WKE MAR 2018

PROJECT ID: 2410-00-77, 2410-00-78

WITH: N/A

COUNTY: MILWAUKEE

ORDER OF SHEETS

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

TOTAL SHEETS = 348

19

N

DESIGN DESIGNATION

A.A.D.T. 2018	=	13,500
A.A.D.T. 2038	=	15,200
D.H.V.	=	1,550
D.D.	=	59/41
T.	=	5.9%
DESIGN SPEED	=	35 MPH
ESALS	=	1,600,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE (PL + 58.1)
- 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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

WEST NATIONAL AVENUE

S 76TH STREET TO S 70TH STREET

LOCAL STREET

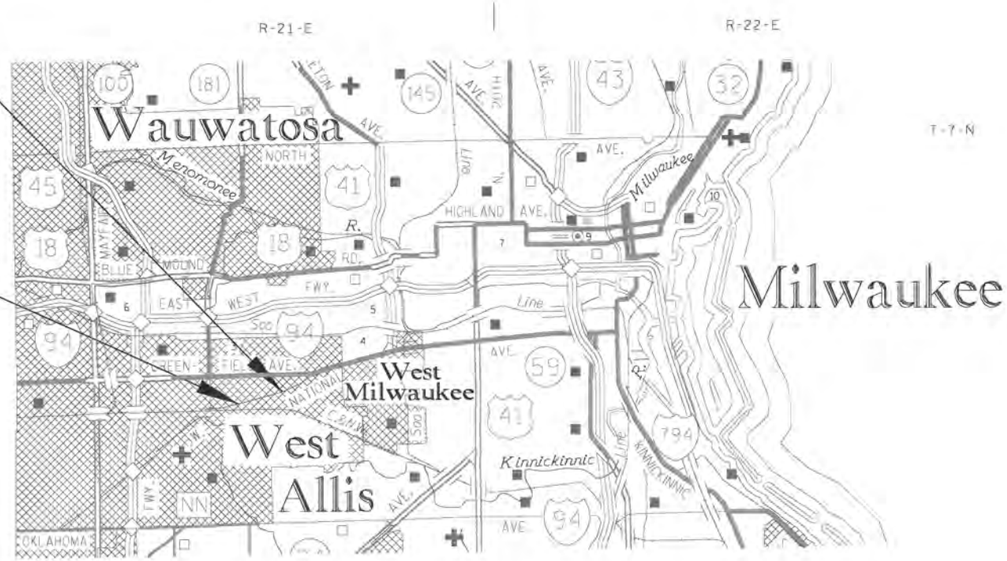
MILWAUKEE COUNTY

STATE PROJECT NUMBER
2410-00-77
2410-00-78

(WATER MAIN, SANITARY SEWER AND STREETSCAPING)

END PROJECT
STA. 38+99.49

BEGIN PROJECT
STA. 17+45.00
Y = 375,094.89
X = 2,533,031.58



LAYOUT
SCALE 0 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.408 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM (WSPCS), SOUTH ZONE, NAD27, GROUND, US SURVEY FOOT

VERTICAL DATUM - CITY OF WEST ALLIS. (NGVD29 - 580.56)

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2410-00-77	WISC 2018150	1
2410-00-78		

ACCEPTED FOR
CITY of WEST ALLIS
1/8/18 (Date) Pat Oquist City Engineer (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY
GRAEF
WISCONSIN STEVE L. HUBERTY 32396 WAUWATOSA, WI PROFESSIONAL ENGINEER
1/8/18 (Date) (Signature)

CITY OF WEST ALLIS
(STORM SEWER, SANITARY SEWER & WATER MAIN PLANS)
WISCONSIN HEATH BROZOVICH 45339 OCONOMOWOC, WI PROFESSIONAL ENGINEER
1/8/2018 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor: GRAEF
Designer: GRAEF
Management Consultant: DAAR CORP, INC.
C.O. Examiner:

APPROVED FOR THE DEPARTMENT
DATE: 1/9/2018 (Management Consultant Signature)

E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\010101_ti.dgn PLOT DATE : 1/8/2018 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 10560.0000 sf / in. WISDOT/CADDS SHEET 15

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

THE EXACT LOCATION OF PRIVATE ENTRANCES IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM THE ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES OR FROM GRUBBING OF TREES OR STUMPS SHALL BE BACKFILLED WITH GRANULAR BACKFILL. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

ALL RADIUS DIMENSIONS FOR CURB & GUTTER ARE GIVEN TO THE FACE OF CURB. ALL ELEVATIONS ALONG CURB & GUTTER ARE GIVEN TO THE FLANGE. OFFSETS NOTED ARE TO THE FACE OF CURB, UNLESS OTHERWISE NOTED.

THE LOCATION OF KNOWN EXISTING UTILITIES IN THE VICINITY OF THE PROJECT ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITIES IN THE AREA THAT ARE NOT SHOWN.

HMA PAVEMENT WHERE INDICATED ON THE PLANS, SHALL CONSIST OF LAYERS AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER.

2" DEPTH 2" OF HMA PAVEMENT 4 LT 58-28 S AS THE UPPER LAYER

ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

SILT FENCE SHALL BE INSTALLED IN THE LOCATIONS AS DIRECTED BY THE ENGINEER.

ASPHALT AND CONCRETE DRIVEWAYS SHALL BE SAWCUT AT THE MATCH LINE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

INLET PROTECTION IS REQUIRED AT ALL INLETS AS PER DETAIL OR AS DIRECTED BY THE ENGINEER.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM TRAFFIC CONTROL COVERING SIGNS.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

CONCRETE JOINTS SHALL MATCH ABUTTING PAVEMENT AND CURB AND GUTTER JOINTS UNLESS OTHERWISE DESIGNATED BY THE ENGINEER.

ALL TIE OR DOWEL BARS INSERTED INTO A HOLE DRILLED IN THE EXISTING CONCRETE SHALL BE PAID FOR UNDER THE ITEM "DRILLED PAVEMENT TIES" AND "DRILLED DOWEL BARS." ALL OTHER TIE OR DOWEL BARS INCORPORATED INTO NEW POURED CONCRETE SHALL BE INCIDENTAL TO THE APPROPRIATE ITEM.

STANDARD ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CONC	CONCRETE
CP	CULVERT PIPE
CPCM	CULVERT PIPE CORRUGATED METAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CSCP	CORRUGATED STEEL CULVERT PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC-YARD
D	DEGREE OF CURVE
DISCH	DISCHARGE
FE	FIELD ENTRANCE
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
NTS	NOT TO SCALE
PAVT	PAVEMENT
PB	PULL BOX
PC	POINT-OF-CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RAD	RADIUS
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
SSPRCHE	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
SSPC	STORM SEWER PIPE COMPOSITE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SB	SIGNAL BASE
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TC	TOP OF CURB
TLE	TEMPORARY LIMITED EASEMENT

CITY OF WEST ALLIS

MR. PETER DANIELS
CITY OF WEST ALLIS ENGINEERING DEPARTMENT
7525 W GREENFIELD AVENUE
WEST ALLIS, WI 53214
(414) 302-8374

DESIGNER

MR. STEVE HUBERTY
GRAEF
HONEY CREEK CORPORATE CENTER
125 S. 84TH STREET, SUITE 401
MILWAUKEE, WI 53212
(414) 266-9090

DNR

MS. KRISTINA BETZOLD
WISCONSIN DEPT. OF NATURAL RESOURCES
2300 N. MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
(414) 263-8517

MILWAUKEE COUNTY TRANSIT

MS. MELANIE FLYNN
MILWAUKEE COUNTY TRANSIT SYSTEM
1942 N. 17TH STREET
MILWAUKEE, WI 53205
(414) 343-1764

UTILITIES

AT&T WISCONSIN
MS. DEANNA BARBIAN
435 S. 95TH STREET
MILWAUKEE, WI 53214
(414) 476-6188; (414) 469-1335 (MOBILE)

CHARTER COMMUNICATIONS
MR. STEVE CRAMER
1320 N MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
(414) 277-4045

TDS METROCOM
MR. MATTHEW SCHULTE
16924 W. VICTOR ROAD
NEW BERLIN, WI 53151
(262) 754-3063

WE ENERGIES (ELECTRIC)
SEND ALL CORRESPONDENCE TO:

MR. DAN SANDE
333 W. EVERETT STREET, PSBA-A299
MILWAUKEE, WI 53203
(414)221-4578
DAN.SANDE@WE-ENERGIES.COM

CONSTRUCTION FIELD CONTACT:
MR. KEN FRANECKI
500 S. 16TH STREET
WEST ALLIS, WI 53214
(414) 944-5531; MOBILE (414) 939-1039
KENNETH.FRANECKI@WE-ENERGIES.COM

WE ENERGIES (GAS OPERATIONS)
SEND ALL CORRESPONDENCE TO:

MR. DAN SANDE
333 W. EVERETT STREET, PSBA-A299
MILWAUKEE, WI 53203
(414)221-4578
DAN.SANDE@WE-ENERGIES.COM

CONSTRUCTION FIELD CONTACT:
MR. ALEX DANTINNE
WE ENERGIES - GAS
500 S. 116TH STREET
WEST ALLIS, WI 53203
(920) 621-6903

CITY OF WEST ALLIS - WATER
MR. MIKE BROFKA
6300 MCGOECH AVENUE
WEST ALLIS, WI 53219
(414) 302-0459

CITY OF WEST ALLIS - SANITARY
MR. TIM LAST
6300 MCGOECH AVENUE
WEST ALLIS, WI 53219
(414) 302-8816

CITY OF WEST ALLIS - FIBER OPTIC, ELECTRIC & TRAFFIC SIGNALS
MR. DAVE YOUNG
6300 MCGOECH AVENUE
WEST ALLIS, WI 53219
(414) 302-8876; MOBILE (414)477-0964

INDEX OF TYPICAL SECTION AND DETAIL SHEETS

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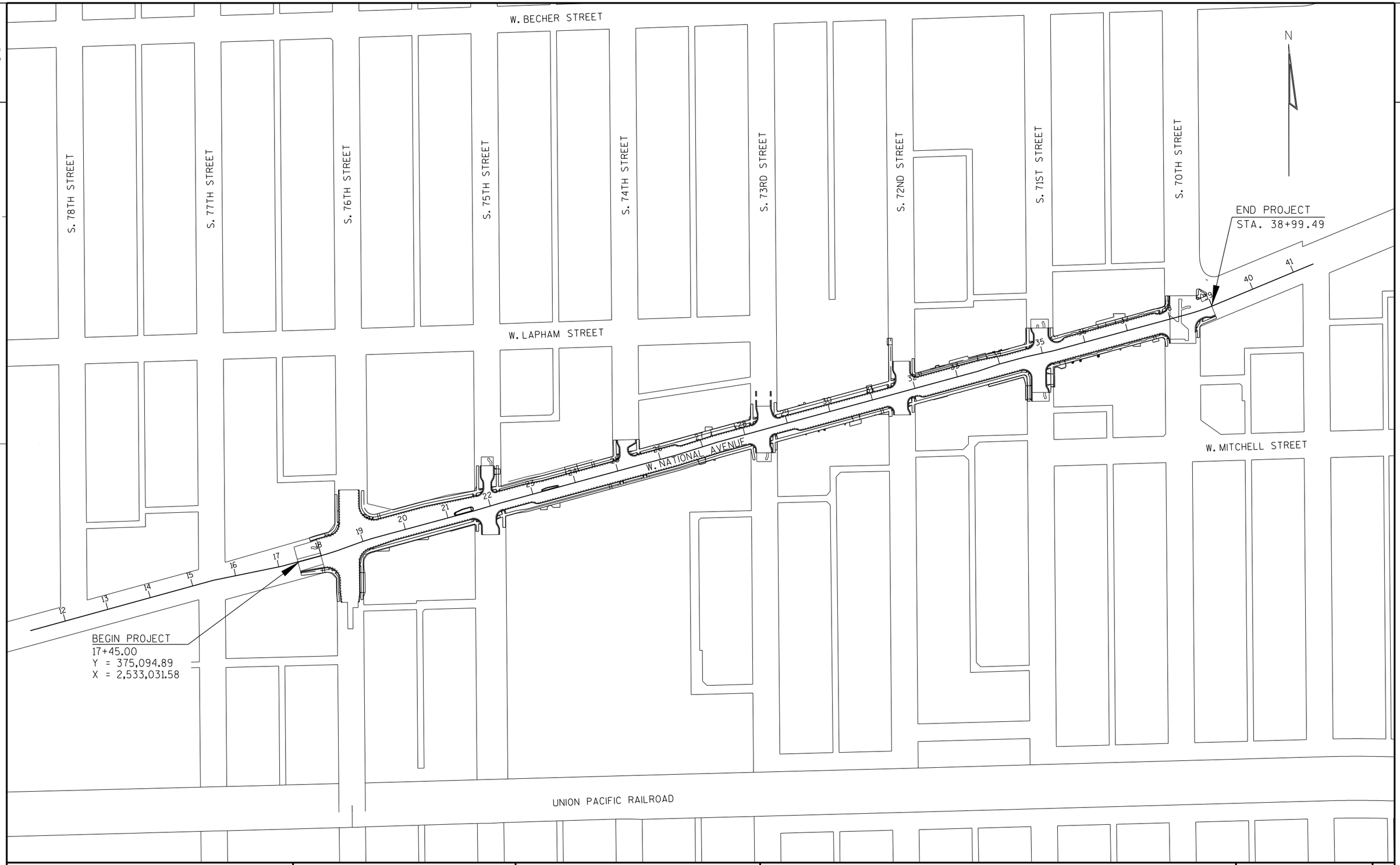
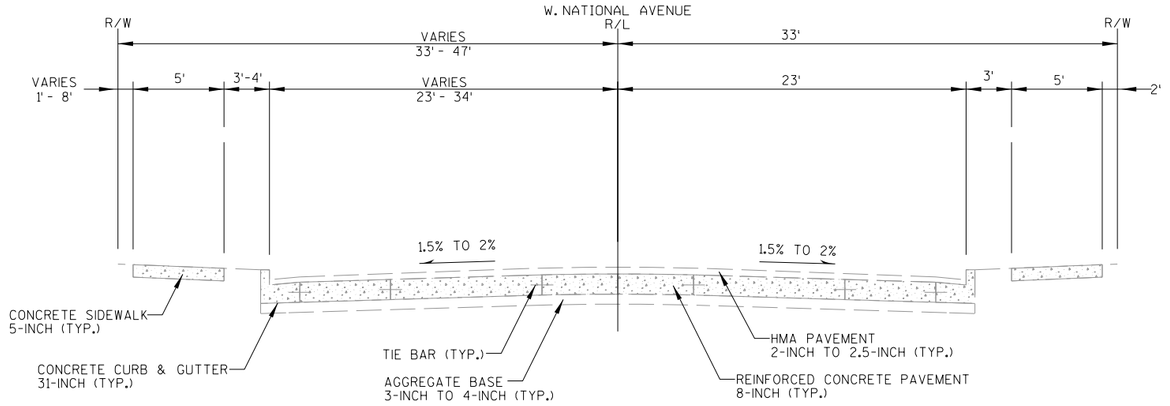
DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

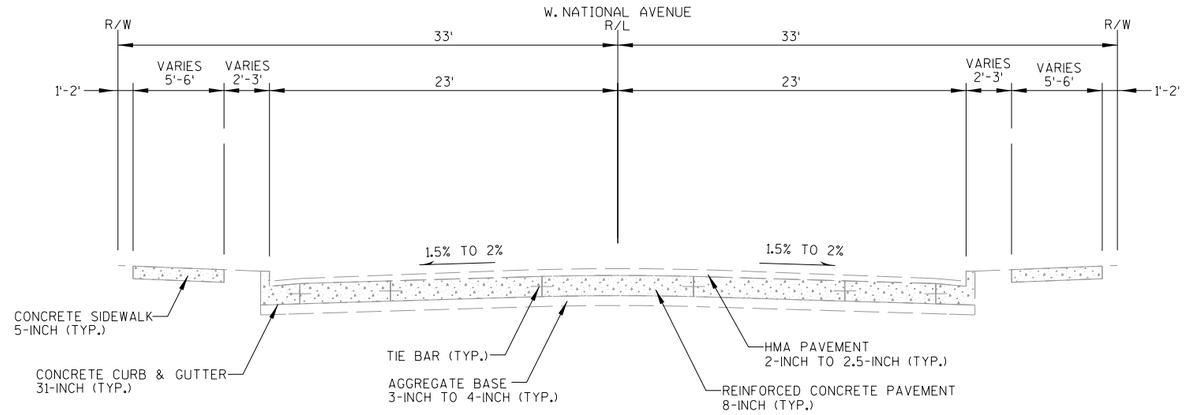


PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 3	E



TYPICAL EXISTING SECTION

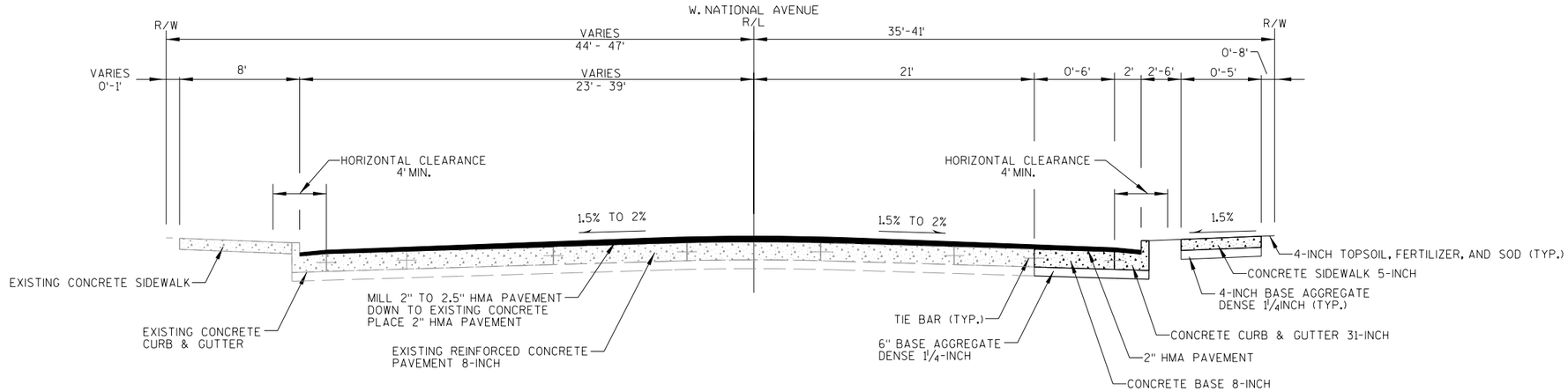
STA 17+45 - 22+25



TYPICAL EXISTING SECTION

STA 22+25 - 38+99.49

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 4	E

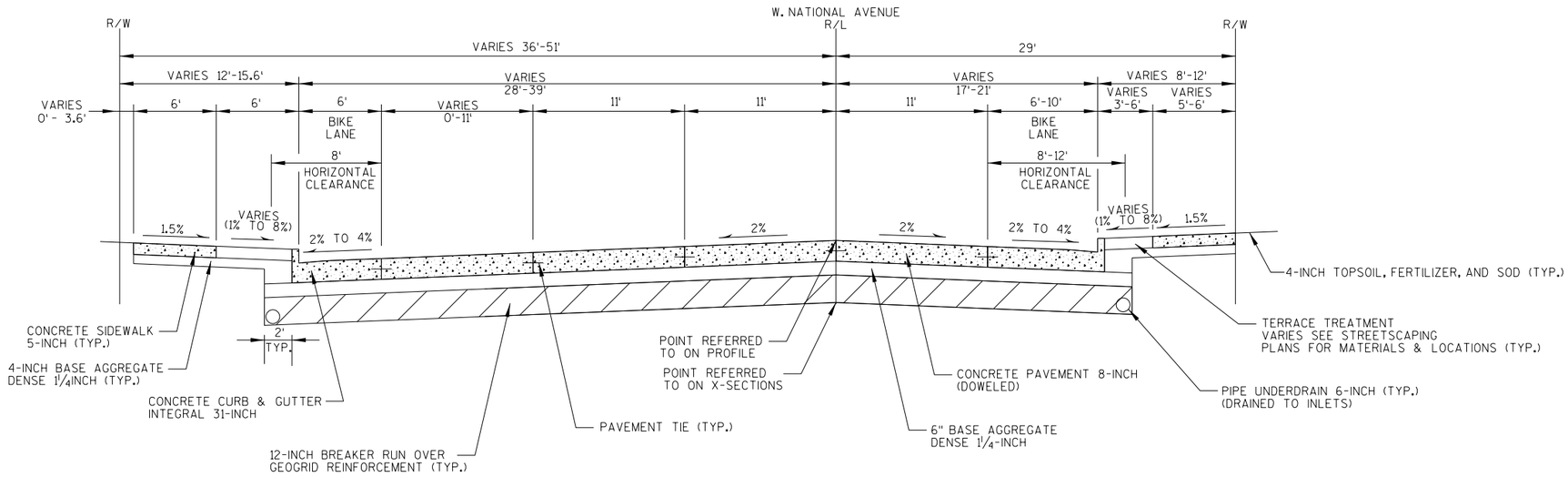


TYPICAL FINISHED SECTION

(MILL & OVERLAY)

STA 17+45 - 17+94

STA 38+00.16 - 38+99.49

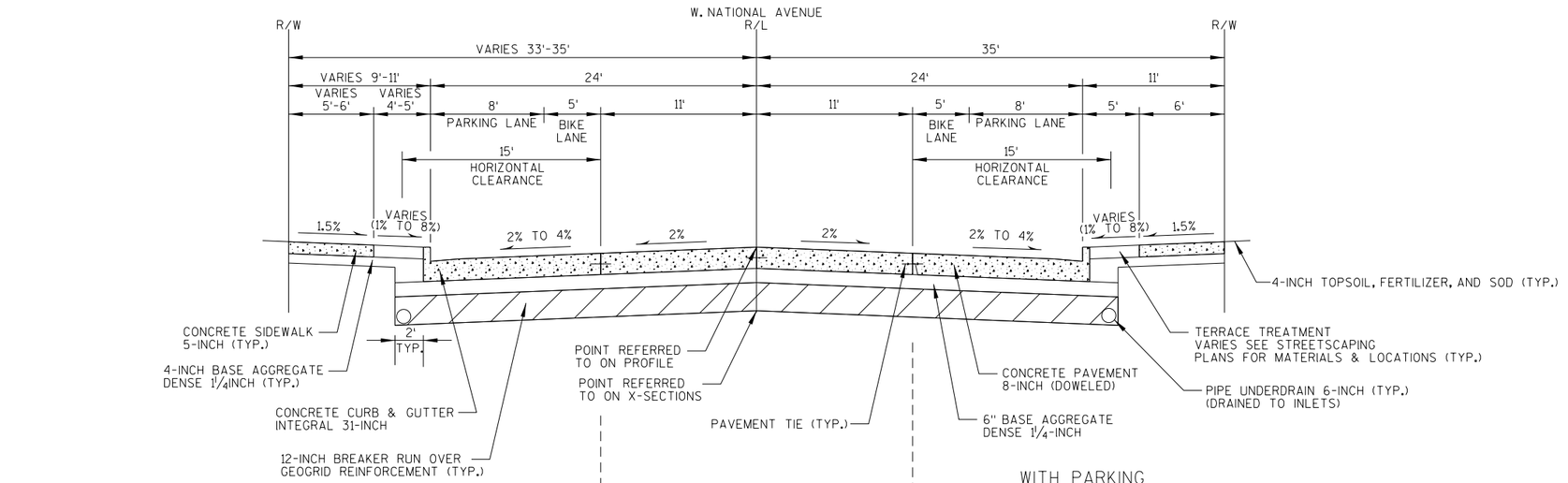


TYPICAL FINISHED SECTION

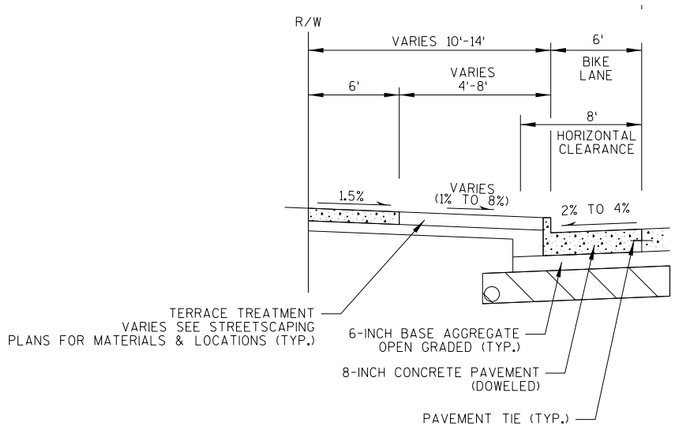
STA 17+94 - 22+25

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 5	E

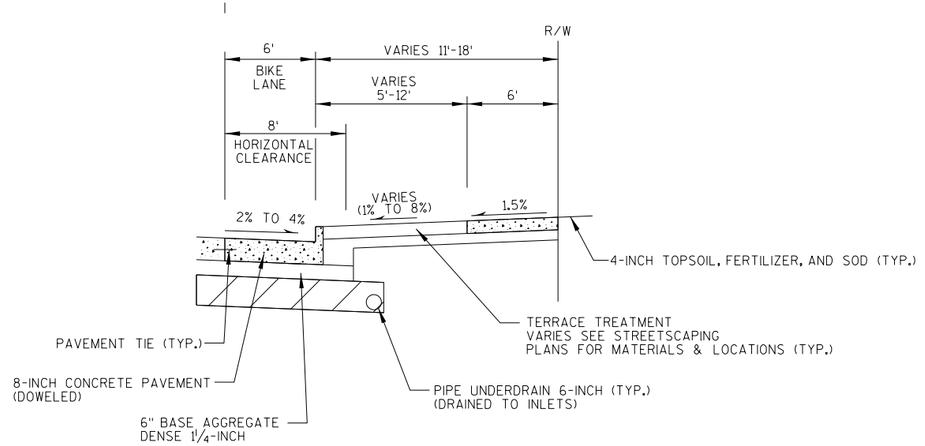
FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\020301_ts.dgn PLOT DATE : 1/10/2018 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 10.0000 sf / in.



WITH PARKING



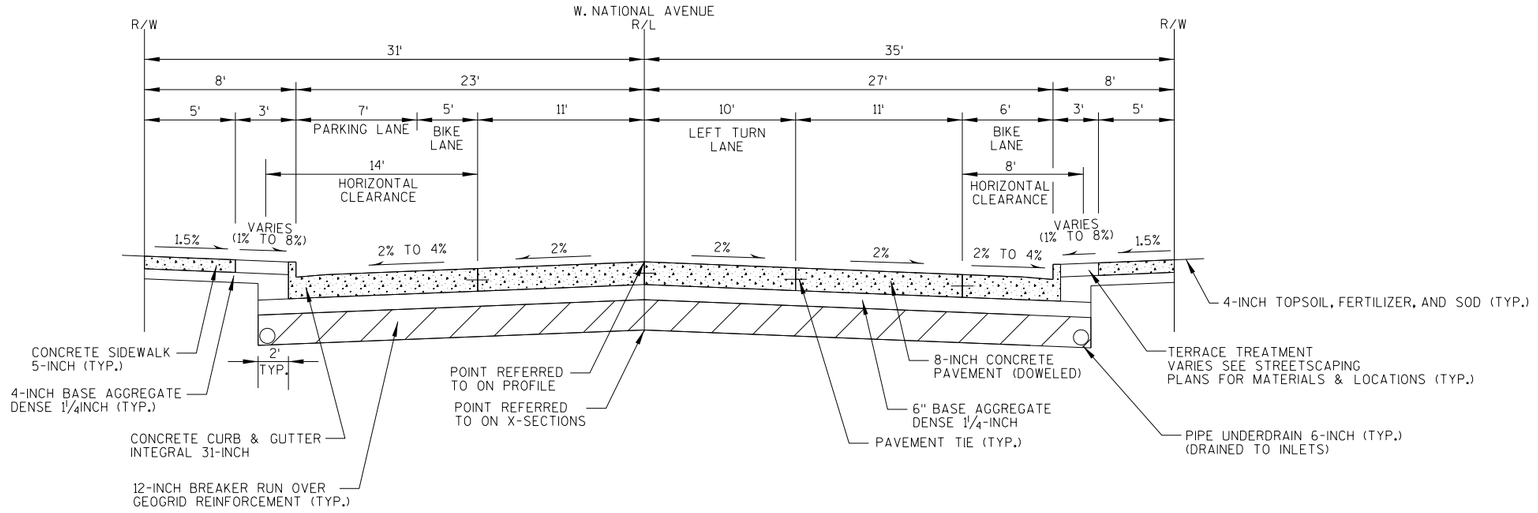
WITHOUT PARKING
STA 26+55 - 31+50



WITHOUT PARKING
STA 22+25 - 22+90
STA 28+65 - 29+10
STA 31+90 - 32+00

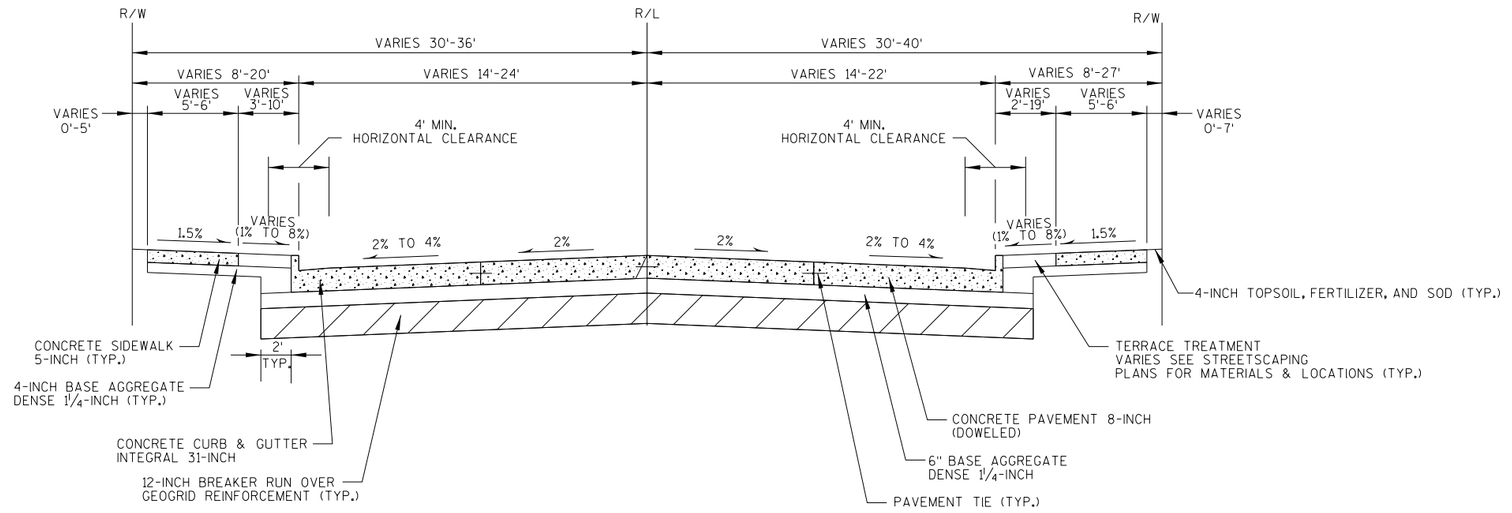
TYPICAL FINISHED SECTION
STA 22+25 - 35+00

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 6	E



TYPICAL FINISHED SECTION

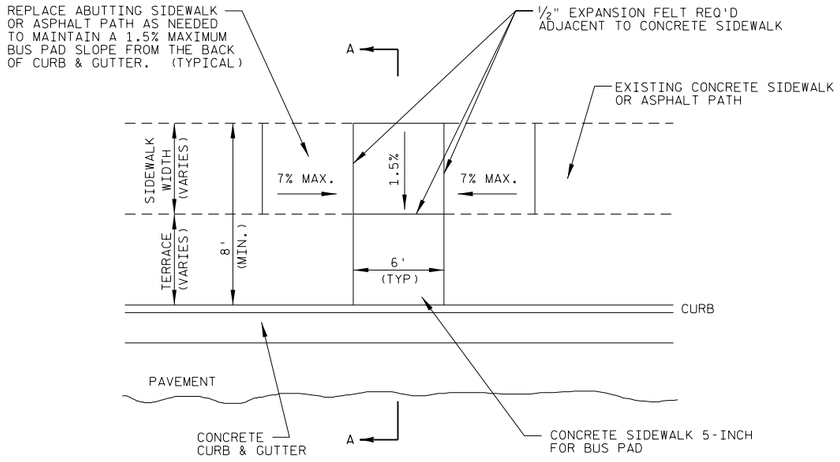
STA 35+00 - 38+00.16



TYPICAL FINISHED SECTION SIDE ROADS

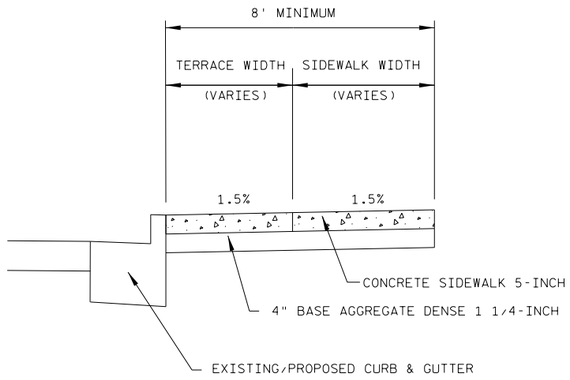
S. 76TH STREET
S. 75TH STREET
S. 74TH STREET
S. 73RD STREET
S. 72ND STREET
S. 71ST STREET

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 7	E



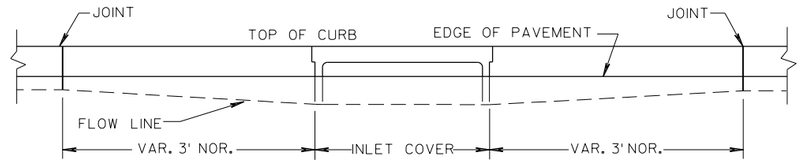
PLAN VIEW - SIDEWALK WITH TERRACE

NOTE: DEPRESS SIDEWALK AS NEEDED TO MAINTAIN 1.5% MAXIMUM CROSS SLOPE IN TERRACE AREA.

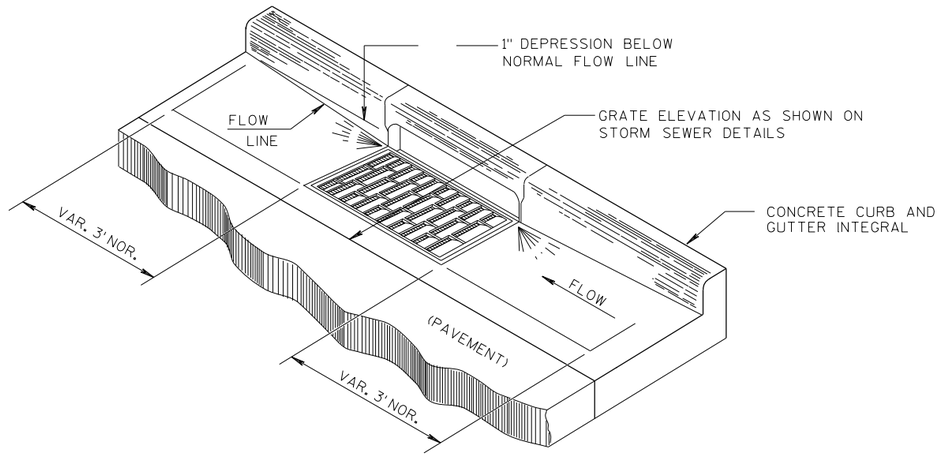


SECTION A-A

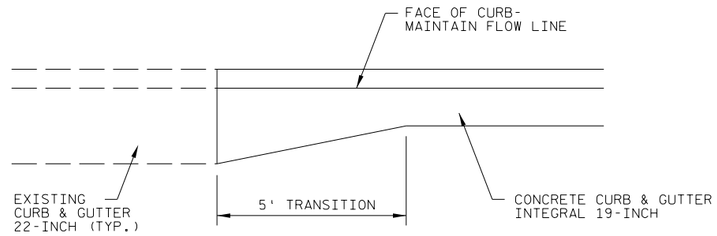
CONCRETE BUS PAD DETAIL



ELEVATION



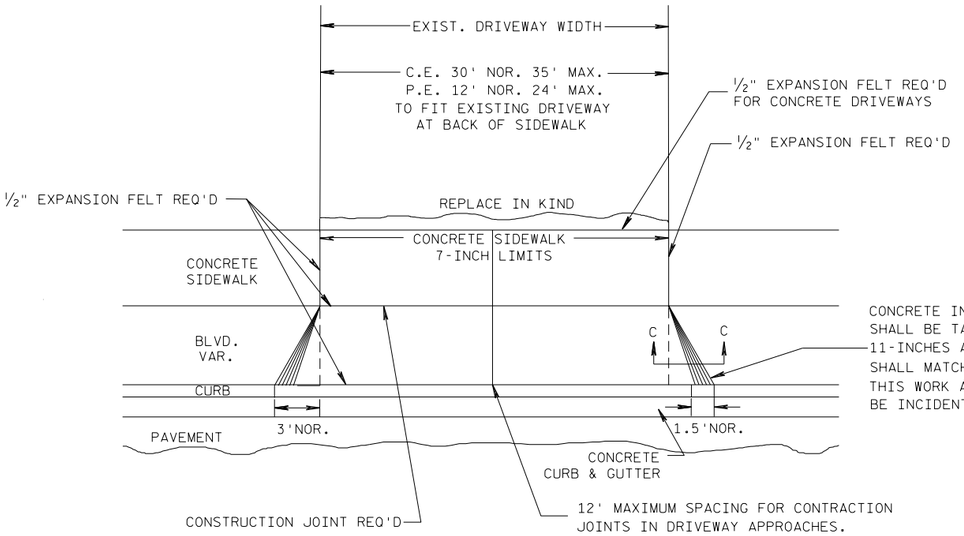
DETAIL OF CURB AND GUTTER AT INLETS



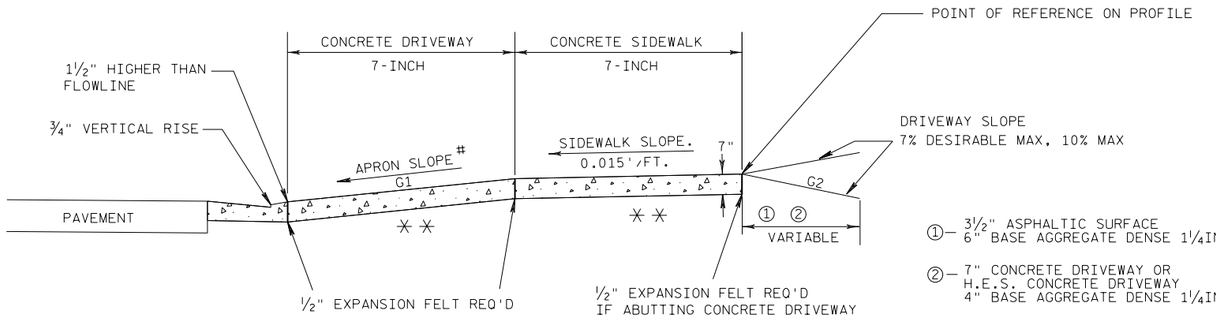
CONCRETE CURB AND GUTTER TRANSITION

(PAYMENT INCIDENTAL TO CURB AND GUTTER)

STA. 8+65A RT



PLAN VIEW



TYPICAL SIDEWALK SECTION

① — 3½" ASPHALTIC SURFACE
6" BASE AGGREGATE DENSE 1¼INCH

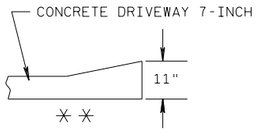
② — 7" CONCRETE DRIVEWAY OR
H.E.S. CONCRETE DRIVEWAY
4" BASE AGGREGATE DENSE 1¼INCH

\#

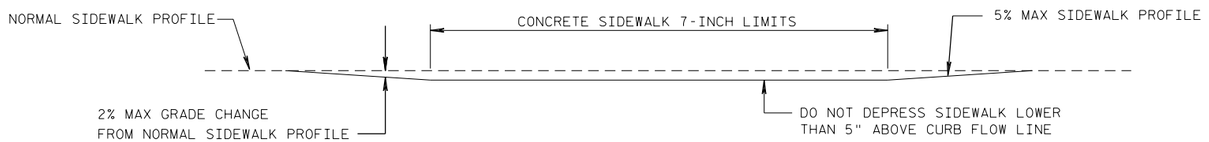
TERRACE WIDTH	APRON SLOPE (G1) MIN %	DESIRABLE %	MAX %
3 FT	7.0	8.5	10.0
4 FT	5.0	7.0	10.0
5 FT	4.0	7.0	10.0
6 FT	4.0	7.0	10.0
7 FT	3.5	7.0	10.0
8 FT	3.0	7.0	10.0

NOTE: ALGEBRAIC DIFFERENCE BETWEEN TANGENT GRADES G1 & G2 TO NOT EXCEED 15%

DEPRESS SIDEWALK PROFILE IF DRIVEWAY APRON EXCEEDS MAX SLOPE



SECTION C-C

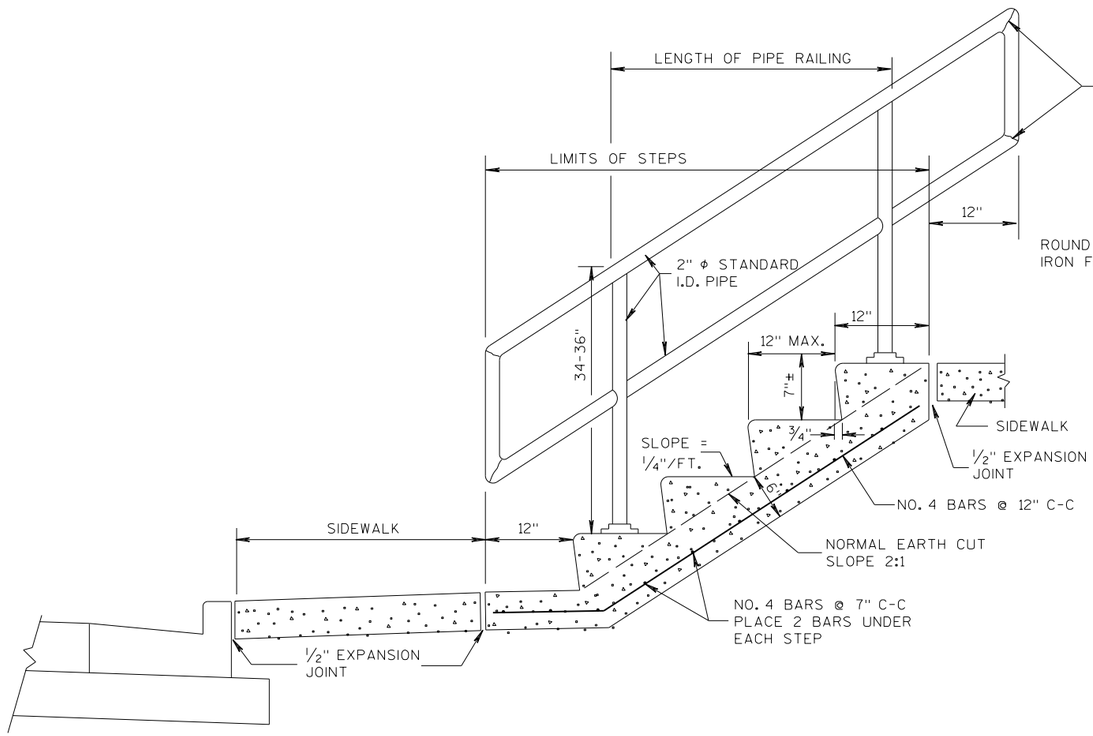


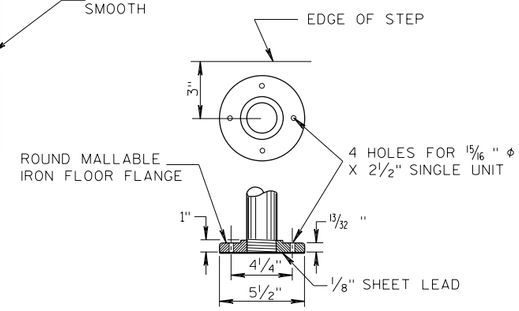
DEPRESSED SIDEWALK PROFILE DETAIL

DRIVEWAY ENTRANCE DETAIL WITH SIDEWALK, CURB & GUTTER

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 9	E

2





FLANGE DETAIL

NOTE:

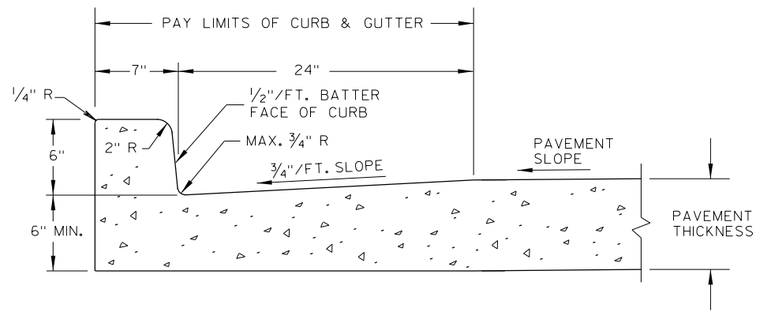
THE EXACT LOCATION, WIDTHS, & NUMBER OF STEPS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

STEEL REINFORCEMENT AND PIPE RAILING NOT REQUIRED ON STEPS WITH 2 RISERS OR LESS.

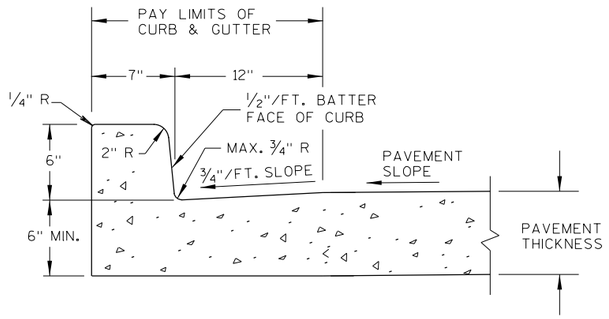
MINIMUM WIDTH OF STEP EQUALS 4 FEET.

RAILING TO BE PLACED ON LEFT ASCENDING SIDE OF STEPS ONLY.

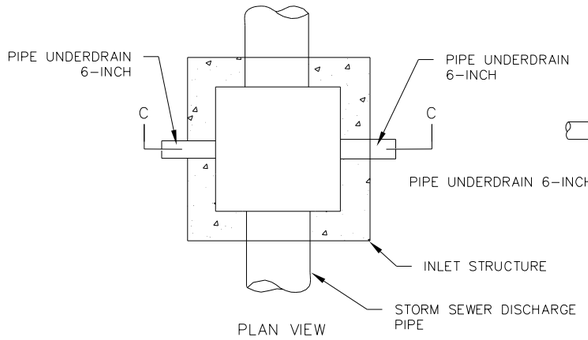
CONCRETE STEPS DETAIL



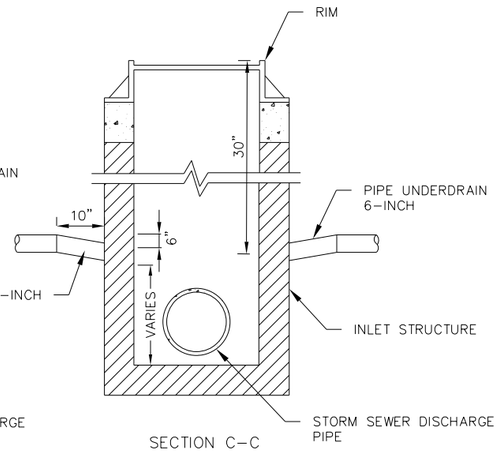
31" INTEGRAL CONCRETE CURB AND GUTTER



19" INTEGRAL CONCRETE CURB AND GUTTER



PLAN VIEW



SECTION C–C

UNDERDRAIN OUTFALL AT INLET

NOTES:

1. CONNECTIONS TO INLETS OR MANHOLES IN MEDIAN SHALL USE PIPE UNDERDRAIN, 6–INCH

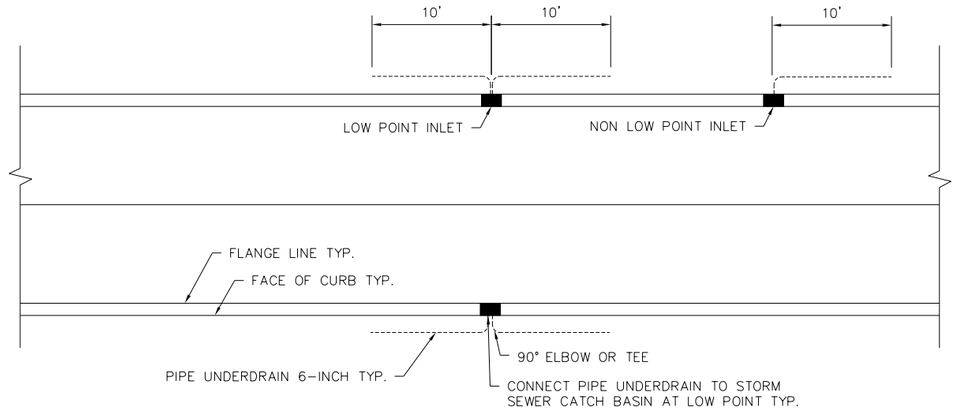
2. PROVIDE 6" DIA. OPENINGS FOR UNDERDRAIN PIPE A MINIMUM OF 38" BELOW THE RIM ELEVATION. CORE INTO EXISTING INLETS TO REMAIN.

3. SEE MISCELLANEOUS QUANTITIES AND STORM SEWER PLANS FOR PIPE UNDERDRAIN LOCATIONS.

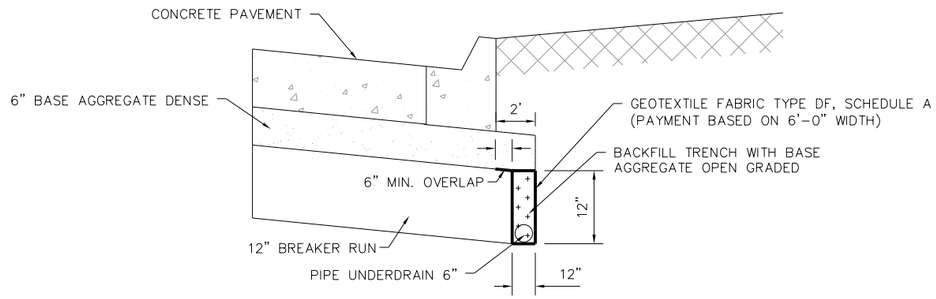
4. PIPE UNDERDRAIN ONLY REQUIRED ON HIGH SIDE OF INLET IN SLOPED CONDITION.

5. PIPE UNDERDRAIN REQUIRED ON BOTH SIDES OF INLET IN SAG CONDITION.

2

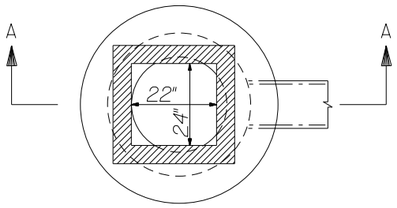


PLAN

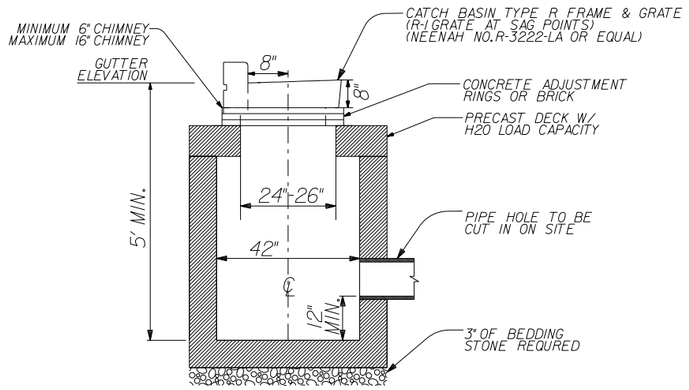


UNDERDRAIN TRENCH DETAIL

10' EACH SIDE OF INLET AT LOW POINTS.
10' ON HIGH SIDE OF INLET AT ALL OTHER INLETS
CONNECT PIPE UNDERDRAIN TO INLETS



PLAN VIEW

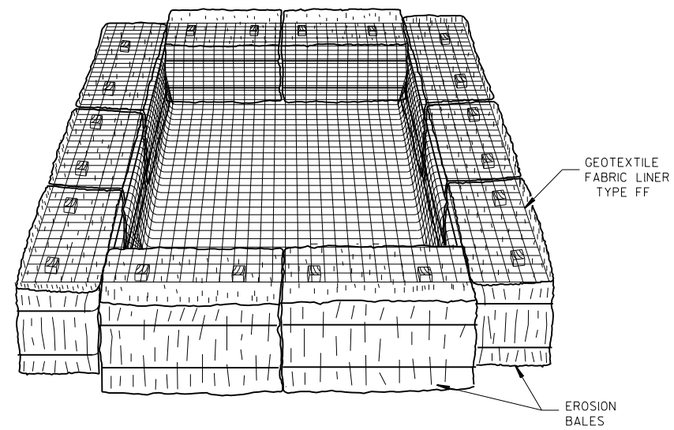


SECTION A-A

REVISED JAN.2016
CITY OF WEST ALLIS

ROAD TYPE CATCH BASIN
FIGURE V-117

CATCH BASIN, SPECIAL



TEMPORARY SETTLING BASIN

(SIZE TO BE DETERMINED IN FIELD AS INDICATED BELOW:)

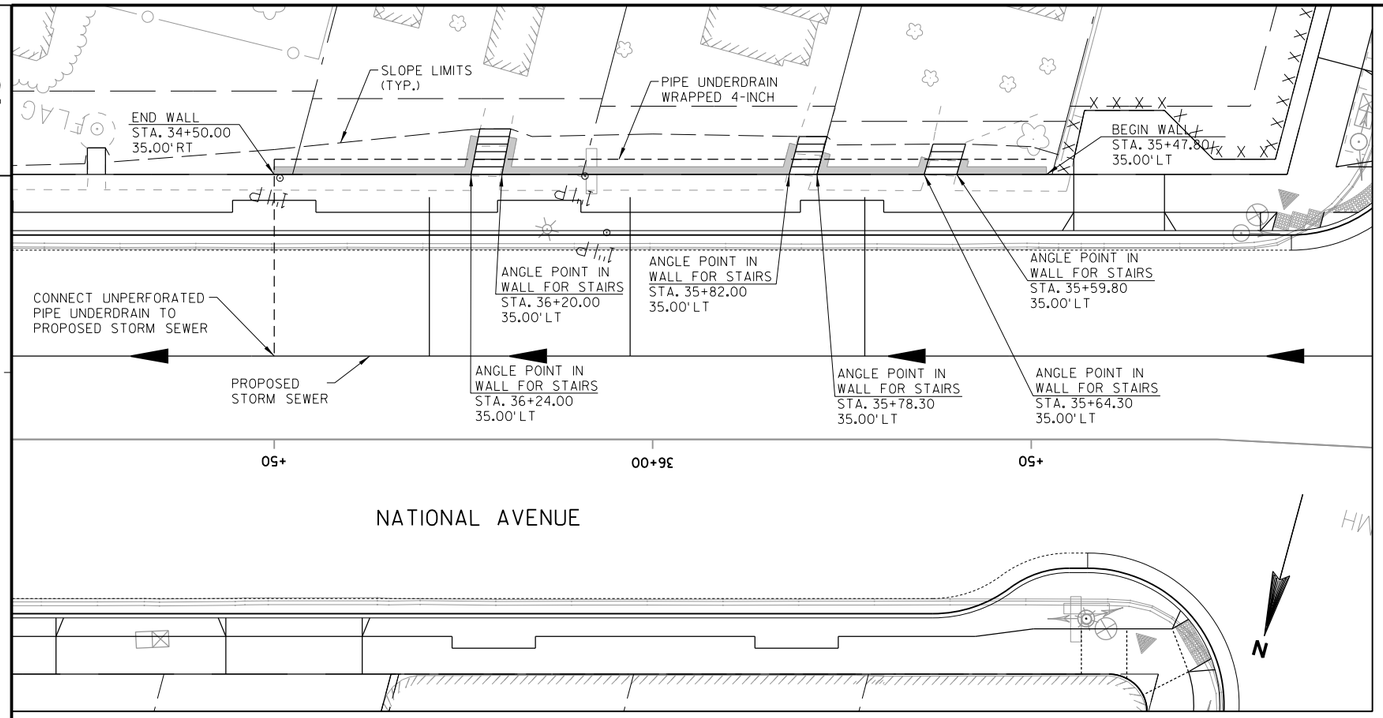
STORAGE VOLUME (C.F.) = 16 X GPM (PUMP RATE)

EXAMPLE:
CONTRACTOR INDICATES PUMP CAPABLE OF 50 GPM
HEIGHT OF BALES = 1.5 FT.

SOLUTION:
SV (C.F.) = 16 X 50
SV = 800 C.F.

$\frac{800\ C.F.}{1.5\ FT.}$ = 533 S.F.

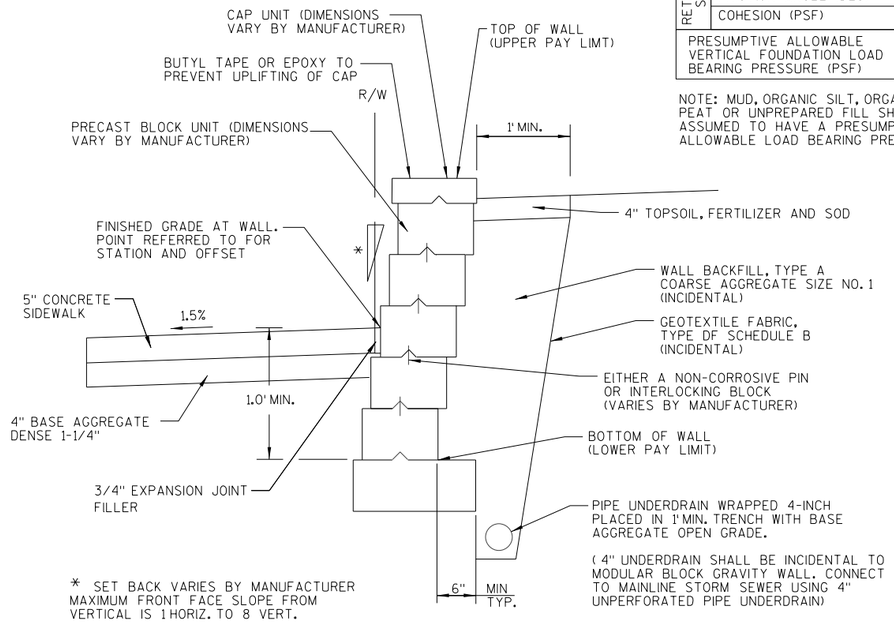
USE A 20 FT. X 27 FT. BASIN



PLAN

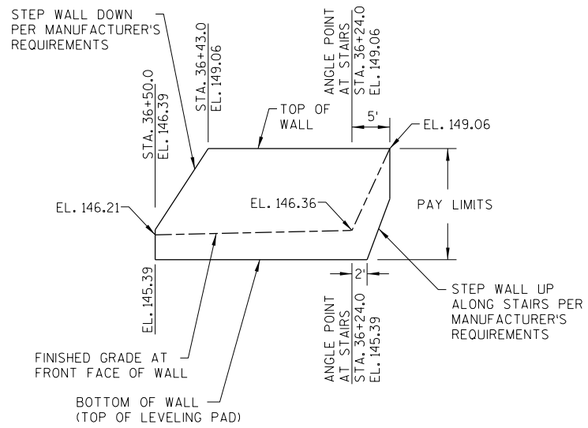
SOIL PARAMETERS		
RETAINED SOIL	UNIT WEIGHT (PCF)	120
	FRICTION ANGLE (DEG)	30
	COHESION (PSF)	0
PRESUMPTIVE ALLOWABLE VERTICAL FOUNDATION LOAD BEARING PRESSURE (PSF)		1,500

NOTE: MUD, ORGANIC SILT, ORGANIC CLAY, PEAT OR UNPREPARED FILL SHALL NOT BE ASSUMED TO HAVE A PRESUMPTIVE ALLOWABLE LOAD BEARING PRESSURE.

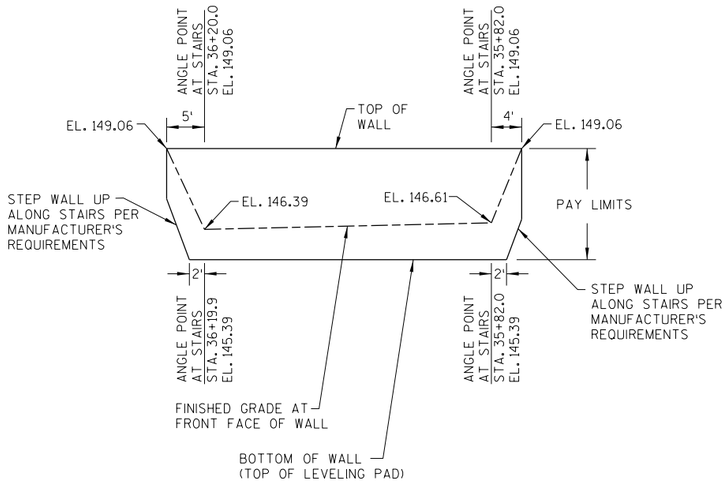


* SET BACK VARIES BY MANUFACTURER MAXIMUM FRONT FACE SLOPE FROM VERTICAL IS 1 HORIZ. TO 8 VERT.

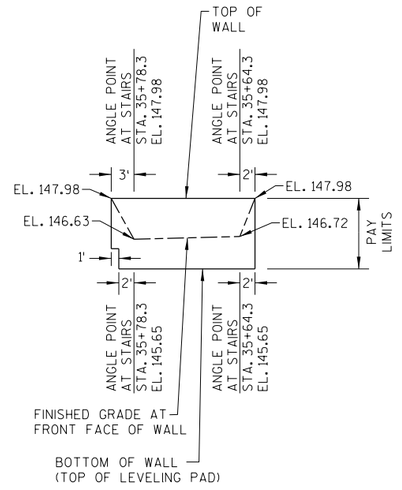
TYPICAL SECTION
MODULAR CONCRETE UNIT
N.T.S.



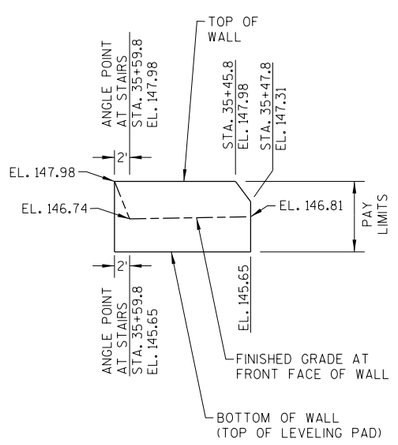
PROFILE
(LOOKING SOUTH AT WALL)



PROFILE
(LOOKING SOUTH AT WALL)



PROFILE
(LOOKING SOUTH AT WALL)

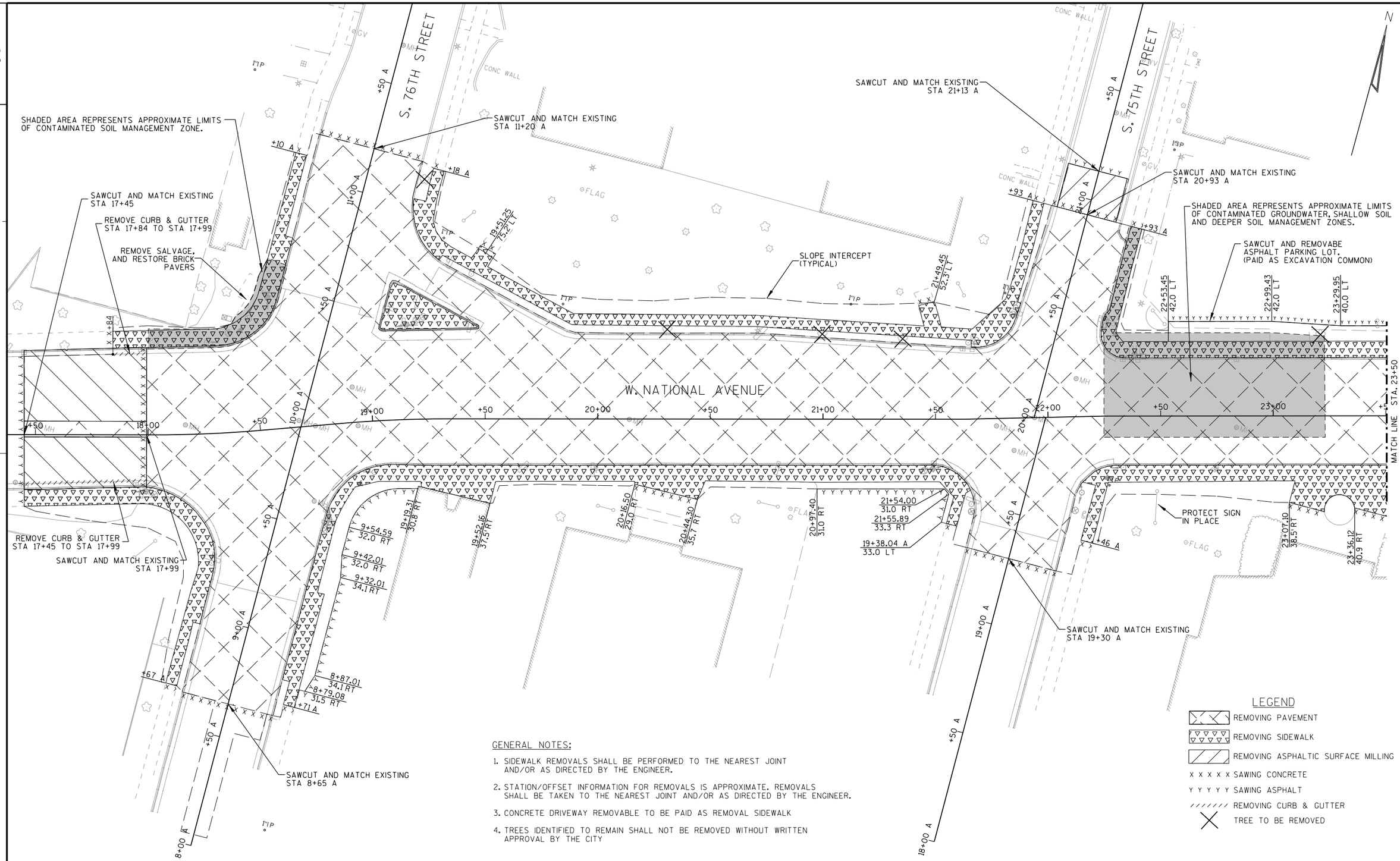


PROFILE
(LOOKING SOUTH AT WALL)

MODULAR BLOCK RETAINING WALL

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 13	E

2



GENERAL NOTES:

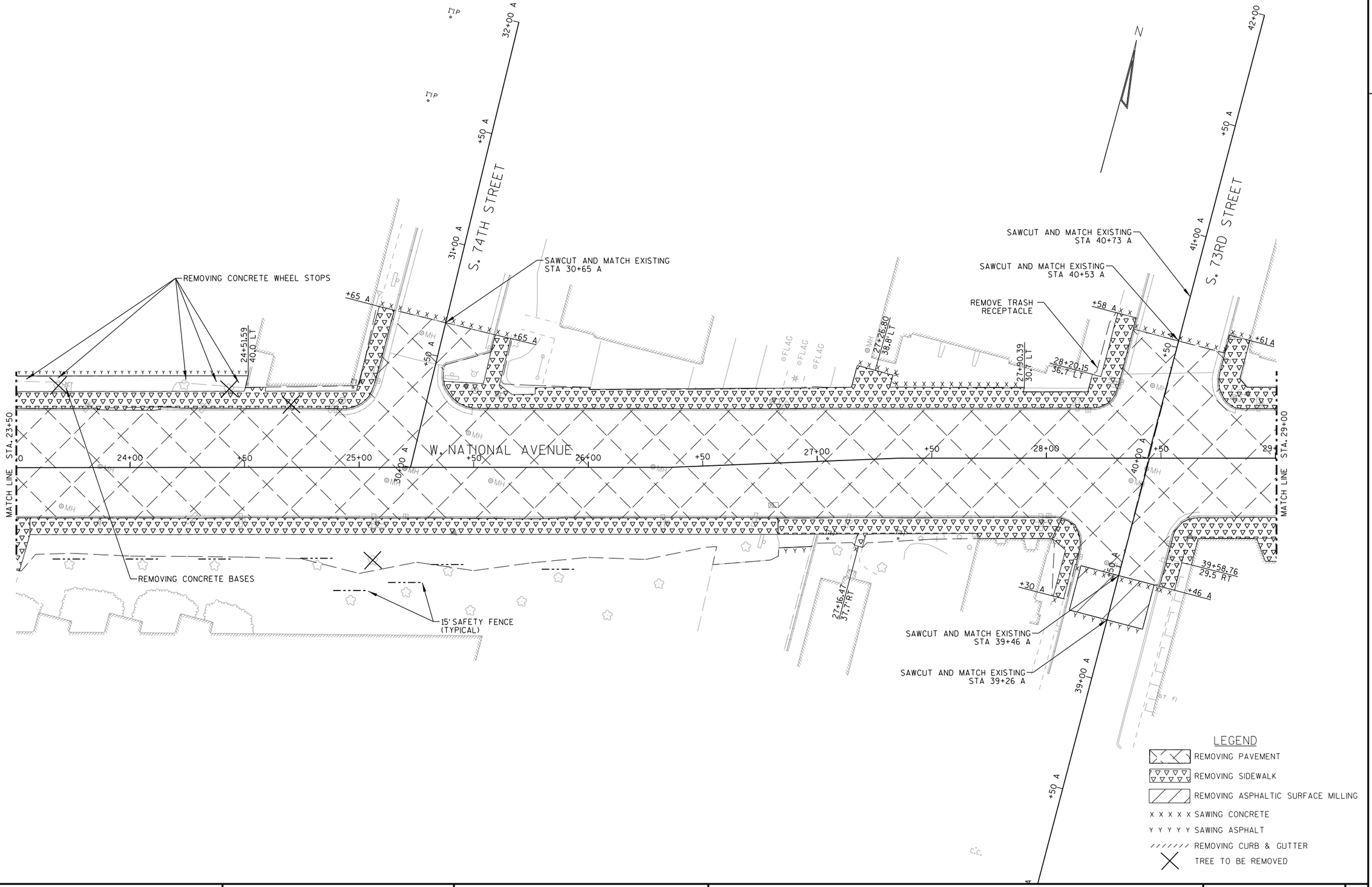
1. SIDEWALK REMOVALS SHALL BE PERFORMED TO THE NEAREST JOINT AND/OR AS DIRECTED BY THE ENGINEER.
2. STATION/OFFSET INFORMATION FOR REMOVALS IS APPROXIMATE. REMOVALS SHALL BE TAKEN TO THE NEAREST JOINT AND/OR AS DIRECTED BY THE ENGINEER.
3. CONCRETE DRIVEWAY REMOVABLE TO BE PAID AS REMOVAL SIDEWALK
4. TREES IDENTIFIED TO REMAIN SHALL NOT BE REMOVED WITHOUT WRITTEN APPROVAL BY THE CITY

LEGEND

- REMOVING PAVEMENT
- REMOVING SIDEWALK
- REMOVING ASPHALTIC SURFACE MILLING
- X X X X X SAWING CONCRETE
- Y Y Y Y Y SAWING ASPHALT
- REMOVING CURB & GUTTER
- TREE TO BE REMOVED

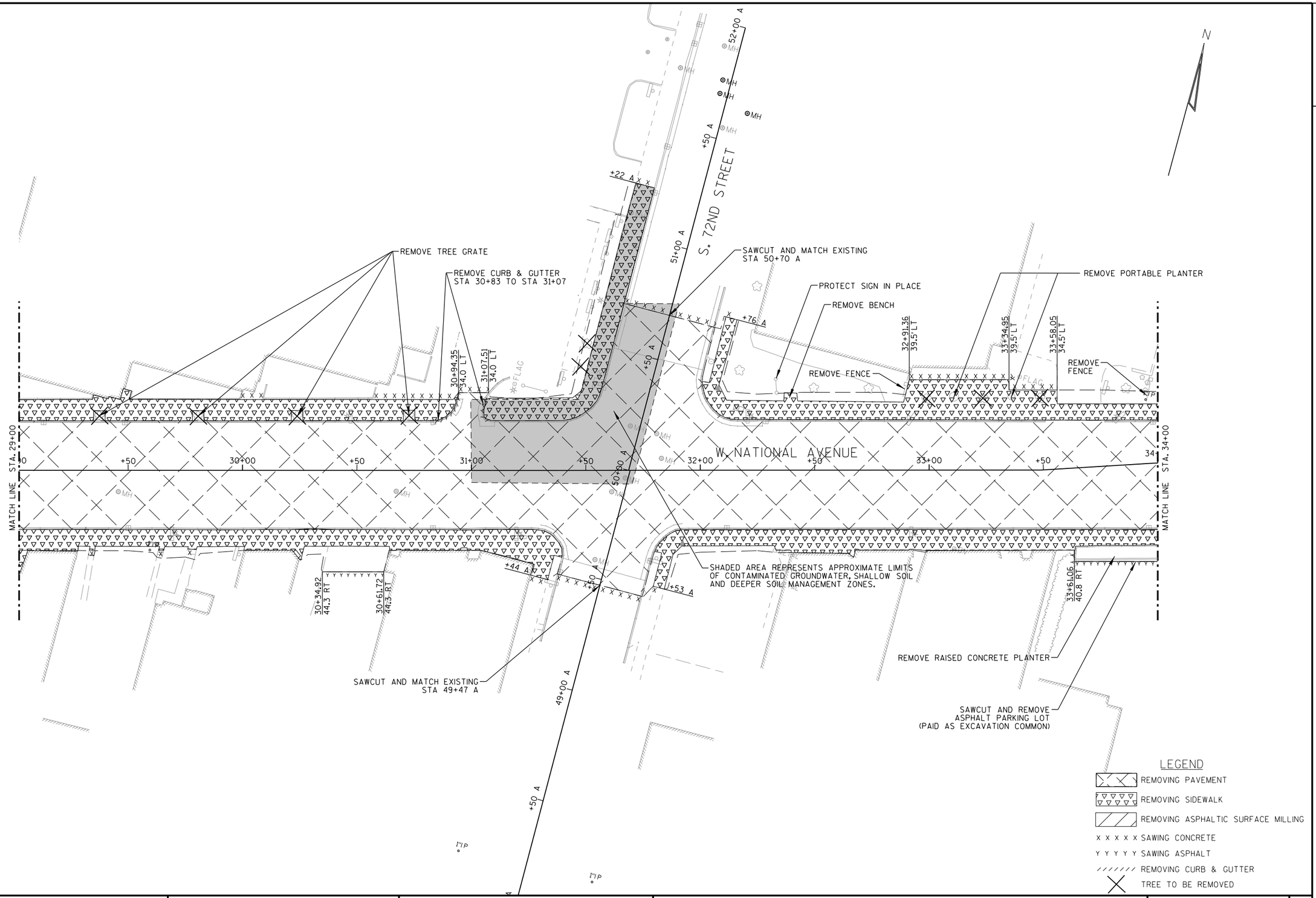
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 14	E

2



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 15	E

2



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 16	E

2

2

N

W. NATIONAL AVENUE

S. 71ST STREET

S. 70TH STREET

MATCH LINE STA. 34+00

SAWCUT AND MATCH EXISTING STA 60+78 A

SAWCUT AND MATCH EXISTING STA 60+58 A

REMOVE 6" WALL (INCIDENTAL TO EXCAVATION COMMON)

REMOVE BRICK PLANTER (INCIDENTAL TO EXCAVATION COMMON)

REMOVE RAISED CONCRETE PLANTER

SAWCUT AND REMOVE CONCRETE PAVEMENT (PAID AS REMOVING PAVEMENT)

SAWCUT AND REMOVE ASPHALT PARKING LOT

CAUTION - POSSIBLE PETROLEUM UNDERGROUND STORAGE TANK

REMOVE CURB & GUTTER STA 70+34 A TO STA 70+45 A

REMOVE SMALL ROCKS (INCIDENTAL TO EXCAVATION COMMON)

SAWCUT AND MATCH EXISTING STA 70+45 A

BUS SHELTER REMOVABLE BY MCTS

SAWCUT AND MATCH EXISTING STA 38+99

REMOVE CURB & GUTTER STA 38+48 TO STA 38+99

SAWCUT AND MATCH EXISTING STA 69+36 A

SHADED AREA REPRESENTS APPROXIMATE LIMITS OF CONTAMINATED SOIL AND GROUNDWATER, MANAGEMENT ZONES.

SAWCUT AND MATCH EXISTING STA 59+12 A

SAWCUT AND MATCH EXISTING STA 58+92 A

34+45.00 43.0 RT

59+31.49 33.0 LT

35+19.72 37.4 RT

35+25.96 37.0 RT

35+32.41 43.5 RT

35+42.99 43.5 RT

35+60.82 39.1 RT

35+78.68 41.0 RT

36+21.27 38.7 RT

12+00.00 1753.1 RT

12+00.00 1789.6 RT

59+24.69 32.0 RT

36+36.41 38.0 LT

36+78.82 45.6 LT

59+99.62 384.2 RT

LEGEND

- REMOVING PAVEMENT
- REMOVING SIDEWALK
- REMOVING ASPHALTIC SURFACE MILLING
- X X X X X SAWING CONCRETE
- Y Y Y Y Y SAWING ASPHALT
- REMOVING CURB & GUTTER
- TREE TO BE REMOVED

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 17	E

2

2

S. 76TH STREET

W. NATIONAL AVENUE

N

R/W

TLE

SLOPE INTERCEPT (TYP)

SLOPE INTERCEPT (TYP)

18+59.81
60.32 LT
165.44

18+55.09
61.99 LT
165.52

18+52.87
57.12 LT
165.60

18+49.10
52.48 LT
165.98

18+43.70
48.98 LT
166.25

18+37.54
46.90 LT
166.30

18+31.69
46.32 LT
166.37

18+31.64
41.29 LT
166.29

18+30.62
38.34 LT
166.07

18+30.51
36.34 LT
166.15

18+37.58
36.29 LT
166.12

18+37.40
38.28 LT
166.04

18+38.75
42.02 LT
166.22

18+46.25
44.55 LT
166.17

18+52.52
48.83 LT
165.90

18+57.15
54.52 LT
165.52

18+61.67
54.13 LT
165.28

18+63.47
53.26 LT
165.36

18+63.92
59.96 LT
165.16

18+65.81
59.29 LT
165.24

CURB RAMP TYPE 3 MODIFIED
BACK OF CURB RADIUS = 27.42'
CHORD LENGTH = 6.25'

CURB RAMP TYPE 3 MODIFIED
BACK OF CURB RADIUS = 27.42'
CHORD LENGTH = 6.30'

19+20.70
62.48 LT
165.41

19+17.77
55.98 LT
164.88

19+16.17
55.05 LT
165.00

19+21.59
49.87 LT
164.92

19+20.21
48.56 LT
165.04

19+29.91
49.70 LT
165.13

19+28.48
43.59 LT
165.02

19+27.53
41.88 LT
165.14

19+33.65
40.97 LT
165.07

19+32.97
39.09 LT
165.19

19+25.68
64.66 LT
165.50

19+24.03
55.82 LT
165.02

19+28.32
59.46 LT
165.11

19+32.97
54.68 LT
165.22

19+37.32
52.44 LT
165.29

19+43.15
51.09 LT
165.71

19+35.19
46.83 LT
165.20

19+42.61
45.12 LT
165.62

CURB RAMP TYPE 3 MODIFIED
BACK OF CURB RADIUS = 32.42'
CHORD LENGTH = 7.49'

CURB RAMP TYPE 3 MODIFIED

SLOPE INTERCEPT
(TYP)

19+00

+50

+50

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CURB RAMP DETAIL	SHEET 18	E

2

W. NATIONAL AVENUE

18+00

+50

19+00

N

CURB RAMP TYPE 3 MODIFIED
SKEW ANGLE = 71.49 DEG
CHORD LENGTH = 6.31'

19+10.35
18.55 RT
165.83

19+10.30
20.54 RT
165.75

19+09.34
23.54 RT
165.97

19+03.09
24.12 RT
166.32

19+16.80
18.40 RT
165.76

19+16.87
20.40 RT
165.68

19+15.84
23.74 RT
165.92

19+21.09
23.42 RT
166.20

19+20.96
28.88 RT
166.28

19+04.10
29.03 RT
166.40

19+09.35
28.54 RT
166.05

19+15.67
28.74 RT
166.00

EX. R/W

PROP. R/W
(ALONG BACK OF WALK)

SLOPE INTERCEPT
(TYP)

TLE

18+09.86
31.25 RT
165.76

18+10.62
29.42 RT
165.88

CURB RAMP TYPE 3 MODIFIED

18+16.03
32.77 RT
165.92

18+14.90
34.37 RT
165.80

18+13.51
39.60 RT
165.90

18+14.05
40.12 RT
165.91

18+21.83
39.14 RT
165.96

18+20.32
40.30 RT
165.84

17+99.29
34.00 RT
166.38

18+08.60
36.13 RT
165.83

R/W

17+99.31
40.00 RT
166.47

18+06.23
41.56 RT
165.92

18+09.95
44.21 RT
165.99

18+12.38
46.58 RT
166.04

18+13.43
48.88 RT
166.08

18+15.85
54.26 RT
166.50

CURB RAMP TYPE 3 MODIFIED
BACK OF CURB RADIUS = 27.42'
CHORD LENGTH = 7.00'

18+25.08
45.71 RT
166.00

18+23.36
46.42 RT
165.88

18+18.38
46.24 RT
165.99

18+20.76
51.64 RT
166.41

SLOPE INTERCEPT
(TYP)

PROP. R/W

EX. R/W

S. 76TH STREET

CURB RAMP TYPE 3 MODIFIED
SKEW ANGLE = 75.3 DEG
CHORD LENGTH = 7.00'

18+81.14
39.19 RT
166.46

18+74.66
44.09 RT
166.01

18+75.60
44.42 RT
165.93

18+72.58
49.93 RT
166.04

18+73.52
50.27 RT
165.96

18+74.63
56.19 RT
166.59

18+85.41
41.79 RT
166.54

18+83.42
46.39 RT
166.23

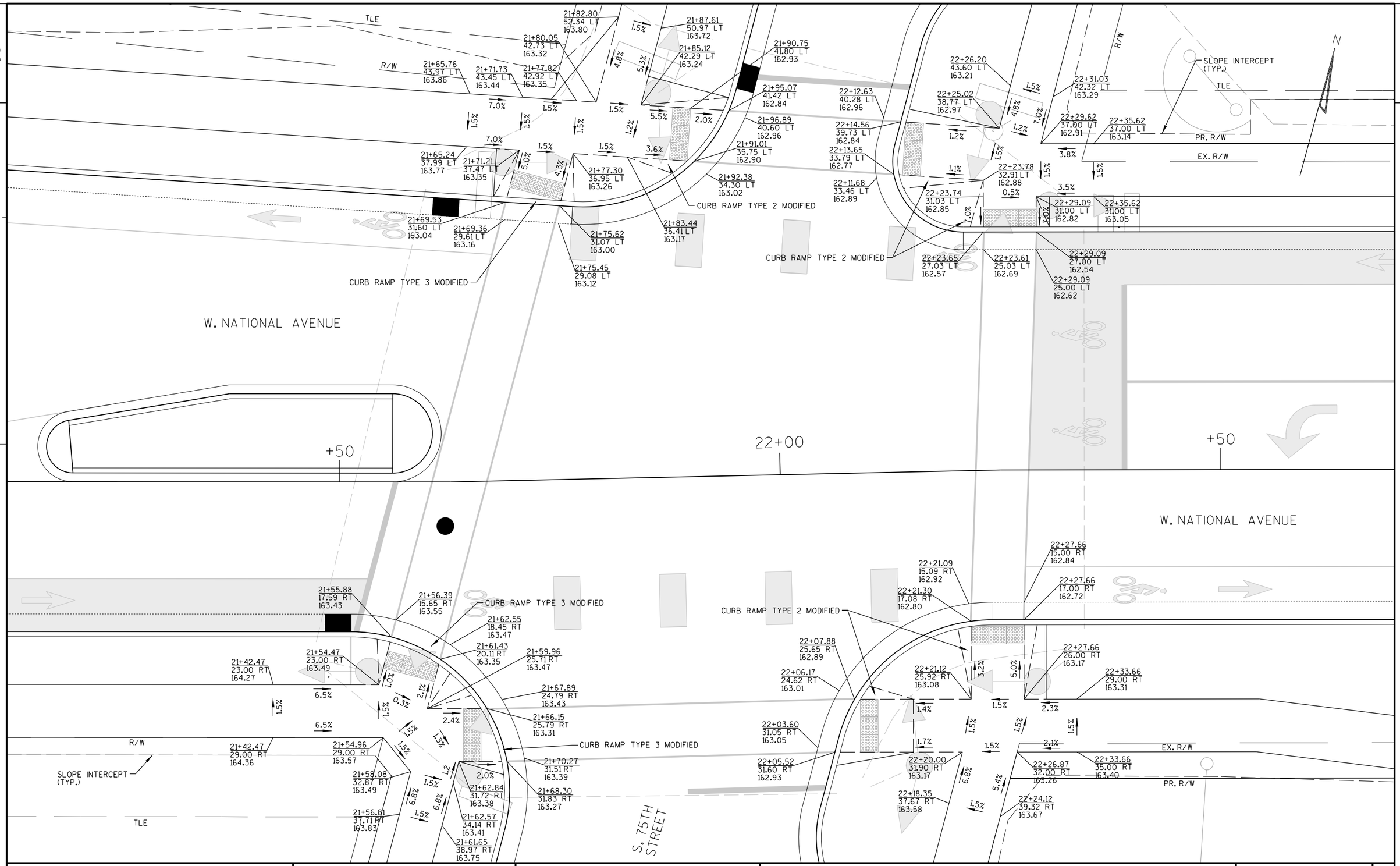
18+78.72
44.69 RT
166.15

18+81.35
52.21 RT
166.26

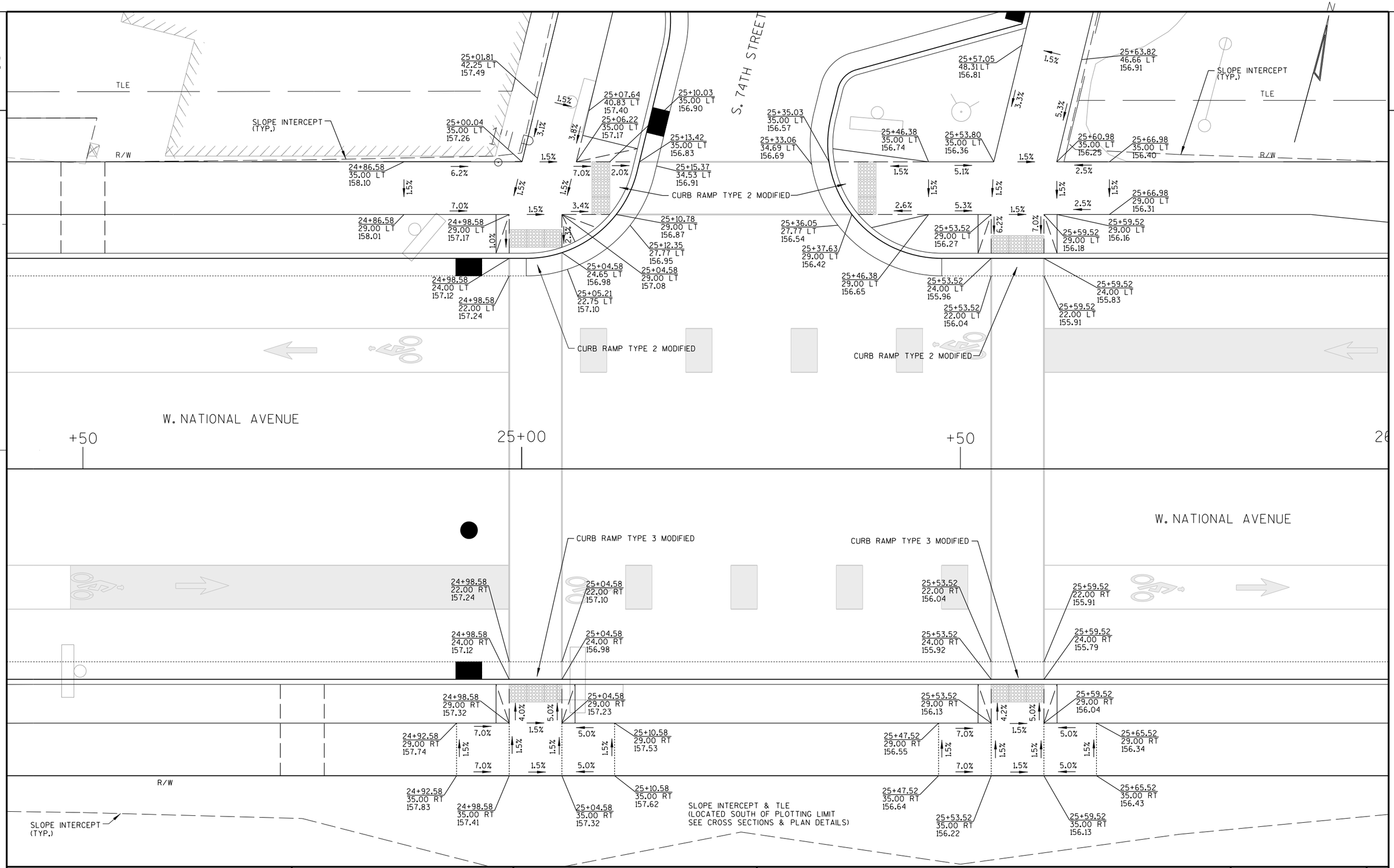
18+76.64
50.53 RT
166.18

18+79.34
57.86 RT
166.67

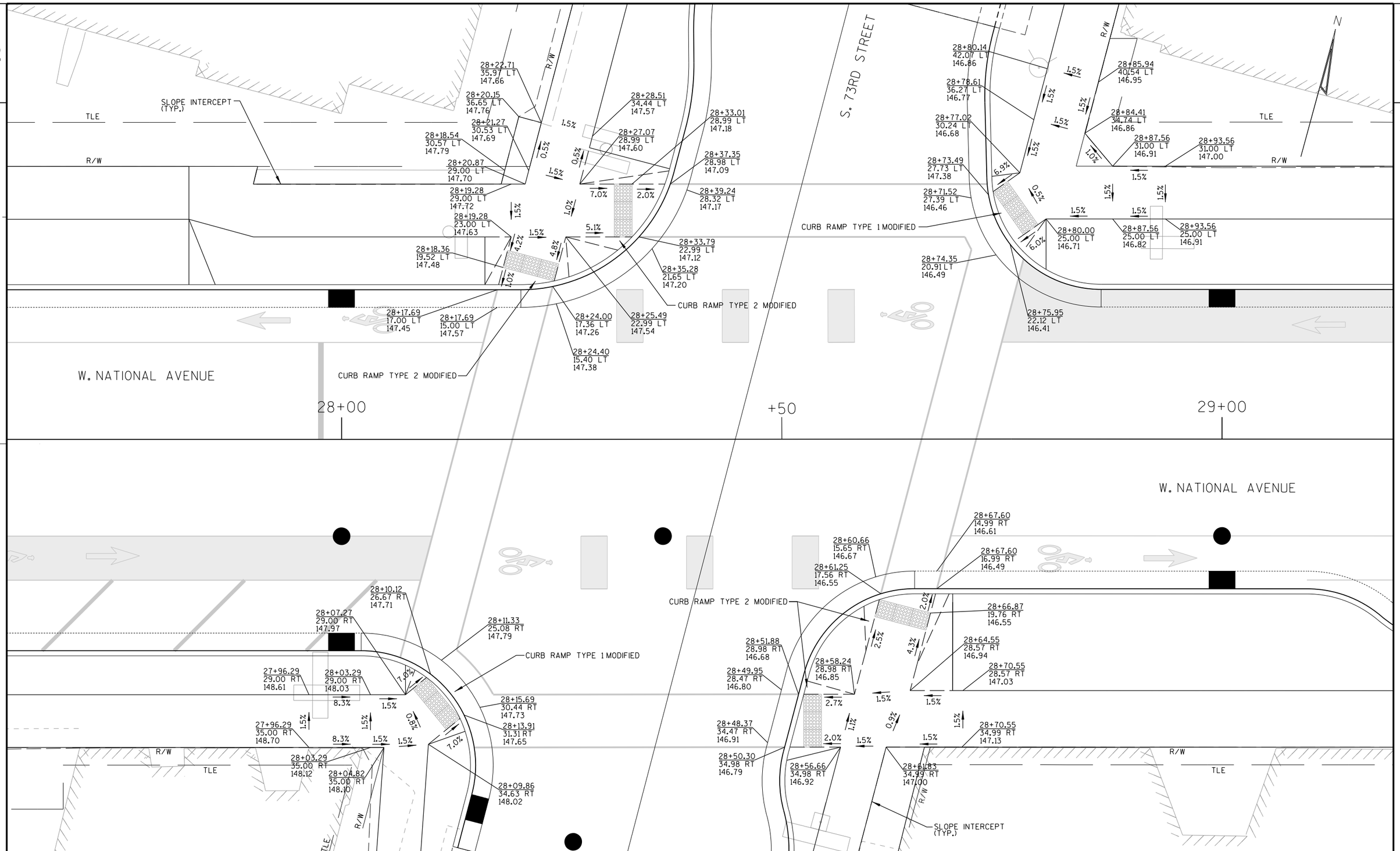
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CURB RAMP DETAIL	SHEET 19	E



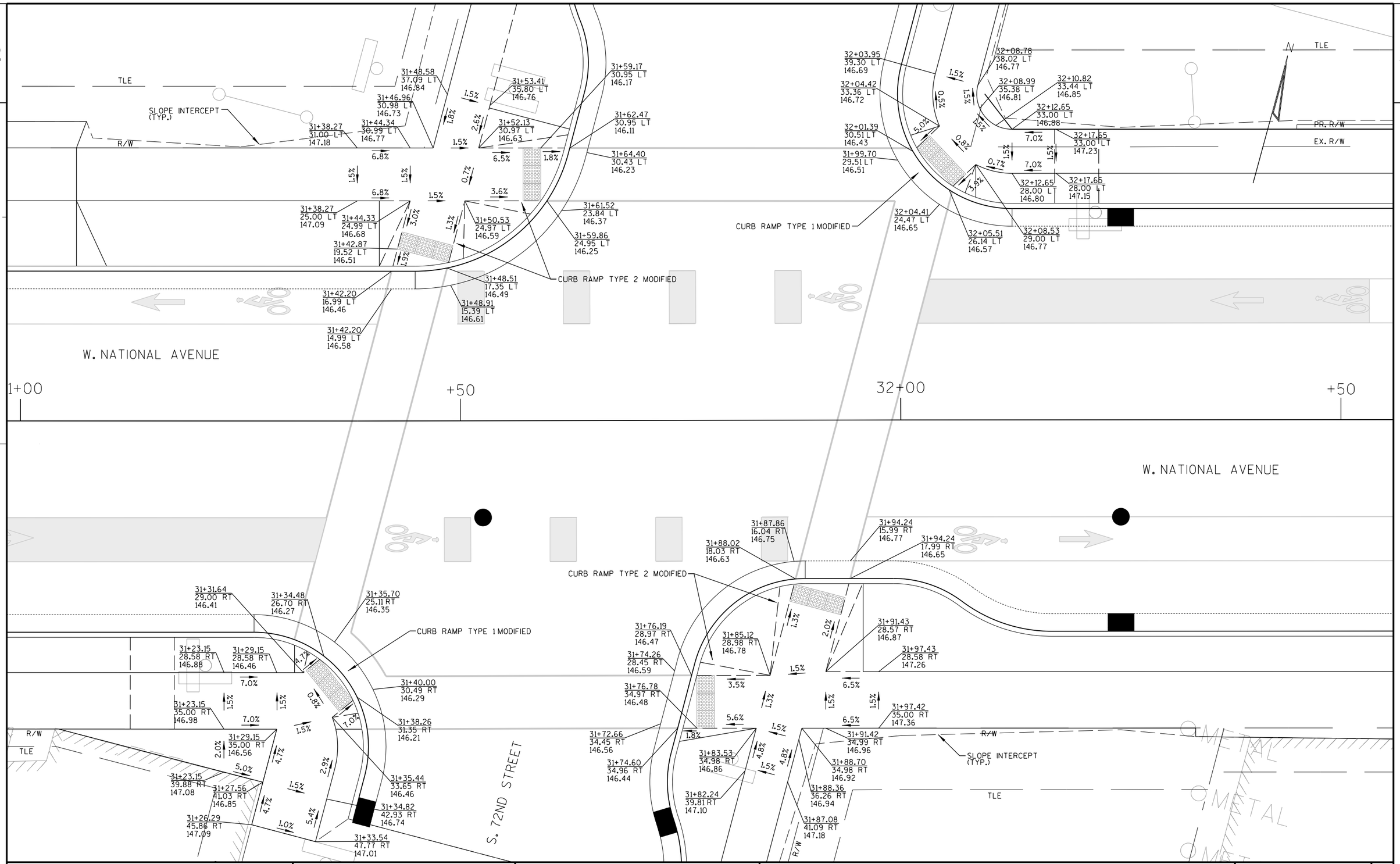
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CURB RAMP DETAIL	SHEET 20	E



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CURB RAMP DETAIL	SHEET 21	E

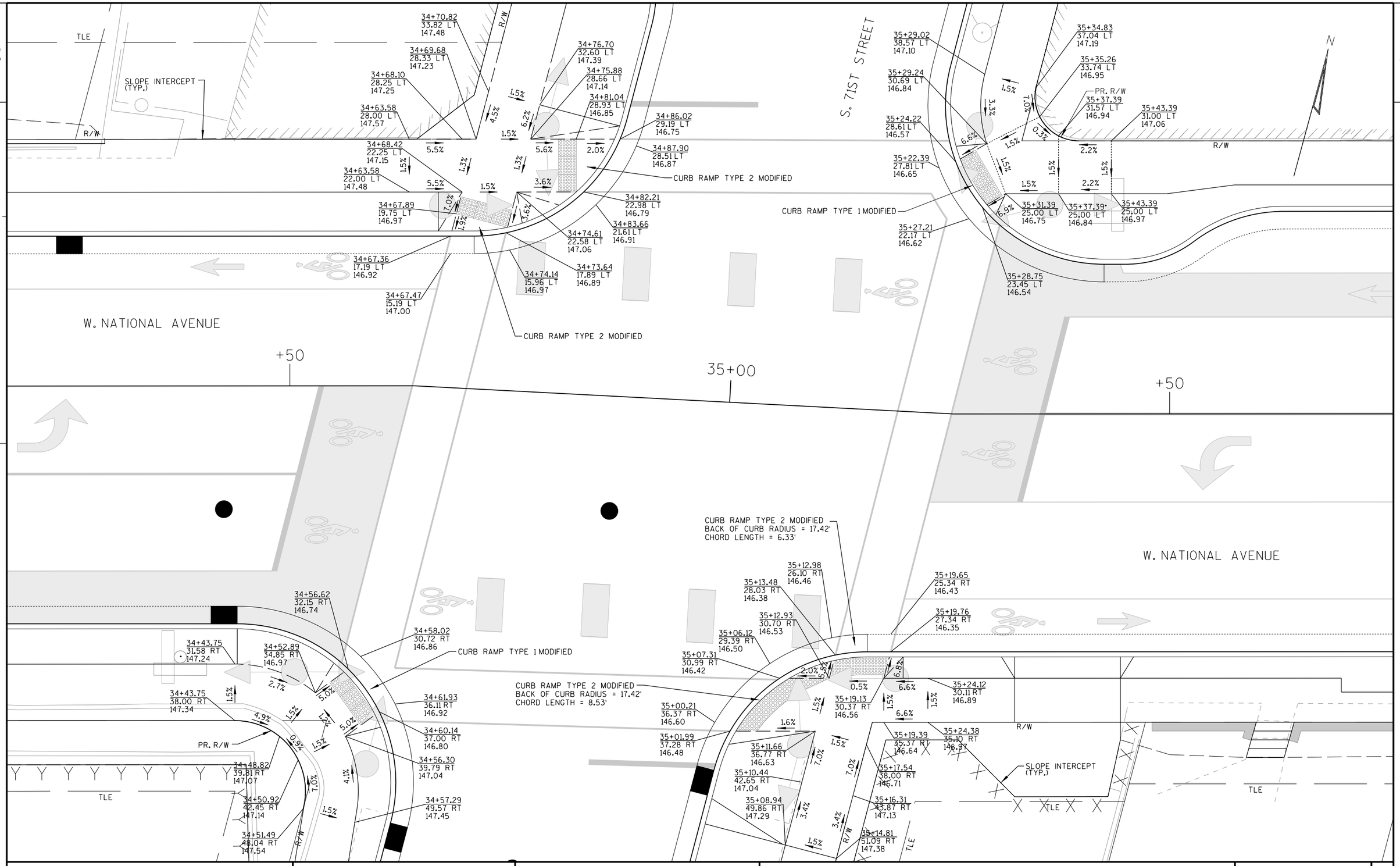


PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CURB RAMP DETAIL	SHEET 22	E



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CURB RAMP DETAIL	SHEET 23	E

2



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CURB RAMP DETAIL	SHEET 24	E

2

N

S. 70TH STREET

EXISTING ADA COMPATIBLE
CURB RAMP TYPE 1-A

SLOPE INTERCEPT
(TYP.)

TLE

R/W

PR. R/W

38+02.42
45.69 LT
143.74

38+06.59
44.51 LT
143.67

38+05.33
39.67 LT
143.42

38+01.05
40.88 LT
143.49

38+10.33
39.01 LT
143.29

37+99.37
35.93 LT
143.57

38+08.40
39.52 LT
143.21

37+77.82
30.50 LT
144.88

37+82.82
30.50 LT
144.53

37+89.04
30.50 LT
144.44

38+03.31
33.76 LT
143.50

38+08.05
32.73 LT
143.44

38+06.26
33.62 LT
143.32

37+77.82
26.00 LT
144.81

37+82.82
26.00 LT
144.46

37+89.02
26.00 LT
144.37

CURB RAMP TYPE 3 MODIFIED
BACK OF CURB RADIUS = 27.42'
CHORD LENGTH = 6.29'

37+87.09
18.640 LT
144.24

37+80.72
18.01 LT
144.38

37+87.51
16.68 LT
144.36

37+80.65
16.01 LT
144.50

CURB RAMP TYPE 3 MODIFIED

7.0%
1.5%
1.3%
6.1%
5.1%
1.7%
1.0%

W. NATIONAL AVENUE

38+00

+50

39+00

38+87.13
46.22 LT
142.03

CURB RAMP TYPE 6 MODIFIED

38+82.05
41.20 LT
142.26

38+90.41
42.22 LT
141.89

38+80.18
36.51 LT
142.34

38+87.12
39.44 LT
142.18

38+89.49
31.06 LT
142.35

38+79.27
34.19 LT
142.51

38+85.21
34.77 LT
142.26

38+94.88
31.20 LT
142.27

38+74.33
34.76 LT
142.46

CURB RAMP TYPE 6 MODIFIED

38+84.27
32.46 LT
142.43

38+72.57
29.91 LT
142.44

38+82.79
28.72 LT
142.49

38+77.40
29.37 LT
142.55

38+95.07
26.20 LT
142.19

38+76.68
27.49 LT
142.41

38+81.66
25.85 LT
142.28

38+89.81
26.07 LT
142.32

38+75.95
25.56 LT
142.37

CURB RAMP TYPE 6 MODIFIED

EXISTING RAISED CURB HEAD AT
BUS STOP.

GRADES SHOWN ARE TO TOP OF CURB.

CONTRACTOR TO GRIND CURB HEAD
IF NECESSARY TO PROVIDE A MAXIMUM
2% SLOPE ALONG CURB HEAD.

3.3%
6.9%
1.5%
0.8%
7.0%
1.6%
2.4%
1.2%
2.0%

W. NATIONAL AVENUE

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CURB RAMP DETAIL	SHEET 25	E

2

W. NATIONAL AVENUE

+50

38+00

+50

W. NATIONAL AVENUE

N

CURB RAMP TYPE 3 MODIFIED

37+69.28
25.05 RT
144.61

37+75.76
26.65 RT
144.64

37+69.14
27.05 RT
144.49

37+74.96
28.49 RT
144.52

37+74.17
31.37 RT
144.59

37+68.32
30.00 RT
144.65

37+78.61
35.00 RT
144.65

37+63.32
30.00 RT
145.00

37+84.43
33.89 RT
144.70

37+82.77
35.00 RT
144.58

CURB RAMP TYPE 3 MODIFIED
BACK OF CURB RADIUS = 17.42'
CHORD LENGTH = 6.58'

37+63.32
35.00 RT
145.08

37+71.93
35.84 RT
144.67

37+68.32
35.00 RT
144.73

37+74.66
38.08 RT
144.73

37+87.30
40.56 RT
144.73

37+85.35
41.00 RT
144.61

37+76.26
41.77 RT
144.77

37+81.20
41.00 RT
144.69

R/W

SLOPE INTERCEPT

PR. R/W

TLE

R/W

S. 70TH STREET

CURB RAMP TYPE 3 MODIFIED

38+70.37
17.47 RT
142.76

38+70.50
19.47 RT
142.68

38+63.37
18.85 RT
142.86

38+64.01
20.74 RT
142.78

38+69.25
23.33 RT
142.76

38+61.96
27.33 RT
143.05

38+68.34
26.16 RT
142.97

38+50.78
35.12 RT
143.39

38+68.71
31.15 RT
143.05

38+48.99
34.52 RT
143.47

38+54.26
35.21 RT
143.59

38+63.68
31.99 RT
143.13

CURB RAMP TYPE 3 MODIFIED
SKEW ANGLE = 74.5 DEG
CHORD LENGTH = 6.23'

38+47.34
40.52 RT
143.59

38+58.55
37.21 RT
143.67

38+49.12
41.09 RT
143.51

38+56.90
42.64 RT
143.76

38+52.48
41.17 RT
143.68

38+51.15
45.95 RT
144.03

38+55.54
47.41 RT
144.11

SLOPE INTERCEPT

TLE

R/W

R/W

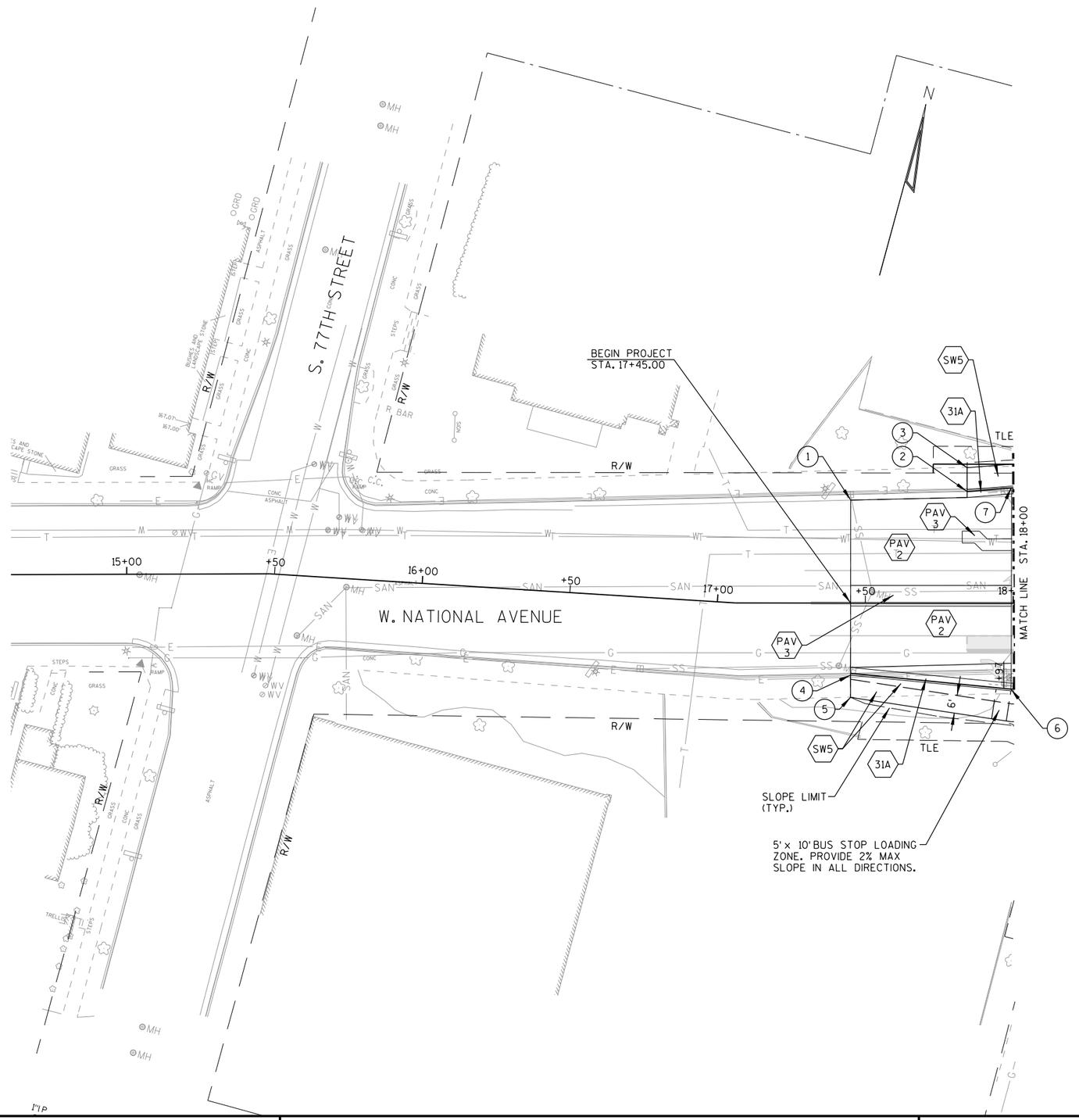
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CURB RAMP DETAIL	SHEET 26	E

LEGEND

19A	CONCRETE CURB AND GUTTER 19-INCH	AS	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
19IC	INTEGRAL CURB AND GUTTER 19-INCH	PAV 1	8" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
31A	CONCRETE CURB AND GUTTER 31-INCH	PAV 2	2" TO 2½" MILL TO EXISTING CONCRETE AND 2" HMA OVERLAY
31IC	INTEGRAL CURB AND GUTTER 31-INCH	PAV 3	2" HMA PAVEMENT, OVER 8" CONCRETE BASE
C	CONCRETE CURB TYPE D	CR1*	(MODIFIED CURB RAMP, SEE DETAIL) CURB RAMP TYPE
SW5	CONCRETE SIDEWALK 5-INCH	PC	CONCRETE CURB PEDESTRIAN
DRW	CONCRETE DRIVEWAY 7-INCH	1	POINT NUMBER

NOTE:

1. SEE INTERSECTION CURB RAMP DETAIL SHEET FOR ADDITIONAL LAYOUT INFORMATION.
2. SEE REMOVAL PLANS FOR REMOVAL LIMITS.
3. SEE STREETSCAPE AND AND LANDSCAPE PLANS FOR ADDITIONAL LAYOUT INFORMATION.

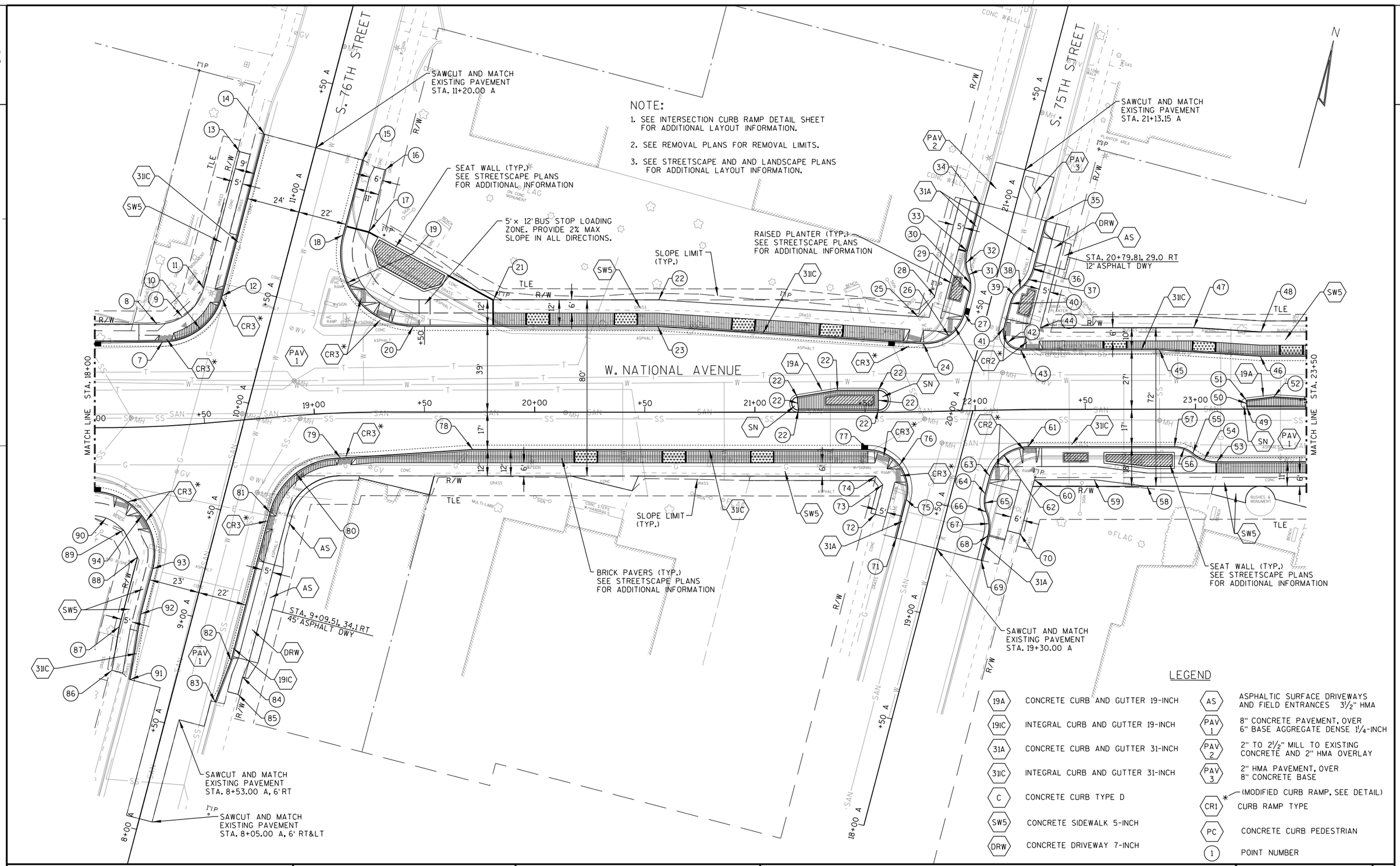


DATA TABLE

POINT NUMBER	STATION	OFFSET		DESCRIPTION
1	17+45.06	34.79'	LT	SAWCUT, MATCH EXISTING
2	17+84.37	37.75'	LT	SAWCUT, MATCH EXISTING, BEGIN CURB TAPER
3	17+84.37	45.78'	LT	SAWCUT, MATCH EXISTING, BEGIN TAPER
4	17+45.06	24.33'	RT	SAWCUT, MATCH EXISTING, BEGIN CURB TAPER
5	17+45.06	31.82'	RT	SAWCUT, MATCH EXISTING, BEGIN TAPER
6	17+99.27	29.00'	RT	END CURB TAPER, BEGIN INTEGRAL CURB
7	17+99.27	39.00'	LT	END CURB TAPER, BEGIN INTEGRAL CURB

NOTE: ALL RADII AND STATION / OFFSETS MEASURED TO THE FACE OF CURB (WHERE APPLICABLE)

2



LEGEND

19A	CONCRETE CURB AND GUTTER 19-INCH	AS	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
19IC	INTEGRAL CURB AND GUTTER 19-INCH	PAV 1	8" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
31A	CONCRETE CURB AND GUTTER 31-INCH	PAV 2	2" TO 2½" MILL TO EXISTING CONCRETE AND 2" HMA OVERLAY
31IC	INTEGRAL CURB AND GUTTER 31-INCH	PAV 3	2" HMA PAVEMENT, OVER 8" CONCRETE BASE
C	CONCRETE CURB TYPE D	* CR1	(MODIFIED CURB RAMP, SEE DETAIL) CURB RAMP TYPE
SW5	CONCRETE SIDEWALK 5-INCH	PC	CONCRETE CURB PEDESTRIAN
DRW	CONCRETE DRIVEWAY 7-INCH	1	POINT NUMBER

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET 28	E

2

2

DATA TABLE

POINT NUMBER	STATION	OFFSET		DESCRIPTION
7	18+32.94	38.22'	LT	END CURB TAPER, BEGIN 28' RADIUS
8	18+30.61	46.35'	LT	BEGIN 22' RADIUS
9	18+31.92	68.32'	LT	22' RADIUS
10	18+34.74	66.18'	LT	28' RADIUS
11	18+54.81	61.18'	LT	END 22' RADIUS
12	18+62.86	56.96'	LT	END 28' RADIUS
13	11+09.52 A	33.00'	LT	SAWCUT, MATCH EXISTING
14	11+20.00 A	24.00'	LT	SAWCUT, MATCH EXISTING
15	11+20.00 A	22.00'	RT	SAWCUT, MATCH EXISTING
16	11+18.32 A	33.00'	RT	SAWCUT, MATCH EXISTING
17	10+89.32 A	33.00'	RT	SIDEWALK PI
18	10+84.85 A	22.00'	RT	BEGIN 33' RADIUS
19	19+44.89	72.00'	LT	33' RADIUS
20	19+44.89	39.00'	RT	END 33' RADIUS
21	19+81.38	51.00'	LT	SIDEWALK PI
22	20+56.30	51.00'	LT	SIDEWALK PI
23	20+55.88	39.00'	LT	BEGIN CURB TAPER
24	21+77.13	30.94'	LT	END INTEGRAL CURB AND TAPER, BEGIN 18' RADIUS
25	21+74.97	43.17'	LT	SIDEWALK PI
26	21+78.69	48.87'	LT	18' RADIUS
27	21+95.99	43.91'	LT	END 18' RADIUS
28	20+47.29 A	25.00'	LT	SIDEWALK PI
29	20+52.81 A	10.00'	LT	BEGIN 13' RADIUS
30	20+52.81 A	23.00'	LT	13' RADIUS
31	20+60.61 A	12.60'	LT	END 13' RADIUS, BEGIN 17' RADIUS
32	20+70.81 A	1.00'	RT	17' RADIUS
33	20+70.81 A	16.00'	LT	END 17' RADIUS
34	20+93.15 A	16.00'	LT	SAWCUT, MATCH EXISTING
35	20+93.15 A	15.00'	RT	SAWCUT, MATCH EXISTING
36	20+70.81 A	15.00'	RT	BEGIN 17' RADIUS
37	20+70.81 A	2.00'	LT	17' RADIUS
38	20+60.61 A	11.60'	RT	END 17' RADIUS, BEGIN 13' RADIUS
39	20+52.81 A	22.00'	RT	13' RADIUS
40	20+52.81 A	9.00'	RT	END 13' RADIUS
41	22+13.85	37.28'	LT	BEGIN 8' RADIUS
42	22+21.54	35.08'	LT	8' RADIUS
43	22+21.38	27.08'	LT	END 8' RADIUS, BEGIN INTEGRAL CURB
44	22+29.62	37.00'	LT	SIDEWALK PI
45	22+83.65	27.00'	LT	BEGIN CURB TAPER
46	23+29.42	24.00'	LT	END CURB TAPER
47	22+99.27	37.00'	LT	BEGIN SIDEWALK TAPER
48	23+29.78	35.00'	LT	END SIDEWALK TAPER
49	23+23.25	1.00'	LT	ISLAND NOSE
50	23+23.25	2.50'	LT	2.5' RADIUS CURB FLANGE

NOTE: ALL RADII AND STATION / OFFSETS
MEASURED TO THE FACE OF CURB
(WHERE APPLICABLE)

DATA TABLE

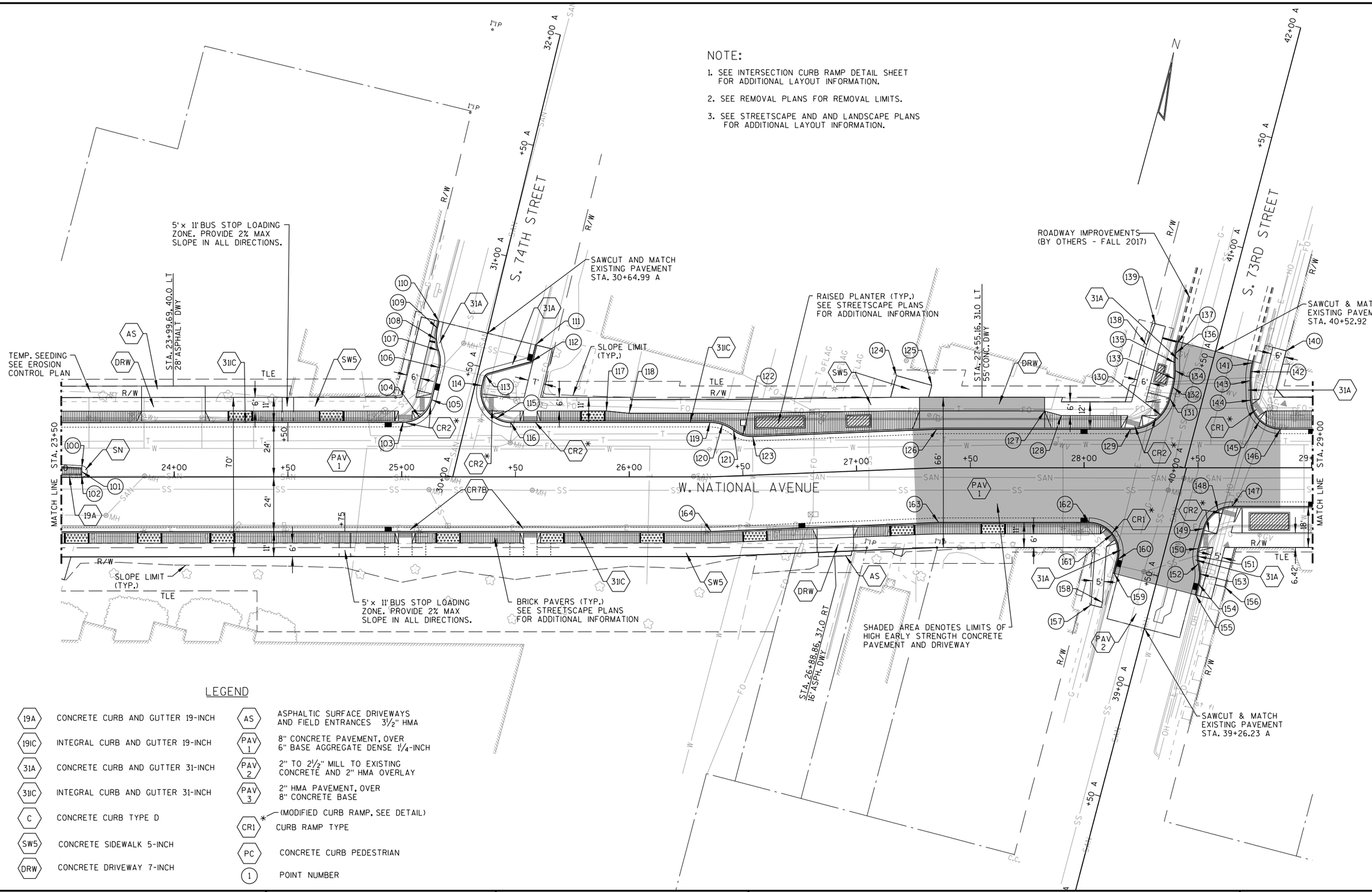
POINT NUMBER	STATION	OFFSET		DESCRIPTION
51	23+23.06	3.99'	LT	ISLAND NOSE
52	23+35.61	5.56'	LT	ISLAND TAPER
53	23+09.67	24.00'	RT	BEGIN 17' RADIUS
54	23+09.67	7.00'	RT	17' RADIUS
55	22+98.75	20.03'	RT	END 17' RADIUS, BEGIN 13' RADIUS
56	22+90.41	30.00'	RT	13' RADIUS
57	22+90.41	17.00'	RT	END 13' RADIUS
58	22+78.0	35.00'	RT	BEGIN SIDEWALK TAPER
59	22+54.00	32.00'	RT	END SIDEWALK TAPER
60	22+26.87	32.00'	RT	SIDEWALK PI
61	22+23.65	16.98'	RT	BEGIN 18' RADIUS, BEGIN INTEGRAL CURB
62	22+23.28	34.97'	RT	18' RADIUS
63	22+05.98	30.02'	RT	END 18' RADIUS
64	19+59.64 A	15.00'	RT	BEGIN 13' RADIUS
65	19+59.64 A	28.00'	RT	13' RADIUS
66	19+51.84 A	17.60'	RT	END 13' RADIUS, BEGIN 17' RADIUS
67	19+41.64 A	4.00'	RT	17' RADIUS
68	19+41.64 A	21.00'	RT	END 17' RADIUS
69	19+30.00 A	21.00'	RT	SAWCUT, MATCH EXISTING
70	19+46.04 A	35.00'	RT	SAWCUT, MATCH EXISTING
71	19+30.00 A	19.00'	LT	SAWCUT, MATCH EXISTING
72	19+38.04 A	31.00'	LT	SAWCUT, MATCH EXISTING
73	19+51.89 A	31.00'	RT	SIDEWALK PI
74	21+54.96	29.00'	RT	SIDEWALK PI
75	21+67.84	39.69'	RT	BEGIN 18' RADIUS
76	21+51.32	35.00'	RT	18' RADIUS
77	21+51.32	17.00'	RT	END INTEGRAL CURB, END 18' RADIUS
78	19+71.91	17.00'	RT	BEGIN CURB TAPER
79	19+11.05	20.57'	RT	END CURB TAPER, BEGIN 33' RADIUS
80	19+09.45	53.54'	RT	33' RADIUS
81	18+76.18	42.86'	RT	END 33' RADIUS
82	8+85.00 A	22.00'	RT	BEGIN CURB TAPER
83	8+65.00 A	19.80'	RT	END CURB TAPER, SAWCUT, MATCH EXISTING
84	8+79.08 A	29.00'	RT	SIDEWALK PI
85	8+70.97 A	29.00'	RT	SAWCUT, MATCH EXISTING
86	8+66.98 A	29.15'	LT	BEGIN SIDEWALK TAPER, SAWCUT, MATCH EXISTING
87	8+86.98 A	31.00'	LT	END SIDEWALK TAPER
88	9+19.66 A	31.00'	LT	SIDEWALK PI
89	18+21.38	46.58'	RT	SIDEWALK PI
90	17+99.37	57.00'	RT	17' SIDEWALK RADIUS
91	8+65.00 A	20.20'	LT	BEGIN CURB TAPER, SAWCUT, MATCH EXISTING
92	8+95.00 A	23.00'	RT	END CURB TAPER
93	18+23.93	64.54'	RT	BEGIN 28' RADIUS
94	17+99.37	57.00'	RT	28' RADIUS

NOTE: ALL RADII AND STATION / OFFSETS
MEASURED TO THE FACE OF CURB
(WHERE APPLICABLE)

2

NOTE:

1. SEE INTERSECTION CURB RAMP DETAIL SHEET FOR ADDITIONAL LAYOUT INFORMATION.
2. SEE REMOVAL PLANS FOR REMOVAL LIMITS.
3. SEE STREETSCAPE AND AND LANDSCAPE PLANS FOR ADDITIONAL LAYOUT INFORMATION.



LEGEND

19A	CONCRETE CURB AND GUTTER 19-INCH	AS	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
19IC	INTEGRAL CURB AND GUTTER 19-INCH	PAV 1	8" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
31A	CONCRETE CURB AND GUTTER 31-INCH	PAV 2	2" TO 2½" MILL TO EXISTING CONCRETE AND 2" HMA OVERLAY
31IC	INTEGRAL CURB AND GUTTER 31-INCH	PAV 3	2" HMA PAVEMENT, OVER 8" CONCRETE BASE
C	CONCRETE CURB TYPE D	CR1*	(MODIFIED CURB RAMP, SEE DETAIL) CURB RAMP TYPE
SW5	CONCRETE SIDEWALK 5-INCH	PC	CONCRETE CURB PEDESTRIAN
DRW	CONCRETE DRIVEWAY 7-INCH	1	POINT NUMBER

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET 30	E

2

2

DATA TABLE

POINT NUMBER	STATION	OFFSET		DESCRIPTION
100	23+59.39	4.00'	LT	ISLAND NOSE
101	23+59.30	2.50'	LT	2.5' RADIUS CURB FLANGE
102	23+59.30	1.00'	LT	ISLAND NOSE
103	25+00.53	24.00'	LT	END INTEGRAL CURB, BEGIN 13' RADIUS
104	25+00.53	37.00'	LT	13' RADIUS
105	25+13.16	33.92'	LT	END 13' RADIUS
106	30+45.33 A	17.00'	LT	BEGIN 13' RADIUS
107	30+52.52 A	19.17'	LT	END 13' RADIUS, BEGIN 17' RADIUS
108	30+61.91 A	5.00'	LT	17' RADIUS
109	30+61.91 A	22.00'	LT	END 17' RADIUS
110	30+65.00 A	22.00'	LT	SAWCUT, MATCH EXISTING
111	30+65.00 A	21.65'	RT	SAWCUT, MATCH EXISTING
112	30+57.50 A	21.65'	RT	CURB TAPER
113	30+45.33 A	6.00'	RT	3' RADIUS
114	25+35.25	40.08'	LT	BEGIN 13' RADIUS
115	25+47.88	37.00'	LT	13' RADIUS
116	25+47.88	24.00'	LT	END 13' RADIUS, BEGIN INTEGRAL CURB
117	25+89.96	29.00'	LT	BEGIN CURB TAPER
118	25+99.96	28.00'	LT	END CURB TAPER
119	26+36.46	23.93	LT	BEGIN 17' RADIUS
120	26+35.78	6.99'	LT	17' RADIUS
121	26+46.70	20.03'	LT	END 17' RADIUS, BEGIN 13' RADIUS
122	26+55.04	30.00'	LT	13' RADIUS
123	26+55.04	17.00'	LT	END 13' RADIUS, BEGIN CURB TAPER
124	27+19.11	41.21'	LT	SIDEWALK PI
125	27+34.49	36.36'	LT	SIDEWALK PI
126	27+35.58	17.00'	LT	END CURB TAPER
127	27+82.66	25.00'	LT	BEGIN SIDEWALK TAPER
128	27+89.99	23.00'	LT	END SIDEWALK TAPER
129	28+20.39	17.00'	LT	END INTEGRAL CURB, BEGIN 18' RADIUS
130	28+20.39	35.00'	LT	18' RADIUS
131	28+37.79	30.39'	LT	END 18' RADIUS
132	40+32.91 A	14.00'	LT	BEGIN 28' RADIUS

NOTE: ALL RADII AND STATION / OFFSETS MEASURED TO THE FACE OF CURB (WHERE APPLICABLE)

DATA TABLE

POINT NUMBER	STATION	OFFSET		DESCRIPTION
133	40+32.91 A	42.00'	LT	28' RADIUS
134	40+40.28 A	14.99'	LT	END 28' RADIUS
135	40+43.51 A	15.87'	LT	BEGIN 32' RADIUS
136	40+51.94 A	15.00'	RT	32' RADIUS
137	40+51.94 A	17.00'	LT	END 32' RADIUS
138	40+47.92 A	30.00'	LT	BEGIN SIDEWALK TAPER
139	40+57.92 A	28.69'	LT	END SIDEWALK TAPER, SAWCUT, MATCH EXISTING
140	40+61.05 A	30.00'	RT	SAWCUT, MATCH EXISTING
141	40+52.20 A	17.00'	RT	BEGIN 28' RADIUS
142	40+52.20 A	45.00'	RT	28' RADIUS
143	40+44.37 A	18.12'	RT	END 28' RADIUS
144	28+73.30	29.37'	LT	BEGIN 13' RADIUS
145	28+86.27	30.00'	LT	13' RADIUS
146	28+86.27	17.00'	LT	END 13' RADIUS, BEGIN INTEGRAL CURB
147	28+65.07	16.99'	RT	BEGIN 13' RADIUS, BEGIN INTEGRAL CURB
148	28+65.06	29.99'	RT	13' RADIUS
149	28+52.49	26.68'	RT	END 13' RADIUS
150	39+66.18 A	14.00'	RT	BEGIN 13' RADIUS
151	39+66.18 A	27.00'	RT	13' RADIUS
152	39+59.70 A	15.73'	RT	END 13' RADIUS, BEGIN 17' RADIUS
153	39+51.22 A	1.00'	RT	17' RADIUS
154	39+51.22 A	18.00'	RT	END 17' RADIUS
155	39+46.22 A	18.00'	RT	SAWCUT, MATCH EXISTING
156	39+52.78 A	29.54'	RT	SAWCUT, MATCH EXISTING
157	39+30.28 A	25.32'	LT	SAWCUT, MATCH EXISTING
158	39+32.53 A	20.66'	LT	SIDEWALK PI
159	39+46.22 A	19.00'	LT	SAWCUT, MATCH EXISTING
160	28+14.77	40.30'	RT	BEGIN 13' RADIUS
161	28+02.22	37.00'	RT	13' RADIUS
162	28+02.22	24.00'	RT	END INTEGRAL CURB, END 13' RADIUS
163	27+35.10	24.00'	RT	BEGIN CURB TAPER
164	26+35.50	24.00'	RT	END CURB TAPER

NOTE: ALL RADII AND STATION / OFFSETS MEASURED TO THE FACE OF CURB (WHERE APPLICABLE)

LEGEND

19A	CONCRETE CURB AND GUTTER 19-INCH
19IC	INTEGRAL CURB AND GUTTER 19-INCH
31A	CONCRETE CURB AND GUTTER 31-INCH
31IC	INTEGRAL CURB AND GUTTER 31-INCH
C	CONCRETE CURB TYPE D
SW5	CONCRETE SIDEWALK 5-INCH
DRW	CONCRETE DRIVEWAY 7-INCH
AS	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
PAV 1	8" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
PAV 2	2" TO 2½" MILL TO EXISTING CONCRETE AND 2" HMA OVERLAY
PAV 3	2" HMA PAVEMENT, OVER 8" CONCRETE BASE
CR1 *	(MODIFIED CURB RAMP, SEE DETAIL) CURB RAMP TYPE
PC	CONCRETE CURB PEDESTRIAN
1	POINT NUMBER

NOTE:
1. SEE INTERSECTION CURB RAMP DETAIL SHEET FOR ADDITIONAL LAYOUT INFORMATION.
2. SEE REMOVAL PLANS FOR REMOVAL LIMITS.
3. SEE STREETSCAPE AND AND LANDSCAPE PLANS FOR ADDITIONAL LAYOUT INFORMATION.

N

W. NATIONAL AVENUE

S. 72 ND STREET

RAISED PLANTER (TYP.) SEE STREETSCAPE PLANS FOR ADDITIONAL INFORMATION

BRICK PAVERS (TYP.) SEE STREETSCAPE PLANS FOR ADDITIONAL INFORMATION

STA. 31+00.37, 34.0 LT 12' ASPHALT DWY

STA. 33+67.52, 33.9 LT 20' ASPHALT DWY

SAWCUT AND MATCH EXISTING PAVEMENT STA. 30+64.99 A

5'x 9' BUS STOP LOADING ZONE. PROVIDE 2% MAX SLOPE IN ALL DIRECTIONS.

5'x 11' BUS STOP LOADING ZONE. PROVIDE 2% MAX SLOPE IN ALL DIRECTIONS.

PEDESTRIAN CURB

SLOPE LIMIT (TYP.)

CONCRETE STEPS (TYP.)

STA. 30+53.74, 35.0 RT 16' ASPHALT DWY

SAWCUT AND MATCH EXISTING PAVEMENT STA. 30+64.99 A

TEMP. SEEDING SEE EROSION CONTROL PLAN

MATCH LINE STA. 29+00

MATCH LINE STA. 34+00

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET 32	E

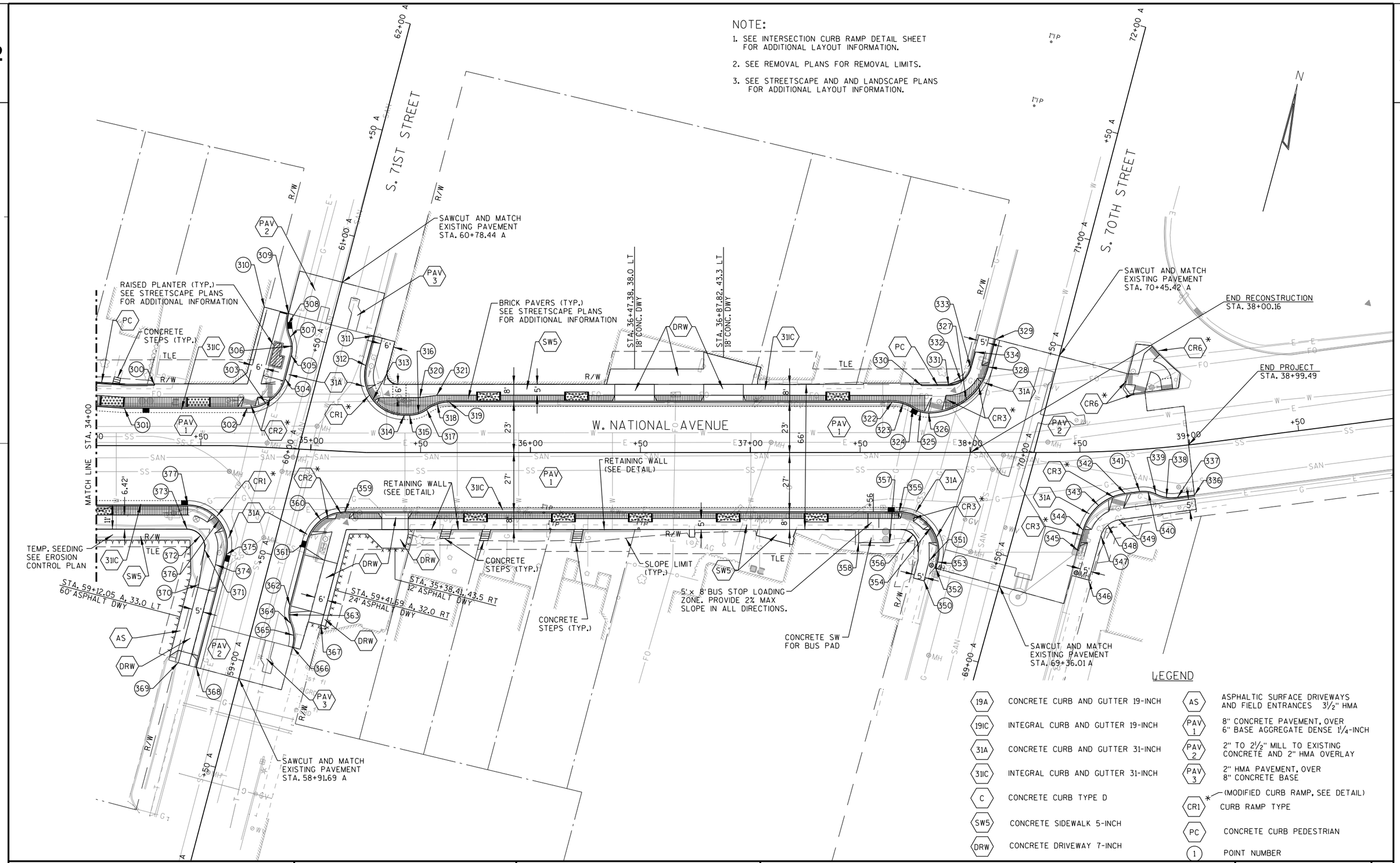
DATA TABLE

POINT NUMBER	STATION	OFFSET		DESCRIPTION
200	31+44.88	16.99'	LT	END INTEGRAL CURB, BEGIN 18' RADIUS
201	31+44.92	34.99'	LT	18' RADIUS
202	31+62.31	30.36'	LT	END 18' RADIUS
203	50+34.88 A	14.00'	LT	BEGIN 13' RADIUS
204	50+34.88 A	27.00'	LT	13' RADIUS
205	50+42.68 A	16.60'	LT	END 13' RADIUS, BEGIN 17' RADIUS
206	50+52.88 A	3.00'	LT	17' RADIUS
207	50+52.88 A	20.00'	LT	END 17' RADIUS
208	50+70.00 A	20.00'	LT	SAWCUT, MATCH EXISTING
209	51+06.76 A	32.00'	LT	SAWCUT, MATCH EXISTING
210	51+22.23 A	32.00'	LT	SAWCUT, MATCH EXISTING
211	50+75.71 A	29.00'	RT	SAWCUT, MATCH EXISTING
212	50+70.00 A	20.00'	RT	SAWCUT, MATCH EXISTING
213	32+00.14	40.32'	LT	BEGIN 13' RADIUS
214	32+12.65	37.00'	LT	13' RADIUS
215	32+12.65	24.00'	LT	END 13' RADIUS, BEGIN INTEGRAL CURB
216	32+58.00	36.50'	LT	SIDEWALK PI
217	32+66.00	36.50'	LT	SIDEWALK PI
218	33+56.52	23.58'	LT	BEGIN CURB TAPER
219	33+81.98	30.57'	LT	BEGIN PEDESTRIAN CURB
220	33+87.33	30.25'	LT	BEGIN PEDESTRIAN CURB TAPER
221	32+17.15	24.00'	RT	BEGIN 17' RADIUS
222	32+17.15	7.00'	RT	17' RADIUS
223	32+06.95	20.60'	RT	END 17' RADIUS, BEGIN 13' RADIUS
224	31+99.10	31.00'	RT	13' RADIUS
225	31+99.12	18.00'	RT	END 13' RADIUS
226	31+89.12	17.98'	RT	BEGIN 13' RADIUS, BEGIN INTEGRAL CURB
227	31+89.10	30.98'	RT	13' RADIUS
228	31+76.54	27.65'	RT	END 13' RADIUS
229	49+63.98 A	14.00'	RT	BEGIN 13' RADIUS
230	49+63.98 A	27.00'	RT	13' RADIUS
231	49+56.80 A	16.17'	RT	END 13' RADIUS, BEGIN 17' RADIUS
232	49+47.40 A	2.00'	RT	17' RADIUS
233	49+47.40 A	19.00'	RT	END 17' RADIUS, SAWCUT, MATCH EXISTING
234	49+52.95 A	27.63'	RT	SAWCUT, MATCH EXISTING
235	49+43.96 A	30.00'	LT	SAWCUT, MATCH EXISTING
236	49+47.40 A	19.00'	LT	SAWCUT, MATCH EXISTING
237	31+39.04	40.31'	RT	BEGIN 13' RADIUS
238	31+26.55	37.00'	RT	13' RADIUS
239	31+26.55	24.00'	RT	END INTEGRAL CURB, END 13' RADIUS
240	30+61.74	44.31'	RT	DRIVEWAY PI
241	30+34.92	44.31'	RT	DRIVEWAY PI
242	29+28.91	24.00'	RT	BEGIN 17' RADIUS
243	29+28.91	7.00'	RT	17' RADIUS
244	29+17.99	20.03'	RT	END 17' RADIUS, BEGIN 13' RADIUS
245	29+09.65	30.00'	RT	13' RADIUS
246	29+09.65	17.00'	RT	END 13' RADIUS

NOTE: ALL RADII AND STATION / OFFSETS
MEASURED TO THE FACE OF CURB
(WHERE APPLICABLE)

NOTE:

1. SEE INTERSECTION CURB RAMP DETAIL SHEET FOR ADDITIONAL LAYOUT INFORMATION.
2. SEE REMOVAL PLANS FOR REMOVAL LIMITS.
3. SEE STREETSCAPE AND AND LANDSCAPE PLANS FOR ADDITIONAL LAYOUT INFORMATION.



LEGEND

19A	CONCRETE CURB AND GUTTER 19-INCH	AS	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 3½" HMA
19IC	INTEGRAL CURB AND GUTTER 19-INCH	PAV 1	8" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
31A	CONCRETE CURB AND GUTTER 31-INCH	PAV 2	2" TO 2½" MILL TO EXISTING CONCRETE AND 2" HMA OVERLAY
31IC	INTEGRAL CURB AND GUTTER 31-INCH	PAV 3	2" HMA PAVEMENT, OVER 8" CONCRETE BASE
C	CONCRETE CURB TYPE D	CR1*	CURB RAMP TYPE (MODIFIED CURB RAMP, SEE DETAIL)
SW5	CONCRETE SIDEWALK 5-INCH	PC	CONCRETE CURB PEDESTRIAN
DRW	CONCRETE DRIVEWAY 7-INCH	1	POINT NUMBER

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET 34	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\021205_pd.dgn PLOT DATE : 1/10/2018 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

DATA TABLE

POINT NUMBER	STATION	OFFSET		DESCRIPTION
300	34+29.00	27.50'	LT	END PEDESTRIAN CURB
301	34+15.19	17.00'	LT	END CURB TAPER
302	34+70.04	17.33'	LT	END INTEGRAL CURB, BEGIN 18' RADIUS
303	34+69.09	35.31'	LT	18' RADIUS
304	34+86.71	31.64'	LT	END 18' RADIUS
305	60+40.44 A	14.00'	LT	BEGIN 13' RADIUS
306	60+40.44 A	27.00'	LT	13' RADIUS
307	60+48.24 A	16.60'	LT	END 13' RADIUS, BEGIN 17' RADIUS
308	60+58.44 A	3.00'	LT	17' RADIUS
309	60+58.44 A	20.00'	LT	END 17' RADIUS, SAWCUT, MATCH EXISTING
310	60+58.44 A	31.48'	LT	SAWCUT, MATCH EXISTING
311	60+58.44 A	20.00'	RT	SAWCUT, MATCH EXISTING
312	35+23.08	39.51'	LT	BEGIN 18' RADIUS
313	35+42.56	35.00'	LT	18' RADIUS
314	35+42.56	17.00'	LT	END 18' RADIUS, BEGIN INTEGRAL CURB
315	35+45.00	17.00'	LT	BEGIN 13' RADIUS
316	35+45.00	30.00'	LT	13' RADIUS
317	35+52.80	19.60'	LT	END 13' RADIUS, BEGIN 17' RADIUS
318	35+63.00	6.00'	LT	17' RADIUS
319	35+63.00	23.00'	LT	END 17' RADIUS
320	35+49.70	25.00'	LT	BEGIN SIDEWALK TAPER
321	35+57.38	26.00'	LT	END SIDEWALK TAPER
322	37+64.57	23.00'	LT	BEGIN 17' RADIUS
323	37+64.57	6.00'	LT	17' RADIUS
324	37+73.93	20.17'	LT	END 17' RADIUS, BEGIN 13' RADIUS
325	37+81.15	31.00'	LT	13' RADIUS
326	37+81.15	18.00'	LT	END INTEGRAL CURB, END 13' RADIUS, BEGIN 28' RADIUS
327	37+81.15	46.00'	LT	28' RADIUS
328	38+08.23	38.87'	LT	END 28' RADIUS
329	70+45.35 A	30.00'	LT	SAWCUT, MATCH EXISTING
330	37+77.82	30.50'	LT	BEGIN PEDESTRIAN CURB
331	37+90.17	30.50'	LT	BEGIN 10.5' RADIUS
332	37+90.17	41.00'	LT	10.5' RADIUS
333	38+00.33	38.33'	LT	END 10.5' RADIUS
334	70+37.41 A	37.36'	LT	END PEDESTRIAN CURB
335	-	-	-	NOT USED
336	38+99.49	23.05'	RT	SAWCUT, MATCH EXISTING
337	38+92.01	23.26'	RT	BEGIN 17' RADIUS
338	38+91.45	6.27'	RT	17' RADIUS

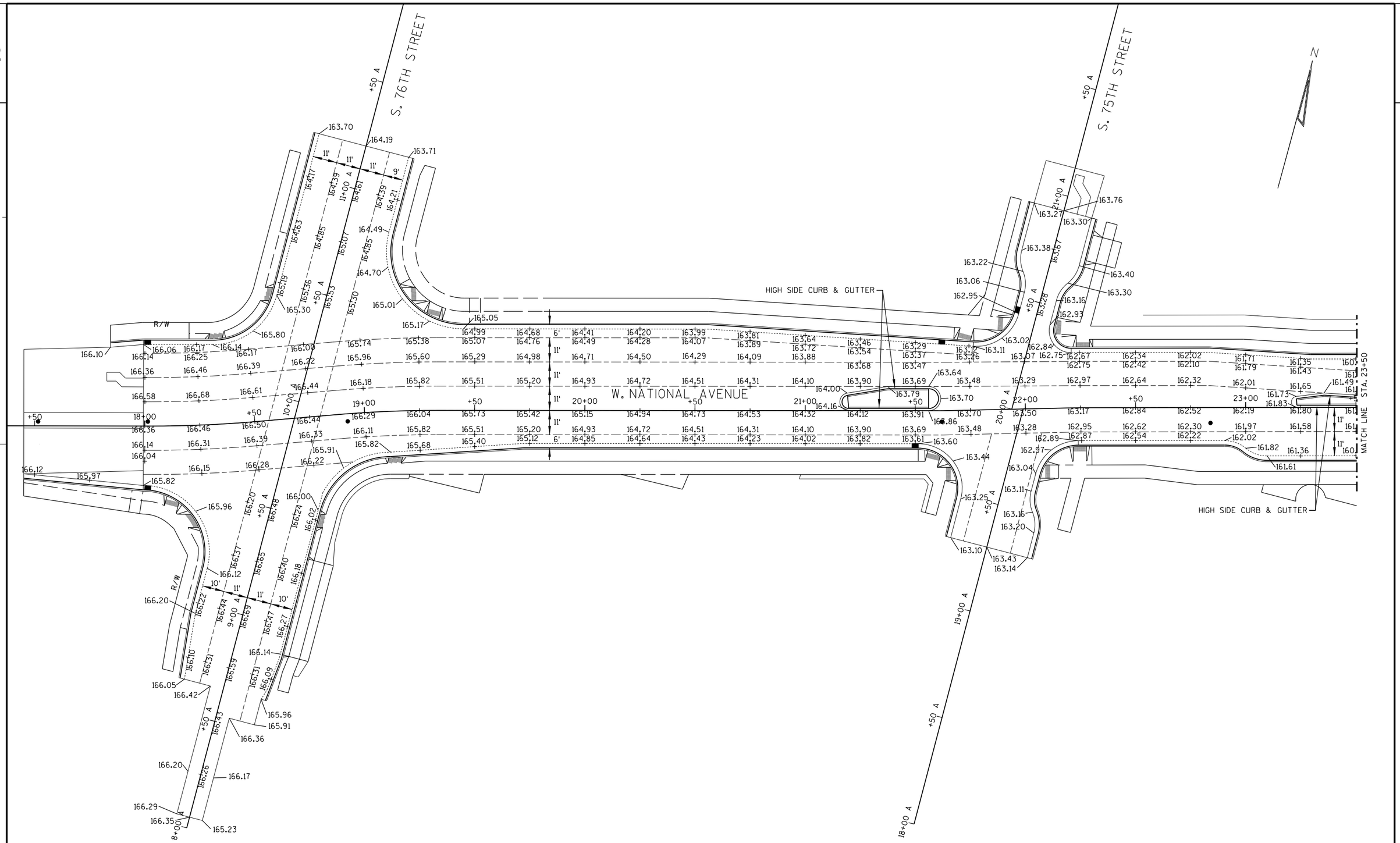
NOTE: ALL RADII AND STATION / OFFSETS
MEASURED TO THE FACE OF CURB
(WHERE APPLICABLE)

DATA TABLE

POINT NUMBER	STATION	OFFSET		DESCRIPTION
339	38+82.89	20.83'	RT	END 17' RADIUS, BEGIN 13' RADIUS
340	38+76.65	32.05'	RT	13' RADIUS
341	38+75.86	19.08'	RT	END 13' RADIUS
342	38+69.42	19.55'	RT	BEGIN 23' RADIUS
343	38+71.06	42.49'	RT	23' RADIUS
344	38+50.68	35.45'	RT	END 23' RADIUS
345	69+61.23 A	30.00'	RT	SAWCUT, MATCH EXISTING
346	69+49.36 A	38.50'	RT	SAWCUT, MATCH EXISTING
347	38+58.19	38.23'	RT	BEGIN 10' RADIUS
348	38+67.02	41.32'	RT	10' RADIUS
349	38+66.25	31.36'	RT	END 10' RADIUS
350	69+29.01 A	33.58'	LT	SAWCUT, MATCH EXISTING
351	69+38.49 A	33.81'	LT	SIDEWALK PI
352	69+36.01 A	30.00'	LT	SAWCUT, MATCH EXISTING
353	37+85.15	49.81'	RT	BEGIN 18' RADIUS
354	37+67.80	45.00'	RT	18' RADIUS
355	37+67.80	27.00'	RT	END INTEGRAL CURB, END 18' RADIUS
356	37+68.36	43.00'	RT	8' RADIUS
357	37+63.32	41.00'	RT	BUS PAD PI
358	37+49.32	41.00'	RT	BUS PAD PI
359	35+17.09	27.48'	RT	BEGIN 18' RADIUS, BEGIN INTEGRAL CURB
360	35+18.08	45.45'	RT	18' RADIUS
361	35+00.41	41.78'	RT	END 18' RADIUS
362	59+29.69 A	14.00'	RT	BEGIN 13' RADIUS
363	59+29.69 A	27.00'	RT	13' RADIUS
364	59+21.89 A	16.60'	RT	END 13' RADIUS, BEGIN 17' RADIUS
365	59+11.69 A	3.00'	RT	17' RADIUS
366	59+11.69 A	20.00'	RT	END 17' RADIUS, SAWCUT, MATCH EXISTING
367	59+24.69 A	30.00'	RT	SAWCUT, MATCH EXISTING
368	59+91.69 A	20.00'	LT	SAWCUT, MATCH EXISTING
369	58+91.69 A	28.50'	LT	SAWCUT, MATCH EXISTING
370	59+28.41 A	28.50'	LT	SIDEWALK PI
371	34+51.65	47.29'	RT	BEGIN 8' RADIUS
372	34+43.75	46.00'	RT	8' RADIUS
373	34+43.75	38.00'	RT	END 8' RADIUS
374	59+39.14 A	23.50'	LT	SIDEWALK TAPER
375	34+61.42	49.59'	RT	BEGIN 18' RADIUS
376	34+44.02	45.00'	RT	18' RADIUS
377	34+44.02	27.00'	RT	END INTEGRAL CURB, END 18' RADIUS

NOTE: ALL RADII AND STATION / OFFSETS
MEASURED TO THE FACE OF CURB
(WHERE APPLICABLE)

2



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PAVEMENT GRADES	SHEET 36	E

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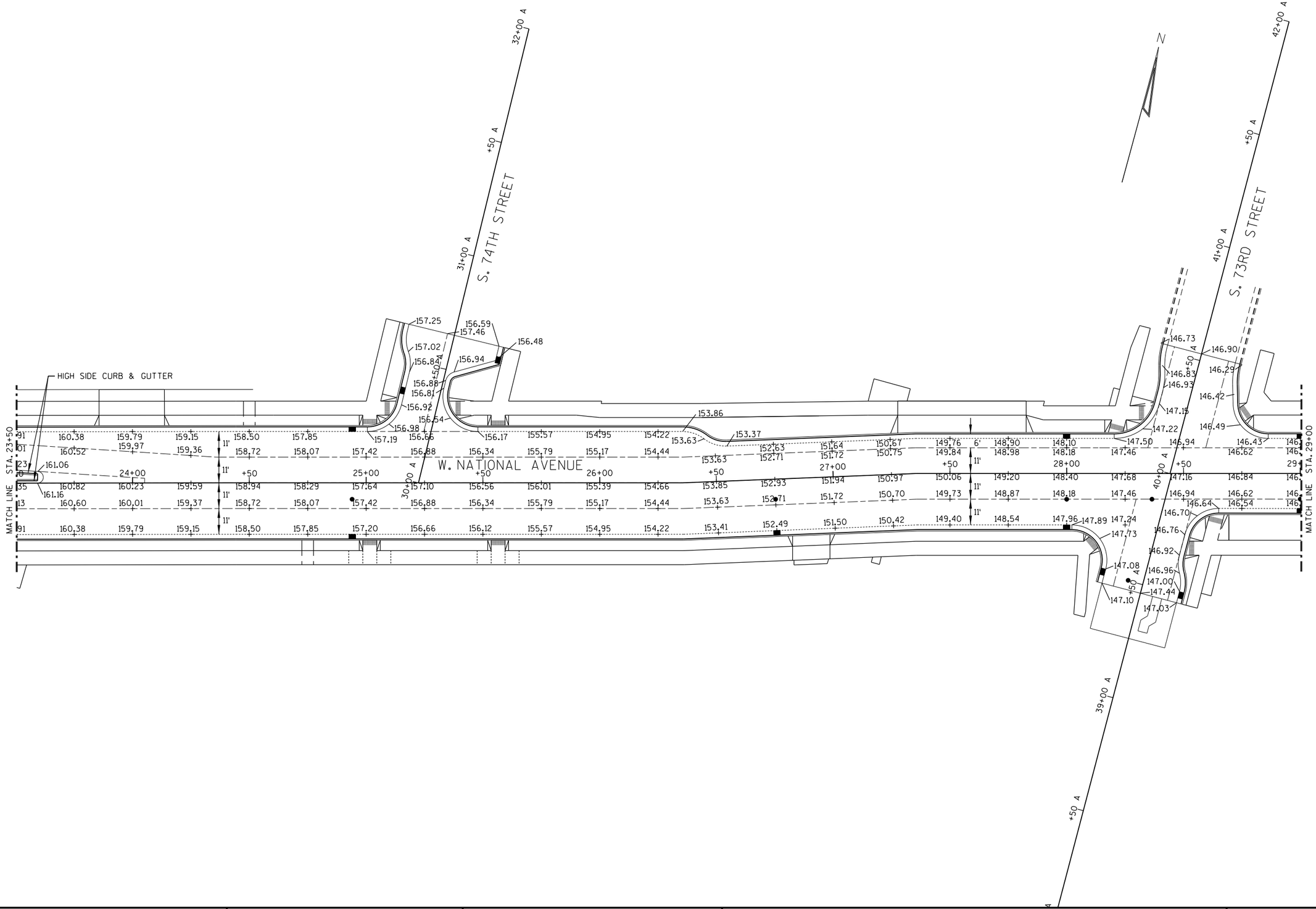

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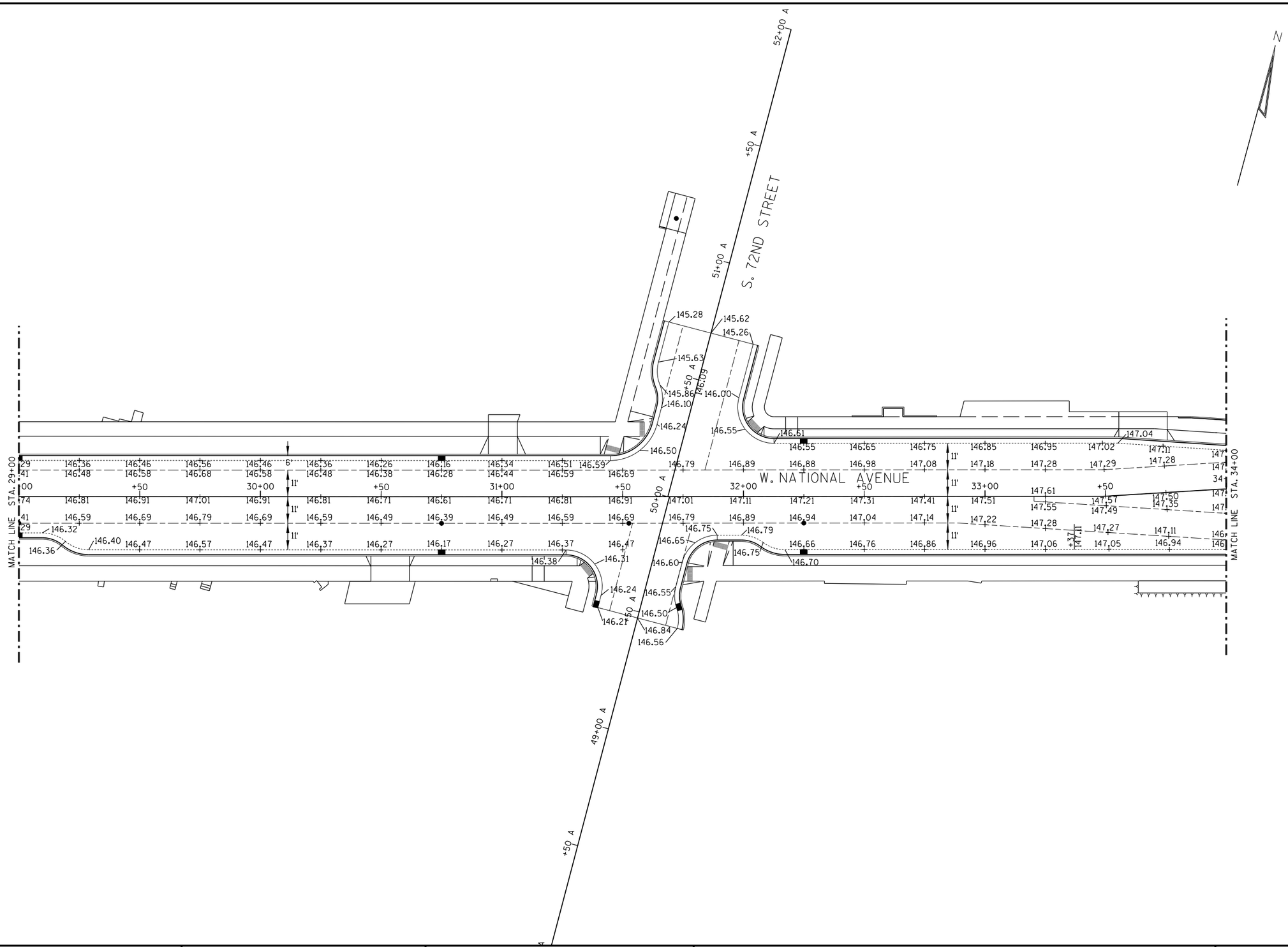

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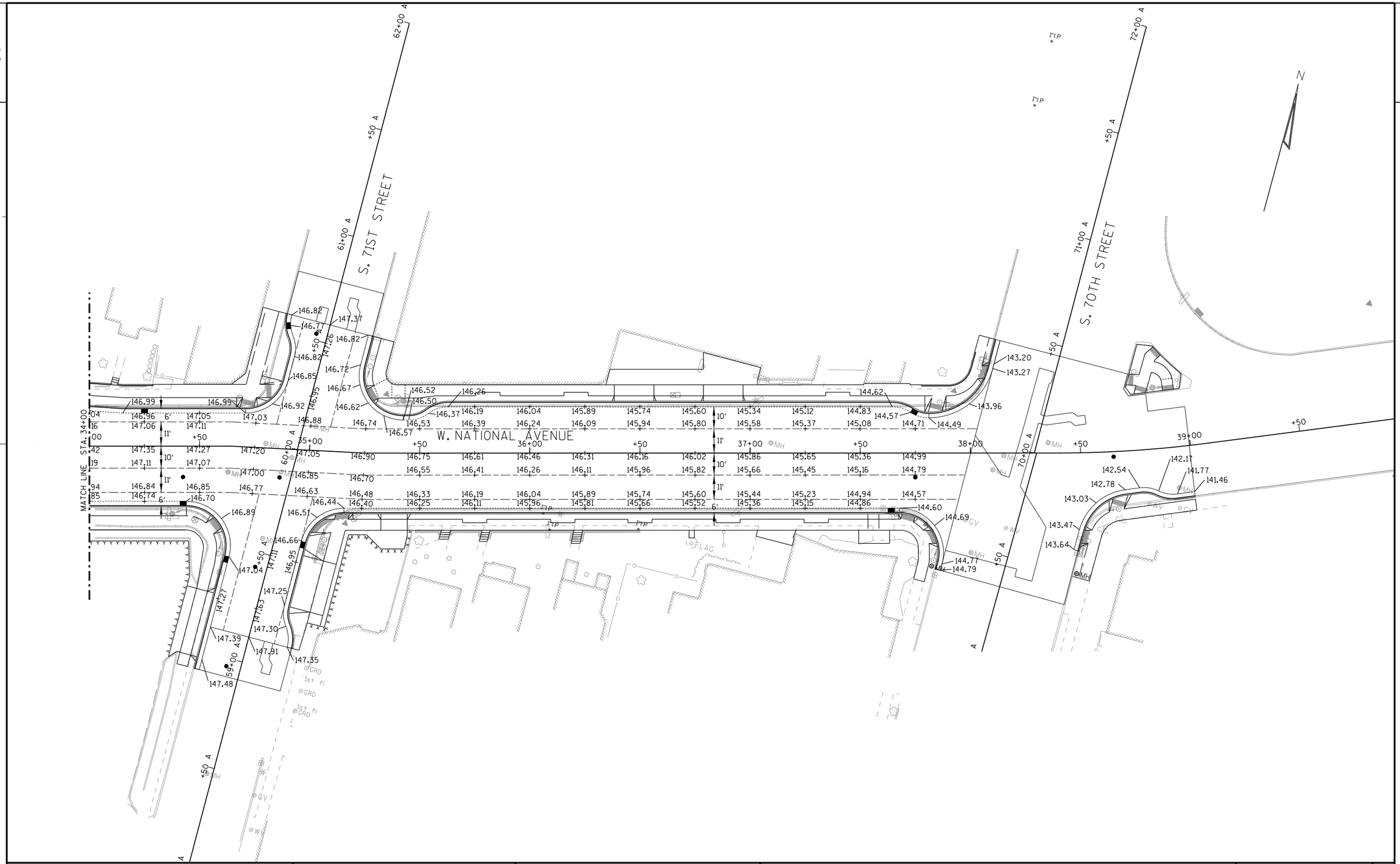
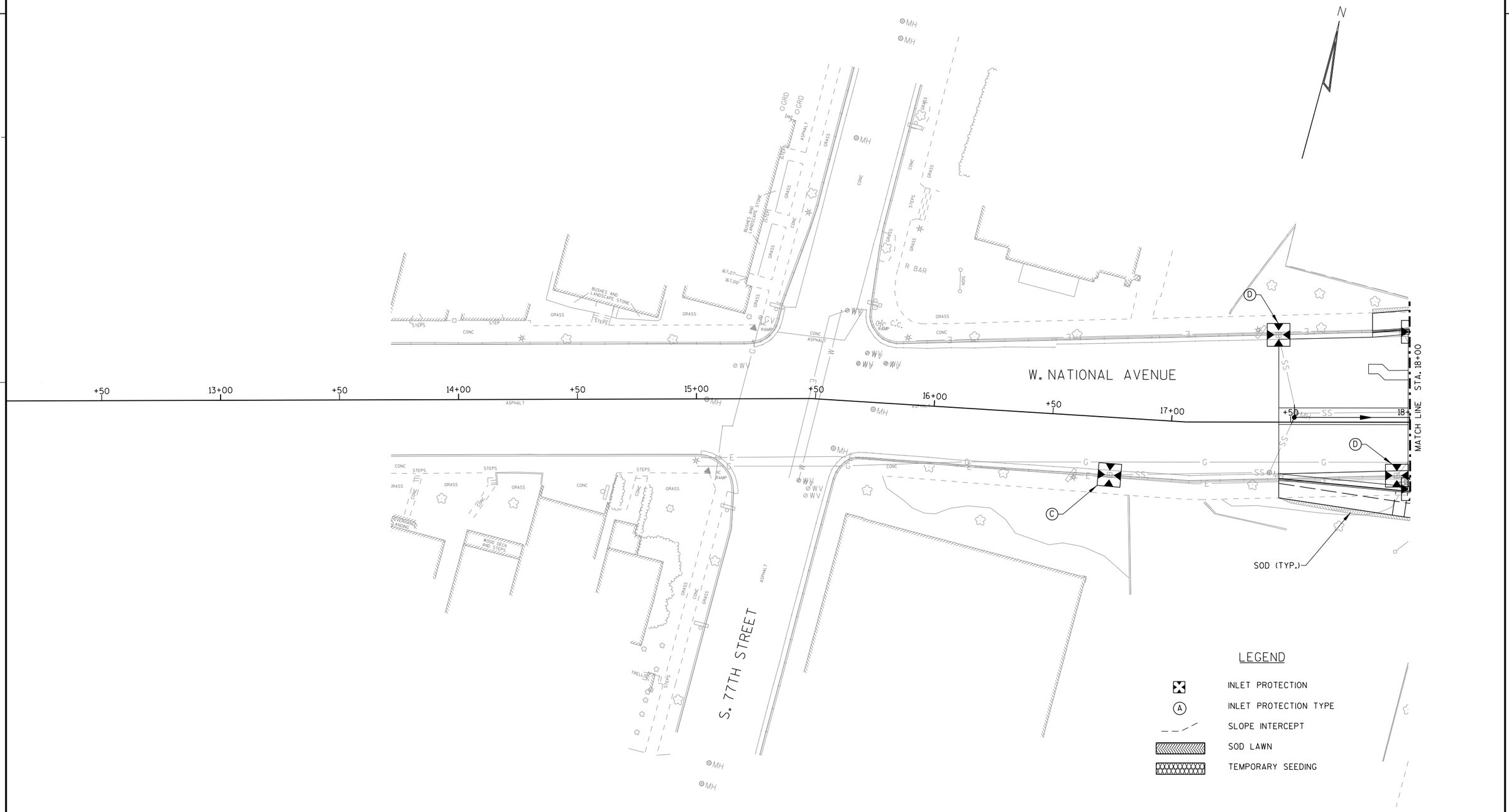


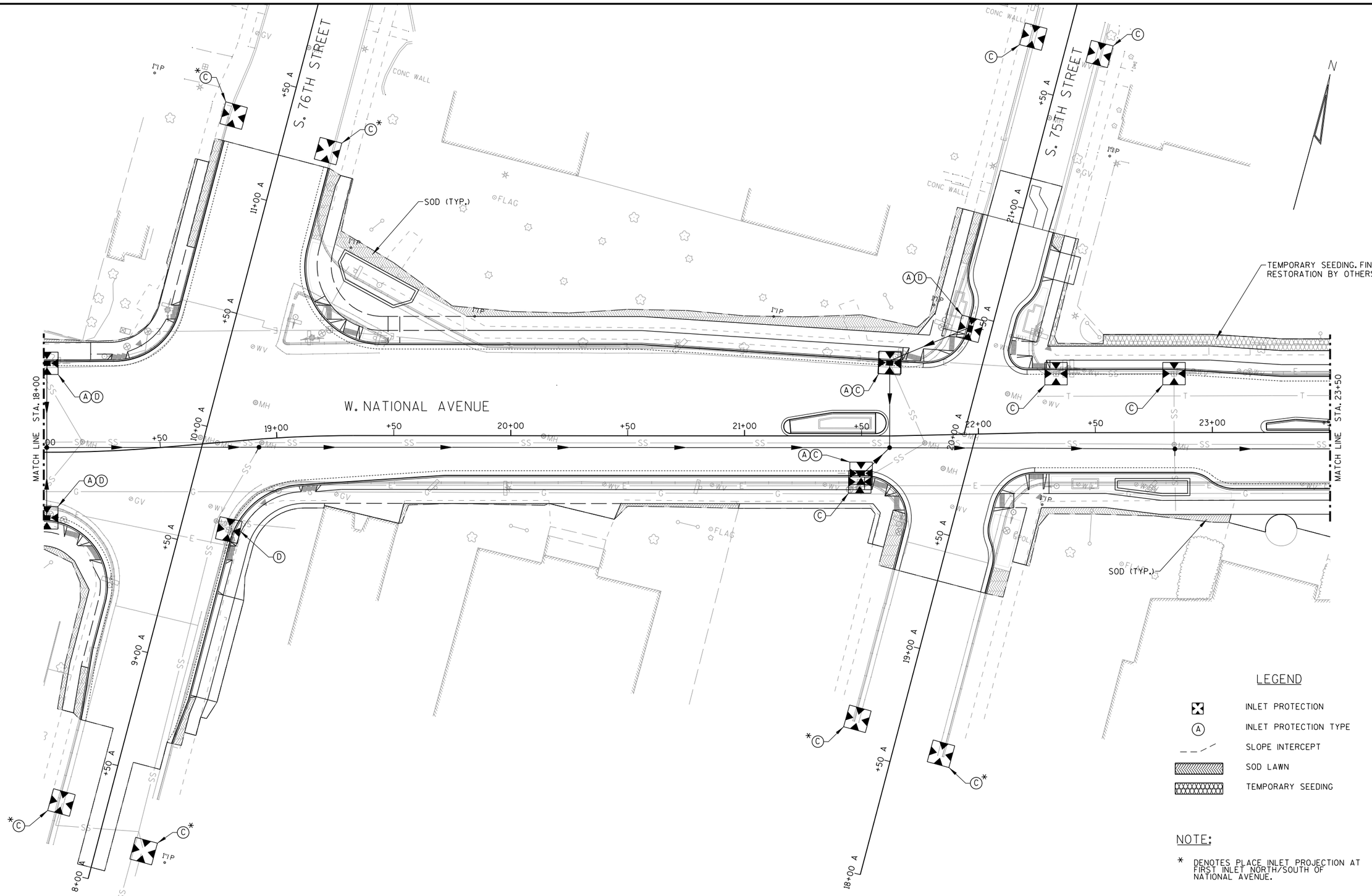
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PAVEMENT GRADES	SHEET 39	E

2



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET 40	E

2



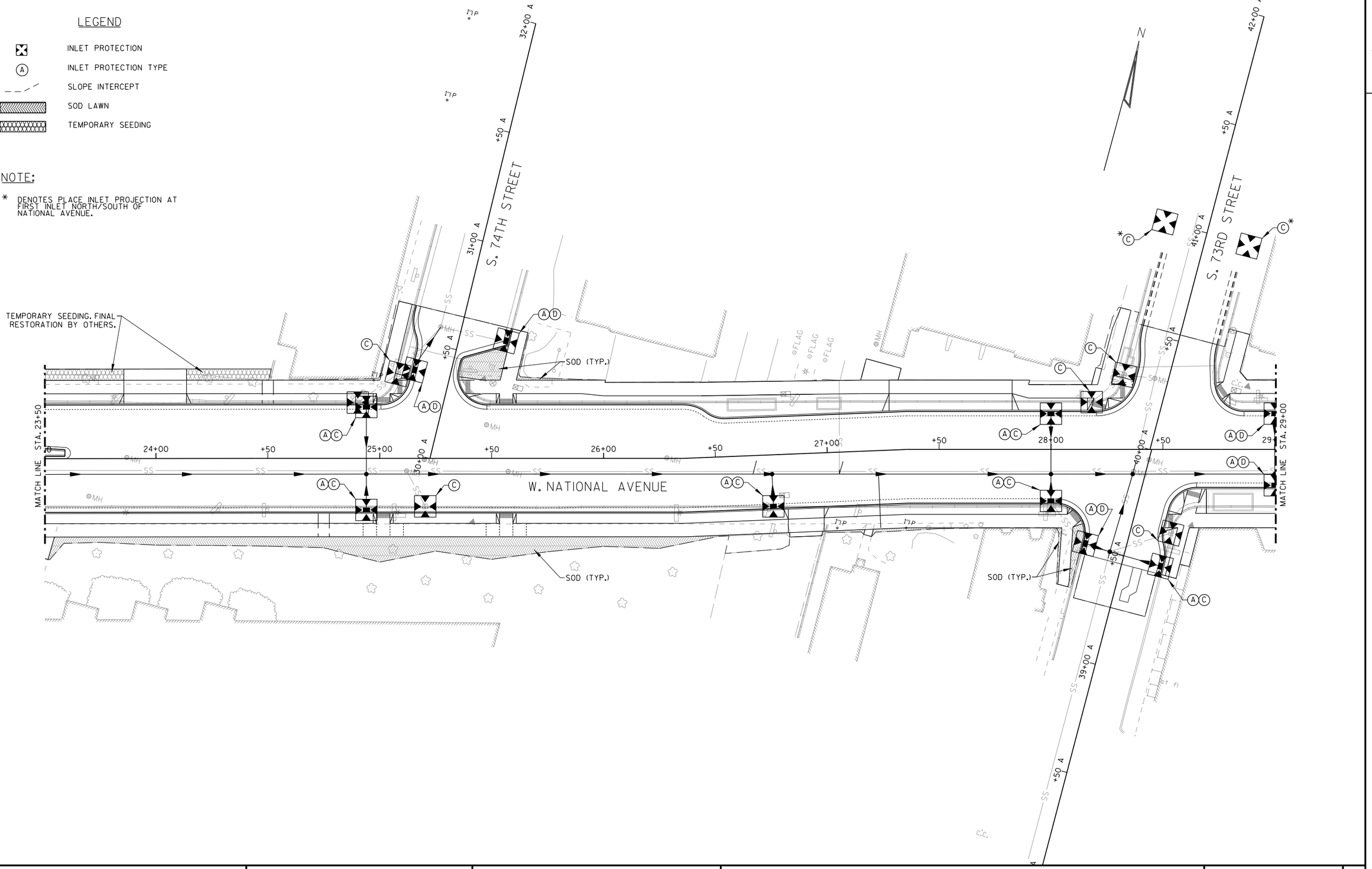
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET 41	E

LEGEND

- INLET PROTECTION
- (A) INLET PROTECTION TYPE
- SLOPE INTERCEPT
- SOD LAWN
- TEMPORARY SEEDING

NOTE:

* DENOTES PLACE INLET PROJECTION AT FIRST INLET NORTH/SOUTH OF NATIONAL AVENUE.



