WKE

AUG 2014

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 = 656

PROJECT ID: 1060-35-91

WITH:

COUNTY: MILWAUKEE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1060-35-91		

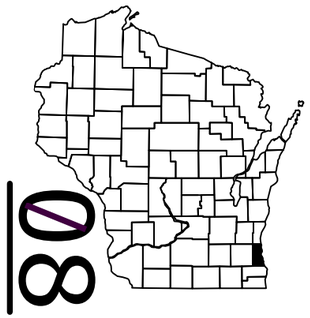
ZOO IC, 2014 TMP PROJECTS

VARIOUS LOCATIONS

IH-94

MILWAUKEE COUNTY

STATE PROJECT NUMBER
1060-35-91



N

W. BLUEMOUND RD. BTWN N. 103RD & N. 99TH
BEGIN CONSTRUCTION 1060-35-91
STA. 185+09
X=571650.71
Y=298206.22
END CONSTRUCTION 1060-35-91
STA. 185+49

W. THEO TRECKER WAY & STH 100
BEGIN CONSTRUCTION 1060-35-91
STA. 546+70
X=569169.18
Y=293785.29
END CONSTRUCTION 1060-35-91
STA. 551+20

S. 84TH ST. & STATE FAIR GATE 4
BEGIN CONSTRUCTION 1060-35-91
STA. 233+25
X=577167.84
Y=292485.01
END CONSTRUCTION 1060-35-91
STA. 234+30

S. 70TH ST.
BEGIN CONSTRUCTION 1060-35-91
STA. 14+35
X=581835.17
Y=296318.71
END CONSTRUCTION 1060-35-91
STA. 17+50

S. 84TH ST. & STATE FAIR GATE 5
BEGIN CONSTRUCTION 1060-35-91
STA. 250+15
X=577158.92
Y=294174.99
END CONSTRUCTION 1060-35-91
STA. 251+40

W. BLUEMOUND RD. & N. 68TH ST.
BEGIN CONSTRUCTION 1060-35-91
STA. 293+85
X=582424.06
Y=298572.82
END CONSTRUCTION 1060-35-91
STA. 295+06

68TH ST. ON RAMP / W. KEARNEY ST.
BEGIN CONSTRUCTION 1060-35-91
STA. 785+50
X=581836.22
Y=296290.21
END CONSTRUCTION 1060-35-91
STA. 796+89

STH 100 & STH 59
TRAFFIC SIGNAL IMPROVEMENT

STH 100 & W. LAPHAM ST.
BEGIN CONSTRUCTION 1060-35-91
STA. 512+31
X=569262.46
Y=290350.09
END CONSTRUCTION 1060-35-91
STA. 518+81

W. LINCOLN AVE. & S. 98TH ST.
BEGIN CONSTRUCTION 1060-35-91
STA. 55+18
X=572370.47
Y=286475.56
END CONSTRUCTION 1060-35-91
STA. 56+35

W. LINCOLN AVE. & I-894 SB EXIT RAMP
BEGIN CONSTRUCTION 1060-35-91
STA. 44+57
X=571309.67
Y=286422.18
END CONSTRUCTION 1060-35-91
STA. 45+67

W. GREENFIELD AVE. & S. 92ND ST.
BEGIN CONSTRUCTION 1060-35-91
STA. 39+15
X=574524.31
Y=291454.63
END CONSTRUCTION 1060-35-91
STA. 40+70

W. GREENFIELD AVE. & S. 84TH ST.
BEGIN CONSTRUCTION 1060-35-91
STA. 223+30
X=577188.86
Y=291490.48
END CONSTRUCTION 1060-35-91
STA. 228+15

W. GREENFIELD AVE., S. 92ND ST. - S. 84TH ST.
BEGIN CONSTRUCTION 1060-35-91
STA. 542+00
X=574566.62
Y=291539.89
END CONSTRUCTION 1060-35-91
STA. 567+73

W. LINCOLN AVE. & W. BELOIT AVE.
BEGIN CONSTRUCTION 1060-35-91
STA. 152+53
X=582105.85
Y=286551.64
END CONSTRUCTION 1060-35-91
STA. 160+09

W. NATIONAL AVE. & S. 102ND ST.
BEGIN CONSTRUCTION 1060-35-91
STA. 35+86
X=570519.45
Y=284341.03
END CONSTRUCTION 1060-35-91
STA. 37+25

W. LINCOLN AVE. & W. NATIONAL AVE.
BEGIN CONSTRUCTION 1060-35-91
STA. 62+30
X=573082.30
Y=286490.81
END CONSTRUCTION 1060-35-91
STA. 66+60

S. 84TH ST. & W. NATIONAL AVE.
BEGIN CONSTRUCTION 1060-35-91
STA. 197+61
X=577216.55
Y=288921.61
END CONSTRUCTION 1060-35-91
STA. 202+93

LAYOUT
SCALE 0 1.0 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, 'MILWAUKEE' COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

DESIGN DESIGNATION		S. 68TH ENTRANCE RAMP	HWY 100 & ORCHARD/LAPHAM	HWY 100 & THEO	W. BLUEMOUND RD
A.A.D.T.	=	3,187 (2011)	35,500 (2005)	32,500 (2008)	19,900 (2009)
A.A.D.T.	=				
D.H.V.	=				
D.D.	=				
T.	=				
DESIGN SPEED	=	45 MPH	45 MPH	45 MPH	35 MPH
ESALS	=				

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

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

PREPARED BY

Surveyor	FORWARD 45
Designer	REBECCA KLEIN
Project Manager	CHRIS HAGER, PE
Regional Examiner	
Regional Supervisor	WILLIAM S. MOHR, PE
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 5/1/14 (Signature)

E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\010101_TI.DWG PLOT DATE : 9/7/2012 10:35 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : ----------

WISDOT/CADDS SHEET 10

STANDARD ABBREVIATIONS

AEW	APRON ENDWALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCHMARK
C&G	CURB AND GUTTER
CL OR $^{C}_{L}$	CENTER OR CONSTRUCTION LINE
CMCP	CULVERT PIPE CORRUGATED METAL
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALTIC
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
M/L	MAINLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON END WALL FOR CULVERT PIPE REINFORCED CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RRSP	RAILROAD SPIKE
RT	RIGHT
SLV	SALVAGED
SAPBC	SALVAGED ASPHALTIC PAVEMENT BASE COURSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
VCL	VERTICAL CURVE LENGTH
VPC	POINT VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEWS
TYPICAL SECTIONS
UTILITY INFORMATION ONLY DETAILS
PLAN DETAILS
FTMS PLANS
EROSION CONTROL PLANS
STORM SEWER PLANS
PERMANENT SIGNING PLANS
LIGHTING PLANS
TEMPORARY TRAFFIC SIGNAL PLANS
TRAFFIC SIGNAL PROJECT OVERVIEW
TRAFFIC SIGNAL DETAILS
TRAFFIC SIGNAL PLANS
PAVEMENT MARKING PLANS
TRAFFIC CONTROL PLANS
ALIGNMENT PLANS

UTILITY CONTACTS

2

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

2

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2

GENERAL NOTES

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

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

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.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE TOPSOILED AND SODDED AS DIRECTED BY THE ENGINEER.

A SAWED JOINT SHALL BE REQUIRED WHERE NEW HMA SURFACE MEETS EXISTING ASPHALTIC CONCRETE SURFACE.

CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER AT LEAST TWO WEEKS PRIOR TO DISTURBING ANY PUBLIC SURVEY MONUMENTS.

ALL ALIGNMENTS SHALL NOT BE USED FOR REAL ESTATE PURPOSES.

A CONVERSION FACTOR OF 2.10 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE.

A CONVERSION FACTOR OF 115 LBS/SY/IN IS USED TO ESTIMATE QUANTITIES FOR HMA PAVEMENT.

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

THE EROSION CONTROL ITEMS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

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

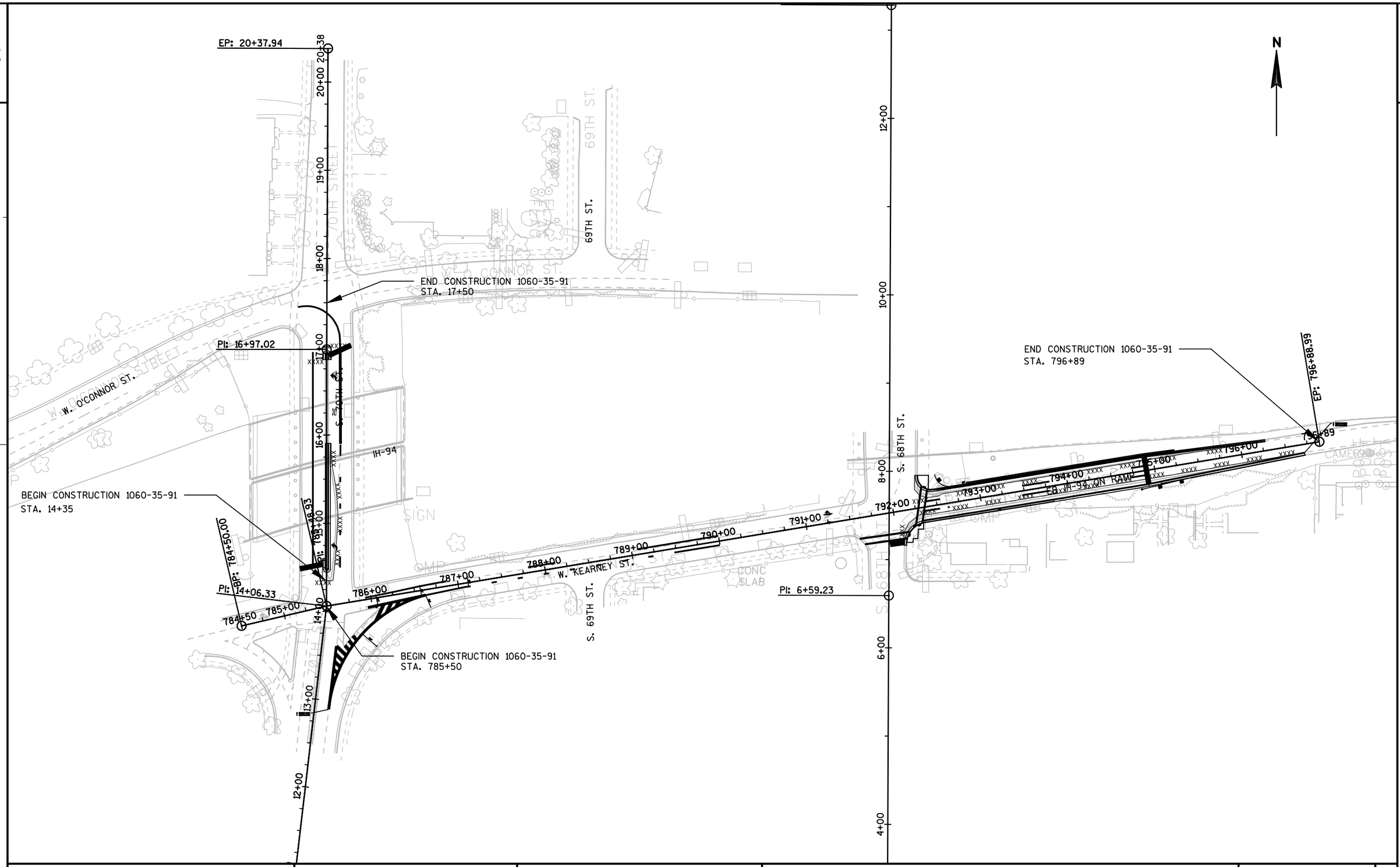
WHEN THE QUANTITY OF HMA PAVEMENT OR BASE AGGREGATE IS MEASURED FOR PAYMENT BY THE TON THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES.

CONCRETE SIDEWALK AND CURB & GUTTER SHOULD BE REMOVED TO THE NEAREST JOINT OR AS APPROVED BY THE ENGINEER.

HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

LOCATION	PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION	ASPHALTIC MATERIAL
70th ST. & 68th ST. ENTRANCE RAMP	6 1/4" HMA E-3	4"	LOWER LAYER	19.0 MM	PG 64-22
		2 1/4"	UPPER LAYER	12.5 MM	PG 64-22
STH 100 LOCATIONS	6" HMA E-3	4"	LOWER LAYER	19.0 MM	PG 58-28
		2"	UPPER LAYER	12.5 MM	PG 58-28
W. LINCOLN AVE. & W. BELOIT RD.	6" HMA E-3	4"	LOWER LAYER	19.0 MM	PG 58-28
		2"	UPPER LAYER	12.5 MM	PG 58-28



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PROJECT OVERVIEW- 68TH ST. RAMP, S. 70TH ST., W. KEARNEY ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\020201_PO.DWG
PLOT DATE : 4/30/2014 8:02 AM
PLOT BY : WAGNER, SCOTT H
PLOT NAME :
PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2

N

END CONSTRUCTION 1060-35-91
STA. 185+49

BP: 185+00.00

W. BLUEMOUND RD.

183 184 185 186 187 188

W. BLUEMOUND RD.

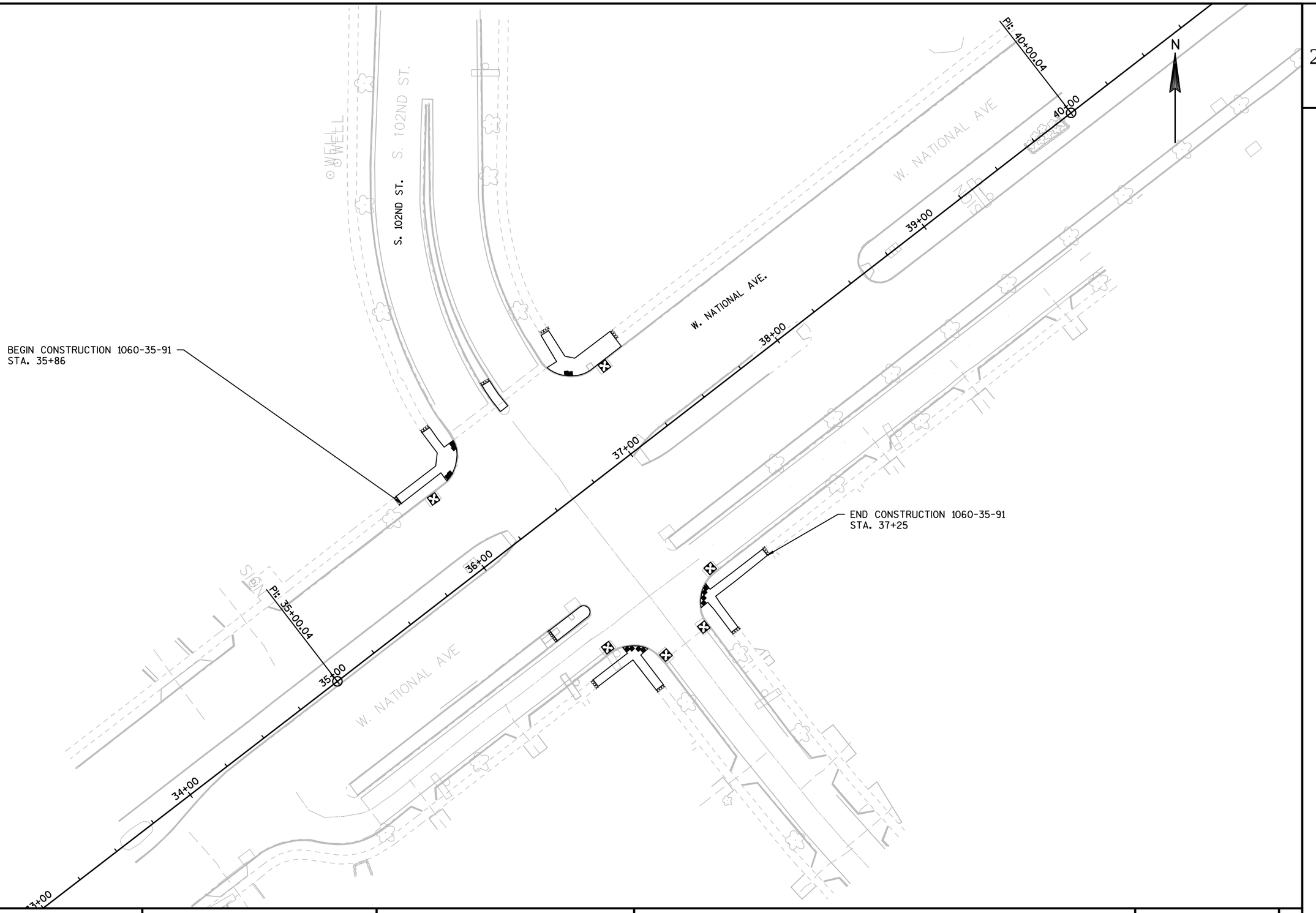
BEGIN CONSTRUCTION 1060-35-91
STA. 185+09

MILWAUKEE COUNTY ZOO

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PROJECT OVERVIEW-W. BLUEMOUND RD. BTWN N. 103RD & N. 99TH	SHEET 7	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\020202_PO.DWG PLOT DATE : 4/30/2014 8:02 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PROJECT OVERVIEW - W. NATIONAL AVE. & S. 102ND ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\020203_PO.DWG PLOT DATE : 4/30/2014 8:02 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:50_XREF
WISDOT/CADDS SHEET 42

2

N

W. NATIONAL AVE.

W. NATIONAL AVENUE (EAST BOUND)

W. NATIONAL AVE.

W. NATIONAL AVENUE (WEST BOUND)

99

CONC

4TH STREET

198

199

EP: 100+00.00

PI: 200+00.00

200

BP: 10+00.00

201

S. 84TH ST.

202

BP: 100+00.00

203

EP: 10+00.00

S. 84TH STREET

END CONSTRUCTION 1060-35-91
STA. 202+93

BP: 9+25.00

W. MAPLE ST.

CHAIN LINK FENCE

FO

FO RUNS ALONG BRIDGE IN ENCLOSED PIPE

PLANTER

ASPH

BEGIN CONSTRUCTION 1060-35-91
STA. 197+61

ROCK

W. BURNHAM ST.

WEST BURNHAM STREET

11

EP: 11+50.00

RAILROAD

101

PI: 101+32.17

W. NATIONAL AVE.

W. NATIONAL AVENUE (EAST BOUND)

W. NATIONAL AVE.

WEST NATIONAL AVENUE (WEST BOUND)

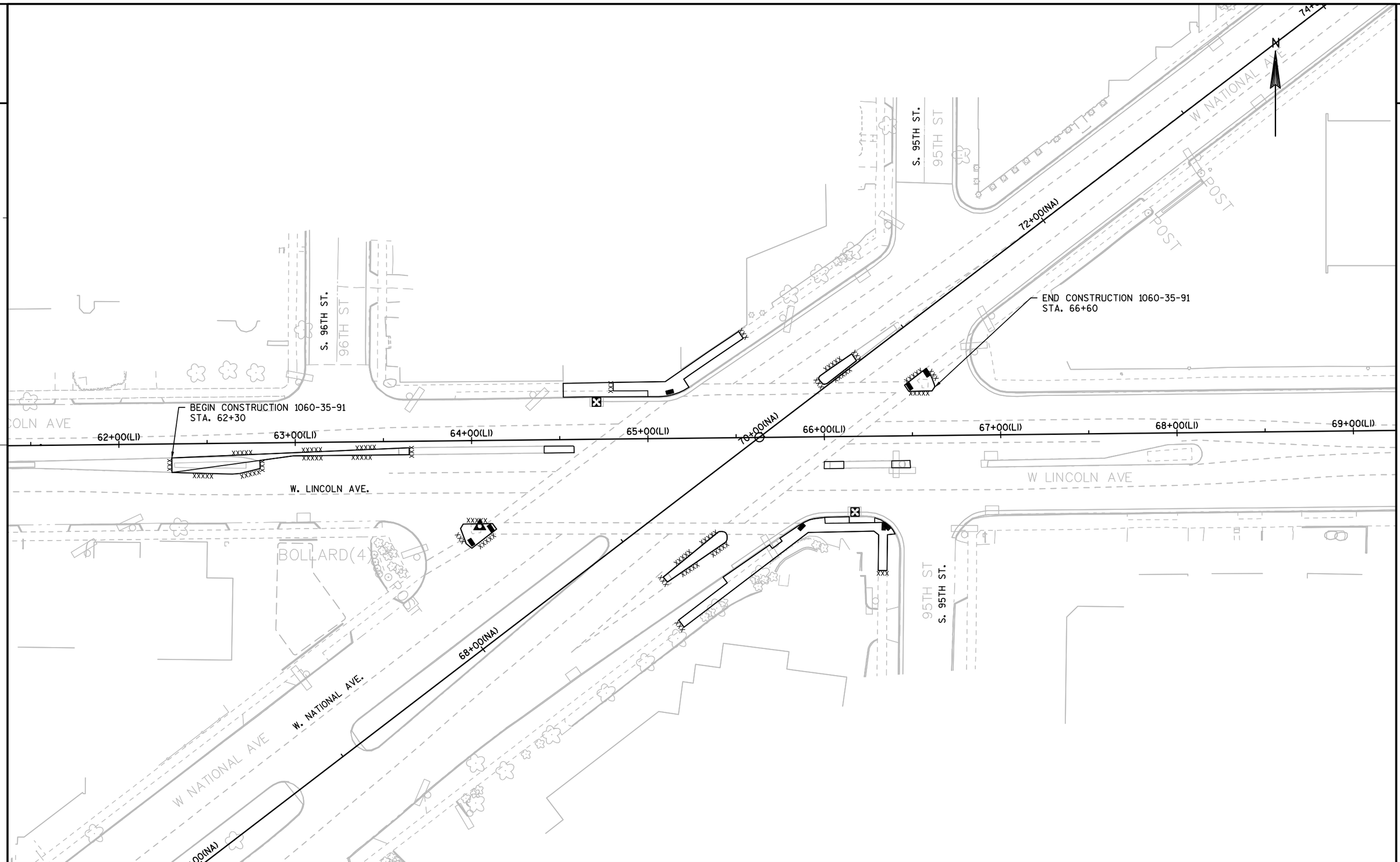
102

BRICK

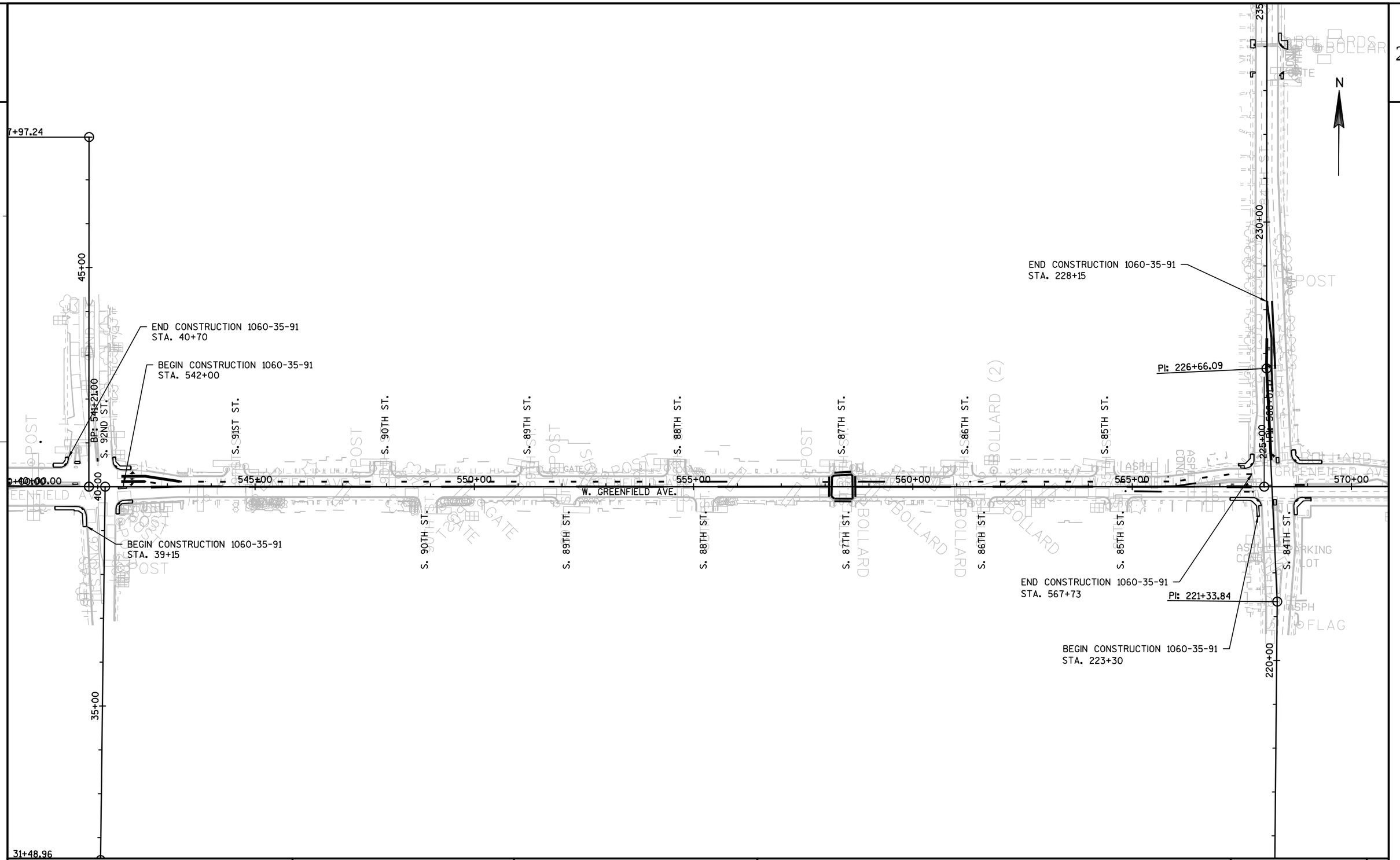
PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PROJECT OVERVIEW - S. 84TH ST. & W. NATIONAL AVE.	SHEET 9	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\020203.5_PO.DWG PLOT DATE : 4/30/2014 8:02 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PROJECT OVERVIEW - W. LINCOLN AVE. & W. NATIONAL AVE.	SHEET 10	E



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PROJECT OVERVIEW-W. GREENFIELD AVE., S. 92ND ST.-S. 84TH ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\020205_PO.DWG PLOT DATE : 4/30/2014 8:03 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

N

EP: 252+45.86

PI: 251+86.13

252+00

END CONSTRUCTION 1060-35-91
STA. 251+40

S. 84TH ST.

251+00

W. SCHLINGER AVE.

STATE FAIR
GATE 5

POST

POST

POST

SIGN

250+00

BEGIN CONSTRUCTION 1060-35-91
STA. 250+15

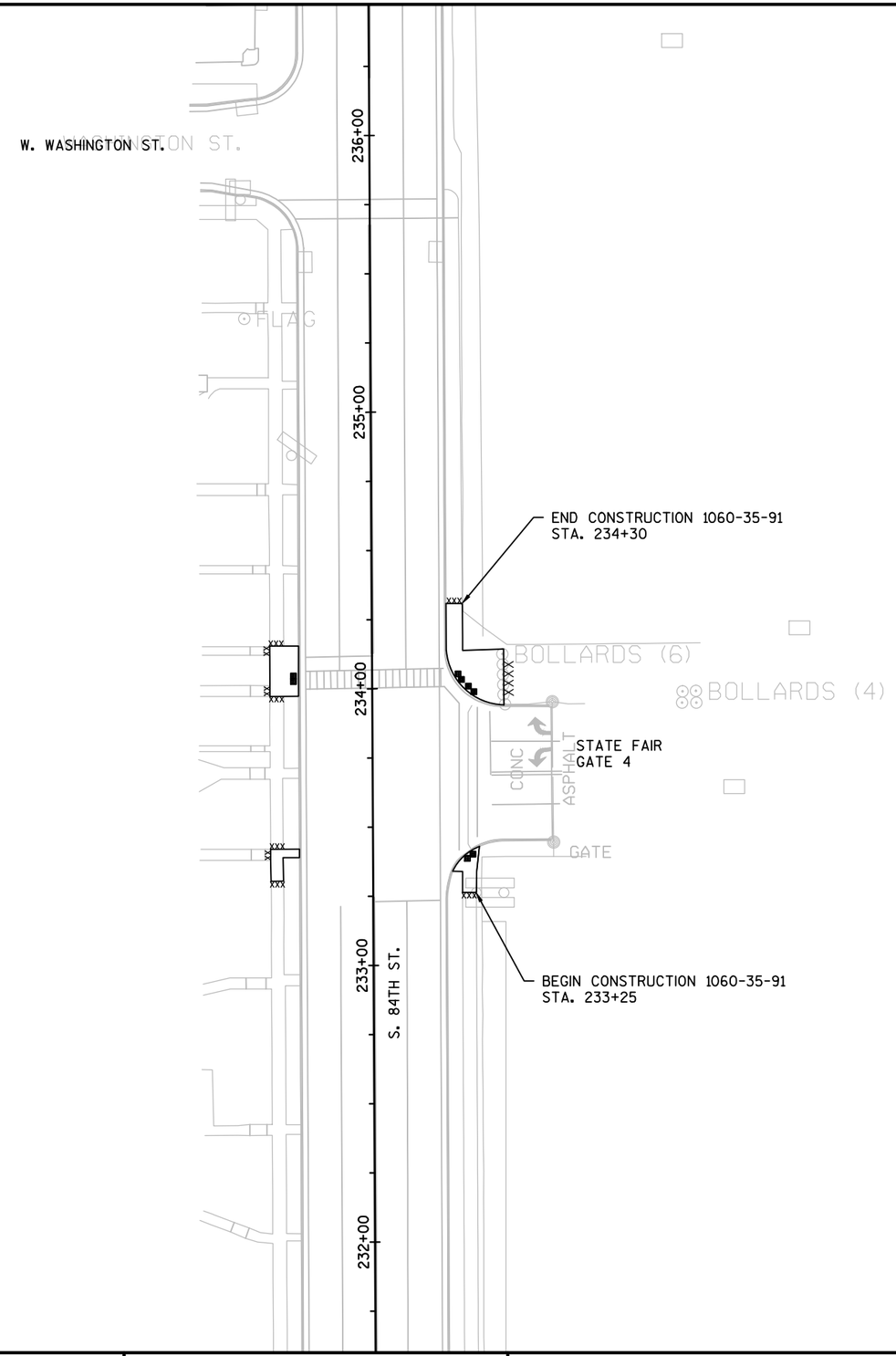
249+00

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PROJECT OVERVIEW - S. 84TH ST. & STATE FAIR GATE 5	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\020206_PO.DWG PLOT DATE : 4/30/2014 8:03 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:50_XREF

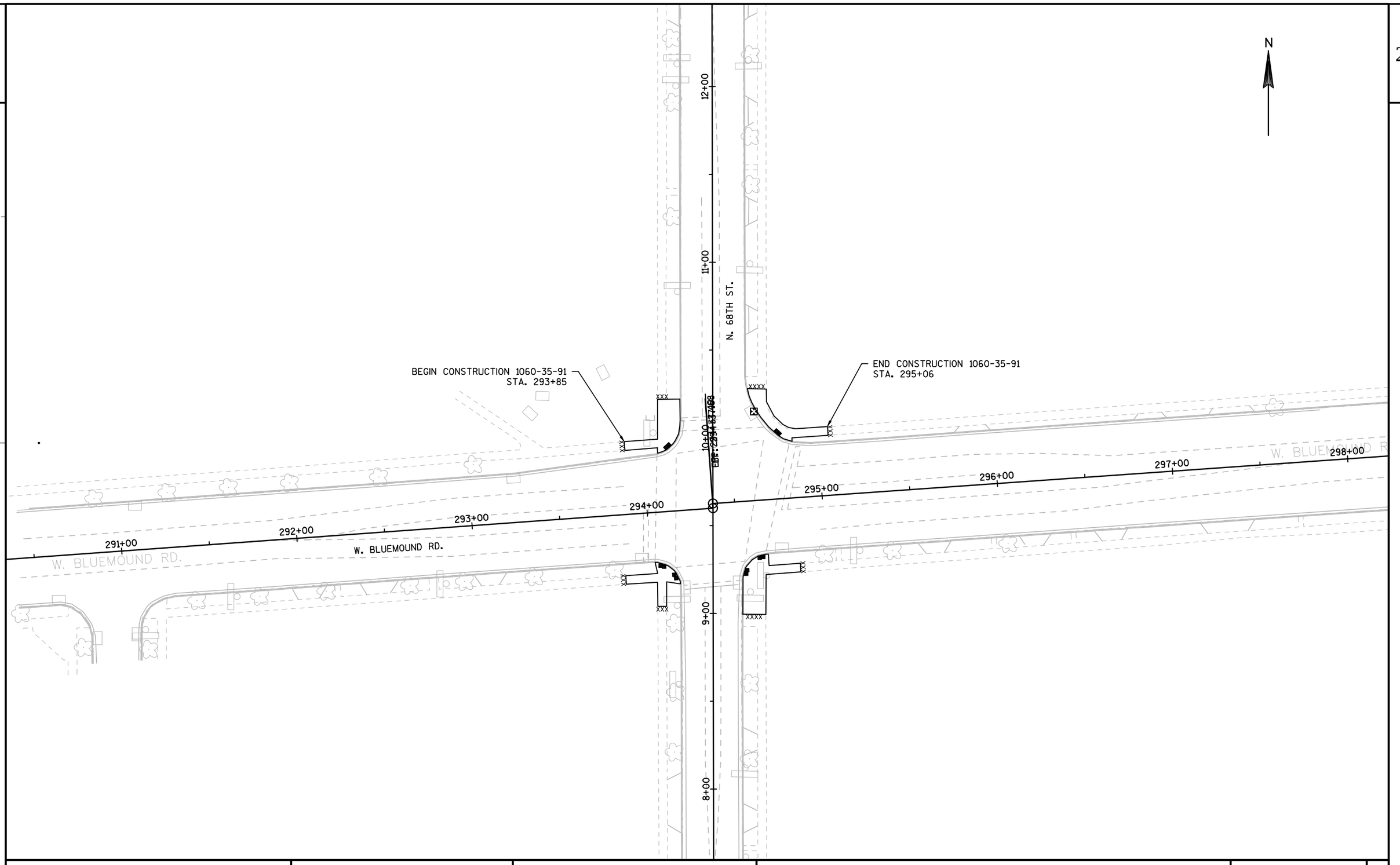
WISDOT/CADDS SHEET 42

2



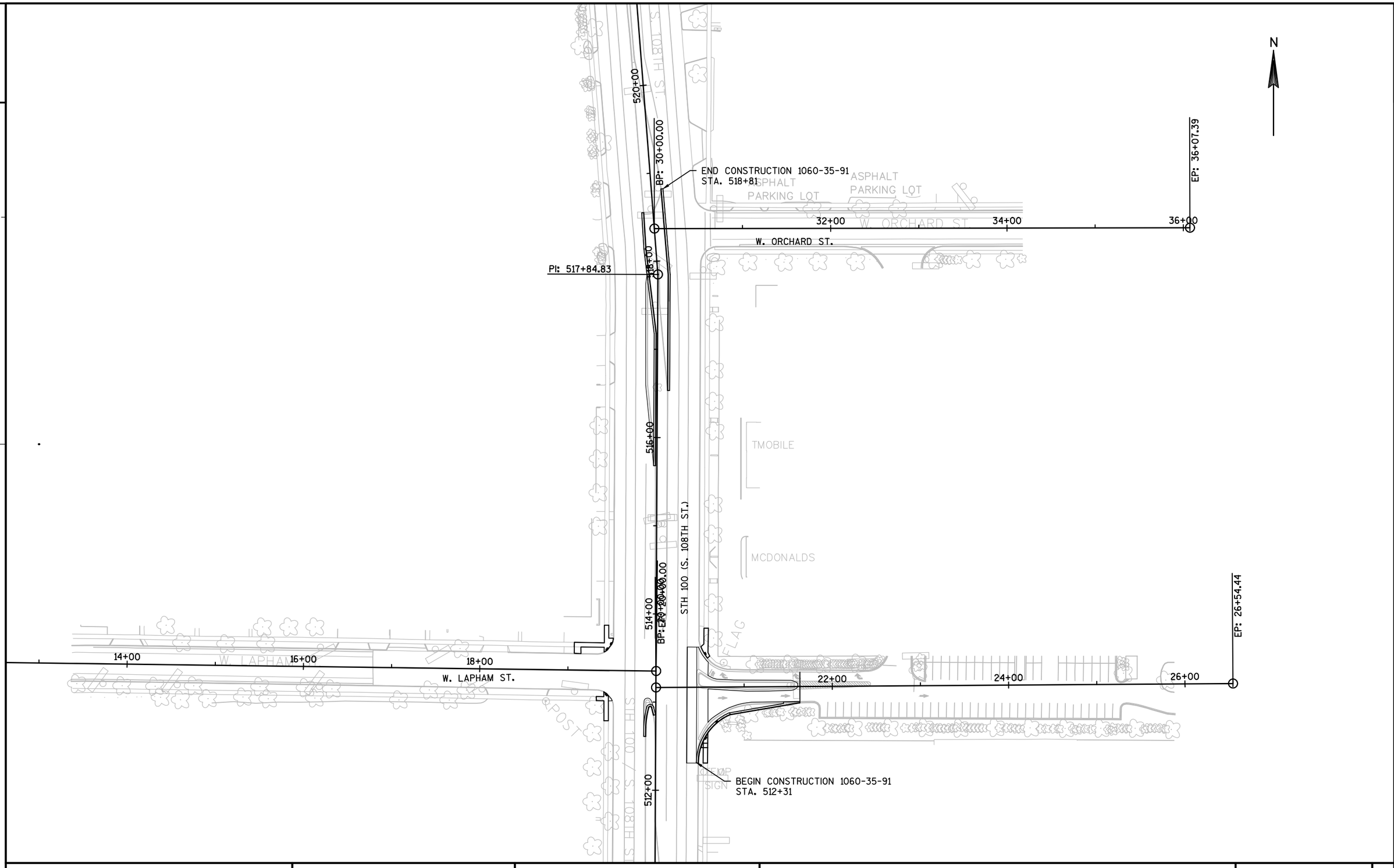
PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PROJECT OVERVIEW - S. 84TH ST. & STATE FAIR GATE 4	SHEET 13	E

2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PROJECT OVERVIEW - W. BLUEMOUND RD. & N. 68TH ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\020208_PO.DWG PLOT DATE : 4/30/2014 8:04 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:50_XREF



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PROJECT OVERVIEW - STH 100 & W. LAPHAM ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\020210_PO.DWG PLOT DATE : 4/30/2014 8:04 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42

2

N

PI: 552+01.57

END CONSTRUCTION 1060-35-91
STA. 551+20

EP: 20+00.00

14+00 16+00 18+00 PI: 550+62.43

W. THEO TRECKER WAY

W. THEO TRECKER WAY

SIGN

BEGIN CONSTRUCTION 1060-35-91
STA. 546+70

STH 100 (S. 108TH ST.)

BOLLARD (2)

POST

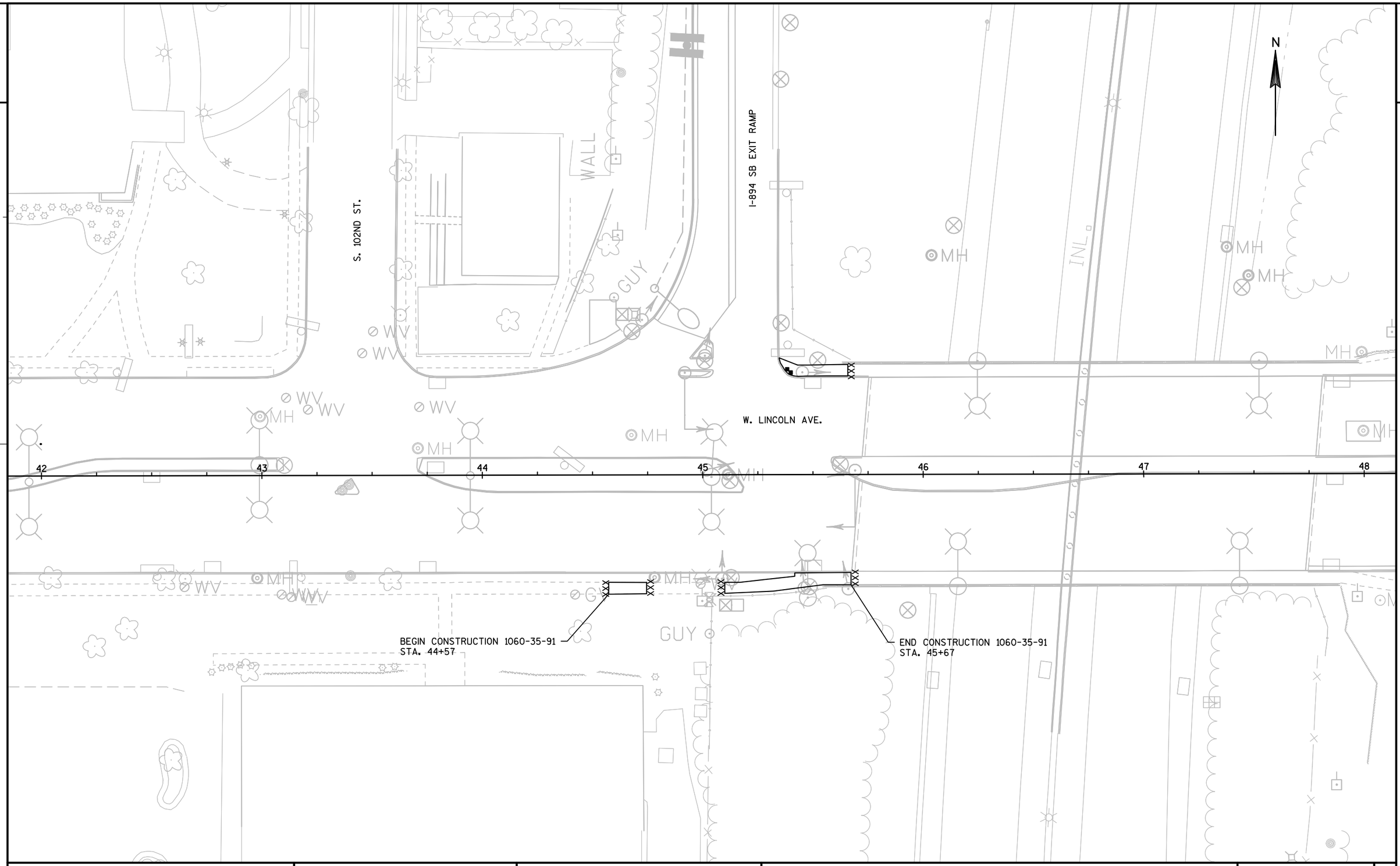
W. WALKER ST

W. WALKER ST.

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PROJECT OVERVIEW - W. THEO. TRECKER WAY & STH 100	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\020209_PO.DWG PLOT DATE : 4/30/2014 8:04 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:100_XREF

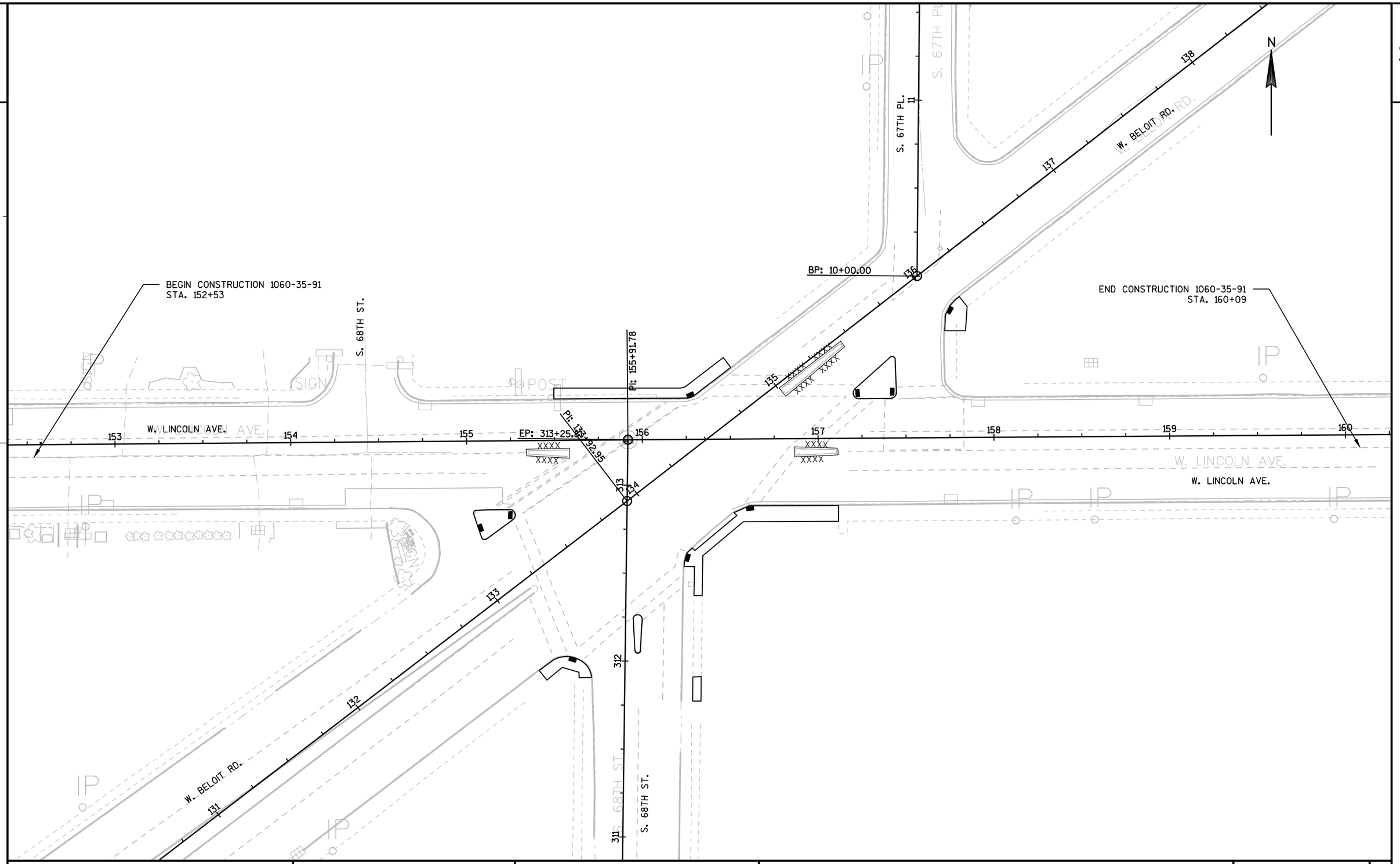
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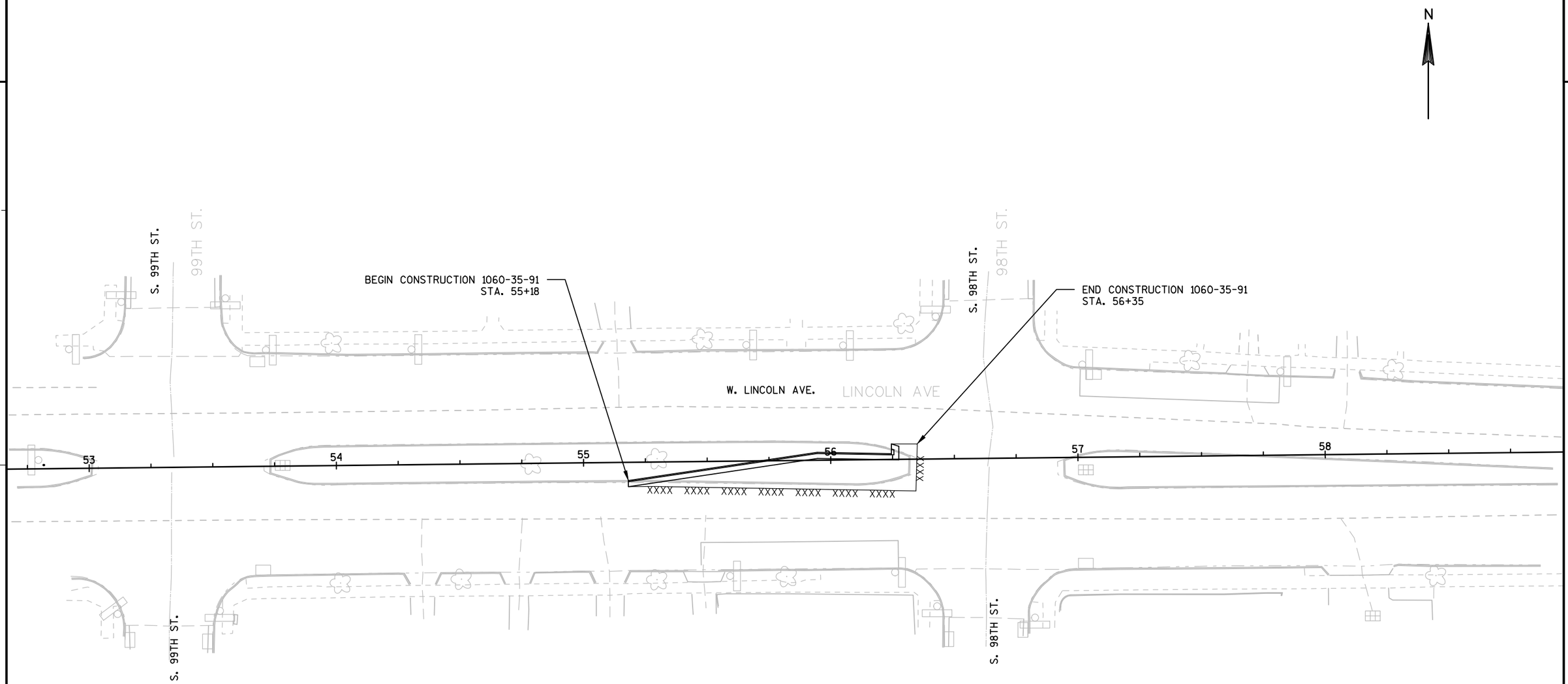
PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PROJECT OVERVIEW - W. LINCOLN AVE. & I-894 SB EXIT RAMP	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\020211_PO.DWG PLOT DATE : 4/30/2014 8:04 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2


N
BEGIN CONSTRUCTION 1060-35-91
STA. 152+53
END CONSTRUCTION 1060-35-91
STA. 160+09
BP: 10+00.00
EP: 313+25.80
PI: 155+91.78
PI: 133+92.95
S. 67TH PL.
S. 68TH ST.
W. BELOIT RD.
W. LINCOLN AVE.
W. LINCOLN AVE.
W. LINCOLN AVE.
W. BELOIT RD.
S. 68TH ST.
S. 68TH ST.
SIGN
POST
IP
IP
IP

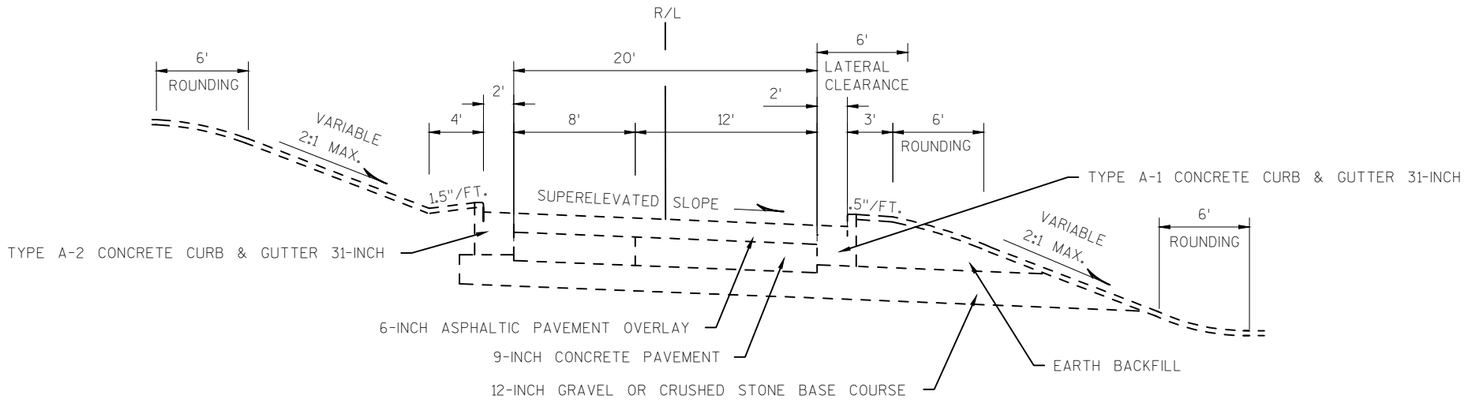
2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PROJECT OVERVIEW - W. LINCOLN AVE. & S. 98TH ST.	SHEET 19	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\020213_PO.DWG PLOT DATE : 4/30/2014 8:05 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2



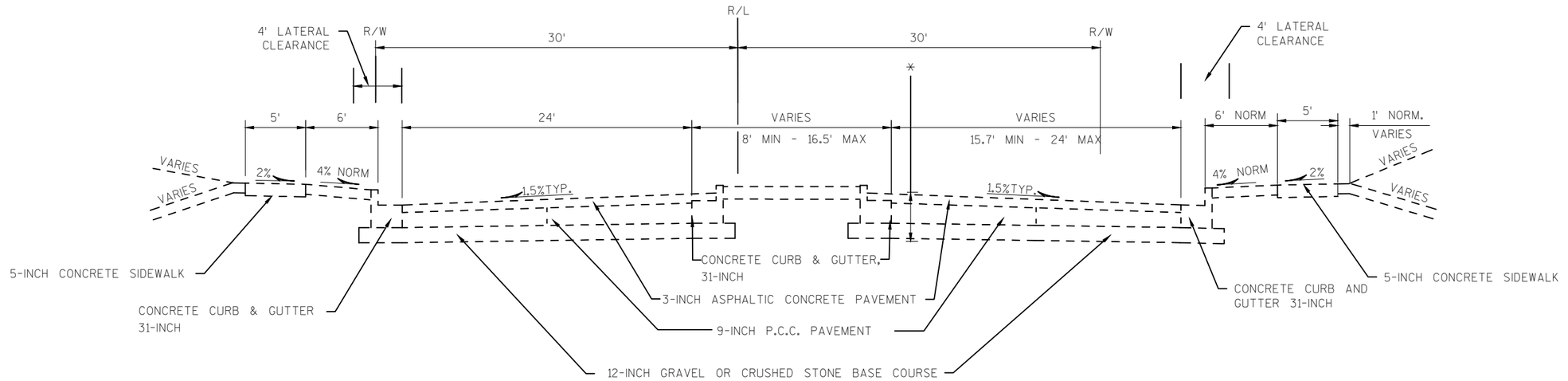
TYPICAL EXISTING SECTION

68TH ST. ON RAMP

STA. 792+00 TO STA. 796+89

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TYPICAL SECTION - 68TH ST. ON RAMP	SHEET 20	E

2



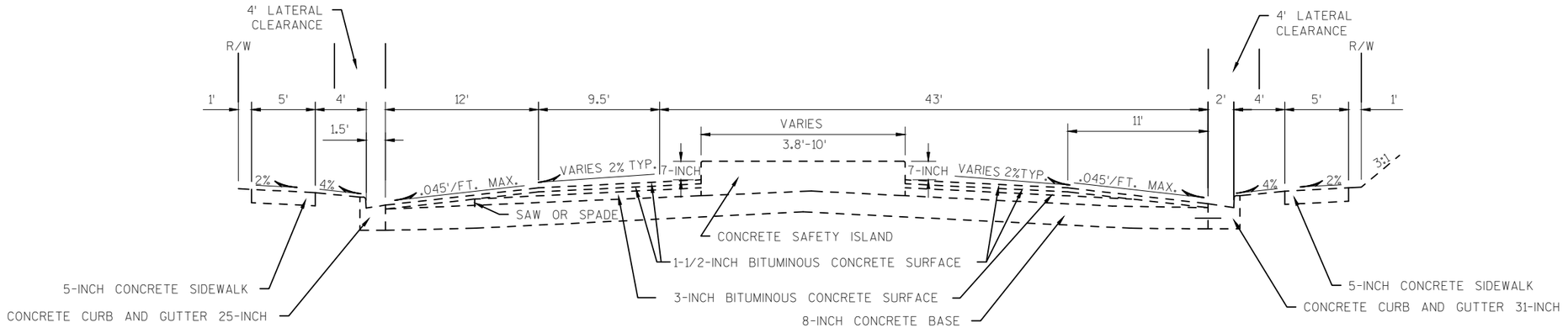
TYPICAL EXISTING SECTION

S. 70TH ST.

STA. 14+35 TO STA. 17+50

*NOTE:

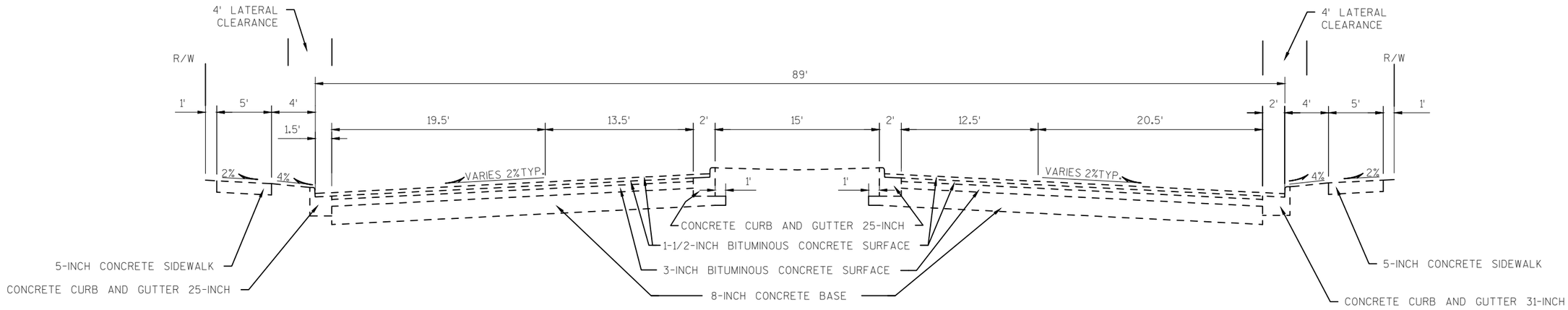
CONFIRM EXISTING PAVEMENT STRUCTURE WITH ENGINEER IN THE FIELD.



TYPICAL EXISTING SECTION

W. LINCOLN AVE.

STA. 62+30 TO STA. 66+60



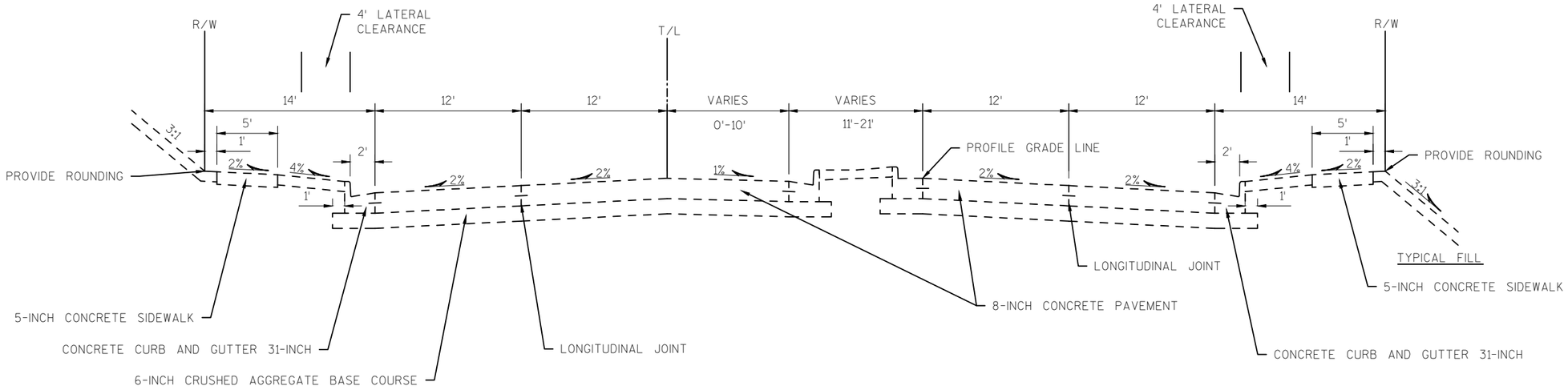
TYPICAL EXISTING SECTION

W. LINCOLN AVE.

STA. 55+18 TO STA. 56+35

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TYPICAL SECTION - W. LINCOLN AVE.	SHEET 22	E

2



TYPICAL EXISTING SECTION

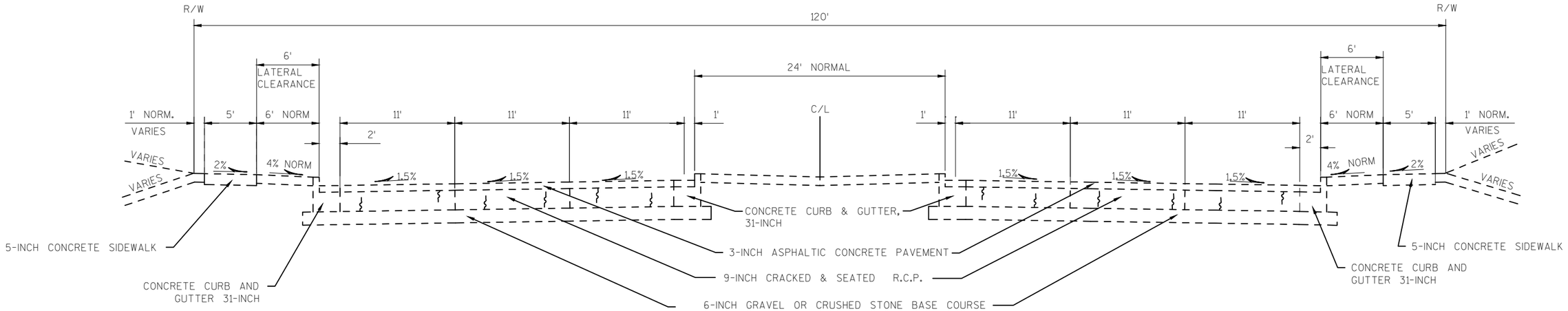
S. 84TH ST.

STA. 226+14 TO STA. 228+19.1

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TYPICAL SECTION - S. 84TH ST.	SHEET 23	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\020300_TS.DWG PLOT DATE : 6/2/2014 7:35 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : ---------- PLOT SCALE : 0.100193

WISDOT/CADDS SHEET 42



TYPICAL EXISTING SECTION

STH 100

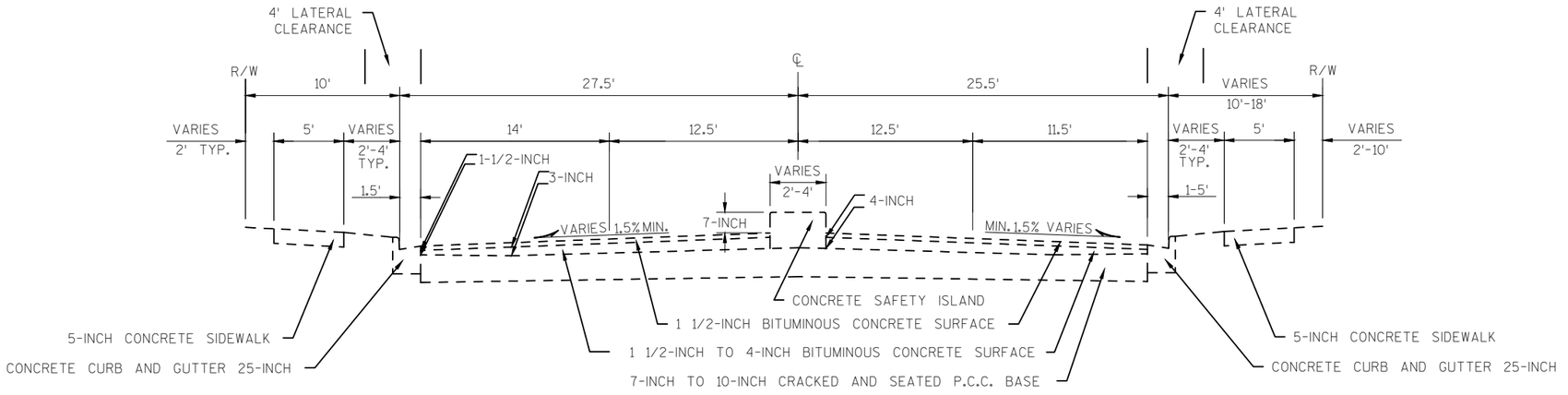
STA. 512+31 TO STA. 518+81

STA. 546+70 TO STA. 549+25

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TYPICAL SECTION - STH 100	SHEET 24	E

2

N

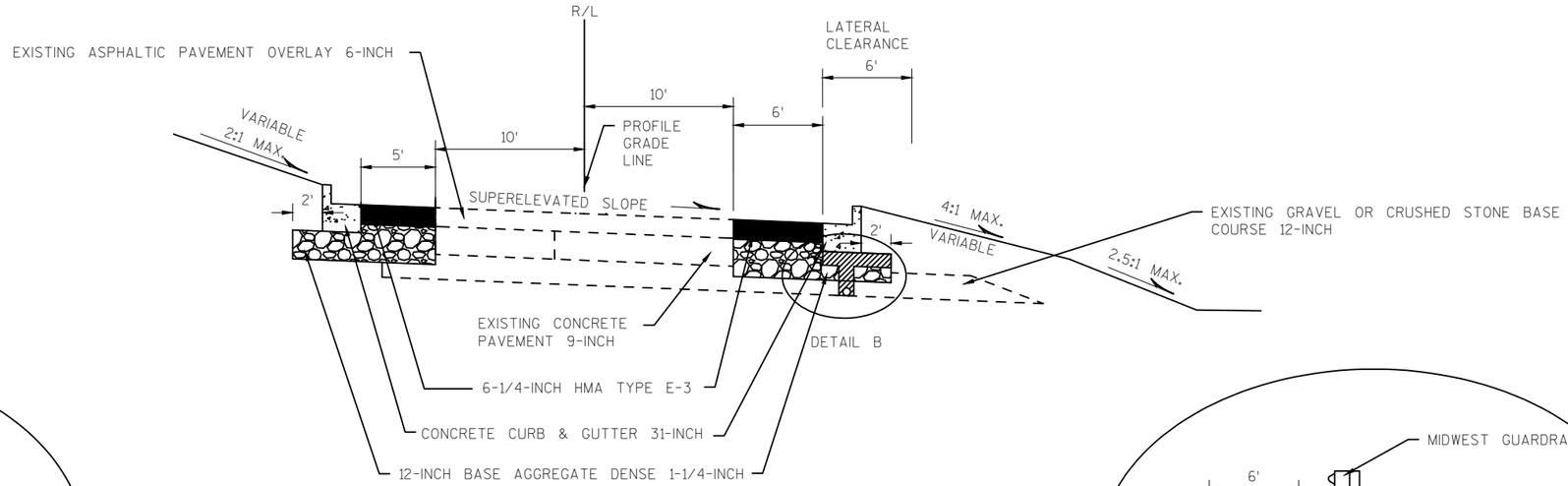


TYPICAL EXISTING SECTION

W. BELOIT RD.

STA. 135+00 TO STA. 135+45

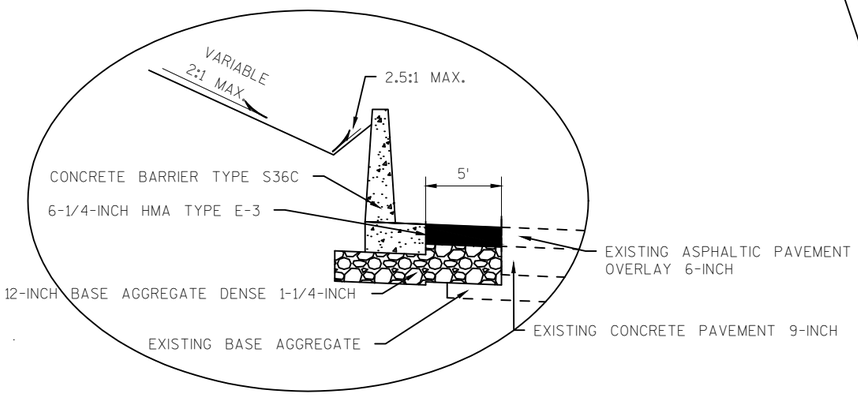
PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TYPICAL SECTION - W. BELOIT RD.	SHEET 25	E



TYPICAL PROPOSED SECTION

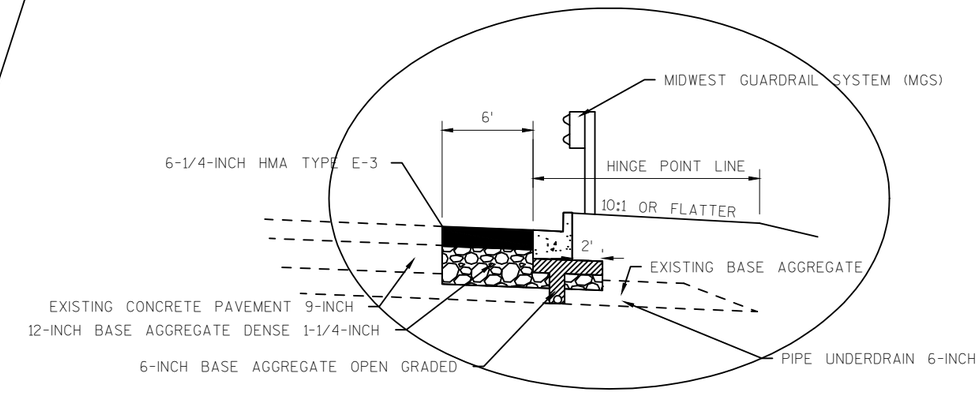
68TH ST. ON RAMP

STA. 792+00 TO STA. 796+89



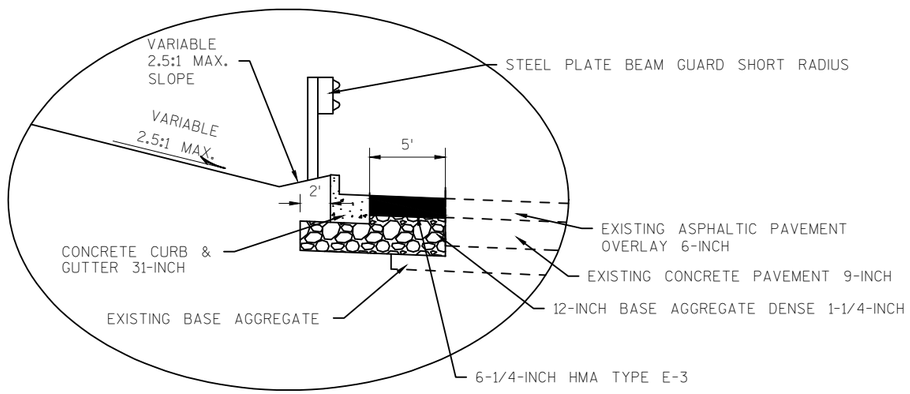
STA. 792+87.1 TO STA. 795+25

(LEFT SIDE)



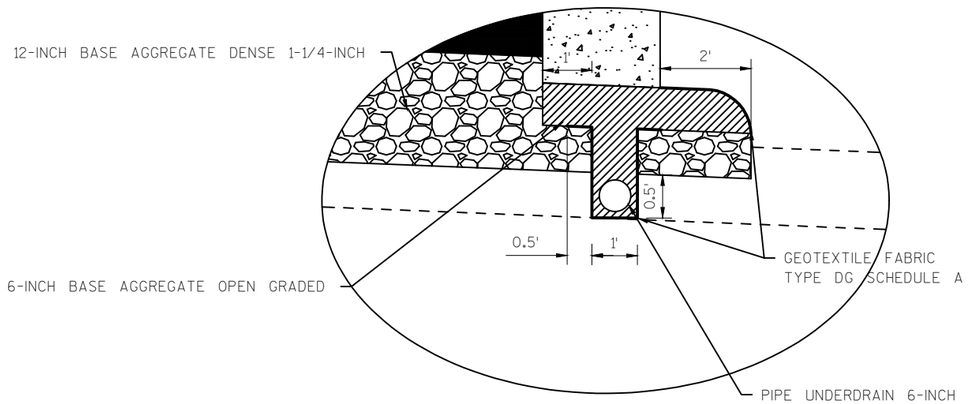
STA. 794+84.5 TO STA. 795+50

(RIGHT SIDE)



STA. 792+53.0 TO 792+87.1

(LEFT SIDE)

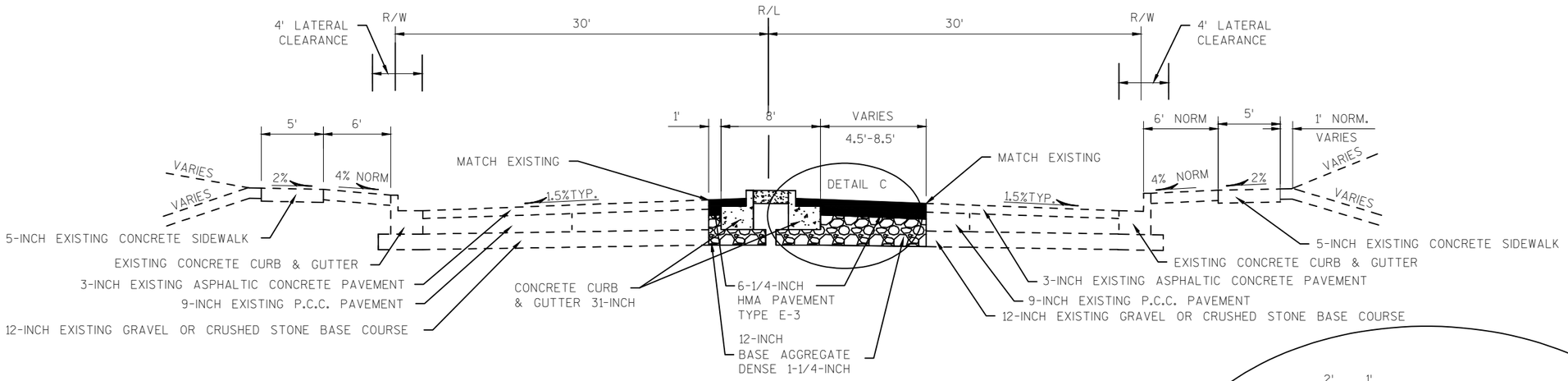


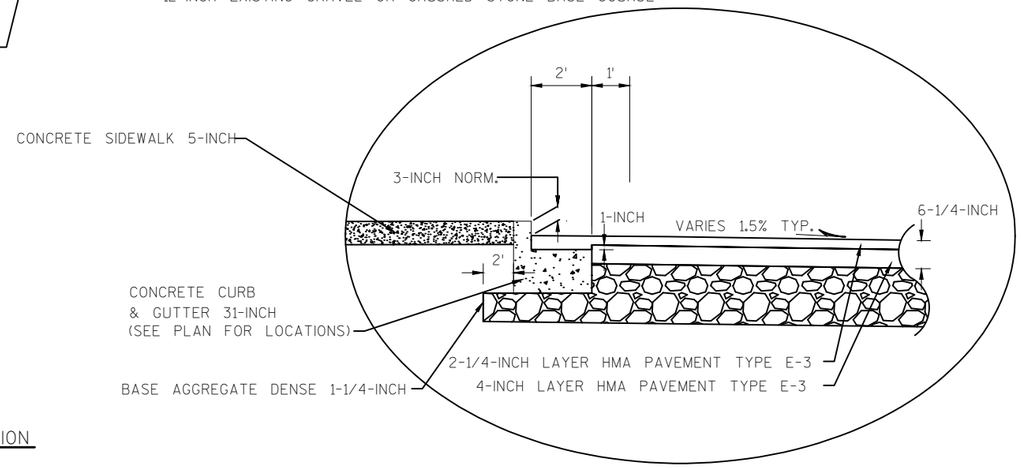
DETAIL B

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TYPICAL SECTION - 68TH ST. ON RAMP	SHEET 26	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\020300_TS.DWG PLOT DATE : 6/2/2014 7:36 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42





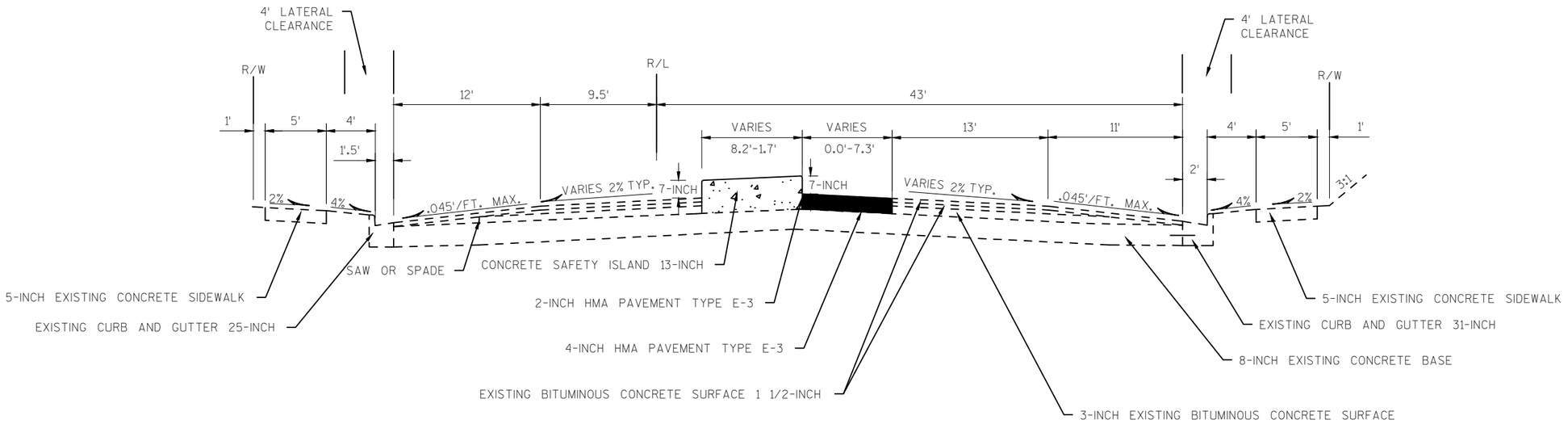
DETAIL C

TYPICAL PROPOSED SECTION

S. 70TH ST.

STA. 14+35 TO STA. 17+50

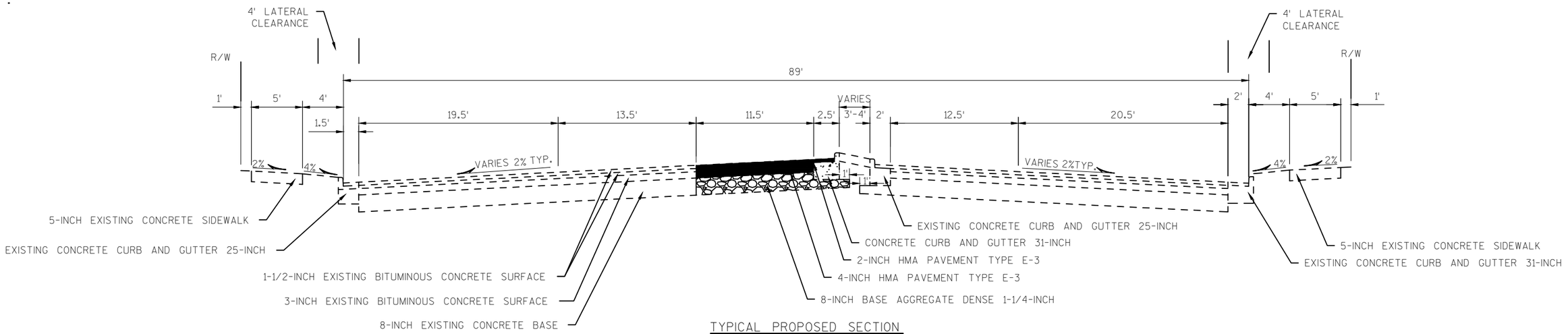
PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TYPICAL SECTION - S. 70TH ST.	SHEET 27	E



TYPICAL PROPOSED SECTION

W. LINCOLN AVE.

STA. 62+30 TO STA. 66+60



TYPICAL PROPOSED SECTION

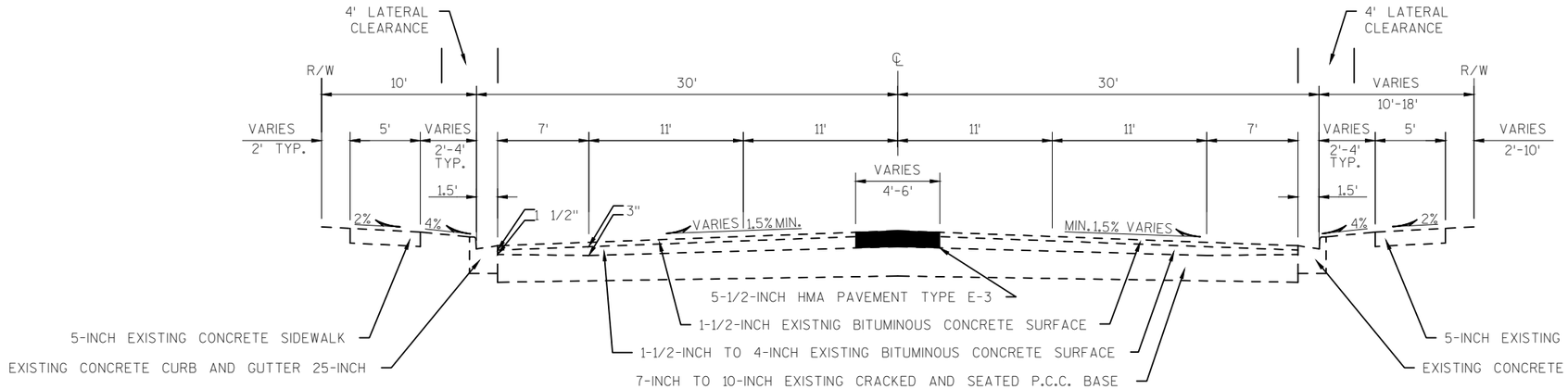
W. LINCOLN AVE.

STA. 55+18 TO STA. 56+35

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TYPICAL SECTION - W. LINCOLN AVE.	SHEET 28	E

2

N

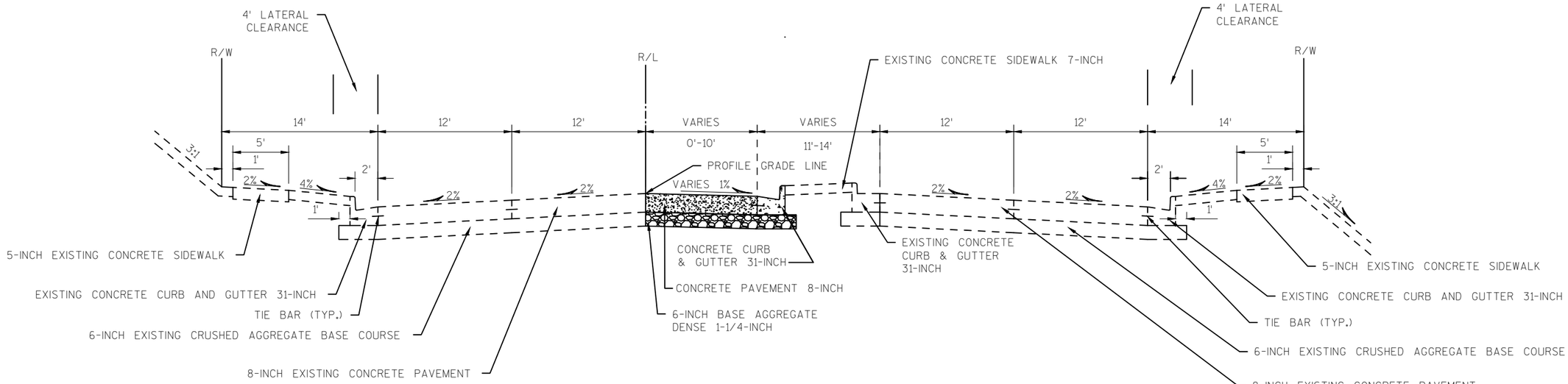


TYPICAL PROPOSED SECTION

W. LINCOLN AVE.

STA. 152+53 TO STA. 160+09

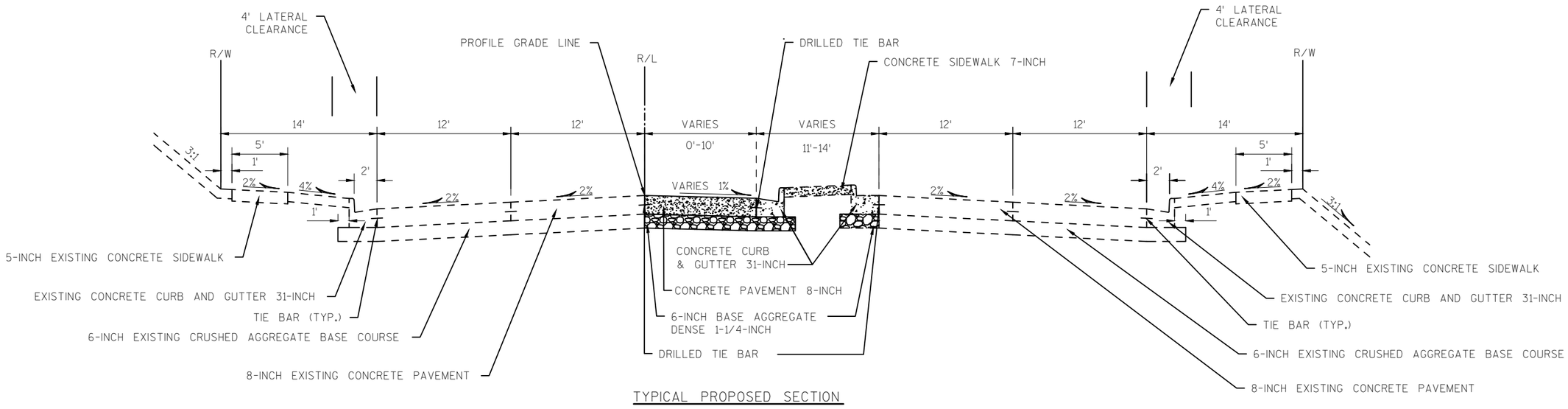
PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TYPICAL SECTION - W. LINCOLN AVE.	SHEET 29	E



TYPICAL PROPOSED SECTION

S. 84TH ST.

STA. 226+14 TO STA. 226+65.4

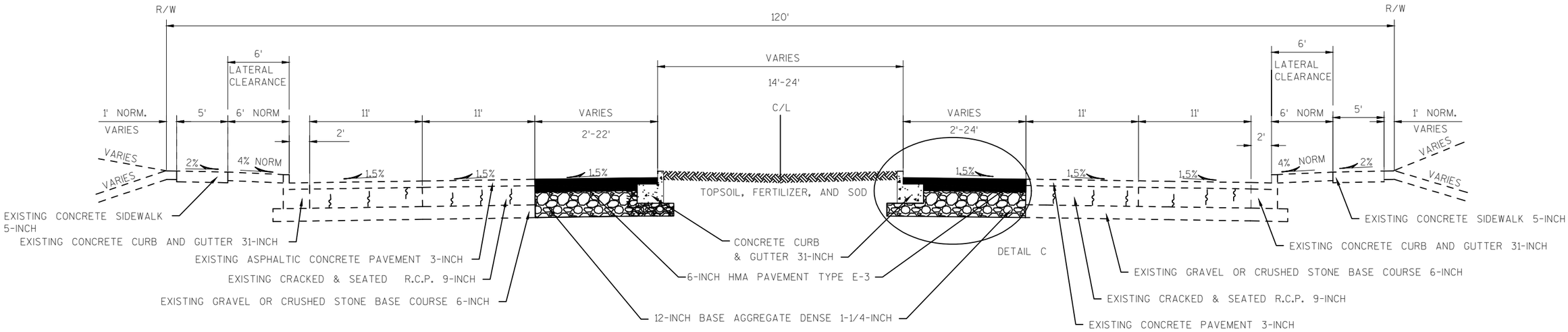


TYPICAL PROPOSED SECTION

S. 84TH ST.

STA. 226+65.4 TO STA. 228+19.1

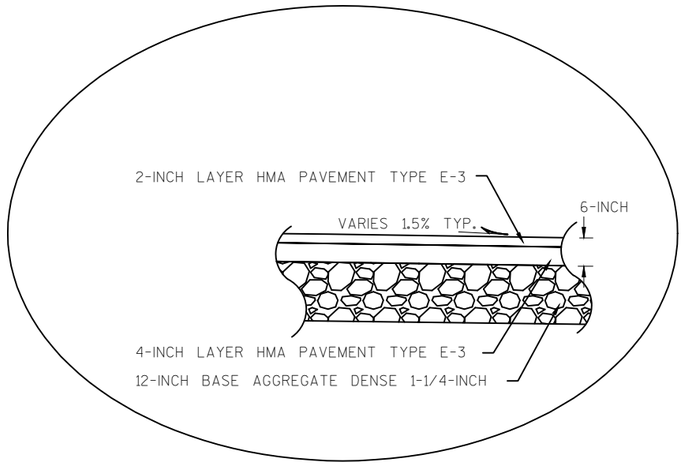
PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TYPICAL SECTION - S. 84TH ST.	SHEET 30	E



TYPICAL PROPOSED SECTION

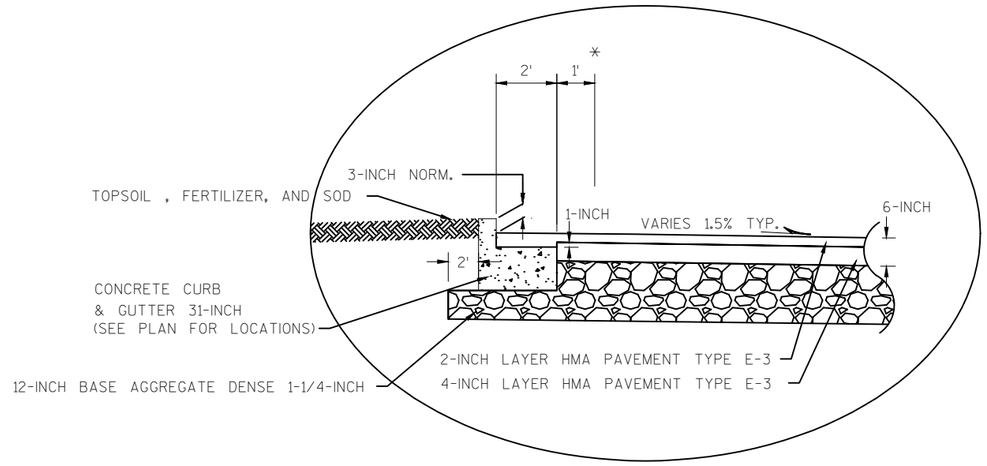
STH 100

STA. 512+31 TO STA. 518+81



DETAIL D

(W. LAPHAM ST.)

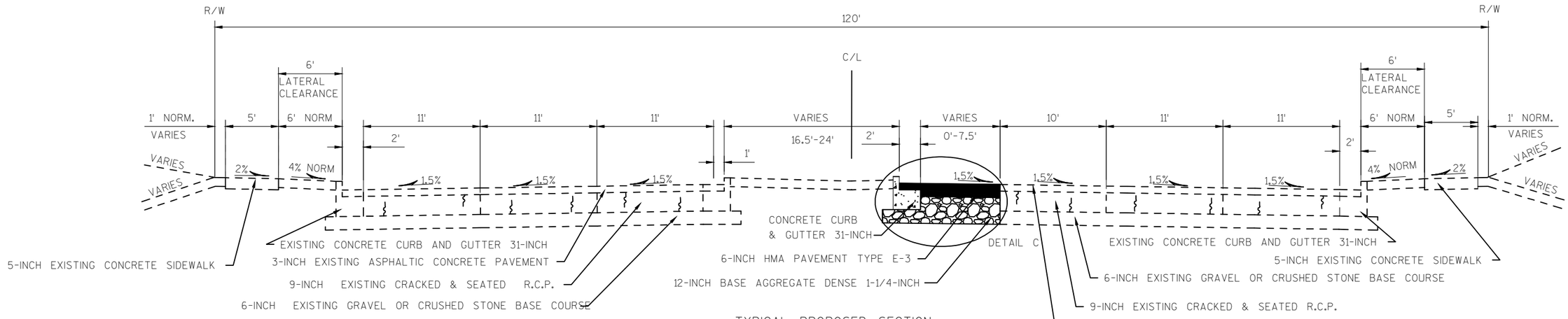


DETAIL C

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TYPICAL SECTION - STH 100	SHEET 31	E

2

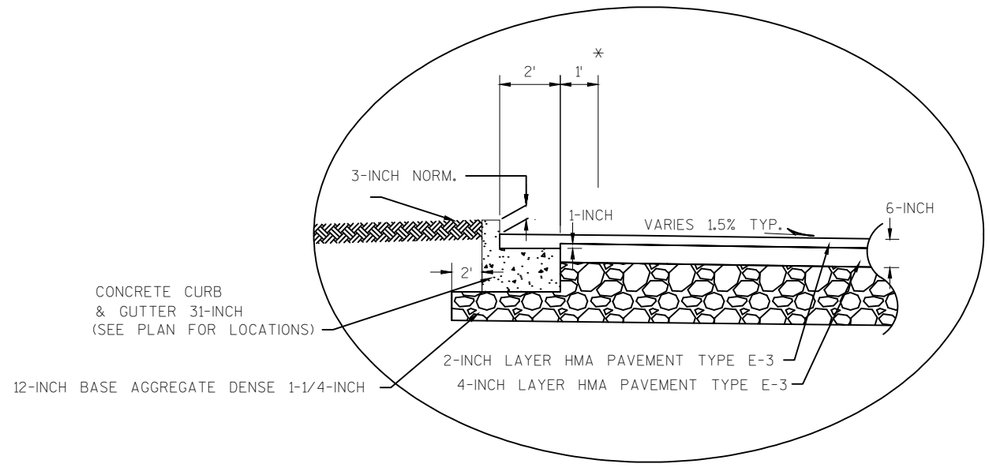
DETAIL C



TYPICAL PROPOSED SECTION

STH 100

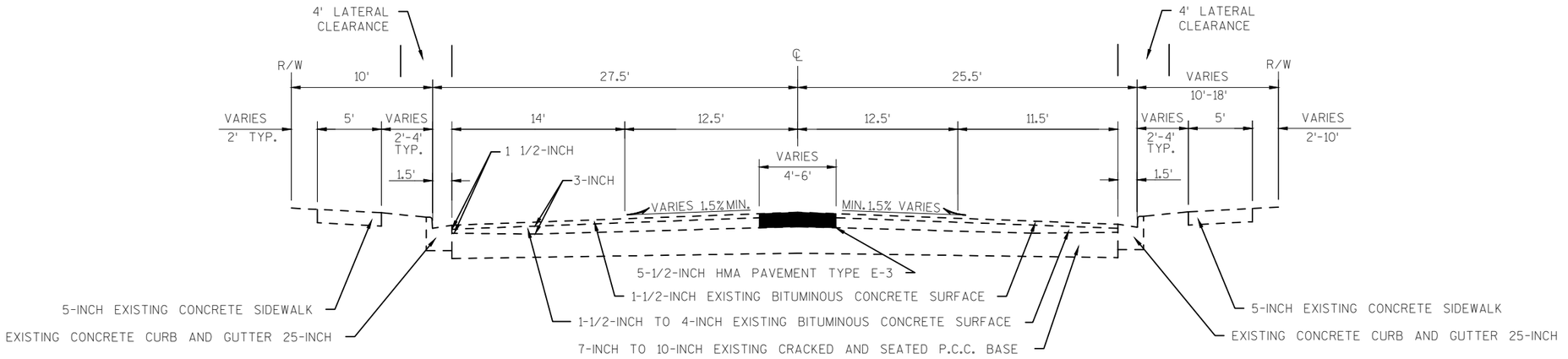
STA. 546+70 TO STA. 549+25



DETAIL C

2

N



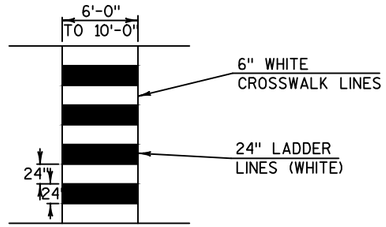
TYPICAL PROPOSED SECTION

W. BELOIT RD.

STA. 135+00 TO STA. 135+45

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TYPICAL SECTION - W. BELOIT RD.	SHEET 33	E

2



CONTINENTAL
CROSSWALK
MARKING
TYPICAL
DETAIL 2

CROSSWALK DETAILS

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 34	E

2

2

N

9+00

8+00

S. 68TH ST.

7+00

6+00

PI: 6+59.23

W. DIXON ST.

792+00

793+00

794+00

795+00

796+00

EP: 796+88.99

EB I94 ON RAMP

EB IH-94 ON RAMP

FOR UTILITY INFORMATION ONLY

Xref W:\PDS\C3D\10603307\91\Dsn\Displays\UT1\xut1.dwg

PROJECT NO: 1060-33-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION - S. 68TH ST. ON RAMP AT IH-94	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023004_UT.DWG PLOT DATE : 4/30/2014 9:14 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

2

BP: 784+50.00

785+00

PI: 14+06.33

PI: 785+48.93

786+00

787+00

13+00

14+00

15+00

16+00

17+00

18+00

S. 70TH ST.

S. 70TH ST.

W. O'CONNOR ST.

W. KEARNEY ST.

70TH STREET

N

FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-33-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION - S. 70TH ST.	SHEET 36	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023001_UT.DWG PLOT DATE : 4/30/2014 9:12 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

2

N

S. 68TH ST.

S. 70TH ST.

SIGN

W. KEARNEY ST.

786+00

787+00

788+00

789+00

790+00

791+00

S. 69TH ST.

CONC SLAB

PI: 6+59.23

FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-33-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION - W. KEARNEY ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023003_UT.DWG PLOT DATE : 4/30/2014 9:13 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

N

W. BLUEMOUND AVE.

BP: 185+00.00

181 182 183 184 185 186 186

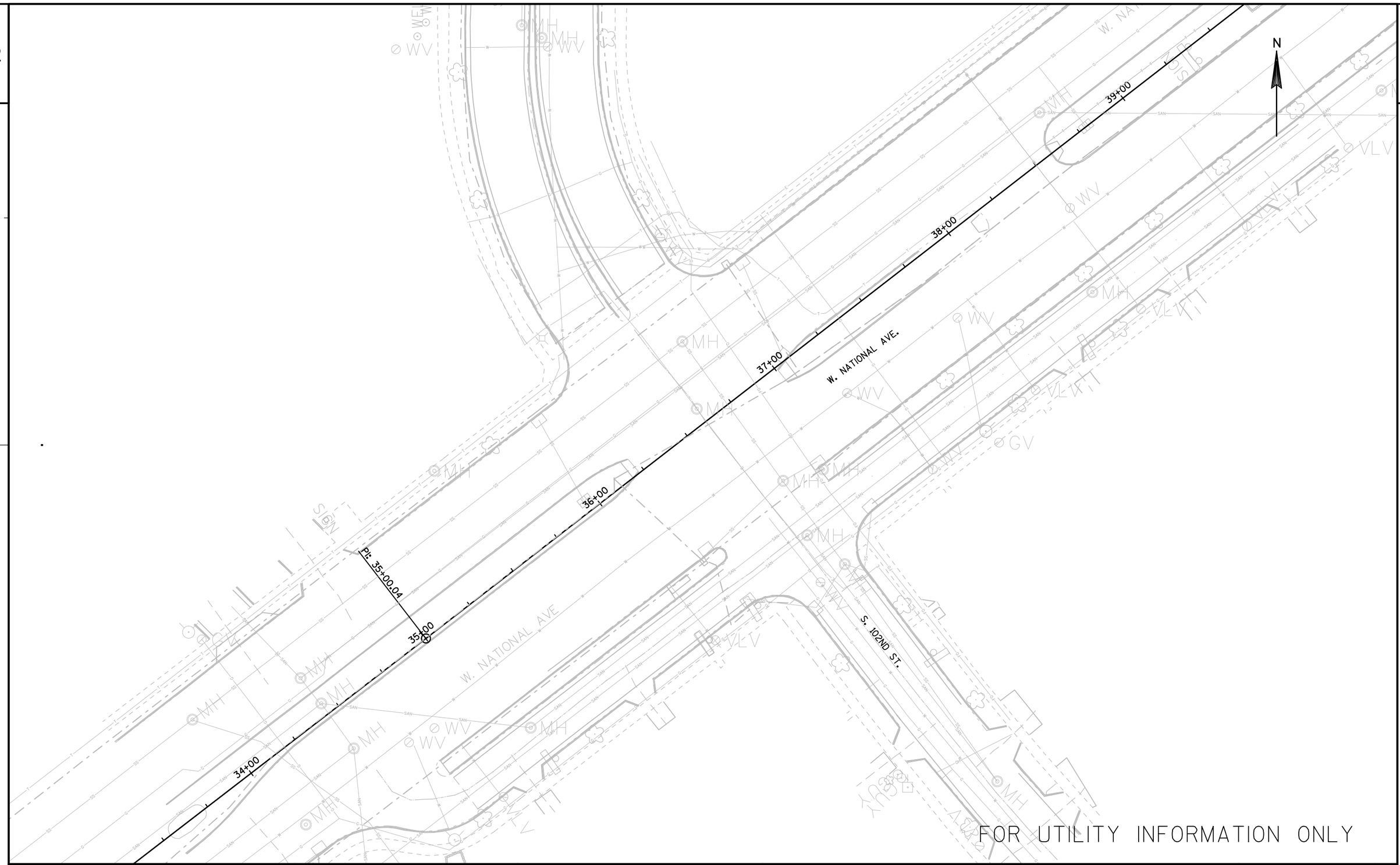
W. BLUEMOUND RD.

FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION-W. BLUEMOUND RD. BTWN N. 103RD & N. 99TH	SHEET 38	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023005_UT.DWG PLOT DATE : 4/30/2014 9:14 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

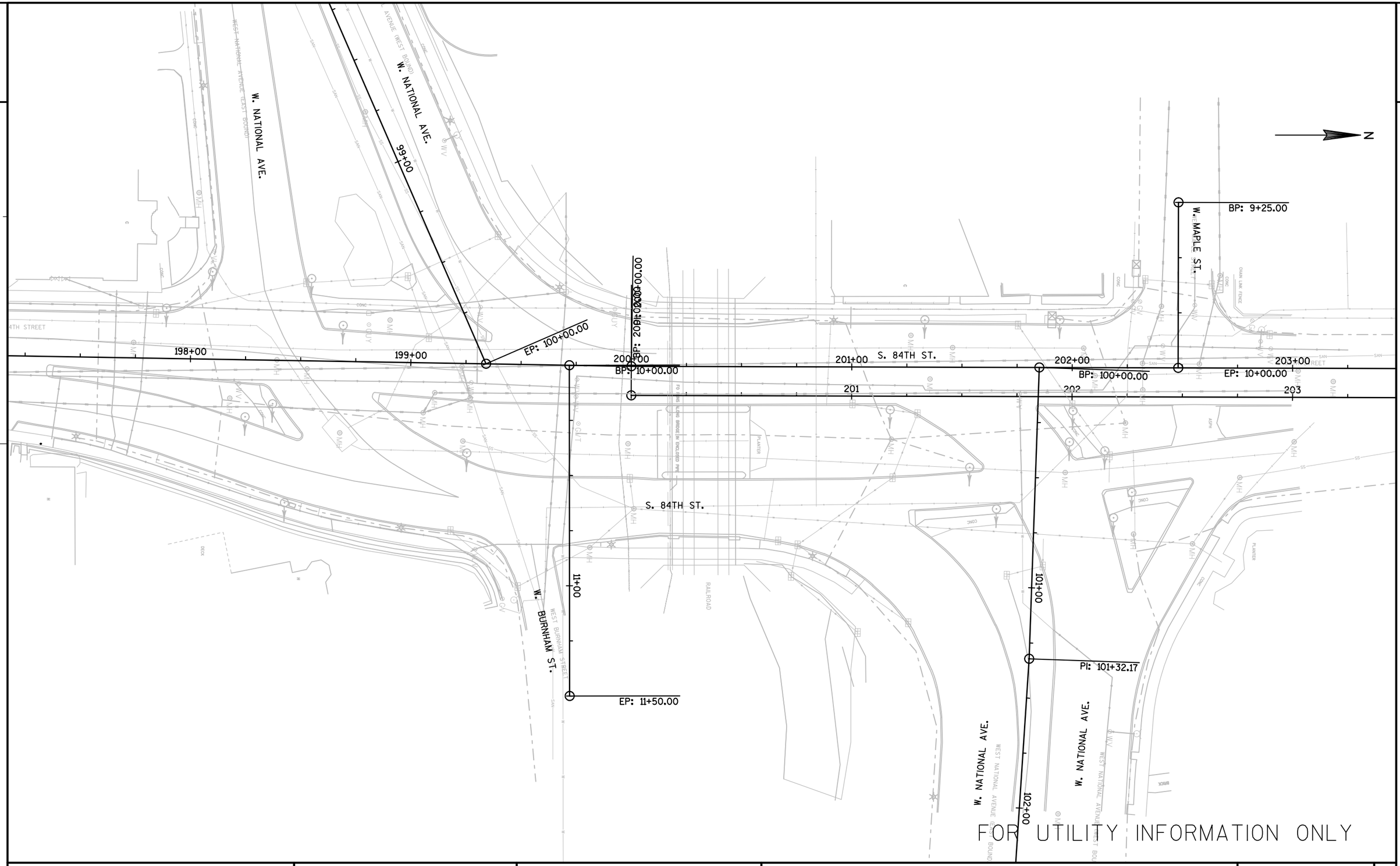


PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION - W. NATIONAL AVE. & S. 102ND ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023006_UT.DWG PLOT DATE : 4/30/2014 9:16 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

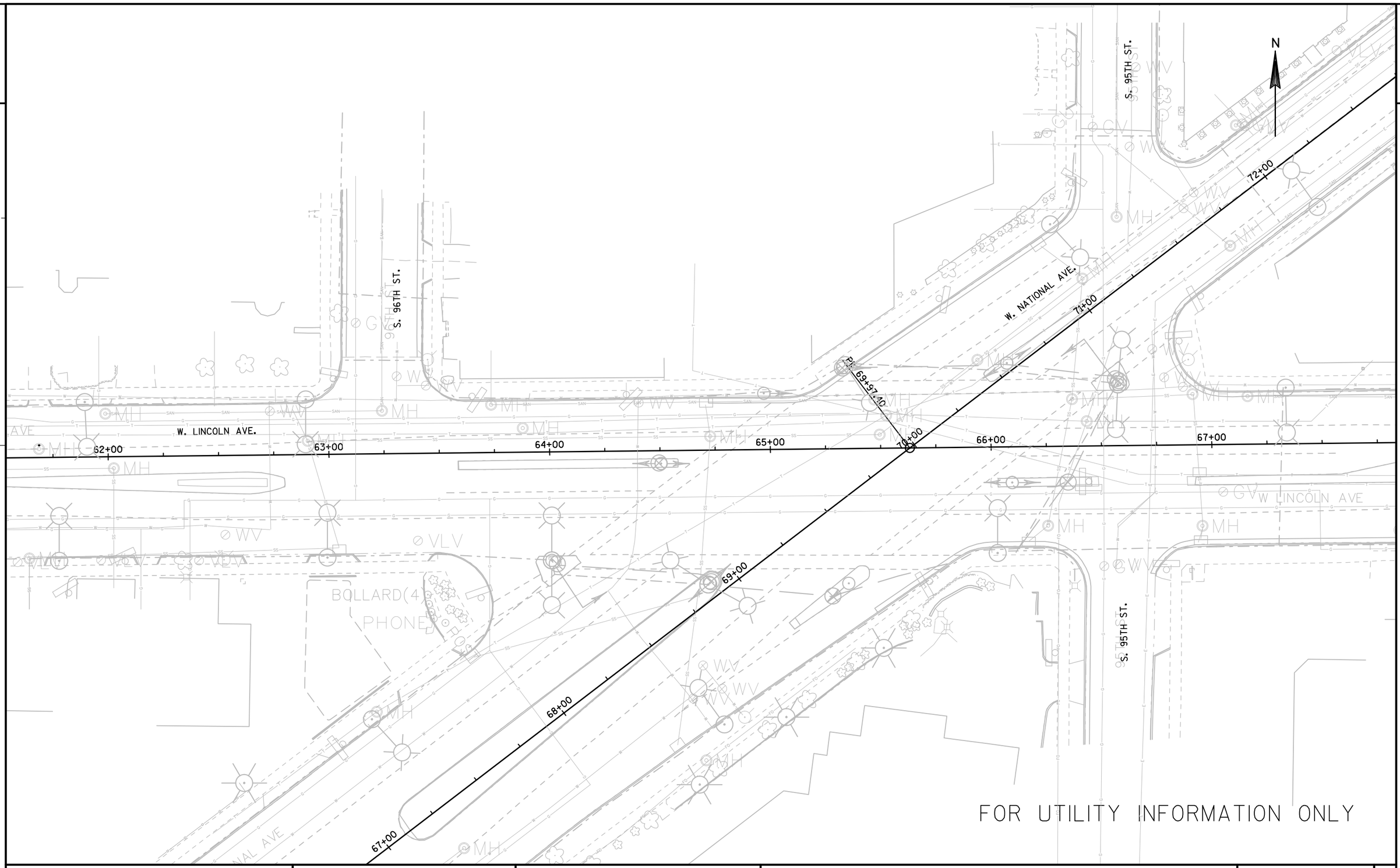
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION - S. 84TH ST. & W. NATIONAL AVE.	SHEET 40	E

2



PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	UTILITY INFORMATION - W. LINCOLN AVE. & W. NATIONAL AVE.	SHEET 41	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023007_UT.DWG PLOT DATE : 4/30/2014 9:17 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

2

N

42+00

41+00

542+00

543+00

544+00

W. GREENFIELD AVE.

S. 92ND ST.

FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	UTILITY INFORMATION - W. GREENFIELD AVE. & S. 92ND ST.	SHEET 42	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023012_UT.DWG PLOT DATE : 4/30/2014 9:20 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

2

N

W. GREENFIELD AVE.

BOLLARD

GREENFIELD AVE.

