NCL

MARCH 2017

PROJECT ID: 6999-07-88

WITH: N/A

COUNTY: WOOD

ORDER OF SHEETS

TOTAL SHEETS = 136

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C WI RAPIDS, 8TH & EAST GRAND AVE

INTERSECTION MODIFICATION

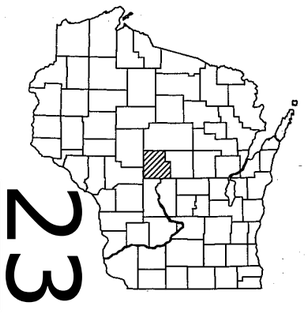
LOCAL STREET

WOOD COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6999-07-88	WISC 2017112	1

STATE PROJECT NUMBER

6999-07-88

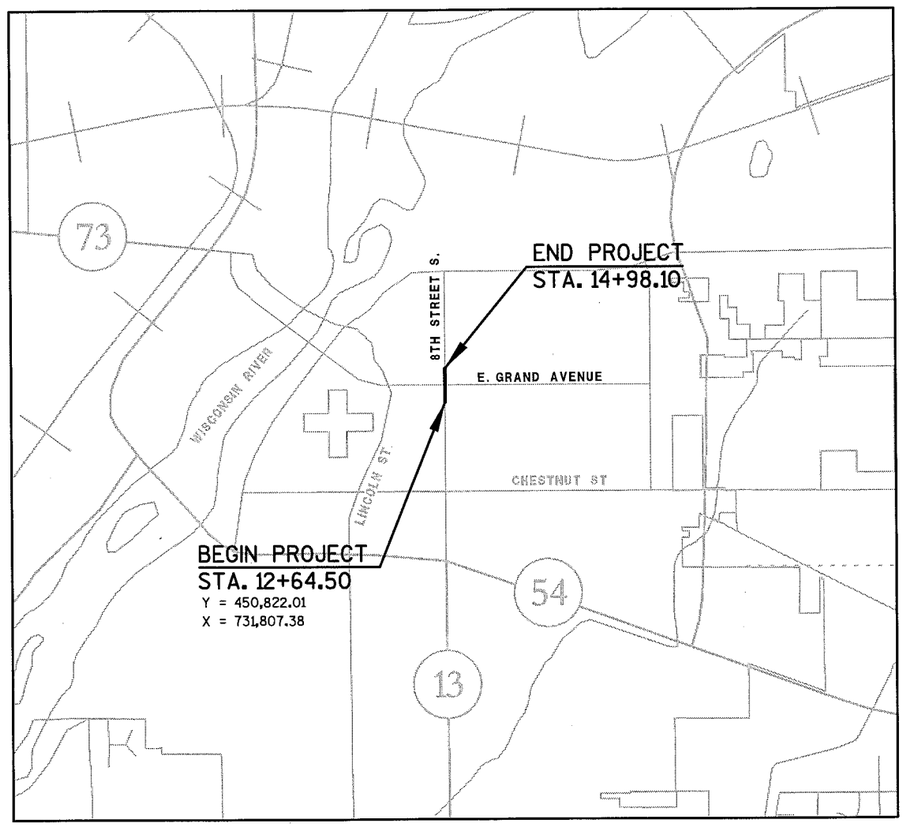


23

DESIGN DESIGNATION

A.A.D.T. (2017)	= 11,600
A.A.D.T. (2037)	= 12,700
D.H.V. (4.1%)	= 521
D.D.	= 59/41
T.	= 4.8%
DESIGN SPEED	= 35 MPH
ESALS	= 490,000

R-6-E



T-22-N

LAYOUT

SCALE 0 0.5 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.044 MI.

COORDINATES AND BEARINGS ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WOOD COUNTY ZONE, NAD 83 (1991) ADJUSTMENT. ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (1991 ADJUSTMENT) (NAVD83).

ACCEPTED FOR

CITY OF WISCONSIN RAPIDS

9/28/16 (Date)

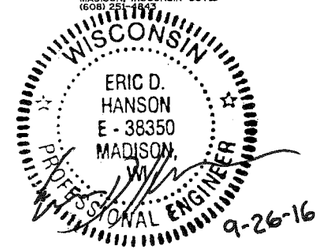
Joe Eichstedt (Signature & Title of Official)

City Engineer

ORIGINAL PLANS PREPARED BY:

STRAND ASSOCIATES®

910 WEST WINGRA DRIVE
MADISON, WISCONSIN 53715
(608) 251-4843



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	CITY OF WISCONSIN RAPIDS
Designer	STRAND ASSOCIATES INC.
Management Consultant	CEDAR CORPORATION

APPROVED FOR THE DEPARTMENT

DATE: 10-27-2016 (Management Consultant Signature)

E

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 — CAUTION
- MARSH AREA
- WOODED OR SHRUB AREA
- HIGH VOLTAGE — CAUTION

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) — ROCK
- SPECIAL DITCH — LABEL
- GRADE ELEVATION — 95.36
- CULVERT (Profile View)

UTILITIES

- ELECTRIC — E
- FIBER OPTIC — FO
- GAS — G
- SANITARY SEWER — SAN
- STORM SEWER — SS
- TELEPHONE — T
- WATER — W
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

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.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER IN CONSULTATION WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

ALL SIGN LOCATIONS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO INSTALLATION.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED AS DIRECTED BY THE ENGINEER.

MISCELLANEOUS REMOVAL ITEMS SHALL BE REMOVED TO AN EXISTING JOINT, SAWCUT WHERE SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

RADIUS DIMENSIONS FOR THE CURB AND GUTTER ARE TO THE FLANGE LINE UNLESS OTHERWISE NOTED.

STORM SEWER PIPE ELEVATIONS, LENGTH, AND LOCATIONS AS SHOWN ON THE PLANS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

A SAWED JOINT WILL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

DESIGNER NOTES

DESIGNS, PLANS, AND SPECIFICATIONS FOR SANITARY SEWER AND WATER MAIN PROVIDED BY THE CITY OF WISCONSIN RAPIDS.

UTILITIES

* CITY OF WISCONSIN RAPIDS
UTILITY TYPE: SANITARY SEWER/ WATER MAIN
ATTENTION: JOE EICHSTEADT
444 WEST GRAND AVENUE
WISCONSIN RAPIDS, WI 54495
(715) 421-8251
E-MAIL: jeichsteadt@wirapids.org

* WISCONSIN RAPIDS WATER WORKS & LIGHTING COMMISSION
UTILITY TYPE: ELECTRIC/STREET LGHTING
ATTENTION: JOSH ELLIOTT
221 16TH STREET SOUTH
WISCONSIN RAPIDS, WI 54494
(715) 252-3407
E-MAIL: josh.elliott@wrwwlc.com

* SOLARUS
UTILITY TYPE: ELECTRIC/COMMUNICATIONS
ATTENTION: DENNIS PIERCE
440 EAST GRAND AVENUE
WISCONSIN RAPIDS, WI 54494
(715) 421-8172
E-MAIL: pierce@solarus.net

* WE ENERGIES
UTILITY TYPE: GAS
ATTENTION: RYAN MIENTKE
1921 8TH STREET SOUTH
WISCONSIN RAPIDS, WI 54494
(715) 421-7249
E-MAIL: Ryan.Mientke@we-energies.com

* DENOTES DIGGERS HOTLINE MEMBER

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

SECTION 2 ORDER OF SHEETS

CITY CONTACT

JOE EICHSTEADT, P.E.
CITY OF WISCONSIN RAPIDS
444 WEST GRAND AVENUE
RAPIDS, WI 54495
(715) 421-8251
E-MAIL: jeichsteadt@wirapids.org

DESIGN CONTACT

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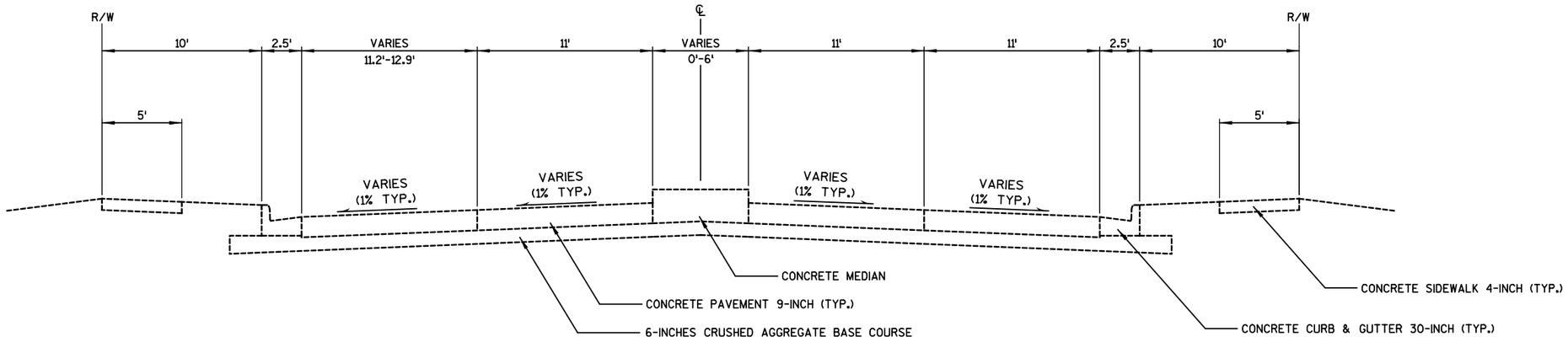
STRAND ASSOCIATES, INC.
910 WEST WINGRA DRIVE
MADISON, WI 53715
(608) 251-4843
E-MAIL: eric.hanson@strand.com

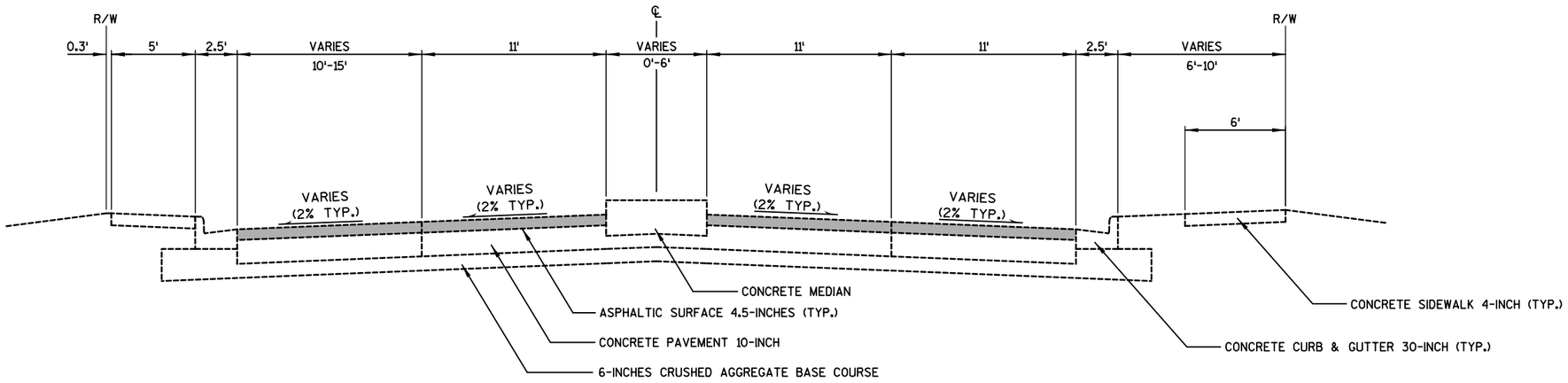
DNR LIAISON

MARC HERSHFIELD
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
473 GRIFFITH DRIVE
WISCONSIN RAPIDS, WI 54494
(715) 421-7867
E-MAIL: marc.hershfield@wisconsin.gov



TYPICAL EXISTING SECTION - 8TH STREET SOUTH (SOUTH LEG)

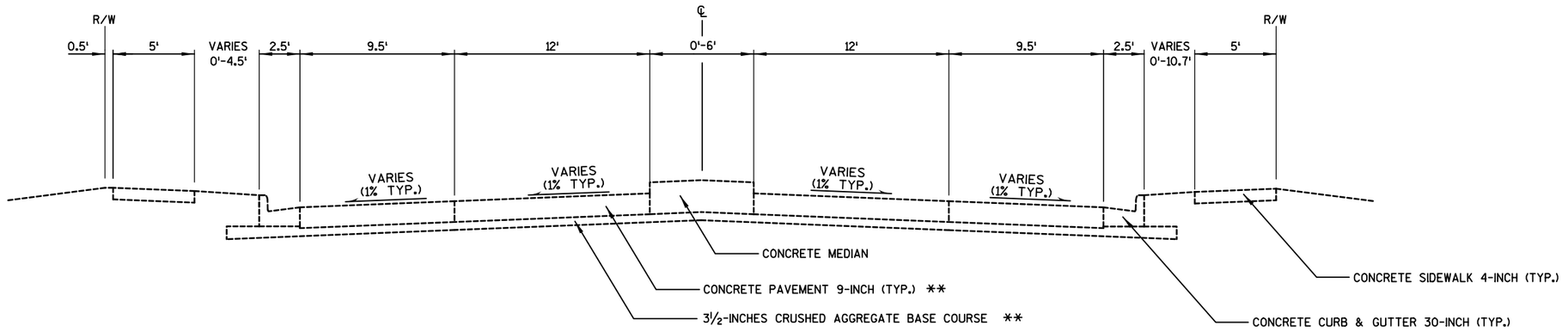
STA. 12+64.50 - STA. 14+31.51



TYPICAL EXISTING SECTION - 8TH STREET SOUTH (NORTH LEG)

STA. 14+31.51 - STA. 14+98.10

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	TYPICAL SECTIONS	SHEET 3	E

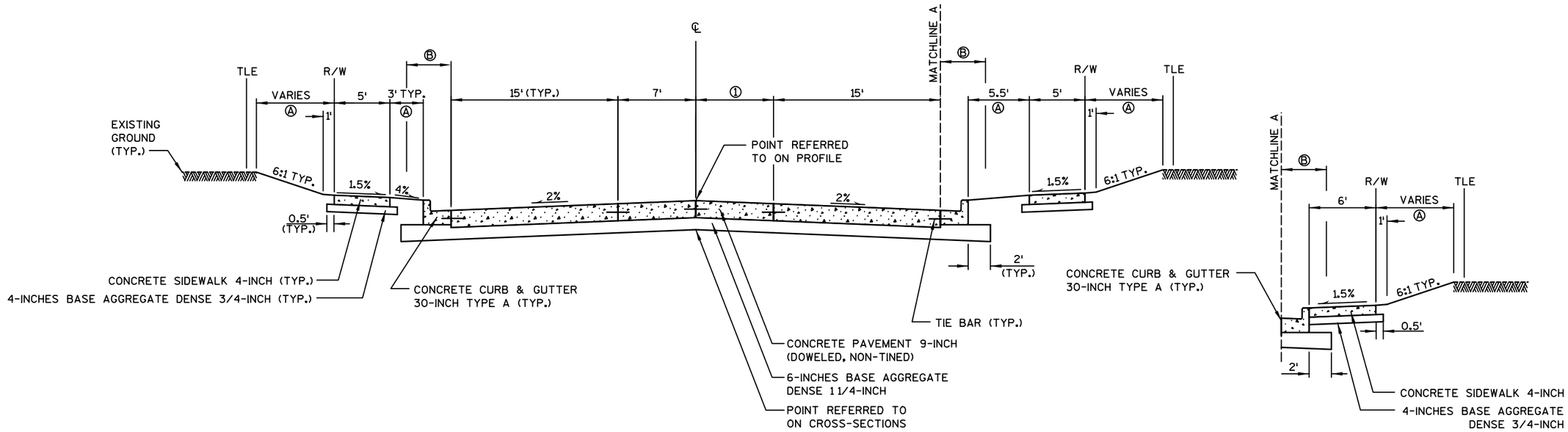


** PAVEMENT STRUCTURE BETWEEN STA. 75+51.18 AND STA. 75+82.00
ASPHALTIC SURFACE - 4.5-INCH
6-INCHES CRUSHED AGGREGATE BASE COURSE

TYPICAL EXISTING SECTION - EAST GRAND AVENUE

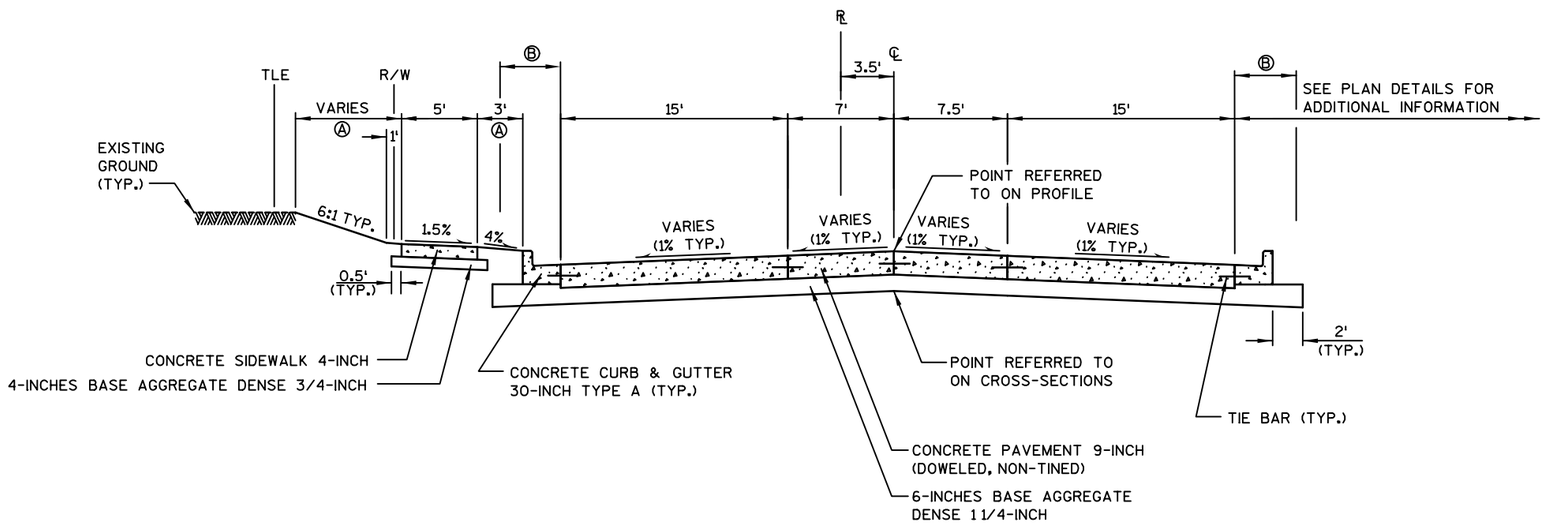
STA. 73+89.67 - STA. 75+82.00

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	TYPICAL SECTIONS	SHEET 4	E



TYPICAL FINISHED SECTION
8TH STREET
STA. 12+64.50 - STA. 14+98.10

STA. 12+64.50 - STA. 14+09.17



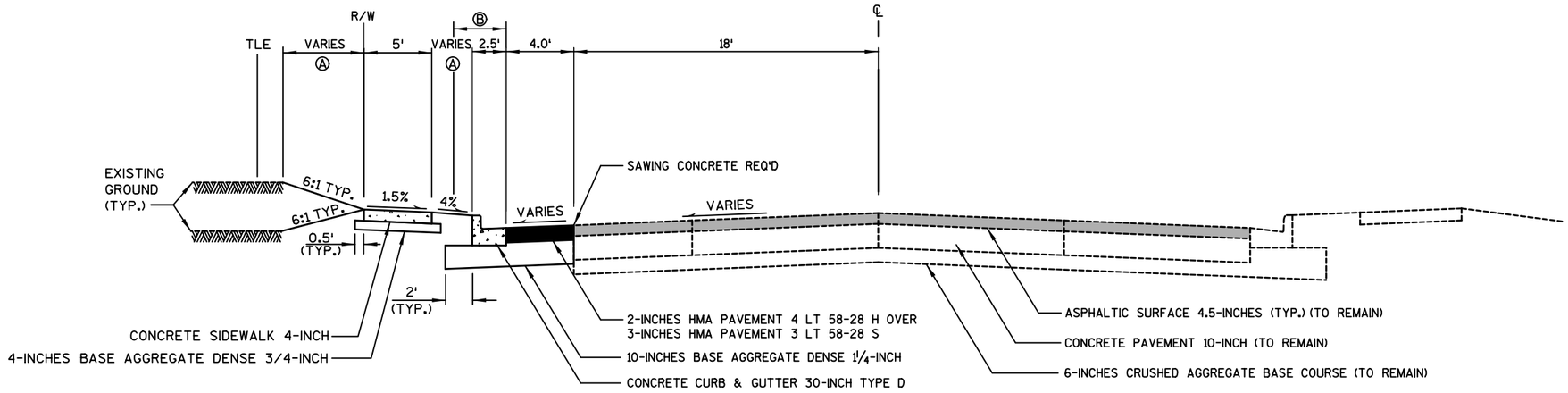
TYPICAL FINISHED SECTION
E. GRAND AVENUE
STA. 74+16.67 - STA. 75+51.20

Ⓐ TOPSOIL; FERTILIZER TYPE B; SOD LAWN (TYP.) SEE PLAN DETAILS FOR ADDITIONAL INFORMATION

Ⓑ 4' LATERAL CLEARANCE

① STA. 12+64.50 - STA. 13+37.0; 7'
STA. 13+37.0 - STA. 13+47.1; 7' TO 6'
STA. 13+47.1 - STA. 14+98.10; 6'

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	TYPICAL SECTIONS	SHEET 5	E



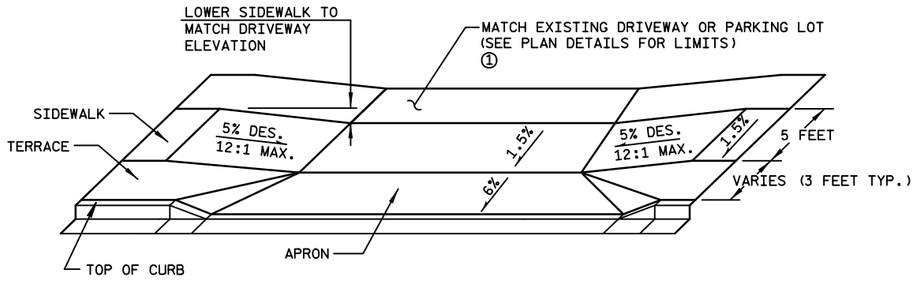
TYPICAL FINISHED SECTION
8TH STREET

STA. 14+98.10 (LT) - STA. 15+67.85 (LT)

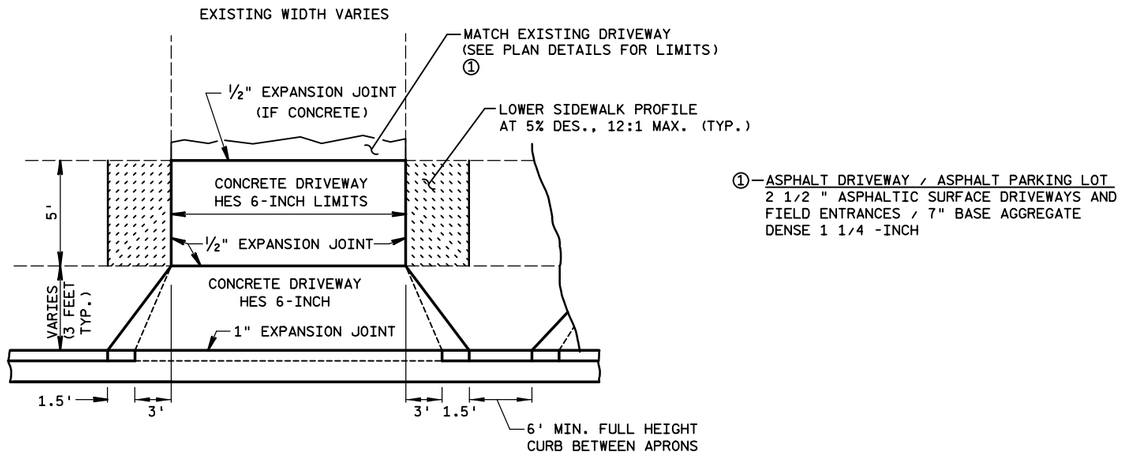
Ⓐ TOPSOIL; FERTILIZER TYPE B; SOD LAWN (TYP.) SEE PLAN DETAILS FOR ADDITIONAL INFORMATION

Ⓑ 4' LATERAL CLEARANCE

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	TYPICAL SECTIONS	SHEET 6	E

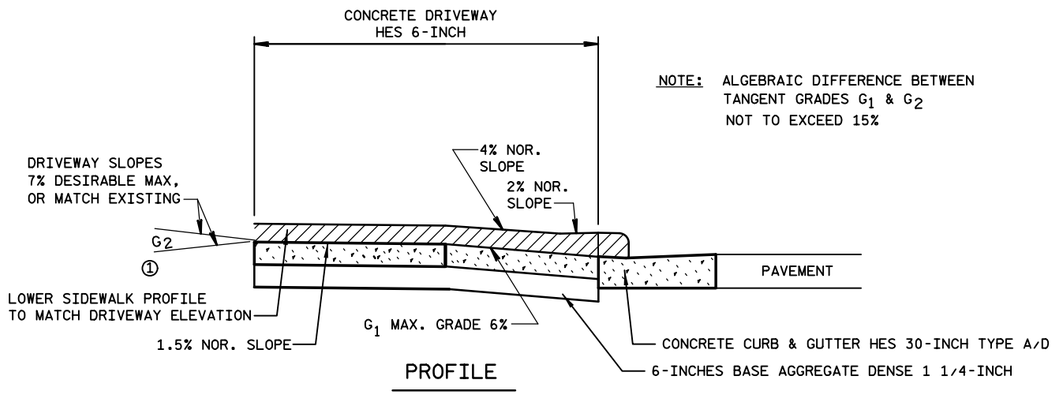


LOWERING SIDEWALK AT DRIVEWAY APRONS



① ASPHALT DRIVEWAY / ASPHALT PARKING LOT
2 1/2 " ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES / 7" BASE AGGREGATE DENSE 1 1/4 -INCH

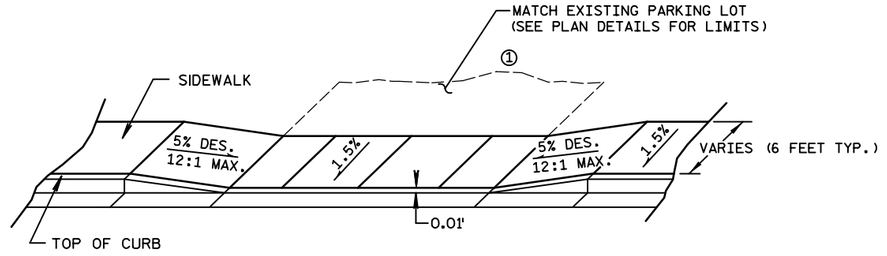
PLAN



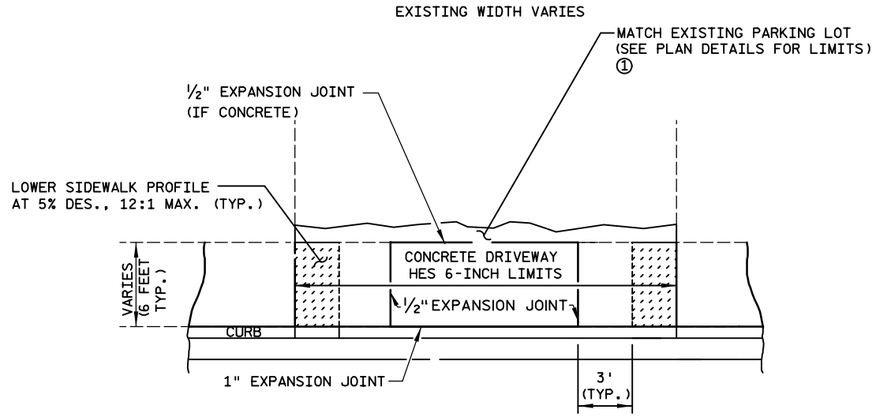
PROFILE

DRIVEWAY ENTRANCE DETAIL WITH NARROW TERRACE

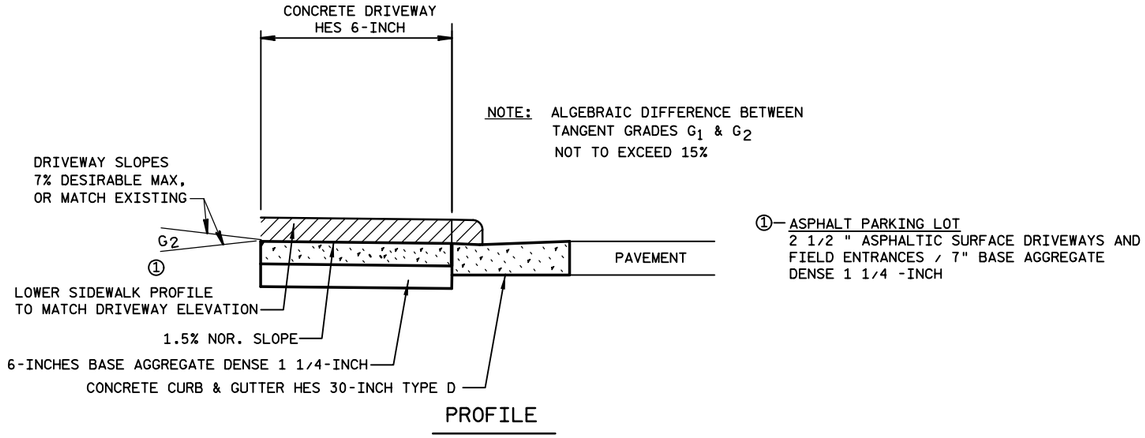
(STA. 14+88 LT.)



LOWERING SIDEWALK AT DRIVEWAY APRONS



PLAN



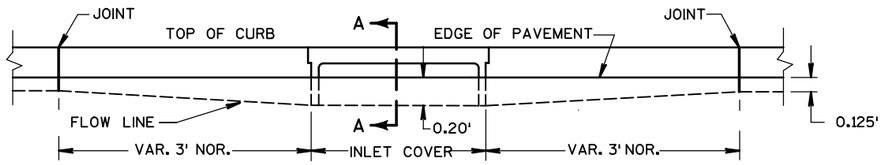
① ASPHALT PARKING LOT
2 1/2 " ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES / 7" BASE AGGREGATE DENSE 1 1/4 -INCH

PROFILE

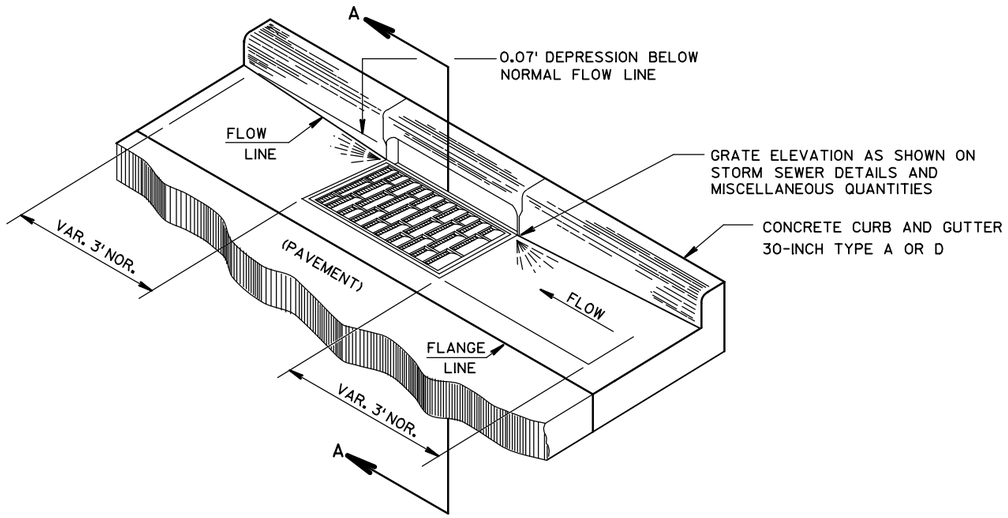
DRIVEWAY ENTRANCE DETAIL WITHOUT TERRACE

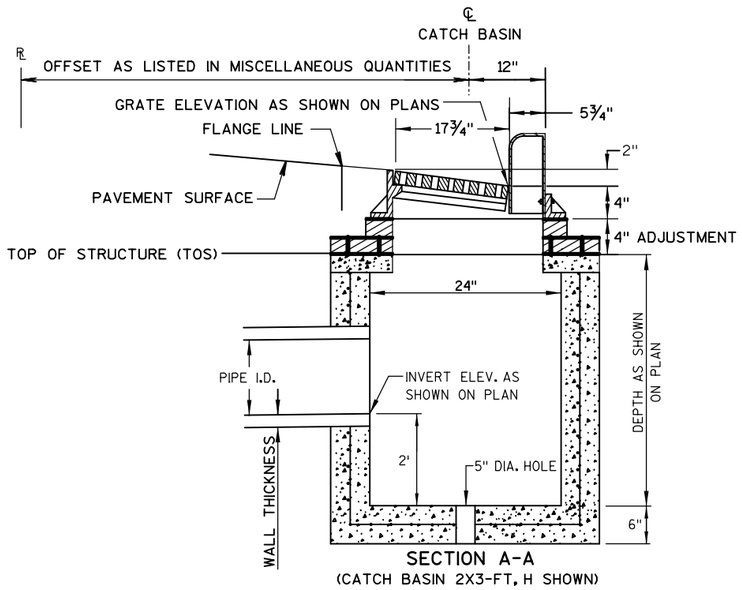
(STA. 15+35 LT.)

PROJECT NO:6999-07-88	HWY:8TH STREET SOUTH	COUNTY:WOOD	CONSTRUCTION DETAILS	SHEET 7	E



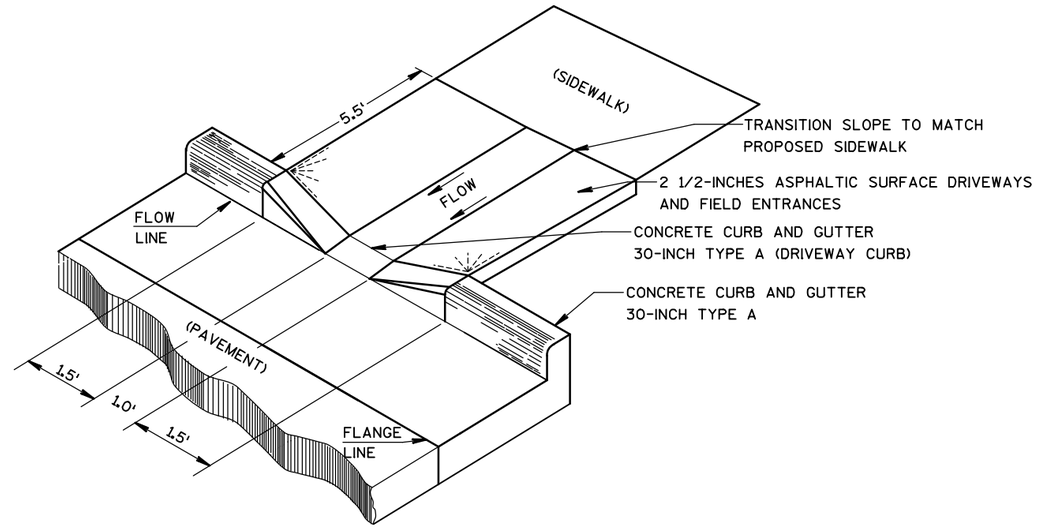
ELEVATION





SECTION A-A
(CATCH BASIN 2X3-FT. H SHOWN)

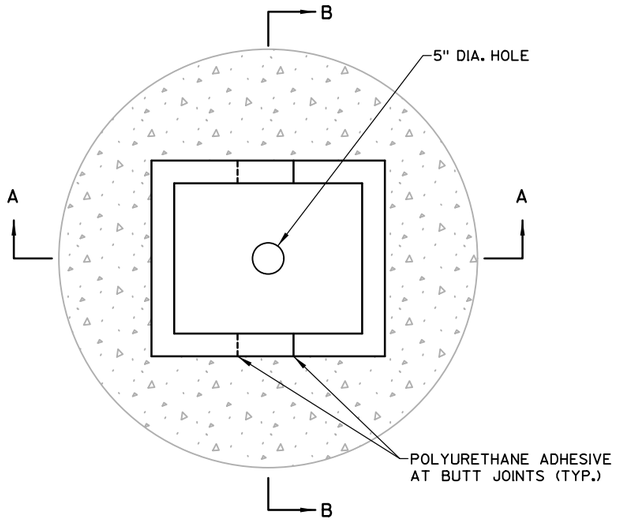
DETAIL OF CONCRETE CURB AND GUTTER 30-INCH TYPE A OR TYPE D AT CATCH BASINS



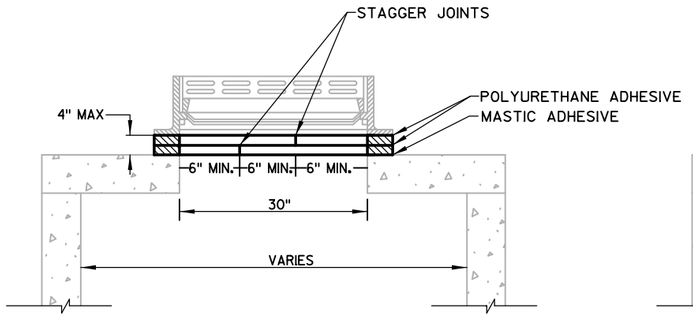
OPEN BACK CURB DRAIN DETAIL

(CURB AND GUTTER THROUGH OPENING PAID FOR
AS CONCRETE CURB & GUTTER 30-INCH TYPE A)

2

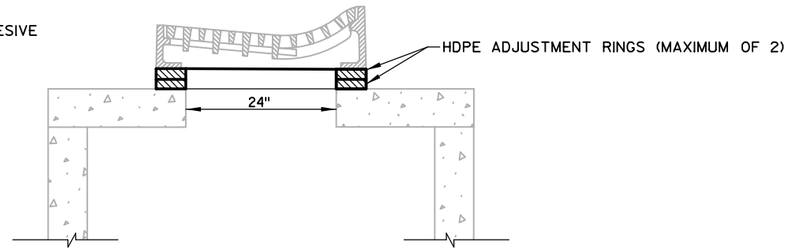


PLAN VIEW



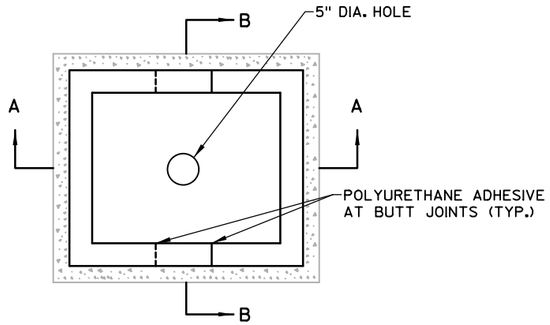
SECTION A-A

NOTE:
ALL CUTS MADE TO HDPE ADJUSTMENT
RINGS WILL BE PERPENDICULAR AND PROVIDE
A TIGHT JOINT.

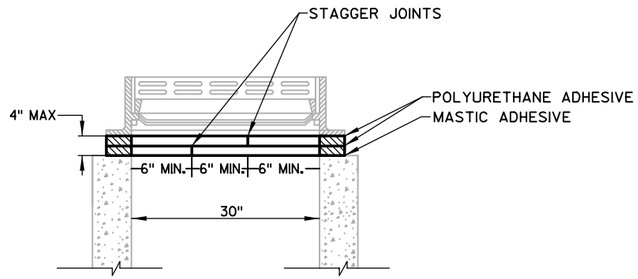


SECTION B-B

HDPE RING CUTTING DETAIL FOR CATCH BASINS 4-FT & 5-FT AND MANHOLES 4-FT

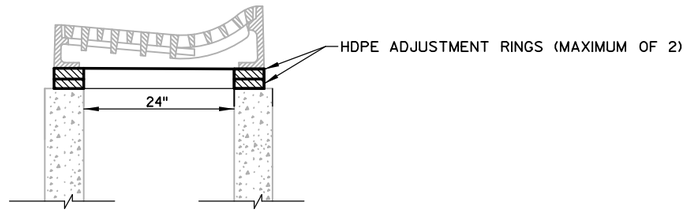


PLAN VIEW



SECTION A-A

NOTE:
ALL CUTS MADE TO HDPE ADJUSTMENT
RINGS WILL BE PERPENDICULAR AND PROVIDE
A TIGHT JOINT.



SECTION B-B

HDPE RING CUTTING DETAIL FOR CATCH BASINS 2X3-FT

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CONSTRUCTION DETAILS	SHEET 9	E

1) THE BOTTOM 2" POLYETHYLENE ADJUSTMENT RING IS TO BE SET ON THE CONE OR FLAT-TOP IN A MORTAR BED COMPOSED OF ONE (1) PART PORTLAND CEMENT AND TWO (2) PARTS MASON SAND MIXED WITH POTABLE WATER.

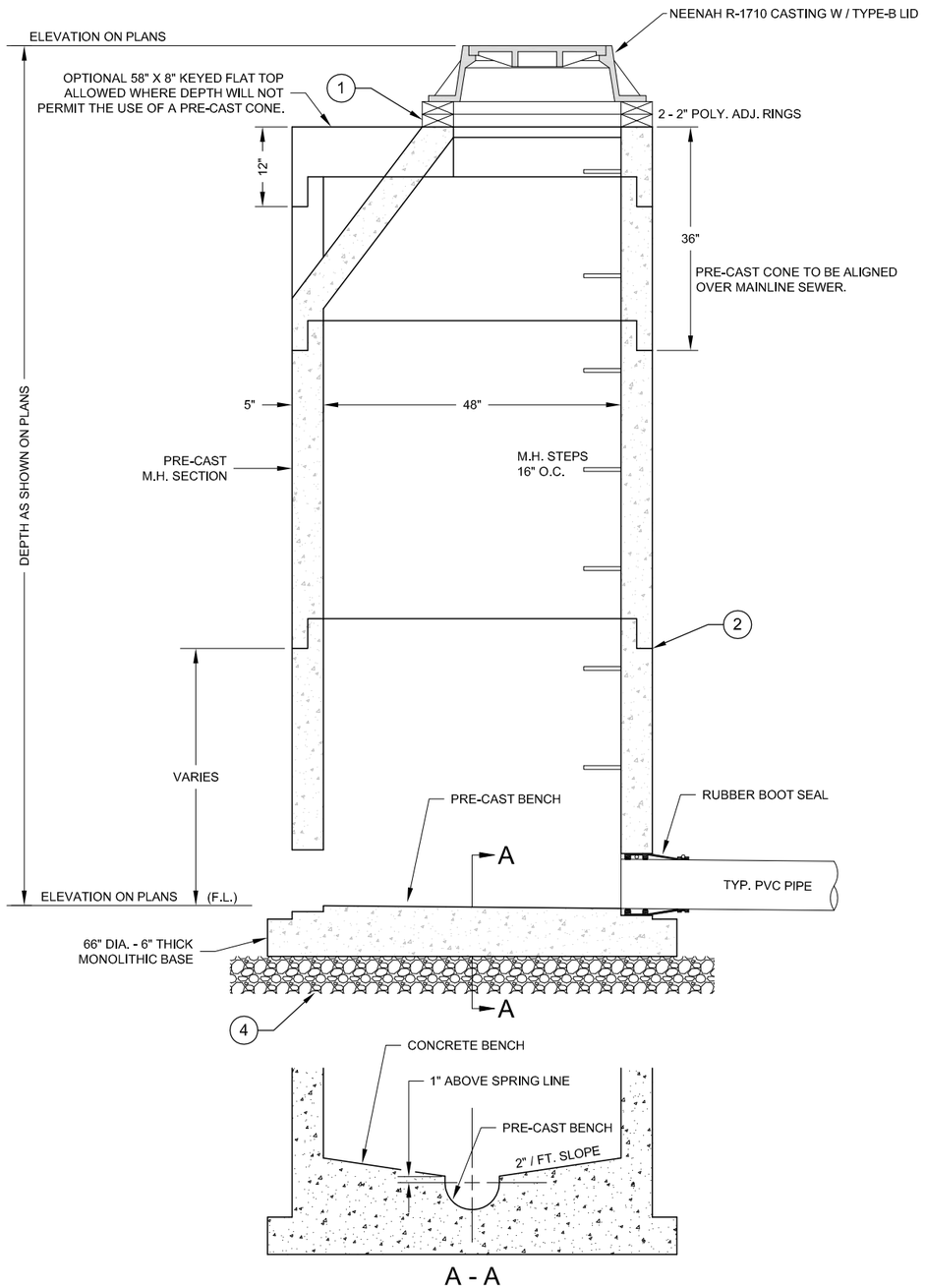
2) A SELF - LUBRICATING GASKET OR OPTIONAL BUTYL SEAL IS TO BE USED ON ALL MANHOLE JOINTS.

3) THE MANHOLE CONSTRUCTION PLATE WILL BE SET ON THE MANHOLE CONE OR FLAT-TOP FOR GRADING PURPOSES. FINAL CASTING RIM GRADE TO BE SET OFF OF THE CURB FLANGE AND:

A) 5" BELOW FINISHED PAVEMENT GRADE FOR ASPHALT STREETS.

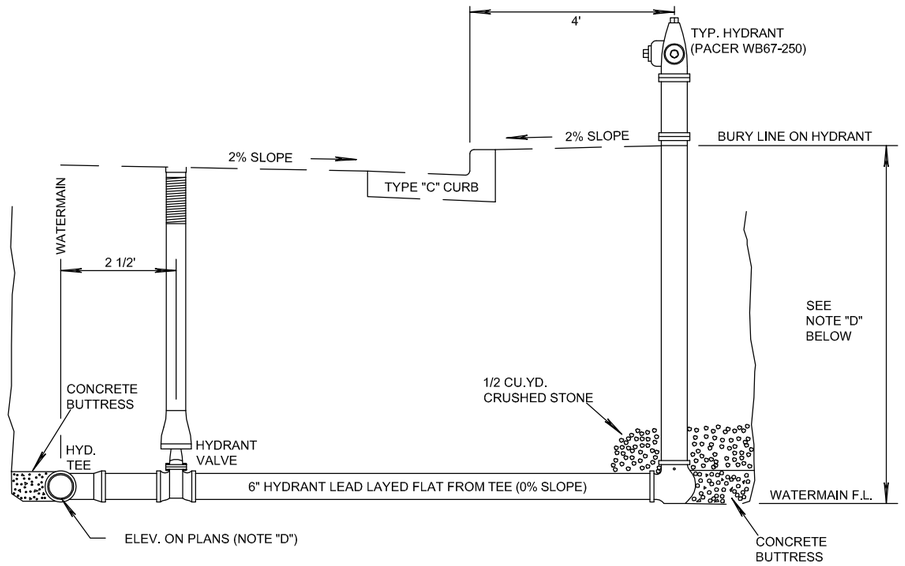
B) AT FINISHED PAVEMENT GRADE FOR CONCRETE STREETS.

4) MANHOLE SHALL BE SET ON 6" (MIN.) , 3/4" CLEAN / CRUSHED STONE. ADD 3" (9" MIN.) FOR WET TRENCHES.



TYPICAL SANITARY MANHOLE TYPE - 48" DIA. (FOR 8" THRU 21" SEWER MAIN)

2



WATERMAIN DESIGN NOTES:

A) WATERMAIN SIZE TO BE DETERMINED BY EXISTING FIELD CONDITIONS OR THE WATER & LIGHT DEPARTMENT.

B) HYDRANT SPACING IS 600' IN RESIDENTIAL AREAS AND 350' IN COMMERCIAL / INDUSTRIAL AREAS.

C) WATERMAIN GRADES ARE DESIGNED TO FLOWLINE AND SHOWN IN PROFILE ON CITY "A" DRAWINGS.

D) HYDRANT SIZE IS A STANDARD 6". HYDRANT BURY DEPTH IS FROM WATERMAIN FLOWLINE AT HYDRANT TEE TO HYDRANT BURY LINE OR GROUND LINE. HYDRANT BURY DEPTHS RANGE FROM 1'-6" TO 11'-6" IN 6" INCREMENTS.

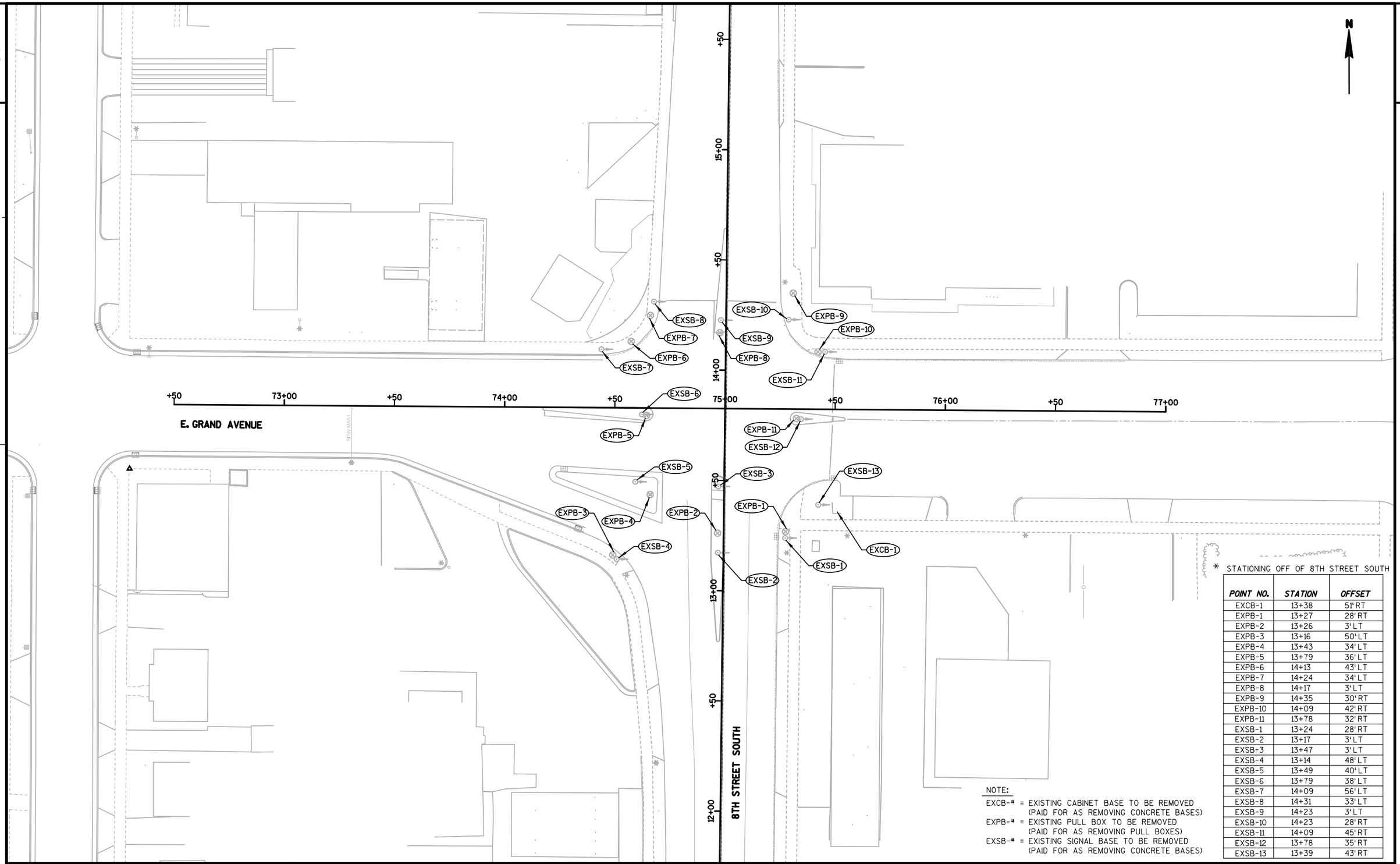
E) IN GENERAL, A HIGH POINT SHOULD BE DESIGNED INTO THE WATER MAIN AT EVERY HYDRANT LOCATION FOR FLUSHING PURPOSES.

F) WATER MAIN DESIGN DEPTHS SHOULD BE SUCH THAT THERE IS A MINIMUM OF 7FT. OF COVER OVER THE TOP OF WATER MAIN PIPE.

G) WATER MAIN INCLUDING HYDRANT LEAD'S SHALL BE INSULATED IF THERE IS LESS THAN 6FT. OF COVER OVER THE TOP OF PIPE.

REFERENCE "STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN WISCONSIN" - "CHAPTER 4.17.0 INSULATION" AND "PIPE INSULATION DETAIL - FILE NO. 48" FOR DETAILED DESCRIPTIONS.

TYPICAL LOCATION FOR HYDRANT AND WATER VALVE



* STATIONING OFF OF 8TH STREET SOUTH

POINT NO.	STATION	OFFSET
EXCB-1	13+38	51' RT
EXPB-1	13+27	28' RT
EXPB-2	13+26	3' LT
EXPB-3	13+16	50' LT
EXPB-4	13+43	34' LT
EXPB-5	13+79	36' LT
EXPB-6	14+13	43' LT
EXPB-7	14+24	34' LT
EXPB-8	14+17	3' LT
EXPB-9	14+35	30' RT
EXPB-10	14+09	42' RT
EXPB-11	13+78	32' RT
EXSB-1	13+24	28' RT
EXSB-2	13+17	3' LT
EXSB-3	13+47	3' LT
EXSB-4	13+14	48' LT
EXSB-5	13+49	40' LT
EXSB-6	13+79	38' LT
EXSB-7	14+09	56' LT
EXSB-8	14+31	33' LT
EXSB-9	14+23	3' LT
EXSB-10	14+23	28' RT
EXSB-11	14+09	45' RT
EXSB-12	13+78	35' RT
EXSB-13	13+39	43' RT

NOTE:

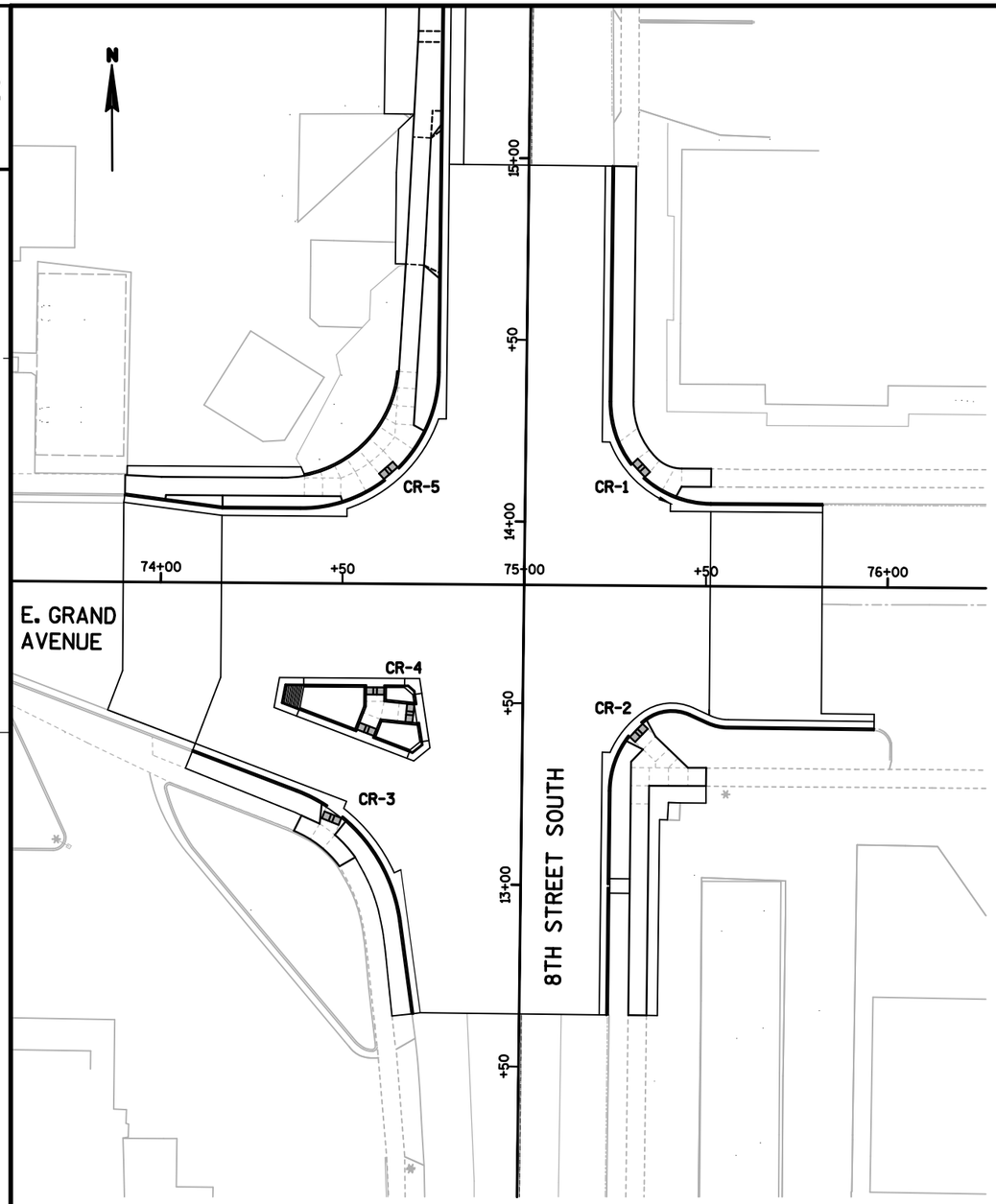
EXCB-# = EXISTING CABINET BASE TO BE REMOVED (PAID FOR AS REMOVING CONCRETE BASES)

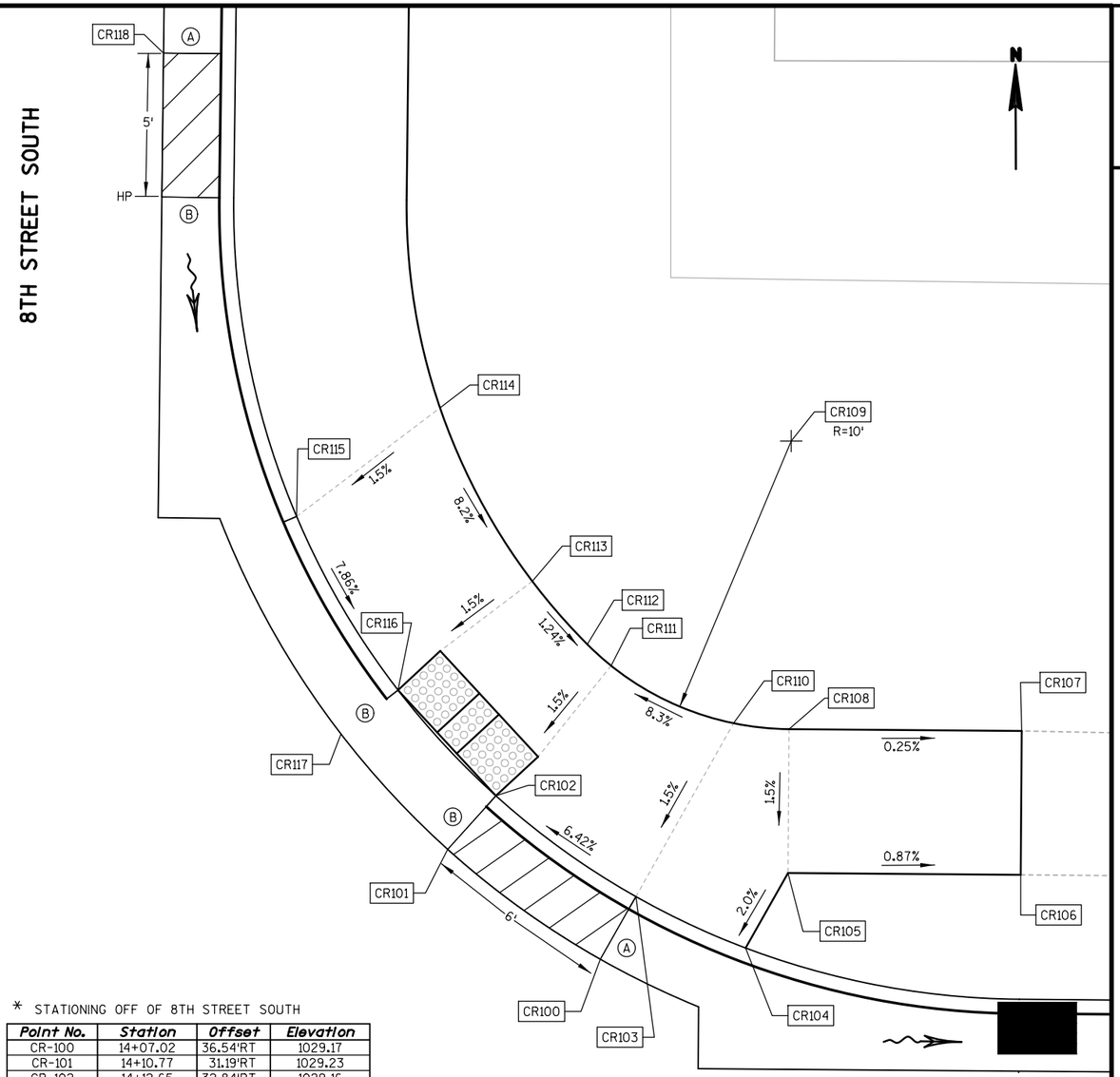
EXPB-# = EXISTING PULL BOX TO BE REMOVED (PAID FOR AS REMOVING PULL BOXES)

EXSB-# = EXISTING SIGNAL BASE TO BE REMOVED (PAID FOR AS REMOVING CONCRETE BASES)

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CONSTRUCTION DETAILS	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\021003a_cd.dgn PLOT DATE : 10/12/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42





* STATIONING OFF OF 8TH STREET SOUTH

Point No.	Station	Offset	Elevation
CR-100	14+07.02	36.54'RT	1029.17
CR-101	14+10.77	31.19'RT	1029.23
CR-102	14+12.65	32.84'RT	1029.16
CR-103	14+09.21	37.74'RT	1029.55
CR-104	14+07.47	41.57'RT	1029.52
CR-105	14+10.09	43.01'RT	1029.58
CR-106	14+10.12	51.09'RT	Match Exist.
CR-107	14+15.12	51.07'RT	Match Exist.
CR-108	14+15.09	42.99'RT	1029.65
CR-109	14+25.09	42.95'RT	---
CR-110	14+15.27	41.07'RT	1029.65
CR-111	14+17.22	36.79'RT	1029.25
CR-112	14+17.95	35.95'RT	1029.26
CR-113	14+20.12	34.02'RT	1029.30
CR-114	14+26.10	30.74'RT	1029.86
CR-115	14+22.27	25.81'RT	1029.76
CR-116	14+16.28	29.40'RT	1029.21
CR-117	14+14.73	27.44'RT	1029.28
CR-118	14+38.30	21.00'RT	1029.39

(A) 6.25% GUTTER SLOPE
(B) 4.0% GUTTER SLOPE
HP = HIGH POINT
▨ = GUTTER TRANSITION

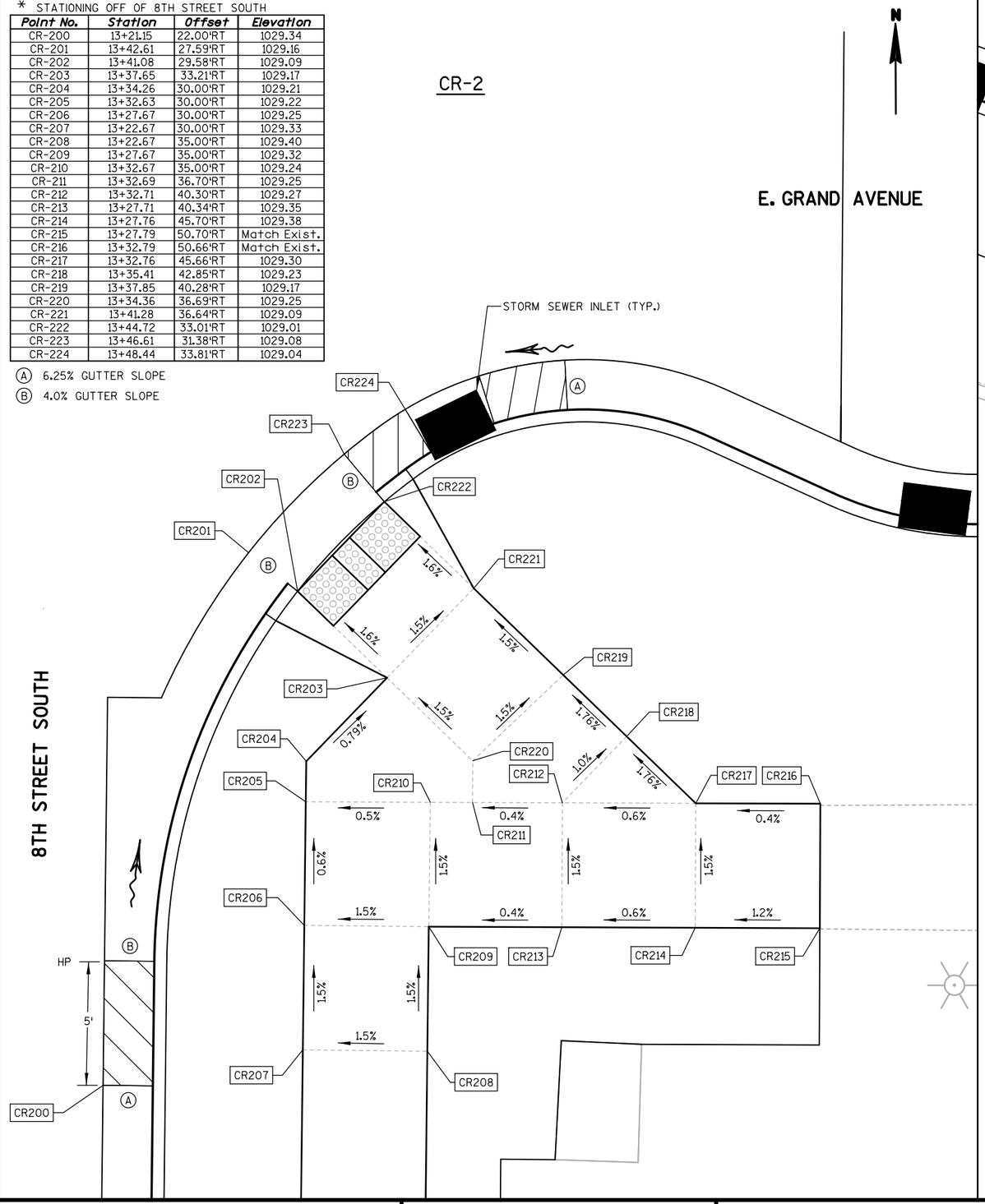
CR-1

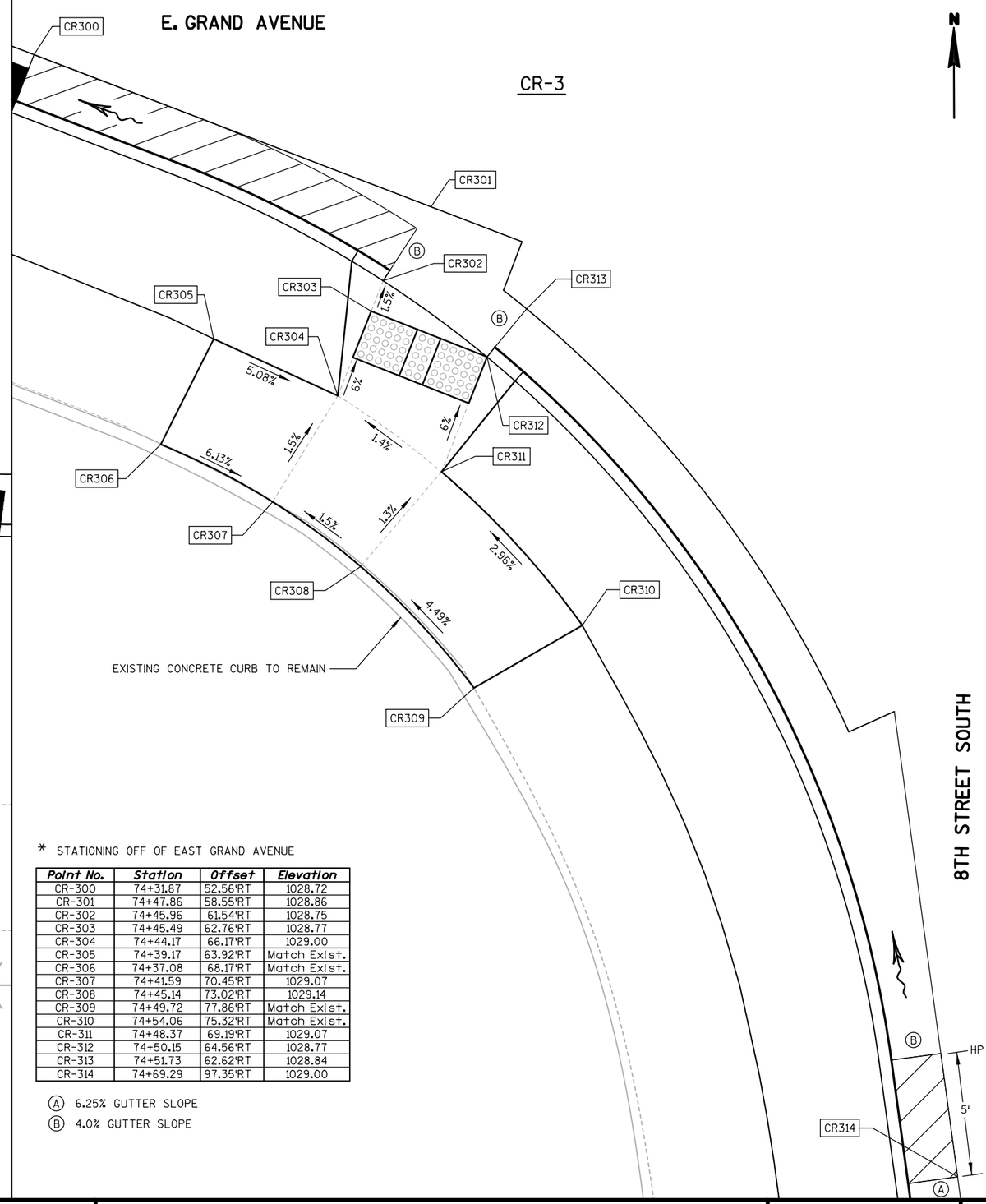
PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CONSTRUCTION DETAILS - CURB RAMP DETAILS	SHEET 13	E

* STATIONING OFF OF 8TH STREET SOUTH

Point No.	Station	Offset	Elevation
CR-200	13+21.15	22.00'RT	1029.34
CR-201	13+42.61	27.59'RT	1029.16
CR-202	13+41.08	29.58'RT	1029.09
CR-203	13+37.65	33.21'RT	1029.17
CR-204	13+34.26	30.00'RT	1029.21
CR-205	13+32.63	30.00'RT	1029.22
CR-206	13+27.67	30.00'RT	1029.25
CR-207	13+22.67	30.00'RT	1029.33
CR-208	13+22.67	35.00'RT	1029.40
CR-209	13+27.67	35.00'RT	1029.32
CR-210	13+32.67	35.00'RT	1029.24
CR-211	13+32.69	36.70'RT	1029.25
CR-212	13+32.71	40.30'RT	1029.27
CR-213	13+27.71	40.34'RT	1029.35
CR-214	13+27.76	45.70'RT	1029.38
CR-215	13+27.79	50.70'RT	Match Exist.
CR-216	13+32.79	50.66'RT	Match Exist.
CR-217	13+32.76	45.66'RT	1029.30
CR-218	13+35.41	42.85'RT	1029.23
CR-219	13+37.85	40.28'RT	1029.17
CR-220	13+34.36	36.69'RT	1029.25
CR-221	13+41.28	36.64'RT	1029.09
CR-222	13+44.72	33.01'RT	1029.01
CR-223	13+46.61	31.38'RT	1029.08
CR-224	13+48.44	33.81'RT	1029.04

(A) 6.25% GUTTER SLOPE
(B) 4.0% GUTTER SLOPE





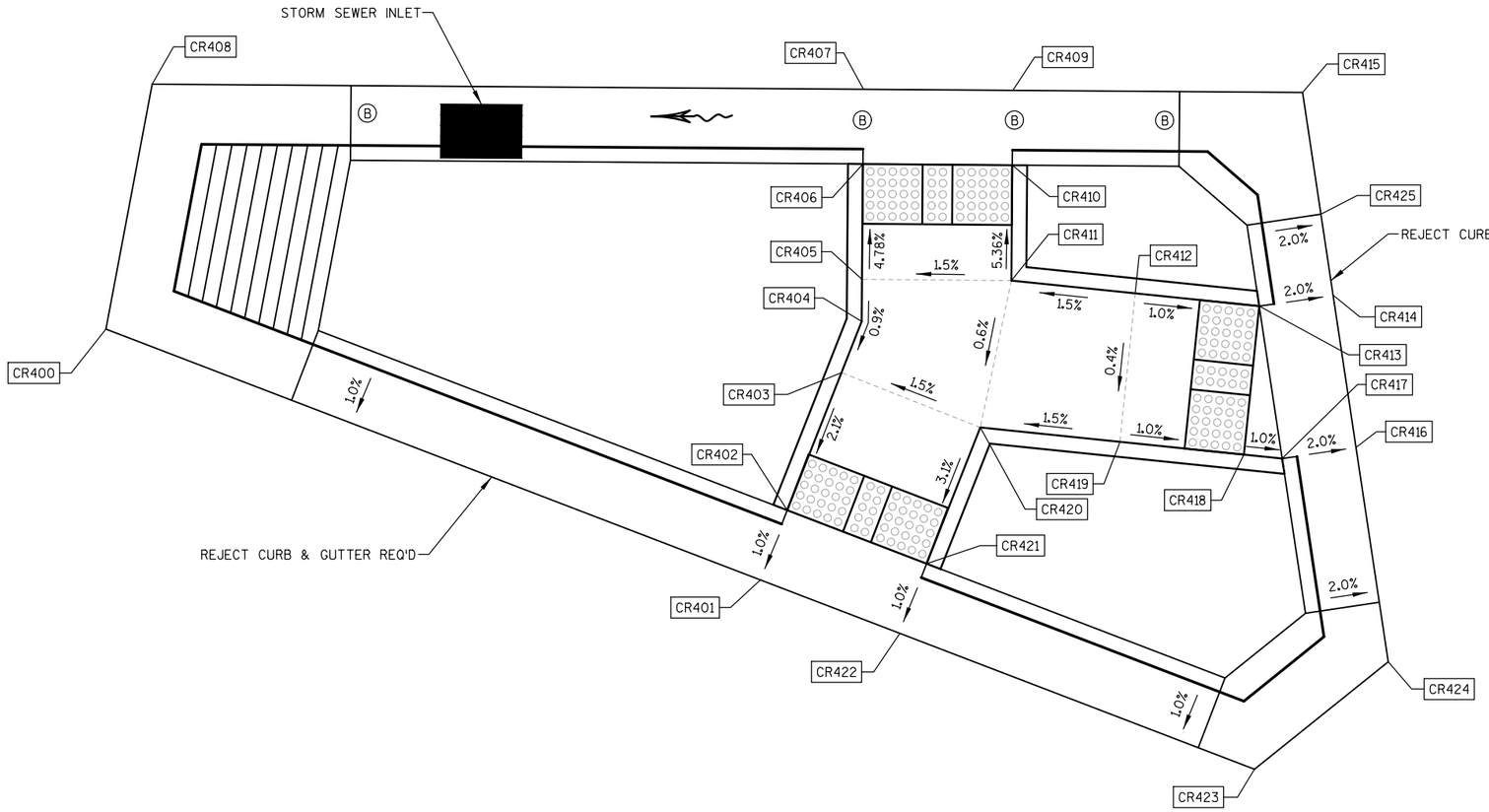
* STATIONING OFF OF EAST GRAND AVENUE

Point No.	Station	Offset	Elevation
CR-300	74+31.87	52.56'RT	1028.72
CR-301	74+47.86	58.55'RT	1028.86
CR-302	74+45.96	61.54'RT	1028.75
CR-303	74+45.49	62.76'RT	1028.77
CR-304	74+44.17	66.17'RT	1029.00
CR-305	74+39.17	63.92'RT	Match Exist.
CR-306	74+37.08	68.17'RT	Match Exist.
CR-307	74+41.59	70.45'RT	1029.07
CR-308	74+45.14	73.02'RT	1029.14
CR-309	74+49.72	77.86'RT	Match Exist.
CR-310	74+54.06	75.32'RT	Match Exist.
CR-311	74+48.37	69.19'RT	1029.07
CR-312	74+50.15	64.56'RT	1028.77
CR-313	74+51.73	62.62'RT	1028.84
CR-314	74+69.29	97.35'RT	1029.00

(A) 6.25% GUTTER SLOPE
(B) 4.0% GUTTER SLOPE

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CONSTRUCTION DETAILS - CURB RAMP DETAILS	SHEET 14	E

CR-4

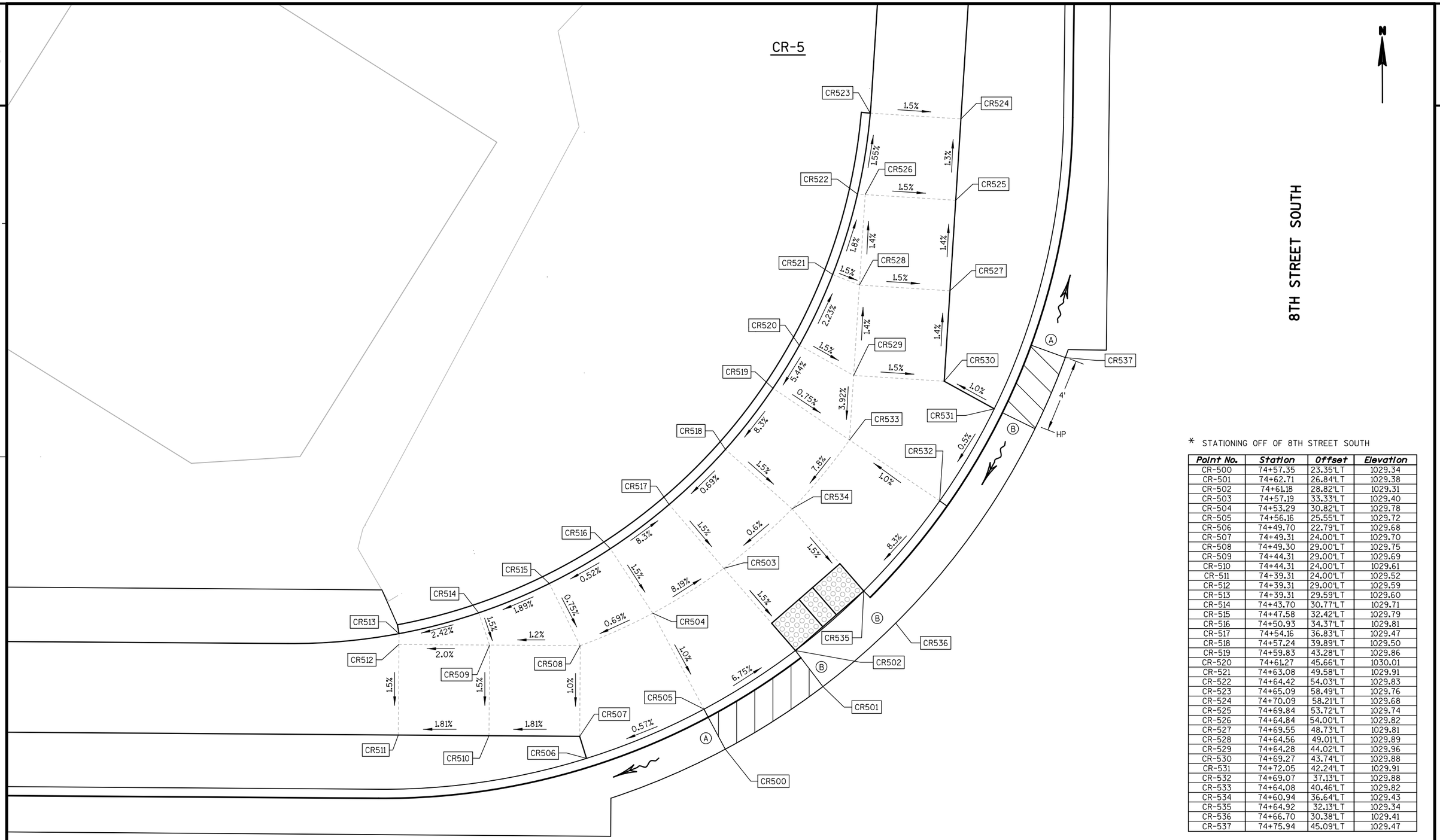


* STATIONING OFF OF EAST GRAND AVENUE

Point No.	Station	Offset	Elevation
CR-400	74+31.38	34.22'RT	1029.17
CR-401	74+53.36	42.46'RT	1029.29
CR-402	74+54.24	40.12'RT	1029.32
CR-403	74+56.02	35.50'RT	1029.43
CR-404	74+56.69	33.78'RT	1029.45
CR-405	74+56.69	32.37'RT	1029.46
CR-406	74+56.69	28.50'RT	1029.27
CR-407	74+56.69	26.00'RT	1029.34
CR-408	74+32.86	26.00'RT	1029.18
CR-409	74+61.69	26.00'RT	1029.39
CR-410	74+61.69	28.50'RT	1029.32
CR-411	74+61.69	32.37'RT	1029.53
CR-412	74+65.84	32.77'RT	1029.59
CR-413	74+70.00	33.17'RT	1029.55
CR-414	74+72.47	32.78'RT	1029.50
CR-415	74+71.40	26.00'RT	1029.50
CR-416	74+73.27	37.88'RT	1029.47
CR-417	74+70.80	38.27'RT	1029.52
CR-418	74+69.52	38.14'RT	1029.53
CR-419	74+65.37	37.75'RT	1029.57
CR-420	74+60.69	37.30'RT	1029.50
CR-421	74+58.92	41.87'RT	1029.35
CR-422	74+58.04	44.21'RT	1029.32
CR-423	74+69.95	48.67'RT	1029.38
CR-424	74+74.40	45.04'RT	1029.43
CR-425	74+72.04	30.07'RT	1029.51

Ⓐ 6.25% GUTTER SLOPE
Ⓑ 4.0% GUTTER SLOPE

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CONSTRUCTION DETAILS - CURB RAMP DETAILS	SHEET 15	E



* STATIONING OFF OF 8TH STREET SOUTH

Point No.	Station	Offset	Elevation
CR-500	74+57.35	23.35'LT	1029.34
CR-501	74+62.71	26.84'LT	1029.38
CR-502	74+61.18	28.82'LT	1029.31
CR-503	74+57.19	33.33'LT	1029.40
CR-504	74+53.29	30.82'LT	1029.78
CR-505	74+56.16	25.55'LT	1029.72
CR-506	74+49.70	22.79'LT	1029.68
CR-507	74+49.31	24.00'LT	1029.70
CR-508	74+49.30	29.00'LT	1029.75
CR-509	74+44.31	29.00'LT	1029.69
CR-510	74+44.31	24.00'LT	1029.61
CR-511	74+39.31	24.00'LT	1029.52
CR-512	74+39.31	29.00'LT	1029.59
CR-513	74+39.31	29.59'LT	1029.60
CR-514	74+43.70	30.77'LT	1029.71
CR-515	74+47.58	32.42'LT	1029.79
CR-516	74+50.93	34.37'LT	1029.81
CR-517	74+54.16	36.83'LT	1029.47
CR-518	74+57.24	39.89'LT	1029.50
CR-519	74+59.83	43.28'LT	1029.86
CR-520	74+61.27	45.66'LT	1030.01
CR-521	74+63.08	49.58'LT	1029.91
CR-522	74+64.42	54.03'LT	1029.83
CR-523	74+65.09	58.49'LT	1029.76
CR-524	74+70.09	58.21'LT	1029.68
CR-525	74+69.84	53.72'LT	1029.74
CR-526	74+64.84	54.00'LT	1029.82
CR-527	74+69.55	48.73'LT	1029.81
CR-528	74+64.56	49.01'LT	1029.89
CR-529	74+64.28	44.02'LT	1029.96
CR-530	74+69.27	43.74'LT	1029.88
CR-531	74+72.05	42.24'LT	1029.91
CR-532	74+69.07	37.13'LT	1029.88
CR-533	74+64.08	40.46'LT	1029.82
CR-534	74+60.94	36.64'LT	1029.43
CR-535	74+64.92	32.13'LT	1029.34
CR-536	74+66.70	30.38'LT	1029.41
CR-537	74+75.94	45.09'LT	1029.47

Ⓐ 6.25% GUTTER SLOPE
Ⓑ 4.0% GUTTER SLOPE

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CONSTRUCTION DETAILS - CURB RAMP DETAILS	SHEET 16	E

2

N

8TH STREET SOUTH

EAST GRAND AVENUE

2-INCHES HMA PAVEMENT 4 LT 58-28 H OVER
3-INCHES HMA PAVEMENT 3 LT 58-28 S OVER
10-INCHES BASE AGGREGATE DENSE 1¼-INCH

SALVAGE AND REPLACE LANDSCAPING STONE

REMOVING LANDSCAPING TIMBERS REQ'D

CONCRETE CURB PEDESTRIAN REQ'D

EXISTING CONCRETE CURB TO REMAIN

SOD LAWN

SEE CONSTRUCTION DETAIL "OPEN BACK CURB DRAIN"

STA. 75+00.00
STA. 13+82.58

90° 15' 18"

LEGEND

ASPH-D	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES		CURB RAMP, TYPE X
CONC-9	CONCRETE PAVEMENT 9-INCH	→	TRAFFIC FLOW
CD-6	CONCRETE DRIVEWAY HES 6-INCH	■	PROPOSED STORM SEWER CATCH BASIN
SCC-4	STAMPING COLORED CONCRETE (4-INCH)	●	PROPOSED STORM SEWER MANHOLE
CS-4	CONCRETE SIDEWALK 4-INCH	▬	CURB RAMP DETECTABLE WARNING FIELD (YELLOW)
CG-30A	CONCRETE CURB & GUTTER 30-INCH TYPE A	⟵	DRAINAGE FLOW ARROW
CG-30D	CONCRETE CURB & GUTTER 30-INCH TYPE D	XXXXX	SAWING CONCRETE
CMSL-1	CONCRETE MEDIAN SLOPED NOSE (TYPE 1)	|||||||	REJECT CURB AND GUTTER
CMSL-2	CONCRETE MEDIAN SLOPED NOSE (TYPE 2)	//////	SAWING ASPHALT

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	PLAN DETAILS	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\021201_pd.dgn PLOT DATE : 12/1/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

2

** SEE CONSTRUCTION DETAIL "CURB RAMPS" FOR ADDITIONAL LAYOUT INFORMATION

N

8TH STREET SOUTH

EAST GRAND AVENUE

73+00 74+00 75+00 76+00 77+00

15+00 14+00 13+00

+50

VARIES

REMOVING PAVEMENT REQ'D (DRIVEWAY REMOVAL)

REMOVING PAVEMENT REQ'D (DRIVEWAY REMOVAL)

NOTE: ALL POINTS & RADII ARE TO FLANGE LINE OF CURB, GUTTER AND CURB AND GUTTER, UNLESS OTHERWISE NOTED.

