



# Wisconsin Department of Transportation

March 20, 2018

**Division of Transportation Systems Development**

Bureau of Project Development  
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**NOTICE TO ALL CONTRACTORS:**

**Proposal #06: 1090-30-70, WISC 2018190**  
**Rock Freeway**  
**Crowbar Dr to Cth I**  
**IH 43**  
**Waukesha County**

**2445-09-70**  
**North Avenue**  
**115<sup>th</sup> St to Union Pacific RR Bridge**  
**Local Street**  
**Milwaukee County**

**Letting of April 10, 2018**

This is Addendum No. 02, which provides for the following:

**Special Provisions:**

Revised Special Provisions	
Article No.	Description
1	General
3	Prosecution and Progress
7	Utilities
8	Other Contracts

Added Special Provisions	
Article No.	Description
72	Railroad Insurance and Coordination – Union Pacific Railway Company
73	Cold Patch, Item 495.1000.S
74	Joint and Crack Repair, Item SPV.0090.0001
75	Survey Project 2445-09-70, Item SPV.0105.0002
76	Pavement Cleanup Project 2445-09-70, Item SPV.0105.0003

**Schedule of Items:**

Revised Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
204.0120	Removing Asphaltic Surface Milling	SY	679	11,949	12,628
305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,694	115	2,809
455.0605	Tack Coat	GAL	379	717	1,096
460.2000	Incentive Density HMA Pavement	DOL	749	1000	1,749
625.0100	Topsoil	SY	8,111	773	8,884

628.1905	Mobilizations Erosion Control	EA	19	2	21
628.1910	Mobilizations Emergency Erosion Control	EA	9	2	11
628.7005	Inlet Protection Type A	EA	9	3	12
628.7020	Inlet Protection Type D	EA	14	24	38
634.0618	Posts Wood 4x6-Inch x18-FT	EA	46	11	57
634.0622	Posts Wood 4x6-Inch x 22-FT	EA	4	2	6
634.0816	Posts Wood 2x2-Inch x 16-FT	EA	2	4	6
637.2210	Signs Type II Reflective H	SF	251	123.42	374.42
637.2230	Signs Type II Reflective F	SF	100.5	32.5	133
638.2102	Moving Signs Type II	EA	3	2	5
638.2602	Removing Signs Type II	EA	22	10	32
638.3000	Removing Small Sign Supports	EA	30	10	40
643.0300	Traffic Control Drums	DAY	65,810	6,786	72,596
643.0420	Traffic Control Barricades Type III	DAY	7,161	672	7,833
643.0705	Traffic Control Warning Lights Type A	DAY	14,297	1,591	15,888
643.0715	Traffic Control Warning Lights Type C	DAY	2,798	710	3,508
643.0800	Traffic Control Arrow Boards	DAY	304	72	376
643.0900	Traffic Control Signs	DAY	54,377	1,667	56,044
646.1020	Marking Line Epoxy 4-Inch	LF	9,619	1,343	10,962
646.3020	Marking Line Epoxy 8-Inch	LF	90	1,735	1,825
649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	27,974	500	28,474
690.0150	Sawing Asphalt	LF	3,768	384	4,152

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
204.0100	Removing Pavement	SY	0	637	637
204.0150	Removing Curb & Gutter	LF	0	68	68
204.0155	Removing Concrete Sidewalk	SY	0	72	72
208.0100	Borrow	CY	0	425	425
213.0100.0002	Finishing Roadway (2445-09-70)	EA	0	1	1
320.0155	Concrete Base 9-Inch	SY	0	10	10
390.0403	Base Patching Concrete SHES	SY	0	160	160
416.0610	Drilled Tie Bars	EA	0	259	259
416.0620	Drilled Dowel Bars	EA	0	160	160
460.6224	HMA Pavement 4MT 58-28 S	TON	0	1,389	1,389
495.1000.S	Cold Patch	TON	0	5	5
601.0331	Concrete Curb & Gutter 31-Inch	LF	0	506	506
601.0600	Concrete Curb Pedestrian	LF	0	15	15
602.0410	Concrete Sidewalk 5-Inch	SF	0	645	645
602.0505	Curb Ramp Detectable Warning Field Yellow	SF	0	50	50
627.0200	Mulching	SY	0	773	773
628.2008	Erosion Mat Urban Class I Type B	SY	0	773	773
629.0210	Fertilizer Type B	CWT	0	0.5	5.5
630.0140	Seeding Mixture No. 40	LB	0	24	24
637.2215	Signs type II Reflective H Folding	SF	0	7.46	7.46
643.0410	Traffic Control Barricades Type II	DAY	0	73	73
643.0920	Traffic Control Covering Signs Type II	DAY	0	26	26
646.5020	Marking Arrow Epoxy	EA	0	9	9
646.5120	Marking Word Epoxy	EA	0	6	6
646.6120	Marking Stop Line Epoxy 18-Inch	LF	0	18	18
646.7120	Marking Diagonal Epoxy 12-Inch	LF	0	451	451

646.8120	Marking Curb Epoxy	LF	0	150	150
646.8220	Marking Island Nose Epoxy	EA	0	4	4
690.0250	Sawing Concrete	LF	0	1,086	1,086
SPV.0090.0001	Joint And Crack Repair	LF	0	1,000	1,000
SPV.0105.0002	Survey Project 2445-09-70	LS	0	1	1
SPV.0105.0003	Pavement Cleanup Project 2445-09-70	LS	0	1	1

**Plan Sheets:**

<b>Added Plan Sheets – Project 2445-09-70</b>	
Plan Sheet	Plan Sheet Title (brief description of why sheet was added)
1	Title Sheet
2-4	Utility Contacts and General Notes
5-6	Typical Sections
7	Construction Details
8-10	Plan Details
11	Permanent Signing
12-13	Pavement Marking
14-18	Traffic Control
19	Alignment Layout
20-21	Survey Control
22-23	EOQ
24-29	Miscellaneous Quantities
30-61	Standard Detail Drawings
62-88	Sign Plates

**Other**

This addendum adds to Proposal #06 **Project ID 2445-09-70, North Avenue, 115<sup>th</sup> St to Union Pacific RR Bridge, Local Street, Milwaukee County.**

Form DT1502 Highway Work Proposal (proposal cover sheet) is revised to add **Project ID 2445-09-70, North Avenue, 115<sup>th</sup> St to Union Pacific RR Bridge, Local Street, Milwaukee County.**

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

*Mike Coleman*

Proposal Development Specialist  
Proposal Management Section

**ADDENDUM NO. 01**  
**1090-30-70, 2445-09-70**  
**March 20, 2018**

**Special Provisions**

**1. General.**

*Replace paragraph one with the following:*

Perform the work under this construction contract for Project 1090-30-70, Rock Freeway, Crowbar Dr to CTH I, IH 43, Waukesha County, Wisconsin, and also Project 2445-09-70, North Avenue, 115<sup>th</sup> St to Union Pacific RR Bridge, Local Street, Waukesha County, Wisconsin, as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2018 Edition, as published by the department, and these special provisions.

**3. Prosecution and Progress.**

*Add the following section heading after paragraph five:*

**Prosecution and Progress Project 1090-30-70**

*Add the following section at the end of the article:*

**Prosecution and Progress Project 2445-09-70**

**Schedule of Operations**

Traffic shifts shown in a given stage may occur at different times during that stage depending on the controlling elements for a given traffic movement as approved by the engineer. The department anticipates that the schedule of major traffic shifts and roadway openings and closings for each stage shall be as follows, unless approved by the engineer:

**North Avenue Stage I**

Complete median curb and gutter, earthwork grading, and landscaping restoration work  
Complete outside shoulder curb and gutter and sidewalk

**North Avenue Stage II**

Complete SHES concrete base patching, asphalt surface milling, joint and crack repair, HMA pavement, and pavement marking

**Contractor Coordination**

Attend weekly scheduling meetings to discuss the near term schedule activities, address any long-term schedule issues, and discuss any relevant technical issues. Develop a rolling three-week schedule identifying the previous week worked and a two week "look ahead". Provide sufficient detail to include actual and planned activities and all the subcontractors for offsite and construction activities, addressing all activities including ramp and lane closure schedules to be performed and identifying issues requiring engineering action or input.

**Work Restrictions**

**Definitions**

The following definitions apply to this contract:

**North Avenue Night Time Closure Hours**

- 9:30 PM Sunday, Monday, Tuesday, Wednesday, Thursday – 5:30 AM the following day
- 11:00 PM Friday, Saturday – 8:00 AM the following day

**Freeway Ramp Closure Hours**

- 9:30 PM Sunday, Monday, Tuesday, Wednesday, Thursday – 5:30 AM the following day
- 11:00 PM Friday, Saturday – 8:00 AM the following day

**IH 41 Freeway Ramp Restrictions**

IH 41 freeway ramp closures are permitted during IH 41 Freeway Ramp Closure Hours only.

All entrance and exit ramps shall be posted three business days in advance of their closure with dates and time of closure.

**North Avenue Restrictions**

Prior to 12:01 am on July 9, 2018, no work is permitted on North Avenue.

During Stage 1, a permanent single lane closure in each direction is permitted as shown in the plans to facilitate median construction.

During Stage 2, maintain two thru lanes in each direction at all times, except a single lane closure may be taken in each direction during North Avenue Night Time Closure Hours only. All SHES concrete base patching, asphalt surface milling, joint and crack repair, HMA pavement, and pavement marking shall be completed during North Avenue Night Time Closure Hours, unless otherwise approved by the engineer in the field.

Do not, at any time, conduct construction operations in the median area and adjacent outside shoulder area of the local street at the same time without obtaining prior permission of the engineer.

Intersection closures may be taken during North Avenue Night Time Closure Hours only.

Maintain access to all driveways and businesses at all times, except short term closures will be permitted utilizing flagging operations during night time milling and paving operations.

Keep sidewalks open unless otherwise shown on the plans, or to facilitate the removal and replacement of curb ramps. Provide sidewalk access along North Avenue on one side of the street at all times. Reopen all sidewalks within 120 hours of commencing any sidewalk replacement, or repair work.

Permitting the contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the department of any of its rights under the contract.

**General Work Restrictions**

Excavation material and cleared and grubbed material shall be stockpiled on upland areas an adequate distance away from wetlands, storm sewer inlets, floodplains, and the waterways as determined by engineer.

Provide the Wisconsin State Patrol, Milwaukee County Highway Maintenance, the City of Wauwatosa Police Department, and Milwaukee County Sheriff's Department with a 24-hour emergency contact number for when maintenance is required.

Park equipment and store material only at work sites approved by the engineer.

Keep open travel lanes free of construction debris at all times.

### **Interim and Final Completion of Work**

*Supplement standard spec 108.10 with the following:*

The department will not grant time extensions for the following:

- Severe weather as specified in standard spec 108.10.2.2.
- Labor disputes that are not industry wide.
- Delays in material deliveries.

Each day is defined as a twenty-four hour period beginning at 12:01 AM.  
SEF Rev. 16\_1206

### **Interim Completion of Work of North Avenue 8/12/2018**

*Supplement standard spec 108.11 as follows.*

If the contractor fails to complete all work on North Avenue as shown in the plans prior to 12:01 AM on August 13, 2018, the department will assess the contractor \$5,000 in interim liquidated damages per day for each calendar day after 12:01 AM on August 13, 2018. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM on August 13, 2018.

## **7. Utilities.**

*Add the following section heading prior paragraph one:*

### **Utilities Project 1090-30-70**

*Add the following section at the end of the article:*

### **Utilities Project 2445-09-70**

This contract comes under the provisions of Administrative Rule TRANS 220.

Additional information regarding recently relocated utility facilities may be available on permits issued to the utility companies. These permits can be viewed at the Region Office during normal working hours. Contact WisDOT SE Freeways Utility Coordinator Greg Berry at (414) 750-7828 for further information.

Underground and overhead utility facilities are located within the project limits. Utility adjustments are required for this construction project as noted below. Coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area as required per state statute. Use caution to ensure the integrity of underground facilities and maintain code clearances from overhead facilities at all times.

Some utility work, as described below, is dependent on prior work being performed by the contractor at a specific site. Provide the engineer and the affected utility a good faith notice of when the utility is to start work at the site. Notice shall be given 14 to 16 calendar days in advance of when the site will be available to the utility. Follow up with a confirmation notice to the engineer and the utility not less than 3 working days before the site will be ready for the utility to begin its work.

Contact utility companies listed in the plans prior to preparing bids to obtain current information on existing utility locations and the status of any new utility relocation work.

Utility companies will be performing utility work and adjustments within the limits and during the life of the project. The contractor shall cooperate and coordinate construction activities with these companies.

There may be discontinued utility facilities within the project limits. If a conflict with a discontinued utility facility is encountered, contact the appropriate utility owner/representative to coordinate construction activities and proper removal and disposal of said facility as necessary.

Utility working days shown herein are as defined in Wisconsin Administrative Code Chapter Trans 220.

Known utilities in the projects are as follows:

### **North Avenue**

**AT&T Wisconsin** has existing underground communications facilities within the project limits in the following locations:

- An existing underground communications line beginning beyond the westerly project limits and running easterly along the northerly median curb line of North Avenue to a manhole at the intersection of North Avenue and N. 114<sup>th</sup> Street at Station 106NO+66, 8'LT. From there it runs northeasterly and then continues easterly along the middle of the westbound lanes of North Avenue, crossing below IH 41, and continuing easterly to a manhole beyond the project limits. This line will remain in place without adjustment. AT&T Wisconsin will adjust the manhole at Station 106NO+66, 8'LT during construction. Allow 3 days for AT&T Wisconsin to perform the manhole adjustments.
- An existing underground communications line beginning beyond the southerly project limits and running northerly along the center of N. 114<sup>th</sup> Street to a vault in the median of North Avenue at Station 106NO+66, 8'LT and continuing northerly to beyond the project limits. This line will remain in place without adjustment.

AT&T Wisconsin also has discontinued underground communication facilities within the project limits in the following locations:

- A discontinued underground communications line beginning at a manhole at Station 106NO+66, 8'LT and running easterly along the northerly median curb line of North Avenue, crossing below IH 41, to a discontinued manhole at Station 113NO+37, 2'LT and continuing to beyond the project limits.
- A discontinued underground communications line beginning at a manhole at Station 113NO+37, 2'LT and running northerly to Station 113NO+37, 58'LT.
- A discontinued underground communications line beginning at a manhole at Station 113NO+37, 2'LT and running southerly to Station 113NO+32, 68'RT. From there it turns and runs easterly along the southerly right of way of North Avenue to Station 116NO+58, 62'RT where it turns southerly and ends near a pedestal at Station 116NO+62, 83'RT.

Contact Jeff Oldenburg (262-896-7522 office; 414-412-7047 cell) of AT&T Wisconsin 7 days in advance to coordinate manhole adjustments, locations and any excavation near their facilities.

**Charter Communications** has an existing underground communications line beginning beyond the southerly project limits at N. 114<sup>th</sup> Street and running northerly to Station 106NO+21, 68'RT where it turns and runs easterly along the southerly right of way of North Avenue, crossing below IH 41, and continuing easterly to beyond the project limits. This line will remain in place without adjustment.

Charter Communications also has a discontinued underground communication line beginning at Station 116NO+62, 52'LT and running easterly along the northerly sidewalk of North Avenue and continuing to beyond the project limits.

Contact Steve Cramer (414-277-4045) of Charter Communications 7 days in advance to coordinate locations and any excavation near their facilities.

**Wauwatosa, City of - Lighting** has existing underground electric lines and light poles throughout the project limits along the north and south curb lines of North Avenue. These facilities will remain in place without adjustment.

Contact Randy Michelz (414-479-8929) of City of Wauwatosa - Lighting 7 days in advance to coordinate locations and any excavation near their facilities.

**Wauwatosa, City of - Sewer** has existing underground sanitary sewer facilities within the project limits in the following locations:

- An existing underground sanitary sewer beginning at a manhole south of the project limits in the middle of the southwest IH 41 / North Avenue interchange loop ramp and running northerly, crossing North Avenue at Station 109NO+88, and continuing northerly to beyond the project limits. This line will remain in place without adjustment.
- An existing underground sanitary sewer beginning beyond the westerly project limits and running easterly along the southerly eastbound lane of North Avenue to a manhole in the intersection of N. 114<sup>th</sup> Street at Station 106NO+51, 45'RT where it turns and runs southerly to beyond the project limits. This line will remain in place without adjustment. The City of Wauwatosa will adjust the manhole at Station 106NO+51, 45'RT during construction. Allow 3 days for the City of Wauwatosa to perform the manhole adjustments.

Contact Mike Maki (414-479-8991) of City of Wauwatosa – Sewer 7 days in advance to coordinate manhole adjustments, locations and any excavation near their facilities.

**Wauwatosa, City of – Signals** has existing temporary signal facilities at the North Avenue/ southbound on-ramp to USH 45 intersection and at the North Avenue/ northbound on-ramp to USH 45 intersection. These facilities will remain in place without adjustment.

Contact Randy Michelz (414-479-8929) of City of Wauwatosa - Signals 7 days in advance to coordinate locations and any excavation near their facilities.

**Wauwatosa Water Utility** has existing underground water facilities within the project limits in the following locations:

- An existing underground water main beginning beyond the westerly project limits and running easterly along the southerly curb line of North Avenue, crossing below IH 41, and continuing easterly to beyond the project limits. This line will remain in place without adjustment.
- An existing underground water main beginning beyond the westerly project limits and running easterly along the northerly curb line of North Avenue to a tee in the intersection of N. 113<sup>th</sup> Street at Station 109NO+73, 50'LT. This line will remain in place without adjustment.
- An existing underground water main beginning at a tee at Station 109NO+89, 53'RT and running northerly, crossing North Avenue at Station 109+80, and continuing along N. 113<sup>th</sup> Street to beyond the project limits. This line will remain in place without adjustment.
- An existing underground water main beginning beyond the southerly project limits and running northerly along N. 114<sup>th</sup> Street and continuing to a tee in the eastbound lanes of North Avenue at Station 106NO+43, 55'RT. This line will remain in place without adjustment.
- An existing underground water main beginning beyond the northerly project limits and running southerly along N. 114<sup>th</sup> Street to the median of North Avenue. From there it turns and runs easterly and then southeasterly to a manhole on the south side of North Avenue at Station 107NO+47. This line will remain in place without adjustment.

Contact Dave Simpson (414-831-0799) of Wauwatosa Water Utility 7 days in advance to coordinate locations and any excavation near their facilities.



**We Energies – Electric** has underground electric facilities within the project limits in the following locations:

- An underground electric line beginning beyond the southerly project limits and running northerly along the west side of N. 114<sup>th</sup> Street to a manhole at Station 106NO+50, 69' RT. This line will remain in place without adjustment.
- An underground electric line beginning beyond the southerly project limits and running northerly to Station 117NO+50, 68'RT where it turns and runs easterly along the southerly right of way of North Avenue to beyond the project limits. This line will remain in place without adjustment.

Contact Nicholas Welch (414-944-5765) of We Energies - Electric 7 days in advance to coordinate locations and any excavation near their facilities.

**We Energies – Gas** has underground gas facilities within the project limits in the following locations:

- An existing underground gas main beginning beyond the westerly project limits and running easterly along the northerly westbound lane of North Avenue, crossing below IH 41, and continuing easterly to beyond the project limits. This line will remain in place without adjustment. We Energies will adjust gas valves along this line during construction. Allow 3 days for We Energies to perform the gas valve adjustments.
- An existing underground gas main beginning beyond the southerly project limits and running northerly along the westerly lanes of N. 114<sup>th</sup> Street, crossing North Avenue at Station 106NO+35, and continuing northerly to a tee at Station 106NO+35, 33'LT. This line will remain in place without adjustment.
- An existing underground gas main beginning beyond the northerly project limits and running southerly along N. 114<sup>th</sup> Street to a tee at Station 106NO+24, 33'LT. This line will remain in place without adjustment.

We Energies - Gas also has discontinued facilities within the project limits in the following locations:

- An underground gas main beginning beyond the westerly project limits and running easterly along the northerly curb line of North Avenue, crossing below IH 41, and continuing easterly to beyond the project limits.
- An underground gas main beginning beyond the northerly project limits and running southerly along N. 114<sup>th</sup> Street to a tee at Station 106NO+32, 57'LT.
- An underground gas main beginning beyond the southerly project limits and running northerly along N. 114<sup>th</sup> Street, crossing North Avenue at Station 106NO+41, and continuing to a tee at Station 106NO+41, 57'LT.
- An underground gas main beginning at a tee at Station 109NO+52, 44'LT and running northerly along N. 113<sup>th</sup> Street to beyond the project limits.
- An underground gas main beginning at a tee at Station 113NO+66, 45'LT and running southerly, crossing North Avenue at Station 113NO+66, and continuing southerly to beyond the project limits.
- An underground gas main beginning at a tee at Station 117NO+33, 46'LT and running southerly, crossing North Avenue at Station 117NO+33, and continuing southerly to beyond the project limits.

Contact Nick Ernster (414-944-5574) of We Energies-Gas 7 days in advance to coordinate gas valve adjustments, locations and any excavation near their facilities.

**WisDOT** has existing underground electric lines and light poles within the project limits, including along the median of IH 41, and along the ramps at the IH 41/ North Avenue interchange. These facilities will remain in place without adjustment.

Contact Eric Perea (262-574-5422 office/414-750-0935 cell) of WisDOT 7 days in advance to coordinate locations and any excavation near their facilities.

**WisDOT** has existing traffic management and underground communications facilities within the project limits in the following locations:

- An underground communication line beginning at Station 107NO+21, 75'RT and running westerly, crossing the IH 41 southbound on-ramp, and continuing westerly to Station 106NO+67, 75'RT where it turns and runs southerly to beyond the project limits. This line will remain in place without adjustment.
- An underground communication line beginning beyond the southerly project limits and running northerly, crossing North Avenue at Station 110NO+15, and continuing northerly to beyond the project limits. This line will remain in place without adjustment.
- An underground communication line beginning at Station 116NO+93, 75'LT and running easterly, crossing the IH 41 northbound on-ramp, and continuing easterly to Station 117NO+62, 83'LT where it turns and runs northerly to beyond the project limits. This line will remain in place without adjustment.

Contact Jeff Madson (414-225-3723) of WisDOT 7 days in advance to coordinate locations and any excavation near their facilities.

## **8. Other Contracts.**

*Add the following project at the end of the article:*

### **City of Wauwatosa Local Street Resurfacing (North Avenue)**

North Avenue, 118<sup>th</sup> St to 115<sup>th</sup> St and UPRR Bridge to Mayfair Rd

City of Wauwatosa Contact: Bill Wehrley, (414) 479-8929

## **72. Railroad Insurance and Coordination – Union Pacific Railway Company**

### **A Description**

Comply with standard spec 107.17 for all work affecting Union Pacific Railway Company property and any existing tracks.

### **A.1 Railroad Insurance Requirements**

In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3. Insurance is filed in the name of Union Pacific Railway Company.

Notify evidence of the required coverage, and duration to Danielle Allen, Contract Administrator; 1400 Dodge Street, Stop 1690, Omaha, NE 68179; Telephone (402) 544-8020; E-mail: [danielleallen@up.com](mailto:danielleallen@up.com).

Also send a copy to the following: Paul Derksen, SE Region Railroad Coordinator; 141 N. W. Barstow Street, Waukesha, WI 53188; Telephone (262) 548-8770; E-mail: [paul.derksen@dot.wi.gov](mailto:paul.derksen@dot.wi.gov).

Include the following information on the insurance document:

- Project ID: 2445-09-70
- Project Location: Wauwatosa, WI
- Route Name: North Ave, Milwaukee County
- Crossing ID: 177 263E
- Railroad Subdivision: Milwaukee

- Railroad Milepost: 92.07
- Work Performed: Traffic control

## **A.2 Train Operation**

Approximately 12 through freight trains operate daily at up to 40 mph.

## **A.3 Names and Addresses of Railroad Representatives for Consultation and Coordination**

### **Construction Contact**

John Venice, Manager Special Projects - Industry & Public Projects Engineering Department; 101 North Wacker Drive - Suite 1920, Chicago, IL 60606; Telephone (312) 777-2043; E-mail [jnvenice@up.com](mailto:jnvenice@up.com) for consultation on railroad requirements during construction.

Amend standard spec 108.4 to include the railroad in the distribution of the initial bar chart, and monthly schedule updates. The bar chart shall specifically show work involving coordination with the railroad.

### **Flagging Contact**

See Construction Contact. If more than 30 days of flagging is required contact UP 30 days prior to needing a flagger on site. Reference the Wisconsin Milepost and Subdivision located in A.1.

### **Cable Locate Contact**

In addition to contacting Diggers Hotline, contact the UP Call Before You Dig line at (800) 336-9193 at least five working days before the locate is needed. Normal business hours are 6:30 AM to 6:30 PM, Central Time, Monday through Friday, except holidays and are subject to change. Calls will be routed at all times in case of an emergency. Reference the Wisconsin Milepost and Subdivision located in A.1.

UP will only locate railroad owned cable buried in the railroad right-of-way. The railroad does not locate any other utilities.

## **A.4 Work by Railroad**

The railroad will perform the work described in this section, except for work described in other special provisions, and will be accomplished without cost to the contractor. none

## **A.5 Temporary Grade Crossing**

If a temporary grade crossing is desired, submit a written request to the railroad representative named in A.3 at least 40 days prior to the time needed. Approval is subject to the discretion of the railroad. The department has made no arrangements for a temporary grade crossing.

stp-107-026 (20170615)

## **73. Cold Patch, Item 495.1000.S.**

### **A Description**

This special provision describes furnishing cold patch and filling potholes and other voids in existing pavement surfaces as the engineer directs.

### **B Materials**

Furnish a mixture of course aggregate, natural sand, and MC-250 bituminous material designed to have a workability range of 15-100° F without heating. Ensure that the mixture:

- Adheres to wet surfaces.

- Resists damage from water, salt, and deicing products.
- Requires no mixing or special handling before use.
- Supports traffic immediately after placement and compaction.

Conform to the following gradation:

SIEVE SIZE	PERCENT PASSING (by weight)
1/2-inch (12.5 mm)	100
3/8-inch (9.5 mm)	90 - 100
No. 4 (4.75 mm)	-90 max
No. 8 (2.38 mm)	20 - 65
No. 200 (0.074 mm)	2 - 10
Bitumen	4.8 - 5.4

The department will accept cold patch based primarily on the engineer's visual inspection. The department may also test for gradation.

### **C Construction**

Stockpile cold patch on site on a smooth, firm, well-drained area cleared of vegetation and foreign material. Cover the stockpile and ensure that it is easily accessible. Replenish the stockpile throughout the project duration, but limit the size at any given time to 10 tons on site unless the engineer approves otherwise. Dispose of unused material at project completion unless the engineer directs otherwise.

Place cold patch by hand. Remove ponded water and loose debris before placement. Compact flush with a tamper, roller, or vehicle tire after placement.

Refill patched areas as necessary to maintain a flush pavement surface until project completion.

### **D Measurement**

The department will measure Cold Patch by the ton, acceptably stockpiled on site.

### **E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
495.1000.S	Cold Patch	TON

Payment for Cold Patch is full compensation for providing and maintaining patches; for furnishing and replenishing stockpiled material on-site; and for disposing of excess material at the project completion

Stp-495-010 (20160607)

## **74. Joint and Crack Repair, Item SPV.0090.0001.**

### **A Description**

This special provision describes joint and crack repair involving removing all loose or spalled concrete and asphaltic patching, cleaning the joints and cracks, and filling with asphaltic material and compacting HMA.

### **B Materials**

Furnish Hot Mixed Asphalt 4 MT 58-28 S; the engineer will not require the contractor to conform to the quality management program specified under 460.2.8.

### **C Construction**

Clean out all joints and cracks. Place asphaltic tack coat. Fill voids with new asphaltic mixture and compact.

**D Measurement**

The department will measure Joint And Crack Repair by the linear foot acceptably completed.

**E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0001	Joint And Crack Repair	LF

Payment is full compensation for removing and properly disposing of all loose or spalled concrete and asphaltic patching; for cleaning joints and cracks; for furnishing and placing tack coat, for furnishing HMA pavement and filling the joints and cracks with HMA pavement; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Asphaltic material, asphaltic mixture and tack coat used to fill the joint will be incidental to the completed work.

**75. Survey Project 2445-09-70, Item SPV.0105.0002.**

**A Description**

This special provision describes modifying standard spec 105.6 and 650 to define the requirements for construction staking for this contract. Conform to standard spec 105.6 and 650 except as modified in this special provision.

*Replace standard spec 105.6.1(2) with the following:*

The department will not perform any construction staking for this contract. Obtain engineer's approval before performing all survey required to lay out and construct the work under this contract.

*Replace standard spec 650.1 with the following:*

This section describes the contractor-performed construction staking required under individual contract bid items to establish the horizontal and vertical position for all aspects of construction including:

- base
- sidewalk
- curb and gutter
- concrete base
- pavement markings (temporary and permanent)
- supplemental control
- traffic control items

**B (Vacant)**

**C Construction**

*Replace standard spec 650.3.1(6) with the following:*

Maintain neat, orderly, and complete survey notes, drawings, and computations used in establishing the lines and grades. This includes:

- Raw data files
- Digital stakeout reports
- Control check reports

- Supplemental control files (along with method used to establish coordinates and elevation)
- Calibration report

Make the survey notes and computations available to the engineer within 24 hours as the work progresses unless a longer period is approved by the engineer.

**D Measurement**

*Replace standard spec 650.4 with the following:*

The department will measure Survey Project 2445-09-70 as a separate single lump sum unit of work, acceptably completed.

**E Payment**

*Replace standard spec 650.5 with the following:*

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.0002	Survey Project 2445-09-70	LS

Payment is full compensation for performing all survey work required to lay out and construct all work under this contract and for adjusting stakes to ensure compatibility with existing field conditions. The department will not make final payment for this item until the contractor submits all survey notes and computations used to establish the required lines and grades to the engineer within 24 hours of completing this work. Re-staking due to construction disturbance and knock-outs will be performed at no additional cost to the department.

sef-650-005 (20171004)

**76. Pavement Cleanup Project 2445-09-70, Item SPV.0105.0003.**

**A Description**

This special provision describes cleanup of dust and debris from pavements within and adjacent to the job site.

**B Materials**

**B.1 Pavement Cleanup**

Furnish a vacuum-type street sweeper equipped with a power broom, water spray system, and a vacuum collection system.

Utilize vacuum equipment with a self-contained particulate collector capable of preventing discharge from the collection bin into the atmosphere.

Use a vacuum-type sweeper as the primary sweeper, except as specified herein or approved by the engineer.

**C Construction**

**C.1 Pavement Cleanup**

Keep all pavements, curb lanes and gutters both closed and open to public traffic within the job-site boundaries free of dust and debris generated from any activity under the contract. Keep all pavements, curb lanes and gutters adjacent to the project free of dust and debris that are affected by land disturbing, dust generating activities, as defined in the contractor's dust control implementation plan.

Provide surveillance to identify if material is being tracked from the jobsite. Clean up spillage and material tracked from the project within an hour of occurrence or as directed by the engineer. Perform cleanup operations in a safe manner.

Provide routine sweeping of all pavements, curb lanes and gutters on local street active haul routes a minimum of once a day as defined in the Dust Control Implementation Plan (DCIP) or as directed by the engineer.

In addition to routine sweeping, conduct sweepings as the engineer directs or approves, to deal with dust problems that might arise during off-work hours or emergencies. Provide the engineer with a contact person available at all times to respond to requests for emergency sweeping. Respond to emergency sweeping requests within 4 hours.

If the vacuum-type sweeper breaks down, a mechanical broom sweeper may be substituted for no more than 24 hours total elapsed time. Repair the vacuum-type sweeper within that 24 hours or substitute a vacuum-type sweeper.

Skid steers with mechanical power brooms may only be utilized on sidewalks and driveways whose pavements will not support the weight of a street sweeper, unless otherwise approved by the engineer.

**D Measurement**

The department will measure Pavement Cleanup Project 2445-09-70 as a single lump sum for work acceptably completed.

**E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.0003	Pavement Cleanup Project 2445-09-70	LS

Payment schedule for this item will be in accordance to the percentage of contract value earned. Payment is full compensation for surveillance, mobilization, sweeping, and disposing of materials.

**Schedule of Items**

Attached, dated March 20, 2018, are the revised Schedule of Items Pages 1 – 16.

**Plan Sheets**

The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:  
Added: (Project 2445-09-70): 1 – 88.

END OF ADDENDUM

# HIGHWAY WORK PROPOSAL

Wisconsin Department of Transportation  
06/2017 s.66.0901(7) Wis. Stats

Proposal Number: **006**

<u>COUNTY</u>	<u>STATE PROJECT</u>	<u>FEDERAL</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>
Waukesha	1090-30-70	WISC 2018190	Rock Freeway; Crowbar Dr To Cth I	IH 043
Milwaukee	2445-09-70	N/A	North Avenue; 115th St To Union Pacific Rr Bridge	LOC STR

This proposal, submitted by the undersigned bidder to the Wisconsin Department of Transportation, is in accordance with the advertised request for proposals. The bidder is to furnish and deliver all materials, and to perform all work for the improvement of the designated project in the time specified, in accordance with the appended Proposal Requirements and Conditions.

Proposal Guaranty Required: \$100,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: April 10, 2018 Time (Local Time): 9:00 am	Firm Name, Address, City, State, Zip Code  <b>SAMPLE</b> <b>NOT FOR BIDDING PURPOSES</b>  This contract is exempt from federal oversight.
Contract Completion Time December 15, 2018	
Assigned Disadvantaged Business Enterprise Goal <b>15%</b>	

This certifies that the undersigned bidder, duly sworn, is an authorized representative of the firm named above; that the bidder has examined and carefully prepared the bid from the plans, Highway Work Proposal, and all addenda, and has checked the same in detail before submitting this proposal or bid; and that the bidder or agents, officer, or employees have not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal bid.

Do not sign, notarize, or submit this Highway Work Proposal when submitting an electronic bid on the Internet.

Subscribed and sworn to before me this date \_\_\_\_\_

\_\_\_\_\_  
(Signature, Notary Public, State of Wisconsin)

\_\_\_\_\_  
(Bidder Signature)

\_\_\_\_\_  
(Print or Type Name, Notary Public, State Wisconsin)

\_\_\_\_\_  
(Print or Type Bidder Name)

\_\_\_\_\_  
(Date Commission Expires)

\_\_\_\_\_  
(Bidder Title)

Notary Seal

Type of Work:	For Department Use Only
Mill, Grade, Base, Storm Sewer, Concrete Pavement, Asphalt Pavement, Curb & Gutter, Concrete Barrier, Signing, Lighting, Concrete Panel Wall MSE R-67-131, 132, Marking, Structures B-67-109, 110, 114, 134, 135, 359	
Notice of Award Dated	Date Guaranty Returned



WKE

PROJECT ID: 2445-09-70

COUNTY: MILWAUKEE

STATE PROJECT	FEDERAL PROJECT
2445-09-70	

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

**NORTH AVENUE**  
115TH ST TO UNION PACIFIC RR BRIDGE  
**LOCAL STREET**  
MILWAUKEE COUNTY

STATE PROJECT NUMBER  
**2445-09-70**

APR 2018  
ORDER OF SHEETS

- Section No. 1 Title
- Section No. 2 Typical Sections and Details
- Section No. 3 Estimate of Quantities
- Section No. 3 Miscellaneous Quantities
- Section No. 4 Right-of-Way-Plan
- Section No. 5 Plan and Profile
- Section No. 6 Standard Detail Drawings
- Section No. 7 Sign Plates
- Section No. 8 Structure-Plans
- Section No. 9 Computer-Earthwork-Data
- Section No. 9 Cross-Sections

TOTAL SHEETS = 88

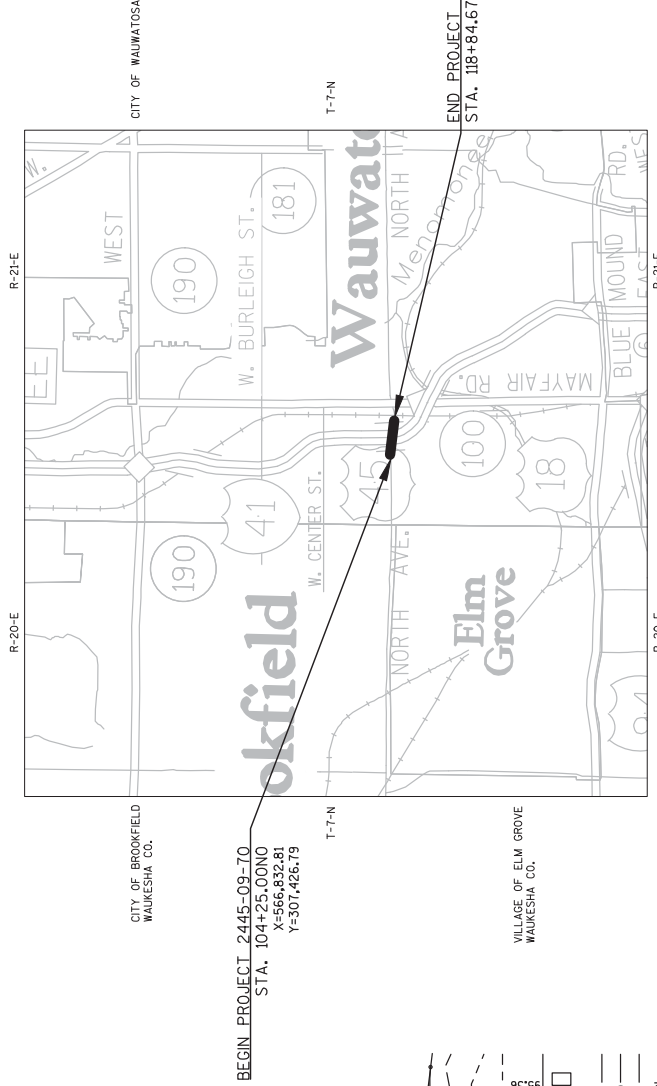


06

DESIGN DESIGNATION **NORTH AVE.**  
 A.A.D.T. (2017) = 27,700  
 A.A.D.T. (2037) = 30,300  
 D.R.V. = 1.395  
 D.D. = 8% EB/41% WB  
 T. = 4.3%  
 DESIGN SPEED = 40 MPH  
 ESALS = 2,379,800

CONVENTIONAL SYMBOLS

- PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (BOX OR PIPE)
- COMBUSTIBLE FLUIDS
- MARSH AREA
- WOODED OR SHRUB AREA
- PROFILE
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (TO BE NOTED ON SUCH)
- SPECIAL DITCH
- GRADE ELEVATION
- CULVERT (Profile View)
- UTILITIES
- ELECTRIC
- FIBER OPTIC
- GAS
- SANITARY SEWER
- STORM SEWER
- TELEPHONE
- WATER
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE



BEGIN PROJECT 2445-09-70  
 STA. 104+25.00/NO  
 Y=566,832.81  
 Y=307,426.73

END PROJECT 2445-09-70  
 STA. 118+84.67/NO

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, MILWAUKEE COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES. ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD88 (2007).

TOTAL NET LENGTH OF CENTERLINE = 0.276 MI.

Addendum No. 01  
 ID 2445-09-70  
 Added Project Plan Set  
 Added Sheets 1 - 88  
 March 20, 2018

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	PREPARED BY Surveyor Designer Project Manager Regional Examiner Regional Supervisor
	WISDOT CHRIS ZACHARIAS, P.E. WILLIAM S. MOHR, P.E.
	APPROVED FOR THE DEPARTMENT DATE: 3/16/18 <i>Chris Zacharias</i> (Signature)

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(CONTINUED ON NEXT SHEET)

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND  
FACILITIES BEFORE YOU DIG, IN WISCONSIN

WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS  
NOTICE BEFORE YOU EXCAVATE.



Dial 811 or (800) 242-8511  
www.DiggersHotline.com

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 NICHOLAS.WELCH@WE-ENERGIES.COM

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 JEFFREY.MADSON@DOT.WI.GOV

STANDARD ABBREVIATIONS

APRON END WALL  
 AGGREGATE  
 ASPHALTIC  
 BASE A GREGATE DENSE  
 BENCH MARK  
 C&G  
 CENTER OR CONSTRUCTION LINE  
 CULVERT PIPE CORRUGATED METAL  
 CONCRETE  
 CONC  
 CP  
 CULVERT PIPE  
 CULVERT PIPE REINFORCED CONCRETE  
 CONCRETE SURFACE DRAIN  
 CSD  
 CUBIC YARD  
 CY  
 DELTA  
 D  
 DEGREE OF CURVE  
 DISCHARGE  
 DISCH  
 EASTBOUND  
 ENB  
 EXISTING NOISE BARRIER  
 FIELD ENTRANCE  
 FE  
 FLOW LINE  
 FL  
 HOT MIX ASPHALT  
 HMA  
 INVERT  
 INV  
 LENGTH OF CURVE  
 L  
 LEFT HAND FORWARD  
 LHF  
 LOW POINT  
 LP  
 LEFT  
 LT  
 MINIMUM  
 MIN  
 MATCHLINE  
 M/L  
 NORTHBOUND  
 NB  
 NORMAL CROWN  
 NC  
 PAVEMENT  
 PAVT  
 POINT OF CURVE  
 PC  
 POINT OF COMPOUND CURVE  
 PCC  
 PRIVATE ENTRANCE  
 PE  
 POINT OF INTERSECTION  
 PI  
 PROFILE GRADE LINE  
 PGL  
 PERMANENT LIMITED EASEMENT  
 PLE  
 PROPOSED NOISE BARRIER  
 PNB  
 PRC  
 POINT OF REVERSE CURVE  
 PT  
 POINT OF TANGENT  
 R  
 RADIUS OF CURVE  
 REFERENCE LINE  
 R/L  
 RIGHT OF WAY  
 R/W  
 RIGHT OF CURVE  
 RC  
 REVERSE CROWN  
 REOD  
 REQUIRED  
 RHF  
 RIGHT HAND FORWARD  
 RUN OFF LENGTH  
 ROL  
 RAILROAD SPIKE  
 RRSP  
 RIGHT  
 RT  
 SALVAGED ASPHALTIC PAVEMENT BASE COARSE  
 SOUTHBOUND  
 SB  
 STANDARD DETAIL DRAWING  
 SDD  
 SUPPER ELEVATION  
 SE  
 SQUARE FOOT  
 SF  
 STORM SEWER PIPE REINFORCED CONCRETE  
 SSPRC  
 STATION  
 STA  
 SQUARE YARD  
 SY  
 TANGENT LENGTH  
 T  
 TEMPORARY LIMITED EASEMENT  
 TLE  
 VERTICAL CURVE LENGTH  
 VCL  
 POINT OF VERTICAL CURVE  
 VPC  
 POINT OF VERTICAL INTERSECTION  
 VPI  
 POINT OF VERTICAL TANGENT  
 VPT  
 WESTBOUND  
 WB

AEW  
 AGG  
 ASPH  
 BAD  
 BM  
 C&G  
 CIL  
 CMCP  
 CONC  
 CP  
 CPRC  
 CSD  
 CY  
 D  
 DISCH  
 ENB  
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 VCL  
 VPC  
 VPI  
 VPT  
 WB

CONSTRUCT HMA PAVEMENT WITH THE FOLLOWING LAYERS:

PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION
4 MT 58-28 S	2"	1-2" UPPER LAYER	12.5 MM

E

ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- PERMANENT SIGNING
- PAVEMENT MARKING
- TRAFFIC CONTROL
- ALIGNMENT LAYOUT

PROJECT NO: 2445-09-70

HWY: NORTH AVENUE

COUNTY: MILWAUKEE

GENERAL NOTES

SHEET: E

FILE NAME

PLOT DATE: 3/13/2018

PLOT BY:

PLOT SCALE: 1:1

3

GENERAL NOTES

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER. ANY REINFORCEMENT LOCATED IN EXISTING CONCRETE PAVEMENT SHALL BE CONSIDERED INCIDENTAL TO THE REMOVING PAVEMENT ITEM, AND NO ADDITIONAL COMPENSATION WILL BE GRANTED.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY BY CONTRACTOR.

WHEN THE QUANTITY OF HMA PAVEMENT OR BASE AGGREGATE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLAN IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

A SAWED JOINT IS REQUIRED WHERE NEW HMA PAVEMENT MEETS EXISTING HMA PAVEMENT.