W. GREENFIELD AVE.

566+00

567+00

568+00

569+00

570+00

571+00

225

224

223

S. 84TH ST.

ONLY

ASPH

CONC

PARKING LOT

FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	UTILITY INFORMATION - W. GREENFIELD AVE. & S. 84TH ST.	SHEET 43	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023012_UT.DWG PLOT DATE : 4/30/2014 9:20 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

2

N

225 226 227 228 229 230

S. 84TH ST.

S. 84TH ST.

W. GREENFIELD AVE.

GREENFIELD AVE.

BOLLARD

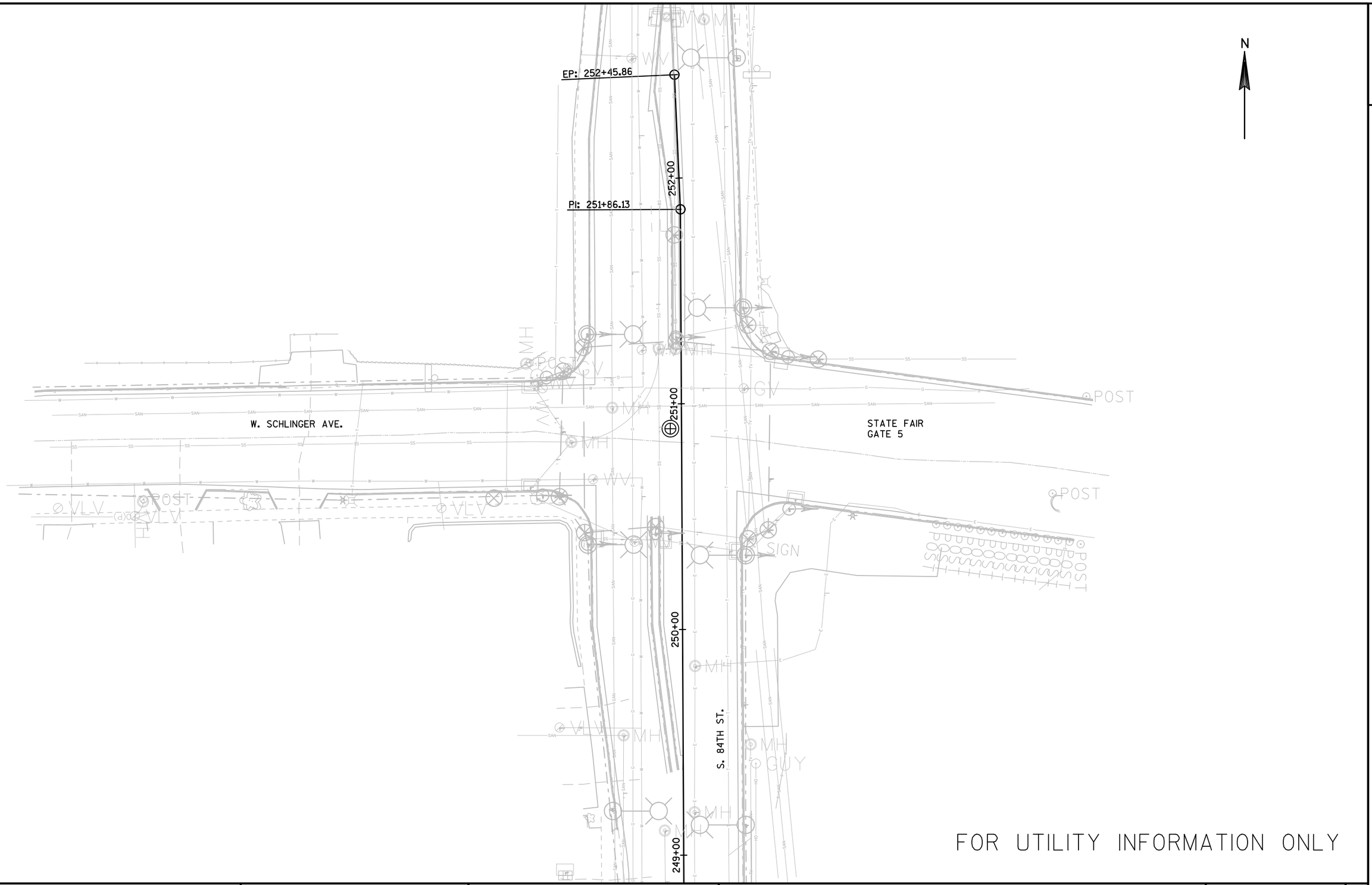
GATE GATE

FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION - W. GREENFIELD AVE. & S. 84TH ST.	SHEET 44	E

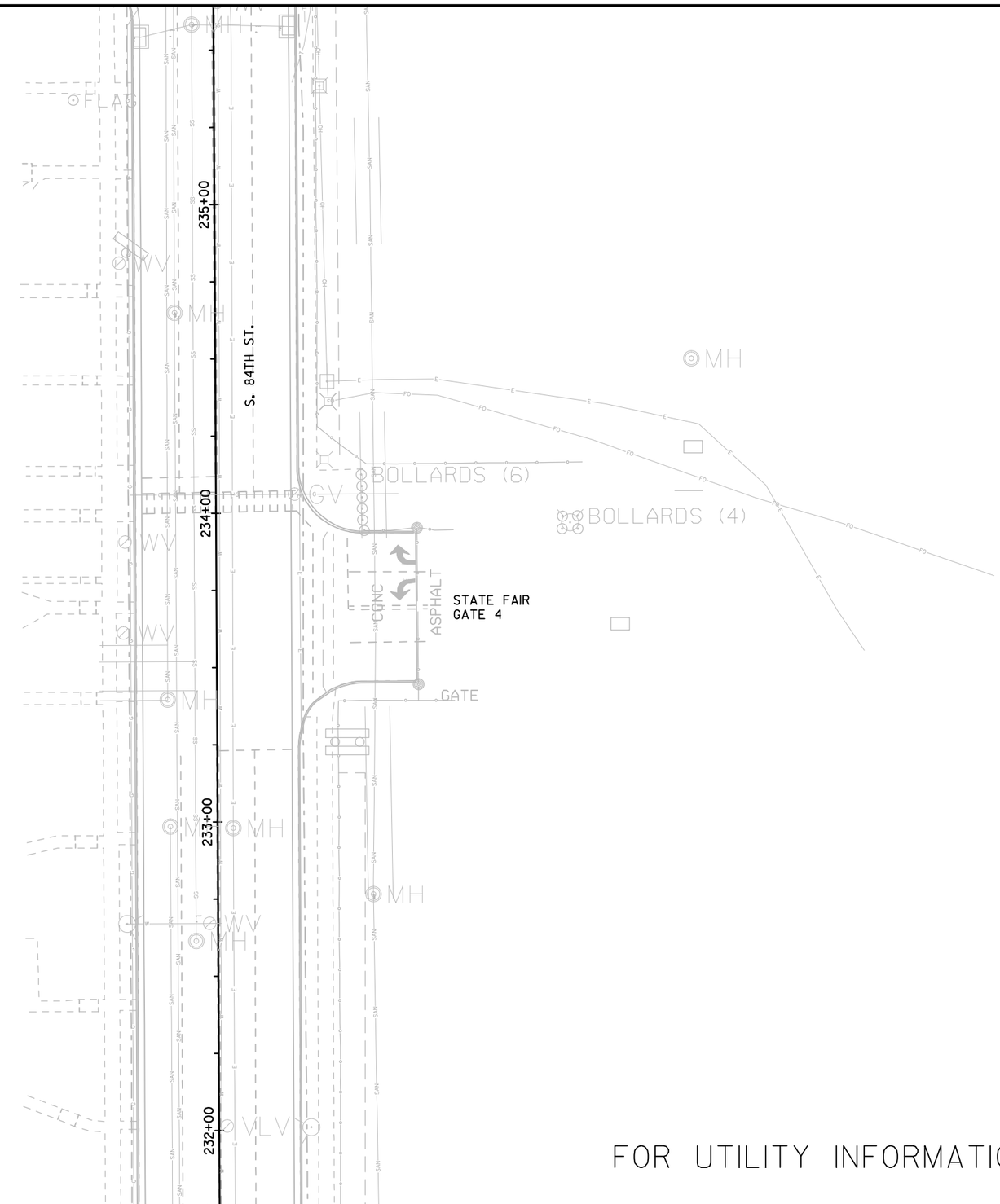
FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023009_UT.DWG PLOT DATE : 4/30/2014 9:17 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2



FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	UTILITY INFORMATION - S. 84TH ST. & STATE FAIR GATE 5	SHEET 45	E



FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	UTILITY INFORMATION - S. 84TH ST. & STATE FAIR GATE 4	SHEET 46	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023011_UT.DWG PLOT DATE : 4/30/2014 9:19 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

2

N

N. 68TH ST.

W. BLUEMOUND RD.

FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	UTILITY INFORMATION - W. BLUEMOUND RD. & N. 68TH ST.	SHEET 47	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023017_UT.DWG PLOT DATE : 4/30/2014 9:21 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

2

N

W. LAPHAM ST.

17+00

18+00

19+00

EP: 20+00.00

515+00

514+00

513+00

512+00

STH 100 (S. 108TH ST.)

STH 100 / S. 108TH ST.

MCDONALDS

TEMP SIGN

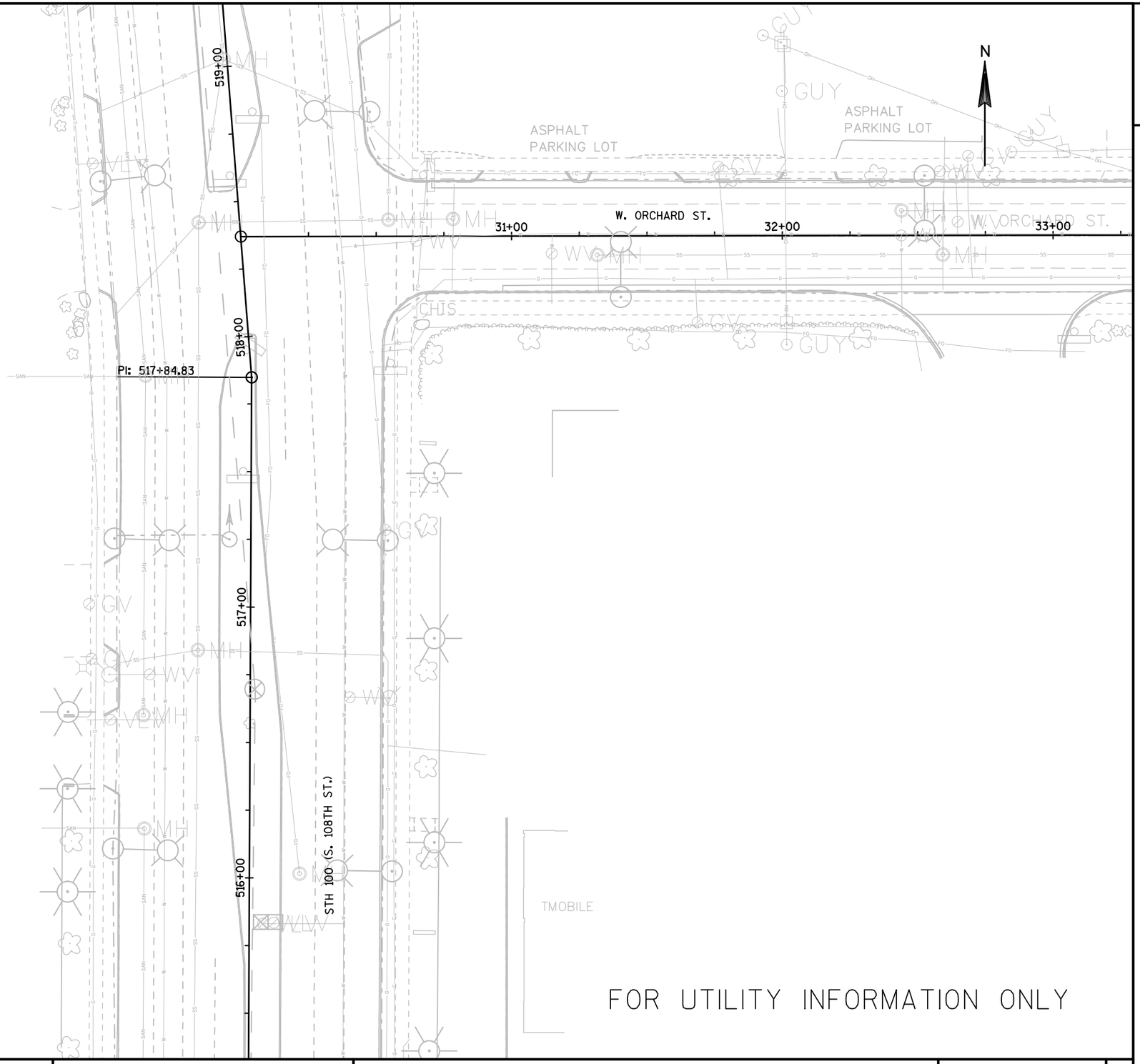
STOP

FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION - STH 100 & W. LAPHAM ST.	SHEET 48	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023020_UT.DWG PLOT DATE : 4/30/2014 9:24 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

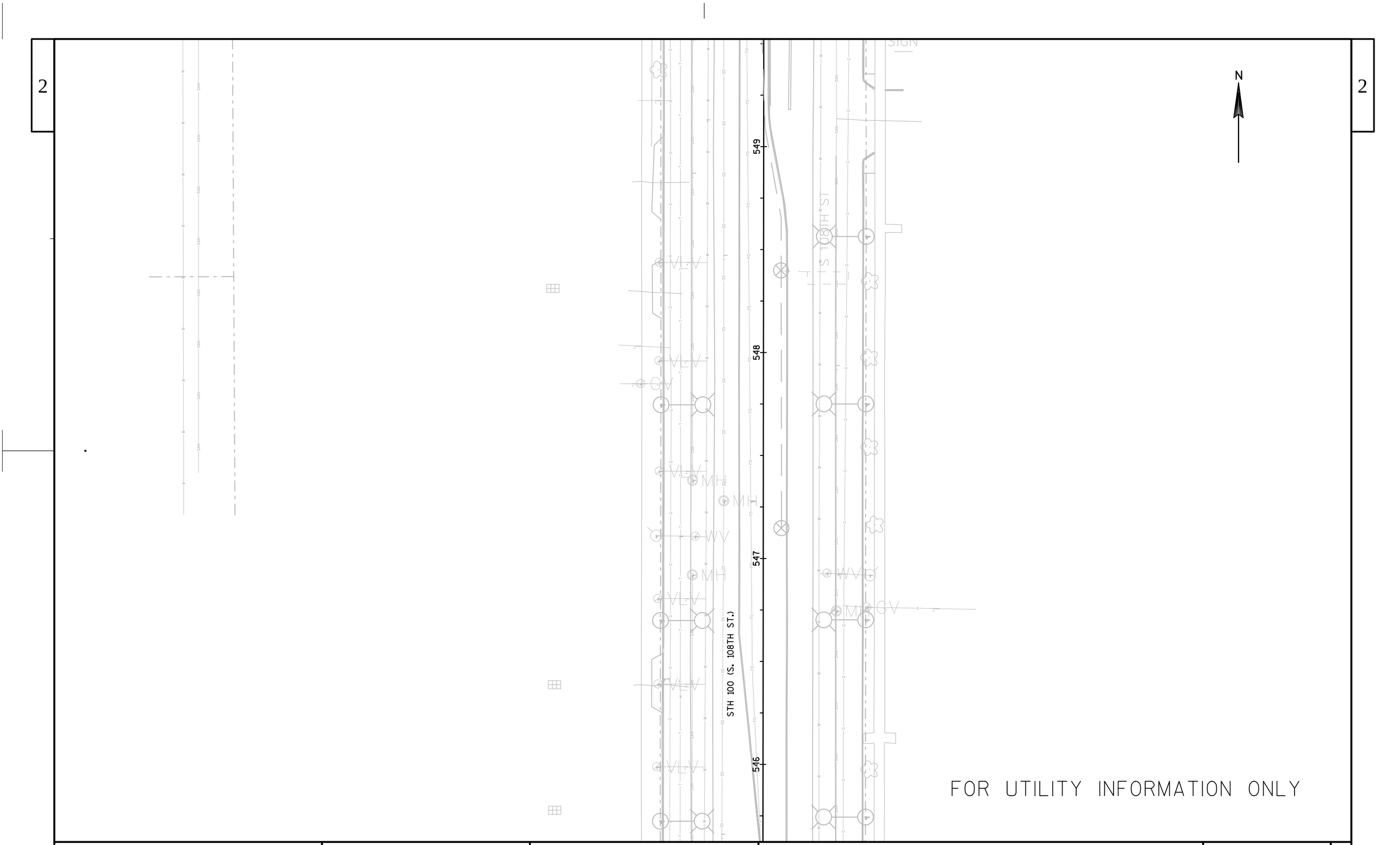


PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION - STH 100 & W. LAPHAM ST.	SHEET 49	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023019_UT.DWG PLOT DATE : 4/30/2014 9:23 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION - W. THEO. TRECKER WAY & STH 100	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023018_UT.DWG PLOT DATE : 4/30/2014 9:22 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

2

N

W. THEO. TRECKER WAY

17+00

18+00

19+00

PI: 552+01.57

PI: 550+62.43

552

551

550

549

EP: 20+00.00

STH 100 (S. 108TH ST.)

W. THEO TRECKER WAY

SIGN

FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION - W. THEO. TRECKER WAY & STH 100	SHEET 51	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023018_UT.DWG PLOT DATE : 4/30/2014 9:22 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

N

I-894 SB EXIT RAMP

S. 102ND ST.

W. LINCOLN AVE.

42 43 44 45 46 47

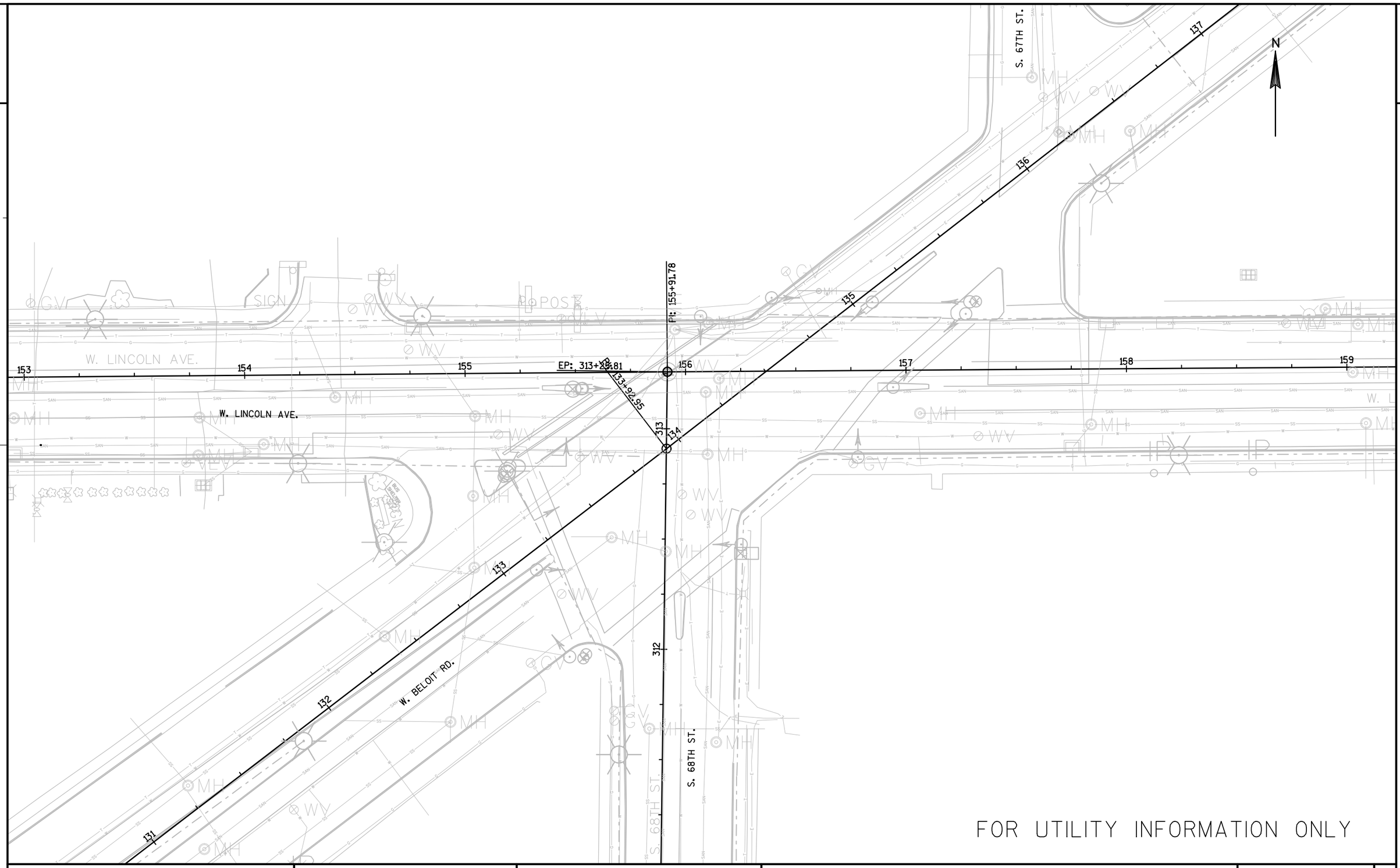
FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION - W. LINCOLN AVE. & I-894 SB EXIT RAMP	SHEET 52	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023021_UT.DWG PLOT DATE : 4/30/2014 9:25 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2



FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION - W. LINCOLN AVE. & W. BELOIT RD.	SHEET 53	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023022_UT.DWG PLOT DATE : 4/30/2014 9:26 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

N

S. 99TH ST.

S. 98TH ST.

W. LINCOLN AVE.

LINCOLN AVE

FOR UTILITY INFORMATION ONLY

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	UTILITY INFORMATION - W. LINCOLN AVE. & S. 98TH ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\023023_UT.DWG PLOT DATE : 4/30/2014 9:26 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

STEEL PLATE BEAM GUARD
SHORT RADIUS TERMINAL

792+30.4, 37.4' LT
BEGIN SAWCUT
BEGIN REMOVING CURB &
GUTTER
BEGIN CONCRETE CURB AND
GUTTER 31-INCH
MATCH EXISTING

REMOVING CONCRETE SIDEWALK

792+47.8, 33.0' LT
15' RAD F.O.C.

STEEL PLATE BEAM GUARD SHORT
RADIUS TERMINAL

IH-94

STEEL PLATE BEAM GUARD SHORT RADIUS

792+89.6, 18.3' LT
STEEL THRIE BEAM
STRUCTURE APPROACH

794+90.8, 17.8 RT
ANGLE POINT

794+90.4, 17.2' LT
ANGLE POINT

HMA PAVEMENT TYPE E-3, 4-INCH
HMA PAVEMENT TYPE E-3, 2 1/4-INCH
BASE AGGREGATE DENSE 1 1/4-INCH

795+25.0, 16.0' LT
END CONCRETE BARRIER TYPE S36C
REVERSE SLOPE
BEGIN CONCRETE CURB & GUTTER
31-INCH REVERSE SLOPE

796+28.4, 12.2' LT
END REMOVING CURB & GUTTER
END CURB & GUTTER 31-INCH
REVERSE SLOPE
MATCH EXISTING
END SAWCUT

CONCRETE SIDEWALK 5-INCH
MATCH EXISTING
BASE AGGREGATE DENSE 3/4-INCH

REMOVING CONCRETE SIDEWALK

CONCRETE SIDEWALK 5-INCH
MATCH EXISTING
BASE AGGREGATE DENSE 3/4-INCH

792+08.2, 39.4' RT
BEGIN SAWCUT
BEGIN REMOVING
CURB & GUTTER
MATCH EXISTING
BEGIN CONCRETE CURB
AND GUTTER 31-INCH
MATCH EXISTING

PI: 6+59.23

792+87.1, 17.9' LT
END CONCRETE CURB
& GUTTER 31-INCH
REVERSE SLOPE
BEGIN CONCRETE
BARRIER TYPE S36C
REVERSE SLOPE

793+81.5, 17.4 RT F.O.C.
BEGIN DRIVEWAY
ENTRANCE CURB

DRIVEWAY CURB HEAD AT GUARDRAIL

795+04.9, 17.3' RT F.O.C.
END DRIVEWAY ENTRANCE CURB

794+84.5, 20.3' RT
MGS POST NO. 1

796+70.7, 12.1' RT
END REMOVING CURB & GUTTER
END CURB & GUTTER 31-INCH
MATCH EXISTING
END SAWCUT

HMA PAVEMENT TYPE E-3, 4-INCH
HMA PAVEMENT TYPE E-3, 2 1/4-INCH
BASE AGGREGATE DENSE 1 1/4-INCH

792+33.2, 42.0' RT
25' RAD F.O.C.

W. DIXON ST.

S. 68TH ST.

EB IH-94 ON RAMP

CAMER

EP: 796+88.99

792+00 793+00 794+00 795+00 796+00 796+89

7+00 8+00 9+00

6+00

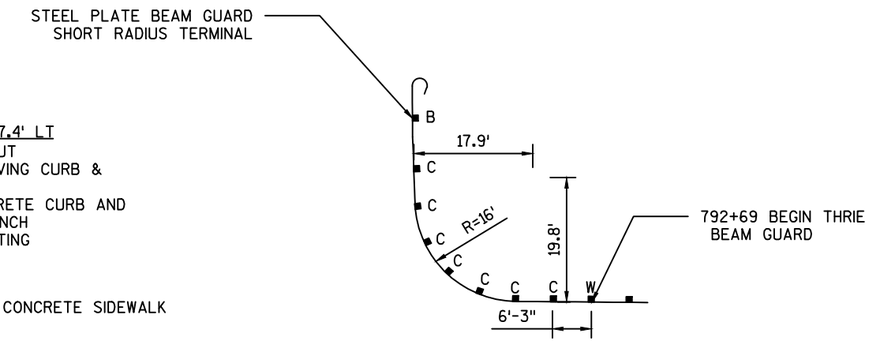
709.94 710.13 710.41 710.71 711.05 711.49 712.08 712.65 713.28 713.82 714.00 714.35 714.49 714.52 714.37 714.10

709.79 709.59 709.57 709.79 710.09 710.43 710.87 711.45 712.03 712.60 713.00 713.39 713.72 713.98 714.03 713.90 713.67 713.30 712.97

R=16' R=15' R=25' CG03

F.O.C - FACE OF CURB

STEEL PLATE BEAM GUARD SHORT RADIUS (SEE S.D.D.)

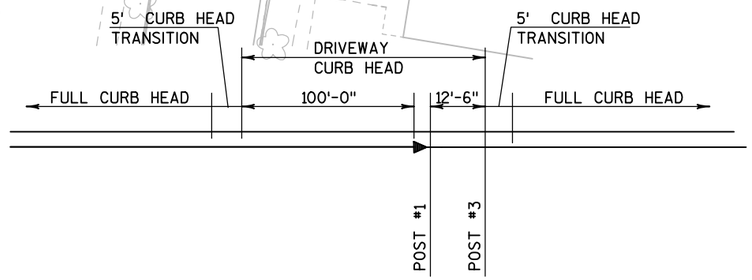


LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

N

DRIVEWAY CURB HEAD AT GUARDRAIL



PROJECT NO: 1060-33-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - 68TH ST. ON RAMP AT IH-94	SHEET 55	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\021204_PD.DWG PLOT DATE : 6/2/2014 7:37 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

BEGIN REMOVING ASPHALT PAVEMENT
14+35.2, 4.8' LT
BEGIN HMA PAVEMENT TYPE E-3
14+35.2, 4.8' LT
MATCH EXISTING
BEGIN SAWCUT
14+35.2, 4.8' LT

BEGIN REMOVING ASPHALT PAVEMENT
16+85.6, 1.7' LT
BEGIN HMA PAVEMENT TYPE E-3
MATCH EXISTING
16+85.6, 1.7' LT
BEGIN REMOVING CURB & GUTTER
BEGIN REMOVING CONCRETE SIDEWALK
BEGIN CONCRETE CURB & GUTTER 31-INCH REVERSE SLOPE
MATCH EXISTING
BEGIN SAWCUT
16+85.6, 1.7' LT

N

W. O'CONNOR ST.

BP: 784+50.00

784+50

785+00

PI: 14+06.33

END REMOVING ASPHALT PAVEMENT
END HMA PAVEMENT TYPE E-3
MATCH EXISTING
END SAWCUT
16+98.7, 4.7' LT

BEGIN CONCRETE CURB & GUTTER 31-INCH REVERSE SLOPE
14+44.5, 0.0'
MATCH EXISTING

END REMOVING CURB & GUTTER
END CONCRETE CURB & GUTTER 31-INCH REVERSE SLOPE
MATCH EXISTING
16+95.3, 0.2' RT

14+48.5, 1.2' LT
BEGIN CONCRETE SIDEWALK 5-INCH

14+60.3, 1.8' LT

15+90.5, 1.2' LT
END CONCRETE SIDEWALK 5-INCH
MATCH EXISTING

16+85.6, 1.2' LT
BEGIN CONCRETE SIDEWALK
5-INCH

PI: 16+97.02

S. 70TH ST.

13+00

14+00

PI: 15+48.93

15+00

16+00

17+00

18+00

70TH STREET

3'

14+48.5, 0.2' RT
2' RADIUS F.O.C.

16+98.7, 5.3' RT

16+94.3, 1.5' RT
END REMOVING CONCRETE SIDEWALK

14+39.0, 5.2' RT
BEGIN REMOVING CONCRETE SIDEWALK

16+91.5, 0.3' RT
2' RADIUS F.O.C.

14+37.2, 4.3' RT
BEGIN REMOVING CURB & GUTTER

786+00

W. KEARNEY ST.

787+00

14+35.2, 7.3' RT

END REMOVING ASPHALT PAVEMENT
15+90.6, 2.3' RT
END REMOVING CURB & GUTTER
15+90.6, 2.3' RT
END HMA PAVEMENT TYPE E-3
MATCH EXISTING
END CONCRETE CURB & GUTTER 31-INCH REVERSE SLOPE
MATCH EXISTING
END SAWCUT
15+90.6, 2.3' RT
END REMOVING CONCRETE SIDEWALK
15+90.6, 2.3' RT

16+91.5, 1.8' RT
END CONCRETE SIDEWALK 5-INCH

SIGN

W. O CONNOR ST.

LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

F.O.C. - FACE OF CURB

PROJECT NO: 1060-33-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - S. 70TH ST.	SHEET 56	E

LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

N

BEGIN CONCRETE SIDEWALK 5-INCH
185+25.7, 71.6' LT
MATCH EXISTING
BEGIN SAWCUT

END CONCRETE SIDEWALK 5-INCH
185+48.7, 71.7' LT
MATCH EXISTING
END SAWCUT

BP: 185+00.00

183 184 185 186 187 188

W. BLUEMOUND RD.

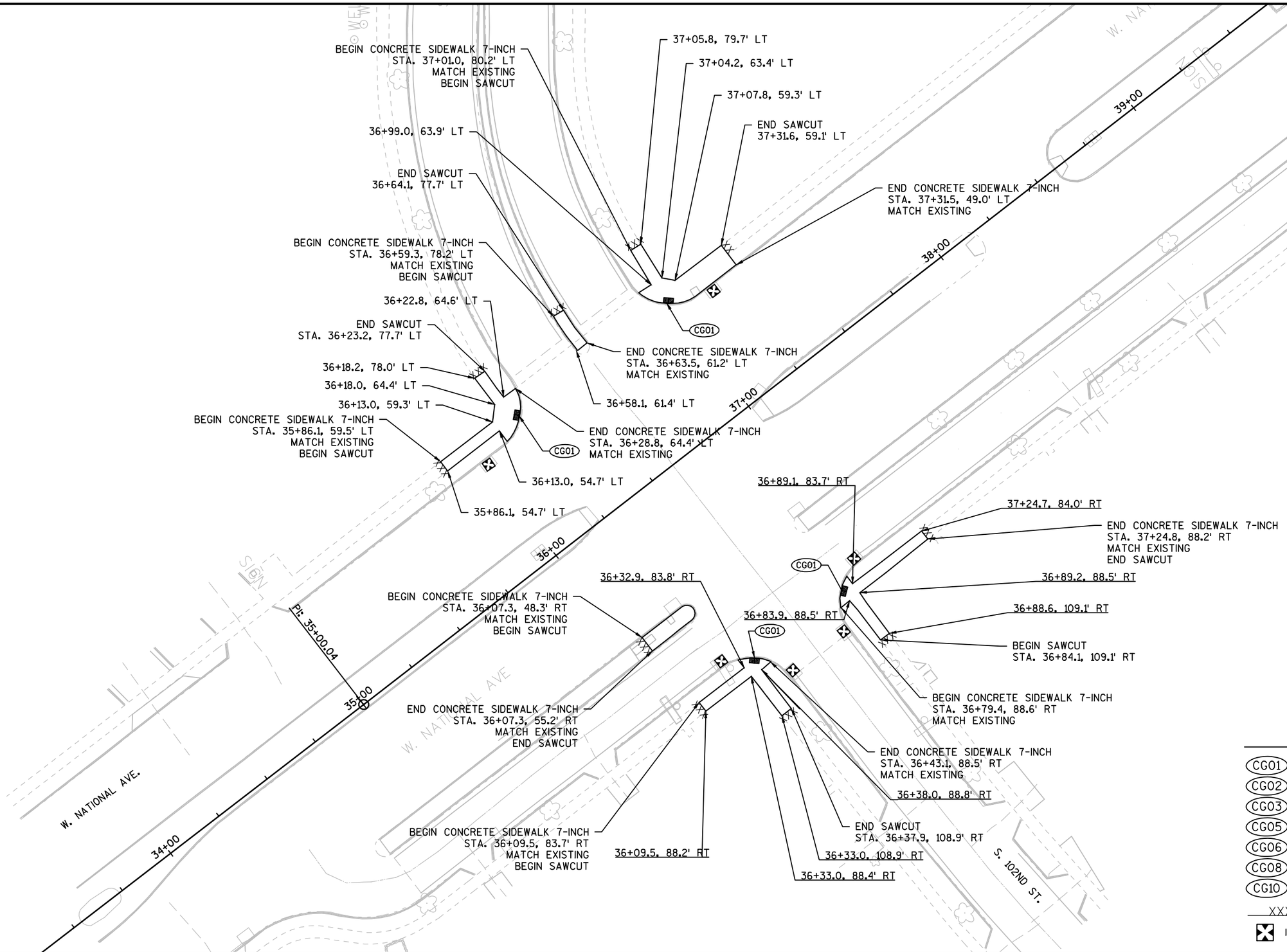
W. BLUEMOUND RD.

MILWAUKEE COUNTY ZOO

BEGIN CONCRETE SIDEWALK 5-INCH
185+09.9, 52.1' RT
MATCH EXISTING
BEGIN SAWCUT

END CONCRETE SIDEWALK 5-INCH
185+52.2, 52.5' RT
MATCH EXISTING
END SAWCUT

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - W. BLUEMOUND RD. BTWN N. 103RD & N. 99TH	SHEET 57	E



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - W. NATIONAL AVE. & S. 102ND ST.	SHEET 58	E

2

END CONCRETE SIDEWALK 7-INCH
198+13.5, 52.0' LT
MATCH EXISTING
END SAWCUT
198+13.5, 52.0' LT

197+86.4, 31.4' LT

BEGIN CONCRETE
SIDEWALK 7-INCH
BEGIN SAWCUT
197+87.2, 21.1' LT
MATCH EXISTING

CG01

W. NATIONAL AVE.

WEST NATIONAL AVENUE (WEST BOUND)

WEST NATIONAL AVENUE (EAST BOUND)

W. NATIONAL AVE.

99

199+15.1, 31.3' LT

END SAWCUT
199+02.5, 28.1' LT

BEGIN CONCRETE
SIDEWALK 7-INCH
199+02.9, 23.0' LT
MATCH EXISTING
BEGIN SAWCUT
199+02.9, 23.0' LT

END CONCRETE SIDEWALK 7-INCH
199+20.9, 24.9' LT
MATCH EXISTING

BEGIN CONCRETE SIDEWALK 7-INCH
200+62.1, 23.7' LT
MATCH EXISTING
BEGIN SAWCUT
200+62.1, 23.7' LT

202+15.7, 28.5' LT

201+44.0, 28.6' LT

200+92.1, 28.5' LT

201+80.7, 28.9' LT

END CONCRETE SIDEWALK 7-INCH
202+15.7, 23.6' LT
MATCH EXISTING
END SAWCUT
202+15.7, 23.6' LT

BEGIN CONCRETE SIDEWALK 7-INCH
202+64.1, 33.8' LT
MATCH EXISTING

202+68.3, 34.3' LT

BEGIN SAWCUT
202+73.3, 34.7' LT

N

BP: 9+25.00

W. MAPLE ST.

WEST MAPLE STREET

202+92.6, 23.7' LT

END CONCRETE
SIDEWALK 7-INCH
202+92.7, 15.7' LT
MATCH EXISTING
END SAWCUT
202+92.7, 15.7' LT

CG06

PI: 200+00.00

EP: 100+00.00

BP: 10+00.00

198

199

200

201

202

203

S. 84TH ST.

201+79.0, 20.0' LT

201+87.5, 20.0' LT

CG10

BP: 100+00.00

EP: 10+00.00

BEGIN CONCRETE
SIDEWALK 7-INCH
198+20.3, 10.5' RT
MATCH EXISTING

CG08

END CONCRETE
SIDEWALK 7-INCH
198+43.5, 33.6' RT
MATCH EXISTING

BEGIN CONCRETE
SIDEWALK 7-INCH
201+87.6, 17.4' RT
MATCH EXISTING

CG08

END CONCRETE
SIDEWALK 7-INCH
202+13.7, 39.8' RT
MATCH EXISTING

END CONCRETE
SIDEWALK 7-INCH
202+52.9, 54.7' RT
MATCH EXISTING

BEGIN CONCRETE
SIDEWALK 7-INCH
201+29.6, 72.3' RT
MATCH EXISTING

CG08

202+25.1, 57.7' RT

CG08

CG08

END CONCRETE
SIDEWALK 7-INCH
202+86.7, 62.3' RT
MATCH EXISTING
END SAWCUT
202+86.7, 62.3' RT

BEGIN CONCRETE
SIDEWALK 7-INCH
197+61.5, 41.0' RT
MATCH EXISTING
BEGIN SAWCUT
197+61.5, 41.0' RT

END CONCRETE
SIDEWALK 7-INCH
197+85.1, 47.2' RT
MATCH EXISTING
END SAWCUT
197+85.1, 47.2' RT

BEGIN CONCRETE
SIDEWALK 7-INCH
198+50.6, 67.9' RT
MATCH EXISTING
BEGIN SAWCUT
198+50.6, 67.9' RT

CG10

END CONCRETE
SIDEWALK 7-INCH
198+59.0, 70.1' RT
MATCH EXISTING
END SAWCUT
198+59.0, 70.1' RT

BEGIN SAWCUT
199+92.25, 82.40' RT

CG05

BEGIN CONCRETE
SIDEWALK 7-INCH
199+66.9, 89.4' RT
MATCH EXISTING

END CONCRETE
SIDEWALK 7-INCH
199+92.41, 87.23' RT
MATCH EXISTING
END SAWCUT
199+92.41, 87.23' RT

W. BURNHAM ST.

WEST BURNHAM STREET

11

EP: 11+50.00

S. 84TH ST.

BEGIN CONCRETE
SIDEWALK 7-INCH
200+97.5, 95.3' RT
MATCH EXISTING
BEGIN SAWCUT
200+97.5, 95.3' RT

CG10

END CONCRETE SIDEWALK
7-INCH
201+03.5, 99.4' RT
MATCH EXISTING
END SAWCUT
201+03.5, 99.4' RT

END CONCRETE
SIDEWALK 7-INCH
201+78.6, 71.6' RT
MATCH EXISTING

BEGIN CONCRETE
SIDEWALK 7-INCH
202+16.8, 66.9' RT
MATCH EXISTING

202+67.2, 77.0' RT

202+87.5 67.2' RT

101

PI: 101+32.17

202+64.2, 92.1' RT

W. NATIONAL AVE.

WEST NATIONAL AVENUE (EAST BOUND)

W. NATIONAL AVE.

WEST NATIONAL AVENUE

202+27.1, 174.1' RT

202+25.3, 202.4' RT

102

BEGIN CONCRETE
SIDEWALK 7-INCH
202+28.3, 216.0' RT
MATCH EXISTING
BEGIN SAWCUT
202+28.3, 216.0' RT

LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - S. 84TH ST. & W. NATIONAL AVE.	SHEET 59	E

LEGEND

- CG01 CURB RAMP TYPE 1
- CG02 CURB RAMP TYPE 1A
- CG03 CURB RAMP TYPE 2
- CG05 CURB RAMP TYPE 4A
- CG06 CURB RAMP TYPE 4B
- CG08 CURB RAMP TYPE 6
- CG10 CURB RAMP TYPE 7B
- XXXX SAWCUT
- INLET PROTECTION TYPE C

END CONCRETE SAFETY ISLANDS
64+57.8(LI), 3.8' RT
MATCH EXISTING
END SAWCUT
64+57.8(LI), 3.8' RT

BEGIN CONCRETE SIDEWALK 7-INCH
64+52.2(LI), 32.1' LT
MATCH EXISTING
BEGIN SAWCUT
64+52.2(LI), 32.1' LT

70+67.8(NA), 5.8' LT

BEGIN CONCRETE SAFETY ISLANDS
70+44.4(NA), 6.2' LT
MATCH EXISTING
BEGIN SAWCUT
70+44.4(NA), 6.2' LT

70+24.4(NA), 54.8' LT

69+83.5(NA), 52.3' LT

65+10.2(LI), 32.2' LT

END CONCRETE SAFETY ISLANDS
STA. 63+64.6(LI), 3.7' RT
MATCH EXISTING

END REMOVING PAVEMENT
STA. 63+64.6(LI), 3.7' RT

END REMOVING ASPHALTIC SURFACE
STA. 63+58.8(LI), 3.8' RT

BEGIN REMOVING PAVEMENT
STA. 62+29.9(LI), 8' RT
BEGIN REMOVING ASPHALTIC SURFACE
STA. 62+29.9(LI), 8' RT
BEGIN CONCRETE SAFETY ISLANDS
STA. 62+29.9(LI), 8' RT
MATCH EXISTING

S. 96TH ST.

96TH ST

S. 95TH ST.

95TH ST

W. NATIONAL AVE.

W. LINCOLN AVE.

AVE

62+00 63+00 64+00 65+00 66+00 67+00 68+00 69+00 70+00 71+00 72+00

PI: 69+97.40

64+41.1(LI), 3.6' RT

64+52.2(LI), 24.0' LT

CG01

64+58.1(LI), 7.5' RT

63+64.6(LI), 7.5' RT

62+98.8(LI), 7.5' RT

64+11.4(LI), 47.2' RT

63+94.7(LI), 47.2' RT

CG08

END CONCRETE SAFETY ISLANDS
70+67.5(NA), 1.1' LT
MATCH EXISTING
END SAWCUT
70+67.5(NA), 1.1' LT

W LINCOLN AVE

END CONCRETE SIDEWALK 7-INCH
70+24.2(NA), 50.2' LT
MATCH EXISTING
END SAWCUT
70+24.2(NA), 50.2' LT

69+83.0(NA), 46.9' LT

BEGIN CONCRETE SAFETY ISLAND
64+41.0(LI), 7.5' RT
MATCH EXISTING
BEGIN SAWCUT
64.41.0(LI), 7.5' RT

END CONCRETE SAFETY ISLANDS
64+13.6(LI), 50.3' RT
MATCH EXISTING
END SAWCUT
64+13.6(LI), 50.3' RT

END HMA PAVEMENT TYPE E-3
STA. 62+80.0(LI), 13.3' RT
MATCH EXISTING

BEGIN CONCRETE SAFETY ISLANDS
63+93.2(LI), 49.7' RT
MATCH EXISTING
BEGIN SAWCUT
63+93.2(LI), 49.7' RT

68+29.8(NA), 49.3' LT

BEGIN HMA PAVEMENT TYPE E-3
STA. 62+29.9(LI), 16.2' RT

LINCOLN AVE. ALIGNMENT (LI)

NATIONAL AVE. ALIGNMENT (NA)

N

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - W. LINCOLN AVE. & W. NATIONAL AVE.	SHEET 60	E

LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

S. 96TH ST.

96TH ST

W. LINCOLN AVE.

63+00 64+00 65+00 66+00 67+00 68+00

W. NATIONAL AVE.

69+00 70+00 71+00 72+00 73+00

S. 95TH ST.

95TH ST

W LINCOLN AVE

LINCOLN AVE. ALIGNMENT (LI)

NATIONAL AVE. ALIGNMENT (NA)

BOLLARD(4)

POST

Pt. 69+97.40

CG08

CG01

CG01

BEGIN CONCRETE SAFETY ISLANDS
STA. 66+38.1(LI), 14.1' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 66+38.1(LI), 14.1' RT

END CONCRETE SAFETY ISALNDS
66+10.9(LI), 14.1' RT
MATCH EXISTING
END SAWCUT
66+10.9(LI), 14.1' RT

BEGIN CONCRETE SAFETY ISLANDS
65+99.9(LI), 14.1' RT
MATCH EXISTING
BEGIN SAWCUT
65+99.9(LI), 14.1' RT

END CONCRETE SAFETY ISLANDS
69+49.4(NA), 31.4' RT
MATCH EXISTING
END SAWCUT
69+49.4(NA), 31.4' RT

BEGIN CONCRETE SAFETY ISLANDS
69+05.9(NA), 29.7' RT
MATCH EXISTING
BEGIN SAWCUT
69+05.9(NA), 29.7' RT

BEGIN CONCRETE SIDEWALK 7-INCH
68+98.1(NA), 54.4' RT
MATCH EXISTING
BEGIN SAWCUT
68+98.1(NA), 54.4' RT

70+96.4(NA), 26.3' RT

BEGIN CONCRETE SIDEWALK 7-INCH
70+80.8(NA), 26.4' RT
MATCH EXISTING
BEGIN SAW CUT
70+80.8(NA), 26.4, RT

END CONCRETE SIDEWALK 7-INCH
66+63.0(LI), 27.6' LT
MATCH EXISTING
END SAWCUT
66+63.0(LI), 27.6' LT

END CONCRETE SAFETY ISLANDS
STA. 66+48.4(LI), 14.0' RT
MATCH EXISTING
END SAWCUT
STA. 66+48.4(LI), 14.0' RT

66+48.7(LI), 18.2' RT

66+61.3(LI), 25.3' LT

66+48.2(LI), 25.2' LT

66+38.0(LI), 18.1' RT

66+10.9(LI), 18.0' RT

65+99.7(LI), 18.1' RT

66+13.6(LI), 45.0' RT

66+13.6(LI), 48.9' RT

66+28.1(LI), 46.3' RT

66+28.0(LI), 49.0' RT

65+90.3(LI), 54.1' RT

END CONCRETE SIDEWALK 7-INCH
66+39.5(LI), 55.5' RT
MATCH EXISTING

69+71.9(NA), 54.5' RT

69+71.9(NA), 52.4' RT

66+35.2(LI), 55.9' RT

66+30.2(LI), 55.9' RT

66+27.5(LI), 53.8' RT

69+64.9(NA), 54.5' RT

69+64.9(NA), 52.0' RT

END SAWCUT
66+34.8(LI), 76.3' RT

66+29.7(LI), 76.2' RT

69+32.8(NA), 54.4' RT

69+32.8(NA), 50.3' RT

69+98.1(NA), 59.4' RT

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - W. LINCOLN AVE. & W. NATIONAL AVE.	SHEET 61 E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\021207_PD.DWG PLOT DATE : 4/30/2014 8:59 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

BEGIN CONCRETE SIDEWALK 7-INCH
40+58.3, 19.1' RT
MATCH EXISTING
BEGIN SAWCUT

END CONCRETE SIDEWALK 7-INCH
40+53.5, 20.4' LT
MATCH EXISTING

BEGIN CONCRETE SIDEWALK 7-INCH
40+53.5, 32.3' LT
MATCH EXISTING

END CONCRETE SIDEWALK 7-INCH
40+67.0, 46.5' LT
MATCH EXISTING
END SAWCUT

40+67.0, 53.9' LT

40+60.6, 53.9' LT

40+53.7, 59.2' LT

BEGIN CONCRETE SIDEWALK 7-INCH
40+53.7, 81.1' LT
MATCH EXISTING
BEGIN SAWCUT

40+44.5, 81.0' LT

CG01

40+08.6, 25.2' LT

40+08.5, 36.7' LT
END SAWCUT

BEGIN CONCRETE SIDEWALK 7-INCH
40+05.2, 39.7' LT
MATCH EXISTING
BEGIN SAWCUT

W. GREENFIELD AVE.

END CONCRETE SIDEWALK 7-INCH
40+05.5, 25.1' LT
MATCH EXISTING

CG01

39+53.9, 113.8' LT

BEGIN CONCRETE SIDEWALK 7-INCH
39+45.8, 113.6' LT
MATCH EXISTING
BEGIN SAWCUT

39+46.6, 70.2' LT

39+44.4, 70.1' LT

39+44.4, 60.8' LT

39+38.4, 51.4' LT

39+08.7, 49.3' LT

END CONCRETE SIDEWALK 7-INCH
39+09.2, 41.0' LT
MATCH EXISTING
END SAWCUT

42+00

41+00

40+00

39+00

S. 92ND ST.

40+64.6, 18.6' RT

END CONCRETE SIDEWALK 7-INCH
40+64.8, 20.7' RT
MATCH EXISTING
END SAWCUT

40+58.5, 21.2' RT

BEGIN CONCRETE SIDEWALK 7-INCH
40+66.9, 54.6' RT
MATCH EXISTING
BEGIN SAWCUT

40+67.3, 61.0' RT

40+57.4, 61.6' RT

40+47.4, 71.4' RT

END CONCRETE SIDEWALK 7-INCH
40+47.2, 95.5' RT
MATCH EXISTING
END SAWCUT

40+39.2, 95.5' RT

CG01

END CONCRETE SAFETY ISLANDS
542+07.1, 0.8' RT
MATCH EXISTING
END SAWCUT

542+00

543+00

544+00

542+07.1, 3.6' RT

W. GREENFIELD AVE.

S. 91ST ST.

91ST ST.

BEGIN CONCRETE SAFETY ISLANDS
541+87.5, 2.8' RT
MATCH EXISTING
BEGIN SAWCUT

CG01

39+70.7, 62.2' RT

END CONCRETE SIDEWALK 7-INCH
39+63.9' 62.6' RT
MATCH EXISTING
END SAWCUT

39+62.2, 38.6' RT

39+56.2, 32.6' RT

39+39.1, 32.9' RT

BEGIN CONCRETE SIDEWALK 7-INCH
39+38.9, 25.6' RT
MATCH EXISTING
BEGIN SAWCUT

N

LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - W. GREENFIELD AVE. & S. 92ND ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\021212_PD.DWG PLOT DATE : 4/30/2014 8:57 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

N

224+71.8, 37.7' LT
224+62.2, 12.7' RT
224+62.2, 18.5' RT
224+49.8, 18.4' RT
224+77.6, 47.7' RT
END CONCRETE SIDEWALK 7-INCH
224+72.2, 46.1' LT
MATCH EXISTING
END SAWCUT
224+72.2, 46.1' LT
224+50.0, 12.6' RT
224+62.9, 46.6' LT
224+51.7, 58.1' LT
567+47.6, 47.8' LT
224+52.4, 73.1' LT
CG01
BEGIN SAWCUT
567+43.3, 47.7' LT
BEGIN CONCRETE SIDEWALK 7-INCH
567+47.6, 42.5' LT
MATCH EXISTING
END CONCRETE SIDEWALK 7-INCH
224+77.6, 57.5' RT
MATCH EXISTING
END SAWCUT
224+77.6, 57.5' RT
224+65.7, 57.5' RT
BEGIN SAWCUT
569+31.9, 60.5' LT
224+53.9, 66.6' RT
CG01
BEGIN CONCRETE SIDEWALK 7-INCH
569+31.9, 52.4' LT
MATCH EXISTING
BEGIN CONCRETE SIDEWALK 7-INCH
STA. 568+72.0, 5.0' LT
MATCH EXISTING
BEGIN SAWCUT
STA. 568+72.0, 5.0' LT
END CONCRETE SIDEWALK 7-INCH
STA. 568+92.5, 5.1' LT
MATCH EXISTING
END SAWCUT
STA. 568+92.5, 5.1' LT
568+72.0, 2.7' LT
568+92.5, 2.6' LT
W. GREENFIELD AVE.
566+00
567+00
568+00
569+00
570+00
571+00
224
225
CONC
ASPH
BOLLARD

END CONCRETE SIDEWALK 7-INCH
567+23.9, 24.8' RT
MATCH EXISTING
END SAWCUT
567+23.9, 24.8' RT
CG01
CG01
END CONCRETE SIDEWALK 7-INCH
569+07.7, 24.6' RT
MATCH EXISTING
567+23.9, 31.0' RT
567+71.3, 31.2' RT
223+54.6, 37.0' LT
223+54.5, 31.9' LT
223+54.3, 26.4' LT
223+60.7, 69.7' RT
223+46.9, 55.2' RT
END SAWCUT
569+07.5, 32.3' RT
BEGIN CONCRETE SIDEWALK 7-INCH
223+30.5, 55.1' RT
MATCH EXISTING
BEGIN SAWCUT
223+30.5, 55.1' RT
BEGIN CONCRETE SIDEWALK 7-INCH
223+30.6, 36.9' LT
MATCH EXISTING
BEGIN SAWCUT
223+30.6, 36.9' LT
223+30.6, 31.9' LT
223+67.0, 2.5' RT
223+66.8, 8.4' RT
223+54.4, 2.4' RT
223+54.4, 8.5' RT
223+30.6, 47.8' RT
223
S. 84TH ST.
ASPH
CONC
PARKING
LOT

LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - W. GREENFIELD AVE. & S. 84TH ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\021212_PD.DWG PLOT DATE : 4/30/2014 8:57 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

W. GREENFIELD AVE.

S. 84TH ST.

BEGIN CONCRETE CURB & GUTTER 31-INCH
STA. 226+14, 11.9' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 226+14, 11.9' RT

SEE NEXT PLAN
SHEET FOR DETAILS

BEGIN CONCRETE PAVEMENT 8-INCH
STA. 226+14.2, 9.9' RT
MATCH EXISTING

END REMOVING CONCRETE CURB & GUTTER
STA. 226+72, 2.7' RT

END CONCRETE PAVEMENT 8-INCH
STA. 228+13.0, .02' RT
MATCH EXISTING

PI: 226+66.09

227+35.2, 11.9' RT

STA. 228+13, 2.2' RT

END CONCRETE CURB & GUTTER 31-INCH
STA. 228+19, 2.2' RT
MATCH EXISTING
END SAWCUT
STA. 228+19, 2.2' RT
END CONCRETE SIDEWALK 7-INCH
STA. 228+19, 2.2' RT
MATCH EXISTING

END REMOVING CONCRETE SIDEWALK 7-INCH
STA. 228+19, 2.2' RT

225 226 227 228 229 230

N

BOLLARD

GREENFIELD AVE.

BEGIN REMOVING CONCRETE SIDEWALK 7-INCH
STA. 226+14, 11.9' RT
BEGIN REMOVING CONCRETE CURB & GUTTER
STA. 226+14, 11.9' RT

BEGIN CONCRETE SIDEWALK 7-INCH
STA. 226+65.7, 12.5' RT

226+66.6, 19.0' RT

END REMOVING CONCRETE CURB & GUTTER
STA. 226+72.6, 20.7' RT

BEGIN REMOVING CONCRETE CURB & GUTTER
STA. 226+65.4, 21.2' RT
BEGIN CONCRETE CURB & GUTTER 31-INCH
STA. 226+65.4, 21.2' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 226+65.4, 21.2' RT

228+19.0, 11.7' RT

END CONCRETE CURB & GUTTER 31-INCH
STA. 228+19.1, 13.7' RT
END SAWCUT
STA. 228+19.1, 13.7' RT

228+13.0, 12.0' RT

SEE NEXT PLAN
SHEET FOR DETAILS

LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

PROJECT NO: 1060-33-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - W. GREENFIELD AVE. & S. 84TH ST.	SHEET 64	E

2

N

EP: 252+45.86

END CONCRETE SIDEWALK 7-INCH
STA. 251+32.3, 3.4' LT
MATCH EXISTING
END SAWCUT
STA. 251+32.3, 3.4' LT

252+00

PI: 251+86.13

END SAWCUT
251+41.7, 40.7' LT

BEGIN SAWCUT
251+41.6, 26.8' RT

END CONCRETE SIDEWALK 7-INCH
251+42.0, 34.8' RT
MATCH EXISTING
END SAWCUT
251+42.0, 34.8' RT

END CONCRETE SIDEWALK 7-INCH
251+41.7, 46.8' LT
MATCH EXISTING
BEGIN SAWCUT
251+41.7, 46.8' LT

251+32.4, 35.2' RT

251+32.3, 0.7' LT

BEGIN CONCRETE SIDEWALK 7-INCH
251+16.0, 47.0' LT
MATCH EXISTING

CG05

BEGIN CONCRETE SIDEWALK 7-INCH
251+22.9, 36.6' RT
MATCH EXISTING

CG05

251+19.9, 0.6' LT

POST

POST

W. SCHLINGER AVE.

END CONCRETE SIDEWALK 7-INCH
STA. 250+52.0, 13.1' LT
MATCH EXISTING
END SAWCUT
STA. 250+52.0, 13.1' LT

BEGIN CONCRETE SIDEWALK 7-INCH
STA. 251+19.9, 3.4' LT
MATCH EXISTING
BEGIN SAWCUT
STA. 251+19.9, 3.4' LT

STATE FAIR
GATE 5

251+00

END CONCRETE SIDEWALK 7-INCH
250+59.4, 51.3' LT

250+52.0, 10.5' LT

END CONCRETE SIDEWALK 7-INCH
250+53.8, 58.9' RT
MATCH EXISTING
END SAWCUT
250+53.8, 58.9' RT

CG01

CG01

POST

POST

END SAWCUT
250+55.9, 81.1' LT

250+50.2, 81.0' LT

250+43.7, 57.5' RT

250+56.4, 51.7' LT

250+45.7, 43.1' RT

250+43.2, 10.4' LT

250+48.4, 48.7' LT

250+40.4, 35.0' RT

250+00

BEGIN CONCRETE SIDEWALK 7-INCH
250+15.8, 46.7' LT
MATCH EXISTING
BEGIN SAWCUT
250+15.8, 46.7' LT

BEGIN CONCRETE SIDEWALK 7-INCH
250+26.8, 34.9' RT
MATCH EXISTING
BEGIN SAWCUT
250+26.8, 34.9' RT

250+15.9, 40.4' LT

250+26.9, 26.7' RT

BEGIN CONCRETE SIDEWALK 7-INCH
STA. 250+43.3, 13.4' LT
MATCH EXISTING
BEGIN SAWCUT
STA. 250+43.3, 13.4' LT

S. 84TH ST.

249+00

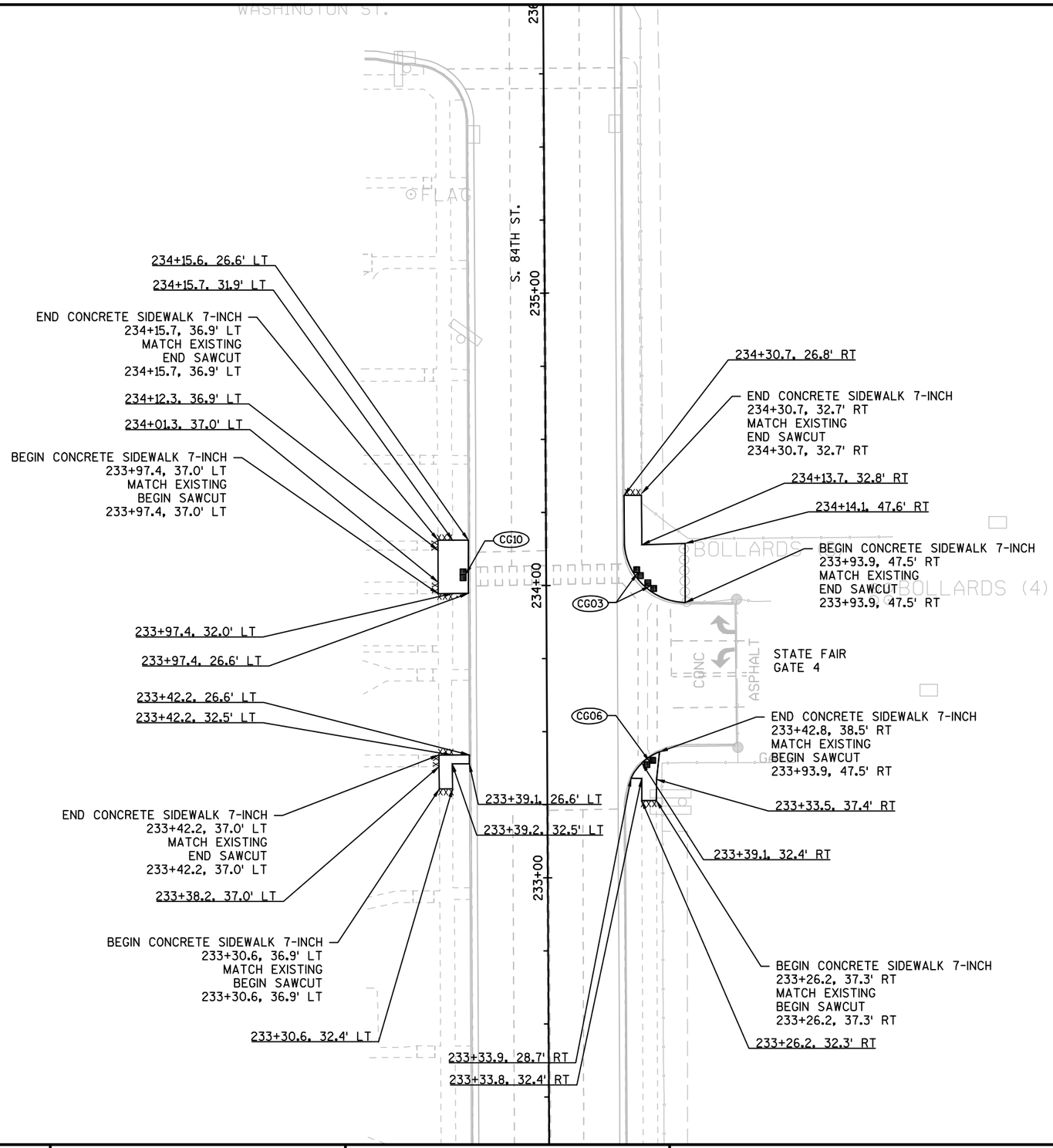
LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - S. 84TH ST. & STATE FAIR GATE 5	SHEET 65	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\021210_PD.DWG PLOT DATE : 4/30/2014 9:03 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2



LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - S. 84TH ST. & STATE FAIR GATE 4	SHEET 66	E

2

N

END CONCRETE SIDEWALK 5-INCH
STA. 10+22.1, 18.8' LT
MATCH EXISTING

END SAWCUT
STA. 10+41.7, 26.5' LT

10+22.0, 31.4' LT

294+08.9, 41.5' LT

BEGIN CONCRETE SIDEWALK 5-INCH
STA. 293+89.9, 36.5' LT
MATCH EXISTING
BEGIN SAWCUT
STA. 293+89.9, 36.5' LT

CG01

294+08.4, 36.7' LT

294+08.3, 33.6' LT

BEGIN CONCRETE SIDEWALK 5-INCH
STA. 10+44.6, 25.7' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 10+44.6, 25.7' RT

10+27.7, 30.5' RT

10+20.5, 30.5' RT

10+12.5, 34.8' RT

10+07.5, 40.0' RT

10+05.1, 47.0' RT

END CONCRETE SIDEWALK 5-INCH
STA. 295+05.8, 38.9' LT
MATCH EXISTING
END SAWCUT
STA. 295+05.8, 38.9' LT

CG01

295+05.8, 34.2' LT

294+85.2, 34.2' LT

294+85.1, 32.2' LT

W. BLUEMOUND RD.

292 293 294 295 296 297

11 10 9 8

294+02.4, 28.4' RT

294+03.4, 34.7' RT

293+85.3, 34.7' RT

CG03

BEGIN CONCRETE SIDEWALK 5-INCH
STA. 293+85.3, 39.6' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 293+85.3, 39.6' RT

294+03.0, 39.8' RT

294+02.1, 53.5' RT

294+08.1, 39.8' RT

294+07.1, 53.8' RT

END CONCRETE SIDEWALK 5-INCH
STA. 294+15.9, 41.6' RT
MATCH EXISTING
END SAWCUT
STA. 294+15.9, 41.6' RT

N. 68TH ST.

EBP:2284337408

CG03

294+67.1, 30.8' RT

294+67.1, 37.4' RT

294+84.9, 37.4' RT

END CONCRETE SIDEWALK 5-INCH
STA. 294+85.0, 42.3' RT
MATCH EXISTING
END SAWCUT
STA. 294+85.0, 42.3' RT

294+65.1, 42.4' RT

294+63.3, 65.1' RT

BEGIN CONCRETE SIDEWALK 5-INCH
STA. 294+50.3, 64.0' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 294+50.3, 64.0' RT

LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - W. BLUEMOUND RD. & N. 68TH ST.	SHEET 67	E

2

N

STH 100 (S. 108TH ST.)

513+62.0
END REMOVING
ASPHALTIC SURFACE
MILLING (LANE 3)

513+86.9, 58.8' LT
END SAWCUT
END CONCRETE
SIDEWALK 7-INCH
MATCH EXISTING

513+86.7, 53.8' LT
END SAWCUT

513+67.1, 92.6' LT
BEGIN SAWCUT

513+72.3, 48.6' LT
END SAWCUT

513+56.5, 59.0' LT
BEGIN CONCRETE
SIDEWALK 7-INCH
MATCH EXISTING
BEGIN SAWCUT

CG03

W. LAPHAM ST.

17+00 18+00 19+00

HMA PAVEMENT TYPE E-3

BP: 20+00.00

513+11.0, 59.1' LT
END CONCRETE
SIDEWALK 7-INCH
MATCH EXISTING

512+93.2, 6.5' LT
2' RADIUS F.O.C.

CG03

513+05.9, 59.1' LT

513+05.9, 67.6' LT
END SAWCUT

513+00.9, 67.5' LT
BEGIN SAWCUT

513+01.1, 53.9' LT

513+01.2, 49.8' LT

512+78.5, 58.9' LT
BEGIN CONCRETE SIDEWALK 7-INCH
MATCH EXISTING
BEGIN SAWCUT

512+78.5, 53.9' LT
END SAWCUT

512+85.0, 2.8' LT
END CONCRETE CURB & GUTTER
31-INCH REVERSE SLOPE
END SAWCUT

REMOVING CURB & GUTTER

512+60.9, 11.7' LT
BEGIN SAWCUT
BEGIN CONCRETE
CURB & GUTTER
31-INCH REVERSE
SLOPE

512+31.0
BEGIN REMOVING
ASPHALTIC SURFACE
MILLING (LANE 3)

515
514
513
512

513+62.6, 48.1' RT
END SAWCUT

REMOVING PAVEMENT

735.32
735.82
735.83

20+51.3, 46.0' LT

513+84.0M 54.1' RT
BEGIN SAWCUT

513+84.0, 59.1' RT
END CONCRETE SIDEWALK 7-INCH
END SAWCUT
MATCH EXISTING

20+59.3, 39.3' LT
REMOVING PAVEMENT

20+61.2, 35.2' LT
BEGIN CONCRETE
SIDEWALK 7-INCH

CG01

SEE TYPICAL PROPOSED SECTION
STH 100 STA. 512+31 TO 518+81,
DETAIL D, FOR BASE AND
PAVEMENT STRUCTURE.

REMOVING ASPHALTIC SURFACE MILLING

REMOVING CURB & GUTTER

HMA PAVEMENT TYPE E-3
(CROWN LINE)

21+00 22+00 23+00

736.47 736.88 737.29

736.06

737.03

EXISTING ELEVATION
737.35

736.35 735.82 735.48

20+83.9, 31.1' RT P.T.
F.O.C.

SILT FENCE

21+63.3, 18.2' RT
END CONCRETE
CURB & GUTTER 31-INCH
MATCH EXISTING

512+69.8, 78.3' RT
90' RADIUS F.O.C.

REMOVING CURB & GUTTER

512+64.7, 59.0' RT
END CONCRETE SIDWALK 7-INCH

CG03

512+31.3, 108.3' RT
60' RADIUS F.O.C.

512+48.5, 54.1' RT

512+31.1, 59.0' RT
END SAWCUT

512+31.1, 54.2' RT
BEGIN CONCRETE SIDEWALK 7-INCH
BEGIN SAWCUT
MATCH EXISTING

512+31.0, 48.3' RT P.C. F.O.C.
BEGIN CONCRETE CURB & GUTTER 31-INCH
BEGIN SAWCUT
MATCH EXISTING

F.O.C. - FACE OF CURB

TEMP SIGN

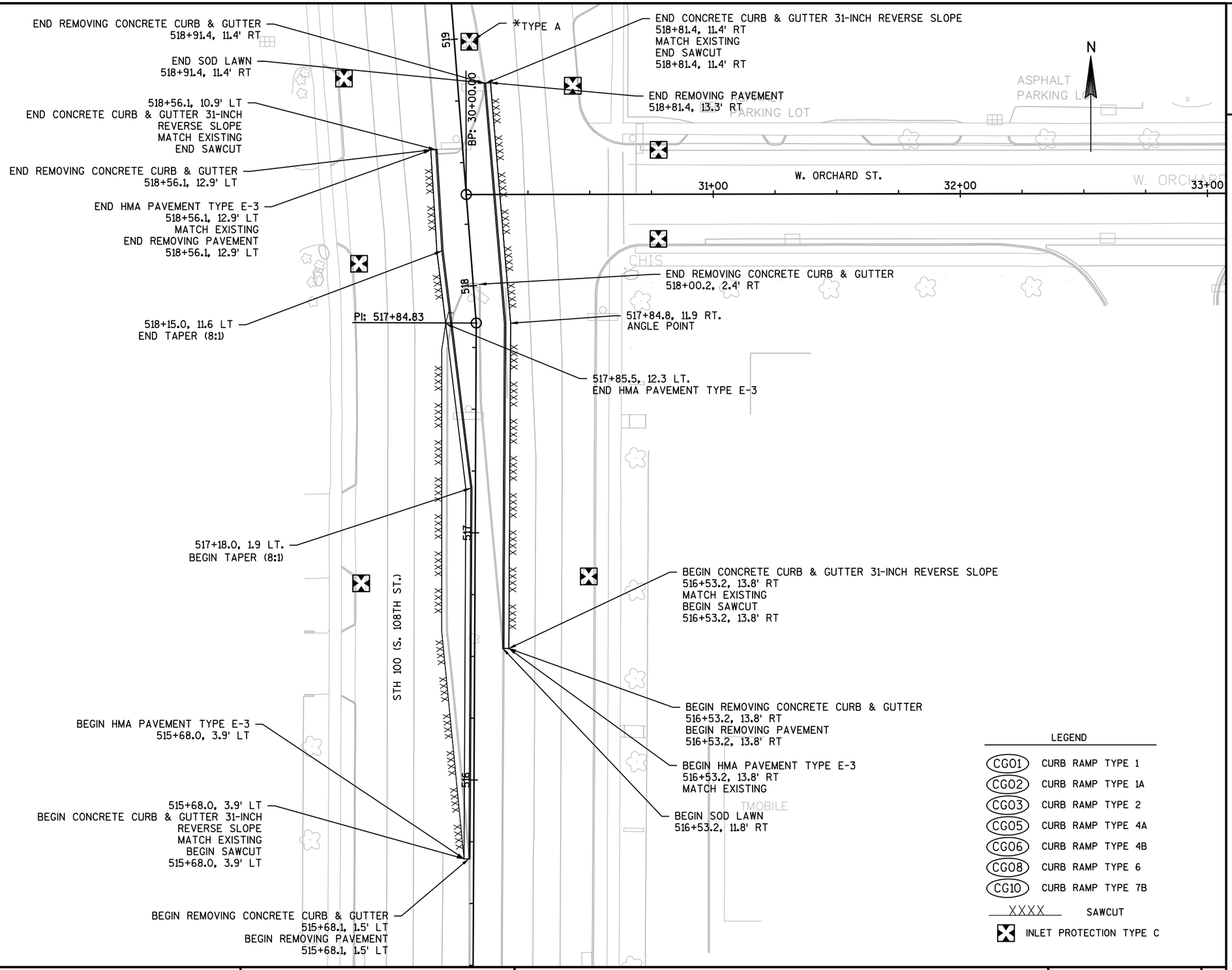
MCDONALDS

CHIS

LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - STH 100 & W. LAPHAM ST.	SHEET 68	E



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - STH 100 & W. LAPHAM ST.	SHEET 69	E

END REMOVING CONCRETE CURB AND GUTTER
STA. 549+23.5, 2.6' RT
END REMOVING PAVEMENT
STA. 549+23.5, 2.6' RT

END CONCRETE CURB & GUTTER 31-INCH
STA. 549+23.5, 2.6' RT
MATCH EXISTING
END SAWCUT
STA. 549+23.5, 2' RT

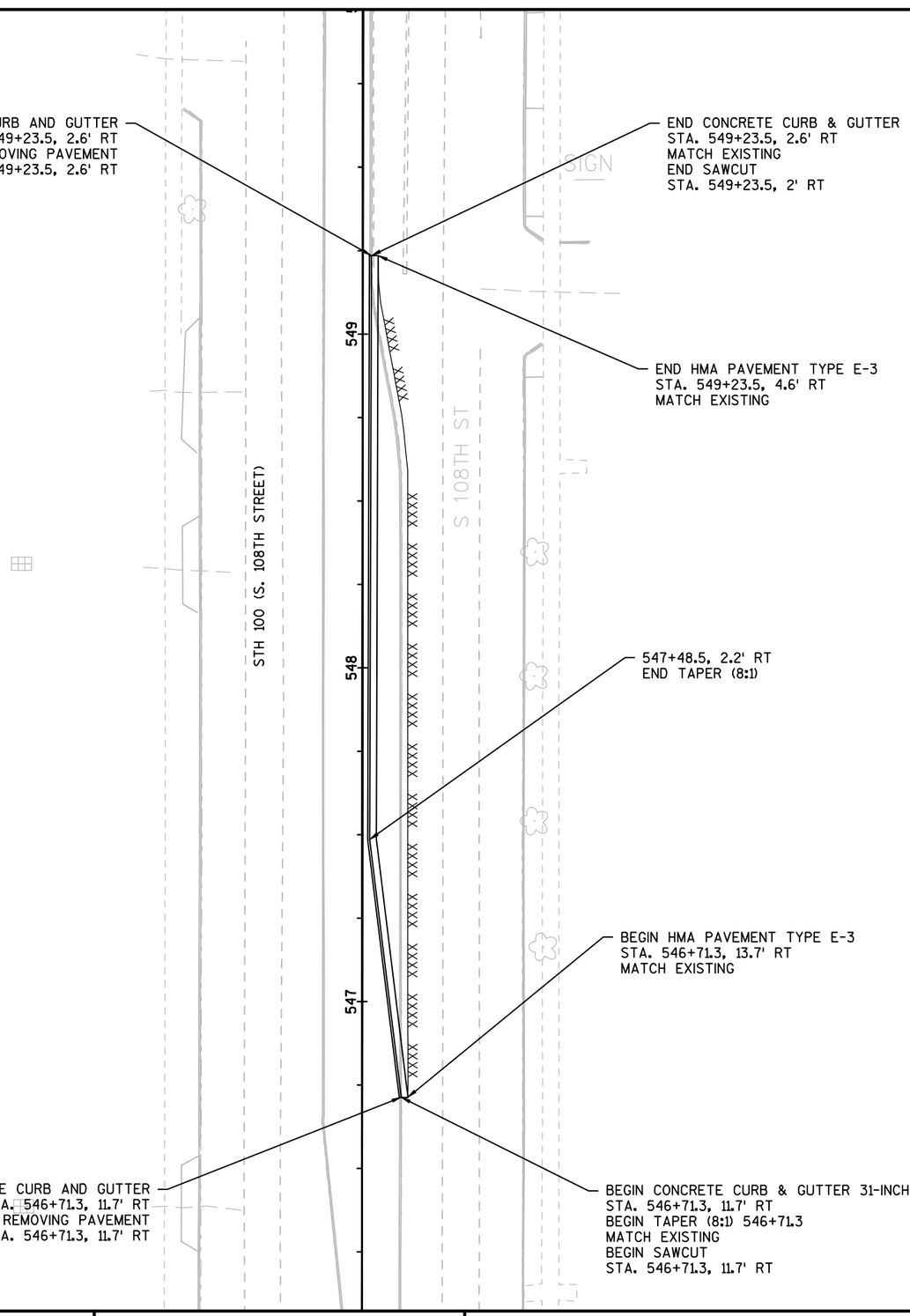
END HMA PAVEMENT TYPE E-3
STA. 549+23.5, 4.6' RT
MATCH EXISTING

547+48.5, 2.2' RT
END TAPER (8:1)

BEGIN HMA PAVEMENT TYPE E-3
STA. 546+71.3, 13.7' RT
MATCH EXISTING

BEGIN REMOVING CONCRETE CURB AND GUTTER
STA. 546+71.3, 11.7' RT
BEGIN REMOVING PAVEMENT
STA. 546+71.3, 11.7' RT

BEGIN CONCRETE CURB & GUTTER 31-INCH
STA. 546+71.3, 11.7' RT
BEGIN TAPER (8:1) 546+71.3
MATCH EXISTING
BEGIN SAWCUT
STA. 546+71.3, 11.7' RT



LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - W. THEO. TRECKER WAY & STH 100	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\021218_PD.DWG
PLOT DATE : 4/30/2014 9:07 AM
PLOT BY : WAGNER, SCOTT H
PLOT NAME :
PLOT SCALE : 1:40_XREF
WISDOT/CADDS SHEET 42

2

N

BEGIN SAWCUT
STA. 19+49.4, 57.1' LT

END CONCRETE SIDEWALK 7-INCH
STA. 19+33.3, 57.1' LT
MATCH EXISTING
END SAWCUT
STA. 19+33.3, 57.1' LT

PI: 552+01.57

552

STH 100 (S. 108TH STREET)

END CONCRETE CURB TYPE A
STA. 551+05.5, 50.6' LT

BEGIN CONCRETE CURB TYPE A
STA. 550+99.0, 50.5' LT

551

EP: 20+00.00

CG08

CG08

STA. 19+24.3, 29.7' LT

BEGIN CONCRETE
SIDEWALK 7-INCH
STA. 19+46.8, 29.8' LT
MATCH EXISTING

BEGIN CONCRETE
SIDEWALK 7-INCH
STA. 550+64.2, 58.7' RT
MATCH EXISTING

END CONCRETE SIDEWALK 7-INCH
STA. 550+64.8, 81.2' RT
MATCH EXISTING

W. THEO. TRECKER WAY

17 18 19

PI: 550+62.03

BEGIN CONCRETE CURB TYPE A
STA. 550+30.9, 56.2' RT

END CONCRETE CURB TYPE A
STA. 550+33.4, 60.2' RT
END REMOVING CONCRETE SIDEWALK
STA. 550+33.4, 60.2' RT

W THEO TRECKER WAY

STA. 19+39.2, 32.5' RT

STA. 19+38.7, 37.9' RT

CG01

CG03

END CONCRETE SIDEWALK 7-INCH
STA. 19+22.2, 38.0' RT
MATCH EXISTING
END SAWCUT
STA. 19+22.2, 38.0' RT

STA. 19+48.4, 44.2' RT

BEGIN REMOVING CONCRETE SIDEWALK
STA. 550+30.9, 60.0' RT
END CONCRETE SIDEWALK 7-INCH
STA. 550+30.9, 60.0' RT
MATCH EXISTING

STA. 19+45.7, 47.5' RT

END REMOVING CONCRETE CURB
STA. 550+30.9, 56.2' RT

STA. 19+22.2, 42.7' RT

550

STA. 550+06.6, 49.1' RT

BEGIN REMOVING CONCRETE CURB
STA. 550+27.2, 52.4' RT

BEGIN CONCRETE SIDEWALK 7-INCH
STA. 19+40.9, 55.9' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 19+40.9, 55.9' RT

STA. 19+45.7, 56.0' RT

END SAWCUT
STA. 550+06.6, 59.1' RT

BEGIN CONCRETE
SIDEWALK 7-INCH
STA. 550+06.6, 54.4' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 550+06.6, 54.4' RT

SIGN

549

TH ST

LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - W. THEO. TRECKER WAY & STH 100	SHEET E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\021218_PD.DWG PLOT DATE : 4/30/2014 9:07 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

S. 102ND ST.

WALL

GUY

I-894 SB EXIT RAMP

ZOO FREEWAY 45/I-894

N

BEGIN CONCRETE SIDEWALK 7-INCH
STA. 45+34.8, 53.0' LT
MATCH EXISTING

STA. 45+32.0, 49.7' LT

BEGIN SAWCUT
STA. 45+65.9, 49.9' LT

CG03

END CONCRETE SIDEWALK 7-INCH
STA. 45+65.86, 44.74' LT
MATCH EXISTING
END SAWCUT
STA. 45+65.9, 44.7' LT

42 43 44 45 46 47 48

W. LINCOLN AVE.

45+41.6, 44.6' RT

45+09.9, 48.8' RT

45+41.6, 46.1' RT

44+74.4, 48.8' RT

45+67.2, 44.5' RT

44+57.2, 48.7' RT

BEGIN CONCRETE SIDEWALK 7-INCH
STA. 44+57.2, 54.1' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 44+57.2, 54.1' RT

END CONCRETE SIDEWALK 7-INCH
STA. 44+74.4, 54.0' RT
MATCH EXISTING
END SAWCUT
STA. 44+74.4, 54.0' RT

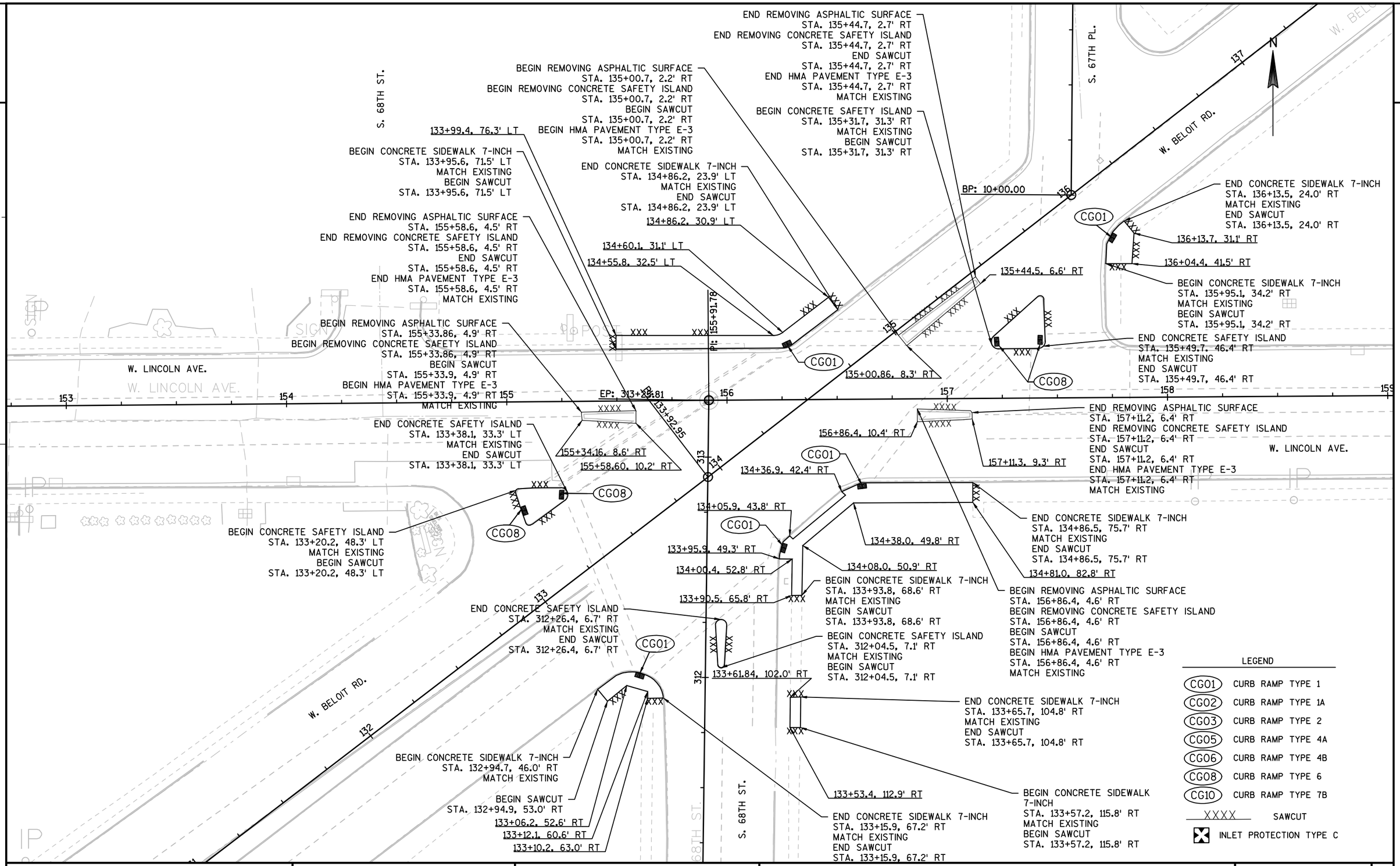
BEGIN CONCRETE SIDEWALK 7-INCH
STA. 45+09.9, 53.8' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 45+09.9, 53.8' RT

END CONCRETE SIDEWALK 7-INCH
STA. 45+67.2, 50.0' RT
MATCH EXISTING
END SAWCUT
STA. 45+67.2, 50.0' RT

LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - W. LINCOLN AVE. & I-894 SB EXIT RAMP	SHEET 72	E



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - W. LINCOLN AVE. & W. BELOIT RD.	SHEET 73	E

2

N

S. 99TH ST.

99TH ST.

S. 98TH ST.

98TH ST.

W. LINCOLN AVE.

LINCOLN AVE

BEGIN REMOVING CURB & GUTTER
STA. 55+18.1, 7.4' RT
BEGIN CONCRETE CURB & GUTTER 31-INCH
STA. 55+18.1, 7.4' RT
MATCH EXISTING

END CONCRETE CURB & GUTTER 31-INCH
STA. 56+24.6, 2.3' LT
MATCH EXISTING

56+24.6, 6.3' LT

56+27.6, 5.3' LT

END REMOVING ASPHALTIC PAVEMENT
STA. 56+35.1, 6.1' LT
END SAWCUT
STA. 56+35.1, 6.1 LT
END HMA PAVEMENT TYPE E-1
STA. 56+35.1, 6.1' LT
MATCH EXISTING

53 54 55 56 57 58

XXXX XXXX XXXX XXXX XXXX XXXX XXXX

END REMOVING CONCRETE CURB & GUTTER
STA. 56+32.2, 1.3' LT

CONCRETE MEDIAN SLOPED NOSE TYPE 2

56+34.3, 12.9' RT

56+27.5, 0.2' RT

BEGIN REMOVING ASPHALTIC PAVEMENT
STA. 55+18.0, 9.9' RT
BEGIN SAWCUT
STA. 55+18.0, 9.9' RT
BEGIN HMA PAVEMENT TYPE E-3
STA. 55+18.0, 9.87' RT
MATCH EXISTING

S. 99TH ST.

S. 98TH ST.

LEGEND

CG01	CURB RAMP TYPE 1
CG02	CURB RAMP TYPE 1A
CG03	CURB RAMP TYPE 2
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG10	CURB RAMP TYPE 7B
XXXX	SAWCUT
	INLET PROTECTION TYPE C

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PLAN DETAIL - W. LINCOLN AVE. & S. 98TH ST.	SHEET 74 E

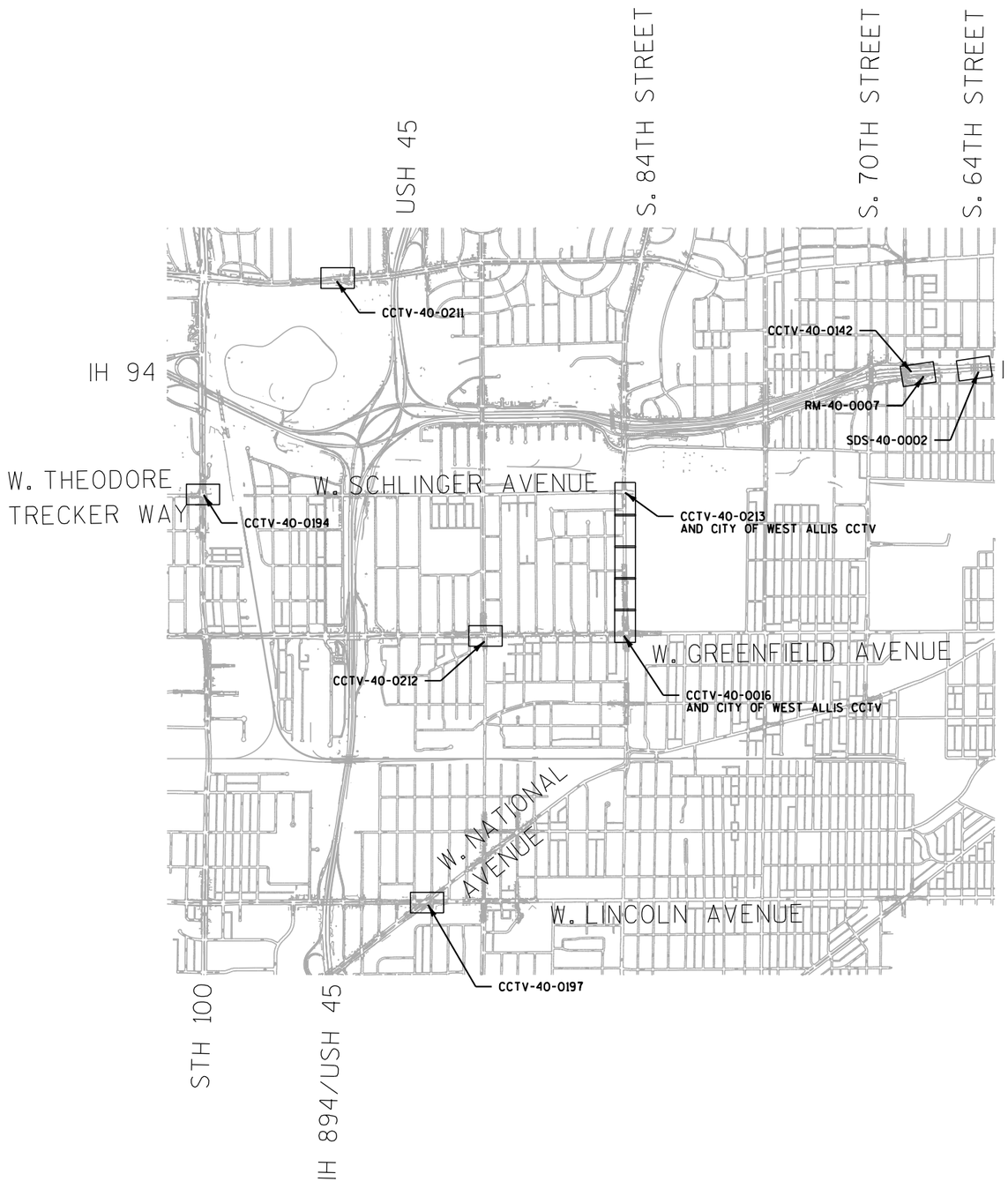
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LEGEND

	EXISTING	PROPOSED
FTMS CONVENTIONAL SYMBOLS		
JUNCTION BOX		
CCTV CAMERA AND POLE		
FTMS FIELD CABINET AND BASE		
POLE MOUNTED CABINET		
METER BREAKER PEDESTAL		
24"X36" STEEL PULL BOX		
MANHOLE		
ADVANCE FLASHER ASSEMBLY		
FTMS (ITS) CONDUIT		
BREAKER DISCONNECT BOX		
COMMUNICATIONS VAULT, TYPE 1		
WIRELESS TRAFFIC SENSOR		
WIRELESS TRAFFIC SENSOR REPEATER		
WIRELESS TRAFFIC SENSOR ACCESS POINT		
RAMP METER SIDEMOUNT SIGNAL		
RAMP METER OVERHEAD SIGNAL		
BLUETOOTH DETECTOR		
CITY OF WEST ALLIS CAMERA		

FTMS STANDARD ABBREVIATIONS

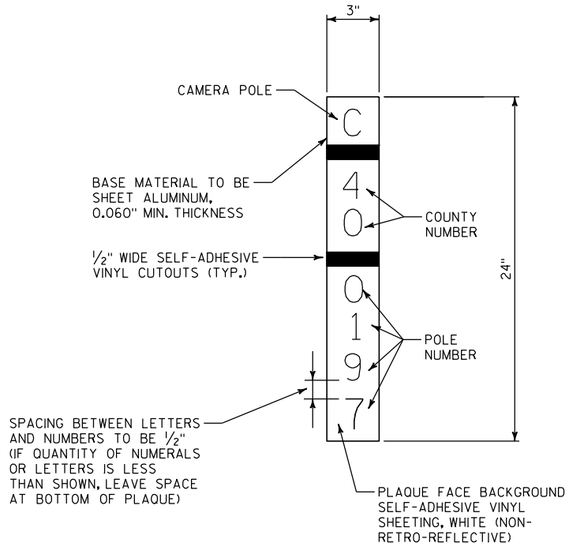
CB	CONTROLLER CABINET
CCTV	CLOSED CIRCUIT TELEVISION SITE
CV	COMMUNICATIONS VAULT
FY	ADVANCE FLASHER (ASSEMBLY)
PB	PULL BOX
MH	MANHOLE
RM	RAMP METER
SB	SIGN BASE
WCCTV	CITY OF WEST ALLIS CAMERA
WTS	WIRELESS TRAFFIC SENSOR
WTSR	WIRELESS TRAFFIC SENSOR REPEATER
WTSAP	WIRELESS TRAFFIC SENSOR ACCESS POINT



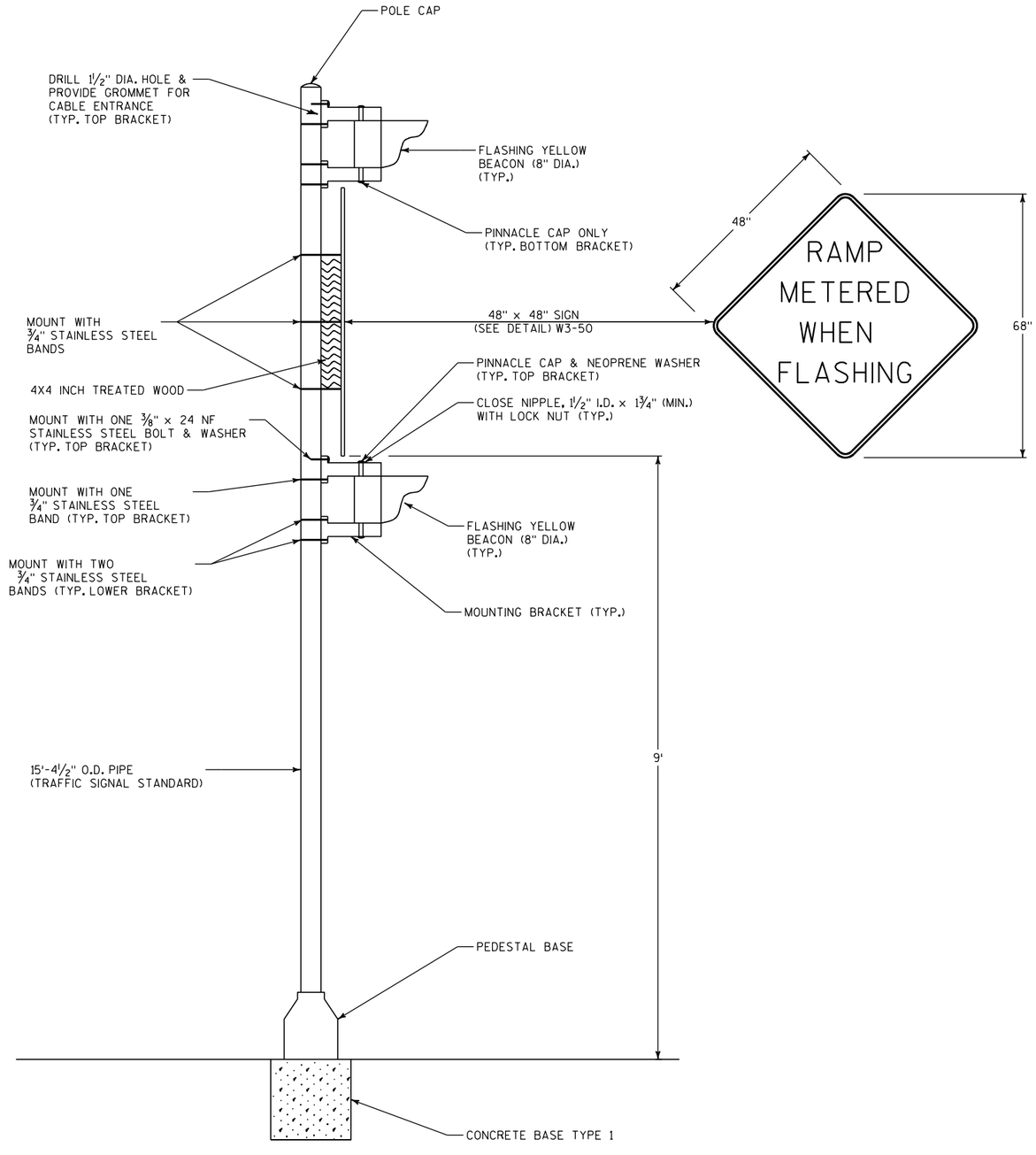
FTMS GENERAL NOTES

1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.
2. BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.
3. BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
4. NO TREES (AND/OR SHRUBS) SHALL BE REMOVED WITHOUT APPROVA OF THE ENGINEER.
5. AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT, AND SHALL BE INCLUDED IN THE COST OF INSTALLING FTMS ITEMS. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION SHALL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS.
6. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
7. DUE TO RAMP, LANE, SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.
8. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.
9. THE CONTRACTOR SHALL CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414) 227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.
10. ALL LOOP DETECTORS ARE STATIONED TO CENTER OF LEADING EDGE AS APPROACHED BY NORMAL VEHICLE PATH.
11. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.
12. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS - OVERVIEW	SHEET	E



POLE IDENTIFICATION PLAQUE DETAIL

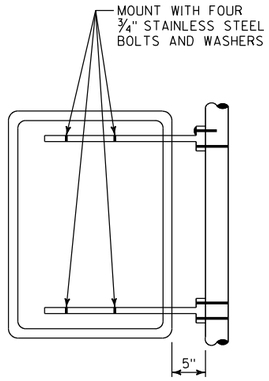


SIGNAL ASSEMBLY ADVANCE FLASHER TYPE 1

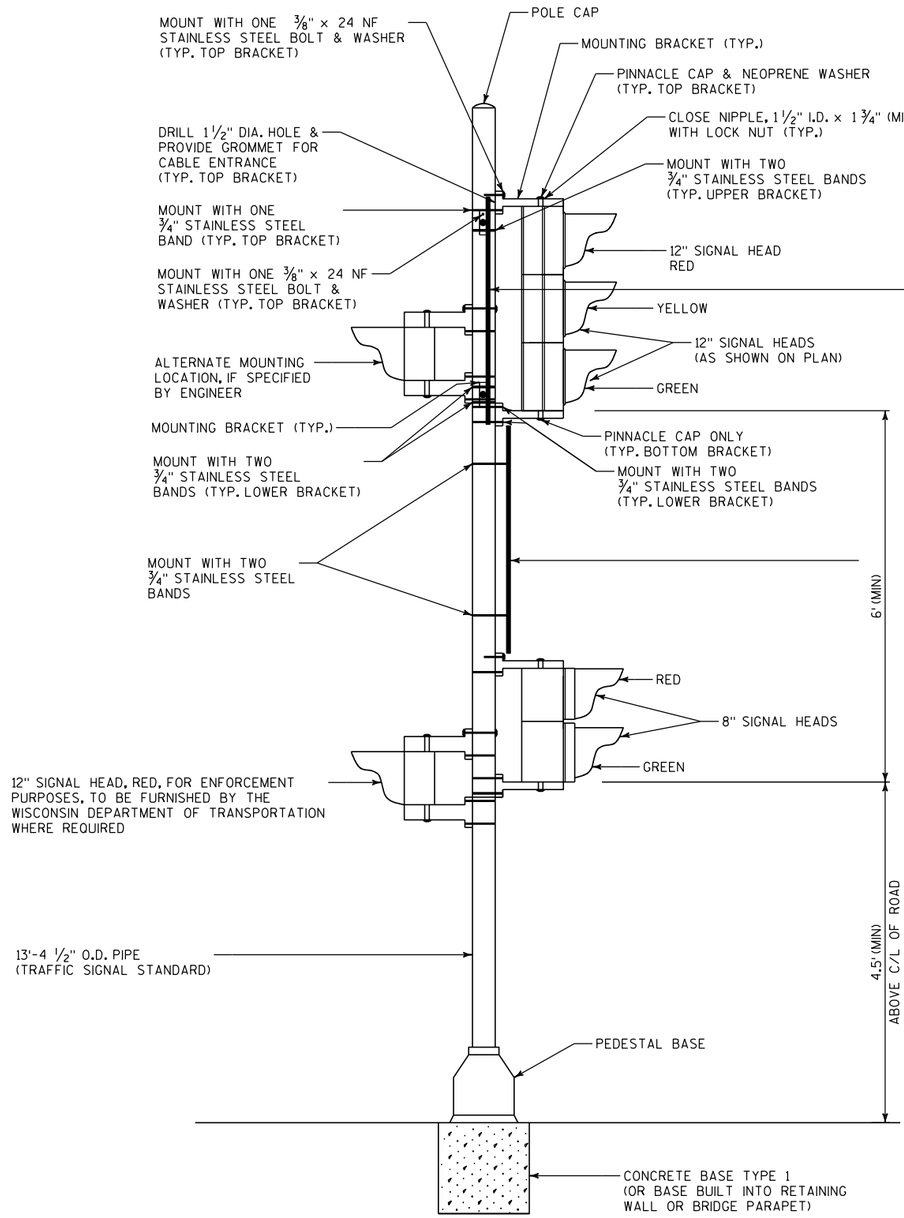
PROJECT NO: 1030-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

NOTE

1) R10-6 SIGN: AN ARROW POINTING LEFT SHALL BE USED ON A RIGHT SIDE SIGNAL & AN ARROW POINTING RIGHT SHALL BE USED ON A LEFT SIDE SIGNAL.