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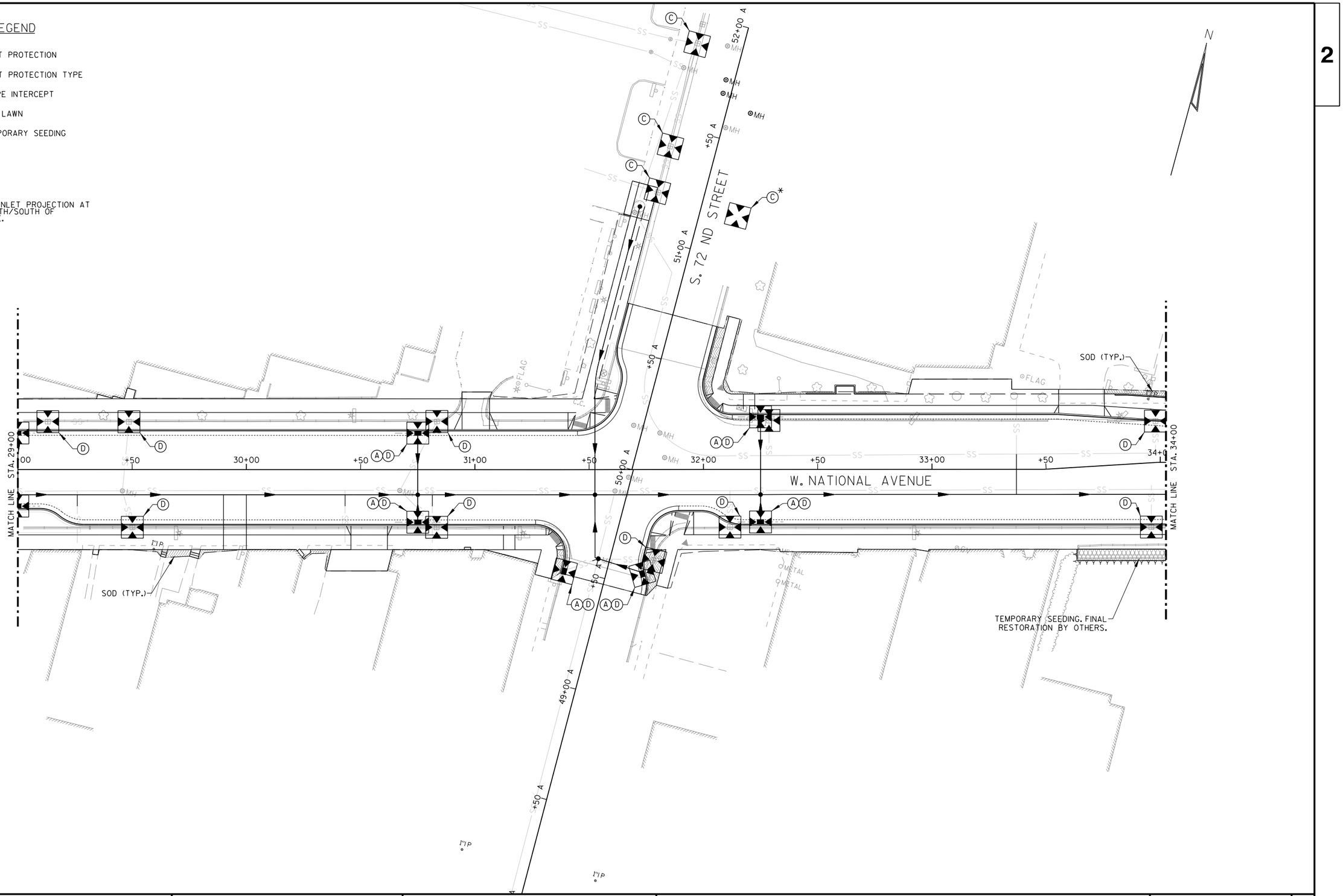
LEGEND

- INLET PROTECTION
- (A) INLET PROTECTION TYPE
- SLOPE INTERCEPT
- SOD LAWN
- TEMPORARY SEEDING

NOTE:

* DENOTES PLACE INLET PROJECTION AT FIRST INLET NORTH/SOUTH OF NATIONAL AVENUE.



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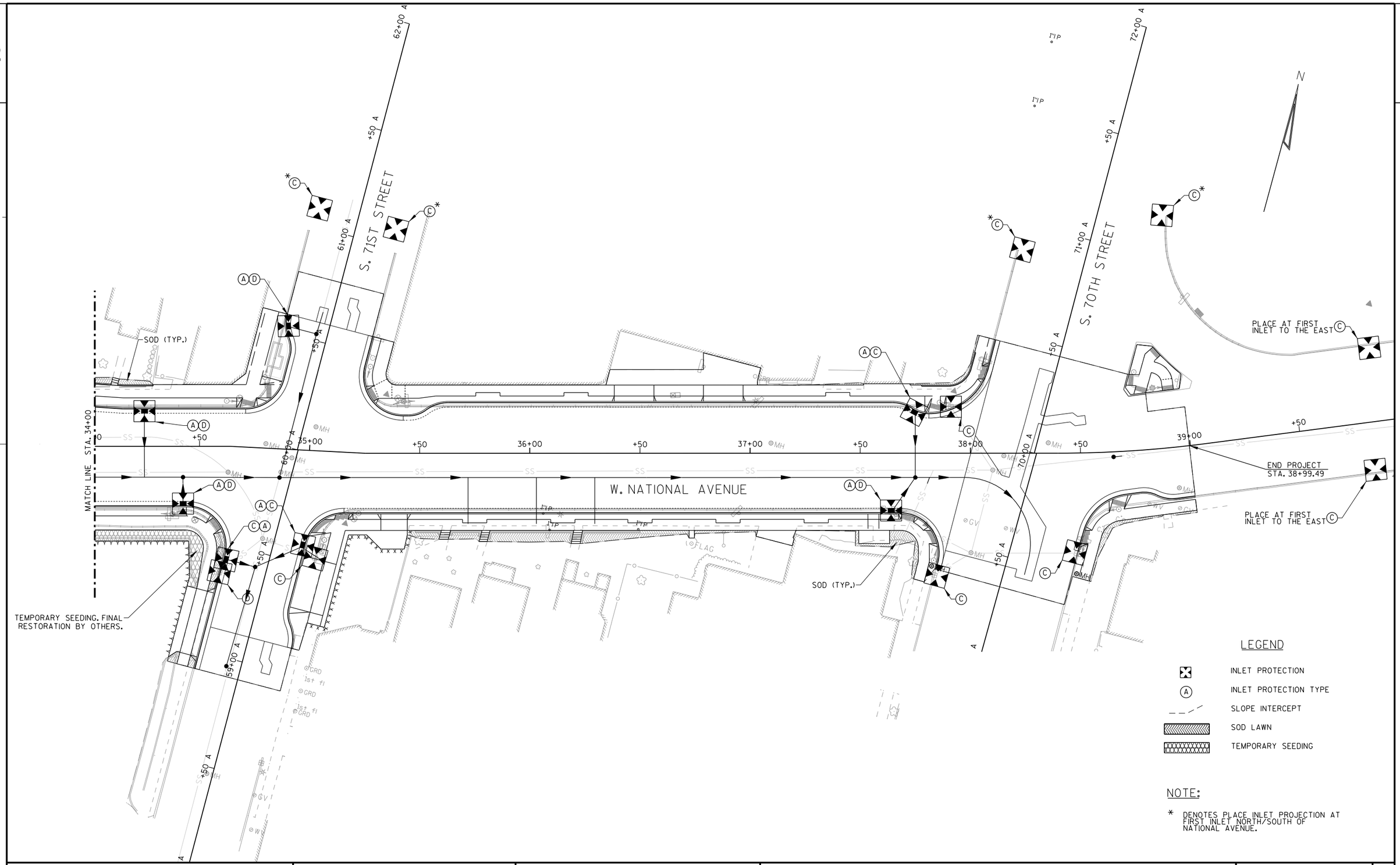
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET 43	E

2



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET 44	E

LEGEND

P-XX STORM SEWER PIPE NUMBER

XXX DRAINAGE STRUCTURE NUMBER

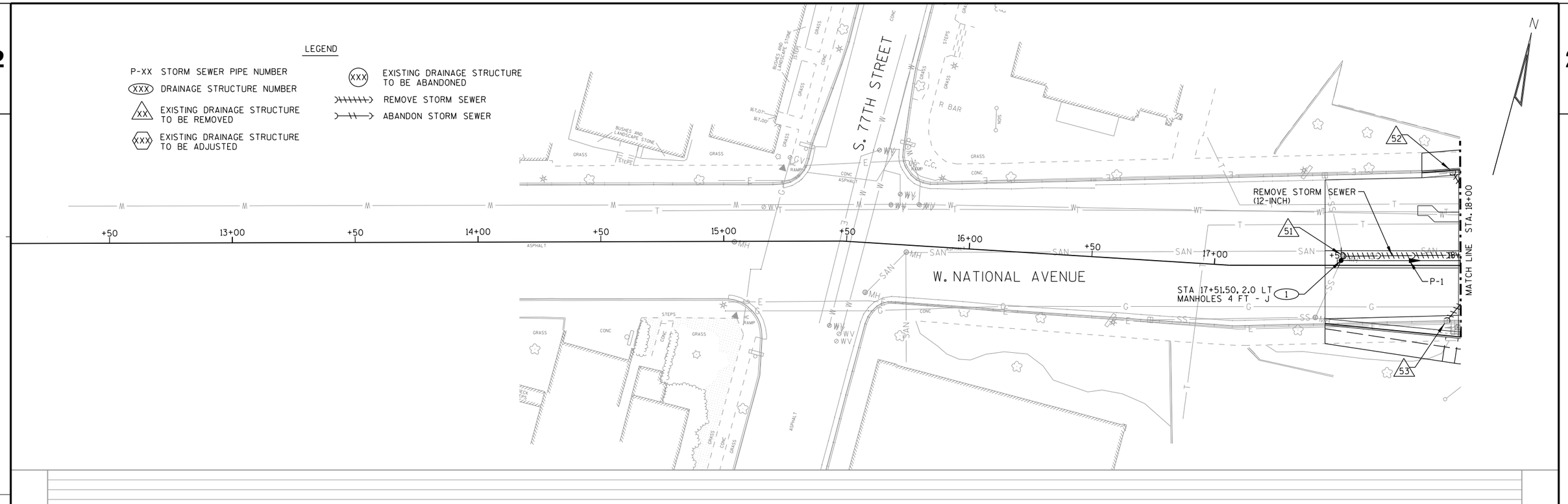
XX EXISTING DRAINAGE STRUCTURE TO BE REMOVED

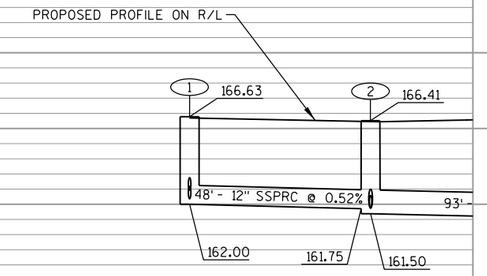
XXX EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED

XXX EXISTING DRAINAGE STRUCTURE TO BE ABANDONED

REMOVE STORM SEWER

ABANDON STORM SEWER





PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STORM SEWER	SHEET 45	E

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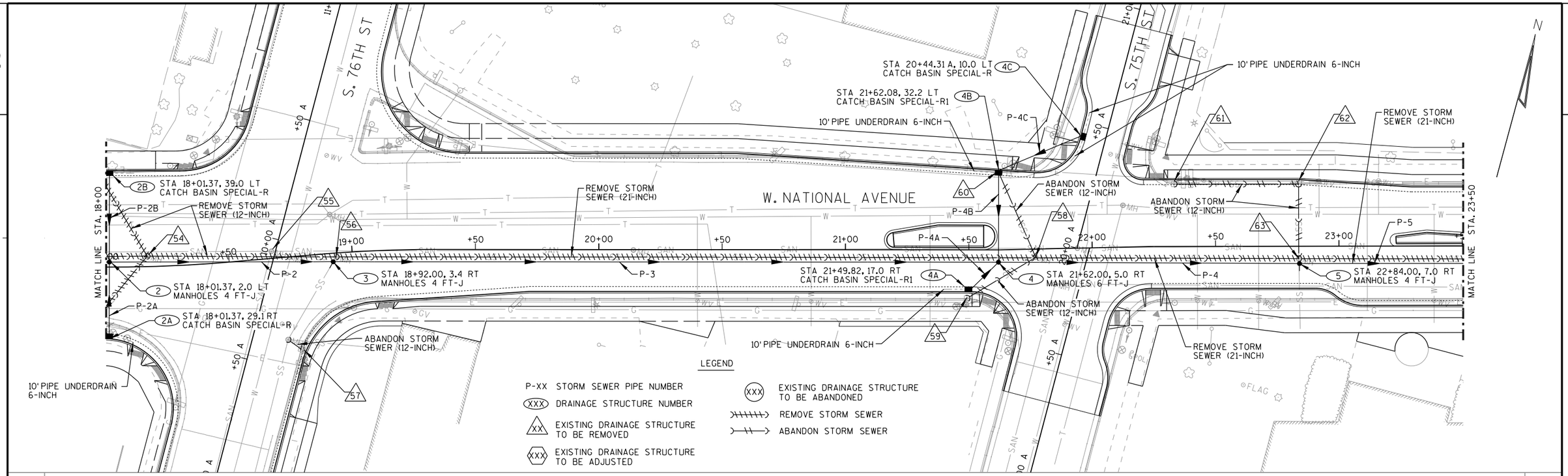
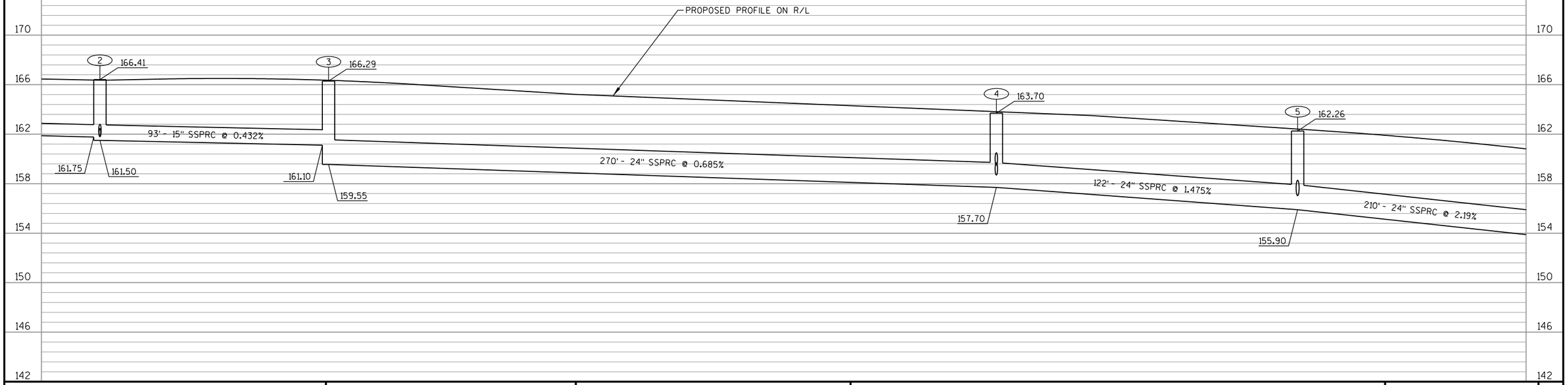
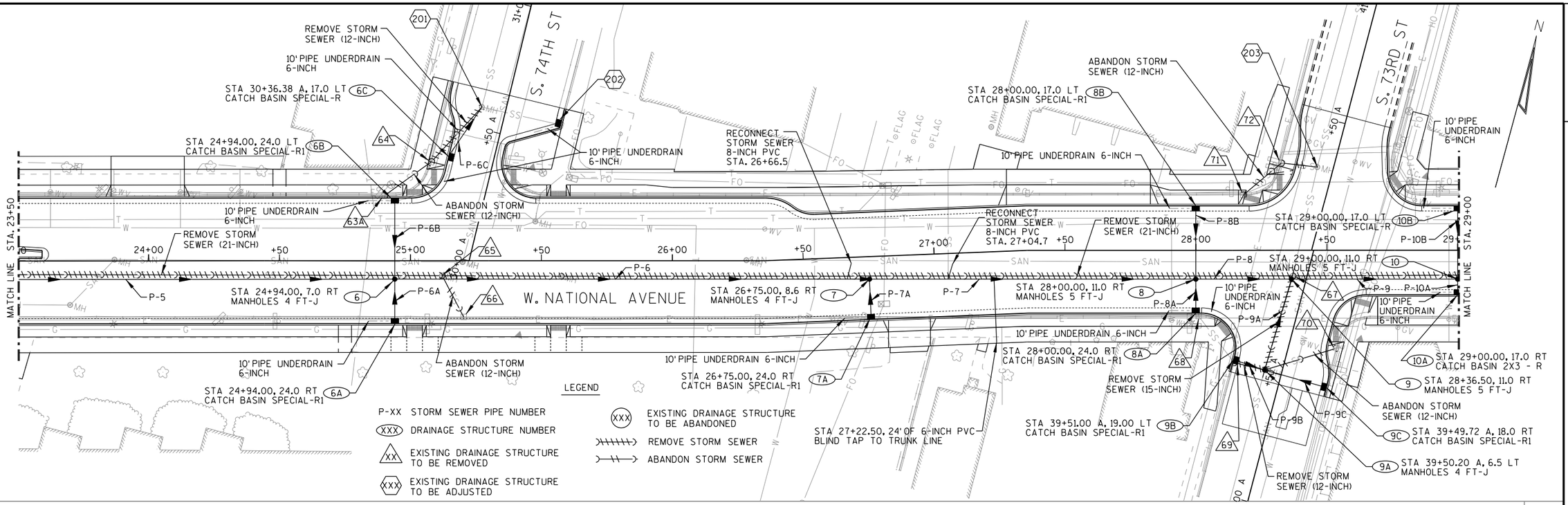
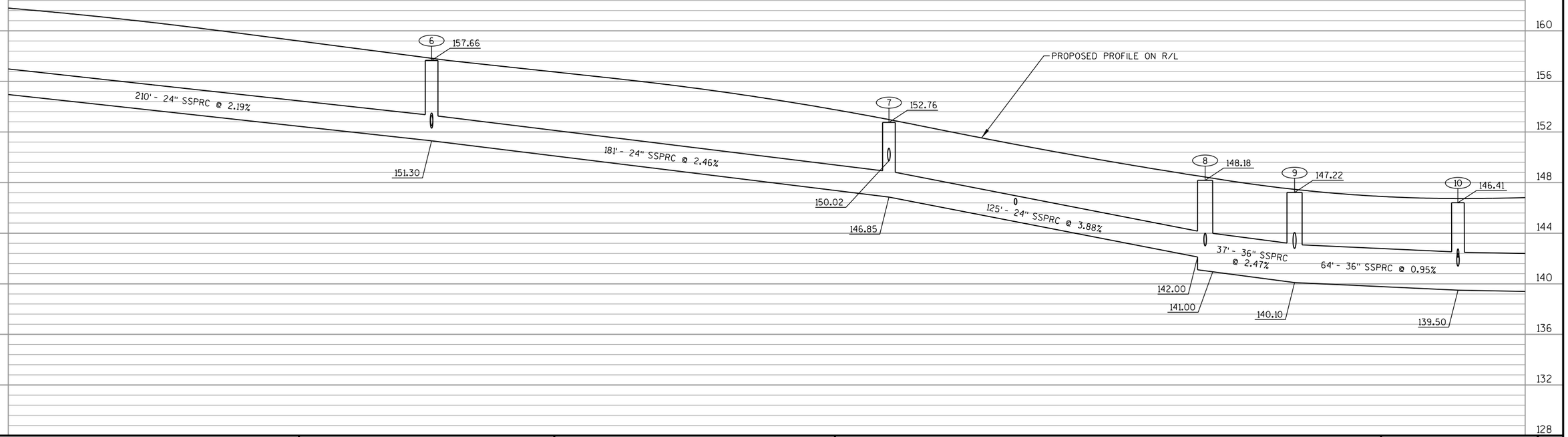




PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STORM SEWER	SHEET 46	E

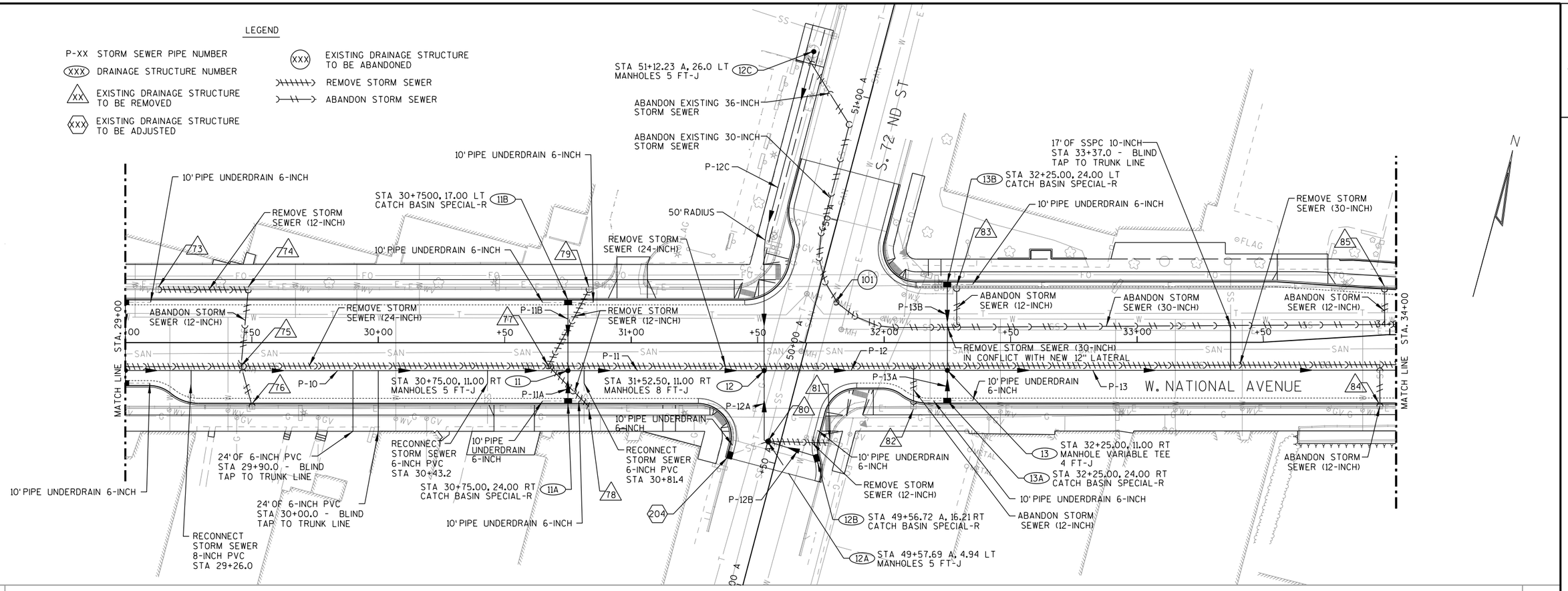


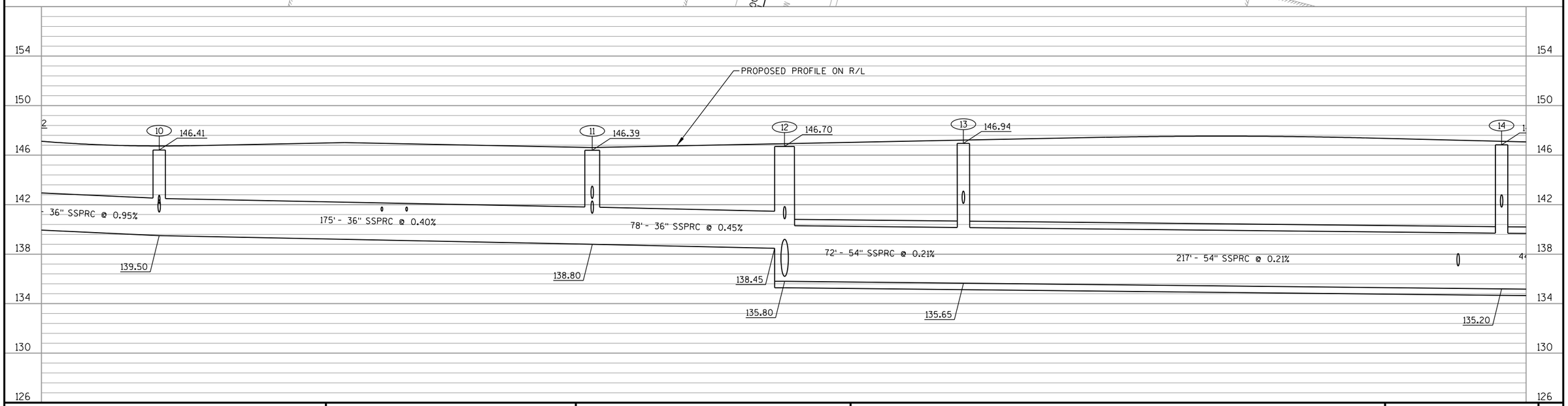


PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STORM SEWER	SHEET 47	E

LEGEND

- P-XX STORM SEWER PIPE NUMBER
- (XXX) DRAINAGE STRUCTURE NUMBER
- XX EXISTING DRAINAGE STRUCTURE TO BE REMOVED
- XXX EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED
- (XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED
- REMOVE STORM SEWER
- ABANDON STORM SEWER





PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STORM SEWER	SHEET 48	E

LEGEND

P-XX STORM SEWER PIPE NUMBER
(XXX) DRAINAGE STRUCTURE NUMBER
XX EXISTING DRAINAGE STRUCTURE TO BE REMOVED
XXX EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED
(XXX) EXISTING DRAINAGE STRUCTURE TO BE ABANDONED
REMOVE STORM SEWER
ABANDON STORM SEWER

W. NATIONAL AVENUE
S. 71ST ST
S. 70TH ST
MATCH LINE STA. 34+00
N

STA 60+53.06 A, 5.00 LT MANHOLES 4 FT - J (15B)
STA 60+53.06 A, 19.10 LT CATCH BASIN 2X3-R (15C)
STA 34+25.00, 17.0 LT CATCH BASIN SPECIAL-R (14B)
10' PIPE UNDERDRAIN 6-INCH
ABANDON STORM SEWER (30-INCH)
10' PIPE UNDERDRAIN 6-INCH
REMOVE STORM SEWER (30-INCH) IN CONFLICT WITH NEW 12" LATERAL
REMOVE STORM SEWER (30-INCH)
REMOVE STORM SEWER (30-INCH)
P-15B
P-15C
P-15A
REMOVE STORM SEWER (24-INCH)
P-14B
P-13
P-14
CORE INTO TRUNK LINE
P-14A
P-15D
10' PIPE UNDERDRAIN 6-INCH
STA 34+42.50, 14.00 RT MANHOLE VARIABLE TEE 4 FT-J (14)
STA 34+42.50, 27.00 RT CATCH BASIN SPECIAL-R (14A)
STA 59+43.22 A, 20.00 LT CATCH BASIN SPECIAL-R1 (15D)
STA 59+43.22 A, 5.32 LT MANHOLES 4 FT - J (15E)
STA 58+96.34 A, 6.49 RT MANHOLES 4 FT - J (BULKHEAD 30" PIPE TO NORTH) (15A)
P-15E
ABANDON STORM SEWER (30-INCH)
REMOVE STORM SEWER (12-INCH)
P-15F
STA 59+58.36 A, 14.00 RT CATCH BASIN 2X3-R1 (15F)
STA 34+87.00, 13.03 RT MANHOLES 8 FT - J (15)
ABANDON STORM SEWER (24-INCH)
P-15
21' OF 6-INCH PVC STA 36+29.5 - BLIND TAP TO TRUNK LINE
21' OF 6-INCH PVC STA 36+03.5 - BLIND TAP TO TRUNK LINE
21' OF 6-INCH PVC STA 35+72.0 - BLIND TAP TO TRUNK LINE
REMOVE STORM SEWER (18-INCH)
STA 37+75.00, 19.55 LT CATCH BASIN SPECIAL-R1 (16B)
10' PIPE UNDERDRAIN 6-INCH
STA 37+75.00, 11.00 RT MANHOLE VARIABLE TEE 4 FT-J (16)
P-16B
P-16A
10' PIPE UNDERDRAIN 6-INCH
STA 37+64.00, 27.00 RT CATCH BASIN SPECIAL-R (16A)
REMOVE STORM SEWER (15-INCH)
RECONNECT STORM SEWER 8-INCH PVC STA 37+80.0
ABANDON STORM SEWER (12-INCH)
ABANDON STORM SEWER (15-INCH)
ABANDON STORM SEWER (18-INCH)
P-16 30' RADIUS
10' PIPE UNDERDRAIN 6-INCH
CONNECT TO EXISTING 54" SSPRC
PREVIOUSLY ABANDONED STORM SEWER PIPE
STA 38+65.00, 2.80 RT MANHOLES 4 FT - J (BULKHEAD PIPE TO WEST) (17)

PROPOSED PROFILE ON R/L

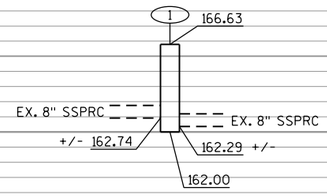
148
144
140
136
132
128
124
120
116

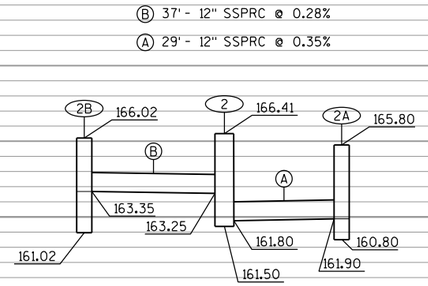
14 146.83
15 146.76
16 144.77
17 142.92

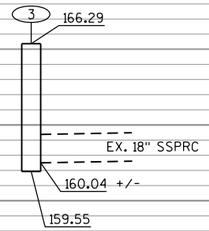
44' - 54" SSPRC @ 0.227%
289' - 54" SSPRC @ 0.260%
83' - 54" SSPRC @ 0.579%
CONCRETE COLLAR REQUIRED
EXISTING 54" SSPRC
EXISTING 18" SSPRC

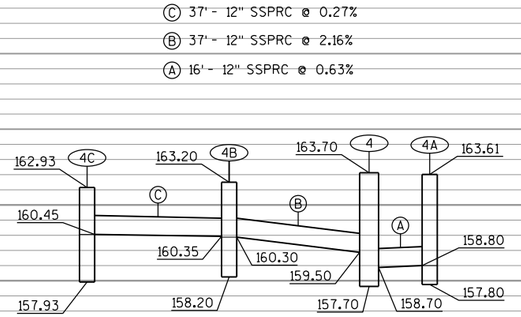
135.20
135.10
134.35
133.87
134.55 (+/-)

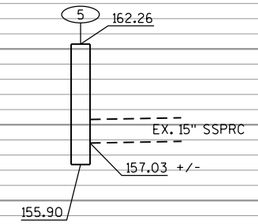
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STORM SEWER	SHEET 49	E

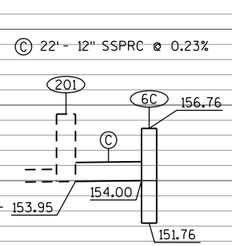


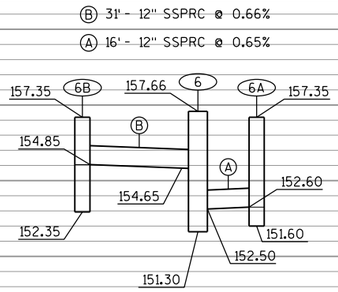


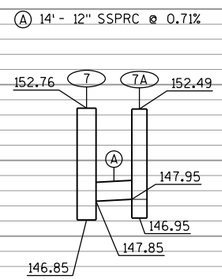


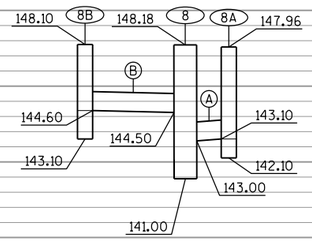


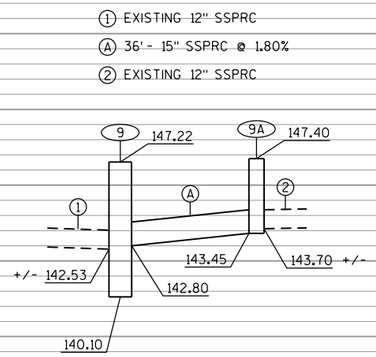


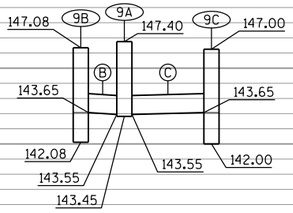




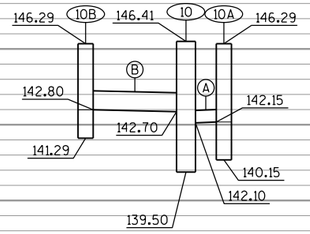


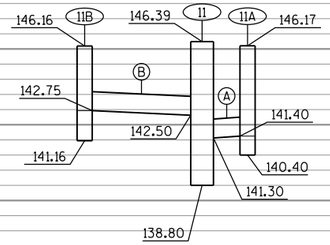


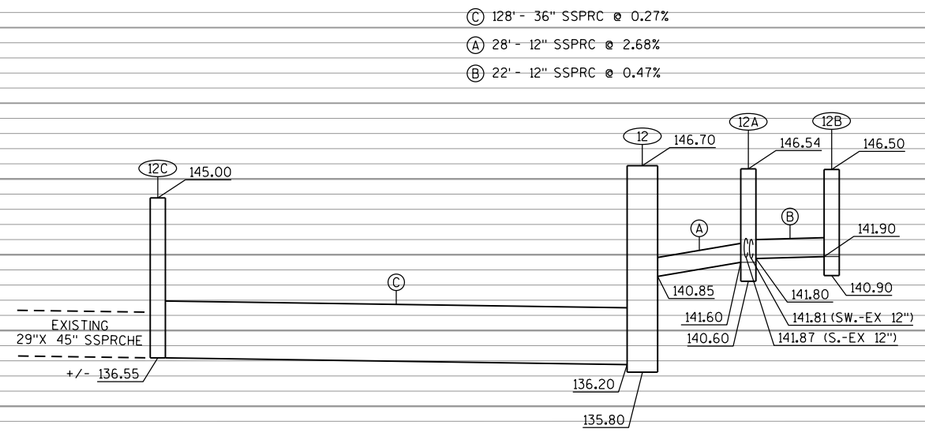


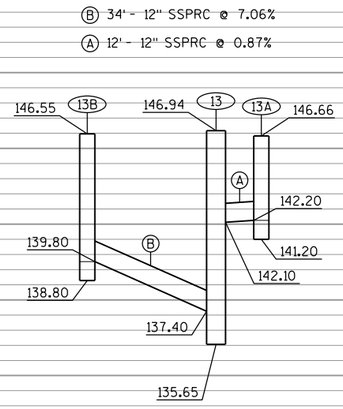


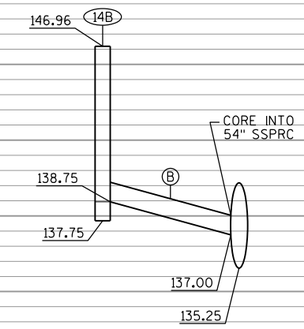
PROJECT NO: 2410-00-77	HWY: NATIONAL AVENUE	COUNTY: MILWAUKEE	STORM SEWER PROFILES	SHEET 50	E

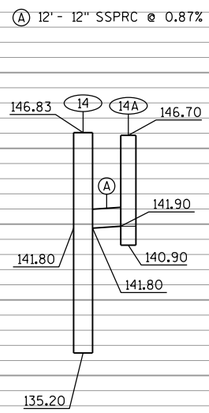


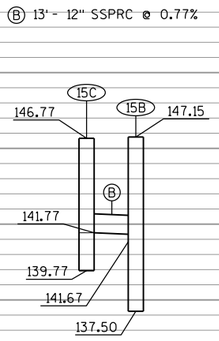


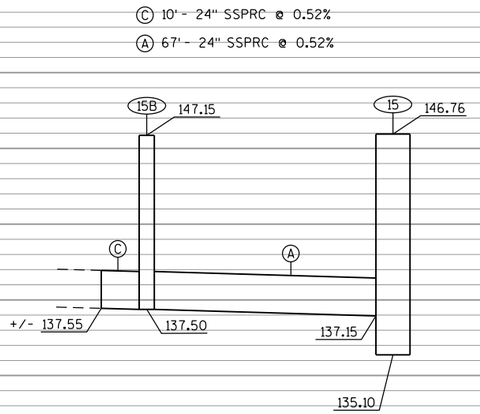












PROJECT NO: 2410-00-77	HWY: NATIONAL AVENUE	COUNTY: MILWAUKEE	STORM SEWER PROFILES	SHEET 51	E

158
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150
146
142
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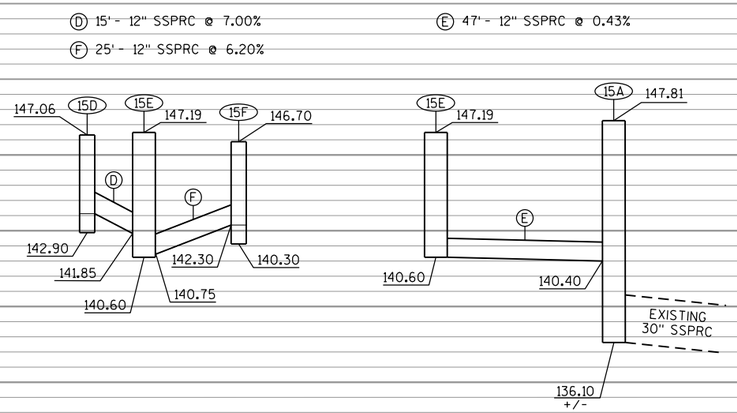
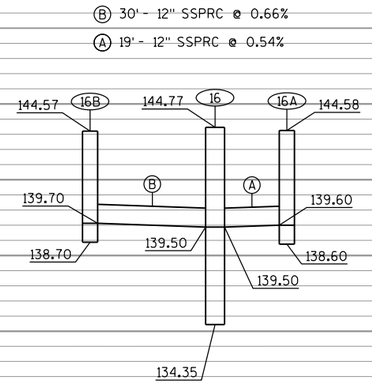
134
130
126





STRUCT. NO.	STATION	OFFSET	PIPE NO.	C-C (FT)	TO STRUCT.	CB TYPE & COVER		MH TYPE & COVER		RIM/ GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INLET ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
1	17+51.50	2.0' LT	P-1	48.0	2	--	--	4 FT	J	166.63	4.63	12	162.00	161.75	48.00	0.52	V	CONNECT TO EX. STORM SEWER, 8" N I.E.=162.74, 8" S I.E.=162.29
2	18+01.37	2.0' LT	P-2	93.0	3	--	--	4 FT	J	166.41	4.91	15	161.50	161.10	93.00	0.43	V	
2A	18+01.37	29.1' RT	P-2A	29.0	2	SPECIAL	R	--	--	165.80	3.90	12	161.90	161.80	29.00	0.35	V	
2B	18+01.37	39.0' LT	P-2B	37.0	2	SPECIAL	R	--	--	166.02	2.67	12	163.35	163.25	37.00	0.28	V	
3	18+92.00	3.4' RT	P-3	270.0	4	--	--	4 FT	J	166.29	6.74	24	159.55	157.70	270.00	0.69	IV	CONNECT TO EX. STORM SEWER, 18" S I.E.=160.04 (+/-)
4	21+62.00	5.0' RT	P-4	122.0	5	--	--	6 FT	J	163.70	6.00	24	157.70	155.90	122.00	1.48	IV	
4C	20+44.31	10.0' LT	P-4C	37.0	4B	SPECIAL	R	--	--	162.93	2.48	12	160.45	160.35	37.00	0.27	V	
4B	21+62.08	32.2' LT	P-4B	37.0	4	SPECIAL	R-1	--	--	163.20	2.90	12	160.30	159.50	37.00	2.16	V	
4A	21+49.82	17.0' RT	P-4A	16.0	4	SPECIAL	R-1	--	--	163.61	4.81	12	158.80	158.70	16.00	0.63	V	
5	22+84.00	7.0' RT	P-5	210.0	6	--	--	4 FT	J	162.26	6.36	24	155.90	151.30	210.00	2.19	IV	CONNECT TO EX. STORM SEWER, 15" S I.E.=157.03 (+/-)
6	24+94.00	7.0' RT	P-6	181.0	7	--	--	4 FT	J	157.66	6.36	24	151.30	146.85	181.00	2.46	IV	
6A	24+94.00	24.0' RT	P-6A	16.0	6	SPECIAL	R-1	--	--	157.35	4.75	12	152.60	152.50	16.00	0.65	V	
6B	24+94.00	24.0' LT	P-6B	31.0	6	SPECIAL	R-1	--	--	157.35	2.50	12	154.85	154.65	31.00	0.66	V	
6C	30+36.38 A	17.0' LT	P-6C	22.0	201	SPECIAL	R	--	--	156.76	2.76	12	154.00	153.95	22.00	0.23	V	CONNECT TO EX. STRUCTURE 201, I.E.=153.95 (+/-)
7	26+75.00	8.6' RT	P-7	125.0	8	--	--	4 FT	J	152.76	5.91	24	146.85	142.00	125.00	3.88	IV	
7A	26+75.00	24.0' RT	P-7A	14.0	7	SPECIAL	R-1	--	--	152.49	4.54	12	147.95	147.85	14.00	0.71	V	
8	28+00.00	11.0' RT	P-8	37.0	9	--	--	5 FT	J	148.18	7.18	36	141.00	140.09	37.00	2.47	IV	
8A	28+00.00	24.1' RT	P-8A	12.0	8	SPECIAL	R-1	--	--	147.96	4.86	12	143.10	143.00	12.00	0.87	V	
8B	28+00.00	17.0' LT	P-8B	27.0	8	SPECIAL	R-1	--	--	148.10	3.50	12	144.60	144.50	27.00	0.38	V	
9	28+36.50	11.0' RT	P-9	64.0	10	--	--	5 FT	J	147.22	7.12	36	140.10	139.49	64.00	0.95	IV	CONNECT TO EX. STORM SEWER, 12" N I.E.=142.53 (+/-)
9A	39+50.20 A	6.5' LT	P-9A	36.0	9	--	--	4 FT	J	147.40	3.95	15	143.45	142.80	36.00	1.80	V	CONNECT TO EX. STORM SEWER, 12" S I.E.=143.70 (+/-)
9B	39+51.00 A	19.0' LT	P-9B	12.0	9A	SPECIAL	R-1	--	--	147.08	3.43	12	143.65	143.55	12.00	0.87	V	
9C	39+49.72 A	18.0' RT	P-9C	23.0	9A	SPECIAL	R-1	--	--	147.00	3.35	12	143.65	143.55	23.00	0.43	V	
10	29+00.00	11.0' RT	P-10	175.0	11	--	--	5 FT	J	146.41	6.91	36	139.50	138.80	175.00	0.40	IV	
10A	29+00.00	17.0' RT	P-10A	5.0	10	2X3	R	--	--	146.29	4.14	12	142.15	142.09	5.00	1.11	V	
10B	29+00.00	17.0' LT	P-10B	27.0	10	SPECIAL	R	--	--	146.29	3.49	12	142.80	142.70	27.00	0.38	V	
11	30+75.00	11.0' RT	P-11	78.0	12	--	--	5 FT	J	146.39	7.59	36	138.80	138.45	78.00	0.45	IV	
11A	30+75.00	24.0' RT	P-11A	12.0	11	SPECIAL	R	--	--	146.17	4.77	12	141.40	141.30	12.00	0.80	V	
11B	30+75.00	17.0' LT	P-11B	27.0	11	SPECIAL	R	--	--	146.16	3.41	12	142.75	142.50	27.00	0.93	V	
12	31+52.50	11.0' RT	P-12	72.0	13	--	--	8 FT	J	146.70	10.90	54	135.80	135.65	72.00	0.21	IV	
12A	49+57.69 A	4.94' LT	P-12A	28.0	12	--	--	5 FT	J	146.54	4.94	12	141.60	140.85	28.00	2.68	V	
12B	49+56.72 A	16.21' RT	P-12B	22.0	12A	SPECIAL	R	--	--	146.50	4.60	12	141.90	141.80	22.00	0.47	V	
12C	51+12.23 A	26.0' LT	P-12C	128.0	12	--	--	5 FT	J	145.00	8.45	36	136.55	136.20	128.00	0.27	IV	CONNECT TO EX. STORM SEWER, 29" X 45" N I.E.=136.55 (+/-)

STORM SEWER NOTES:

1. STATION / OFFSETS TO MANHOLES ARE GIVEN TO THE CENTER OF STRUCTURE.
2. STATION / OFFSETS TO INLETS AND CATCH BASINS ARE GIVEN TO THE FACE OF CURB.
3. MANHOLE RIM/GRATE ELEVATIONS ARE GIVEN TO THE CENTER OF THE STRUCTURE.
4. CATCH BASIN AND INLET RIM/GRATE ELEVATIONS ARE GIVEN TO THE FLANGE LINE.
5. DEPTH OF MANHOLES, CATCH BASINS AND INLETS ARE MEASURED FROM THE LOWEST INVERT OF THE STRUCTURE TO THE RIM/GRATE ELEVATION.
6. PIPE LENGTHS FOR STRUCTURES ARE SHOWN FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
7. CONTRACTOR SHALL VERIFY DEPTH OF ALL EXISTING STORM SEWER STRUCTURES BEFORE BEGINNIG WORK AND SHALL REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO BEGINNING WORK.
8. USE BACKFILL CONTROLLED LOW STRENGH UP TO THE TOP OF THE WATER LINE IN AREAS WHER THE PROPOSED STORM SEWER GOES UNDER THE WATER LINE.

STRUCT. NO.	STATION	OFFSET	PIPE NO.	C-C (FT)	TO STRUCT.	CB TYPE & COVER		MH TYPE & COVER		RIM/ GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INLET ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
13	32+25.00	11.0' RT	P-13	217.0	14	--	--	4 FT V.T.	J	146.94	11.29	54	135.65	135.19	217.00	0.21	IV	
13A	32+25.00	24.0' RT	P-13A	12.0	13	SPECIAL	R	--	--	146.66	4.46	12	142.20	142.10	12.00	0.87	V	
13B	32+25.00	24.0' LT	P-13B	34.0	13	SPECIAL	R	--	--	146.55	6.75	12	139.80	137.40	34.00	7.06	V	
14	34+42.50	11.0' RT	P-14	44.0	15	--	--	4 FT V.T.	J	146.83	11.63	54	135.20	135.10	44.00	0.23	IV	
14A	34+42.50	27.0' RT	P-14A	12.0	14	SPECIAL	R	--	--	146.70	4.80	12	141.90	141.80	12.00	0.87	V	
14B	34+25.00	17.0' LT	P-14B	27.0	TRUNK	SPECIAL	R	--	--	146.96	8.21	12	138.75	137.00	27.00	6.48	V	CORE INTO 54" TRUNK LINE
15	34+87.00	13.03' RT	P-15	289.0	16	--	--	8 FT	J	146.76	11.66	54	135.10	134.35	289.00	0.26	IV	
15A	58+96.34 A	6.49' RT	--	--	--	--	--	4 FT	J	147.81	11.71	--	136.10	--	--	--	IV	CONNECT TO EX. STORM SEWER, 30" S I.E.=136.10 (+/-) BULKHEAD 30" PIPE TO NORTH
15B	60+53.06 A	5.00' LT	P-15A	67.0	15	--	--	4 FT	J	147.15	9.65	24	137.50	137.15	67.00	0.52	IV	
15C	60+53.06 A	19.10' LT	P-15B	13.0	15B	2X3	R	--	--	146.77	5.00	12	141.77	141.67	13.00	0.77	V	
EX. PIPE	60+63.44 A	4.6' LT	P-15C	10.0	15B	--	--	--	--	--	--	24	137.55	137.50	10.00	0.52	IV	CONCRETE COLLAR REQUIRED
15D	59+43.22 A	20.00' LT	P-15D	15.0	15E	SPECIAL	R-1	--	--	147.06	4.16	12	142.90	141.85	15.00	7.00	V	
15E	59+43.22 A	5.32' LT	P-15E	47.0	15A	--	--	4 FT	J	147.19	6.59	12	140.60	140.40	47.00	0.43	V	
15F	59+58.36 A	14.00' RT	P-15F	25.0	15E	2X3	R-1	--	--	146.70	4.40	12	142.30	140.75	25.00	6.20	V	
16	37+75.00	11.0' RT	P-16	83.0	EX. PIPE	--	--	4 FT V.T.	J	144.77	10.42	54	134.35	133.87	83.00	0.58	IV	CONNECT TO EX. STORM SEWER, 54" I.E.=133.87 (+/-) CONCRETE COLLAR REQUIRED
16A	37+64.00	27.0' RT	P-16A	19.0	16	SPECIAL	R	--	--	144.58	4.98	12	139.60	139.50	19.00	0.54	V	
16B	37+75.00	19.55' LT	P-16B	30.0	16	SPECIAL	R-1	--	--	144.57	4.87	12	139.70	139.50	30.00	0.66	V	
17	38+65.00	2.80' RT	--	--	--	--	--	4 FT	J	142.92	8.37		134.55	--	--		V	CONNECT TO EX. STORM SEWER, 18" E I.E.=134.55 (+/-) BULKHEAD PIPE TO WEST

STORM SEWER NOTES:

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2. STATION / OFFSETS TO INLETS AND CATCH BASINS ARE GIVEN TO THE FACE OF CURB.
3. MANHOLE RIM/GRATE ELEVATIONS ARE GIVEN TO THE CENTER OF THE STRUCTURE.
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7. CONTRACTOR SHALL VERIFY DEPTH OF ALL EXISTING STORM SEWER STRUCTURES BEFORE BEGINNIG WORK AND SHALL REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO BEGINNING WORK.
8. USE BACKFILL CONTROLLED LOW STRENGH UP TO THE TOP OF THE WATER LINE IN AREAS WHER THE PROPOSED STORM SEWER GOES UNDER THE WATER LINE.

CRUSHED CONCRETE BACKFILL
8" SANITARY SEWER SDR 35 PVC SP 320.5'
10" SANITARY SEWER SDR 35 PVC SP 198.5'

EXIST. SURFACE GRADE
PROP. SURFACE GRADE
RIM EL. 166.47
RIM EL. 163.55
RIM EL. 160.53
EXIST. 12" STORM
PROP. 12" STORM
PROP. 24" STORM
EXIST. 21" STORM
EXIST. 8" W.M.
PROP. 8" W.M.
EXIST. 10" SANITARY
S=0.00452
S=0.00277
SANITARY (RELAY)
8"
10"

S1 8" SANITARY S.155.45
8" SANITARY E.155.20

S2 8" SANITARY O.D. W.153.75
8" SANITARY S.150.79
10" SANITARY E.150.55

S3 10" SANITARY W.150.00
EXIST. 10" SANITARY E.150.00

GREENFIELD HEIGHTS 5
BALDWIN-CUSICK SUBD. 6
BALDWIN-CUSICK SUBD. 5
LINWOOD 3
LINWOOD 2
W. NATIONAL AVE.
S. 77TH ST.
S. 76TH ST.
S. 75TH ST.

ILLUM
TEL (6 MTD)
EXIST. 8" W.M.
ABANDON 10" SANITARY
ABANDONED POLICE & FIRE DUCT
12" STORM(40)
12" STORM(86)
ELEC.(4 MTD)
6" W.M.(107)
30" W.M.(150)
6" GAS
8" SAN(89)
6" W.M.(111)
10" SAN(41)
10" SAN(09)
10" SAN(89)
10" SAN(2005)
21" STORM(40)
PROP. 8" W.M.
PROP. 24" STORM
10" SAN(09)
DYE TEST MAY BE NEEDED PRIOR TO ABANDONMENT
ABAND. F&P DUCT
STA. 18+68.4.4 LT SAN. MANHOLE
STA. 21+88.7.0.0 LT SAN. O.D. MANHOLE
STA. 23+87.1.0 RT SAN. MANHOLE
8" SANITARY (RELAY) 18' OF 8" SANITARY (RELAY) SDR 35 PVC SP S=0.00418
26 LIN. FT. OF 6" DIA. BLDG SANITARY SEWER
BLK'D
CONNECT TO EXIST. PVC EL.150.87 *7421
ABANDON 10" SAN.
VAC
*7608 *7647 *7510 *7715-17 *7527-29-31-33 *7515

C.S.M. 6099
N
SCALE FT. 0 30 60

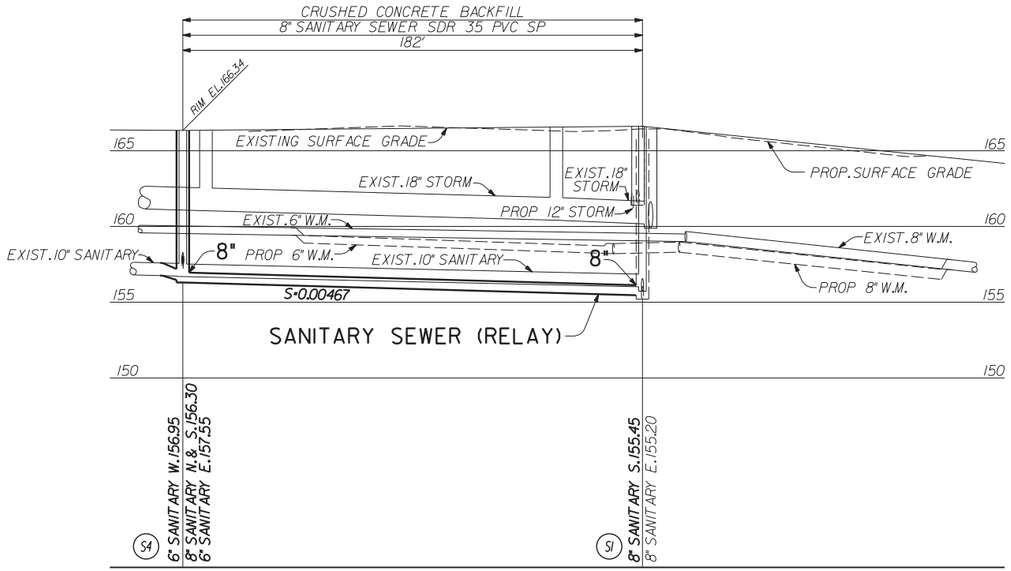
JOSEPH M. BURTCH E-28873 WEST ALLIS WI
WISCONSIN PROFESSIONAL ENGINEER

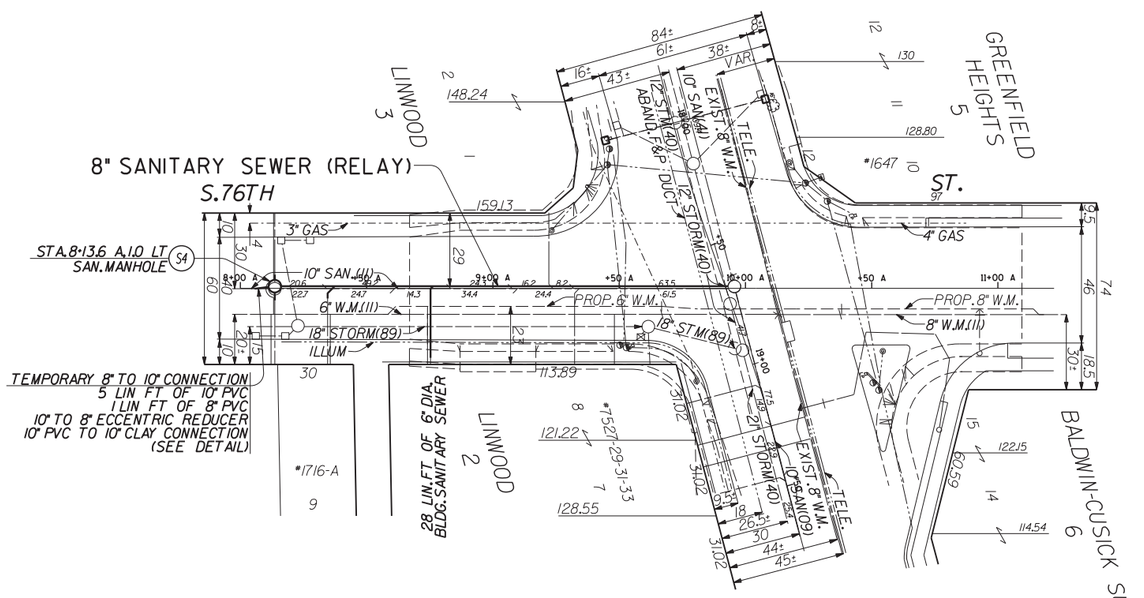
CITY OF WEST ALLIS ENGINEERING DEPARTMENT

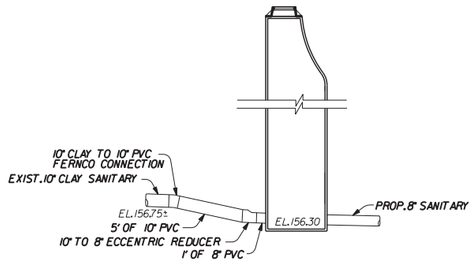
PLAN & PROFILE
SANITARY SEWER RELAY & BLDG. SERV.
IN WEST NATIONAL AVENUE
FROM SOUTH 74TH STREET
TO SOUTH 77TH STREET

CONTRACT NO. STATE CONT	CONTRACTOR	HOR. 1"=60'
ACCOUNT NO. P1529N	INSPECTOR	SCALE: VERT. 1"=10'
	AS-BUILT ENT'D BY	SYSTEM NO. SS-13
	AS-BUILT CHK'D BY	¼ SEC. NO. 453
	GIS ENTERED BY	
DRAWN BY RFS	Peter C. Daniels APPROVED CHIEF DESIGN ENGINEER	9-27-17 DATE
DATE DRAWN 16/17		
DESIGNED BY HMB	Joseph M. Burtch APPROVED ASSISTANT CITY ENGINEER	9-27-17 DATE
CHECKED BY JMB		
SURVEY 1-17		
FINAL PLAN DATE	PLAN FILE NO. S-1589	

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SANITARY SEWER	SHEET 55







10" TO 8" TEMPORARY CONNECTION DETAIL
(NOT TO SCALE)

WISCONSIN
JOSEPH M. BURTCH
E-28873
WEST ALLIS
WI
PROFESSIONAL ENGINEER

SCALE FT.
0 30 60

N

CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

PLAN & PROFILE
SANITARY MAIN RELAY & BLDG. SERV.
IN SOUTH 76TH STREET
FROM WEST NATIONAL AVENUE
TO 182' SOUTH OF W. NATIONAL AVE.

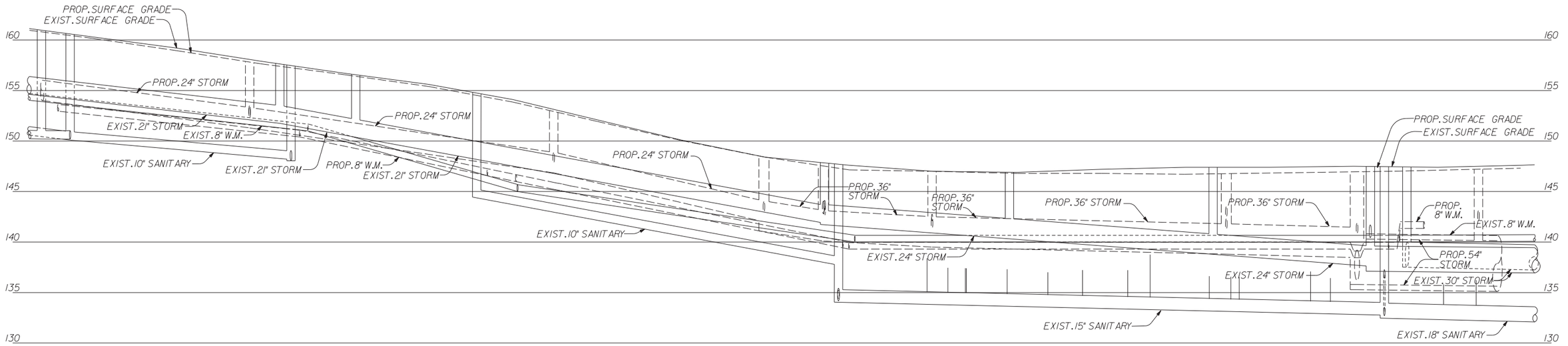
CONTRACT NO. STATE CONT
ACCOUNT NO. P1529N
CONTRACTOR
INSPECTOR
AS-BUILT ENT'D BY
AS-BUILT CHK'D BY
GIS ENTERED BY
SCALE: HOR. 1"=60' VERT. 1"=10'
SYSTEM NO. SS-13
¼ SEC. NO. 453

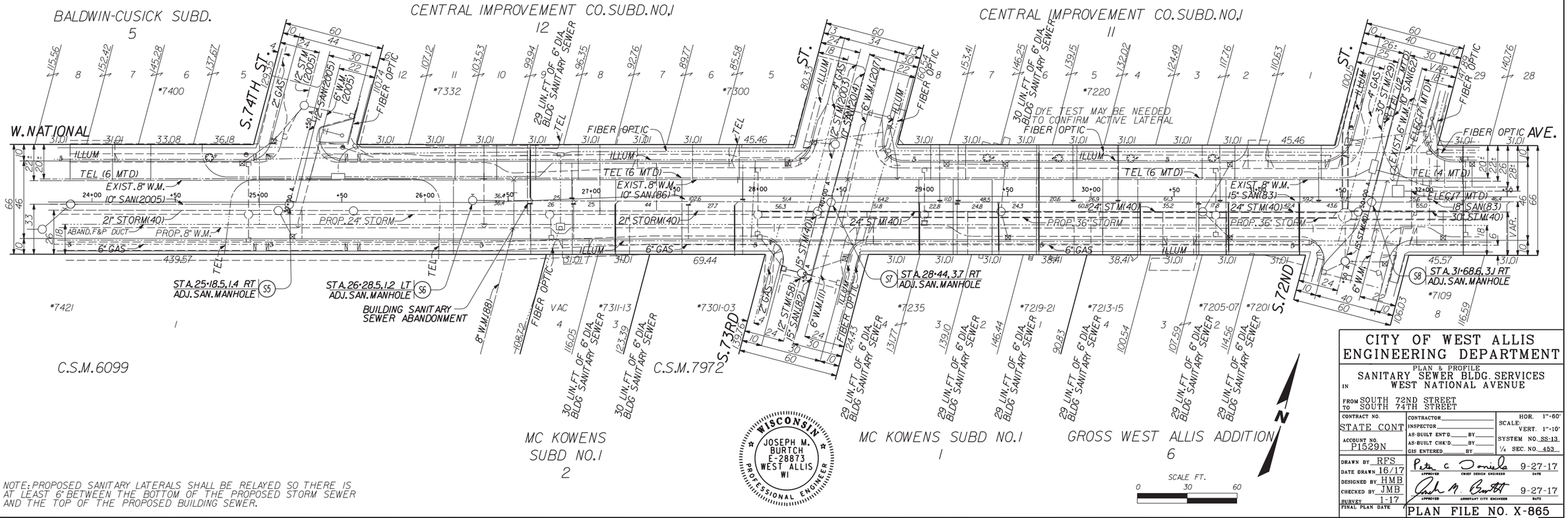
DRAWN BY HMB
DATE DRAWN 16/17
DESIGNED BY HMB
CHECKED BY JMB
SURVEY 1-17
FINAL PLAN DATE

Peter C Daniels APPROVED CHIEF DESIGN ENGINEER 9-27-17 DATE
Joseph M. Burtch APPROVED ASSISTANT CITY ENGINEER 9-27-17 DATE

PLAN FILE NO. S-1590

PROJECT NO: 2410-00-78 | HWY: W. NATIONAL AVE. | COUNTY: MILWAUKEE | SANITARY SEWER | SHEET 56





NOTE: PROPOSED SANITARY LATERALS SHALL BE RELAYED SO THERE IS AT LEAST 6" BETWEEN THE BOTTOM OF THE PROPOSED STORM SEWER AND THE TOP OF THE PROPOSED BUILDING SEWER.

WISCONSIN
JOSEPH M. BURTCH
E-28873
WEST ALLIS
WI
PROFESSIONAL ENGINEER

CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

PLAN & PROFILE
SANITARY SEWER BLDG. SERVICES
IN WEST NATIONAL AVENUE
FROM SOUTH 72ND STREET
TO SOUTH 74TH STREET

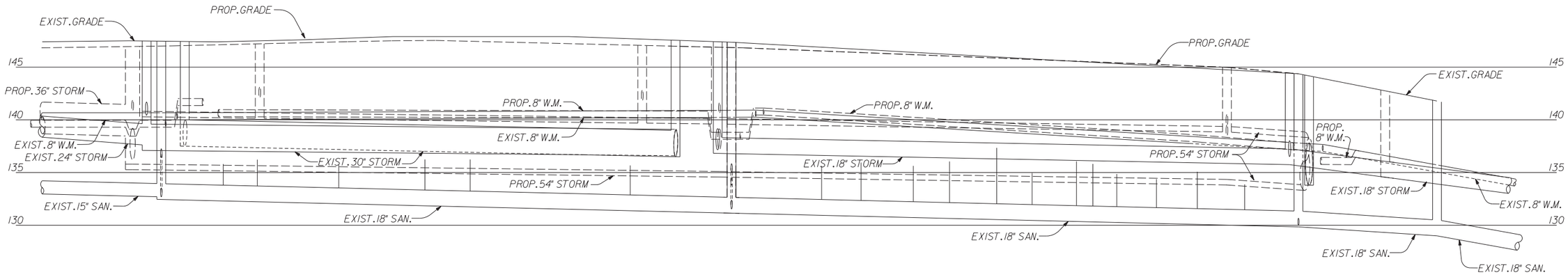
CONTRACT NO. STATE CONT	CONTRACTOR
ACCOUNT NO. P1529N	INSPECTOR
DRAWN BY RFS	AS-BUILT ENT'D. BY
DATE DRAWN 16/17	AS-BUILT CHK'D. BY
DESIGNED BY HMB	GIS ENTERED BY
CHECKED BY JMB	SURVEY 1-17
FINAL PLAN DATE	

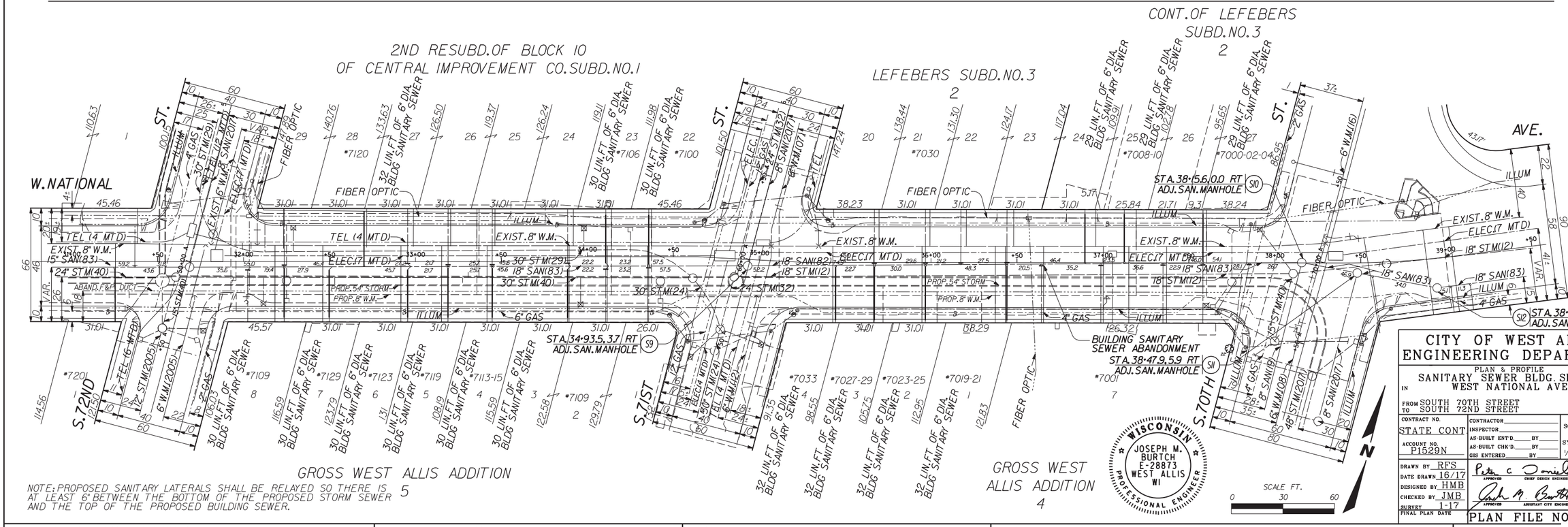
HOR. 1"=60'
SCALE:
VERT. 1"=10'
SYSTEM NO. SS-13
¼ SEC. NO. 453

Peter C. Daniels, CHIEF DESIGN ENGINEER — 9-27-17
John M. Burtt, ASSISTANT CITY ENGINEER — 9-27-17

PLAN FILE NO. X-865

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SANITARY SEWER	SHEET 57

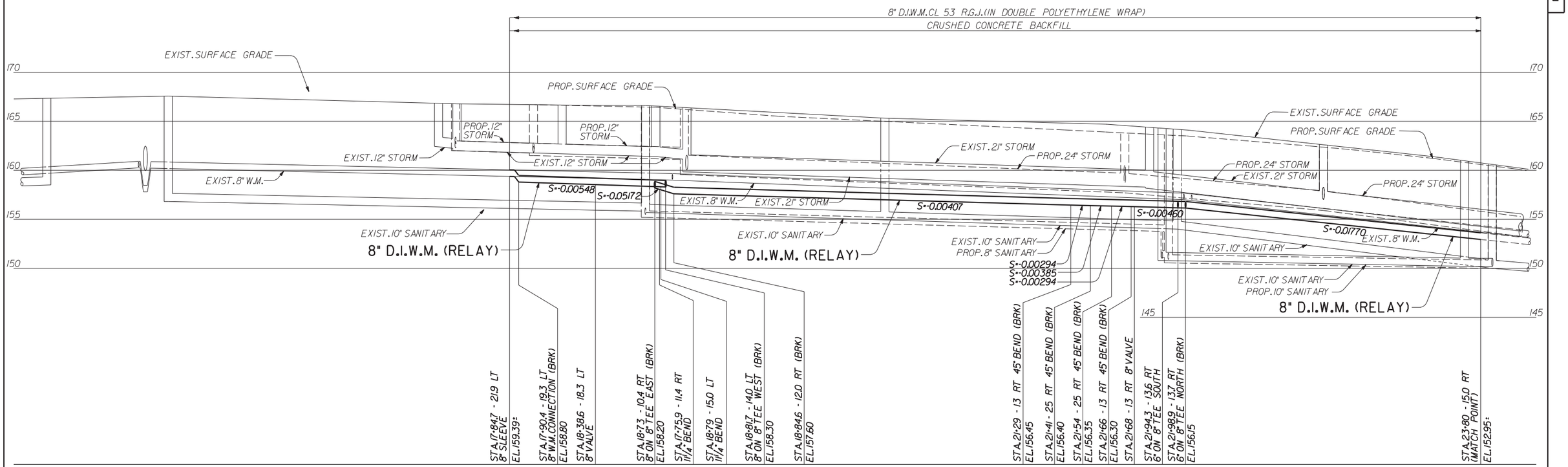


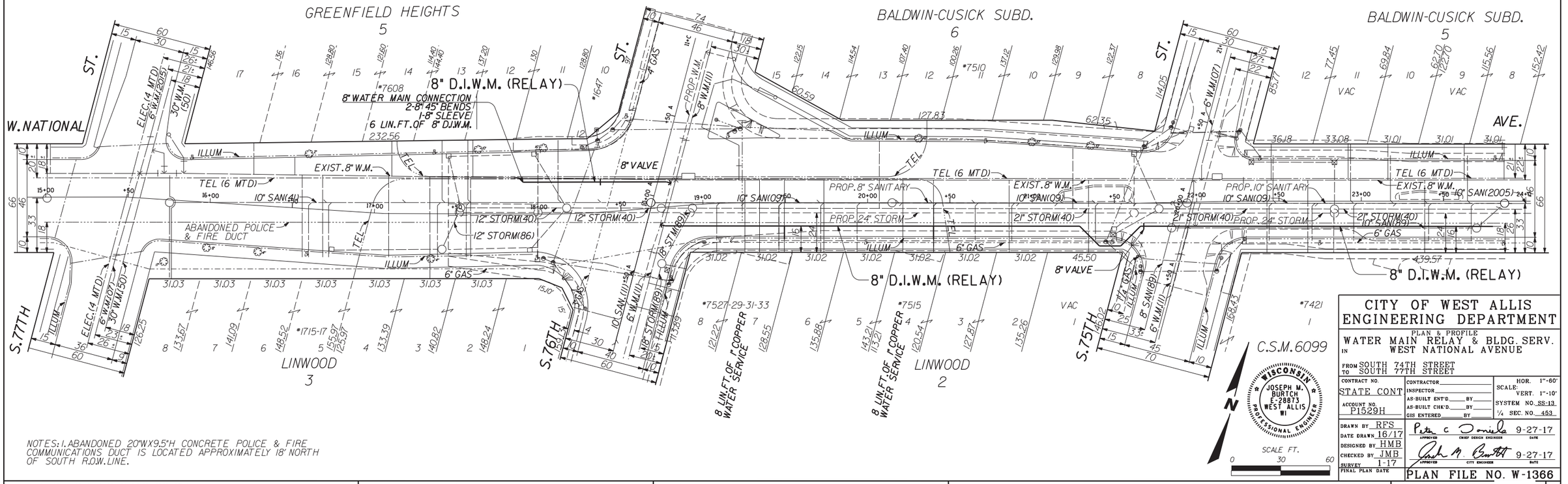


CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

PLAN & PROFILE
SANITARY SEWER BLDG. SERVICES
IN WEST NATIONAL AVENUE
FROM SOUTH 70TH STREET
TO SOUTH 72ND STREET

CONTRACT NO. STATE CONT	CONTRACTOR	HOR. 1"=60'
ACCOUNT NO. P1529N	INSPECTOR	SCALE: VERT. 1"=10'
	AS-BUILT ENT'D BY	SYSTEM NO. SS-13
	AS-BUILT CHK'D BY	1/4 SEC. NO. 453
	GIS ENTERED BY	
DRAWN BY RFS	Peter C Daniels	9-27-17
DATE DRAWN 16/17	APPROVED CHIEF DESIGN ENGINEER	DATE
DESIGNED BY HMB	Joseph M Burtch	9-27-17
CHECKED BY JMB	APPROVED ASSISTANT CITY ENGINEER	DATE
SURVEY 1-17		
FINAL PLAN DATE	PLAN FILE NO. X-866	





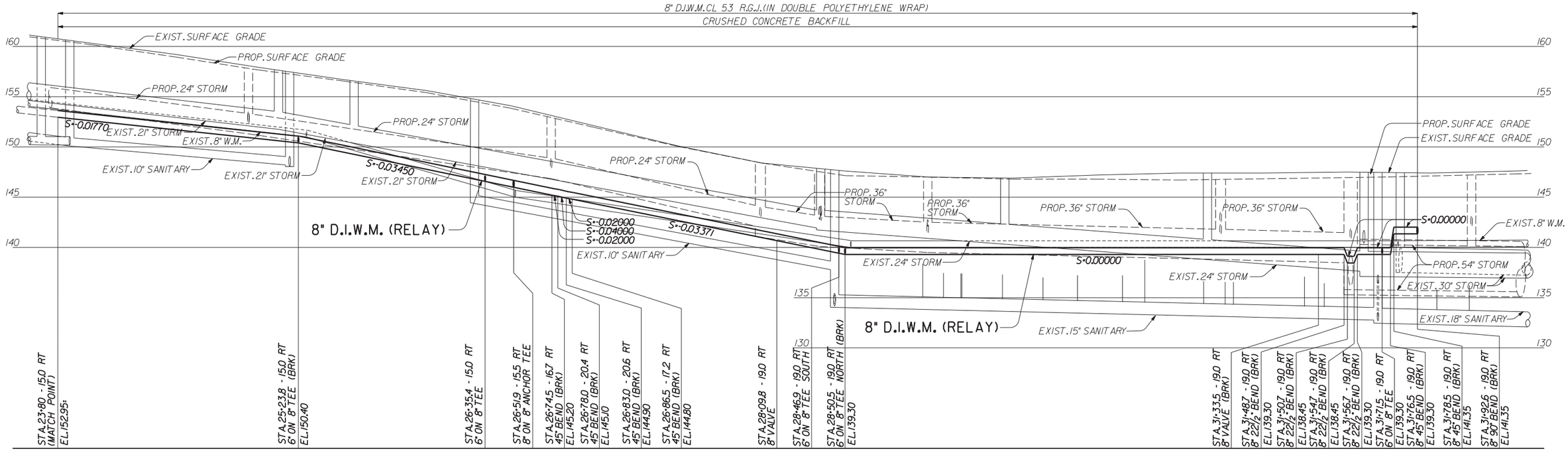
NOTES: 1. ABANDONED 20"WX9.5"H CONCRETE POLICE & FIRE COMMUNICATIONS DUCT IS LOCATED APPROXIMATELY 18' NORTH OF SOUTH R.O.W. LINE.

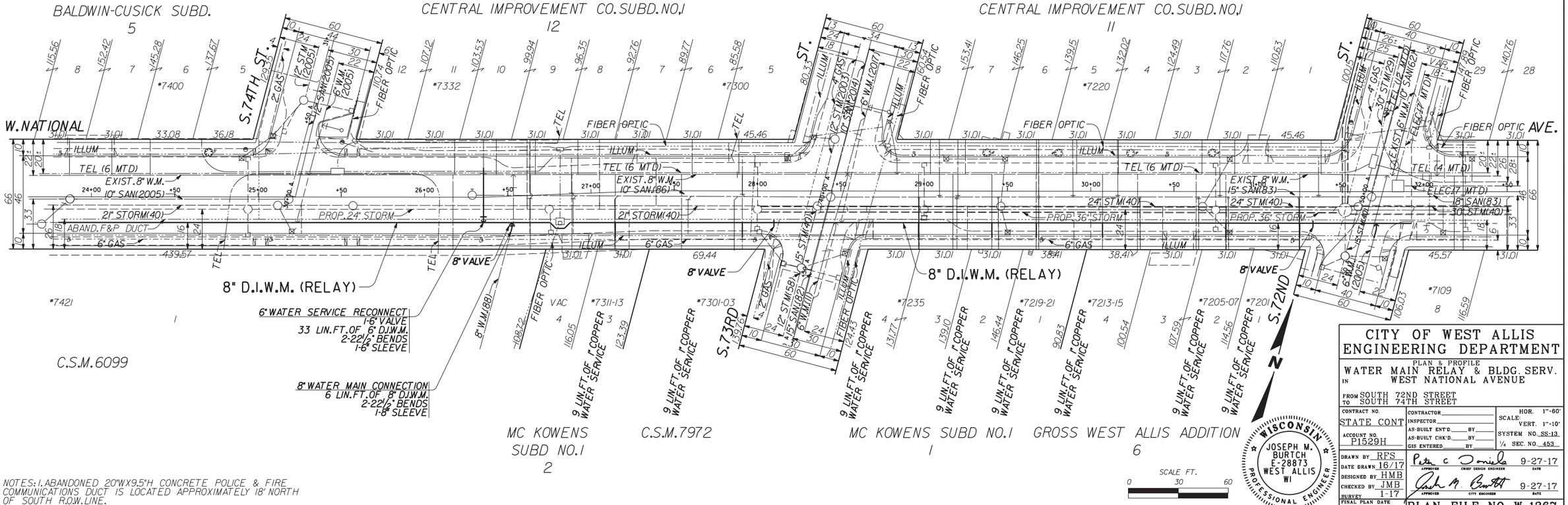
CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

PLAN & PROFILE
WATER MAIN RELAY & BLDG. SERV.
IN WEST NATIONAL AVENUE
FROM SOUTH 74TH STREET
TO SOUTH 77TH STREET

CONTRACT NO. STATE CONT	CONTRACTOR	HOR. 1"=60'
ACCOUNT NO. P1529H	INSPECTOR	SCALE: VERT. 1"=10'
	AS-BUILT ENT'D BY	SYSTEM NO. SS-13
	AS-BUILT CHK'D BY	¼ SEC. NO. 453
	GIS ENTERED BY	
DRAWN BY RFS		
DATE DRAWN 16/17	Peter C Daniels APPROVED CHIEF DESIGN ENGINEER	9-27-17 DATE
DESIGNED BY HMB		
CHECKED BY JMB	Joseph M. Burtch APPROVED CITY ENGINEER	9-27-17 DATE
SURVEY 1-17		
FINAL PLAN DATE	PLAN FILE NO. W-1366	

PROJECT NO: 2410-00-78 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | WATER MAIN | SHEET 59





NOTES: 1. ABANDONED 20"WX9.5"H CONCRETE POLICE & FIRE COMMUNICATIONS DUCT IS LOCATED APPROXIMATELY 18' NORTH OF SOUTH R.O.W. LINE.

WISCONSIN
JOSEPH M. BURTCH
E-28873
WEST ALLIS
WI
PROFESSIONAL ENGINEER

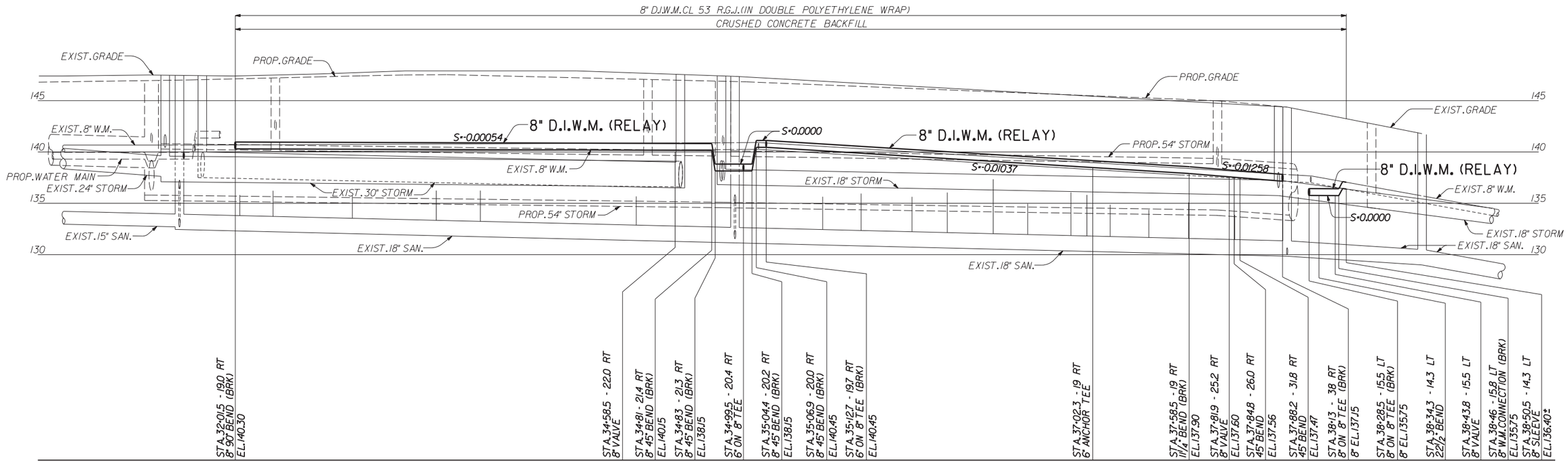
CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

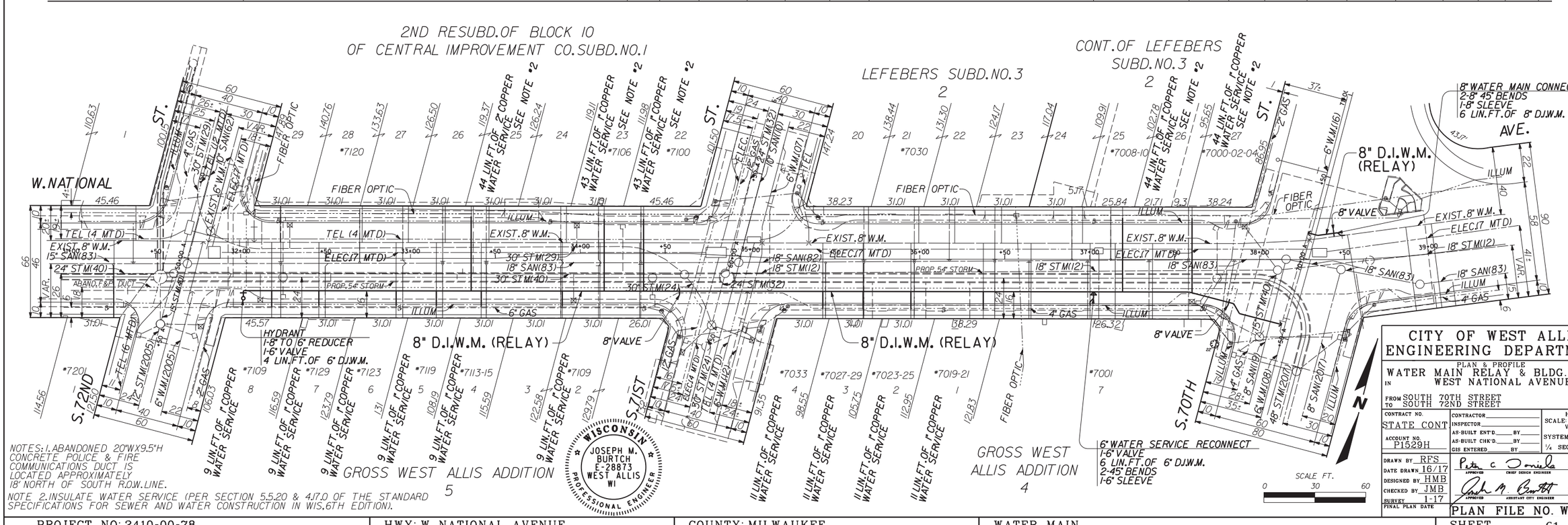
PLAN & PROFILE
WATER MAIN RELAY & BLDG. SERV.
IN WEST NATIONAL AVENUE
FROM SOUTH 72ND STREET
TO SOUTH 74TH STREET

CONTRACT NO. STATE CONT	CONTRACTOR	HOR. 1"=60'
ACCOUNT NO. P1529H	INSPECTOR	VERT. 1"=10'
	AS-BUILT ENT'D BY	SYSTEM NO. SS-13
	AS-BUILT CHK'D BY	¼ SEC. NO. 453
	GIS ENTERED BY	
DRAWN BY RFS	Peter C Daniels	9-27-17
DATE DRAWN 16/17	APPROVED CHIEF DESIGN ENGINEER	DATE
DESIGNED BY HMB	Joseph M. Burtch	9-27-17
CHECKED BY JMB	APPROVED CITY ENGINEER	DATE
SURVEY 1-17		
FINAL PLAN DATE		

PLAN FILE NO. W-1367

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	WATER MAIN	SHEET 60





NOTES: 1. ABANDONED 20'WX9.5'H CONCRETE POLICE & FIRE COMMUNICATIONS DUCT IS LOCATED APPROXIMATELY 18' NORTH OF SOUTH R.O.W. LINE.

NOTE 2. INSULATE WATER SERVICE (PER SECTION 5.5.20 & 417.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WIS. 6TH EDITION).

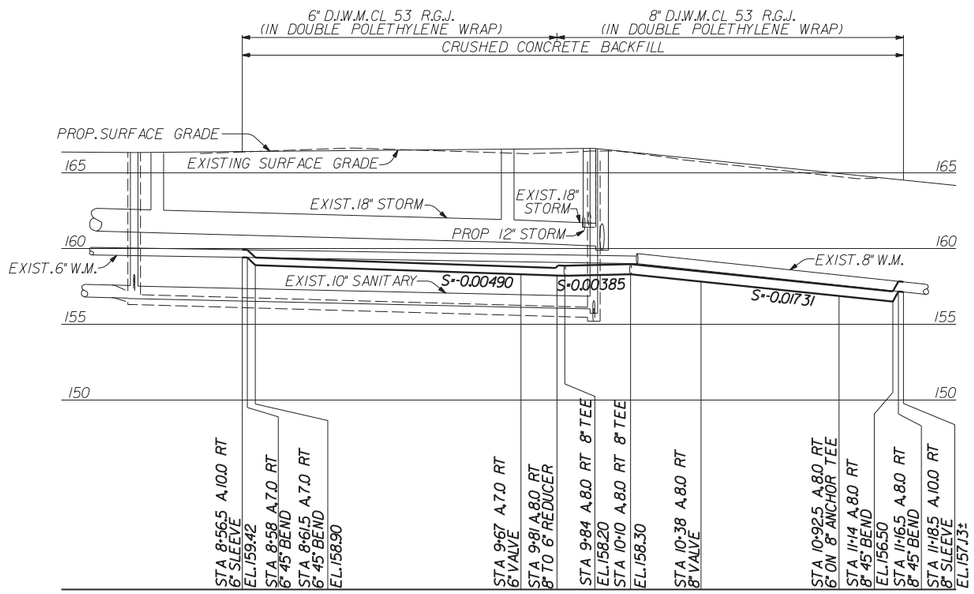
CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

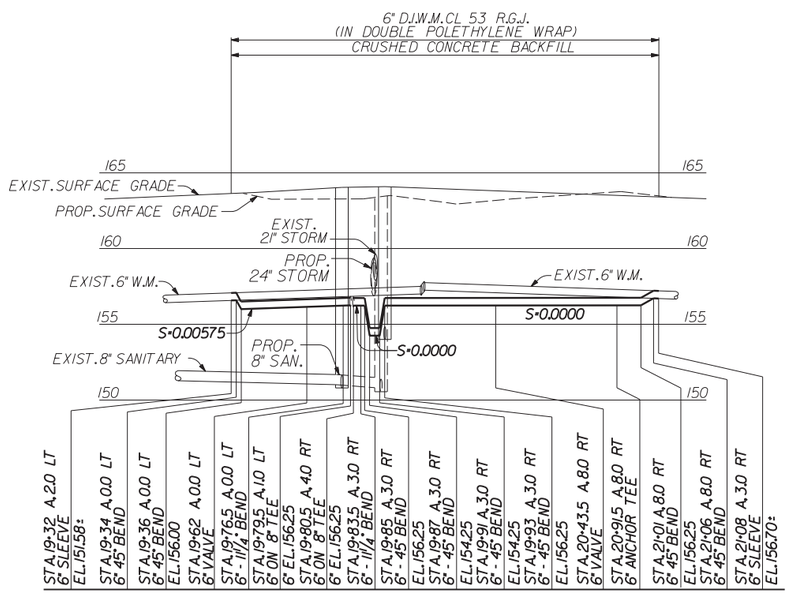
PLAN & PROFILE
WATER MAIN RELAY & BLDG. SERV.
IN WEST NATIONAL AVENUE
FROM SOUTH 70TH STREET
TO SOUTH 72ND STREET

CONTRACT NO. STATE CONT	CONTRACTOR	HOR. 1"=60'
ACCOUNT NO. P1529H	INSPECTOR	SCALE: VERT. 1"=10'
	AS-BUILT ENT'D BY	SYSTEM NO. SS-13
	AS-BUILT CHK'D BY	¼ SEC. NO. 453
	GIS ENTERED BY	
DRAWN BY RFS	Peter C Daniels	9-27-17
DATE DRAWN 16/17	APPROVED CHIEF DESIGN ENGINEER	DATE
DESIGNED BY HMB		
CHECKED BY JMB		9-27-17
SURVEY 1-17	APPROVED ASSISTANT CITY ENGINEER	DATE
FINAL PLAN DATE	PLAN FILE NO. W-1368	

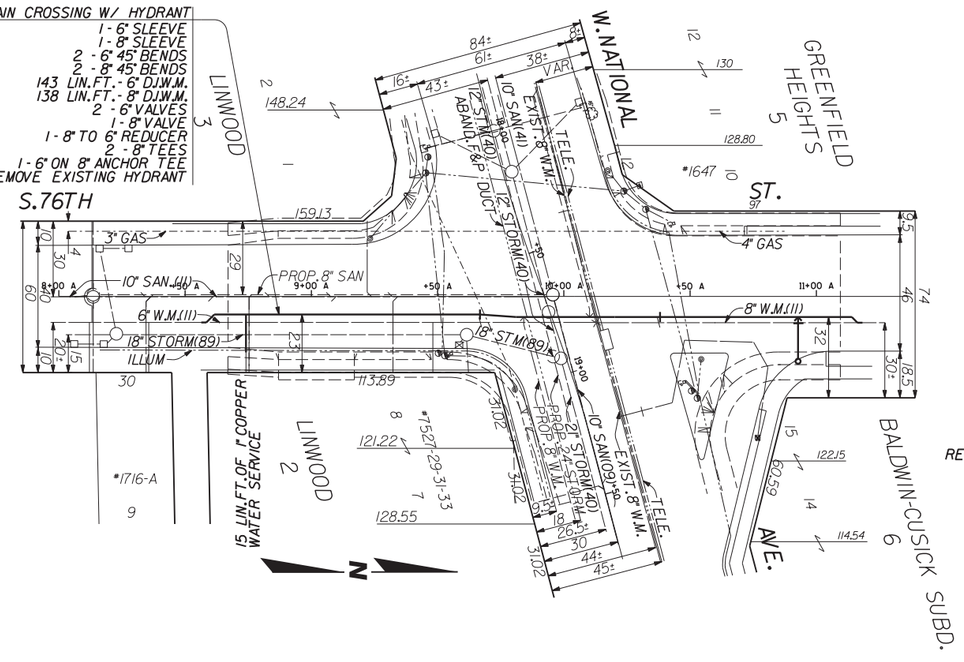
PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	WATER MAIN

SHEET 61

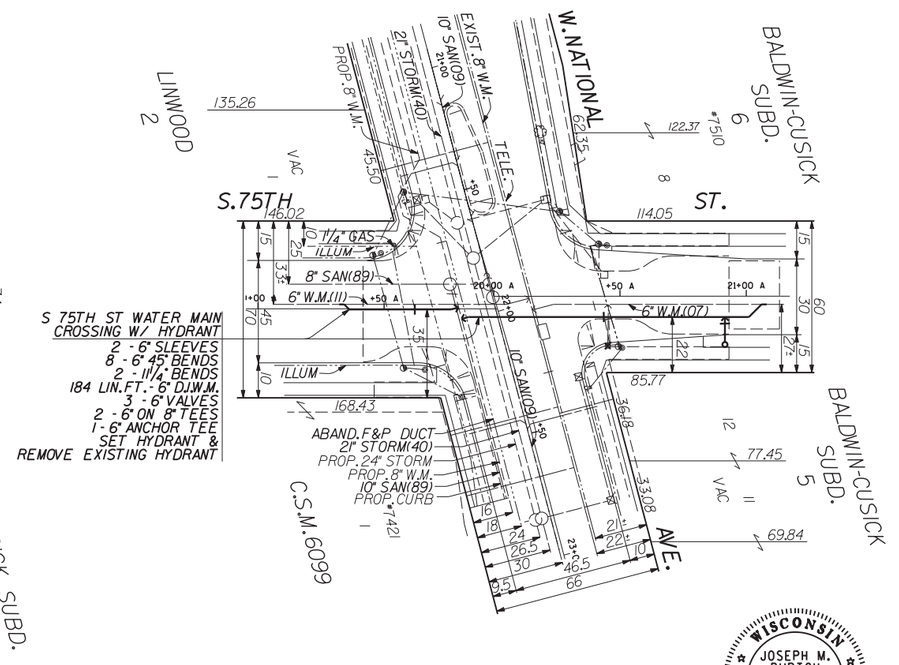




S 76TH ST WATER MAIN CROSSING W/ HYDRANT
1 - 6" SLEEVE
1 - 8" SLEEVE
2 - 6" 45° BENDS
2 - 8" 45° BENDS
143 LIN.FT. - 6" D.I.W.M.
138 LIN.FT. - 8" D.I.W.M.
2 - 6" VALVES
1 - 8" VALVE
1 - 8" TO 6" REDUCER
2 - 8" TEES
1 - 6" ON 8" ANCHOR TEE
SET HYDRANT & REMOVE EXISTING HYDRANT



S 75TH ST WATER MAIN CROSSING W/ HYDRANT
2 - 6" SLEEVES
8 - 6" 45° BENDS
2 - 11¼° BENDS
184 LIN.FT. - 6" D.I.W.M.
3 - 6" VALVES
2 - 6" ON 8" TEES
1 - 6" ANCHOR TEE
SET HYDRANT & REMOVE EXISTING HYDRANT

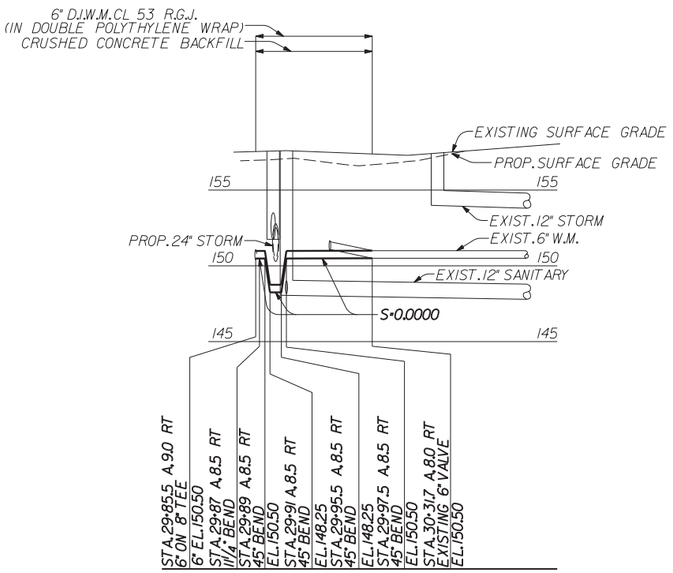


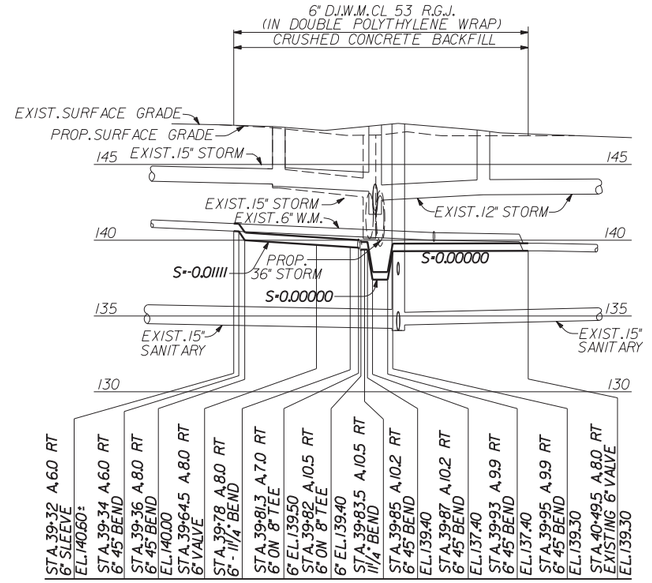
SCALE FT.
0 30 60

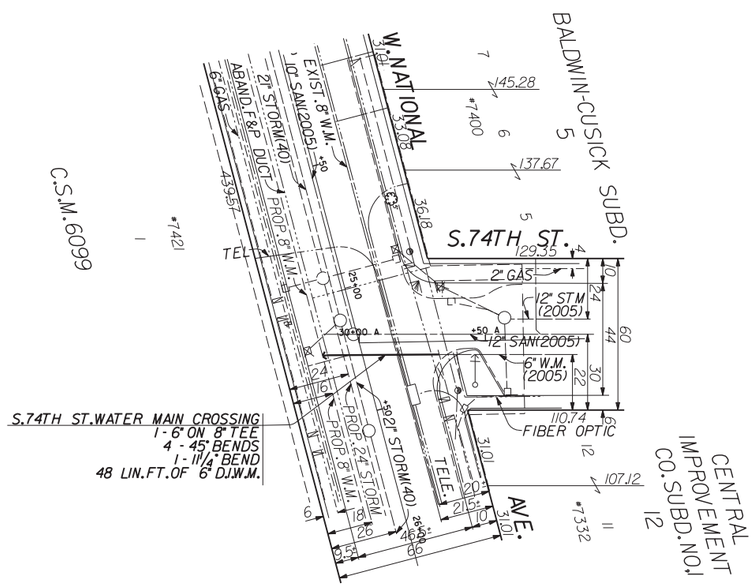
CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

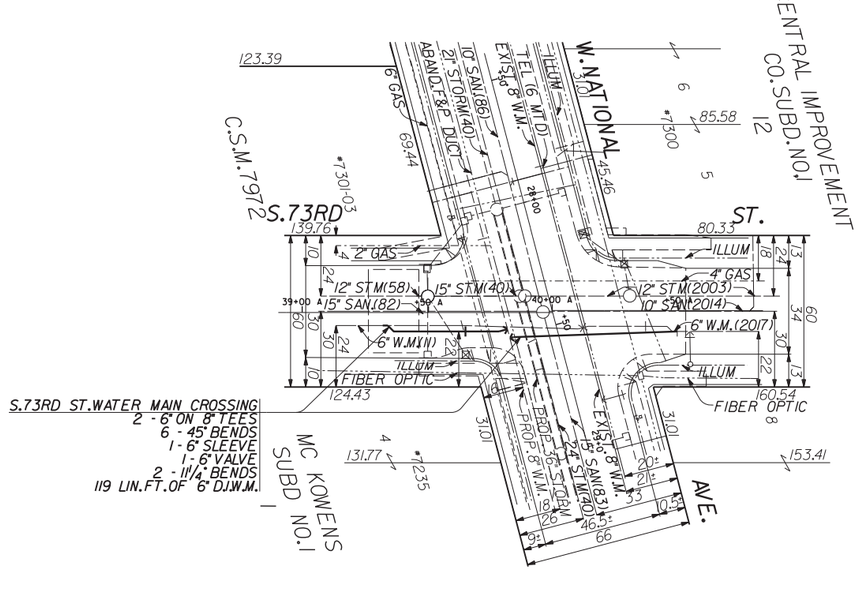
PLAN & PROFILE
WATER MAIN RELAY & BLDG. SERV.
IN SOUTH 75TH & 76TH STREET
AT WEST NATIONAL AVENUE

CONTRACT NO. STATE CONT	CONTRACTOR	HOR. 1"=60'
ACCOUNT NO. P1529H	INSPECTOR	SCALE: VERT. 1"=10'
	AS-BUILT ENT'D. BY	SYSTEM NO. SS-13
	AS-BUILT CHK'D. BY	¼ SEC. NO. 453
	GIS ENTERED BY	
DRAWN BY HMB	Peter C Daniels APPROVED CHIEF DESIGN ENGINEER	9-27-17 DATE
DATE DRAWN 16/17		
DESIGNED BY HMB		
CHECKED BY JMB	John M. Burtch APPROVED ASSISTANT CITY ENGINEER	9-27-17 DATE
SURVEY 1-17		
FINAL PLAN DATE	PLAN FILE NO. W-1369	







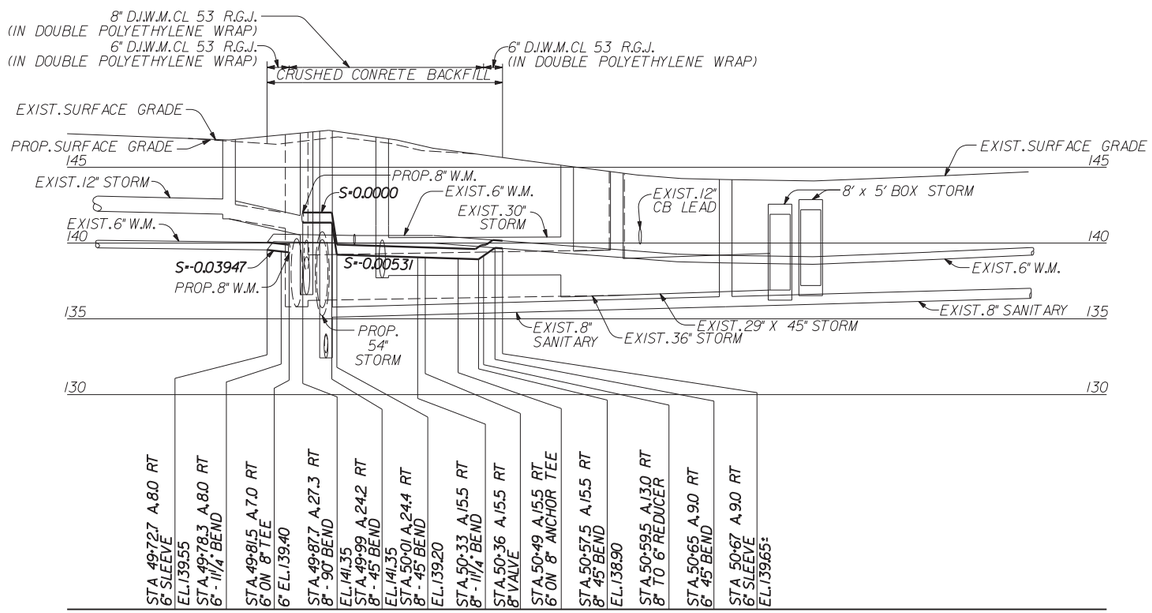


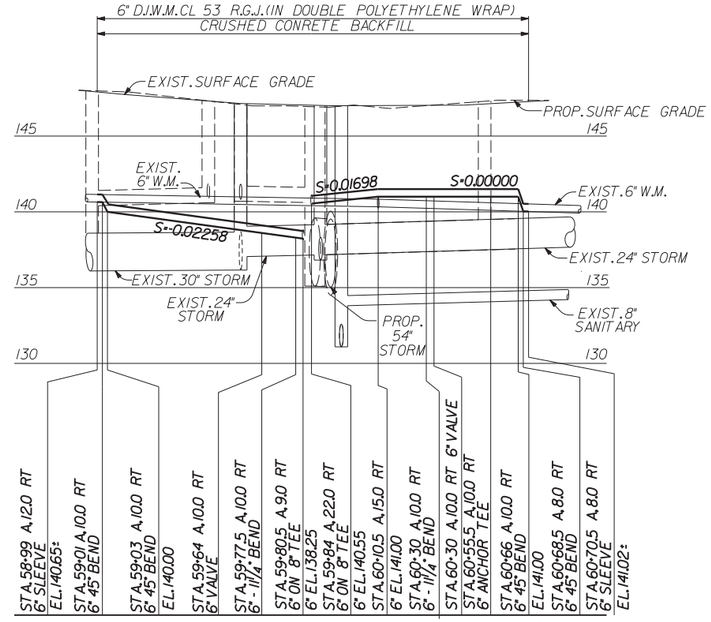
SCALE FT.
0 30 60

CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

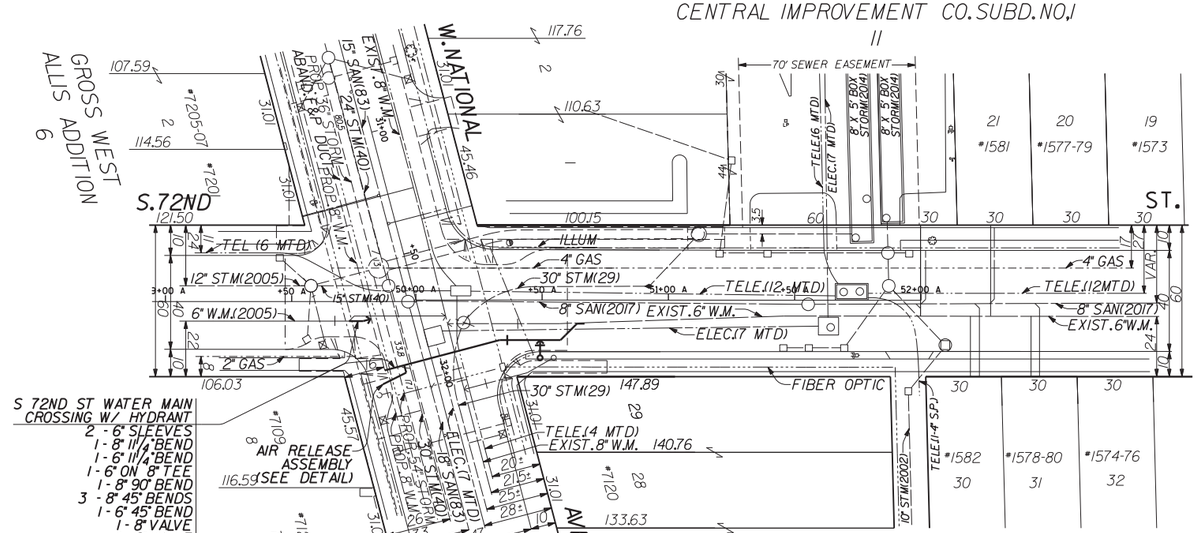
PLAN & PROFILE
WATER MAIN RELAY & BLDG. SERV.
IN SOUTH 74TH & 73RD STREET
AT WEST NATIONAL AVENUE

CONTRACT NO. STATE CONT	CONTRACTOR	HOR. 1"=60'
ACCOUNT NO. P1529H	INSPECTOR	SCALE: VERT. 1"=10'
	AS-BUILT ENT'D. BY	SYSTEM NO. SS-13
	AS-BUILT CHK'D. BY	1/4 SEC. NO. 453
	GIS ENTERED BY	
DRAWN BY HMB	Peter C Daniels APPROVED CHIEF DESIGN ENGINEER	9-27-17 DATE
DATE DRAWN 16/17		
DESIGNED BY HMB		
CHECKED BY JMB	Joseph M. Burtch APPROVED ASSISTANT CITY ENGINEER	9-27-17 DATE
SURVEY 1-17		
FINAL PLAN DATE	PLAN FILE NO. W-1370	

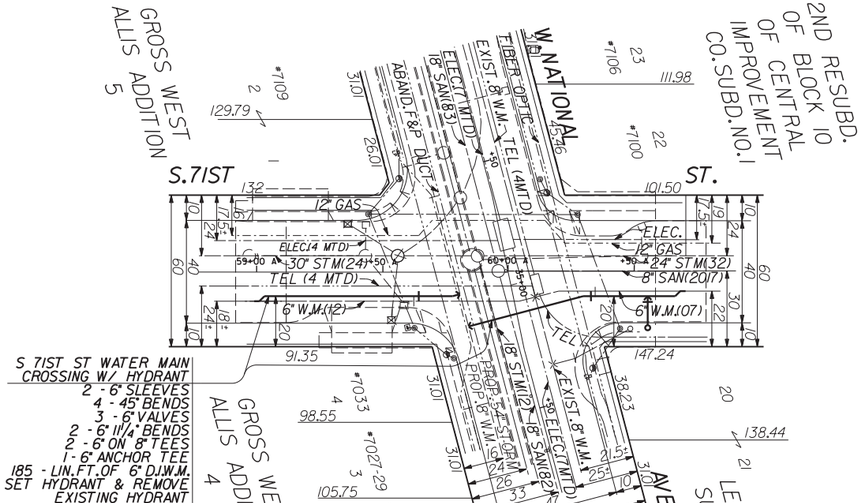




CENTRAL IMPROVEMENT CO.SUBD.NO.1

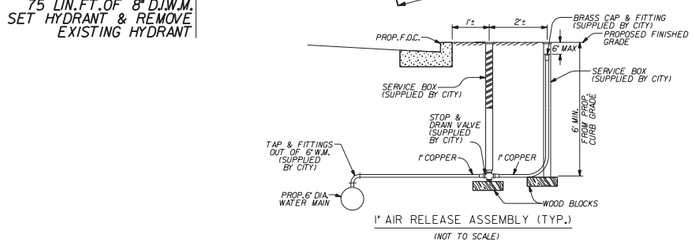


2ND RESUBD.OF BLOCK 10 OF CENTRAL IMPROVEMENT CO.SUBD.NO.1

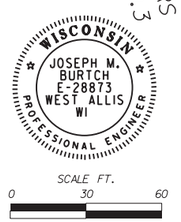


S 72ND ST WATER MAIN CROSSING W/ HYDRANT
2 - 6" SLEEVES
1 - 8" 11¼° BEND
1 - 6" 11¼° BEND
1 - 6" ON 8" TEE
1 - 8" 90° BEND
3 - 8" 45° BENDS
1 - 6" 45° BEND
1 - 8" VALVE
1 - 6" VALVE
1 - 6" ON 8" ANCHOR TEE
26 LIN.FT.OF 6" D.I.W.M.
75 LIN.FT.OF 8" D.I.W.M.
SET HYDRANT & REMOVE EXISTING HYDRANT

S 71ST ST WATER MAIN CROSSING W/ HYDRANT
2 - 6" SLEEVES
4 - 45° BENDS
3 - 6" VALVES
2 - 6" 11¼° BENDS
2 - 6" ON 8" TEES
1 - 6" ANCHOR TEE
185 - LIN.FT.OF 6" D.I.W.M.
SET HYDRANT & REMOVE EXISTING HYDRANT



1" AIR RELEASE ASSEMBLY (TYP.)
(NOT TO SCALE)



SCALE FT.
0 30 60

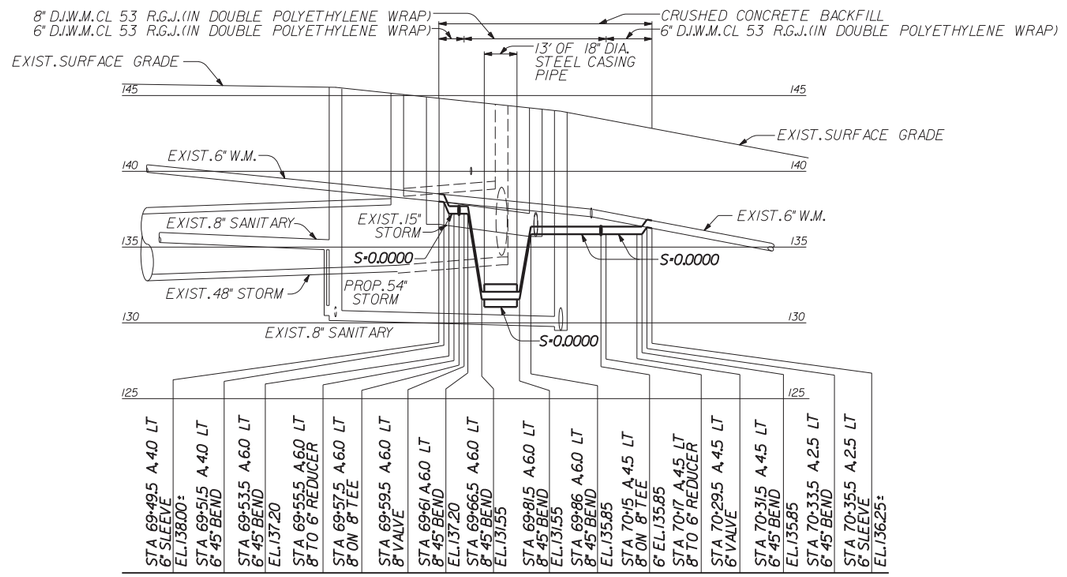
N

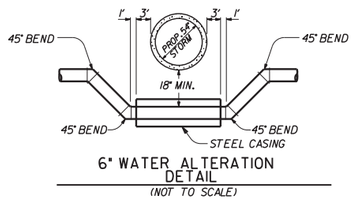
CITY OF WEST ALLIS ENGINEERING DEPARTMENT

PLAN & PROFILE
WATER MAIN RELAY & BLDG. SERV.
IN SOUTH 72ND & 71ST STREET
AT WEST NATIONAL AVENUE

CONTRACT NO. STATE CONT	CONTRACTOR	HOR. 1"=60'
ACCOUNT NO. P1529H	INSPECTOR	VERT. 1"=10'
	AS-BUILT ENT'D. BY	SYSTEM NO. SS-6
	AS-BUILT CHK'D. BY	¼ SEC. NO. 438, 439
	GIS ENTERED BY	
DRAWN BY HMB	Peter C Daniels APPROVED CHIEF DESIGN ENGINEER	9-27-17 DATE
DATE DRAWN 16/17		
DESIGNED BY HMB		
CHECKED BY JMB	Joseph M. Burtch APPROVED ASSISTANT CITY ENGINEER	9-27-17 DATE
SURVEY 1-17		
FINAL PLAN DATE	PLAN FILE NO. W-1371	

PROJECT NO: 2410-00-78 | HWY: W. NATIONAL AVE. | COUNTY: MILWAUKEE | WATER MAIN | SHEET 64





6" WATER ALTERATION DETAIL
(NOT TO SCALE)

NOTE: STATIONS MAY NEED TO BE ALTERED DEPENDING ON METHOD OF CONSTRUCTION OF CURVED STORM SEWER.

SCALE FT.
0 30 60

WISCONSIN
JOSEPH M. BURTCH
E-28873
WEST ALLIS
WI
PROFESSIONAL ENGINEER

CITY OF WEST ALLIS
ENGINEERING DEPARTMENT

PLAN & PROFILE
IN WATER MAIN RELAY & BLDG. SERV.
SOUTH 70TH STREET
AT WEST NATIONAL AVENUE

CONTRACT NO. STATE CONT	CONTRACTOR	HOR. 1"=60'
ACCOUNT NO P1529H	INSPECTOR	SCALE: VERT. 1"=10'
	AS-BUILT ENT'D. BY	SYSTEM NO. SS-13
	AS-BUILT CHK'D. BY	¼ SEC. NO. 453
	GIS ENTERED BY	
DRAWN BY HMB	Peter C Soniela APPROVED CHIEF DESIGN ENGINEER	9-27-17 DATE
DATE DRAWN 16/17		
DESIGNED BY HMB		
CHECKED BY JMB	APPROVED ASSISTANT CITY ENGINEER	9-27-17 DATE
SURVEY 1-17		
FINAL PLAN DATE	PLAN FILE NO. W-1372	

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	WATER MAIN	SHEET 65

NOTES:
1. REFER TO EROSION CONTROL PLANS FOR ALL SOD LAWN AREAS.
2. DETAIL CALL-OUTS IN LEGEND REFER TO PLANTING DETAILS.

LEGEND

- SHADE TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS -PLANT BULBS @ 3 PER GRASS (TYP) (1)
- ROADWAY LIGHT FIXTURES - SEE ELECTRICAL
- PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP) (1)

BEGIN PROJECT
STA. 17+45.00

S. 76TH STREET

12-SPT/36-TFA
2-SPM
1-CCB
18-GRR/54-NDM
6-HPB
12-SPT/36-TFA

1"IP

W. NATIONAL AVENUE

MATCH LINE STA. 20+00

17+00 +50 18+00 +50 19+00 +50 20

11+00 4 +50 4 10+00 4 +50 4

MH

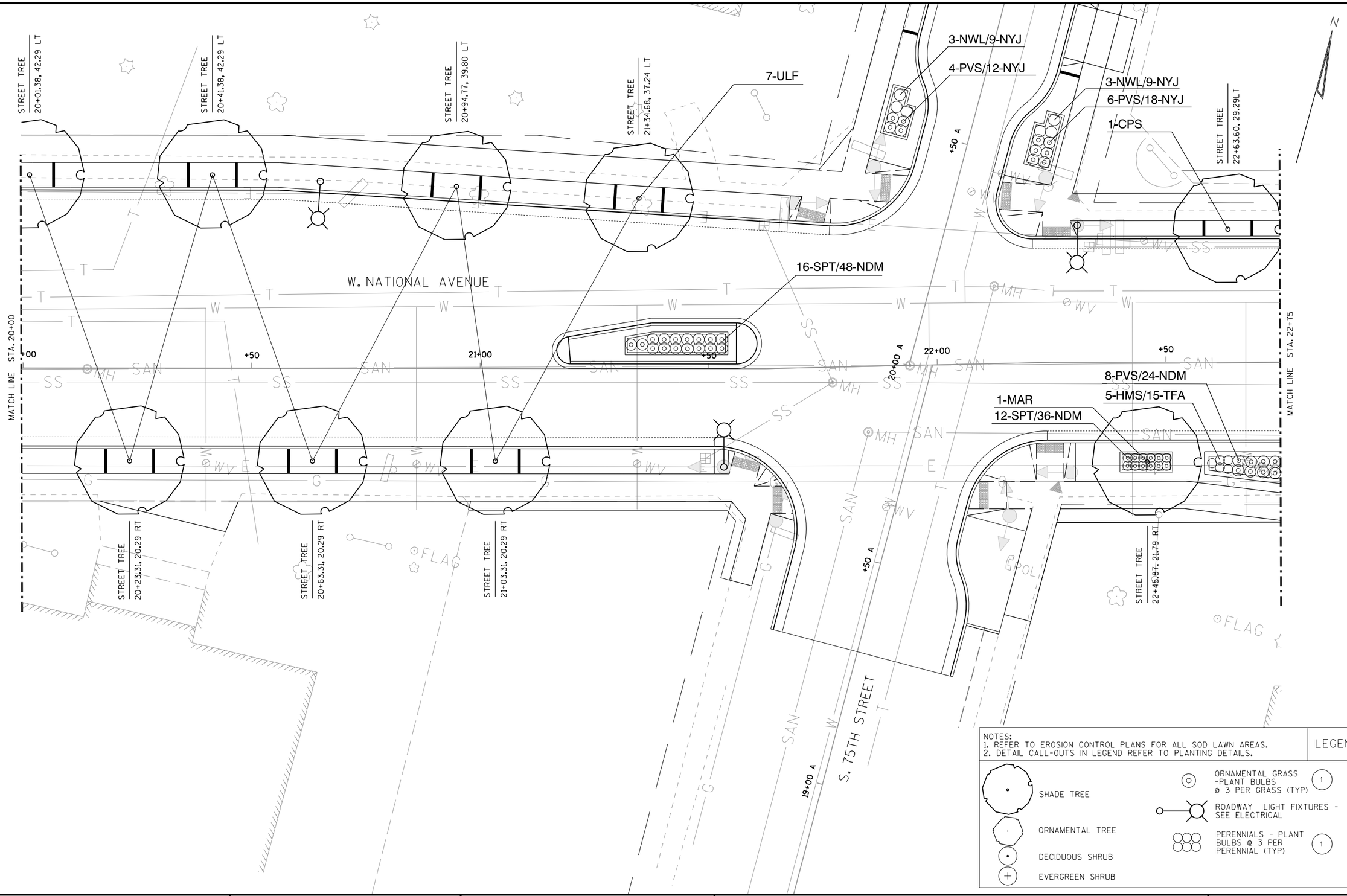
N

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 66	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\023101_pl.dgn PLOT DATE : 9/28/2017 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 42

2



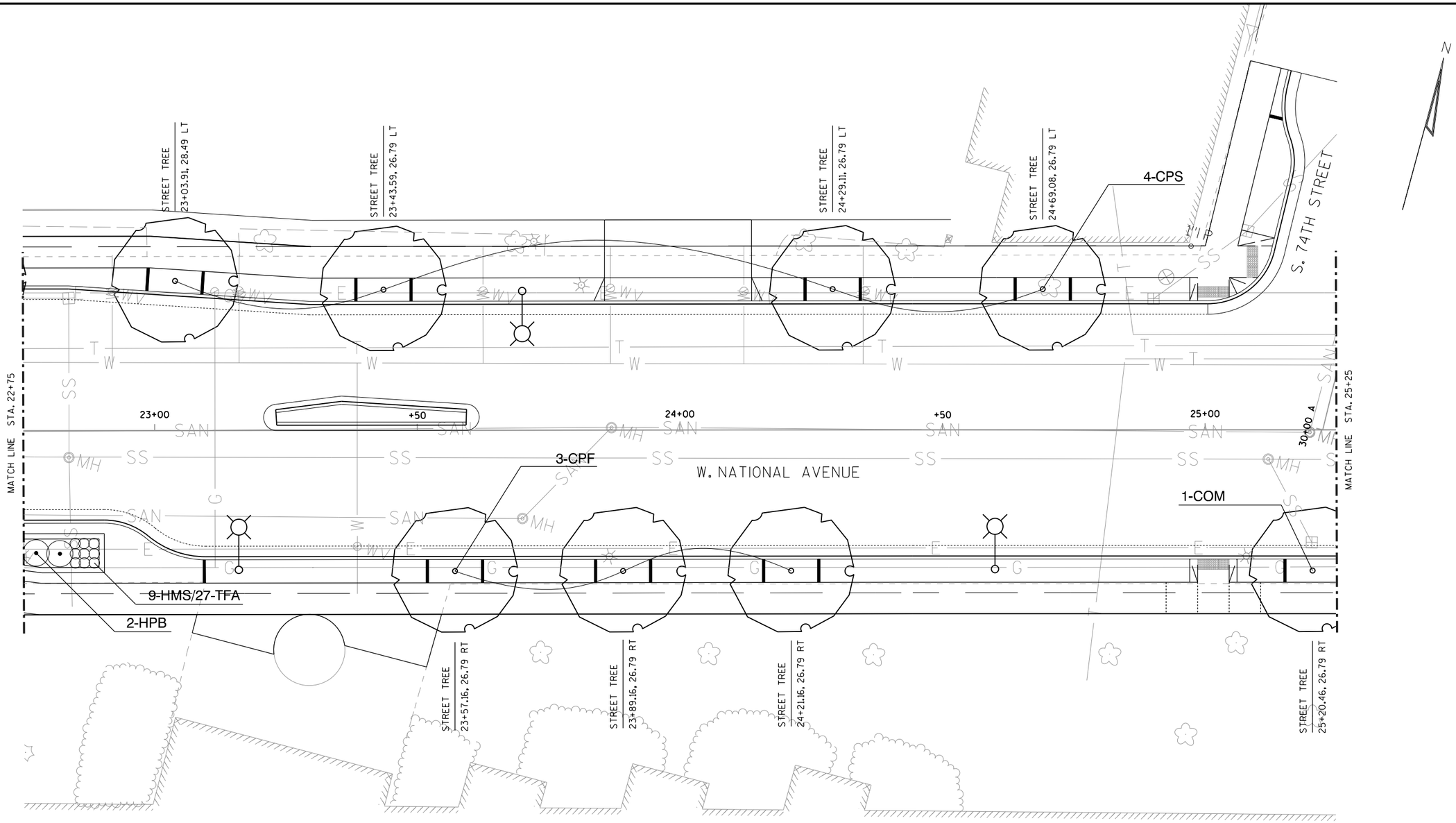
NOTES:
1. REFER TO EROSION CONTROL PLANS FOR ALL SOD LAWN AREAS.
2. DETAIL CALL-OUTS IN LEGEND REFER TO PLANTING DETAILS.

LEGEND

- SHADE TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS -PLANT BULBS @ 3 PER GRASS (TYP) (1)
- ROADWAY LIGHT FIXTURES - SEE ELECTRICAL
- PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP) (1)

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 67	E

2



NOTES:
1. REFER TO EROSION CONTROL PLANS FOR ALL SOD LAWN AREAS.
2. DETAIL CALL-OUTS IN LEGEND REFER TO PLANTING DETAILS.

LEGEND

- SHADE TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS -PLANT BULBS @ 3 PER GRASS (TYP) (1)
- ROADWAY LIGHT FIXTURES - SEE ELECTRICAL
- PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP) (1)

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 68	E

2

S. 74TH STREET

+50

MATCH LINE STA. 25+25

MATCH LINE STA. 27+75

+50

26+00

+50

27+00

+50

W. NATIONAL AVENUE

STREET TREE
25+84.02, 26.79 LT

4-GBP

3-RRD

12-HMH/36-NYJ

STREET TREE
27+01.64, 21.88 LT

10-SPT/30-NDM

3-COM

16-CAK

6-GRR

STREET TREE
25+66.02, 26.79 RT

STREET TREE
26+10.00, 26.79 RT

STREET TREE
26+54.24, 26.79 RT

6-HHP

3" THICK SHREDDED HARDWOOD BARK MULCH AT PLANT BED - SEE SPV'S. MAINTAIN 18" CLEAR BARK MULCH AREA ALONG EDGE OF PAVING

STREET TREE
27+19.06, 26.79 RT

STREET TREE
27+60.00, 26.79 RT

1"IP

1"IP

N

NOTES:
1. REFER TO EROSION CONTROL PLANS FOR ALL SOD LAWN AREAS.
2. DETAIL CALL-OUTS IN LEGEND REFER TO PLANTING DETAILS.

LEGEND

SHADE TREE

ORNAMENTAL TREE

DECIDUOUS SHRUB

EVERGREEN SHRUB

ORNAMENTAL GRASS -PLANT BULBS @ 3 PER GRASS (TYP) (1)

ROADWAY LIGHT FIXTURES - SEE ELECTRICAL

PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP) (1)

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 69	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\023104_pl.dgn PLOT DATE : 9/28/2017 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 42

2

1-NWL/4-NYJ
4-SPT/12-NYJ
4-QRL
STREET TREE 29+31.56, 21.29 LT
STREET TREE 29+71.56, 21.29 LT
STREET TREE 30+11.56, 21.29 LT
STREET TREE 30+68.56, 21.29 LT
N
MATCH LINE STA. 27+75
28+00
+50
29+00
+50
30+00
+50
MATCH LINE STA. 29+75
W. NATIONAL AVENUE
2-ZSM
10-NWL/30-TFA
4-PVS/12-NDM
10-HMS/30-NDM
STREET TREE 29+93.73, 26.58 RT
STREET TREE 30+33.73, 26.58 RT
S. 73RD STREET

NOTES:
1. REFER TO EROSION CONTROL PLANS FOR ALL SOD LAWN AREAS.
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LEGEND

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- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS -PLANT BULBS @ 3 PER GRASS (TYP) (1)
- ROADWAY LIGHT FIXTURES - SEE ELECTRICAL
- PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP) (1)

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 70	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\023105_pl.dgn
PLOT DATE : 9/28/2017
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 42

2

N

W. NATIONAL AVENUE

S. 72ND STREET

MATCH LINE STA. 30+75

MATCH LINE STA. 33+75

1-QRL

STREET TREE
31+22.77, 21.29 LT

6-ULR

STREET TREE
33+00.45, 26.29 LT

STREET TREE
33+40.49, 26.29 LT

1-ZSM

STREET TREE
30+84.55, 26.58 RT

STREET TREE
32+31.43, 26.58 RT

STREET TREE
32+71.43, 26.58 RT

STREET TREE
33+28.43, 26.58 RT

STREET TREE
33+66.79, 27.70 RT

31+00 +50 32+00 +50 33+00 +50

49+00 A 50+00 A +50 A +50 A

NOTES:
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2. DETAIL CALL-OUTS IN LEGEND REFER TO PLANTING DETAILS.

LEGEND

- SHADE TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS -PLANT BULBS @ 3 PER GRASS (TYP) (1)
- ROADWAY LIGHT FIXTURES - SEE ELECTRICAL
- PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP) (1)

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 71	E

2

1-CPF

2-ULR

2-NWL/6-NYJ

4-PVS/12-NYJ

5-GTD

STREET TREE 34+09.72, 20.16 LT

STREET TREE 34+48.94, 19.79 LT

STREET TREE 35+81.00, 25.08 LT

STREET TREE 36+21.00, 25.08 LT

STREET TREE 34+04.50

STREET TREE 35+75.00, 29.08 RT

STREET TREE 36+15.00, 29.08 RT

STREET TREE 36+50.00, 29.08 RT

MATCH LINE STA. 33+75

MATCH LINE STA. 36+75

W. NATIONAL AVENUE

S. 71ST STREET

34+00

+50

35+00

36+00

60+00 Δ

+50 Δ

59+00 Δ

NOTES:
1. REFER TO EROSION CONTROL PLANS FOR ALL SOD LAWN AREAS.
2. DETAIL CALL-OUTS IN LEGEND REFER TO PLANTING DETAILS.

LEGEND

SHADE TREE

ORNAMENTAL TREE

DECIDUOUS SHRUB

EVERGREEN SHRUB

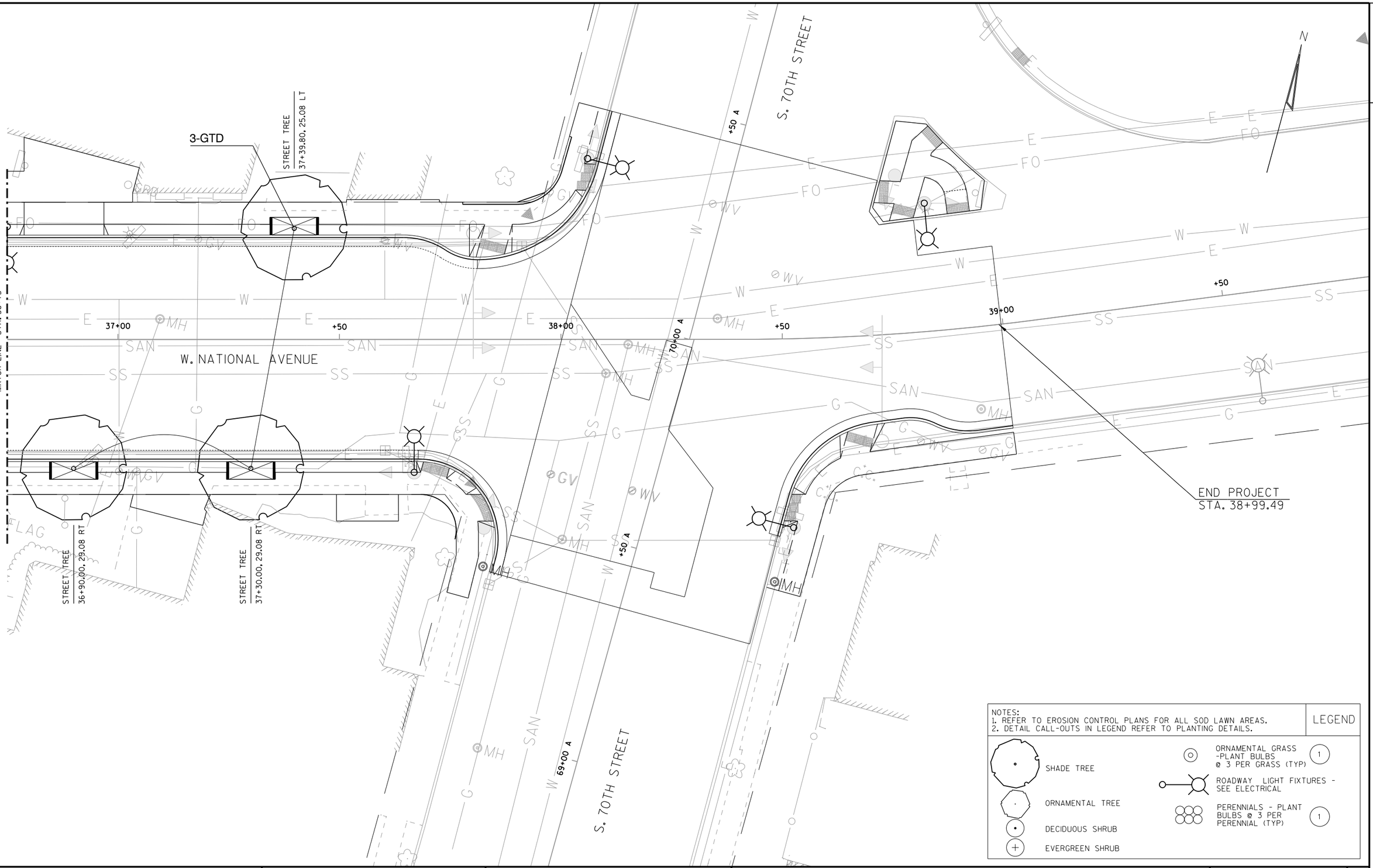
ORNAMENTAL GRASS -PLANT BULBS @ 3 PER GRASS (TYP) (1)

ROADWAY LIGHT FIXTURES - SEE ELECTRICAL

PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP) (1)

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 72	E

2



NOTES:
1. REFER TO EROSION CONTROL PLANS FOR ALL SOD LAWN AREAS.
2. DETAIL CALL-OUTS IN LEGEND REFER TO PLANTING DETAILS.

LEGEND

- SHADE TREE
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- PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP) (1)

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 73	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\023108_pl.dgn
PLOT DATE : 9/28/2017
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 42

PLANT DATA CHART

PLANT DATA CHART

SYMBOL	COMMON NAME	SCIENTIFIC NAME	ANS TYPE	MATURE HEIGHT	SIZE WHEN PLANTED	ROOT CONDITION	MINIMUM SIZE BALL/POT ROOT DIAM.	BALL/POT ROOT DEPTH	PLANT HOLE DIAM.	PLANT HOLE DEPTH	BRACE OR GUY	FERTILIZER UNITS REQ'D	RODENT PROTECTION REQ'D	MULCH RING DIAM.	SPACING
	LARGE DECIDUOUS TREES														
ULF	ELM, FONTIER	ULMUS 'FRONTIER'	1T	45'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
ULR	ELM, REGAL	ULMUS X 'REGAL'	1T	60'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
GBP	GINKGO, PRINCETON SENTRY	GINKGO BILOBA 'PRINCETON SENTRY'	1T	40'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
CPS	HACKBERRY, PRAIRIE SENTINEL	CELTIS OCCIDENTALIS 'PRAIRIE SENTINEL'	1T	45'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
GTD	HONEYLOCUST, STREETKEEPER	GLEDITSIA TRIACANTHOS INERMIS 'DRAVES'	1T	40'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
QRL	OAK, REGAL PRINCE ENGLISH	QUERCUS ROBUR X BICOLOR 'LONG'	1T	45'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
ZSM	ZELKOVA, MUSASHINO	ZELKOVA SERRATA 'MUSASHINO'	1T	45'	2.0" CAL	B&B	28"	16"	52"	16"	NO	4	NO	72"*	AS SHOWN
	SMALL DECIDUOUS TREES														
MAR	CRABAPPLE, ADIRONDACK	MALUS 'ADIRONDACK'	3T	25'	1.75" CAL.	B&B	24"	14"	48"	14"	NO	3	NO	72"*	AS SHOWN
COM	DOGWOOD, CORNELIANCHERRY	CORNUS MAS	3T	20'	1.75" CAL.	B&B	24"	14"	48"	14"	NO	3	NO	72"*	AS SHOWN
CPF	MUSCLEWOOD, FIRESPIRE	CARPINUS CAROLINIANA 'JN UPRIGHT'	3T	20'	1.75" CAL.	B&B	24"	14"	48"	14"	NO	3	NO	72"*	AS SHOWN
SPM	LILAC, CHINA SNOW PEKING	SYRINGA PEKINENSIS 'MORTON'	3T	25'	8'-10' HT CLUMP	B&B	24"	14"	48"	14"	NO	3	NO	72"*	AS SHOWN
CCB	REDBUD, BURGANDY HEARTS	CERCIS CANADENSIS 'GRESWAN'	3T	20'	8'-10' HT CLUMP	B&B	24"	14"	48"	14"	NO	3	NO	72"*	AS SHOWN
	DECIDUOUS SHRUBS														
HPB	HYDRANGEA, LITTLE LAMB	HYDRANGEA PANICULATA 'LITTLE LAMB'	3S	4'-6'	24" HT.	B&B	14"	9"	36"	14"	NO	2	NO	NONE	AS SHOWN
RRD	RUGOSA ROSE, DWARF PAVEMENT	ROSA RUGOSA 'DWARF PAVEMENT'	3S	3'	12" HT.	B&B	14"	9"	36"	14"	NO	2	NO	NONE	AS SHOWN
	PERENNIALS														
NWL	CATMINT, WALKER'S LOW	NEPETA RACEMOSA 'WALKER'S LOW'	1S	24"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
HMS	DAYLILY, STRAWBERRY CANDY	HEMEROCALLIS 'STRAWBERRY CANDY'	1S	26"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
GRR	GERANIUM, ROZANNE	GERANIUM 'ROZANNE'	1S	18"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
HMH	DAYLILY, HAPPY RETURNS	HEMEROCALLIS 'HAPPY RETURNS'	1S	24"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
HHP	DAYLILY, HYPERION	HEMEROCALLIS 'HYPERION'	1S	40"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
	ORNAMENTAL GRASSES														
CAK	FEATHER REED GRASS	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	1S	5'	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	36"
SPT	PRAIRIE DROPSEED, TARA DWARF	SPOROBOLIS HETEROLEPSIS 'TARA'	1S	24"	4" POT	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
PVS	SWITCHGRASS, SHENANDOAH	PANICUM VIRGATUM 'SHENANDOAH'	1S	30"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
	SPRING BULBS														
NDM	DAFFODIL, DUTCH MASTER	NARCISSUS 'DUTCH MASTER'	1S	16"	MIN. 4" CIRCUMF.	BULB	X	X	4"	6"	NO	1	NO	NONE	0 PER GRASS
NYJ	DAFFODIL, YELLOW JONQUILS	NARCISSUS 'YELLOW JONQUILS'	1S	16"	MIN. 4" CIRCUMF.	BULB	X	X	4"	6"	NO	1	NO	NONE	1 PER GRASS
TFA	TULIP, ALBERT HEIJN	TULIPA 'ALBERT HEIJN	1S	16"	MIN. 4" CIRCUMF.	BULB	X	X	4"	6"	NO	1	NO	NONE	2 PER GRASS

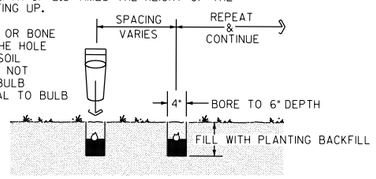
B&B: BALLED AND BURLAPED
CG: CONTAINER GROWN
HT: HEIGHT
BR: BARE ROOT
* MULCH RING ONLY APPLICABLE IF PLANTED OUTSIDE OF A PLANTING BED

CONTRACTOR TO TRIANGULATE BULBS BETWEEN ORNAMENTAL GRASSES AND PERENNIALS IN QUANTITIES NOTED ON LANDSCAPE PLAN (TYP)

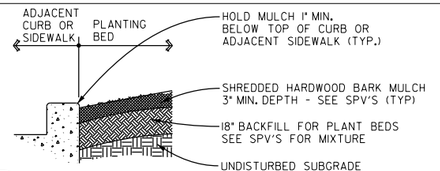
INSTALL BULBS IN FALL

SET PERENNIAL BULBS @ DEPTH OF 2.5 TIMES THE HEIGHT OF THE BULB W/ GROWTH TIP POINTING UP.

PROVIDE EITHER BULB FOOD OR BONE MEAL IN THE BOTTOM OF THE HOLE AND THEN COVER WITH TOPSOIL BEFORE PLANTING BULB. DO NOT PLANT BULB DIRECTLY ON BULB FOOD/BONE MEAL. INCIDENTAL TO BULB PLANTING.



1 FALL BULB PLANTING DETAIL



2 MULCH EDGE AT CURB OR SIDEWALK

LANDSCAPING NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING AWARE OF ALL RELATED EXISTING AND PROPOSED CONDITIONS, UTILITIES, PIPES AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR FIELD LOCATION OF ALL UNDERGROUND UTILITY LINES, INCLUDING DEPTHS, PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY AND ALL COST OR OTHER LIABILITIES INCURRED DUE TO DAMAGE OF SAID UTILITIES/STRUCTURES/ETC.

2. THE CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS APPARENT THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER FOR CLARIFICATION. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL LIABILITIES, INCLUDING NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH ALL PLANTING AND RELATED OPERATIONS.

   SEE STANDARD SPECIFICATIONS, SPV'S, AND DETAILS FOR PLANTING METHODS, REQUIREMENTS, SOIL TESTING, MATERIALS, EXECUTION AND PLANT PROTECTION, PLANT STAKING METHODS, PLANT PIT DIMENSIONS, BACKFILL AND OTHER RELATED REQUIREMENTS.

4. THE ACCEPTABLE TOLERANCES FOR THIS PROJECT ARE MINIMAL AND SPECIFIC LAYOUT IS REQUIRED AS SHOWN ON THE LAYOUT, PLANTING, AND OTHER PLANS. PLANTS SHALL BE SPACED AS PER PLANS.

5. PLANT NAMES ARE ABBREVIATED ON THE DRAWINGS. SEE PLANT LEGEND FOR SYMBOLS, ABBREVIATIONS, BOTANICAL/COMMON NAMES, SIZES, ESTIMATED QUANTITIES (IF GIVEN) AND OTHER REMARKS.

6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FURNISH ALL PLANT MATERIALS FREE OF PESTS OR PLANT DISEASES. IT IS THE CONTRACTOR'S OBLIGATION TO MAINTAIN AND WARRANTY ALL PLANT MATERIALS PER THE SPECIFICATIONS. ALL PLANTS SHALL BE SUBJECT TO OWNER'S APPROVAL PRIOR TO INSTALLATION.

7. THE CONTRACTOR SHALL FINE GRADE, RAKE AND BE RESPONSIBLE FOR POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES AND THROUGHOUT SITE, WITH ACCURATELY SET FLOW LINES. NO LOW SPOTS OR PONDING OF SURFACE WATER WILL BE ACCEPTED IN THE FINAL WORK. NO ROCKS OR DEBRIS WILL BE ACCEPTED. FINAL GRADE TOLERANCES ARE +/-0.1FOOT MAXIMUM.

8. WHERE PROVIDED, AREA TAKEOFFS AND PLANT QUANTITY ESTIMATES ARE FOR INFORMATION ONLY. CONTRACTOR IS RESPONSIBLE TO DO THEIR OWN QUANTITY TAKE-OFFS FOR ALL PLANT MATERIALS AND SIZES SHOWN ON PLANS. IN CASE OF ANY DISCREPANCIES, PLANS (PLANT SYMBOLS) TAKE PRECEDENCE OVER CALL-OUTS AND/OR "PLANT LIST".

9. COORDINATE INSTALLATION OF ALL PLANT MATERIAL WITH INSTALLATION OF ALL ADJACENT PAVEMENTS, PLANTER CURBING, SEAT WALLS, ROADWAY CURB & GUTTER AND RELATED STRUCTURES. ANY DAMAGE TO EXISTING IMPROVEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR.

10. THE CONTRACTOR IS RESPONSIBLE TO "RESTORE" ALL AREAS OF THE SITE, OR ADJACENT AREAS, WHERE DISTURBED. TURF AREAS DISTURBED SHALL BE RESTORED WITH NEW SOD.

11. THE LANDSCAPE CONTRACTOR SHALL TAKE ALL NECESSARY SCHEDULING AND OTHER PRECAUTIONS TO AVOID WINTER, CLIMATIC, OR OTHER DAMAGE TO PLANTS.

12. PLANT SUBSTITUTIONS BY THE LANDSCAPE CONTRACTOR WILL NOT BE PERMITTED UNLESS IT CAN BE VERIFIED UNEQUIVOCALLY THAT THE PLANTS ARE NOT AVAILABLE FROM NURSERY SOURCES LOCATED A REASONABLE DISTANCE FROM THE PROJECT SITE. IF THIS SHOULD HAPPEN, ANY PROPOSED PLANT SUBSTITUTION WILL REQUIRE PRIOR REVIEW AND APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT AND OWNER.

13. ALL PLANTING BEDS ARE TO BE EXCAVATED TO A DEPTH OF 24-INCHES AND REPLACED WITH BACKFILL FOR PLANT BEDS. SEE SPV'S.

LEGEND

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

- CONCRETE PAVERS AT ROADWAY TERRACE - SEE SPV'S (1) (5)
- CONCRETE PAVERS AT ROADWAY CORNERS - SEE SPV'S (1) (5)
- BACKFILL FOR PLANT BEDS, 24" TH. AND 3" TH. SHREDDED BARK MULCH - SEE SPV'S (8) (9)
- BACKFILL FOR STREET TREES AND 3" TH. SHREDDED BARK MULCH - SEE SPV'S (8) (9)
- STRUCTURAL SOIL EXTENTS AT STREET TREES - SEE SPV'S (8) (9)
- PRECAST CONCR. PLANTER CURB - SEE SPV'S (17)
- (B) BICYCLE RACK - SEE SPV'S
- (R)(T) TRASH & RECYCLABLE RECEPTACLES - SEE SPV'S, LEAVE 3" CLEAR BETWEEN UNITS' (TYP)
- BENCH - SEE SPV'S
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

(18) CONCRETE PAVER LAYOUT AT ROADWAY CORNER

BEGIN PROJECT
STA. 17+45.00

W. NATIONAL AVENUE

S. 76TH STREET

STA. 19+17.19 (5) CONC. HEADER

STA 19+50 STONE VENEER SEAT WALL (13)

STA. 19+60.62 SEAT WALL

STA. 19+88.73

STA. 19+93.38

STA. 19+81.38 (5) CONC. HEADER FOR CORNER PAVERS

CONCRETE TERRACE PAVERS TO ABUT CONCRETE HEADER FOR CORNER PAVERS

MATCH LINE STA. 20+00

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT & MATERIALS PLAN	SHEET 75 E

2

STA. 20+33.38
STA. 20+87.34
STA. 21+27.26
STA. 21+45.97
STA. 21+53.46
STA. 21+97.24
STA. 22+26.84
STA. 22+55.62
STA. 22+30.17
STA. 22+39.91
STA. 22+58.41
STA. 22+05.07
STA. 20+15.31
STA. 20+55.31
STA. 20+95.31

16 17 PRECAST CONCRETE PLANTER

9 12 STREET TREE IN 10'L. MULCH BED

W. NATIONAL AVENUE

MATCH LINE STA. 20+00

MATCH LINE STA. 22+75

20+00

+50

21+00

22+00

CONCRETE HEADER (TYP.) 5

16' (TYP)

8' (TYP)

6' 16.5' 1.9'

4' .5' .2'

12" 4' 2' 11.7' 3.5' 7.5' 6'

8.8' 2' 4' 12" 3' 9.5' 3.5'

2' 4.4' 2' 2.5' 3' .2'

9.7' 11.5' 7'

13 STA. 22+50 STONE VENEER SEAT WALL

18 CONCRETE PAVER LAYOUT AT ROADWAY CORNER

19+00 A

S. 75TH STREET

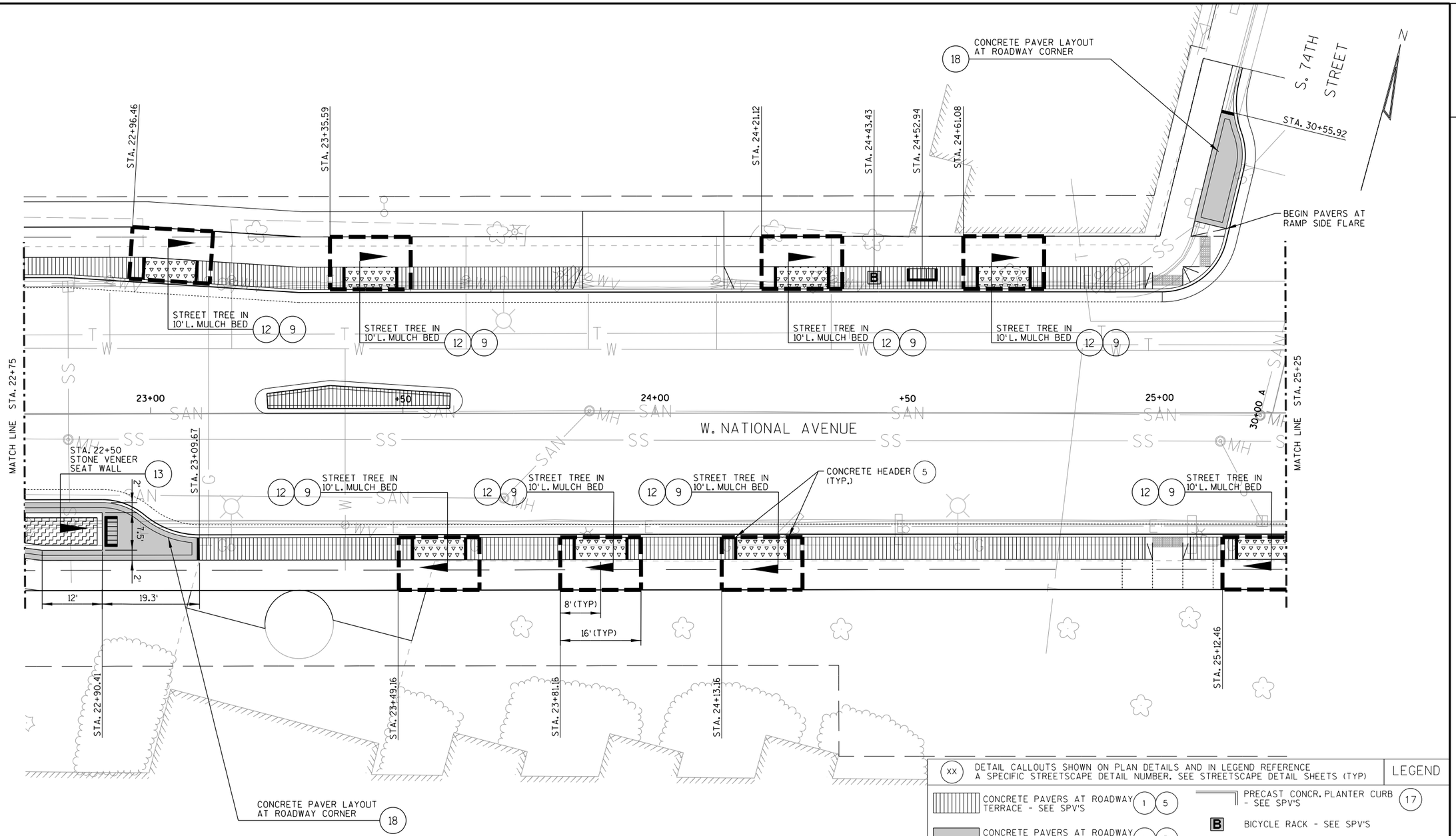
N

LEGEND	
(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)	
CONCRETE PAVERS AT ROADWAY TERRACE - SEE SPV'S (1 5)	PRECAST CONCR. PLANTER CURB - SEE SPV'S (17)
CONCRETE PAVERS AT ROADWAY CORNERS - SEE SPV'S (1 5)	(B) BICYCLE RACK - SEE SPV'S
BACKFILL FOR PLANT BEDS, 24" TH. AND 3" TH. SHREDDED BARK MULCH - SEE SPV'S (8 9)	(R T) TRASH & RECYCLABLE RECEPTACLES - SEE SPV'S, LEAVE 3" CLEAR BETWEEN UNITS' (TYP)
BACKFILL FOR STREET TREES AND 3" TH. SHREDDED BARK MULCH - SEE SPV'S (8 9)	BENCH - SEE SPV'S
STRUCTURAL SOIL EXTENTS AT STREET TREES - SEE SPV'S (8 9)	ROADWAY LIGHTING - SEE ELECTRICAL PLANS

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT & MATERIALS PLAN	SHEET 76	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\023152_st.dgn PLOT DATE : 9/28/2017 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

2



(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

LEGEND

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- CONCRETE PAVERS AT ROADWAY CORNERS - SEE SPV'S (1) (5)
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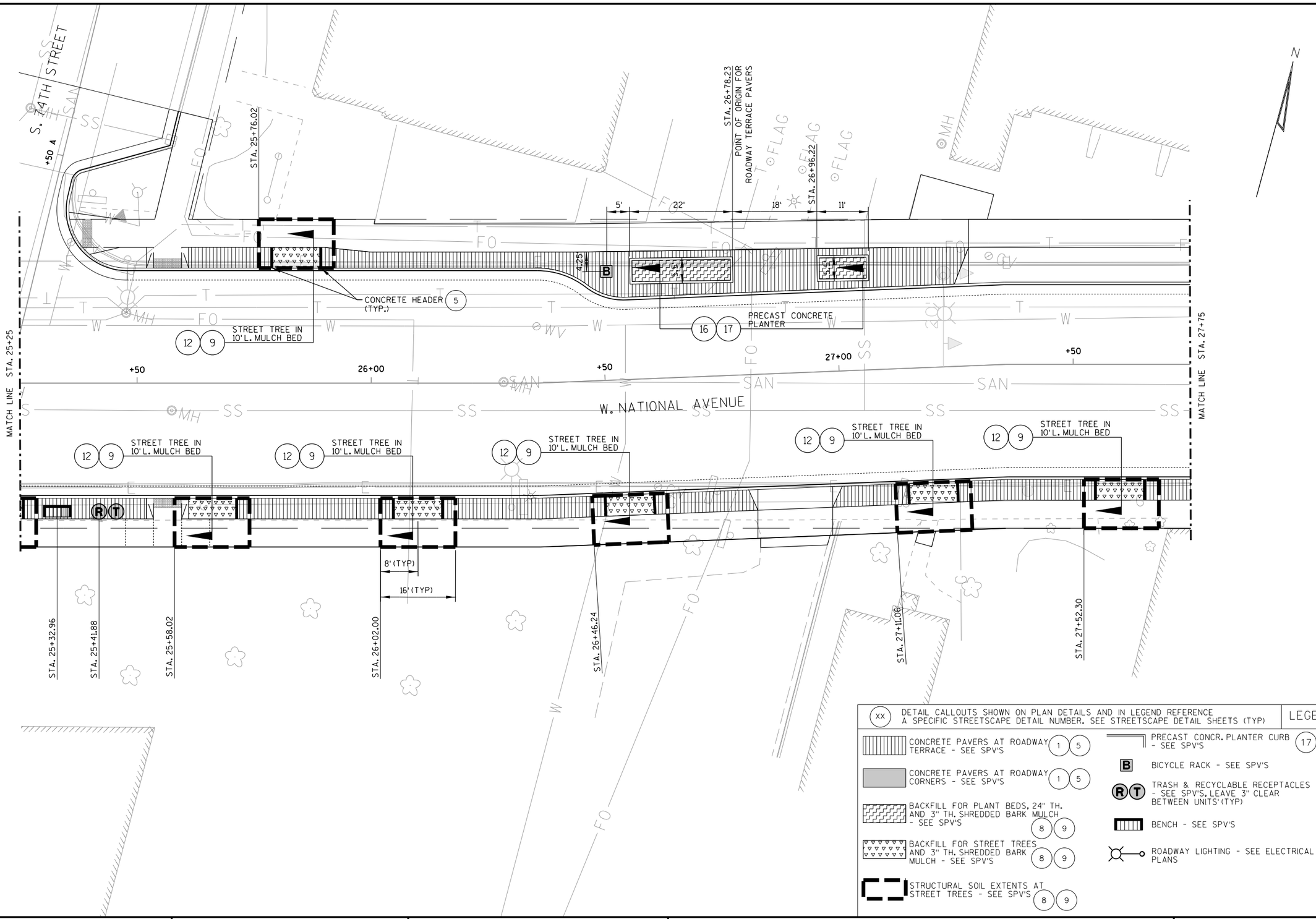
- STRUCTURAL SOIL EXTENTS AT STREET TREES - SEE SPV'S (8) (9)
- PRECAST CONCR. PLANTER CURB - SEE SPV'S (17)
- (B) BICYCLE RACK - SEE SPV'S
- (RT) TRASH & RECYCLABLE RECEPTACLES - SEE SPV'S, LEAVE 3" CLEAR BETWEEN UNITS' (TYP)
- BENCH - SEE SPV'S
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT & MATERIALS PLAN	SHEET 77	E

2



(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

LEGEND

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- (R T) TRASH & RECYCLABLE RECEPTACLES - SEE SPV'S, LEAVE 3" CLEAR BETWEEN UNITS' (TYP)
- BENCH - SEE SPV'S
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT & MATERIALS PLAN	SHEET 78	E

2

18 CONCRETE PAVER LAYOUT AT ROADWAY CORNER

16 17 PRECAST CONCRETE PLANTER

12" 4' 2'

STA. 28+40.77

+50 A

11.5'

3.5'

5' 5'

B R T

10.2'

STA. 27+99.12

MATCH LINE STA. 27+75

28+00

+50

40+00 A

29+00

+50

30+00

+50

MATCH LINE STA. 29+75

STA. 29+23.56

STA. 29+63.56

16'(TYP)

8'(TYP)

STA. 30+03.56

STA. 30+60.56

12 9 STREET TREE IN 10'L. MULCH BED

12 9 STREET TREE IN 10'L. MULCH BED

12 9 STREET TREE IN 10'L. MULCH BED

12 9 STREET TREE IN 10'L. MULCH BED

W. NATIONAL AVENUE

STA. 28+69.39

3'

18'

2'

STA. 29+10.41

STA. 29+28.91

5.5'

B

8'

1'

8 4'x 10' TREE GRATE

8 4'x 10' TREE GRATE

CONCRETE HEADER (TYP.) 5

STA. 28+54.26

+50 A

PRECAST CONCRETE PLANTER 16 17

CONCRETE PAVER LAYOUT AT ROADWAY CORNER 18

STA. 29+85.73

STA. 30+25.73

39+00 A

S. 73RD STREET

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

LEGEND

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- R T TRASH & RECYCLABLE RECEPTACLES - SEE SPV'S, LEAVE 3" CLEAR BETWEEN UNITS' (TYP)
- BENCH - SEE SPV'S
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT & MATERIALS PLAN	SHEET 79	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\023155_st.dgn PLOT DATE : 9/28/2017 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

2

18 CONCRETE PAVER LAYOUT AT ROADWAY CORNER

S. 72ND STREET

STA. 31+14.76

STA. 31+55.59

6.3'

STA. 31+62.42

STA. 31+62.44

+50 Ahd

CENTER BENCH ON CORNER PAD. LOCATE BACK OF BENCH 3" OFF EDGE OF PAVING.

LOCATE BIKE RACK WITHIN ADJACENT PLAZA. COORDINATE WITH ENGINEER ON FINAL LOCATION AND ORIENTATION.

STA. 32+92.45

STA. 33+32.45

16' (TYP)

8' (TYP)

12 9 STREET TREE IN 10'L. MULCH BED

12 9 STREET TREE IN 10'L. MULCH BED

12 9 STREET TREE IN 10'L. MULCH BED

MATCH LINE STA. 30+75

MATCH LINE STA. 33+75

31+00 +50 32+00 +50 33+00 +50

50+00 Ahd

W. NATIONAL AVENUE

19 8 4'x 10' TREE GRATE

19 8 4'x 10' TREE GRATE

CONCRETE HEADER (TYP.) 5

19 8 4'x 10' TREE GRATE

19 8 4'x 10' TREE GRATE

STREET TREE IN 10'L. MULCH BED 12 9

STA. 30+76.56

STA. 30+79.50 TREE GRATE

+50 Ahd

49+00 Ahd

S. 72ND STREET

STA. 32+05.76

STA. 32+19.57

STA. 32+26.43 TREE GRATE

STA. 32+66.43 TREE GRATE

STA. 33+23.43 TREE GRATE

STA. 33+61.69 TREE GRATE

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

LEGEND

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- BACKFILL FOR PLANT BEDS, 24" TH. AND 3" TH. SHREDDED BARK MULCH - SEE SPV'S (8 9)
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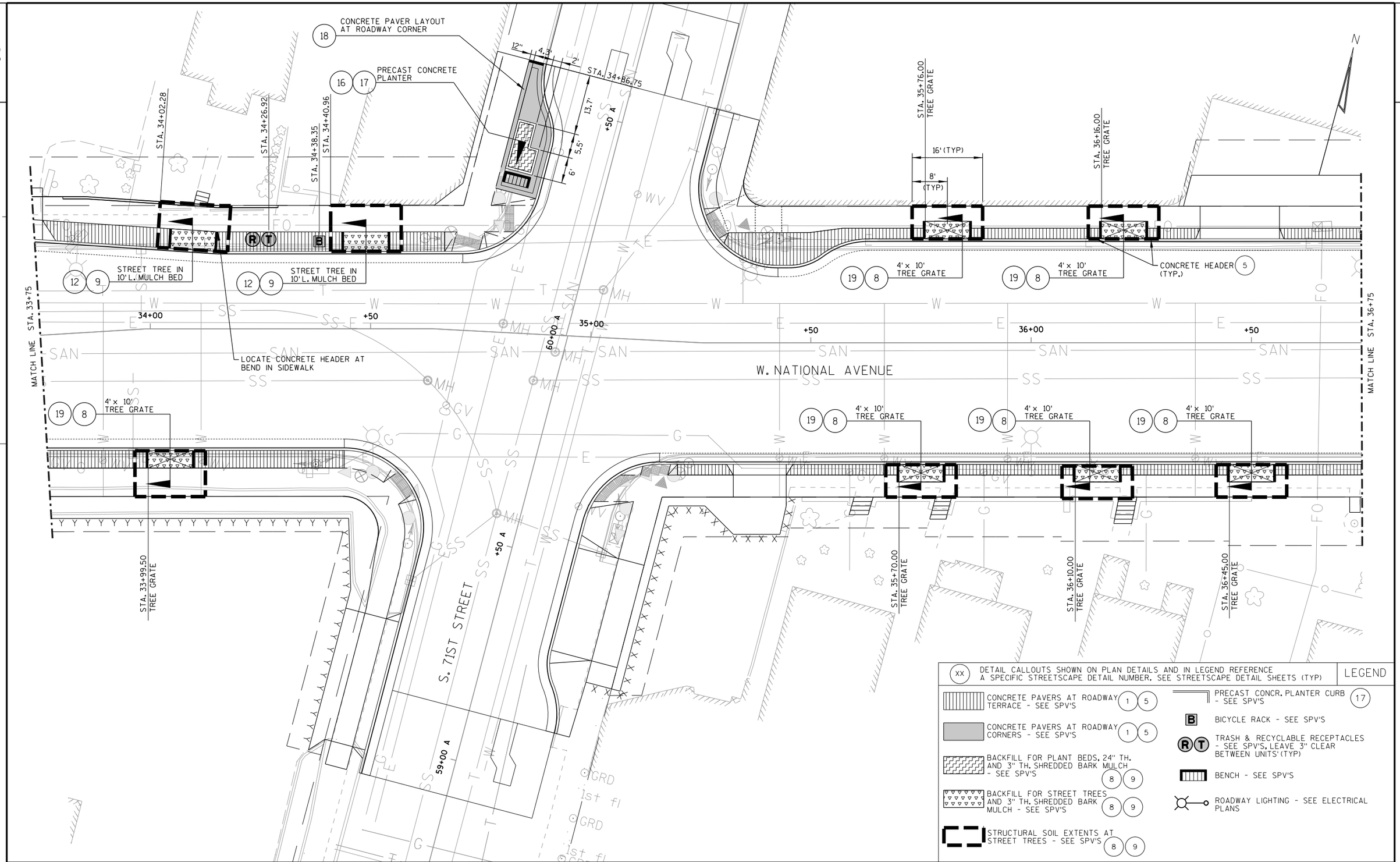
- STRUCTURAL SOIL EXTENTS AT STREET TREES - SEE SPV'S (8 9)
- PRECAST CONCR. PLANTER CURB - SEE SPV'S (17)
- B BICYCLE RACK - SEE SPV'S
- RT TRASH & RECYCLABLE RECEPTACLES - SEE SPV'S, LEAVE 3" CLEAR BETWEEN UNITS' (TYP)
- BENCH - SEE SPV'S
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT & MATERIALS PLAN	SHEET 80	E

2



LEGEND

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

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- BENCH - SEE SPV'S
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT & MATERIALS PLAN	SHEET 81	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\023157_st.dgn PLOT DATE : 9/28/2017 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 42

2

N

MATCH LINE STA. 36+75

W. NATIONAL AVENUE

S. 70TH STREET

STA. 37+34.80
TREE GRATE

16' (TYP)

8'
(TYP)

5 CONCRETE HEADER (TYP.)

4' x 10'
TREE GRATE 8 19

4' x 10'
TREE GRATE 8 19

4' x 10'
TREE GRATE 8 19

STA. 36+85.00
TREE GRATE

STA. 37+25.00
TREE GRATE

B B

LOCATE BIKE RACKS WITHIN ADJACENT PLAZA. COORDINATE WITH ENGINEER ON FINAL LOCATIONS AND ORIENTATION.

GRAPHIC SYMBOLS ARE OVERSIZED. CENTER TRASH AND RECYCLING RECEPTACLES WITHIN NEW CONCRETE PAD AT EAST END OF BUS SHELTER TO ENSURE THERE IS NOTHING LOCATED WITHIN SIDEWALK ZONE. COORDINATE WITH ENGINEER ON FINAL LOCATIONS.

37+00 +50 38+00 +50 39+00 +50

69+00 4 +50 4 70+00 4 +50 4

END PROJECT
STA. 38+99.49

LEGEND

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- BENCH - SEE SPV'S
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT & MATERIALS PLAN	SHEET 82	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\023158_st.dgn PLOT DATE : 9/28/2017 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

STREETSCAPE LAYOUT NOTES

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER.

ALL DIMENSIONS SHOWN ARE IN FEET AND INCHES

UNLESS INDICATED OTHERWISE, ALL DIMENSIONS SHOWN ALONG THE ROADWAYS ARE TAKEN FROM THE BACK OF THE CURB.

UNLESS SHOWN OTHERWISE, ALL DIMENSIONS ARE GIVEN FOR THE CENTER POINT OF SITE ELEMENTS & STRUCTURES SUCH AS BIKE RACKS, UNIT PAVERS, TREE PLANTING PITS ETC.

LOCATE EXPANSION AND CONTROL JOINTS PER PLANS AND DETAILS.

REFER TO ROADWAY PLANS FOR THE LOCATIONS OF PROPOSED UTILITY LINES, STRUCTURES, GRADING AND SITE ELEVATIONS.

ALL PAVING SURFACES SHALL BE FLUSH AND MEET SMOOTHLY AND EVENLY.

SMOOTH, SQUARE AND EVEN JOINTS SHALL BE PROVIDED WHERE MATCHING EXISTING PAVEMENT AND SIDEWALK BY SAWCUTTING.

LOCATE ALL SITE FURNISHINGS A MINIMUM OF 18" CLEAR FROM B.O.C. TO MEET WISDOT CLEARANCE STANDARDS.

CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. POTHOLE AS NECESSARY.

ALL UTILITIES ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL VERIFY LAYOUT PATTERN FOR ALL PAVER PAVING WITH OWNER'S REPRESENTATIVE PRIOR TO START OF INSTALLATION. CONTRACTOR TO PROVIDE MOCK-UPS, SAMPLES, AND INFORMATION FOR PAVER PAVING AS DIRECTED IN THE SPV'S.

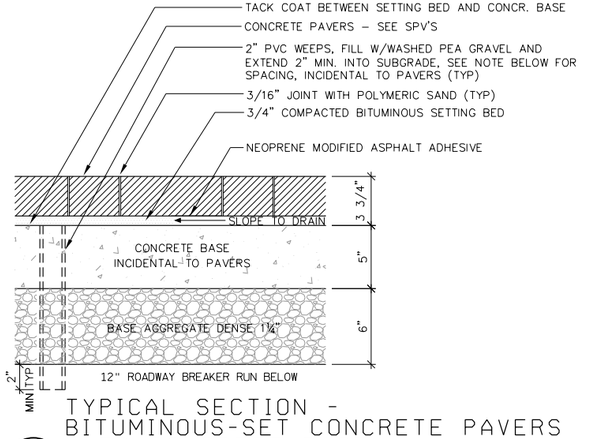
CONTRACTOR TO STAY WITHIN PUBLIC R.O.W. UNLESS OTHERWISE NOTED AND ALL NECESSARY EASEMENTS HAVE BEEN AQUIRED.

TOLERANCES FOR PAVER PAVING ARE MINIMAL FOR THIS PROJECT - SEE SPV'S FOR ACCEPTABLE TOLERANCES.

SUBMIT SAMPLES OF ALL MATERIALS FOR REVIEW AND APPROVAL BY PETER DANIELS, DPW / PRINCIPAL ENGINEER (414) 302-8374, PRIOR TO DELIVERY AS IDENTIFIED IN THE WRITTEN SPECIFICATIONS.

CONSTRUCT MOCK-UPS OF ALL PAVING AND HARDSCAPE ELEMENTS FOR REVIEW AND APPROVAL BY PETER DANIELS, DPW / PRICIPAL ENGINEER (414) 302-8374 AS IDENTIFIED IN SPV'S.

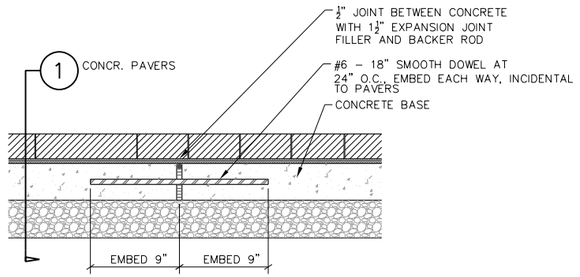
PROVIDE ENOUGH PAVERS TO COVER REQUIRED CUTTING IN ORDER TO ACHIEVE PAVING PATTERNS AS SHOWN ON PLANS.



1 TYPICAL SECTION - BITUMINOUS-SET CONCRETE PAVERS OVER CONCRETE BASE

1"=2'-0"

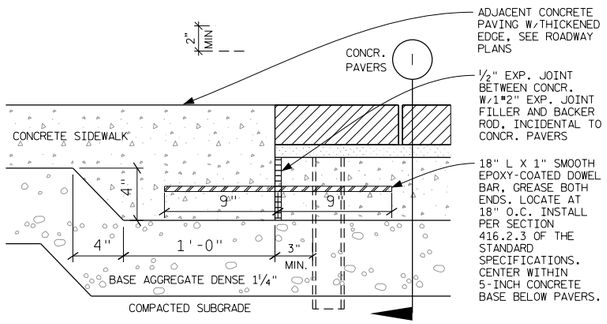
REFER TO LAYOUT AND MATERIALS PLANS FOR LOCATION OF CONCRETE PAVERS. SLOPE CONCRETE BASE TO WEEPS AT 1% MIN. PROVIDE WEEPS IN GRID LAYOUT AT 4'-0" O.C. STARTING ALONG LOW EDGE. PROVIDE CONTROL JOINTS AT 4'-0" O.C. PROVIDE EXPANSION JOINTS AT 24'-0" O.C. MAX. UNLESS OTHERWISE INDICATED ON DRAWINGS.



2 BITUMINOUS-SET CONCRETE PAVERS CONSTRUCTION/EXPANSION JOINT

1"=1'-0"

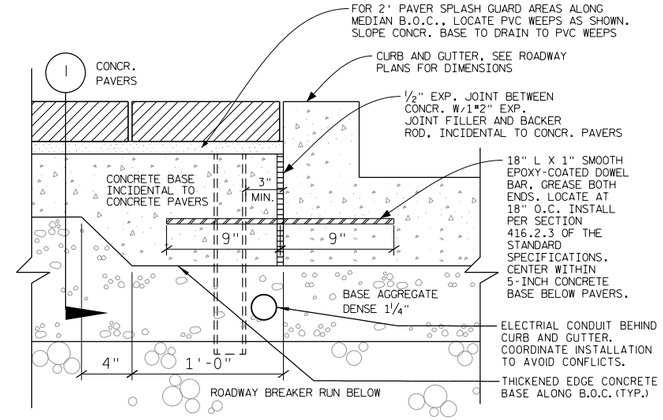
PROVIDE AT 25' O.C. UNLESS OTHEWISE NOTED ON STREETSCAPE LAYOUT AND MATERIALS PLANS



3 TYPICAL SECTION - CONCRETE PAVERS AT CONCRETE PAVING

1" = 1'-0"

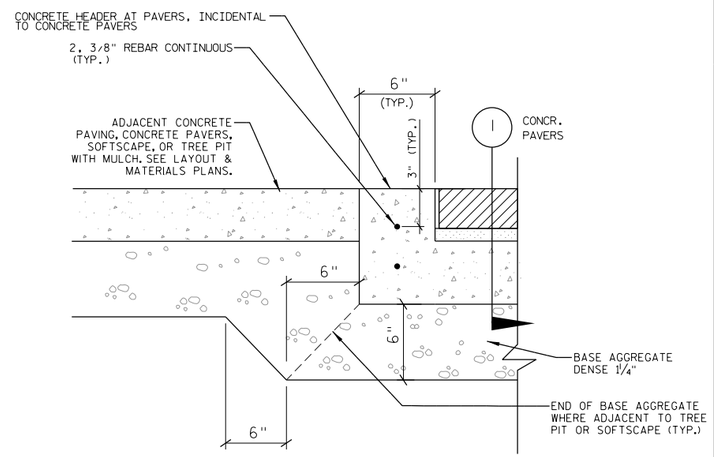
SEE STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATIONS



4 TYPICAL SECTION - CONCRETE PAVERS AT BACK OF CURB

1" = 1'-0"

SEE STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATIONS



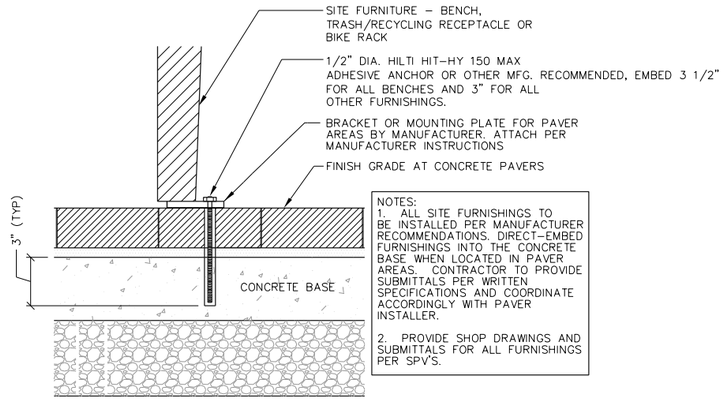
5 TYPICAL SECTION - CONCRETE HEADER AT CONCRETE PAVERS

1" = 1'-0"

SEE STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATIONS

DETAIL SHEET NOTE:

XX — DETAIL CALLOUTS ON STREETSCAPE DETAIL SHEETS REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER (TYP)

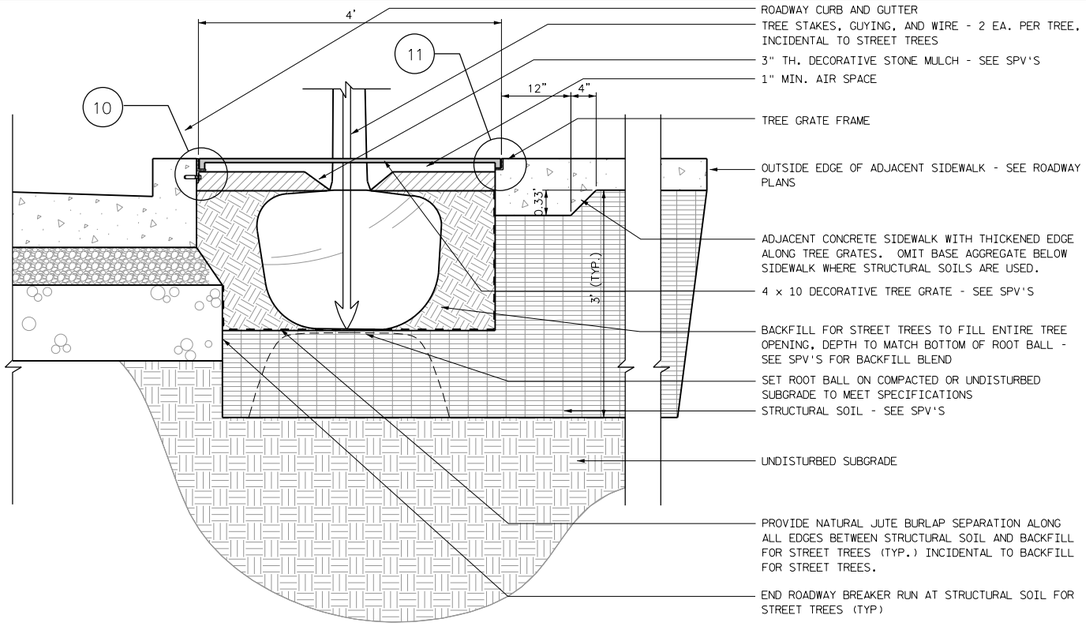


NOTES:
1. ALL SITE FURNISHINGS TO BE INSTALLED PER MANUFACTURER RECOMMENDATIONS. DIRECT-EMBED FURNISHINGS INTO THE CONCRETE BASE WHEN LOCATED IN PAVER AREAS. CONTRACTOR TO PROVIDE SUBMITTALS PER WRITTEN SPECIFICATIONS AND COORDINATE ACCORDINGLY WITH PAVER INSTALLER.
2. PROVIDE SHOP DRAWINGS AND SUBMITTALS FOR ALL FURNISHINGS PER SPV'S.