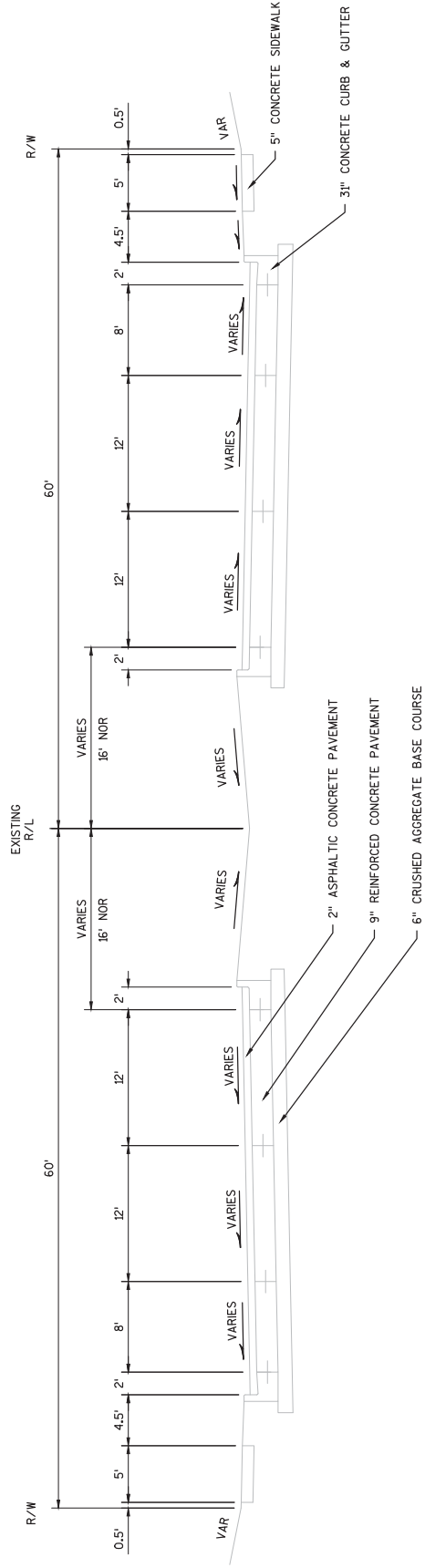
REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL.

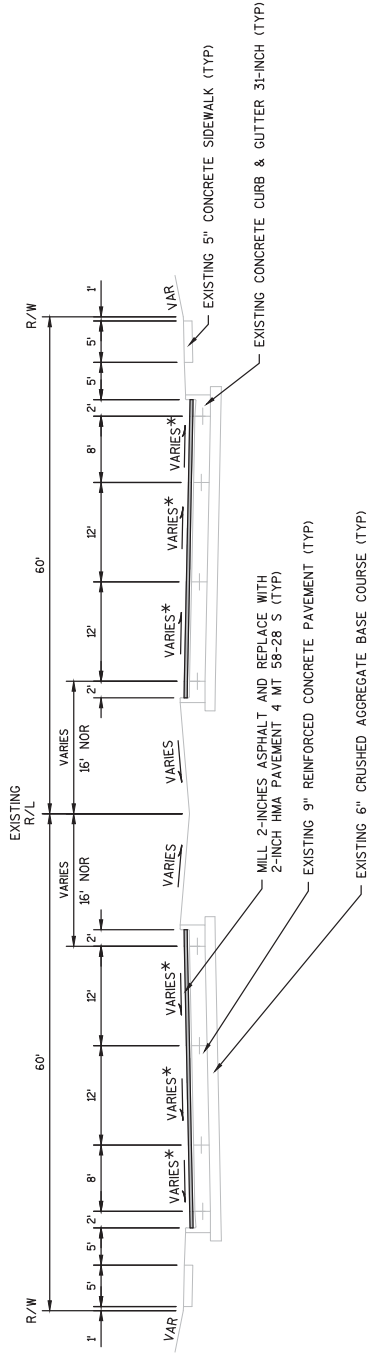
THE ACTUAL LOCATIONS OF EROSION CONTROL BMPs WILL BE DETERMINED BY THE CONTRACTOR'S EGP AND BY THE ENGINEER. EROSION CONTROL BMPs SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

FERTILIZER SHALL NOT BE USED WITHIN 100' OF NAVIGABLE WATERWAYS OR WETLANDS.

CONTRACTOR MUST CONTACT THE PROJECT ENGINEER AND THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION (SEWRPC) (JOHN WASHBURN) AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLIC SURVEY MONUMENT.

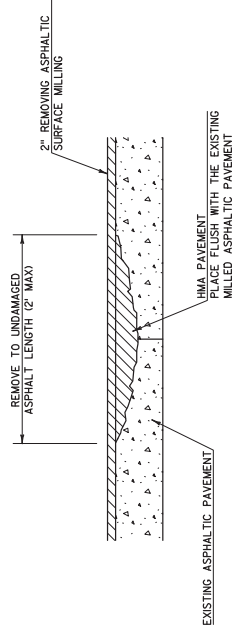


TYPICAL EXISTING SECTION  
 W. NORTH AVENUE  
 STA 104N0+25.00 TO STA 118N0+84.67 EASTBOUND  
 STA 104N0+25.00 TO STA 118N0+84.67 WESTBOUND



\*CROSS SLOPE VARIES, MATCH EXISTING

TYPICAL FINISHED SECTION  
 W. NORTH AVENUE  
 STA 104+00+25.00 TO STA 108+00+84.67



JOINT AND CRACK REPAIR DETAIL

PROJECT NO: 2445-09-70

HWY: W. NORTH AVE.

COUNTY: MILWAUKEE

CONSTRUCTION DETAILS

SHEET 7

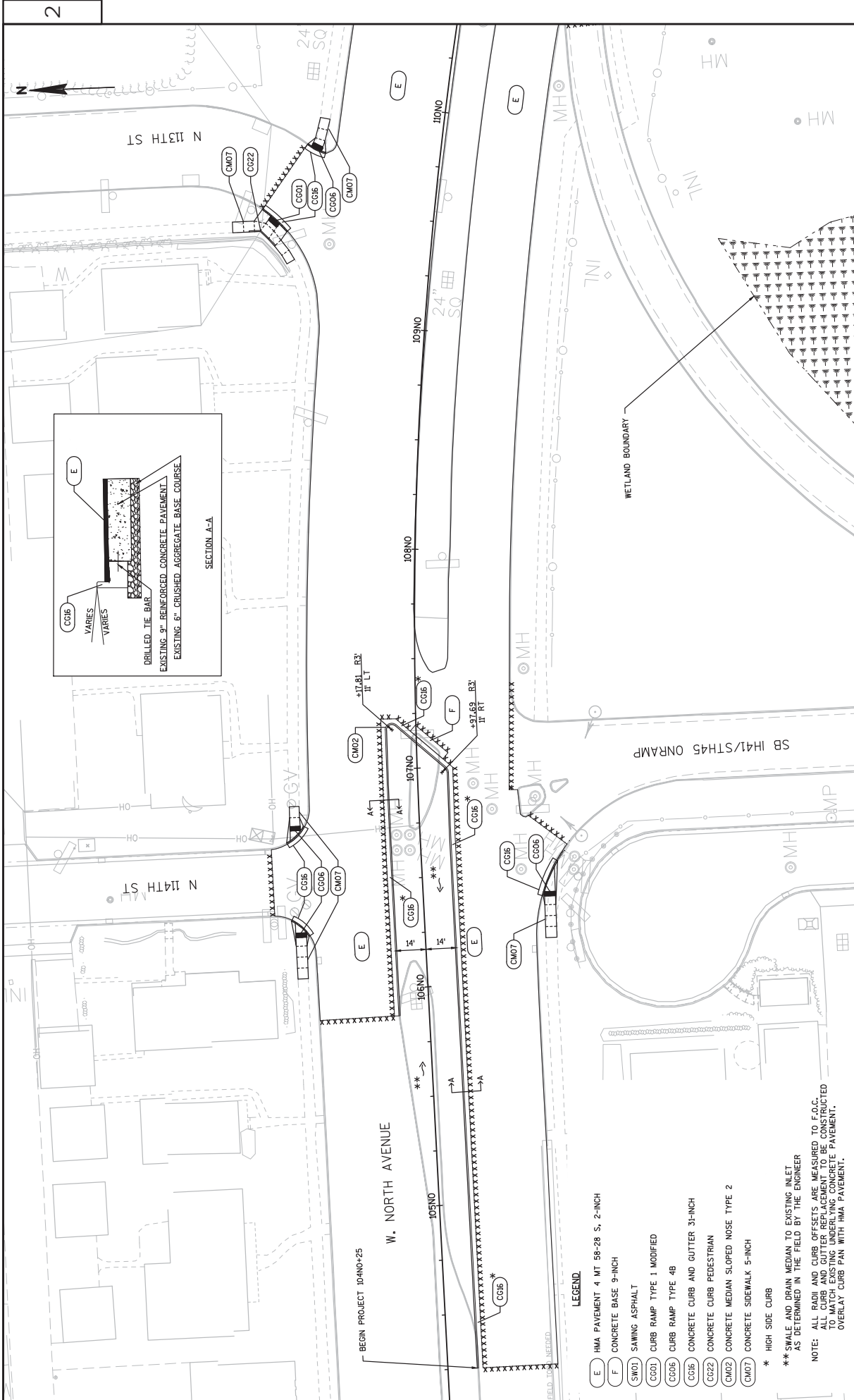
E

FILE NAME : W:\NPS\C3D\24450970\NPS\FPLAN\021001\_CD.DWG  
LAYOUT NAME - \*\*\*\*

PLOT BY : LARKIN, MICHAEL A

PLOT NAME :  
PLOT SCALE : 1 IN=10 FT

WSDOT/CADD SHEET 42



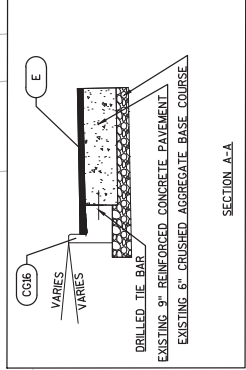
2

2

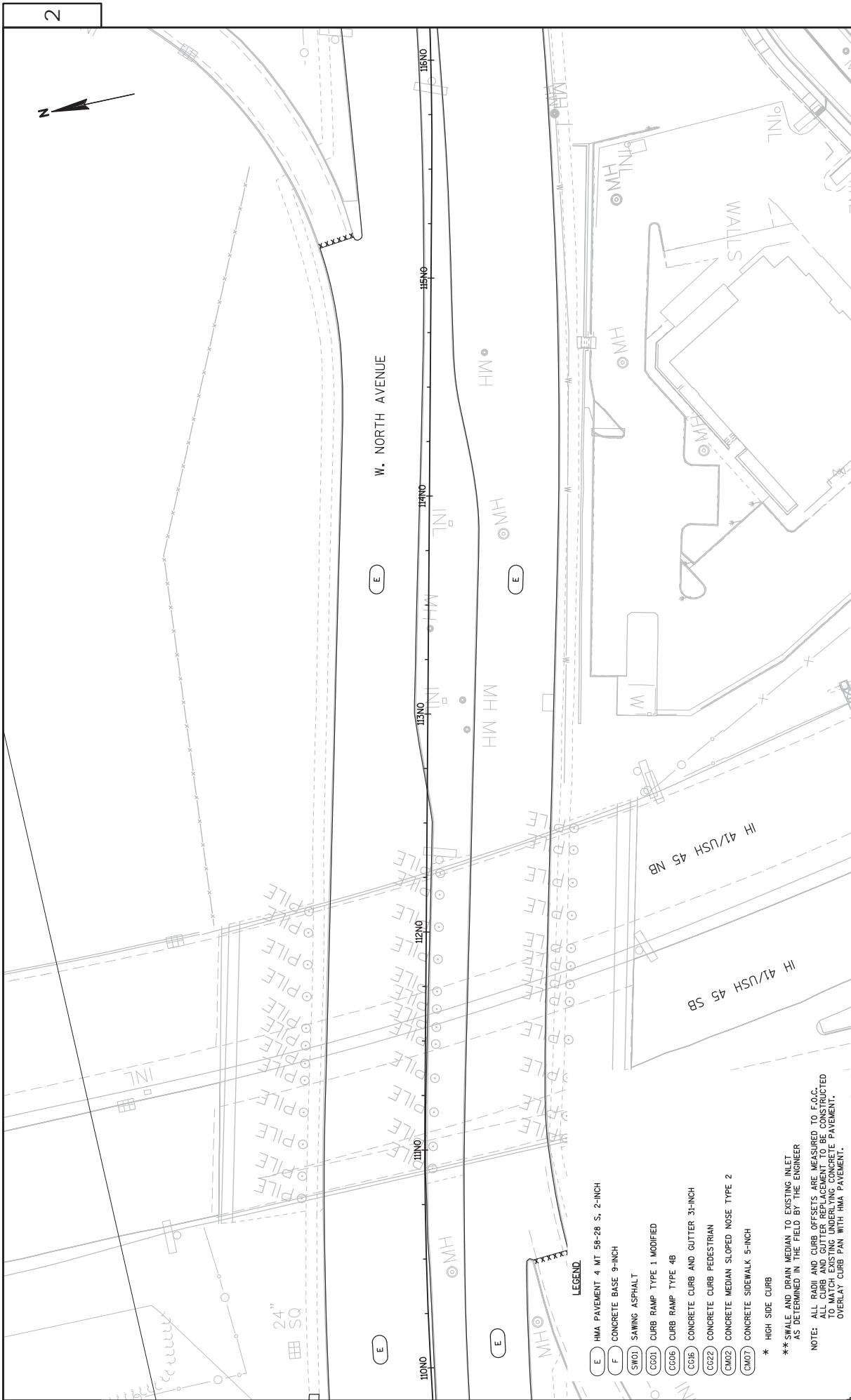
- LEGEND:**
- (E) HMA PAVEMENT 4 MT 58-28 S, 2-INCH
  - (F) CONCRETE BASE 9-INCH
  - (SWD) SAWING ASPHALT
  - (CC01) CURB RAMP TYPE 1 MODIFIED
  - (CC06) CURB RAMP TYPE 4B
  - (CC05) CONCRETE CURB AND GUTTER 31-INCH
  - (CC22) CONCRETE CURB PEDESTRIAN
  - (CM02) CONCRETE MEDIAN SLOPED NOSE TYPE 2
  - (CM07) CONCRETE SIDEWALK 5-INCH

\* HIGH SIDE CURB  
 \*\* SWALE AND DRAIN MEDIAN TO EXISTING INLET AS DETERMINED IN THE FIELD BY THE ENGINEER

NOTE: ALL RADI AND CURB OFFSETS ARE MEASURED TO F.O.C. UNLESS OTHERWISE NOTED. ALL CONSTRUCTION SHALL BE CONDUCTED TO MATCH EXISTING UNDERLYING CONCRETE PAVEMENT. OVERLAY CURB PAN WITH HMA PAVEMENT.

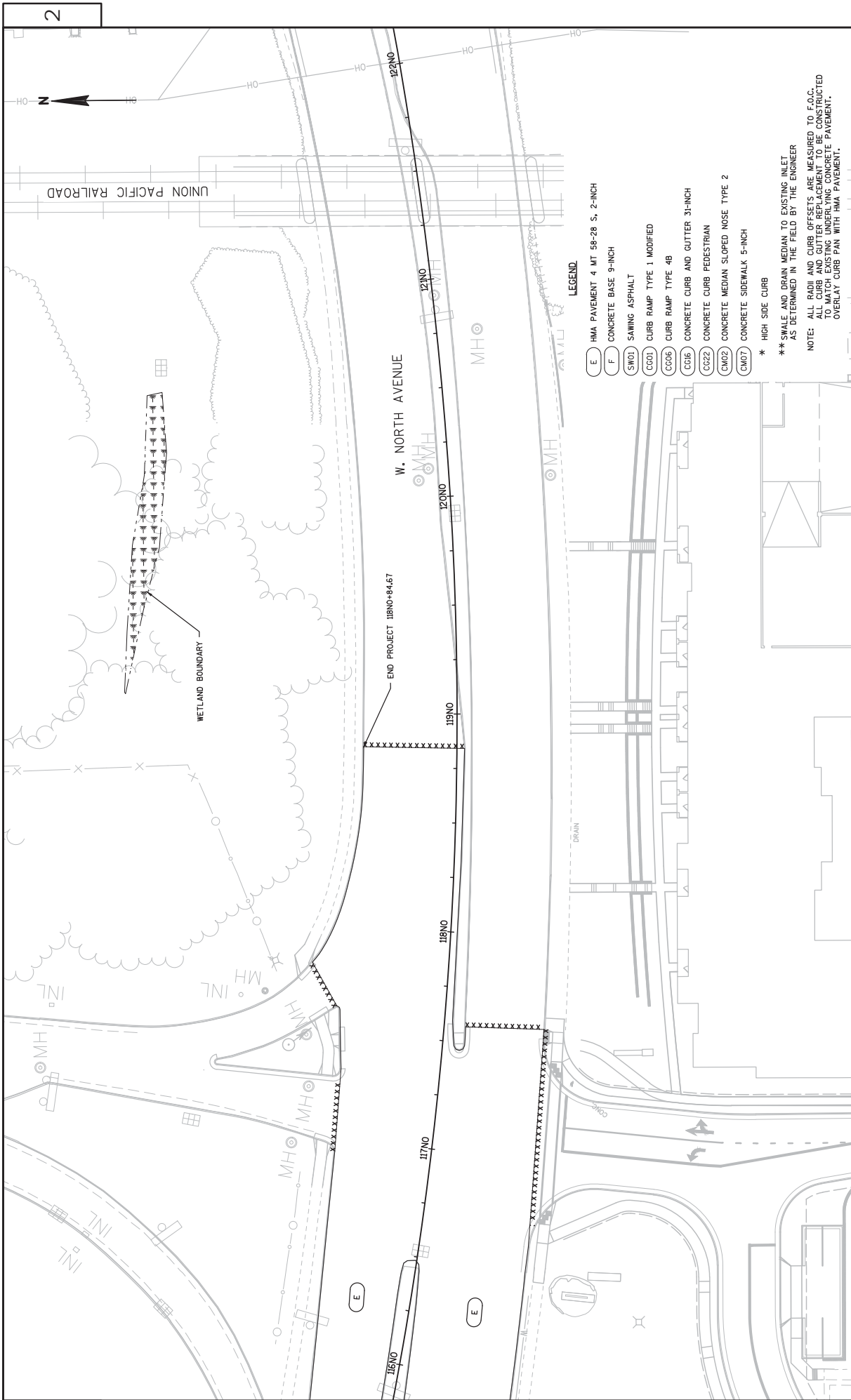






2

2

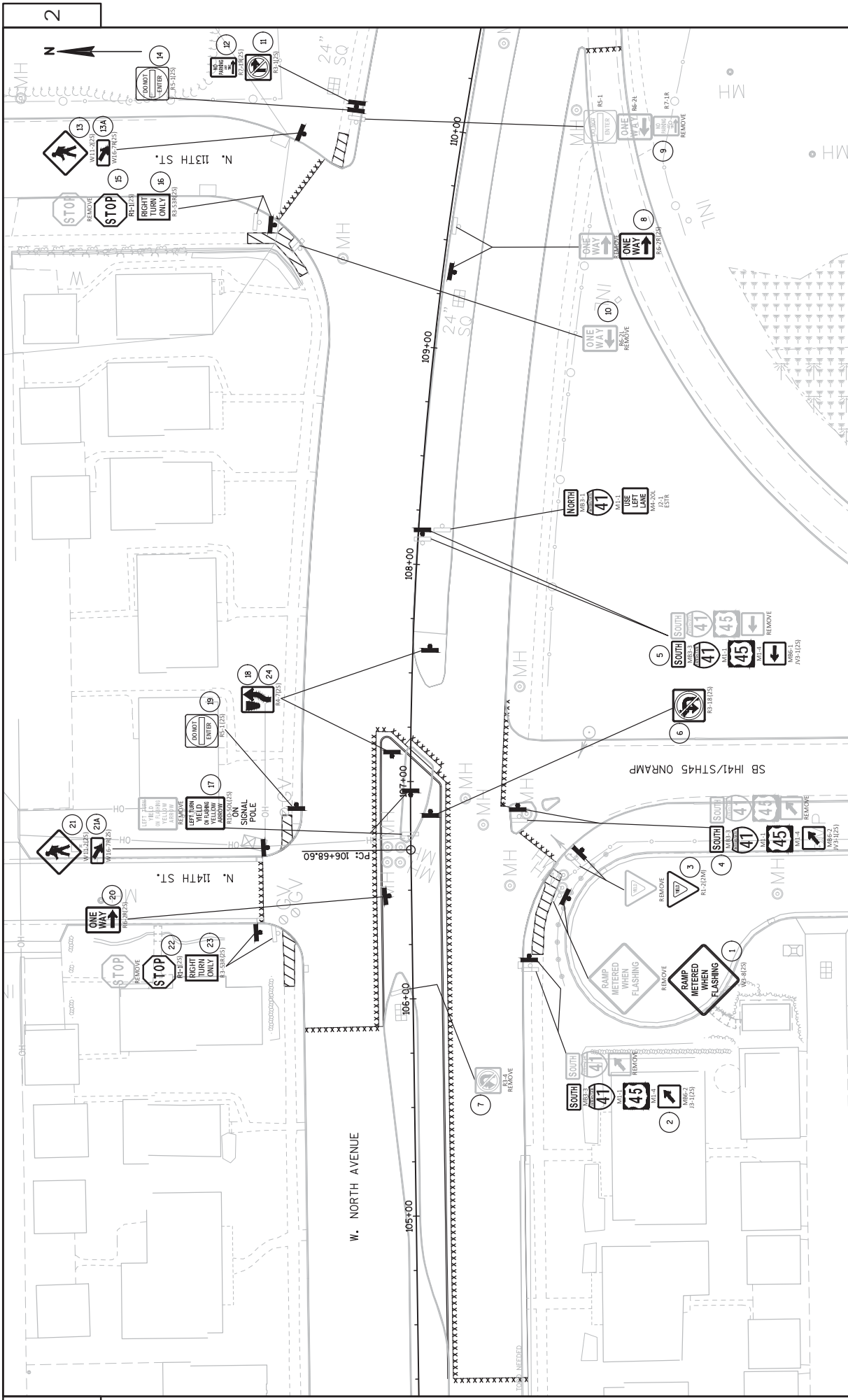


- LEGEND**
- (E) HMA PAVEMENT 4 MT 58-28 S, 2-INCH
  - (F) CONCRETE BASE 9-INCH
  - (SWD) SAWING ASPHALT
  - (CC01) CURB RAMP TYPE 1 MODIFIED
  - (CC06) CURB RAMP TYPE 4B
  - (CC0E) CONCRETE CURB AND GUTTER 31-INCH
  - (CC22) CONCRETE CURB PEDESTRIAN
  - (CM02) CONCRETE MEDIAN SLOPED NOSE TYPE 2
  - (CM07) CONCRETE SIDEWALK 5-INCH
- \* HIGH SIDE CURB

\*\* SWALE AND DRAIN MEDIAN TO EXISTING INLET AS DETERMINED IN THE FIELD BY THE ENGINEER

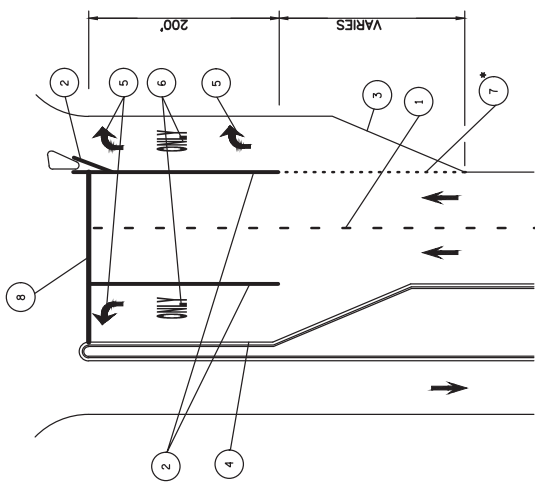
NOTE: ALL RADI AND CURB OFFSETS ARE MEASURED TO F.O.C. ALL CURB AND GUTTER REPLACEMENT TO BE CONSTRUCTED TO MATCH EXISTING UNDERLYING CONCRETE PAVEMENT. OVERLAY CURB PAN WITH HMA PAVEMENT.

PROJECT NO: 2445-09-70	HWY: NORTH AVENUE	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 10
FILE NAME : W:\NPOS\C3D\4450970\DSN\PLAN\021201.PD.DWG				
LAYOUT NAME : 22				
PLOT DATE : 3/13/2018 1:10 PM				
PLOT BY : MCGILLICUDDY, BENJAMIN				
PLOT SCALE : 1 IN=40 FT				
WISDOT/CADD SHEET 42				



2

2



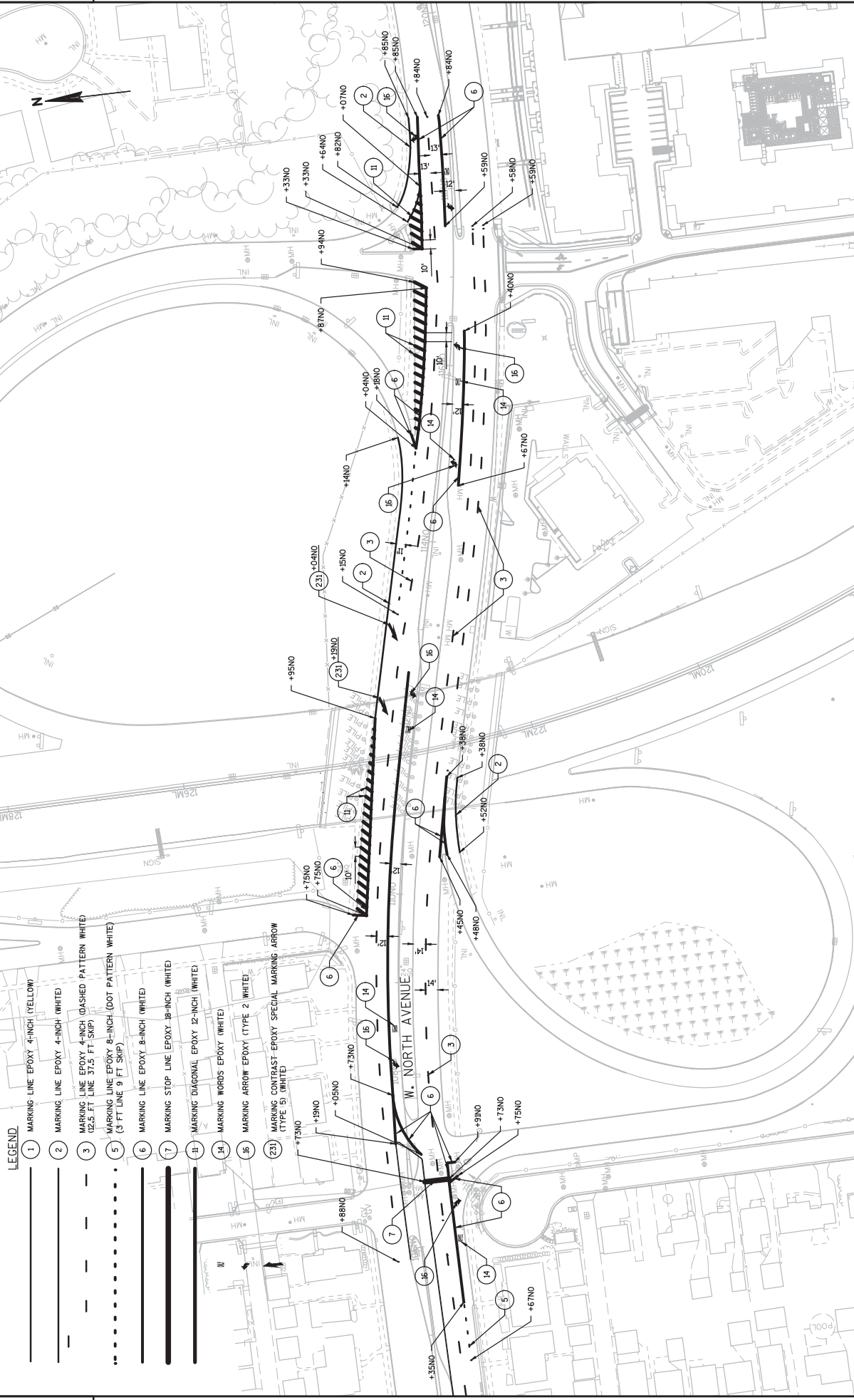
NOTE: SIGNALIZED INTERSECTION

\* (7) DOT PATTERN NOT NEEDED IF CURB & GUTTER UNLESS ON CURVE

**TYPICAL MARKING AT SIGNALIZED INTERSECTION CURB & GUTTER MEDIAN**

**LEGEND**

- (1) PAVEMENT MARKING 4" LANE LINE WHITE (12.5' LINE, 37.5' SPACE)
- (2) PAVEMENT MARKING 8" CHANNELIZING WHITE
- (3) PAVEMENT MARKING 4" WHITE EDGELINE 45 MPH & GREATER
- (4) PAVEMENT MARKING 4" YELLOW EDGELINE 45 MPH & GREATER
- (5) PAVEMENT MARKING TYPE 2 ARROW
- (6) PAVEMENT MARKING WORDS
- (7) PAVEMENT MARKING 8" WHITE (3' LINE, 9' SPACE)
- (8) PAVEMENT MARKING 18" STOP LINE



- LEGEND**
- 1 MARKING LINE EPOXY 4-INCH (YELLOW)
  - 2 MARKING LINE EPOXY 4-INCH (WHITE)
  - 3 MARKING LINE EPOXY 4-INCH (DASHED PATTERN WHITE) (2.5 FT LINE 37.5 FT SKIP)
  - 5 MARKING LINE EPOXY 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
  - 6 MARKING LINE EPOXY 8-INCH (WHITE)
  - 7 MARKING STOP LINE EPOXY 18-INCH (WHITE)
  - 11 MARKING DIAGONAL EPOXY 12-INCH (WHITE)
  - 14 MARKING WORDS EPOXY (WHITE)
  - 16 MARKING ARROW EPOXY (TYPE 2 WHITE)
  - 23 MARKING CONTRAST-EPOXY SPECIAL MARKING ARROW (TYPE 5) (WHITE)

PROJECT NO: 2445-09-70

HWY: NORTH AVENUE

COUNTY: MILWAUKEE

PAVEMENT MARKING

SHEET 13

E

FILE NAME : W:\NPS\C3D\24450970\DSN\FPLAN\024501\_P.M.DWG

LAYOUT NAME - 12

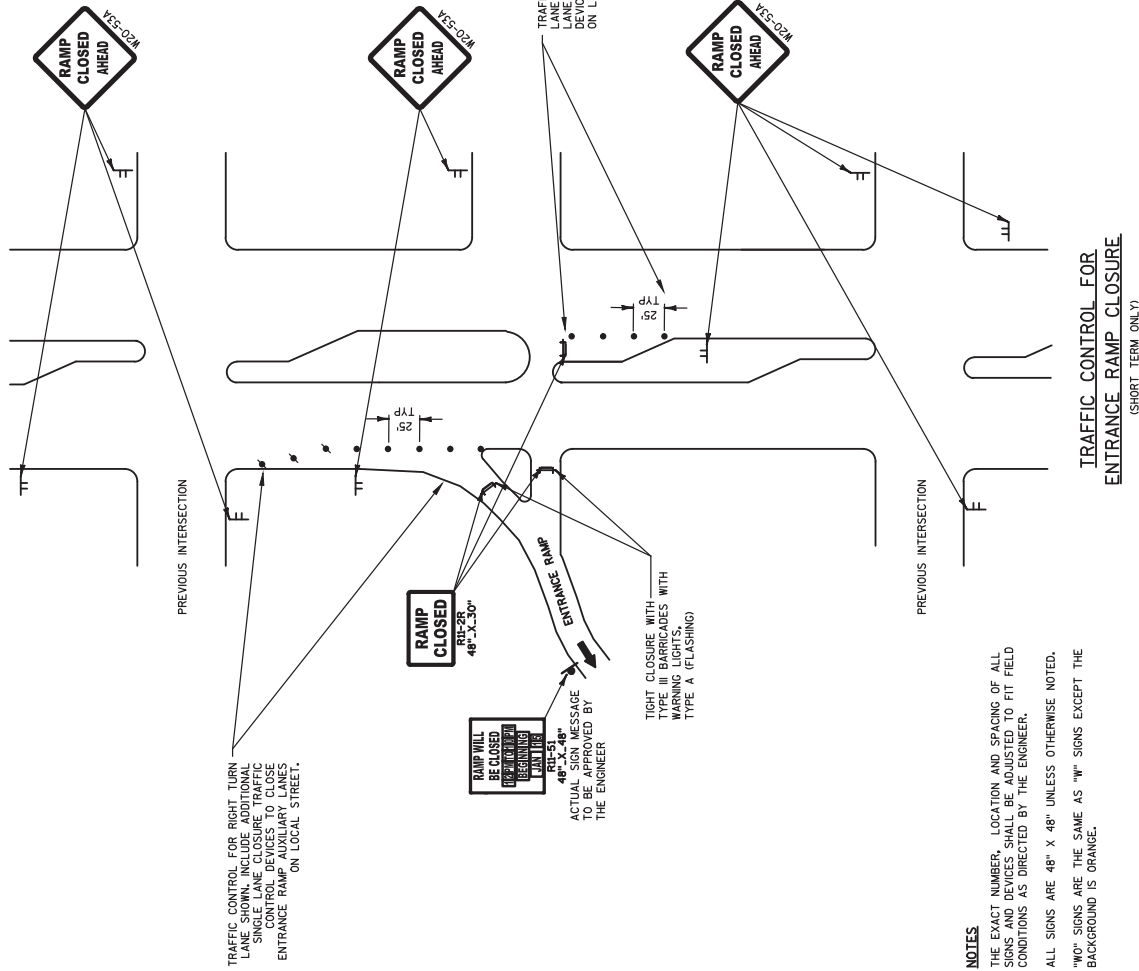
PLOT DATE : 3/14/2018 9:25 AM

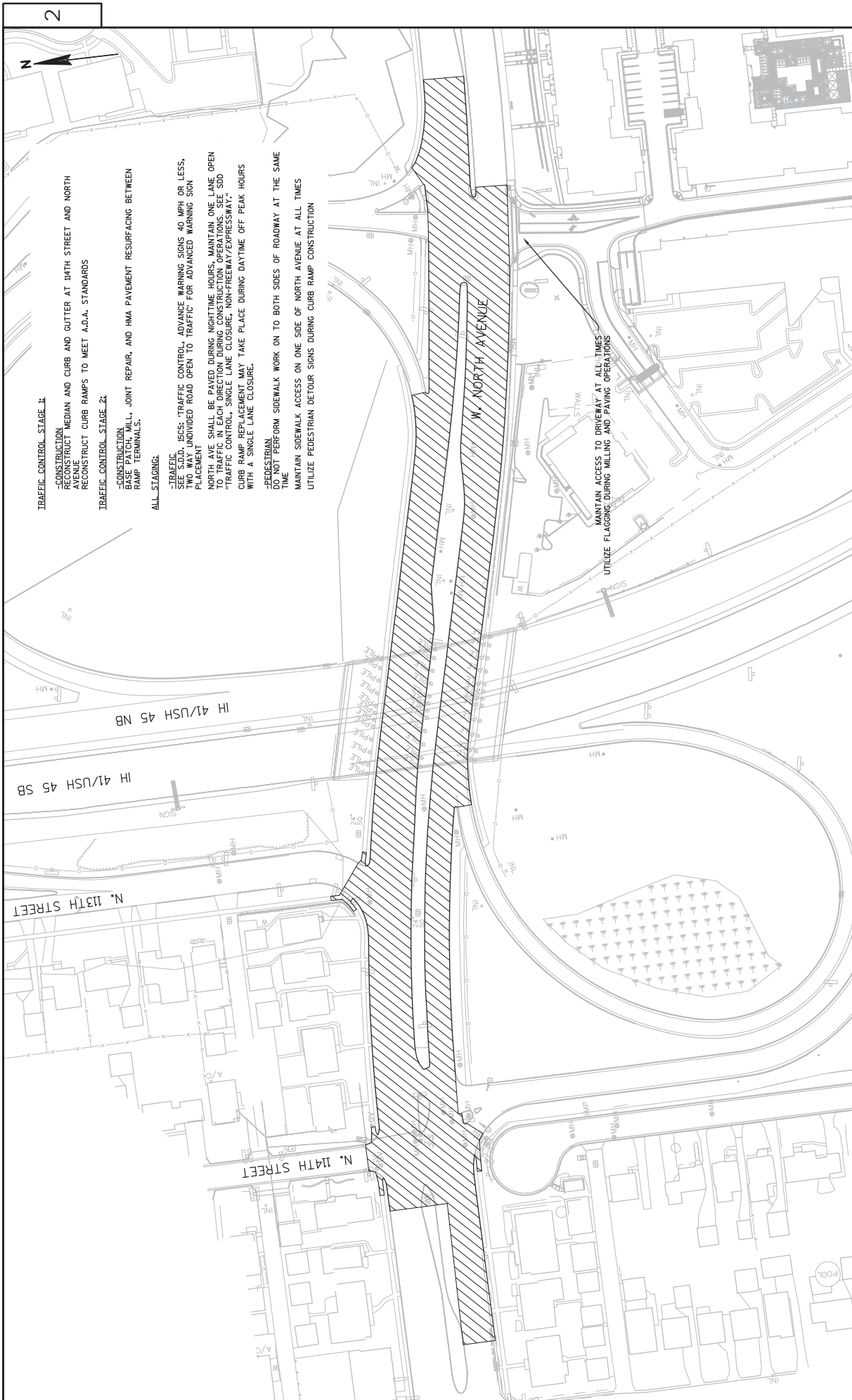
PLOT BY : LARKIN, MICHAEL A

PLOT NAME :

PLOT SCALE : 1 IN=100 FT

WSDOT/CADD SHEET 42





2

2

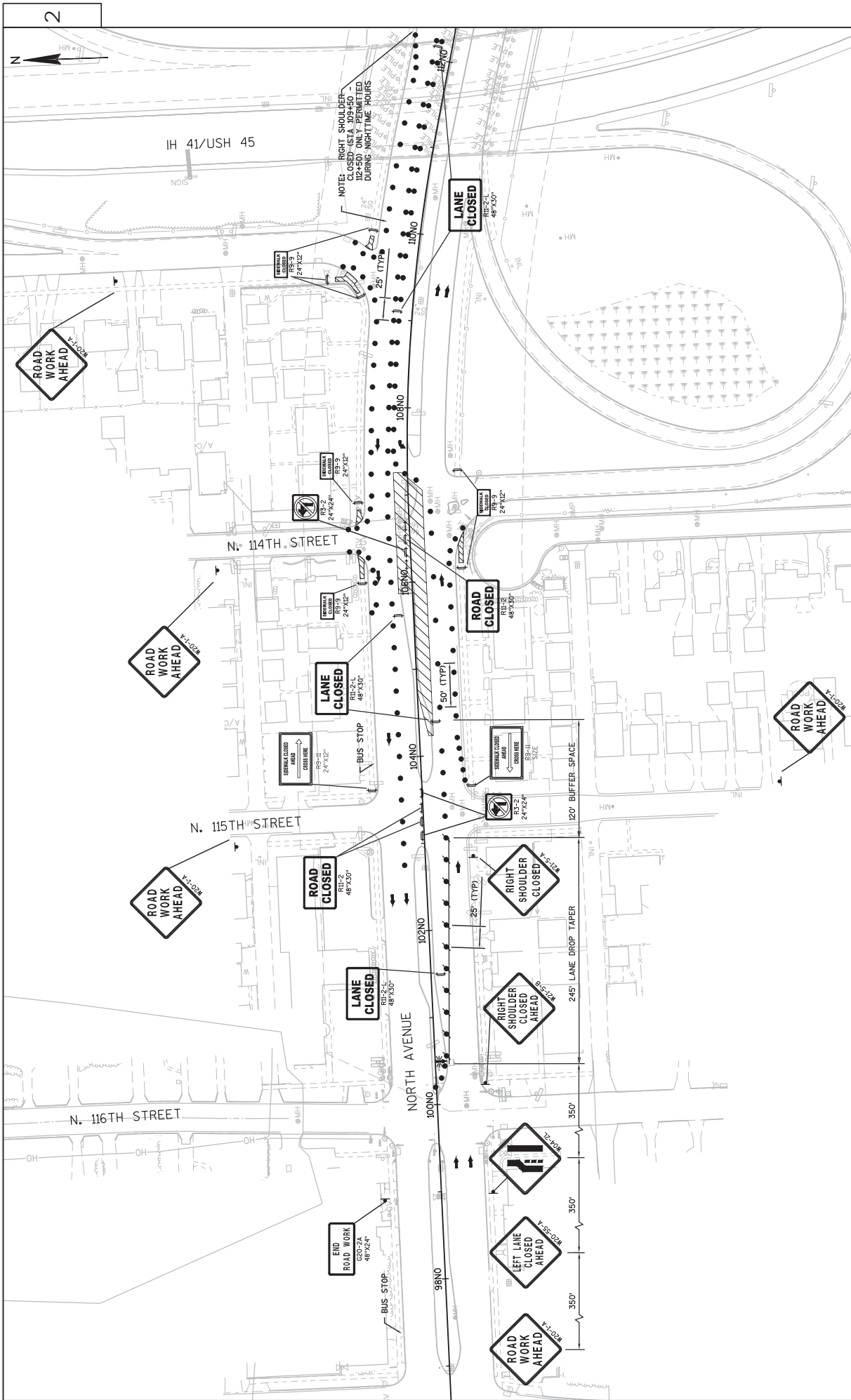
**TRAFFIC CONTROL STAGE 1:**  
 -CONSTRUCTION  
 RECONSTRUCT MEDIAN AND CURB AND GUTTER AT 14TH STREET AND NORTH AVENUE  
 RECONSTRUCT CURB RAMPS TO MEET A.D.A. STANDARDS

**TRAFFIC CONTROL STAGE 2:**  
 -CONSTRUCTION  
 BASE PATCH, MILL, JOINT REPAIR, AND HMA PAVEMENT RESURFACING BETWEEN RAMP TERMINALS.

**ALL STAGINGS:**  
 -TRAFFIC SIGNS: "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" FOR ADVANCED WARNING SIGN PLACEMENT  
 NORTH AVE SHALL BE PAVED DURING NIGHTTIME HOURS, MAINTAIN ONE LANE OPEN TO TRAFFIC IN EACH DIRECTION DURING CONSTRUCTION OPERATIONS. SEE SDD  
 "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEMWAY/EXPRESSWAY."  
 CURB RAMP REPLACEMENT MAY TAKE PLACE DURING DAYTIME OFF PEAK HOURS WITH A SINGLE LANE CLOSURE.