LEGEND

- PROPOSED STORM SEWER CATCH BASIN
- PROPOSED STORM SEWER MANHOLE
- DRAINAGE FLOW ARROW
- XXX PLAN DETAIL POINT

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	PLAN DETAILS	SHEET 18	E

POINT NO.	STATION E. GRAND AVENUE	OFFSET	STATION 8TH STREET SOUTH	OFFSET	ELEV.	Y	X	REMARKS
100	73+85.64	35.22'RT	---	---	---	450,905.70	731,694.16	MATCH EXISTING CURB AND GUTTER
101	73+89.67	24.44'RT	---	---	---	450,916.46	731,698.27	MATCH EXISTING PAVEMENT
102	73+89.67	21.95'LT	---	---	---	450,962.84	731,698.60	MATCH EXISTING CURB AND GUTTER
103	73+89.99	24.43'LT	---	---	---	450,965.31	731,698.94	MATCH EXISTING CURB AND GUTTER
104	73+90.00	29.43'LT	---	---	---	450,970.31	731,698.99	MATCH EXISTING SIDEWALK
105	73+90.51	29.41'LT	---	---	---	450,970.29	731,699.49	MATCH EXISTING GROUND
106	73+90.54	32.00'LT	---	---	---	450,972.88	731,699.55	MATCH EXISTING GROUND
107	74+00.00	29.00'LT	---	---	1029.32	450,969.81	731,708.98	BOS
108	74+01.23	24.00'LT	---	---	1029.25	450,964.81	731,710.18	FOS
109	74+38.35	32.00'LT	---	---	---	450,972.54	731,747.35	MATCH EXISTING GROUND
110	74+16.67	18.50'LT	---	---	1029.07	450,959.19	731,725.58	EDGE OF CONCRETE
111	74+39.22	30.08'LT	14+12.39	60.91'LT	1029.60	450,970.61	731,748.21	BOC
112	74+33.19	29.00'LT	14+11.28	66.94'LT	1029.53	450,969.57	731,742.17	BOS
113	74+33.19	61.00'LT	14+43.28	67.08'LT	---	451,001.57	731,742.41	R=32'; FOC
114	74+65.14	59.19'LT	14+41.62	35.12'LT	1029.76	450,999.53	731,774.34	BOS
115	74+64.59	58.53'LT	14+40.96	35.67'LT	1029.76	450,998.88	731,773.79	BOC
116	74+38.26	18.50'LT	14+00.81	61.82'LT	1029.22	450,959.04	731,747.16	EDGE OF CONCRETE
117	74+66.48	30.15'LT	14+12.59	33.65'LT	1029.41	450,970.48	731,775.47	EDGE OF CONCRETE
118	74+38.26	58.50'LT	14+40.81	62.00'LT	---	450,999.04	731,747.46	R=40'
119	---	---	15+67.85	25.47'LT	---	451,125.64	731,785.47	MATCH EXISTING GROUND
120	74+78.26	58.32'LT	14+40.81	22.00'LT	1029.40	450,998.57	731,787.45	EDGE OF CONCRETE
121	---	---	14+70.50	36.50'LT	---	451,028.43	731,773.30	MATCH EXISTING GROUND
122	---	---	14+95.64	36.50'LT	---	451,053.56	731,773.60	MATCH EXISTING GROUND
123	---	---	15+07.57	35.99'LT	---	451,065.49	731,774.24	MATCH EXISTING GROUND
124	---	---	15+11.74	31.81'LT	1029.36	451,069.61	731,778.47	BOS
125	---	---	14+70.24	28.62'LT	1029.27	451,028.08	731,781.18	FOS AT DRIVEWAY
126	---	---	14+75.66	28.34'LT	1029.30	451,033.49	731,781.52	FOS
127	---	---	15+05.24	27.09'LT	1029.10	451,063.06	731,783.12	FOS AT DRIVEWAY
128	---	---	15+12.75	26.77'LT	1029.32	451,070.56	731,783.53	FOS
129	---	---	15+11.74	40.00'LT	---	451,069.71	731,770.29	MATCH EXISTING GROUND
130	---	---	15+55.67	40.00'LT	---	451,113.63	731,770.80	MATCH EXISTING GROUND
131	---	---	15+55.67	30.62'LT	1029.20	451,113.52	731,780.18	BOS
132	---	---	15+34.67	24.50'LT	---	451,092.45	731,786.05	DRIVEWAY OPENING
133	---	---	15+34.54	30.85'LT	1028.95	451,092.40	731,779.70	BOS
134	---	---	15+52.67	24.50'LT	---	451,110.45	731,786.26	DRIVEWAY OPENING
135	---	---	15+58.12	30.59'LT	---	451,115.97	731,780.24	MATCH EXISTING SIDEWALK
136	---	---	15+58.12	25.59'LT	---	451,115.91	731,785.24	MATCH EXISTING SIDEWALK
137	---	---	15+67.85	22.00'LT	---	451,125.60	731,788.94	MATCH EXISTING CURB AND GUTTER
138	---	---	15+67.85	18.00'LT	---	451,125.55	731,792.94	MATCH EXISTING PAVEMENT
139	---	---	14+98.10	22.00'LT	1028.97	451,055.86	731,788.12	EDGE OF CONCRETE
140	---	---	14+98.10	18.00'LT	---	451,055.81	731,792.13	MATCH EXISTING PAVEMENT
141	---	---	14+98.10	21.00'RT	---	451,055.35	731,831.12	MATCH EXISTING CURB AND GUTTER
142	---	---	14+98.10	29.50'RT	---	451,055.25	731,839.62	MATCH EXISTING SIDEWALK
143	75+21.22	50.63'LT	14+33.30	21.00'RT	1029.45	450,990.56	731,830.36	EDGE OF CONCRETE
144	75+29.72	50.59'LT	14+33.30	29.50'RT	1029.96	450,990.46	731,838.86	BOS
145	75+51.22	50.50'LT	14+33.30	51.00'RT	---	450,990.21	731,860.36	R=30'
146	75+29.95	29.34'LT	14+12.05	29.83'RT	1029.25	450,969.21	731,838.94	EDGE OF CONCRETE
147	75+51.20	20.50'LT	14+03.30	51.11'RT	1029.04	450,960.21	731,860.11	EDGE OF CONCRETE
148	75+51.21	32.31'LT	14+15.12	51.07'RT	---	450,972.03	731,860.22	MATCH EXISTING SIDEWALK
149	75+51.21	27.31'LT	14+10.12	51.09'RT	---	450,967.03	731,860.18	MATCH EXISTING SIDEWALK
150	75+82.00	20.47'LT	---	---	---	450,959.96	731,890.92	MATCH EXISTING CURB AND GUTTER
151	75+81.88	34.86'RT	---	---	---	450,904.63	731,890.40	MATCH EXISTING PAVEMENT
152	75+96.56	34.93'RT	---	---	---	450,904.46	731,905.07	MATCH EXISTING PAVEMENT
153	75+96.55	36.93'RT	---	---	---	450,902.46	731,905.05	MATCH EXISTING CURB AND GUTTER
154	75+56.48	36.74'RT	---	---	1028.96	450,902.94	731,864.99	EDGE OF ASPHALT
155	75+56.54	24.74'RT	---	---	---	450,914.94	731,865.13	R=12'
156	75+51.64	35.69'RT	---	---	1029.04	450,904.02	731,860.15	EDGE OF ASPHALT
157	75+46.67	33.47'RT	13+49.32	46.82'RT	1029.13	450,906.28	731,855.19	EDGE OF CONCRETE
158	75+40.95	46.25'RT	13+36.52	41.16'RT	---	450,893.55	731,849.38	R=14'
159	75+32.55	35.05'RT	13+47.68	32.71'RT	1029.06	450,904.81	731,841.06	EDGE OF CONCRETE
160	75+48.75	56.65'RT	13+26.15	49.00'RT	---	450,883.09	731,857.10	R=27'
161	74+16.67	26.00'RT	---	---	1029.07	450,914.69	731,725.26	EDGE OF CONCRETE
162	75+21.75	56.53'RT	13+26.15	22.00'RT	1029.39	450,883.40	731,830.10	EDGE OF CONCRETE
163	75+50.43	50.01'RT	13+32.79	50.66'RT	---	450,889.71	731,858.84	MATCH EXISTING SIDEWALK
164	75+50.45	55.01'RT	13+27.79	50.70'RT	---	450,884.71	731,858.82	MATCH EXISTING SIDEWALK
165	---	---	13+23.11	50.73'RT	---	450,880.02	731,858.80	MATCH EXISTING GROUND
166	---	---	13+23.05	43.60'RT	---	450,880.05	731,851.66	MATCH EXISTING GROUND
167	---	---	13+23.16	40.37'RT	---	450,880.20	731,848.44	MATCH EXISTING GROUND
168	---	---	13+18.38	40.18'RT	---	450,875.42	731,848.19	MATCH EXISTING GROUND
169	---	---	13+18.38	38.00'RT	---	450,875.44	731,846.01	MATCH EXISTING GROUND
170	---	---	12+64.50	38.00'RT	---	450,821.57	731,845.38	MATCH EXISTING GROUND
171	---	---	12+64.50	35.00'RT	---	450,821.60	731,842.38	MATCH EXISTING SIDEWALK
172	---	---	12+64.50	30.00'RT	---	450,821.66	731,837.38	MATCH EXISTING SIDEWALK
173	---	---	12+64.50	22.00'RT	---	450,821.76	731,829.38	MATCH EXISTING CURB AND GUTTER
174	---	---	12+64.50	27.22'LT	---	450,822.33	731,780.16	MATCH EXISTING CURB AND GUTTER
175	---	---	12+63.49	34.98'LT	---	450,821.41	731,772.39	MATCH EXISTING GROUND
176	74+68.58	92.40'RT	12+90.04	31.00'LT	1029.03	450,847.92	731,776.68	EDGE OF CONCRETE
177	74+58.68	69.62'RT	13+12.78	41.00'LT	1028.90	450,873.18	731,769.68	EDGE OF CONCRETE
178	74+22.06	99.07'RT	12+83.16	77.50'LT	---	450,841.58	731,730.11	R=47'
179	74+09.82	44.29'RT	---	---	---	450,896.45	731,718.27	MATCH EXISTING CURB AND GUTTER
180	74+38.55	55.06'RT	13+27.25	61.20'LT	1028.76	450,885.47	731,746.93	EDGE OF CONCRETE
181	74+49.72	77.86'RT	13+04.50	49.93'LT	---	450,862.59	731,757.93	MATCH EXISTING SIDEWALK
182	74+26.00	95.72'RT	12+86.53	73.57'LT	---	450,844.91	731,734.08	R=29.7'; FOC
183	74+37.08	68.17'RT	13+14.13	62.62'LT	---	450,872.37	731,745.35	MATCH EXISTING SIDEWALK
184	74+07.15	51.15'RT	---	---	---	450,889.61	731,715.55	MATCH EXISTING GROUND

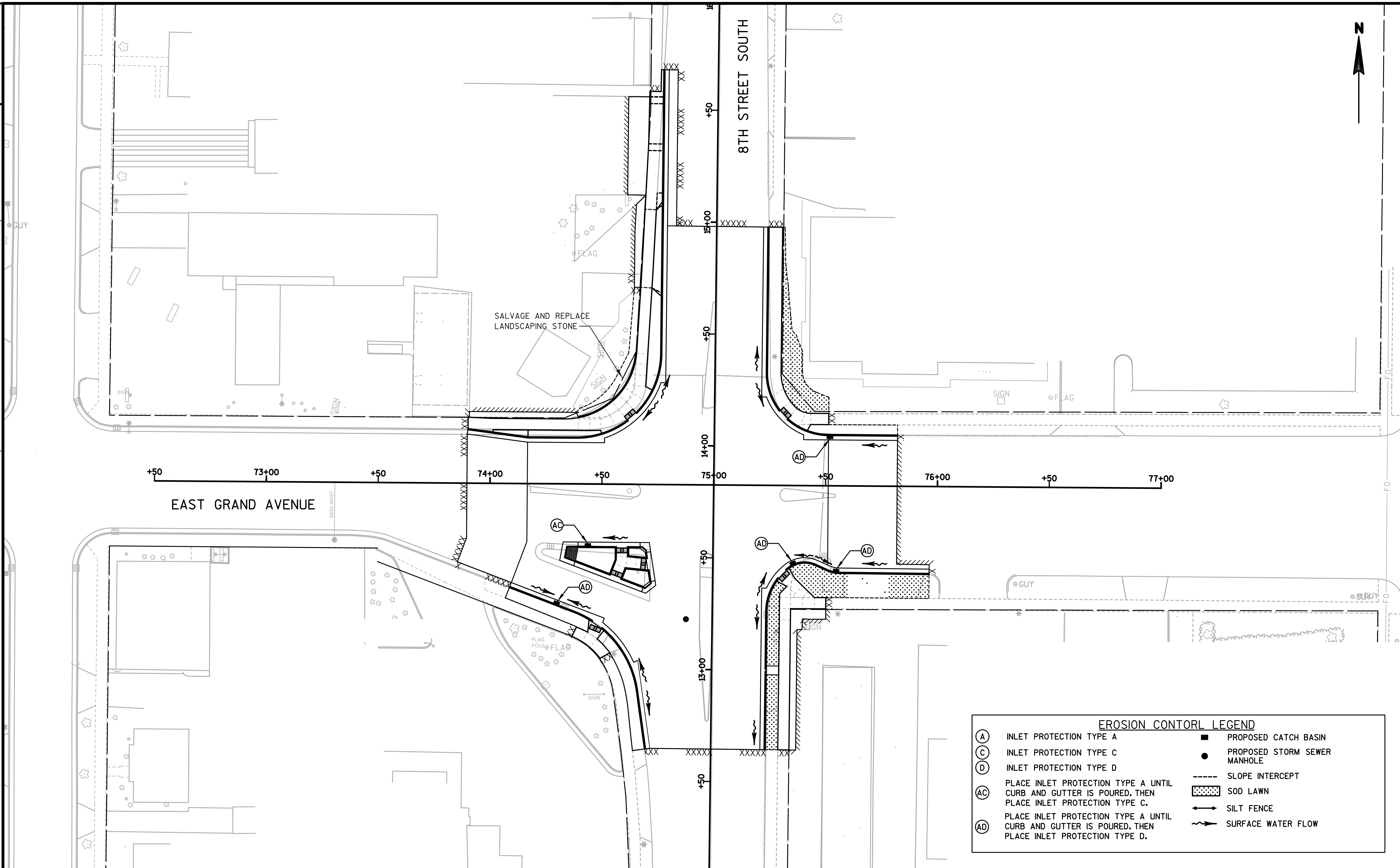
NOTE: FOR INFORMATIONAL USE ONLY.
JOINT LAYOUT PAID FOR AS
"CONCRETE PAVEMENT JOINT LAYOUT"

8TH STREET SOUTH

EAST GRAND AVENUE

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	JOINT DETAILS	SHEET	E

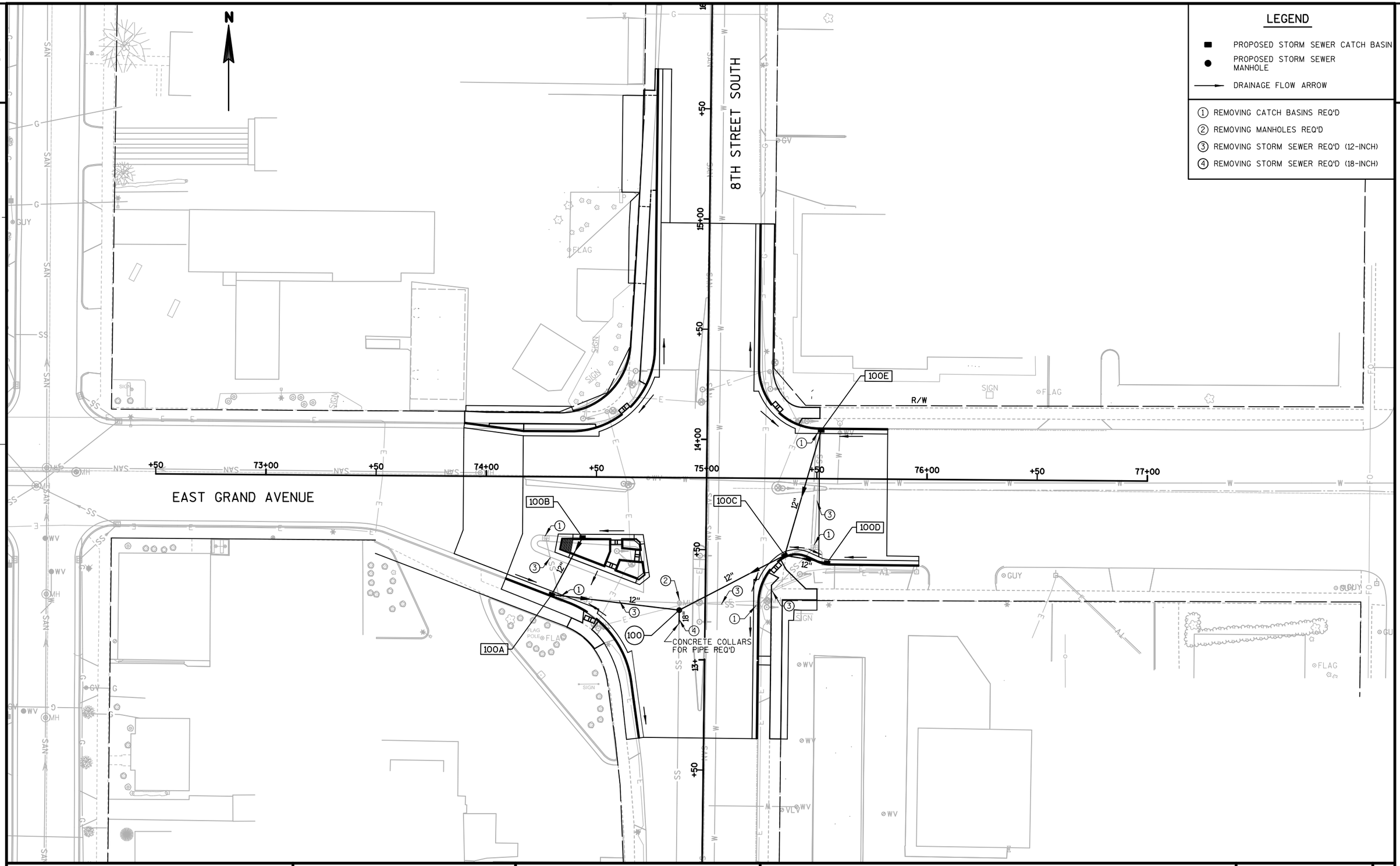
FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\021301_jd.dgn PLOT DATE : 11/30/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$



ERIOSION CONTORL LEGEND

(A) INLET PROTECTION TYPE A	■ PROPOSED CATCH BASIN
(C) INLET PROTECTION TYPE C	● PROPOSED STORM SEWER MANHOLE
(D) INLET PROTECTION TYPE D	----- SLOPE INTERCEPT
(AC) PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS POURED. THEN PLACE INLET PROTECTION TYPE C.	SOD LAWN
(AD) PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS POURED. THEN PLACE INLET PROTECTION TYPE D.	SILT FENCE
	SURFACE WATER FLOW

PROJECT NO:6999-07-88	HWY:8TH STREET SOUTH	COUNTY:WOOD	EROSION CONTROL	SHEET 21	E



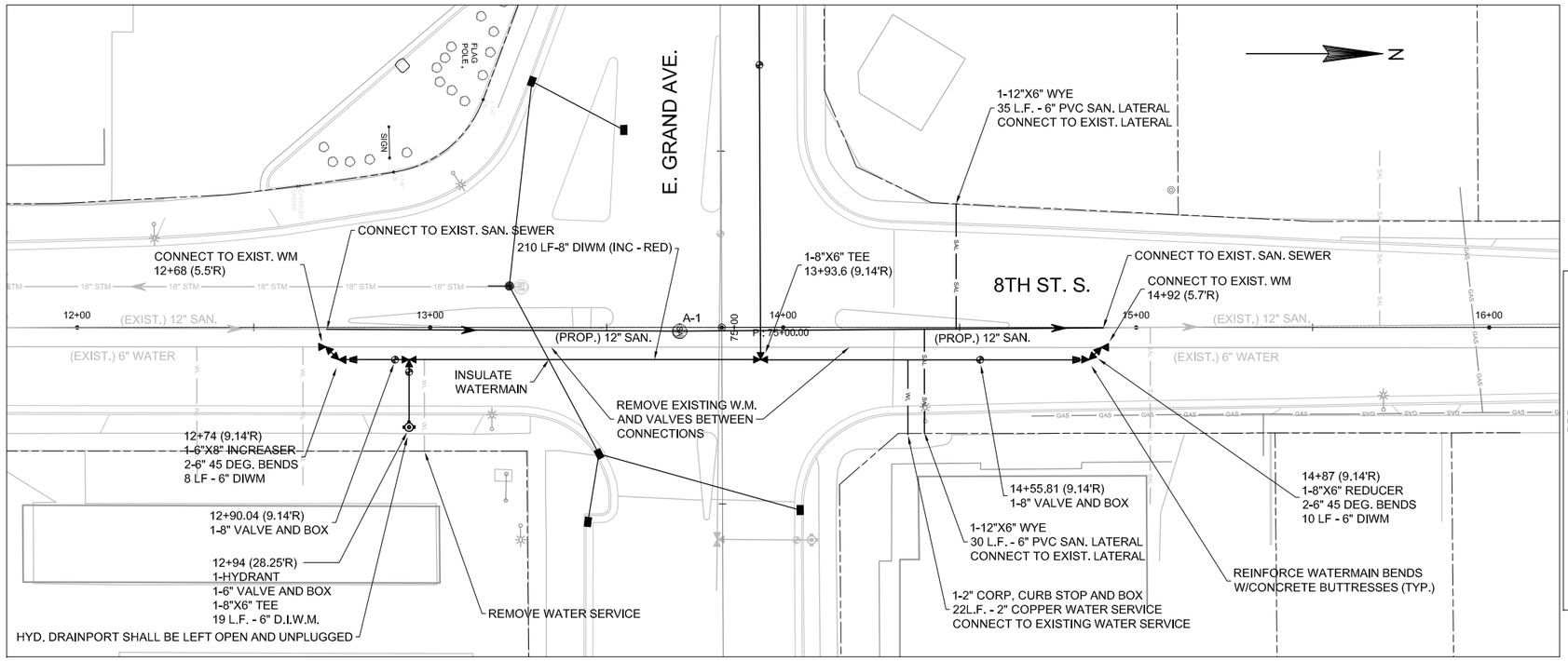
2

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	STORM SEWER	SHEET	E

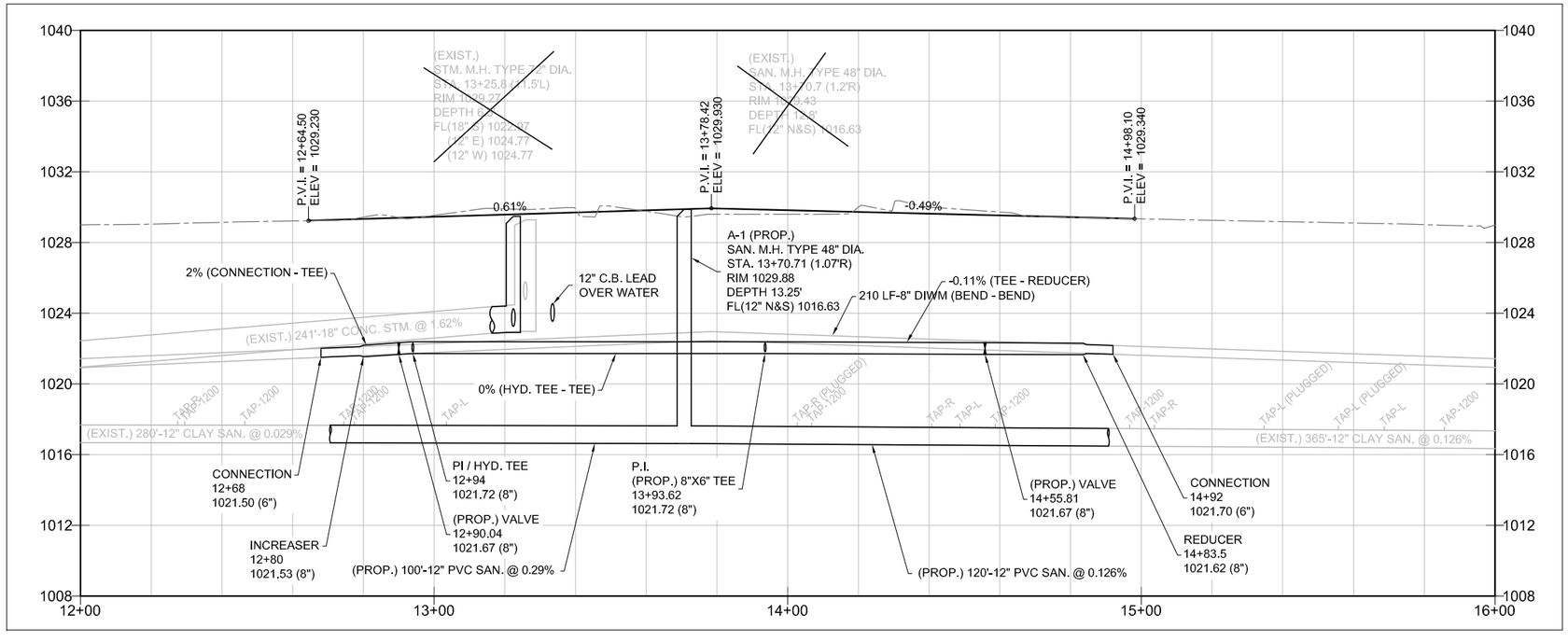
FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\022501_ss.dgn PLOT DATE : 11/30/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

STRUCT NO.	STATION	OFFSET	C-C (FT)	TO STRUCT	CATCH BASIN TYPE	COVER	MH TYPE	COVER	RIM/ GRATE ELEV.	T.O.S. ELEV.	DEPTH TO PIPE INVERT (FT)	DEPTH TO 24-INCH SUMP (FT)	DISCHARGE PIPE					REMARKS
													SIZE (IN)	INLET ELEV.	DISCHARGE ELEV.	LENGTH (FT)	SLOPE (%)	
100	74+87.99	60.1' RT	6.00	EXIST.	--		4-FT	J	1029.47	1028.55	5.65	7.65	18	1022.90	---	6	---	CONCRETE COLLARS FOR PIPE REQ'D
100A	74+30.06	53.5' RT	58.3	100	5-FT	H-S	--	--	1028.52	1027.85	3.67	5.67	12	1024.18	1023.25	58	1.60%	FLAT SLAB TOP W/ 2X3 FT OPENING REQ'D; 24-INCH SUMP REQ'D
100B	74+43.90	27.5' RT	29.4	100A	2x3 FOOT	H	--	--	1029.05	1028.38	3.57	5.57	12	1024.81	1024.28	29	1.80%	24-INCH SUMP REQ'D
100C	75+35.69	34.9' RT	54.0	100	4-FT	H-S	--	--	1028.84	1028.17	4.26	6.26	12	1023.91	1023.25	54	1.22%	FLAT SLAB TOP W/ 2X3 FT OPENING REQ'D; 24-INCH SUMP REQ'D
100D	75+54.94	38.1' RT	19.5	100C	2x3 FOOT	H-S	--	--	1028.76	1028.09	3.57	5.57	12	1024.52	1024.01	20	2.62%	24-INCH SUMP REQ'D
100E	75+51.83	22.0' LT	59.1	100C	2x3 FOOT	H-S	--	--	1028.84	1028.17	3.57	5.57	12	1024.60	1024.01	59	1.00%	24-INCH SUMP REQ'D

2



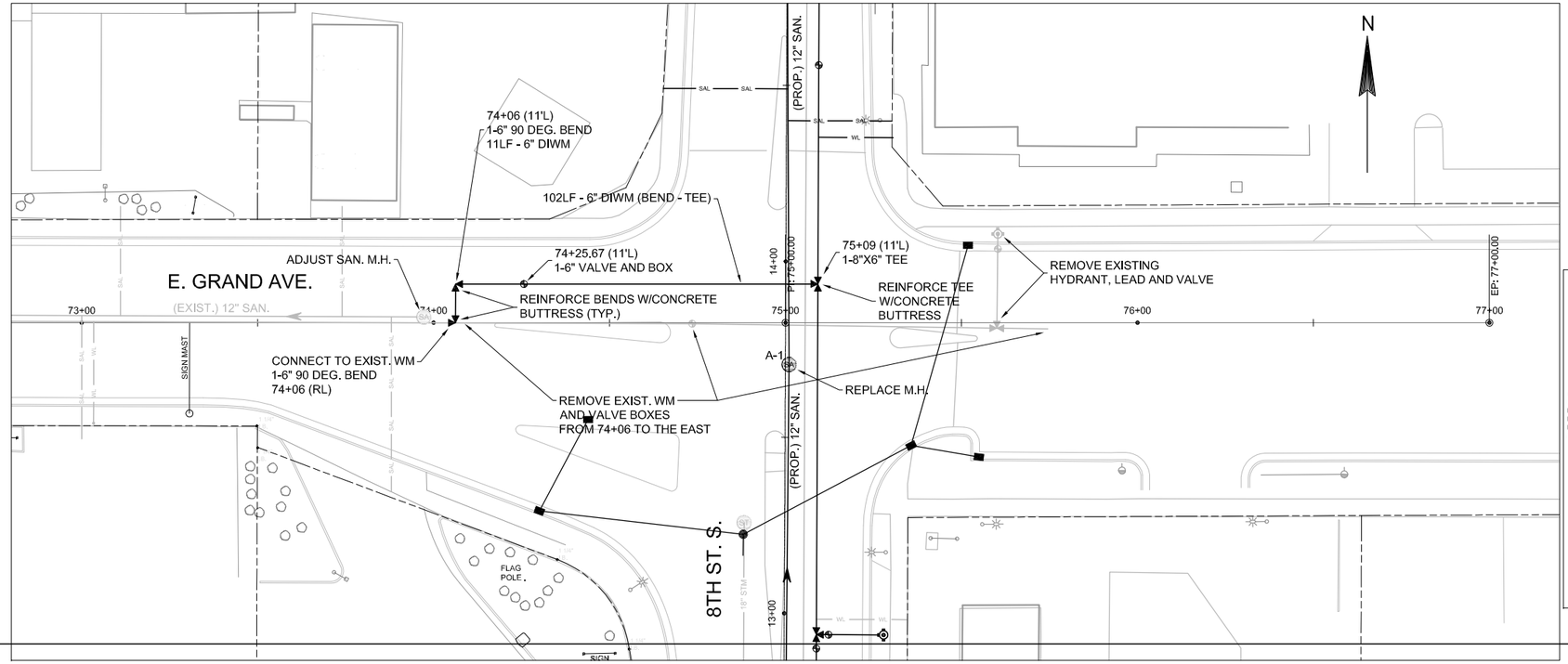
WISCONSIN
NICHOLAS A. DUMS
E-40440
MARSHFIELD, WI
PROFESSIONAL ENGINEER
10-4-16

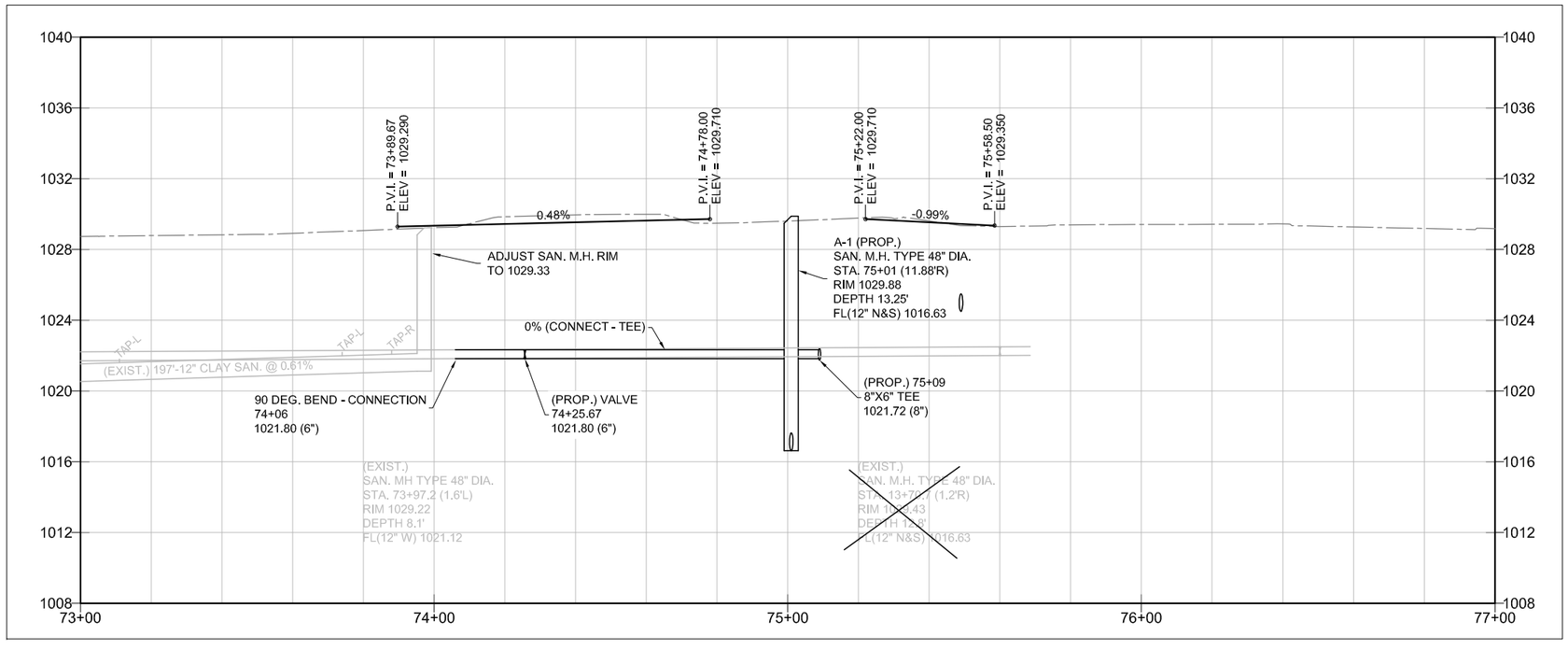


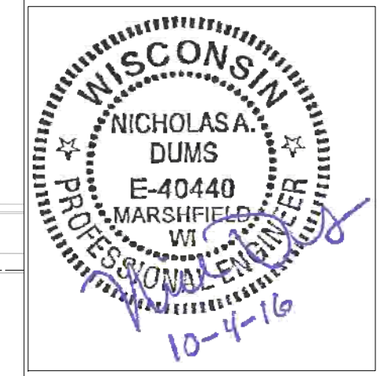
PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	8TH STREET SOUTH SEWER AND WATER MAIN	SHEET 24	E

FILE NAME : S:\ENGINEERING\CAD\PROJECTS\EAST GRAND REBUILD\E GRAND CONSULTANT.DWG
LAYOUT NAME - SHEET - 8TH STREET

PLOT DATE : 10/4/2016 8:28 AM PLOT BY : SCHULZE, MARC PLOT NAME : PLOT SCALE : 1 IN:40 FT







PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	EAST GRAND AVENUE SEWER AND WATER MAIN	SHEET 25	E

FILE NAME : S:\ENGINEERING\CAD\PROJECTS\EAST GRAND REBUILD\E GRAND CONSULTANT.DWG
LAYOUT NAME - ####

PLOT DATE : 10/4/2016 8:26 AM PLOT BY : SCHULZE, MARC PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

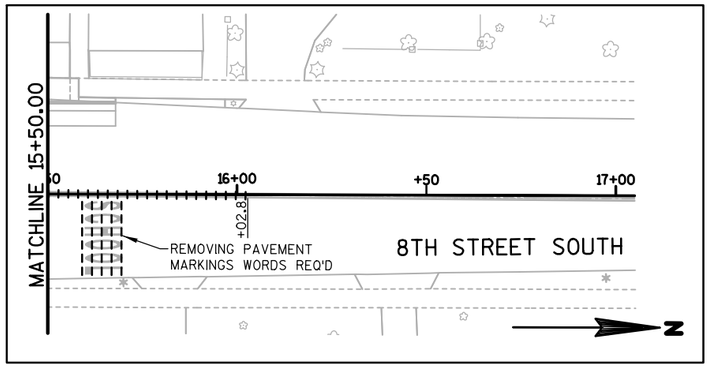
N

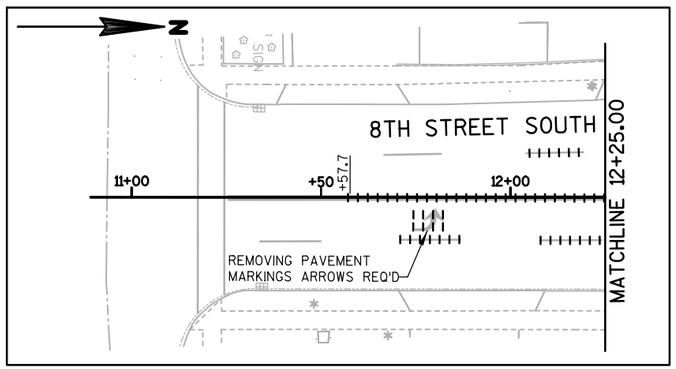
MATCHLINE 15+50.00

8TH STREET SOUTH

EAST GRAND AVENUE

MATCHLINE 12+25.00





LEGEND

REMOVING PAVEMENT MARKINGS

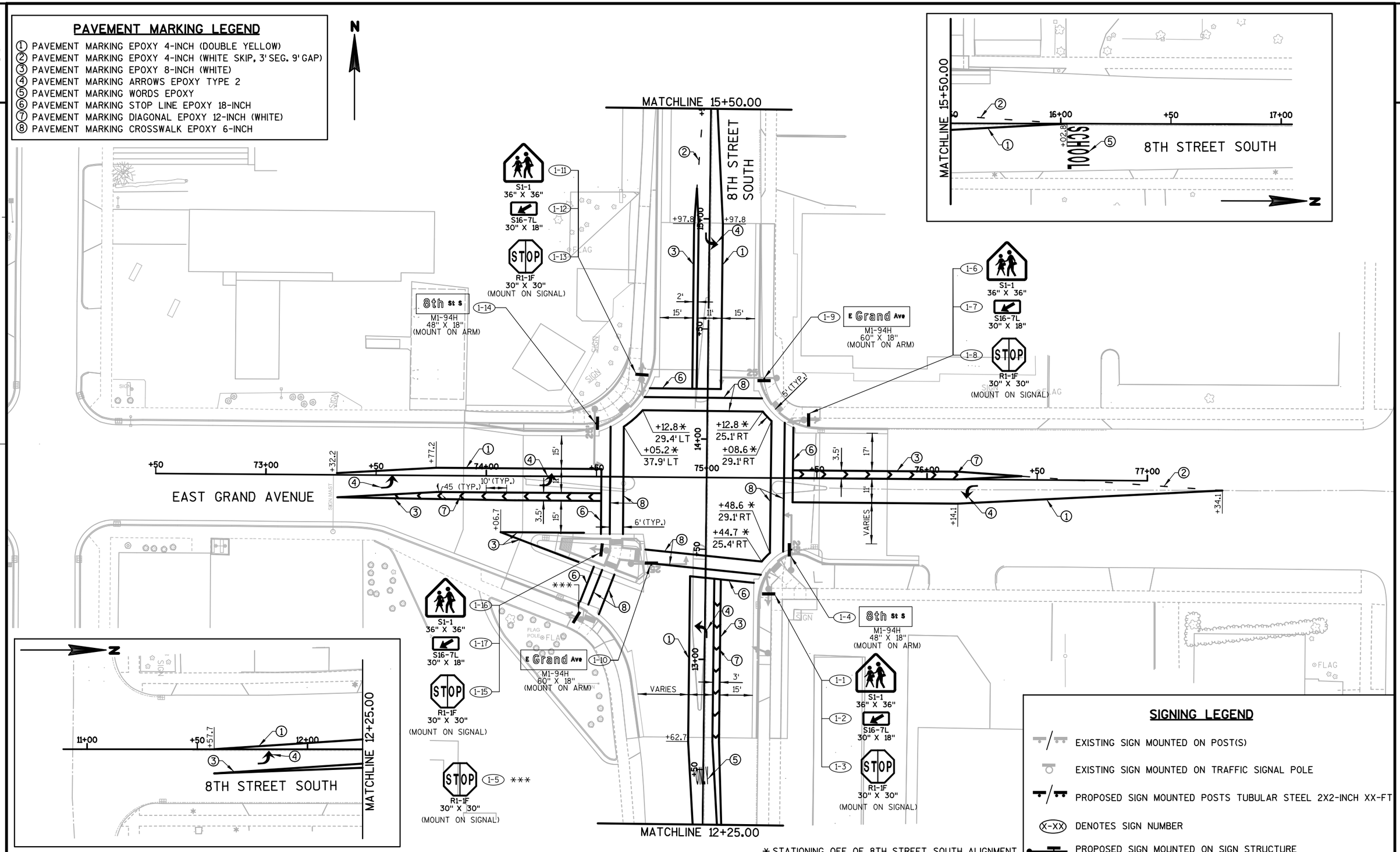
PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	PAVEMENT MARKING REMOVAL DETAIL	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\023201_ps.dgn PLOT DATE : 11/29/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE SKIP, 3' SEG. 9' GAP)
3. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
4. PAVEMENT MARKING ARROWS EPOXY TYPE 2
5. PAVEMENT MARKING WORDS EPOXY
6. PAVEMENT MARKING STOP LINE EPOXY 18-INCH
7. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
8. PAVEMENT MARKING CROSSWALK EPOXY 6-INCH

N

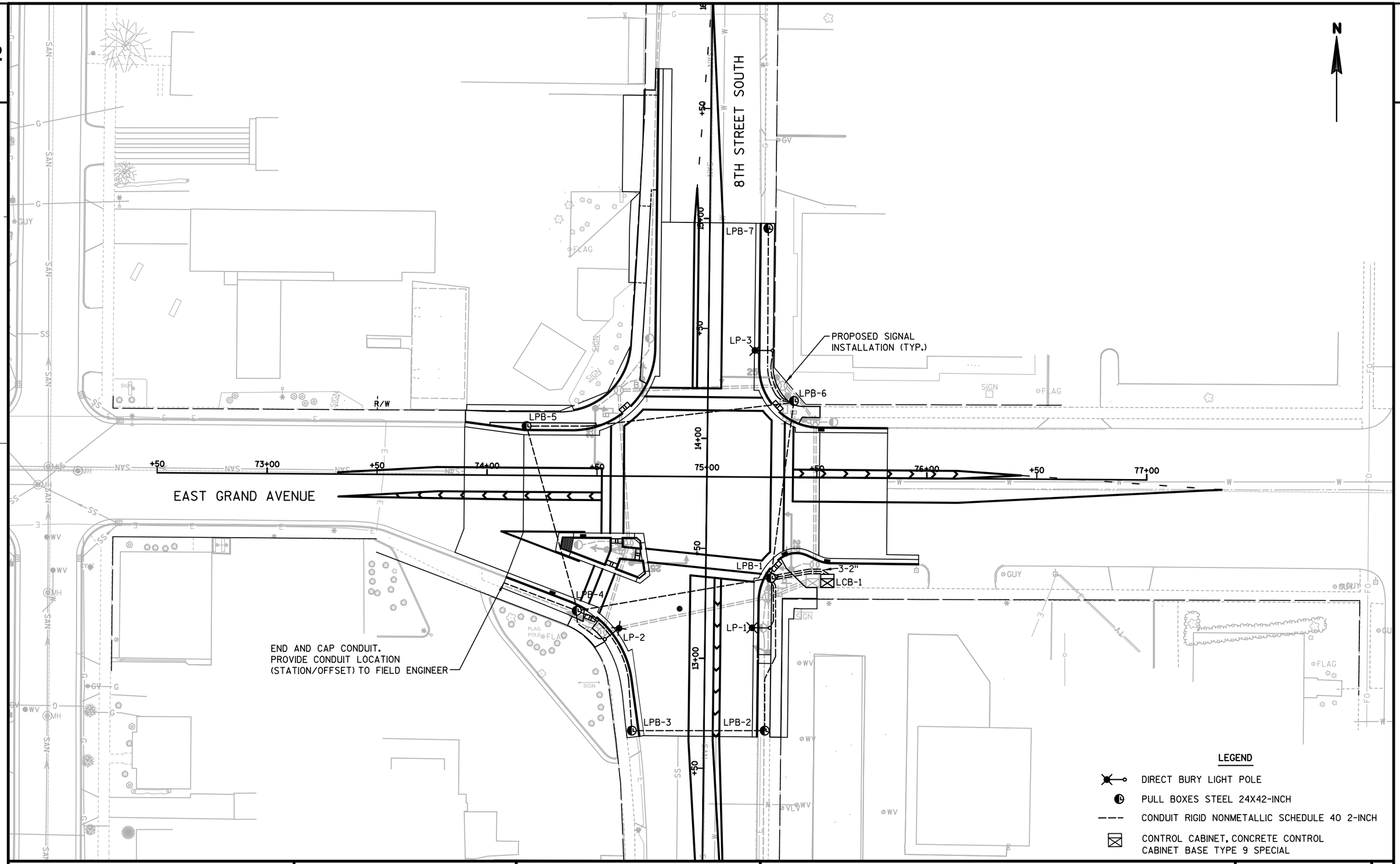


SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON TRAFFIC SIGNAL POLE
- PROPOSED SIGN MOUNTED POSTS TUBULAR STEEL 2X2-INCH XX-FT
- (X-XX) DENOTES SIGN NUMBER
- PROPOSED SIGN MOUNTED ON SIGN STRUCTURE

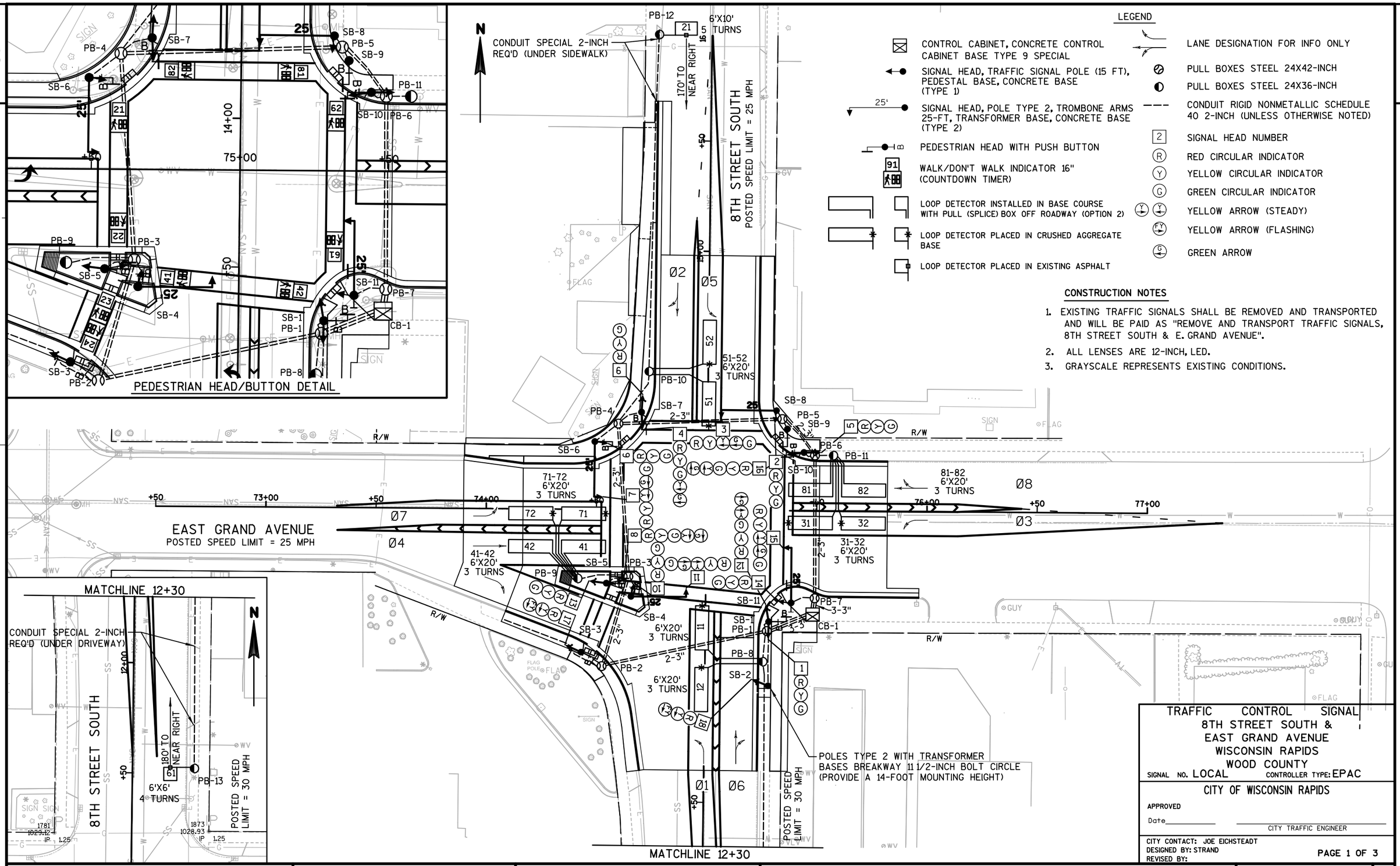
PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\023202_ps.dgn PLOT DATE : 12/1/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	LIGHTING PLAN	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\023501_lp.dgn PLOT DATE : 11/30/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$



LEGEND

- CONTROL CABINET, CONCRETE CONTROL CABINET BASE TYPE 9 SPECIAL
- SIGNAL HEAD, TRAFFIC SIGNAL POLE (15 FT), PEDESTAL BASE, CONCRETE BASE (TYPE 1)
- SIGNAL HEAD, POLE TYPE 2, TROMBONE ARMS 25-FT, TRANSFORMER BASE, CONCRETE BASE (TYPE 2)
- PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
- LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE
- LOOP DETECTOR PLACED IN EXISTING ASPHALT
- LANE DESIGNATION FOR INFO ONLY
- PULL BOXES STEEL 24X42-INCH
- PULL BOXES STEEL 24X36-INCH
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH (UNLESS OTHERWISE NOTED)
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW (STEADY)
- YELLOW ARROW (FLASHING)
- GREEN ARROW

CONSTRUCTION NOTES

1. EXISTING TRAFFIC SIGNALS SHALL BE REMOVED AND TRANSPORTED AND WILL BE PAID AS "REMOVE AND TRANSPORT TRAFFIC SIGNALS, 8TH STREET SOUTH & E. GRAND AVENUE".
2. ALL LENSES ARE 12-INCH, LED.
3. GRAYSCALE REPRESENTS EXISTING CONDITIONS.

TRAFFIC CONTROL SIGNAL
8TH STREET SOUTH &
EAST GRAND AVENUE
WISCONSIN RAPIDS
WOOD COUNTY

SIGNAL NO. LOCAL CONTROLLER TYPE: EPAC

CITY OF WISCONSIN RAPIDS

APPROVED

Date _____ _____
CITY TRAFFIC ENGINEER

CITY CONTACT: JOE EICHSTEADT
DESIGNED BY: STRAND
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\024001_sp.dgn PLOT DATE : 11/30/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATION

RING 1

	HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø2 R/W	Ø2 CLEAR TO **	Ø3 R/W	Ø3 CLEAR TO **	Ø4 R/W	Ø4 CLEAR TO **	FLASH
Ø1	3,4	G	Y -	-	- -	-	- -	-	- -	
Ø2	9-12	R	R R	G	Y R	R	R R	R	R R	R
Ø3	7,8	-	- -	-	- -	G	Y -	-	- -	
Ø4	13-16	R	R R	R	R R	R	R R	G	Y R	R
Ø5	11,12	-	- -	-	- -	-	- -	-	- -	
Ø6	1-4	R	R R	R	R R	R	R R	R	R R	R
Ø7	15,16	-	- -	-	- -	-	- -	-	- -	
Ø8	5-8	R	R R	R	R R	R	R R	R	R R	R
OLA	17,18	FY	Y R	R	R R	R	R R	FY	Y R	R
Ø2P	21-24	DW	DW DW	*	DW DW	DW	DW DW	DW	DW DW	
Ø4P	41,42	DW	DW DW	DW	DW DW	DW	DW DW	*	DW DW	
Ø6P	61,62	DW	DW DW	DW	DW DW	DW	DW DW	DW	DW DW	
Ø8P	81,82	DW	DW DW	DW	DW DW	DW	DW DW	DW	DW DW	

RING 2

	HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **	Ø6 R/W	Ø6 CLEAR TO **	Ø7 R/W	Ø7 CLEAR TO **	Ø8 R/W	Ø8 CLEAR TO **
Ø1	3,4	-	- -	-	- -	-	- -	-	- -
Ø2	9-12	R	R R	R	R R	R	R R	R	R R
Ø3	7,8	-	- -	-	- -	-	- -	-	- -
Ø4	13-16	R	R R	R	R R	R	R R	R	R R
Ø5	11,12	G	Y -	-	- -	-	- -	-	- -
Ø6	1-4	R	R R	G	Y R	R	R R	R	R R
Ø7	15,16	-	- -	-	- -	G	Y -	-	- -
Ø8	5-8	R	R R	R	R R	R	R R	G	Y R
OLA	17,18	R	R R	R	R R	R	R R	R	R R
Ø2P	21-24	DW	DW DW	DW	DW DW	DW	DW DW	DW	DW DW
Ø4P	41,42	DW	DW DW	DW	DW DW	DW	DW DW	DW	DW DW
Ø6P	61,62	DW	DW DW	*	DW DW	DW	DW DW	DW	DW DW
Ø8P	81,82	DW	DW DW	DW	DW DW	DW	DW DW	*	DW DW

BARRIER

N

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11	1	X			1	1				6'x20'	3
12	2	X			1	1				6'x20'	3
21	3			X		2				6'x10'	5
31	4	X			3	3				6'x20'	3
32	5	X			3	3				6'x20'	3
41	6	X			4	4				6'x20'	3
42	7	X			4	4				6'x20'	3
51	8	X			5	5				6'x20'	3
52	9	X			5	5				6'x20'	3
61	10			X		6				6'x6'	4
71	11	X			7	7				6'x20'	3
72	12	X			7	7				6'x20'	3
81	13	X			8	8				6'x20'	3
82	14	X			8	8				6'x20'	3

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				X
2	X	6	MIN.	X
3				X
4		8		X
5				X
6	X	2	MIN.	X
7				X
8		4		X

OVERLAPS

O.L. "A" = Ø1 & Ø4
O.L. "B" =
O.L. "C" =
O.L. "D" =

TYPE OF INTERCONNECT COMMUNICATION	
NONE	X
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
RADIO	
*LOCATION OF MASTER CONTROLLER NO: S-	
SIGNAL SYSTEM #: SS- -	

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
3M	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF LIGHTING	
BY OTHER AGENCY	X
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

* WHEN CALLED, TIMED STEADY WALK,THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	5 OR 6	2,3,4,7,8
2	5 OR 6	1,3,4,7,8
3	7 OR 8	1,2,4,5,6
4	7 OR 8	1,2,3,5,6
5	1 OR 2	3,4,6,7,8
6	1 OR 2	3,4,5,7,8
7	4 OR 3	1,2,5,6,8
8	4 OR 3	1,2,5,6,7

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1 AT LEFT.)

TRAFFIC CONTROL SIGNAL
8TH STREET SOUTH AND E. GRAND AVENUE
WISCONSIN RAPIDS
WOOD COUNTY

SIGNAL NO. LOCAL

CITY CONTACT: JOE EICHSTEADT
DESIGNED BY:
REVISED BY:

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	SEQUENCE OF OPERATIONS	SHEET 30	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\024002_ph.dgn PLOT DATE : 11/29/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

8TH STREET SOUTH AND CHESTNUT STREET TRAFFIC SIGNAL CABLING CHART NO. 14 CABLE						
CABLE RUN	CABLE	HEAD NO.	MOVEMENT	LENS	CONDUCTOR COLOR	REMARKS
CONTROL CABINET TO SB-1	12/C	1	NB	R	R	Ø 6
				Y	O	
				G	G	
		12	SBL	R	R/BLK	Ø 5
				Y	O/BLK	
				G	BLU/BLK	
				← Y	G/BLK	
				← G	BLK/W	
		61	Ø 6 PED	D/WALK	BLK	
				WALK	BLU	
				PED BUTTON	W/BLK	BUTTON
CONTROL CABINET TO SB-2	5/C	18	EBR	R	R	Ø 4
				Y →	O	
				FY→	G	
CONTROL CABINET TO SB-3	7/C	17	EBR	R	R	Ø 4
				Y →	O	
				FY→	G	
		24	Ø 2 PED	D/WALK	BLK	
				WALK	BLU	
				PED BUTTON	W/BLK	BUTTON
CONTROL CABINET TO SB-4	12/C	10	SB	R	R	Ø 2
				Y	O	
				G	G	
		11	SBL	R	R/BLK	Ø 5
				Y	O/BLK	
				G	BLU/BLK	
				← Y	G/BLK	
				← G	BLK/W	
		41	Ø 4 PED	D/WALK	BLK	
				WALK	BLU	
				PED BUTTON	W/BLK	BUTTON
CONTROL CABINET TO SB-5	12/C	8	WBL	R	R/BLK	Ø 3
				Y	O/BLK	
				G	BLU/BLK	
				← Y	G/BLK	
				← G	BLK/W	
		13	EB	R	R	Ø 4
				Y	O	
				G	G	
		22	Ø 2 PED	D/WALK	BLK	
				WALK	BLU	
				PED BUTTON	W/BLK	BUTTON
		23	Ø 2 PED	D/WALK	BLK	
				WALK	BLU	
CONTROL CABINET TO SB-6	12/C	6	WB	R	R	Ø 8
				Y	O	
				G	G	
		7	WBL	R	R/BLK	Ø 3
				Y	O/BLK	
				G	BLU/BLK	
				← Y	G/BLK	
				← G	BLK/W	
		21	Ø 2 PED	D/WALK	BLK	
				WALK	BLU	
				PED BUTTON	W/BLK	BUTTON

8TH STREET SOUTH AND CHESTNUT STREET TRAFFIC SIGNAL CABLING CHART NO. 14 CABLE						
CABLE RUN	CABLE	HEAD NO.	MOVEMENT	LENS	CONDUCTOR COLOR	REMARKS
CONTROL CABINET TO SB-7	12/C	4	NBL	R	R/BLK	Ø 1
				Y	O/BLK	
				G	BLU/BLK	
				← Y	G/BLK	
				← G	BLK/W	
		9	SB	R	R	Ø 2
				Y	O	
				G	G	
		82	Ø 8 PED	D/WALK	BLK	
				WALK	BLU	
				PED BUTTON	W/BLK	BUTTON
CONTROL CABINET TO SB-8	9/C	2	NB	R	R	Ø 6
				Y	O	
				G	G	
		3	NBL	R	R/BLK	Ø 1
				Y	BLU	
				G	G/BLK	
				← Y	BLK	
				← G	W/BLK	
CONTROL CABINET TO SB-9	5/C	81	Ø 8 PED	D/WALK	R	
				WALK	G	
				PED BUTTON	O	BUTTON
CONTROL CABINET TO SB-10	12/C	5	WB	R	R	Ø 8
				Y	O	
				G	G	
		16	EBL	R	R/BLK	Ø 7
				Y	O/BLK	
				G	BLU/BLK	
				← Y	G/BLK	
				← G	BLK/W	
		62	Ø 6 PED	D/WALK	BLK	
				WALK	BLU	
				PED BUTTON	W/BLK	BUTTON
CONTROL CABINET TO SB-11	12/C	14	EB	R	R	Ø 4
				Y	O	
				G	G	
		15	EBL	R	R/BLK	Ø 7
				Y	O/BLK	
				G	BLU/BLK	
				← Y	G/BLK	
				← G	BLK/W	
		42	Ø 4 PED	D/WALK	BLK	
				WALK	BLU	
				PED BUTTON	W/BLK	BUTTON

EQUIPMENT GROUNDING CONDUCTOR 10 AWG	
FROM	TO
CB-1	SB-1
SB-1	SB-2
SB-2	SB-3
SB-3	SB-4
SB-4	SB-5
SB-5	SB-6
SB-6	SB-7
SB-7	SB-8
SB-8	SB-9
SB-9	SB-10
SB-10	SB-11
SB-11	CB-1

PULL BOX BONDING JUMPER 10 AWG	
FROM	TO
SB-1	PB-1
SB-3	PB-2
SB-4	PB-3
SB-7	PB-4
SB-8	PB-5
SB-10	PB-6
SB-11	PB-7

BLK = BLACK
W = WHITE
R = RED
G = GREEN
O = ORANGE
BLU = BLUE

1. ENSURE THE GROUNDED CONDUCTORS AND THE POLE CABLES ARE BOTH 12" LONGER THAN THE UNGROUNDED CONDUCTORS.
2. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART.
3. USE SEPARATE WHITE CONDUCTOR AS THE GROUNDED CONDUCTOR (NEUTRAL) FOR ALL TRAFFIC SIGNAL INDICATIONS.

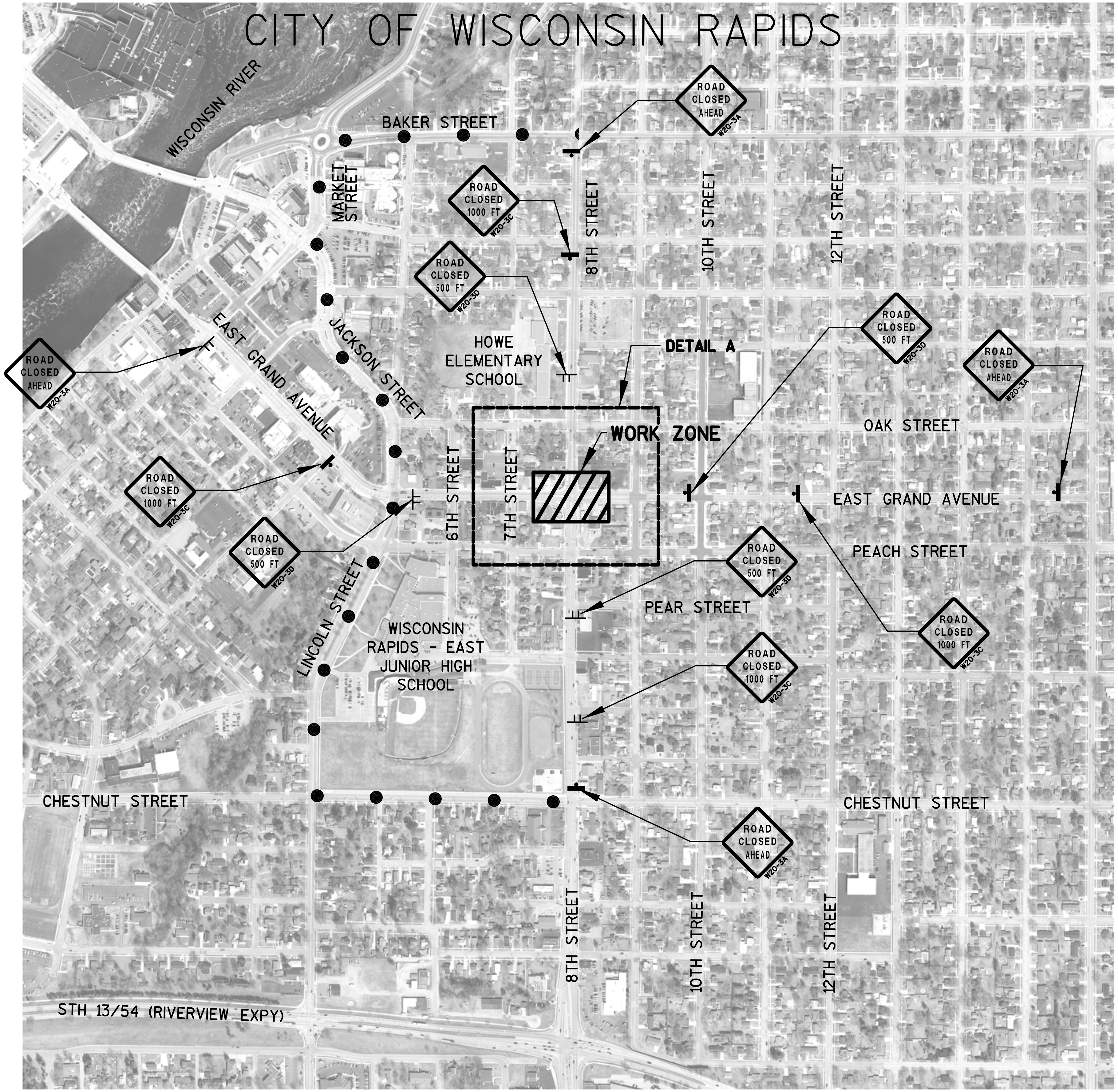
TRAFFIC CONTROL SIGNAL
8TH STREET SOUTH AND E. GRAND AVENUE
WISCONSIN RAPIDS
WOOD COUNTY

SIGNAL NO. LOCAL

CITY CONTACT: JOE EICHSTEADT
DESIGNED BY:
REVISED BY:

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CABLE ROUTING	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\024003_cr.dgn PLOT DATE : 11/29/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



N

LEGEND

- WOOD POST WITH ATTACHED SIGN
- BARRICADES TYPE III WITH ATTACHED SIGN TYPE 2 (TWO WARNING LIGHTS TYPE A REQ'D.)
- BARRICADES TYPE III WITHOUT SIGN (TWO WARNING LIGHTS TYPE A REQ'D.)
- BARRICADES TYPE III WITHOUT SIGN (ONE WARNING LIGHTS TYPE A REQ'D.)
- DETOUR ROUTE
- EXISTING SIGN TO REMAIN
- EXISTING SIGN ON POLE
- WOOD POST WITH ATTACHED SIGN
- WOOD POSTS WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- 13 EXISTING SIGN (TYP.)

FOR ADDITIONAL INFORMATION USE STANDARD DETAIL DRAWINGS: "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" AND "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"

GENERAL NOTES FOR TRAFFIC CONTROL

SEE DETOUR SIGNING PLAN FOR ADDITIONAL INFORMATION.

ALL SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTORS METHODS OR SEQUENCES OF OPERATION.

ROAD MACHINERY, TRUCK ENTRANCE, FLAGMEN AHEAD, ETC., SIGNS SHALL BE USED AS NEEDED AND SHALL BE REMOVED OR COVERED WHEN THE ACTIVITY OR CONDITION DOES NOT EXIST. NO WARNING LIGHT SHALL BE USED WITH A COVERED SIGN.

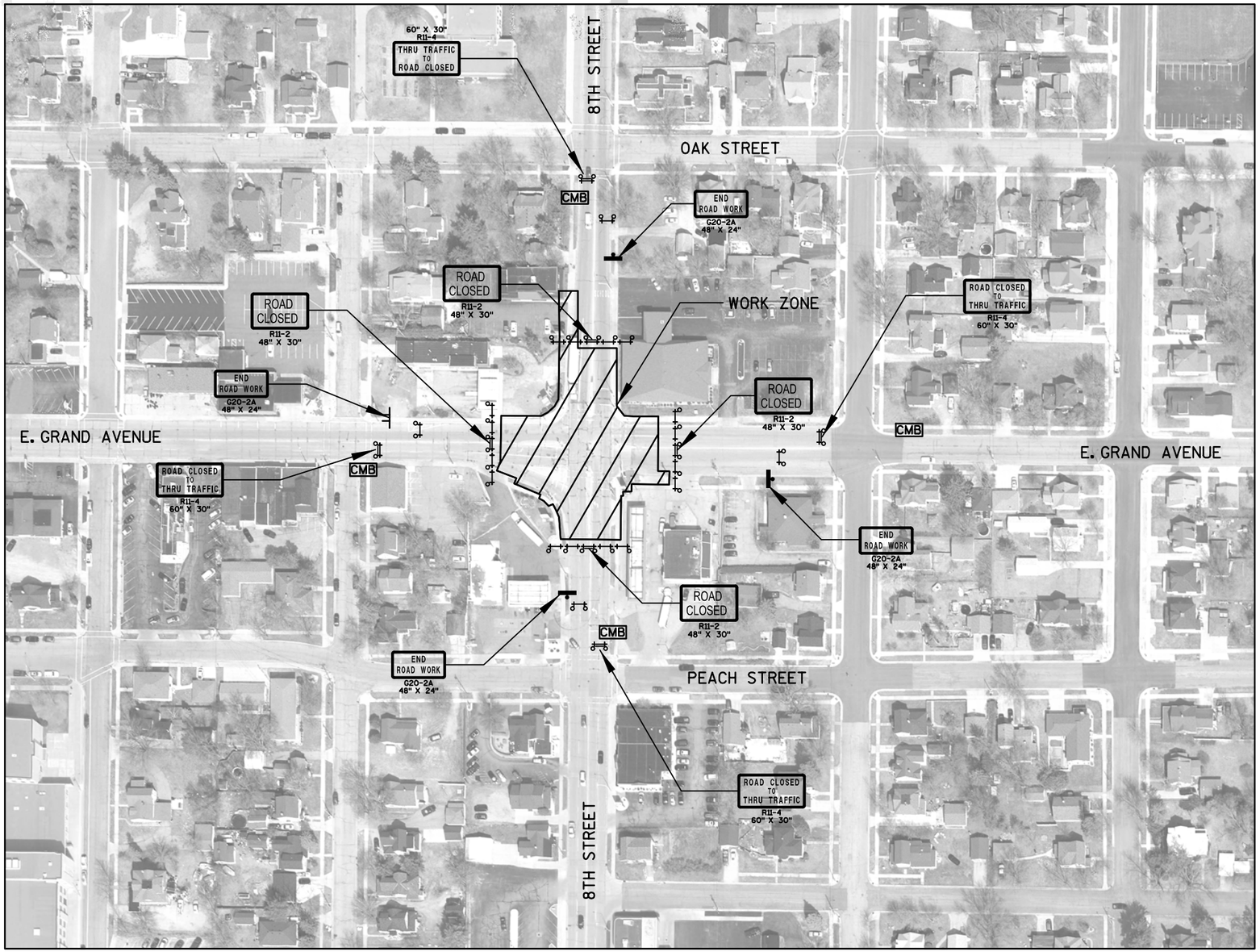
"WO" SERIES SIGNS ARE "W" SERIES EXCEPT THE BACKGROUND IS ORANGE.

LOCAL ACCESS SHALL BE MAINTAINED AT ALL TIMES.

TYPE III BARRICADES MAY BE SUBSTITUTED FOR POST MOUNTED SIGNS IN SITUATIONS WHERE SIGN LOCATIONS ARE CONTINUALLY MOVING. (TEMPORARY SIGN SUPPORT MAY ALSO BE USED.)

DETAILS OF TRAFFIC CONTROL NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

CITY OF WISCONSIN RAPIDS



DETAIL A

LEGEND

- WOOD POST WITH ATTACHED SIGN
- BARRICADES TYPE III WITH ATTACHED SIGN TYPE 2 (TWO WARNING LIGHTS TYPE A REQ'D.)
- BARRICADES TYPE III WITHOUT SIGN (TWO WARNING LIGHTS TYPE A REQ'D.)
- BARRICADES TYPE III WITHOUT SIGN (ONE WARNING LIGHTS TYPE A REQ'D.)
- DETOUR ROUTE
- EXISTING SIGN TO REMAIN
- EXISTING SIGN ON POLE
- WOOD POST WITH ATTACHED SIGN
- WOOD POSTS WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- 13 EXISTING SIGN (TYP.)