6 TYPICAL SITE FURNITURE MOUNTING

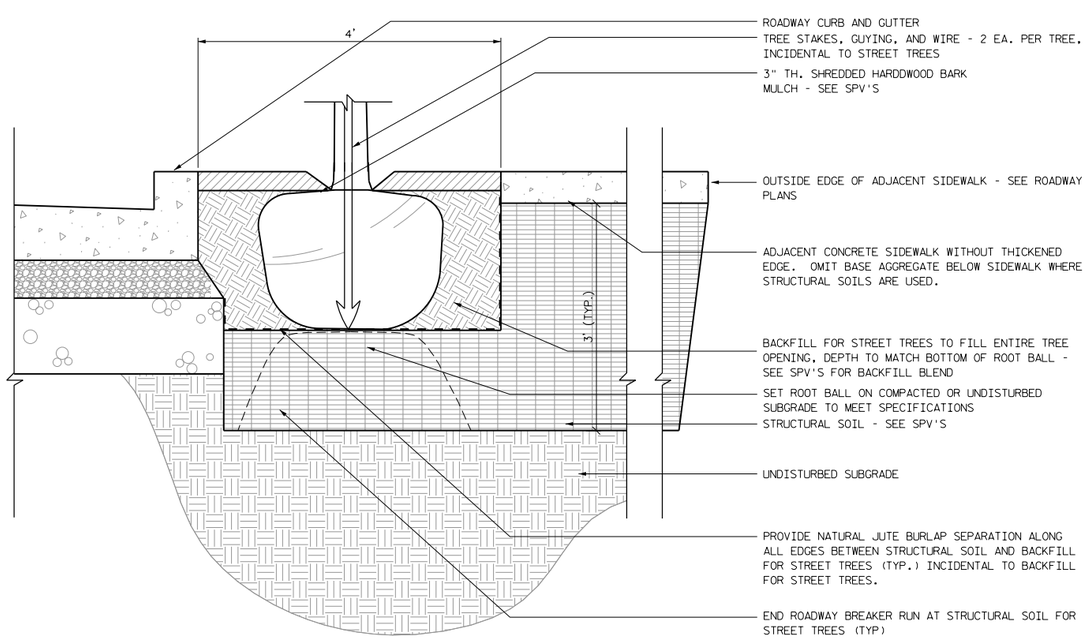
N.T.S.

SEE STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATIONS



8 TYPICAL SECTION – STREET TREE W/DECORATIVE GRATE AND STRUCTURAL SOIL

REFER TO STREETSCAPE LAYOUT AND MATERIALS PLANS FOR TREE GRATE SIZES AND LOCATIONS

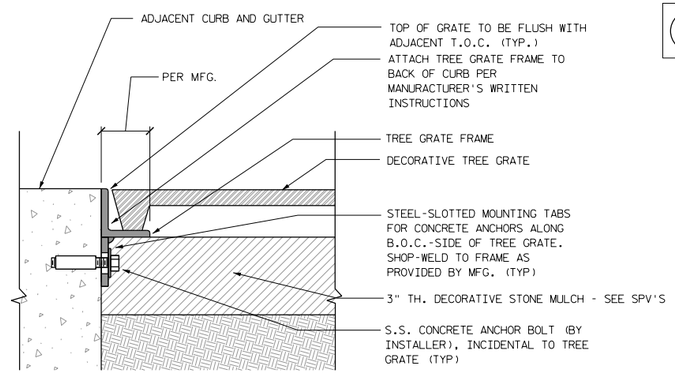


9 TYPICAL SECTION – STREET TREE W/MULCH & STRUCTURAL SOIL

REFER TO STREETSCAPE LAYOUT AND MATERIALS PLANS FOR TREE PLANTER SIZES AND LOCATIONS

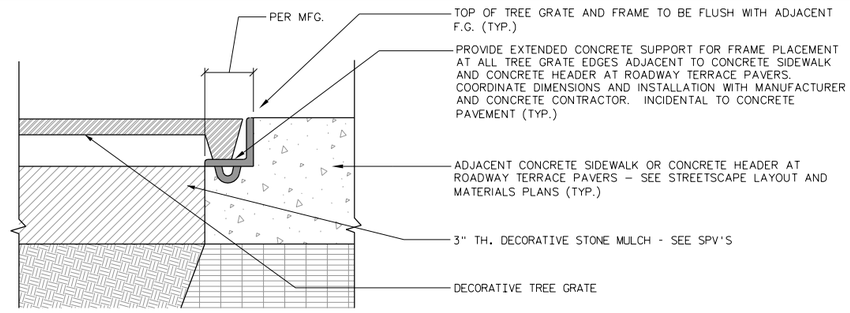
DETAIL SHEET NOTE:

(XX) DETAIL CALLOUTS ON STREETSCAPE DETAIL SHEETS REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER (TYP)



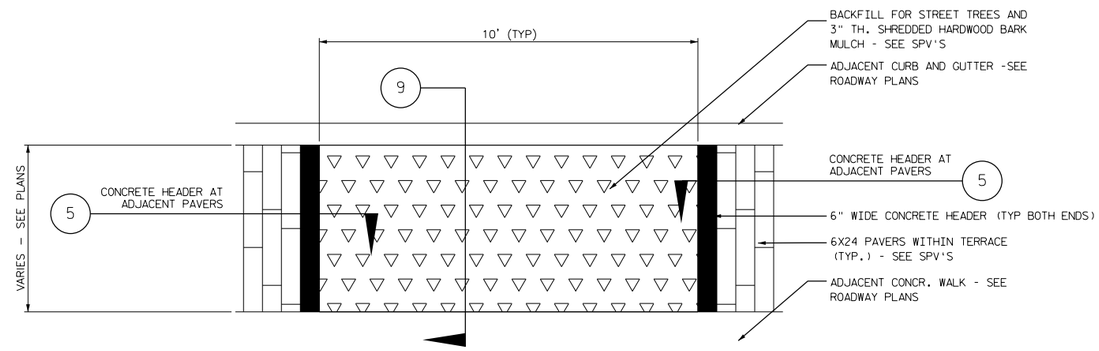
10 TYPICAL ENLARGEMENT – TREE GRATE FRAME MOUNTING AT CURB AND GUTTER

N.T.S.



11 TYPICAL ENLARGEMENT – TREE GRATE FRAME MOUNTING @ ADJACENT CONCR. WALK AND ADJACENT CONCR. HEADER & TERRACE PAVERS

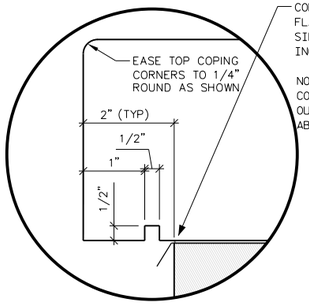
N.T.S.



12 TYPICAL LAYOUT PLAN – STREET TREE PLANTER WITH MULCH BED

REFER TO STREETSCAPE LAYOUT AND MATERIALS PLANS FOR TREE PLANTER LOCATIONS AND DIMENSIONS

N.T.S.

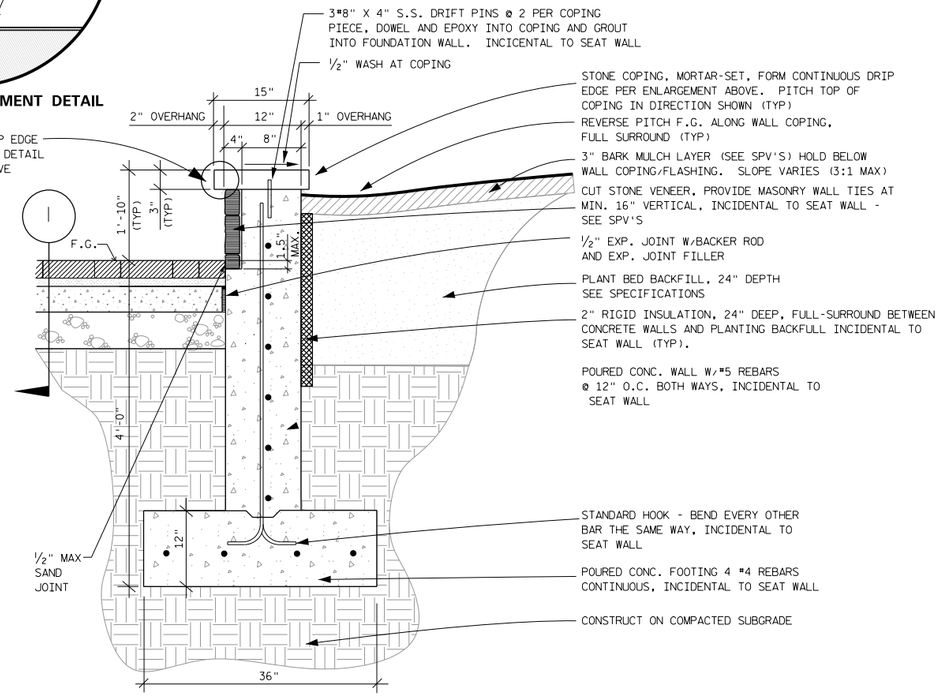


CONTINUOUS GALVANIZED STEEL FLASHING ACCROSS TOP AND ON BOTH SIDES OF WALL, BRONZE COLOR, INCIDENTAL TO SEAT WALL

NOTE: ONLY PROVIDE COPING DRIP EDGE ALONG OUTSIDE EDGE OF COPING, ABOVE STONE VENEER (TYP)

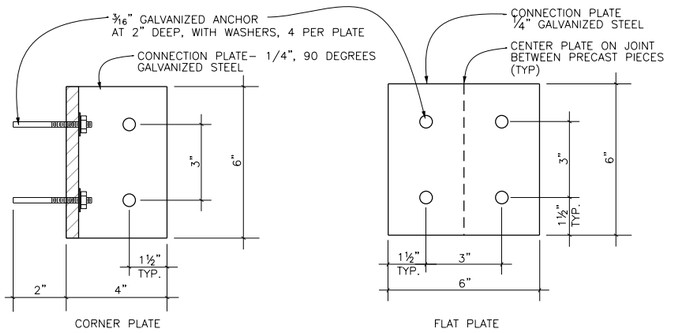
DRIP EDGE ENLARGEMENT DETAIL

SPV.0105.01 STONE VENEER SEAT WALL, STA.19+50	Units	Totals
BAR STEEL REINFORCEMENT RETAINING WALLS	LB	1500.00
STONE COPINIG	LF	89.00
STONE VENEER	SFF	175.00
CONCRETE MASONRY WALL AND FOOTING	CY	10.00
SPV.0105.02 STONE VENEER SEAT WALL, STA.22+50	**Units**	**Totals**
BAR STEEL REINFORCEMENT RETAINING WALLS	LB	1300.00
STONE COPINIG	LF	77.00
STONE VENEER	SFF	151.00
CONCRETE MASONRY WALL AND FOOTING	CY	9.00



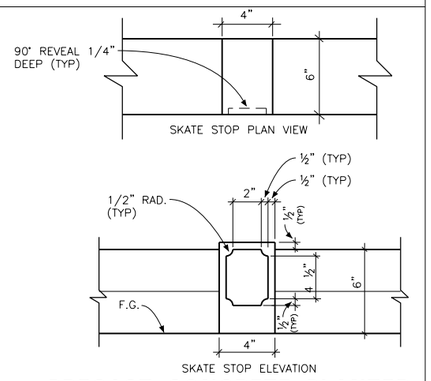
13 TYPICAL SECTION - STONE VENEER SEAT WALL, STA. 19+50 & STA. 22+50

REFER TO STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATION
STA. 19+42 LT & STA. 22+75 RT



14 PRECAST CONCRETE PLANTER CONNECTION PLATE DETAIL

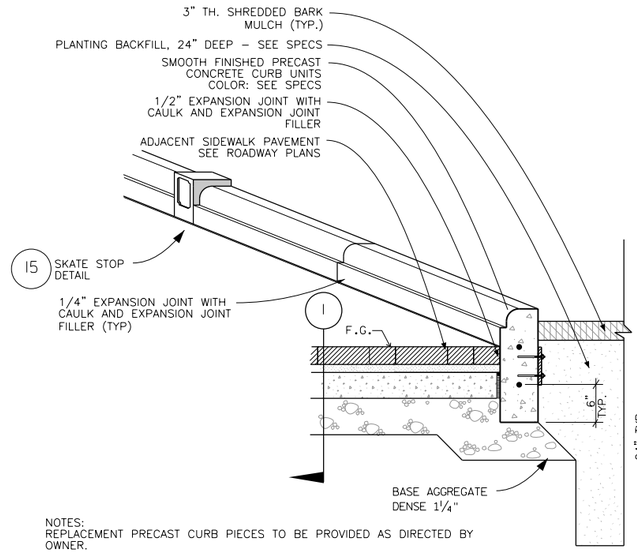
ALL PLATE HARDWARE AND FASTENERS ARE INCICENTAL TO PRECAST CONCRETE PLANTERS.

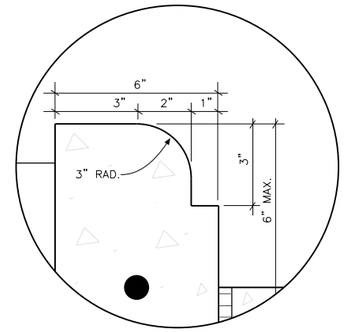


15 PRECAST CONCRETE PLANTER SKATE STOP DETAIL

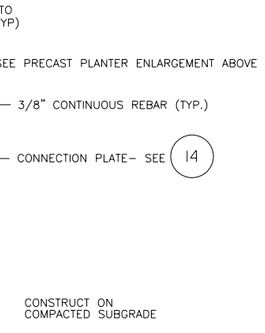
DETAIL SHEET NOTE:

XX DETAIL CALLOUTS ON STREETSCAPE DETAIL SHEETS REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER (TYP)





PRECAST PLANTER ENLARGEMENT - SECTION VIEW



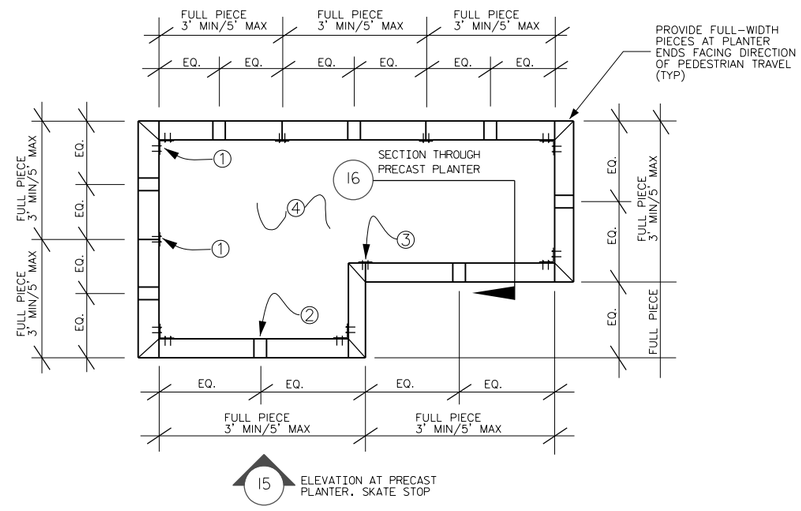
CONSTRUCT ON COMPACTED SUBGRADE

NOTES:
REPLACEMENT PRECAST CURB PIECES TO BE PROVIDED AS DIRECTED BY OWNER.

TOP OF ALL PRECAST CONCRETE PLANTERS TO BE HELD CONSISTENT AT 6" ABOVE ADJACENT F.G. (TYP). PRECAST PIECES TO BE MANUFACTURED TO MATCH PROPOSED GRADING AS BEST AS POSSIBLE. SEE GRADING PLANS FOR PROPOSED ADJACENT GRADING.

CAULK FOR PRECAST CONCRETE TO MATCH COLOR OF PRECAST CONCRETE. SUBMIT SAMPLES TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO CONSTRUCTION.

16 TYPICAL SECTION - PRECAST CONCRETE CURB PLANTER



NOTES

1. CONNECTION PLATE - SEE 14
2. SKATE STOP DETAIL (TYP SYMB) PROIVDE ONE SKATE STOP PER EACH FULL-SIZED PRECAST PIECE. - SEE 15
3. 1/4" EXPANSION JOINT WITH CAULK & EXPANSION JOINT SEALANT BETWEEN PRECAST PIECES (TYP.)
4. 3" TH. SHREDDED BARK MULCH AND BACKFILL FOR PLANT BEDS, 24" DEEP (SEE LS PLANS FOR PLANTING & DETAILS)

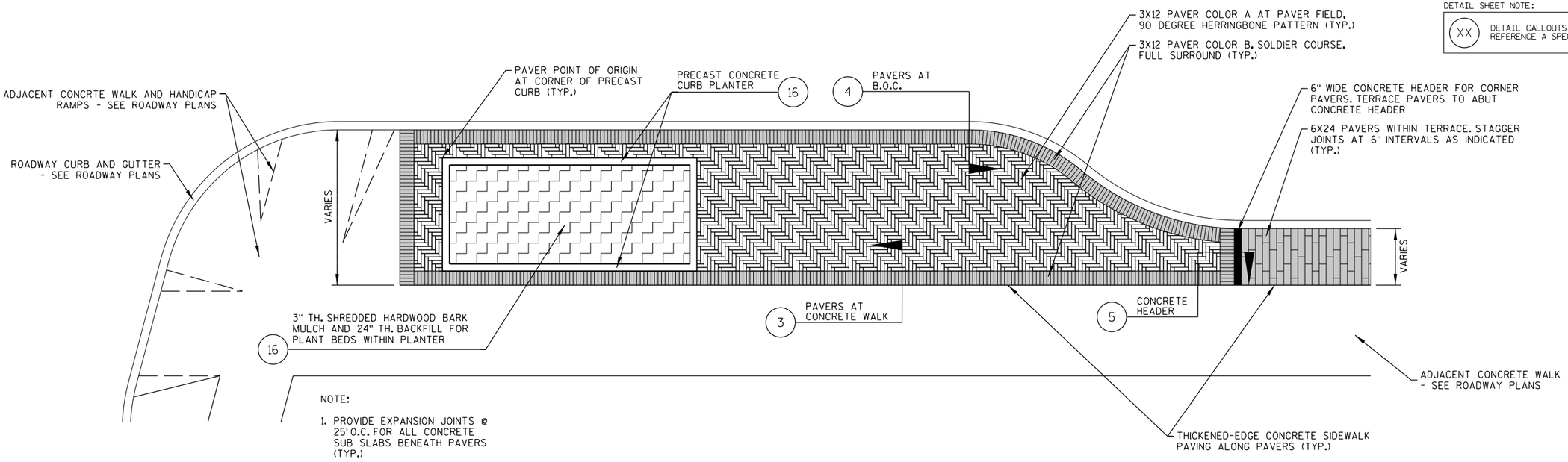
SUBMIT DETAILED SHOP DRAWINGS FOR EACH INDIVIDUAL PRECAST CONCRETE PLANTER AS DESCRIBED IN SPV'S

17 TYPICAL LAYOUT PLAN - PRECAST CONCRETE CURB PLANTER

REFER TO STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATIONS AND DIMENSIONS OF PRECAST CONCRETE PLANTERS

DETAIL SHEET NOTE:

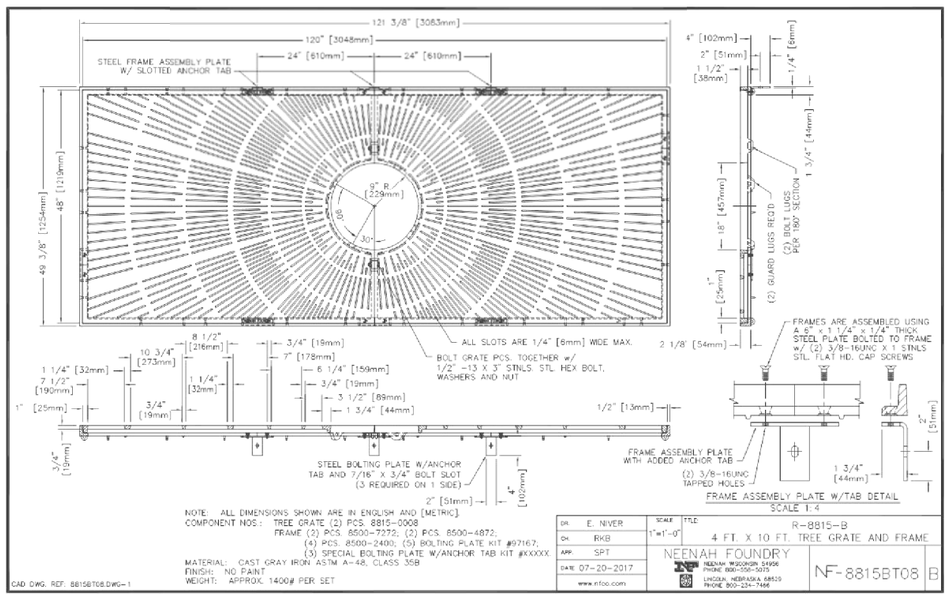
(XX) DETAIL CALLOUTS ON STREETSCAPE DETAIL SHEETS REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER (TYP)



18 TYPICAL LAYOUT PLAN - CONCRETE PAVERS AT ROADWAY CORNER AND TERRACE AREA

SEE STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATIONS OF CONCRETE PAVERS. PRECAST CONCRETE PLANTER CONFIGURATIONS VARY PER EACH LOCATION.

N.T.S.



19 4' x 10' TREE GRATE

SEE STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATIONS

N.T.S.

PROJECT NO: 2410-00-78	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	STREETSCAPE DETAILS	SHEET 87	E

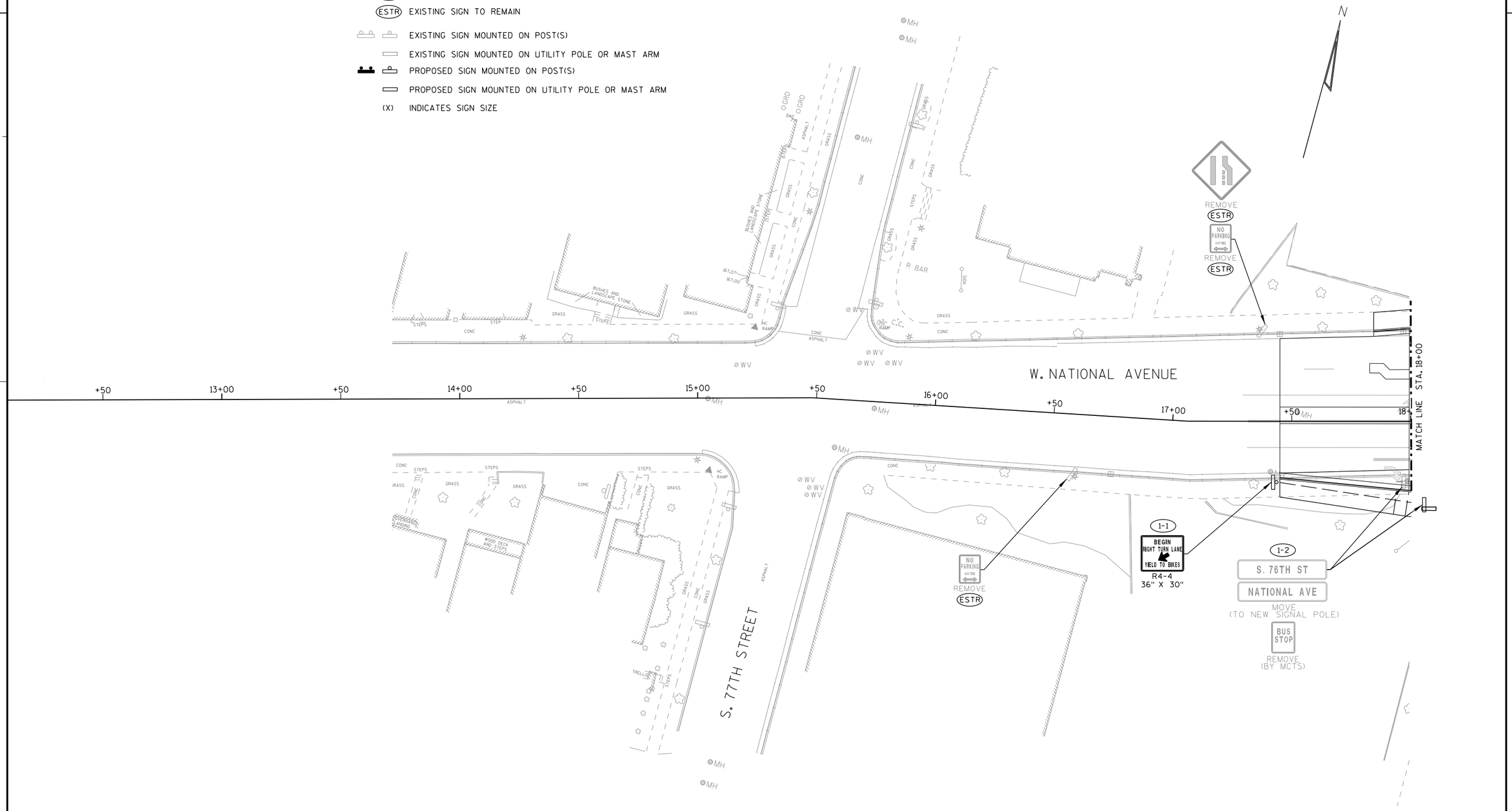
FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\023150_st_det4 .dgn PLOT DATE : 9/28/2017 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 2.0000 sf / in.

WISDOT/CADDS SHEET 42

2

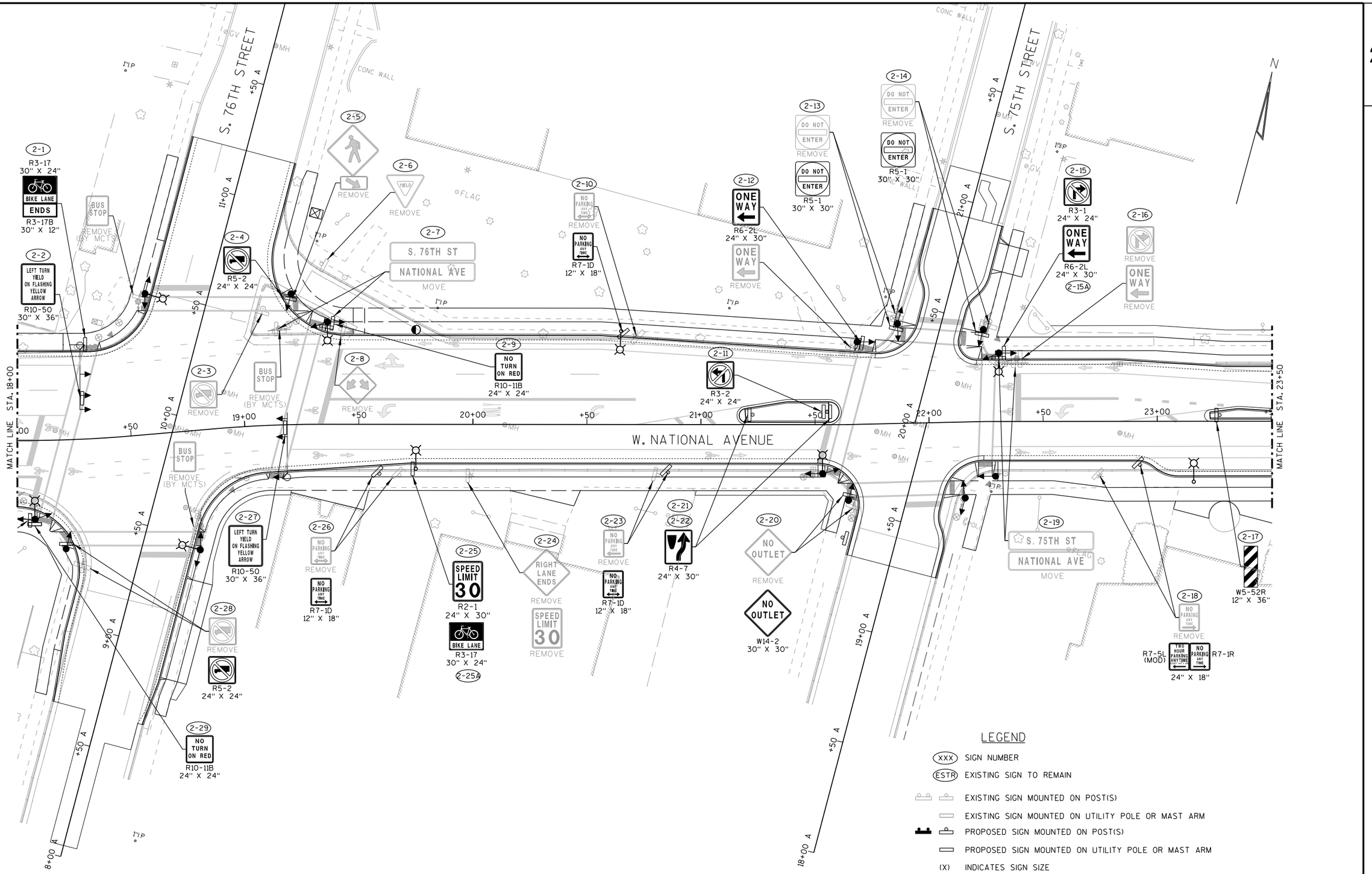
LEGEND

- (XXX) SIGN NUMBER
- (ESTR) EXISTING SIGN TO REMAIN
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON UTILITY POLE OR MAST ARM
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON UTILITY POLE OR MAST ARM
- (X) INDICATES SIGN SIZE



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 88	E

2

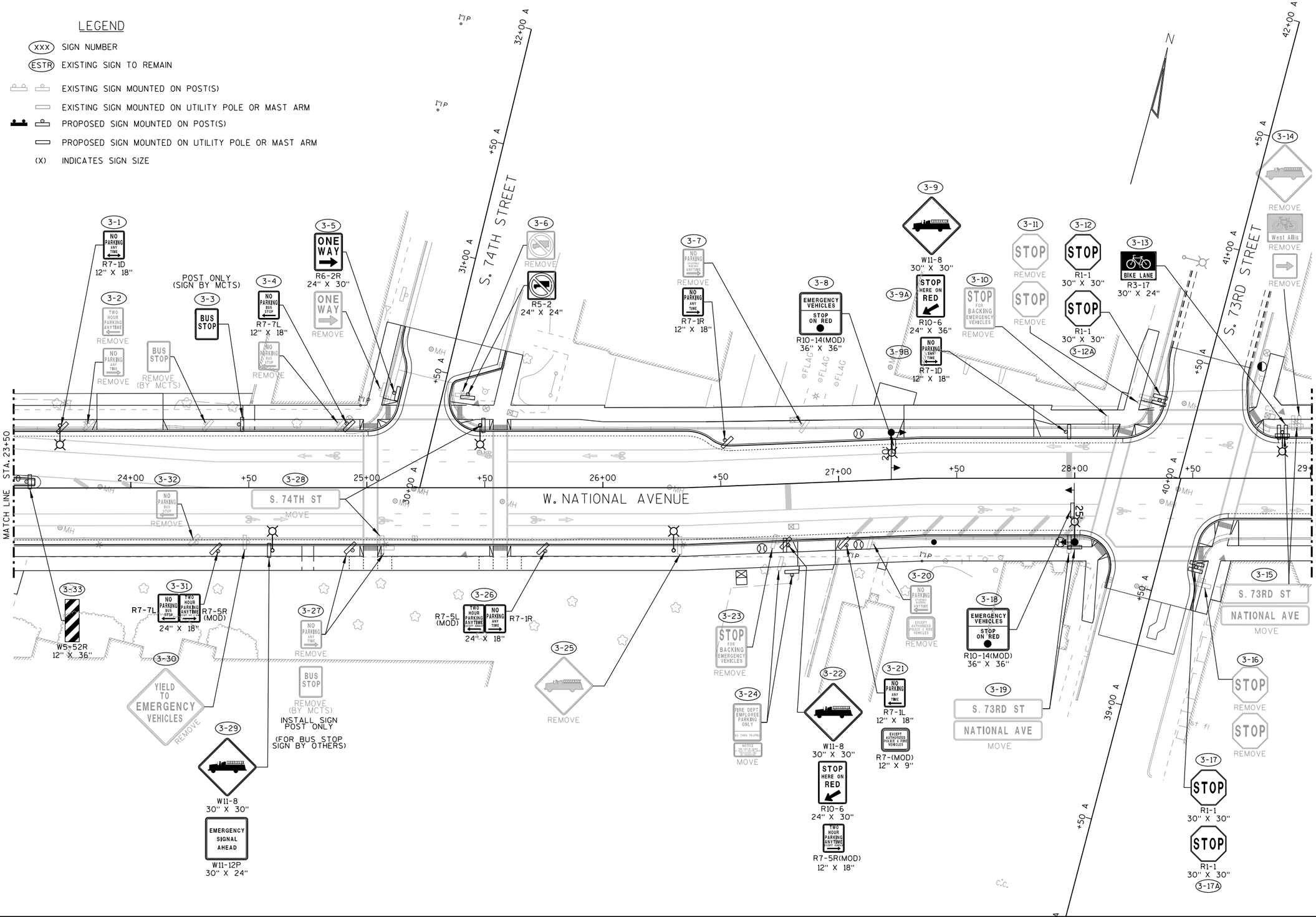


PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 89	E

2

LEGEND

- (XXX) SIGN NUMBER
- (ESTR) EXISTING SIGN TO REMAIN
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON UTILITY POLE OR MAST ARM
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON UTILITY POLE OR MAST ARM
- (X) INDICATES SIGN SIZE



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 90	E

2

LEGEND

- (XXX) SIGN NUMBER
- (ESTR) EXISTING SIGN TO REMAIN
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON UTILITY POLE OR MAST ARM
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON UTILITY POLE OR MAST ARM
- (X) INDICATES SIGN SIZE

N

S. 72 ND STREET

W. NATIONAL AVENUE

MATCH LINE STA. 29+00

MATCH LINE STA. 34+00

30+00 31+00 32+00 33+00 34+00 +50

51+00 A 52+00 A 50+00 A 49+00 A +50 A

4-1 SPEED LIMIT 30 R2-1 24" X 30"
4-1A NO PARKING ANY TIME R7-1D 12" X 18"

4-2 W11-8 30" X 30"
4-2A EMERGENCY SIGNAL AHEAD W11-12P 30" X 24"

4-3 YIELD TO EMERGENCY VEHICLES REMOVE
SPEED LIMIT 30 REMOVE

ESTR DO NOT ENTER REMOVE

4-4 NO PARKING ANY TIME R7-1D 12" X 18"

4-5 STOP REMOVE
STOP REMOVE

4-6 STOP R1-1 30" X 30"
4-6A STOP R1-1 30" X 30"

4-7 S. 72ND ST
NATIONAL AVE
MOVE

BUS STOP REMOVE (BY MCTS)

4-8 NO PARKING BUS STOP REMOVE
R7-7L NO PARKING BUS STOP / TWO HOUR PARKING ANYTIME R7-5R (MOD) 24" X 18"

4-9 NO PARKING ANY TIME R7-1R 12" X 18"

4-10 TWO HOUR PARKING ANYTIME REMOVE

4-11 SPEED LIMIT 30 R2-1 24" X 30"
TWO HOUR PARKING ANYTIME R7-5R(MOD) 12" X 18"
4-11A

4-12 SPEED LIMIT 30 REMOVE

4-13 STOP REMOVE
STOP R1-1 30" X 30"
4-13A STOP R1-1 30" X 30"

4-14 REMOVE
R5-2 24" X 24"

4-15 S. 72ND ST
NATIONAL AVE
MOVE
TWO HOUR PARKING ANYTIME R7-5R(MOD) 12" X 18"

4-16 West Allis REMOVE
TWO HOUR PARKING ANYTIME REMOVE

4-17 BIKE LANE R3-17 30" X 24"
TWO HOUR PARKING ANYTIME R7-5D (MOD) 12" X 18"
4-17A

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 91	E

2

LEGEND

- (XXX) SIGN NUMBER
- (ESTR) EXISTING SIGN TO REMAIN
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON UTILITY POLE OR MAST ARM
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON UTILITY POLE OR MAST ARM
- (X) INDICATES SIGN SIZE

N

S. 71ST STREET

S. 70TH STREET

W. NATIONAL AVENUE

5-1 NO PARKING ANY TIME R7-1L 12" X 18"

5-2 NO TURN ON RED R10-11B 24" X 24"

5-3 REMOVE R5-2 24" X 24"

5-4 S. 71ST ST / NATIONAL AVE MOVE

5-5 TWO HOUR PARKING 8AM-6PM R7-5D (MOD) 12" X 18"

5-6 NO PARKING BETWEEN DRIVEWAY R7-52D (MOD) 18" X 24"

5-7 West Allis REMOVE; TWO HOUR PARKING 8AM-6PM REMOVE

5-8 BIKE LANE R3-17 30" X 24"; TWO HOUR PARKING 8AM-6PM R7-5D (MOD) 12" X 18"

5-8A

5-9 LEFT TURN YIELD ON FLASHING YELLOW ARROW R10-50 30" X 36"

5-10 S. 70TH ST / NATIONAL AVE MOVE

5-11 REMOVE W12-1D 24" X 24"

5-12 LEFT TURN YIELD ON FLASHING YELLOW ARROW R10-50 30" X 36"

5-13 S. 70TH ST / NATIONAL AVE MOVE

5-14 NO TURN ON RED R10-11B 24" X 24"

5-15 S. 70TH ST / NATIONAL AVE MOVE

5-16 NO PARKING BUS STOP R7-7L 12" X 18"; NO PARKING BUS STOP REMOVE

5-17 West Allis REMOVE; ONE HOUR PARKING 8AM-4PM REMOVE

5-18 BIKE LANE R3-17 30" X 24"; NO PARKING ANY TIME R7-1D 12" X 18"

5-18A

5-19 NO TURN ON RED R10-11B 24" X 24"

5-20 S. 71ST ST / NATIONAL AVE MOVE

BUS STOP REMOVE (BY MCTS) (x4)

END PROJECT STA. 38+99.49

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 92	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\023205_ps.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42

2

LIGHTING PLAN LEGEND

EXISTING MUNICIPAL POLE, ARM, LUMINAIRE, AND BASE TO BE REMOVED.

EXISTING MUNICIPAL POLE, ARM, AND LUMINAIRE TO REMAIN.

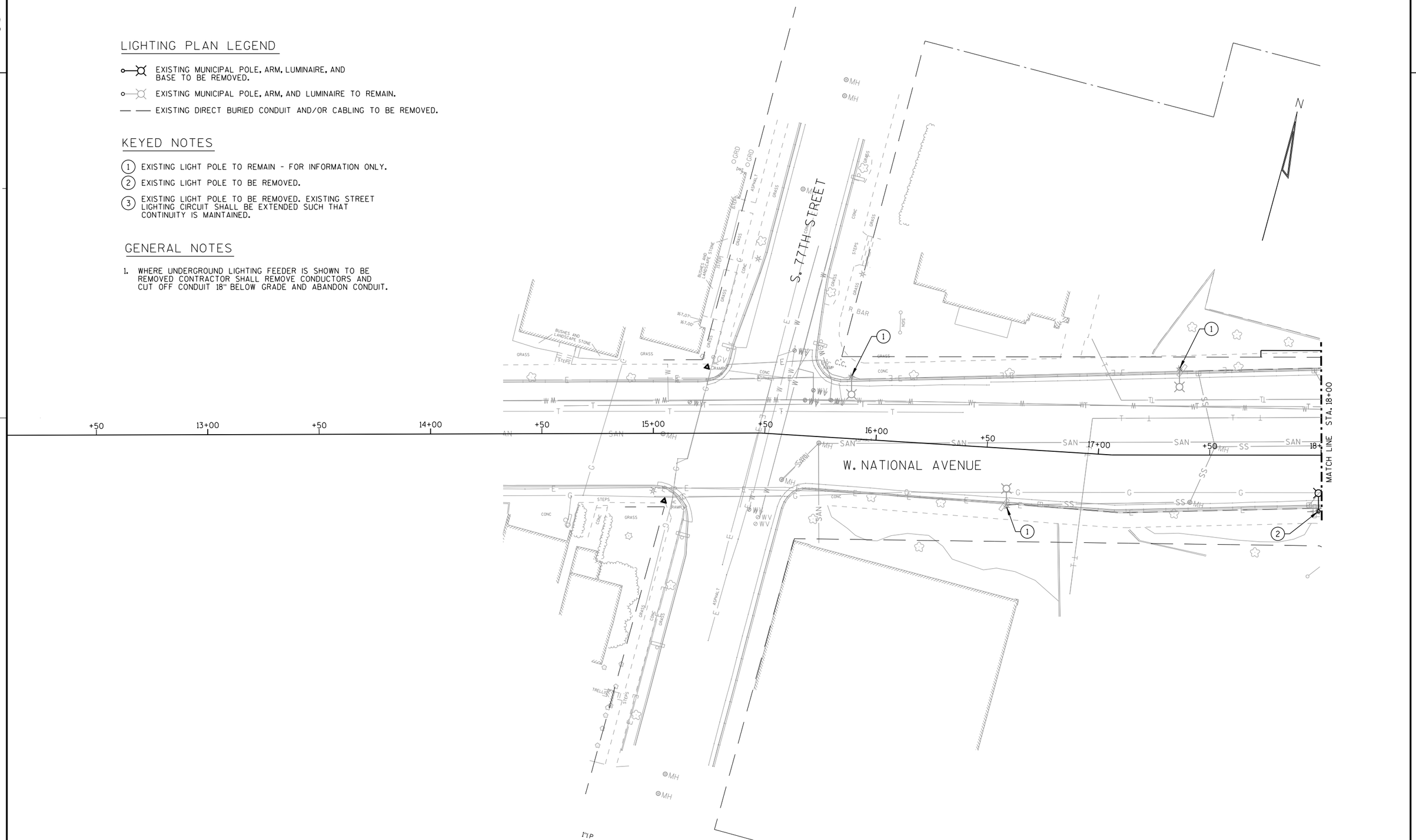
EXISTING DIRECT BURIED CONDUIT AND/OR CABLING TO BE REMOVED.

KEYED NOTES

1. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY.
2. EXISTING LIGHT POLE TO BE REMOVED.
3. EXISTING LIGHT POLE TO BE REMOVED. EXISTING STREET LIGHTING CIRCUIT SHALL BE EXTENDED SUCH THAT CONTINUITY IS MAINTAINED.

GENERAL NOTES

1. WHERE UNDERGROUND LIGHTING FEEDER IS SHOWN TO BE REMOVED CONTRACTOR SHALL REMOVE CONDUCTORS AND CUT OFF CONDUIT 18" BELOW GRADE AND ABANDON CONDUIT.



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET 93	E

2

LIGHTING PLAN LEGEND

- EXISTING MUNICIPAL POLE, ARM, LUMINAIRE, AND BASE TO BE REMOVED.
- EXISTING MUNICIPAL POLE, ARM, AND LUMINAIRE TO REMAIN.
- EXISTING DIRECT BURIED CONDUIT AND/OR CABLING TO BE REMOVED.

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GENERAL NOTES

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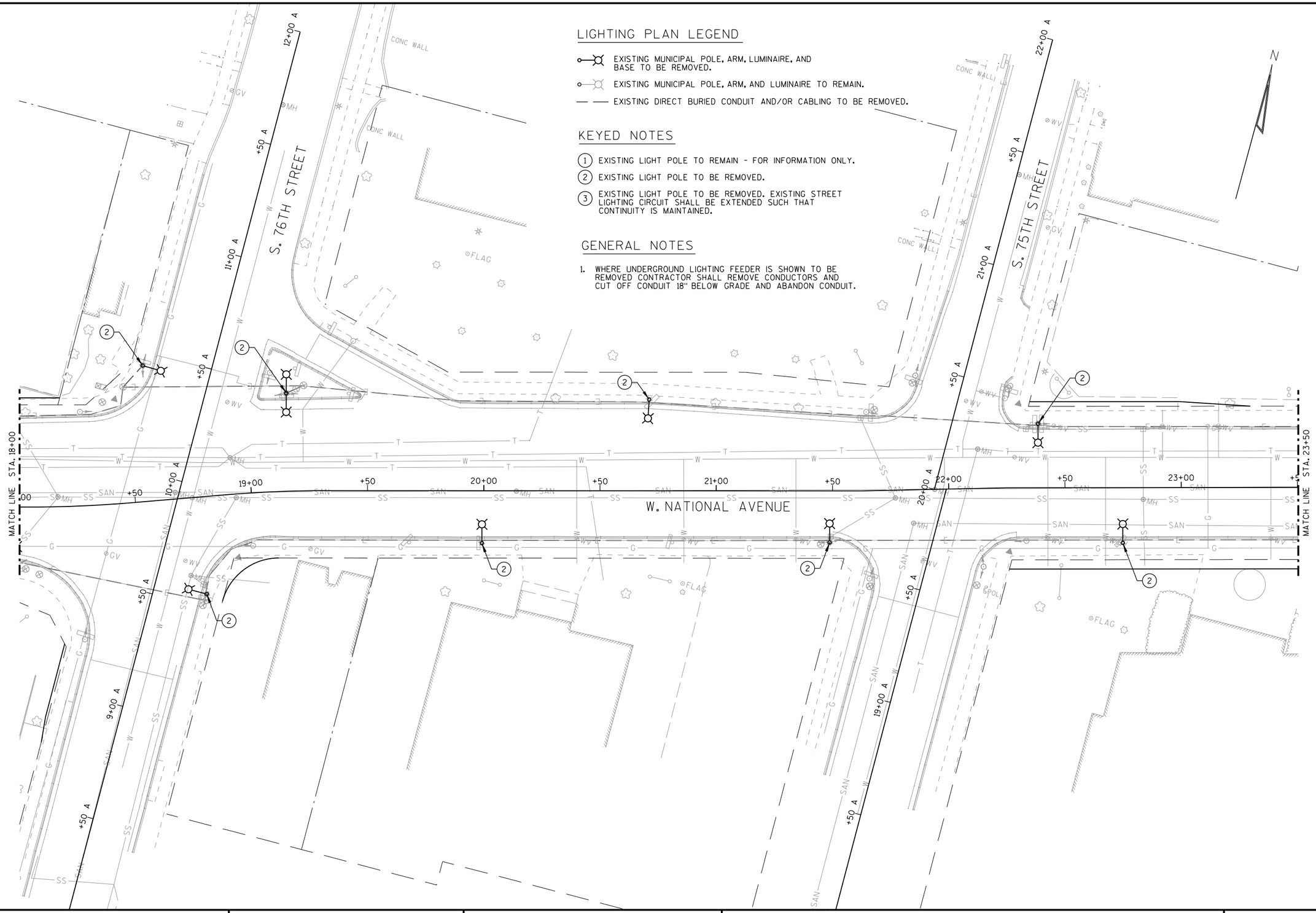

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET 94	E

LIGHTING PLAN LEGEND

- EXISTING MUNICIPAL POLE, ARM, LUMINAIRE, AND BASE TO BE REMOVED.
- EXISTING MUNICIPAL POLE, ARM, AND LUMINAIRE TO REMAIN.
- EXISTING DIRECT BURIED CONDUIT AND/OR CABLING TO BE REMOVED.

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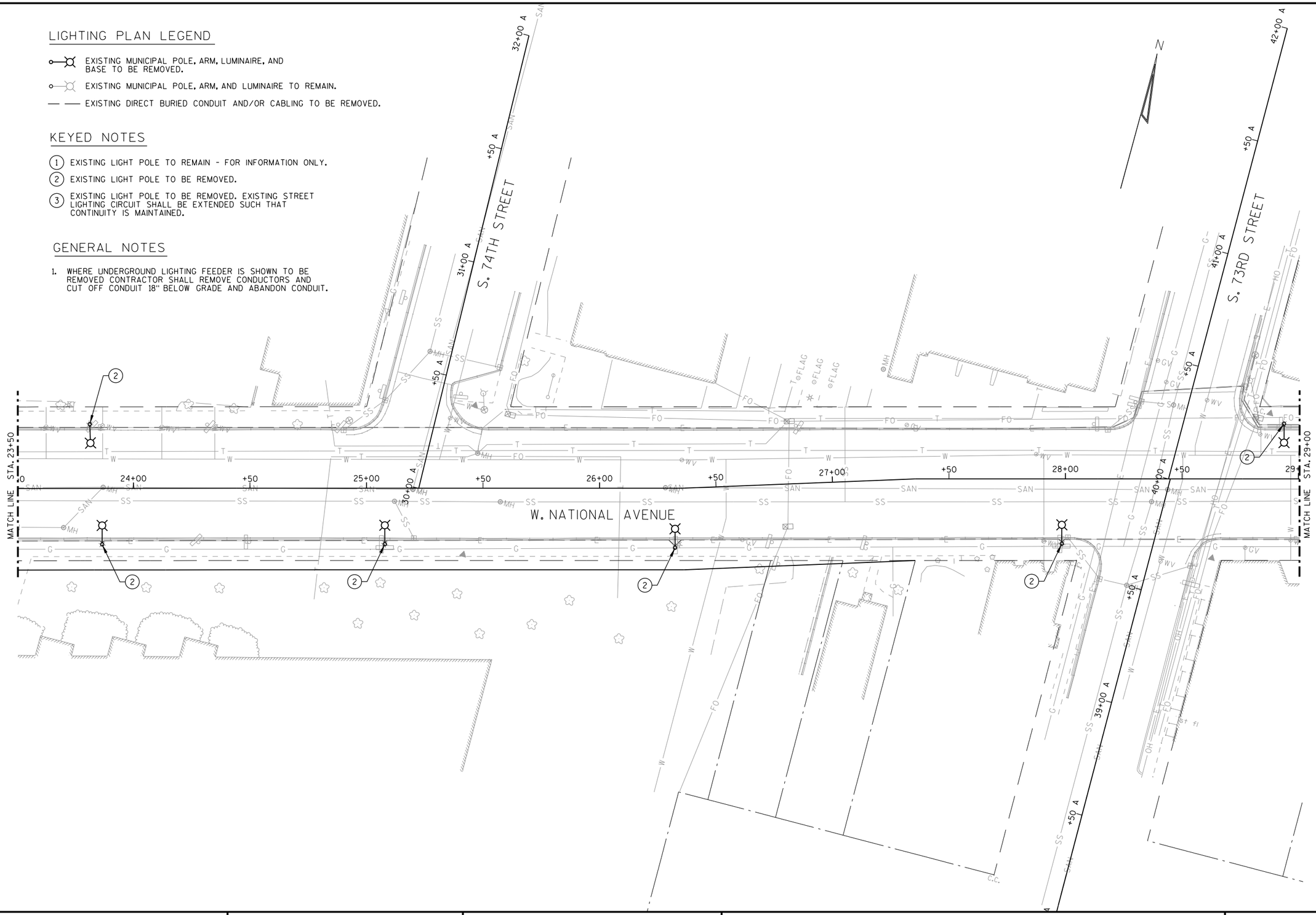

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET 95	E

LIGHTING PLAN LEGEND

EXISTING MUNICIPAL POLE, ARM, LUMINAIRE, AND BASE TO BE REMOVED.

EXISTING MUNICIPAL POLE, ARM, AND LUMINAIRE TO REMAIN.

EXISTING DIRECT BURIED CONDUIT AND/OR CABLING TO BE REMOVED.

KEYED NOTES

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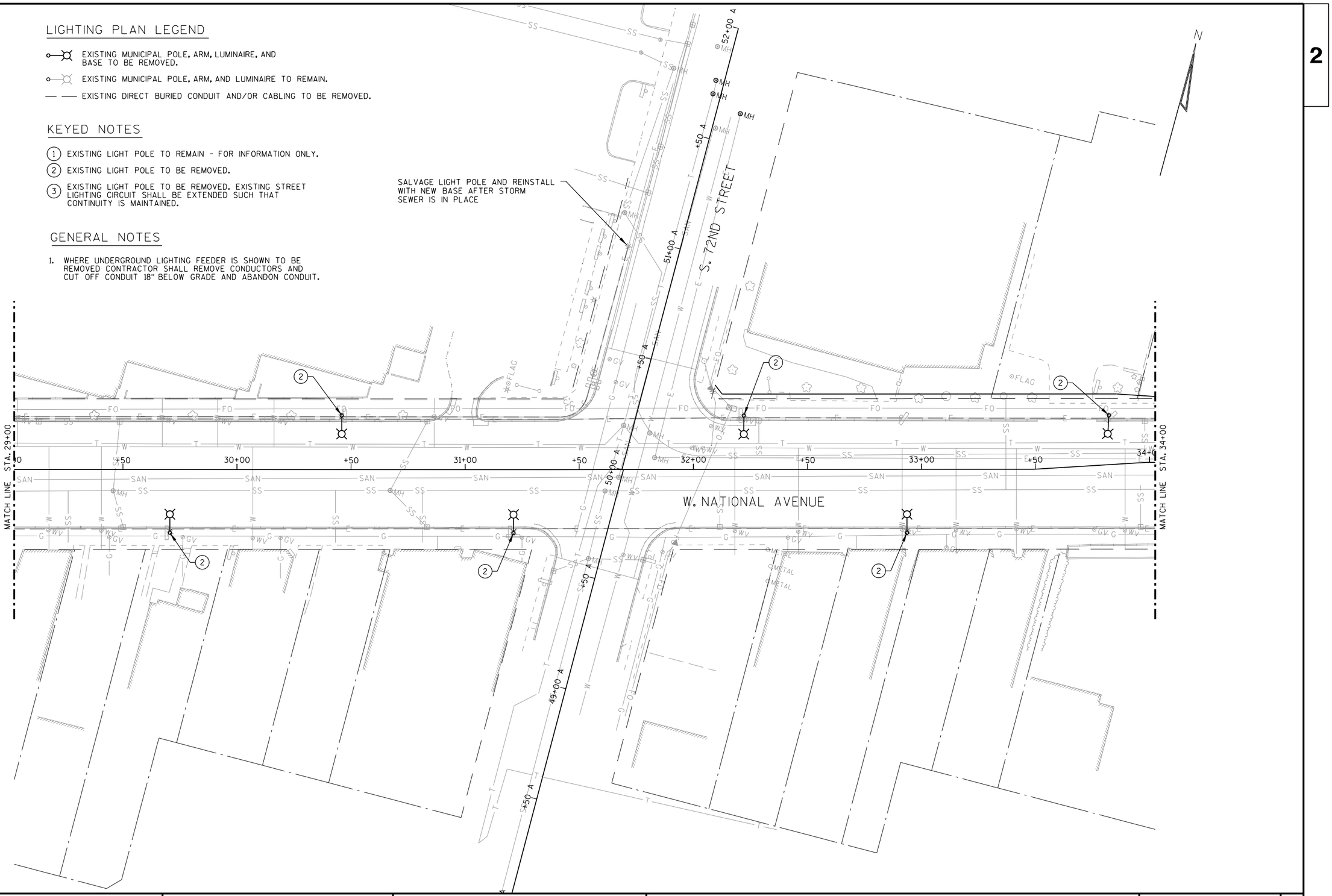

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET 96	E

LIGHTING PLAN LEGEND

- EXISTING MUNICIPAL POLE, ARM, LUMINAIRE, AND BASE TO BE REMOVED.
- EXISTING MUNICIPAL POLE, ARM, AND LUMINAIRE TO REMAIN.
- EXISTING DIRECT BURIED CONDUIT AND/OR CABLING TO BE REMOVED.

KEYED NOTES

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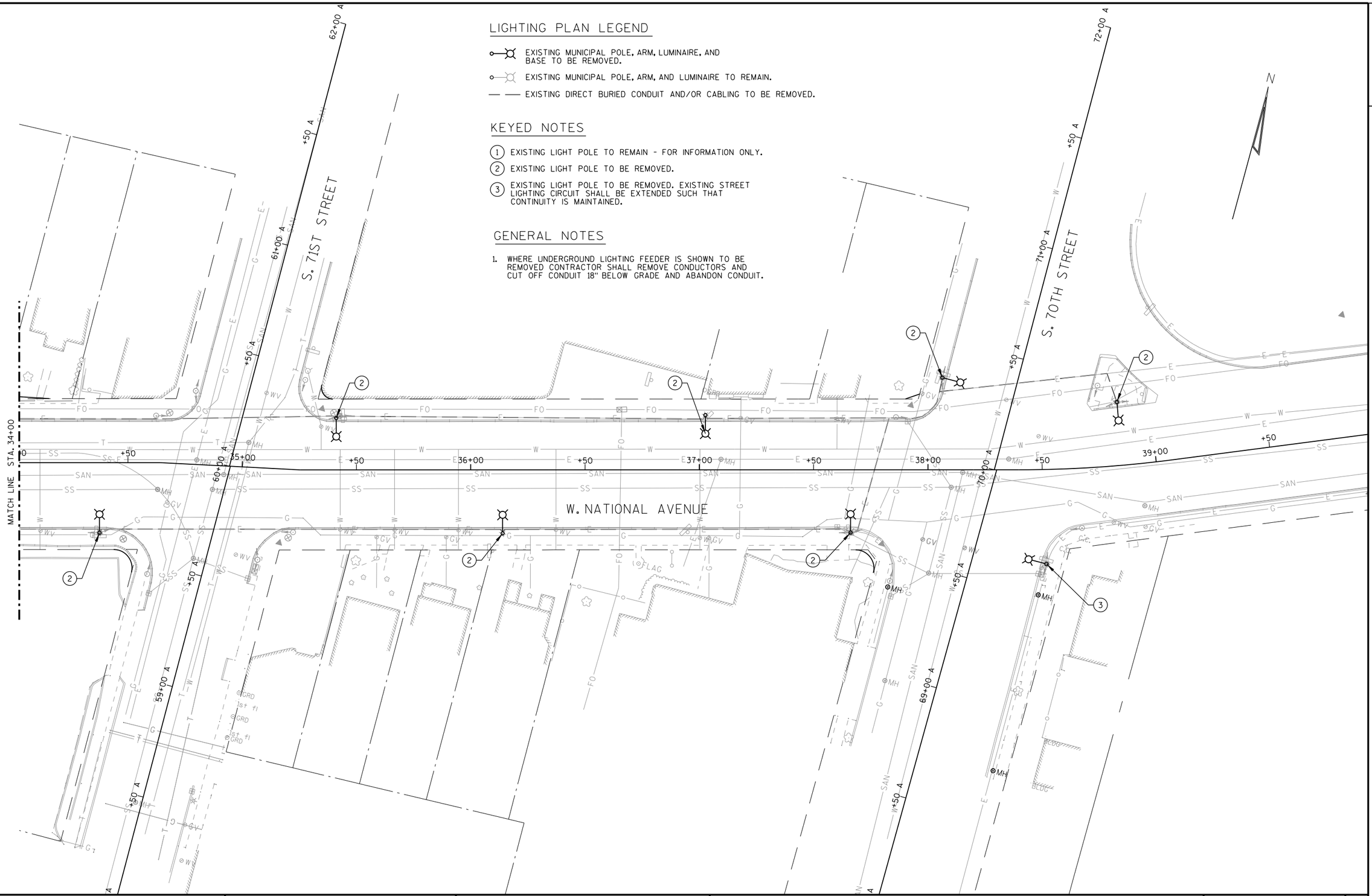
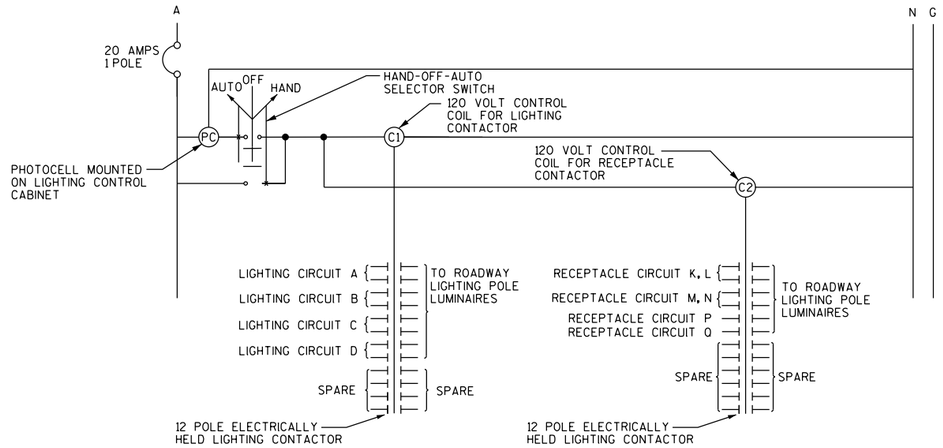


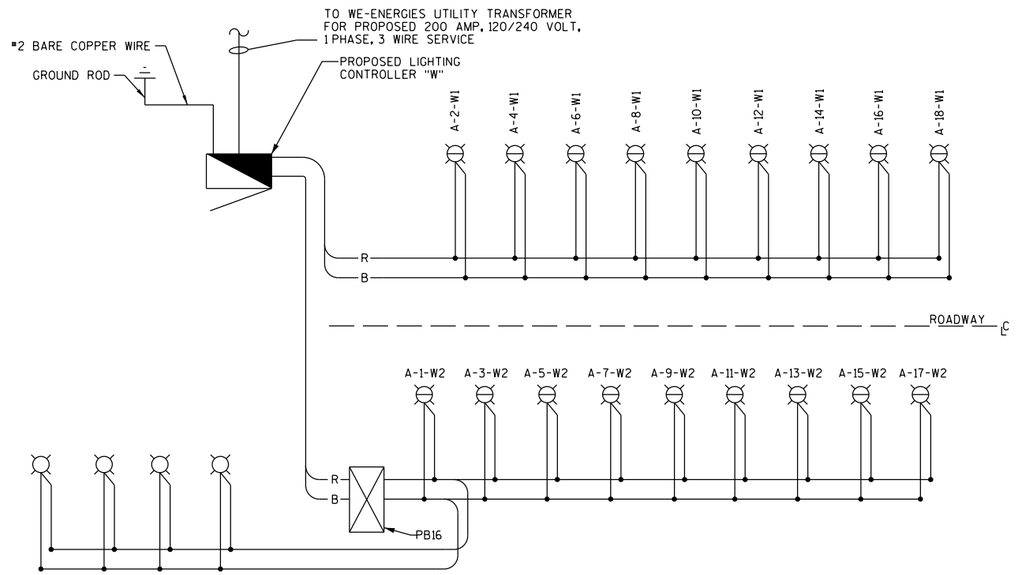
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET 97	E



7 LIGHTING CONTROL SCHEMATIC - CONTROLLER "W"

NTS

LOAD TABULATION FOR LIGHTING CONTROLLER "W"				
CIRCUIT	DESCRIPTION	PHASE A (RED) AMPS	PHASE B (BLACK) AMPS	BREAKER SIZE AMPS
A	(8) TYPE "A" FIXTURES @ .625 AMPS	5.00	5.00	30 AMP, 2 POLE
B	(9) TYPE "A" FIXTURES @ .625 AMPS	5.625	5.625	30 AMP, 2 POLE
	TOTAL CONNECTED LOAD @ 120 VOLT, 1 PHASE (AMPS)	10.625	10.625	
	TOTAL CONNECTED LOAD @ 240 VOLT, 1 PHASE (AMPS)	10.625 AMPS		



8 SINGLE-LINE CIRCUITING DIAGRAM - CONTROLLER "W"

NTS

LEGEND

	EXISTING (ETR)
	PROPOSED 75 WATT LED DECORATIVE LUMINAIRE
	PROPOSED LIGHTING CONTROLLER, SINGLE TYPE
R	RED CONDUCTOR (PHASE A)
B	BLACK CONDUCTOR (PHASE B)
W	WHITE CONDUCTOR (NEUTRAL)
G	GREEN CONDUCTOR (GROUND)

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF CIRCULAR AUGER.

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

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON PLANS.

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

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

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

ALL CONDUIT ENDS AT 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.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT 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, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF BASE REQUIRES DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND BASE BACKFILL SHALL BE TAMPED TIGHT AGAINST BARE CONCRETE BASE IN LAYERS OF 1'-0" OR LESS.

#4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2 AND TYPE 5 BASES.

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

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

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS

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

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

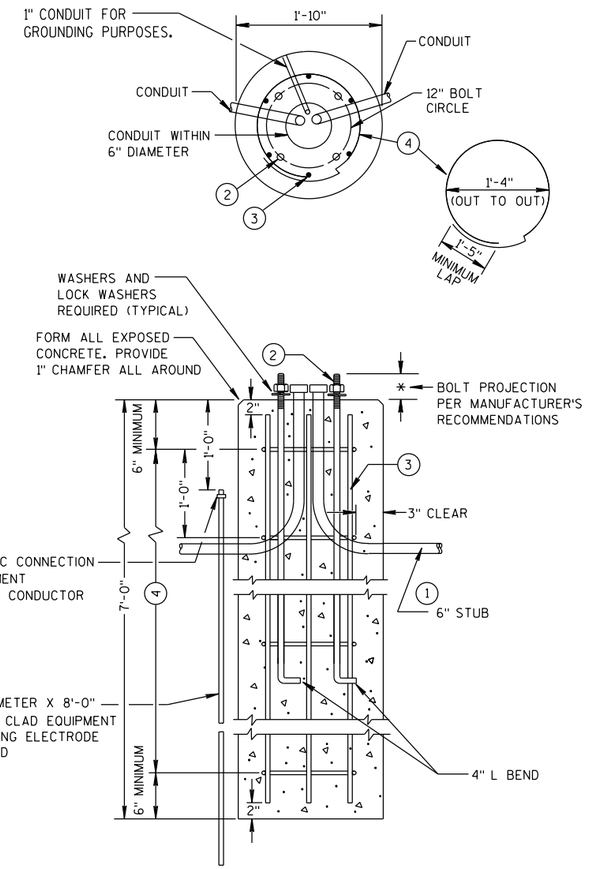
BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF STANDARD SPECIFICATIONS (LATEST EDITION).

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

(2) (4) ¾" DIAMETER X 5'-0" ANCHOR RODS WITH 4" L BEND.

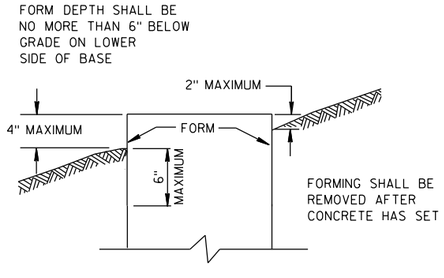
(3) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

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



CONCRETE BASES TYPE 2 (MOD)

NTS

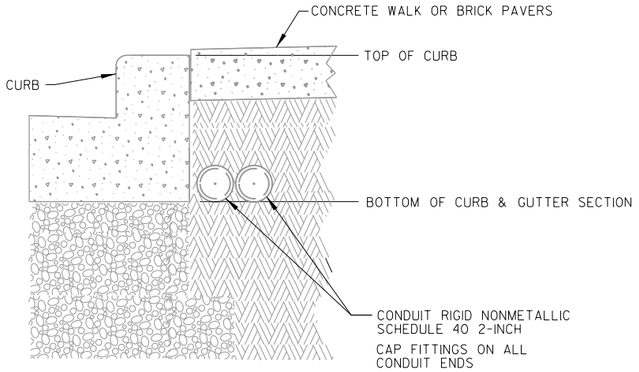


FORMING DETAIL

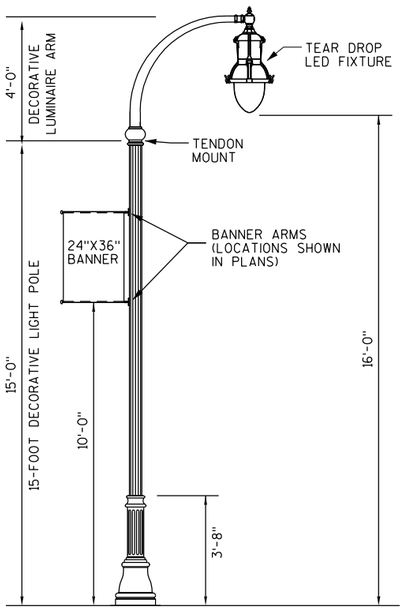
NOTE:

1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.

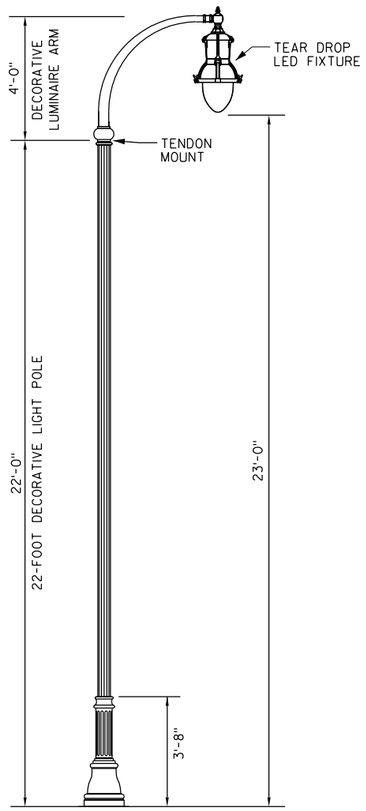
2.) CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



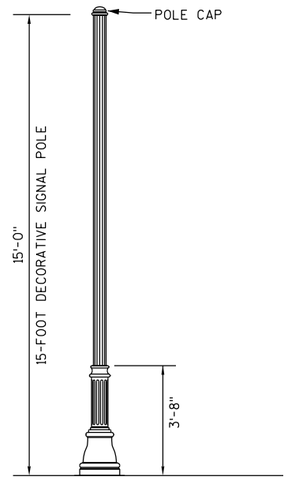
5 TYPICAL CONDUIT INSTALLATION
NTS



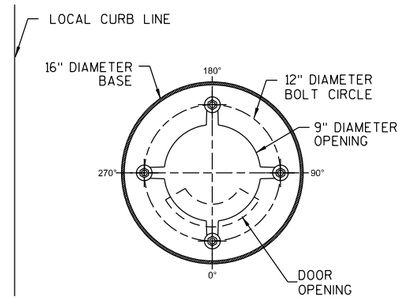
1 DECORATIVE LIGHTING ASSEMBLY -TYPE "A"
NTS



2 DECORATIVE LIGHTING ASSEMBLY -TYPE "B"
NTS



3 15-FOOT DECORATIVE SIGNAL POLE
NTS



4 DECORATIVE POLE BOLT CIRCLE DIAGRAM
NTS

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING & TRAFFIC SIGNAL DETAILS	SHEET 100	E

LIGHTING PLAN LEGEND

- MUNICIPAL LIGHT POLE WITH SINGLE ARM AND LUMINAIRE. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- EXISTING MUNI. POLE, ARM, AND LUMINAIRE TO REMAIN.
- LIGHTING CONTROL CABINET
- PULL BOX (24" X 42")
- PULL BOX (24" X 36")
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)
- CONDUIT STUBOUT

STA. XX+XX.XX. XX.X' LT = FIXTURE LOCATION
A-1-W1 = FIXTURE DESIGNATION

- FIXTURE CIRCUIT
- FIXTURE SERVICE
- FIXTURE NUMBER
- FIXTURE TYPE
  - A = TYPE "A"
  - B = TYPE "B" ON SIGNAL POLE (SEE LIGHTING FIXTURE SCHEDULE)

CABLE AND CONDUIT LEGEND

(A) 3 #4 AWG ADN 1 #4 GROUND IN 3" CONDUIT

(B) EXISTING STREET LIGHTING CIRCUIT F-1 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 3" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.

(C) EXISTING STREET LIGHTING CIRCUIT L-4 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 3" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.

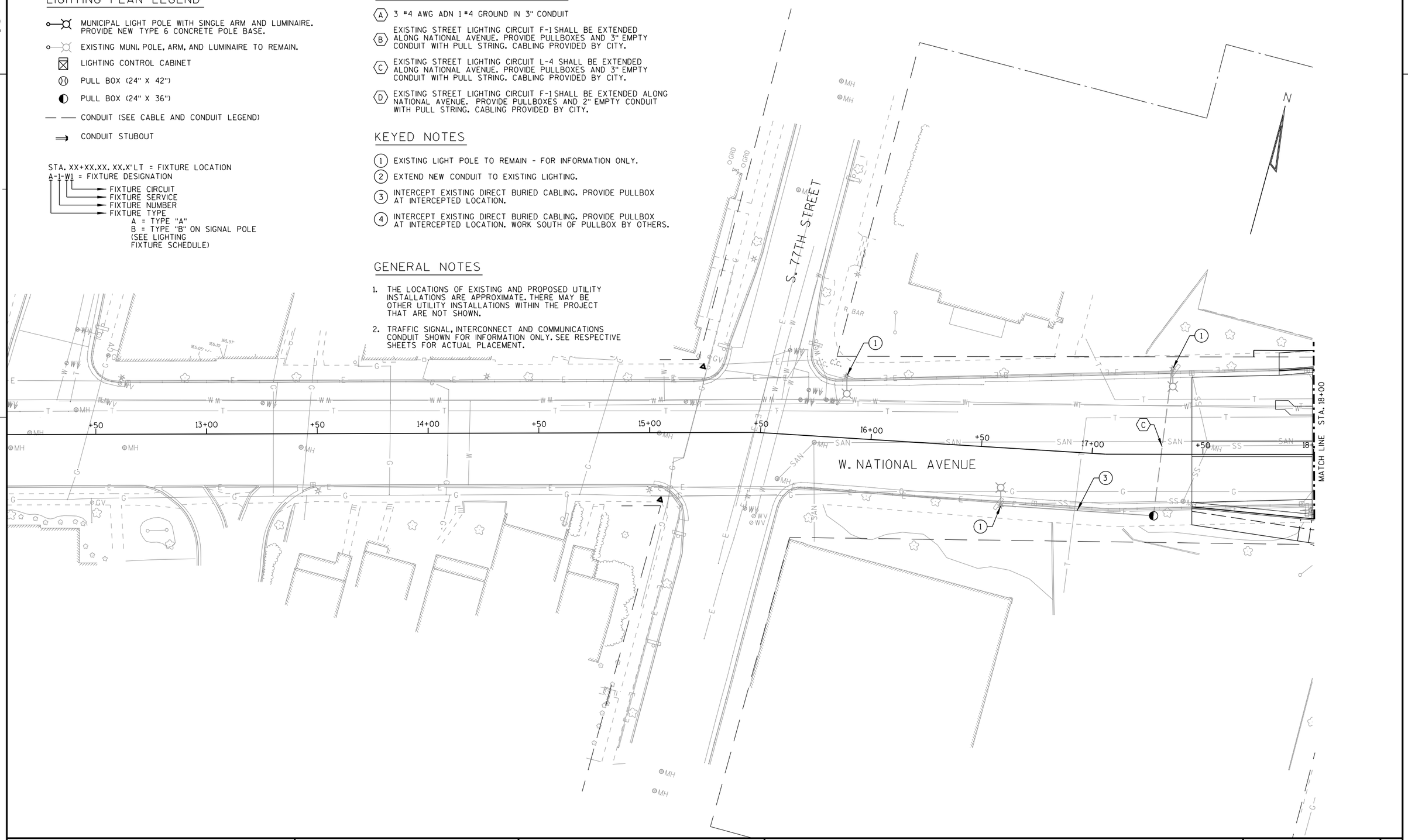
(D) EXISTING STREET LIGHTING CIRCUIT F-1 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 2" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.

KEYED NOTES

1. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY.
2. EXTEND NEW CONDUIT TO EXISTING LIGHTING.
3. INTERCEPT EXISTING DIRECT BURIED CABLING. PROVIDE PULLBOX AT INTERCEPTED LOCATION.
4. INTERCEPT EXISTING DIRECT BURIED CABLING. PROVIDE PULLBOX AT INTERCEPTED LOCATION. WORK SOUTH OF PULLBOX BY OTHERS.

GENERAL NOTES

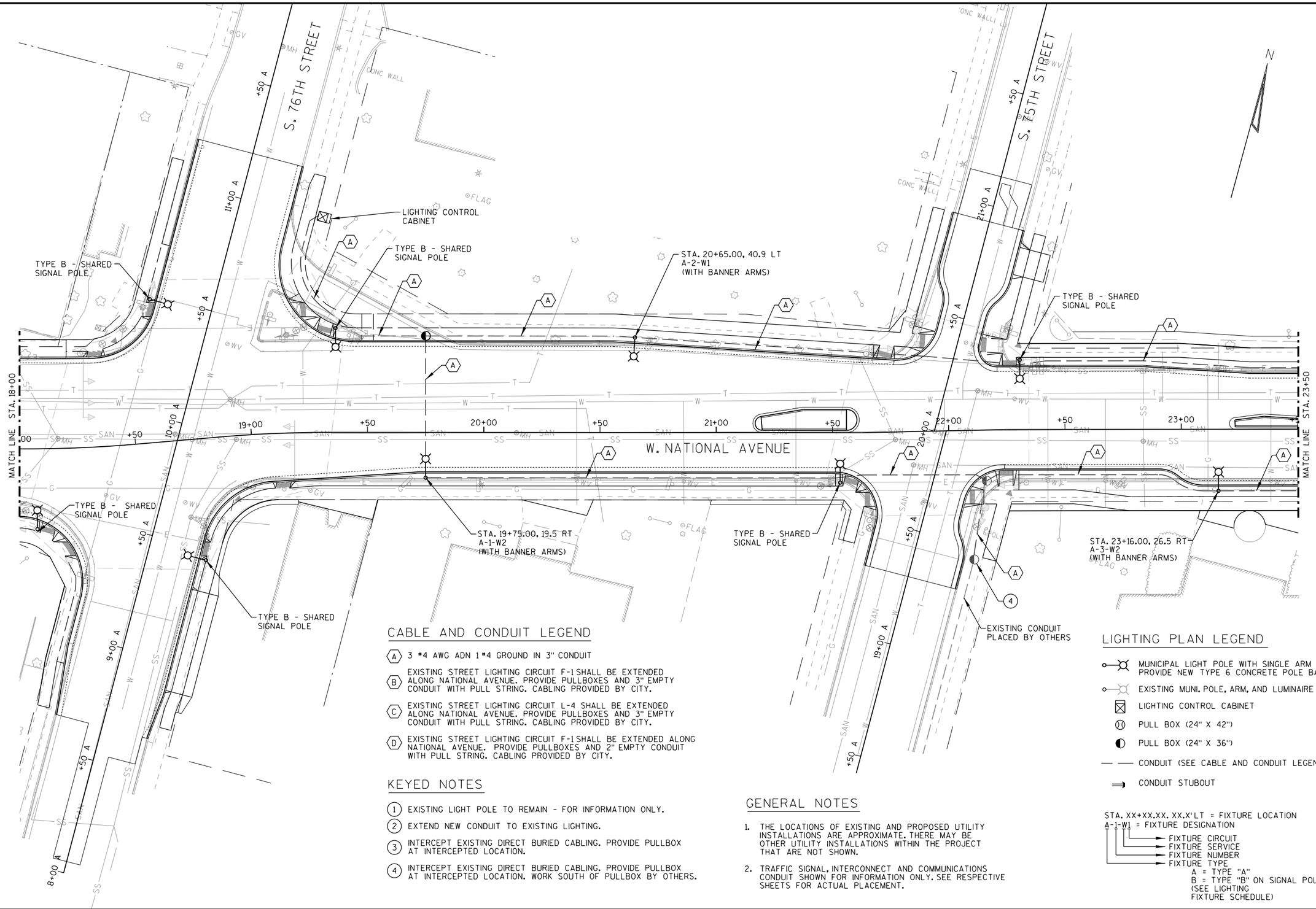
1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT THAT ARE NOT SHOWN.
2. TRAFFIC SIGNAL, INTERCONNECT AND COMMUNICATIONS CONDUIT SHOWN FOR INFORMATION ONLY. SEE RESPECTIVE SHEETS FOR ACTUAL PLACEMENT.



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING PLAN	SHEET 101	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\023511_lp.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

2



CABLE AND CONDUIT LEGEND

- (A) 3 #4 AWG ADN 1 #4 GROUND IN 3" CONDUIT
- (B) EXISTING STREET LIGHTING CIRCUIT F-1 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 3" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.
- (C) EXISTING STREET LIGHTING CIRCUIT L-4 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 3" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.
- (D) EXISTING STREET LIGHTING CIRCUIT F-1 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 2" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.

KEYED NOTES

1. EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY.
2. EXTEND NEW CONDUIT TO EXISTING LIGHTING.
3. INTERCEPT EXISTING DIRECT BURIED CABLING. PROVIDE PULLBOX AT INTERCEPTED LOCATION.
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GENERAL NOTES

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT THAT ARE NOT SHOWN.
2. TRAFFIC SIGNAL, INTERCONNECT AND COMMUNICATIONS CONDUIT SHOWN FOR INFORMATION ONLY. SEE RESPECTIVE SHEETS FOR ACTUAL PLACEMENT.

LIGHTING PLAN LEGEND

- MUNICIPAL LIGHT POLE WITH SINGLE ARM AND LUMINAIRE. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- EXISTING MUNI. POLE, ARM, AND LUMINAIRE TO REMAIN.
- LIGHTING CONTROL CABINET
- PULL BOX (24" X 42")
- PULL BOX (24" X 36")
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)
- CONDUIT STUBOUT

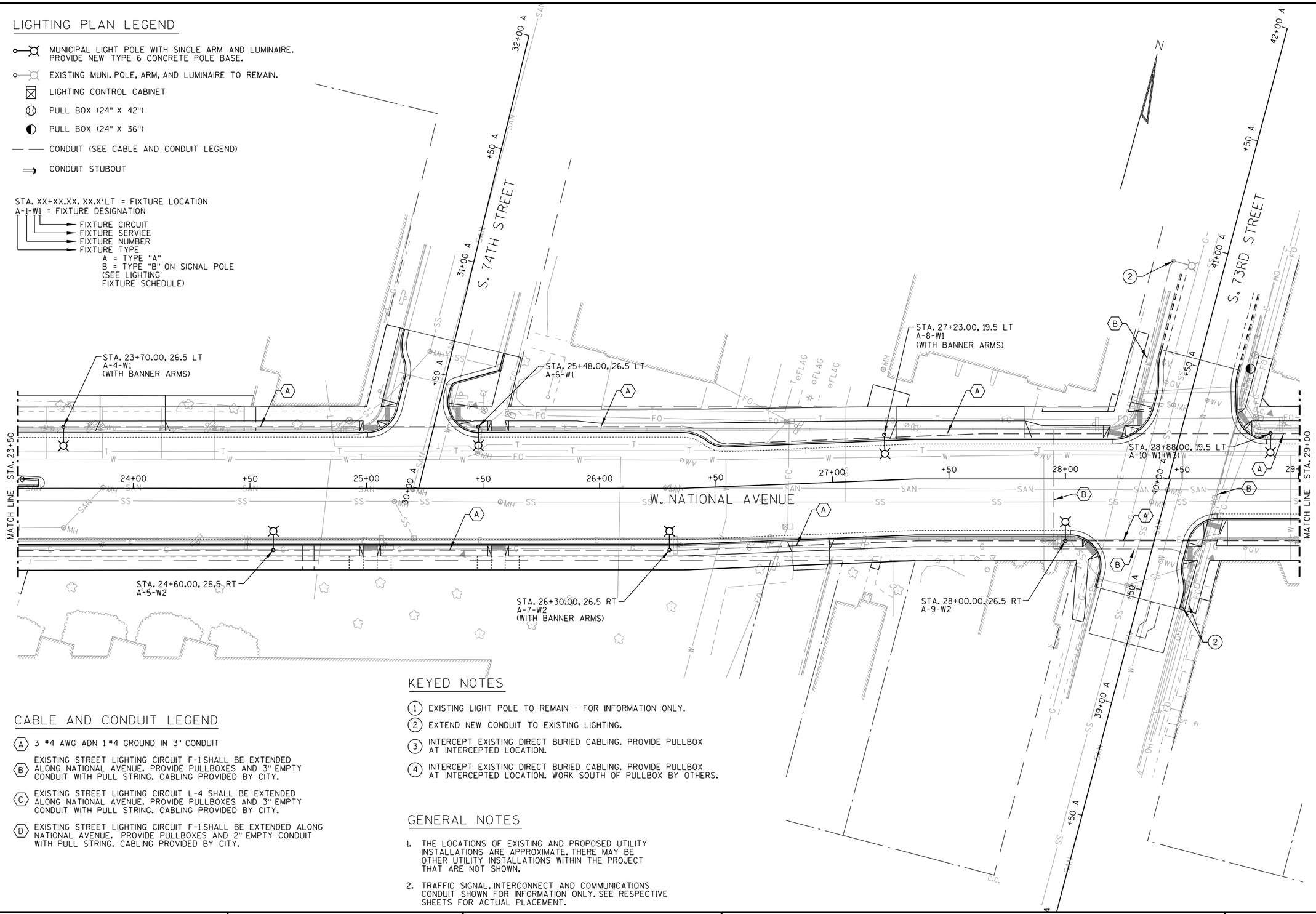
STA. XX+XX.XX, XX.X'LT = FIXTURE LOCATION
A-1-W1 = FIXTURE DESIGNATION
- FIXTURE CIRCUIT
- FIXTURE SERVICE
- FIXTURE NUMBER
- FIXTURE TYPE
  - A = TYPE "A"
  - B = TYPE "B" ON SIGNAL POLE (SEE LIGHTING FIXTURE SCHEDULE)

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING PLAN	SHEET 102	E

LIGHTING PLAN LEGEND

- MUNICIPAL LIGHT POLE WITH SINGLE ARM AND LUMINAIRE. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- EXISTING MUNI. POLE, ARM, AND LUMINAIRE TO REMAIN.
- LIGHTING CONTROL CABINET
- PULL BOX (24" X 42")
- PULL BOX (24" X 36")
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)
- CONDUIT STUBOUT

STA. XX+XX.XX. XX.X'LT = FIXTURE LOCATION
A-1-W1 = FIXTURE DESIGNATION
- A-1-W1 → FIXTURE CIRCUIT
- A-1-W1 → FIXTURE SERVICE
- A-1-W1 → FIXTURE NUMBER
- A-1-W1 → FIXTURE TYPE
  - A = TYPE "A"
  - B = TYPE "B" ON SIGNAL POLE (SEE LIGHTING FIXTURE SCHEDULE)



CABLE AND CONDUIT LEGEND

- (A) 3 #4 AWG ADN 1 #4 GROUND IN 3" CONDUIT
- (B) EXISTING STREET LIGHTING CIRCUIT F-1 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 3" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.
- (C) EXISTING STREET LIGHTING CIRCUIT L-4 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 3" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.
- (D) EXISTING STREET LIGHTING CIRCUIT F-1 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 2" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.

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4. INTERCEPT EXISTING DIRECT BURIED CABLING. PROVIDE PULLBOX AT INTERCEPTED LOCATION. WORK SOUTH OF PULLBOX BY OTHERS.

GENERAL NOTES

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT THAT ARE NOT SHOWN.
2. TRAFFIC SIGNAL, INTERCONNECT AND COMMUNICATIONS CONDUIT SHOWN FOR INFORMATION ONLY. SEE RESPECTIVE SHEETS FOR ACTUAL PLACEMENT.

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING PLAN	SHEET 103	E

LIGHTING PLAN LEGEND

- MUNICIPAL LIGHT POLE WITH SINGLE ARM AND LUMINAIRE. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- EXISTING MUNI. POLE, ARM, AND LUMINAIRE TO REMAIN.
- LIGHTING CONTROL CABINET
- PULL BOX (24" X 42")
- PULL BOX (24" X 36")
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)
- CONDUIT STUBOUT

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A-1-W1 = FIXTURE DESIGNATION
- FIXTURE CIRCUIT
- FIXTURE SERVICE
- FIXTURE NUMBER
- FIXTURE TYPE
  - A = TYPE "A"
  - B = TYPE "B" ON SIGNAL POLE (SEE LIGHTING FIXTURE SCHEDULE)

CABLE AND CONDUIT LEGEND

(A) 3 #4 AWG ADN 1 #4 GROUND IN 3" CONDUIT

(B) EXISTING STREET LIGHTING CIRCUIT F-1 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 3" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.

(C) EXISTING STREET LIGHTING CIRCUIT L-4 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 3" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.

(D) EXISTING STREET LIGHTING CIRCUIT F-1 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 2" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.

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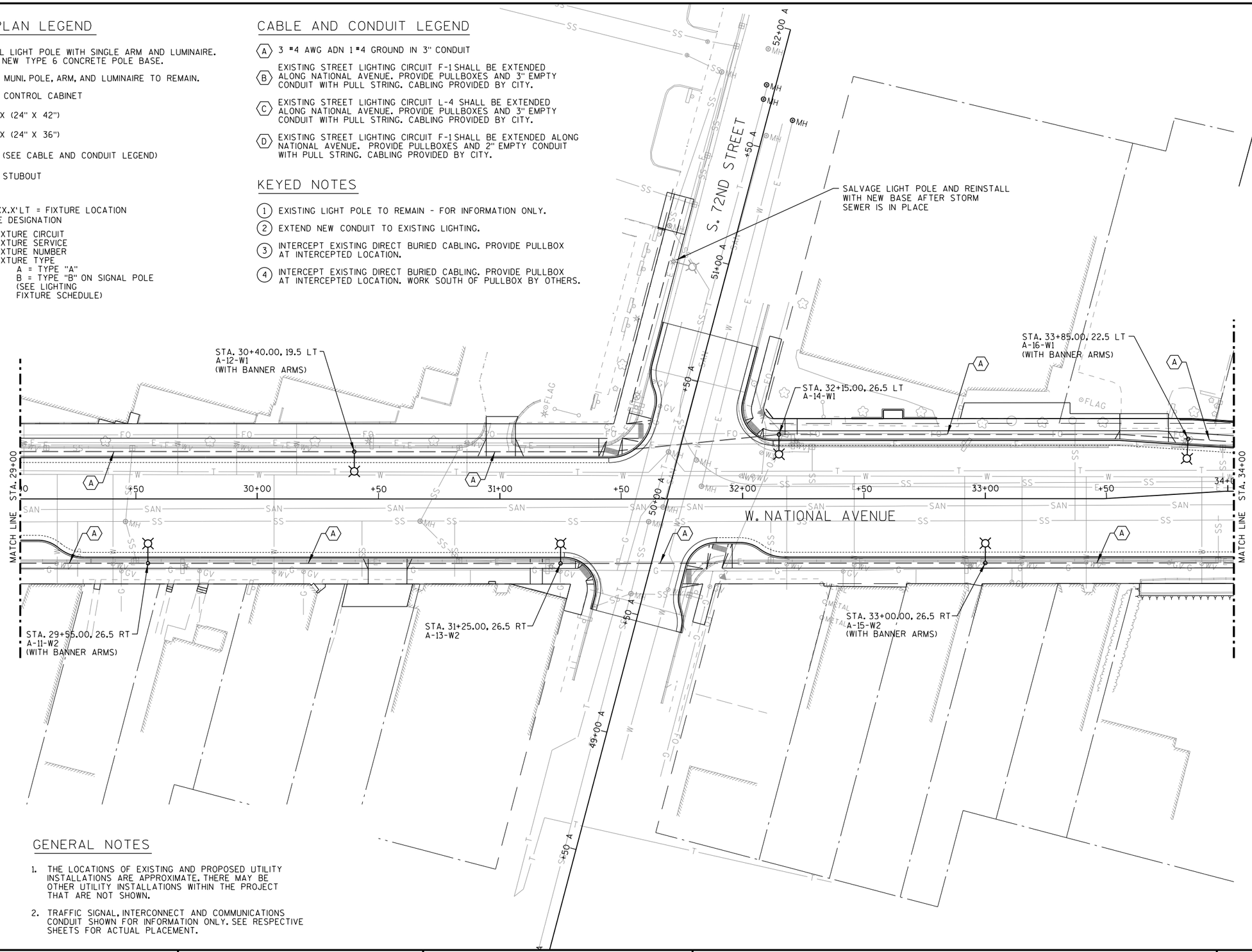

GENERAL NOTES

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2. TRAFFIC SIGNAL, INTERCONNECT AND COMMUNICATIONS CONDUIT SHOWN FOR INFORMATION ONLY. SEE RESPECTIVE SHEETS FOR ACTUAL PLACEMENT.

LIGHTING PLAN LEGEND

- MUNICIPAL LIGHT POLE WITH SINGLE ARM AND LUMINAIRE. PROVIDE NEW TYPE 6 CONCRETE POLE BASE.
- EXISTING MUNI. POLE, ARM, AND LUMINAIRE TO REMAIN.
- LIGHTING CONTROL CABINET
- PULL BOX (24" X 42")
- PULL BOX (24" X 36")
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)
- CONDUIT STUBOUT

STA. XX+XX.XX. XX.X' LT = FIXTURE LOCATION
A-1-W1 = FIXTURE DESIGNATION
- FIXTURE CIRCUIT
- FIXTURE SERVICE
- FIXTURE NUMBER
- FIXTURE TYPE
  - A = TYPE "A"
  - B = TYPE "B" ON SIGNAL POLE (SEE LIGHTING FIXTURE SCHEDULE)

CABLE AND CONDUIT LEGEND

(A) 3 #4 AWG ADN 1 #4 GROUND IN 3" CONDUIT

(B) EXISTING STREET LIGHTING CIRCUIT F-1 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 3" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.

(C) EXISTING STREET LIGHTING CIRCUIT L-4 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 3" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.

(D) EXISTING STREET LIGHTING CIRCUIT F-1 SHALL BE EXTENDED ALONG NATIONAL AVENUE. PROVIDE PULLBOXES AND 2" EMPTY CONDUIT WITH PULL STRING. CABLING PROVIDED BY CITY.

KEYED NOTES

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2. EXTEND NEW CONDUIT TO EXISTING LIGHTING.
3. INTERCEPT EXISTING DIRECT BURIED CABLING. PROVIDE PULLBOX AT INTERCEPTED LOCATION.
4. INTERCEPT EXISTING DIRECT BURIED CABLING. PROVIDE PULLBOX AT INTERCEPTED LOCATION. WORK SOUTH OF PULLBOX BY OTHERS.

S. 71ST STREET

S. 70TH STREET

W. NATIONAL AVENUE

MATCH LINE STA. 34+00

STA. 36+75.00, 25.5 LT
A-18-W1
(WITH BANNER ARMS)

STA. 36+90.00, 29.5 RT
A-17-W2
(WITH BANNER ARMS)

TYPE B - SHARED SIGNAL POLE

N

GENERAL NOTES

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT THAT ARE NOT SHOWN.
2. TRAFFIC SIGNAL, INTERCONNECT AND COMMUNICATIONS CONDUIT SHOWN FOR INFORMATION ONLY. SEE RESPECTIVE SHEETS FOR ACTUAL PLACEMENT.

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- DECORATIVE SIGNAL POLE
- (XX) MONOTUBE BASE, POLE, 30' ARM
- DECORATIVE LIGHTING POLE
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 42"
- (V) COMMUNICATIONS VAULT TYPE ROUND
- PEDESTRIAN HEAD
- CONTROL CABINET
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

STRUCTURE NUMBERS
SB2 = S-40-1906
SB6 = S-40-1907

W. NATIONAL AVE

S. 76TH STREET

POSTED SPEED LIMIT = 30 MPH

POSTED SPEED LIMIT = 25 MPH

225' TO NEAR RIGHT SIGNAL

180' TO NEAR RIGHT SIGNAL

CONC WALL

FLAG

FO I/C

I/C CV100

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
5. VIDEO DETECTION ZONES TO BE PROGRAMMED IN THE FIELD.
6. CITY OF WEST ALLIS FORCES WILL INSTALL CONDUIT AND WIRING TO 4 LIGHT POLES ON S. 76TH STREET SOUTH OF W. NATIONAL AVENUE.

TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE & S. 76TH STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

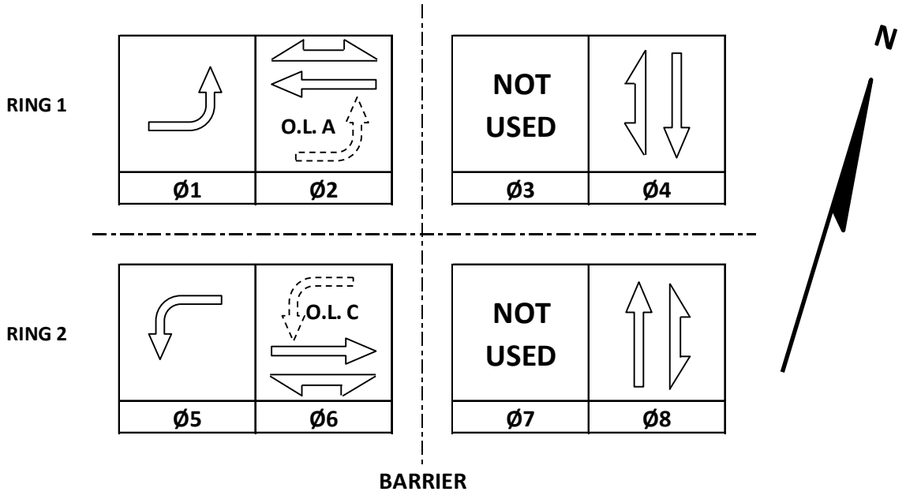
CABINET TYPE: TS-2
SIGNAL NO. CONTROLLER TYPE: EPAC

CITY CONTACT: PETER DANIELS
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 106	E

	HEAD NUMBERS	FLASH
Ø1	4,5	-
Ø2	6,7,8	R
Ø3		
Ø4	14,15,16	R
Ø5	9,10	-
Ø6	1,2,3	R
Ø7		
Ø8	11,12,13	R
Ø2P	19,20	
Ø4P	17,18	
Ø6P	23,24	
Ø8P	21,22	
OLA	9,10	R ←
OLB		
OLC	4,5	R ←
OLD		



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT	←	→	↓	↑
PHASE	2+5	6+1	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.
AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	X
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS-

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

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	41	51	81				
ASSIGNED PHASE	1	4	5	8				
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND	X	X	X	X				
DELAY								

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
								SWITCH
								EXTEND
								DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	21	42	61	82				
ASSIGNED PHASE	2	4	6	8				
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND	X	X	X	X				
DELAY								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
								SWITCH
								EXTEND
								DELAY

W. NATIONAL AVENUE & S. 76TH STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO: CABINET TYPE: TS2
CONTROLLER TYPE: EPAC
DATE: 10/17 PAGE NO. 2 OF 2

PROJECT ID:	2410-00-77
INTERSECTION:	W. NATIONAL AVENUE & S. 76TH STREET

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	
SB1	15											
		4				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		6	RED	ORG	GRN							
		21								BLK	BLU	
SB2	15											
		2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		22								BLK	BLU	
SB3	12											
		11	RED	ORG	GRN							
		15	RED	ORG	GRN							
		23								BLK	BLU	
SB4	12											
		16	RED	ORG	GRN							
		24								BLK	BLU	
SB5	15											
		1	RED	ORG	GRN							
		9				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		17								BLK	BLU	
SB6	15											
		7	RED	ORG	GRN							
		8	RED	ORG	GRN							
		10				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		18								BLK	BLU	
SB7	12											
		12	RED	ORG	GRN							
		14	RED	ORG	GRN							
		19								BLK	BLU	
SB8	12											
		13	RED	ORG	GRN							
		20								BLK	BLU	

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	HEAD A (SB5)
CB1	HEAD B (SB15)
CB1	HEAD C (SB17)
CB1	HEAD D (SB7)

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB1
PB3	SB2
PB4	SB3
PB5	SB4
PB6	SB5
PB7	SB6
PB8	SB7
PB9	SB8

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB1
SB1	SB3
SB3	EX-01732
EX-01732	EX-01828
SB3	EX-01715
EX-01715	EX-01809
CB1	SB7
SB7	SB5

NOTES:
*USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
*ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
*RECONNECT THE GROUNDING CONDUCTORS WHENEVER THE CIRCUIT HAS BEEN INTERRUPTED TO ENSURE THE GROUNDING CIRCUIT IS COMPLETE.
*WIRING OF EXISTING LIGHTING POLES (EX) TO BE INSTALLED BY CITY OF WESTALLIS FORCES

W. NATIONAL AVENUE & S. 76TH STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

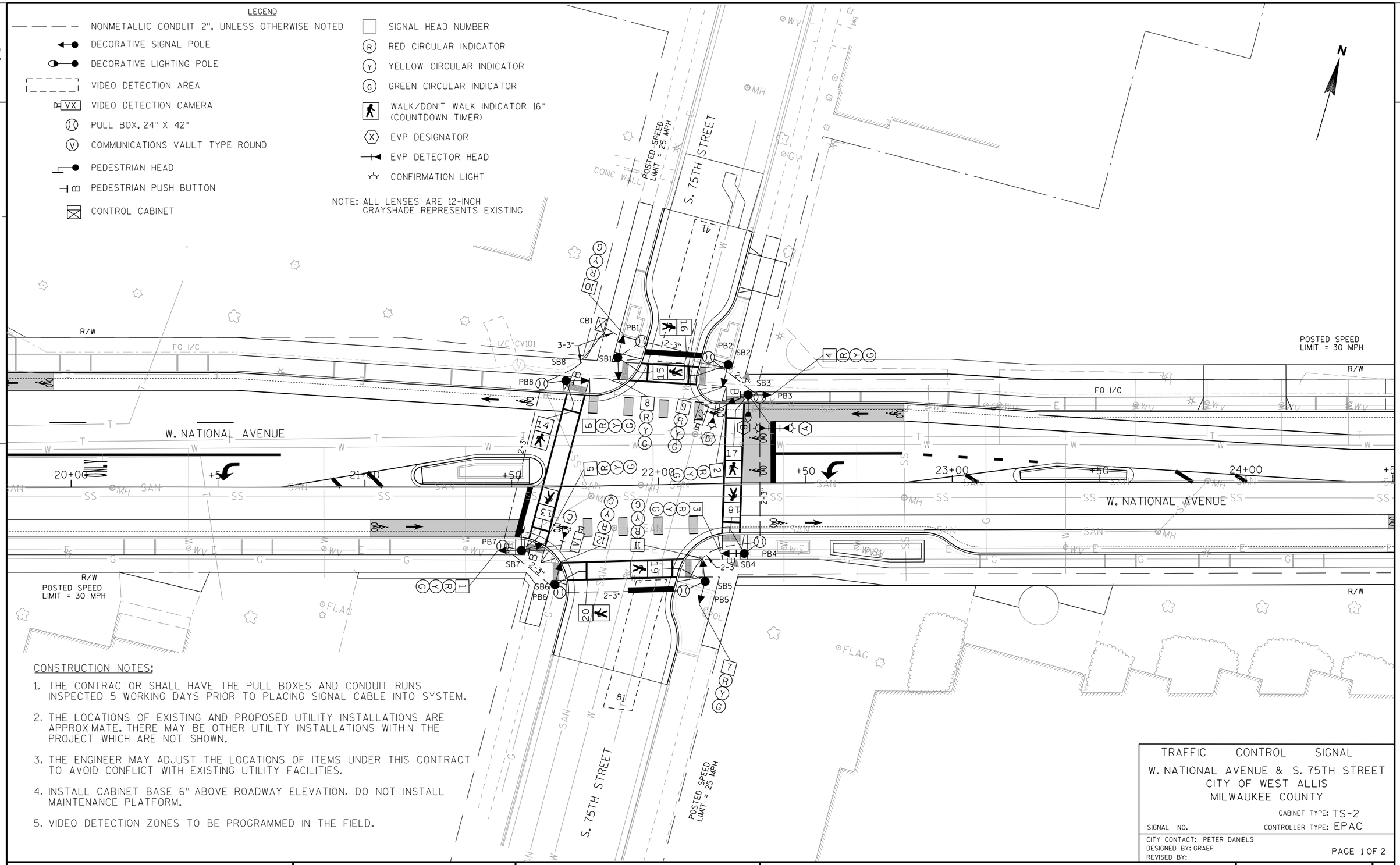
SIGNAL NO: CABINET TYPE: TS2
CONTROLLER TYPE: EPAC

DATE: 7/17 PAGE NO. 1 OF 1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- DECORATIVE SIGNAL POLE
- DECORATIVE LIGHTING POLE
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 42"
- V COMMUNICATIONS VAULT TYPE ROUND
- PEDESTRIAN HEAD
- PEDESTRIAN PUSH BUTTON
- CONTROL CABINET
- SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION. DO NOT INSTALL MAINTENANCE PLATFORM.
5. VIDEO DETECTION ZONES TO BE PROGRAMMED IN THE FIELD.

TRAFFIC CONTROL SIGNAL

W. NATIONAL AVENUE & S. 75TH STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CABINET TYPE: TS-2
SIGNAL NO. CONTROLLER TYPE: EPAC

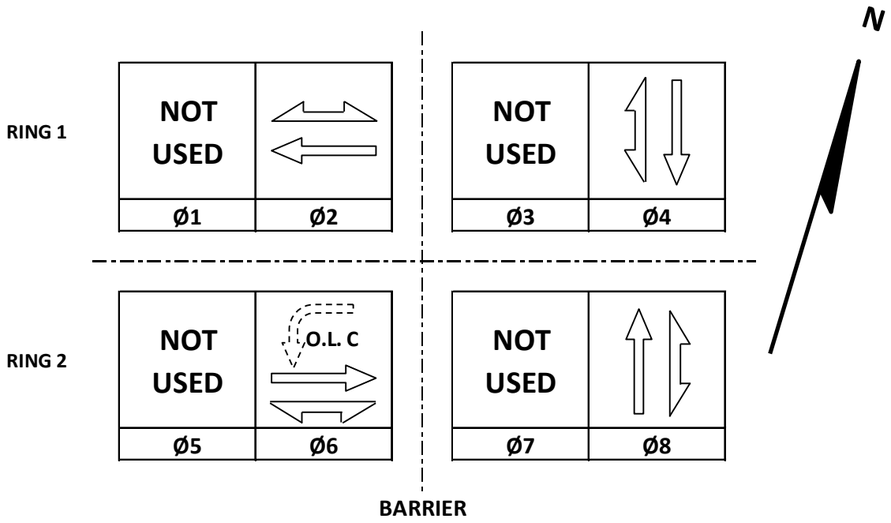
CITY CONTACT: PETER DANIELS
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 109 E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\02_75th Street\024021_sp.dgn
PLOT DATE : 10/3/2017 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 30.0000 sf / in.

	HEAD NUMBERS	FLASH
Ø1		
Ø2	4,5,6	R
Ø3		
Ø4	10,11,12	R
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8	7,8,9	R
Ø2P	15,16	
Ø4P	13,14	
Ø6P	19,20	
Ø8P	17,18	
OLA		
OLB		
OLC	4,5,6	R ←
OLD		



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT	←	→	↓	↑
PHASE	2+5	6+2	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+5 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6.
AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	X
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO: S-	
SIGNAL SYSTEM NO: SS-	

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

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23	21	27	25	31	29	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	41																PLAN LOOP DETECTOR*(S)
ASSIGNED PHASE	4																ASSIGNED PHASE
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
SWITCH																	SWITCH
EXTEND	X																EXTEND
DELAY																	DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24	22	28	26	32	30	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	81																PLAN LOOP DETECTOR*(S)
ASSIGNED PHASE	8																ASSIGNED PHASE
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
SWITCH																	SWITCH
EXTEND	X																EXTEND
DELAY																	DELAY

W. NATIONAL AVENUE & S. 75TH STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO:	CABINET TYPE: TS2
	CONTROLLER TYPE: EPAC
DATE: 10/17	PAGE NO. 2 OF 2

2

PROJECT ID:	2410-00-77
INTERSECTION:	W. NATIONAL AVENUE & S. 75TH STREET

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	
SB1	12											
		8	RED	ORG	GRN							
		10	RED	ORG	GRN							
		15								BLK	BLU	
SB2	12											
		9	RED	ORG	GRN							
		16								BLK	BLU	
SB3	12											
		2	RED	ORG	GRN							
		4	RED	ORG	GRN							
		17								BLK	BLU	
		B										WHT/BLK
SB4	12											
		3	RED	ORG	GRN							
		18								BLK	BLU	
		B										WHT/BLK
SB5	12											
		7	RED	ORG	GRN							
		11	RED	ORG	GRN							
		19								BLK	BLU	
SB6	12											
		12	RED	ORG	GRN							
		20								BLK	BLU	
SB7	12											
		1	RED	ORG	GRN							
		5	RED	ORG	GRN							
		13								BLK	BLU	
		B										WHT/BLK
SB8	12											
		6	RED	ORG	GRN							
		14								BLK	BLU	
		B										WHT/BLK

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	HEAD A (SB3)
CB1	HEAD B (SB3)
CB1	HEAD C (SB7)
CB1	HEAD D (SB3)

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	SB1
PB2	SB2
PB3	SB3
PB4	SB4
PB5	SB5
PB6	SB6
PB7	SB7
PB8	SB8

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB3
CB1	SB7

NOTES:
*USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
*ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
*RECONNECT THE GROUNDING CONDUCTORS WHENEVER THE CIRCUIT HAS BEEN INTERRUPTED TO ENSURE THE GROUNDING CIRCUIT IS COMPLETE.

W. NATIONAL AVENUE & S. 75TH STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

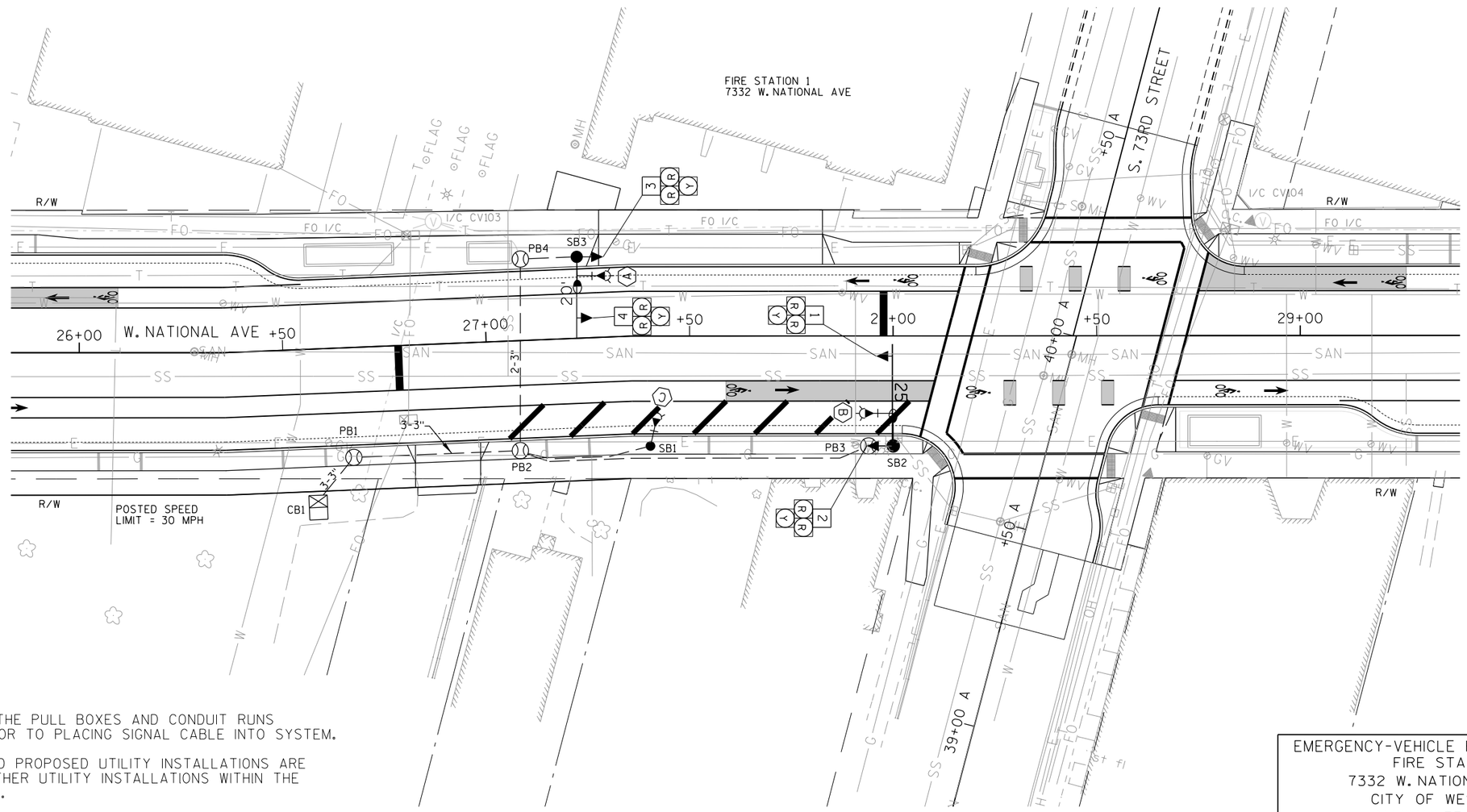
SIGNAL NO: CABINET TYPE: TS2
CONTROLLER TYPE: EPAC

DATE: 10/17 PAGE NO. 1 OF 1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- DECORATIVE SIGNAL POLE
- (XX) TRANSFORMER BASE, TROMBONE ARM (XX')
- DECORATIVE LIGHTING FIXTURE
- PULL BOX, 24" X 42"
- (V) COMMUNICATIONS VAULT TYPE ROUND
- CONTROL CABINET
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



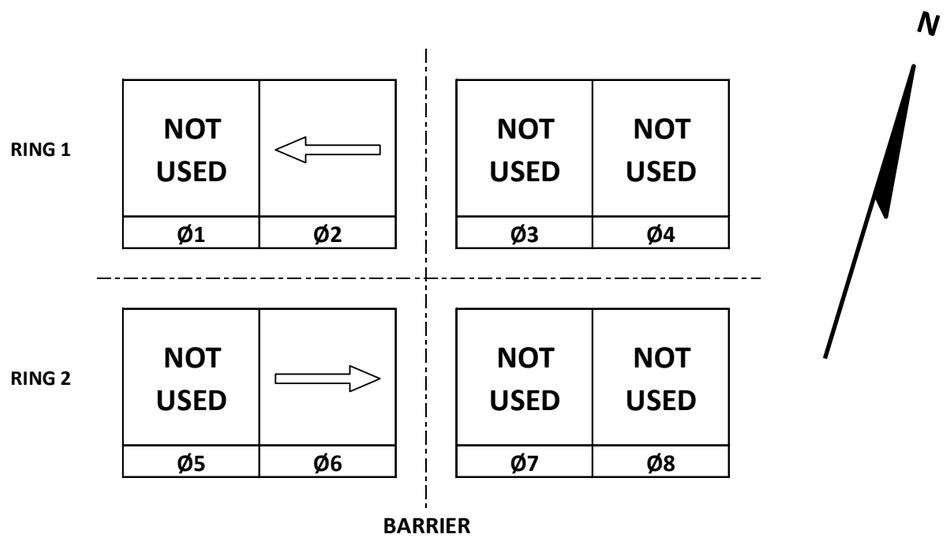
CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.

EMERGENCY-VEHICLE HYBRID BEACON
FIRE STATION 1
7332 W. NATIONAL AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY
CABINET TYPE: TS-2
SIGNAL NO. CONTROLLER TYPE: EPAC
CITY CONTACT: PETER DANIELS
DESIGNED BY: GRAEF
REVISED BY:
PAGE 1 OF 2

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	EMERGENCY-VEHICLE HYBRID BEACON	SHEET 112	E

	HEAD NUMBERS	FLASH
Ø1		
Ø2	3,4	R
Ø3		
Ø4		
Ø5		
Ø6	1,2	R
Ø7		
Ø8		
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLA		
OLB		
OLC		
OLD		



TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	X
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	

TYPE OF COORDINATION	
NONE	X
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS-

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

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT	←	→		
PHASE	2+6	6+2		

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6.

GENERAL NOTES:

1. EMERGENCY VEHICLE HYBRID BEACON TO BE ACTIVATED BY EMERGENCY VEHICLE PREEMPTION

FIRE STATION 1 7332 W. NATIONAL AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO: CABINET TYPE: TS2
CONTROLLER TYPE: EPAC
DATE: 10/17 PAGE NO. 2 OF 2

PROJECT ID:	2410-00-77
INTERSECTION:	FIRE STATION 1

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR		
			RED 1	RED 2	YELLOW
SB2	12				
		1	RED	ORG	GRN
		2	RED/BLK	ORG/BLK	GRN/BLK
SB3	12				
		3	RED	ORG	GRN
		4	RED/BLK	ORG/BLK	GRN/BLK

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	HEAD A (SB3)
CB1	HEAD B (SB2)

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB1
PB3	SB2
PB4	SB3

NOTES:
*USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
*ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
*RECONNECT THE GROUNDING CONDUCTORS WHENEVER THE CIRCUIT HAS BEEN INTERRUPTED TO ENSURE THE GROUNDING CIRCUIT IS COMPLETE.

EMERGENCY-VEHICLE HYBRID BEACON
FIRE STATION 1
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO: CABINET TYPE: TS2
CONTROLLER TYPE: EPAC

DATE: 10/17 PAGE NO. 1 OF 1

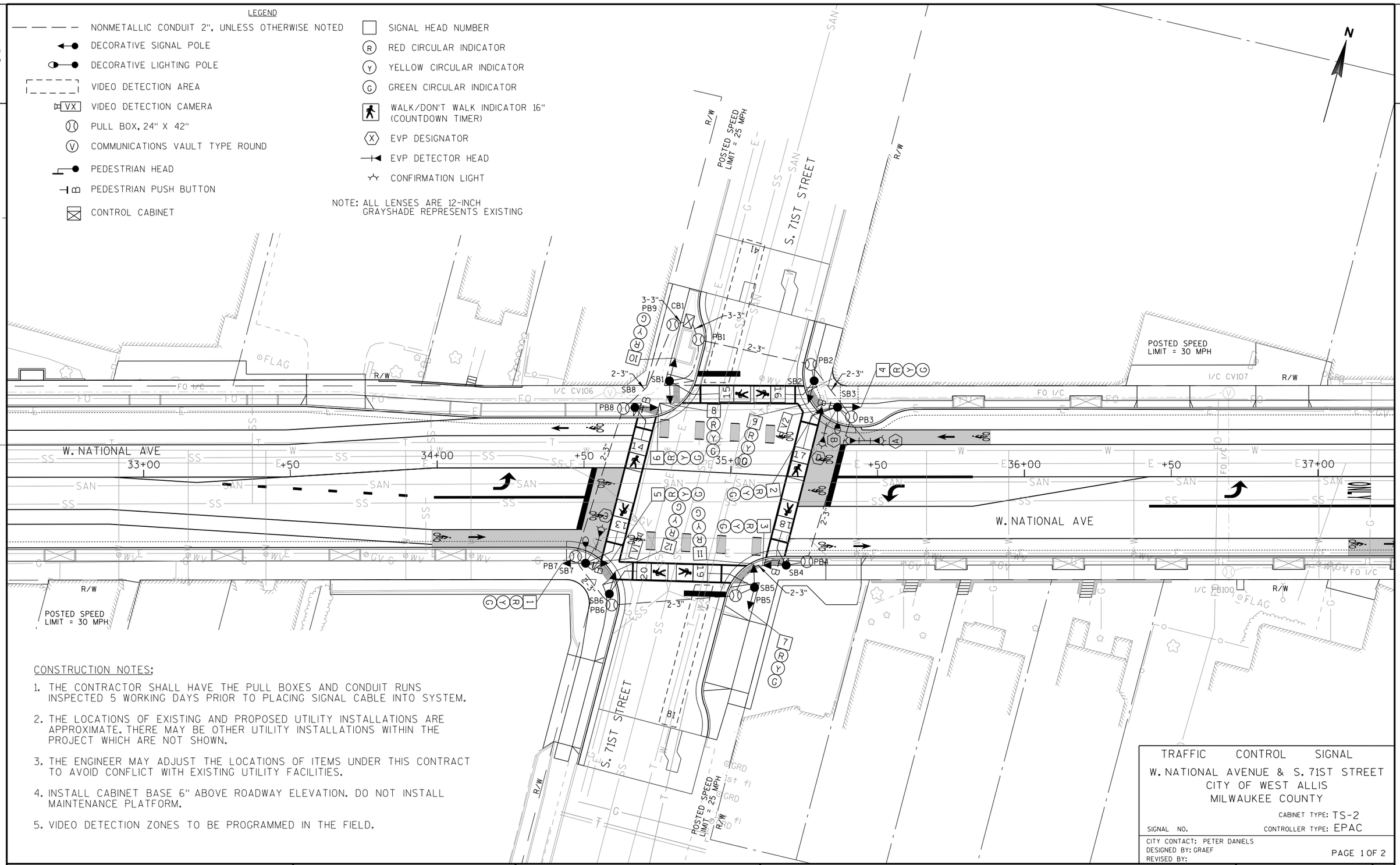
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CABLE ROUTING	SHEET NO: 114 E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- DECORATIVE SIGNAL POLE
- DECORATIVE LIGHTING POLE
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 42"
- (V) COMMUNICATIONS VAULT TYPE ROUND
- PEDESTRIAN HEAD
- PEDESTRIAN PUSH BUTTON
- CONTROL CABINET
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION. DO NOT INSTALL MAINTENANCE PLATFORM.
5. VIDEO DETECTION ZONES TO BE PROGRAMMED IN THE FIELD.

TRAFFIC CONTROL SIGNAL

W. NATIONAL AVENUE & S. 71ST STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CABINET TYPE: TS-2
SIGNAL NO. CONTROLLER TYPE: EPAC

CITY CONTACT: PETER DANIELS
DESIGNED BY: GRAEF
REVISED BY:

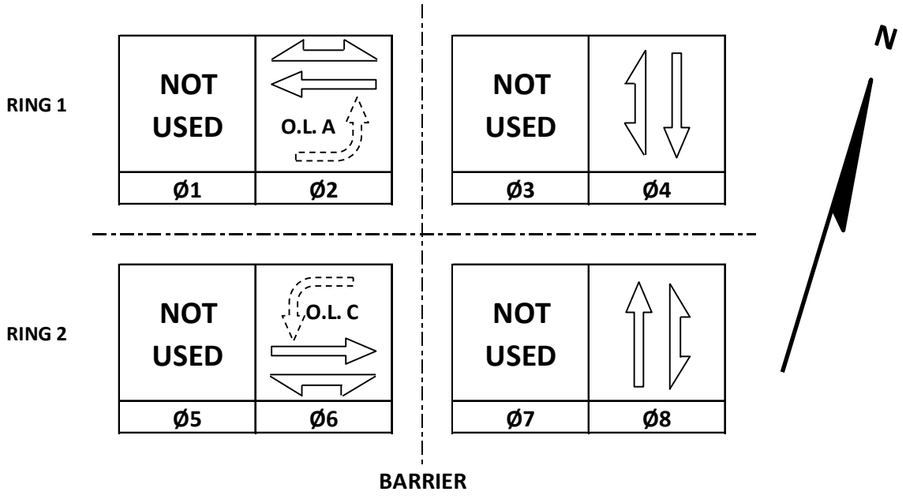
PAGE 1 OF 2

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 115	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\04_71st Street\024021_sp.dgn PLOT DATE : 10/3/2017 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 30.0000 sf / in.

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1		
Ø2	4,5,6	R
Ø3		
Ø4	10,11,12	R
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8	7,8,9	R
Ø2P	15,16	
Ø4P	13,14	
Ø6P	19,20	
Ø8P	17,18	
OLA	1,2,3	R ←
OLB		
OLC	4,5,6	R ←
OLD		



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT	←	↱	↓	↑
PHASE	2+5	6+1	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.
AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	X
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO: S-	
SIGNAL SYSTEM NO: SS-	

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

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23	21	27	25	31	29	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	41																PLAN LOOP DETECTOR*(S)
ASSIGNED PHASE	4																ASSIGNED PHASE
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
SWITCH																	SWITCH
EXTEND	X																EXTEND
DELAY																	DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24	22	28	26	32	30	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	81																PLAN LOOP DETECTOR*(S)
ASSIGNED PHASE	8																ASSIGNED PHASE
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
SWITCH																	SWITCH
EXTEND	X																EXTEND
DELAY																	DELAY

W. NATIONAL AVENUE & S. 71ST STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO:	CABINET TYPE: TS2
	CONTROLLER TYPE: EPAC
DATE: 10/17	PAGE NO. 2 OF 2

PROJECT ID:	2410-00-77
INTERSECTION:	W. NATIONAL AVENUE & S. 71ST STREET

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	
SB1	12											
		8	RED	ORG	GRN							
		10	RED	ORG	GRN							
		15								BLK	BLU	
SB2	12											
		9	RED	ORG	GRN							
		16								BLK	BLU	
SB3	12											
		2	RED	ORG	GRN							
		4	RED	ORG	GRN							
		17								BLK	BLU	
		B										WHT/BLK
SB4	12											
		3	RED	ORG	GRN							
		18								BLK	BLU	
		B										WHT/BLK
SB5	12											
		7	RED	ORG	GRN							
		11	RED	ORG	GRN							
		19								BLK	BLU	
SB6	12											
		12	RED	ORG	GRN							
		20								BLK	BLU	
SB7	12											
		1	RED	ORG	GRN							
		5	RED	ORG	GRN							
		13								BLK	BLU	
		B										WHT/BLK
SB8	12											
		6	RED	ORG	GRN							
		14								BLK	BLU	
		B										WHT/BLK

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	HEAD A (SB3)
CB1	HEAD B (SB3)
CB1	HEAD C (SB7)
CB1	HEAD D (SB3)

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB2
PB3	SB3
PB4	SB4
PB5	SB5
PB6	SB6
PB7	SB7
PB8	SB8
PB9	CB1

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB3
CB1	SB7

NOTES:
*USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
*ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
*RECONNECT THE GROUNDING CONDUCTORS WHENEVER THE CIRCUIT HAS BEEN INTERRUPTED TO ENSURE THE GROUNDING CIRCUIT IS COMPLETE.

W. NATIONAL AVENUE & S. 71ST STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO: CABINET TYPE: TS2
CONTROLLER TYPE: EPAC
DATE: 10/17 PAGE NO. 1 OF 1

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CABLE ROUTING	SHEET NO: 117	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- DECORATIVE SIGNAL POLE
- (XX) MONOTUBE BASE, POLE, 30' ARM
- DECORATIVE LIGHTING POLE
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 42"
- (V) COMMUNICATIONS VAULT TYPE ROUND
- PEDESTRIAN HEAD
- CONTROL CABINET

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- S STOP SIGN

STRUCTURE NUMBERS
SB2 = S-40-1908
SB6 = S-40-1909

N

W. NATIONAL AVE
S. 70TH STREET
POSTED SPEED LIMIT = 25 MPH
POSTED SPEED LIMIT = 30 MPH
180' TO NEAR RIGHT SIGNAL
225' TO NEAR RIGHT SIGNAL
R/W
I/C CV107
FO I/C
I/C PB100
FLAG
ONLY
36+00
37+00
38+00
39+00
40+00
69+00 A
70+00 A
71+00 A
PB1
SB1
PB2
SB2
SB3
PB3
PB4
SB4
PB5
SB5
PB6
SB6
SB7
PB7
SB8
PB8
CB1
V1
V2
V3
V4

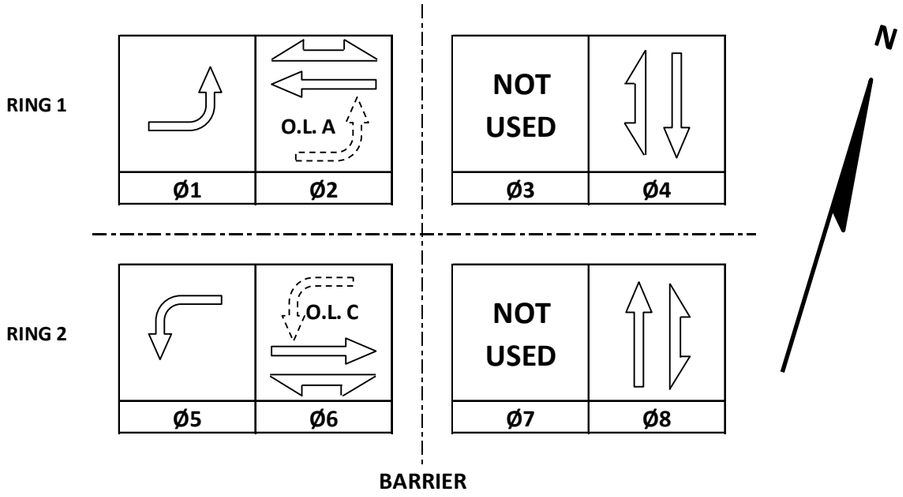
CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
5. VIDEO DETECTION ZONES TO BE PROGRAMMED IN THE FIELD.

TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE & S. 70TH STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY
CABINET TYPE: TS-2
SIGNAL NO. CONTROLLER TYPE: EPAC
CITY CONTACT: PETER DANIELS
DESIGNED BY: GRAEF
REVISED BY:
PAGE 1 OF 2

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 118	E

	HEAD NUMBERS	FLASH
Ø1	4,5	-
Ø2	6,7,8	R
Ø3		
Ø4	14,15,16	R
Ø5	9,10	-
Ø6	1,2,3	R
Ø7		
Ø8	11,12,13	R
Ø2P	19,20	
Ø4P	17,18	
Ø6P	23,24	
Ø8P	21,22	
OLA	9,10	R ←
OLB		
OLC	4,5	R ←
OLD		



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT	←	→	↓	↑
PHASE	2+5	6+1	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.
AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	X
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS-

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

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	41	51	81				
ASSIGNED PHASE	1	4	5	8				
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND	X	X	X	X				
DELAY								

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
								SWITCH
								EXTEND
								DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	21	42	61	82				
ASSIGNED PHASE	2	4	6	8				
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND	X	X	X	X				
DELAY								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
								SWITCH
								EXTEND
								DELAY

W. NATIONAL AVENUE & S. 70TH STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO: CABINET TYPE: TS2
CONTROLLER TYPE: EPAC
DATE: 10/17 PAGE NO. 2 OF 2

PROJECT ID:	2410-00-77
INTERSECTION:	W. NATIONAL AVENUE & S. 70TH STREET

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	
SB1	15											
		1	RED	ORG	GRN							
		9				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		17								BLK	BLU	
SB2	15											
		7	RED	ORG	GRN							
		8	RED	ORG	GRN							
		10				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		18								BLK	BLU	
SB3	12											
		12	RED	ORG	GRN							
		14	RED	ORG	GRN							
		19								BLK	BLU	
SB4	12											
		13	RED	ORG	GRN							
		20								BLK	BLU	
SB5	15											
		4				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		6	RED	ORG	GRN							
		21								BLK	BLU	
SB6	15											
		2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		22								BLK	BLU	
SB7	12											
		11	RED	ORG	GRN							
		15	RED	ORG	GRN							
		23								BLK	BLU	
SB8	12											
		16	RED	ORG	GRN							
		24								BLK	BLU	

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	HEAD A (SB2)
CB1	HEAD B (SB6)
CB1	HEAD C (SB7)
CB1	HEAD D (SB3)

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	SB1
PB2	SB2
PB3	SB3
PB4	SB4
PB5	SB5
PB6	SB6
PB7	SB7
PB8	SB8

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB1
SB1	SB3
CB1	SB7
SB7	SB5

NOTES:
*USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
*ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
*RECONNECT THE GROUNDING CONDUCTORS WHENEVER THE CIRCUIT HAS BEEN INTERRUPTED TO ENSURE THE GROUNDING CIRCUIT IS COMPLETE.

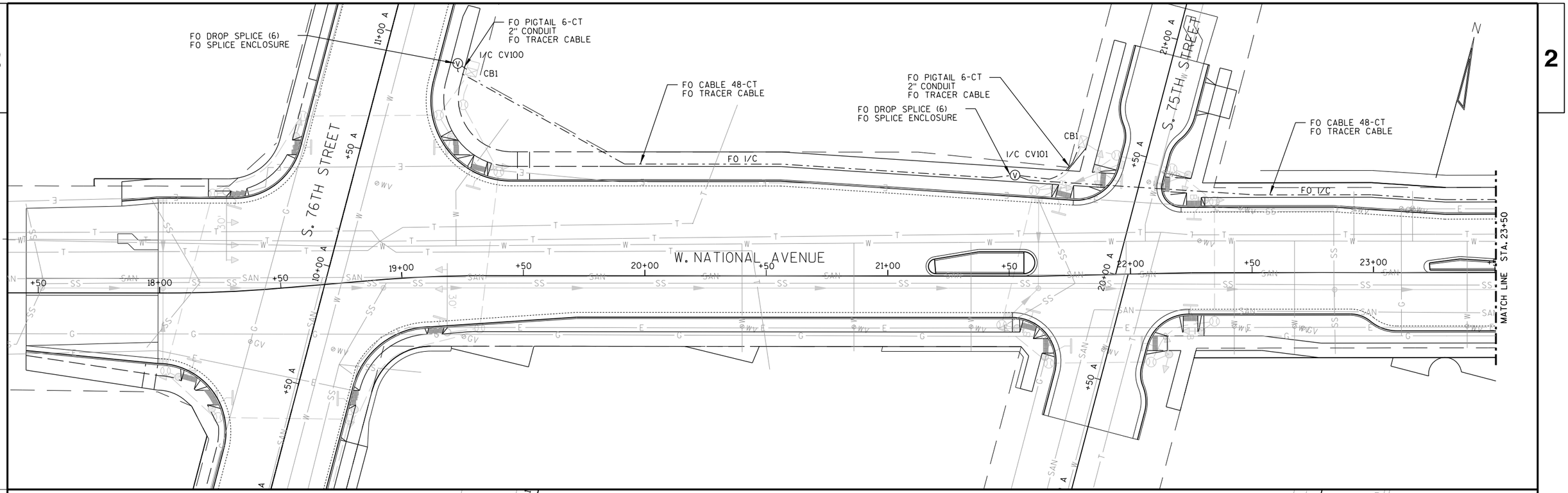
W. NATIONAL AVENUE & S. 70TH STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

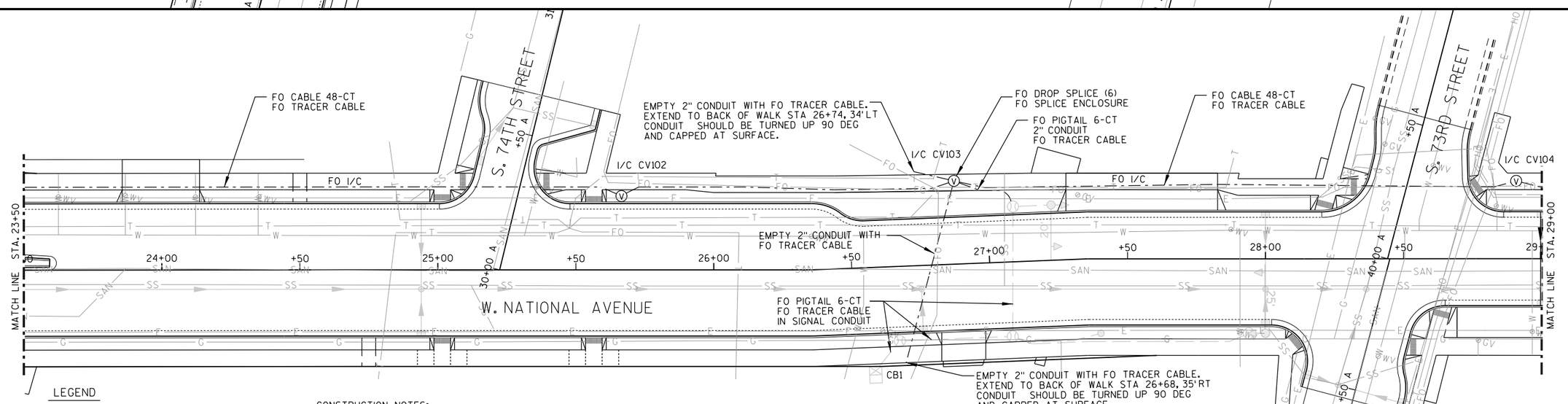
SIGNAL NO: CABINET TYPE: TS2
CONTROLLER TYPE: EPAC
DATE: 10/17 PAGE NO. 1 OF 1

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CABLE ROUTING	SHEET NO: 120	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

2





LEGEND

- CONTROL CABINET
- PULL BOX, 24" X 42"
- COMMUNICATIONS VAULT TYPE ROUND
- NONMETALLIC CONDUIT 3" UNLESS OTHERWISE NOTED

CONSTRUCTION NOTES:

1. LEAVE 30-FEET OF FIBER OPTIC INTERCONNECT CABLE COILED IN EACH PULL BOX AND 100-FEET COILED IN EACH VAULT.
2. THE CONTRACTOR SHALL HAVE THE VAULTS AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT ---------- AT THE CITY OF WEST ALLIS AT (XXX) XXX-XXXX.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. MAINLINE SPLICES SHALL BE AS DIRECTED BY THE ENGINEER IN THE FIELD.
6. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.
7. TRAFFIC SIGNALS SHOWN GRAYSHADED FOR PLAN CLAIRITY.

TRAFFIC CONTROL INTECONNECT
W. NATIONAL AVE - 76TH ST TO 70TH ST
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO.

CITY CONTACT:
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT	SHEET 121	E

2

FO CABLE 48-CT
FO TRACER CABLE

FO I/C

R/W

MATCH LINE STA. 29+00

W. NATIONAL AVENUE

S. 72ND STREET

I/C CV105

FO CABLE 48-CT
FO TRACER CABLE

FO I/C

MATCH LINE STA. 33+50

FO PIGTAIL 6-CT
2" CONDUIT
FO TRACER CABLE

FO DROP SPLICE (6)
FO SPLICE ENCLOSURE

CB1

I/C CV106

S. 71ST STREET

FO CABLE 48-CT
FO TRACER CABLE

FO DROP SPLICE (6)
FO SPLICE ENCLOSURE

I/C CV107

FO PIGTAIL 6-CT
FO TRACER CABLE

MATCH LINE STA. 34+50

W. NATIONAL AVENUE

I/C PB100

EMPTY 2" CONDUIT WITH FO TRACER CABLE.
EXTEND TO BACK OF WALK STA 36+70, 35'RT
CONDUIT SHOULD BE TURNED UP 90 DEG
AND CAPPED AT SURFACE.

FO PIGTAIL 6-CT
2" CONDUIT
FO TRACER CABLE

CB1

S. 70TH STREET

LEGEND

- CONTROL CABINET
- PULL BOX, 24" X 42"
- COMMUNICATIONS VAULT TYPE ROUND
- NONMETALLIC CONDUIT 3", UNLESS OTHERWISE NOTED

TRAFFIC CONTROL INTECONNECT
W. NATIONAL AVE - 76TH ST TO 70TH ST
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO.

CITY CONTACT:
DESIGNED BY: GRAEF
REVISED BY:

PAGE 2 OF 2

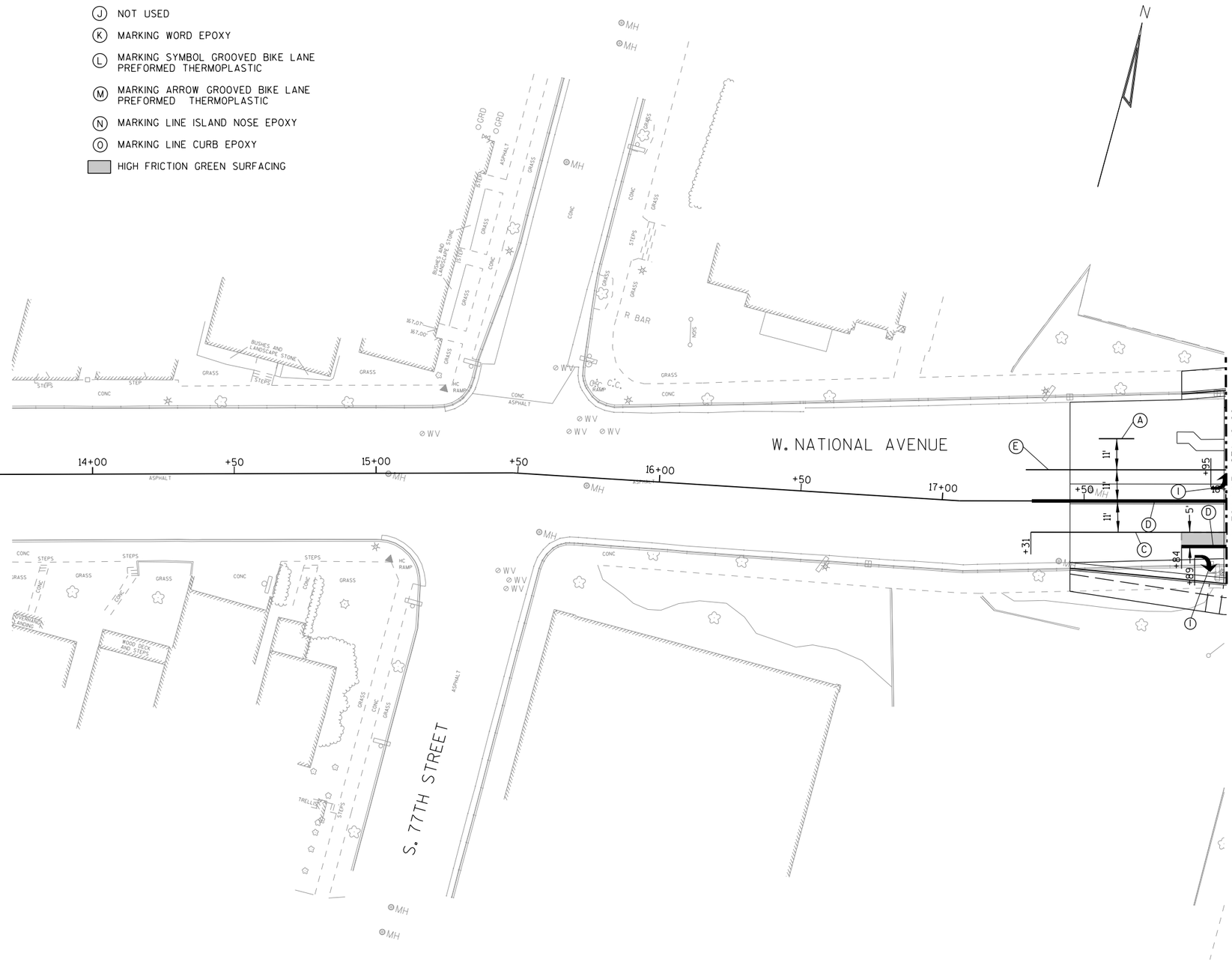
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT	SHEET 122	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\06_Signal IC\024002_ic.dgn | PLOT DATE : 10/3/2017 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 40.0000 sf / in.

2

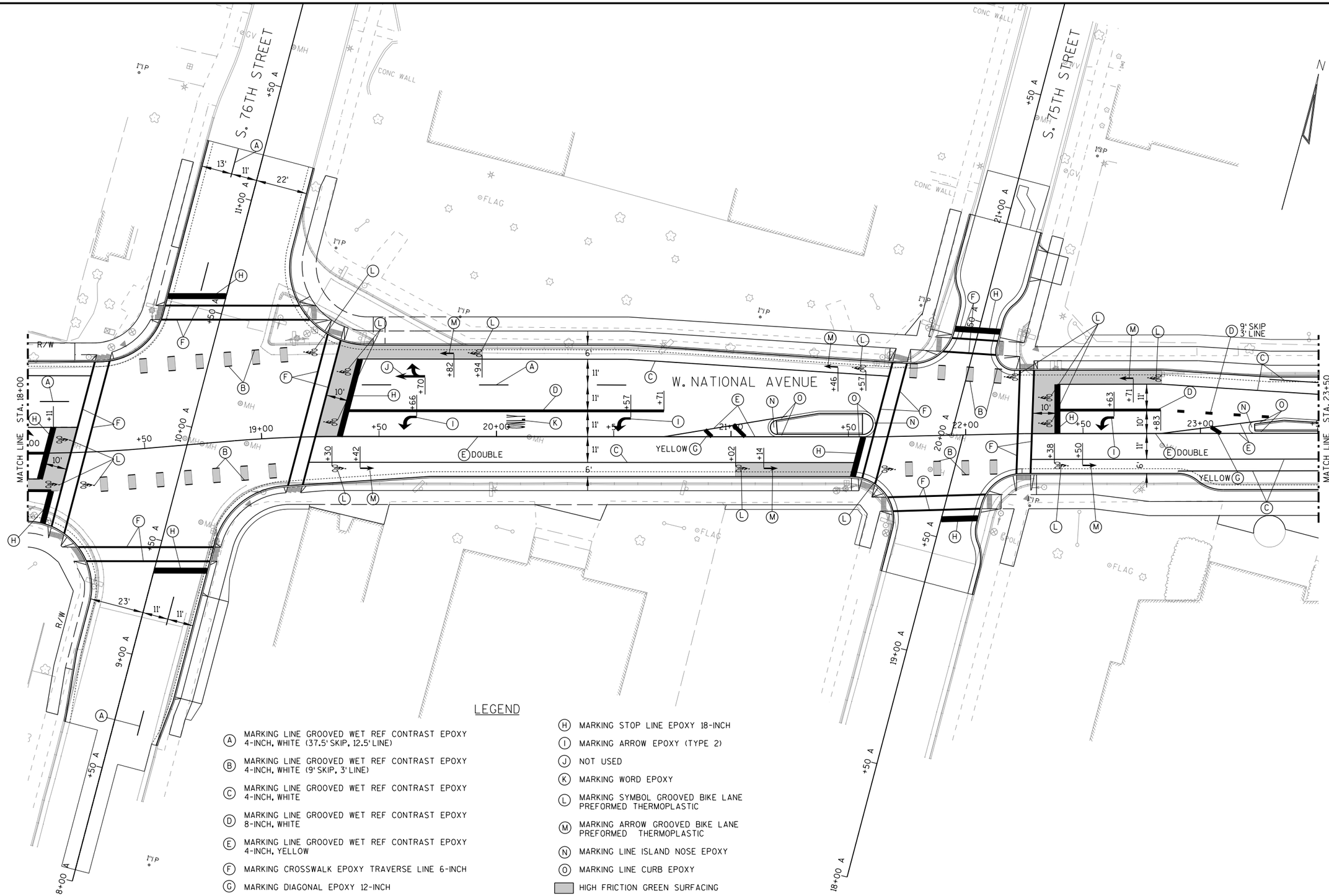
LEGEND

- (A) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
- (B) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (9' SKIP, 3' LINE)
- (C) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE
- (D) MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH, WHITE
- (E) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, YELLOW
- (F) MARKING CROSSWALK EPOXY TRAVERSE LINE 6-INCH
- (G) MARKING DIAGONAL EPOXY 12-INCH
- (H) MARKING STOP LINE EPOXY 18-INCH
- (I) MARKING ARROW EPOXY (TYPE 2)
- (J) NOT USED
- (K) MARKING WORD EPOXY
- (L) MARKING SYMBOL GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (M) MARKING ARROW GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (N) MARKING LINE ISLAND NOSE EPOXY
- (O) MARKING LINE CURB EPOXY
- HIGH FRICTION GREEN SURFACING



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 123	E

2

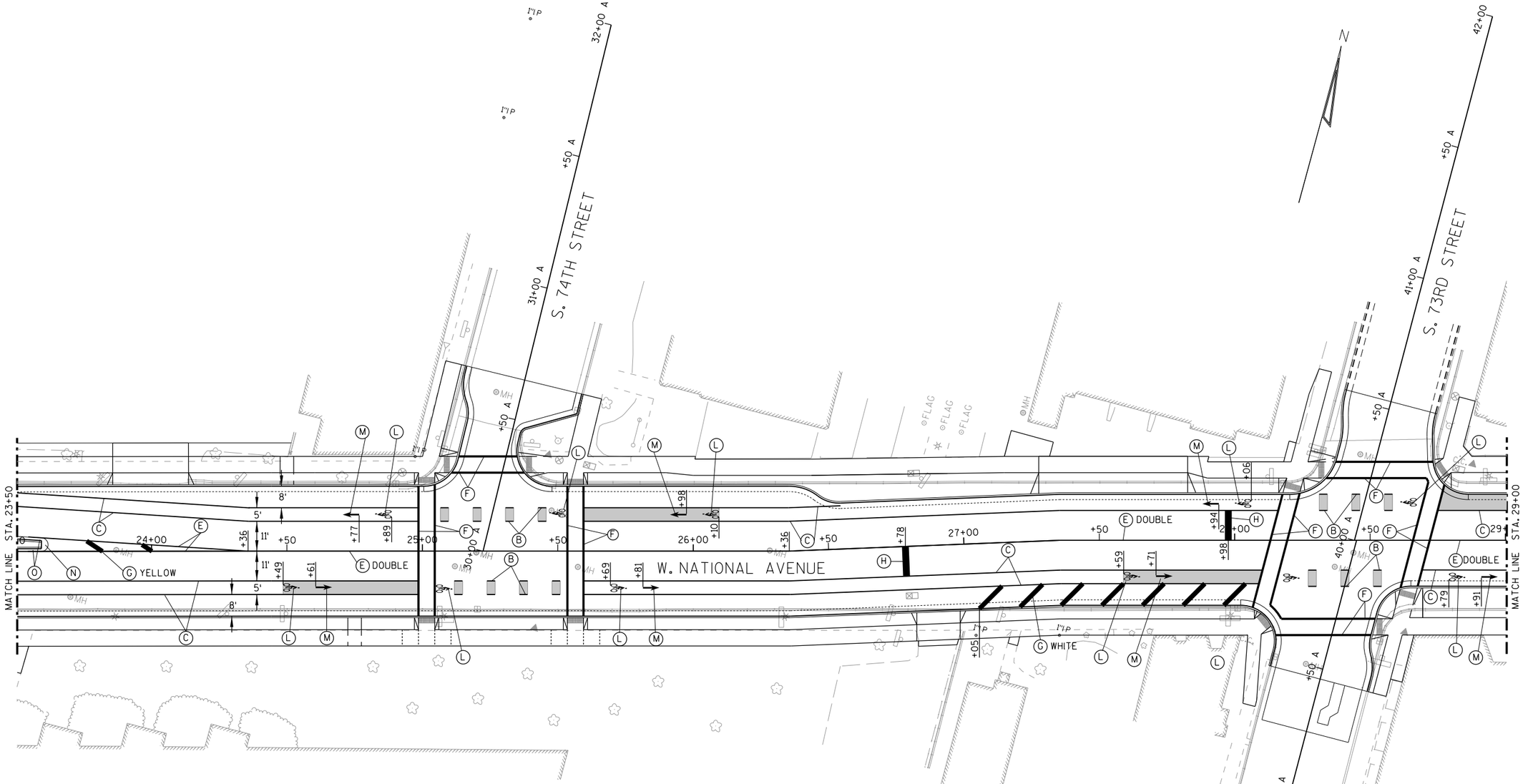


LEGEND

- (A) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
- (B) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (9' SKIP, 3' LINE)
- (C) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE
- (D) MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH, WHITE
- (E) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, YELLOW
- (F) MARKING CROSSWALK EPOXY TRAVERSE LINE 6-INCH
- (G) MARKING DIAGONAL EPOXY 12-INCH
- (H) MARKING STOP LINE EPOXY 18-INCH
- (I) MARKING ARROW EPOXY (TYPE 2)
- (J) NOT USED
- (K) MARKING WORD EPOXY
- (L) MARKING SYMBOL GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (M) MARKING ARROW GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (N) MARKING LINE ISLAND NOSE EPOXY
- (O) MARKING LINE CURB EPOXY
- HIGH FRICTION GREEN SURFACING

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 124	E

2



LEGEND

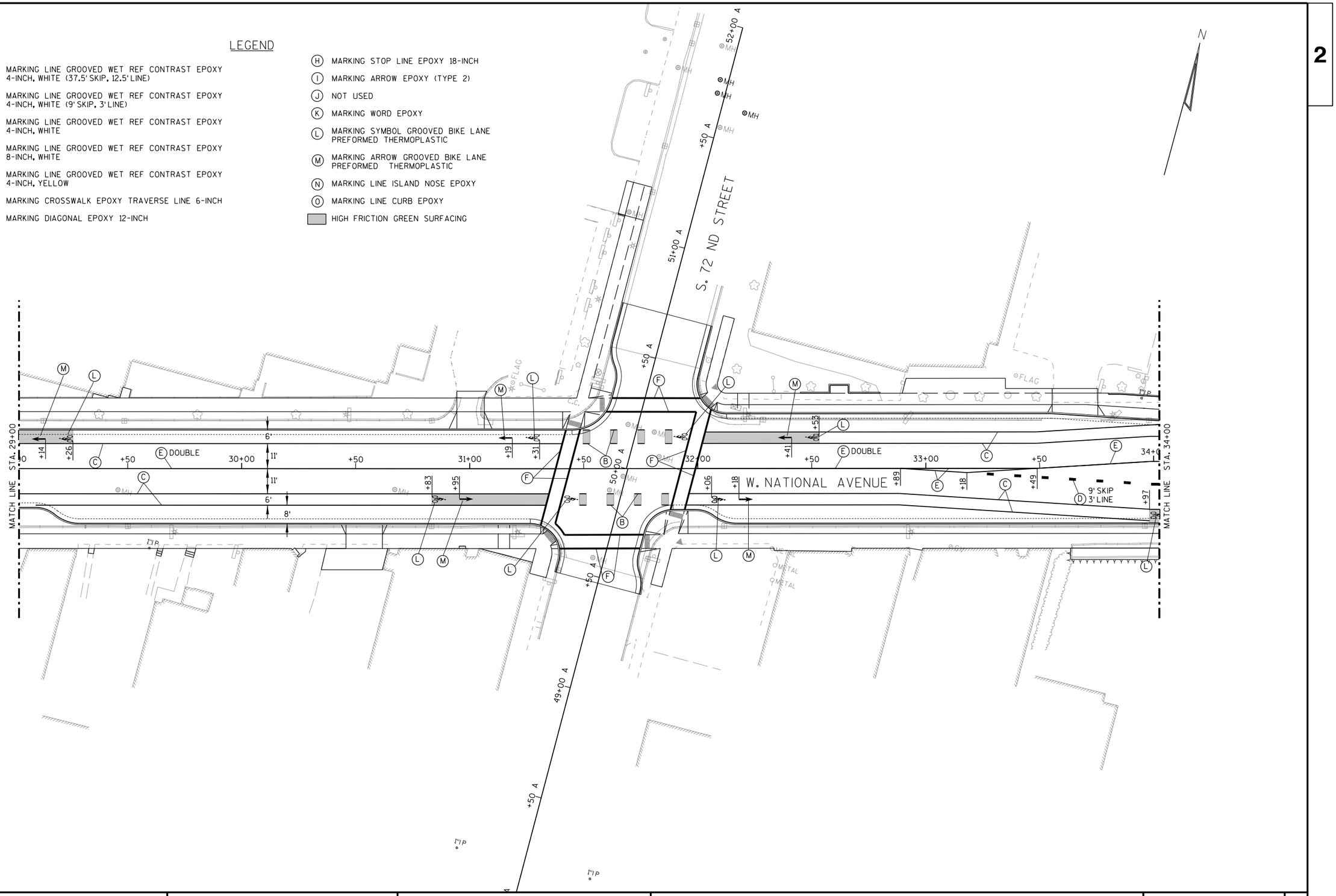
- (A) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
- (B) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (9' SKIP, 3' LINE)
- (C) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE
- (D) MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH, WHITE
- (E) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, YELLOW
- (F) MARKING CROSSWALK EPOXY TRAVERSE LINE 6-INCH
- (G) MARKING DIAGONAL EPOXY 12-INCH
- (H) MARKING STOP LINE EPOXY 18-INCH
- (I) MARKING ARROW EPOXY (TYPE 2)
- (J) NOT USED
- (K) MARKING WORD EPOXY
- (L) MARKING SYMBOL GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (M) MARKING ARROW GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (N) MARKING LINE ISLAND NOSE EPOXY
- (O) MARKING LINE CURB EPOXY
- HIGH FRICTION GREEN SURFACING

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 125	E

2

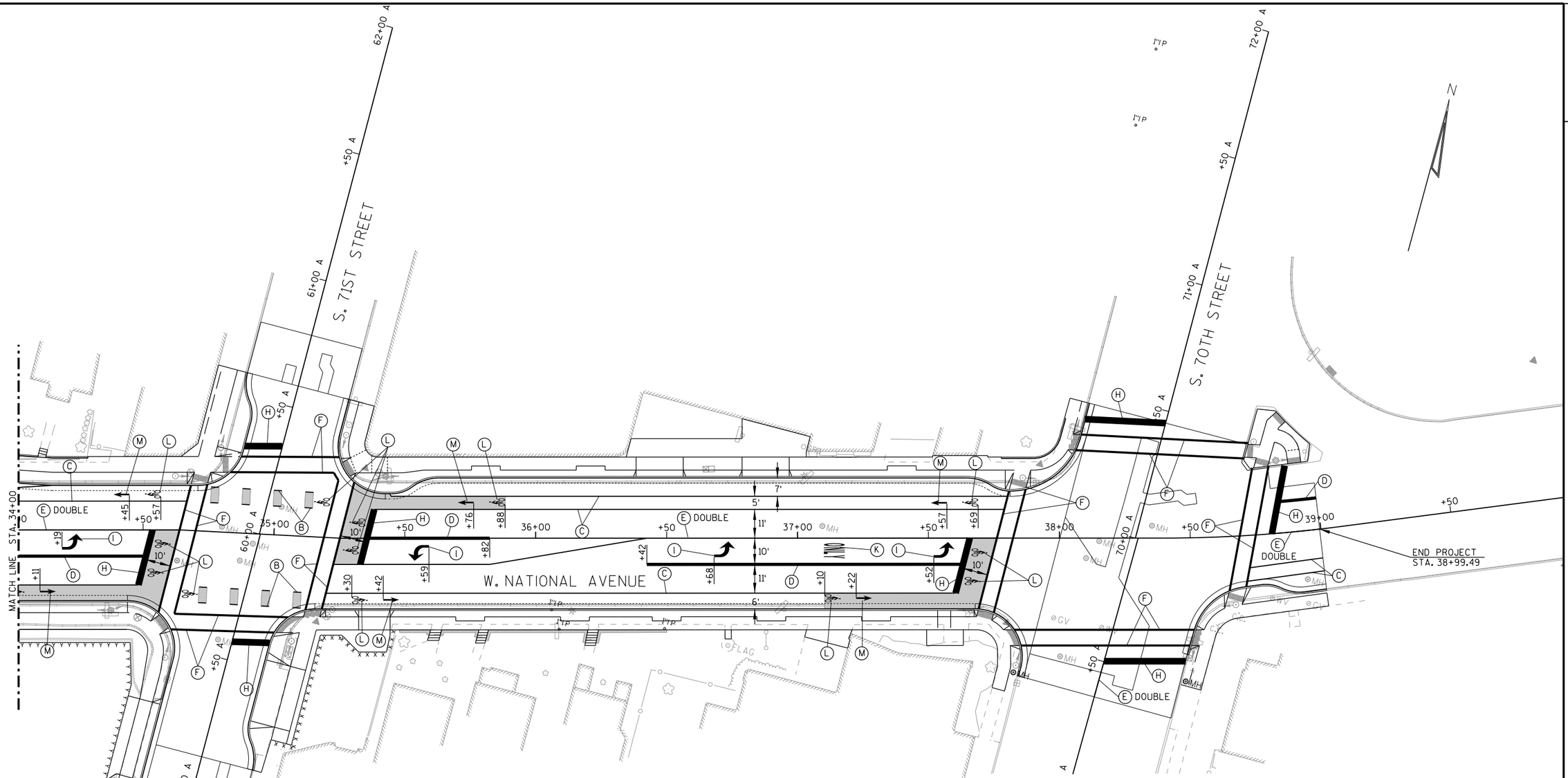
LEGEND

- (A) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
- (B) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (9' SKIP, 3' LINE)
- (C) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE
- (D) MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH, WHITE
- (E) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, YELLOW
- (F) MARKING CROSSWALK EPOXY TRAVERSE LINE 6-INCH
- (G) MARKING DIAGONAL EPOXY 12-INCH
- (H) MARKING STOP LINE EPOXY 18-INCH
- (I) MARKING ARROW EPOXY (TYPE 2)
- (J) NOT USED
- (K) MARKING WORD EPOXY
- (L) MARKING SYMBOL GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (M) MARKING ARROW GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (N) MARKING LINE ISLAND NOSE EPOXY
- (O) MARKING LINE CURB EPOXY
- HIGH FRICTION GREEN SURFACING



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 126	E

2



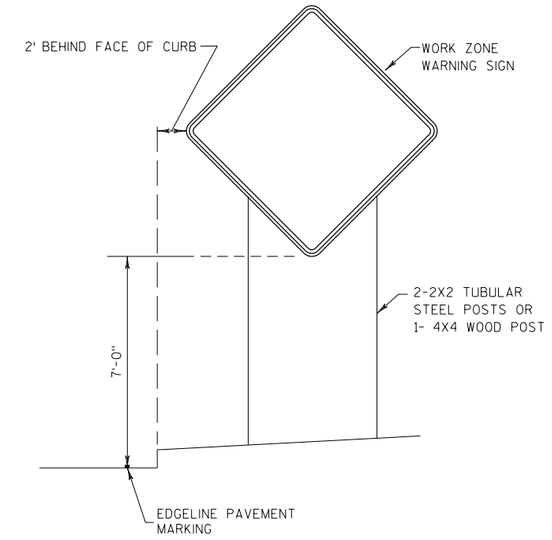
LEGEND

- (A) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
- (B) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (9' SKIP, 3' LINE)
- (C) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE
- (D) MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH, WHITE
- (E) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, YELLOW
- (F) MARKING CROSSWALK EPOXY TRAVERSE LINE 6-INCH
- (G) MARKING DIAGONAL EPOXY 12-INCH
- (H) MARKING STOP LINE EPOXY 18-INCH
- (I) MARKING ARROW EPOXY (TYPE 2)
- (J) NOT USED
- (K) MARKING WORD EPOXY
- (L) MARKING SYMBOL GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (M) MARKING ARROW GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (N) MARKING LINE ISLAND NOSE EPOXY
- (O) MARKING LINE CURB EPOXY
- HIGH FRICTION GREEN SURFACING

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 127	E

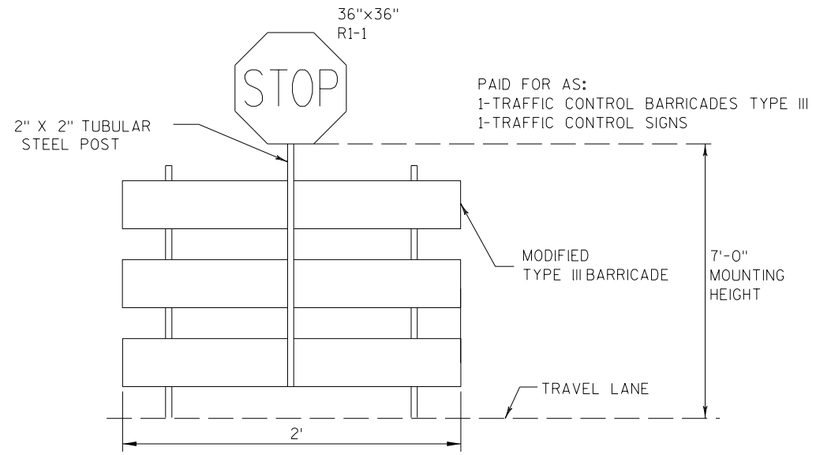
TRAFFIC CONTROL NOTES

1. MAINTAIN ACCESS FOR EMERGENCY VEHICLES AND LOCAL TRAFFIC ON NATIONAL AVENUE AT ALL TIMES.
2. THE CONTRACTOR SHALL REMOVE ALL EXISTING PAVEMENT MARKINGS WHICH CONFLICT WITH THE TRAFFIC CONTROL. PAVEMENT MARKING SHOWN IS EXISTING.
3. THE CONTRACTOR SHALL COVER ANY SIGN CONFLICTING WITH THE TRAFFIC CONTROL IN OPERATION AS NEEDED OR AS DIRECTED BY THE ENGINEER. COVERING OF SIGNS IS INCLUDED IN "TRAFFIC CONTROL COVERING SIGNS TYPE II" ITEM.
4. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY BARRICADES, SIGNS, DIRECTIONAL ARROWS, LIGHTS, TEMPORARY MARKINGS, FLAGMEN, AND SAFETY DEVICES AS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
5. DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTOR'S METHOD OR SEQUENCES OF OPERATION.
6. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
7. ALL SIGNS ARE 48" X 48" EXCEPT OTHERWISE NOTED.
8. ANY "STOP" SIGNS THAT ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.
9. THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD LOCATIONS AS APPROVED BY THE ENGINEER IN THE FIELD.
10. BOTH STEADY BURN LIGHTS AND FLASHING LIGHTS SHALL BE ONE WAY WITH THE LIGHT SOURCE SHOWING TOWARDS ADJACENT APPROACHING TRAFFIC.
11. CHANNELIZING DEVICES SHALL BE DRUMS WITH ATTACHED TYPE "C" STEADY BURN LIGHT (TAPERS ONLY).
12. MAINTAIN ACCESS TO DRIVEWAYS DURING CONSTRUCTION. FOR PROPERTIES WITH MULTIPLE DRIVEWAYS, ONLY ONE DRIVEWAY CAN BE CLOSED/WORKED ON AT ANY TIME.

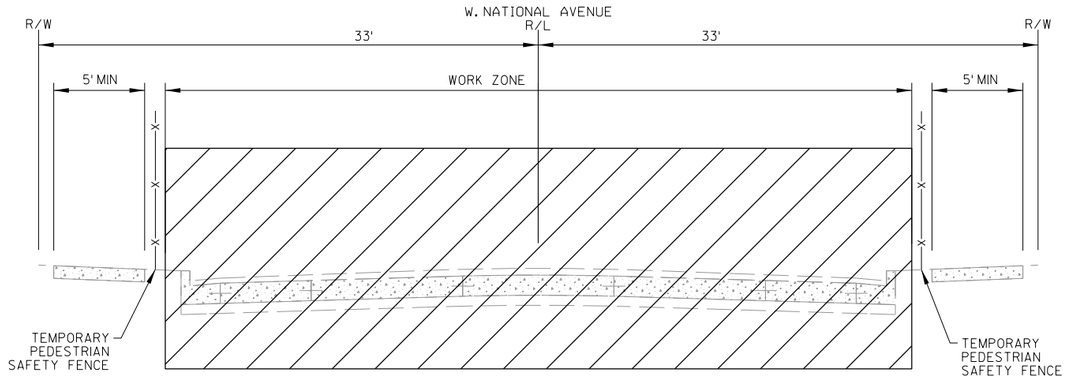


TYPICAL TEMPORARY TRAFFIC CONTROL DETAIL
MOUNTING ON FIXED SUPPORT

LONG TERM
7 DAYS OR MORE

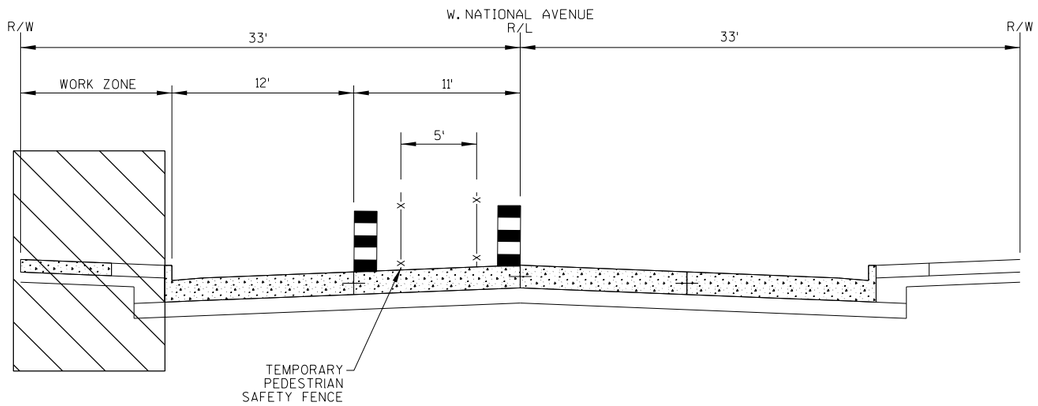


TEMPORARY STOP SIGN



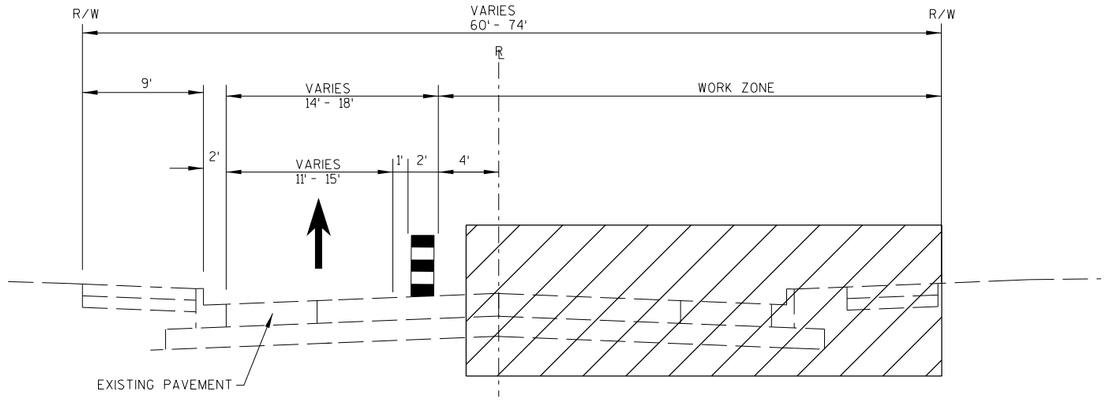
STAGING TYPICAL SECTION - ROADWAY

W. NATIONAL AVENUE
(MAINTAIN PEDESTRIAN ACCESS ON EXISTING SIDEWALK)



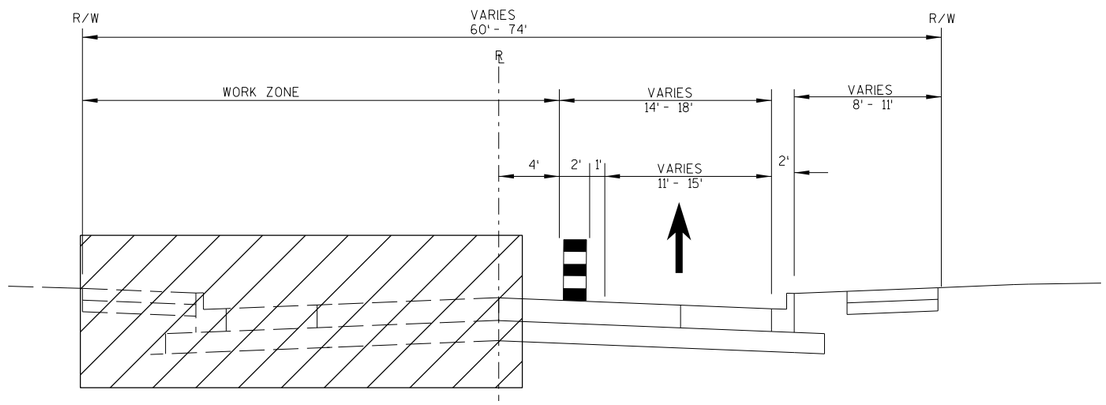
STAGING TYPICAL SECTION - SIDEWALKS

W. NATIONAL AVENUE
(MAINTAIN PEDESTRIAN ACCESS IN DRIVING
LANE. CONSTRUCT ONE SIDE AT A TIME.)



STAGE 2 - TYPICAL SECTION

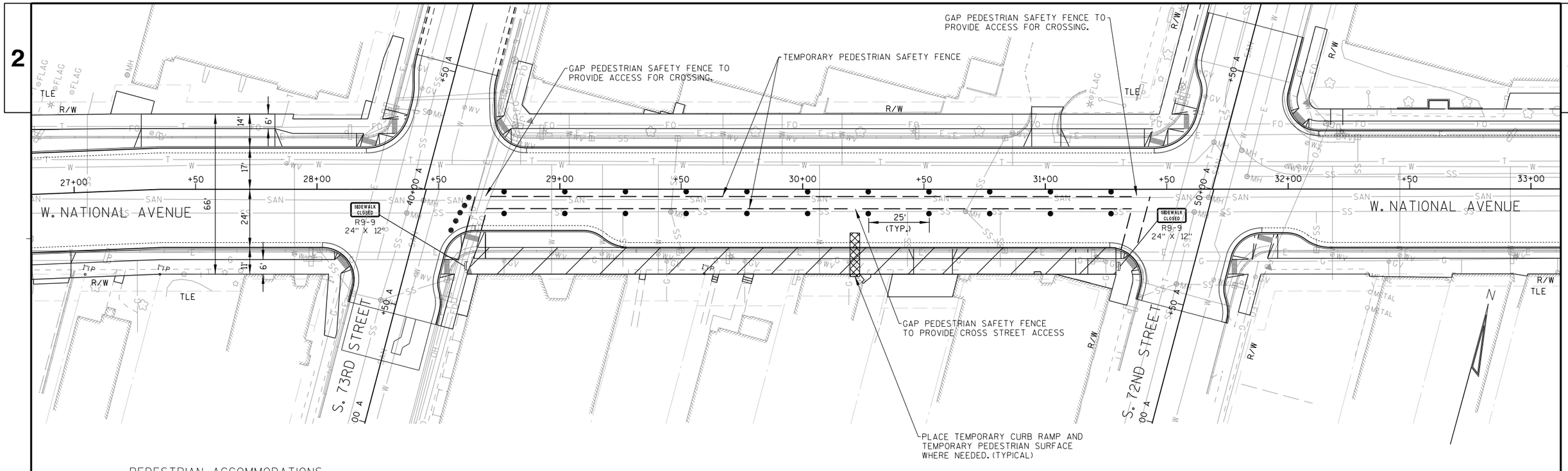
76TH STREET



STAGE 3 - TYPICAL SECTION

76TH STREET

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL TYPICAL SECTIONS	SHEET 130	E



PEDESTRIAN ACCOMMODATIONS

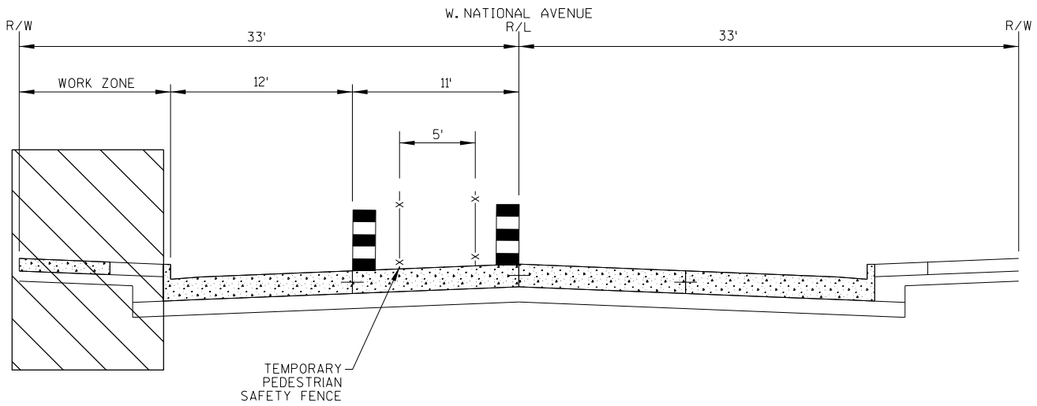
MAINTAIN ACCESS TO PROPERTIES WHEN SIDEWALK IS BEING CONSTRUCTED BY DETOURING PEDESTRIANS TO THE NEWLY CONSTRUCTED DRIVING LANE. PROVIDE TEMPORARY CURB RAMPS AND TEMPORARY PEDESTRIAN SURFACE PAST THE WORK ZONE. SOME BLOCKS MAY NOT NEED THIS DETAIL IF PROPERTY OWNERS AGREE TO TEMPORARY CLOSURES.