-PEDESTRIAN  
 DO NOT PERFORM SIDEWALK WORK ON TO BOTH SIDES OF ROADWAY AT THE SAME TIME  
 MAINTAIN SIDEWALK ACCESS ON ONE SIDE OF NORTH AVENUE AT ALL TIMES  
 UTILIZE PEDESTRIAN DETOUR SIGNS DURING CURB RAMP CONSTRUCTION

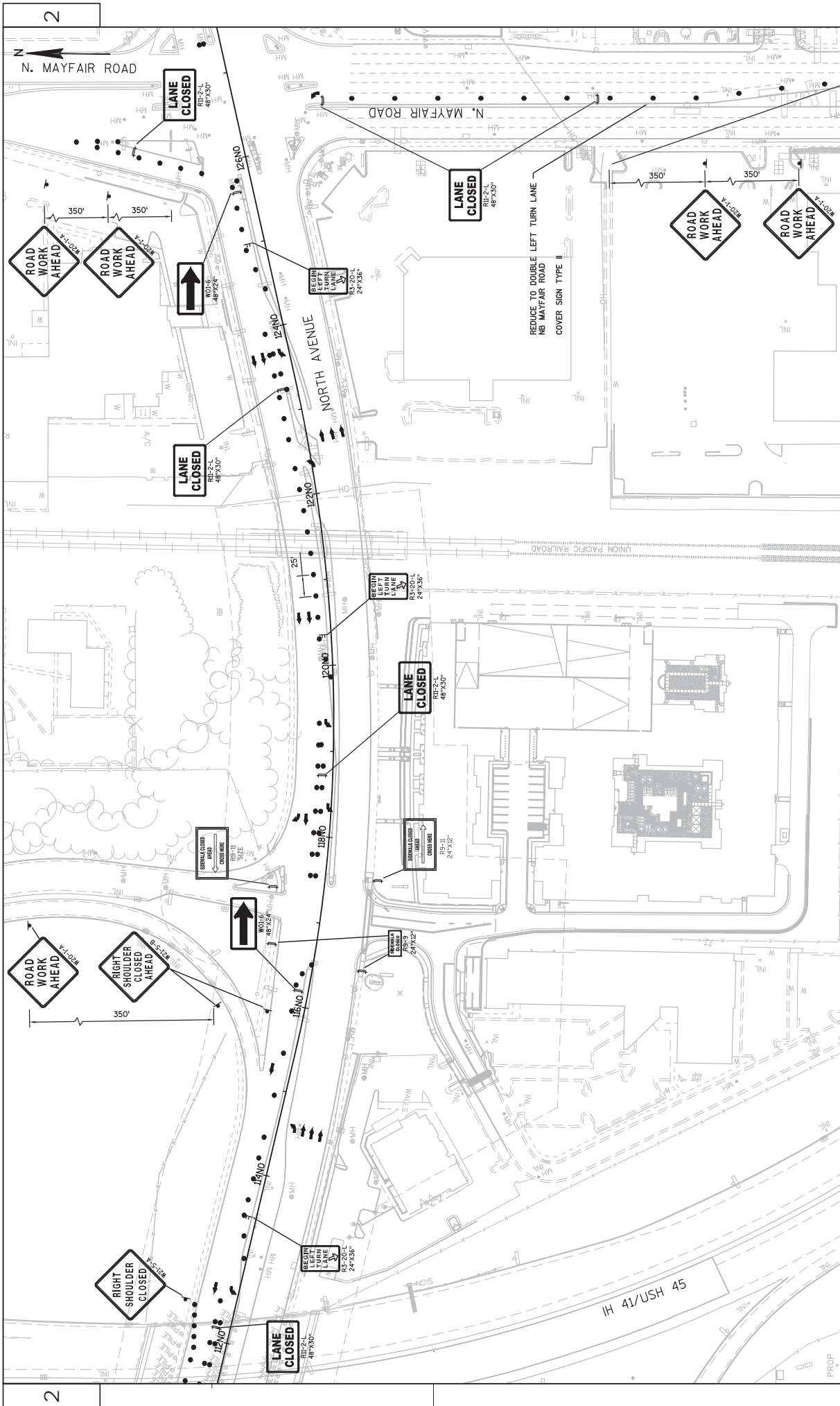
MAINTAIN ACCESS TO DRIVEWAY AT ALL TIMES  
 UTILIZE FLAGGING DURING MILLING AND PAVING OPERATIONS



2

2





2

N. MAYFAIR ROAD

N. MAYFAIR ROAD

NORTH AVENUE

PROJECT NO: 2445-09-70  
 COUNTY: MILWAUKEE  
 HWY: NORTH AVENUE  
 TRAFFIC CONTROL - NORTH AVENUE STAGE 1  
 SHEET 17  
 WISDOT/CADD SHEET 42

FILE NAME : M:\N\POS\C3D\24450970\DSN\PLAN\026203\_TC.DWG  
 LAYOUT NAME - 05

PLOT BY : MCGILLICUDDY, BENJAMIN

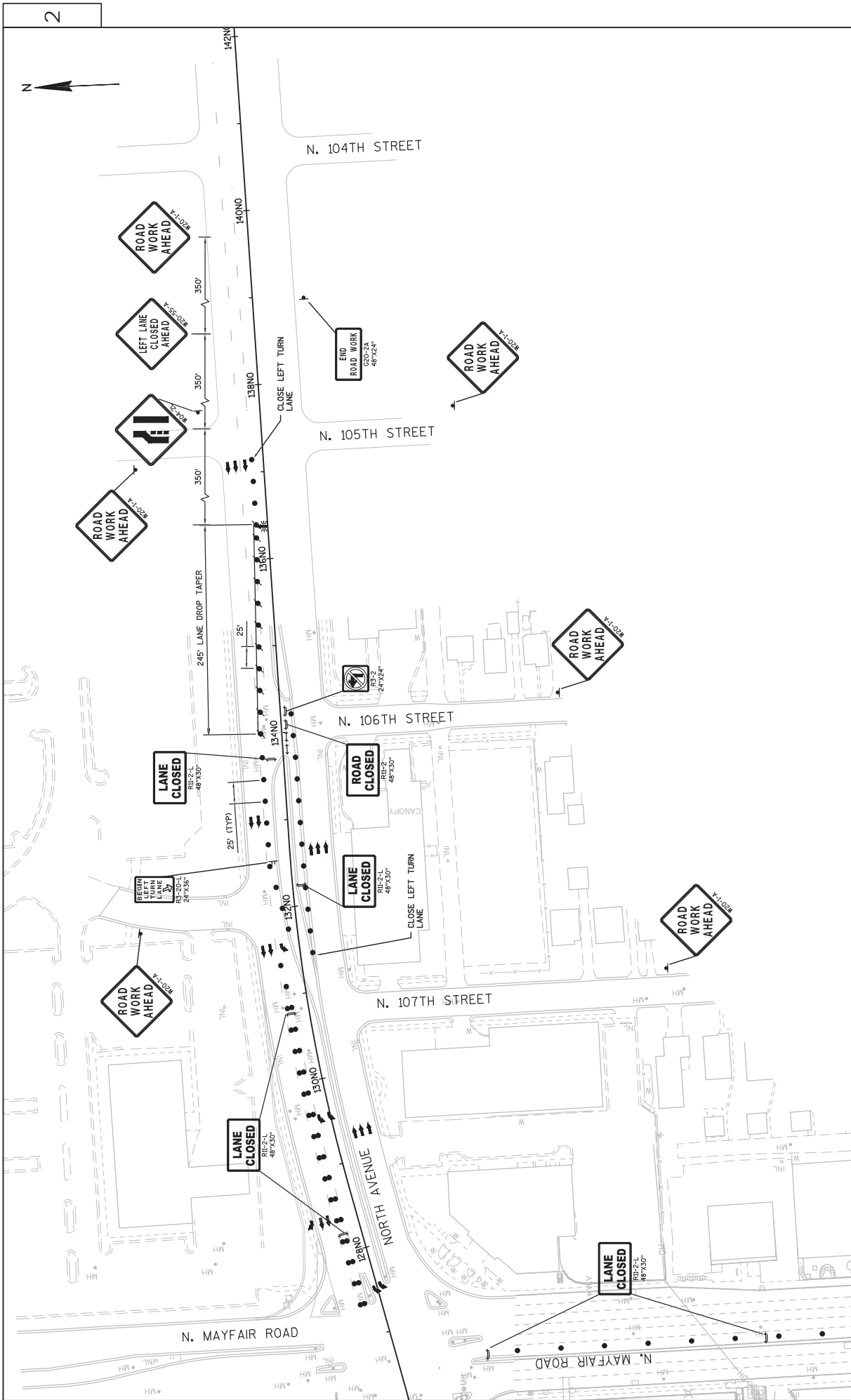
TRAFFIC CONTROL - NORTH AVENUE STAGE 1

COUNTY: MILWAUKEE

HWY: NORTH AVENUE

PROJECT NO: 2445-09-70

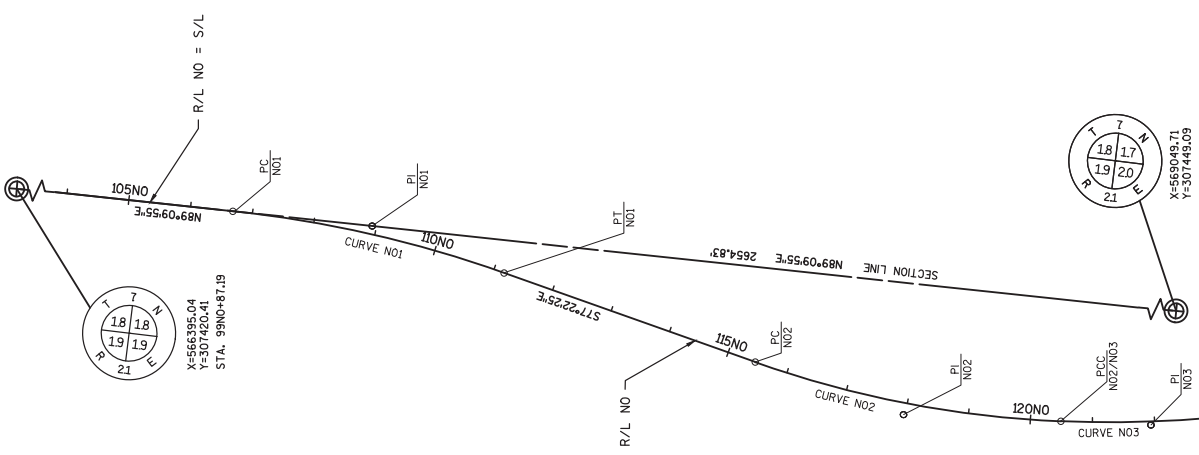
FILE NAME : M:\N\POS\C3D\24450970\DSN\PLAN\026203\_TC.DWG  
 LAYOUT NAME - 05



2

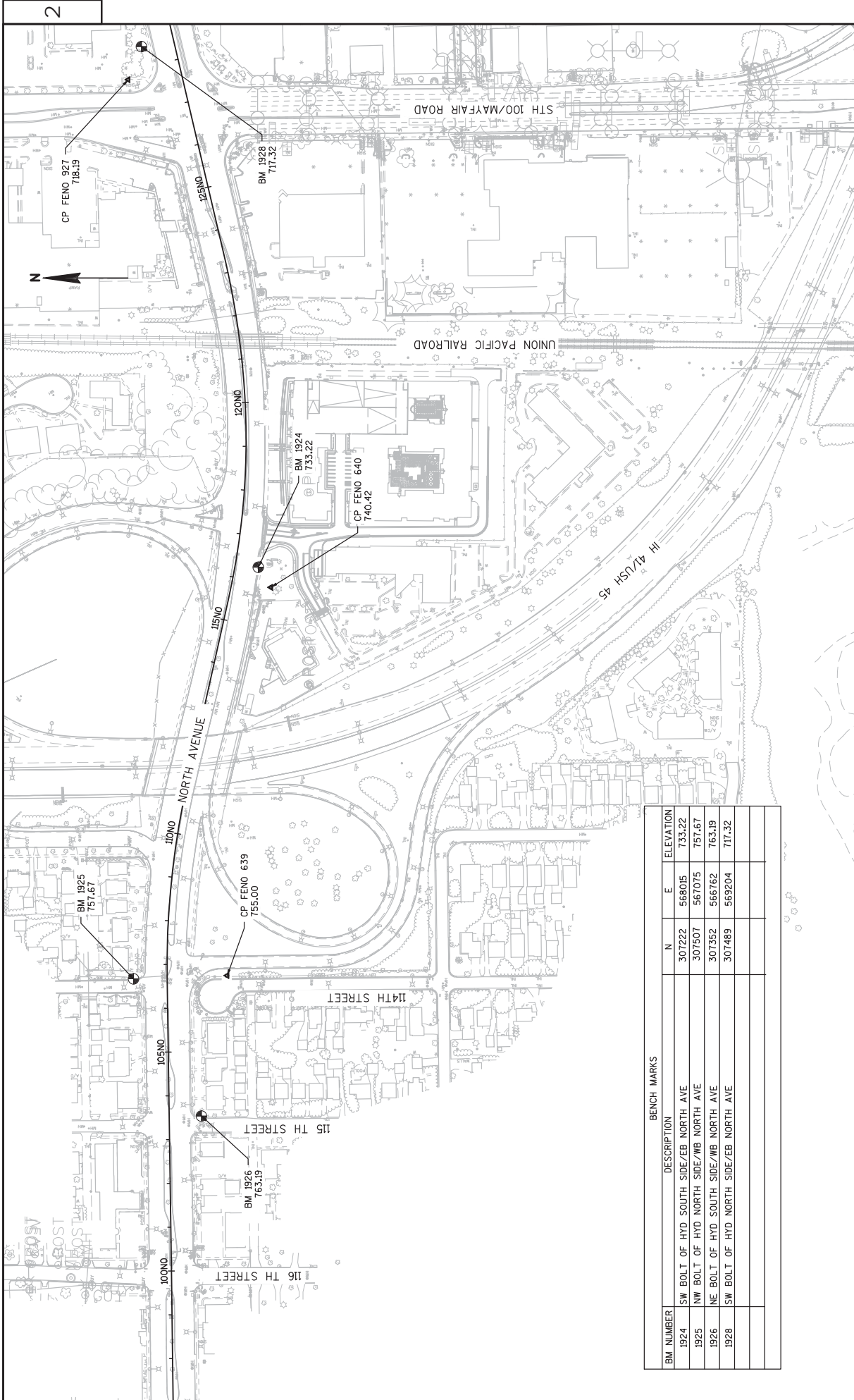
2

PROJECT NO: 2445-09-70	COUNTY: MILWAUKEE	TRAFFIC CONTROL - NORTH AVENUE STAGE 1	SHEET 18	E
FILE NAME : W:\XPOS\C3D\44450970\DSN\PLAN\026203-TC.DWG	LAYOUT NAME - 06	PLANT DATE : 3/14/2018 11:27 AM	PLANT SCALE : 1 IN=100 FT	WISDOT/CADD'S SHEET 42
HWY: NORTH AVENUE		FILE NAME : W:\XPOS\C3D\44450970\DSN\PLAN\026203-TC.DWG		



X=566395.04  
 Y=307420.41  
 STA. 99NC+87.19

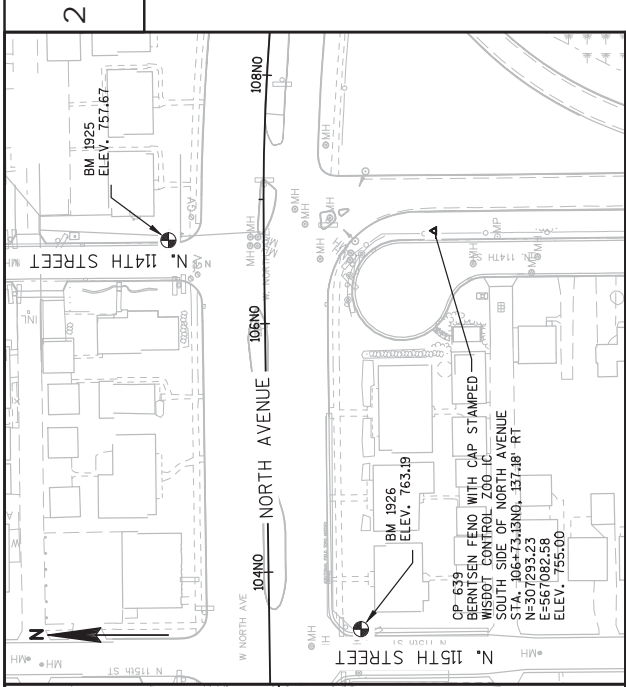
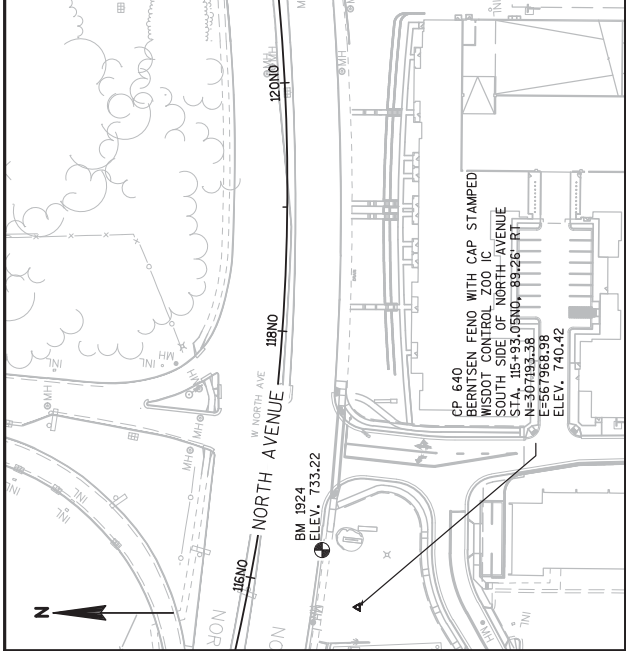
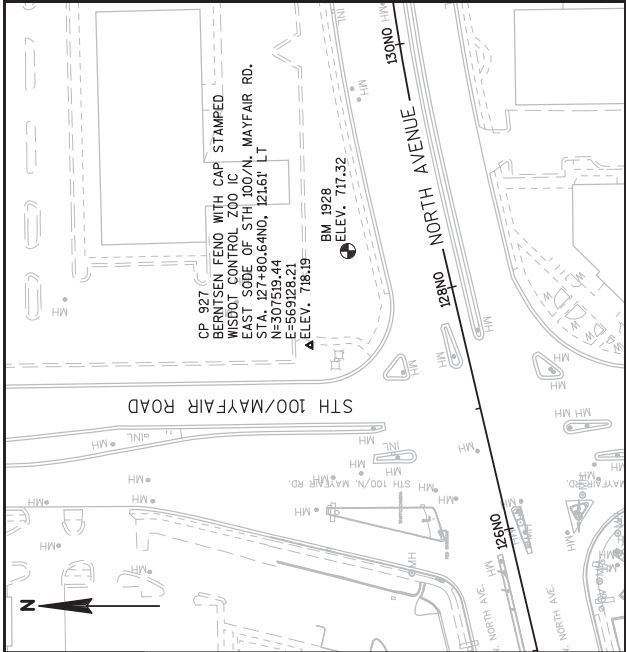
CURVE DATA											
CURVE NO.	PI STA	PI EASTING	PI NORTHING	DELTA	D	T	L	E	R	PC	PT
N01	108+93.99NO	567301.74	307433.62	13°27'40"	3°00'00"	225.39	448.71	13.25	1909.85	106+48.60NO	111+17.30NO
N02	117+95.79NO	568187.61	307235.18	17°40'20"	3°24'47"	253.46	503.13	19.03	1678.71	115+46.27NO	120+49.39NO
N03	121+94.44NO	568584.86	307266.76	8°41'07"	2°59'59"	145.04	289.53	5.50	1910.03	120+49.39NO	123+38.93NO



BENCH MARKS		
BM NUMBER	DESCRIPTION	ELEVATION
1924	SW BOLT OF HYD SOUTH SIDE/EB NORTH AVE	733.22
1925	NW BOLT OF HYD NORTH SIDE/MB NORTH AVE	757.67
1926	NE BOLT OF HYD SOUTH SIDE/MB NORTH AVE	763.19
1928	SW BOLT OF HYD NORTH SIDE/EB NORTH AVE	717.32

2

2



2

2

PROJECT NO: 2445-09-70

HWY: NORTH AVENUE

COUNTY: MILWAUKEE

ALIGNMENT LAYOUT - SURVEY CONTROL

SHEET

21

E

FILE NAME : W:\NPD\330\4450970\DSN\FPLAN\027251\_AD\_CP.DWG

LAYOUT NAME - 02

PLOT DATE : 2/28/2018 1:07 PM

PLOT BY : LARKIN, MICHAEL A

PLOT NAME :

PLOT SCALE : \*\*\*\*\*

WISDOT/CADD SHEET 42

Estimate Of Quantities By Plan Sets

2445-09-70

Line	Item	Item Description	Unit	Total	Qty
0020	204.0100	Removing Pavement	SY	637.000	637.000
0022	204.0120	Removing Asphaltic Surface Milling	SY	11,949.000	11,949.000
0024	204.0150	Removing Curb & Gutter	LF	68.000	68.000
0026	204.0155	Removing Concrete Sidewalk	SY	72.000	72.000
0052	208.0100	Borrow	CY	425.000	425.000
0058	213.0100	Finishing Roadway (project) 0002, 2445-09-70	EACH	1.000	1.000
0062	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	115.000	115.000
0064	320.0155	Concrete Base 9-Inch	SY	10.000	10.000
0066	390.0403	Base Patching Concrete Shes	SY	160.000	160.000
0070	416.0610	Drilled Tie Bars	EACH	259.000	259.000
0072	416.0620	Drilled Dowel Bars	EACH	160.000	160.000
0078	455.0605	Tack Coat	GAL	717.000	717.000
0080	460.2000	Incentive Density HMA Pavement	DOL	1,000.000	1,000.000
0086	460.6224	HMA Pavement 4 MT 58-28 S	TON	1,389.000	1,389.000
0094	495.1000.S	Cold patch	TON	5.000	5.000
0176	601.0331	Concrete Curb & Gutter 31-Inch	LF	506.000	506.000
0182	601.0600	Concrete Curb Pedestrian	LF	15.000	15.000
0184	602.0410	Concrete Sidewalk 5-Inch	SF	645.000	645.000
0186	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	50.000	50.000
0254	625.0100	Topsoil	SY	773.000	773.000
0256	627.0200	Mulching	SY	773.000	773.000
0262	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0264	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0268	628.2008	Erosion Mat Urban Class I Type B	SY	773.000	773.000
0274	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0276	628.7020	Inlet Protection Type D	EACH	24.000	24.000
0284	629.0210	Fertilizer Type B	CWT	0.500	0.500
0288	630.0140	Seeding Mixture No. 40	LB	24.000	24.000
0294	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	11.000	11.000
0296	634.0622	Posts Wood 4x6-Inch X 22-FT	EACH	2.000	2.000
0298	634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	4.000	4.000
0308	637.2210	Signs Type II Reflective H	SF	123.420	123.420
0310	637.2215	Signs Type II Reflective H Folding	SF	7.460	7.460
0312	637.2230	Signs Type II Reflective F	SF	32.500	32.500
0316	638.2102	Moving Signs Type II	EACH	2.000	2.000
0318	638.2602	Removing Signs Type II	EACH	10.000	10.000
0320	638.3000	Removing Small Sign Supports	EACH	10.000	10.000
0326	643.0300	Traffic Control Drums	DAY	6,786.000	6,786.000
0328	643.0410	Traffic Control Barricades Type II	DAY	73.000	73.000
0330	643.0420	Traffic Control Barricades Type III	DAY	672.000	672.000

Estimate Of Quantities By Plan Sets

2445-09-70

Line	Item	Item Description	Unit	Total	Qty
0336	643.0705	Traffic Control Warning Lights Type A	DAY	1,591,000	1,591,000
0338	643.0715	Traffic Control Warning Lights Type C	DAY	710,000	710,000
0340	643.0800	Traffic Control Arrow Boards	DAY	72,000	72,000
0342	643.0900	Traffic Control Signs	DAY	1,667,000	1,667,000
0344	643.0920	Traffic Control Covering Signs Type II	EACH	26,000	26,000
0358	646.1020	Marking Line Epoxy 4-Inch	LF	1,343,000	1,343,000
0364	646.3020	Marking Line Epoxy 8-Inch	LF	1,735,000	1,735,000
0366	646.5020	Marking Arrow Epoxy	EACH	9,000	9,000
0368	646.5120	Marking Word Epoxy	EACH	6,000	6,000
0370	646.6120	Marking Stop Line Epoxy 18-Inch	LF	18,000	18,000
0372	646.7120	Marking Diagonal Epoxy 12-Inch	LF	451,000	451,000
0374	646.8120	Marking Curb Epoxy	LF	150,000	150,000
0376	646.8220	Marking Island Nose Epoxy	EACH	4,000	4,000
0382	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	500,000	500,000
0390	690.0150	Sawing Asphalt	LF	384,000	384,000
0392	690.0250	Sawing Concrete	LF	1,086,000	1,086,000
0428	SPV.0090	Special 0001. Joint and Crack Repair	LF	1,000,000	1,000,000
0436	SPV.0105	Special 0002. Survey Project 2445-09-70	LS	1,000	1,000
0438	SPV.0105	Special 0003. Pavement Cleanup Project 2445-09-70	LS	1,000	1,000

REMOVALS

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET			
1000	W. NORTH AVE	104+25NO	118+84NO	MED		637		
						637	11,949	72
<u>TOTALS:</u>						637	11,949	72

\*\* NOTE: MILLING OF CONCRETE BASE PATCH AREA, EXISTING FULL DEPTH CONCRETE PATCHES, AND FULL DEPTH CONCRETE UTILITY TRENCHES IS INCIDENTAL TO THIS ITEM.

BORROW

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET		
1000	W. NORTH AVE	104+25NO	107+23NO	MED		425	
<u>TOTALS:</u>						425	

FINISHING ROADWAY PROJECT ID 2445-09-70

CATEGORY	STAGE	LOCATION	
1000	ALL	PROJECT	1
<u>TOTAL:</u>			1

PROJECT NO: 2445-09-70

HWY: NORTH AVENUE

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET: E

FILE NAME

PLOT DATE: 3/14/2018

PLOT BY:

PLOT NAME:

24



BASE AGGREGATE ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	TON
1000		W, NORTH AVE	104+25NO		109+91NO	115
<u>TOTALS:</u>						115

ASPHALTIC PAVEMENT ITEMS

CATEGORY	LOCATION	STATION	TO	STATION	COAT	GAL	TACK	HMA PAVEMENT	DOL	HMA PAVEMENT	TON	COLD PATCH	TON	JOINT AND CRACK REPAIR	LF
1000	W, NORTH AVE	104+25NO		118+84NO		717		4 MT 58-28 S			1,389	5		1,000	
<u>TOTALS:</u>						717			1,000		1,389	5		1,000	

CONCRETE ITEMS

CATEGORY	ROADWAY	LOCATION	OFFSET	SY	CONCRETE BASE	CONCRETE SHES	PATCHING	BASE	320.0155	390.0403	416.0610	416.0620	601.0331	601.0600	602.0410	602.0505	690.0250
1000	W, NORTH AVE	104+25NO	118+84NO	L/T/RT	--	--	--	--	169	--	--	506	15	645	645	--	606
	W, NORTH AVE	106+27NO	109+79NO	L/T/RT	10	--	--	--	10	--	--	--	--	--	--	50	--
	UNDISTRIBUTED				--	160	--	--	80	160	160	--	--	--	--	--	480
<u>TOTALS:</u>						10	160	259	160	506	15	645	50	1,086			

SAWING

690.0150  
SAWING  
ASPHALT LF

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	LF
1000	W. NORTH AVE	104+25NO		118+84NO	L/RT	384
<u>TOTAL:</u>						384

INLET PROTECTION

628.1905 628.1910 628.7005 628.7020

MOBILIZATIONS  
EROSION CONTROL EACH  
EMERGENCY EROSION CONTROL EACH  
INLET PROTECTION TYPE A EACH  
INLET PROTECTION TYPE D EACH

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	TYPE A	TYPE D	EACH
1000	W. NORTH AVE UNDISTRIBUTED	105+95NO		119+94NO	L/RT	2	--	2
<u>TOTALS:</u>						2	--	3

RESTORATION ITEMS

625.0100 627.0200 628.2008 629.0210 630.0140  
TOPSOIL MULCHING EROSION MAT FERTILIZER SEEDING  
SY SY TYPEB SY TYPEB MIXTURE NO. 40  
L/RT L/RT SY SY CWT LB

CATEGORY	ROADWAY	STATION	TO	STATION	LOCATION	SY	SY	SY	CWT	LB
1000	W. NORTH AVE	104+25NO		109+92NO	L/RT	773	773	773	0.5	24
<u>TOTALS:</u>						773	773	773	0.5	24

TRAFFIC CONTROL ITEMS

CATEGORY	STAGE LOCATION	DURATION DAYS	STAGE CONTROL DRUMS	643.0300		643.0410		643.0420		643.0705		643.0715		643.0800		643.0900		643.0920	
				EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY
1000	1 W. NORTH AVE	21	274	5754	3	63	504	47	987	22	462	2	42	59	1239	1	21		
	2 W. NORTH AVE	10	54	540	--	--	20	4	216	10	100	1	10	12	120	--	--		
	RAMP	8	24	192	--	--	48	12	288	6	48	--	--	26	208	--	--		
	UNDISTRIBUTED		300	300	10	100	100		100		100	20	20	100	100				
TOTALS:				6,786		73	672		1,591		710		72		1,667		26		

PAVEMENT MARKING ITEMS

CATEGORY	LOCATION	STATION	646.1020		646.3020		646.5020		646.5120		646.6120		646.7120		646.8120		646.8220	
			WHITE LF	WHITE LF	MARKING LINE EPOXY 8-INCH	MARKING LINE EPOXY 8-INCH	MARKING ARROW EPOXY	MARKING WORD EPOXY	MARKING STOP LINE EPOXY	MARKING DIAGONAL EPOXY	MARKING CURB EPOXY	MARKING ISLAND EPOXY	MARKING 12-INCH WHITE LF	MARKING 18-INCH LF	MARKING 12-INCH WHITE LF	MARKING 18-INCH LF	MARKING 12-INCH WHITE LF	MARKING 18-INCH LF
1000	W. NORTH AVE EB	104+25NO	488	73	18	333	3	3	3	18	--	80	2	--	80	2		
	W. NORTH AVE WB	104+25NO	325	457	48	1,336	4	2	3	--	451	70	2	451	70	2		
TOTALS:			813	530	66	1,669	7	9	6	18	451	150	4	1,343	1,735			

SURVEY PROJECT

SPV.0105.0002  
SURVEY  
PROJECT  
2445-09-70

CATEGORY STAGE LOCATION LS

1000 ALL PROJECT 1

TOTAL: 1

PAVEMENT CLEANUP

SPV.0105.0003  
PAVEMENT CLEANUP  
PROJECT 2445-09-70

CATEGORY STAGE LOCATION LS

1000 ALL PROJECT 1

TOTAL: 1

TEMPORARY PAVEMENT MARKING ITEMS

649.0150

TEMPORARY  
MARKING  
LINE  
REMOVABLE  
TAPE  
4-INCH  
LF

CATEGORY STAGE LOCATION STATION TO STATION LF

1000 1 W. NORTH AVE. 100+50NO 103+00NO 250  
W. NORTH AVE. 134+00NO 136+50NO 250

TOTALS: 500

PROJECT NO: 2445-09-70

HWY: NORTH AVENUE

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET: E

FILE NAME

PLOT DATE: 3/14/2018

PLOT BY:

PLOT NAME: \_\_\_\_\_

TYPE I & II PERMANENT SIGNING

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN] x [IN]	SIGN TYPE II REFLECTIVE H [SF]	SIGN TYPE II REFLECTIVE F [SF]	SIGN TYPE II REFLECTIVE H FOLDING [SF]	REMOVING SMALL SIGN SUPPORTS [EA]	REMOVING SIGN TYPE II EA	MOVING SIGN TYPE II [EA]	POSTS WOOD 4" X 6" X 18" [EA]	POSTS WOOD 4" X 6" X 22" [EA]	POSTS TUBULAR STEEL 2" X 2" X 16" [EA]	MOUNT ON SAME POST AS SIGN#	REMARKS / NEW SIGN LOCATION	
															637.2210
1	W3-8(2S)		48 X 48		16,000			1,000							
2	J3-1(2S)		24 X 81		13,500			1,000		1					MOUNT ON RAMP METER POLE
	MB3-3		24 X 12												
	MI-1	IH 41	24 X 24												
	MI-4	USH 45	24 X 24												
	MB6-2		21 X 21												
3	R1-2(2M)		48 X 42		7,000			1,000		1					
4	JV3-1(2S)		24 X 81		13,500			1,000			1				
	MB3-3		24 X 12												
	MI-1	IH 41	24 X 24												
	MI-4	USH 45	24 X 24												
	MB6-1		21 X 21												
6	RS-18(2S)		24 X 24	4,000				1,000		1					
7	RS-4		24 X 24	5,000				1,000		1					
8	RS-2R(2S)		24 X 30					1,000							
9	R7-1R		24 X 12												
10	R6-2L		24 X 24	4,000				1,000							
11	RS-1(2S)		18 X 24	3,000				1,000							
12	R7-1R(SS)		30 X 30												
13	W11-2(2S)		30 X 30		6,250							1			
13A	W16-7R(2S)		24 X 12	2,000									13		
14	RS-1(2S)		30 X 30	6,250											
15	R1-1(2S)		30 X 30	7,460				1,000							
16	RS-53R(2S)		24 X 30	5,000											
17	R10-50L(2S)		30 X 36	7,500											
18	R4-7(2S)		24 X 30	5,000											
19	RS-1(2S)		30 X 30	6,250						1					
20	RS-2R(2S)		24 X 30	5,000						1					
21	W11-2(2S)		30 X 30		6,250										
21A	W16-7R(2S)		24 X 12	2,000											
22	R1-1(2S)		30 X 30	7,460				1,000							
23	RS-53R(2S)		24 X 30	5,000											
24	R4-7(2S)		24 X 30	5,000											
UNDISTRIBUTED															
				---	---	7,460	7,460	10,000	10,000	2	2	11	2	4	---
TOTALS				123,420	32,500	7,460	10,000	10,000	2	2	11	2	4	---	---

2445-09-70

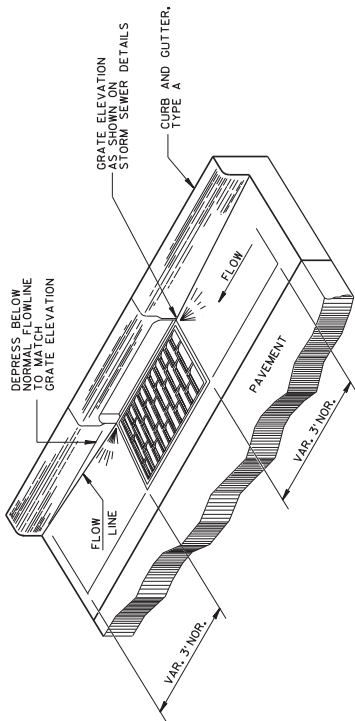
## Standard Detail Drawing List

08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-19A	CURB RAMPS TYPE 1 AND 1-A
08D05-19D	CURB RAMPS TYPE 4B AND 4B1
08D05-19F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-19G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D16-10	CONCRETE GUTTER, CURB AND GUTTER, AND PAVEMENT TIES
08E10-02	INLET PROTECTION TYPE A, B, C AND D
11B02-02	CONCRETE MEDIAN NOSE
13C14-06A	BASE PATCHING CONCRETE
13C14-06B	BASE PATCHING CONCRETE
13C14-06C	BASE PATCHING CONCRETE
13C15-06A	CONCRETE BASE
13C15-06B	CONCRETE BASE
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C03-04	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-04	TRAFFIC CONTROL ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
15C07-14B	PAVEMENT MARKING ARROWS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C08-18B	PAVEMENT MARKING (TURN LANES)
15C18-04	MEDIAN ISLAND MARKING
15C27-02B	PAVEMENT MARKING (ISLANDS)
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-01A	PAVEMENT MARKING (INTERSECTIONS)
15D16-03	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-04	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-03A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-03B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-03C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

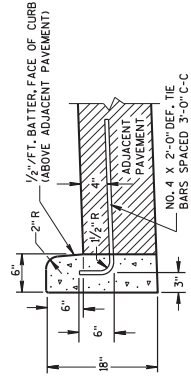
**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.  
 PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.  
 UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

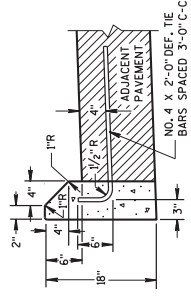
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTI.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE UPGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ REFER TO SDD 8018 AND SDD 8019 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



**DETAIL OF CURB AND GUTTER AT INLETS**  
 (TYPE H INLET COVER SHOWN)

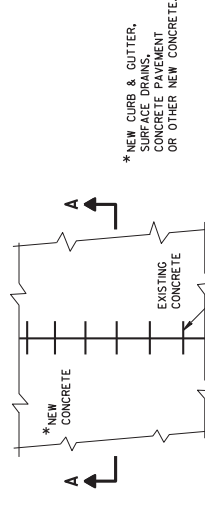


**TYPES A & D**

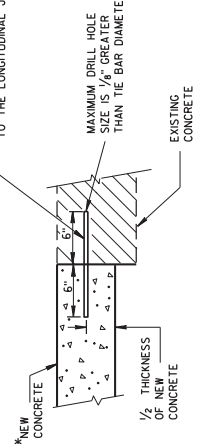


**TYPES G & J**

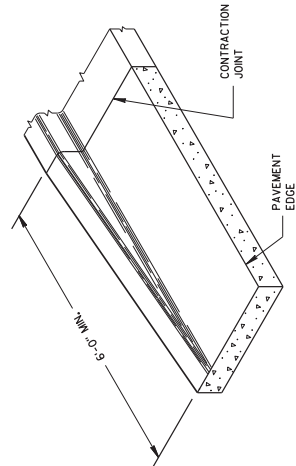
**CONCRETE CURB**



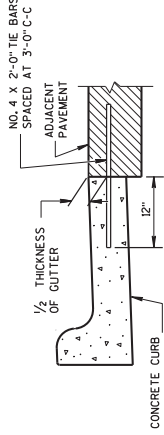
NO. 6 TIE BARS SPACED 2'-6" C-C, IN THE LONGITUDINAL JOINT.



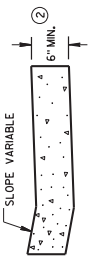
**SECTION A-A**  
**TIE BARS DRILLED INTO EXISTING PAVEMENT**



**END SECTION CURB & GUTTER**



**TYPICAL TIE BAR LOCATION**



**DRIVEWAY ENTRANCE CURB**  
 (WHEN DIRECTED BY THE ENGINEER)

<b>CONCRETE CURB, TIES</b>	
<b>CURB AND GUTTER APPLICATIONS</b>	
STATE OF WISCONSIN	
DEPARTMENT OF TRANSPORTATION	
APPROVED	DATE
/s/ Rodney Taylor	June 2017
ROADWAY STANDARDS	31 ENT
UNIT SUPERVISOR	ENT
FHWA	

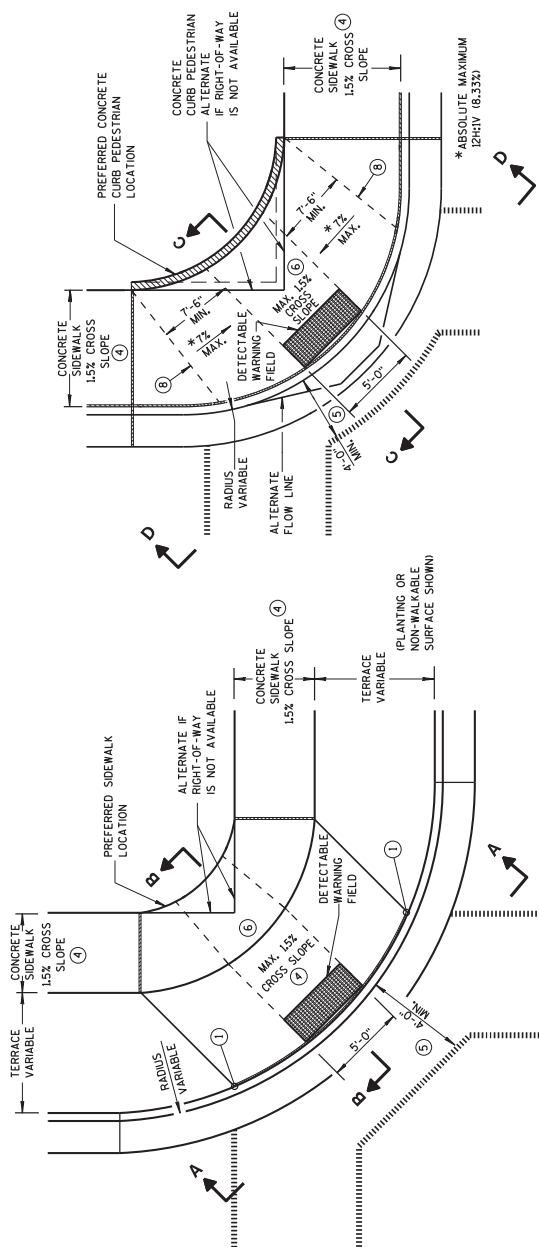
**GENERAL NOTES**

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.  
 DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.  
 WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP. DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

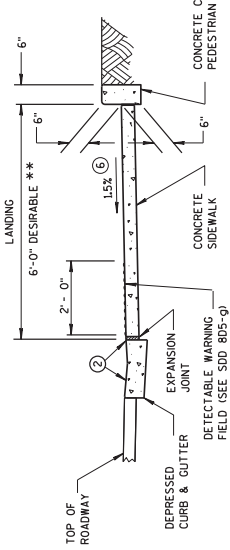
SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD". DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.  
 SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 1/2". MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB RAMP SHALL BE 1.5% TO 2% TO MATCH THE RAMP. MINIMUM 1.5% AND NOT LESS THAN 1.5% TO 2% TO MATCH THE RAMP. CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ ABSOLUTE MAXIMUM 1/4" (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 1/2" GRADE CHANGE.
- ④ 1/2" CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION. WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.)
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

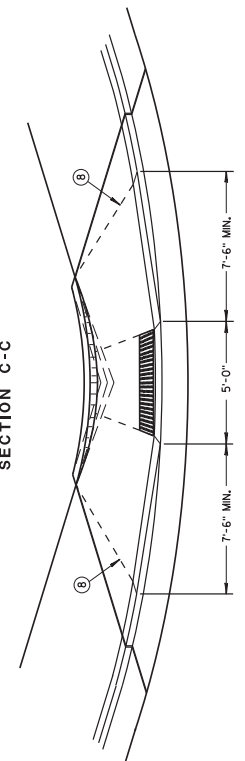


**PLAN VIEW TYPE 1-A RAMP (AND TERRACE)**

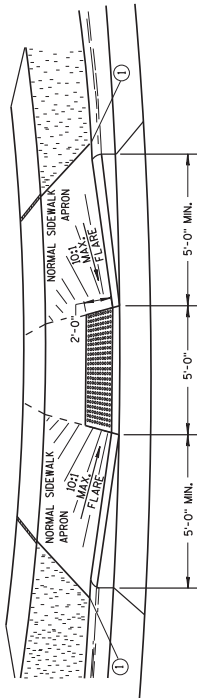
**PLAN VIEW TYPE 1 RAMP (CENTER OF CORNER RADIUS)**



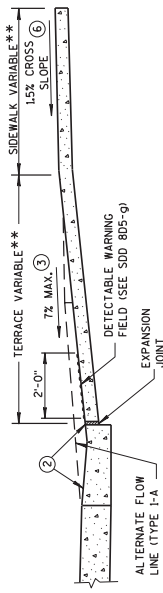
**SECTION C-C**



**VIEW D-D**



**VIEW A-A**



**SECTION B-B**

\*\* WIDTH SHOWN ELSEWHERE IN THE PLANS

- LEGEND**
- 1/2" EXPANSION JOINT- SIDEWALK
  - - - - - CONTRACTION JOINT FIELD LOCATED
  - ||||| PAVEMENT MARKING CROSSWALK (WHITE)
  - ALTERNATIVE LAYOUT

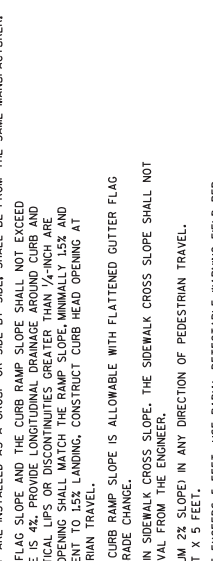
**CURB RAMPS  
 TYPES 1 AND 1-A**  
 STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION



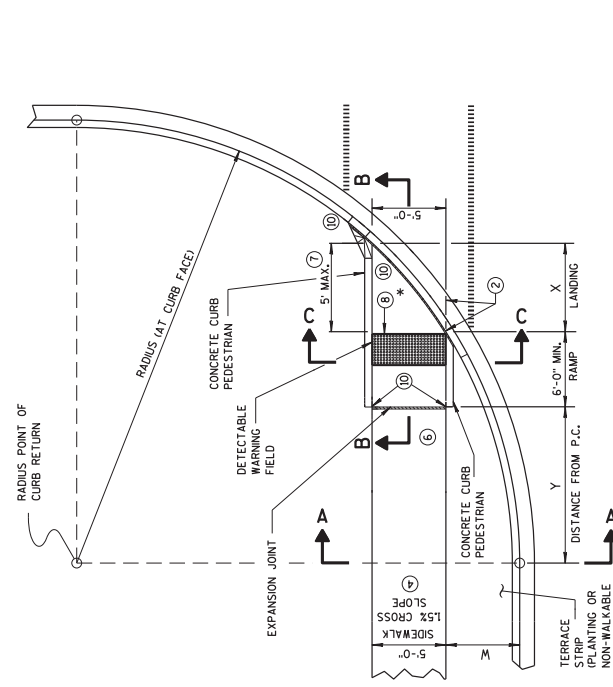
RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"		W = 8'-0"		W = 9'-0"		W = 10'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2'-10 1/4"	0'-5"	2'-1"	1'-4 1/2"	1'-5"	2'-1"	0'-10"	2'-7 1/2"	0'-3 1/4"	3'-0 1/4"	1'-8"	6'-9 1/2"	1'-3 1/4"	7'-2 1/2"	0'-10 3/4"	7'-7 1/4"
15 FEET	4'-6 3/4"	2'-1 1/4"	3'-9"	3'-5 1/4"	3'-1 1/4"	4'-6"	2'-6 3/4"	5'-4 1/2"	2'-1"	6'-1"	1'-8"	6'-9 1/2"	1'-3 1/4"	7'-2 1/2"	0'-10 3/4"	7'-7 1/4"
20 FEET	5'-9 3/4"	3'-6 1/2"	4'-11 1/2"	5'-1 1/4"	4'-3 1/4"	6'-5 1/2"	3'-8 3/4"	7'-7"	3'-3"	8'-6 1/2"	2'-10"	9'-4 1/2"	2'-5 1/2"	10'-1 1/4"	2'-1 1/4"	10'-9"
30 FEET			6'-9 1/4"	7'-11 1/4"	6'-0 1/4"	9'-8"	5'-5"	11'-1 1/4"	4'-10 1/4"	12'-5 1/2"	4'-5 1/2"	13'-7 1/4"	4'-0 1/2"	14'-8 1/2"	3'-8 1/2"	15'-8 1/4"
40 FEET									6'-1 3/4"	15'-9 1/2"	5'-8"	17'-2"	5'-3"	18'-5 1/4"	4'-10 3/4"	19'-8 1/4"
50 FEET															5'-10 1/4"	23'-2"