N

FOR ADDITIONAL INFORMATION USE STANDARD DETAIL DRAWINGS:
"BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" AND
"BARRICADES AND SIGNS FOR MAINLINE CLOSURES"

CMB TRAFFIC CONTROL SIGNS PCMS
(7 DAYS PRIOR TO ROAD CLOSURE)

GENERAL NOTES FOR TRAFFIC CONTROL

SEE DETOUR SIGNING PLAN FOR ADDITIONAL INFORMATION.

ALL SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTORS METHODS OR SEQUENCES OF OPERATION.

ROAD MACHINERY, TRUCK ENTRANCE, FLAGMEN AHEAD, ETC., SIGNS SHALL BE USED AS NEEDED AND SHALL BE REMOVED OR COVERED WHEN THE ACTIVITY OR CONDITION DOES NOT EXIST. NO WARNING LIGHT SHALL BE USED WITH A COVERED SIGN.

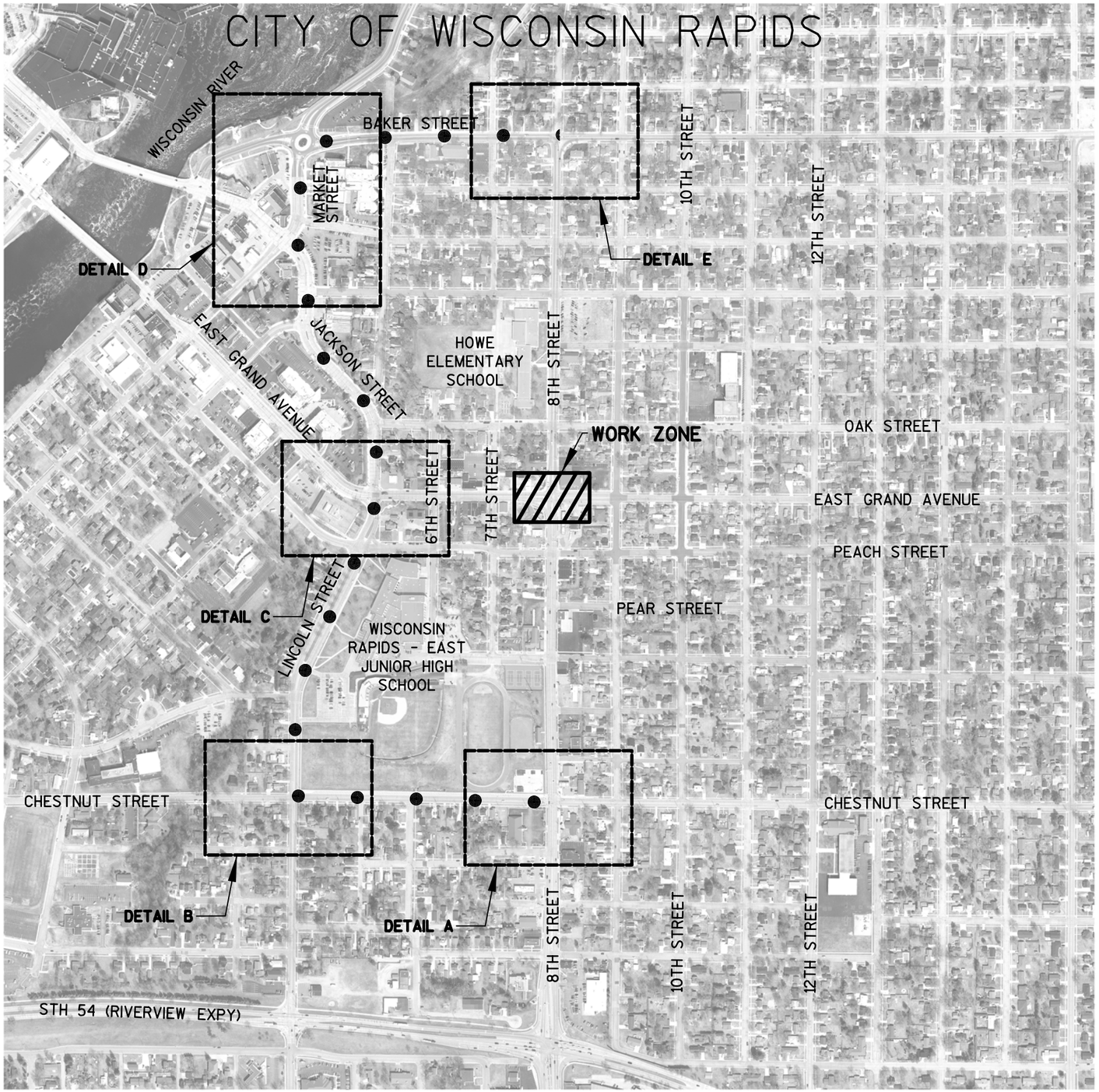
"WO" SERIES SIGNS ARE "W" SERIES EXCEPT THE BACKGROUND IS ORANGE.

LOCAL ACCESS SHALL BE MAINTAINED AT ALL TIMES.

TYPE III BARRICADES MAY BE SUBSTITUTED FOR POST MOUNTED SIGNS IN SITUATIONS WHERE SIGN LOCATIONS ARE CONTINUALLY MOVING. (TEMPORARY SIGN SUPPORT MAY ALSO BE USED.)

DETAILS OF TRAFFIC CONTROL NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD COUNTY	ADVANCE WARNING SIGNING	SHEET 33	E



N

GENERAL NOTES

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

ALL SIGNS SHOWN SHALL BE PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

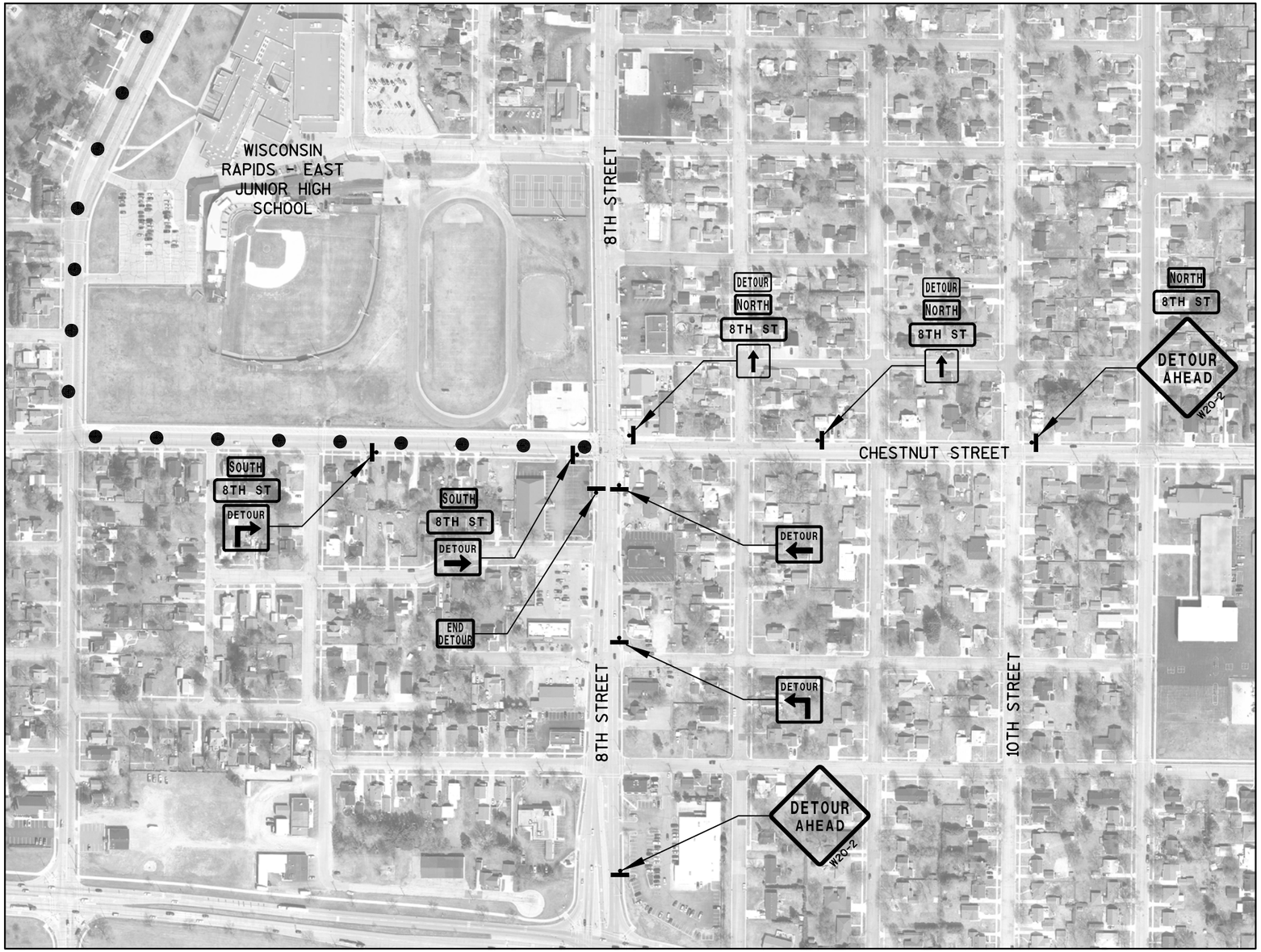
ALL M3 SERIES SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD COUNTY	DETOUR SIGNING OVERVIEW	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\027001_dt.dgn PLOT DATE : 10/12/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

CITY OF WISCONSIN RAPIDS



DETAIL A

N

SIGN LEGEND

DETOUR →	M4-9R 30" X 24"
DETOUR ←	M4-9L 30" X 24"
DETOUR ↰	M4-59L 30" x 30"
DETOUR ↱	M4-59R 30" x 30"
8TH ST	REFLECTIVE BACKGROUND APPROX. SIZE 30" X 12" BACKGROUND - ORANGE MESSAGE - BLACK 5" SERIES C LETTERS
↰	R3-5X (MOD.) APPROX. SIZE 30" X 30" BACKGROUND - ORANGE MESSAGE - BLACK

DETOUR	M4-8 24"X12"
END DETOUR	M4-8A 24"X18"
NORTH	M3-1 24" X 12"
SOUTH	M3-3 24" X 12"
↑	M06-1 21"X21"
←	M06-1 21"X21"
→	M06-1 21"X21"
↰	M5-1L 21" X 21"
↱	M5-1R 21" X 21"

LEGEND

- DETOUR ROUTE
- BARRICADES TYPE III WITH ATTACHED SIGN TYPE 2 (TWO WARNING LIGHTS TYPE A REQ'D.)
- BARRICADES TYPE III WITHOUT SIGN (ONE WARNING LIGHT TYPE A REQ'D.)
- EXISTING SIGN TO REMAIN
- EXISTING SIGN ON POLE
- WOOD POST WITH ATTACHED SIGN
- WOOD POSTS WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- 13 EXISTING SIGN (TYP.)

GENERAL NOTES

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

ALL SIGNS SHOWN SHALL BE PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS.

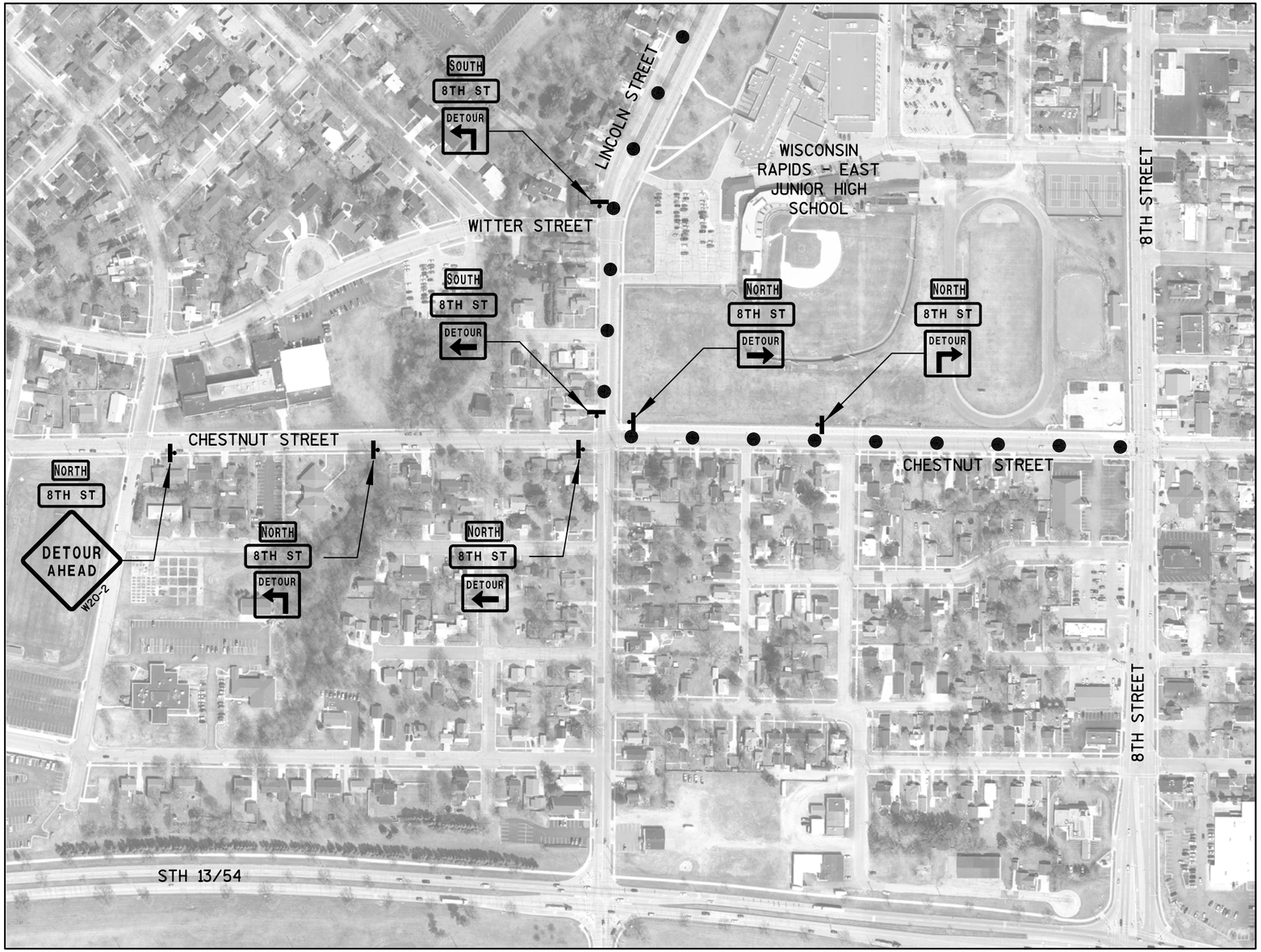
ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

ALL M3 SERIES SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD COUNTY	DETOUR SIGNING	SHEET 35	E

CITY OF WISCONSIN RAPIDS



DETAIL B

SIGN LEGEND

DETOUR →	M4-9R 30" X 24"
DETOUR ←	M4-9L 30" X 24"
DETOUR	M4-59L 30" x 30"
DETOUR	M4-59R 30" x 30"
8TH ST	REFLECTIVE BACKGROUND APPROX. SIZE 30" X 12" BACKGROUND - ORANGE MESSAGE - BLACK 5" SERIES C LETTERS
	R3-5X (MOD.) APPROX. SIZE 30" X 30" BACKGROUND - ORANGE MESSAGE - BLACK

DETOUR	M4-8 24"X12"
END DETOUR	M4-8A 24"X18"
NORTH	M3-1 24" X 12"
SOUTH	M3-3 24" X 12"
↑	M06-1 21"X21"
←	M06-1 21"X21"
→	M06-1 21"X21"
	M5-1L 21" X 21"
	M5-1R 21" X 21"

LEGEND

- DETOUR ROUTE
- BARRICADES TYPE III WITH ATTACHED SIGN TYPE 2 (TWO WARNING LIGHTS TYPE A REQ'D.)
- BARRICADES TYPE III WITHOUT SIGN (ONE WARNING LIGHT TYPE A REQ'D.)
- EXISTING SIGN TO REMAIN
- EXISTING SIGN ON POLE
- WOOD POST WITH ATTACHED SIGN
- WOOD POSTS WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- 13 EXISTING SIGN (TYP.)

GENERAL NOTES

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

ALL SIGNS SHOWN SHALL BE PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

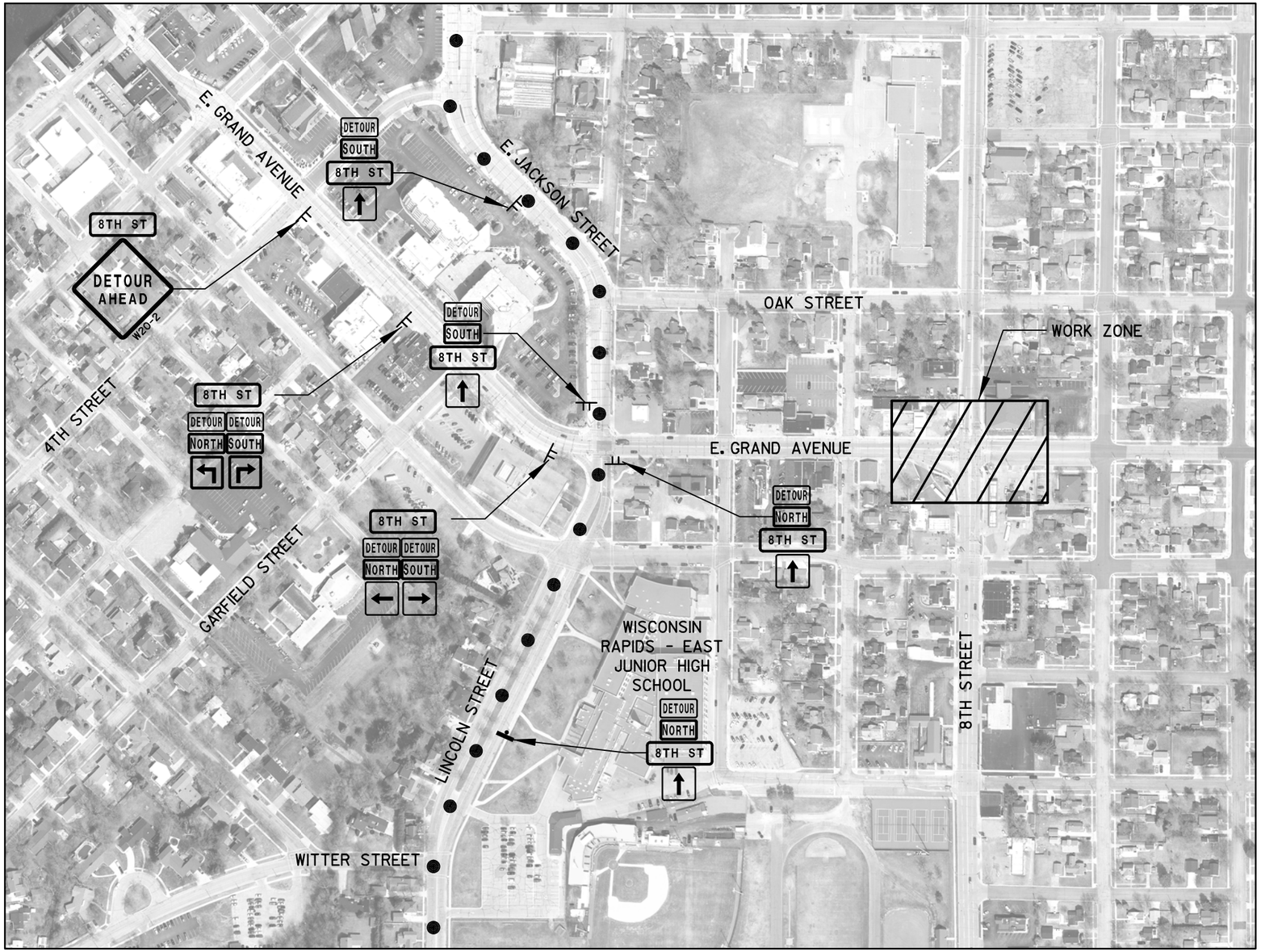
ALL M3 SERIES SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD COUNTY	DETOUR SIGNING	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\027003_dt.dgn PLOT DATE : 10/12/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

CITY OF WISCONSIN RAPIDS



DETAIL C

N

SIGN LEGEND

DETOUR →	M4-9R 30" X 24"
DETOUR ←	M4-9L 30" X 24"
DETOUR ↰	M4-59L 30" x 30"
DETOUR ↱	M4-59R 30" x 30"
8TH ST	REFLECTIVE BACKGROUND APPROX. SIZE 30" X 12" BACKGROUND - ORANGE MESSAGE - BLACK 5" SERIES C LETTERS
↰	R3-5X (MOD.) APPROX. SIZE 30" X 30" BACKGROUND - ORANGE MESSAGE - BLACK

DETOUR	M4-8 24"X12"
END DETOUR	M4-8A 24"X18"
NORTH	M3-1 24" X 12"
SOUTH	M3-3 24" X 12"
↑	M06-1 21"X21"
←	M06-1 21"X21"
→	M06-1 21"X21"
↰	M5-1L 21" X 21"
↱	M5-1R 21" X 21"

LEGEND

- DETOUR ROUTE
- BARRICADES TYPE III WITH ATTACHED SIGN TYPE 2 (TWO WARNING LIGHTS TYPE A REQ'D.)
- BARRICADES TYPE III WITHOUT SIGN (ONE WARNING LIGHT TYPE A REQ'D.)
- EXISTING SIGN TO REMAIN
- EXISTING SIGN ON POLE
- WOOD POST WITH ATTACHED SIGN
- WOOD POSTS WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- 13 EXISTING SIGN (TYP.)

GENERAL NOTES

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

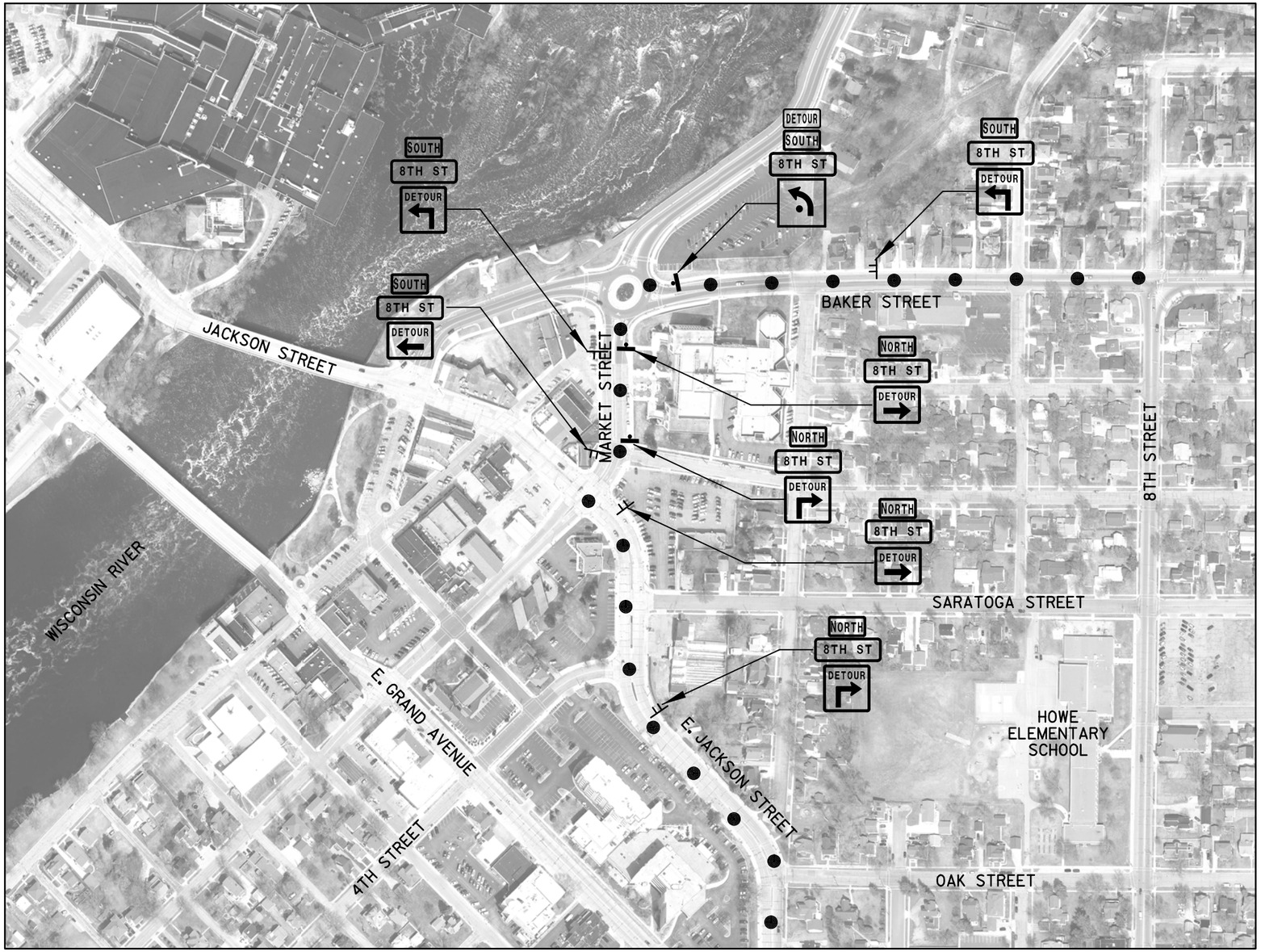
ALL SIGNS SHOWN SHALL BE PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

ALL M3 SERIES SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

CITY OF WISCONSIN RAPIDS



DETAIL D

N

SIGN LEGEND

DETOUR →	M4-9R 30" X 24"
DETOUR ←	M4-9L 30" X 24"
DETOUR ↰	M4-59L 30" x 30"
DETOUR ↱	M4-59R 30" x 30"
8TH ST	REFLECTIVE BACKGROUND APPROX. SIZE 30" X 12" BACKGROUND - ORANGE MESSAGE - BLACK 5" SERIES C LETTERS
↰	R3-5X (MOD.) APPROX. SIZE 30" X 30" BACKGROUND - ORANGE MESSAGE - BLACK

DETOUR	M4-8 24"X12"
END DETOUR	M4-8A 24"X18"
NORTH	M3-1 24" X 12"
SOUTH	M3-3 24" X 12"
↑	M06-1 21"X21"
←	M06-1 21"X21"
→	M06-1 21"X21"
↰	M5-1L 21" X 21"
↱	M5-1R 21" X 21"

LEGEND

- DETOUR ROUTE
- BARRICADES TYPE III WITH ATTACHED SIGN TYPE 2 (TWO WARNING LIGHTS TYPE A REQ'D.)
- BARRICADES TYPE III WITHOUT SIGN (ONE WARNING LIGHT TYPE A REQ'D.)
- EXISTING SIGN TO REMAIN
- EXISTING SIGN ON POLE
- WOOD POST WITH ATTACHED SIGN
- WOOD POSTS WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- 13 EXISTING SIGN (TYP.)

GENERAL NOTES

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

ALL SIGNS SHOWN SHALL BE PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

ALL M3 SERIES SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

CITY OF WISCONSIN RAPIDS

DETAIL E

N

SIGN LEGEND

DETOUR →	M4-9R 30" X 24"
DETOUR ←	M4-9L 30" X 24"
DETOUR ↰	M4-59L 30" x 30"
DETOUR ↱	M4-59R 30" x 30"
8TH ST	REFLECTIVE BACKGROUND APPROX. SIZE 30" X 12" BACKGROUND - ORANGE MESSAGE - BLACK 5" SERIES C LETTERS
↰	R3-5X (MOD.) APPROX. SIZE 30" X 30" BACKGROUND - ORANGE MESSAGE - BLACK

DETOUR	M4-8 24"X12"
END DETOUR	M4-8A 24"X18"
NORTH	M3-1 24" X 12"
SOUTH	M3-3 24" X 12"
↑	M06-1 21"X21"
←	M06-1 21"X21"
→	M06-1 21"X21"
↰	M5-1L 21" X 21"
↱	M5-1R 21" X 21"

LEGEND

- DETOUR ROUTE
- BARRICADES TYPE III WITH ATTACHED SIGN TYPE 2 (TWO WARNING LIGHTS TYPE A REQ'D.)
- BARRICADES TYPE III WITHOUT SIGN (ONE WARNING LIGHT TYPE A REQ'D.)
- EXISTING SIGN TO REMAIN
- EXISTING SIGN ON POLE
- WOOD POST WITH ATTACHED SIGN
- WOOD POSTS WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- 13 EXISTING SIGN (TYP.)

GENERAL NOTES

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

ALL SIGNS SHOWN SHALL BE PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

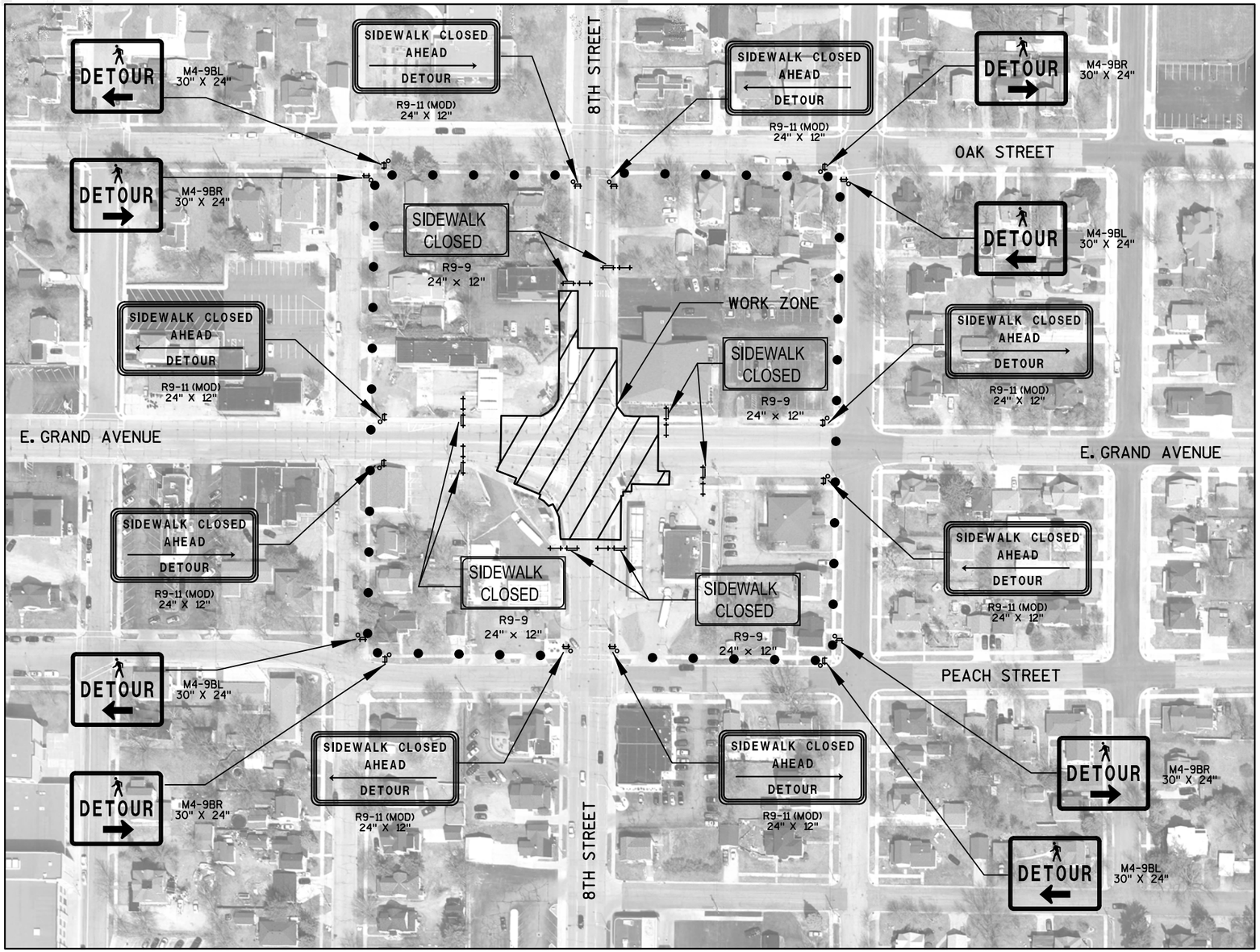
ALL M3 SERIES SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD COUNTY	DETOUR SIGNING	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\027006_dt.dgn PLOT DATE : 10/12/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

CITY OF WISCONSIN RAPIDS



LEGEND

- WOOD POST WITH ATTACHED SIGN
- BARRICADES TYPE III WITH ATTACHED SIGN TYPE 2 (ONE WARNING LIGHTS TYPE A REQ'D.)
- BARRICADES TYPE III WITHOUT SIGN (ONE WARNING LIGHTS TYPE A REQ'D.)
- BARRICADES TYPE II WITH ATTACHED SIGN TYPE 2 (ONE WARNING LIGHTS TYPE A REQ'D.)
- BARRICADES TYPE II WITHOUT SIGN (ONE WARNING LIGHTS TYPE A REQ'D.)
- PEDESTRIAN DETOUR ROUTE
- EXISTING SIGN TO REMAIN
- EXISTING SIGN ON POLE
- WOOD POST WITH ATTACHED SIGN
- WOOD POSTS WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- 13 EXISTING SIGN (TYP.)

N

FOR ADDITIONAL INFORMATION USE STANDARD DETAIL DRAWING: "TRAFFIC CONTROL, PEDESTRIAN ACCOMODATION"

GENERAL NOTES FOR TRAFFIC CONTROL

ALL SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

DETAILS OF TRAFFIC CONTROL NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD COUNTY	PEDESTRIAN DETOUR SIGNING	SHEET 40	E

2

2

CP 8017 1" I.P.
Y = 450,972.76
X = 731,478.69

CP 8017

N

+50 73+00 +50 74+00 +50 75+00 +50 76+00 +50

E. GRAND AVE.

15+00 +50 14+00

CP 8015

CP 8015 1¼" I.B.
Y = 450,914.77
X = 731,358.84

CP 8016

CP 8016
Y = 450,912.83
X = 731,538.57

7th STREET

8th STREET

13+00 +50 12+00 +50 11+00

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CONTROL POINT DATA	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\027301_cp.dgn PLOT DATE : 10/12/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

6999-07-88

Line	Item	Item Description	Unit	Total	Qty
0010	204.0100	Removing Pavement	SY	2,410.000	2,410.000
0020	204.0150	Removing Curb & Gutter	LF	85.000	85.000
0030	204.0155	Removing Concrete Sidewalk	SY	335.000	335.000
0040	204.0195	Removing Concrete Bases	EACH	14.000	14.000
0050	204.0210	Removing Manholes	EACH	1.000	1.000
0060	204.0215	Removing Catch Basins	EACH	5.000	5.000
0070	204.0245	Removing Storm Sewer (size) 001. 12-Inch	LF	210.000	210.000
0080	204.0245	Removing Storm Sewer (size) 002. 18-Inch	LF	9.000	9.000
0090	204.9090.S	Removing (item description) 001. Removing Landscaping Timbers	LF	64.000	64.000
0100	205.0100	Excavation Common	CY	1,734.000	1,734.000
0110	213.0100	Finishing Roadway (project) 001. ID 6999-07-88	EACH	1.000	1.000
0120	305.0110	Base Aggregate Dense 3/4-Inch	TON	80.000	80.000
0130	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,090.000	1,090.000
0140	312.0110	Select Crushed Material	TON	161.000	161.000
0150	405.1000	Stamping Colored Concrete	CY	7.000	7.000
0160	415.0090	Concrete Pavement 9-Inch **P**	SY	1,890.000	1,890.000
0170	416.0260	Concrete Driveway HES 6-Inch	SY	50.000	50.000
0180	416.0620	Drilled Dowel Bars	EACH	34.000	34.000
0190	455.0605	Tack Coat	GAL	21.000	21.000
0200	460.2000	Incentive Density HMA Pavement	DOL	80.000	80.000
0210	460.5223	HMA Pavement 3 LT 58-28 S	TON	68.000	68.000
0220	460.5424	HMA Pavement 4 LT 58-28 H	TON	45.000	45.000
0230	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	22.000	22.000
0240	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000
0250	601.0409	Concrete Curb & Gutter 30-Inch Type A **P**	LF	500.000	500.000
0260	601.0411	Concrete Curb & Gutter 30-Inch Type D **P**	LF	139.000	139.000
0270	601.0600	Concrete Curb Pedestrian	LF	82.000	82.000
0280	602.0405	Concrete Sidewalk 4-Inch **P**	SF	2,950.000	2,950.000
0290	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	70.000	70.000
0300	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	220.000	220.000
0310	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	6.000	6.000
0320	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0330	611.0624	Inlet Covers Type H	EACH	1.000	1.000
0340	611.0639	Inlet Covers Type H-S	EACH	4.000	4.000
0350	611.1004	Catch Basins 4-FT Diameter	EACH	1.000	1.000
0360	611.1005	Catch Basins 5-FT Diameter	EACH	1.000	1.000
0370	611.1230	Catch Basins 2x3-FT	EACH	3.000	3.000

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Line	Item	Item Description	Unit	Total	Qty
0380	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0390	619.1000	Mobilization	EACH	1.000	1.000
0400	620.0300	Concrete Median Sloped Nose	SF	100.000	100.000
0410	624.0100	Water	MGAL	18.000	18.000
0420	625.0100	Topsoil	SY	210.000	210.000
0430	627.0200	Mulching	SY	1,200.000	1,200.000
0440	628.7005	Inlet Protection Type A	EACH	5.000	5.000
0450	628.7015	Inlet Protection Type C	EACH	1.000	1.000
0460	628.7020	Inlet Protection Type D	EACH	4.000	4.000
0470	629.0210	Fertilizer Type B	CWT	0.880	0.880
0480	630.0200	Seeding Temporary	LB	32.400	32.400
0490	631.0300	Sod Water	MGAL	3.000	3.000
0500	631.1000	Sod Lawn	SY	175.000	175.000
0510	637.2210	Signs Type II Reflective H	SF	27.000	27.000
0520	637.2215	Signs Type II Reflective H Folding	SF	25.900	25.900
0530	637.2230	Signs Type II Reflective F	SF	42.000	42.000
0540	642.5001	Field Office Type B	EACH	1.000	1.000
0550	643.0100	Traffic Control (project) 001. ID 6999-07-88	EACH	1.000	1.000
0560	643.0410	Traffic Control Barricades Type II	DAY	1,968.000	1,968.000
0570	643.0420	Traffic Control Barricades Type III	DAY	5,412.000	5,412.000
0580	643.0705	Traffic Control Warning Lights Type A	DAY	6,888.000	6,888.000
0590	643.0900	Traffic Control Signs	DAY	5,904.000	5,904.000
0600	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0610	643.2000	Traffic Control Detour (project) 001. ID 6999-07-88	EACH	1.000	1.000
0620	643.3000	Traffic Control Detour Signs	DAY	9,840.000	9,840.000
0630	644.1616.S	Temporary Pedestrian Safety Fence	LF	100.000	100.000
0640	646.0106	Pavement Marking Epoxy 4-Inch	LF	1,005.000	1,005.000
0650	646.0126	Pavement Marking Epoxy 8-Inch	LF	990.000	990.000
0660	646.0600	Removing Pavement Markings	LF	985.000	985.000
0670	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	6.000	6.000
0680	647.0356	Pavement Marking Words Epoxy	EACH	2.000	2.000
0690	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	144.000	144.000
0700	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	115.000	115.000
0710	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	490.000	490.000
0720	647.0955	Removing Pavement Markings Arrows	EACH	1.000	1.000
0730	647.0965	Removing Pavement Markings Words	EACH	1.000	1.000
0740	650.4000	Construction Staking Storm Sewer	EACH	6.000	6.000
0750	650.5000	Construction Staking Base	LF	128.000	128.000
0760	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	174.000	174.000
0770	650.7000	Construction Staking Concrete Pavement	LF	294.000	294.000

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Line	Item	Item Description	Unit	Total	Qty
0780	650.8500	Construction Staking Electrical Installations (project) 001. ID 6999-07-88	LS	1.000	1.000
0790	650.9910	Construction Staking Supplemental Control (project) 001. ID 6999-07-88	LS	1.000	1.000
0800	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,361.000	1,361.000
0810	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	798.000	798.000
0820	652.0605	Conduit Special 2-Inch	LF	68.000	68.000
0830	652.0800	Conduit Loop Detector	LF	1,037.000	1,037.000
0840	652.0900	Loop Detector Slots	LF	69.000	69.000
0850	653.0135	Pull Boxes Steel 24x36-Inch	EACH	6.000	6.000
0860	653.0140	Pull Boxes Steel 24x42-Inch	EACH	14.000	14.000
0870	653.0905	Removing Pull Boxes	EACH	11.000	11.000
0880	654.0101	Concrete Bases Type 1	EACH	6.000	6.000
0890	654.0102	Concrete Bases Type 2	EACH	5.000	5.000
0900	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	2.000	2.000
0910	655.0230	Cable Traffic Signal 5-14 AWG	LF	973.000	973.000
0920	655.0240	Cable Traffic Signal 7-14 AWG	LF	160.000	160.000
0930	655.0250	Cable Traffic Signal 9-14 AWG	LF	165.000	165.000
0940	655.0260	Cable Traffic Signal 12-14 AWG	LF	1,190.000	1,190.000
0950	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	2,190.000	2,190.000
0960	655.0700	Loop Detector Lead In Cable	LF	2,979.000	2,979.000
0970	655.0800	Loop Detector Wire	LF	3,018.000	3,018.000
0980	656.0200	Electrical Service Meter Breaker Pedestal (location) 001. 8th Street South & E. Grand Avenue	LS	1.000	1.000
0990	657.0100	Pedestal Bases	EACH	6.000	6.000
1000	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	5.000	5.000
1010	657.0305	Poles Type 2	EACH	5.000	5.000
1020	657.0410	Traffic Signal Standards Aluminum 9-FT	EACH	1.000	1.000
1030	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	5.000	5.000
1040	657.0595	Trombone Arms 25-FT	EACH	4.000	4.000
1050	658.0110	Traffic Signal Face 3-12 Inch Vertical	EACH	10.000	10.000
1060	658.0120	Traffic Signal Face 5-12 Inch Vertical	EACH	4.000	4.000
1070	658.0165	Traffic Signal Face 5-12 Inch Horizontal	EACH	4.000	4.000
1080	658.0215	Backplates Signal Face 3 Section 12-Inch	EACH	10.000	10.000
1090	658.0225	Backplates Signal Face 5 Section 12-Inch	EACH	8.000	8.000
1100	658.0416	Pedestrian Signal Face 16-Inch	EACH	10.000	10.000
1110	658.0500	Pedestrian Push Buttons	EACH	9.000	9.000
1120	658.0600	Led Modules 12-Inch Red Ball	EACH	18.000	18.000
1130	658.0605	Led Modules 12-Inch Yellow Ball	EACH	16.000	16.000
1140	658.0610	Led Modules 12-Inch Green Ball	EACH	16.000	16.000

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Line	Item	Item Description	Unit	Total	Qty
1150	658.0620	Led Modules 12-Inch Yellow Arrow	EACH	12.000	12.000
1160	658.0625	Led Modules 12-Inch Green Arrow	EACH	8.000	8.000
1170	658.0635	Led Modules Pedestrian Countdown Timer 16-Inch	EACH	10.000	10.000
1180	658.5069	Signal Mounting Hardware (location) 001. 8th Street South & E. Grand Avenue	LS	1.000	1.000
1190	690.0150	Sawing Asphalt	LF	286.000	286.000
1200	690.0250	Sawing Concrete	LF	314.000	314.000
1210	715.0415	Incentive Strength Concrete Pavement	DOL	567.000	567.000
1220	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	150.000	150.000
1230	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
1240	SPV.0060	Special 001. Traffic Signal Controller, Fully Actuated, 8 Phase	EACH	1.000	1.000
1250	SPV.0060	Special 009. Install Light Pole	EACH	3.000	3.000
1260	SPV.0060	Special 200. Remove Existing Sanitary Manhole	EACH	1.000	1.000
1270	SPV.0060	Special 201. Install Sanitary Manhole	EACH	1.000	1.000
1280	SPV.0060	Special 202. Install Sanitary Manhole Cover	EACH	2.000	2.000
1290	SPV.0060	Special 203. Connect to Existing Sanitary Sewer	EACH	2.000	2.000
1300	SPV.0060	Special 204. Install Sanitary Sewer Lateral	EACH	2.000	2.000
1310	SPV.0060	Special 205. Connect to Existing Water Main	EACH	3.000	3.000
1320	SPV.0060	Special 206. Install Valve and Box	EACH	3.000	3.000
1330	SPV.0060	Special 207. Install Hydrant Complete	EACH	1.000	1.000
1340	SPV.0060	Special 208. Insulate Water Main	EACH	1.000	1.000
1350	SPV.0090	Special 001. Concrete Curb & Gutter HES 30-Inch Type A	LF	31.000	31.000
1360	SPV.0090	Special 002. Concrete Curb & Gutter HES 30-Inch Type D	LF	35.000	35.000
1370	SPV.0090	Special 200. Install 12-Inch PVC Sanitary Sewer	LF	220.000	220.000
1380	SPV.0090	Special 201. Install 6-Inch Ductile Iron Water Main	LF	130.000	130.000
1390	SPV.0090	Special 202. Install 8-Inch Ductile Iron Water Main	LF	204.000	204.000
1400	SPV.0105	Special 001. Remove and Transport Traffic Signals, 8th Street South & E. Grand Avenue	LS	1.000	1.000
1410	SPV.0105	Special 002. Concrete Pavement Joint Layout	LS	1.000	1.000
1420	SPV.0105	Special 200. Unclassified Excavation (Water Main)	LS	1.000	1.000
1430	SPV.0105	Special 201. Construction Staking Sanitary Sewer	LS	1.000	1.000
1440	SPV.0105	Special 202. Construction Staking Water Main	LS	1.000	1.000
1450	SPV.0180	Special 001. Salvage and Replace Landscaping Stone	SY	26.000	26.000

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REMOVING PAVEMENT

CATEGORY	STATION - STATION	LOCATION	204.0100 SY
0010	12+65 - 13+83	RT	490
	12+65 - 13+83	LT	860
	13+83 - 15+68	RT	390
	13+83 - 15+68	LT	670
		TOTAL	2,410

REMOVING CURB & GUTTER

CATEGORY	STATION - STATION	LOCATION	204.0150 LF
0010	11+50 - 13+83	RT	55
	13+83 - 16+50	RT	30
		TOTAL	85

REMOVING CONCRETE SIDEWALK

CATEGORY	STATION - STATION	LOCATION	204.0155 SY
0010	12+65 - 13+83	RT	55
	12+65 - 13+83	LT	65
	13+83 - 15+68	RT	75
	13+83 - 15+68	LT	140
		TOTAL	335

REMOVING CONCRETE BASES

CATEGORY	NO.	STATION	LOCATION	204.0195 EACH
0010	EXCB-1	13+38	51'RT	1
	EXSB-1	13+24	28'RT	1
	EXSB-2	13+17	3'LT	1
	EXSB-3	13+47	3'LT	1
	EXSB-4	13+14	48'LT	1
	EXSB-5	13+49	40'LT	1
	EXSB-6	13+79	38'LT	1
	EXSB-7	14+09	56'LT	1
	EXSB-8	14+31	33'LT	1
	EXSB-9	14+23	3'LT	1
	EXSB-10	14+23	28'RT	1
	EXSB-11	14+09	45'RT	1
	EXSB-12	13+78	35'RT	1
	EXSB-13	13+39	43'RT	1
			TOTAL	14

REMOVING STORM SEWER

CATEGORY	STATION - STATION	LOCATION	204.0245 .001 12-INCH LF	204.0245 .002 18-INCH LF
0010	13+26 - 13+27	LT	55	---
	13+27 - 13+54	LT	30	---
	13+25 - 13+26	LT/RT	35	---
	13+24 - 13+52	RT	35	---
	13+52 - 14+04	RT	55	---
	13+16 - 13+26	LT	---	9
		TOTALS	210	9

REMOVING STRUCTURES

CATEGORY	STATION	OFFSET	204.0210 REMOVING MANHOLES EACH	204.0215 REMOVING CATCH BASINS EACH
0010	13+26	11.7'LT	1	---
	13+25	24.0'RT	---	1
	13+27	66.2'LT	---	1
	13+54	72.6'LT	---	1
	13+52	49.6'RT	---	1
	14+05	51.7'RT	---	1
		TOTALS	1	5

BASE AGGREGATE DENSE

CATEGORY	STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
0010	12+65 - 13+83	RT	15	250
	12+65 - 13+83	LT	15	350
	13+83 - 15+68	RT	15	190
	13+83 - 15+68	LT	35	300
		TOTALS	80	1,090

REMOVING LANDSCAPING TIMBERS

CATEGORY	LOCATION	204.9090.S.001 LF
0010	NORTHWEST QUADRANT	64

EARTHWORK SUMMARY

CATEGORY	LOCATION	205.0100 EXCAVATION COMMON (1) CUT (2) CY	205.0100 EXCAVATION COMMON (1) EBS EXCAVATION (3) 5% OF CUT CY	SALVAGED/ UNUSABLE PAVEMENT MATERIAL CY	AVAILABLE MATERIAL (4) CY	REDUCED EBS IN FILL (5) FACTOR 0.90 CY	EXPANDED EBS BACKFILL (6) FACTOR 1.30 CY	EXPANDED ROCK (7) 1.10	UNEXPANDED FILL CY	EXPANDED FILL (8) FACTOR 1.11 CY	MASS ORDINATE +/- (9)	WASTE CY	*312.0110 SELECT CRUSHED MATERIAL (3) TON
0010	8TH STREET SOUTH	571	29	317	253	26	37	0	7	7	246	246	55
	EAST GRAND AVENUE	787	39	205	582	35	51	0	10	12	570	570	75
	SOUTHEAST QUADRANT	40	2	7	33	2	3	0	2	2	31	31	4
	NORTHEAST QUADRANT	27	1	8	19	1	2	0	2	2	17	17	3
	SOUTHWEST QUADRANT	187	9	87	100	8	12	0	2	2	98	98	20
	NORTHWEST QUADRANT	39	2	15	24	2	3	0	2	2	21	21	4
	SUBTOTALS	1,651	83	640	1,011	74	107	0	25	28	983	983	161
	TOTALS		1,734										

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100.
2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL.
4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL.
5) REDUCED EBS IN FILL: EXCAVATED EBS MATERIAL IS USABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = 0.90.
6) EXPANDED EBS BACKFILL: THIS IS TO BE FILLED WITH SELECT CRUSHED MATERIAL. EBS BACKFILL FACTOR = 1.30.
7) EXPANDED ROCK = UNEXPANDED ROCK * EXPANDED ROCK FACTOR. EXPANDED FILL FACTOR = 1.10.
8) EXPANDED FILL = UNEXPANDED FILL * EXPANDED FILL FACTOR. EXPANDED FILL FACTOR = 1.11.
9) MASS ORDINATE: MASS ORDINATE = (CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL) - (FILL * FILL FACTOR)
PLUS MASS ORDINATE QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS MASS ORDINATE QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

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STAMPING COLORED CONCRETE

CATEGORY	STATION	LOCATION	405.1000 CY
0010	13+45	LT	3
	14+03	LT	1
	14+50	LT	3
		TOTAL	7

CONCRETE PAVEMENT 9-INCH

CATEGORY	STATION - STATION	LOCATION	415.0090 SY
0010	11+50 - 13+83	RT	405
	11+50 - 13+83	LT	680
	13+83 - 16+50	RT	360
	13+83 - 16+50	LT	445
		TOTAL	1,890

CONCRETE DRIVEWAY

CATEGORY	STATION	LOCATION	416.0260 HES 6-INCH SY
0010	14+88	33'LT	35
	15+45	31'LT	15
		TOTAL	50

CONCRETE SIDEWALK SUMMARY

CATEGORY	STATION - STATION	LOCATION	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
0010	12+65 - 13+83	RT	520	10
	12+65 - 13+83	LT	470	40
	13+83 - 15+68	RT	610	10
	13+83 - 15+68	LT	1,350	10
		TOTALS	2,950	70

ASPHALTIC ITEMS SUMMARY

CATEGORY	STATION - STATION	LOCATION	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5424 HMA PAVEMENT 4 LT 58-28 H TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
0010	12+65 - 13+83	RT	6	21	14	4
	12+65 - 13+83	LT	6	20	13	7
	13+83 - 15+68	RT	4	12	8	---
	13+83 - 15+68	LT	5	15	10	11
		TOTALS	21	68	45	22

NOTE: A UNIT WEIGHT OF 110 POUNDS PER SQUARE YARD PER INCH OF THICKNESS WAS USED TO ESTIMATE ASPHALT QUANTITIES.

CONCRETE CURB AND GUTTER

CATEGORY	STATION - STATION	LOCATION	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	SPV.0090.001 CONCRETE CURB & GUTTER HES 30-INCH TYPE A LF	SPV.0090.002 CONCRETE CURB & GUTTER HES 30-INCH TYPE D LF	601.0600 CONCRETE CURB PEDESTRIAN LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF
0010	12+65 - 13+83	RT	105	46	---	---	---	46
	12+65 - 13+83	LT	180	---	---	---	40	---
	13+83 - 15+68	RT	110	31	---	---	---	31
	13+83 - 15+68	LT	105	62	31	35	42	97
		TOTALS	500	139	31	35	82	174

DRILLED DOWEL BARS

CATEGORY	STATION	LOCATION	416.0620 EACH
0010	12+64.50	LT/RT	34

INLETS, MANHOLES, MANHOLE COVERS, AND INLET COVERS

CATEGORY	STRUCT. ID#	STATION	LOCATION	611.2004 MANHOLES 4-FT DIAMETER EACH	611.1230 CATCH BASINS 2X3-FT EACH	611.1004 CATCH BASINS 4-FT DIAMETER EACH	611.1005 CATCH BASINS 5-FT DIAMETER EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0624 INLET COVERS TYPE H EACH	611.0639 INLET COVERS TYPE H-S EACH	520.8000 CONCRETE COLLARS FOR PIPE EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	REMARKS
0010	100	74+87.99	60.1'RT	1	---	---	---	1	---	---	1	1	RUBBER ADJUSTMENT RINGS REQ'D
	100A	74+30.06	53.5'RT	---	---	---	1	---	---	1	---	1	RUBBER ADJUSTMENT RINGS REQ'D
	100B	74+43.90	27.5'RT	---	1	---	---	---	1	---	---	1	RUBBER ADJUSTMENT RINGS REQ'D
	100C	75+35.69	34.9'RT	---	---	1	---	---	---	1	---	1	RUBBER ADJUSTMENT RINGS REQ'D
	100D	75+54.94	38.1'RT	---	1	---	---	---	---	1	---	1	RUBBER ADJUSTMENT RINGS REQ'D
	100E	75+51.83	22.0'LT	---	1	---	---	---	---	1	---	1	RUBBER ADJUSTMENT RINGS REQ'D
			TOTALS	1	3	1	1	1	1	4	1	6	

STORM SEWER PIPE REINFORCED CONCRETE CLASS IV

CATEGORY	FROM STRUCTURE	TO STRUCTURE	608.0412 12-INCH LF	608.0418 18-INCH LF
0010	100	EXISTING	---	6
	100A	100	58	---
	100B	100A	29	---
	100C	100	54	---
	100D	100C	20	---
	100E	100C	59	---
		TOTALS	220	6

CONCRETE MEDIAN SLOPED NOSE

CATEGORY	STATION	LOCATION	620.0300 SF	REMARKS
0010	13+37	LT	20	TYPE 2
	13+52	LT	65	TYPE 1
	13+53	LT	15	TYPE 2
		TOTAL	100	

MOBILIZATION

CATEGORY	PROJECT ID	619.1000 EACH
0010	6999-07-88	1

FINISHING ITEMS

CATEGORY	STATION - STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0200 SEEDING TEMPORARY LB	631.1000 SOD LAWN SY	631.0300 SOD WATER MGAL
0010	12+65 - 13+83	RT	120	---	0.08	---	120	2
	12+65 - 13+83	LT	---	---	---	---	---	---
	13+83 - 15+68	RT	55	---	0.04	---	55	1
	13+83 - 15+68	LT	---	---	---	---	---	---
	UNDISTRIBUTED	---	35	---	---	---	---	---
	WASTE SITE	---	---	1,200	0.76	32.4	---	---
		TOTALS	210	1,200	0.88	32.4	175	3

INLET PROTECTION

CATEGORY	STATION	LOCATION	628.7005 TYPE A EACH	628.7015 TYPE C EACH	628.7020 TYPE D EACH
0010	13+29	69.8' LT	1	---	1
	13+45	55.1' RT	1	---	1
	13+48	35.8' RT	1	---	1
	13+55	56.0' LT	1	1	---
	14+05	51.7' RT	1	---	1
		TOTALS	5	1	4

TRAFFIC SIGNAL CONDUIT SUMMARY

CATEGORY	LOCATION FROM	LOCATION TO	*652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF
0010	CB-1	PB-1	---	66	---
	PB-1	SB-1	5	---	---
	PB-1	SB-2	27	---	---
	PB-1	PB-8	15	---	---
	PB-8	PB-13	125	---	36
	PB-1	PB-2	---	155	---
	PB-2	SB-3	12	---	---
	PB-2	STUB	51	---	---
	PB-2	PB-3	---	84	---
	PB-3	SB-4	10	---	---
	PB-3	SB-5	11	---	---
	PB-3	PB-9	24	---	---
	PB-3	PB-4	---	140	---
	PB-4	SB-6	14	---	---
	PB-4	SB-7	13	---	---
	PB-4	PB-10	29	---	---
	PB-10	PB-12	120	---	32
	PB-4	PB-5	---	150	---
	PB-5	SB-8	5	---	---
	PB-5	SB-9	6	---	---
	PB-5	PB-6	---	46	---
	PB-6	SB-10	6	---	---
	PB-6	PB-11	9	---	---
	PB-6	PB-7	---	130	---
	PB-7	SB-11	11	---	---
	PB-7	CB-1	---	27	---
		TOTALS	493	798	68

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

PAVEMENT MARKING

CATEGORY	STATION - STATION	LOCATION	646.0106 EPOXY 4-INCH DOUBLE YELLOW LF	646.0106 EPOXY 4-INCH 3' SEG. 9' GAP (WHITE) LF	646.0126 EPOXY 8-INCH (WHITE) LF	647.0166 ARROWS EPOXY TYPE 2 EACH	647.0356 WORDS EPOXY EACH	647.0566 STOP LINE EPOXY 18-INCH LF	647.0726 DIAGONAL EPOXY 12-INCH LF	647.0766 CROSSWALK EPOXY 6-INCH LF
0010	12+65 - 13+83	RT	---	---	360	2	---	35	30	125
	12+65 - 13+84	LT	360	---	240	3	1	50	45	145
	13+83 - 16+03	RT	360	23	210	1	1	29	40	105
	13+83 - 16+03	LT	240	22	180	---	---	30	---	115
		TOTALS	960	45	990	6	2	144	115	490
		ITEM TOTAL		1,005						

FIELD OFFICE TYPE C

CATEGORY	PROJECT	642.5201 EACH
0010	6999-07-88	1

PERMANENT SIGNING SUMMARY

CATEGORY	SIGN NO.	APPROX. STA.	LOC.	SIGN CODE	SIGN MESSAGE	SIGN SIZE (W x H) IN	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	REMARKS
0010	1-1	13+32	RT	S1-1	SCHOOL ADVANCE	36 x 36	---	---	6.75	SIGN MOUNTED ON SIGNAL POLE SB-1
	1-2	13+32	RT	S16-7L	LEFT DIAGONAL DOWNWARD POINTING ARROW (YELLOW)	24 x 12	---	---	3.75	SIGN MOUNTED ON SIGNAL POLE SB-1
	1-3	13+32	RT	R1-1F	STOP (FOLDING)	30 x 30	---	5.18	---	SIGN MOUNTED ON SIGNAL POLE SB-1
	1-4	13+41	RT	M1-94H	OVERHEAD STREET NAME SIGN	48 x 18	6.00	---	---	SIGN MOUNTED ON TROMBONE ARM
	1-5	13+18	LT	R1-1F	STOP (FOLDING)	30 x 30	---	5.18	---	SIGN MOUNTED ON SIGNAL POLE SB-3
	1-6	14+09	RT	S1-1	SCHOOL ADVANCE	36 x 36	---	---	6.75	SIGN MOUNTED ON SIGNAL POLE SB-10
	1-7	14+09	RT	S16-7L	LEFT DIAGONAL DOWNWARD POINTING ARROW (YELLOW)	24 x 12	---	---	3.75	SIGN MOUNTED ON SIGNAL POLE SB-10
	1-8	14+09	RT	R1-1F	STOP (FOLDING)	30 x 30	---	5.18	---	SIGN MOUNTED ON SIGNAL POLE SB-10
	1-9	14+28	RT	M1-94H	OVERHEAD STREET NAME SIGN	60 x 18	7.50	---	---	SIGN MOUNTED ON TROMBONE ARM
	1-10	13+42	LT	M1-94H	OVERHEAD STREET NAME SIGN	60 x 18	7.50	---	---	SIGN MOUNTED ON TROMBONE ARM
	1-11	14+27	LT	S1-1	SCHOOL ADVANCE	36 x 36	---	---	6.75	SIGN MOUNTED ON SIGNAL POLE SB-7
	1-12	14+27	LT	S16-7L	LEFT DIAGONAL DOWNWARD POINTING ARROW (YELLOW)	24 x 12	---	---	3.75	SIGN MOUNTED ON SIGNAL POLE SB-7
	1-13	14+27	LT	R1-1F	STOP (FOLDING)	30 x 30	---	5.18	---	SIGN MOUNTED ON SIGNAL POLE SB-7
	1-14	14+13	LT	M1-94H	OVERHEAD STREET NAME SIGN	48 x 18	6.00	---	---	SIGN MOUNTED ON TROMBONE ARM
	1-15	13+49	LT	R1-1F	STOP (FOLDING)	30 x 30	---	5.18	---	SIGN MOUNTED ON SIGNAL POLE SB-5
	1-16	13+49	LT	S1-1	SCHOOL ADVANCE	36 x 36	---	---	6.75	SIGN MOUNTED ON SIGNAL POLE SB-5
	1-17	13+49	LT	S16-7L	LEFT DIAGONAL DOWNWARD POINTING ARROW (YELLOW)	24 x 12	---	---	3.75	SIGN MOUNTED ON SIGNAL POLE SB-5
					TOTALS		27.00	25.90	42.00	

REMOVING PAVEMENT MARKINGS

CATEGORY	STATION - STATION	LOCATION	646.0600 LF	647.0955 ARROWS EACH	647.0965 WORDS EACH
0010	12+65 - 13+83	LT/RT	295	1	---
	13+83 - 15+68	LT/RT	250	---	1
	73+32 - 75+00	LT/RT	130	---	---
	75+00 - 77+34	LT/RT	310	---	---
		TOTALS	985	1	1

TEMPORARY PEDESTRIAN SAFETY FENCE

CATEGORY	LOCATION	644.1616.S LF
0010	UNDISTRIBUTED	100

TRAFFIC SIGNAL PULL BOX SUMMARY

CATEGORY	PULL BOX NO.	STATION	LOCATION	653.0135 PULL BOXES STEEL 24X36-INCH EACH	*653.0140 PULL BOXES STEEL 24X42-INCH EACH
0010	PB-1	13+28.0	28.0' RT	---	1
	PB-2	13+11.7	46.4' LT	---	1
	PB-3	13+52.0	35.2' LT	---	1
	PB-4	14+21.4	40.5' LT	---	1
	PB-5	14+24.3	33.9' RT	---	1
	PB-6	14+08.0	48.9' RT	---	1
	PB-7	13+43.2	49.5' RT	---	1
	PB-8	13+14.2	26.7' RT	1	---
	PB-9	13+50.9	58.2' LT	1	---
	PB-10	14+45.2	26.9' LT	1	---
	PB-11	14+08.0	57.2' RT	1	---
	PB-12	15+98.1	24.0' LT	1	---
	PB-13	11+52.3	28.0' RT	1	---
			TOTALS	6	7

* ADDITIONAL QUANTITIES LISTED ELSEWHERE

CONSTRUCTION STAKING

CATEGORY	STATION - STATION	650.5000 BASE LF	650.7000 CONCRETE PAVEMENT LF
0010	12+64.50 - 13+83.00	---	120
	13+83.00 - 14+98.10	---	115
	74+16.70 - 74+75.50	---	59
	14+98.10 - 15+67.90	70	---
	73+89.70 - 74+16.67	27	---
	75+51.18 - 75+82.00	31	---
	TOTALS	128	294

REMOVING PULL BOXES

CATEGORY	NO.	STATION	LOCATION	653.0905 EACH
0010	EXPB-1	13+27	28'RT	1
	EXPB-2	13+26	3'LT	1
	EXPB-3	13+16	50'LT	1
	EXPB-4	13+43	34'LT	1
	EXPB-5	13+79	36'LT	1
	EXPB-6	14+13	43'LT	1
	EXPB-7	14+24	34'LT	1
	EXPB-8	14+17	3'LT	1
	EXPB-9	14+35	30'RT	1
	EXPB-10	14+09	42'RT	1
	EXPB-11	13+78	32'RT	1
			TOTAL	11

CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS

CATEGORY	PROJECT	650.8500.001 LS
0010	6999-07-88	1

CONSTRUCTION STAKING

CATEGORY	PROJECT	650.9910.001 SUPPLEMENTAL CONTROL LS
0010	6999-07-88	1

TRAFFIC CONTROL DETOUR

CATEGORY	PROJECT	643.2000 EACH
0010	.001 6999-07-88	1

TRAFFIC CONTROL

CATEGORY	LOCATION	DURATION (DAYS)	643.0410 TRAFFIC CONTROL BARRICADES TYPE II EACH	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	643.3000 TRAFFIC CONTROL DETOUR SIGNS EACH	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAY
0010	ADVANCED WARNING SIGNING	123	---	---	28	3,444	40	4,920	24	2,952	4	28	---	---
	TRAFFIC DETOUR SIGNING	123	---	---	---	---	---	---		---	---	---	80	9,840
	PEDESTRIAN DETOUR SIGNING	123	16	1,968	16	1,968	16	1,968	24	2,952	---	---	---	---
		TOTALS		1,968		5,412		6,888		5,904		28		9,840

TRAFFIC CONTROL PROJECT

CATEGORY	PROJECT	643.0100 EACH
0010	.001 6999-07-88	1

WATER

CATEGORY	STATION - STATION	LOCATION	624.0100 MGAL	REMARKS
0010	12+65 - 13+83	RT	4	BASE AGGREGATE COMPACTION
	12+65 - 13+83	LT	6	BASE AGGREGATE COMPACTION
	13+83 - 15+68	RT	3	BASE AGGREGATE COMPACTION
	13+83 - 15+68	LT	5	BASE AGGREGATE COMPACTION
		TOTAL	18	

LOOP DETECTOR INSTALLATION

CATEGORY	PROJECT LOCATION	LOOP NO.	STATION	LOCATION	SIZE FT x FT	NO. OF TURNS	652.0800 CONDUIT LOOP DETECTOR LF	652.0900 LOOP DETECTOR SLOTS LF	655.0700 LOOP DETECTOR LEAD IN CABLE LF	655.0800 LOOP DETECTOR WIRE LF	REMARKS/SDD INSTALLATION REFERENCE
0010	8TH STREET SOUTH	11	13+39.2	1.5'LT	6'X20'	3	79	---	81	216	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE
		12	13+11.2	1.5'LT	6'X20'	3	79	---	81	216	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE
		21	11+52.7	17.0'RT	6'X10'	5	40	40	457	182	LOOP DETECTOR INSALLED IN EXISTING ASPHALTIC PAVEMENT
		31	75+37.1	5.5'RT	6'X20'	3	81	---	142	220	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE
		32	75+61.1	5.5'RT	6'X20'	3	81	---	142	220	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE
		41	74+54.2	17.0'RT	6'X20'	3	78	---	239	234	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
		42	74+30.2	17.0'RT	6'X20'	3	86	---	239	258	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
		51	14+20.8	0.5'RT	6'X20'	3	78	---	289	214	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE
		52	14+48.8	0.5'RT	6'X20'	3	78	---	289	214	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE
		61	15+98.0	12.0'LT	6'X6'	4	32	29	258	118	LOOP DETECTOR INSALLED IN EXISTING ASPHALTIC PAVEMENT
		71	74+54.2	2.0'RT	6'X20'	3	82	---	239	222	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE
		72	74+30.2	2.0'RT	6'X20'	3	83	---	239	224	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE
		81	75+37.2	9.5'LT	6'X20'	3	78	---	142	234	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
		82	75+61.2	9.5'LT	6'X20'	3	82	---	142	246	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
					TOTALS		1,037	69	2,979	3,018	

CONCRETE BASE SUMMARY

CATEGORY	BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	*654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
0010	CB-1	13+34.8	48.6'RT	---	---	1
	SB-1	13+32.3	28.7'RT	1	---	---
	SB-2	13+03.2	28.7'RT	---	1	---
	SB-3	13+17.5	56.3'LT	1	---	---
	SB-4	13+42.3	33.8'LT	---	1	---
	SB-5	13+48.9	45.1'LT	1	---	---
	SB-6	14+13.1	51.1'LT	---	1	---
	SB-7	14+26.7	30.0'LT	1	---	---
	SB-8	14+28.1	31.5'RT	---	1	---
	SB-9	14+19.8	36.2'RT	1	---	---
	SB-10	14+09.2	43.8'RT	1	---	---
	SB-11	13+41.3	39.2'RT	---	1	---
			TOTALS	6	5	1

* ADDITIONAL QUANTITIES LISTED ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL

CATEGORY	LOCATION	BID ITEM NUMBER	LS
0010	8TH STREET SOUTH & E. GRAND AVENUE	656.0200.001	1

TRAFFIC SIGNAL EQUIPMENT GROUNDING AND GROUNDED CONDUCTORS

CATEGORY	LOCATION FROM	LOCATION TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG (GREEN) LF	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG (WHITE) LF
0010	CB-1	SB-1	62	62
	SB-1	SB-2	53	53
	SB-2	SB-3	155	155
	SB-3	SB-4	100	100
	SB-4	SB-5	43	43
	SB-5	SB-6	130	130
	SB-6	SB-7	48	48
	SB-7	SB-8	130	130
	SB-8	SB-9	32	32
	SB-9	SB-10	71	71
	SB-10	SB-11	120	120
	SB-11	CB-1	54	54
	SB-1	PB-1	24	---
	SB-3	PB-2	31	---
	SB-4	PB-3	29	---
	SB-7	PB-4	31	---
	SB-8	PB-5	24	---
	SB-10	PB-6	25	---
	SB-11	PB-7	30	---
		SUBTOTALS	1,192	998
		ITEM TOTAL	2,190	

TRAFFIC SIGNAL CABLE SUMMARY

CATEGORY	LOCATION FROM	LOCATION TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0250 CABLE TRAFFIC SIGNAL 9-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF
0010	CB-1	SB-1	---	---	---	59
	SB-1	HEAD 1	22	---	---	---
	SB-1	HEAD 12	23	---	---	---
	SB-1	42	12	---	---	---
	SB-1	BUTTON	6	---	---	---
	CB-1	SB-2	81	---	---	---
	SB-2	HEAD 18	25	---	---	---
	CB-1	SB-3	---	160	---	---
	SB-3	HEAD 17	22	---	---	---
	SB-3	24	12	---	---	---
	SB-3	BUTTON	6	---	---	---
	CB-1	SB-4	---	---	---	215
	SB-4	HEAD 10	22	---	---	---
	SB-4	HEAD 11	52	---	---	---
	SB-4	41	12	---	---	---
	SB-4	BUTTON	6	---	---	---
	CB-1	SB-5	---	---	---	215
	SB-5	HEAD 8	23	---	---	---
	SB-5	HEAD 13	22	---	---	---
	SB-5	22	12	---	---	---
	SB-5	23	12	---	---	---
	SB-5	BUTTON	6	---	---	---
	CB-1	SB-6	---	---	---	265
	SB-6	HEAD 6	22	---	---	---
	SB-6	HEAD 7	52	---	---	---
	SB-6	21	12	---	---	---
	SB-6	BUTTON	6	---	---	---
	CB-1	SB-7	---	---	---	260
	SB-7	HEAD 4	52	---	---	---
	SB-7	HEAD 9	23	---	---	---
	SB-7	82	12	---	---	---
	SB-7	BUTTON	6	---	---	---
	CB-1	SB-8	---	---	165	---
	SB-8	HEAD 2	22	---	---	---
	SB-8	HEAD 3	52	---	---	---
	CB-1	SB-9	165	---	---	---
	SB-9	81	12	---	---	---
	SB-9	BUTTON	6	---	---	---
	CB-1	SB-10	---	---	---	125
	SB-10	HEAD 5	22	---	---	---
	SB-10	HEAD 16	23	---	---	---
	SB-10	62	12	---	---	---
	SB-10	BUTTON	6	---	---	---
	CB-1	SB-11	---	---	---	51
	SB-11	HEAD 14	22	---	---	---
	SB-11	HEAD 15	52	---	---	---
	SB-11	61	12	---	---	---
	SB-11	BUTTON	6	---	---	---
		TOTALS	973	160	165	1,190

TRAFFIC SIGNAL POLES SUMMARY

CATEGORY	BASE NO.	STATION	LOCATION	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0410 TRAFFIC SIGNAL STANDARDS ALUMINUM 9-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0595 TROMBONE ARMS 25-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH
0010	SB-1	13+32.3	28.7'RT	1	---	---	---	1	---	1
	SB-2	13+03.2	28.7'RT	---	1	1	---	---	---	---
	SB-3	13+17.5	56.3'LT	1	---	---	---	1	---	1
	SB-4	13+42.3	33.8'LT	---	1	1	---	---	1	1
	SB-5	13+48.9	45.1'LT	1	---	---	---	1	---	1
	SB-6	14+13.1	51.1'LT	---	1	1	---	---	1	1
	SB-7	14+26.7	30.0'LT	1	---	---	---	1	---	1
	SB-8	14+28.1	31.5'RT	---	1	1	---	---	1	---
	SB-9	14+19.8	36.2'RT	1	---	---	1	---	---	1
	SB-10	14+09.2	43.8'RT	1	---	---	---	1	---	1
	SB-11	13+41.3	39.2'RT	---	1	1	---	---	1	1
			TOTALS	6	5	5	1	5	4	9

TRAFFIC SIGNAL FACES SUMMARY

CATEGORY	BASE NO.	HEAD NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0120 TRAFFIC SIGNAL FACE 5-12 INCH VERTICAL EACH	658.0165 TRAFFIC SIGNAL FACE 5-12 INCH HORIZONTAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0225 BACKPLATES SIGNAL FACE 5 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
0010	SB-1	1	1	---	---	1	---	---	---
		12	---	1	---	---	1	---	---
		42	---	---	---	---	---	1	1
	SB-2	18	1	---	---	1	---	---	---
	SB-3	17	1	---	---	1	---	---	---
		24	---	---	---	---	---	1	1
	SB-4	10	1	---	---	1	---	---	---
		11	---	---	1	---	1	---	---
		41	---	---	---	---	---	1	1
	SB-5	8	---	1	---	---	1	---	---
		13	1	---	---	1	---	---	---
		22	---	---	---	---	---	1	1
		23	---	---	---	---	---	1	1
	SB-6	6	1	---	---	1	---	---	---
		7	---	---	1	---	1	---	---
		21	---	---	---	---	---	1	1
	SB-7	4	---	1	---	---	1	---	---
		9	1	---	---	1	---	---	---
		82	---	---	---	---	---	1	1
	SB-8	2	1	---	---	1	---	---	---
		3	---	---	1	---	1	---	---
	SB-9	81	---	---	---	---	---	1	1
	SB-10	5	1	---	---	1	---	---	---
		16	---	1	---	---	1	---	---
		62	---	---	---	---	---	1	1
	SB-11	14	1	---	---	1	---	---	---
		15	---	---	1	---	1	---	---
		61	---	---	---	---	---	1	1
		TOTALS	10	4	4	10	8	10	10

LED MODULE SUMMARY

CATEGORY	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH
0010	18	16	16	12	8

TRAFFIC SIGNAL CONTROLLER, SIGNAL MOUNTING HARDWARE

CATEGORY	LOCATION	658.5069.001 SIGNAL MOUNTING HARDWARE LS	SPV.0060.001 TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE EACH
0010	8TH STREET SOUTH AND E. GRAND AVENUE	1	1

3

REMOVE AND TRANSPORT TRAFFIC SIGNALS, 8TH STREET SOUTH & E. GRAND AVENUE

CATEGORY	LOCATION	SPV.0105.001 LS
0010	8TH STREET SOUTH & E. GRAND AVENUE	1

CONCRETE PAVEMENT JOINT LAYOUT

CATEGORY	LOCATION	SPV.0105.002 LS
0010	8TH STREET SOUTH & E. GRAND AVENUE	1

SAWING

CATEGORY	STATION - STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF
0010	11+50 - 13+83	RT	130	37
	11+50 - 13+83	LT	10	100
	13+83 - 16+50	RT	21	37
	13+83 - 16+50	LT	125	140
		TOTALS	286	314

SALVAGE AND REPLACE LANDSCAPING STONE

CATEGORY	LOCATION	SPV.0180.001 SY
0010	NORTHWEST QUADRANT	26

LIGHTING PULL BOX SUMMARY

CATEGORY	PULL BOX NO.	STATION	LOCATION	*653.0140 PULL BOXES STEEL 24X42-INCH EACH
0040	LPB-1	13+36.9	29.7' RT	1
	LPB-2	12+67.5	27.6' RT	1
	LPB-3	12+66.8	32.8' LT	1
	LPB-4	13+21.0	58.4' LT	1
	LPB-5	14+04.7	82.3' LT	1
	LPB-6	14+17.5	39.1' RT	1
	LPB-7	14+95.9	26.6' RT	1
			TOTALS	7

* ADDITIONAL QUANTITIES LISTED ELSEWHERE

TRAFFIC SIGNAL CONDUIT SUMMARY

CATEGORY	LOCATION FROM	LOCATION TO	*652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF
0040	LCB-1	LPB-1	87
	LPB-1	LPB-2	74
	LPB-1	LP-1	24
	LPB-1	LPB-4	90
	LPB-1	LPB-6	82
	LPB-2	LPB-3	61
	LPB-3	LPB-4	65
	LPB-4	LP-2	21
	LPB-4	STUB	36
	LPB-4	LPB-5	88
	LPB-5	LPB-6	125
	LPB-6	LPB-7	86
	LPB-6	LP-3	29
		TOTALS	868

* ADDITIONAL QUANTITIES LISTED ELSEWHERE

LIGHTING CONTROL CABINET

CATEGORY	BASE NO.	STATION	LOCATION	*654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
0040	LCB-1	13+34.8	55.3'RT	1

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

INSTALL LIGHT POLE

CATEGORY	NO.	STATION	LOCATION	SPV.0060.009 EACH
0040	LP-1	13+14.2	29.4' RT	1
	LP-2	13+08.2	45.6' LT	1
	LP-3	14+40.3	29.3' RT	1
			TOTALS	3

3

SANITARY MANHOLE SUMMARY

CATEGORY	STRUCTURE	STATION	OFFSET	SPV.0060.200 REMOVE EXISTING SANITARY MANHOLE EACH	SPV.0060.201 INSTALL SANITARY MANHOLE EACH	SPV.0060.202 INSTALL SANITARY MANHOLE COVER EACH
0020	MH	73+97.2	1.6' LT	---	---	1
	MH	13+70.71	1.2' RT	1	---	---
	MH A-1	13+70.71	1.2' RT	---	1	---
	MH A-1	13+70.71	1.2'RT	---	---	1
		TOTALS		1	1	2

SANITARY SEWER MAIN SUMMARY

CATEGORY	FROM STRUC./STA.	TO STRUC./STA.	SPV.0090.200 INSTALL 12-INCH PVC SANITARY SEWER LF
0020	12+70.71	MH A-1	100
	MH A-1	14+90.71	120

		TOTAL	220

SPV.0060.203 CONNECT TO EXISTING SANITARY SEWER

CATEGORY	STATION	EACH
0020	12+70.71	1
	14+90.71	1
	TOTAL	2

SANITARY SEWER LATERAL SUMMARY

CATEGORY	STATION	LATERAL DIRECTION	SPV.0060.204 INSTALL SANITARY SEWER LATERAL EACH
0020	14+40	EAST	1
	14+49	WEST	1
		TOTALS	2

WATER MAIN DUCTILE IRON (DI) PIPE SUMMARY

CATEGORY	FROM STRUCT./STA.	TO STRUCT./LOC	SPV.0090.201 INSTALL 6-INCH DUCTILE IRON WATER MAIN LF	SPV.0090.202 INSTALL 8-INCH DUCTILE IRON WATER MAIN LF
0030	BEND 74+06	BEND 74+06 LT	11	---
	BEND 74+06 LT	TEE 75+09 LT	103	---
	CONN. 12+68 RT	INCREASER 12+80 RT	8	--
	INCREASER 12+80 RT	HYD. TEE 12+94 RT	---	14
	HYD. TEE 12+94 RT	TEE 13+93.62 RT	---	100
	TEE 13+93.62 RT	REDUCER 14+83.5 RT	---	90
	REDUCER 14+83.5 RT	CONN. 14+92 RT	8	---
		TOTALS	130	204

SPV.0060.208 INSULATE WATER MAIN

CATEGORY	STATION	EACH
0030	13+33.6 RT	1

SPV.0060.205 CONNECT TO EXISTING WATER MAIN

CATEGORY	STATION	EACH
0030	12+68 RT	1
	14+92 RT	1
	74+06 RL	1
	TOTAL	3

WATER MAIN VALVE SUMMARY

CATEGORY	STATION	OFFSET	SPV.0060.206 INSTALL VALVE AND BOX EACH	REMARKS
0030	12+90.04	9.14' RT	1	8-INCH
	14+55.81	9.14' RT	1	8-INCH
	74+25.67	11' LT	1	6-INCH
		TOTALS	3	

3

INSTALL HYDRANT , COMPLETE

CATEGORY	STATION	OFFSET	SPV.0060.207 INSTALL HYDRANT COMPLETE EACH
0030	12+94	28.3' RT	1

CONSTRUCTION STAKING

CATEGORY		SPV.0105.202 CONSTRUCTION STAKING WATER MAIN LS	SPV.0105.201 CONSTRUCTION STAKING SANITARY SEWER LS
0020	SANITARY SEWER	---	1
0030	WATER MAIN	1	---

EXISTING WATER MAIN UNCLASSIFIED EXCAVATION

CATEGORY	LOCATION	SPV.0105.200 UNCLASSIFIED EXCAVATION (WATER MAIN) LS
0030	8TH STREET SOUTH AND EAST GRAND AVENUE	1

3

FILE NAME : S:\ENGINEERING\CAD\PROJECTS\EAST GRAND REBUILD\E GRAND CONSULTANT.DWG
LAYOUT NAME - ####
PLOT DATE : 8/22/2016 10:54 AM PLOT BY : SCHULZE, MARC PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
6999-07-18	4.1	2
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT-OF-WAY REQUIRED FOR

C WI RAPIDS
(8TH & EAST GRAND AVE)
INTERSECTION MODIFICATION

LOCAL STREET — WOOD COUNTY

CONSTRUCTION PROJECT NUMBER
6999-07-88

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	RECORDED AS	(100')
ACCESS RIGHTS	AR	REFERENCE LINE	R/L
ACRES	AC.	RELEASE OF RIGHTS	ROR
AND OTHERS	ET.AL.	REMAINING	REM.
CENTERLINE	C/L	RIGHT-OF-WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC.
CHISELED X	CHIS. X	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.	**CURVE DATA**	
HIGHWAY EASEMENT	H.E.	LONG CHORD	LC
LAND CONTRACT	LC	LONG CHORD BEARING	LCB
MONUMENT	MON.	RADIUS	R
PAGE	P.	DEGREE OF CURVE	D
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA	DELTA
PROPERTY LINE	PL	LENGTH OF CURVE	L
REBAR	RBR.	TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN — LD (1.25" UNLESS NOTED)
R/W MONUMENT (TO BE SET) *
NON-MONUMENTED R/W POINT
SIGN — SIGN
SECTION CORNER MONUMENT
SECTION CORNER SYMBOL
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
R/W BOUNDARY POINT — RWB20
PARCEL NUMBER — 403
UTILITY NUMBER — 92
OFF PREMISE SIGN — 21 EXXON
BRIDGE
SIGNAL CONTROL CABINET
SIGNAL LIGHT
PULL BOX

NEW R/W LINE
EXISTING R/W OR H.E. LINE
PROPERTY LINE — PL
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPTS
CORPORATE LIMITS
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
ACCESS RESTRICTED BY ACQUISTION
NO ACCESS (BY STATUTORY AUTHORITY)
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
EXISTING CENTERLINE
NEW REFERENCE LINE
PARALLEL OFFSET
TRANSMISSION STRUCTURES
BUILDING TO BE REMOVED
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—	
GAS	—G—	
TELEPHONE	—T—	
OVERHEAD	—OH—	
TRANSMISSION LINES ELECTRIC	—E—	
CABLE TELEVISION	—TV—	
FIBER OPTIC	—FO—	
SANITARY SEWER	—SAN—	
STORM SEWER	—SS—	
	NON COMPENSABLE	COMPENSABLE
ELECTRIC POLE		
TELEPHONE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL., ELEC, ETC.)		
LIGHT POLE		

NOTES

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), WOOD COUNTY, NAD83/91 IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL RIGHT-OF-WAY LINES DEPICTED IN NON ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4" X 24" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD."