REAR VIEW

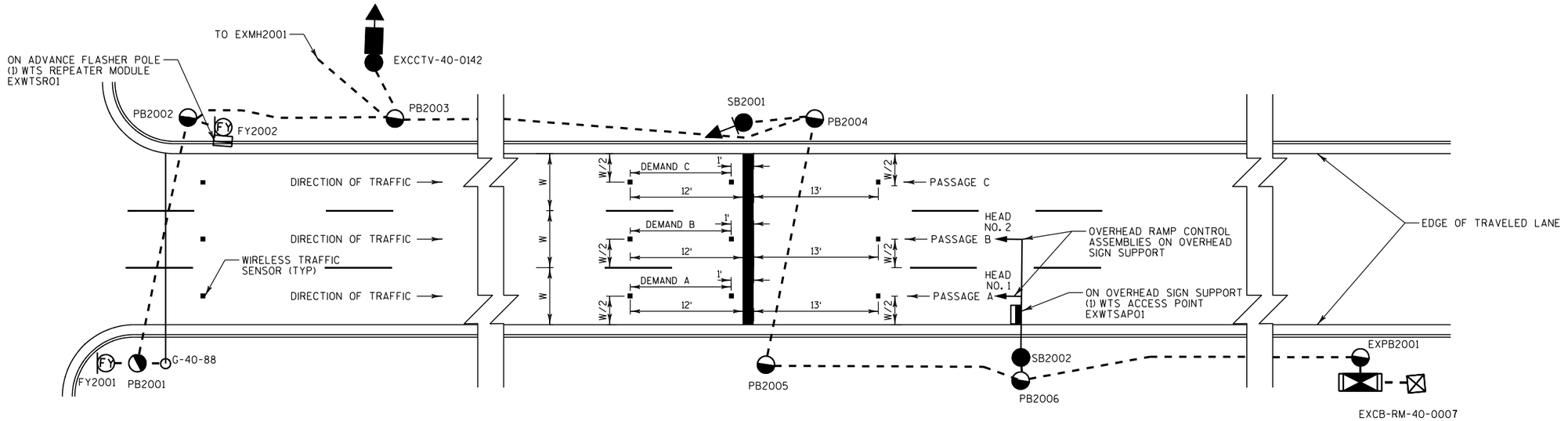


SIDE VIEW

FRONT VIEW

SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT

2



CONDUCTOR CHART

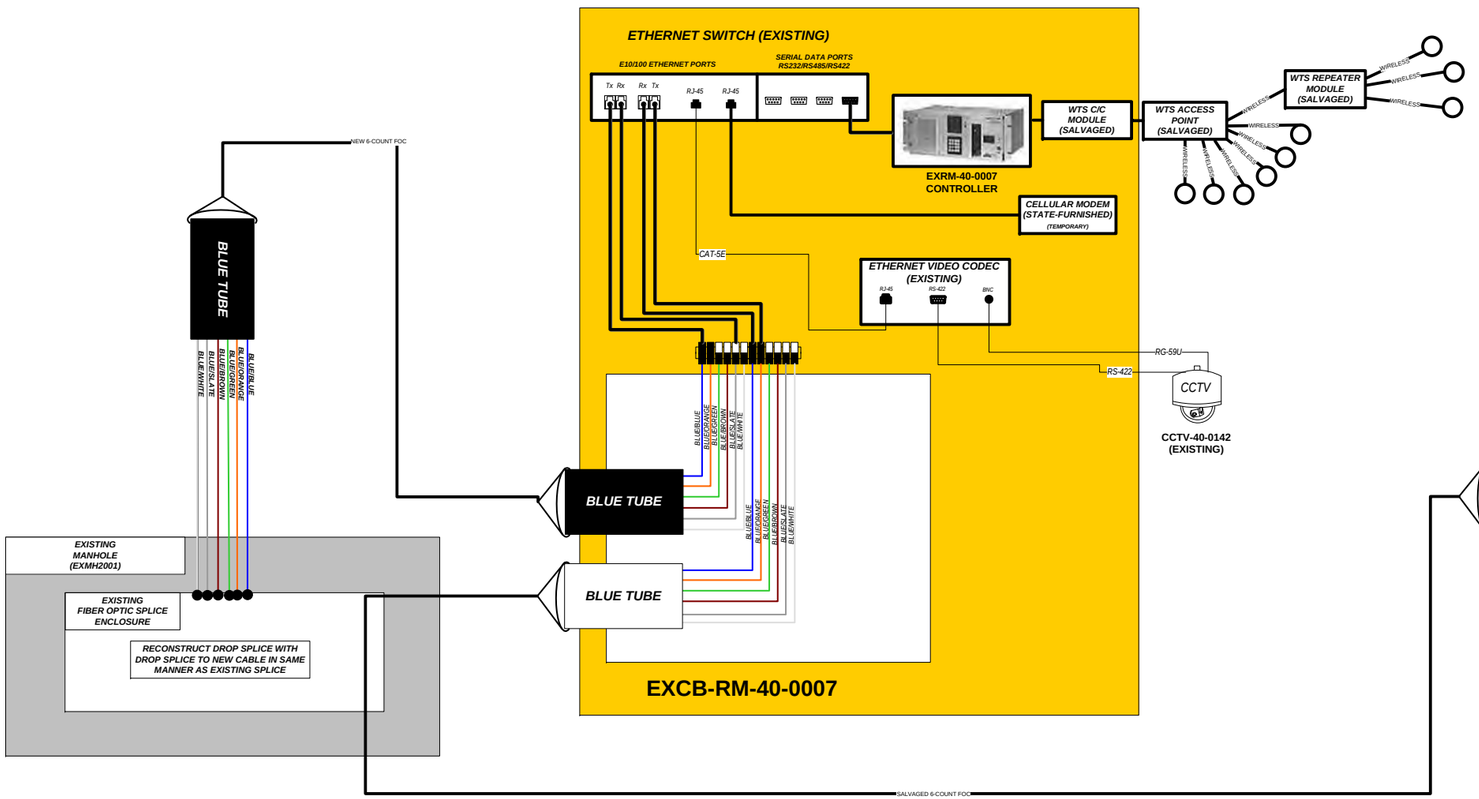
FROM	TO	CABLE SIZE	HEAD NO.	COLOR CODE
EXCB-RM-40-0007	SB2002	9C	1	BLUE, WHITE-BLK, ORANGE
EXCB-RM-40-0007	SB2002	9C	2	GREEN-BLK, ORANGE-BLK, BLUE-BLK
SB2002	SB2001	7C	3	WHITE, RED, GREEN
SB2002	SB2001	7C	4	GREEN, WHITE

DEMAND/PASSAGE LAYOUT

S. 68TH STREET EB ENTRANCE RAMP
(RM-40-0007)
NOT TO SCALE

PROJECT NO: 1030-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

IH-94 @ S. 68TH ST.



KEY

- PROPOSED / EXISTING FUSION SPLICE
- FIBER LEFT BARE
- PROPOSED FIBER TERMINATION
- EXISTING FIBER TERMINATION
- EXISTING WIRELESS COMMUNICATIONS LINK
- PROPOSED / EXISTING COMPONENT
- PROPOSED / EXISTING CCTV CAMERA
- PROPOSED / EXISTING MICROWAVE DETECTOR
- PROPOSED / EXISTING FIBER OPTIC CABLE
- PROPOSED LOOP MONITOR
- PROPOSED 2070 RAMP METER CONTROLLER (STATE-FURNISHED)

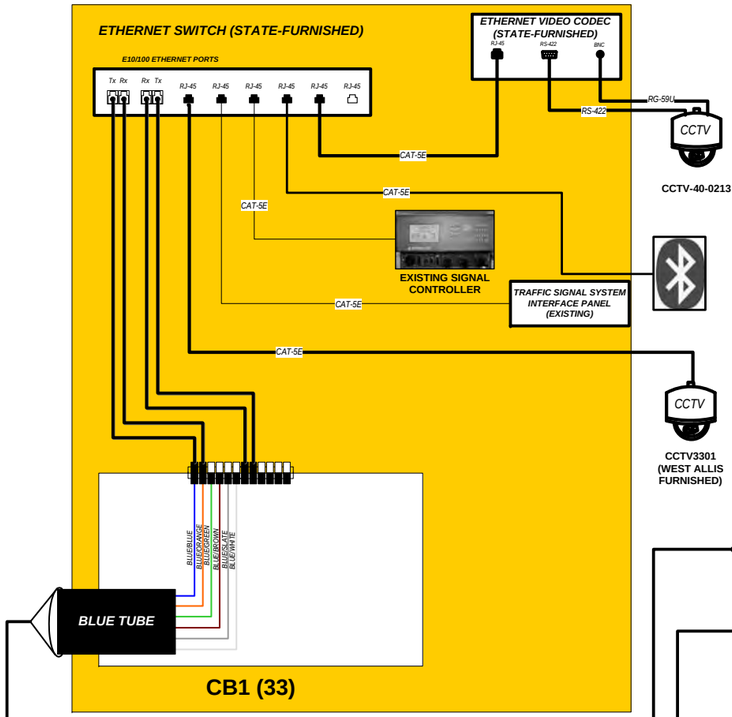
2070 CONTROLLER (STATE-FURNISHED)

- EXISTING TRAFFIC SIGNAL CONTROLLER

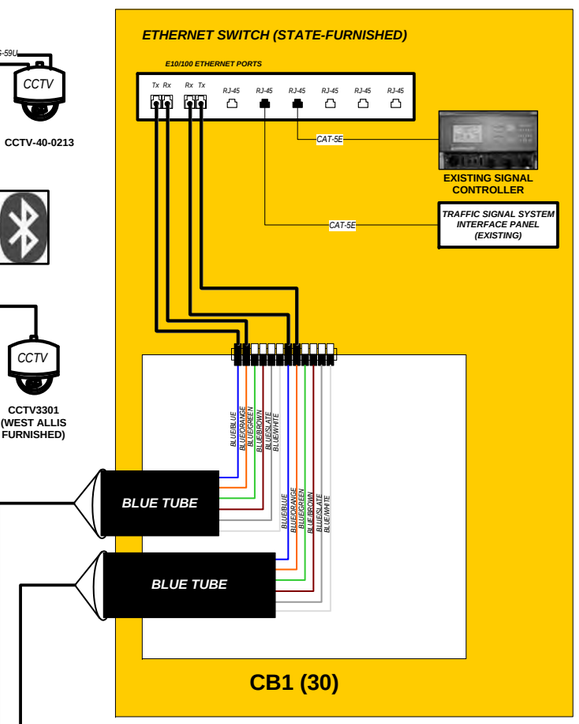


- WIRELESS TRAFFIC SENSOR AND WIRLESS CONNECTION TO REPEATER MODULE

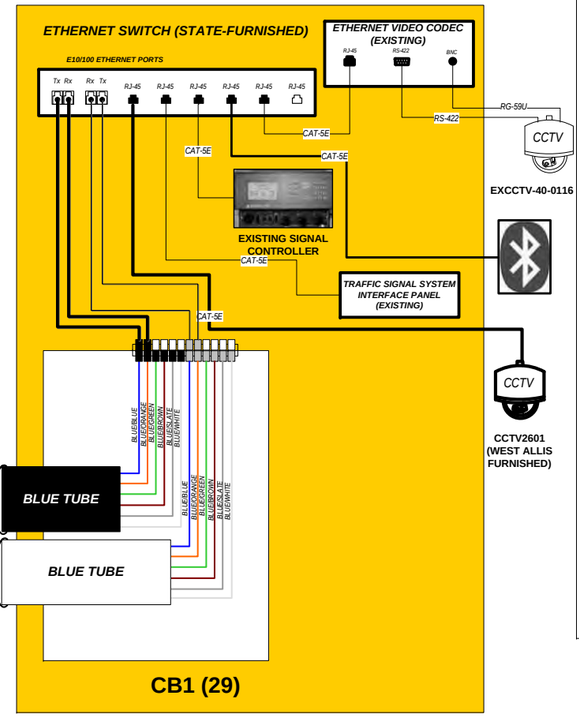
W. SCHLINGER AVE. AND S. 84TH ST.



PARKING LOT ENTRANCE AND S. 84TH ST.



W. GREENFIELD AVE. AND S. 84TH ST.



6-COUNT FOC REMOVED FROM EXISTING CB-CCTV-40-0116 AND REINSTALLED IN CB1 (29)

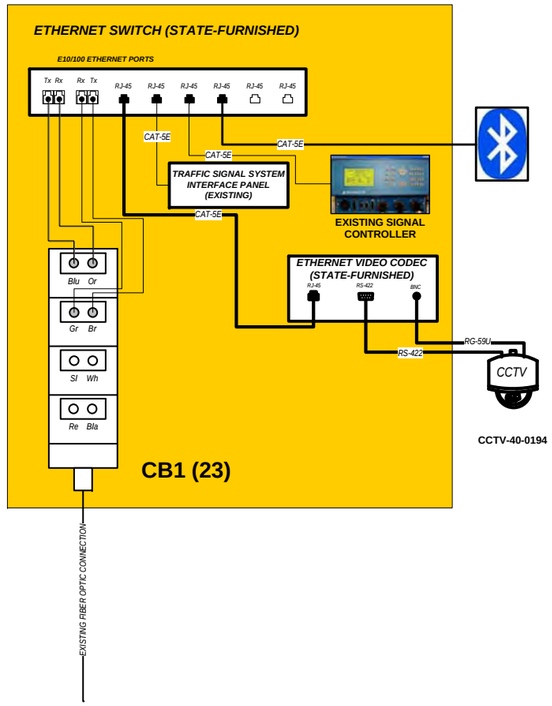
KEY

- PROPOSED / EXISTING FUSION SPLICE
- FIBER LEFT BARE
- PROPOSED FIBER TERMINATION
- EXISTING FIBER TERMINATION
- EXISTING WIRELESS COMMUNICATIONS LINK
- PROPOSED / EXISTING COMPONENT
- PROPOSED / EXISTING CCTV CAMERA
- PROPOSED / EXISTING MICROWAVE DETECTOR
- PROPOSED / EXISTING FIBER OPTIC CABLE
- PROPOSED LOOP MONITOR
- PROPOSED 2070 RAMP METER CONTROLLER (STATE-FURNISHED)
  2070 CONTROLLER (STATE-FURNISHED)
- EXISTING TRAFFIC SIGNAL CONTROLLER
- WIRELESS TRAFFIC SENSOR AND WIRLESS CONNECTION TO REPEATER MODULE

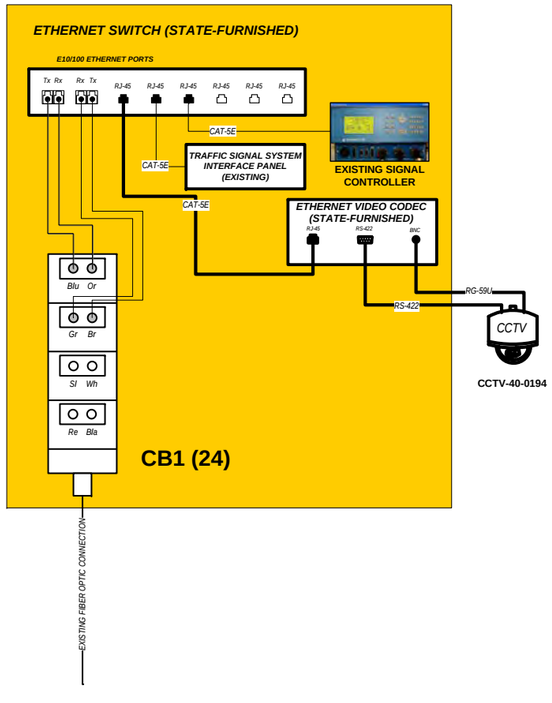
PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS - COMMUNICATIONS DETAILS	SHEET E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : $FILE$ PLOT SCALE : $$.....plotscale.....$$

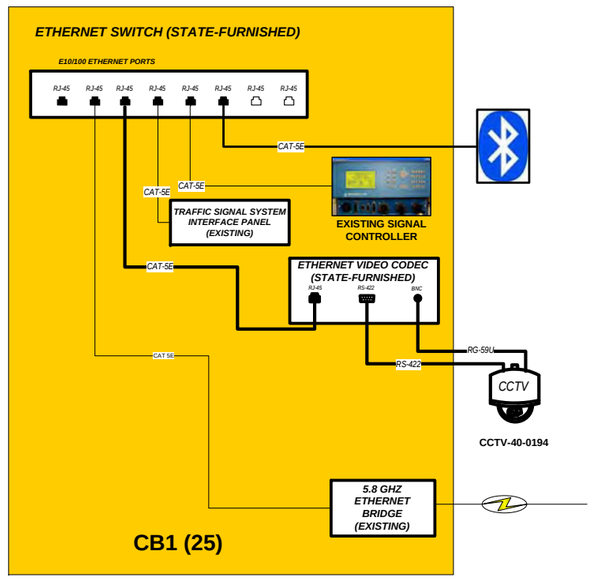
STH 100 AND W. THEODORE TRECKER WAY



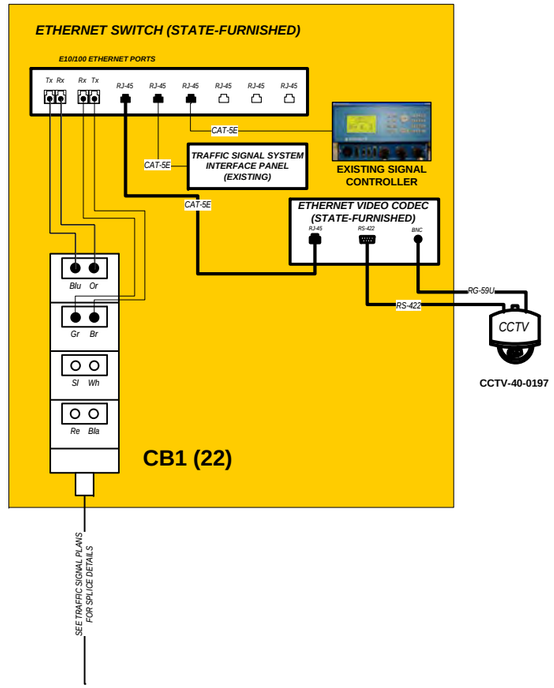
N. 100TH ST. AND W. BLUEMOUND RD.



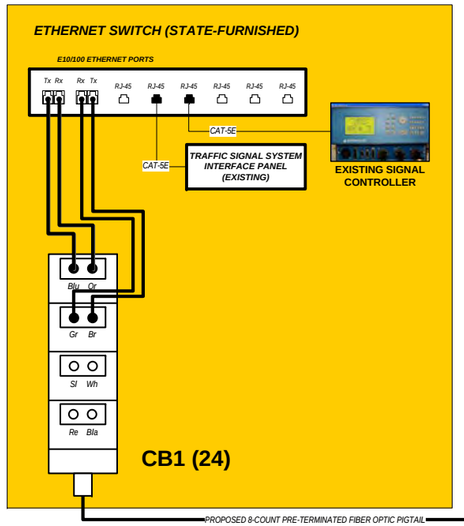
S. 92ND ST. AND W. GREENFIELD AVE.



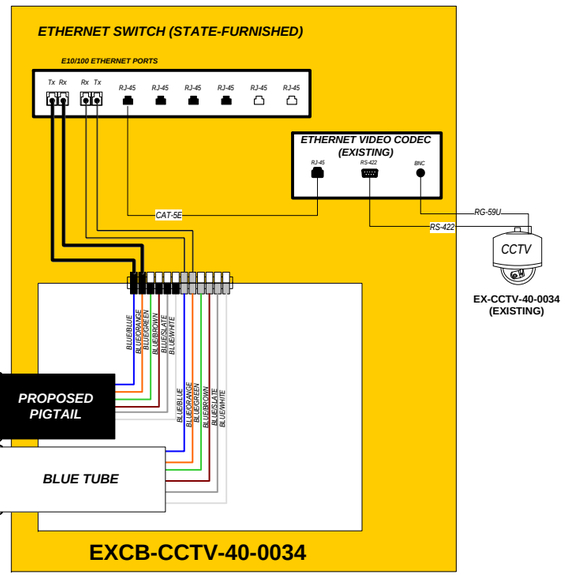
W. LINCOLN AVE. AND W. NATIONAL AVE.



W. LINCOLN AVE. AND SB USH 45 OFF-RAMP



EXISTING CCTV-40-0034 FTMS CABINET



KEY

- PROPOSED / EXISTING FUSION SPLICE
- FIBER LEFT BARE
- PROPOSED FIBER TERMINATION
- EXISTING FIBER TERMINATION
- EXISTING WIRELESS COMMUNICATIONS LINK
- PROPOSED / EXISTING COMPONENT
- PROPOSED / EXISTING CCTV CAMERA
- PROPOSED / EXISTING MICROWAVE DETECTOR
- PROPOSED / EXISTING FIBER OPTIC CABLE
- PROPOSED LOOP MONITOR
- PROPOSED 2070 RAMP METER CONTROLLER (STATE-FURNISHED)

2070 CONTROLLER (STATE-FURNISHED)

- EXISTING TRAFFIC SIGNAL CONTROLLER



- WIRELESS TRAFFIC SENSOR AND WIRLESS CONNECTION TO REPEATER MODULE

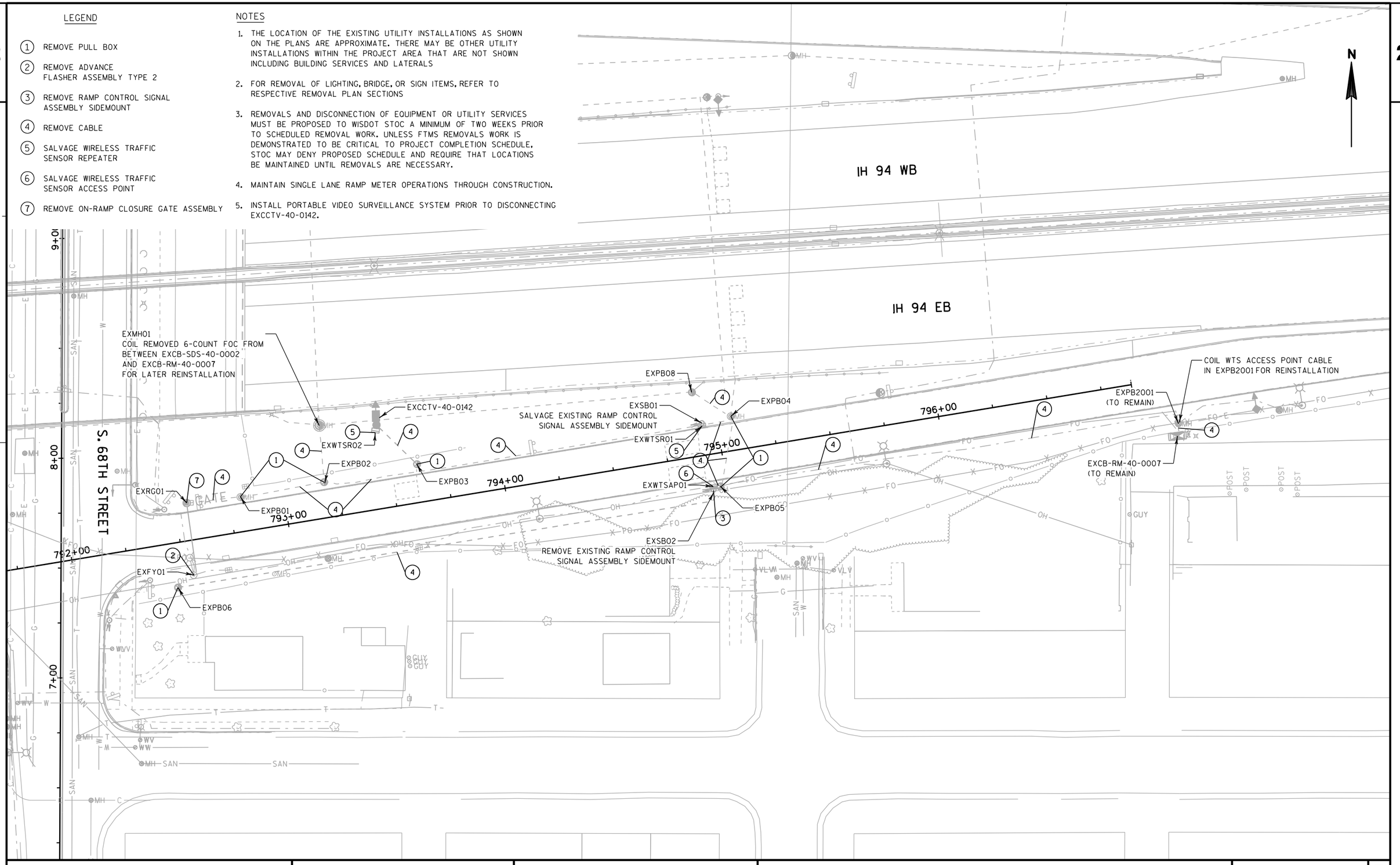
PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS - COMMUNICATIONS DETAILS	SHEET E

LEGEND

1. REMOVE PULL BOX
2. REMOVE ADVANCE FLASHER ASSEMBLY TYPE 2
3. REMOVE RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT
4. REMOVE CABLE
5. SALVAGE WIRELESS TRAFFIC SENSOR REPEATER
6. SALVAGE WIRELESS TRAFFIC SENSOR ACCESS POINT
7. REMOVE ON-RAMP CLOSURE GATE ASSEMBLY

NOTES

1. THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN INCLUDING BUILDING SERVICES AND LATERALS
2. FOR REMOVAL OF LIGHTING, BRIDGE, OR SIGN ITEMS, REFER TO RESPECTIVE REMOVAL PLAN SECTIONS
3. REMOVALS AND DISCONNECTION OF EQUIPMENT OR UTILITY SERVICES MUST BE PROPOSED TO WISDOT STOC A MINIMUM OF TWO WEEKS PRIOR TO SCHEDULED REMOVAL WORK. UNLESS FTMS REMOVALS WORK IS DEMONSTRATED TO BE CRITICAL TO PROJECT COMPLETION SCHEDULE, STOC MAY DENY PROPOSED SCHEDULE AND REQUIRE THAT LOCATIONS BE MAINTAINED UNTIL REMOVALS ARE NECESSARY.
4. MAINTAIN SINGLE LANE RAMP METER OPERATIONS THROUGH CONSTRUCTION.
5. INSTALL PORTABLE VIDEO SURVEILLANCE SYSTEM PRIOR TO DISCONNECTING EXCCTV-40-0142.



PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS REMOVALS	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\021410_fm.dgn PLOT DATE : 20-APR-2014 12:51 PLOT BY : MSCKKC PLOT NAME : 021410_fm PLOT SCALE : 40:1

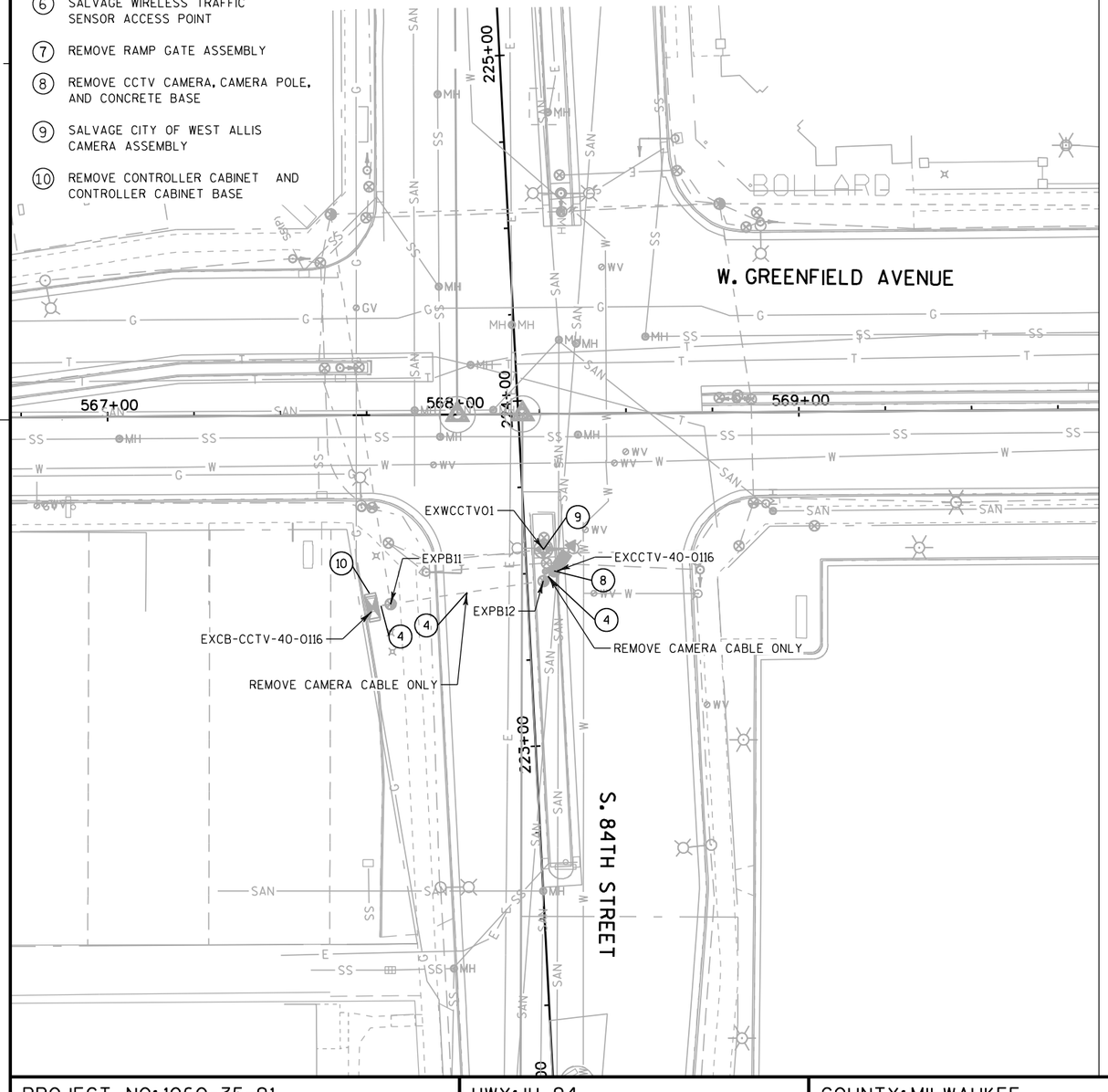
2

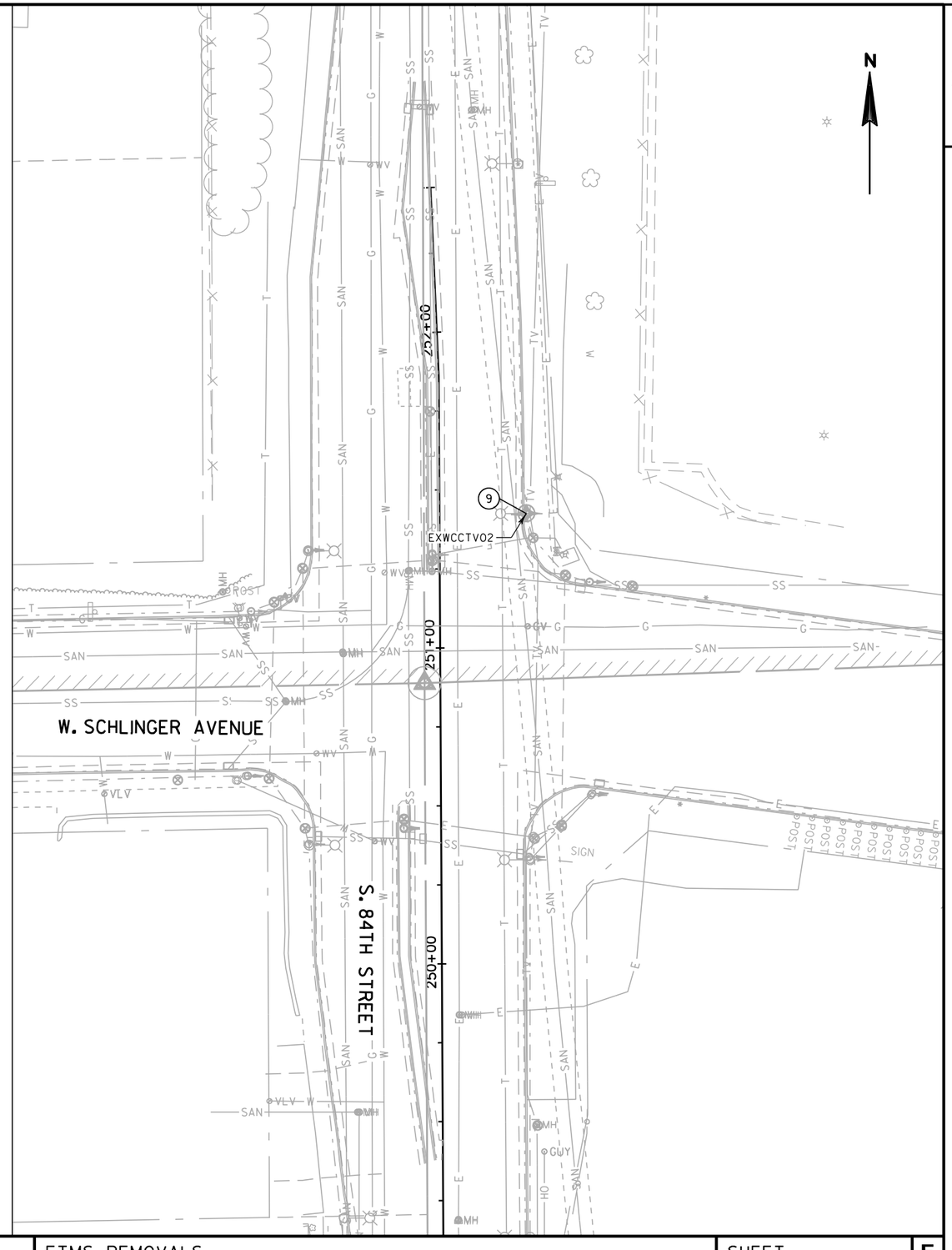
LEGEND

1. REMOVE PULL BOX
2. REMOVE ADVANCE FLASHER ASSEMBLY TYPE 2
3. REMOVE RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT
4. REMOVE CABLE
5. SALVAGE WIRELESS TRAFFIC SENSOR REPEATER
6. SALVAGE WIRELESS TRAFFIC SENSOR ACCESS POINT
7. REMOVE RAMP GATE ASSEMBLY
8. REMOVE CCTV CAMERA, CAMERA POLE, AND CONCRETE BASE
9. SALVAGE CITY OF WEST ALLIS CAMERA ASSEMBLY
10. REMOVE CONTROLLER CABINET AND CONTROLLER CABINET BASE

NOTES

1. THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN INCLUDING BUILDING SERVICES AND LATERALS
2. FOR REMOVAL OF LIGHTING, BRIDGE, OR SIGN ITEMS, REFER TO RESPECTIVE REMOVAL PLAN SECTIONS
3. REMOVALS AND DISCONNECTION OF EQUIPMENT OR UTILITY SERVICES MUST BE PROPOSED TO WISDOT STOC A MINIMUM OF TWO WEEKS PRIOR TO SCHEDULED REMOVAL WORK. UNLESS FTMS REMOVALS WORK IS DEMONSTRATED TO BE CRITICAL TO PROJECT COMPLETION SCHEDULE, STOC MAY DENY PROPOSED SCHEDULE AND REQUIRE THAT LOCATIONS BE MAINTAINED UNTIL REMOVALS ARE NECESSARY.





2

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS REMOVALS	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\021411_fm.dgn PLOT DATE : 20-APR-2014 12:51 PLOT BY : MSCKKC PLOT NAME : 021411_fm PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

W. O'CONNOR STREET

S. 72ND STREET

IH 94 WB

IH 94 EB

TCCTV1901
PORTABLE VIDEO SURVEILLANCE SYSTEM
INSTALL 5.8 GHZ ETHERNET BRIDGE
WIRELESS DATE LINKED TO CCTV-40-0010 AT HAWLEY ROAD

N

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\021419_fm.dgn PLOT DATE : 20-APR-2014 12:54 PLOT BY : MSCKKC PLOT NAME : PLOT SCALE : 40:1

2

N

S. 68TH STREET

9+00

8+00

7+00

IH 94 WB

IH 94 EB

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) 6-COUNT FOC (S-F)
(1) 6-COUNT FOC (SALVAGED)
AND (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

EXMH2001
(1) INSTALL CONDUIT INTO EXISTING MANHOLE
IN EXISTING SPLICE ENCLOSURE
(3) F.O. SPLICES WHEN EXISTING CABLE IS REMOVED
TO MAINTAIN CONTINUITY THROUGH FOC
DURING TEMPORARY CONDITION, AND
(6) F.O. SPLICES TO RESTORE SYSTEM
TO PERMANENT CONDITION WHEN
CABLE IS REINSTALLED.

EXCCTV-40-0142

INTERCEPT EXISTING CONDUITS
(1) WITH (1) CAMERA CABLE
AND (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

(4) 3-INCH NONMETALLIC CONDUITS
(1) WITH (1) 5C NO. 14 AWG TRAFFIC SIGNAL CABLE
AND (1) 2C NO. 12 UF GROUNDED CABLE
(1) WITH (1) CAMERA CABLE
(1) WITH (1) 6-COUNT FOC (S-F),
(1) 6-COUNT FOC (SALVAGED)
AND (1) NO. 14 AWG LIGHTING WIRE

SB2001
(1) INSTALL SALVAGED SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT
(1) CONCRETE BASE TYPE 1

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) 7C NO. 14 AWG TRAFFIC SIGNAL CABLE
AND (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

EXTEND EXISTING CONDUITS

IN EXISTING CONDUITS
(1) WITH (1) 5C, (1) 7C NO. 14 AWG TRAFFIC SIGNAL CABLE
(1) WITH (1) 2C NO. 12 UF GROUNDED CABLE
AND (1) CAMERA CABLE
(1) WITH (1) 6-COUNT FOC (S-F)
(1) 6-COUNT FOC (SALVAGED)
AND (1) NO. 14 AWG LIGHTING WIRE

(5) 3-INCH NONMETALLIC CONDUITS
(1) WITH (1) 5C AND (1) 9C NO. 14 AWG TRAFFIC SIGNAL CABLE
(1) WITH (1) 2C NO. 12 UF GROUNDED CABLE
(1) WITH (1) CAMERA CABLE
(1) WITH (1) 6-COUNT FOC (S-F),
(1) 6-COUNT FOC (SALVAGED)
AND (1) NO. 14 AWG LIGHTING WIRE
(1) WITH (1) WTS ACCESS POINT CABLE

(3) 3-INCH NONMETALLIC CONDUITS
(1) WITH (1) 5C NO. 14 AWG TRAFFIC SIGNAL CABLE
AND (1) NO. 14 AWG LIGHTING WIRE
(1) WITH (1) 2C NO. 12 UF GROUNDED CABLE
G-40-88

PB2003

PB2004

PB2002

FY2002
(1) SIGNAL ASSEMBLY ADVANCE FLASHER TYPE 1
(1) CONCRETE BASE TYPE 1
(1) INSTALL SALVAGED EXWTSR01

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) 5C NO. 14 AWG
TRAFFIC SIGNAL CABLE
AND (1) NO. 14 AWG LIGHTING WIRE

(2) 3-INCH NONMETALLIC CONDUITS SPECIAL
(1) WITH (1) 5C NO. 14 AWG TRAFFIC
SIGNAL CABLE
AND (1) NO. 14 AWG LIGHTING WIRE

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (2) 5C NO. 14 AWG TRAFFIC SIGNAL CABLE
AND (1) NO. 14 AWG LIGHTING WIRE

WTS ARRAY

WTS ARRAY

(1) INSTALL SALVAGED WTS
ACCESS POINT

S-40-994

EXPB2001
(1) INSTALL CONDUIT INTO
EXISTING PULL BOX

PB2001

PB2005

PB2006

EXTEND EXISTING CONDUITS

FY2001
(1) SIGNAL ASSEMBLY ADVANCE FLASHER TYPE 1
(1) CONCRETE BASE TYPE 1

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) 5C NO. 14 AWG TRAFFIC SIGNAL CABLE
AND (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

SB2002
(1) INSTALL SALVAGED EXWTSAP01
(1) SIGNAL ASSEMBLY RAMP CONTROL OVERHEAD

EXCB-RM-40-0007
(1) WIRELESS MODEM (S-F)
PRIOR TO REMOVING FOC

(5) 3-INCH NONMETALLIC CONDUITS
(1) WITH (1) 5C AND (1) 7C NO. 14 AWG TRAFFIC SIGNAL CABLE
(1) WITH (1) 2C NO. 12 UF GROUNDED CABLE
(1) WITH (1) CAMERA CABLE
(1) WITH (1) 6-COUNT FOC (S-F)
(1) 6-COUNT FOC (SALVAGED)
AND (1) NO. 14 AWG LIGHTING WIRE

IN EXISTING CONDUIT
(1) WITH (1) 5C AND (1) 9C NO. 14 AWG TRAFFIC SIGNAL CABLE
(1) WITH (1) 2C NO. 12 UF GROUNDED CABLE
(1) WITH (1) CAMERA CABLE
(1) WITH (1) 6-COUNT FOC (S-F),
(1) 6-COUNT FOC (SALVAGED)
AND (1) NO. 14 AWG LIGHTING WIRE
(1) WITH (1) WTS ACCESS POINT CABLE

(3) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) 9C, (1) 7C NO. 14 AWG TRAFFIC SIGNAL CABLE
AND (1) NO. 14 AWG TRAFFIC SIGNAL WIRE
(1) WITH (1) WTS ACCESS POINT CABLE

792+00

793+00

794+00

795+00

796+00

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

2

N

S. 64TH STREET

IH 94 WB

IH 94 EB

GATE

FO

SS

OH

E

W

G

D

MH

AG

GUY

EXCB-SDS-40-0002
(1) WIRELESS MODEM (S-F)
PRIOR TO REMOVING FOC

R/W

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\021421_fm.dgn PLOT DATE : 20-APR-2014 12:56 PLOT BY : MSCKKC PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

N

W. NATIONAL AVENUE

W. LINCOLN AVENUE

63+00
64+00
65+00
66+00
67+00
68+00
69+00
70+00
71+00
72+00

CCTV-40-0197
ON TRAFFIC SIGNAL POLE
(1) BLUETOOTH DETECTOR (S-F)
ON TRAFFIC SIGNAL MONOTUBE ARM
(1) CCTV CAMERA (S-F)

IN SIGNAL CONDUIT
(1) CAMERA CABLE
(1) BLUETOOTH DETECTOR CABLE

PB2 (22)

CB1 (22)
(1) VIDEO ENCODER (S-F)

R/W

PHONE

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

2

N

IN SIGNAL CONDUIT
(1) CAMERA CABLE
(1) BLUETOOTH DETECTOR CABLE

CB1 (23)
(1) VIDEO ENCODER (S-F)

PB1 (23)

PB2 (23)

IN SIGNAL CONDUIT
(1) CAMERA CABLE
(1) BLUETOOTH DETECTOR CABLE

PB3 (23)

PB4 (23)

CCTV-40-0194
ON TRAFFIC SIGNAL POLE
(1) BLUETOOTH DETECTOR (S-F)
ON TRAFFIC SIGNAL MONOTUBE ARM
(1) CCTV CAMERA (S-F)

W. THEODORE TRECKER WAY

STH 100

17+00 18+00 19+00

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

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

2

N

N. 99TH STREET

W. BLUEMOUND ROAD

CB1 (24)
(1) VIDEO ENCODER (S-F)

IN SIGNAL CONDUIT
(1) CAMERA CABLE

PB1 (24)

IN SIGNAL CONDUIT
(1) CAMERA CABLE

CCTV-40-0211
ON TRAFFIC SIGNAL MONOTUBE ARM
(1) CCTV CAMERA (S-F)

PB2 (24)

IN SIGNAL CONDUIT
(1) CAMERA CABLE

183+00
184+00
186+00
186+00
187+00
187+00
188+00
188+00
189+0

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\021424_fm.dgn PLOT DATE : 20-APR-2014 12:59 PLOT BY : MSCKKC PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

N

CB1 (25)
(1) VIDEO ENCODER (S-F)

IN SIGNAL CONDUIT
(1) CAMERA CABLE
(1) BLUETOOTH DETECTOR CABLE

R/W

PB10 (25)

CCTV-40-0212
ON TRAFFIC SIGNAL POLE
(1) BLUETOOTH DETECTOR (S-F)
ON TRAFFIC SIGNAL MONOTUBE ARM
(1) CCTV CAMERA (S-F)

W. GREENFIELD AVENUE

S. 92ND STREET

41+00

40+00

39+00

38+00

542+00

543+00

544+00

45'

40'

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\021425_fm.dgn PLOT DATE : 20-APR-2014 13:01 PLOT BY : MSCKKC PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

N

CCTV-40-0116
ON TRAFFIC SIGNAL POLE
(1) BLUETOOTH DETECTOR (S-F)
ON TRAFFIC SIGNAL MONOTUBE ARM
(1) CCTV CAMERA (S-F)

IN TRAFFIC SIGNAL CONDUIT
(1) CAMERA CABLE
(1) BLUETOOTH DETECTOR CABLE

IN TRAFFIC SIGNAL CONDUIT
(1) WITH (1) CAMERA CABLE
AND (1) BLUETOOTH DETECTOR CABLE

CB1 (29)

EXPB2902

PB2 (29)

IN TRAFFIC SIGNAL CONDUIT
INSTALL (1) 6-COUNT FOC (SALVAGED)
AND (1) 6-COUNT FOC (S-F)
FROM EXPB2901 TO CB1 (29)

EXPB2901

WCCTV2901
(1) CITY OF WEST ALLIS CAMERA
ON TRAFFIC SIGNAL POLE

IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F)

EXPB2903

IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F)

567+00
568+00
569+00
570+00
223+00
224+00
225+00
226+00
227+00
228+00

S. 84TH STREET

W. GREENFIELD AVENUE

MATCHLINE STA 248+50

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\021429_fm.dgn PLOT DATE : 20-APR-2014 13:02 PLOT BY : MSCKKC PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

N

MATCHLINE STA 228+50

229+00

230+00

231+00

232+00

233+00

234+00

MATCHLINE STA 234+50

S. 84TH STREET

IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F)

IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F)

EXPB3 (30)

EXPB3001

IN EXISTING CONDUIT
(2) 6-COUNT FOC (S-F)

PB1 (30)

CB1 (30)

IN EXISTING CONDUIT
(2) 6-COUNT FOC (S-F)

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

N

W. WASHINGTON STREET

S. 84TH STREET

235+00

236+00

237+00

238+00

239+00

240+00

MATCHLINE STA 234+50

MATCHLINE STA 240+50

IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F)

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

N

W. WALKER STREET

S. 84TH STREET

MATCHLINE STA 240+50

MATCHLINE STA 246+50

241+00 242+00 243+00 244+00 245+00 246+00

IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F)

EXPB3101

IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F)

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

N

W. SCHLINGER AVENUE

R/W

S. 84TH STREET

MATCHLINE STA 246+50

247+00

248+00

249+00

250+00

252+00

IN TRAFFIC SIGNAL CONDUIT
(1) 6-COUNT FOC (S-F)

PB8 (33)

PB9 (33)

CB1 (33)
(1) VIDEO ENCODER (S-F)

PB1 (33)

IN TRAFFIC SIGNAL CONDUIT
(1) CAMERA CABLE
(1) BLUETOOTH DETECTOR CABLE
(1) CITY OF WEST ALLIS CCTV CABLE

PB7 (33)

PB2 (33)

IN TRAFFIC SIGNAL CONDUIT
(1) 6-COUNT FOC (S-F)

CCTV-40-0213
ON TRAFFIC SIGNAL POLE
(1) BLUETOOTH DETECTOR (S-F)
ON TRAFFIC SIGNAL MONOTUBE ARM
(1) CCTV CAMERA (S-F)

IN TRAFFIC SIGNAL CONDUIT
(1) CAMERA CABLE
(1) BLUETOOTH DETECTOR CABLE

IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F)

EXPB3301

PB6 (33)

PB3 (33)

R/W

WCCTV3301
(1) CITY OF WEST ALLIS CAMERA
ON TRAFFIC SIGNAL POLE

IN TRAFFIC SIGNAL CONDUIT
(1) 6-COUNT FOC (S-F)

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

2

N

S. 68TH ST.

TYPE A

GATE

791+00

792+00

793+00

794+00

795+00

796+00

796+89

EP: 796+88.99

EB I94 ON RAMP

EB I-94 ON RAMP

TYPE A

S. 68TH ST.

W. DIXON ST.

LEGEND

INLET PROTECTION TYPE A

INLET PROTECTION TYPE C

SILT FENCE

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	EROSION CONTROL - S. 68TH ST. ON RAMP AT IH-94	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\022002_EC.DWG PLOT DATE : 2/3/2014 10:45 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

2

N

TYPE A

EP: 796+88.99

793+00

794+00

795+00

796+00

796+89

EB I-94 ON RAMP

EB I94 ON RAMP

TYPE A

CAMERA

POST

POST

POST

LEGEND

INLET PROTECTION TYPE A

INLET PROTECTION TYPE C

SILT FENCE

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	EROSION CONTROL - S.68TH ST. ON RAMP AT IH-94	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\022003_EC.DWG PLOT DATE : 2/3/2014 10:45 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

2

N

S. 70TH ST.

SIGN

PI: 785+48.93

PI: 14+06.33

W. KEARNEY ST.

785+00

786+00

787+00

788+00

789+00

790+00

14+00

15+00

16+

13+00

CONC SLAB

LEGEND

INLET PROTECTION TYPE A

INLET PROTECTION TYPE C

SILT FENCE

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	EROSION CONTROL - W. KEARNEY ST.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\022001_EC.DWG PLOT DATE : 2/3/2014 10:45 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 40'-XREF

WISDOT/CADDS SHEET 42

2

2

N

792+19, 14.8 RT.
RECONSTRUCTING INLETS
RIM 709.68
(7)

792+83.7, 20.5 LT.
ADJUSTING INLET COVERS
RIM 710.13
(10)

793+19, 10.5' RT
RECONSTRUCTING INLETS
RIM 710.06
(11)

793+57, 20' RT.
ADJUSTING INLET COVERS
RIM 709.90
(13)

793+19, 16' RT.
INLET 2X2
INLET COVER TYPE A
RIM 709.97
INVERT 705.39
(12)

792+69, 10.5' RT.
ADJUSTING INLET COVERS
RIM 709.57
(9)

792+69, 16' RT.
ADJUSTING INLET COVERS
RIM 709.45
INVERT 704.95
(8)

792+21, 19.3' RT.
INLET 2X2
INLET COVER TYPE A
RIM 709.60
INVERT 705.50
(6)

P-3

P-2

PI: 6+59.23

EP: 796+88.99

S. 68TH ST.

W. DIXON ST.

IH-94

EB IH-94 ON RAMP

9+00

8+00

7+00

6+00

792+00

793+00

794+00

795+00

796+00

796+89

PROJECT NO: 1060-33-91	HWY: IH-94	COUNTY: MILWAUKEE	STORM SEWER- 68TH ST. ON RAMP AT IH-94	SHEET 99	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\022501_SS.DWG PLOT DATE : 4/25/2014 9:17 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

N

STH 100 (S. 108TH ST.)

W. LAPHAM ST.

MCDONALDS

513+12, 81' RT.
ADJUSTING MANHOLE COVERS
5

512+85, 58' RT.
ADJUSTING
MANHOLE COVERS
4

512+83, 66' RT.
REMOVE CATCH BASIN
CONCRETE COLLAR REQUIRED
2

P-1

512+78, 69' RT.
INLET 2X2
(SALVAGED COVER FROM 2)
RIM 735.25
INVERT 731.56
1

512+56, 57' RT
ADJUSTING MANHOLE COVERS
3

STH 100 / S. 108TH ST.

TEMP SIGN

21+00 22+00 23+00

515 514 513 512

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	STORM SEWER-STH 100 & W. LAPHAM ST.	SHEET 100	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

N

STH 59 (W. GREENFIELD AVE)

1
R3-4(2S)
MOUNT ON
LIGHT POLE

STH 100 (S. 108TH ST)

STH 100 (S. 108TH ST)

STH 59 (W. GREENFIELD AVE)

2
STOP
R1-1F(3)
MOUNT ON
SIGNAL POLE

STOP
REMOVE

2

SHEET 1 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN - STH 59 @ STH 100	SHEET 101	E

2

N

REMOVE

EAST INTERSTATE 94

5

EAST MB3-1

INTERSTATE 94 M1-1

MB6-1

J3-1(2S)

784

785

S. 70TH ST.

15

REMOVE

6

R4-7(2S)

MOUNT ON SIGNAL POLE

70TH STREET

4

R4-7(2S)

3

LEFT LANE MUST TURN LEFT

R3-7L(2S)

(NB) UNDER R4-7

REMOVE

⊙MP

STOP

7

R1-1F(3)

MOUNT ON SIGNAL POLE

8

R3-18(2S)

MOUNT ON SIGNAL POLE

REMOVE

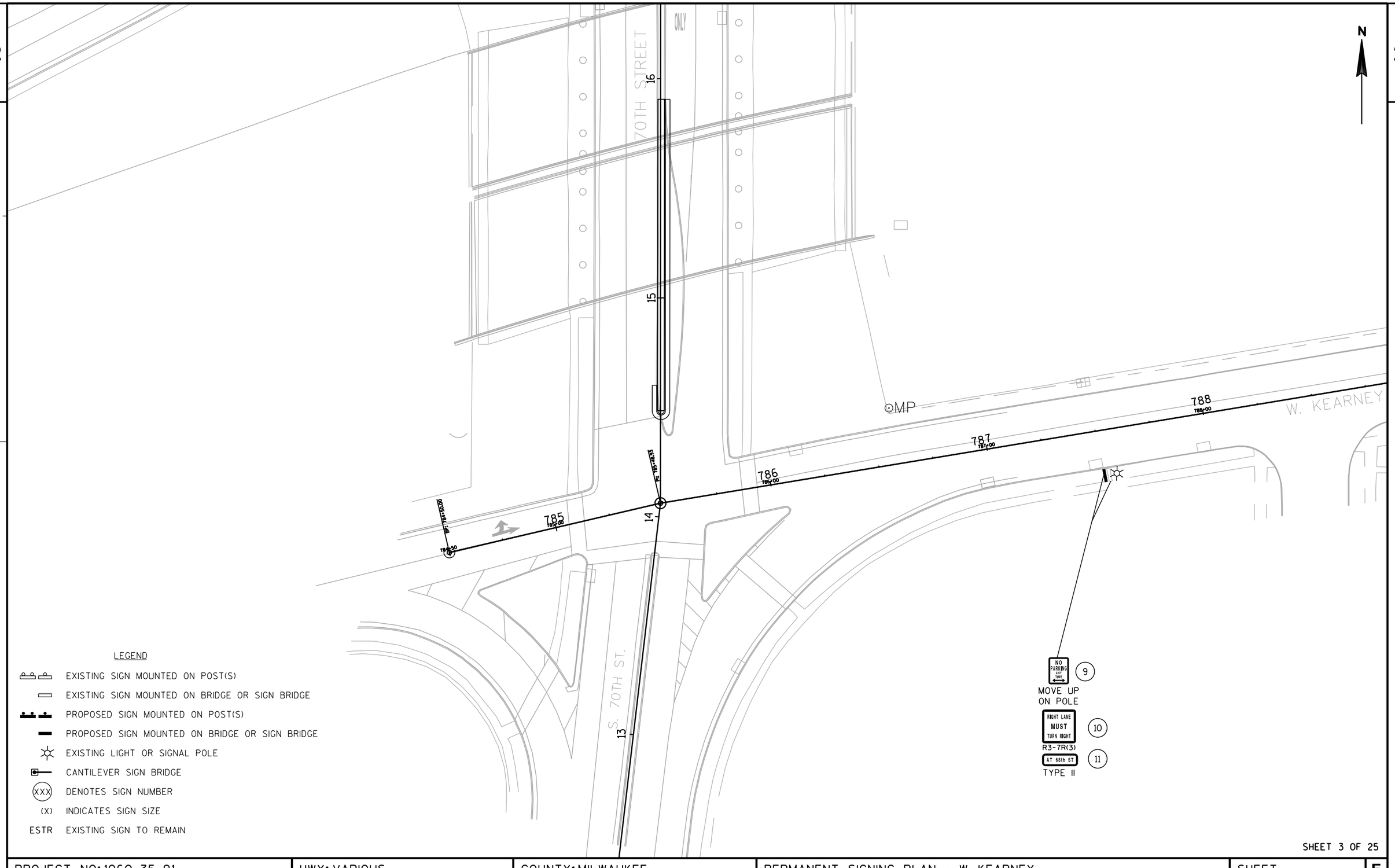
W. O CONNOR ST.

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

SHEET 2 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN 70TH @ W. KEARNEY	SHEET 102 E



LEGEND

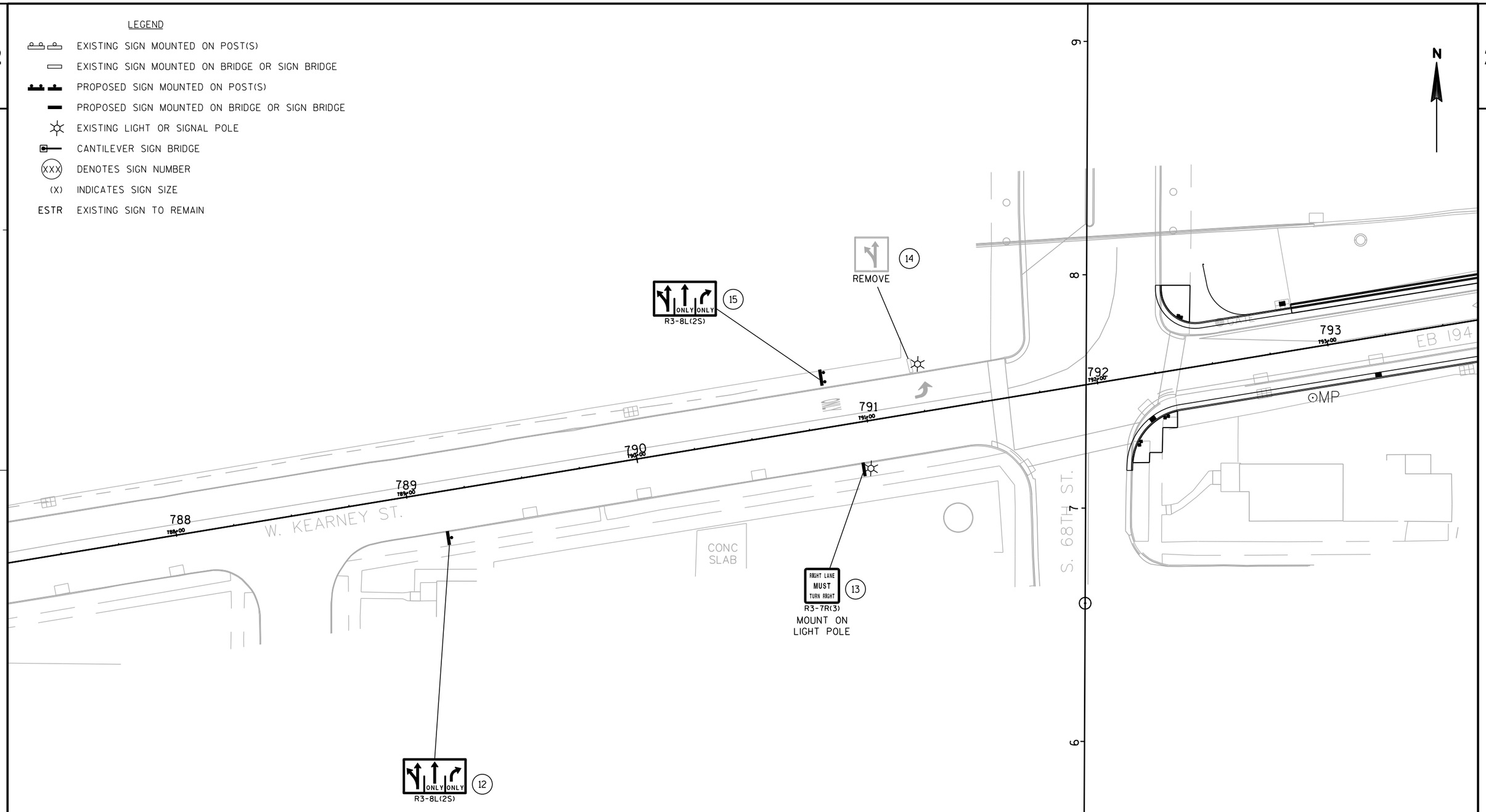
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

SHEET 3 OF 25

PROJECT NO: 1060-35-91	HWY: VARIOUS	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN - W KEARNEY	SHEET 103 E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN



SHEET 4 OF 25

PROJECT NO: 1060-35-91	HWY: VARIOUS	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN - W KEARNEY ST	SHEET 104	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\023204_PS.dgn PLOT DATE : 02-JUN-2014 06:58 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 40:1

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

N

9

8

7

6

S. 68TH ST.

EB 194 ON RAMP

792+00

793+00

794+00

795+00

796+00

796

795

CAMERA

POST

POST

WEST
Zoo Freeway
94

REMOVE

WEST
MB3-4
Zoo Freeway
94
M1-1

23
MB5-1L
J2-1(2S)
MOUNT ON
LIGHT POLE

22
LEFT
LANE
SIGNAL
R10-65L(2S)

21
STOP
HERE ON
RED
R10-6(2S) (MOD)
MOUNT ON
SIGNAL POLE

CANTILEVER OVERHEAD
SIGN SUPPORT
S-40-994

18
STOP
HERE ON
RED
R10-6(2S)
MOUNT ON
WOOD POST

19
CENTER
LANE
SIGNAL
R10-65C(2S)

RIGHT
LANE
SIGNAL
20
R10-65R(2S)

PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
17
R5-57(4)

RAMP
METERED
WHEN
FLASHING
16
W3-8(2S)
ON SIGNAL POLE

RAMP
METERED
WHEN
FLASHING
REMOVE

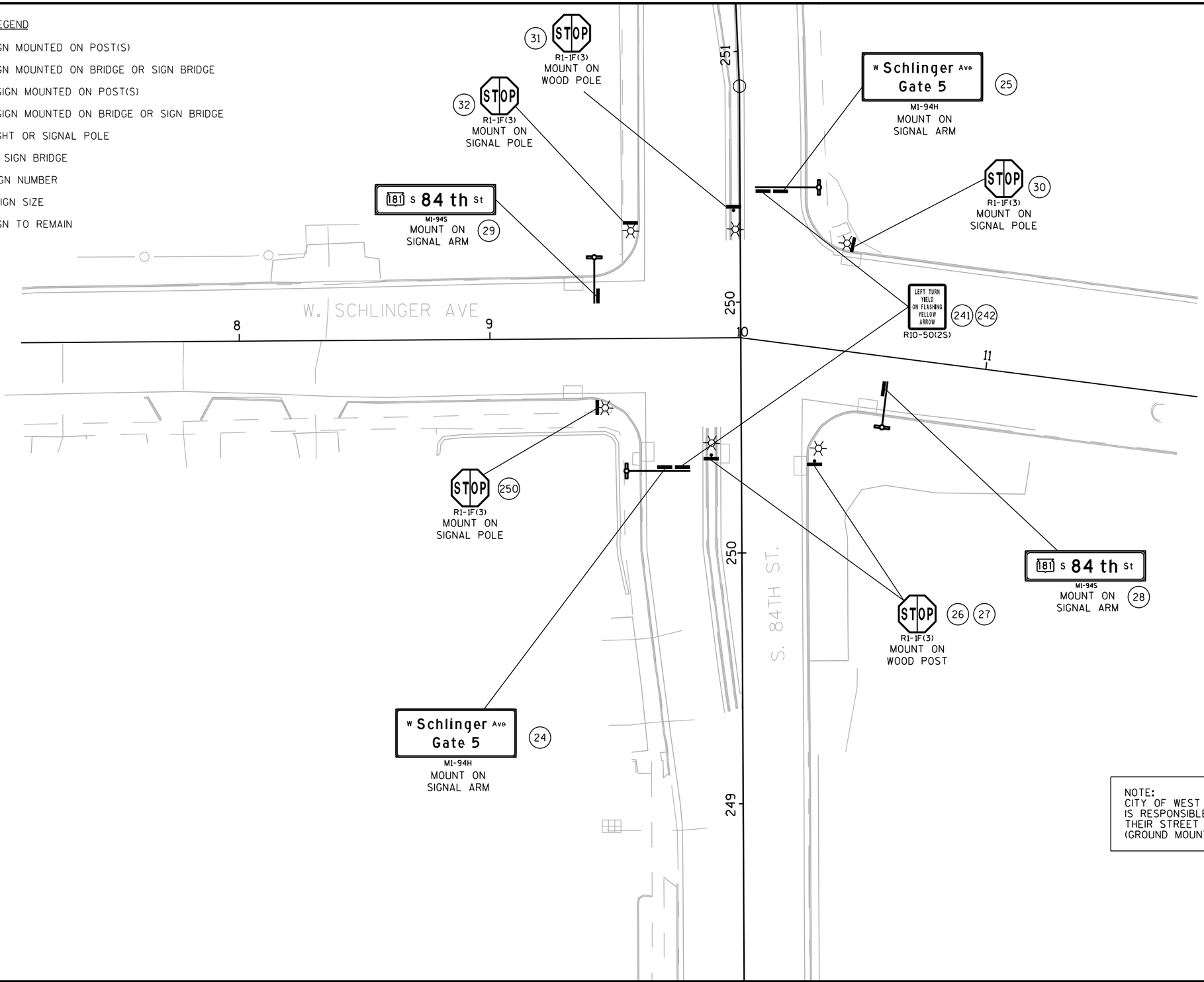
SHEET 5 OF 25

PROJECT NO: 1060-35-91	HWY: VARIOUS	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN - 68TH ST ON RAMP @ IH94	SHEET 105	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN



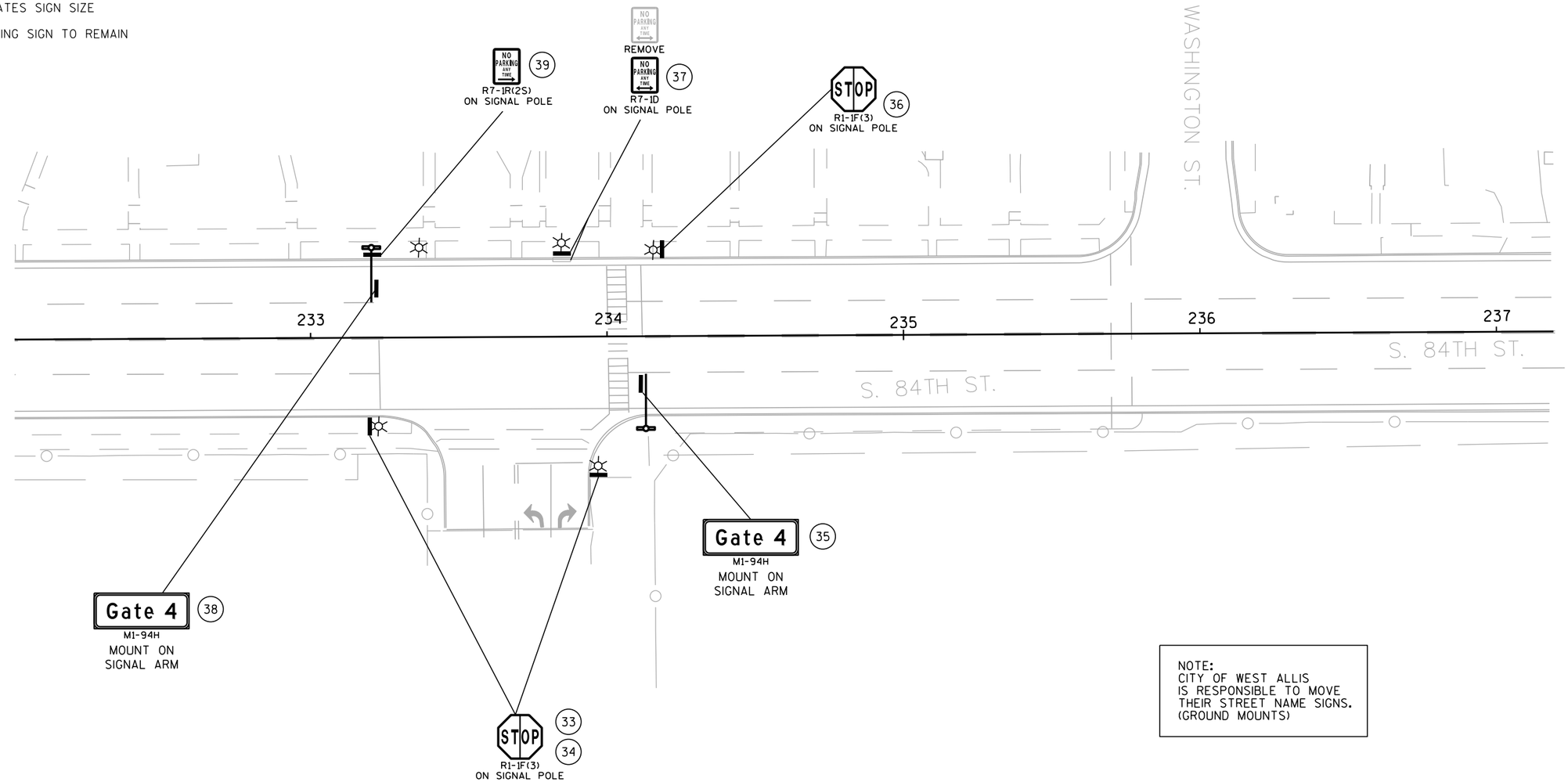
NOTE:
CITY OF WEST ALLIS
IS RESPONSIBLE TO MOVE
THEIR STREET NAME SIGNS.
(GROUND MOUNTS)

SHEET 6 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN- S. 84TH ST @ GATE 5- STATE	SHEET 106 E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN



NOTE:
CITY OF WEST ALLIS
IS RESPONSIBLE TO MOVE
THEIR STREET NAME SIGNS.
(GROUND MOUNTS)

SHEET 7 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN - 84TH ST AT GATE 4	SHEET 107	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\023207_PS.dgn PLOT DATE : 02-JUN-2014 06:58 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

93RD ST

92ND ST

W. GREENFIELD AVE.

539 540 541 541+21 542 543 544

41 40 39 38

N

2

NOTE:
CITY OF WEST ALLIS
IS RESPONSIBLE TO MOVE
THEIR STREET NAME SIGNS.
(GROUND MOUNTS)

NOTE:
TURN OVER OLD
NO PARKING SIGNS TO
CITY OF WEST ALLIS

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

SHEET 8 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN (W. GREENFIELD AVE 92ND-84TH)	SHEET 108 E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\023208_PS.dgn PLOT DATE : 02-JUN-2014 06:59 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

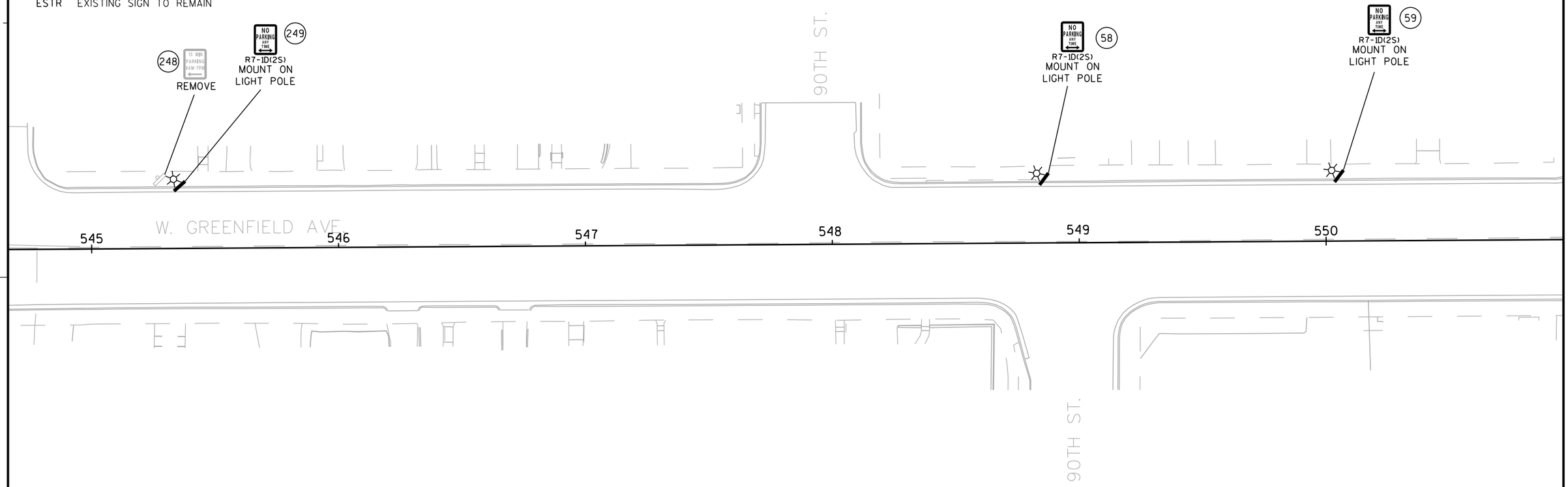
2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

N

2



SHEET 9 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN- (GREENFIELD AVE 92ND-84TH)	SHEET 109	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

N

2

89TH ST.

60 NO PARKING REMOVE

61 ONE HOUR PARKING 8AM-5PM REMOVE

62 NO PARKING ANY TIME R7-1D(2S) MOUNT ON LIGHT POLE

GATE

88TH ST.

63 ONE HOUR PARKING 8AM-5PM REMOVE

64 NO PARKING ANY TIME R7-1D(2S) MOUNT ON LIGHT POLE

551 552 553 554 555 556 557

W. GREENFIELD AVE.

89TH ST.

295 S1-1(2S) MOUNT ON LIGHT POLE

296 AHEAD S16-9P(2S) MOUNT ON LIGHT POLE

AHEAD REMOVE

88TH ST.

297 SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT S4-5I(2S) MOUNT ON LIGHT POLE

SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT REMOVE

SHEET 10 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN (W. GREENFIELD AVE. 92ND-84TH)	SHEET 110 E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

N

2

REMOVE

300 S1-1(2S) MOUNT ON LIGHT POLE

301 WF16-7L(2S) MOUNT ON LIGHT POLE

65 NO PARKING HERE TO CORNER REMOVE

66 ONE HOUR PARKING 8AM-4PM REMOVE

67 R7-1D(2S) MOUNT ON LIGHT POLE

70 ONE HOUR PARKING 8AM-4PM REMOVE

SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT REMOVE

302 SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT S4-5I(2S) MOUNT ON LIGHT POLE

68 ONE HOUR PARKING 8AM-5PM REMOVE

69 NO PARKING ANY TIME R7-1D(2S) MOUNT ON LIGHT POLE

AHEAD REMOVE

303 S1-1(2S) MOUNT ON LIGHT POLE

AHEAD 304 S16-9P(2S) MOUNT ON LIGHT POLE

87TH ST.

86TH ST.

W. GREENFIELD AVE.

558 559 560 561 562 563

298 S1-1(2S) MOUNT ON LIGHT POLE

299 WF16-7L(2S) MOUNT ON LIGHT POLE

REMOVE

87TH ST.

86TH ST.

SHEET 11 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN (W. GREENFIELD AVE. 92ND-84TH)	SHEET 111	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\023211_PS.dgn PLOT DATE : 02-JUN-2014 06:59 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

95 REMOVE — ONE HOUR PARKING 8AM-3PM

94 R7-1D(2S) MOUNT ON LIGHT POLE — NO PARKING ANY TIME

85TH ST.

W. GREENFIELD AVE.

564 565 566 567 568 569 224 225 223 222

91 181 S 84 th St M1-94S MOUNT ON SIGNAL ARM

88 RIGHT LANE MUST TURN RIGHT EXCEPT BUSES MOVE

WEST M3-4 59 M1-6

89 M6-1 MOVE

REMOVE — 84 R4-7(2S) — 86 W5-52L MOUNT ON SIGNAL POLE

90 STOP R1-1F(3) — 93 MOUNT ON SIGNAL POLE

EAST M3-2 59 M1-6 — 92 M6-1 J3-1(2S)

EAST 59 REMOVE

59 W Greenfield Ave M1-94S MOUNT ON SIGNAL ARM 83

STOP R1-1F(3) 82 MOUNT ON SIGNAL POLE

GREENFIELD AVE.

LEFT TURN YIELD ON FLASHING YELLOW ARROW

239 R10-50(2S) MOUNT ON SIGNAL POLE

237 R10-50(2S) MOUNT ON SIGNAL POLE

LEFT TURN YIELD ON FLASHING YELLOW ARROW 238 R10-50(2S) MOUNT ON SIGNAL ARM

STOP R1-1F(3) 81 MOUNT ON WOOD POST

NORTH M3-1 181 M1-6 — 80 M6-1 J3-1(2S) MOUNT ON SIGNAL POLE

RIGHT LANE MUST TURN RIGHT EXCEPT BUSES 79 MOVE

NORTH 181 REMOVE

72 73 STOP R1-1F(3) MOUNT ON WOOD POST

286 288 R4-7(2S) — 287 289 W5-52L

LEFT TURN YIELD ON FLASHING YELLOW ARROW 240 R10-50(2S) MOUNT ON SIGNAL POLE

181 S 84 th St M1-94S 76 MOUNT ON SIGNAL ARM

59 W Greenfield Ave M1-94S 71 MOUNT ON SIGNAL ARM

WEST M3-4 59 M1-6 — 75 M6-1 J3-1(2S) MOUNT ON SIGNAL POLE

STOP R1-1F(3) 77 MOUNT ON SIGNAL POLE

85 R4-7(2S) — 87 W5-52L MOUNT ON SIGNAL POLE

REMOVE

STOP R1-1F(3) 74 MOUNT ON SIGNAL POLE

EAST M3-2 59 M1-6 — 78 M6-1 J3-1(2S)

NOTE:
CITY OF WEST ALLIS
IS RESPONSIBLE TO MOVE
THEIR STREET NAME SIGNS.
(GROUND MOUNTS)

N

SHEET 12 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN- (W. GREENFIELD AVE @ 84TH ST)	SHEET E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\023212_PS.dgn PLOT DATE : 02-JUN-2014 06:59 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

N

BEGIN LEFT TURN LANE
R3-20L(2S)
96

567
568
569
224
225
226
227
228
229
230

S. 84TH ST.

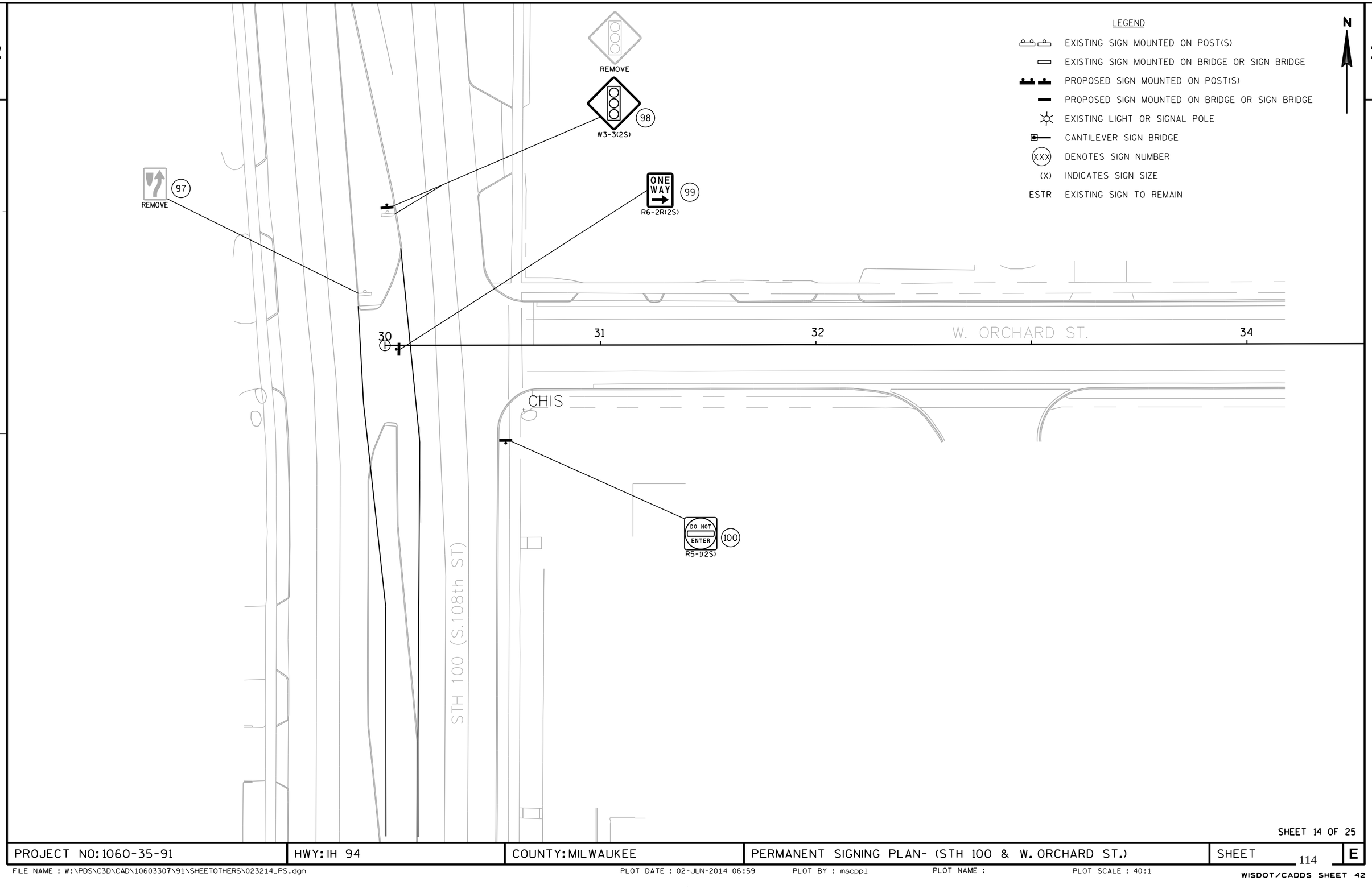
GREENFIELD AVE.

SHEET 13 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 113	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\023213_PS.dgn PLOT DATE : 02-JUN-2014 06:59 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42



SHEET 14 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN- (STH 100 & W. ORCHARD ST.)	SHEET 114	E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

2

2

N

S 108TH ST

W THEO TRECKER WAY

17 18 19 20 51 50 49 48

REMOVE
STOP
R1-1F(3)
MOUNT ON
SIGNAL POLE
108 109

W Theo Trecker Way
M1-94S
MOUNT ON
SIGNAL ARM
107

REMOVE
STOP
R1-1F(3)
MOUNT ON
SIGNAL POLE
105

100 S 108 th St
M1-94S
MOUNT ON
SIGNAL ARM
104 230

STOP
R1-1F(3)
MOUNT ON
SIGNAL POLE
102 103

REMOVE
STOP

STOP
R1-1F(3)
MOUNT ON
SIGNAL POLE
101

W Theo Trecker Way
M1-94H
MOUNT ON
SIGNAL ARM
106

SHEET 15 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN (HWY 100 & W. THEO TRECKER WAY)	SHEET 115 E

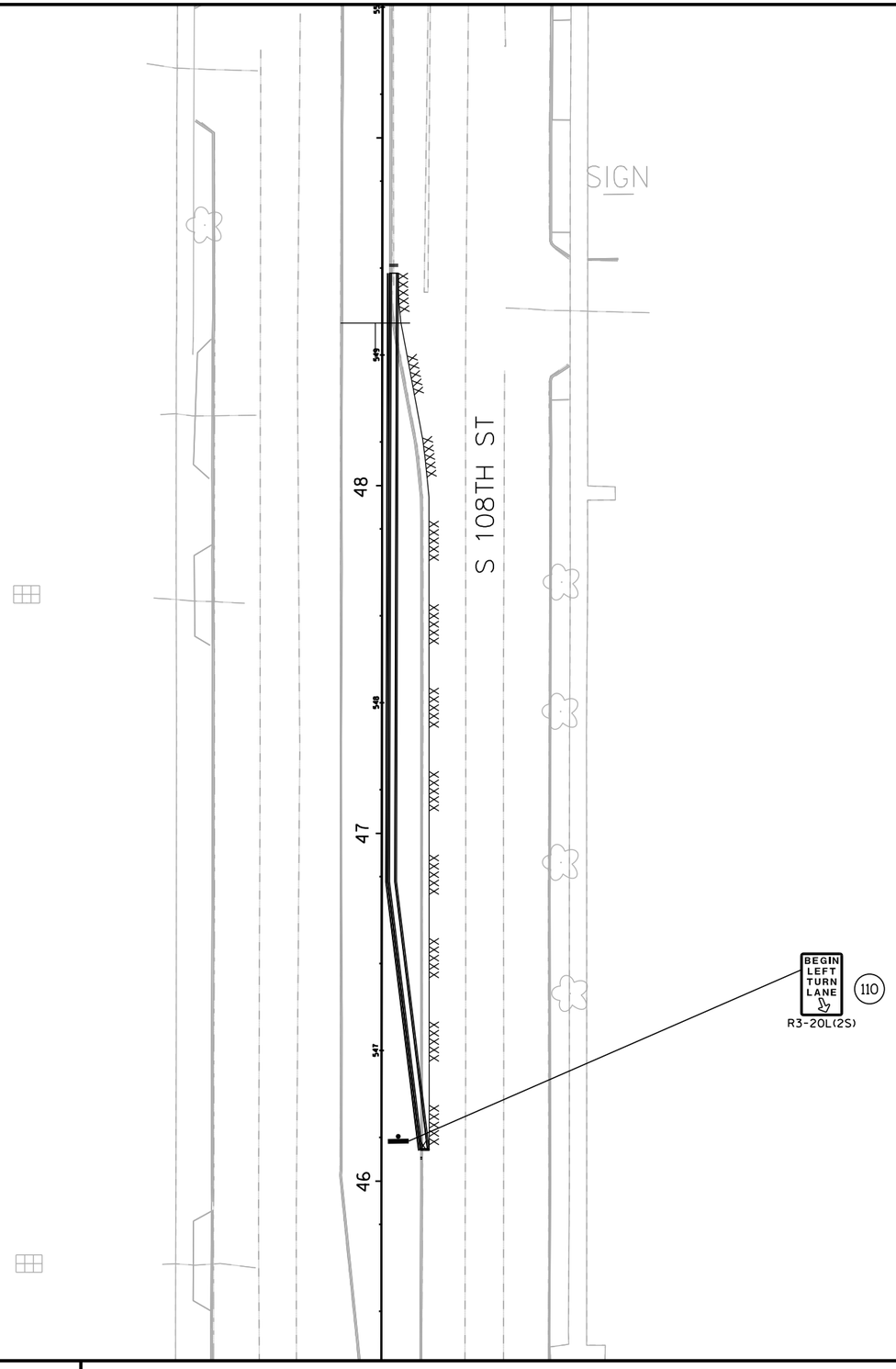
FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\023215_PS.dgn PLOT DATE : 02-JUN-2014 06:59 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN



N

2

SHEET 16 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN - W. THEO. TRECKER WAY & STH 100	SHEET 116	E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

N

W. LAPHAM ST

123 LEFT LANE MUST TURN LEFT — R3-7L(2S)

124 STOP — REMOVE

122 STOP — R1-1F(3) MOUNT ON SIGNAL POLE

W Lapham St — M1-94H ON SIGNAL ARM — 127

128 — R3-4 REMOVE

125 ONE WAY — R6-2L(2M) MOUNT ON SIGNAL POLE

100 S 108 th St — M1-94S ON SIGNAL ARM — 121

290 LEFT TURN YIELD ON FLASHING YELLOW ARROW — R10-50(2S) MOUNT ON SIGNAL ARM

119 DO NOT ENTER — R5-1(3) MOUNT ON SIGNAL POLE

117 STOP — R1-1F(3)

120 STOP — R1-1F(3) MOUNT ON SIGNAL POLE

118 — R3-4 REMOVE

45°

CTH O

231 LEFT TURN YIELD ON FLASHING YELLOW ARROW — R10-50(2S) MOUNT ON SIGNAL ARM ABOVE SIGNAL HEAD

20

20

232 LEFT TURN YIELD ON FLASHING YELLOW ARROW — R10-50(2S) MOUNT ON SIGNAL ARM

STH 100 / S. 108TH ST.

129 130 STOP — R1-1F(3) MOUNT ON SIGNAL POLE

131 132 — R4-7(3) MOUNT ON SIGNAL POLE

112 DO NOT ENTER — R5-1(3) MOUNT ON SIGNAL POLE

REMOVE

113 — R3-2 REMOVE IN ISLAND BEING REMOVED

116 ONE WAY — R6-2L(2M) MOUNT ON SIGNAL POLE

W Lapham St — M1-94H ON SIGNAL ARM — 126

115 STOP — R1-1F(3) MOUNT ON SIGNAL POLE

291 LEFT TURN YIELD ON FLASHING YELLOW ARROW — R10-50(2S) MOUNT ON SIGNAL ARM

100 S 108 th St — M1-94S ON SIGNAL ARM — 111

114 LEFT LANE MUST TURN LEFT — R3-7L(2S)

SHEET 17 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN - STH 100 @ W. LAPHAM ST	SHEET 117 E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\023217_PS.dgn PLOT DATE : 02-JUN-2014 06:59 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 40:1

2

2

N

IH 894/US 45
SB OFF RAMP

REMOVE

143 S1-1(2M)

144 S16-7L(2M)

DO NOT ENTER
WRONG WAY
REMOVE

141 DO NOT ENTER
R5-1(3)

142 WRONG WAY
R5-1A(2S)
3' MOUNT HEIGHT
ON SIGNAL POLE

STOP
REMOVE

STOP 138
R1-1F(3)

140 R3-1(2S)
MOUNT ON
SIGNAL POLE

ONLY
ONLY
ONLY

IH 894

W. LINCOLN AVE

IH 894

W. LINCOLN AVE

WEIGHT LIMIT 45 TONS
133 R12-1(2M)
MOUNT ON
SIGNAL POLE

WEIGHT LIMIT 45 TONS
REMOVE

STOP 134
R1-1F(3)

135 R3-18(2S)
MOUNT ON
WOOD POST

STOP
REMOVE

STOP 136
R1-1F(3)
MOUNT ON
SIGNAL POLE

STOP
REMOVE

139 R4-7(3)
MOUNT ON
SIGNAL POLE

ONE WAY 137
R6-2L(2M)
MOUNT ON
SIGNAL POLE

⊙M

SHEET 18 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN - LINCOLN @ SB USH 45 OFF RAMP	SHEET 118	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\023218_PS.dgn PLOT DATE : 02-JUN-2014 07:16 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

2

2

S. 68TH ST

S. 67TH PL

N

LINCOLN AVE

145 REMOVE

146 3:00 PM to 6:00 PM MON – FRI REMOVE

150 REMOVE ON SIGNAL POLE

151 3:00 PM to 6:00 PM MON – FRI REMOVE

153 154 NO PARKING ANY TIME R7-1D(2S) MOUNT ON SIGNAL POLES

157 NO PARKING ANY TIME R7-1D(2S) MOUNT ON SIGNAL POLE

149 NO PARKING ANY TIME R7-1D(2S) MOUNT ON LIGHT POLE

147 NO PARKING ANY TIME R7-1D(2S) MOUNT ON LIGHT POLE

148 NO PARKING ANY TIME R7-1D(2S) MOUNT ON SIGNAL POLE

152 REMOVE

155 3:00 PM to 6:00 PM MON – FRI 156 REMOVE

251 NO PARKING ANY TIME R7-1L(2S)

BELOIT RD

S. 68TH ST

292 ONLY R3-8A(2S)

SHEET 19 OF 25

PROJECT NO: 1060-35-91	HWY: VARIOUS	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 119	E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

2

2

N

W NATIONAL AVE

95TH ST

94TH ST

W LINCOLN AVE

W NATIONAL AVE

95TH ST

65

70

70

W Lincoln Ave
M1-94H
MOUNT ON SIGNAL ARM (167)

W National Ave
M1-94H
MOUNT ON SIGNAL ARM (168)

STATE FAIR (169)
MOVE TO WOOD POST

LEFT TURN YIELD ON FLASHING YELLOW ARROW (247)
R10-50(2S)
MOUNT ON SIGNAL ARM

LEFT TURN YIELD ON FLASHING YELLOW ARROW (246)
R10-50(2S)
MOUNT ON SIGNAL ARM

(162) (161) (159) (164) (163) (160)
R4-7(2S)
W5-52L(2S)
REMOVE

(165)
W12-1D(2S)
2' MOUNT HEIGHT

W Lincoln Ave
M1-94H
MOUNT ON SIGNAL ARM (158)

(252)
R4-7(2S)

(253)
W5-52L
MOUNT ON WOOD POST
REMOVE

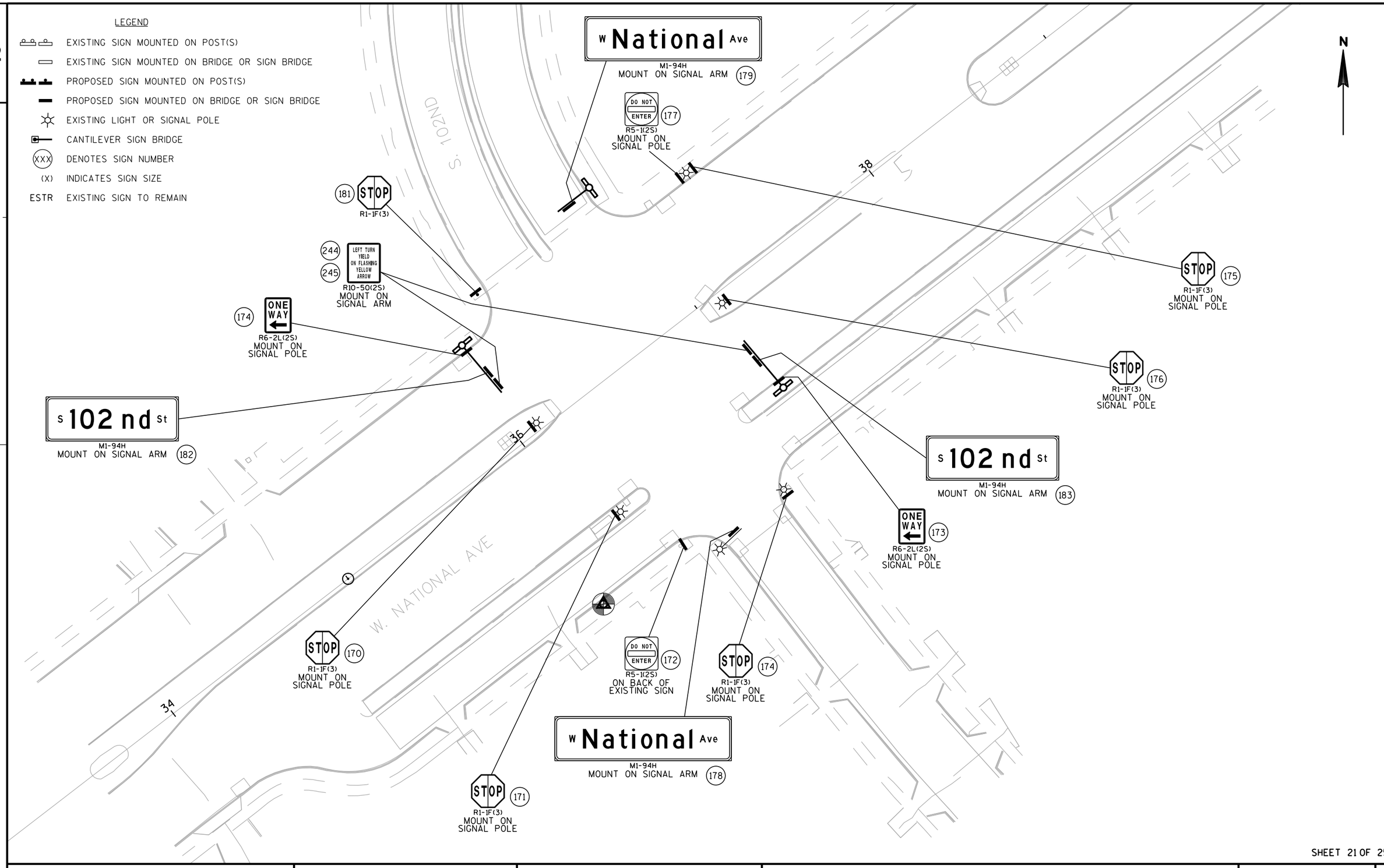
W National Ave
M1-94H
MOUNT ON SIGNAL ARM (166)

SHEET 20 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN - W. NATIONAL AVE @ W. LINCOLN AVE	SHEET 120	E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN



PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 121	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\023221_PS.dgn
PLOT DATE : 02-JUN-2014 06:59
PLOT BY : mscppl
PLOT NAME :
PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

N

2

184 185

W11-2(2M)
AHEAD
W16-9P(2M)

186 187

STA 181+00

USH 18 (W. BLUEMOUND RD)

USH 18 (W. BLUEMOUND RD)

16x16 FLAGS
INCIDENTAL

254

255

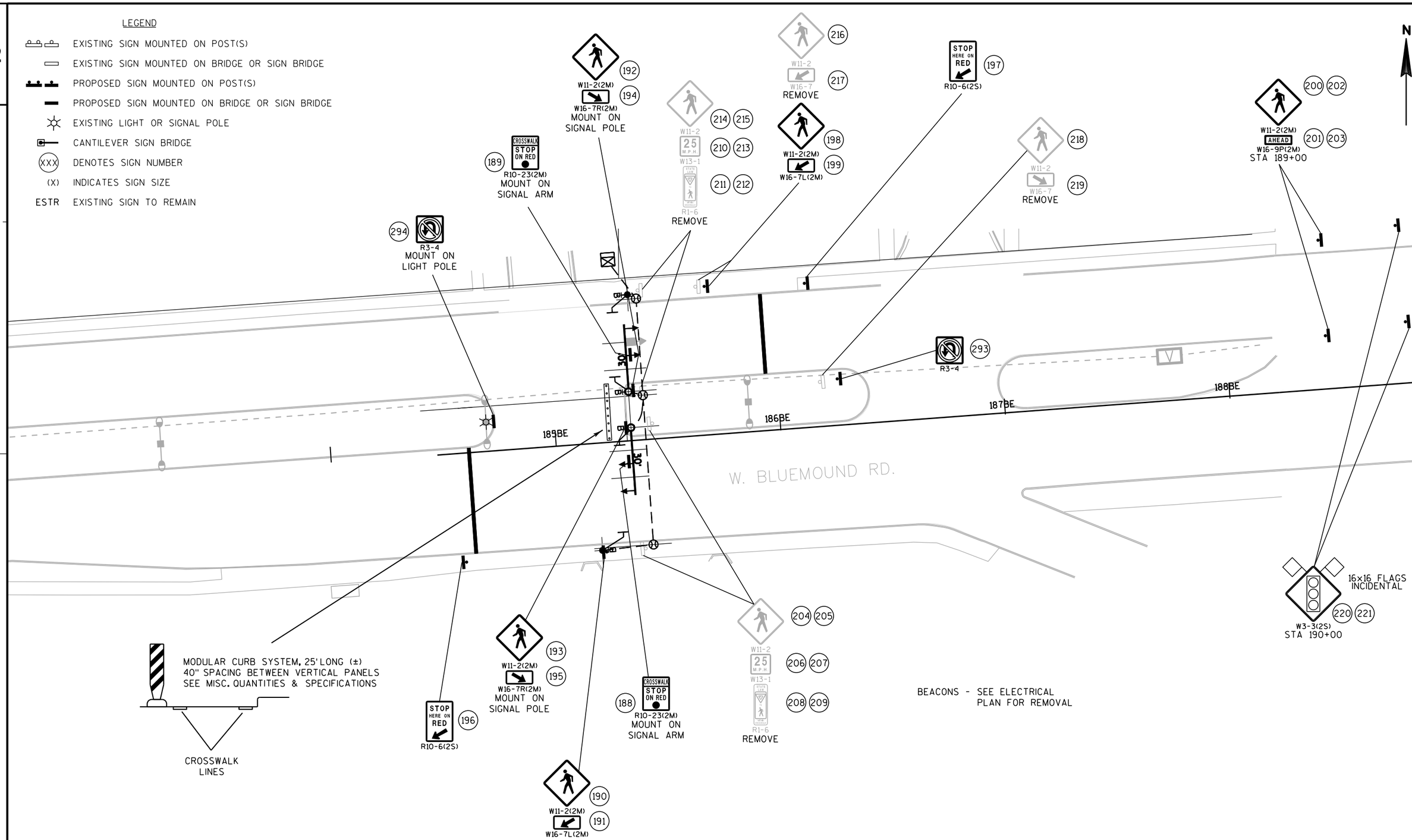
W3-3(2S)
STA 180+00

SHEET 22 OF 25

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN - USH 18 @ ZOO NEAR 89TH ST	SHEET 122	E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN



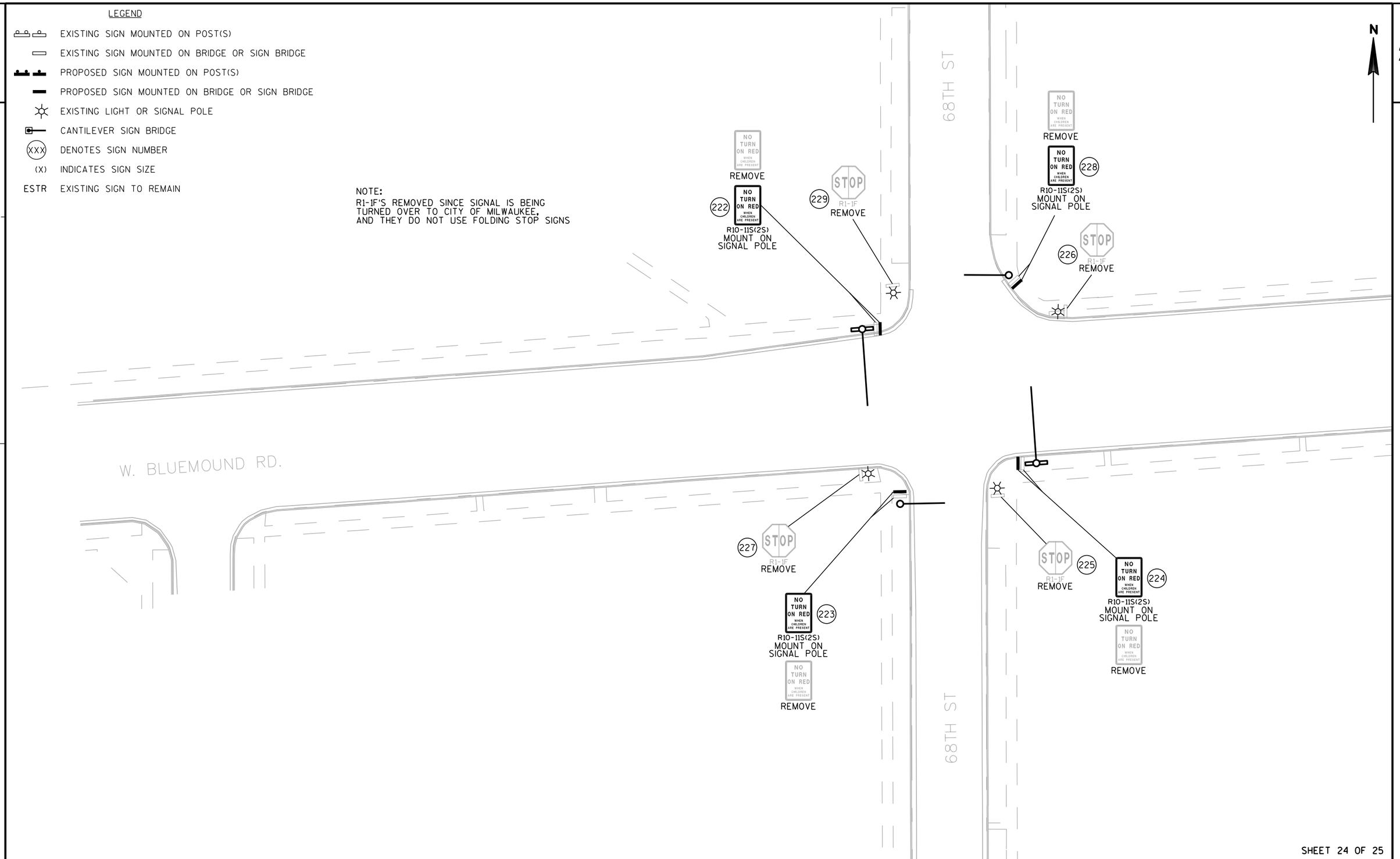
PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 123 E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\023223_PS.dgn PLOT DATE : 02-JUN-2014 07:00 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

NOTE:
R1-1F'S REMOVED SINCE SIGNAL IS BEING TURNED OVER TO CITY OF MILWAUKEE, AND THEY DO NOT USE FOLDING STOP SIGNS



2

N

W NATIONAL AVE (EASTBOUND)

W NATIONAL AVE (WESTBOUND)

S 84TH STREET

W MAPLE ST

REMOVE
W4-2R(2S) 267
MOUNT ON LIGHT POLE

REMOVE
257
R4-7
MOUNT ON SIGNAL POLE

DO NOT CROSS OVER SOLID WHITE LINE 265
MOVE ON SIGNAL POLE

W. National Ave
M1-94H
MOUNT ON MAST ARM 268

DO NOT ENTER 266
R5-1(2S)
MOUNT ON SIGNAL POLE

DO NOT CROSS OVER SOLID WHITE LINE 268
MOVE ON SIGNAL POLE

84th St
MOVE BY CITY

REMOVE
NO TURN ON RED
276
R10-11B(2S)
MOUNT ON SIGNAL POLE

REMOVE
277
R3-18(2S)
MOUNT ON SIGNAL POLE

REMOVE
275
W5-52L(2S)
4' MOUNT HEIGHT ON SIGNAL POLE

W. National Ave
M1-94H
MOUNT ON MAST ARM 274

259
R3-18
MOUNT ON SIGNAL POLE
REMOVE

258
W5-52R(2S)
4' MOUNT HEIGHT
REMOVE

NO TURNS 260
R3-3
NO TURNS
REMOVE

261
W1-6
MOUNT ON STEEL POSTS
REMOVE WITH STEEL POSTS

264
R3-18
MOUNT ON SIGNAL POLE
REMOVE

DO NOT CROSS OVER SOLID WHITE LINE 262
MOVE ON SIGNAL POLE

WRONG WAY 263
R5-1A(2S)
WRONG WAY
REMOVE

269
R3-18(2S)
MOUNT ON SIGNAL POLE
REMOVE

270
271
W1-8(2S)
4' MOUNT HEIGHT
REMOVE

NO TURNS 272
R3-3
MOUNT ON SIGNAL POLE
NO TURNS
REMOVE

BUS STOP
MOVE BY BUS COMPANY

NO TURNS 272
R3-3
MOUNT ON SIGNAL POLE
NO TURNS
REMOVE

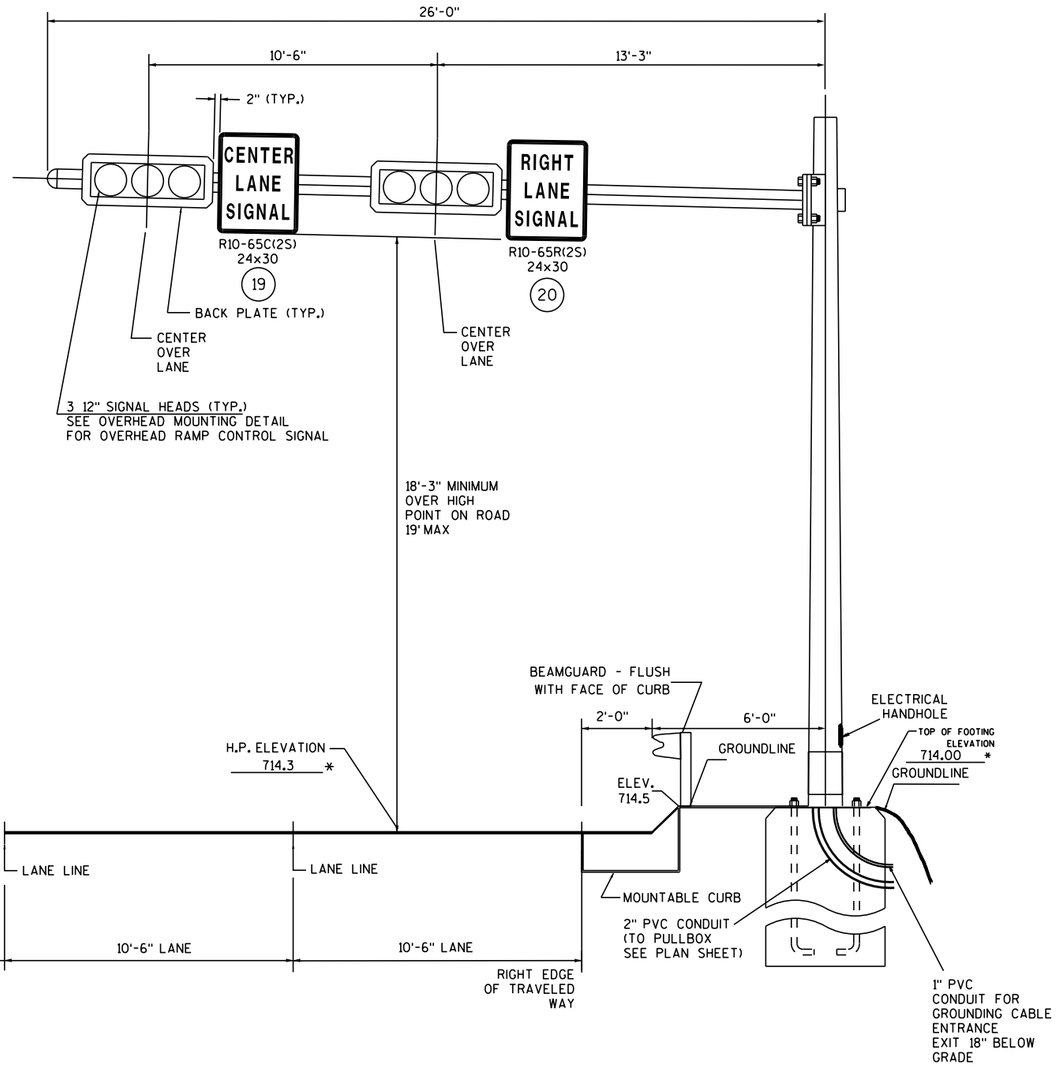
LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

SHEET 25 OF 25

PROJECT NO: 1060-35-91	HWY: 84TH ST	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN - NATIONAL AVE AT 84TH ST	SHEET E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\023225_PS.dgn PLOT DATE : 02-JUN-2014 07:00 PLOT BY : mscpp1 PLOT NAME : PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42



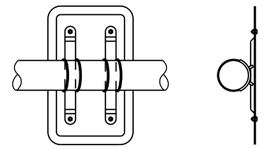
OVERHEAD SIGN SUPPORT

OVERHEAD SIGN SUPPORT NO. S-40-994
LOCATION: EB I-94 ENTRANCE RAMP
STATION: 795+50

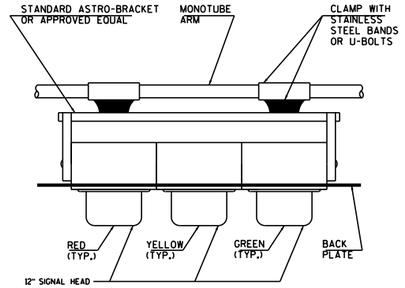
NOTE: SEE "30" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE" FOR FOOTING DETAIL INCIDENTAL TO STRUCTURE

NOTE: "MOUNTING BRACKETS FOR SIGNS SHALL BE PER APPROVED PRODUCT LIST"

NOTE: CONTRACTOR SHALL
1) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT FOOTING. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT
2) PROVIDE DESIGN CALCULATION
3) SHOW SIGN ON SHOP DRAWINGS
4) ID PLAQUE INCIDENTAL TO SIGN SUPPORT
5) 6 ANCHOR RODS SHALL BE USED PER SDD



VERTICAL MOUNTING DETAIL
FOR OVERHEAD SIGNS



HORIZONTAL MOUNTING DETAIL
FOR OVERHEAD RAMP CONTROL SIGNAL

GENERAL NOTES

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT 2 SIGNS WEIGHING 180 LBS EACH PLACED AS SHOWN.