INTERMEDIATE RADII CAN BE INTERPOLATED  
 DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH  
 DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH

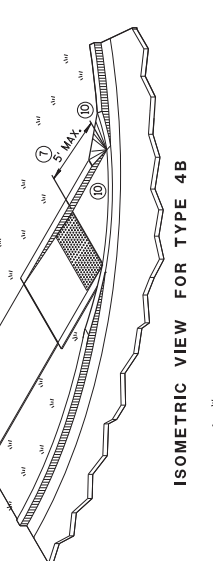
**GENERAL NOTES**  
 AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.  
 DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.  
 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 1/4". MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE. MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.  
 ABSOLUTE MAXIMUM 12HIV 18.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 1/2% GRADE CHANGE.  
 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.  
 PROVIDE A LEVEL LANDING MAXIMUM 2% SLOPE IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.  
 WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 805-11.  
 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.  
 INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



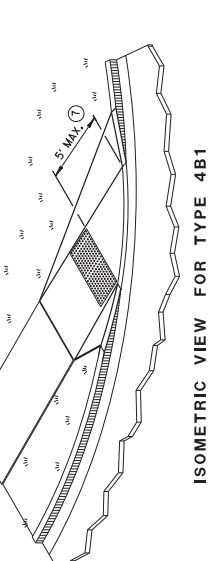
SECTION C-C FOR TYPE 4B



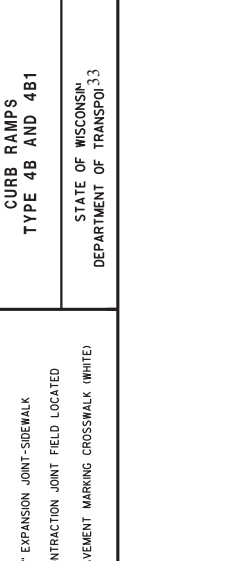
CURB RAMP TYPE 4B PLAN VIEW



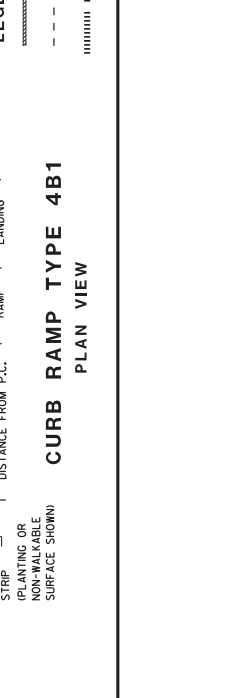
SECTION A-A FOR TYPE 4B



CURB RAMP TYPE 4B1 PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 1/4". MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE. MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ ABSOLUTE MAXIMUM 12HIV 18.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 1/2% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING MAXIMUM 2% SLOPE IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑥ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 805-11.
- ⑦ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑧ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

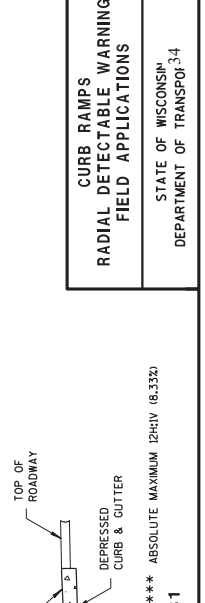
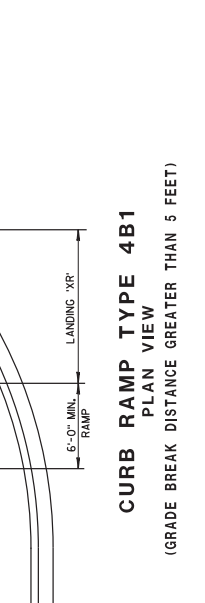
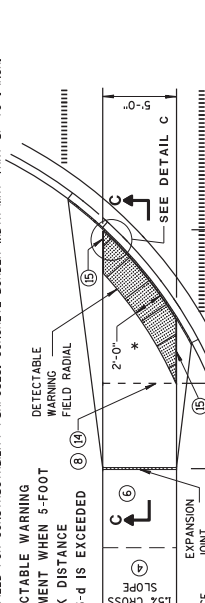
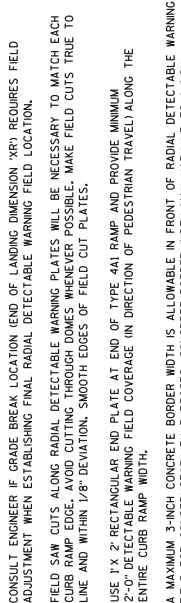
LEGEND  
 ———— 1/2" EXPANSION JOINT-SIDEWALK  
 - - - - - CONTRACTION JOINT FIELD LOCATED  
 ||||||| III PAVEMENT MARKING CROSSWALK (WHITE)

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

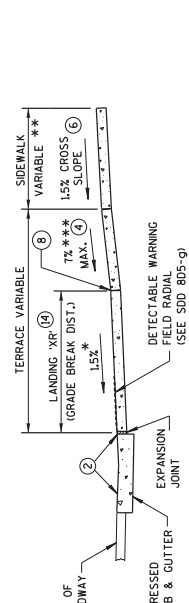
**GENERAL NOTES**  
 AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.  
 DETECTABLE WARNING FIELDS (DWFs) THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.  
 APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.  
 REFER TO SDD 805-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.  
 FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.  
 DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.  
 GRADE CHANGE BETWEEN CUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 1/2%. WHEN CURB RAMP FLAG SLOPE IS 7% OR GREATER, THE CURB RAMP SLOPE SHALL BE 1/2% ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE. MINIMALLY 1/5% AND NOT TO EXCEED 7% WHEN ADJACENT TO 1.5% LANDING. CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.  
 ABSOLUTE MAXIMUM 12HIV (8.33Z) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED CUTTER FLAG SLOPE AND NOT TO EXCEED 1/3% GRADE CHANGE.  
 1/3% CONSTRUCTION TOLERANCE IN SIDEWALK GROSS SLOPE. THE SIDEWALK GROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.  
 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.  
 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.  
 CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION 'XR') REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.  
 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.  
 USE 1 X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2'-0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.  
 A MAXIMUM 3-INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

- ① RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5-FOOT GRADE BREAK DISTANCE PER SDD 805-d IS EXCEEDED
- ② DETECTABLE WARNING FIELD RADIAL
- ③ EXPANSION JOINT
- ④ LANDING 'XR' (GRADE BREAK DIST.)
- ⑤ DETECTABLE WARNING FIELD RADIAL
- ⑥ TERRACE VARIABLE
- ⑦ SIDEWALK VARIABLE
- ⑧ 15% GROSS SLOPE
- ⑨ 7% MAX.
- ⑩ 1.5% SLOPE
- ⑪ DEPRESSURED CURB & GUTTER
- ⑫ EXPANSION JOINT
- ⑬ TOP OF ROADWAY
- ⑭ LANDING 'XR' (GRADE BREAK DIST.)
- ⑮ DETECTABLE WARNING FIELD RADIAL
- ⑯ TERRACE VARIABLE
- ⑰ SIDEWALK VARIABLE
- ⑱ 15% GROSS SLOPE
- ⑲ 7% MAX.
- ⑳ 1.5% SLOPE
- ㉑ DEPRESSURED CURB & GUTTER
- ㉒ EXPANSION JOINT
- ㉓ TOP OF ROADWAY
- ㉔ LANDING 'XR' (GRADE BREAK DIST.)
- ㉕ DETECTABLE WARNING FIELD RADIAL
- ㉖ TERRACE VARIABLE
- ㉗ SIDEWALK VARIABLE
- ㉘ 15% GROSS SLOPE
- ㉙ 7% MAX.
- ㉚ 1.5% SLOPE
- ㉛ DEPRESSURED CURB & GUTTER
- ㉜ EXPANSION JOINT
- ㉝ TOP OF ROADWAY
- ㉞ LANDING 'XR' (GRADE BREAK DIST.)
- ㉟ DETECTABLE WARNING FIELD RADIAL
- ㊱ TERRACE VARIABLE
- ㊲ SIDEWALK VARIABLE
- ㊳ 15% GROSS SLOPE
- ㊴ 7% MAX.
- ㊵ 1.5% SLOPE
- ㊶ DEPRESSURED CURB & GUTTER
- ㊷ EXPANSION JOINT
- ㊸ TOP OF ROADWAY
- ㊹ LANDING 'XR' (GRADE BREAK DIST.)
- ㊺ DETECTABLE WARNING FIELD RADIAL
- ㊻ TERRACE VARIABLE
- ㊼ SIDEWALK VARIABLE
- ㊽ 15% GROSS SLOPE
- ㊾ 7% MAX.
- ㊿ 1.5% SLOPE

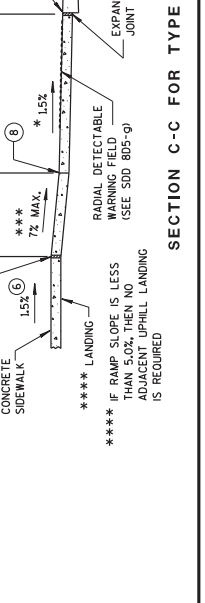
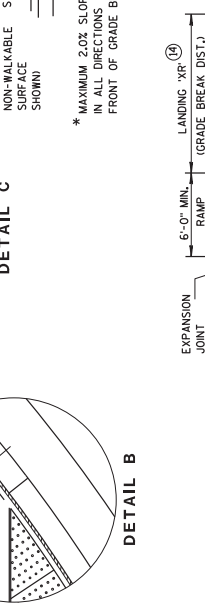
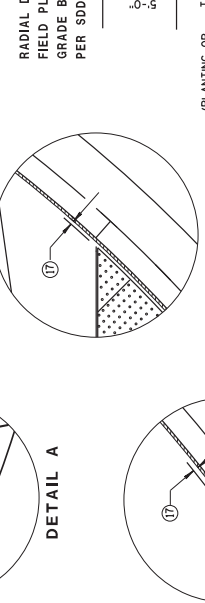
**SECTION A-A**  
 \*\* WIDTH SHOWN ELSEWHERE IN THE PLANS  
 \*\*\* ABSOLUTE MAXIMUM 12HIV (8.33Z)  
 \* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



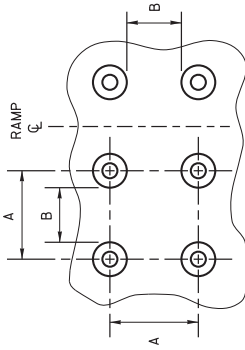
**LEGEND**  
 - - - - - 1/2" EXPANSION JOINT-SIDEWALK  
 - - - - - CONTRACTION JOINT FIELD LOCATED  
 ||||| PAVEMENT MARKING CROSSWALK (WHITE)



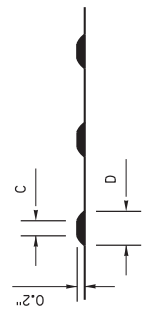
**SECTION A-A**  
 \*\* WIDTH SHOWN ELSEWHERE IN THE PLANS  
 \*\*\* ABSOLUTE MAXIMUM 12HIV (8.33Z)  
 \* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



**CURB RAMPS**  
**RADIAL DETECTABLE WARNING FIELD APPLICATIONS**  
 STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION



PLAN VIEW

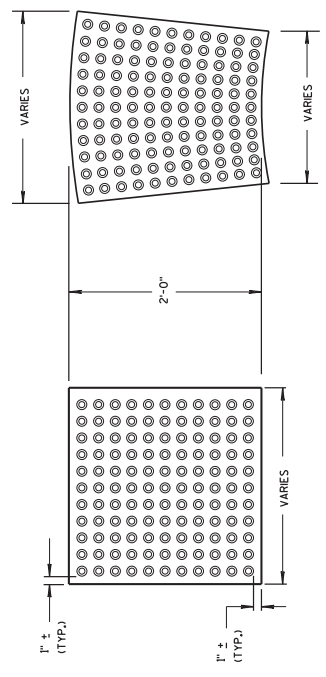


ELEVATION VIEW

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

\* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

**TRUNCATED DOMES  
DETECTABLE WARNING PATTERN DETAIL**



**RECTANGULAR  
PLATES  
DETECTABLE WARNING FIELDS (TYPICAL)**

PLAN VIEW

**GENERAL NOTES**

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

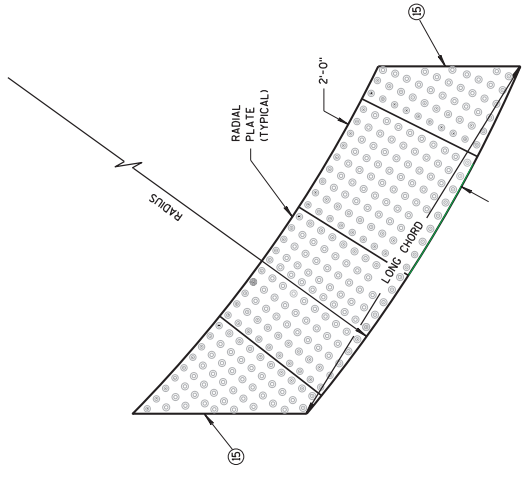
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGES IN COMBINATION WITH SQUARE PANELS ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

⑮ FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



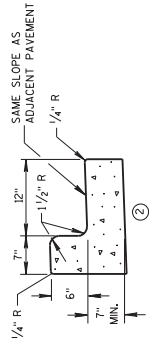
**RADIAL DETECTABLE  
WARNING FIELD ATTRIBUTES**

CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED DATE: June, 2017
DESIGNED BY: Rodney Taylor ROADWAY STANDARDS: 3.5 UNIT SUPERVISOR: ENT
FWHA

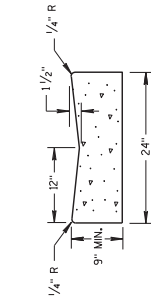
**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.  
 PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.26.2 OF THE STANDARD SPECIFICATIONS.  
 INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.  
 WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FINISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.  
 UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURB.

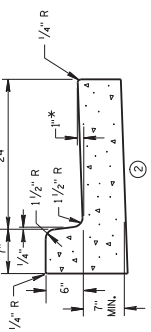
- ① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7-MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



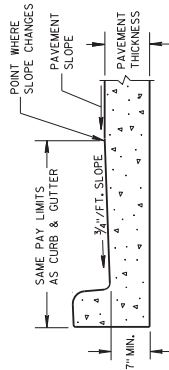
① CONCRETE CURB & GUTTER 19"



① CONCRETE GUTTER 24"

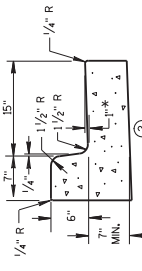


① CONCRETE CURB & GUTTER 31"

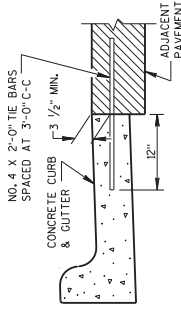


PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

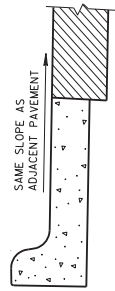
\* TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



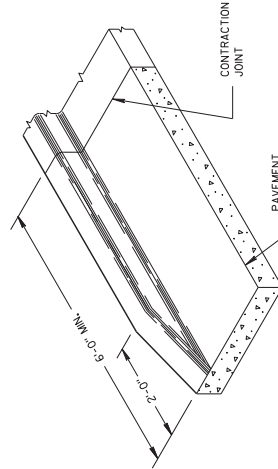
① CONCRETE CURB & GUTTER 22"



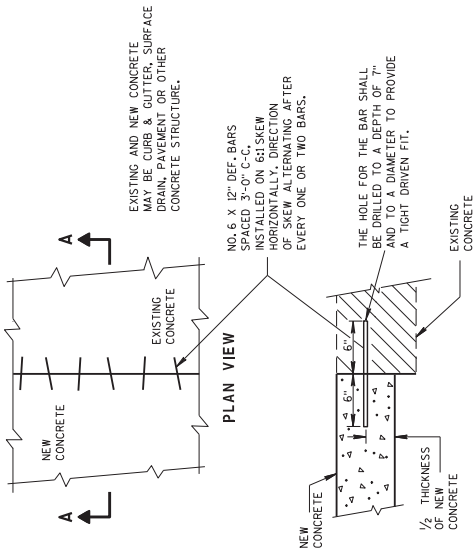
① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION (TYPICAL FOR ALL CURB & GUTTER)



END SECTION CURB & GUTTER



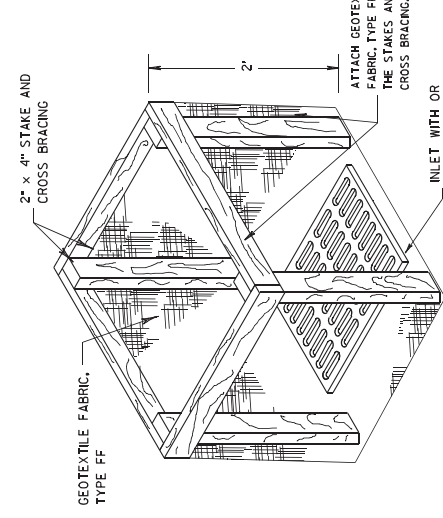
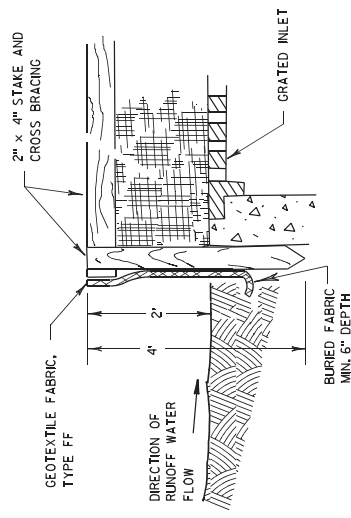
SECTION A-A PAVEMENT TIES

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.  
 NO. 6 X 12" DEEP BARS SPACED 3'-0" C-C INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.  
 THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 6" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

EXISTING CONCRETE  
 1/2" THICKNESS OF NEW CONCRETE

<b>CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES</b> (For Optional Use In Milwaukee Co. Only)	
APPROVED	STATE OF WISCONSIN
DATE 11/22/2000	DEPARTMENT OF TRANSPORTATION
ROADWAY STANDARDS 36	
ENGINEER	
PHWA	

/s/ Jerry Zonn



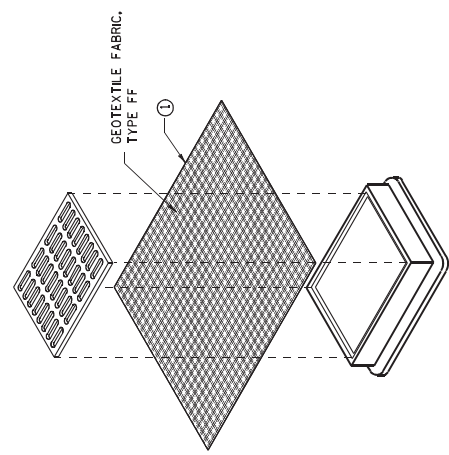
**INLET PROTECTION, TYPE A**

**GENERAL NOTES**  
 INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

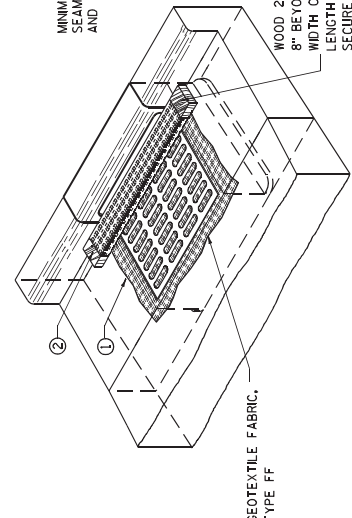
MANUFACTURED ALTERNATIVES, APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2x4.



**INLET PROTECTION, TYPE B (WITHOUT CURB BOX)**  
 (CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

**TYPE B & C**

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

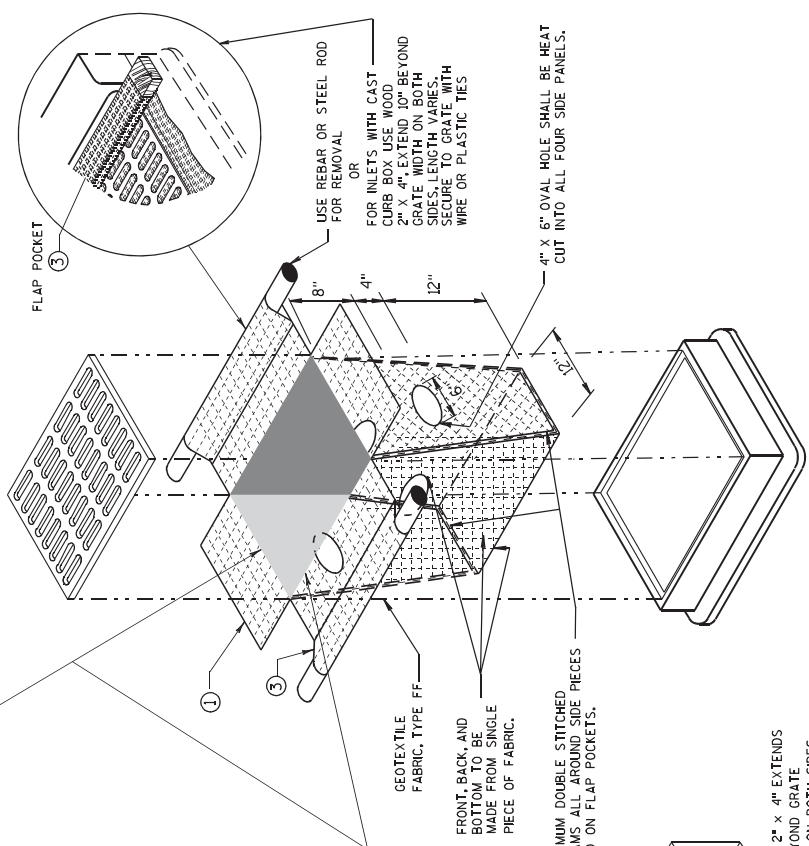
**TYPE D**

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL SNIP THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET SPECIFICATIONS AS PER THE PLAN DIMENSION LENGTH AND WIDTH TO MATCH



**INLET PROTECTION, TYPE D**

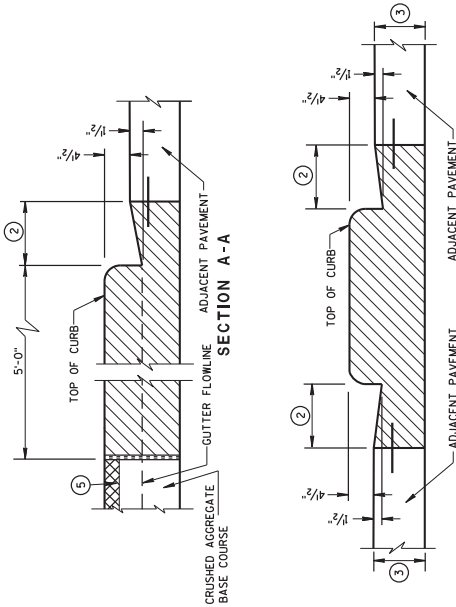
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

<b>INLET PROTECTION TYPE A, B, C, AND D</b>	
STATE OF WISCONSIN	
DEPARTMENT OF TRANSPORTATION	
APPROVED	DATE
10/16/02	/S/ Beth Connors
FHWA OMB ROADWAY DEVELOPMENT 37-10-2	

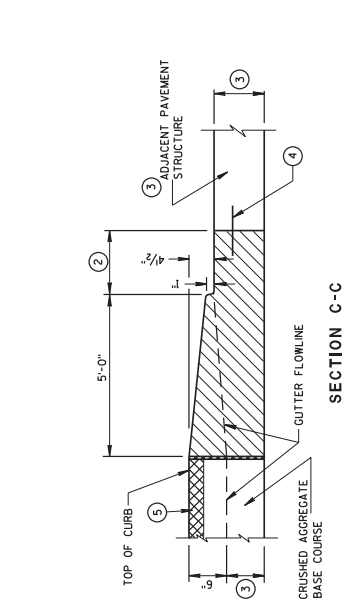
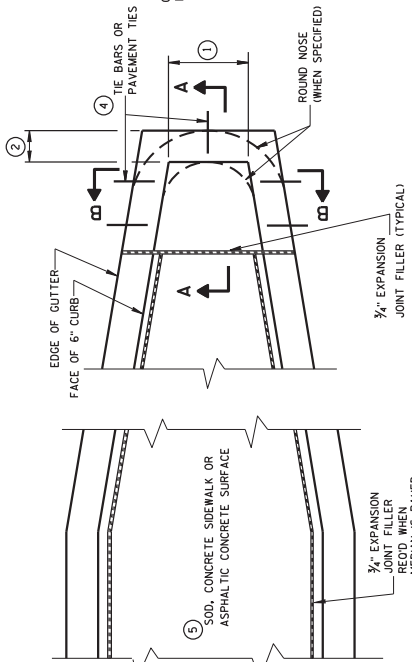
**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

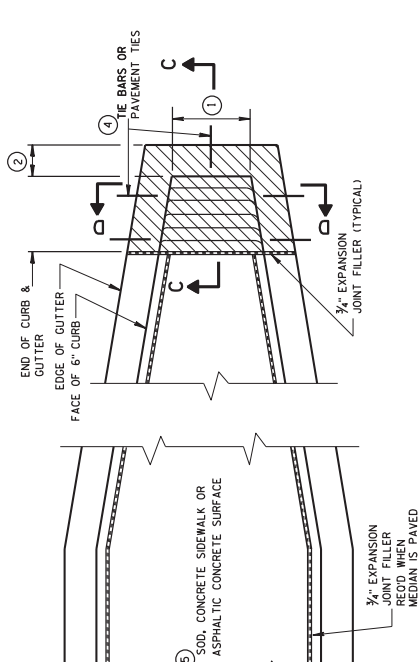
- 1 SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE);
- 2 WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- 3 DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
  - (1) NEW OR EXISTING CONCRETE PAVEMENT.
  - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
  - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.
- 4 TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.
- 5 PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C. INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.
- 6 SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



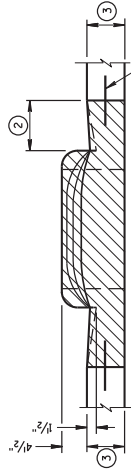
**CONCRETE MEDIAN BLUNT NOSE DETAIL**



**CONCRETE MEDIAN SLOPED NOSE TYPE 1**



**CONCRETE MEDIAN SLOPED NOSE TYPE 2**



**SECTION D-D**

CONCRETE MEDIAN NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	DATE
6/8/2006	1/5/ JEFFRY H. ZOOG ROADWAY STRUCTURES ENGINEER 338
PWMA	

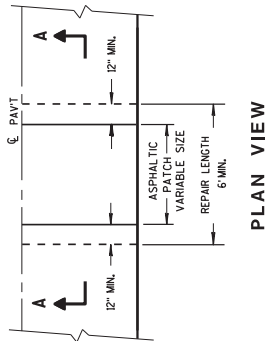
**GENERAL NOTES**

SAW CUT, DRILL AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS; THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

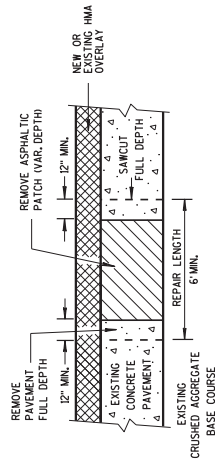
PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

① DOWEL BARS MIGHT NOT EXIST.

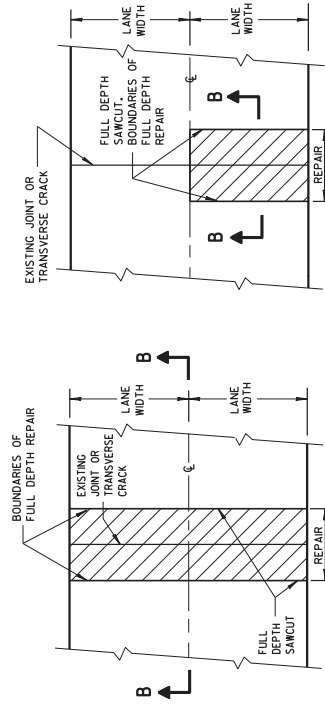


PLAN VIEW



SECTION A-A

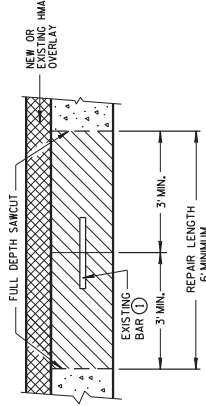
**HMA PATCH REMOVAL**



PLAN VIEW  
(DOUBLE LANE REPAIR)

PLAN VIEW  
(SINGLE LANE REPAIR)

**FULL DEPTH CONCRETE PAVEMENT REMOVAL**

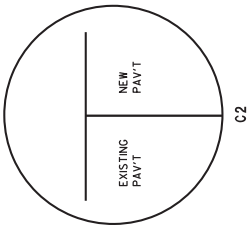
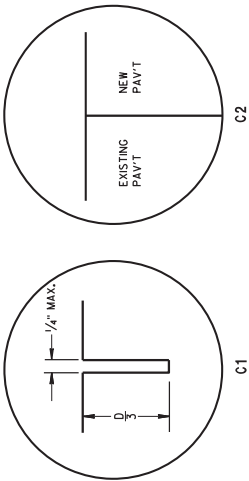


SECTION B-B

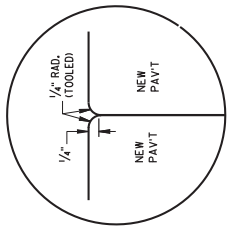
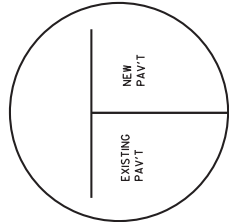
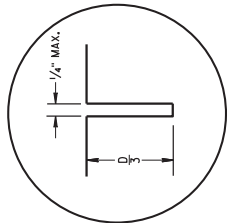
**CONCRETE REMOVAL**

BASE PATCHING CONCRETE

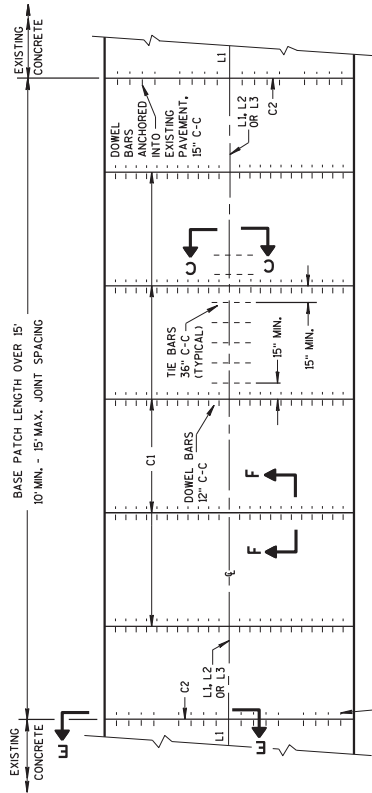
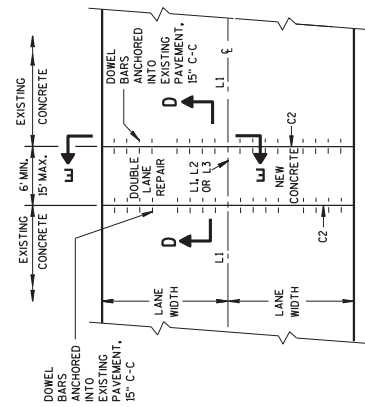
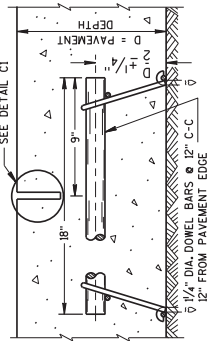
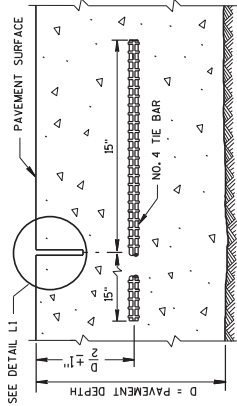
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**TRANSVERSE JOINTS**

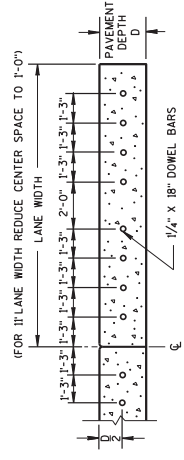
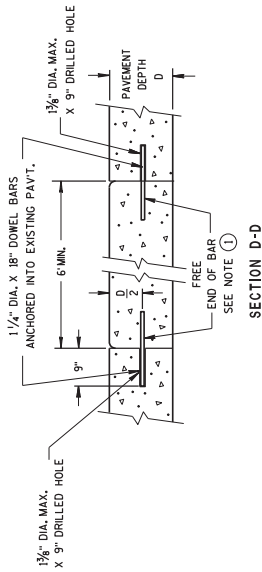


**LONGITUDINAL JOINTS**



**GENERAL NOTES**

- INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.
- CONCRETE BASE PATCHES OF EXISTING NONDOWELED PAVEMENTS DO NOT NEED TO BE DOWELED.
- DO NOT SEAL OR FILL JOINTS.
- ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.
- APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



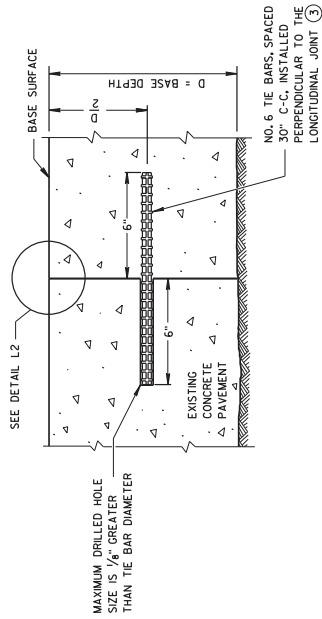
BASE PATCHING CONCRETE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

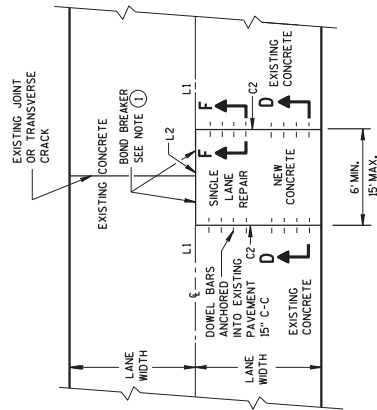


**GENERAL NOTES**

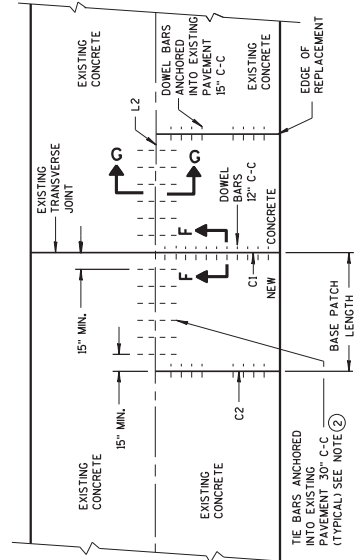
- ① USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE BASE PATCHES UP TO 15 FEET IN LENGTH.
- ② WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ③ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



**SECTION G-G**  
**TIE BARS ANCHORED**  
**INTO EXISTING PAVEMENT**



**PLAN VIEW**  
**SINGLE LANE CONCRETE BASE PATCH**  
**15' MAXIMUM LENGTH**

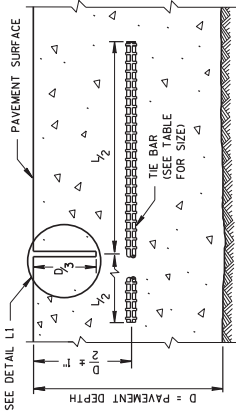


**PLAN VIEW**  
**SINGLE LANE CONCRETE BASE PATCH**  
**GREATER THAN 15' IN LENGTH**

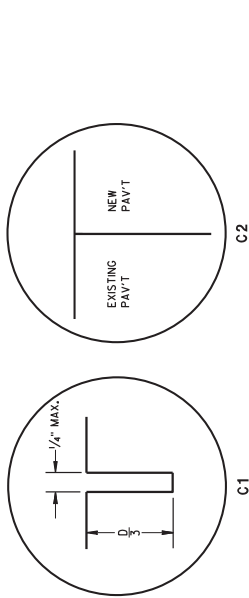
<b>BASE PATCHING CONCRETE</b>
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED Sept., 2005 /S/ Peter Kemp, P.E. DATE / PAVEMENT SUPER 41 P.W.A.

**GENERAL NOTES**

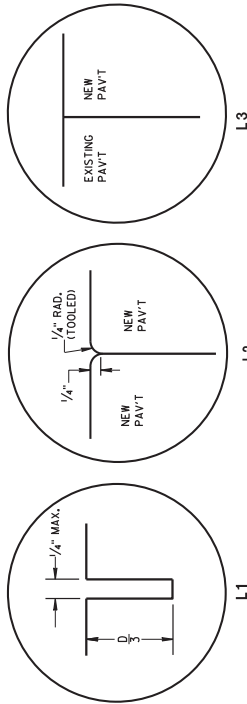
- ANCHOR TIE BARS AND DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.
- INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.
- APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



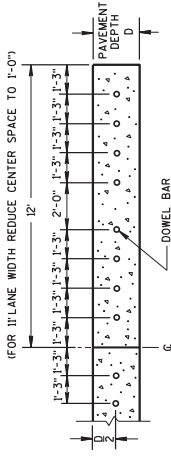
**SECTION C-C  
SAWED JOINT**



**TRANSVERSE JOINTS**



**LONGITUDINAL JOINTS**

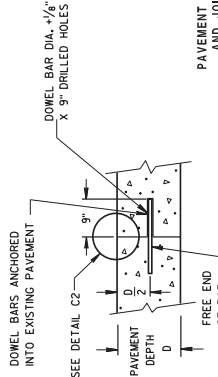


**SECTION E-E  
ANCHORED INTO EXISTING PAVEMENT**

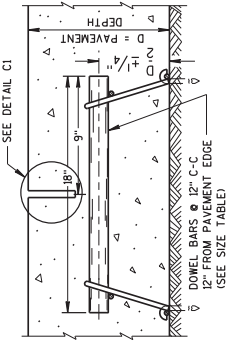
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6, 6 1/2"	NONE	12"
7, 7 1/2"	1"	14"
8, 8 1/2"	1 1/4"	15"
9, 9 1/2"	1 1/4"	15"
10" & ABOVE	1 1/2"	15"

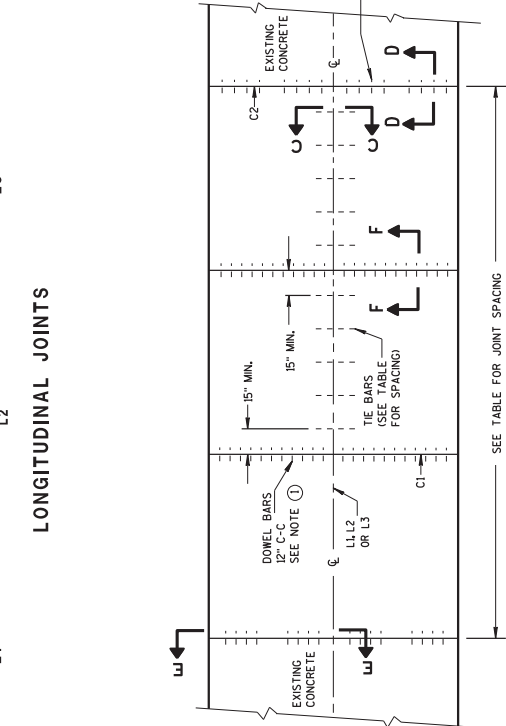
**SECTION D-D**



**SECTION F-F  
CONTRACTION JOINT**



**SECTION F-F  
CONTRACTION JOINT**



**PLAN VIEW  
CONCRETE BASE  
CONTRACTION JOINT LOCATIONS**

**TIE BAR TABLE**

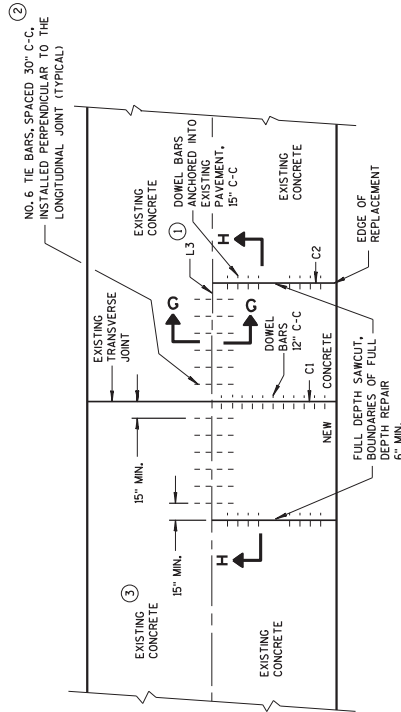
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
≤ 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

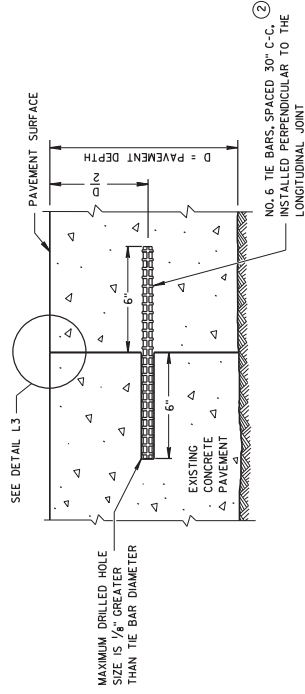
\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

**GENERAL NOTES**

- ① USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.
- ② ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ③ PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

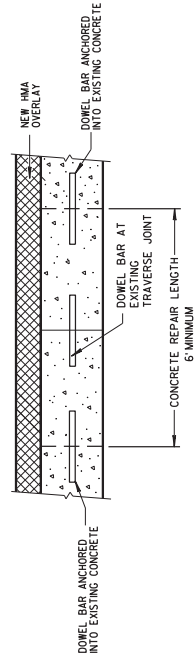


**PLAN VIEW**  
**SINGLE LANE CONCRETE BASE REPAIR**



**SECTION G-G**

**TIE BARS ANCHORED INTO EXISTING PAVEMENT**



**SECTION H-H**

<b>CONCRETE BASE</b>
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED _____ June, 2005 DATE /s/ Peter Kemp, P.E. PAVEMENT SUPE-4.3 FHWA

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.  
 ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.  
 THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.  
 BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.  
 SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

"W" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12", 18" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-X SHALL BE 24" X 24", 18" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

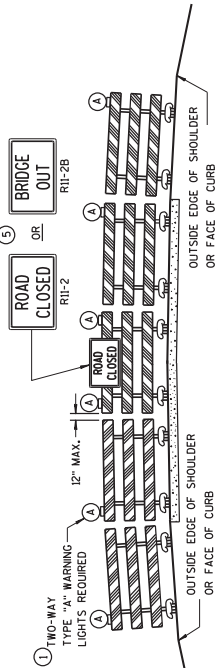
M5-X SHALL BE 24" X 24", 18" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M6-1 (AND M6-3) SHALL BE 21" X 21", 30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

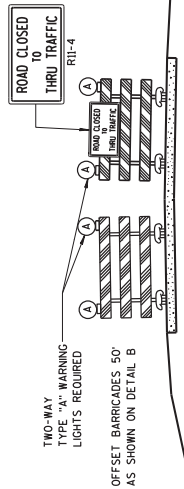
D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

R11-1 SHALL BE 36" X 36".