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE LAND SURVEY.

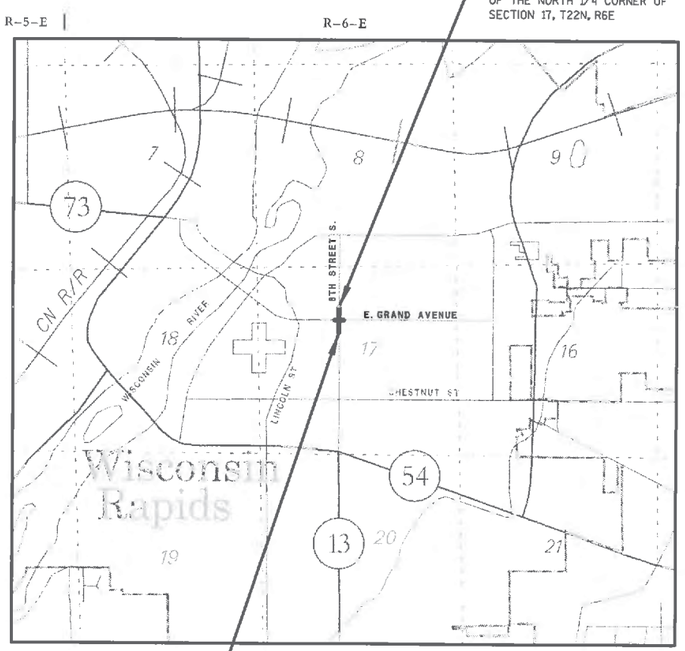
DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

EXISTING HIGHWAY RIGHT-OF-WAY FOR 8TH STREET ESTABLISHED FROM EAST SIDE ASSESSOR'S PLAT NO. 30, SARGENT'S PLAT OF GRAND RAPIDS, CSM 562, CSM 504, CSM 505, QUIT CLAIM DEED DOC. 879475.

EXISTING HIGHWAY RIGHT-OF-WAY FOR EAST GRAND AVENUE ESTABLISHED FROM EAST SIDE ASSESSOR'S PLAT NO. 30, SARGENT'S PLAT OF GRAND RAPIDS, CSM 504, QUIT CLAIM DEED DOC. 879475.

A TEMPORARY LIMITED EASEMENT (T.L.E.) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE. INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (T.L.E.'S) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

END RELOCATION ORDER
STA. 15+75.00
2171.20 FT SOUTH AND 26.54 FT WEST OF THE NORTH 1/4 CORNER OF SECTION 17, T22N, R6E



BEGIN RELOCATION ORDER
STA. 12+25.00
2521.18 FT SOUTH AND 30.64 FT WEST OF THE NORTH 1/4 CORNER OF SECTION 17, T22N, R6E

N

LAYOUT
SCALE 0 — 1/2 MI.

TOTAL NET LENGTH OF CENTERLINE 0.066 MI.

ACCEPTED FOR
CITY OF WISCONSIN RAPIDS
DATE: 9/7/16 (Signature)

ORIGINAL PLAT PREPARED BY

WISCONSIN
HEATHER S. BARTELT
S-2797
MADISON
WI
LAND SURVEYOR
7/13/16

REVISION DATE
12/02/16

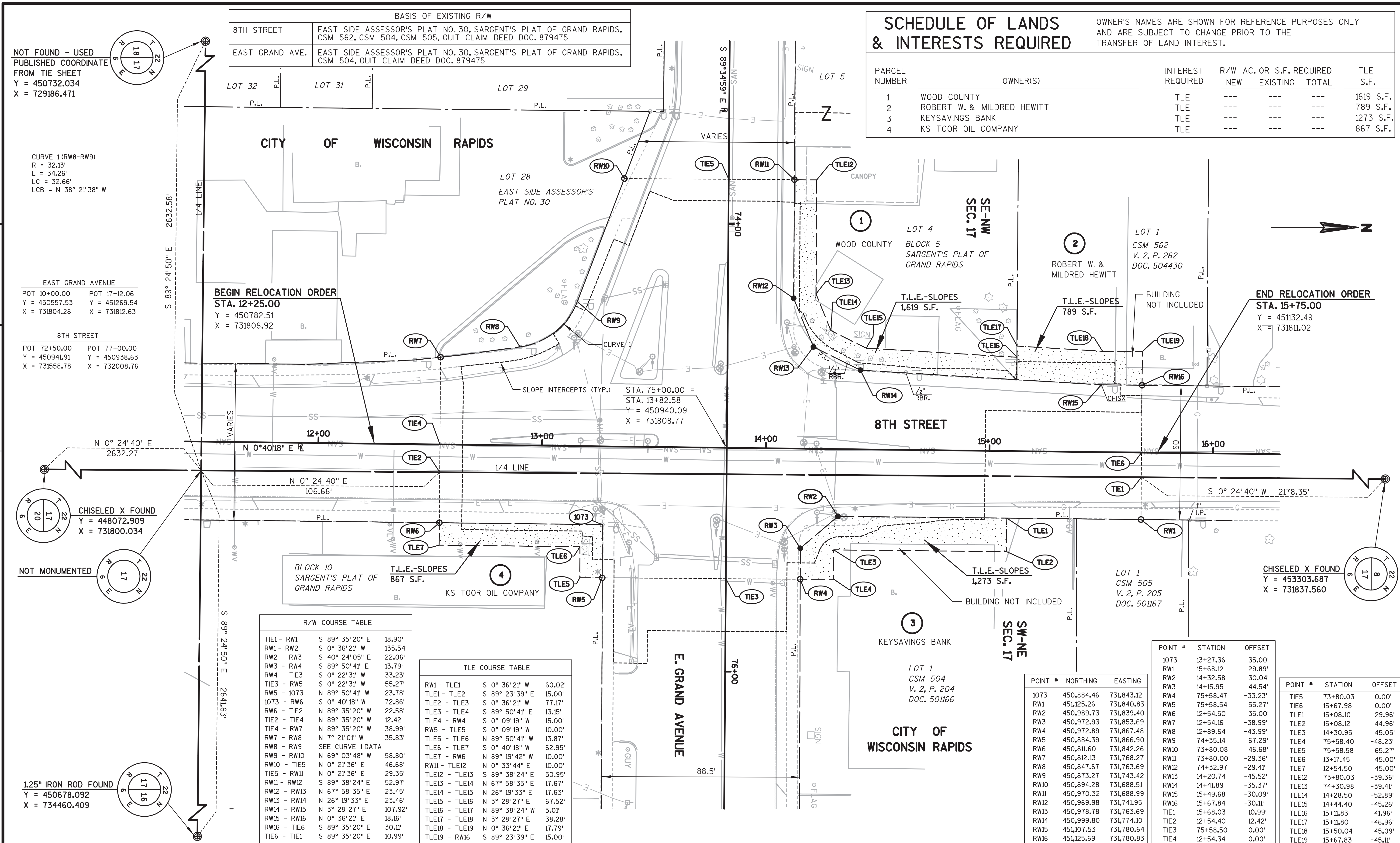
FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\040100_rt.dgn PLOT DATE : 7/13/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 50

BASIS OF EXISTING R/W	
8TH STREET	EAST SIDE ASSESSOR'S PLAT NO. 30, SARGENT'S PLAT OF GRAND RAPIDS, CSM 562, CSM 504, CSM 505, QUIT CLAIM DEED DOC. 879475
EAST GRAND AVE.	EAST SIDE ASSESSOR'S PLAT NO. 30, SARGENT'S PLAT OF GRAND RAPIDS, CSM 504, QUIT CLAIM DEED DOC. 879475

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W AC. OR S.F. REQUIRED NEW	EXISTING	TOTAL	TLE S.F.
1	WOOD COUNTY	TLE	---	---	---	1619 S.F.
2	ROBERT W. & MILDRED HEWITT	TLE	---	---	---	789 S.F.
3	KEYSAVINGS BANK	TLE	---	---	---	1273 S.F.
4	KS TOOR OIL COMPANY	TLE	---	---	---	867 S.F.



R/W COURSE TABLE		
TIE1 - RW1	S 89° 35' 20" E	18.90'
RW1 - RW2	S 0° 36' 21" W	135.54'
RW2 - RW3	S 40° 24' 05" E	22.06'
RW3 - RW4	S 89° 50' 41" E	13.79'
RW4 - TIE3	S 0° 22' 31" W	33.23'
TIE3 - RW5	S 0° 22' 31" W	55.27'
RW5 - 1073	N 89° 50' 41" W	23.78'
1073 - RW6	S 0° 40' 18" W	72.86'
RW6 - TIE2	N 89° 35' 20" W	22.58'
TIE2 - TIE4	N 89° 35' 20" W	12.42'
TIE4 - RW7	N 89° 35' 20" W	38.99'
RW7 - RW8	N 7° 21' 01" W	35.83'
RW8 - RW9	SEE CURVE 1 DATA	
RW9 - RW10	N 69° 03' 48" W	58.80'
RW10 - TIE5	N 0° 21' 36" E	46.68'
TIE5 - RW11	N 0° 21' 36" E	29.35'
RW11 - RW12	S 89° 38' 24" E	52.97'
RW12 - RW13	N 67° 58' 35" E	23.45'
RW13 - RW14	N 26° 19' 33" E	23.46'
RW14 - RW15	N 3° 28' 27" E	107.92'
RW15 - RW16	N 0° 36' 21" E	18.16'
RW16 - TIE6	S 89° 35' 20" E	30.11'
TIE6 - TIE1	S 89° 35' 20" E	10.99'

TLE COURSE TABLE		
RW1 - TLE1	S 0° 36' 21" W	60.02'
TLE1 - TLE2	S 89° 23' 39" E	15.00'
TLE2 - TLE3	S 0° 36' 21" W	77.17'
TLE3 - TLE4	S 89° 50' 41" E	13.15'
TLE4 - RW4	S 0° 09' 19" W	15.00'
RW5 - TLE5	S 0° 09' 19" W	10.00'
TLE5 - TLE6	N 89° 50' 41" W	13.87'
TLE6 - TLE7	S 0° 40' 18" W	62.95'
TLE7 - RW6	N 89° 19' 42" W	10.00'
RW11 - TLE12	N 0° 33' 44" E	10.00'
TLE12 - TLE13	S 89° 38' 24" E	50.95'
TLE13 - TLE14	N 67° 58' 35" E	17.67'
TLE14 - TLE15	N 26° 19' 33" E	17.63'
TLE15 - TLE16	N 3° 28' 27" E	67.52'
TLE16 - TLE17	N 89° 38' 24" W	5.01'
TLE17 - TLE18	N 3° 28' 27" E	38.28'
TLE18 - TLE19	N 0° 36' 21" E	17.79'
TLE19 - RW16	S 89° 23' 39" E	15.00'

POINT #	NORTHING	EASTING
1073	450,884.46	731,843.12
RW1	451,125.26	731,840.83
RW2	450,989.73	731,839.40
RW3	450,972.93	731,853.69
RW4	450,972.89	731,867.48
RW5	450,884.39	731,866.90
RW6	450,811.60	731,842.26
RW7	450,812.13	731,768.27
RW8	450,847.67	731,763.69
RW9	450,873.27	731,743.42
RW10	450,894.28	731,688.51
RW11	450,970.32	731,688.99
RW12	450,969.98	731,741.95
RW13	450,978.78	731,763.69
RW14	450,999.80	731,774.10
RW15	451,107.53	731,780.64
RW16	451,125.69	731,780.83

POINT #	STATION	OFFSET
1073	13+27.36	35.00'
RW1	15+68.12	29.89'
RW2	14+32.58	30.04'
RW3	14+15.95	44.54'
RW4	75+58.47	-33.23'
RW5	75+58.54	55.27'
RW6	12+54.50	35.00'
RW7	12+54.16	-38.99'
RW8	12+89.64	-43.99'
RW9	74+35.14	67.29'
RW10	73+80.08	46.68'
RW11	73+80.00	-29.36'
RW12	74+32.97	-29.41'
RW13	14+20.74	-45.52'
RW14	14+41.89	-35.37'
RW15	15+49.68	-30.09'
RW16	15+67.84	-30.11'
TIE1	15+68.03	10.99'
TIE2	12+54.40	12.42'
TIE3	75+58.50	0.00'
TIE4	12+54.34	0.00'

POINT #	STATION	OFFSET
TIE5	73+80.03	0.00'
TIE6	15+67.98	0.00'
TLE1	15+08.10	29.96'
TLE2	15+08.12	44.96'
TLE3	14+30.95	45.05'
TLE4	75+58.40	-48.23'
TLE5	75+58.58	65.27'
TLE6	13+17.45	45.00'
TLE7	12+54.50	45.00'
TLE12	73+80.03	-39.36'
TLE13	74+30.98	-39.41'
TLE14	14+28.50	-52.89'
TLE15	14+44.40	-45.26'
TLE16	15+11.83	-41.96'
TLE17	15+11.80	-46.96'
TLE18	15+50.04	-45.09'
TLE19	15+67.83	-45.11'

REVISION DATE: 12/02/16	DATE 7/13/16	SCALE, FEET 0 40	HWY: LOCAL STREET	STATE R/W PROJECT NUMBER 6999-07-18	PLAT SHEET 4.2	
	GRID FACTOR N/A		COUNTY: WOOD	CONSTRUCTION PROJECT NUMBER 6999-07-88	PS&E SHEET	E

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
210	14+08, 25' RT	N.E. CORNER OF 8TH ST. AND E. GRAND AVE. BOLT UNDER DATE ON HYDRANT FLANGE.	1030.83

PI STA. 10+00.00
Y=450,557.53
X=731,804.28

BRAR, INDERBANS S
& KULJEET K

EAST GRAND AVENUE

S 89° 34' 59" E

MICHAEL MCKELVEY

PI STA. 17+12.06
Y=451,269.54
X=731,812.63

ROBERT W &
MILDRED HEWITT

ROBERT G &
MARLENE M HOLTZ

N

STA. 14+88 LT.
CONSTRUCT C.E.

STA. 15+35 LT.
CONSTRUCT C.E.

8TH STREET SOUTH

N 0° 40' 18" E

STA. 13+82.58 =
STA. 75+00.00

WISCONSIN RAPIDS WATER WORKS
& LIGHTING COMMISSION (LIGHTING)

BEGIN PROJECT
STA. 12+64.50
SAWCUT REQ'D
MATCH EXISTING
Y=450,822.01
X=731,807.38

CITY OF WISCONSIN RAPIDS
ELECTRIC (SIGNAL)

KS TOOR OIL COMPANY LC

STA. 12+98 RT.
REMOVE EXISTING C.E.

BM #210

SLOPE INTERCEPT (TYP.)

KEYSAVINGS BANK SA

WISCONSIN RAPIDS WATER WORKS
& LIGHTING COMMISSION (WATER)

WE ENERGIES GAS

END PROJECT
STA. 14+98.10
SAWCUT REQ'D
MATCH EXISTING

TOMMY C &
CHERYLA WOLTMAN

PI 12+64.50
EL 1,029.23

PI 13+78.42
EL 1,029.93

PI 14+98.10
EL 1,029.34

PROPOSED PROFILE

+0.62%

-0.50%

EXISTING GROUND

12+00	12+25	12+50	12+75	13+00	13+25	13+50	13+75	14+00	14+25	14+50	14+75	15+00	15+25	15+50
1,028.82	1,029.01	1,029.10	1,029.18	1,029.26	1,029.29	1,029.23	1,029.45	1,029.95	1,029.60	1,029.88	1,029.76	1,029.58	1,029.91	1,029.50	1,029.83	1,030.21	1,029.70	1,029.86	1,029.58	1,029.43	1,029.45	1,029.33	1,029.23	1,029.13	1,028.99	1,028.86

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	PLAN AND PROFILE - 8TH STREET SOUTH	SHEET 57	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\050101_pp.dgn PLOT DATE : 12/1/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 30

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
209	72+20, 43' RT	S.E. CORNER OF 7TH ST. AND E. GRAND AVE. NORTH BOLT ON HYDRANT.	1030.23
210	14+08, 25' RT	N.E. CORNER OF 8TH ST. AND E. GRAND AVE. BOLT UNDER DATE ON HYDRANT FLANGE.	1030.83

PI STA. 72+50.00
Y=450,941.91
X=731,558.78

PI STA. 77+00.00
Y=450,938.63
X=732,008.77

N

MICHAEL MCKELVEY

KEYSAVINGS BANK SA

SLOPE INTERCEPT (TYP.)

TLE

R/W

BM #210

N 0° 40' 18" E

S 89° 34' 59" E

EAST GRAND AVENUE

STA. 75+00.00 =
STA. 13+82.58

WISCONSIN RAPIDS WATER WORKS & LIGHTING COMMISSION (WATER)

7TH STREET SOUTH

BM #209

BEGIN CONSTRUCTION
STA. 73+89.67
SAWCUT REQ'D
MATCH EXISTING
Y=450,940.89
X=731,698.44

P.L.

710 E. GRAND LLC

BRAR, INDERBANS S
& KULJEET K

8TH STREET SOUTH

STA. 75+75 RT.
REMOVE EXISTING C.E.

CITY OF WISCONSIN RAPIDS ELECTRIC (SIGNAL)

WISCONSIN RAPIDS WATER WORKS & LIGHTING COMMISSION (LIGHTING)

KS TOOR OIL
COMPANY LC

CITY OF WISCONSIN RAPIDS STORM SEWER

CITY OF WISCONSIN RAPIDS SANITARY SEWER

END CONSTRUCTION
STA. 75+82.00
SAWCUT REQ'D
MATCH EXISTING

LESTER, TRUST &
PETER SMART

BEGIN PROFILE
STA. 74+16.67

EXISTING GROUND

PROPOSED PROFILE

PI 74+78.00
El 1,029.71

PI 75+22.00
El 1,029.71

PI 75+58.51
El 1,029.35

END PROFILE
STA. 75+82.00

1,029.29

1,029.38

+0.69%

-0.99%

+0.11%

73+00	73+25	73+50	73+75	74+00	74+25	74+50	74+75	75+00	75+25	75+50	75+75	76+00	76+25	76+50	76+75	77+00
1,028.60	1,028.72	1,028.79	1,028.85	1,029.03	1,029.22	1,029.35	1,029.52	1,029.69	1,029.71	1,029.68	1,029.43	1,029.37	1,029.35	1,029.36	1,029.33	1,029.22	1,029.11

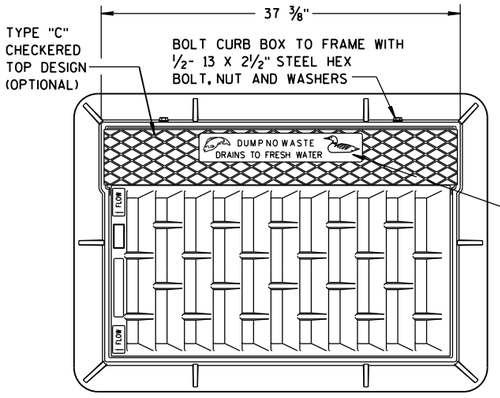
PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	PLAN AND PROFILE - EAST GRAND AVENUE	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\050102_pp.dgn PLOT DATE : 12/1/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

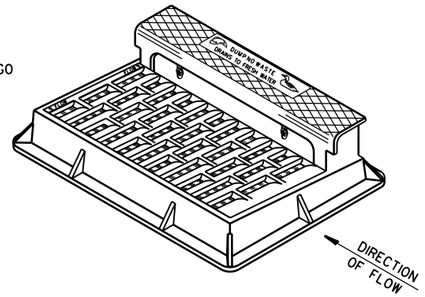
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-01	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08A09-01	CATCH BASINS 2X3-FT AND 2.5X3-FT
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-17A	CURB RAMPS TYPES 1 AND 1-A
08D05-17B	CURB RAMPS TYPES 2 AND 3
08D05-17C	CURB RAMPS TYPES 4A AND 4A1
08D05-17D	CURB RAMPS TYPE 4B AND 4B1
08D05-17E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-09	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09E01-14A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09F08-04	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)
09F13-04	LOOP DETECTOR INSTALLED IN EXISTING ASPHALTIC PAVEMENT
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
11B02-02	CONCRETE MEDIAN NOSE
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C18-03A	CONCRETE PAVEMENT JOINTING
13C18-03B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-03C	CONCRETE PAVEMENT JOINT TIES
13C18-03D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-13B	PAVEMENT MARKING WORDS
15C07-13C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D30-03A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

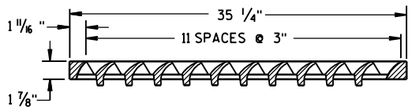
6

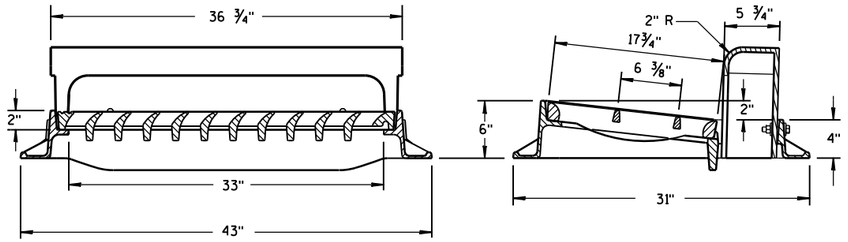


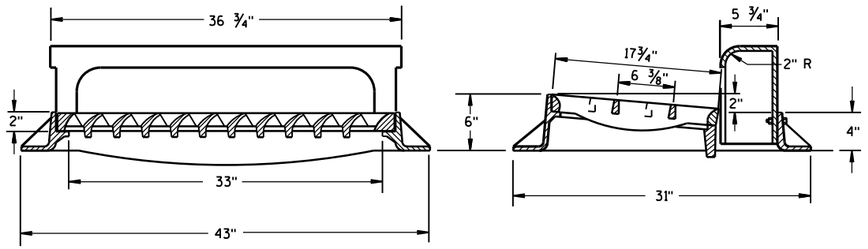
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

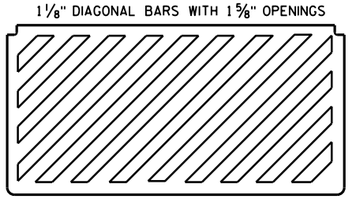






TYPE "H"

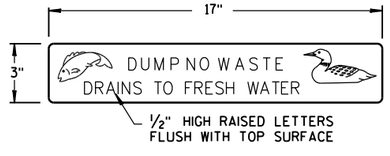
NOTE: EITHER CASTING IS ACCEPTABLE



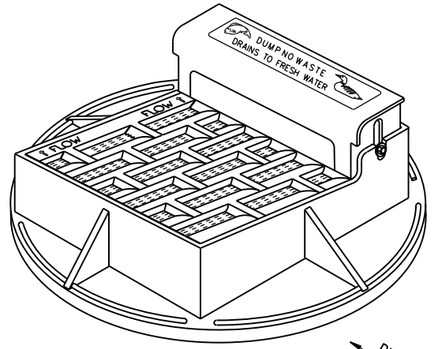
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

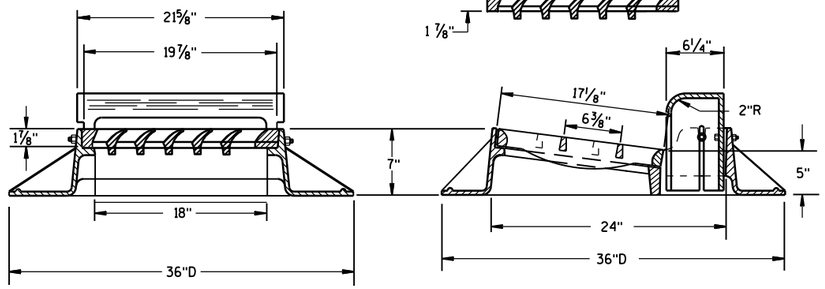


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



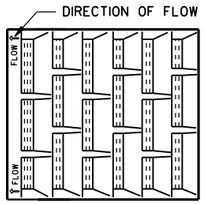
TYPE "A"

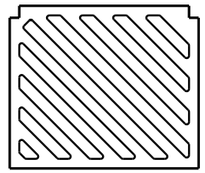
GENERAL NOTES

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.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

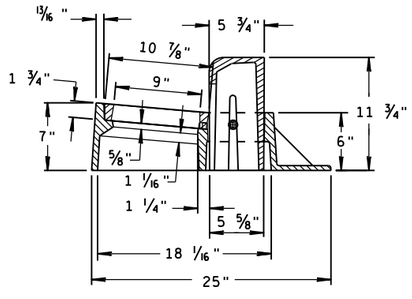


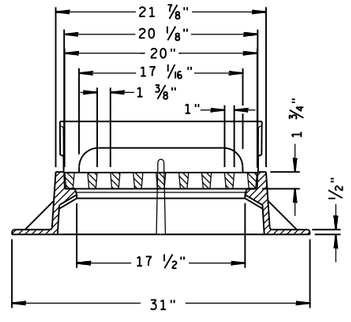


SPECIAL GRATE FOR TYPE "A" COVER

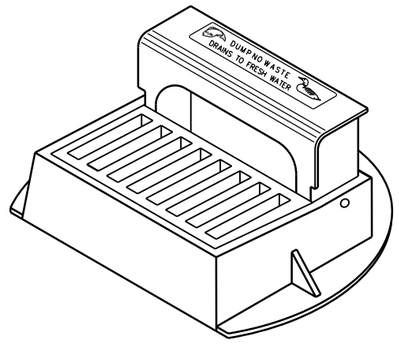
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"



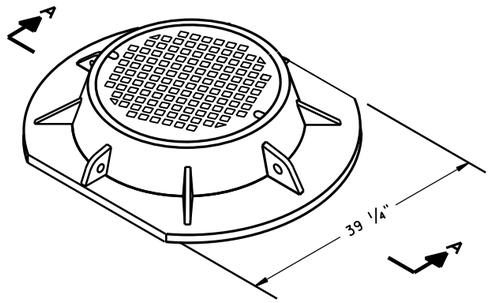
INLET COVERS TYPE A, H, A-S, H-S & Z

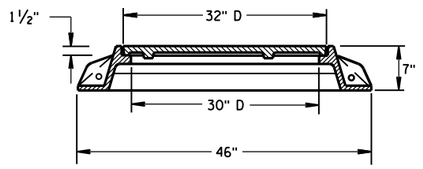
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

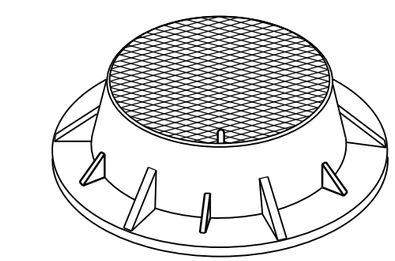
S.D.D. 8 A 5-19a

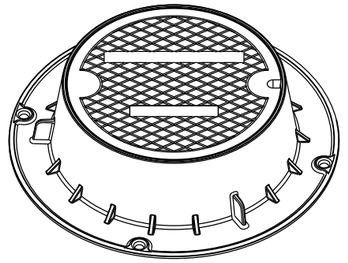
S.D.D. 8 A 5-19a

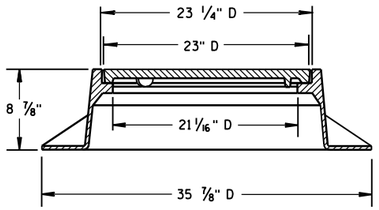


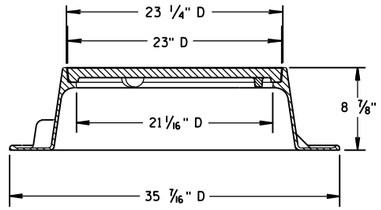


SECTION A-A
TYPE "K"









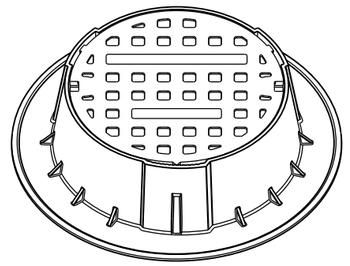
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

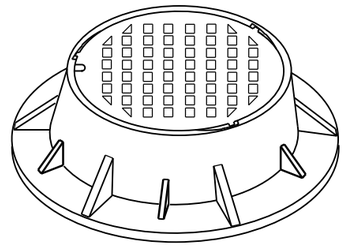
GENERAL NOTES

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.

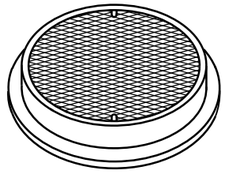
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

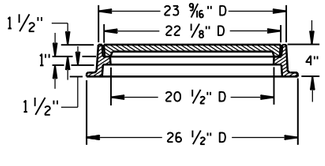
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



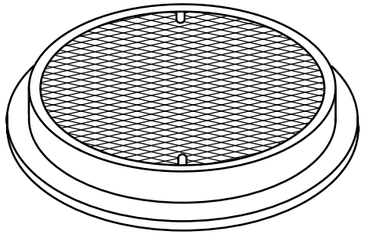


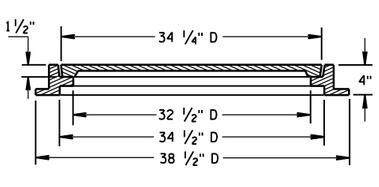
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



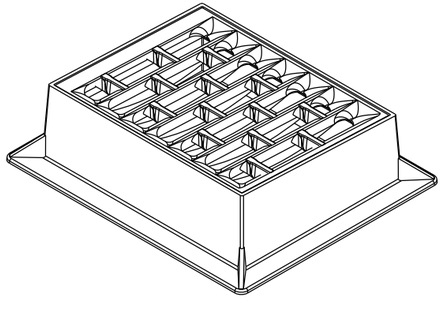


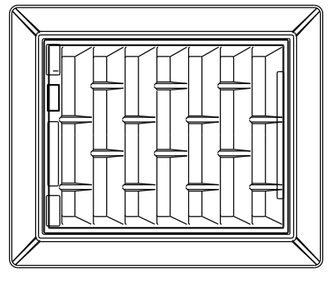
TYPE "L"

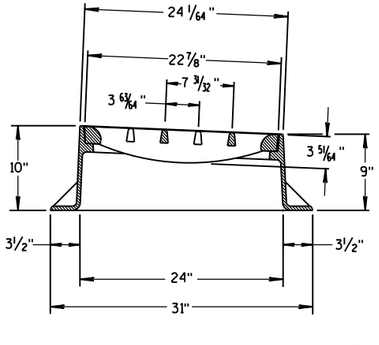


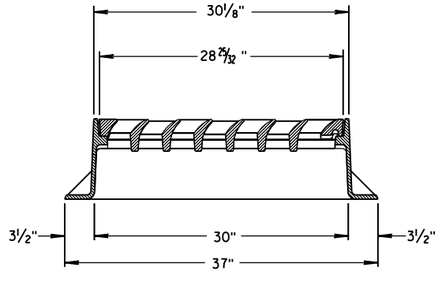


TYPE "M"









INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

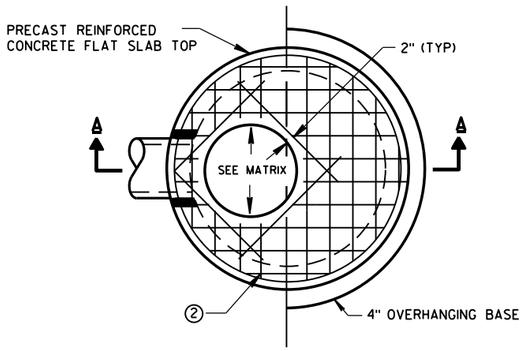
APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

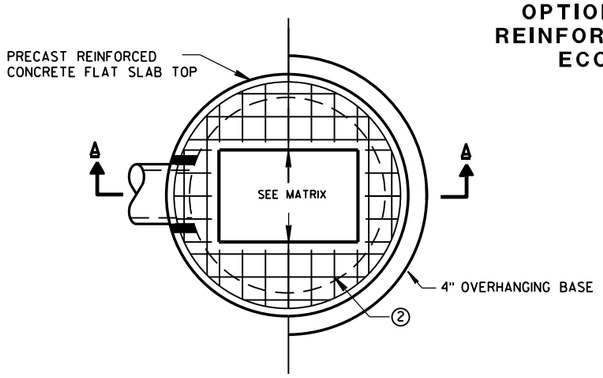
S.D.D. 8 A 5-19d

6

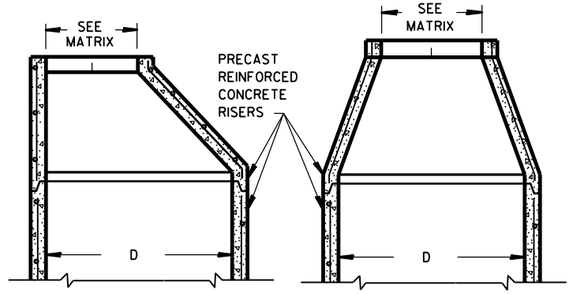
S.D.D. 8 A 5-19d



PLAN VIEW CIRCULAR OPENING

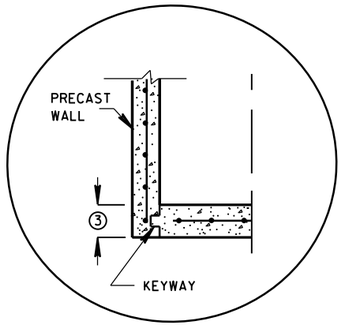


PLAN VIEW RECTANGULAR OPENING

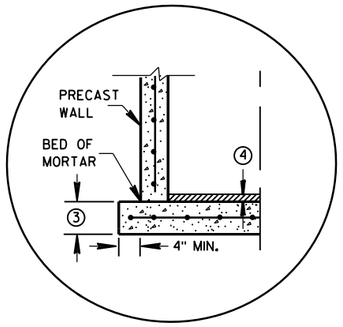


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

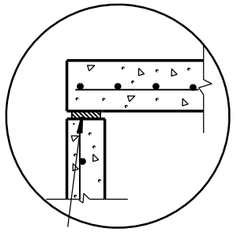


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

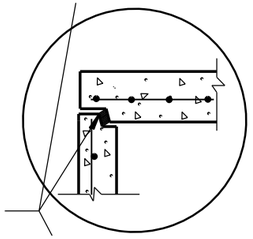


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

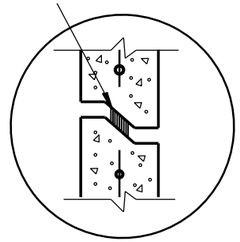


TOP WITH PLAIN END JOINT



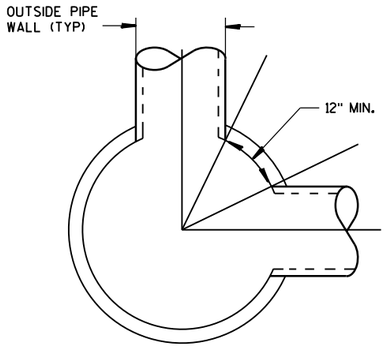
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT

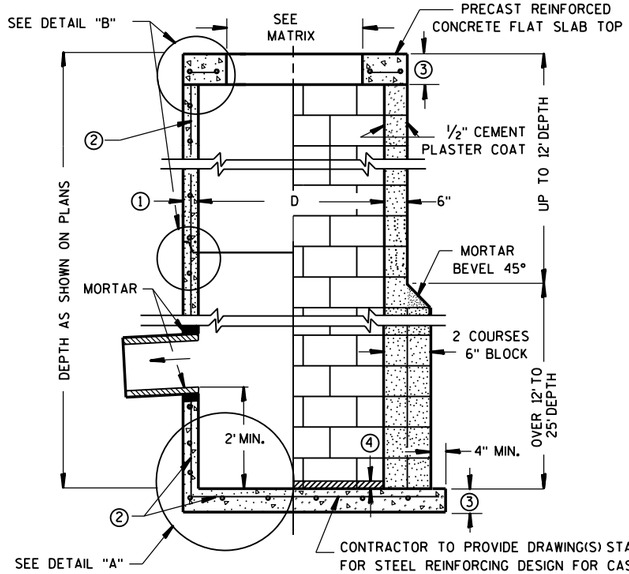


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE 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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT)											
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT-6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

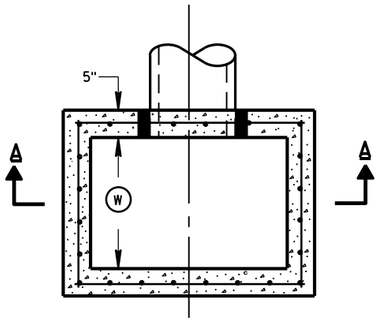
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

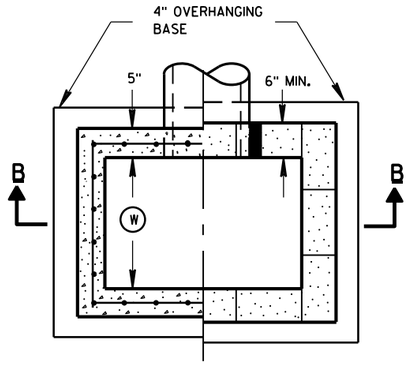
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

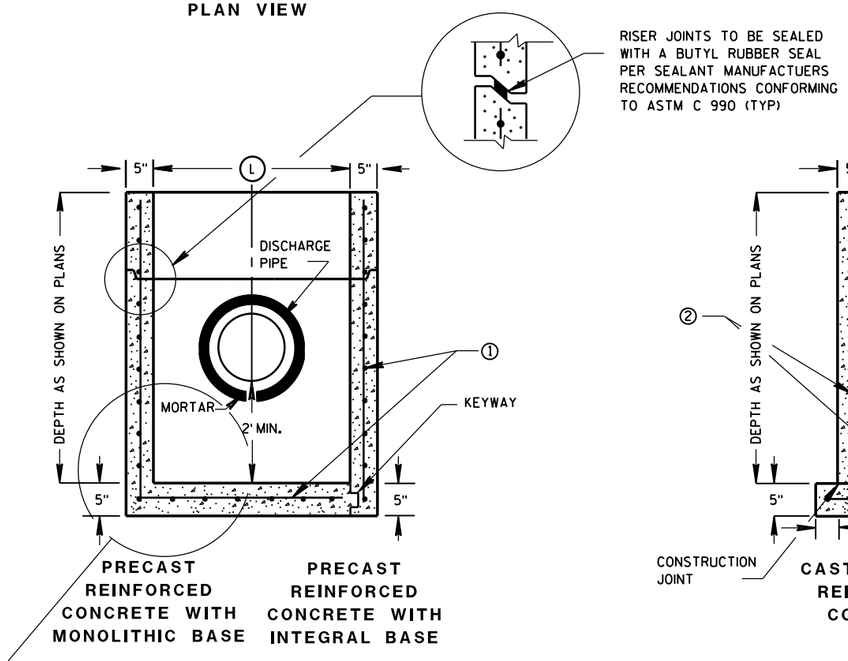
S.D.D. 8 A 8-1



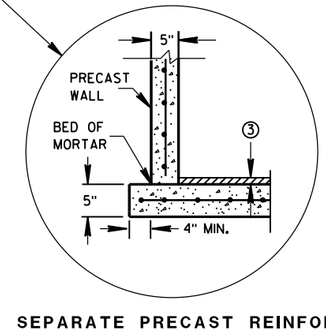
PLAN VIEW



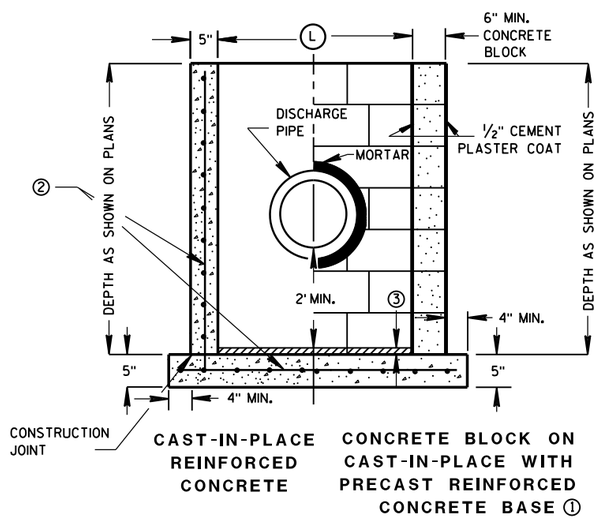
PLAN VIEW



SECTION A-A



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



SECTION B-B

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST CATCH BASIN UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

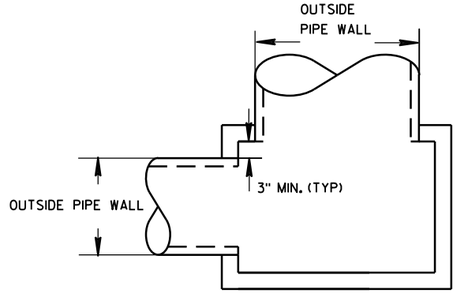
③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE		INLET COVER TYPE	F	ALL H'S
	WIDTH (W) (FT)	LENGTH (L) (FT)		
2X3-FT	2	3		X
2.5X3-FT	2.5	3	X	

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

CATCH BASINS 2X3-FT AND 2.5X3-FT

CATCH BASINS 2X3-FT AND 2.5X3-FT

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FHWA

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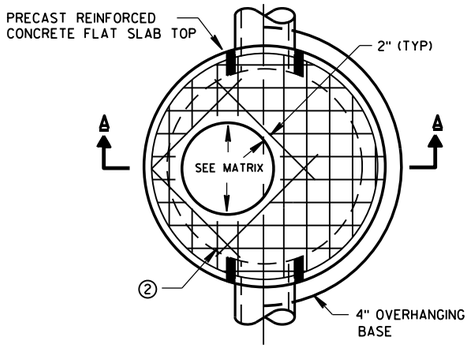
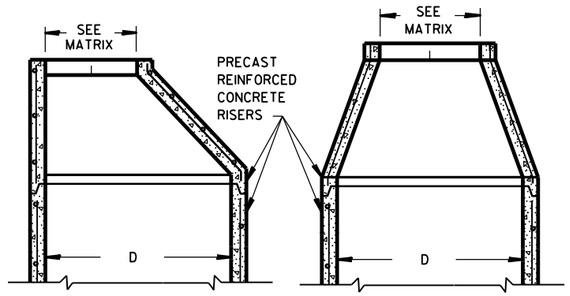
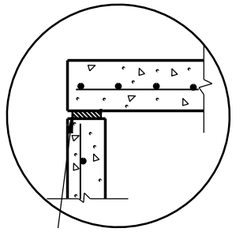


PLAN VIEW CIRCULAR OPENING

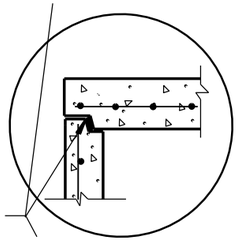


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

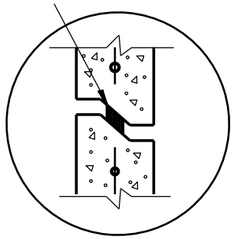


TOP WITH PLAIN END JOINT



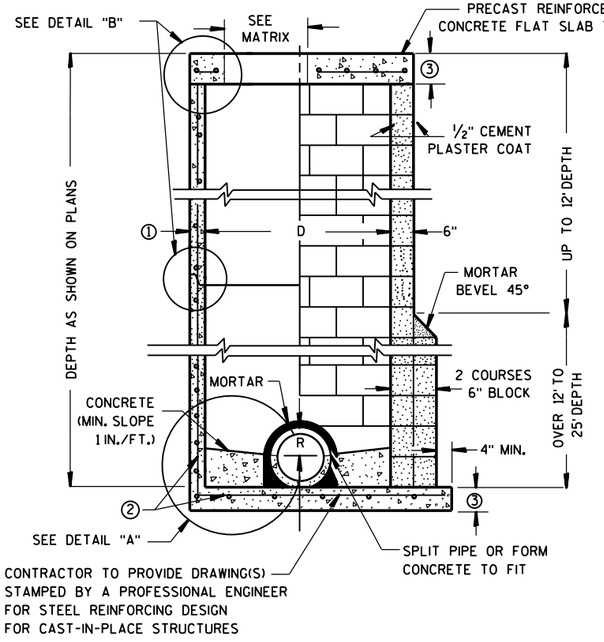
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



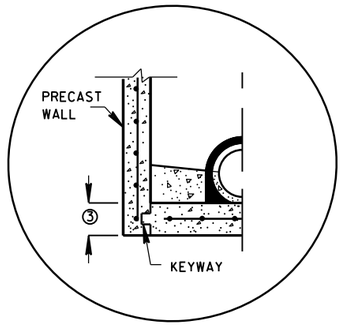
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

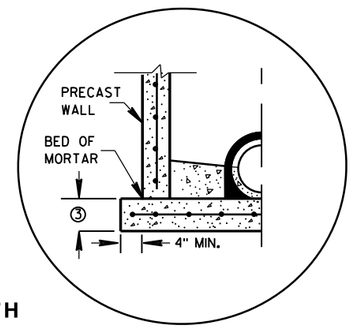


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

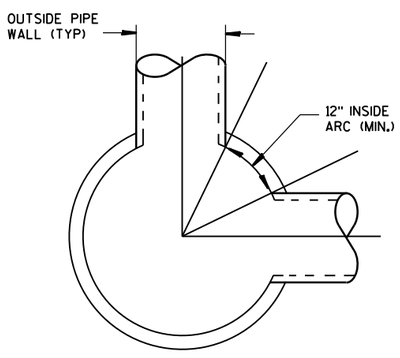


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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6/5/2012 — DATE
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MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

6
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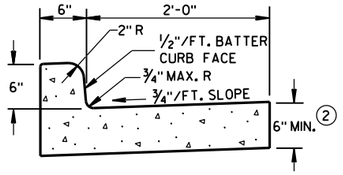
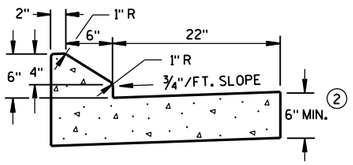
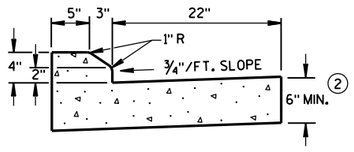


TYPES A & D ①

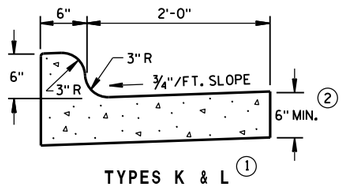


6" SLOPED CURB TYPES G & J ①

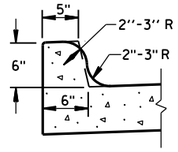


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

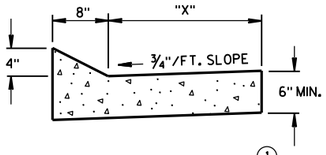


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

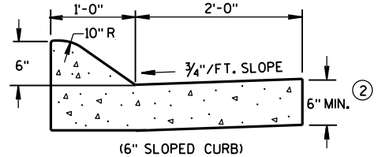
CONCRETE CURB & GUTTER 30"



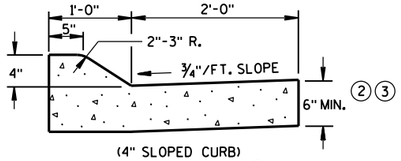
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"

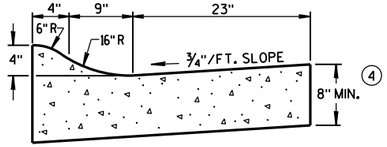


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

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.

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 FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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 TBTT.

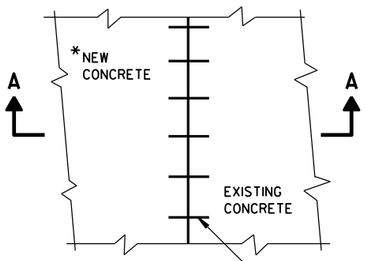
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

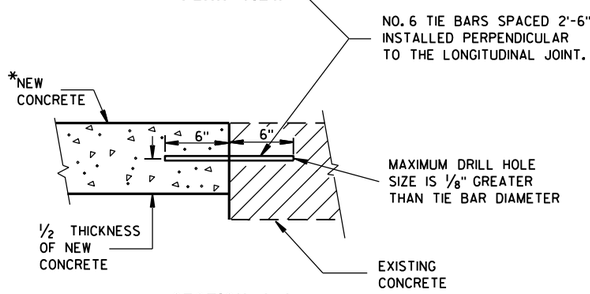
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



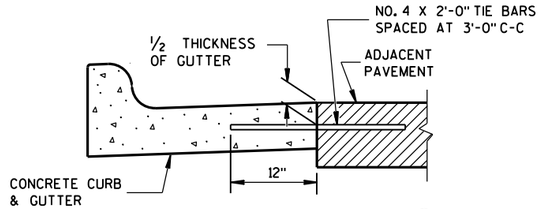
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

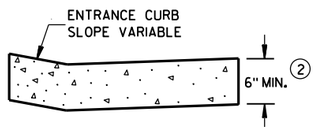


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

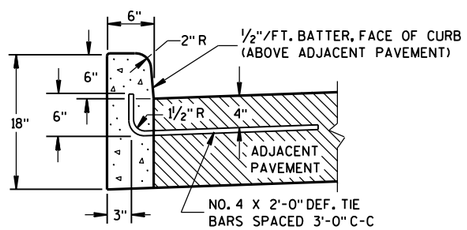


TYPICAL TIE BAR LOCATION ①

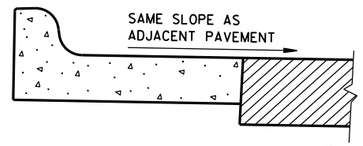


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

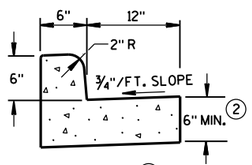


① TYPES A & D



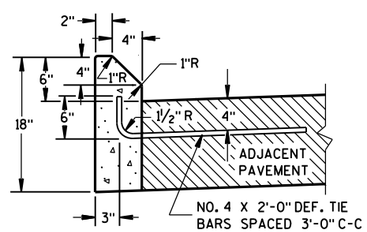
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



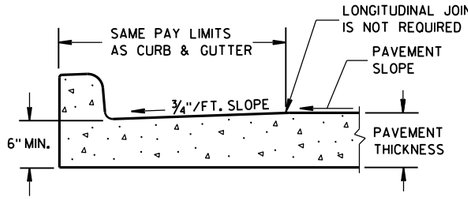
① TYPES A & D

CONCRETE CURB & GUTTER 18"

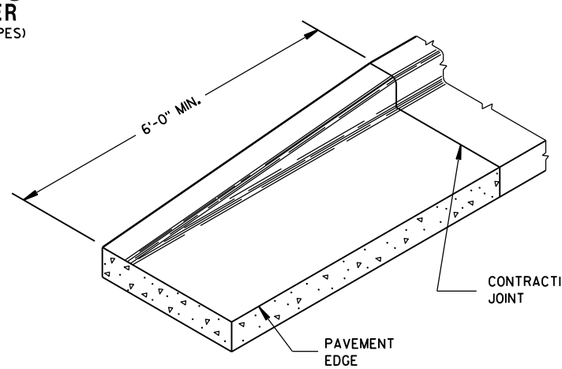


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

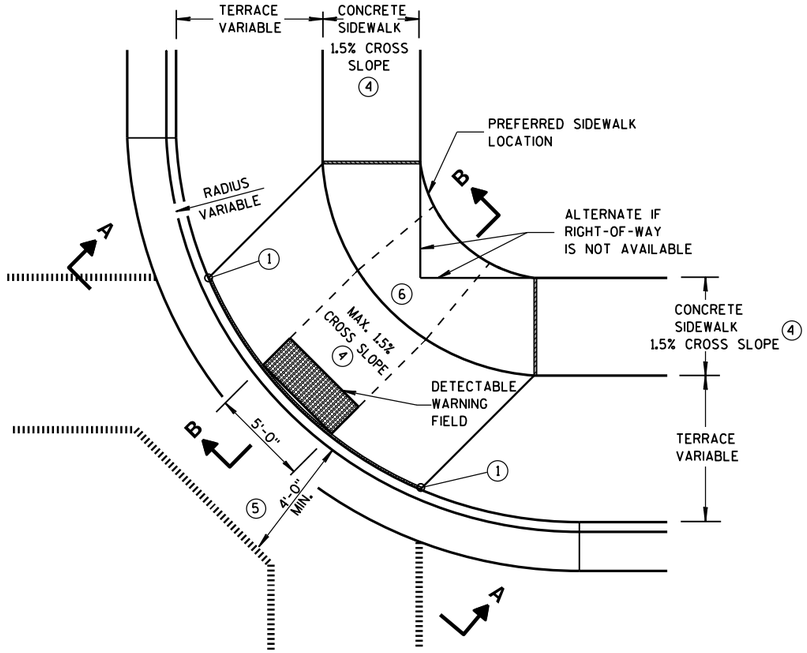
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

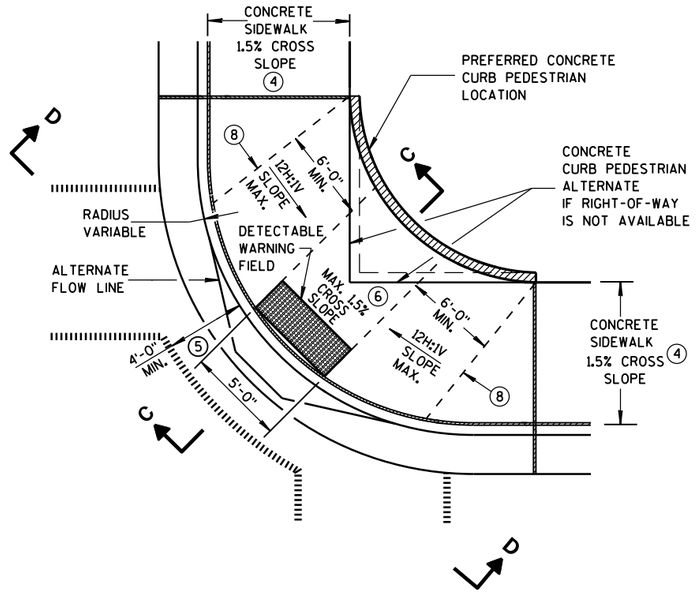
S.D.D. 8 D 1-19



PLAN VIEW

TYPE 1 RAMP

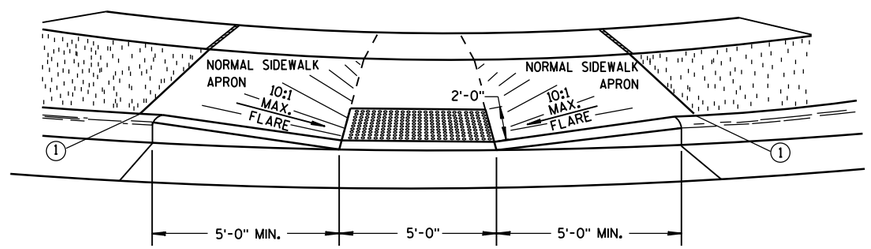
(CENTER OF CORNER RADIUS)



PLAN VIEW

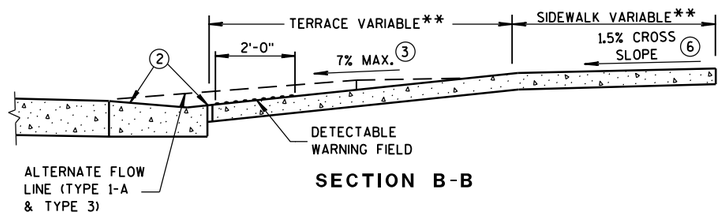
TYPE 1-A RAMP

(NO TERRACE)

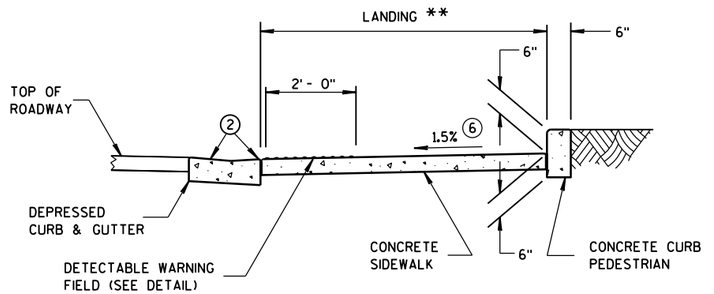


VIEW A-A

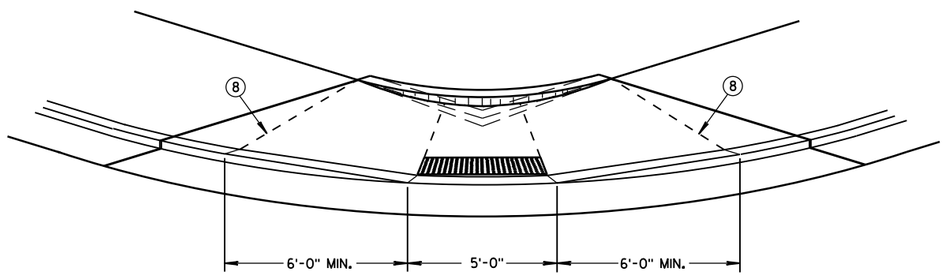
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

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.

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 11%. 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 NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% 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 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 (MINIMUM 4 FEET X 4 FEET).

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

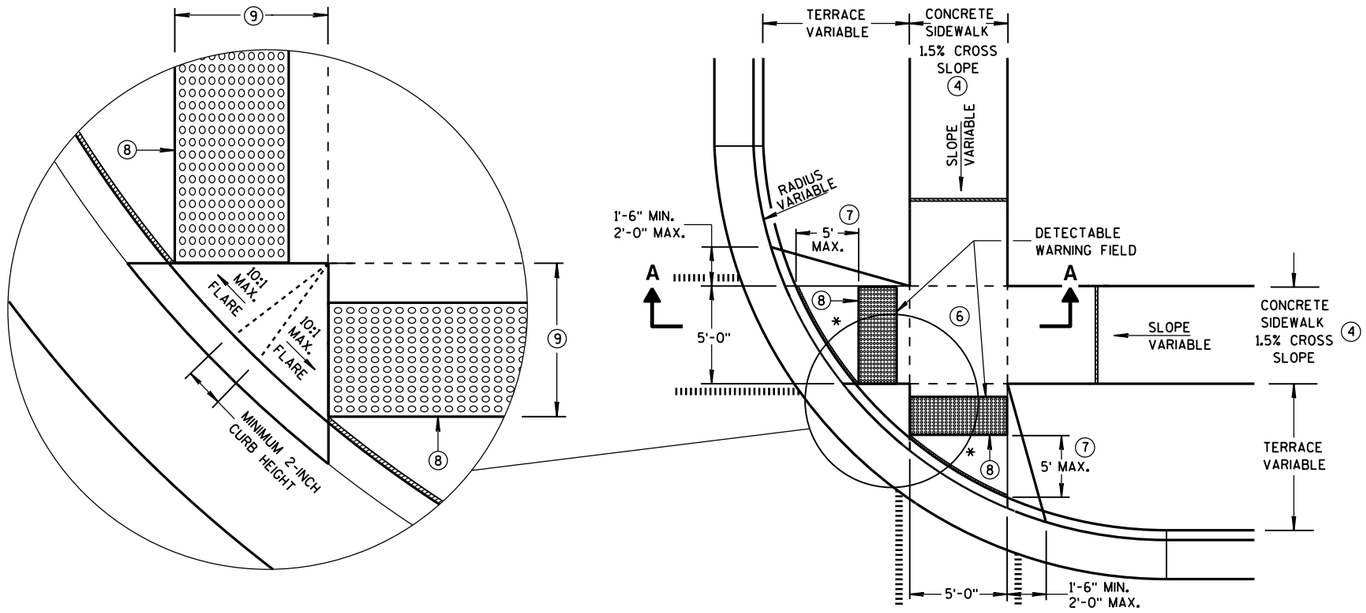
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-17a

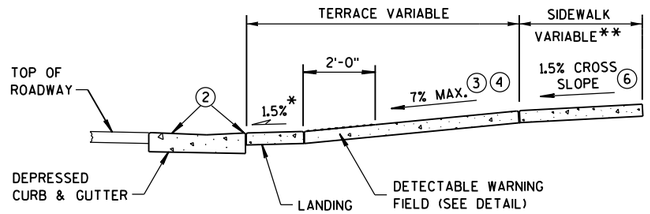


PLAN VIEW

TYPE 2 RAMP

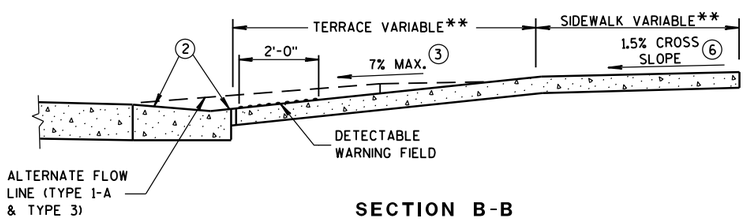
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B

GENERAL NOTES

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. 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 NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% 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.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

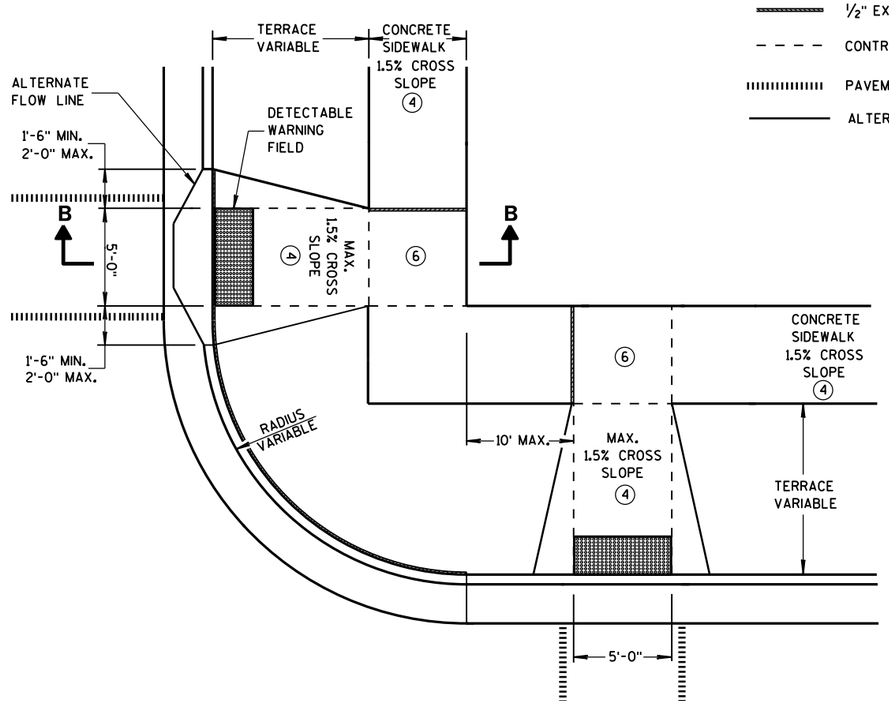
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



PLAN VIEW

TYPE 3 RAMP

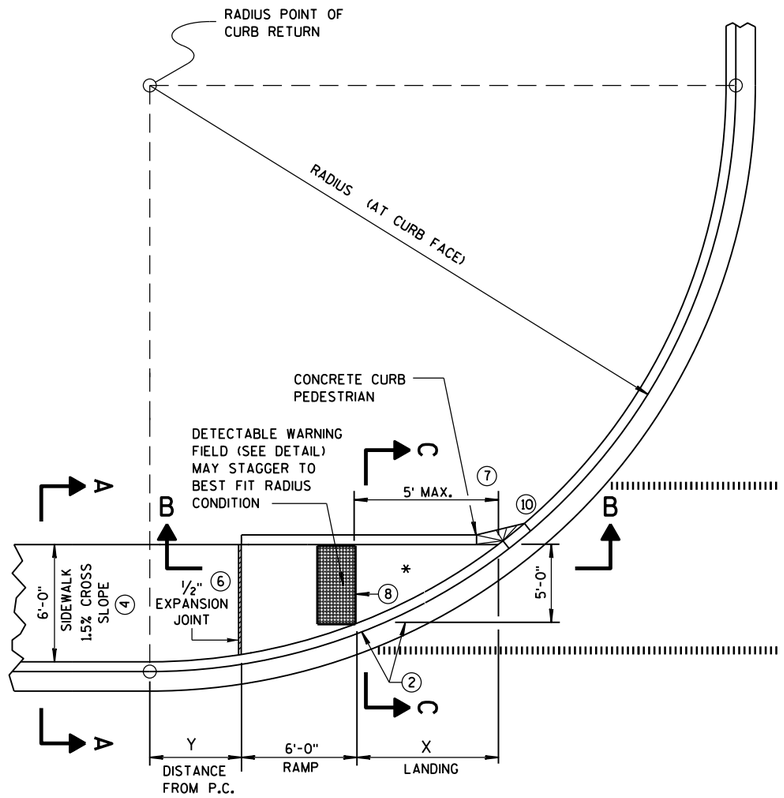
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

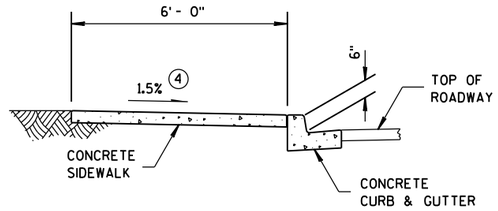
S.D.D. 8 D 5-17b



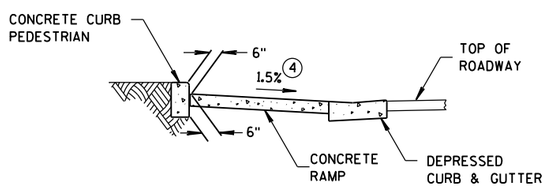
CURB RAMP TYPE 4A
PLAN VIEW

RADIUS (AT CURB FACE)	X	Y
20 FEET	7'-11"	0'-2"
30 FEET	10'-2¾"	1'-7½"
40 FEET	12'-1¼"	2'-10"
50 FEET	13'-8¾"	3'-10¾"
60 FEET	15'-2"	4'-10¼"

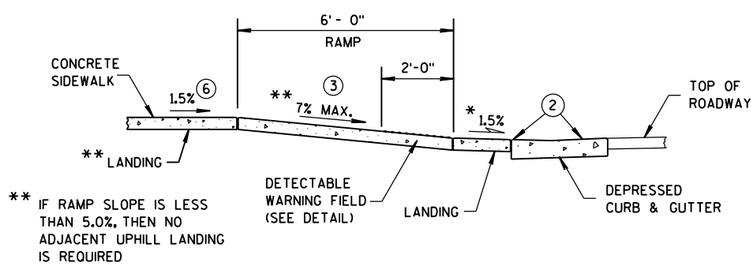
INTERMEDIATE RADII CAN BE INTERPOLATED



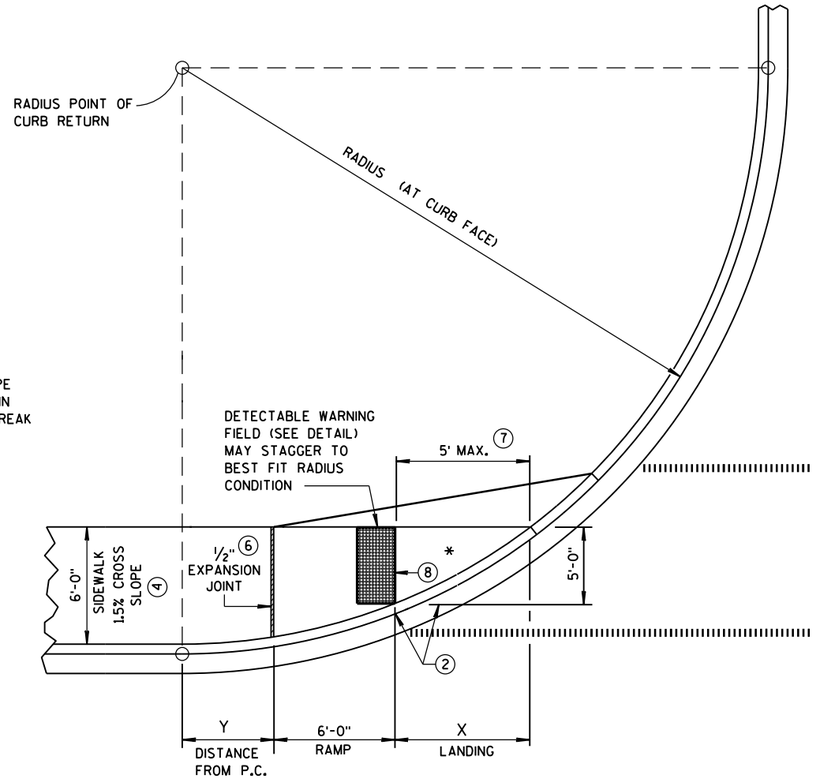
SECTION A-A FOR TYPE 4A



SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

CURB RAMP TYPE 4A1
PLAN VIEW

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.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. 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 NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

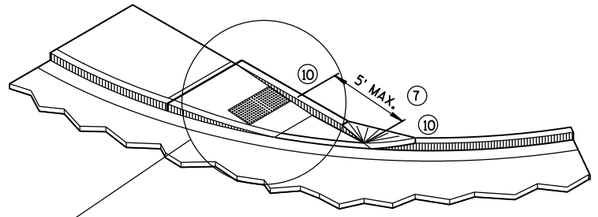
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

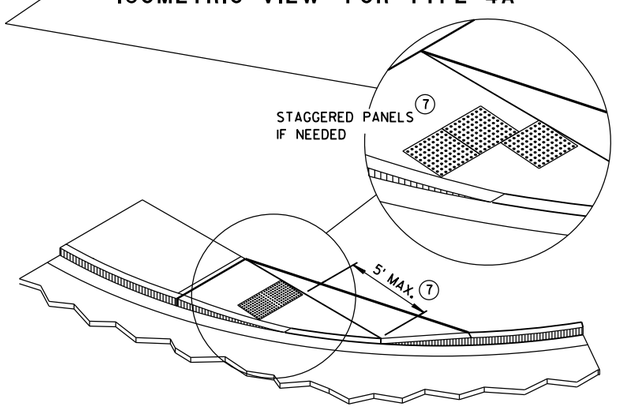
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

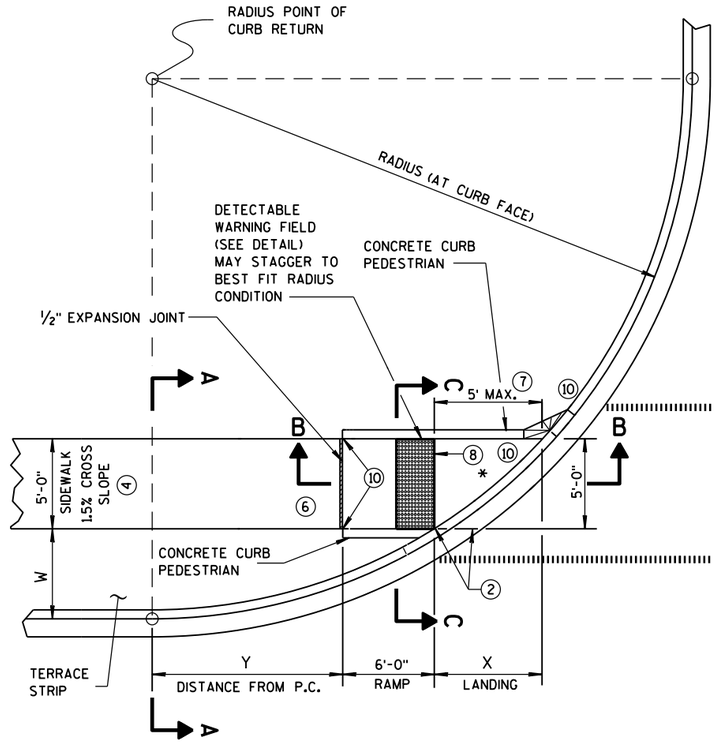
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

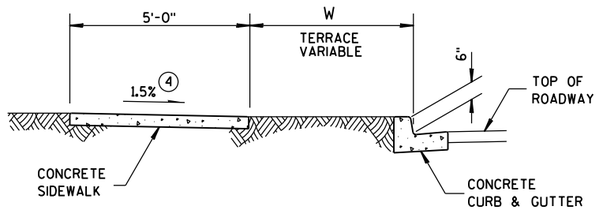
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

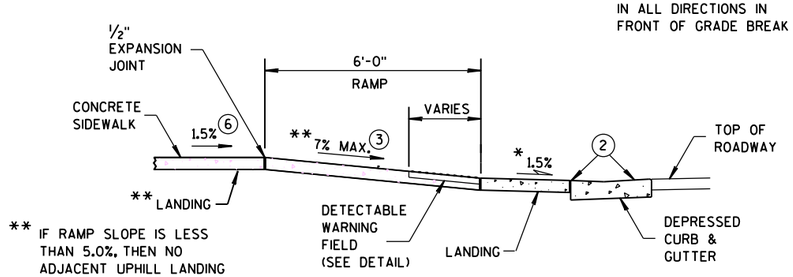
S.D.D. 8 D 5-17c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



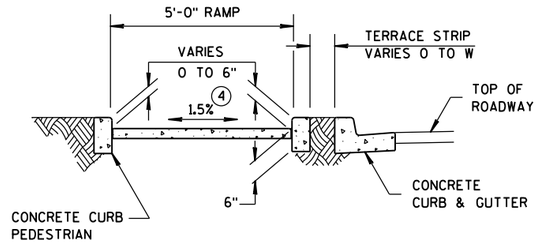
SECTION B-B FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-6¾"	3'-3"	8'-6¼"
30 FEET	7'-9¼"	5'-10½"	6'-9½"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"
40 FEET	9'-4"	7'-10"	8'-2¾"	10'-3"	7'-4¾"	12'-3¾"	6'-8½"	14'-1¼"	6'-1¾"	15'-8½"
50 FEET	10'-8"	9'-6½"	9'-5½"	12'-3¼"	8'-6½"	14'-7½"	7'-9¾"	16'-8¼"	7'-2½"	18'-6¼"
60 FEET	11'-10¼"	11'-0¾"	10'-6½"	14'-1¼"	9'-6½"	16'-8½"	8'-9¼"	18'-11¾"	8'-1½"	21'-0½"

INTERMEDIATE RADII CAN BE INTERPOLATED

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.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

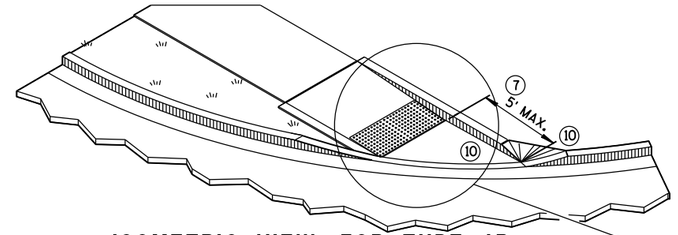
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

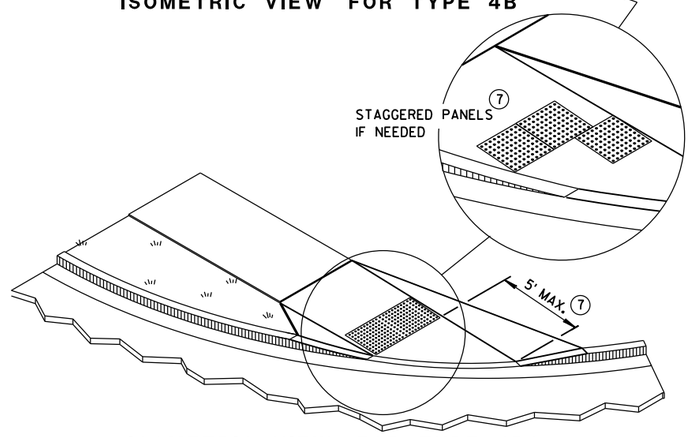
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

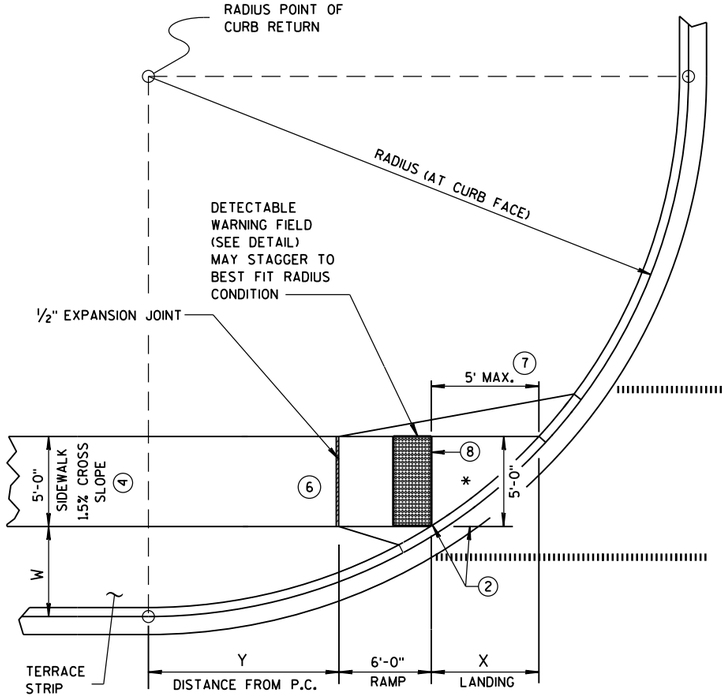
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1



CURB RAMP TYPE 4B1
PLAN VIEW

CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 8 D 5-17d

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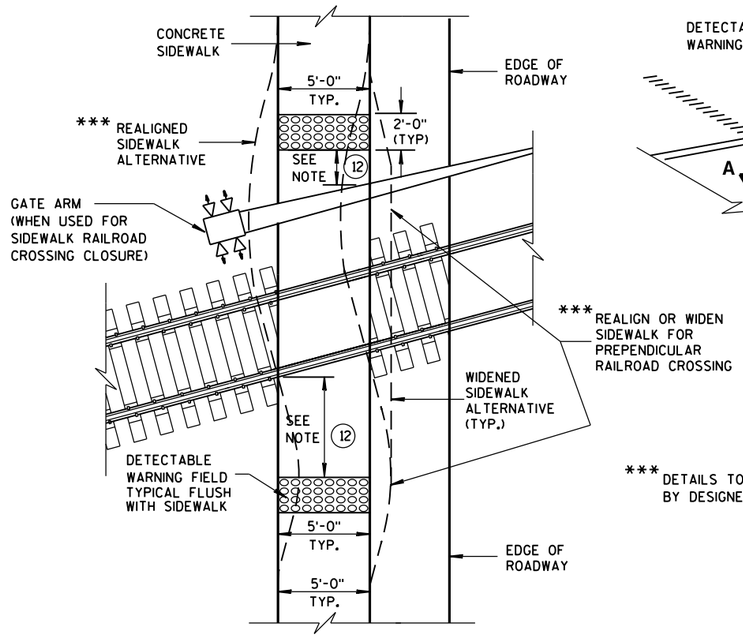
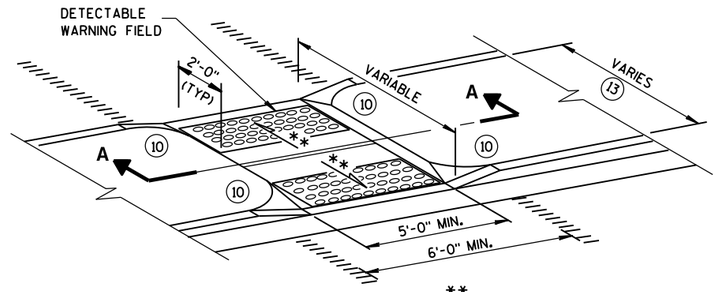
S.D.D. 8 D 5-17d



*** DETAILS TO BE DETERMINED BY DESIGNER

TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. 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 NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% 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.