LEGEND

- WORK ZONE
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC FLOW
- SIGN MOUNTED ON POST
- SIGN MOUNTED ON TEMP SUPPORT
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TYPE II BARRICADE WITH/ WITHOUT ATTACED SIGN
- TYPE III BARRICADE WITH/ WITHOUT ATTACHED SIGN

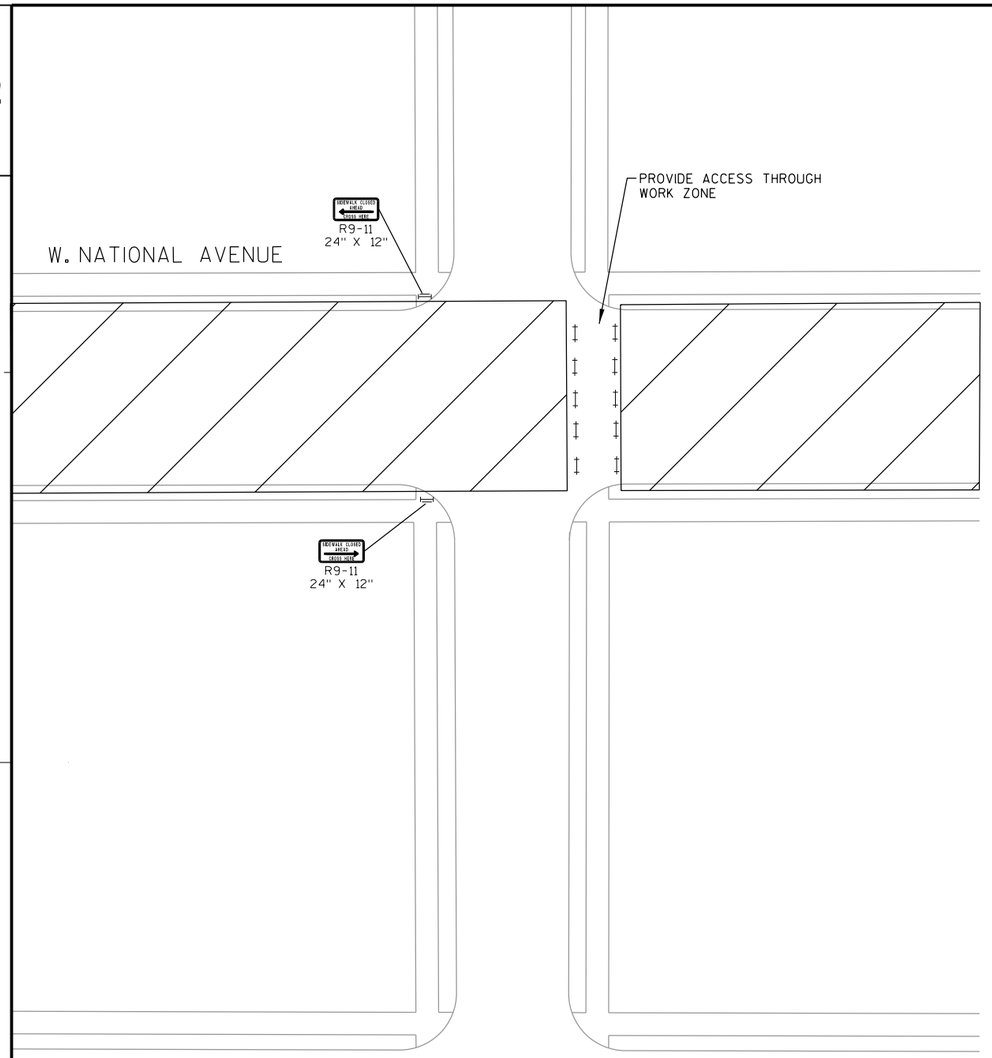
PEDESTRAIN ACCOMMODATION NOTES

1. SIDEWALK CONSTRUCTION - COORDINATE WITH PROPERTY OWNERS ON SCHEDULE: MAINTAIN SIDEWALK ACCESS ALONG NATIONAL AVENUE WHILE ROADWAY IS BEING RECONSTRUCTED. ONCE ROADWAY IS COMPLETED, RECONSTRUCT THE SIDEWALKS BY DETOURING PEDESTRIANS TO THE FINISHED DRIVING LANE.
2. MAINTAIN PEDESTRAIN ACCESS AT ALL TIMES BY ONLY CLOSING ONE SIDE OF THE INTERSECTION AT A TIME OR BY DETOURING PEDESTRIANS TO NEXT SIDE STREET. DO NOT CLOSE TWO ADJACENT SIDE ROADS AT THE SAME TIME.
3. SEE SDD 15D30 "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATION" FOR ADDITIONAL DETAILS.



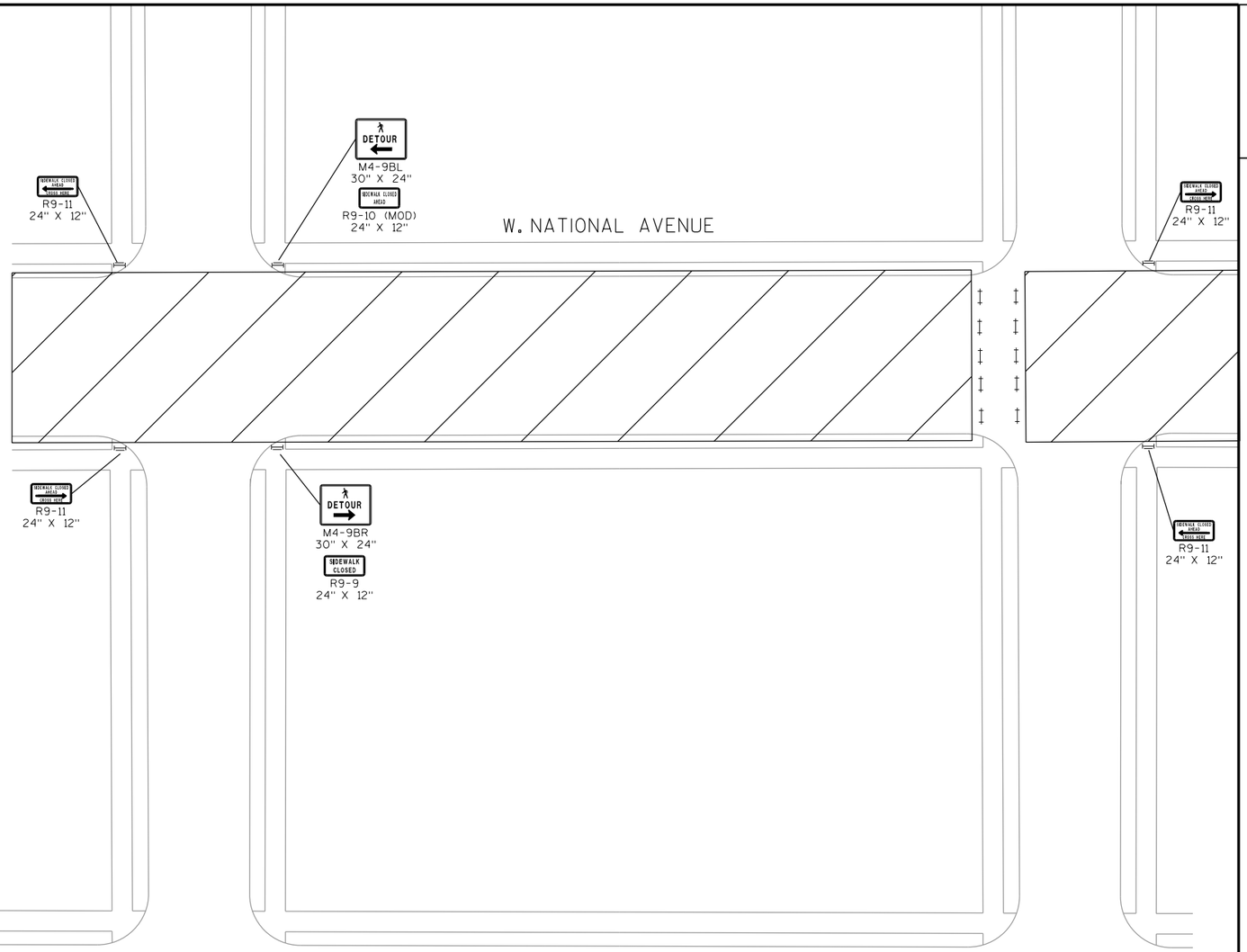
STAGING TYPICAL SECTION - SIDEWALKS

W. NATIONAL AVENUE
(MAINTAIN PEDESTRIAN ACCESS IN DRIVING LANE. CONSTRUCT ONE SIDE AT A TIME.)



PARTIAL SIDEWALK CLOSURE - NO DETOUR

TYPICAL SIDEWALK CLOSURE WHEN ONLY
CLOSING ONE SIDE OF THE INTERSECTION



FULL SIDEWALK CLOSURE - DETOUR

TYPICAL SIDEWALK DETOUR WHEN COMPLETELY
CLOSING ONE OF THE SIDE ROADS

PEDESTRIAN ACCOMMODATION NOTES

1. MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES BY ONLY CLOSING ONE SIDE OF THE INTERSECTION AT A TIME OR BY DETOURING PEDESTRIANS TO NEXT SIDE STREET. DO NOT CLOSE TWO ADJACENT SIDE ROADS AT THE SAME TIME.
2. SEE STANARD DETAIL DRAWING "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATION" FOR ADDITIONAL INFORMATION.

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PEDESTRIAN ACCOMMODATIONS	SHEET 132	E

2

S. 78TH STREET
S. 77TH STREET
S. 76TH STREET
S. 75TH STREET
S. 74TH STREET
S. 73RD STREET
S. 72ND STREET
S. 71ST STREET
S. 70TH STREET

W. LAPHAM STREET
W. NATIONAL AVENUE
W. MITCHELL STREET
W. HICKS STREET
UNION PACIFIC RAILROAD

PCMS

ROAD WORK AHEAD W20-1
ROAD CLOSED AHEAD W20-3
PLACE SIGN AT ORCHARD ST INTERSECTION
ROAD CLOSED TO THRU TRAFFIC R11-4 60" X 30"
END ROAD WORK G20-2A 48" X 24"
ROAD CLOSED R11-2 48" X 30"

NOTES:

1. MAINTAIN EXISTING TRAFFIC SIGNAL OPERATION AT THE INTERSECTIONS OF W. NATIONAL AVENUE WITH S. 76TH STREET AND S. 70TH STREET OR PROVIDE SIGNAGE FOR AN ALL-WAY STOP CONDITION WITH WARNING FLAGS DURING STAGE 1 CONSTRUCTION.
2. MAINTAIN ONE LANE OF THROUGH TRAFFIC IN EACH DIRECTION ON S. 70TH STREET. USE FLAGGING OPERATIONS AND/OR PLATE TRENCHES AS NEEDED TO MAINTAIN ACCESS.

LEGEND

- WORK ZONE
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC FLOW
- SIGN MOUNTED ON POST
- SIGN MOUNTED ON TEMP SUPPORT
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TYPE II BARRICADE WITH/WITHOUT ATTACED SIGN
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1 OVERVIEW	SHEET 133	E

S. 76TH STREET

+50 A | 9+00 A | +50 A | 10+00 A | +50 A | 11+00 A | +50 A | 12+00 A

500'

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK AHEAD
W20-1

R3-1
24" X 24"
MOUNT ON SIGNAL

ROAD CLOSED
R11-2
48" X 30"

R3-2
24" X 24"

19+00

20+00

21+00

+50

R/W

W. NATIONAL AVENUE

MAINTAIN ACCESS TO LIBRARY DURING CONSTRUCTION

STOP
R1-1
30" X 30"

ONE WAY
COVER SIGN

WO6-3
36" X 36"

NOTE:

MAINTAIN EXISTING TRAFFIC SIGNAL OPERATION AT THE INTERSECTIONS OF W. NATIONAL AVENUE WITH S. 76TH AND S. 70TH STREETS OR PROVIDE SIGNAGE FOR AN ALL-WAY STOP CONDITION WITH WARNING FLAGS DURING STAGE 1 CONSTRUCTION.

LEGEND

- WORK ZONE
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC FLOW
- SIGN MOUNTED ON POST
- SIGN MOUNTED ON TEMP SUPPORT
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TYPE II BARRICADE WITH/WITHOUT ATTACED SIGN
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN

N

W. LAPHAM STREET

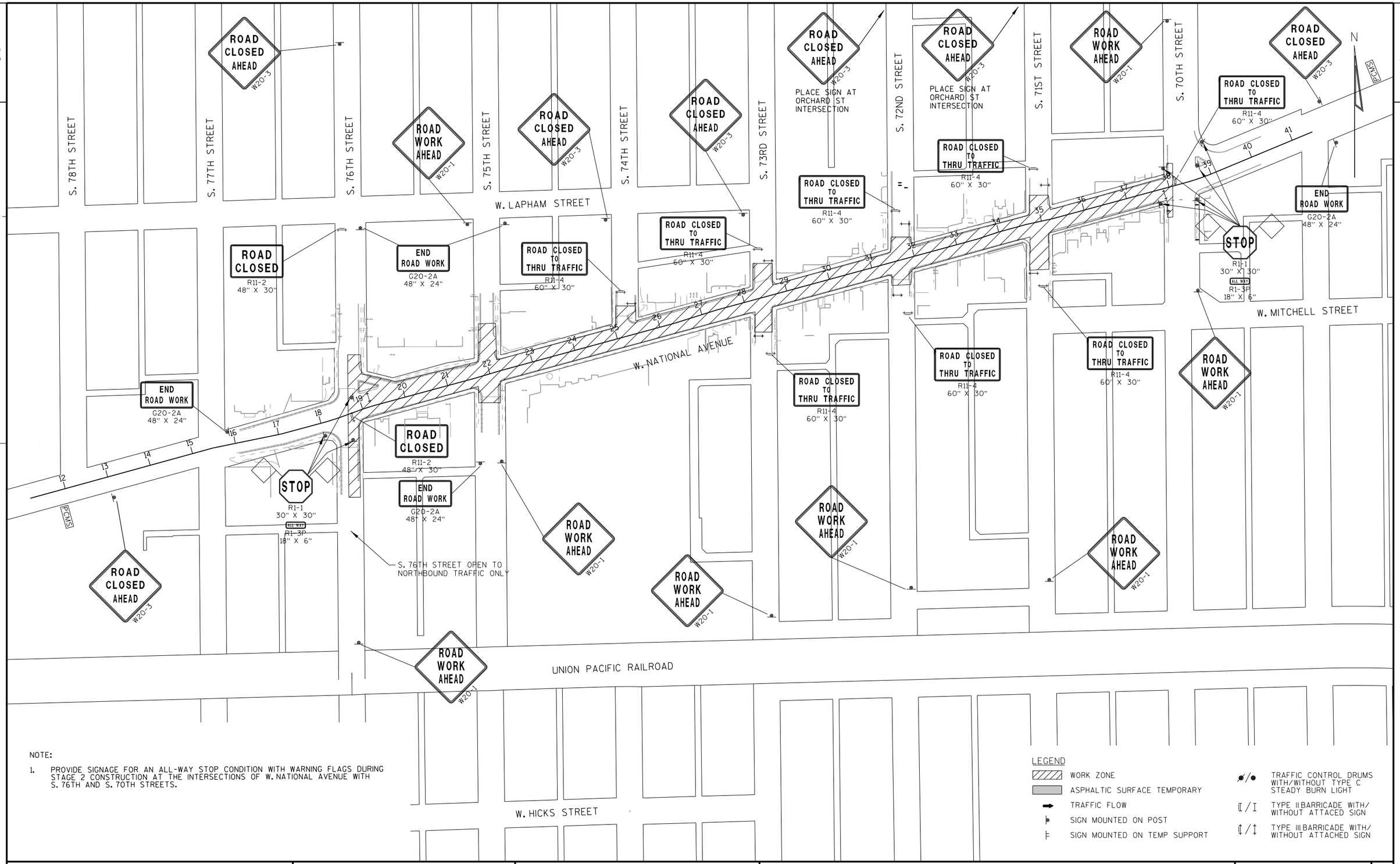
S. 75TH STREET

18+00 A | +50 A | 19+00 A | +50 A | 20+00 A | +50 A | 21+00 A | +50 A | 22+00 A

CONC WALL

FLAG

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 134 E



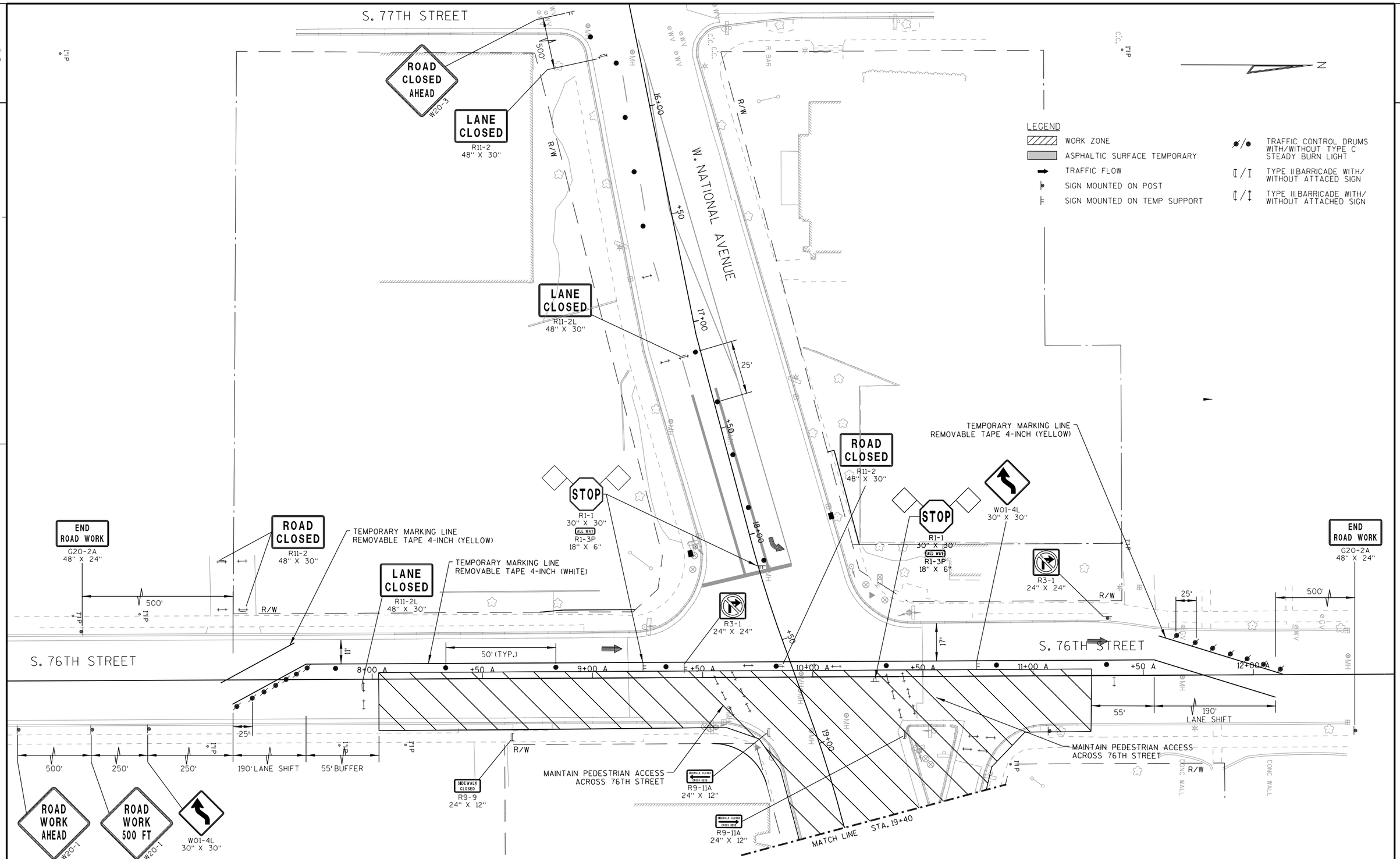
NOTE:

1. PROVIDE SIGNAGE FOR AN ALL-WAY STOP CONDITION WITH WARNING FLAGS DURING STAGE 2 CONSTRUCTION AT THE INTERSECTIONS OF W. NATIONAL AVENUE WITH S. 76TH AND S. 70TH STREETS.

LEGEND

- WORK ZONE
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC FLOW
- SIGN MOUNTED ON POST
- SIGN MOUNTED ON TEMP SUPPORT
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TYPE II BARRICADE WITH/ WITHOUT ATTACED SIGN
- TYPE III BARRICADE WITH/ WITHOUT ATTACHED SIGN

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2 OVERVIEW	SHEET 135	E



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 136 E

2

N

LEGEND

- WORK ZONE
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC FLOW
- SIGN MOUNTED ON POST
- SIGN MOUNTED ON TEMP SUPPORT
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TYPE II BARRICADE WITH/ WITHOUT ATTACED SIGN
- TYPE III BARRICADE WITH/ WITHOUT ATTACHED SIGN

W. LAPHAM STREET

W. NATIONAL AVENUE

S. 75TH STREET

MATCH LINE STA. 19+40

ROAD CLOSED
R11-2
48" X 30"

MAINTAIN ACCESS TO LIBRARY DURING CONSTRUCTION

STOP
R1-1
30" X 30"

ONE WAY
COVER SIGN

ROAD WORK AHEAD
W20-1

W06-3
36" X 36"

ONE WAY
COVER SIGN

ONE WAY
COVER SIGN

END ROAD WORK
G20-2A
48" X 24"

STOP
R1-1
30" X 30"

ROAD WORK AHEAD
W20-1

END ROAD WORK
G20-2A
48" X 24"

STOP
R1-1
30" X 30"

18+00 A
+50 A
19+00 A
+50 A
20+00 A
+50 A
21+00 A
+50 A
22+00 A

R/W
CONC WALL
FLAG
SAN
W
G
S
T
1"IP

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 137	E

2

S. 78TH STREET
S. 77TH STREET
S. 76TH STREET
S. 75TH STREET
S. 74TH STREET
S. 73RD STREET
S. 72ND STREET
S. 71ST STREET
S. 70TH STREET
W. LAPHAM STREET
W. NATIONAL AVENUE
W. MITCHELL STREET
W. HICKS STREET
UNION PACIFIC RAILROAD

ROAD CLOSED AHEAD W20-3
PLACE SIGN AT ORCHARD ST INTERSECTION
ROAD CLOSED TO THRU TRAFFIC R11-4 60" X 30"
ROAD CLOSED R11-2 48" X 30"
END ROAD WORK G20-2A 48" X 24"
STOP R1-1 30" X 30"
ALL WAY R1-3P 18" X 6"
ROAD WORK AHEAD W20-1
BCMS
S. 76TH STREET OPEN TO NORTHBOUND TRAFFIC ONLY

NOTE:

1. PROVIDE SIGNAGE FOR AN ALL-WAY STOP CONDITION WITH WARNING FLAGS DURING STAGE 3 CONSTRUCTION AT THE INTERSECTIONS OF W. NATIONAL AVENUE WITH S. 76TH AND S. 70TH STREETS.

LEGEND

- WORK ZONE
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC FLOW
- SIGN MOUNTED ON POST
- SIGN MOUNTED ON TEMP SUPPORT
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TYPE II BARRICADE WITH/ WITHOUT ATTACED SIGN
- TYPE III BARRICADE WITH/ WITHOUT ATTACHED SIGN

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3 OVERVIEW	SHEET 138	E

S. 77TH STREET

ROAD CLOSED AHEAD
W20-3

500'

R/W

ROAD CLOSED
R11-2
48" X 30"

16+00

W. NATIONAL AVENUE

+50

17+00

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

GRASS CONC STEPS GRASS GRASS

CONC

R/W

LEGEND

- WORK ZONE
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC FLOW
- SIGN MOUNTED ON POST
- SIGN MOUNTED ON TEMP SUPPORT
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TYPE II BARRICADE WITH/ WITHOUT ATTACED SIGN
- TYPE III BARRICADE WITH/ WITHOUT ATTACHED SIGN

NOTE:

PROVIDE SIGNAGE FOR AN ALL-WAY STOP CONDITION WITH WARNING FLAGS DURING STAGE 3 CONSTRUCTION AT THE INTERSECTION OF W. NATIONAL AVENUE AND S. 76TH STREET.

N

MAINTAIN PEDESTRIAN ACCESS ACROSS 76TH STREET

MAINTAIN PEDESTRIAN ACCESS ACROSS 76TH STREET

18+00

+50

END ROAD WORK
G20-2A
48" X 24"

500'

R/W

ROAD CLOSED
R11-2
48" X 30"

S. 76TH STREET

8+00 A +50 A 9+00 A +50 A 10+00 A +50 A 11+00 A +50 A 12+00 A

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)

11'

50' (TYP.)

13'

ROAD CLOSED
R11-2
48" X 30"

R3-2
24" X 24"

19+00

500' 250' 250' 75' LANE SHIFT 55' BUFFER

75' LANE SHIFT

500'

R/W

CONC WALL

CONC WALL

ROAD WORK AHEAD
W20-1

ROAD WORK 500 FT
W20-1

W01-4R
30" X 30"

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)

STOP
R1-1
30" X 30"
ALL WAY
R1-3P
18" X 6"

LANE CLOSED
R11-2
48" X 30"

MATCH LINE STA. 19+40

STOP
R1-1
30" X 30"
ALL WAY
R1-3P
18" X 6"

END ROAD WORK
G20-2A
48" X 24"

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 139	E

2

2

MATCH LINE STA. 19+40

LEGEND

- WORK ZONE
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC FLOW
- SIGN MOUNTED ON POST
- SIGN MOUNTED ON TEMP SUPPORT
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TYPE II BARRICADE WITH/WITHOUT ATTACED SIGN
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN

W. NATIONAL AVENUE

S. 75TH STREET

W. LAPHAM STREET

RIGHT TURN ONLY
R3-53R
24" X 30"

END ROAD WORK
G20-2A
48" X 24"

ROAD CLOSED
R11-2
48" X 30"

ROAD WORK AHEAD
W20-1

STOP
R1-1
30" X 30"

LEFT TURN ONLY
R3-53L
24" X 30"

ONE WAY
COVER SIGN

ROAD CLOSED AHEAD
W20-3

W06-3
36" X 36"

18+00 A
+50 A
19+00 A
+50 A
20+00 A
+50 A
21+00 A
+50 A
22+00 A

R/W
CONC WALL
FLAG
MH
WV
DWY

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 140	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\026211_s3.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

NOTES

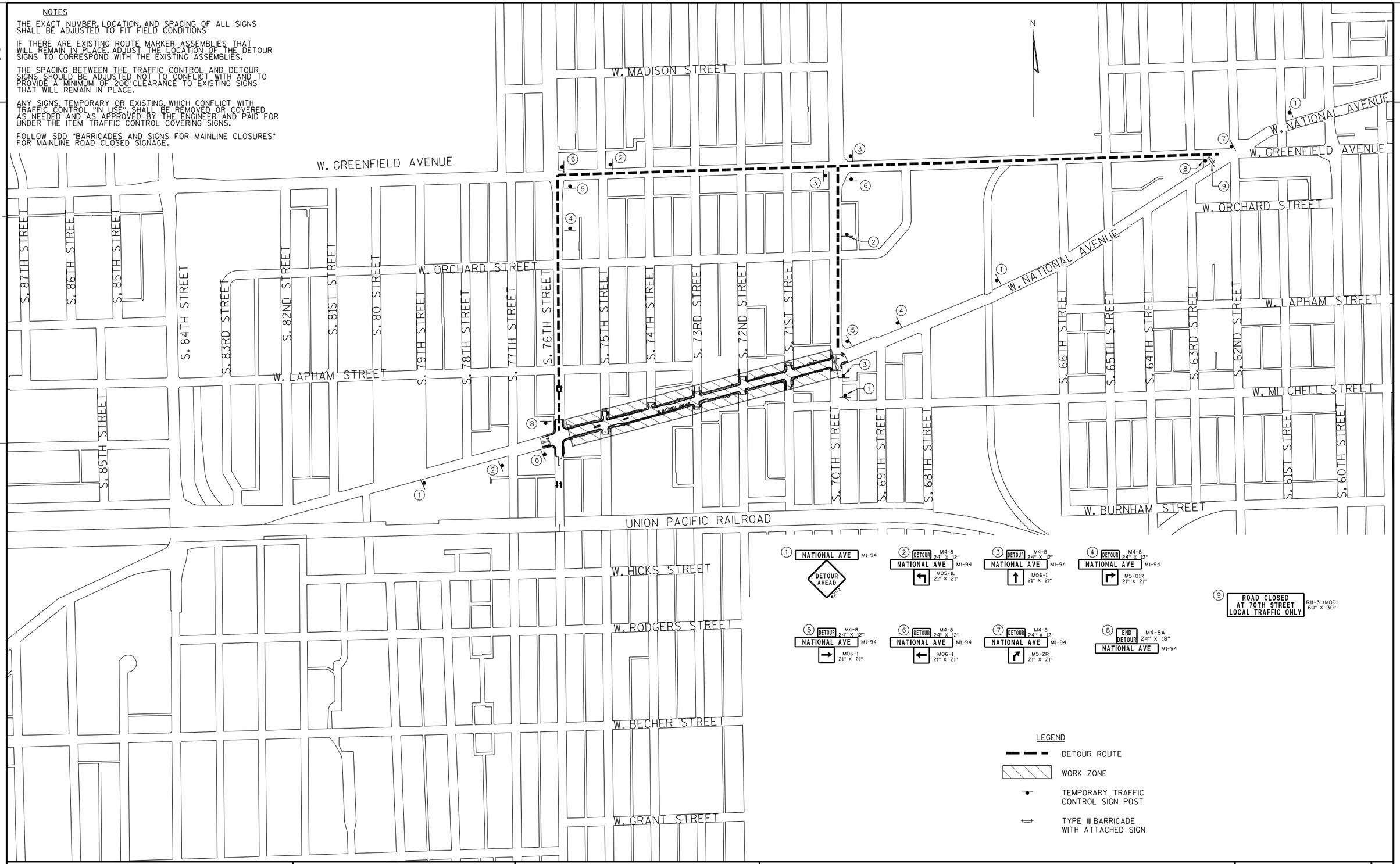
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES.

THE SPACING BETWEEN THE TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200' 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 AND PAID FOR UNDER THE ITEM TRAFFIC CONTROL COVERING SIGNS.

FOLLOW SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR MAINLINE ROAD CLOSED SIGNAGE.



1. NATIONAL AVE M1-94 / DETOUR AHEAD W20-2
2. DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / M05-1L 21" X 21"
3. DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / M06-1 21" X 21"
4. DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / M5-01R 21" X 21"
5. DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / M06-1 21" X 21"
6. DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / M06-1 21" X 21"
7. DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / M5-2R 21" X 21"
8. END DETOUR M4-8A 24" X 18" / NATIONAL AVE M1-94
9. ROAD CLOSED AT 70TH STREET LOCAL TRAFFIC ONLY RII-3 (MOD) 60" X 30"

LEGEND

- DETOUR ROUTE
- WORK ZONE
- TEMPORARY TRAFFIC CONTROL SIGN POST
- TYPE III BARRICADE WITH ATTACHED SIGN

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	DETOUR PLAN - STAGE 1	SHEET 141	E

NOTES

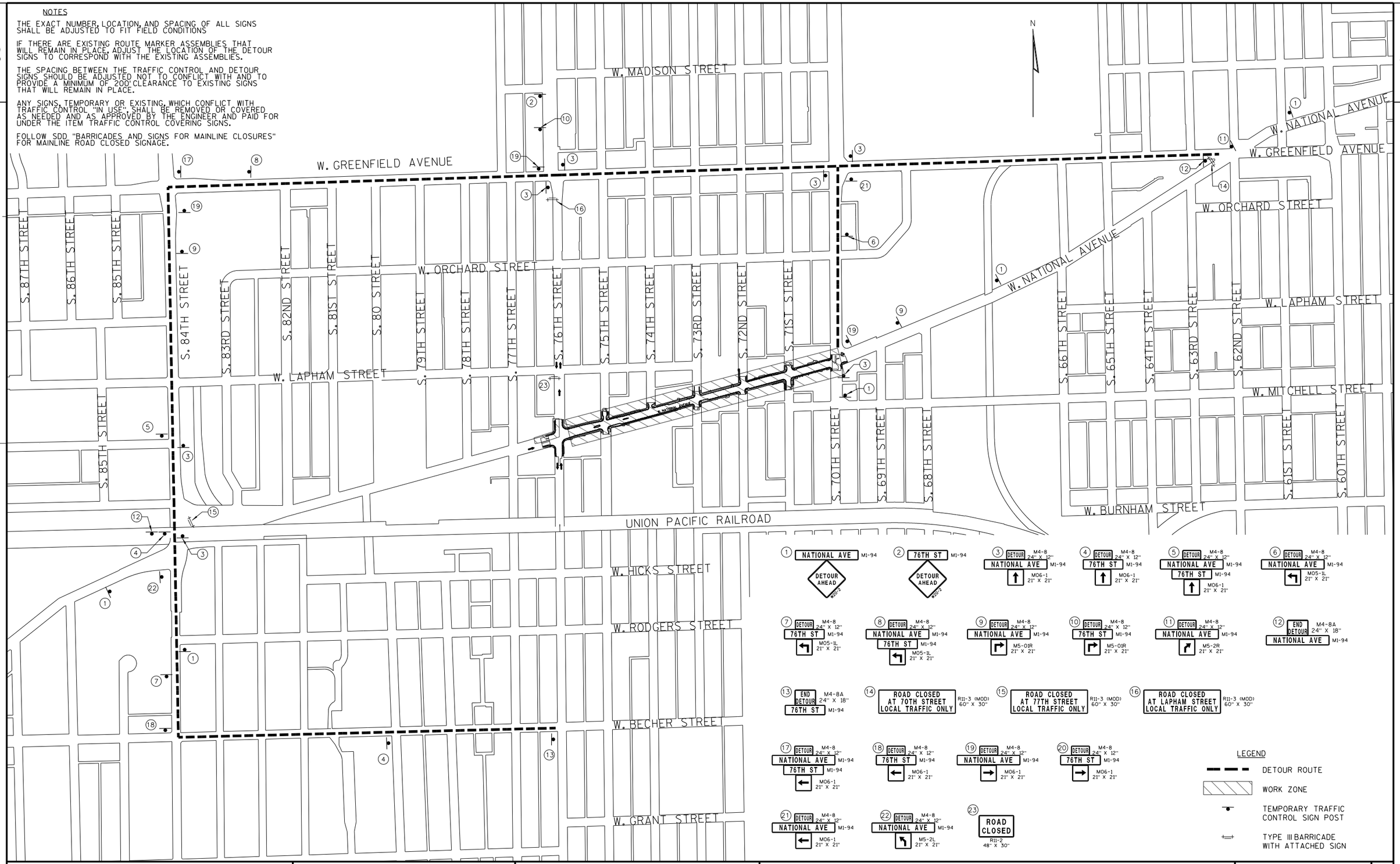
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES.

THE SPACING BETWEEN THE TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200' 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 AND PAID FOR UNDER THE ITEM TRAFFIC CONTROL COVERING SIGNS.

FOLLOW SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR MAINLINE ROAD CLOSED SIGNAGE.



1 NATIONAL AVE M1-94 / DETOUR AHEAD W10-2

2 76TH ST M1-94 / DETOUR AHEAD W10-2

3 DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / M06-1 21" X 21"

4 DETOUR M4-8 24" X 12" / 76TH ST M1-94 / M06-1 21" X 21"

5 DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / 76TH ST M1-94 / M06-1 21" X 21"

6 DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / M05-1L 21" X 21"

7 DETOUR M4-8 24" X 12" / 76TH ST M1-94 / M05-1L 21" X 21"

8 DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / 76TH ST M1-94 / M05-1L 21" X 21"

9 DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / M5-01R 21" X 21"

10 DETOUR M4-8 24" X 12" / 76TH ST M1-94 / M5-01R 21" X 21"

11 DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / M5-2R 21" X 21"

12 END DETOUR M4-8A 24" X 18" / NATIONAL AVE M1-94

13 END DETOUR M4-8A 24" X 18" / 76TH ST M1-94

14 ROAD CLOSED AT 70TH STREET LOCAL TRAFFIC ONLY R11-3 (MOD) 60" X 30"

15 ROAD CLOSED AT 77TH STREET LOCAL TRAFFIC ONLY R11-3 (MOD) 60" X 30"

16 ROAD CLOSED AT LAPHAM STREET LOCAL TRAFFIC ONLY R11-3 (MOD) 60" X 30"

17 DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / 76TH ST M1-94 / M06-1 21" X 21"

18 DETOUR M4-8 24" X 12" / 76TH ST M1-94 / M06-1 21" X 21"

19 DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / M06-1 21" X 21"

20 DETOUR M4-8 24" X 12" / 76TH ST M1-94 / M06-1 21" X 21"

21 DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / M06-1 21" X 21"

22 DETOUR M4-8 24" X 12" / NATIONAL AVE M1-94 / M5-2L 21" X 21"

23 ROAD CLOSED R11-2 48" X 30"

LEGEND

- DETOUR ROUTE
- WORK ZONE
- TEMPORARY TRAFFIC CONTROL SIGN POST
- TYPE III BARRICADE WITH ATTACHED SIGN

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	DETOUR PLAN - STAGE 2	SHEET 142 E

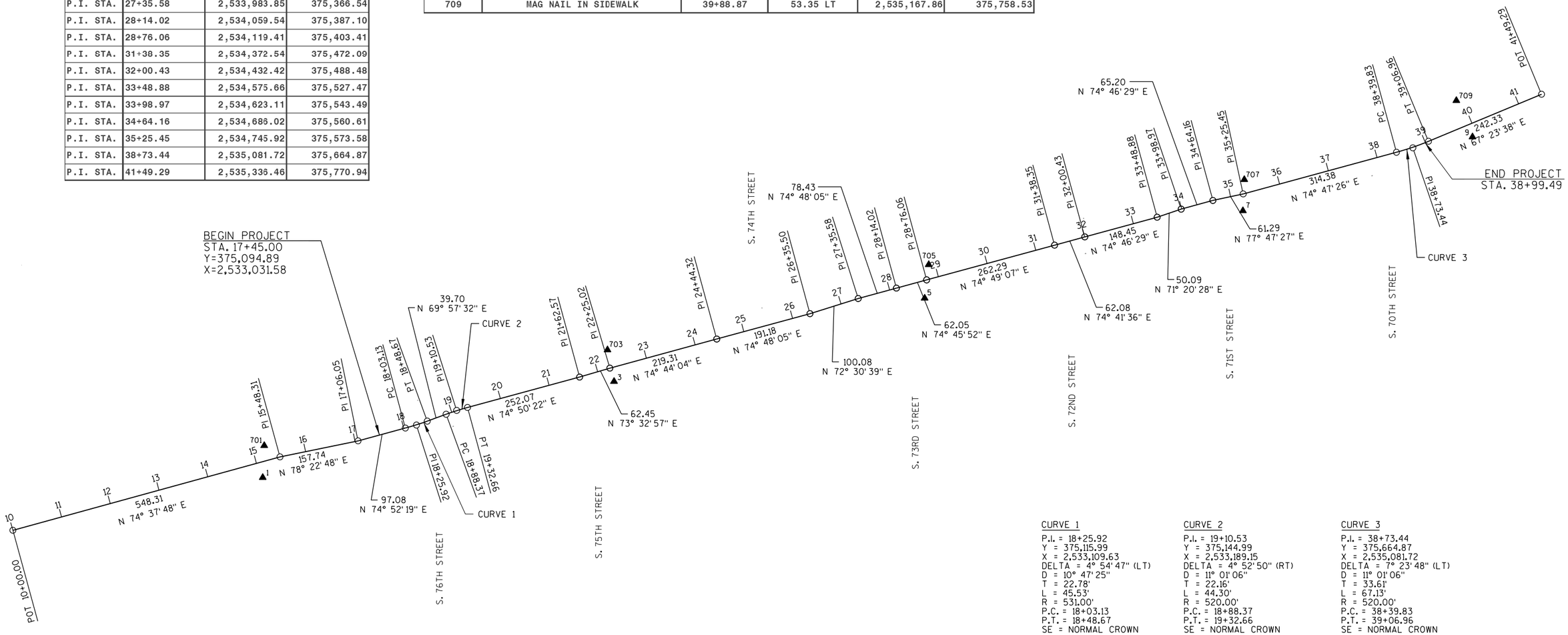
2

ALIGNMENT COORDINATE TABLE

LOCATION		X	Y
P.I. STA.	10+00.00	2,532,310.72	374,907.60
P.I. STA.	15+48.31	2,532,839.42	375,052.93
P.I. STA.	17+06.05	2,532,993.92	375,084.71
P.I. STA.	18+25.92	2,533,109.63	375,115.99
P.I. STA.	19+10.53	2,533,189.15	375,144.99
P.I. STA.	21+62.57	2,533,432.44	375,210.92
P.I. STA.	22+25.02	2,533,492.34	375,228.60
P.I. STA.	24+44.32	2,533,703.90	375,286.34
P.I. STA.	26+35.50	2,533,888.40	375,336.46
P.I. STA.	27+35.58	2,533,983.85	375,366.54
P.I. STA.	28+14.02	2,534,059.54	375,387.10
P.I. STA.	28+76.06	2,534,119.41	375,403.41
P.I. STA.	31+38.35	2,534,372.54	375,472.09
P.I. STA.	32+00.43	2,534,432.42	375,488.48
P.I. STA.	33+48.88	2,534,575.66	375,527.47
P.I. STA.	33+98.97	2,534,623.11	375,543.49
P.I. STA.	34+64.16	2,534,686.02	375,560.61
P.I. STA.	35+25.45	2,534,745.92	375,573.58
P.I. STA.	38+73.44	2,535,081.72	375,664.87
P.I. STA.	41+49.29	2,535,336.46	375,770.94

CONTROL POINTS

POINT #	DESCRIPTION	STATION	OFFSET	X	Y
1	MAG NAIL IN SIDEWALK	15+04.70	30.32 RT	2,532,805.40	375,012.14
3	MAG NAIL IN SIDEWALK	22+26.12	27.48 RT	2,533,500.64	375,202.38
5	MAG NAIL IN SIDEWALK	28+62.77	34.01 RT	2,534,115.52	375,367.10
7	MAG NAIL IN SIDEWALK	35+17.91	32.32 RT	2,534,745.38	375,540.39
9	MAG NAIL IN SIDEWALK	39+90.70	25.47 RT	2,535,199.85	375,686.47
701	MAG NAIL IN SIDEWALK	15+24.21	29.72 LT	2,532,808.30	375,075.20
703	MAG NAIL IN SIDEWALK	22+30.08	36.15 LT	2,533,487.71	375,264.81
705	MAG NAIL IN SIDEWALK	28+87.90	28.07 LT	2,534,123.49	375,433.60
707	MAG NAIL IN SIDEWALK	35+35.04	26.75 LT	2,534,748.16	375,601.91
709	MAG NAIL IN SIDEWALK	39+88.87	53.35 LT	2,535,167.86	375,758.53

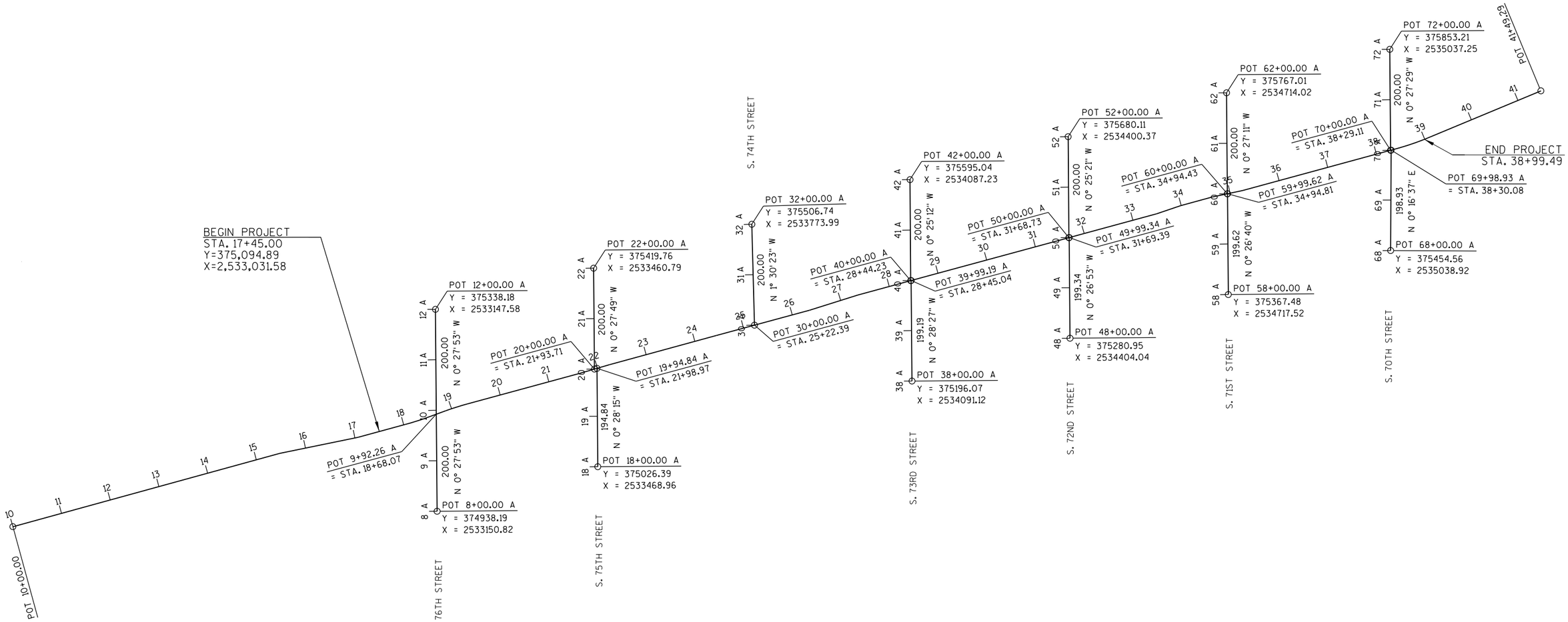


CURVE 1
P.I. = 18+25.92
Y = 375,115.99
X = 2,533,109.63
DELTA = 4° 54' 47" (LT)
D = 10° 47' 25"
T = 22.78'
L = 45.53'
R = 531.00'
P.C. = 18+03.13
P.T. = 18+48.67
SE = NORMAL CROWN

CURVE 2
P.I. = 19+10.53
Y = 375,144.99
X = 2,533,189.15
DELTA = 4° 52' 50" (RT)
D = 11° 01' 06"
T = 22.16'
L = 44.30'
R = 520.00'
P.C. = 18+88.37
P.T. = 19+32.66
SE = NORMAL CROWN

CURVE 3
P.I. = 38+73.44
Y = 375,664.87
X = 2,535,081.72
DELTA = 7° 23' 48" (LT)
D = 11° 01' 06"
T = 33.61'
L = 67.13'
R = 520.00'
P.C. = 38+39.83
P.T. = 39+06.96
SE = NORMAL CROWN

2



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	ALIGNMENT PLAN - SIDE ROADS	SHEET 144	E

Estimate Of Quantities

Line	Item	Item Description	Unit	Total	2410-00-77 Qty	2410-00-78 Qty
0002	201.0120	Clearing	ID	159.000	159.000	
0004	201.0220	Grubbing	ID	159.000	159.000	
0006	204.0100	Removing Pavement	SY	14,804.000	14,804.000	
0008	204.0120	Removing Asphaltic Surface Milling	SY	1,219.000	1,219.000	
0010	204.0150	Removing Curb & Gutter	LF	177.000	177.000	
0012	204.0155	Removing Concrete Sidewalk	SY	3,819.000	3,819.000	
0014	204.0170	Removing Fence	LF	15.000	15.000	
0016	204.0195	Removing Concrete Bases	EACH	1.000	1.000	
0018	204.0210	Removing Manholes	EACH	15.000	15.000	
0020	204.0215	Removing Catch Basins	EACH	29.000	29.000	
0022	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	466.000	466.000	
0024	204.0245	Removing Storm Sewer (size) 02. 15-Inch	LF	38.000	38.000	
0026	204.0245	Removing Storm Sewer (size) 03. 18-Inch	LF	323.000	323.000	
0028	204.0245	Removing Storm Sewer (size) 04. 21-Inch	LF	943.000	943.000	
0030	204.0245	Removing Storm Sewer (size) 05. 24-Inch	LF	399.000	399.000	
0032	204.0245	Removing Storm Sewer (size) 06. 30-Inch	LF	302.000	302.000	
0034	204.0291.S	Abandoning Sewer	CY	112.000	112.000	
0036	204.9060.S	Removing (item description) 01. Trash Receptable	EACH	1.000	1.000	
0038	204.9060.S	Removing (item description) 02. Tree Grate	EACH	4.000	4.000	
0040	204.9060.S	Removing (item description) 03. Portable Planter	EACH	2.000	2.000	
0042	204.9060.S	Removing (item description) 04. Concrete Wheel Stop	EACH	5.000	5.000	
0044	204.9090.S	Removing (item description) 01. Raised Concrete Planter	LF	220.000	220.000	
0046	204.9105.S	Removing (item description) 01. Traffic Signals, W. National Ave & S. 76th St	LS	1.000	1.000	
0048	204.9105.S	Removing (item description) 02. Traffic Signals, W. National Ave & S. 75th St	LS	1.000	1.000	
0050	204.9105.S	Removing (item description) 03. Traffic Signals, W. National Ave & 71st St	LS	1.000	1.000	
0052	204.9105.S	Removing (item description) 04. Traffic Signals, W. National Ave & S. 70th St	LS	1.000	1.000	
0054	204.9165.S	Removing (item description) 01. Concrete Steps	SF	49.000	49.000	
0056	205.0100	Excavation Common	CY	13,377.000	13,377.000	
0058	205.0501.S	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	TON	1,214.000	1,214.000	
0060	213.0100	Finishing Roadway (project) 01. 2410-00-77	EACH	1.000	1.000	
0062	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	5,646.000	5,646.000	
0064	310.0110	Base Aggregate Open-Graded	TON	28.000	28.000	
0066	311.0110	Breaker Run	TON	9,962.000	9,962.000	
0068	320.0145	Concrete Base 8-Inch	SY	265.000	265.000	
0070	415.0080	Concrete Pavement 8-Inch	SY	11,141.000	11,141.000	

					2410-00-77	2410-00-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0072	415.1080	Concrete Pavement HES 8-Inch	SY	889.000	889.000	
0074	415.5110.S	Concrete Pavement Joint Layout	LS	1.000	1.000	
0076	416.0170	Concrete Driveway 7-Inch	SY	391.000	391.000	
0078	416.0270	Concrete Driveway HES 7-Inch	SY	85.000	85.000	
0080	416.0610	Drilled Tie Bars	EACH	97.000	97.000	
0082	416.0620	Drilled Dowel Bars	EACH	606.000	606.000	
0084	455.0605	Tack Coat	GAL	76.000	76.000	
0086	460.5224	HMA Pavement 4 LT 58-28 S	TON	183.000	183.000	
0088	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	20.000	20.000	
0090	513.2050.S	Railing Pipe	LF	9.000	9.000	
0092	520.8000	Concrete Collars for Pipe	EACH	2.000	2.000	
0094	601.0110	Concrete Curb Type D	LF	5.000	5.000	
0096	601.0319	Concrete Curb & Gutter 19-Inch	LF	146.000	146.000	
0098	601.0331	Concrete Curb & Gutter 31-Inch	LF	1,269.000	1,269.000	
0100	601.0600	Concrete Curb Pedestrian	LF	125.000	125.000	
0102	602.0410	Concrete Sidewalk 5-Inch	SF	28,811.000	28,811.000	
0104	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	460.000	460.000	
0106	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	150.000	150.000	
0108	602.1500	Concrete Steps	SF	91.000	91.000	
0110	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	985.000	985.000	
0112	608.0436	Storm Sewer Pipe Reinforced Concrete Class IV 36-Inch	LF	482.000	482.000	
0114	608.0454	Storm Sewer Pipe Reinforced Concrete Class IV 54-Inch	LF	705.000	705.000	
0116	608.0512	Storm Sewer Pipe Reinforced Concrete Class V 12-Inch	LF	716.000	716.000	
0118	608.0515	Storm Sewer Pipe Reinforced Concrete Class V 15-Inch	LF	129.000	129.000	
0120	611.0530	Manhole Covers Type J	EACH	23.000	23.000	
0122	611.0648	Inlet Covers Type R	EACH	15.000	15.000	
0124	611.1230	Catch Basins 2x3-FT	EACH	3.000	3.000	
0126	611.2004	Manholes 4-FT Diameter	EACH	11.000	11.000	
0128	611.2005	Manholes 5-FT Diameter	EACH	6.000	6.000	
0130	611.2006	Manholes 6-FT Diameter	EACH	1.000	1.000	
0132	611.2008	Manholes 8-FT Diameter	EACH	2.000	2.000	
0134	611.2504	Manholes Variable Tee 4-FT Diameter	EACH	3.000	3.000	
0136	611.8105	Adjusting Catch Basin Covers	EACH	2.000	2.000	
0138	611.8110	Adjusting Manhole Covers	EACH	2.000	2.000	
0140	611.8120.S	Cover Plates Temporary	EACH	23.000	23.000	
0142	612.0106	Pipe Underdrain 6-Inch	LF	400.000	400.000	
0144	616.0700.S	Fence Safety	LF	120.000	120.000	

					2410-00-77	2410-00-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0146	618.0100	Maintenance And Repair of Haul Roads (project) 01. 2410-00-77	EACH	1.000	1.000	
0148	619.1000	Mobilization	EACH	1.000	1.000	
0150	620.0300	Concrete Median Sloped Nose	SF	90.000	90.000	
0152	624.0100	Water	MGAL	56.000	56.000	
0154	625.0100	Topsoil	SY	713.000	713.000	
0156	627.0200	Mulching	SY	188.000	188.000	
0158	628.1104	Erosion Bales	EACH	50.000	50.000	
0160	628.1504	Silt Fence	LF	200.000	200.000	
0162	628.1520	Silt Fence Maintenance	LF	200.000	200.000	
0164	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000	
0166	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000	
0168	628.7005	Inlet Protection Type A	EACH	36.000	36.000	
0170	628.7015	Inlet Protection Type C	EACH	50.000	50.000	
0172	628.7020	Inlet Protection Type D	EACH	37.000	37.000	
0174	628.7560	Tracking Pads	EACH	4.000	4.000	
0176	629.0210	Fertilizer Type B	CWT	1.000	1.000	
0178	630.0200	Seeding Temporary	LB	7.000	7.000	
0180	631.0300	Sod Water	MGAL	0.050	0.050	
0182	631.1000	Sod Lawn	SY	713.000	713.000	
0184	632.0101	Trees (species) (size) (root) 01. Elm, Fontier, 2.5" Cal, B&B	EACH	7.000		7.000
0186	632.0101	Trees (species) (size) (root) 02. Elm, Regal, 2.5" Cal, B&B	EACH	8.000		8.000
0188	632.0101	Trees (species) (size) (root) 03. Ginkgo, Princeton Sentry, 2.5" Cal, B&B	EACH	4.000		4.000
0190	632.0101	Trees (species) (size) (root) 04. Hackberry, Prairie Sentinel, 2.5" Cal, B&B	EACH	5.000		5.000
0192	632.0101	Trees (species) (size) (root) 05. Honeylocust, Streetkeeper, 2.5" Cal, B&B	EACH	8.000		8.000
0194	632.0101	Trees (species) (size) (root) 06. Oak, Regal Prince English, 2.5" Cal, B&B	EACH	2.000		2.000
0196	632.0101	Trees (species) (size) (root) 07. Zelkova, Musashino, 2.0" Cal, B&B	EACH	3.000		3.000
0198	632.0101	Trees (species) (size) (root) 08. Crabapple, Adirondack, 1.75" Cal, B&B	EACH	1.000		1.000
0200	632.0101	Trees (species) (size) (root) 09. Dogwood, Corneliancherry, 1.75" Cal, B&B	EACH	4.000		4.000
0202	632.0101	Trees (species) (size) (root) 10. Musclewood, Firespire, 1.75" Cal, B&B	EACH	4.000		4.000
0204	632.0101	Trees (species) (size) (root) 11. Lilac, China Snow Peking, 8'-10' HT Clump, B&B	EACH	2.000		2.000

					2410-00-77	2410-00-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0206	632.0101	Trees (species) (size) (root) 12. Redbud, Burgandy Hearts, 8'-10' HT Clump, B&B	EACH	1.000		1.000
0208	632.0101	Trees (species) (size) (root) 13. Hydrangea, Little Lamb, 24" HT, B&B	EACH	8.000		8.000
0210	632.0101	Trees (species) (size) (root) 14. Rugosa Rose, Dwarf Pavement, 12" HT, B&B	EACH	3.000		3.000
0212	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	26.000		26.000
0214	637.2210	Signs Type II Reflective H	SF	350.000	350.000	
0216	638.2102	Moving Signs Type II	EACH	27.000	27.000	
0218	638.2602	Removing Signs Type II	EACH	58.000	58.000	
0220	638.3000	Removing Small Sign Supports	EACH	24.000	24.000	
0222	643.0300	Traffic Control Drums	DAY	7,966.000	7,966.000	
0224	643.0410	Traffic Control Barricades Type II	DAY	105.000	105.000	
0226	643.0420	Traffic Control Barricades Type III	DAY	6,615.000	6,615.000	
0228	643.0705	Traffic Control Warning Lights Type A	DAY	13,230.000	13,230.000	
0230	643.0715	Traffic Control Warning Lights Type C	DAY	580.000	580.000	
0232	643.0900	Traffic Control Signs	DAY	19,220.000	19,220.000	
0234	643.0920	Traffic Control Covering Signs Type II	EACH	9.000	9.000	
0236	643.1050	Traffic Control Signs PCMS	DAY	42.000	42.000	
0238	643.5000	Traffic Control	EACH	1.000	1.000	
0240	644.1430.S	Temporary Pedestrian Surface Plate	SF	1,740.000	1,740.000	
0242	644.1601.S	Temporary Curb Ramp	EACH	29.000	29.000	
0244	644.1616.S	Temporary Pedestrian Safety Fence	LF	10,680.000	10,680.000	
0246	645.0111	Geotextile Type DF Schedule A	SY	200.000	200.000	
0248	645.0220	Geogrid Type SR	SY	15,712.000	15,712.000	
0250	646.1545	Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	LF	8,767.000	8,767.000	
0252	646.3545	Marking Line Grooved Wet Ref Contrast Epoxy 8-Inch	LF	547.000	547.000	
0254	646.5020	Marking Arrow Epoxy	EACH	10.000	10.000	
0256	646.5120	Marking Word Epoxy	EACH	2.000	2.000	
0258	646.6120	Marking Stop Line Epoxy 18-Inch	LF	396.000	396.000	
0260	646.7120	Marking Diagonal Epoxy 12-Inch	LF	107.000	107.000	
0262	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	2,535.000	2,535.000	
0264	646.8120	Marking Curb Epoxy	LF	40.000	40.000	
0266	646.8220	Marking Island Nose Epoxy	EACH	4.000	4.000	
0268	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	1,674.000	1,674.000	
0270	650.4000	Construction Staking Storm Sewer	EACH	48.000	48.000	
0272	650.4500	Construction Staking Subgrade	LF	2,155.000	2,155.000	
0274	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	5,235.000	5,235.000	
0276	650.7000	Construction Staking Concrete Pavement	LF	2,155.000	2,155.000	
0278	650.8500	Construction Staking Electrical Installations (project) 01. 2410-00-77	LS	1.000	1.000	

					2410-00-77	2410-00-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0280	650.9000	Construction Staking Curb Ramps	EACH	48.000	48.000	
0282	650.9910	Construction Staking Supplemental Control (project) 01. 2410-00-77	LS	1.000	1.000	
0284	650.9920	Construction Staking Slope Stakes	LF	2,155.000	2,155.000	
0286	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	2,610.000	2,610.000	
0288	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	4,967.000	4,967.000	
0290	652.0615	Conduit Special 3-Inch	LF	382.000	382.000	
0292	653.0135	Pull Boxes Steel 24x36-Inch	EACH	7.000	7.000	
0294	653.0140	Pull Boxes Steel 24x42-Inch	EACH	39.000	39.000	
0296	654.0102	Concrete Bases Type 2	EACH	2.000	2.000	
0298	654.0110	Concrete Bases Type 10	EACH	4.000	4.000	
0300	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	5.000	5.000	
0302	654.0230	Concrete Control Cabinet Bases Type L30	EACH	1.000	1.000	
0304	655.0230	Cable Traffic Signal 5-14 AWG	LF	1,740.000	1,740.000	
0306	655.0240	Cable Traffic Signal 7-14 AWG	LF	297.000	297.000	
0308	655.0260	Cable Traffic Signal 12-14 AWG	LF	4,038.000	4,038.000	
0310	655.0270	Cable Traffic Signal 15-14 AWG	LF	1,370.000	1,370.000	
0312	655.0320	Cable Type UF 2-10 AWG Grounded	LF	1,689.000	1,689.000	
0314	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	4,554.000	4,554.000	
0316	655.0610	Electrical Wire Lighting 12 AWG	LF	1,668.000	1,668.000	
0318	655.0630	Electrical Wire Lighting 4 AWG	LF	5,940.000	5,940.000	
0320	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. W. National Ave & S. 76th St	LS	1.000	1.000	
0322	656.0200	Electrical Service Meter Breaker Pedestal (location) 02. W. National Ave & S. 75th St	LS	1.000	1.000	
0324	656.0200	Electrical Service Meter Breaker Pedestal (location) 03. Fire Station 1	LS	1.000	1.000	
0326	656.0200	Electrical Service Meter Breaker Pedestal (location) 04. W. National Ave & S. 71st St	LS	1.000	1.000	
0328	656.0200	Electrical Service Meter Breaker Pedestal (location) 05. W. National Ave & S. 70th St	LS	1.000	1.000	
0330	656.0200	Electrical Service Meter Breaker Pedestal (location) 06. Lighting Cabinet	LS	1.000	1.000	
0332	658.0173	Traffic Signal Face 3S 12-Inch	EACH	48.000	48.000	
0334	658.0174	Traffic Signal Face 4S 12-Inch	EACH	8.000	8.000	
0336	658.0416	Pedestrian Signal Face 16-Inch	EACH	32.000	32.000	
0338	658.0500	Pedestrian Push Buttons	EACH	7.000	7.000	
0340	658.5069	Signal Mounting Hardware (location) 01. W. National Ave & S. 76th St	LS	1.000	1.000	
0342	658.5069	Signal Mounting Hardware (location) 02. W. National Ave & S. 75th St	LS	1.000	1.000	

					2410-00-77	2410-00-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0344	658.5069	Signal Mounting Hardware (location) 03. Fire Station 1	LS	1.000	1.000	
0346	658.5069	Signal Mounting Hardware (location) 04. W. National Ave & S. 71st St	LS	1.000	1.000	
0348	658.5069	Signal Mounting Hardware (location) 05. W. National Ave & S. 70th St	LS	1.000	1.000	
0350	659.2130	Lighting Control Cabinets 120/240 30-Inch	EACH	1.000	1.000	
0352	670.0100	Field System Integrator	LS	1.000	1.000	
0354	670.0200	ITS Documentation	LS	1.000	1.000	
0356	673.0110	Communication Vault Type Round	EACH	8.000	8.000	
0358	678.0200	Fiber Optic Splice Enclosure	EACH	5.000	5.000	
0360	678.0300	Fiber Optic Splice	EACH	30.000	30.000	
0362	678.0500	Communication System Testing	LS	1.000	1.000	
0364	690.0150	Sawing Asphalt	LF	1,153.000	1,153.000	
0366	690.0250	Sawing Concrete	LF	1,219.000	1,219.000	
0368	715.0415	Incentive Strength Concrete Pavement	DOL	3,610.000	3,610.000	
0370	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,400.000	2,400.000	
0372	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,400.000	1,400.000	
0374	SPV.0035	Special 01. Backfill for Plant Beds - 24 Inch Depth	CY	74.000	74.000	
0376	SPV.0035	Special 02. Backfill for Street Trees	CY	167.000	167.000	
0378	SPV.0035	Special 03. Structural Soil at Street Trees	CY	738.000	738.000	
0380	SPV.0060	Special 01. Install Internal Sanitary Manhole Seal	EACH	12.000	12.000	
0382	SPV.0060	Special 02. Adjust Sanitary Manhole Frame	EACH	12.000	12.000	
0384	SPV.0060	Special 03. Temporary Sanitary Connection 8" to 10"	EACH	1.000	1.000	
0386	SPV.0060	Special 04. Building Sanitary Sewer Abandonment	EACH	30.000	30.000	
0388	SPV.0060	Special 05. Building Sanitary Sewer Reconnect, 6-Inch	EACH	1.000	1.000	
0390	SPV.0060	Special 06. Water Main Connection, 8-Inch	EACH	3.000	3.000	
0392	SPV.0060	Special 07. Valve, 8-Inch	EACH	8.000	8.000	
0394	SPV.0060	Special 08. Hydrant	EACH	1.000	1.000	
0396	SPV.0060	Special 09. Air Release Assembly, 1-Inch	EACH	1.000	1.000	
0398	SPV.0060	Special 10. Adjust Water Valve Box	EACH	28.000	28.000	
0400	SPV.0060	Special 11. Water Service Reconnect D.I.W.M. Cl 53 R.G.J., 6-Inch	EACH	2.000	2.000	
0402	SPV.0060	Special 12. S 76th St Water Main Crossing with Hydrant	EACH	1.000	1.000	
0404	SPV.0060	Special 13. S 75th St Water Main Crossing with Hydrant	EACH	1.000	1.000	
0406	SPV.0060	Special 14. S 74th St Water Main Crossing	EACH	1.000	1.000	
0408	SPV.0060	Special 15. S 73rd St Water Main Crossing	EACH	1.000	1.000	
0410	SPV.0060	Special 16. S 72nd St Water Main Crossing with Hydrant	EACH	1.000	1.000	
0412	SPV.0060	Special 17. S 71st St Water Main Crossing with Hydrant	EACH	1.000	1.000	
0414	SPV.0060	Special 18. S 70th St Water Main Crossing with Casing	EACH	1.000	1.000	
0416	SPV.0060	Special 19. Bench	EACH	10.000	10.000	

					2410-00-77	2410-00-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0418	SPV.0060	Special 20. Trash Receptacle	EACH	11.000		11.000
0420	SPV.0060	Special 21. Recycling Receptacle	EACH	11.000		11.000
0422	SPV.0060	Special 22. Bicycle Rack	EACH	8.000		8.000
0424	SPV.0060	Special 23. Tree Grate - 4'x10'	EACH	15.000		15.000
0426	SPV.0060	Special 24. Round Steel Sign Post System	EACH	33.000	33.000	
0428	SPV.0060	Special 25. Catmint, Walker's Low 1 Gal CG	EACH	19.000		19.000
0430	SPV.0060	Special 26. Daylily, Strawberry Candy 1 Gal CG	EACH	24.000		24.000
0432	SPV.0060	Special 27. Geranium, Rozanne 1 Gal CG	EACH	18.000		18.000
0434	SPV.0060	Special 28. Feather Reed Grass 1 Gal CG	EACH	8.000		8.000
0436	SPV.0060	Special 29. Prairie Dropseed, Tara Dwarf 4" Pot CG	EACH	66.000		66.000
0438	SPV.0060	Special 30. Switchgrass, Shenandoah 1 Gal CG	EACH	26.000		26.000
0440	SPV.0060	Special 31. Daffodil, Dutch Master Bulb 4" Circumf	EACH	234.000		234.000
0442	SPV.0060	Special 32. Daffodil, Yellow Jonquils Bulb 4" Circumf	EACH	118.000		118.000
0444	SPV.0060	Special 33. Tulip, Albert Heijn Bulb 4" Circumf	EACH	144.000		144.000
0446	SPV.0060	Special 34. Adjust Fiber Optic Vault	EACH	5.000	5.000	
0448	SPV.0060	Special 35. 15-foot Decorative Light Pole	EACH	19.000	19.000	
0450	SPV.0060	Special 36. 22-Foot Decorative Light Pole	EACH	13.000	13.000	
0452	SPV.0060	Special 37. 15-Foot Decorative Signal Pole	EACH	18.000	18.000	
0454	SPV.0060	Special 38. Decorative Luminaire Arm	EACH	31.000	31.000	
0456	SPV.0060	Special 39. Tear Drop LED Fixture	EACH	31.000	31.000	
0458	SPV.0060	Special 40. Light Pole Banner Arm	EACH	11.000	11.000	
0460	SPV.0060	Special 41. Concrete Bases Type 2 (Mod)	EACH	47.000	47.000	
0462	SPV.0060	Special 42. Transformer Bases Breakaway 11 1/2-Inch Bolt Circle Black	EACH	2.000	2.000	
0464	SPV.0060	Special 43. Poles Type 2 Black	EACH	2.000	2.000	
0466	SPV.0060	Special 44. Trombone Arms 20-Ft Black	EACH	1.000	1.000	
0468	SPV.0060	Special 45. Trombone Arms 25-FT Black	EACH	1.000	1.000	
0470	SPV.0060	Special 46. Monotube Poles Type 9 Black	EACH	4.000	4.000	
0472	SPV.0060	Special 47. Monotube Arm 30-Ft Black	EACH	4.000	4.000	
0474	SPV.0060	Special 48. Traffic Signal Faces - Hybrid Beacon	EACH	4.000	4.000	
0476	SPV.0060	Special 49. Traffic Signal Controller & Cabinet	EACH	5.000	5.000	
0478	SPV.0060	Special 50. Pre-terminated Patch Panel with 6-Ports	EACH	5.000	5.000	
0480	SPV.0060	Special 51. IP Ethernet with Single Mode Fiber Ports	EACH	5.000	5.000	
0482	SPV.0060	Special 52. IP Video Encoder Single Port	EACH	4.000	4.000	
0484	SPV.0060	Special 53. Removing Lighting Units	EACH	29.000	29.000	
0486	SPV.0060	Special 54. Relocation of Existing Light Fixture	EACH	1.000	1.000	
0488	SPV.0060	Special 55. Lamp Disposal High Intensity Discharge	EACH	29.000	29.000	
0490	SPV.0060	Special 56. Marking Symbol Grooved Bike Lane preformed Thermoplastic	EACH	47.000		47.000
0492	SPV.0060	Special 57. Marking Arrow Grooved Bike Lane	EACH	24.000		24.000

					2410-00-77	2410-00-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
		Preformed Thermoplastic				
0494	SPV.0060	Special 58. Catch Basin Special	EACH	24.000	24.000	
0496	SPV.0060	Special 59. Inlet Cover Type R-1	EACH	12.000	12.000	
0498	SPV.0060	Special 60. Field Facilities Office Space	EACH	1.000	1.000	
0500	SPV.0060	Special 61. Daylily, Happy Returns 1 Gal CG	EACH	12.000		12.000
0502	SPV.0060	Special 62. Daylily,Hyperion 1 Gal CG	EACH	6.000		6.000
0504	SPV.0060	Special 63. Storm Sewer Reconnect	EACH	6.000	6.000	
0506	SPV.0090	Special 01. Sanitary Sewer Relay, SDR 35 PVC SP, 8-Inch	LF	521.000		521.000
0508	SPV.0090	Special 02. Sanitary Sewer Relay, SDR 35 PVC SP, 10-Inch	LF	199.000		199.000
0510	SPV.0090	Special 03. Abandon Sanitary Sewer, 10-Inch	LF	485.000		485.000
0512	SPV.0090	Special 04. Building Sanitary Sewer, 6-Inch	LF	860.000		860.000
0514	SPV.0090	Special 05. Water Main Relay, D.I.W.M. Cl 53 R.G.J., 8-Inch	LF	2,061.000		2,061.000
0516	SPV.0090	Special 06. Water Service, Copper, 1-Inch	LF	375.000		375.000
0518	SPV.0090	Special 07. Water Service, Copper, 2-Inch	LF	44.000		44.000
0520	SPV.0090	Special 08. Precast Concrete Planter Curbing	LF	361.000		361.000
0522	SPV.0090	Special 09. Fiber Optic Tracer Cable	LF	2,320.000	2,320.000	
0524	SPV.0090	Special 10. Dielectric Fiber Optic Cable 48-Count	LF	2,609.000	2,609.000	
0526	SPV.0090	Special 11. Concrete Curb & Gutter Integral 31-Inch	LF	3,523.000	3,523.000	
0528	SPV.0090	Special 12. Concrete Curb & Gutter Integral 19-Inch	LF	98.000	98.000	
0530	SPV.0090	Special 13. 6-Inch PVC Storm Sewer Lateral	LF	135.000	135.000	
0532	SPV.0090	Special 14. 10-Inch PVC Storm Sewer Lateral	LF	17.000	17.000	
0534	SPV.0105	Special 01. Stone Veneer Seat Wall, Sta.19+50	LS	1.000		1.000
0536	SPV.0105	Special 02. Stone Veneer Seat Wall, Sta.22+50	LS	1.000		1.000
0538	SPV.0105	Special 03. Vehicle Video Detention System, W. National Ave & S. 76th St	LS	1.000	1.000	
0540	SPV.0105	Special 04. Vehicle Video Detection System, W. National Ave & S. 75th St	LS	1.000	1.000	
0542	SPV.0105	Special 05. Vehicle Video Detection System, W. National Ave & S. 71st St	LS	1.000	1.000	
0544	SPV.0105	Special 06. Vehicle Video Detection System, W. National Ave & S. 70th St	LS	1.000	1.000	
0546	SPV.0105	Special 07. Emergency Vehicle Preemption System, W. National Ave & S. 76th St	LS	1.000	1.000	
0548	SPV.0105	Special 08. Emergency Vehicle Preemption System, W. National Ave & S. 75th St	LS	1.000	1.000	
0550	SPV.0105	Special 09. Emergency Vehicle Preemption System, Fire Station 1	LS	1.000	1.000	
0552	SPV.0105	Special 10. Emergency Vehicle Preemption System, W. National Ave & S. 71st St	LS	1.000	1.000	

					2410-00-77	2410-00-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0554	SPV.0105	Special 11. Emergency Vehicle Preemption System, W. National Ave & S. 70th St	LS	1.000	1.000	
0556	SPV.0120	Special 01. Management of Petroleum-Contaminated Groundwater	MGAL	0.100	0.100	
0558	SPV.0165	Special 01. 3x12 Concrete Pavers Over Concrete Base	SF	3,316.000		3,316.000
0560	SPV.0165	Special 02. 6x24 Concrete Pavers Over Concrete Base	SF	10,182.000		10,182.000
0562	SPV.0165	Special 03. Wall Modular Block Gravity Landscape, STA. 36+00	SF	354.000	354.000	
0564	SPV.0165	Special 04. High Friction Green Surfacing	SF	6,138.000		6,138.000
0566	SPV.0180	Special 01. Shredded Hardwood Bark Mulch	SY	355.000		355.000
0568	SPV.0180	Special 02. Geotextile Fabric Type FF	SY	150.000	150.000	
0570	SPV.0200	Special 01. Sanitary Manhole, 3'-6" Dia.	VF	32.000		32.000
0572	SPV.0200	Special 02. Sanitary O.D. Manhole, 3'-6" Dia.	VF	13.000		13.000

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CLEARING AND GRUBBING

STREET	STATION	OFFSET	201.0120 CLEARING I.D.	201.0220 GRUBBING I.D.
76TH STREET	11+13 A	25' RT	3	3
NATIONAL AVENUE	20+31	40' LT	12	12
NATIONAL AVENUE	21+00	38' LT	15	15
NATIONAL AVENUE	21+35	36' LT	15	15
NATIONAL AVENUE	23+21	36' LT	5	5
NATIONAL AVENUE	23+69	36' LT	5	5
NATIONAL AVENUE	24+43	34' LT	4	4
NATIONAL AVENUE	24+70	27' LT	6	6
NATIONAL AVENUE	25+06	41' RT	15	15
NATIONAL AVENUE	29+37	24' LT	6	6
NATIONAL AVENUE	29+81	24' LT	6	6
NATIONAL AVENUE	30+24	24' LT	6	6
NATIONAL AVENUE	30+73	24' LT	6	6
72ND STREET	50+49 A	32' LT	10	10
NATIONAL AVENUE	32+99	31' LT	8	8
NATIONAL AVENUE	33+23	31' LT	3	3
NATIONAL AVENUE	33+50	31' LT	4	4
NATIONAL AVENUE	37+74	49' RT	30	30
PROJECT TOTAL			159	159

REMOVING ASPHALTIC SURFACE MILLING

STREET	FROM	TO	204.0120 SY
NATIONAL AVENUE	17+45	28+45	379
NATIONAL AVENUE	28+45	39+00	841
		PROJECT TOTALS	1,219

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REMOVING CURB & GUTTER

STREET	LOCATION	204.0150 LF
NATIONAL AVENUE	17+45 TO 17+99 RT	54
NATIONAL AVENUE	17+84 TO 17+99 LT	15
NATIONAL AVENUE	30+83 TO 31+07 LT	32
70TH STREET	70+34A TO 70+45A	11
NATIONAL AVENUE	38+48 TO 38+99	65
	PROJECT TOTAL:	177

REMOVING PAVEMENT

STREET	FROM	TO	204.0100 SY
NATIONAL AVENUE	17+45	28+45	8,250
NATIONAL AVENUE	28+45	39+00	6,554
		PROJECT TOTALS	14,804

REMOVING CONCRETE SIDEWALK

STREET	FROM STATION		TO STATION	204.0155 SY
NATIONAL AVENUE	17+45	-	28+45	1,914
NATIONAL AVENUE	28+45	-	39+00	1,905
			PROJECT TOTAL:	3,819

ALL ITEMS CATEGORY 0010

REMOVING FENCE

STREET	LOCATION	204.0170 LF
NATIONAL AVENUE	32+88 LT	10
NATIONAL AVENUE	33+95 LT	5
	PROJECT TOTAL:	15

REMOVING MANHOLES

STREET	STATION	OFFSET	REMOVING MANHOLES 204.0210 EACH
NATIONAL AVENUE	17+52	4' LT	1
NATIONAL AVENUE	18+17	4' LT	1
NATIONAL AVENUE	18+74	0' RT	1
NATIONAL AVENUE	18+93	2' RT	1
NATIONAL AVENUE	21+77	3' RT	1
NATIONAL AVENUE	22+84	5' RT	1
NATIONAL AVENUE	25+12	6' RT	1
NATIONAL AVENUE	28+37	10' RT	1
NATIONAL AVENUE	29+46	9' RT	1
NATIONAL AVENUE	30+67	9' RT	1
NATIONAL AVENUE	31+54	39' RT	1
NATIONAL AVENUE	34+81	41' RT	1
NATIONAL AVENUE	34+88	10' RT	1
NATIONAL AVENUE	38+10	8' RT	1
NATIONAL AVENUE	38+00	45' RT	1
PROJECT TOTAL			15

REMOVING CATCH BASINS

STREET	STATION	OFFSET	REMOVING CATCH BASINS 204.0215 EACH
NATIONAL AVENUE	17+95	22' RT	1
NATIONAL AVENUE	17+97	38' LT	1
NATIONAL AVENUE	18+76	38' RT	1
NATIONAL AVENUE	21+49	20' RT	1
NATIONAL AVENUE	21+62	31' LT	1
NATIONAL AVENUE	22+33	25' LT	1
NATIONAL AVENUE	22+84	25' LT	1
NATIONAL AVENUE	24+90	25' LT	1
NATIONAL AVENUE	25+08	38' LT	1
NATIONAL AVENUE	25+20	22' RT	1
NATIONAL AVENUE	28+01	25' RT	1
NATIONAL AVENUE	28+15	43' RT	1
NATIONAL AVENUE	28+54	37' RT	1
NATIONAL AVENUE	28+18	21' LT	1
NATIONAL AVENUE	28+33	33' LT	1
NATIONAL AVENUE	29+13	21' LT	1
NATIONAL AVENUE	29+49	21' LT	1
NATIONAL AVENUE	29+50	25' RT	1
NATIONAL AVENUE	30+83	25' RT	1
NATIONAL AVENUE	30+83	21' LT	1
NATIONAL AVENUE	31+78	40' RT	1
NATIONAL AVENUE	32+12	25' RT	1
NATIONAL AVENUE	32+29	21' LT	1
NATIONAL AVENUE	33+94	28' RT	1
NATIONAL AVENUE	33+99	18' LT	1
NATIONAL AVENUE	34+59	57' RT	1
NATIONAL AVENUE	35+05	49' RT	1
NATIONAL AVENUE	37+60	25' RT	1
NATIONAL AVENUE	37+91	21' LT	1
PROJECT TOTAL			29

ALL ITEMS CATEGORY 0010

REMOVING STORM SEWER

STREET	STATION	-	STATION	LOCATION	204.0245.01 12-INCH LF	204.0245.02 15-INCH LF	204.0245.03 18-INCH LF	204.0245.04 21-INCH LF	204.0245.05 24-INCH LF	204.0245.06 30-INCH LF
NATIONAL AVENUE	17+45	-	28+45	LT & RT	255	38	--	943	--	--
NATIONAL AVENUE	28+45	-	39+00	LT & RT	211	--	323	--	399	302
				PROJECT TOTAL	466	38	323	943	399	302

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MISCELLANEOUS REMOVALS

STREET	STATION	OFFSET	204.0195 REMOVING CONCRETE BASES EACH	204.9060.S.01 REMOVING TRASH RECEPTACLE EACH	204.9060.S.02 REMOVING TREE GRATE EACH	204.9060.S.03 REMOVING PORTABLE PLANTER EACH	204.9060.S.04 REMOVING CONCRETE WHEEL STOP EACH	204.9090.S.01 REMOVING RAISED CONCRETE PLANTER LF	204.9165.S.01 REMOVING CONCRETE STEPS LF
NATIONAL AVENUE	23+60	38' LT	-	-	-	-	1	-	-
NATIONAL AVENUE	23+72	36' LT	1	-	-	-	-	-	-
NATIONAL AVENUE	23+70	38' LT	-	-	-	-	1	-	-
NATIONAL AVENUE	24+25	38' LT	-	-	-	-	1	-	-
NATIONAL AVENUE	24+35	38' LT	-	-	-	-	1	-	-
NATIONAL AVENUE	24+45	38' LT	-	-	-	-	1	-	-
NATIONAL AVENUE	28+22	39' LT	-	1	-	-	-	-	-
NATIONAL AVENUE	29+37	24' LT	-	-	1	-	-	-	-
NATIONAL AVENUE	29+81	24' LT	-	-	1	-	-	-	-
NATIONAL AVENUE	30+24	24' LT	-	-	1	-	-	-	-
NATIONAL AVENUE	30+73	24' LT	-	-	1	-	-	-	-
NATIONAL AVENUE	33+11	32' LT	-	-	-	1	-	-	-
NATIONAL AVENUE	33+36	32' LT	-	-	-	1	-	-	-
NATIONAL AVENUE	29+64	33' RT	-	-	-	-	-	-	3
NATIONAL AVENUE	29+76	33' RT	-	-	-	-	-	-	8
NATIONAL AVENUE	34+12	28' LT	-	-	-	-	-	-	4
NATIONAL AVENUE	35+61	39' RT	-	-	-	-	-	-	8
NATIONAL AVENUE	35+79	39' RT	-	-	-	-	-	-	10
NATIONAL AVENUE	36+21	39' RT	-	-	-	-	-	-	16
NATIONAL AVENUE	33+62 TO 33+54	RT	-	-	-	-	-	220	-
		PROJECT TOTAL:	1	1	4	2	5	220	49

EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL

STREET	SITE NAME	FROM	TO	205.0501.S TON
NATIONAL AVENUE	FORMER FRANK'S SERVICE	18+00	18+60	1.5
NATIONAL AVENUE	FORMER JOE'S SERVICE	22+25	23+25	107.4
NATIONAL AVENUE	CARBURETOR SHOP	34+55	35+35	719.4
NATIONAL AVENUE	FIRE HOUSE SQUARE	31+00	31+70	385.6
			PROJECT TOTALS	1,214

ABANDONING SEWER

STREET	STATION	TO	STATION	LOCATION	204.0291.S CY
NATIONAL AVENUE	17+45	-	28+45	LT & RT	7
NATIONAL AVENUE	28+45	-	39+00	LT & RT	105
				PROJECT TOTAL	112

ALL ITEMS CATEGORY 0010

3

EARTHWORK SUMMARY

Stage	From/To Station	Location	Common Excavation (1) Cut (2)	Item 205.0100 * EBS Excavation (3)	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (6) Factor 1.11	Breaker Run (7)	Mass Ordinate +/- (8)	Waste	Borrow (9) #208.0100)	Comment:
			CY	CY	CY	CY	CY	CY	TON	CY	CY	CY	
Stage 1	17+50 to 19+50	National Avenue	10724	0	3237	7487	41	46	0	7441	7441	0	
Stage 2/3	19+50 to 38+00	National Avenue	1181	0	419	761	2	2	0	759	759	0	National & 76th Intersection
Stage 2/3	8+05 to 11+20	76th Street	835	0	131	704	9	12	0	693	693	0	National & 76th Intersection
	Undistributed	EBS		637					1147		-	0	Assume 5% of Cut
			12740	637	3788	8952	52	60	1147	8892	8892	0	
		Total Common Exc		13377									

* ADDITIONAL QUANTITY SHOWN ELSEWHERE IN PLAN

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Breaker Run.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
6) Expanded Fill. Factor = 1.11
7) Breaker Run
8) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Location.
9) Borrow Excavation

3

FINISHING ROADWAY (2410-00-77)

LOCATION	213.0100 EACH
NATIONAL AVENUE	1
PROJECT TOTAL	1

CONCRETE PAVEMENT JOINT LAYOUT

STREET	415.5110.S LS
NATIONAL AVENUE	1
PROJECT TOTAL	1

3

BASE AGGREGATE DENSE 1-1/4 INCH

STREET	STATION	TO	STATION	305.0120 TON
NATIONAL AVENUE	17+45	-	28+45	3,166
NATIONAL AVENUE	28+45	-	39+00	2,480
			PROJECT TOTAL	5,646

CONCRETE PAVEMENT

STREET	STATION	TO	STATION	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.1080 CONCRETE PAVEMENT 8-INCH HES SY
NATIONAL AVENUE	17+45	-	28+45	6,336	613
NATIONAL AVENUE	28+45	-	39+00	4,805	276
			PROJECT TOTAL	11,141	889

BREAKER RUN

STREET	STATION	TO	STATION	311.0110 TON
NATIONAL AVENUE	17+45	-	28+45	5,013
NATIONAL AVENUE	28+45	-	39+00	3,802
UNDISTRIBUTED (EARTHWORK)		-		1,147
			PROJECT TOTAL	9,962

CONCRETE DRIVEWAY 7-INCH

STREET	STATION	TO	STATION	416.0170 CONCRETE DRIVEWAY 7-INCH SY	416.0270 CONCRETE DRIVEWAY HES 7-INCH SY
NATIONAL AVENUE	17+45	-	28+45	104	85
NATIONAL AVENUE	28+45	-	39+00	287	0
			PROJECT TOTAL	391	85

CONCRETE BASE 8-INCH

STREET	STATION	TO	STATION	320.0145 SY
NATIONAL AVENUE	17+45	-	28+45	24
NATIONAL AVENUE	28+45	-	39+00	241
PROJECT TOTAL				265

DRILLED TIE BARS

STREET	STATION	TO	STATION	416.0610 EACH
NATIONAL AVENUE	17+45	-	28+45	23
NATIONAL AVENUE	28+45	-	39+00	74
PROJECT TOTAL				97

ALL ITEMS CATEGORY 0010

3

DRILLED DOWEL BARS

STREET	STATION	TO	STATION	416.0620 EACH
NATIONAL AVENUE	17+45	-	28+45	250
NATIONAL AVENUE	28+45	-	39+00	356
PROJECT TOTAL				606

ASPHALT

STREET	STATION	TO	STATION	460.5224 HMA PAVEMENT 4 LT 58-28 S (TON)	455.0605 TACK COAT (GAL)	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES (TON)
NATIONAL AVENUE	17+45	-	28+45	53	22	9
NATIONAL AVENUE	28+45	-	39+00	130	54	11
PROJECT TOTAL				183	76	20

3

CONCRETE CURB & GUTTER

STREET	STATION	TO	STATION	601.0110 CONCRETE CURB TYPE D LF	601.0319 CONCRETE CURB AND GUTTER 19-INCH LF	601.0331 CONCRETE CURB AND GUTTER 31-INCH LF	601.0600 CONCRETE CURB PEDESTRIAN LF	SPV.0090.11 CONCRETE CURB AND GUTTER INTEGRAL 31-INCH LF	SPV.0090.12 CONCRETE CURB AND GUTTER INTEGRAL 19-INCH LF
NATIONAL AVENUE	17+45	-	28+45	0	146	542	0	1994	98
NATIONAL AVENUE	28+45	-	39+00	5	0	727	125	1529	0
PROJECT TOTAL				5	146	1269	125	3523	98

CONCRETE SIDEWALK 5-INCH

STREET	STATION	TO	STATION	602.0410 SF
NATIONAL AVENUE	17+45	-	28+45	14,841
NATIONAL AVENUE	28+45	-	39+00	13,970
			PROJECT TOTAL	28,811

CURB RAMP DETECTABLE WARNING FIELD

STREET	STATION	TO	STATION	YELLOW 602.0505 SF	RADIAL YELLOW 602.0605 SF
NATIONAL AVENUE	17+45	-	28+45	228	80
NATIONAL AVENUE	28+45	-	39+00	232	70
PROJECT TOTAL				460	150

ALL ITEMS CATEGORY 0010

CONCRETE STEPS

STREET	STA.	OFF	513.2050.S RAILING PIPE LF	602.1500 CONCRETE STEPS SF
NATIONAL AVENUE	29+63	35' RT	0	7
NATIONAL AVENUE	29+75	36' RT	0	14
NATIONAL AVENUE	34+12	28' LT	0	10
NATIONAL AVENUE	35+60	35' RT	4	17
NATIONAL AVENUE	35+80	35' RT	3	18
NATIONAL AVENUE	36+20	35' RT	2	25
PROJECT TOTAL			9	91

ADJUSTING CATCH BASIN COVERS

STREET	STATION	OFFSET	611.8105 EACH
NATIONAL AVENUE	25+57	52' LT	1
NATIONAL AVENUE	31+39	44' RT	1
PROJECT TOTAL			2

STORM SEWER SUMMARY

ITEM NUMBER	ITEM	PROJECT TOTAL	
520.8000	Concrete Collars for Pipe	2	EACH
608.0512	Storm Sewer Pipe Reinforced Concrete Class V 12-Inch	716	LF
608.0515	Storm Sewer Pipe Reinforced Concrete Class V 15-Inch	129	LF
608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	985	LF
608.0436	Storm Sewer Pipe Reinforced Concrete Class IV 36-Inch	482	LF
608.0454	Storm Sewer Pipe Reinforced Concrete Class IV 54-Inch	705	LF
611.0530	Manhole Covers Type J	23	EACH
611.0648	Inlet Covers Type R	15	EACH
611.1230	Catch Basins 2x3-FT	3	EACH
611.2004	Manholes 4-FT Diameter	11	EACH
611.2005	Manholes 5-FT Diameter	6	EACH
611.2006	Manholes 6-FT Diameter	1	EACH
611.2008	Manholes 8-FT Diameter	2	EACH
611.2504	Manholes Variable Tee 4-FT Diameter	3	EACH
SPV.0060.58	Catch Basins Special	24	EACH
SPV.0060.59	Inlet Covers Type R-1	12	EACH

(REFER TO STORM SEWER PLAN DRAINAGE TABLE FOR ADDITIONAL INFORMATION)

ADJUSTING MANHOLE COVERS

STREET	STATION	OFFSET	611.8110 EACH
NATIONAL AVENUE	25+27	59' LT	1
NATIONAL AVENUE	28+46	32' LT	1
PROJECT TOTAL			2

TEMPORARY COVER PLATES

STREET	STATION	OFFSET	TEMPORARY COVER PLATES 611.8120.S EACH
NATIONAL AVENUE	17+51.50	2.0' LT	1
NATIONAL AVENUE	18+01.37	2.0' LT	1
NATIONAL AVENUE	18+92.00	3.4' RT	1
NATIONAL AVENUE	21+62.00	5.0' RT	1
NATIONAL AVENUE	22+84.00	7.0' RT	1
NATIONAL AVENUE	24+94.00	7.0' RT	1
NATIONAL AVENUE	26+75.00	8.6' RT	1
NATIONAL AVENUE	28+00.00	11.0' RT	1
NATIONAL AVENUE	28+36.50	11.0' RT	1
NATIONAL AVENUE	29+00.00	11.0' RT	1
NATIONAL AVENUE	30+75.00	11.0' RT	1
NATIONAL AVENUE	31+52.50	11.0' RT	1
NATIONAL AVENUE	32+25.00	11.0' RT	1
NATIONAL AVENUE	34+42.50	11.0' RT	1
NATIONAL AVENUE	34+87.00	13.03' RT	1
NATIONAL AVENUE	37+75.00	11.0' RT	1
NATIONAL AVENUE	38+65.00	2.80' RT	1
71ST STREET	58+96.34 A	6.49' RT	1
71ST STREET	60+53.06 A	5.00' LT	1
71ST STREET	59+43.22 A	5.32' LT	1
72ND STREET	49+57.69 A	4.94' LT	1
72ND STREET	51+12.23 A	26.0' LT	1
73RD STREET	39+50.20 A	6.5' LT	1
PROJECT TOTAL			23

ALL ITEMS CATEGORY 0010

3

PIPE UNDERDRAIN, GEOTEXTILE FABRIC & GEOGRID

STREET	STATION	TO	STATION	310.0110 BASE AGGREGATE OPEN GRADE TON	612.0106 PIPE UNDERDRAIN 6-INCH LF	645.0111 GEOTEXTILE TYPE DF SCHEDULE A SY	645.0220 GEOGRID TYPE SR SY
NATIONAL AVENUE	17+45	-	28+45	12	170	85	8982
NATIONAL AVENUE	28+45	-	39+00	16	230	115	6730
PROJECT TOTAL				28	400	200	15712

TOPSOIL

STREET	STATION	TO	STATION	625.0100 SY
NATIONAL AVENUE	17+45		28+45	518
NATIONAL AVENUE	28+45		39+00	145
UNDISTRIBUTED				50
			PROJECT TOTAL	713

3

MAINTENANCE AND REPAIR HAUL ROADS ID 2410-00-77

LOCATION	618.0100 EACH
NATIONAL AVENUE	1

TEMPORARY SEEDING AND MULCH

STREET	STATION	TO	STATTION	627.0200 MULCHING SY	630.0200 SEEDING TEMPORARY LB
NATIONAL AVENUE	17+45		28+45	103	3
NATIONAL AVENUE	28+45		39+00	60	2
UNDISTRIBUTED				25	2
			PROJECT TOTAL	188	7

CONCRETE MEDIAN SLOPED NOSE

STREET	STATION	TO	STATION	620.0300 SF
NATIONAL AVENUE	17+45	-	28+45	90
NATIONAL AVENUE	28+45	-	39+00	0
PROJECT TOTAL				90

WATER

STREET	LOCATION	TO	STATTION	624.0100 MGAL
NATIONAL AVENUE	17+45	-	28+45	32
NATIONAL AVENUE	28+45	-	39+00	25
			PROJECT TOTAL	56

SILT FENCE

STREET	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
UNDISTRIBUTED	200	200
PROJECT TOTAL	200	200

ALL ITEMS CATEGORY 0010

3

TEMPORARY SETTLING BASINS

STREET	628.1104 EROSION BALES EACH	SPV.0180.02 GEOTEXTILE FABRIC TYPE FF SY
UNDISTRIBUTED	50	150
PROJECT TOTAL	50	150

EROSION CONTROL MOBILIZATIONS

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
UNDISTRIBUTED	2	4
PROJECT TOTAL	2	4

INLET PROTECTION

STREET	STATION	TO	STATION	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH
NATIONAL AVENUE	17+45		28+45	14	25	9
NATIONAL AVENUE	28+45		39+00	17	20	23
UNDISTRIBUTED				5	5	5
			PROJECT TOTAL	36	50	37

3

TRACKING PAD

STREET	LOCATION	628.7560 EACH
NATIONAL AVENUE	UNDISTRIBUTED	4
	PROJECT TOTAL	4

SOD QUANTITIES

STREET	STATION	TO	STATTION	629.0210 FERTILIZER TYPE B CWT	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
NATIONAL AVENUE	17+45		28+45	0.5	0.02	518
NATIONAL AVENUE	28+45		39+00	0.2	0.01	145
UNDISTRIBUTED				0.3	0.02	50
			PROJECT TOTAL	1.0	0.05	713

ALL ITEMS CATEGORY 0010

TYPE II SIGNS

SIGN NO.	LOCATION	STATION		SIGN CODE	MESSAGE	SIZE		637.2210 SIGNS TYPE II REFLECTIVE H SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	SPV.0060.24 ROUND STEEL SIGN POST SYSTEM EACH	POLE HEIGHT FOR INFORMATION ONLY CONTRACTOR TO VERIFY POLE HEIGHT WITH MUTCD REQUIREMENTS PRIOR TO ORDERING			REMARKS
													10 ft	12 ft	15 FT	
1-1	NATIONAL AVE	17+44	RT	R4-4	-	36	X 30	7.5	-	-	-	1	-	1	-	-
1-2	NATIONAL AVE	18+08	RT	-	-	-	-	-	2	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-1	NATIONAL AVE	18+30	LT	R3-17,R3-17B	-	30	X 36	7.5	-	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-2	NATIONAL AVE	18+29	LT	R10-50	-	30	X 36	7.5	-	-	-	-	-	-	-	ATTACH TO SIGNAL ARM
2-3	NATIONAL AVE	19+10	LT	-	-	-	-	-	-	1	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-4	NATIONAL AVE	19+21	LT	R5-2	-	24	X 24	4.0	-	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-5	NATIONAL AVE	19+20	LT	-	-	-	-	-	-	2	1	-	-	-	-	-
2-6	NATIONAL AVE	19+34	LT	-	-	-	-	-	-	1	1	-	-	-	-	-
2-7	NATIONAL AVE	19+36	LT	-	-	-	-	-	2	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-8	NATIONAL AVE	19+42	LT	-	-	-	-	-	-	1	1	-	-	-	-	-
2-9	NATIONAL AVE	19+36	LT	R10-11B	-	24	X 24	4.0	-	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-10	NATIONAL AVE	20+65	LT	R7-1D	ANY TIME, DA	12	X 18	1.5	-	1	-	-	-	-	-	ATTACH TO LIGHT POLE
2-11	NATIONAL AVE	21+55	LT	R3-2	-	24	X 24	4.0	-	-	-	1	-	1	-	-
2-12	NATIONAL AVE	21+69	LT	R6-2L	-	24	X 30	5.0	-	1	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-13	NATIONAL AVE	21+87	LT	R5-1	-	30	X 30	6.3	-	1	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-14	NATIONAL AVE	22+25	LT	R5-1	-	30	X 30	6.3	-	1	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-15	NATIONAL AVE	22+31	LT	R3-1	-	24	X 24	4.0	-	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-15A	NATIONAL AVE	22+31	LT	R6-2L	-	24	X 30	5.0	-	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-16	NATIONAL AVE	22+38	LT	-	-	-	-	-	-	2	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-17	NATIONAL AVE	23+27	LT	W5-52R	-	12	X 36	3.0	-	-	-	1	-	1	-	-
2-18	NATIONAL AVE	22+92	RT	R7-5LMOD,R7-1R	TWO HOUR, ANYTIME EXCEPT SAT & SUN, LA; ANY TIME, RA	24	X 18	3.0	-	1	-	1	1	-	-	-
2-19	NATIONAL AVE	22+31	LT	-	-	-	-	-	2	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-20	NATIONAL AVE	21+64	RT	W14-2	-	30	X 30	6.3	-	1	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-21	NATIONAL AVE	21+55	LT	R4-7	-	24	X 30	5.0	-	-	-	-	-	-	-	ON POLE WITH SIGN 2-11
2-22	NATIONAL AVE	21+23	LT	R4-7	-	24	X 30	5.0	-	-	-	1	-	1	-	-
2-23	NATIONAL AVE	20+86	RT	R7-1D	ANY TIME, DA	12	X 18	1.5	-	1	1	1	1	-	-	-
2-24	NATIONAL AVE	19+99	RT	-	-	-	-	-	-	2	-	-	-	-	-	ATTACH TO LIGHT POLE
2-25	NATIONAL AVE	19+75	RT	R2-1	30	24	X 30	5.0	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
2-25A	NATIONAL AVE	19+75	RT	R3-17	-	30	X 24	5.0	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
2-26	NATIONAL AVE	19+59	RT	R7-1D	ANY TIME, DA	12	X 18	1.5	-	1	1	1	1	-	-	-
2-27	NATIONAL AVE	19+18	RT	R10-50	-	30	X 36	7.5	-	-	-	-	-	-	-	ATTACH TO SIGNAL ARM
2-28	NATIONAL AVE	18+20	RT	R5-2	-	24	X 24	4.0	-	1	-	-	-	-	-	ATTACH TO SIGNAL POLE
2-29	NATIONAL AVE	18+08	RT	R10-11B	-	24	X 24	4.0	-	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
3-1	NATIONAL AVE	23+70	LT	R7-1D	ANY TIME, DA	12	X 18	1.5	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
3-2	NATIONAL AVE	23+81	LT	-	-	-	-	-	-	2	-	-	-	-	-	ATTACH TO LIGHT POLE
3-3	NATIONAL AVE	24+46	LT	-	-	-	-	-	-	-	-	1	1	-	-	POST ONLY, SIGN BY MCTS
3-4	NATIONAL AVE	24+91	LT	R7-7L	BUS STOP, LA	12	X 18	1.5	-	1	1	1	1	-	-	-
3-5	NATIONAL AVE	25+12	LT	R6-2R	-	24	X 30	5.0	-	1	1	1	-	1	-	-
3-6	NATIONAL AVE	25+43	LT	R5-2	-	24	X 24	4.0	-	1	1	1	-	1	-	-
3-7	NATIONAL AVE	26+53	LT	R7-1R	ANY TIME, RA	12	X 18	1.5	-	1	1	1	1	-	-	-
3-8	NATIONAL AVE	27+23	LT	R10-14MOD	EMERGENCY VEHICLES, STOP ON RED	36	X 36	9.0	-	-	-	-	-	-	-	ATTACH TO SIGNAL ARM
3-9	NATIONAL AVE	27+96	LT	W11-8	-	30	X 30	6.3	-	-	-	1	-	-	1	-
3-9A	NATIONAL AVE	27+96	LT	R10-6	-	24	X 36	6.0	-	-	-	-	-	-	-	ON POLE WITH SIGN 3-9
3-9B	NATIONAL AVE	27+96	LT	R7-1D	ANY TIME, DA	12	X 18	1.5	-	-	-	-	-	-	-	ON POLE WITH SIGN 3-9
3-10	NATIONAL AVE	28+12	LT	-	-	-	-	-	-	1	1	-	-	-	-	-

ALL ITEMS CATEGORY 0010

TYPE II SIGNS

SIGN NO.	LOCATION	STATION		SIGN CODE	MESSAGE	SIZE		637.2210 SIGNS TYPE II REFLECTIVE H SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	SPV.0060.24 ROUND STEEL SIGN POST SYSTEM EACH	POLE HEIGHT FOR INFORMATION ONLY CONTRACTOR TO VERIFY POLE HEIGHT WITH MUTCD REQUIREMENTS PRIOR TO ORDERING			REMARKS
													10 ft	12 ft	15 FT	
3-11	NATIONAL AVE	28+30	LT	-	-	-	-	-	-	2	1	-	-	-	-	-
3-12	NATIONAL AVE	28+36	LT	R1-1	-	30	X 30	6.3	-	-	-	1	-	-	1	-
3-12A	NATIONAL AVE	28+36	LT	R1-1	-	30	X 30	6.3	-	-	-	-	-	-	-	ON POLE WITH SIGN 3-12
3-13	NATIONAL AVE	28+88	LT	R3-17	-	30	X 24	5.0	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
3-14	NATIONAL AVE	28+94	LT	-	-	-	-	-	-	3	-	-	-	-	-	ATTACHED TO LIGHT POLE
3-15	NATIONAL AVE	28+88	LT	-	-	-	-	-	2	-	-	-	-	-	-	ATTACH TO LIGHT POLE
3-16	NATIONAL AVE	28+54	RT	-	-	-	-	-	-	2	-	-	-	-	-	ATTACH TO UTILITY POLE
3-17	NATIONAL AVE	28+51	RT	R1-1	-	30	X 30	6.3	-	-	-	1	-	-	1	-
3-17A	NATIONAL AVE	28+51	RT	R1-1	-	30	X 30	6.3	-	-	-	-	-	-	-	ON POLE WITH SIGN 3-17
3-18	NATIONAL AVE	28+00	RT	R10-14MOD	EMERGENCY VEHICLES, STOP ON RED	36	X 36	9.0	-	-	-	-	-	-	-	ATTACH TO SIGNAL ARM
3-19	NATIONAL AVE	28+00	RT	-	-	-	-	-	2	-	-	-	-	-	-	-
3-20	NATIONAL AVE	27+14	RT	-	-	-	-	-	-	2	1	-	-	-	-	-
3-21	NATIONAL AVE	27+02	RT	R7-1L,R7-MOD	ANY TIME, LA; EXCEPT AUTHORIZED POLICE & FIRE VEHICLES	12	X 27	2.3	-	-	-	1	-	1	-	-
3-22	NATIONAL AVE	26+96	RT	W11-8, R10-6, R7-5RMOD	TWO HOUR, ANYTIME EXCEPT SUNDAY	30	X 78	16.3	-	-	-	1	-	-	1	-
3-23	NATIONAL AVE	26+73	RT	-	-	-	-	-	-	1	1	-	-	-	-	-
3-24	NATIONAL AVE	26+79	RT	-	-	-	-	-	2	-	1	1	1	-	-	-
3-25	NATIONAL AVE	26+34	RT	-	-	-	-	-	-	1	-	-	-	-	-	ATTACHED TO LIGHT POLE
3-26	NATIONAL AVE	25+76	RT	R7-5LMOD,R7-1R	TWO HOUR, ANYTIME EXCEPT SUNDAY, LA; ANY TIME, RA	24	X 18	3.0	-	-	-	1	1	-	-	-
3-27	NATIONAL AVE	24+94	RT	-	-	-	-	-	-	1	-	-	-	-	-	ATTACHED TO LIGHT POLE
3-28	NATIONAL AVE	25+48	LT	-	-	-	-	-	1	-	-	-	-	-	-	ATTACH TO LIGHT POLE
3-29	NATIONAL AVE	24+60	RT	W11-8,W11-12P	EMERGENCY SIGNAL AHEAD	30	X 54	11.3	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
3-30	NATIONAL AVE	24+50	RT	-	-	-	-	-	-	1	1	-	-	-	-	-
3-31	NATIONAL AVE	24+37	RT	R7-7L,R7-5RMOD	BUS STOP, LA; TWO HOUR ANYTIME, EXCEP SAT & SUN, RA	24	X 18	3.0	-	-	-	1	1	-	-	-
3-32	NATIONAL AVE	24+28	RT	-	-	-	-	-	-	1	1	-	-	-	-	-
3-33	NATIONAL AVE	23+56	LT	W5-52R	-	12	X 36	3.0	-	-	-	1	-	1	-	-
4-1	NATIONAL AVE	29+89	LT	R2-1	30	24	X 30	5.0	-	-	-	1	-	-	1	-
4-1A	NATIONAL AVE	29+89	LT	R7-1D	ANY TIME, DA	12	X 18	1.5	-	-	-	-	-	-	-	ON POLE WITH SIGN 4-1
4-2	NATIONAL AVE	30+40	LT	W11-8	-	30	X 30	6.3	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
4-2A	NATIONAL AVE	30+40	LT	W11-12P	EMERGENCY SIGNAL AHEAD	30	X 24	5.0	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
4-3	NATIONAL AVE	30+46	LT	-	-	-	-	-	-	2	-	-	-	-	-	ATTACHED TO LIGHT POLE
4-4	NATIONAL AVE	31+13	LT	R7-1D	ANY TIME, DA	12	X 18	1.5	-	-	-	1	1	-	-	-
4-5	NATIONAL AVE	31+56	LT	-	-	-	-	-	-	2	1	-	-	-	-	-
4-6	NATIONAL AVE	31+61	LT	R1-1	-	30	X 30	6.3	-	-	-	1	-	-	1	-
4-6A	NATIONAL AVE	31+61	LT	R1-1	-	30	X 30	6.3	-	-	-	-	-	-	-	ON POLE WITH SIGN 4-6
4-7	NATIONAL AVE	32+15	LT	-	-	-	-	-	2	-	-	-	-	-	-	-
4-8	NATIONAL AVE	32+81	LT	R7-7L,R7-5RMOD	BUS STOP, LA; TWO HOUR ANYTIME, EXCEP SAT & SUN, RA	24	X 18	3.0	-	1	1	1	1	-	-	-
4-9	NATIONAL AVE	33+48	LT	R7-1R	ANY TIME, RA	12	X 18	1.5	-	-	-	1	1	-	-	-
4-10	NATIONAL AVE	33+83	LT	-	-	-	-	-	-	1	-	-	-	-	-	ATTACHED TO LIGHT POLE

3

ALL ITEMS CATEGORY 0010

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TYPE II SIGNS

SIGN NO.	LOCATION	STATION		SIGN CODE	MESSAGE	SIZE		637.2210 SIGNS TYPE II REFLECTIVE H SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	SPV.0060.24 ROUND STEEL SIGN POST SYSTEM EACH	POLE HEIGHT FOR INFORMATION ONLY CONTRACTOR TO VERIFY POLE HEIGHT WITH MUTCD REQUIREMENTS PRIOR TO ORDERING			REMARKS
													10 ft	12 ft	15 FT	
4-11	NATIONAL AVE	33+00	RT	R2-1	30	24	X 30	5.0	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
4-11A	NATIONAL AVE	33+00	RT	R7-5RMOD	TWO HOUR, ANYTIME EXCEPT SUNDAY	12	X 18	1.5	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
4-12	NATIONAL AVE	32+94	RT	-	-	-	-	-	-	2	-	-	-	-	-	ATTACHED TO LIGHT POLE
4-13	NATIONAL AVE	31+78	RT	R1-1	-	30	X 30	6.3	-	1	1	1	-	-	1	-
4-13A	NATIONAL AVE	31+78	RT	R1-1	-	30	X 30	6.3	-	-	-	-	-	-	-	ON POLE WITH SIGN 4-13
4-14	NATIONAL AVE	31+37	RT	R5-2	-	24	X 24	4.0	-	1	1	1	-	1	-	-
4-15	NATIONAL AVE	31+25	RT	R7-5RMOD	TWO HOUR ANYTIME, EXCEPT SUNDAY, RA	12	X 18	1.5	2	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
4-16	NATIONAL AVE	29+71	RT	-	-	-	-	-	-	2	-	-	-	-	-	ATTACHED TO LIGHT POLE
4-17	NATIONAL AVE	29+55	RT	R3-17	-	30	X 24	5.0	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
4-17A	NATIONAL AVE	29+55	RT	R7-5DMOD	TWO HOUR ANYTIME, EXCEPT SUNDAY, DA	12	X 18	1.5	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
5-1	NATIONAL AVE	34+66	LT	R7-1L	ANY TIME	12	X 18	1.5	-	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
5-2	NATIONAL AVE	35+36	LT	R10-11B	-	24	X 24	4.0	-	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
5-3	NATIONAL AVE	35+29	LT	R5-2	-	24	X 24	4.0	-	1	1	1	-	1	-	-
5-4	NATIONAL AVE	35+36	LT	-	-	-	-	-	2	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
5-5	NATIONAL AVE	36+00	LT	R7-5DMOD	TWO HOUR 8AM-9PM, EXCEPT SUNDAY, DA	12	X 18	1.5	-	-	-	1	1	-	-	-
5-6	NATIONAL AVE	36+75	LT	R7-52DMOD	BETWEEN DRIVEWAYS, DA	18	X 24	3.0	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
5-7	NATIONAL AVE	37+03	LT	-	-	-	-	-	-	2	-	-	-	-	-	ATTACHED TO LIGHT POLE
5-8	NATIONAL AVE	37+50	LT	R3-17	-	30	X 24	5.0	-	-	-	1	-	1	-	-
5-8A	NATIONAL AVE	37+50	LT	R7-5DMOD	TWO HOUR 8AM-9PM, EXCEPT SUNDAY, DA	12	X 18	1.5	-	-	-	-	-	-	-	ON POLE WITH SIGN 5-8
5-9	NATIONAL AVE	37+80	LT	R10-50	-	30	X 36	7.5	-	-	-	-	-	-	-	ATTACH TO SIGNAL ARM
5-10	NATIONAL AVE	38+06	LT	-	-	-	-	-	2	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
5-11	NATIONAL AVE	38+97	LT	W12-1D	-	24	X 24	4.0	-	1	1	1	-	1	-	-
5-12	NATIONAL AVE	38+72	RT	R10-50	-	30	X 36	7.5	-	-	-	-	-	-	-	ATTACH TO SIGNAL ARM
5-13	NATIONAL AVE	38+52	RT	-	-	-	-	-	2	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
5-14	NATIONAL AVE	37+67	RT	R10-11B	-	24	X 24	4.0	-	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
5-15	NATIONAL AVE	37+67	RT	-	-	-	-	-	2	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
5-16	NATIONAL AVE	36+90	RT	R7-7L	BUS STOP, LA	12	X 18	1.5	-	1	1	1	1	-	-	-
5-17	NATIONAL AVE	36+09	RT	-	-	-	-	-	-	2	1	-	-	-	-	-
5-18	NATIONAL AVE	36+00	RT	R3-17	-	30	X 24	5.0	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
5-18A	NATIONAL AVE	36+00	RT	R7-1D	ANY TIME, DA	12	X 18	1.5	-	-	-	-	-	-	-	ATTACH TO LIGHT POLE
5-19	NATIONAL AVE	34+51	RT	R10-11B	-	24	X 24	4.0	-	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
5-20	NATIONAL AVE	34+51	RT	-	-	-	-	-	2	-	-	-	-	-	-	ATTACH TO SIGNAL POLE
						TOTAL		350.0	27	58	24	33	14	12	7	

ALL ITEMS CATEGORY 0010

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TRAFFIC CONTROL

LOCATION	DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0410 TRAFFIC CONTROL BARRICADES TYPE II EACH	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAYS	643.0920 TRAFFIC CONTROL COVERING SIGNS NO.	643.0920 TRAFFIC CONTROL COVERING SIGNS CYCLES	643.0920 TRAFFIC CONTROL COVERING SIGNS EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) LF	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW) LF
STAGE 1	120					26	3,120	52	6,240			102	12,240	3	1	3	14		
STAGE 2	35	32	1,120	3	105	51	1,785	102	3,570	14	490	154	5,390	3	1	3	14	765	380
STAGE 3	30	28	840			57	1,710	114	3,420	3	90	53	1,590	3	1	3	14	51	478
SIDEWALK CONSTRUCTION	21	286	6,006																
PROJECT TOTALS	206	346	7,966	3	105	134	6,615	268	13,230	17	580	309	19,220	9	3	9	42	816	858
																			1,674

TRAFFIC CONTROL

LOCATION	643.5000 EACH
NATIONAL AVENUE	1
PROJECT TOTAL	1

TEMPORARY PEDESTRIAN ACCOMMODATIONS

STREET	644.1430.S TEMPORARY PEDESTRIAN SURFACE PLATE SF	644.1601.S TEMPORARY CURB RAMP EACH	644.1616.S TEMPORARY PEDESTRIAN SAFETY FENCE LF	616.0700.S FENCE SAFETY LF
UNDITRIBUTED	1740	29	10680	120
PROJECT TOTAL	1740	29	10680	120

ALL ITEMS CATEGORY 0010

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PAVEMENT MARKING

				646.1545					646.3545		646.5020	646.5120
				MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH					MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH		MARKING ARROW EPOXY	MARKING WORDS EPOXY
STREET	FROM		TO	SOLID WHITE LF	YELLOW LF	SOLID DOUBLE YELLOW LF	SKIP-DASH (37.5'X12.5') WHITE LF	SKIP-DASH (9'X3') WHITE LF	WHITE (SOLID) LF	SKIP-DASH (9'X3') WHITE LF	WHITE EACH	WHITE EACH
NATIONAL AVENUE	17+30	-	28+45	2324	328	1598	113	198	282	12	6	1
NATIONAL AVENUE	28+45	-	39+00	2464	120	1514	0	108	235	18	4	1
			SUB TOTALS	4788	448	3112	113	306	517	30	10	2
			PROJECT TOTALS	8767					547		10	2

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PAVEMENT MARKING

				646.6120	646.7120	646.7420	646.8120	646.8220
				MARKING STOP LINE EPOXY 18-INCH	MARKING DIAGONAL EPOXY 12-INCH	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH	MARKING CURB EPOXY	MARKING ISLAND NOSE EPOXY
STREET	FROM		TO	WHITE LF	YELLOW LF	WHITE LF	YELLOW LF	YELLOW EACH
NATIONAL AVENUE	17+30	-	28+45	215	107	1233	40	4
NATIONAL AVENUE	28+45	-	39+00	181	0	1302	0	0
			SUB TOTALS	396	107	2535	40	4
			PROJECT TOTALS	396	107	2535	40	4

ALL ITEMS CATEGORY 0010

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STREET LIGHTING WIRING AND CONDUIT

FROM	TO	652.0225 * CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	655.0610 * ELECTRICAL WIRE LIGHTING 12 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF
LCC-A	PB2	90	60	270
PB2	A-1-W2	60	60	180
PB2	A-2-W1	95	60	285
A-1-W2	A-3-W2	400	60	1200
A-3-W2	A-5-W2	145	60	435
A-5-W2	A-7-W2	175	60	525
A-7-W2	A-9-W2	175	60	525
A-9-W2	A-11-W2	160	60	480
A-11-W2	A-13-W2	175	60	525
A-13-W2	A-15-W2	180	60	540
A-15-W2	A-17-W2	330	60	990
A-2-W1	A-4-W1	385	60	1155
A-4-W1	A-6-W1	180	60	540
A-6-W1	A-8-W1	180	60	540
A-8-W1	A-10-W1	415	60	1245
A-10-W1	A-12-W1	150	60	450
A-12-W1	A-14-W1	185	60	555
A-14-W1	A-16-W1	180	60	540
A-16-W1	A-18-W1	305	60	915
	SUBTOTALS	1,980	480	5,940

* ADDITIONAL QUANTITY SHOWN ELSEWHERE

PULL BOXES

DESCRIPTION	STATION	OFFSET	653.0135 PULL BOXES STEEL 24X36 EACH
PB1	17+28.00	27.5' RT	1
PB2	19+75.00	40.0' LT	1
PB3	22+20.00	22.5' RT	1
PB4	22+15.00	55.0' RT	1
PB5	28+80.00	47.5' LT	1
PB6	39+52.00	41.0' LT	1
PB7	39+52.00	23.5' RT	1
		TOTAL	7

CONSTRUCTION STAKING MAINLINE ITEMS

ITEM	QUANTITY	UNIT	DESCRIPTION
650.4000	48	EACH	CONSTRUCTION STAKING STORM SEWER
650.4500	2,155	LF	CONSTRUCTION STAKING SUBGRADE
650.5500	5,235	LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER
650.7000	2,155	LF	CONSTRUCTION STAKING CONCRETE PAVEMENT
650.8500	1	LS	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (2410-00-77)
650.9000	48	EACH	CONSTRUCTION STAKING CURB RAMPS
650.9910	1	LS	CONSTRUCTION STAKING SUPLEMENTAL CONTROL (2410-00-77)
650.9920	2,155	LF	CONSTRUCTION STAKING SLOPE STAKES

LIGHTING CONTROL CABINET

DESCRIPTION	STATION	OFFSET	654.0230 CONCRETE CONTROL CABINET BASES TYPE L30 EACH	659.2130 LIGHTING CONTROL CABINETS 120/240 30-INCH (BLACK) EACH
LCC-A	19+30.00	93' LT	1	1
		PROJECT TOTALS	1	1

ELECTRICAL SERVICE METER BREAKER PEDESTAL LIGHTING CABINET

BASE NO.	656.0200.06 L.S.
LCC-A	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SAWCUTTING

STREET	STATION	TO	STATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF
NATIONAL AVENUE	17+45	-	28+45	570	589
NATIONAL AVENUE	28+45	-	39+00	583	630
PROJECT TOTAL				1,153	1,219

ALL ITEMS CATEGORY 0010

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ADJUST FIBER OPTIC VAULT

STREET	FROM	TO	SPV.0060.34 EACH
NATIONAL AVENUE	17+45	28+45	2
NATIONAL AVENUE	28+45	39+00	3
		PROJECT TOTALS	5

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LUMINAIRE AND POLE MOUNTINGS

DESCRIPTION	STATION	OFFSET	SPV.0060.35 15-FOOT DECORATIVE LIGHT POLE EACH	SPV.0060.38* DECORATIVE LUMINAIRE ARM EACH	SPV.0060.39* TEARDROP LED FIXTURE EACH	SPV.0060.40* LIGHT POLE BANNER ARM EACH	SPV.0060.41* CONCRETE BASE TYPE 2 (MOD) EACH
A-1-W2	19+75	19.5' LT	1	1	1	1	1
A-2-W1	20+65	40.9' RT	1	1	1	1	1
A-3-W2	23+16	26.5' LT	1	1	1	1	1
A-4-W1	23+70	26.5' RT	1	1	1	1	1
A-5-W2	24+60	26.5' LT	1	1	1		1
A-6-W1	25+48	26.5' RT	1	1	1		1
A-7-W2	26+30	26.5' LT	1	1	1	1	1
A-8-W1	27+23	19.5' RT	1	1	1	1	1
A-9-W2	28+00	26.5' LT	1	1	1		1
A-10-W1	28+88	19.5' RT	1	1	1		1
A-11-W2	29+55	26.5' LT	1	1	1	1	1
A-12-W1	30+40	19.5' RT	1	1	1	1	1
A-13-W2	31+25	26.5' LT	1	1	1		1
A-14-W1	32+15	26.5' RT	1	1	1		1
A-15-W2	33+00	26.5' LT	1	1	1	1	1
A-16-W1	33+85	22.5' RT	1	1	1	1	1
A-17-W2	36+90	29.5' LT	1	1	1		1
A-18-W1	36+75	25.5' RT	1	1	1		1
SPARE			1	1	1	1	1
SUBTOTALS			19	19	19	11	19

*** DENOTES ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLAN**

ALL ITEMS CATEGORY 0010

LIGHTING REMOVAL & RELOCATIONS

STATION	OFFSET	SPV.0060.53 REMOVING LIGHTING UNITS EACH	SPV.0060.54 RELOCATION OF EXISTING LIGHT FIXTURE EACH	SPV.0060.55 LAMP DISPOSAL HIGH INTENSITY DISCHARGE EACH
18+00.00	RT	1		1
18+55.00	LT	1		1
18+70.00	RT	1		1
19+20.00	LT	1		1
20+00.00	RT	1		1
20+70.00	LT	1		1
21+45.00	RT	1		1
22+40.00	LT	1		1
22+70.00	RT	1		1
23+80.00	LT	1		1
23+85.00	RT	1		1
25+10.00	RT	1		1
26+30.00	RT	1		1
27+95.00	RT	1		1
28+90.00	LT	1		1
29+70.00	RT	1		1
30+45.00	LT	1		1
31+20.00	RT	1		1
31+70.00	LT		1	
32+20.00	LT	1		1
32+90.00	RT	1		1
33+80.00	LT	1		1
34+40.00	RT	1		1
35+40.00	LT	1		1
36+15.00	RT	1		1
37+05.00	LT	1		1
37+60.00	RT	1		1
38+10.00	LT	1		1
38+50.00	RT	1		1
38+80.00	LT	1		1
SUBTOTALS		29	1	29

STORM SEWER SERVICES

STATION	LOCATION	SPV.0060.63 STORM SEWER RECONNECT EACH	SPV.0090.13 6-INCH PVC STORM SEWER LATERAL L.F.	SPV.0090.14 10-INCH PVC STORM SEWER LATERAL L.F.
26+66.5	LT	1	-	-
27+04.7	LT	1	-	-
27+22.5	RT	-	24	-
29+26	RT	1	-	-
29+90	RT	-	24	-
30+00	RT	-	24	-
30+43.2	RT	1	-	-
30+81.4	RT	1	-	-
33+37	LT	-	-	17
35+72	RT	-	21	-
36+03.5	RT	-	21	-
36+29.5	RT	-	21	-
37+80	RT	1	-	-
	PROJECT TOTALS	6	135	17

MANAGEMENT OF PETROLEUM-CONTAMINATED GROUNDWATER

STREET	SPV.0120.01 MGAL
NATIONAL AVENUE	0.1
PROJECT TOTAL	0.1

WALL MODULAR BLOCK GRAVITY LANDSCAPE, STA. 36+00

SPV.0165.03

STREET	STATION	TO	STATION	SF
NATIONAL AVENUE	35+50	-	36+50	354
			PROJECT TOTAL	354

ALL ITEMS CATEGORY 0010

REMOVE TRAFFIC SIGNALS W. NATIONAL AVE & S. 76TH ST

LOCATION	204.9105.S.01 REMOVE TRAFFIC SIGNALS L.S.
W. NATIONAL AVENUE & 76TH STREET	1
TOTAL	1

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.
CB1	PB1	--	42
PB1	PB2	--	62
PB2	PB3	--	130
PB3	PB4	--	140
PB4	PB5	--	108
PB5	PB6	--	58
PB6	PB7	--	152
PB7	PB8	--	102
PB8	PB9	--	112
PB9	CB1	--	72
PB2	SB1	4	--
PB3	SB2	--	14
PB4	SB3	5	--
PB5	SB4	5	--
PB6	SB5	6	--
PB7	SB6	--	6
PB8	SB7	9	--
PB9	SB8	10	--
	*** TOTALS	39	998

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
W NATIONAL AVENUE & S 76TH STREET
ALL ITEMS CATEGORY 0010

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CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 7-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG
CABLE TRAFFIC SIGNAL 15-14 AWG

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG L.F.
CB1	SB1	--	--	--	92
SB1	HEAD 4	--	22	--	--
SB1	HEAD 6	21	--	--	--
SB1	HEAD 21	15	--	--	--
CB1	SB2	--	--	--	183
SB2	HEAD 2	44	--	--	--
SB2	HEAD 3	25	--	--	--
SB2	HEAD 5	--	53	--	--
SB2	HEAD 22	15	--	--	--
CB1	SB3	--	--	260	--
SB3	HEAD 11	21	--	--	--
SB3	HEAD 15	21	--	--	--
SB3	HEAD 23	15	--	--	--
CB1	SB4	--	--	330	--
SB4	HEAD 16	21	--	--	--
SB4	HEAD 24	15	--	--	--
CB1	SB5	--	--	--	288
SB5	HEAD 1	21	--	--	--
SB5	HEAD 9	--	22	--	--
SB5	HEAD 17	15	--	--	--
CB1	SB6	--	--	--	196
SB6	HEAD 7	48	--	--	--
SB6	HEAD 8	39	--	--	--
SB6	HEAD 10	--	54	--	--
SB6	HEAD 18	15	--	--	--
CB1	SB7	--	--	132	--
SB7	HEAD 12	21	--	--	--
SB7	HEAD 14	21	--	--	--
SB7	HEAD 19	15	--	--	--
CB1	SB8	--	--	61	--
SB8	HEAD 13	21	--	--	--
SB8	HEAD 20	15	--	--	--
			--	--	--
	*** TOTALS	444	151	783	759

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 1 OF 3

3

CONCRETE BASE TYPE 2 (MOD)
CONCRETE BASES TYPE 10
CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	SPV.0060.41 CONCRETE BASE TYPE 2 (MOD) EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	19+29.14	83.7' LT	--	--	1
SB1	19+36.23	44.9' LT	1	--	--
SB2	19+18.00	23.1' RT	--	1	--
SB3	18+75.99	52.3' RT	1	--	--
SB4	18+19.99	47.8' RT	1	--	--
SB5	18+07.54	34.6' RT	1	--	--
SB6	18+29.52	41.1' LT	--	1	--
SB7	18+61.35	61.7' LT	1	--	--
SB8	19+21.45	57.4' LT	1	--	--
		*** TOTALS	6	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
W NATIONAL AVENUE & S 76TH STREET
ALL ITEMS CATEGORY 0010

PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	19+26.01	70.4' LT	1
PB2	19+39.82	42.7' LT	1
PB3	19+32.03	21.5' RT	1
PB4	18+73.47	56.1' RT	1
PB5	18+22.32	51.6' RT	1
PB6	18+02.44	32.0' RT	1
PB7	18+23.28	40.4' LT	1
PB8	18+64.92	69.8' LT	1
PB9	19+17.04	66.3' LT	1
		*** TOTALS	9

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELETRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	92
SB1	SB2	123
SB2	SB3	113
SB3	SB4	104
SB4	SB5	80
SB5	SB6	128
SB6	SB7	106
SB7	SB8	115
SB8	CB1	61
PB1	CB1	25
PB2	SB1	12
PB3	SB2	22
PB4	SB3	13
PB5	SB4	13
PB6	SB5	14
PB7	SB6	14
PB8	SB7	17
PB9	SB8	18
	*** TOTAL	1070

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
INTERSECTION OF W NATIONAL AVE & S 76TH ST

BASE NO.	656.0200.01 ELETRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE INTERSECTION OF W NATIONAL AVE & S 76TH ST

LOCATION	658.5069.01 SIGNAL MOUNTING HARDWARE L.S.
W NATIONAL AVE & S 76TH ST	1
TOTAL	1

CABLE TYPE UF 2-10 AWG GROUNDED
ELECTRICAL WIRE LIGHTING 12 AWG

		655.0320 CABLE TYPE UF 2-10 AWG GROUNDED L.F.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
CB1	SB1	92	--
SB1	LUMIN	--	99
SB1	SB3	200	--
SB3	LUMIN	--	99
CB1	SB7	132	--
SB7	LUMIN	--	99
SB7	SB5	198	--
SB5	LUMIN	--	99
	***TOTALS	622	396

***ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 2 OF 3

INTERSECTION OF
W NATIONAL AVENUE & S 76TH STREET
ALL ITEMS CATEGORY 0010

TRAFFIC SIGNAL FACE 3S 12-INCH
TRAFFIC SIGNAL FACE 4S 12-INCH
PEDESTRIAN SIGNAL FACE 16-INCH

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH
1	SB5	1	--	--
2	SB2	1	--	--
3	SB2	1	--	--
4	SB1	--	1	--
5	SB2	--	1	--
6	SB1	1	--	--
7	SB6	1	--	--
8	SB6	1	--	--
9	SB5	--	1	--
10	SB6	--	1	--
11	SB3	1	--	--
12	SB7	1	--	--
13	SB8	1	--	--
14	SB7	1	--	--
15	SB3	1	--	--
16	SB4	1	--	--
17	SB5	--	--	1
18	SB6	--	--	1
19	SB7	--	--	1
20	SB8	--	--	1
21	SB1	--	--	1
22	SB2	--	--	1
23	SB3	--	--	1
24	SB4	--	--	1
*** TOTALS		12	4	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

22-FOOT DECORATIVE LIGHT POLE
15-FOOT DECORATIVE SIGNAL POLE
DECORATIVE LUMINAIRE ARM
TEAR DROP LED FIXTURE
MONOTUBE POLES TYPE 9 BLACK
MONOTUBE ARMS 30-FT BLACK

SIGNAL BASE NO.	SPV.0060.36 22-FOOT DECORATIVE LIGHT POLE EACH	SPV.0060.37 15-FOOT DECORATIVE SIGNAL POLE EACH	SPV.0060.38 DECORATIVE LUMINAIRE ARM EACH	SPV.0060.39 TEAR DROP LED FIXTURE EACH	SPV.0060.46 MONOTUBE POLES TYPE 9 BLACK EACH	SPV.0060.47 MONOTUBE ARMS 30-FT BLACK EACH
SB1	1	--	1	1	--	--
SB2	--	--	--	--	1	1
SB3	1	--	1	1	--	--
SB4	--	1	--	--	--	--
SB5	1	--	1	1	--	--
SB6	--	--	--	--	1	1
SB7	1	--	1	1	--	--
SB8	--	1	--	--	--	--
SPARE	1	1	--	--	--	--
*** TOTALS	5	3	4	4	2	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL CONTROLLER & CABINET
VEHICLE VIDEO DETECTION SYSTEM, W. NATIONAL AVE & S. 76TH ST
EMERGENCY VEHICLE PREEMPTION SYSTEM, W. NATIONAL AVE & S. 76TH ST

LOCATION	SPV.0060.49 TRAFFIC SIGNAL CONTROLLER & CABINET EACH	SPV.0105.03 VEHICLE VIDEO DETECTION SYSTEM L.S.	SPV.0105.07 EMERGENCY VEHICLE PREEMPTION SYSTEM L.S.
W NATIONAL AVE & S 76TH ST	1	1	1
TOTAL	1	1	1

SHEET 3 OF 3

REMOVE TRAFFIC SIGNALS W. NATIONAL AVE & S. 75TH ST

LOCATION	204.9105.S.02 REMOVE TRAFFIC SIGNALS L.S.
W. NATIONAL AVENUE & 75TH STREET	1
TOTAL	1

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.
CB1	PB1	--	45
PB1	PB2	--	48
PB2	PB3	--	44
PB3	PB4	--	98
PB4	PB5	--	68
PB5	PB6	--	84
PB6	PB7	--	50
PB7	PB8	--	114
PB8	CB1	--	90
PB1	SB1	10	--
PB2	SB2	7	--
PB3	SB3	4	--
PB4	SB4	7	--
PB5	SB5	8	--
PB6	SB6	4	--
PB7	SB7	7	--
PB8	SB8	9	--
	*** TOTALS	56	641

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.
CB1	SB1	--	52
SB1	HEAD 8	21	--
SB1	HEAD 10	21	--
SB1	HEAD 15	15	--
CB1	SB2	--	89
SB2	HEAD 9	21	--
SB2	HEAD 16	15	--
CB1	SB3	--	124
SB3	HEAD 2	21	--
SB3	HEAD 4	21	--
SB3	HEAD 17	15	--
CB1	SB4	--	192
SB4	HEAD 3	21	--
SB4	HEAD 18	15	--
CB1	SB5	--	237
SB5	HEAD 7	21	--
SB5	HEAD 11	21	--
SB5	HEAD 19	15	--
CB1	SB6	--	175
SB6	HEAD 12	21	--
SB6	HEAD 20	15	--
CB1	SB7	--	137
SB7	HEAD 1	21	--
SB7	HEAD 5	21	--
SB7	HEAD 13	15	--
CB1	SB8	--	66
SB8	HEAD 6	21	--
SB8	HEAD 14	15	--
	*** TOTALS	372	1072

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
W NATIONAL AVENUE & S 75TH STREET
ALL ITEMS CATEGORY 0010

3

CONCRETE BASE TYPE 2 (MOD)
CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	SPV.0060.41 CONCRETE BASE TYPE 2 (MOD) EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	21+81.55	54.9' LT	--	**1
SB1	21+87.07	43.6' LT	1	--
SB2	22+24.62	40.4' LT	1	--
SB3	22+30.59	30.0' LT	1	--
SB4	22+29.16	24.0' RT	1	--
SB5	22+15.10	33.3' RT	1	--
SB6	21+63.97	33.2' RT	1	--
SB7	21+53.31	21.5' RT	1	--
SB8	21+69.27	36.1' LT	1	--
		*** TOTALS	8	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
** DO NOT INSTALL CONCRETE MAINTENANCE PLATFORM
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	21+95.33	49.0' LT	1
PB2	22+18.01	43.0' LT	1
PB3	22+34.51	29.2' LT	1
PB4	22+34.51	20.0' RT	1
PB5	22+07.67	36.3' RT	1
PB6	21+65.51	35.9' RT	1
PB7	21+46.89	20.1' RT	1
PB8	21+60.23	35.2' LT	1
		*** TOTALS	8

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELETRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	52
SB1	SB2	81
SB2	SB3	73
SB3	SB4	100
SB4	SB5	89
SB5	SB6	94
SB6	SB7	76
SB7	SB8	113
SB8	CB1	66
PB1	SB1	18
PB2	SB2	15
PB3	SB3	12
PB4	SB4	15
PB5	SB5	16
PB6	SB6	12
PB7	SB7	15
PB8	SB8	17
	*** TOTAL	864

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
INTERSECTION OF W NATIONAL AVE & S 75TH ST

BASE NO.	656.0200.02 ELETRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE INTERSECTION OF W NATIONAL AVE & S 75TH ST

LOCATION	658.5069.02 SIGNAL MOUNTING HARDWARE L.S.
W NATIONAL AVE & S 75TH ST	1
TOTAL	1

CABLE TYPE UF 2-10 AWG GROUNDED
ELECTRICAL WIRE LIGHTING 12 AWG

		655.0320 CABLE TYPE UF 2-10 AWG GROUNDED L.F.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
CB1	**SB3**	**124**	**--**
SB3	**LUMIN**	**--**	**99**
CB1	**SB7**	**137**	**--**
SB7	**LUMIN**	**--**	**99**
	*****TOTALS**	**261**	**198**

*****ADDITIONAL QUANTITIES SHOWN ELSEWHERE**

SHEET 2 OF 3

INTERSECTION OF
W NATIONAL AVENUE & S 75TH STREET
ALL ITEMS CATEGORY 0010

TRAFFIC SIGNAL FACE 3S 12-INCH
PEDESTRIAN SIGNAL FACE 16-INCH

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH
1	SB7	1	--
2	SB3	1	--
3	SB4	1	--
4	SB3	1	--
5	SB7	1	--
6	SB8	1	--
7	SB5	1	--
8	SB1	1	--
9	SB2	1	--
10	SB1	1	--
11	SB5	1	--
12	SB6	1	--
13	SB7	--	1
14	SB8	--	1
15	SB1	--	1
16	SB2	--	1
17	SB3	--	1
18	SB4	--	1
19	SB5	--	1
20	SB6	--	1
*** TOTALS		12	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

22-FOOT DECORATIVE LIGHT POLE
15-FOOT DECORATIVE SIGNAL POLE
DECORATIVE LUMINAIRE ARM
TEAR DROP LED FIXTURE
PEDESTRIAN PUSH BUTTONS

SIGNAL BASE NO.	SPV.0060.36 22-FOOT DECORATIVE LIGHT POLE EACH	SPV.0060.37 15-FOOT DECORATIVE SIGNAL POLE EACH	SPV.0060.38 DECORATIVE LUMINAIRE ARM EACH	SPV.0060.39 TEAR DROP LED FIXTURE EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH
SB1	--	1	--	--	--
SB2	--	1	--	--	--
SB3	1		1	1	1
SB4	--	1	--	--	1
SB5	--	1	--	--	--
SB6	--	1	--	--	--
SB7	1	--	1	1	1
SB8	--	1	--	--	1
SB9	--	--	--	--	--
*** TOTALS	2	6	2	2	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL CONTROLLER & CABINET
VEHICLE VIDEO DETECTION SYSTEM, W. NATIONAL AVE & S. 75TH ST
EMERGENCY VEHICLE PREEMPTION SYSTEM, W. NATIONAL AVE & S. 75TH ST

LOCATION	SPV.0060.49 TRAFFIC SIGNAL CONTROLLER & CABINET EACH	SPV.0105.04 VEHICLE VIDEO DETECTION SYSTEM L.S.	SPV.0105.08 EMERGENCY VEHICLE PREEMPTION SYSTEM L.S.
W NATIONAL AVE & S 75TH ST	1	1	1
TOTAL	1	1	1

SHEET 3 OF 3

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 176	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

3

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.
CB1	PB1	--	42
PB1	PB2	--	123
PB2	PB3	87	--
PB2	PB4	--	94
PB2	SB1	33	--
PB3	SB2	6	--
PB4	SB3	14	--
	*** TOTALS	140	259

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.
CB1	SB2	--	207
SB2	HEAD 1	44	--
SB2	HEAD 2	20	--
CB1	SB3	--	175
SB3	HEAD 3	20	--
SB3	HEAD 4	39	--
	*** TOTALS	123	382

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELETRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	131
SB1	SB2	166
SB2	SB3	210
SB3	CB1	175
PB1	CB1	25
PB2	SB1	41
PB3	SB2	14
PB4	SB3	22
	*** TOTAL	784

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

CONCRETE BASES TYPE 2
CONCRETE BASE TYPE 2 (MOD)
TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE BLACK
CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	654.0102 CONCRETE BASES TYPE 2 EACH	SPV.0060.41 CONCRETE BASE TYPE 2 (MOD) EACH	SPV.0060.42 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE BLACK EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	26+57.20	37.4' RT	--	--	--	1
SB1	27+40.38	27.0' RT	--	1	--	--
SB2	28+00.00	27.0' RT	1	--	1	--
SB3	27+23.07	20.0' LT	1	--	1	--
		*** TOTALS	2	1	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	26+66.38	27.0' RT	1
PB2	27+07.33	27.0' RT	1
PB3	27+93.95	27.0' RT	1
PB4	27+09.24	20.0' LT	1
		*** TOTALS	4

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 1 OF 2

3

ELECTRICAL SERVICE METER BREAKER PEDESTAL
FIRESTATION 1

BASE NO.	656.0200.03 ELETRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE FIRESTATION 1

LOCATION	658.5069.03 SIGNAL MOUNTING HARDWARE L.S.
7332 W NATIONAL AVE	1
TOTAL	1

3

TRAFFIC SIGNAL FACES - HYBRID BEACON

SIGNAL HEAD NO.	SIGNAL BASE NO.	SPV.0060.48 TRAFFIC SIGNAL FACES - HYBRID BEACON EACH
1	SB2	1
2	SB2	1
3	SB3	1
4	SB3	1
	*** TOTALS	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

15-FOOT DECORATIVE SIGNAL POLE
POLES TYPE 2 BLACK
TROMBONE ARMS 20-FT BLACK
TROMBONE ARMS 25-FT BLACK

SIGNAL BASE NO.	SPV.0060.37 15-FOOT DECORATIVE SIGNAL POLE EACH	SPV.0060.43 POLES TYPE 2 BLACK EACH	SPV.0060.44 TROMBONE ARMS 20-FT BLACK EACH	SPV.0060.45 TROMBONE ARMS 25-FT BLACK EACH
SB1	1	--	--	--
SB2	--	1	--	1
SB3	--	1	1	--
*** TOTALS	1	2	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL CONTROLLER & CABINET
EMERGENCY VEHICLE PREEMPTION SYSTEM, FIRE STATION 1

LOCATION	SPV.0060.49 TRAFFIC SIGNAL CONTROLLER & CABINET EACH	SPV.0105.09 EMERGENCY VEHICLE PREEMPTION SYSTEM L.S.
FIRE STATION 1	1	1
TOTAL	1	1

3

REMOVE TRAFFIC SIGNALS W. NATIONAL AVE & S. 71ST ST

LOCATION	204.9105.S.03 REMOVE TRAFFIC SIGNALS L.S.
W. NATIONAL AVENUE & 71ST STREET	1
TOTAL	1

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.
CB1	PB1	--	21
PB1	PB2	--	80
PB2	PB3	--	46
PB3	PB4	--	104
PB4	PB5	--	64
PB5	PB6	--	84
PB6	PB7	--	42
PB7	PB8	--	106
PB8	PB9	--	68
PB9	CB1	--	18
PB1	SB1	20	--
PB2	SB2	6	--
PB3	SB3	6	--
PB4	SB4	7	--
PB5	SB5	7	--
PB6	SB6	4	--
PB7	SB7	4	--
PB8	SB8	4	--
	*** TOTALS	58	633

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.
CB1	SB1	--	54
SB1	HEAD 8	21	--
SB1	HEAD 10	21	--
SB1	HEAD 15	15	--
CB1	SB2	--	96
SB2	HEAD 9	21	--
SB2	HEAD 16	15	--
CB1	SB3	--	135
SB3	HEAD 2	21	--
SB3	HEAD 4	21	--
SB3	HEAD 17	15	--
CB1	SB4	--	204
SB4	HEAD 3	21	--
SB4	HEAD 18	15	--
CB1	SB5	--	252
SB5	HEAD 7	21	--
SB5	HEAD 11	21	--
SB5	HEAD 19	15	--
CB1	SB6	--	193
SB6	HEAD 12	21	--
SB6	HEAD 20	15	--
CB1	SB7	--	156
SB7	HEAD 1	21	--
SB7	HEAD 5	21	--
SB7	HEAD 13	15	--
CB1	SB8	--	87
SB8	HEAD 6	21	--
SB8	HEAD 14	15	--
	*** TOTALS	372	1177

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

SHEET 1 OF 3

INTERSECTION OF
W NATIONAL AVENUE & S 71ST STREET
ALL ITEMS CATEGORY 0010

3

CONCRETE BASE TYPE 2 (MOD)
CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	SPV.0060.41 CONCRETE BASE TYPE 2 (MOD) EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	34+83.06	50.9' LT	--	**1
SB1	34+77.53	30.3' LT	1	--
SB2	35+28.45	32.7' LT	1	--
SB3	35+36.40	23.8' LT	1	--
SB4	35+20.45	30.3' RT	1	--
SB5	35+10.09	38.4' RT	1	--
SB6	34+58.59	42.9' RT	1	--
SB7	34+50.52	32.5' RT	1	--
SB8	34+66.28	20.6' LT	1	--
		*** TOTALS	8	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
** DO NOT INSTALL CONCRETE MAINTENANCE PLATFORM
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	34+86.61	44.8' LT	1
PB2	35+27.36	38.3' LT	1
PB3	35+41.11	20.5' LT	1
PB4	35+25.94	28.8' RT	1
PB5	35+03.76	41.6' RT	1
PB6	34+59.39	46.7' RT	1
PB7	34+47.08	30.2' RT	1
PB8	34+63.42	20.2' LT	1
PB9	34+77.67	49.5' LT	1
		*** TOTALS	9

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELETRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	54
SB1	SB2	106
SB2	SB3	75
SB3	SB4	105
SB4	SB5	86
SB5	SB6	93
SB6	SB7	69
SB7	SB8	101
SB8	CB1	87
PB1	CB1	18
PB2	SB2	14
PB3	SB3	14
PB4	SB4	15
PB5	SB5	15
PB6	SB6	12
PB7	SB7	12
PB8	SB8	12
PB9	CB1	14
	*** TOTAL	902

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
INTERSECTION OF W NATIONAL AVE & S 71ST ST

BASE NO.	656.0200.04 ELETRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE INTERSECTION OF W NATIONAL AVE & S 71ST ST

LOCATION	658.5069.04 SIGNAL MOUNTING HARDWARE L.S.
W NATIONAL AVE & S 71ST ST	1
TOTAL	1

CABLE TYPE UF 2-10 AWG GROUNDED
ELECTRICAL WIRE LIGHTING 12 AWG

		655.0320 CABLE TYPE UF 2-10 AWG GROUNDED L.F.	**655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.**
CB1	**SB3**	**135**	**--**
SB3	**LUMIN**	**--**	**99**
CB1	**SB7**	**156**	**--**
SB7	**LUMIN**	**--**	**99**
	*****TOTALS**	**291**	**198**

*****ADDITIONAL QUANTITIES SHOWN ELSEWHERE**

SHEET 2 OF 3

INTERSECTION OF
W NATIONAL AVENUE & S 71ST STREET
ALL ITEMS CATEGORY 0010

3

TRAFFIC SIGNAL FACE 3S 12-INCH
PEDESTRIAN SIGNAL FACE 16-INCH

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH
1	SB7	1	--
2	SB3	1	--
3	SB5	1	--
4	SB3	1	--
5	SB7	1	--
6	SB8	1	--
7	SB5	1	--
8	SB1	1	--
9	SB2	1	--
10	SB1	1	--
11	SB5	1	--
12	SB6	1	--
13	SB7	--	1
14	SB8	--	1
15	SB1	--	1
16	SB2	--	1
17	SB3	--	1
18	SB4	--	1
19	SB5	--	1
20	SB6	--	1
*** TOTALS		12	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

22-FOOT DECORATIVE LIGHT POLE
15-FOOT DECORATIVE SIGNAL POLE
DECORATIVE LUMINAIRE ARM
TEAR DROP LED FIXTURE
PEDESTRIAN PUSH BUTTONS

SIGNAL BASE NO.	SPV.0060.36 22-FOOT DECORATIVE LIGHT POLE EACH	SPV.0060.37 15-FOOT DECORATIVE SIGNAL POLE EACH	SPV.0060.38 DECORATIVE LUMINAIRE ARM EACH	SPV.0060.39 TEAR DROP LED FIXTURE EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH
SB1	--	1	--	--	--
SB2	--	1	--	--	--
SB3	1		1	1	1
SB4	--	1	--	--	--
SB5	--	1	--	--	--
SB6	--	1	--	--	--
SB7	1	--	1	1	1
SB8	--	1	--	--	1
*** TOTALS	2	6	2	2	3

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL CONTROLLER & CABINET
VEHICLE VIDEO DETECTION SYSTEM, W. NATIONAL AVE & S. 71ST ST
EMERGENCY VEHICLE PREEMPTION SYSTEM, W. NATIONAL AVE & S. 71ST ST

LOCATION	SPV.0060.49 TRAFFIC SIGNAL CONTROLLER & CABINET EACH	SPV.0105.05 VEHICLE VIDEO DETECTION SYSTEM L.S.	SPV.0105.10 EMERGENCY VEHICLE PREEMPTION SYSTEM L.S.
W NATIONAL AVE & S 71ST ST	1	1	1
TOTAL	1	1	1

SHEET 3 OF 3

REMOVE TRAFFIC SIGNALS W. NATIONAL AVE & S. 70TH ST

LOCATION	204.9105.S.04 REMOVE TRAFFIC SIGNALS L.S.
W. NATIONAL AVENUE & 70TH STREET	1
TOTAL	1

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
CONDUIT SPECIAL 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
CB1	PB1	--	36	--
PB1	PB2	--	110	--
PB2	PB3	--	90	--
PB3	PB4	--	--	140
PB4	PB5	--	32	--
PB5	PB6	--	--	110
PB6	PB7	--	84	--
PB7	PB8	--	--	132
PB8	CB1	--	48	--
PB1	SB1	6	--	--
PB2	SB2	--	11	--
PB3	SB3	5	--	--
PB4	SB4	8	--	--
PB5	SB5	3	--	--
PB6	SB6	--	5	--
PB7	SB7	11	--	--
PB8	SB8	4	--	--
	*** TOTALS	37	416	382

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
W NATIONAL AVENUE & S 70TH STREET
ALL ITEMS CATEGORY 0010

3

CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 7-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG
CABLE TRAFFIC SIGNAL 15-14 AWG

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG L.F.
CB1	SB1	--	--	--	45
SB1	HEAD 1	21	--	--	--
SB1	HEAD 9	--	22	--	--
SB1	HEAD 17	15	--	--	--
CB1	SB2	--	--	--	121
SB2	HEAD 7	43	--	--	--
SB2	HEAD 8	25	--	--	--
SB2	HEAD 10	--	51	--	--
SB2	HEAD 18	15	--	--	--
CB1	SB3	--	--	176	--
SB3	HEAD 12	21	--	--	--
SB3	HEAD 14	21	--	--	--
SB3	HEAD 19	15	--	--	--
CB1	SB4	--	--	265	--
SB4	HEAD 13	21	--	--	--
SB4	HEAD 20	21	--	--	--
CB1	SB5	--	--	--	257
SB5	HEAD 4	--	22	--	--
SB5	HEAD 6	21	--	--	--
SB5	HEAD 21	15	--	--	--
CB1	SB6	--	--	--	188
SB6	HEAD 2	42	--	--	--
SB6	HEAD 3	25	--	--	--
SB6	HEAD 5	--	51	--	--
SB6	HEAD 22	15	--	--	--
CB1	SB7	--	--	136	--
SB7	HEAD 11	21	--	--	--
SB7	HEAD 15	21	--	--	--
SB7	HEAD 23	15	--	--	--
CB1	SB8	--	--	47	--
SB8	HEAD 16	21	--	--	--
SB8	HEAD 24	15	--	--	--
	*** TOTALS	429	146	624	611

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 1 OF 3

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 182	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

INTERSECTION OF
W NATIONAL AVENUE & S 70TH STREET
ALL ITEMS CATEGORY 0010

3

CONCRETE BASE TYPE 2 (MOD)
CONCRETE BASES TYPE 10
CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	SPV.0060.41 CONCRETE BASE TYPE 2 (MOD) EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	37+70.11	37.4' RT	--	--	1
SB1	37+66.86	30.0' RT	1	--	--
SB2	37+80.23	24.0' LT	--	1	--
SB3	38+06.01	40.8' LT	1	--	--
SB4	38+78.06	35.7' LT	1	--	--
SB5	38+84.57	28.9' LT	1	--	--
SB6	38+71.07	23.9' RT		1	--
SB7	38+51.59	42.6' RT	--	--	--
SB8	37+85.59	42.5' RT	1	--	--
		*** TOTALS	5	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	37+61.16	29.5' RT	1
PB2	37+69.82	24.5' LT	1
PB3	38+07.14	45.0' LT	1
PB4	38+80.22	43.5' LT	1
PB5	38+87.81	29.7' LT	1
PB6	38+75.59	23.8' RT	1
PB7	38+48.28	52.3' RT	1
PB8	37+83.17	46.3' RT	1
		*** TOTALS	8

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELETRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	45
SB1	SB2	112
SB2	SB3	101
SB3	SB4	123
SB4	SB5	67
SB5	SB6	103
SB6	SB7	98
SB7	SB8	121
SB8	CB1	47
PB1	SB1	14
PB2	SB2	19
PB3	SB3	13
PB4	SB4	16
PB5	SB5	11
PB6	SB6	13
PB7	SB7	19
PB8	SB8	12
	*** TOTAL	934

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
INTERSECTION OF W NATIONAL AVE & S 70TH ST

BASE NO.	656.0200.05 ELETRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE INTERSECTION OF W NATIONAL AVE & S 70TH ST

LOCATION	658.5069.05 SIGNAL MOUNTING HARDWARE L.S.
W NATIONAL AVE & S 70TH ST	1
TOTAL	1

CABLE TYPE UF 2-10 AWG GROUNDED
ELECTRICAL WIRE LIGHTING 12 AWG

		655.0320 CABLE TYPE UF 2-10 AWG GROUNDED L.F.	**655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.**
CB1	**SB1**	**45**	**--**
SB1	**LUMIN**	**--**	**99**
SB1	**SB3**	**167**	**--**
SB3	**LUMIN**	**--**	**99**
CB1	**SB7**	**136**	**--**
SB7	**LUMIN**	**--**	**99**
SB7	**SB5**	**167**	**--**
SB5	**LUMIN**	**--**	**99**
	*****TOTALS**	**515**	**396**

*****ADDITIONAL QUANTITIES SHOWN ELSEWHERE**

SHEET 2 OF 3

TRAFFIC SIGNAL FACE 3S 12-INCH
TRAFFIC SIGNAL FACE 4S 12-INCH
PEDESTRIAN SIGNAL FACE 16-INCH

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH
1	SB1	1	--	--
2	SB6	1	--	--
3	SB6	1	--	--
4	SB5	--	1	--
5	SB6	--	1	--
6	SB5	1	--	--
7	SB2	1	--	--
8	SB2	1	--	--
9	SB1	--	1	--
10	SB2	--	1	--
11	SB7	1	--	--
12	SB3	1	--	--
13	SB4	1	--	--
14	SB3	1	--	--
15	SB7	1	--	--
16	SB8	1	--	--
17	SB1	--	--	1
18	SB2	--	--	1
19	SB3	--	--	1
20	SB4	--	--	1
21	SB5	--	--	1
22	SB6	--	--	1
23	SB7	--	--	1
24	SB8	--	--	1
*** TOTALS		12	4	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

22-FOOT DECORATIVE LIGHT POLE
15-FOOT DECORATIVE SIGNAL POLE
DECORATIVE LUMINAIRE ARM
TEAR DROP LED FIXTURE
MONOTUBE POLES TYPE 9 BLACK
MONOTUBE ARMS 30-FT BLACK

SIGNAL BASE NO.	SPV.0060.36 22-FOOT DECORATIVE LIGHT POLE EACH	SPV.0060.37 15-FOOT DECORATIVE SIGNAL POLE EACH	SPV.0060.38 DECORATIVE LUMINAIRE ARM EACH	SPV.0060.39 TEAR DROP LED FIXTURE EACH	SPV.0060.46 MONOTUBE POLES TYPE 9 BLACK EACH	SPV.0060.47 MONOTUBE ARMS 30-FT BLACK EACH
SB1	1	--	1	1	--	--
SB2	--	--	--	--	1	1
SB3	1	--	1	1	--	--
SB4	--	1	--	--	--	--
SB5	1	--	1	1	--	--
SB6	--	--	--	--	1	1
SB7	1	--	1	1	--	--
SB8	--	1	--	--	--	--
*** TOTALS	4	2	4	4	2	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL CONTROLLER & CABINET
VEHICLE VIDEO DETECTION SYSTEM, W. NATIONAL AVE & S. 70TH ST
EMERGENCY VEHICLE PREEMPTION SYSTEM, W. NATIONAL AVE & S. 70TH ST

LOCATION	SPV.0060.49 TRAFFIC SIGNAL CONTROLLER & CABINET EACH	SPV.0105.06 VEHICLE VIDEO DETECTION SYSTEM L.S.	SPV.0105.11 EMERGENCY VEHICLE PREEMPTION SYSTEM L.S.
W NATIONAL AVE & S 70TH ST	1	1	1
TOTAL	1	1	1

3

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
FIBER OPTIC TRACER CABLE

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	SPV.0090.09 FIBER OPTIC TRACER CABLE L.F.
I/C CV100	I/C CV101	--	242	242
I/C CV101	I/C CV102	--	418	418
I/C CV102	I/C CV103	--	122	122
I/C CV103	I/C CV104	--	205	205
I/C CV104	I/C CV105	--	335	335
I/C CV105	I/C CV106	--	325	325
I/C CV106	I/C CV107	--	312	312
I/C CV107	I/C PB100	--	61	61
I/C CV100	CB1 (76TH)	7	--	7
I/C CV101	CB1 (75TH)	36	--	36
I/C CV103	26+74, 34' LT	15	--	15
I/C CV103	26+68, 35' RT	68	--	68
I/C CV103	PB4 (FIRE STA)	25	--	25
I/C CV106	CB1 (71ST)	44	--	44
I/C PB100	36+70, 35' RT	3	--	3
I/C PB100	CB1 (70TH)	102	--	102
	***TOTALS	300	2020	2320

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL 24X42-INCH
COMMUNICATION VAULT TYPE ROUND

PULL BOX NO.	STATION	OFFSET	653.0140 PULL BOXES STEEL 24x42-INCH EACH	673.0110 COMMUNICATION VAULT TYPE ROUND EACH
I/C CV100	19+42.3	87.4 LT	--	1
I/C CV101	21+52.4	41.6 LT	--	1
I/C CV102	25+76.5	26.8 LT	--	1
I/C CV103	26+88.3	30.0 LT	--	1
I/C CV104	28+90.8	28.0 LT	--	1
I/C CV105	32+24.4	30.5 LT	--	1
I/C CV106	34+58.8	25.5 LT	--	1
I/C CV107	36+69.6	28.5 LT	--	1
I/C PB100	36+69.6	32.5 RT	1	--
		***TOTALS	1	8

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FIELD SYSTEM INTEGRATOR
ITS DOCUMENTATION
COMMUNICATION SYSTEM TESTING

LOCATION	670.0100 FIELD SYSTEM INTEGRATOR L.S.	670.0200 ITS DOCUMENTATION L.S.	678.0500 COMMUNICATION SYSTEM TESTING L.S.
2410-00-77	1	1	1
TOTALS	1	1	1

FIBER SPLICE ENCLOSURE
FIBER OPTIC SPLICE

LOCATION	INTERSECTION	678.0200 FIBER SPLICE ENCLOSURE EACH	678.0300 FIBER OPTIC SPLICE EACH
I/C CV100	W. NATIONAL AVE & 76TH ST	1	6
I/C CV101	W. NATIONAL AVE & 75TH ST	1	6
I/C CV103	FIRE STATION 1	1	6
I/C CV105	W. NATIONAL AVE & 71ST ST	1	6
I/C CV106	W. NATIONAL AVE & 76TH ST	1	6
TOTALS		5	30

3

PRE-TERMINATED PATCH PANEL 6-PORTS
IP ETHERNET SWITCH WITH SINGLE MODE FIBER PORTS
IP VIDEO ENCODER, SIGNLE PORT

LOCATION	INTERSECTION	SPV.0060.50 PRE-TERMINATED PATCH PANEL 6-PORTS EACH	SPV.0060.51 IP ETHERNET SWITCH WITH SINGLE MODE FIBER PORTS EACH	SPV.0060.52 IP VIDEO ENCODER SIGNLE PORT EACH
CB1	W. NATIONAL AVE & S. 76TH ST	1	1	1
CB1	W. NATIONAL AVE & S. 75TH ST	1	1	1
CB1	FIRE STATION 1	1	1	--
CB1	W. NATIONAL AVE & S. 71ST ST	1	1	1
CB1	W. NATIONAL AVE & S. 70TH ST	1	1	1
	TOTALS	5	5	4

DIELECTRIC FIBER OPTIC CABLE 48-CT

FROM	TO	SPV.0090.10 DIELECTRIC FIBER OPTIC CABLE 48-CT L.F.
I/C CV100	I/C CV101	392
I/C CV101	I/C CV102	518
I/C CV102	I/C CV103	222
I/C CV103	I/C CV104	305
I/C CV104	I/C CV105	435
I/C CV105	I/C CV106	425
I/C CV106	I/C CV107	312
	TOTAL	2609

3

SHEET 2 OF 2

3

3

MISCELLANEOUS LS QUANTITIES

LOCATION	CATEGORY 0040 632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES EACH	CATEGORY 0040 SPV.0035.01 BACKFILL FOR PLANT BEDS - 24 INCH DEPTH CY	CATEGORY 0040 SPV.0035.02 BACKFILL FOR STREET TREES CY	CATEGORY 0040 SPV.0035.03 STRUCTURAL SOIL AT STREET TREES CY	CATEGORY 0040 SPV.0060.19 BENCH EACH	CATEGORY 0040 SPV.0060.20 TRASH RECEPTACLE EACH	CATEGORY 0040 SPV.0060.21 RECYCLING RECEPTACLE EACH	CATEGORY 0040 SPV.0060.22 BICYCLE RACK EACH
PROJECT ID 2410-00-77	26	74	167	738	10	11	11	8
PROJECT TOTAL:	26	74	167	738	10	11	11	8

LOCATION	CATEGORY 0040 SPV.0060.23 TREE GRATE-4'X10' EACH	CATEGORY 0040 SPV.0090.08 PRECAST CONCRETE PLANTER CURBING LF	CATEGORY 0040 SPV.0105.01 STONE VENEER SEAT WALL, STA. 19+50 LS	CATEGORY 0040 SPV.0105.02 STONE VENEER SEAT WALL, STA. 22+50 LS	CATEGORY 0040 SPV.0165.01 3X12 CONCRETE PAVERS OVER CONCRETE BASE SF	CATEGORY 0040 SPV.0165.02 6X24 CONCRETE PAVERS OVER CONCRETE BASE SF	CATEGORY 0040 SPV.0180.01 SHREDDED HARDWOOD BARK MULCH SY
PROJECT ID 2410-00-77	15	361	1	1	3,316	10,182	355
PROJECT TOTAL:	15	361	1	1	3,316	10,182	355

ALL ITEMS CATEGORY 0040

PLANT QUANTITIES

CATEGORY 0040	BID NUMBER	SYMBOL	COMMON NAME	SIZE WHEN PLANTED	ROOT CONDITION	UNIT	TOTALS
			LARGE DECIDUOUS TREES				
	632.0101.01	ULF	ELM, FONTIER	2.5" CAL	B&B	EA	7
	632.0101.02	ULR	ELM, REGAL	2.5" CAL	B&B	EA	8
	632.0101.03	GBP	GINKGO, PRINCETON SENTRY	2.5" CAL	B&B	EA	4
	632.0101.04	CPS	HACKBERRY, PRAIRIE SENTINEL	2.5" CAL	B&B	EA	5
	632.0101.05	GTD	HONEYLOCUST, STREETKEEPER	2.5" CAL	B&B	EA	8
	632.0101.06	QRL	OAK, REGAL PRINCE ENGLISH	2.5" CAL	B&B	EA	2
	632.0101.07	ZSM	ZELKOVA, MUSASHINO	2.0" CAL	B&B	EA	3
			SMALL DECIDUOUS TREES				
	632.0101.08	MAR	CRABAPPLE, ADIRONDACK	1.75" CAL.	B&B	EA	1
	632.0101.09	COM	DOGWOOD, CORNELIANCHERRY	1.75" CAL.	B&B	EA	4
	632.0101.10	CPF	MUSCLEWOOD, FIRESPIRE	1.75" CAL.	B&B	EA	4
	632.0101.11	SPM	LILAC, CHINA SNOW PEKING	8'-10' HT CLUMP	B&B	EA	2
	632.0101.12	CCB	REDBUD, BURGANDY HEARTS	8'-10' HT CLUMP	B&B	EA	1
			DECIDUOUS SHRUBS				
	632.0101.13	HAW	HYDRANGEA PANICULATA 'LITTLE LAMB'	24" HT.	B&B	EA	8
	632.0101.14	RRD	RUGOSA ROSE, DWARF PAVEMENT	12" HT.	B&B	EA	3
			PERENNIALS				
	SPV.0060.25	NWL	CATMINT, WALKER'S LOW	1 GAL.	CG	EA	19
	SPV.0060.26	HMS	DAYLILY, STRAWBERRY CANDY	1 GAL.	CG	EA	24
	SPV.0060.27	GRR	GERANIUM, ROZANNE	1 GAL.	CG	EA	18
	SPV.0060.61	HMH	DAYLILY, HAPPY RETURNS	1 GAL.	CG	EA	12
	SPV.0060.62	HHP	DAYLILY, HYPERION	1 GAL.	CG	EA	6
			ORNAMENTAL GRASSES				
	SPV.0060.28	CAK	FEATHER REED GRASS	1 GAL.	CG	EA	8
	SPV.0060.29	SPT	PRAIRIE DROPSEED, TARA DWARF	4" POT	CG	EA	66
	SPV.0060.30	PVS	SWITCHGRASS, SHENANDOAH	1 GAL.	CG	EA	26
			SPRING BULBS				
	SPV.0060.31	NDM	DAFFODIL, DUTCH MASTER	MIN. 4" CIRCUMF.	BULB	EA	234
	SPV.0060.32	NYJ	DAFFODIL, YELLOW JONQUILS	MIN. 4" CIRCUMF.	BULB	EA	118
	SPV.0060.33	TFA	TULIP, ALBERT HEIJN	MIN. 4" CIRCUMF.	BULB	EA	144

B&B: BALLED AND BURLAPED

CG: CONTAINER GROWN

HT: HEIGHT

BR: BARE ROOT

* MULCH RING ONLY APPLICABLE IF PLANTED OUTSIDE OF A PLANTING BED

ALL ITEMS CATEGORY 0040

3

PAVEMENT MARKING

STREET	FROM		TO	CAT 0040 SPV.0060.56 MARKING SYMBOL GROOVED BIKE LANE PREFORMED THERMOPLASTIC WHITE EACH	CAT 0040 SPV.0060.57 MARKING ARROW GROOVED BIKE LANE PREFORMED THERMOPLASTIC WHITE EACH	CAT 0040 SPV.0165.04 HIGH FRICTION GREEN SURFACING GREEN SF
NATIONAL AVENUE	17+30	-	28+45	24	12	3285
NATIONAL AVENUE	28+45	-	39+00	23	12	2853
			SUB TOTALS	47	24	6138
			PROJECT TOTALS	47	24	6138

ALL ITEMS CATEGORY 0040

3

SANITARY SEWER PIPES

CATEGORY	UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	SPV.0090.01 SANITARY SEWER RELAY SDR 35 PVC SP 8-INCH L.F.	SPV.0090.02 SANITARY SEWER RELAY SDR 35 PVC SP 10-INCH L.F.	SPV.0060.03 TEMPORARY SANITARY CONNECTION 8" TO 10" EACH	SPV.0090.03 ABANDON SANITARY SEWER 10-INCH L.F.
0020	Existing 8" in 75th St	S2	18	-	-	-
	S1	S2	321	-	-	-
	S2	S3	-	199	-	-
	S4	S1	182	-	1	-
	S13	S14	-	-	-	180
	S14	S3	-	-	-	18
	East side of S 77th St	S1	-	-	-	287
		PROJECT TOTALS	521	199	1	485

SANITARY SEWER STRUCTURES

CATEGORY	STRUCTURE NUMBER	STATION	LOCATION		SPV.0200.01 SANITARY MANHOLE 3'-6" DIA. VERT. FT.	SPV.0200.02 SANITARY O.D. MANHOLE 3'-6" DIA. VERT. FT.	SPV.0060.01 INSTALL INTERNAL SANITARY MANHOLE SEAL EACH	SPV.0060.02 ADJUST SANITARY MANHOLE FRAME EACH	RIM ELEV.	STRUCTURE BOTTOM ELEV.	COMMENTS
0020	S1	18+68.4	4.4	LT	11.27	-	1	1	166.47	155.20	-
	S2	21+88.7	0.0	LT	-	13.00	1	1	163.55	150.55	-
	S3	23+87.1	1.0	RT	10.53	-	1	1	160.53	150.00	-
	S4	8+13.6A	1.0	LT	10.04	-	1	1	166.34	156.30	-
	S5	25+18.5	1.4	RT	-	-	1	1	-	-	-
	S6	26+28.5	1.2	LT	-	-	1	1	-	-	-
	S7	28+56	3.7	RT	-	-	1	1	-	-	-
	S8	31+68.6	3.1	RT	-	-	1	1	-	-	-
	S9	34+93.5	3.7	RT	-	-	1	1	-	-	-
	S10	38+15.6	0.0	RT	-	-	1	1	-	-	-
	S11	38+47.9	5.9	RT	-	-	1	1	-	-	-
	S12	38+92.8	17.2	RT	-	-	1	1	-	-	-
	S13	19+76A	10.0	LT	-	-	-	-	-	-	WILL BE REMOVED WITH SANITARY RELAY
	S14	23+70	16.0	RT	-	-	-	-	-	-	WILL BE REMOVED WITH WATER RELAY
		PROJECT TOTALS			32	13	12	12			

BUILDING SANITARY SEWER

CATEGORY	STATION	LOCATION	SPV.0090.04 BUILDING SANITARY SEWER 6-INCH LIN. FT.	SPV.0060.04 BUILDING SANITARY SEWER ABANDOMENT EACH	SPV.0060.05 BUILDING SANITARY SEWER RECONNECT 6-INCH EACH
0020	19+48	RT	26	-	-
	20+42	RT	26	-	-
	26+65	LT	29	-	-
	26+65	RT	-	1	-
	26+90	LT	-	1	-
	26+91	RT	-	1	-
	27+16	RT	30	-	-
	27+60.5	RT	-	1	-
	27+88	RT	30	-	-
	27+92.5	LT	-	1	-
	28+97	RT	29	-	-
	29+09	LT	-	1	-
	29+19.5	RT	-	1	-
	29+20.5	LT	-	1	-
	29+44.5	RT	29	-	-
	29+69	LT	30	-	-
	29+69	RT	29	-	-
	29+89.5	LT	-	1	-
	30+16.5	LT	-	1	-
	30+29.5	RT	29	-	-
	30+65	RT	-	1	-
	30+77.5	LT	-	1	-
	30+82.5	RT	29	-	-
	31+25	RT	29		-
	31+37	LT	-	1	-
	32+02.5	RT	-	1	-
	32+23.5	LT	-	1	-
	32+23.5	RT	30	-	-
	32+52	RT	30	-	-
	32+70	LT	32	-	-

BUILDING SANITARY SEWER CONTINUED

STATION	LOCATION	SPV.0090.04 BUILDING SANITARY SEWER 6-INCH LIN. FT.	SPV.0060.04 BUILDING SANITARY SEWER ABANDOMENT EACH	SPV.0060.05 BUILDING SANITARY SEWER RECONNECT 6-INCH EACH
32+97	LT	-	1	-
32+97	RT	30	-	-
33+19	LT	-	1	-
33+19	RT	30	-	-
33+44.5	LT	-	1	-
33+44.5	RT	30	-	-
33+90	LT	-	1	-
33+90	RT	30	-	-
34+12.5	LT	30	-	-
34+12.5	RT	-	1	-
34+35.5	LT	30	-	-
34+35.5	RT	-	1	-
35+44.5	RT	32	-	-
35+67	LT	-	1	-
35+67	RT	32	-	-
35+97	LT	-	1	-
35+97	RT	32	-	-
36+17.5	LT	-	1	-
36+44	LT	-	1	-
36+44	RT	32	-	-
36+64.5	RT	-	1	-
36+89.5	LT	29	-	-
36+99	RT	-	1	-
37+12.5	LT	29	-	-
37+35	RT	-	1	-
37+58	LT	29	-	-
37+58	RT	-	1	-
37+85	RT	-	1	-
8+37.5 A	RT	-	-	1
8+76 A	RT	28	-	-
	PROJECT TOTALS	860	30	1

3

WATER MAIN RELAY

CATEGORY	FROM STA.	TO STA.	SPV.0090.05 WATER MAIN RELAY D.I.W.M. CL 53 R.G.J. 8-INCH L.F.	SPV.0060.06 WATER MAIN CONNNECTION 8-INCH EACH	SPV.0060.07 VALVE 8-INCH EACH	SPV.0060.08 HYDRANT EACH	SPV.0060.09 AIR RELEASE ASSEMBLY 1-INCH EACH	SPV.0060.10 ADJUST WATER VALVE BOX EACH	SPV.0060.12 S 76TH ST W.M. CROSSING W/ HYDRANT EACH	SPV.0060.13 S 75TH ST W.M. CROSSING W/ HYDRANT EACH	SPV.0060.14 S 74TH ST W.M. CROSSING EACH	SPV.0060.15 S 73RD ST W.M. CROSSING EACH	SPV.0060.16 S 72ND ST W.M. CROSSING W/ HYDRANT EACH	SPV.0060.17 S 71ST ST W.M. CROSSING W/ HYDRANT EACH	SPV.0060.18 S 70TH ST W.M. CROSSING W/ CASING EACH
0030	17+84.7, 21.9 LT	18+81.7, 14.0 LT	90	1	1	-	-	1	-	-	-	-	-	-	-
	18+73, 10.4 RT	31+92.6, 19.0 RT	1331	1	4	-	-	5	-	-	-	-	-	-	-
	32+01.5, 19.0 RT	38+13, 39.3 RT	617	-	2	1	-	4	-	-	-	-	-	-	-
	38+28.5, 15.5 LT	38+50.5, 14.3 RT	23	1	1	-	-	1	-	-	-	-	-	-	-
	8+56.5 A, 10.0 RT	11+18.5 A, 10.0 RT	-	-	-	-	-	3	1	-	-	-	-	-	-
	19+32 A, 2.0 LT	21+08 A, 3.0 RT	-	-	-	-	-	3	-	1	-	-	-	-	-
	29+85.5 A, 9.0 RT	30+31.7 A, 8.0 RT	-	-	-	-	-	1	-	-	1	-	-	-	-
	39+32A, 6.0 RT	40+49.5 A, 8.0 RT	-	-	-	-	-	2	-	-	-	1	-	-	-
	49+77.7 A, 8.0 RT	50+67 A, 9.0 RT	-	-	-	-	1	3	-	-	-	-	1	-	-
	58+99 A, 12.0 RT	60+70.5 A, 8.0 RT	-	-	-	-	-	3	-	-	-	-	-	1	-
	69+49.5 A, 4.0 LT	70+35.5 A, 4.0 LT	-	-	-	-	-	2	-	-	-	-	-	-	1
		PROJECT TOTALS	2061	3	8	1	1	28	1	1	1	1	1	1	1

3

WATER SERVICES

CATEGORY	STATION	LOCATION	SPV.0090.06 WATER SERVICE COPPER 1-INCH LIN. FT.	SPV.0090.07 WATER SERVICE COPPER 2-INCH LIN. FT.	SPV.0060.11 WATER SERVICE RECONNECT D.I.W.M. CL 53 R.G.J. 6-INCH EACH
0030	19+49.5	RT	8	-	-
	20+40	RT	8	-	-
	26+35.4	LT	-	-	1
	27+14.5	RT	9	-	-
	27+91	RT	9	-	-
	28+96.5	RT	9	-	-
	29+40.5	RT	9	-	-
	29+67.5	RT	9	-	-
	30+07	RT	9	-	-
	30+81	RT	9	-	-
	31+25.5	RT	9	-	-
	32+18.5	RT	9	-	-
	32+46	RT	9	-	-
	32+91.5	RT	9	-	-
	33+15	RT	9	-	-
	33+35.5	LT	-	44	-
	33+41.5	RT	9	-	-
	33+88	RT	9	-	-
	34+14	LT	43	-	-
	34+37.5	LT	43	-	-
	35+43	RT	11	-	-
	35+66.5	RT	11	-	-
	35+94.5	RT	11	-	-
	36+37.5	RT	11	-	-
	37+02.5	RT	-	-	1
	37+19.5	LT	44	-	-
	37+60.5	LT	44	-	-
	8+74 A	RT	15	-	-
		PROJECT TOTALS	375	44	2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

W. NATIONAL AVENUE

S. 76TH STREET TO S. 70TH STREET

LOCAL ROAD

MILWAUKEE COUNTY

STATE PROJECT NUMBER
2410-00-77

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
2410-00-07	4.01	10
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT OF WAY REQUIRED FOR
W. NATIONAL AVENUE
S. 76TH ST. - S. 70TH ST.
W. NATIONAL AVENUE — MILWAUKEE CO.