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE WORKING OPERATIONS BEING PERFORMED WITHIN THE ROADWAY LIMITS, THE SIGNS SHALL BE YOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLY. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.



**DETAIL D**  
**ROAD CLOSURE BARRICADE DETAIL**  
 APPROACH VIEW



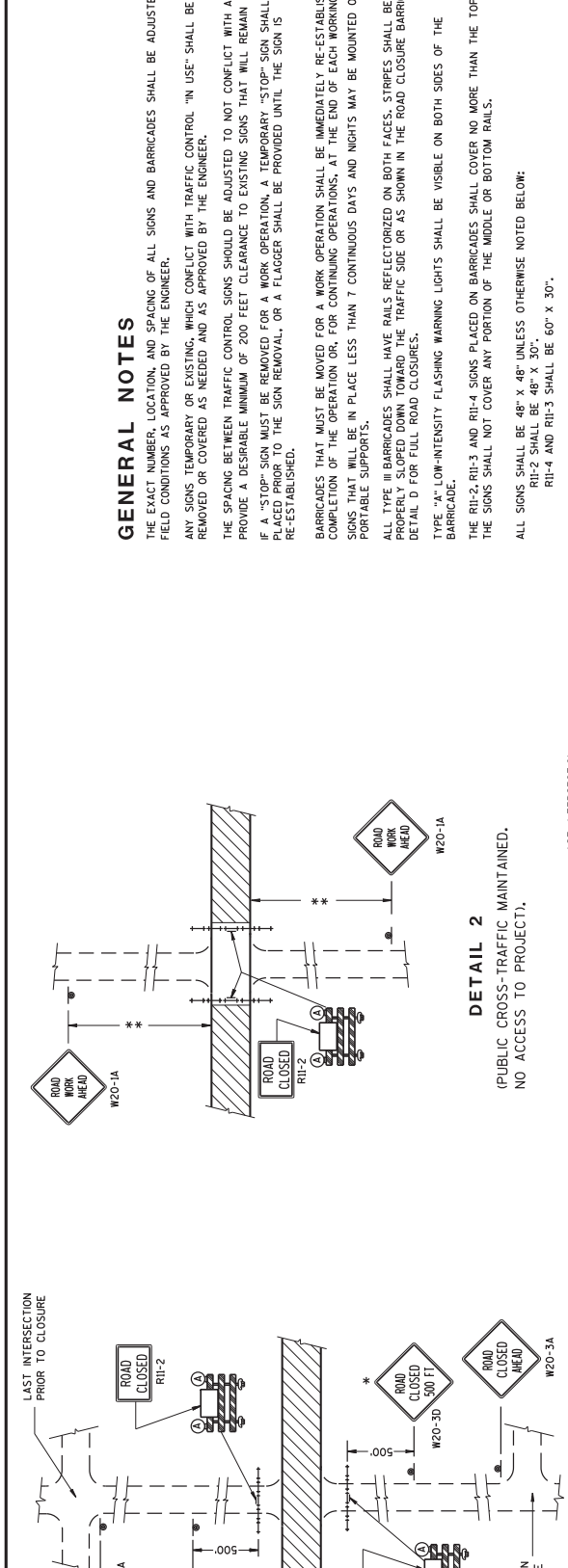
**DETAIL E**  
**LANE CLOSURE BARRICADE DETAIL**  
 APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

**BARRICADES AND SIGNS FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

Sept. 2005 /S/ Peter Amokobe Atopa  
 DATE STATEWIDE WORK 20-44  
 SAFETY ENGR  
 FHWA



**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED UPSTREET TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SCOPED DOWN TO THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE RII-2, RII-3 AND RII-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:  
 RII-2 SHALL BE 48" X 30".  
 RII-4 AND RII-3 SHALL BE 60" X 30".

\*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

\*\*500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- ↑ TYPE III BARRICADE
- ↑ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

<b>BARRICADES AND SIGNS FOR SIDEROAD CLOSURES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE: Sept. 2005	BY: Peter Amakobee Atepa STATEWORKS/20-45 SAFETY ENGINEER

**DETAIL 1**

(NO ACCESS TO PROJECT)

**DETAIL 2**

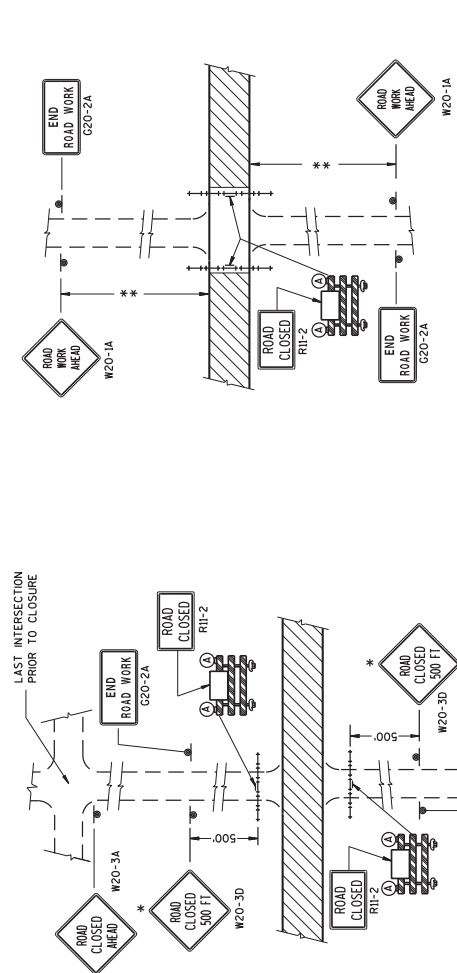
(PUBLIC CROSS-TRAFFIC MAINTAINED, NO ACCESS TO PROJECT)

**DETAIL 3**

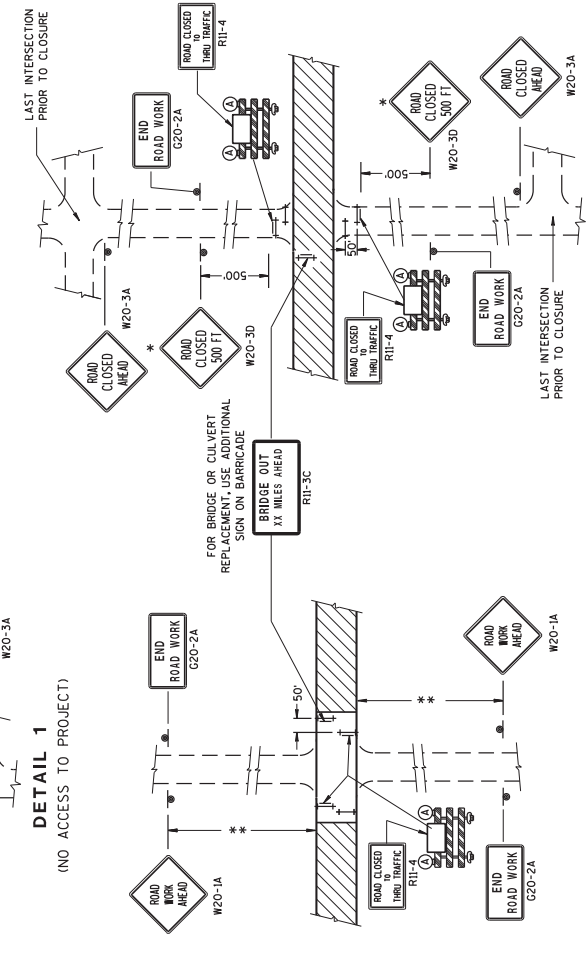
(PUBLIC CROSS-TRAFFIC MAINTAINED, CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS)

**DETAIL 4**

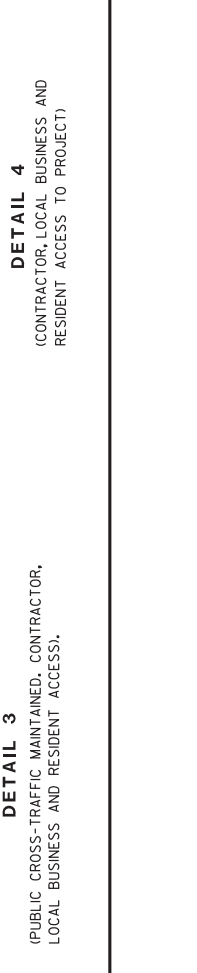
(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)



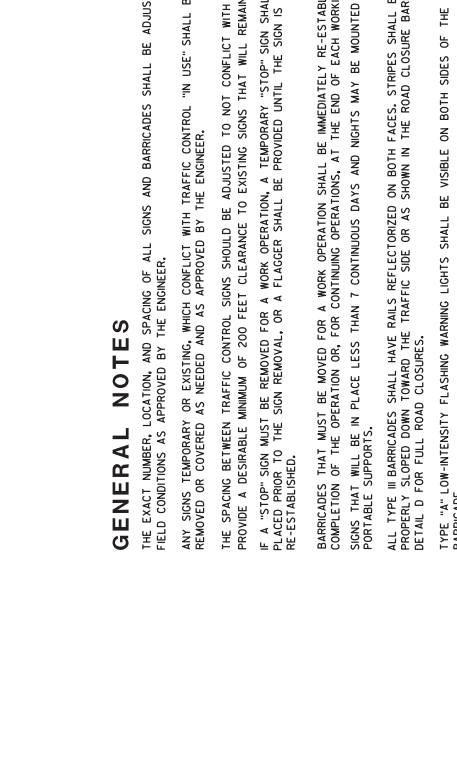
**DETAIL 1**  
(NO ACCESS TO PROJECT)



**DETAIL 2**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
NO ACCESS TO PROJECT).



**DETAIL 3**  
(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR,  
LOCAL BUSINESS AND RESIDENT ACCESS).



**DETAIL 4**  
(CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED UPSTREAM TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SCLOPED DOWN, DOWN THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:  
R11-2 SHALL BE 48" X 30".  
R11-4 AND R11-3 SHALL BE 60" X 30".

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- ↑ TYPE III BARRICADE
- ↑ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

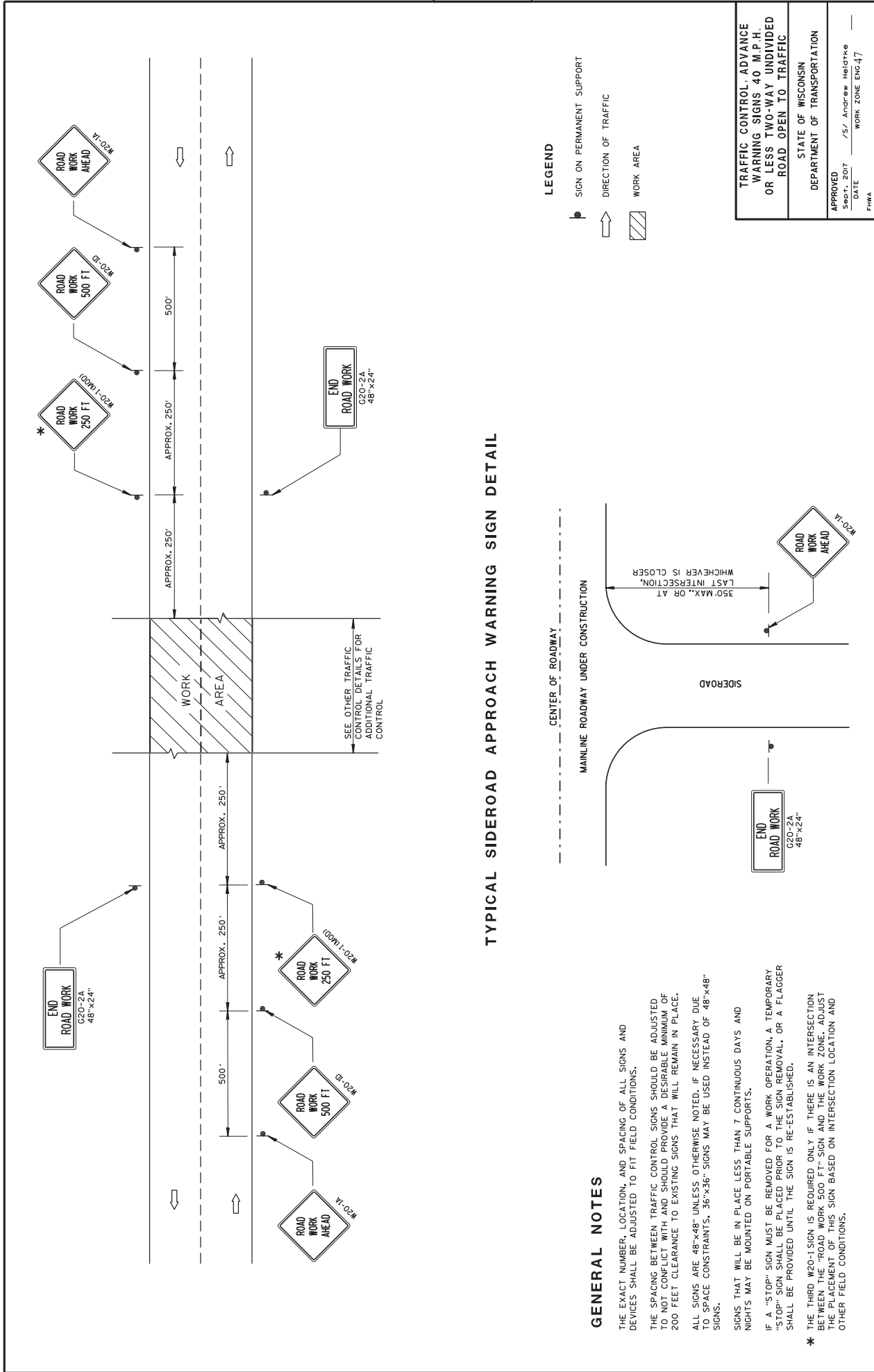
\* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

\*\* 500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

**BARRICADES AND SIGNS FOR SIDEROAD CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED \_\_\_\_\_  
DATE Sept. 2017 /s/ Andrew Heitshke  
WORK ZONE ENG.46  
P.W.M.A.



### TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

#### GENERAL NOTES

- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.
- THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
- ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED, IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.
- SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.
- \* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION WITHIN THE ROAD WORK 500 FT. SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

#### LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

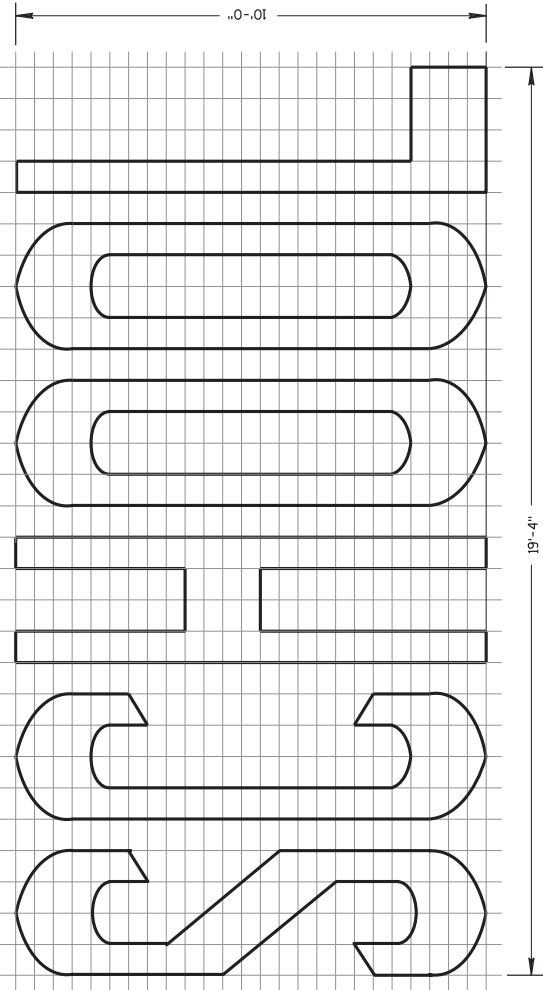
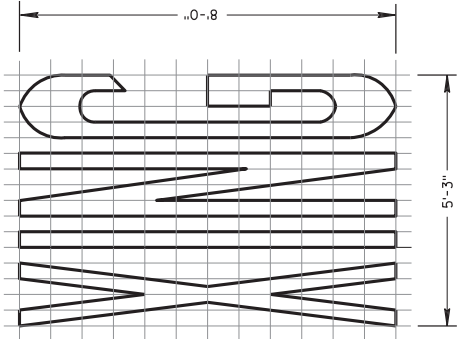
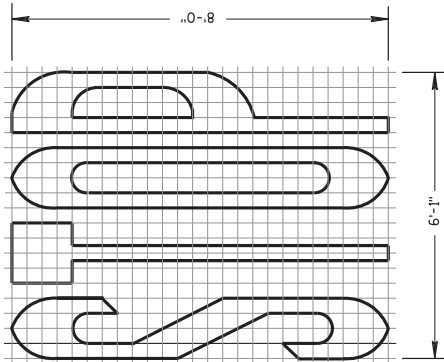
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

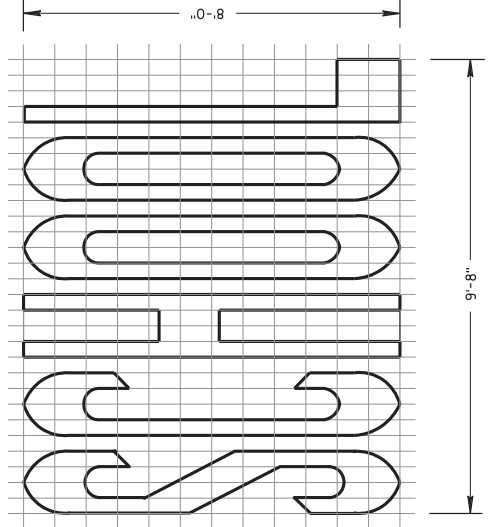
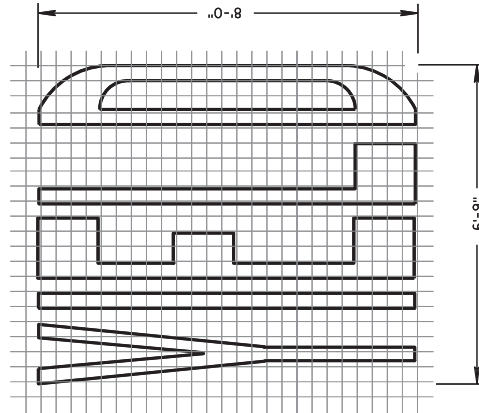
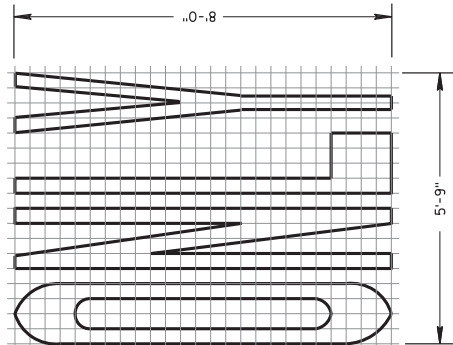
APPROVED  
 DATE Sept., 2017 /S/ Andrew Heidtke  
 PWMA WORK ZONE ENG-47

**GENERAL NOTES**

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



**TWO - LANE**

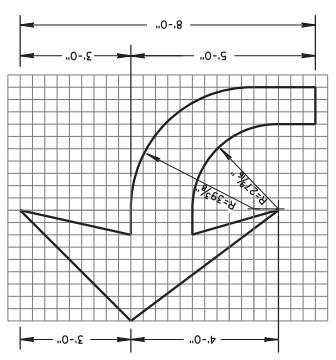
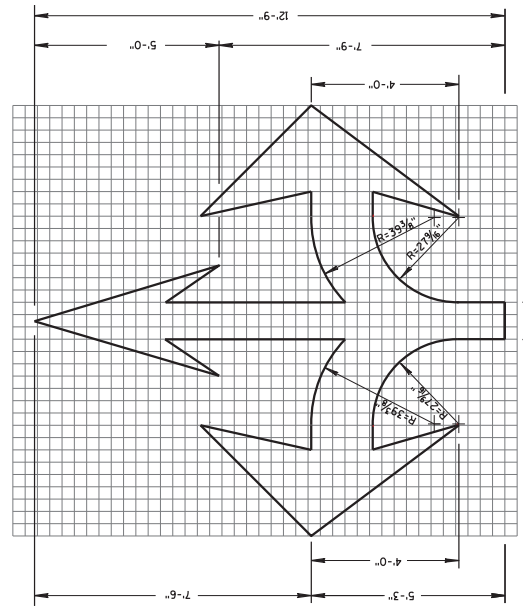
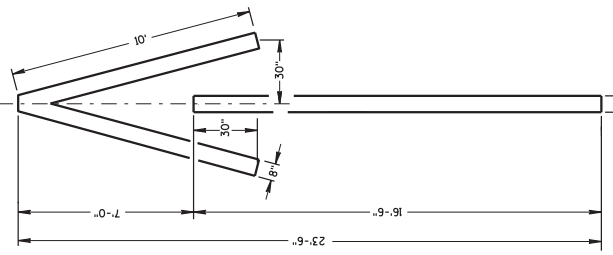


**SINGLE - LANE**

<b>PAVEMENT MARKING WORDS</b>
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED DATE: June 2017 /S/ Matthew R. Rouch STATE SIGNING AND MARKING ENGINEER FHWA



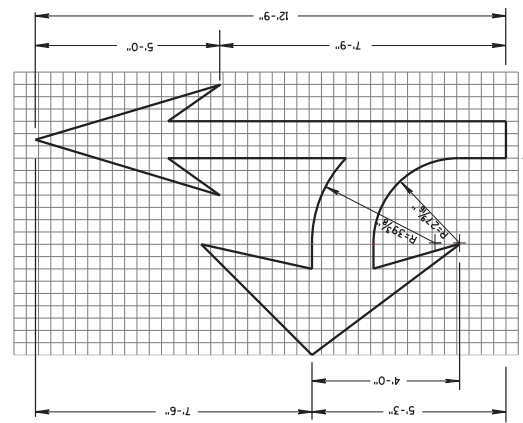
**GENERAL NOTES**  
 DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



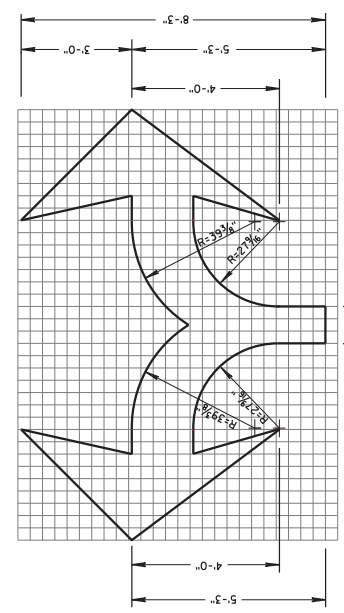
**TYPE 4**

**TYPE 6**

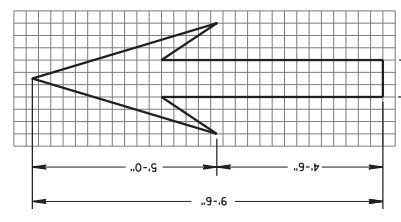
**TYPE 2**



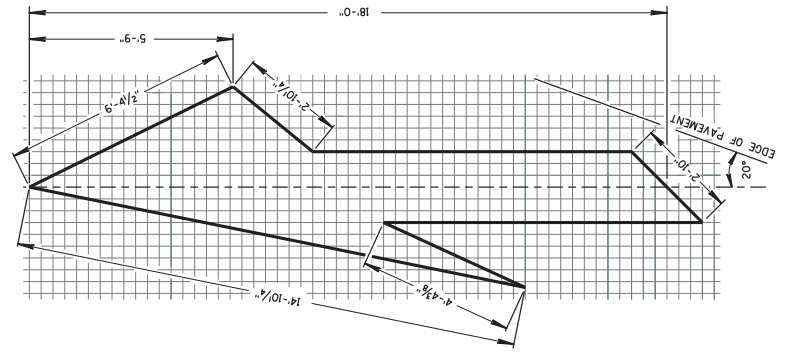
**TYPE 3**



**TYPE 7**



**TYPE 1**



**TYPE 5 LANE DROP ARROW**

<b>PAVEMENT MARKING ARROWS</b>
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED DATE: June 2017 /s/ Matthew R. Ruch STATE SIGNING AND MAR (1) WEER FHWA

**GENERAL NOTES**  
 DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

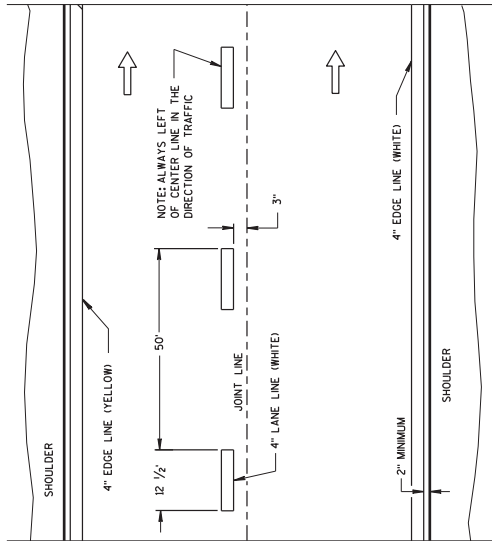
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T"-MARKING.

**NOTE**  
 ARROW SYMBOL ( → ) SHOWS DIRECTION OF TRAVEL

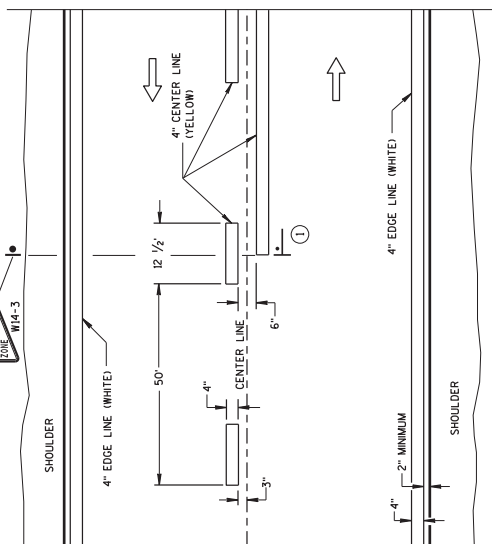
**LEGEND**

— | • "T" MARKING

• POST MOUNTED SIGN

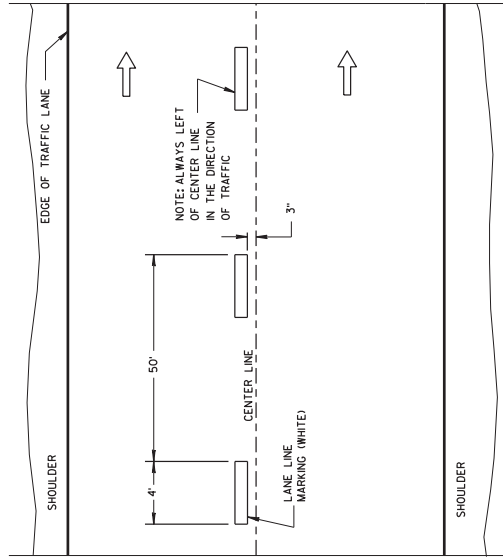


ONE WAY TRAFFIC

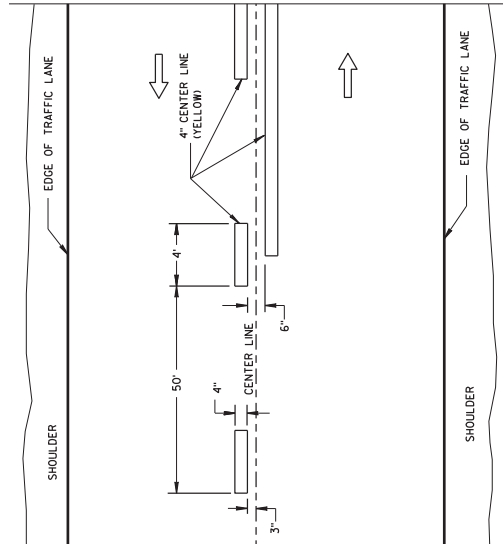


TWO WAY TRAFFIC

**PERMANENT PAVEMENT MARKING**



ONE WAY TRAFFIC



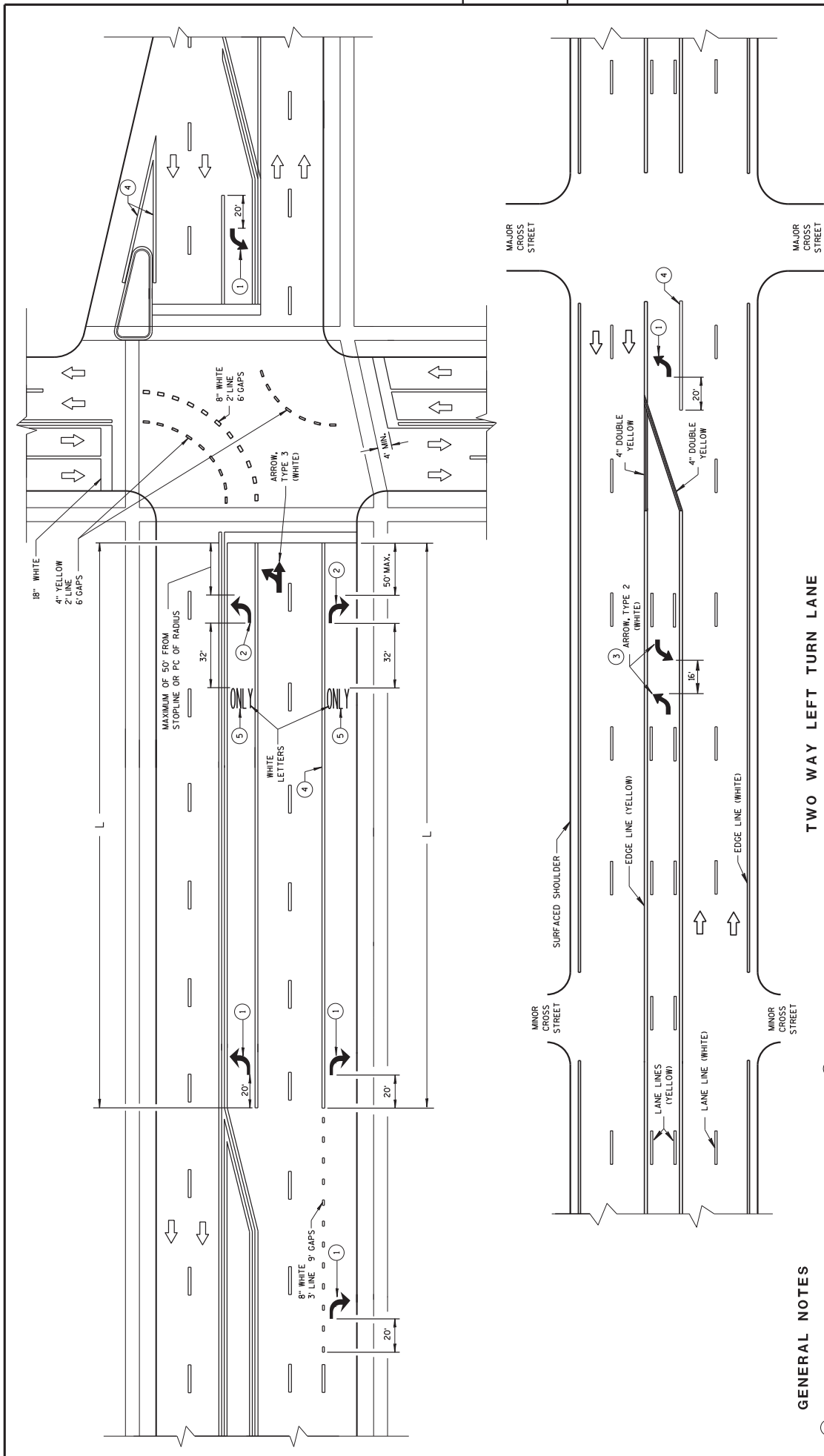
TWO WAY TRAFFIC

**TEMPORARY PAVEMENT MARKING**

LONGITUDINAL MARKING  
 (MAINLINE)

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

APPROVED  
 DATE June 2017 /S/ Matthew R. Raugh  
 STATE SIGNING AND MAR 50 -NEEP  
 FHWA



**GENERAL NOTES**

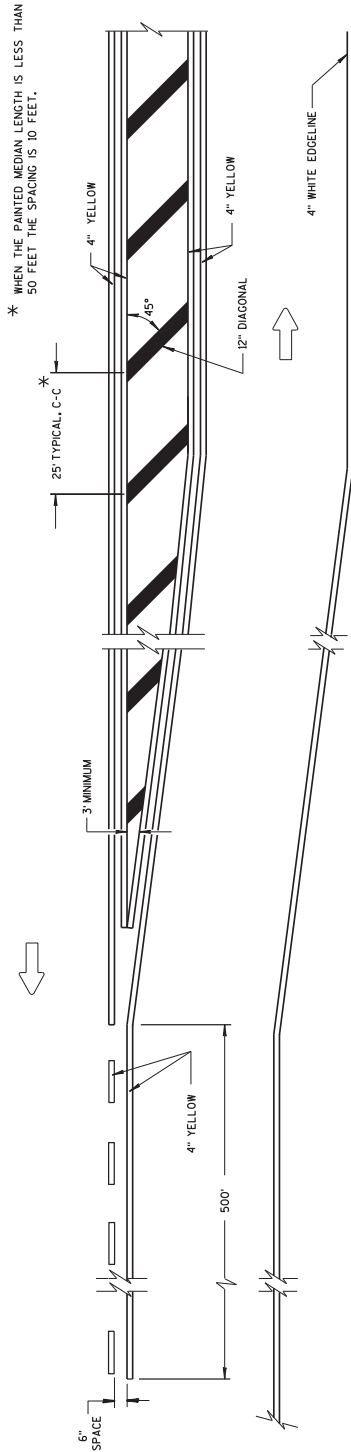
- ① REQUIRED ARROW, TYPE 2 (WHITE).
- ② REQUIRED ARROW, TYPE 2 (WHITE) WHEN L IS GREATER THAN 78 FEET AND LESS THAN OR EQUAL TO 166 FEET.
- ③ A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

**TWO WAY LEFT TURN LANE**

**PAVEMENT MARKING (TURN LANES)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

NOTE: ARROW SYMBOL (↑) SHOWS DIRECTION OF TRAVEL  
L = LENGTH OF TURN BAY

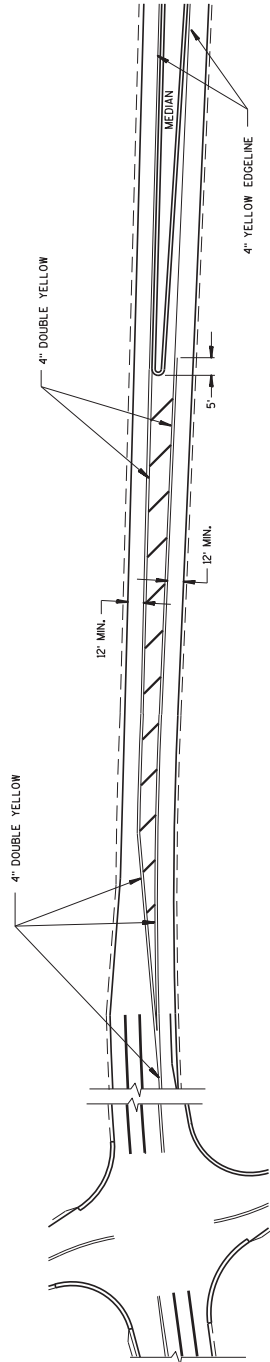


**GENERAL NOTE**

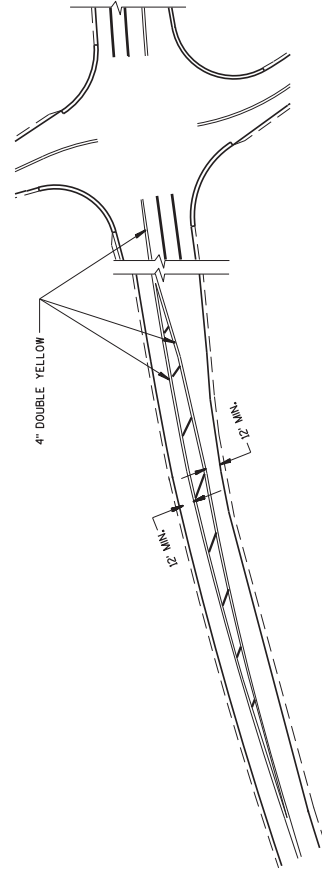
DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



**MEDIAN ISLAND DETAIL**



**APPROACH MARKINGS FOR OTHER MEDIAN TYPES**



**NON APPROACH MARKINGS**

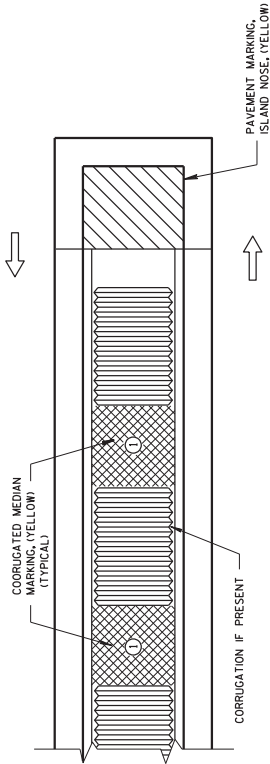
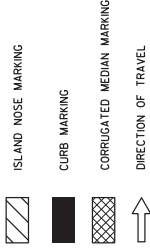
MEDIAN ISLAND MARKING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

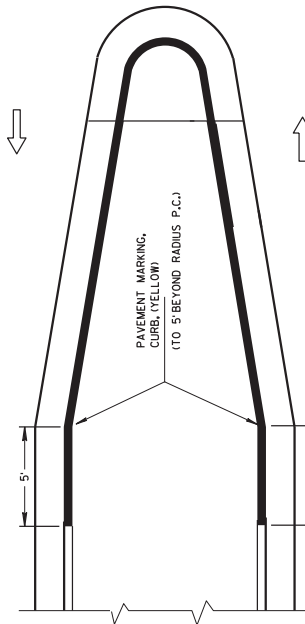
APPROVED  
DATE: June 2017  
/S/ Matthew Rauch  
STATE SIGNING AND MARK 52  
PRWA

**GENERAL NOTES**

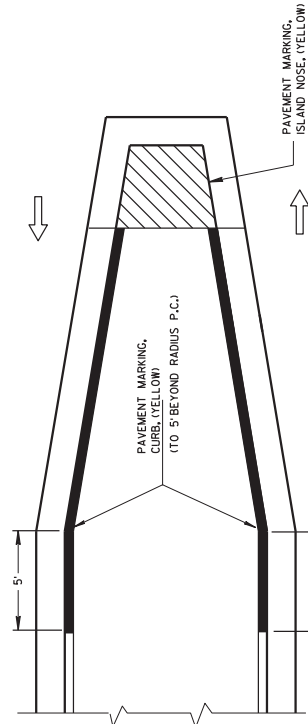
- ① WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE CURB OF THE CONCRETE CORRUGATED MEDIAN. THE TYPE OF PAVEMENT MARKING FOR CONCRETE CORRUGATED MEDIAN WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



**MEDIAN ISLAND WITH SQUARE BLUNT NOSE**



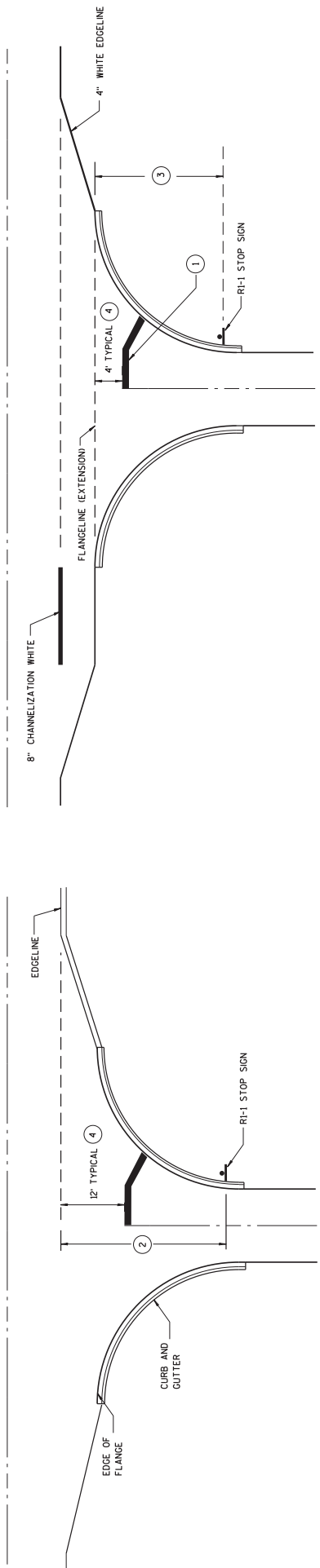
**MEDIAN ISLAND WITH ROUND BLUNT NOSE**



**MEDIAN ISLAND WITH SLOPED NOSE**

**TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS**

<b>PAVEMENT MARKING (ISLANDS)</b>
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED _____ DATE June 2017 /s/ Matthew Rauch STATE SIGNING AND MARK 53 SER _____ FHWA

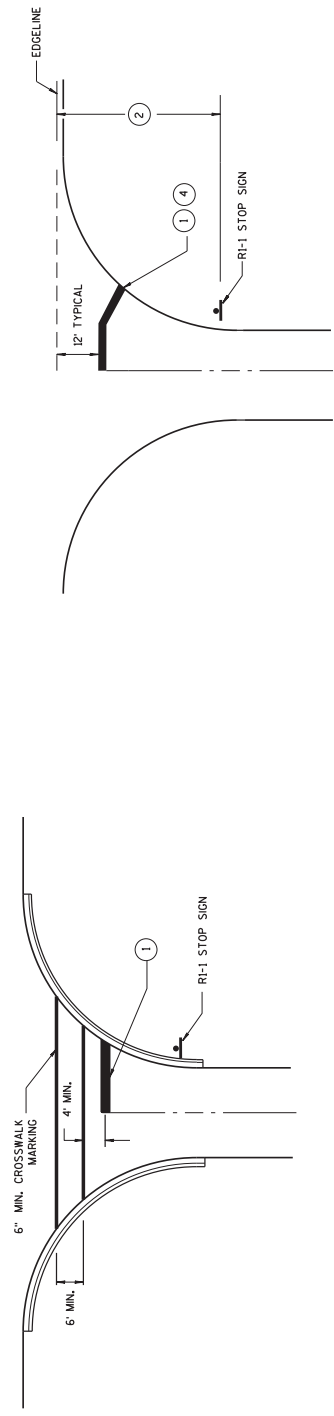


TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE

GENERAL NOTES

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THEN NO STOP LINE IS REQUIRED.
- 3 IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE EXTENSION THEN NO STOP LINE IS REQUIRED.
- 4 MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

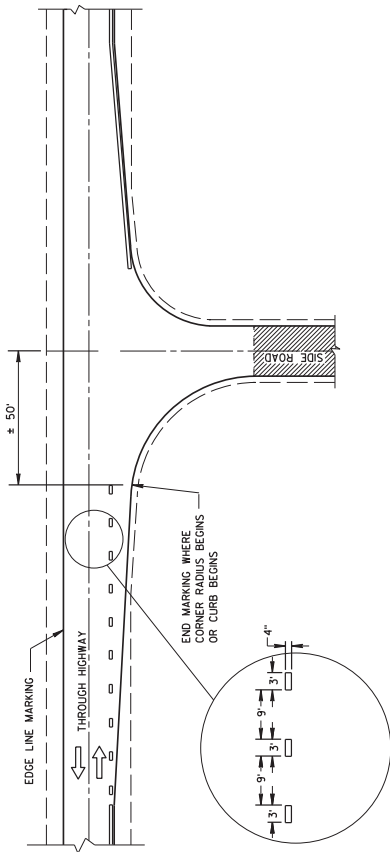
APPROVED /S/ Matthew R. Rouch  
DATE 4-18-2016 STATE SIGNING AND MAR 54  
HEER  
FHWA

**GENERAL NOTES**

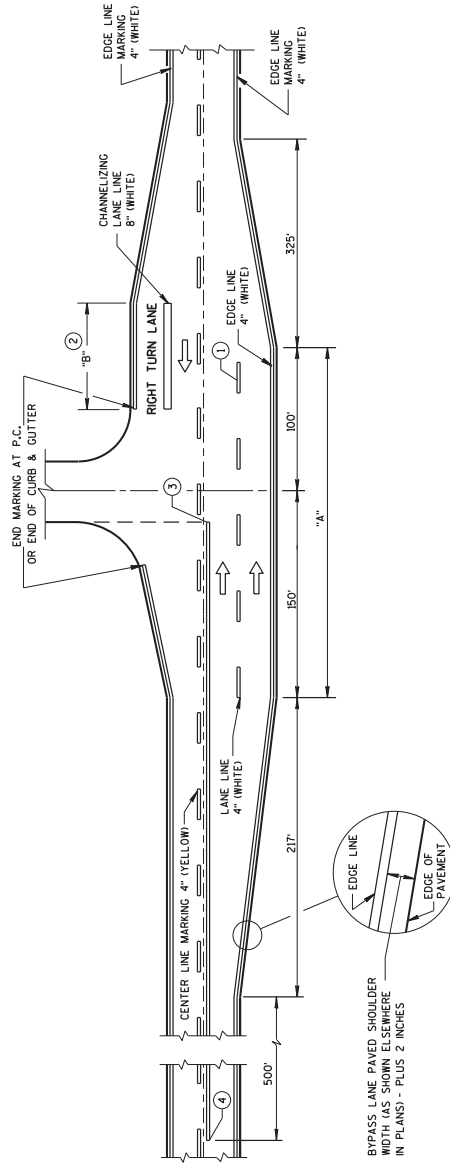
EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

ARROW SYMBOL ( ⇨ ) SHOWS DIRECTION OF TRAVEL



**MINOR INTERSECTION WITHOUT CURBS**



**MAJOR INTERSECTIONS**  
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)

PAVEMENT MARKING  
(INTERSECTIONS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

### GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP FOR A LEFT SIDE EXIT RAMP. REVERSE THE TRAFFIC CONTROL.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

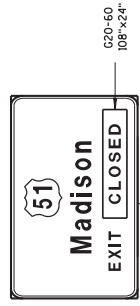
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

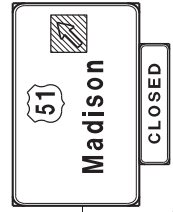
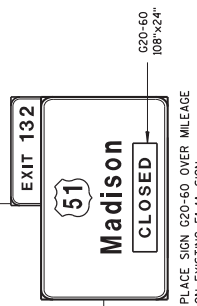
WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

\* W20-LAND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

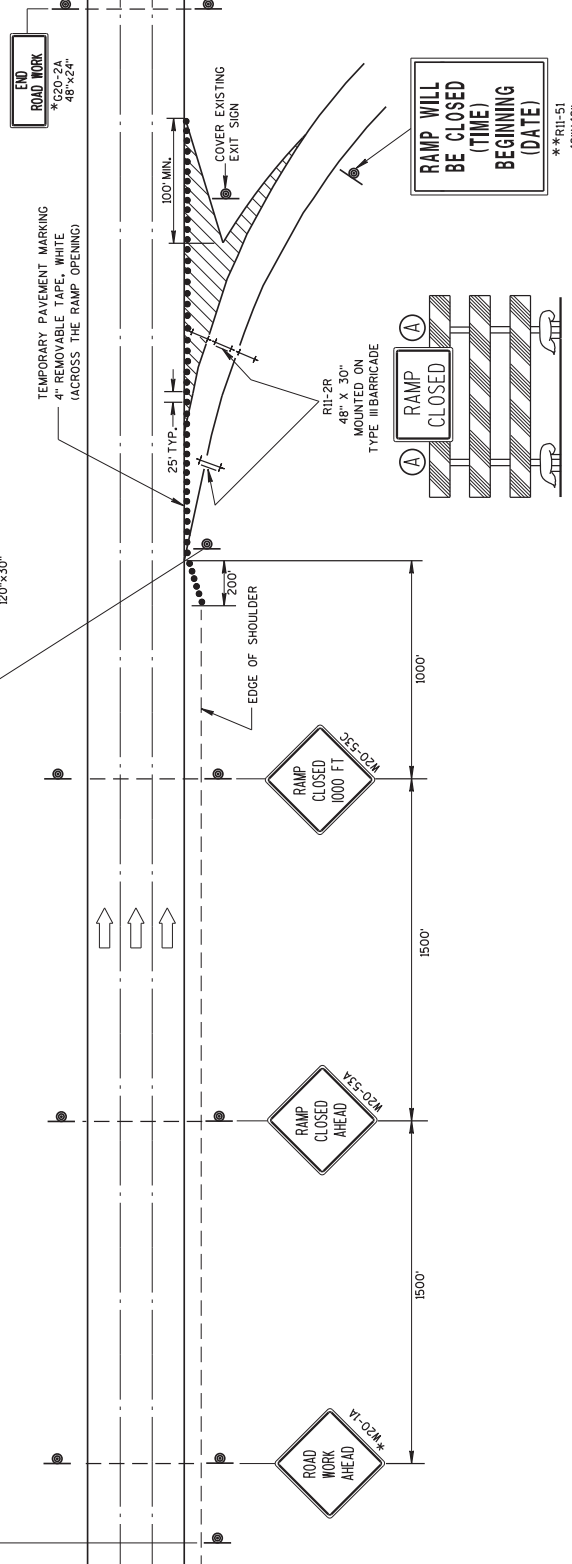
\*\* PLACE "RAMP WILL BE CLOSED" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



OR



COVER ARROW ON EXISTING E4-1A SIGN COVERING SIGNS TYPE 1)



OR SPECIAL SIGN IF INDICATED IN PLAN

### LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL EXIT RAMP CLOSURE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED  
 DATE: Sept. 2015  
 DRAWN BY: Peter Amokobe  
 CHECKED BY: Peter Amokobe  
 STATEWORK NO: 2015-56  
 SAFETY: 56  
 P.W.A.



## GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE, FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS, ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

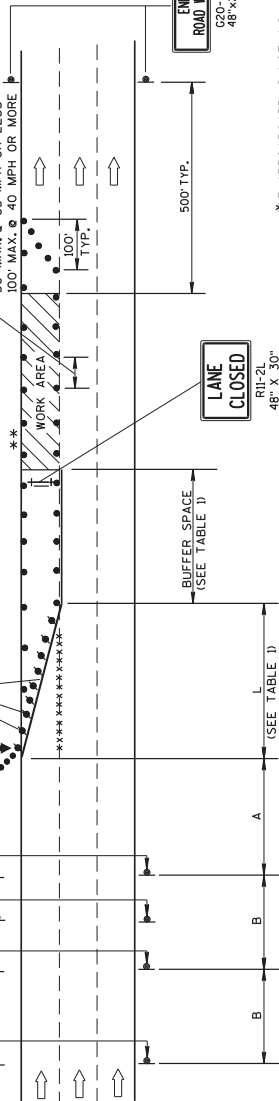
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

\*\*THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

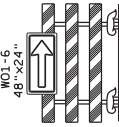
(S) DRUMS SPACED @ 10' INTERVALS AS NEEDED IN FRONT OF ARROW BOARD  
 SPACING:  
 25' @ 35 MPH OR LESS  
 50' @ 40 MPH OR MORE

TEMPORARY PAVEMENT MARKING, 4-INCH REMOVABLE TAPE (WHITE ON RIGHT, YELLOW ON LEFT)

SPACING:  
 50' MAX. @ 35 MPH OR LESS  
 100' MAX. @ 40 MPH OR MORE



\*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.  
 (PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)



## LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

TABLE 1  
 TAPER AND BUFFER SPACE  
 FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	1600'	280'
55	1660'	335'

FOR LANE WIDTH OTHER THAN 12':

- L = WS AT 45 MPH OR GREATER
- L =  $\frac{WS^2}{100}$  AT 40 MPH OR LESS
- L = TAPER LENGTH IN FEET
- S = NON-CONSTRUCTION SPEED LIMIT (MPH)
- W = WIDTH OF LANE CLOSURE

<b>TRAFFIC CONTROL -                  SINGLE LANE CLOSURE -                  NON-FREEWAY/EXPRESSWAY</b>	
DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016	/s/ Peter Amkobe Afepe STATEWIDE WORK ZONE SAFETY ENGINEER

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER. THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE. SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

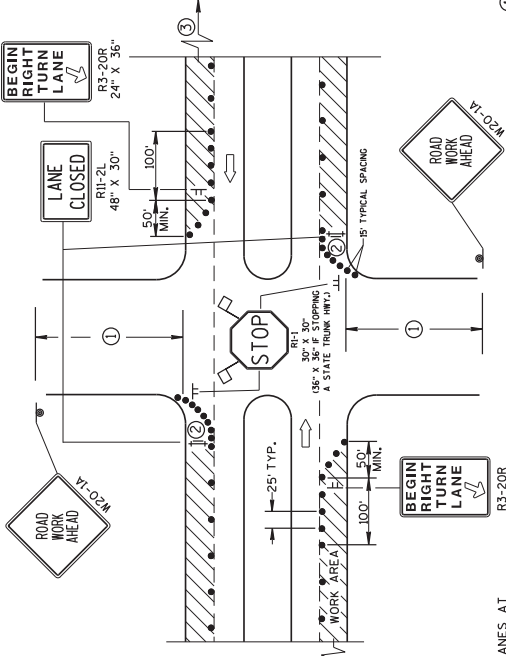
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

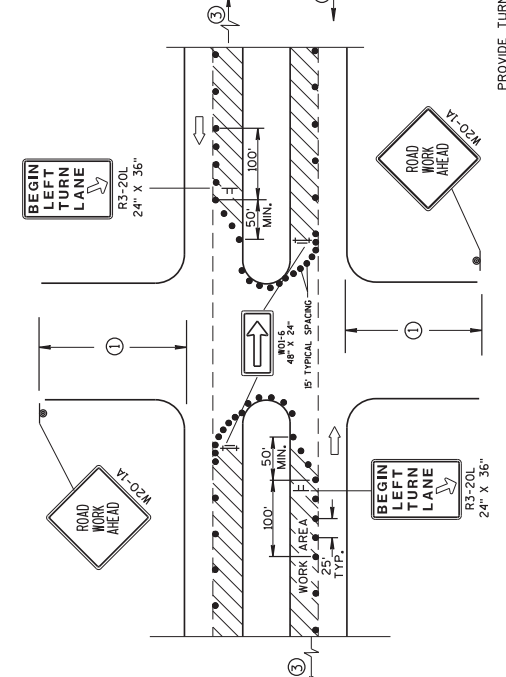
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER. 350' IF 35-40 MPH. 200' IF 25-30 MPH.
- ② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

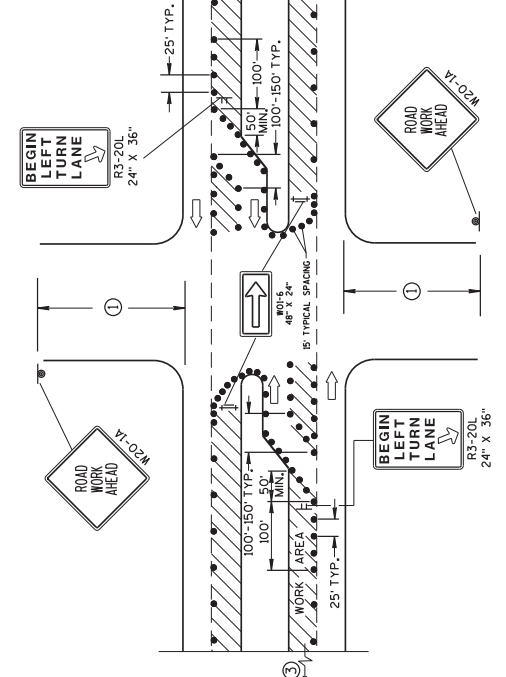


**DETAIL A**  
FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

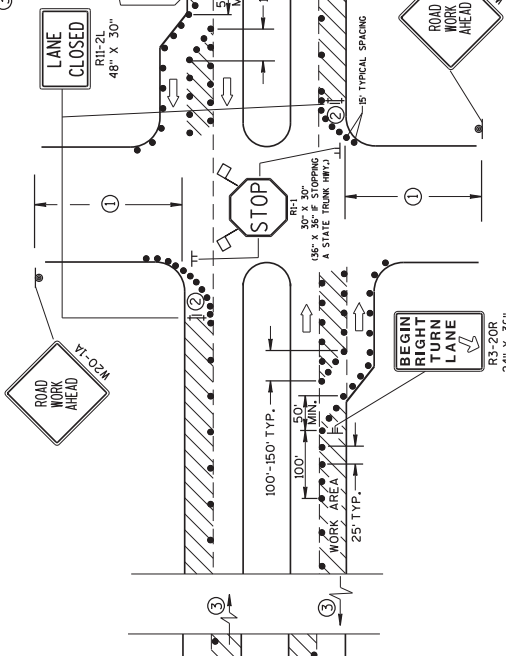
PROVIDE TURN LANES AT INTERSECTIONS, WHEREVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



**DETAIL B**  
FOR RIGHT LANE CLOSURE AT INTERSECTION



**DETAIL C**  
FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)

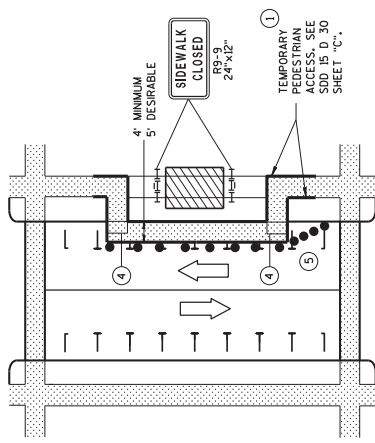


**DETAIL D**  
FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

- LEGEND**
- TRAFFIC CONTROL DRUM
  - ⊙ SIGN ON PERMANENT SUPPORT
  - ⊙ SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
  - ↑ TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
  - ➔ DIRECTION OF TRAFFIC
  - ▨ FLAGS, 16" X 16" MIN., (ORANGE)
  - ▨ WORK AREA

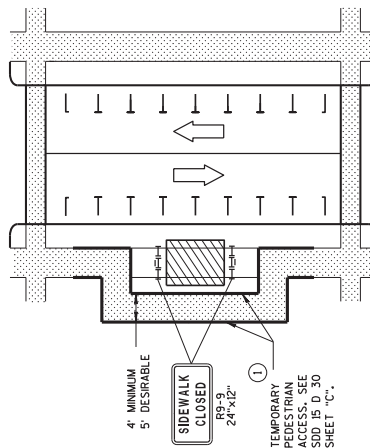
<b>TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE</b>	
STATE OF WISCONSIN	
DEPARTMENT OF TRANSPORTATION	
APPROVED	/s/ Peter Amakobe Atepa
DATE	June 2016
STATEWORK PROJECT NO.	WIS-58
SAFETY	EGS-58
FHWA	

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

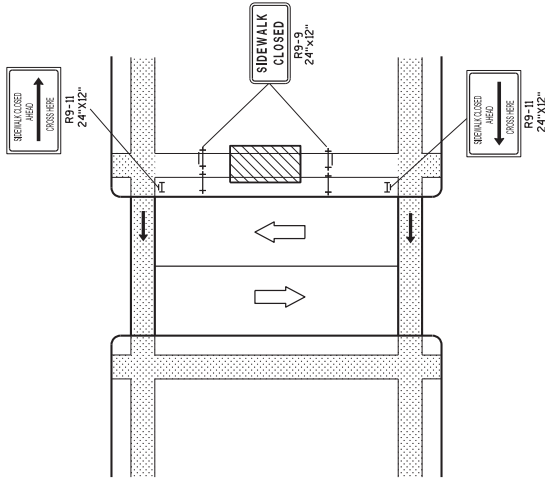


### MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

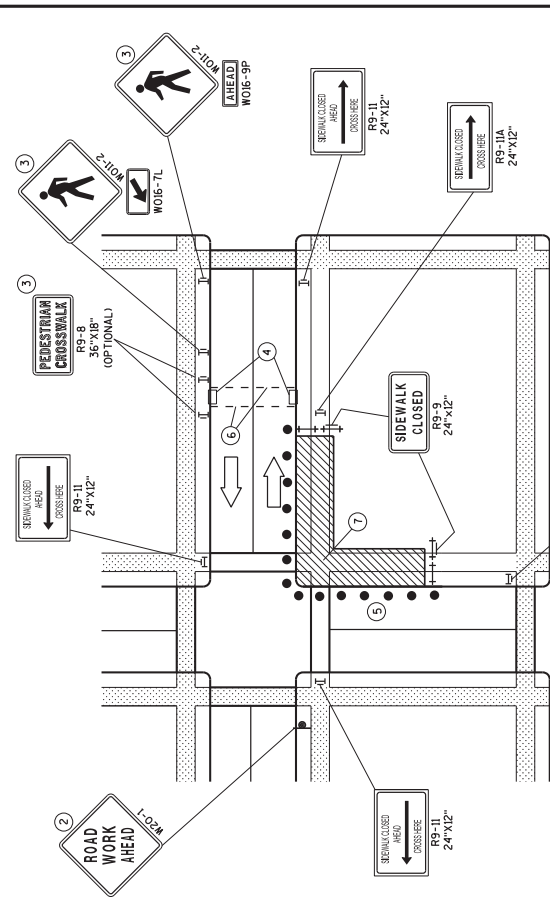
NOTE: LAYOUT SAME AS ABOVE.



### SIDEWALK DIVERSION



### MID-BLOCK SIDEWALK CLOSURE



### CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

#### GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STABLE BURN LIGHTS ARE NECESSARY TO PROVIDE A TEMPORARY PEDESTRIAN ACCESSIBLE WALKWAY. WHEN AVAILABLE, USE CHANNELIZING DEVICES TO DETOUR, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

"W0" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

FOR NIGHTTIME CLOSURE USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC. PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED SIDEWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

1 IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.

2 "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

3 IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND W016-5P ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.

4 TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".

5 DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.

6 TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.

7 LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

#### LEGEND

- SIGN ON PERMANENT SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE B, HIGH-INTENSITY FLASHING)

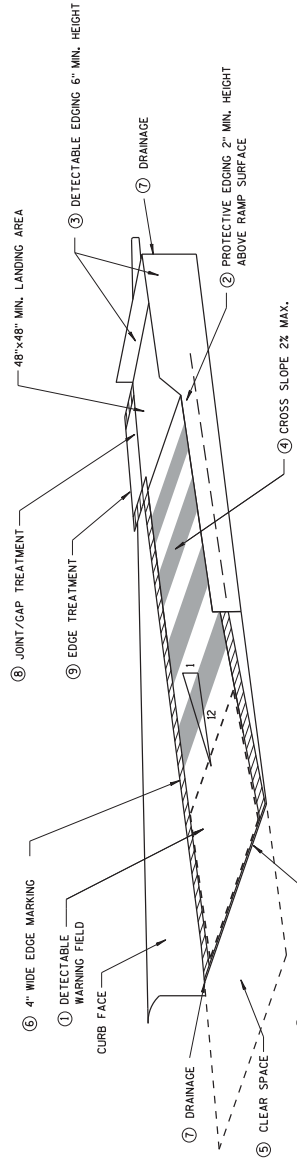
- ➔ DIRECTION OF TRAFFIC
- TRAFFIC CONTROL DRUM

TRAFFIC CONTROL,  
PEDESTRIAN ACCOMMODATION  
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

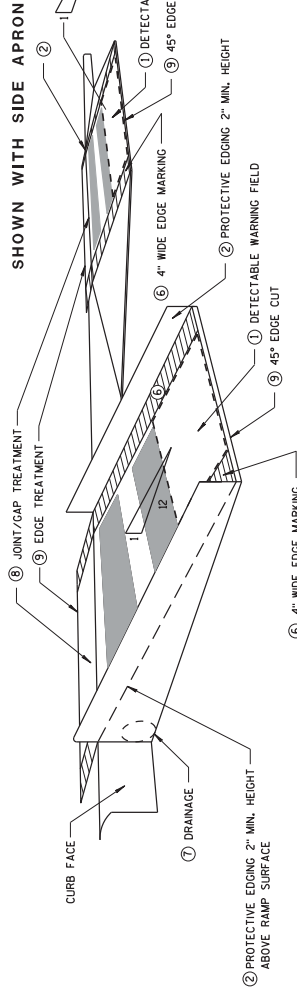
**GENERAL NOTES**

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.  
ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY  
TO MAINTAIN PEDESTRIAN ACCESS.

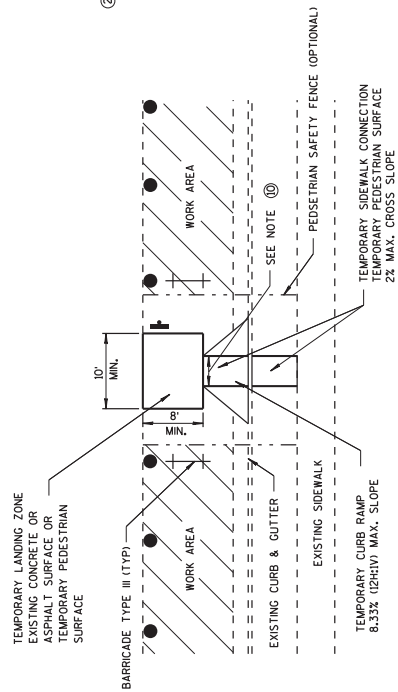
- ① CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 805 SHEET "E".
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 8:33%. PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.
- ⑤ CLEAR SPACE OF 48"x48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- ⑥ THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.
- ⑦ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑧ LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- ⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".
- ⑩ 5' WIDE MIN. WITH PEDESTRIAN SAFETY FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.



**TEMPORARY CURB RAMP  
PARALLEL TO CURB**



**TEMPORARY CURB RAMP  
PERPENDICULAR TO CURB**



**TEMPORARY BUS STOP PAD**

- LEGEND**
- WORK AREA
  - TYPE III BARRICADE
  - TRAFFIC CONTROL DRUM

TRAFFIC CONTROL,  
TEMPORARY ADA COMPLIANT  
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

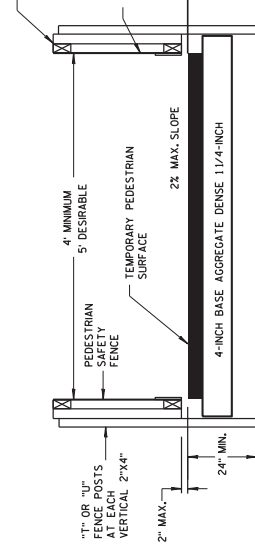
APPROVED  
DATE: June 2006  
DATE: /S/ Peter Amokobor Atepe  
STATEWIDE WORK LOG (6)  
SAFETY SIGN  
FHWA

**GENERAL NOTES**

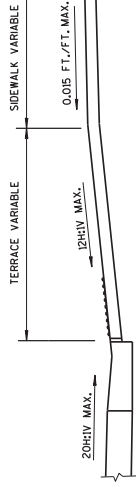
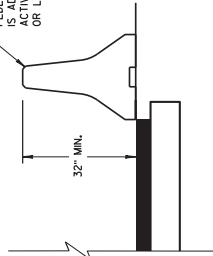
① INTERCHANGEABLE WITH THE PEDESTRIAN SAFETY FENCE.

THE TOP OF THE FENCE IS TO BE A SMOOTH CONTINUOUS SURFACE THAT IS TO BE FREE OF SHARP OR ROUGH EDGES

INSTALL PEDESTRIAN SAFETY FENCE PANEL WITH THE PLASTIC SAFETY ACCESS. THE TEMPORARY PEDESTRIAN ACCESS.

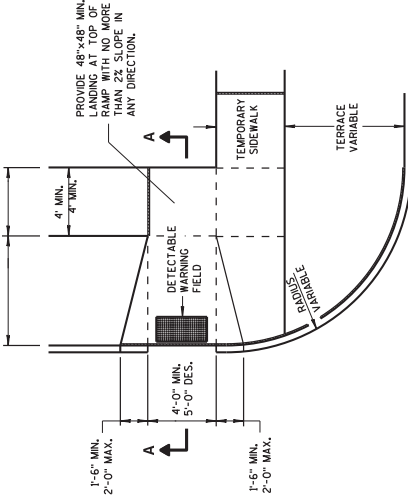


PLACE CONCRETE BARRIER TEMPORARY PEDESTRIAN ACCESS OR LIVE TRAFFIC LANES



**SECTION A-A**

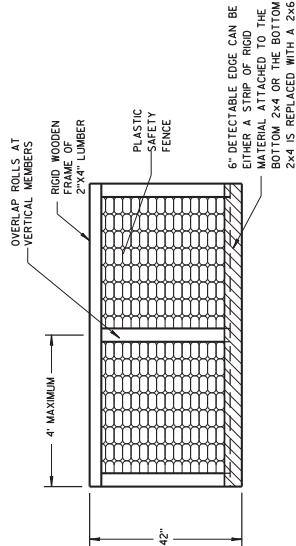
**TEMPORARY PEDESTRIAN ACCESS**



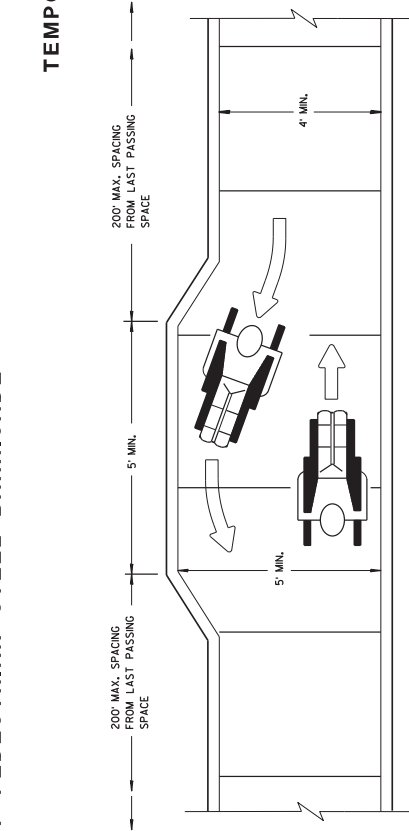
**SECTION B-B**

**ELEVATION VIEW**

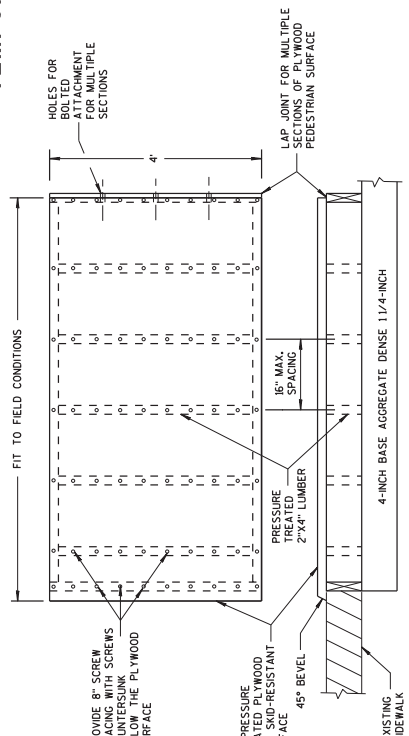
**PEDESTRIAN SAFETY FENCE**



**TEMPORARY PEDESTRIAN STEEL BARRICADE**



**TEMPORARY TYPE 3 RAMP**  
(OUTSIDE OF CROSSWALK AREA)



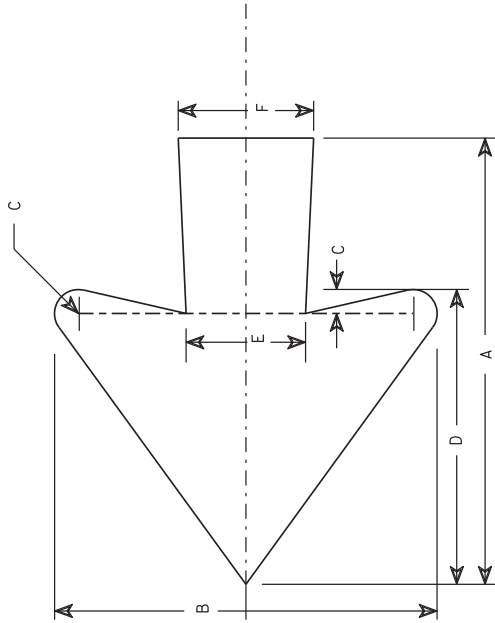
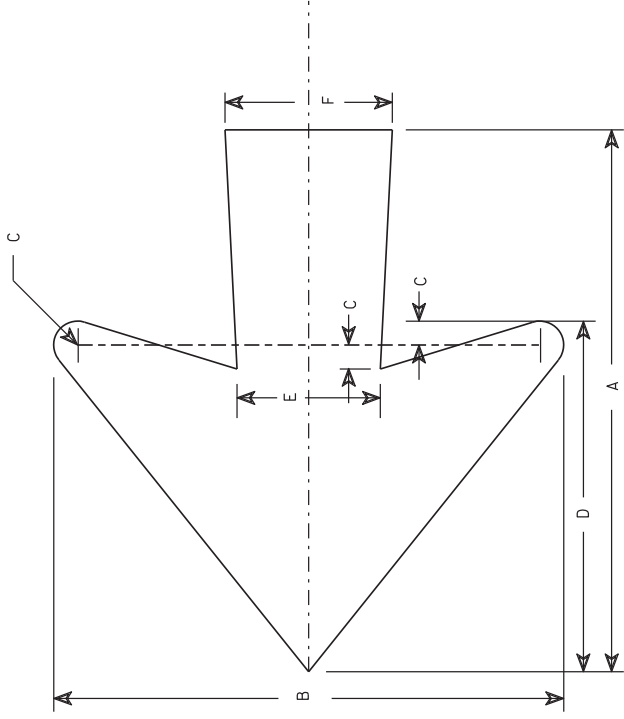
**TEMPORARY PEDESTRIAN SURFACE PLYWOOD**

**NARROW SIDEWALK PASSING DETAIL**

APPROVED	DATE	DESIGNED BY	CHECKED BY
June 2006		Peter Amodeo	Amodeo
STATEWIDE OPERATIONS DIVISION			
SAFETY ENGINEER			

TRAFFIC CONTROL,  
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



Lower Case Copy Size	Right or Left	A			B	C	D	E	F
		2 Town	3 Town	* Town					
4 1/2 Series D&E	8 1/2	11	18	8	3/8	5 1/2	2 1/4	2 5/8	
6 Series D&E	12	18	24	10 3/4	1/2	7 3/8	3 1/4	3 1/2	
8 Series E	15 1/2	24	30	14 1/4	3/4	9 3/4	4 1/4	4 1/2	

\* Indicates Ahead and Tilt for 2 & 3 Town applications.

Lower Case Copy Size	Right or Left	A			B	C	D	E	F
		12 Town	3 Town	* Town					
3 3/4 Series C	7	11	18	6	3/8	4 5/8	1 7/8	2 1/8	

\* Indicates Ahead and Tilt for 2 & 3 Town applications.

STANDARD ARROWS  
FOR D1 GUIDE SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Christa J. Spang*  
for State Traffic Engineer  
DATE 8/10/92 PLATE NO. A1-2.3

SHEET NO: 62

E

WISDOT/CADDIS SHEET 42

PLOT DATE : 28-SEP-2005 07:11

PLOT BY : DOTDZK

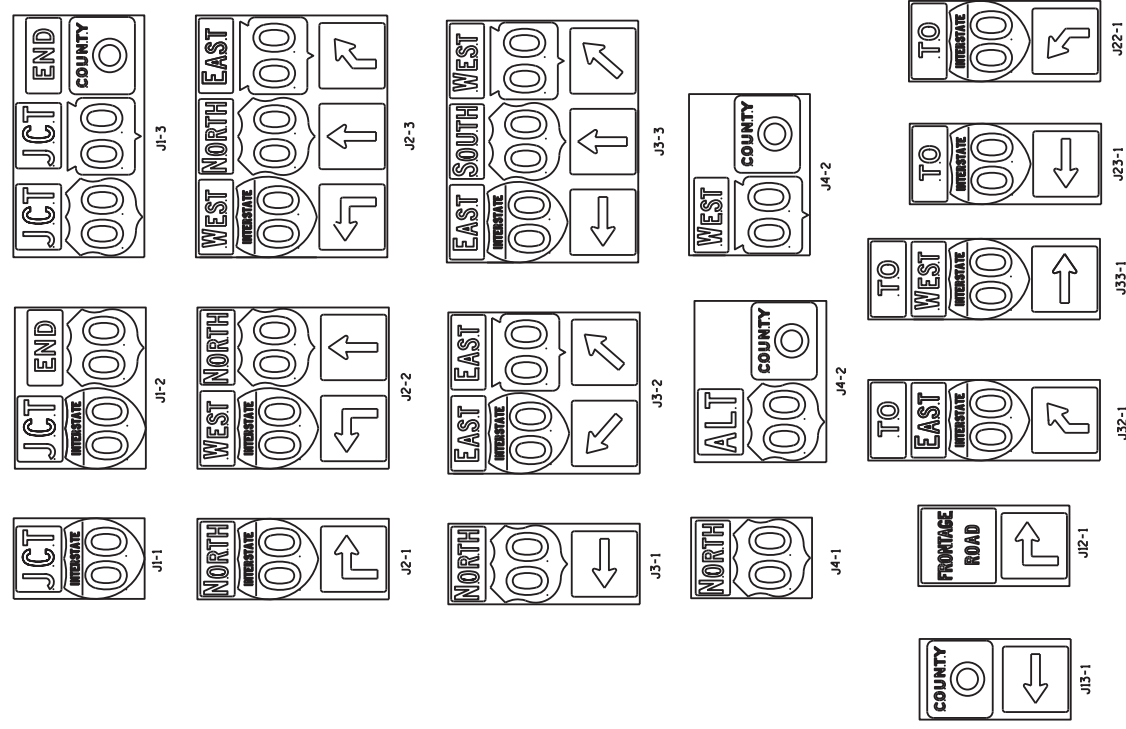
PROJECT NO:

FILE NAME : C:\Users\Projects\tr\_std\plate\412.dcn

NOTES

- Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
  - Background - Black Non-reflective
  - Message - see Note 5
- Message Series - See Note 5
- Corners shall be square or rounded if base material is plywood, if base material is metal the corners shall be rounded.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M-1 Interstate marker shall be blue.
- Single panel j-assemblies shall only be used with route marker shields that are same size, if the route marker shields are different size use multiple piece component.
- Route assemblies that have 24 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- All Vertical J Assemblies are given a Sign Code of JV
- For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

TYPICAL ASSEMBLIES



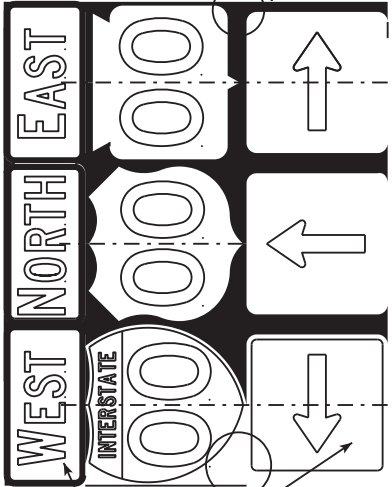
JV

(Typical Vertical J-Assembly See Note 10 and 11)

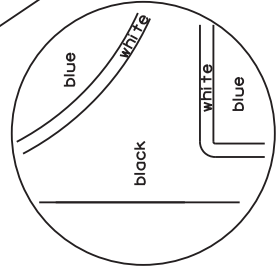


Blue Background

JH-1



[blue background with interstate]



[black background]

ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raush*  
For State Traffic Engineer

DATE 2/06/14 PLOT 63 A2-1S.8

GENERAL NOTES

RURAL AREA (See Note 2)

URBAN AREA

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.

2. If signs are mounted on barrier wall, see A4-10 sign plate.

3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of a sub-sign.

4. J-Assemblies are considered to be one sign for mounting height.

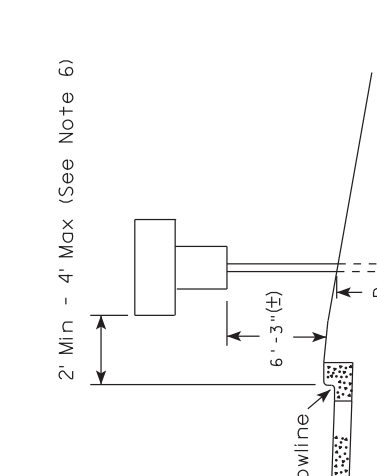
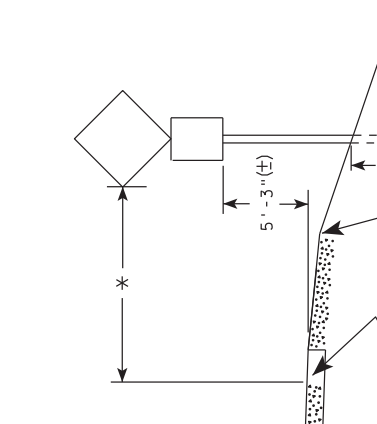
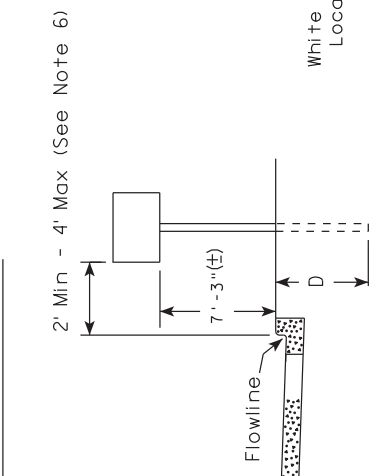
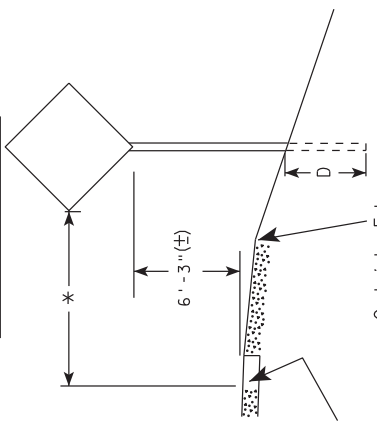
5. Minimum mounting height for signs mounted on traffic signal poles is 5'-3" (±).

6. Offset distance shall be consistent with existing signs or consistent throughout length of project.

7. The (±) tolerance for mounting height is 3 inches.

8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).