WIND VELOCITIES 85 M/H

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

ALLOWABLE DESIGN STRESSES

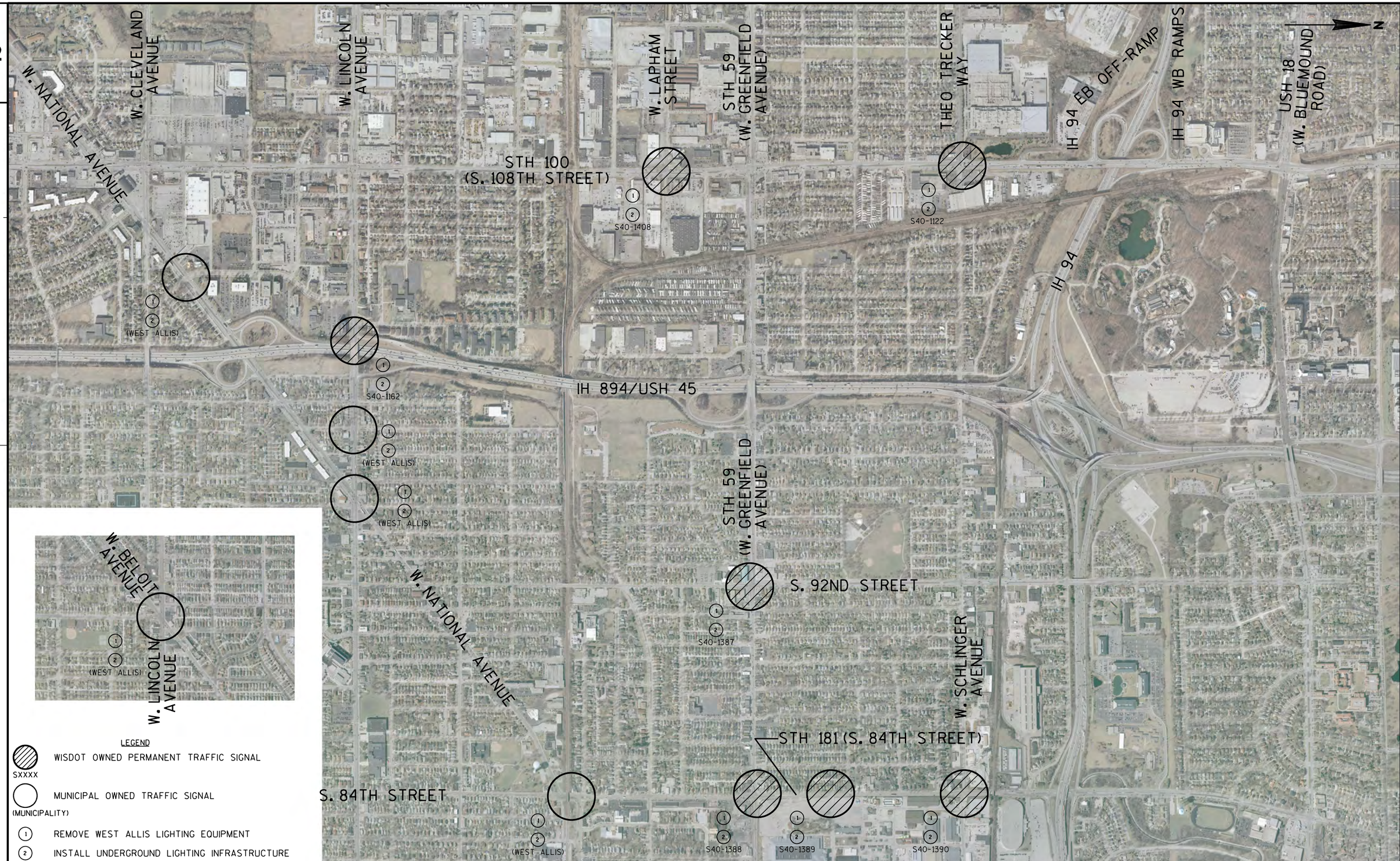
CONCRETE MASONRY	FC=3500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	FY=60,000 PSI

FOUNDATION DATA

ALLOWABLE SOIL BEARING PRESSURE = 3000 PSF

SHEET 1 OF 1

PROJECT NO: 1060-35-91	HWY: I-94 EB KEARNEY @ 68TH ST RAMP	COUNTY: MILWAUKEE	OVERHEAD SIGN SUPPORT - RAMP DETAIL - S-40-994	SHEET 126	E



LEGEND

SXXXX — WISDOT OWNED PERMANENT TRAFFIC SIGNAL

(MUNICIPALITY) — MUNICIPAL OWNED TRAFFIC SIGNAL

(1) REMOVE WEST ALLIS LIGHTING EQUIPMENT

(2) INSTALL UNDERGROUND LIGHTING INFRASTRUCTURE

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	WEST ALLIS LIGHTING PROJECT OVERVIEW	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023500_lp_po.dgn PLOT DATE : 29-APR-2014 08:56 PLOT BY : MSCITM PLOT NAME : PLOT SCALE : 1125:1

WISDOT/CADDS SHEET 42

LEGEND

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS EXISTING TO BE REMOVED.

N

W. LAPHAM STREET

STH 100 (S. 108TH STREET)

R/W

SB1

SB2

SB6

511+00

512+00

513+00

514+00

515+00

516+00

19+00

21+00

MCDONALDS

TMOBILE

CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
3. CITY OF WEST ALLIS PERSONEL SHALL BREAK THE EXISTING CIRCUIT AND MAKE ANY NECESSARY EXISTING WIRE DISCONNECTIONS PRIOR TO ANY LIGHTING REMOVALS. CONTACT THE CITY OF WEST ALLIS PRIOR TO BEGINNING ANY LIGHTING REMOVALS.

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET	E

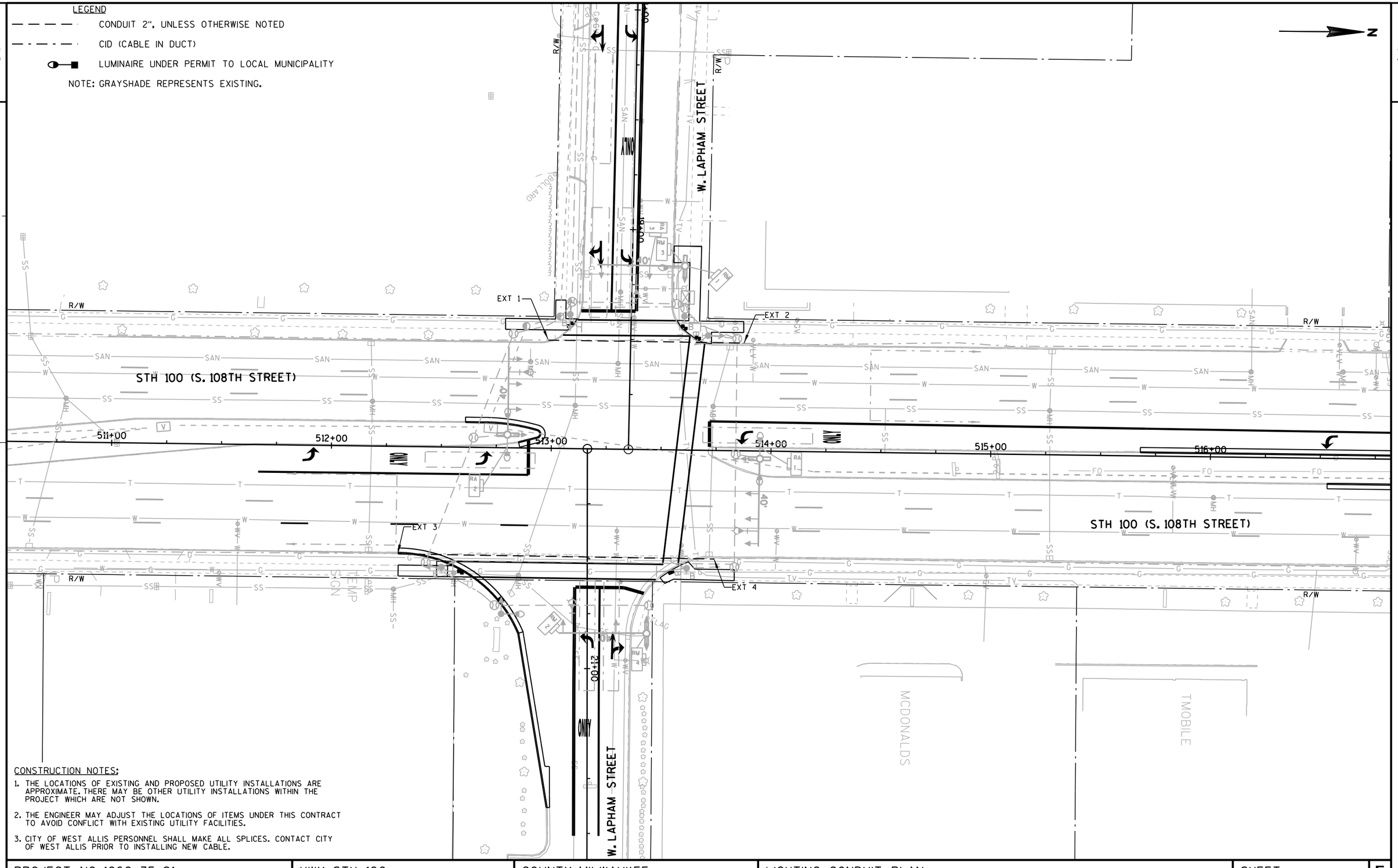
LEGEND

CONDUIT 2", UNLESS OTHERWISE NOTED

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING.



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3. CITY OF WEST ALLIS PERSONNEL SHALL MAKE ALL SPLICES. CONTACT CITY OF WEST ALLIS PRIOR TO INSTALLING NEW CABLE.

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	LIGHTING CONDUIT PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023502_lp.dgn PLOT DATE : 29-APR-2014 09:07 PLOT BY : MSCITM PLOT NAME : 023502_lp PLOT SCALE : 40:1

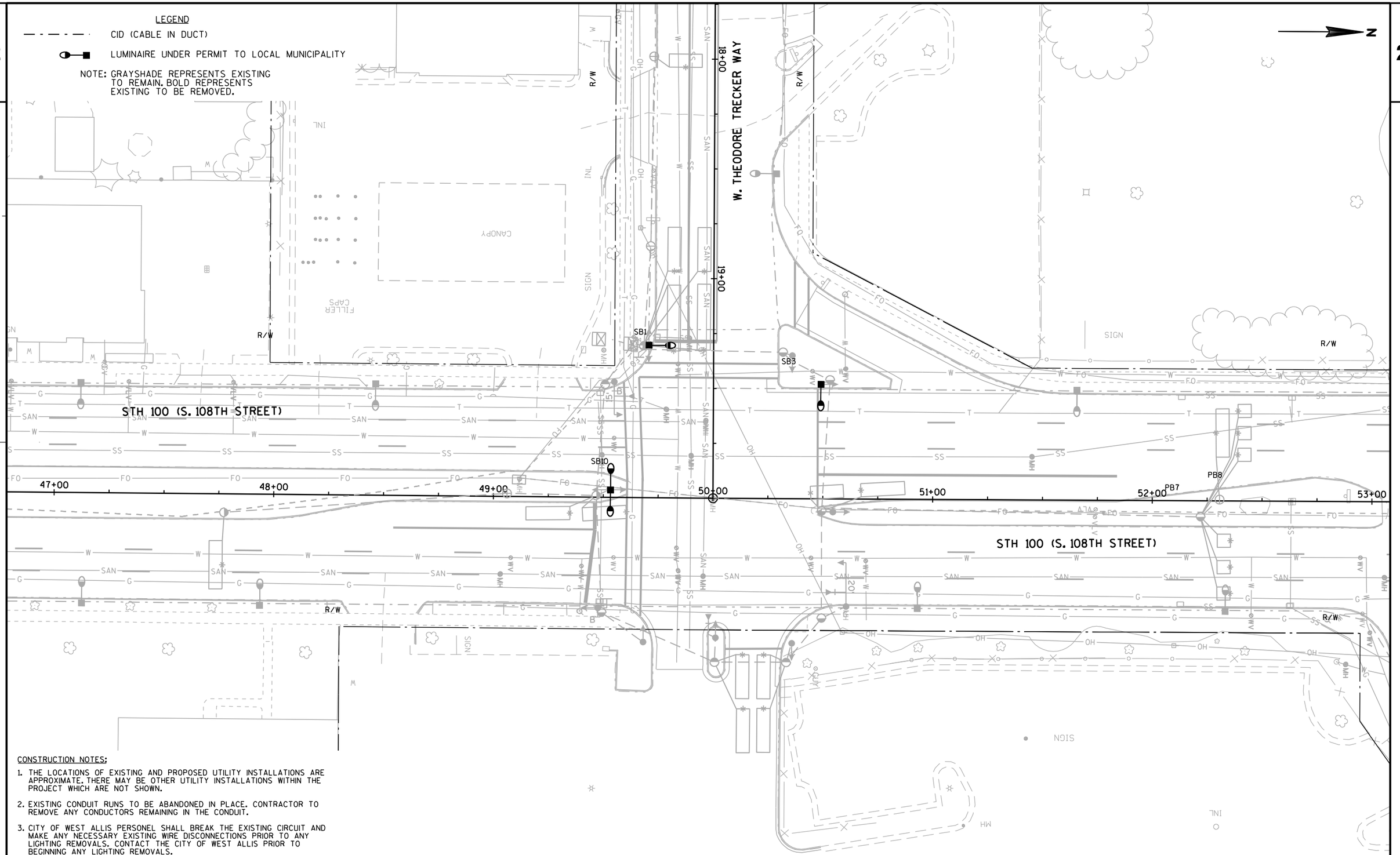
2

LEGEND

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS EXISTING TO BE REMOVED.



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PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023503_lp.dgn PLOT DATE : 29-APR-2014 09:11 PLOT BY : MSCITM PLOT NAME : 023503_lp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

CONDUIT 2", UNLESS OTHERWISE NOTED

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING.

2

2

N

STH 100 (S. 108TH STREET)

W. THEODORE TRECKER WAY

DRIVEWAY

EXT 5

EXT 6

EXT 7

EXT 8

EXT 9

EXT 10

R/W

47+00

48+00

49+00

50+00

51+00

52+00

53+00

19+00

8+00

CANOPY

SIGN

CONSTRUCTION NOTES;

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3. CITY OF WEST ALLIS PERSONNEL SHALL MAKE ALL SPLICES. CONTACT CITY OF WEST ALLIS PRIOR TO INSTALLING NEW CABLE.

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	LIGHTING CONDUIT PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023504_lp.dgn PLOT DATE : 29-APR-2014 09:14 PLOT BY : MSCITM PLOT NAME : 023504_lp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS EXISTING TO BE REMOVED.

N

S. 92ND STREET

STH 59 (W. GREENFIELD AVENUE)

SB2 SB5 SB8 LB1 SB12

41+00 40+00 39+00

542+00 543+00 544+00

R/W

CONSTRUCTION NOTES:

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PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET	E

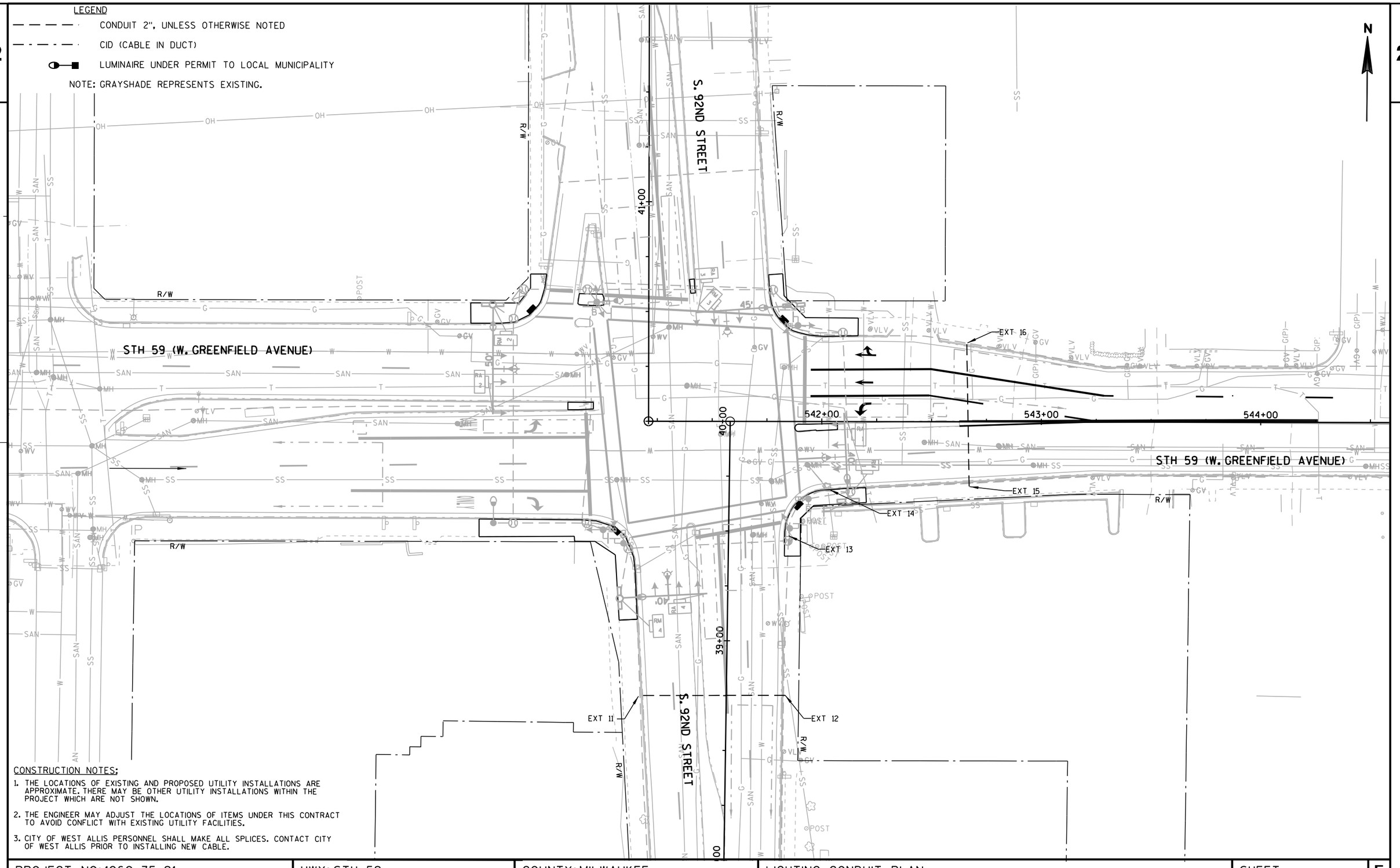
LEGEND

CONDUIT 2", UNLESS OTHERWISE NOTED

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING.



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PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	LIGHTING CONDUIT PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023506_lp.dgn PLOT DATE : 29-APR-2014 11:58 PLOT BY : mscjym PLOT NAME : 023506_lp PLOT SCALE : 40:1

LEGEND

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS EXISTING TO BE REMOVED.

STH 59 (W. GREENFIELD AVENUE)

STH 181 (S. 84TH STREET)

S. 84TH STREET

BOLLARD

ONLY

SB1 SB5 SB7 SB11 LB1

566+00 567+00 568+00 569+00 570+00 571+00

225+00 224+00 223+00 226+00

CONSTRUCTION NOTES:

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PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023507_lp.dgn PLOT DATE : 29-APR-2014 09:37 PLOT BY : MSCITM PLOT NAME : 023507_lp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

CONDUIT 2", UNLESS OTHERWISE NOTED

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING.

STH 59 (W. GREENFIELD AVENUE)

STH 181 (S. 84TH STREET)

S. 84TH STREET

EXT 17

EXT 18

EXT 19

EXT 20

EXT 21

EXT 22

566+00

567+00

568+00

569+00

570+00

571+00

225+00

224+00

223+00

222+00

R/W

ONLY

BOLLARD

CONSTRUCTION NOTES;

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PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	LIGHTING CONDUIT PLAN	SHEET	E

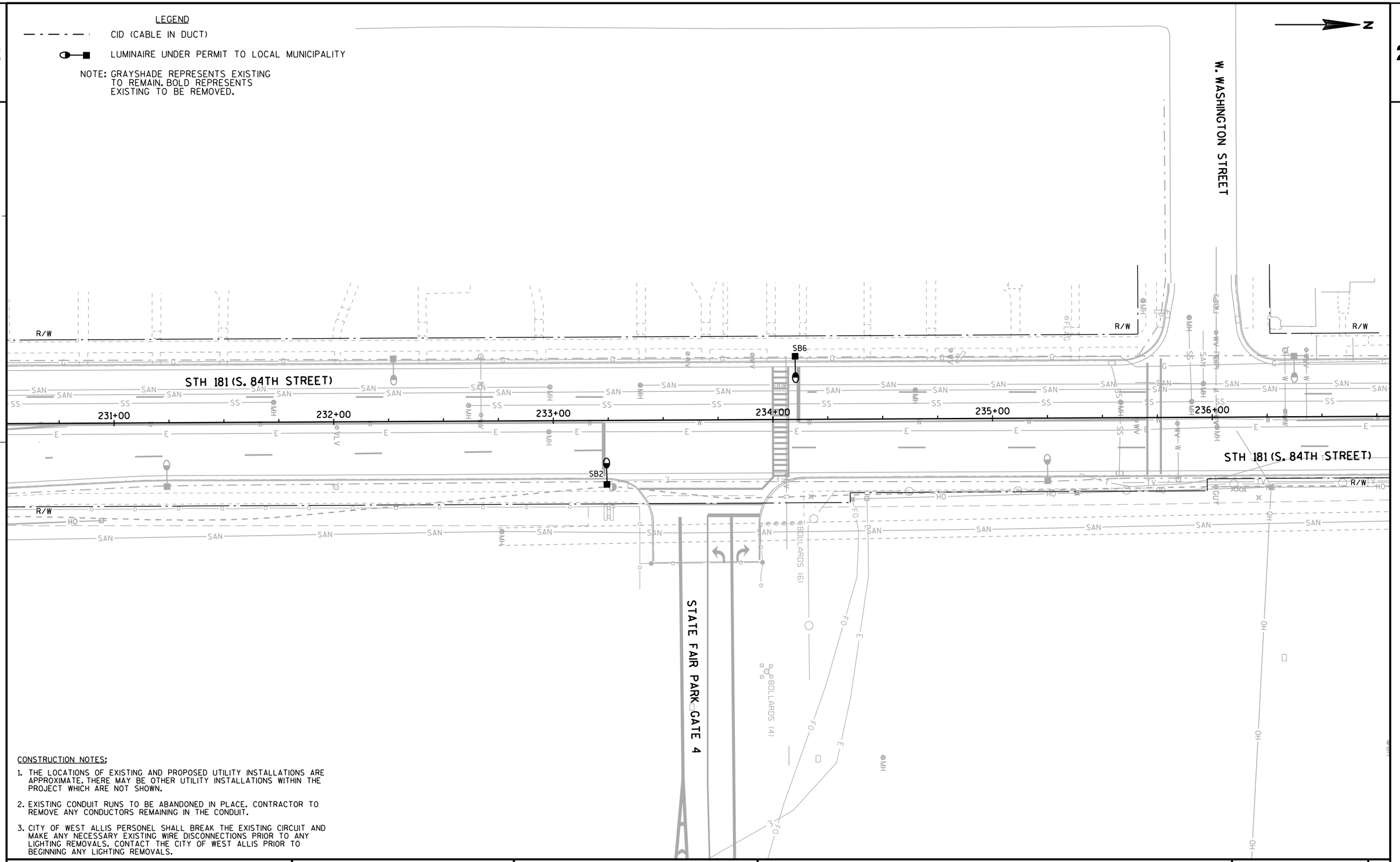
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LEGEND

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS EXISTING TO BE REMOVED.



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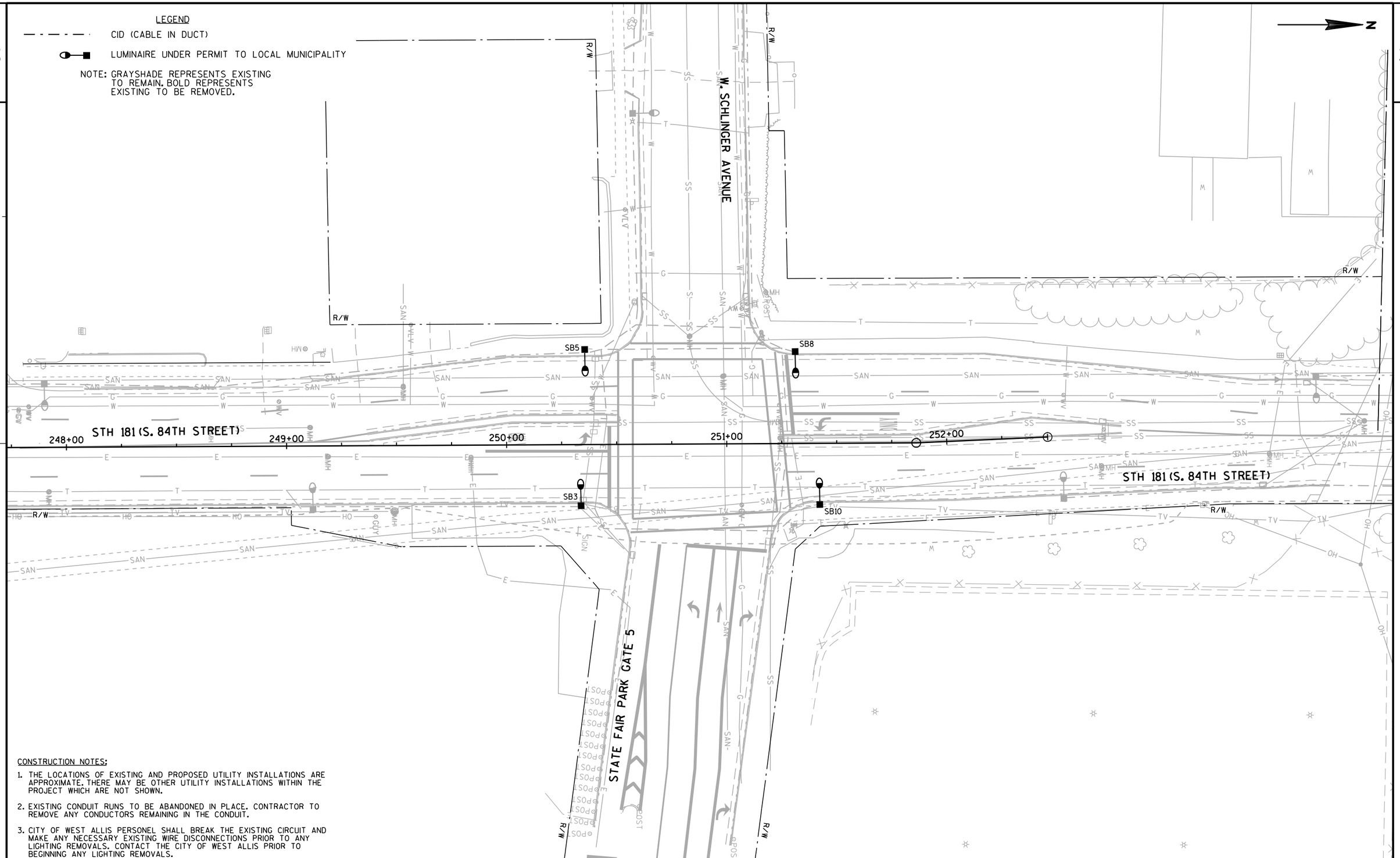
PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET	E

LEGEND

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

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PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023510_lp.dgn PLOT DATE : 29-APR-2014 12:00 PLOT BY : mscjym PLOT NAME : 023510_lp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

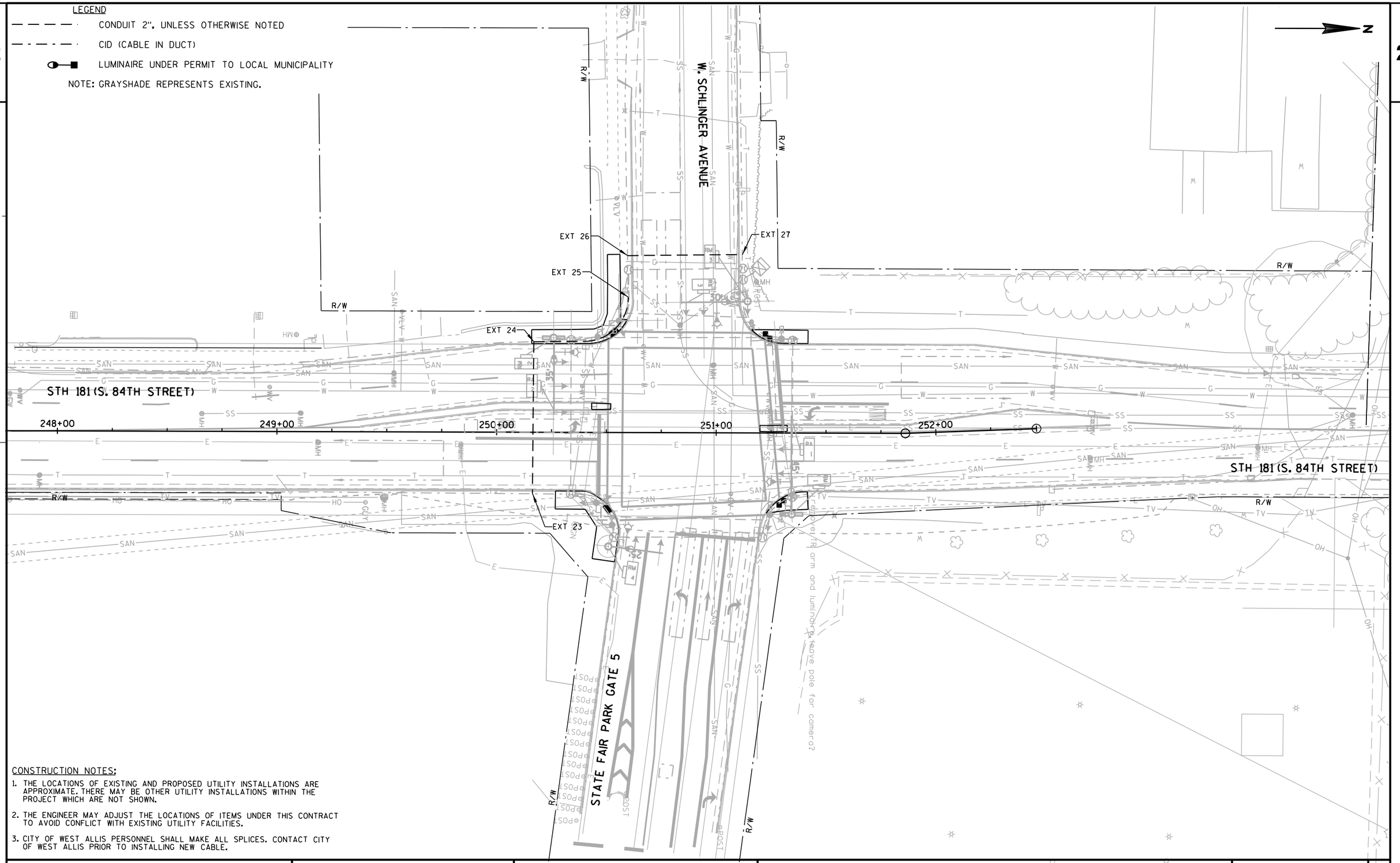
LEGEND

CONDUIT 2", UNLESS OTHERWISE NOTED

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING.



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PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	LIGHTING CONDUIT PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023511_lp.dgn PLOT DATE : 29-APR-2014 09:44 PLOT BY : MSCITM PLOT NAME : 023511_lp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS EXISTING TO BE REMOVED.

W. NATIONAL AVENUE

S. 102ND STREET

SB4 SB5 SB10 SB9

34+00 35+00 36+00 37+00 38+00 39+00

CONSTRUCTION NOTES;

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PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET	E

LEGEND

CONDUIT 2", UNLESS OTHERWISE NOTED

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING.

2

2

S. 102ND STREET

W. NATIONAL AVENUE

W. NATIONAL AVENUE

R/W

EXT 30

EXT 31

EXT 32

EXT 33

EXT 28

EXT 29

34+00

35+00

36+00

37+00

38+00

39+00

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PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING CONDUIT PLAN	SHEET	E

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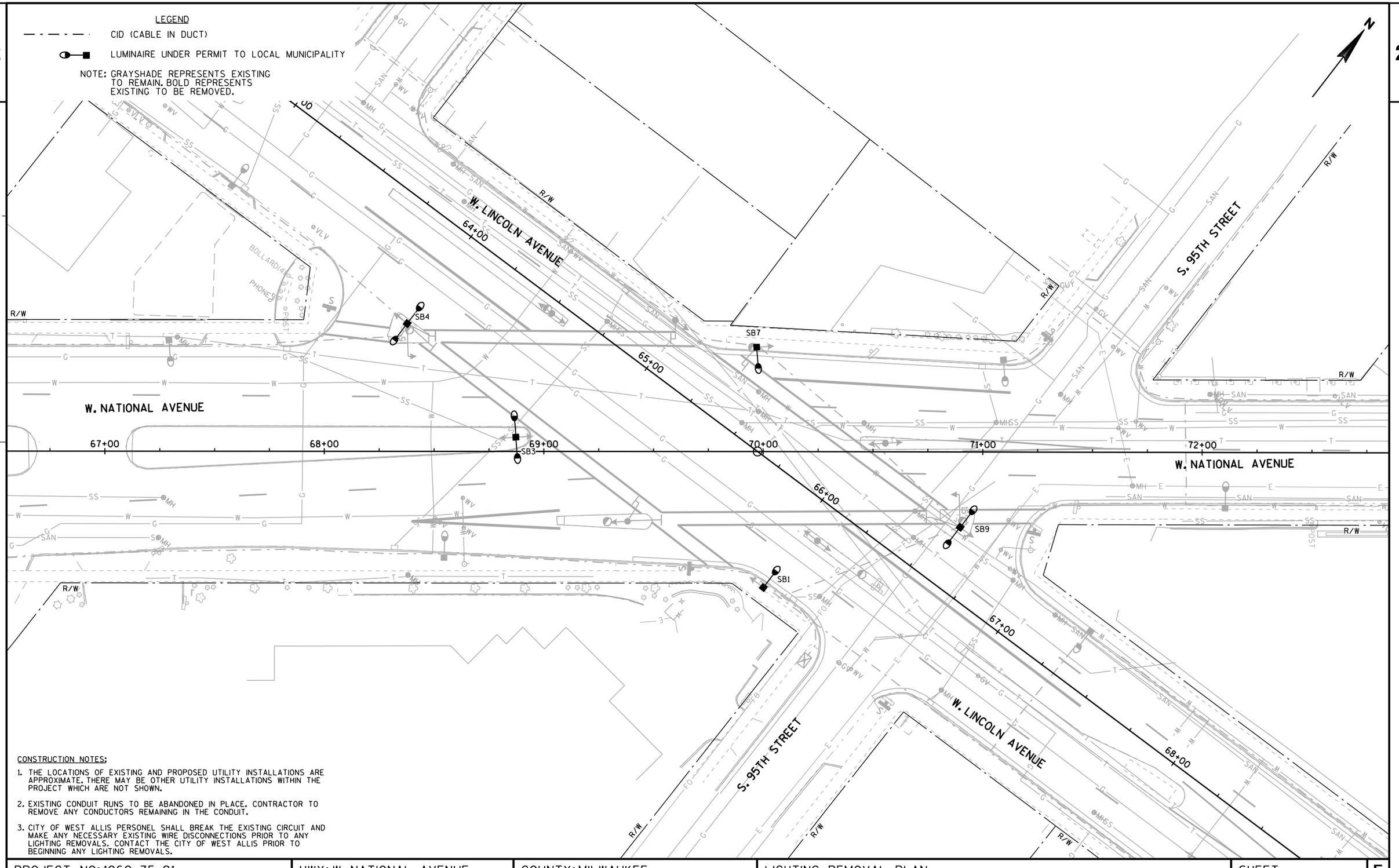
2

LEGEND

CID (CABLE IN DUCT)

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PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET	E

LEGEND

CONDUIT 2", UNLESS OTHERWISE NOTED

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING.

W. NATIONAL AVENUE

W. LINCOLN AVENUE

S. 95TH STREET

EXT 34

EXT 35

EXT 36

EXT 37

CONSTRUCTION NOTES:

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PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	LIGHTING CONDUIT PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023515_lp.dgn PLOT DATE : 29-APR-2014 12:02 PLOT BY : mscjym PLOT NAME : 023515_lp PLOT SCALE : 40:1

LEGEND

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS EXISTING TO BE REMOVED.

IH 894/USH 45 SB OFF RAMP

W. LINCOLN AVENUE

R/W IS OFF THE PAGE

R/W IS OFF THE PAGE

W. LINCOLN AVENUE

43+00 44+00 45+00 46+00 47+00 48+00

SB9

CONSTRUCTION NOTES;

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PROJECT NO: 1060-35-91	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023516_lp.dgn PLOT DATE : 29-APR-2014 09:55 PLOT BY : MSCITM PLOT NAME : 023516_lp PLOT SCALE : 40.000042:1

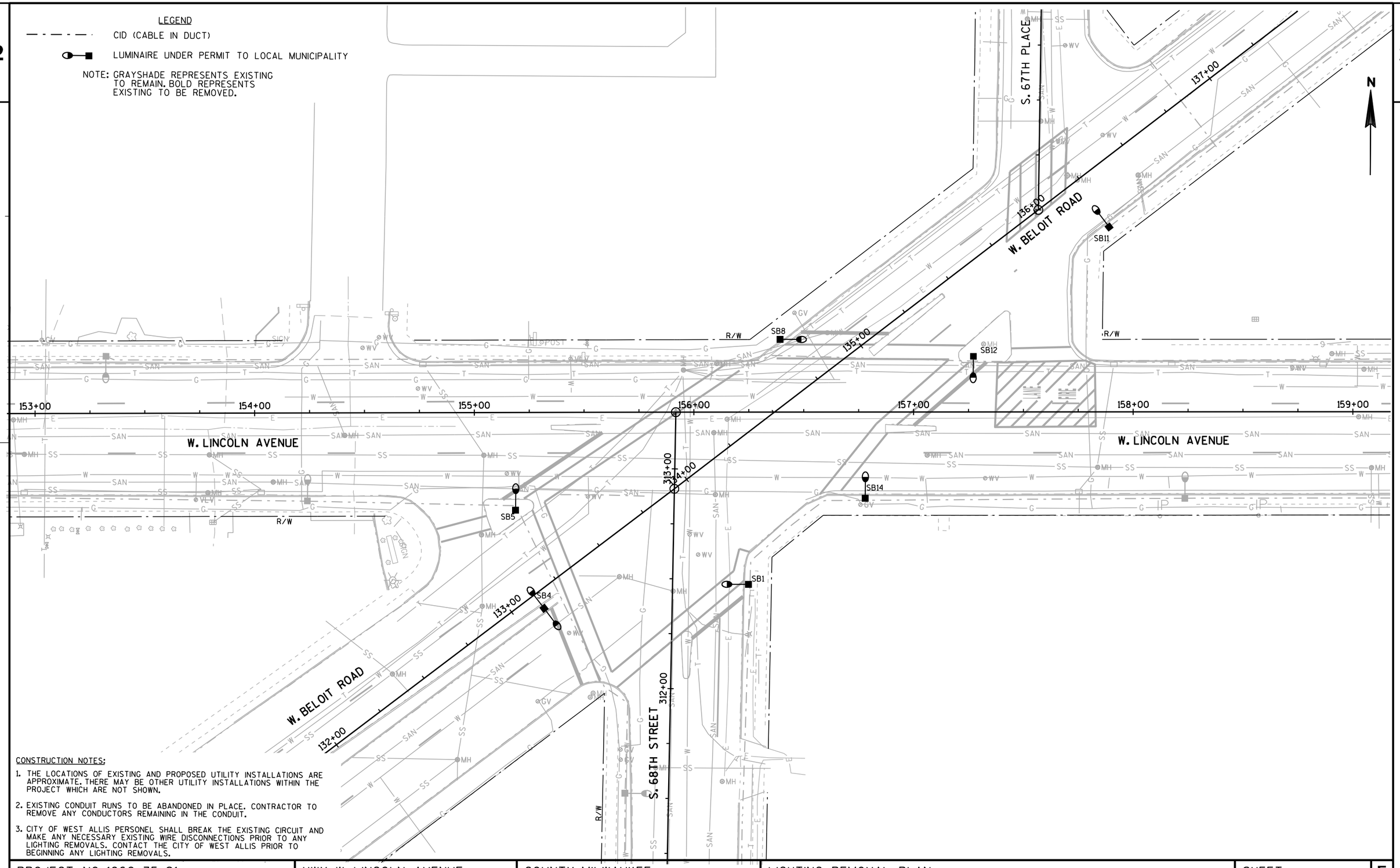
2

LEGEND

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PROJECT NO: 1060-35-91	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET	E

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WISDOT/CADDS SHEET 42

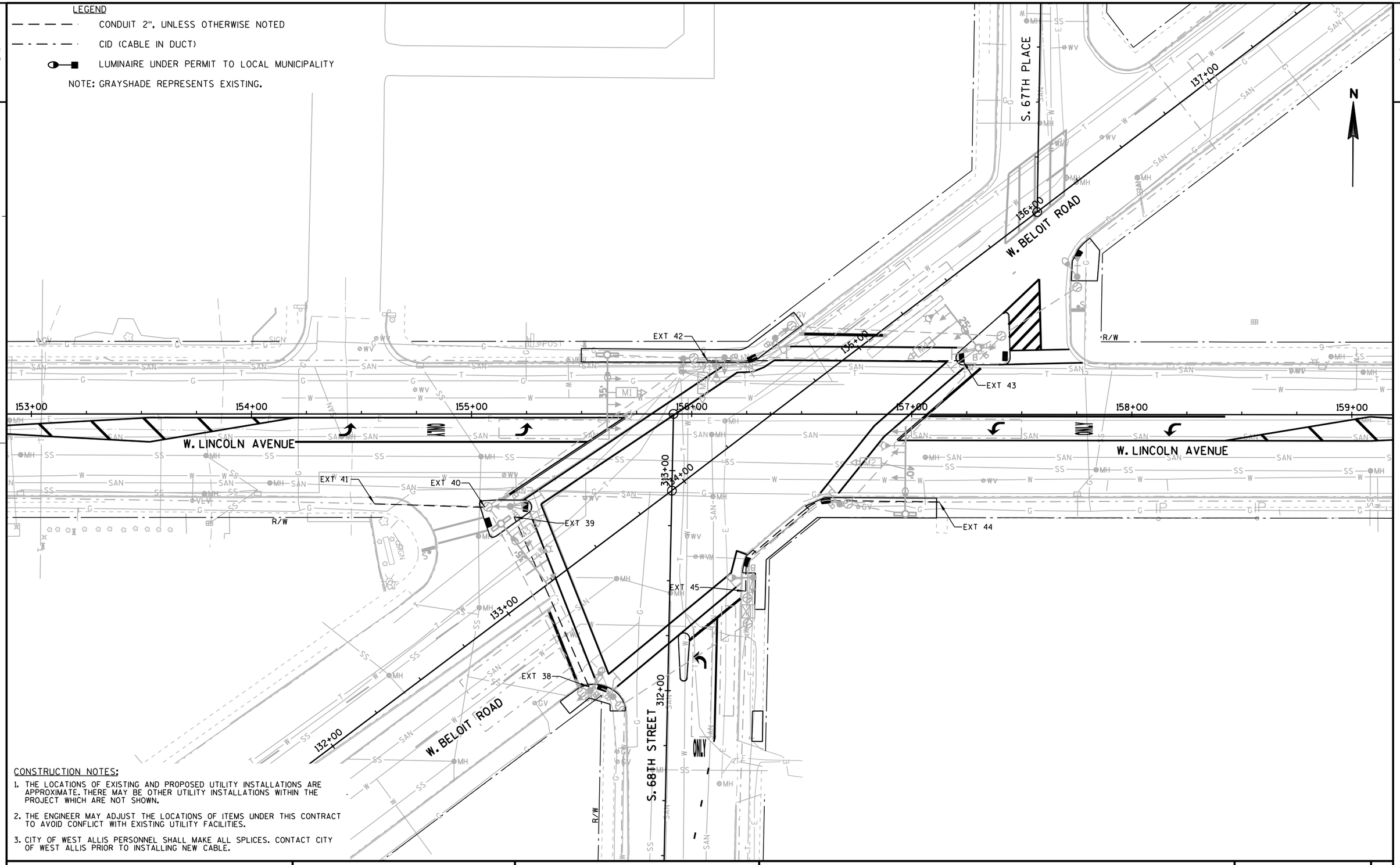
LEGEND

CONDUIT 2", UNLESS OTHERWISE NOTED

CID (CABLE IN DUCT)

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PROJECT NO: 1060-35-91	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	LIGHTING CONDUIT PLAN	SHEET	E

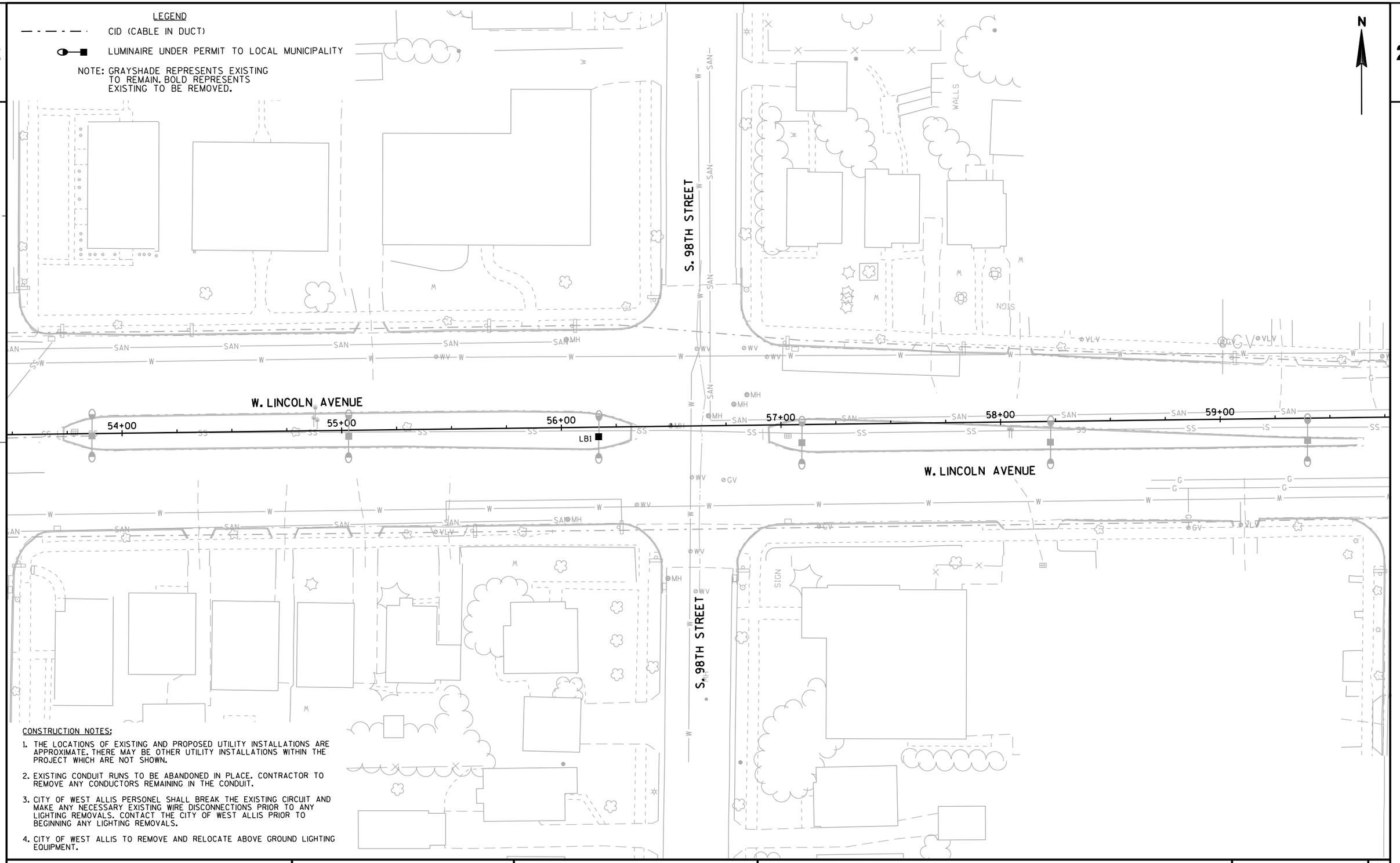
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LEGEND

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS EXISTING TO BE REMOVED.



CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
3. CITY OF WEST ALLIS PERSONEL SHALL BREAK THE EXISTING CIRCUIT AND MAKE ANY NECESSARY EXISTING WIRE DISCONNECTIONS PRIOR TO ANY LIGHTING REMOVALS. CONTACT THE CITY OF WEST ALLIS PRIOR TO BEGINNING ANY LIGHTING REMOVALS.
4. CITY OF WEST ALLIS TO REMOVE AND RELOCATE ABOVE GROUND LIGHTING EQUIPMENT.

PROJECT NO: 1060-35-91	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET	E

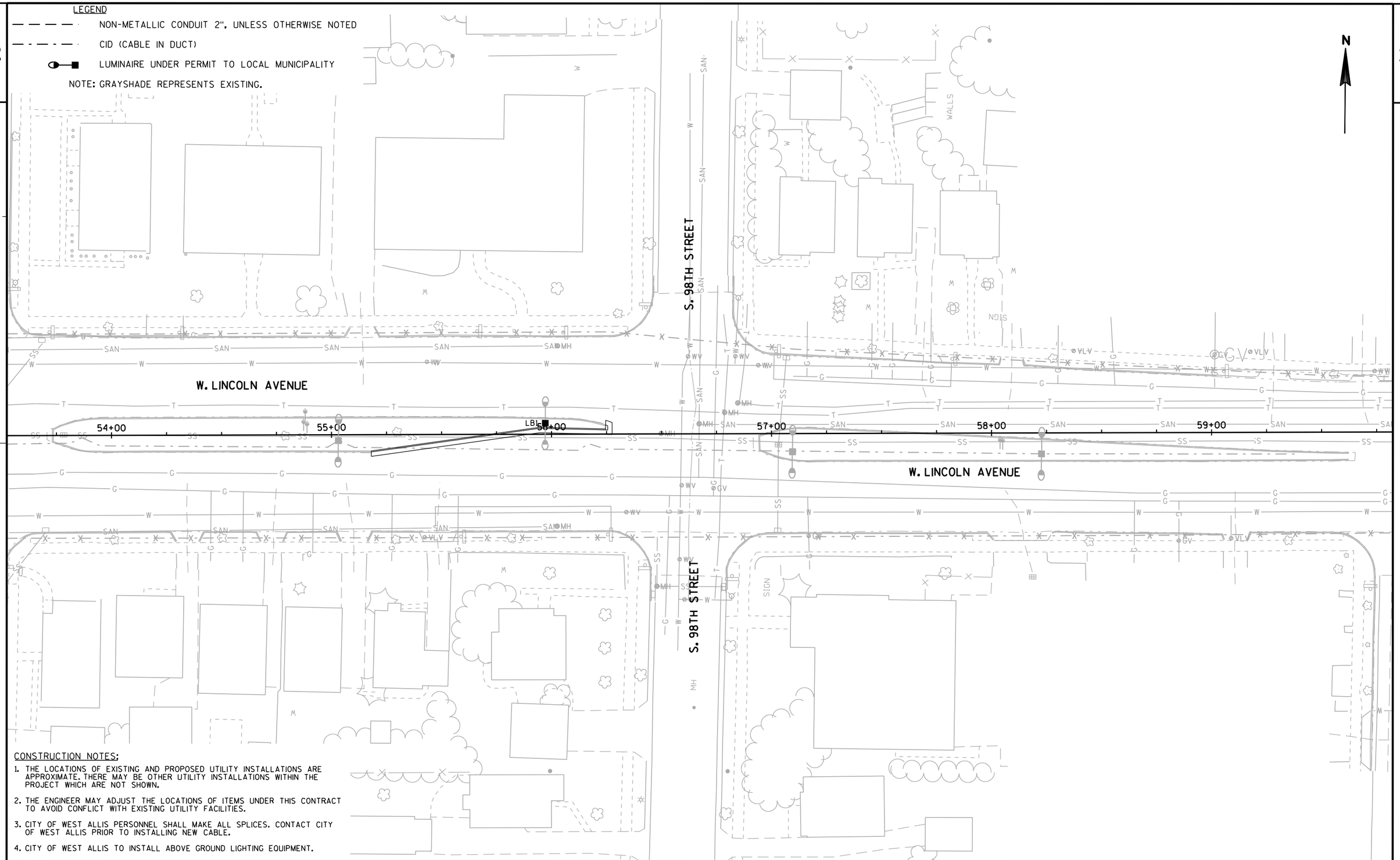
LEGEND

NON-METALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

CID (CABLE IN DUCT)

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

NOTE: GRAYSHADE REPRESENTS EXISTING.



CONSTRUCTION NOTES;

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
3. CITY OF WEST ALLIS PERSONNEL SHALL MAKE ALL SPLICES. CONTACT CITY OF WEST ALLIS PRIOR TO INSTALLING NEW CABLE.
4. CITY OF WEST ALLIS TO INSTALL ABOVE GROUND LIGHTING EQUIPMENT.

PROJECT NO: 1060-35-91	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	LIGHTING PLAN	SHEET	E

2

W. NATIONAL AVENUE
W. CLEVELAND AVENUE
W. LINCOLN AVENUE
W. LAPHAM STREET
STH 59 (W. GREENFIELD AVENUE)
THEO TRECKER WAY
IH 94 EB OFF-RAMP
IH 94 WB RAMPS
USH 18 (W. BLUEMOUND ROAD)
N
STH 100 (S. 108TH STREET)
S40-1408
S40-1071
S40-1122
IH 894/USH 45
IH 94
(WEST ALLIS)
S40-1162
(WAUWATOSA)
W. BELOIT AVENUE
W. LINCOLN AVENUE
W. NATIONAL AVENUE
S. 92ND STREET
S40-1387
W. SCHLINGER AVENUE
STH 181 (S. 84TH STREET)
S. 84TH STREET
S40-1388
S40-1389
S40-1390
N. 68TH STREET

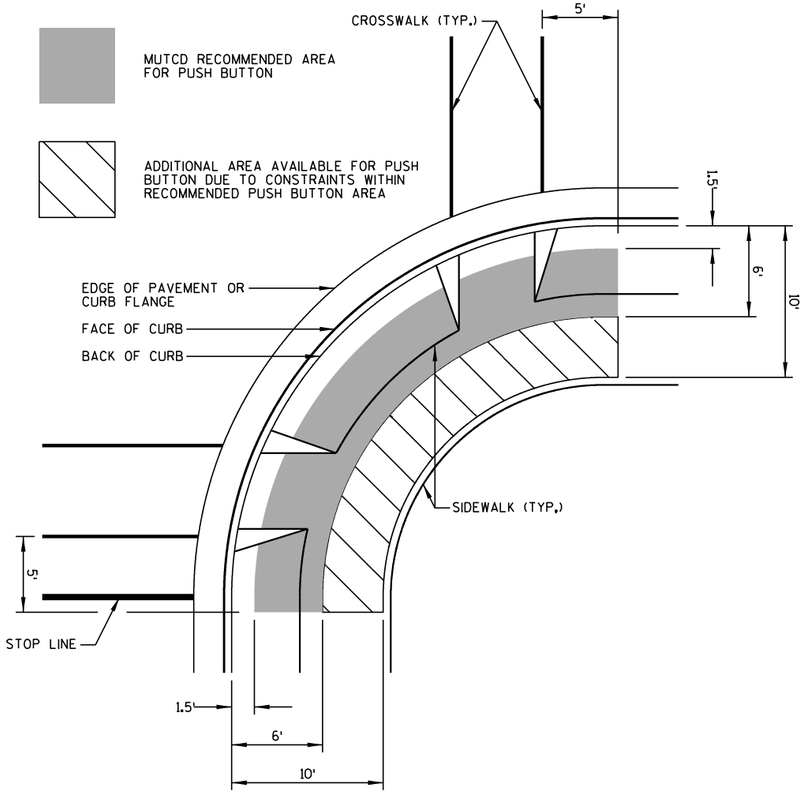
LEGEND

- WISDOT OWNED PERMANENT TRAFFIC SIGNAL (SXXXX)
- MUNICIPAL OWNED TRAFFIC SIGNAL (MUNICIPALITY)
- (A) INSTALL TEMPORARY TRAFFIC SIGNAL
- (B) REMOVE TEMPORARY TRAFFIC SIGNAL UPON 1060-35-91 PROJECT COMPLETION
- (C) TEMPORARY TRAFFIC SIGNAL NOT REQUIRED

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PROJECT OVERVIEW	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023901_sp_tmp_po.dgn PLOT DATE : 29-APR-2014 10:01 PLOT BY : MSCAXW PLOT NAME : PLOT SCALE : 1125:1

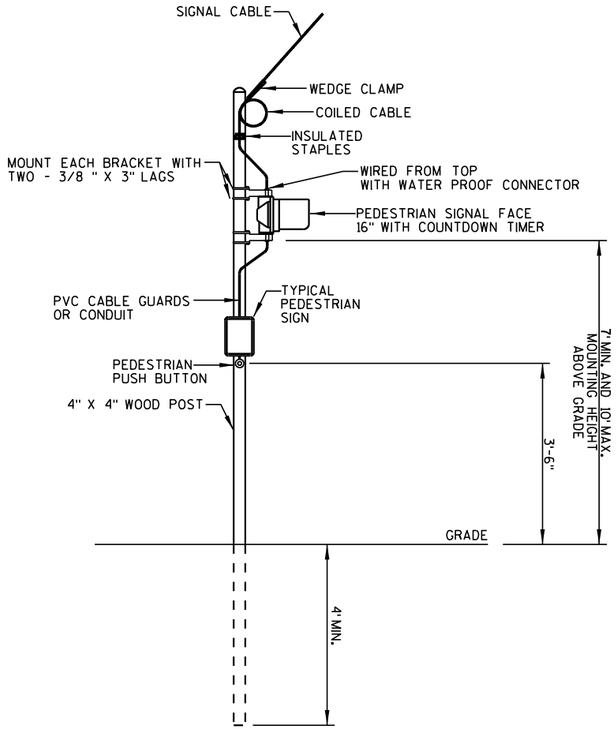
WISDOT/CADDS SHEET 42



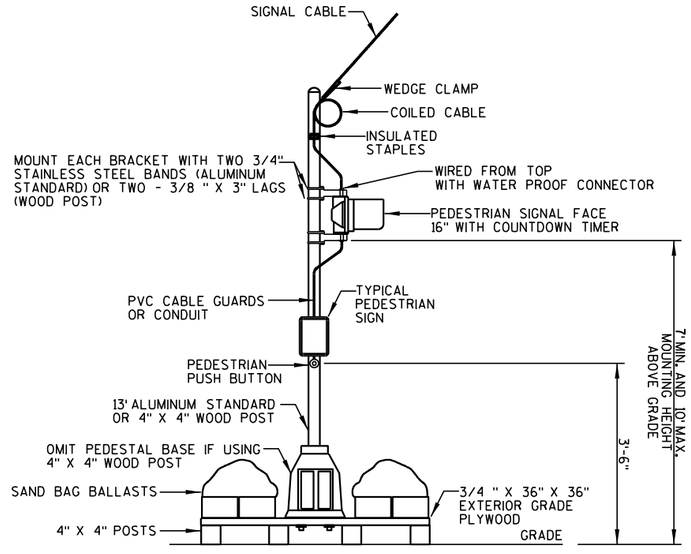
PUSH BUTTON LOCATION NOTES:

1. PUSHBUTTONS SHOULD BE CAPABLE OF EASY ACTIVATION AND CONVENIENTLY LOCATED NEAR EACH END OF CROSSWALK OR CROSSING AREA.
2. PUSHBUTTONS SHOULD BE PLACED UNOBSTRUCTED AND ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR.
3. PUSHBUTTONS SHOULD BE PLACED WHERE THERE IS AN ALL-WEATHER SURFACE, A WHEELCHAIR ACCESSIBLE ROUTE FROM THE PUSHBUTTON TO THE RAMP.
4. PUSHBUTTONS SHOULD BE PLACED BETWEEN THE EDGE OF THE CROSSWALK LINE (EXTENDED) FARTHEST FROM THE CENTER OF THE INTERSECTION AND THE SIDE OF A CURB RAMP (IF PRESENT), BUT NOT GREATER THAN 5-FEET FROM SAID CROSSWALK LINE.
5. PUSHBUTTONS SHOULD BE PLACED BETWEEN 1.5-FEET AND 6-FEET FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT. IF THERE ARE PHYSICAL CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5-FEET AND 6-FEET FORM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FARTHER THAN 10-FEET FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
6. PUSHBUTTONS SHOULD BE PLACED WITH THE FACE OF THE PUSH BUTTON PARALLEL TO THE CROSSWALK TO BE USED.
7. PUSHBUTTONS ON THE SAME CORNER OF AN INTERSECTION SHOULD BE SEPARATED BY A DISTANCE OF AT LEAST 10-FEET. WHERE THERE ARE PHYSICAL CONSTRAINTS ON A PARTICULAR CORNER THAN MAKE IT IMPRACTICAL TO PROVIDE THE 10-FOOT SEPARATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.
8. PUSHBUTTON POLES SHALL BE PLACED SO THAT ALL EQUIPMENT ATTACHED TO THE POLE (PEDESTRIAN SIGNAL HEAD, PUSHBUTTON, SIGN, ETC.) IS OUTSIDE THE MINIMUM LATERAL CLEARANCE DISTANCE OF 2-FEET FROM FACE OF CURB OR EDGE OF TRAVELED WAY.
9. PUSHBUTTONS SHOULD BE PLACED SO THE THE REACH DISTANCE FROM THE EDGE OF THE FLAT SURFACE ADJACENT TO THE PUSHBUTTON DOES NOT EXCEED THE MAXIMUM ADA REACH DISTANCE OF 2-FEET.

TEMPORARY PEDESTRIAN SIGNAL AREA



WOOD POST



SKID TYPE

TEMPORARY PEDESTRIAN SIGNAL NOTES:

1. SIGNAL DROP CABLES SHALL BE PLACED A MINIMUM OF 12-FEET ABOVE GROUND NOT SUBJECT TO VEHICULAR TRAFFIC.
2. SIGNAL DROP CABLES SHALL BE PLACED A MINIMUM OF 17-FEET ABOVE GROUND SUBJECT TO VEHICULAR TRAFFIC, INCLUDING CONSTRUCTION VEHICLES.
3. SKID TYPE TEMPORARY MAY BE USED FOR PEDESTRIAN PUSH BUTTONS AS LONG AS THE REACH DISTANCE FROM THE EDGE OF THE SKID TO THE PUSH BUTTON DOES NOT EXCEED THE MAXIMUM ADA REACH DISTANCE OF 2-FEET.
4. PUSHBUTTONS SHOULD BE PLACED AT A MOUNTING HEIGHT OF 3.5-FEET ABOVE THE WALKING SURFACE.
5. MAINTAIN ADA ACCESSIBLE ROUTE AND PEDESTRIAN ACCESSIBILITY REQUIREMENTS FOR ALL ACTIVE PEDESTRIAN SIGNAL INDICATION CROSSING AREAS.
6. MAINTAIN TEMPORARY PEDESTRIAN SIGNALS THROUGHOUT CONSTRUCTION TO ENSURE THAT THE PLACEMENT OF THE TEMPORARY PEDESTRIAN SIGNALS COMPLIES WITH ALL APPLICABLE ADA AND MUTCD SIGNAL PLACEMENT REQUIREMENTS.

TEMPORARY PEDESTRIAN SIGNAL

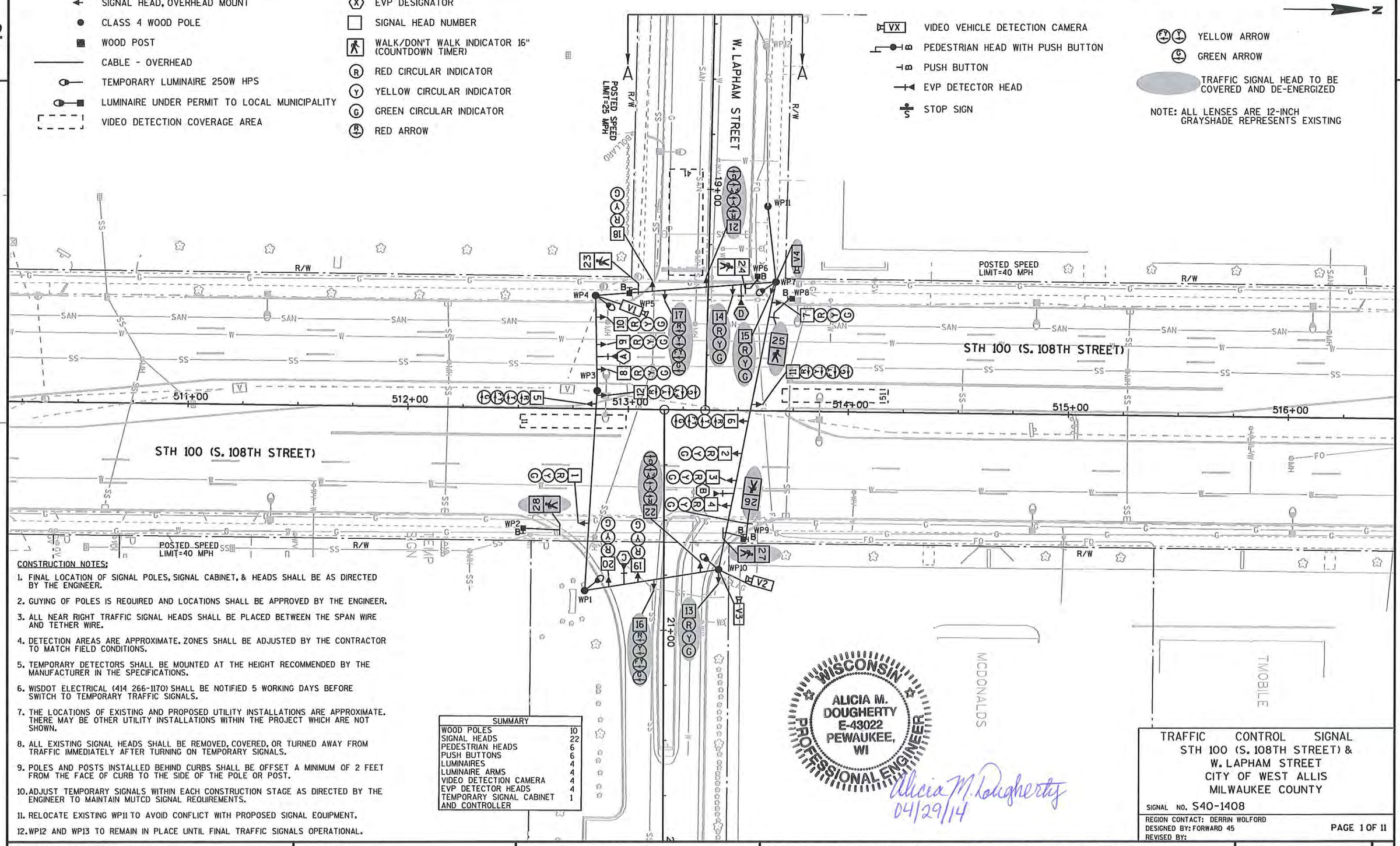
LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW

LEGEND (CON'T)

- VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD
- STOP SIGN
- YELLOW ARROW
- GREEN ARROW
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. DETECTION AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
5. TEMPORARY DETECTORS SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. WISDOT ELECTRICAL (414 266-1170) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE SWITCH TO TEMPORARY TRAFFIC SIGNALS.
7. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
8. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
9. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POLE OR POST.
10. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
11. RELOCATE EXISTING WP11 TO AVOID CONFLICT WITH PROPOSED SIGNAL EQUIPMENT.
12. WP12 AND WP13 TO REMAIN IN PLACE UNTIL FINAL TRAFFIC SIGNALS OPERATIONAL.

SUMMARY	
WOOD POLES	10
SIGNAL HEADS	22
PEDESTRIAN HEADS	6
PUSH BUTTONS	6
LUMINAIRES	4
LUMINAIRE ARMS	4
VIDEO DETECTION CAMERA	4
EVP DETECTOR HEADS	4
TEMPORARY SIGNAL CABINET AND CONTROLLER	1

WISCONSIN
ALICIA M. DOUGHERTY
E-43022
PEWAUKEE, WI
PROFESSIONAL ENGINEER

Alicia M. Dougherty
04/29/14

TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1408

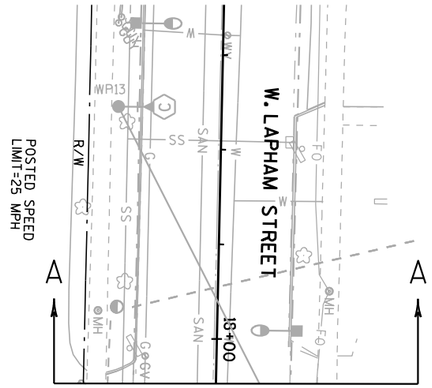
REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 11

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-CONSTRUCTION	SHEET E

2

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TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

MUNINCIPAL CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 11

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023903a_sp_tmp.dgn PLOT DATE : 29-APR-2014 03:45 PLOT BY : MSCITM PLOT NAME : 023903a_sp_tmp PLOT SCALE : 40:1

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW

LEGEND (CON'T)

- VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD
- STOP SIGN
- YELLOW ARROW
- GREEN ARROW
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

W. LAPHAM STREET

POSTED SPEED LIMIT=25 MPH

STH 100 (S. 108TH STREET)

POSTED SPEED LIMIT=40 MPH

511+00 512+00 513+00 514+00 515+00 516+00 19+00 21+00

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10 WP11 WP12

MCDONALDS

TMOBILE

TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1408

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

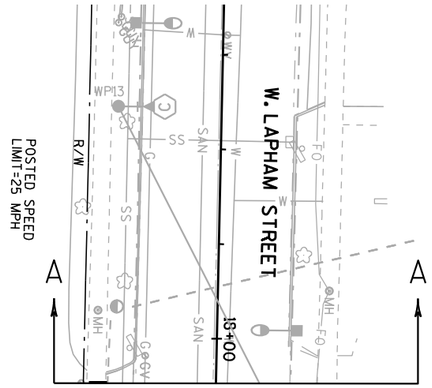
PAGE 3 OF 11

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1	SHEET	E

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TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1408

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 4 OF 11

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023904a_sp_tmp.dgn PLOT DATE : 29-APR-2014 03:57 PLOT BY : MSCITM PLOT NAME : 023904a_sp_tmp PLOT SCALE : 40:1

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW

LEGEND (CON'T)

- VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD
- YELLOW ARROW
- GREEN ARROW
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

W. LAPHAM STREET

STH 100 (S. 108TH STREET)

POSTED SPEED LIMIT=25 MPH

POSTED SPEED LIMIT=40 MPH

511+00 512+00 513+00 514+00 515+00 516+00 19+00 21+00

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10 WP11 WP12

MCDONALDS

TMOBILE

TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1408

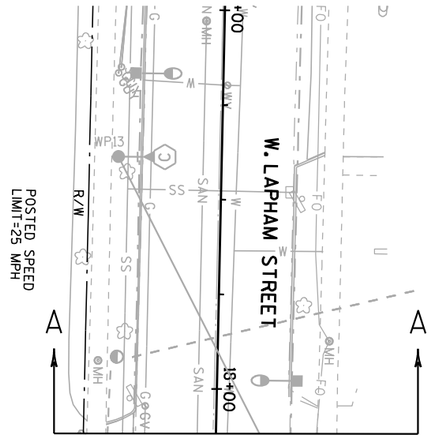
REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 5 OF 11

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023905_sp_tmp.dgn PLOT DATE : 29-APR-2014 09:40 PLOT BY : MSCAXW PLOT NAME : 023905_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42



TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1408

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 6 OF 11

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET	E

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WISDOT/CADDS SHEET 42

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW

LEGEND (CON'T)

- VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD
- YELLOW ARROW
- GREEN ARROW
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

W. LAPHAM STREET

STH 100 (S. 108TH STREET)

POSTED SPEED LIMIT=25 MPH

POSTED SPEED LIMIT=40 MPH

POSTED SPEED LIMIT=40 MPH

ONLY

ONLY

TEMP SIGN

MCDONALDS

TMOBILE

511+00 512+00 513+00 514+00 515+00 516+00 21+00

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10 WP11 WP12

TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1408

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

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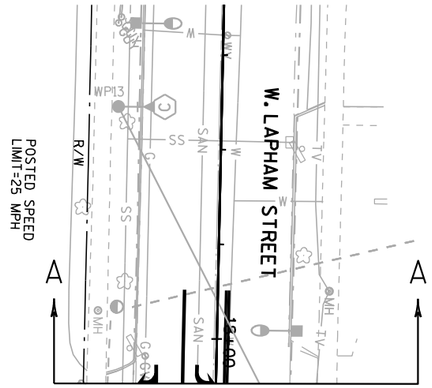
PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 3	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023906_sp_tmp.dgn PLOT DATE : 29-APR-2014 13:30 PLOT BY : MSCAXW PLOT NAME : 023906_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

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TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1408

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 8 OF 11

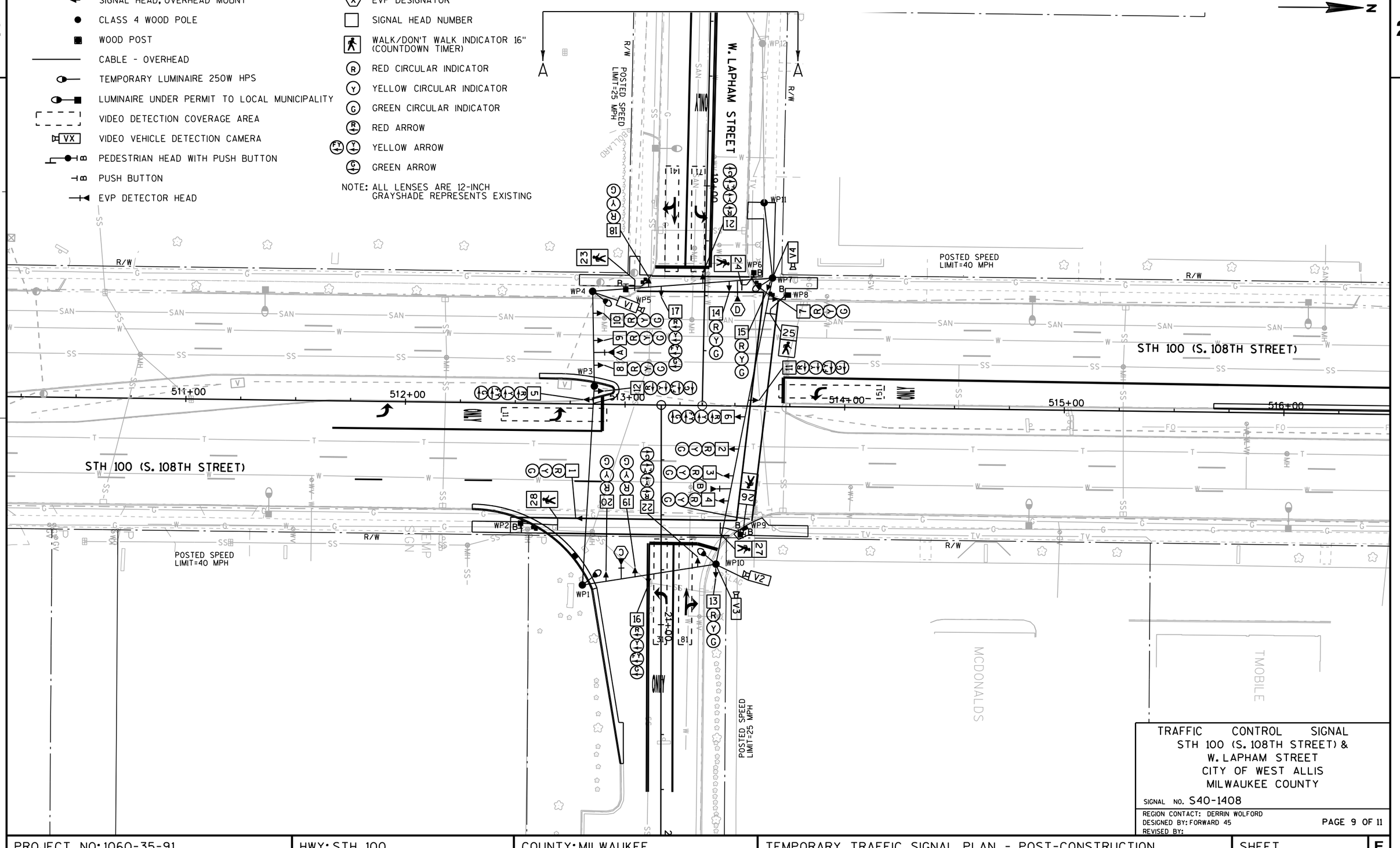
PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 3	SHEET	E

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LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD
- EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1408

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

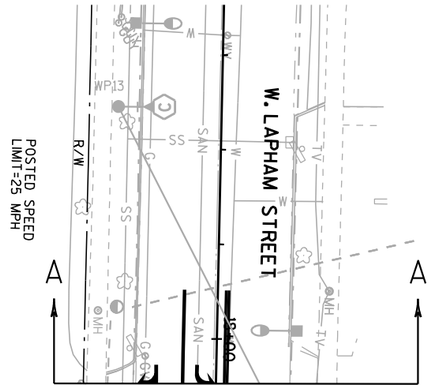
PAGE 9 OF 11

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - POST-CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023907_sp_tmp.dgn PLOT DATE : 29-APR-2014 09:46 PLOT BY : MSCAXW PLOT NAME : 023907_sp_tmp PLOT SCALE : 40:1

2

N



TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

MUNINCIPAL CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 10 OF 11

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - POST-CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023907a_sp_tmp.dgn PLOT DATE : 29-APR-2014 04:29 PLOT BY : MSCITM PLOT NAME : 023907a_sp_tmp PLOT SCALE : 40:1

SEQUENCE OF OPERATION

SEE NOTE 3 — OLA — OLB

RING 1

	HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø2 R/W	Ø2 CLEAR TO **	Ø3 R/W	Ø3 CLEAR TO **	Ø4 R/W	Ø4 CLEAR TO **	FLASH
Ø1	5,6	G ←	- -	-	- -	-	- -	-	- -	-
Ø2	7,8,9,10	R	R R	G	Y R	R	R R	R	R R	R
Ø3	16,17	-	- -	-	- -	G ←	- -	-	- -	-
Ø4	18,19,20	R	R R	R	R R	R	R R	G	Y R	R
Ø5	11,12	-	- -	-	- -	-	- -	-	- -	-
Ø6	1,2,3,4	R	R R	R	R R	R	R R	R	R R	R
Ø7	21,22	-	- -	-	- -	-	- -	-	- -	-
Ø8	13,14,15	R	R R	R	R R	R	R R	R	R R	R
OLA	5,6	-	Y R	FY	Y R	R ←	R R ←	R ←	R R ←	R ←
OLB	16,17	R ←	R R ←	R ←	R R ←	-	Y R ←	FY ←	Y R ←	R ←
OLC	11,12	R ←	R R ←	R ←	R R ←	R ←	R R ←	R ←	R R ←	R ←
OLD	21,22	R ←	R R ←	R ←	R R ←	R ←	R R ←	R ←	R R ←	R ←
Ø2P	23,24	D	D D	*	D D	D	D D	D	D D	
Ø4P										
Ø6P	27,28	D	D D	D	D D	D	D D	D	D D	
Ø8P	25,26	D	D D	D	D D	D	D D	D	D D	

SEE NOTE 3 — OLC — OLD

RING 2

	HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **	Ø6 R/W	Ø6 CLEAR TO **	Ø7 R/W	Ø7 CLEAR TO **	Ø8 R/W	Ø8 CLEAR TO **
Ø1	5,6	-	- -	-	- -	-	- -	-	- -
Ø2	7,8,9,10	R	R R	R	R R	R	R R	R	R R
Ø3	16,17	-	- -	-	- -	-	- -	-	- -
Ø4	18,19,20	R	R R	R	R R	R	R R	R	R R
Ø5	11,12	G ←	- -	-	- -	-	- -	-	- -
Ø6	1,2,3,4	R	R R	G	Y R	R	R R	R	R R
Ø7	21,22	-	- -	-	- -	G ←	- -	-	- -
Ø8	13,14,15	R	R R	R	R R	R	R R	G	Y R
OLA	5,6	R ←	R R ←	R ←	R R ←	R ←	R R ←	R ←	R R ←
OLB	16,17	R ←	R R ←	R ←	R R ←	R ←	R R ←	R ←	R R ←
OLC	11,12	-	Y R ←	FY ←	Y R ←	R ←	R R ←	R ←	R R ←
OLD	21,22	R ←	R R ←	R ←	R R ←	-	Y R ←	FY ←	Y R ←
Ø2P	23,24	D	D D	D	D D	D	D D	D	D D
Ø4P									
Ø6P	27,28	D	D D	*	D D	D	D D	D	D D
Ø8P	25,26	D	D D	D	D D	D	D D	*	D D

BARRIER

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

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

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11		X			1	1					VIDEO
31		X			3	3					VIDEO
41		X			4	4		X			VIDEO
51		X			5	5					VIDEO
71		X			7	7					VIDEO
81		X			8	8		X			VIDEO

CONTROLLER LOGIC

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

N

SPECIAL OVERLAPS

	PROTECTIVE	PERMISSIVE
O.L. "A" =	1	2
O.L. "B" =	3	4
O.L. "C" =	5	6
O.L. "D" =	7	8

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

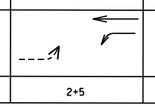
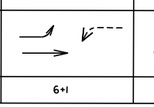
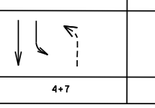
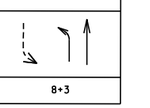
TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	x
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

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

CHART 1

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL D
MOVEMENT				
PHASE	2+5	6+1	4+7	8+3

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

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1.)
3. PHASES 1 AND 5 ARE IN CONFLICT AND NOT ALLOWED TO TIME CONCURRENTLY.

STH 100 (S. 108TH STREET) & W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1408

CONTROLLER TYPE: TEMP

DATE 04/14

PROJECT NO: 1060-35-91 | HWY: STH 100 | COUNTY: MILWAUKEE | TEMPORARY SEQUENCE OF OPERATIONS - ALL STAGES | SHEET E

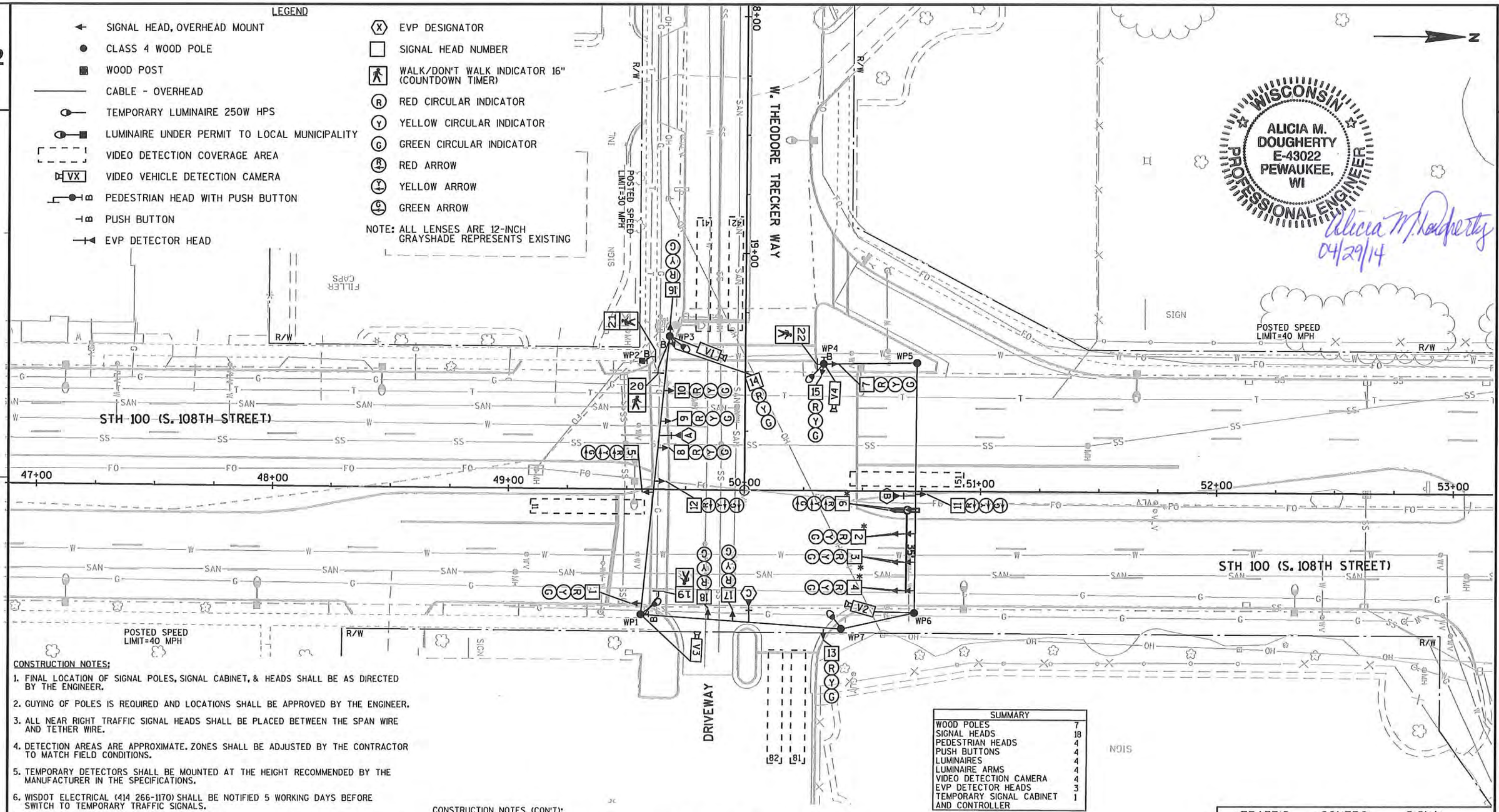
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WISDOT/CADDS SHEET 42

2

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD
- EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING



WISCONSIN
ALICIA M. DOUGHERTY
E-43022
PEWAUKEE, WI
PROFESSIONAL ENGINEER

Alicia M. Dougherty
04/29/14

CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. DETECTION AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
5. TEMPORARY DETECTORS SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. WISDOT ELECTRICAL (414 266-1170) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE SWITCH TO TEMPORARY TRAFFIC SIGNALS.
7. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
8. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
9. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POLE OR POST.
10. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.

CONSTRUCTION NOTES (CON'T):

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARM IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE IS INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE SIGNAL HEADS. THE CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

SUMMARY	
WOOD POLES	7
SIGNAL HEADS	18
PEDESTRIAN HEADS	4
PUSH BUTTONS	4
LUMINAIRES	4
LUMINAIRE ARMS	4
VIDEO DETECTION CAMERA	4
EVP DETECTOR HEADS	3
TEMPORARY SIGNAL CABINET AND CONTROLLER	1

TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. THEODORE TRECKER WAY
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1122

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-CONSTRUCTION	SHEET E

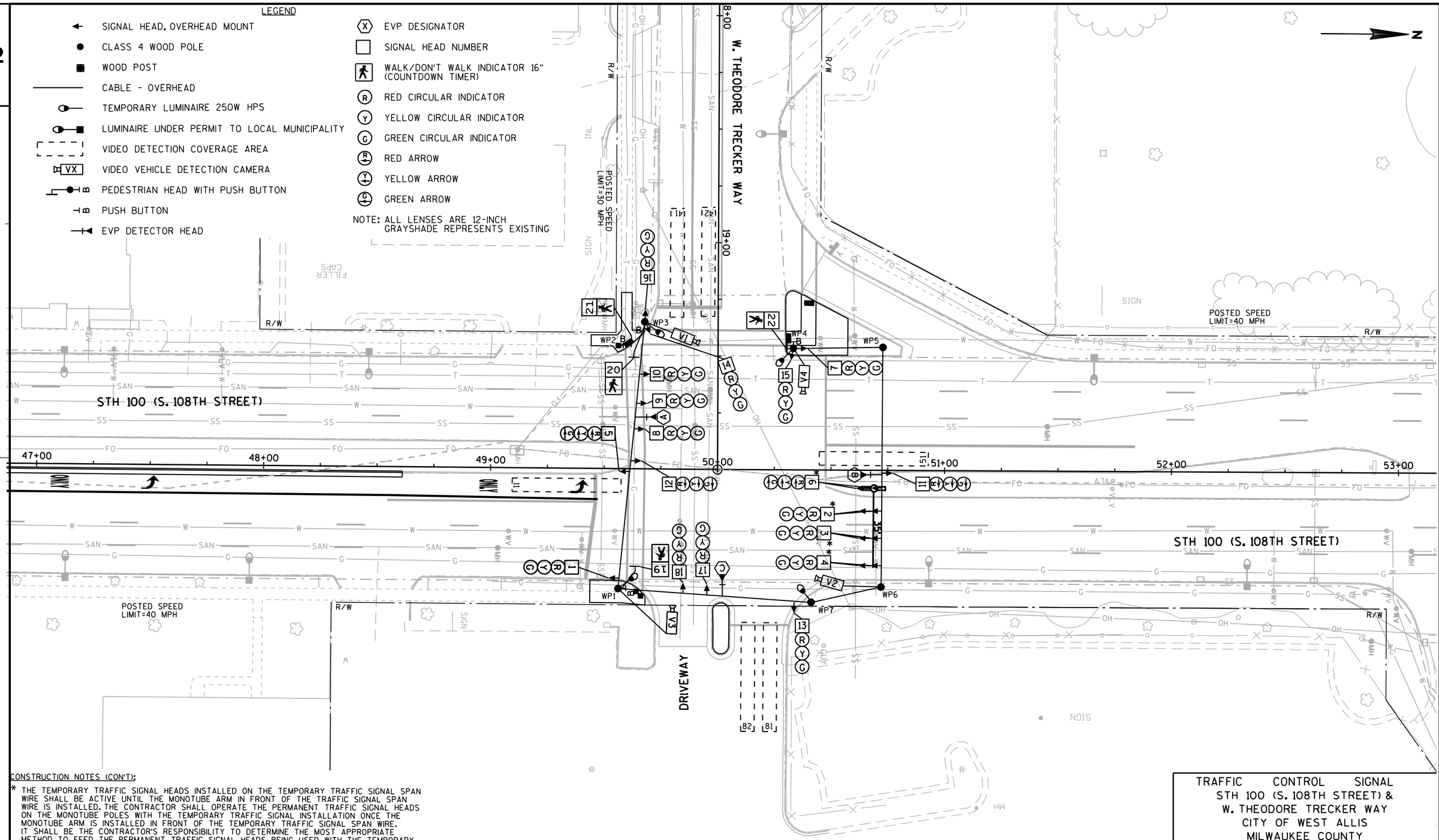
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WISDOT/CADDS SHEET 42

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD
- EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES (CON'T):

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARM IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE IS INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE SIGNAL HEADS. THE CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. THEODORE TRECKER WAY
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1122

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - POST-CONSTRUCTION	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023912_sp_tmp.dgn PLOT DATE : 29-APR-2014 04:47 PLOT BY : MSCITM PLOT NAME : 023912_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATION

		Ø1							Ø2							Ø3							Ø4							FLASH
			CLEAR TO							CLEAR TO							CLEAR TO							CLEAR TO						
	HEAD NUMBERS	R/W	**						R/W	**						R/W	**						R/W	**						
Ø1	5,6	G	Y	R					R	R	R												R	R	R					R
Ø2	7,8,9,10	R	R	R					G	Y	R												R	R	R					R
Ø3																														
Ø4	16,17,18	R	R	R					R	R	R												G	Y	R					R
RING 1 Ø5	11,12	R	R	R					R	R	R												R	R	R					R
Ø6	1,2,3,4	R	R	R					R	R	R												R	R	R					R
Ø7																														
Ø8	13,14,15	R	R	R					R	R	R												R	R	R					R
Ø2P	21,22	D	D	D					*	D	D												D	D	D					
Ø4P	19,20	D	D	D					D	D	D												*	D	D					
Ø6P																														
Ø8P																														

		Ø5							Ø6							Ø7							Ø8						
			CLEAR TO							CLEAR TO							CLEAR TO							CLEAR TO					
	HEAD NUMBERS	R/W	**						R/W	**						R/W	**						R/W	**					
Ø1	5,6	R	R	R					R	R	R												R	R	R				
Ø2	7,8,9,10	R	R	R					R	R	R												R	R	R				
Ø3																													
RING 2 Ø4	16,17,18	R	R	R					R	R	R												R	R	R				
Ø5	11,12	G	Y	R					R	R	R												R	R	R				
Ø6	1,2,3,4	R	R	R					G	Y	R												R	R	R				
Ø7																													
Ø8	13,14,15	R	R	R					R	R	R												G	Y	R				
Ø2P	21,22	D	D	D					D	D	D												D	D	D				
Ø4P	19,20	D	D	D					D	D	D												D	D	D				
Ø6P																													
Ø8P																													

BARRIER

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

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

CHART 1

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

N

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11		X			1	1					VIDEO
41		X			4	4		X			VIDEO
42		X			4	4					VIDEO
51		X			5	5					VIDEO
81		X			8	8		X			VIDEO
82		X			8	8					VIDEO

CONTROLLER LOGIC

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

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

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

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

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

AFTER PREEMPTION SEQUENCE 4+8, CONTROLLER SHALL RETURN TO PHASES 4+8.

GENERAL NOTES:

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

STH 100 (S. 108TH STREET) &
W. THEODORE TRECKER WAY
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1122

CONTROLLER TYPE: TEMP

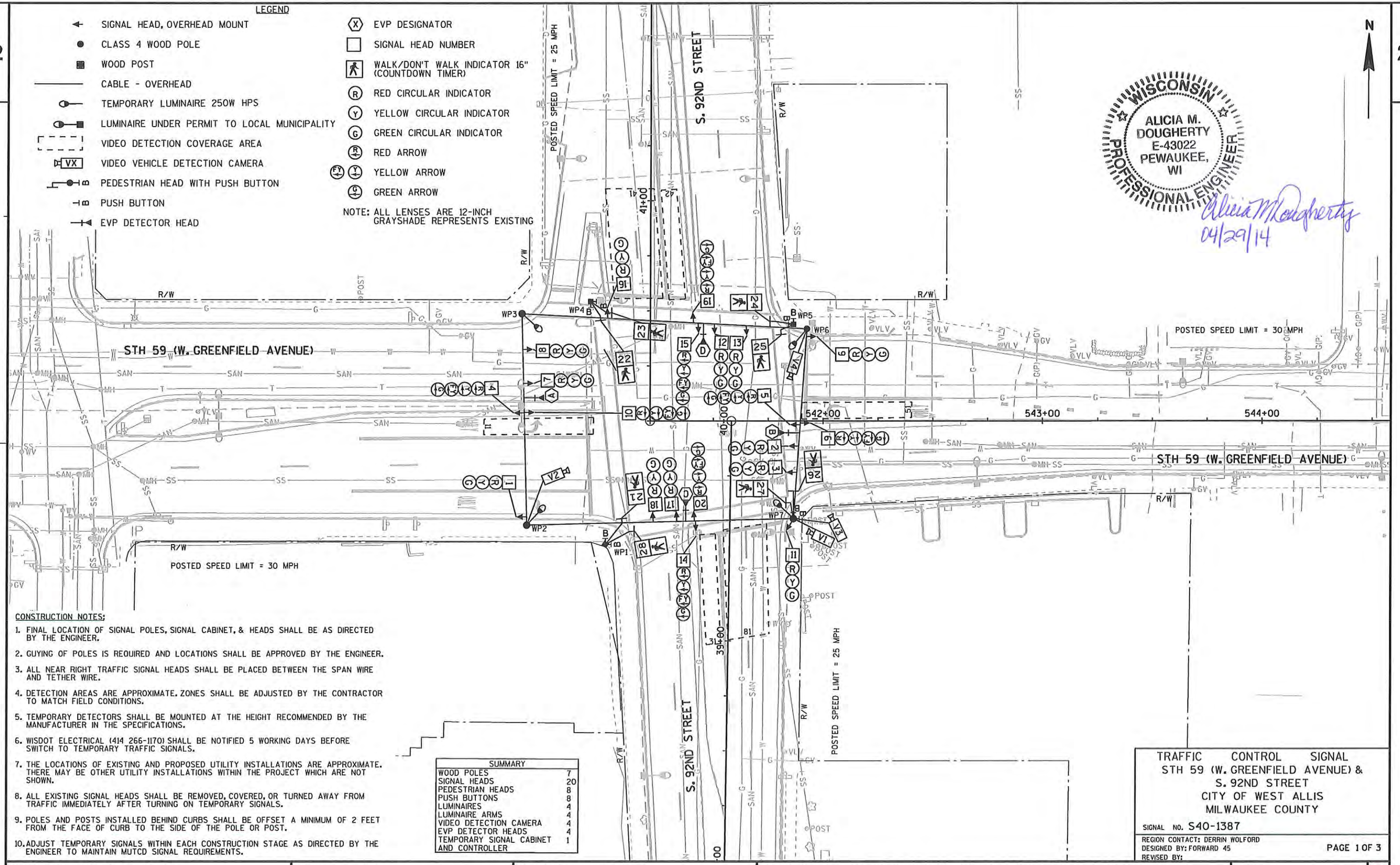
DATE 04/14

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TEMPORARY SEQUENCE OF OPERATIONS	SHEET	E

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD
- X EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING



WISCONSIN
ALICIA M. DOUGHERTY
E-43022
PEWAUKEE, WI
PROFESSIONAL ENGINEER

Alicia M Dougherty
04/29/14

CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. DETECTION AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
5. TEMPORARY DETECTORS SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. WISDOT ELECTRICAL (414 266-1170) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE SWITCH TO TEMPORARY TRAFFIC SIGNALS.
7. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
8. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
9. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POLE OR POST.
10. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.