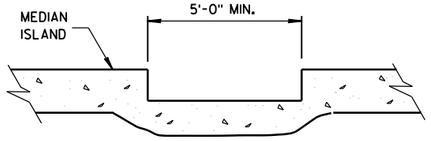
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

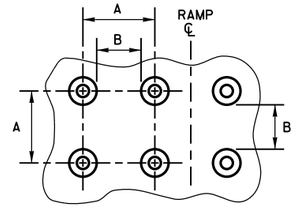
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



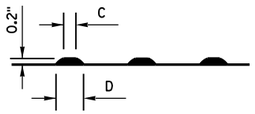
SECTION A-A

	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.

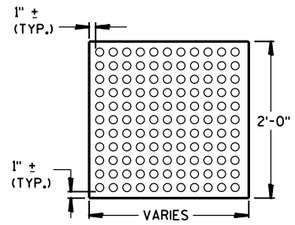


PLAN VIEW

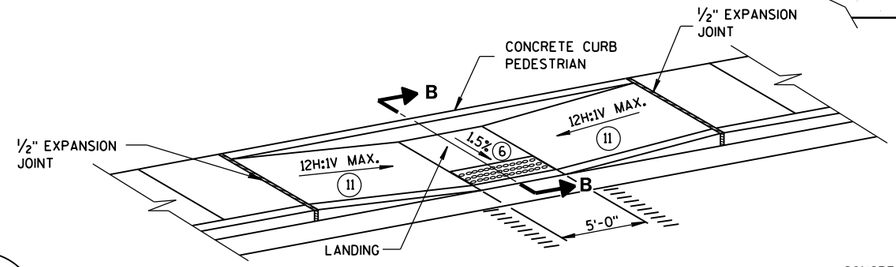


ELEVATION VIEW

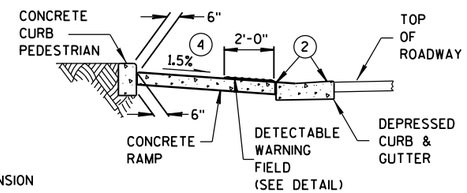
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW
DETECTABLE WARNING FIELD (TYPICAL)

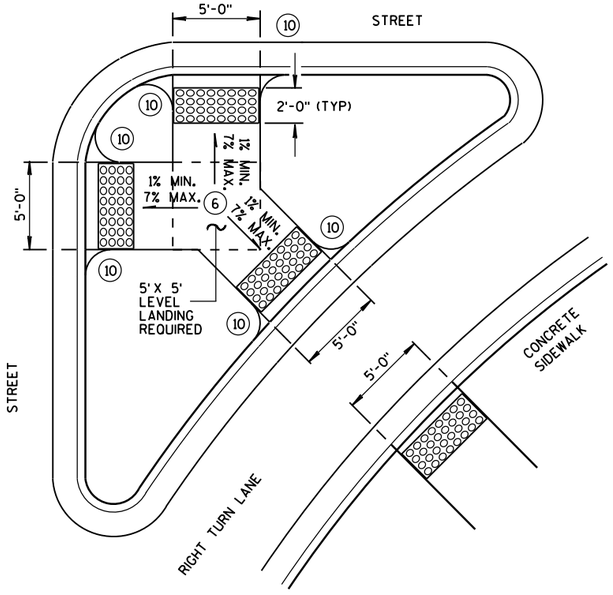


MID-BLOCK CROSSING
TYPE 7A

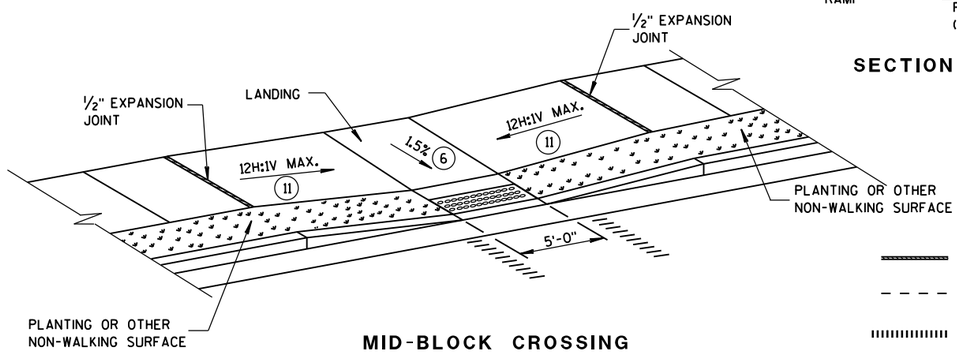


SECTION B-B

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

LEGEND

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

CURB RAMPS TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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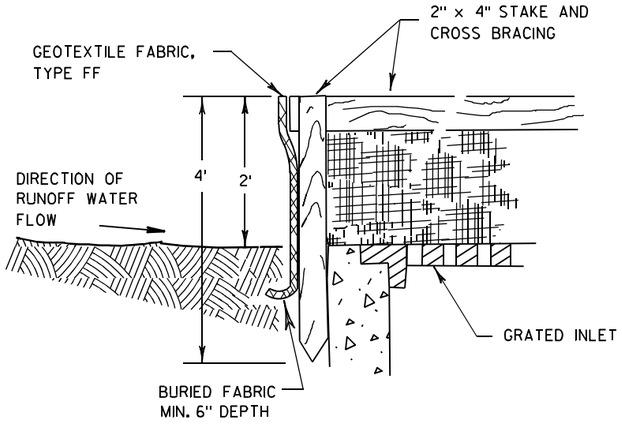
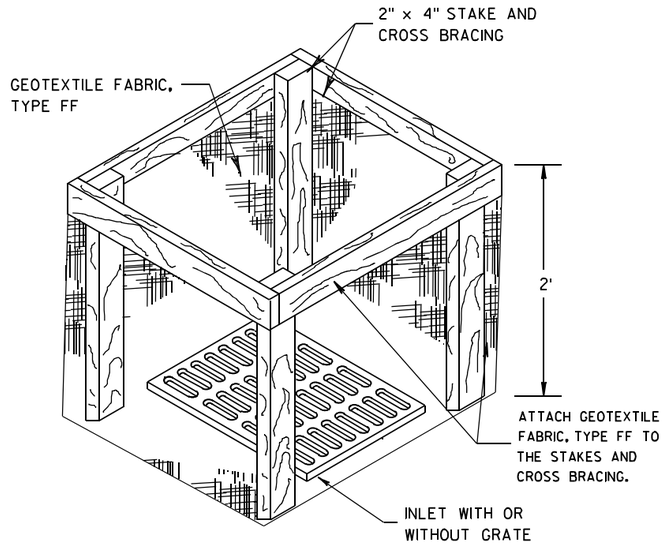
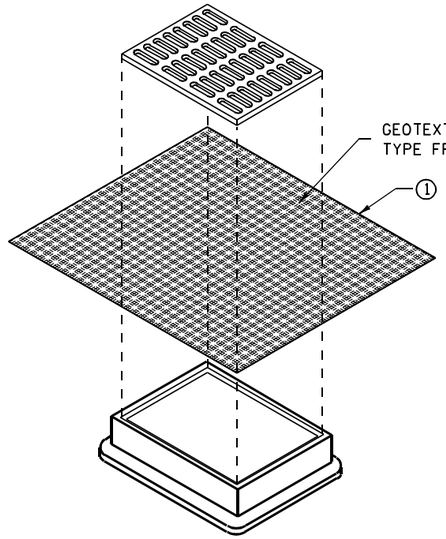
S.D.D. 8 D 5-17e



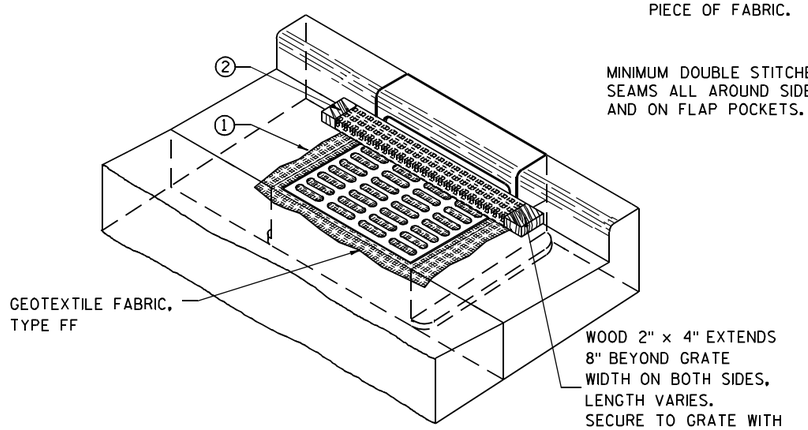


INLET PROTECTION, TYPE A

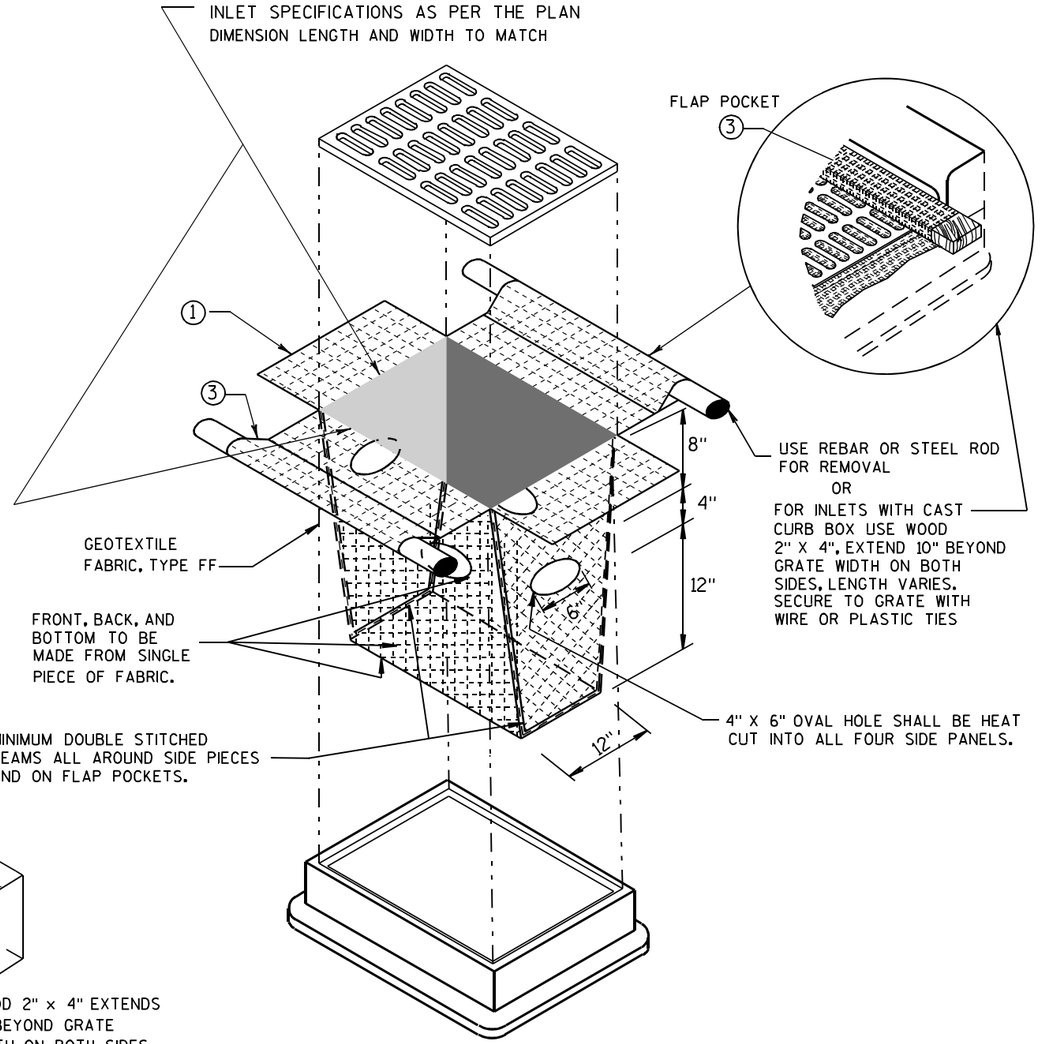


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

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.

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 CINCH 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 PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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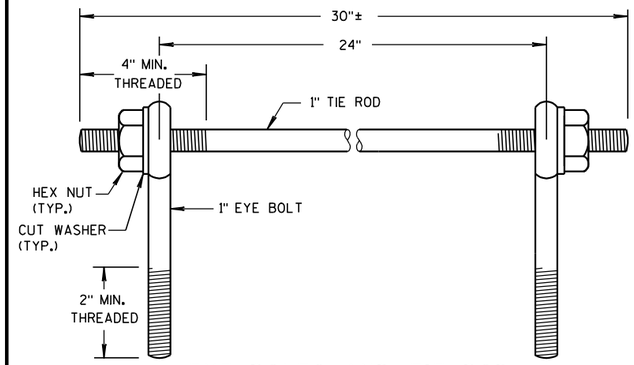
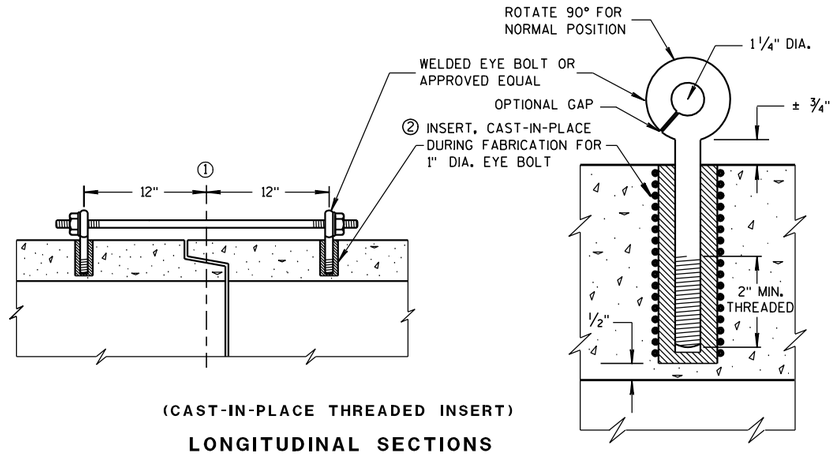
S.D.D. 8 E 10-2



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

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

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

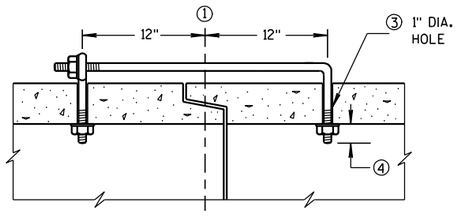
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

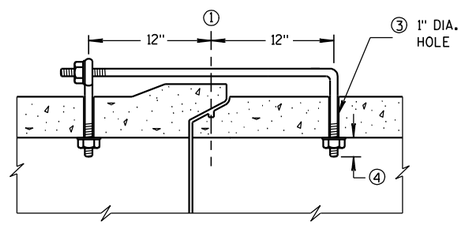
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

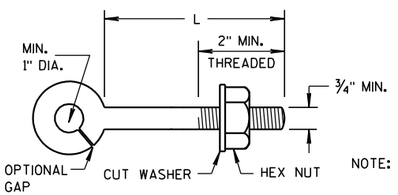


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

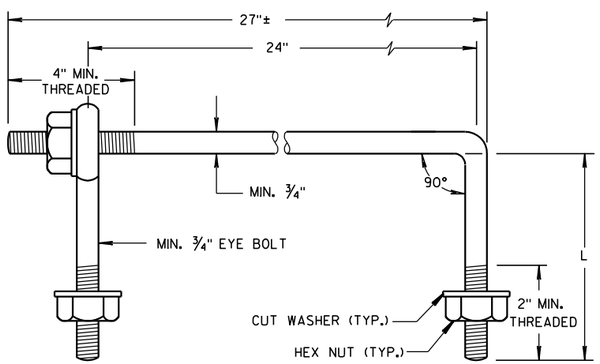
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

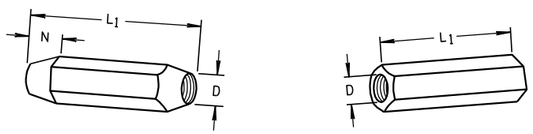
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

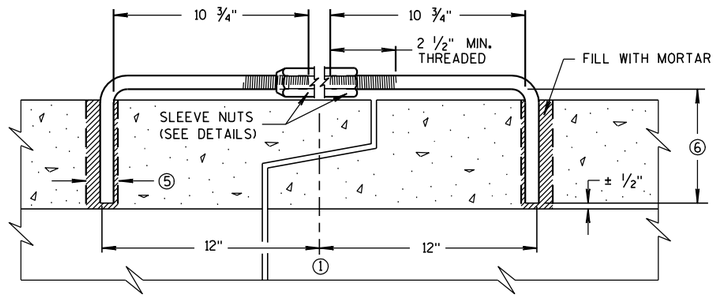
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

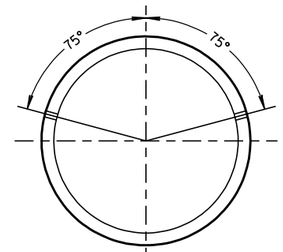
SLEEVE NUTS



LONGITUDINAL SECTION

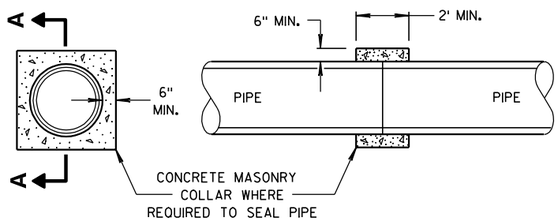
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

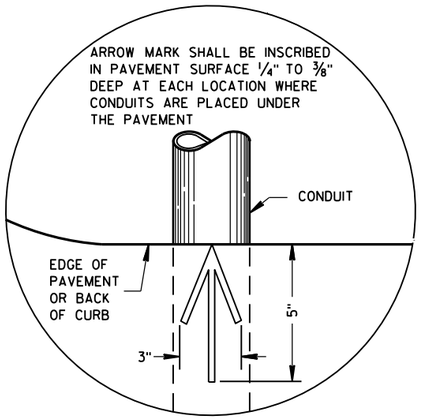
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
72
FHWA

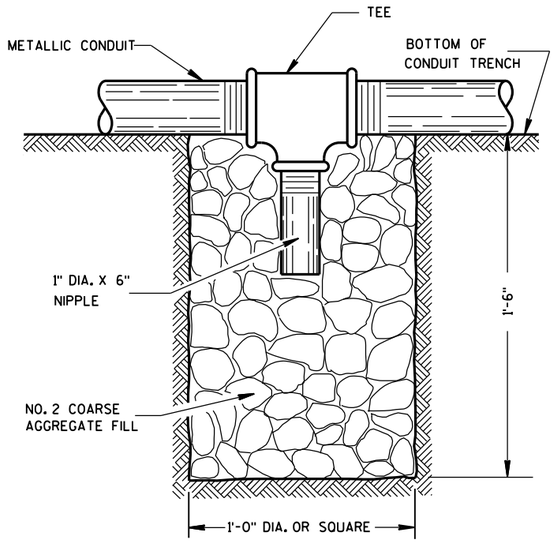
6

S.D.D. 8 F 4-7



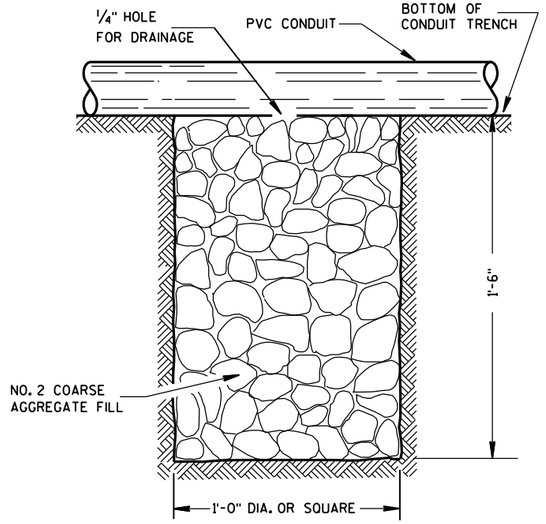
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

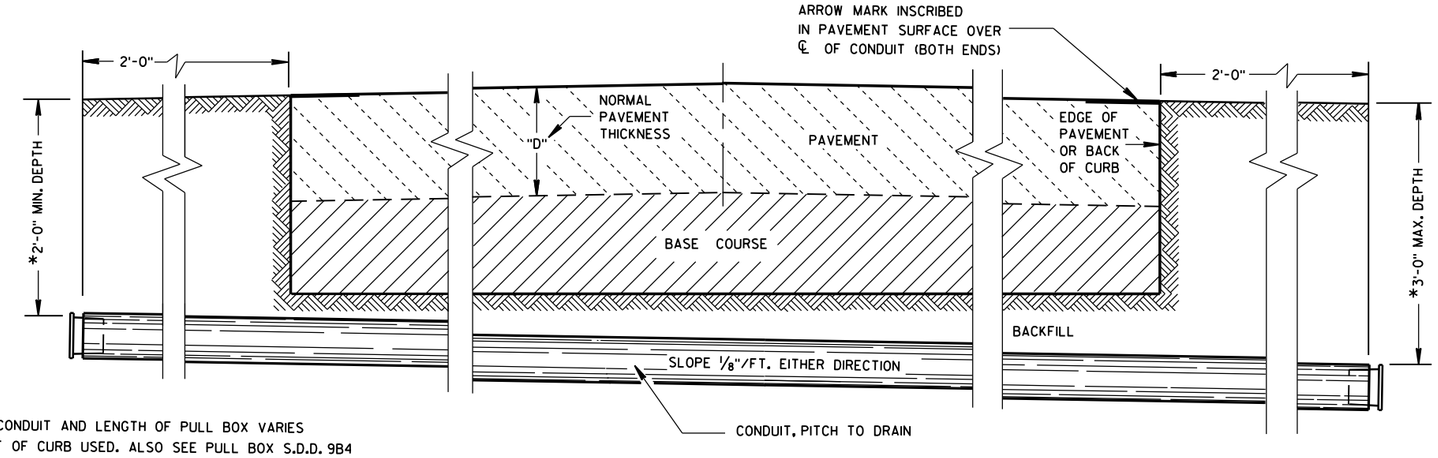
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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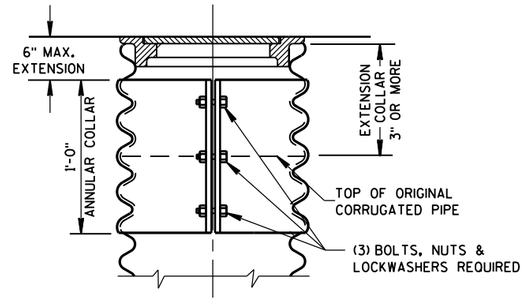
S.D.D. 9 B 2-9

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

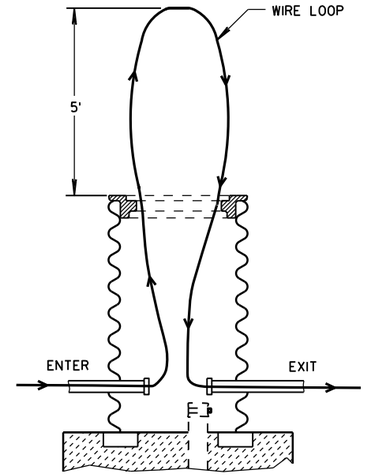
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

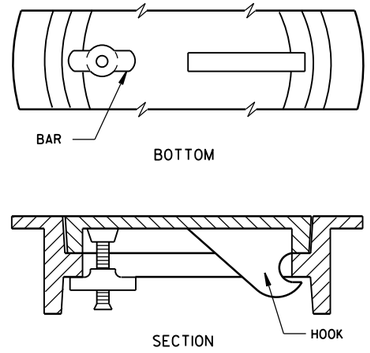
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

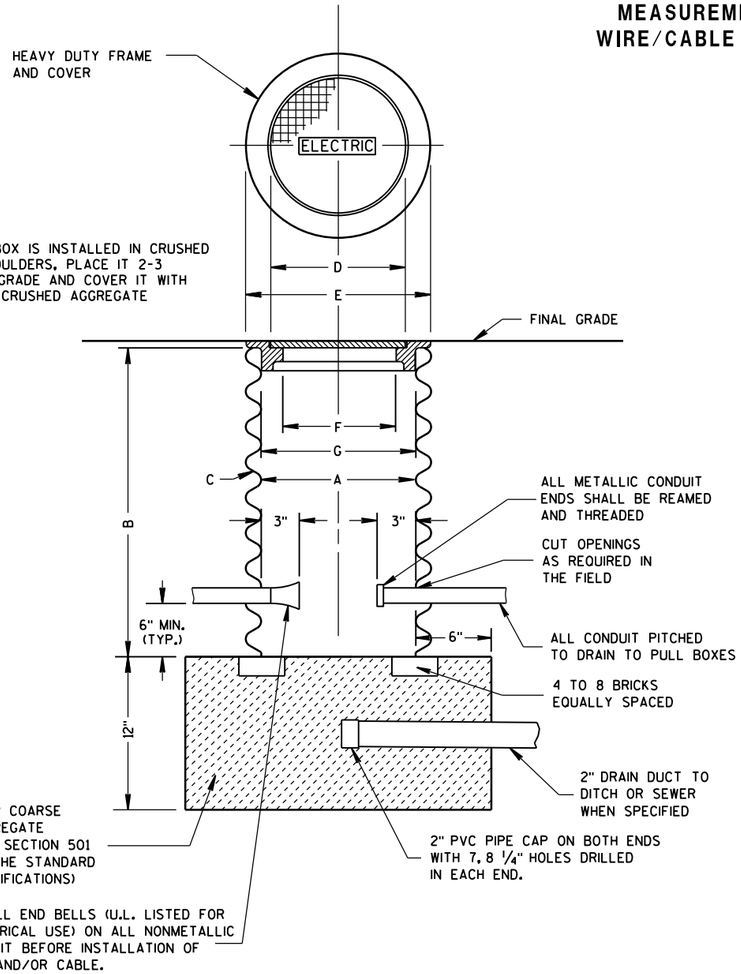


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



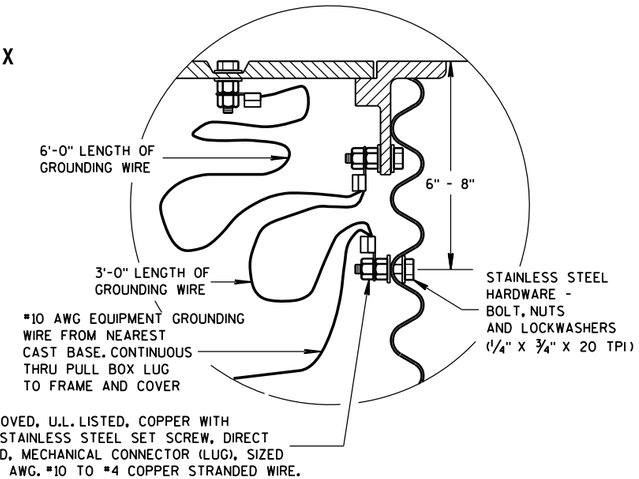
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

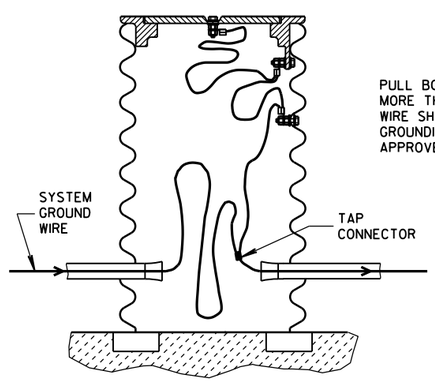
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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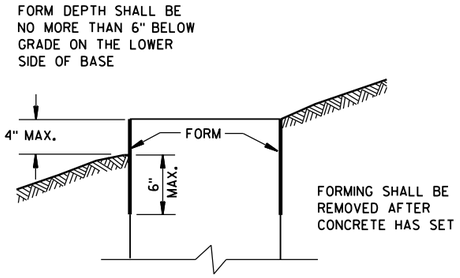
S.D.D. 9 B 4-11



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

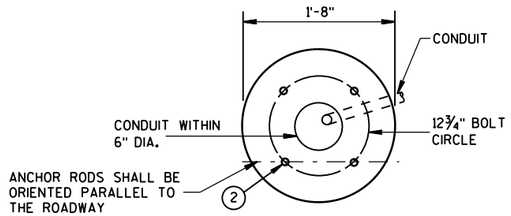
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

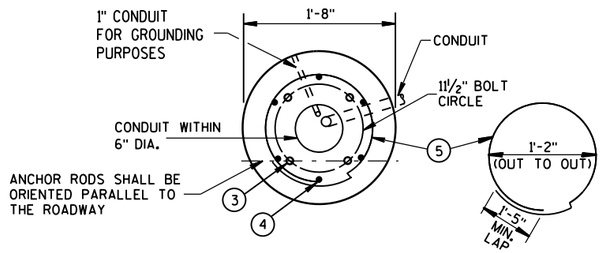
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

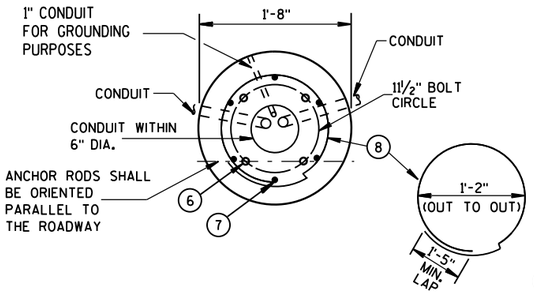
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

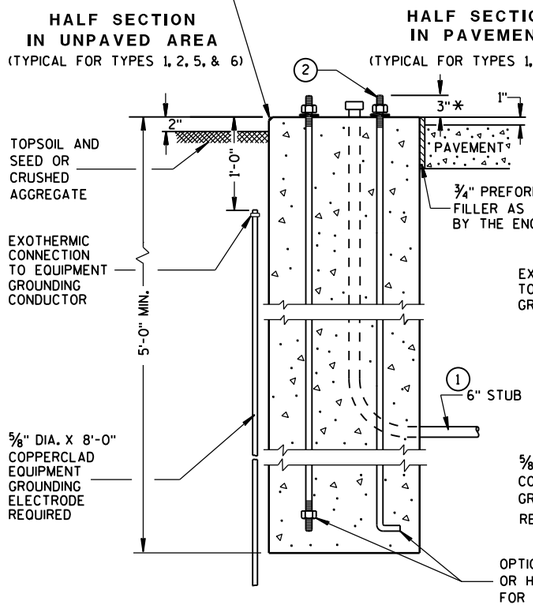
(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

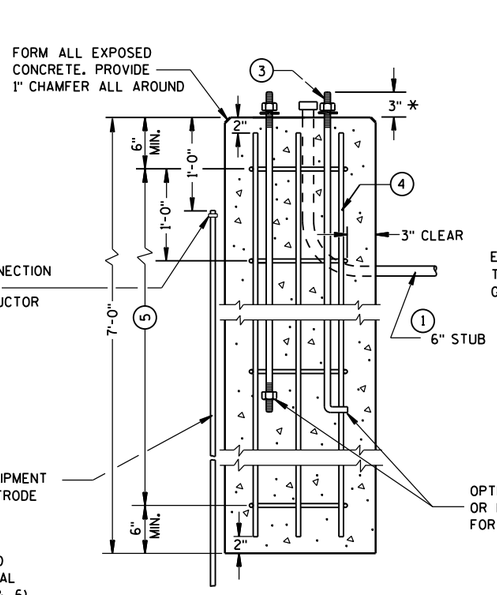
(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.



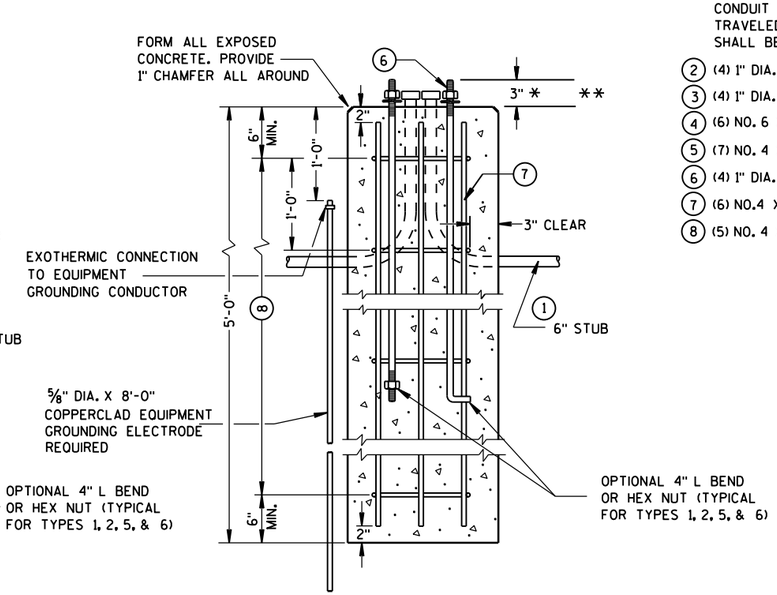








TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

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S.D.D. 9 C 2-7

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

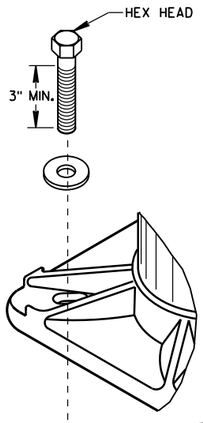
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

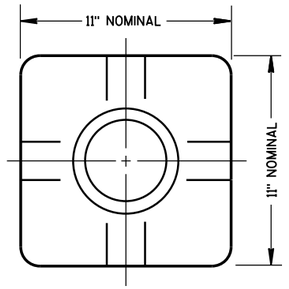
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

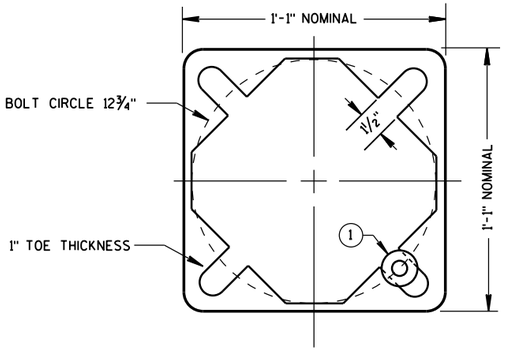
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

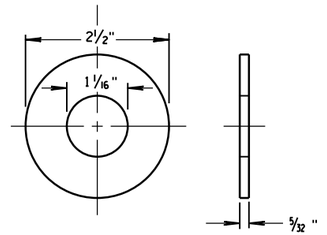




TOP VIEW
(PEDESTAL BASE)

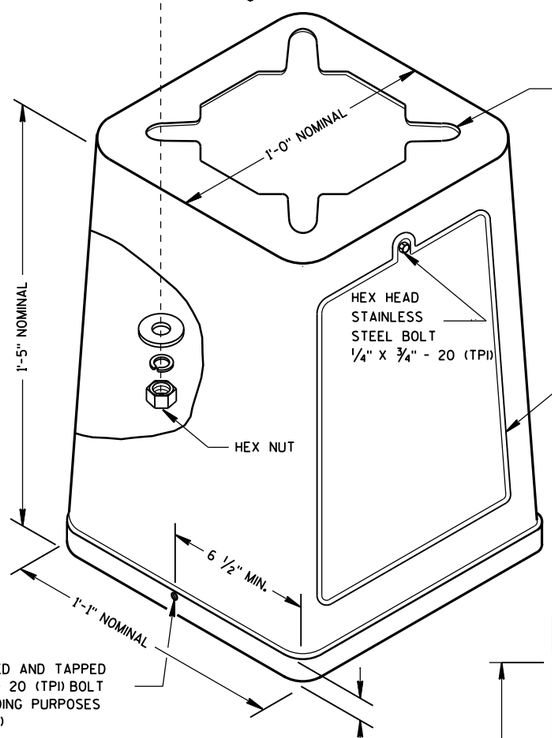


BOTTOM VIEW
(PEDESTAL BASE)

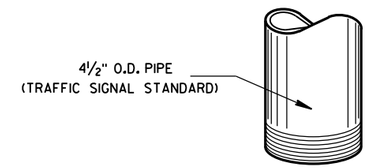


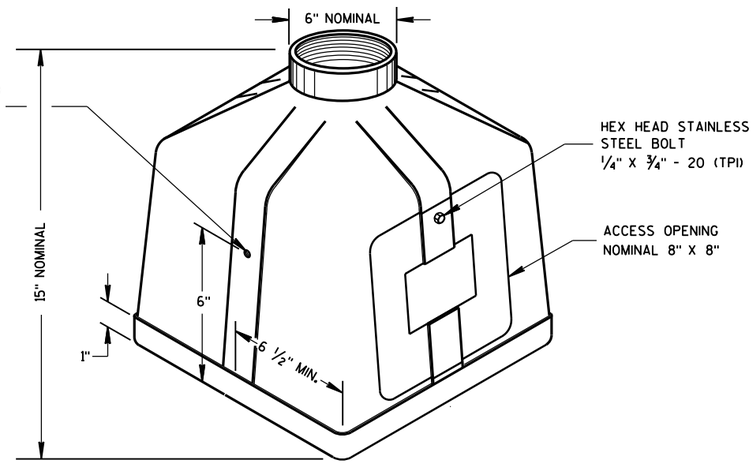
ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)



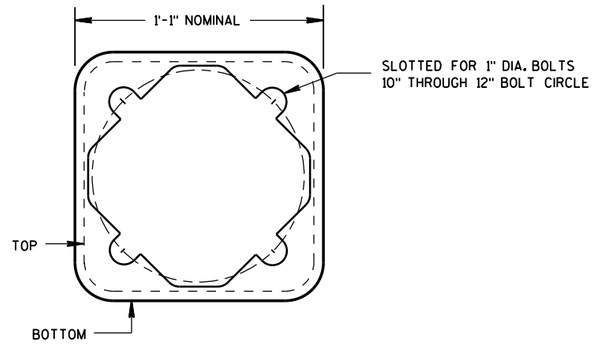
ISOMETRIC VIEW



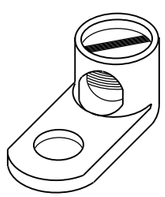


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

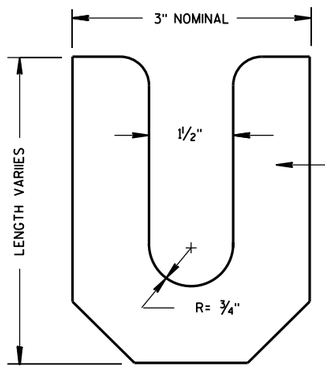


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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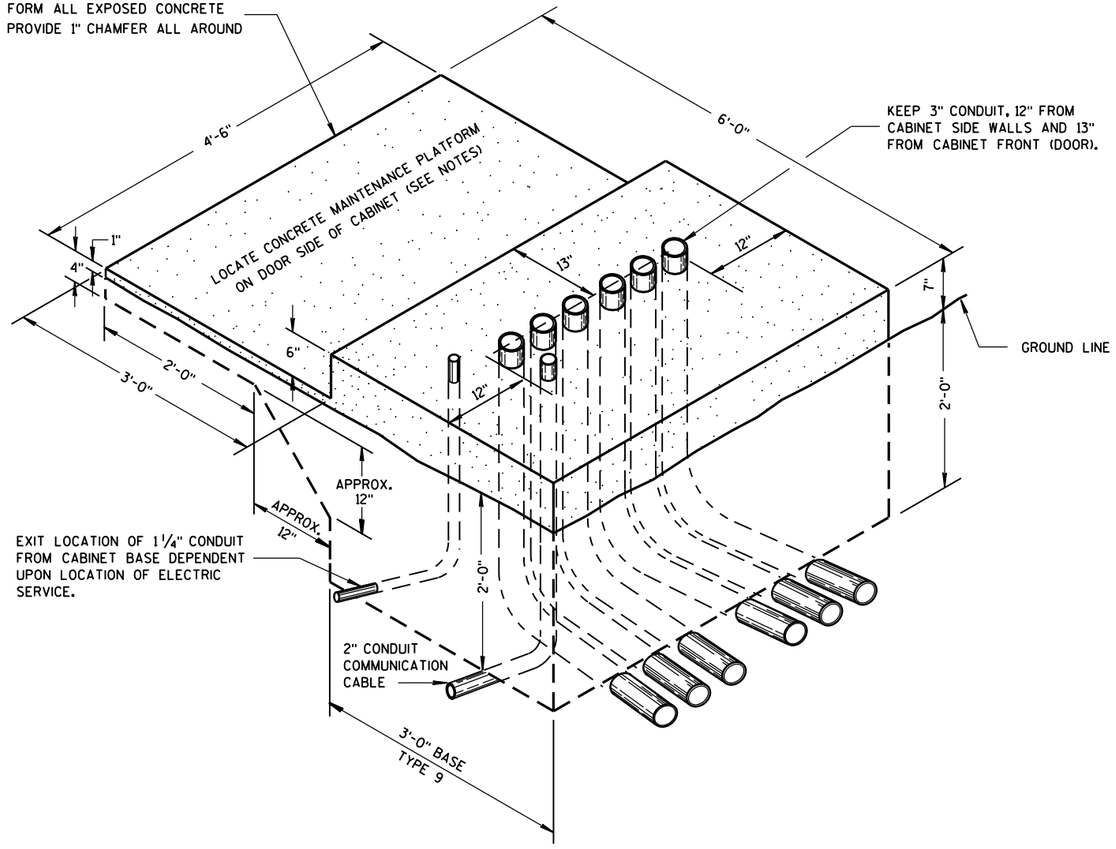
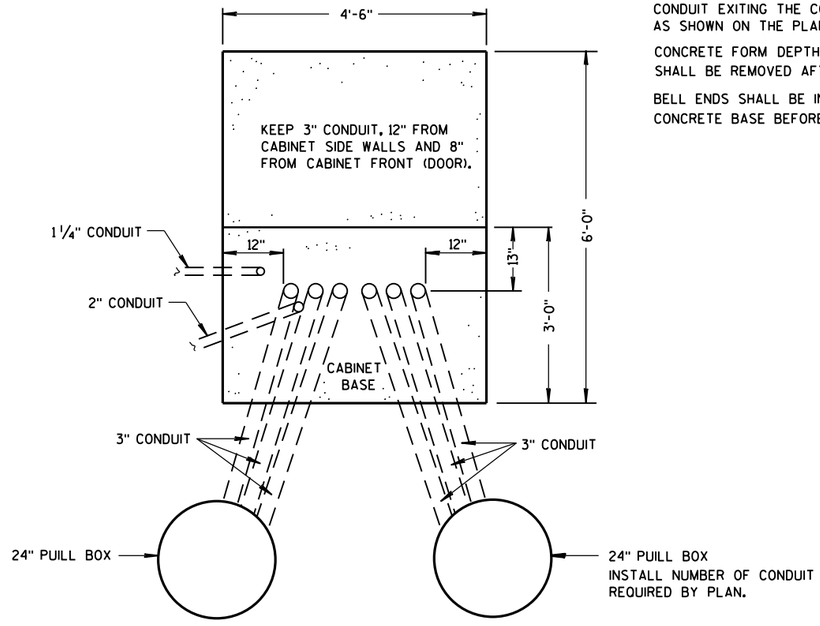


ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
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Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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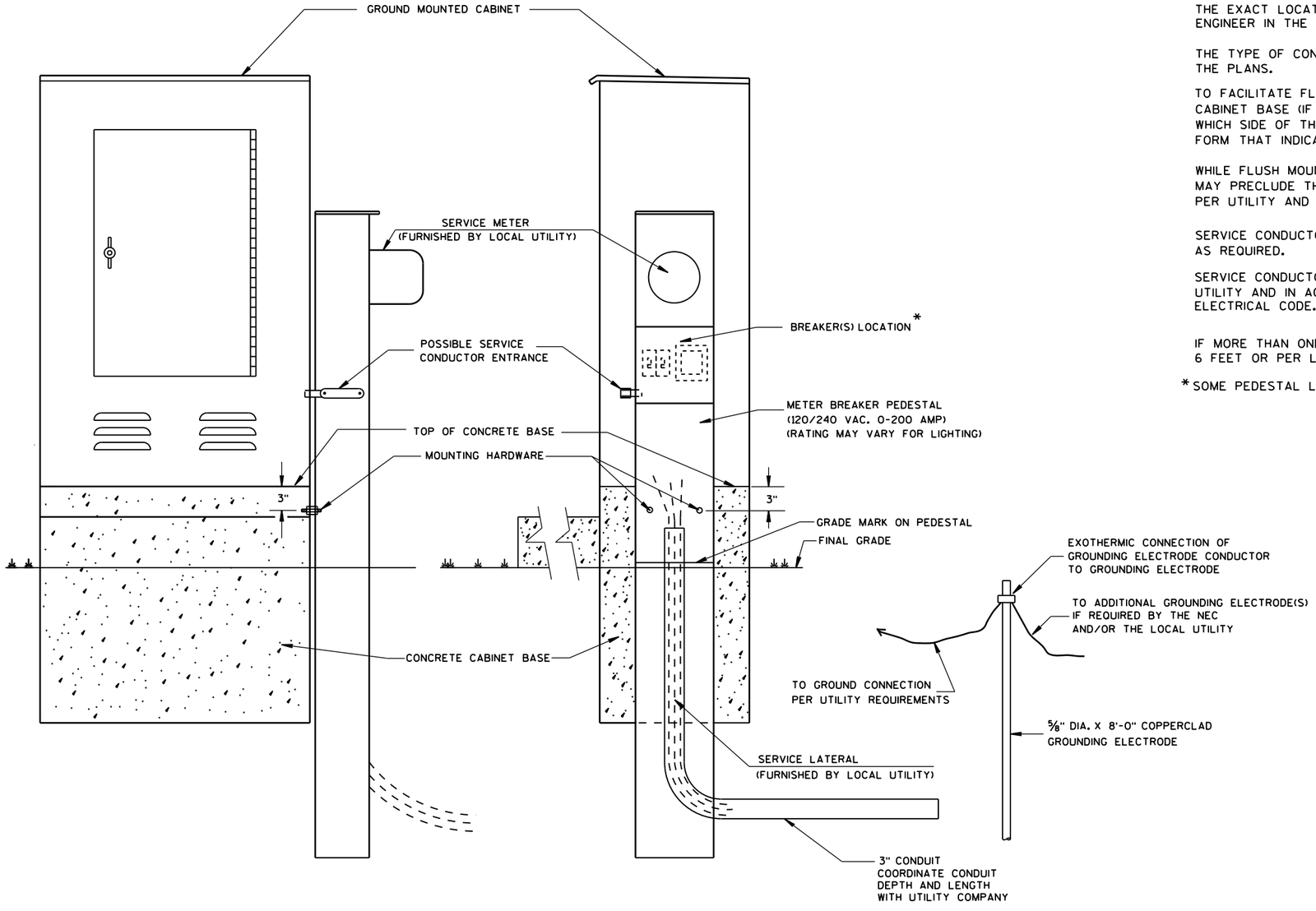

TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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Sept. 2014 — DATE
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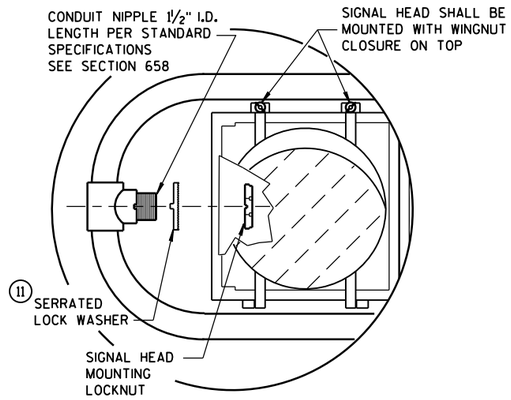
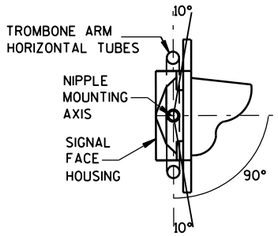


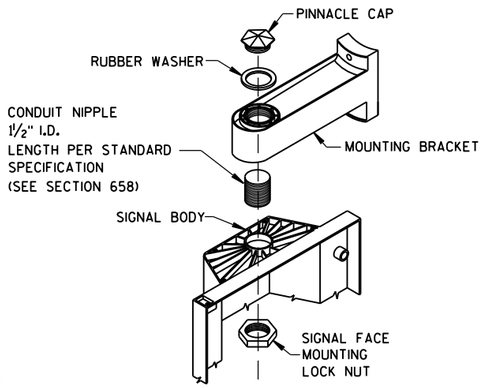
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL *

* SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR



SECTION A-A

(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)



SIGNAL FACE MOUNTING DETAIL

(BANDED)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLES SHALL BE EITHER ALUMINUM OR GALVANIZED STEEL AS CALLED FOR IN THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652 SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)

(3) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658).

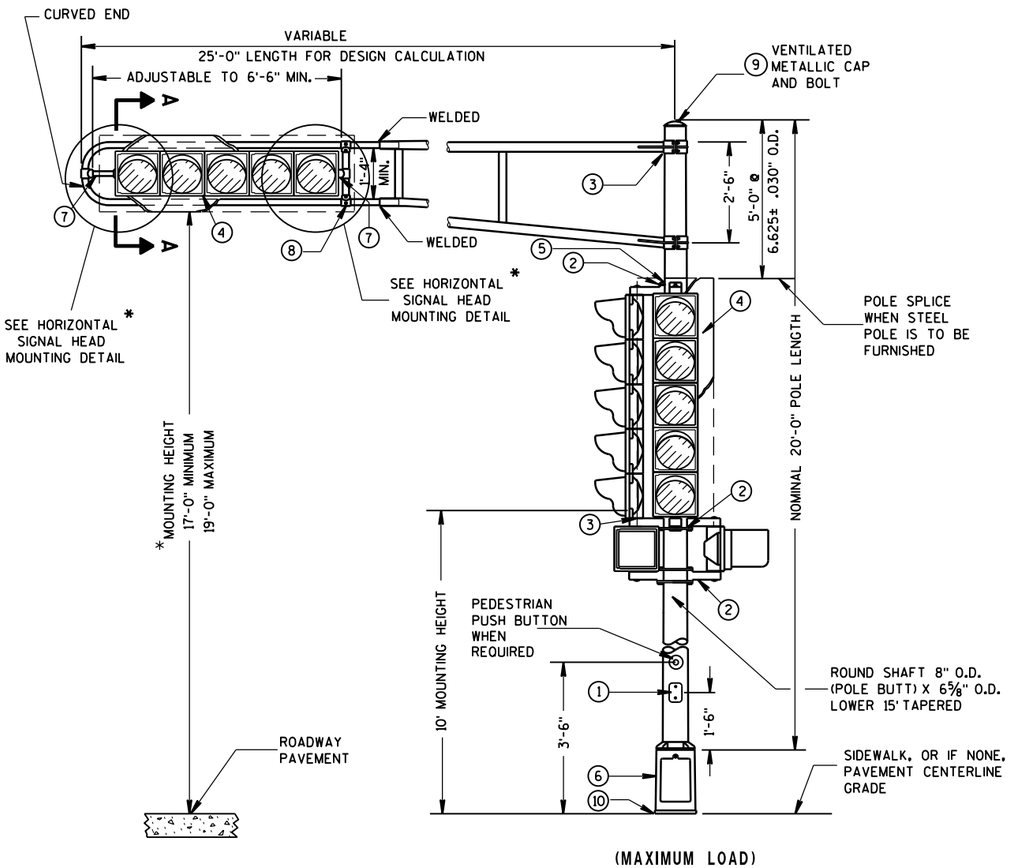
(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" LONG - 20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

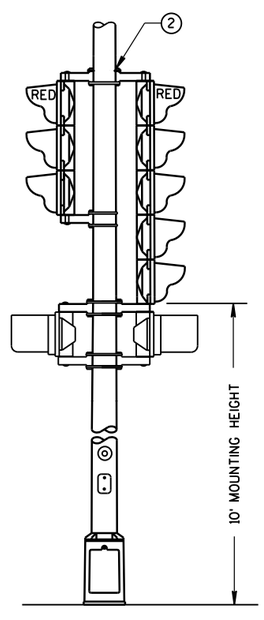
(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

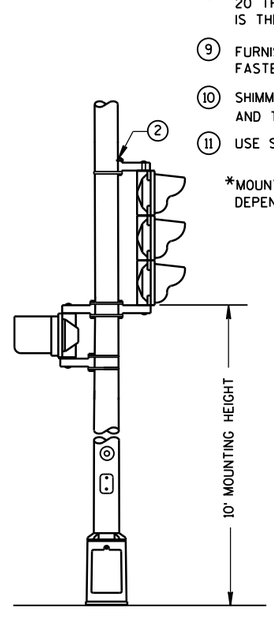
*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.



(MAXIMUM LOAD)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES

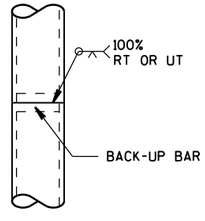


TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 2 POLE MOUNTING CONFIGURATION

FOR MANUFACTURERS USE ONLY

WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



POLE SPLICE DETAIL

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

STATE OF WISCONSIN
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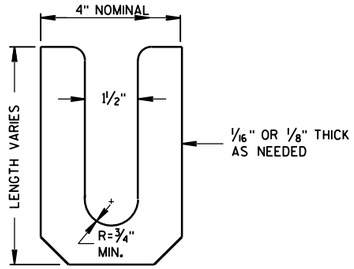
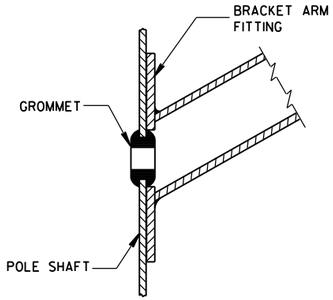
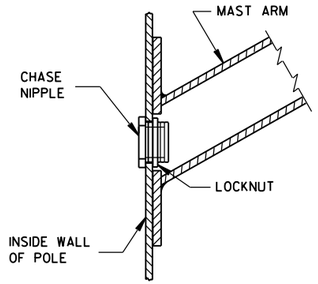


LEVELING SHIM (13)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

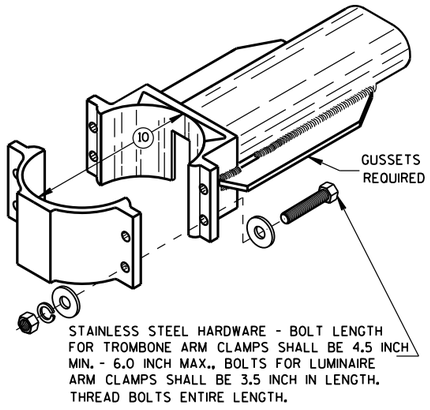
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

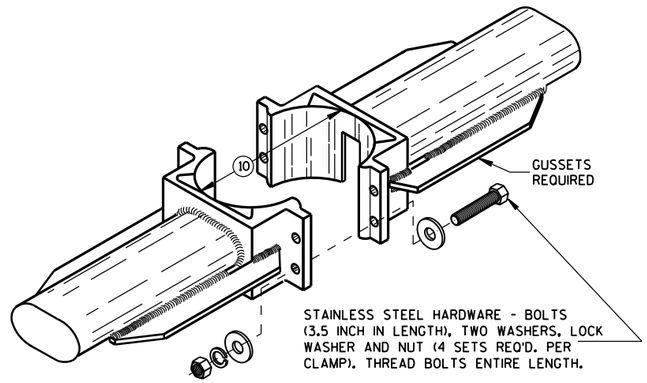
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

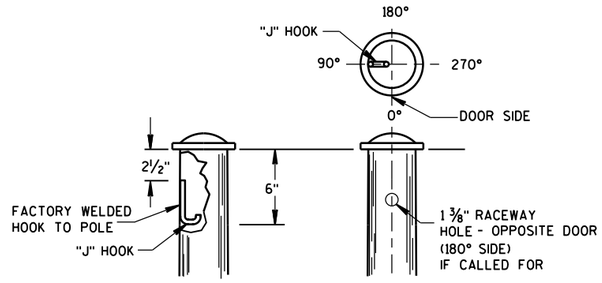
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



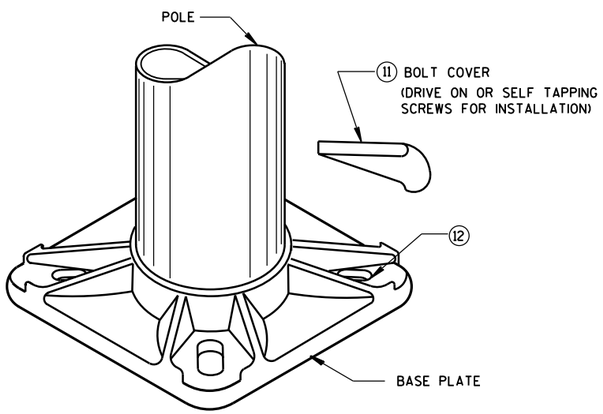
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



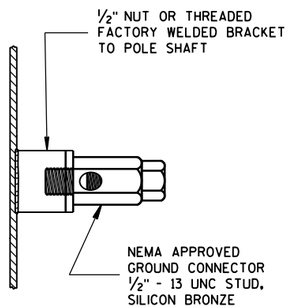
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

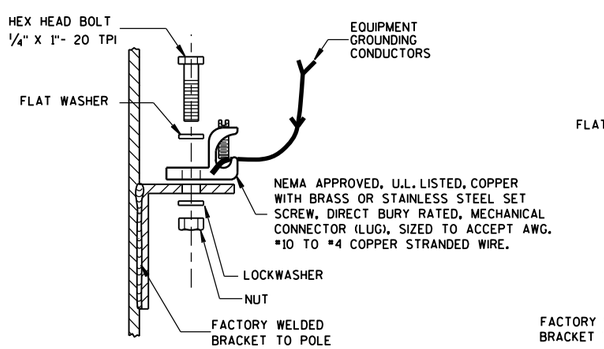


TYPICAL "J" HOOK LOCATION



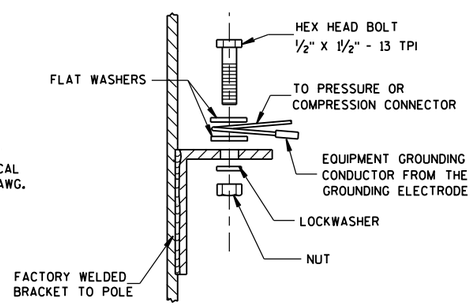
BASE PLATE





TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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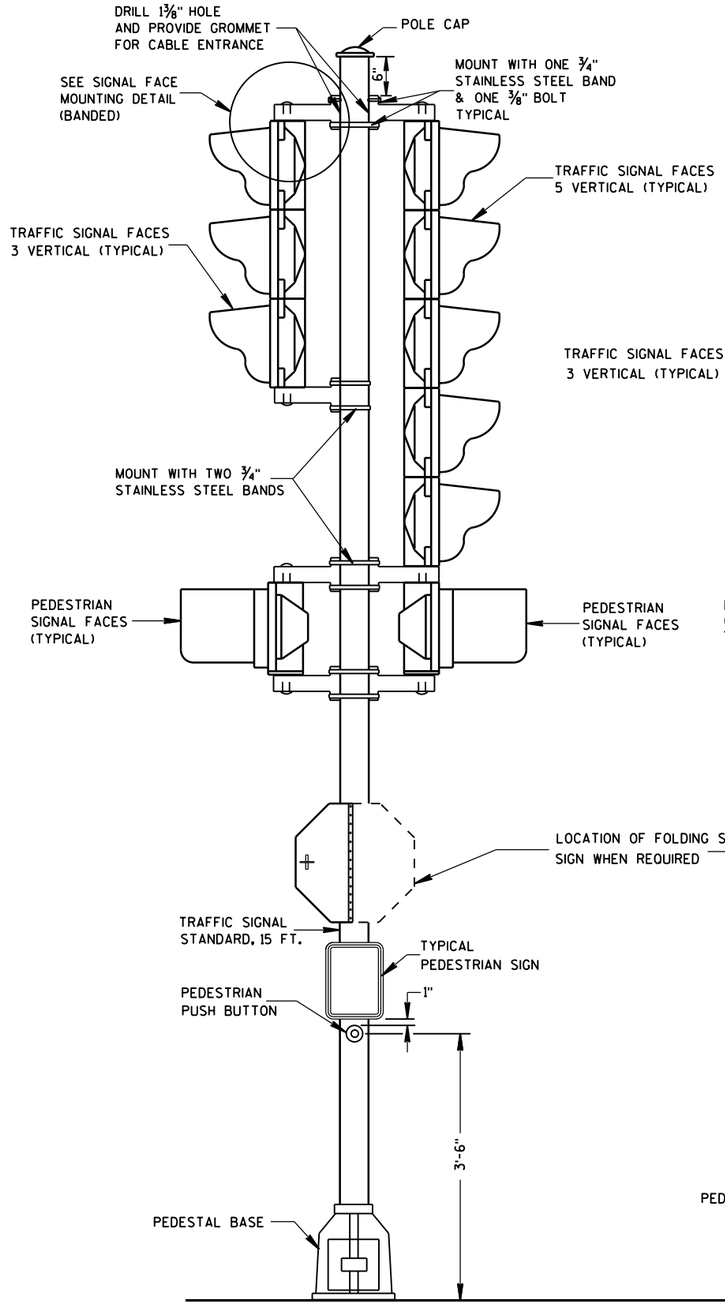
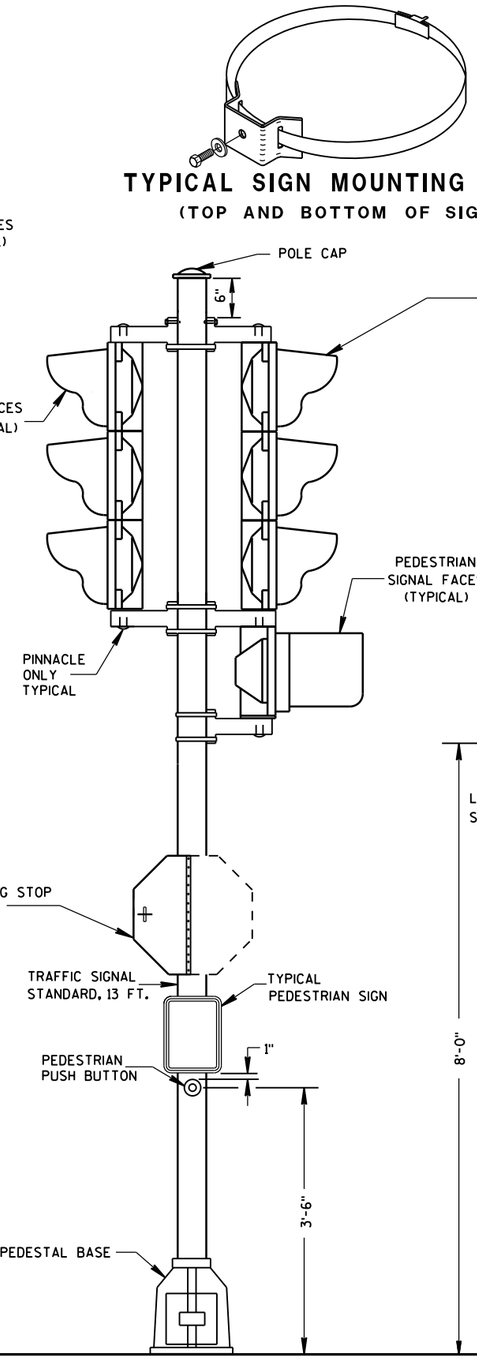
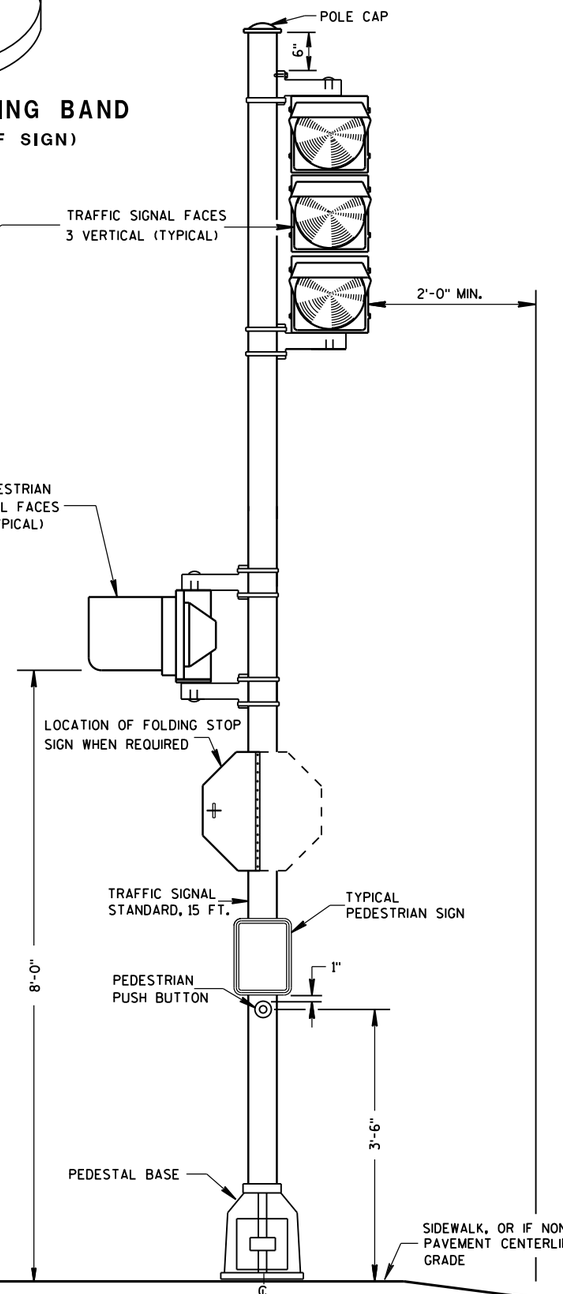


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

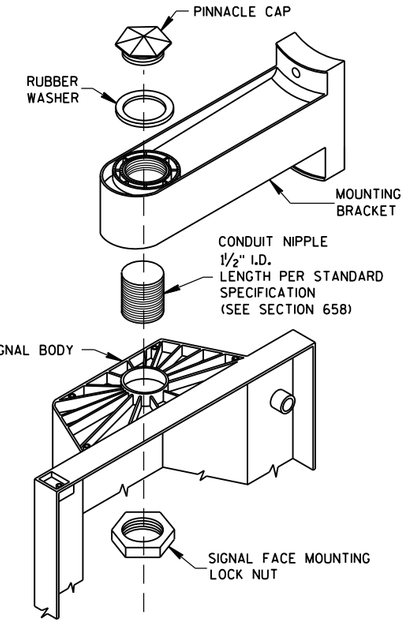
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



SIGNAL FACE MOUNTING DETAIL
(BANDED)

TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/28/2013 — DATE
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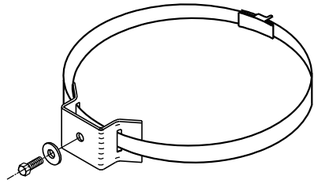
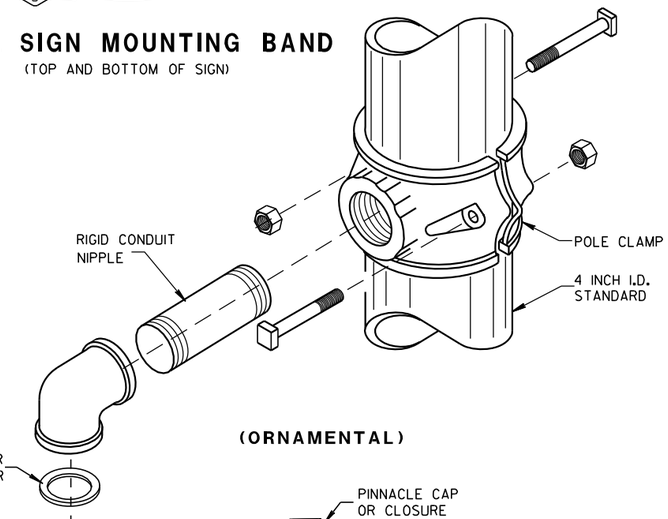


TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



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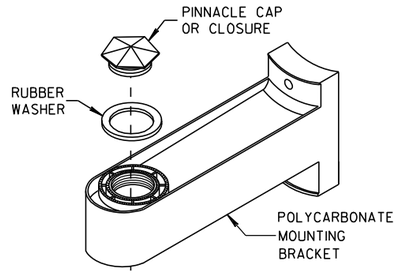

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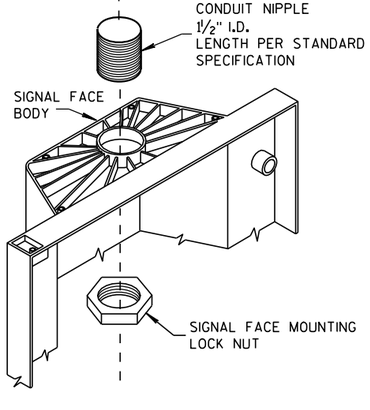
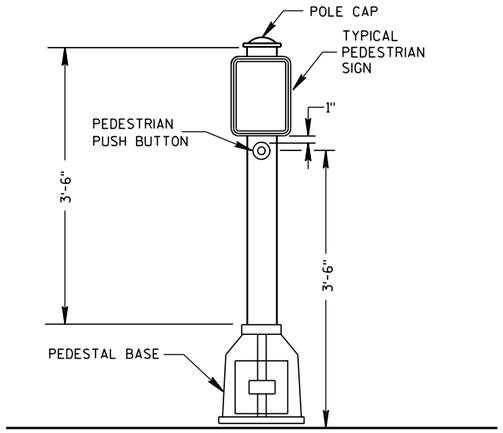


SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

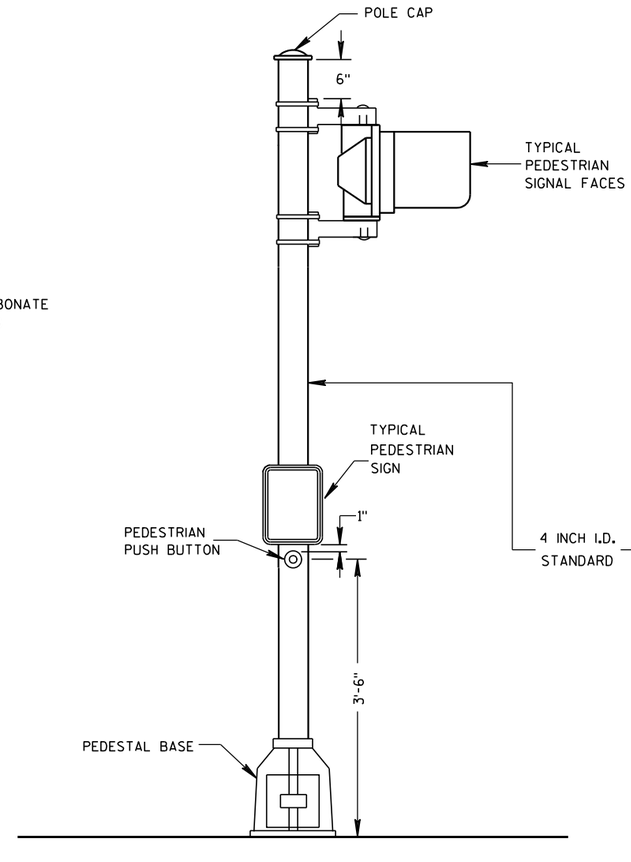
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

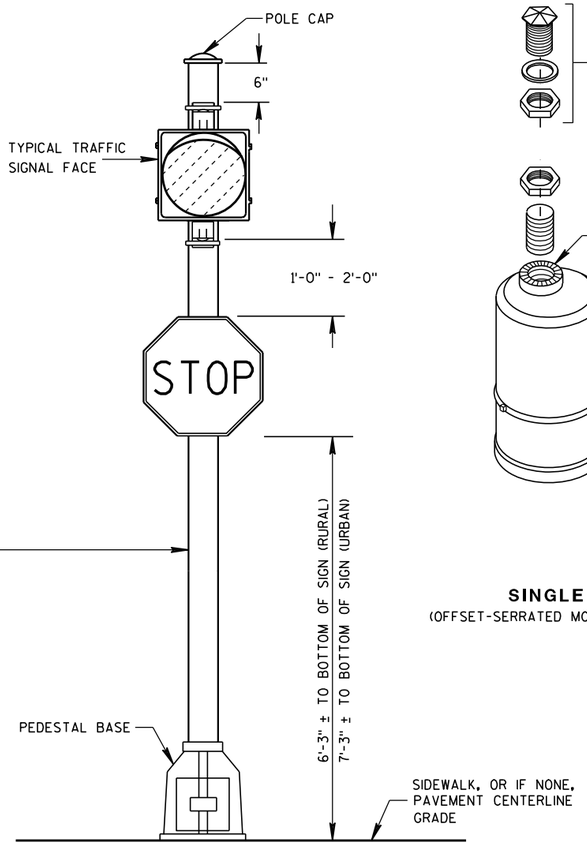
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

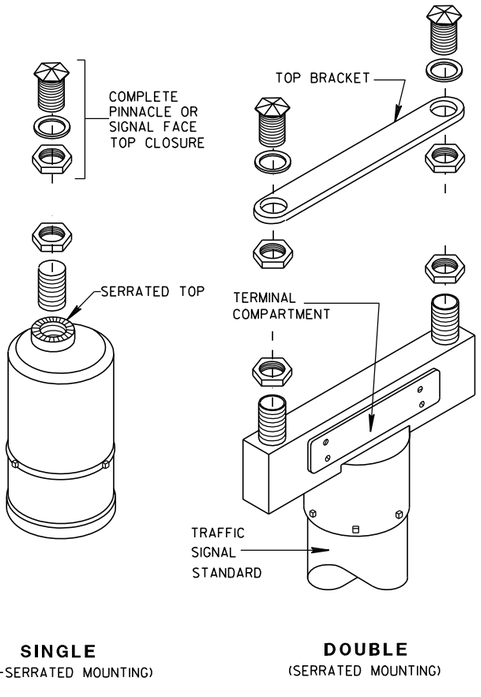
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



PEDESTRIAN FACE STANDARD-10 FT.
(WALK-DON'T WALK)



STANDARD FLASHER.
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED



SINGLE
(OFFSET-SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/11/10
DATE

/S/ John Corbin
STATE ELECTRICAL ENGI

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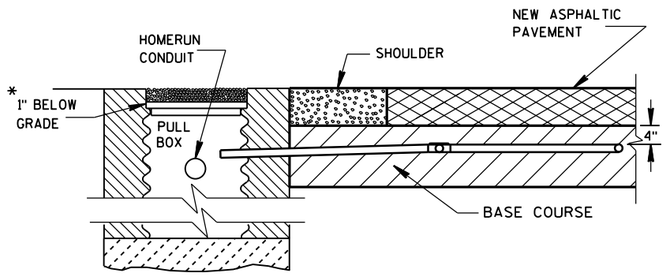
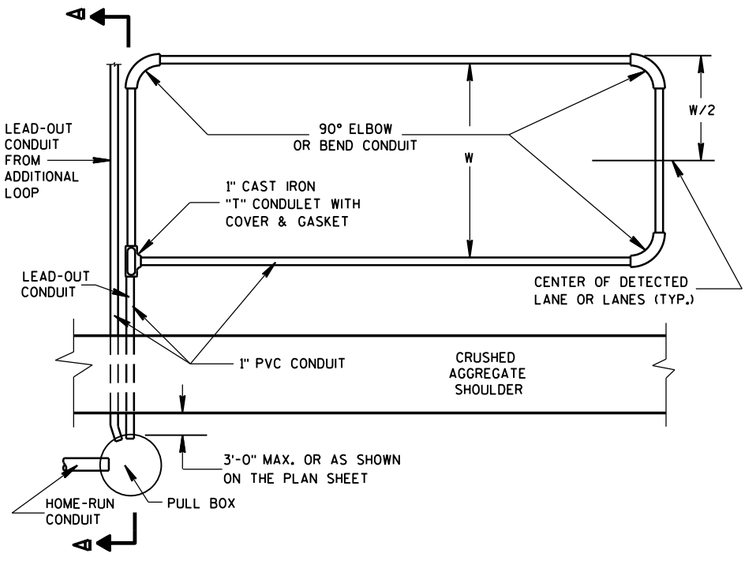


SECTION A-A
NO CURB & GUTTER

DETECTOR LOOP INSTALLATION DETAIL

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.