POST EMBEDMENT DEPTH	
Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

\*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

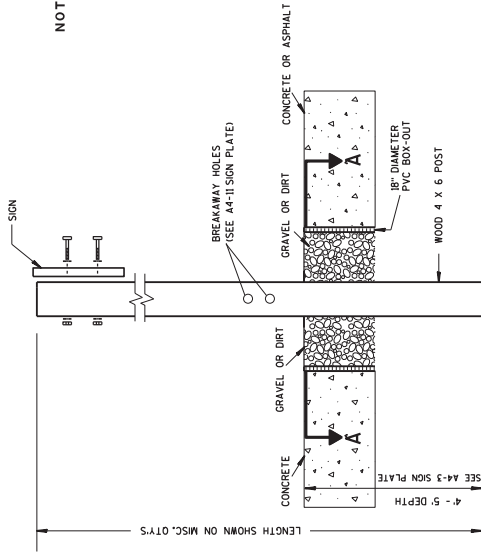
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Roush*  
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

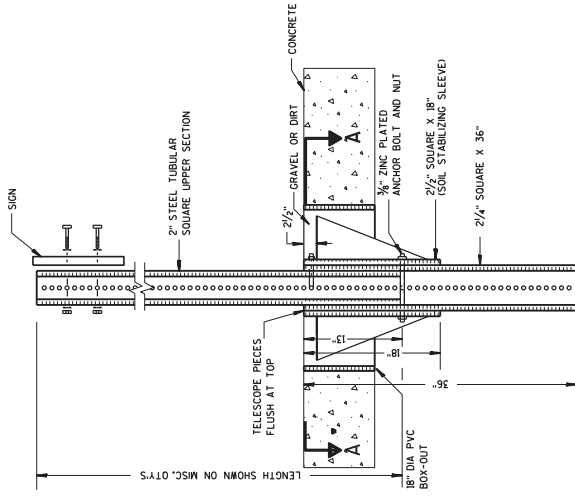




**ELEVATION VIEW**

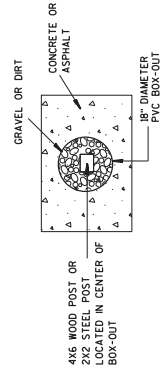
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
  2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
  3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



**ELEVATION VIEW**

**DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT**



**PLAN VIEW**

**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

**SIGN POST  
BOX-OUTS  
A4-3B**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

For State Traffic Engineer  
DATE 1/27/14 PLATE A4-3B.1

SHEET NO: 65

E

PROJECT NO:

HWY:

COUNTY:

FILE NAME : C:\CAEF\ees\Projects\TF\_stdp\lots\A43B.dgn

PLOT BY : mscsjo

PLOT NAME :

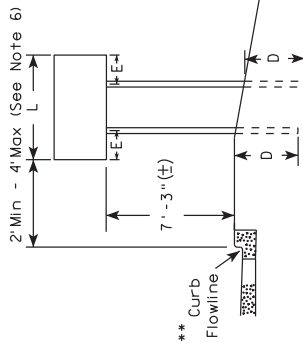
PLOT SCALE : 13.6598127:1.000000

WISDOT/CADD5 SHEET 42

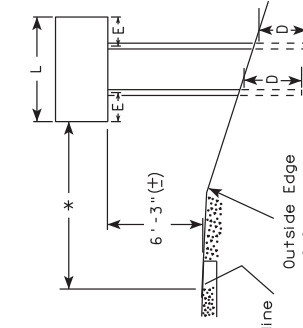
GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

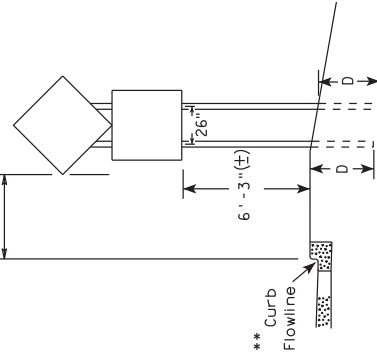
URBAN AREA



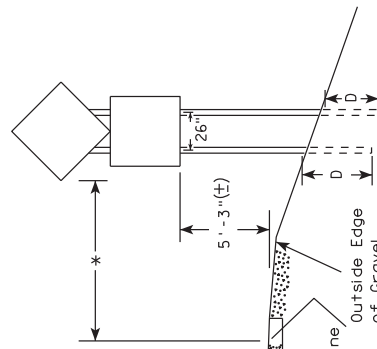
RURAL AREA (See Note 3)



URBAN AREA (See Note 6)



RURAL AREA (See Note 3)



48" DIAMOND WARNING SIGN

48" DIAMOND WARNING SIGN

- \* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- \*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- \*\*\* See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	L	E
Greater than 48" Less than 60"	12"	L/5
60" to 108"		

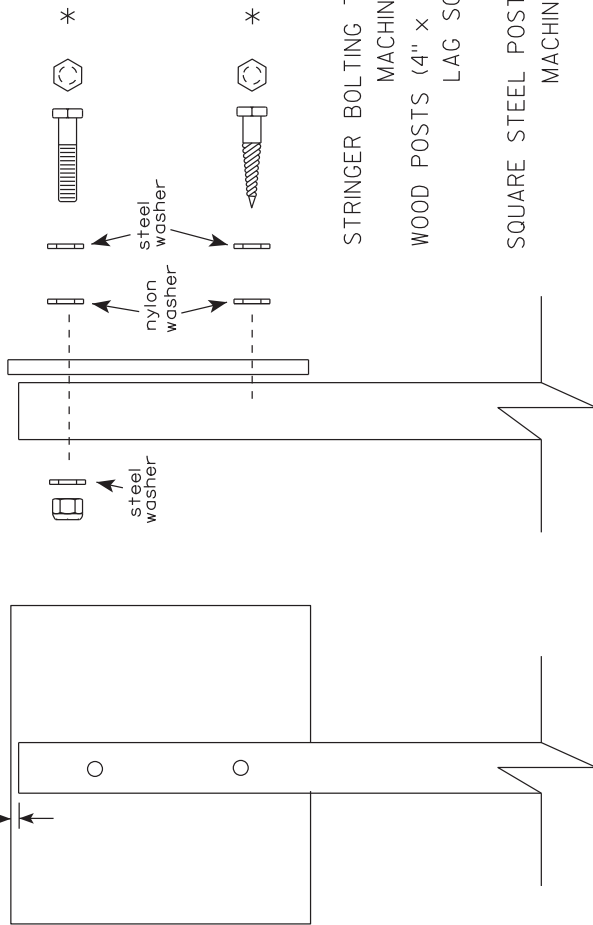
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	L	E
Greater than 108" to 144"	12"	

POST EMBEDMENT DEPTH	
Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS
WISCONSIN DEPT OF TRANSPORTATION
APPROVED <i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 8/21/17 PLATE NO. A4-4.15

SIGN SHALL BE MOUNTED TO PROJECT ABOVE THE TOP OF THE POST

1" ± 1/2"



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)

3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)

3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL

O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

\* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

Wisconsin State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

SHEET NO. 67

PROJECT NO:

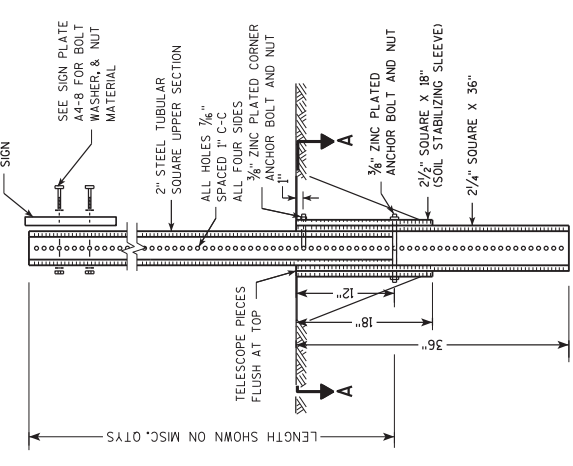
FILE NAME : C:\VCP\files\Drawings\atp\_strm\atp\A4R.DWG

PRINT DATE : 11-08-2016 11:16

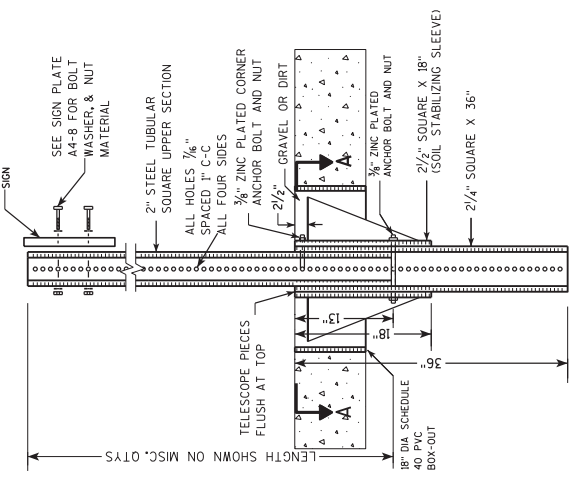
PRINT BY : 66

66

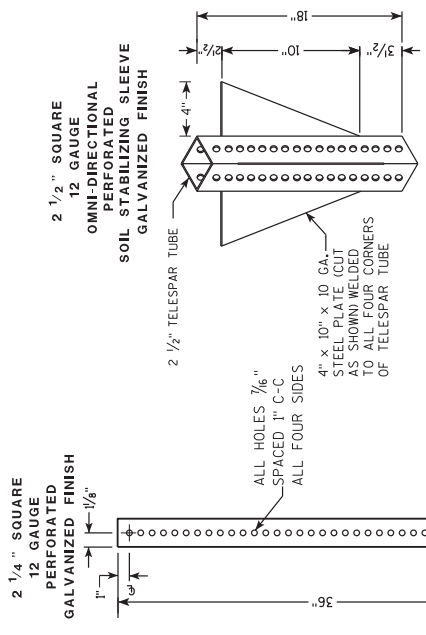
**DETAIL OF TUBULAR STEEL SIGN POST**  
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)



**DETAIL OF TUBULAR STEEL SIGN POST**  
(IN POURED CONCRETE OR ASPHALT)



**TELESCOPIC TUBING ANCHORS**  
**TWO PIECE SYSTEM**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL SIGN POST**  
A4 - 9

WISCONSIN DEPT OF TRANSPORTATION  
APPROVED *Matthew R. Rauch*  
Far State Traffic Engineer  
DATE 2/05/15 PLAT 68 14-9.9

SHEET NO: **E**

PROJECT NO:

COUNTY:

HWY:

PLOT BY: mscsjj

PLOT DATE: 05-FEB-2015 17:09

PLOT NAME: PROJECTS\TF\_stdp\lots\449.DGN

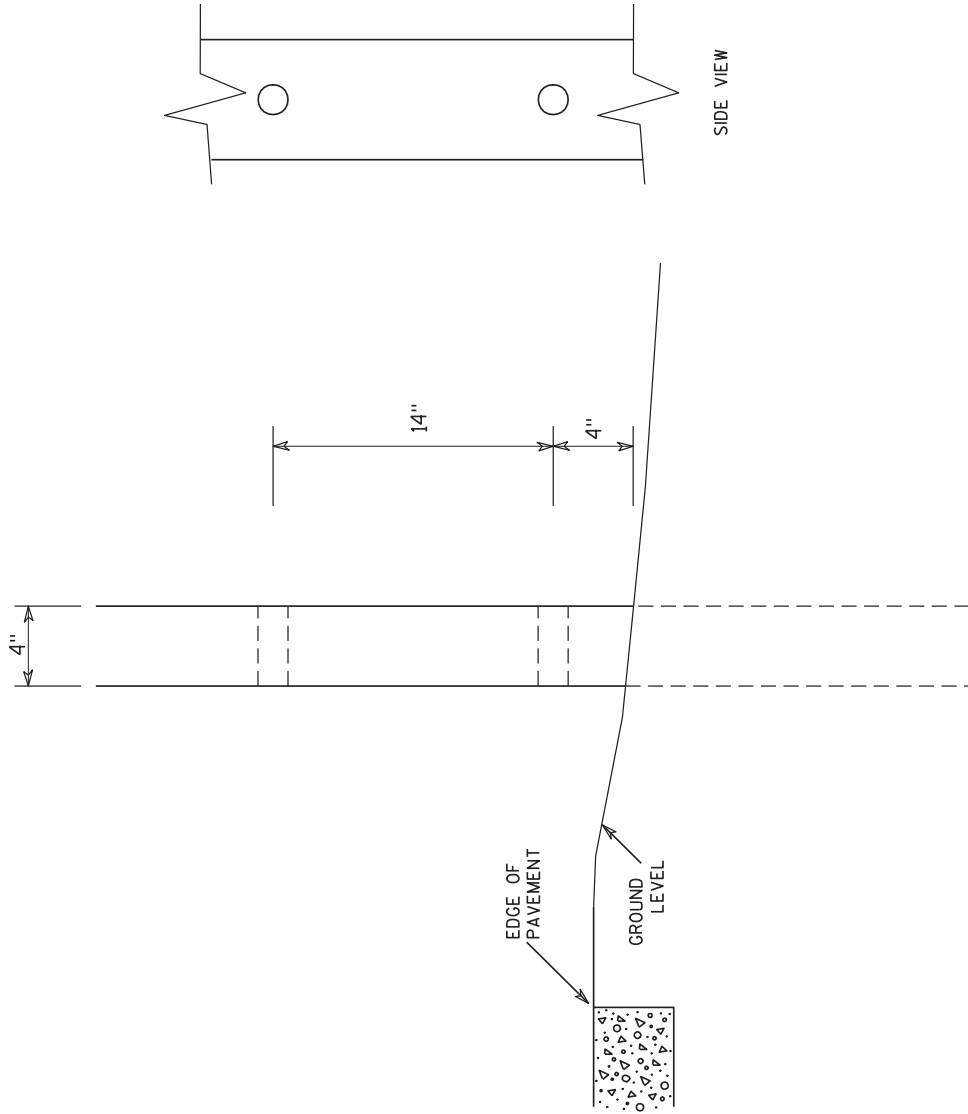
FILE NAME: I:\C:\CAEF\_files\Projects\TF\_stdp\lots\449.DGN

PLOT SCALE: 1:1.659812711.000000

WISDOT/CADD'S SHEET 42

GENERAL NOTES

- All 4 x 6 Wood Posts shall be modified by having two 1 1/2" diameter holes drilled perpendicular to the roadway centerline.



SIDE VIEW

4 X 6 WOOD POST  
MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Charles J. Speer*  
for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

SHEET NO: 69

E

WISDOT/CADDIS SHEET 42

PLOT SCALE : 6:20723811.000000

PLOT NAME :

PLOT BY : BOTSJA

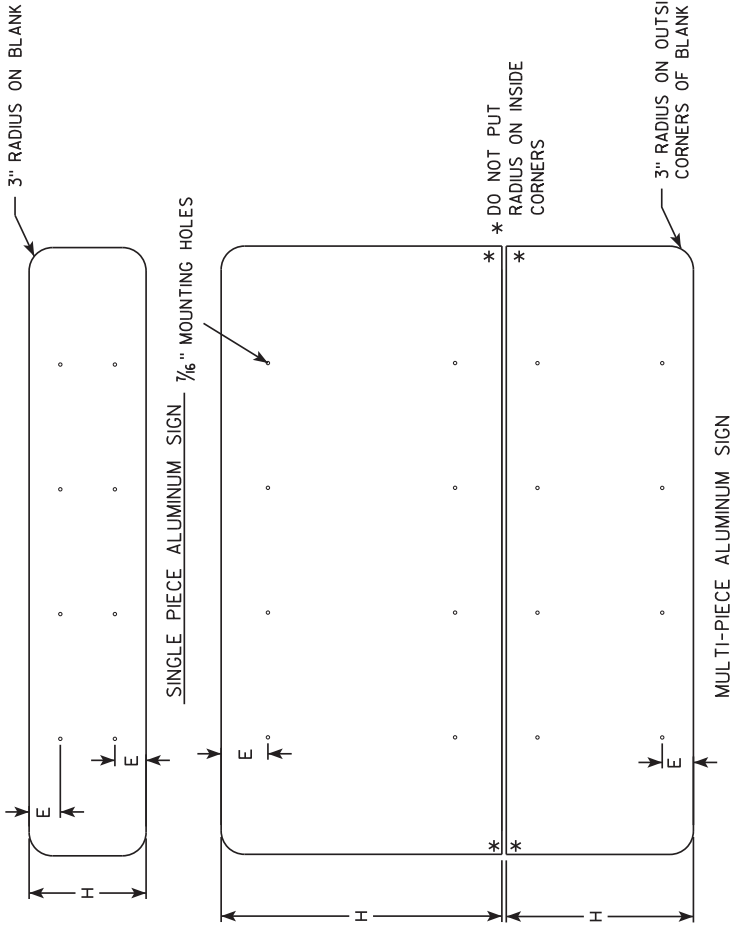
PLOT DATE : 10-NOV-2005 10:09

COUNTY:

HWY:

PROJECT NO:

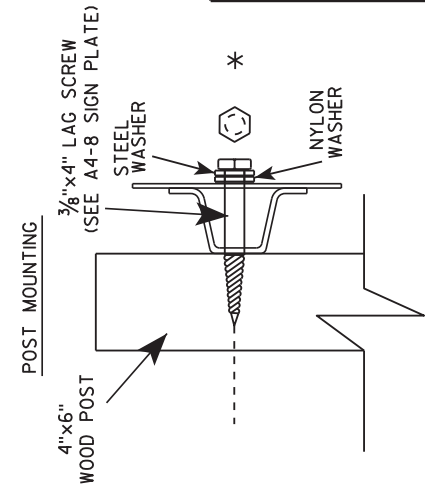
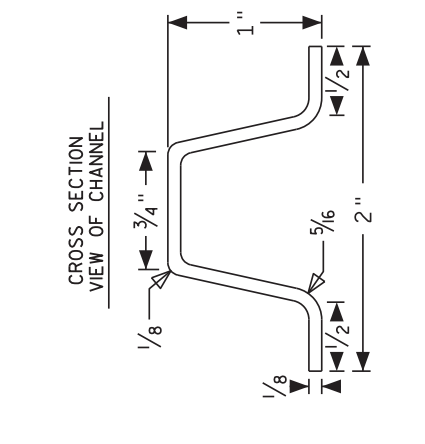
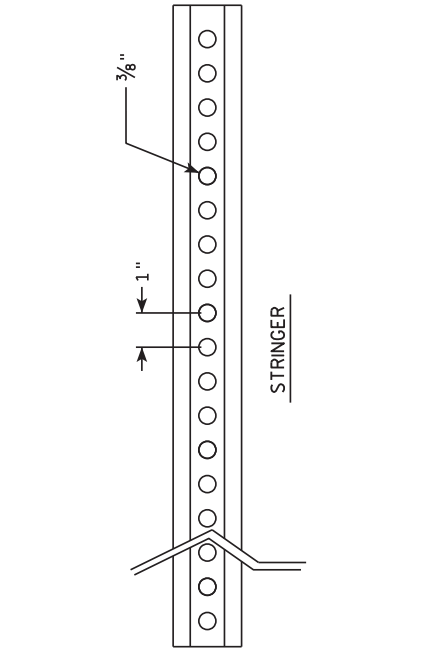
FILE NAME : C:\Users\NProjects\N\std\dotnet\A411.DGN



**GENERAL NOTES**

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16 1/2" 33 1/2" 50 1/2" 67 1/2"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19 1/2" 38 1/2" 57 1/2" 76 1/2"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22 1/2" 43 1/2" 64 1/2" 85 1/2"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

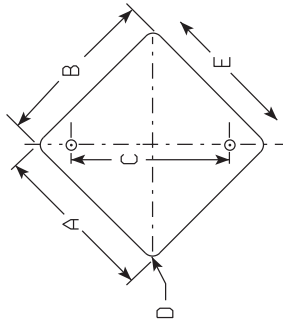


**SIGN STRINGER MOUNTING REQUIREMENTS**

WISCONSIN DEPT OF TRANSPORTATION

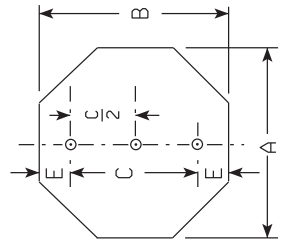
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/26/16 PLATE NO. A4-1B.1



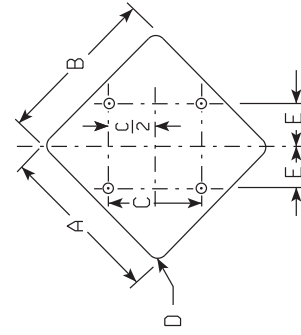
1

TYPE 1						
A	B	C	D	E	Area Sq. Ft.	Mounting Holes
18	18	18	1 1/2	14	2.25	2
24	24	24	1 1/2	20	4.0	2
30	30	30	1 7/8	22	6.25	2
36	36	36	2 1/4	26	9.0	2



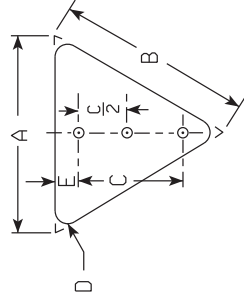
2

TYPE 4						
A	B	C	D	E	Area Sq. Ft.	Mounting Holes
18	18	14	1	2	1.95	2
36	36	24	2	2	3.9	2
48	48	32	3	3	7.0	2

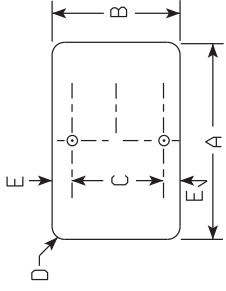


3

TYPE 5 CONT'D.							
A	B	C	D	E	Area Sq. Ft.	Mounting Holes	
30	30	22	1 7/8	4	6.25	2	
36	36	28	1 1/2	2	3.0	2	
36	36	18	1 1/2	2	4.5	2	
36	36	24	20	1 1/2	2	6.0	2
36	36	26	2 1/4	5	9.0	2	
40	40	18	14	1 1/2	2	5.00	2
42	42	21	17	1 7/8	2	6.125	2
42	42	30	22	1 7/8	4	8.75	2
48	48	24	20	1 7/8	2	8.0	2



4



5

NOTES

1. All sign blanks shall have 7/16" Diameter mounting hole.

ALUMINUM THICKNESS

SIGN WIDTH \_\_\_\_\_ NOMINAL THICKNESS  
 30 inches and under 0.080 inch  
 Greater than 30-36 inches 0.100 inch  
 Over 36 inches 0.125 inch

STOP SIGN THICKNESS

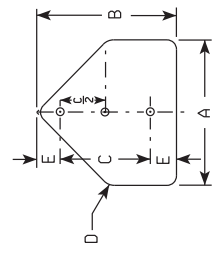
SIGN WIDTH \_\_\_\_\_ NOMINAL THICKNESS  
 30 inches 0.100 inch  
 36-48 inches 0.125 inch

TYPE 2						
A	B	C	D	E	Area Sq. Ft.	Mounting Holes
24	24	20	2	3.31	2	
30	30	24	3	5.18	2	
36	36	28	4	7.46	2	
48	48	36	6	13.25	3	

TYPE 3						
A	B	C	D	E	Area Sq. Ft.	Mounting Holes
48	48	26	3	13	16.0	4

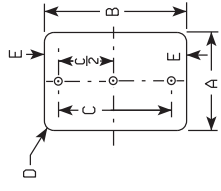
TYPE 5							
A	B	C	D	E	Area Sq. Ft.	Mounting Holes	
8	8	6	1 1/2	1	0.44	2	
12	12	9	1 1/2	1 1/2	1.00	2	
18	18	14	1 1/2	2	2.25	2	
21	21	15	1 1/2	2	2.19	2	
21	21	17	1 1/2	2	3.06	2	
24	24	12	8	1 1/2	2	2.0	2
24	24	18	14	1 1/2	2	3.0	2
24	24	20	20	1 1/2	2	4.0	2
30	30	12	8	1 1/2	2	2.5	2
30	30	15	11	1 1/2	2	3.13	2
30	30	18	14	1 1/2	2	3.75	2
30	30	21	17	1 1/2	2	4.37	2
30	30	24	20	1 1/2	2	5.0	2

STANDARD LAYOUT OF  
 ALUMINUM SIGN BLANKS  
 SHEET 1 OF 3  
 WISCONSIN DEPT OF TRANSPORTATION  
 APPROVED *Matthew R. Raub*  
 for State Traffic Engineer  
 DATE 8/22/17 PLATE NO. A5-3,24



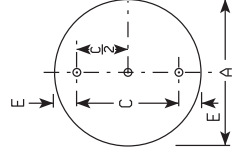
6

TYPE 6						
A	B	C	D	E	Area Sq. Ft.	Mounting Holes
30	30	24	1 7/8	3	4.68	2
36	36	26	1 7/8	5	6.75	2
48	48	32	1 7/8	8	12.0	3



7

TYPE 7						
A	B	C	D	E	Area Sq. Ft.	Mounting Holes
12	18	15	1 1/2	1 1/2	1.5	2
12	24	20	1 1/2	2	2.0	2
12	36	24	1 1/2	6	3.0	2
12	48	32	1 1/2	8	4.0	3
15	21	18	1 1/2	1 1/2	2.19	2
18	24	20	1 1/2	2	3.0	2
18	36	24	1 1/2	6	4.5	2
18	54	36	2 1/2	9	6.75	3
21	60	40	1 1/2	10	8.75	3
21	72	52	1 1/2	10	10.5	3
24	30	22	1 1/2	4	5.0	2
24	36	24	1 1/2	6	6.0	2
24	39	27	1 1/2	6	6.5	3
24	45	32	1 7/8	6	7.5	3
24	48	32	1 7/8	8	8.0	3
24	57	37	1 7/8	10	9.5	3
36	48	32	1 7/8	8	12.0	3
30	36	24	1 7/8	6	7.5	2
36	54	36	2 1/4	9	12.75	3
36	57	37	1 7/8	10	14.25	3
48	39	27	1 7/8	10	13.0	3
48	45	32	1 7/8	10	14.0	3
48	57	37	3	6	19.0	3



8

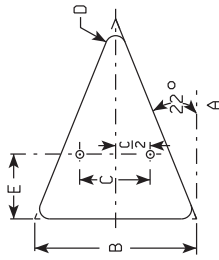
TYPE 8					
A	B	C	E	Area Sq. Ft.	Mounting Holes
30	—	24	3	4.91	2
36	—	26	5	7.07	2
48	—	32	8	12.5	3

NOTES

- All sign blanks shall have 7/16" Diameter mounting holes.

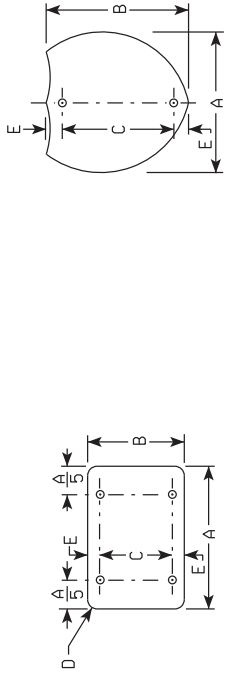
STANDARD LAYOUT OF  
ALUMINUM SIGN BLANKS  
SHEET 2 OF 3  
WISCONSIN DEPT OF TRANSPORTATION  
APPROVED *Matthew R Raub*  
for State Traffic Engineer  
DATE 8/22/17 PLATE NO. A5-3.24  
SHEET NO: 72





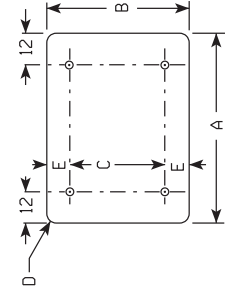
10

TYPE 10 (NOTE 1)						
A	B	C	D	E	Area Sq. Ft.	Mounting Holes
48	36	14	2 1/4	16	6.0	2



11

TYPE 12 (NOTE 2)					
A	B	C	E	Area Sq. Ft.	Mounting Holes
24	24	18	3	3.13	2
30	24	18	3	3.91	2
36	36	28	4	7.03	2
45	36	28	4	8.79	2



12

TYPE 13						
A	B	C	D	E	Area Sq. Ft.	Mounting Holes
48	60	40	3	10	20.0	4
54	12	8	1 1/2	2	4.5	4
54	15	11	1 1/2	2	5.63	4
54	18	14	1 1/2	2	6.75	4
54	21	17	1 1/2	2	7.88	4
54	24	20	1 7/8	2	9.0	4
54	36	28	1 7/8	4	13.5	4
54	48	40	1 7/8	4	18.0	4
60	12	8	1 1/2	2	5.0	4
60	18	14	1 1/2	2	7.5	4
60	24	20	1 7/8	2	10.0	4
60	30	22	1 7/8	4	12.5	4
60	36	28	1 7/8	4	15.0	4
60	42	34	1 7/8	4	17.5	4
60	48	40	3	4	20.0	4

13

NOTES

1. Dimension A on type #10 is measured to the theoretical intersections of the edges.
2. Shape of type #12 shall conform to FHWA standard for Interstate route markers.
3. All signs over 60" in width shall have 3" radius on the outside corners of the aluminum blank.
4. For signs over 60" in width see sign plate A4-18 for hole placement.

STANDARD LAYOUT OF ALUMINUM SIGN BLANKS SHEET 3 OF 3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Matthew P. Raub*  
for State Traffic Engineer

DATE 8/22/17 PLATE NO. A5.3.24

SHEET NO: 73

E

PROJECT NO: COUNTY: HWY:

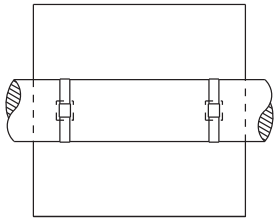
PLOT DATE : 22-AUG-2017 11:50 PLOT BY : \$\$.plotuser...\$ PLOT NAME :

PLOT SCALE : 1.957742:1.000000 WISDOT/CADD SHEET 42

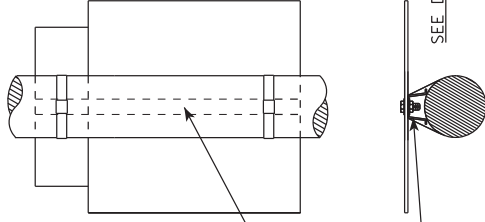
FILE NAME : C:\CAEFiles\Projects\tr\_stdplate\A53.DGN

# BANDING

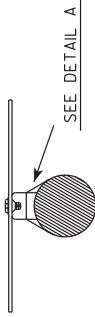
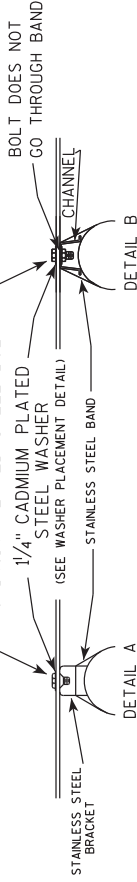
SINGLE SIGN



"J" ASSEMBLY



CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET



SEE DETAIL A

DETAIL A

DETAIL B

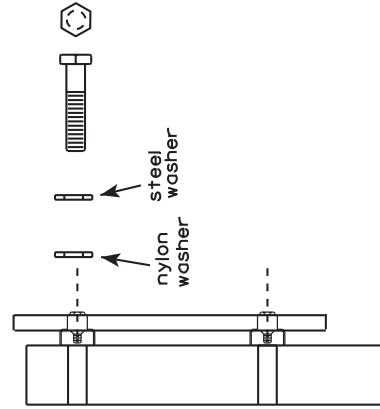
BOLT DOES NOT  
GO THROUGH BAND

CHANNEL

DETAIL A

DETAIL B

## WASHER PLACEMENT



WASHERS (ALL POSTS) -

- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
  - 1-1/4" O.D. X 3/8" I.D. X .080 NYLON
- FOR ALL TYPE H SIGNS

## GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION  
APPROVED *Matthew R. Raub*  
State Traffic Engineer  
DATE 8/16/13 PLATE NO. A5-9.3

SHEET NO: 74

COUNTY:

HWY:

PROJECT NO:

FILE NAME : C:\GCEP\145\Projects\145\std\010th\A59.DGN

PLOT DATE : 16-AUG-2013 13:27

PLOT BY : mscsjo

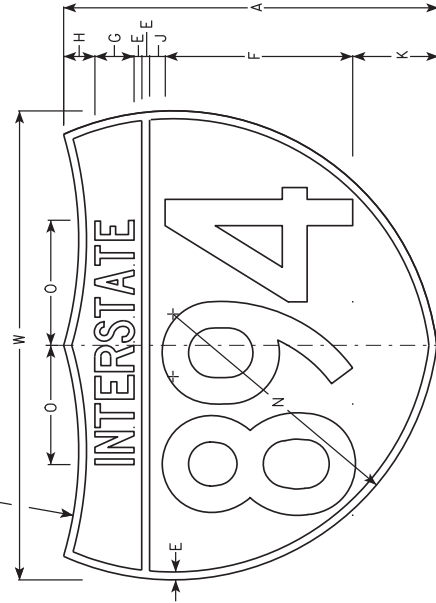
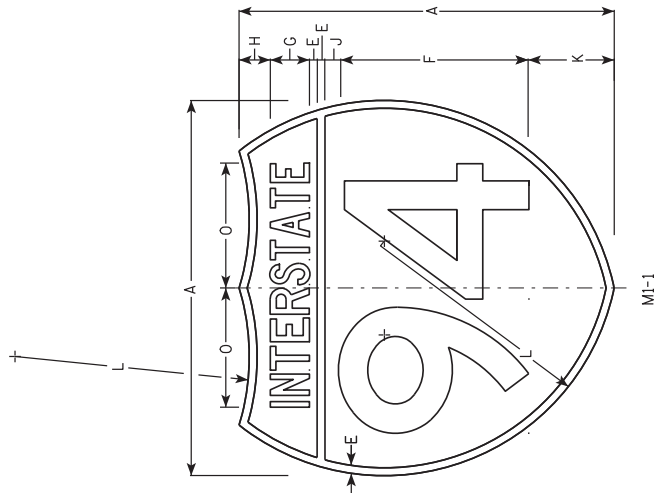
PLOT NAME :

PLOT SCALE : 33.740899:1.000000

WISDOT/CADDIS SHEET 42

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Top Red - Bottom Blue (See Note 6)  
Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & adjust spacing as per plate A10-1.
5. M1-1- Numerals - D  
Interstate - C  
M1-1A - All copy - C
6. Permanent Signs  
Message - Type H Reflective  
Detour or other temporary signs  
Background - Reflective  
Message - Reflective



Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1																									
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 1/8								30		
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45		
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45		
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45		

INTERSTATE ROUTE MARKER  
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for  
State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

SHEET NO: 75

E

PLOT NAME :

PLOT BY : DIT,PH

PLOT DATE : 13-OCT-2005 14:49

COUNTY :

HWY :

PROJECT NO :

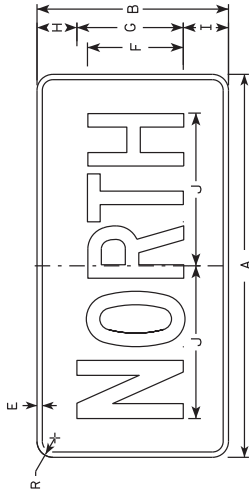
FILE NAME : C:\User\Projects\tr-stp\plate\M1.1.DGN

PLOT SCALE : 7.9477811.000000

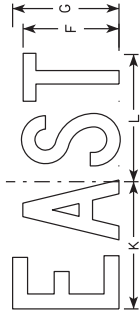
WISDOT/CADDIS SHEET 42

NOTES

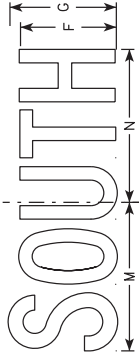
- All Signs Type II - Type H
- Color:
  - Background - See note 5
  - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White Message - Black  
 MB3-1 thru MB3-4 Background - Blue Message - White  
 MK3-1 thru MK3-4 Background - Green Message - White  
 MM3-1 thru MM3-4 Background - White Message - Green  
 MN3-1 thru MN3-4 Background - Brown Message - White  
 MP3-1 thru MP3-4 Background - White Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.



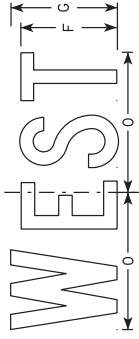
M3-1  
MK3-1  
MN3-1



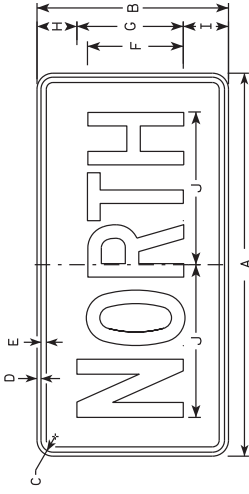
MB3-2  
MK3-2  
MN3-2



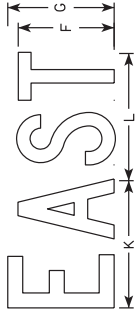
MB3-3  
MK3-3  
MN3-3



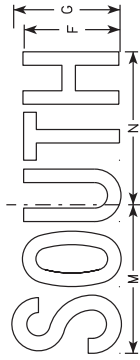
MB3-4  
MK3-4  
MN3-4



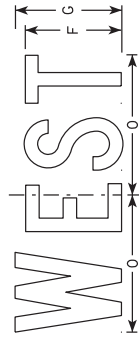
M3-1  
MM3-1  
MP3-1



M3-2  
MM3-2  
MP3-2



M3-3  
MM3-3  
MP3-3



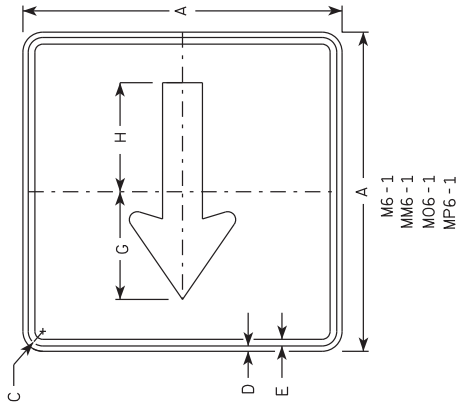
M3-4  
MM3-4  
MP3-4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											2.00
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									4.5
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

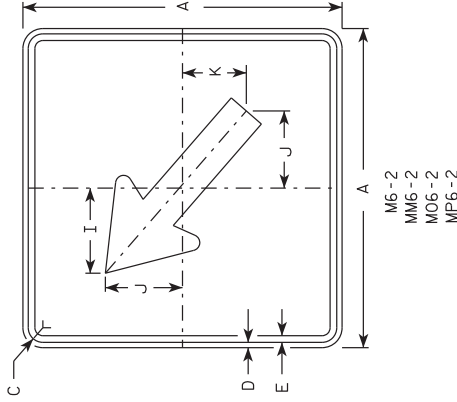
PROJECT NO: \_\_\_\_\_ COUNTY: \_\_\_\_\_ HWY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

STANDARD SIGNS  
M3-1 thru M3-4  
SERIES

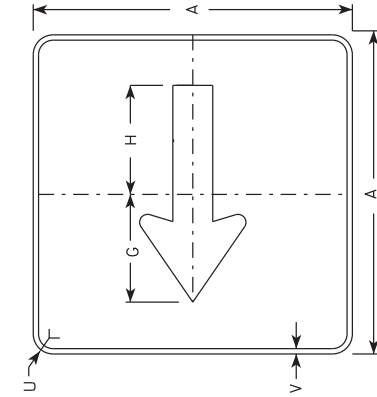
WISCONSIN DEPT OF TRANSPORTATION  
APPROVED  
*Matthew P. Raub*  
For State Traffic Engineer  
DATE 10/15/15 PLAT M3-114  
76



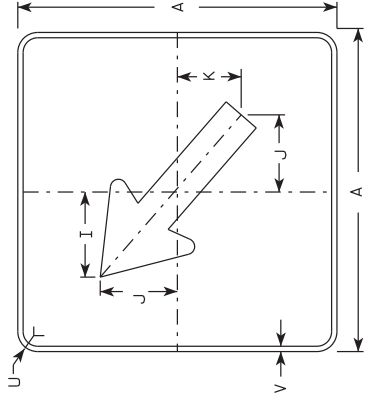
M6-1  
MM6-1  
M06-1  
MP6-1



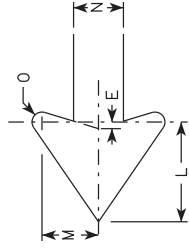
M6-2  
MM6-2  
M06-2  
MP6-2



MB6-1  
MK6-1  
MN6-1  
MR6-1



MB6-2  
MK6-2  
MN6-2  
MR6-2



NOTES

- Signs are Type II - Type H except as Shown
- Color:  
Background - See note 4  
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White  
Message - Black  
MB6-1 and MB6-2 Background - Blue  
Message - White  
MK6-1 and MK6-2 Background - Green  
Message - White  
MM6-1 and MM6-2 Background - White  
Message - Green  
MN6-1 and MN6-2 Background - Brown  
Message - White  
M06-1 and M06-2 Background - Orange - Type F Reflective  
Message - Black  
MP6-1 and MP6-2 Background - White  
Message - Blue  
MR6-1 and MR6-2 Background - Brown  
Message - Yellow

STANDARD SIGN  
M6-1 & M6-2  
SERIES

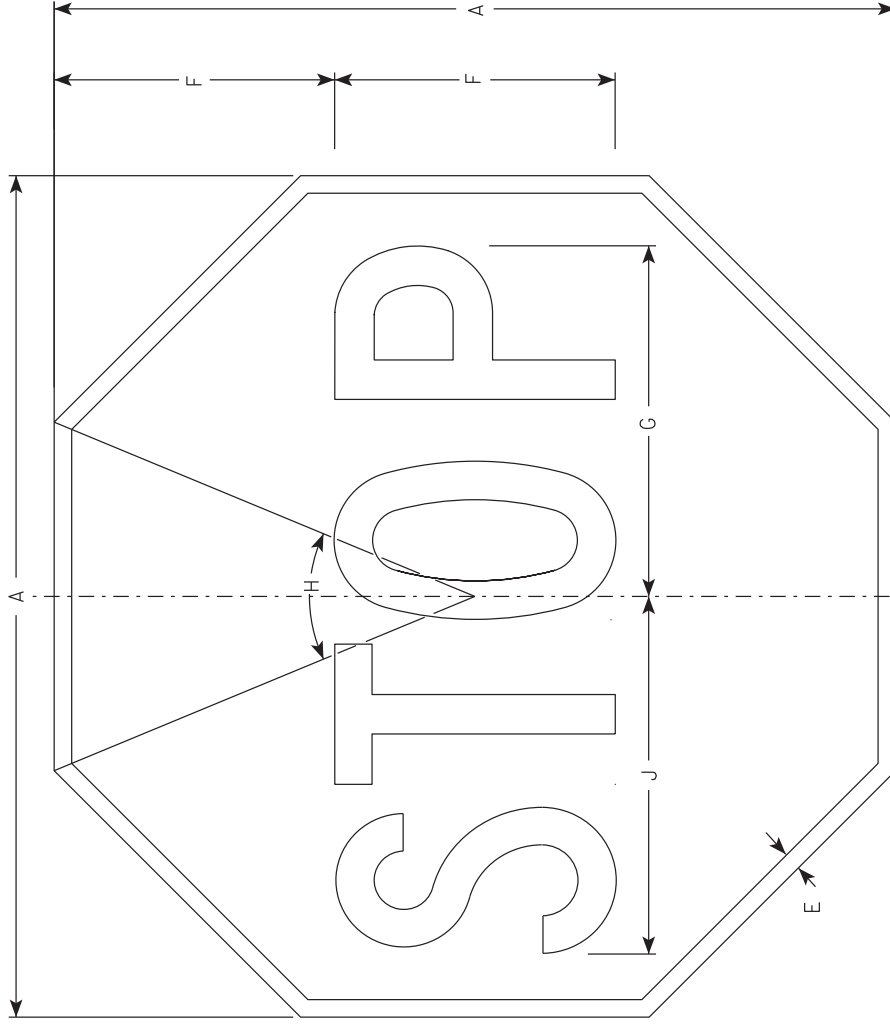
WISCONSIN DEPT OF TRANSPORTATION  
APPROVED  
*Matthew P. Raub*  
Reg. State Traffic Engineer  
DATE 10/15/15 PLAT 77 M6-115

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																										
2	21		1 1/8	3/8	3/8	7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8	10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8	10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8	10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

PROJECT NO: COUNTY: HWY: SHEET NO: E

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Red  
Message - White
3. Message Series - C

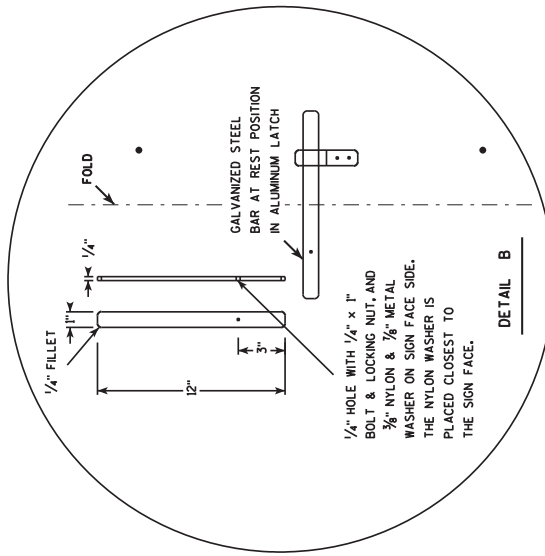
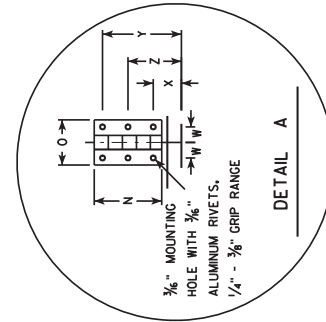
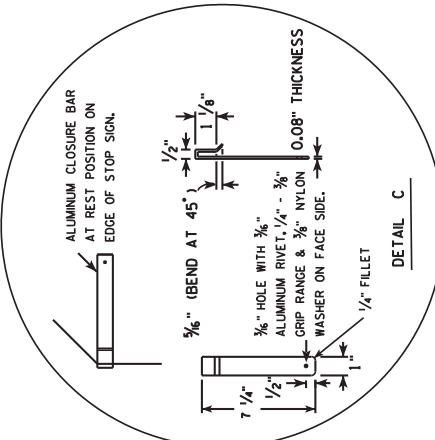
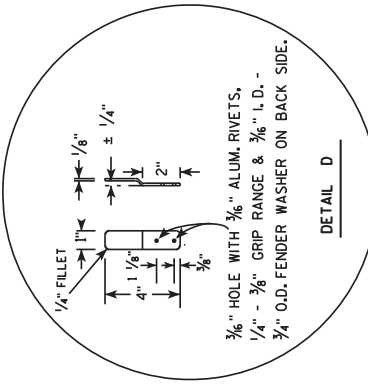
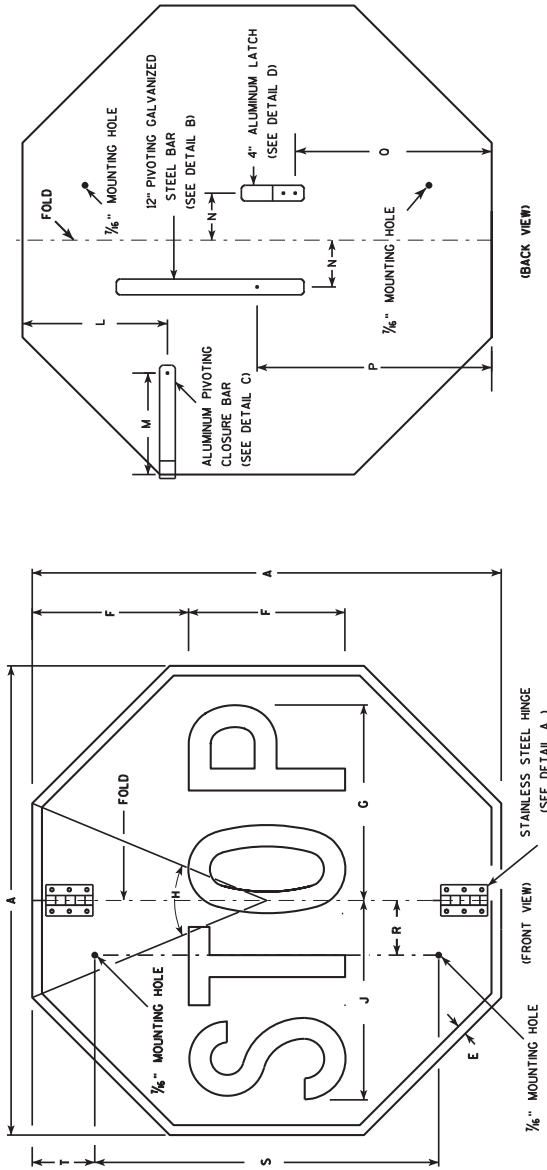


R1-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°	12 3/4																		5.18
2S	30				5/8	10	12 1/2	45°	12 3/4																		5.18
2M	36				3/4	12	15	45°	15 3/8																		7.46
3	36				3/4	12	15	45°	15 3/8																		7.46
4	48				1	16	20	45°	20 1/2																		13.25
5	48				1	16	20	45°	20 1/2																		13.25
6	18				3/8	6	7 3/4	45°	7 3/4																		1.86
7	12				1/4	4	5	45°	5 1/8																		0.78

STANDARD SIGN  
R1-1  
WISCONSIN DEPT OF TRANSPORTATION  
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer  
DATE 11/12/15 PLATE NO. R1-1.13

- NOTES**
- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
  - Color: Background - Red Message - White
  - Message Series - C
  - All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.