SUMMARY	
WOOD POLES	7
SIGNAL HEADS	20
PEDESTRIAN HEADS	8
PUSH BUTTONS	8
LUMINAIRES	4
LUMINAIRE ARMS	4
VIDEO DETECTION CAMERA	4
EVP DETECTOR HEADS	4
TEMPORARY SIGNAL CABINET AND CONTROLLER	1

TRAFFIC CONTROL SIGNAL
STH 59 (W. GREENFIELD AVENUE) &
S. 92ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1387

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-CONSTRUCTION	SHEET	E

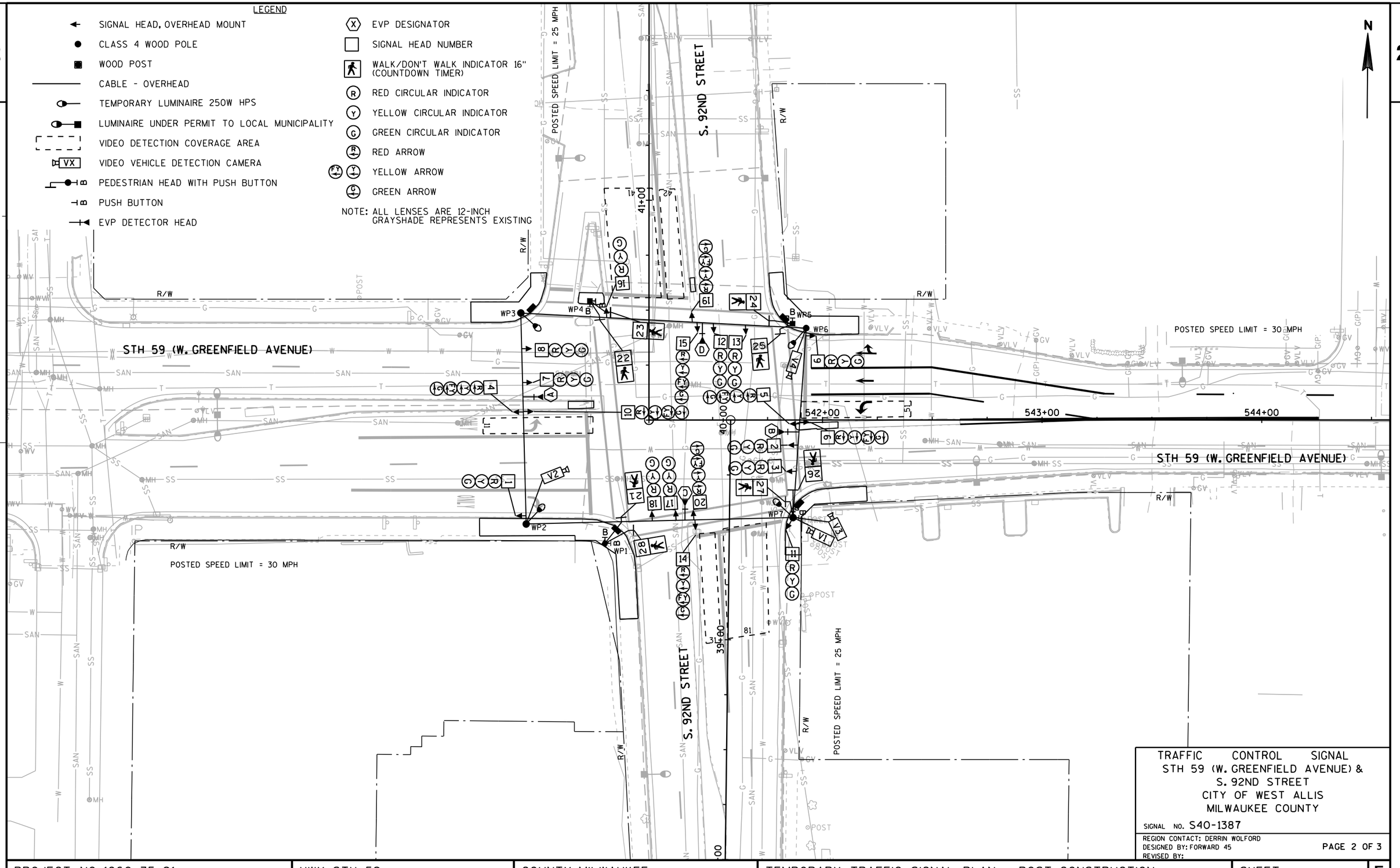
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WISDOT/CADDS SHEET 42

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD
- EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 59 (W. GREENFIELD AVENUE) &
S. 92ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1387

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - POST-CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023922_sp_tmp.dgn PLOT DATE : 29-APR-2014 04:58 PLOT BY : MSCITM PLOT NAME : 023922_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATION

RING 1

	HEAD NUMBERS	Ø1 R/W	Ø1 **	Ø1 CLEAR TO	Ø2 R/W	Ø2 **	Ø2 CLEAR TO	Ø3 R/W	Ø3 **	Ø3 CLEAR TO	Ø4 R/W	Ø4 **	Ø4 CLEAR TO	FLASH
Ø1	4,5	G ←	- -		-	- -		-	- -		-	- -		-
Ø2	6,7,8	R	R R		G	Y R		R	R R		R	R R		R
Ø3	14,15	-	- -		-	- -		G ←	- -		-	- -		R ←
Ø4	16,17,18	R	R R		R	R R		R	R R		G	Y R		R
Ø5	9,10	-	- -		-	- -		-	- -		-	- -		-
Ø6	1,2,3	R	R R		R	R R		R	R R		R	R R		R
Ø7														
Ø8	11,12,13	R	R R		R	R R		R	R R		R	R R		R
OLA	4,5	-	Y R		FY	Y R		R ←	R R		R ←	R R		R ←
OLB	14,15	R ←	R R		R ←	R R		-	Y R		FY ←	Y R		R ←
OLC	9,10	R ←	R R		R ←	R R		R ←	R R		R ←	R R		R ←
OLD	19,20	R ←	R R		R ←	R R		R ←	R R		R ←	R R		
Ø2P	23,24	D	D D		*	D D		D	D D		D	D D		
Ø4P	21,22	D	D D		D	D D		D	D D		*	D D		
Ø6P	27,28	D	D D		D	D D		D	D D		D	D D		
Ø8P	25,26	D	D D		D	D D		D	D D		D	D D		

RING 2

	HEAD NUMBERS	Ø5 R/W	Ø5 **	Ø5 CLEAR TO	Ø6 R/W	Ø6 **	Ø6 CLEAR TO	Ø7 R/W	Ø7 **	Ø7 CLEAR TO	Ø8 R/W	Ø8 **	Ø8 CLEAR TO
Ø1	4,5	-	- -		-	- -					-	- -	
Ø2	6,7,8	R	R R		R	R R					R	R R	
Ø3	14,15	-	- -		-	- -					-	- -	
Ø4	16,17,18	R	R R		R	R R					R	R R	
Ø5	9,10	G ←	- -		-	- -					-	- -	
Ø6	1,2,3	R	R R		G	Y R					R	R R	
Ø7													
Ø8	11,12,13	R	R R		R	R R					G	Y R	
OLA	4,5	R ←	R R		R ←	R R					R ←	R R	
OLB	14,15	R ←	R R		R ←	R R					R ←	R R	
OLC	9,10	-	Y R		FY ←	Y R					R ←	R R	
OLD	19,20	R ←	R R		R ←	R R					FY ←	Y R	
Ø2P	23,24	D	D D		D	D D					D	D D	
Ø4P	21,22	D	D D		D	D D					D	D D	
Ø6P	27,28	D	D D		*	D D					D	D D	
Ø8P	25,26	D	D D		D	D D					*	D D	

BARRIER

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

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

N

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11		X			1	1					VIDEO
31		X			3	3					VIDEO
41		X			4	4					VIDEO
42		X			4	4					VIDEO
51		X			5	5					VIDEO
81		X			8	8					VIDEO

CONTROLLER LOGIC

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

SPECIAL OVERLAPS

	PROTECTIVE	PERMISSIVE
O.L. "A" =	1	2
O.L. "B" =	3	4
O.L. "C" =	5	6
O.L. "D" =		8

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

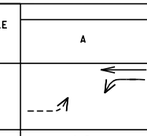
TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	x
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

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

CHART 1

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL D
MOVEMENT				
PHASE	2+5	6+1	4+8	8+3

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

AFTER PREEMPTION SEQUENCE 4+8 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

GENERAL NOTES:

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

STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1387

CONTROLLER TYPE: TEMP

DATE 04/14

PAGE NO. 3 OF 3

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	TEMPORARY SEQUENCE OF OPERATIONS	SHEET E

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD

LEGEND (CON'T)

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

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

STH 181 (S. 84TH STREET)

STH 59 (W. GREENFIELD AVENUE)

S. 84TH STREET

POSTED SPEED LIMIT = 30 MPH

R/W

566+00 567+00 568+00 569+00 570+00 571+00

223+00 224+00 225+00 22+00

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10

CONSTRUCTION NOTES;

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. DETECTION AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
5. TEMPORARY DETECTORS SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. WISDOT ELECTRICAL (414 266-1170) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE SWITCH TO TEMPORARY TRAFFIC SIGNALS.
7. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
8. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
9. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POLE OR POST.
10. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.

SUMMARY	
WOOD POLES	10
SIGNAL HEADS	20
PEDESTRIAN HEADS	8
PUSH BUTTONS	8
LUMINAIRES	4
LUMINAIRE ARMS	4
VIDEO DETECTION CAMERA	4
EVP DETECTOR HEADS	4
TEMPORARY SIGNAL CABINET AND CONTROLLER	1

WISCONSIN
ALICIA M. DOUGHERTY
E-43022
PEWAUKEE, WI
PROFESSIONAL ENGINEER

Alicia M. Dougherty
04/29/14

TRAFFIC CONTROL SIGNAL
STH 59 (W. GREENFIELD AVENUE) &
STH 181 (S. 84TH STREET)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1388

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-CONSTRUCTION	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023931_sp_tmp.dgn PLOT DATE : 29-APR-2014 05:04 PLOT BY : MSCITM PLOT NAME : 023931_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD

LEGEND (CON'T)

- EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

STH 181 (S. 84TH STREET)

STH 59 (W. GREENFIELD AVENUE)

S. 84TH STREET

POSTED SPEED LIMIT = 30 MPH

566+00 567+00 568+00 569+00 570+00 571+00 225+00 224+00 223+00 22+00

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10

TRAFFIC CONTROL SIGNAL
STH 59 (W. GREENFIELD AVENUE) &
STH 181 (S. 84TH STREET)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1388

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - POST-CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023932_sp_tmp.dgn PLOT DATE : 29-APR-2014 05:07 PLOT BY : MSCITM PLOT NAME : 023932_sp_tmp PLOT SCALE : 40:1

SEQUENCE OF OPERATION

RING 1

	HEAD NUMBERS	Ø1 R/W	Ø1 **	Ø1 CLEAR TO	Ø2 R/W	Ø2 **	Ø2 CLEAR TO	Ø3 R/W	Ø3 **	Ø3 CLEAR TO	Ø4 R/W	Ø4 **	Ø4 CLEAR TO	FLASH
Ø1	4,5	G	- -		-	- -		-	- -		-	- -		-
Ø2	6,7,8	R	R R		G	Y R		R	R R		R	R R		R
Ø3	14,15	-	- -		-	- -		G	- -		-	- -		-
Ø4	16,17,18	R	R R		R	R R		R	R R		G	Y R		R
Ø5	9,10	-	- -		-	- -		-	- -		-	- -		-
Ø6	1,2,3	R	R R		R	R R		R	R R		R	R R		R
Ø7	19,20	-	- -		-	- -		-	- -		-	- -		-
Ø8	11,12,13	R	R R		R	R R		R	R R		R	R R		R
OLA	4,5	-	Y R		FY	Y R		R	R R		R	R R		R
OLB	14,15	R	R R		R	R R		-	Y R		FY	Y R		R
OLC	9,10	R	R R		R	R R		R	R R		R	R R		R
OLD	19,20	R	R R		R	R R		R	R R		R	R R		R
Ø2P	23,24	D	D D		*	D D		D	D D		D	D D		
Ø4P	21,22	D	D D		D	D D		D	D D		*	D D		
Ø6P	27,28	D	D D		D	D D		D	D D		D	D D		
Ø8P	25,26	D	D D		D	D D		D	D D		D	D D		

RING 2

	HEAD NUMBERS	Ø5 R/W	Ø5 **	Ø5 CLEAR TO	Ø6 R/W	Ø6 **	Ø6 CLEAR TO	Ø7 R/W	Ø7 **	Ø7 CLEAR TO	Ø8 R/W	Ø8 **	Ø8 CLEAR TO
Ø1	4,5	-	- -		-	- -		-	- -		-	- -	
Ø2	6,7,8	R	R R		R	R R		R	R R		R	R R	
Ø3	14,15	-	- -		-	- -		-	- -				
Ø4	16,17,18	R	R R		R	R R		R	R R		R	R R	
Ø5	9,10	G	- -		-	- -		-	- -				
Ø6	1,2,3	R	R R		G	Y R		R	R R		R	R R	
Ø7	19,20	-	- -		-	- -		G	- -				
Ø8	11,12,13	R	R R		R	R R		R	R R		G	Y R	
OLA	4,5	R	R R		R	R R		R	R R		R	R R	
OLB	14,15	R	R R		R	R R		R	R R		R	R R	
OLC	9,10	-	Y R		FY	Y R		R	R R		R	R R	
OLD	19,20	R	R R		R	R R		-	Y R		FY	Y R	
Ø2P	23,24	D	D D		D	D D		D	D D		D	D D	
Ø4P	21,22	D	D D		D	D D		D	D D		D	D D	
Ø6P	27,28	D	D D		*	D D		D	D D		D	D D	
Ø8P	25,26	D	D D		D	D D		D	D D		*	D D	

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

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

BARRIER

N

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11		X			1	1					VIDEO
31		X			3	3					VIDEO
41		X			4	4					VIDEO
51		X			5	5					VIDEO
71		X			7	7					VIDEO
81		X			8	8					VIDEO

CONTROLLER LOGIC

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

SPECIAL OVERLAPS

	PROTECTIVE	PERMISSIVE
O.L. "A" =	1	2
O.L. "B" =	3	4
O.L. "C" =	5	6
O.L. "D" =	7	8

TYPE OF INTERCONNECT COMMUNICATION	
NONE	
TBC	x
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS- -	

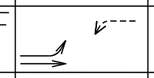
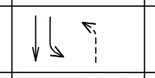
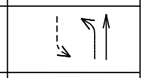
TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	x
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

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

CHART 1

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL D
MOVEMENT				
PHASE	2+5	6+1	4+7	8+3

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

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASE 4+8.

GENERAL NOTES:

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

STH 59 (W. GREENFIELD AVENUE) &
STH 181 (S. 84TH STREET)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1388

CONTROLLER TYPE: TEMP

DATE 04/14

PAGE NO. 3 OF 3

PROJECT NO: 1060-35-91 | HWY: STH 59 | COUNTY: MILWAUKEE | TEMPORARY SEQUENCE OF OPERATIONS | SHEET E

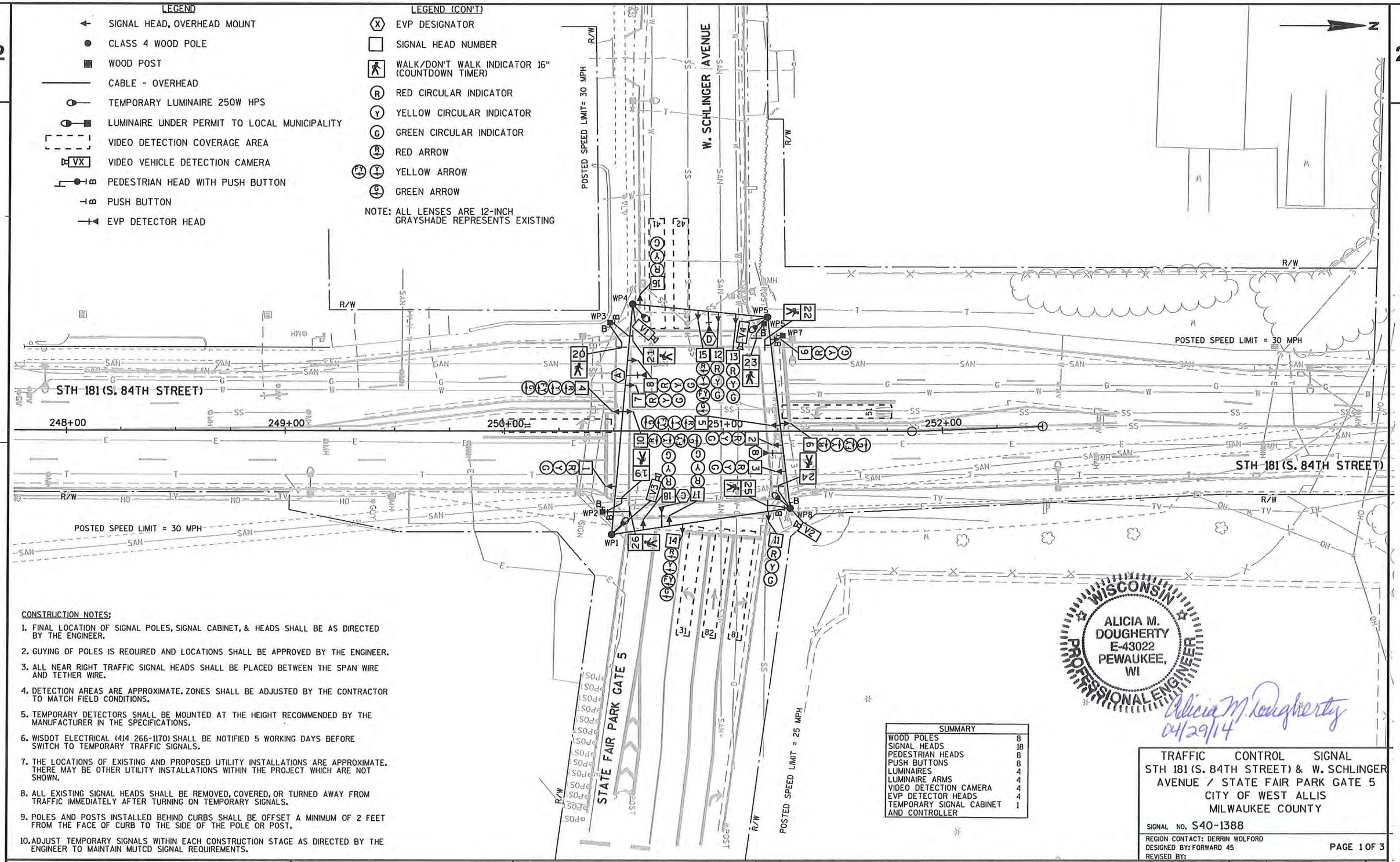
LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD

LEGEND (CON'T)

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

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES;

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. DETECTION AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
5. TEMPORARY DETECTORS SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. WISDOT ELECTRICAL (414 266-1170) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE SWITCH TO TEMPORARY TRAFFIC SIGNALS.
7. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
8. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
9. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POLE OR POST.
10. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.

SUMMARY	
WOOD POLES	8
SIGNAL HEADS	18
PEDESTRIAN HEADS	8
PUSH BUTTONS	8
LUMINAIRES	4
LUMINAIRE ARMS	4
VIDEO DETECTION CAMERA	4
EVP DETECTOR HEADS	4
TEMPORARY SIGNAL CABINET AND CONTROLLER	1

WISCONSIN
ALICIA M. DOUGHERTY
E-43022
PEWAUKEE, WI
PROFESSIONAL ENGINEER

Alicia M Dougherty
04/29/14

TRAFFIC CONTROL SIGNAL
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE / STATE FAIR PARK GATE 5
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1388

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-CONSTRUCTION	SHEET 170	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023941_sp_tmp.dgn PLOT DATE : 29-APR-2014 09:57 PLOT BY : MSCAXW PLOT NAME : 023941_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD

LEGEND (CON'T)

- (X) EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (FY) (Y) YELLOW ARROW
- (G) GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

W. SCHLINGER AVENUE

POSTED SPEED LIMIT= 30 MPH

R/W

STH 181 (S. 84TH STREET)

248+00 249+00 250+00 251+00 252+00

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

POSTED SPEED LIMIT = 30 MPH

STATE FAIR PARK GATE 5

POSTED SPEED LIMIT = 25 MPH

TRAFFIC CONTROL SIGNAL
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE / STATE FAIR PARK GATE 5
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1388

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - POST-CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023942_sp_tmp.dgn PLOT DATE : 29-APR-2014 09:59 PLOT BY : MSCAXW PLOT NAME : 023942_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATION

RING 1

	HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø2 R/W	Ø2 CLEAR TO **	Ø3 R/W	Ø3 CLEAR TO **	Ø4 R/W	Ø4 CLEAR TO **	FLASH
Ø1	4,5	G ←	- -	-	- -	-	- -	-	- -	-
Ø2	6,7,8	R	R R	G	Y R	R	R R	R	R R	R
Ø3	14,15	-	- -	-	- -	G ←	- -	-	- -	-
Ø4	16,17,18	R	R R	R	R R	R	R R	G	Y R	R
Ø5	9,10	-	- -	-	- -	-	- -	-	- -	-
Ø6	1,2,3	R	R R	R	R R	R	R R	R	R R	R
Ø7										
Ø8	11,12,13	R	R R	R	R R	R	R R	R	R R	R
OLA	4,5	-	Y R	FY	Y R	R ←	R R ←	R ←	R R ←	R
OLB	14,15	R ←	R R ←	R ←	R R ←	-	Y R ←	FY ←	Y R ←	R
OLC	9,10	R ←	R R ←	R ←	R R ←	R ←	R R ←	R ←	R R ←	R
OLD										
Ø2P	21,22	D	D D	*	D D	D	D D	D	D D	
Ø4P	19,20	D	D D	D	D D	D	D D	*	D D	
Ø6P	25,26	D	D D	D	D D	D	D D	D	D D	
Ø8P	23,24	D	D D	D	D D	D	D D	D	D D	

RING 2

	HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **	Ø6 R/W	Ø6 CLEAR TO **	Ø7 R/W	Ø7 CLEAR TO **	Ø8 R/W	Ø8 CLEAR TO **
Ø1	4,5	-	- -	-	- -			-	- -
Ø2	6,7,8	R	R R	R	R R			R	R R
Ø3	9,10	-	- -	-	- -			-	- -
Ø4	16,17,18	R	R R	R	R R			R	R R
Ø5	9,10	G ←	- -	-	- -			-	- -
Ø6	1,2,3	R	R R	G	Y R			R	R R
Ø7									
Ø8	11,12,13	R	R R	R	R R			G	Y R
OLA	4,5	R ←	R R ←	R ←	R R ←			R ←	R R ←
OLB	14,15	R ←	R R ←	R ←	R R ←			R ←	R R ←
OLC	9,10	-	Y R ←	FY ←	Y R ←			R ←	R R ←
OLD									
Ø2P	21,22	D	D D	D	D D			D	D D
Ø4P	19,20	D	D D	D	D D			D	D D
Ø6P	25,26	D	D D	*	D D			D	D D
Ø8P	23,24	D	D D	D	D D			*	D D

BARRIER

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

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

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11		X			1	1					VIDEO
31		X			3	3					VIDEO
41		X			4	4		X			VIDEO
42		X			4	4					VIDEO
51		X			5	5					VIDEO
81		X			8	8		X			VIDEO
82		X			8	8					VIDEO

CONTROLLER LOGIC

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

SPECIAL OVERLAPS

	PROTECTIVE	PERMISSIVE
O.L. "A" =	1	2
O.L. "B" =	3	4
O.L. "C" =	5	6
O.L. "D" =		

N

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

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

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

CHART 1

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL D
MOVEMENT				
PHASE	2+5	6+1	4+8	8+3

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

AFTER PREEMPTION SEQUENCE 4+8 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

GENERAL NOTES:

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

STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE / STATE FAIR GATE 5
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1388

CONTROLLER TYPE: TEMP

DATE 04/14

PAGE NO. 3 OF 3

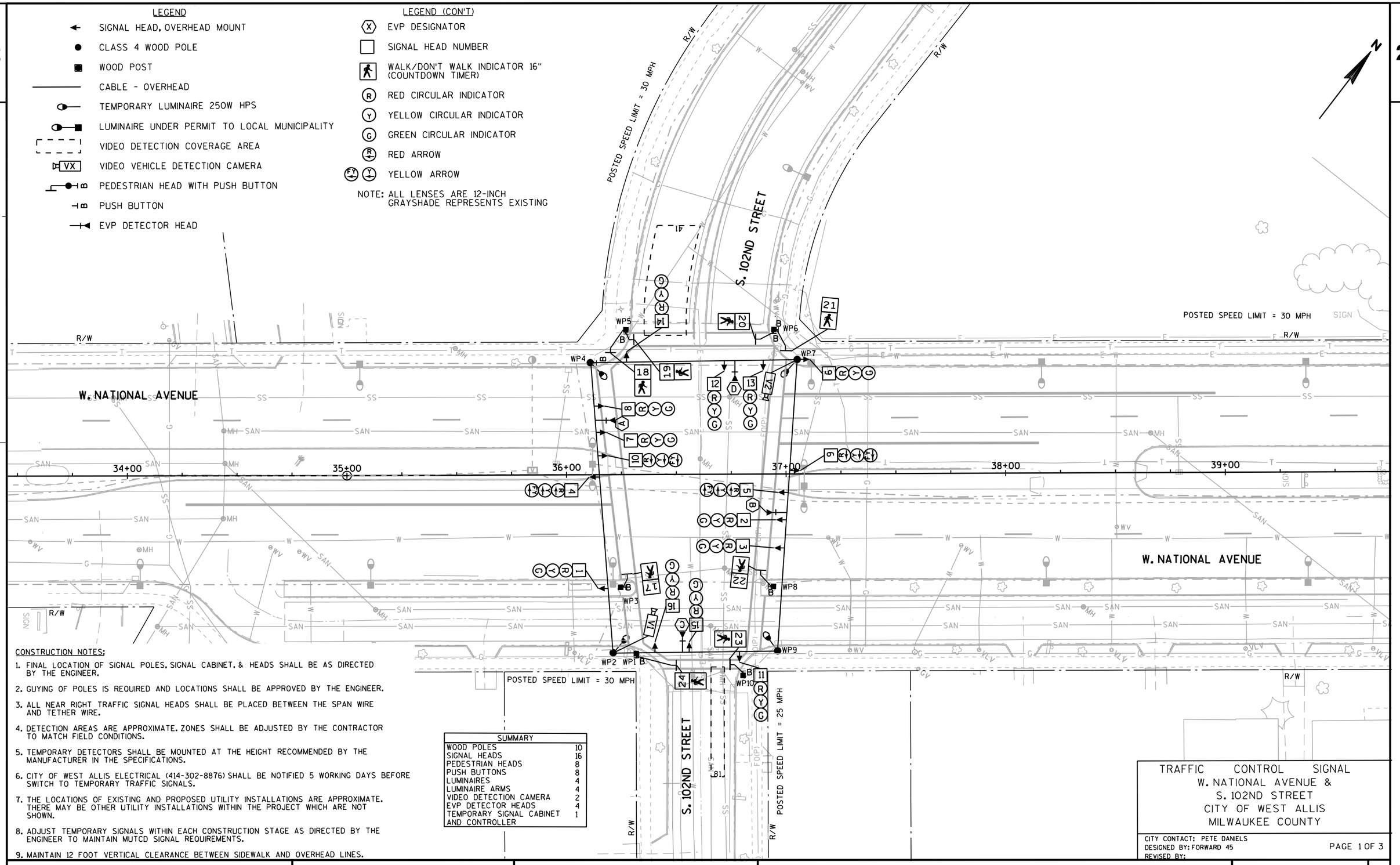
LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD

LEGEND (CON'T)

- (X) EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (FY) (Y) YELLOW ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. DETECTION AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
5. TEMPORARY DETECTORS SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. CITY OF WEST ALLIS ELECTRICAL (414-302-8876) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE SWITCH TO TEMPORARY TRAFFIC SIGNALS.
7. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
8. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
9. MAINTAIN 12 FOOT VERTICAL CLEARANCE BETWEEN SIDEWALK AND OVERHEAD LINES.

SUMMARY	
WOOD POLES	10
SIGNAL HEADS	16
PEDESTRIAN HEADS	8
PUSH BUTTONS	8
LUMINAIRES	4
LUMINAIRE ARMS	4
VIDEO DETECTION CAMERA	2
EVP DETECTOR HEADS	4
TEMPORARY SIGNAL CABINET AND CONTROLLER	1

TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE &
S. 102ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CITY CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023961_sp_tmp.dgn PLOT DATE : 29-APR-2014 05:28 PLOT BY : MSCITM PLOT NAME : 023961_sp_tmp PLOT SCALE : 40.007027:1

WISDOT/CADDS SHEET 42

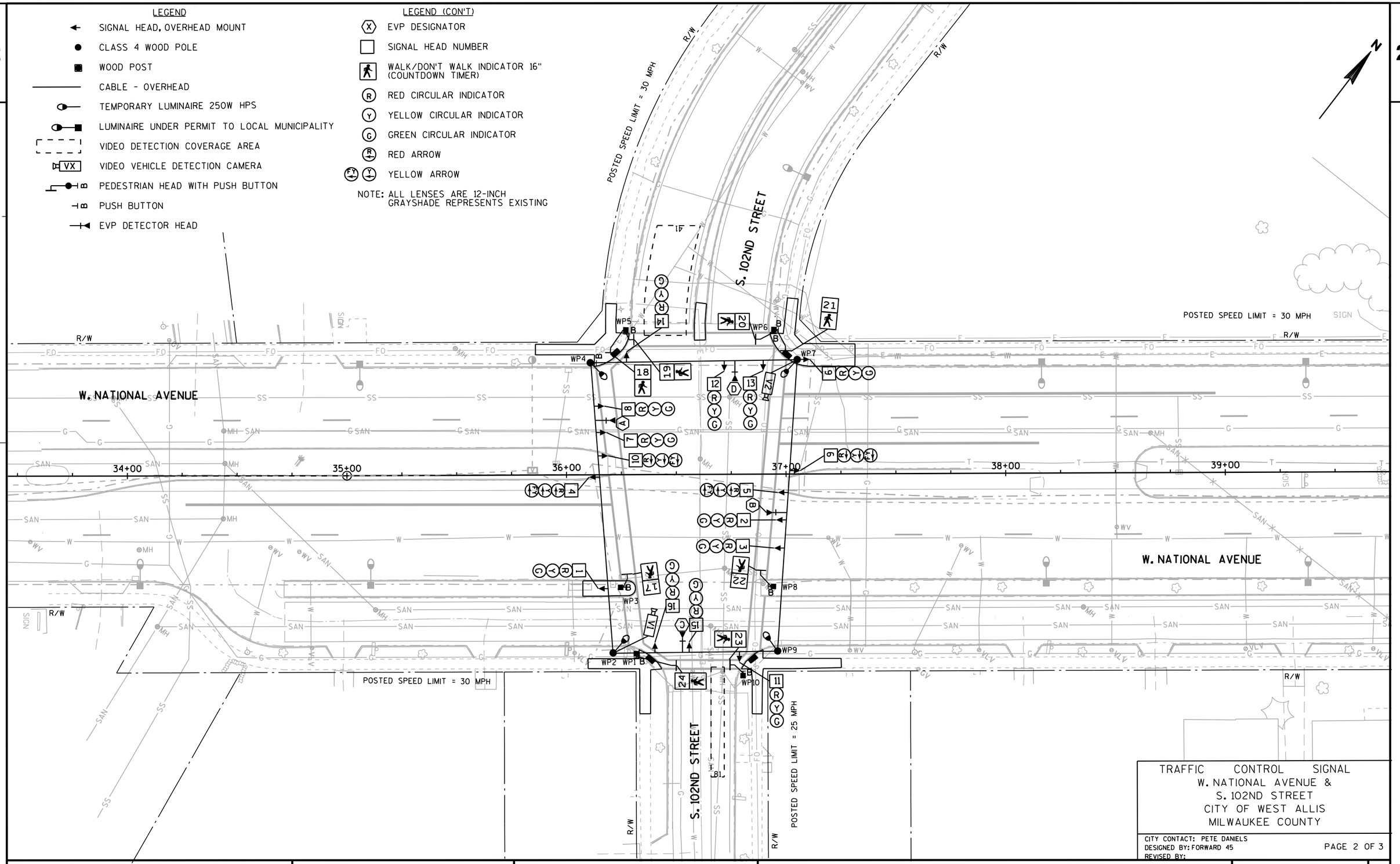
LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD

LEGEND (CON'T)

- (X) EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (FY) (Y) YELLOW ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE &
S. 102ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CITY CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - POST-CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023962_sp_tmp.dgn PLOT DATE : 29-APR-2014 05:31 PLOT BY : MSCITM PLOT NAME : 023962_sp_tmp PLOT SCALE : 40.007027:1

WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATION

RING 1

	HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø2 R/W	Ø2 CLEAR TO **	Ø3 R/W	Ø3 CLEAR TO **	Ø4 R/W	Ø4 CLEAR TO **	FLASH
		NOT USED		OLA		NOT USED				
Ø1										
Ø2	6,7,8			G Y R				R R R		R
Ø3										
Ø4	14,15,16			R R R				G Y R		R
Ø5										
Ø6	1,2,3			R R R				R R R		R
Ø7										
Ø8	11,12,13			R R R				R R R		R
OLA	4,5			FY Y R				R R R		R
OLB										
OLC	9,10			R R R				R R R		R
OLD										
Ø2P	19,20			* D D				D D D		
Ø4P	17,18			D D D				* D D		
Ø6P	23,24			D D D				D D D		
Ø8P	21,22			D D D				D D D		

RING 2

	HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **	Ø6 R/W	Ø6 CLEAR TO **	Ø7 R/W	Ø7 CLEAR TO **	Ø8 R/W	Ø8 CLEAR TO **
		NOT USED		OLC		NOT USED			
Ø1									
Ø2	6,7,8			R R R				R R R	
Ø3									
Ø4	14,15,16			R R R				R R R	
Ø5									
Ø6	1,2,3			G Y R				R R R	
Ø7									
Ø8	11,12,13			R R R				G Y R	
OLA	4,5			R R R				R R R	
OLB									
OLC	9,10			FY Y R				R R R	
OLD									
Ø2P	19,20			D D D				D D D	
Ø4P	17,18			D D D				D D D	
Ø6P	23,24			* D D				D D D	
Ø8P	21,22			D D D				* D D	

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

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

BARRIER

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
41		X			4	4					VIDEO
81		X			8	8					VIDEO

CONTROLLER LOGIC

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

SPECIAL OVERLAPS

	PROTECTIVE	PERMISSIVE
O.L. "A" =		2
O.L. "B" =		
O.L. "C" =		6
O.L. "D" =		

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

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

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

CHART 1

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL D
MOVEMENT				
PHASE	2+6	6+2	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+6 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.

GENERAL NOTES:

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

W. NATIONAL AVENUE &
S. 102ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

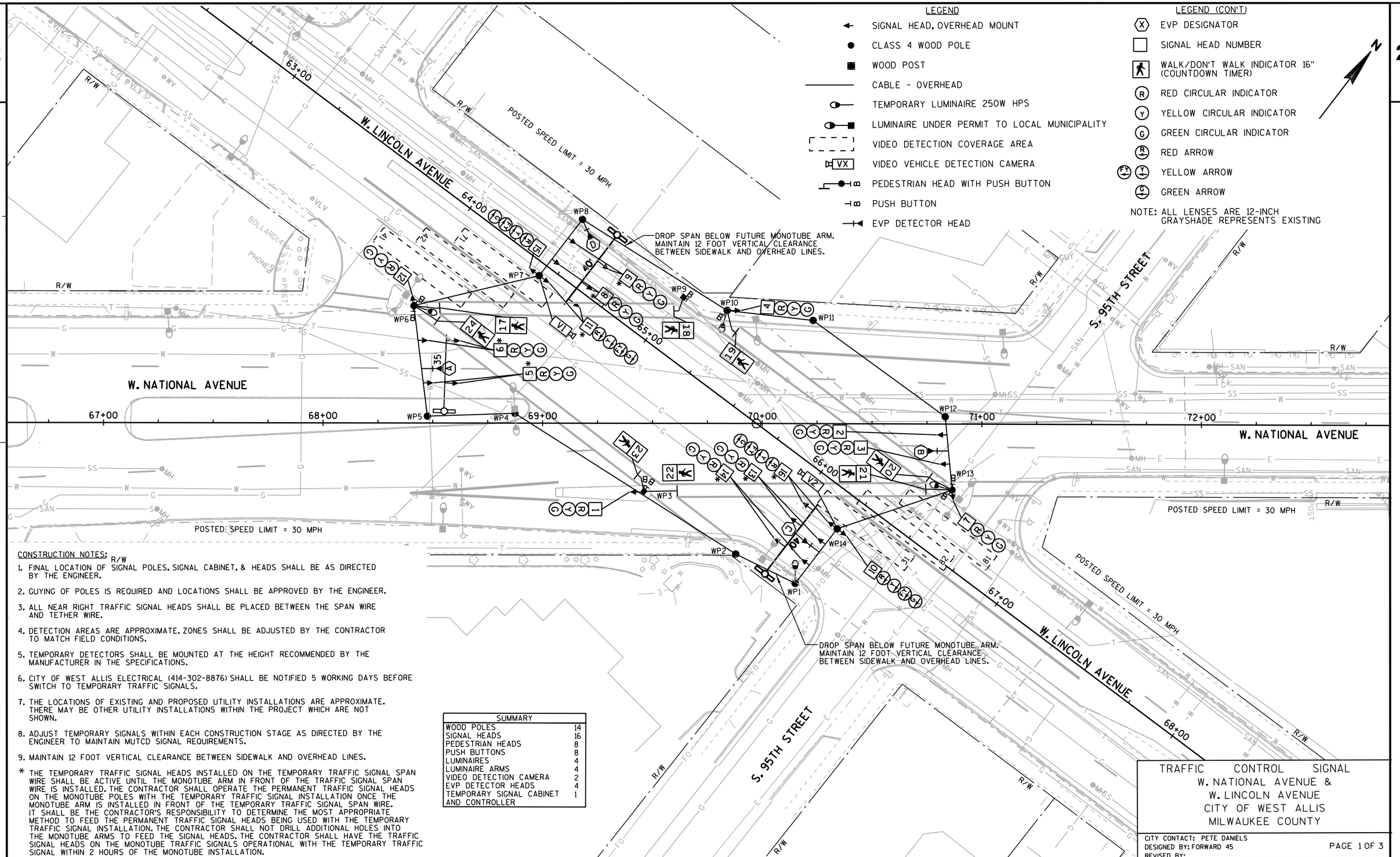
SIGNAL NO.

CONTROLLER TYPE: TEMP

DATE 04/14

PAGE NO. 3 OF 3

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TEMPORARY SEQUENCE OF OPERATIONS	SHEET E



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. DETECTION AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
5. TEMPORARY DETECTORS SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. CITY OF WEST ALLIS ELECTRICAL (414-302-8876) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE SWITCH TO TEMPORARY TRAFFIC SIGNALS.
7. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
8. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
9. MAINTAIN 12 FOOT VERTICAL CLEARANCE BETWEEN SIDEWALK AND OVERHEAD LINES.

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARM IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE IS INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE SIGNAL HEADS. THE CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

SUMMARY	
WOOD POLES	14
SIGNAL HEADS	16
PEDESTRIAN HEADS	8
PUSH BUTTONS	8
LUMINAIRES	4
LUMINAIRE ARMS	4
VIDEO DETECTION CAMERA	2
EVP DETECTOR HEADS	4
TEMPORARY SIGNAL CABINET AND CONTROLLER	1

TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE &
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CITY CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-CONSTRUCTION	SHEET	E

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD

LEGEND (CON'T)

- EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

W. LINCOLN AVENUE

W. NATIONAL AVENUE

S. 95TH STREET

63+00 64+00 65+00 66+00 67+00 68+00 69+00 70+00 71+00 72+00

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10 WP11 WP12 WP13 WP14

POSTED SPEED LIMIT = 30 MPH

R/W

DROP SPAN BELOW FUTURE MONOTUBE ARM.
MAINTAIN 12 FOOT VERTICAL CLEARANCE
BETWEEN SIDEWALK AND OVERHEAD LINES.

CONSTRUCTION NOTES:

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARM IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE IS INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE SIGNAL HEADS. THE CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE &
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CITY CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - POST-CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023972_sp_tmp.dgn PLOT DATE : 29-APR-2014 05:39 PLOT BY : MSCITM PLOT NAME : 023972_sp_tmp PLOT SCALE : 40.007027:1

SEQUENCE OF OPERATION

RING 1

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

RING 2

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

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

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

BARRIER

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
31		X			3	3					VIDEO
41		X			4	4					VIDEO
42		X			4	4					VIDEO
71		X			7	7					VIDEO
81		X			8	8					VIDEO
82		X			8	8					VIDEO

CONTROLLER LOGIC

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

SPECIAL OVERLAPS

	PROTECTIVE	PERMISSIVE
O.L. "A" =		
O.L. "B" =	3	4
O.L. "C" =		
O.L. "D" =	7	8

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

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

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

CHART 1

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL D
MOVEMENT	← →	← →	↙ ↖	↗ ↘
PHASE	2+6	6+2	4+7	3+8

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

AFTER PREEMPTION SEQUENCE 3+8 OR 4+7, CONTROLLER SHALL RETURN TO PHASE 4+8.

GENERAL NOTES:

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

W. NATIONAL AVENUE &
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO.

CONTROLLER TYPE: TEMP

DATE 04/14

PAGE NO. 3 OF 3

PROJECT NO: 1060-35-91 | HWY: W. NATIONAL AVENUE | COUNTY: MILWAUKEE | TEMPORARY SEQUENCE OF OPERATIONS | SHEET E

LEGEND

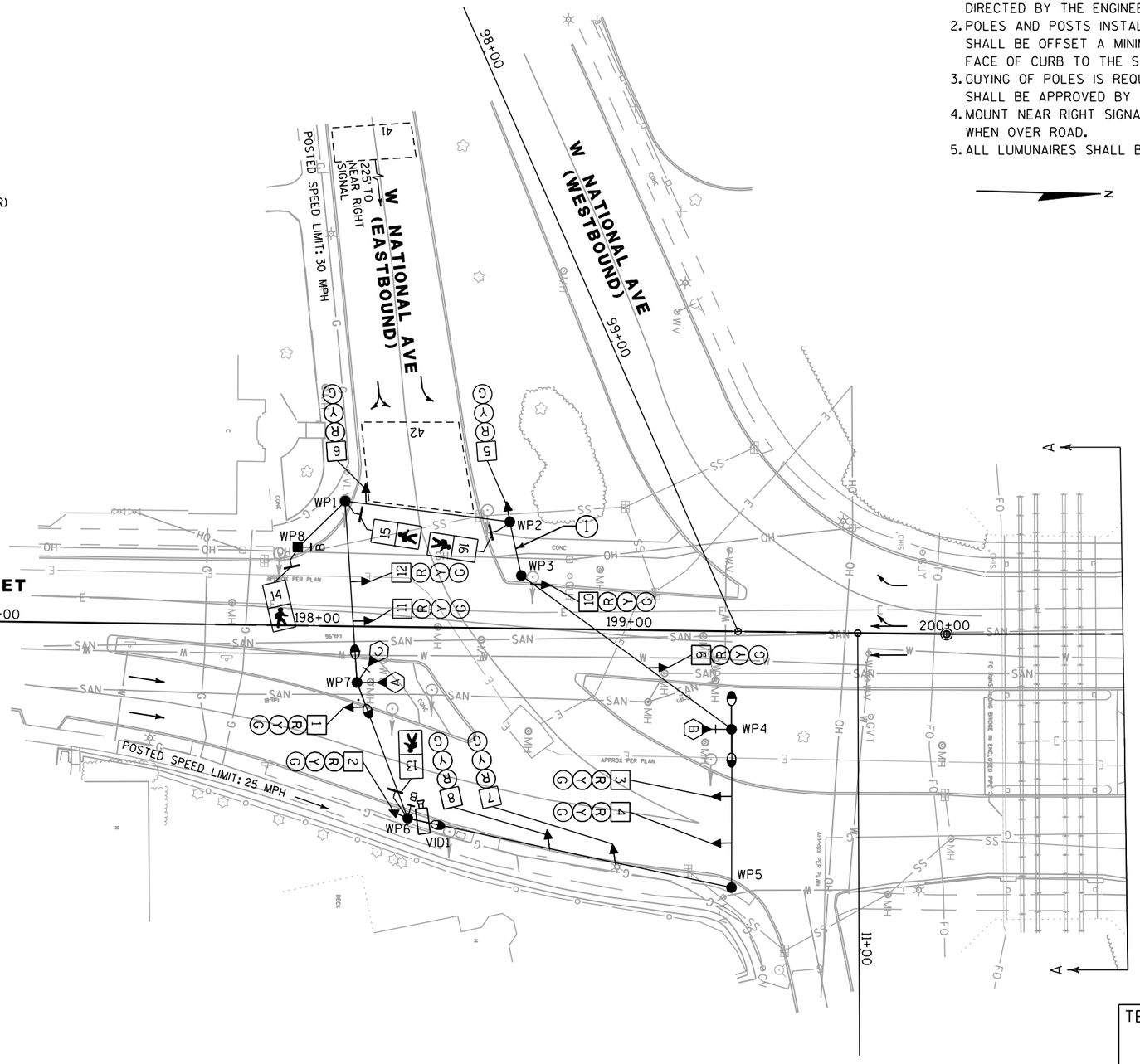
- TYPE 4 WOOD POLE
- WOOD POST
- SIGNAL HEAD, OVERHEAD MOUNT
- LUMINAIRE
- LANE DESIGNATION FOR INFORMATION ONLY
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK / DON'T WALK INDICATOR 12" (COUNTDOWN TIMER)
- EVP DETECTOR HEAD
- (X) EVP DESIGNATOR
- VIDEO DETECTION CAMERA
- VIDEO DETECTION COVERAGE AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

① LOWER SPAN WIRE TO 12-FT MIN. ABOVE GROUND BETWEEN ADJACENT WOOD POLES TO AVOID OVERHEAD LINES. FIELD ADJUST AS NEEDED.

CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINETS, AND SIGNAL HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE
3. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. MOUNT NEAR RIGHT SIGNAL ABOVE TETHER WIRE WHEN OVER ROAD.
5. ALL LUMUNAIRES SHALL BE LED



SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY

DESCRIPTION	QUANTITY
WOOD POLES, CLASS 4	7 EA
WOOD POLES, (PEDESTRIAN SIGNAL)	1 EA
SPAN WIRE	432 LF
TRAFFIC SIGNAL FACES, 3-V	12 EA
PEDESTRIAN SIGNAL FACES 12"	4 EA
LUMINAIRES, 250W LED	5 EA
VIDEO DETECTION CAMERAS	1 EA
EVP DETECTOR HEADS	3 EA
TEMPORARY SIGNAL CABINET & CONTROLLER	1 EA
PUSH BUTTON	2 EA
LUMINAIRE ARMS	5 EA

TEMPORARY TRAFFIC CONTROL SIGNAL
84TH STREET & NATIONAL AVENUE
(SOUTH INTERSECTION)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO.

SCALE 0 20

PROJECT NO: 1060-35-91	HWY: 84TH STREET	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN	SHEET 179 E

SEQUENCE OF OPERATION

NOT USED | NOT USED | NOT USED | NOT USED

	HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø2 R/W	Ø2 CLEAR TO **	Ø3 R/W	Ø3 CLEAR TO **	Ø4 R/W	Ø4 CLEAR TO **	FLASH
	Ø1									
	Ø2			G	Y R			R	R R	R
	Ø3									
RING 1	Ø4			R	R R			G	Y R	R
	Ø5									
	Ø6			R	R R			R	R R	R
	Ø7									
	Ø8									
	Ø2P	15, 16		*	D D			D	D D	
	Ø4P	13, 14		D	D D			*	D D	
	Ø6P									
	Ø8P									

NOT USED | NOT USED | NOT USED | NOT USED

	HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **	Ø6 R/W	Ø6 CLEAR TO **	Ø7 R/W	Ø7 CLEAR TO **	Ø8 R/W	Ø8 CLEAR TO **
	Ø1								
	Ø2			R	R R				
	Ø3								
RING 2	Ø4			R	R R				
	Ø5								
	Ø6			G	Y R				
	Ø7								
	Ø8								
	Ø2P	15, 16		D	D D				
	Ø4P	13, 14		D	D D				
	Ø6P								
	Ø8P								

BARRIER

N

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

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

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1		
2	6	4
3		
4	NONE	2,6
5		
6	2	4
7		
8		

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
41				X		4			X		VIDEO
42		X			4	4					VIDEO

CONTROLLER LOGIC

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

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C
MOVEMENT	↓	↑	↖
PHASE	2	6	4

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

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

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

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

GENERAL NOTES:

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

84TH STREET & NATIONAL AVENUE
(SOUTH INTERSECTION)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO.

CONTROLLER TYPE: TEMP

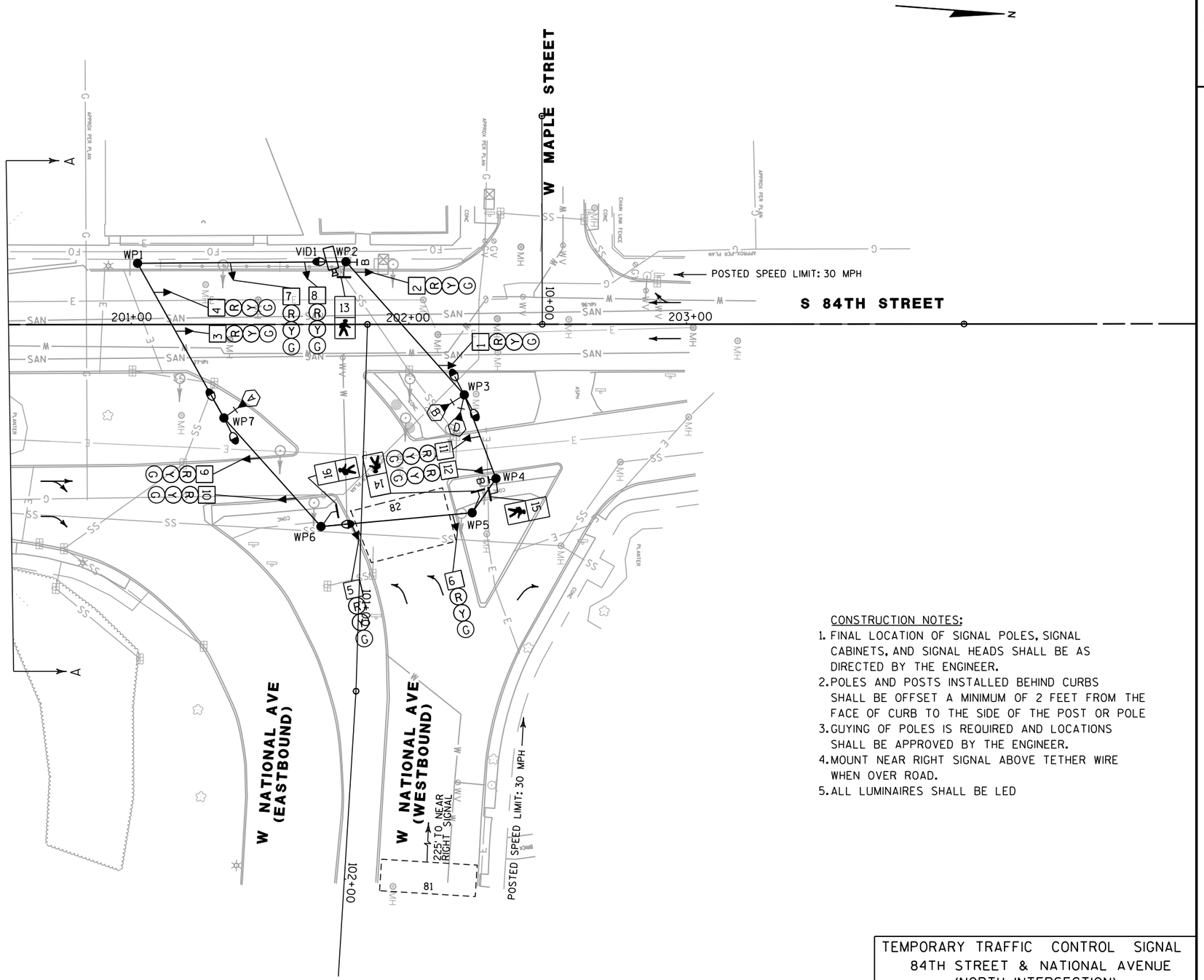
DATE 2/14 PAGE NO. 2 OF 2

PROJECT NO: 1060-35-91 | HWY: 84TH STREET | COUNTY: MILWAUKEE | TEMPORARY SEQUENCE OF OPERATIONS | SHEET 180 | E

LEGEND

- TYPE 4 WOOD POLE
- SIGNAL HEAD, OVERHEAD MOUNT
- LUMINAIRE
- LANE DESIGNATION FOR INFORMATION ONLY
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK / DON'T WALK INDICATOR 12" (COUNTDOWN TIMER)
- EVP DETECTOR HEAD
- (X) EVP DESIGNATOR
- VIDEO DETECTION CAMERA
- VIDEO DETECTION COVERAGE AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINETS, AND SIGNAL HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE
3. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. MOUNT NEAR RIGHT SIGNAL ABOVE TETHER WIRE WHEN OVER ROAD.
5. ALL LUMINAIRES SHALL BE LED

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY

DESCRIPTION	QUANTITY
WOOD POLES, CLASS 4	7 EA
SPAN WIRE	357 LF
TRAFFIC SIGNAL FACES, 3-V	12 EA
PEDESTRIAN SIGNAL FACES 12"	4 EA
LUMINAIRES, 250W LED	6 EA
VIDEO DETECTION CAMERAS	1 EA
EVP DETECTOR HEADS	3 EA
TEMPORARY SIGNAL CABINET & CONTROLLER	1 EA
PUSH BUTTON	2 EA
LUMINAIRE ARMS	6 EA

TEMPORARY TRAFFIC CONTROL SIGNAL
84TH STREET & NATIONAL AVENUE
(NORTH INTERSECTION)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO.

SCALE 0 20

PROJECT NO: 1060-35-91	HWY: 84TH STREET	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN	SHEET 181 E

FILE NAME : t:\1131100\cadd\plan\024104_sp_TempSignal 84th_National.dgn PLOT DATE : 4/23/2014 PLOT BY : wdw PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

SEQUENCE OF OPERATION

		NOT USED	⇓			NOT USED	NOT USED		
		Ø1			Ø2		Ø3		Ø4			FLASH
			CLEAR TO			CLEAR TO		CLEAR TO		CLEAR TO		
	HEAD NUMBERS	R/W	**		R/W	**		R/W	**		R/W	**		
RING 1	Ø1													
	Ø2	1, 2, 3, 4			G	Y	R							R
	Ø3													
	Ø4													
	Ø5													
	Ø6	9, 10, 11, 12			R	R	R							R
	Ø7													
	Ø8	5, 6, 7, 8			R	R	R							R
	Ø2P													
	Ø4P													
	Ø6P	15, 16			D	D	D							
	Ø8P	13, 14			D	D	D							

		NOT USED	⇕			NOT USED	↶		
		Ø5			Ø6		Ø7		Ø8		
			CLEAR TO			CLEAR TO		CLEAR TO		CLEAR TO	
	HEAD NUMBERS	R/W	**		R/W	**		R/W	**		R/W	**	
RING 2	Ø1												
	Ø2	1, 2, 3, 4			R	R	R				R	R	R
	Ø3												
	Ø4												
	Ø5												
	Ø6	9, 10, 11, 12			G	Y	R				R	R	R
	Ø7												
	Ø8	5, 6, 7, 8			R	R	R				G	Y	R
	Ø2P												
	Ø4P												
	Ø6P	15, 16			*	D	D				D	D	D
	Ø8P	13, 14			D	D	D				*	D	D

BARRIER

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

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

N

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
81				X		8			X		VIDEO
82		X			8	8					VIDEO

CONTROLLER LOGIC

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

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL D
MOVEMENT	↓	↑	↙
PHASE	2	6	8

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

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

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

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

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1		
2	6	8
3		
4		
5		
6	2	8
7		
8	NONE	2, 6

GENERAL NOTES:

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

84TH STREET & NATIONAL AVENUE
(NORTH INTERSECTION)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO.

CONTROLLER TYPE: TEMP

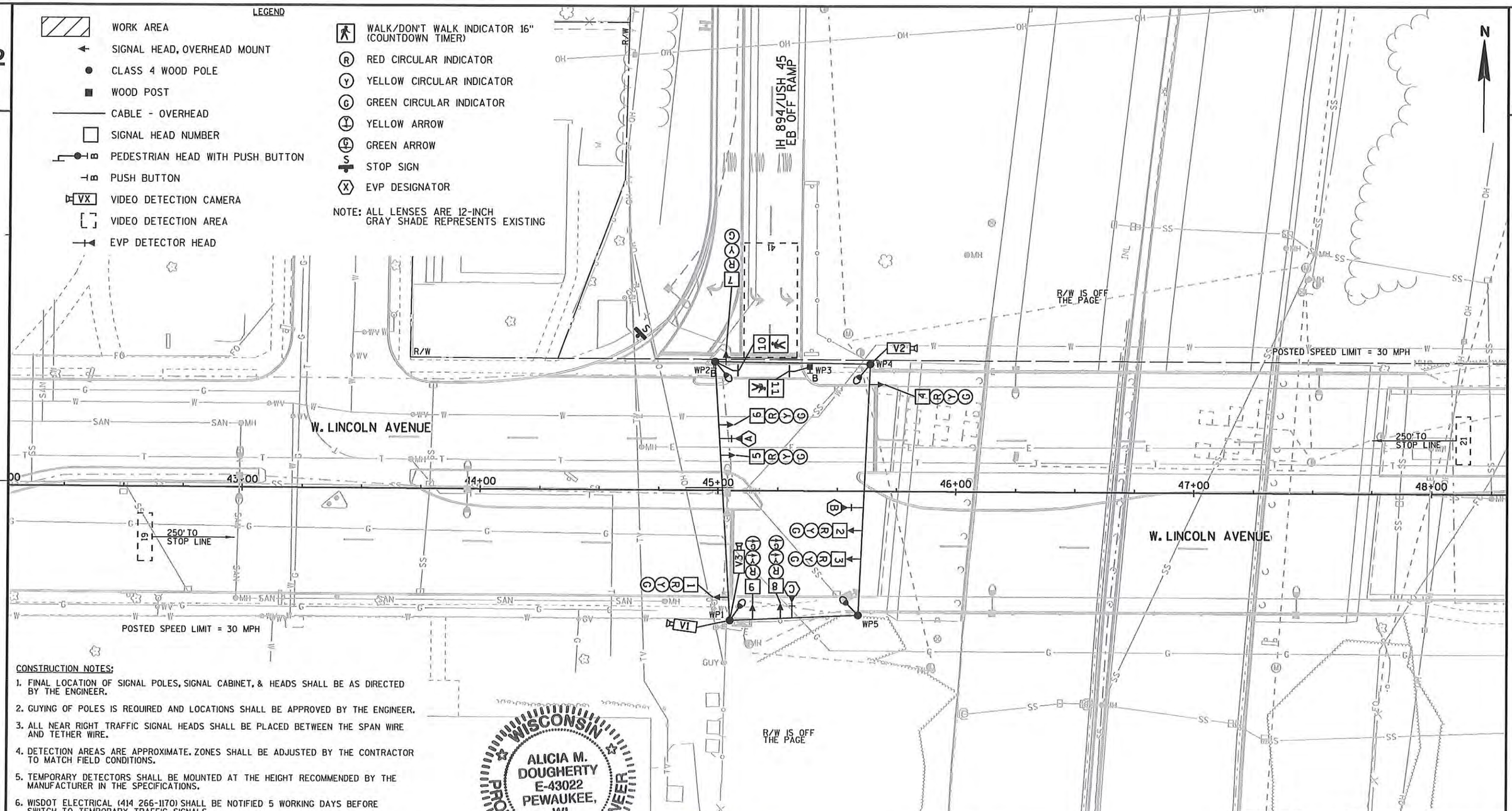
DATE 2/14

PAGE NO. 2 OF 2

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA
- EVP DETECTOR HEAD
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- S STOP SIGN
- (X) EVP DESIGNATOR

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. DETECTION AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
5. TEMPORARY DETECTORS SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. WISDOT ELECTRICAL (414 266-1170) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE SWITCH TO TEMPORARY TRAFFIC SIGNALS.
7. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
8. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
9. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POLE OR POST.
10. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.

WISCONSIN
ALICIA M. DOUGHERTY
E-43022
PEWAUKEE, WI
PROFESSIONAL ENGINEER

Alicia M Dougherty
04/29/14

SUMMARY	
WOOD POLES	5
SIGNAL HEADS	9
PEDESTRIAN HEADS	2
PUSH BUTTONS	2
LUMINAIRES	4
LUMINAIRE ARMS	4
VIDEO DETECTION CAMERA	3
EVP DETECTOR HEADS	3
TEMPORARY SIGNAL CABINET AND CONTROLLER	1

TRAFFIC CONTROL SIGNAL
IH 894 / USH 45 EB OFF RAMP &
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1162

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1060-35-91	HWY: IH 894	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-CONSTRUCTION	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023951_sp_tmp.dgn PLOT DATE : 29-APR-2014 05:20 PLOT BY : MSCITM PLOT NAME : 023951_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA
- EVP DETECTOR HEAD
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- STOP SIGN
- EVP DESIGNATOR

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING

IH 894/USH 45 EB OFF RAMP

W. LINCOLN AVENUE

R/W IS OFF THE PAGE

POSTED SPEED LIMIT = 30 MPH

250' TO STOP LINE

WP1 WP2 WP3 WP4 WP5

V1 V2 V3

43+00 44+00 45+00 46+00 47+00 48+00

TRAFFIC CONTROL SIGNAL
IH 894 / USH 45 EB OFF RAMP &
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1162

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

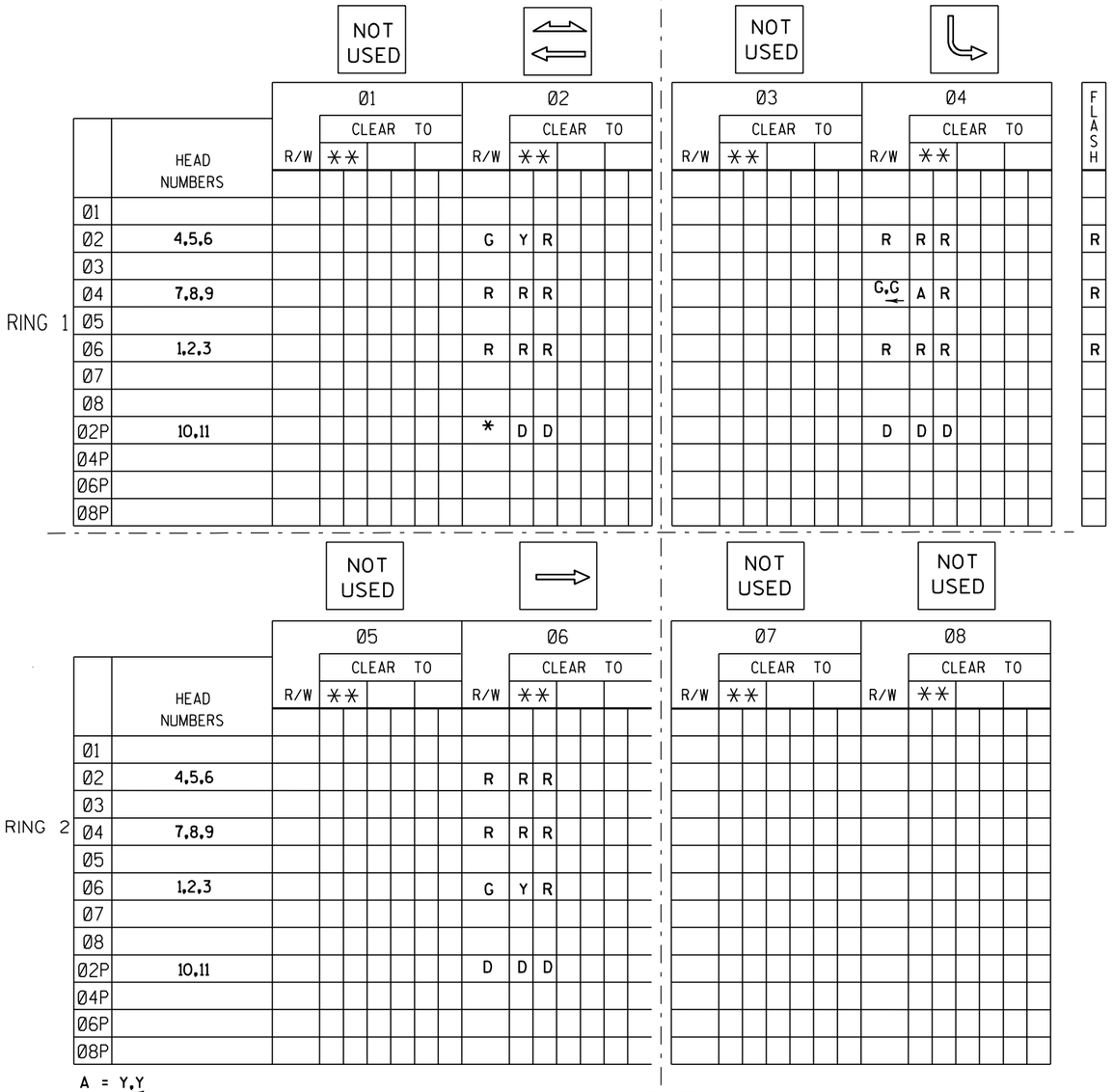
PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: IH 894	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - POST-CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023952_sp_tmp.dgn PLOT DATE : 29-APR-2014 05:22 PLOT BY : MSCITM PLOT NAME : 023952_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATION



DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
21		X			2	2					VIDEO
41		X			4	4					VIDEO
61		X			6	6					VIDEO

CONTROLLER LOGIC

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

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

N

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

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

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C
MOVEMENT	← →	← →	↓
PHASE	2+6	6+2	4

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

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

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

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

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1		
2	6	4
3		
4	NONE	2,6
5		
6	2	4
7		
8		

GENERAL NOTES:

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

IH 894 / USH 45 EB OFF RAMP &
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1162

CONTROLLER TYPE: TEMP

DATE 04/14

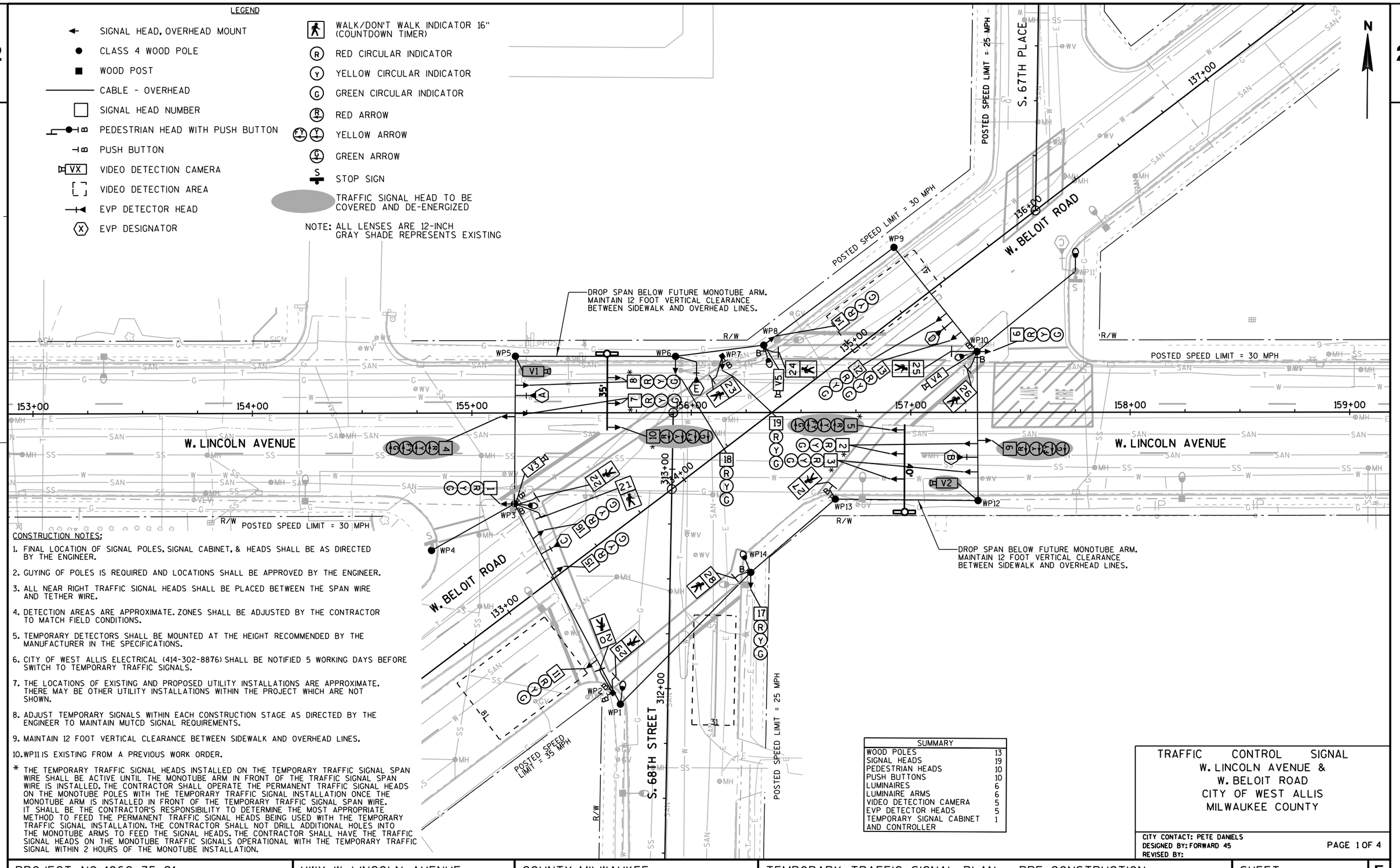
PAGE NO. 3 OF 3

PROJECT NO: 1060-35-91	HWY: IH 894	COUNTY: MILWAUKEE	TEMPORARY SEQUENCE OF OPERATIONS	SHEET	E

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA
- EVP DETECTOR HEAD
- EVP DESIGNATOR
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- STOP SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. DETECTION AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
5. TEMPORARY DETECTORS SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. CITY OF WEST ALLIS ELECTRICAL (414-302-8876) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE SWITCH TO TEMPORARY TRAFFIC SIGNALS.
7. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
8. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
9. MAINTAIN 12 FOOT VERTICAL CLEARANCE BETWEEN SIDEWALK AND OVERHEAD LINES.
10. WP11 IS EXISTING FROM A PREVIOUS WORK ORDER.

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARM IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE IS INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE SIGNAL HEADS. THE CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

SUMMARY	
WOOD POLES	13
SIGNAL HEADS	19
PEDESTRIAN HEADS	10
PUSH BUTTONS	10
LUMINAIRES	6
LUMINAIRE ARMS	6
VIDEO DETECTION CAMERA	5
EVP DETECTOR HEADS	5
TEMPORARY SIGNAL CABINET AND CONTROLLER	1

TRAFFIC CONTROL SIGNAL
W. LINCOLN AVENUE & W. BELOIT ROAD
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CITY CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 4

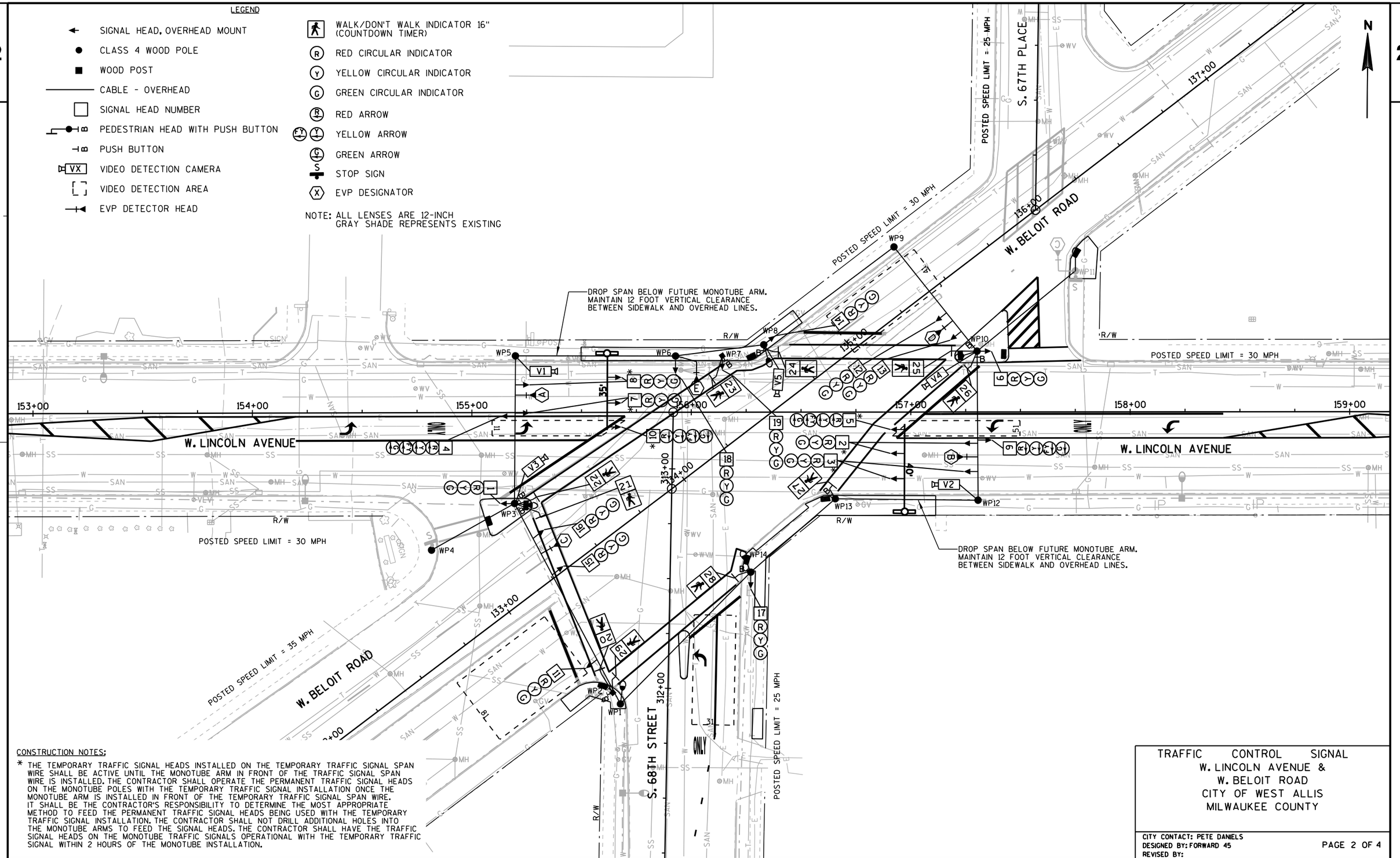
PROJECT NO: 1060-35-91	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023991_sp_tmp.dgn PLOT DATE : 29-APR-2014 05:44 PLOT BY : MSCITM PLOT NAME : 023991_sp_tmp PLOT SCALE : 40:1

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA
- EVP DETECTOR HEAD
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- STOP SIGN
- EVP DESIGNATOR

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARM IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE IS INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE POLES WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE SIGNAL HEADS. THE CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE TRAFFIC SIGNALS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE INSTALLATION.

TRAFFIC CONTROL SIGNAL
W. LINCOLN AVENUE &
W. BELOIT ROAD
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CITY CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 4

PROJECT NO: 1060-35-91	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - POST-CONSTRUCTION	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023992_sp_tmp.dgn PLOT DATE : 29-APR-2014 05:46 PLOT BY : MSCITM PLOT NAME : 023992_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATION

RING		HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø1 CLEAR TO	Ø1 CLEAR TO	Ø2 R/W	Ø2 CLEAR TO **	Ø2 CLEAR TO	Ø2 CLEAR TO	Ø3 R/W	Ø3 CLEAR TO **	Ø3 CLEAR TO	Ø3 CLEAR TO	Ø4 R/W	Ø4 CLEAR TO **	Ø4 CLEAR TO	Ø4 CLEAR TO	FLASH
	Ø1																		
	Ø2	6,7,8					G	Y	R		R	R	R		R	R	R		R
	Ø3	17,18,19					R	R	R		G	Y	R		R	R	R		R
	Ø4	14,15,16					R	R	R		R	R	R		G	Y	R		R
RING 1	Ø5																		
	Ø6	1,2,3					R	R	R		R	R	R		R	R	R		R
	Ø7																		
	Ø8	11,12,13					R	R	R		R	R	R		R	R	R		R
	ØLA																		
	ØLC																		
	Ø2P	24,25					*	D	D		D	D	D		D	D	D		
	Ø4P	22,23					D	D	D		D	D	D		*	D	D		
	Ø6P	20,21					D	D	D		D	D	D		D	D	D		
	Ø8P	26,27,28,29					D	D	D		D	D	D		D	D	D		

RING		HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **	Ø5 CLEAR TO	Ø5 CLEAR TO	Ø6 R/W	Ø6 CLEAR TO **	Ø6 CLEAR TO	Ø6 CLEAR TO	Ø7 R/W	Ø7 CLEAR TO **	Ø7 CLEAR TO	Ø7 CLEAR TO	Ø8 R/W	Ø8 CLEAR TO **	Ø8 CLEAR TO	Ø8 CLEAR TO
	Ø1																	
	Ø2	6,7,8					R	R	R						R	R	R	
	Ø3	17,18,19					R	R	R						R	R	R	
	Ø4	14,15,16					R	R	R						R	R	R	
RING 2	Ø5																	
	Ø6	1,2,3					G	Y	R						R	R	R	
	Ø7																	
	Ø8	11,12,13					R	R	R						G	Y	R	
	ØLA																	
	ØLC																	
	Ø2P	24,25					D	D	D						D	D	D	
	Ø4P	22,23					D	D	D						D	D	D	
	Ø6P	20,21					*	D	D						D	D	D	
	Ø8P	26,27,28,29					D	D	D						*	D	D	

BARRIER

N

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
31		X			3	3					VIDEO
41		X			4	4					VIDEO
81		X			8	8					VIDEO

CONTROLLER LOGIC

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

SPECIAL OVERLAPS

	PROTECTIVE	PERMISSIVE
O.L. "A" =		
O.L. "B" =		
O.L. "C" =		
O.L. "D" =		

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

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

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

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1		
2	6	3,4,8
3	NONE	2,4,6,8
4	8	2,3,6
5		
6	2	3,4,8
7		
8	4	2,3,6

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL D	CHANNEL E
MOVEMENT	← →	← →	↙	↗	↑
PHASE	2 AND 6	6 AND 2	4	8	3

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

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

AFTER PREEMPTION SEQUENCE 3, CONTROLLER SHALL RETURN TO PHASE 3.

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

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

GENERAL NOTES:

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

W. LINCOLN AVENUE &
W. BELOIT ROAD
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO.

CONTROLLER TYPE: TEMP

DATE 04/14

PAGE NO. 3 OF 4

PROJECT NO: 1060-35-91	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	TEMPORARY SEQUENCE OF OPERATIONS - PRE CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\023998_sp_tmp_ph.dgn PLOT DATE : 29-APR-2014 05:48 PLOT BY : MSCITM PLOT NAME : 023998_sp_tmp_ph PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATION

RING 1

	HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø2 R/W	Ø2 CLEAR TO **	Ø3 R/W	Ø3 CLEAR TO **	Ø4 R/W	Ø4 CLEAR TO **	FLASH
Ø1	4,5	G	- -	-	- -	-	- -	-	- -	-
Ø2	6,7,8	R	R R	G	Y R	R	R R	R	R R	R
Ø3	17,18,19	R	R R	R	R R	G	Y R	R	R R	R
Ø4	14,15,16	R	R R	R	R R	R	R R	G	Y R	R
Ø5	9,10	-	- -	-	- -	-	- -	-	- -	-
Ø6	1,2,3	R	R R	R	R R	R	R R	R	R R	R
Ø7										
Ø8	11,12,13	R	R R	R	R R	R	R R	R	R R	R
OLA	4,5	-	Y R	FY	R R	R	R R	R	R R	R
OLC	9,10	R	R R	R	R R	R	R R	R	R R	R
Ø2P	24,25	D	D D	*	D D	D	D D	D	D D	
Ø4P	22,23	D	D D	D	D D	D	D D	*	D D	
Ø6P	20,21	D	D D	D	D D	D	D D	D	D D	
Ø8P	26,27,28,29	D	D D	D	D D	D	D D	D	D D	

RING 2

	HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **	Ø6 R/W	Ø6 CLEAR TO **	Ø7 R/W	Ø7 CLEAR TO **	Ø8 R/W	Ø8 CLEAR TO **
Ø1	4,5	-	- -	-	- -			-	- -
Ø2	6,7,8	R	R R	R	R R			R	R R
Ø3	17,18,19	R	R R	R	R R			R	R R
Ø4	14,15,16	R	R R	R	R R			R	R R
Ø5	9,10	G	- -	-	- -			-	- -
Ø6	1,2,3	R	R R	G	Y R			R	R R
Ø7									
Ø8	11,12,13	R	R R	R	R R			G	Y R
OLA	4,5	R	R R	R	R R			R	R R
OLC	9,10	-	Y R	FY	Y R			R	R R
Ø2P	24,25	D	D D	D	D D			D	D D
Ø4P	22,23	D	D D	D	D D			D	D D
Ø6P	20,21	D	D D	*	D D			D	D D
Ø8P	26,27,28,29	D	D D	D	D D			*	D D

BARRIER

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

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

N

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11		X			1	1					VIDEO
31		X			3	3					VIDEO
41		X			4	4					VIDEO
51		X			5	5					VIDEO
81		X			8	8					VIDEO

CONTROLLER LOGIC

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

SPECIAL OVERLAPS

	PROTECTIVE	PERMISSIVE
O.L. "A" =	1	2
O.L. "B" =		
O.L. "C" =	5	6
O.L. "D" =		

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

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

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	B	C	D	E
MOVEMENT					
PHASE	2+5	6+1	4	8	3

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

AFTER PREEMPTION SEQUENCE 4 OR 8, CONTROLLER SHALL RETURN TO PHASE 4+8.

AFTER PREEMPTION SEQUENCE 3, CONTROLLER SHALL RETURN TO PHASE 3.

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	6	2,3,4,8
2	6	1,3,4,8
3	NONE	1,2,4,5,6,8
4	8	1,2,3,5,6
5	2	
6	2	3,4,5,8
7		
8	4	1,2,3,5,6

GENERAL NOTES:

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

W. LINCOLN AVENUE &
W. BELOIT ROAD
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO.

CONTROLLER TYPE: TEMP

DATE 04/14

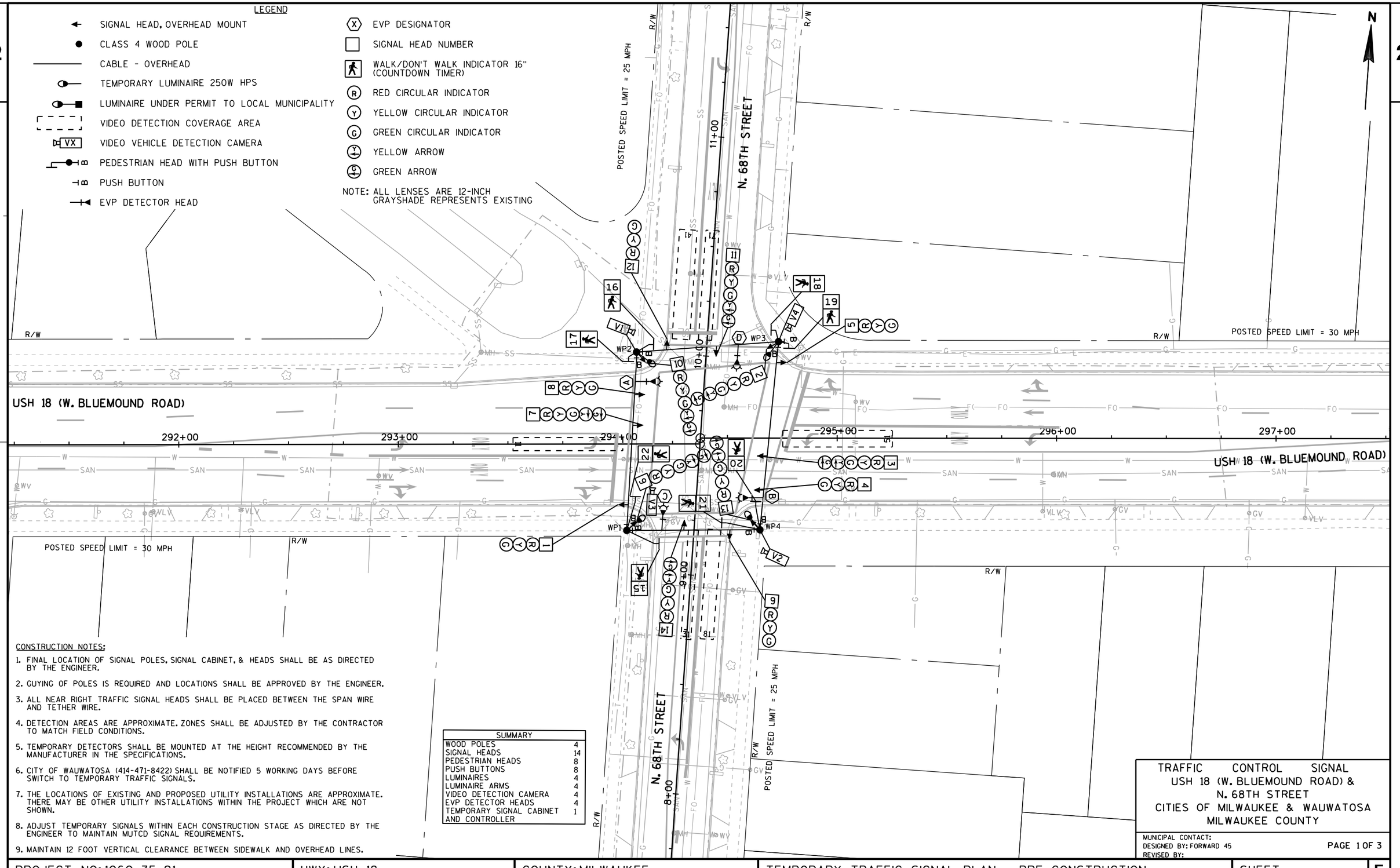
PAGE NO. 4 OF 4

PROJECT NO: 1060-35-91	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	TEMPORARY SEQUENCE OF OPERATIONS - POST CONSTRUCTION	SHEET	E

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD
- EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- Y YELLOW ARROW
- G GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. DETECTION AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
5. TEMPORARY DETECTORS SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. CITY OF WAUWATOSA (414-471-8422) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE SWITCH TO TEMPORARY TRAFFIC SIGNALS.
7. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
8. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
9. MAINTAIN 12 FOOT VERTICAL CLEARANCE BETWEEN SIDEWALK AND OVERHEAD LINES.

SUMMARY	
WOOD POLES	4
SIGNAL HEADS	14
PEDESTRIAN HEADS	8
PUSH BUTTONS	8
LUMINAIRES	4
LUMINAIRE ARMS	4
VIDEO DETECTION CAMERA	4
EVP DETECTOR HEADS	4
TEMPORARY SIGNAL CABINET AND CONTROLLER	1

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
N. 68TH STREET
CITIES OF MILWAUKEE & WAUWATOSA
MILWAUKEE COUNTY

MUNICIPAL CONTACT:
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1060-35-91	HWY: USH 18	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE CONSTRUCTION	SHEET	E

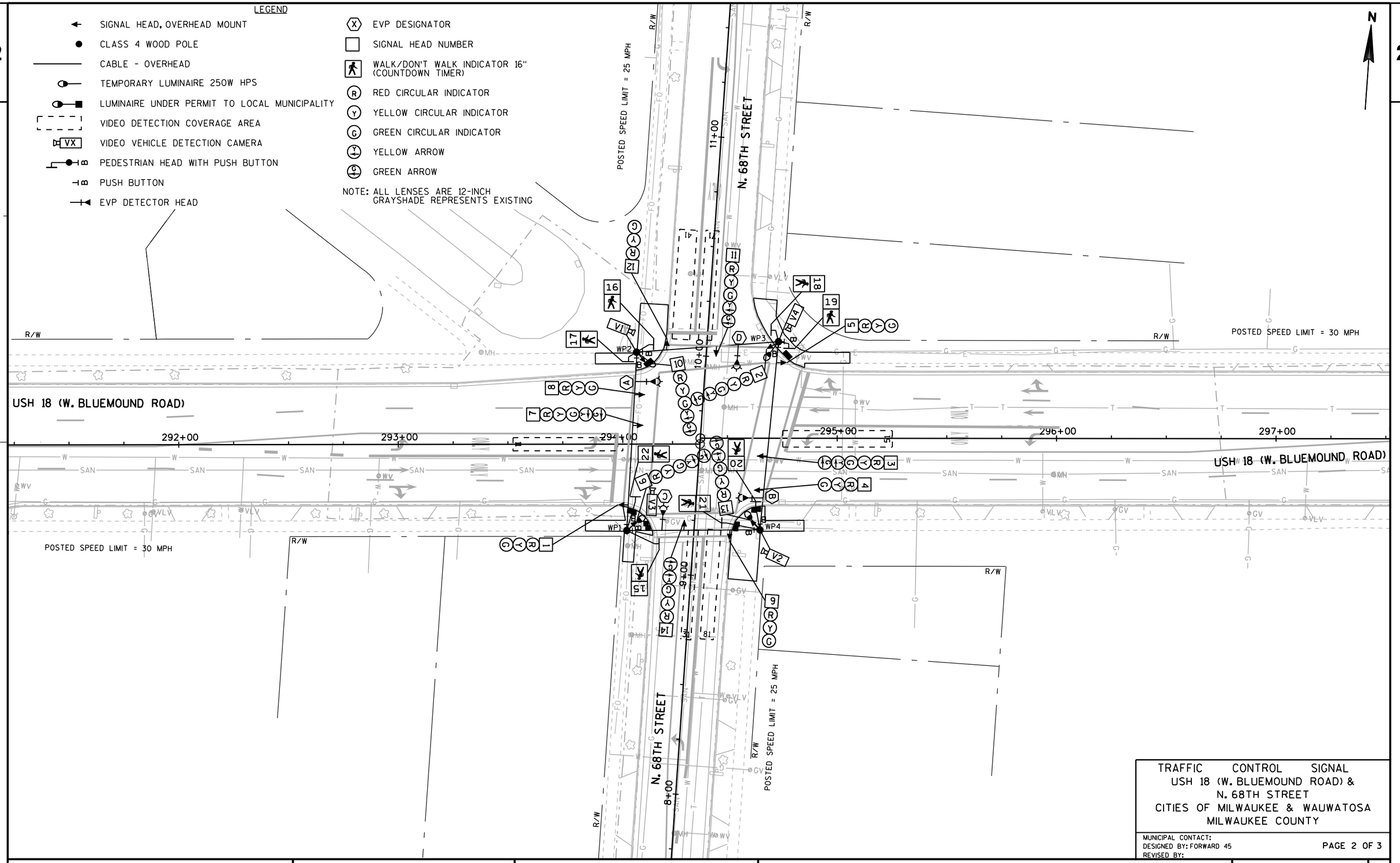
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WISDOT/CADDS SHEET 42

LEGEND

- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- TEMPORARY LUMINAIRE 250W HPS
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION COVERAGE AREA
- VX VIDEO VEHICLE DETECTION CAMERA
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DETECTOR HEAD
- EVP DESIGNATOR
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- Y YELLOW ARROW
- G GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
N. 68TH STREET
CITIES OF MILWAUKEE & WAUWATOSA
MILWAUKEE COUNTY

MUNICIPAL CONTACT:
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: USH 18	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - POST CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024002_sp_tmp.dgn PLOT DATE : 28-APR-2014 15:03 PLOT BY : MSCAXW PLOT NAME : 024002_sp_tmp PLOT SCALE : 40:1

SEQUENCE OF OPERATION

RING 1

	HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO ✳✳	Ø2 R/W	Ø2 CLEAR TO ✳✳	Ø3 R/W	Ø3 CLEAR TO ✳✳	Ø4 R/W	Ø4 CLEAR TO ✳✳	FLASH
Ø1	2,3	G	Y	-	-	-	-	-	-	-
Ø2	5,6,7,8	R	R	G	Y	R	R	R	R	R
Ø3	10,11	-	-	-	-	G	Y	-	-	-
Ø4	12,13,14	R	R	R	R	R	R	G	Y	R
Ø5	6,7	-	-	-	-	-	-	-	-	-
Ø6	1,2,3,4	R	R	R	R	R	R	R	R	R
Ø7	13,14	-	-	-	-	-	-	-	-	-
Ø8	9,10,11	R	R	R	R	R	R	R	R	R
Ø2P	17,18	D	D	*	D	D	D	D	D	
Ø4P	15,16	D	D	D	D	D	D	*	D	
Ø6P	21,22	D	D	D	D	D	D	D	D	
Ø8P	19,20	D	D	D	D	D	D	D	D	

RING 2

	HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO ✳✳	Ø6 R/W	Ø6 CLEAR TO ✳✳	Ø7 R/W	Ø7 CLEAR TO ✳✳	Ø8 R/W	Ø8 CLEAR TO ✳✳
Ø1	2,3	-	-	-	-	-	-	-	-
Ø2	5,6,7,8	R	R	R	R	R	R	R	R
Ø3	10,11	-	-	-	-	-	-	-	-
Ø4	12,13,14	R	R	R	R	R	R	R	R
Ø5	6,7	G	Y	-	-	-	-	-	-
Ø6	1,2,3,4	R	R	G	Y	R	R	R	R
Ø7	13,14	-	-	-	-	G	Y	-	-
Ø8	9,10,11	R	R	R	R	R	R	G	Y
Ø2P	17,18	D	D	D	D	D	D	D	D
Ø4P	15,16	D	D	D	D	D	D	D	D
Ø6P	21,22	D	D	*	D	D	D	D	D
Ø8P	19,20	D	D	D	D	D	D	*	D

BARRIER

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

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

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11	1	X			1	1					VIDEO
31	3	X			3	3					VIDEO
41	4	X			4	4					VIDEO
51	5	X			5	5					VIDEO
71	7	X			7	7					VIDEO
81	8	X			8	8					VIDEO

CONTROLLER LOGIC

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

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

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

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

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

N

CHART 1

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

GENERAL NOTES:

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

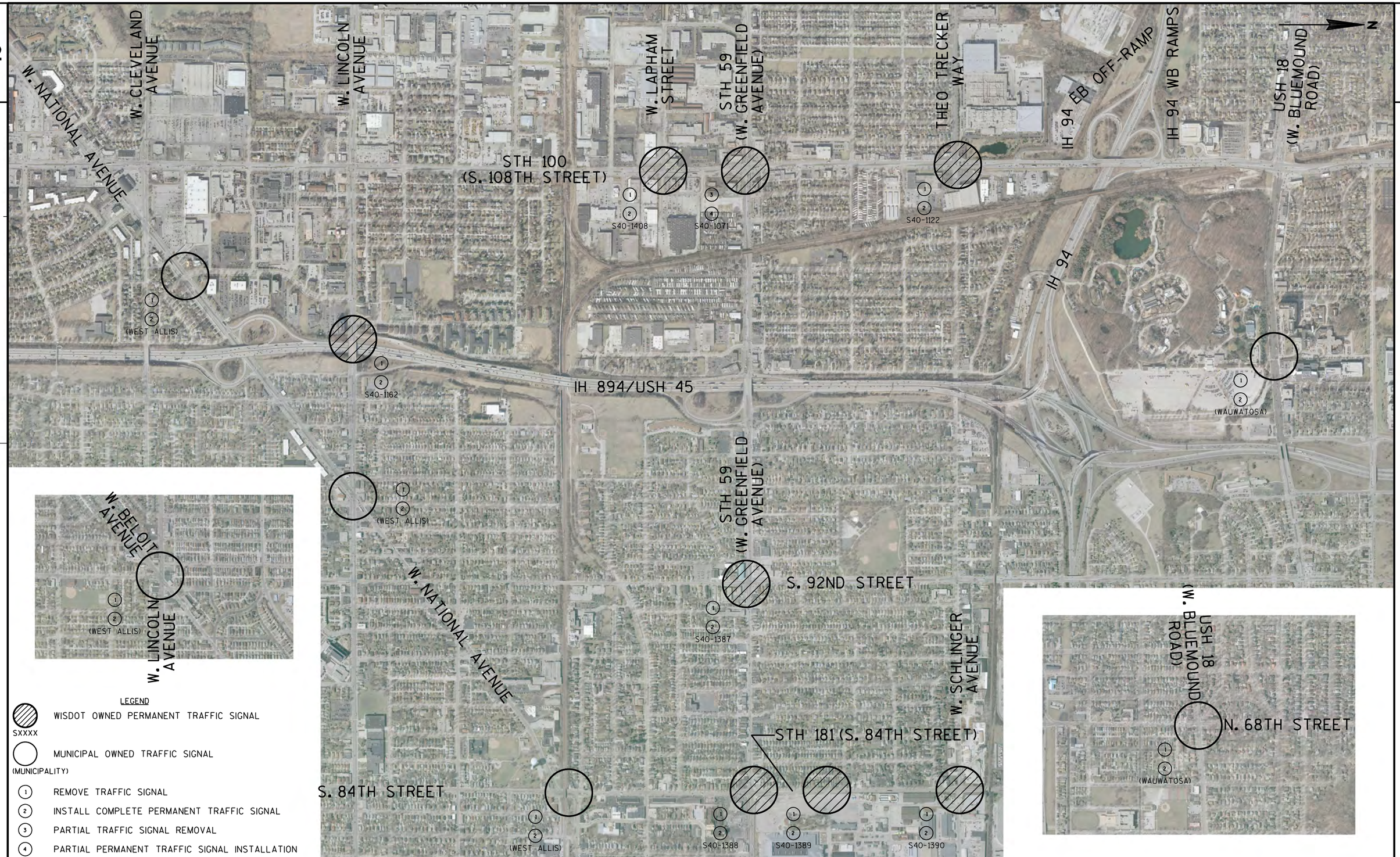
USH 18 (W. BLUEMOUND ROAD & N. 68TH STREET
CITIES OF MILWAUKEE & WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO.

CONTROLLER TYPE: TEMP

DATE 04/14 PAGE NO. 3 OF 3

2



LEGEND

SXXXX — WISDOT OWNED PERMANENT TRAFFIC SIGNAL

(MUNICIPALITY) — MUNICIPAL OWNED TRAFFIC SIGNAL

(1) REMOVE TRAFFIC SIGNAL

(2) INSTALL COMPLETE PERMANENT TRAFFIC SIGNAL

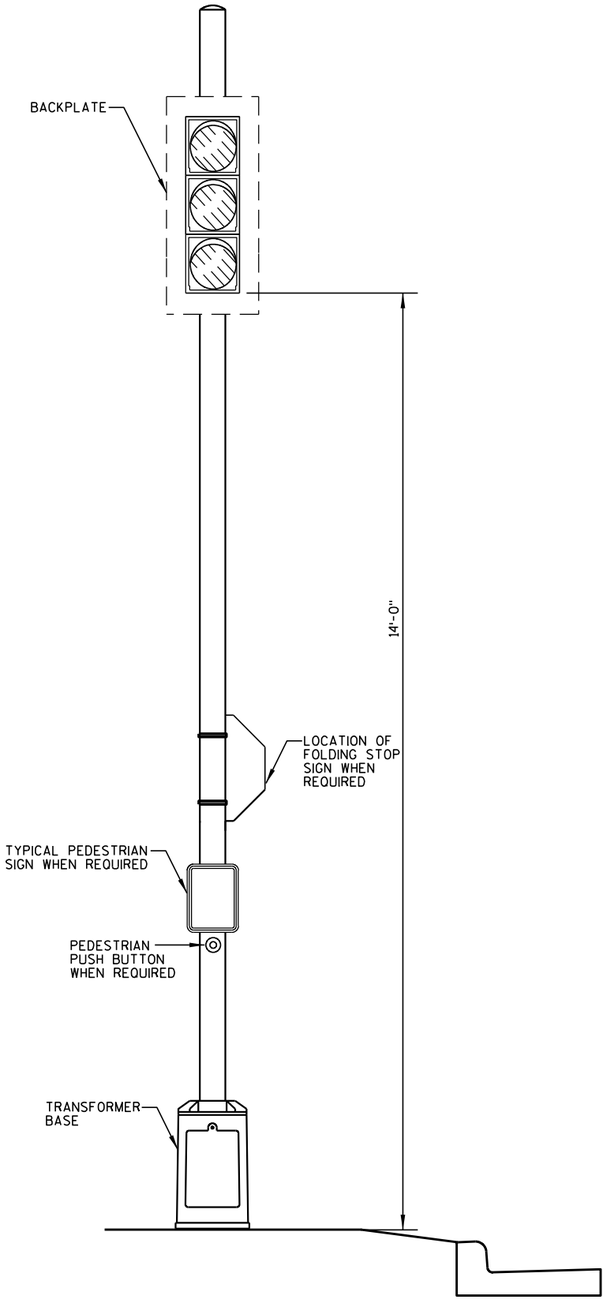
(3) PARTIAL TRAFFIC SIGNAL REMOVAL

(4) PARTIAL PERMANENT TRAFFIC SIGNAL INSTALLATION

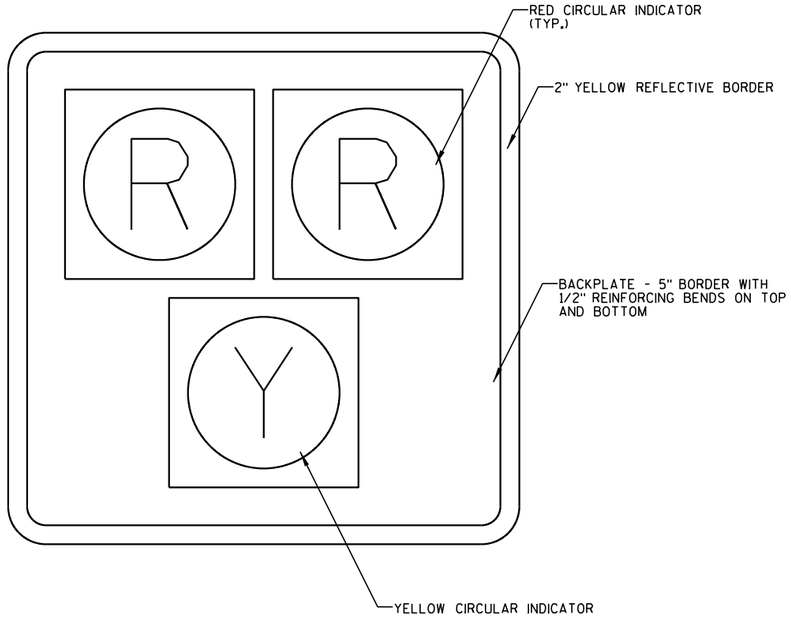
PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PROJECT OVERVIEW	SHEET	E

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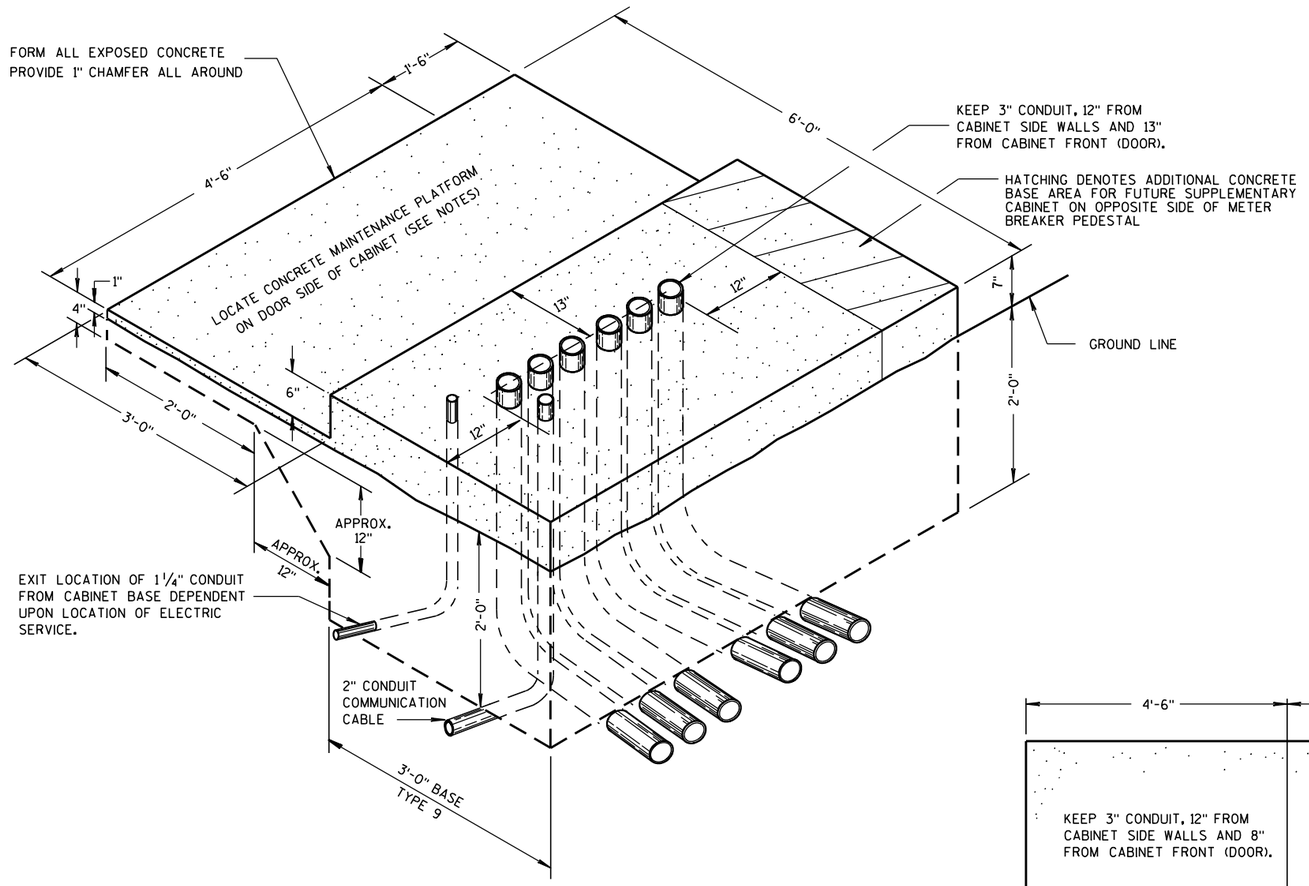


FAR INDICATIONS
TYPE 2 OR TYPE 3 POLE, TYPE 2 CONCRETE BASE



PEDESTRIAN HYBRID BEACON

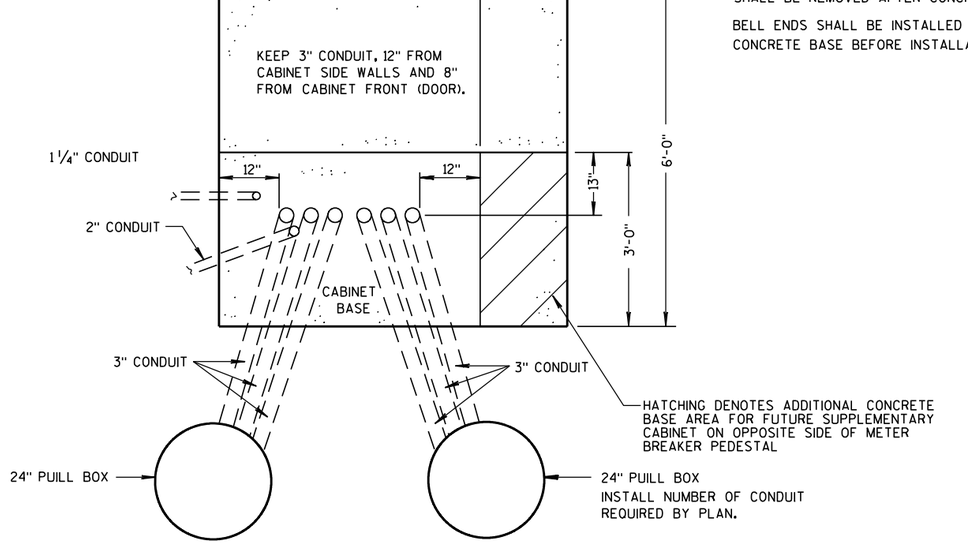
PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL DETAILS	SHEET	E



ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

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 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 (MOD.)

PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL DETAILS	SHEET	E

NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE

(XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

PULL BOX, 24" X 36"

CONTROL CABINET

EVP DESIGNATOR

EVP DETECTOR HEAD

TRAFFIC SIGNAL HEAD

SIGNAL HEAD NUMBER

(R) RED CIRCULAR INDICATOR

(Y) YELLOW CIRCULAR INDICATOR

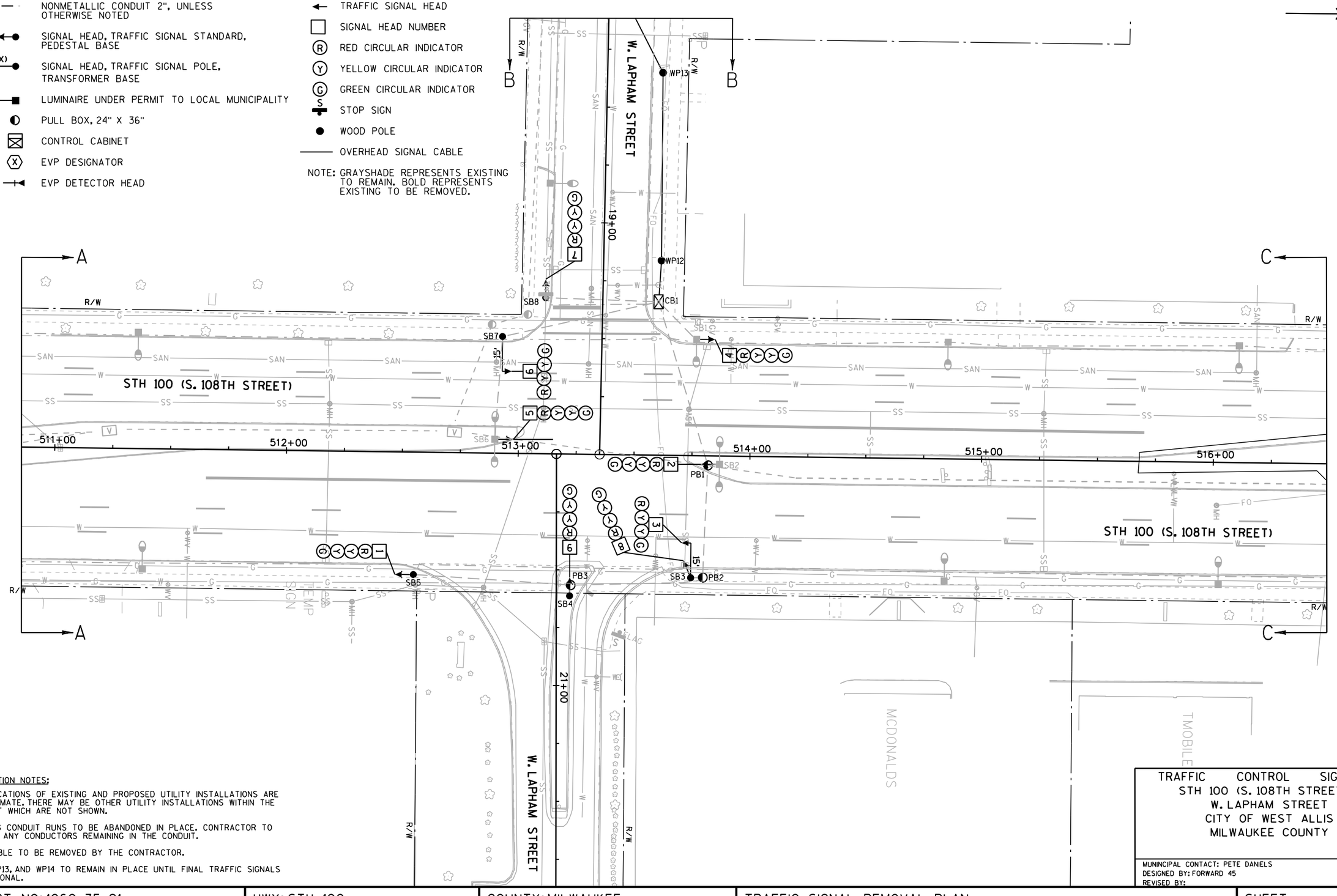
(G) GREEN CIRCULAR INDICATOR

S STOP SIGN

WOOD POLE

OVERHEAD SIGNAL CABLE

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS EXISTING TO BE REMOVED.



CONSTRUCTION NOTES;

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
3. EVP CABLE TO BE REMOVED BY THE CONTRACTOR.
4. WP12, WP13, AND WP14 TO REMAIN IN PLACE UNTIL FINAL TRAFFIC SIGNALS OPERATIONAL.

TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

MUNINCIPAL CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 2

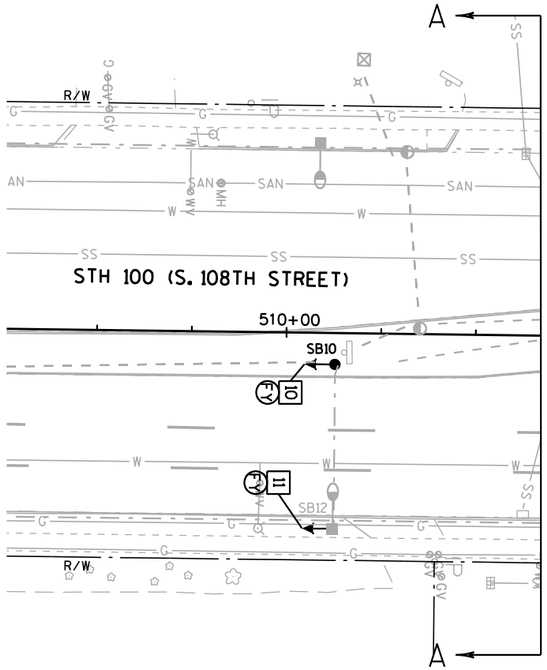
PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

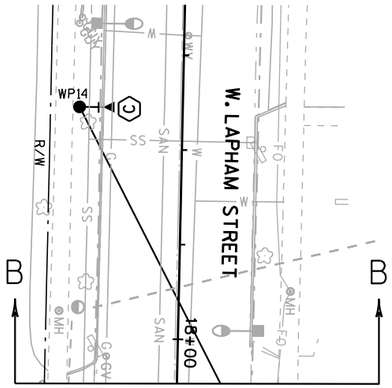
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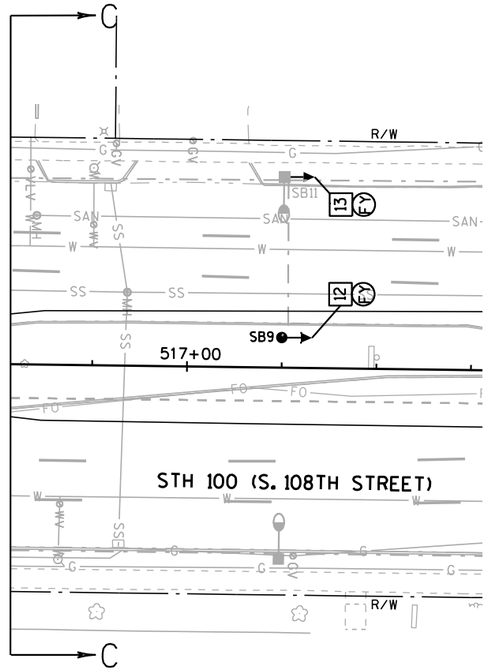
WISDOT/CADDS SHEET 42

2

N







TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

MUNINCIPAL CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- RADAR DETECTION AREA
- RX RADAR DETECTOR
- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD

LEGEND (CON'T)

- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

WISCONSIN
JASON R. MATSON
37111
WAUKESHA, WI
PROFESSIONAL ENGINEER
04/25/2014

STH 100 (S. 108TH STREET)

W. LAPHAM STREET

POSTED SPEED LIMIT=25 MPH

550' TO END OF DETECTION AREA
50' TO RADAR DETECTOR UNIT

POSTED SPEED LIMIT=40 MPH

511+00 512+00 513+00 514+00 515+00 516+00

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. ALL LUMINAIRES ARE LED CATEGORY C UNLESS OTHERWISE NOTED.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.
6. CONDUIT EMBEDDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3".
7. PROPOSED FTMS IS SHOWN GRAYSHADED FOR PLAN CLAIRTY.
8. RADAR UNIT AND EVP DETECTOR LOCATIONS ARE APPROXIMATE. COORDINATE PLACEMENT OF THE EQUIPMENT WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO PLACING THE EQUIPMENT.
9. DETECTION ZONE LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE SETTING DETECTION ZONES WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO SETTING DETECTION ZONES.

STRUCTURE NUMBERS

SB3	= S-40-1453
SB5	= S-40-1454
SB8	= S-40-1455
SB11	= S-40-1456

TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CABINET TYPE: TS2
SIGNAL NO. S40-1408 CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 4/29/14 Joyce Murphy
REGION TRAFFIC ENGINEER

APPROVED
Date 5/1/14 Joanna L. Bush
STATE TRAFFIC ENGINEER

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 198	E

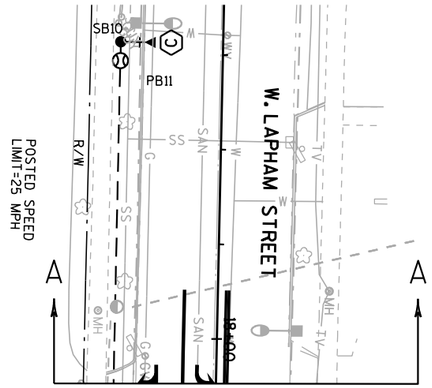
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WISDOT/CADDS SHEET 42

4-29-14 DSJ

2

N



TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

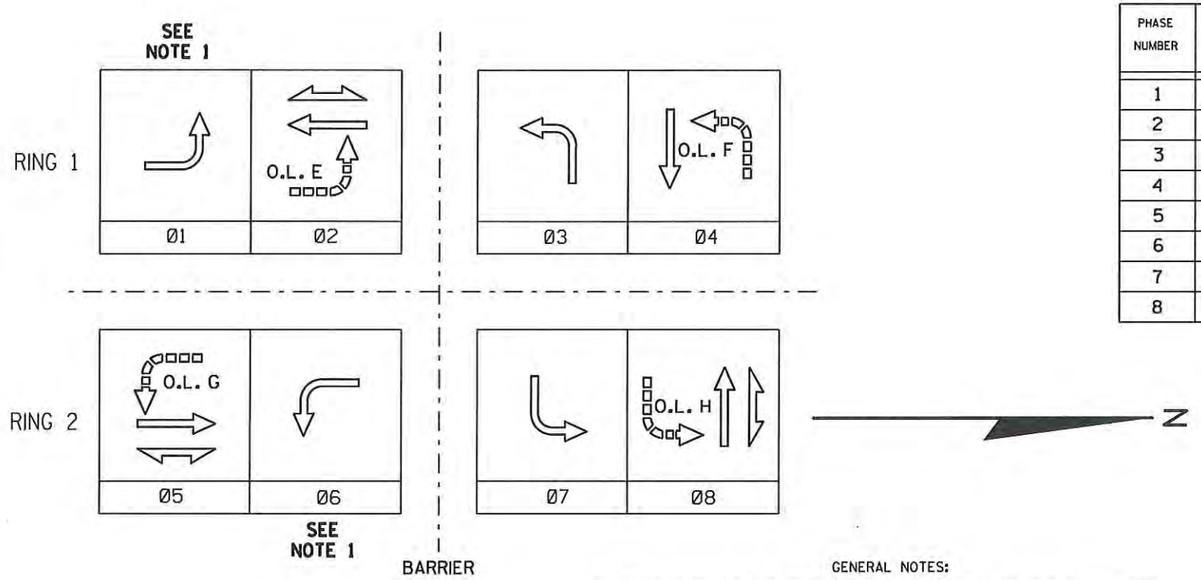
SIGNAL NO. S40-1408

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

	HEAD NUMBERS	FLASH
Ø1	5,6	-
Ø2	7,8,9,10	R
Ø3	16,17	-
Ø4	18,19,20	R
Ø5	1,2,3,4	R
Ø6	11,12	-
Ø7	21,22	-
Ø8	13,14,15	R
Ø2P	23,24	
Ø4P		
Ø5P	27,28	
Ø8P	25,26	
OLE	5,6	R
OLF	16,17	R
OLG	11,12	R
OLH	21,22	R



CONTROLLER LOGIC

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

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

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

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

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

GENERAL NOTES:

1. PHASES 1 AND 6 ARE IN CONFLICT AND NOT ALLOWED TO TIME CONCURRENTLY.

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	31	42	51	81			
CALLED PHASE	1	3	4	5	8			
CALL OPTION	X	X	X		X			
DELAY TIME		X	X		X			
EXTEND OPTION	X	X	X	X	X			
EXTEND TIME								
USE ADDED INITIAL				X				
CROSS SWITCH PHASE	2	4						

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	21	41	43	61				
CALLED PHASE	2	4	4	6				
CALL OPTION			X	X				
DELAY TIME								
EXTEND OPTION	X	X	X	X				
EXTEND TIME		X						
USE ADDED INITIAL	X							
CROSS SWITCH PHASE				5				

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL D
MOVEMENT				
PHASE	2+6	5+1	4+7	8+3

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

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

STH 100 (S. 108TH STREET) &
W. LAPHAM STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1408 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 04/14 PAGE NO. 3 OF 3

4-29-14 DTW
4/29/14 JMM

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024119_sp_ph.dgn PLOT DATE : 29-APR-2014 16:14 PLOT BY : mscjym PLOT NAME : 024119_sp_ph PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

STH 100 & W. LAPHAM STREET

2

PROJECT ID:	1060-35-91
INTERSECTION:	STH 100 (S. 108TH STREET) & W. LAPHAM STREET

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

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING> <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1	7	25								BLK	BLU		
		B										WHT/BLK	
SB2	12	5				RED	ORG	GRN	BLK/WHT				
		7	RED/BLK	ORG/BLK	GRN/BLK								
		24								BLK	BLU		
		B										WHT/BLK	
SB3	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		4	RED	ORG	GRN								
		6				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB4	12	26								RED/BLK	GRN/BLK		
		27								BLK	BLU		
		(SB) B										WHT/BLK	
		(WB) B										BLK/WHT	
SB5	12	13	BLK	BLU	WHT/BLK								
		19	RED	ORG	GRN								
		21				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		22				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB6	7	20	RED	ORG	GRN								
SB7	12	1	RED	ORG	GRN								
		11				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		28								BLK	BLU		
		B										WHT/BLK	
SB8	12	8	RED	ORG	GRN								
		9	RED	ORG	GRN								
		10	RED	ORG	GRN								
		12				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB9	12	16				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		18	RED	ORG	GRN								
		23								BLK	BLU		
		B										WHT/BLK	
SB11	12	14	RED	ORG	GRN								
		15	RED	ORG	GRN								
		17				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				

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.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

WISCONSIN
JASON R. MATSON
37111
WAUKESHA, WI
PROFESSIONAL ENGINEER
4/29/14

(CONTINUED ON NEXT SHEET)

(CONTINUED)

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	SB9
SB9	SB10
SB10	SB11
SB11	CB1

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
PB9	SB9
PB10	SB9
PB11	SB10
PB12	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB8 (HEAD A)
CB1	SB3 (HEAD B)
CB1	SB5 (HEAD C)
CB1	SB10 (HEAD C)
CB1	SB11 (HEAD D)

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB3
CB1	SB11
SB11	SB8
SB8	SB6

RADAR DETECTION CABLE	
FROM	TO
CB1	RA1 (SB3)
CB1	RA2 (SB8)
CB1	RA3 (SB11)
CB1	RM1 (SB11)
CB1	RM2 (SB5)
CB1	RM3 (SB11)
CB1	RM4 (SB5)

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 18" X 24"
- PULL BOX, 12" X 24"
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD

LEGEND (CON'T)

- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- YIELD SIGN

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS EXISTING TO BE REMOVED.

N

STH 100 (S. 108TH STREET)

W. THEODORE TRECKER WAY

DRIVEWAY

47+00 48+00 49+00 50+00 51+00 52+00 53+00 8+00 19+00

PB1 PB2 PB3 PB4 PB5 PB6 PB7 PB8 PB9 PB10 PB11 PB12 PB13 PB14 PB15 PB16

SB1 SB2 SB4 SB5 SB6 SB7 SB8 SB9 SB10 SB11

CB1

ABANDON

R/W

SIGN

CONSTRUCTION NOTES;

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRES AND LEAD-IN CABLE TO BE REMOVED BY CONTRACTOR.
3. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
4. EVP CABLE TO BE REMOVED BY THE CONTRACTOR.
5. CABINET AND CONTROLLER SHALL BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.
6. PB1 TO REMAIN IN PLACE FOR FUTURE FOC CONNECTION.

WISCONSIN JASON MATSE 37111 WAUKESHA, WI PROFESSIONAL ENGINEER

09/24/2014

TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. THEODORE TRECKER WAY
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1122

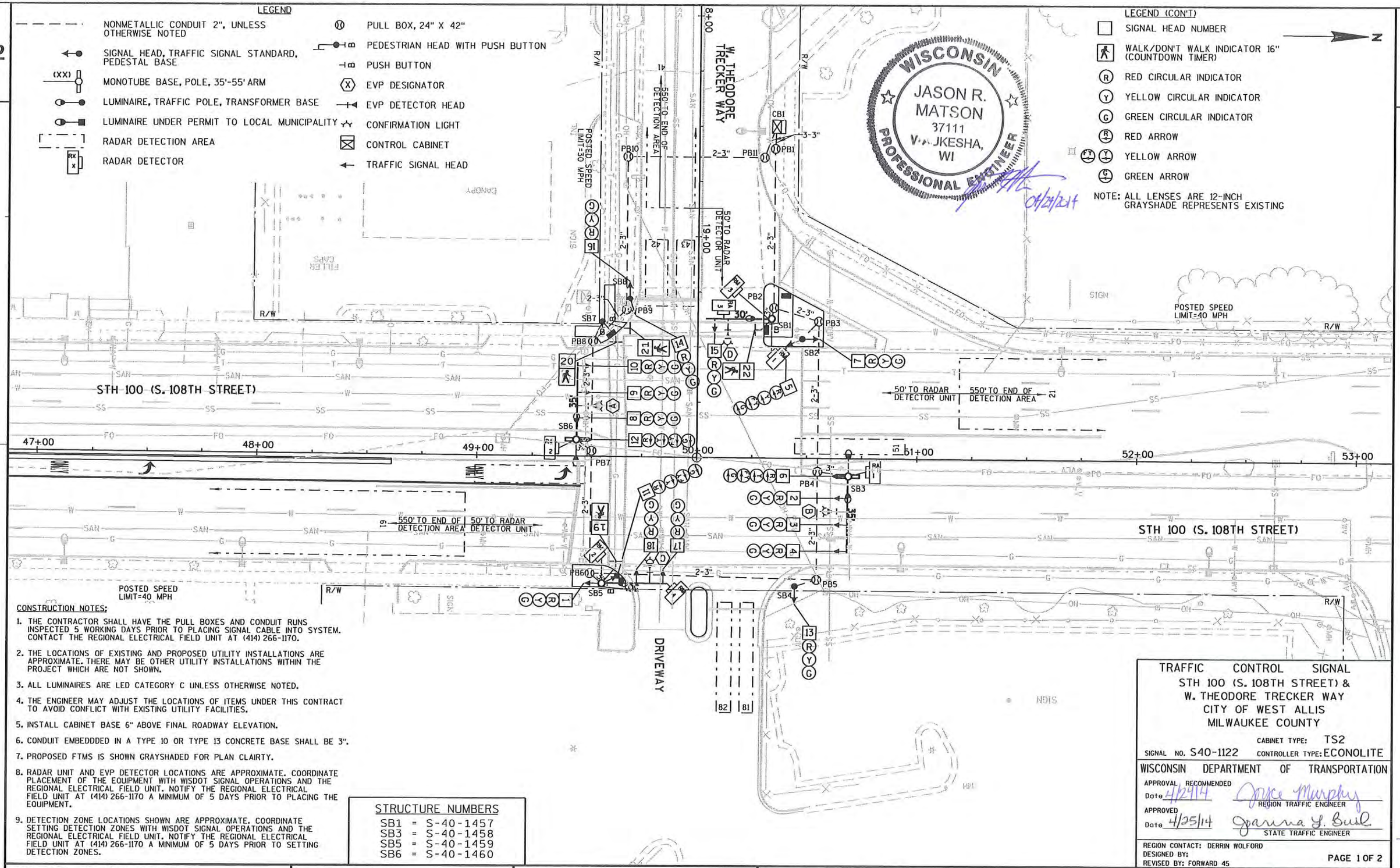
REGION CONTACT:
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024121_sp.dgn PLOT DATE : 29-APR-2014 06:08 PLOT BY : MSCDYB PLOT NAME : 024121_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42



CONSTRUCTION NOTES;

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. ALL LUMINAIRES ARE LED CATEGORY C UNLESS OTHERWISE NOTED.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.
6. CONDUIT EMBEDDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3".
7. PROPOSED FTMS IS SHOWN GRAYSHADED FOR PLAN CLAIRTY.
8. RADAR UNIT AND EVP DETECTOR LOCATIONS ARE APPROXIMATE. COORDINATE PLACEMENT OF THE EQUIPMENT WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO PLACING THE EQUIPMENT.
9. DETECTION ZONE LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE SETTING DETECTION ZONES WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO SETTING DETECTION ZONES.

STRUCTURE NUMBERS

SB1 = S-40-1457
SB3 = S-40-1458
SB5 = S-40-1459
SB6 = S-40-1460

TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
W. THEODORE TRECKER WAY
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CABINET TYPE: TS2
SIGNAL NO. S40-1122 CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 4/24/14 Joyce Murphy REGION TRAFFIC ENGINEER

APPROVED
Date 4/25/14 Joanna L. Buol STATE TRAFFIC ENGINEER

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY:
REVISED BY: FORWARD 45

PAGE 1 OF 2

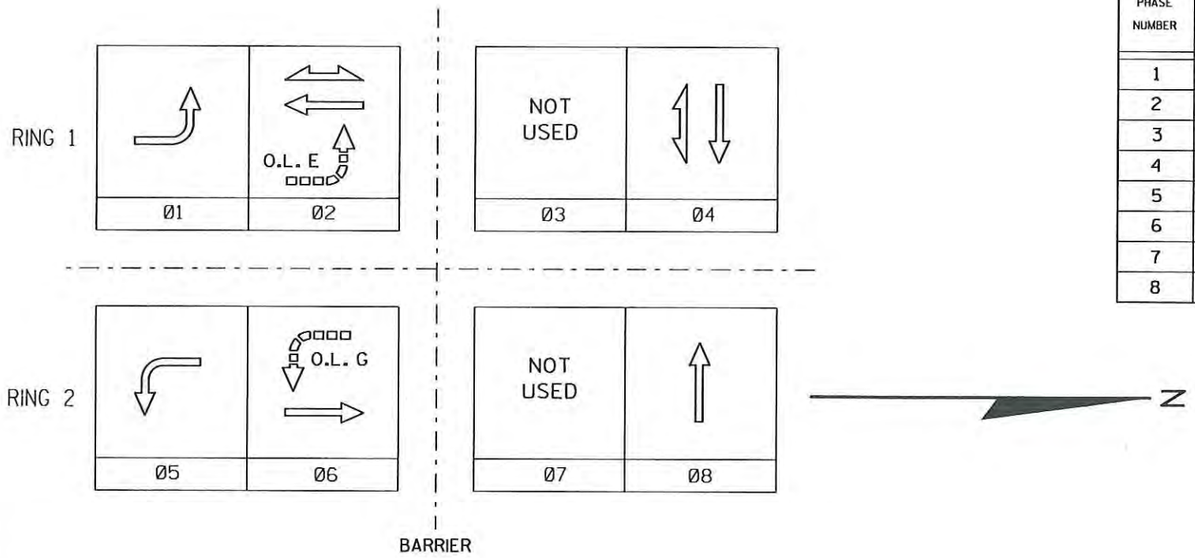
PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024125_sp.dgn PLOT DATE : 24-APR-2014 07:01 PLOT BY : MSCDYB PLOT NAME : 024125_sp PLOT SCALE : 40:1

4-24-14 DJW

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	5,6	-
Ø2	7,8,9,10	R
Ø3		
Ø4	16,17,18	R
Ø5	11,12	-
Ø6	1,2,3,4	R
Ø7		
Ø8	13,14,15	R
Ø2P	21,22	
Ø4P	19,20	
Ø6P		
Ø8P		
OLE	5,6	R
OLF		
OLG	11,12	R
OLH		



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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	11	41	43	61	82			
CALLED PHASE	1	4	4	6	8			
CALL OPTION	X		X		X			
DELAY TIME								
EXTEND OPTION	X	X	X	X	X			
EXTEND TIME		X						
USE ADDED INITIAL				X				
CROSS SWITCH PHASE	2							

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR *(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR *(S)	21	42	51	81				
CALLED PHASE	2	4	5	8				
CALL OPTION		X	X	X				
DELAY TIME		X		X				
EXTEND OPTION	X	X	X	X				
EXTEND TIME								
USE ADDED INITIAL	X							
CROSS SWITCH PHASE			6					

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR *(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL 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.

STH 100 (S. 108TH STREET) &
W. THEODORE TRECKER WAY
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1122 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 04/14 PAGE NO. 2 OF 2

4-24-14 JMM

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET E

STH 100 & W. THEODORE TRECKER WAY

2

PROJECT ID:	1060-35-91
INTERSECTION:	STH 100 (S. 108TH STREET) & W. THEODORE TRECKER WAY

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

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

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.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

WISCONSIN JASON R. MATRON 37111 WAUKESHA, WI PROFESSIONAL ENGINEER

04/29/2014

(CONTINUED ON NEXT SHEET)

(CONTINUED)

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

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB1
SB1	SB3
CB1	SB6
SB6	SB5

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
PB10	SB8
PB11	CB1

RADAR DETECTION CABLE	
FROM	TO
CB1	RA1 (SB3)
CB1	RA2 (SB6)
CB1	RA3 (SB1)
CB1	RM1 (SB1)
CB1	RM2 (SB5)
CB1	RM3 (SB1)
CB1	RM4 (SB5)

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB6 (HEAD A)
CB1	SB3 (HEAD B)
CB1	SB5 (HEAD C)
CB1	SB1 (HEAD D)

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA

LEGEND (CON'T)

- ACCESSIBLE PEDESTRIAN SIGNAL
- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONTROL CABINET
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

NOTE: GRAYSHADE REPRESENTS EXISTING.

N

STH 100 (S. 108TH STREET)

STH 59 (W. GREENFIELD AVENUE)

R/W

STRUCTURE NUMBERS

SB8 = S-40-1276
SB10 = S-40-1277
SB1 = S-40-1278
SB3 = S-40-1279

CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. THE CONCRETE BASE FOR SB6 SHALL REMAIN IN PLACE.

WISCONSIN
JASON MATS
37111
WAUKESHA, WI
PROFESSIONAL ENGINEER
04/21/2014

TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
STH 59 (W. GREENFIELD AVENUE)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1071

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024211_sp.dgn PLOT DATE : 29-APR-2014 06:18 PLOT BY : MSCDYB PLOT NAME : 024211_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE

(XX) MONOTUBE BASE, POLE, 35'-55' ARM

LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

VIDEO DETECTION AREA

VX VIDEO DETECTION CAMERA

LEGEND (CON'T)

ACCESSIBLE PEDESTRIAN SIGNAL

PULL BOX, 24" X 42"

PEDESTRIAN HEAD WITH PUSH BUTTON

PUSH BUTTON

EVP DESIGNATOR

EVP DETECTOR HEAD

CONTROL CABINET

SIGNAL HEAD NUMBER

WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)

(R) RED CIRCULAR INDICATOR

(Y) YELLOW CIRCULAR INDICATOR

(G) GREEN CIRCULAR INDICATOR

(R) RED ARROW

(Y) YELLOW ARROW

(G) GREEN ARROW

NOTE: GRAYSHADE REPRESENTS EXISTING.

N

STH 59 (W. GREENFIELD AVENUE)

STH 100 (S. 108TH STREET)

POSTED SPEED LIMIT= 35 MPH

POSTED SPEED LIMIT= 40 MPH

R/W

FTMS FOC

WISCONSIN PROFESSIONAL ENGINEER JASON R. MATSON 37111 WAUKESHA, WI

04/24/2014

CONSTRUCTION NOTES;

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. ALL LUMINAIRES ARE LED UNLESS OTHERWISE NOTED.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. SB6 TO BE PLACED ON EXISTING CONCRETE BASE.

STRUCTURE NUMBERS

SB8 = S-40-1276
SB10 = S-40-1277
SB1 = S-40-1278
SB3 = S-40-1279

REVISION				
Rev. No.	ADD WB RIGHT TURN ARROW.			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
16	Date	By	Date	By
	4/24/14	JMM	4/25/14	DJB

RECONSTRUCT PORTIONS OF INTERSECTION SIGNAL. 9-8-99

INSTALL AUDIBLE PEDESTRIAN SIGNALS ON NORTH APPROACH. 8-12-96

ADDED THIRD THROUGH LANE ON SOUTH APPROACH. 3-2-89

REVISED SEQUENCE OF OPERATIONS. 6-30-88

INSTALLED LT TURN DETECTION AND EB ARROWS. 6-22-87

UPGRADED INTERSECTION. 12-13-79

NEW CONTROLLER INSTALLED. 6-4-79

INSTALLED LT TURN ARROWS AND MAGNETIC DETECTORS ON STH 100. 5-29-70

INSTALLED 6-3 SECTION HEADS AND N/S PEDESTRIAN SIGNALS. 6-6-66

UPGRADED INTERSECTION. 6-1-64

INITIAL INSTALLATION. 1935

UPDATED DETECTION AND CABINET. ADDED INSYNC ADAPTIVE CONTROL. 3-15-13

INTERSECTION RECONSTRUCTION 5-12

ADD PED BUTTONS. 11-11-03

GEOMETRIC CHANGES. INSTALL LT STOPLINE LOOPS. CHANGE TO PROTECTED ONLY LEFTS. ADD PED BUTTONS.

EMERGENCY VEHICLE PREEMPTION INSTALLED ON ALL APPROACHES. 4-06-00

TRAFFIC CONTROL SIGNAL
STH 100 (S. 108TH STREET) &
STH 59 (W. GREENFIELD AVENUE)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CABINET TYPE: TS2

SIGNAL NO. S40-1071 CONTROLLER TYPE: EPAC M51

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 6/25/79 ROBERT MOE
REGION TRAFFIC ENGINEER

APPROVED
Date 12/11/84 H.O. PRICE
STATE TRAFFIC ENGINEER

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY:
REVISED BY: FORWARD 45

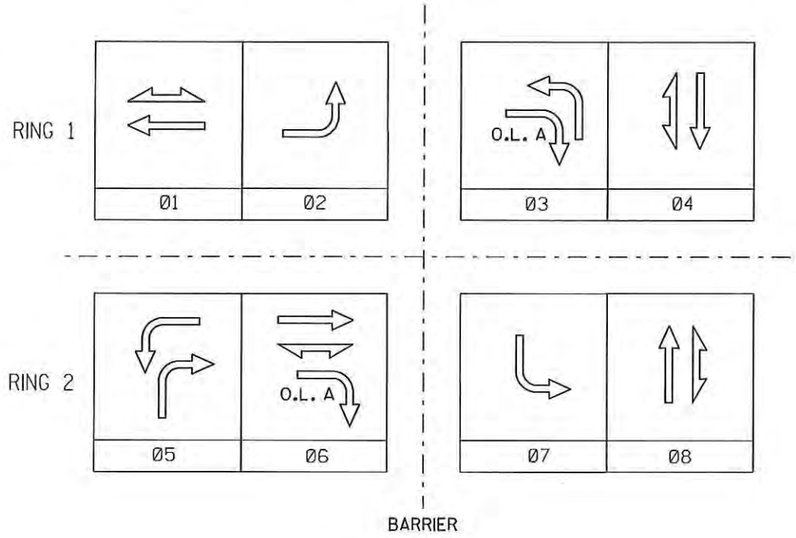
PAGE 1 OF 2

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024215_sp.dgn PLOT DATE : 23-APR-2014 08:40 PLOT BY : MSCD1S PLOT NAME : 024215_sp PLOT SCALE : 40.000103:1 WISDOT/CADDS SI

4-24-14 DJW 4/24/14 JMM

	HEAD NUMBERS	FLASH
Ø1	19,20,21,22	R
Ø2	15,16	R
Ø3	9,10	R
Ø4	1,2,3	R
Ø5	6,23,24,33	R
Ø6	11,12,13,14	R
Ø7	4,5	R
Ø8	6,7,8,33	R
Ø1P	29,30	
Ø4P	27,28	
Ø6P	25,26	
Ø8P	31,32	
OLA	17,18	R
OLB		
OLC		
OLD		



CONTROLLER LOGIC

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

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

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

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

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT				
PHASE	1+5	6+2	4+7	8+3

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

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	13	22	32	42	51	61	63
ASSIGNED PHASE	1	1	2	3	4	5	6	6
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY								

19	17	23	21	27	25	31	29	DETECTOR INPUT
72	82							PLAN LOOP DETECTOR #(S)
7	8							ASSIGNED PHASE
VEH	VEH							OPERATION MODE
								SWITCH
								EXTEND
								DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	12	21	31	41	43	52	62	71
ASSIGNED PHASE	1	2	3	4	4	5	6	7
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY				X				

20	18	24	22	28	26	32	30	DETECTOR INPUT
81	83							PLAN LOOP DETECTOR #(S)
8	8							ASSIGNED PHASE
VEH	VEH							OPERATION MODE
								SWITCH
								EXTEND
X								DELAY

GENERAL NOTES:
1. PHASES 2 AND 5 ARE IN CONFLICT AND NOT ALLOWED TO TIME CONCURRENTLY.

STH 100 (S. 108TH STREET) &
STH 59 (W. GREENFIELD AVENUE)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1071 CABINET TYPE: TS2

CONTROLLER TYPE: EPAC M51

DATE 04/14 PAGE NO. 2 OF 2

4-24-14 DJW 4/24/14 SMM

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET	E

STH 100 & STH 59

2

PROJECT ID:	1060-35-91
INTERSECTION:	STH 100 (S. 108TH STREET) & STH 59 (W. GREENFIELD AVENUE)

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

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1 *	12 *	33	RED *	ORG *	GRN *								
SB1 **	12 **	33					ORG/BLK **	GRN/BLK **					
SB6***	12***	6	RED ***	ORG ***	GRN ***		ORG/BLK ***	GRN/BLK ***					
		25								BLK ***	BLU ***		
		B										WHT/BLK ***	

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.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.
RE-CONNECT EXISTING EQUIPMENT GROUNDING CONDUCTOR IN SB6 TO REESTABLISH THE COMPLETE GROUNDING CIRCUIT FROM BASE TO BASE.
RE-CONNECT EXISTING PULL BOX BONDING JUMPER IN SB6.

* USE EXISTING 12-CT TRAFFIC SIGNAL CABLE FOR THE R,Y,G INDICATIONS FOR HEAD 33.
** USE PROPOSED 12-CT TRAFFIC SIGNAL CABLE FOR THE YA,GA INDICATIONS FOR HEAD 33.
*** USE EXISTING 12-CT TRAFFIC SIGNAL CABLE FOR THE R,Y,G,YA,GA INDICATIONS FOR HEAD 6.



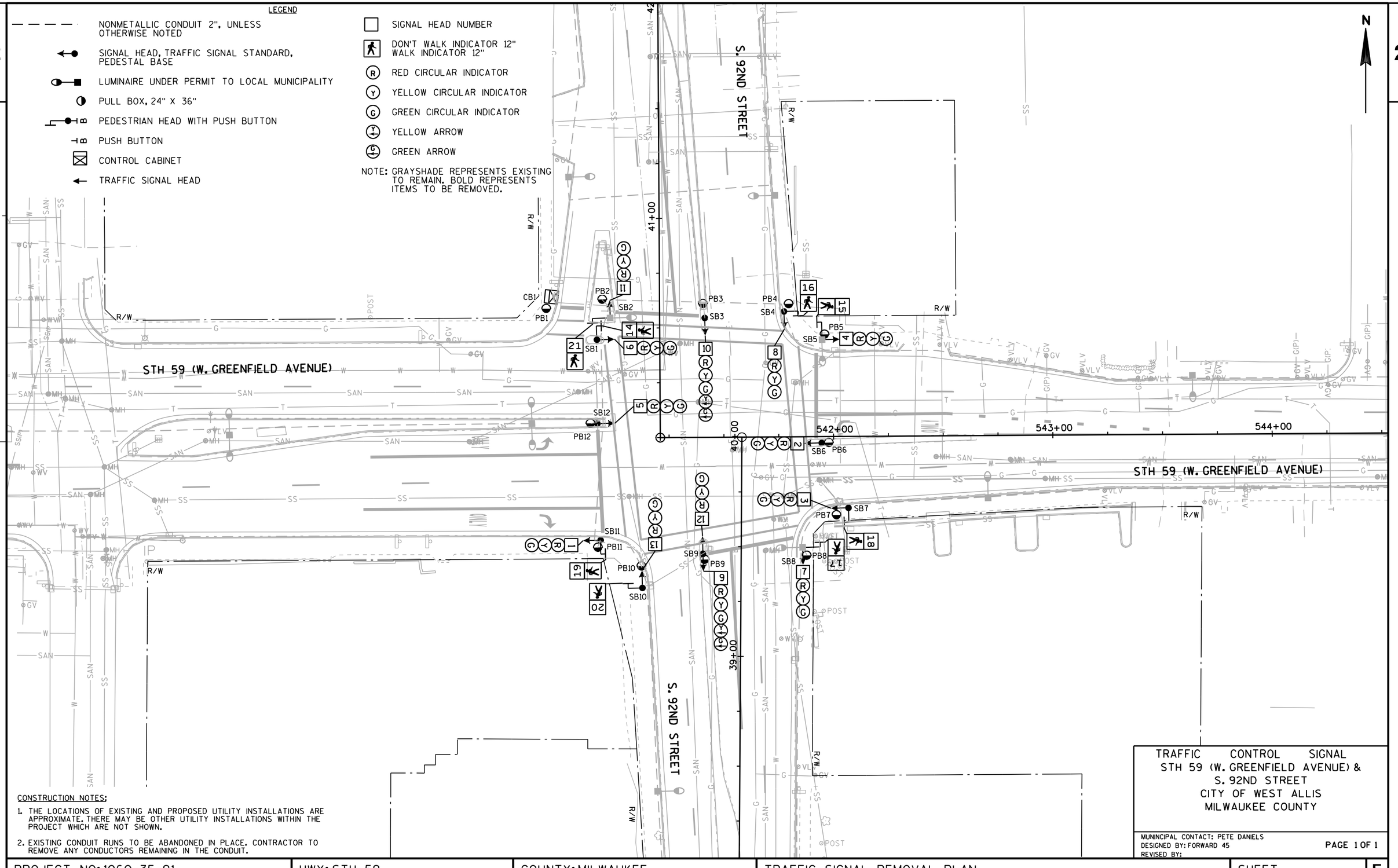
PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	CABLE ROUTING	SHEET: 211 E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024220_sp_cr.ppt PLOT DATE : 4/29/2014 10:26:54 AM PLOT BY : MSCD1S PLOT NAME : 024130_sp_cr1 PLOT SCALE : 1:1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- DON'T WALK INDICATOR 12" WALK INDICATOR 12"
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS ITEMS TO BE REMOVED.



CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.

TRAFFIC CONTROL SIGNAL
STH 59 (W. GREENFIELD AVENUE) &
S. 92ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

MUNINCIPAL CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024221_sp.dgn PLOT DATE : 29-APR-2014 06:26 PLOT BY : MSCDYB PLOT NAME : 024221_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE

(XX) MONOTUBE BASE, POLE, 35'-55' ARM

LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

RADAR DETECTION AREA

RX RADAR DETECTOR

LEGEND (CON'T)

PULL BOX, 24" X 42"

PEDESTRIAN HEAD WITH PUSH BUTTON

PUSH BUTTON

EVP DESIGNATOR

EVP DETECTOR HEAD

CONFIRMATION LIGHT

CONTROL CABINET

TRAFFIC SIGNAL HEAD

SIGNAL HEAD NUMBER

WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)

R RED CIRCULAR INDICATOR

Y YELLOW CIRCULAR INDICATOR

G GREEN CIRCULAR INDICATOR

RA RED ARROW

YA YELLOW ARROW

GA GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

N

STH 59 (W. GREENFIELD AVENUE)

S. 92ND STREET

POSTED SPEED LIMIT = 25 MPH

POSTED SPEED LIMIT = 30 MPH

50' TO RADAR DETECTOR UNIT

550' TO END OF DETECTION AREA

PB1 CB1 PB2 PB3 PB4 PB5 PB6 PB8 PB9 PB10

SB1 SB2 SB3 SB4 SB5 SB6 SB7 SB8 SB9 SB10 SB11

542+00 543+00 544+00 39+00 41+00

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. ALL LUMINAIRES ARE LED CATEGORY B UNLESS OTHERWISE NOTED.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.
6. CONDUIT EMBEDDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3".
7. PROPOSED FTMS IS SHOWN GRAYSHADED FOR PLAN CLAIRTY.
8. ROTATE SB2 WINGS 90-DEGREES.
9. RADAR UNIT AND EVP DETECTOR LOCATIONS ARE APPROXIMATE. COORDINATE PLACEMENT OF THE EQUIPMENT WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO PLACING THE EQUIPMENT.
10. DETECTION ZONE LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE SETTING DETECTION ZONES WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO SETTING DETECTION ZONES.

STRUCTURE NUMBERS

SB2 = S-40-1461
SB4 = S-40-1462
SB8 = S-40-1463
SB11 = S-40-1464

WISCONSIN JASON R. MATSON 37[illegible] WAUKESHA, WI PROFESSIONAL ENGINEER

04/24/2014

TRANSFERRED FROM CITY OF WEST ALLIS UPON COMPLETION OF 1060-35-91.

TRAFFIC CONTROL SIGNAL

STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CABINET TYPE: TS2

SIGNAL NO. S40-1387 CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 4/24/14 Jose Murphy REGION TRAFFIC ENGINEER

APPROVED
Date 4/25/14 Joanna Y. Bush STATE TRAFFIC ENGINEER

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

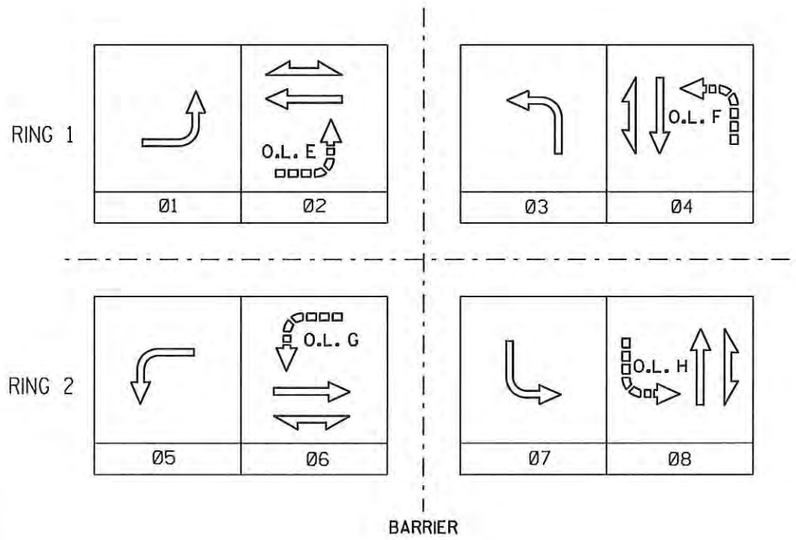
PAGE 1 OF 2

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024225_sp.dgn PLOT DATE : 24-APR-2014 12:08 PLOT BY : MSCJ5W PLOT NAME : 024225_sp PLOT SCALE : 40:1

4-24-14 DTW

	HEAD NUMBERS	FLASH
Ø1	4,5	-
Ø2	6,7,8	R
Ø3	14,15	-
Ø4	16,17,18	R
Ø5	9,10	-
Ø6	1,2,3	R
Ø7	19,20	-
Ø8	11,12,13	R
Ø2P	23,24	
Ø4P	21,22	
Ø6P	27,28	
Ø8P	25,26	
OLE	4,5	R
OLF	14,15	R
OLG	9,10	R
OLH	19,20	R





CONTROLLER LOGIC

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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	22	41	51	62	81	83	
CALLED PHASE	1	2	4	5	6	8	8	
CALL OPTION	X	X		X	X		X	
DELAY TIME	X			X				
EXTEND OPTION		X	X		X	X	X	
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE		1			5			

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	21	31	42	61	71	82		
CALLED PHASE	2	3	4	6	7	8		
CALL OPTION		X	X		X	X		
DELAY TIME						X		
EXTEND OPTION	X	X	X	X	X	X		
EXTEND TIME								
USE ADDED INITIAL	X			X				
CROSS SWITCH PHASE								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL D
MOVEMENT				
PHASE	2+5	6+1	4+7	8+3

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

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1387 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 04/14 PAGE NO. 2 OF 2

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024229_sp_ph.dgn PLOT DATE : 25-APR-2014 13:47 PLOT BY : mscjym PLOT NAME : 024229_sp_ph PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

4-24-14 DTW

4/24/14 JMM

STH 59 & S. 92ND STREET

2

PROJECT ID:	1060-35-91
INTERSECTION:	STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET

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

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING> <YELLOW>	D/WALK	WALK	PED BUTTON
SB1	21	14				RED	ORG	GRN	BLK/WHT			
		16	RED/BLK	ORG/BLK	GRN/BLK							
		22								BLK	BLU	
		23								RED/WHT	GRN/WHT	
		(SB) B										WHT/BLK
		(EB) B										BLU/BLK
SB2	12	12	RED	ORG	GRN							
		13	RED	ORG	GRN							
		15				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		25								BLK	BLU	
		B										WHT/BLK
SB3	12	4				RED	ORG	GRN	BLK/WHT			
		6	RED/BLK	ORG/BLK	GRN/BLK							
		24								BLK	BLU	
		B										WHT/BLK
SB4	12	2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		27								BLK	BLU	
SB5	7	(NB) B										WHT/BLK
		(WB) B										BLU/BLK
SB6	12	11	RED	ORG	GRN							
		19				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		26								BLK	BLU	
SB7	7	21								BLK	BLU	
		B										WHT/BLK
SB8	12	17	RED	ORG	GRN							
		18	RED	ORG	GRN							
		20				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB9	12	1	RED	ORG	GRN							
		9				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		28								BLK	BLU	
		B										WHT/BLK
SB11	12	7	RED	ORG	GRN							
		8	RED	ORG	GRN							
		10				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			

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.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

WISCONSIN
JASON R. MATSON
3711
WI
PROFESSIONAL ENGINEER
04/2/2014

(CONTINUED ON NEXT SHEET)

(CONTINUED)

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	SB9
SB9	SB10
SB10	SB11
SB11	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB1
PB3	SB2
PB4	SB3
PB5	SB4
PB6	SB6
PB7	SB7
PB8	SB9
PB9	SB10
PB10	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB11 (HEAD A)
CB1	SB4 (HEAD B)
CB1	SB8 (HEAD C)
CB1	SB2 (HEAD D)

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB4
CB1	SB11
SB11	SB10
SB10	SB8

RADAR DETECTION CABLE	
FROM	TO
CB1	RA1 (SB4)
CB1	RM1 (SB4)
CB1	RA2 (SB11)
CB1	RM2 (SB11)
CB1	RA3 (SB2)
CB1	RM3 (SB2)
CB1	RA4 (SB8)
CB1	RM4 (SB8)

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PB PUSH BUTTON
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- DON'T WALK INDICATOR 12" WALK INDICATOR 12"
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS ITEMS TO BE REMOVED.

STH 59 (W. GREENFIELD AVENUE)

STH 181 (S. 84TH STREET)

S. 84TH STREET

566+00 567+00 568+00 569+00 570+00 571+00

225+00 224+00 223+00

BOLLARD

CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.

TRAFFIC CONTROL SIGNAL
STH 59 (W. GREENFIELD AVENUE) &
STH 181 (S. 84TH STREET)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

MUNINCIPAL CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024231_sp.dgn PLOT DATE : 29-APR-2014 06:34 PLOT BY : MSCDYB PLOT NAME : 024231_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- RADAR DETECTION AREA
- RX RADAR DETECTOR

LEGEND (CON'T)

- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

N

STH 59 (W. GREENFIELD AVENUE)

STH 181 (S. 84TH STREET)

S. 84TH STREET

POSTED SPEED LIMIT = 30 MPH

R/W

50' TO RADAR 550' TO END OF DETECTOR UNIT DETECTION AREA

550' TO END OF 50' TO RADAR DETECTION AREA DETECTOR UNIT

566+00 567+00 568+00 569+00 570+00 571+00

225+00 224+00 223+00 222+00

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. ALL LUMINAIRES ARE LED CATEGORY B UNLESS OTHERWISE NOTED.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.
6. CONDUIT EMBEDDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3".
7. PROPOSED FTMS IS SHOWN GRAYSHADED FOR PLAN CLAIRTY.
8. RADAR UNIT AND EVP DETECTOR LOCATIONS ARE APPROXIMATE. COORDINATE PLACEMENT OF THE EQUIPMENT WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO PLACING THE EQUIPMENT.
9. DETECTION ZONE LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE SETTING DETECTION ZONES WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO SETTING DETECTION ZONES.

STRUCTURE NUMBERS

SB3 = S-40-1465
SB7 = S-40-1466
SB11 = S-40-1467
SB15 = S-40-1468

WISCONSIN JASON R. MATSON 32... WAUKESHA, WI PROFESSIONAL ENGINEER

04/21/2014

TRANSFERRED FROM CITY OF WEST ALLIS UPON COMPLETION OF 1060-35-91.

TRAFFIC CONTROL SIGNAL
STH 59 (W. GREENFIELD AVENUE) & STH 181 (S. 84TH STREET)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CABINET TYPE: TS2
SIGNAL NO. S40-1388 CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED Date 4/24/14 — Joya Murphy, REGION TRAFFIC ENGINEER

APPROVED Date 4/25/14 — Joanne L. Bush, STATE TRAFFIC ENGINEER

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 2

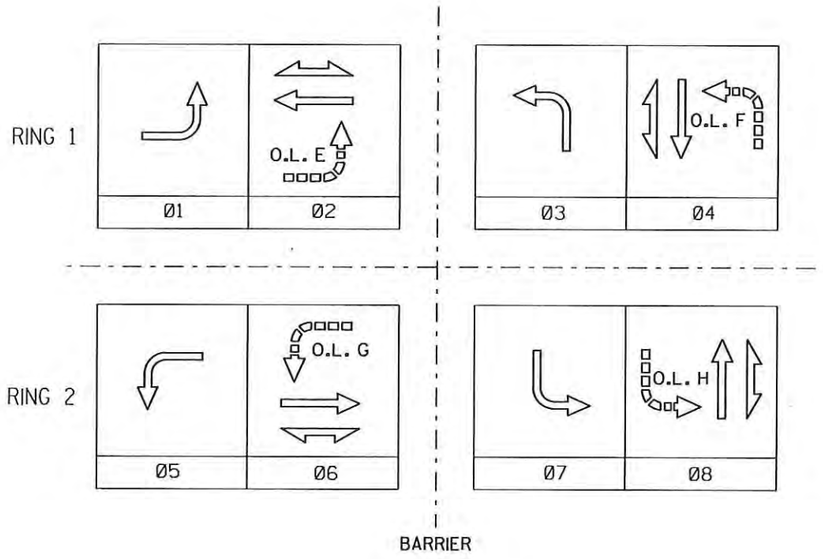
PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024235_sp.dgn PLOT DATE : 24-APR-2014 07:29 PLOT BY : MSCDYB PLOT NAME : 024235_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

4-24-14 DJW

	HEAD NUMBERS	FLASH
Ø1	4,5	-
Ø2	6,7,8	R
Ø3	14,15	-
Ø4	16,17,18	R
Ø5	9,10	-
Ø6	1,2,3	R
Ø7	19,20	-
Ø8	11,12,13	R
Ø2P	23,24	
Ø4P	21,22	
Ø6P	27,28	
Ø8P	25,26	
OLE	4,5	R
OLF	14,15	R
OLG	9,10	R
OLH	19,20	R





CONTROLLER LOGIC

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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	31	42	51	62	81	83	
CALLED PHASE	1	3	4	5	6	8	8	
CALL OPTION	X	X	X	X	X		X	
DELAY TIME		X		X				
EXTEND OPTION	X		X		X	X	X	
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE	2				5			

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR #(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	21	41	43	61	71	82		
CALLED PHASE	2	4	4	6	7	8		
CALL OPTION			X		X	X		
DELAY TIME						X		
EXTEND OPTION	X	X	X	X	X	X		
EXTEND TIME								
USE ADDED INITIAL	X			X				
CROSS SWITCH PHASE			3		8			

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR #(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL D
MOVEMENT				
PHASE	2+5	6+1	4+7	8+3

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

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

STH 59 (W. GREENFIELD AVENUE) &
STH 181 (S. 84 STREET)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1388 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 04/14 PAGE NO. 2 OF 2

4-24-14 DTW
4/24/14 JMM

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET E

PROJECT ID:	1060-35-91
INTERSECTION:	STH 59 (W. GREENFIELD AVENUE) & STH 181 (S. 84TH STREET)

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

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON
SB1	12	1	RED	ORG	GRN							
		9				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		28								BLK	BLU	
		B										WHT/BLK
SB3	12	7	RED	ORG	GRN							
		8	RED	ORG	GRN							
		10				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB4	7	23								BLK	BLU	
		B										WHT/BLK
SB5	12	14				RED	ORG	GRN	BLK/WHT			
		16	RED/BLK	ORG/BLK	GRN/BLK							
		22								BLK	BLU	
		B										WHT/BLK
SB6	12	15				RED	ORG	GRN	BLK/WHT			
SB7	12	12	RED	ORG	GRN							
		13	RED	ORG	GRN							
SB8	7	25								BLK	BLU	
		B										WHT/BLK
SB9	12	4				RED	ORG	GRN	BLK/WHT			
		6	RED/BLK	ORG/BLK	GRN/BLK							
		24								BLK	BLU	
		B										WHT/BLK
SB11	12	2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB12	7	27								BLK	BLU	
		B										WHT/BLK
SB13	12	11	RED	ORG	GRN							
		19				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		26								BLK	BLU	
		B										WHT/BLK
SB14	12	20				RED	ORG	GRN	BLK/WHT			
SB15	12	17	RED	ORG	GRN							
		18	RED	ORG	GRN							
SB16	7	21								BLK	BLU	
		B										WHT/BLK

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.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

(CONTINUED ON NEXT SHEET)

WISCONSIN JASON R. MATS... PROFESSIONAL ENGINEER WI

04/29/2014

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	CABLE ROUTING	SHEET: 220	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024240_sp_cr.ppt PLOT DATE : 4/29/2014 10:28:19 AM PLOT BY : MSCD1S PLOT NAME : 024240_sp_cr1 PLOT SCALE : 1:1

(CONTINUED)

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	SB15
SB15	SB16
SB16	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB4
PB3	SB5
PB4	SB6
PB5	SB8
PB6	SB9
PB7	SB12
PB8	SB13
PB9	SB14
PB10	SB15

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB3 (HEAD A)
CB1	SB11 (HEAD B)
CB1	SB15 (HEAD C)
CB1	SB7 (HEAD D)

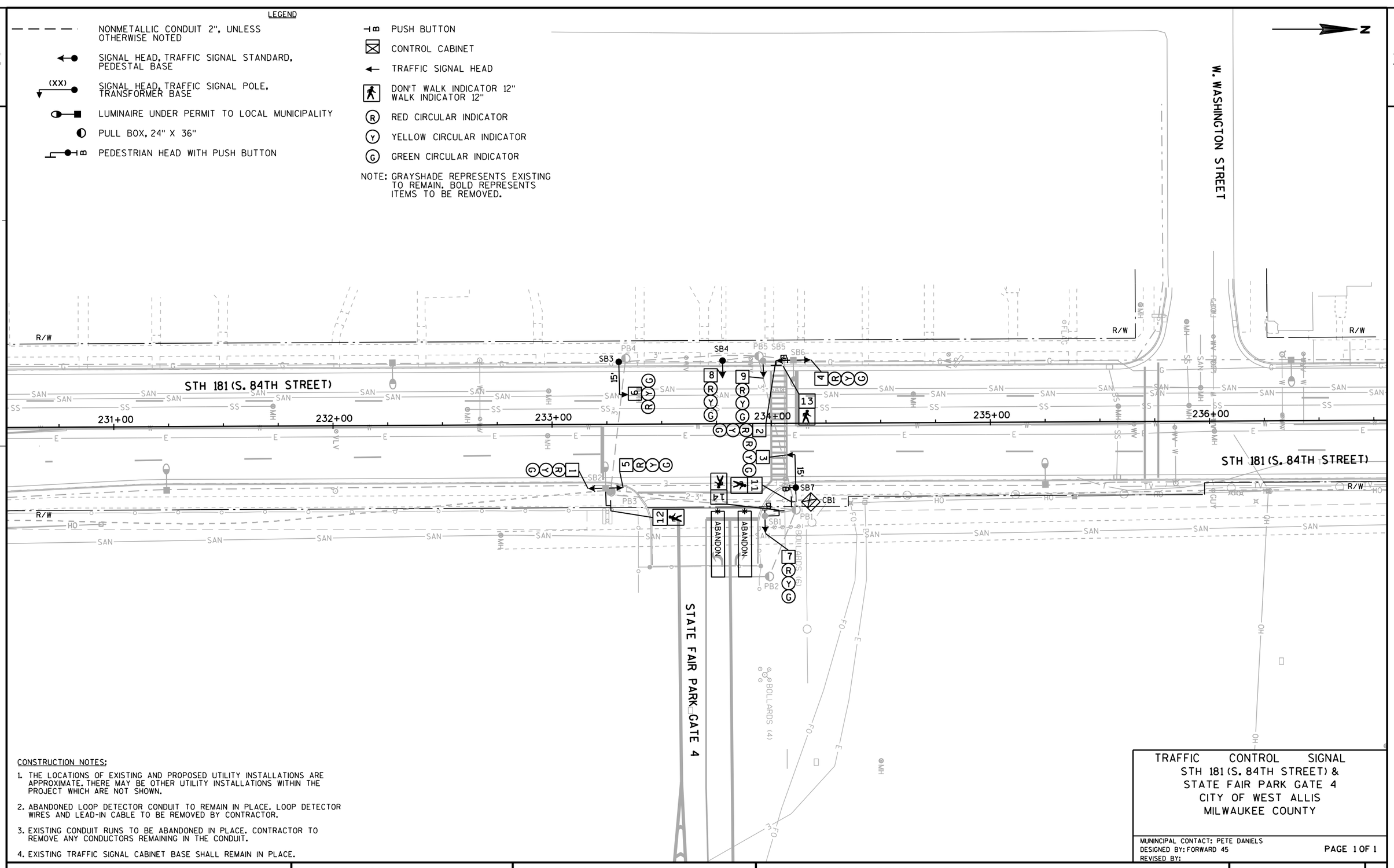
LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB2
SB2	SB3
SB3	SB7
CB1	SB15
SB15	SB11
SB11	SB10

RADAR DETECTION CABLE	
FROM	TO
CB1	RA1 (SB11)
CB1	RM1 (SB11)
CB1	RA2 (SB3)
CB1	RM2 (SB3)
CB1	RA3 (SB7)
CB1	RM3 (SB7)
CB1	RA4 (SB15)
CB1	RM4 (SB15)

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- DON'T WALK INDICATOR 12" WALK INDICATOR 12"
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS ITEMS TO BE REMOVED.



CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRES AND LEAD-IN CABLE TO BE REMOVED BY CONTRACTOR.
3. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
4. EXISTING TRAFFIC SIGNAL CABINET BASE SHALL REMAIN IN PLACE.

TRAFFIC CONTROL SIGNAL
STH 181 (S. 84TH STREET) &
STATE FAIR PARK GATE 4
CITY OF WEST ALLIS
MILWAUKEE COUNTY

MUNINCIPAL CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

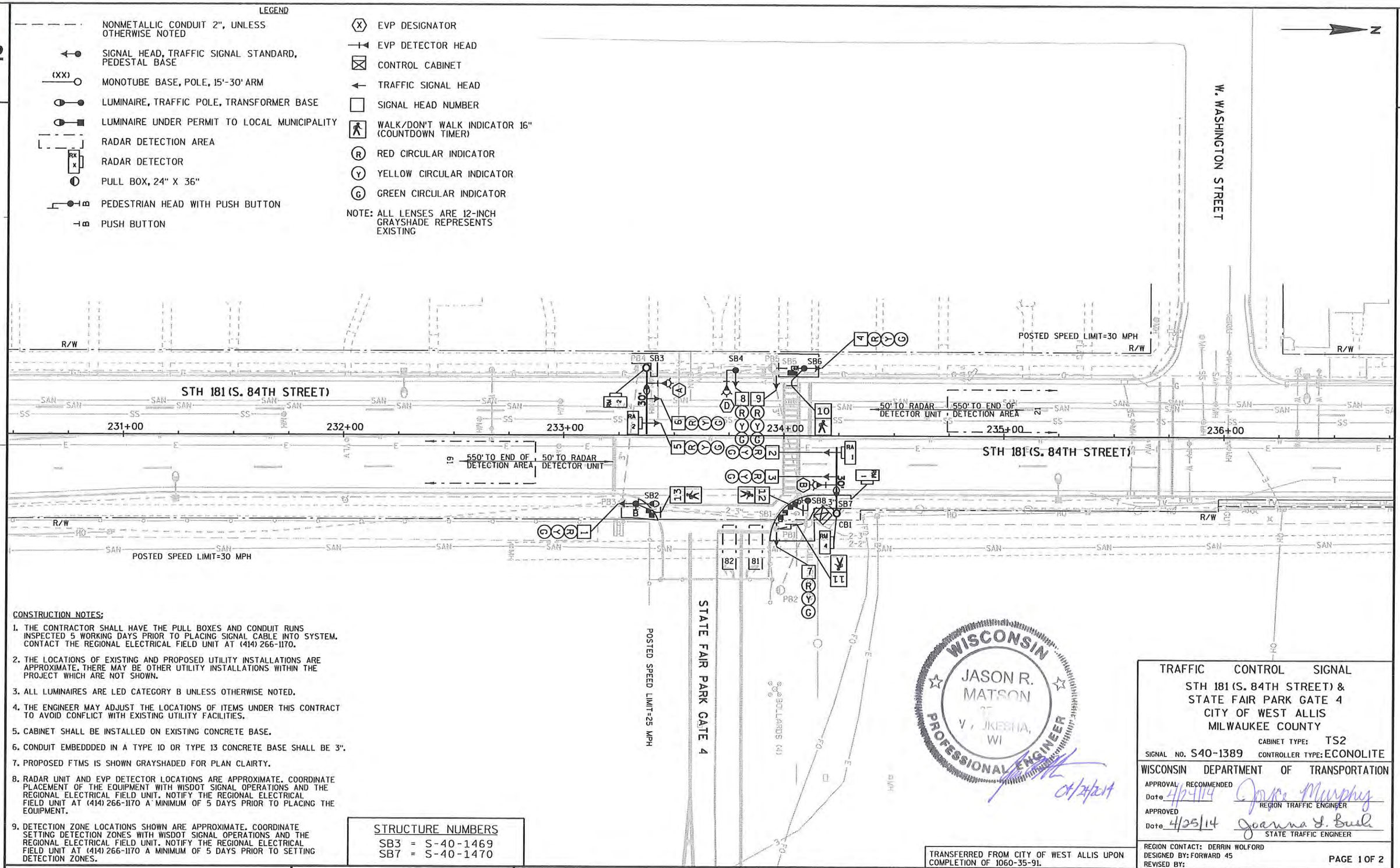
FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024311_sp.dgn PLOT DATE : 29-APR-2014 06:42 PLOT BY : MSCDYB PLOT NAME : 024311_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- RADAR DETECTION AREA
- RX RADAR DETECTOR
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR

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. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. ALL LUMINAIRES ARE LED CATEGORY B UNLESS OTHERWISE NOTED.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. CABINET SHALL BE INSTALLED ON EXISTING CONCRETE BASE.
6. CONDUIT EMBEDDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3".
7. PROPOSED FTMS IS SHOWN GRAYSHADED FOR PLAN CLAIRTY.
8. RADAR UNIT AND EVP DETECTOR LOCATIONS ARE APPROXIMATE. COORDINATE PLACEMENT OF THE EQUIPMENT WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO PLACING THE EQUIPMENT.
9. DETECTION ZONE LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE SETTING DETECTION ZONES WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO SETTING DETECTION ZONES.

STRUCTURE NUMBERS
SB3 = S-40-1469
SB7 = S-40-1470

WISCONSIN JASON R. MATSON E-35 WAUKESHA, WI PROFESSIONAL ENGINEER
04/24/2014

TRANSFERRED FROM CITY OF WEST ALLIS UPON COMPLETION OF 1060-35-91.

TRAFFIC CONTROL SIGNAL
STH 181 (S. 84TH STREET) &
STATE FAIR PARK GATE 4
CITY OF WEST ALLIS
MILWAUKEE COUNTY
CABINET TYPE: TS2
SIGNAL NO. S40-1389 CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVAL RECOMMENDED Date 4/24/14 Jackie Murphy REGION TRAFFIC ENGINEER
APPROVED Date 4/25/14 Joanna L. Buck STATE TRAFFIC ENGINEER

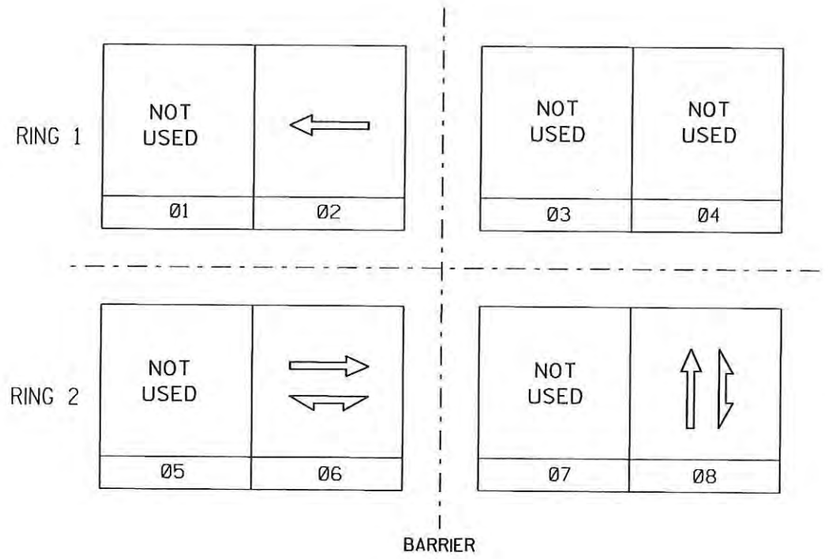
REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:
PAGE 1 OF 2

PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024315_sp.dgn PLOT DATE : 24-APR-2014 07:37 PLOT BY : MSCDYB PLOT NAME : 024315_sp PLOT SCALE : 40:1 WISDOT/CADDS SHEET 42

MDI 41-42-4

	HEAD NUMBERS	FLASH
Ø1		
Ø2	4,5,6	R
Ø3		
Ø4		
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8	7,8,9	R
Ø2P		
Ø4P		
Ø6P	12,13	
Ø8P	10,11	
OLE		
OLE		
OLG		
OLH		



CONTROLLER LOGIC

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

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

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

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

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL D
MOVEMENT	← →	← →	↑
PHASE	2+6	6+2	8

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

AFTER PREEMPTION SEQUENCE 8, CONTROLLER SHALL RETURN TO PHASE 8.

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	21	81						
CALLED PHASE	2	8						
CALL OPTION		X						
DELAY TIME		X						
EXTEND OPTION	X	X						
EXTEND TIME								
USE ADDED INITIAL	X							
CROSS SWITCH PHASE								

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	61	82						
CALLED PHASE	6	8						
CALL OPTION		X						
DELAY TIME								
EXTEND OPTION	X	X						
EXTEND TIME								
USE ADDED INITIAL	X							
CROSS SWITCH PHASE								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

STH 181 (S. 84TH STREET) &
STATE FAIR PARK GATE 4
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1389 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 04/14 PAGE NO. 2 OF 2

PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024319_sp_ph.dgn PLOT DATE : 24-APR-2014 12:11 PLOT BY : MSCJ5W PLOT NAME : 024319_sp_ph PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

4-24-14 DSW
4/24/14 MSW

STH 181 (S. 84TH STREET) & STATE FAIR PARK GATE 4

2

PROJECT ID:	1060-35-91
INTERSECTION:	STH 181 (S. 84TH STREET) & STATE FAIR PARK GATE 4

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

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING> <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1	12	7	RED	ORG	GRN								
		11								BLK	BLU		
		B										WHT/BLK	
SB2	12	1	RED	ORG	GRN								
		13								BLK	BLU		
		B										WHT/BLK	
SB3	12	5	RED	ORG	GRN								
		6	RED	ORG	GRN								
SB4	12	8	RED	ORG	GRN								
SB5	12	9	RED	ORG	GRN								
SB6	12	4	RED	ORG	GRN								
		10								BLK	BLU		
		B										WHT/BLK	
SB7	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
SB8	7	12								BLK	BLU		
		B										WHT/BLK	

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.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

WISCONSIN
JASON R. MATSON
371[illegible]
[illegible], JKE[illegible]
WI
PROFESSIONAL ENGINEER
4/24/2014

(CONTINUED ON NEXT SHEET)

(CONTINUED)

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

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB2
SB2	SB3
CB1	SB7

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB3	SB2
PB4	SB3
PB5	SB5

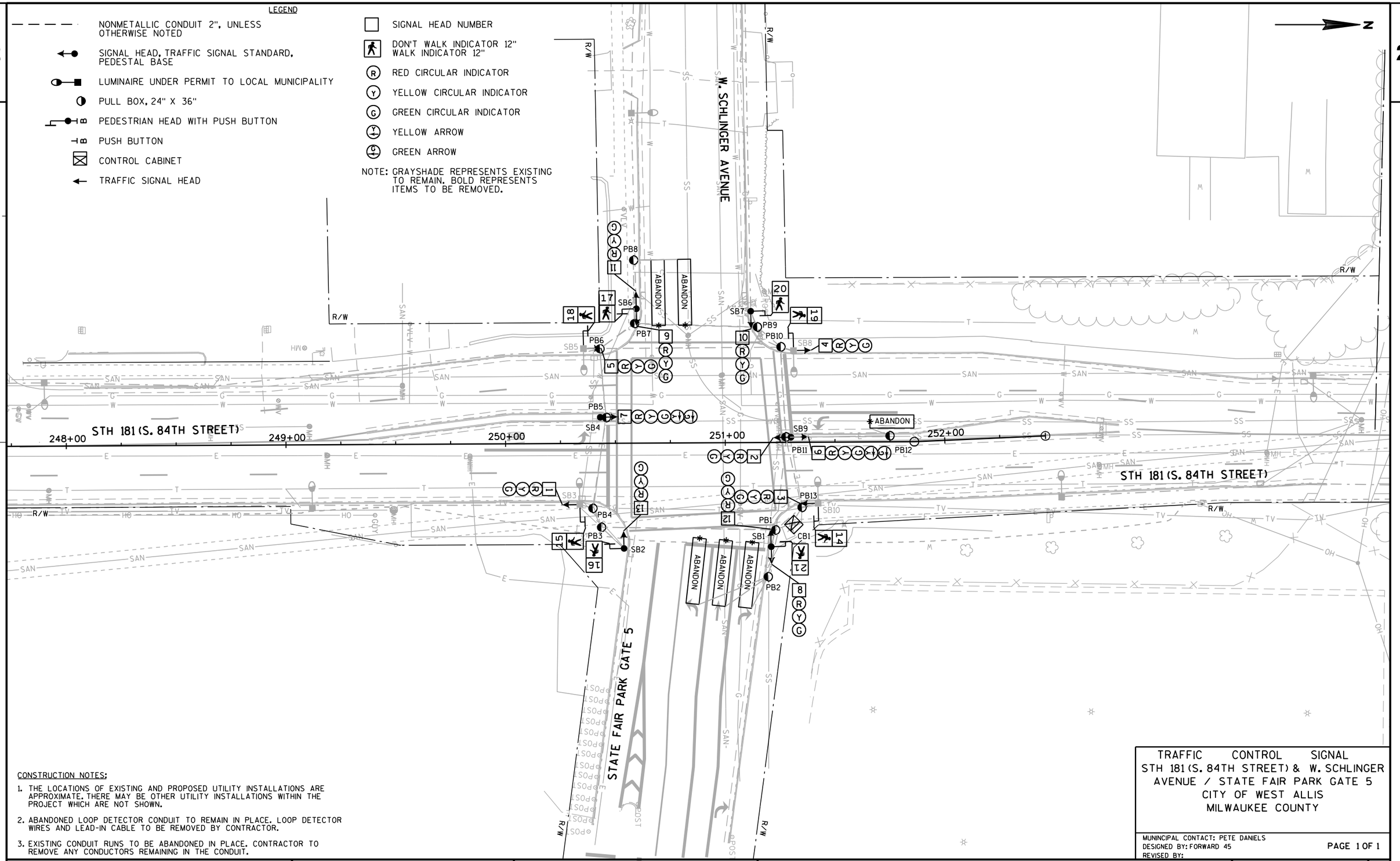
RADAR DETECTION CABLE	
FROM	TO
CB1	RA1 (SB7)
CB1	RA2 (SB3)
CB1	RM1 (SB7)
CB1	RM2 (SB3)
CB1	RM4 (SB7)

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB3 (HEAD A)
CB1	SB7 (HEAD B)
CB1	SB4 (HEAD D)

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- DON'T WALK INDICATOR 12" WALK INDICATOR 12"
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS ITEMS TO BE REMOVED.



CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRES AND LEAD-IN CABLE TO BE REMOVED BY CONTRACTOR.
3. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.

TRAFFIC CONTROL SIGNAL
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE / STATE FAIR PARK GATE 5
CITY OF WEST ALLIS
MILWAUKEE COUNTY

MUNINCIPAL CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024321_sp.dgn PLOT DATE : 29-APR-2014 12:21 PLOT BY : MSCAXW PLOT NAME : 024321_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- RADAR DETECTION AREA
- RX RADAR DETECTOR
- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER

LEGEND (CON'T)

- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

N

W. SCHLINGER AVENUE

STH 181 (S. 84TH STREET)

248+00 249+00 250+00 251+00 252+00

POSTED SPEED LIMIT = 30 MPH

POSTED SPEED LIMIT = 25 MPH

R/W

550' TO END OF DETECTION AREA

50' TO RADAR DETECTOR UNIT

STATE FAIR PARK GATE 5

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. ALL LUMINAIRES ARE LED CATEGORY B UNLESS OTHERWISE NOTED.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.
6. CONDUIT EMBEDDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3".
7. PROPOSED FTMS IS SHOWN GRAYSHADED FOR PLAN CLAIRTY.
8. SIGNAL HEAD 6 SHALL BE A SIDE FIRE MOUNT.
9. RADAR UNIT AND EVP DETECTOR LOCATIONS ARE APPROXIMATE. COORDINATE PLACEMENT OF THE EQUIPMENT WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO PLACING THE EQUIPMENT.
10. DETECTION ZONE LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE SETTING DETECTION ZONES WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO SETTING DETECTION ZONES.

STRUCTURE NUMBERS

SB1	S-40-1471
SB3	S-40-1472
SB5	S-40-1473
SB8	S-40-1474

WISCONSIN JASON R. MATSON 37111 WAUKESHA, WI PROFESSIONAL ENGINEER 04/24/14

TRANSFERRED FROM CITY OF WEST ALLIS UPON COMPLETION OF 1060-35-91.

TRAFFIC CONTROL SIGNAL

STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE / STATE FAIR PARK GATE 5
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CABINET TYPE: TS2
SIGNAL NO. S40-1390 CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED Date 4/24/14 — REGION TRAFFIC ENGINEER
APPROVED Date 4/25/14 — STATE TRAFFIC ENGINEER

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

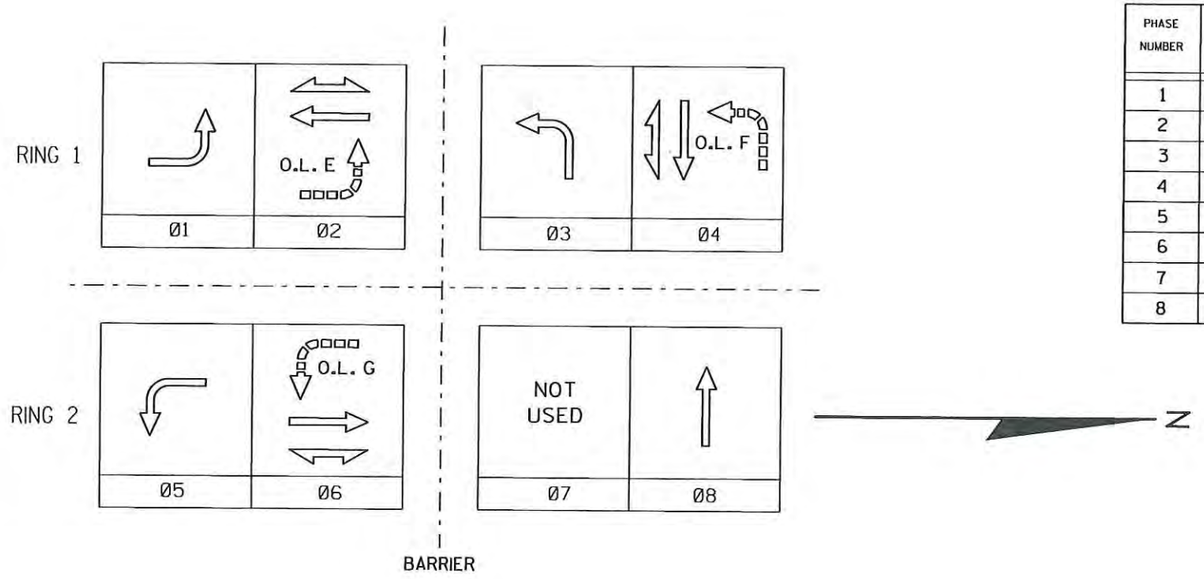
PAGE 1 OF 2

PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024325_sp.dgn PLOT DATE : 24-APR-2014 07:45 PLOT BY : MSCDYB PLOT NAME : 024325_sp PLOT SCALE : 40:1 WISDOT/CADDS SHEET 42

4-24-14 DJW

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



CONTROLLER LOGIC

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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	11	22	41	43	51	81		
CALLED PHASE	1	2	4	4	5	8		
CALL OPTION	X	X		X	X	X		
DELAY TIME	X					X		
EXTEND OPTION		X	X	X	X	X		
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE		1			6			

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR *(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR *(S)	21	31	42	44	61	82		
CALLED PHASE	2	3	4	4	6	8		
CALL OPTION		X	X	X		X		
DELAY TIME		X	X					
EXTEND OPTION	X		X	X	X	X		
EXTEND TIME								
USE ADDED INITIAL	X				X			
CROSS SWITCH PHASE				3				

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR *(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL D
MOVEMENT				
PHASE	2+5	6+1	4+8	8+3

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

AFTER PREEMPTION SEQUENCE 4+8 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE / STATE FAIR GATE 5
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1390 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 04/14 PAGE NO. 2 OF 2

4-24-14 DTW
4/24/14 SMM

PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET E

PROJECT ID:	1060-35-91
INTERSECTION:	STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE

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

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING> <YELLOW>	D/WALK	WALK	PED BUTTON
SB1	12	12	RED	ORG	GRN							
		13	RED	ORG	GRN							
		15				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB2	12	4				RED	ORG	GRN	BLK/WHT			
		6	RED/BLK	ORG/BLK	GRN/BLK							
		22								BLK	BLU	
		B										WHT/BLK
SB3	12	2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		23								BLK	BLU	
SB4	12	11	RED	ORG	GRN							
		B										WHT/BLK
SB5	12	17	RED	ORG	GRN							
		18	RED	ORG	GRN							
SB6	7	19								BLK	BLU	
		B										WHT/BLK
SB7	12	1	RED	ORG	GRN							
		9				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		24								BLK	BLU	
		B										WHT/BLK
SB8	12	7	RED	ORG	GRN							
		8	RED	ORG	GRN							
		10				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB9	7	21								BLK	BLU	
		B										WHT/BLK
SB10	12	14				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		16	RED	ORG	GRN							
		20								BLK	BLU	
		B										WHT/BLK

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.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.



(CONTINUED ON NEXT SHEET)

(CONTINUED)

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	SB9
SB9	SB10
SB10	CB1

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB1
SB1	SB3
CB1	SB8
SB8	SB5

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB2
PB3	SB3
PB4	SB4
PB5	SB5
PB6	SB7
PB7	SB8
PB8	SB10
PB9	CB1

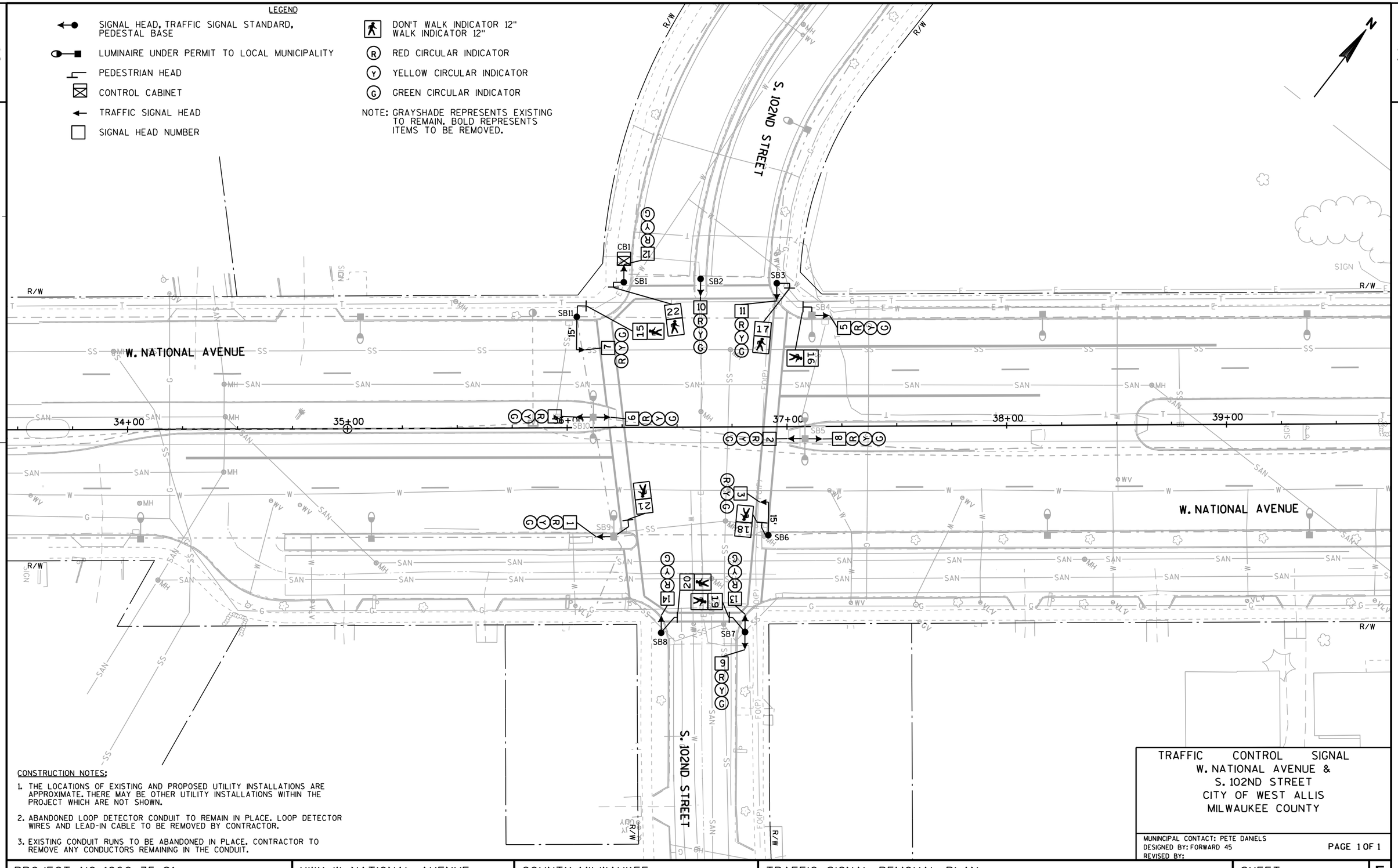
RADAR DETECTION CABLE	
FROM	TO
CB1	RA1 (SB3)
CB1	RA2 (SB8)
CB1	RA3 (SB1)
CB1	RM1 (SB3)
CB1	RM2 (SB8)
CB1	RM3 (SB1)
CB1	RM4 (SB5)

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB8 (HEAD A)
CB1	SB3 (HEAD B)
CB1	SB5 (HEAD C)
CB1	SB1 (HEAD D)

LEGEND

- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- PEDESTRIAN HEAD
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- DON'T WALK INDICATOR 12" WALK INDICATOR 12"
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS ITEMS TO BE REMOVED.



CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRES AND LEAD-IN CABLE TO BE REMOVED BY CONTRACTOR.
3. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.

TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE &
S. 102ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

MUNINCIPAL CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024411_sp.dgn PLOT DATE : 29-APR-2014 06:58 PLOT BY : MSCDYB PLOT NAME : 024411_sp PLOT SCALE : 40:1

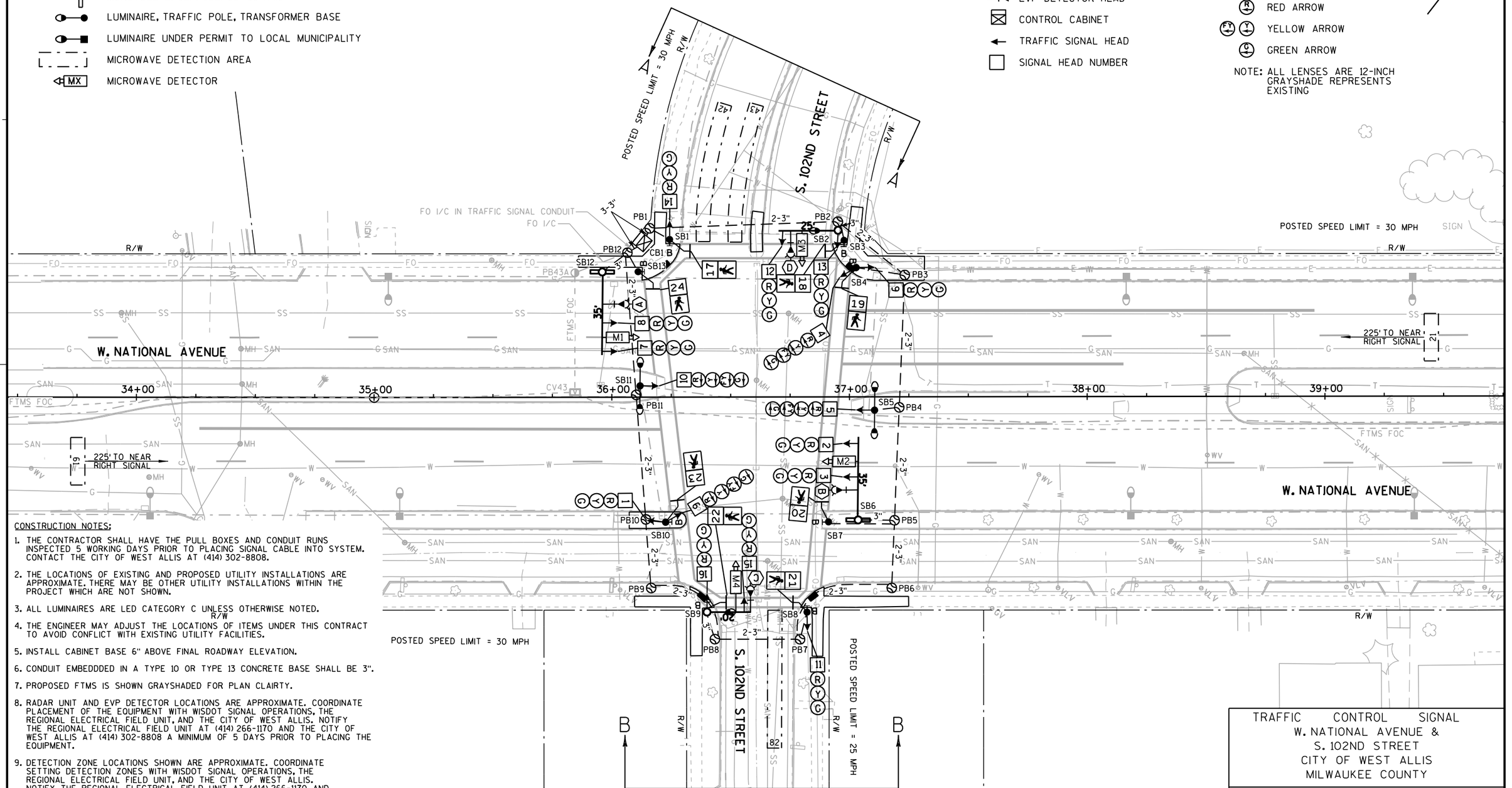
LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- MICROWAVE DETECTION AREA
- MX MICROWAVE DETECTOR

LEGEND (CON'T)

- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

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. CONTACT THE CITY OF WEST ALLIS AT (414) 302-8808.
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. ALL LUMINAIRES ARE LED CATEGORY C UNLESS OTHERWISE NOTED.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.
6. CONDUIT EMBEDDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3".
7. PROPOSED FTMS IS SHOWN GRAYSHADED FOR PLAN CLAIRTY.
8. RADAR UNIT AND EVP DETECTOR LOCATIONS ARE APPROXIMATE. COORDINATE PLACEMENT OF THE EQUIPMENT WITH WISDOT SIGNAL OPERATIONS, THE REGIONAL ELECTRICAL FIELD UNIT, AND THE CITY OF WEST ALLIS. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 AND THE CITY OF WEST ALLIS AT (414) 302-8808 A MINIMUM OF 5 DAYS PRIOR TO PLACING THE EQUIPMENT.
9. DETECTION ZONE LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE SETTING DETECTION ZONES WITH WISDOT SIGNAL OPERATIONS, THE REGIONAL ELECTRICAL FIELD UNIT, AND THE CITY OF WEST ALLIS. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 AND THE CITY OF WEST ALLIS AT (414) 302-8808 A MINIMUM OF 5 DAYS PRIOR TO SETTING DETECTION ZONES.

TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE &
S. 102ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

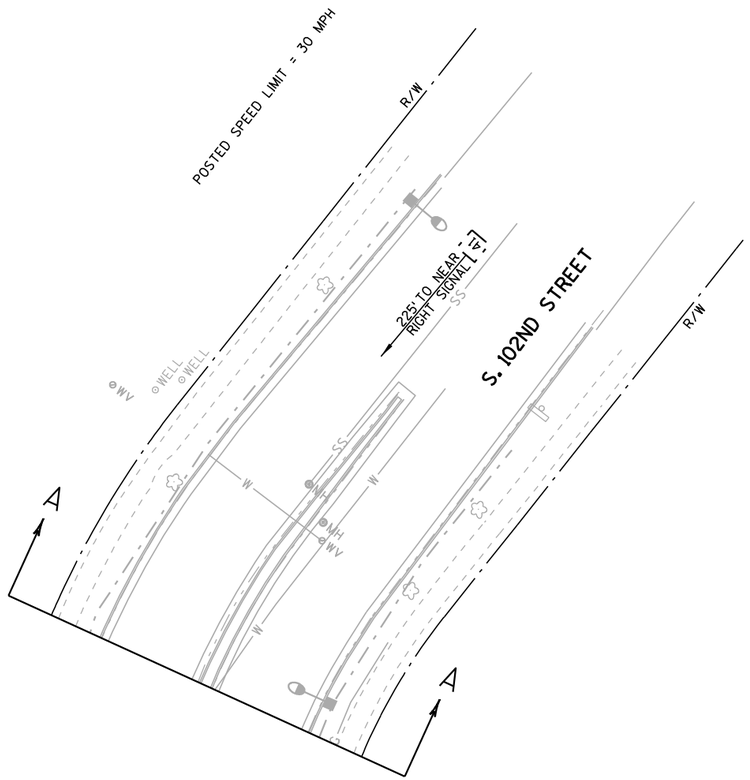
CITY CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

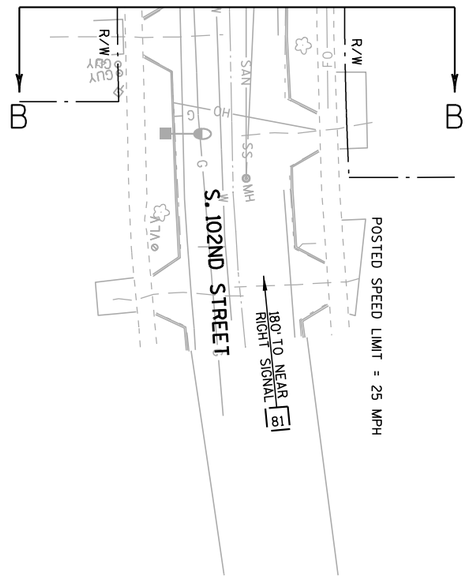
PAGE 1 OF 3

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024415_sp.dgn PLOT DATE : 29-APR-2014 07:01 PLOT BY : MSCDYB PLOT NAME : 024415_sp PLOT SCALE : 40:1

2





TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE &
S. 102ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

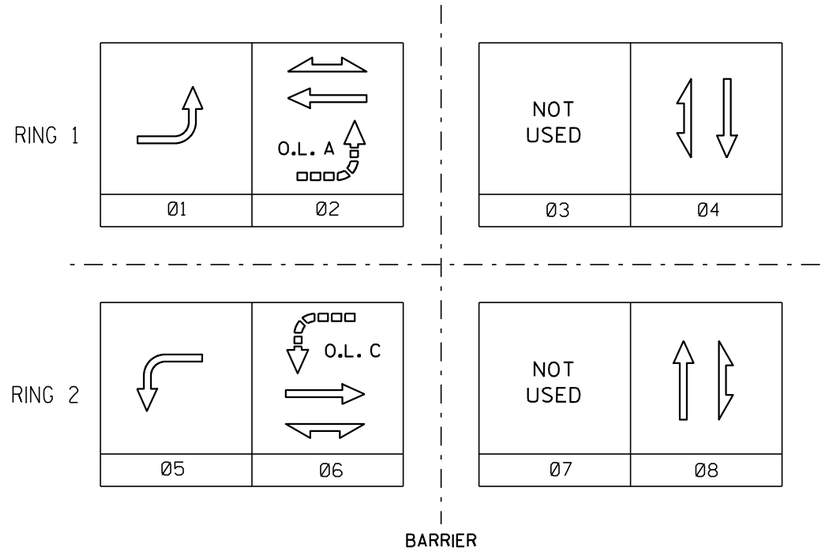
CITY CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024416_sp.dgn PLOT DATE : 29-APR-2014 07:04 PLOT BY : MSCDYB PLOT NAME : 024416_sp PLOT SCALE : 40:1

	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	17,18	
Ø4P	23,24	
Ø6P	21,22	
Ø8P	19,20	
OLA	4,5	R
OLB		
OLC	9,10	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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	21	42	61	82				
ASSIGNED PHASE	2	4	6	6				
OPERATION MODE	VEH	VEH	VEH	VEH				
SWITCH								
EXTEND								
DELAY		X						

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

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR *(S)	41	43	81					
ASSIGNED PHASE	4	4	4					
OPERATION MODE	VEH	VEH	VEH					
SWITCH								
EXTEND								
DELAY								

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL 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.

W. NATIONAL AVENUE &
S. 102ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. CABINET TYPE: TS2

CONTROLLER TYPE: EPAC

DATE 04/14 PAGE NO. 3 OF 3

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET E

W. NATIONAL AVENUE & S. 102ND STREET

2

PROJECT ID:	1060-35-91
INTERSECTION:	W. NATIONAL AVENUE & S. 102ND STREET

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

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1	12	14	RED	ORG	GRN								
		17								BLK	BLU		
		B										WHT/BLK	
SB2	12	12	RED	ORG	GRN								
		13	RED	ORG	GRN								
SB3	7	18								BLK	BLU		
		B										WHT/BLK	
SB4	12	4				RED	ORG	GRN	BLK/WHT				
		6	RED/BLK	ORG/BLK	GRN/BLK								
		19								BLK	BLU		
		B										WHT/BLK	
SB5	12	5				RED	ORG	GRN	BLK/WHT				
SB6	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
SB7	7	20								BLK	BLU		
		B										WHT/BLK	
SB8	12	11	RED	ORG	GRN								
		21								BLK	BLU		
		B										WHT/BLK	
SB9	12	15	RED	ORG	GRN								
		16	RED	ORG	GRN								
		22								BLK	BLU		
		B										WHT/BLK	
SB10	12	1	RED	ORG	GRN								
		9				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		23								BLK	BLU		
		B										WHT/BLK	
SB11	12	10				RED	ORG	GRN	BLK/WHT				
SB12	12	7	RED	ORG	GRN								
		8	RED	ORG	GRN								
SB13	7	24								BLK	BLU		
		B										WHT/BLK	

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.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

(CONTINUED ON NEXT SHEET)

(CONTINUED)

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	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	CB1

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB2
SB2	SB5
CB1	SB11
SB11	SB9

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB2
PB3	SB4
PB4	SB5
PB5	SB6
PB6	SB6
PB7	SB8
PB8	SB9
PB9	SB10
PB10	SB10
PB11	SB11
PB12	SB13

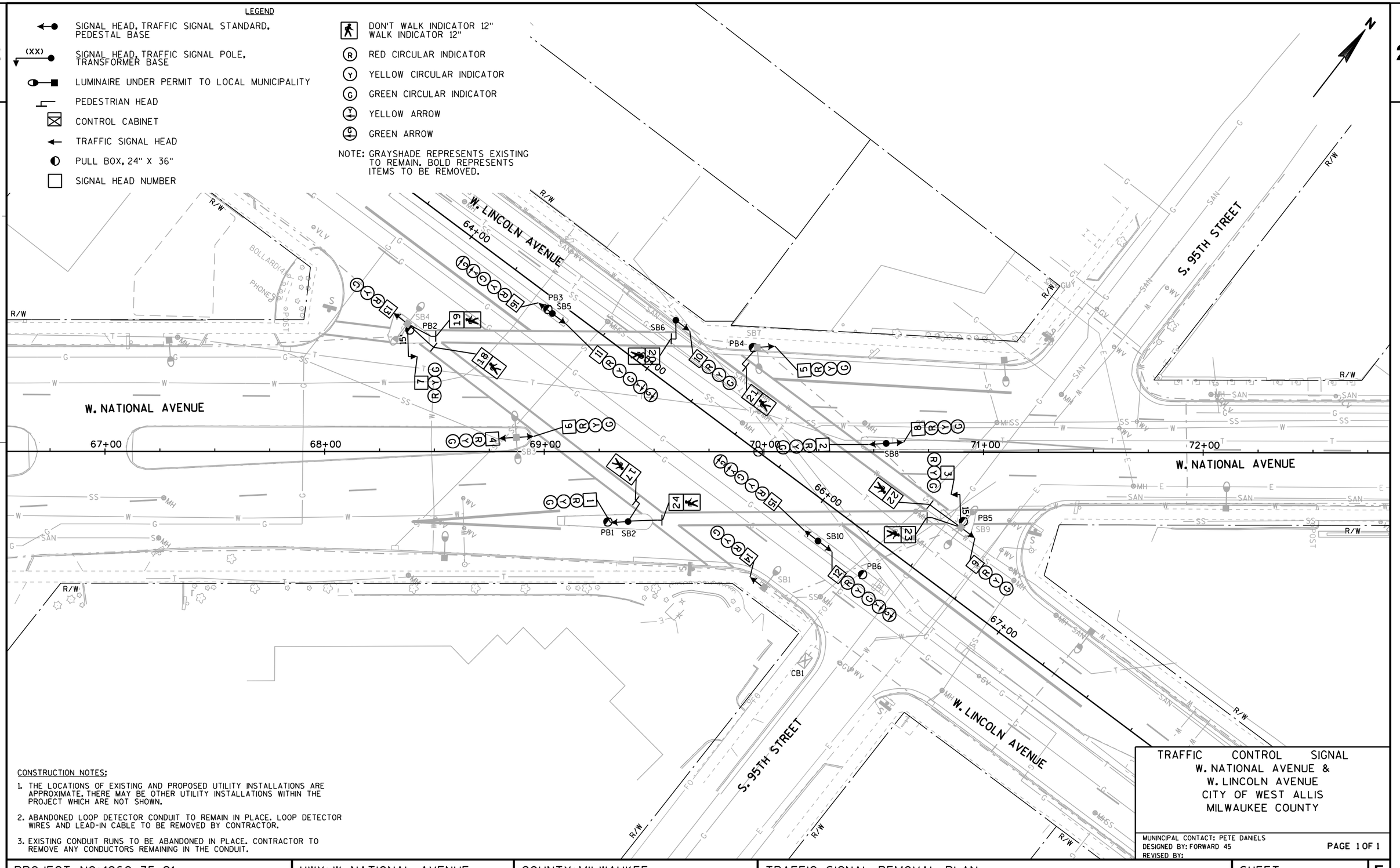
MICROWAVE DETECTION CABLE	
FROM	TO
CB1	M1 (SB12)
CB1	R1 (SB6)
R1 (SB6)	M2 (SB6)
CB1	M3 (SB2)
CB1	R2 (SB9)
R2 (SB9)	M4 (SB9)

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB12 (HEAD A)
CB1	SB6 (HEAD B)
CB1	SB9 (HEAD C)
CB1	SB2 (HEAD D)

LEGEND

- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- PEDESTRIAN HEAD
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- PULL BOX, 24" X 36"
- SIGNAL HEAD NUMBER
- DON'T WALK INDICATOR 12" WALK INDICATOR 12"
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (Y) YELLOW ARROW
- (G) GREEN ARROW

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS ITEMS TO BE REMOVED.



CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRES AND LEAD-IN CABLE TO BE REMOVED BY CONTRACTOR.
3. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.

TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE &
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

MUNINCIPAL CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024421_sp.dgn PLOT DATE : 29-APR-2014 07:11 PLOT BY : MSCDYB PLOT NAME : 024421_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE

(XX) MONOTUBE BASE, POLE, 15'-30' ARM

(XX) MONOTUBE BASE, POLE, 35'-55' ARM

LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

MICROWAVE DETECTION AREA

MX MICROWAVE DETECTOR

LEGEND (CON'T)

PULL BOX, 24" X 42"

PEDESTRIAN HEAD WITH PUSH BUTTON

PUSH BUTTON

EVP DESIGNATOR

EVP DETECTOR HEAD

CONTROL CABINET

TRAFFIC SIGNAL HEAD

SIGNAL HEAD NUMBER

CIRCULAR INDICATOR WITH TUNNEL VISOR

WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)

R RED CIRCULAR INDICATOR

Y YELLOW CIRCULAR INDICATOR

G GREEN CIRCULAR INDICATOR

R RED ARROW

Y YELLOW ARROW

G GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

W. LINCOLN AVENUE

W. NATIONAL AVENUE

S. 95TH STREET

POSTED SPEED LIMIT = 30 MPH

225' TO NEAR RIGHT SIGNAL

FTMS FOC

FO I/C

FO I/C IN TRAFFIC SIGNAL CONDUIT

CONSTRUCTION NOTES;

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE CITY OF WEST ALLIS AT (414) 302-8808.

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. ALL LUMINAIRES ARE LED CATEGORY C UNLESS OTHERWISE NOTED.

4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.

5. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.

6. CONDUIT EMBEDDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3".

7. PROPOSED FTMS IS SHOWN GRAYSHADED FOR PLAN CLAIRTY.

8. RADAR UNIT AND EVP DETECTOR LOCATIONS ARE APPROXIMATE. COORDINATE PLACEMENT OF THE EQUIPMENT WITH WISDOT SIGNAL OPERATIONS, THE REGIONAL ELECTRICAL FIELD UNIT, AND THE CITY OF WEST ALLIS. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 AND THE CITY OF WEST ALLIS AT (414) 302-8808 A MINIMUM OF 5 DAYS PRIOR TO PLACING THE EQUIPMENT.

9. DETECTION ZONE LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE SETTING DETECTION ZONES WITH WISDOT SIGNAL OPERATIONS, THE REGIONAL ELECTRICAL FIELD UNIT, AND THE CITY OF WEST ALLIS. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 AND THE CITY OF WEST ALLIS AT (414) 302-8808 A MINIMUM OF 5 DAYS PRIOR TO SETTING DETECTION ZONES.

TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE &
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

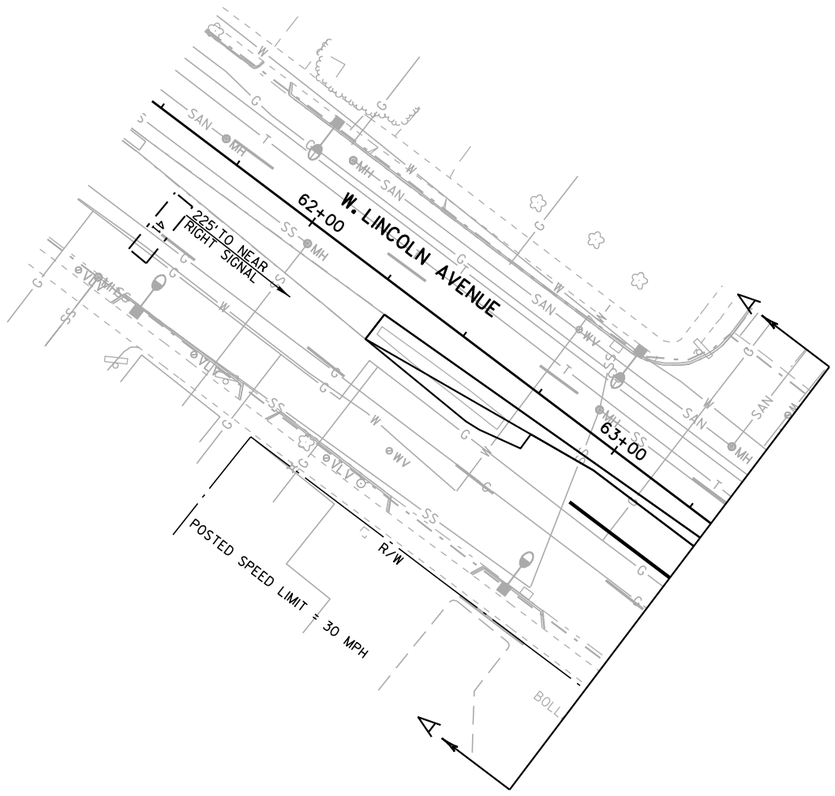
CITY CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024425_sp.dgn PLOT DATE : 29-APR-2014 07:13 PLOT BY : MSCDYB PLOT NAME : 024425_sp PLOT SCALE : 40:1

2





TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE &
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CITY CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

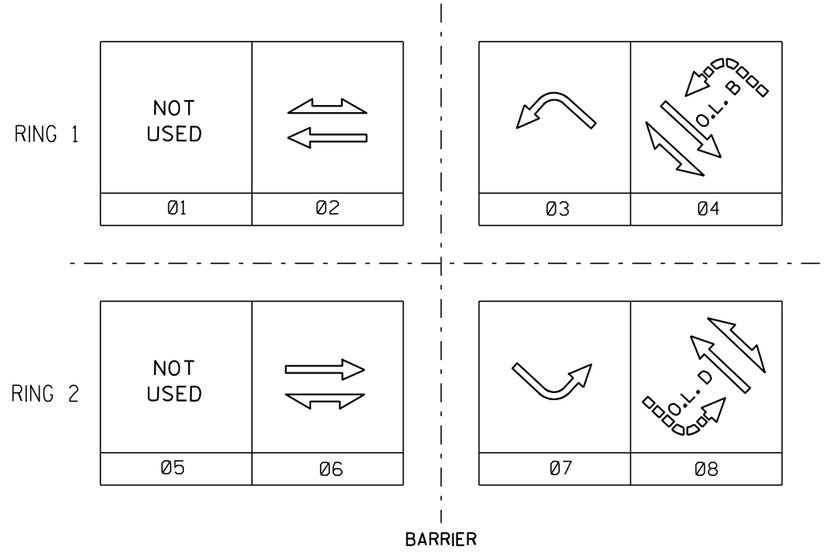
PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024426_sp.dgn PLOT DATE : 29-APR-2014 07:15 PLOT BY : MSCDYB PLOT NAME : 024426_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

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



CONTROLLER LOGIC

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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	21	41	43	71	82			
ASSIGNED PHASE	2	2	4	7	8			
OPERATION MODE	VEH	VEH	VEH	VEH	VEH			
SWITCH				4				
EXTEND		X						
DELAY								

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

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR *(S)	31	42	61	81	83			
ASSIGNED PHASE	2	3	4	8	8			
OPERATION MODE	VEH	VEH	VEH	VEH	VEH			
SWITCH	8							
EXTEND				X				
DELAY								

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL D
MOVEMENT	← →	← →	↘ ↜	↘ ↗
PHASE	2+6	6+2	4+7	3+8

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

AFTER PREEMPTION SEQUENCE 3+8 OR 4+7, CONTROLLER SHALL RETURN TO PHASE 4+8.