CONSTRUCTION PROJECT NUMBER
2410-00-77

CAUTION
THIS PLAT IS FOR ILLUSTRATIVE PURPOSES ONLY.
DEEDS MUST BE CHECKED TO DETERMINE
PROPERTY BOUNDARIES.

CONVENTIONAL SYMBOLS

- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- NEW REFERENCE LINE
- NEW R/W LINE
- EXISTING R/W OR HE LINE
- PROPERTY LINE (P.L.)
- LOT, TIE & OTHER MINOR LINES
- SLOPE INTERCEPT
- CORPORATE LIMITS
- UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC) (W (TYPE))
- NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
- TEMPORARY LIMITED EASEMENT AREA
- EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
- TRANSMISSION STRUCTURES
- BUILDING — TO BE REMOVED
- BRIDGE
- SECTION CORNER SYMBOL
- SECTION CORNER MONUMENT
- R/W MONUMENT (TO BE SET)
- NON-MONUMENTED R/W POINT
- FOUND IRON PIN (1-INCH UNLESS NOTED)
- GEODETIC SURVEY MONUMENT
- SIXTEENTH CORNER MONUMENT
- SIGN
- OFF-PREMISE SIGN (#1-2)

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE	■	□
TELEPHONE POLE	●	⌀
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)	✖	✖

- ACCESS RESTRICTED BY ACQUISITION
- NO ACCESS (BY STATUTORY AUTHORITY)
- ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
- NO ACCESS (NEW HIGHWAY)
- PARCEL NUMBER (25)
- UTILITY NUMBER (40)
- PARALLEL OFFSETS

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF BEGINNING	POB
ACRES	AC	POINT OF CURVATURE	PC
AHEAD	AH	POINT OF COMPOUND CURVE	PCC
ALUMINUM	ALUM	POINT OF INTERSECTION	PI
AND OTHERS	ET AL	POINT OF TANGENCY	PT
BACK	BK	PROPERTY LINE	PL
BLOCK	BLK	RECORDED AS	(100')
CENTERLINE	C	REEL / IMAGE	R/I
CERTIFIED SURVEY MAP	CSM	REFERENCE LINE	R
CONCRETE	CONC	REMAINING	REM
COUNTY	CO	RESTICTIVE DEVELOPMENT EASEMENT	RDE
COUNTY TRUNK HIGHWAY	CTH	RIGHT	RT
DISTANCE	DIST	RIGHT OF WAY	R/W
CORNER	COR	SECTION	SEC
DOCUMENT NUMBER	DOC	SEPTIC VENT	SEPV
EASEMENT	EASE	SQUARE FEET	SF
EXISTING	EX	STATE TRUNK HIGHWAY	STH
GAS VALVE	GV	STATION	STA
GRID NORTH	GN	TELEPHONE PEDESTAL	TP
HIGHWAY EASEMENT	HE	TEMPORARY LIMITED EASEMENT	TLE
IDENTIFICATION	ID	TRANSPORTATION PROJECT PLAT	TPP
LAND CONTRACT	LC	UNITED STATES HIGHWAY	USH
LEFT	LT	VOLUME	V
MONUMENT	MON	GRID COORDINATES	Y,X
NATIONAL GEODETIC SURVEY	NGS	GROUND COORDINATES	N,E
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
PERMANENT LIMITED EASEMENT	PLE		

END PROJECT
STA. 39+06.96
1091' NORTH OF AND 1968' EAST OF THE SW. CORNER OF THE NW.1/4. SECTION 3, T.6N., R.21E.

BEGIN PROJECT
STA. 15+86.00
540' NORTH OF AND 273' WEST OF THE SW. CORNER OF THE NW.1/4. SECTION 3, T.6N., R.21E.

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

CONVENTIONAL UTILITY SYMBOLS

- WATER — W
- GAS — G
- TELEPHONE — T
- OVERHEAD TRANSMISSION LINES — OH
- ELECTRIC — E
- CABLE TELEVISION — TV
- FIBER OPTIC — FO
- SANITARY SEWER — SAN
- STORM SEWER — SS

N

LAYOUT
SCALE 0 ____ MI.

TOTAL NET LENGTH OF CENTERLINE = 0.440 MI.

NOTES:

COORDINATES SHOWN ON THIS PLAT ARE ORIENTED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE. ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THE DETAIL SHEETS.

RIGHT OF WAY MONUMENTS ARE AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

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

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE THE NECESSARY EQUIPMENT THEREON AND 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 HIGHWAY AUTORITIES DEEM NECESSARY OR DESIRABLE. ALL TLE'S EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

ORIGINAL PLAT PREPARED BY
GRAEF

WISCONSIN
MICHAEL J. RATZBURG
S-2236
WAUKESHA, WI
LAND SURVEYOR

11/01/16 (Date) (Signature)

REVISION DATE
09/21/17
10/04/17
11/20/17

CITY OF WEST ALLIS

APPROVED FOR THE CITY
DATE 12/12/2016 (Signature)

E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\040101_rt.dgn
PLOT DATE : 10/23/2016
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 20000.0000 sf / in.
WISDOT/CADDS SHEET 50

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSED ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	NEW	EXISTING	TOTAL	REMAINING ACRES	TEMP. ACRES	PERM. ACRES	PARCEL NUMBER
1	4.05	KAH II LLC	FEE, TLE	0.959	0.001	0.000	0.001	0.958	0.021	0.000	1
2	4.05	Jordan Evangelical Lutheran Congregation	FEE, TLE	0.781	0.003	0.000	0.003	0.781	0.006	0.000	2
3	4.05	City of West Allis	TLE	0.670	0.000	0.000	0.000	0.670	0.018	0.000	3
4	4.06	Gerald P. Neitzel	FEE, TLE	0.167	0.002	0.000	0.002	0.165	0.033	0.000	4
5	4.06	Charles I. Foster, Willaim Murdock, Frank Baldwin, Trustees of W.A. Lodge No. 291F. & A.M. and W.A. Lodge No. 291, a Fraternal Org.	TLE	0.494	0.000	0.000	0.000	0.494	0.041	0.000	5
6	4.06	Central Park, LLC	TLE	1.884	0.000	0.000	0.000	1.884	0.029	0.000	6
7	4.07	Richardson Holdings, LLC	FEE, TLE	0.662	0.004	0.000	0.004	0.658	0.045	0.000	7
8	4.07	City of West Allis	FEE, TLE	4.042	0.040	0.000	0.040	4.002	0.251	0.000	8
9	4.07/4.08	City of West Allis	TLE	0.558	0.000	0.000	0.000	0.558	0.041	0.000	9
10	4.08	City of West Allis	FEE, TLE	0.078	0.001	0.000	0.001	0.077	0.006	0.000	10
11	4.08	Jack A. Schoberg	FEE, TLE	0.083	0.001	0.000	0.001	0.082	0.005	0.000	11
12	4.08	Donnelly Real Estate, LLC	TLE	0.203	0.000	0.000	0.000	0.203	0.006	0.000	12
13	4.08	Dennis & Goria Geniesse	TLE	0.182	0.000	0.000	0.000	0.182	0.001	0.000	13
14	4.08	Dennis & Goria Geniesse	TLE	0.099	0.000	0.000	0.000	0.099	0.008	0.000	14
15	4.08	Dennis & Goria Geniesse	TLE	0.116	0.000	0.000	0.000	0.116	0.011	0.000	15
16	4.08	First Property Development, LLC	TLE	0.147	0.000	0.000	0.000	0.147	0.002	0.000	16
17	4.08	Russell & Arlene Kleist	TLE	0.147	0.000	0.000	0.000	0.147	0.009	0.000	17
18	4.08	Donald Falk	TLE	0.082	0.000	0.000	0.000	0.082	0.002	0.000	18
19	4.08	Ziegler-Wisconsin 16, LLC	TLE	1.285	0.000	0.000	0.000	1.285	0.043	0.000	19
20	4.09	Cesar Romero & Jenny Dela Cruz Pillado	TLE	0.113	0.000	0.000	0.000	0.113	0.009	0.000	20
21	4.09	BFS WI LLC	TLE	0.083	0.000	0.000	0.000	0.083	0.001	0.000	21
22	4.09	Wade V. & Rae Ann Register	TLE	0.088	0.000	0.000	0.000	0.088	0.001	0.000	22
23	4.09	Christopher L. Taylor	TLE	0.082	0.000	0.000	0.000	0.082	0.001	0.000	23
24	4.09	George & Lillian Steller	TLE	0.077	0.000	0.000	0.000	0.077	0.001	0.000	24
25	4.09	Thomas & Janet Doyle	FEE, TLE	0.261	0.001	0.000	0.001	0.260	0.026	0.000	25
26	4.09	City of West Allis	FEE, TLE	0.538	0.009	0.000	0.009	0.529	0.038	0.000	26
27	4.09	Craig F. Bushberger	FEE, TLE	0.080	0.001	0.000	0.001	0.079	0.008	0.000	27
28	4.09	Jaden/Brody LLC	TLE	0.108	0.000	0.000	0.000	0.108	0.011	0.000	28
29	4.10	Lloyd T. & Patricia Bradford	TLE	0.066	0.000	0.000	0.000	0.066	0.012	0.000	29
30	4.10	Thor Housing, LLC	TLE	0.071	0.000	0.000	0.000	0.071	0.005	0.000	30
31	4.10	Jorge Avila	TLE	0.076	0.000	0.000	0.000	0.076	0.006	0.000	31
32	4.10	Bradley J. Toth	TLE	0.100	0.000	0.000	0.000	0.100	0.009	0.000	32
33	4.10	City of West Allis	FEE, TLE	0.602	0.001	0.000	0.001	0.601	0.033	0.000	33
34	4.10	Expert Realty & Investments, LLC	FEE, TLE	0.476	0.001	0.000	0.001	0.475	0.021	0.000	34
35	4.10	Daniel S. & Valerie A. Garaci	TLE	0.110	0.000	0.000	0.000	0.110	0.005	0.000	35
36	4.10	Ken Baranowski	FEE, TLE	0.098	0.001	0.000	0.001	0.097	0.006	0.000	36
37	4.10	Thu-Phuong T Do	TLE	0.177	0.000	0.000	0.000	0.177	0.003	0.000	37

4

4

REVISION DATE
09/28/17 (NO CHANGES)
10/04/17 - PARCEL 80 REMOVED
11/20/17 (NO CHANGES)

DATE 08-15-2016

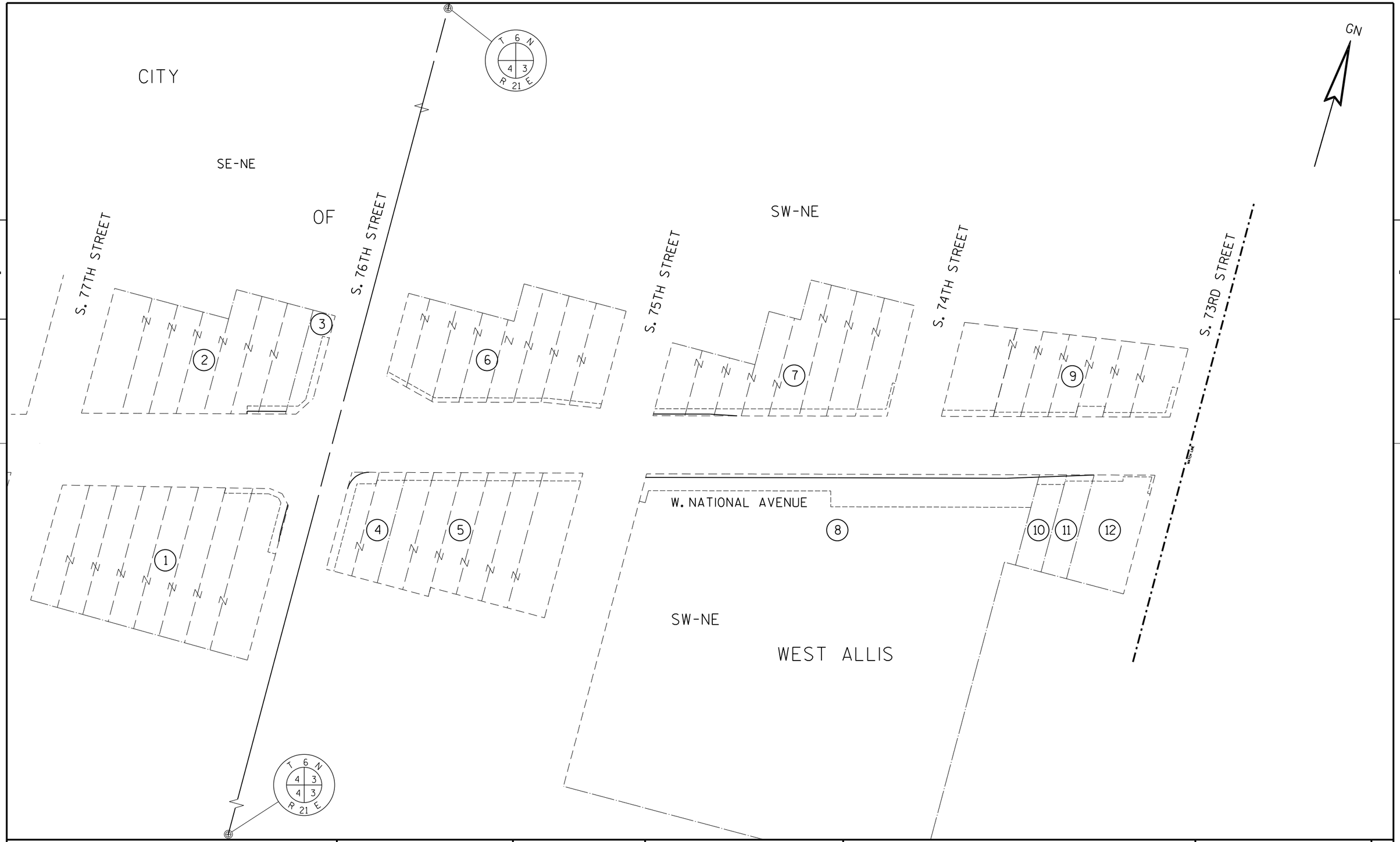
SCALE: FEET
0 N/A

HWY: NATIONAL AVENUE
COUNTY: MILWAUKEE

R/W PROJECT NUMBER 2410-00-07
CONSTRUCTION PROJECT NUMBER 2410-00-77

PLAT SHEET 4.02
PS&E SHEET 195

E

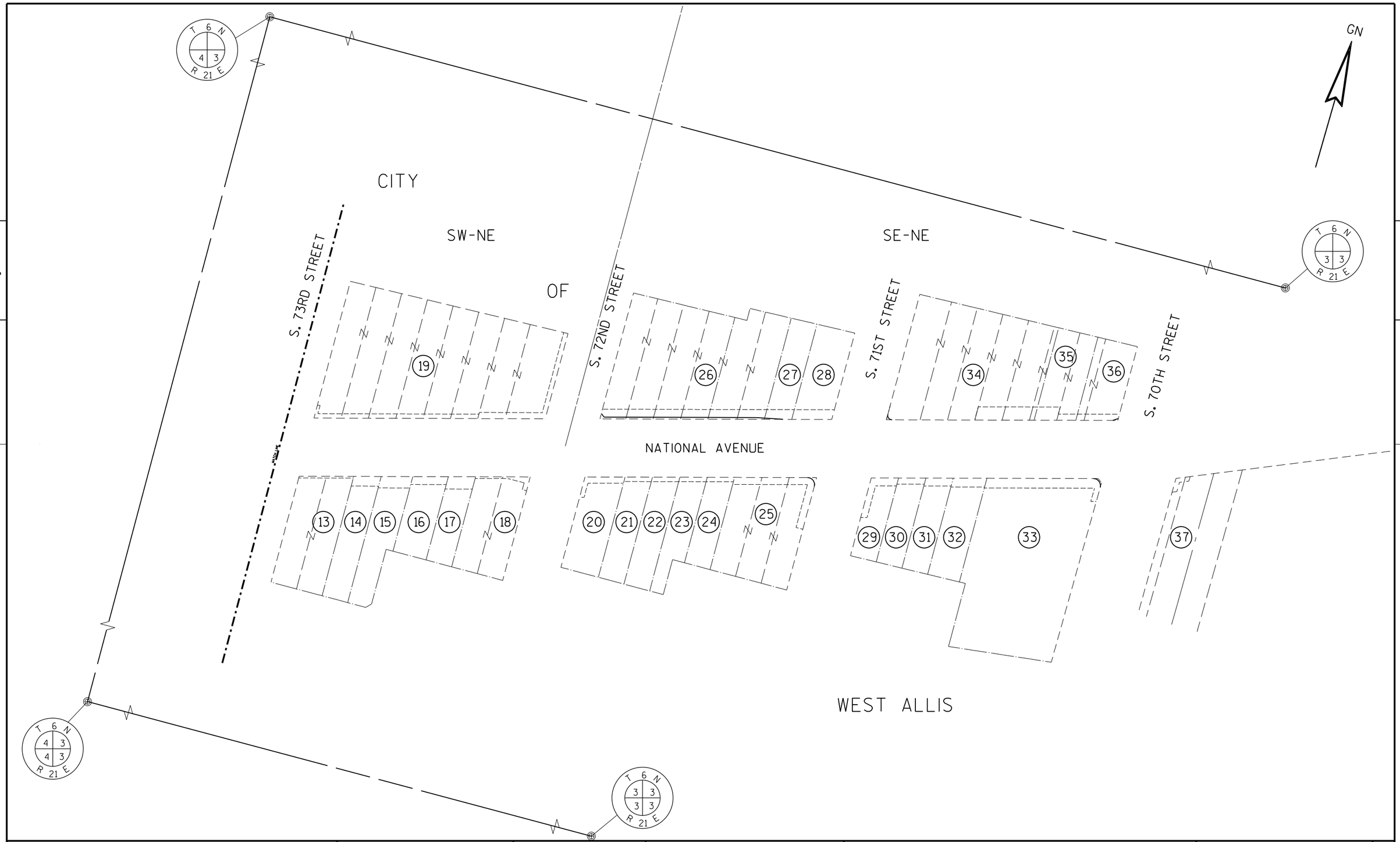


4

4

REVISION DATE	DATE 08-15-2016	SCALE, FEET	HWY: NATIONAL AVENUE	R/W PROJECT NUMBER 2410-00-07	PLAT SHEET 4.03	
09/28/17 (NO CHANGES) 10/04/17 (NO CHANGES) 11/20/17 (NO CHANGES)	GRID FACTOR 0.99992401	0 50 100	COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 2410-00-77	PS&E SHEET	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\040103_r1.dgn PLOT DATE : 11/21/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$



4

4

REVISION DATE	DATE 08-15-2016	SCALE, FEET	HWY: NATIONAL AVENUE	R/W PROJECT NUMBER 2410-00-07	PLAT SHEET 4.04	
09/28/17 (NO CHANGES) 10/04/17 - PARCEL 80 REMOVED 11/20/17 (NO CHANGES)	GRID FACTOR 0.99992401	0 50 100	COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 2410-00-77	PS&E SHEET 197	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\040104_r1.dgn PLOT DATE : 11/21/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 75

LINE TABLE

420-421	N 05°45'28" W	10.84'
421-422	N 00°27'53" W	32.68'
422-423	S 42°35'43" E	1.49'
423-420	S 00°27'53" E	42.37'
424-425	N 15°07'41" W	3.00'
425-426	N 74°52'19" E	44.34'
426-427	S 00°27'53" E	3.10'
427-424	S 74°52'19" W	43.55'
420-555	S 00°27'53" E	14.25'
565-571	N 74°52'19" E	45.91'
555-556	S 89°32'07" W,	9.00'
571-426	S 00°27'53" E	6.20'
556-557	N 00°27'53" W	57.63'
557-558	N 42°35'43" W	6.37'
558-559	N 82°33'15" W	11.76'
559-560	S 75°35'26" W	50.57'
560-561	N 00°27'53" W	6.18'
561-562	N 75°35'26" E	50.24'
562-563	S 82°33'15" E	15.10'
563-422	S 42°35'43" E	13.84'
564-427	S 74°52'19" W	12.03'
425-565	N 15°07'41" W	6.00'
427-571	N 00°27'53" W,	9.30'
571-566	N 74°52'19" E,	12.12'
566-567	N 32°30'50" E	11.53'
567-568	N 00°27'53" W	74.17'
568-569	N 89°32'07" E	8.00'
569-570	S 00°27'53" E	71.03'
570-564	S 32°30'50" W	26.39'

BEGIN RELOCATION ORDER
STA. 15+86.00
N=375,060.537
E=2,532,876.387

CONCRETE MONUMENT
W/BRASS CAP
N=376,917.33
E=2,533,134.77

T 6 N
4 3
R 21 E

GN

CURVE 1
P.I. = 18+25.92
Y = 375,115.99
X = 2,533,109.63
DELTA = 4° 54' 47" (LT)
D = 10° 47' 25"
T = 22.78'
L = 45.53'
R = 531.00'
P.C. = 18+03.13
P.T. = 18+48.67

HIGHWAY	BASIS OF EXISTING R/W	WIDTH
W. NATIONAL AVE.	GREENFIELD HEIGHTS SUBDIVISION LINWOOD SUBDIVISION WEST ALLIS EXHIBITS Y-939 & Y-280	VARIES
S. 77TH ST.	GREENFIELD HEIGHTS SUBDIVISION LINWOOD SUBDIVISION	60'
S. 76TH ST.	GREENFIELD HEIGHTS SUBDIVISION LINWOOD SUBDIVISION	60'

NOTE: TLE DOES NOT INCLUDE ANY PART OF THE BUILDING.

REVISION DATE 09/28/17 (NO CHANGES) 10/04/17 (NO CHANGES) 11/20/17 LINE TABLE REV.	DATE 08-15-2016	SCALE, FEET 0 20 40	HWY: NATIONAL AVENUE	R/W PROJECT NUMBER 2410-00-07	PLAT SHEET 4.05
	GRID FACTOR 0.99992401		COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 2410-00-77	PS&E SHEET 198 E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\040110_rp.dgn PLOT DATE : 11/21/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 75

LINE TABLE

429-430	N 00°27'53" W	19.29'
430-428	N 74°50'22" E	19.29'
572-573	S 00° 27'53" E	9.30'
573-574	S 74° 50'22" W	31.01'
574-575	S 00° 27'53" E	4.14'
575-576	S 74° 50'22" W	21.71'
576-577	S 00° 27'53" E	102.81'
577-578	S 89° 31'45" W	9.00'
578-429	N 00° 27'53" W	94.60'
428-572	N 74° 50'22" E	42.74'

CURVE 2
P.I. = 19+10.53
Y = 375,144.99
X = 2,533,189.15
DELTA = 4° 52'50" (RT)
D = 11° 01'06"
T = 22.16'
L = 44.30'
R = 520.00'
P.C. = 18+88.37
P.T. = 19+32.66

C1
DEL. = 75°18'15"
TAN. = 19.29'
LEN. = 32.86'
RAD. 25.00'
CHD. = 30.54'
C.B. = N 37°11'15" E

CONCRETE MONUMENT
W/BRASS CAP
N=376,917.33
E=2,533,134.77

CONCRETE MONUMENT
W/BRASS CAP
N=374,528.14
E=2,533,154.15

CITY OF WEST ALLIS

SW-NW

SW-NW

W. NATIONAL AVENUE

S. 76TH STREET

S. 75TH STREET

BLOCK 6
BALDWIN CUSIK SUBDIVISION

BLOCK 2
LINWOOD SUBDIVISION

LOT 15 LOT 14 LOT 13 LOT 12 LOT 11 LOT 10 LOT 9 LOT 8

LOT 8 LOT 7 LOT 6 LOT 5 LOT 4 LOT 3 LOT 2 LOT 1

6 CENTRAL PARK, LLC

4 GERALD P. NEITZEL

5 CHARLES I. FOSTER, WILLIAM MURDOCK, FRANK BALDWIN, TRUSTEES OF W.A. LODGE NO. 291 F & A.M. & W.A. LODGE NO. 291, A FRATERNAL ORG.

NOTE: TLE DOES NOT INCLUDE any PART OF THE BUILDING

BLD.

CONC WALL

MH

WV

TLE SLOPES

SLOPE INTERCEPT (TYP.)

MATCH LINE

N 00°27'53" W. 2389.27'

1726.41'

564.66'

37.67'

229.91

N 74° 50'22" E

N 89°32'07" E
30.00'

N 69° 57'32" E
20.30

31.20'
N 73° 32'57" E

19+00 PC 18+88.37
19+10.53 PI
19+32.66 PT
+50
20+00
+50
21+00
+50
PI 21+62.57

19+32.89
85.36'
19+31.72
80.37'
1" I.P.

19+85.89
56.00'
19+84.60
51.00'

21+12.68
56.00'
21+12.43
51.00'

21+76.74
49.34'
21+75.35
44.48'

18+90.28
27.36'
430

19+10.93
28.56'
428

19+54.59
29.00'
572

19+52.23
38.00'
573

19+20.31
37.86'
574

19+19.07
41.84'
575

18+95.51
40.78'
576

18+83.72
45.54'
429

18+60.47
137.69'
577

18+51.99
134.67'
578

21+54.96
29.00'
580

21+52.60
38.00'
579

HIGHWAY	BASIS OF EXISTING R/W	WIDTH
W. NATIONAL AVE.	BALDWIN CUSIK SUBDIVISION LINWOOD SUBDIVISION WEST ALLIS EXHIBITS Y-814 & Y-302	VARIES
S. 76TH ST.	BALDWIN CUSIK SUBDIVISION LINWOOD SUBDIVISION	60'
S. 75TH ST.	BALDWIN CUSIK SUBDIVISION LINWOOD SUBDIVISION	60'

REVISION DATE
09/28/17 (NO CHANGES)
10/04/17 (NO CHANGES)
11/20/17 (NO CHANGES)

DATE 08-15-2016

GRID FACTOR 0.99992401

SCALE, FEET
0 20 40

HWY: NATIONAL AVENUE

COUNTY: MILWAUKEE

R/W PROJECT NUMBER 2410-00-07

CONSTRUCTION PROJECT NUMBER 2410-00-77

PLAT SHEET 4.06

PS&E SHEET 199

E

CONCRETE MONUMENT
W/BRASS CAP
N=376,917.33
E=2,533,134.77

T 6 N
R 21 E
4 3

1726.41'
N.00°27'53"W. 2389.27'

CITY
SW-NW

BLD.
BLD.
1" M.P.
30'
MH
WV

S. 75TH STREET
LINE
PL

LOT 12 LOT 11 LOT 10 LOT 9

7
RICHARDSON HOLDINGS, LLC
NOTE: THE TLE DOES NOT INCLUDE ANY PART OF THE BUILDING

LOT 8 LOT 7 LOT 6 LOT 5
BLOCK 6
BALDWIN CUSIK SUBDIVISION

60'
S. 74TH STREET
PL

LOT 9 LOT 10 LOT 11 LOT 12
CENTRAL IMPROVEMENTS COMPANY'S SUBDIVISION

9
CITY OF WEST ALLIS
BLD.

LINE TABLE

434 - 431	N°00° 27' 49" W	2.07	431 - 589	N 00° 27' 49"W,	6.21
431 - 432	N 74° 44' 04" E	64.47	589 - 590	N 74° 44' 04"E,	262.59
432 - 433	N 78° 29' 04" E	30.58	590 - 591	N 01° 30' 23"W,	30.63
433 - 434	S 74° 44' 04" W	95.52	591 - 592	N 88° 29' 37"E,	3.00
601 - 602	N 74° 46' 08" E	446.30'	592 - 593	S 01° 30' 23"E,	38.13
602 - 594	S 00° 28' 27" E	2.62'	593 - 433	S 74° 44' 04"W,	170.32
594 - 436	S 72° 30' 39" W	36.63'	615 - 616	N 01° 30' 23"W,	7.20
436 - 435	S 74° 45' 57" W	410.09'	616 - 617	N 74° 48' 05"E,	59.00
435 - 601	N 00° 28' 15" W	4.14'	617 - 618	S 00° 25' 12"E,	2.07
			618 - 619	N 74° 48' 05"E,	93.08
			626 - 615	S 74° 48' 05"W,	259.50
			594 - 595	S 00°28'27"E,	35.63'
			595 - 596	S 74°48'05" W,	227.32'
			596 - 597	N 15°15'56" W,	17.99'
			597 - 598	S 74°44'04"W,	206.99'
			598 - 599	S 00°28'15"E,	14.30'
			599 - 600	S 89°31'45"W,	7.00'
			600 - 435	N 00°28'15"W,	27.97'

GN

431 22+34.79 37.00'
22+36.38 43.00' 589
2'
22+99.27 37.00' 432
TLE SLOPES
8'
590 BLD. 24+98.92 43.06'
591 25+06.17 72.82'
25+09.09 72.11' 592
25+00.06 35.07' 593
1" I.P.
616 25+63.50 42.00'
7'
617 26+22.51 42.00'
26+21.98 40.00' 618
5'
PL
22+34.27 35.00' 434
23+29.78 35.00' 433
25+61.80 35.00' 615
TLE SLOPES

W. NATIONAL AVENUE

N 15°09'38" W 35.00'
N 69° 57' 32" E 42.45'
62.45'
N 73° 32' 57" E
252.07'
N 74° 50' 22" E
9.18'
10.30'
S 00°28'15" E 32.06'
N 01°30'23" W 36.02'
108.95'
N 74° 44' 04" E 219.31'
N 74° 48' 05" E 191.18'
22+00 +50 23+00 +50 24+00 +50 25+00 +50 26+00 +50
66' 35' 31' 4' 66'
PI 22+25.02
PI 24+44.32
PI 26+35.50
602.33'
1" I.P.
PL
601 22+27.13 31.00
435 22+26.07 35.00'
22+29.35 50.00' 598
22+25.70 63.83' 599
22+17.65 61.90' 600
19.5'
19'
SLOPE INTERCEPT (TYP.)
597 24+36.34 50.00'
596 24+36.34 67.99'
BLD.
19'
TLE SLOPES
436 26+35.50 35.01'
26+72.20 32.49' 602
26+71.43 35.00' 594
595 26+61.00 69.07'
MATCH
P.L.
40'

T 6 N
R 21 E
4 3
4 3

CONCRETE MONUMENT
W/BRASS CAP
N=374,528.14
E=2,533,154.15

8
CITY OF WEST ALLIS

WEST ALLIS
SW-NW

PARCEL 1
C.S.M. NO. 6099

HIGHWAY	BASIS OF EXISTING R/W	WIDTH
W. NATIONAL AVE.	BALDWIN CUSIK SUBDIVISION CENTRAL IMPROVEMENTS CO. SUBDIVISION C.S.M. NO. 6099	66'
S. 75TH ST.	BALDWIN CUSIK SUBDIVISION CENTRAL IMPROVEMENTS CO. SUBDIVISION C.S.M. NO. 6099	60'
S. 74TH ST.	BALDWIN CUSIK SUBDIVISION CENTRAL IMPROVEMENTS CO. SUBDIVISION	60'

REVISION DATE
09/28/17 (NO CHANGES)
10/04/17 (NO CHANGES)
11/20/17 (NO CHANGES)

DATE 08-15-2016
GRID FACTOR

SCALE, FEET
0 20 40

HWY: NATIONAL AVENUE
COUNTY: MILWAUKEE

R/W PROJECT NUMBER 2410-00-07
CONSTRUCTION PROJECT NUMBER 2410-00-77

PLAT SHEET 4.07
PS&E SHEET 200

E

CITY

GN

CONCRETE MONUMENT
W/BRASS CAP
N=376,917.33
E=2,533,134.77

T 6 N
4 3
R 21 E

N 88°06'03" E 1256.85'

CONCRETE MONUMENT
W/BRASS CAP
N=377,003.41
E=2,535,730.54

T 6 N
3 3
R 21 E

S. 73RD STREET

S. 72ND STREET

SW-NW

CENTRAL IMPROVEMENTS COMPANY'S SUBDIVISION

BLOCK 11
CENTRAL IMPROVEMENTS COMPANY'S SUBDIVISION NO. 1

LOT 13 LOT 14 LOT 15 LOT 16 LOT 8 LOT 7 LOT 6 LOT 5 LOT 4 LOT 3 LOT 2 LOT 1

9
CITY OF WEST ALLIS

NOTE: THE TLE DOES NOT INCLUDE ANY PART OF THE BUILDING

19
ZIEGLER-WISCONSIN 16, LLC

NOTE: THE TLE DOES NOT INCLUDE ANY PART OF THE BUILDING

W. NATIONAL AVENUE

TLE SLOPES

SLOPE INTERCEPT (TYP.)

BLD.

PL

C.C.

1" I.P.

MATCH LINE

620	27+18.72	43.71'	
619	27+16.59	36.79'	5'
	27+48.01	43.00'	621
623	28+16.51	36.00'	5'
	28+24.24	65.23'	624
	28+30.05	63.70'	625
	28+87.25	45.50'	
	28+90.35	45.50'	
	28+87.85	36.00'	
	27+46.16	36.00'	622
	28+21.40	31.00'	626
	30+70.65	36.00'	
	30+71.17	38.00'	
	31+42.61	37.99'	
	31+71.65	127.77'	
	31+66.81	129.06'	

627	27+03.19	33.73'	
602	26+72.20	32.49'	
	27+34.19	34.97'	437
	27+68.39	37.00'	612
	28+04.82	35.00'	608
	28+66.84	34.99'	657
	28+66.32	36.99'	656
	28+01.19	37.00'	611
	27+68.39	42.00'	613
	27+99.21	56.34'	609
	27+96.31	55.57'	610
	27+32.07	41.89'	606
	27+02.80	35.00'	603
	27+01.07	40.65'	607
	26+99.86	44.61'	604
	26+68.87	43.37'	605
	26+71.43	35.00'	594
	29+28.38	37.00'	653
	28+92.57	37.00'	
	29+05.53	37.00'	
	29+26.02	46.00'	
	29+57.04	46.00'	
	29+56.51	48.00'	
	29+92.42	48.00'	
	29+93.47	44.00'	
	30+33.72	44.00'	
	30+32.41	49.00'	
	30+63.43	49.00'	
	31+04.13	37.00'	643
	30+67.11	35.00'	638
	30+66.58	37.00'	644
	31+22.21	41.70'	642
	31+20.17	49.48'	641
	31+29.15	35.00'	639
	31+25.00	50.76'	640

27+00 N 72° 30' 39" E 39.60' 22.07' +50 78.43 N 74° 48' 05" E PI 27+35.56 28+00 62.05 N 74° 45' 52" E PI 28+14.02 +50 29+00 PI 28+76.06 +50 30+00 262.29 N 74° 49' 07" E +50 31+00 +50 N 74° 41' 36" E PI 31+38.35 30.38'

S 00°28'27" E 35.28'

S 00°25'21" E 1478.91'

60'

30'

35'

99'

31'

LINE TABLE

627 - 603	S 00° 28' 27" E	1.33
603 - 594	S 72° 30' 39" W	31.37
594 - 602	N 00° 28' 27" W	2.62
602 - 627	N 74° 48' 05" E	31.02
627 - 437	N 74° 48' 05" E	31.02
437 - 603	S 72° 27' 35" W	31.38
603 - 627	N 00° 28' 27" W	1.33
618 - 619	N 74° 48' 05" E	93.08
619 - 620	N 00° 25' 12" W	7.24
620 - 621	N 74° 48' 05" E	31.03
621 - 622	S 00° 25' 12" E	7.24
622 - 623	N 74° 48' 05" E	70.33
623 - 624	N 00° 25' 12" W	30.24
624 - 625	N 89° 34' 48" E	6.00
625 - 626	S 00° 25' 12" E	33.83
626 - 615	S 74° 48' 05" W	259.50
603 - 604	S 00° 28' 27" E	10.05
604 - 605	S 74° 48' 05" W	31.02
605 - 594	N 00° 28' 27" W	8.75
594 - 603	N 72° 30' 39" E	31.37
437 - 606	S 00° 28' 27" E	7.24
606 - 607	S 74° 48' 05" W	31.02
607 - 603	N 00° 28' 27" W	5.91
437 - 608	N 74° 48' 05" E	69.23
608 - 609	S 00° 28' 27" E	22.06
609 - 610	S 89° 31' 33" W	3.00
610 - 611	N 00° 28' 27" W	19.21
611 - 612	S 74° 48' 05" W	32.80
612 - 613	S 15° 11' 55" E	5.00
613 - 606	S 74° 48' 05" W	34.64
639 - 640	S 00° 26' 53" E	16.29
640 - 641	S 89° 33' 07" W	5.00
641 - 642	N 00° 26' 53" W	8.05
642 - 643	S 89° 23' 30" W	18.69
643 - 644	S 74° 49' 07" W	37.55
644 - 638	N 00° 26' 53" W	2.07
638 - 639	N 74° 49' 07" E	62.04

10 CITY OF WEST ALLIS

11 JACK A. SCHOBERG

12 DONNELLY REAL ESTATE, LLC
NOTE; THE TLE DOES NOT INCLUDE ANY PART OF THE BUILDING

13 DENNIS & GLORIA GENIESSE
NOTE; THE TLE DOES NOT INCLUDE ANY PART OF THE BUILDING

14 DENNIS & GLORIA GENIESSE

15 DENNIS & GLORIA GENIESSE

16 FIRST PROPERTY DEVELOPMENT, LLC
NOTE; THE TLE DOES NOT INCLUDE ANY PART OF THE BUILDING

17 RUSSEL & ARLENE KLEIST
NOTE; THE TLE DOES NOT INCLUDE ANY PART OF THE BUILDING

18 DONALD FALK
NOTE; THE TLE DOES NOT INCLUDE ANY PART OF THE BUILDING

PARCEL 1
C.S.M. NO. 7972

BLOCK 2
McKOWEN'S SUBDIVISION NO. 1

BLOCK 6
GROSS WEST ALLIS ADDITION

SW-NW

WEST ALLIS

HIGHWAY	BASIS OF EXISTING R/W	WIDTH
W. NATIONAL AVE.	McKOWEN'S SUBDIVISION C.S.M. NO. 7972 CENTRAL IMPROVEMENTS CO. SUBDIVISION	66'
S. 73RD ST.	CENTRAL IMPROVEMENTS CO. SUBDIVISION	60'
S. 72ND ST.	GROSS WEST ALLIS ADDITION C.S.M. NO. 7972	60'

REVISION DATE
09/28/17 (NO CHANGES)
10/04/17 - PARCEL 80 REMOVED
11/20/17 TIE DIST. TO PARCEL 18

DATE 08-15-2016

GRID FACTOR

SCALE, FEET
0 20 40

HWY: NATIONAL AVENUE

COUNTY: MILWAUKEE

R/W PROJECT NUMBER 2410-00-07

CONSTRUCTION PROJECT NUMBER 2410-00-77

PLAT SHEET 4.08

PS&E SHEET 201

E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\040113_rp.dgn

PLOT DATE : 11/21/2017

PLOT BY : $$...plotuser...$$ PLOT NAME :

PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 75

CONCRETE MONUMENT
W/BRASS CAP
N=376,917.33
E=2,533,134.77

N 88°06'03" E 1256.85'

CONCRETE MONUMENT
W/BRASS CAP
N=377,003.41
E=2,535,730.54

SE-NW

CITY

LINE TABLE

657-438	S 74° 46' 29" W	10.38'
439-657	N 00° 26' 40" W	10.38'
439-645	S 00° 26' 40" E	50.28'
645-646	S 89° 33' 20" W	8.00'
646-647	N 00° 26' 40" W	50.28'
647-648	S 74° 46' 29" W	84.81'
648-649	N 00° 26' 40" W	8.27'
649-438	N 74° 46' 29" E	82.70'
658-443	N 00° 25' 21" W	6.23'
443-442	S 52° 49' 26" E	5.08'
442-440	N 74° 46' 29" E	172.81'
440-652	N 78° 35' 20" E	9.46'
651-659	S 00° 27' 11" E	1.42'
659-658	S 74° 46' 29" W	186.58'
443-650	N 00° 25' 21" W	5.15'
650-651	N 74° 46' 29" E	186.57'
652-651	N 00° 27' 11" W	9.96'
652-440	S 78° 35' 20" W	9.46'
440-442	S 74° 46' 29" W	172.81'
442-443	N 52° 49' 26" W	5.08'
659-652	N 00° 27' 11" W	1.42'
652-441	N 78° 35' 20" E	20.60'
441-659	S 74° 46' 29" W	20.92'
651-652	S 00° 27' 11" E	9.96'
651-653	N 74° 46' 29" E	31.03'
653-654	S 00° 27' 11" E	11.38'
654-441	S 74° 46' 29" W	10.11'

LOT 29 LOT 28 LOT 27 LOT 26 LOT 25 LOT 24 LOT 23 LOT 22

2ND RE-SUBDIVISION OF BLOCK 10
CENTRAL IMPROVEMENTS
COMPANY'S SUBDIVISION NO. 1

26 CITY OF WEST ALLIS

27 CRAIG F. BUSHBERGER

28 JADEN/BRODY, LLC

BLD.

SLOPE INTERCEPT (TYP.)

SEE DETAIL "A"

TLE SLOPES

651 33+98.97 39.03'

652 33+96.76 29.56'

440 33+87.37 30.75'

1" I.P.

659 33+96.32 28.21'

441 34+15.55 28.00'

34+28.56 39.00' 653

34+25.66 28.00' 654

34+72.00 39.47'

S. 72ND STREET

S. 71ST STREET

LINE 1446.80'

S 00°25'21" E

W. NATIONAL AVENUE

N 74°46'29" E 31.03'

31.70'

32+00

N 74° 41' 36" E

+50 148.45

N 74° 46' 29" E

33+00

+50 50.09

N 71° 20' 28" E

34+00

65.20'

N 74° 46' 29" E

+50 30.26'

N 77° 47' 27" E

PI 32+00.43

PI 33+48.88

PI 33+98.97

PI 33+64.16

33+58.85 35.66' 649

S 00°26'40" E 39.30'

SEE DETAIL "B"

33+57.23 40.57'

33+56.26 43.52' 648

647 34+43.75 46.00'

8'

31+94.46 41.99'

31+90.22 57.99'

31+85.05 57.98'

32+35.38 40.00'

32+34.85 42.00'

32+66.41 40.00'

32+97.59 40.00'

33+28.62 40.00'

MATCH LINE

20 CESAR ROMERO & JENNY DELA CRUZ PILLADO

21 BFS WI, LLC

22 WADE V. & RAE ANN REGISTER

23 CHRISTOPHER L. TAYLOR

24 GEORGE & LILLIAN STELLER

25 THOMAS & JANET DOYLE

NOTE: THE TLE DOES NOT INCLUDE ANY PART OF THE BUILDING

646 34+30.93 94.61'

645 34+38.66 96.66'

LOT 8 LOT 7 LOT 6 LOT 5 LOT 4 LOT 3 LOT 2 LOT 1

BLOCK 5
GROSS WEST ALLIS ADDITION

WEST ALLIS

SE-NW

GN

650 32+10.87 42.00'

443 32+09.55 37.02'

658 32+07.96 31.00'

32+12.65 33.00' 442

DETAIL "A"
N.T.S.

438 34+43.75 38.00'

34+54.14 38.00' 657

34+51.49 48.04' 439

C1
DEL. = 104°46'51"
TAN. = 10.38'
RAD. = 8.00'
LEN. = 14.63'
CHD. = 12.68'
C.B. = S 52°50'06" E

DETAIL "B"
N.T.S.

HIGHWAY	BASIS OF EXISTING R/W	WIDTH
W. NATIONAL AVE.	2ND REDIVISION OF CENTRAL IMPROVEMENTS CO. SUBDIVISION GROSS WEST ALLIS ADDITION WEST ALLIS EXHIBIT Y-549	66'
S. 72ND ST.	2ND REDIVISION OF CENTRAL IMPROVEMENTS CO. SUBDIVISION GROSS WEST ALLIS ADDITION	60'
S. 71ST ST.	2ND REDIVISION OF CENTRAL IMPROVEMENTS CO. SUBDIVISION GROSS WEST ALLIS ADDITION	60'

REVISION DATE
09/28/17 - REVISED STA/OFFSETS
10/04/17 (NO CHANGES)
11/20/17 LINE TABLE REV

DATE 08-15-2016
GRID FACTOR

SCALE, FEET
0 20 40

HWY: NATIONAL AVENUE
COUNTY: MILWAUKEE

R/W PROJECT NUMBER 2410-00-07
CONSTRUCTION PROJECT NUMBER 2410-00-77

PLAT SHEET 4.09
PS&E SHEET 202

E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\040114_rp.dgn
PLOT DATE : 11/21/2017
PLOT BY : $$...plotuser...$$ PLOT NAME :
PLOT SCALE : $$.....plotscale.....$$
WISDOT/CADDS SHEET 75

CONCRETE MONUMENT
W/BRASS CAP
N=377,003.41
E=2,535,730.54

N 88°06'03" E 1256.85'

CONCRETE MONUMENT
W/BRASS CAP
N=376,917.33
E=2,533,134.77

S 00°25'21" E 1478.91

N 74°41'36"E
31.70'

148.45'
N 74° 46'29" E

50.09'
N 71° 20'28" E

65.20'
N 74° 46'29" E

61.29'
N 77° 47'27" E

LINE TABLE

448 - 660	N 74° 47'26" E	5.47'
660 - 661	S 52° 10'49" E	6.14'
661 - 449	S 00° 16'37" W	4.98'
449 - 662	S 00° 16'37" W	16.91'
662 - 663	S 74° 47'26" W	6.23'
663 - 664	N 00° 16'37" E	15.57'
664 - 665	S 74° 47'26" W	124.94'
665 - 666	N 00° 26'40" W	11.38'
666 - 448	N 74° 47'26" E	120.80'
667 - 444	N 00° 27'11" W	6.49'
445 - 667	S 74° 47'26" W	6.49'
446 - 447	N 55° 36'04" E	6.57'
447 - 671	S 00° 27'29" E	2.23'
671 - 446	S 74° 47'26" W	5.64'
446 - 668	S 74° 47'26" W	41.93'
668 - 669	N 00° 27'29" W	7.24'
669 - 670	N 74° 47'26" E	47.57'
670 - 447	S 00° 27'29" E	5.00'

HIGHWAY	BASIS OF EXISTING R/W	WIDTH
W. NATIONAL AVE.	LEFEBERS SUBDIVISION GROSS WEST ALLIS ADDITION	66'
S. 71ST ST.	LEFEBERS SUBDIVISION GROSS WEST ALLIS ADDITION	60'
S. 70TH ST.	LEFEBERS SUBDIVISION GROSS WEST ALLIS ADDITION	60'

GN

CITY

SE-NW

S. 71ST STREET

S. 70TH STREET

LINE

30'

BLOCK 2
LEFEBERS SUBDIVISION NO. 3

LOT 20 LOT 21 LOT 22 LOT 23 LOT 24 LOT 25 LOT 26 LOT 27

5' 25' 21'

9'

NOTE; THE TLE DOES NOT INCLUDE ANY PART OF THE BUILDING

NOTE; THE TLE DOES NOT INCLUDE ANY PART OF THE BUILDING

C2
DEL. = 104°45'23"
TAN. = 6.49'
RAD. = 5.00'
LEN. = 9.14'
CHD. = 7.92'
C.B. = S 52°49'53" E

34 EXPERT REALTY & INVESTMENTS, LLC
NOTE; THE TLE DOES NOT INCLUDE ANY PART OF THE BUILDING

35 DANIEL S. & VALERIE A. GARACI

36 KEN BARANOWSKI

OF

35+34.94 37.26 444
35+39.72 31.00 445
36+37.49 46.00
36+33.54 31.00
SLOPE INTERCEPT BLD.(TYP.)
TLE SLOPES
37+04.71 46.00
37+00.76 31.00
37+30.48 46.00 BLD.
37+28.37 38.00
37+50.10 38.00 669
37+97.66 38.00 670
37+48.24 31.00 668
667 35+33.23 31.00
PL
SEE DETAIL "A"
N 15°12'34" W 31.00'

15' 7' 7'

NATIONAL AVENUE

7.78'
35+00 +50 36+00 +50 256.94' 314.38 37+00 +50 38+00 +50 39+00
242.91'
N 74° 47'26" E
31'
35'
S 15°12'34" E 35.00'
PC 38+39.83
PI 38+73.44
PT 39+06.96

CURVE 3
P.I. = 38+73.44
Y = 375,664.87
X = 2,535,081.72
DELTA = 7° 23'48" (LT)
D = 11° 01'06"
T = 33.61'
L = 67.13'
R = 520.00'
P.C. = 38+39.83
P.T. = 39+06.96

END RELOCATION ORDER
STA. 39+06.96
N=375,677.789
E=2,535,112.750

PI 35+25.45

TLE SLOPES
35+76.43 42.00
36+06.93 44.00
36+44.93 45.00
36+47.56 35.00' 666
36+44.66 46.00 665
TLE SLOPES
SEE DETAIL "B"
37+71.67 61.00 662
663 37+65.45 61.00
BLD.

35+23.40 44.17
35+45.41 42.00
35+44.88 44.00 BLD.
35+75.90 44.00 BLD.
36+06.66 45.00 BLD.
35+15.81 80.62
35+08.58 80.99
MATCH LINE

9' 7' 9' 17' 10' 11' 6'

38+75.85 33.79
38+74.17 38.91
38+64.10 39.70
38+56.09 50.53
38+61.02 50.02
BLD.

15' 5' 5'

448 37+68.36 35.00'
37+73.82 35.00' 660
37+77.52 39.91' 661
37+76.07 45.14' 449
664 37+69.60 46.00'

C1
DEL. = 102°24'50"
TAN. = 9.95'
RAD. = 8.00'
LEN. = 14.30'
CHD. = 12.47'
C.B. = S 54°05'35" E

DETAIL "B"
N.T.S.

29 LLOYD T. & PATRICIA BRADFORD
30 THOR HOUSING, LLC
31 JORGE AVILA
32 BRADLEY J. TOTH
33 CITY OF WEST ALLIS
NOTE; THE TLE DOES NOT INCLUDE ANY PART OF THE BUILDING
37 THU-PHUONG T DO

LOT 4 LOT 3 LOT 2 LOT 1 LOT 7 LOT 8 LOT 7

SE-NW

446 37+90.17 31.00'
37+96.38 33.16' 447
671 37+95.81 31.00'

DETAIL "A"
N.T.S.

80' 30'

WEST ALLIS

BLOCK 4
GROSS WEST ALLIS ADDITION

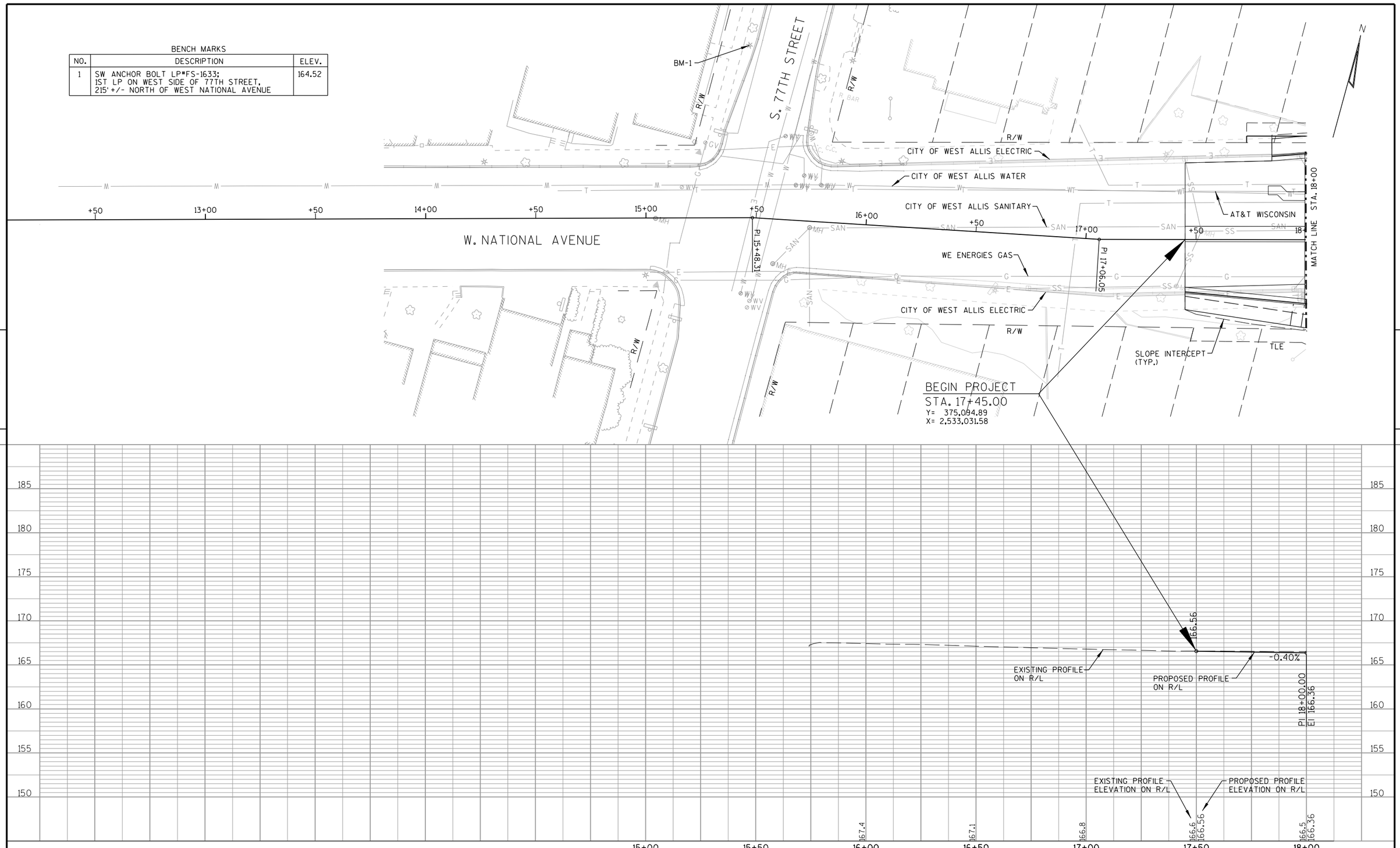
BLOCK 3
GROSS WEST ALLIS ADDITION

REVISION DATE 09/28/17 - REVISED STA/OFFSETS 10/04/17 (NO CHANGES) 11/20/17 (NO CHANGES)	DATE 08-15-2016 GRID FACTOR	SCALE, FEET 0 20 40	HWY: NATIONAL AVENUE	R/W PROJECT NUMBER 2410-00-07	PLAT SHEET 4.10	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 2410-00-77	PS&E SHEET 203	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\040115_rp.dgn PLOT DATE : 11/21/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 75

BENCH MARKS

NO.	DESCRIPTION	ELEV.
1	SW ANCHOR BOLT LP*FS-1633; 1ST LP ON WEST SIDE OF 77TH STREET, 215' +/- NORTH OF WEST NATIONAL AVENUE	164.52



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PLAN AND PROFILE	SHEET 204	E

BENCH MARKS

NO.	DESCRIPTION	ELEV.
2	SW ANCHOR BOLT LP#FA-1632; 1ST LP ON EAST SIDE OF 76TH STREET, 165' +/- NORTH OF WEST NATIONAL AVENUE	163.05
3	SW ANCHOR BOLT LP#FC3-1633; 1ST LP ON WEST SIDE OF 75TH STREET, 120' +/- NORTH OF WEST NATIONAL AVENUE	163.81

CURVE DATA

CURVE 1
P.I. = 18+25.92
Y = 375,115.99
X = 2,533,109.63
DELTA = 4° 54' 47" (LT)
D = 10° 47' 25"
T = 22.78'
L = 45.53'
R = 531.00'
P.C. = 18+03.13
P.T. = 18+48.67

CURVE 2
P.I. = 19+10.53
Y = 375,144.99
X = 2,533,189.15
DELTA = 4° 52' 50" (RT)
D = 11° 01' 06"
T = 22.16'
L = 44.30'
R = 520.00'
P.C. = 18+88.37
P.T. = 19+32.66

N

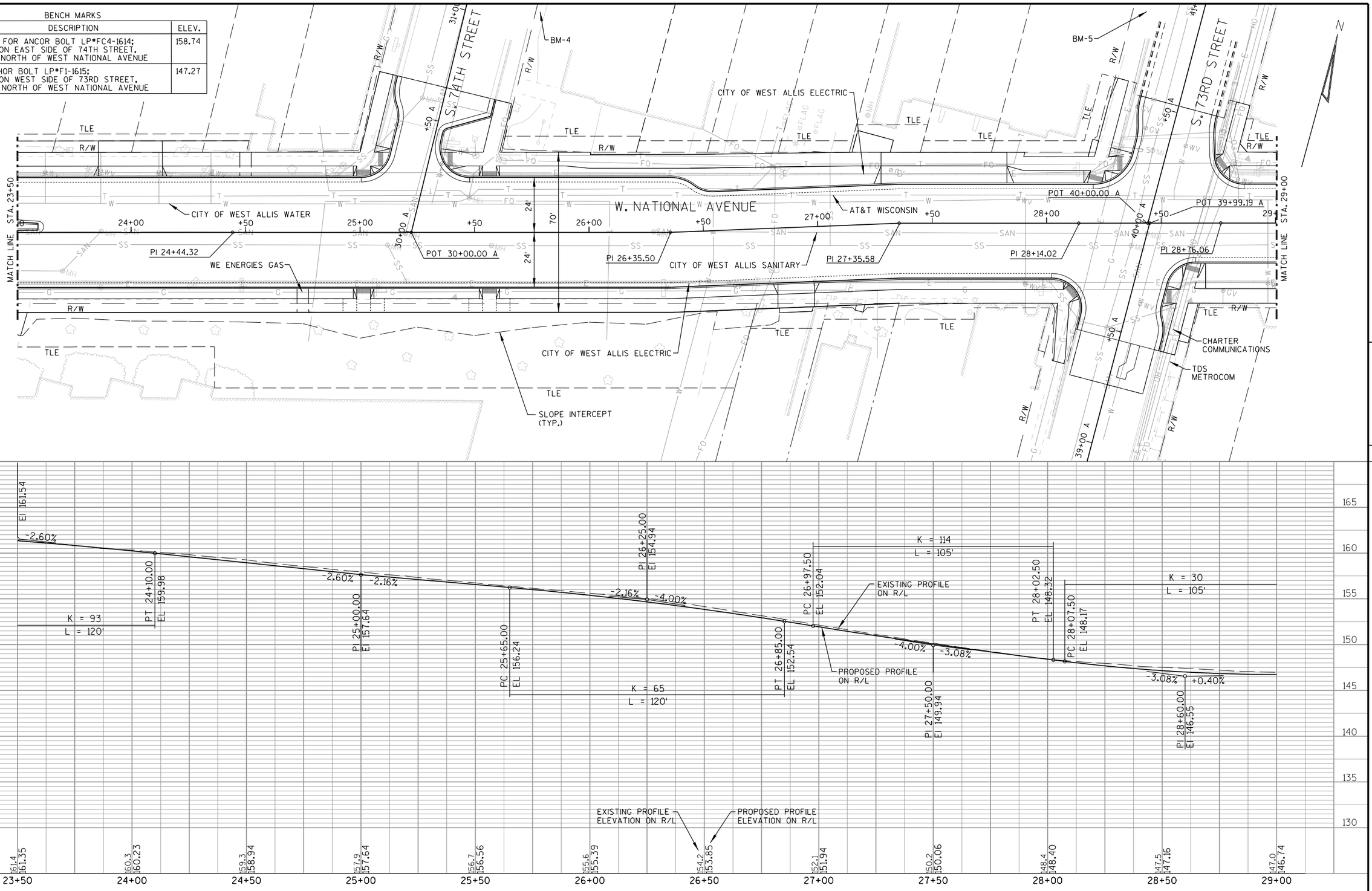
BM-2
BM-3
S. 76TH STREET
S. 75TH STREET
W. NATIONAL AVENUE
TLE
R/W
CITY OF WEST ALLIS ELECTRIC
AT&T WISCONSIN
CITY OF WEST ALLIS WATER
CITY OF WEST ALLIS SANITARY
WE ENERGIES GAS
SLOPE INTERCEPT (TYP.)
CURVE 1
CURVE 2
PC 18+03.13
PI 18+25.92
PT 18+48.67
PC 18+88.37
PI 19+10.53
PT 19+32.66
POT 20+00.00 A
POT 19+94.84 A
PI 21+62.57
PI 22+25.02
MATCH LINE STA. 18+00
MATCH LINE STA. 23+50
80'
40'
16'
27'
17'
70'

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | PLAN AND PROFILE | SHEET 205 | E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\050102_pp.dgn | PLOT DATE : 10/31/2017 | PLOT BY : $$...plotuser...$$ | PLOT NAME : | PLOT SCALE : $$.....plotscale.....$$ | WISDOT/CADDS SHEET 30

BENCH MARKS

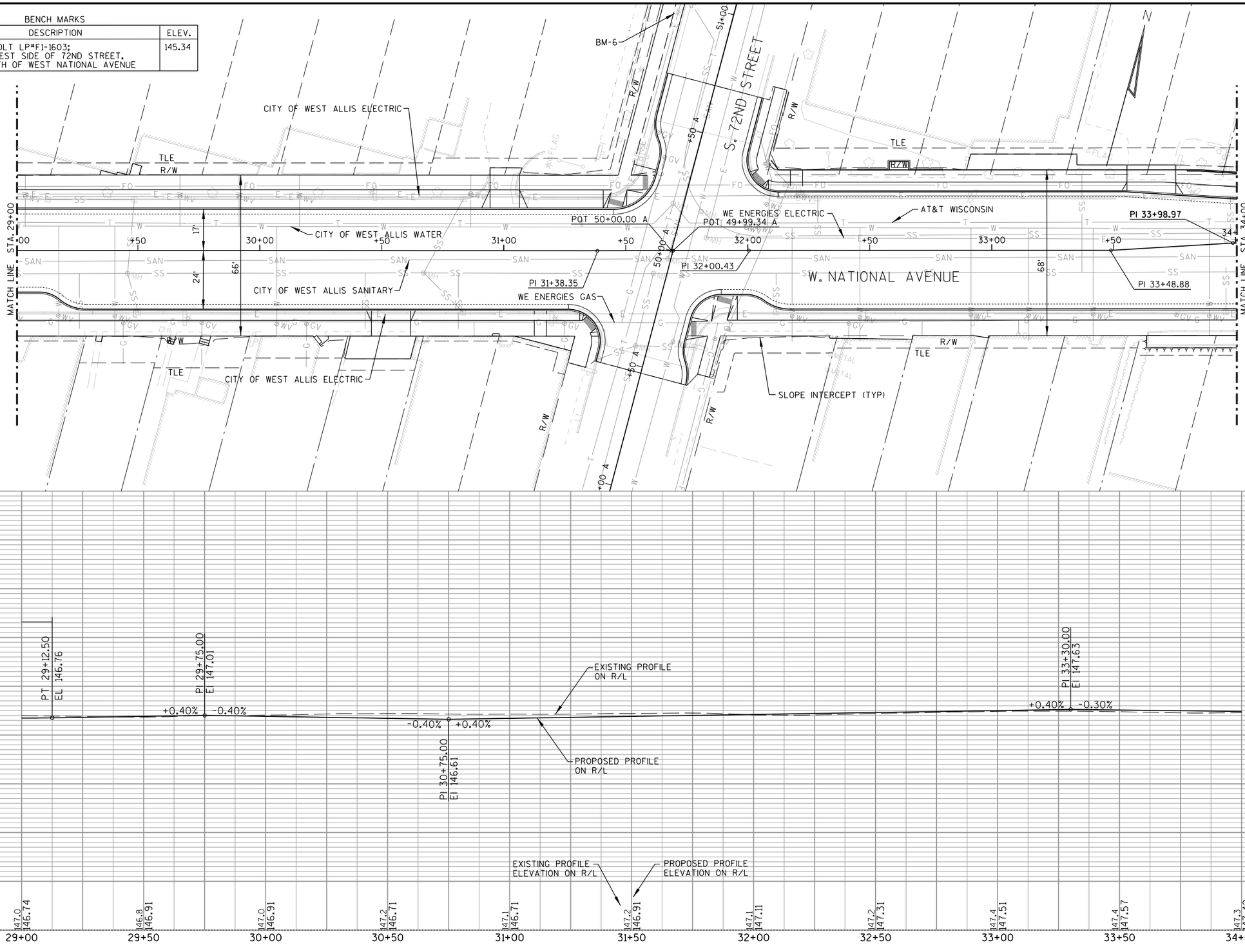
NO.	DESCRIPTION	ELEV.
4	SW NUT FOR ANCOR BOLT LP*FC4-1614; 1ST LP ON EAST SIDE OF 74TH STREET, 165' +/- NORTH OF WEST NATIONAL AVENUE	158.74
5	SW ANCHOR BOLT LP*F1-1615; 1ST LP ON WEST SIDE OF 73RD STREET, 100' +/- NORTH OF WEST NATIONAL AVENUE	147.27



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PLAN AND PROFILE	SHEET 206	E

BENCH MARKS

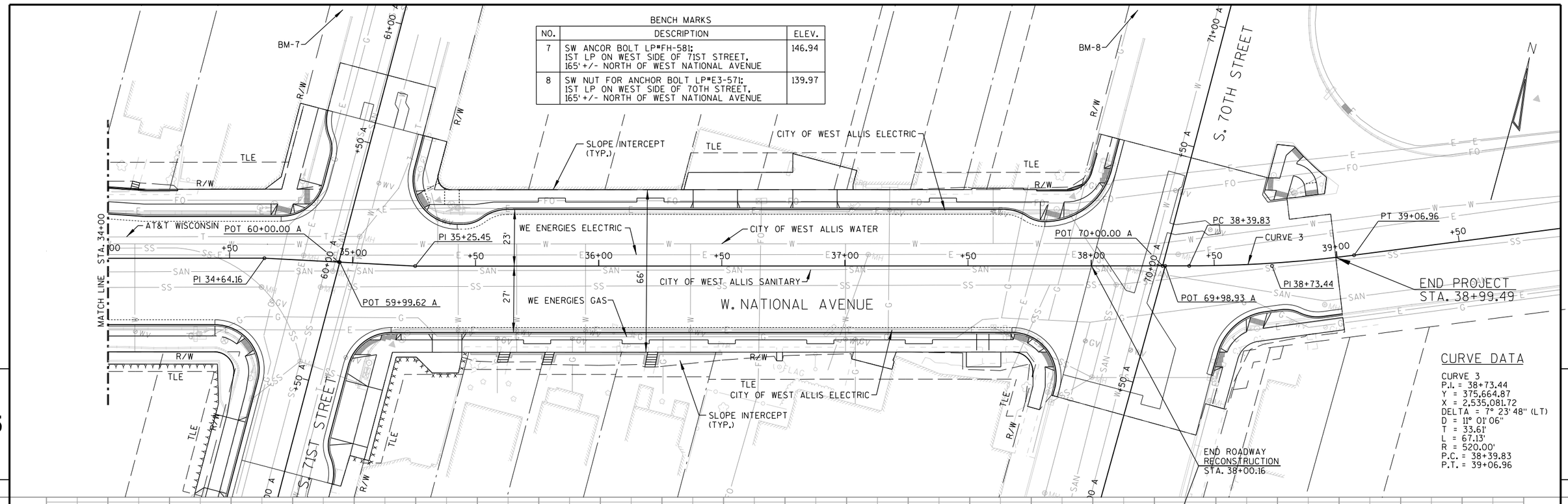
NO.	DESCRIPTION	ELEV.
6	SW ANCOR BOLT LP#F1-1603; 1ST LP ON WEST SIDE OF 72ND STREET, 100'+/- NORTH OF WEST NATIONAL AVENUE	145.34



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PLAN AND PROFILE	SHEET 207	E

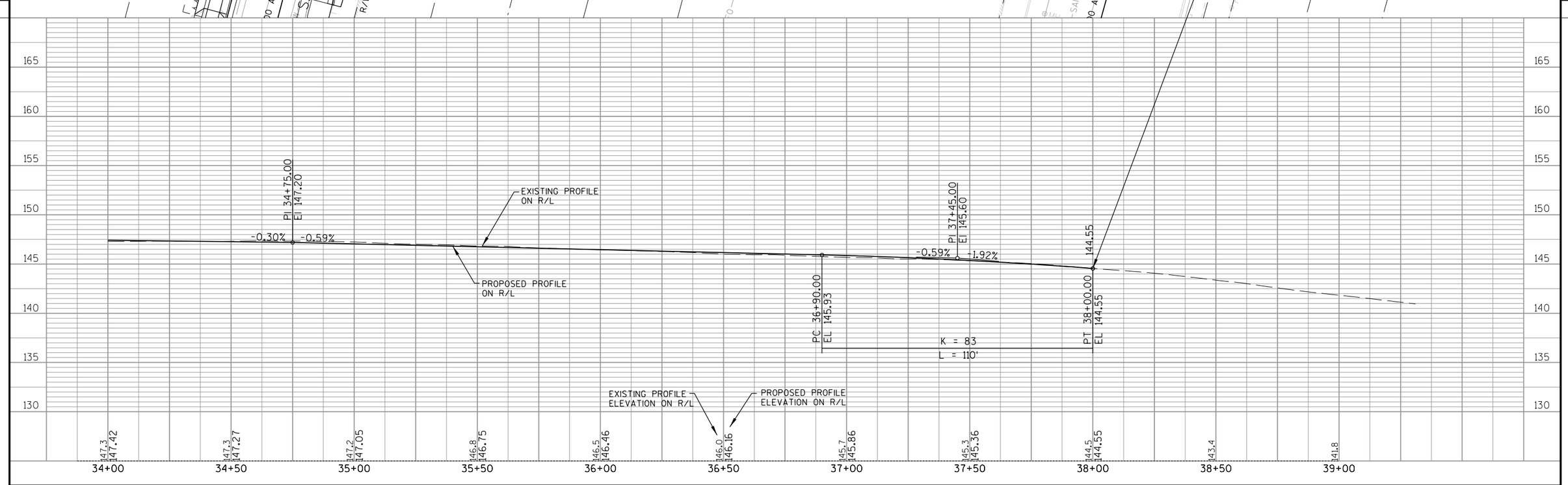
BENCH MARKS

NO.	DESCRIPTION	ELEV.
7	SW ANCOR BOLT LP#FH-581; 1ST LP ON WEST SIDE OF 71ST STREET, 165'+/- NORTH OF WEST NATIONAL AVENUE	146.94
8	SW NUT FOR ANCHOR BOLT LP#E3-571; 1ST LP ON WEST SIDE OF 70TH STREET, 165'+/- NORTH OF WEST NATIONAL AVENUE	139.97

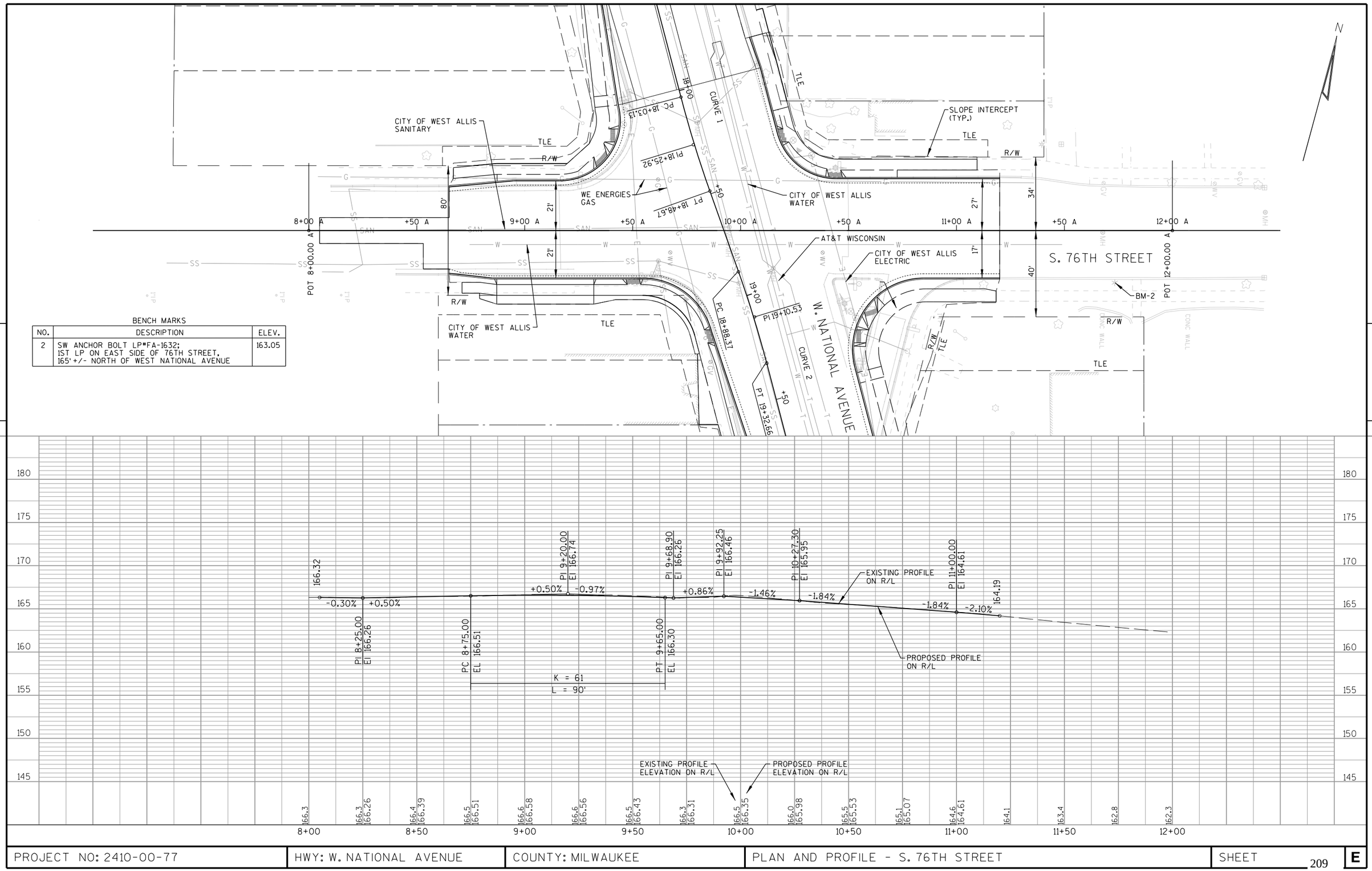


CURVE DATA

CURVE 3
P.I. = 38+73.44
Y = 375,664.87
X = 2,535,081.72
DELTA = 7° 23' 48" (LT)
D = 11° 01' 06"
T = 33.61'
L = 67.13'
R = 520.00'
P.C. = 38+39.83
P.T. = 39+06.96



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PLAN AND PROFILE	SHEET 208	E



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	PLAN AND PROFILE - S. 76TH STREET	SHEET 209	E

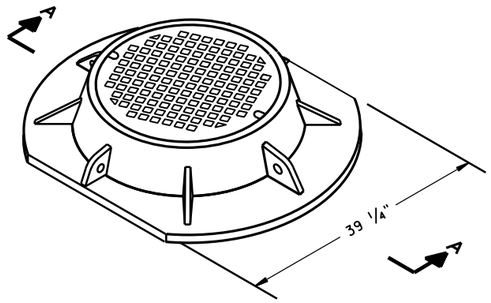
Standard Detail Drawing List

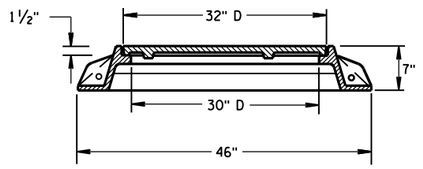
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A09-02	CATCH BASINS 2X3-FT AND 2.5X3-FT
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08B11-02	MANHOLES VARIABLE TEE AND SPECIAL 4-FT DIAMETER
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-19A	CURB RAMPS TYPES 1 AND 1-A
08D05-19B	CURB RAMPS TYPES 2 AND 3
08D05-19C	CURB RAMPS TYPES 4A AND 4A1
08D05-19D	CURB RAMPS TYPE 4B AND 4B1
08D05-19E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-19F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-19G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D15-05B	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D15-05C	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08D17-06	MANHOLES, MANHOLE & INLET COVERS
08D18-01	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08D19-01	DRIVEWAY AND SIDEWALK RAMPS TYPE Z
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	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
09C11-10	CONCRETE BASE TYPE 10
09C14-02	CONCRETE CONTROL CABINET BASE, TYPE L
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09D04-02	LIGHTING CONTROL CABINET 120/240 VOLT
09E01-14A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
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
09E08-08A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-08E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09E12-01E	GENERAL NOTES AND HARDWARE DETAILS FOR OVER HEIGHT TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09H10-01	COMMUNICATION VAULT TYPE - ROUND
11B02-02	CONCRETE MEDIAN NOSE
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C15-06A	CONCRETE BASE
13C15-06B	CONCRETE BASE
13C18-05A	CONCRETE PAVEMENT JOINTING
13C18-05B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-05C	CONCRETE PAVEMENT JOINT TYPES
13C18-05D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14A01-03	TREE PRESERVATION DETAILS
14A02-01	TREE PLANTING DETAIL
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
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C07-14E	PAVEMENT MARKING FOR BIKE LANES
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C08-18B	PAVEMENT MARKING (TURN LANES)
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C27-02B	PAVEMENT MARKING (ISLANDS)
15C29-05A	BICYCLE LANE MARKING
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

6

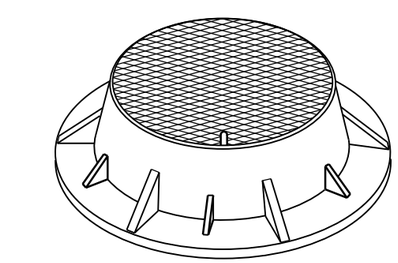
Standard Detail Drawing List

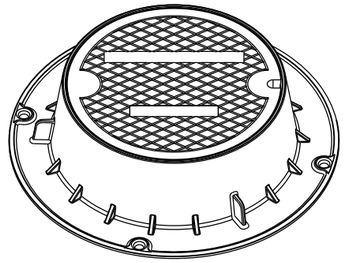
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-03A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-03B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-03C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

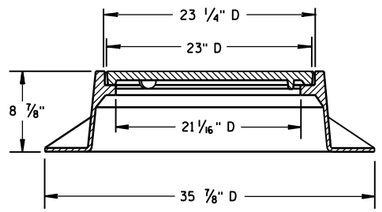


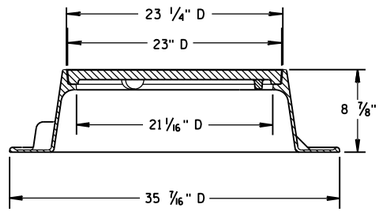


SECTION A-A
TYPE "K"









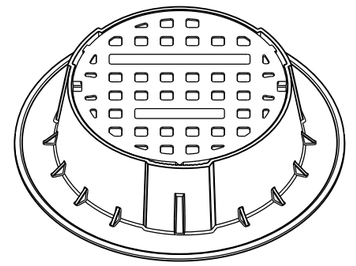
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

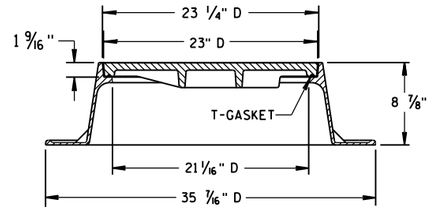
GENERAL NOTES

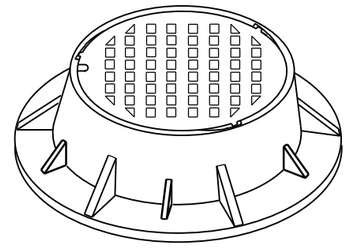
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

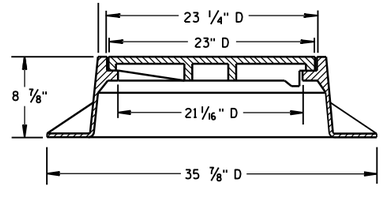
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

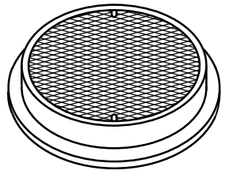


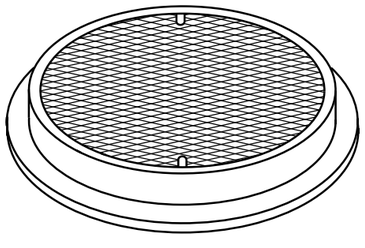


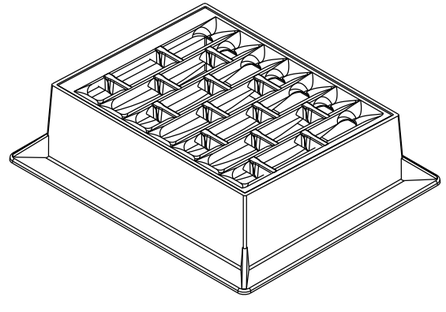


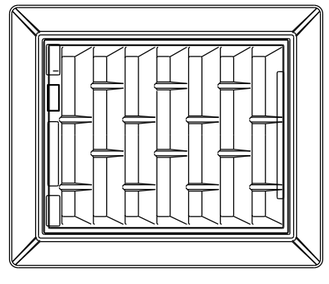


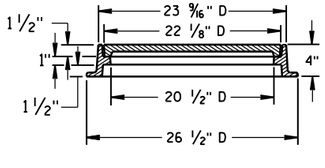
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



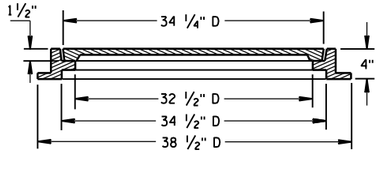




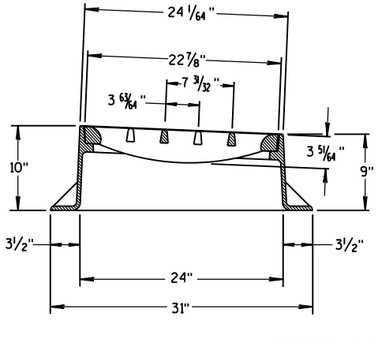


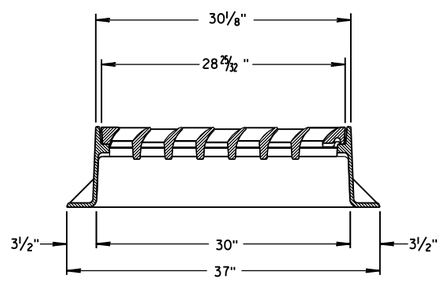


TYPE "L"



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
FHWA

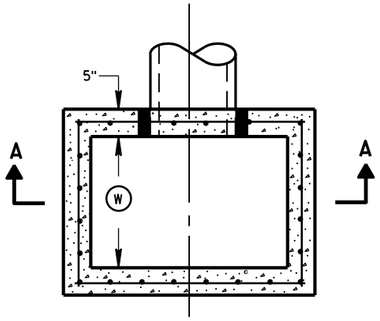
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

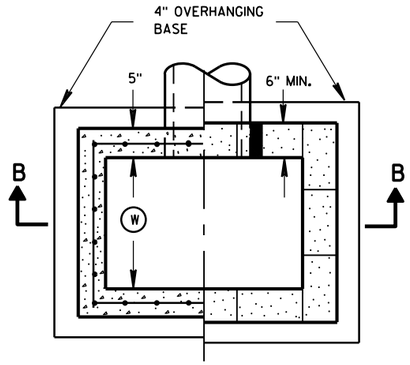
S.D.D. 8 A 5-19d

6

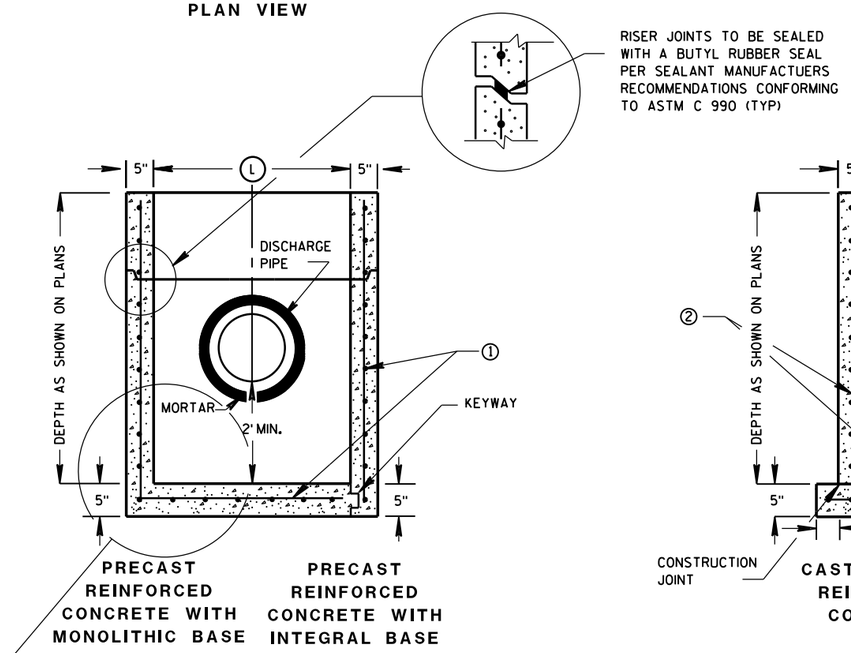
S.D.D. 8 A 5-19d



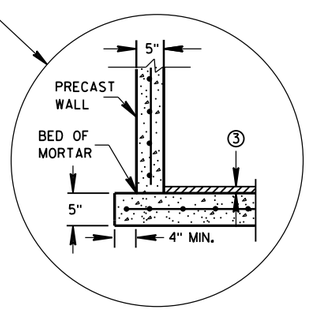
PLAN VIEW



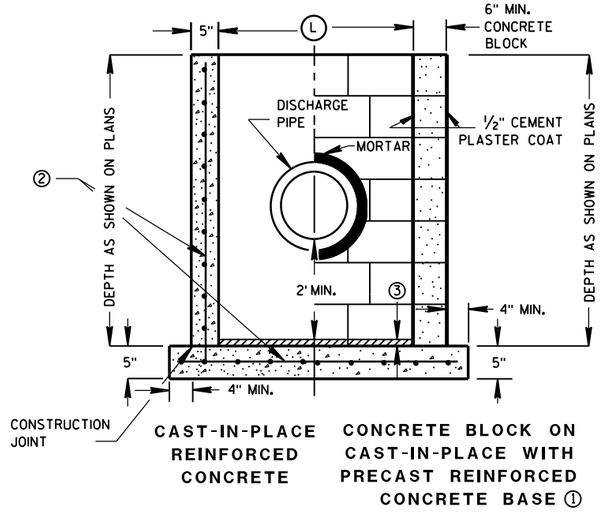
PLAN VIEW



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 FOUNDATION 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.

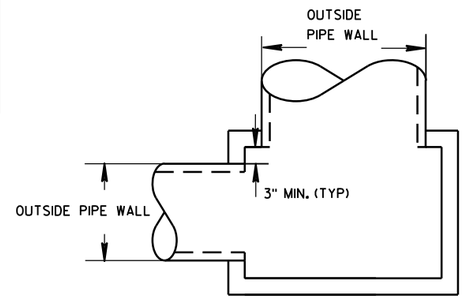
③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

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

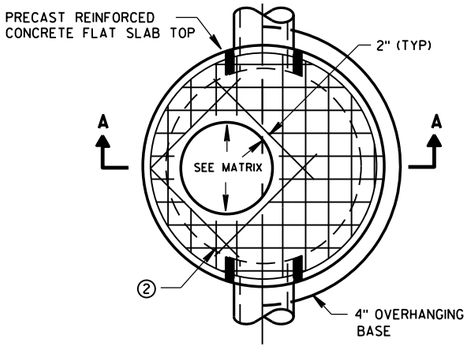
CATCH BASINS 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

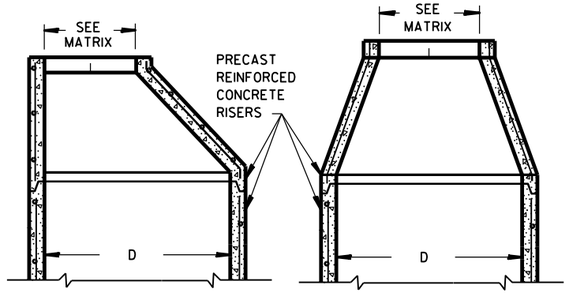
APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

6

S.D.D. 8 A 9-2

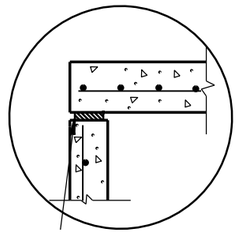


PLAN VIEW CIRCULAR OPENING

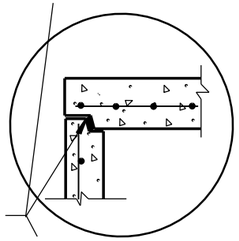


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

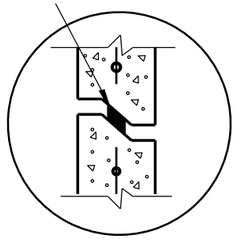


TOP WITH PLAIN END JOINT



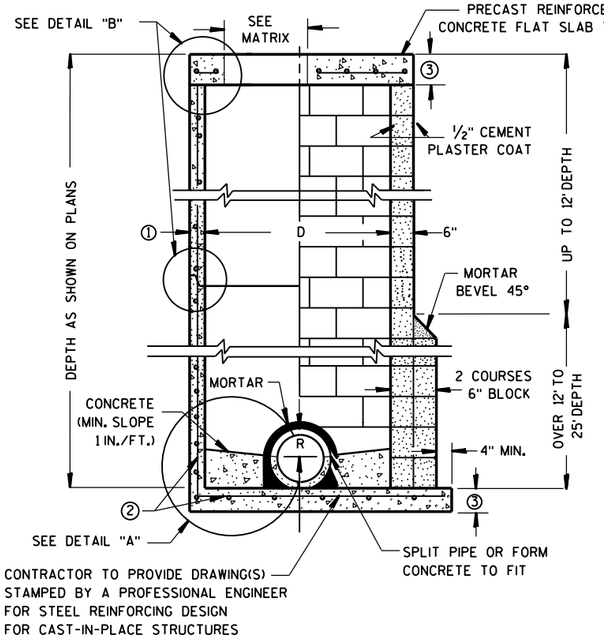
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



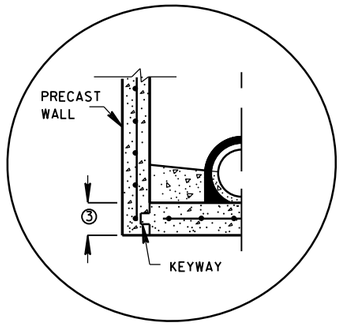
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

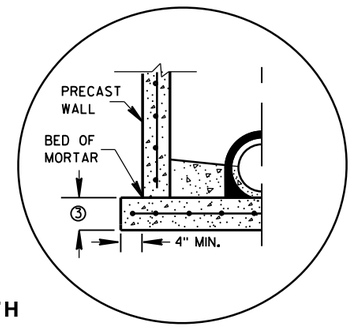


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

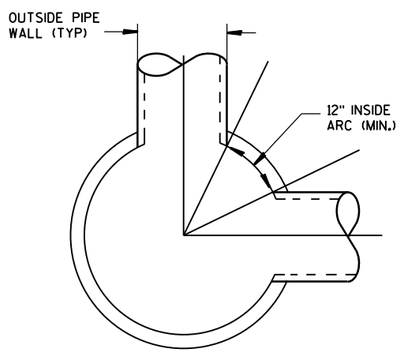


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



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 FOUNDATION 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.

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

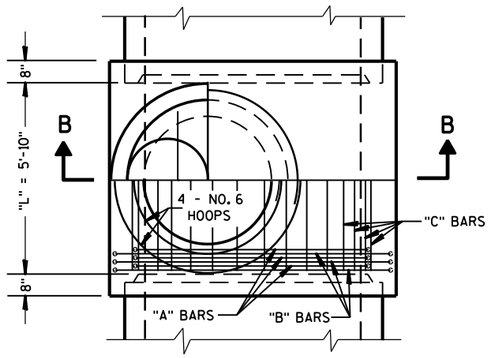
APPROVED

Sept., 2016
DATE

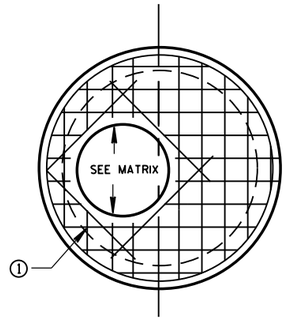
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV

FHWA

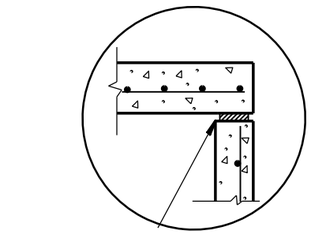
6
S.D.D. 8 B 9-2



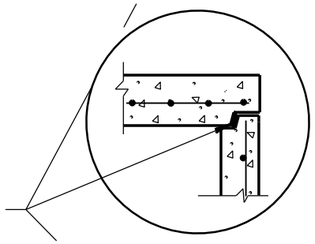
HALF SECTION A-A



PLAN VIEW PRECAST REINFORCED CONCRETE FLAT SLAB TOP WITH ECCENTRIC OPENING

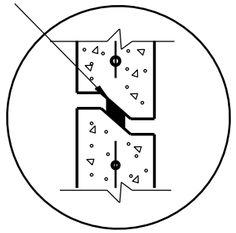


TOP WITH PLAIN END JOINT



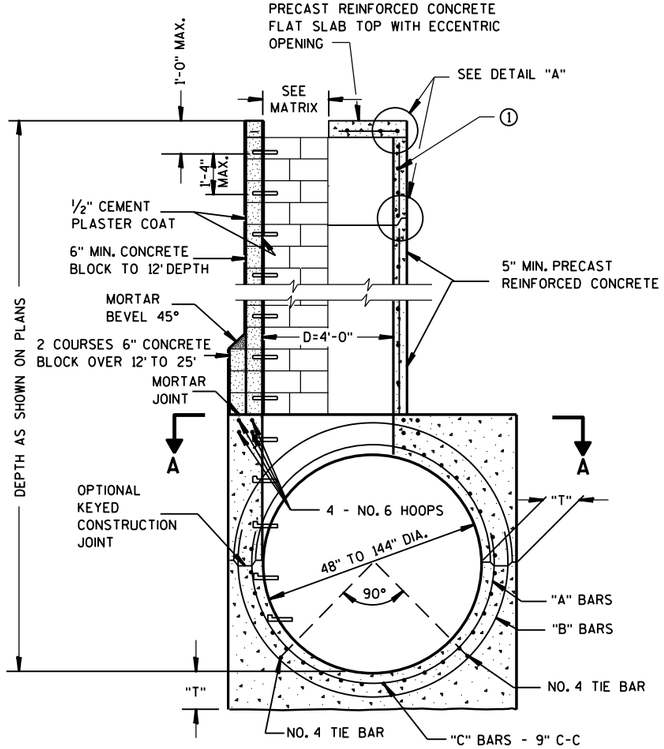
TOP WITH TONGUE AND GROOVE JOINT

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



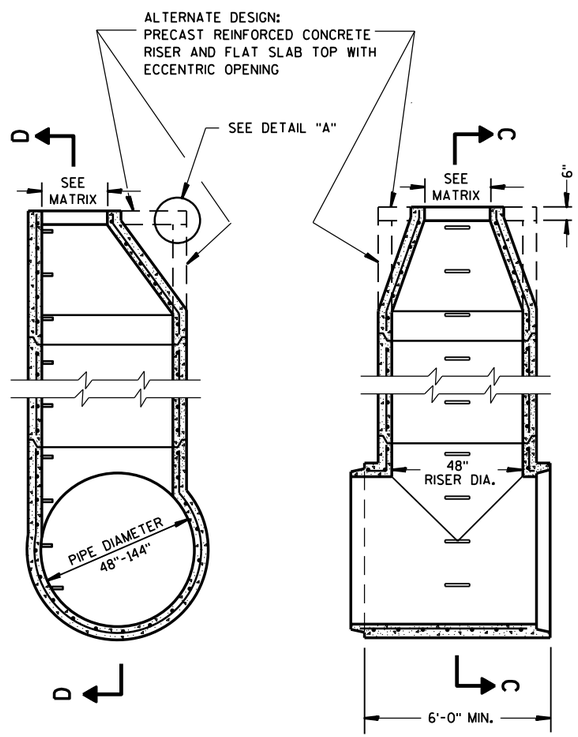
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "A"



SECTION B-B

MANHOLE VARIABLE SPECIAL 4-FT DIAMETER



SECTION C-C SECTION D-D

MANHOLE VARIABLE TEE 4-FT DIAMETER

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 4T-L", "MANHOLES 4S-M", ETC. THE VARIABLE TEE IS DENOTED BY 4T AND THE VARIABLE SPECIAL IS DENOTED BY 4S. THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

STEPS MEETING 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.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE OR 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.

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

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

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

(1) FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE WITH AASHTO M 199.

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

NOTES FOR MANHOLE VARIABLE SPECIAL 4-FT DIAMETER

NOTE: ALL "A", "B", AND "C" BAR STEEL REINFORCING IS THE SAME DIAMETER WHICH VARIES WITH DEPTH.
NO. 5 BARS TO 20' DEPTH
NO. 6 BARS OVER 20' TO 30' DEPTH
NO. 7 BARS OVER 30' TO 40' DEPTH

THE "A" AND "B" BARS MAY BE PLACED IN ONE OR TWO SEGMENTS, AND SHALL LAP 24 BAR DIAMETERS.

"C" BARS SHALL HAVE STANDARD HOOKED ENDS.

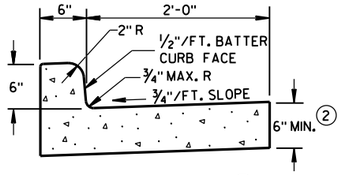
NOTE: "T" THROUGHOUT LENGTH "L" SHALL BE 13" FOR PIPE DIAMETER 48" TO 84" AND 15" FOR PIPE DIAMETER GREATER THAN 84".

MANHOLE VARIABLE TEE AND SPECIAL 4-FT DIAMETER

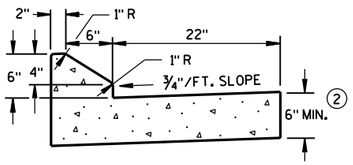
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

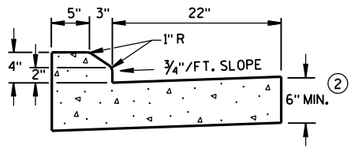
6
S.D.D. 8 B 11-2



TYPES A & D ①

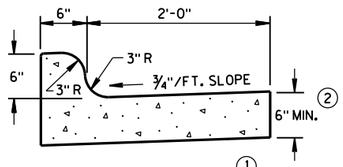


6" SLOPED CURB TYPES G & J ①

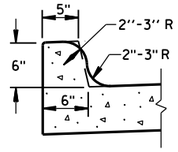


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

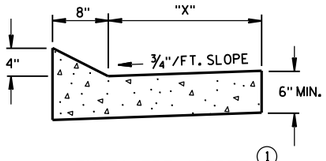


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

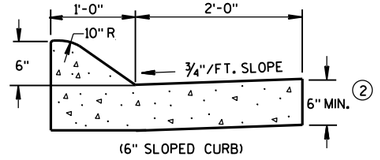
CONCRETE CURB & GUTTER 30"



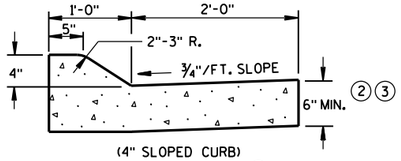
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

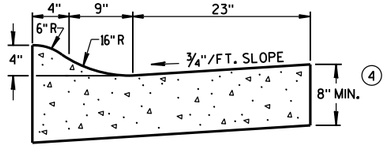


(6" SLOPED CURB)



(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.

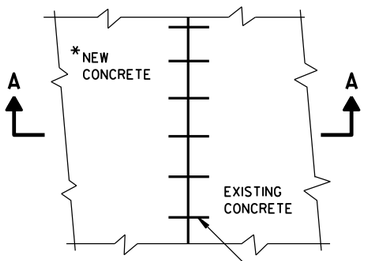
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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.

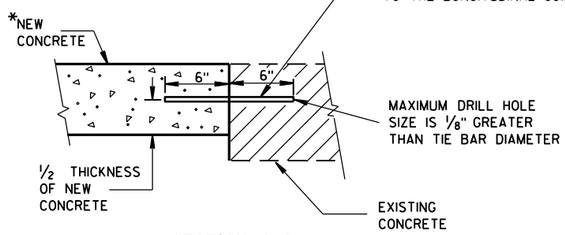
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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



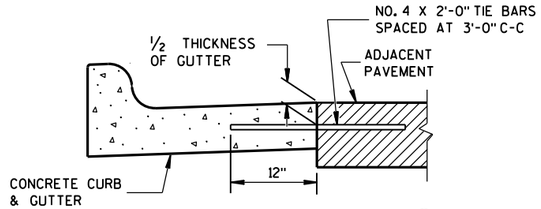
PLAN VIEW

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

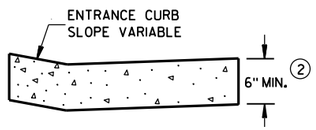


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

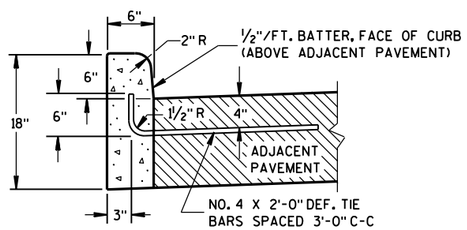


TYPICAL TIE BAR LOCATION ①

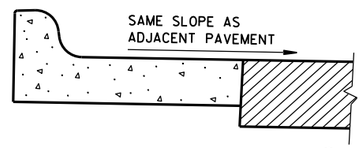


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

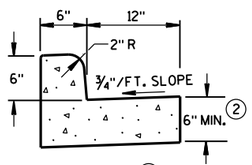


① TYPES A & D



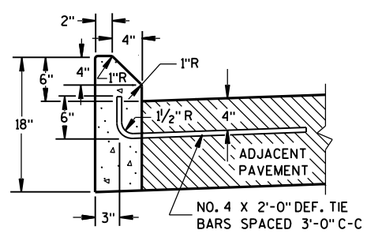
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



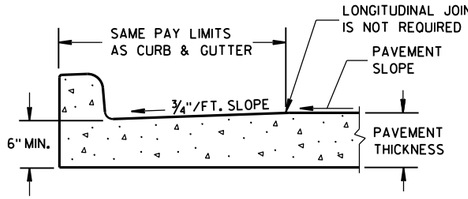
① TYPES A & D

CONCRETE CURB & GUTTER 18"

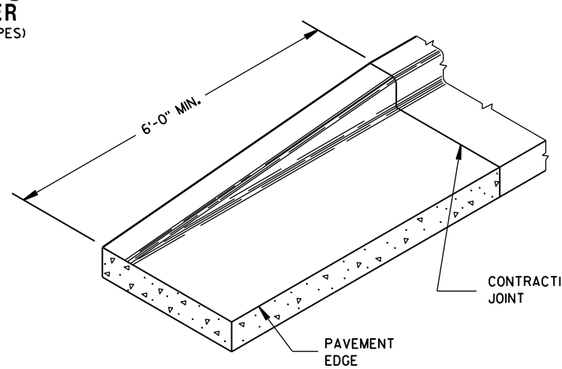


① TYPES G & J

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

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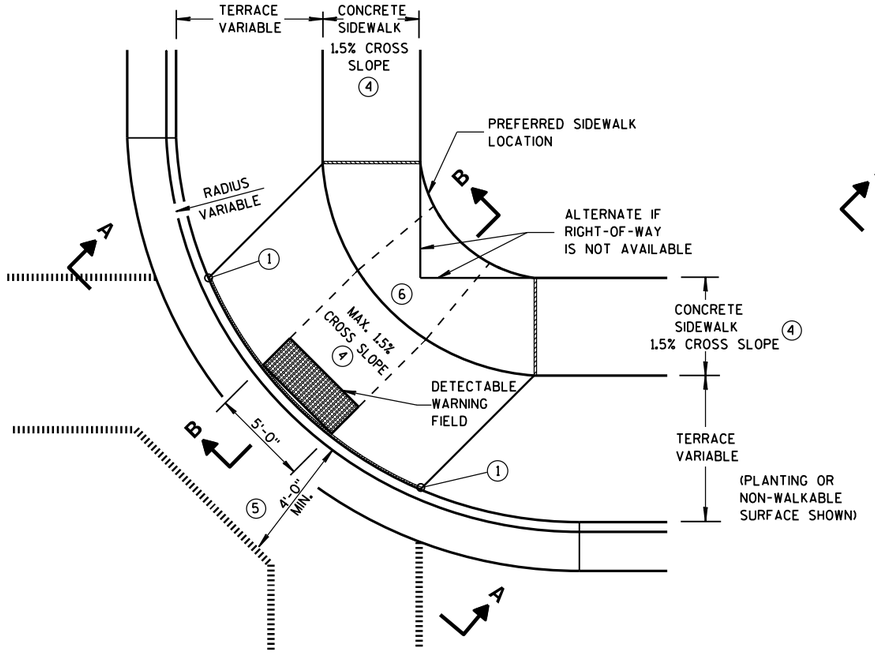
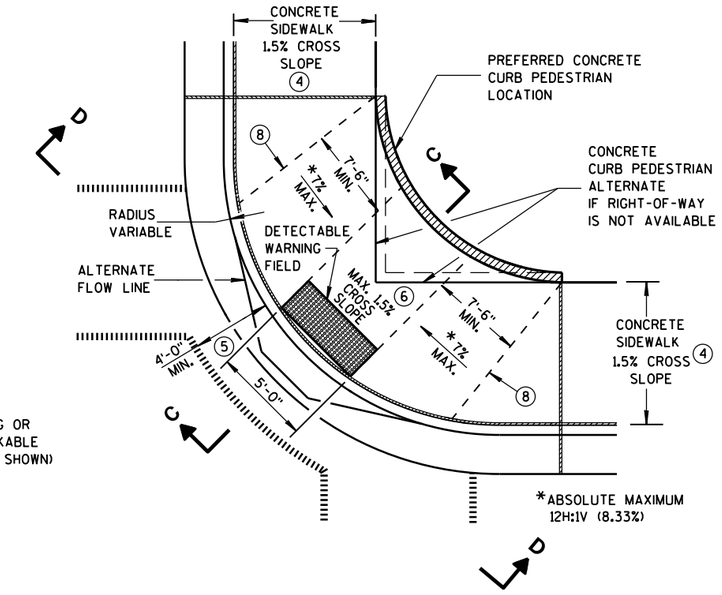


PLAN VIEW

TYPE 1 RAMP

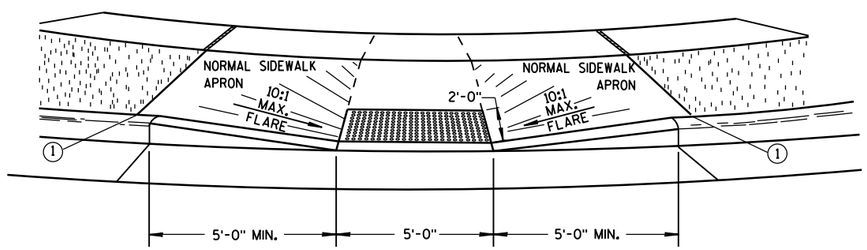
(CENTER OF CORNER RADIUS)



PLAN VIEW

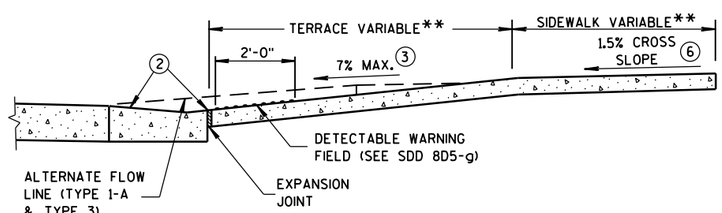
TYPE 1-A RAMP

(NO TERRACE)

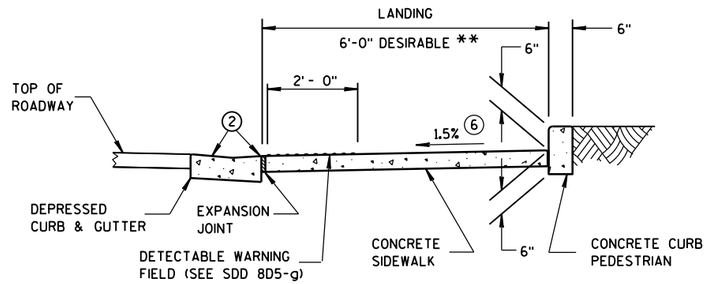


VIEW A-A

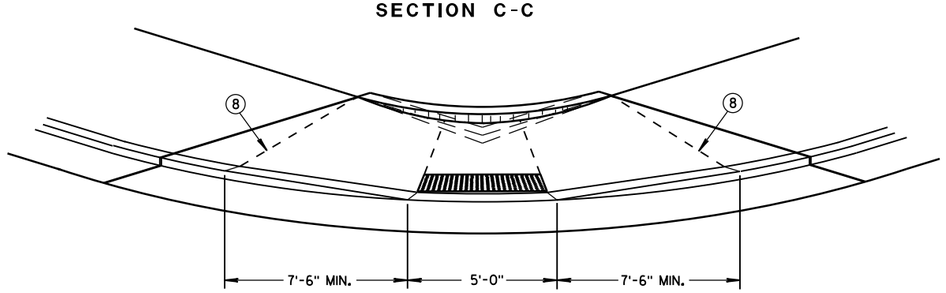
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

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

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 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 MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 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.

(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 TRANSPOI

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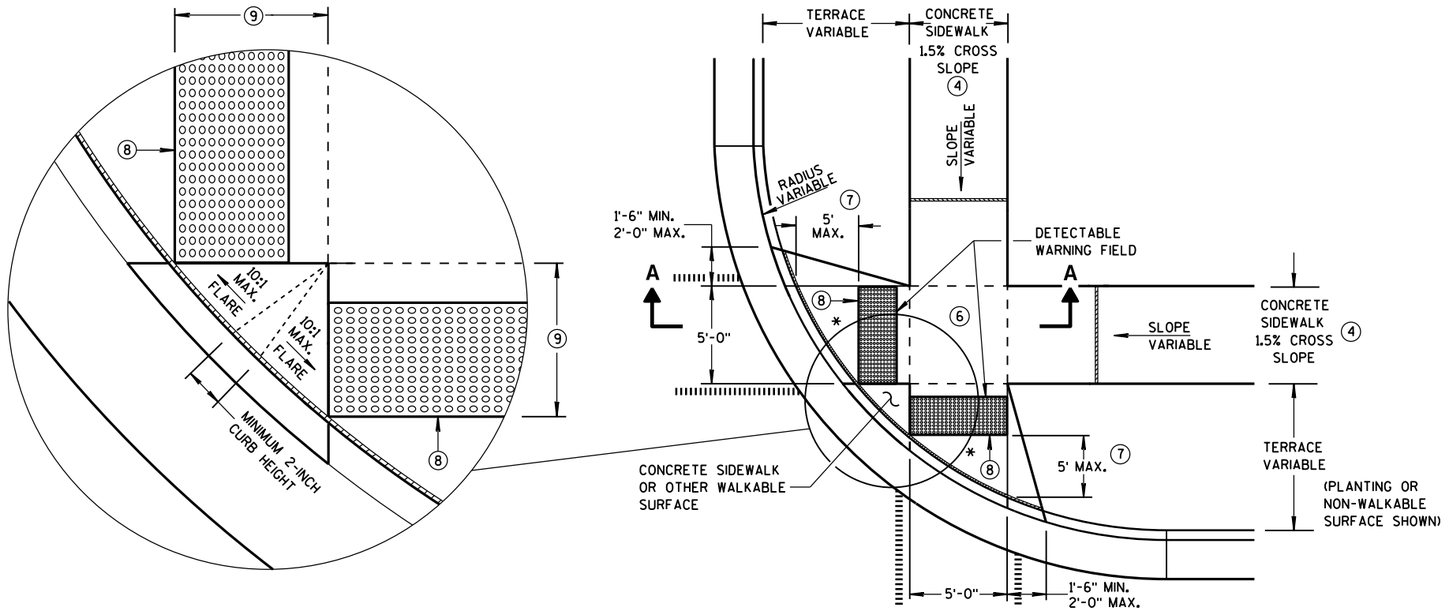
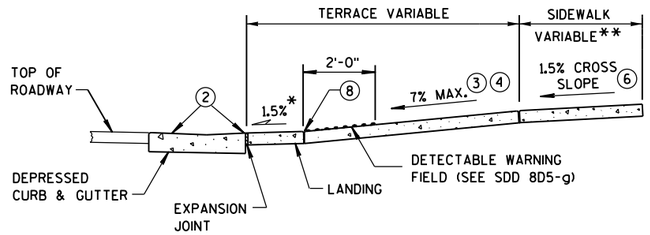


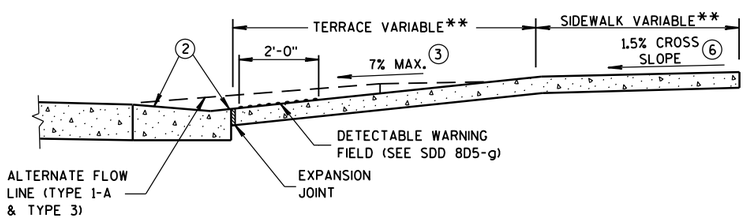
PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)

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

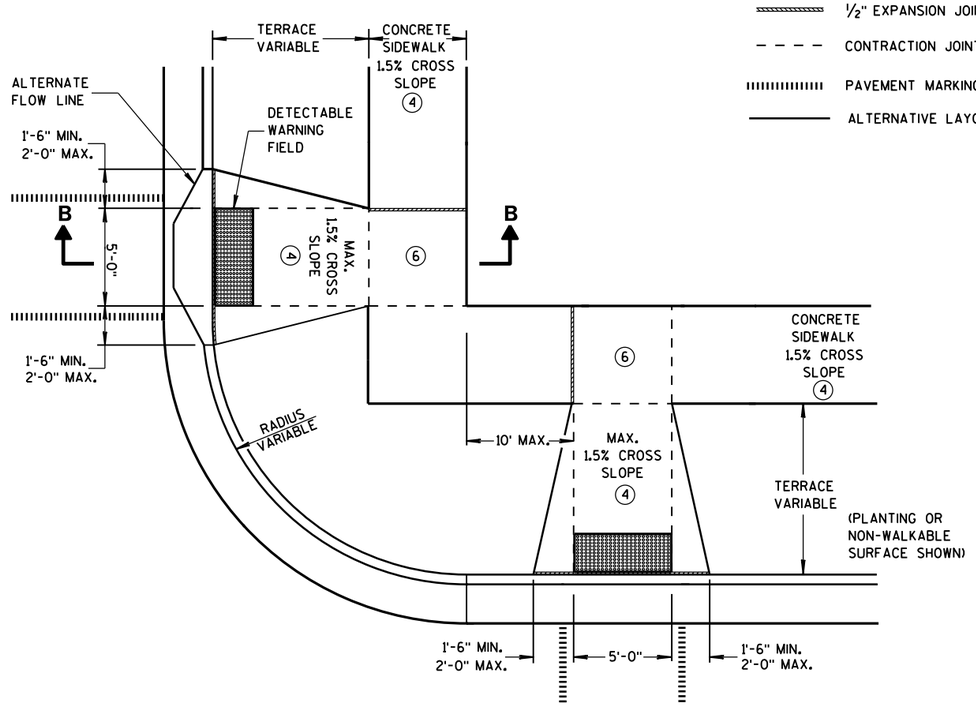


SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

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 MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 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.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(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

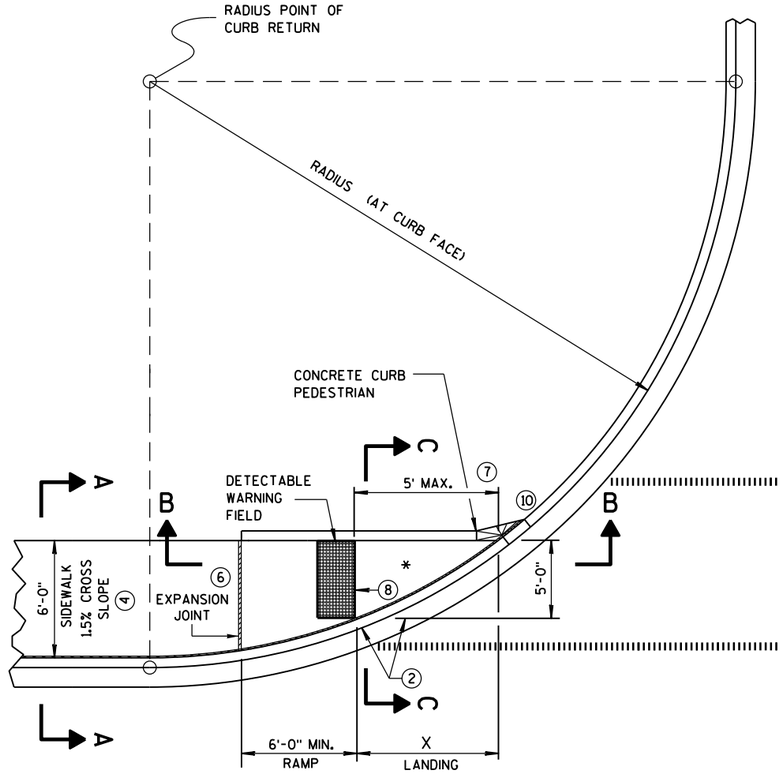
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

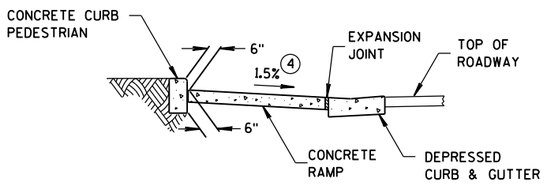
S.D.D. 8 D 5-19b



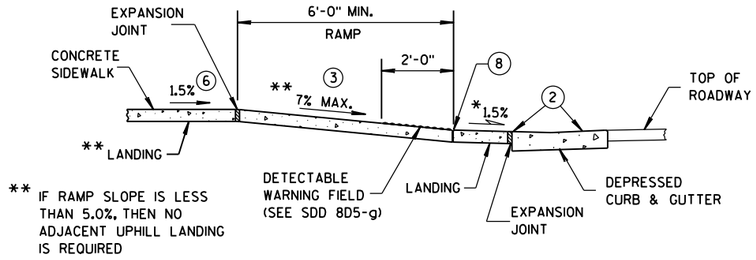
CURB RAMP TYPE 4A
PLAN VIEW

RADIUS (AT CURB FACE)	X
10 FEET	4'-7"
15 FEET	6'-5½"

INTERMEDIATE RADII CAN BE INTERPOLATED

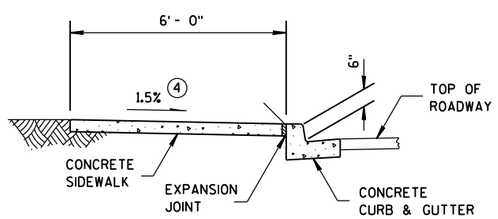


SECTION C-C FOR TYPE 4A



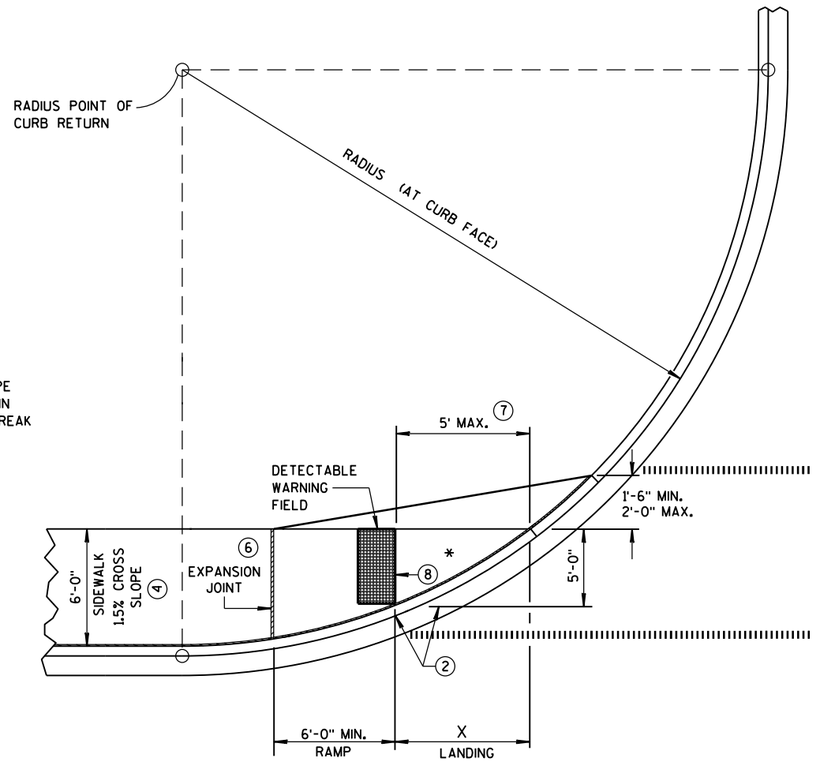
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B-B FOR TYPE 4A



SECTION A-A 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 ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

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

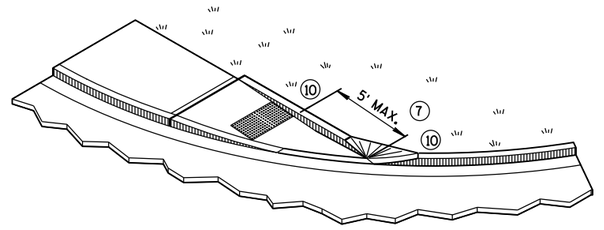
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

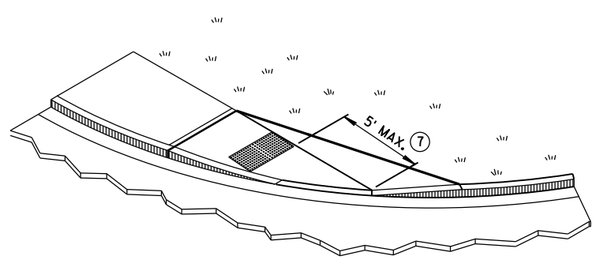
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(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

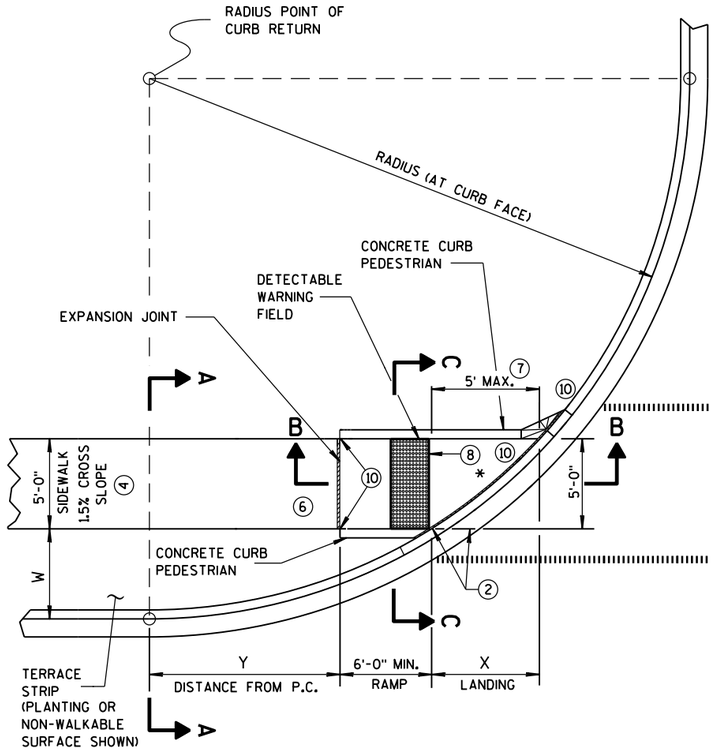
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

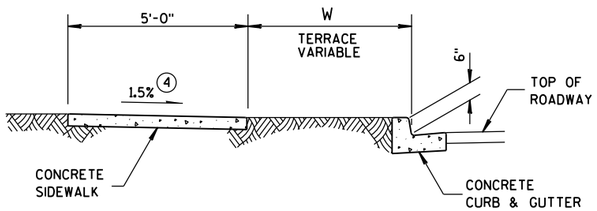
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

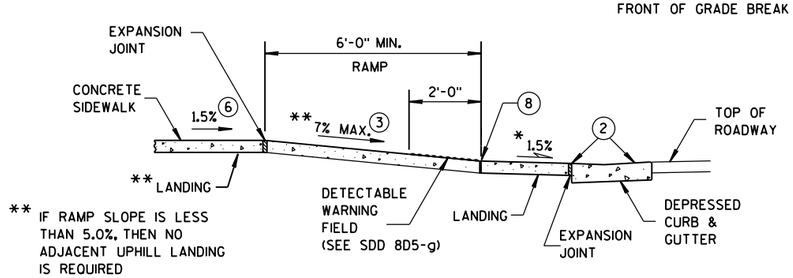
S.D.D. 8 D 5-19c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



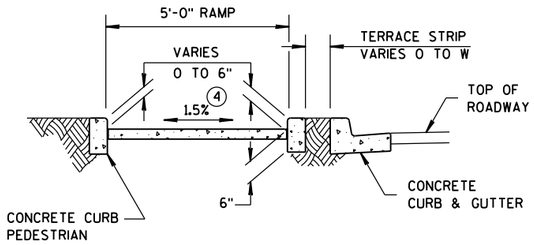
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B-B FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"		W = 8'-0"		W = 9'-0"		W = 10'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2'-10¼"	0'-5"	2'-1"	1'-4½"	1'-5"	2'-1"	0'-10"	2'-7½"	0'-3¼"	3'-0¼"						
15 FEET	4'-6¾"	2'-1¾"	3'-9"	3'-5¼"	3'-1¼"	4'-6"	2'-6¾"	5'-4½"	2'-1"	6'-1"	1'-8"	6'-8½"	1'-3¼"	7'-2½"	0'-10¾"	7'-7¼"
20 FEET	5'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-7"	3'-3"	8'-6½"	2'-10"	9'-4½"	2'-5½"	10'-1¼"	2'-1¼"	10'-9"
30 FEET			6'-9¼"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"	4'-5½"	13'-7¾"	4'-0¾"	14'-8½"	3'-8½"	15'-8¼"
40 FEET									6'-1¾"	15'-8½"	5'-8"	17'-2"	5'-3"	18'-5¾"	4'-10¾"	19'-8¼"
50 FEET															5'-10¼"	23'-2"

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



SECTION C-C FOR TYPE 4B

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 MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

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

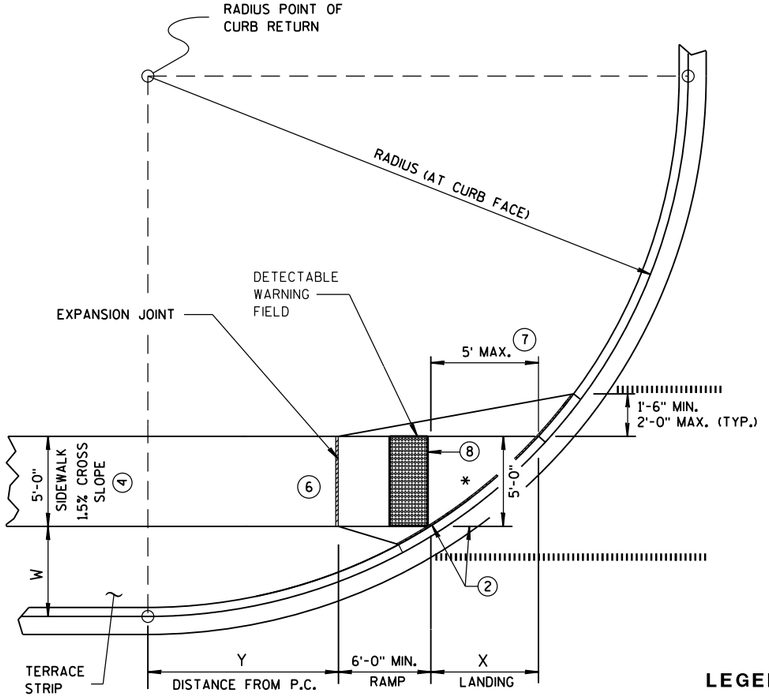
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

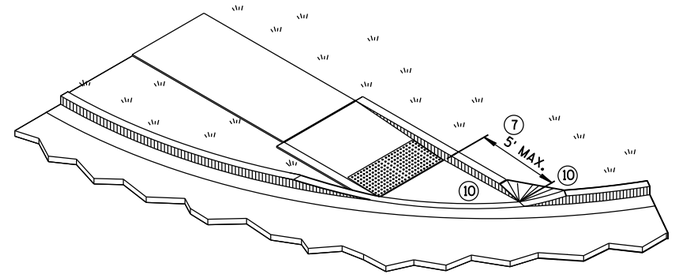
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

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

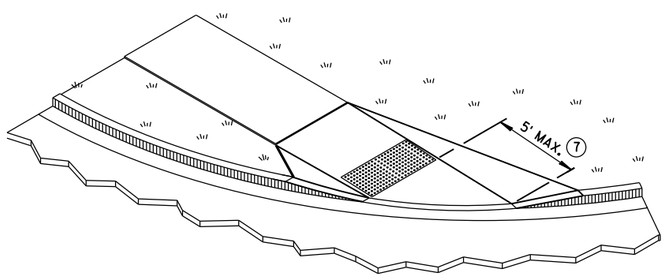
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

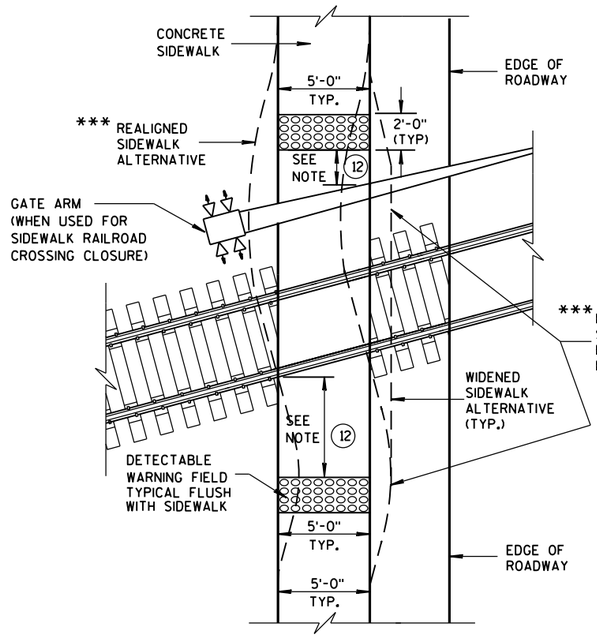
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

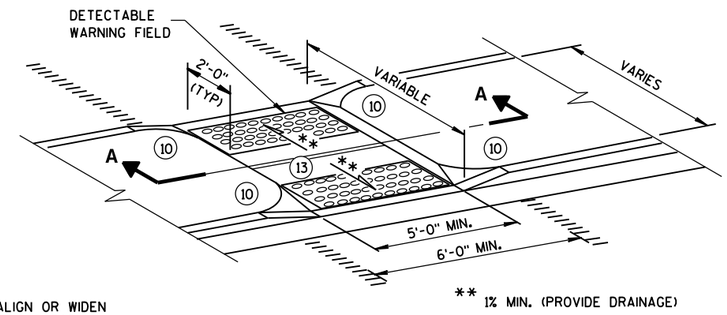
6

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



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING

*** DETAILS TO BE DETERMINED BY DESIGNER



** 1% MIN. (PROVIDE DRAINAGE)

MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING
TYPE 5

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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 MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 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.

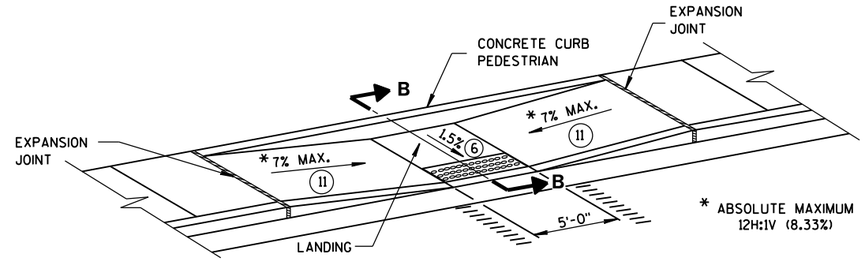
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

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

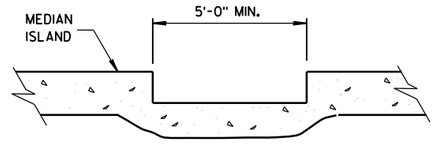
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(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.

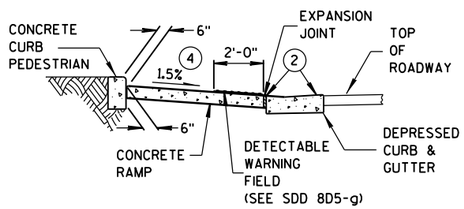
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2-FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.



MID-BLOCK CROSSING
TYPE 7A

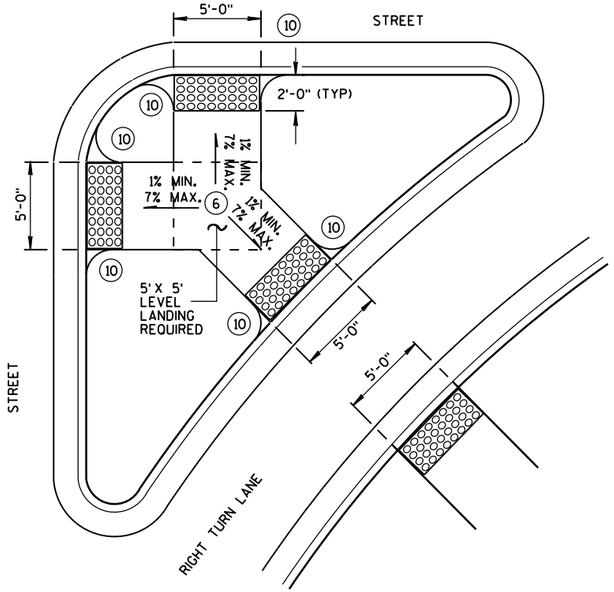


SECTION A-A

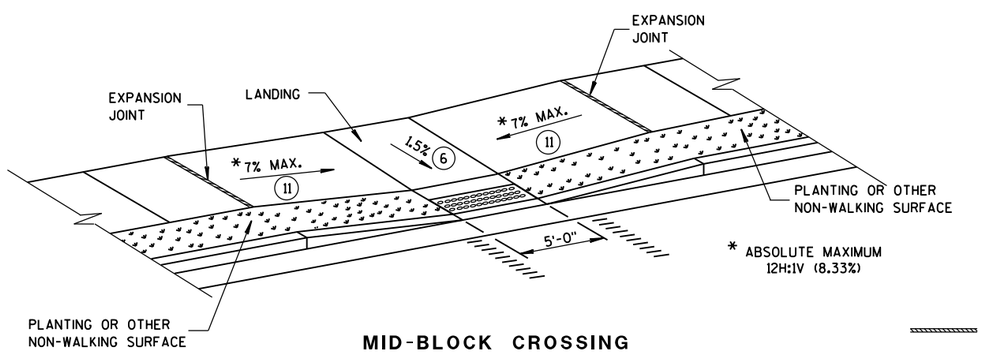


SECTION B-B

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

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

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

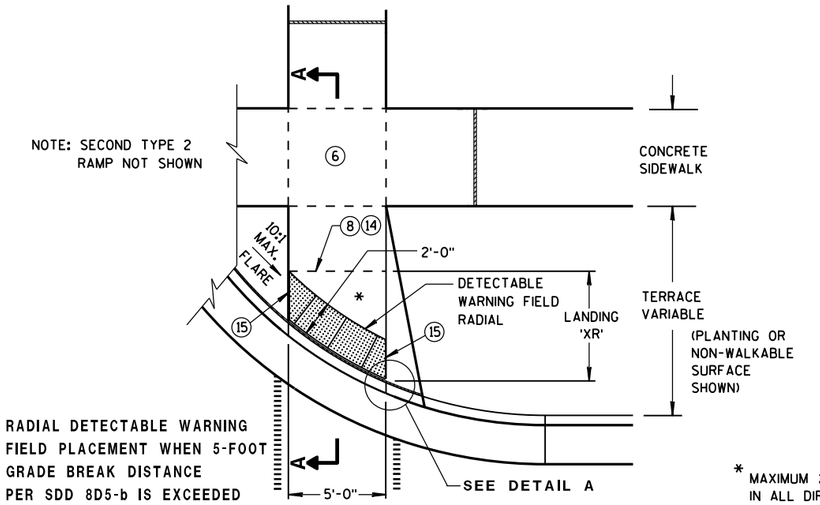
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-19e

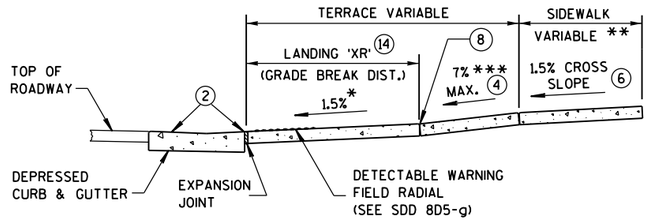
6

S.D.D. 8 D 5-19e



TYPE 2 RAMP
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)

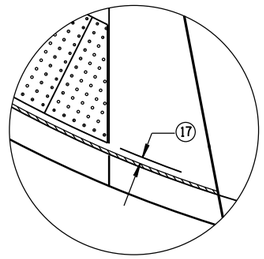
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



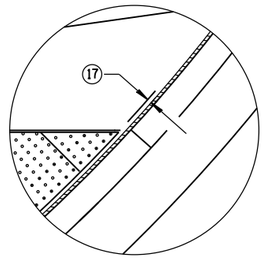
** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

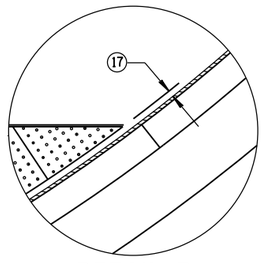
SECTION A-A



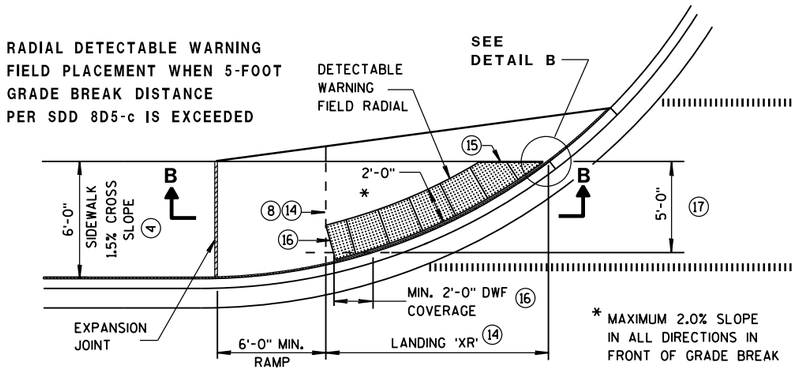
DETAIL A



DETAIL C

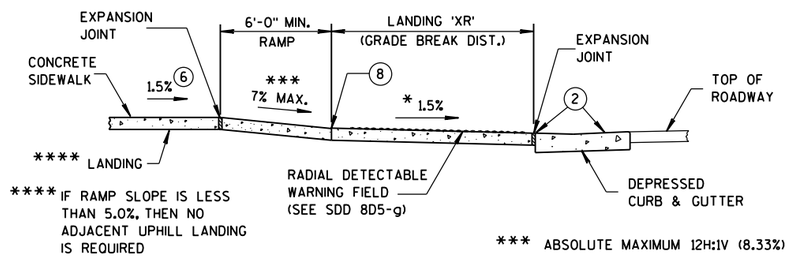


DETAIL B



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

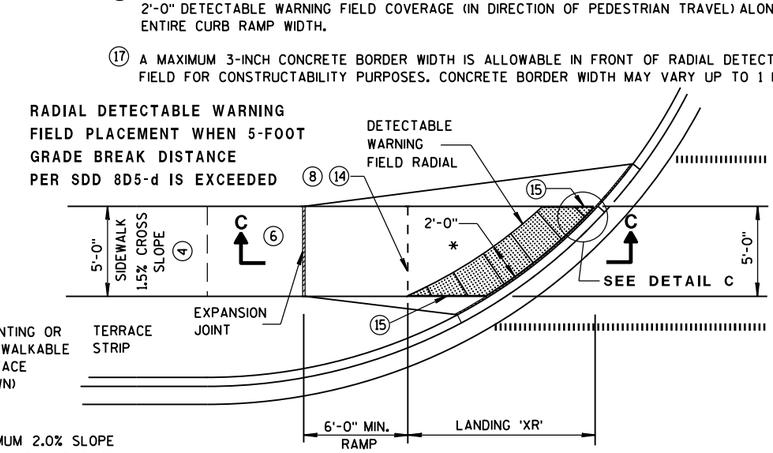
CURB RAMP TYPE 4A1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

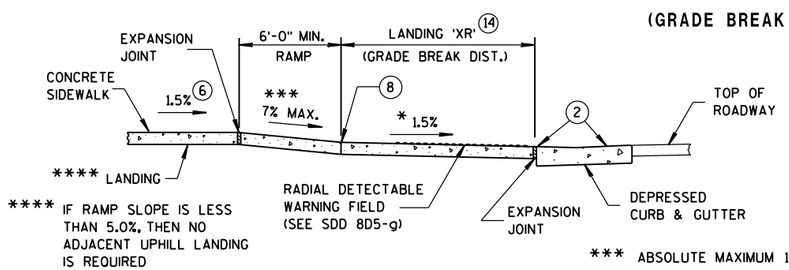
*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION B-B FOR TYPE 4A1



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

CURB RAMP TYPE 4B1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION C-C FOR TYPE 4B1

LEGEND

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

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

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

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

(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 MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 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.

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

(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION 'XR') REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

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

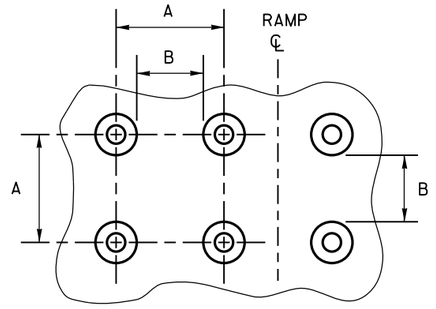
(16) USE 1'X 2' RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2'-0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 3-INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

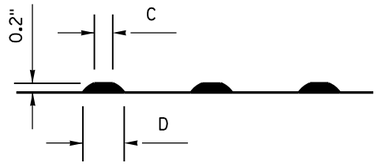
CURB RAMPS
RADIAL DETECTABLE WARNING FIELD APPLICATIONS

	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

GENERAL NOTES

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

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

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

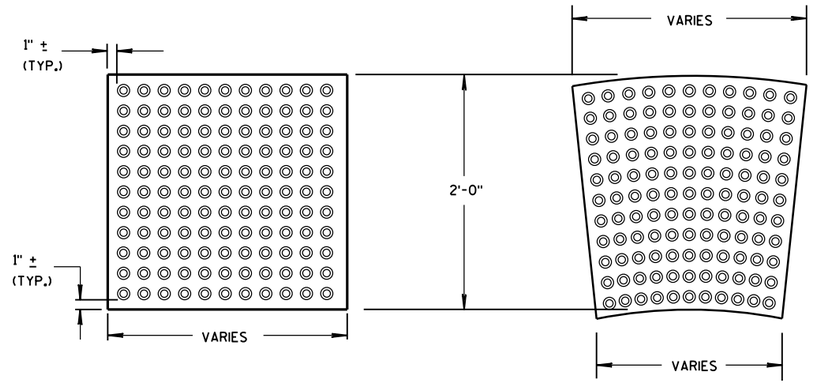
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

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

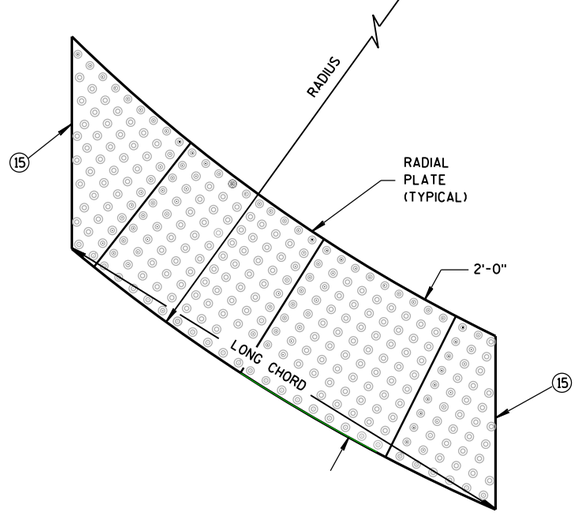


RECTANGULAR PLATES

RADIAL PLATES

DETECTABLE WARNING FIELDS (TYPICAL)

PLAN VIEW



RADIAL DETECTABLE WARNING FIELD ATTRIBUTES

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
ENT
FHWA

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S.D.D. 8 D 5-19g

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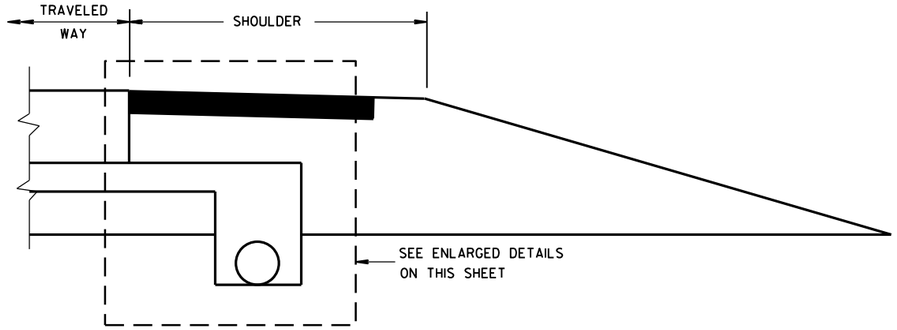
S.D.D. 8 D 5-19g



RURAL CROSS SECTION

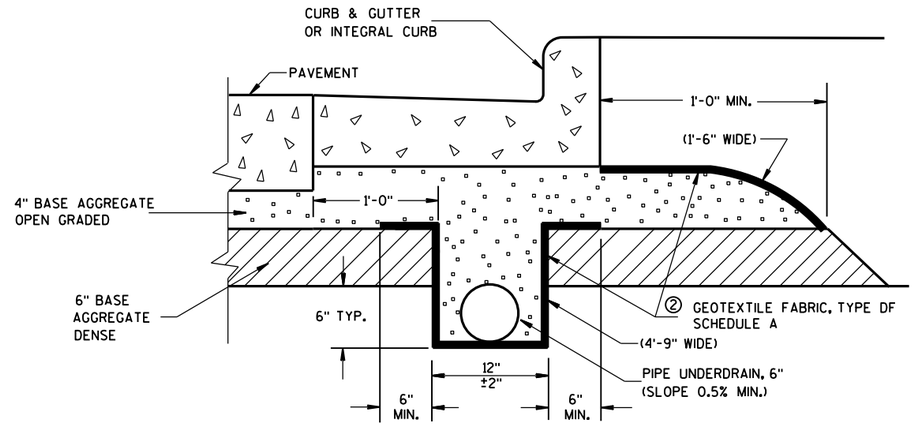
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

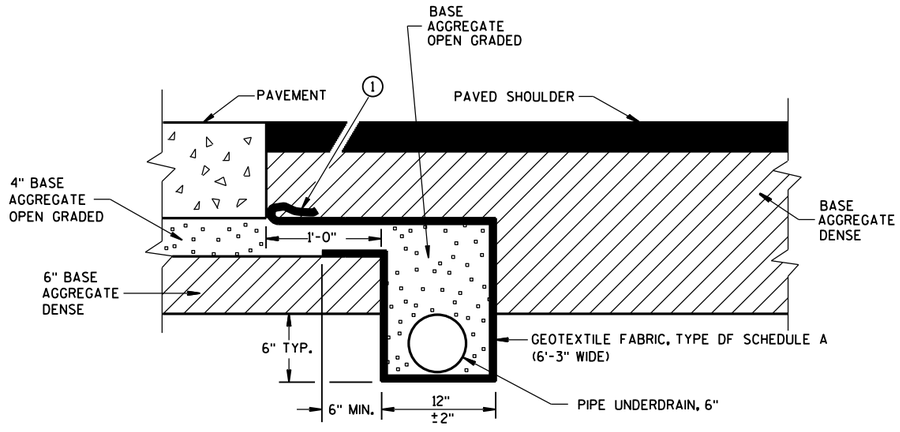
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

① FOLD OVER EXCESS GEOTEXTILE FABRIC AT THIS LOCATION.

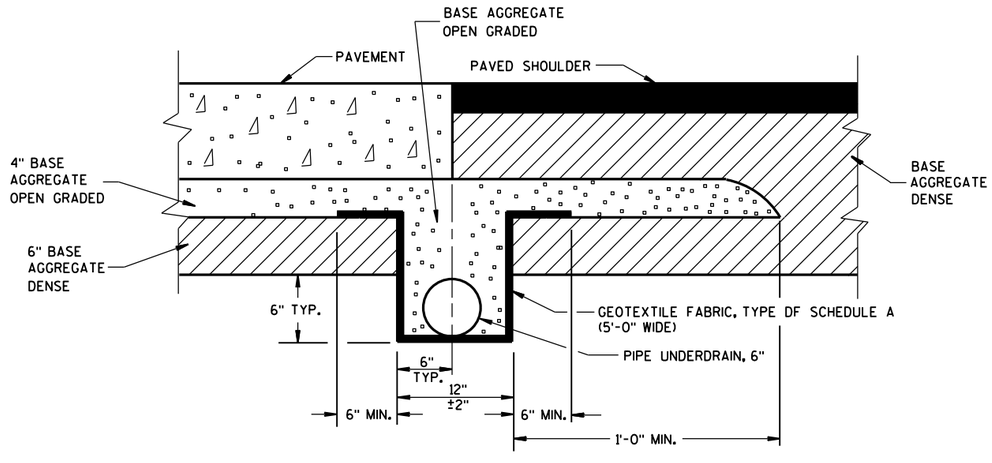
② TOTAL FABRIC WIDTH IS 6'-3" FOR PAYMENT.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATE

EDGEDRAIN IN RURAL ROADWAY

EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPE
FHWA

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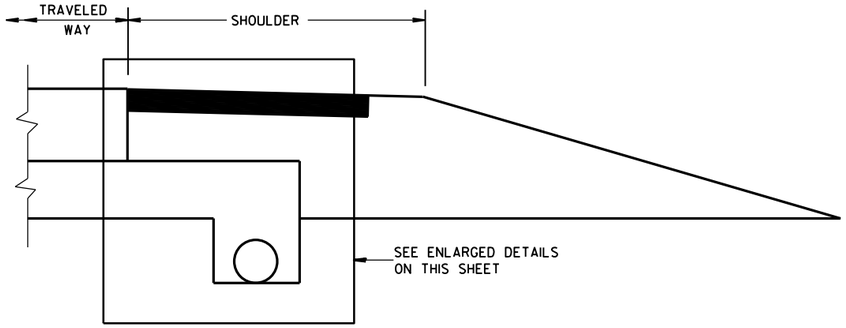
S.D.D. 8 D 15-5b

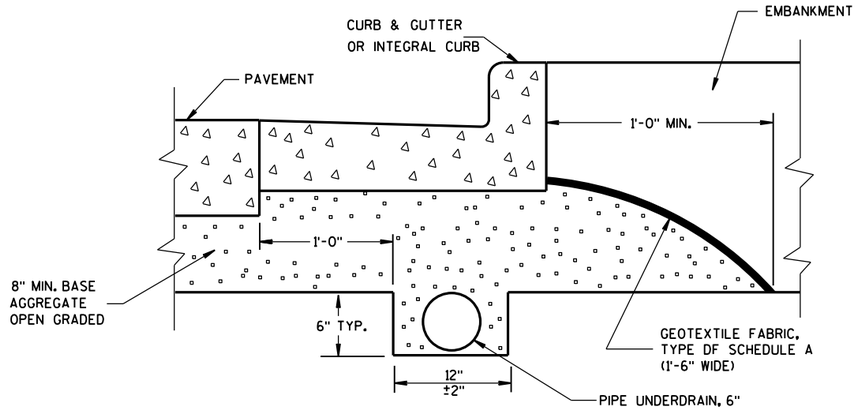


RURAL CROSS SECTION

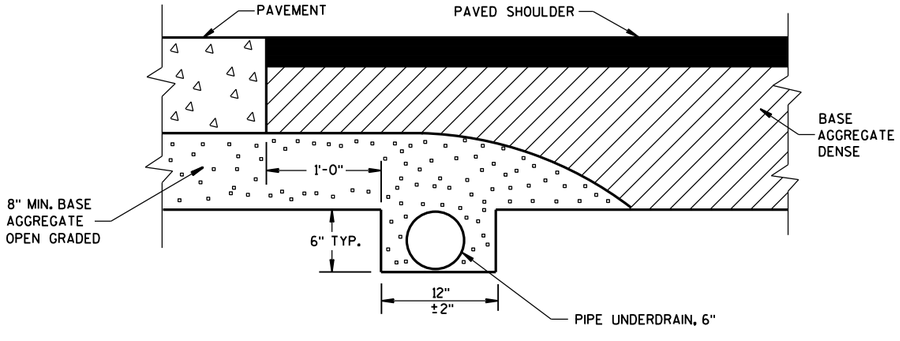
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

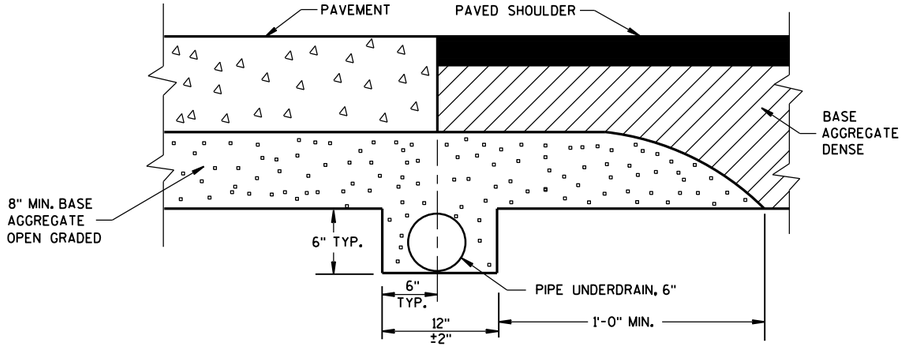
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

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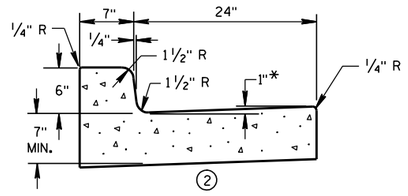
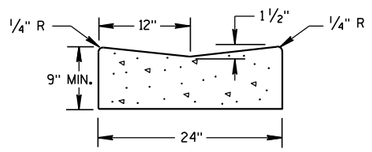
EDGEDRAIN AND BASE AGGREGATE OPEN GRADED	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept. 2015	/S/ Peter Kemp, P.E.
DATE	PAVEMENT SUPE
FHWA	

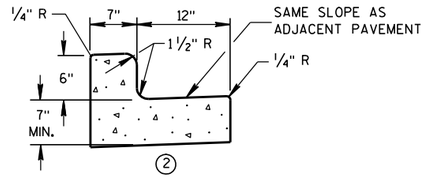
S.D.D. 8 D 15-5c



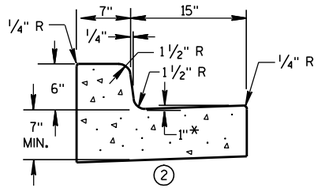
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

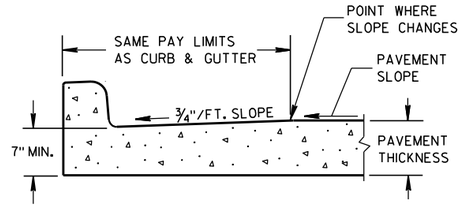


① CONCRETE CURB & GUTTER 19"



① CONCRETE CURB & GUTTER 22"

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

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.

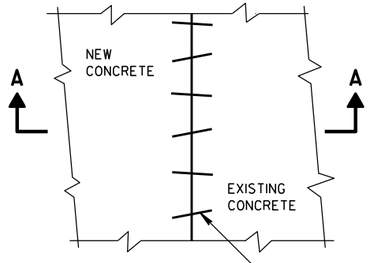
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURB.

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MIMIMUM GUTTER THICKNESS IS MAINTAINED.

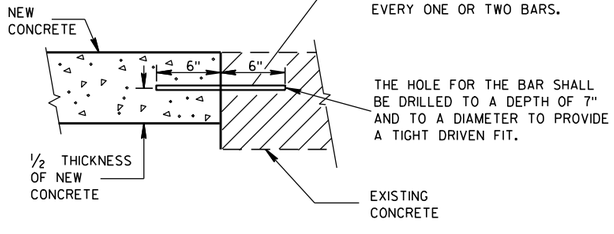
③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

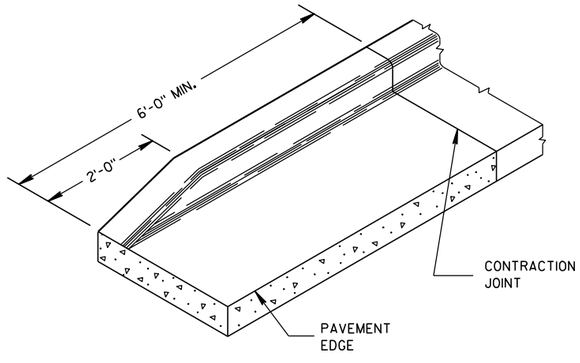
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



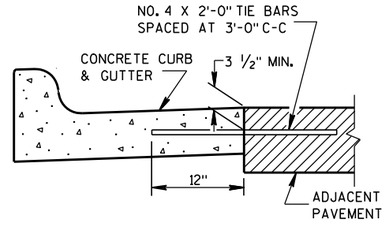
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A

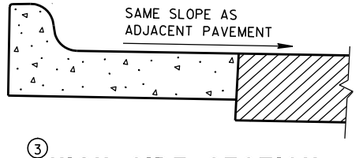
PAVEMENT TIES



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION

(TYPICAL FOR ALL CURB & GUTTER)

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional Use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/2/2010
DATE

/S/ Jerry Zogg
ROADWAY STANDARDS ENGINEER

FHWA

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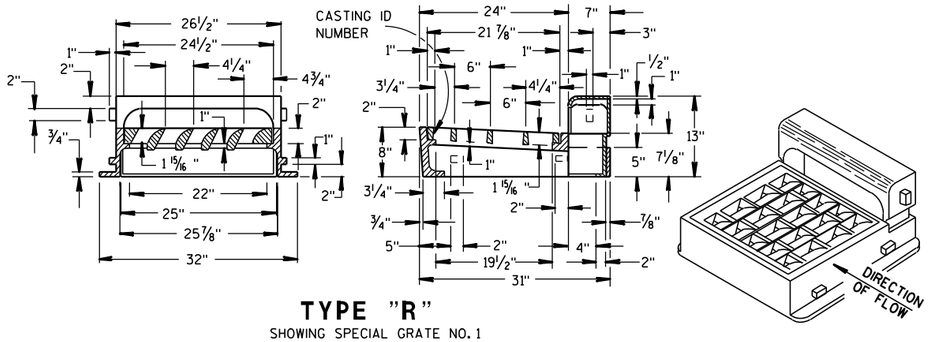
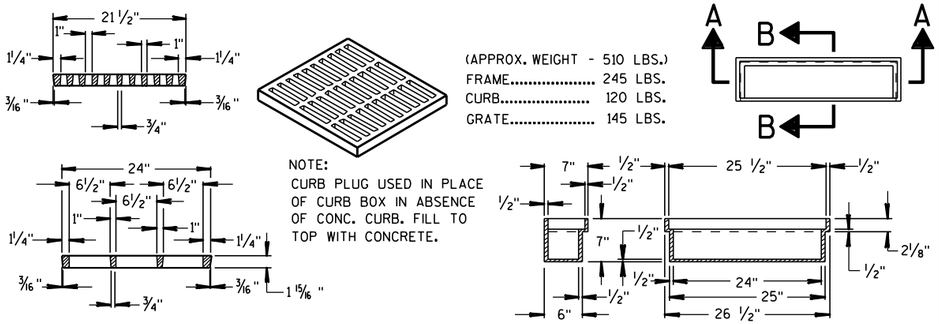
INLET COVERS



TYPE "R"

SHOWING SPECIAL GRATE NO. 1
(TO BE NOTED AS R-1 IN DRAINAGE TABLE)



(APPROX. WEIGHT - 510 LBS.)
FRAME..... 245 LBS.
CURB..... 120 LBS.
GRATE..... 145 LBS.

NOTE:
CURB PLUG USED IN PLACE OF CURB BOX IN ABSENCE OF CONC. CURB. FILL TO TOP WITH CONCRETE.

GRATE FOR TYPE "R" INLET COVER

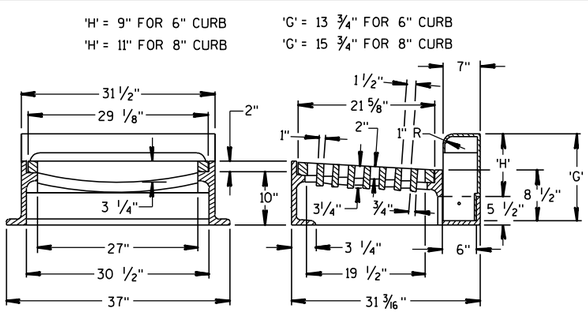
(GRATE..... 150 LBS.)
(TO BE USED UNLESS OTHERWISE NOTED IN DRAINAGE TABLE)

SECTION B-B SECTION A-A

SPECIAL CURB PLUG "P"

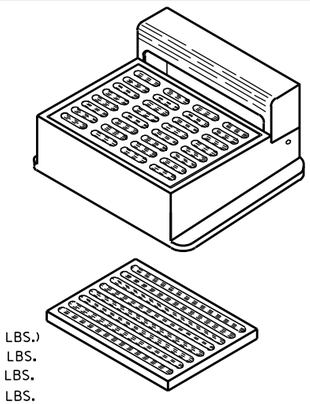
(CURB PLUG..... 85 LBS.)
(TO BE NOTED AS R-P IN DRAINAGE TABLE)

'H' = 9" FOR 6" CURB
'H' = 11" FOR 8" CURB
'G' = 13 3/4" FOR 6" CURB
'G' = 15 3/4" FOR 8" CURB

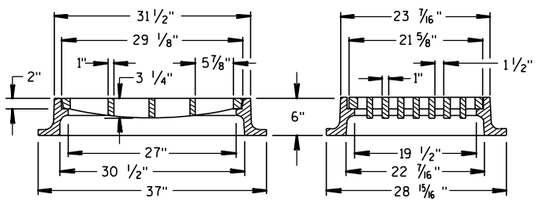


TYPE "W"

(APPROX. WEIGHT - 670 LBS.)
FRAME..... 350 LBS.
CURB BOX..... 135 LBS.
GRATE..... 185 LBS.



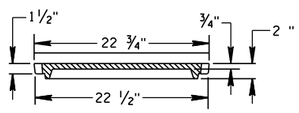
ALTERNATE GRATE
(FOR EXPRESSWAY RAMPS)
TYPES "W" & "X"



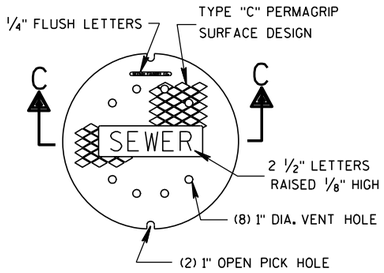
TYPE "X"

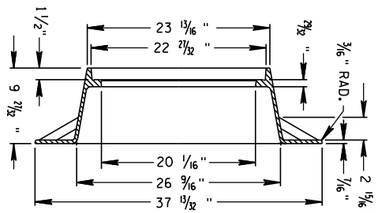
(APPROX. WEIGHT - 470 LBS.)

MANHOLE COVER



SECTION C-C





TYPE "Q"

(APPROX. WEIGHT - 290 LBS.)

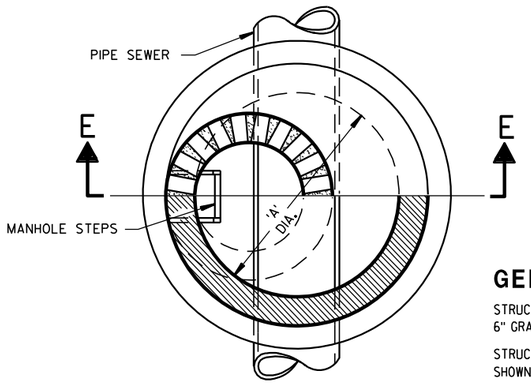
TABLE OF DIMENSIONS

TYPE	'A'	'B'	'C'
11	3'-6"	2'-8"	12" - 36"*
12	4'-0"	3'-8"	12" - 42"**
13	5'-0"	5'-8"	42" - 48"
14	6'-0"	7'-8"	54" - 60"

* 12" - 21" FOR PRECAST MANHOLES
** 12" - 24" FOR PRECAST MANHOLES

THE FIRST STEP SHALL BE PLACED 16" ABOVE THE BENCH.

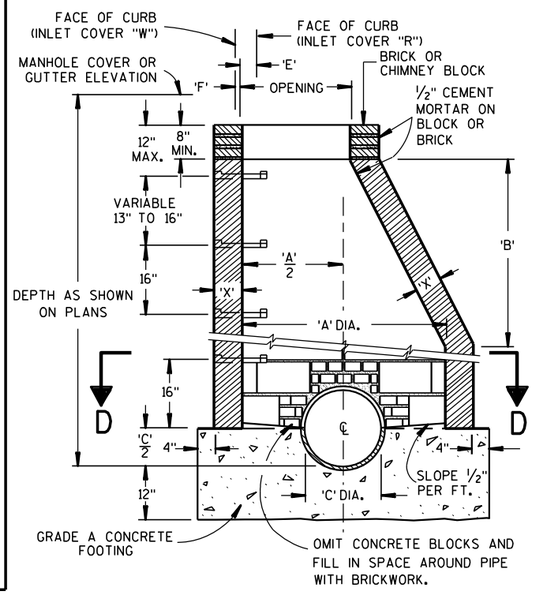
MANHOLE



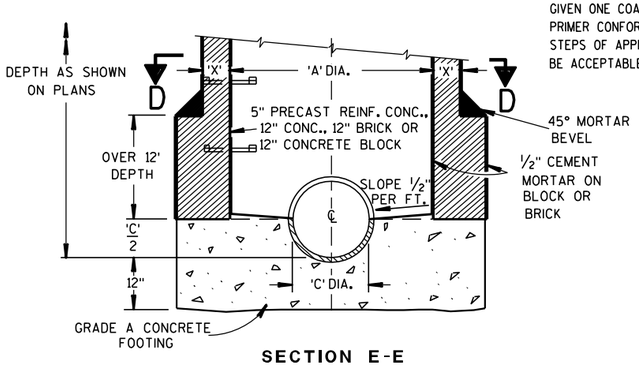
HALF SECTION D-D

TABLE OF OPENING DIMENSIONS

COVER TYPE	COVER DESCRIPTION	OPENING	'E'	'F'
"O"	ROUND	2'-2" DIA.	—	—
"W"	CURB BOX	1'-8" X 2'-6"	—	1"
"X"	INLET	1'-10" X 2'-6"	—	—
"R"	CURB BOX	2'-0" X 2'-1"	4"	—



SECTION E-E



SECTION E-E

TYPES 11, 12, 13 & 14

GENERAL NOTES

STRUCTURE WALL THICKNESS 'X' TO BE 8" BRICK, 6" CONCRETE BLOCK, 6" GRADE A CONCRETE OR 5" PRECAST REINFORCED CONCRETE.

STRUCTURE FOOTINGS ARE TO BE GRADE A CONCRETE OF THE THICKNESS SHOWN IN THE DETAIL OR 5" PRECAST REINFORCED CONCRETE.

REINFORCEMENT FOR 5" PRECAST REINFORCED CONCRETE SHALL BE 6" X 6" W16 X W16 WELDED SREEL WIRE FABRIC AND SHALL BE EMBEDDED 2" CLEAR.

PRECAST INLET UNITS AND BASES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

PRECAST CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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

SET FRAME ELEVATION 0.03 FT. LOWER THAN ELEVATION INDICATED ON THE PLANS.

THE CONTRACTOR MAY FORM AND POUR MONOLITHIC CONCRETE INVERT PROVIDED THE PIPE ENDS ARE EXTENDED INTO THE M.H. AND NOT TERMINATED WITHIN THE M.H. WALLS.

MANHOLE STEPS

STEPS MEETING THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH; 16 INCH C-C MAX. SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM WALL EMBEDMENT OF 3 INCHES IN PRECAST MANHOLE AND 6 INCHES IN 8 INCH BRICK OR 6 INCH BLOCK MANHOLE; TREAD OF STEP SHALL HAVE A NON-SKID SURFACE AND BE FLANKED BY CLEATS, WITH A MINIMUM OF 10 INCHES CLEAR BETWEEN CLEATS, TO PREVENT FOOT SLIPPING OFF THE EDGE CLEATS SHALL BE A MINIMUM OF 3/4 INCH HIGH BY 3/4 INCH WIDE HAVING A MINIMUM THICKNESS OF 3/8 INCH. STEPS SHALL BE CAPABLE OF SUPPORTING A CONCENTRATED LOAD OF 300 LBS. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

SOLID ALUMINUM STEPS SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 0.75 INCH. ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE SHALL BE GIVEN ONE COAT OF SUITABLE QUALITY PAINT, SUCH AS ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645 OR EQUIVALENT. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCING BAR WILL BE ACCEPTABLE.

MANHOLES, MANHOLE & INLET COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/12/2011 — DATE
/S/ Jerry H. Zogg — ROADSIDE STANDARDS ENGINEER
227 — [illegible]
FHWA

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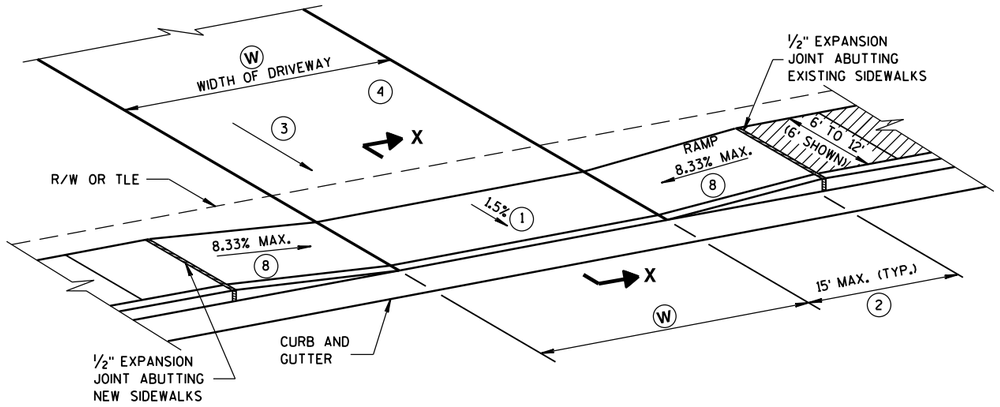
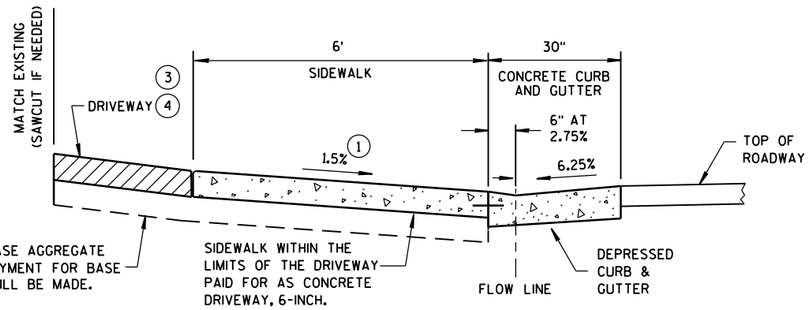
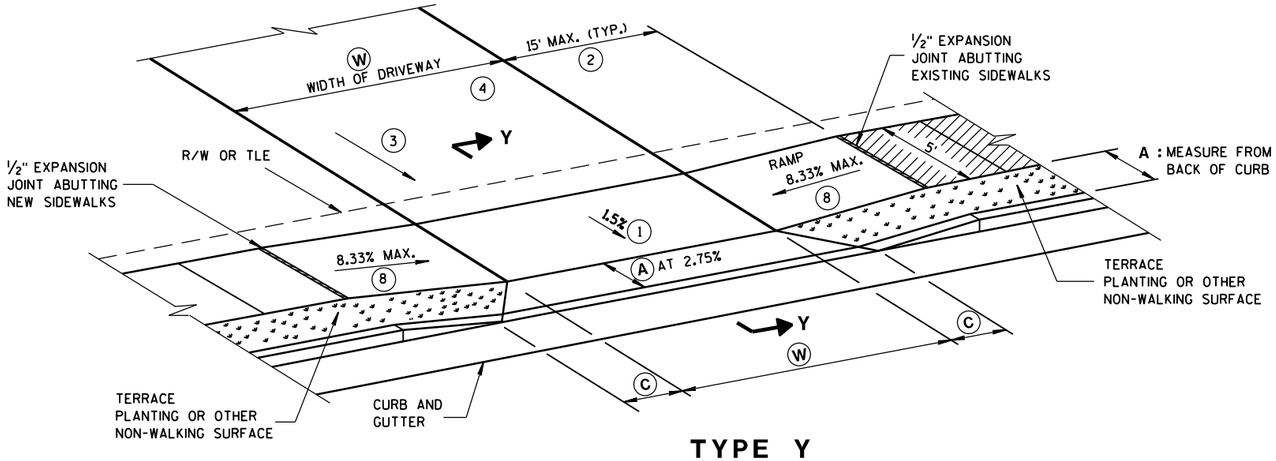


TYPE X
SIDEWALK ABUTS CURB & GUTTER
TERRACE VARIES 0 TO 3 FEET



SECTION X-X

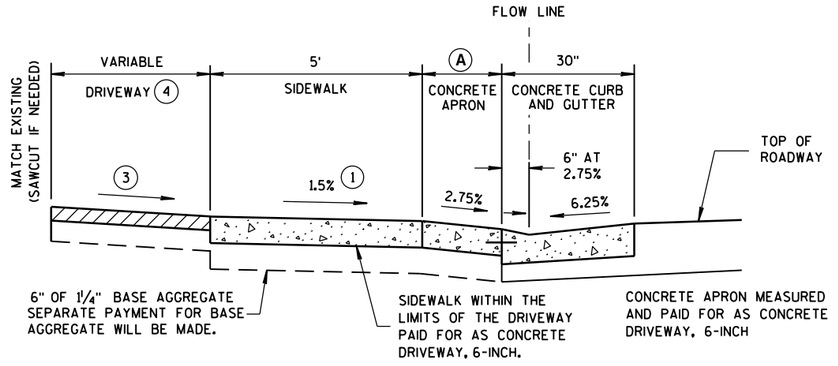


TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET

W: 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)
16' MIN. - 35' MAX. COMMERCIAL (CE)

GENERAL NOTES

1. CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
2. THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.
3. DRIVEWAY SLOPES: DESIRABLE MAXIMUM
   - 10.5% UP AWAY FROM SIDEWALK (SAG)
   - 8.5% DOWN AWAY FROM SIDEWALK (CREST)
   - ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG
4. DRIVEWAY TYPES
   - 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
   - 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
   - 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)
5. PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.
6. (W) IS SHOWN ON PLAN AND PROFILE SHEETS.
7. OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.
8. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.



NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

SECTION Y-Y

DRIVEWAY DETAIL
WITH CONCRETE CURB & GUTTER
(URBAN AND SUBURBAN)

TABLE Y

A FEET	C FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'

NOT TO SCALE

DRIVEWAY AND SIDEWALK RAMPS
TYPES X & Y

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERV
FHWA

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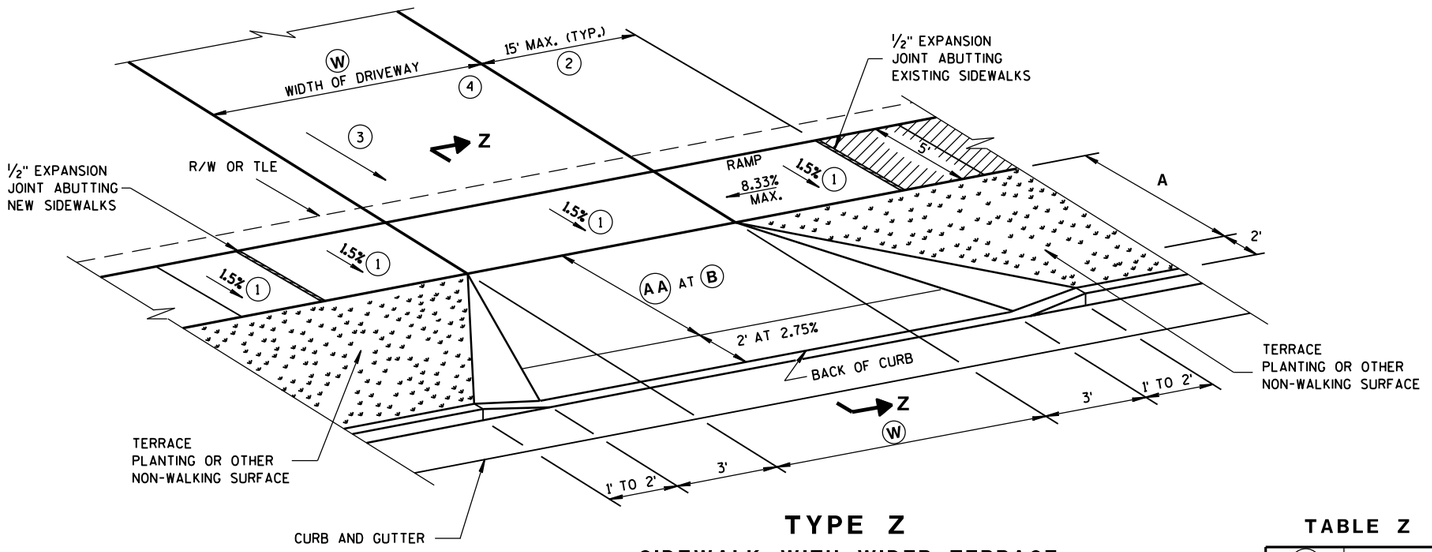
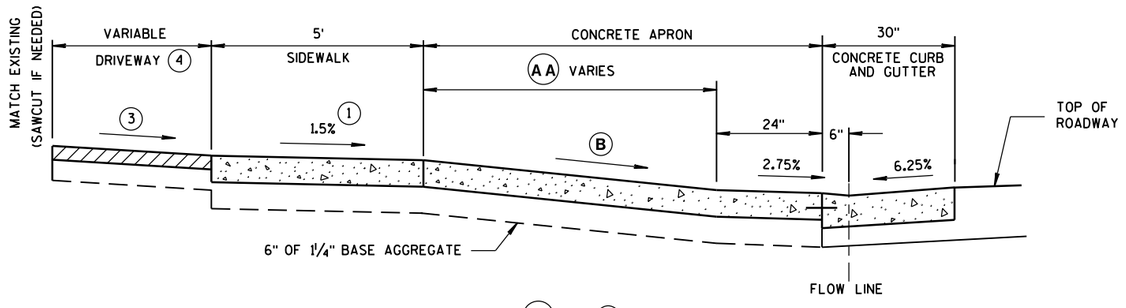


TYPE Z

SIDEWALK WITH WIDER TERRACE
TERRACE VARIES 7 TO 12 FEET

TABLE Z

(AA) FEET	(B) %
4.5'	11.5%
5.5'	9-11.5%
6.5'	8-11.5%
7.5'	7-11.5%
8.5'	6-11.5%
9.5'	5-11.5%



PROVIDE (AA) AND (B) AS SHOWN ON CROSS SECTIONS.

NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS FOR **B** VALUES NOT SHOWN IN TABLE Z.

SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY PAID FOR AS CONCRETE DRIVEWAY, 6-INCH.

SEPARATE PAYMENT FOR BASE AGGREGATE WILL BE MADE.

CONCRETE APRON MEASURED AND PAID FOR AS CONCRETE DRIVEWAY, 6-INCH

SECTION Z-Z

DRIVEWAY DETAIL WITH CONCRETE CURB & GUTTER

(URBAN AND SUBURBAN)

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)
16' MIN. - 35' MAX. COMMERCIAL (CE)

GENERAL NOTES

1. CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

2. THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.

3. DRIVEWAY SLOPES: DESIRABLE MAXIMUM
   10.5% UP AWAY FROM SIDEWALK (SAG)
   8.5% DOWN AWAY FROM SIDEWALK (CREST)
   ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

4. DRIVEWAY TYPES
   - 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
   - 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
   - 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)

5. PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

6. (W) IS SHOWN ON PLAN AND PROFILE SHEETS.

7. OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

NOT TO SCALE

DRIVEWAY AND SIDEWALK RAMPS TYPE Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERV
FHWA

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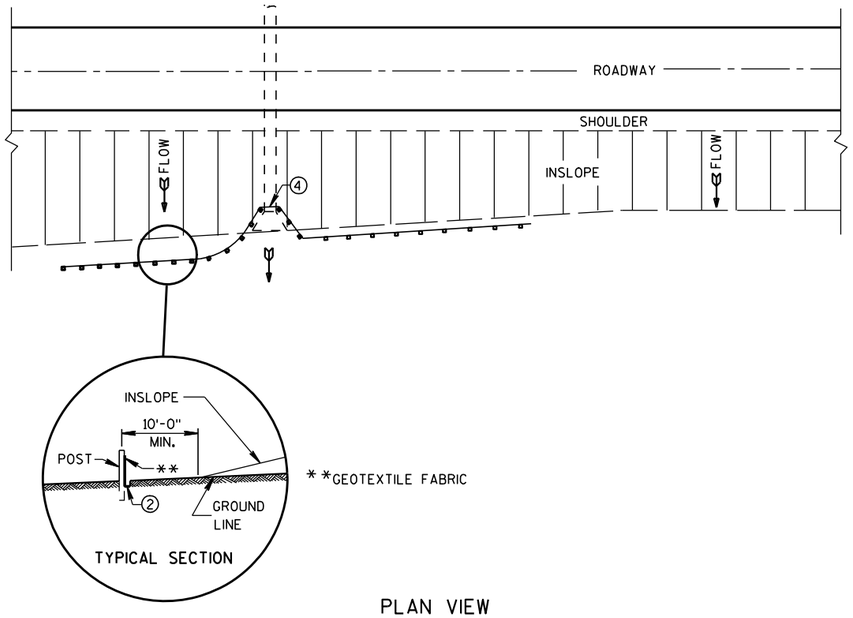
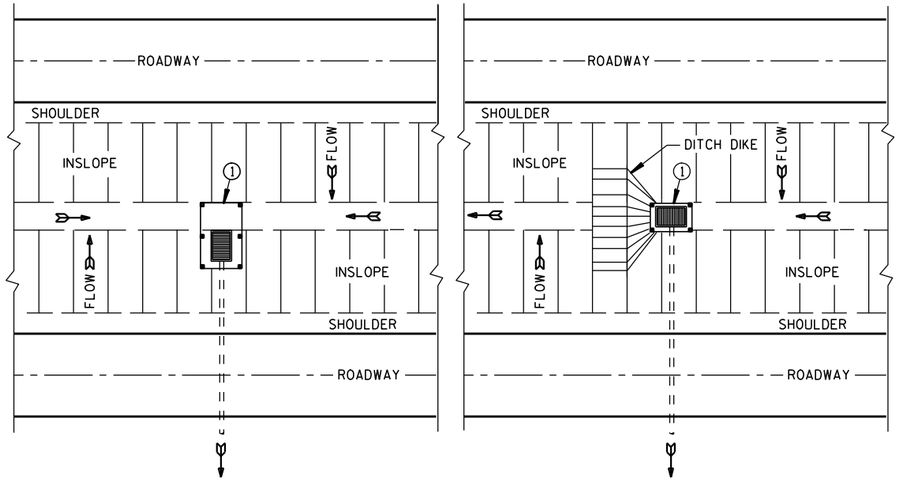


PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



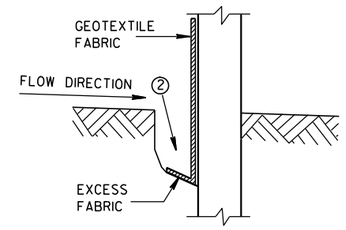
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

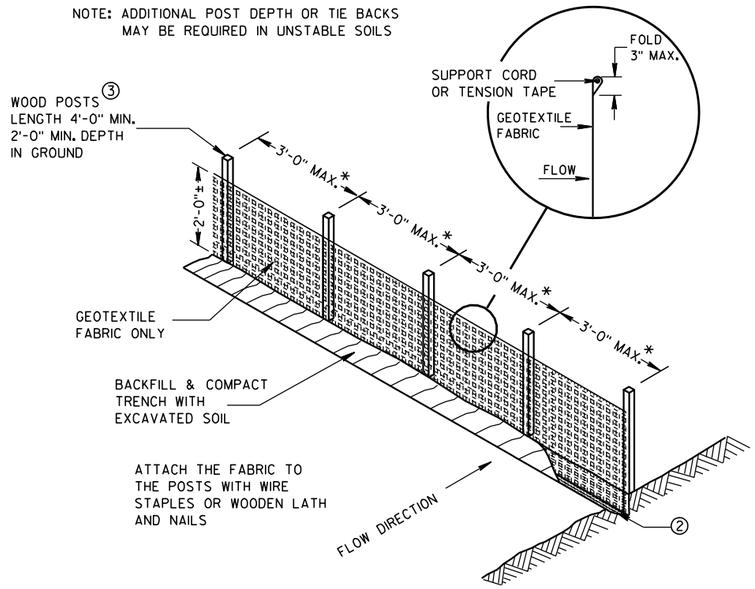
GENERAL NOTES

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

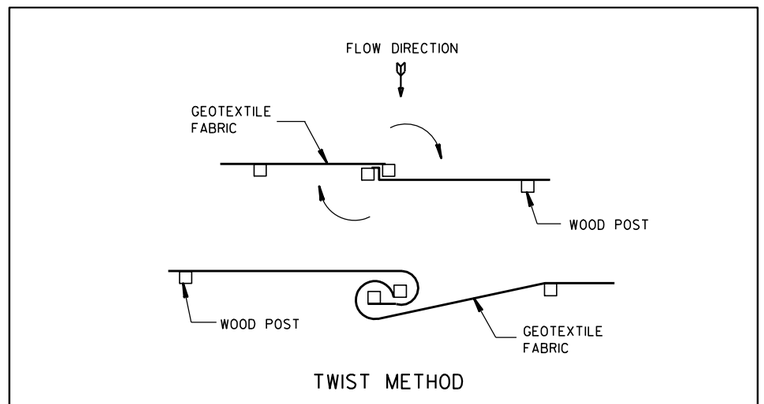
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



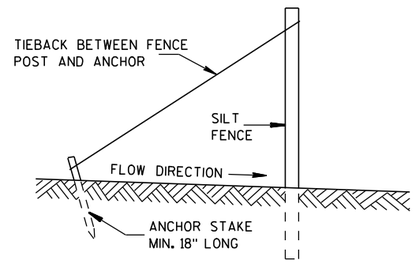
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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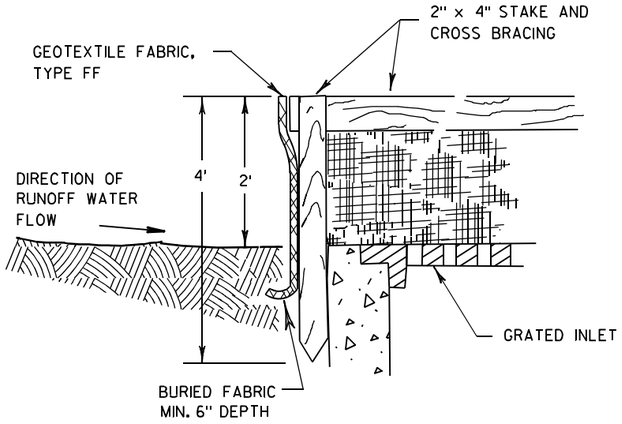
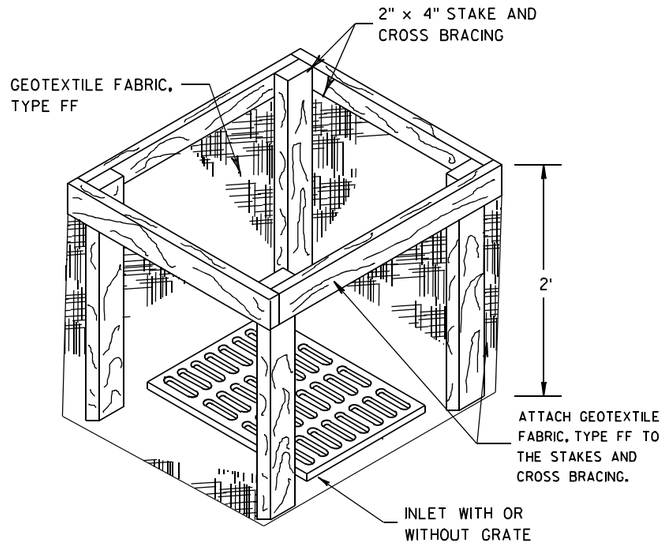
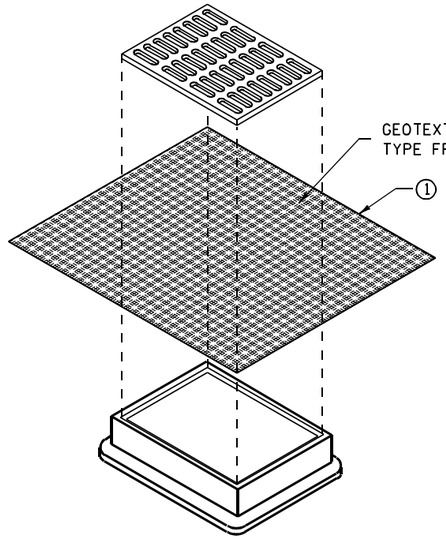


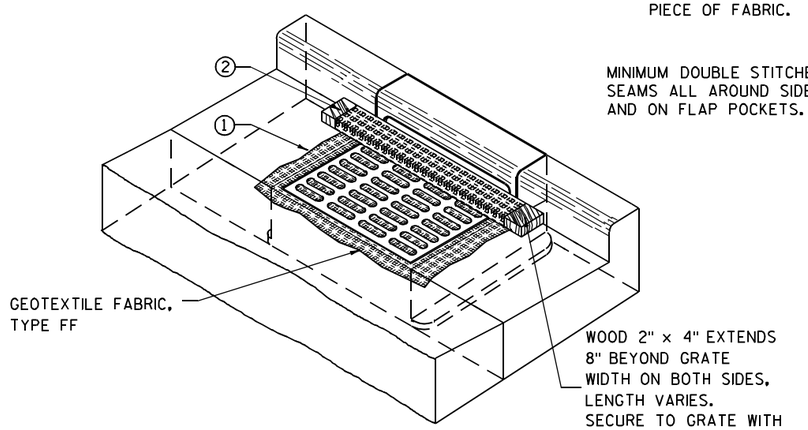


INLET PROTECTION, TYPE A

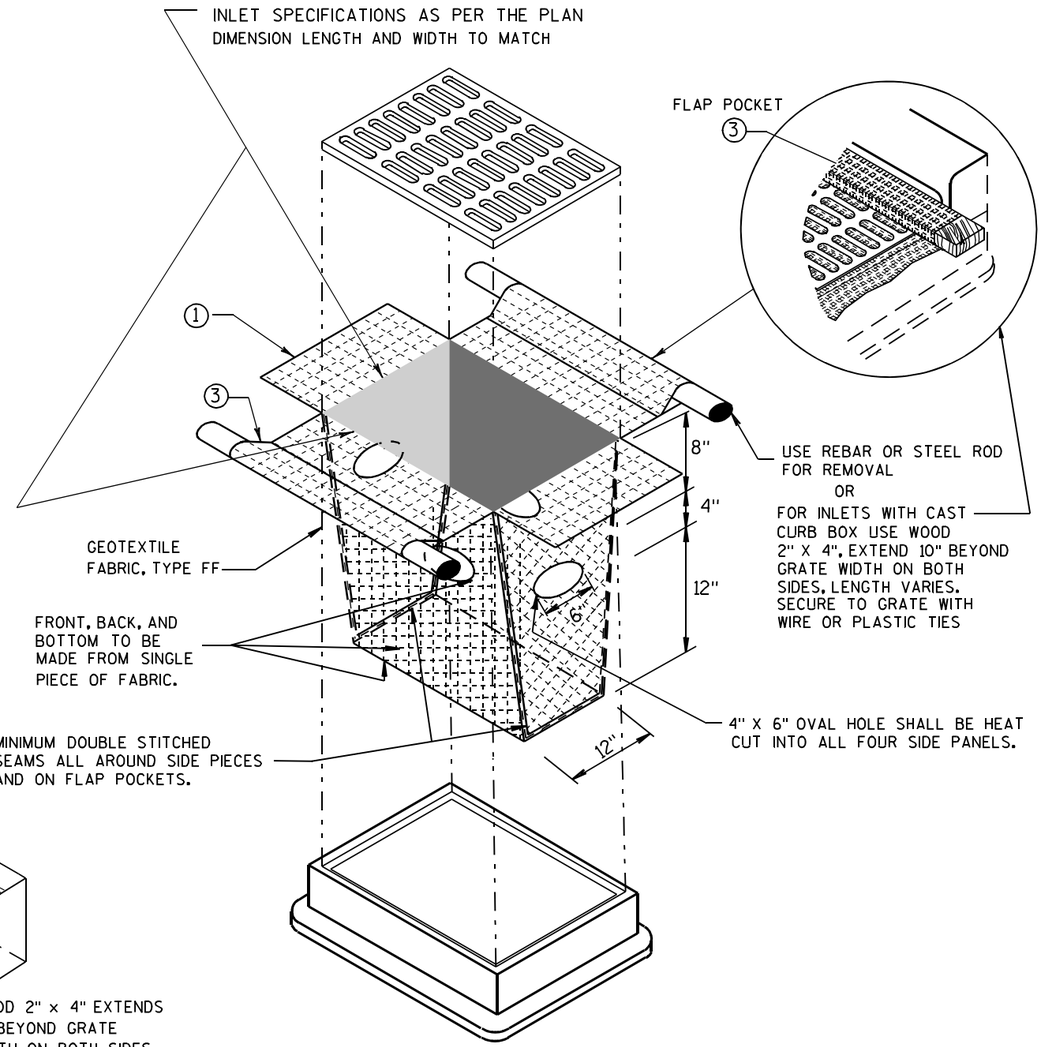


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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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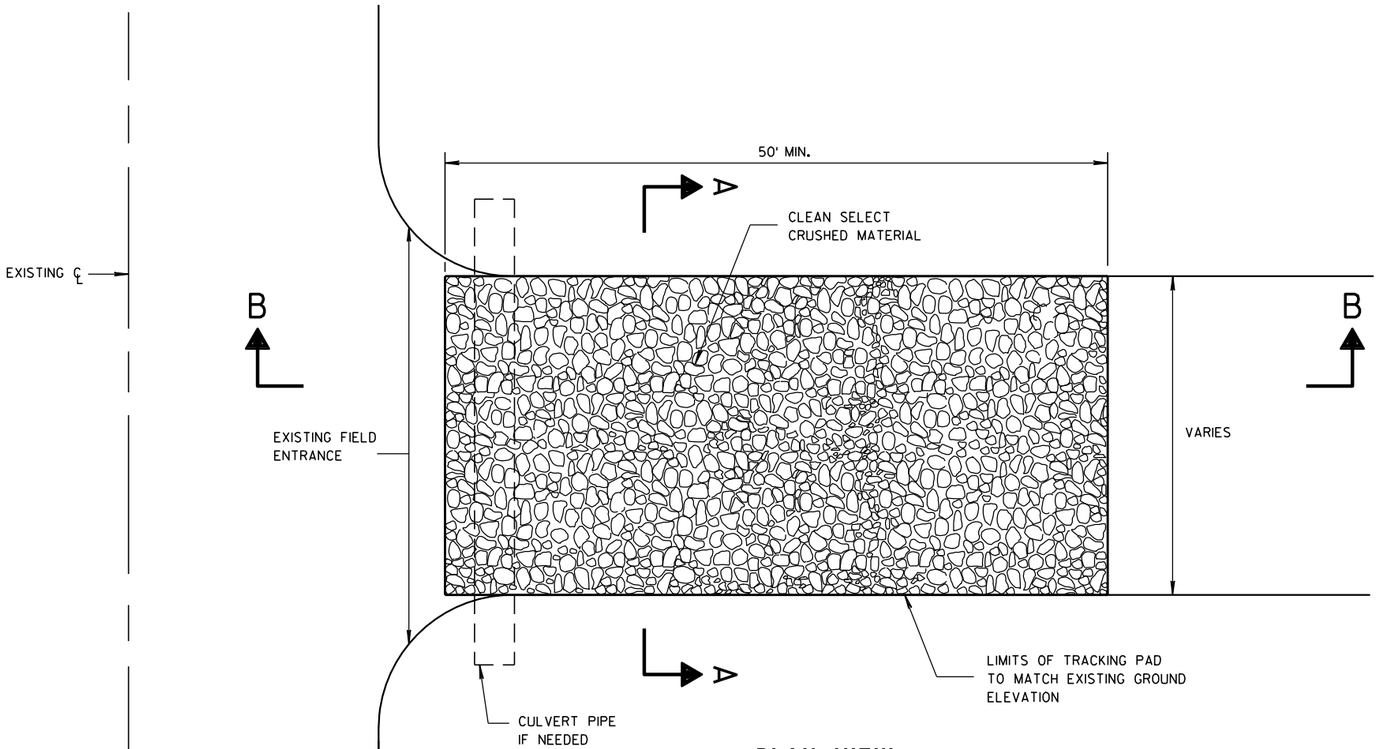
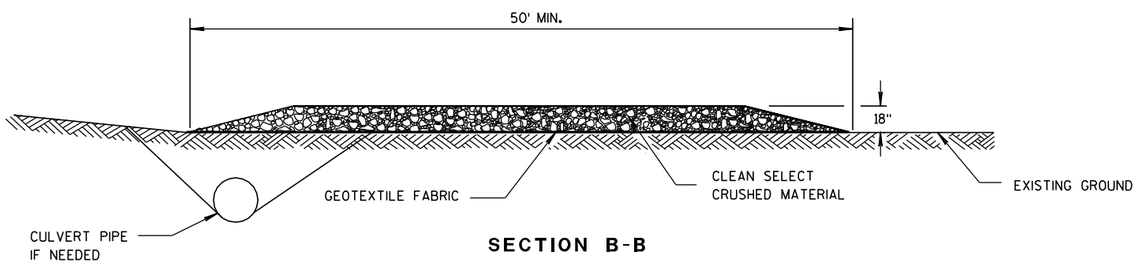
S.D.D. 8 E 10-2



PLAN VIEW



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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

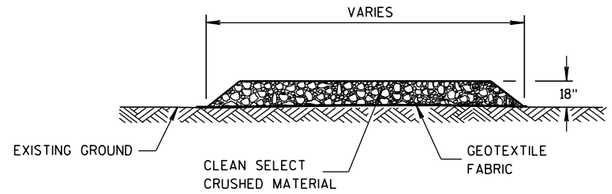
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER
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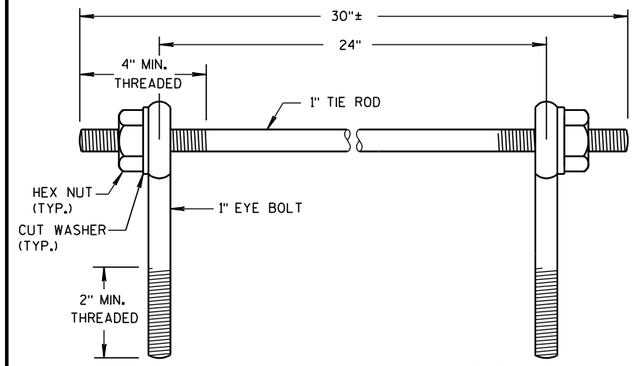
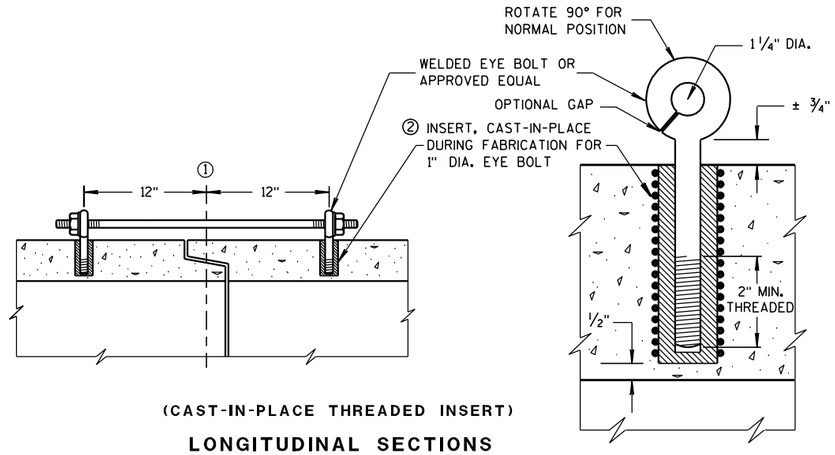


EYE BOLTS AND TIE ROD



(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.

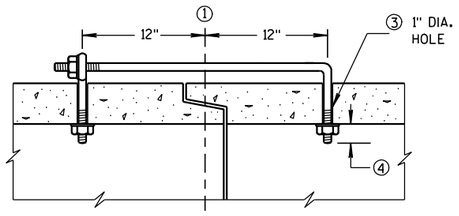
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

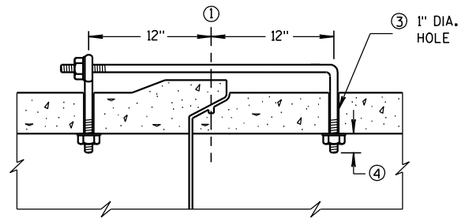
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

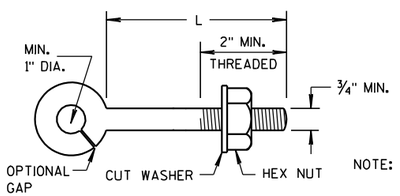


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

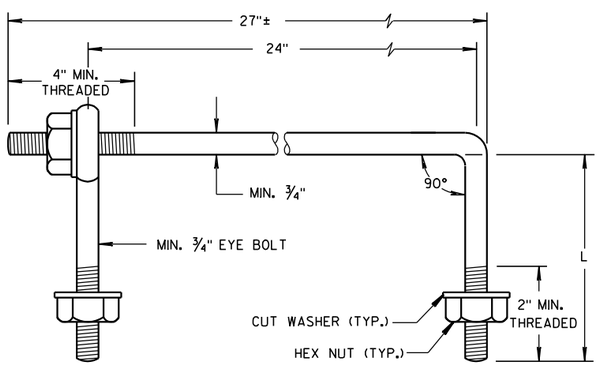
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

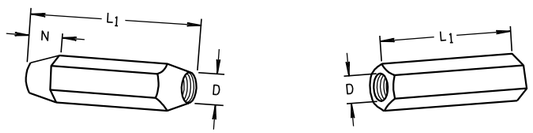
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

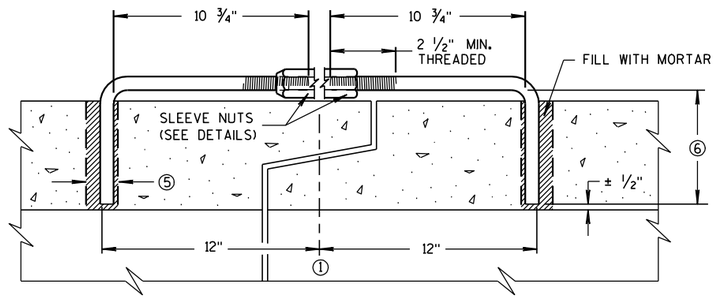
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

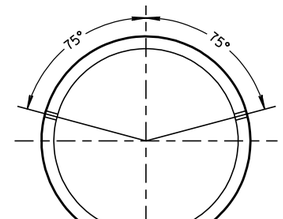
SLEEVE NUTS



LONGITUDINAL SECTION

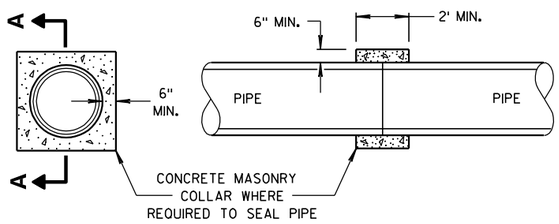
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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

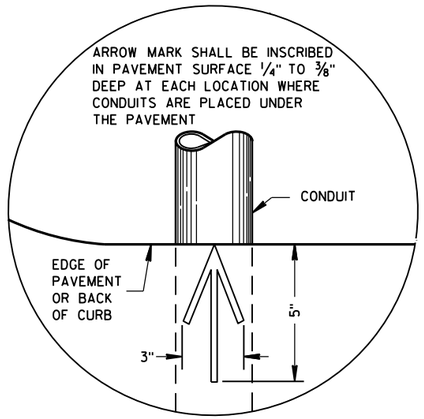
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
233
FHWA

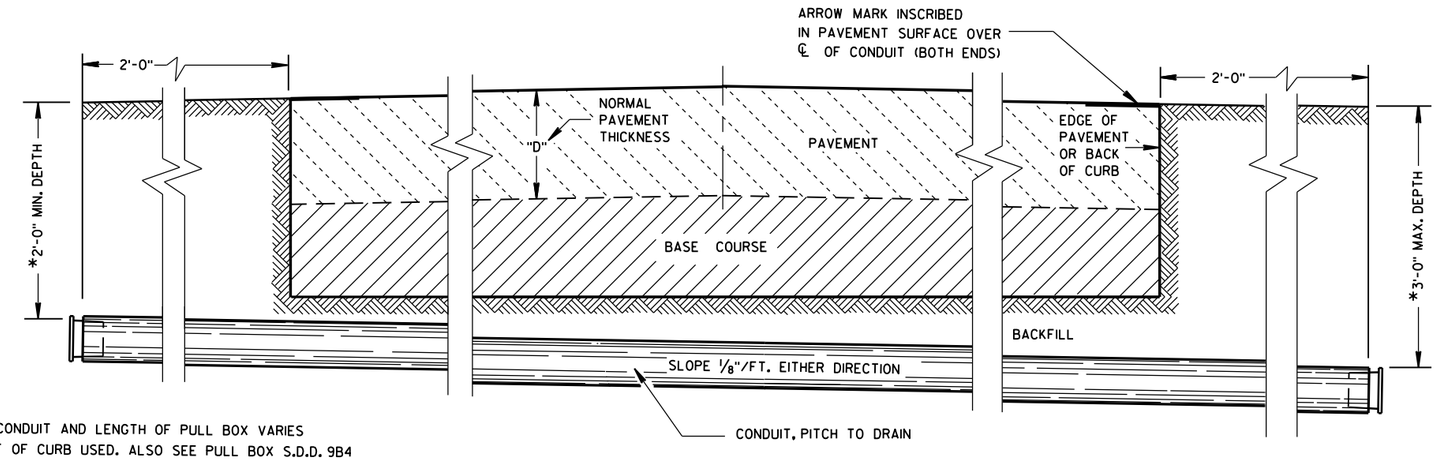
6

S.D.D. 8 F 4-7



PLAN VIEW

ARROW MARK



*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

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.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

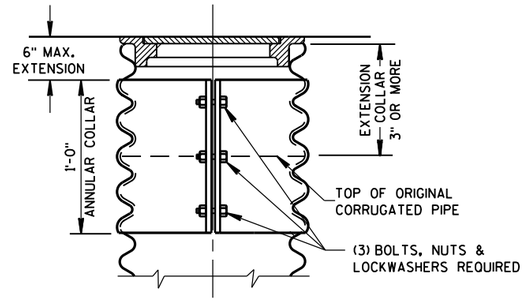
APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 234
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

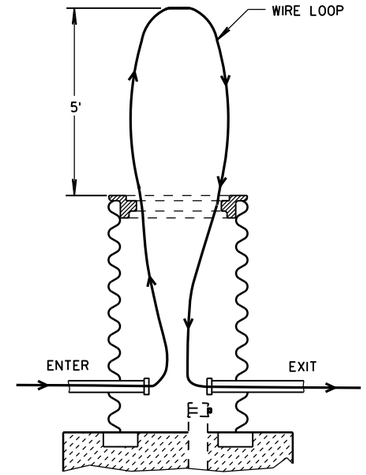
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	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.

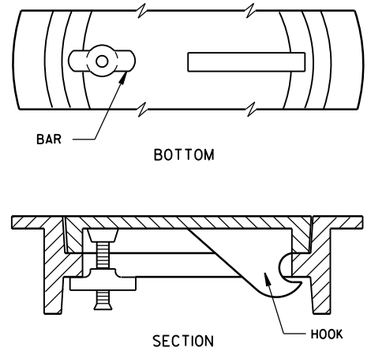
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

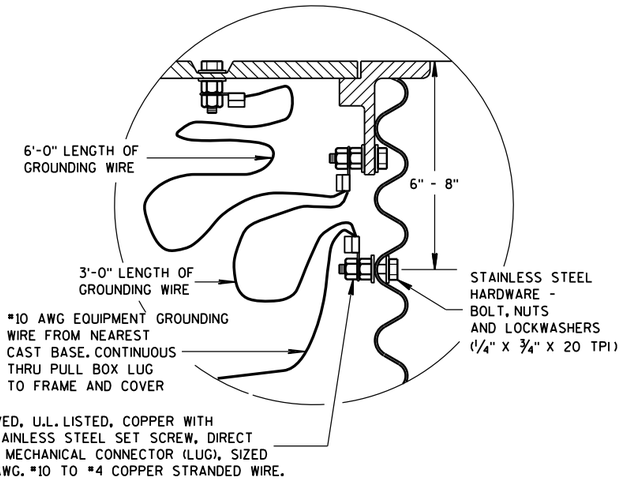


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



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.

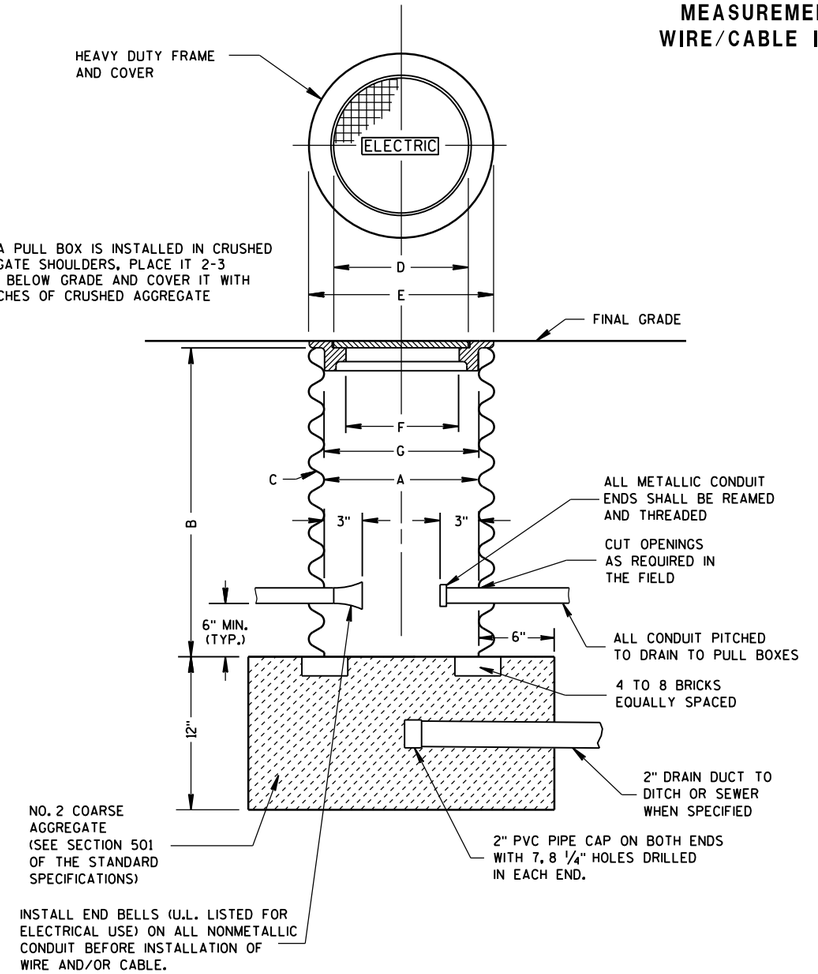
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

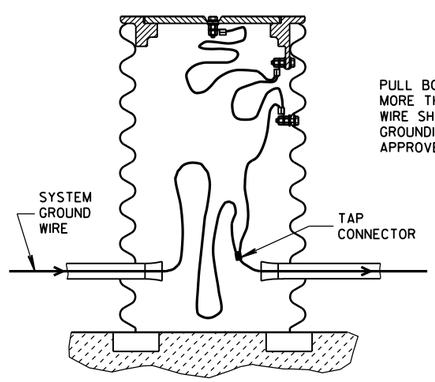
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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



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

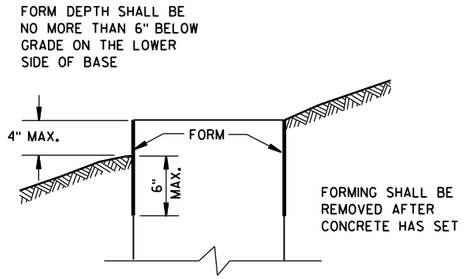
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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.

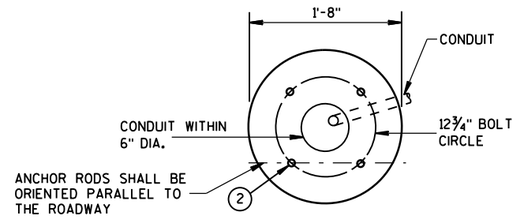
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

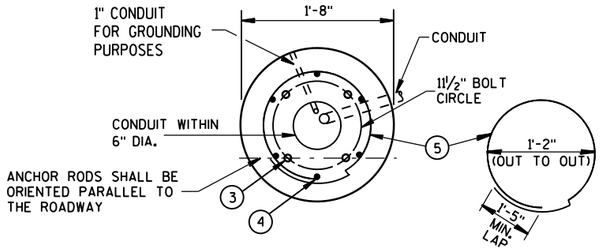
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

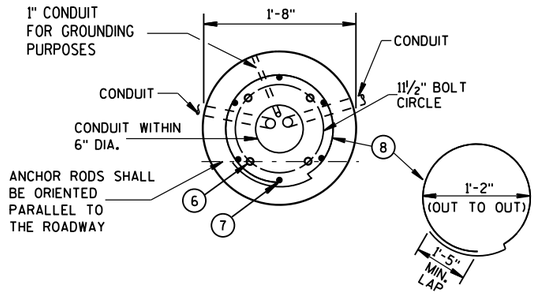
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

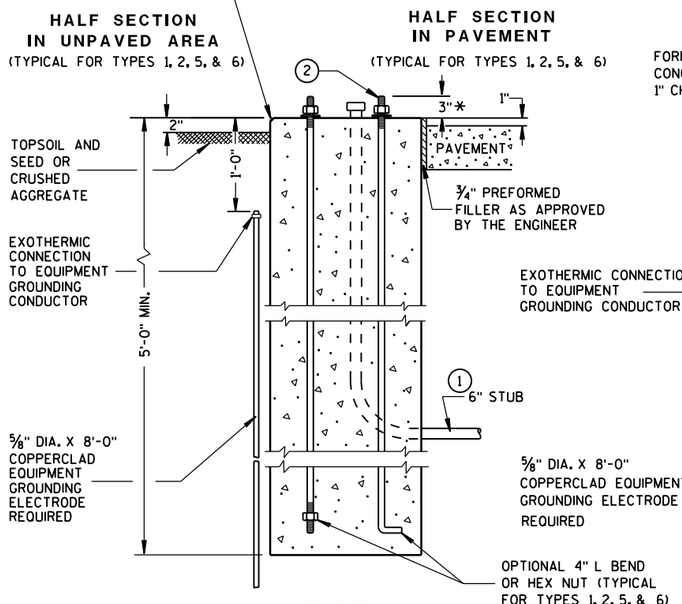




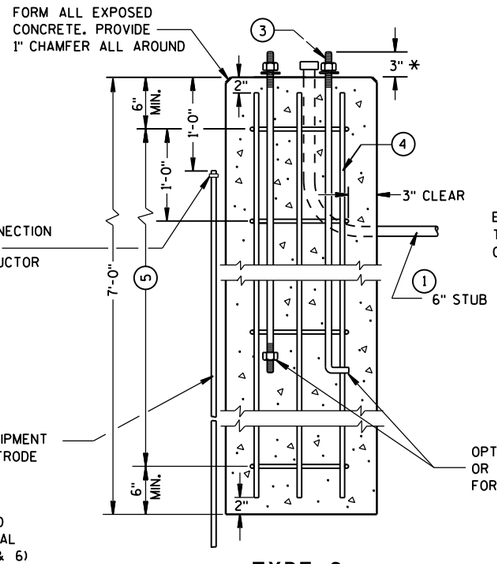


HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5, & 6)

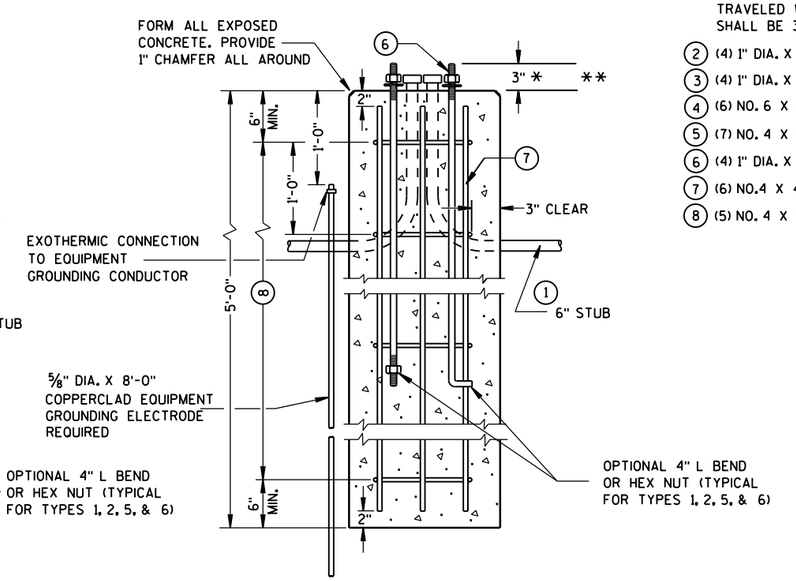
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 1



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 236
FHWA

6
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.

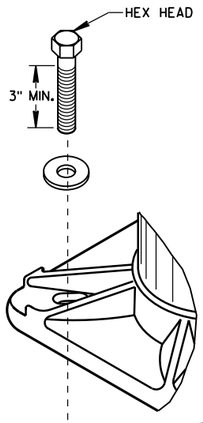
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

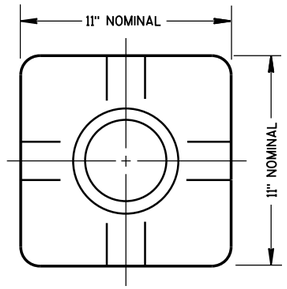
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

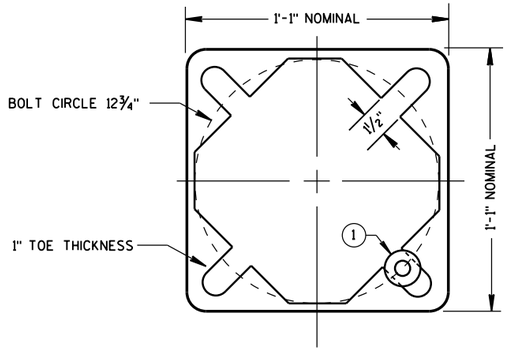
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

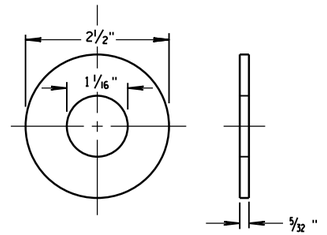




TOP VIEW
(PEDESTAL BASE)

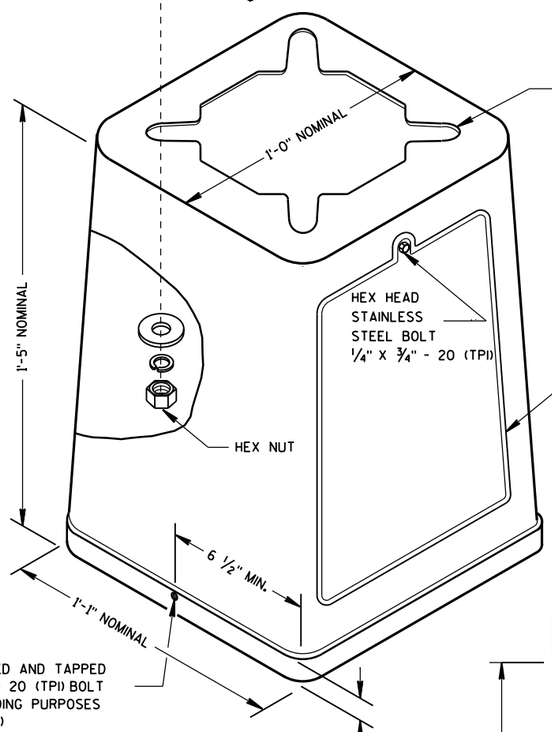


BOTTOM VIEW
(PEDESTAL BASE)

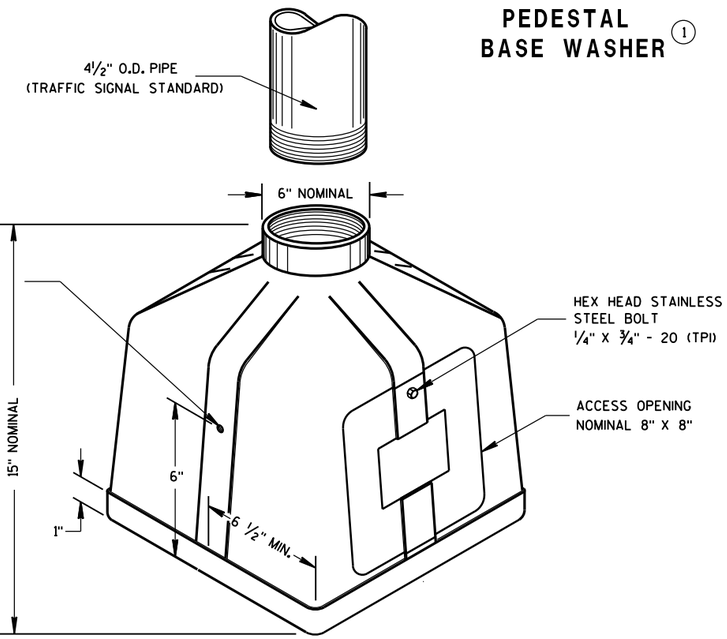


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

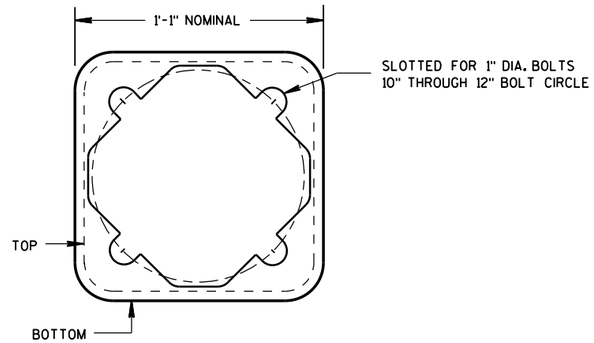


ISOMETRIC VIEW

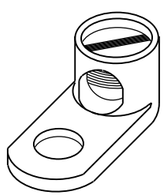


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

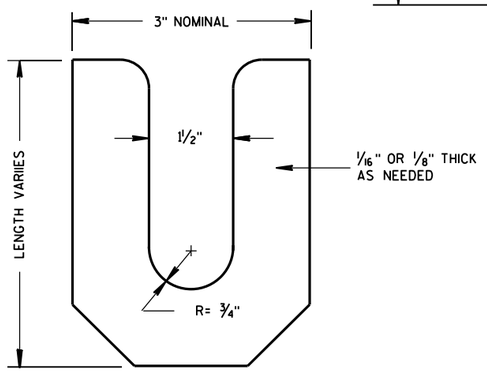


TYPICAL MECHANICAL CONNECTOR LUG

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
FHWA

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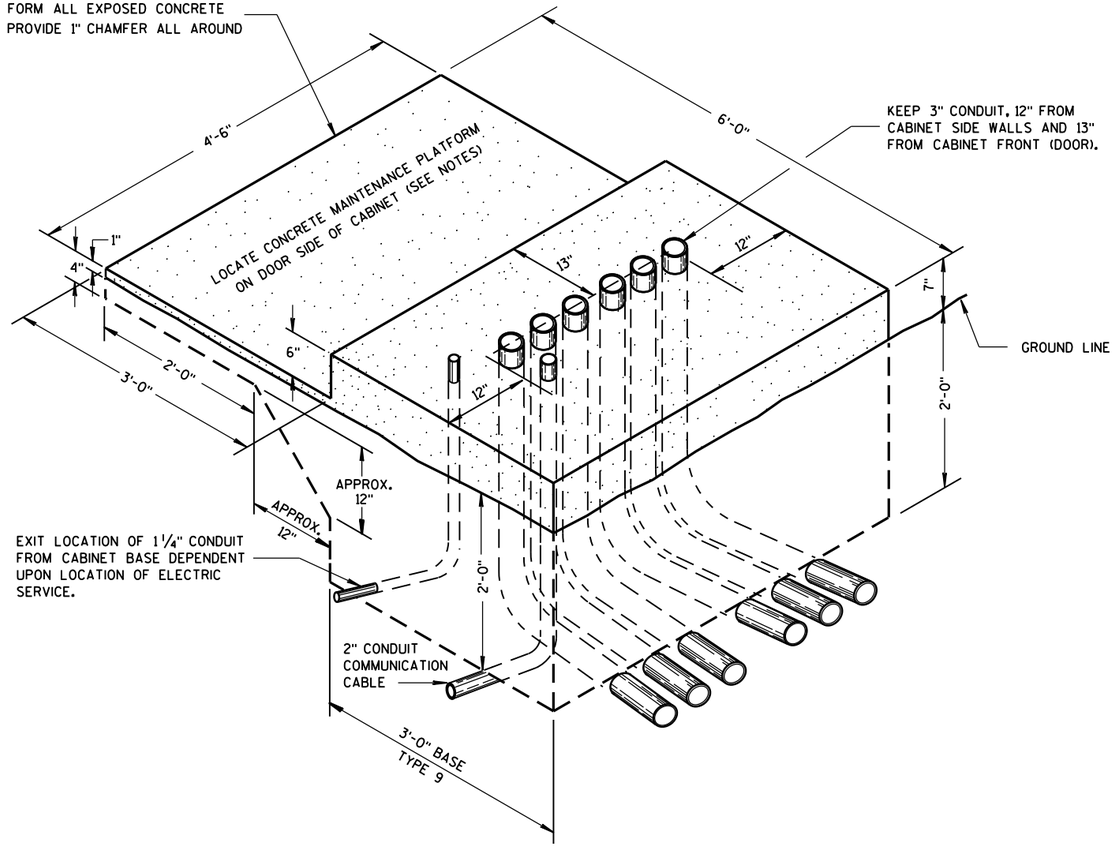
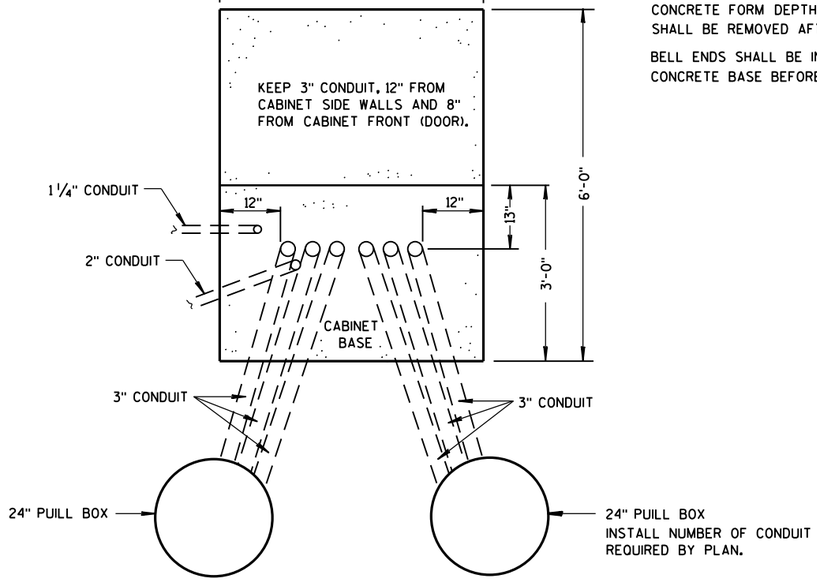
S.D.D. 9 C 3-4



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
DEPARTMENT OF TRANSPORTATION

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

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 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 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

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. CONDUIT IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL ENTER THE BASE 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.

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

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

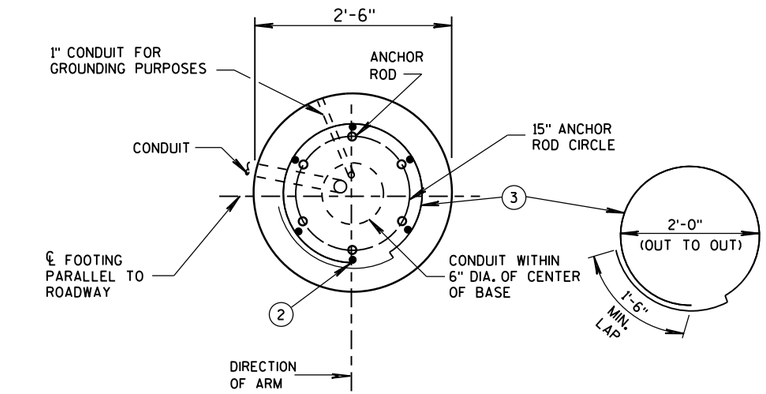
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

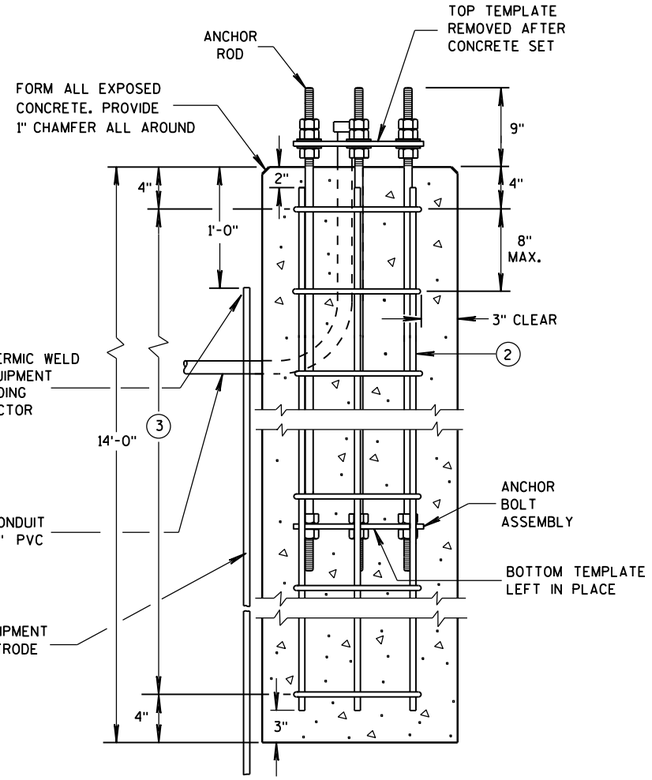
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES. (GREATER THAN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

(2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

(3) (21) NO. 5 X 7'-10" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

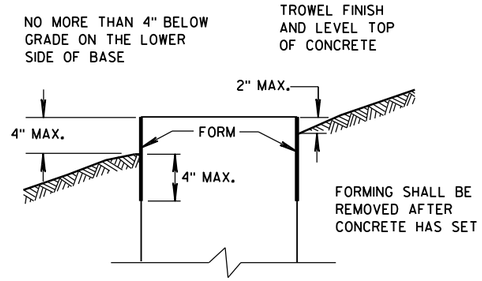
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 641.2.2.3 OF THE STANDARD SPECIFICATION)	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



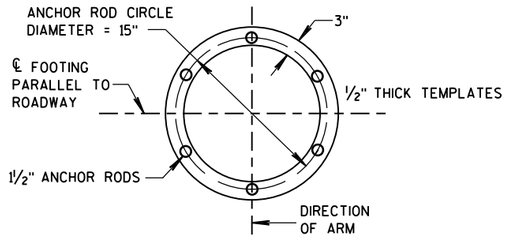


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 & OVER HEIGHT (OH) POLES)

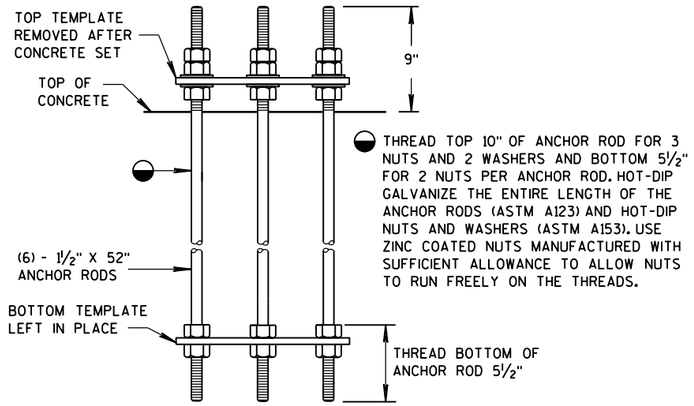
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10 ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	172
LBS. OF VERTICAL BAR STEEL	122

CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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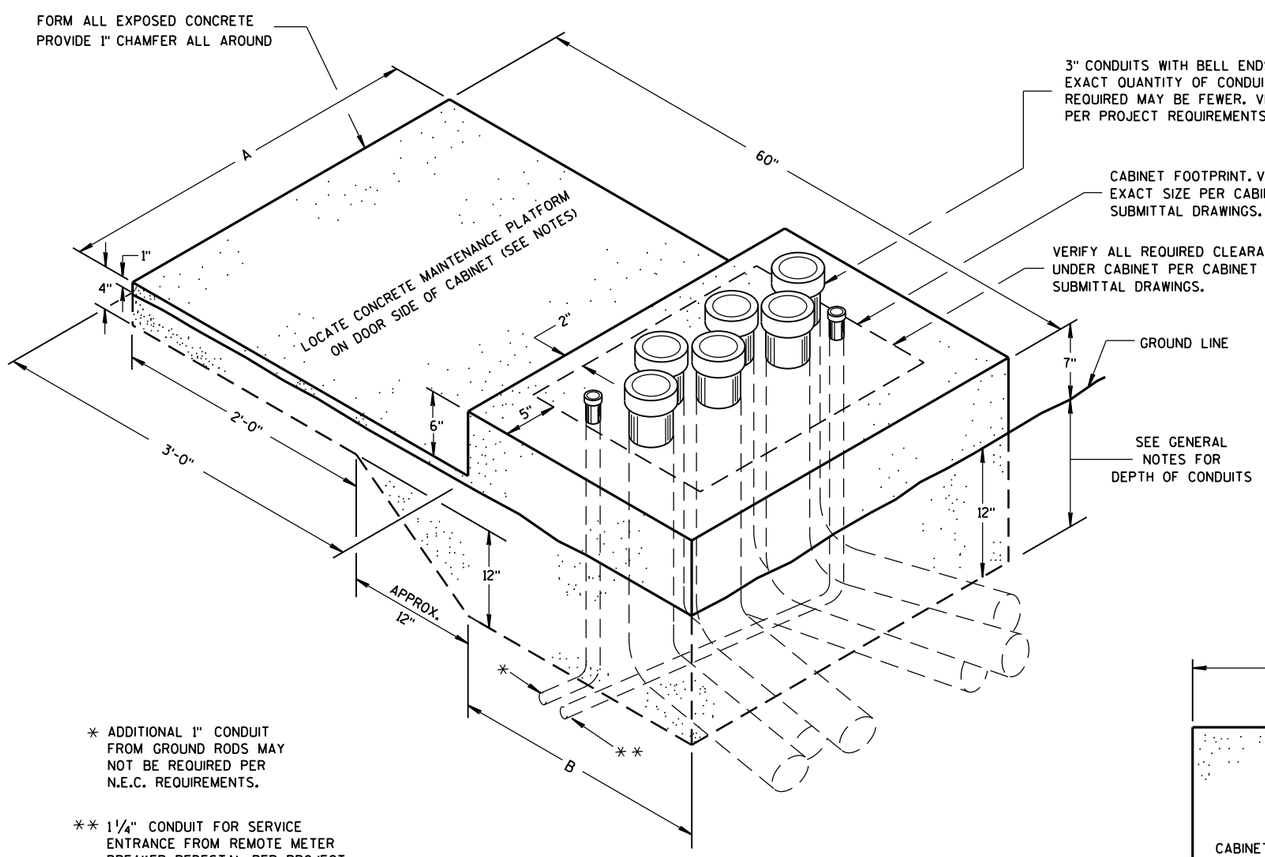
S.D.D. 9 C 11-10



* ADDITIONAL 1" CONDUIT FROM GROUND RODS MAY NOT BE REQUIRED PER N.E.C. REQUIREMENTS.

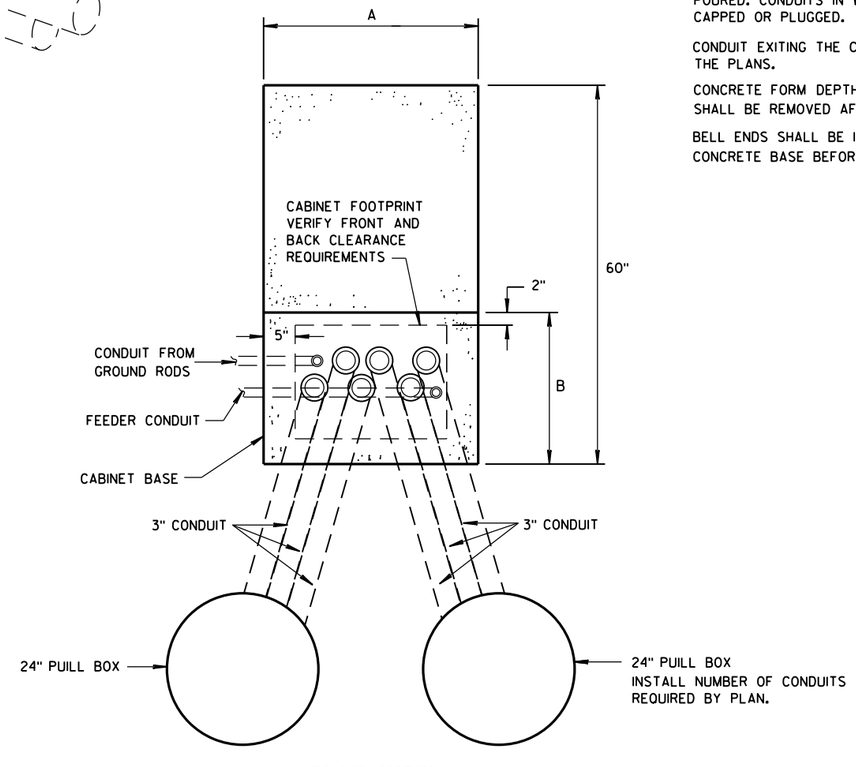
** 1¼" CONDUIT FOR SERVICE ENTRANCE FROM REMOTE METER BREAKER PEDESTAL PER PROJECT REQUIREMENTS. VERIFY LOCATION OF CONDUIT DEPENDENT UPON LOCATION OF INCOMING FEEDER AND FOR EASE OF CONNECTION TO LOAD CENTER.

ISOMETRIC VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

(C.Y. CONCRETE = APPROX. 0.4)

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSIONS		MAXIMUM 3" CONDUITS
		A	B	
L24	24"	34"	24"	4
L30	30"	40"	24"	6



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

GENERAL NOTES

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

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS 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 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 L

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Nov. 2014 — DATE
/S/ Thomas Gonring — STATE LIGHTING ENGINE
FHWA

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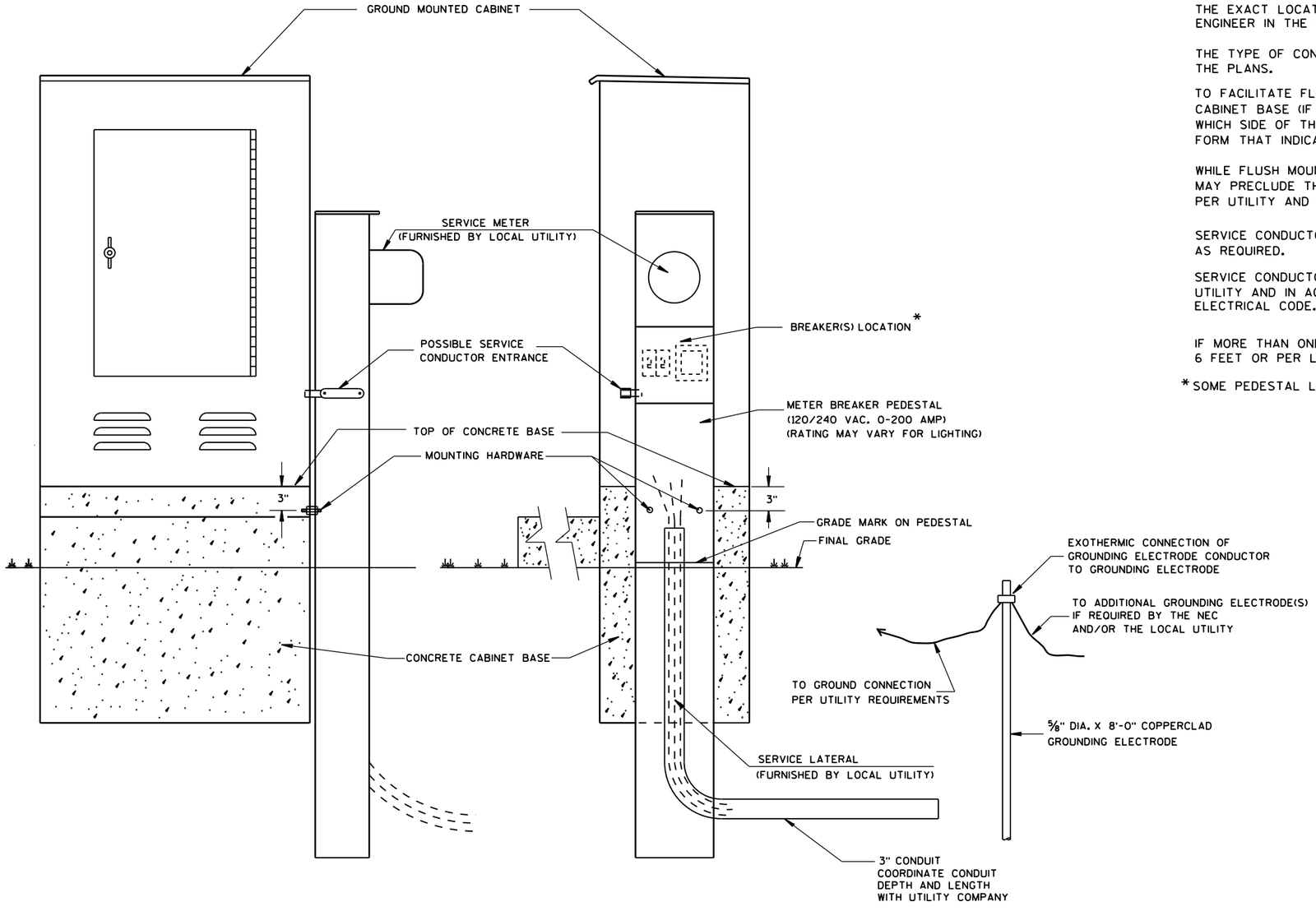

TYPICAL CABINET SERVICE INSTALLATION

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

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

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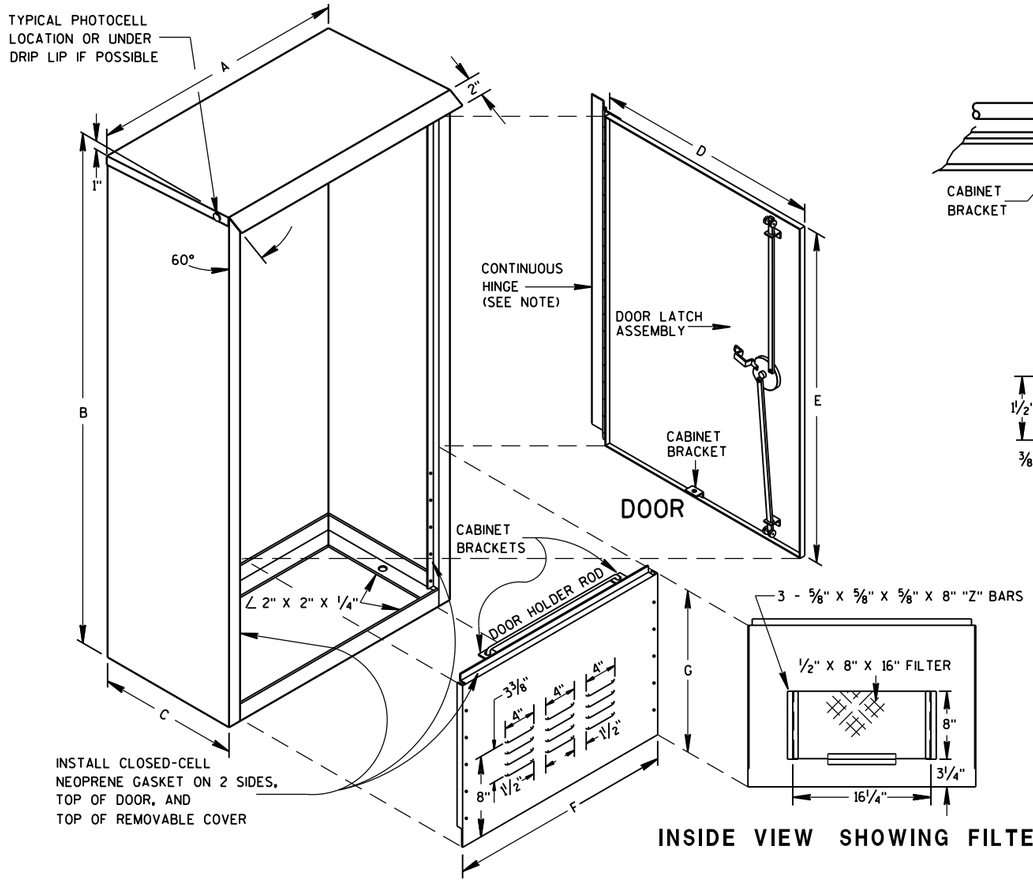
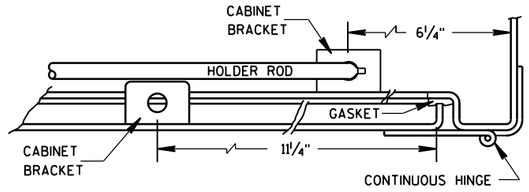
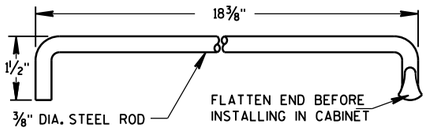


REMOVABLE COVER

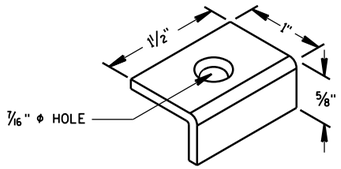
INSIDE VIEW SHOWING FILTER



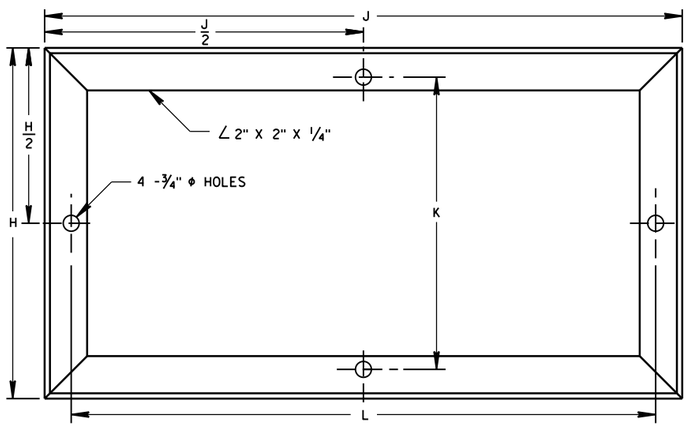
HINGE & DOOR HOLDER



HOLDER ROD



CABINET BRACKET



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2

GENERAL NOTES

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

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

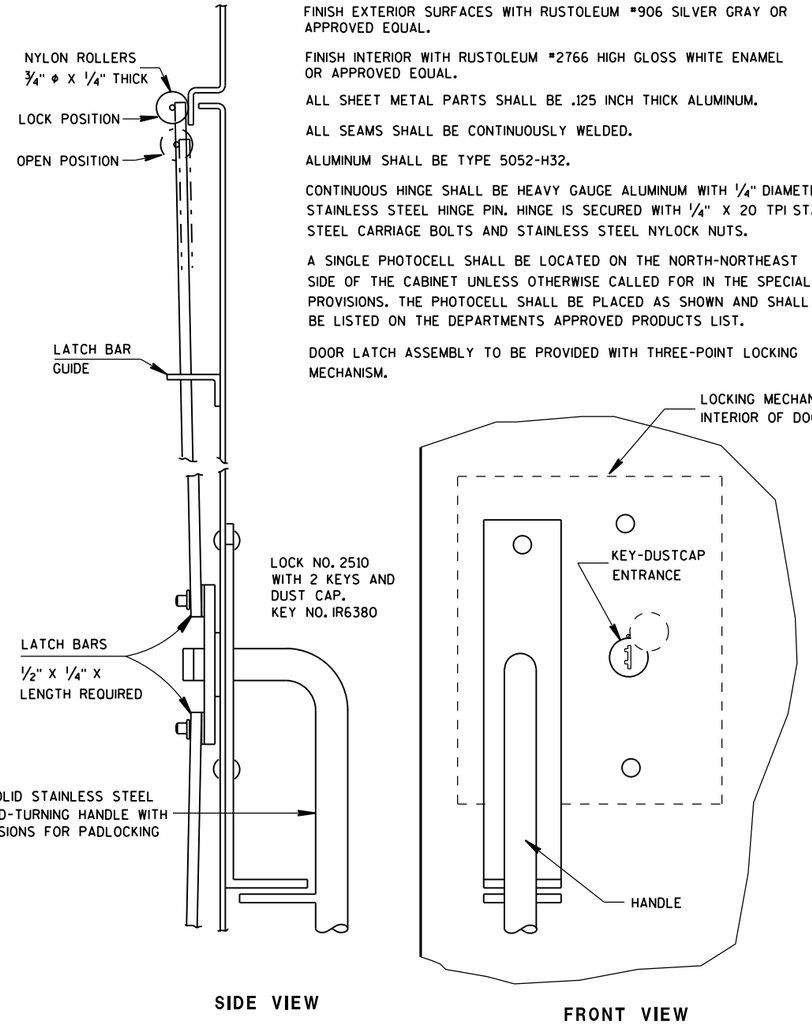
ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

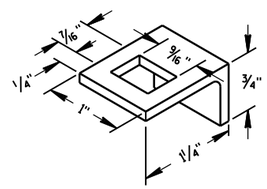
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

SIGNAL CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL 242
FHWA

6

S.D.D. 9 D 2-3

6

S.D.D. 9 D 2-3

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.

ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE-WIRED BY THE CABINET FABRICATOR.

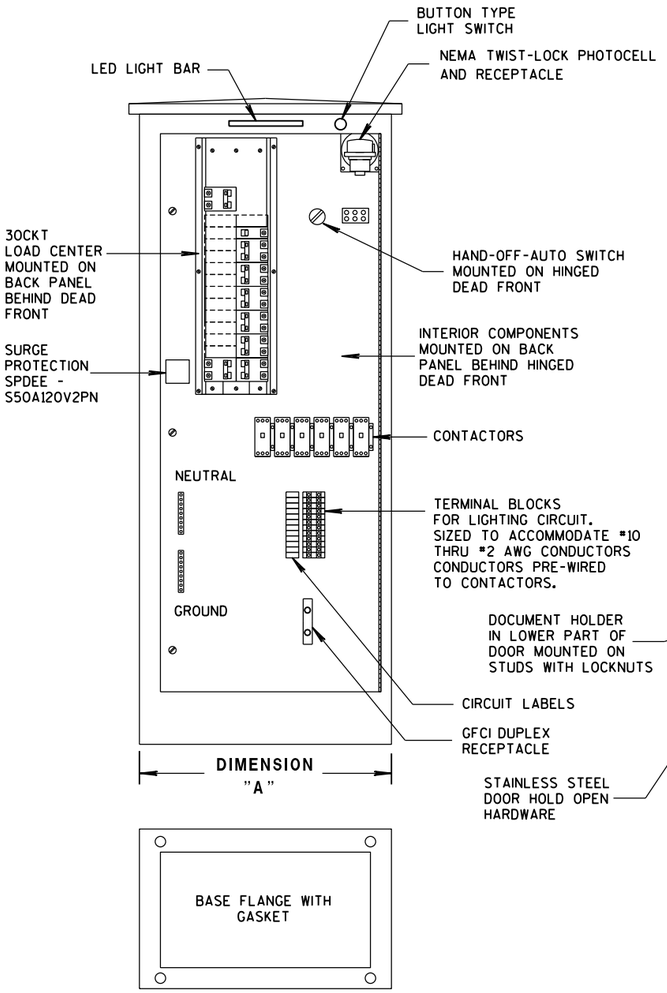
ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS.

THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.

A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.

FRONT INTERIOR ELEVATION



SIDE VIEW

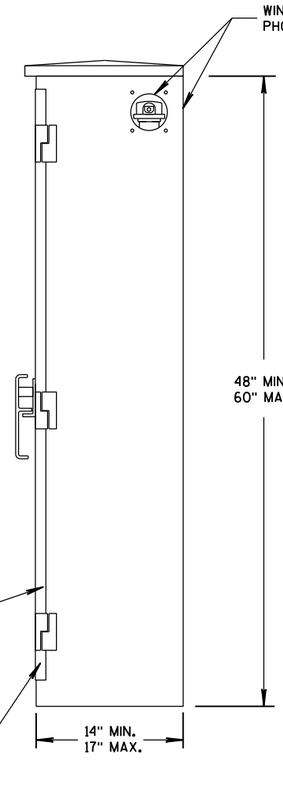
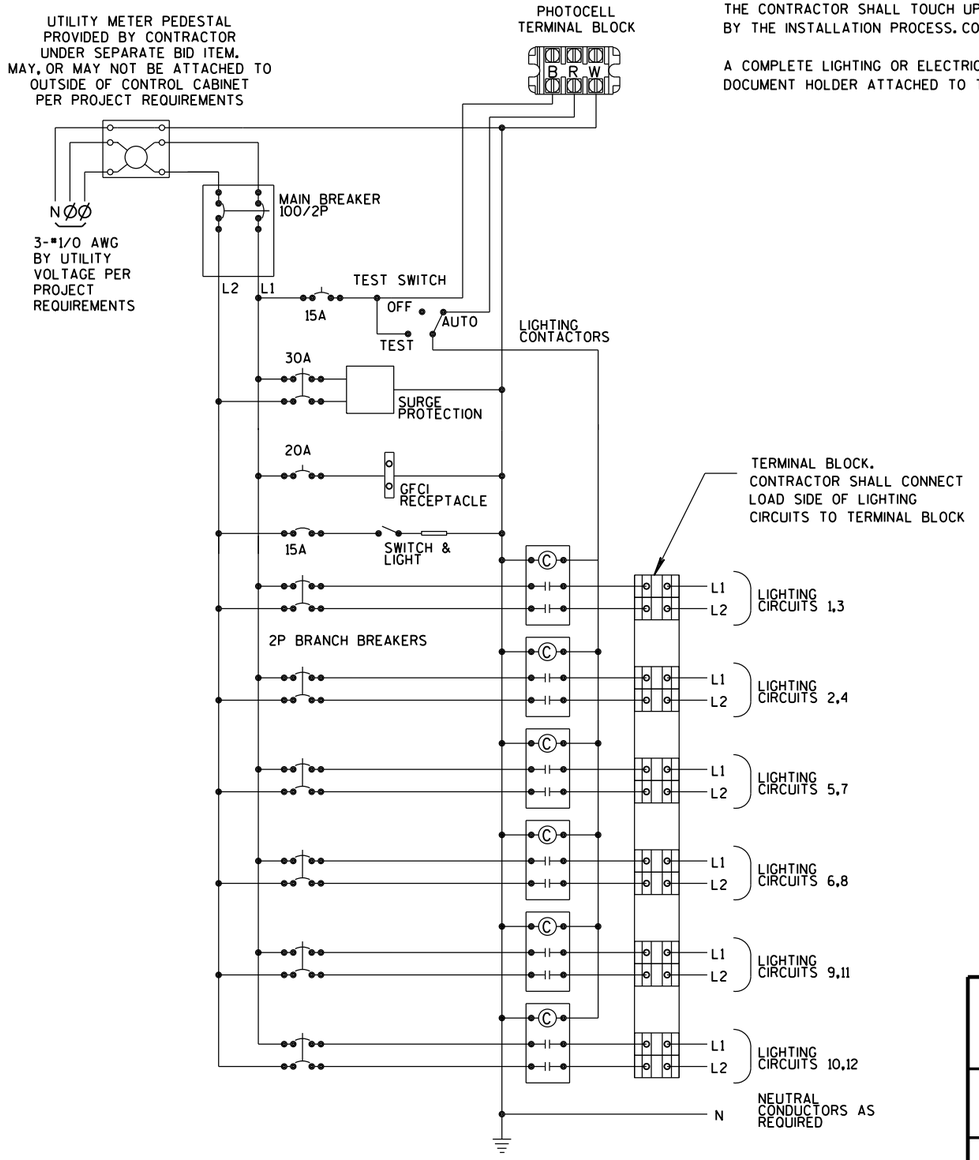


TABLE OF DIMENSIONS (INCHES)

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSION "A"
L24	24"	24"
L30	30"	30"

LIGHTING CONTROL CABINET



CONTROL CABINET SCHEMATIC

LIGHTING CONTROL CABINET 120/240 VOLT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 DATE
/S/ Thomas Gonring STATE LIGHTING ENGINEER
FHWA

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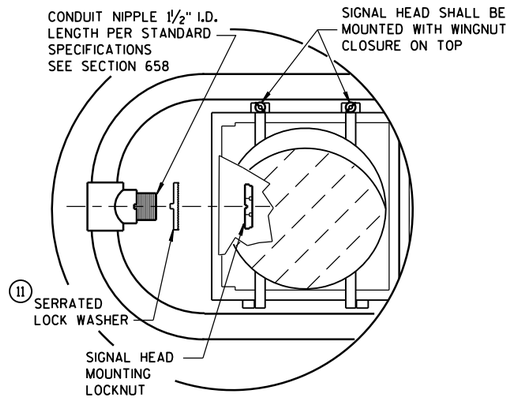
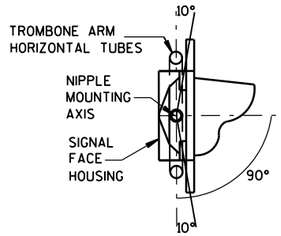
S.D.D. 9 D 4-2



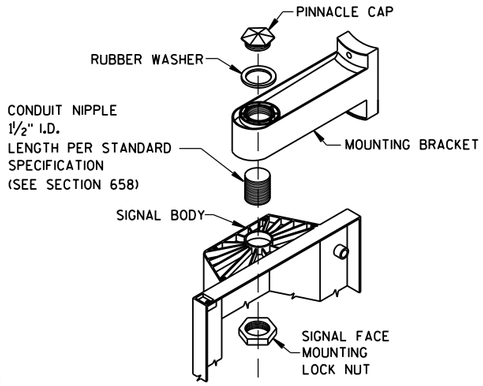
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL *

* 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.

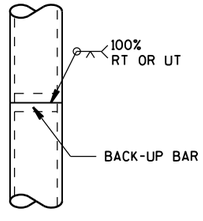
(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

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

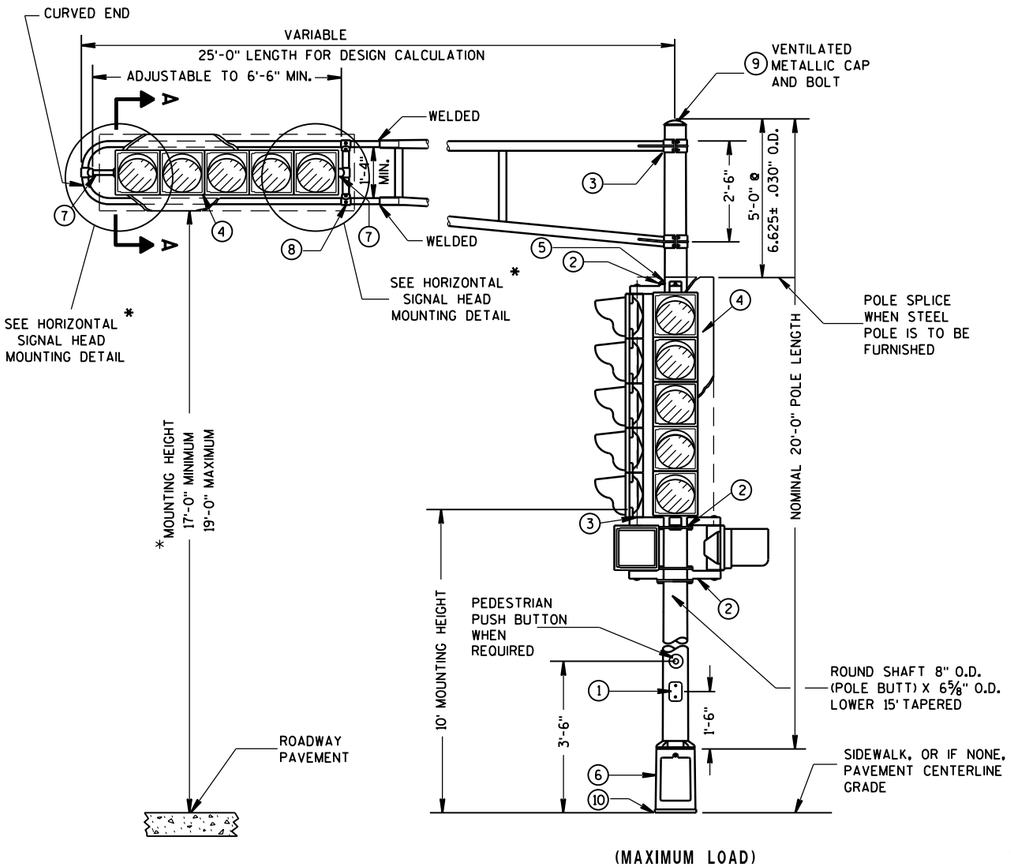
*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.

FOR MANUFACTURERS USE ONLY

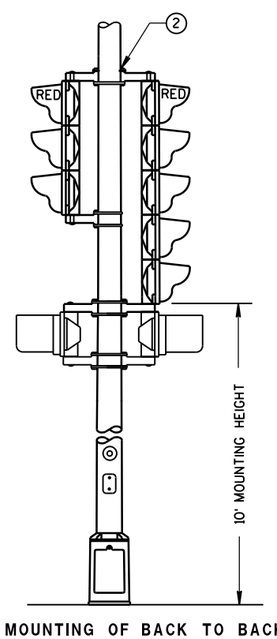
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



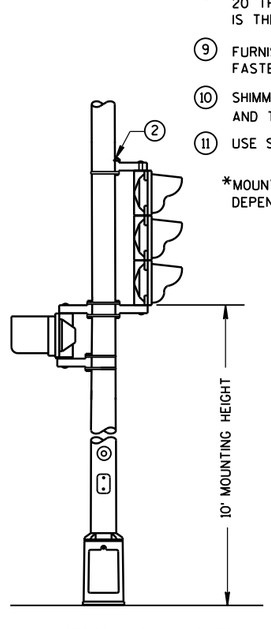
POLE SPLICE DETAIL



(MAXIMUM LOAD)



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



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

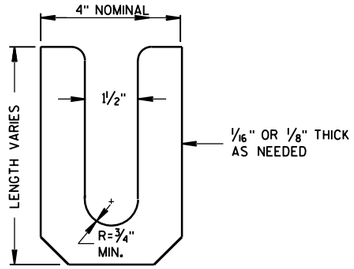
TYPE 2 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

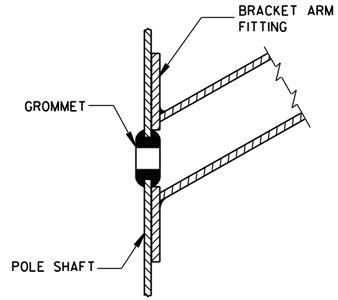
6

S.D.D. 9 E 1-14a

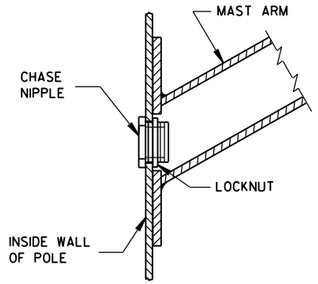


LEVELING SHIM (13)

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.

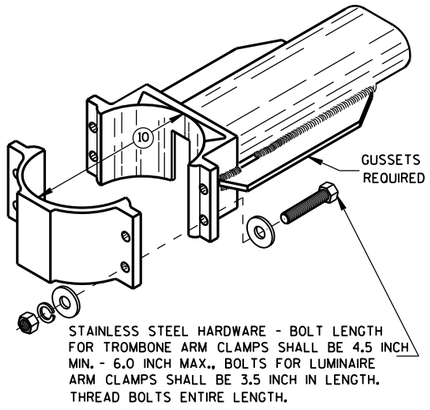
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

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

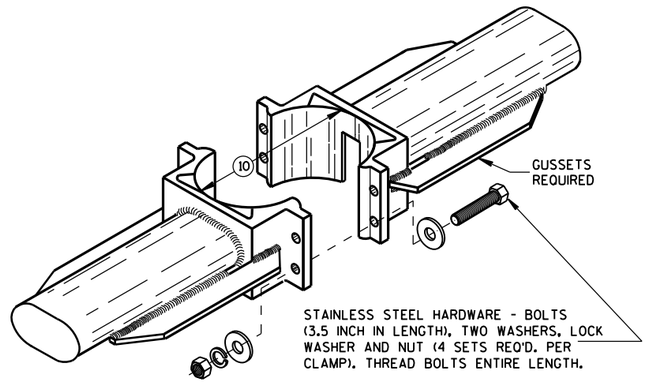
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(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.

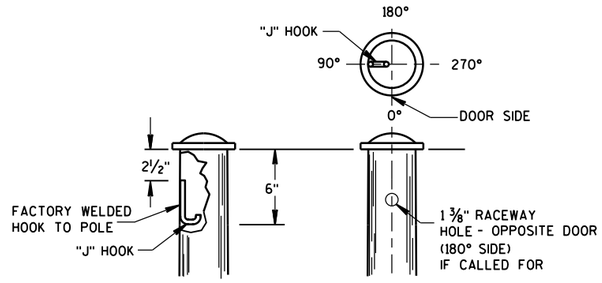
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



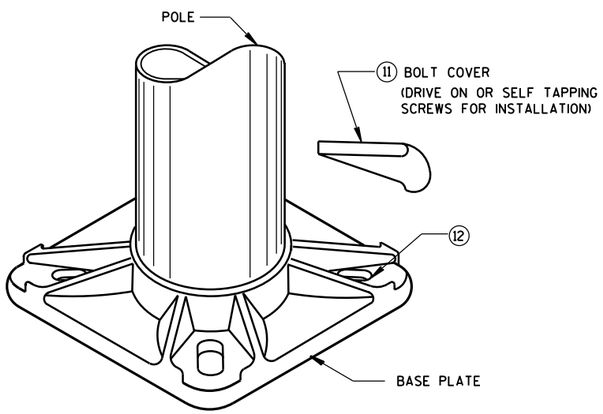
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



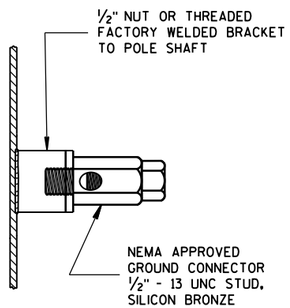
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

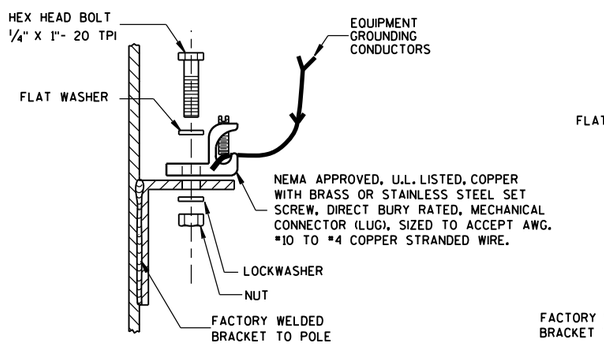


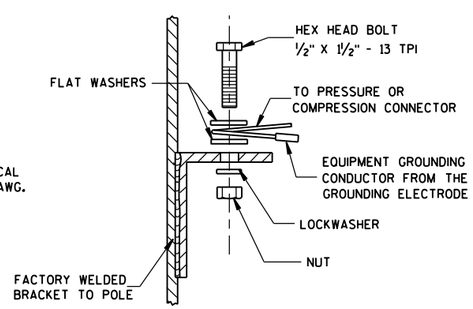
TYPICAL "J" HOOK LOCATION



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
FHWA

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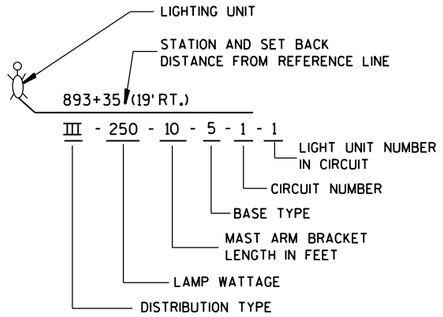
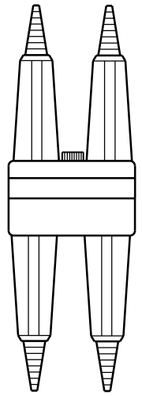
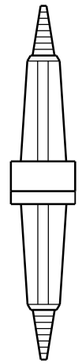
S.D.D. 9 E 1-14g



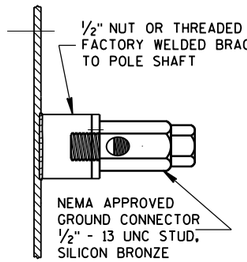
LIGHTING UNIT CODE
(TYPICAL)

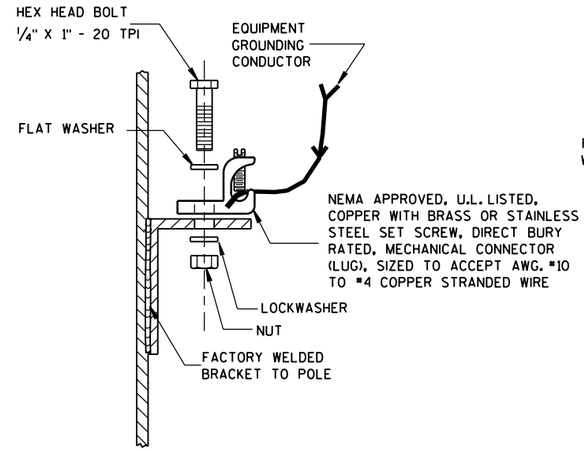


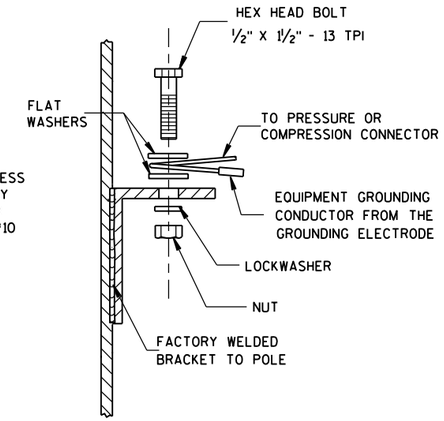
DETAIL "A"
BREAKAWY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



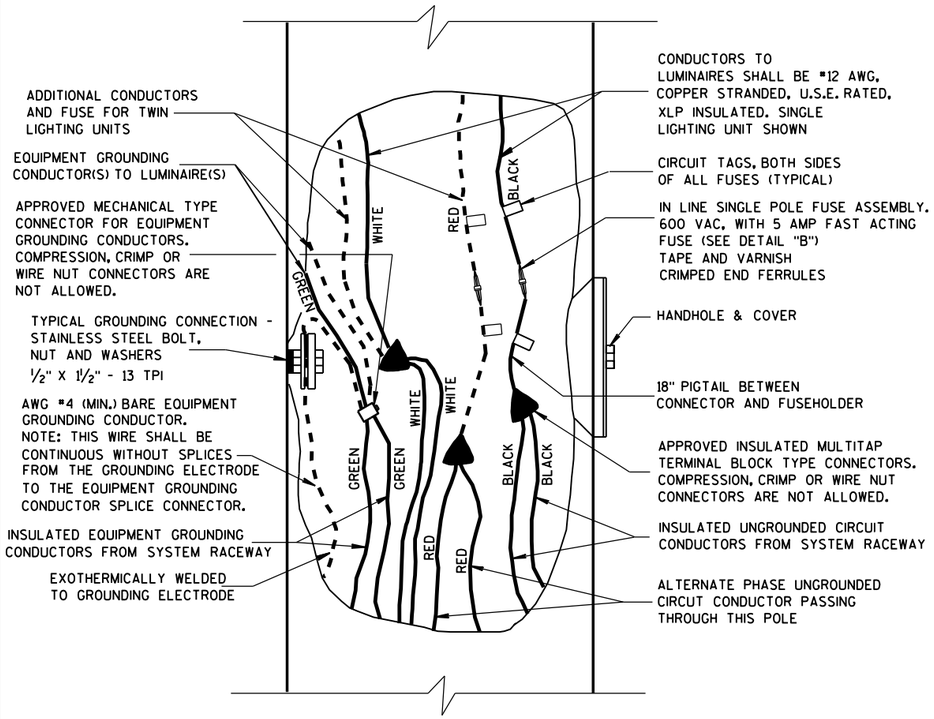
DETAIL "B"
BREAKAWY SINGLE POLE WITH WATERPROOF INSULATING BOOT



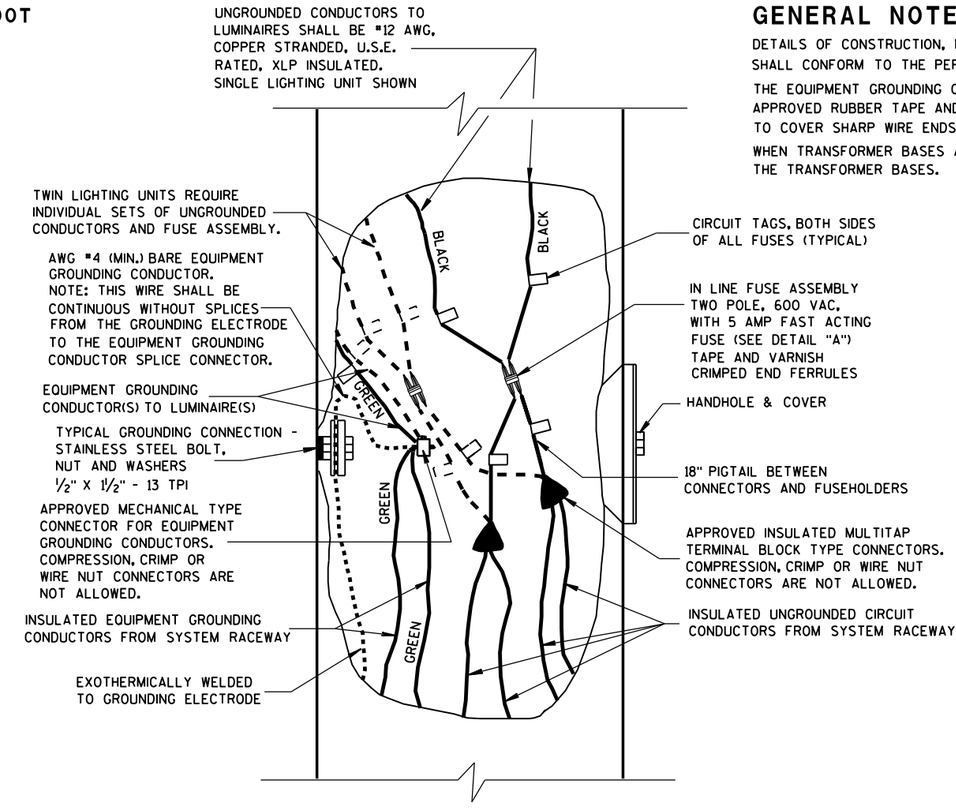




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

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

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

NON-FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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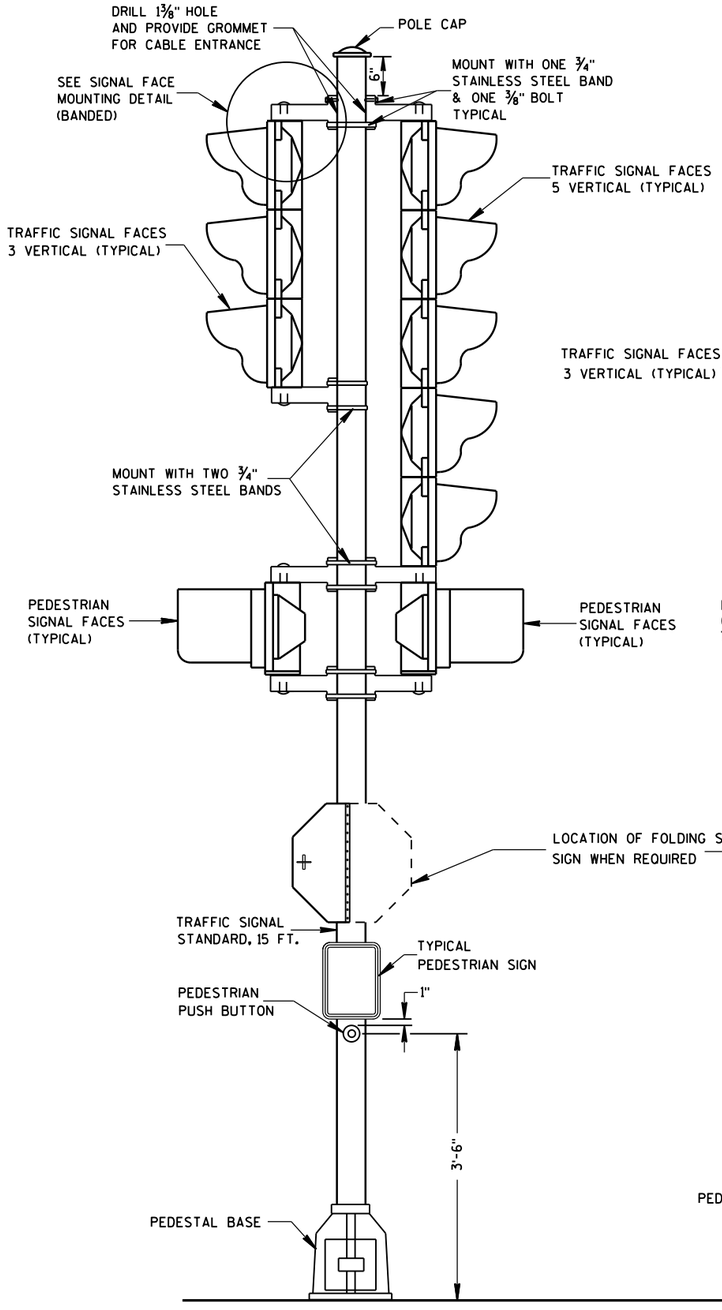
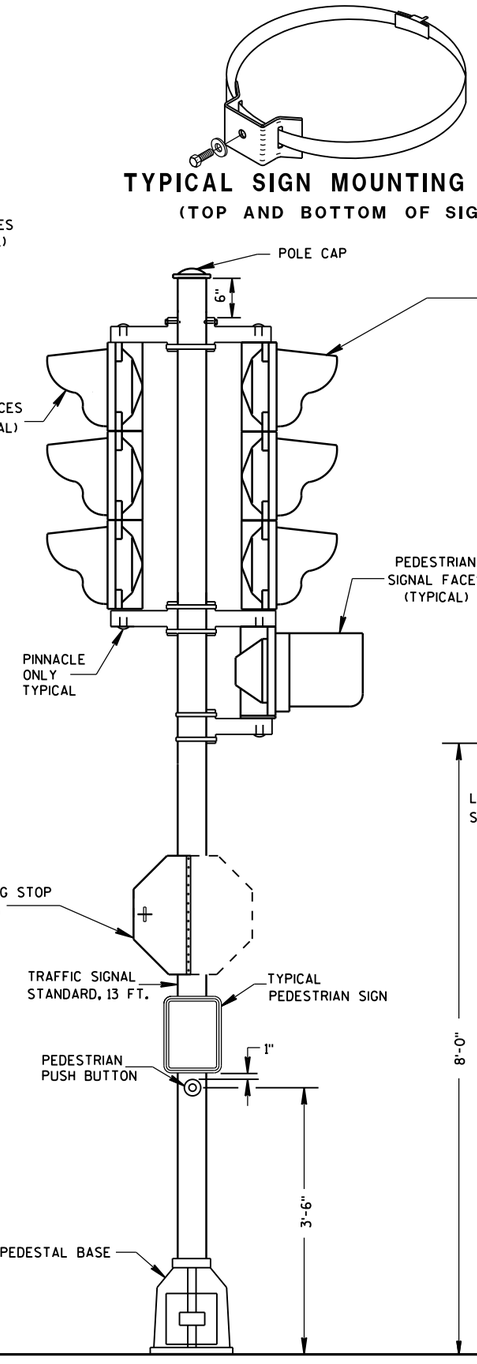
S.D.D. 9 E 3-5

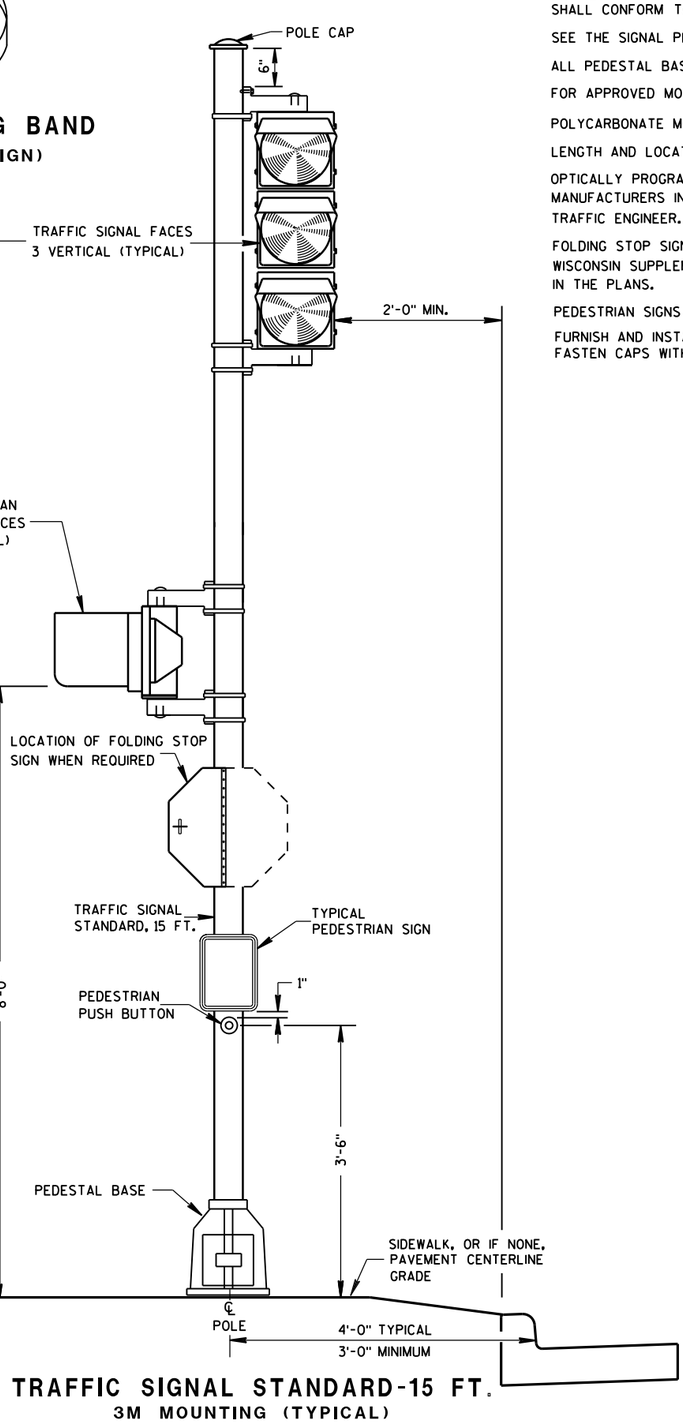


TRAFFIC SIGNAL STANDARD-15 FT.



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.

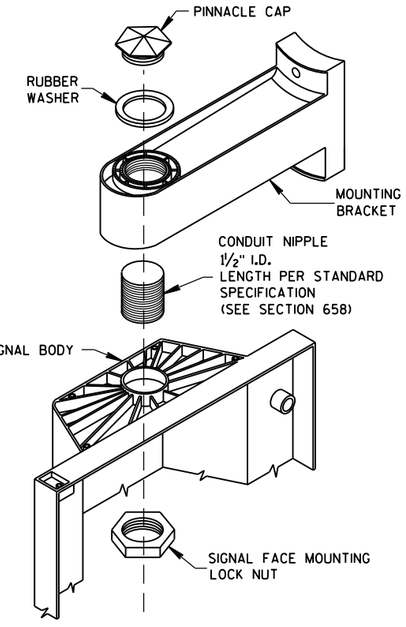
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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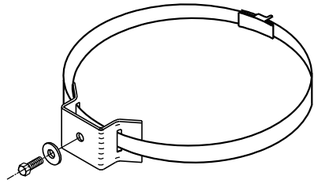
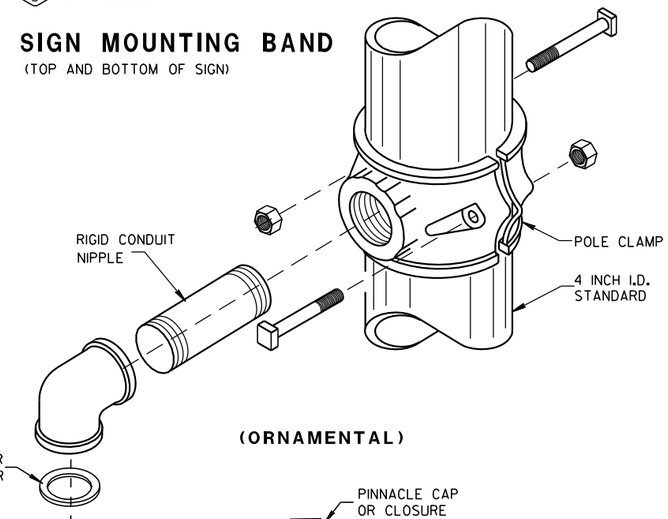
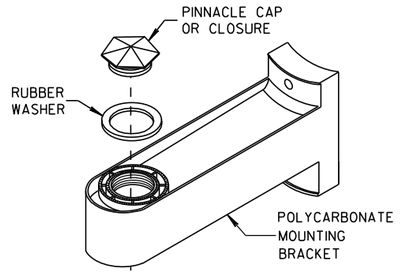


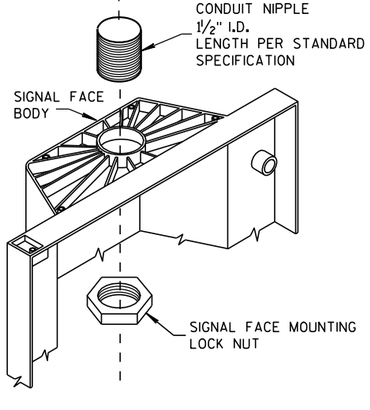
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



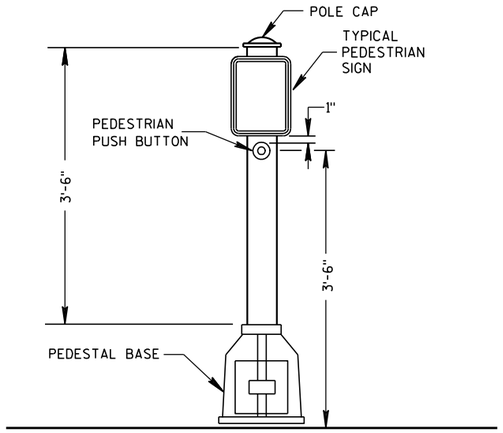
(ORNAMENTAL)



(BANDED)



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.

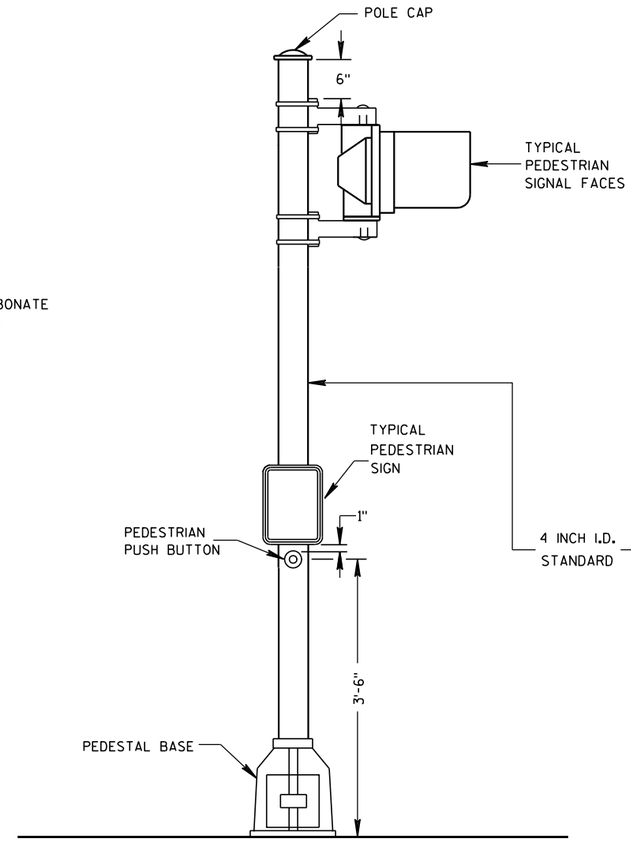
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

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

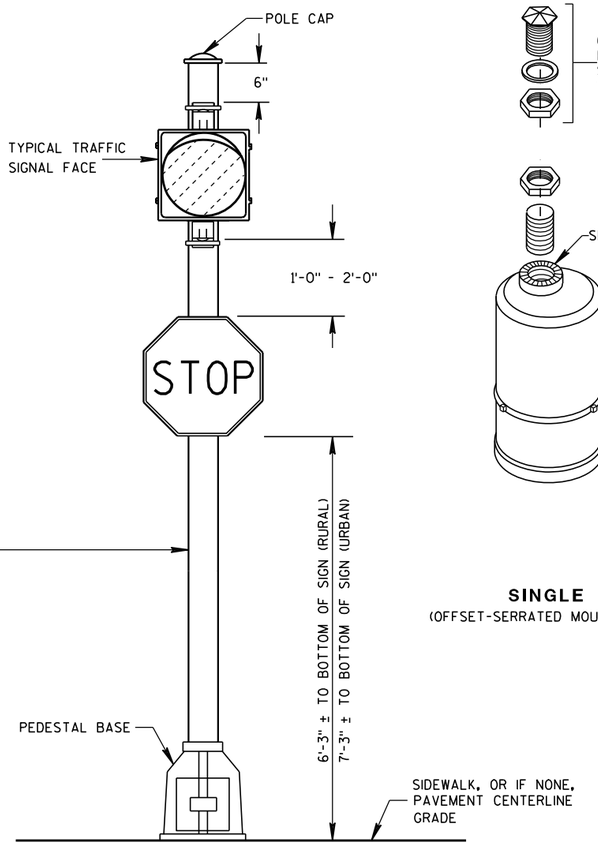
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

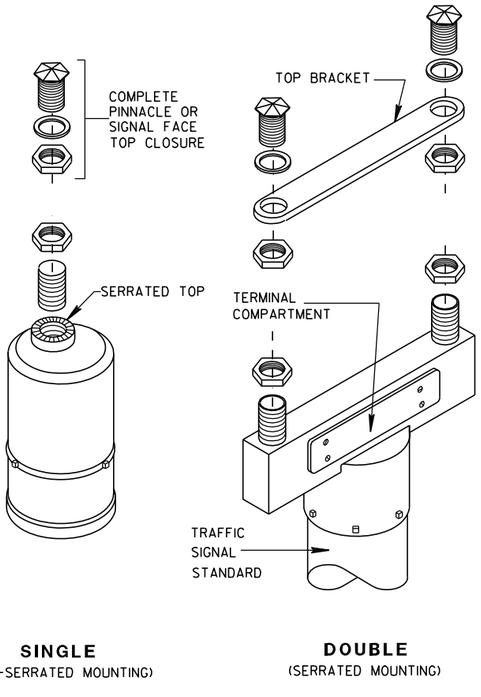
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



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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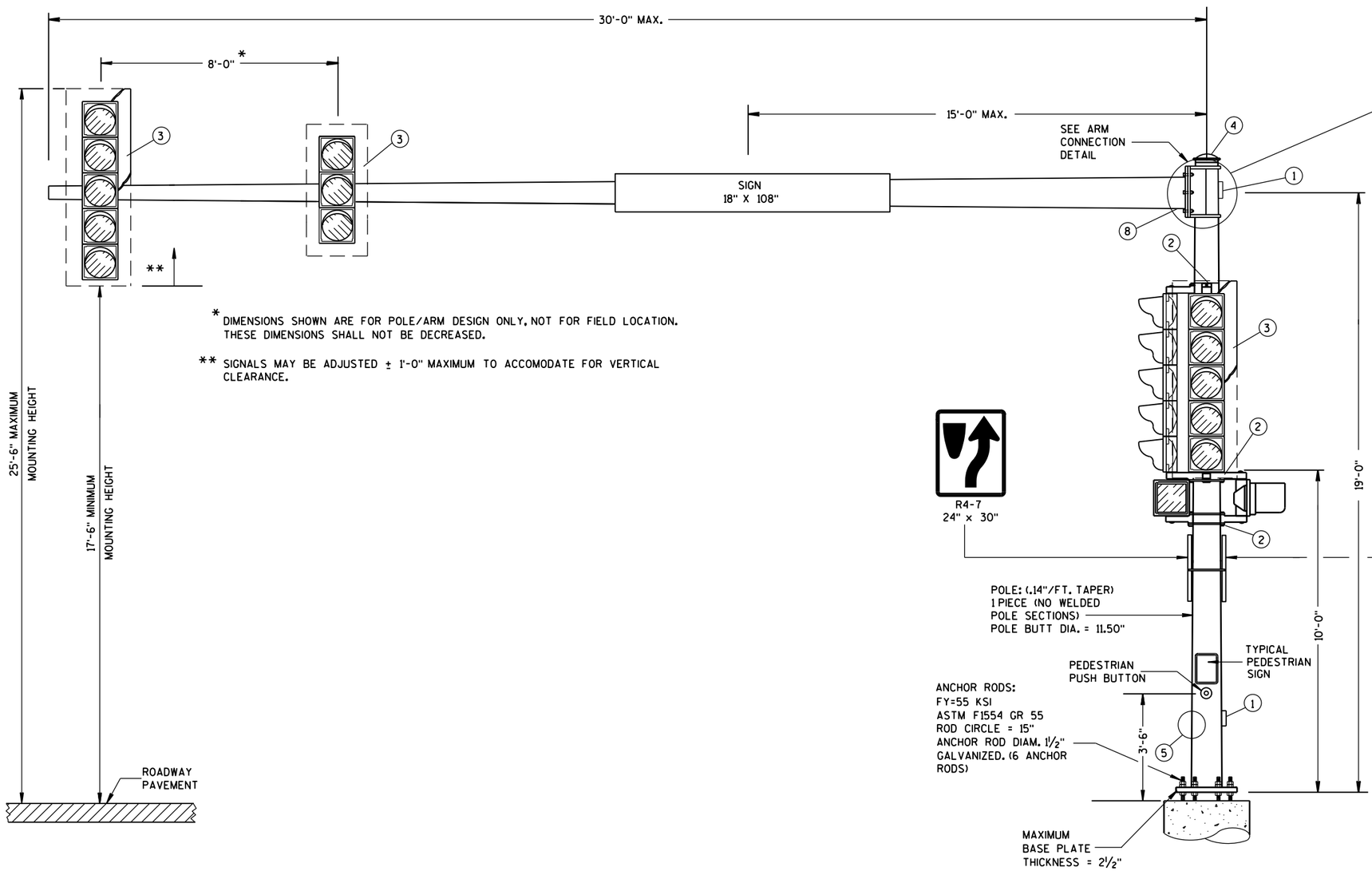
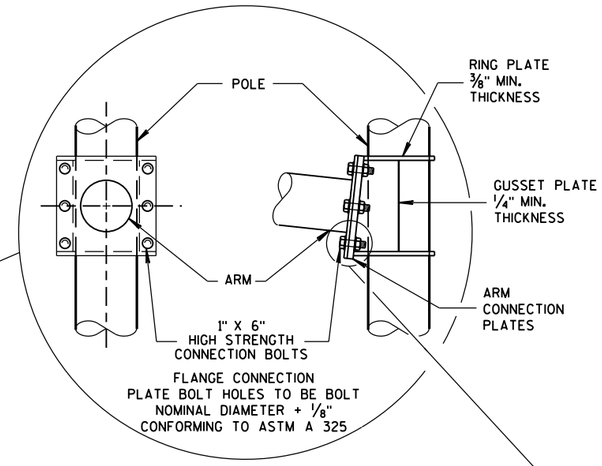
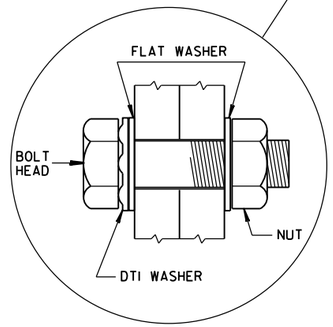


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

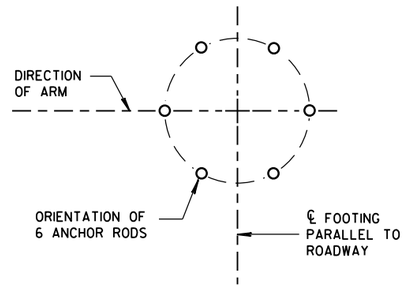
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 9 POLE 15'- 30' MONOTUBE ARM

TYPE 9 POLE 15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May, 2016 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

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

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO 2013 6TH EDITION AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

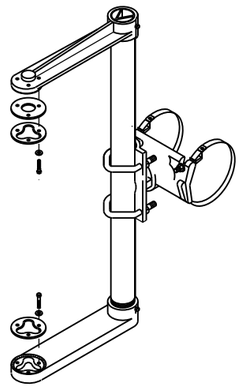
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

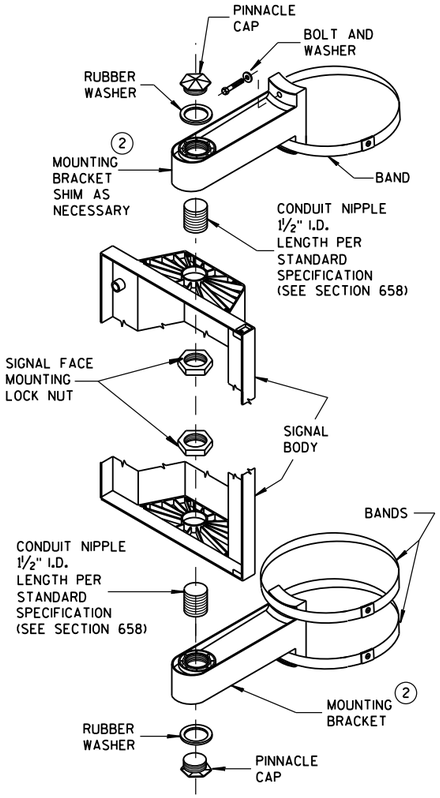
MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

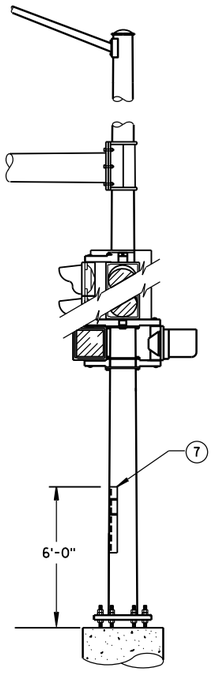


SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM

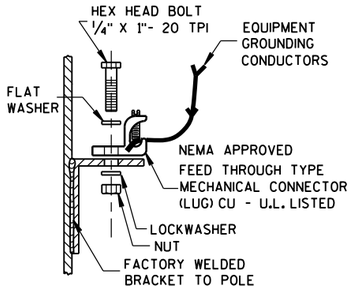
(MOUNT PER MANUFACTURER'S RECOMMENDATION)



SIGNAL FACE
VERTICAL MOUNTING DETAIL

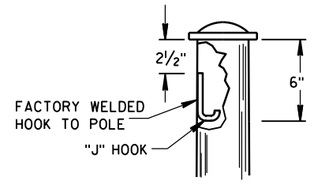


STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT



TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



"J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2016
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL 250

FHWA

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S.D.D. 9 E 8-8e

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S.D.D. 9 E 8-8e

GENERAL NOTES

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

OVER HEIGHT POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

OVER HEIGHT POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

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

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING 2017 INTERIM REVISIONS) AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

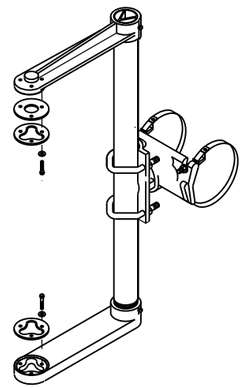
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

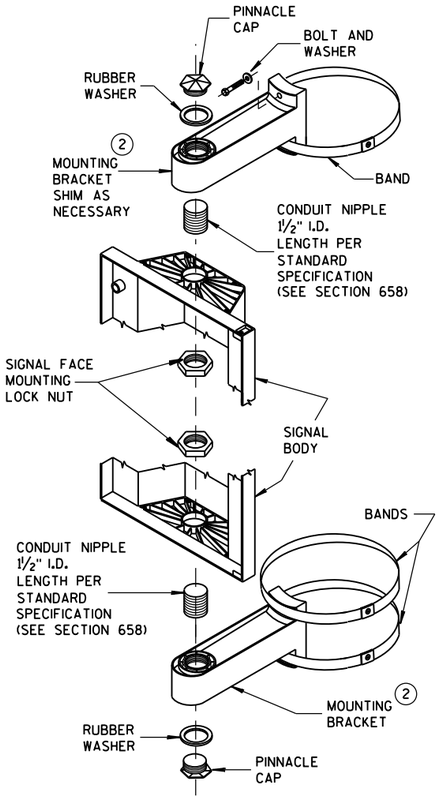
MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

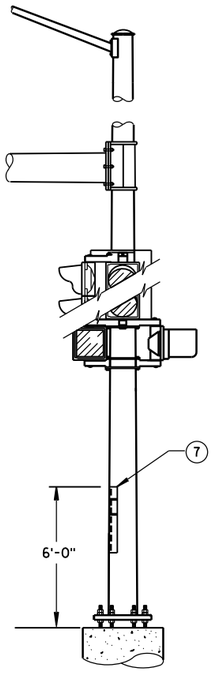


SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

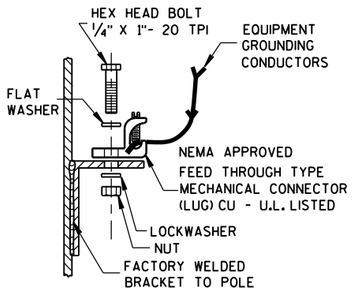
(MOUNT PER MANUFACTURER'S RECOMMENDATION)



SIGNAL FACE VERTICAL MOUNTING DETAIL

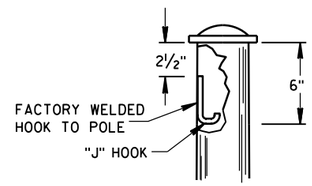


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



"J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE DETAILS FOR OVER HEIGHT TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 E 12-1e

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		COMMUNICATIONS VAULT
VAULT DIAMETER (INSIDE) **	A	36
VAULT OVERALL OUTSIDE DIAMETER	B	39
VAULT LENGTH	C	42
FRAME OPENING	D	34 1/2
WEIGHT IN POUNDS *		
COVER		95
VAULT ONLY		85

* THE ACTUAL WEIGHT OF THE COVER AND VAULT MAY VARY NOT TO EXCEED 100 LBS FOR THE COVER AND 100 LBS FOR THE VAULT ONLY.

** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE

GENERAL NOTES

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

ALL VAULTS, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER.

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DICONTINUITIES LESS THAN 1/4".

COVER SHALL BE MAGNETICALLY LOCATABLE.

VAULTS AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

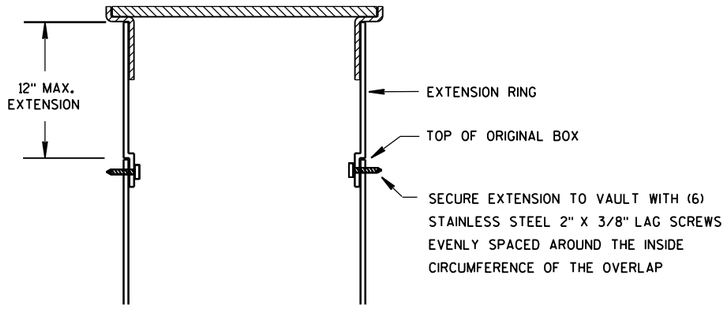
ENTRANCE HOLES INTO VAULT SHALL BE FIELD CUT AT TIME OF PLACEMENT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL CABLE IN ANY VAULT UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

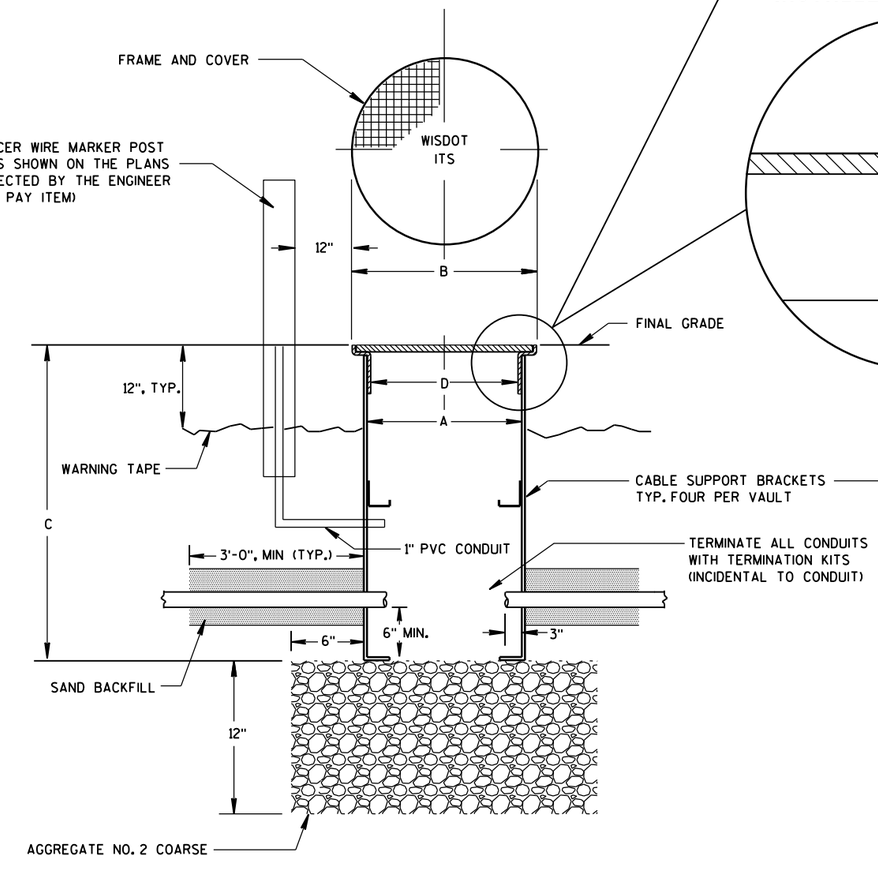
VAULT EXTENSION MAY ONLY BE USED IF DIRECTED BY THE ENGINEER.

CABLE SUPPORT BRACKETS SHALL BE STAINLESS STEEL AND FASTENED TO THE SIDE WALL WITH 3/8" STAINLESS STEEL BOLT AND NUT. BRACKETS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER.

FIBER TRACER MARKER POSTS SHALL BE CONSTRUCTED WITH HIGH-IMPACT PLASTIC MATERIAL WHICH IS FADE RESISTANT AND UV STABLE. ALL HARWARE SHALL BE STAINLESS STEEL AND CONTAIN A MINIMUM OF FIVE STANDARD TERMINALS.

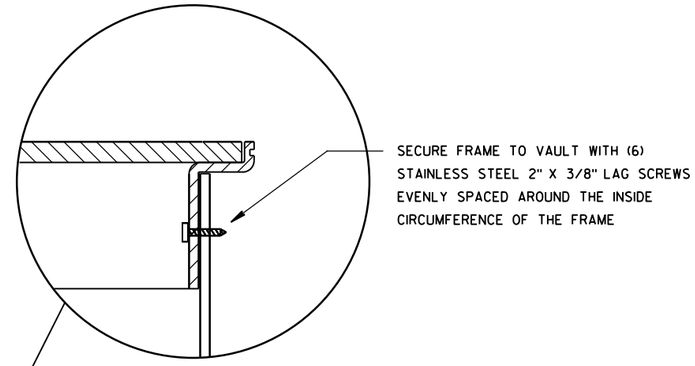


VAULT EXTENSION

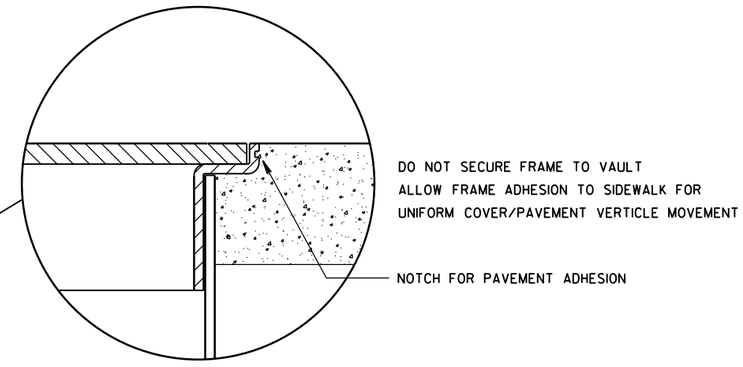


ROUND COMMUNICATIONS VAULT

INSTALLED IN SOD OR CRUSHED AGGREGATE



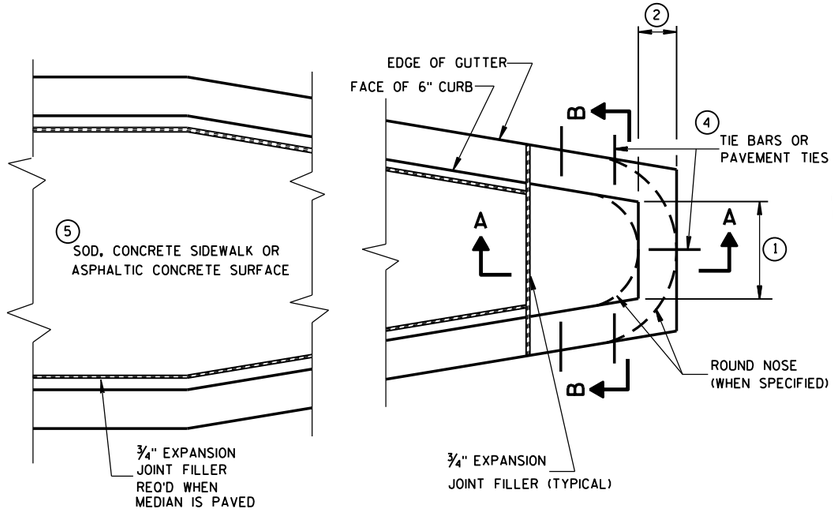
INSTALLED IN SIDEWALK

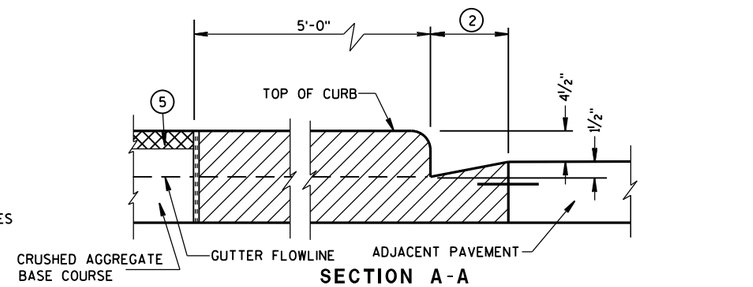


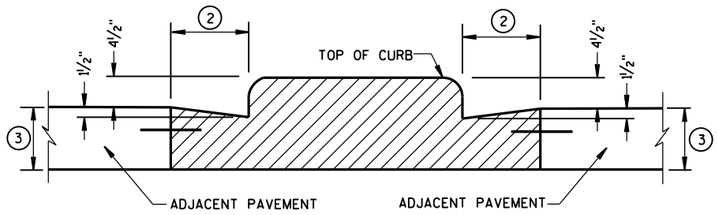
COMMUNICATION VAULT TYPE - ROUND

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 — DATE
/S/Ahmet Demirbilek — STATE ELECTRICAL
252
FHWA







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.

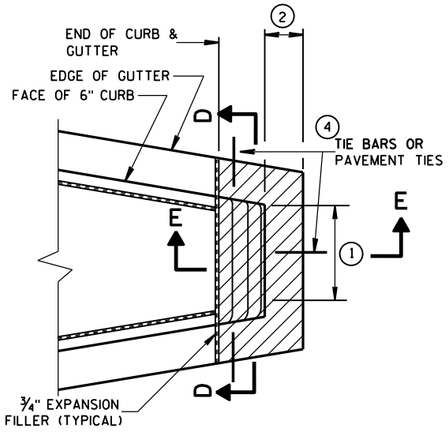
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

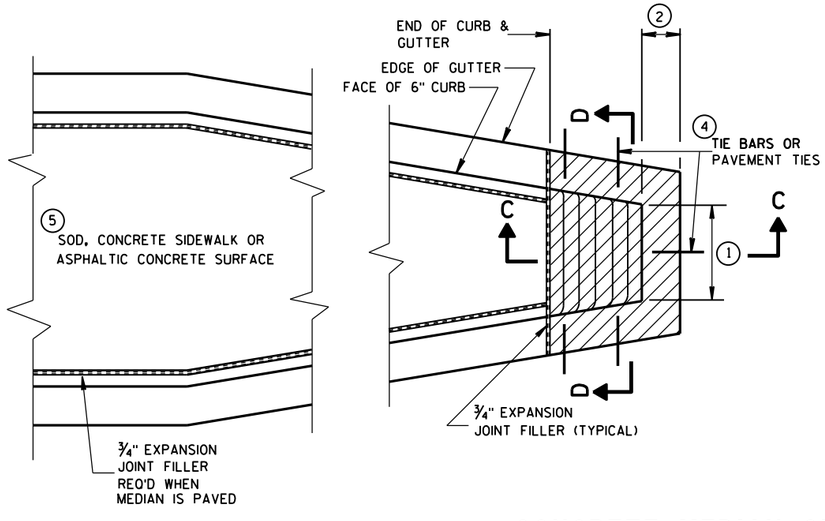
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

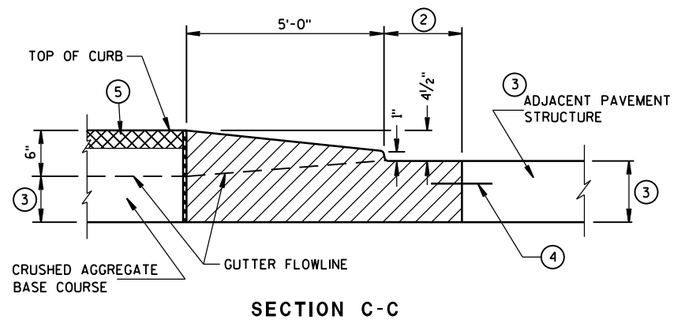
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

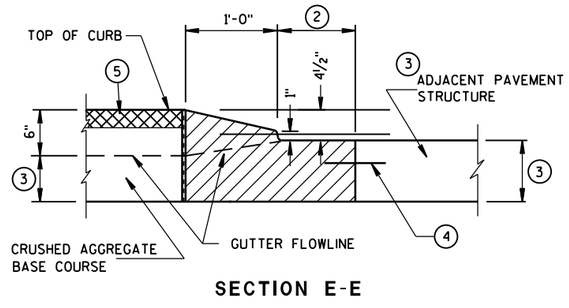
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

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



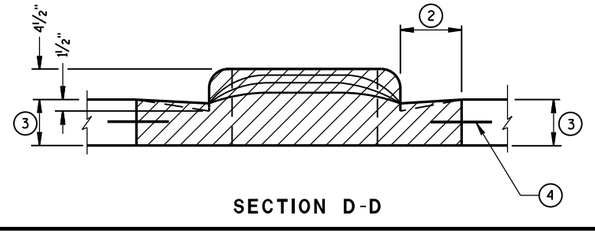






CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/8/2006
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 11 B 2-2

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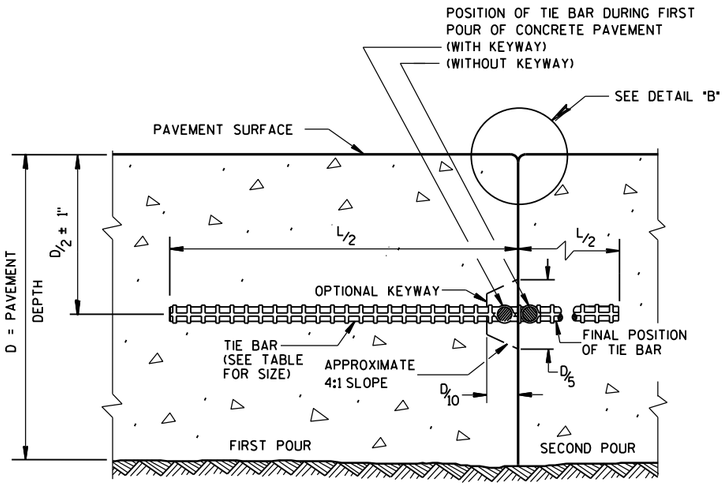
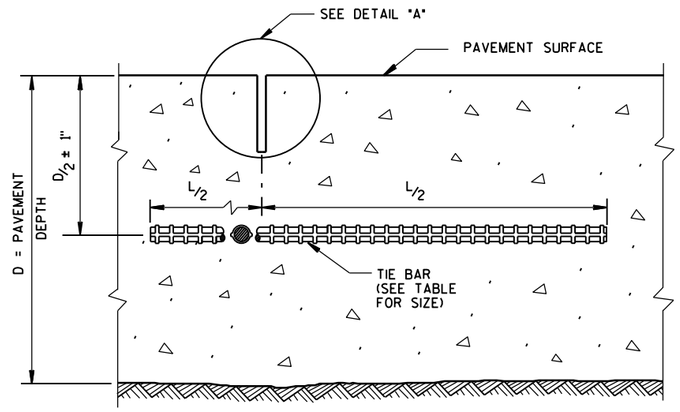
S.D.D. 11 B 2-2



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.

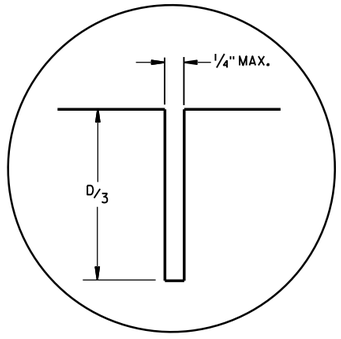
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

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

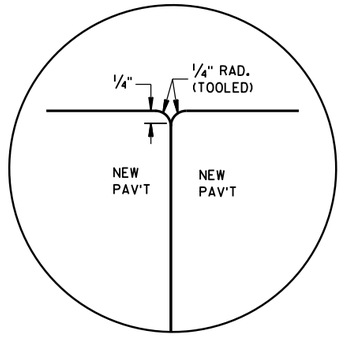
PLAN VIEW

SECTION A-A

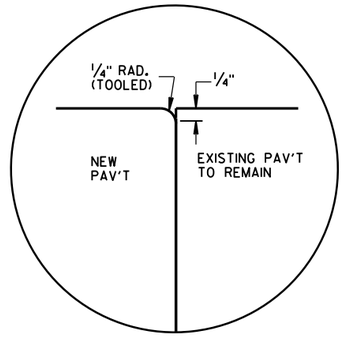
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



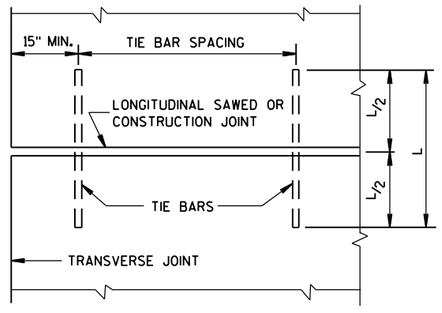
DETAIL "C"

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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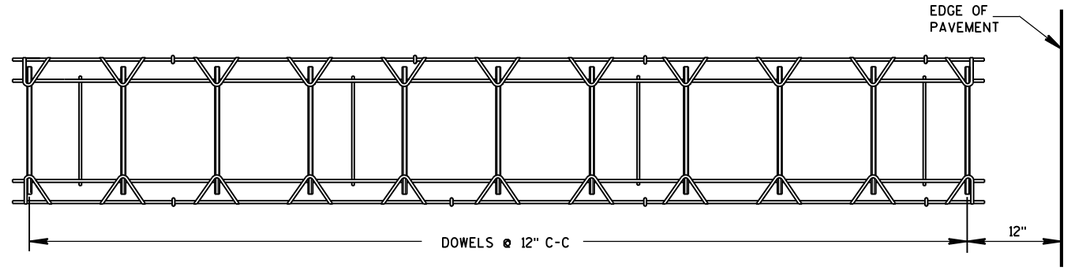
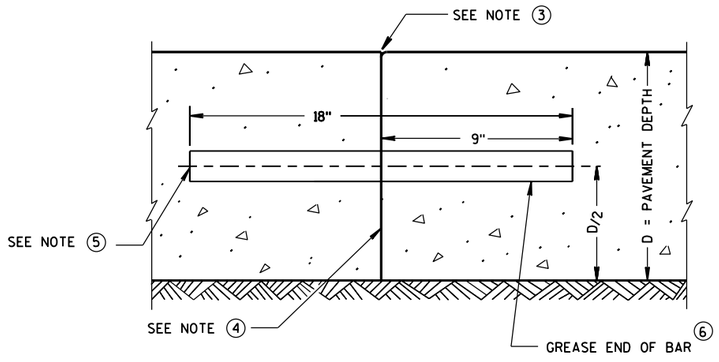
S.D.D. 13 C 1-18



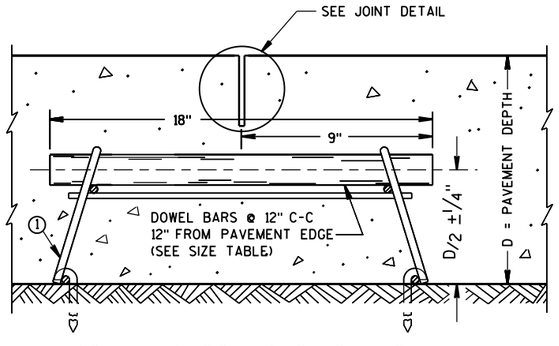
PLAN VIEW

SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



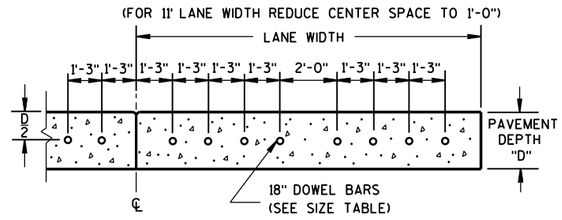
TRANSVERSE CONSTRUCTION JOINT



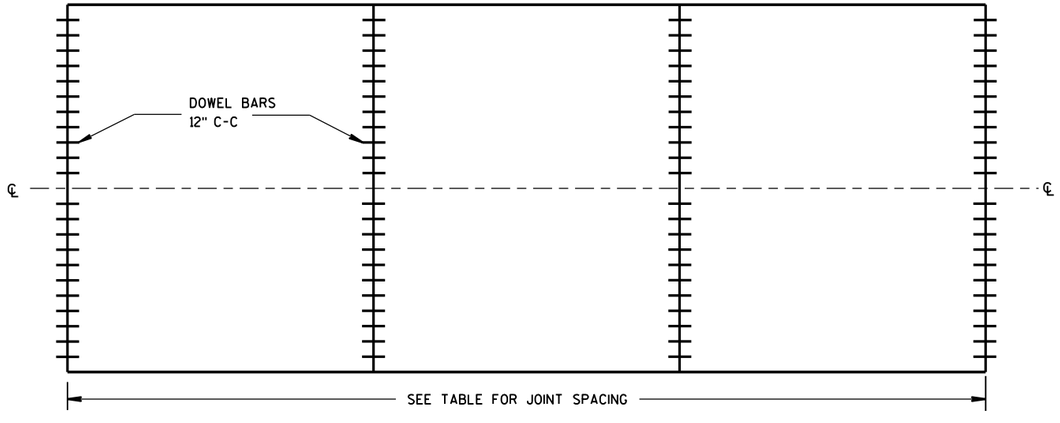
DOWELED CONTRACTION JOINT

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.

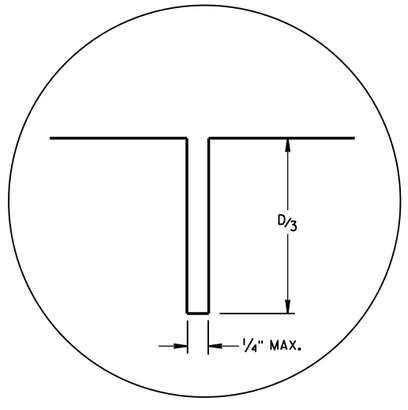
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

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

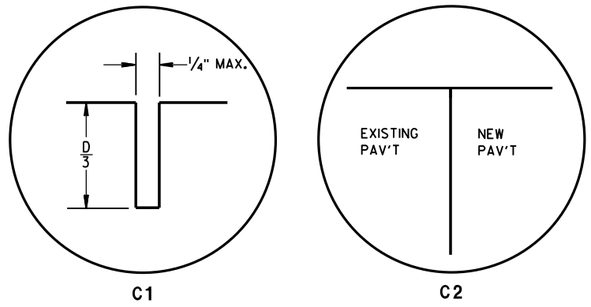
URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

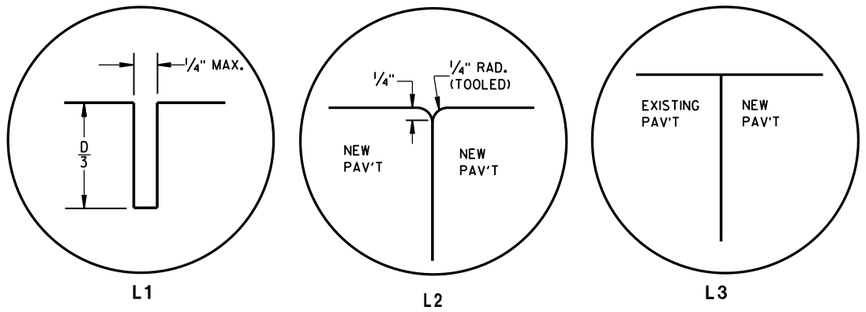
APPROVED
5/3/2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER
FHWA

6

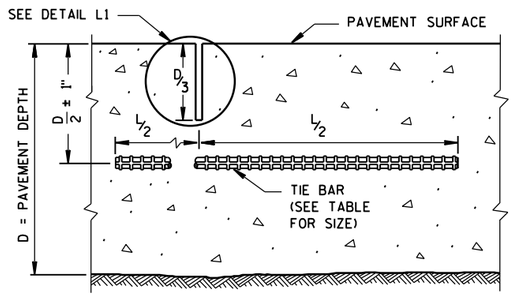
S.D.D. 13 C 13-8



TRANSVERSE JOINTS

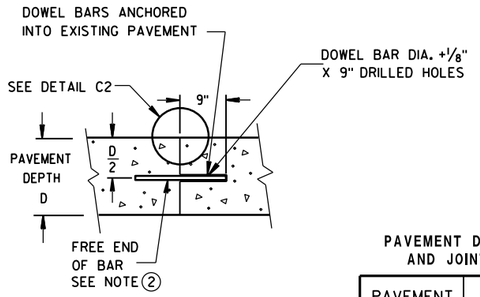


LONGITUDINAL JOINTS



SECTION C-C

SAWED JOINT



SECTION D-D

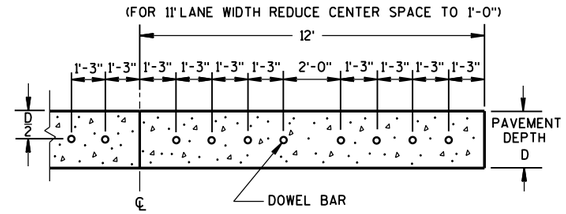
GENERAL NOTES

ANCHOR TIE BARS AND DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

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



SECTION E-E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

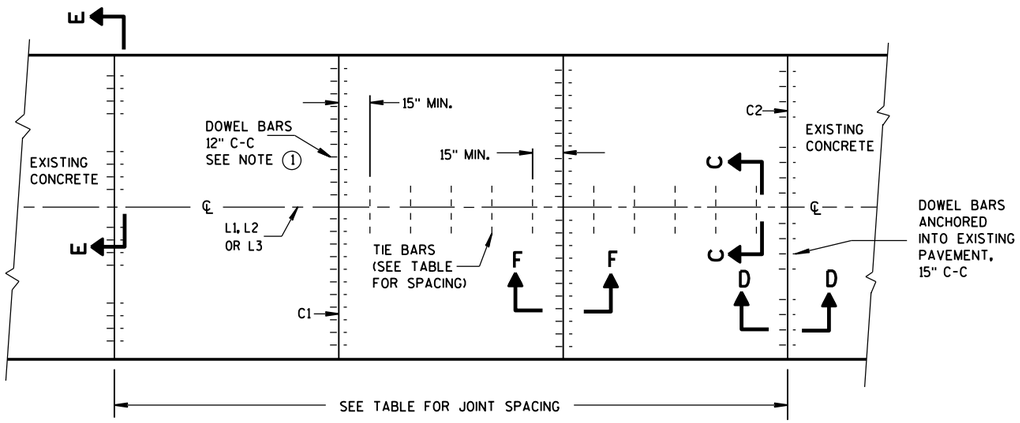
PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5½", 6, 6 ½"	NONE	12'
7, 7 ½"	1"	14'
8, 8 ½"	1 ¼"	15'
9, 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

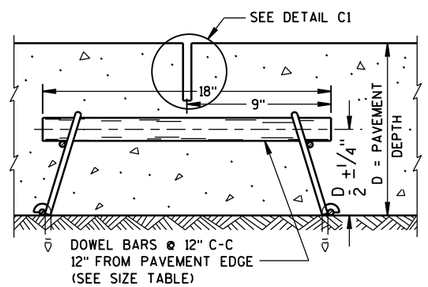
* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

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



PLAN VIEW

CONCRETE BASE CONTRACTION JOINT LOCATIONS



SECTION F-F

CONTRACTION JOINT

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

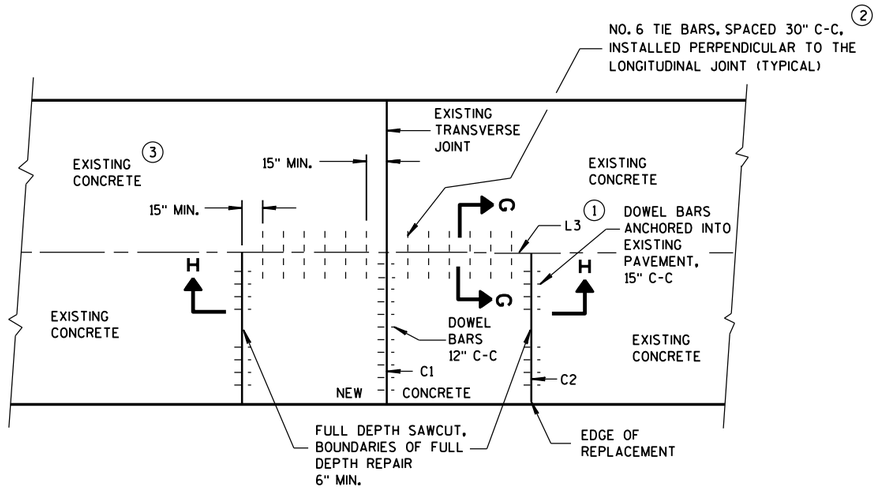
6
S.D.D. 13 C 15-6a

GENERAL NOTES

(1) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.

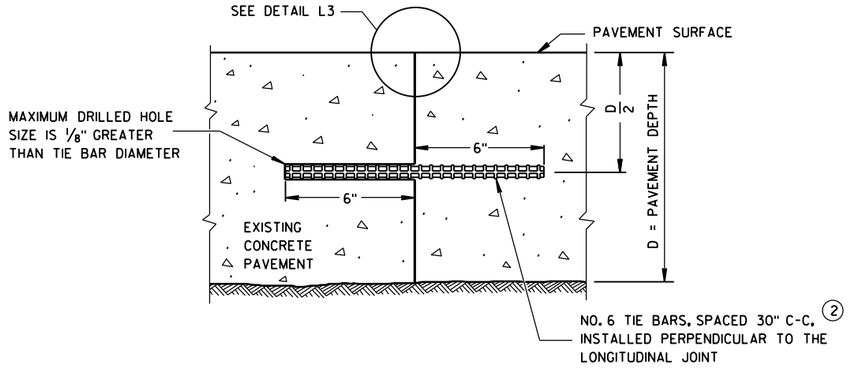
(2) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

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



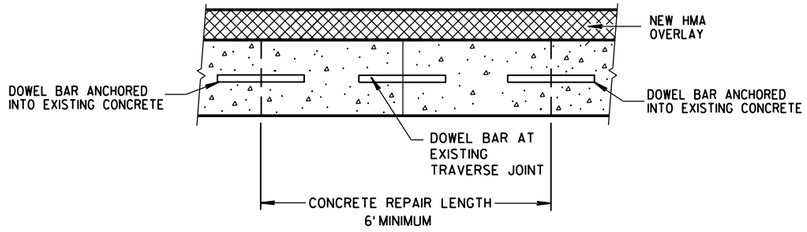
PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR



SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H-H

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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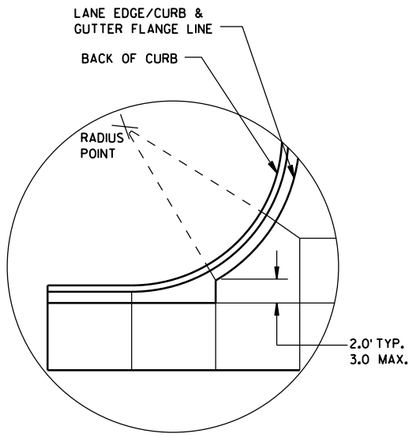
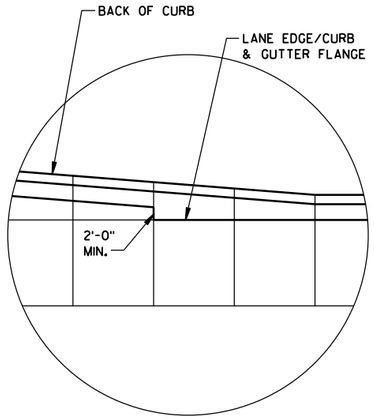
S.D.D. 13 C 15-6b



DETAIL "A"



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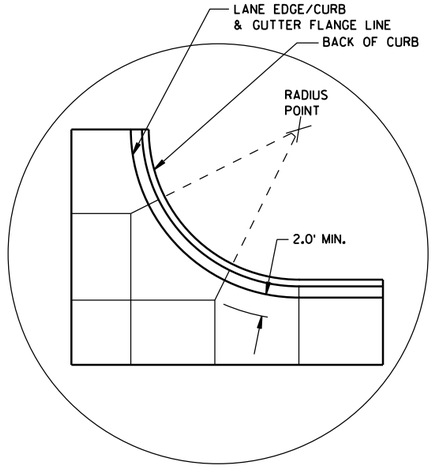

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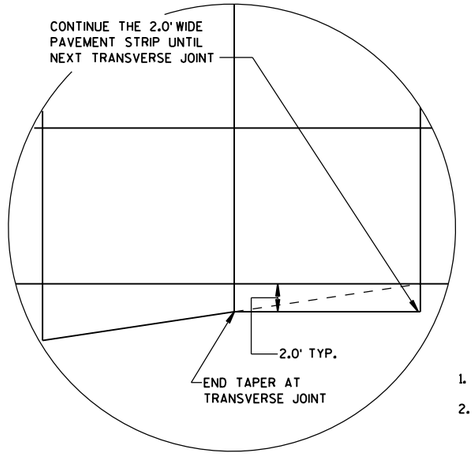


DETAIL "D"

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.

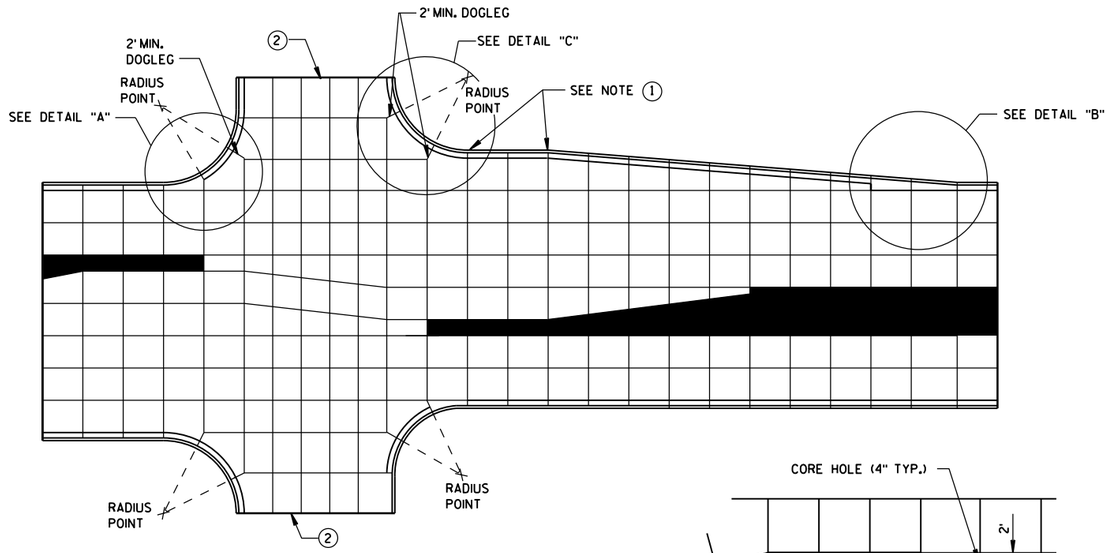
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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.

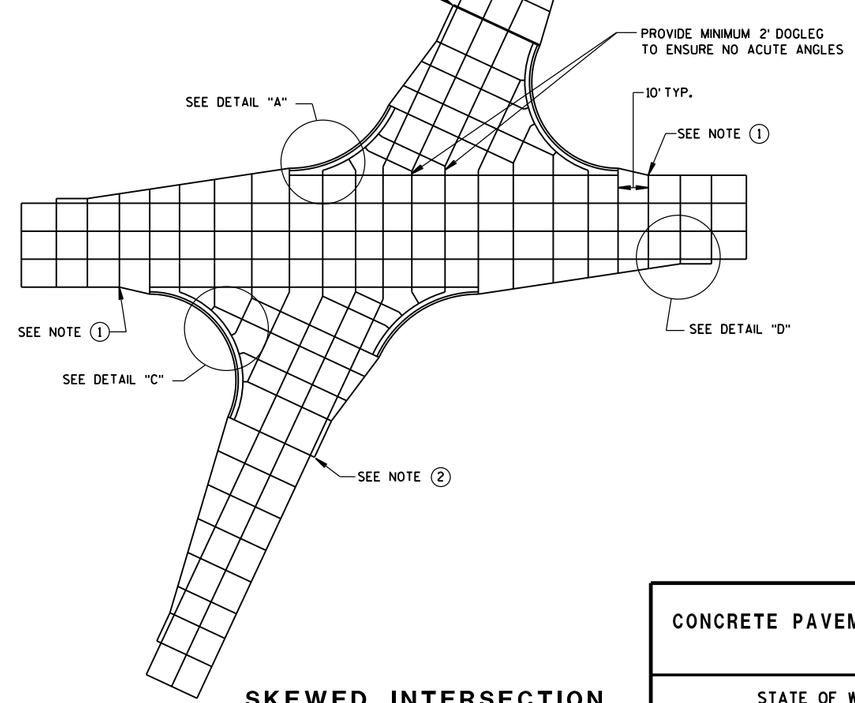
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM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



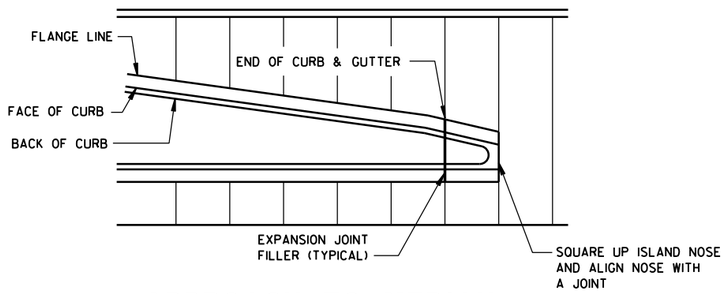
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

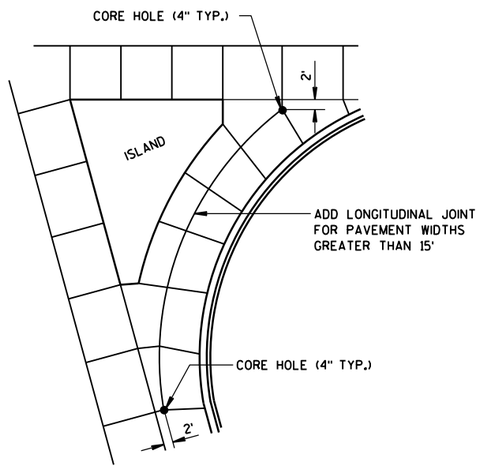
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 258

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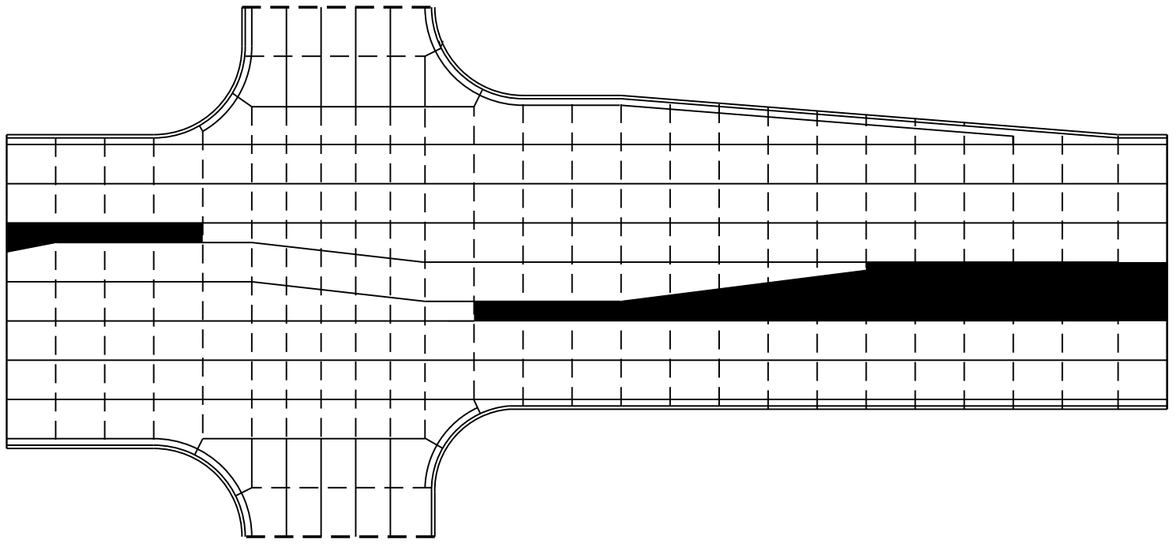
S.D.D. 13 C 18-5a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

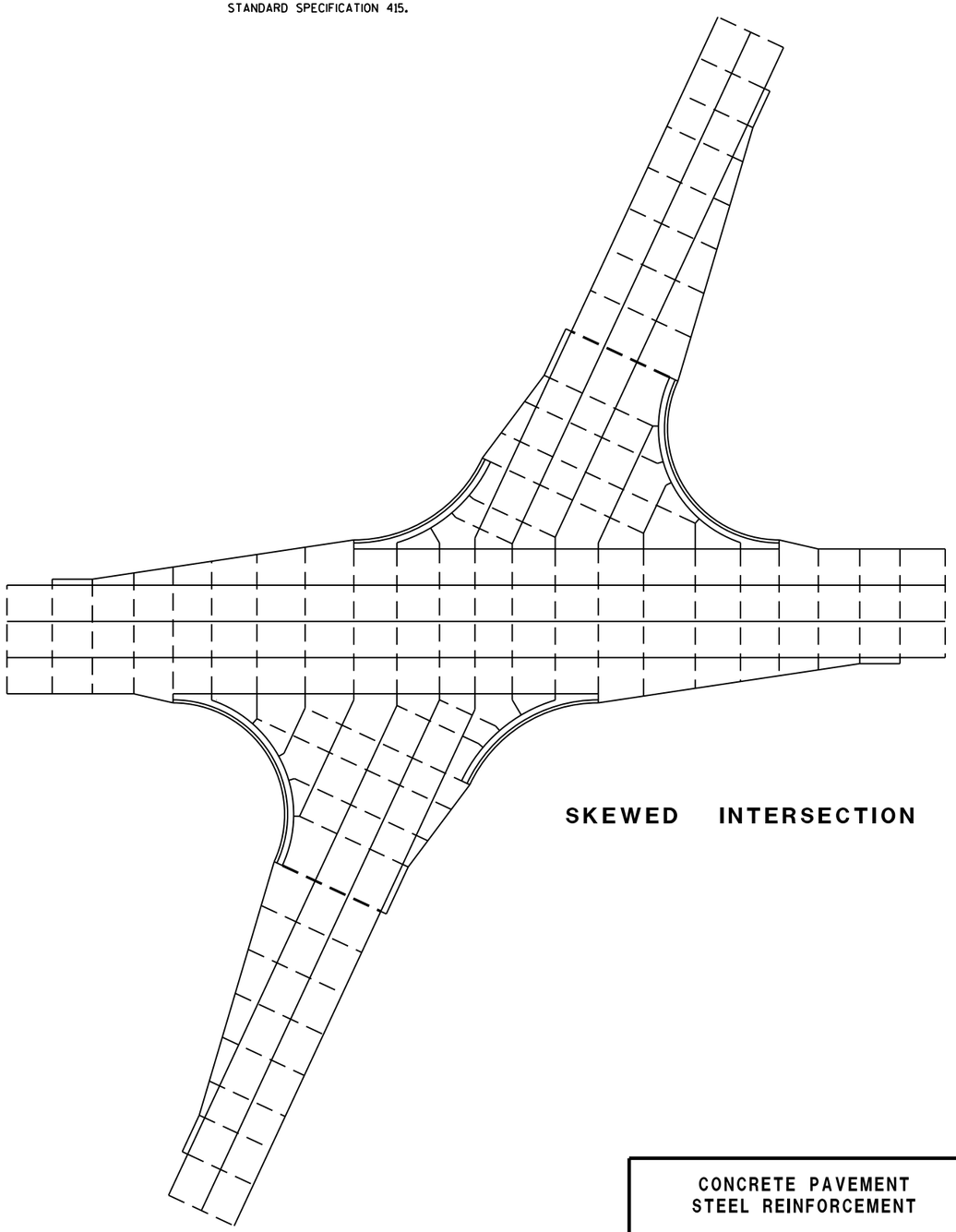
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

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



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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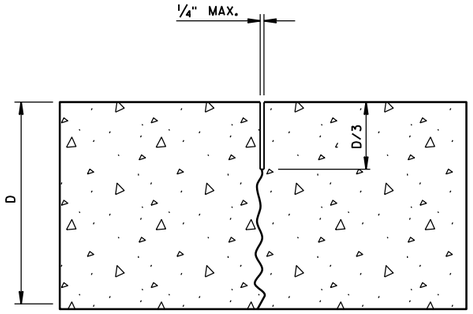
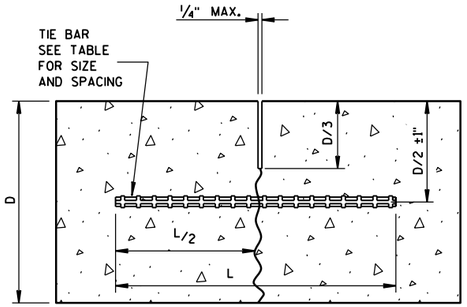


UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

TIE BAR TABLE

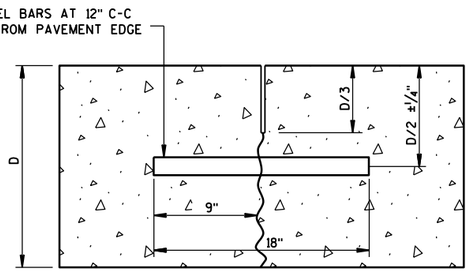
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* 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

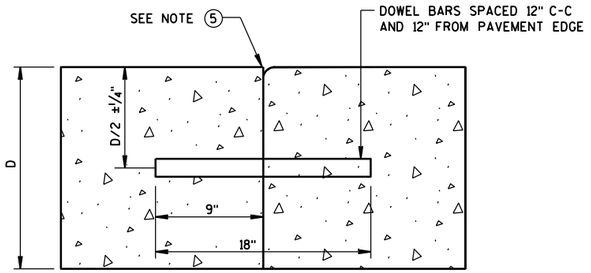
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 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.