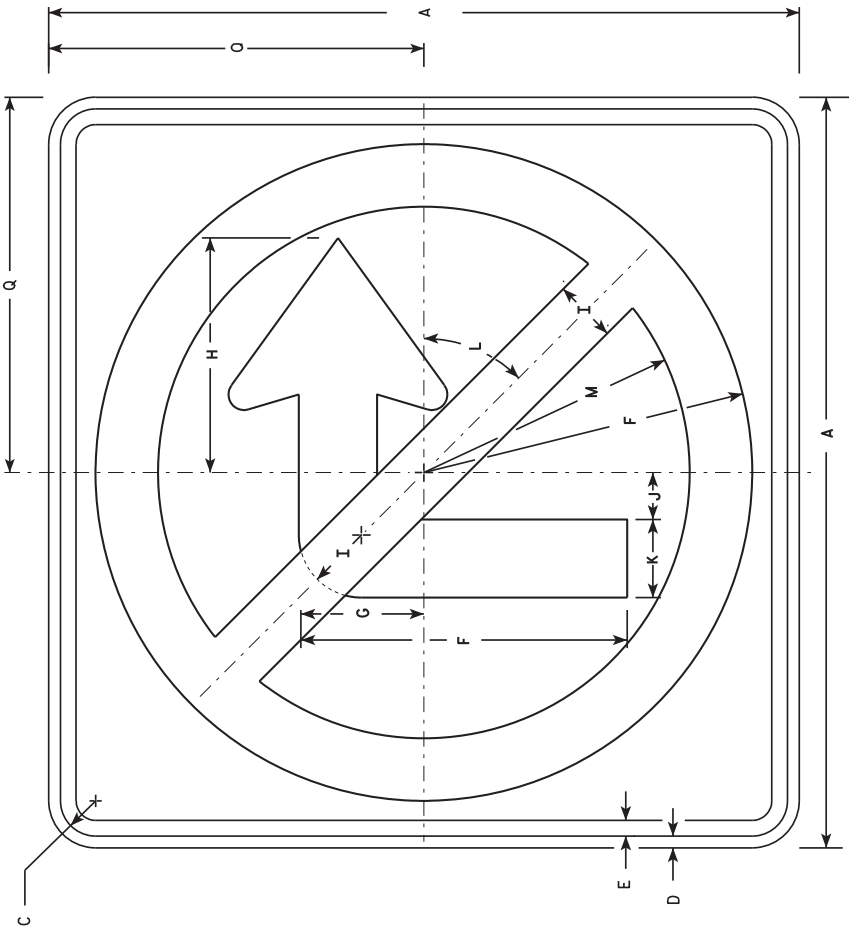


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	MAX. WT.
1																											
2S	30					10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5				1 1/4	3 1/2	2 3/8	5.18
2M	36					12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5				1 1/4	3 1/2	2 3/8	7.46
3	36					12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5				1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

**STANDARD SIGN**  
**R1-1F**

WISCONSIN DEPT. OF TRANSPORTATION  
 APPROVED  
*Matthew S. Pausch*  
 State Traffic Engineer  
 DATE 12/03/10 PLATE NO. RI-1F-3

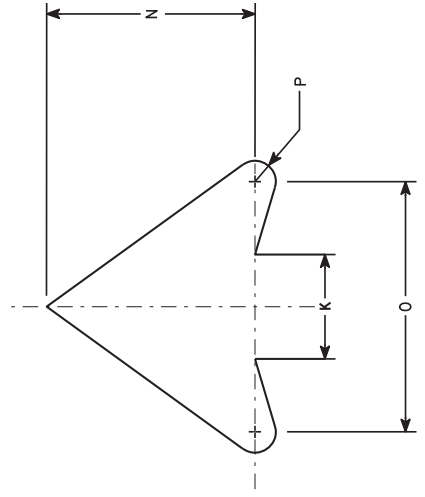
**PROJECT NO:**  
**HWY:**  
**COUNTY:**  
**SHEET NO: 79**  
**E**



R3-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonalbar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	MIN. WIND SPEED, mph
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45	17	10	12	1	24										16.0

STANDARD SIGN  
R3-1

WISCONSIN DEPT OF TRANSPORTATION  
APPROVED *Matthew R. Rauch*  
State Traffic Engineer  
DATE 12/08/10 PLATE NO. R3-1.5

PROJECT NO: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 80 **E**

HWY: \_\_\_\_\_

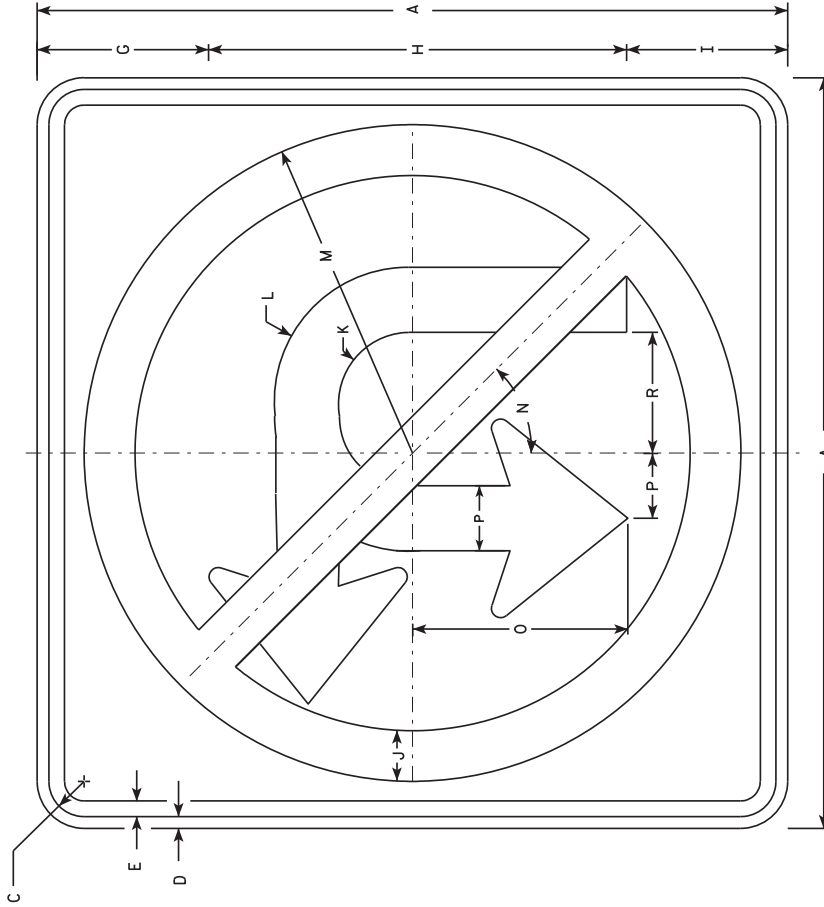
PLOT DATE: 08-DEC-2010 13:23 PLOT BY: 667sjo PLOT NAME: \_\_\_\_\_

PLOT SCALE: 1:5,950 R3.1.000000 WISDOT/CADDIS SHEET 42



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



R3-18

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	Y	Z	APPROX. SQ. FT.
1																										
2S	24	1 1/8	3/4	1/2	5 1/2	13 3/8	5 1/8	2 1/4	4 1/4	10 1/2	45°	6 7/8	2 1/8	3 7/8												4.0
2M	36	1 5/8	5/4	3/4	8 1/4	20	7 3/4	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8	5 3/4												9.0
3	36	1 5/8	5/4	3/4	8 1/4	20	7 3/4	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8	5 3/4												9.0
4	36	1 5/8	5/4	3/4	8 1/4	20	7 3/4	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8	5 3/4												9.0
5	48	2 1/4	3/4	1	11	26 3/4	10 1/4	3 1/4	4 5/8	8 5/8	21	45°	13 3/4	4 1/8	7 3/4											16.0

STANDARD SIGN  
R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/21/10 PLATE NO. R3-18.2

SHEET NO: 81

PROJECT NO:

HWY:

COUNTY:

PLOT DATE : 21-DEC-2010 10:58

PLOT BY : 067sjo

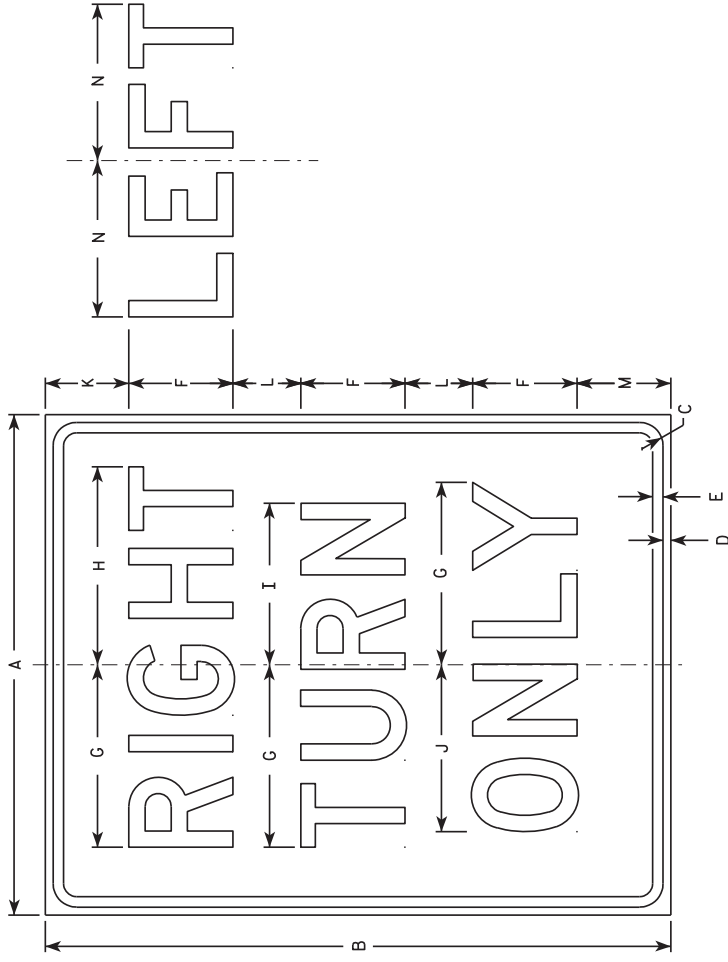
PLOT NAME :

PLOT SCALE : 5:95904311.000000

WISDOT/CADDIS SHEET 42

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
  - Background - White
  - Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R3-53L same as R3-53R except LEFT is substituted for RIGHT.



R3-53R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	APPRO. DR. TT.
1																											
2S	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
2M	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
3	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
4																											
5																											

STANDARD SIGN  
R3-53

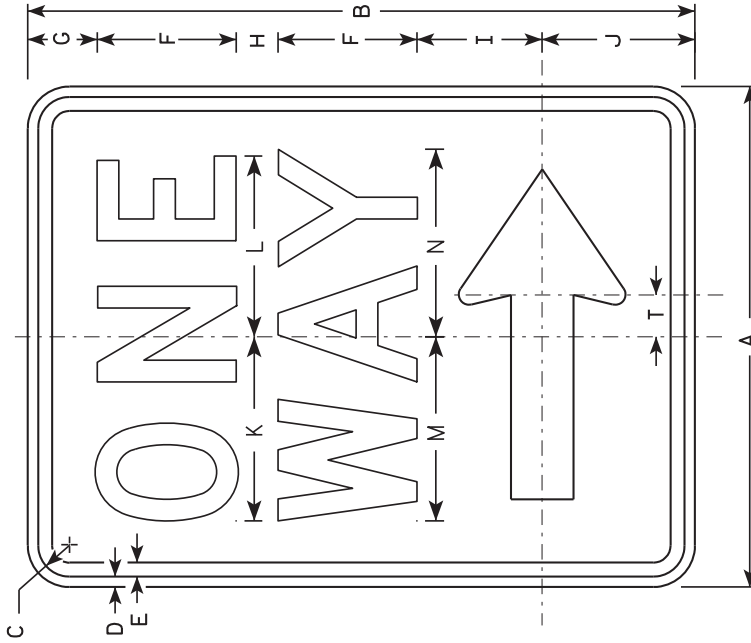
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

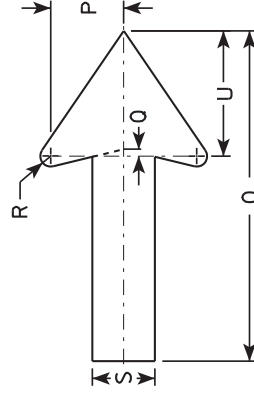
DATE 3/24/2011 PLATE NO. R3-53.8

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 82 **E**

FILE NAME : C:\User\PROJECTS\T...s\h\plate\R353.DGN PLOT DATE : 24-MAR-2011 14:54 PLOT BY : mscsjo PLOT NAME : \_\_\_\_\_ PLOT SCALE : 5:9504311.000000 WISDOT/CADDIS SHEET 42



R6-2R



NOTES

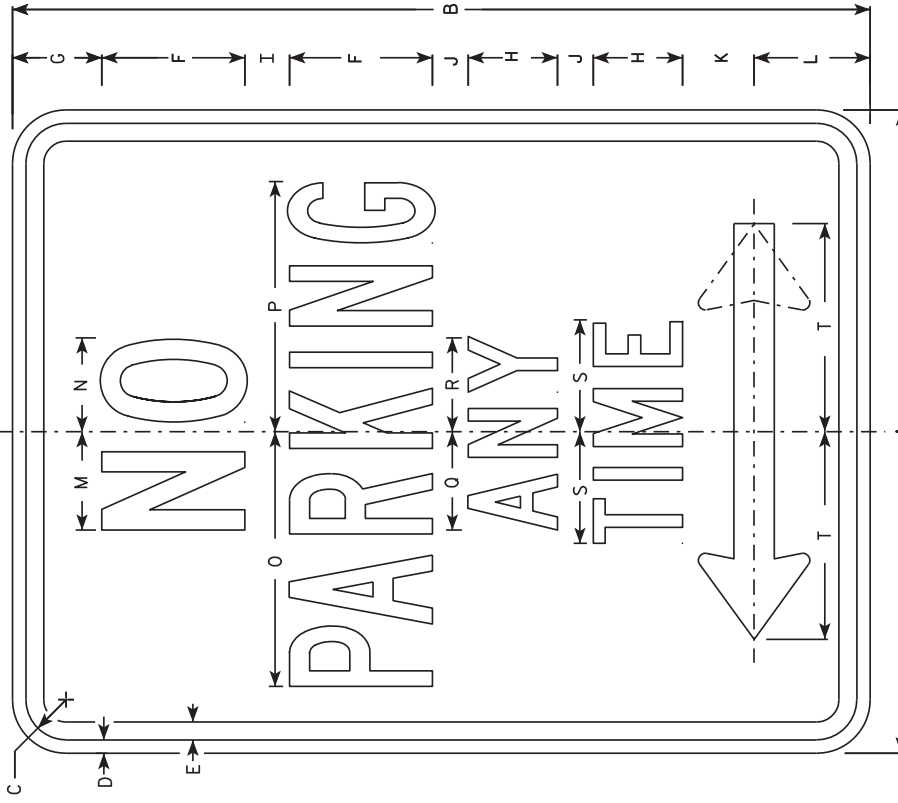
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 3/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

STANDARD SIGN  
R6-2 R&L  
WISCONSIN DEPT OF TRANSPORTATION  
APPROVED  
*Matthew P. Rauch*  
for State Traffic Engineer  
DATE 11/2/10 PLATE NO. R6-2.B

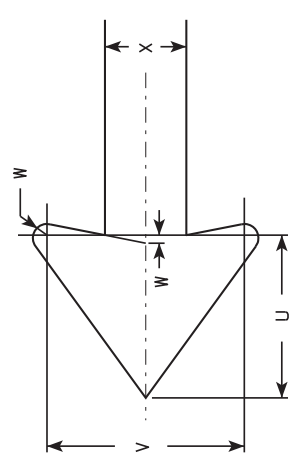
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 83 **E**

FILE NAME : C:\User\PROJECTS\T...shd\plateR62.DGN PLOT DATE : 02-NOV-2010 15:25 PLOT BY : dlj,jh PLOT NAME : PLOT SCALE : 4'-4628211.000000 WISDOT/CADDIS SHEET 42



**NOTES**

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-ID (double arrow)  
R7-IL (left arrow)  
R7-IR (right arrow)



R7-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	APPROX. SQ. FT.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	3 1/8	5 7/8	2 1/4	2 3/8	2 1/4	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2				5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2				5.0
4																											
5																											

STANDARD SIGN  
R7-1

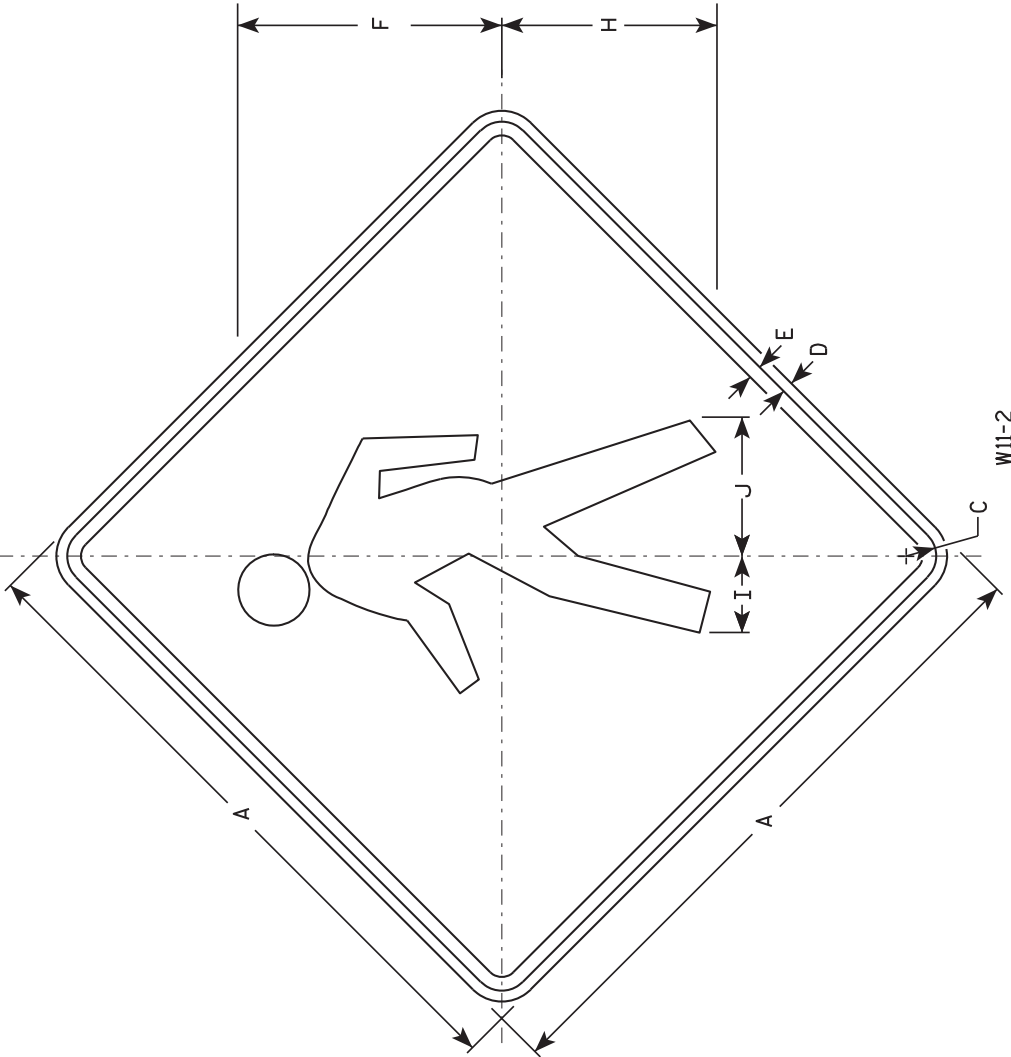
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rausch*  
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. - R7-1.9

**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area
1	24	1 1/8	3/8	1/2	9 3/4	7 7/8	2 7/8	5 1/8																			4.0
2S	30	1 3/8	1/2	5/8	12 1/8	9 7/8	3 1/2	6 3/8																			6.25
2M	36	1 5/8	5/8	3/4	14 1/2	11 7/8	4 1/4	7 5/8																			9.0
3	36	1 5/8	5/8	3/4	14 1/2	11 7/8	4 1/4	7 5/8																			9.0
4	48	2 1/4	3/4	1	19 3/8	15 3/4	5 5/8	10 1/4																			16.0

STANDARD SIGN

W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Matthew R. Rauch*  
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

PROJECT NO:

HWY:

COUNTY:

PLOT DATE : 07-JUN-2010 13:23

PLOT BY : dlj,jh

PLOT NAME :

PLOT SCALE : 5:70681811.000000

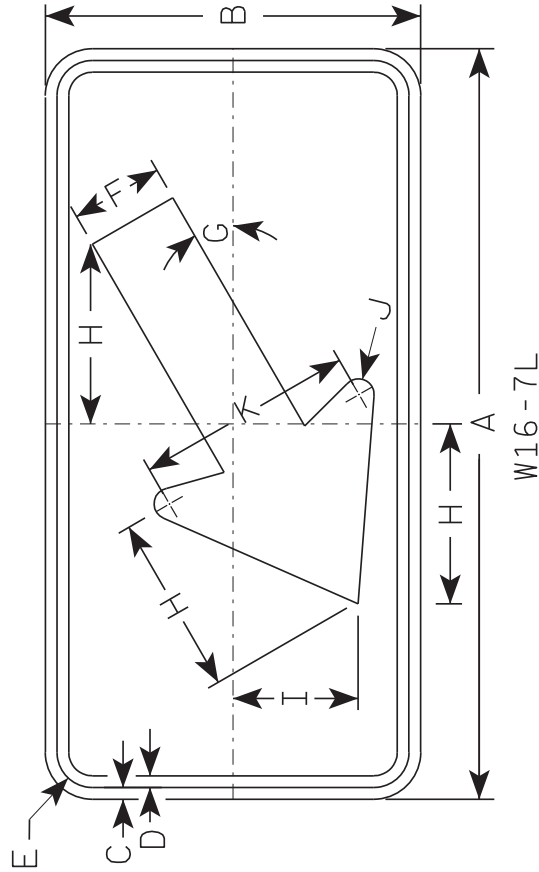
SHEET NO: 85

E

WISDOT/CADDIS SHEET 42

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W16-7R is the same as W16-L except the arrow is reversed along the vertical centerline.



W16-7L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																										
2S	24	12	3/8	1/8	3	30°	5 3/4	4	1/2	7																2.0
2M	30	18	3/8	1/2	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4																										8
5																										8

STANDARD SIGN  
W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rausch*  
for State Traffic Engineer

DATE 11/02/10 PLATE NO. W16-7.5

SHEET NO: 86

E

COUNTY:

HWY:

PROJECT NO:

FILE NAME : C:\User\PROJECTS\T...s\hd\dot\w167.dcn

PLOT DATE : 02-NOV-2010 09:34

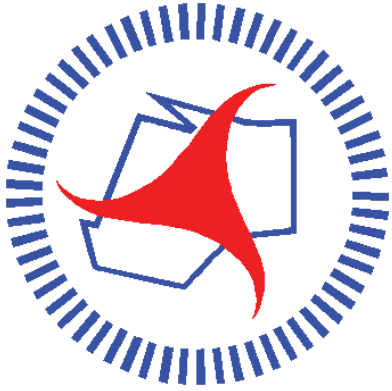
PLOT BY : 667sjo

PLOT NAME :

PLOT SCALE : 3.97269611.000000

WISDOT/CADDIS SHEET 42

Notes



## ***Wisconsin Department of Transportation***

Dedicated people creating transportation solutions through innovation and exceptional service.

<http://www.dot.wisconsin.gov>





Proposal Schedule of Items

Proposal ID: 20180410006 Project(s): 1090-30-70, 2445-09-70

Federal ID(s): WISC 2018190, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	108.4400 CPM Progress Schedule	1.000 EACH	_____.	_____.
0004	201.0105 Clearing	21.000 STA	_____.	_____.
0006	201.0205 Grubbing	21.000 STA	_____.	_____.
0008	203.0200 Removing Old Structure (station) 0010. 21C+10	LS	LUMP SUM	_____.
0010	203.0200 Removing Old Structure (station) 0020. 26+00	LS	LUMP SUM	_____.
0012	203.0210.S Abatement of Asbestos Containing Material (structure) 0010. B-67-114	LS	LUMP SUM	_____.
0014	203.0210.S Abatement of Asbestos Containing Material (structure) 0020. B-67-104	LS	LUMP SUM	_____.
0016	203.0225.S Debris Containment (structure) 0010. B- 67-114	LS	LUMP SUM	_____.
0018	203.0225.S Debris Containment (structure) 0020. B- 67-359	LS	LUMP SUM	_____.
0020	204.0100 Removing Pavement	637.000 SY	_____.	_____.
0022	204.0120 Removing Asphaltic Surface Milling	12,628.000 SY	_____.	_____.
0024	204.0150 Removing Curb & Gutter	68.000 LF	_____.	_____.
0026	204.0155 Removing Concrete Sidewalk	72.000 SY	_____.	_____.
0028	204.0165 Removing Guardrail	1,288.000 LF	_____.	_____.
0030	204.0170 Removing Fence	115.000 LF	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20180410006 Project(s): 1090-30-70, 2445-09-70

Federal ID(s): WISC 2018190, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0032	204.0175 Removing Concrete Slope Paving	1,281.000 SY	_____.	_____.
0034	204.0220 Removing Inlets	6.000 EACH	_____.	_____.
0036	204.0245 Removing Storm Sewer (size) 0001. 12-INCH	340.000 LF	_____.	_____.
0038	204.0245 Removing Storm Sewer (size) 0002. 30-INCH	19.000 LF	_____.	_____.
0040	204.0245 Removing Storm Sewer (size) 0003. 42-INCH	183.000 LF	_____.	_____.
0042	204.9060.S Removing (item description) 1001. LUMINAIRES	156.000 EACH	_____.	_____.
0044	204.9060.S Removing (item description) 1002. SIGN LIGHTING	1.000 EACH	_____.	_____.
0046	205.0100 Excavation Common	8,413.000 CY	_____.	_____.
0048	206.1000 Excavation for Structures Bridges (structure) 0010. B-67-114	LS	LUMP SUM	_____.
0050	206.1000 Excavation for Structures Bridges (structure) 0020. B-67-359	LS	LUMP SUM	_____.
0052	208.0100 Borrow	425.000 CY	_____.	_____.
0054	210.1500 Backfill Structure Type A	632.000 TON	_____.	_____.
0056	213.0100 Finishing Roadway (project) 0001. 1090-30-70	1.000 EACH	_____.	_____.
0058	213.0100 Finishing Roadway (project) 0002. 2445-09-70	1.000 EACH	_____.	_____.



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Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0060	305.0110 Base Aggregate Dense 3/4-Inch	148.000 TON	_____.	_____.
0062	305.0120 Base Aggregate Dense 1 1/4-Inch	2,809.000 TON	_____.	_____.
0064	320.0155 Concrete Base 9-Inch	10.000 SY	_____.	_____.
0066	390.0403 Base Patching Concrete Shes	160.000 SY	_____.	_____.
0068	415.0410 Concrete Pavement Approach Slab **P**	343.000 SY	_____.	_____.
0070	416.0610 Drilled Tie Bars	259.000 EACH	_____.	_____.
0072	416.0620 Drilled Dowel Bars	160.000 EACH	_____.	_____.
0074	416.1010 Concrete Surface Drains	2.000 CY	_____.	_____.
0076	450.4000 HMA Cold Weather Paving	293.000 TON	_____.	_____.
0078	455.0605 Tack Coat	1,096.000 GAL	_____.	_____.
0082	460.2000 Incentive Density HMA Pavement	1,749.000 DOL	1.00000	1,749.00
0084	460.6223 HMA Pavement 3 MT 58-28 S	867.000 TON	_____.	_____.
0086	460.6224 HMA Pavement 4 MT 58-28 S	1,389.000 TON	_____.	_____.
0088	460.6424 HMA Pavement 4 MT 58-28 H	304.000 TON	_____.	_____.
0090	465.0315 Asphaltic Flumes	32.000 SY	_____.	_____.
0092	465.0400 Asphaltic Shoulder Rumble Strips	3,596.000 LF	_____.	_____.
0094	495.1000.S Cold patch	5.000 TON	_____.	_____.



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Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0096	501.1000.S Ice Hot Weather Concreting	4,030.000 LB	_____.	_____.
0098	502.0100 Concrete Masonry Bridges	816.000 CY	_____.	_____.
0100	502.3100 Expansion Device (structure) 0010. B-67-114	LS	LUMP SUM	_____.
0102	502.3200 Protective Surface Treatment **P**	2,899.000 SY	_____.	_____.
0104	502.3210 Pigmented Surface Sealer	554.000 SY	_____.	_____.
0106	502.4205 Adhesive Anchors No. 5 Bar	344.000 EACH	_____.	_____.
0108	503.0137 Prestressed Girder Type I 36W-Inch **P**	1,207.000 LF	_____.	_____.
0110	505.0400 Bar Steel Reinforcement HS Structures	4,920.000 LB	_____.	_____.
0112	505.0600 Bar Steel Reinforcement HS Coated Structures	266,640.000 LB	_____.	_____.
0114	505.0800.S Bar Steel Reinforcement HS Stainless Structures	1,870.000 LB	_____.	_____.
0116	506.2605 Bearing Pads Elastomeric Non-Laminated	28.000 EACH	_____.	_____.
0118	506.4000 Steel Diaphragms (structure) 0010. B-67-359	24.000 EACH	_____.	_____.
0120	506.6000 Bearing Assemblies Expansion (structure) 0010. B-67-114	8.000 EACH	_____.	_____.
0122	506.7050.S Removing Bearings (structure) 0010. B-67-114	8.000 EACH	_____.	_____.
0124	509.0301 Preparation Decks Type 1	23.000 SY	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0126	509.0302 Preparation Decks Type 2	8.000 SY	_____.	_____.
0128	509.1500 Concrete Surface Repair	134.000 SF	_____.	_____.
0130	509.2000 Full-Depth Deck Repair	12.000 SY	_____.	_____.
0132	513.2001 Railing Pipe (structure) 0010. R-67-131	192.000 LF	_____.	_____.
0134	513.2001 Railing Pipe (structure) 0020. R-67-132	204.000 LF	_____.	_____.
0136	513.4091 Railing Tubular Screening (structure) 0010. B-67-359	426.000 LF	_____.	_____.
0138	514.0445 Floor Drains Type GC	2.000 EACH	_____.	_____.
0140	516.0500 Rubberized Membrane Waterproofing **P**	42.000 SY	_____.	_____.
0142	517.0900.S Preparation and Coating of Top Flanges (structure) 0010. B-67-114	LS	LUMP SUM	_____.
0144	517.1010.S Concrete Staining (structure) 0010. B-67- 359 **P**	10.000 SF	_____.	_____.
0146	517.1800.S Structure Repainting Recycled Abrasive (structure) 0010. B-67-109	LS	LUMP SUM	_____.
0148	517.1800.S Structure Repainting Recycled Abrasive (structure) 0020. B-67-110	LS	LUMP SUM	_____.
0150	517.1800.S Structure Repainting Recycled Abrasive (structure) 0030. B-67-114	LS	LUMP SUM	_____.
0152	517.3000.S Structure Overcoating Cleaning and Priming (structure) 0010. B-67-134	LS	LUMP SUM	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0154	517.3000.S Structure Overcoating Cleaning and Priming (structure) 0020. B-67-135	LS	LUMP SUM	_____.
0156	517.4000.S Containment and Collection of Waste Materials (structure) 0010. B-67-134	LS	LUMP SUM	_____.
0158	517.4000.S Containment and Collection of Waste Materials (structure) 0020. B-67-135	LS	LUMP SUM	_____.
0160	517.4500.S Negative Pressure Containment and Collection of Waste Materials (structure) 0010. B-67-109	LS	LUMP SUM	_____.
0162	517.4500.S Negative Pressure Containment and Collection of Waste Materials (structure) 0020. B-67-110	LS	LUMP SUM	_____.
0164	517.4500.S Negative Pressure Containment and Collection of Waste Materials (structure) 0030. B-67-114	LS	LUMP SUM	_____.
0166	517.6001.S Portable Decontamination Facility	5.000 EACH	_____.	_____.
0168	520.8000 Concrete Collars for Pipe	6.000 EACH	_____.	_____.
0170	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	4.000 EACH	_____.	_____.
0172	522.1042 Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	1.000 EACH	_____.	_____.
0174	550.1100 Piling Steel HP 10-Inch X 42 Lb	3,600.000 LF	_____.	_____.
0176	601.0331 Concrete Curb & Gutter 31-Inch	506.000 LF	_____.	_____.
0178	601.0409 Concrete Curb & Gutter 30-Inch Type A	60.000 LF	_____.	_____.
0180	601.0411 Concrete Curb & Gutter 30-Inch Type D	104.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0182	601.0600 Concrete Curb Pedestrian	15.000 LF	_____.	_____.
0184	602.0410 Concrete Sidewalk 5-Inch	645.000 SF	_____.	_____.
0186	602.0505 Curb Ramp Detectable Warning Field Yellow	50.000 SF	_____.	_____.
0188	603.1142 Concrete Barrier Type S42	966.000 LF	_____.	_____.
0190	603.8000 Concrete Barrier Temporary Precast Delivered	6,118.000 LF	_____.	_____.
0192	603.8125 Concrete Barrier Temporary Precast Installed	9,812.000 LF	_____.	_____.
0194	604.0400 Slope Paving Concrete	1,313.000 SY	_____.	_____.
0196	604.9010.S Slope Paving Repair Crushed Aggregate	42.000 CY	_____.	_____.
0198	604.9015.S Reseal Crushed Aggregate Slope Paving	378.000 SY	_____.	_____.
0200	606.0100 Riprap Light	134.000 CY	_____.	_____.
0202	606.0200 Riprap Medium	2.000 CY	_____.	_____.
0204	608.0212 Storm Sewer Pipe Reinforced Concrete Class II 12-Inch	137.000 LF	_____.	_____.
0206	608.0330 Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	20.000 LF	_____.	_____.
0208	608.0442 Storm Sewer Pipe Reinforced Concrete Class IV 42-Inch	274.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0210	608.2329 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	52.000 LF	_____.	_____.
0212	611.0642 Inlet Covers Type MS	4.000 EACH	_____.	_____.
0214	611.0651 Inlet Covers Type S	4.000 EACH	_____.	_____.
0216	611.0654 Inlet Covers Type V	2.000 EACH	_____.	_____.
0218	611.2006 Manholes 6-FT Diameter	1.000 EACH	_____.	_____.
0220	611.2007 Manholes 7-FT Diameter	1.000 EACH	_____.	_____.
0222	611.3003 Inlets 3-FT Diameter	2.000 EACH	_____.	_____.
0224	611.3220 Inlets 2x2-FT	2.000 EACH	_____.	_____.
0226	611.3902 Inlets Median 2 Grate	2.000 EACH	_____.	_____.
0228	612.0206 Pipe Underdrain Unperforated 6-Inch	20.000 LF	_____.	_____.
0230	612.0406 Pipe Underdrain Wrapped 6-Inch	511.000 LF	_____.	_____.
0232	614.0150 Anchor Assemblies for Steel Plate Beam Guard	4.000 EACH	_____.	_____.
0234	614.0905 Crash Cushions Temporary	12.000 EACH	_____.	_____.
0236	614.2300 MGS Guardrail 3	659.000 LF	_____.	_____.
0238	614.2500 MGS Thrie Beam Transition	234.000 LF	_____.	_____.
0240	614.2610 MGS Guardrail Terminal EAT	6.000 EACH	_____.	_____.





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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0242	614.2620 MGS Guardrail Terminal Type 2	2.000 EACH	_____.	_____.
0244	616.0100 Fence Woven Wire (height) 0001. 4-FT	115.000 LF	_____.	_____.
0246	616.0406 Fence Chain Link Salvaged 6-FT	162.000 LF	_____.	_____.
0248	619.1000 Mobilization	1.000 EACH	_____.	_____.
0250	623.0200 Dust Control Surface Treatment	5,818.000 SY	_____.	_____.
0252	624.0100 Water	33.000 MGAL	_____.	_____.
0254	625.0100 Topsoil	8,884.000 SY	_____.	_____.
0256	627.0200 Mulching	773.000 SY	_____.	_____.
0258	628.1504 Silt Fence	2,634.000 LF	_____.	_____.
0260	628.1520 Silt Fence Maintenance	2,634.000 LF	_____.	_____.
0262	628.1905 Mobilizations Erosion Control	21.000 EACH	_____.	_____.
0264	628.1910 Mobilizations Emergency Erosion Control	11.000 EACH	_____.	_____.
0266	628.2002 Erosion Mat Class I Type A	6,698.000 SY	_____.	_____.
0268	628.2008 Erosion Mat Urban Class I Type B	773.000 SY	_____.	_____.
0270	628.2023 Erosion Mat Class II Type B	1,414.000 SY	_____.	_____.
0272	628.6510 Soil Stabilizer Type B	0.300 ACRE	_____.	_____.
0274	628.7005 Inlet Protection Type A	12.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0276	628.7020 Inlet Protection Type D	38.000 EACH	_____.	_____.
0278	628.7504 Temporary Ditch Checks	286.000 LF	_____.	_____.
0280	628.7560 Tracking Pads	5.000 EACH	_____.	_____.
0282	628.7570 Rock Bags	50.000 EACH	_____.	_____.
0284	629.0210 Fertilizer Type B	5.500 CWT	_____.	_____.
0286	630.0120 Seeding Mixture No. 20	224.000 LB	_____.	_____.
0288	630.0140 Seeding Mixture No. 40	24.000 LB	_____.	_____.
0290	630.0200 Seeding Temporary	115.000 LB	_____.	_____.
0292	633.5200 Markers Culvert End	5.000 EACH	_____.	_____.
0294	634.0618 Posts Wood 4x6-Inch X 18-FT	57.000 EACH	_____.	_____.
0296	634.0622 Posts Wood 4x6-Inch X 22-FT	6.000 EACH	_____.	_____.
0298	634.0816 Posts Tubular Steel 2x2-Inch X 16-FT	6.000 EACH	_____.	_____.
0300	635.0200 Sign Supports Structural Steel HS	2,600.000 LB	_____.	_____.
0302	635.0300 Sign Supports Replacing Base Connection Bolts	2.000 EACH	_____.	_____.
0304	636.0100 Sign Supports Concrete Masonry	4.400 CY	_____.	_____.
0306	636.0500 Sign Supports Steel Reinforcement	264.000 LB	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0308	637.2210 Signs Type II Reflective H	374.420 SF	_____.	_____.
0310	637.2215 Signs Type II Reflective H Folding	7.460 SF	_____.	_____.
0312	637.2230 Signs Type II Reflective F	133.000 SF	_____.	_____.
0314	638.2101 Moving Signs Type I	2.000 EACH	_____.	_____.
0316	638.2102 Moving Signs Type II	5.000 EACH	_____.	_____.
0318	638.2602 Removing Signs Type II	32.000 EACH	_____.	_____.
0320	638.3000 Removing Small Sign Supports	40.000 EACH	_____.	_____.
0322	638.3100 Removing Structural Steel Sign Supports	4.000 EACH	_____.	_____.
0324	642.5401 Field Office Type D	1.000 EACH	_____.	_____.
0326	643.0300 Traffic Control Drums	72,596.000 DAY	_____.	_____.
0328	643.0410 Traffic Control Barricades Type II	73.000 DAY	_____.	_____.
0330	643.0420 Traffic Control Barricades Type III	7,833.000 DAY	_____.	_____.
0332	643.0500 Traffic Control Flexible Tubular Marker Posts	1,569.000 EACH	_____.	_____.
0334	643.0600 Traffic Control Flexible Tubular Marker Bases	1,569.000 EACH	_____.	_____.
0336	643.0705 Traffic Control Warning Lights Type A	15,888.000 DAY	_____.	_____.
0338	643.0715 Traffic Control Warning Lights Type C	3,508.000 DAY	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0340	643.0800 Traffic Control Arrow Boards	376.000 DAY	_____.	_____.
0342	643.0900 Traffic Control Signs	56,044.000 DAY	_____.	_____.
0344	643.0920 Traffic Control Covering Signs Type II	26.000 EACH	_____.	_____.
0346	643.1000 Traffic Control Signs Fixed Message	692.000 SF	_____.	_____.
0348	643.1050 Traffic Control Signs PCMS	121.000 DAY	_____.	_____.
0350	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0352	645.0111 Geotextile Type DF Schedule A	98.000 SY	_____.	_____.
0354	645.0130 Geotextile Type R	402.000 SY	_____.	_____.
0356	645.0140 Geotextile Type SAS	40.000 SY	_____.	_____.
0358	646.1020 Marking Line Epoxy 4-Inch	10,962.000 LF	_____.	_____.
0360	646.1040 Marking Line Grooved Wet Ref Epoxy 4-Inch	7,590.000 LF	_____.	_____.
0362	646.1555 Marking Line Grooved Contrast Permanent Tape 4-Inch	1,414.000 LF	_____.	_____.
0364	646.3020 Marking Line Epoxy 8-Inch	1,825.000 LF	_____.	_____.
0366	646.5020 Marking Arrow Epoxy	9.000 EACH	_____.	_____.
0368	646.5120 Marking Word Epoxy	6.000 EACH	_____.	_____.
0370	646.6120 Marking Stop Line Epoxy 18-Inch	18.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0372	646.7120 Marking Diagonal Epoxy 12-Inch	451.000 LF	_____.	_____.
0374	646.8120 Marking Curb Epoxy	150.000 LF	_____.	_____.
0376	646.8220 Marking Island Nose Epoxy	4.000 EACH	_____.	_____.
0378	646.9000 Marking Removal Line 4-Inch	23,656.000 LF	_____.	_____.
0380	649.0105 Temporary Marking Line Paint 4-Inch	11,308.000 LF	_____.	_____.
0382	649.0150 Temporary Marking Line Removable Tape 4-Inch	28,474.000 LF	_____.	_____.
0384	659.1125 Luminaires Utility LED C	81.000 EACH	_____.	_____.
0386	659.1130 Luminaires Utility LED D	73.000 EACH	_____.	_____.
0388	659.1215 Luminaires Underdeck LED C	16.000 EACH	_____.	_____.
0390	690.0150 Sawing Asphalt	4,152.000 LF	_____.	_____.
0392	690.0250 Sawing Concrete	1,086.000 LF	_____.	_____.
0394	715.0415 Incentive Strength Concrete Pavement	500.000 DOL	1.00000	500.00
0396	715.0502 Incentive Strength Concrete Structures	4,896.000 DOL	1.00000	4,896.00
0398	ASP.1T0A On-the-Job Training Apprentice at \$5.00/HR	6,000.000 HRS	5.00000	30,000.00
0400	ASP.1T0G On-the-Job Training Graduate at \$5.00/HR	9,000.000 HRS	5.00000	45,000.00
0402	SPV.0035 Special 0100. EBS EXCAVATION	421.000 CY	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0404	SPV.0035 Special 0101. EBS BACKFILL	421.000 CY	_____.	_____.
0406	SPV.0035 Special 4010. POLYESTER POLYMER CONCRETE OVERLAY WITH MILLING AND TRIAL OVERLAY	131.000 CY	_____.	_____.
0408	SPV.0035 Special 4020. RAPID SET DECK PATCHING	7.000 CY	_____.	_____.
0410	SPV.0035 Special 4030. HPC MASONRY STRUCTURES **P**	537.000 CY	_____.	_____.
0412	SPV.0060 Special 0101. MOBILIZATIONS EMERGENCY PAVEMENT REPAIR	4.000 EACH	_____.	_____.
0414	SPV.0060 Special 0201. TEMPORARY STONE DITCH CHECKS	3.000 EACH	_____.	_____.
0416	SPV.0060 Special 0400. TRAFFIC CONTROL FULL FREEWAY CLOSURE	16.000 EACH	_____.	_____.
0418	SPV.0060 Special 0401. Covering Signs Type II	1.000 EACH	_____.	_____.
0420	SPV.0060 Special 1001. LAMP DISPOSAL HIGH INTENSITY DISCHARGE	161.000 EACH	_____.	_____.
0422	SPV.0060 Special 4010. STRAPPING B-67-135	1.000 EACH	_____.	_____.
0424	SPV.0060 Special 4020. EMBEDDED GALVANIC ANODES	87.000 EACH	_____.	_____.
0426	SPV.0075 Special 0001. PAVEMENT CLEANUP PROJECT 1090-30-70	40.000 HRS	_____.	_____.
0428	SPV.0090 Special 0001. Joint and Crack Repair	1,000.000 LF	_____.	_____.
0430	SPV.0090 Special 4010. EXPANSION JOINT SEAL SYSTEM	274.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0432	SPV.0090 Special 4020. SAWING PAVEMENT DECK PREPARATION AREAS	254.000 LF	_____.	_____.
0434	SPV.0105 Special 0001. SURVEY PROJECT 1090-30-70	LS	LUMP SUM	_____.
0436	SPV.0105 Special 0002. Survey Project 2445-09-70	LS	LUMP SUM	_____.
0438	SPV.0105 Special 0003. Pavement Cleanup Project 2445-09-70	LS	LUMP SUM	_____.
0440	SPV.0105 Special 1001. MAINTENANCE OF LIGHTING SYSTEMS	LS	LUMP SUM	_____.
0442	SPV.0105 Special 1002. LIGHTING SYSTEM INTERGRATOR	LS	LUMP SUM	_____.
0444	SPV.0105 Special 1003. LIGHTING SYSTEM SURVEY	LS	LUMP SUM	_____.
0446	SPV.0135 Special 0001. VIBRATION MONITORING	2.000 MON	_____.	_____.
0448	SPV.0165 Special 4010. LONGITUDINAL GROOVING BRIDGE DECK **P**	8,995.000 SF	_____.	_____.
0450	SPV.0165 Special 4020. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-67-131 **P**	3,550.000 SF	_____.	_____.
0452	SPV.0165 Special 4030. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-67-132 **P**	4,000.000 SF	_____.	_____.
0454	SPV.0165 Special 4040. FIBER WRAP REINFORCING STRUCTURAL	458.000 SF	_____.	_____.

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Total: \_\_\_\_\_.

Total Bid: \_\_\_\_\_.