TYPICAL PLAN OF LOOP DETECTOR

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD-OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

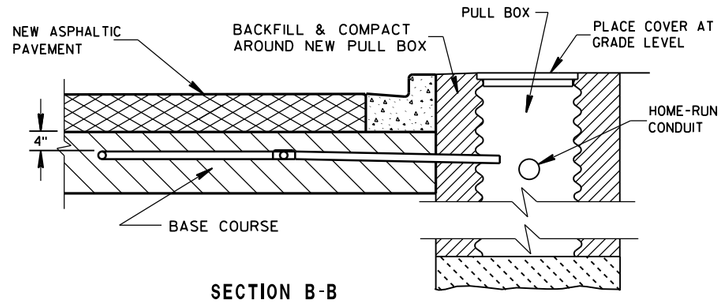
SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP DUCT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT AND CONDULET SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE THE ASPHALTIC PAVEMENT IS PLACED.

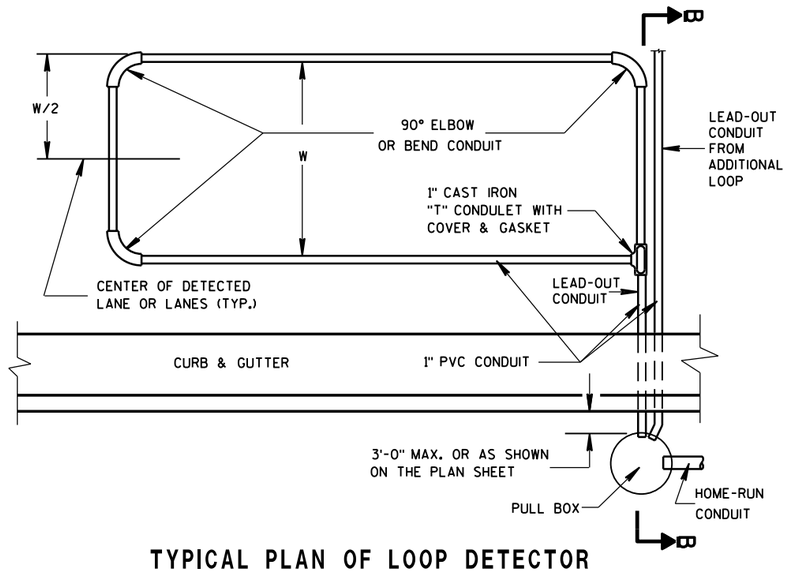
WHEN MULTIPLE LAYERS OF ASPHALTIC PAVEMENT ARE TO BE PLACED, LOOPS MAY BE INSTALLED BY SAWING A TWO INCH WIDE SLOT IN THE FIRST LAYER, DIG OUT THE ASPHALTIC MATERIAL AND BASE COURSE, PLACE THE LOOP, FILL THE SLOT WITH BASE COURSE MATERIAL AND NEW ASPHALTIC MATERIAL AND TAMP THE ASPHALTIC MATERIAL IN PLACE.

SHOULD TRAFFIC BE ALLOWED TO USE THE AREA OF ROADWAY WITH THE NEWLY INSTALLED LOOP BEFORE THE PLACEMENT OF THE NEXT LAYER OF ASPHALTIC PAVEMENT, THE SLOT/PAVEMENT OPENING SHALL BE SEALED WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".



SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR

LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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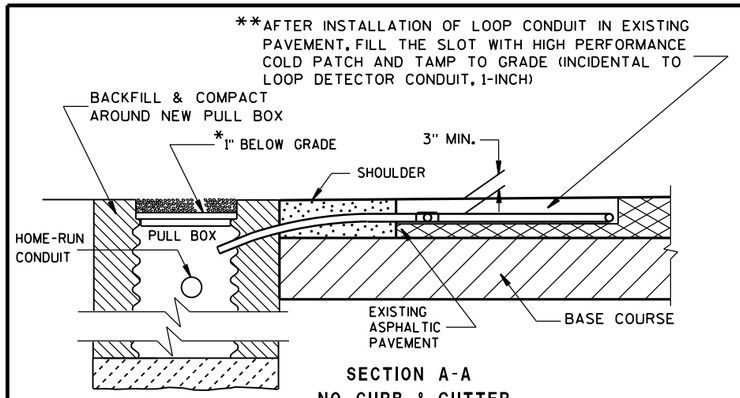
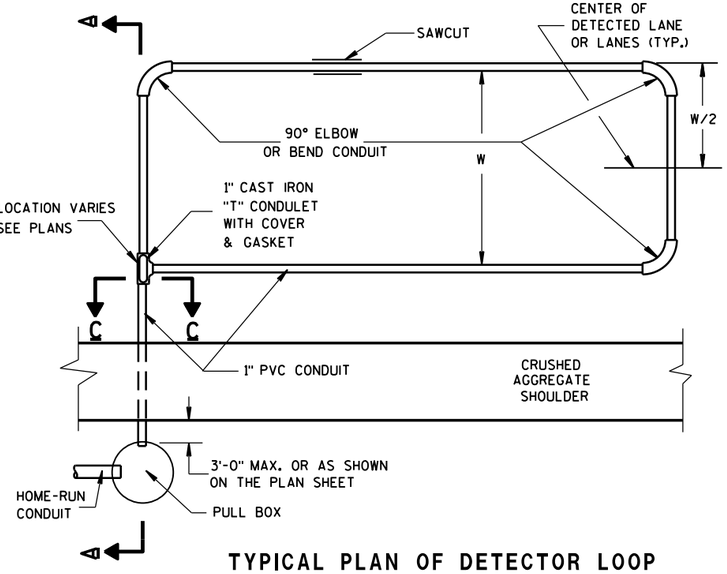


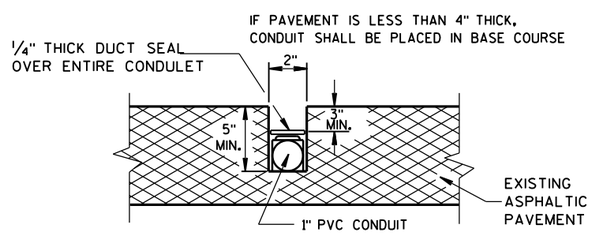
SECTION A-A
NO CURB & GUTTER

TYPICAL PLAN OF LOOP DETECTOR

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.



TYPICAL PLAN OF DETECTOR LOOP



SIDE VIEW
SECTION C-C

LOOP DETECTOR SLOT DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISITANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

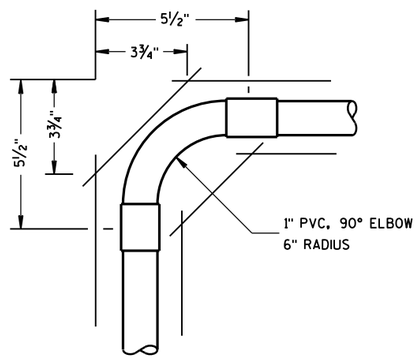
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

IN THE EVENT THAT THE EXISTING PAVEMENT IS MORE THAN 5 INCHES THICK, AND THEREFORE , THE 1 INCH CONDUIT DOES NOT REQUIRE INSTALLATION BELOW THE PAVEMENT INTO THE BASE COURSE, PLACE SOME OF THE TAR OR EPOXY SEALANT IN THE SLOT TO A DEPTH OF APPROXIMATELY 1/2 INCH BEFORE INSTALLATION OF THE CONDUIT. IF THE CONDUIT MUST BE PLACED IN THE BASE COURSE, DO NOT PLACE THE TAR OR EPOXY SEALANT IN THE SLOT.

ONCE THE 2" LOOP SLOT HAS BEEN CHIPPED OUT, THE LOOP INSTALLATION SHALL BE COMPLETED PRIOR TO OPENING THE LANE(S) TO TRAFFIC.

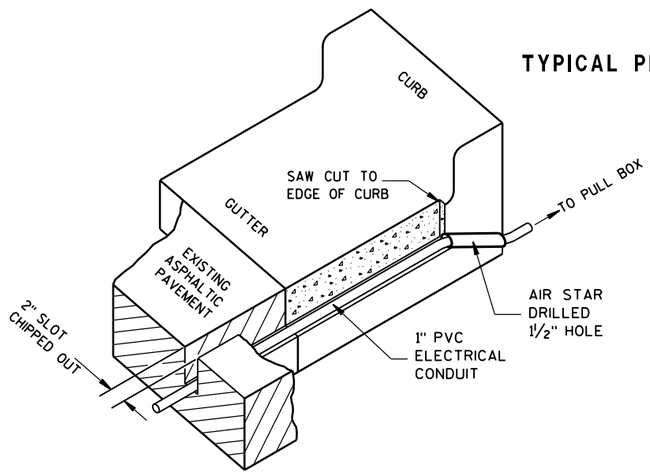
** AFTER THE HIGH PERFORMANCE COLD PATCH HAS BEEN TAMPED, SEAL THE SLOT/HIGH PERFORMANCE COLD PATCH/ PAVEMENT OPENING WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".

IN THE EVENT HIGH PERFORMANCE COLD PATCH IS NOT AVAILABLE, AND FLEXIBLE TYPE EPOXY IS USED AS A LOOP SLOT FILLER, THE 2 INCH SLOT SHALL BE TOTALLY CLEAN AND DRY BEFORE ITS INSTALLATION. EPOXY USE SHALL BE APPROVED BY THE DISTRICT TRAFFIC ENGINEER AND THE FURNISHED EPOXY SHALL BE INSTALLED AFTER WRITTEN APPROVAL BY THE PROJECT ENGINEER.



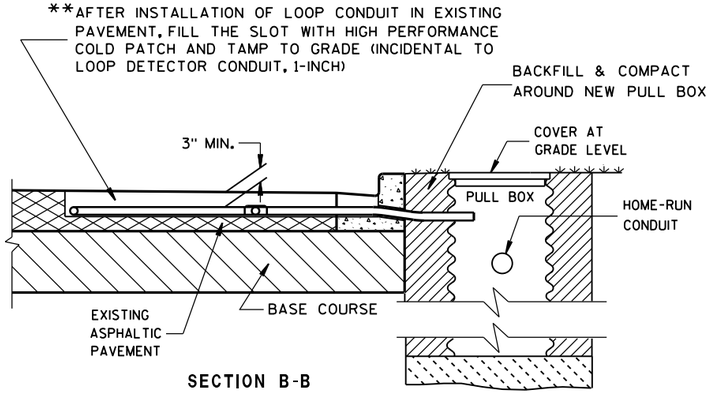
TOP VIEW

CORNER SAW SLOT DETAIL



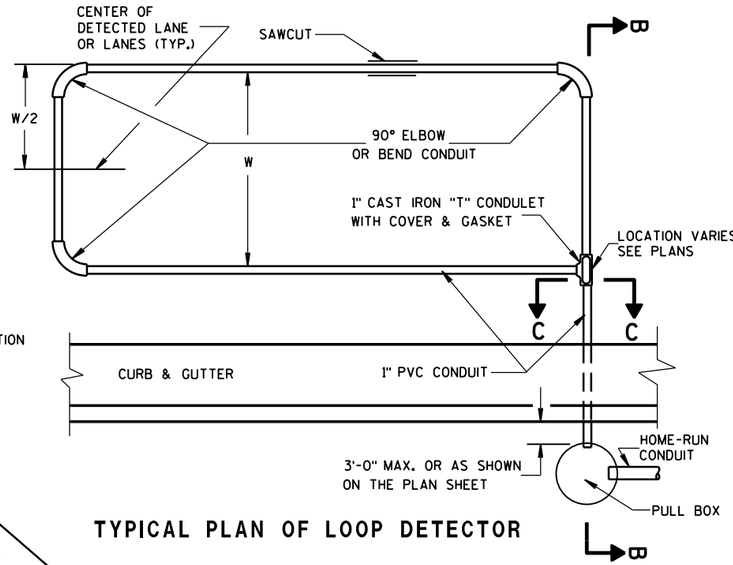
ISOMETRIC VIEW

TYPICAL SAW CUT DETAIL FOR LEAD-IN CONDUIT



SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR

LOOP DETECTOR INSTALLED IN EXISTING ASPHALTIC PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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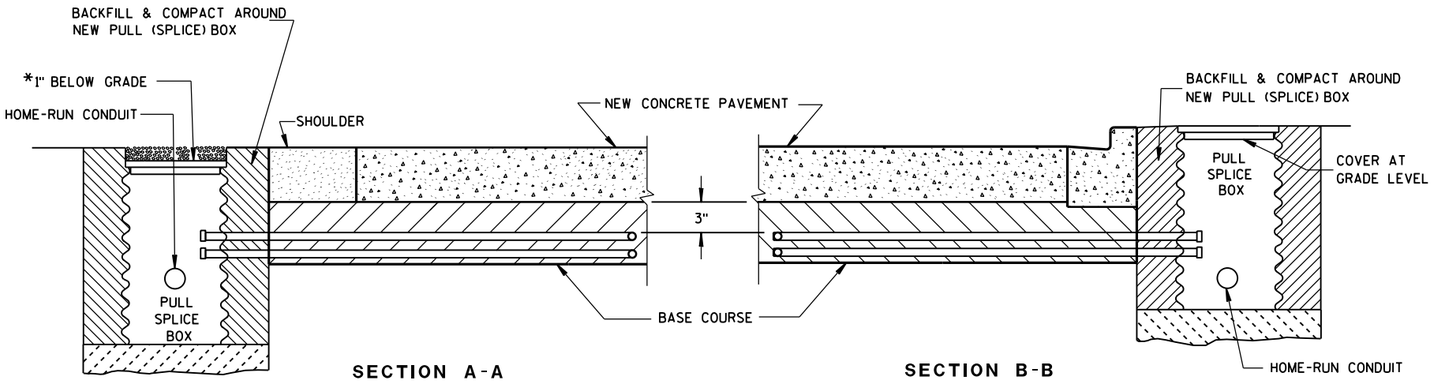

SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

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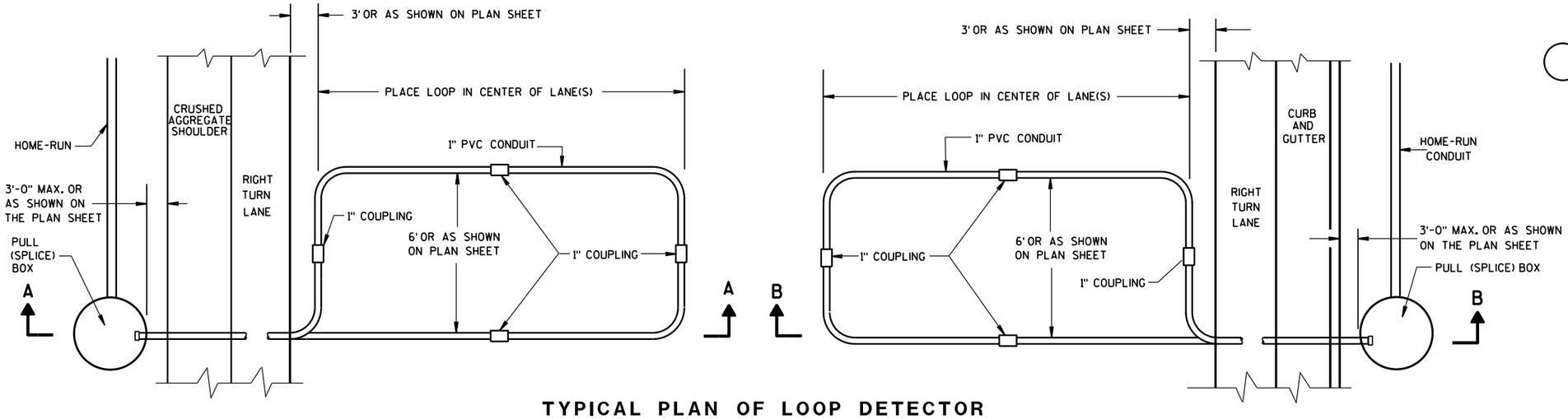
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

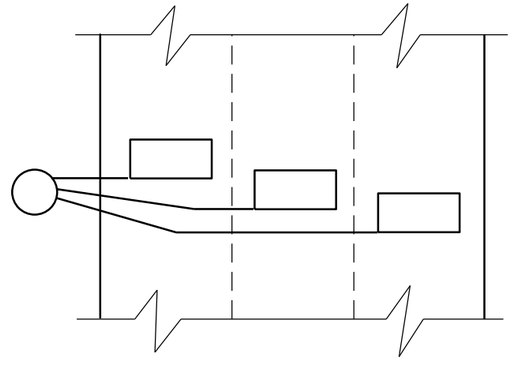
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 24" PULL (SPLICE) BOX



MULTI-LANE INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL
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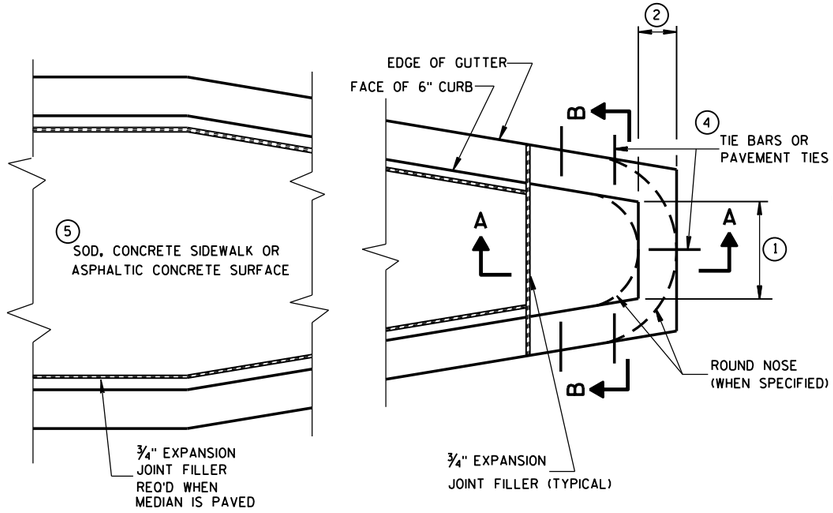
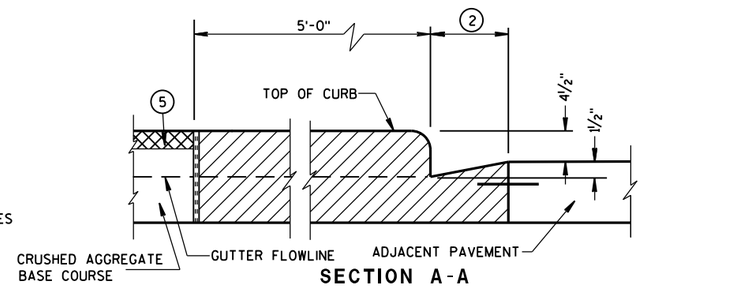
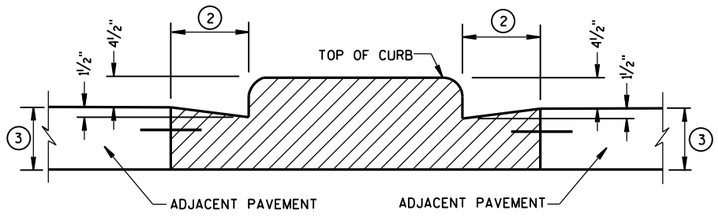






CONCRETE MEDIAN BLUNT NOSE DETAIL

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.

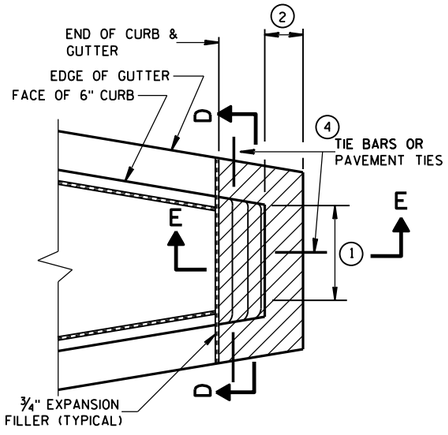
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

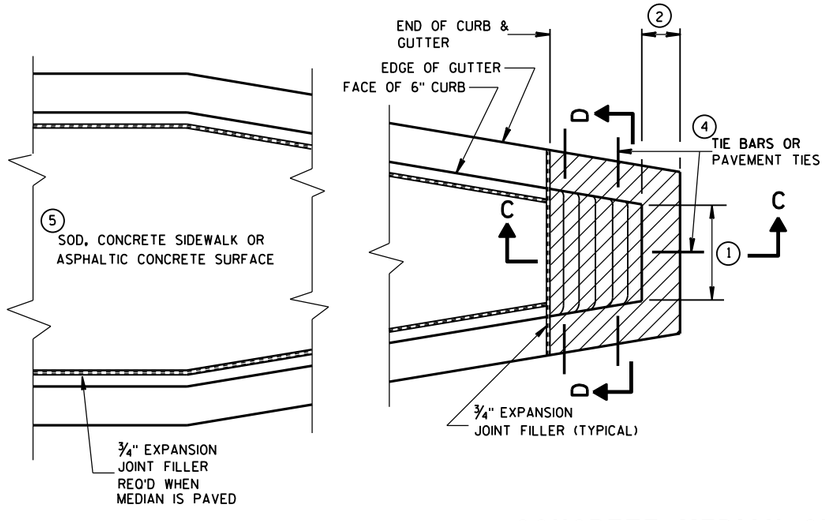
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

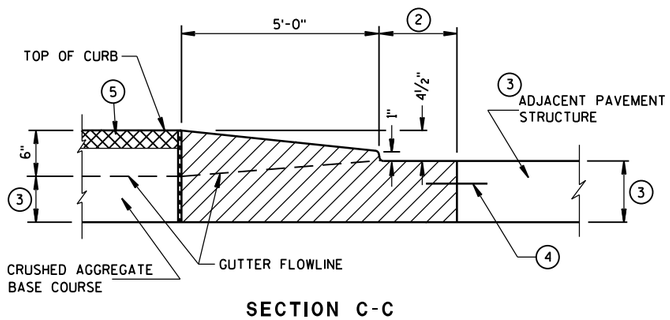
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

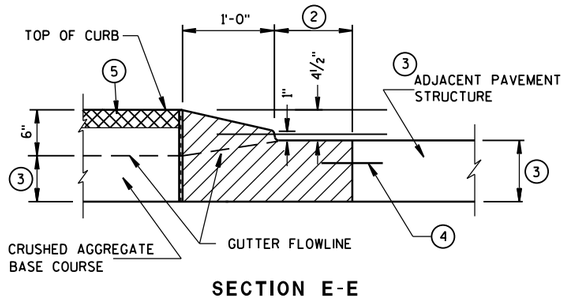
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



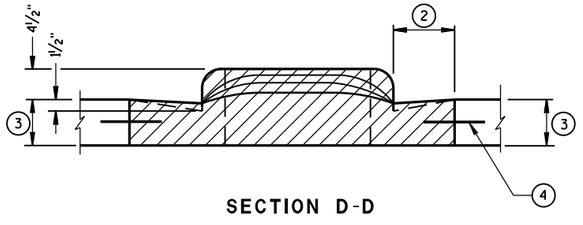






CONCRETE MEDIAN SLOPED NOSE TYPE 1

CONCRETE MEDIAN SLOPED NOSE TYPE 2



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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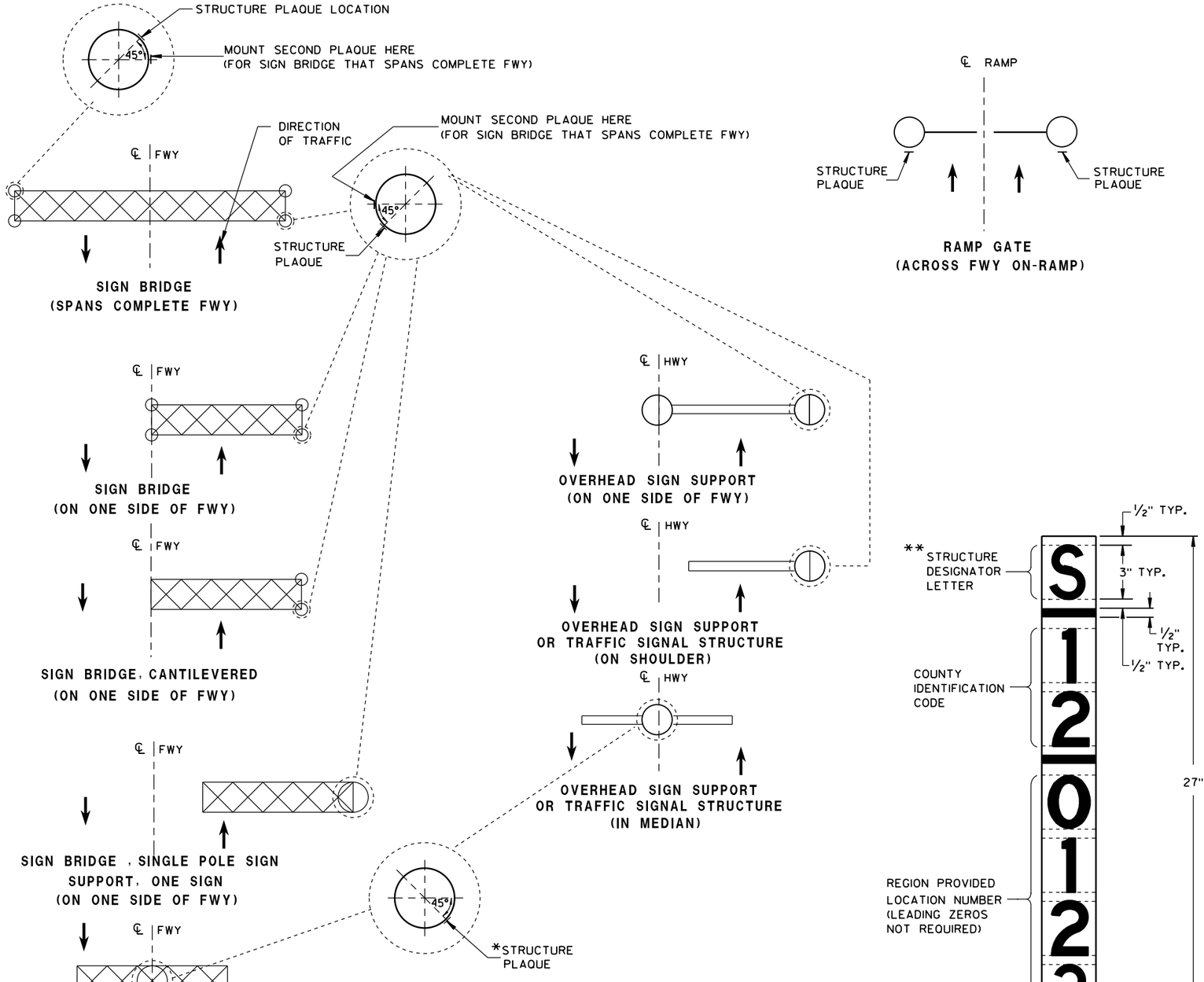
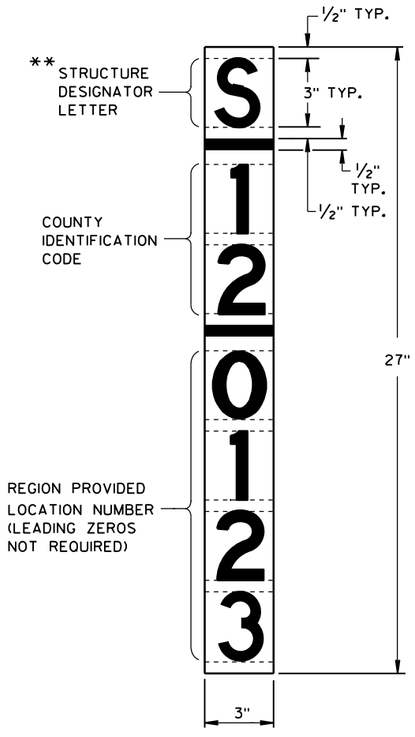


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES

**RAMP GATE
(ACROSS FWY ON-RAMP)**



** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

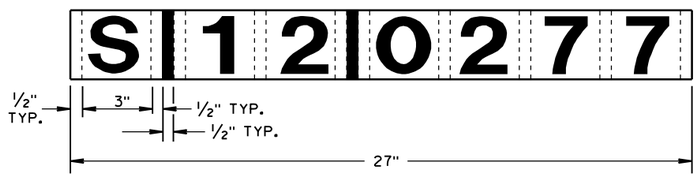
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 12 A 4-3

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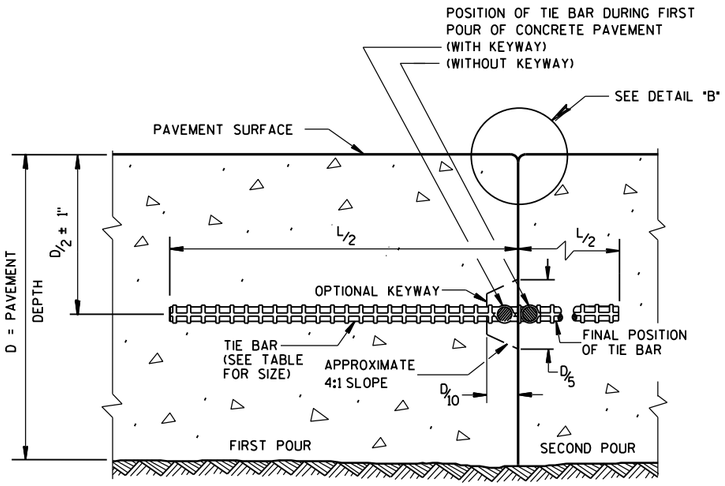
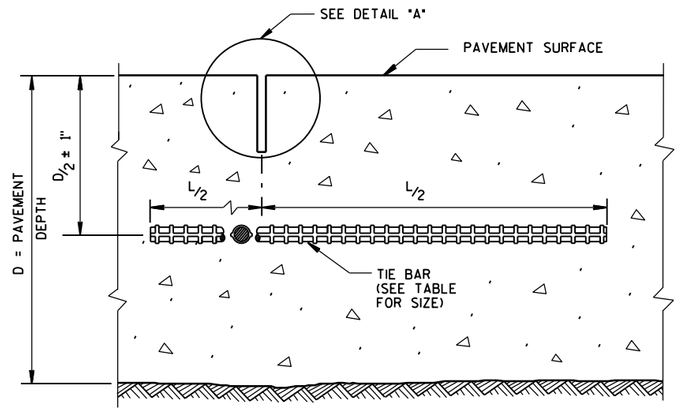
S.D.D. 12 A 4-3



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

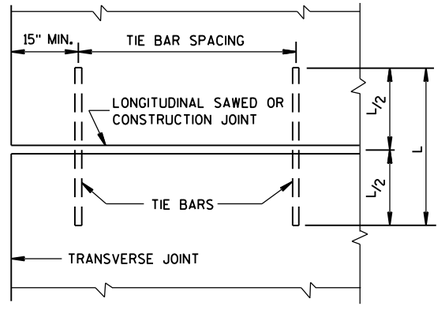
DETAIL "C"

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" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

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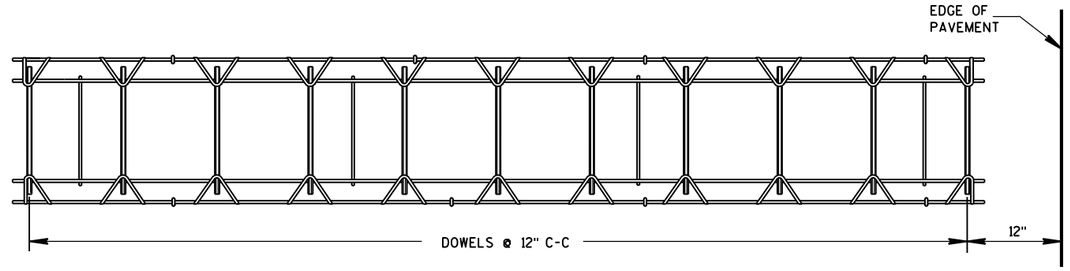
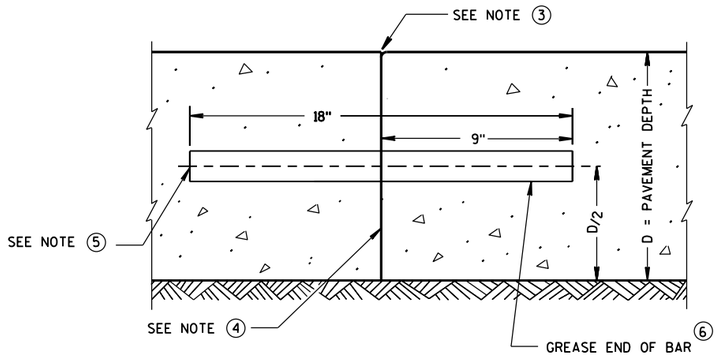
S.D.D. 13 C 1-18



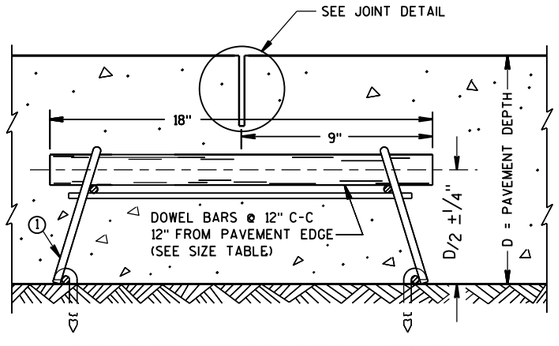
PLAN VIEW

SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



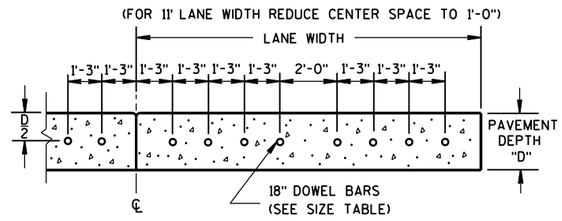
TRANSVERSE CONSTRUCTION JOINT



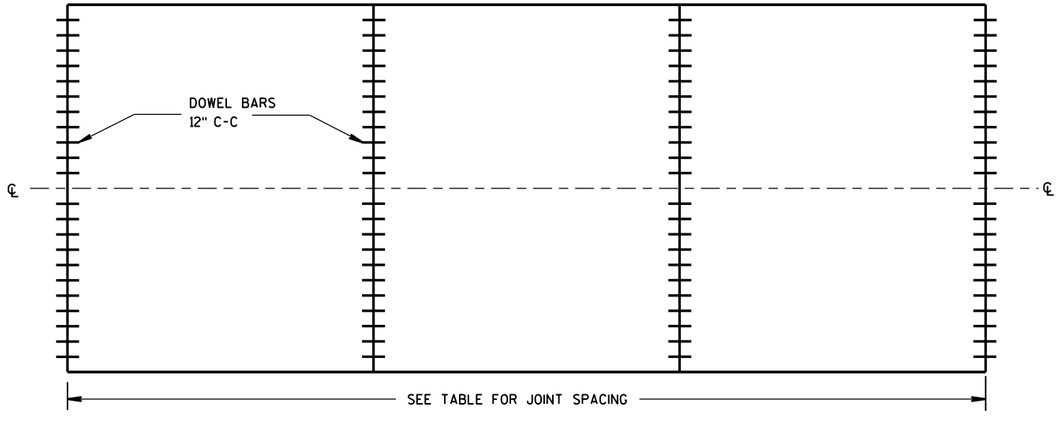
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① **OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.**

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

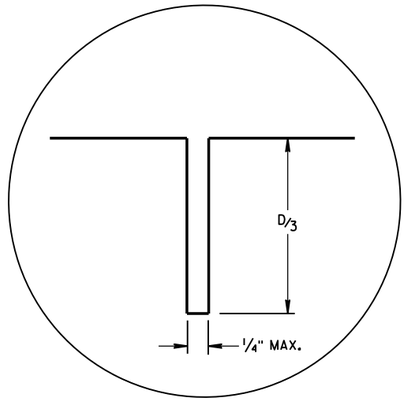
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/3/2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER
FHWA

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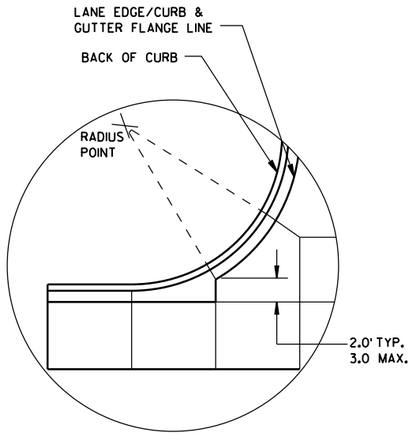
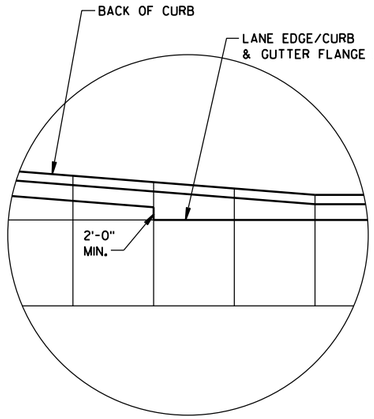
S.D.D. 13 C 13-8



DETAIL "A"



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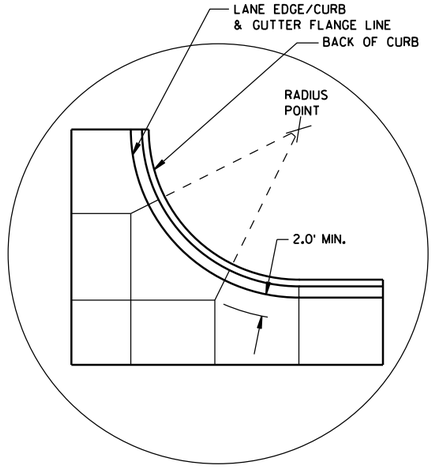
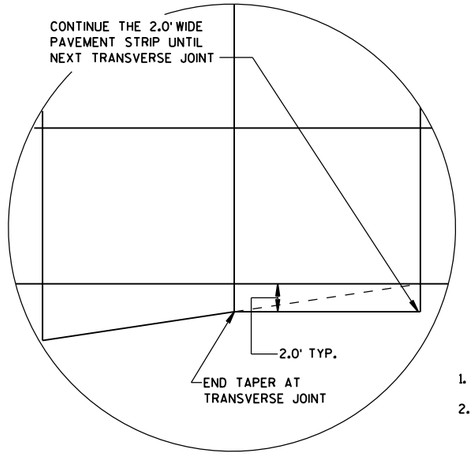


DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

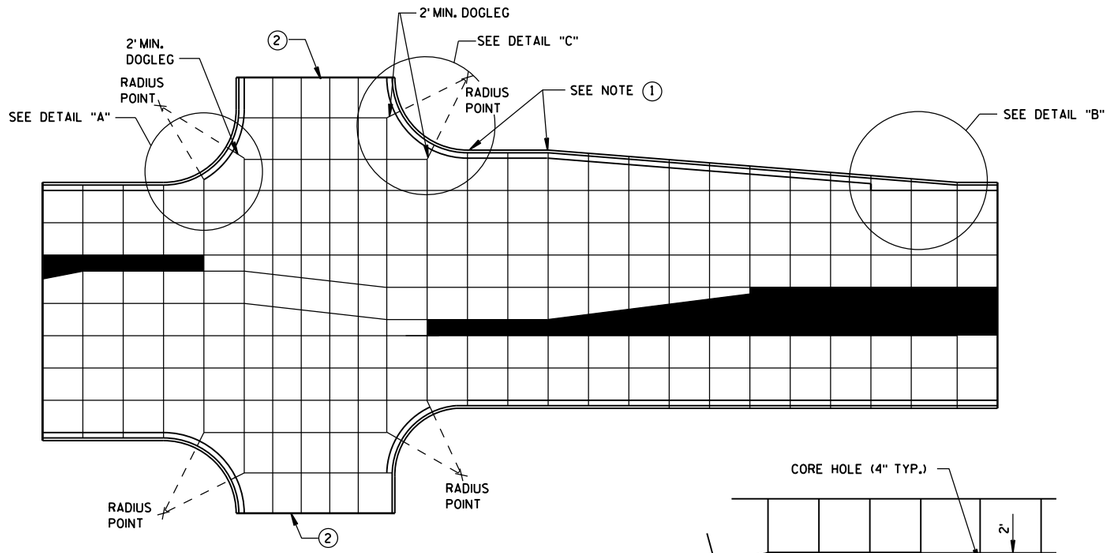
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

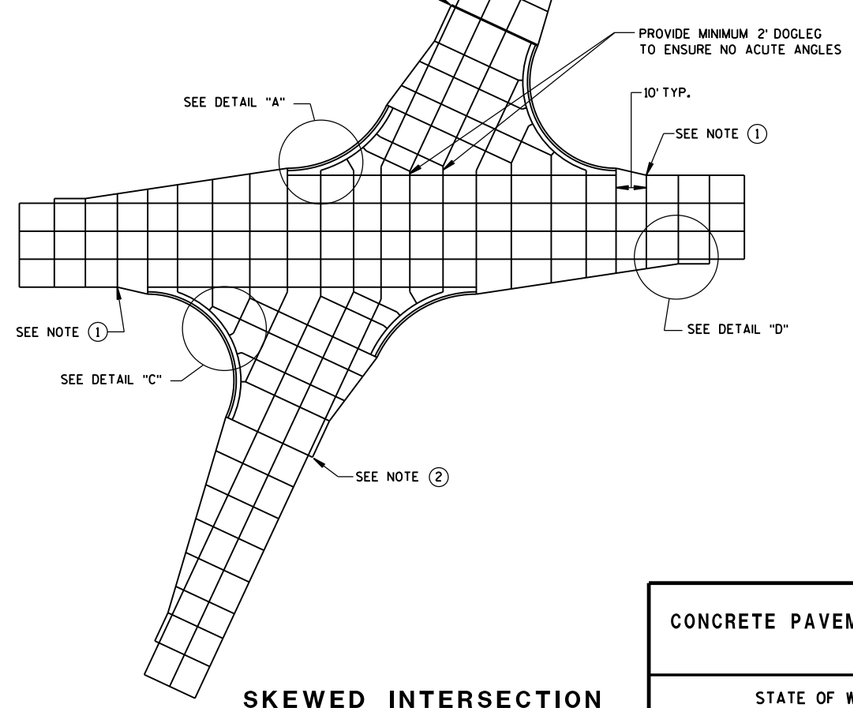
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



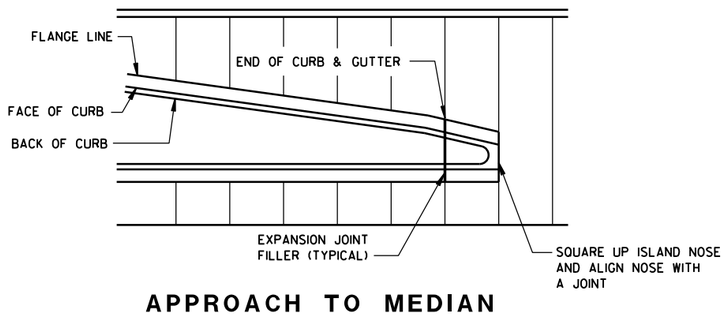
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

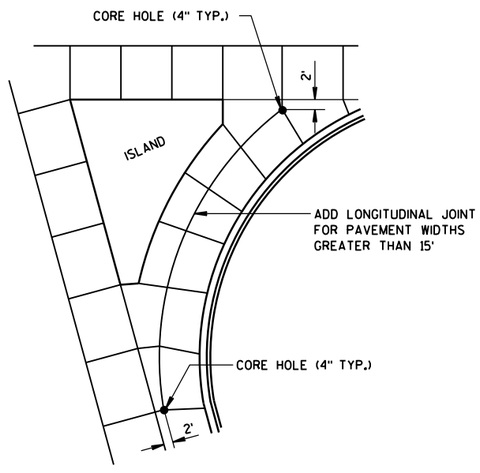
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

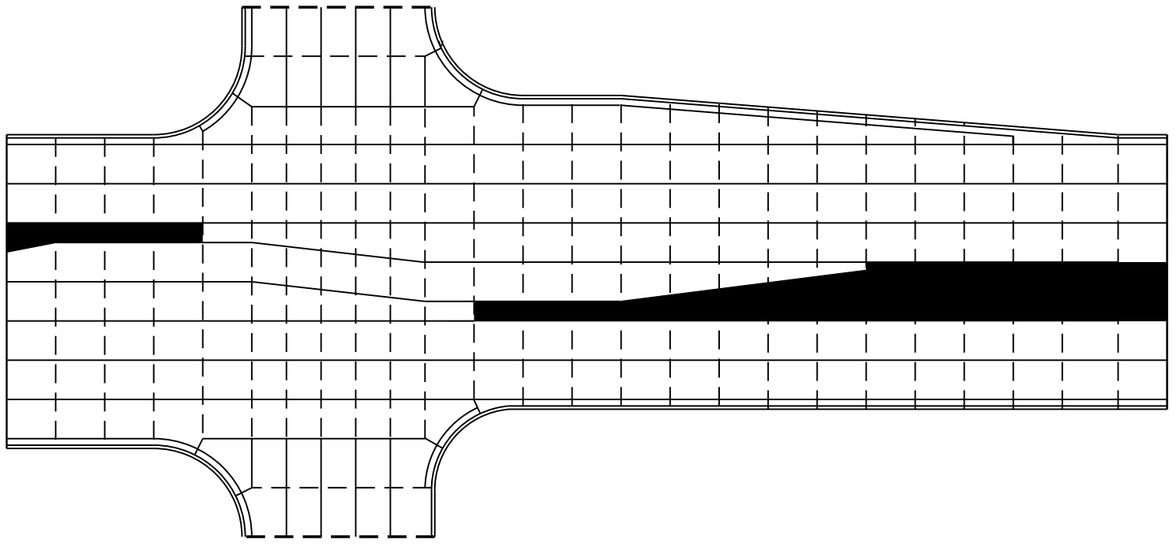
6
S.D.D. 13 C 18-3a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

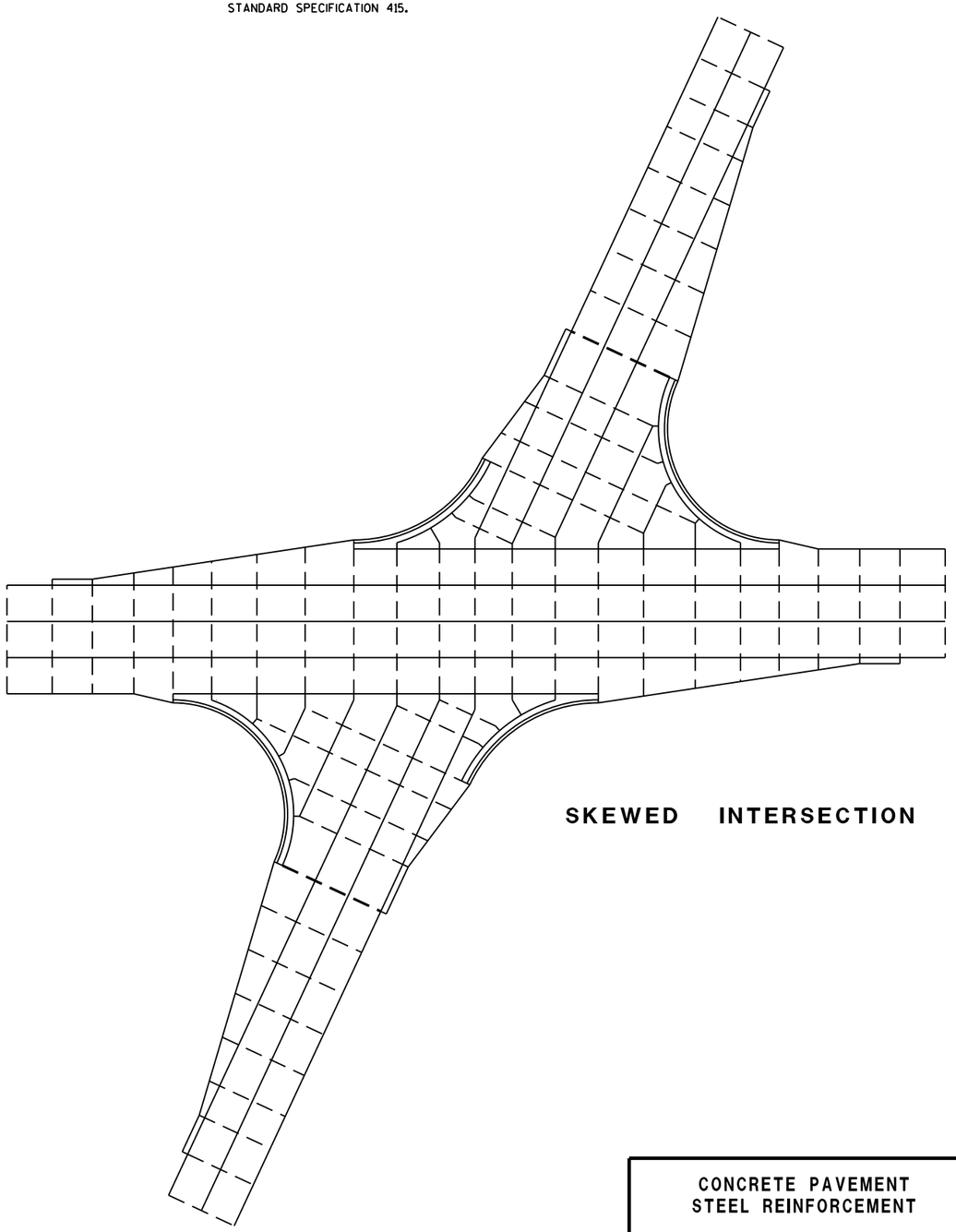
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

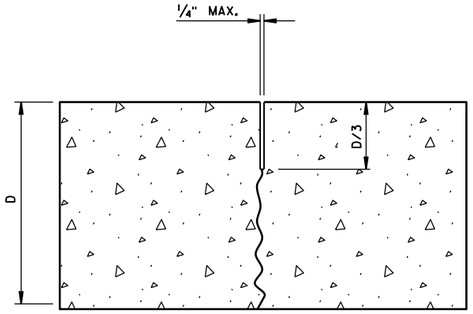
S.D.D. 13 C 18-3b

CONCRETE PAVEMENT
STEEL REINFORCEMENT

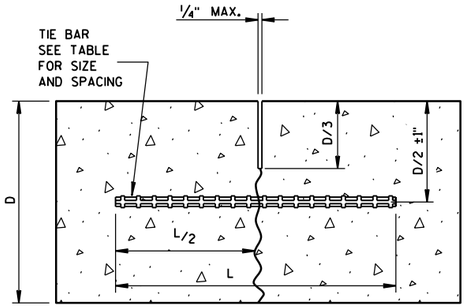
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

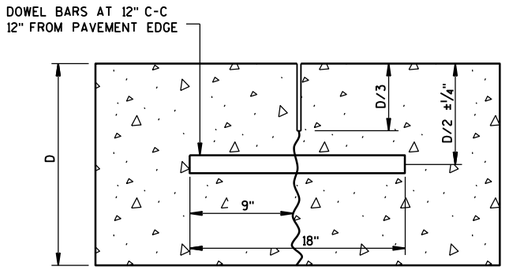
S.D.D. 13 C 18-3b



UNDOWELED-TRANSVERSE



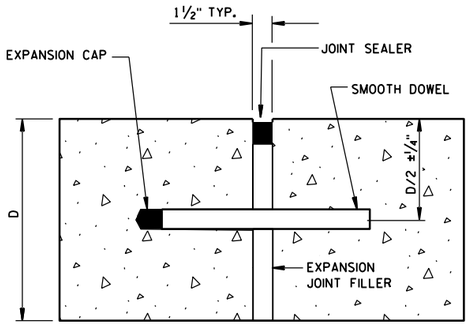
TIED LONGITUDINAL



DOWELED-TRANSVERSE

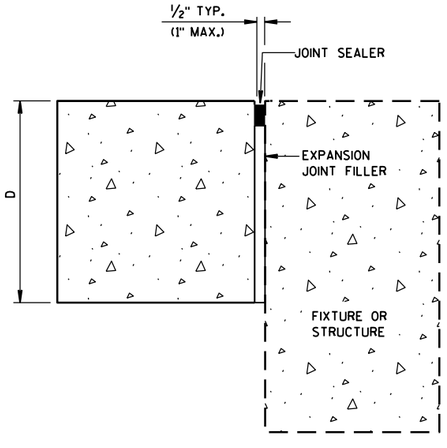
CONTRACTION JOINTS

SEE NOTE (2)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

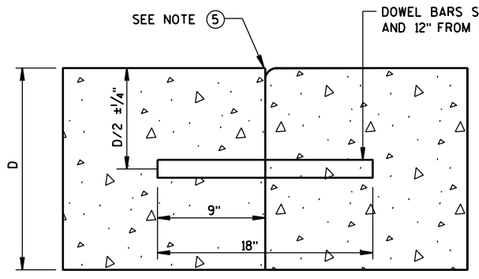
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24"**

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

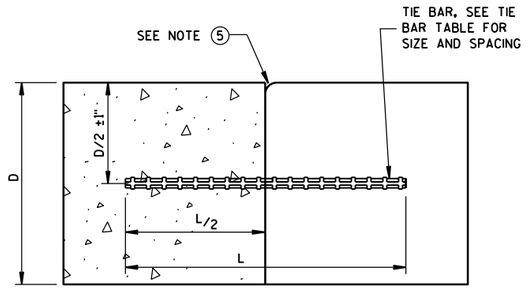
** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

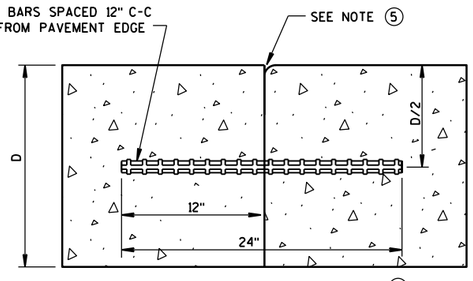
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



DOWELED TRANSVERSE (3)

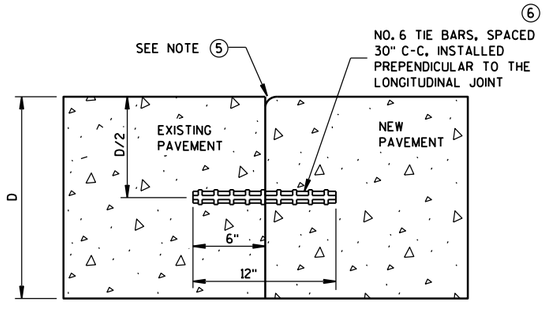


TIED LONGITUDINAL



TIED TRANSVERSE (3)

(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS

SEE NOTE (4)

CONCRETE PAVEMENT
JOINT TYPES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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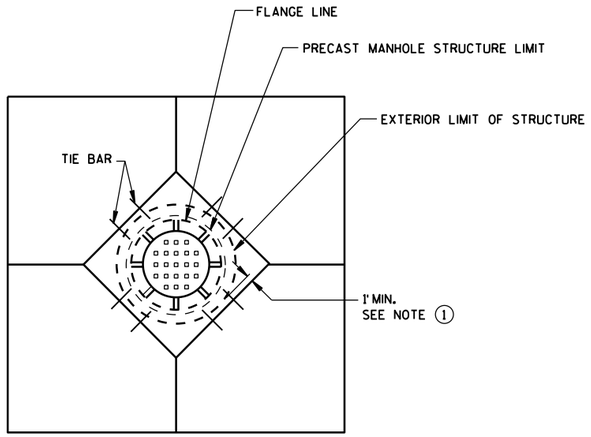
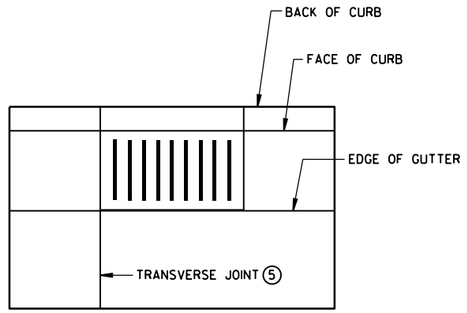
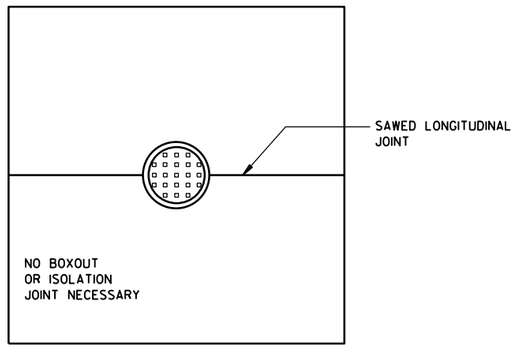
S.D.D. 13 C 18-3c



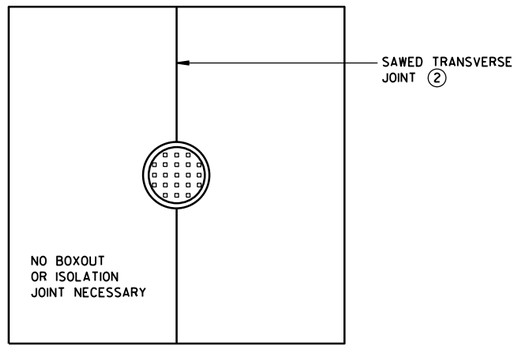
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



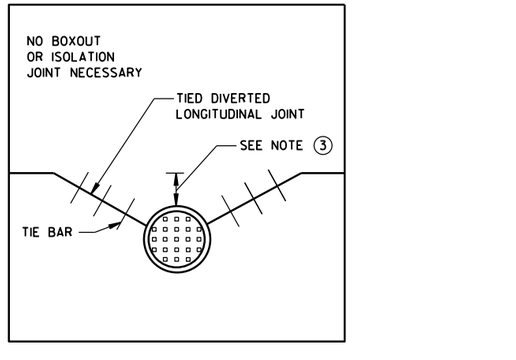
INLET WITH TRANSVERSE JOINT



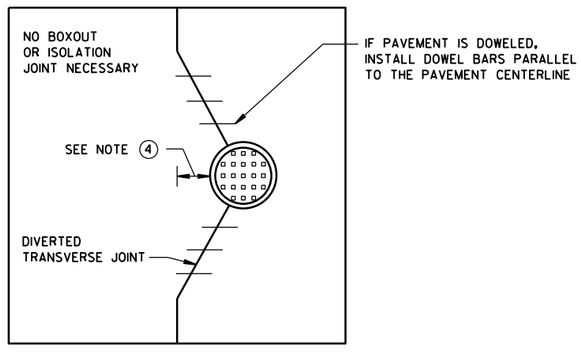
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

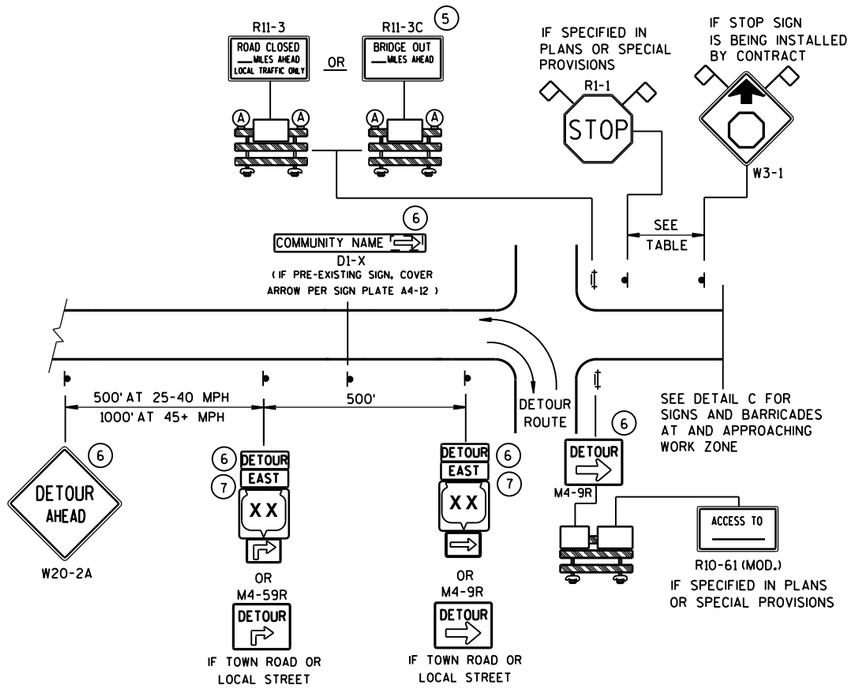
CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

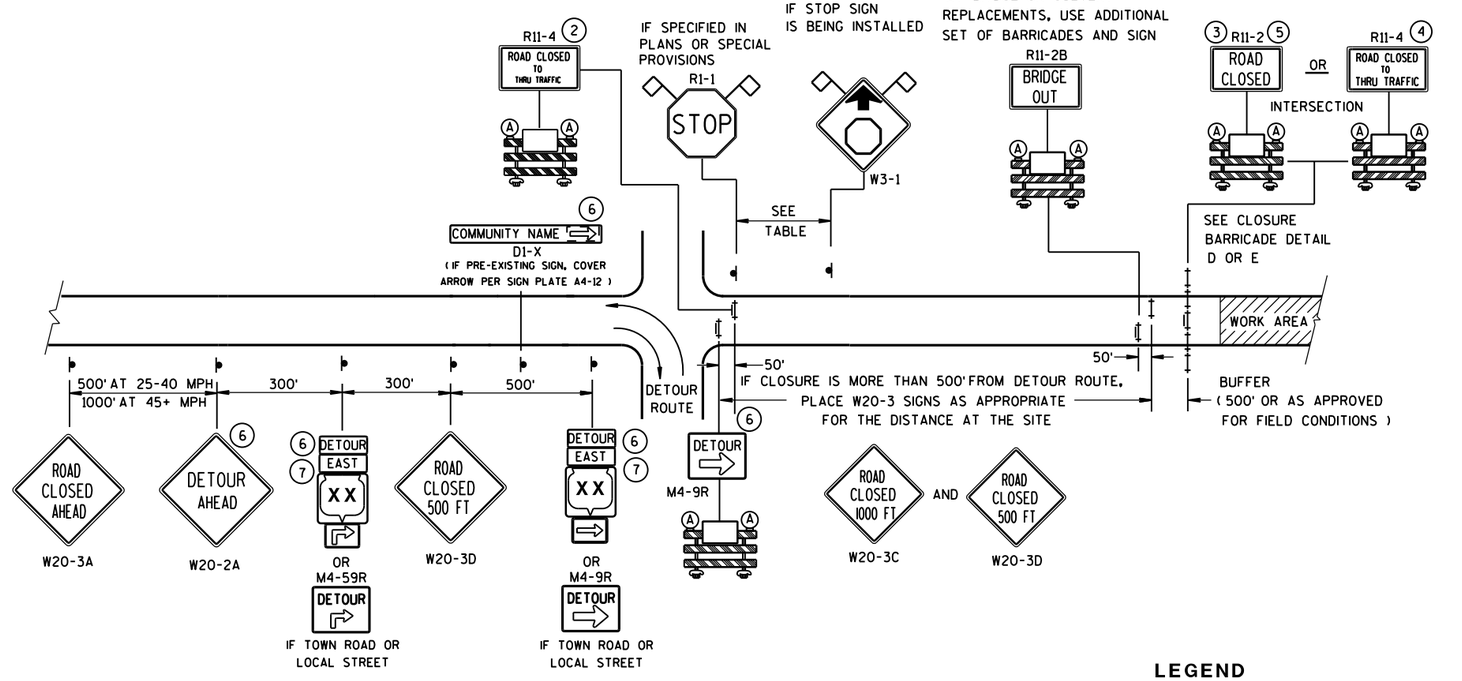
6

S.D.D. 13 C 18-3d



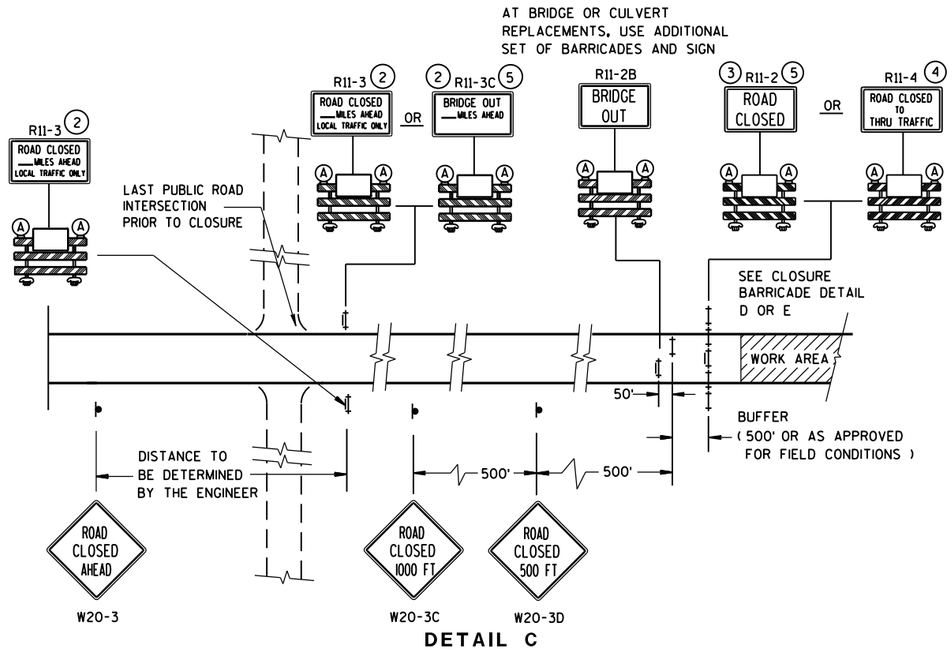
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES (1) THROUGH (7)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

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S.D.D. 15 C 2-6a

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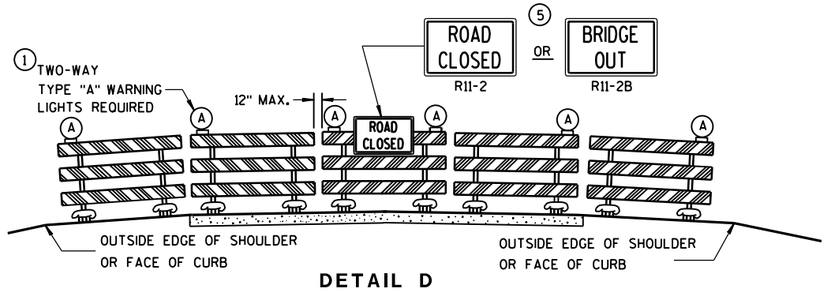
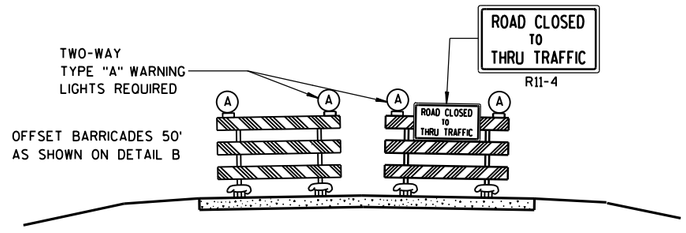
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

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.

"WO 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". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 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.
- R1-1 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 EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. 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.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI

FHWA

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S.D.D. 15 C 2-6b

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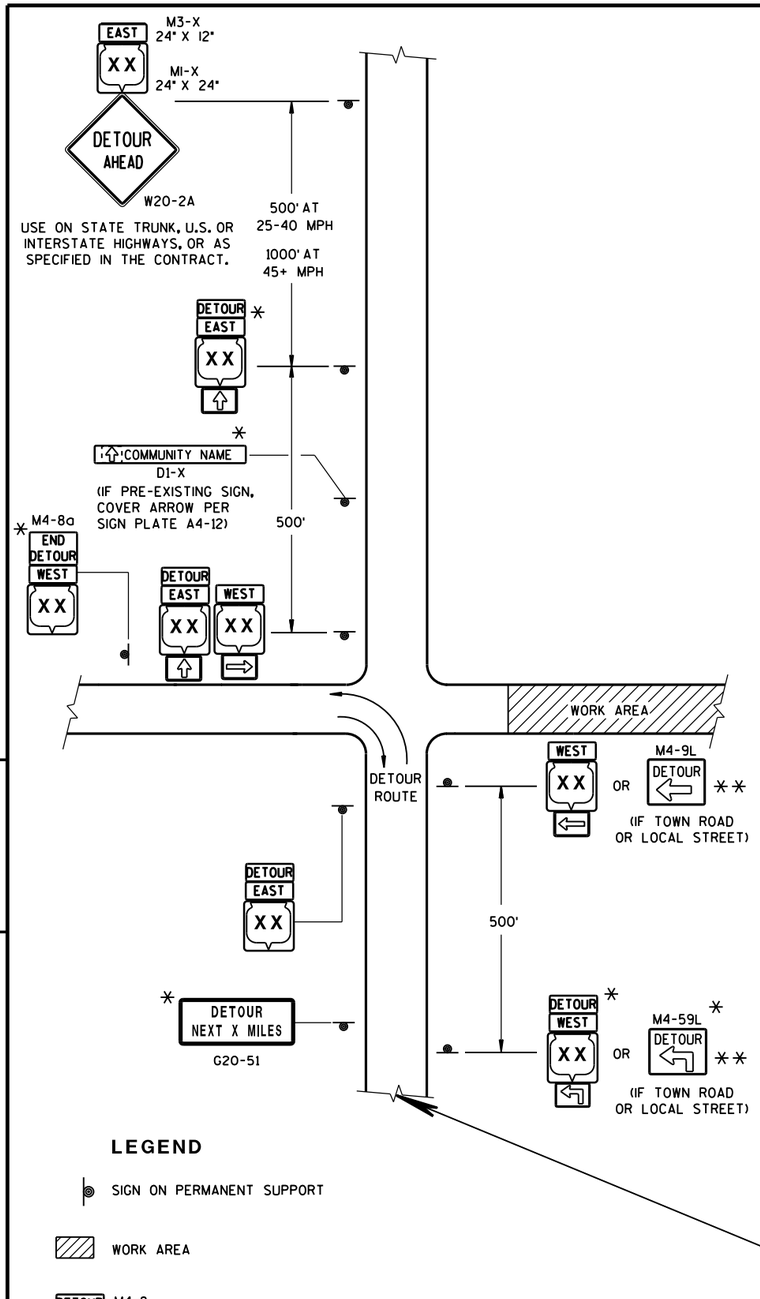
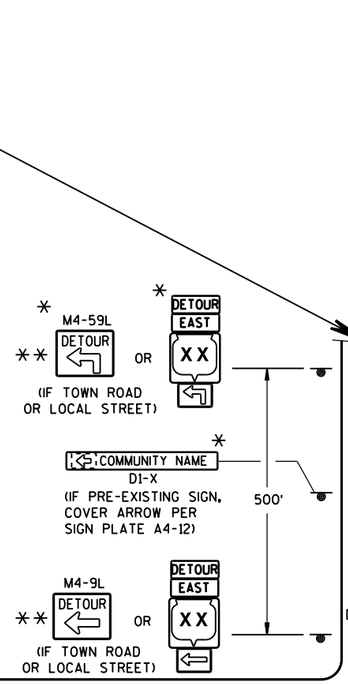
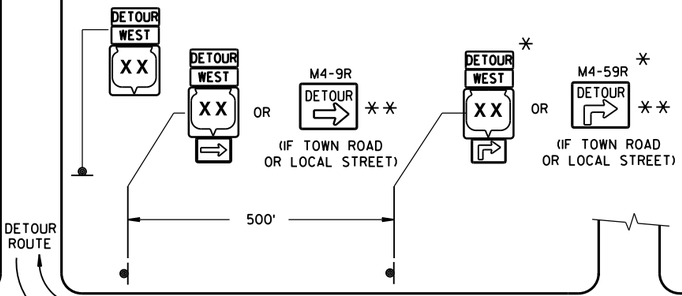
S.D.D. 15 C 2-6b

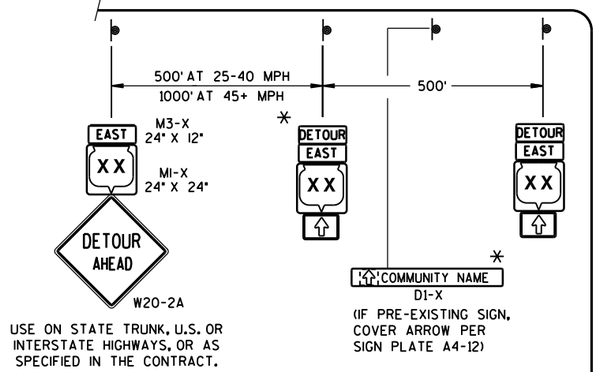
THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

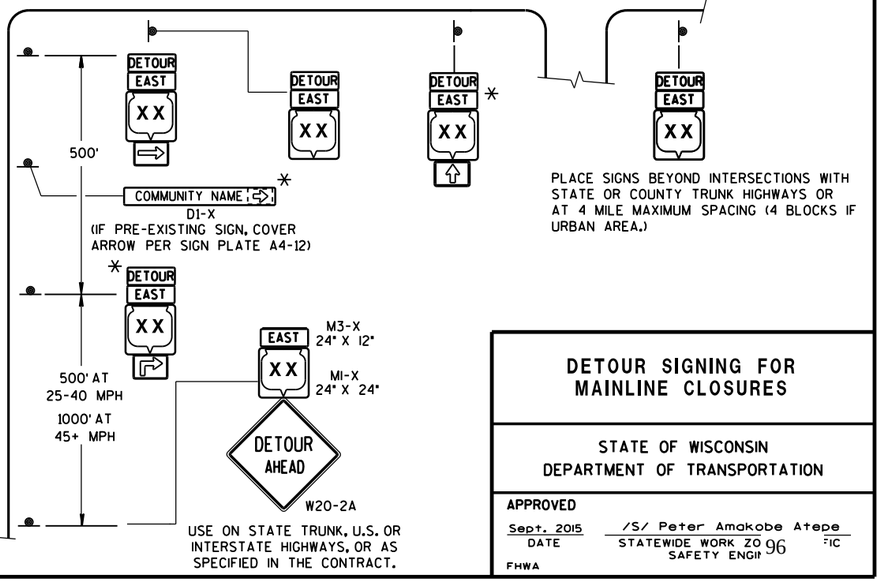


MATCH POINT









GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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.

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- MO5-1 AND MO6-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR EAST M4-8 / M3-X
- XX OR COUNTY XX OR XX — M1-4 / M1-5A / M1-6
- MO5-1 / MO6-1 / MO6-1

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible] FIC

FHWA

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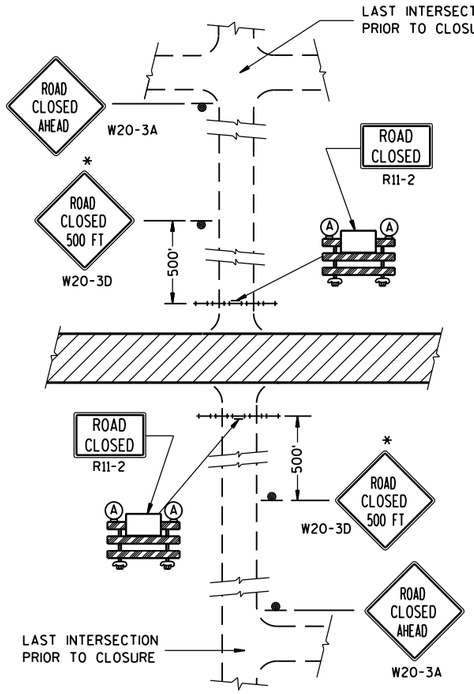
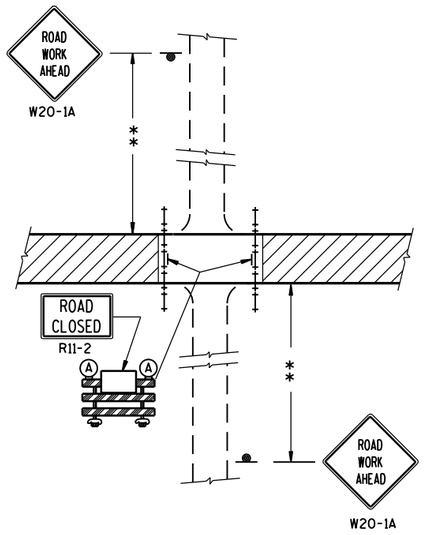
S.D.D. 15 C 2-6c



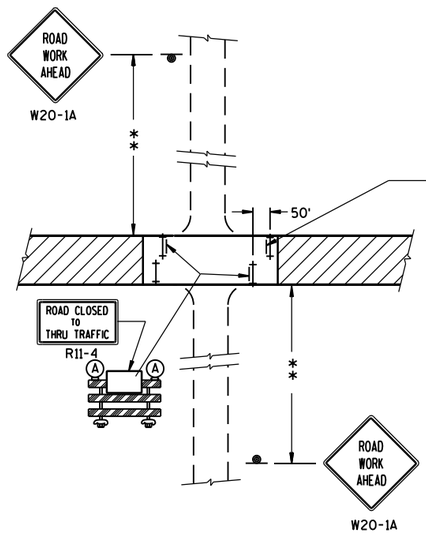
DETAIL 1

(NO ACCESS TO PROJECT)



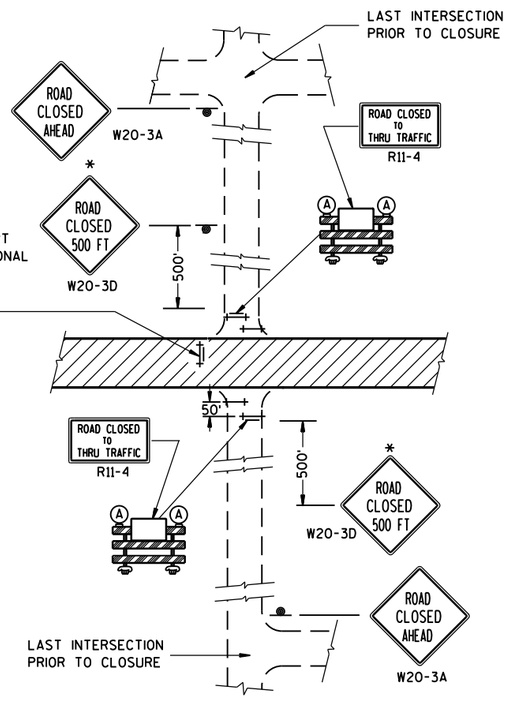
DETAIL 2

(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 PRIOR 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 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 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".