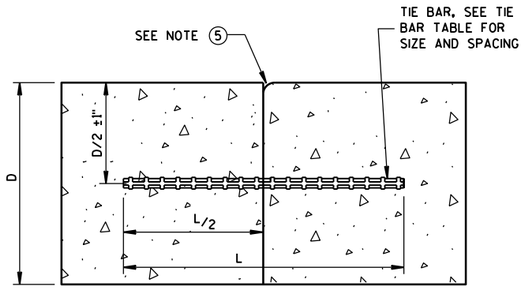
DOWELED-TRANSVERSE

CONTRACTION JOINTS

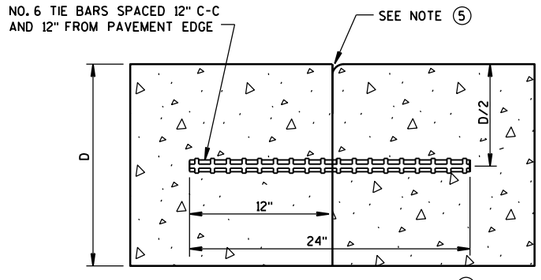
SEE NOTE (2)



DOWELED TRANSVERSE (3)

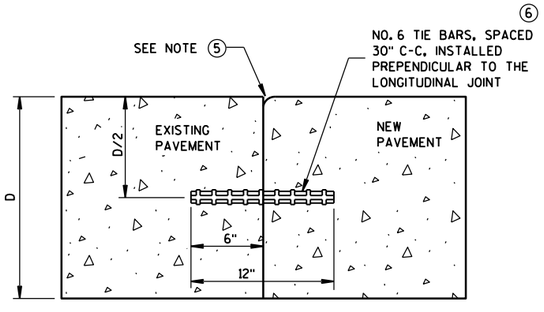


TIED LONGITUDINAL



TIED TRANSVERSE (3)

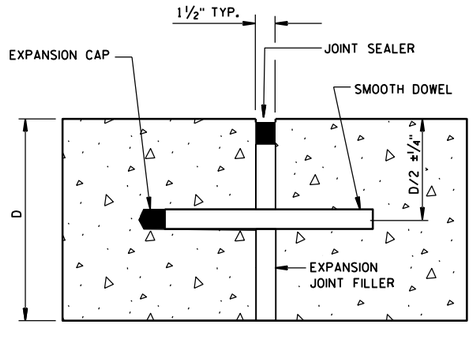
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

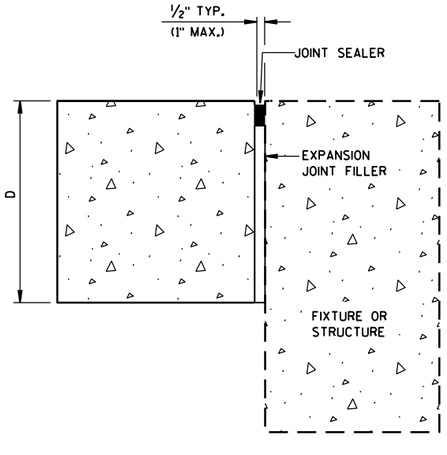
CONSTRUCTION JOINTS

SEE NOTE (4)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

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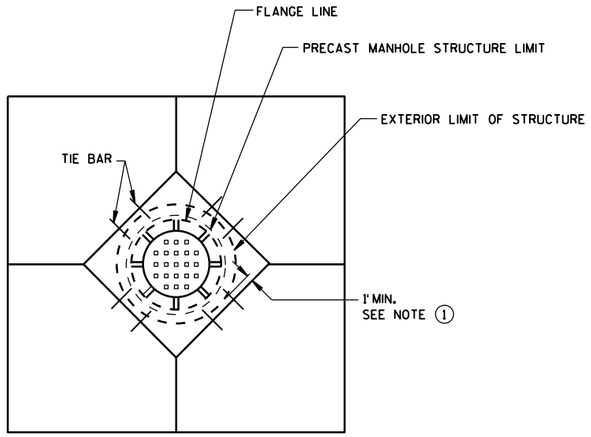
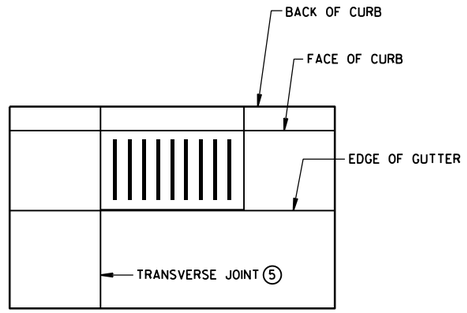
CONCRETE PAVEMENT
JOINT TYPES

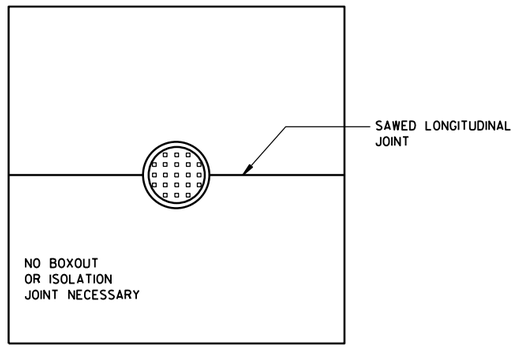
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



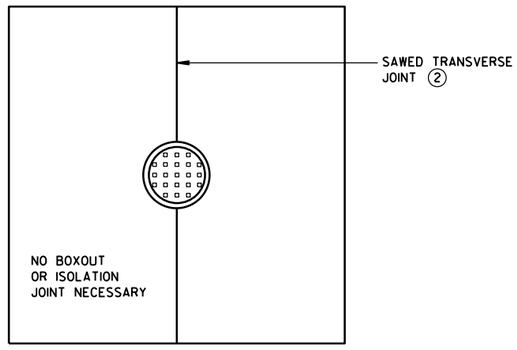
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



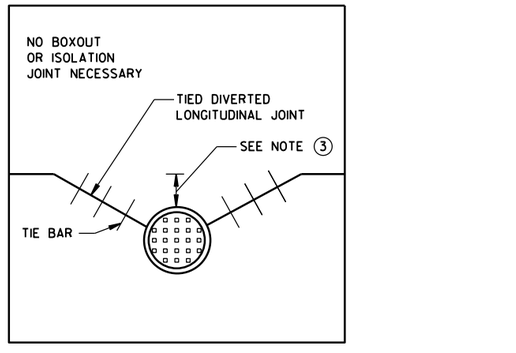
INLET WITH TRANSVERSE JOINT



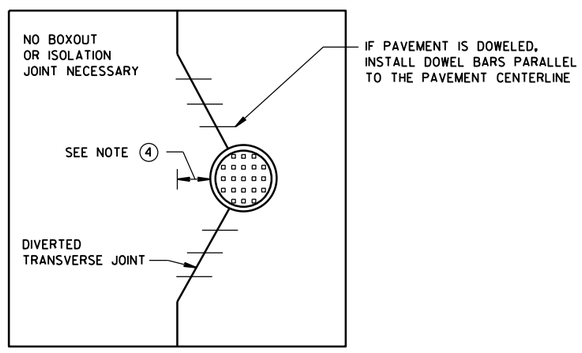
MANHOLE WITH LONGITUDINAL JOINT



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
December, 2016 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPEF
FHWA

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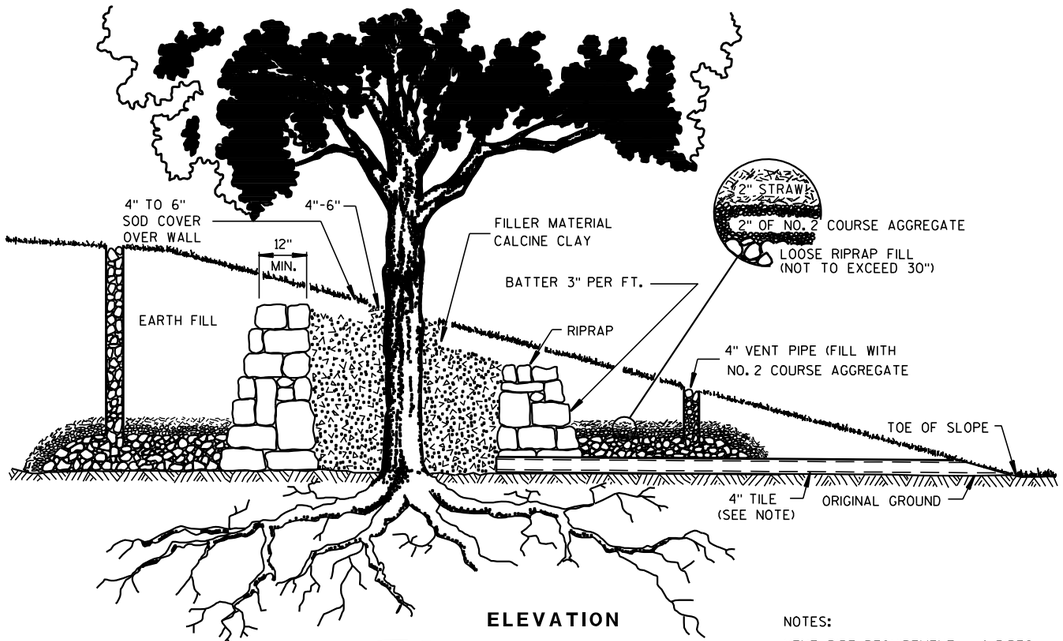
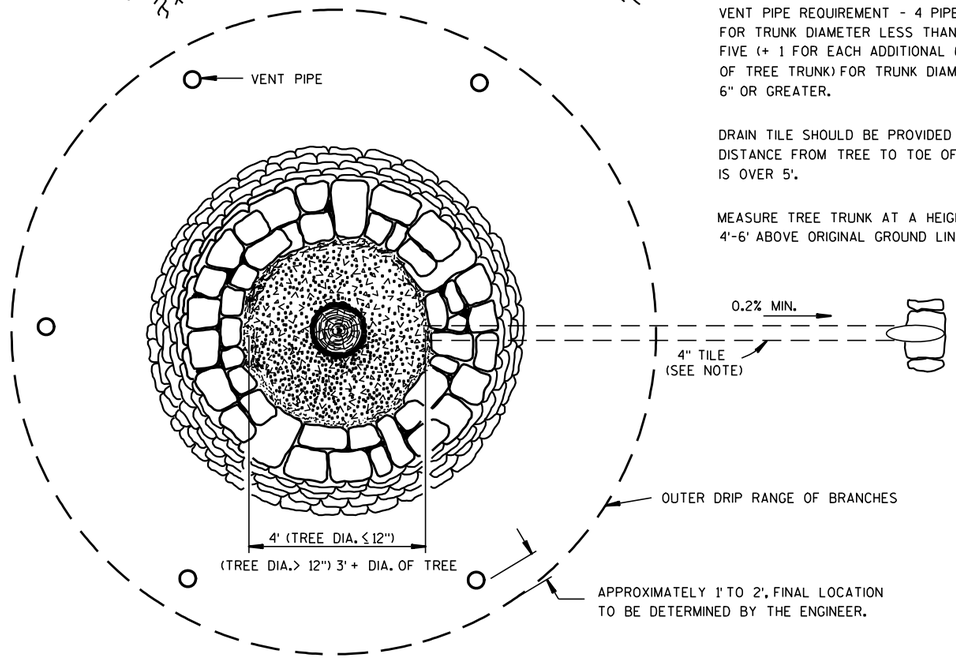


ELEVATION



PLAN

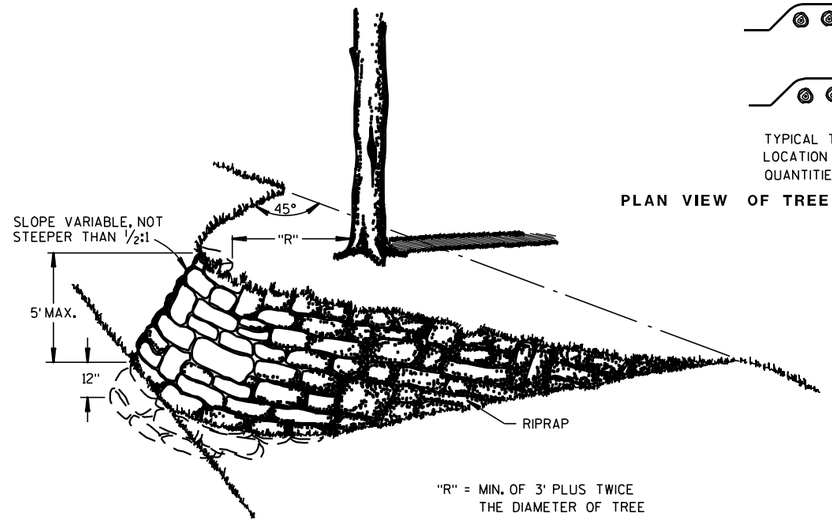
FULL TREE WELL WITH RIPRAP WALL

NOTES:

VENT PIPE REQUIREMENT - 4 PIPES FOR TRUNK DIAMETER LESS THAN 6". FIVE (+ 1 FOR EACH ADDITIONAL 6" OF TREE TRUNK) FOR TRUNK DIAMETER 6" OR GREATER.

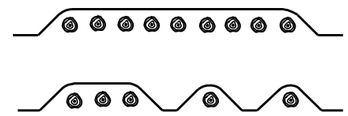
DRAIN TILE SHOULD BE PROVIDED IF DISTANCE FROM TREE TO TOE OF SLOPE IS OVER 5'.

MEASURE TREE TRUNK AT A HEIGHT 4'-6' ABOVE ORIGINAL GROUND LINE.



"R" = MIN. OF 3' PLUS TWICE THE DIAMETER OF TREE

DETAILS OF TREE ISLAND AND ROOT PROTECTION



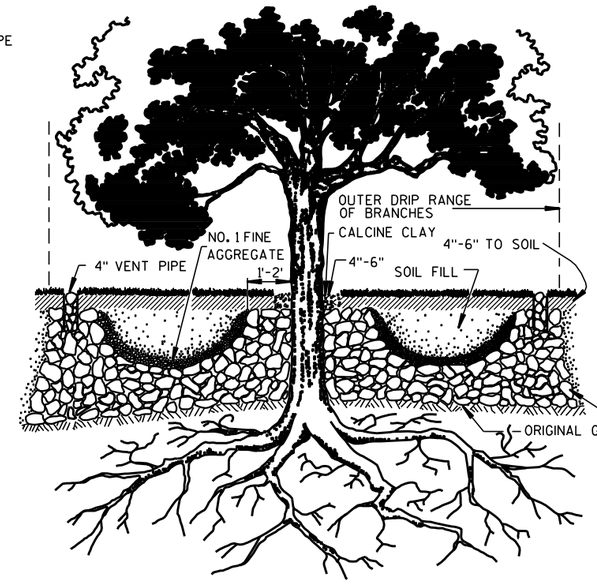
TYPICAL TREATMENTS OF ROOT PROTECTION. LOCATION SHOWN ON MISCELLANEOUS QUANTITIES SHEET.

PLAN VIEW OF TREE ISLANDS FOR ONE OR MORE TREES

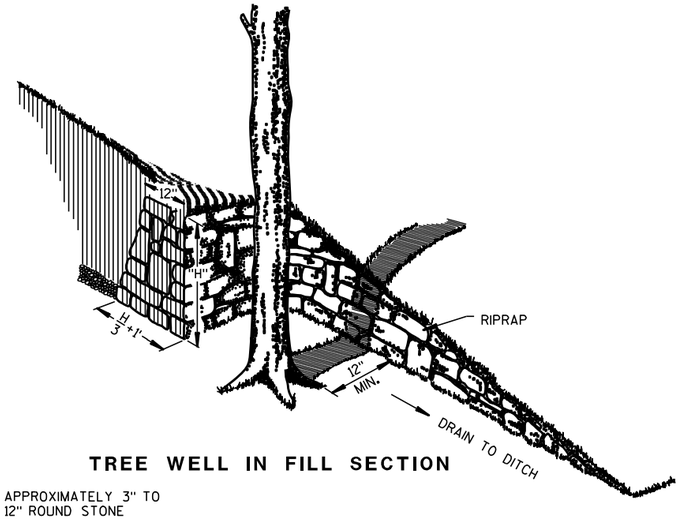
GENERAL NOTES

WALLS TO BE BUILT TO APPROXIMATE SHAPE AND DIMENSIONS SHOWN. STONE TO CONFORM TO SPECIFICATIONS FOR RIPRAP.

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



TREE WELL WITHOUT WALL



TREE WELL IN FILL SECTION

DETAILS FOR TREE WELLS

TREE PRESERVATION DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/25/76 DATE — /S/ D. L. Strand STATE DESIGN ENGINEER — WYS

FHWA

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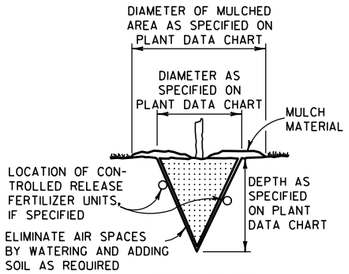
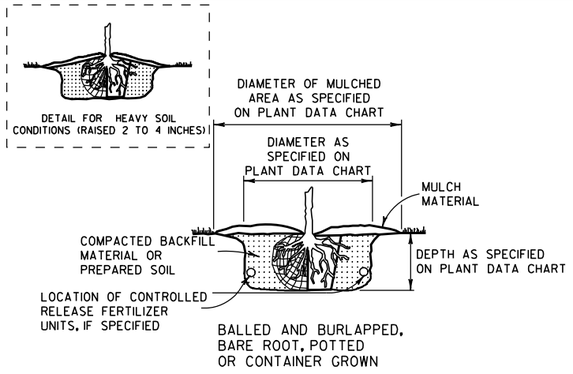
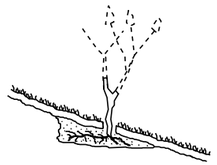


MACHINE MOVED

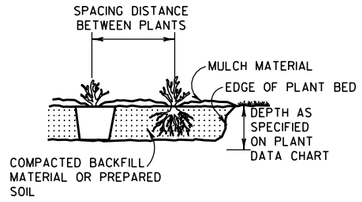


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



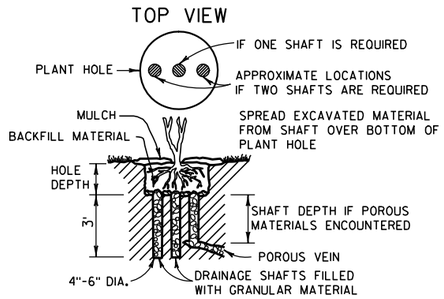
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



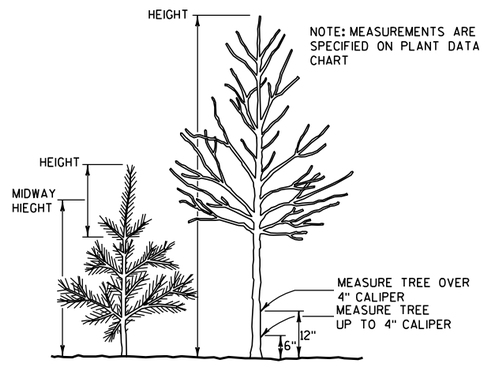
PREPARED BED (BARE ROOT AND POTTED)

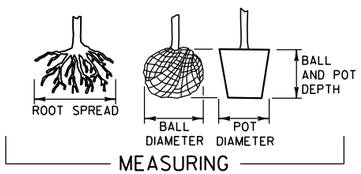
PLANTING



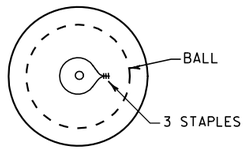
NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

DRAINING

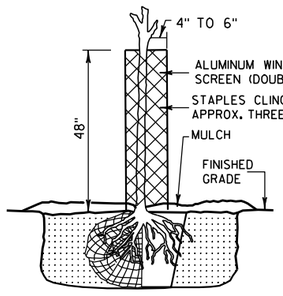




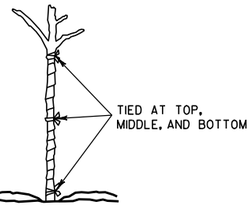
MEASURING



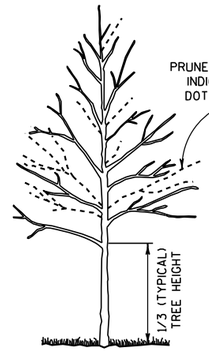
TOP VIEW



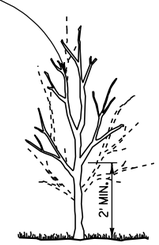
RODENT PROTECTION



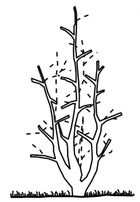
WRAPPING



TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)



SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)

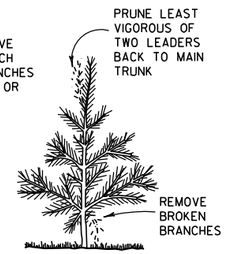


MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES

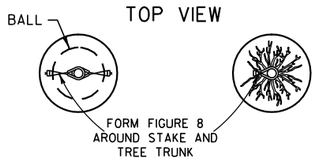
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

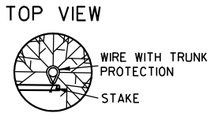
SUMAC

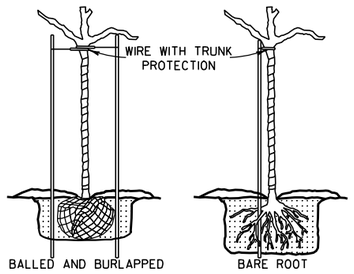


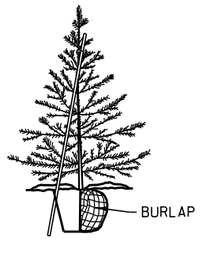
TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

PRUNING



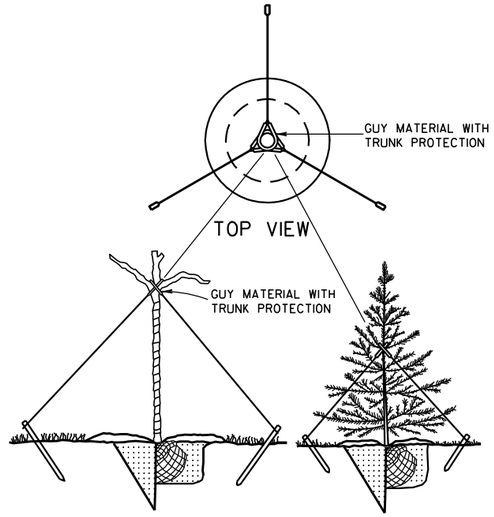




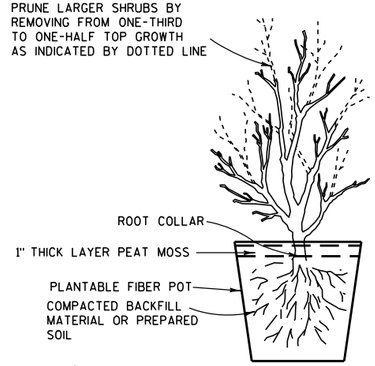


NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.

BRACING



GUYING



POTTING

NOTES

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

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

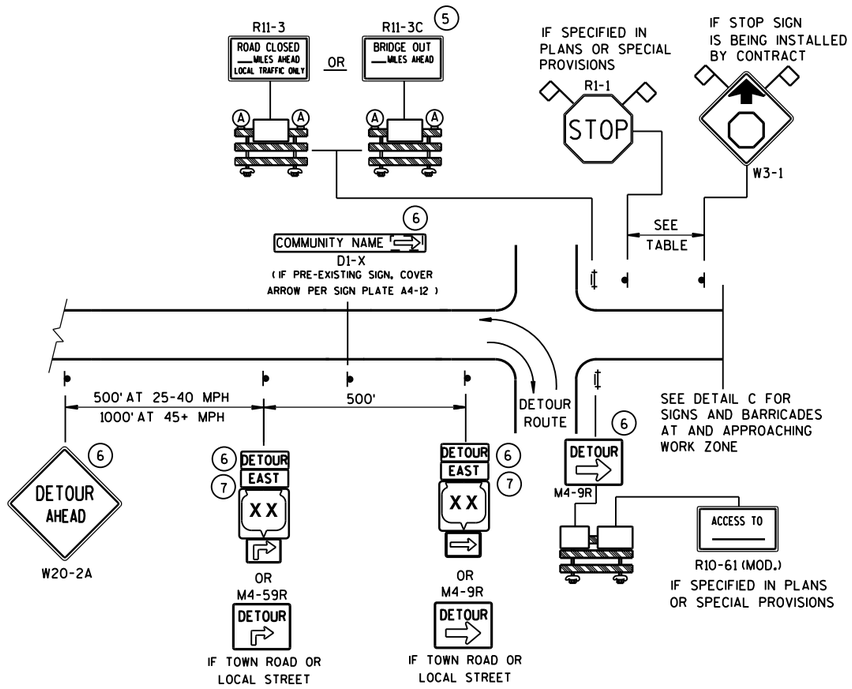
TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/11/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

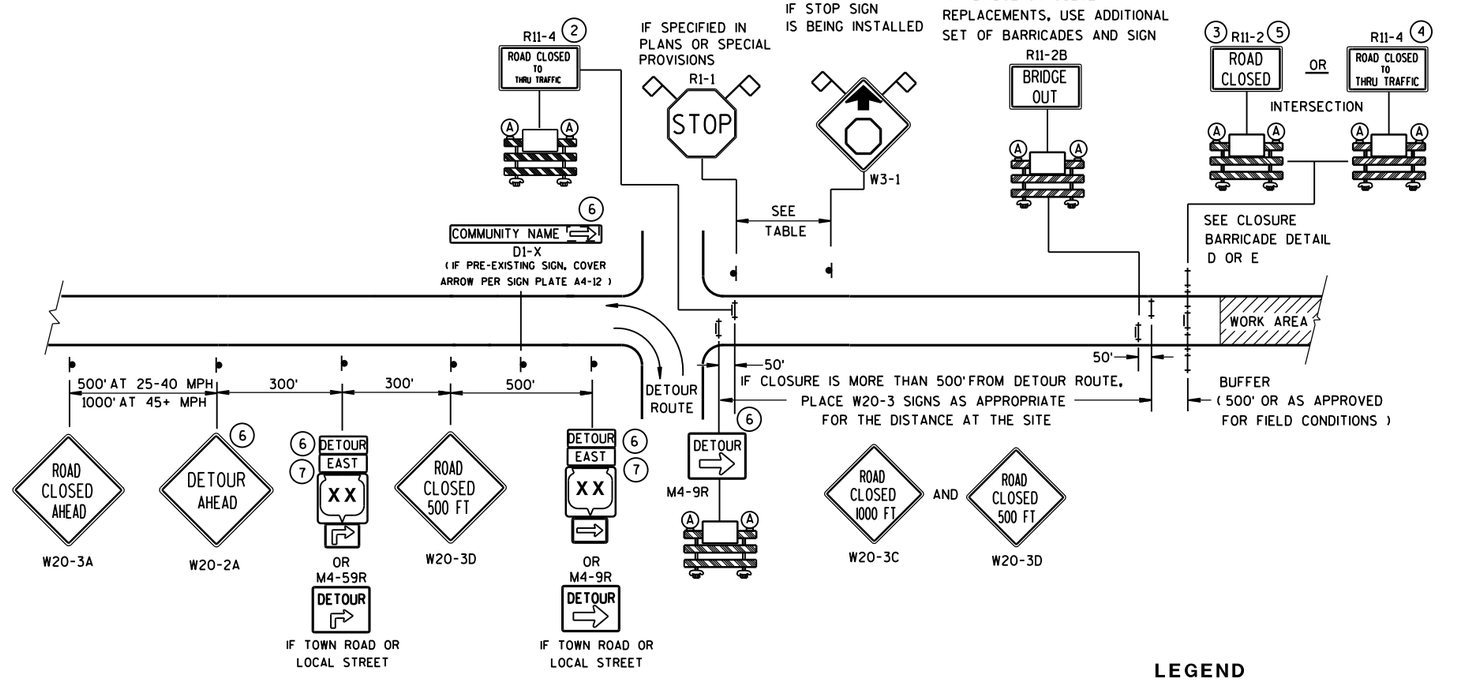
6

S.D.D. 14 A 2-1



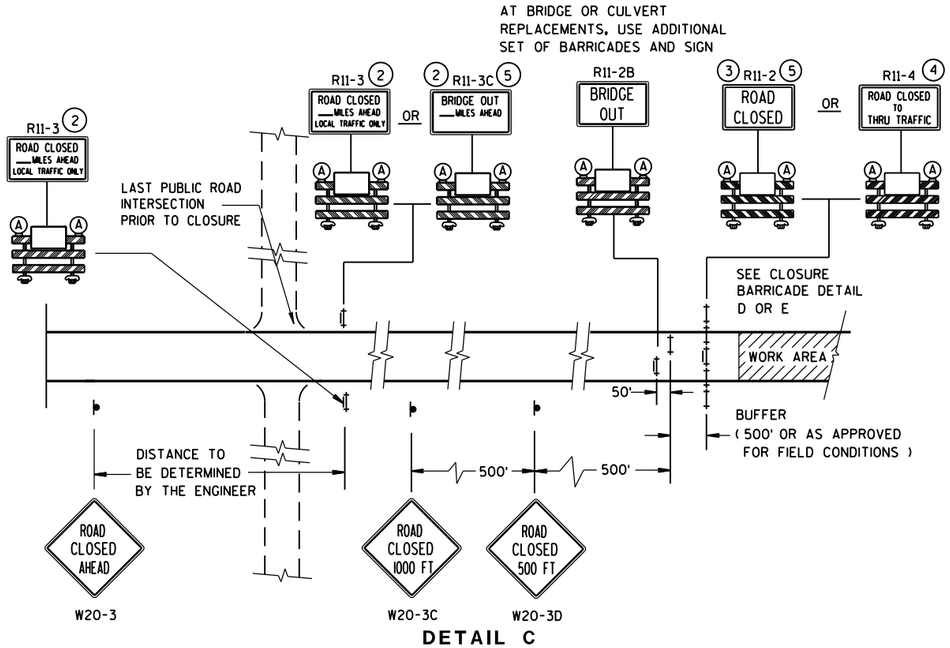
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

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

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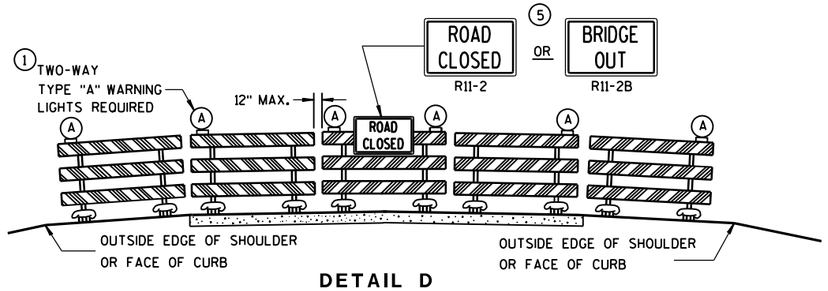
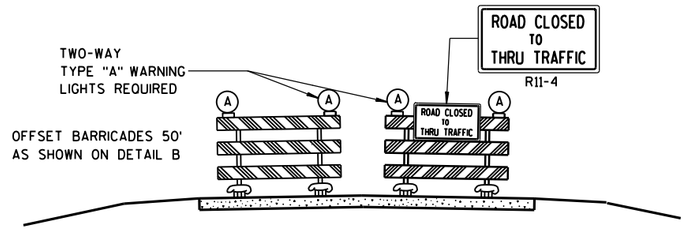


DETAIL D

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 — FIC

6

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.

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.

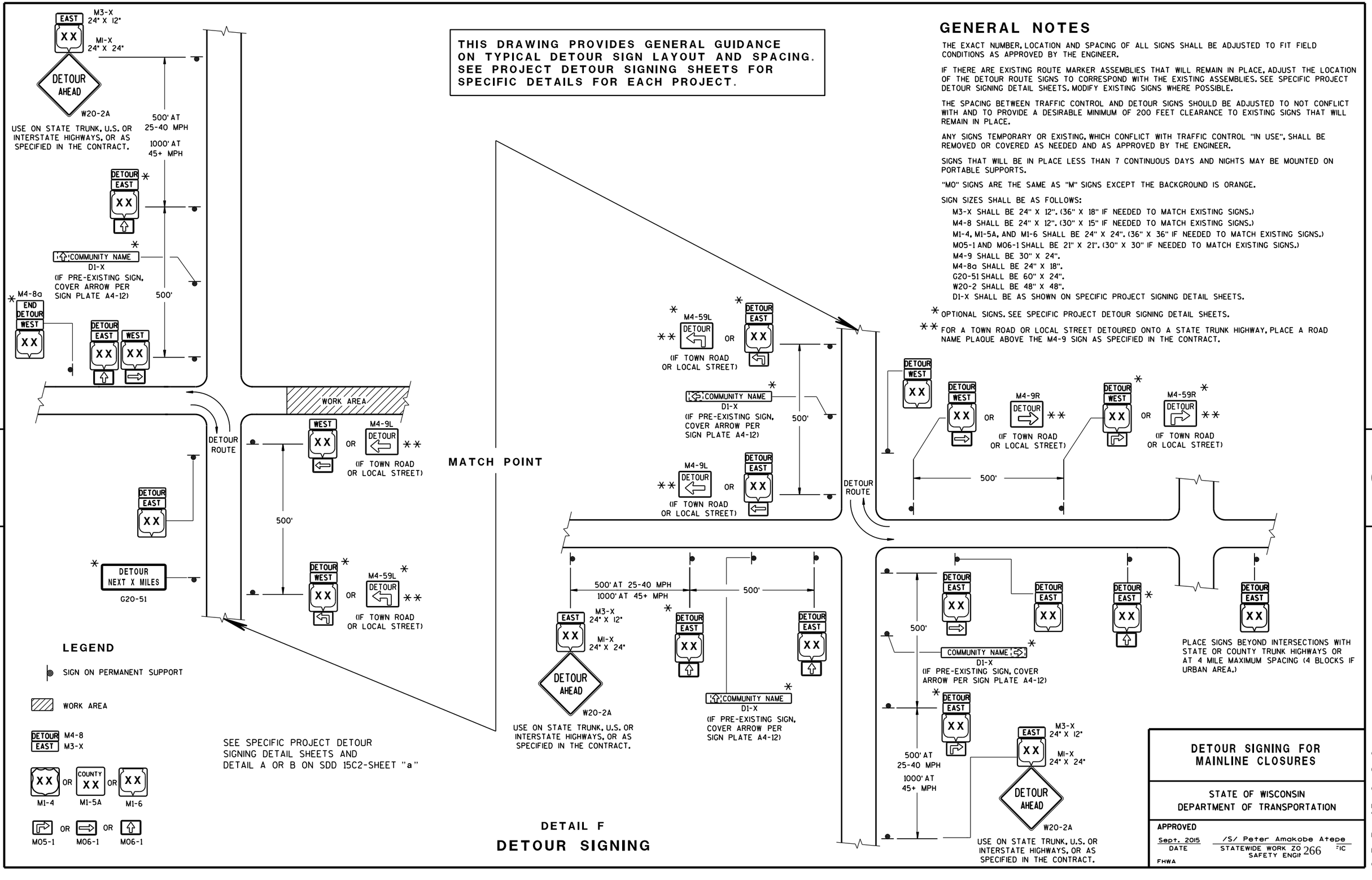
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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 OR MO6-1 OR 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

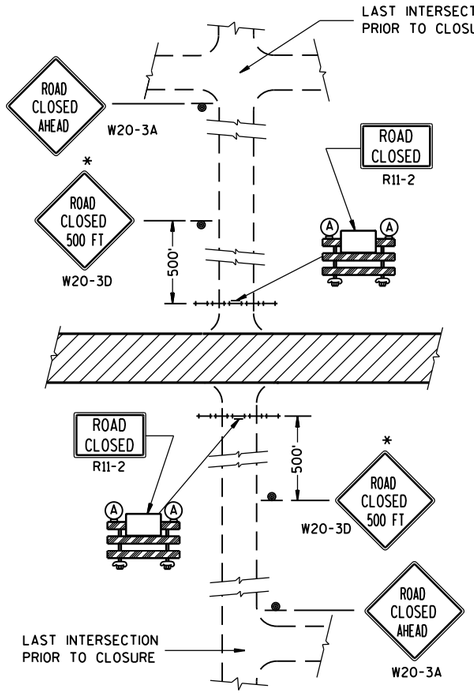
APPROVED

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

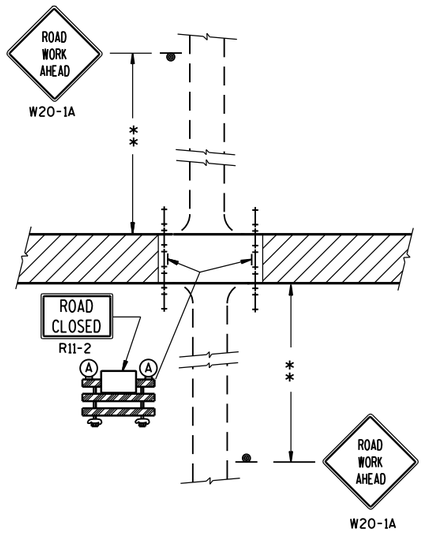
FHWA

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



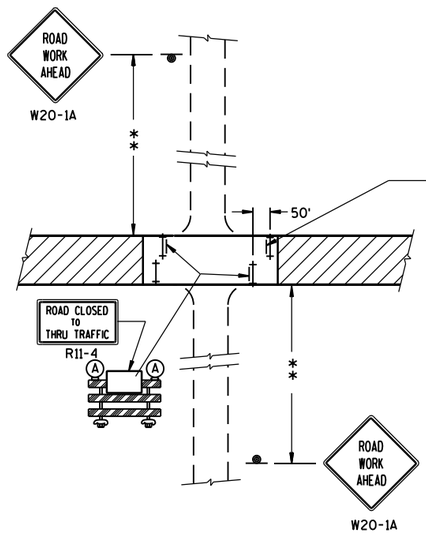
DETAIL 1

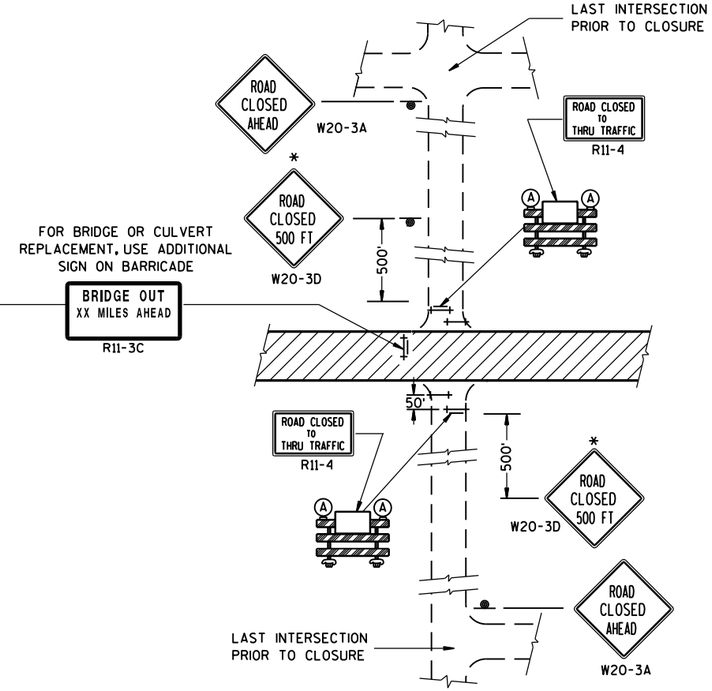
(NO ACCESS TO PROJECT)



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

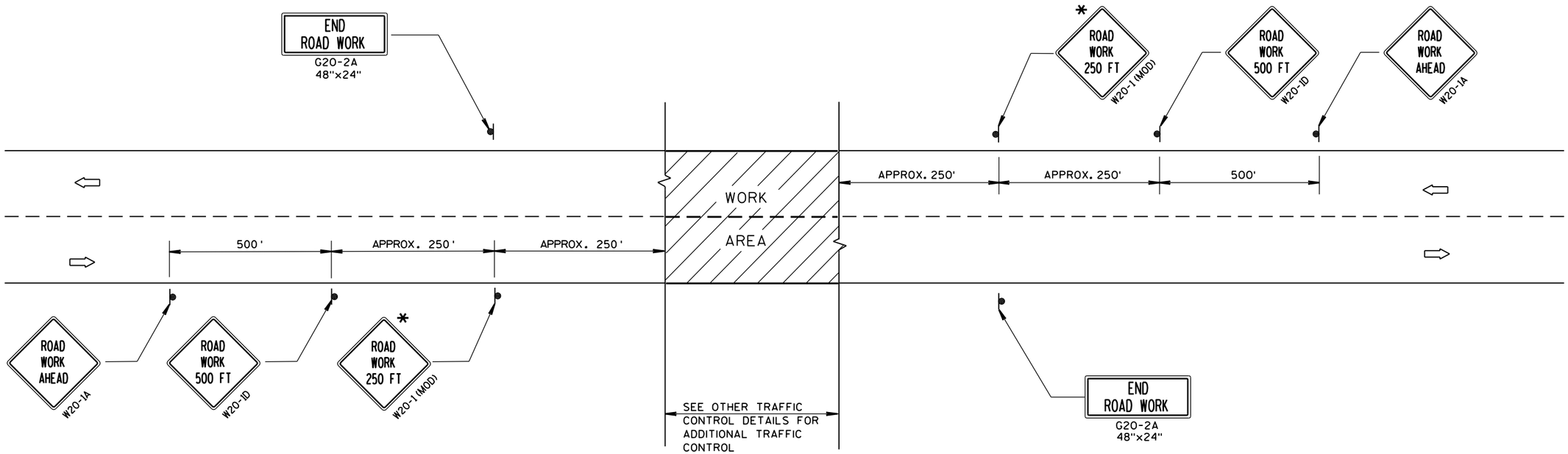
6

S.D.D. 15 C 3-3

6

S.D.D. 15 C 3-3

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

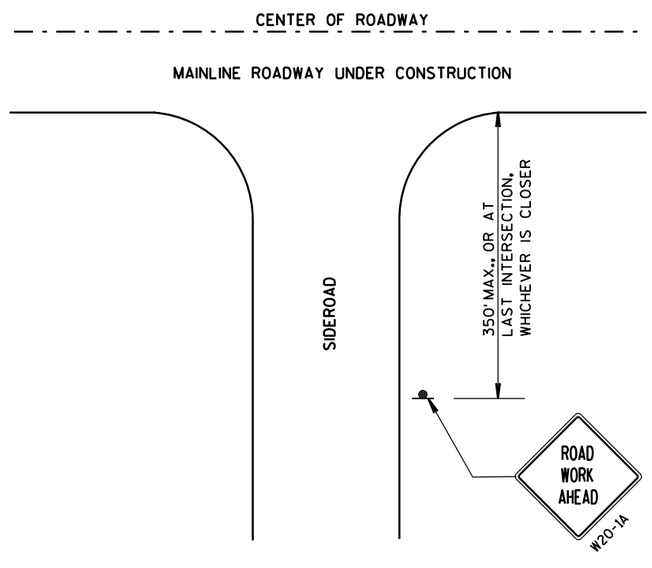
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

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

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

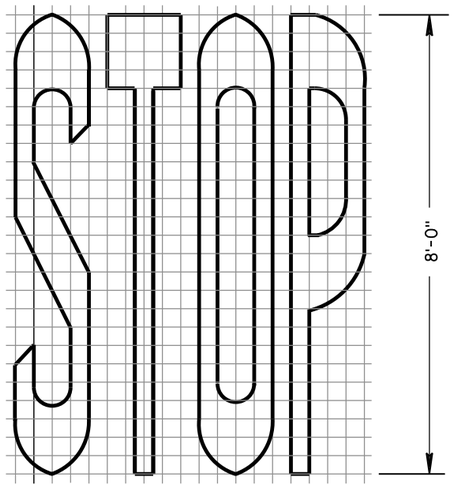
APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

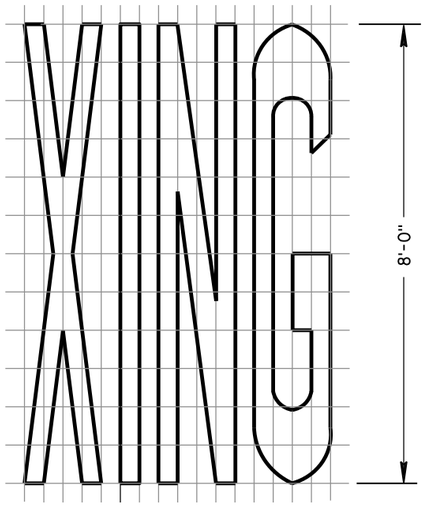
6

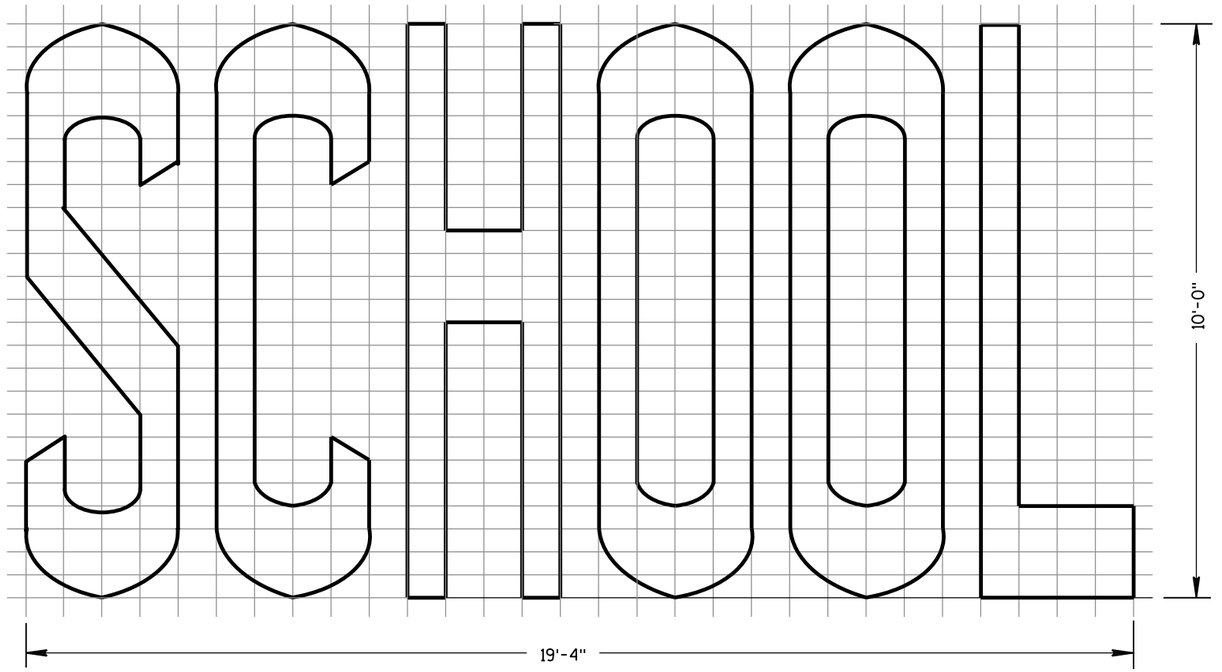
S.D.D. 15 C 5-3

GENERAL NOTES

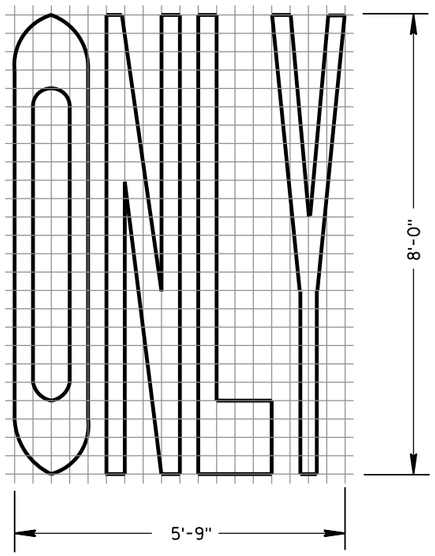
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

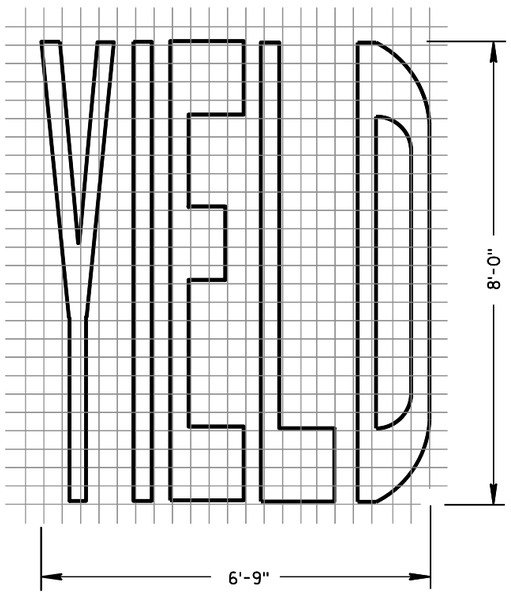


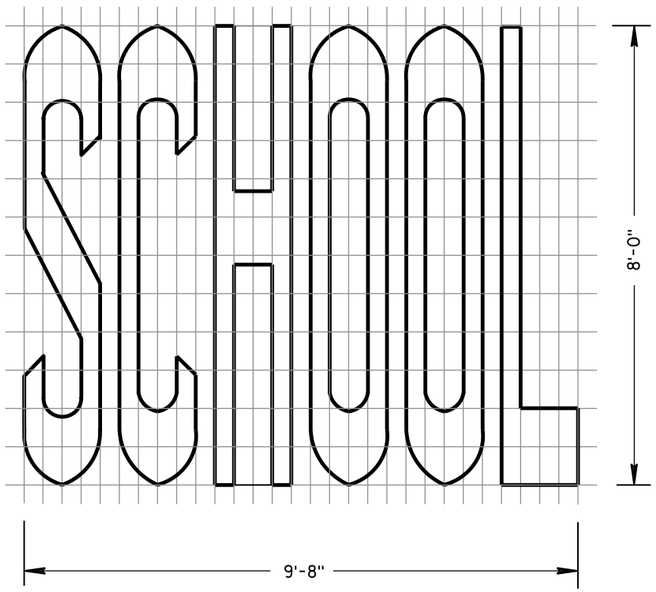




TWO-LANE







SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARK
EER
FHWA

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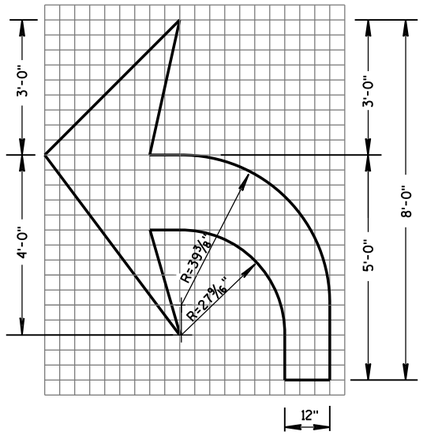
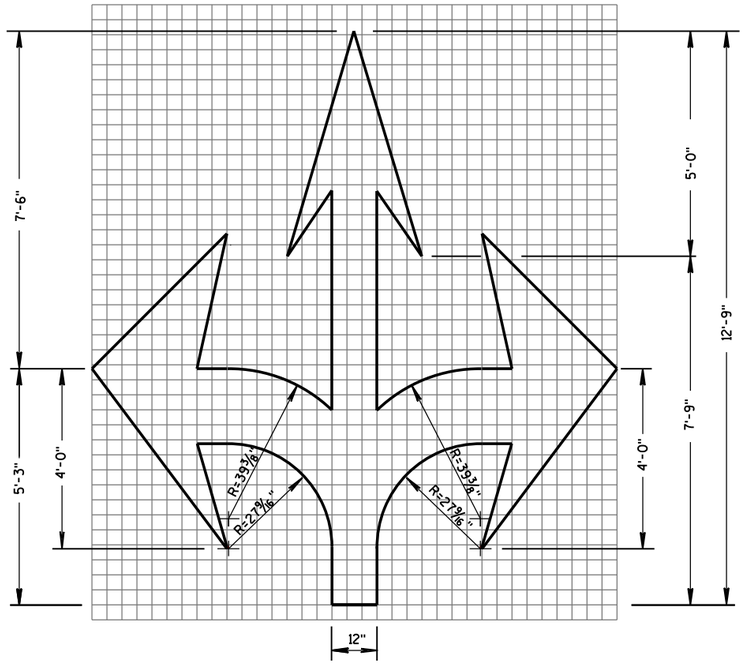
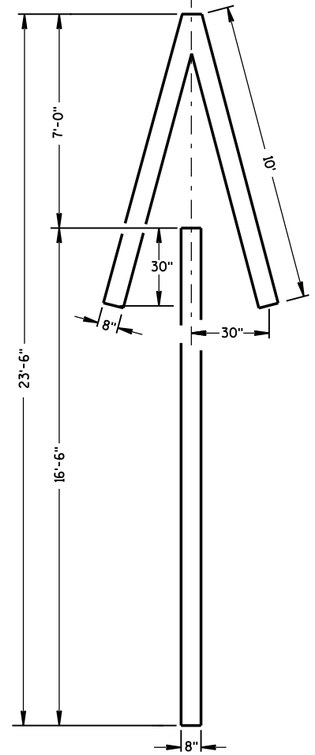
S.D.D. 15 C 7-14b



TYPE 2



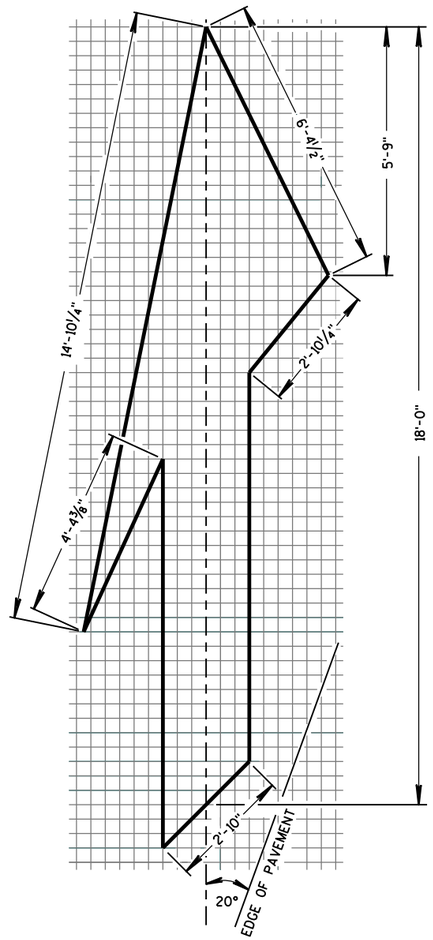
TYPE 6



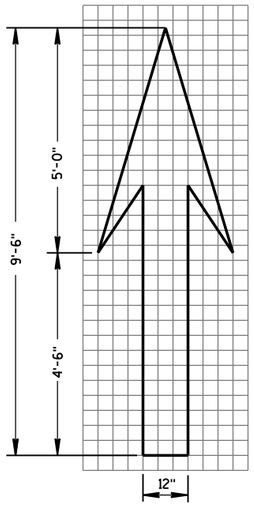
TYPE 4

GENERAL NOTES

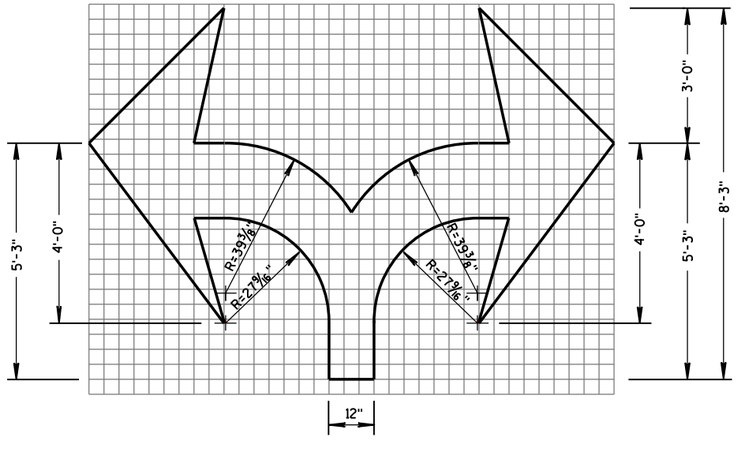
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



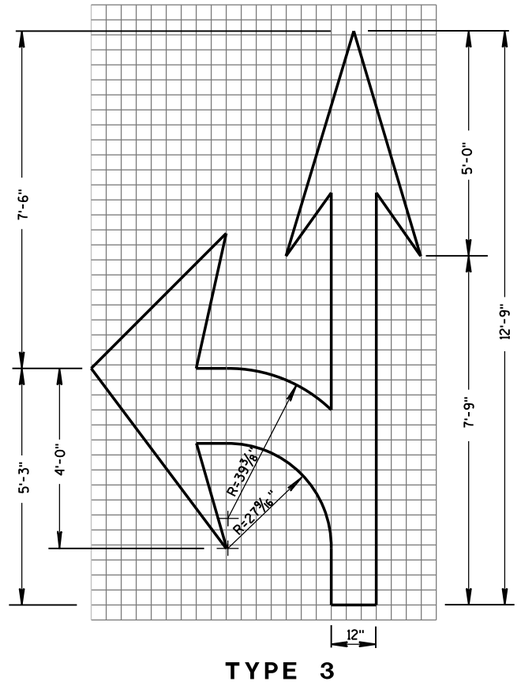
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 15 C 7-14c

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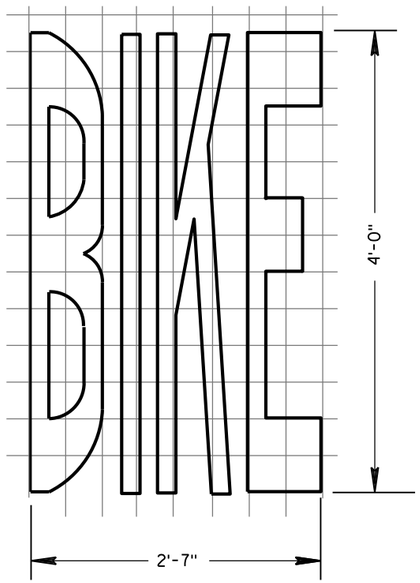
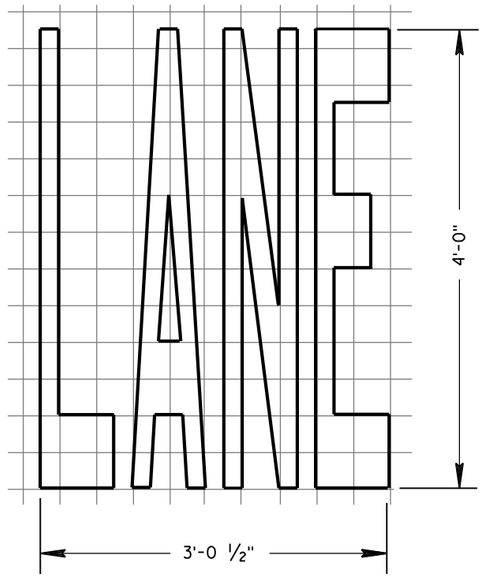
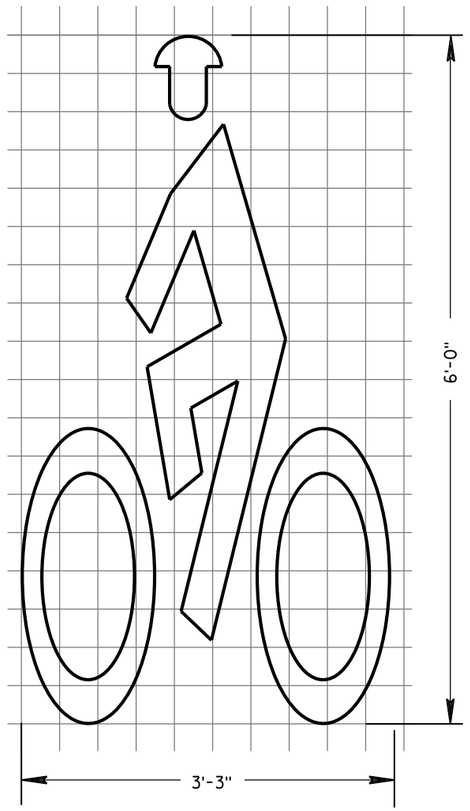
S.D.D. 15 C 7-14c

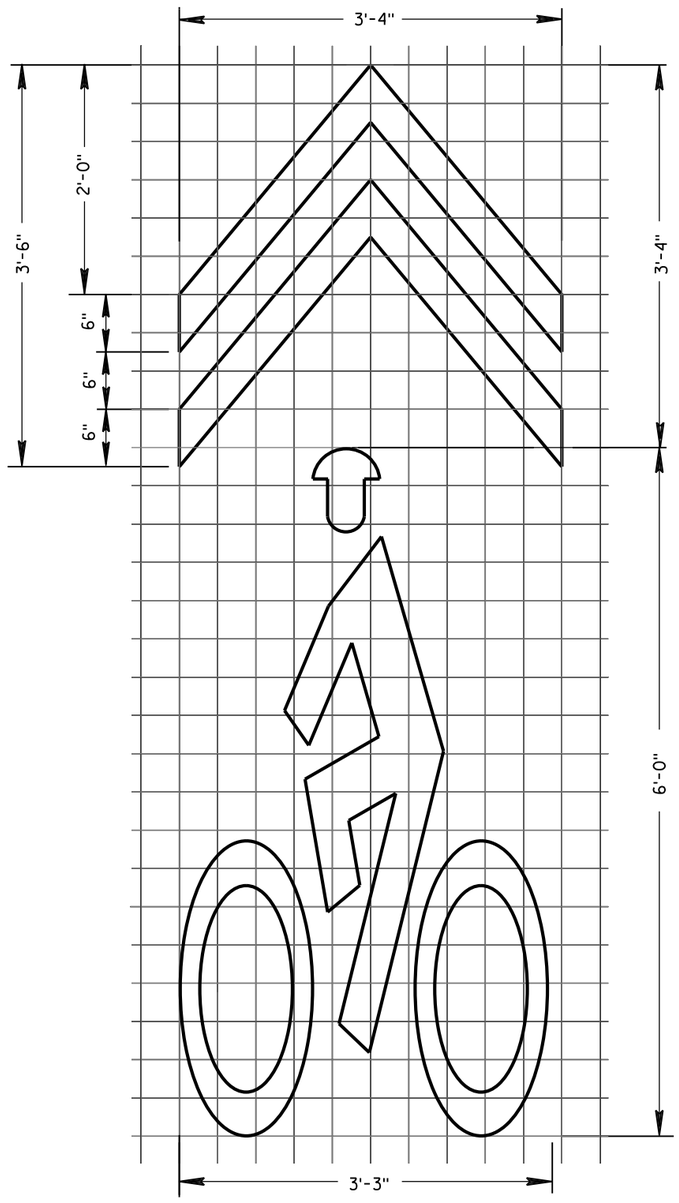




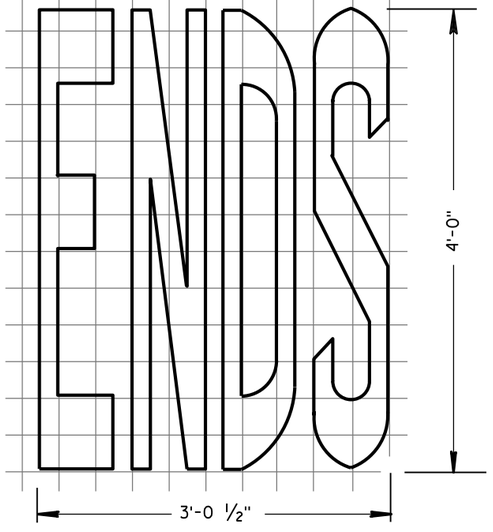
BIKE LANE WORDS



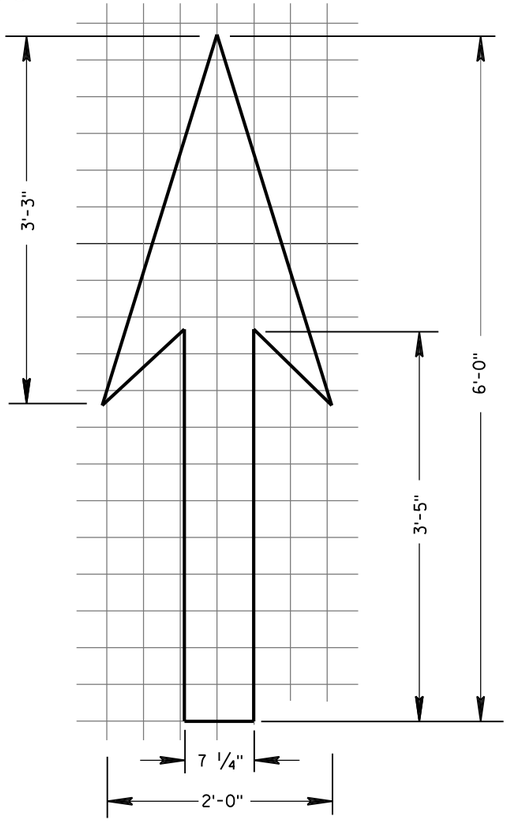
BIKE LANE SYMBOL



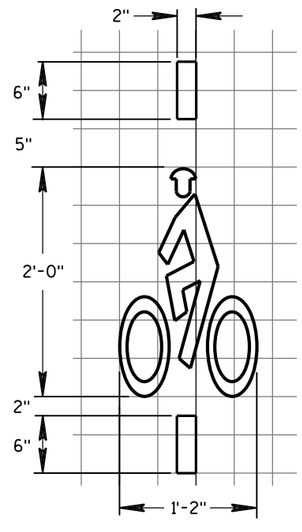
BIKE SYMBOL FOR SHARED LANE



BIKE LANE WORDS



BIKE LANE ARROW



BICYCLE DETECTOR PAVEMENT MARKING

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.

PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARK[ER]
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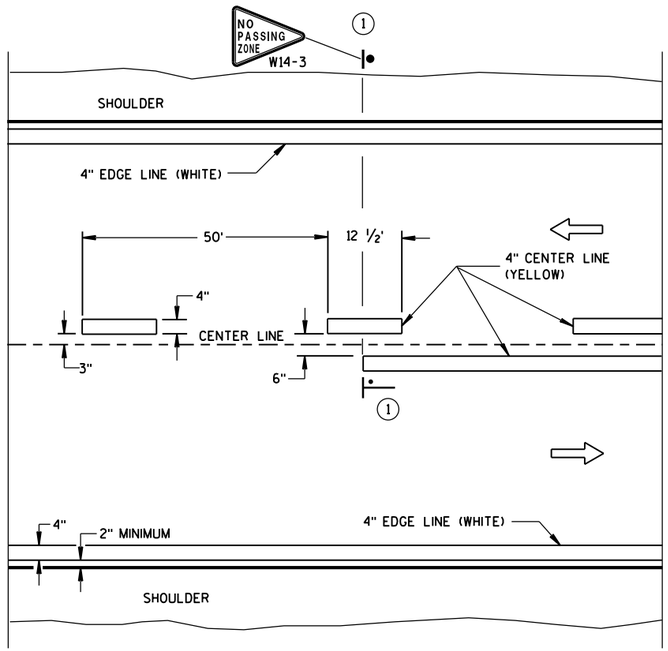
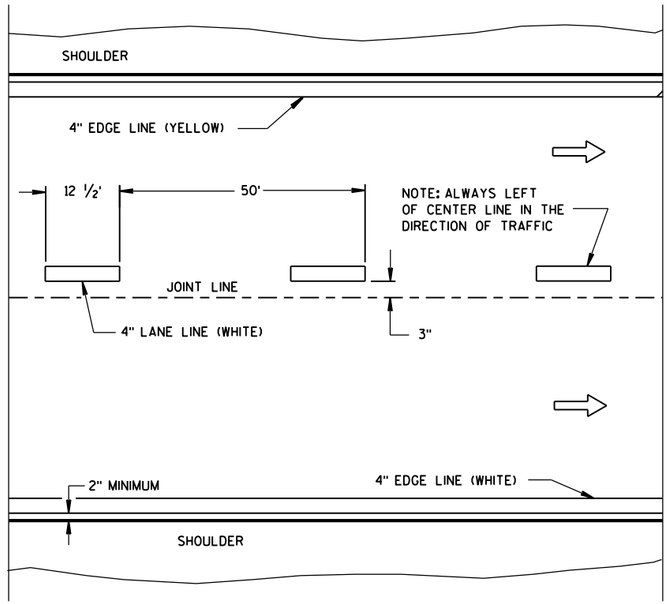
S.D.D. 15 C 7-14e



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

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

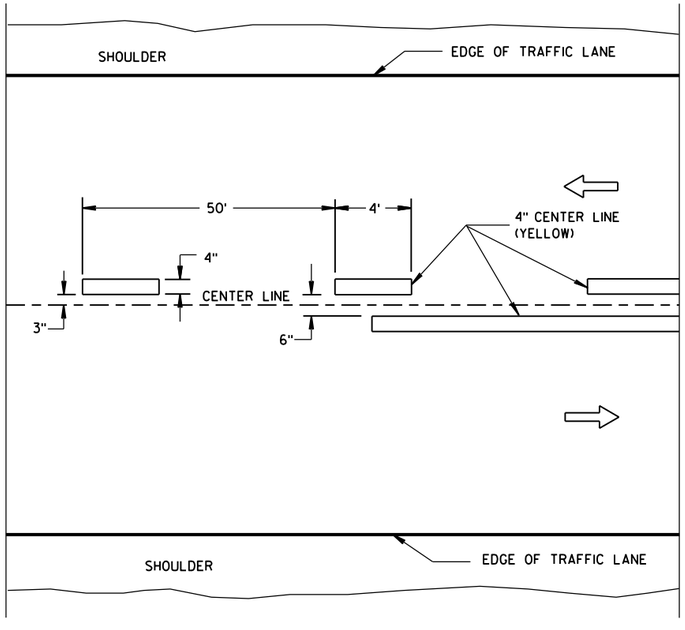
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

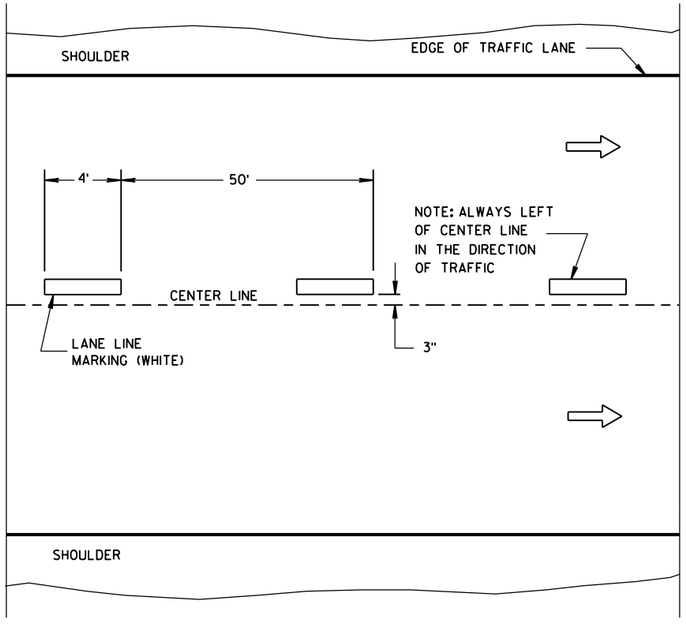
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MAR ENGINEER
FHWA	

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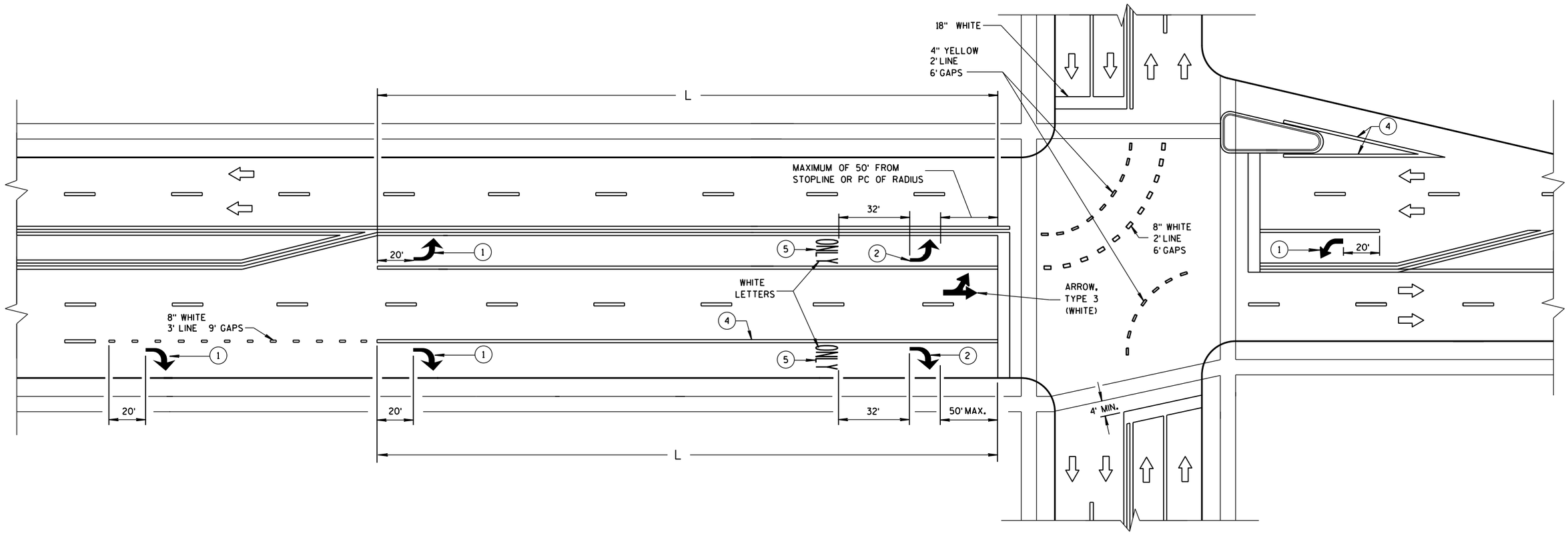
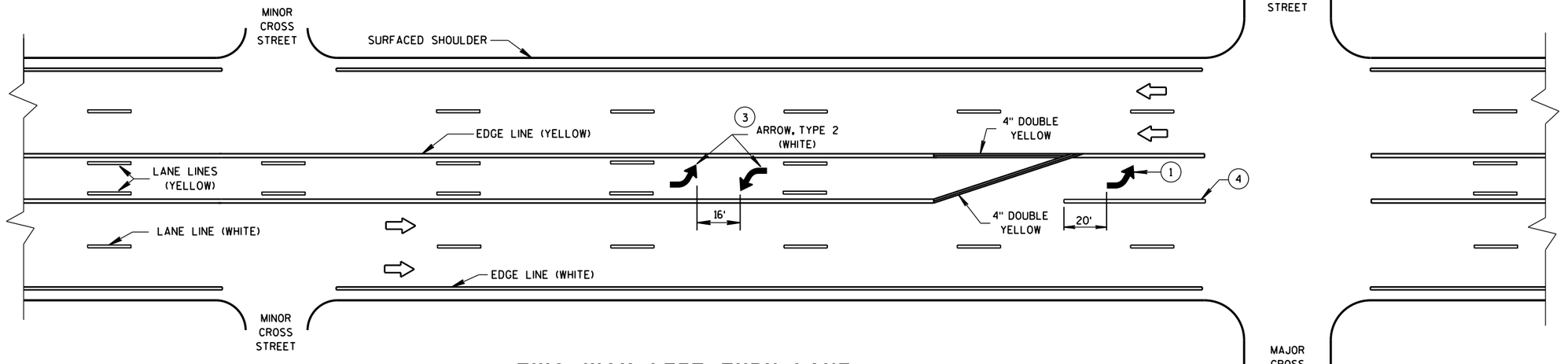
S.D.D. 15 C 8-18a





GENERAL NOTES

(1) REQUIRED ARROW, TYPE 2 (WHITE).

(2) REQUIRED ARROW, TYPE 2 (WHITE) WHEN L IS GREATER THAN 78 FEET AND LESS THAN OR EQUAL TO 166 FEET.

(3) A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

(4) 8" WHITE

(5) REQUIRED WORD ONLY WHEN L IS GREATER THAN 166 FEET.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL

L = LENGTH OF TURN BAY

TWO WAY LEFT TURN LANE

PAVEMENT MARKING
(TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 C 8-18b

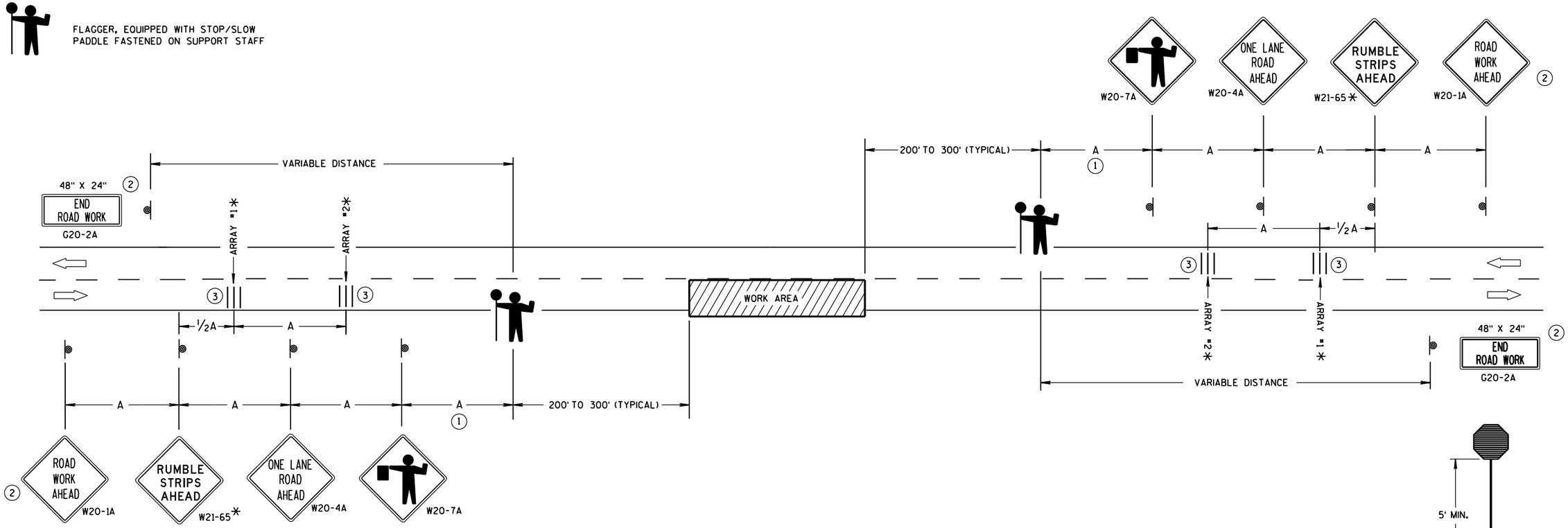
LEGEND

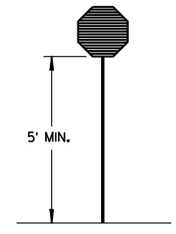
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING A
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING A.





STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

GENERAL NOTES

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

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

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

(1) FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(3) EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

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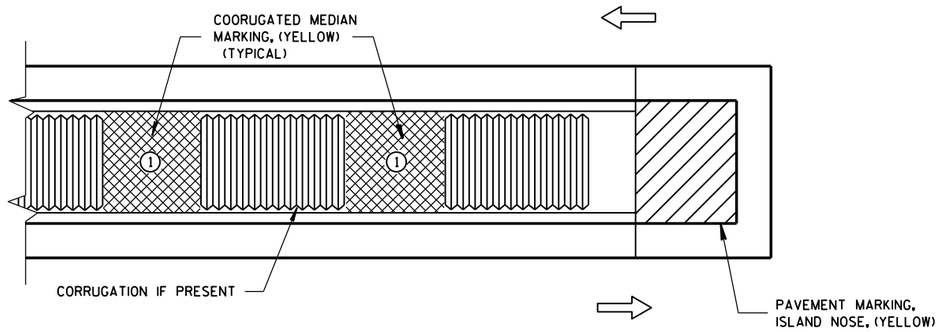
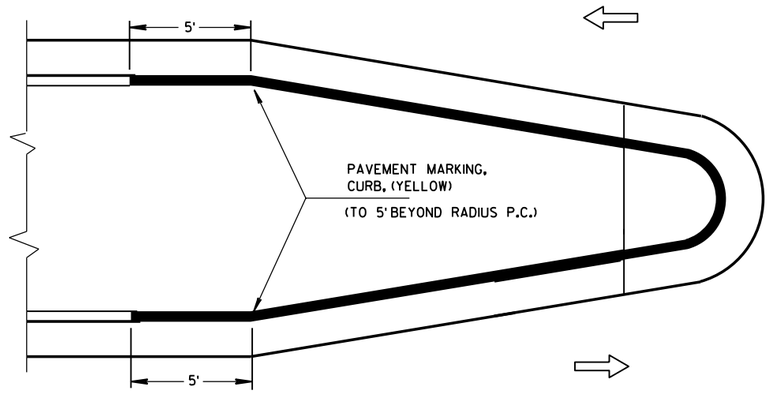
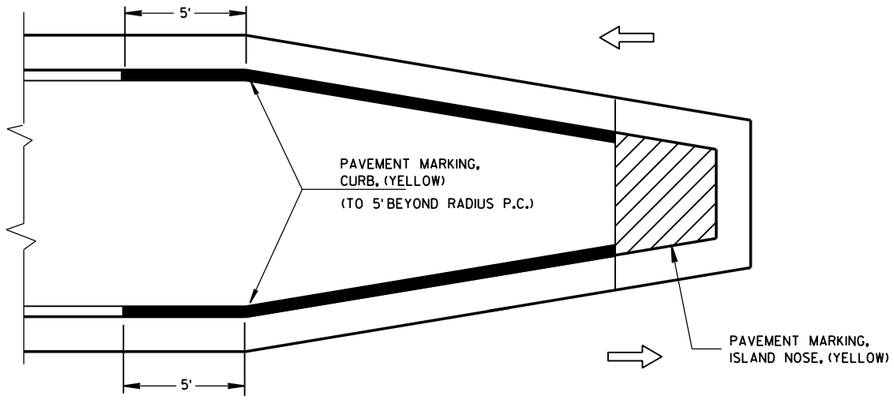
S.D.D. 15 C 12-6



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

GENERAL NOTES

(1) WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE 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.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARK ENGINEER

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275

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S.D.D. 15 C 27-2b

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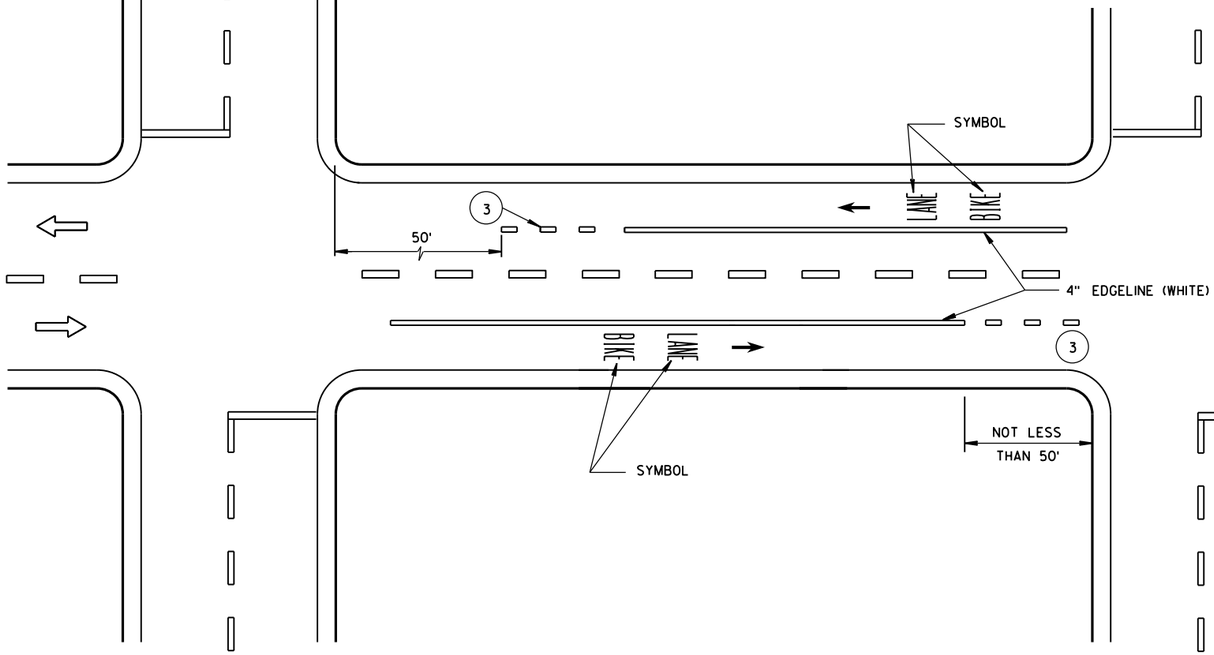
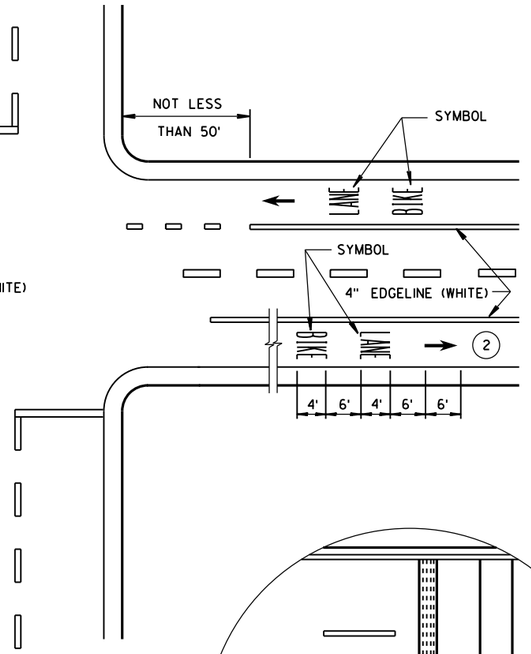
S.D.D. 15 C 27-2b



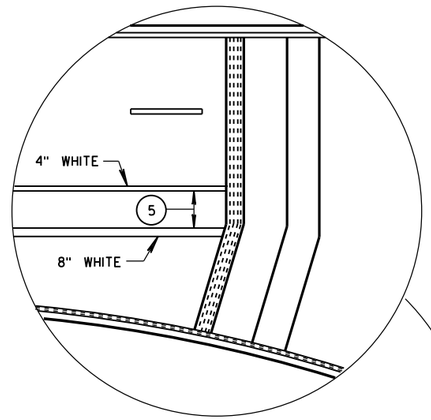


DESIGNATED BICYCLE LANE
NO PARKING

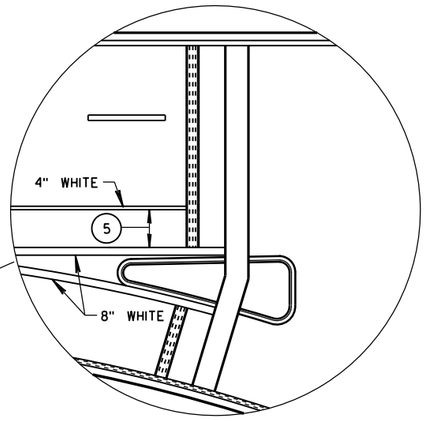
GENERAL NOTES

1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
3. DOTTED LINES (3'LINE, 9'GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
4. IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
5. BIKE ACCOMODATION FOR CONCRETE PAVEMENT IS 5 FEET WIDE. BIKE ACCOMODATION FOR ASPHALT PAVEMENT IS A MINIMUM OF 4 FEET. USE 5 FEET AT ≥45 MPH.
6. OMIT THESE MARKINGS FOR WIDER TURN LANE APPLICATIONS (MINIMUM OF 15 FEET WIDE TURN LANE).
7. REFER TO CONTRACT PLANS FOR LANE WIDTH.

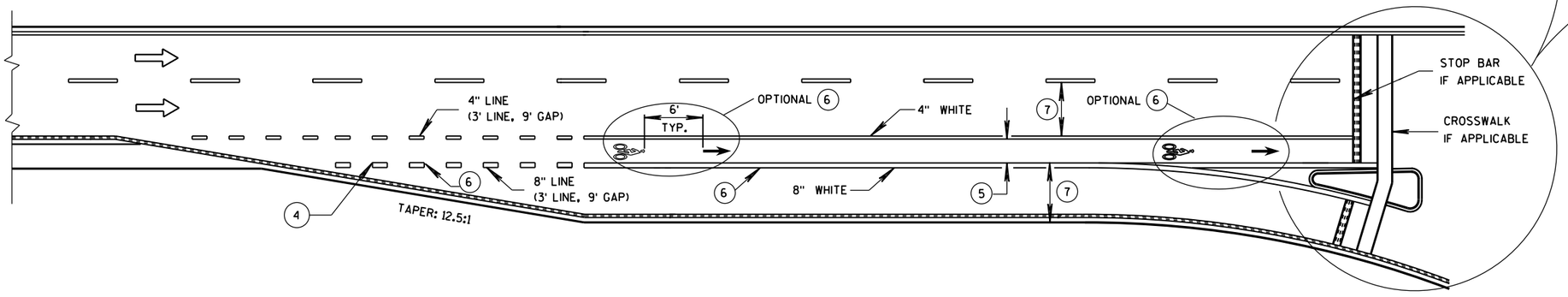
⇨ DIRECTION OF TRAVEL



4 LANE DIVIDED WITHOUT ISLAND



4 LANE DIVIDED WITH ISLAND



BIKE LANE - FOR 2-LANE ROADWAYS AND 4-LANE DIVIDED ROADWAYS
(4-LANE DIVIDED WITH RIGHT TURN LANE SHOWN)

BICYCLE LANE MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 12-2016 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MAR NEER
FHWA	

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S.D.D. 15 C 29-5a

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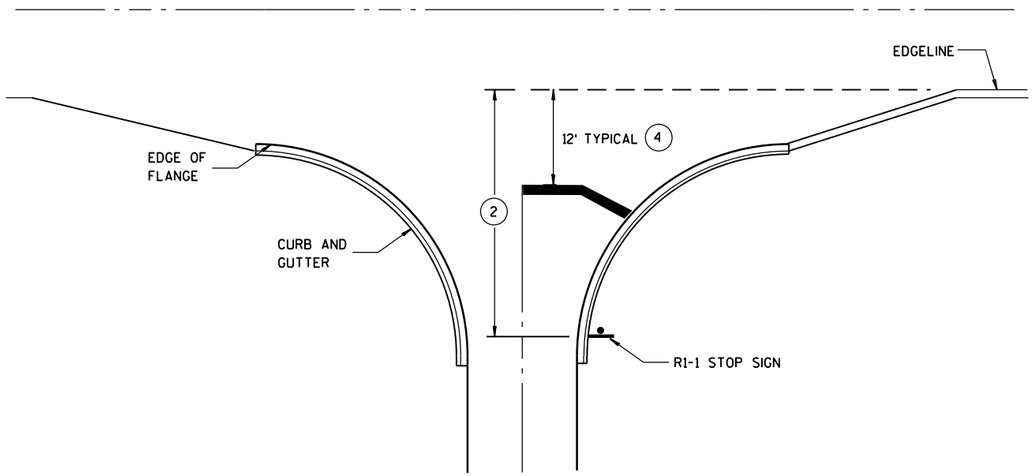
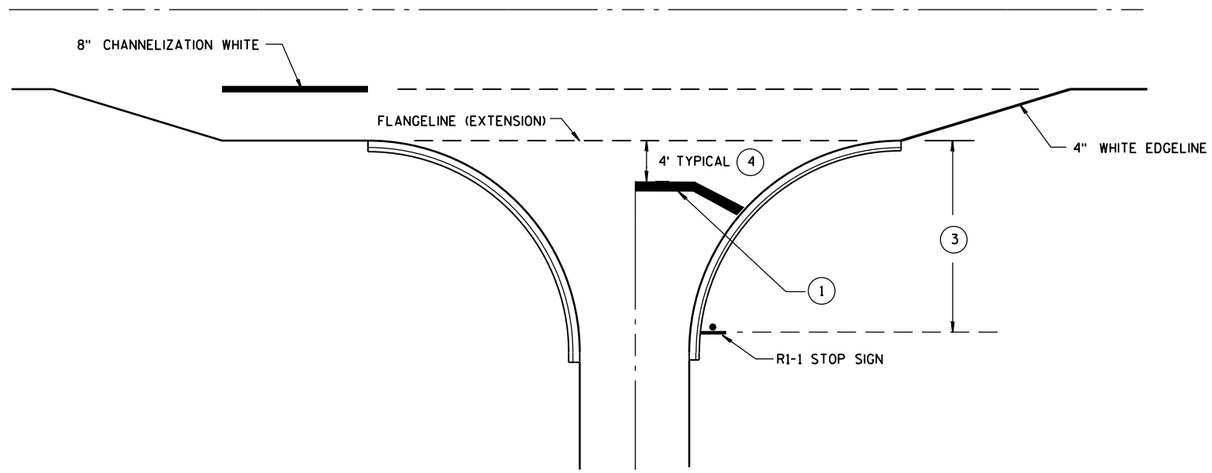
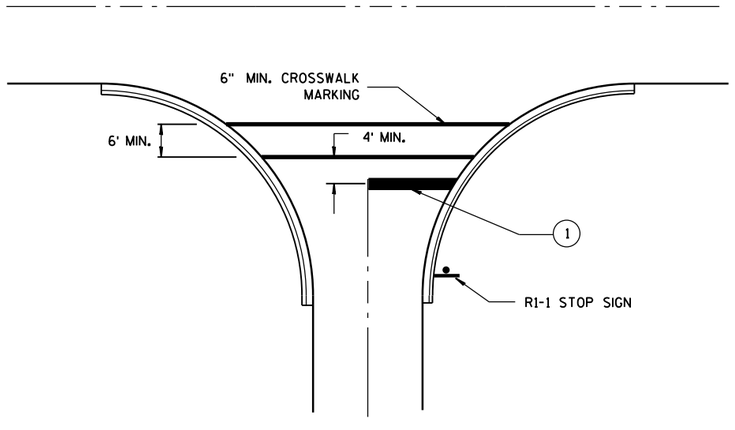
S.D.D. 15 C 29-5a



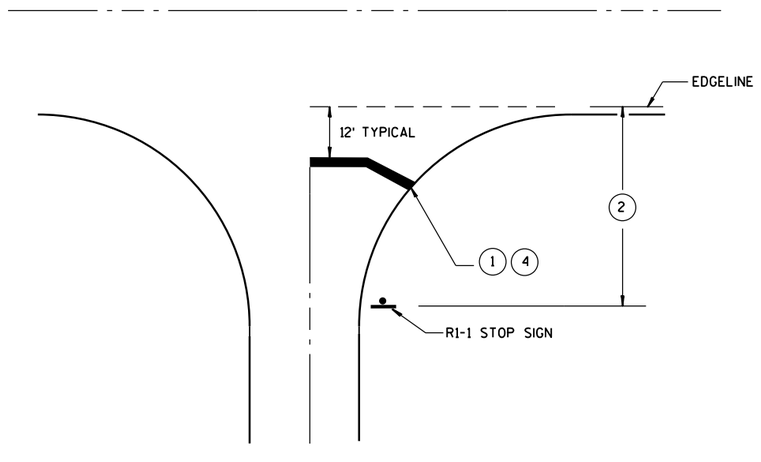
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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 277 NEER

FHWA

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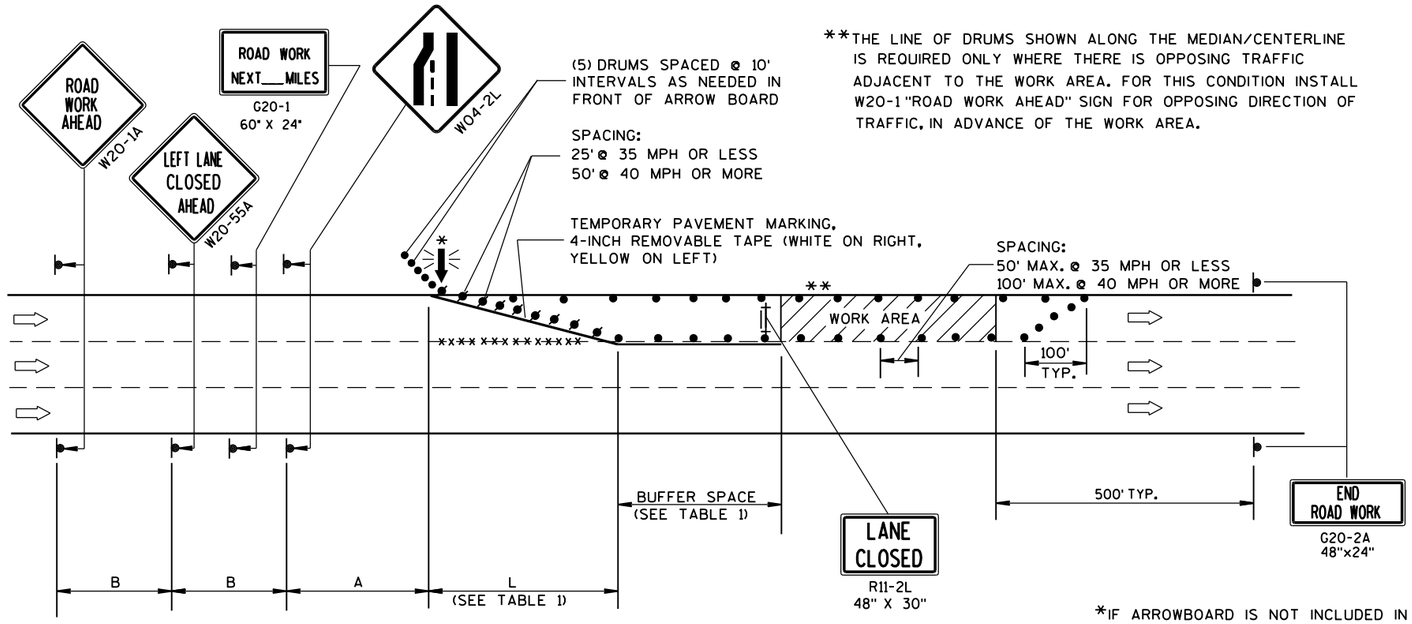
S.D.D. 15 C 33-2



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

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

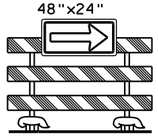


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

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

GENERAL NOTES

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

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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

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

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

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

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

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

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

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

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

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

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
FHWA

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER — IC

6

S.D.D. 15 D 20-4

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S.D.D. 15 D 20-4

GENERAL NOTES

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

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

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

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

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

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

TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

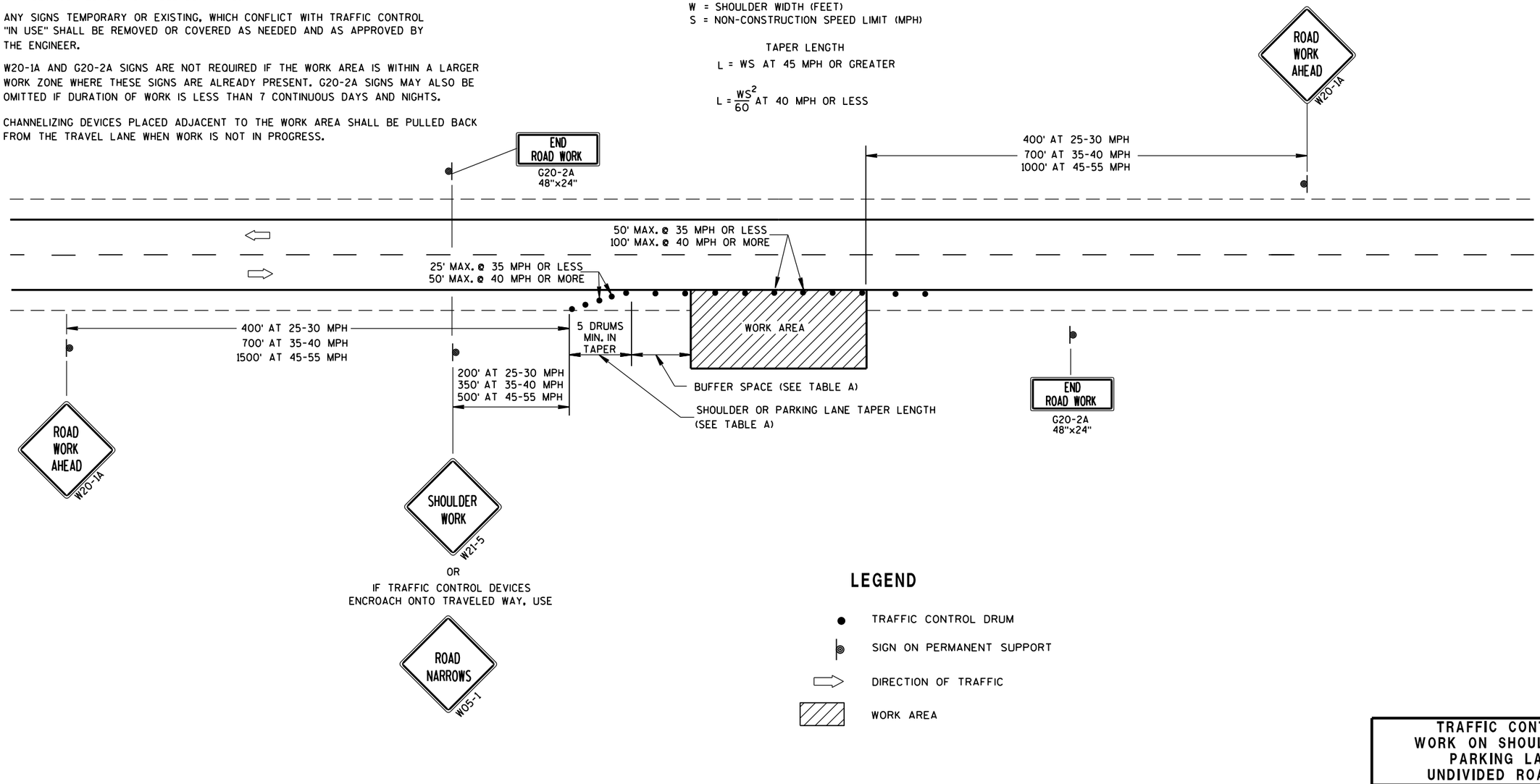
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

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

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

July 14, 2015 — DATE

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

FHWA

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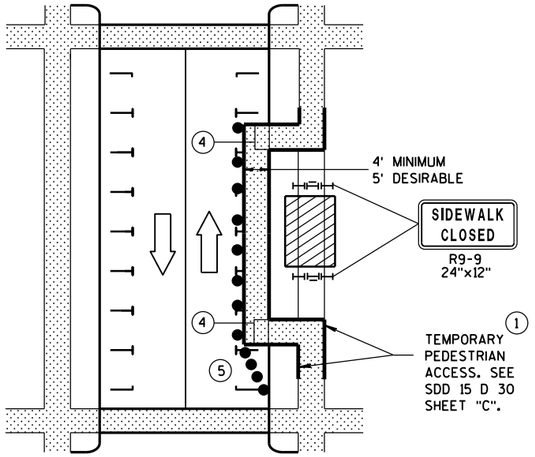
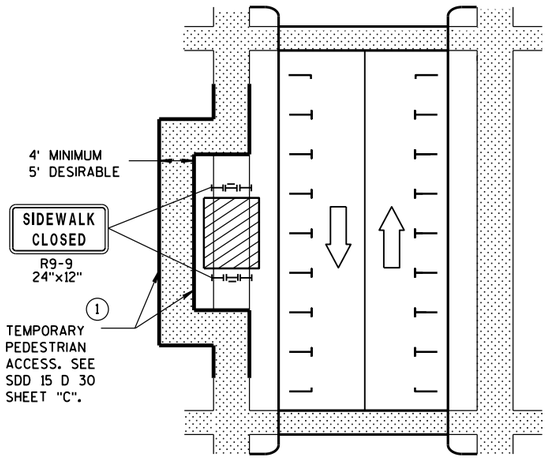
S.D.D. 15 D 28-3

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

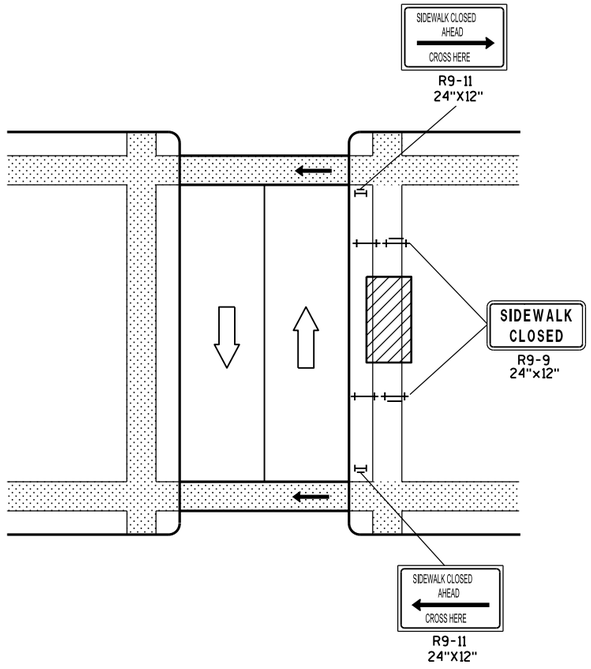


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

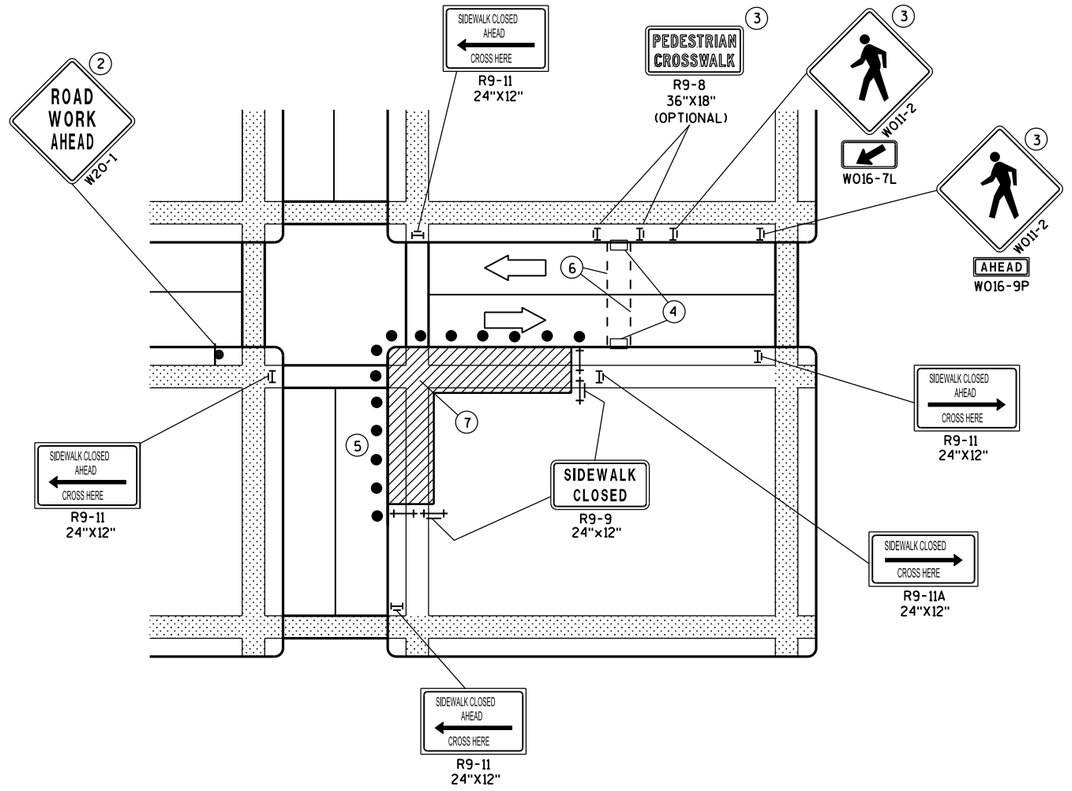
NOTE: LAYOUT SAME AS ABOVE.



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

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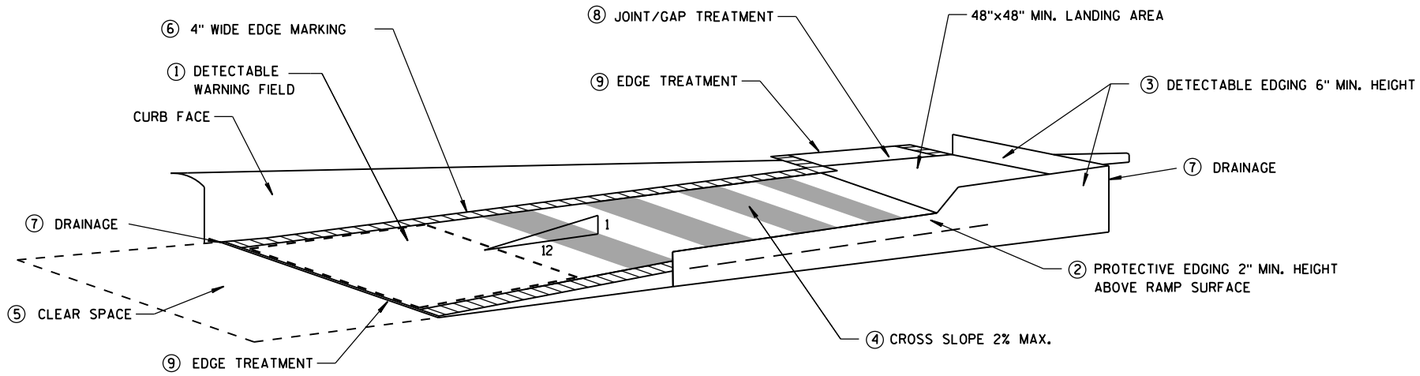
S.D.D. 15 D 30-3a



TEMPORARY CURB RAMP PARALLEL TO CURB

GENERAL NOTES

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

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

① CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 8D5 SHEET "E".

② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

④ CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

⑤ CLEAR SPACE OF 48"X48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

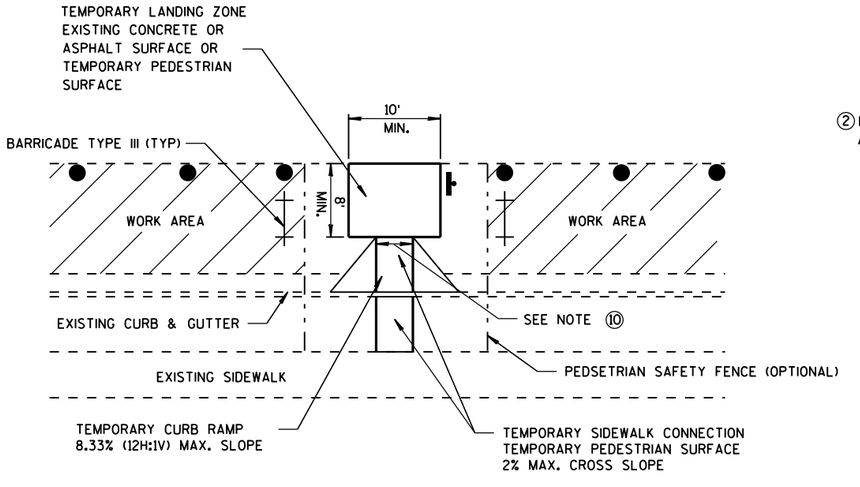
⑥ THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.

⑦ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

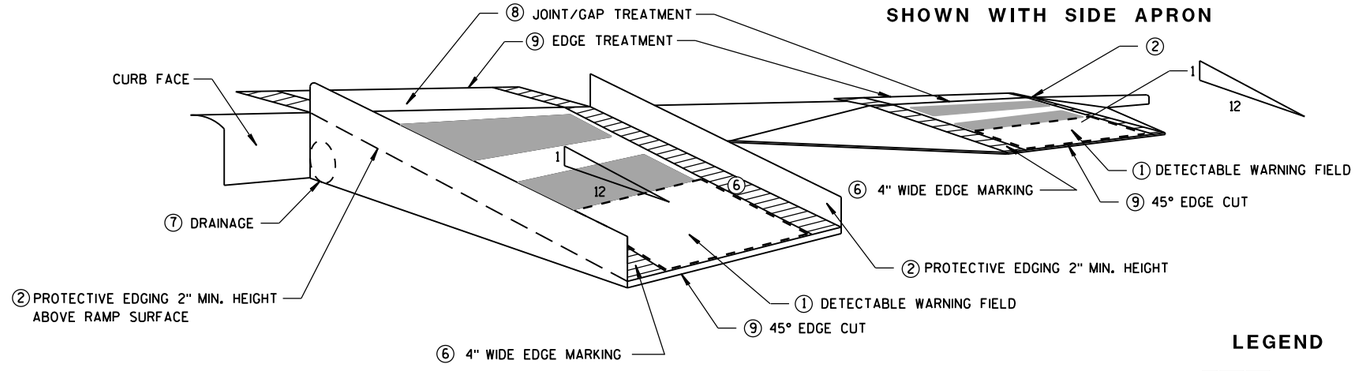
⑧ LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

⑩ 5' WIDE MIN. WITH PEDSETRIAN SAFETY FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.



TEMPORARY BUS STOP PAD



SHOWN WITH PROTECTIVE EDGE

SHOWN WITH SIDE APRON

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

LEGEND

WORK AREA

TYPE III BARRICADE

TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

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S.D.D. 15 D 30-3b

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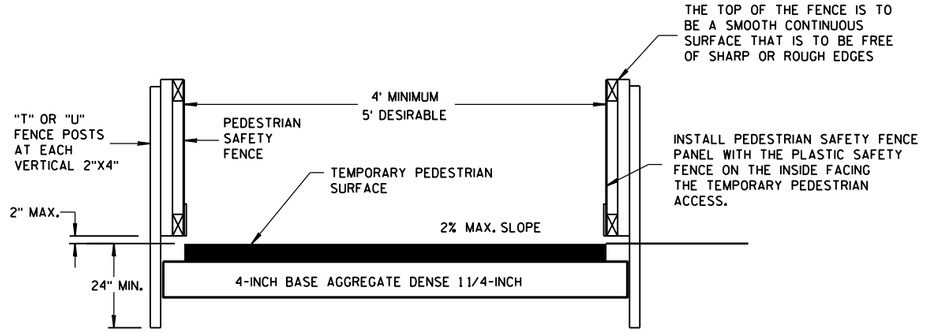
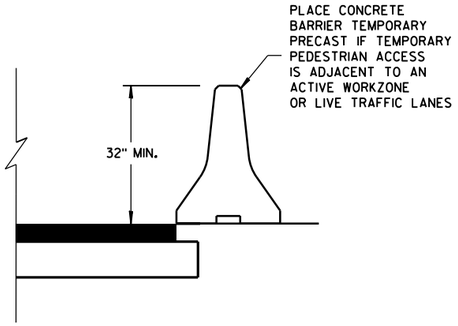
S.D.D. 15 D 30-3b

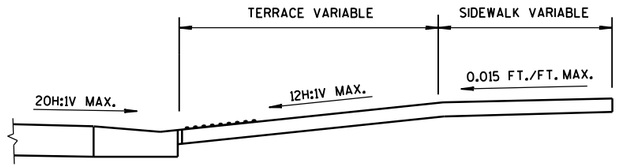




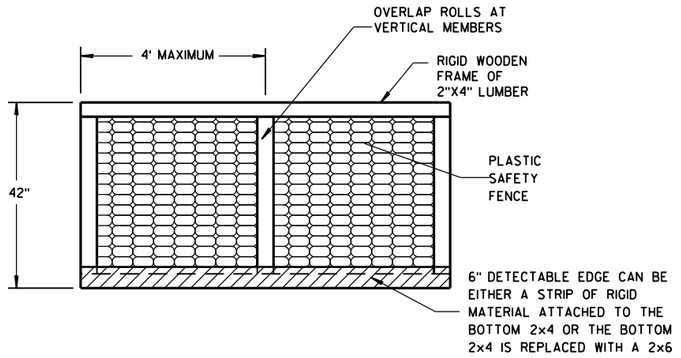
TEMPORARY PEDESTRIAN ACCESS

GENERAL NOTES

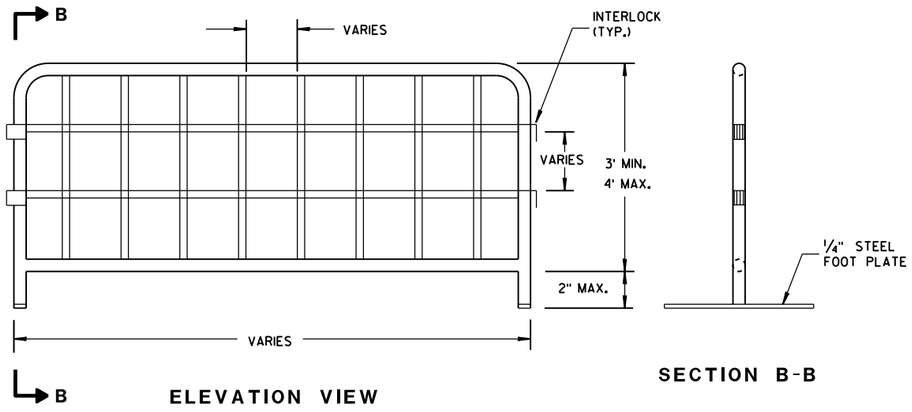
(1) INTERCHANGEABLE WITH THE PEDESTRIAN SAFETY FENCE.



SECTION A-A



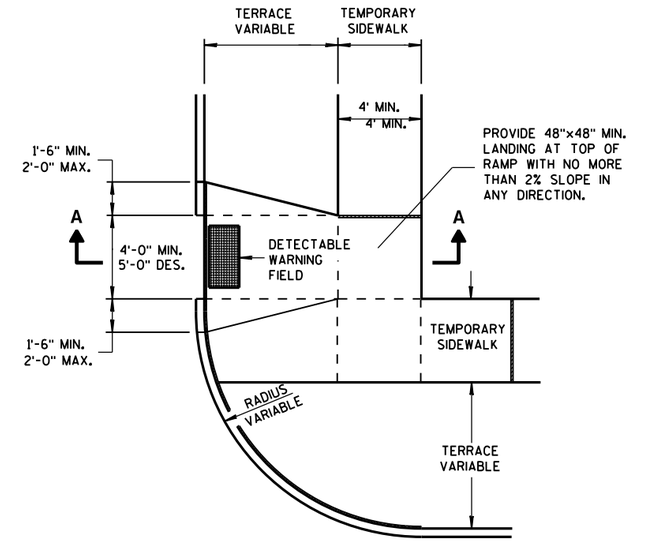
PEDESTRIAN SAFETY FENCE



ELEVATION VIEW

SECTION B-B

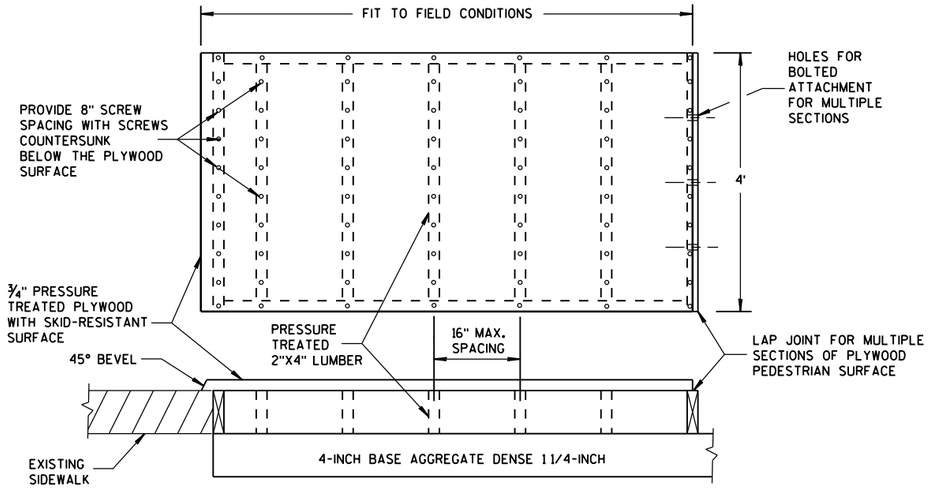
TEMPORARY PEDESTRIAN STEEL BARRICADE (1)



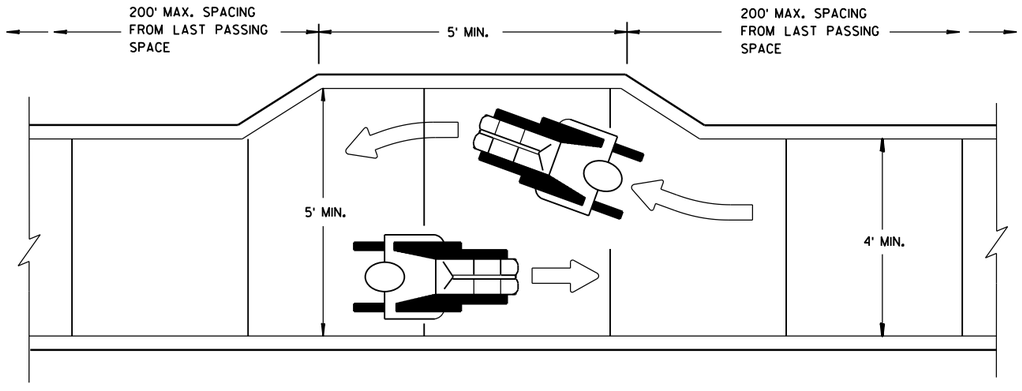
PLAN VIEW

TEMPORARY TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)



TEMPORARY PEDESTRIAN SURFACE PLYWOOD



NARROW SIDEWALK PASSING DETAIL

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016
DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZON SAFETY ENGIN IC
FHWA

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S.D.D. 15 D 30-3c

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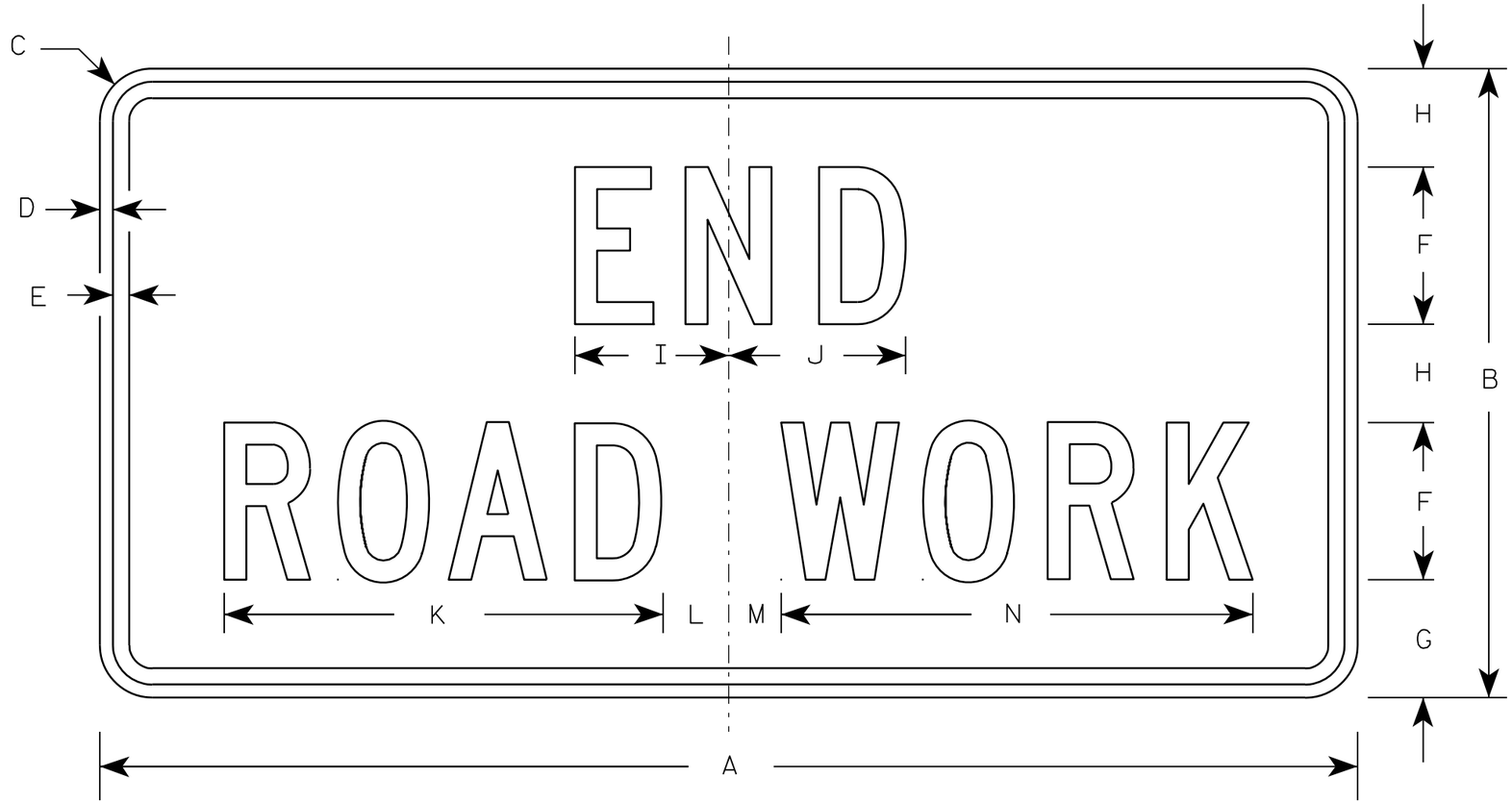
S.D.D. 15 D 30-3c



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: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO: 283	E

NOTES

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

M1-94

* Minimum dimension is normally height of upper case letter.

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	Varies	15	2 1/4		3/4	4 1/2	6	5	4 1/8	8 5/8	5 1/4	14 5/8	7 3/4	6	8 1/2			30									Varies
3																											
4	Varies	21	3		1	6	8	7 1/8	4 3/4	9 1/2	5 3/4	17 1/2	9 1/4	7	12			36									Varies
5	Varies	21	3		1	6	8	7 1/8	4 3/4	9 1/2	5 3/4	17 1/2	9 1/4	7	12			36									Varies

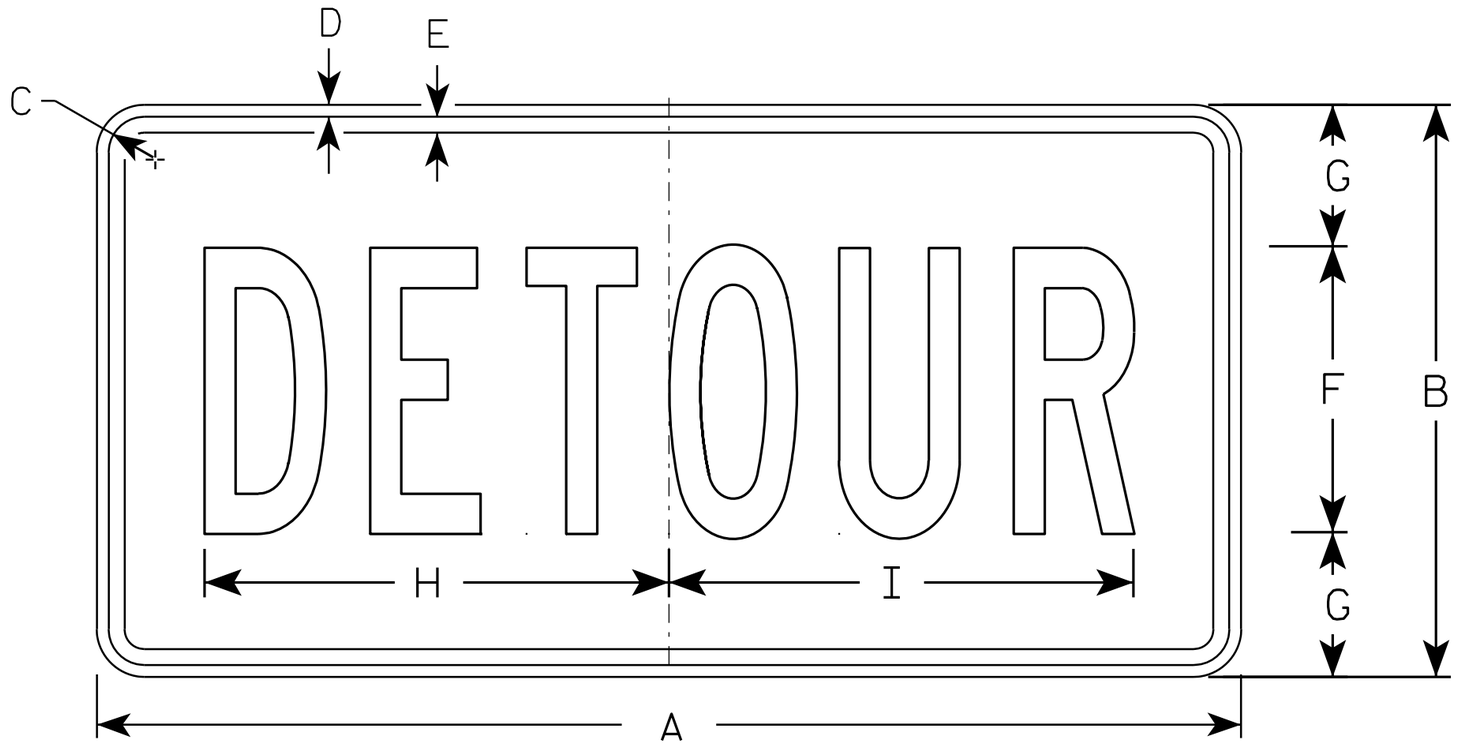
STANDARD SIGN
M1-94

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/16/10 PLATE NO. M1-94.6

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 284 | E



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																											

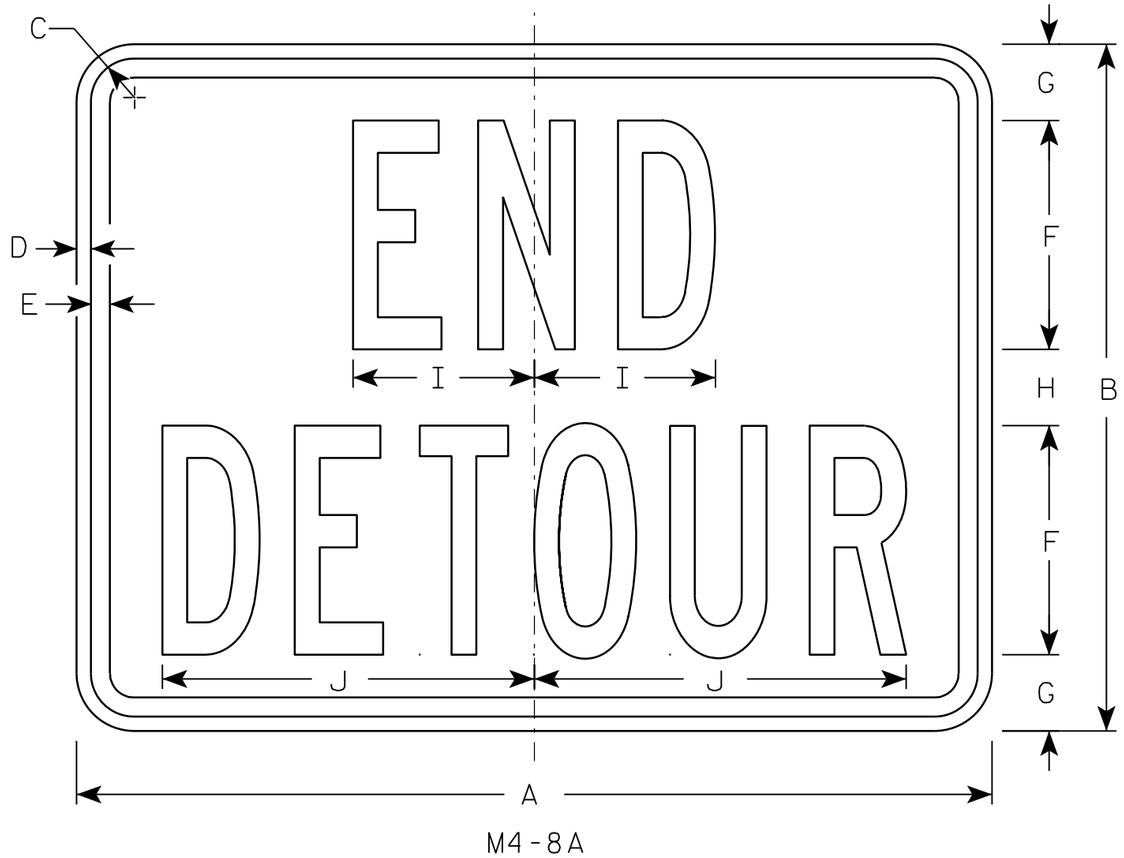
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO: 285	E



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																											

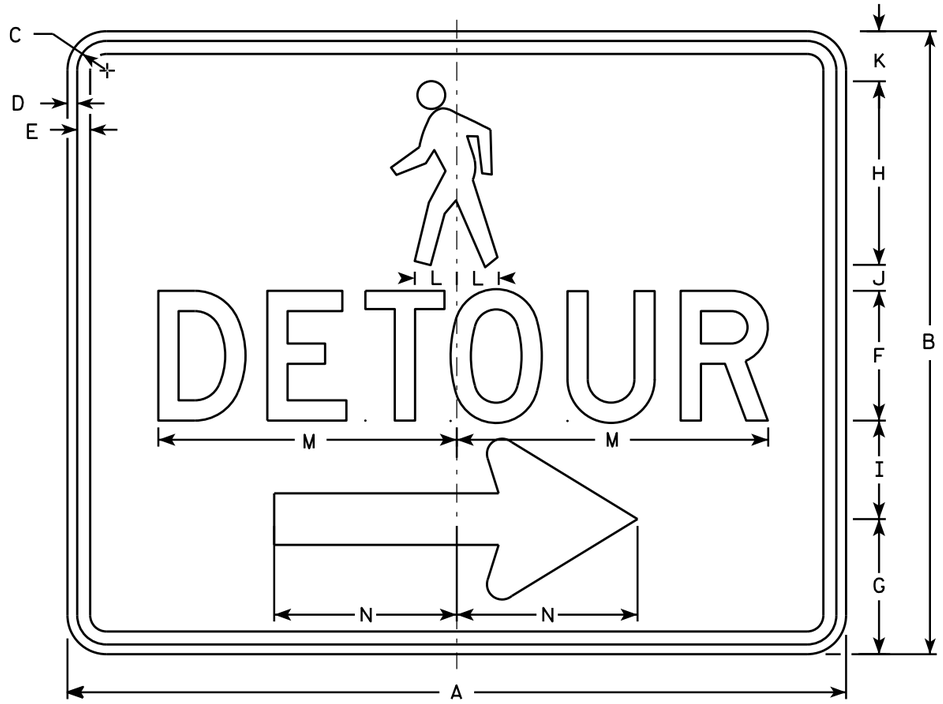
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

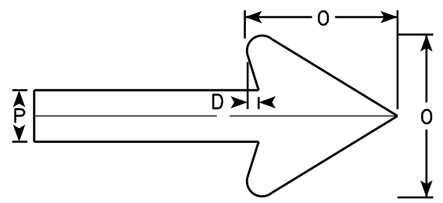
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO: 286	E



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

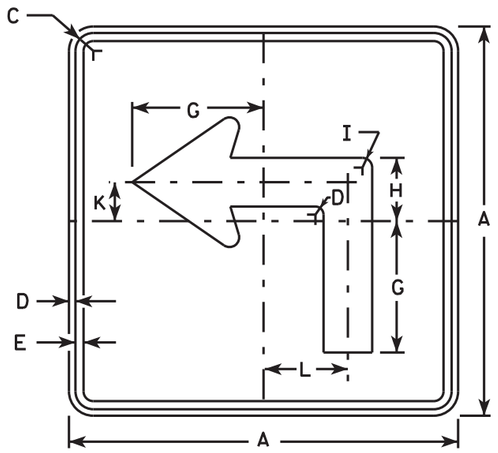
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

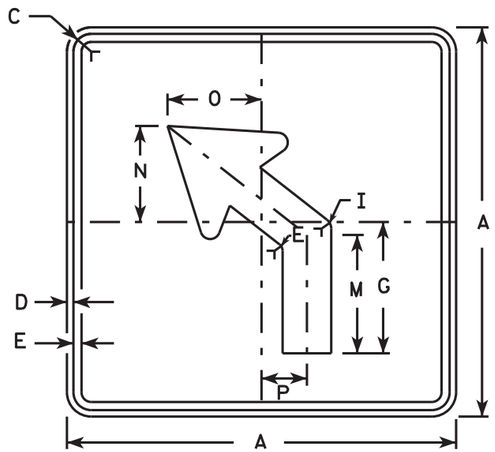
DATE 9/30/13 PLATE NO. M4-9B.1

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO:	E

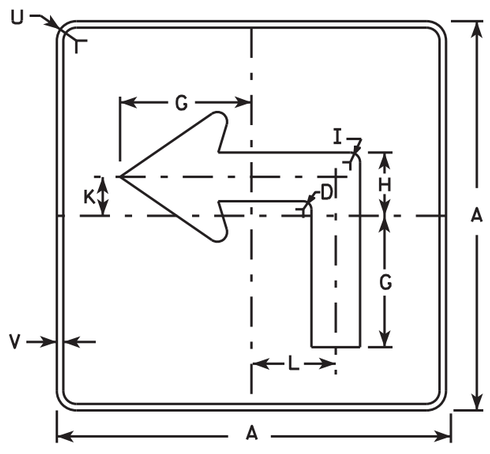
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M49B.DGN PLOT DATE : 01-OCT-2013 13:44 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



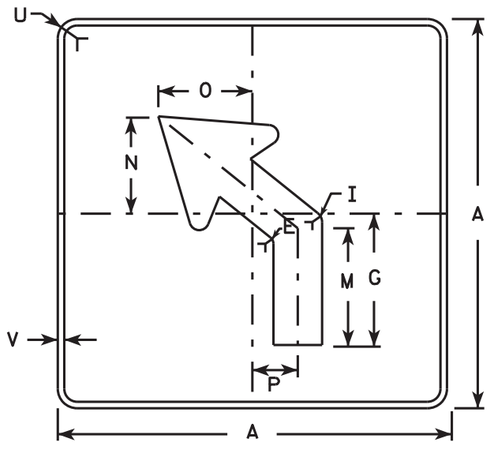
M5-1L
MM5-1L
MO5-1L
MP5-1L



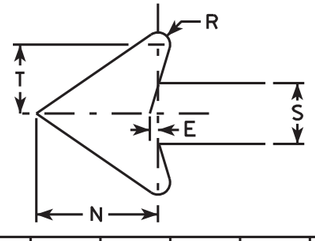
M5-2L
MM5-2L
MO5-2L
MP5-2L



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

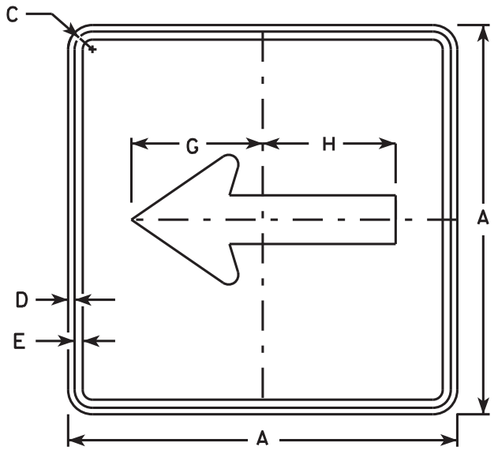
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

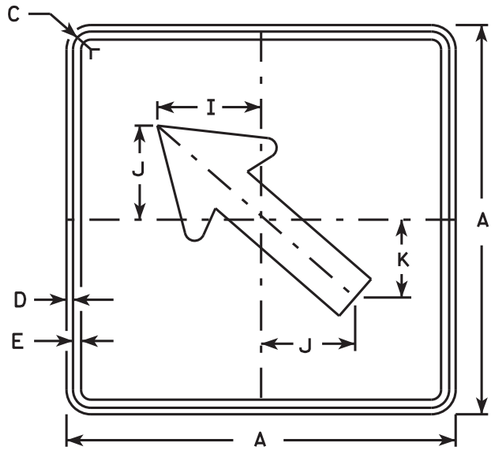
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M5-1.13

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO. 288 | E



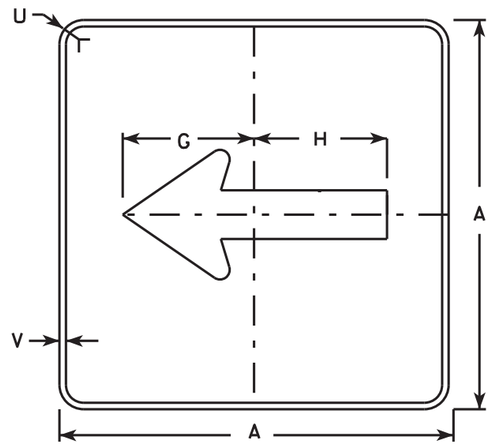
M6-1
MM6-1
MO6-1
MP6-1



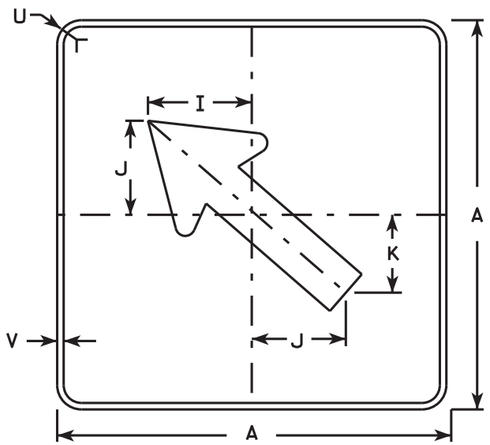
M6-2
MM6-2
MO6-2
MP6-2

NOTES

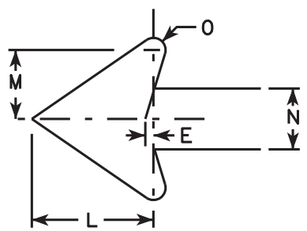
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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

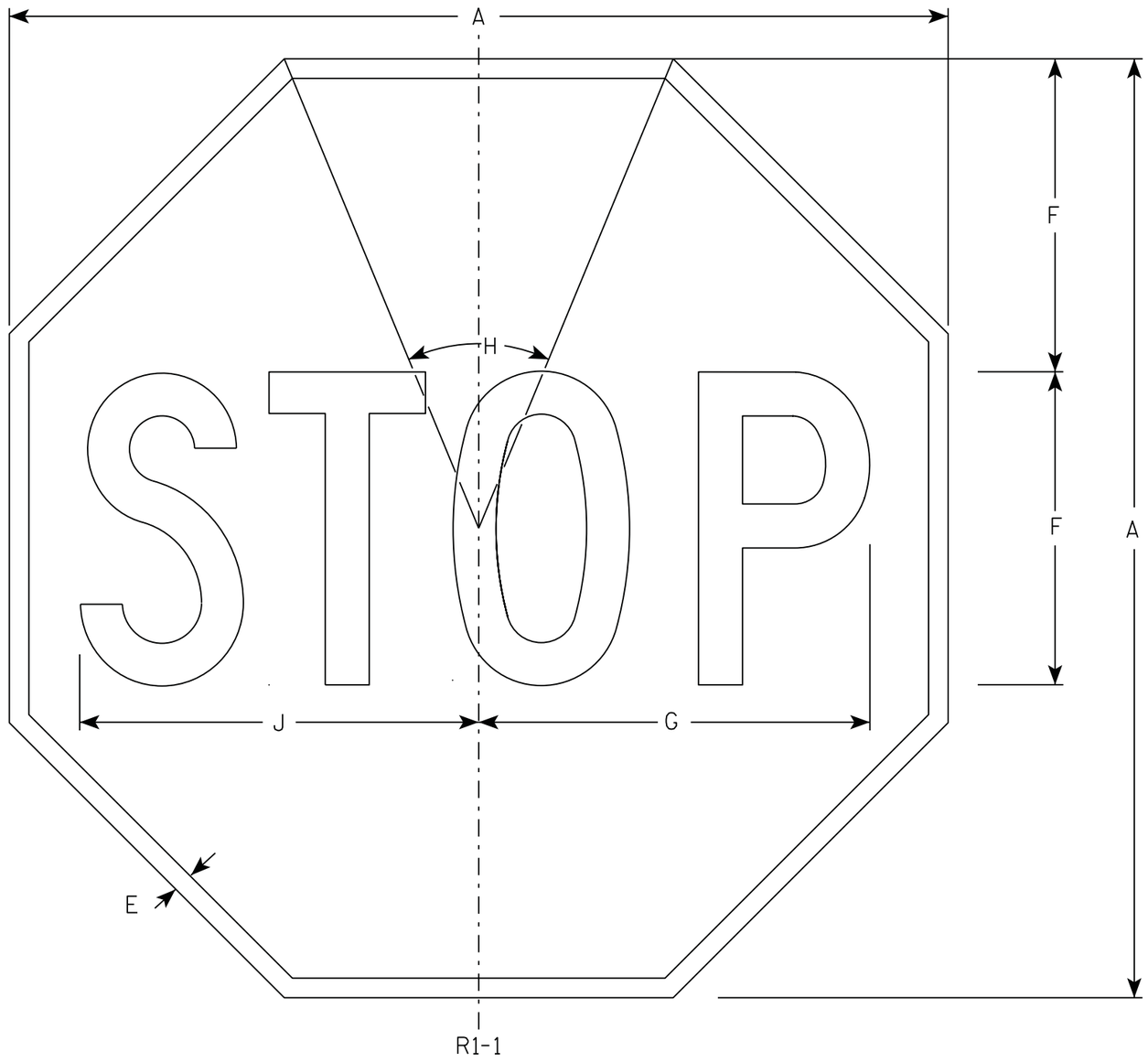
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO. 289 | 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

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

STANDARD SIGN

R1-1

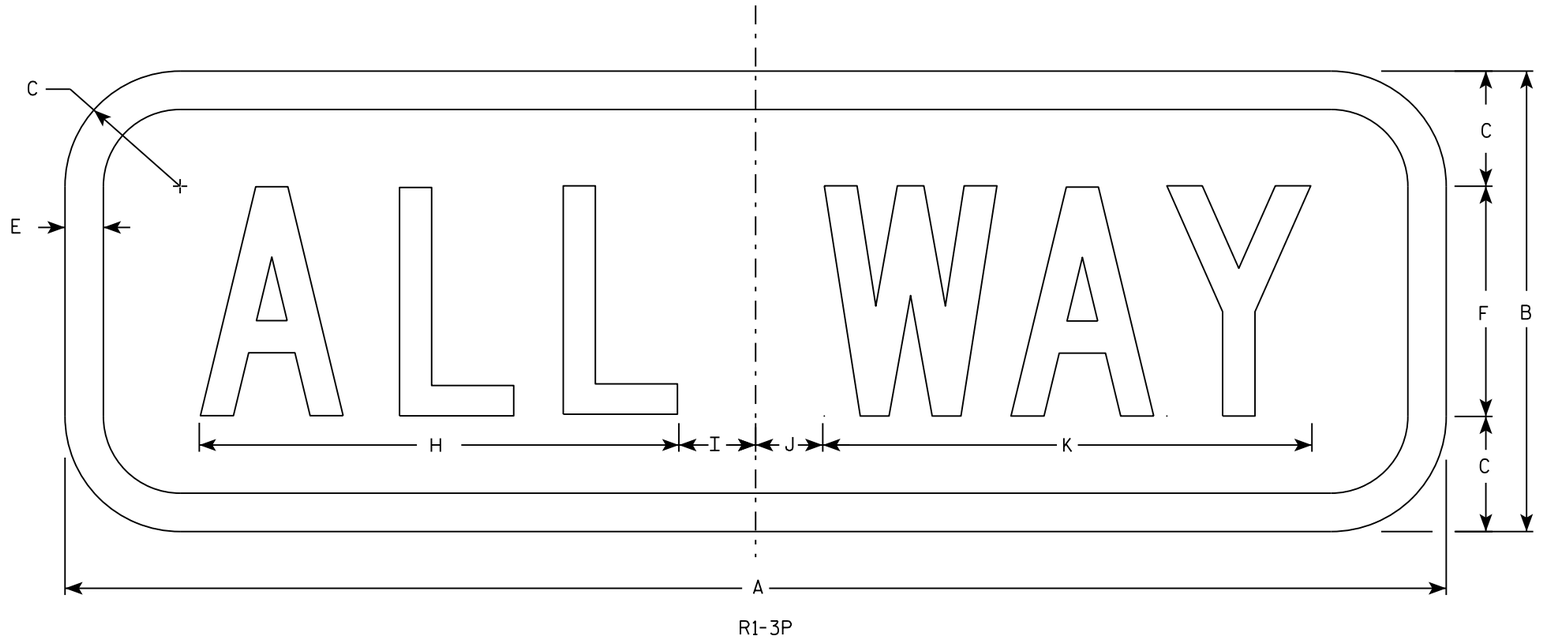
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO: 290	E



R1-3P

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. For 30"x30" R1-1 use 18"x6" R1-3P sign
   For 36"x36" R1-1 use 24"x9" R1-3P sign
   For 48"x48" R1-1 use 30"x12" R1-3P sign

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	18	6	1 ½		½	3		6 ¼	1 ¼	⅞	6 ⅜																0.75
2S	18	6	1 ½		½	3		6 ¼	1 ¼	⅞	6 ⅜																1.5
2M	24	9	1 ½		½	5		9 ¼	1 ¼	¾	9 ¾																1.5
3	24	9	1 ½		½	5		9 ¼	1 ¼	¾	9 ¾																1.5
4	30	12	2 ¼		⅝	6		11	2 ¼	1 ½	11 ¾																2.5
5	30	12	2 ¼		⅝	6		11	2 ¼	1 ½	11 ¾																2.5

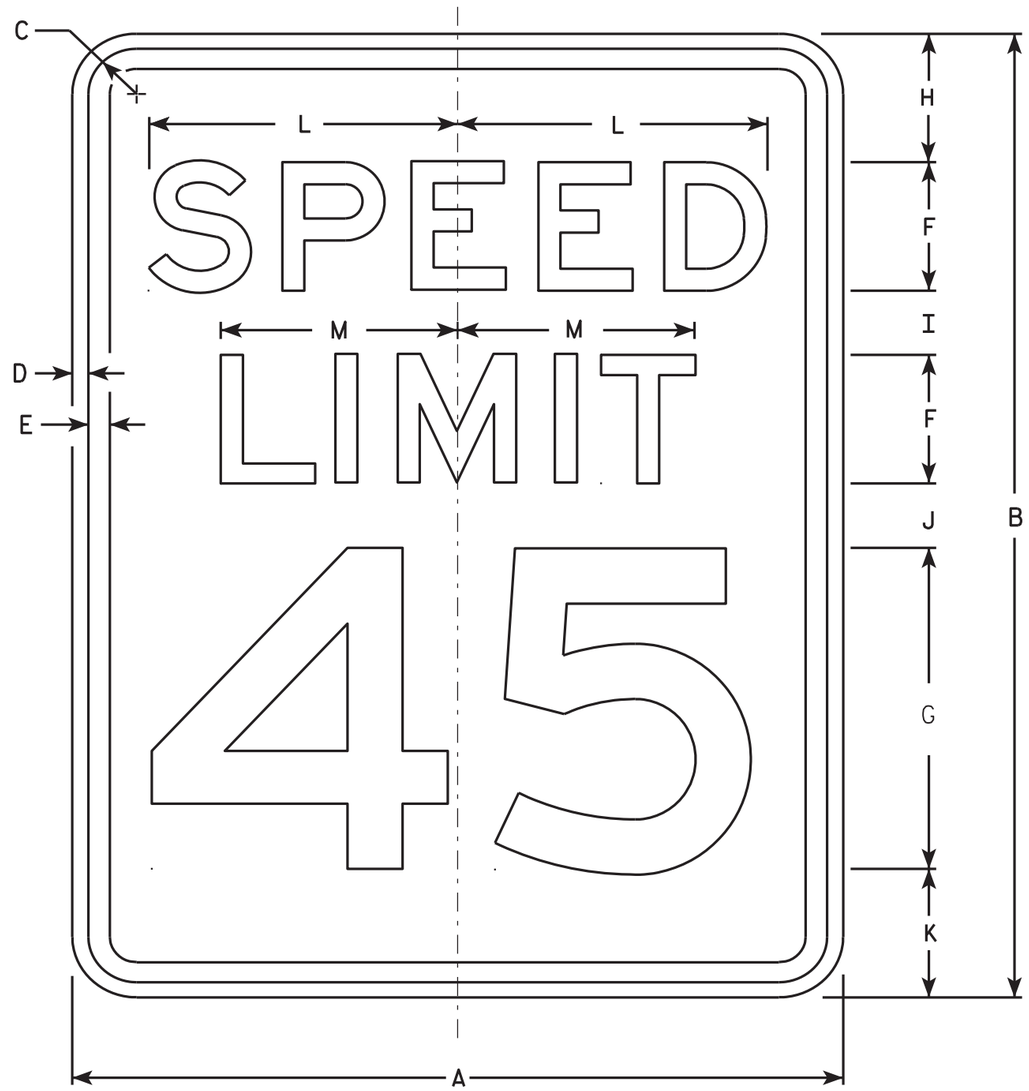
STANDARD SIGN
R1-3P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/29/16 PLATE NO. R1-3P.3

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 291 | E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
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. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

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	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

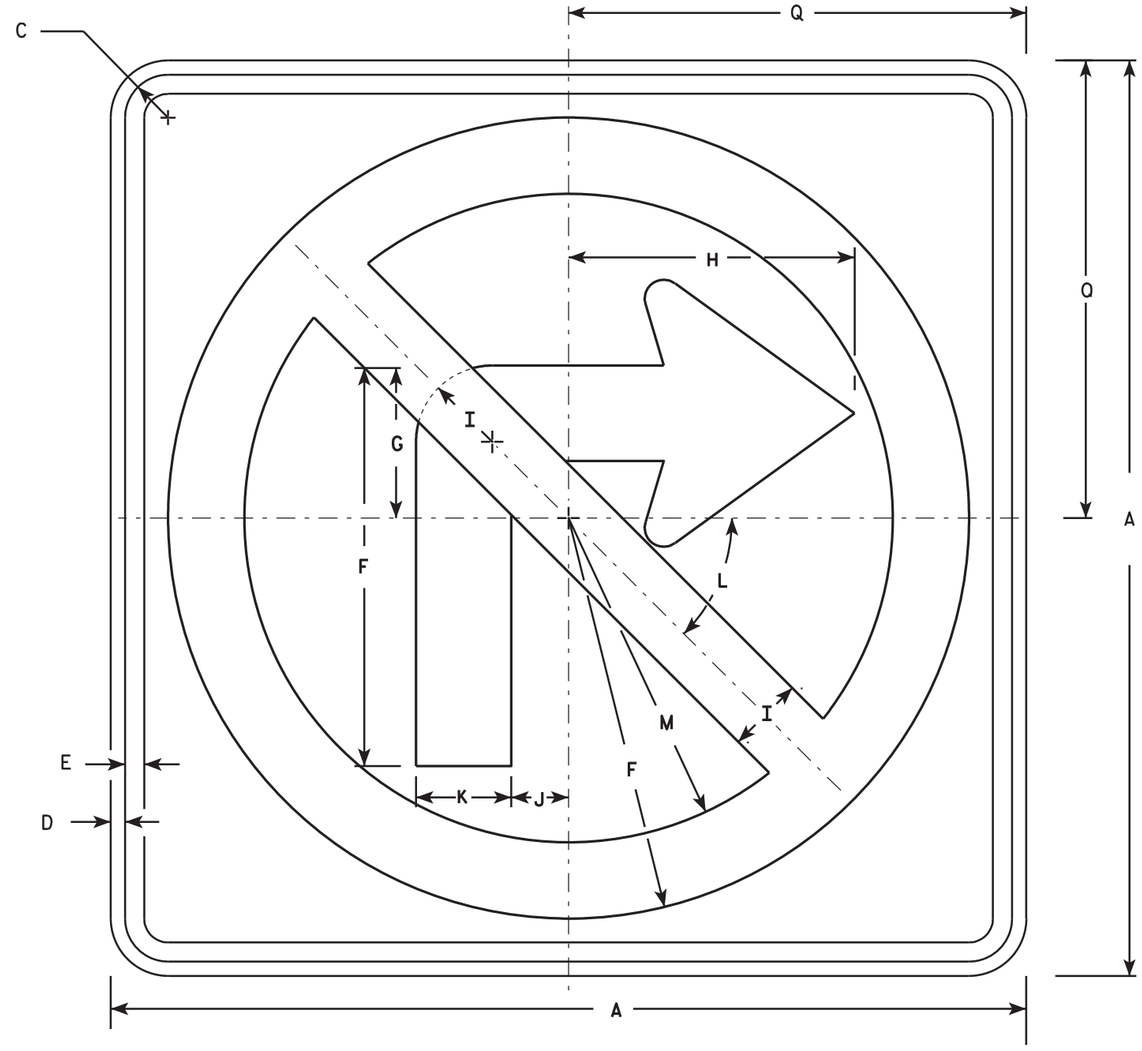
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

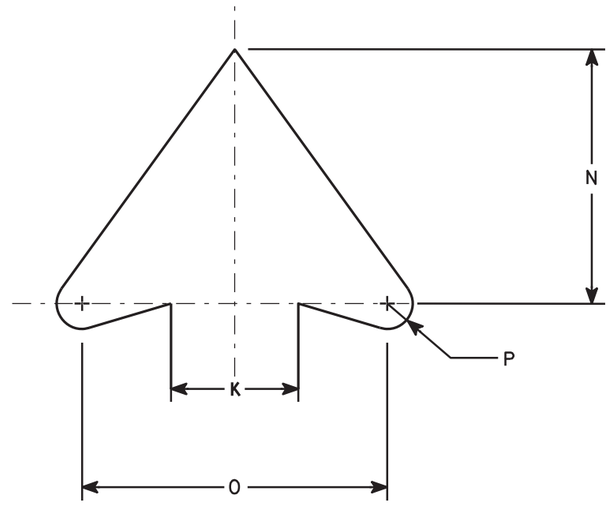
PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 292 | E



R3-1

NOTES

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



ARROW DETAIL

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

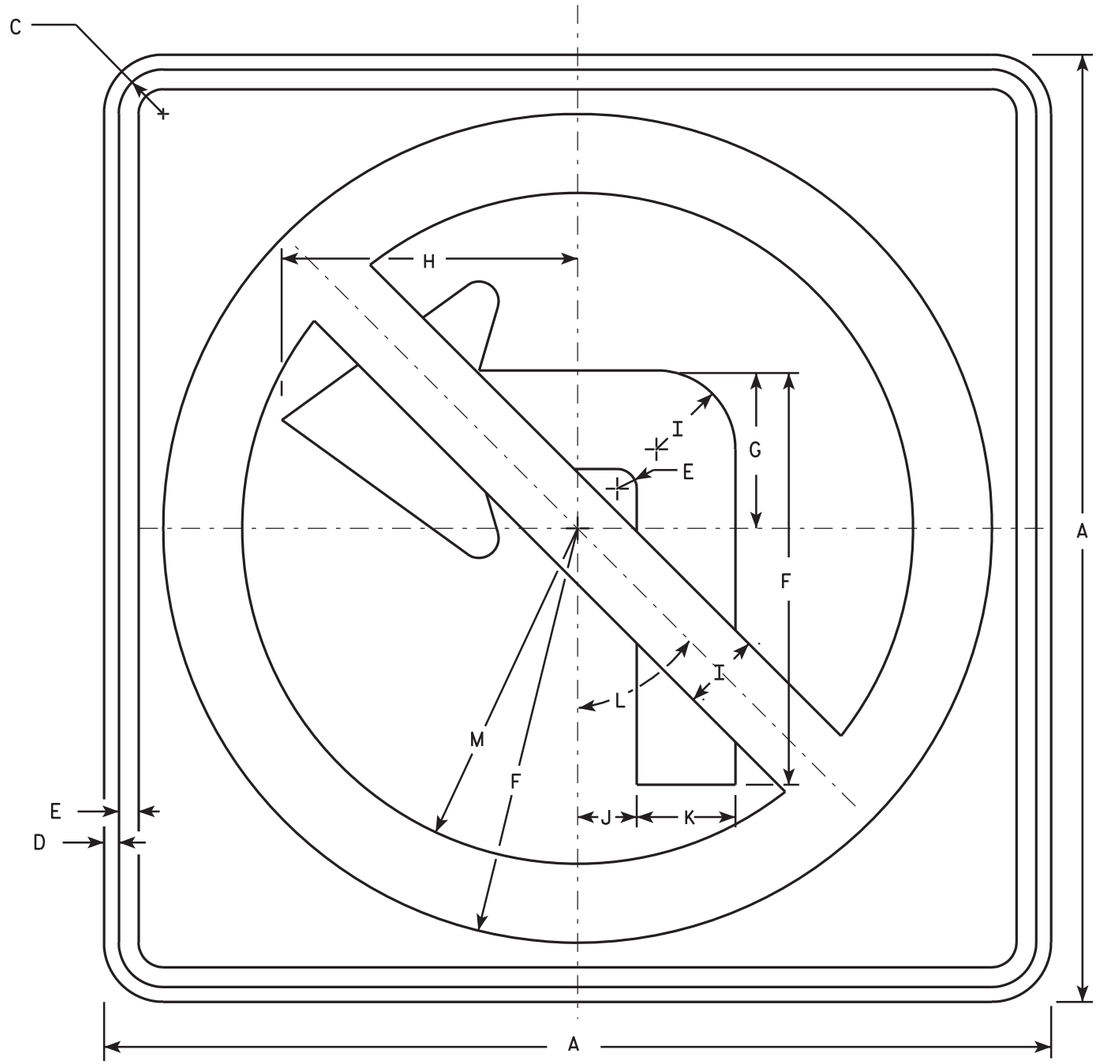
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

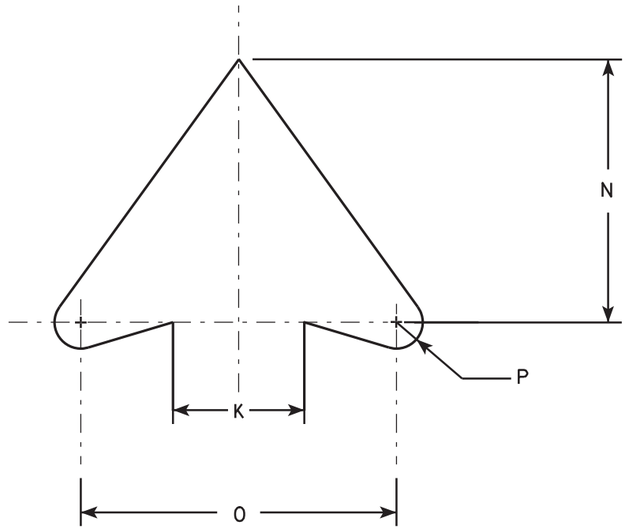
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO: 293	E



R3-2

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 - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



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	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 294 | E

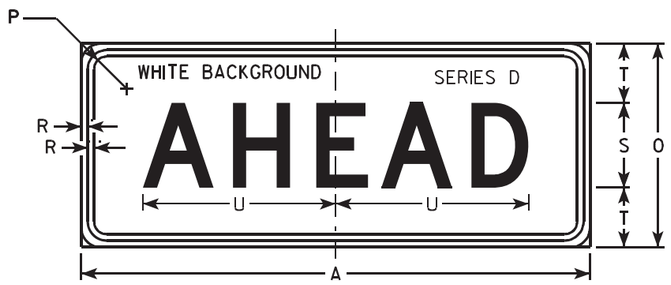
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R32.DGN PLOT DATE : 08-DEC-2010 14:41 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.760408:1.000000

WISDOT/CADDS SHEET 42

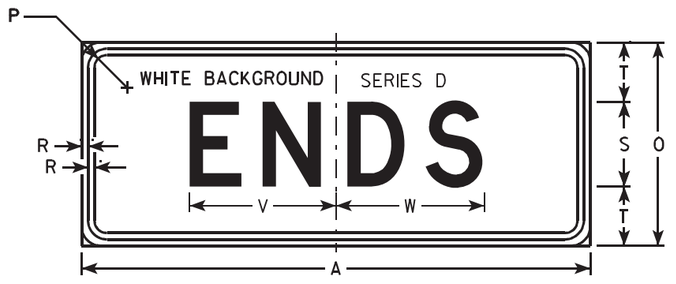
R3-17

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - AS SHOWN
   Message - BLACK
3. Message Series - C or as noted on the Signs.
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.



R3-17ap



R3-17bp

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	R3-17 Area sq. ft.	R3-17ap Area sq. ft.	R3-17bp Area sq. ft.
1																													
2S	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
2M	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
3																													
4																													
5																													

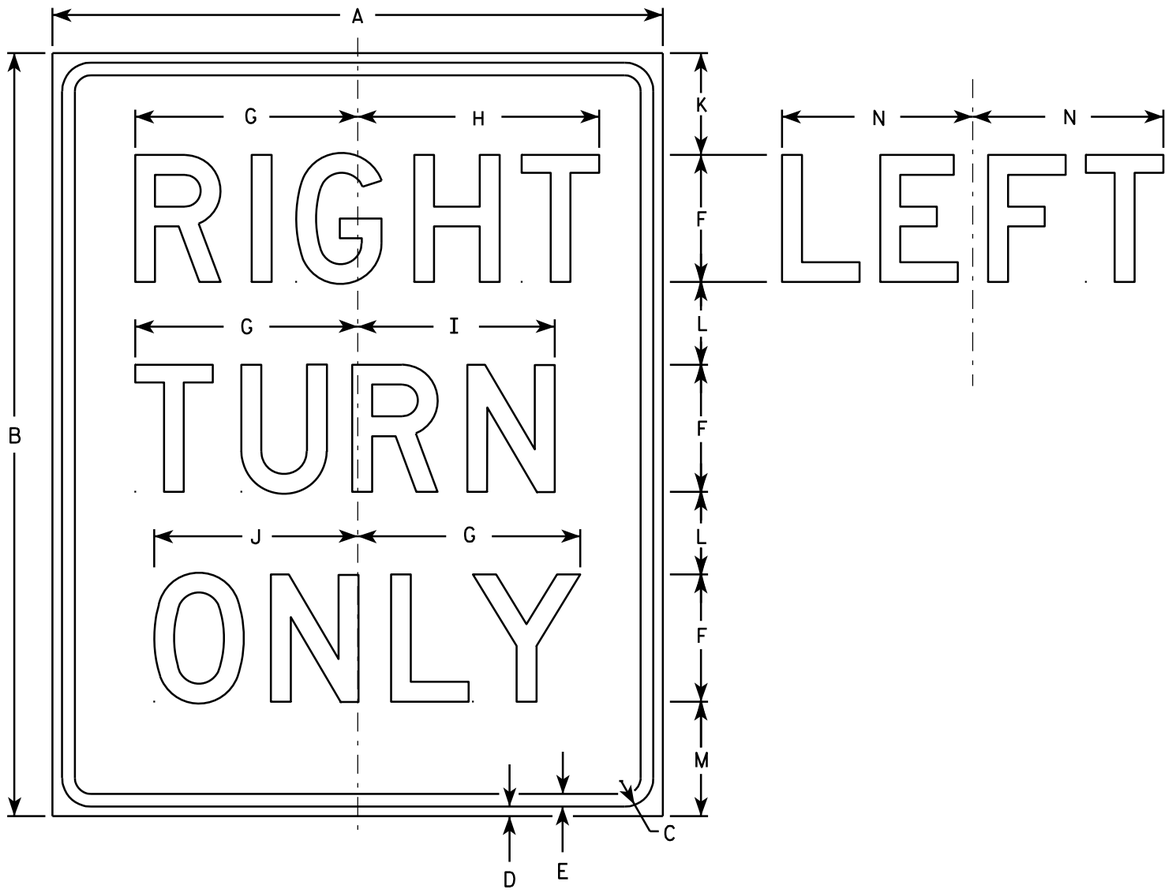
STANDARD SIGN
R3-17 & R3-17a&bp

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/12/2011 PLATE NO. R3-17.2

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO: 295	E



R3-53R

NOTES

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

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	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
2M	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
3	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
4																											
5																											

STANDARD SIGN
R3-53

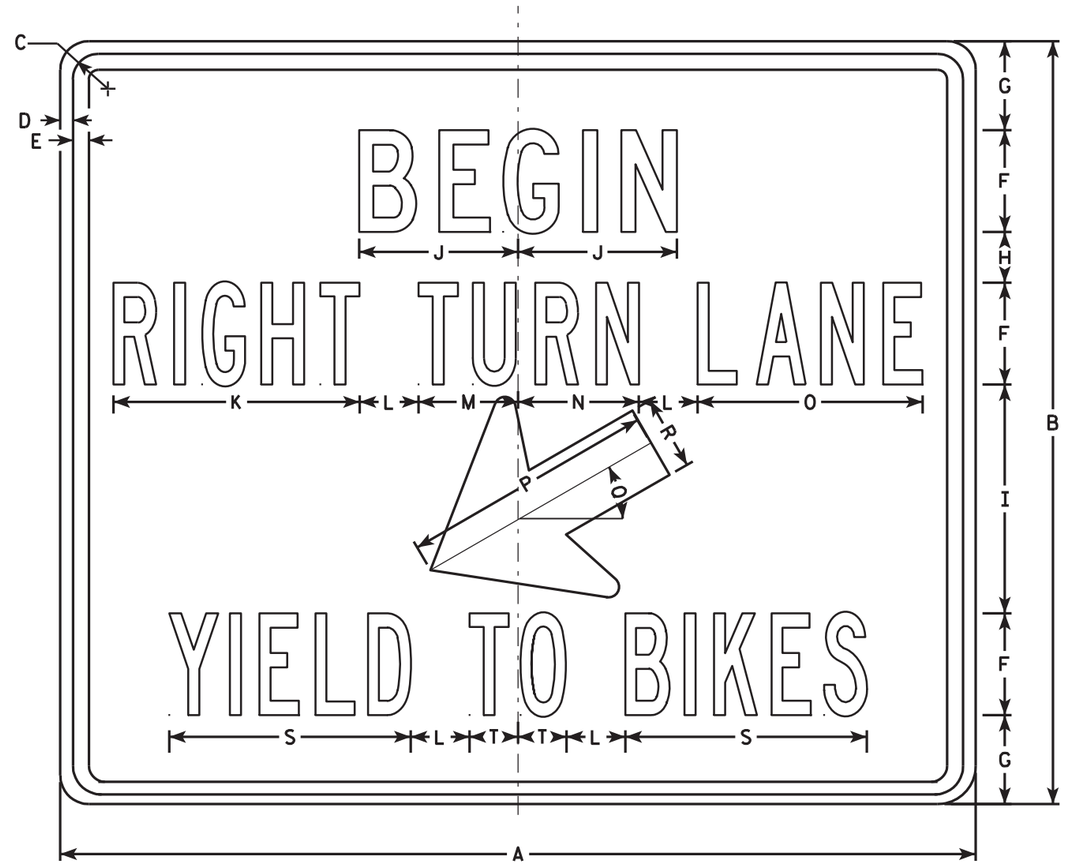
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/24/2011 PLATE NO. R3-53.8

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 296 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R353.DGN PLOT DATE : 24-MAR-2011 14:54 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000
WISDOT/CADDS SHEET 42



R4-4

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 - 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. Line 1 is Series C
   Lines 2 & 3 are Series B

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	36	30	1 3/8	1/2	5/8	4	3 1/2	2	9	6 1/4	9 3/4	2 3/8	3 7/8	4 3/4	8 7/8	10	30°	2 7/8	9 1/2	1 7/8							7.5
2M	36	30	1 3/8	1/2	5/8	4	3 1/2	2	9	6 1/4	9 3/4	2 3/8	3 7/8	4 3/4	8 7/8	10	30°	2 7/8	9 1/2	1 7/8							7.5
3																											
4																											
5																											

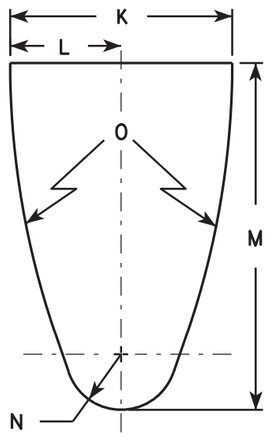
STANDARD SIGN
R4-4

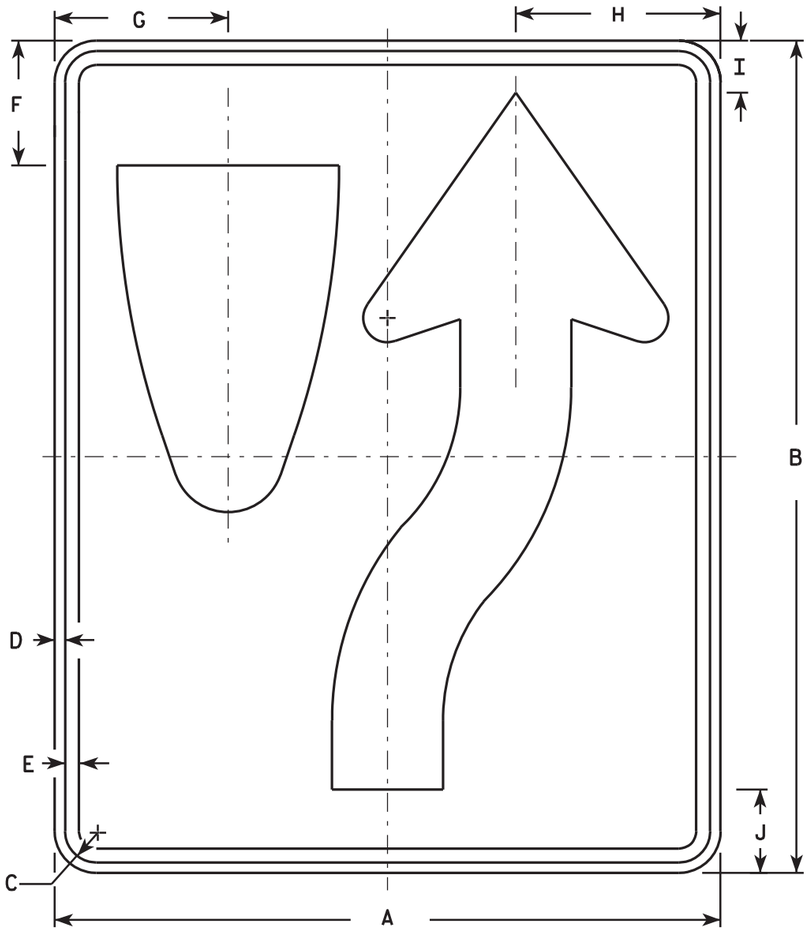
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew L Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-4.2

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 297 | E

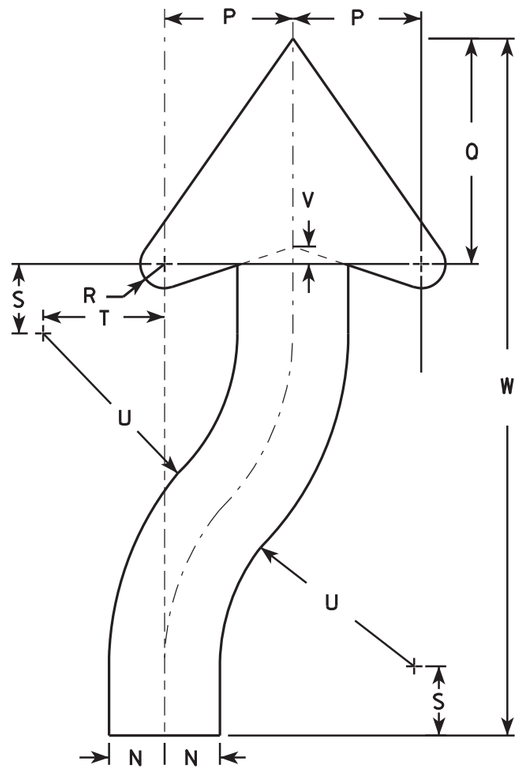




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend 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	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

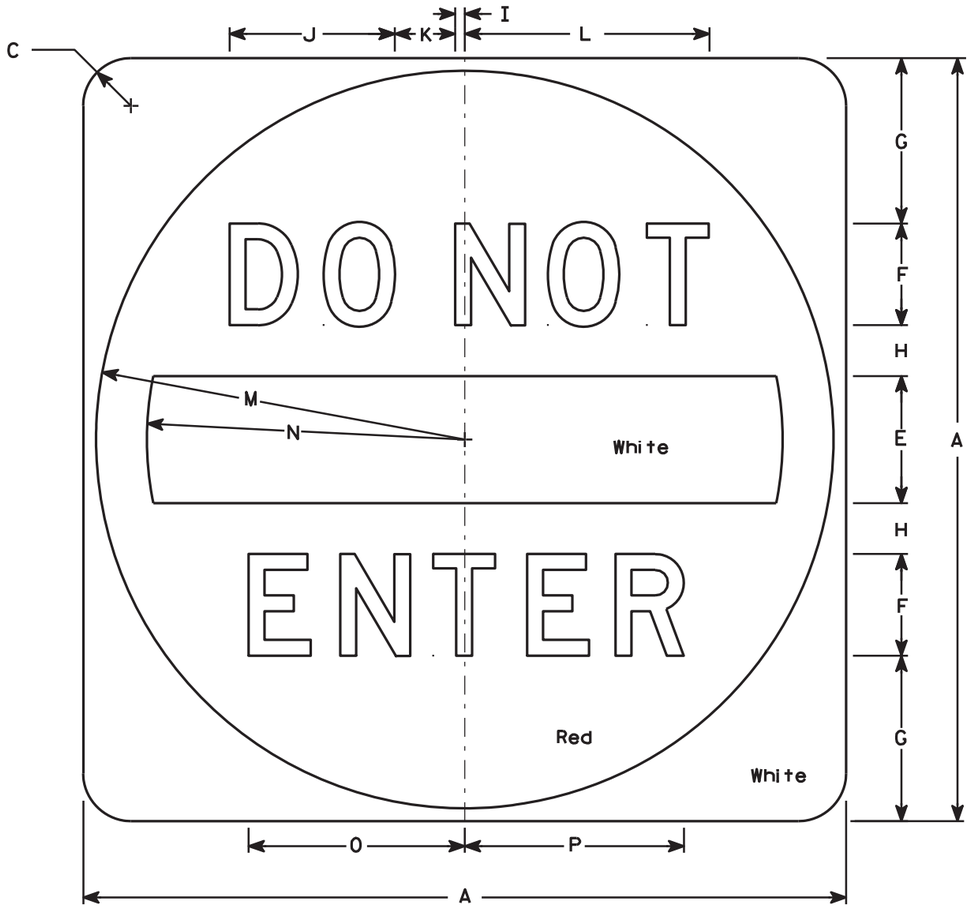
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 298 | E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors 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		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

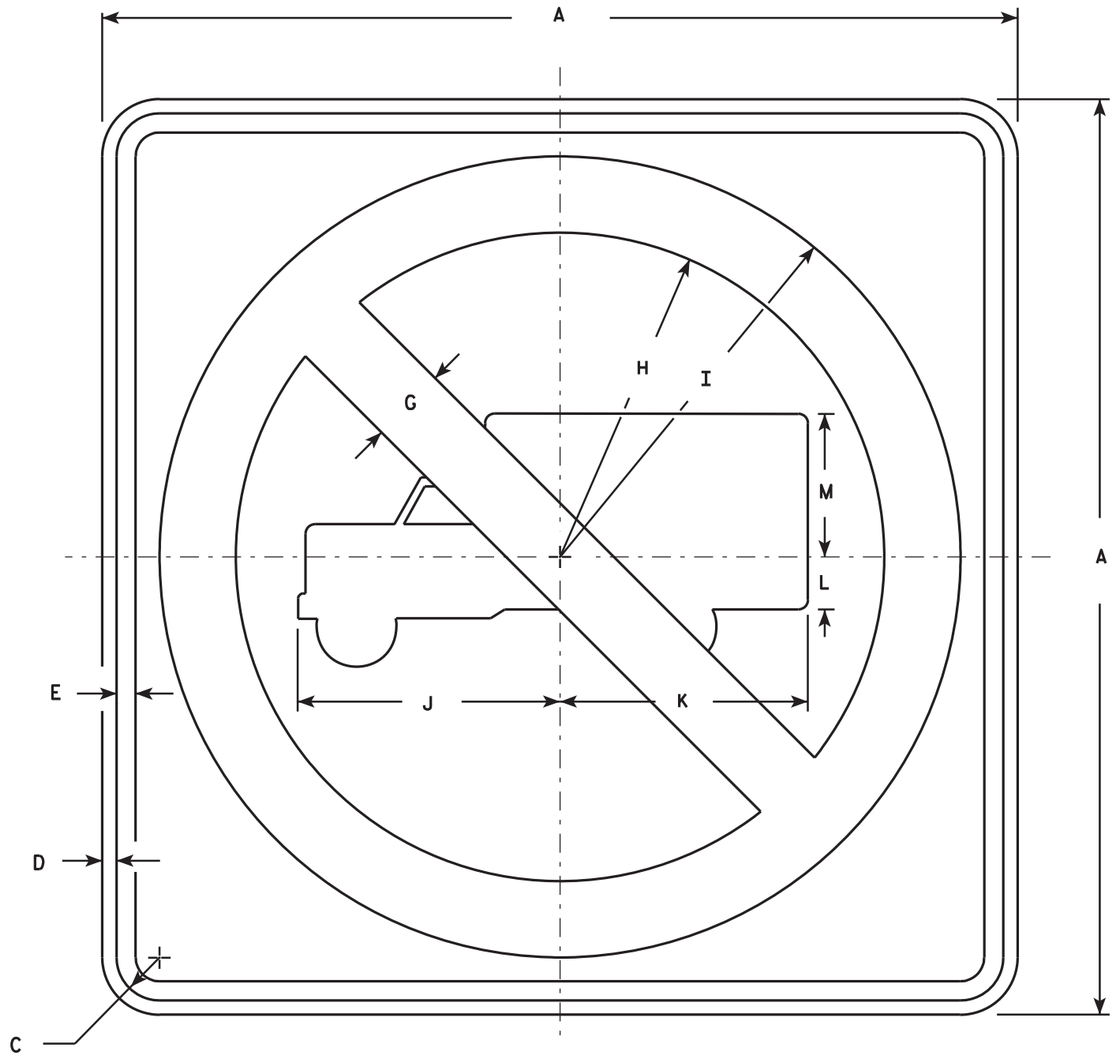
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 299 | E



R5-2

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 - 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. Circle & Diagonal - Reflective red.
   Truck Symbol & Border - Non-reflective black.