W. NATIONAL AVENUE &
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. CABINET TYPE: TS2

CONTROLLER TYPE: EPAC

DATE 04/14 PAGE NO. 3 OF 3

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET E

PROJECT ID:	1060-35-91
INTERSECTION:	W. NATIONAL AVENUE & W. LINCOLN AVENUE

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

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1	12	13	RED	ORG	GRN								
		14	RED	ORG	GRN								
		16				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB2	12	1	RED	ORG	GRN								
		17								RED/BLK	GRN/BLK		
		24								BLK	BLU		
		(NB) B										WHT/BLK	
		(WB) B										BLK/WHT	
SB3	12	5	RED	ORG	GRN								
		6	RED	ORG	GRN								
SB4	15	10				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		12	RED	ORG	GRN								
		18								RED/WHT	GRN/WHT		
		19								BLK	BLU		
		(NB) B										WHT/BLK	
		(EB) B										BLU/WHT	
SB6	12	8	RED	ORG	GRN								
		9	RED	ORG	GRN								
		11				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB7	7	20								BLK	BLU		
		B										WHT/BLK	
SB8	12	4	RED	ORG	GRN								
		21								BLK	BLU		
		B										WHT/BLK	
SB9	12 (CABLE 1)	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		7	BLK	BLU	WHT/BLK								
		15				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
	12 (CABLE 2)	22								RED/BLK	GRN/BLK		
		23								BLK	BLU		
		(SB) B										WHT/BLK	
		(WB) B										BLK/WHT	

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.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

(CONTINUED ON NEXT SHEET)

(CONTINUED)

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

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

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB3 (HEAD A)
CB1	SB8 (HEAD B)
CB1	SB1 (HEAD C)
CB1	SB5 (HEAD D)

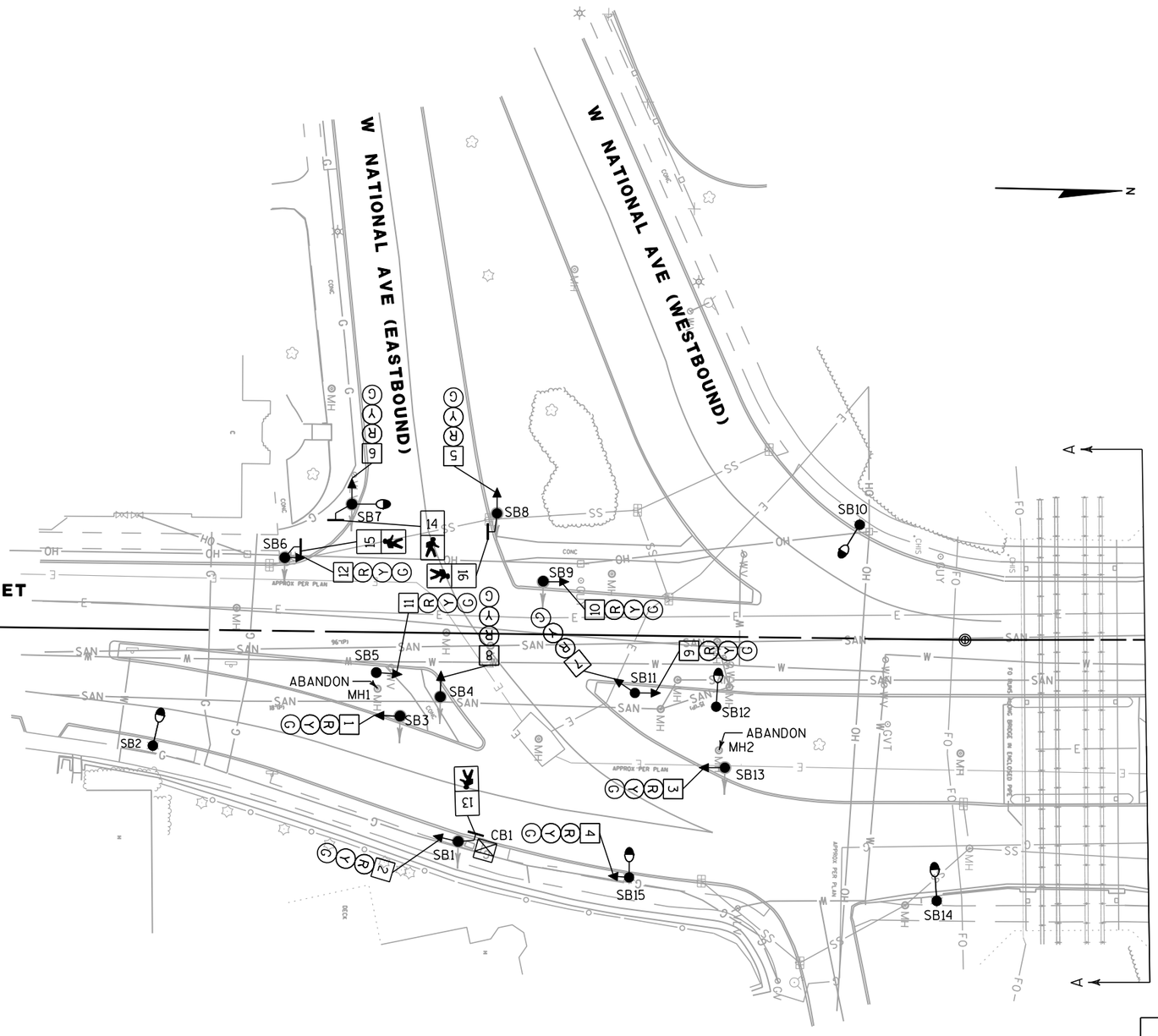
LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB1
SB1	SB3
CB1	SB9
SB9	SB8
SB8	SB6

MICROWAVE DETECTION CABLE	
FROM	TO
CB1	R1 (SB7)
R1 (SB7)	M1 (SB5)
CB1	M2 (SB1)
CB1	M3 (SB8)
CB1	R2 (SB3)
R2 (SB3)	M4 (SB3)

LEGEND

- CONTROL CABINET
- SIGNAL HEAD, PEDESTAL MOUNT
- LUMINAIRE
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- PEDESTRIAN HEAD
- WALK / DON'T WALK INDICATOR 12"

NOTE:
GRAYSHADE REPRESENTS EXISTING
BOLD REPRESENTS ITEMS TO BE REMOVED



CONSTRUCTION NOTES:
1. CABINET AND CONTROLLER SHALL BE REMOVED BY CONTRACTOR AND RETURNED TO THE CITY OF WEST ALLIS

TRAFFIC CONTROL SIGNAL
84TH STREET & NATIONAL AVENUE
(SOUTH INTERSECTION)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO.

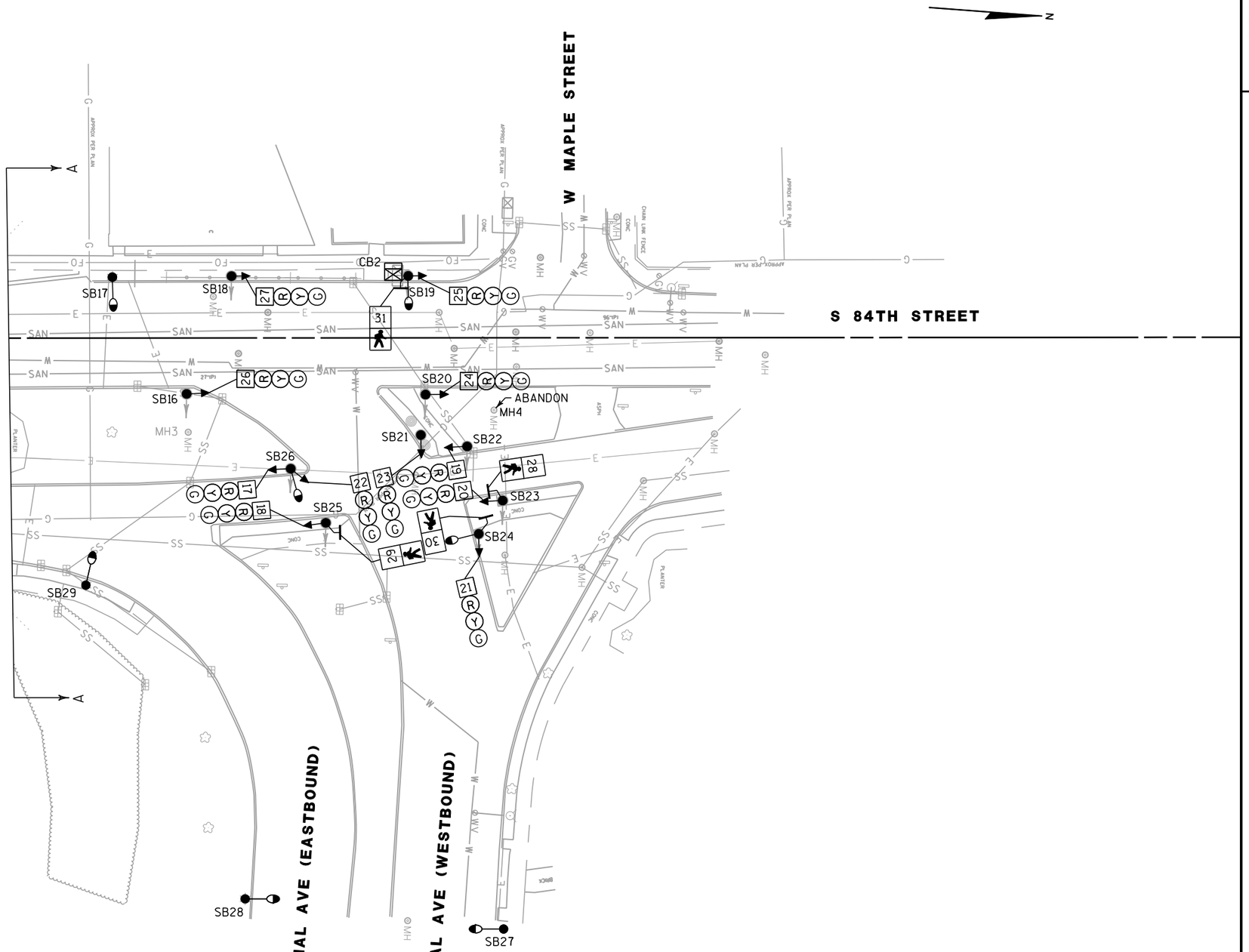
SCALE 0 20

PROJECT NO: 1060-35-91	HWY: 84TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 244	E

LEGEND

- CONTROL CABINET
- SIGNAL HEAD, PEDESTAL MOUNT
- LUMINAIRE
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- PEDESTRIAN HEAD
- WALK / DON'T WALK INDICATOR 12"

NOTE:
GRAYSHADE REPRESENTS EXISTING
BOLD REPRESENTS ITEMS TO BE REMOVED



CONSTRUCTION NOTES:
1. CABINET AND CONTROLLER SHALL BE REMOVED BY CONTRACTOR AND RETURNED TO THE CITY OF WEST ALLIS

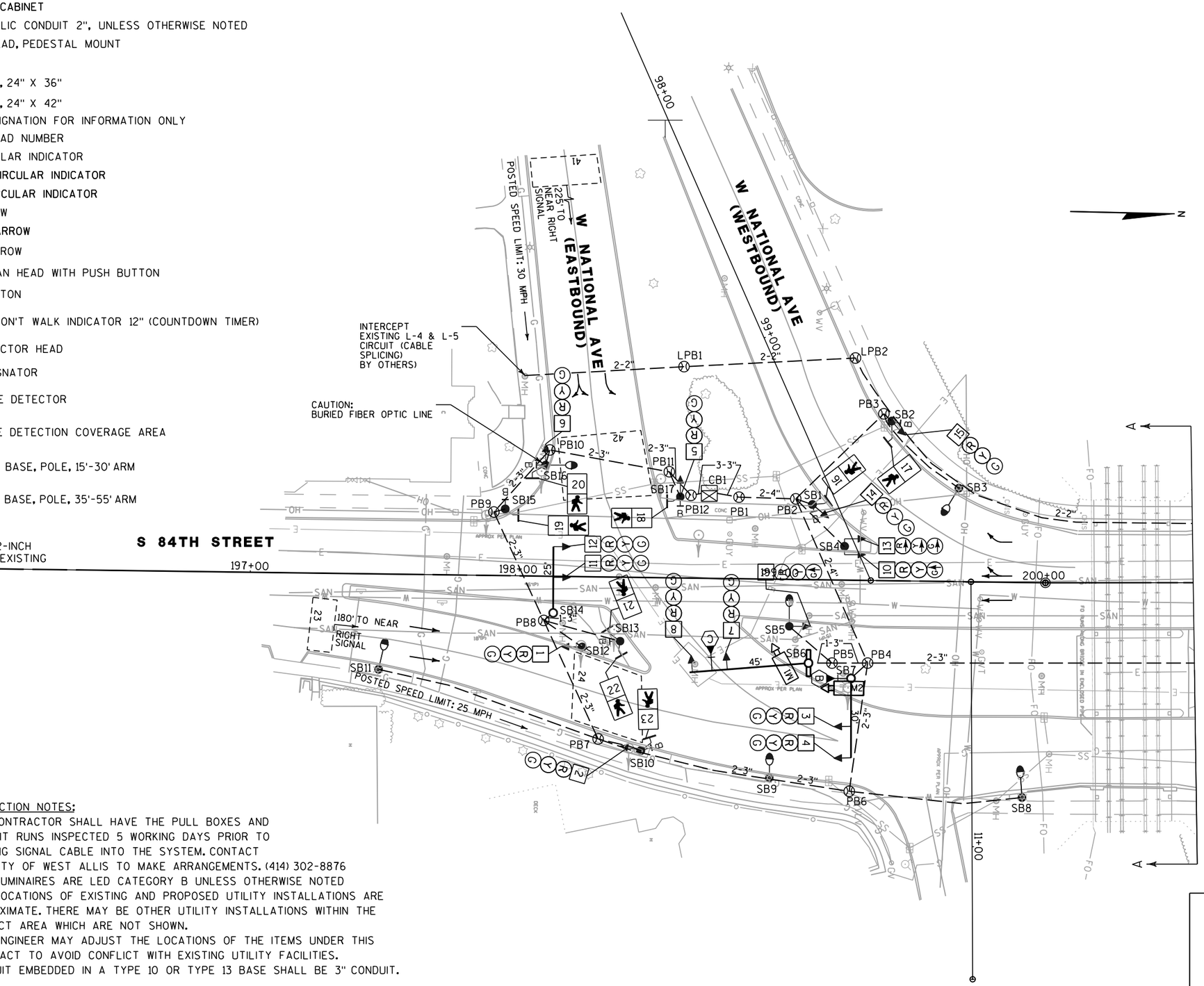
TRAFFIC CONTROL SIGNAL
84TH STREET & NATIONAL AVENUE
(NORTH INTERSECTION)
CITY OF WEST ALLIS
MILWAUKEE COUNTY
SIGNAL NO.
SCALE 0 20

PROJECT NO: 1060-35-91	HWY: 84TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 245 E

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, PEDESTAL MOUNT
- LUMINAIRE
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- LANE DESIGNATION FOR INFORMATION ONLY
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK / DON'T WALK INDICATOR 12" (COUNTDOWN TIMER)
- EVP DETECTOR HEAD
- EVP DESIGNATOR
- M1 MICROWAVE DETECTOR
- MICROWAVE DETECTION COVERAGE AREA
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM

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 THE SYSTEM. CONTACT THE CITY OF WEST ALLIS TO MAKE ARRANGEMENTS. (414) 302-8876
2. ALL LUMINAIRES ARE LED CATEGORY B UNLESS OTHERWISE NOTED
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF THE ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. CONDUIT EMBEDDED IN A TYPE 10 OR TYPE 13 BASE SHALL BE 3" CONDUIT.

TRAFFIC CONTROL SIGNAL
84TH STREET & NATIONAL AVENUE
(SOUTH INTERSECTION)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO.

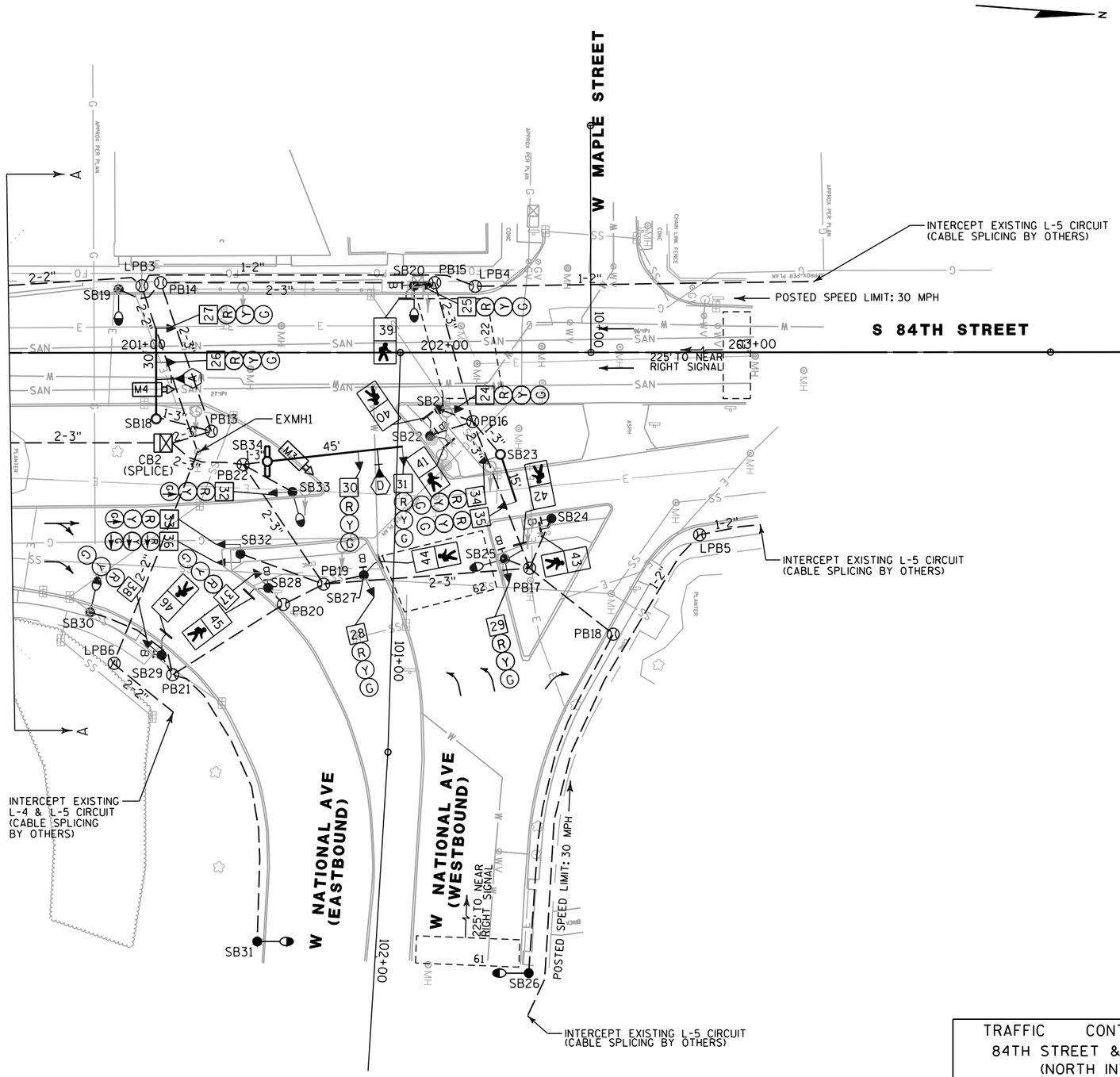
SCALE 0 20

PROJECT NO: 1060-35-91	HWY: 84TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 246 E

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, PEDESTAL MOUNT
- LUMINAIRE
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- LANE DESIGNATION FOR INFORMATION ONLY
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK / DON'T WALK INDICATOR 12" (COUNTDOWN TIMER)
- EVP DETECTOR HEAD
- EVP DESIGNATOR
- MICROWAVE DETECTOR
- MICROWAVE DETECTION COVERAGE AREA
- MONOTUBE BASE, POLE, 15'-30' ARM
- MONOTUBE BASE, POLE, 35'-55' ARM

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
84TH STREET & NATIONAL AVENUE
(NORTH INTERSECTION)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

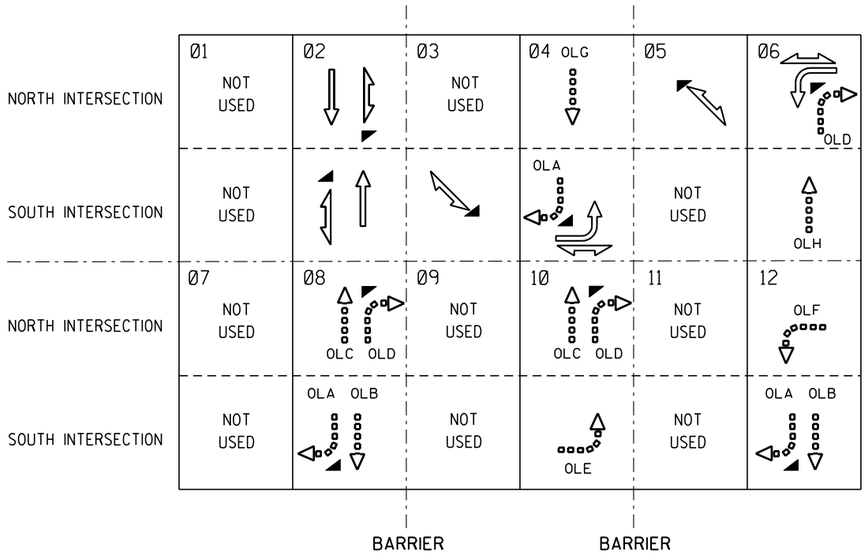
SIGNAL NO.

SCALE 0 20

PROJECT NO: 1060-35-91	HWY: 84TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 247	E

FILE NAME : t:\1131100\cadd\plan\024002_sp_signal 84th_National.dgn PLOT DATE : 4/23/2014 PLOT BY : wdw PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42



	HEAD NUMBERS	FLASH
01		
02	1, 2, 3, 4, 24, 25, 26, 27	R
03		
04	5, 6, 7, 8	R
05		
06	28, 29, 30, 31	R
07		
08		
02P	18, 19, 43, 44	
03P	16, 17	
04P	20, 21, 22, 23	
05P	45, 46	
06P	39, 40, 41, 42	
08P		
OLA	13, 14, 15	R, R
OLB	9, 10, 11, 12	R
OLC	32, 33, 34, 35	R
OLD	36, 37, 38	R, R
OLE	5, 6, 7, 8	R
OLF	28, 29, 30, 31	R
OLG	24, 25, 26, 27	R
OLH	1, 2, 3, 4	R

N

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

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

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

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR #	21	23	41	61				
PHASE ASSIGNED	2	2	4	6				
PHASE CALLED	2	2	4	6				
PHASE SWITCHED								

19	17	23	21	27	25	31	29	DETECTOR INPUT
								DETECTOR #
								PHASE ASSIGNED
								PHASE CALLED
								PHASE SWITCHED

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR #	22	24	42	62				
PHASE ASSIGNED	2	2	4	6				
PHASE CALLED	2	2	4	6				
PHASE SWITCHED								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								DETECTOR #
								PHASE ASSIGNED
								PHASE CALLED
								PHASE SWITCHED

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D	
MOVEMENT					NORTH INTERSECTION
					SOUTH INTERSECTION
PHASE	2+8	2+8	4+10	6+12	

AFTER PREEMPTION SEQUENCE 2+8, CONTROLLER SHALL RETURN TO PHASES 2+8
AFTER PREEMPTION SEQUENCE 4+10, CONTROLLER SHALL RETURN TO PHASES 4+10
AFTER PREEMPTION SEQUENCE 6+12, CONTROLLER SHALL RETURN TO PHASES 6+12

TRAFFIC CONTROL SIGNAL
84TH STREET & NATIONAL AVE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO.

CONTROLLER TYPE: EPAC TS2

DATE FEBRUARY 2014 PAGE NO. 3 OF 3

PROJECT ID:	1060-35-91
INTERSECTION:	S. 84th Street & National Avenue (South Intersection)

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

DATE	5/1/14

CB1 TO	JUMPER	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTON	OTHER
					RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	D/WALK	WALK		
SB1		12	14	OLA	RED	ORG	GRN							
			16	3							BLK	BLU		
			PB	3									WHT/BLK	
SB2		12	15	OLA	RED	ORG	GRN							
			17	3							BLK	BLU		
			PB	3									WHT/BLK	
SB4		12	10	OLB	RED	ORG				GRN				
			13	OLA				RED/BLK	ORG/BLK	GRN/BLK				
SB5		12	9	OLB	RED/BLK	ORG/BLK				GRN/BLK				
SB6		12	7	4, OLE	RED	ORG	GRN							
			8	4, OLE	RED	ORG	GRN							
SB7		12	3	2, OLH	RED	ORG	GRN							
			4	2, OLH	RED	ORG	GRN							
SB10		12	2	2, OLH	RED	ORG	GRN							
			23	4							BLK	BLU		
			PB	4									WHT/BLK	
SB12		7	1	4	RED	ORG	GRN							
SB13		12	21	4							BLK	BLU		
			22	4							BLK/WHT	BLU/BLK		
			PB	4									WHT/BLK	
SB14		12	11	OLB	RED	ORG	GRN							
			12	OLB	RED	ORG	GRN							
SB15		7	19	2							BLK	BLU		
			PB	2									WHT/BLK	
SB16		12	6	4, OLE	RED	ORG	GRN							
			20	4							BLK	BLU		
			PB	4									WHT/BLK	
SB17		12	5	4, OLE	RED	ORG	GRN							
			18	4							BLK	BLU		
			PB	4									WHT/BLK	

CB1 TO	# OF COND.	
CB2	15	SEE NORTH INTERSECTION FOR CABLING
CB2	15	SEE NORTH INTERSECTION FOR CABLING

*Use the white conductor in the cable assembly 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.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	**TO**
CB1	SB1
SB1	SB2
SB2	SB4
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB10
SB10	SB12
SB12	SB13
SB13	SB14
SB14	SB15
SB15	SB16
SB16	SB17
SB17	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	**TO**
PB1	CB1
PB2	SB1
PB3	SB2
PB4	SB7
PB5	SB6
PB6	SB9
PB7	SB10
PB8	SB14
PB9	SB15
PB10	SB16
PB11	SB17
PB12	CB1

MICROWAVE DETECTOR CABLE	
FROM	**TO**
CB1	M1 (SB6)
CB1	M2 (SB7)

EMERGENCY VEHICLE PREEMPTION (EVP) CABLE	
From	**To**
CB1	SB6 (HEAD 'B')
CB1	SB7 (HEAD 'C')

LIGHTING UF #10 AWG W/GROUND	
FROM	**TO**
CB1	SB3
SB3	SB5
SB5	SB8
SB8	SB9
CB1	SB16
SB16	SB11

EQUIPMENT GROUNDING CONDUCTOR 8 AWG GRN XLP	
FROM	**TO**
CB1	CB2

PROJECT NO: 1060-35-91	HWY: S. 84th STREET	COUNTY: MILWAUKEE	CABLE ROUTING	SHEET NO: 250 E

FILE NAME : T:\(Project #)\Quants\3030201_mq.ppt PLOT DATE : 4/23/2014 12:11 PM PLOT BY : PLOT NAME : 030201_mq PLOT SCALE : 1.000000:1.000000 WISDOT / CADDS SHEET 42

PROJECT ID:	1060-35-91
INTERSECTION:	S. 84th Street & National Avenue (North Intersection)

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

DATE	5/1/14

CB2 (SPLICE) TO	JUMPER	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTON	OTHER
					RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	D/WALK	WALK		
SB18		12	27	2, OLG	RED	ORG	GRN							
			28	2, OLG	RED	ORG	GRN							
SB20		12	25	2, OLG	RED	ORG	GRN							
			39	6							BLK	BLU		
			PB	6									WHT/BLK	
SB21		7	24	2, OLG	RED	ORG	GRN							
SB22		12	40	6							BLK	BLU		
			41	6							BLK	BLU		
			PB	6									WHT/BLK	
SB23		12	34	OLC	RED	ORG	GRN							
			35	OLC	RED	ORG	GRN							
SB24		7	43	OLC	RED	ORG	GRN				BLK	BLU		
			PB	6									WHT/BLK	
SB25		12	29	6, OLF	RED	ORG	GRN							
			42	6							BLK	BLU		
			PB	2									WHT/BLK	
SB27		12	28	6, OLF	RED	ORG	GRN							
			44	2							BLK	BLU		
			PB	2									WHT/BLK	
SB28		12	37	OLD	RED	ORG	GRN							
			45	5							BLK	BLU		
			PB	5									WHT/BLK	
SB29		12	38	OLD	RED	ORG	GRN							
			46	5							BLK	BLU		
			PB	5									WHT/BLK	
SB32		12	33	OLC	RED	ORG				GRN				
			36	OLD				RED/BLK	ORG/BLK	GRN/BLK				
SB33		12	32	OLC	RED	ORG				GRN				
SB34		12	30	6, OLF	RED	ORG	GRN							
			31	6, OLF	RED	ORG	GRN							

*Use the white conductor in the cable assembly 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.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	**TO**
CB2	SB18
SB18	SB20
SB20	SB21
SB21	SB22
SB22	SB23
SB23	SB24
SB24	SB25
SB25	SB27
SB27	SB28
SB28	SB29
SB29	SB32
SB32	SB33
SB33	SB34
SB34	CB2

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	**TO**
PB13	SB18
PB14	SB18
PB15	SB20
PB16	SB21
PB17	SB25
PB19	SB27
PB20	SB28
PB21	SB29
PB22	SB34

MICROWAVE DETECTOR CABLE	
FROM	**TO**
CB1	R1 (CB2)
R1 (CB2)	M4 (SB18)
CB1	R2 (CB2)
R2 (CB2)	M3 (SB34)

EMERGENCY VEHICLE PREEMPTION (EVP) CABLE	
From	**To**
CB1	SB19 (HEAD 'A')
CB1	SB34 (HEAD 'D')

LIGHTING UF #10 AWG W/GROUND	
FROM	**TO**
CB2	SB19
SB19	SB20
SB20	SB25
SB25	SB26
CB2	SB33
SB33	SB30
SB30	SB31
CB2	CB1

PROJECT NO: 1060-35-91	HWY: S. 84th STREET	COUNTY: MILWAUKEE	CABLE ROUTING	SHEET NO: 252	E

FILE NAME : T:\(Project #)\Quants\3030201_mq.ppt PLOT DATE : 4/23/2014 12:11 PM PLOT BY : PLOT NAME : 030201_mq PLOT SCALE : 1.000000:1.000000 WISDOT / CADDS SHEET 42

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- S STOP SIGN

LEGEND (CON'T)

- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

N

IH 894/USH 45 EB OFF RAMP

W. LINCOLN AVENUE

R/W IS OFF THE PAGE

CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRES AND LEAD-IN CABLE TO BE REMOVED BY CONTRACTOR.
3. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
4. CABINET AND CONTROLLER SHALL BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.

WISCONSIN
ALICIA M. DOUGHERTY
E-43022
PEWAUKEE, WI
PROFESSIONAL ENGINEER

Alicia M. Dougherty
04/29/14

TRAFFIC CONTROL SIGNAL
IH 894 / USH 45 EB OFF RAMP &
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1162

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-35-91	HWY: IH 894	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024511_sp.dgn PLOT DATE : 29-APR-2014 07:21 PLOT BY : MSCDYB PLOT NAME : 024511_sp PLOT SCALE : 40:1

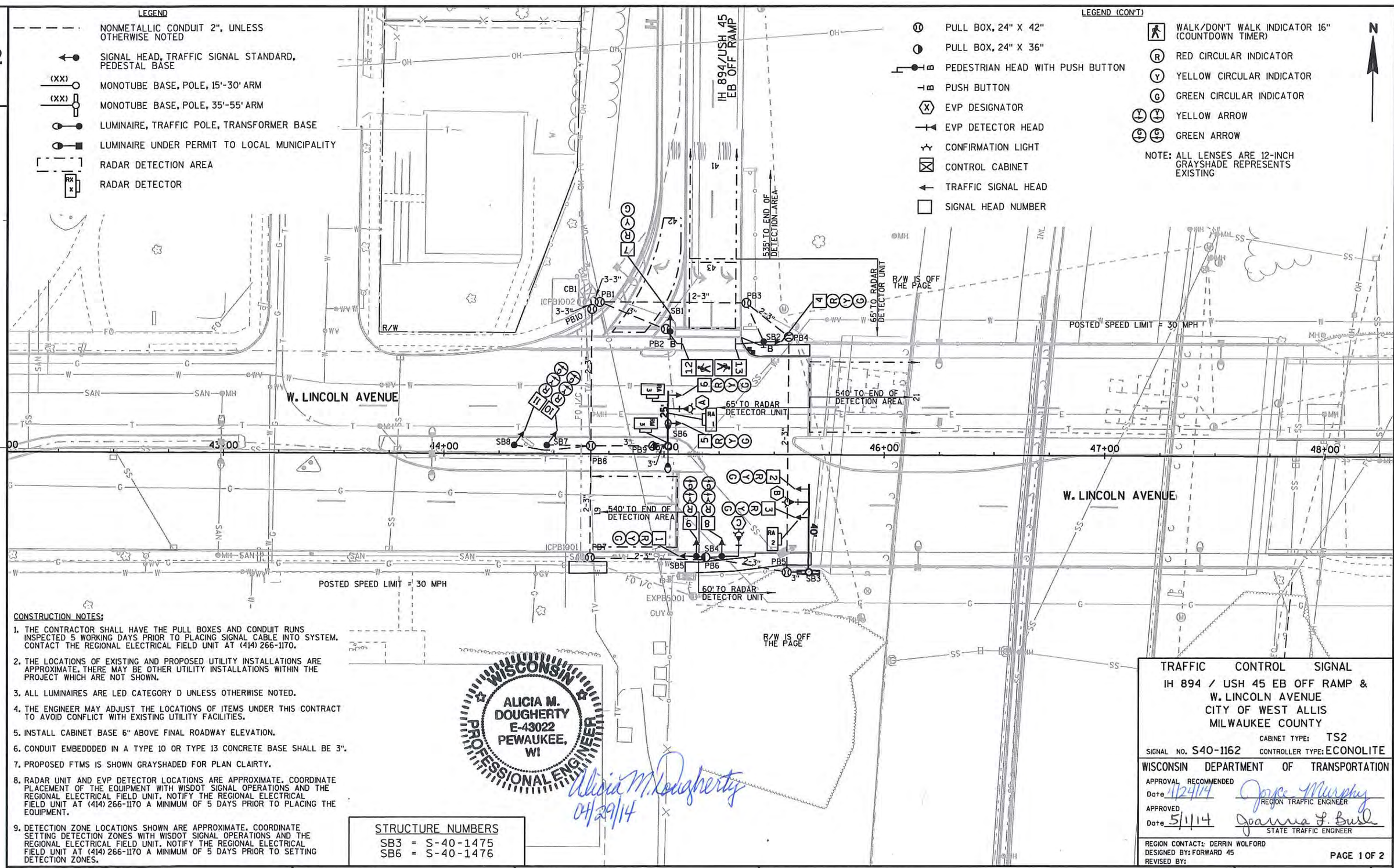
LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- RADAR DETECTION AREA
- RADAR DETECTOR

LEGEND (CON'T)

- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW

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. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. ALL LUMINAIRES ARE LED CATEGORY D UNLESS OTHERWISE NOTED.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.
6. CONDUIT EMBEDDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3".
7. PROPOSED FTMS IS SHOWN GRAYSHADED FOR PLAN CLAIRTY.
8. RADAR UNIT AND EVP DETECTOR LOCATIONS ARE APPROXIMATE. COORDINATE PLACEMENT OF THE EQUIPMENT WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO PLACING THE EQUIPMENT.
9. DETECTION ZONE LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE SETTING DETECTION ZONES WITH WISDOT SIGNAL OPERATIONS AND THE REGIONAL ELECTRICAL FIELD UNIT. NOTIFY THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170 A MINIMUM OF 5 DAYS PRIOR TO SETTING DETECTION ZONES.

WISCONSIN PROFESSIONAL ENGINEER
ALICIA M. DOUGHERTY
E-43022
PEWAUKEE, WI

Alicia M. Dougherty 04/29/14

STRUCTURE NUMBERS
SB3 = S-40-1475
SB6 = S-40-1476

TRAFFIC CONTROL SIGNAL
IH 894 / USH 45 EB OFF RAMP &
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CABINET TYPE: TS2
SIGNAL NO. S40-1162 CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 4/24/14 Joyce Murphy
REGION TRAFFIC ENGINEER

APPROVED
Date 5/1/14 Joanna L. Bush
STATE TRAFFIC ENGINEER

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 2

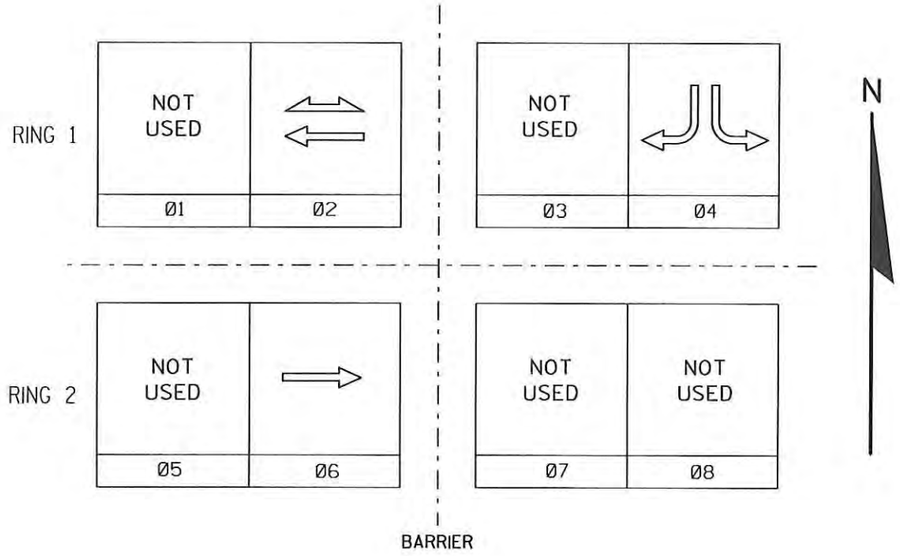
PROJECT NO: 1060-35-91	HWY: IH 894	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 254	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024515_sp.dgn PLOT DATE : 24-APR-2014 12:36 PLOT BY : MSCJ5W PLOT NAME : 024515_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

4-24-14 DJW

	HEAD NUMBERS	FLASH
Ø1		
Ø2	4,5,6	R
Ø3		
Ø4	7,8,9,10,11	R
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8		
Ø2P	12,13	
Ø4P		
Ø6P		
Ø8P		
OLE		
OLF		
OLG		
OLH		



CONTROLLER LOGIC

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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	21	42	61					
CALLED PHASE	2	4	6					
CALL OPTION		X						
DELAY TIME		X						
EXTEND OPTION	X	X	X					
EXTEND TIME								
USE ADDED INITIAL	X		X					
CROSS SWITCH PHASE								

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR *(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR *(S)	41	43						
CALLED PHASE	4	4						
CALL OPTION		X						
DELAY TIME								
EXTEND OPTION	X	X						
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR *(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C
MOVEMENT	⇄	⇄	⌟⌟
PHASE	2+6	6+2	4

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

AFTER PREEMPTION SEQUENCE 4,
CONTROLLER SHALL RETURN TO PHASE 4.

IH 894 / USH 45 EB OFF RAMP &
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1162 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 04/14 PAGE NO. 2 OF 2

PROJECT NO: 1060-35-91	HWY: IH 894	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024519_sp_ph.dgn PLOT DATE : 24-APR-2014 08:16 PLOT BY : MSCDYB PLOT NAME : 024519_sp_ph PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

MB H1-24-14 4/24/14

IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

2

PROJECT ID:	1060-35-91
INTERSECTION:	IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

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

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1	12	7	RED	ORG	GRN								
		12								BLK	BLU		
		B										WHT/BLK	
SB2	12	4	RED	ORG	GRN								
		13								BLK	BLU		
		B										WHT/BLK	
SB3	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
SB4	12	8	RED				ORG	GRN					
SB5	12	1	RED/BLK	ORG/BLK	GRN/BLK								
		9	RED				ORG	GRN					
SB6	12	5	RED	ORG	GRN								
		6	RED	ORG	GRN								
SB7	12	10	RED				ORG	GRN					
SB8	12	11	RED				ORG	GRN					

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.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

WISCONSIN
ALICIA M. DOUGHERTY
E-43022
PEWAUKEE, WI
PROFESSIONAL ENGINEER

Alicia M. Dougherty
04/29/14

(CONTINUED ON NEXT SHEET)

(CONTINUED)

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

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB1
PB3	SB2
PB4	SB2
PB5	SB3
PB6	SB5
PB7	SB5
PB8	SB7
PB9	SB6
PB10	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB6 (HEAD A)
CB1	SB3 (HEAD B)
CB1	SB4 (HEAD C)

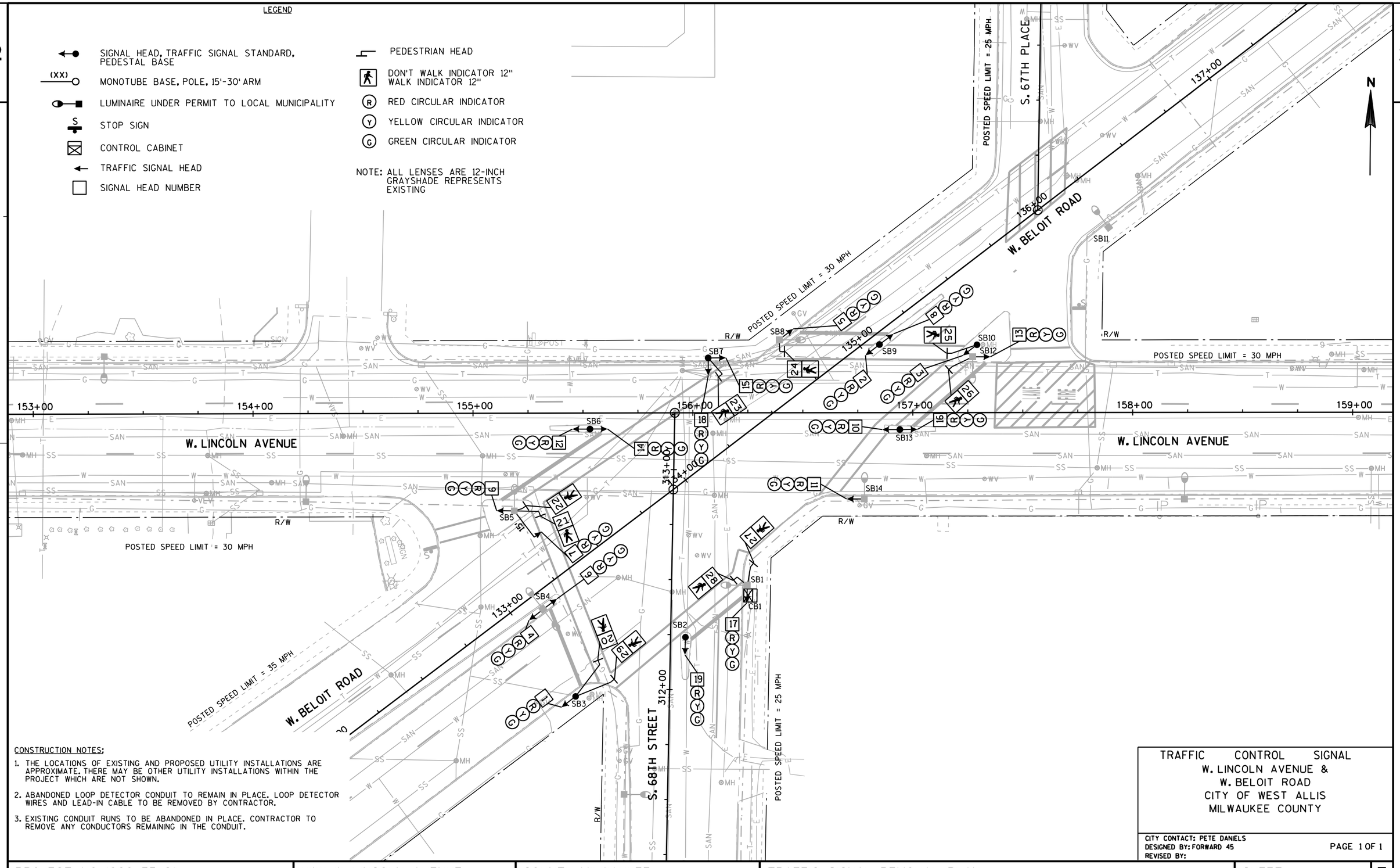
LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB6

RADAR DETECTION CABLE	
FROM	TO
CB1	RA1 (SB6)
CB1	RA2 (SB3)
CB1	RA3 (SB6)
CB1	RM3 (SB6)

LEGEND

- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- S STOP SIGN
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- PEDESTRIAN HEAD
- DON'T WALK INDICATOR 12" WALK INDICATOR 12"
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES;

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRES AND LEAD-IN CABLE TO BE REMOVED BY CONTRACTOR.
3. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.

TRAFFIC CONTROL SIGNAL
W. LINCOLN AVENUE &
W. BELOIT ROAD
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CITY CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-35-91	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

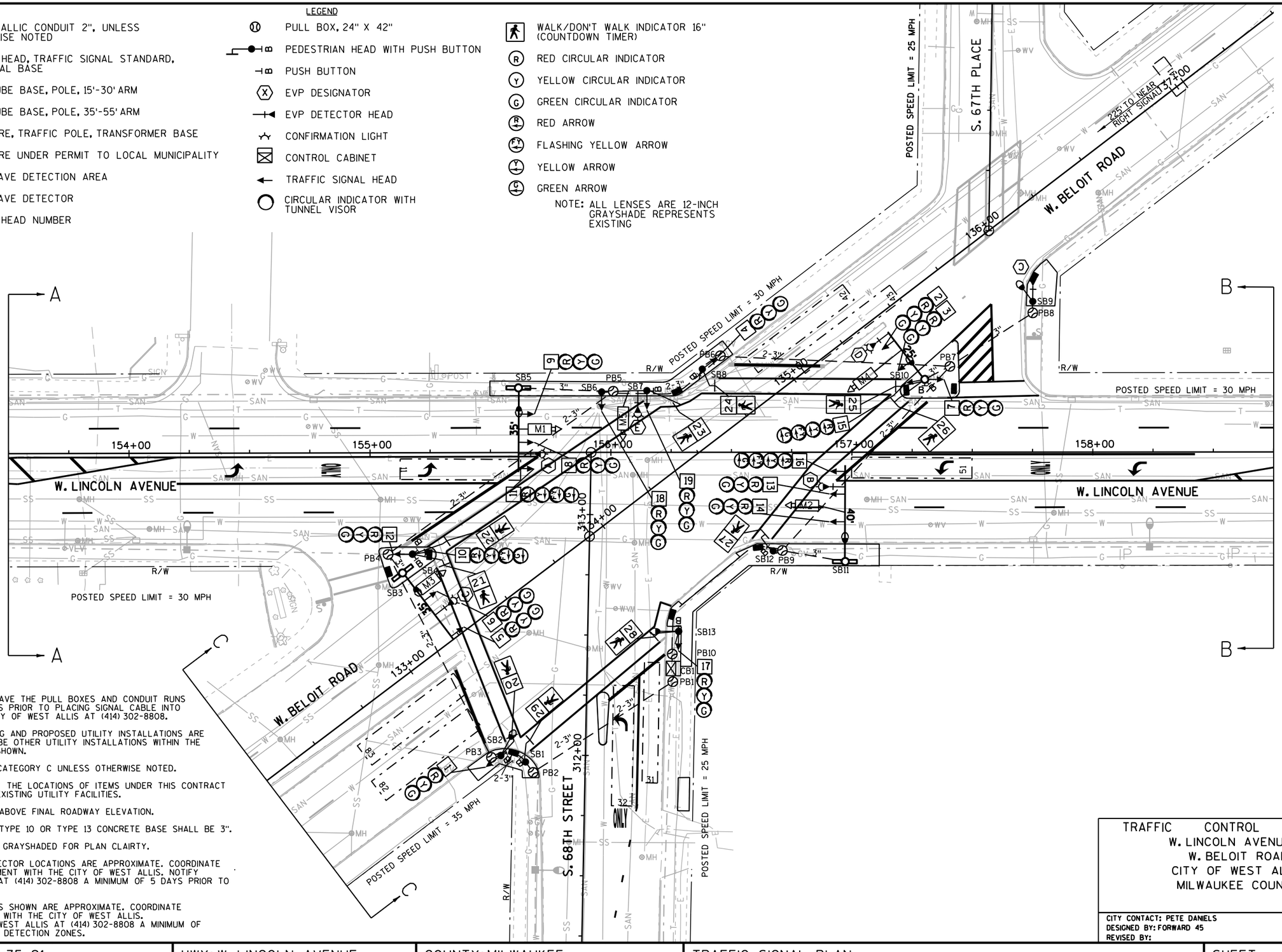
FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024521_sp.dgn PLOT DATE : 29-APR-2014 07:28 PLOT BY : MSCDYB PLOT NAME : 024521_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- MICROWAVE DETECTION AREA
- MX MICROWAVE DETECTOR
- SIGNAL HEAD NUMBER
- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- CIRCULAR INDICATOR WITH TUNNEL VISOR
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- RED ARROW
- FLASHING YELLOW ARROW
- YELLOW ARROW
- GREEN ARROW

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. CONTACT THE CITY OF WEST ALLIS AT (414) 302-8808.
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. ALL LUMINAIRES ARE LED CATEGORY C UNLESS OTHERWISE NOTED.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.
6. CONDUIT EMBEDDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3".
7. PROPOSED FTMS IS SHOWN GRAYSHADED FOR PLAN CLAIRTY.
8. RADAR UNIT AND EVP DETECTOR LOCATIONS ARE APPROXIMATE. COORDINATE PLACEMENT OF THE EQUIPMENT WITH THE CITY OF WEST ALLIS. NOTIFY THE CITY OF WEST ALLIS AT (414) 302-8808 A MINIMUM OF 5 DAYS PRIOR TO PLACING THE EQUIPMENT.
9. DETECTION ZONE LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE SETTING DETECTION ZONES WITH THE CITY OF WEST ALLIS. NOTIFY THE THE CITY OF WEST ALLIS AT (414) 302-8808 A MINIMUM OF 5 DAYS PRIOR TO SETTING DETECTION ZONES.

TRAFFIC CONTROL SIGNAL
W. LINCOLN AVENUE &
W. BELOIT ROAD
CITY OF WEST ALLIS
MILWAUKEE COUNTY

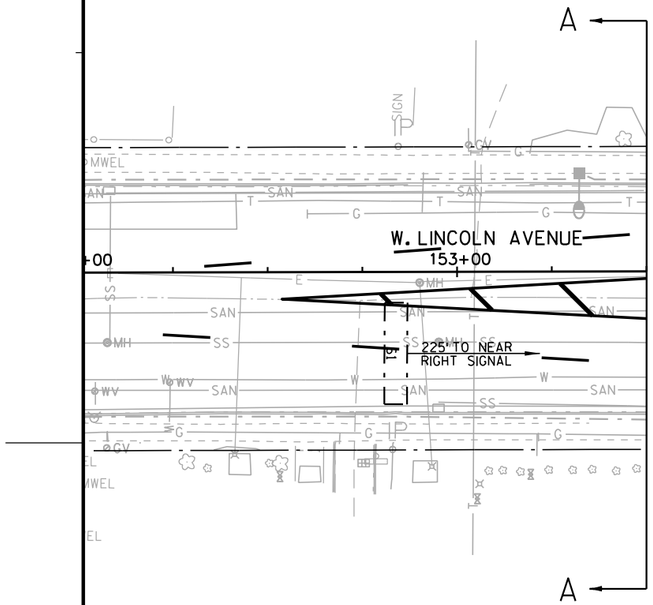
CITY CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

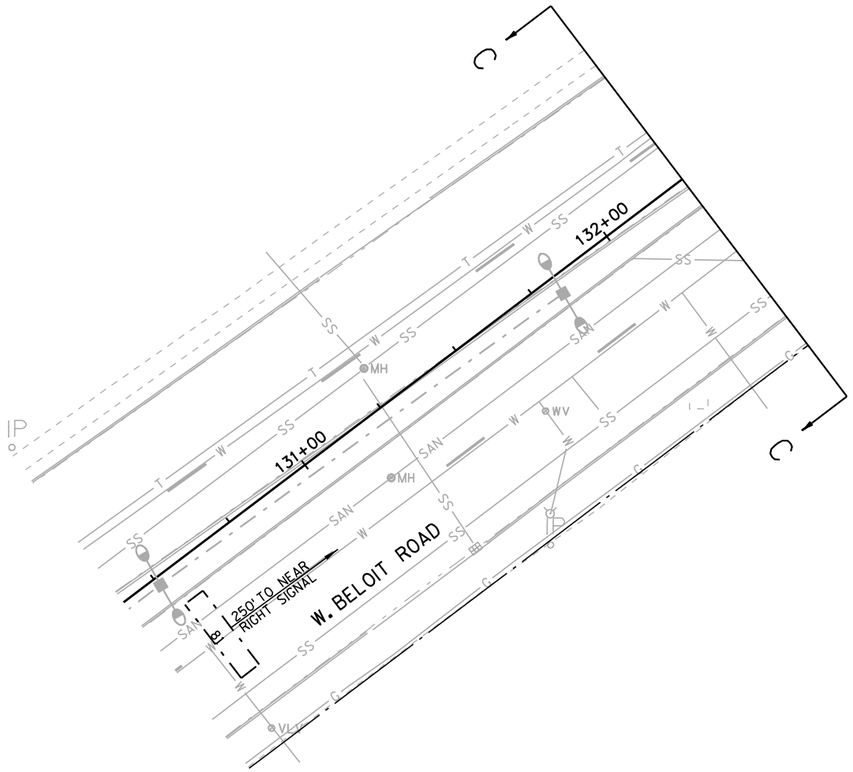
PAGE 1 OF 3

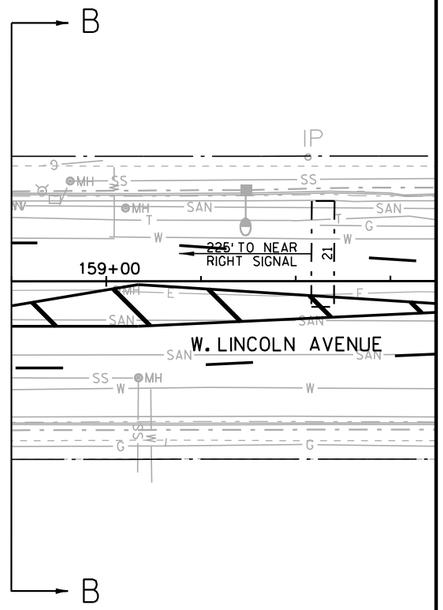
PROJECT NO: 1060-35-91	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024525_sp.dgn PLOT DATE : 29-APR-2014 07:29 PLOT BY : MSCDYB PLOT NAME : 024525_sp PLOT SCALE : 40:1

2







TRAFFIC CONTROL SIGNAL
W. LINCOLN AVENUE &
W. BELOIT ROAD
CITY OF WEST ALLIS
MILWAUKEE COUNTY

CITY CONTACT: PETE DANIELS
DESIGNED BY: FORWARD 45
REVISED BY:

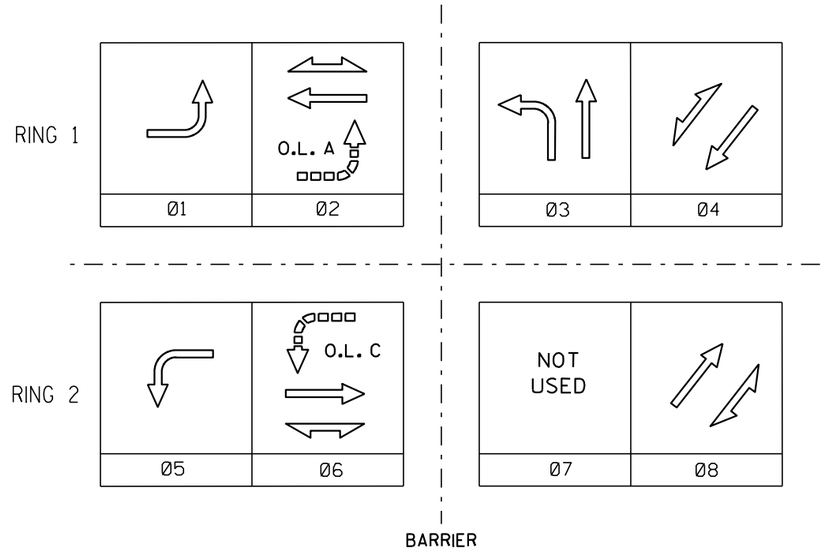
PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024526_sp.dgn PLOT DATE : 29-APR-2014 07:30 PLOT BY : MSCDYB PLOT NAME : 024526_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	15,16	-
Ø2	7,8,9	R
Ø3	17,18,19	R
Ø4	4,5,6	R
Ø5	10,11	-
Ø6	12,13,14	R
Ø7		
Ø8	1,2,3	R
Ø2P	24,25	
Ø4P	22,23	
Ø6P	20,21	
Ø8P	26,27,28,29	
OLA	15,16	R
OLB		
OLC	10,11	R
OLD		



CONTROLLER LOGIC

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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	11	31	41	43	61	82		
ASSIGNED PHASE	1	3	4	4	6	8		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH		
SWITCH								
EXTEND	X	X	X	X	X	X		
DELAY								

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

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR *(S)	21	32	42	51	81	83		
ASSIGNED PHASE	2	3	4	5	8	8		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH		
SWITCH								
EXTEND	X	X	X	X	X	X		
DELAY								

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	B	C	D	E
MOVEMENT					
PHASE	2+5	6+1	4	8	3

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

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

AFTER PREEMPTION SEQUENCE 3,
CONTROLLER SHALL RETURN TO PHASE 3.

W. LINCOLN AVENUE &
W. BELOIT ROAD
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. CABINET TYPE: TS2

CONTROLLER TYPE: EPAC

DATE 04/14 PAGE NO. 3 OF 3

PROJECT NO: 1060-33-93	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET E

W. LINCOLN AVENUE & W. BELOIT ROAD

2

PROJECT ID:	1060-35-91
INTERSECTION:	W. LINCOLN AVENUE & W. BELOIT ROAD

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

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING> <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1	7	29								BLK	BLU		
		B										WHT/BLK	
SB2	12	1	RED	ORG	GRN								
		20								BLK	BLU		
		B										WHT/BLK	
SB3	12	5	RED	ORG	GRN								
		6	RED	ORG	GRN								
SB4	15	10				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		12	RED	ORG	GRN								
		21								BLK	BLU		
		22								RED/WHT	GRN/WHT		
		(NB) B										WHT/BLK	
		(EB) B										BLU/BLK	
SB5	12	8	RED	ORG	GRN								
		9	RED	ORG	GRN								
		11				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB6	12	18	RED	ORG	GRN								
SB7	12	19	RED	ORG	GRN								
		23								BLK	BLU		
		B										WHT/BLK	
SB8	12	4	RED	ORG	GRN								
		24								BLK	BLU		
		B										WHT/BLK	
SB10	12 (CABLE 1)	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		7	BLK	BLU	WHT/BLK								
		15				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB10	12 (CABLE 2)	25								RED/BLK	GRN/BLK		
		26								BLK	BLU		
		(NB) B										WHT/BLK	
		(WB) B										BLK/WHT	
SB11	12	13	RED	ORG	GRN								
		14	RED	ORG	GRN								
		16				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB12	7	27								BLK	BLU		
		B										WHT/BLK	
SB13	12	17	RED	ORG	GRN								
		28								BLK	BLU		
		B										WHT/BLK	

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.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

(CONTINUED ON NEXT SHEET)

(CONTINUED)

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	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB1
PB3	SB2
PB4	SB3
PB5	SB6
PB6	SB8
PB7	SB10
PB8	SB9
PB9	SB12
PB10	SB13

MICROWAVE DETECTION CABLE	
FROM	TO
CB1	R1 (SB3)
R1 (SB3)	M1 (SB5)
CB1	M2 (SB11)
CB1	R2 (SB3)
R2 (SB3)	M3 (SB3)
CB1	M4 (SB10)
CB1	R3 (SB3)
R3 (SB3)	M5 (SB7)

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB5 (HEAD A)
CB1	SB11 (HEAD B)
CB1	SB3 (HEAD C)
CB1	SB9 (HEAD C)
CB1	SB10 (HEAD D)
CB1	SB7 (HEAD E)

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB2
SB2	SB3
SB3	SB5
CB1	SB13
SB13	SB11
SB11	SB10
SB10	SB9

PAGE 2 OF 2

LEGEND

(XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE

SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

PB PUSH BUTTON

CONTROL CABINET

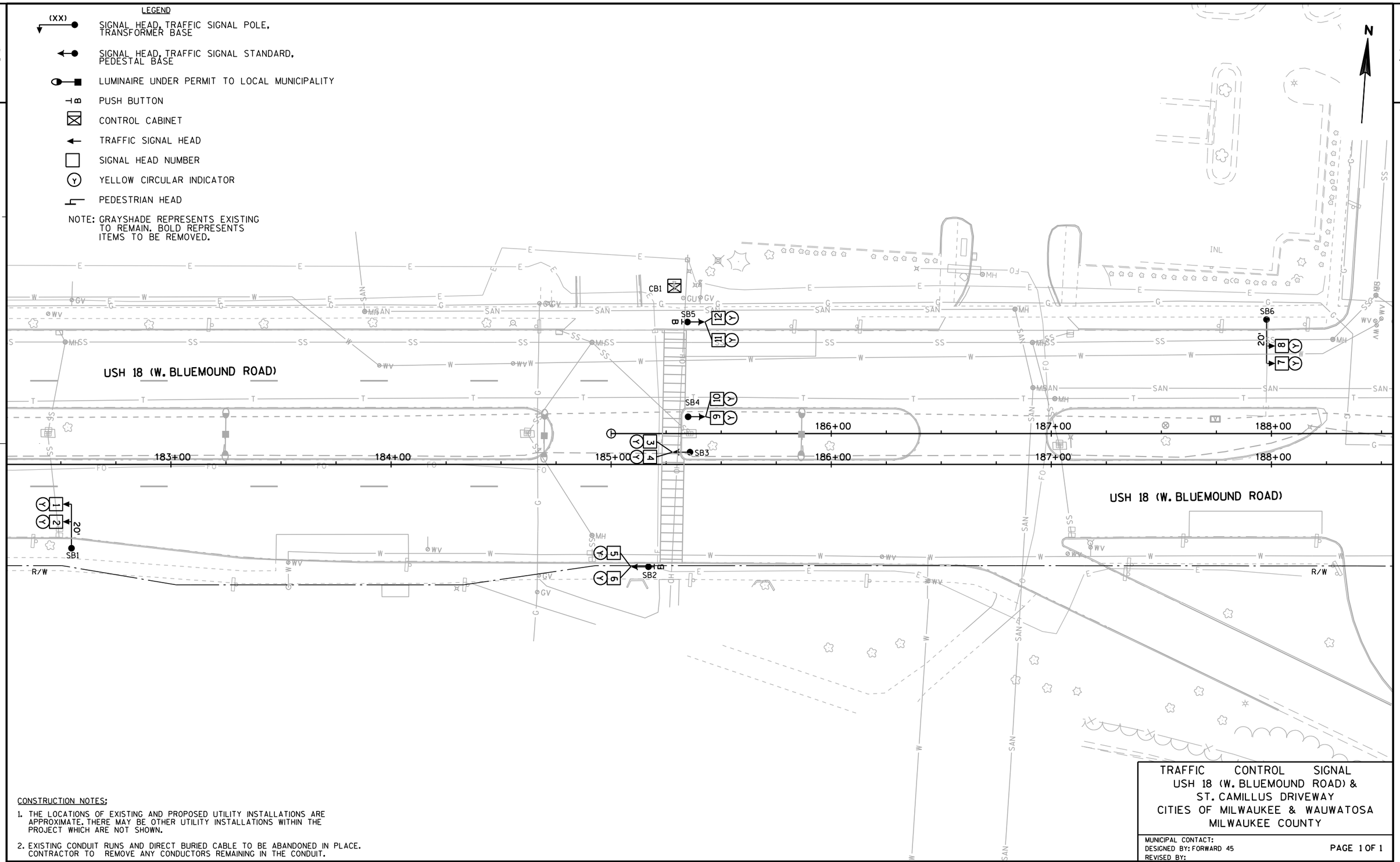
TRAFFIC SIGNAL HEAD

SIGNAL HEAD NUMBER

Y YELLOW CIRCULAR INDICATOR

PEDESTRIAN HEAD

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS ITEMS TO BE REMOVED.



CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. EXISTING CONDUIT RUNS AND DIRECT BURIED CABLE TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
ST. CAMILLUS DRIVEWAY
CITIES OF MILWAUKEE & WAUWATOSA
MILWAUKEE COUNTY

MUNICIPAL CONTACT:
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

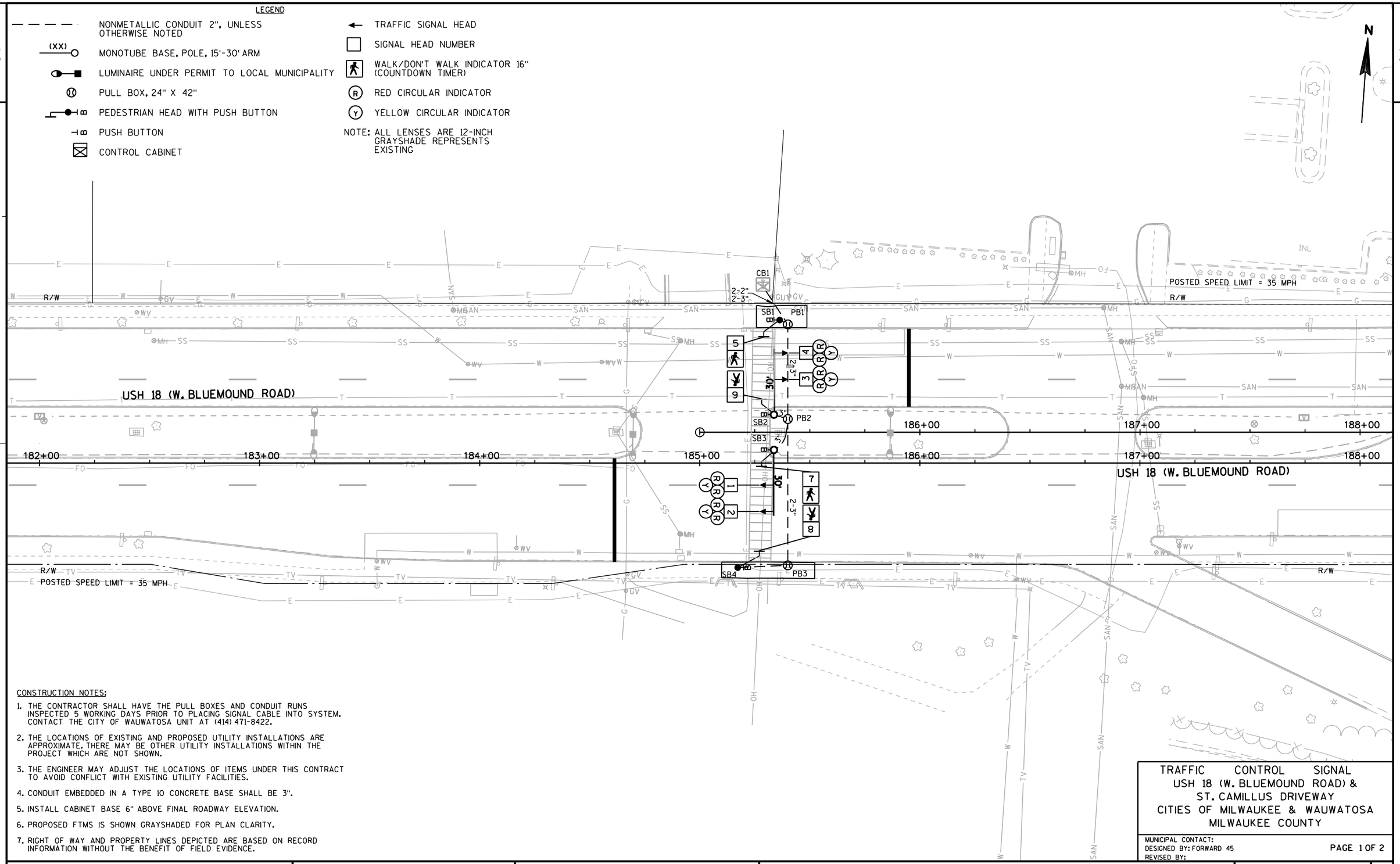
PROJECT NO: 1060-35-91	HWY: USH 18	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024611_sp.dgn PLOT DATE : 29-APR-2014 07:36 PLOT BY : MSCDYB PLOT NAME : 024611_sp PLOT SCALE : 40:1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR

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. CONTACT THE CITY OF WAUWATOSA UNIT AT (414) 471-8422.
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. CONDUIT EMBEDDED IN A TYPE 10 CONCRETE BASE SHALL BE 3".
5. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.
6. PROPOSED FTMS IS SHOWN GRAYSHADED FOR PLAN CLARITY.
7. RIGHT OF WAY AND PROPERTY LINES DEPICTED ARE BASED ON RECORD INFORMATION WITHOUT THE BENEFIT OF FIELD EVIDENCE.

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
ST. CAMILLUS DRIVEWAY
CITIES OF MILWAUKEE & WAUWATOSA
MILWAUKEE COUNTY

MUNICIPAL CONTACT:
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 1060-35-91	HWY: USH 18	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024615_sp.dgn PLOT DATE : 29-APR-2014 07:38 PLOT BY : MSCDYB PLOT NAME : 024615_sp PLOT SCALE : 40:1

SEQUENCE OF OPERATION

NOT USED | ⇒⇐ | NOT USED | ⇓

	HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø1 CLEAR TO	Ø1 CLEAR TO	Ø2 R/W	Ø2 CLEAR TO **	Ø2 CLEAR TO	Ø2 CLEAR TO	Ø3 R/W	Ø3 CLEAR TO **	Ø3 CLEAR TO	Ø3 CLEAR TO	Ø4 R/W	Ø4 CLEAR TO **	Ø4 CLEAR TO	Ø4 CLEAR TO	FLASH
Ø2	1,2,3,4					-	FY	Y						RR	FR	-		Y
Ø4	5,6,7,8					D	D	D						*	FD	D		

RING 1 — BARRIER

- = DARK SIGNAL
FY = FLASHING YELLOW
Y = STEADY YELLOW
RR = STEADY RED
FR = FLASHING RED
D = DON'T WALK
FD = FLASHING DON'T WALK

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

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

N

CONTROLLER LOGIC

PHASE NUMBER	PHASE RECALL	PHASE ACTIVE
2	MIN.	X
4		X

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

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

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
2	NONE	4
4	NONE	2

USH 18 (W. BLUEMOUND ROAD) & HAWK

CITIES OF MILWAUKEE & WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO.

CONTROLLER TYPE:

DATE 2/14 PAGE NO. 2 OF 2

USH 18 & HAWK

2

PROJECT ID:	1060-35-91
INTERSECTION:	USH 18 (W. BLUEMOUND ROAD) & HAWK

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

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED1	RED2	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1	7	5								BLK	BLU		
		B										WHT/BLK	
SB2	12	3	RED	ORG	GRN								
		4	RED/BLK	ORG/BLK	GRN/BLK								
		6								BLK	BLU		
		B										WHT/BLK	
SB3	12	1	RED	ORG	GRN								
		2	RED/BLK	ORG/BLK	GRN/BLK								
		7								BLK	BLU		
		B										WHT/BLK	
SB4	7	8								BLK	BLU		
		B										WHT/BLK	

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.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

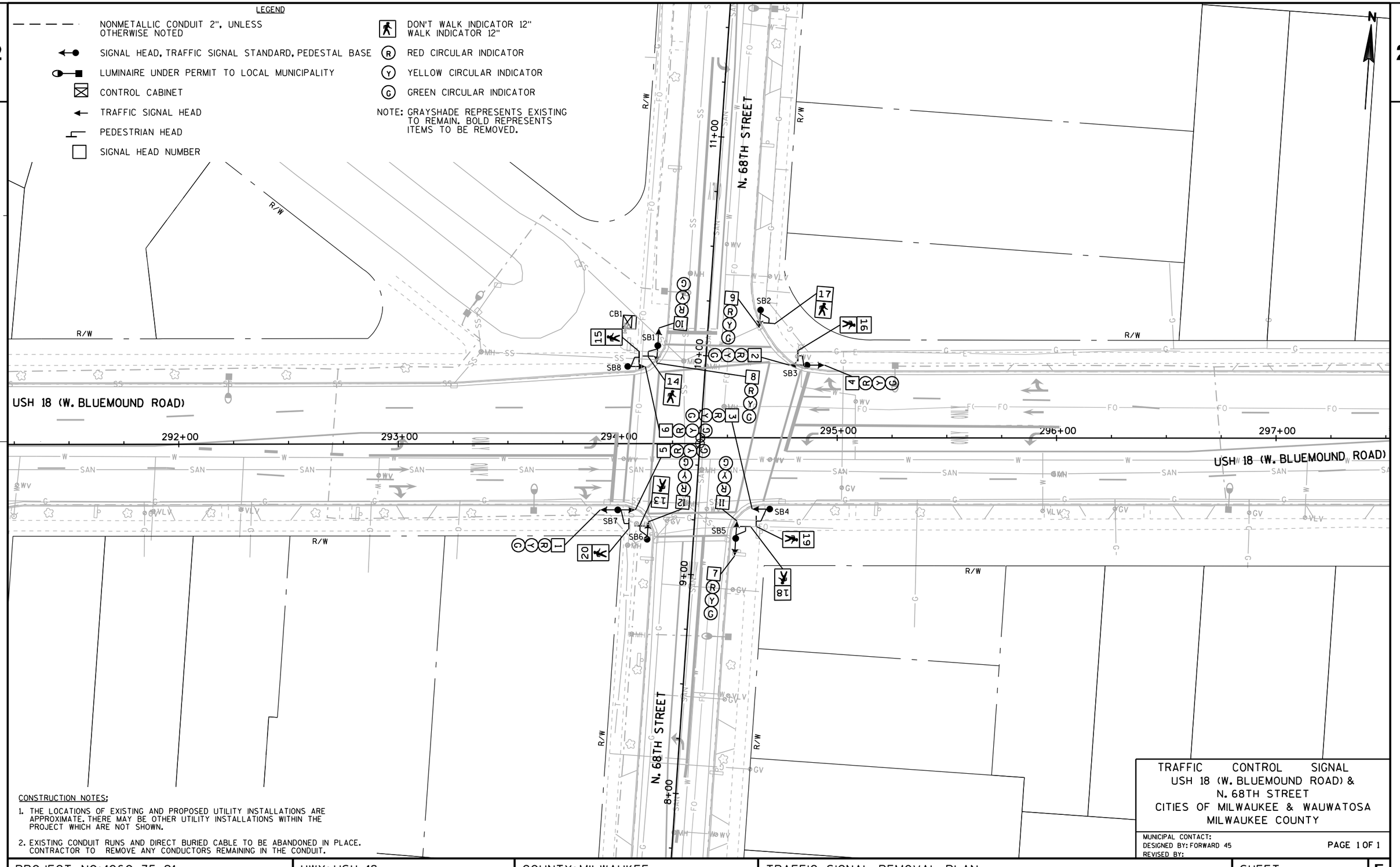
EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	SB1
PB2	SB2
PB3	SB4

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- PEDESTRIAN HEAD
- SIGNAL HEAD NUMBER
- DON'T WALK INDICATOR 12" WALK INDICATOR 12"
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR

NOTE: GRAYSHADE REPRESENTS EXISTING TO REMAIN. BOLD REPRESENTS ITEMS TO BE REMOVED.



CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. EXISTING CONDUIT RUNS AND DIRECT BURIED CABLE TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
N. 68TH STREET
CITIES OF MILWAUKEE & WAUWATOSA
MILWAUKEE COUNTY

MUNICIPAL CONTACT:
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-35-91	HWY: USH 18	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024621_sp.dgn PLOT DATE : 29-APR-2014 07:42 PLOT BY : MSCDYB PLOT NAME : 024621_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

LEGEND

NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE

(XX) MONOTUBE BASE, POLE, 15'-30' ARM

LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY

MICROWAVE DETECTION AREA

MX MICROWAVE DETECTOR

LEGEND (CON'T)

PULL BOX, 24" X 42"

PEDESTRIAN HEAD WITH PUSH BUTTON

PUSH BUTTON

EVP DESIGNATOR

EVP DETECTOR HEAD

CONTROL CABINET

TRAFFIC SIGNAL HEAD

SIGNAL HEAD NUMBER

WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)

(R) RED CIRCULAR INDICATOR

(Y) YELLOW CIRCULAR INDICATOR

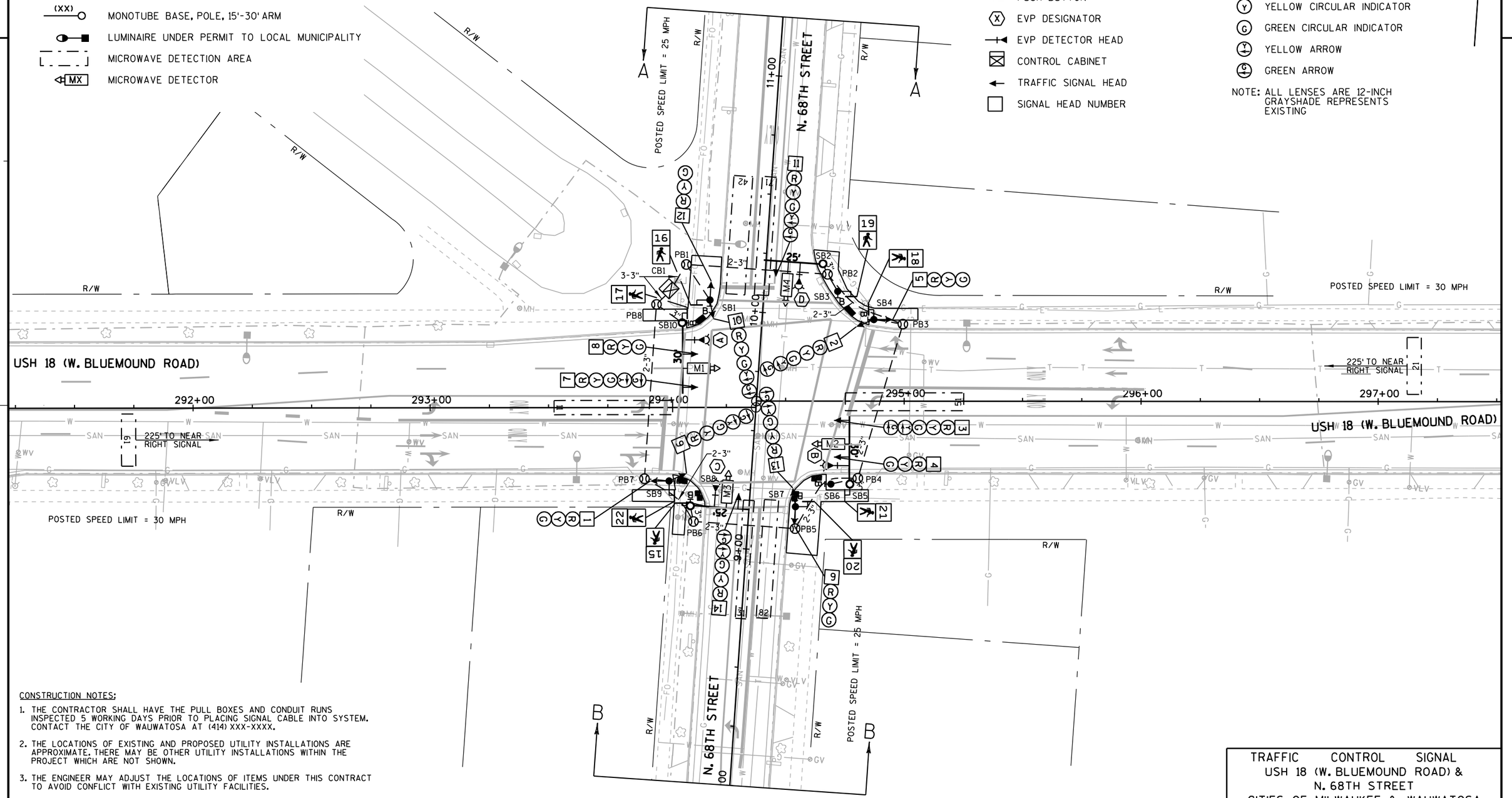
(G) GREEN CIRCULAR INDICATOR

YELLOW ARROW

GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

N



CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE CITY OF WAUWATOSA AT (414) XXX-XXXX.
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 FINAL ROADWAY ELEVATION.
5. CONDUIT EMBEDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3".
6. RIGHT OF WAY AND PROPERTY LINES DEPICTED ARE BASED ON RECORD INFORMATION WITHOUT THE BENEFIT OF FIELD EVIDENCE.

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
N. 68TH STREET
CITIES OF MILWAUKEE & WAUWATOSA
MILWAUKEE COUNTY

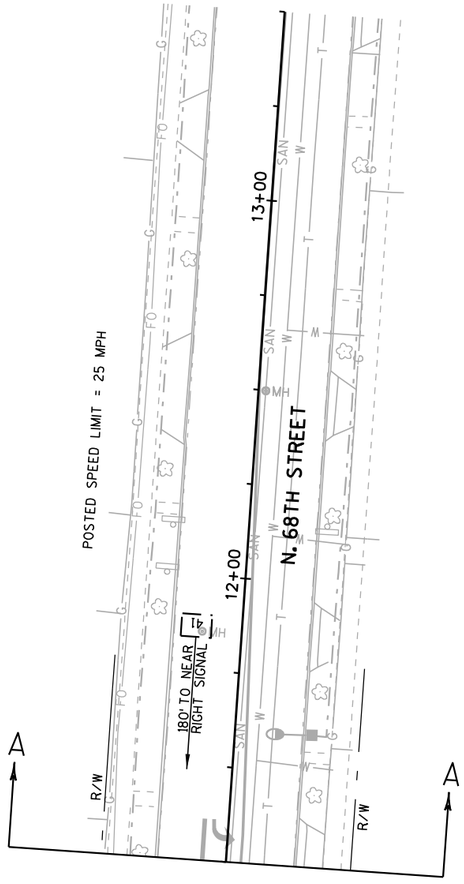
MUNICIPAL CONTACT:
DESIGNED BY: FORWARD 45
REVISED BY:

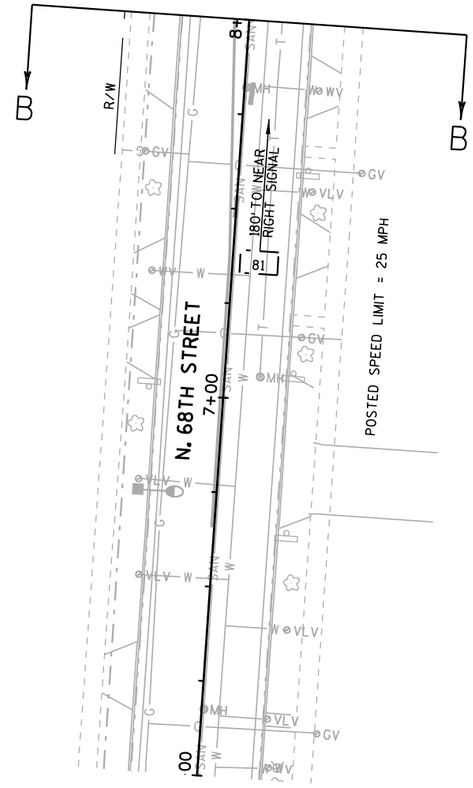
PAGE 1 OF 3

PROJECT NO: 1060-35-91	HWY: USH 18	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024625_sp.dgn PLOT DATE : 29-APR-2014 07:45 PLOT BY : MSCDYB PLOT NAME : 024625_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42





TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
N. 68TH STREET
CITIES OF MILWAUKEE & WAUWATOSA
MILWAUKEE COUNTY

MUNICIPAL CONTACT:
DESIGNED BY: FORWARD 45
REVISED BY:

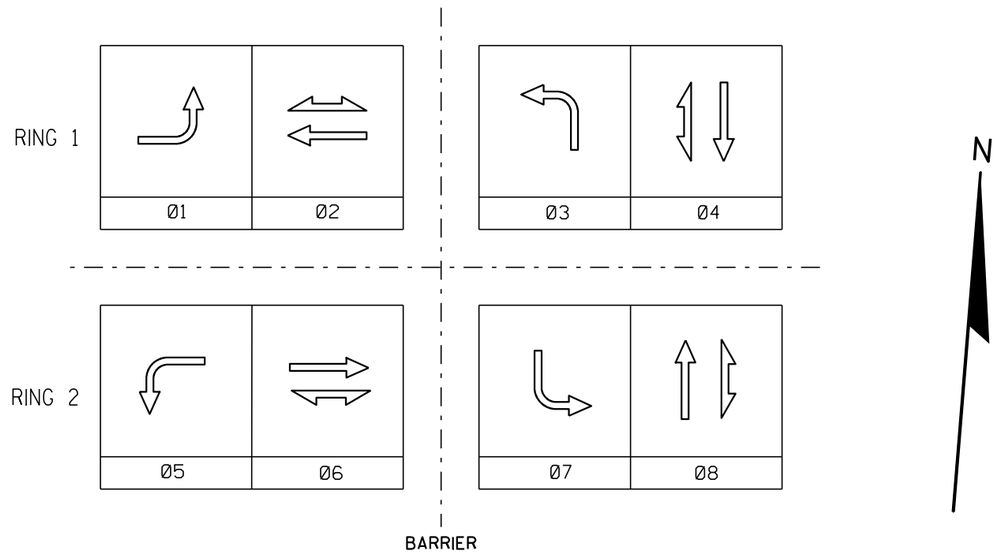
PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: USH 18	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024626_sp.dgn PLOT DATE : 29-APR-2014 07:47 PLOT BY : MSCDYB PLOT NAME : 024626_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	2,3	-
Ø2	5,6,7,8	R
Ø3	10,11	-
Ø4	12,13,14	R
Ø5	6,7	-
Ø6	1,2,3,4	R
Ø7	13,14	-
Ø8	9,10,11	R
Ø2P	17,18	
Ø4P	15,16	
Ø6P	21,22	
Ø8P	19,20	
OLE		
OLF		
OLG		
OLH		



CONTROLLER LOGIC

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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	31	42	61	81			
CALLED PHASE	1	3	4	6				
CALL OPTION	X	X	X	X				
DELAY TIME	X	X	X					
EXTEND OPTION	X	X	X	X	X			
EXTEND TIME					X			
USE ADDED INITIAL				X				
CROSS SWITCH PHASE	6	8						

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	21	41	51	71	82			
CALLED PHASE	2		5	7	8			
CALL OPTION	X		X	X	X			
DELAY TIME			X	X	X			
EXTEND OPTION	X	X	X	X	X			
EXTEND TIME		X						
USE ADDED INITIAL	X							
CROSS SWITCH PHASE			2	4				

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

AFTER PREEMPTION SEQUENCE 2+6 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.

USH 18 (W. BLUEMOUND ROAD) &
N. 68TH STREET
CITIES OF MILWAUKEE & WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. CABINET TYPE: 330

CONTROLLER TYPE: 170

DATE 04/14 PAGE NO. 3 OF 3

USH 18 & N. 68TH STREET

2

PROJECT ID:	1060-35-91
INTERSECTION:	USH 18 (W. BLUEMOUND ROAD) & N. 68TH STREET

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

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING> <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1	15	10	RED	ORG	GRN		BLK	BLU					
		12	RED/BLK	ORG/BLK	GRN/BLK								
		16								BLK/WHT	BLU/BLK		
		B										WHT/BLK	
SB2	12	11	RED	ORG	GRN		BLK	BLU					
SB3	7	19								BLK	BLU		
		B										WHT/BLK	
SB4	15	2	RED	ORG	GRN		BLK	BLU					
		5	RED/BLK	ORG/BLK	GRN/BLK								
		18								BLK/WHT	BLU/BLK		
		B										WHT/BLK	
SB5	15	3	RED/BLK	ORG/BLK	GRN/BLK		BLK/WHT	BLU/BLK					
		4	RED	ORG	GRN								
		21								BLK	BLU		
SB6	7	B										WHT/BLK	
SB7	15	9	RED	ORG	GRN								
		13	RED/BLK	ORG/BLK	GRN/BLK		BLK/WHT	BLU/BLK					
		20								BLK	BLU		
		B										WHT/BLK	
SB8	12	14	RED	ORG	GRN		BLK	BLU					
		15								BLK/WHT	BLU/BLK		
		B										WHT/BLK	
SB9	15	1	RED	ORG	GRN								
		6	RED/BLK	ORG/BLK	GRN/BLK		BLK/WHT	BLU/BLK					
		22								BLK	BLU		
		B										WHT/BLK	
SB10	15	7	RED/BLK	ORG/BLK	GRN/BLK		BLK/WHT	BLU/BLK					
		8	RED	ORG	GRN								
		17								BLK	BLU		
		B										WHT/BLK	

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.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

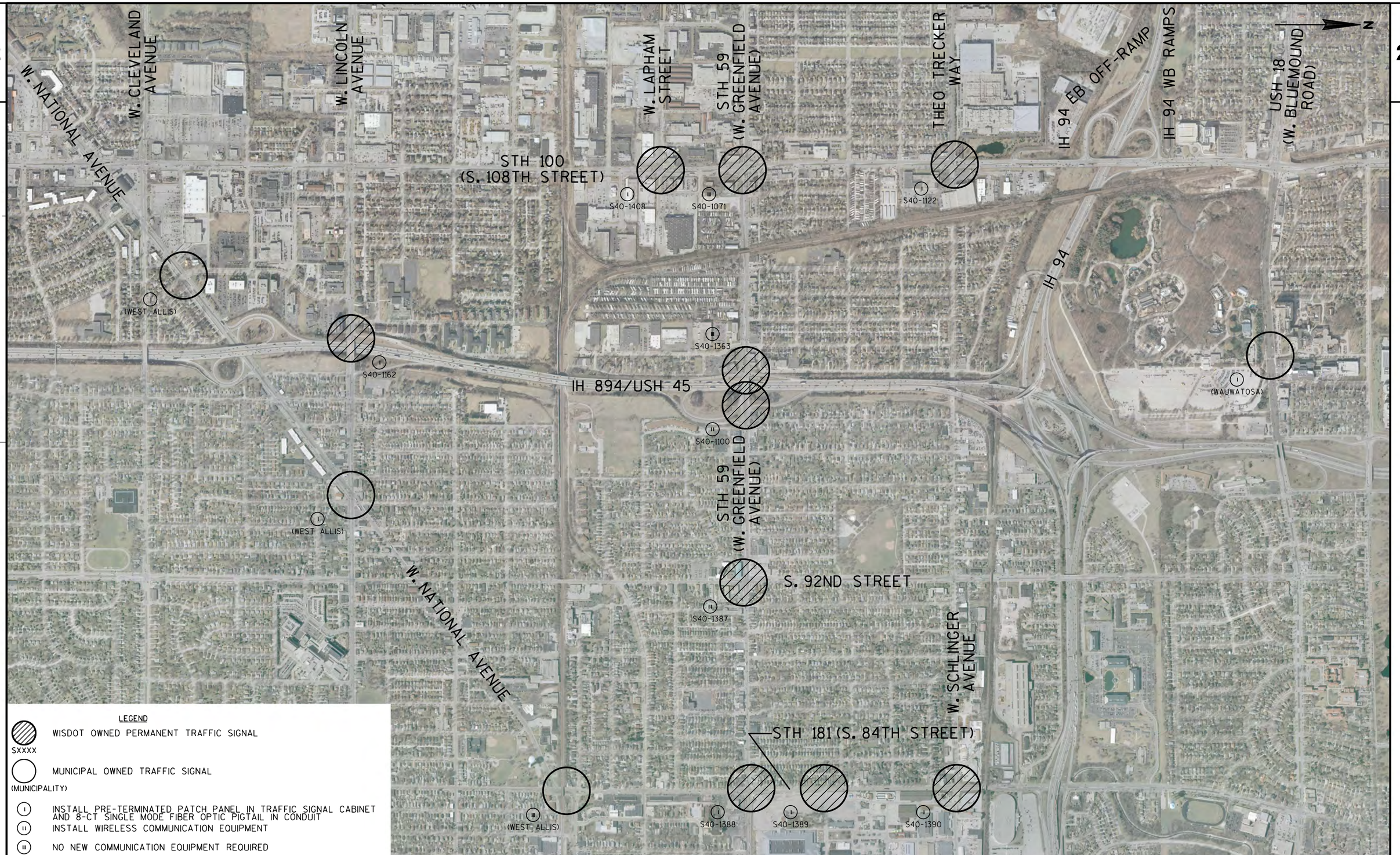
EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB2
PB3	SB4
PB4	SB5
PB5	SB7
PB6	SB8
PB7	SB9
PB8	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB10 (HEAD A)
CB1	SB5 (HEAD B)
CB1	SB8 (HEAD C)
CB1	SB2 (HEAD D)

MICROWAVE DETECTION CABLE	
FROM	TO
CB1	M1 (SB10)
CB1	M2 (SB5)
CB1	M3 (SB8)
CB1	M4 (SB2)

2



LEGEND

SXXXX — WISDOT OWNED PERMANENT TRAFFIC SIGNAL

(MUNICIPALITY) — MUNICIPAL OWNED TRAFFIC SIGNAL

(I) INSTALL PRE-TERMINATED PATCH PANEL IN TRAFFIC SIGNAL CABINET AND 8-CT SINGLE MODE FIBER OPTIC PIGTAIL IN CONDUIT

(II) INSTALL WIRELESS COMMUNICATION EQUIPMENT

(III) NO NEW COMMUNICATION EQUIPMENT REQUIRED

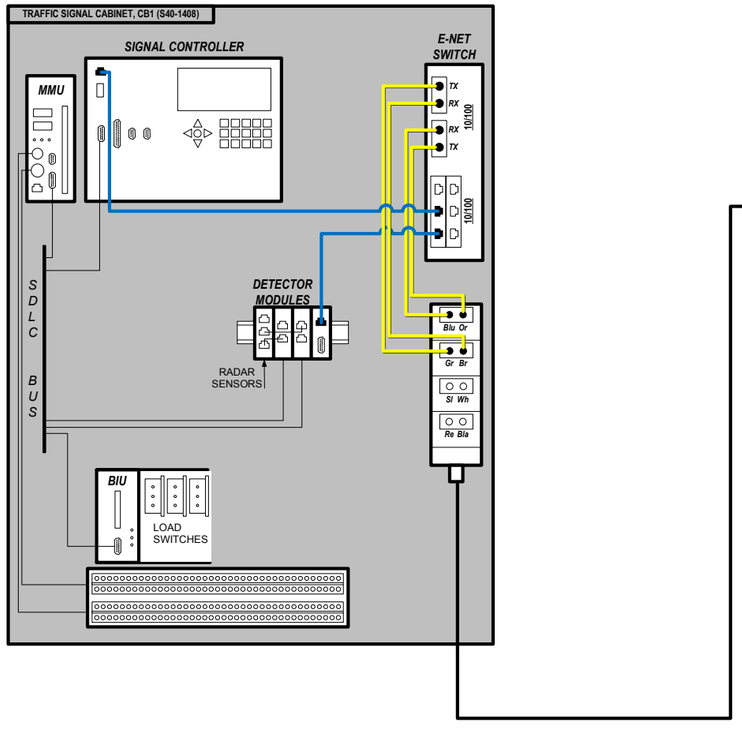
PROJECT NO: 1060-35-91	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PROJECT OVERVIEW	SHEET	E

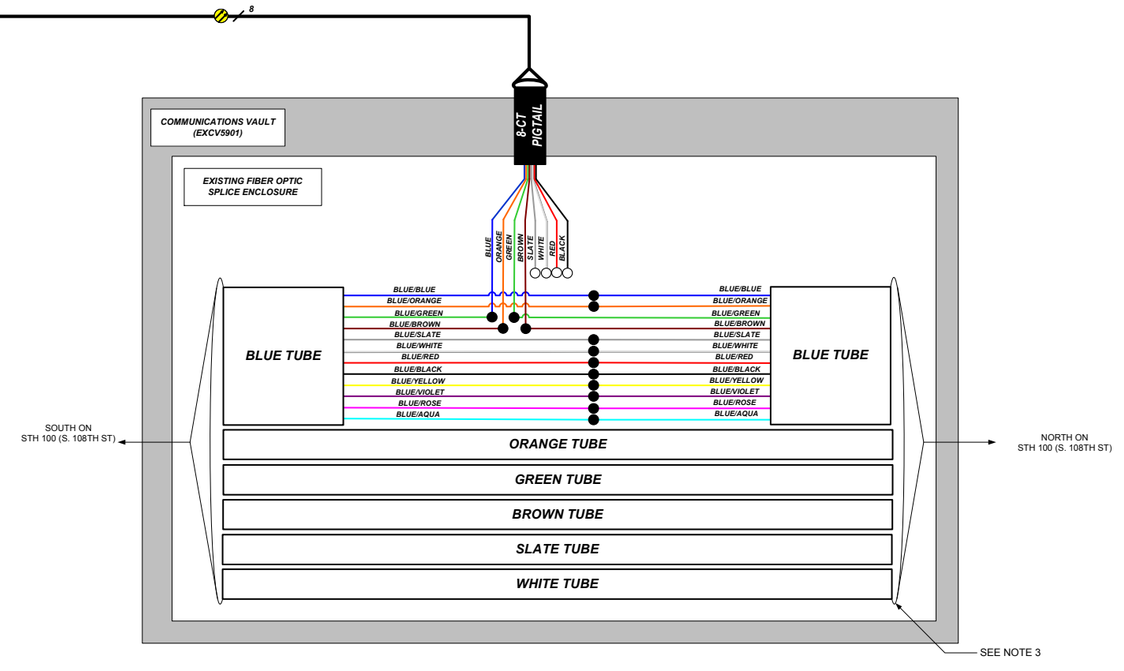
FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024701_co_po.dgn PLOT DATE : 29-APR-2014 06:19 PLOT BY : MSCITM PLOT NAME : PLOT SCALE : 1125:1

2

KEY

- PROPOSED / EXISTING FUSION SPLICE
- UNSPLICED FIBER
- PROPOSED / EXISTING FIBER TERMINATION
- PROPOSED POINT-TO-POINT 5.8 GHz RADIO/ANTENNA
- PROPOSED/EXISTING WIRELESS COMMUNICATIONS LINK
- PROPOSED / EXISTING COMPONENT
- PROPOSED / EXISTING FIBER OPTIC CABLE
- SM FIBER OPTIC CABLE (# STRANDS) — 36





NOTES:

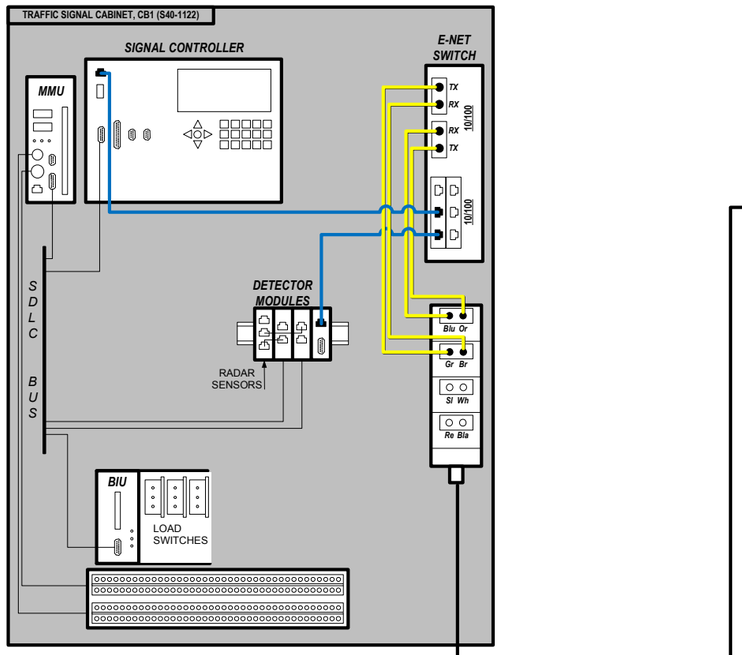
1. S-F = STATE-FURNISHED.
2. ADAPTIVE SIGNAL CONTROL EQUIPMENT TO BE INSTALLED IN FUTURE.
3. SEE FTMS PLANS FOR DETAILS ON FIBER TRUNK CABLE.

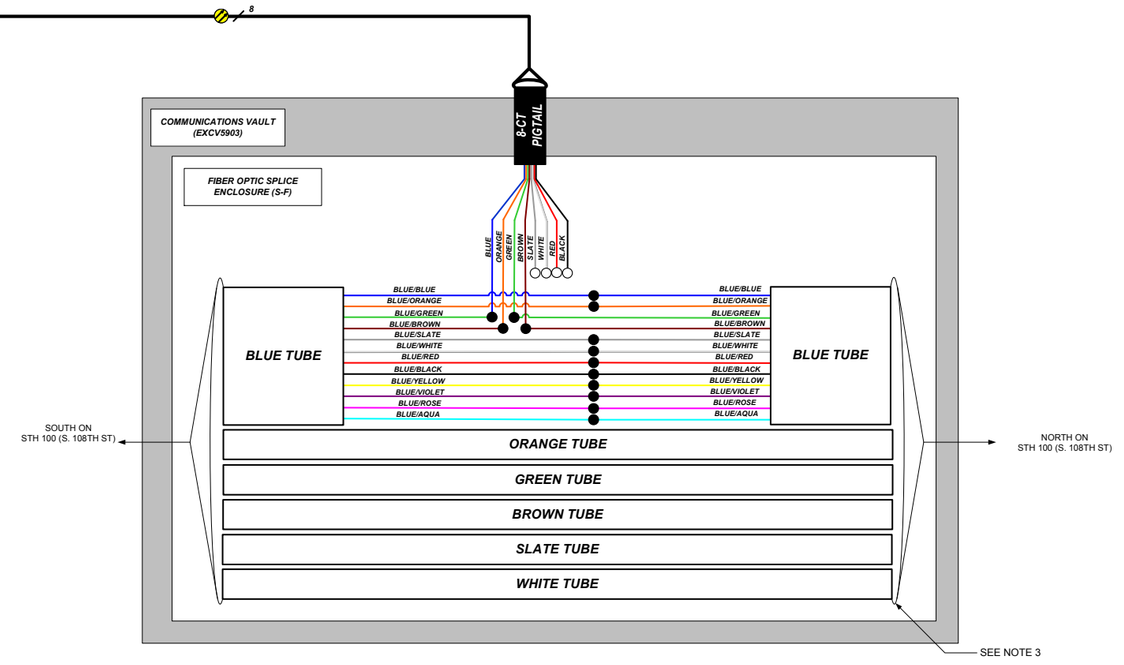
PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	COMMUNICATIONS DETAILS - STH 100 (S. 108th ST) AND W. LAPHAM ST	SHEET E

2

KEY

- PROPOSED / EXISTING FUSION SPLICE
- UNSPLICED FIBER
- PROPOSED / EXISTING FIBER TERMINATION
- PROPOSED POINT-TO-POINT 5.8 GHz RADIO/ANTENNA
- PROPOSED/EXISTING WIRELESS COMMUNICATIONS LINK
- PROPOSED / EXISTING COMPONENT
- PROPOSED / EXISTING FIBER OPTIC CABLE
- SM FIBER OPTIC CABLE (# STRANDS) — 36





NOTES:

1. S-F = STATE-FURNISHED.
2. ADAPTIVE SIGNAL CONTROL EQUIPMENT TO BE INSTALLED IN FUTURE.
3. SEE FTMS PLANS FOR DETAILS ON FIBER TRUNK CABLE.