*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
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... — FHWA

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S.D.D. 15 C 3-3

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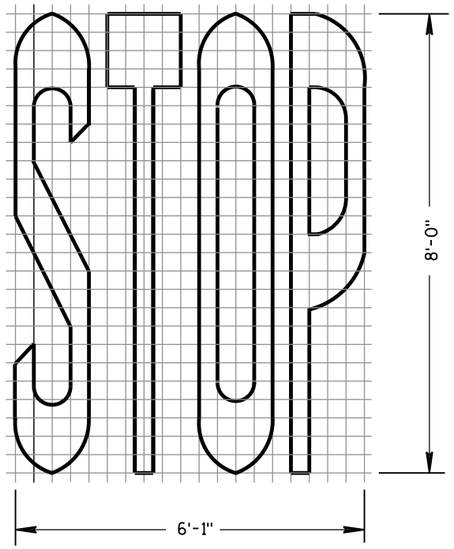
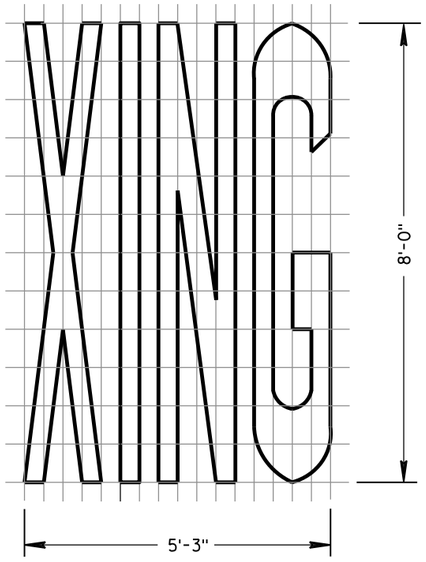
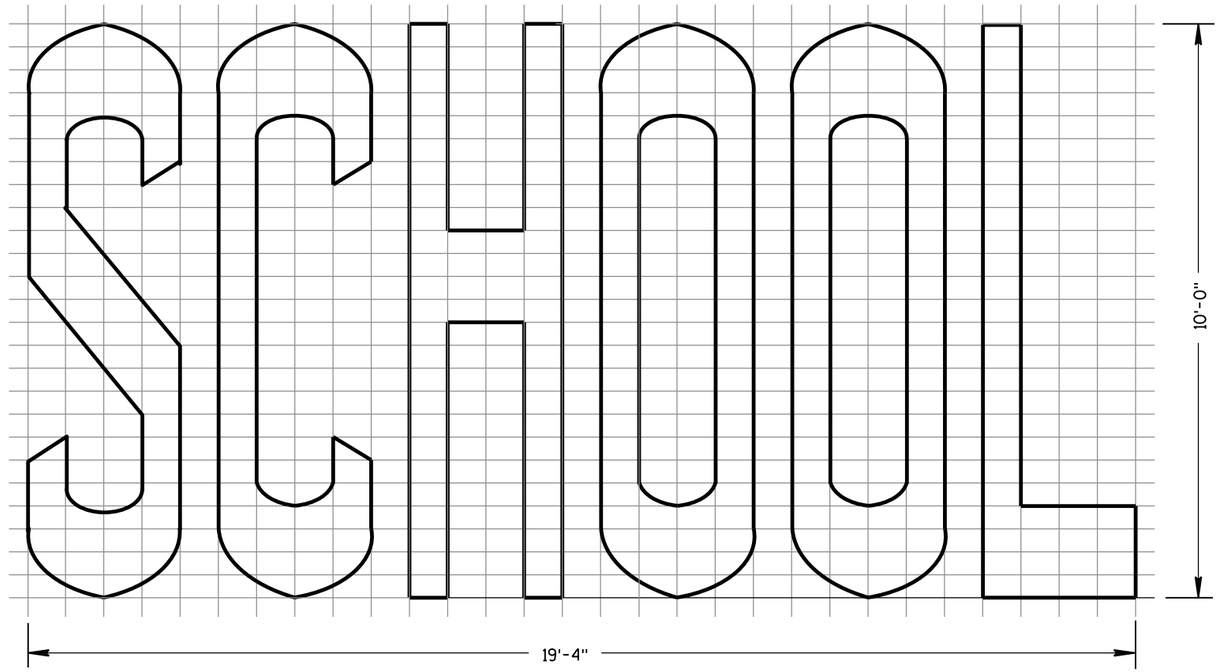
S.D.D. 15 C 3-3

GENERAL NOTES

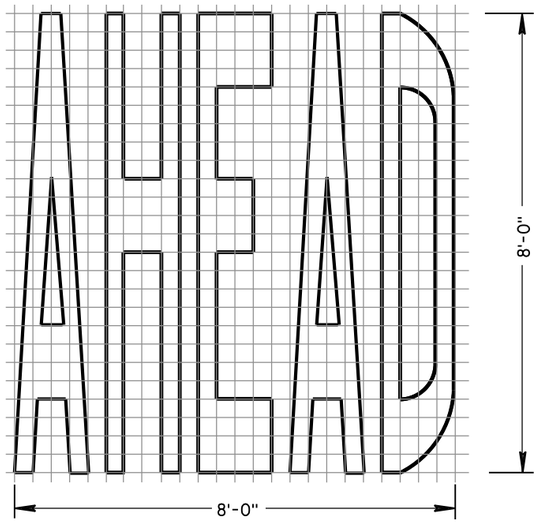
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

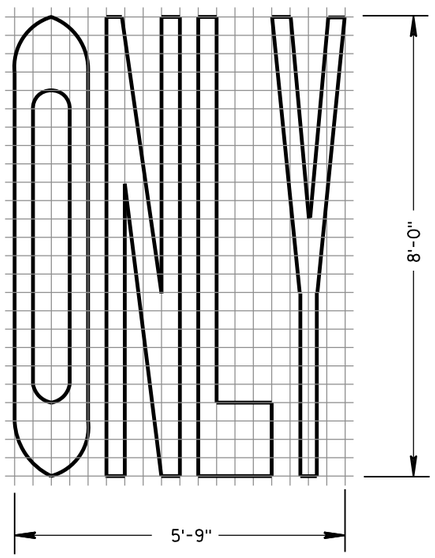


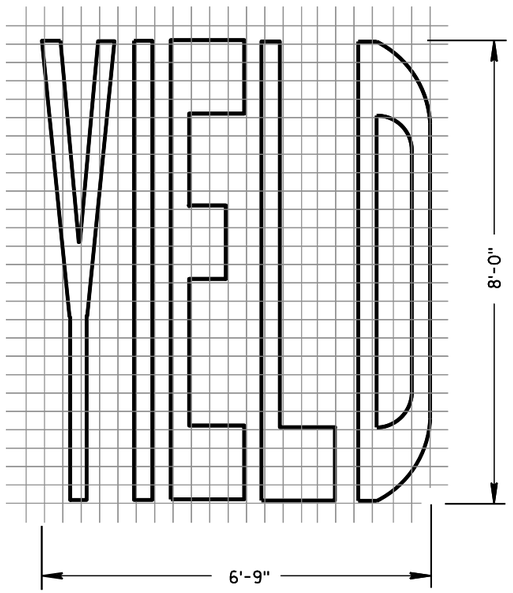


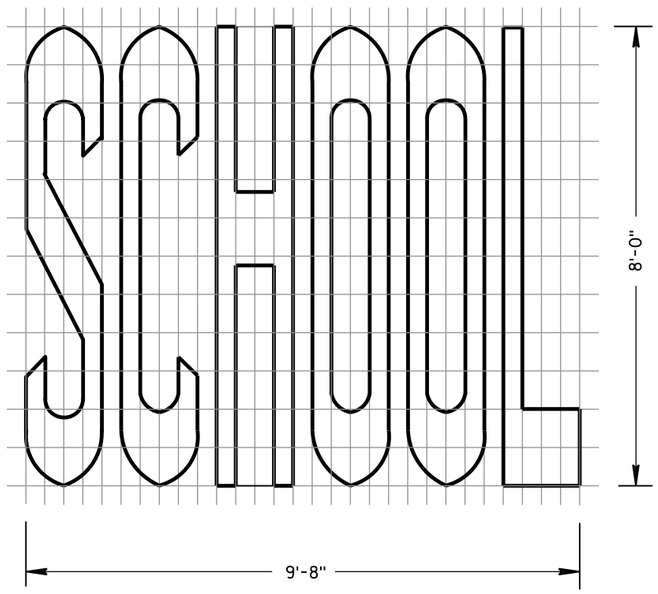


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-16	/S/ Matthew R. Rauch	
DATE	STATE SIGNING AND MARK	EER

FHWA

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S.D.D. 15 C 7-13b

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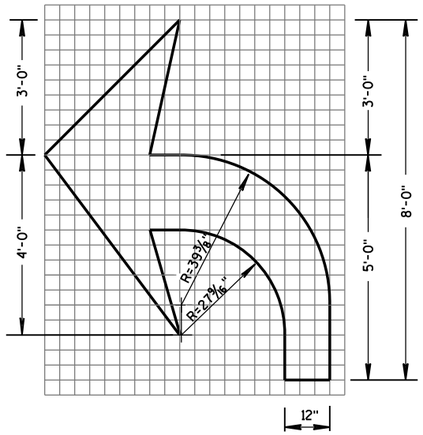
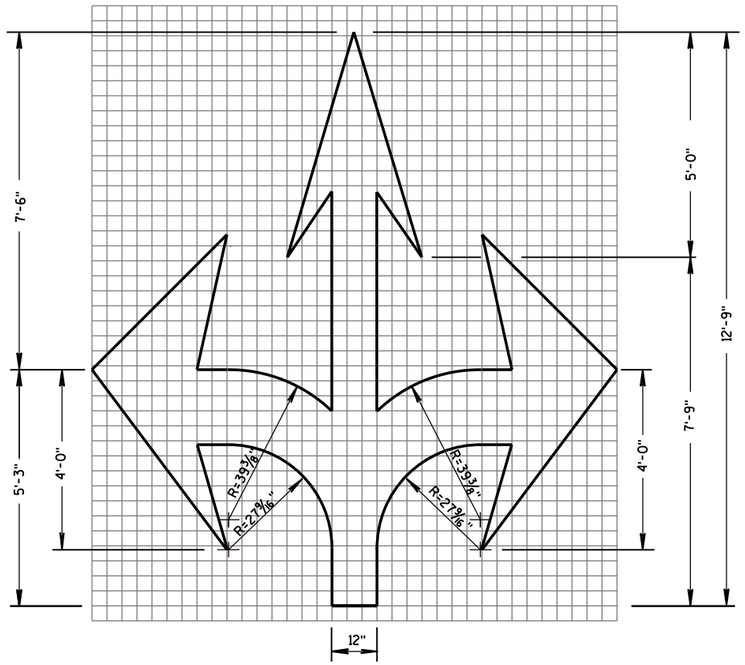
S.D.D. 15 C 7-13b

GENERAL NOTES

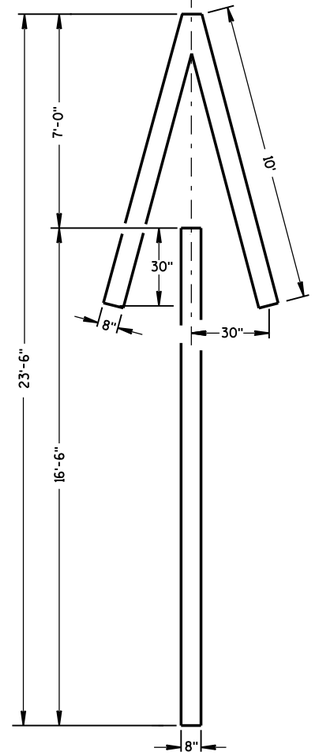
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



TYPE 2



TYPE 6



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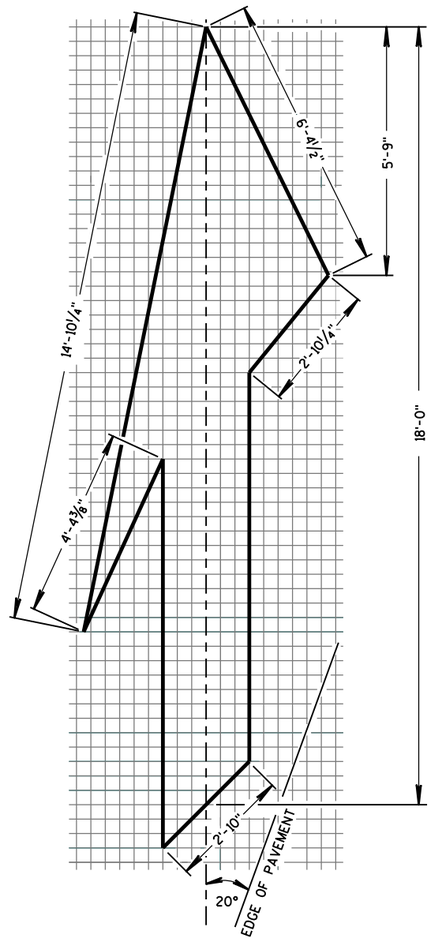
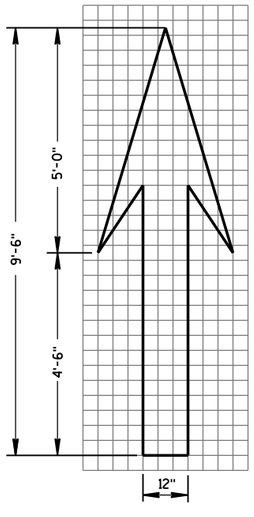
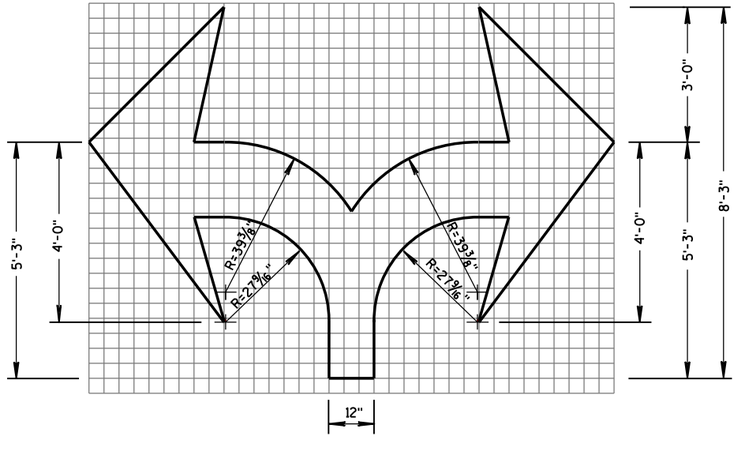


TYPE 5 LANE DROP ARROW



TYPE 1



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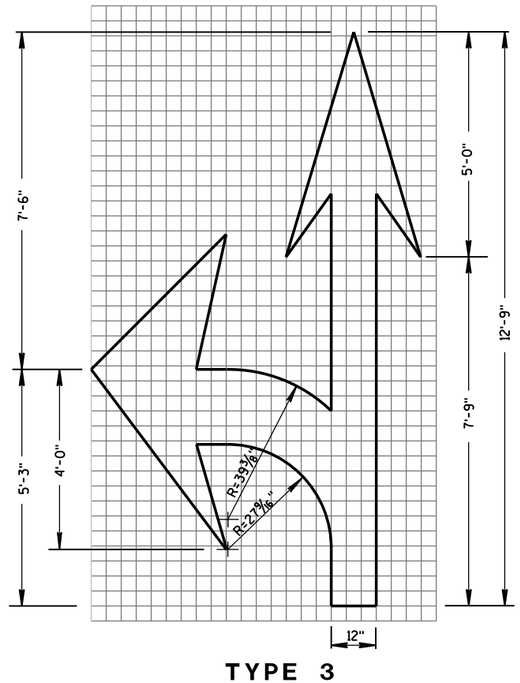

TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR 99 NEER
FHWA

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S.D.D. 15 C 7-13c

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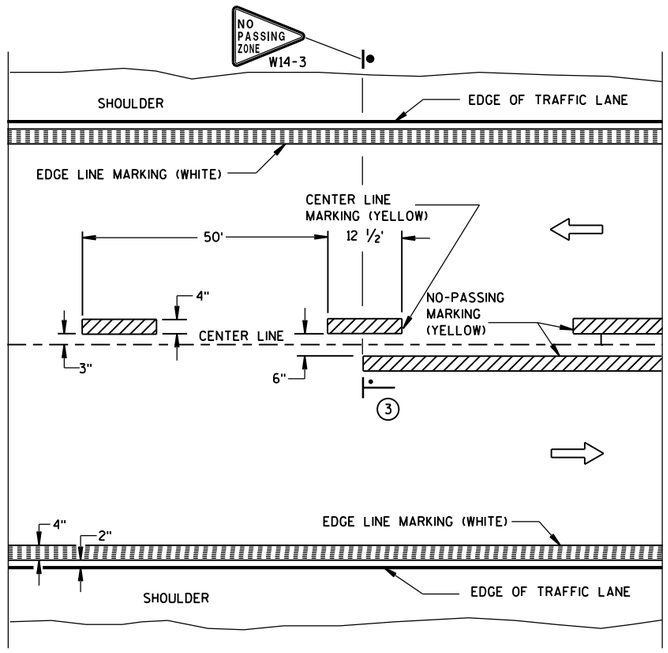
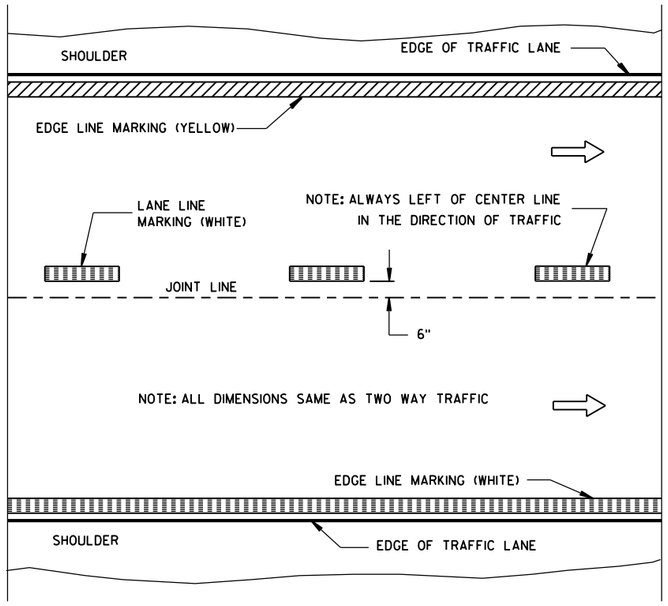
S.D.D. 15 C 7-13c

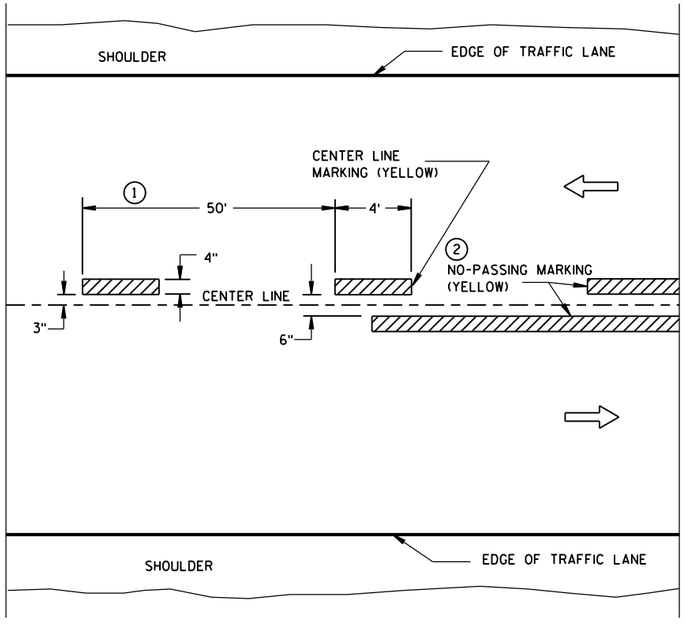


TWO WAY TRAFFIC

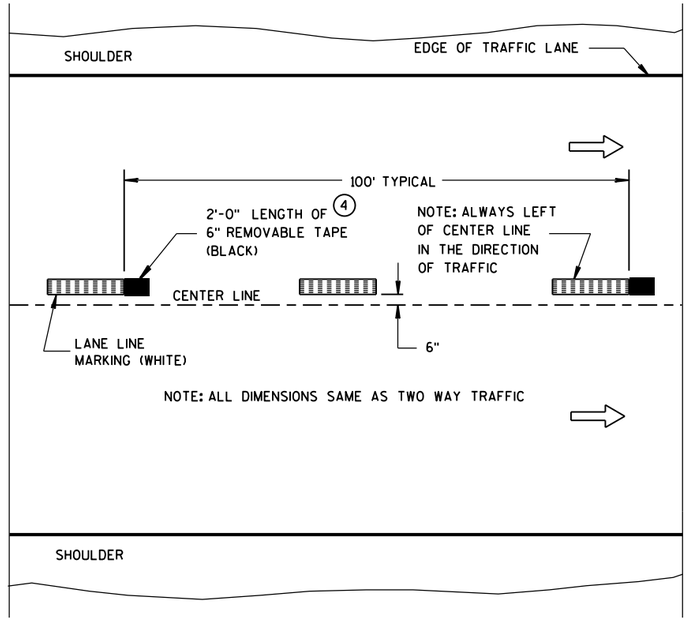


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

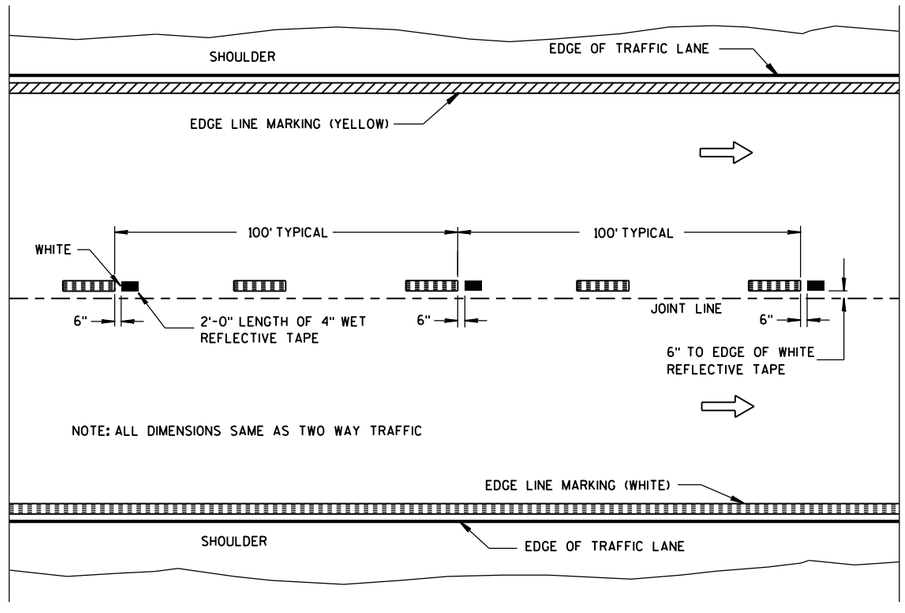
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC E

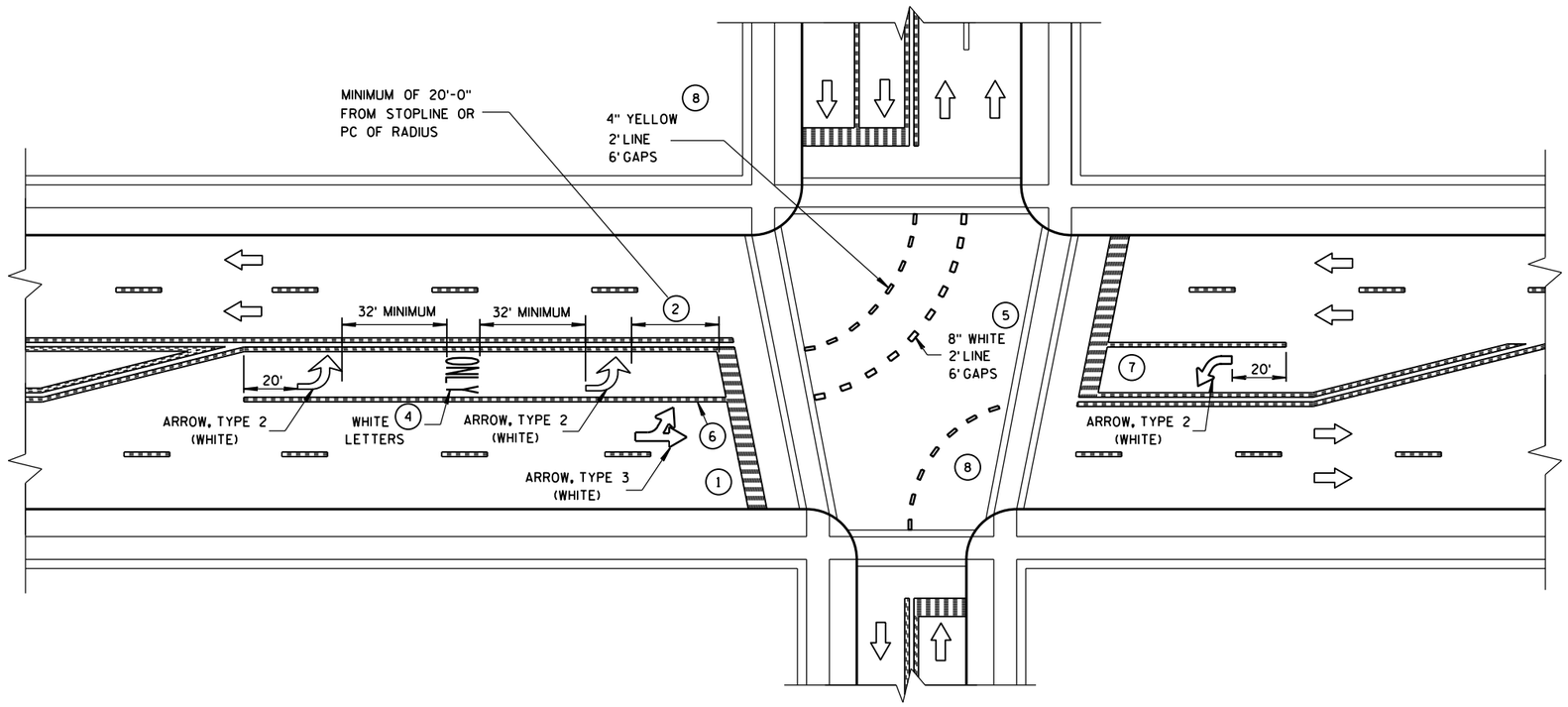
FHWA

6

S.D.D. 15 C 8-16a

6

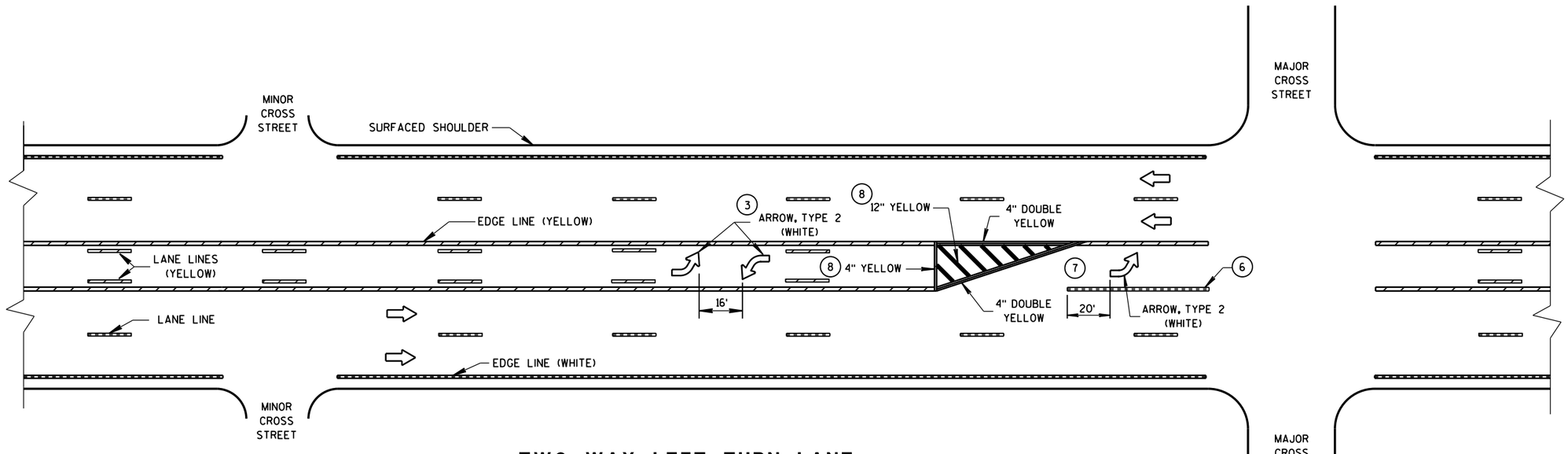
S.D.D. 15 C 8-16a



GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

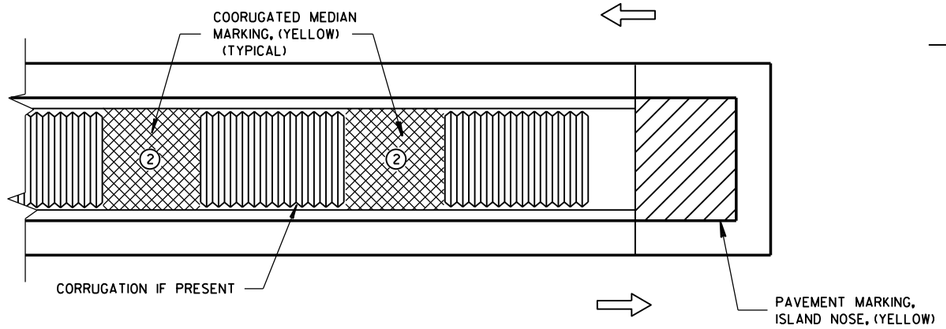
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

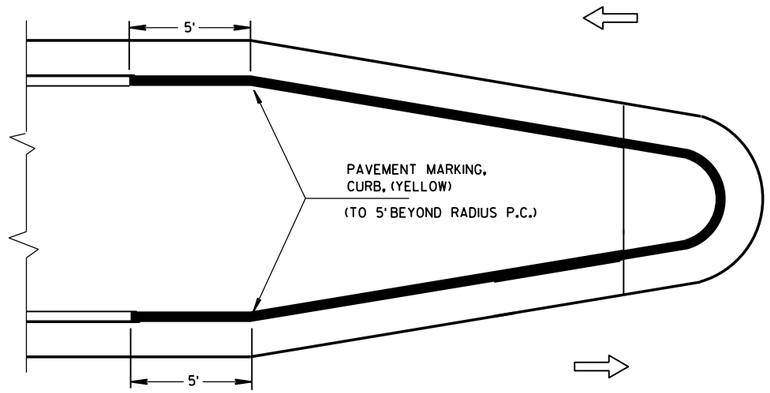
S.D.D. 15 C 8-16e

6

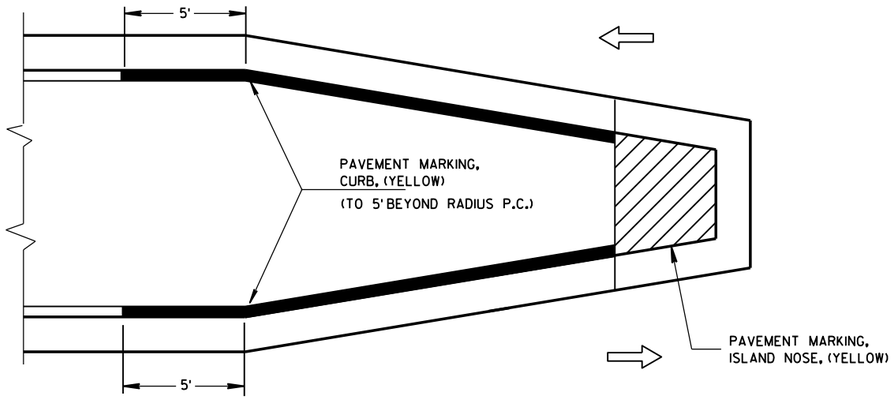
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

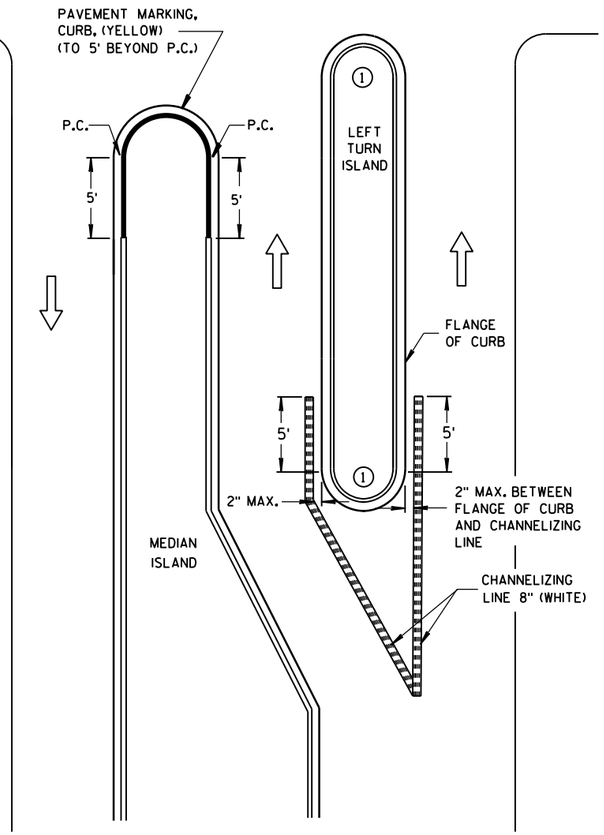


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

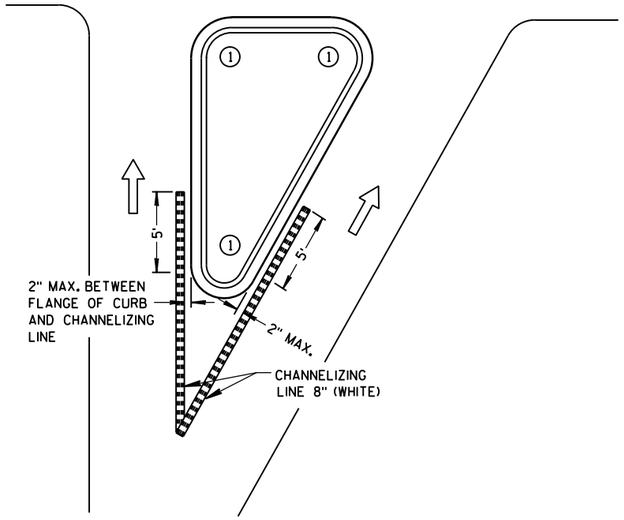


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

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



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

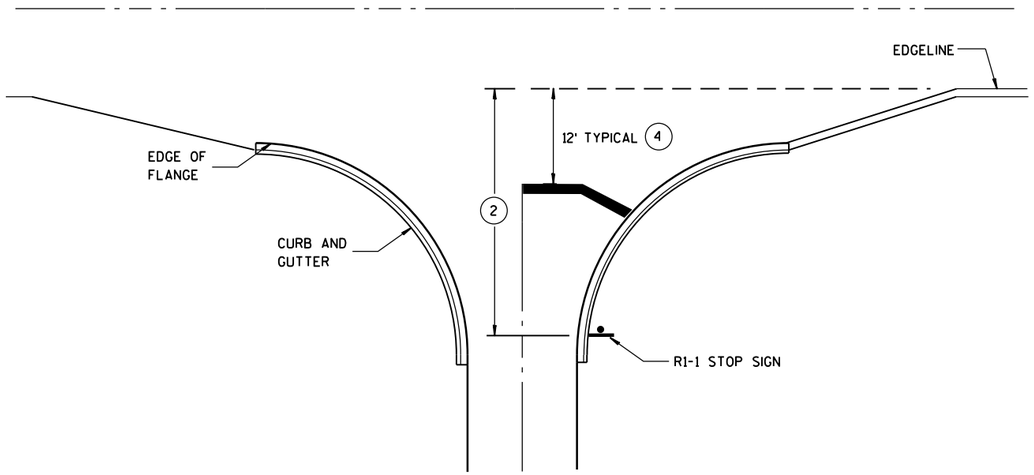
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

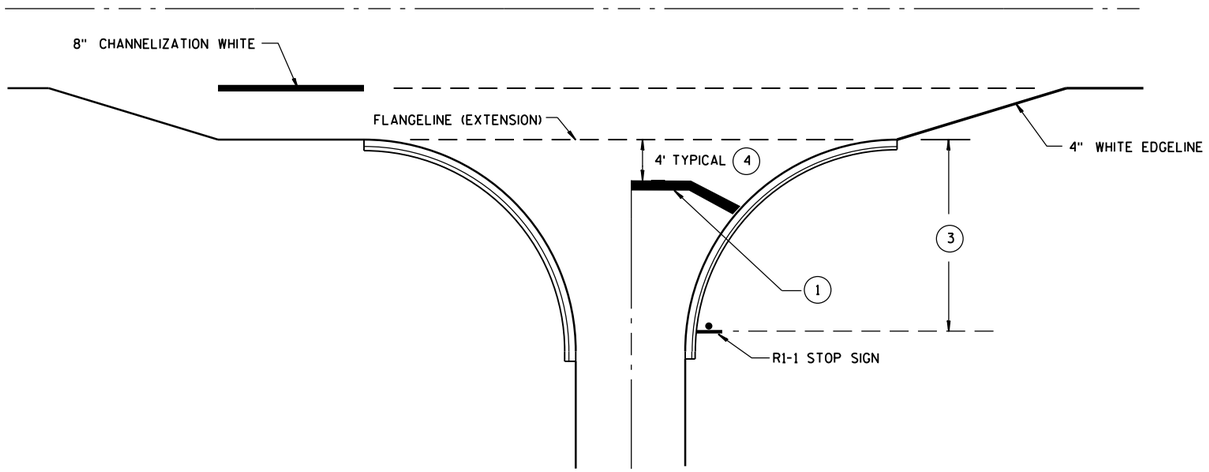
S.D.D. 15 C 8-16f

6

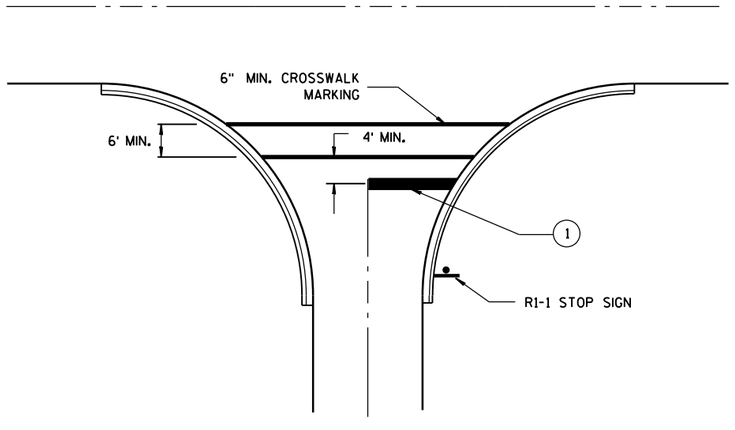
S.D.D. 15 C 8-16f



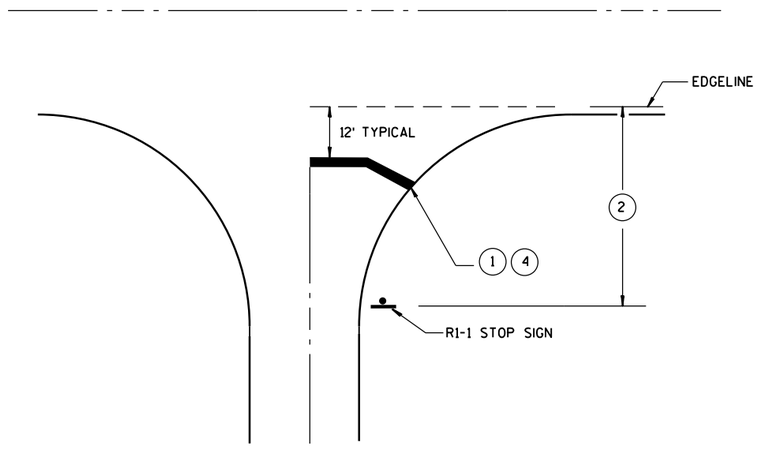
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

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 EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN 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).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-2016
DATE

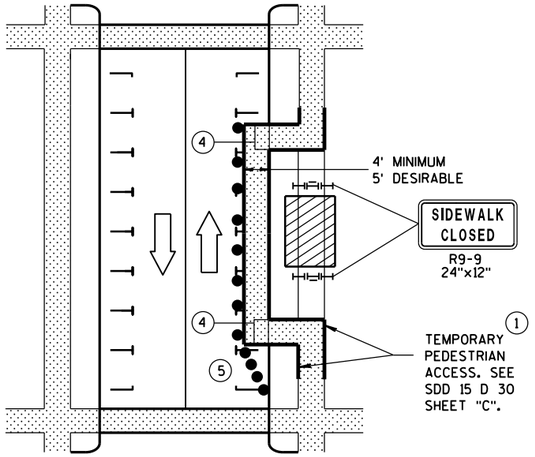
/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible] ENGINEER

FHWA

6

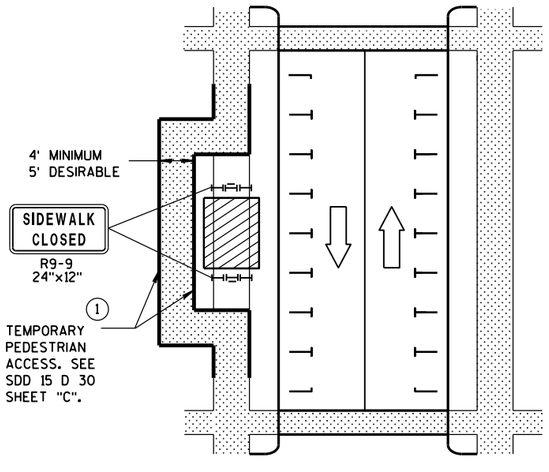
S.D.D. 15 C 33-2

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

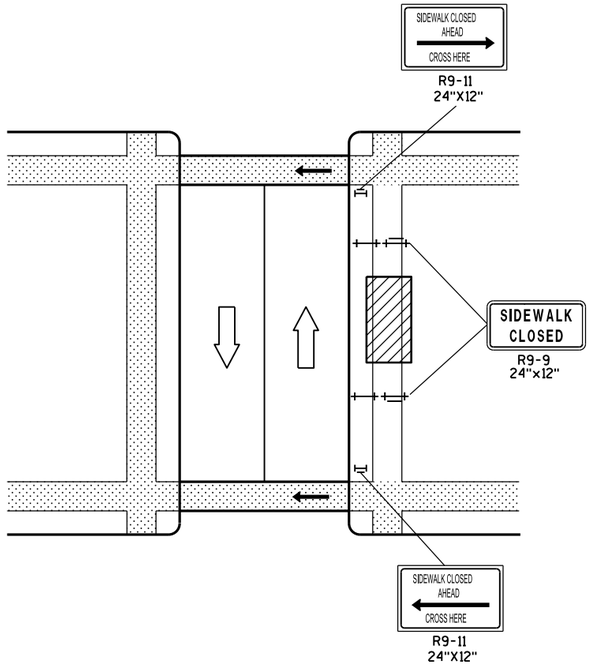


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

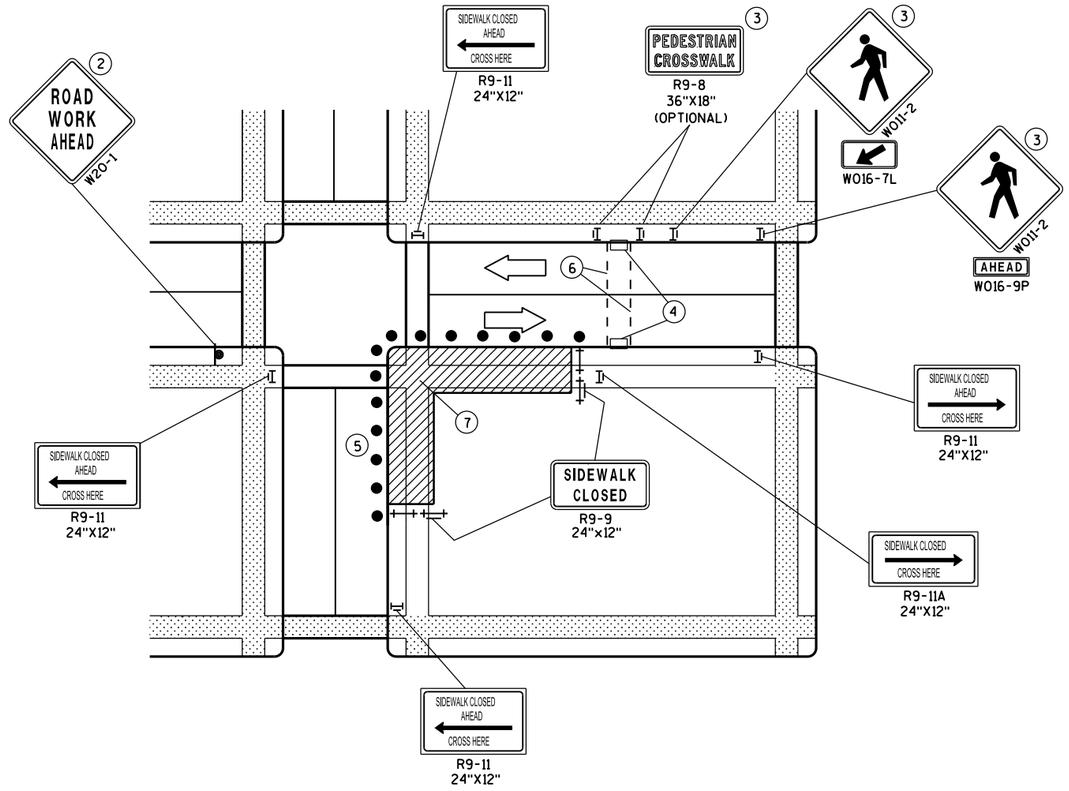
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE 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. STAGE WORK, AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

"WO" 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 CROSSWALK 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 W011-2 SIGN 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 A, LOW-INTENSITY FLASHING)
- DIRECTION OF TRAFFIC
- TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

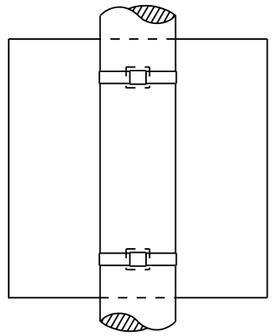
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

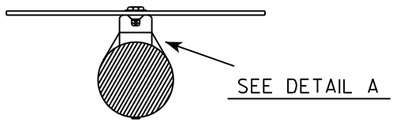
6

S.D.D. 15 D 30-3a

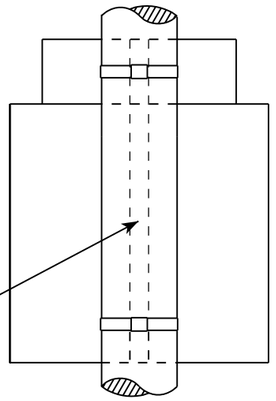
BANDING

SINGLE SIGN

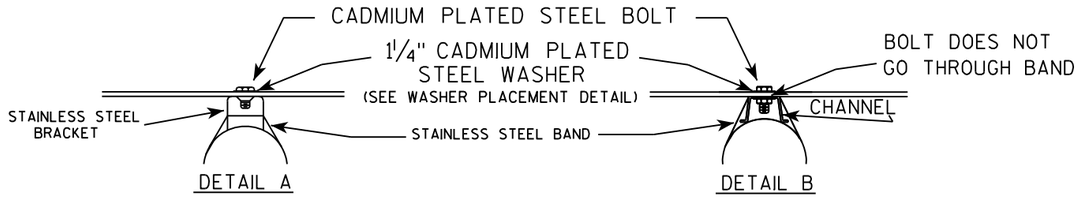




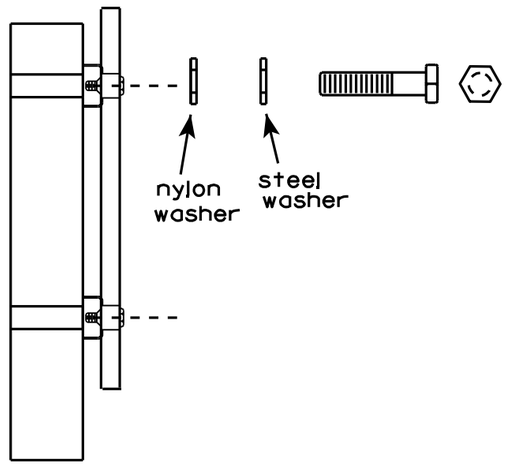
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL INSTALLATION SHEET



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.

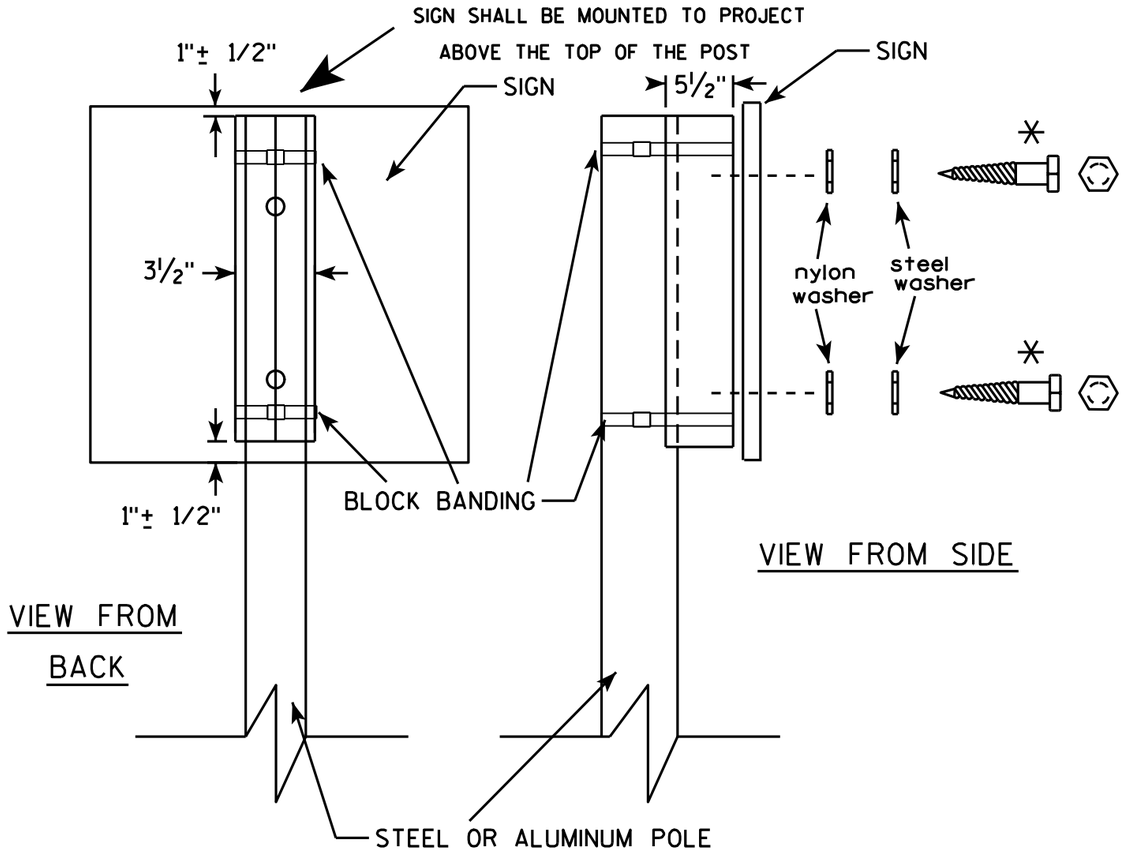
STANDARD SIGN
SIGN BANDING DETAILS

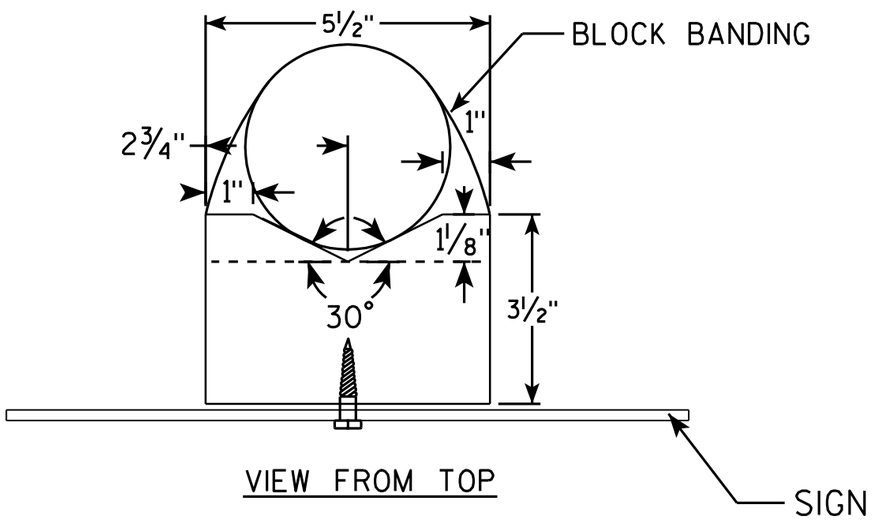
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 105	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

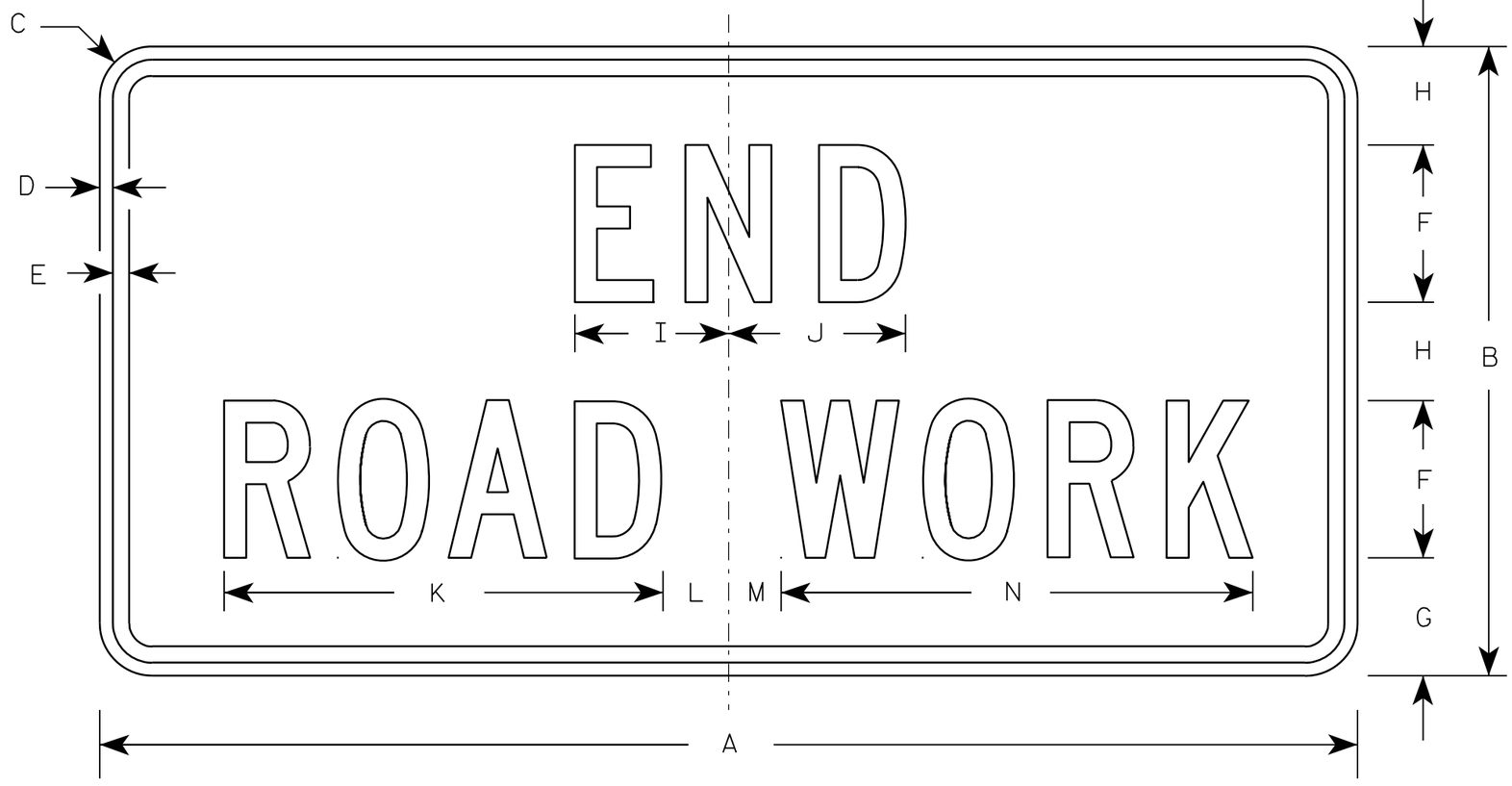
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 106 E



G20-2A

NOTES

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

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 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	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

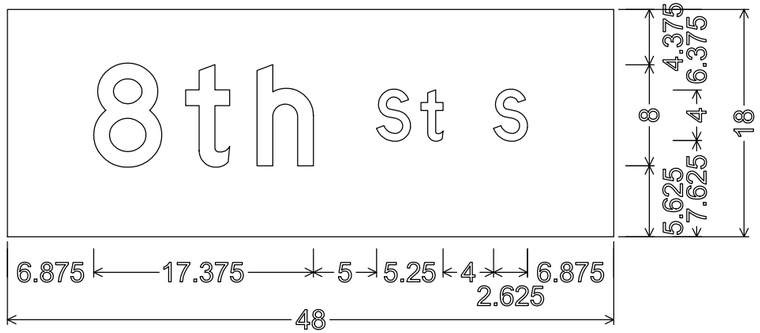
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

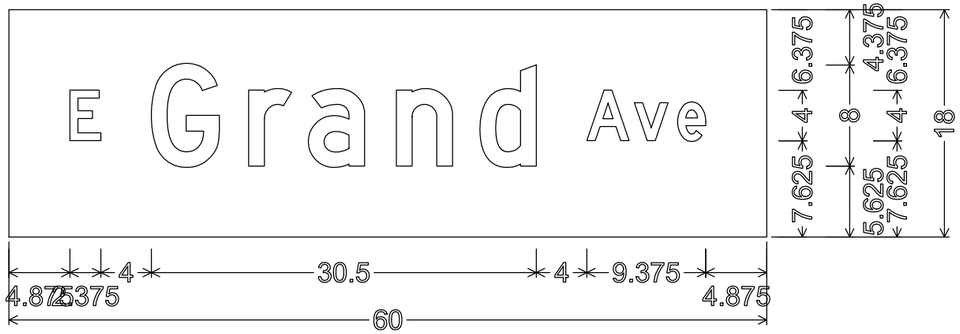
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 107	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - D
4. Sign Base Material on .125 sheet aluminum



M1-94H; No border,

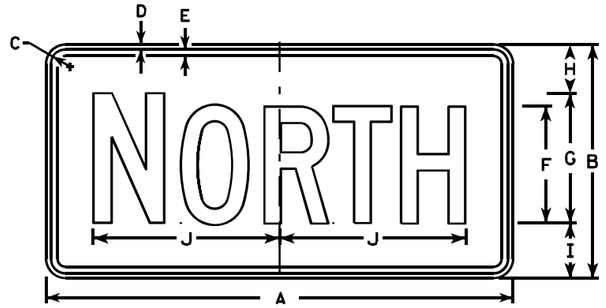


M1-94H; No border

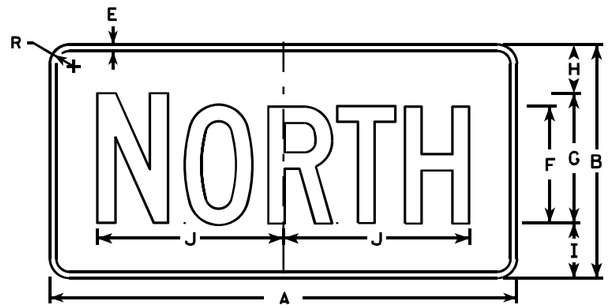
7

7

PROJECT NO: 6999-07-88	HWY: 8TH ST	COUNTY: WOOD	PERMANENT SIGNING	SHEET NO: 108	E



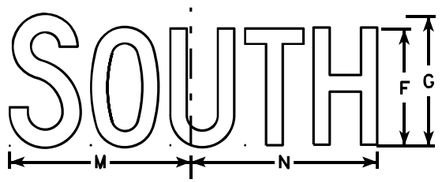
M3-1
MM3-1
MP3-1



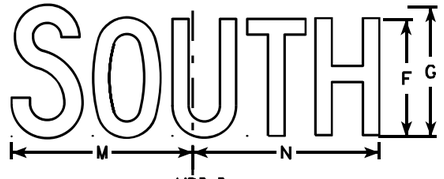
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

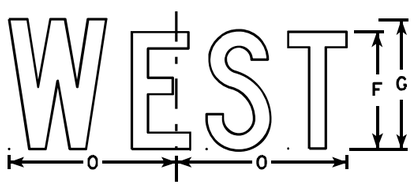
MB3-2
MK3-2
MN3-2



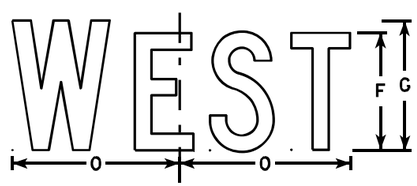
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
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. 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
6. Note the first letter of each direction is larger than the remainder of the message.

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	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									2.00
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

STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

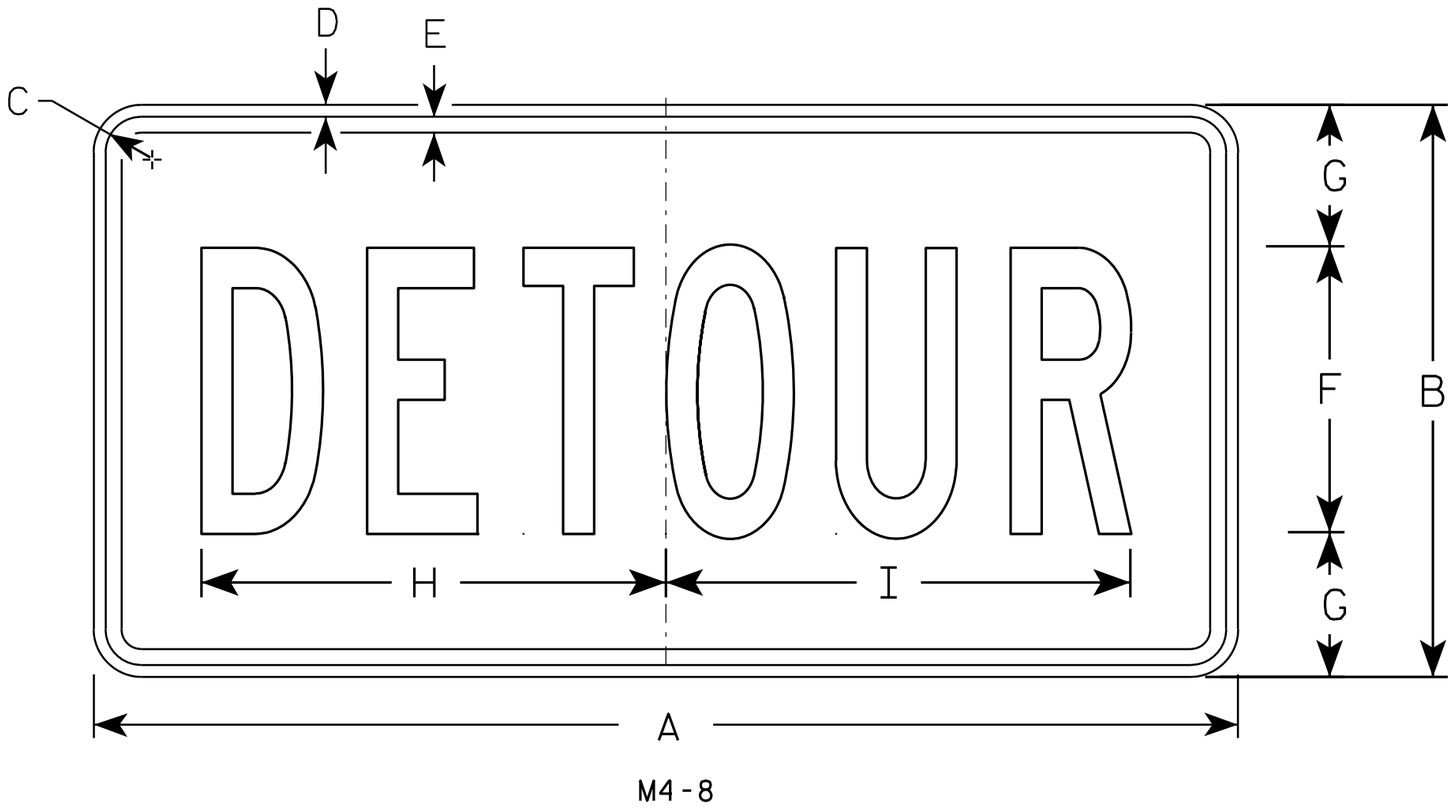
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO. 109 | E

7

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 15-OCT-2015 12:16 PLOT BY : ss...plotuser...ss PLOT NAME : PLOT SCALE : 18.607113:1.000000 WISDOT/CADDS SHEET 42



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
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.

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	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

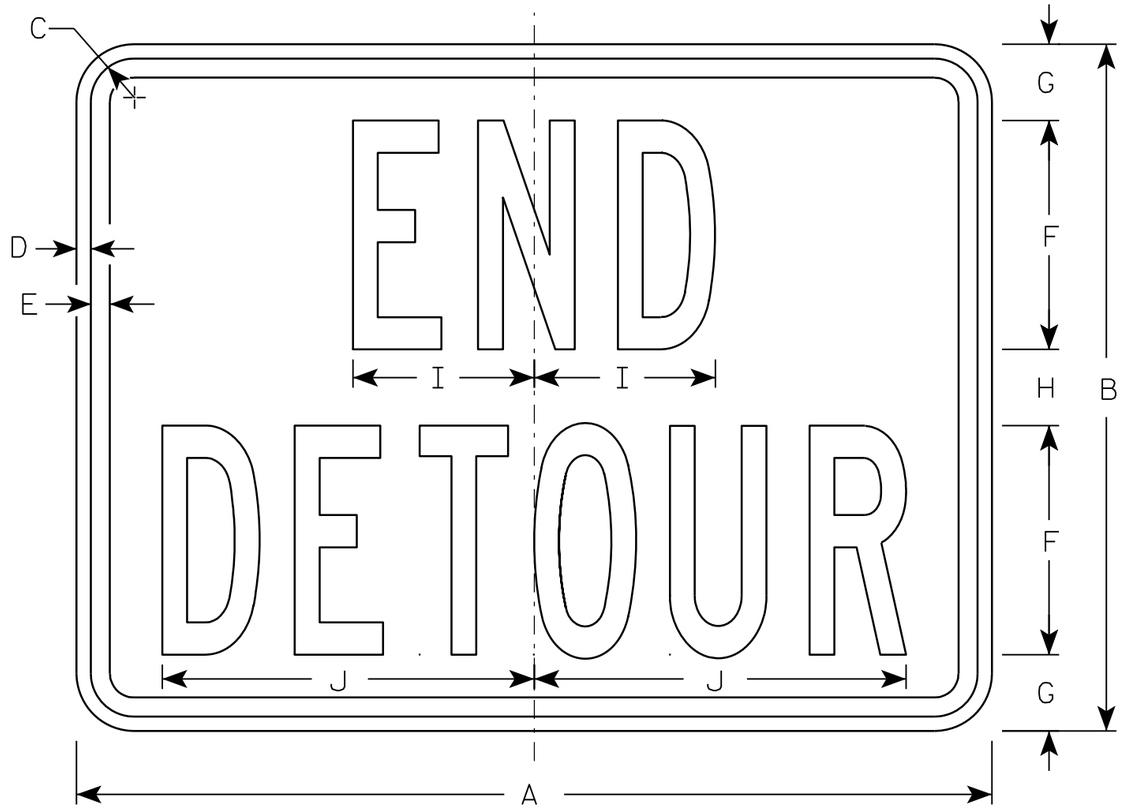
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 110	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\M48.DGN PLOT DATE : 10-NOV-2010 13:18 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 4.767233:1.000000

WISDOT/CADDS SHEET 42

7

7



M4-8A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
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.

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	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

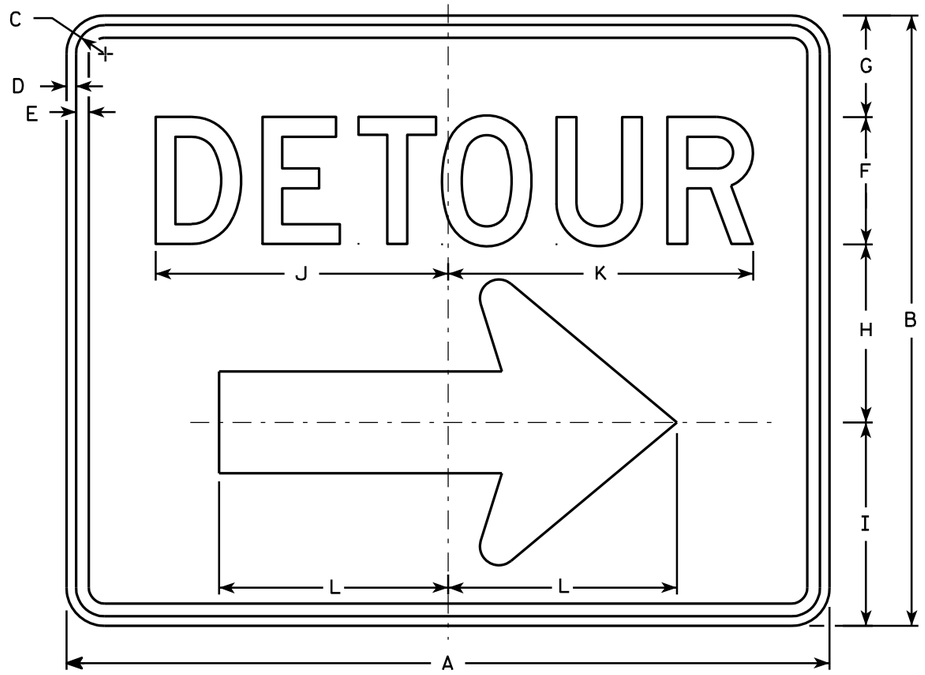
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

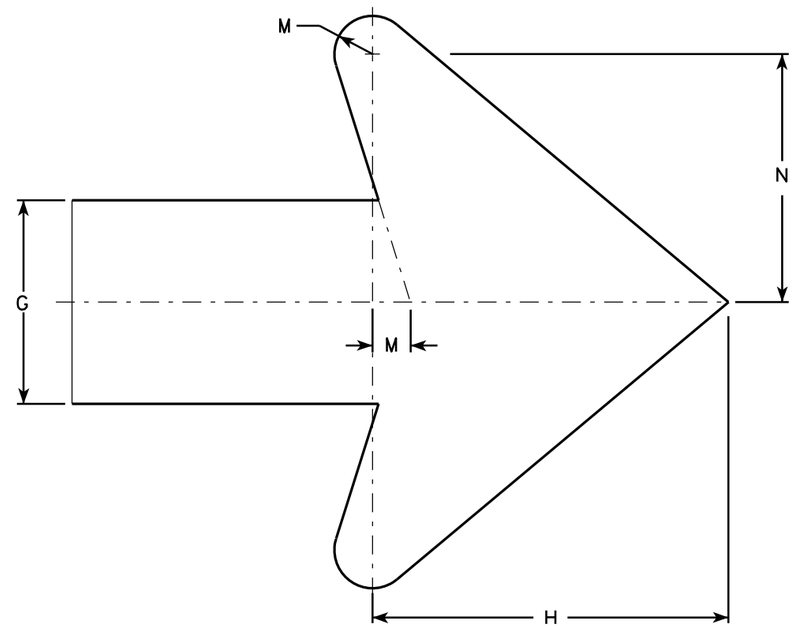
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 111	E



M4-9R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   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. M4-9L is the same as M4-9R except the arrow is reversed.



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	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

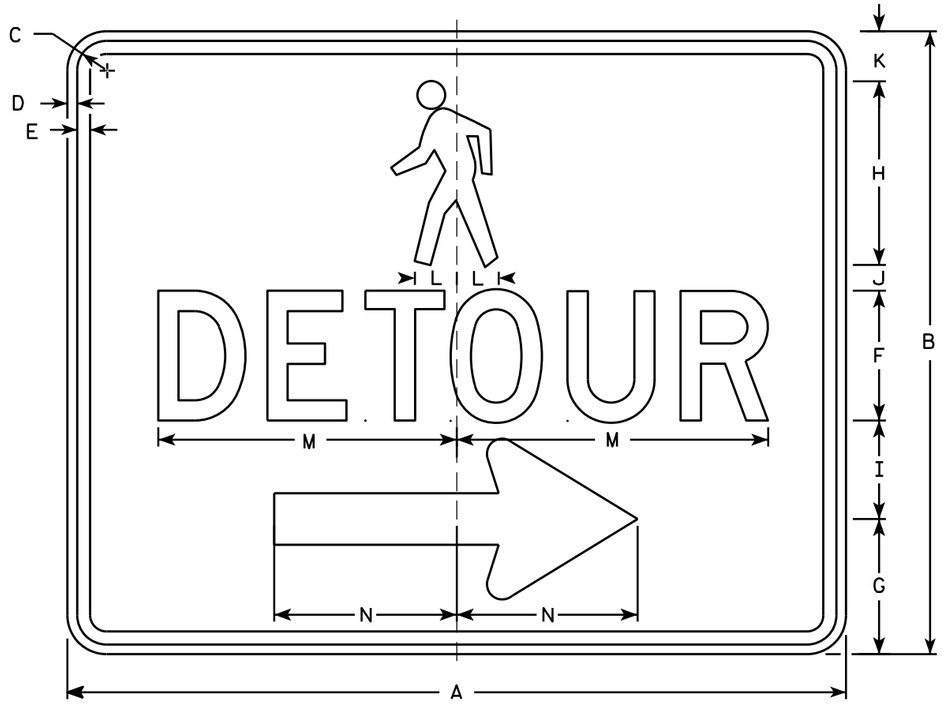
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

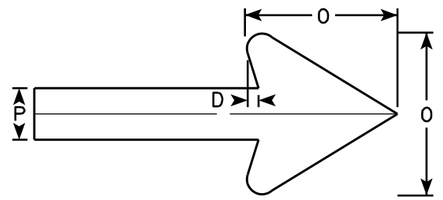
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 112 | E



M4-9BR

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   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. M4-9BL is the same as M4-9BR except the arrow is reversed.