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	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
2M	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
3	30		1 3/8	1/2	5/8		2 1/2	10 5/8	13 1/8	8 1/2	8 1/8	1 5/8	4 3/4														6.25
4	36		1 5/8	5/8	3/4		3	12 3/4	15 3/4	10 1/4	9 3/4	2	5 3/4														9.0
5	48		2 1/4	3/4	1		4	17	21	13 5/8	13	2 5/8	7 5/8														16.0

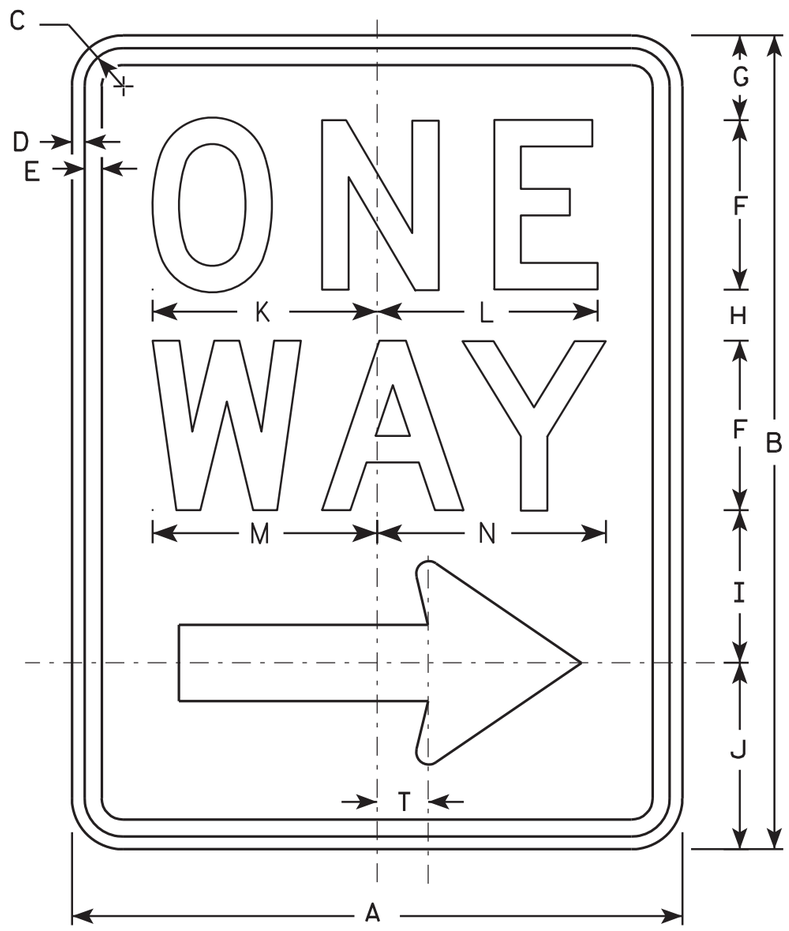
STANDARD SIGN
R5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2.6

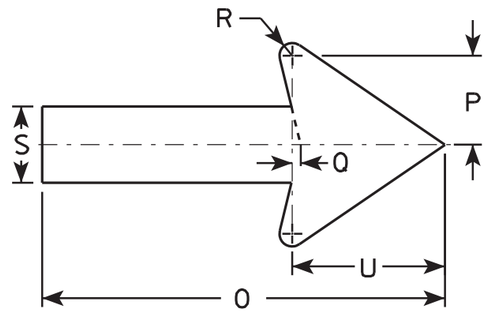
PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 300 | E



R6-2R

NOTES

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



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

STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

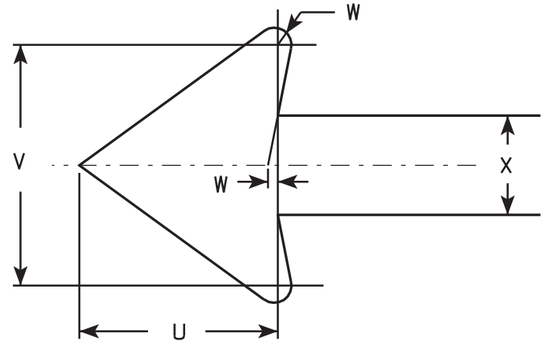
DATE 11/2/10 PLATE NO. R6-2.8

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 301 | E

R7-1

NOTES

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



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	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

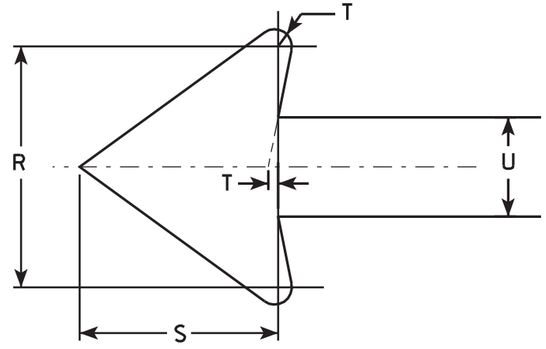
DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO: 302	E

R7-5

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 - Green
3. Message Series - See Note 7
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. Substitute appropriate numerals as required & adjust spacing to achieve proper balance.
6. R7-5D (double arrow)
   R7-5L (left arrow)
   R7-5R (right arrow)
7. Lines 1, 2 & 3 are series C Copy
   Line 4 Series B Copy.



* - See Note 5

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	12	18	1 1/8	3/8	3/8	2	2	2 1/4	1 1/4	4	2 1/2	2 1/8	2	2 7/8	4 5/8	4 1/2	3 7/8	1 3/4	1 1/2	1/8	3/4						1.5
2S	18	24	1 1/8	3/8	1/2	3	3	2 5/8	1 1/4	5 5/8	3 1/4	3 1/8	3 1/8	4 1/4	6 7/8	6 3/4	5 1/8	2 5/8	2 1/4	1/4	1 1/8						3.0
2M	24	30	1 1/8	3/8	1/2	4	3	3	2	6	3 1/2	4 1/4	4 1/8	5 3/4	9 1/8	9 1/8	7 3/4	3 1/2	3	1/4	1 1/2						5.0
3	24	30	1 1/8	3/8	1/2	4	3	3	2	6	3 1/2	4 1/4	4 1/8	5 3/4	9 1/8	9 1/8	7 3/4	3 1/2	3	1/4	1 1/2						5.0
4																											
5																											

STANDARD SIGN
R7-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

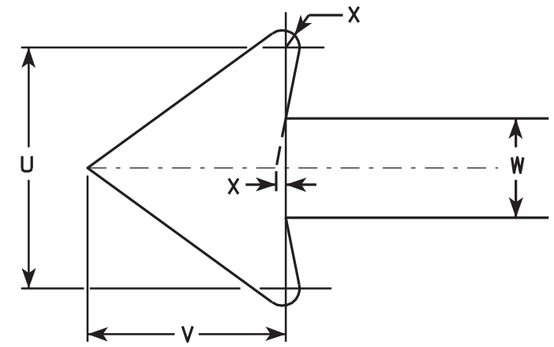
DATE 03/31/2011 PLATE NO. R7-5.8

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 303 | E

R7-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 6
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. R7-7D (double arrow)
   R7-7R (right arrow)
   R7-7L (left arrow)
6. Lines 1, 3 and 4 are Series C.
   Line 2 is Series B.



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	12	18	1 1/8	3/8	3/8	3	2	1 7/8	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2	2 3/4	2 5/8	3 7/8	1 3/4	1 1/2	3/4	1/8			1.50
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 1/2	3 3/8	3 3/8	5 7/8	2 5/8	2 1/4	1 1/8	1/4			3.00
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3	4 1/8	4	7 3/4	3 1/2	3	1 1/2	1/4			5.00
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3	4 1/8	4	7 3/4	3 1/2	3	1 1/2	1/4			5.00
4																											
5																											

STANDARD SIGN
R7-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

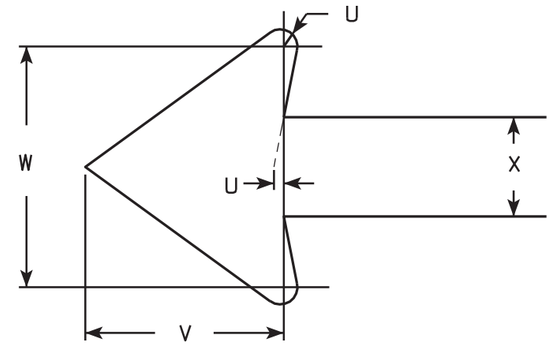
DATE 3/31/2011 PLATE NO. R7-7.8

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 304 | E

R7-52

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-52D (double arrow)
   R7-52L (left arrow)
   R7-52R (right arrow)



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	12	18	1 1/8	3/8	3/8	3	1 7/8	1 1/2	7/8	7/8	2	2 1/2	2	2	4 7/8	4 7/8	5 1/8	5	3 1/8	3 7/8	1/8	1 1/2	1 3/4	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	6 3/8	6 1/4	3 7/8	5 7/8	1/4	2 1/4	2 5/8	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	7 5/8	7 5/8	4 3/4	7 3/4	1/4	3	3 1/2	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	7 5/8	7 5/8	4 3/4	7 3/4	1/4	3	3 1/2	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-52

WISCONSIN DEPT OF TRANSPORTATION

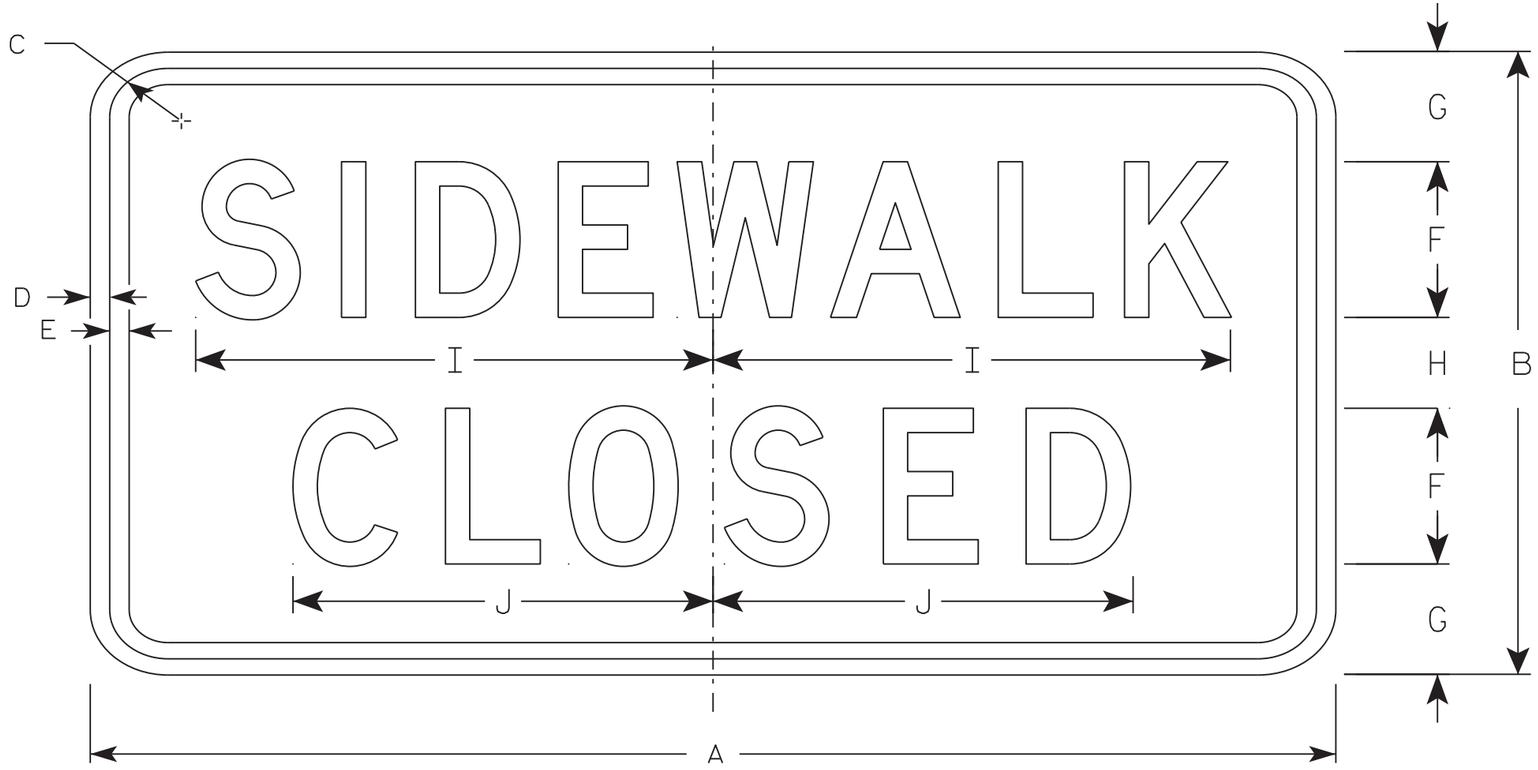
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-52.6

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO: 305	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R752.dgn PLOT DATE : 31-MAR-2011 13:07 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

WISDOT/CADDS SHEET 42



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.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

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	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN
R9-9

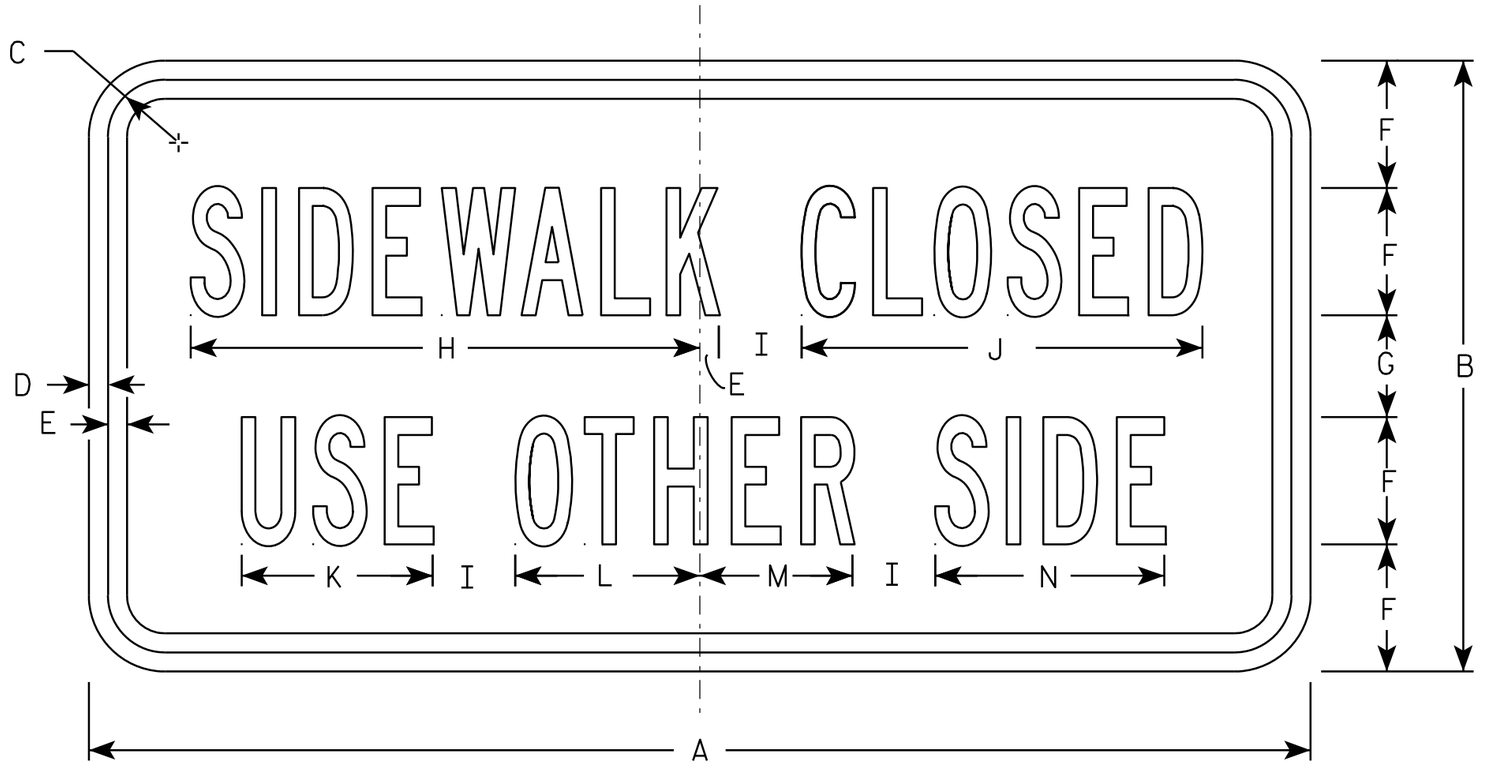
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE 306 R9-9.6

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R99.DGN PLOT DATE : 11-AUG-2016 11:33 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 2.918761:1.000000



R9-10

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 - 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	24	12	1 1/8	3/8	3/8	2 1/2	2	10	1 5/8	7 7/8	3 3/4	3 5/8	3	4 1/2													2.0
2S	48	24	2 3/4	3/4	3/4	5	4	20	3 1/4	15 3/4	7 1/2	7 1/4	6	9													8.0
2M	48	24	2 3/4	3/4	3/4	5	4	20	3 1/4	15 3/4	7 1/2	7 1/4	6	9													8.0
3																											
4																											
5																											

STANDARD SIGN
R9-10

WISCONSIN DEPT OF TRANSPORTATION

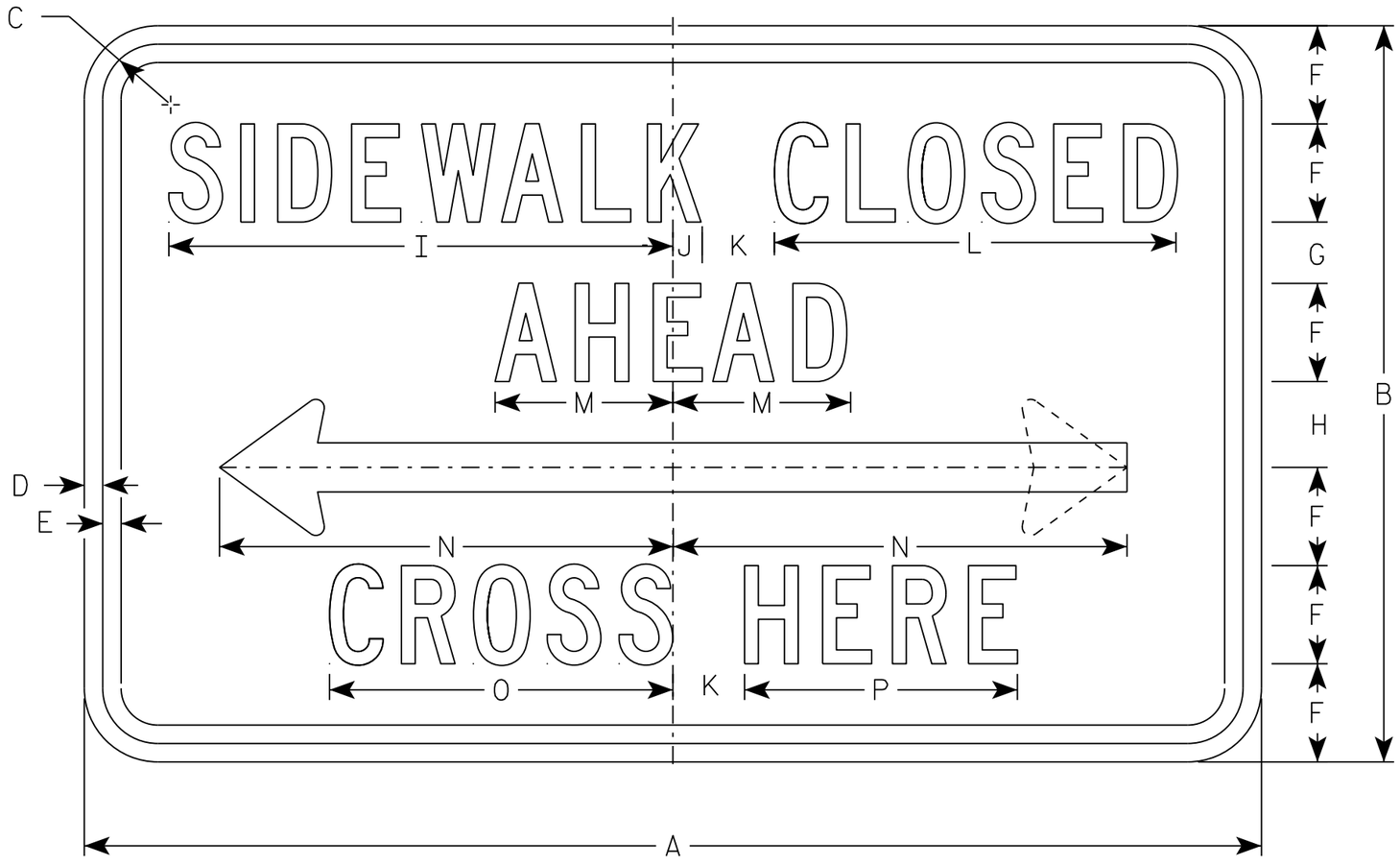
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/2012 PLATE NO. R9-10.5

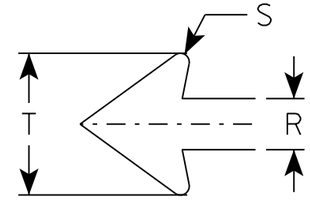
PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 307 | E

NOTES

1. Sign is Type II - Type H Reflective
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.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.



R9-11



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	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
2M	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
3	30	15	1 1/8	3/8	1/2	2	1 1/2	1 1/2	13	3/4	2	10 1/4	4 5/8	12 3/8	8 7/8	6 7/8		1 1/4	1/4	3 5/8							3.125
4																											
5																											

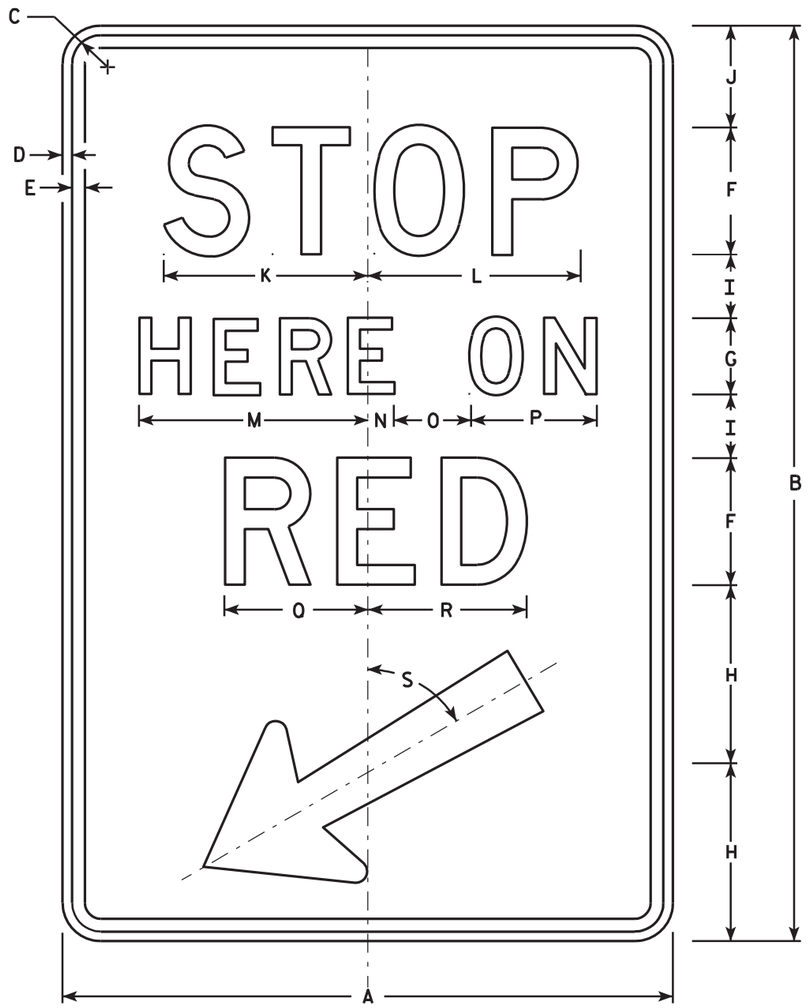
STANDARD SIGN
R9-11

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/29/16 PLATE NO. R9-11.3

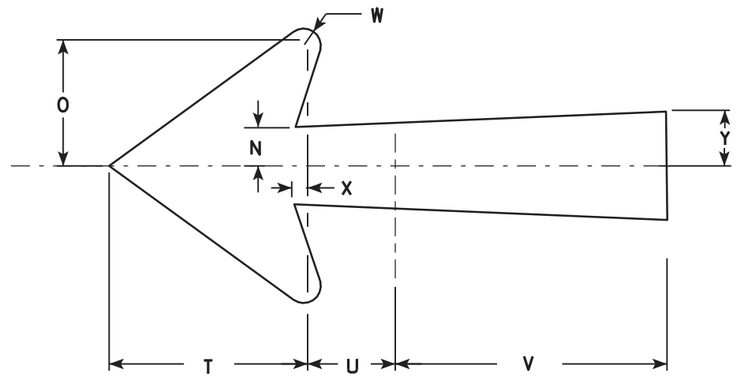
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO: 308	E



R10-6

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.



Arrow Detail

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	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

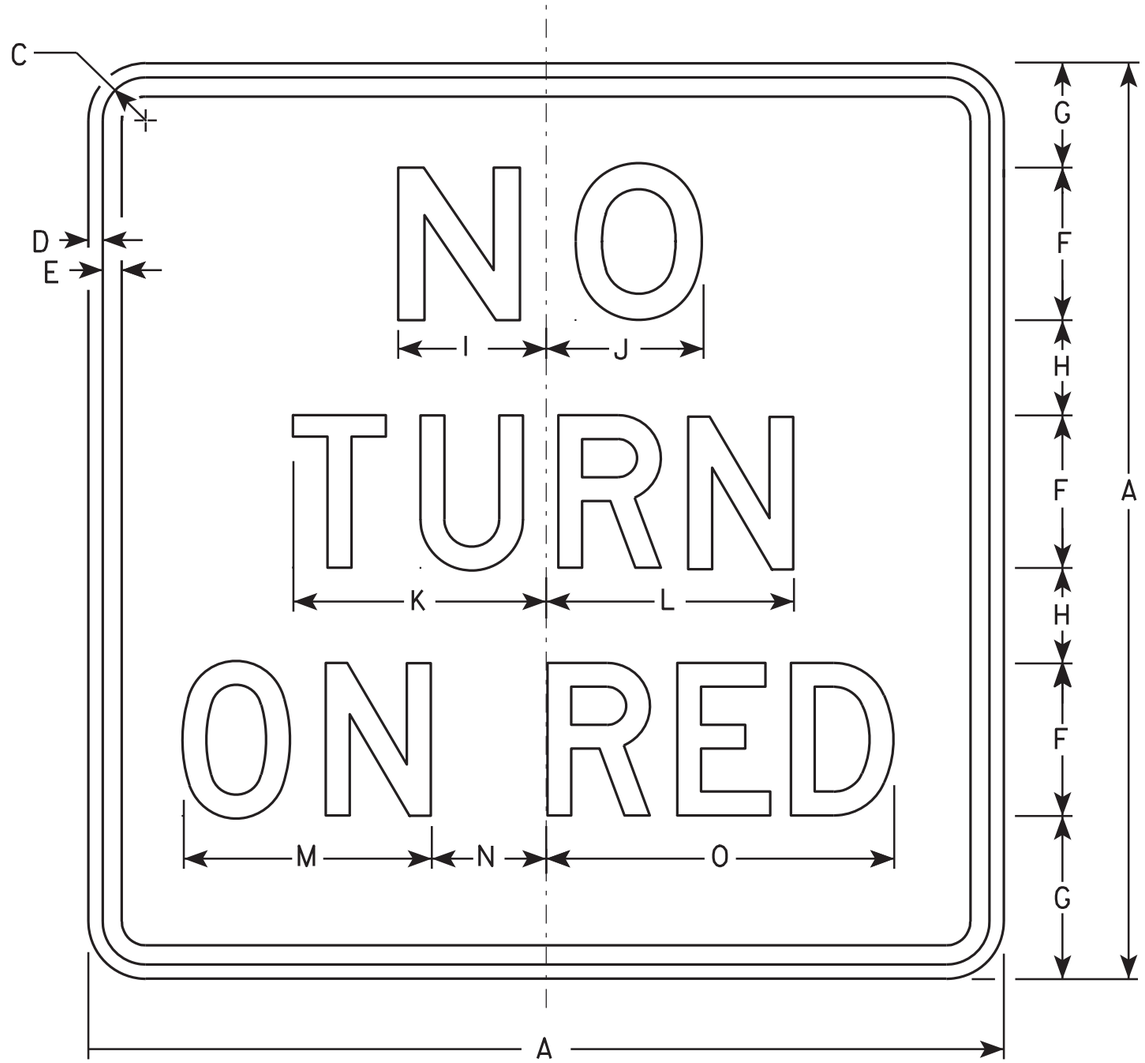
STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 309 | E



R10-11B

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 - 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. Line 1 is Series E.
   Lines 2 and 3 are Series D.

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	18		1 1/8	3/8	3/8	3	2 3/4	1 3/4	3	3 1/8	5	4 7/8	5 1/4	1 7/8	7 1/8												2.25
2S	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
2M	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
3	30		1 3/8	1/2	5/8	5	4 1/2	3	4 7/8	5 1/4	8 1/4	8 1/8	7 3/4	4 1/8	11 7/8												6.25
4																											
5																											

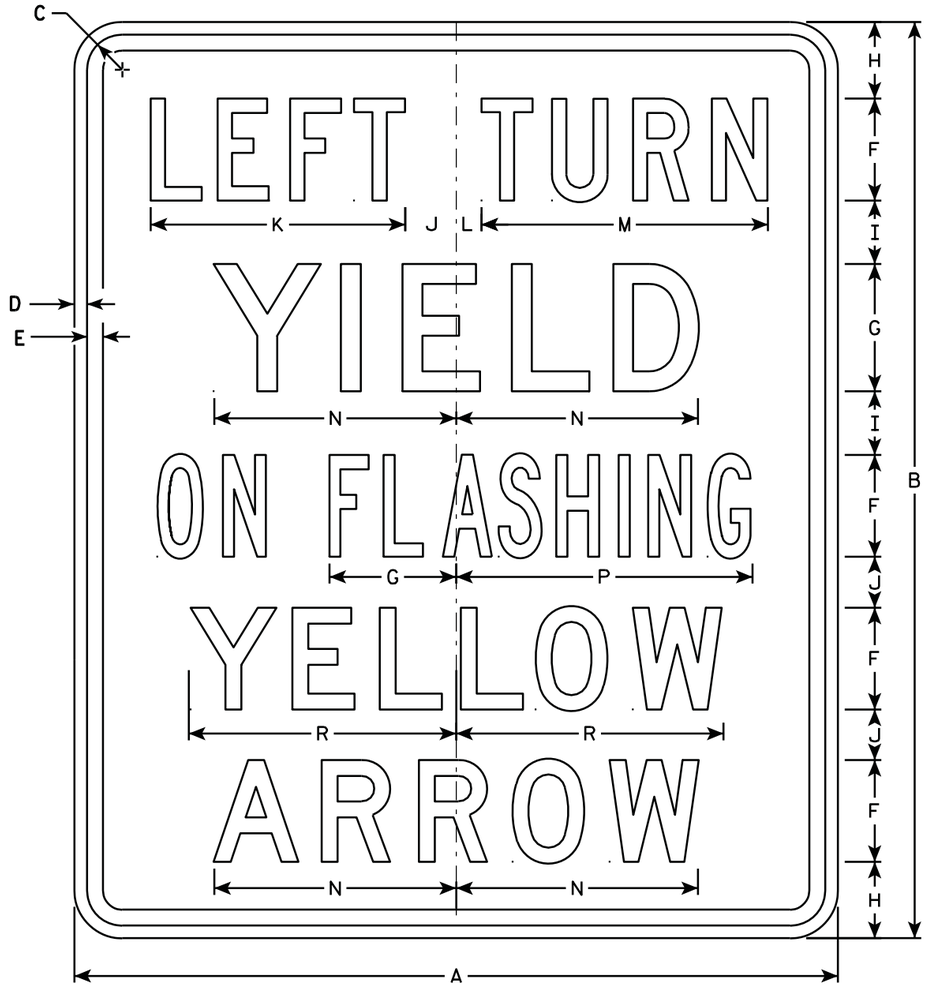
STANDARD SIGN
R10-11B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-11B.4

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 310 | E

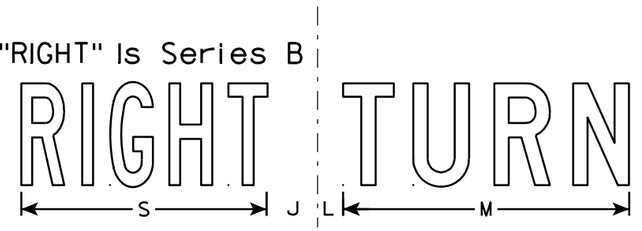


R10-50L

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 - 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. Line 1 is Series C.
   Lines 2, 4 and 5 are Series D.
   Line 3 is Series B.

"RIGHT" Is Series B



R10-50R

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	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2	9 5/8								7.5
2M	30	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2	9 5/8								7.5
3																											
4																											
5																											

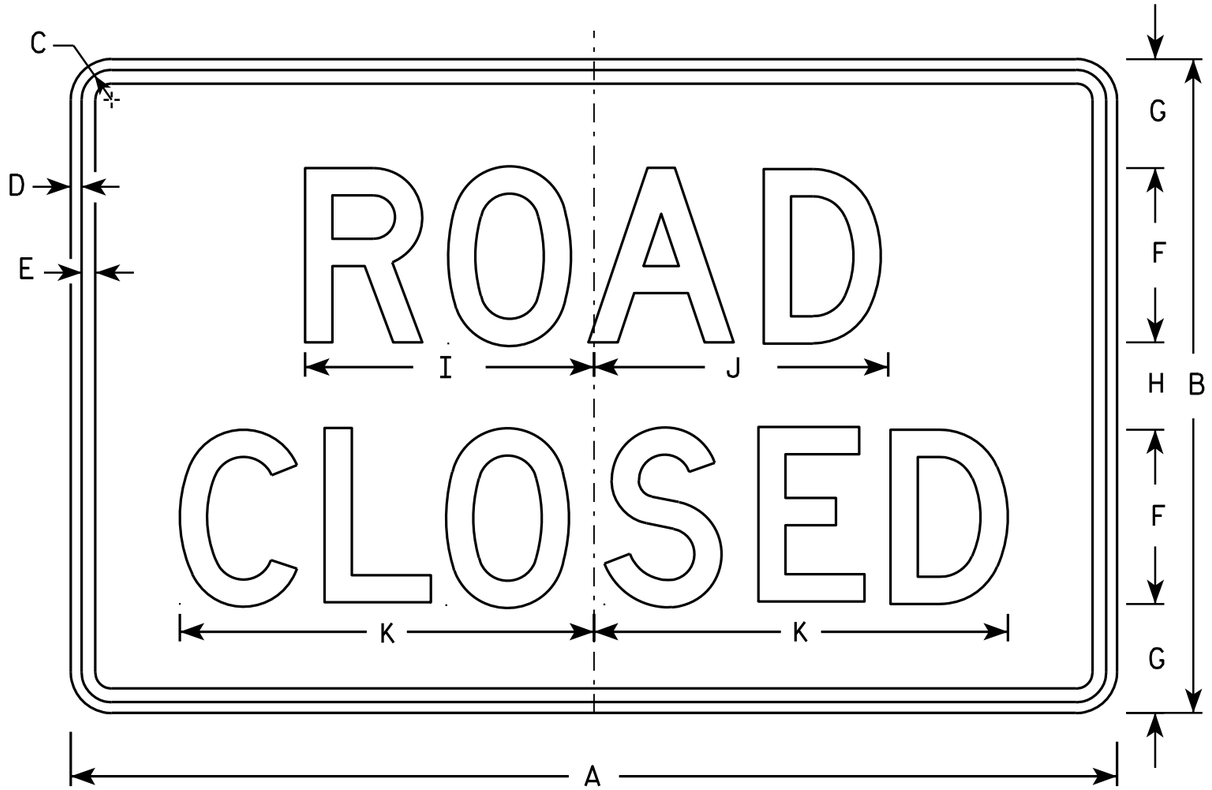
STANDARD SIGN
R10-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/11/13 PLATE NO. R10-50.2

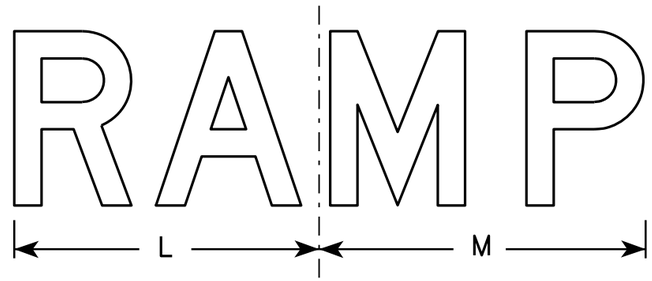
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO: 311	E



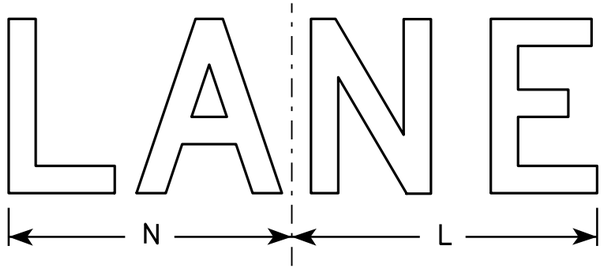
R11-2

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

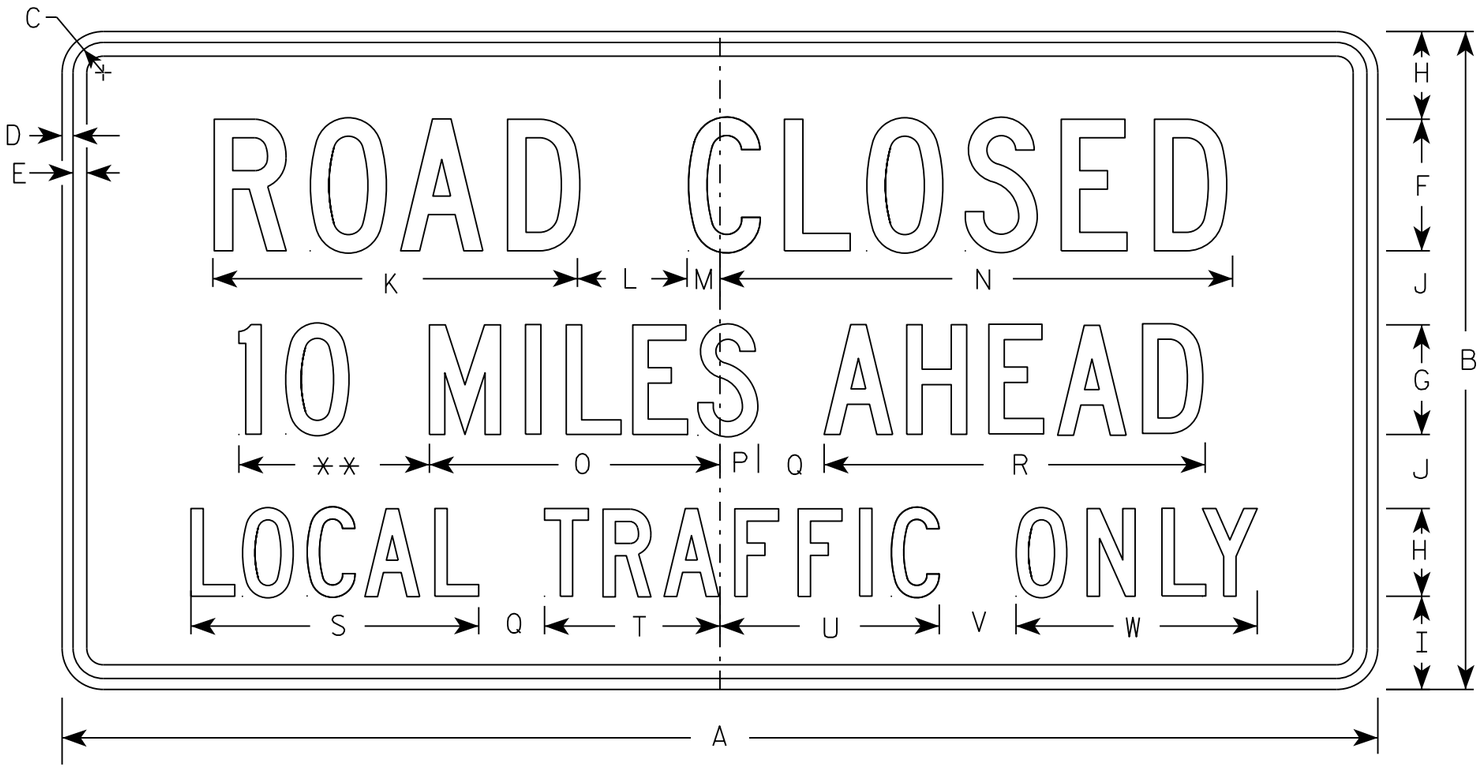
PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 312 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.DGN PLOT DATE : 01-APR-2011 14:25 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.952219:1.000000

WISDOT/CADDS SHEET 42

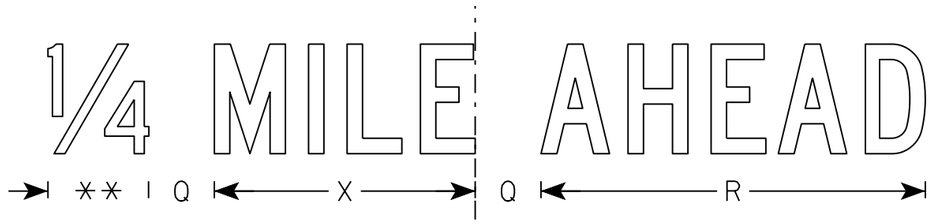
NOTES

1. Sign is Type II - Type H Reflective
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.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



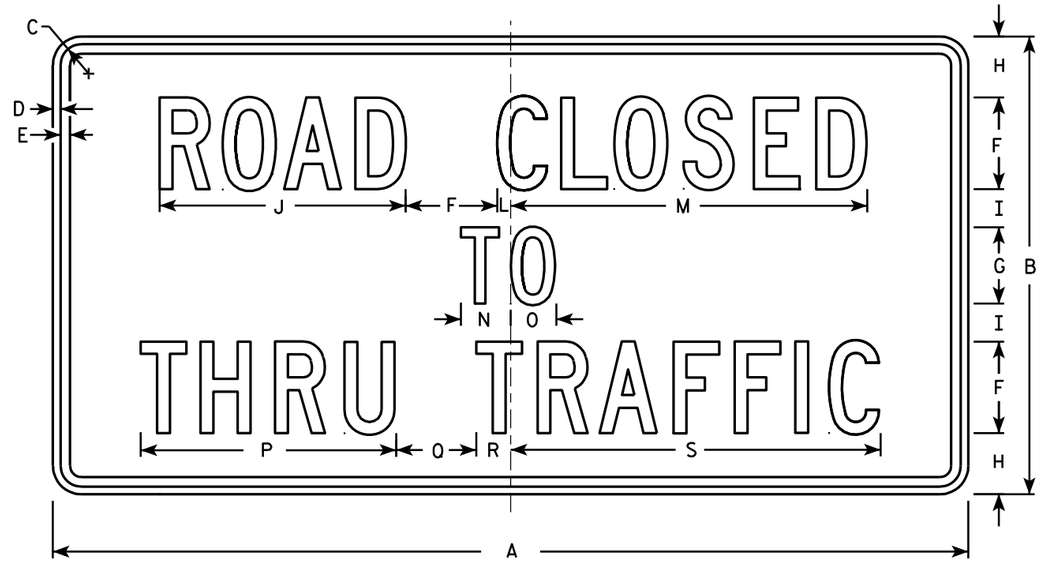
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/15/17 PLATE NO. R11-3.8

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO: 313	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

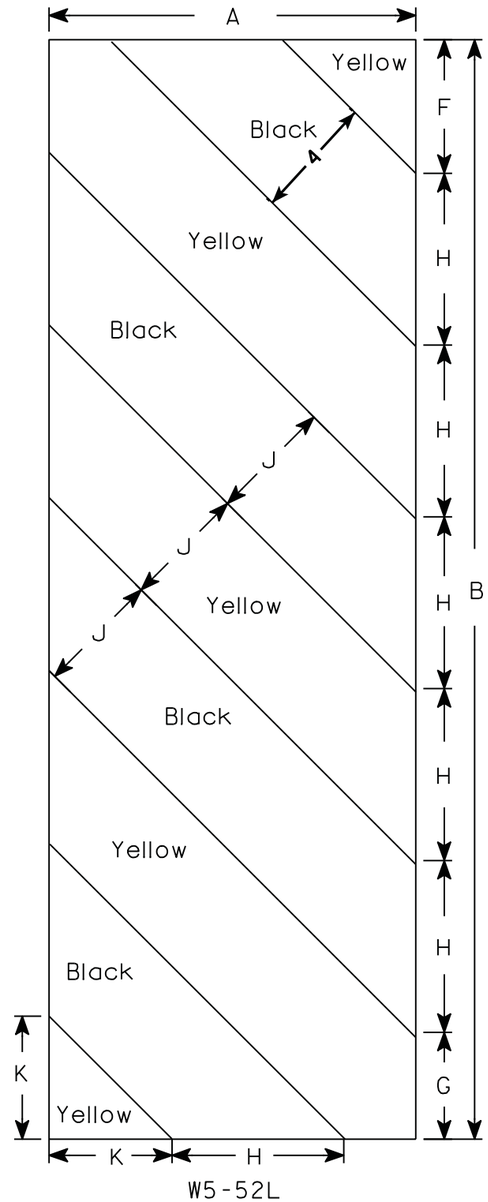
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

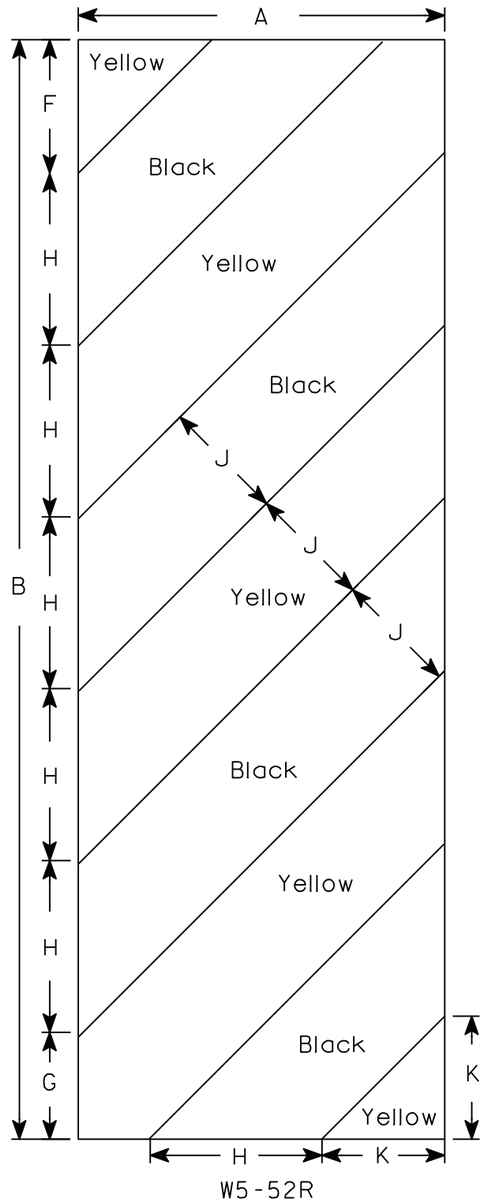
PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 314 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R114.DGN PLOT DATE : 01-APR-2011 14:11 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



W5-52L



W5-52R

NOTES

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

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	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

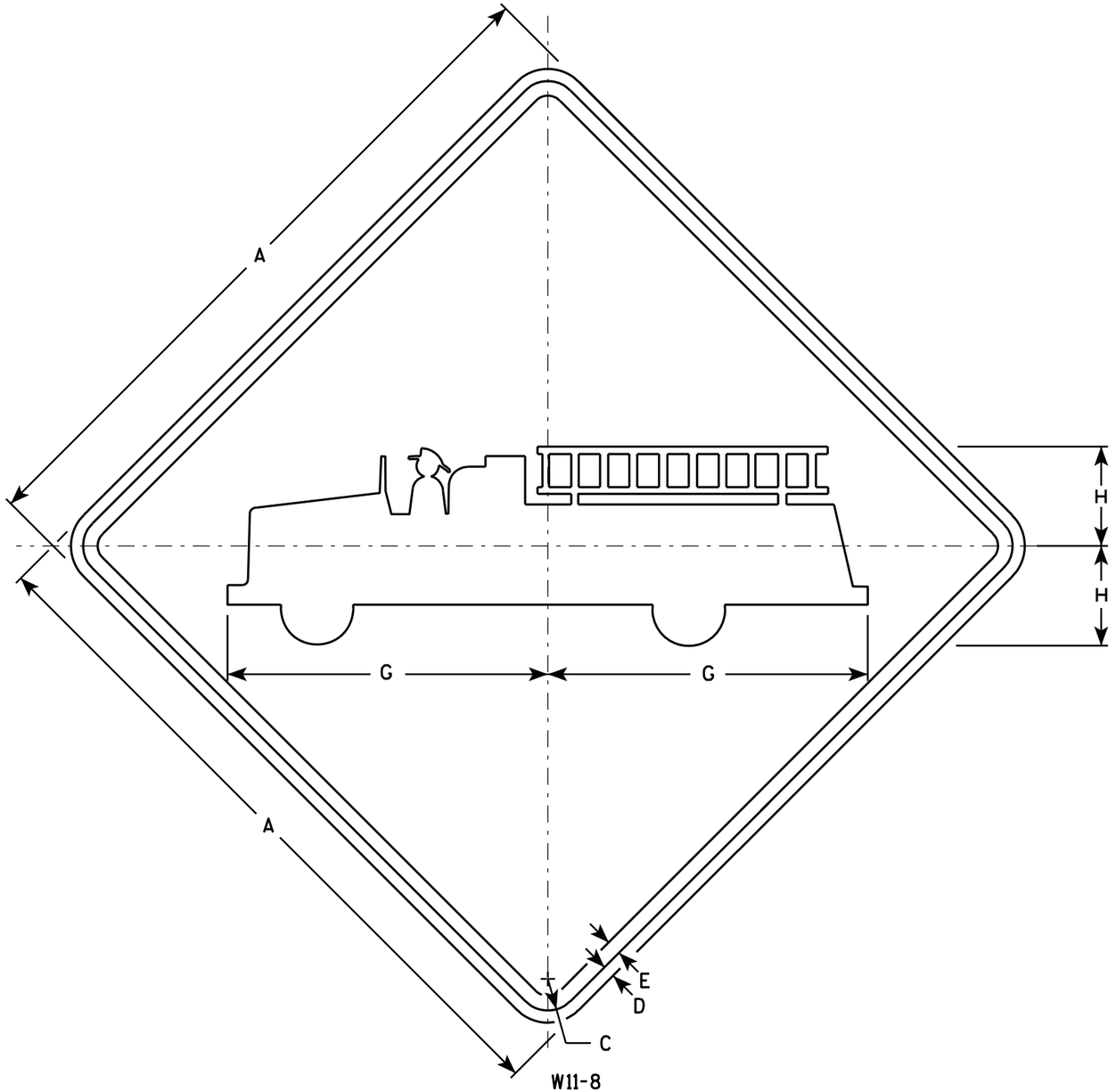
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO: 315	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W552.DGN PLOT DATE : 29-MAY-2012 13:03 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.961899:1.000000

WISDOT/CADDS SHEET 42

7

7



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		11	3 3/8																			4.0
2S	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
2M	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
3	36		1 5/8	5/8	3/4		16 1/2	5 1/4																			9.0
4	48		2 1/4	3/4	1		22	7																			16.0
5																											

STANDARD SIGN
W11-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W11-8.7

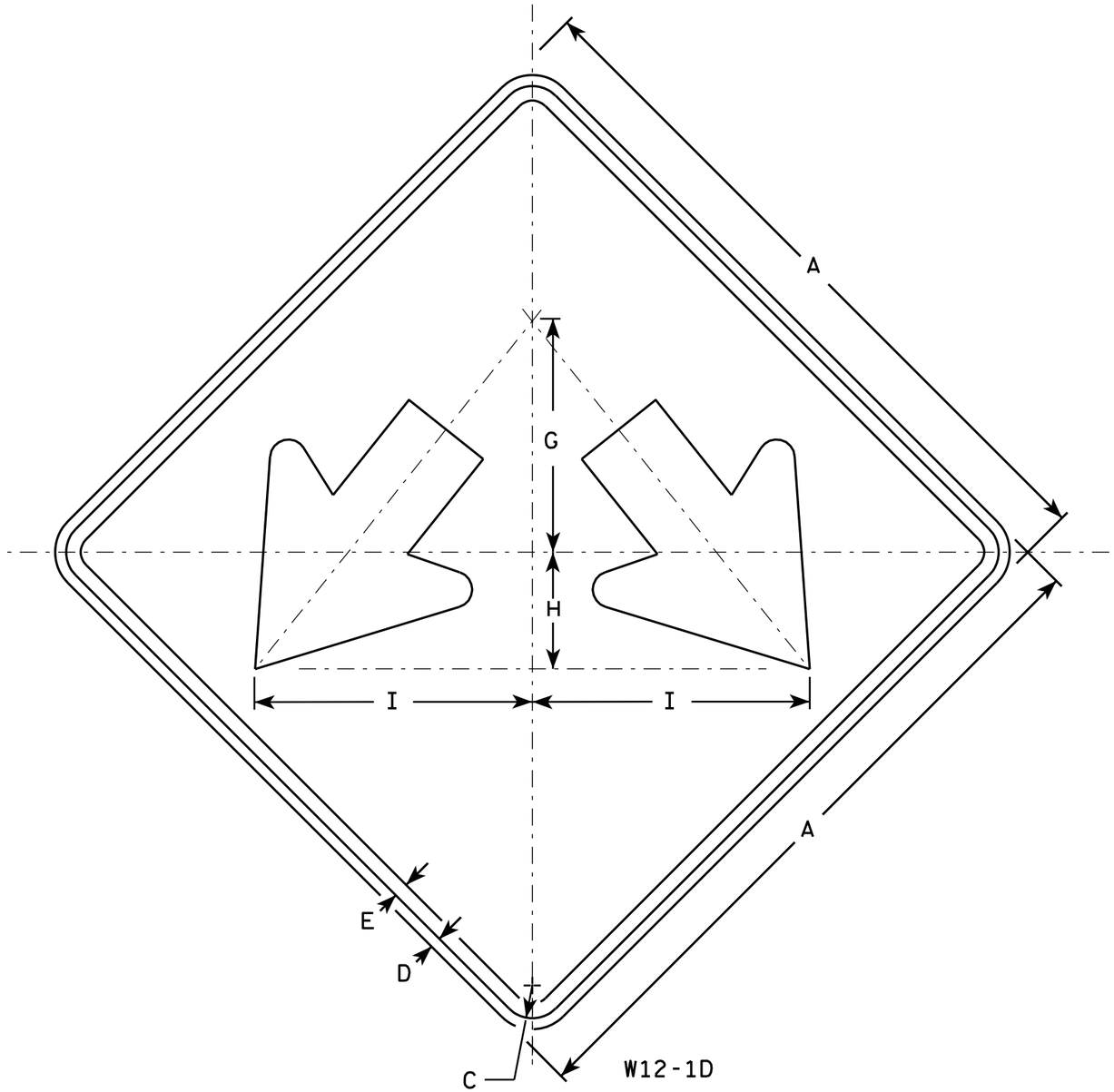
PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 316 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W118.DGN PLOT DATE : 13-MAR-2013 12:58 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

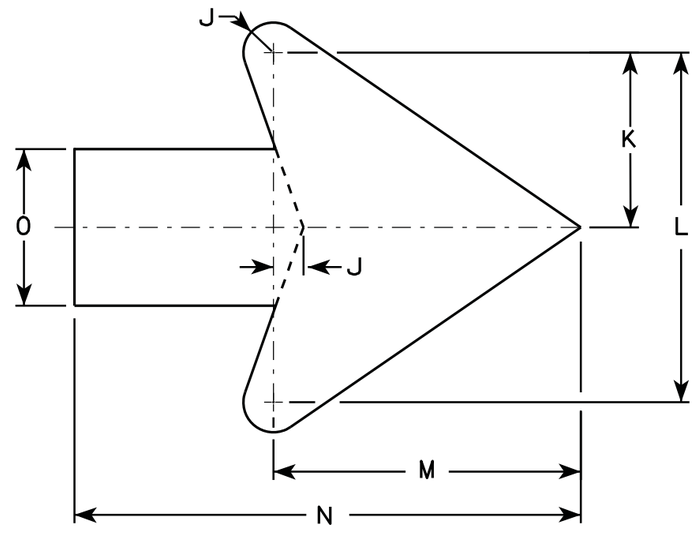
7

7



NOTES

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



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	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

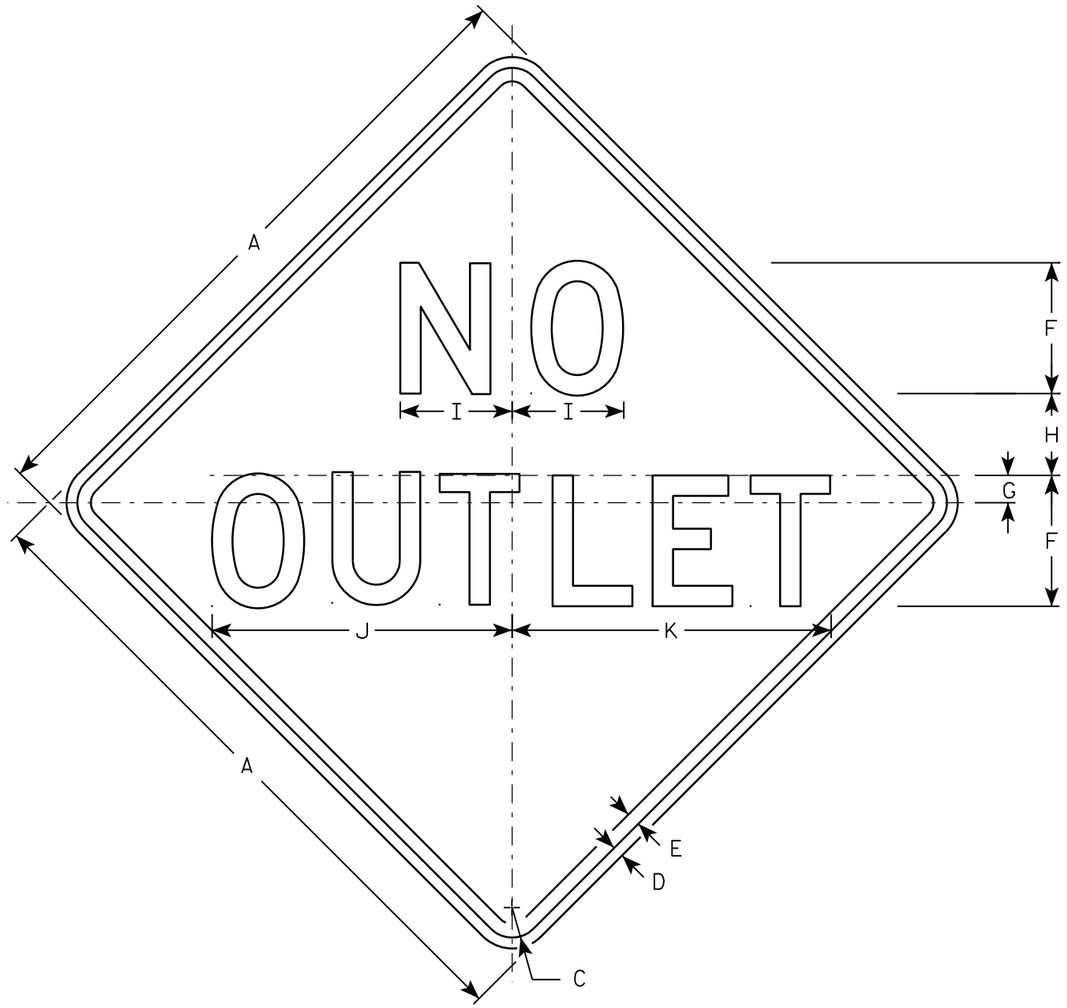
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO: 317	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W121D.DGN PLOT DATE : 13-MAR-2013 13:26 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.713802:1.000000

WISDOT/CADDS SHEET 42

7

7



W14-2

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Message - BLACK
3. 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.

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		1 1/8	3/8	1/2	5	1	2 3/4	4 1/8	11 3/4	12 3/8																4.0
2S	30		1 3/8	1/2	5/8	6	1 1/4	3 3/4	5 1/8	13 3/4	14 5/8																6.25
2M	30		1 3/8	1/2	5/8	6	1 1/4	3 3/4	5 1/8	13 3/4	14 5/8																6.25
3	36		1 5/8	5/8	3/4	7	1 3/8	4 5/8	6	16 1/8	17 1/8																9.0
4																											
5																											

STANDARD SIGN
W14-2

WISCONSIN DEPT OF TRANSPORTATION

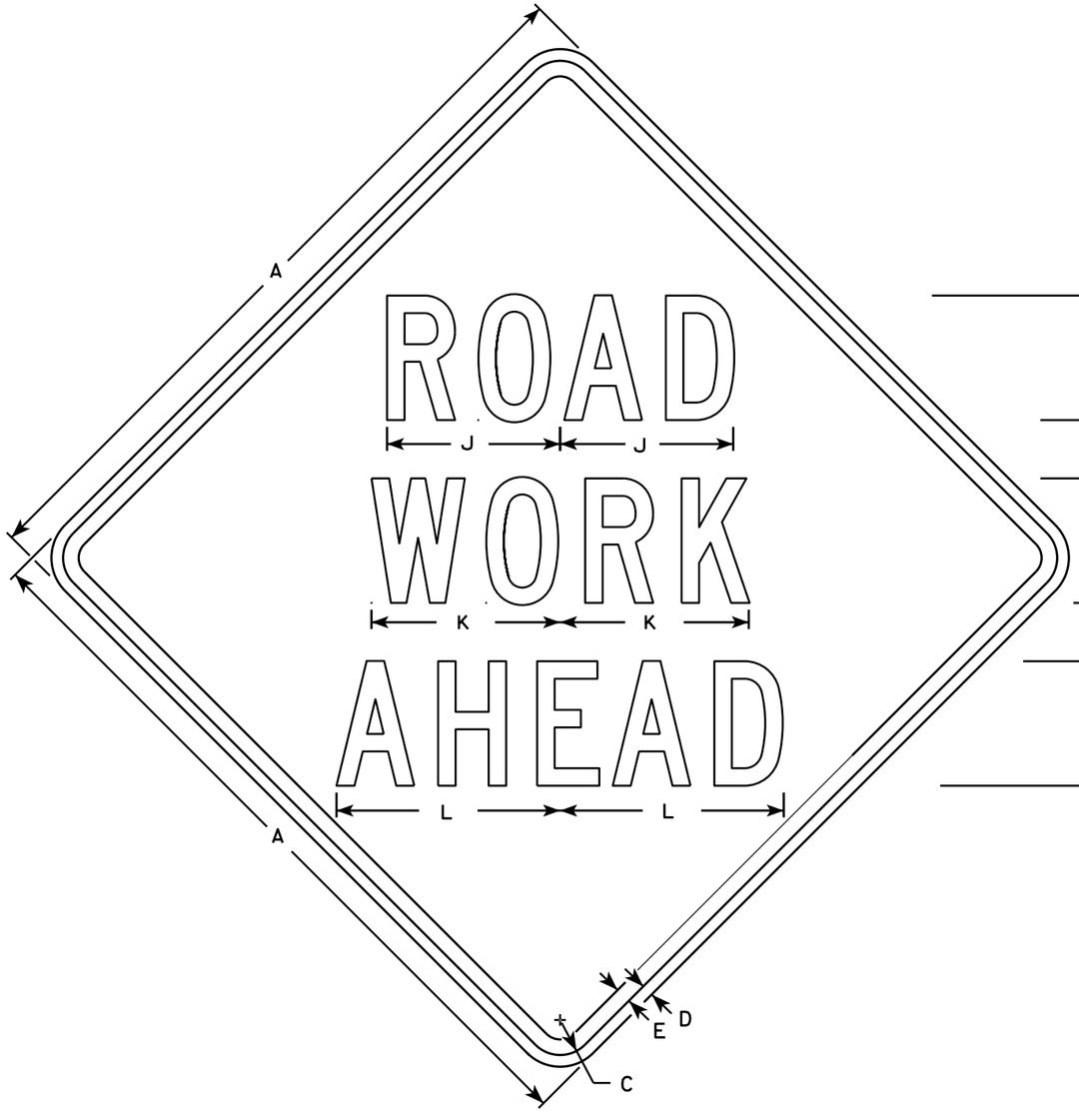
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W14-2.3

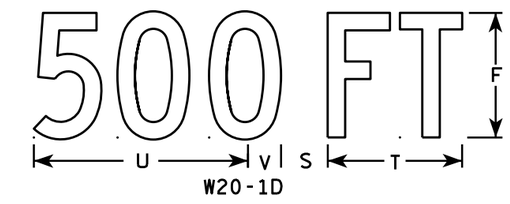
PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 318 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W142.DGN PLOT DATE : 13-MAR-2013 13:30 PLOT BY : mscj9h

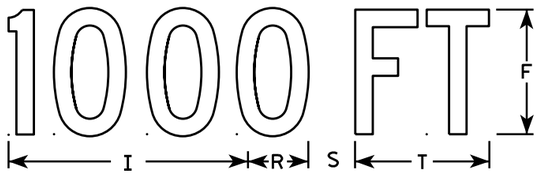
7



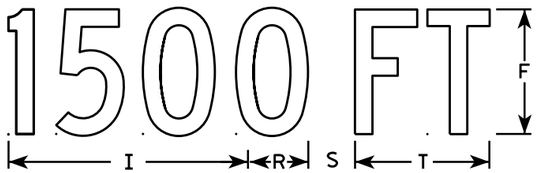
W20-1A



W20-1D



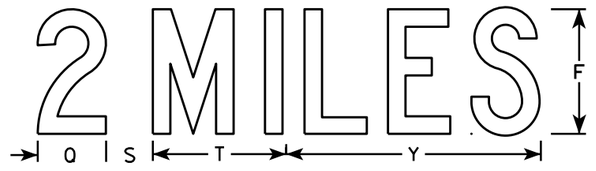
W20-1C



W20-1B

W20-1G

W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
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.

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 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

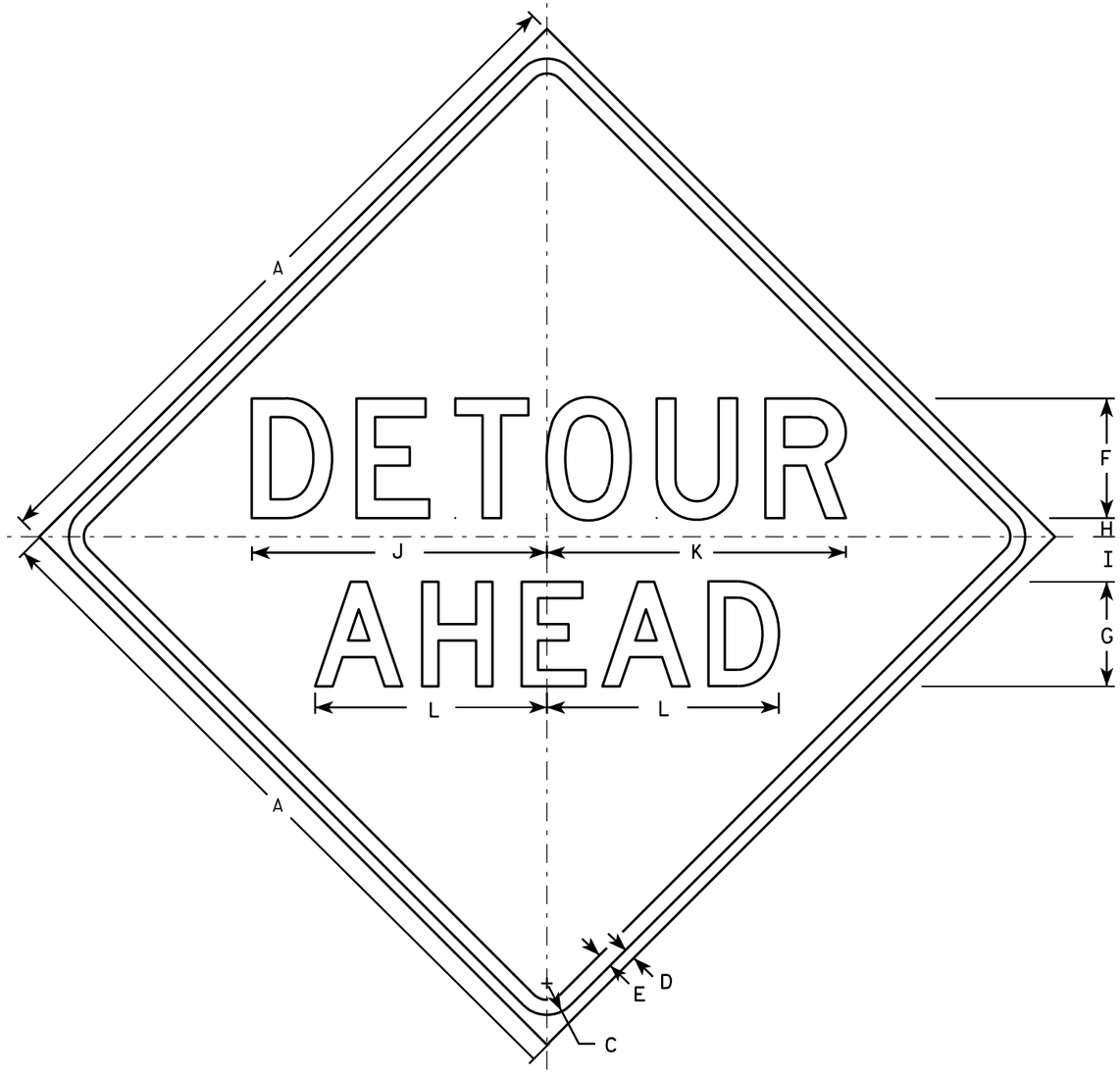
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

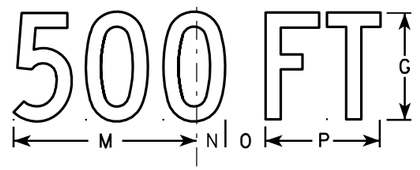
State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

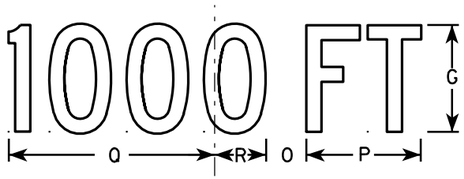
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SIGN PLATES	SHEET NO:	E



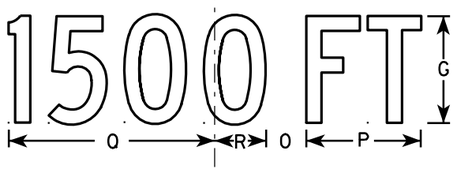
W20-2A



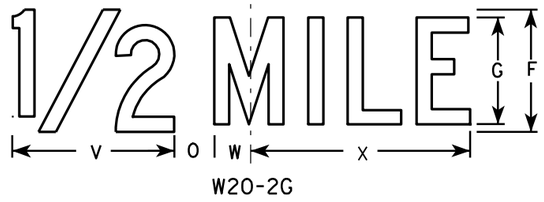
W20-2D



W20-2C



W20-2B



W20-2G

W20-2F

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. Line 1 is Series D.
   Line 2 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	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

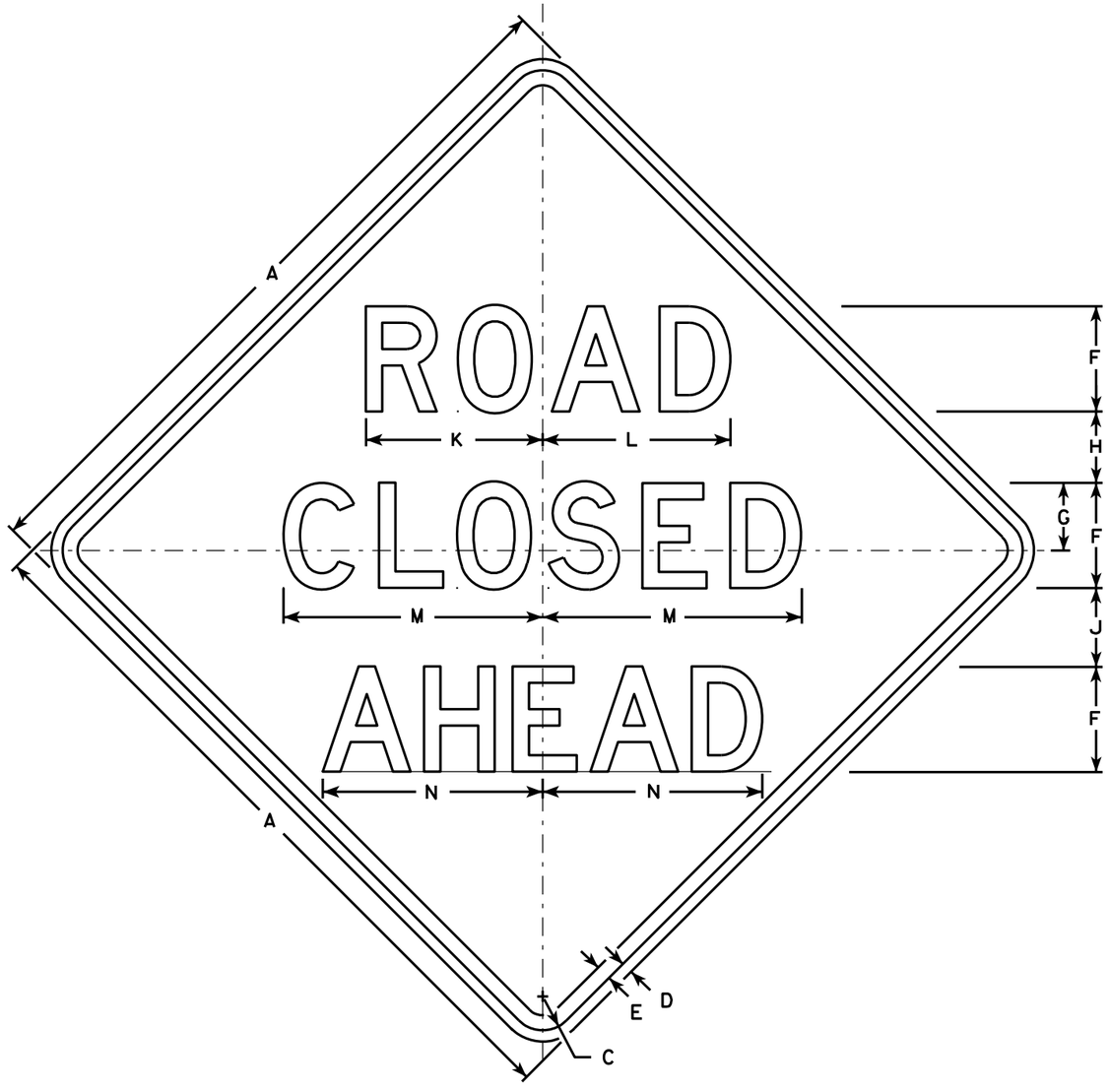
PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 320 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W202.DGN PLOT DATE : 18-MAR-2011 10:00 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000

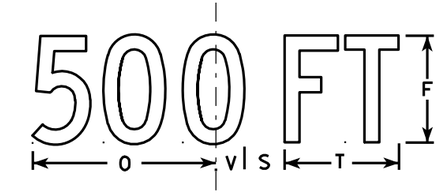
WISDOT/CADDS SHEET 42

7

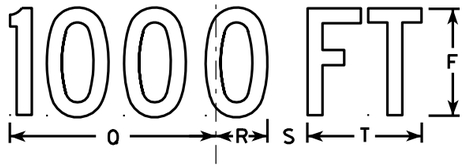
7



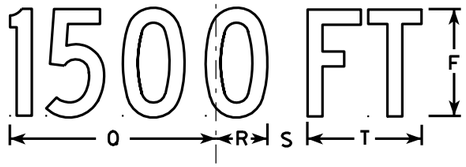
W20-3A



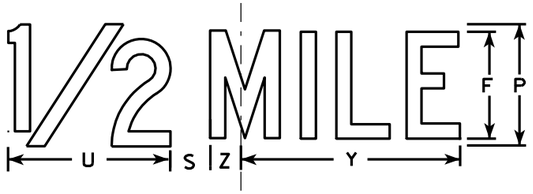
W20-3D



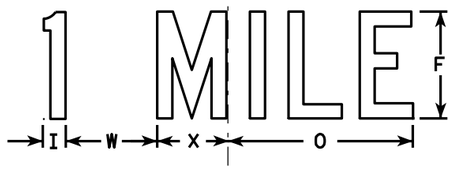
W20-3C



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

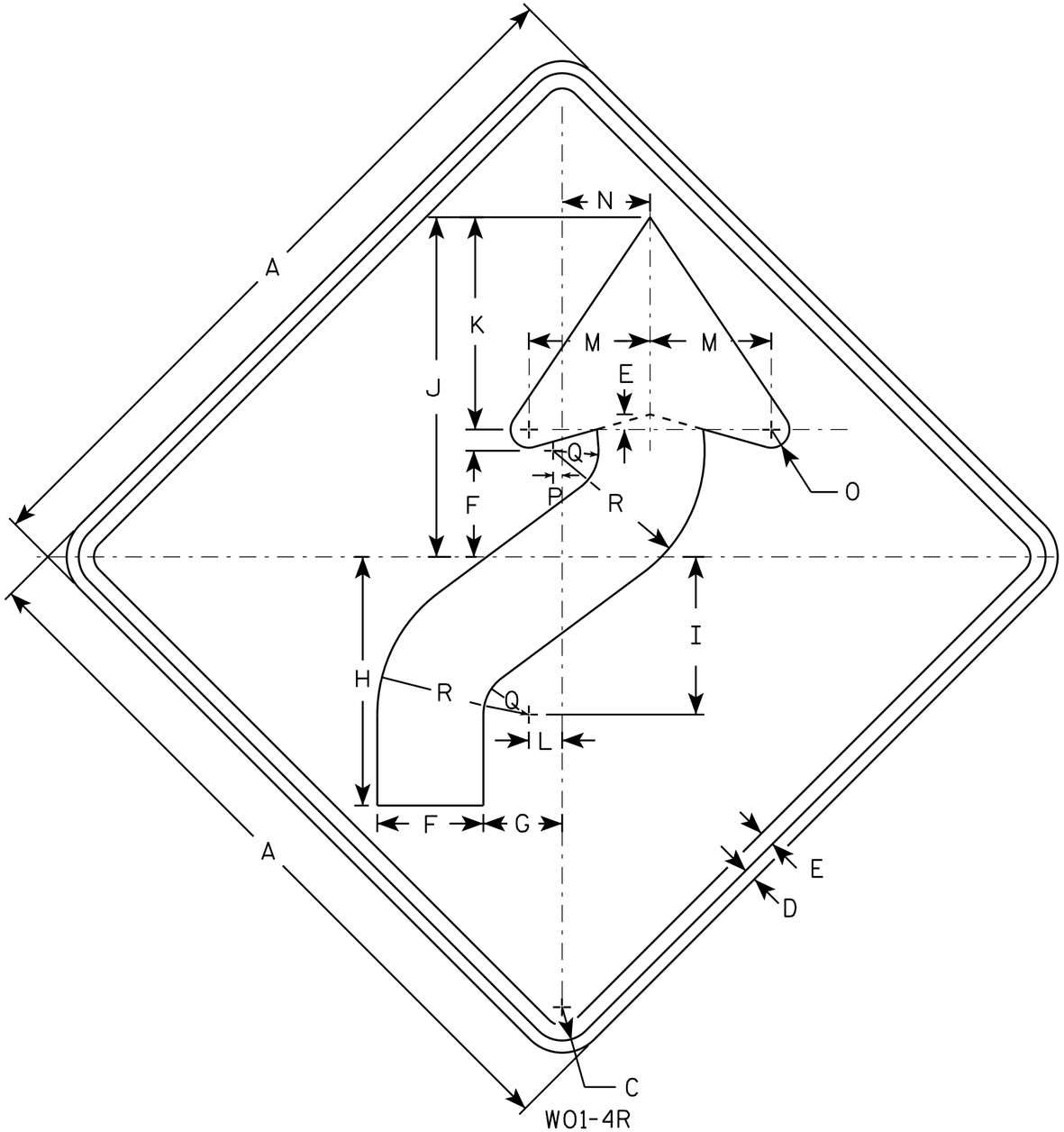
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: 321 | 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



W01-4R

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. 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. W01-4L is the same as W01-4R 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	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

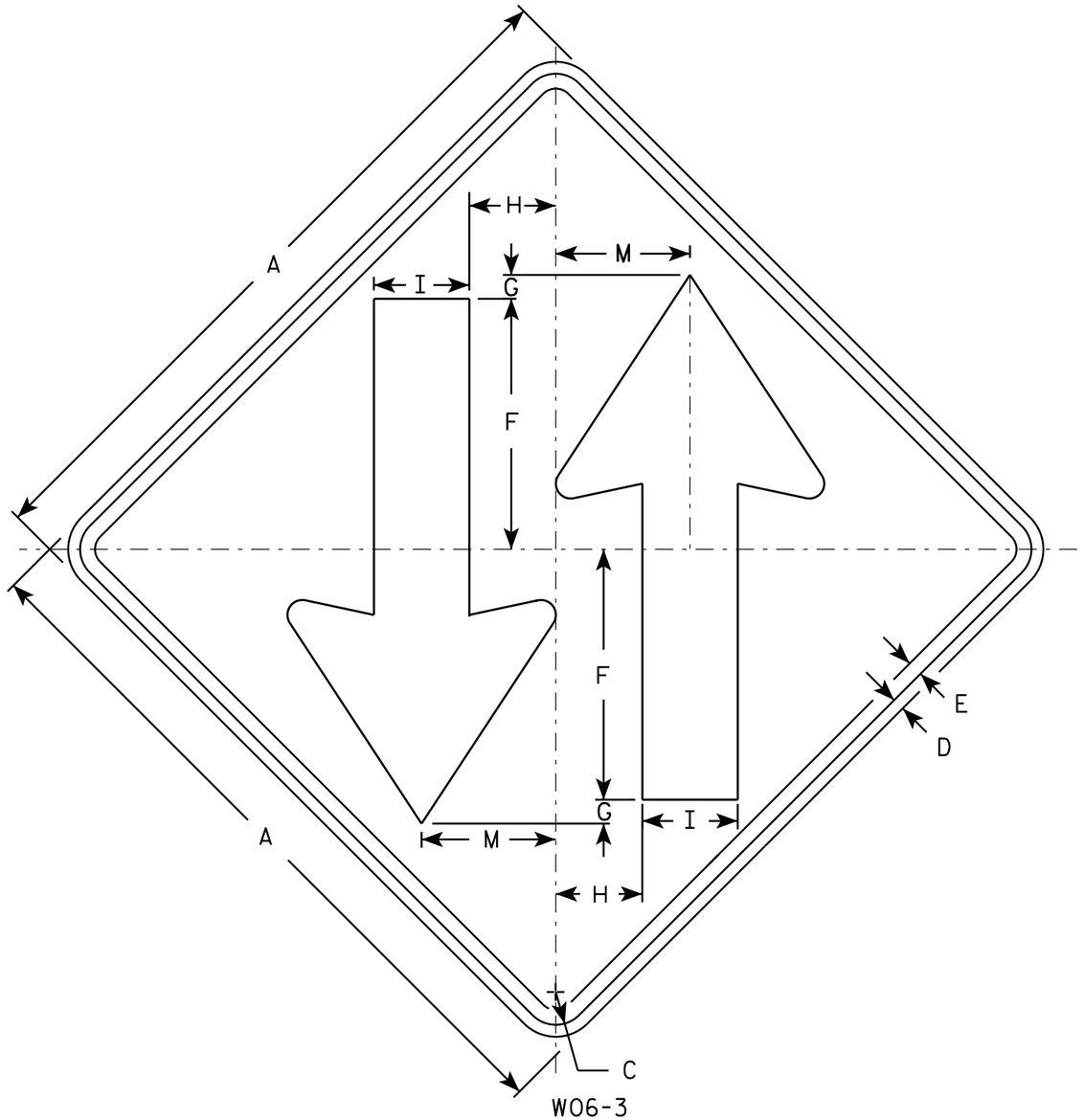
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-4.1

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: E

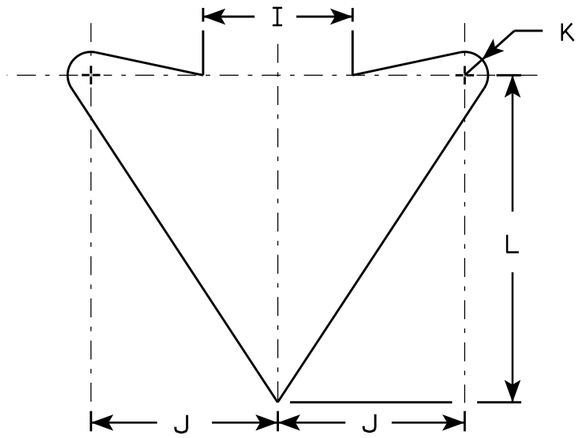
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.755110:1.000000
WISDOT/CADDS SHEET 42



W06-3

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. 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.



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	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
2S	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
2M	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
3	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
4	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
5	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0

STANDARD SIGN
W06-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 323 W06-3.1

PROJECT NO: 2410-00-77 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | SIGN PLATES | SHEET NO: E

NATIONAL AVENUE - STAGE 1

STATION	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.11	Mass Ordinate
19+50.00	0	165	59	2	0	0	0	0	0	0
20+00.00	50	166	51	0	306	102	2	306	2	203
20+50.00	50	171	51	0	312	94	0	619	2	420
21+00.00	50	175	50	0	320	94	0	939	2	647
21+50.00	50	180	47	0	329	90	0	1268	2	886
21+75.00	25	262	82	0	205	60	0	1472	2	1031
22+00.00	25	369	125	2	292	96	1	1764	3	1226
22+25.00	25	215	74	3	270	92	2	2035	6	1402
22+50.00	25	134	40	2	162	53	2	2196	8	1508
23+00.00	50	132	42	1	246	76	3	2443	11	1675
23+50.00	50	139	42	0	251	78	1	2694	12	1847
24+00.00	50	146	42	0	264	78	0	2957	12	2034
24+50.00	50	151	42	0	275	78	0	3232	12	2231
25+00.00	50	164	44	0	292	80	0	3524	12	2443
25+25.00	25	237	0	0	186	20	0	3710	12	2608
25+50.00	25	186	53	0	196	25	0	3906	12	2779
26+00.00	50	145	42	0	306	88	0	4212	12	2998
26+50.00	50	132	38	0	256	74	0	4469	12	3180
26+90.00	40	125	38	2	190	56	1	4659	14	3313
27+00.00	10	118	39	2	45	14	1	4704	15	3343
27+50.00	50	123	42	0	223	75	2	4927	17	3489
27+75.00	25	119	41	0	112	38	0	5039	17	3562
28+00.00	25	110	40	0	106	38	0	5145	17	3631
28+50.00	50	227	85	0	312	116	0	5457	17	3827
29+00.00	50	105	34	4	307	110	4	5765	21	4020
29+50.00	50	109	40	2	198	69	6	5963	27	4144
30+00.00	50	118	40	1	210	74	3	6173	30	4277
30+50.00	50	148	40	0	246	74	1	6419	31	4448
31+00.00	50	142	42	0	269	76	0	6688	31	4641
31+25.00	25	131	40	1	126	38	0	6814	32	4729
31+50.00	25	180	62	0	144	47	0	6958	32	4825
31+75.00	25	293	0	0	219	29	0	7177	32	5015
32+00.00	25	190	80	4	224	37	2	7401	34	5200
32+25.00	25	127	43	0	147	57	2	7547	36	5287
32+50.00	25	132	42	0	120	39	0	7667	36	5368
33+00.00	50	137	42	0	249	78	0	7916	36	5539
33+50.00	50	126	42	0	244	78	0	8160	36	5705
33+75.00	25	133	42	0	120	39	0	8280	36	5786
34+00.00	25	130	42	0	122	39	0	8402	36	5869
34+50.00	50	176	44	0	283	80	0	8685	36	6072
34+75.00	25	271	94	0	207	64	0	8892	36	6216
35+00.00	25	301	117	0	265	98	0	9157	36	6383
35+38.00	38	139	42	2	310	112	1	9466	38	6579
35+50.00	12	131	41	1	60	18	1	9526	39	6620
36+00.00	50	137	42	3	248	77	4	9774	43	6787
36+50.00	50	139	42	0	256	78	3	10030	46	6962
36+88.00	38	138	42	0	195	59	0	10225	46	7097
37+00.00	12	134	42	0	60	19	0	10285	46	7139
37+50.00	50	133	42	0	247	78	0	10533	46	7309
38+00.00	50	74	22	0	192	59	0	10724	46	7441
					10724	3237	41			

9

9

ALL CATEGORY 0010

PROJECT NO: 2410-00-77	HWY: WEST NATIONAL AVENUE	COUNTY: MILWAUKEE	EARTHWORK DATA	SHEET: 324 E

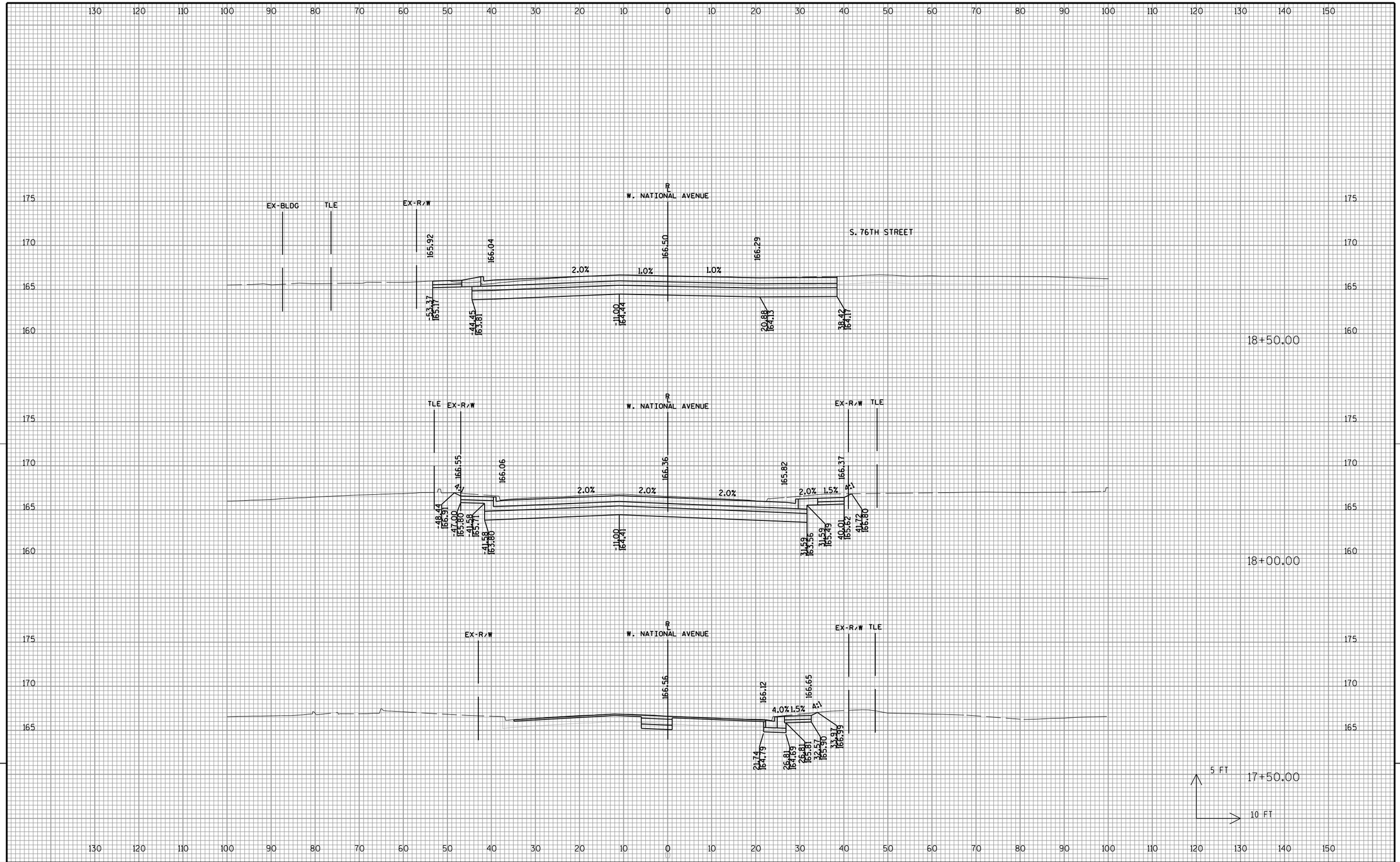
FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

NATIONAL AVENUE - STAGE 2 / 3

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.11	
17+50.00		34	18	0	0	0	0	0	0	0
18+00.00	50	190	55	0	207	68	0	207	0	140
18+50.00	50	181	72	0	344	118	0	551	0	366
19+00.00	50	167	61	0	322	123	0	873	0	565
19+50.00	50	165	59	2	307	111	2	1181	2	759
					1181	419	2			

S. 76TH STREET - STAGE 2 / 3

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.11	
08+05.00		26	8	0	0	0	0	0	0	0
08+25.00	20	26	8	0	19	6	0	19	0	13
08+50.00	25	26	8	0	24	7	0	43	0	30
08+65.00	15	116	28	0	39	10	0	83	0	59
08+75.00	10	116	28	0	43	10	0	126	0	92
09+00.00	25	128	28	0	113	26	0	239	0	179
09+25.00	25	133	29	0	121	26	0	360	0	274
09+50.00	25	133	29	0	123	27	0	483	0	370
10+50.00	0	186	32	0	0	0	0	483	0	370
10+75.00	25	126	37	10	144	6	5	627	5	503
11+00.00	25	124	32	0	116	6	5	743	10	608
11+20.00	20	124	32	0	92	6	0	835	10	694
					835	131	9			

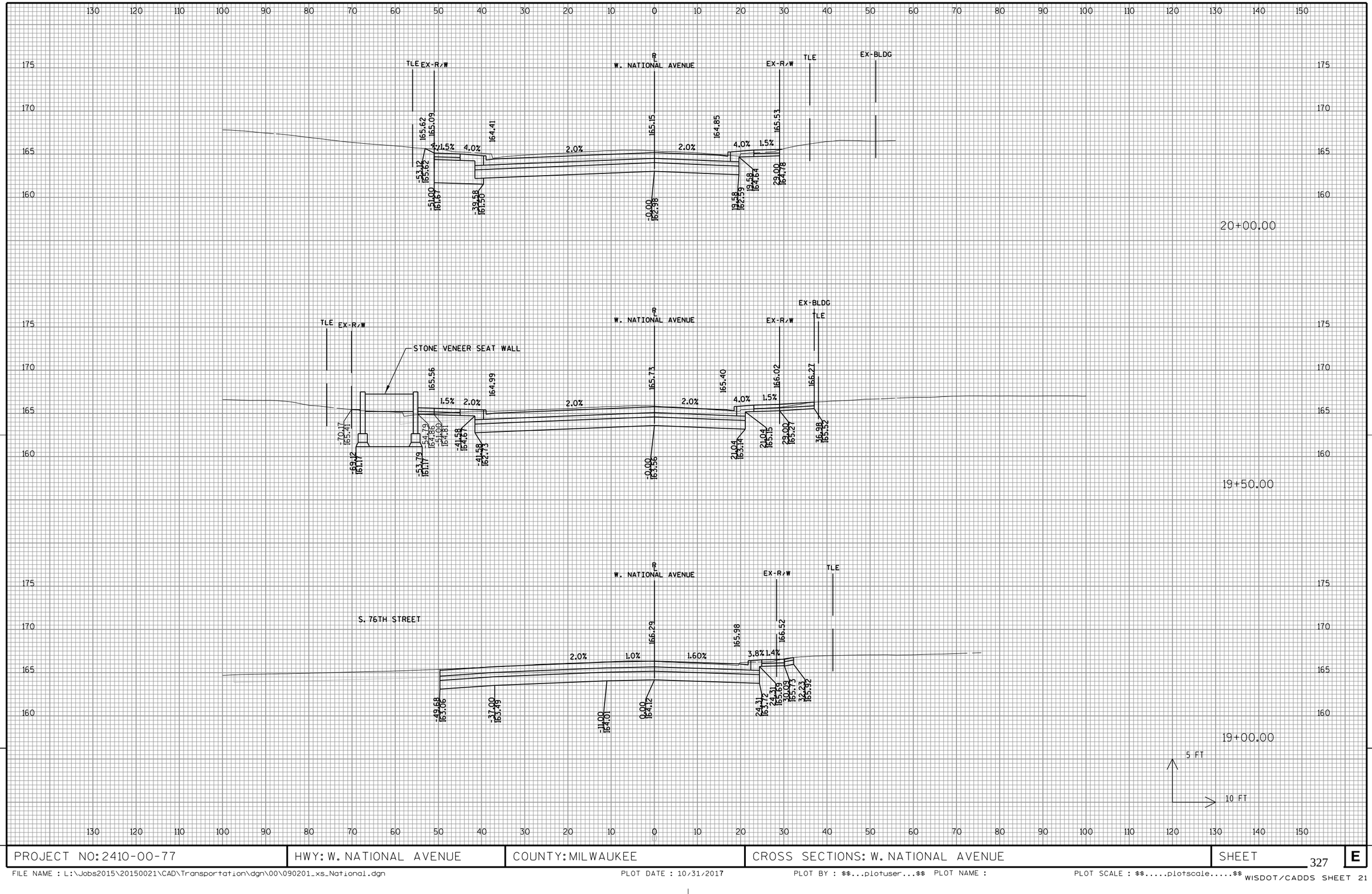


9

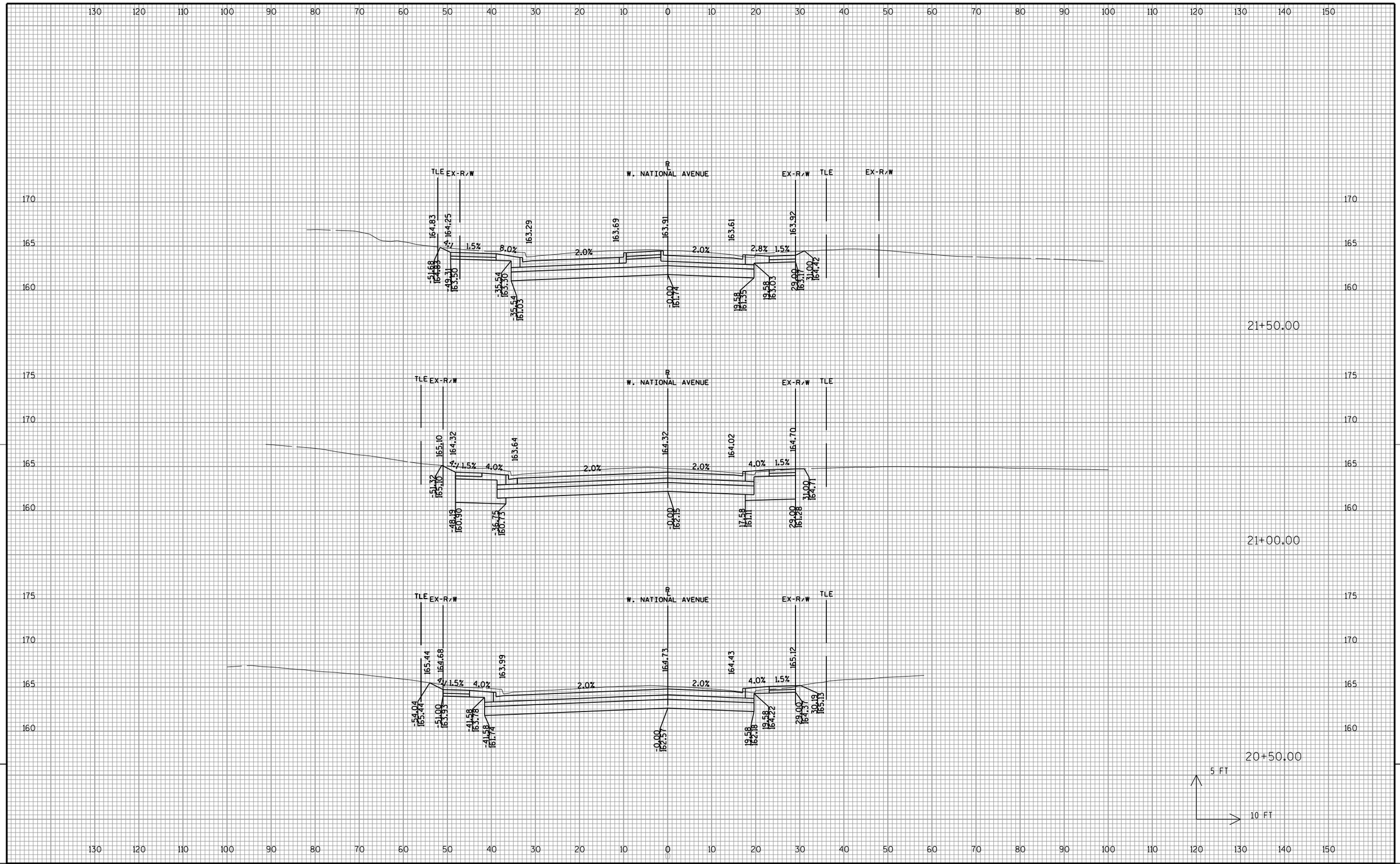
9

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 326	E

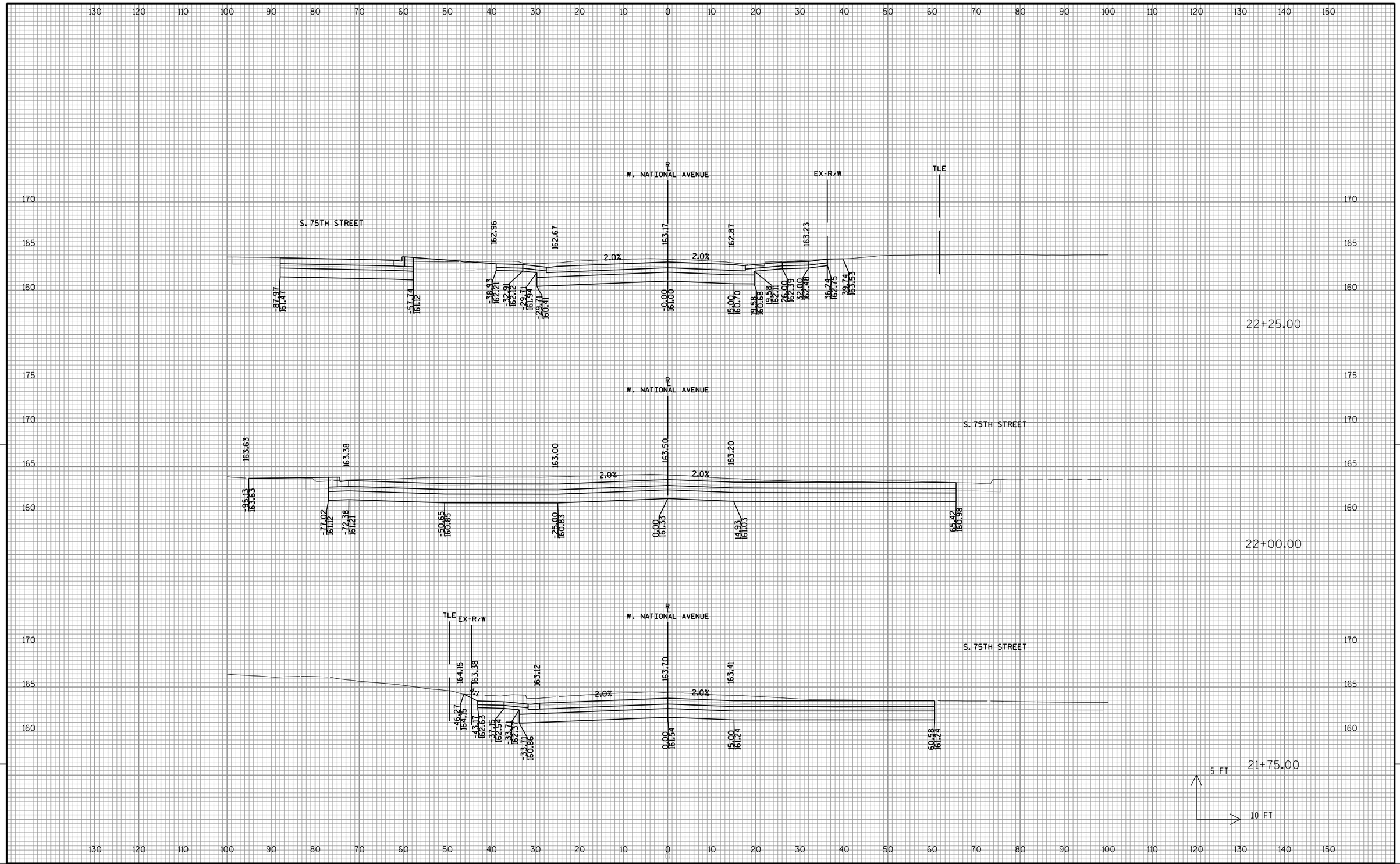
FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090201_xs_National.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



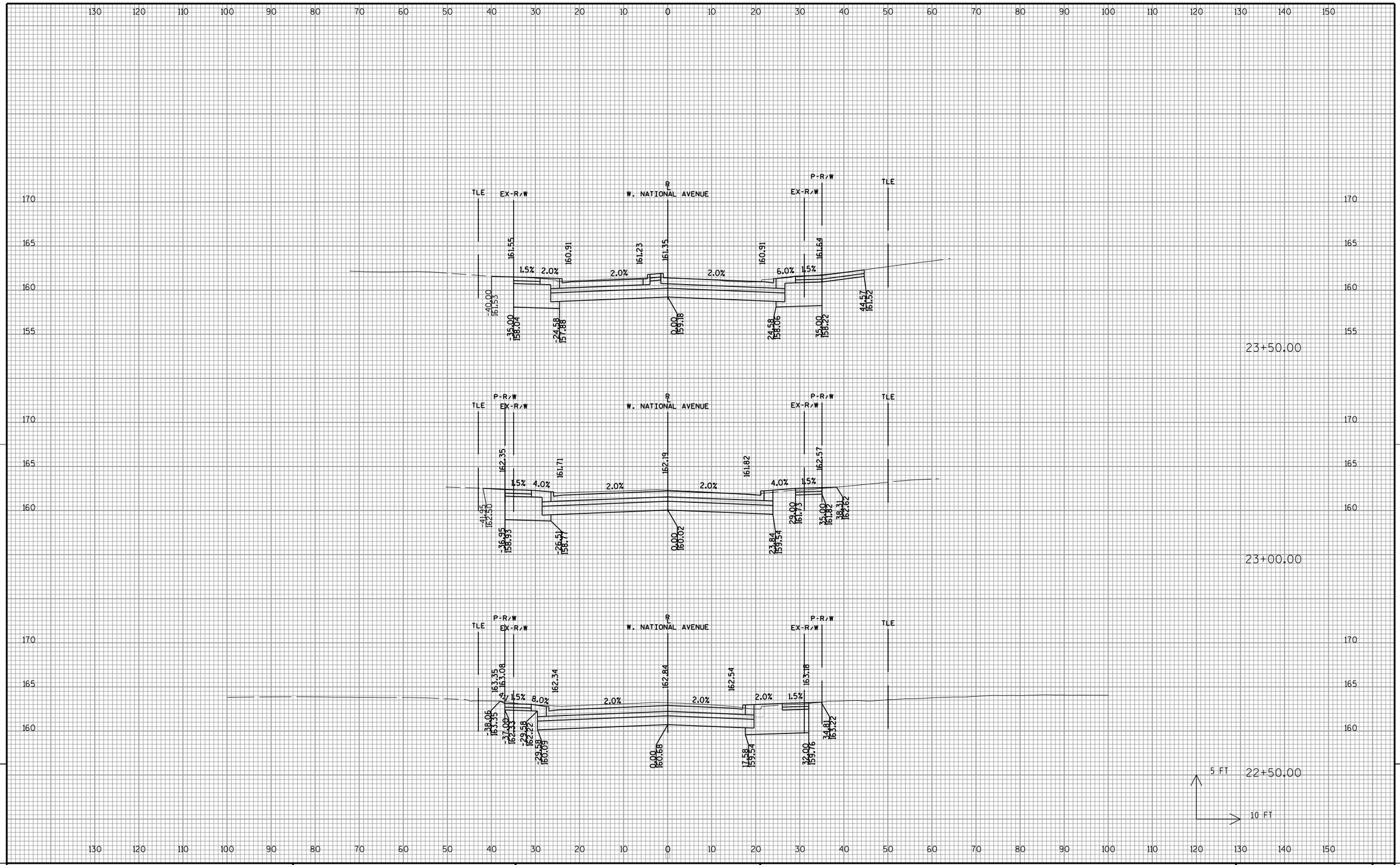
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 327	E



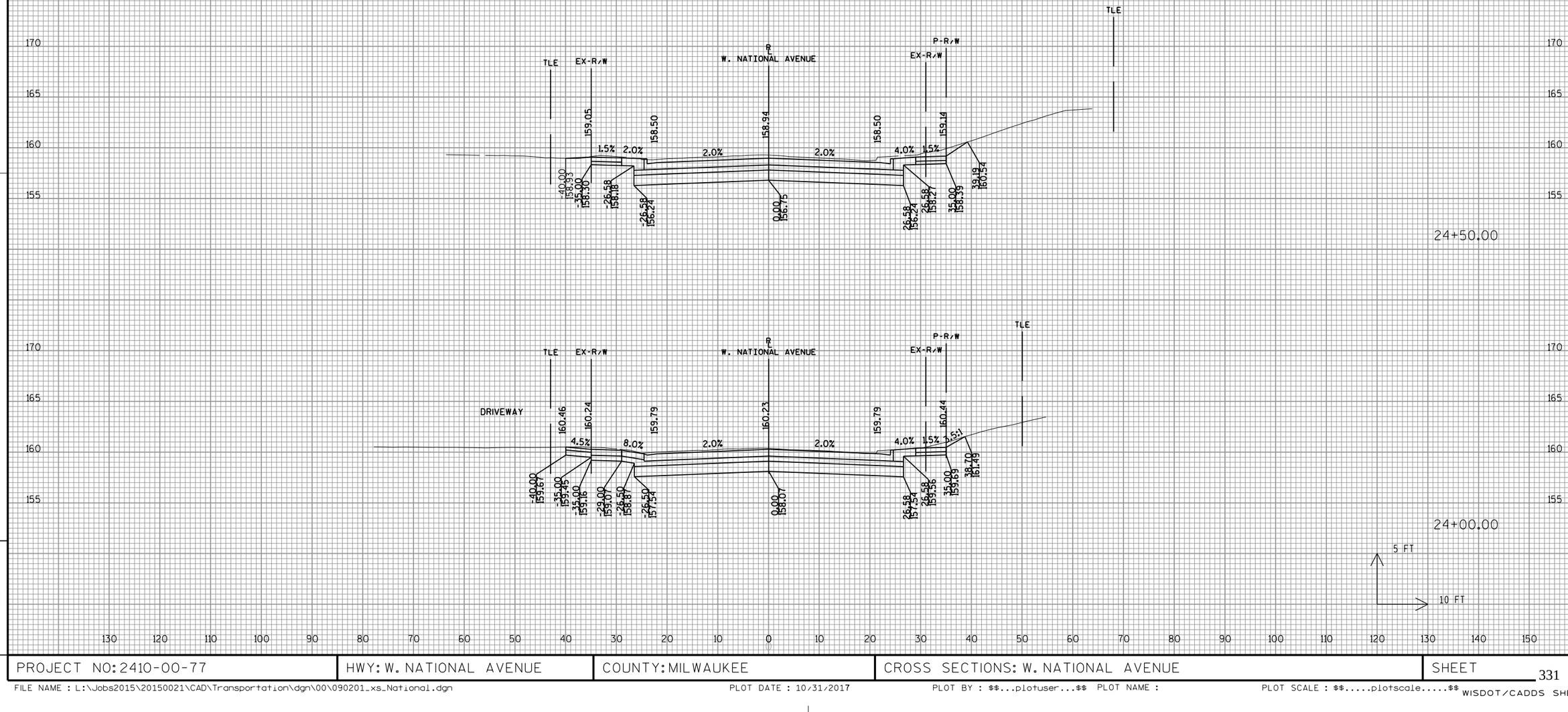
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 328	E



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 329	E

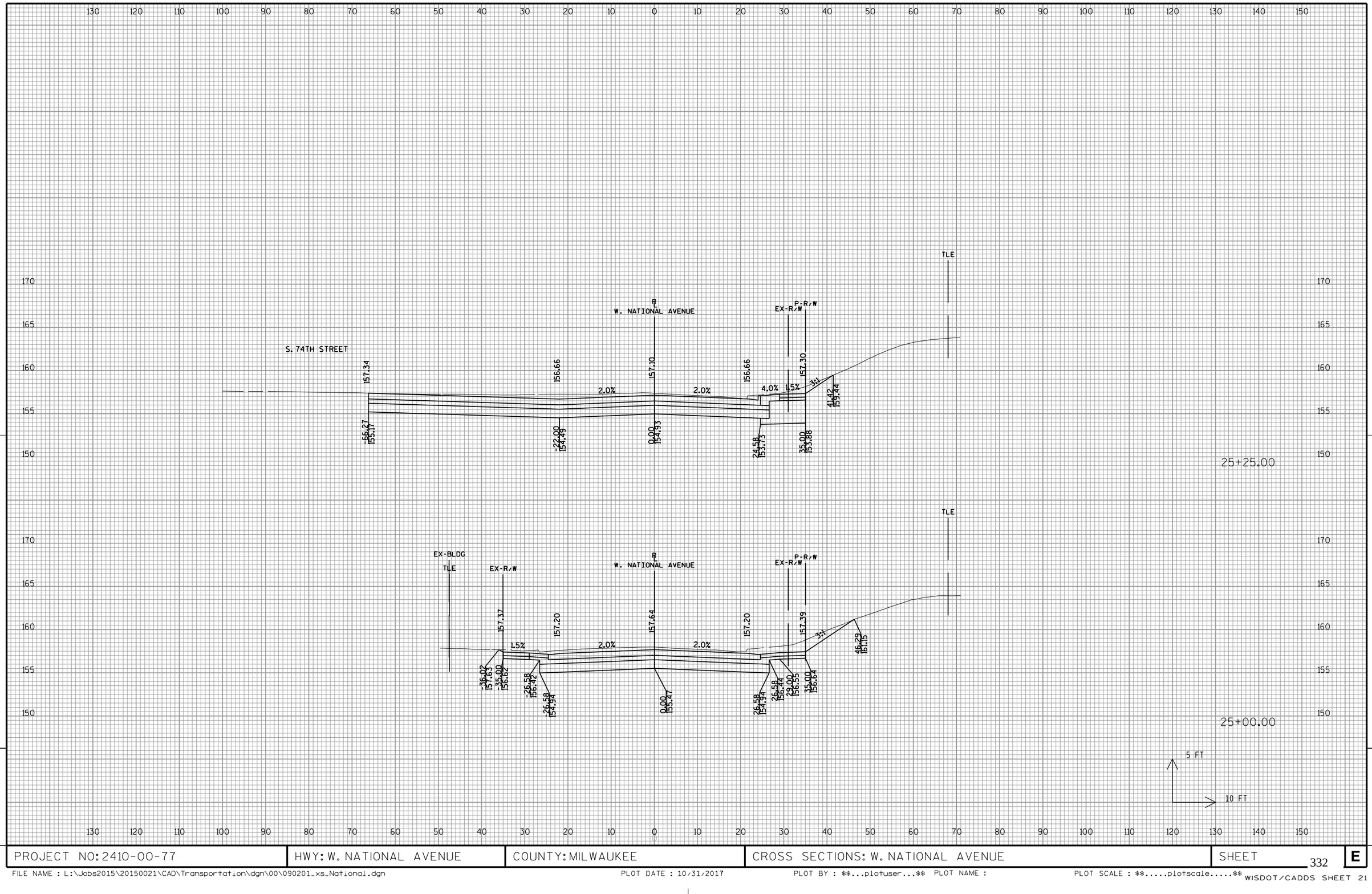


PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 330	E



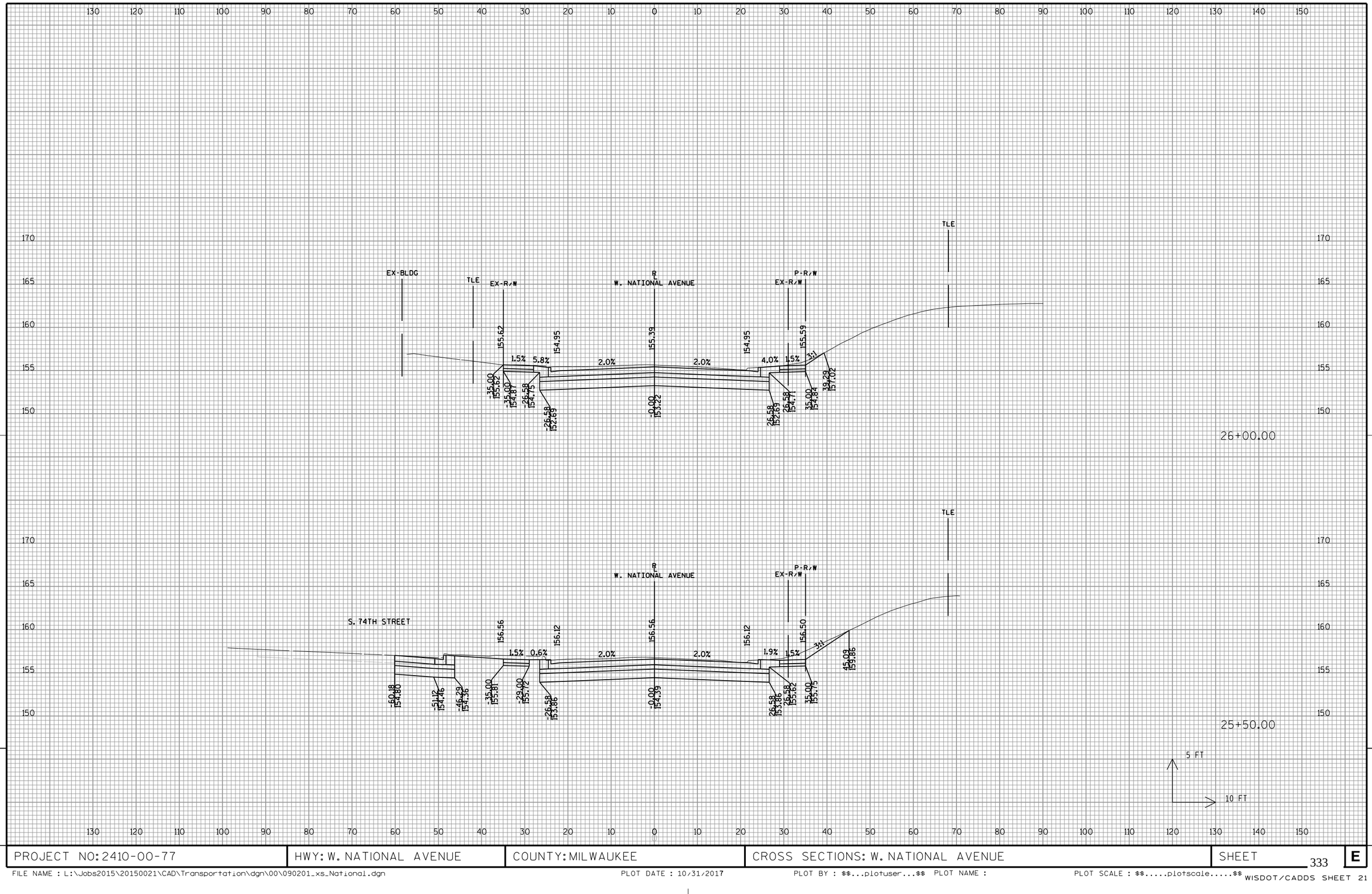
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 331	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090201_xs_National.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 332	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090201_xs_National.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$



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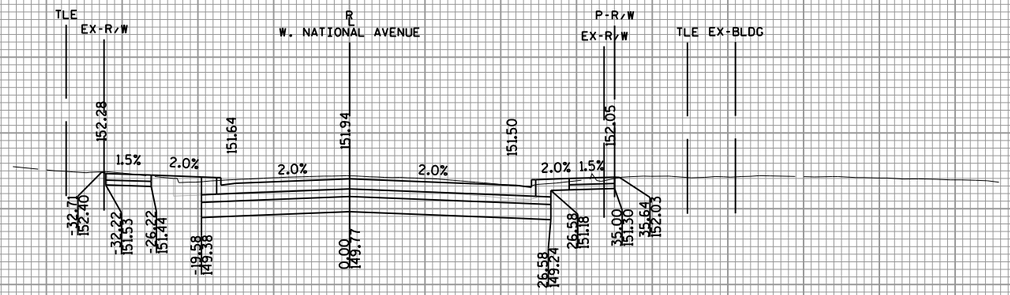
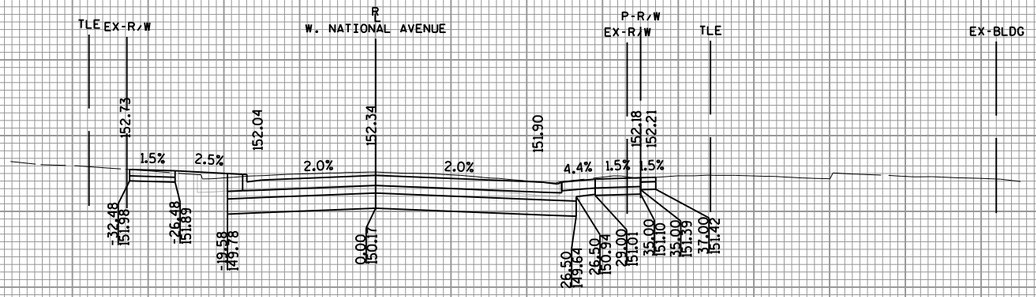
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 333	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090201_xs_National.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

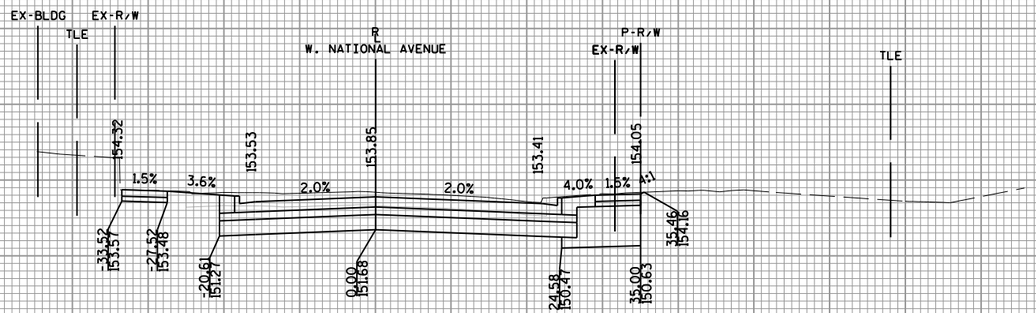
WISDOT/CADDS SHEET 21



27+00.00



26+90.00



26+50.00

5 FT

10 FT

9

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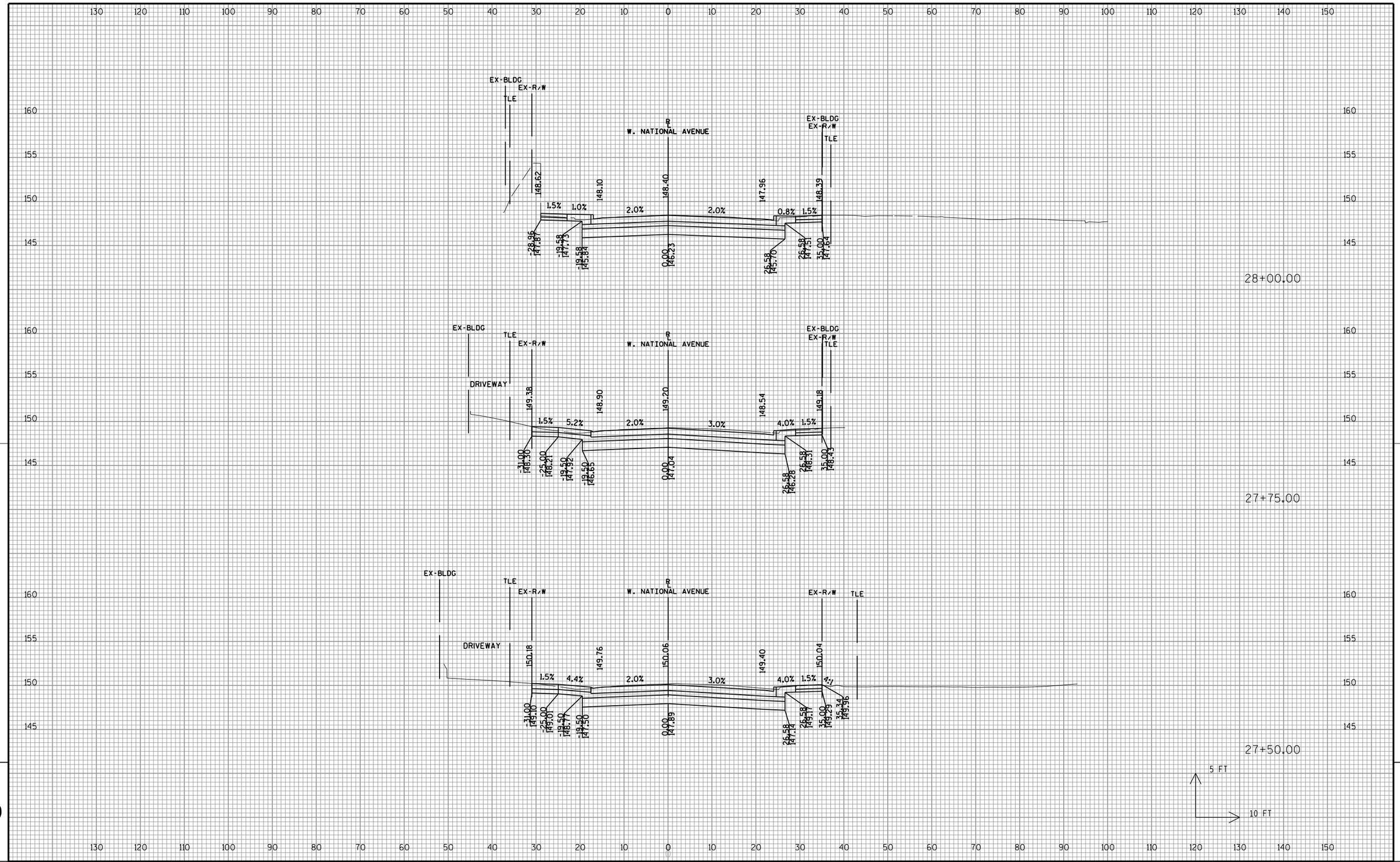
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 334	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090201_xs_National.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



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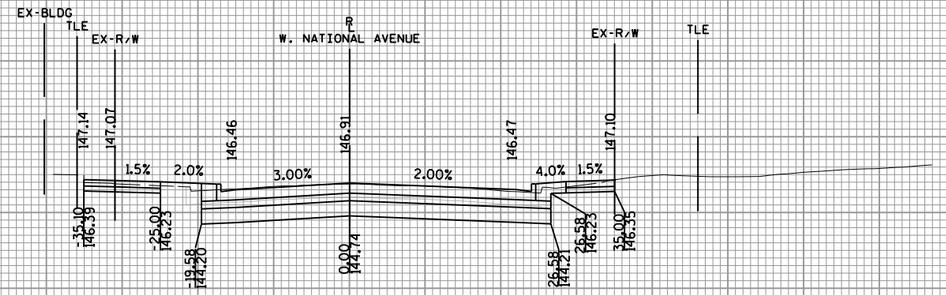
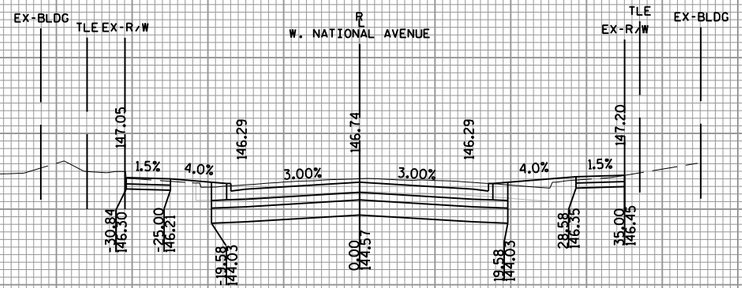
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 335	E

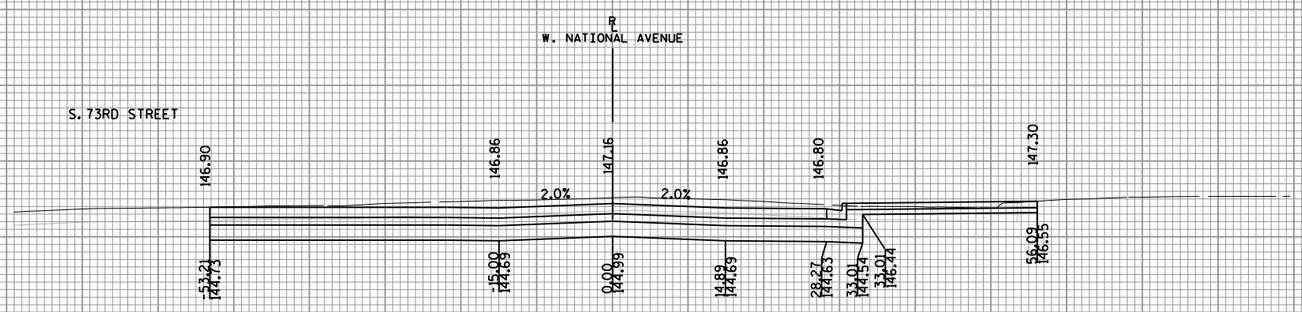
FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090201_xs_National.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



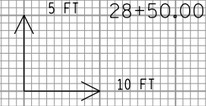
29+50.00



29+00.00

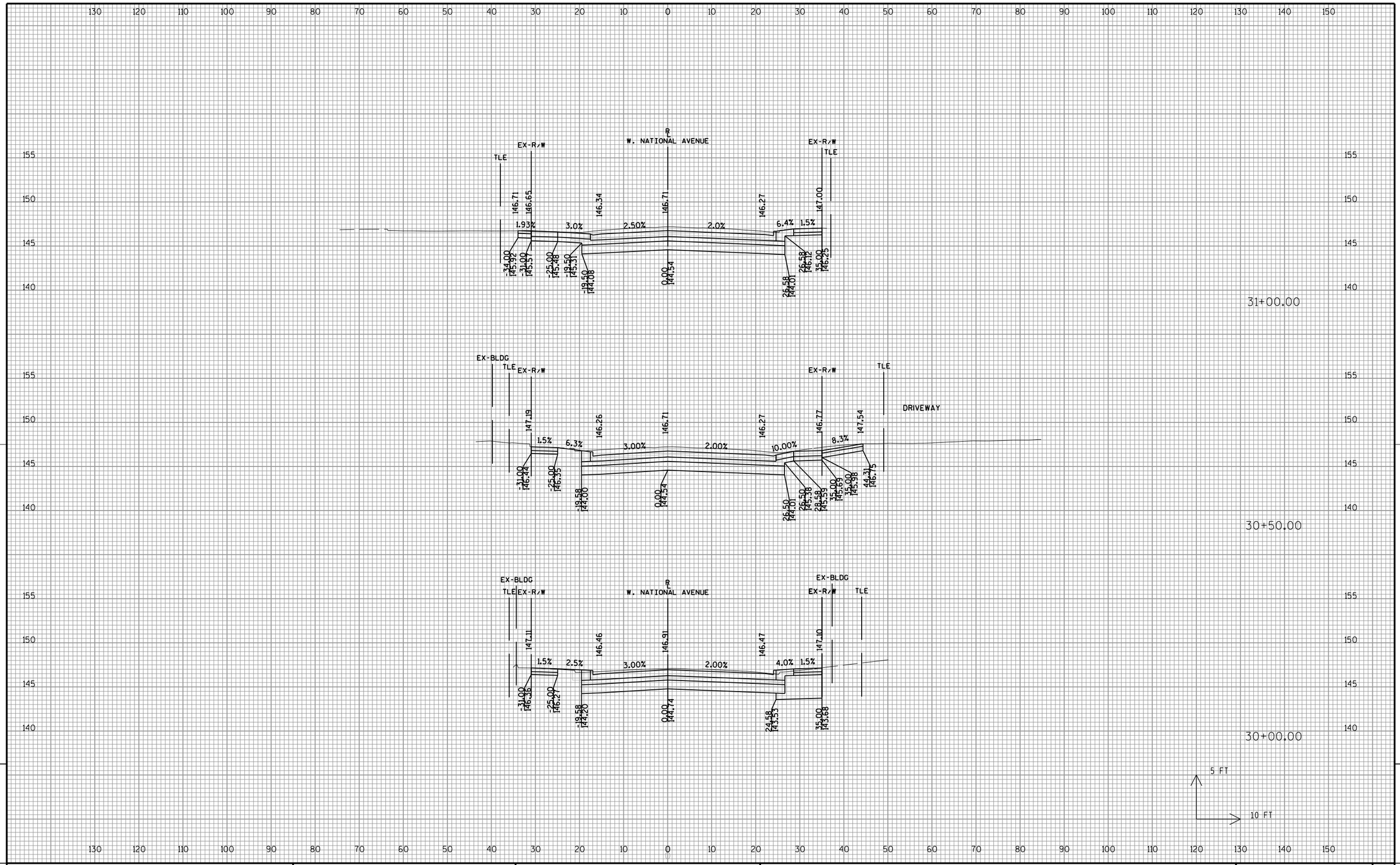


28+50.00



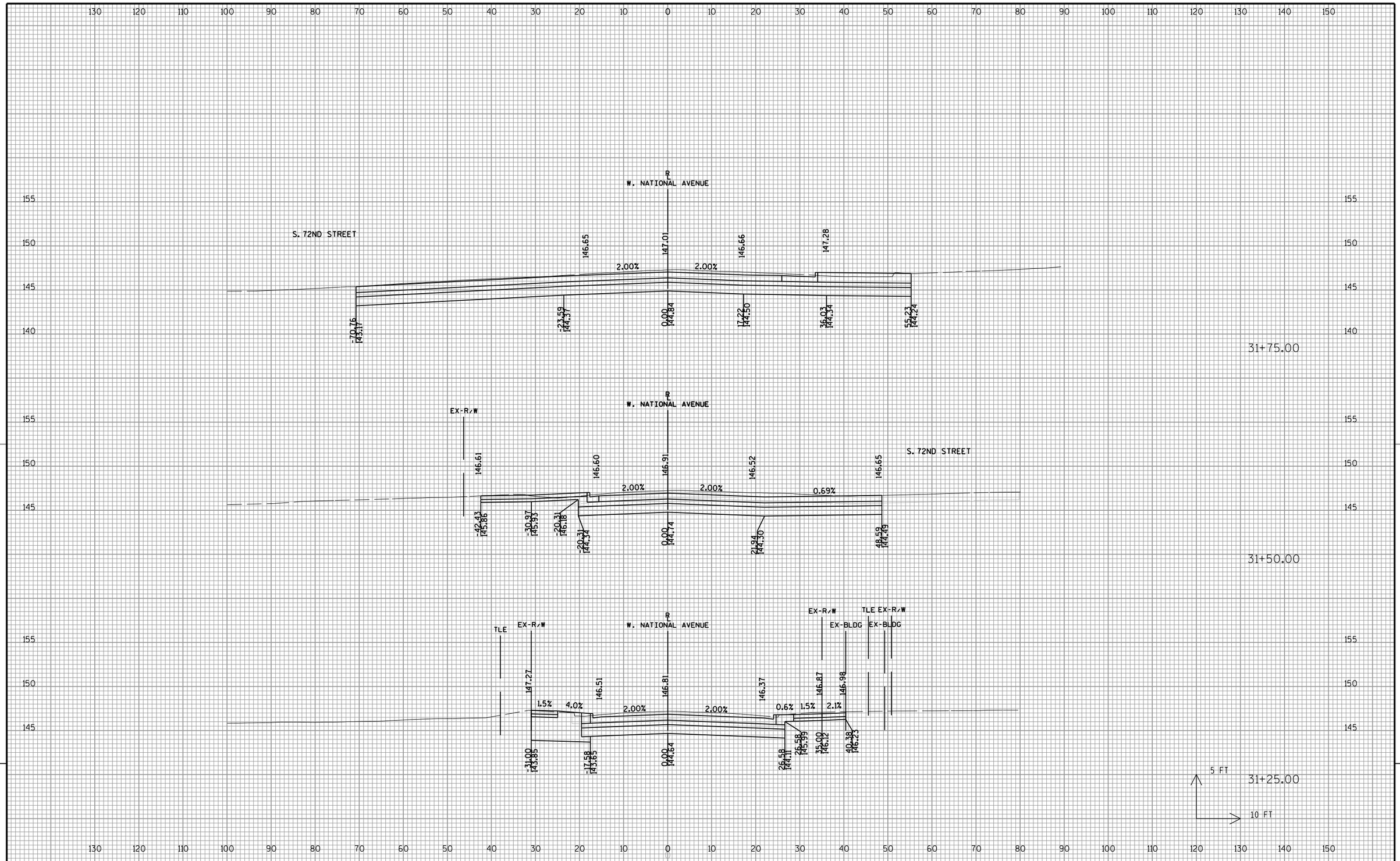
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 336	E

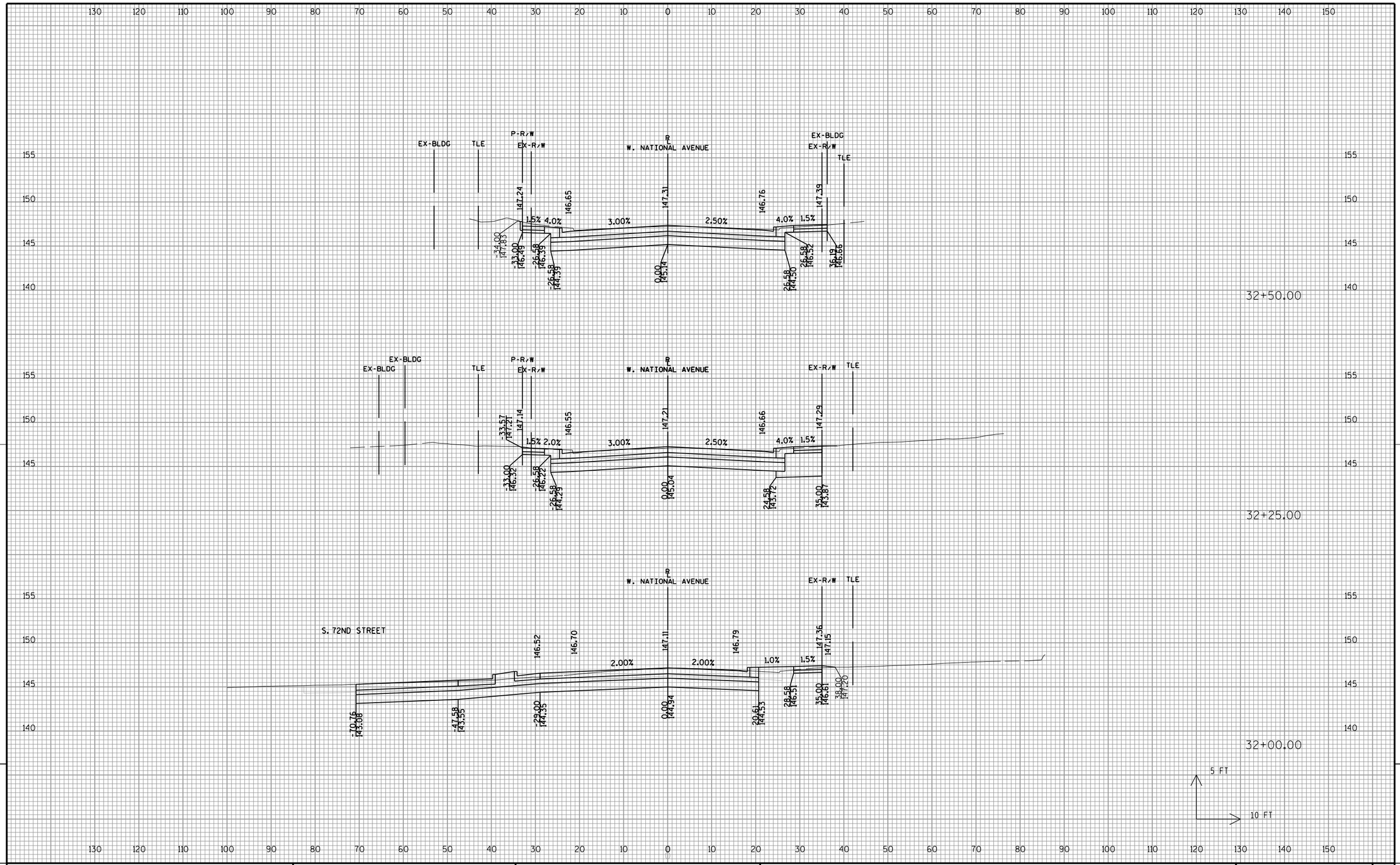
FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090201_xs_National.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



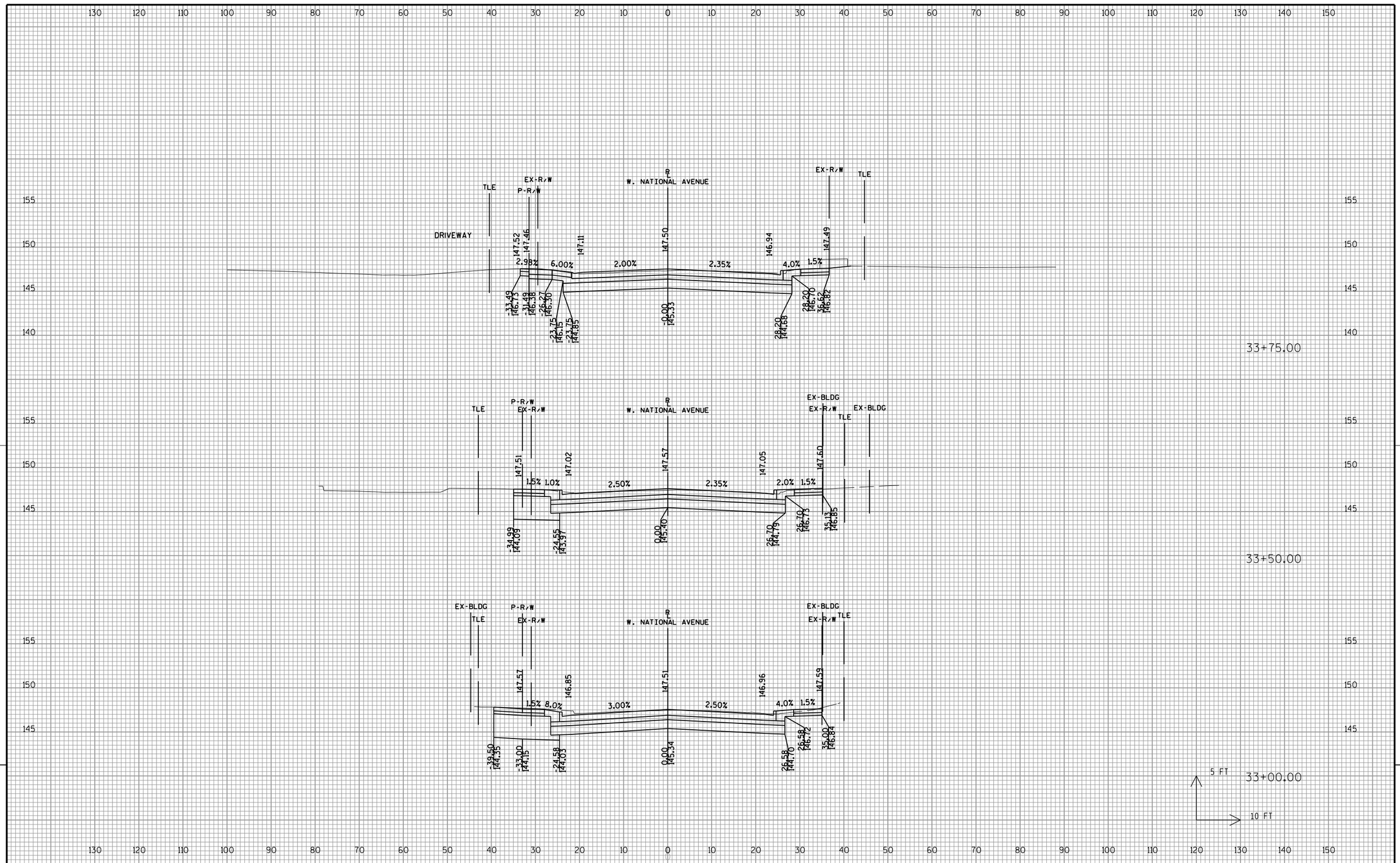
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 337	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090201_xs_National.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21


130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
155
150
145
140
℄
W. NATIONAL AVENUE
S. 72ND STREET
146.65
147.01
146.66
147.28
2.00%
2.00%
-70.76
143.17
-23.59
144.37
0.00
144.84
17.22
144.50
36.03
144.34
55.23
144.24
31+75.00
EX-R/W
S. 72ND STREET
146.61
146.60
146.91
146.52
146.65
2.00%
2.00%
0.69%
-42.43
145.86
-30.97
145.93
-20.31
146.18
20.21
144.34
0.00
144.74
21.34
144.30
48.59
144.29
31+50.00
TLE
EX-R/W
EX-R/W
TLE EX-R/W
EX-BLDG
EX-BLDG
147.27
146.51
146.81
146.37
146.87
146.98
1.5%
4.0%
2.00%
2.00%
0.6%
1.5%
2.1%
-31.00
143.85
-17.58
143.65
0.00
144.64
26.58
144.11
26.58
145.99
35.00
146.12
40.38
146.23
5 FT
10 FT
31+25.00
PROJECT NO: 2410-00-77
HWY: W. NATIONAL AVENUE
COUNTY: MILWAUKEE
CROSS SECTIONS: W. NATIONAL AVENUE
SHEET 338
E
FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090201_xs_National.dgn
PLOT DATE : 10/31/2017
PLOT BY : $$...plotuser...$$ PLOT NAME :
PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 339	E



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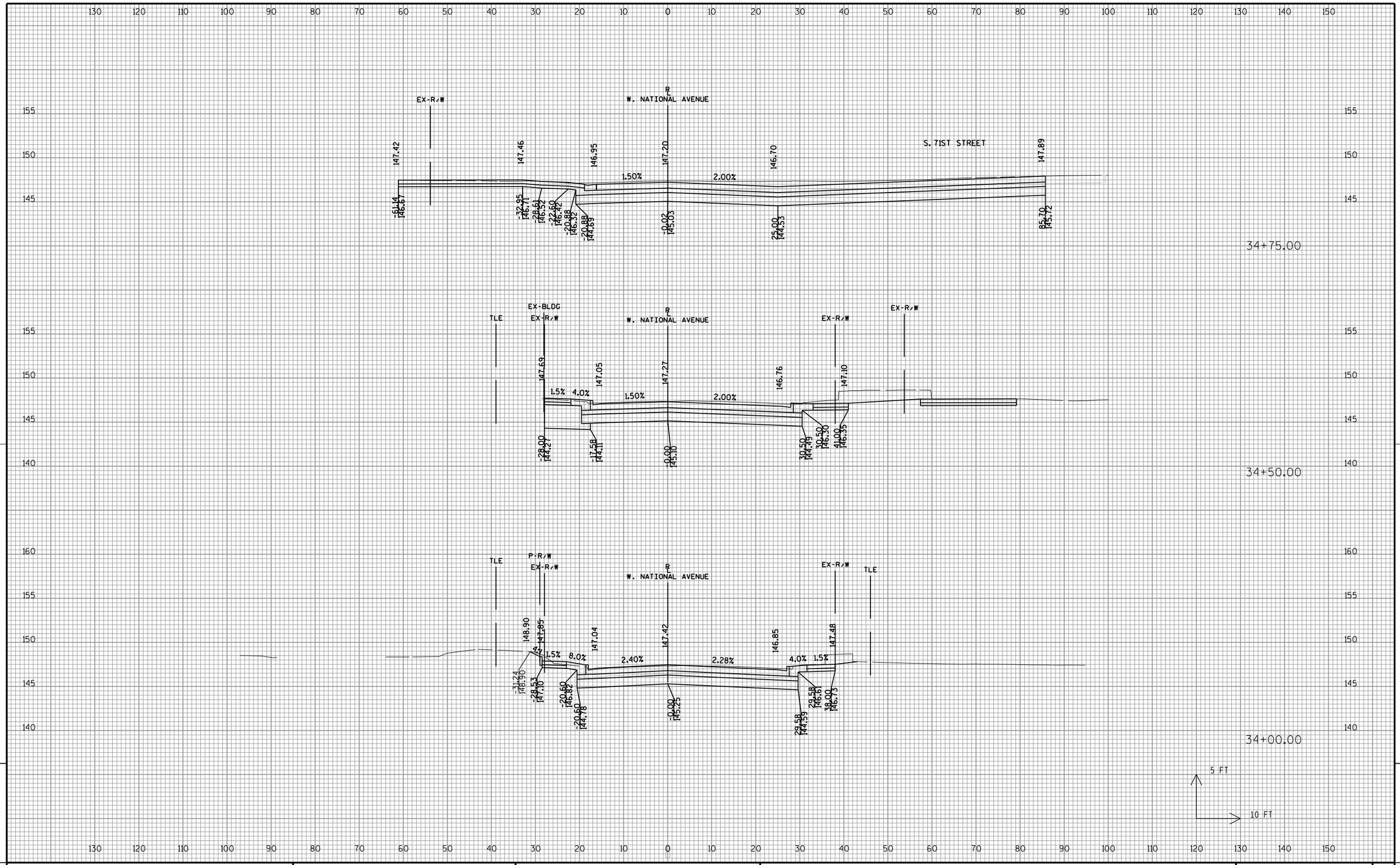
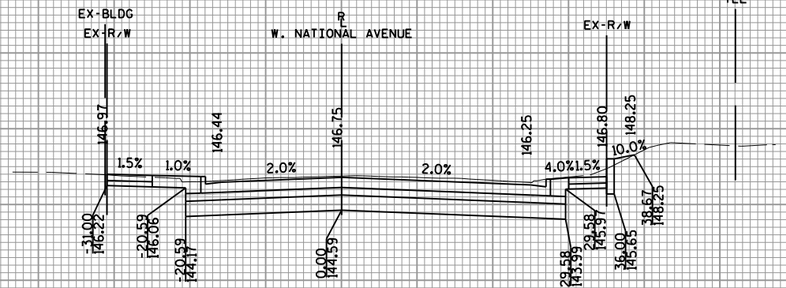
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 340	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090201_xs_National.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21

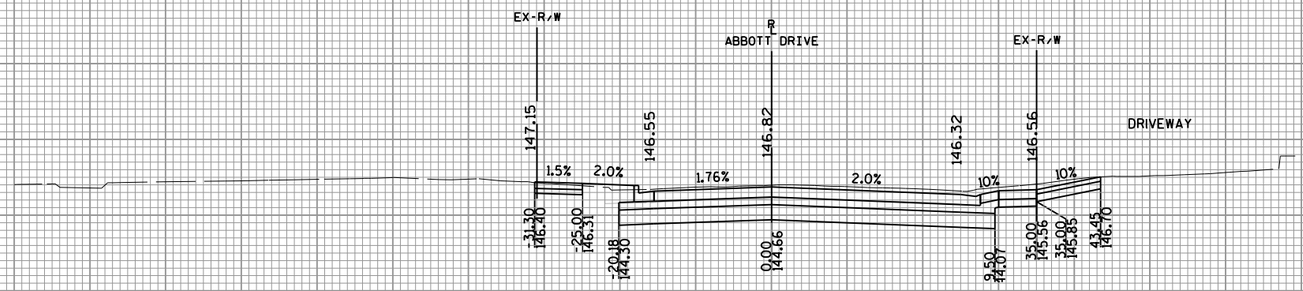


PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 341	E

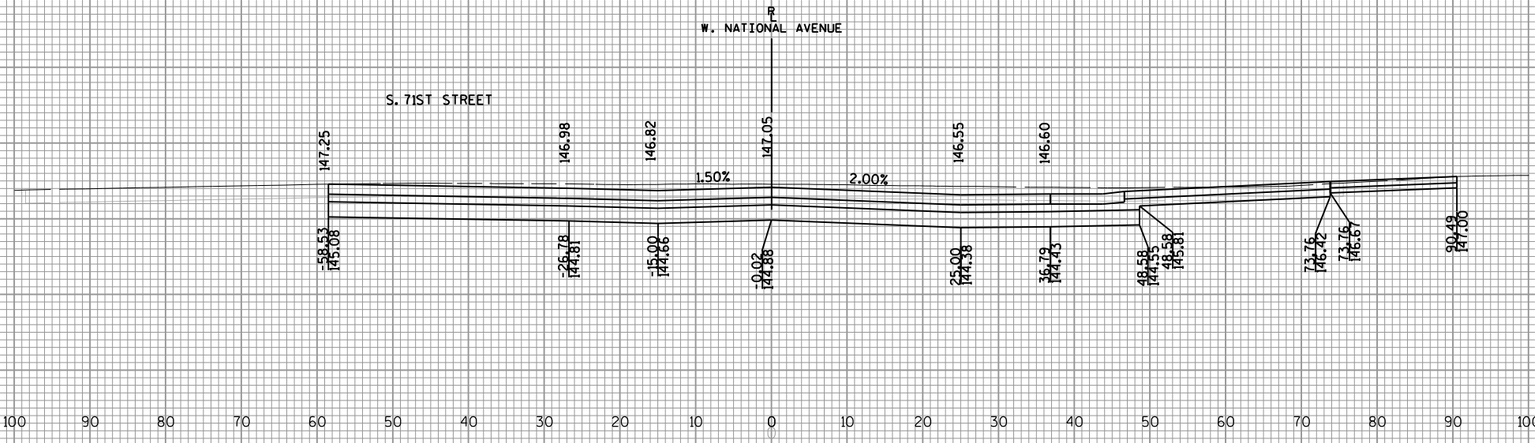
FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090201_xs_National.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



35+50.00



35+38.00



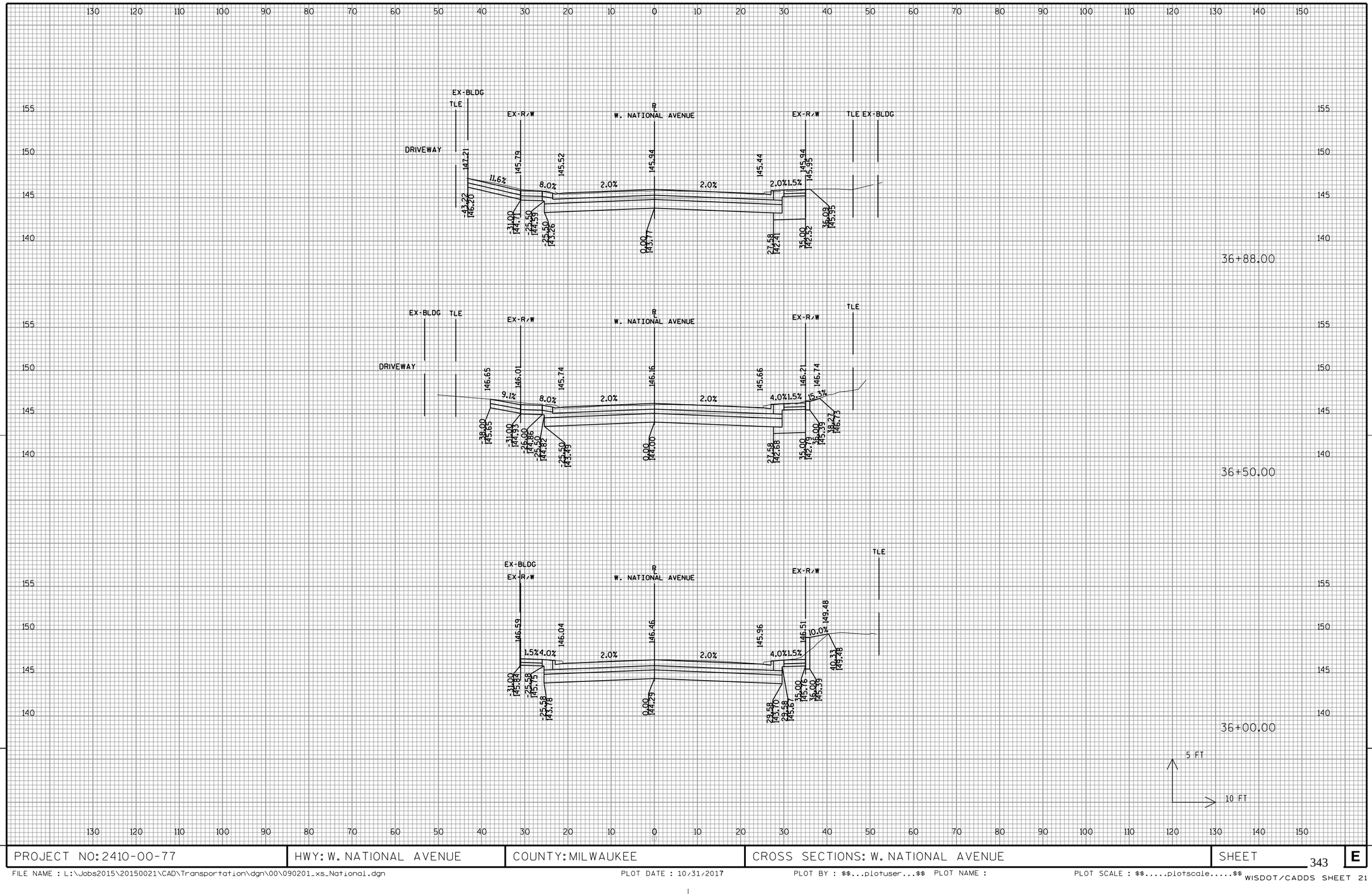
35+00.00

5 FT

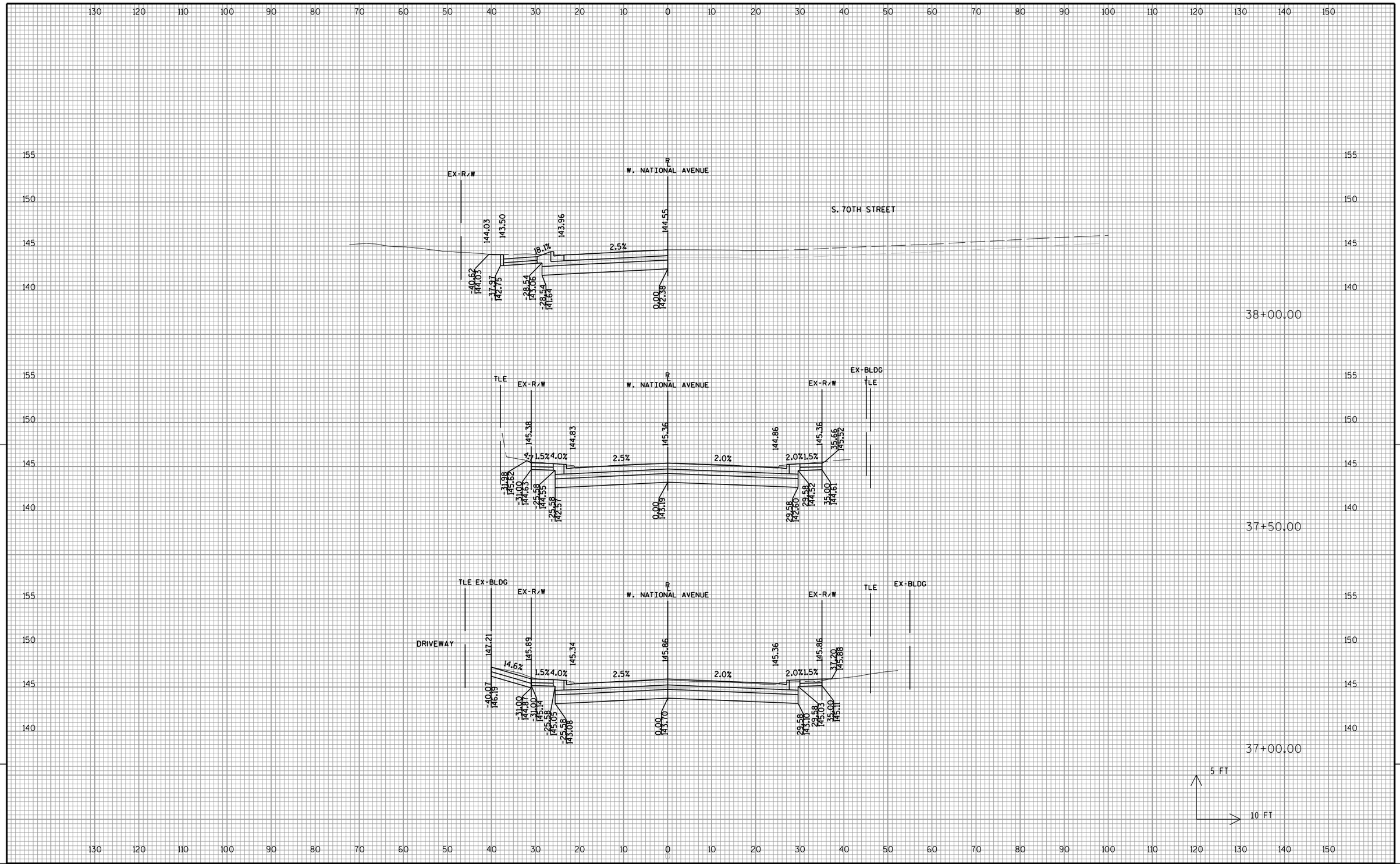
10 FT

PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 342	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090201_xs_National.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 343	E



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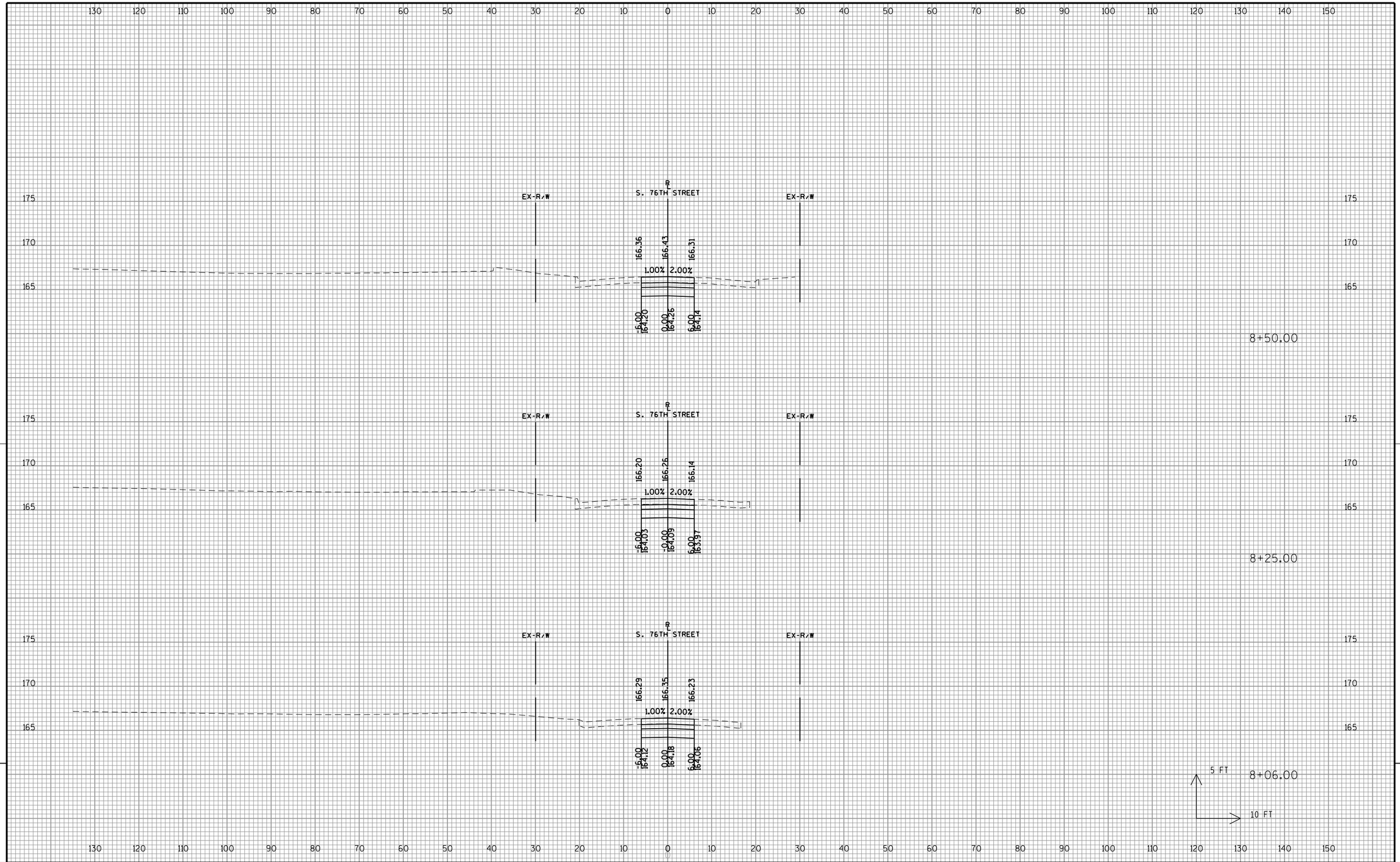
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. NATIONAL AVENUE	SHEET 344	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090201_xs_National.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



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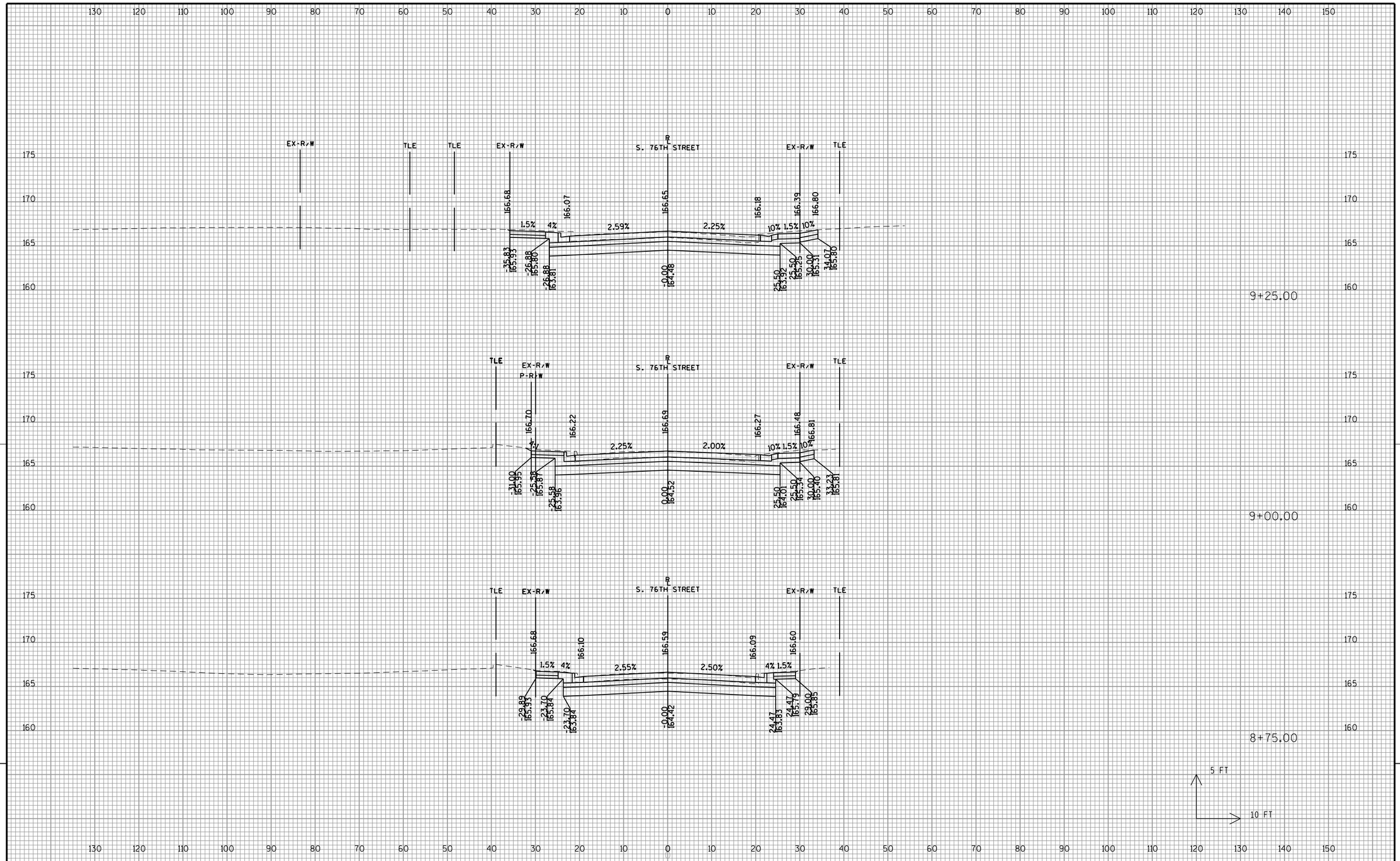
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 76TH STREET	SHEET 345	E

FILE NAME : L:\Jobs2015\20150021\CAD\Transportation\dgn\00\090202_xs_76th.dgn PLOT DATE : 10/31/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 21



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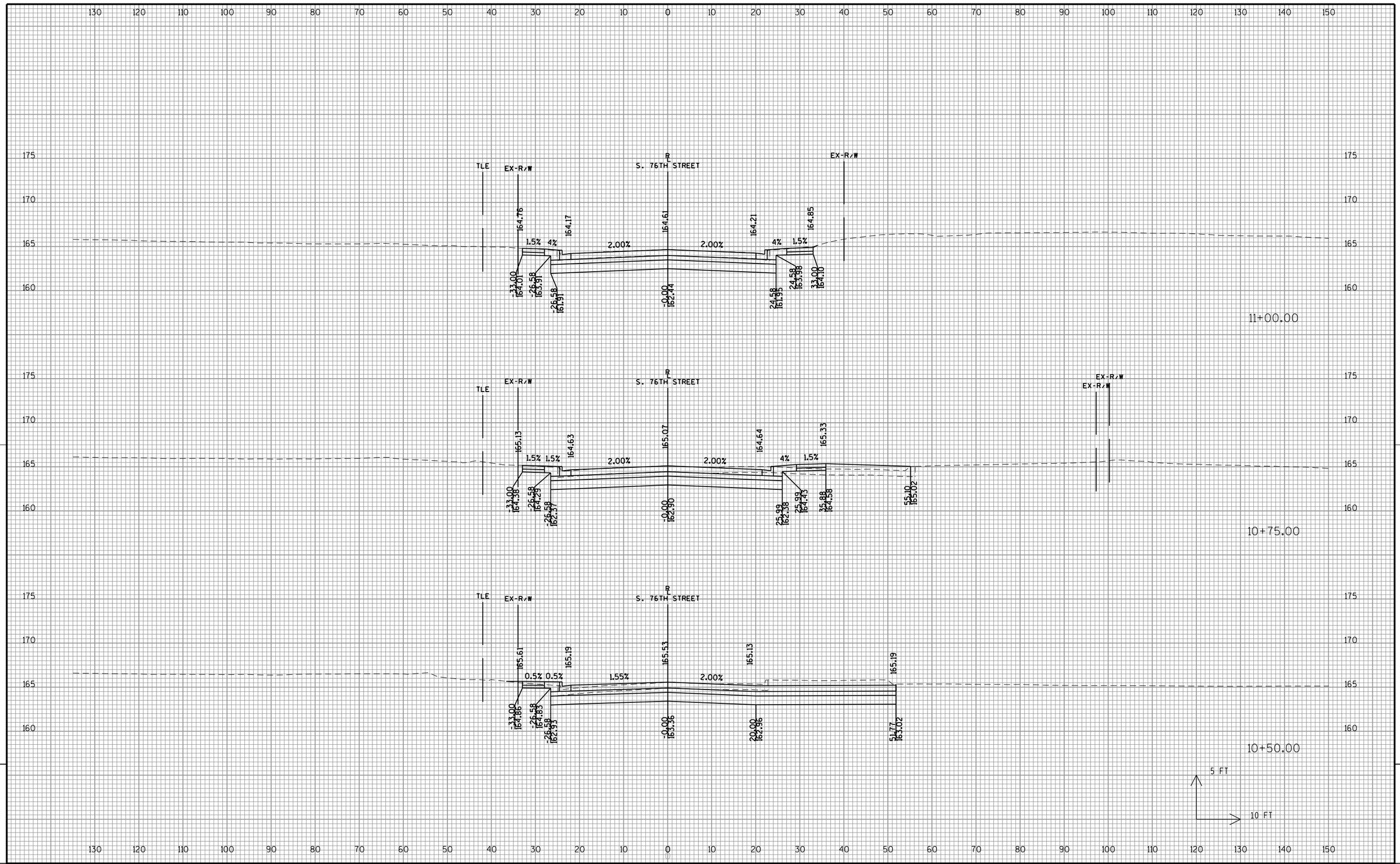
PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 76TH STREET	SHEET 346	E



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PROJECT NO: 2410-00-77	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 76TH STREET	SHEET 347	E

Wisconsin Department of Transportation

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