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	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.00
3																											
4																											
5																											

STANDARD SIGN
M4-9B L&R

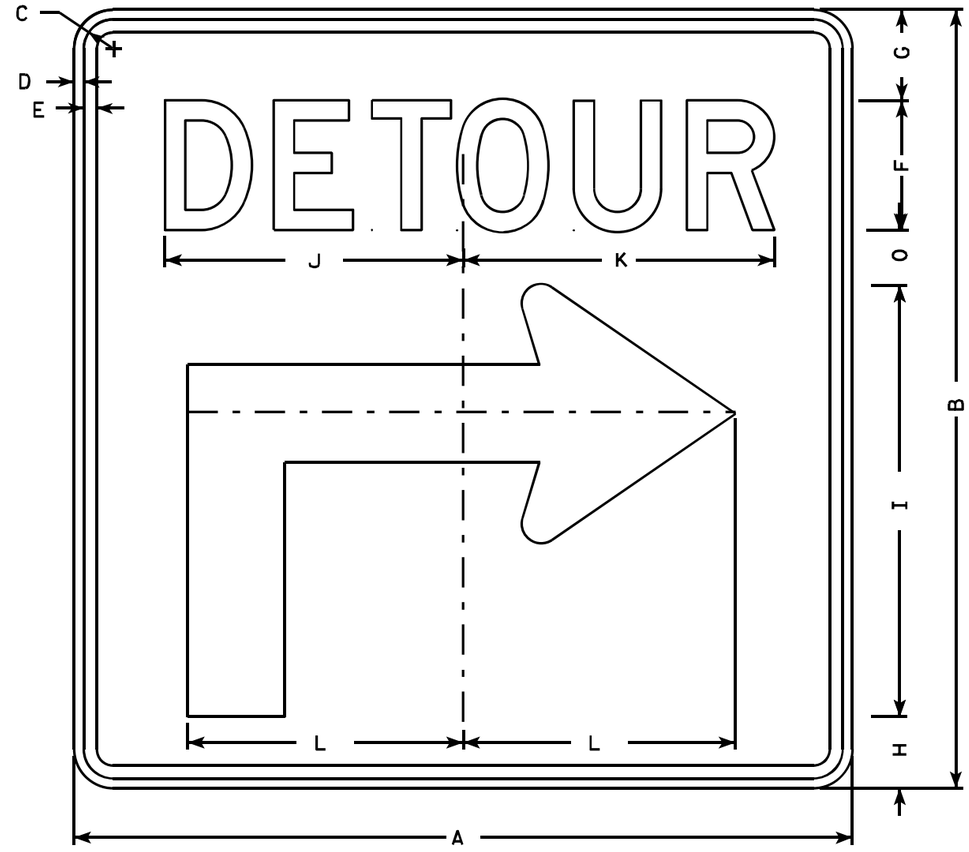
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. M4-9B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

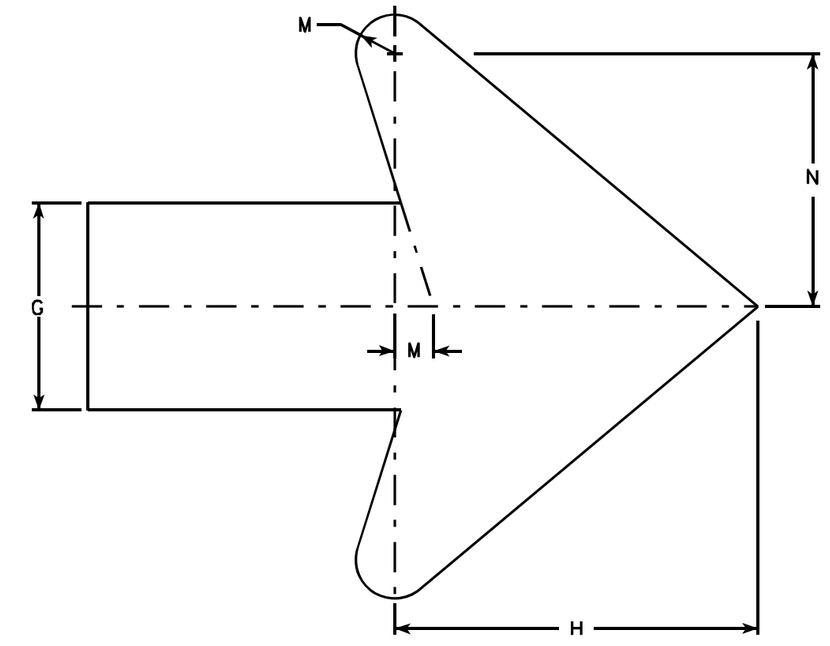
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M49B.DGN PLOT DATE : 01-OCT-2013 13:44 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



M4-59R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   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.
5. M4-59L is the same as M4-59R except the arrow is reversed.



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	Area sq. ft.
1																											
2	30	30	1 1/8	3/8	1/2	5	3 1/2	2 3/4	16 5/8	11 1/2	12	10 1/2	3/4	4 7/8	2 1/8												6.25
3	30	30	1 1/8	3/8	1/2	5	3 1/2	2 3/4	16 5/8	11 1/2	12	10 1/2	3/4	4 7/8	2 1/8												6.25
4	48	48	1 3/8	1/2	5/8	8	5 5/8	4 3/8	26 5/8	20 5/8	20 1/2	17	1 1/8	6 7/8	3 3/8												16.0
5	48	48	1 3/8	1/2	5/8	8	5 5/8	4 3/8	26 5/8	20 5/8	20 1/2	17	1 1/8	6 7/8	3 3/8												16.0

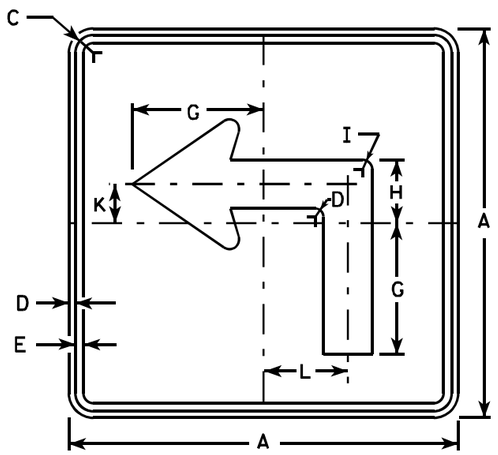
STANDARD SIGN
M4-59 L&R

WISCONSIN DEPT OF TRANSPORTATION

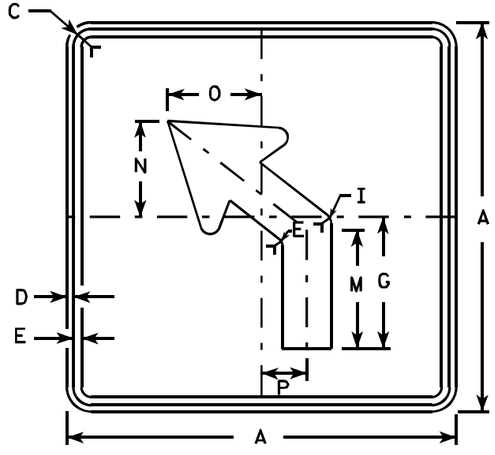
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/15 PLATE NO. M4-59.1

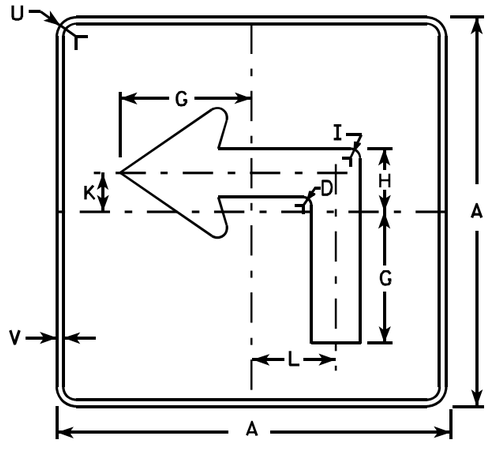
PROJECT NO:	HWY:	COUNTY:		SHEET NO. 114	E



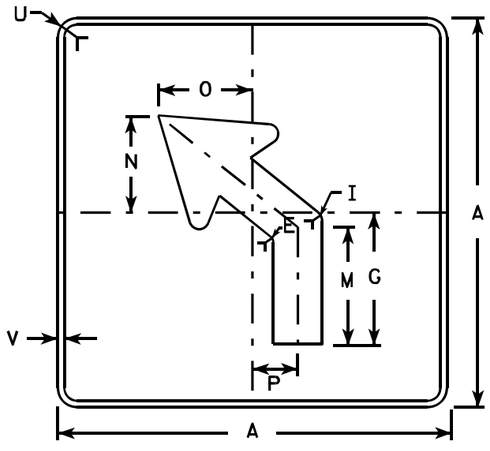
M5-1L
MM5-1L
MO5-1L
MP5-1L



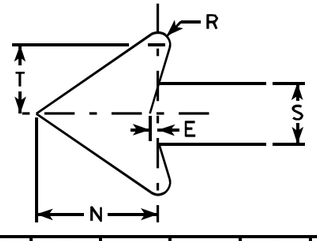
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   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. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

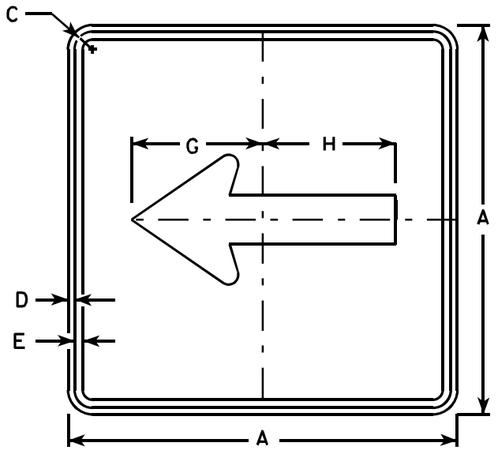
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

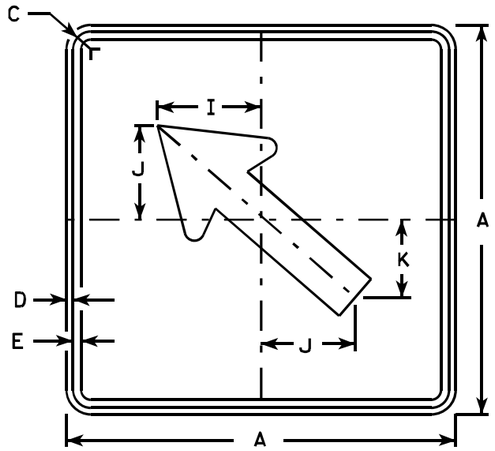
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M5-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO. 115 | E



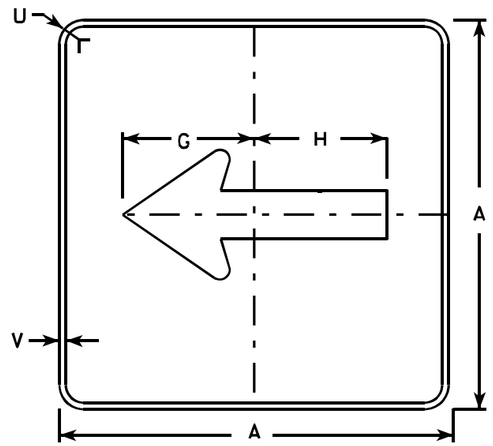
M6-1
MM6-1
MO6-1
MP6-1



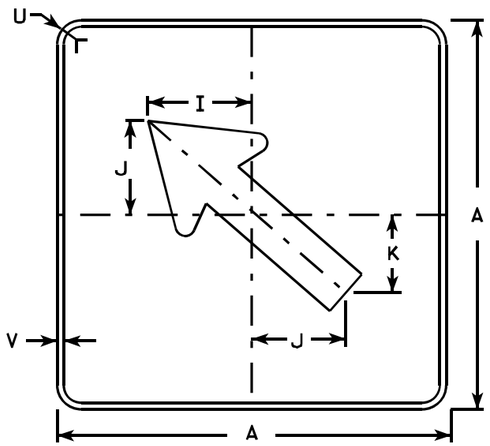
M6-2
MM6-2
MO6-2
MP6-2

NOTES

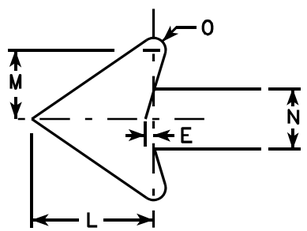
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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
   MO6-1 and MO6-2 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



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



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



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	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

STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

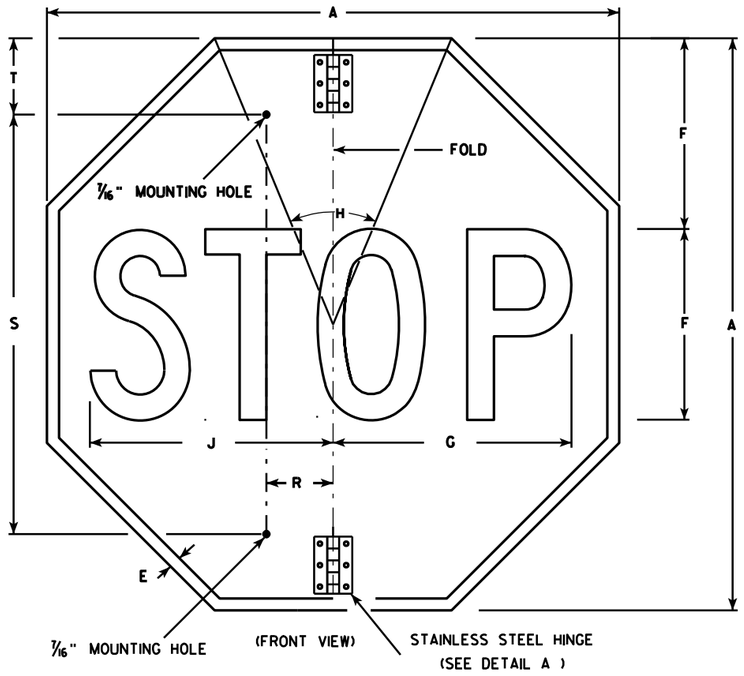
APPROVED Matthew R Rauch
for State Traffic Engineer

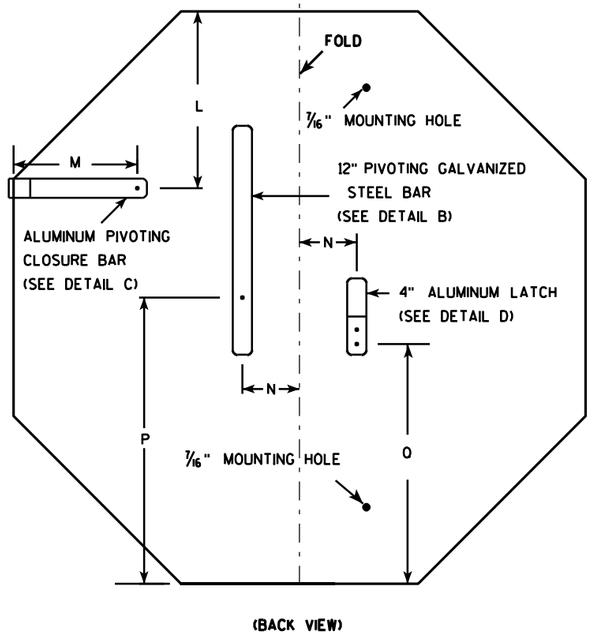
DATE 10/15/15 PLATE NO. M6-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO. 116 | E

7

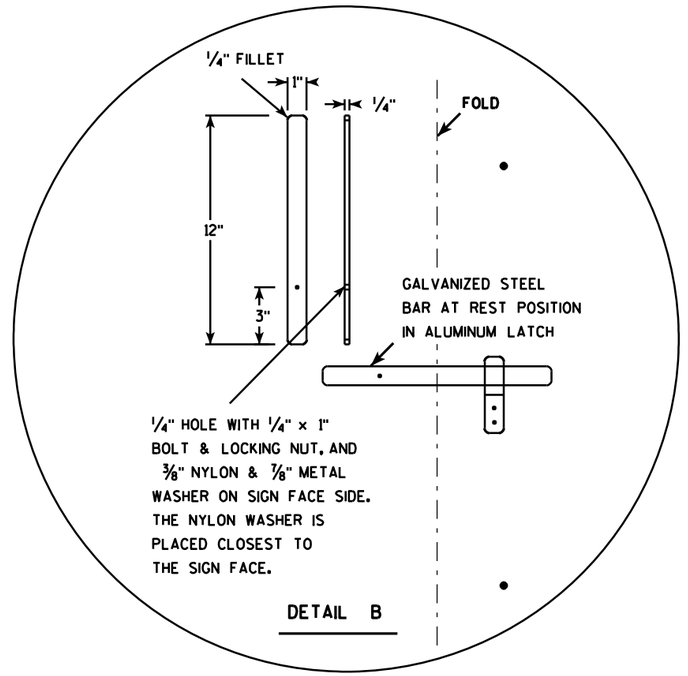
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 15-OCT-2015 13:17 PLOT BY : ss...plotuser...ss PLOT NAME : PLOT SCALE : 18.607113:1.000000
WISDOT/CADDS SHEET 42

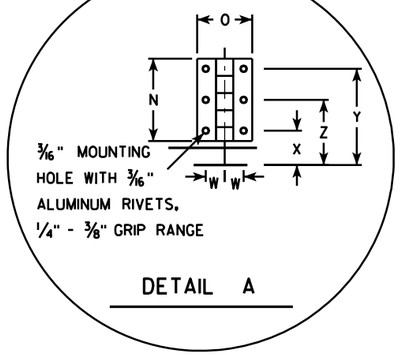


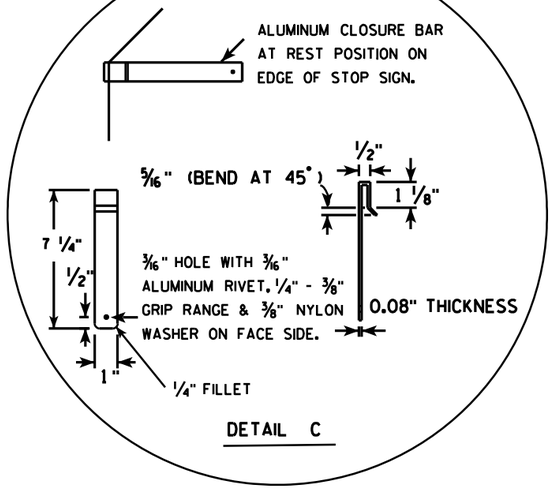


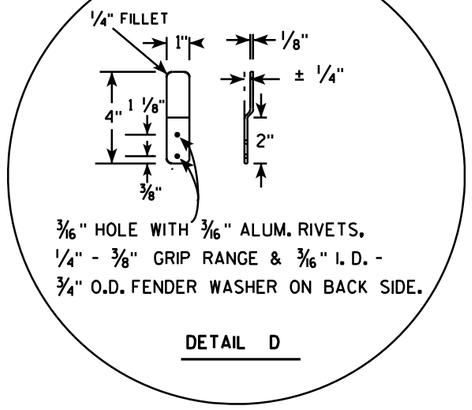
NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. 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	Area sq. ft.
1																											
2S	30				5/8	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			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

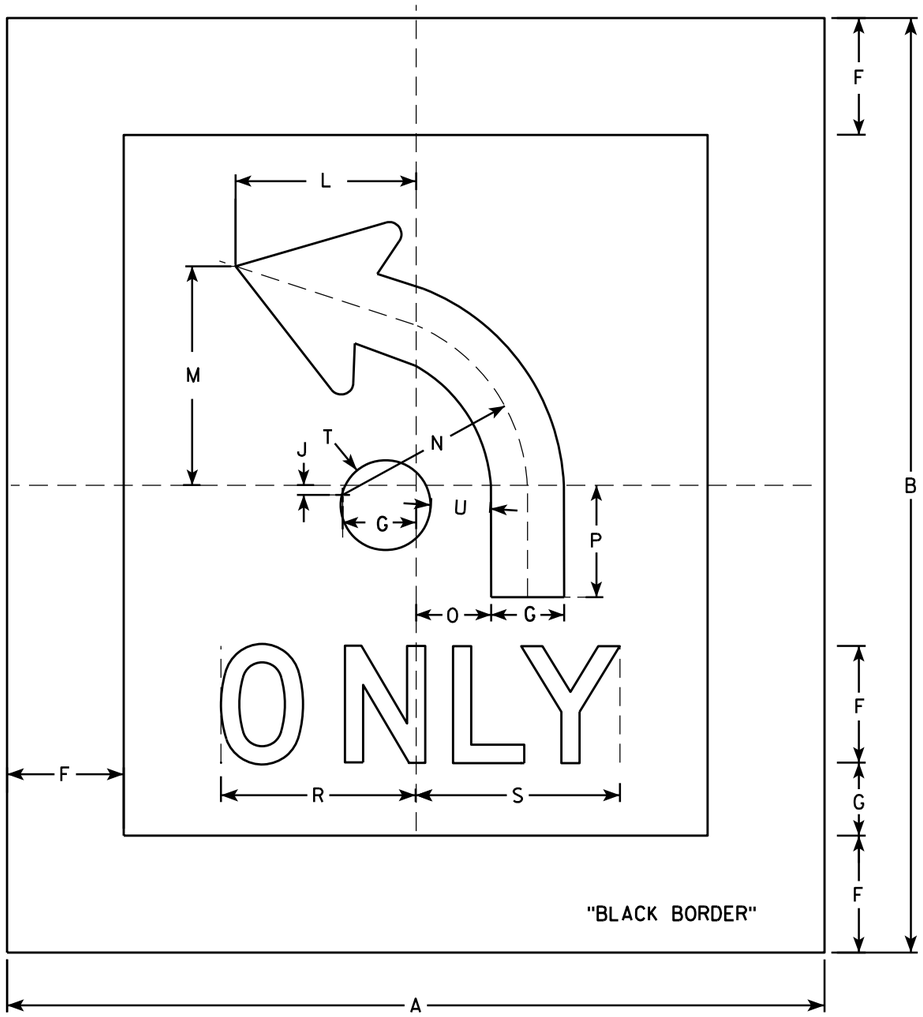
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

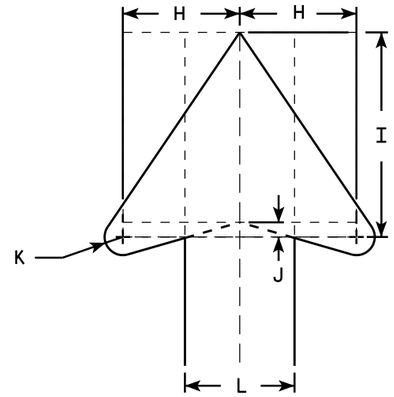
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 117	E



R3-5X

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
5. The 6" border is non-reflective black.



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	Area sq. ft.
1																											
2S	42	48				6	3 3/4	4	7	1/2	5/8	9 1/4	11 1/4	9 1/2	3 7/8	5 3/4		10	10 1/2	4 1/2	3						14.0
2M	42	48				6	3 3/4	4	7	1/2	5/8	9 1/4	11 1/4	9 1/2	3 7/8	5 3/4		10	10 1/2	4 1/2	3						14.0
3																											
4																											
5																											

STANDARD SIGN
R3-5X

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 118 R3-5X.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

R9-9

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 - C
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.

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																											
2S	30	18	1 3/4	1/2	1/2	4	3 1/2	3	10 3/4	8 1/8																	3.75
2M	30	18	1 3/4	1/2	1/2	4	3 1/2	3	10 3/4	8 1/8																	3.75
3																											
4																											
5																											

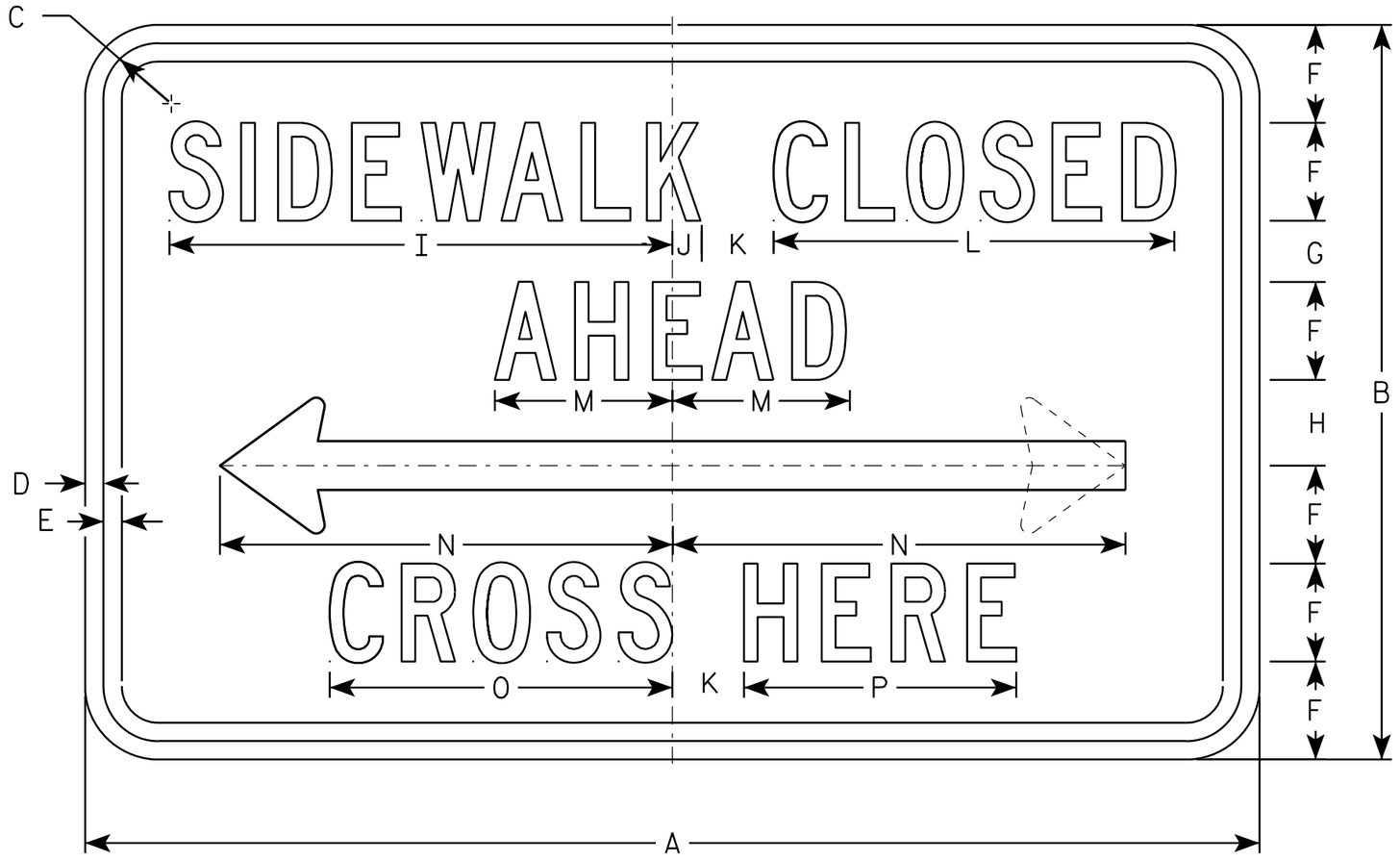
STANDARD SIGN
R9-9

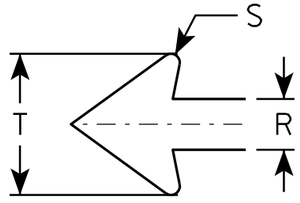
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/2011 PLATE NO. R9-9.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 119	E





R9-11

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 - C except Size 1 is 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.

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	24	12	1 1/8	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
2S	48	30	2 3/4	3/4	3/4	4	2 1/2	3 1/2	20 1/2	1 1/4	3	16 3/8	7 1/4	18 1/2	14	11 1/8		2	3/8	5 1/2							10.0
2M	48	30	2 3/4	3/4	3/4	4	2 1/2	3 1/2	20 1/2	1 1/4	3	16 3/8	7 1/4	18 1/2	14	11 1/8		2	3/8	5 1/2							10.0
3																											
4																											
5																											

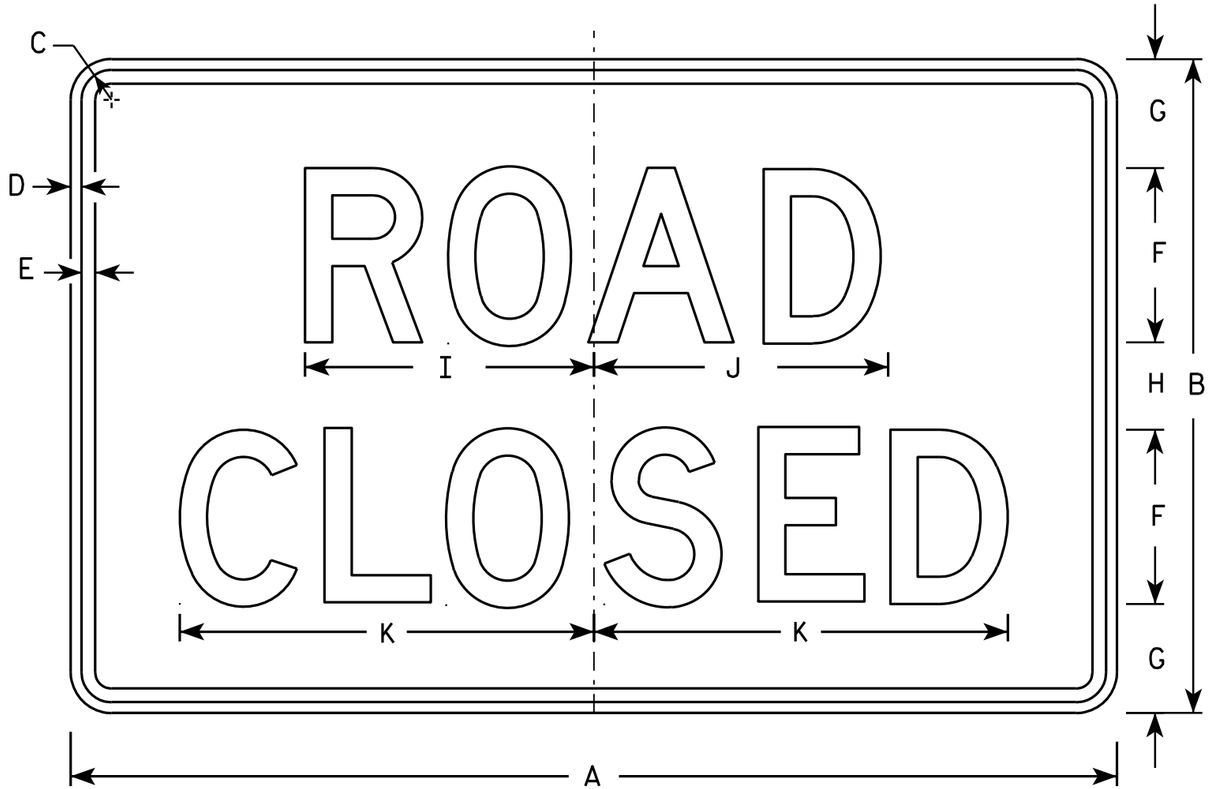
STANDARD SIGN
R9-11

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/17/2012 PLATE NO. R9-11.2

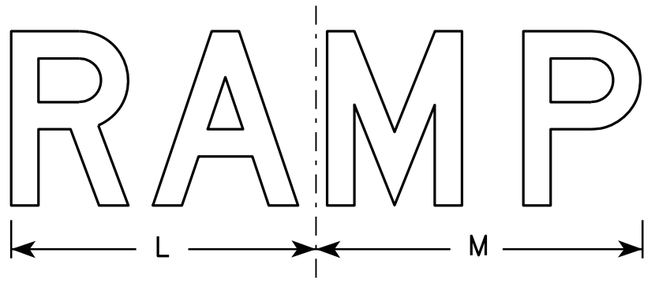
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 120	E



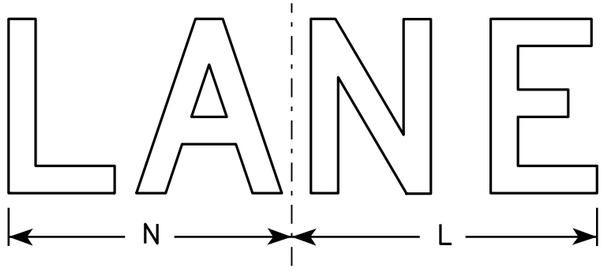
R11-2

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. Modify the message as required.



R11-2R



R11-2L

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																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

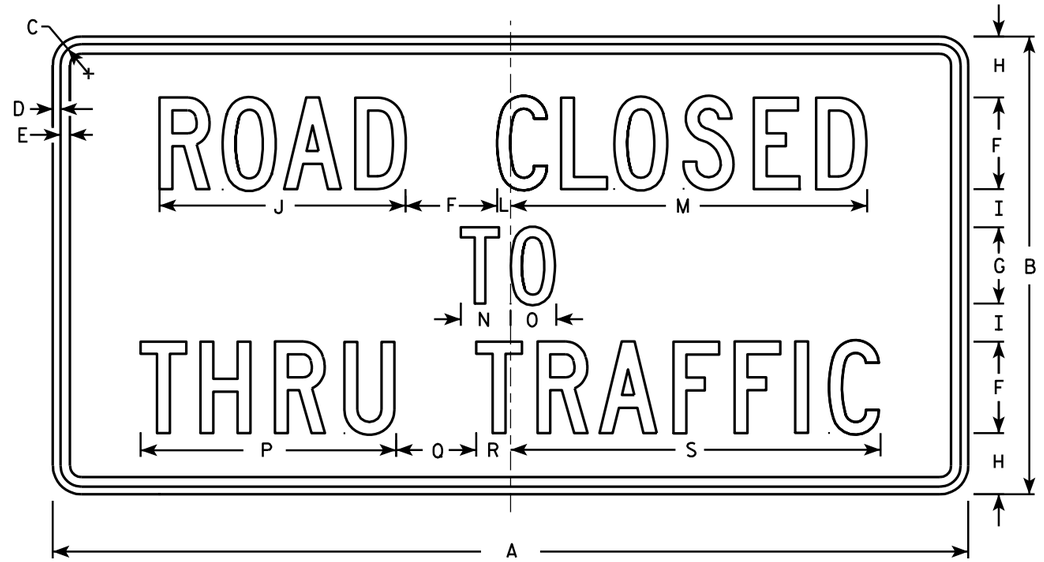
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 121	E



R11-4

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 - C
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.

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																											
2S	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

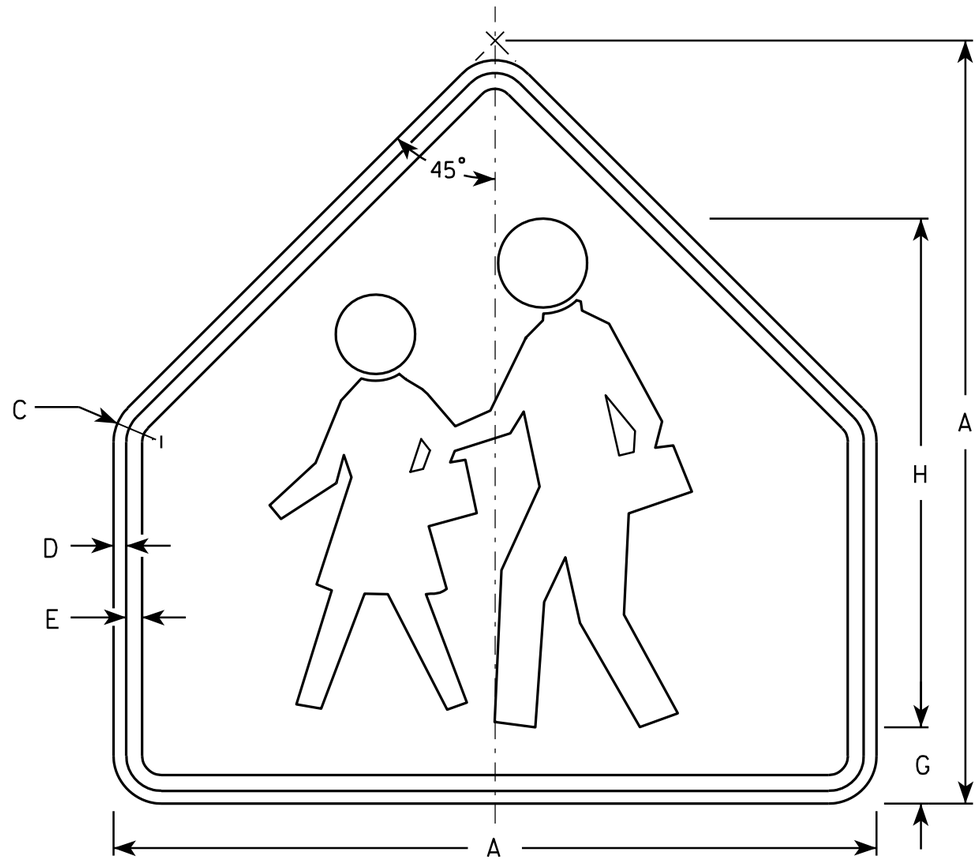
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 122 | E



S1-1

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-Green
   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 sq. ft.
1	30		1 3/8	1/2	5/8		3	20																			4.69
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
4	48		2 1/4	3/4	1		4 3/4	32																			12
5																											

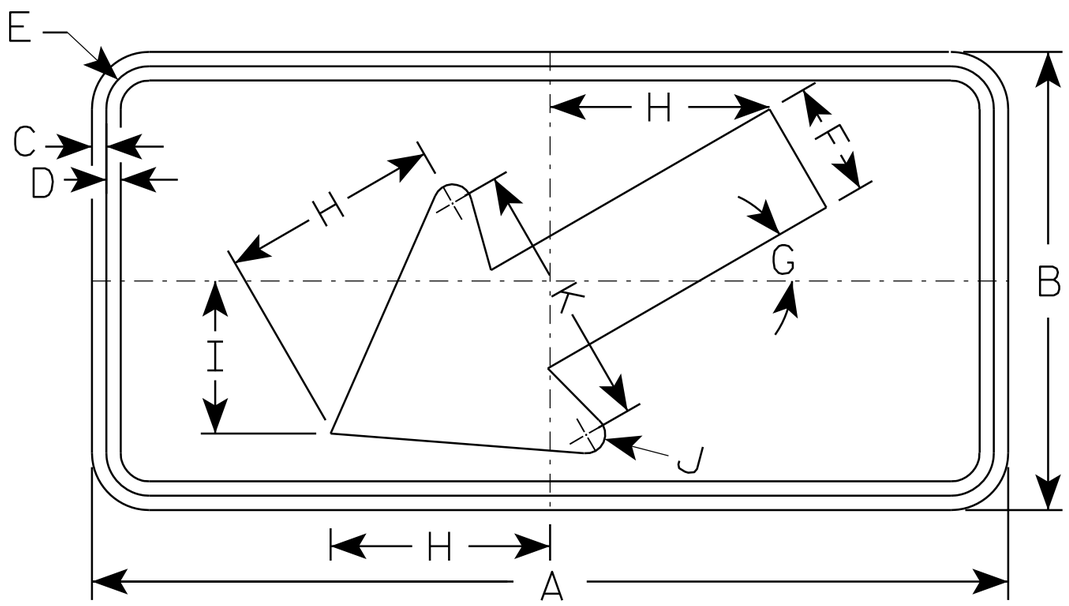
STANDARD SIGN
S1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/05 PLATE NO. S1-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 123	E



S16-7L

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-Green
   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. S16-7R are the same as S16-7L except the arrow is reversed along the vertical centerline.

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	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2S	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0
5																											

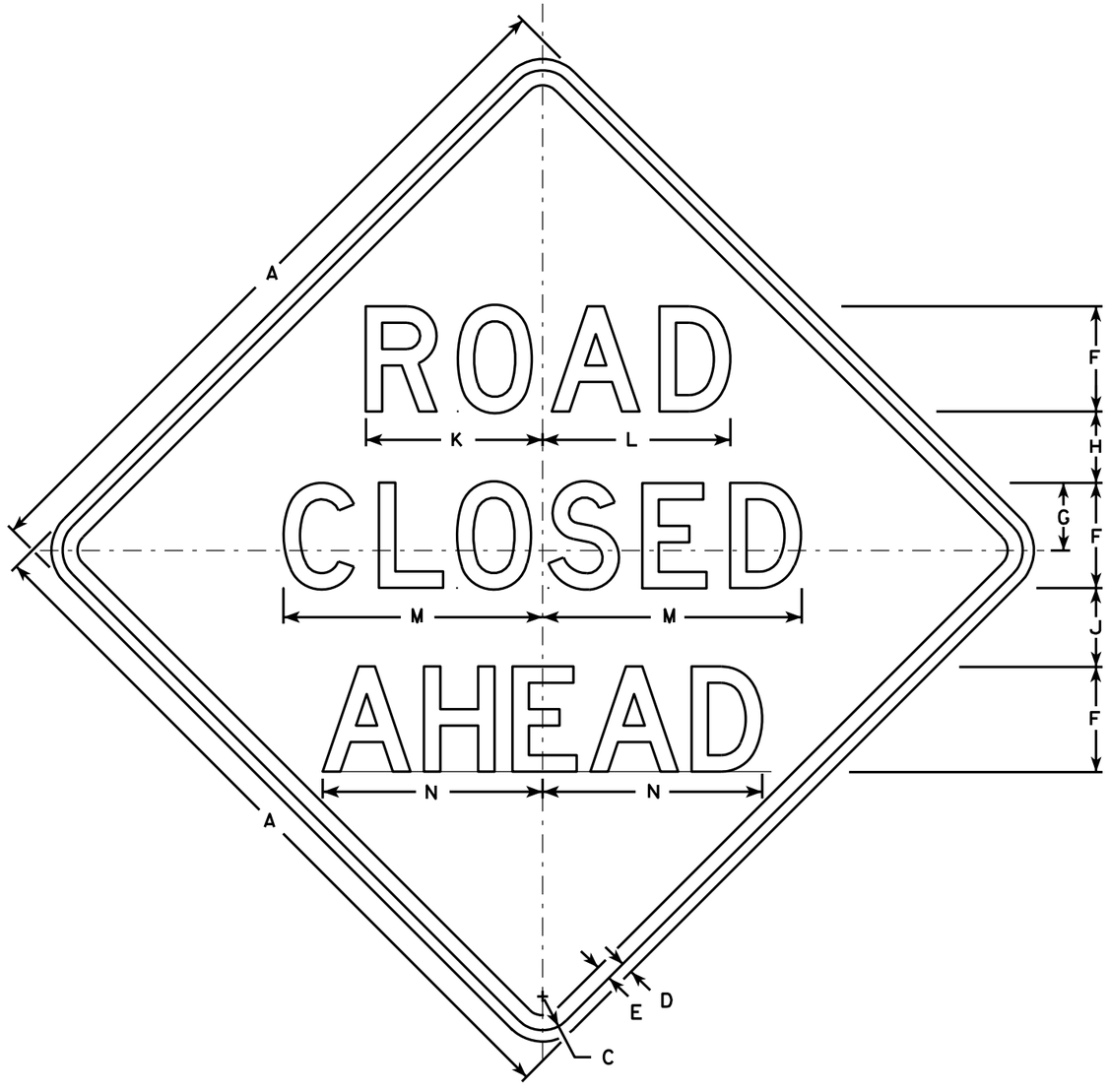
STANDARD SIGN
S16-7

WISCONSIN DEPT OF TRANSPORTATION

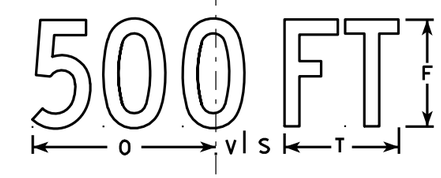
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/22/13 PLATE NO. S16-7.1

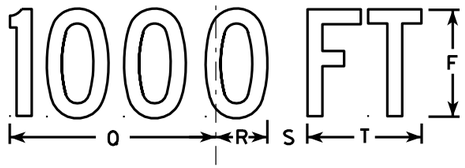
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 124 | E



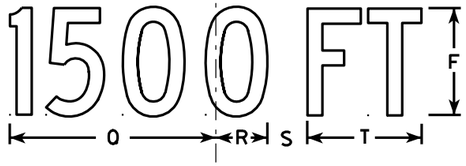
W20-3A



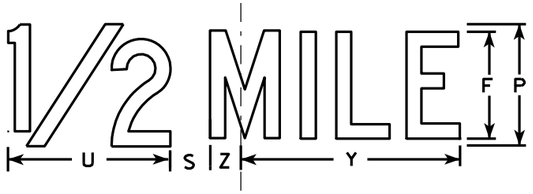
W20-3D



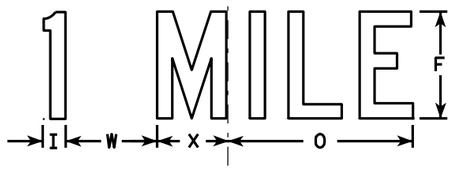
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
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 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

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	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 125 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42

8TH STREET SOUTH												
		AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)		
STATION	DISTANCE	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT NOTE 1	SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	EBS	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 4
12+64.50		67	35	0	3	0	0	0	0	0	0	0
12+75.00	11	66	35	1	3	26	13	0	1	26	0	12
13+00.00	25	65	35	1	3	60	32	1	3	86	1	40
13+25.00	25	60	35	1	3	58	32	1	3	144	2	64
13+27.67	3	60	35	1	3	6	3	0	0	150	3	67
13+27.68	0	46	33	0	2	0	0	0	0	150	3	67
13+50.00	22	46	33	0	2	38	27	0	2	188	3	78
13+75.00	25	41	33	0	2	41	31	0	2	229	3	88
14+00.00	25	44	33	0	2	39	31	0	2	268	3	97
14+25.00	25	54	33	0	3	45	31	0	2	313	3	111
14+25.01	0	67	41	3	3	0	0	0	0	314	3	111
14+50.00	25	67	39	3	3	62	37	3	3	375	6	132
14+75.00	25	76	38	0	4	66	35	2	3	441	8	161
14+88.00	13	77	37	0	4	37	18	0	2	478	8	180
14+98.10	10	77	36	0	4	29	14	0	1	507	8	195
14+98.11	0	21	36	0	1	0	0	0	0	507	8	195
15+00.00	2	21	6	0	1	1	1	0	0	508	8	195
15+25.00	25	24	5	0	1	21	5	0	1	529	8	210
15+44.00	19	27	4	0	1	18	3	0	1	547	8	225
15+50.00	6	27	4	0	1	6	1	0	0	553	8	230
15+67.85	18	27	4	0	1	18	3	0	1	571	8	245
				COLUMN TOTALS		571	317	7	29			

NOTES:
1) CUT: CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: THIS IS NOT SHOWN IN THE CROSS SECTIONS
3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL
4) MASS ORDINATE: MASS ORDINATE = (CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL) - (FILL * FILL FACTOR)

E. GRAND AVENUE												
		AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)		
STATION	DISTANCE	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT NOTE 1	SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	EBS	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 4
73+89.67		89	50	1	4	0	0	0	0	0	0	0
74+16.66	27	89	50	1	4	89	50	1	4	89	1	37
74+16.67	0	69	41	1	3	0	0	0	0	89	1	37
74+38.26	22	67	41	1	3	54	33	1	3	143	2	58
74+38.27	0	47	40	0	2	0	0	0	0	143	2	58
74+78.00	40	47	40	0	2	69	59	0	3	212	2	68
75+22.00		48	42	0	2	0	0	0	0	212	2	68
75+51.18	29	74	42	0	4	66	45	0	3	278	2	89
75+58.50	7	80	2	0	4	21	6	0	1	299	2	104
75+75.00	158	80	2	2	4	468	12	8	23	767	12	549
75+82.00	7	80	2	2	4	21	1	1	1	787	13	569
				COLUMN TOTALS		787	205	10	39			

NOTES:
1) CUT: CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: THIS IS NOT SHOWN IN THE CROSS SECTIONS
3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL
4) MASS ORDINATE: MASS ORDINATE = (CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL) - (FILL * FILL FACTOR)

9

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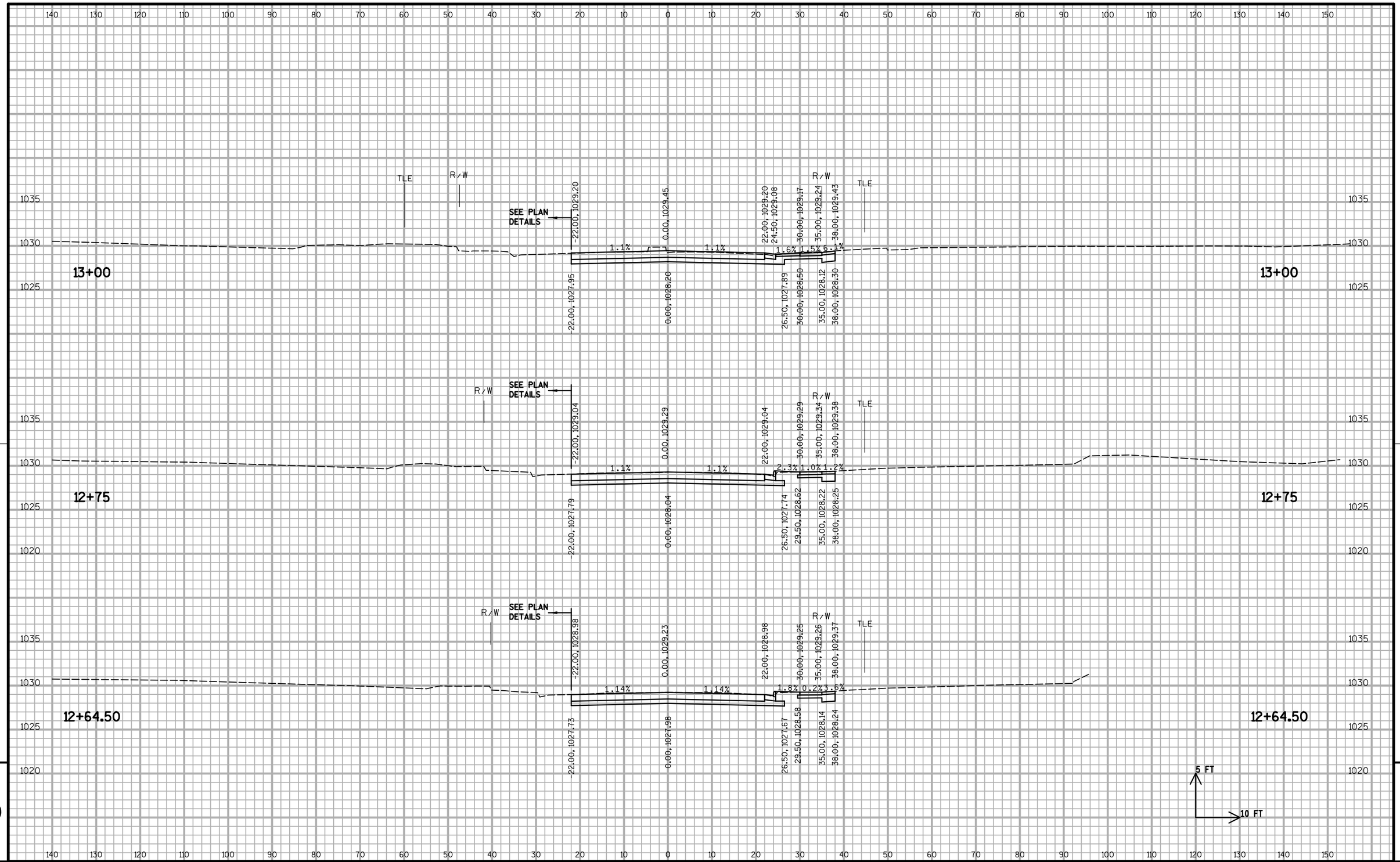
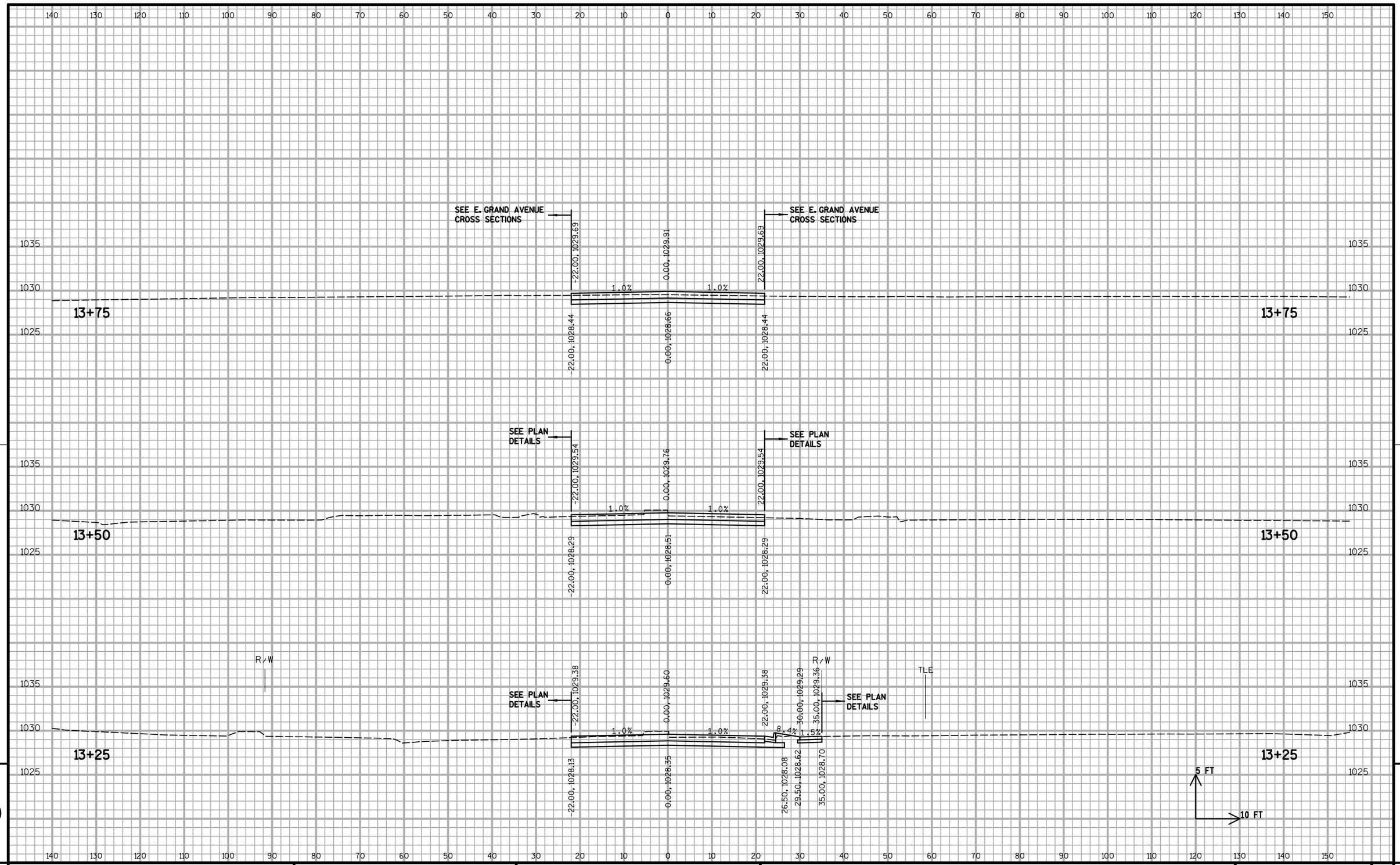
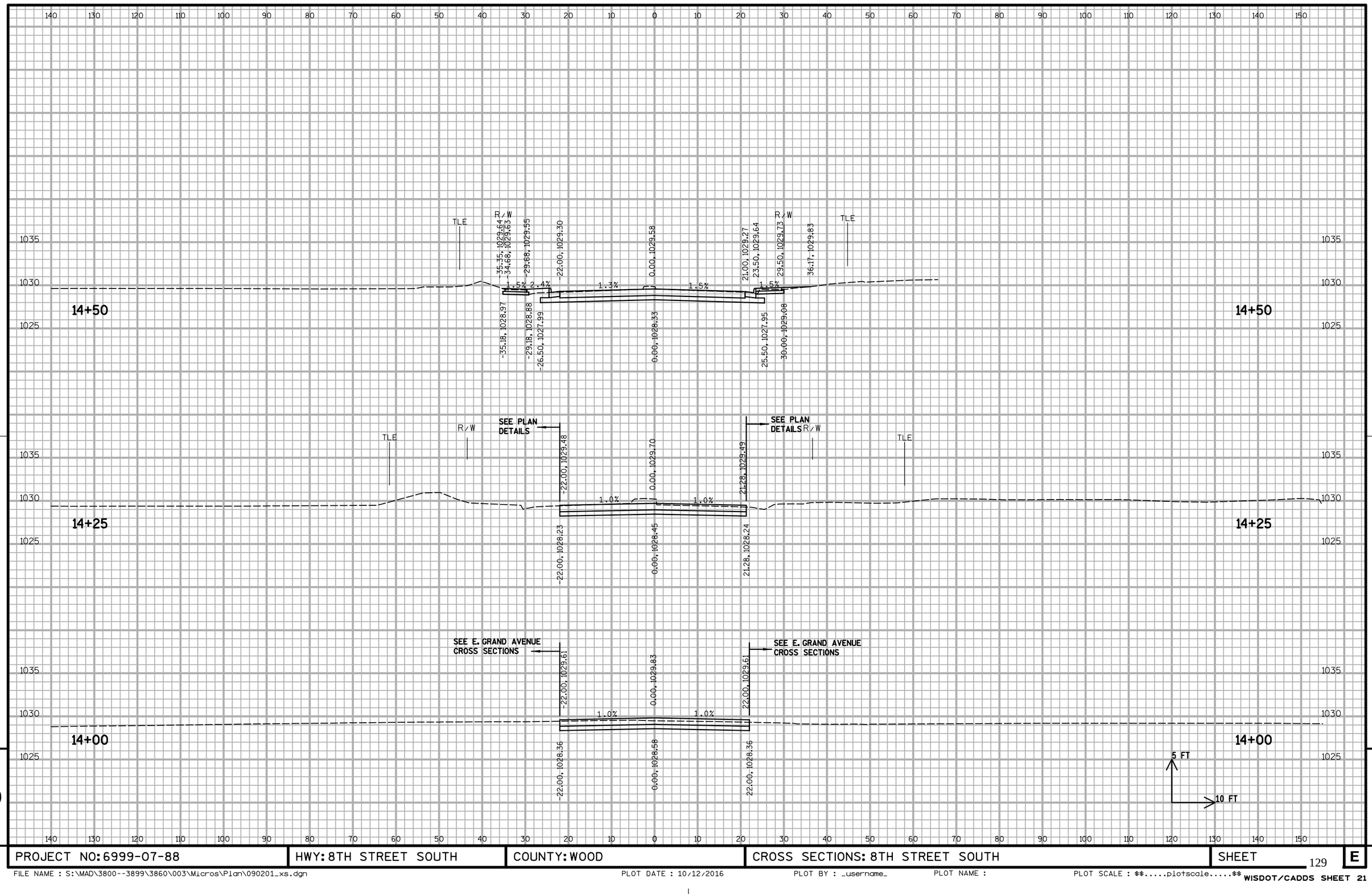


PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CROSS SECTIONS: 8TH STREET SOUTH	SHEET 127	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\090201_xs.dgn PLOT DATE : 10/12/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

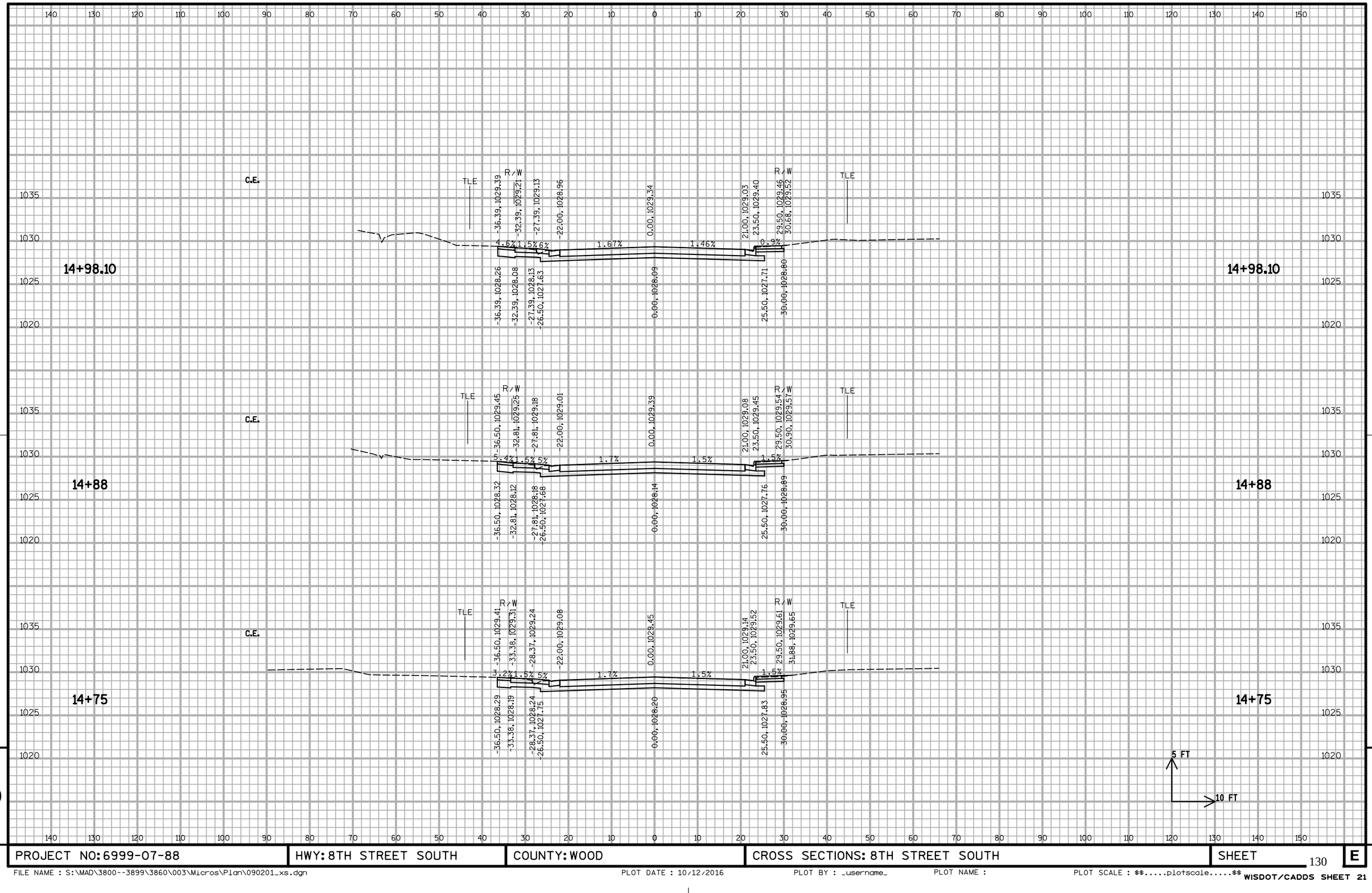


PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CROSS SECTIONS: 8TH STREET SOUTH	SHEET 128	E



PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CROSS SECTIONS: 8TH STREET SOUTH	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\090201_xs.dgn PLOT DATE : 10/12/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



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PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CROSS SECTIONS: 8TH STREET SOUTH	SHEET 130	E

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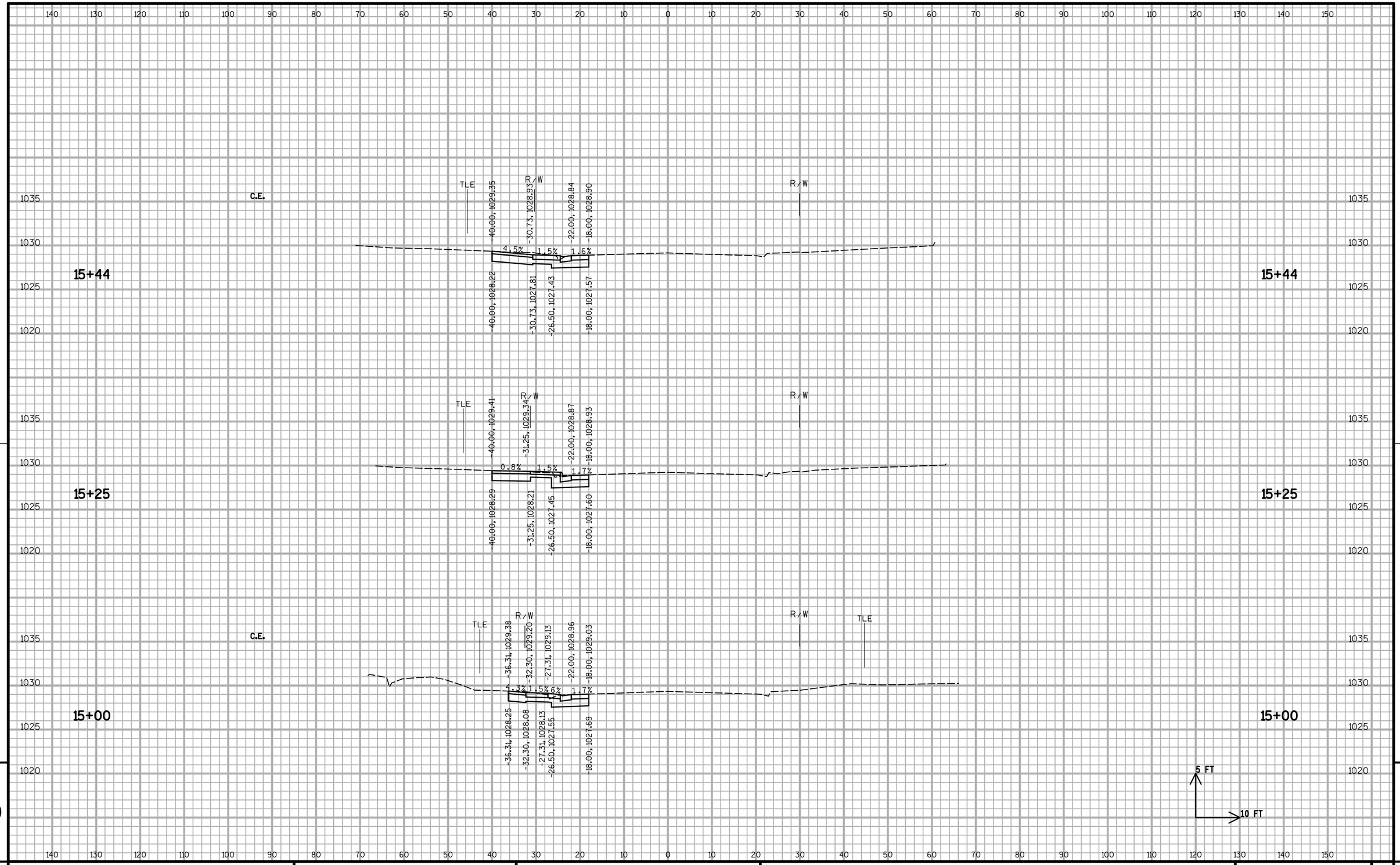

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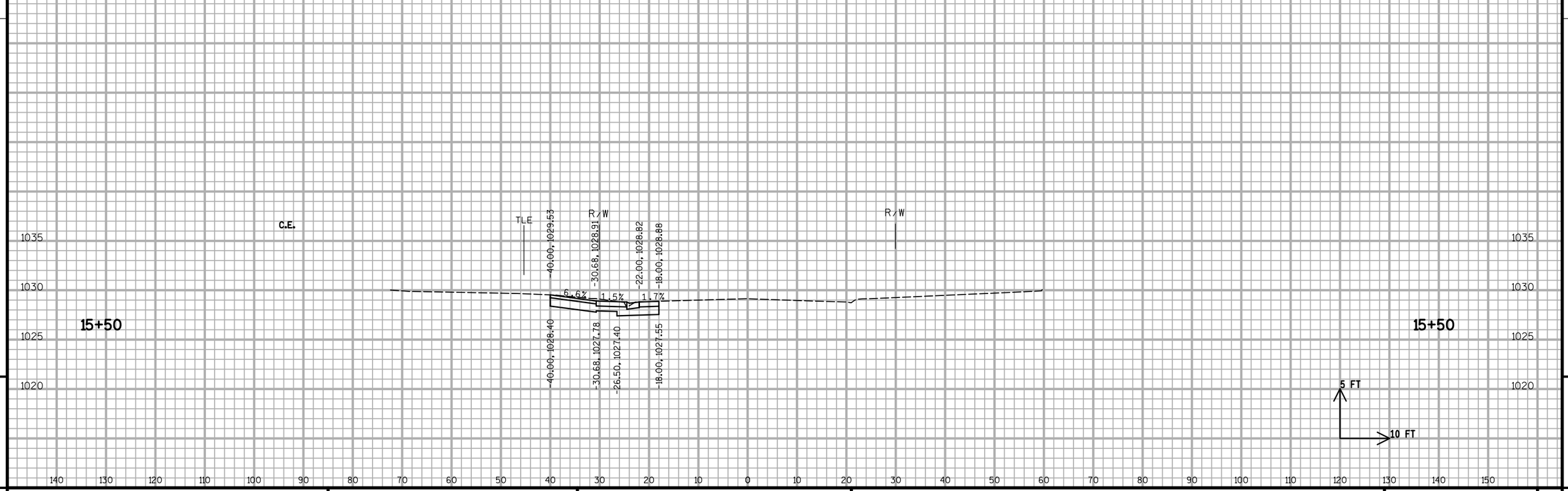
PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CROSS SECTIONS: 8TH STREET SOUTH	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\090201_xs.dgn PLOT DATE : 10/12/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



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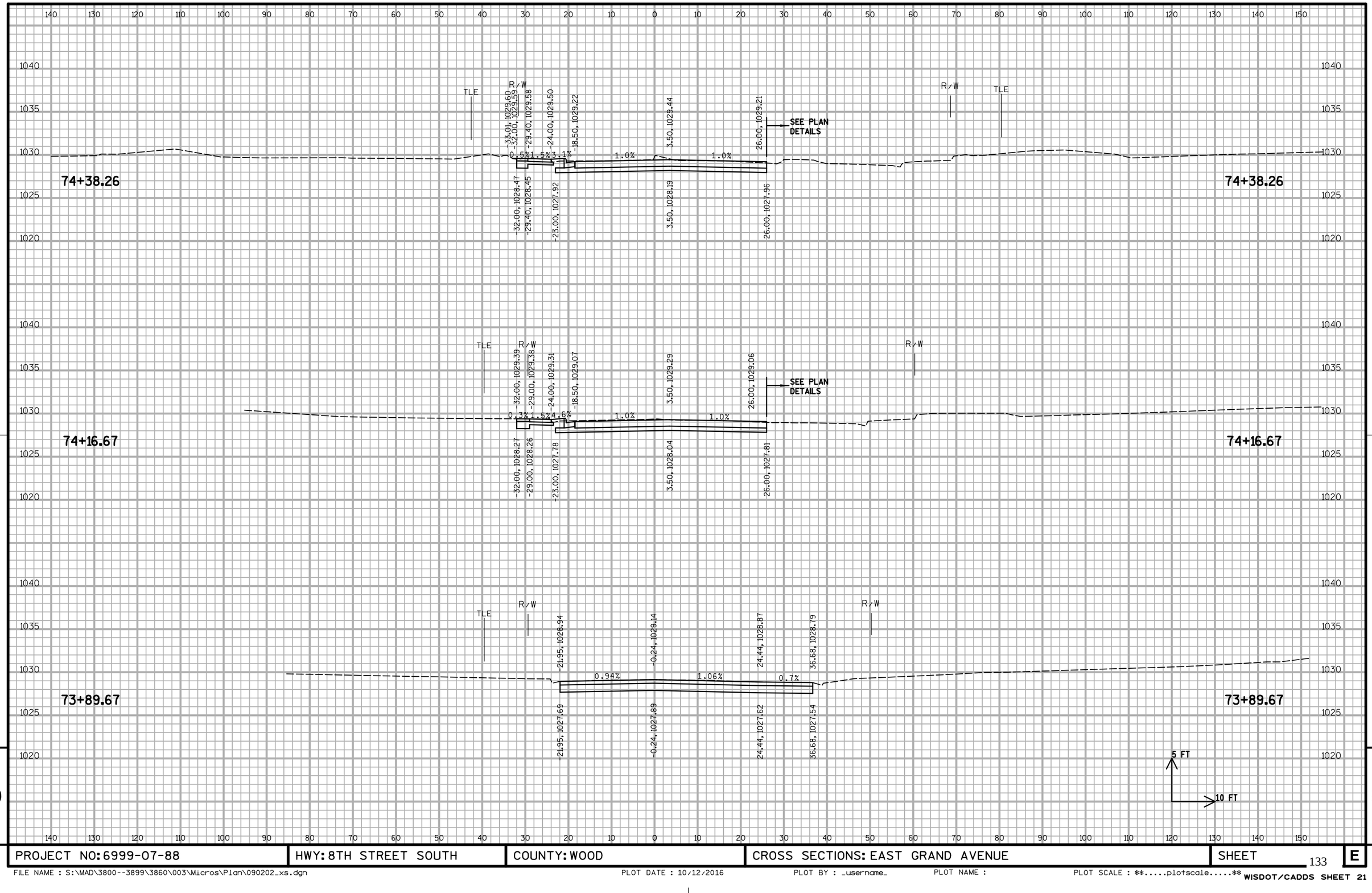
PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CROSS SECTIONS: 8TH STREET SOUTH	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\090201_xs.dgn PLOT DATE : 10/12/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



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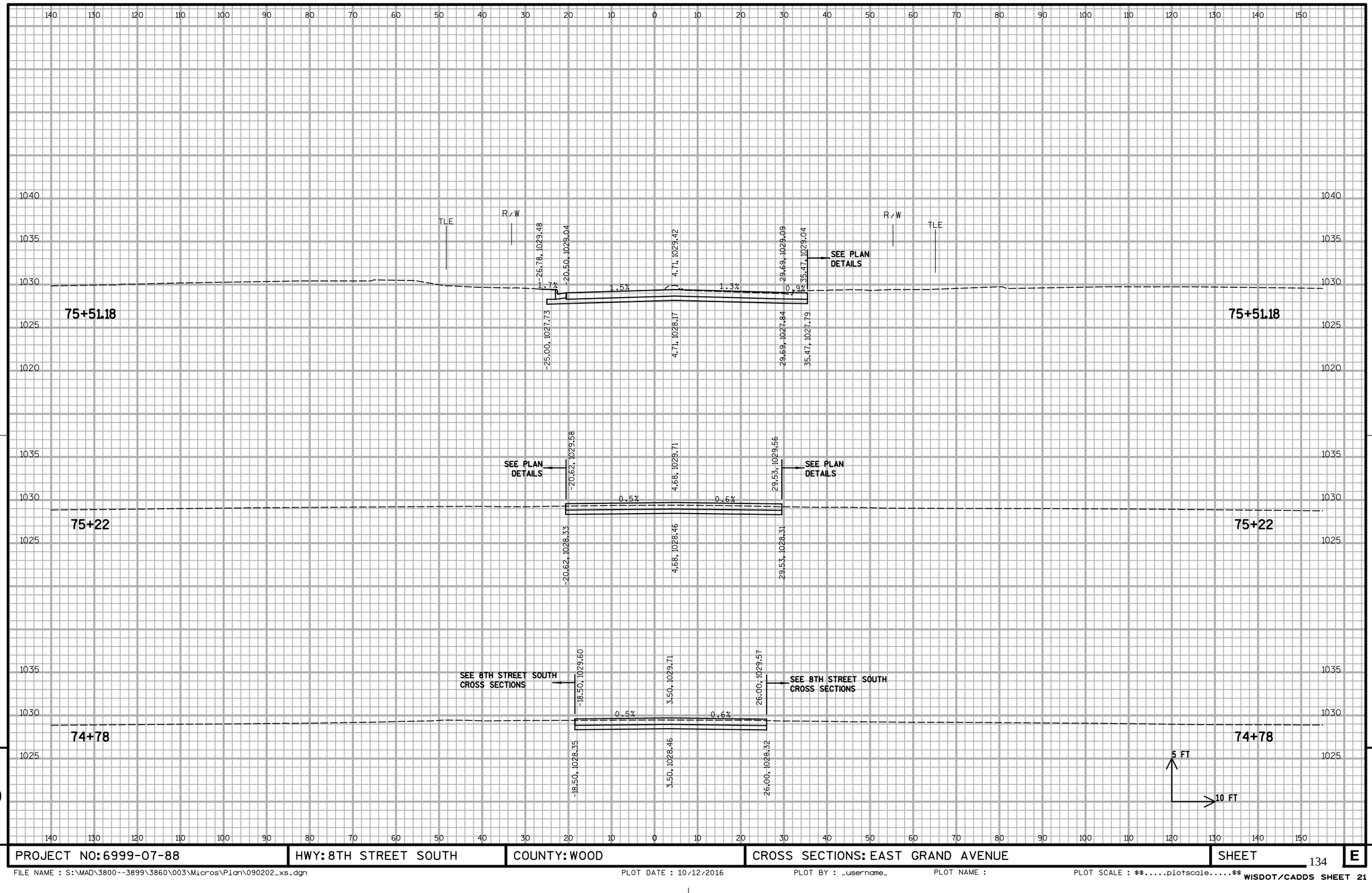
PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CROSS SECTIONS: EAST GRAND AVENUE	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\090202_xs.dgn PLOT DATE : 10/12/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CROSS SECTIONS: EAST GRAND AVENUE	SHEET 134	E

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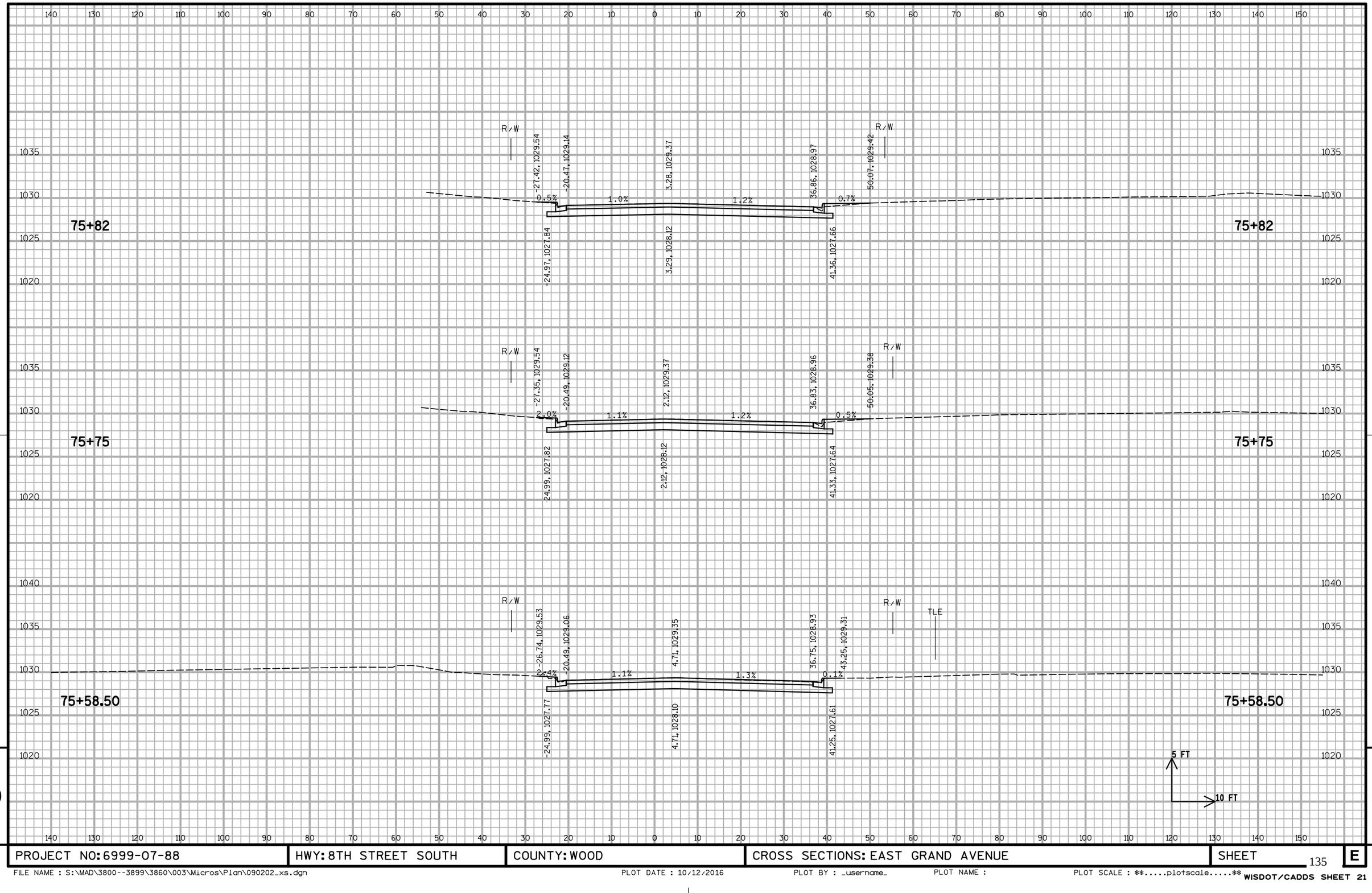

PROJECT NO: 6999-07-88	HWY: 8TH STREET SOUTH	COUNTY: WOOD	CROSS SECTIONS: EAST GRAND AVENUE	SHEET	E

FILE NAME : S:\MAD\3800--3899\3860\003\Micros\Plan\090202_xs.dgn PLOT DATE : 10/12/2016 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21

Wisconsin Department of Transportation

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