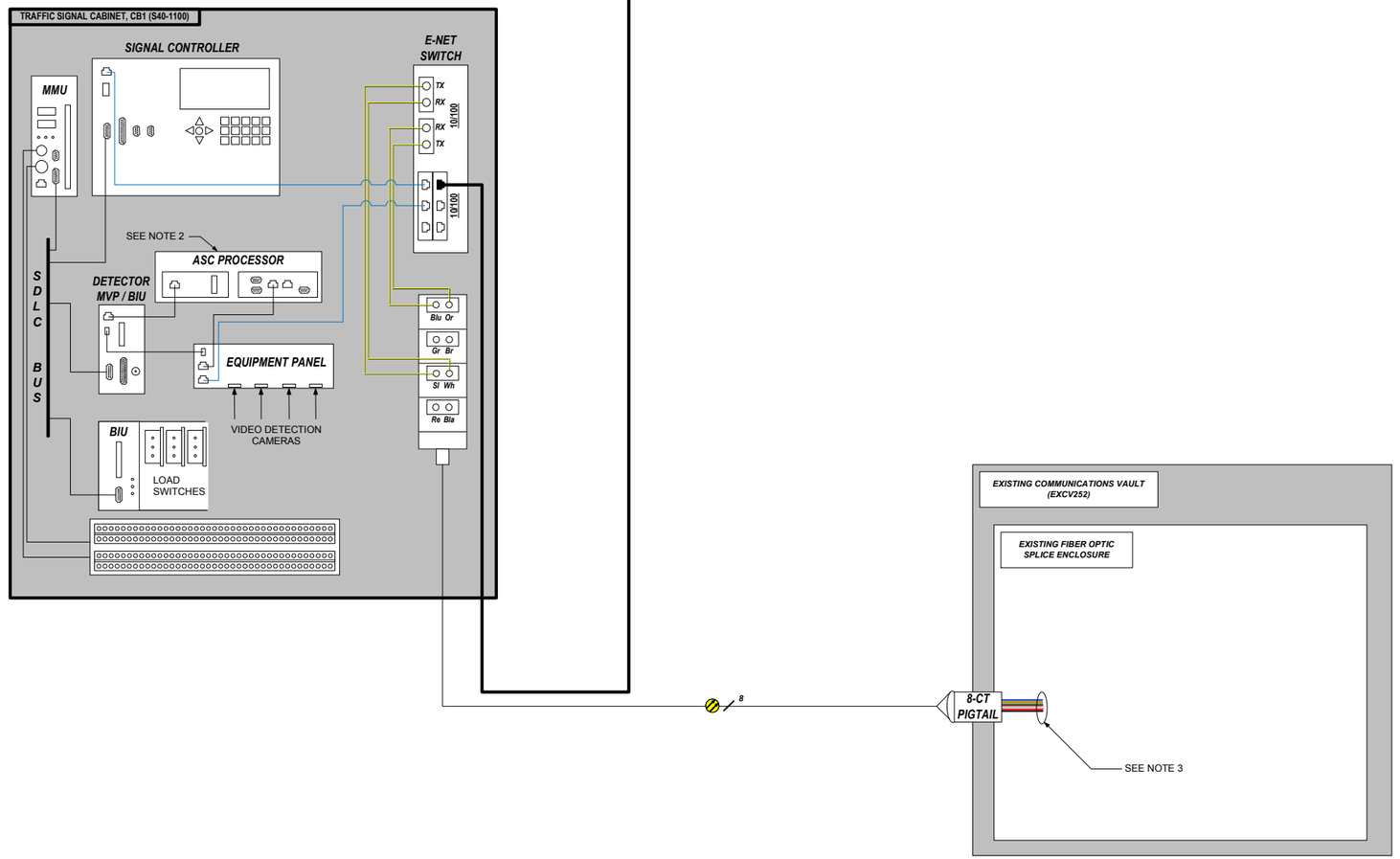
PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	COMMUNICATIONS DETAILS - STH 100 (S. 108th ST) AND W. THEODORE TRECKER WAY	SHEET E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : $FILE$ PLOT SCALE : $$.....plotscale.....$$

2

KEY

- PROPOSED / EXISTING FUSION SPLICE
- UNSPLICED FIBER
- PROPOSED / EXISTING FIBER TERMINATION
- PROPOSED POINT-TO-POINT 5.8 GHz RADIO/ANTENNA
- PROPOSED/EXISTING WIRELESS COMMUNICATIONS LINK
- PROPOSED / EXISTING COMPONENT
- PROPOSED / EXISTING FIBER OPTIC CABLE
- SM FIBER OPTIC CABLE (# STRANDS)



NOTES:

1. S-F = STATE-FURNISHED.
2. ADAPTIVE SIGNAL CONTROL EQUIPMENT TO BE INSTALLED BY OTHERS.
3. NO FIBER WORK REQUIRED. FIBER OPTIC SPLICES AND CONNECTIONS ARE IN PLACE.

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	COMMUNICATIONS DETAILS - STH 59 AND IH 894 WB OFF RAMP	SHEET E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : $FILE$ PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42

2

KEY

- PROPOSED / EXISTING FUSION SPLICE
- UNSPLICED FIBER
- PROPOSED / EXISTING FIBER TERMINATION
- PROPOSED POINT-TO-POINT 5.8 GHz RADIO/ANTENNA
- PROPOSED/EXISTING WIRELESS COMMUNICATIONS LINK
- PROPOSED / EXISTING COMPONENT
- PROPOSED / EXISTING FIBER OPTIC CABLE
- SM FIBER OPTIC CABLE (# STRANDS) — 36

WEST TO
STH 59 AND IH 894 WB OFF RAMP

5.8 GHz

TRAFFIC SIGNAL CABINET, CB1 (S40-1387)

SIGNAL CONTROLLER

MMU

E-NET SWITCH

TX
RX
10/100
RX
TX
10/100

S D L C B U S

DETECTOR MODULES

RADAR SENSORS

BIU

LOAD SWITCHES

NOTES:

1. S-F = STATE-FURNISHED.
2. ADAPTIVE SIGNAL CONTROL EQUIPMENT TO BE INSTALLED IN FUTURE.

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	COMMUNICATIONS DETAILS - STH 59 AND 92ND ST	SHEET E

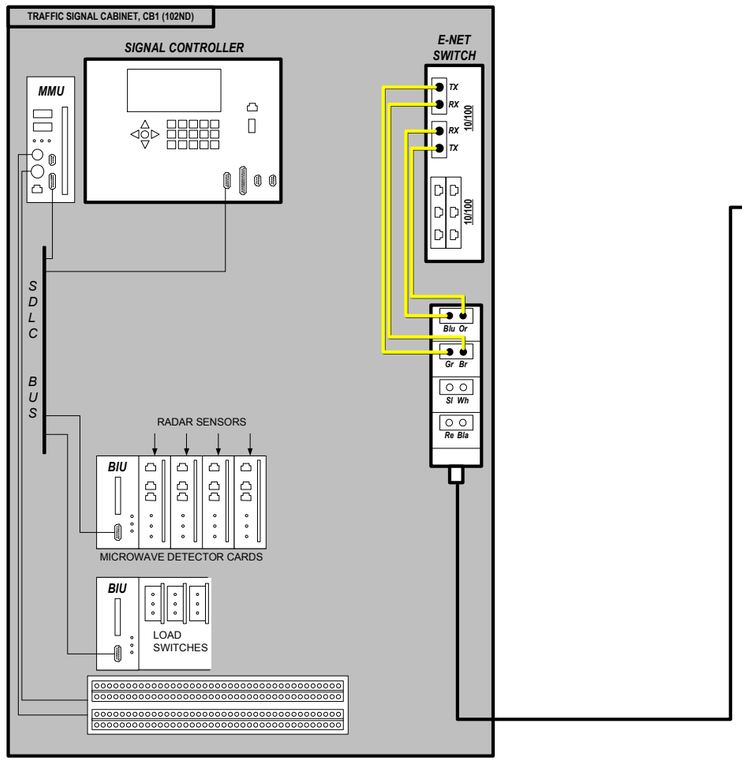
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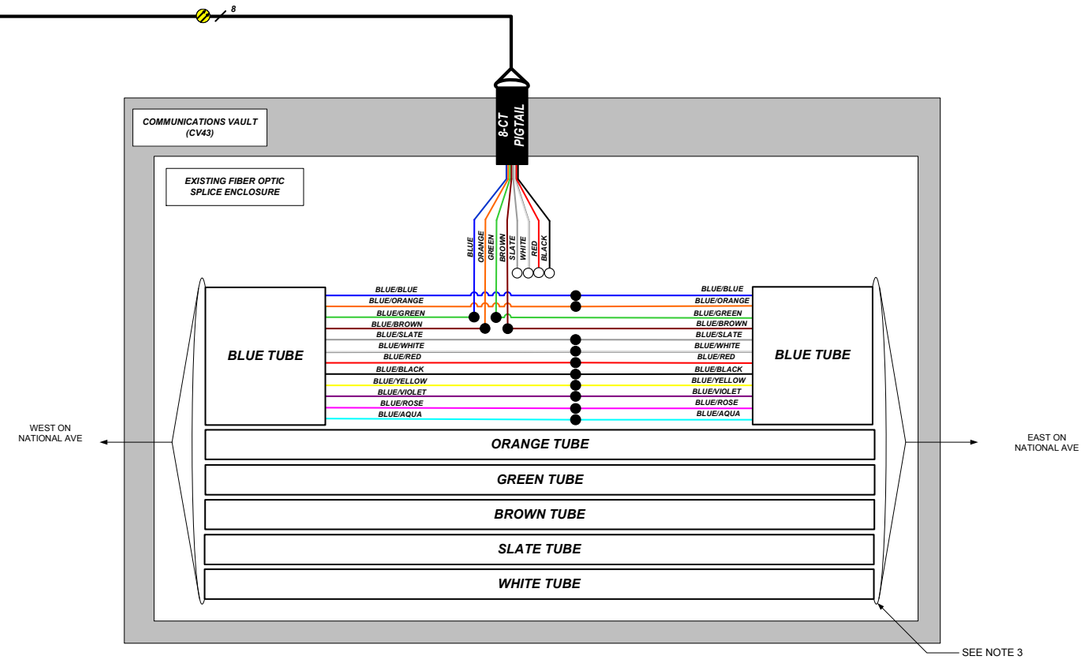
WISDOT/CADDS SHEET 42

2

KEY

- PROPOSED / EXISTING FUSION SPLICE
- UNSPLICED FIBER
- PROPOSED / EXISTING FIBER TERMINATION
- PROPOSED POINT-TO-POINT 5.8 GHz RADIO/ANTENNA
- PROPOSED/EXISTING WIRELESS COMMUNICATIONS LINK
- PROPOSED / EXISTING COMPONENT
- PROPOSED / EXISTING FIBER OPTIC CABLE
- SM FIBER OPTIC CABLE (# STRANDS) — 36





NOTES:

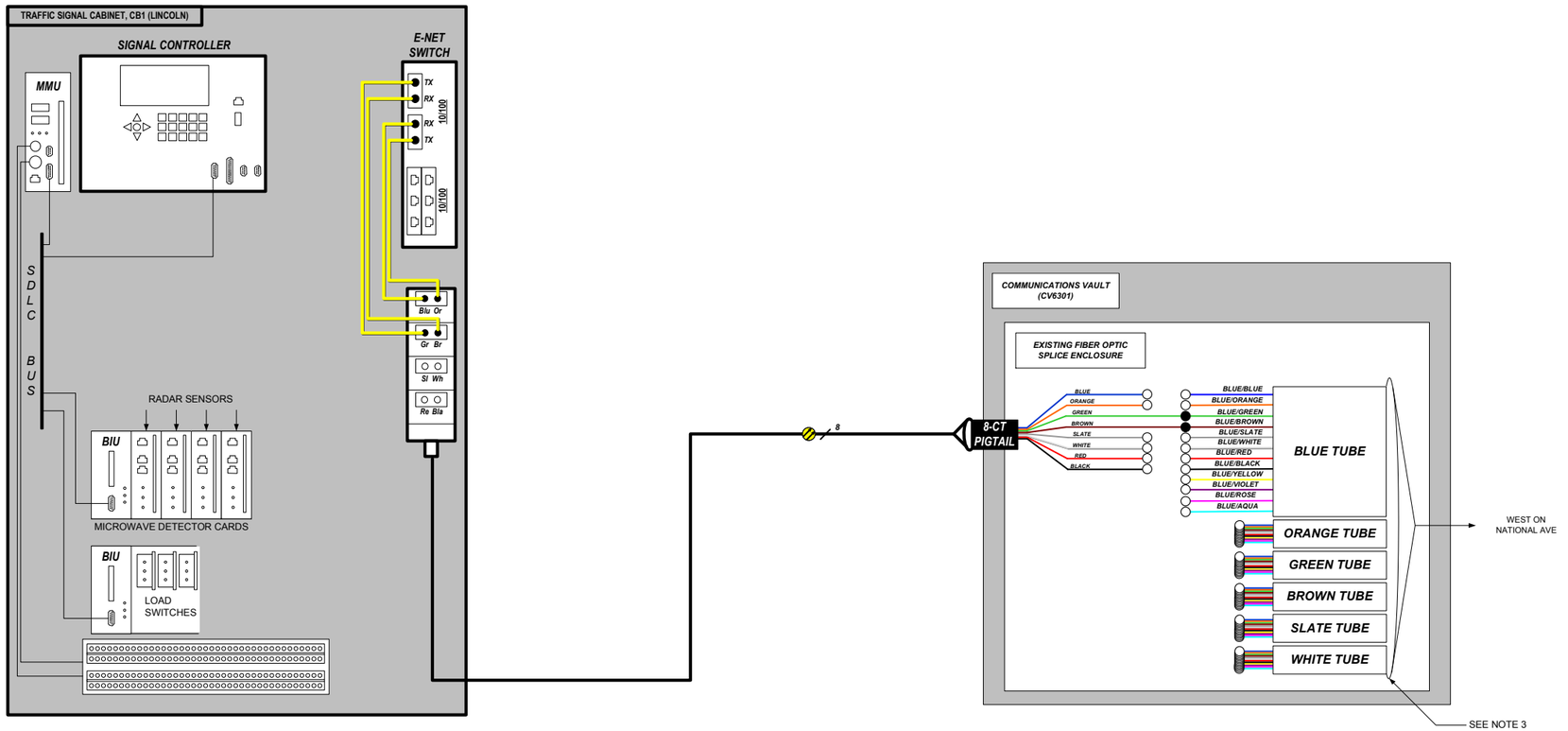
1. S-F = STATE-FURNISHED.
2. ADAPTIVE SIGNAL CONTROL EQUIPMENT TO BE INSTALLED IN FUTURE.
3. SEE FTMS PLANS FOR DETAILS ON FIBER TRUNK CABLE.

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVE	COUNTY: MILWAUKEE	COMMUNICATIONS DETAILS - W. NATIONAL AVE AND S. 102ND STREET	SHEET E

2

KEY

- PROPOSED / EXISTING FUSION SPLICE
- UNSPLICED FIBER
- PROPOSED / EXISTING FIBER TERMINATION
- PROPOSED POINT-TO-POINT 5.8 GHz RADIO/ANTENNA
- PROPOSED/EXISTING WIRELESS COMMUNICATIONS LINK
- PROPOSED / EXISTING COMPONENT
- PROPOSED / EXISTING FIBER OPTIC CABLE
- SM FIBER OPTIC CABLE (# STRANDS) — 36



NOTES:

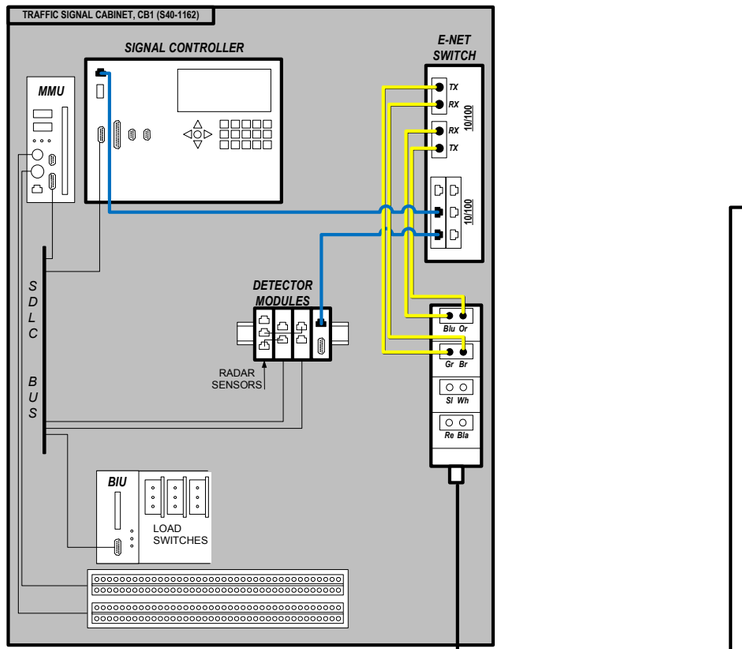
1. S-F = STATE-FURNISHED.
2. ADAPTIVE SIGNAL CONTROL EQUIPMENT TO BE INSTALLED IN FUTURE.
3. SEE FTMS PLANS FOR DETAILS ON FIBER TRUNK CABLE.

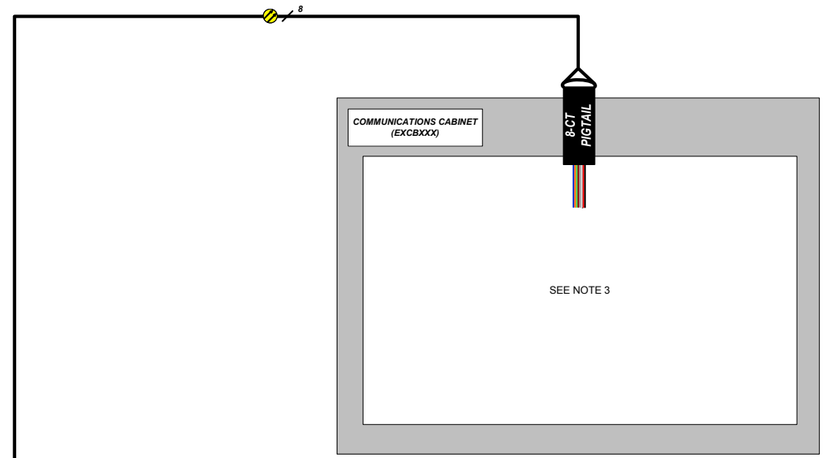
PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVE	COUNTY: MILWAUKEE	COMMUNICATIONS DETAILS - W. NATIONAL AVE AND W. LINCOLN AVE	SHEET E

2

KEY

- PROPOSED / EXISTING FUSION SPLICE
- UNSPLICED FIBER
- PROPOSED / EXISTING FIBER TERMINATION
- PROPOSED POINT-TO-POINT 5.8 GHz RADIO/ANTENNA
- PROPOSED/EXISTING WIRELESS COMMUNICATIONS LINK
- PROPOSED / EXISTING COMPONENT
- PROPOSED / EXISTING FIBER OPTIC CABLE
- SM FIBER OPTIC CABLE (# STRANDS) — 36





NOTES:

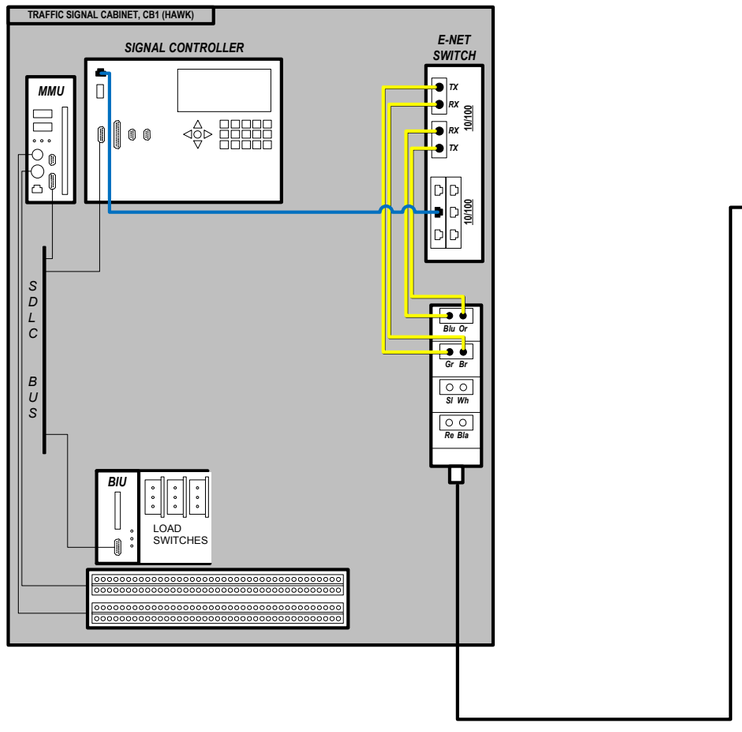
1. S-F = STATE-FURNISHED.
2. ADAPTIVE SIGNAL CONTROL EQUIPMENT TO BE INSTALLED IN FUTURE.
3. SEE FTMS PLANS FOR DETAILS ON FIBER ASSIGNMENTS IN CABINET.

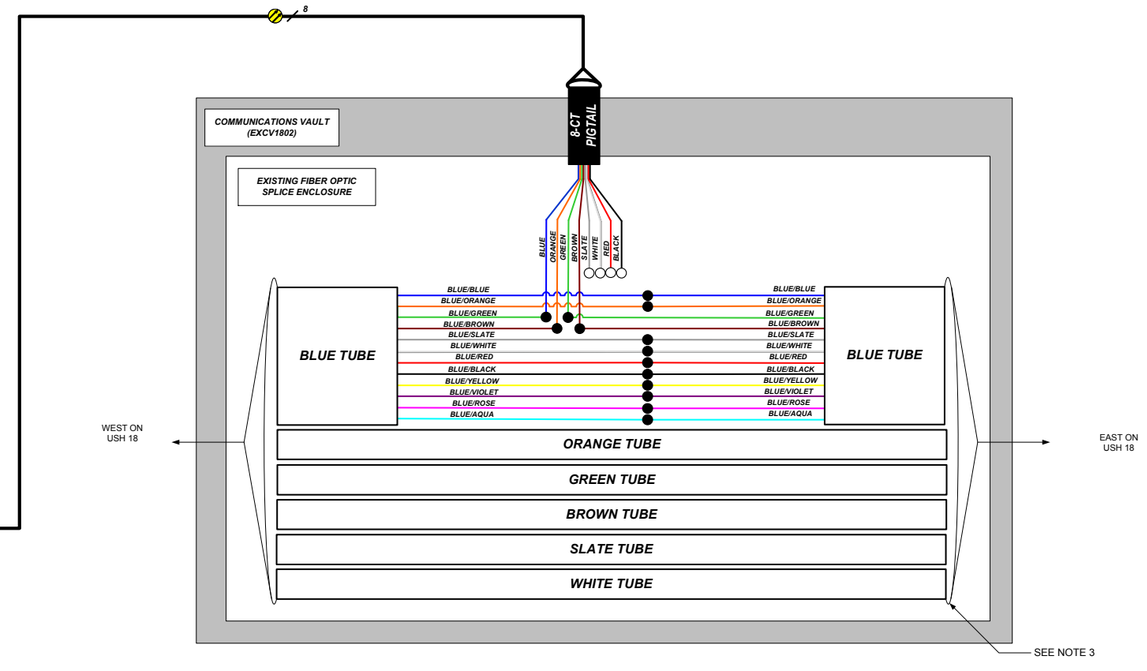
PROJECT NO: 1060-35-91	HWY: IH 894	COUNTY: MILWAUKEE	COMMUNICATIONS DETAILS - IH 894/USH 45 AND SB OFF RAMP	SHEET E

2

KEY

- PROPOSED / EXISTING FUSION SPLICE
- UNSPLICED FIBER
- PROPOSED / EXISTING FIBER TERMINATION
- PROPOSED POINT-TO-POINT 5.8 GHz RADIO/ANTENNA
- PROPOSED/EXISTING WIRELESS COMMUNICATIONS LINK
- PROPOSED / EXISTING COMPONENT
- PROPOSED / EXISTING FIBER OPTIC CABLE
- SM FIBER OPTIC CABLE (# STRANDS) — 36





NOTES:

1. S-F = STATE-FURNISHED.
2. ADAPTIVE SIGNAL CONTROL EQUIPMENT TO BE INSTALLED IN FUTURE.
3. SEE FTMS PLANS FOR DETAILS ON FIBER TRUNK CABLE.

PROJECT NO: 1060-35-91	HWY: USH 18	COUNTY: MILWAUKEE	COMMUNICATIONS DETAILS - USH 18 (W. BLUEMOUND RD) AND HAWK	SHEET E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : $FILE$ PLOT SCALE : $$.....plotscale.....$$

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- FTMS CONDUIT WITH FO CABLE
- PULL BOX, 24" X 42"
- FTMS PULL BOX
- FTMS VAULT
- CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING

FO CABLE PIGTAIL 8-CT IN FTMS CONDUIT

FO CABLE PIGTAIL 8-CT IN TRAFFIC SIGNAL CONDUIT

CB1 (S40-1408)

FO CABLE PIGTAIL 8-CT IN FTMS CONDUIT

FIBER OPTIC SPLICE (14) USE EXISTING FIBER OPTIC SPLICE ENCLOSURE

W. LAPHAM STREET

STH 100 (S. 108TH STREET)

MCDONALDS

TMOBILE

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
5. 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.
6. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
7. PROPOSED FTMS AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC CONTROL INTERCONNECT
STH 100 (S. 108TH STREET)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1408, S40-1122

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024711_co.dgn PLOT DATE : 29-APR-2014 06:27 PLOT BY : MSCITM PLOT NAME : 024711_co PLOT SCALE : 40:1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- FTMS CONDUIT WITH FO CABLE
- PULL BOX, 24" X 42"
- FTMS PULL BOX
- FTMS VAULT
- CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING

FO CABLE PIGTAIL 8-CT IN TRAFFIC SIGNAL CONDUIT

2" FO CABLE PIGTAIL 8-CT

FO CABLE PIGTAIL 8-CT IN FTMS CONDUIT

FIBER OPTIC SPLICE (14) USE FIBER OPTIC SPLICE ENCLOSURE SHOWN IN FTMS PLANS

CB1 (S40-1122)

FO CABLE PIGTAIL 8-CT IN TRAFFIC SIGNAL CONDUIT

EXPB5905

EXCV5903

PB9 PB10 PB11

STH 100 (S. 108TH STREET)

W. THEODORE TRECKER WAY

DRIVEWAY

ALLEY

18+00 19+00 47+00 48+00 49+00 50+00 51+00 52+00 53+00

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
5. 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.
6. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
7. PROPOSED FTMS AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.
8. EXPB5905 IS EXISTING PB1 SHOWN TO REMAIN ON TRAFFIC SIGNAL REMOVAL PLAN.

TRAFFIC CONTROL INTERCONNECT
STH 100 (S. 108TH STREET)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1408, S40-1122

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024712_co.dgn PLOT DATE : 29-APR-2014 06:30 PLOT BY : MSCITM PLOT NAME : 024712_co PLOT SCALE : 40:1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- FTMS CONDUIT WITH FO CABLE
- 5.8 WIRELESS ETHERNET BRIDGE
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- FTMS PULL BOX
- FTMS VAULT
- CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING

IH 894 WB ON RAMP

R/W IS OFF THE PAGE

STH 59 (W. GREENFIELD AVENUE)

5.8 WIRELESS ETHERNET BRIDGE CABLE IN TRAFFIC SIGNAL CONDUIT

CB1 (S40-1100)

R/W IS OFF THE PAGE

IH 894 WB OFF RAMP

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
5. 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.
6. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
7. PROPOSED FTMS AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC CONTROL INTERCONNECT
STH 59 (W. GREENFIELD AVENUE)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1100, S40-1387, S40-1388

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024713_co.dgn PLOT DATE : 29-APR-2014 06:31 PLOT BY : MSCITM PLOT NAME : 024713_co PLOT SCALE : 40:1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- FTMS CONDUIT WITH FO CABLE
- 5.8 WIRELESS ETHERNET BRIDGE
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- FTMS PULL BOX
- FTMS VAULT
- CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING

N

S. 92ND STREET

STH 59 (W. GREENFIELD AVENUE)

CB1 (S40-1387)

5.8 WIRELESS ETHERNET BRIDGE CABLE IN TRAFFIC SIGNAL CONDUIT

R/W

41+00

40+00

39+00

542+00

543+00

544+00

45'

40'

50'

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
5. 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.
6. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
7. PROPOSED FTMS AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC CONTROL INTERCONNECT
STH 59 (W. GREENFIELD AVENUE)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1100, S40-1387, S40-1388

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET E

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- FTMS CONDUIT WITH FO CABLE
- PULL BOX, 24" X 42"
- FTMS PULL BOX
- FTMS VAULT
- CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING

STH 181 (S. 84TH STREET)

STH 59 (W. GREENFIELD AVENUE)

S. 84TH STREET

BOLLARD

CB1 (S40-1388)

EXPB2901

PB10

2"

566+00 567+00 568+00 569+00 570+00 571+00

225+00 224+00 223+00 222+00

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
5. 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.
6. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
7. PROPOSED FTMS AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.
8. ALL TERMINATIONS AND SPLICING DETAILS ARE SHOWN IN FTMS PLAN SECTION.

TRAFFIC CONTROL INTERCONNECT
STH 59 (W. GREENFIELD AVENUE)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1100, S40-1387, S40-1388

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 3 OF 3

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

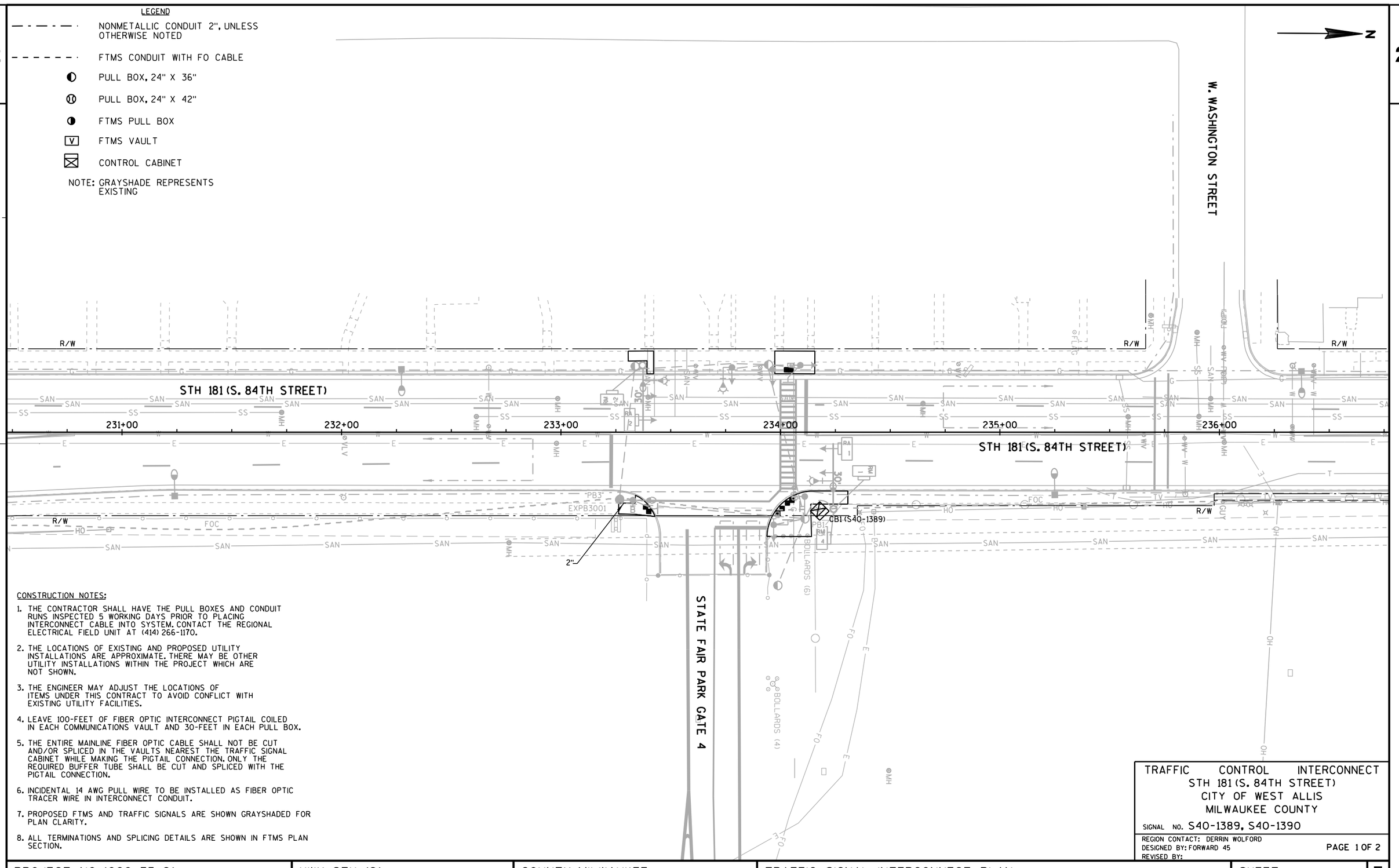
FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024715_co.dgn PLOT DATE : 29-APR-2014 06:34 PLOT BY : MSCITM PLOT NAME : 024715_co PLOT SCALE : 40:1

2

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- FTMS CONDUIT WITH FO CABLE
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- FTMS PULL BOX
- FTMS VAULT
- CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
5. 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.
6. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
7. PROPOSED FTMS AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.
8. ALL TERMINATIONS AND SPLICING DETAILS ARE SHOWN IN FTMS PLAN SECTION.

TRAFFIC CONTROL INTERCONNECT
STH 181 (S. 84TH STREET)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1389, S40-1390

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 2

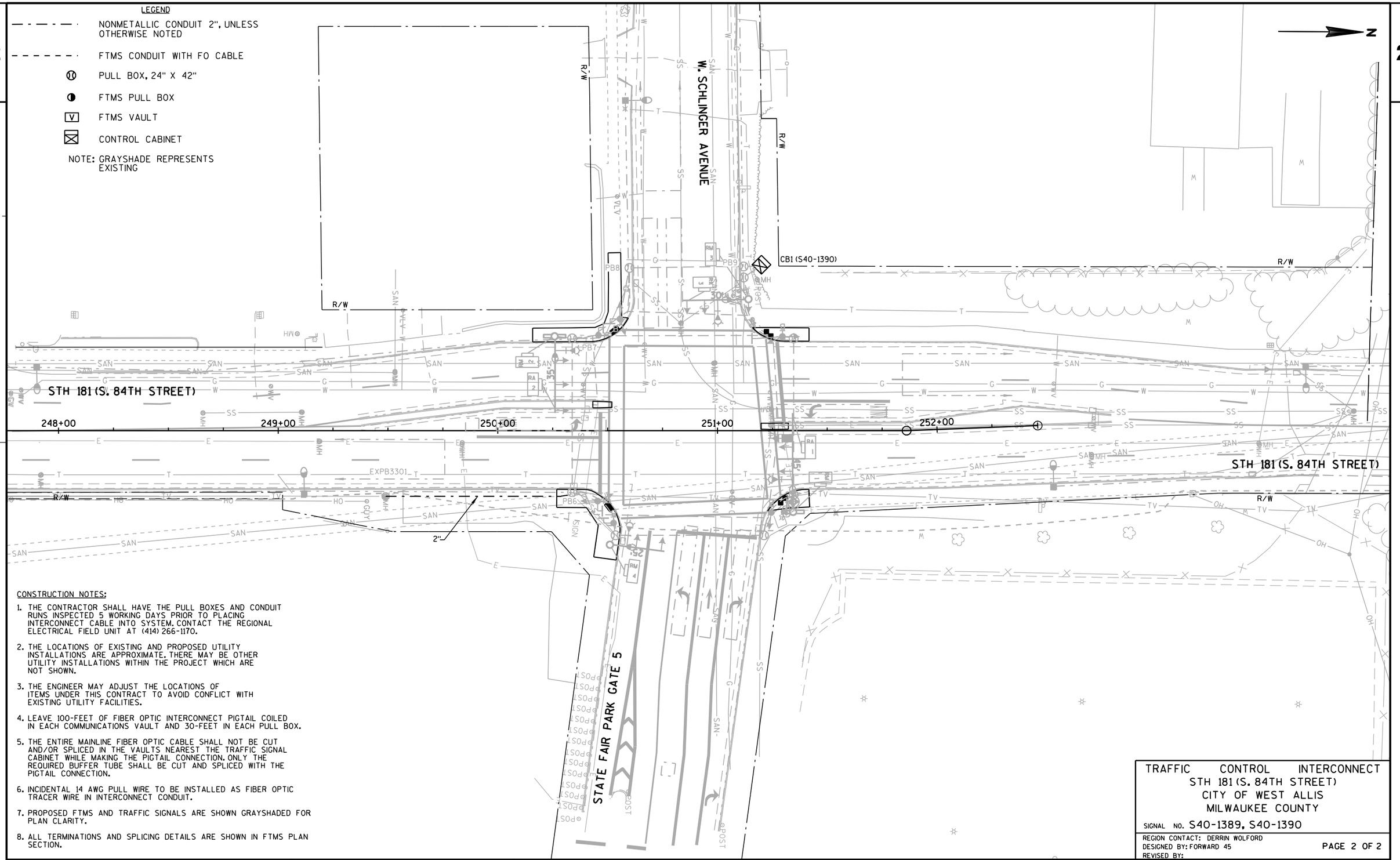
PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024716_co.dgn PLOT DATE : 29-APR-2014 06:39 PLOT BY : MSCITM PLOT NAME : 024716_co PLOT SCALE : 40:1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- FTMS CONDUIT WITH FO CABLE
- PULL BOX, 24" X 42"
- FTMS PULL BOX
- FTMS VAULT
- CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
5. 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.
6. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
7. PROPOSED FTMS AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.
8. ALL TERMINATIONS AND SPLICING DETAILS ARE SHOWN IN FTMS PLAN SECTION.

TRAFFIC CONTROL INTERCONNECT
STH 181 (S. 84TH STREET)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1389, S40-1390

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 2

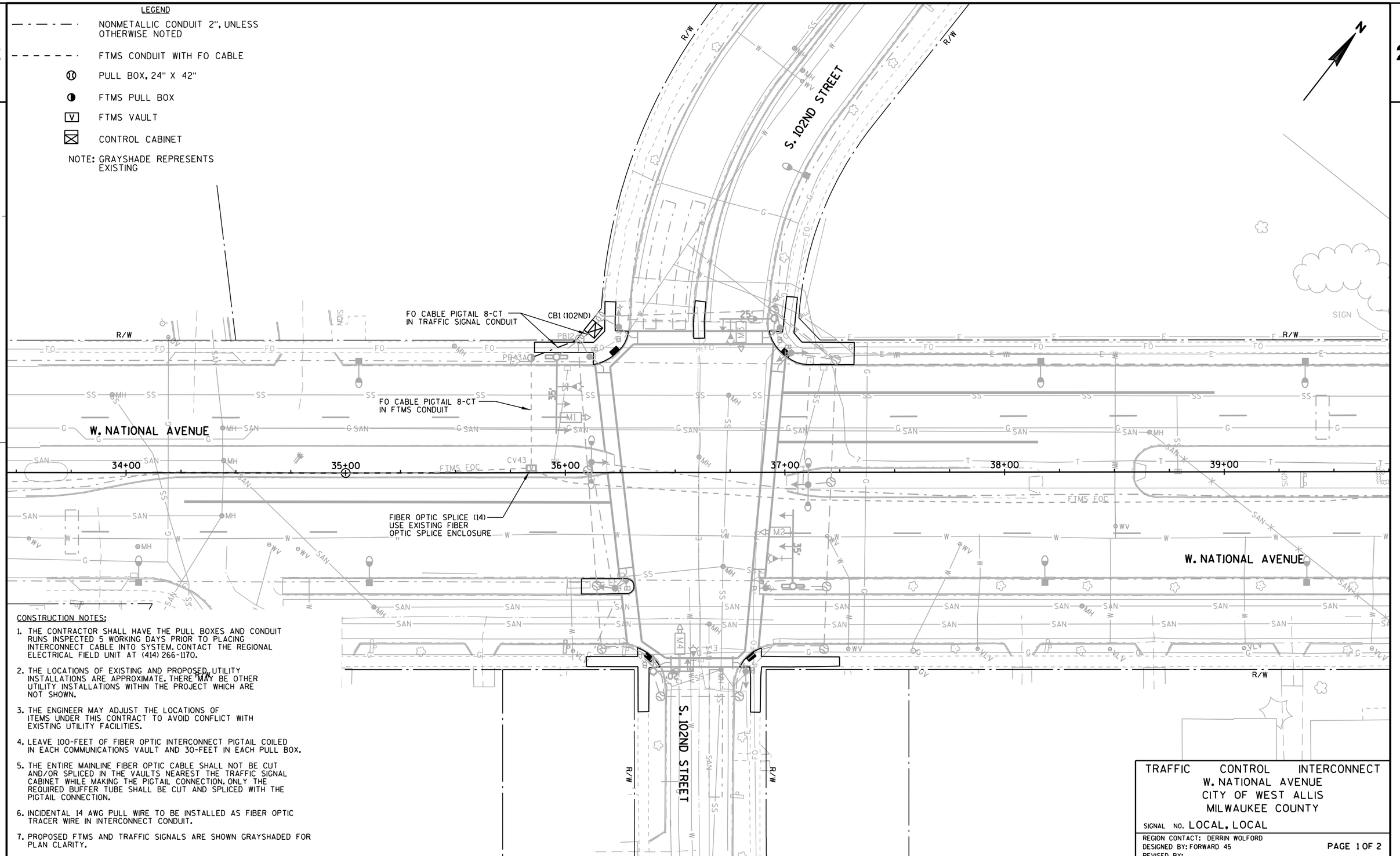
PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024717_co.dgn PLOT DATE : 29-APR-2014 06:43 PLOT BY : MSCITM PLOT NAME : 024717_co PLOT SCALE : 40:1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- FTMS CONDUIT WITH FO CABLE
- PULL BOX, 24" X 42"
- FTMS PULL BOX
- FTMS VAULT
- CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
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6. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
7. PROPOSED FTMS AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC CONTROL INTERCONNECT
W. NATIONAL AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. LOCAL, LOCAL

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024718_co.dgn PLOT DATE : 29-APR-2014 06:44 PLOT BY : MSCITM PLOT NAME : 024718_co PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- FTMS CONDUIT WITH FO CABLE
- PULL BOX, 24" X 42"
- FTMS PULL BOX
- FTMS VAULT
- CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING

W. LINCOLN AVENUE

W. NATIONAL AVENUE

S. 95TH STREET

63+00 64+00 65+00 66+00 67+00 68+00 69+00 70+00 71+00 72+00

FIBER OPTIC SPLICE (2)
USE EXISTING FIBER
OPTIC SPLICE ENCLOSURE

2"
FO CABLE PIGTAIL 8-CT

FO CABLE PIGTAIL 8-CT
IN TRAFFIC SIGNAL CONDUIT

FO CABLE PIGTAIL 8-CT
IN TRAFFIC SIGNAL CONDUIT

CB1 (LINCOLN)

FTMS FOC

R/W

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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.
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7. PROPOSED FTMS AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC CONTROL INTERCONNECT
W. NATIONAL AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. LOCAL, LOCAL

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024719_co.dgn PLOT DATE : 29-APR-2014 06:46 PLOT BY : MSCITM PLOT NAME : 024719_co PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- FTMS CONDUIT WITH FO CABLE
- PULL BOX, 24" X 42"
- FTMS PULL BOX
- FTMS VAULT
- CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING

IH 894/USH 45 EB OFF RAMP

FO CABLE PIGTAIL 8-CT FIBER OPTIC TRACER CABLE

CB1 (S40-1162)

ICPB1002

R/W IS OFF THE PAGE

W. LINCOLN AVENUE

43+00 44+00 45+00 46+00 47+00 48+00

FO CABLE PIGTAIL 8-CT FIBER OPTIC TRACER CABLE

ICPB100100

EXCBXXXX

EXPB5001

R/W IS OFF THE PAGE

W. LINCOLN AVENUE

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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6. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
7. PROPOSED FTMS AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.
8. ALL TERMINATIONS AND SPLICING DETAILS ARE SHOWN IN FTMS PLAN SECTION.

TRAFFIC CONTROL INTERCONNECT
W. LINCOLN AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S40-1162

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-35-91	HWY: IH 894	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

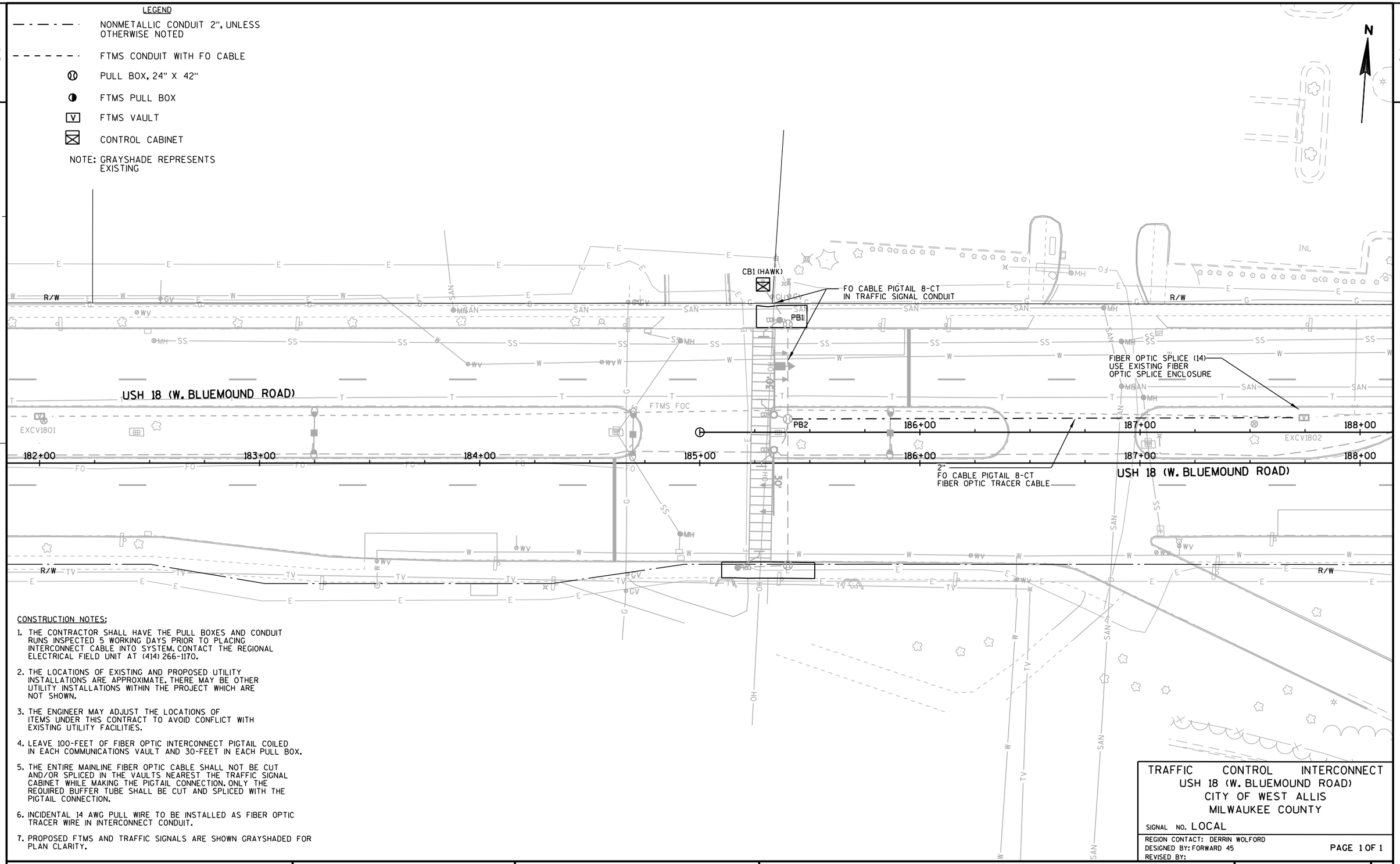
FILE NAME : W:\Cadd\Final\10603591_TM3\Roads\cds\024720_co.dgn PLOT DATE : 29-APR-2014 06:46 PLOT BY : MSCITM PLOT NAME : 024720_co PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- FTMS CONDUIT WITH FO CABLE
- PULL BOX, 24" X 42"
- FTMS PULL BOX
- FTMS VAULT
- CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
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7. PROPOSED FTMS AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC CONTROL INTERCONNECT
USH 18 (W. BLUEMOUND ROAD)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. LOCAL

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-35-91	HWY: USH 18	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

PAVEMENT MARKING LEGEND:

1 PAVEMENT MARKING EPOXY 4–INCH (YELLOW)
2 PAVEMENT MARKING EPOXY 4–INCH (WHITE)
3 PAVEMENT MARKING EPOXY 4–INCH (DASHED WHITE 12.5 FT LINE 37.5 FT SKIP)
4 PAVEMENT MARKING EPOXY 4–INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
6 PAVEMENT MARKING EPOXY 8–INCH (WHITE)
7 PAVEMENT MARKING STOP LINE EPOXY 18–INCH (WHITE)
9 PAVEMENT MARKING CROSSWALK 6–INCH EPOXY (WHITE)
10 PAVEMENT MARKING DIAGONAL EPOXY 12–INCH (YELLOW)
11 PAVEMENT MARKING DIAGONAL EPOXY 12–INCH (WHITE)
14 PAVEMENT MARKING WORDS EPOXY (WHITE)
15 PAVEMENT MARKING ARROWS EPOXY TYPE 1 (WHITE)
16 PAVEMENT MARKING ARROWS EPOXY TYPE 2 (WHITE)
17 PAVEMENT MARKING ARROWS EPOXY TYPE 3 (WHITE)
68 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18–INCH (WHITE)
70 PAVEMENT MARKING GROOVED THERMOPLASTIC CROSSWALK 6–INCH (WHITE)
171 PAVEMENT MARKING CROSSWALK EPOXY 24–INCH (WHITE)
172 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 24–INCH (WHITE)

2

N

9+00

8+00

S. 68TH ST.

IH-94

W. DIXON ST.

792+00

793+00

794+00

795+00

796+00

796+89

EP: 796+88.99

EB IH-94 ON RAMP

EB IH-94 ON RAMP

792+37.8, 6.0' LT (3)

792+34.5, 4.5' RT (3)

794+90.5, 5.2' LT (3)

794+90.4, 16.2' LT (7)

794+90.6, 5.3' RT (3)

794+90.6, 15.7' RT (7)

796+28.4, 10.6' LT (1)

796+70.7, 9.4' RT (2)

11'

10.5'

10.5'

7'

7'

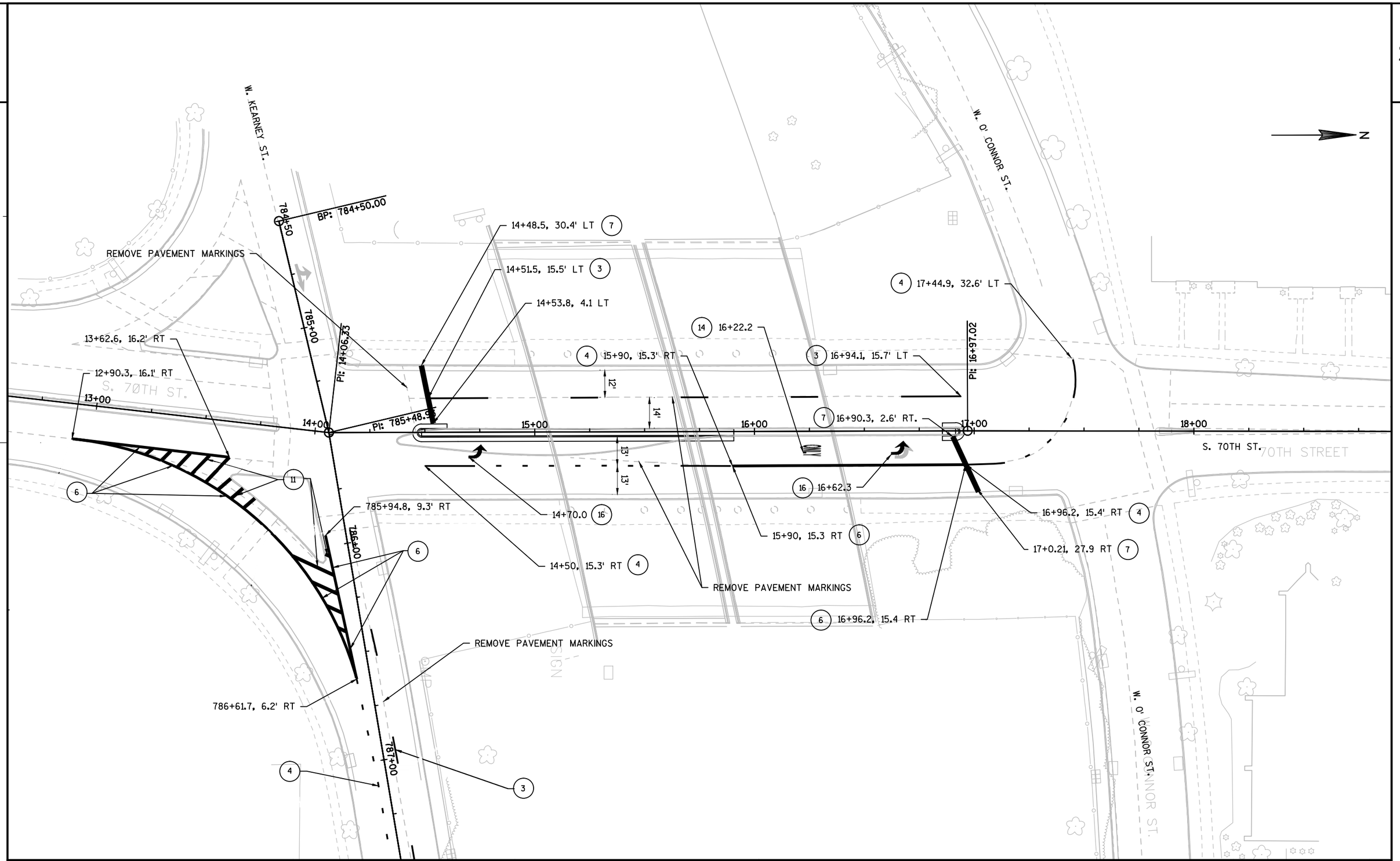
4'

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - 68TH ST. ON RAMP AT IH-94	SHEET 295	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024501_PM.DWG PLOT DATE : 4/24/2014 2:15 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - S. 70TH ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024501_PM.DWG PLOT DATE : 4/24/2014 2:15 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

N

16+00

14'

12'

13'

13'

15+00

14+06.33

14+00

13+00

PI: 785+48.3

SIGN

OMP

W. KEARNEY ST.

W. KEARNEY ST.

S. 70TH ST.

S. 69TH ST.

CONC SLAB

786+00

787+00

788+00

789+00

790+00

791+00

11'

11.3'

10.5'

15'

(3) 787+06.5, 6.3' LT (ANGLE POINT)

(3) 785+93.8, 2.1' LT

786+56.6, 4.8' LT (ANGLE POINT)

785+94.8, 9.3' RT

13+62.6, 16.2' RT

12+90.3, 16.1' RT

786+61.7, 6.2' RT (4)

(11) REMOVE PAVEMENT MARKINGS

(6)

(4)

REMOVE PAVEMENT MARKINGS

(17) 789+03.5

(14) 788+63.5

(16) 789+03.5

(15) 789+03.5

(3) 789+99.7, 5.9' LT

(4) 789+99.7, 4.6' RT

CONSTRUCTED IN TRAFFIC CONTROL STAGE 1

REMOVED IN TRAFFIC CONTROL STAGE 1

(17) 791+18.0

(14) 790+82.7

(15) 791+20.8

CONSTRUCTED IN TRAFFIC CONTROL STAGE 1

PI:

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - W. KEARNEY ST.	SHEET 297	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024501_PM.DWG PLOT DATE : 4/24/2014 2:15 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

N

REMOVE PAVEMENT MARKINGS

17 789+03.5

789+03.5 15

CONSTRUCTED IN TRAFFIC CONTROL STAGE 1

17 791+18.0

3 789+99.7, 5.9' LT

15 791+20.8

11'

W. KEARNEY ST.

788+00 789+00 790+00 791+00 792+00 793+00 794+00

10.5' 10.5'

W. KEARNEY ST.

4 789+99.7, 4.6' RT

REMOVE PAVEMENT MARKING WORDS

14 790+82.7

CONSTRUCTED IN TRAFFIC CONTROL STAGE 1

14 788+63.5

S. 69TH ST.

CONC SLAB

9 791+57.4, 23.5' RT

791+90.2, 35.3' RT

16 789+03.5

9+00

8+00

S. 68TH ST.

IH-94

792+35.9, 23.8 LT 9

792+44.5, 18.3' LT 1

792+37.8, 6.0' LT 3

7'

EB IH-94 ON RAMP

EB IH-94 ON RAMP

792+34.5, 4.5' RT 3

792+31.2, 15.1' RT 2

792+22.7, 19.3' RT

792+15.0, 25.9' RT

792+06.9, 35.7' RT 7

7'

4'

7+00

S. 68TH ST.

PI: 6+59.23

W. DIXON ST.

6+00

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING-W. KEARNEY ST./68TH ST. ON RAMP AT IH-94	SHEET 298	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024501_PM.DWG PLOT DATE : 4/24/2014 2:15 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

N

70 MATCH EXISTING

186+14.9, 60.5' LT

68

186+14.4, 25.0' LT

BP: 185+00.00

172 MATCH EXISTING

184+63.2, 2.3' LT

183 184 185 186 187 188

W. BLUEMOUND RD.

CONTINENTAL CROSSWALK

6'

68

184+63.0, 44.5' RT

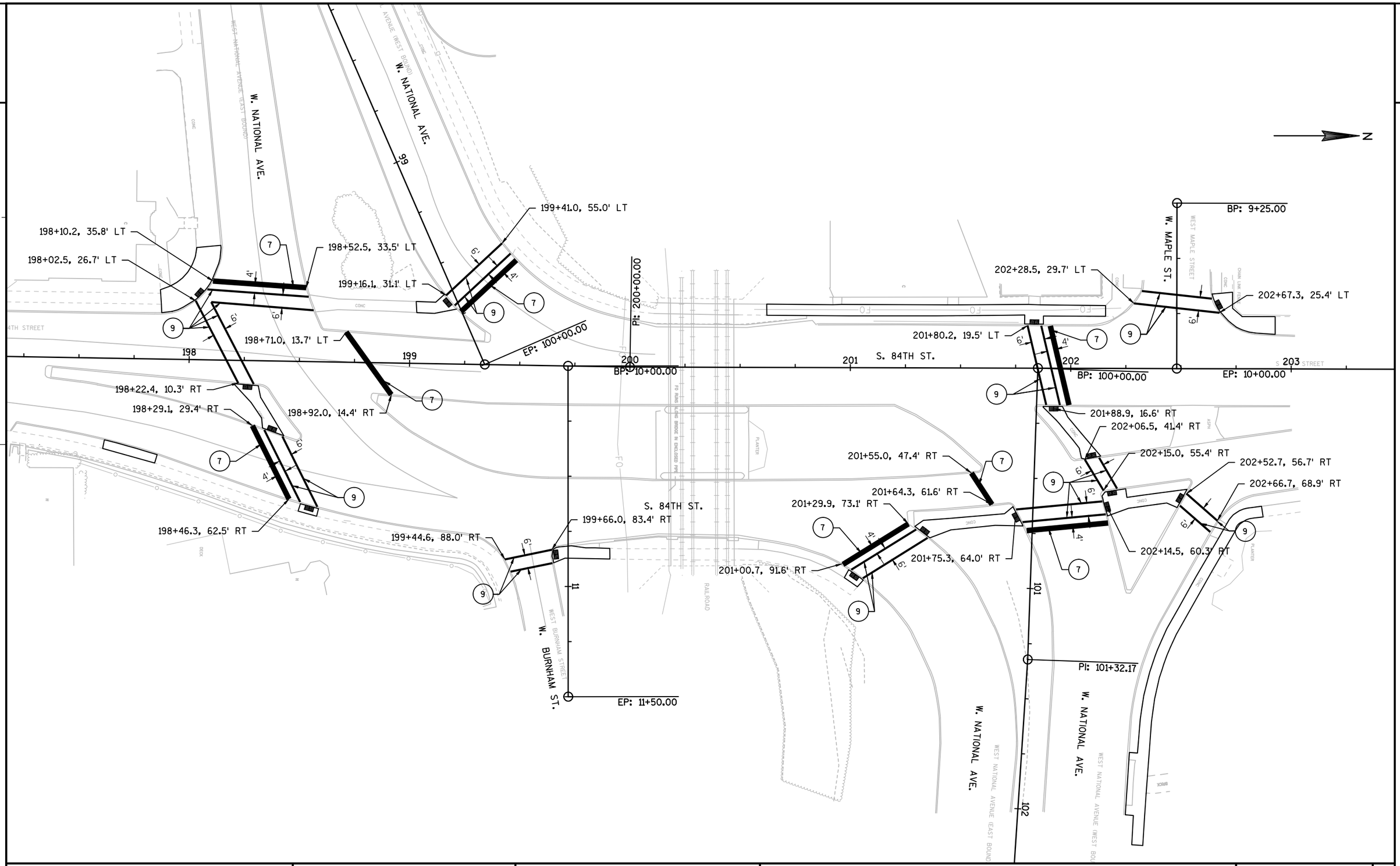
MILWAUKEE COUNTY ZOO

PROJECT NO:1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING-W. BLUEMOUND RD. BTWN N. 103RD & N. 99TH	SHEET 299	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024505_PM.DWG PLOT DATE : 4/28/2014 8:31 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

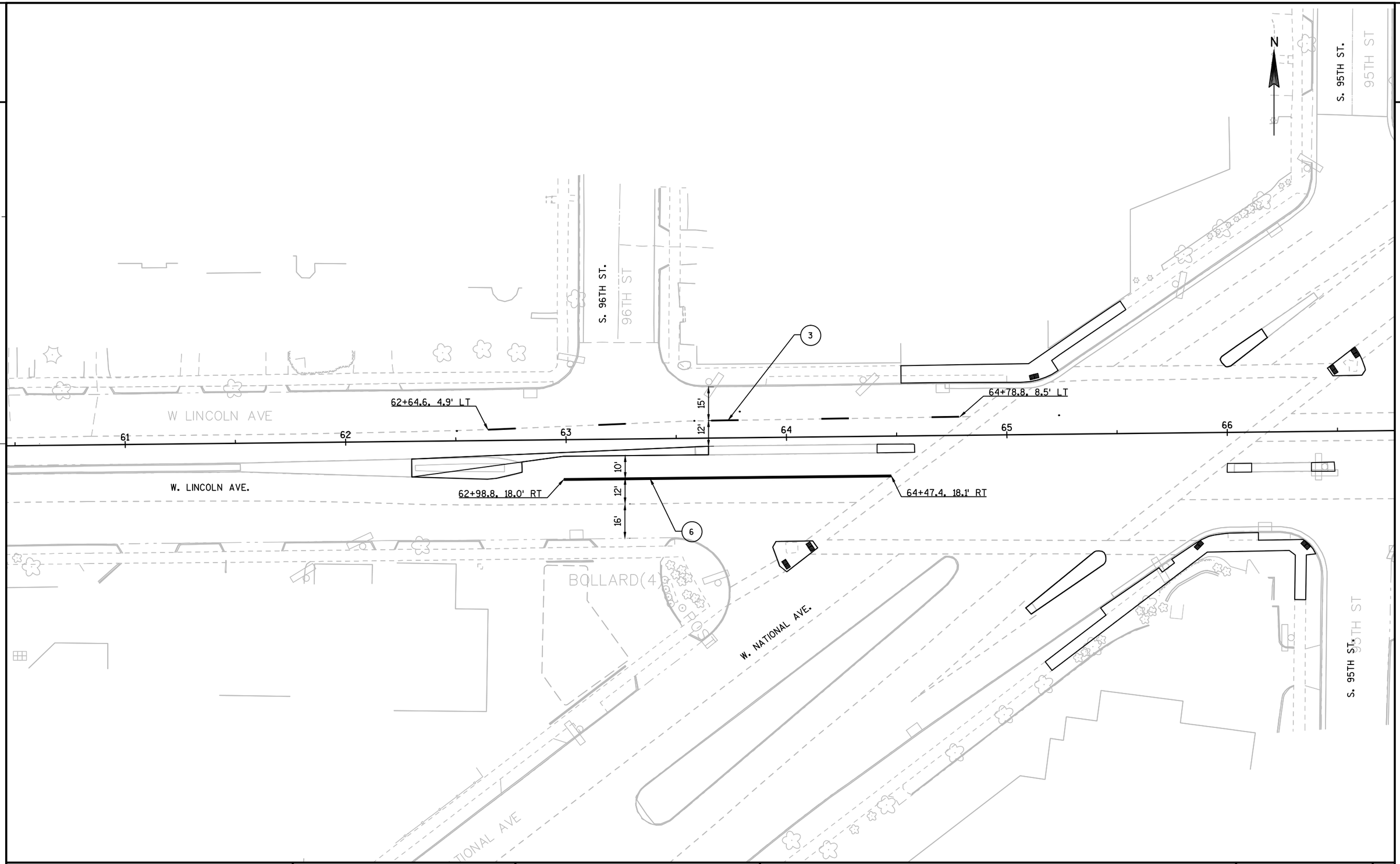
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - S. 84TH ST. & W. NATIONAL AVE.	SHEET 300	E

2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - W. LINCOLN AVE. & W. NATIONAL AVE.	SHEET 301	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024516_PM.DWG PLOT DATE : 4/28/2014 8:35 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

N

S. 92ND ST.

S. 91ST ST.

W. GREENFIELD AVE.

W. GREENFIELD AVE.

BP: 541+21.00

17 542+15.0

15 542+14.9

541+94.9, 23.6' LT

6

541+94.8, 11.6' LT

16 542+14.8

542+49.8, 24.0' LT

542+49.9, 12.0' LT

543+28.5, 11.9' LT

543+22.8, 0.7' LT

1 MATCH EXISTING (DOUBLE)

3

4

6

13'

12'

12'

11'

12'

11'

11'

11'

542+00

543+00

544+00

545+00

546+00

547+00

POST

POST

POST

POST

POST

POST

S. 92ND ST.

92ND ST

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - W. GREENFIELD AVE., 92ND ST. TO 84TH ST.	SHEET 302	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024519_PM.DWG PLOT DATE : 4/28/2014 8:38 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

2

N

S. 90TH ST.

3

POST

1 MATCH EXISTING (DOUBLE)

89TH S S. 89TH ST.

POST

SIGN

GATE

11'

11'

547+00 548+00 549+00 550+00 551+00 552+00 553+0

W. GREENFIELD AVE.

MATCH EXISTING (DOUBLE) 1

90TH S. 90TH ST.

GATE

T20

GATE

3

88TH S. 89TH ST.

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - W. GREENFIELD AVE., 92ND ST. TO 84TH ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024519_PM.DWG PLOT DATE : 4/28/2014 8:38 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

2

N

S. 88TH ST.

S. 87TH ST.

SIGN

POST

1 MATCH EXISTING (DOUBLE)

3

9 MATCH EXISTING

W. GREENFIELD AVE.

553+00 554+00 555+00 556+00 557+00 558+00

11'

11'

W. GREENFIELD AVE.

3

1 MATCH EXISTING (DOUBLE)

9 MATCH EXISTING

S. 88TH ST.

S. 87TH ST.

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - W. GREENFIELD AVE., 92ND ST. TO 84TH ST.	SHEET 304	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024519_PM.DWG PLOT DATE : 4/28/2014 8:38 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

2

N

S. 87TH ST.

MATCH EXISTING 9

3

WHILE

W. GREENFIELD AVE.

559+00

560+00

561+00

S. 86TH ST.

BOLLARD (2)

MATCH EXISTING (DOUBLE) 1

11'

11'

562+00

563+00

564+00

S. 85TH ST.

W. GREENFIELD AVE.

MATCH EXISTING 9

MATCH EXISTING (DOUBLE) 1

BOLLARD

BOLLARD

BOLLARD

3

S. 87TH ST.

S. 86TH ST.

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - W. GREENFIELD AVE., 92ND ST. TO 84TH ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024519_PM.DWG PLOT DATE : 4/28/2014 8:38 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

N

16 MATCH EXISTING

3 MATCH EXISTING

1 MATCH EXISTING (DOUBLE)

3 566+60.0, 20.4' LT

11'

11'

11'

11'

S. 85TH ST.

ASPH

CONC

W. GREENFIELD AVE.

564+00

565+00

566+00

567+00

568+00

569+00

225+00

224+00

223+00

PI: 568+01.17

ONLY

BOLLARD

W. GREENFIELD AVE.

MATCH EXISTING (DOUBLE) 1

565+79.1, 11.6' LT

MATCH EXISTING 3

14 MATCH EXISTING

6 MATCH EXISTING

7 MATCH EXISTING

85TH ST

S. 85TH ST.

S. 84TH ST.

ASPH

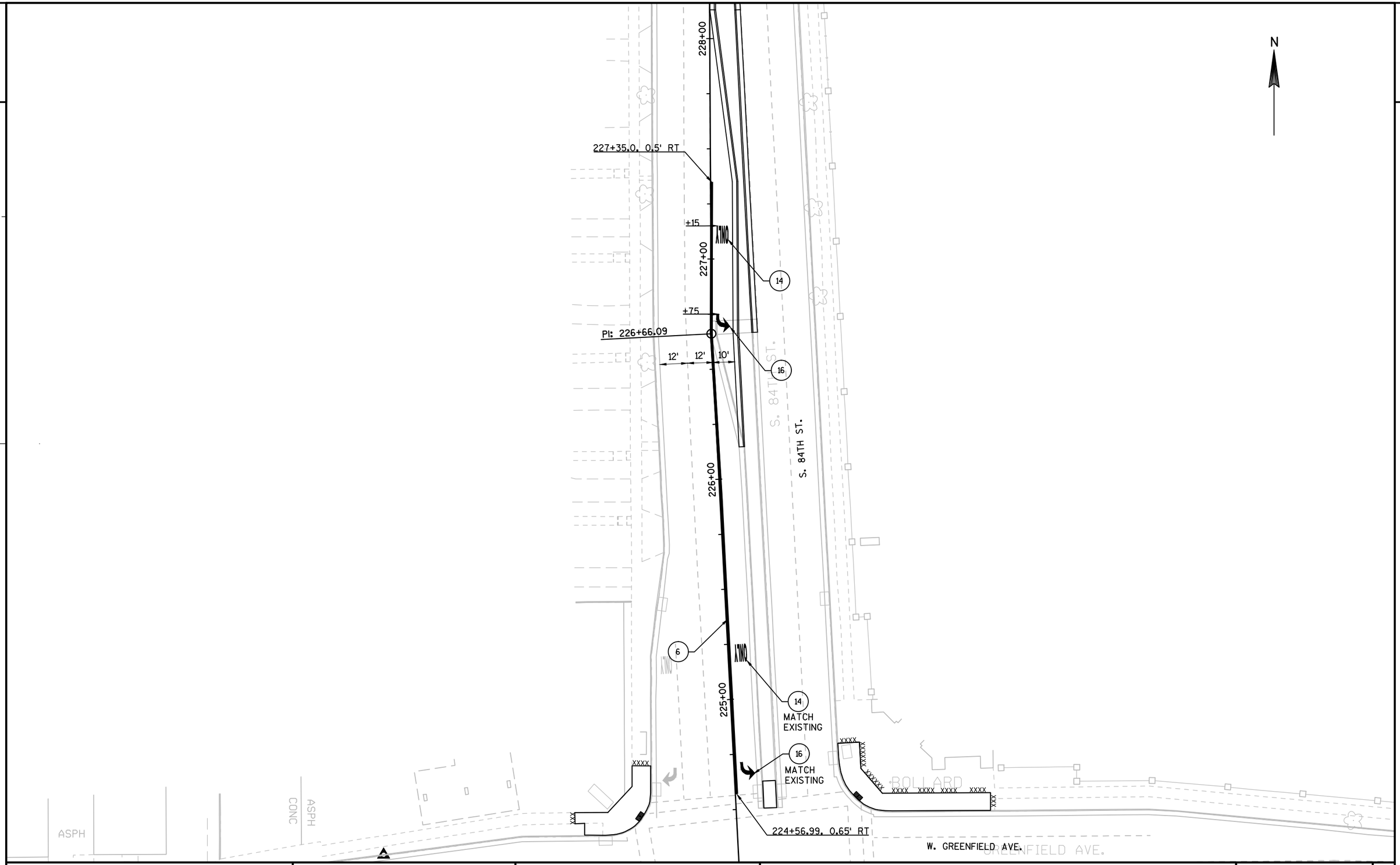
CONC

PARKING LOT

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - W. GREENFIELD AVE., 92ND ST. TO 84TH ST.	SHEET 306	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024519_PM.DWG PLOT DATE : 4/28/2014 8:38 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2



PROJECT NO:1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - W. GREENFIELD AVE. & S. 84TH ST.	SHEET 307 E

2

N

EP: 252+45.86

252+00

PI: 251+86.13

7 MATCH EXISTING

9

250+86.5, 51.3' LT

W. SCHLINGER AVE.

7

6'

4'

251+00

7 MATCH EXISTING

9

7 MATCH EXISTING

STATE FAIR GATE 5

POST

POST

POST

SIGN

POST

POST

7 MATCH EXISTING

250+00

S. 84TH ST.

249+00

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - S. 84TH ST. & STATE FAIR GATE 5	SHEET 308	E

2

N

S. 84TH ST.

7
MATCH
EXISTING

171
MATCH
EXISTING

BOLLARDS (6)

7
MATCH
EXISTING

BOLLARDS (4)

9
MATCH
EXISTING

9
MATCH
EXISTING

234+00

CONC

ASPHALT

STATE FAIR
GATE 4

GATE

7
MATCH
EXISTING

233+00

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - S. 84TH ST. & STATE FAIR GATE 4	SHEET 309	E

2

N

W. LAPHAM ST.

ONLY

17

16

6

18+58.0 14

1 (DOUBLE)

19+09.0 16

17 19+05.4

19+37.2, 9.2' RT

7 19+37.4, 22.7' RT

19+71.9, 13.2' LT

513+62.5, 51.8' LT 9

13' 11' 16'

7'

9 513+04.7, 51.6' LT

513+71.9, 13.2' LT 7

PAVEMENT MARKING CURB (EPOXY)

14 512+26.5

512+71.8, 11.7' LT

512+89.8, 3.4' LT 7

16 511+86.8

512+71.8, 0.9' LT

16 512+65.6

6 517+18.0, 11.8' LT

16 516+57.9

513+92.0 16

512

514

516

11'

12'

STH 100 (S. 108TH ST.)

514+32.0 14

511+66.8, 12.3' RT 6

7'

513+71.9, 1.3' LT

516+98.0 14

512+89.8, 12.3' RT

511+76.9, 34.3 3

512+89.7, 34.3' RT

7'

9 512+52.2, 52.0' RT

REMOVE PAVEMENT MARKINGS

513+51.4, 52.1' RT 9

20+63.0, 5.4' RT

20+63.0, 5.6' LT

20+65.7, 25.6' LT 7

20+63.0, 16.5' LT

16 20+90.6

(DOUBLE) 1

ONLY

20+95.7 17

14 21+30.9

11' 11' 11'

21+76.1, 5.7' RT

21+76.1, 5.3' LT 6

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - STH 100 & LAPHAM ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024515_PM.DWG PLOT DATE : 4/28/2014 8:34 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

N

STH 100 (S. 108TH ST.)

MCDONALDS

14 514+32.0

16 513+92.0

6

9 513+62.5, 51.8" LT

513+71.9, 13.2' LT

513+71.9, 1.3' LT 7

ONLY

11'

514

19+37.1, 1.9' LT

513+51.4, 52.1' RT 9

20+65.7, 25.6' LT 7

20+63.0, 16.5' LT

20+63.0, 5.6' LT

17+87.1, 2.2' LT

1 (DOUBLE)

7'

16 19+09.0

16'

7'

21+76.1, 5.3' LT 6

W. LAPHAM ST.

19+37.2, 9.2' RT

20+95.7 17

11'

13'

16 18+07.0

PAVEMENT MARKING
CURB (EPOXY)

22

11'

11'

11'

512+89.8, 3.4' LT

7'

6 17+87.2, 8.8' RT

17 18+07.0

14 18+58.0

17 19+05.4

7 19+37.4, 22.7' RT

21+76.1, 5.7' RT

20+90.6 16

21+30.9 14

1 (DOUBLE)

20+63.0, 5.4' RT 7

512+89.7, 34.3' RT

512+52.2, 52.0' RT 9

512+71.8, 11.7' LT

512+71.8, 0.9' LT

9 513+04.7, 51.6' LT

7 512+89.8, 11.2' RT

16 512+65.6

12'

ONLY

TEMP
SIGN

14 512+26.5

512

STH 100 / S. 108TH ST.

511+76.9, 34.3' RT 3

16 511+86.8

511+66.8, 12.3' RT 6

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - STH 100 & LAPHAM ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024515_PM.DWG PLOT DATE : 4/28/2014 8:34 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

W. THEO TRECKER WAY

N

550+09.7, 13.5' RT

550

+98

16

ONLY

+58

14

SIGN

549

S. 108TH ST

6

STH 100 (S. 108TH ST.)

+09

548

16

ONLY

+69

10' 11' 11' 13'

14

547+48.6, 12.2' RT

547

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - W. THEO TRECKER WAY & STH 100	SHEET 312	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024518_PM.DWG PLOT DATE : 4/28/2014 8:36 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

N

BP: 10+00.00

S. 68TH ST.

W. LINCOLN AVE.

W. BELOIT RD.

152+58.7, 3.5' LT

(DOUBLE)

153+42.9, 9.8' LT

153+50.9, 1.8' RT

154+19.8, 1.7' RT

152+53.8, 7.1' RT

154+19.8, 12.7' RT

153+53.8, 12.7' RT

152+55.2, 18.5' RT

153+54.9, 25.0' RT

155+69.8, 1.7' RT

155+71.3, 10.3' LT

PI: 155+91.78

EP: 313+28.81

155+17.6, 37.0' RT

157+31.4, 21.0' LT

157+18.9, 10.1' LT

156+93.5, 11.9' RT

156+75.7, 22.9' RT

MATCH EXISTING

312+42.5, 32.2' RT

312+23.9, 9.3' RT

MATCH EXISTING

MATCH EXISTING

311+78.3, 21.7' RT

ONLY

311+03.3, 8.1' RT

25'

13.5'

10.5'

+40

+80

+20

+10

+70

11'

12'

152

153

154

155

156

157

312

313

311

131

132

133

134

135

MWEL

IP

SIGN

POST

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - W. LINCOLN AVE. & W. BELOIT RD.	SHEET 313	E

2

N

S. 67TH PL.

W. BELOIT RD.

137

BP: 10+00.00

136

157+57.9, 61.5' LT

11

6

7

155+69.8, 1.7' RT

155+71.3, 10.3' LT

PI: 155+91.78

157+58.7, 29.3' LT

9 MATCH EXISTING

157+31.4, 21.0' LT

12'

1.9'

135

3

159+08.4, 10.1' LT

10

1 (DOUBLE)

14

16

158+42.4, 0.9' RT

159+08.4, 0.9' RT

160+06.1, 3.8' LT

155

+20

EP: 313+28.81

156

157

158

159

160

161

160+08.4, 7.2' RT

159+08.4, 11.9' RT

157+18.9, 10.1' LT

156+93.5, 11.9' RT

158+42.4, 11.9' RT

25'

W. LINCOLN AVE.

+42

+82

13'

+23

11'

313-94.95

313

134

37.0' RT

156+75.7, 22.9' RT

159+08.4, 22.9' RT

160+06.8, 18.4' RT

S. 67TH ST.

133

312+42.5, 32.2' RT

312+23.9, 9.3' RT

+10

312

+70

ONLY

311+78.3, 21.7' RT

S. 68TH ST.

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - W. LINCOLN AVE. & W. BELOIT RD.	SHEET 314	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\024520_PM.DWG PLOT DATE : 4/30/2014 9:30 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

N

S. 99TH ST.

99TH ST.

S. 98TH ST.

98TH ST.

W. LINCOLN AVE.

LINCOLN AVE

PAVEMENT MARKING CURB (EPOXY)

PAVEMENT MARKING ISLAND NOSE (EPOXY)

56+02.7, 7.3' LT

56+02.6, 2.5' LT

53 54 55 56 57 58

12'

13.5'

20'

55+94.4, 9.3' RT

56+25.3, 10.2' RT

6

S. 99TH ST.

S. 98TH ST.

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	PAVEMENT MARKING - W. LINCOLN AVE. & S. 98TH ST.	SHEET 315	E

2

S. 70TH ST.

SIGN

ROAD WORK AHEAD W20-1

LEFT LANE CLOSED AHEAD W20-5

W04-2L

789+99.7, 5.9' LT
PAVEMENT MARKING
EPOXY 8-INCH
(TO REMAIN IN PLACE)

789+99.7, 4.6' RT
TEMPORARY PAVEMENT
MARKING 8-INCH

791+51.0, 16.6' LT
PAVEMENT MARKING
STOPLINE
EPOXY 18-INCH (WHITE)
(TO REMAIN IN PLACE)

791+50.5, 5.7' LT
PAVEMENT MARKING
EPOXY 8-INCH
(TO REMAIN IN PLACE)

791+21.7
TEMPORARY PAVEMENT
MARKING ARROWS

REMOVE PAVEMENT MARKINGS

791+17.5
TEMPORARY PAVEMENT
MARKING ARROWS

790+82.7
TEMPORARY PAVEMENT
MARKING WORDS

ROAD WORK AHEAD W20-1

N

400'

786+00 787+00 788+00 789+00 W. KEARNEY ST. 790+00 791+00

W. KEARNEY ST.

11'
10.5'
10.5'

790+82.7
PAVEMENT MARKING
WORDS EPOXY (WHITE)
(TO REMAIN IN PLACE)

S. 69TH ST.

789+99.7, 4.6' RT
PAVEMENT MARKING
EPOXY 8-INCH
(TO REMAIN IN PLACE)

CONC

791+21.7
PAVEMENT MARKING ARROWS
EPOXY TYPE 2 (WHITE)
(TO REMAIN IN PLACE)

788+94.4, 15.1' RT
TEMPORARY PAVEMENT
MARKING 8-INCH

791+50.0, 4.8' RT
PAVEMENT MARKING
EPOXY 8-INCH
(TO REMAIN IN PLACE)

PI: 6+59.23

791+47.8, 18.4' RT
PAVEMENT MARKING STOPLINE
EPOXY 18-INCH (WHITE)
(TO REMAIN IN PLACE)

500'

S. 68TH ST.

6+00

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

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - S. 68TH ST. ON RAMP AT IH-94 - STAGE 1	SHEET 316	E

2

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDE WALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.

ROAD WORK AHEAD W20-1

SIDEWALK CLOSED USE OTHER SIDE R5-8a 24" X 12"

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

SIDEWALK CLOSED R5-8 24" X 12"

TYPE III BARRICADE WITH ATTACHED SIGN

LANE CLOSED R11-2(MOD) 48" X 30"

S. 68TH ST.

9+00

8+00

7+00

6+00

400'

500'

400'

500'

400'

IH-94

W. KEARNEY ST.

W. DIXON ST.

792+00

793+00

794+00

795+00

796+00

796+89

EB IH 94 ON RAMP

50'

11'

11'

11.4'

25'

796+89.0, 7.7' LT
TEMPORARY PAVEMENT MARKING 8-INCH

EP: 796+88.99

792+36.5, 1.7' LT
TEMPORARY PAVEMENT MARKING 8-INCH

791+61.2, 5.5' RT
TEMPORARY PAVEMENT MARKING 8-INCH

792+31.8, 9.0' RT
TEMPORARY PAVEMENT MARKING 8-INCH

794+90
TEMPORARY PAVEMENT MARKING
STOP LINE 12-INCH

796+28.3, 0.5' LT
ANGLE POINT
TEMPORARY PAVEMENT MARKING 8-INCH

PI: 6+59.23

791+79.00

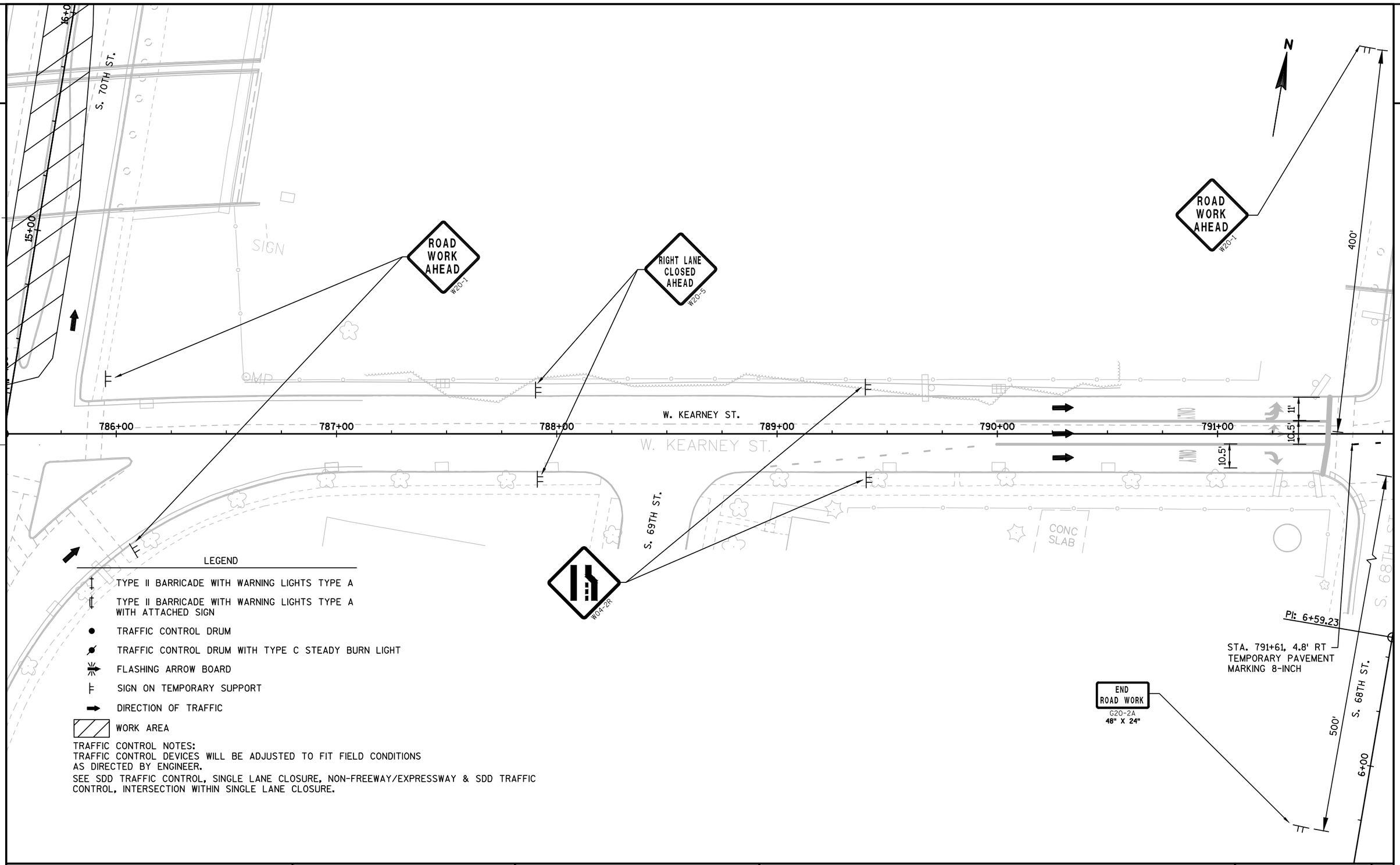
CAMERA

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - S. 68TH ST. ON RAMP AT IH-94 - STAGE 1	SHEET 317	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\026102_S2.DWG PLOT DATE : 4/30/2014 8:09 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2



LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - S. 68TH ST. ON RAMP AT IH-94 - STAGE 2	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\026001S1.DWG PLOT DATE : 4/30/2014 8:09 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF
WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDE WALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.

N

ROAD WORK AHEAD W20-1

SIDEWALK CLOSED USE OTHER SIDE R5-8a 24" X 12"

SIDEWALK CLOSED R5-8 24" X 12"

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

9+00

8+00

7+00

6+00

400'

500'

S. 68TH ST.

STA. 792+28.0, 0.0' RT TEMPORARY PAVEMENT MARKING 8-INCH

IH-94

792+00

793+00

794+00

795+00

796+00

50'

17'

14'

EB IH 94 ON RAMP

E.P: 796+88.99

796+89.0, 3.4' RT TEMPORARY PAVEMENT MARKING 8-INCH

500'

25'

TYPE III BARRICADE WITH ATTACHED SIGN

LANE CLOSED R11-2(MOD) 48" X 30"

SIDEWALK CLOSED R5-8 24" X 12"

ROAD WORK AHEAD W20-1

W. DIXON ST.

ROAD WORK AHEAD W20-1

SIDEWALK CLOSED USE OTHER SIDE R5-8a 24" X 12"

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

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - S. 68TH ST. ON RAMP AT IH-94 - STAGE 2	SHEET 319	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\026002S1.DWG PLOT DATE : 4/30/2014 8:10 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.
SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

W. KEARNEY ST.

ROAD WORK AHEAD
W20-1

BP: 784+50.00

784+50

785+00

PI: 14+06.33

400'

TYPE III BARRICADE WITH ATTACHED SIGN

LANE CLOSED
R11-2(MOD)
48" X 30"

12+00

13+00

14+00

S. 70TH ST.

PI: 785+48.93

15+00

16+00

17+00

50'

16'

10'

25'

12'

11'

S. 70TH ST.

REMOVE PAVEMENT MARKINGS

TYPE III BARRICADE WITH ATTACHED SIGN

W1-6
48"X24"

PI: 16+97.02

REMOVE PAVEMENT MARKING ARROWS

LEFT TURN LANE
R3-20L
24"X30"

16+92.0, 6.4' RT
TEMPORARY PAVEMENT MARKING STOP LINES
REMOVABLE TAPE 18-INCH

REMOVE PAVEMENT MARKING WORDS

16+18.9, 17.3' RT
TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 8-INCH

17+02.3, 28.2' RT
TEMPORARY PAVEMENT MARKING STOP LINES
REMOVABLE TAPE 18-INCH

W. O' CONNOR ST.

N

400'

W01-4R

TYPE III BARRICADE WITH ATTACHED SIGN

W1-6
48"X24"

786+00

W. KEARNEY ST.

787+00

SIGN

IH-94

ROAD WORK AHEAD
W20-1

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - S. 70TH ST.	SHEET 320	E

2

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

400'

TYPE III BARRICADE WITH ATTACHED SIGN
W01-6
48" X 24"

TYPE III BARRICADE WITH ATTACHED SIGN
LANE CLOSED
R11-2(MOD)
48" X 30"

W4-2L
36"X36"

ROAD WORK AHEAD
W20-1

200'

400'

PI: 16+97.02

EP: 20+37.94

15'

25'

17'

18+00

19+00

20+00

16+96.9, 17.3' RT.
TEMPORARY PAVEMENT
MARKING 8-INCH

70TH STREET

S. 70TH ST.

500'

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

400'

LEFT LANE CLOSED AHEAD
W20-5

W. O' CONNOR ST.

400'

W. O' CONNOR ST.

ROAD WORK AHEAD
W20-1

18+80.00

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - S. 70TH ST.	SHEET 321	E

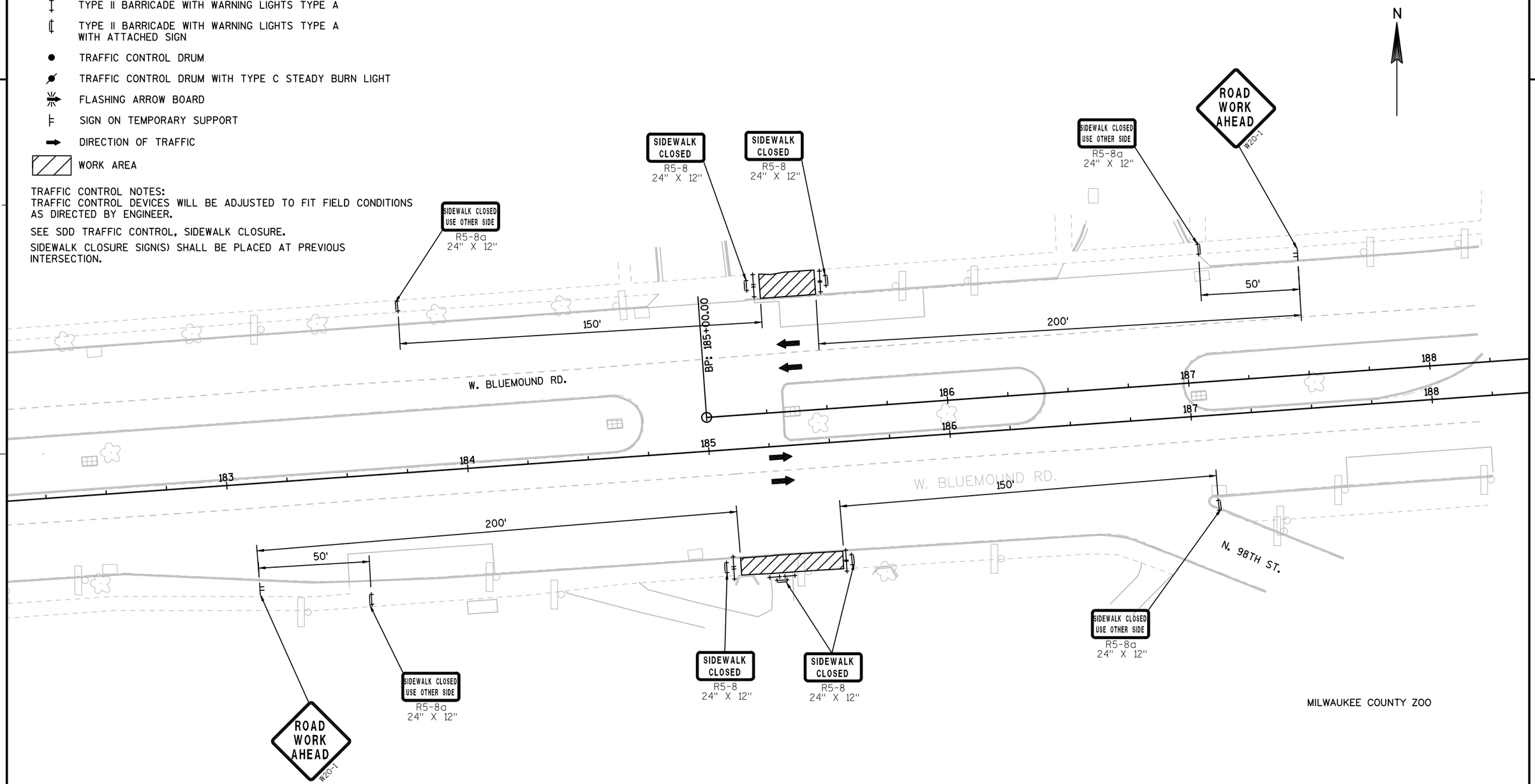
LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDEWALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. BLUEMOUND RD. BTWN N. 103RD & N. 99TH	SHEET 322	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025004_TC.DWG PLOT DATE : 4/30/2014 8:14 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF
WISDOT/CADDS SHEET 42

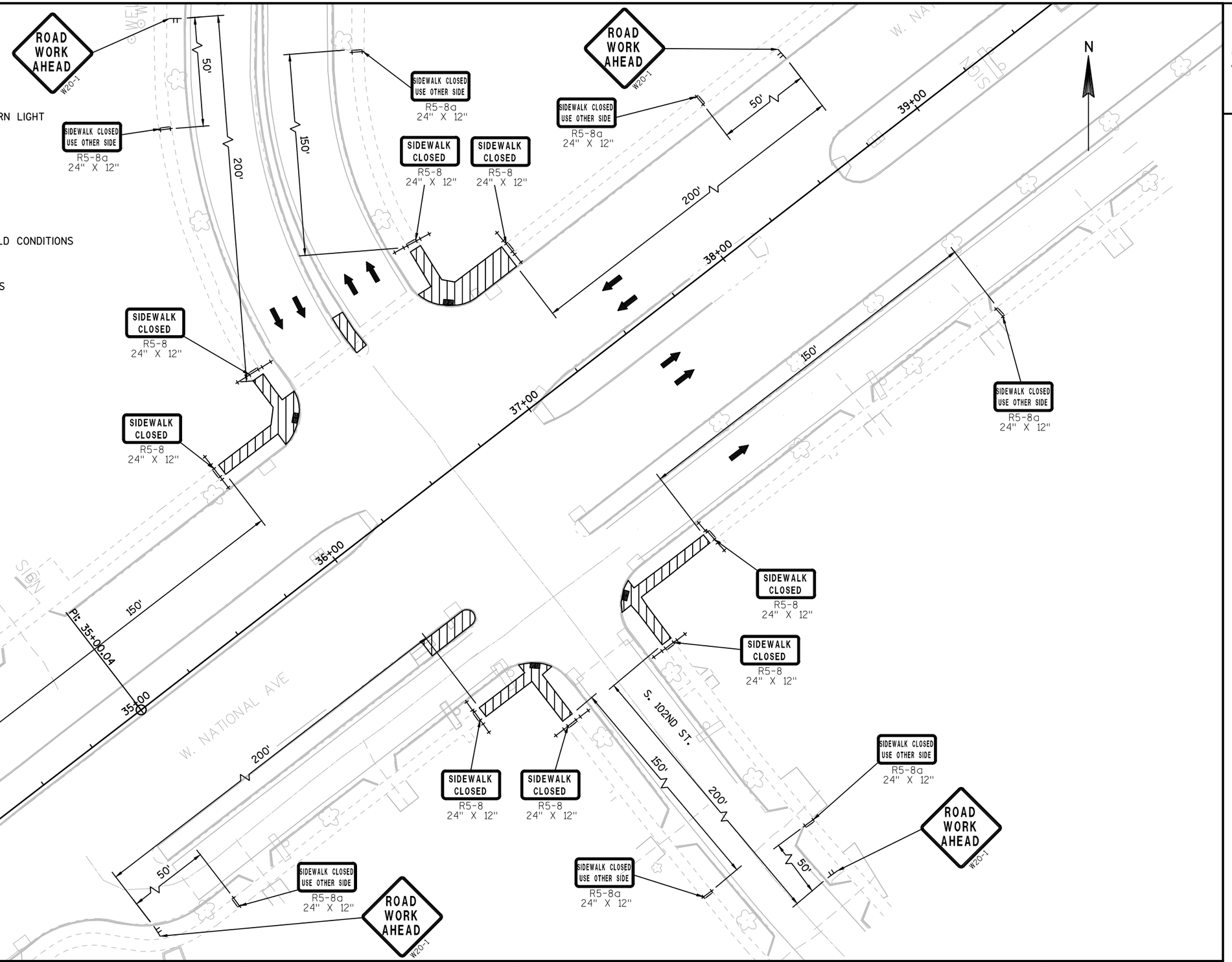
LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDEWALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.

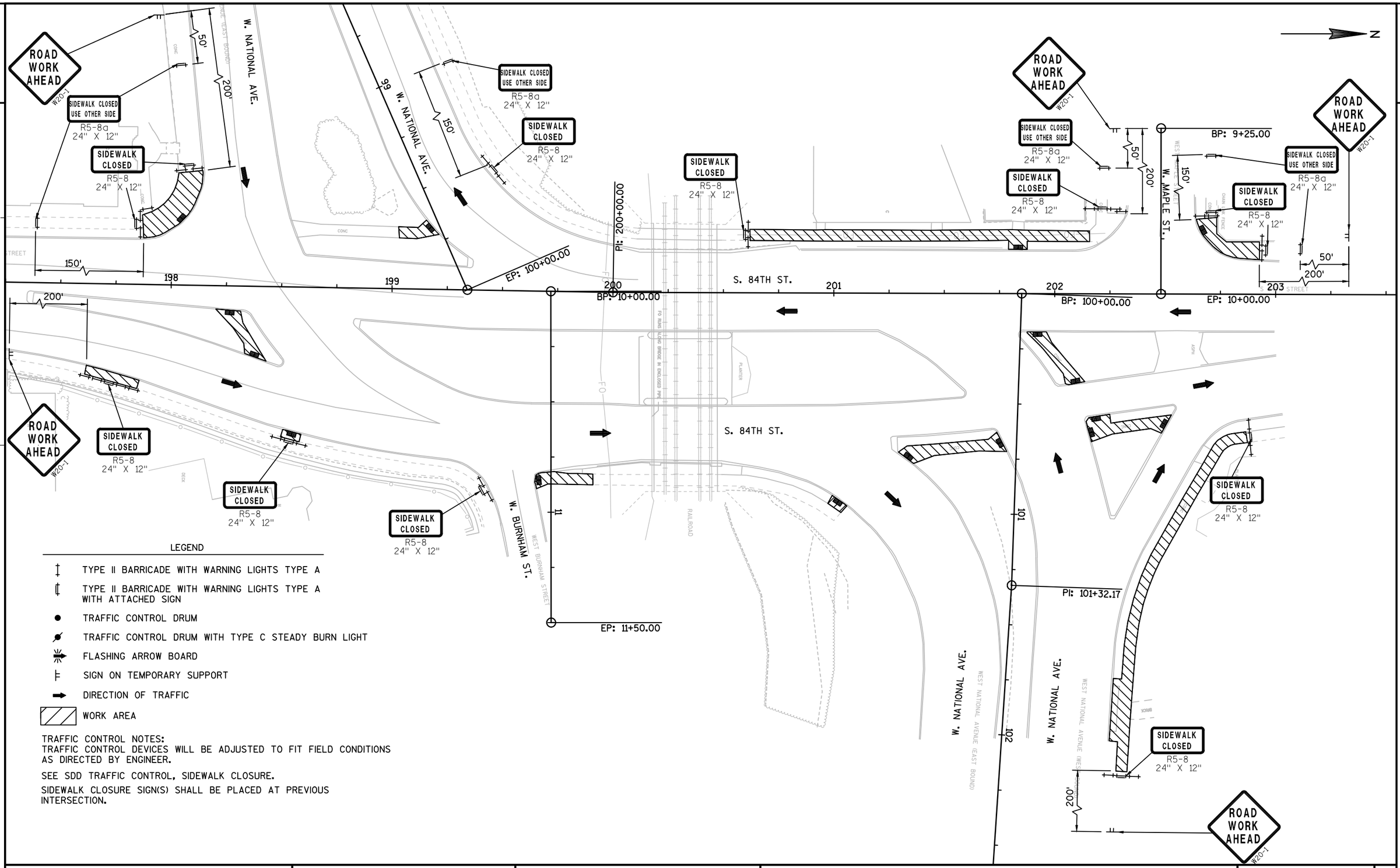


PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. NATIONAL AVE. & S. 102ND ST.	SHEET 323	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025005_TC.DWG PLOT DATE : 4/30/2014 8:17 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2



LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDEWALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - S. 84TH ST. & W. NATIONAL AVE.	SHEET 324	E

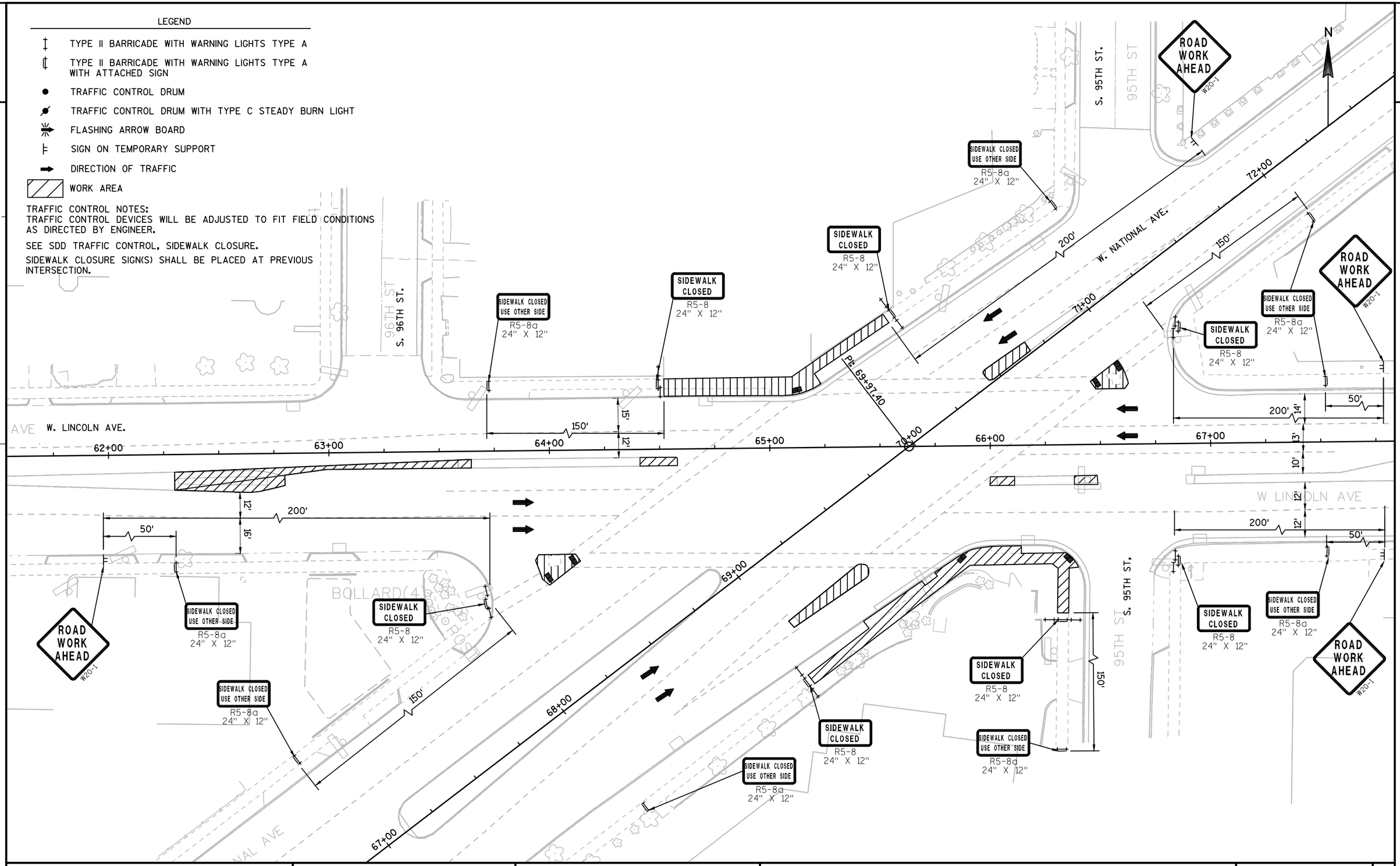
LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDEWALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.



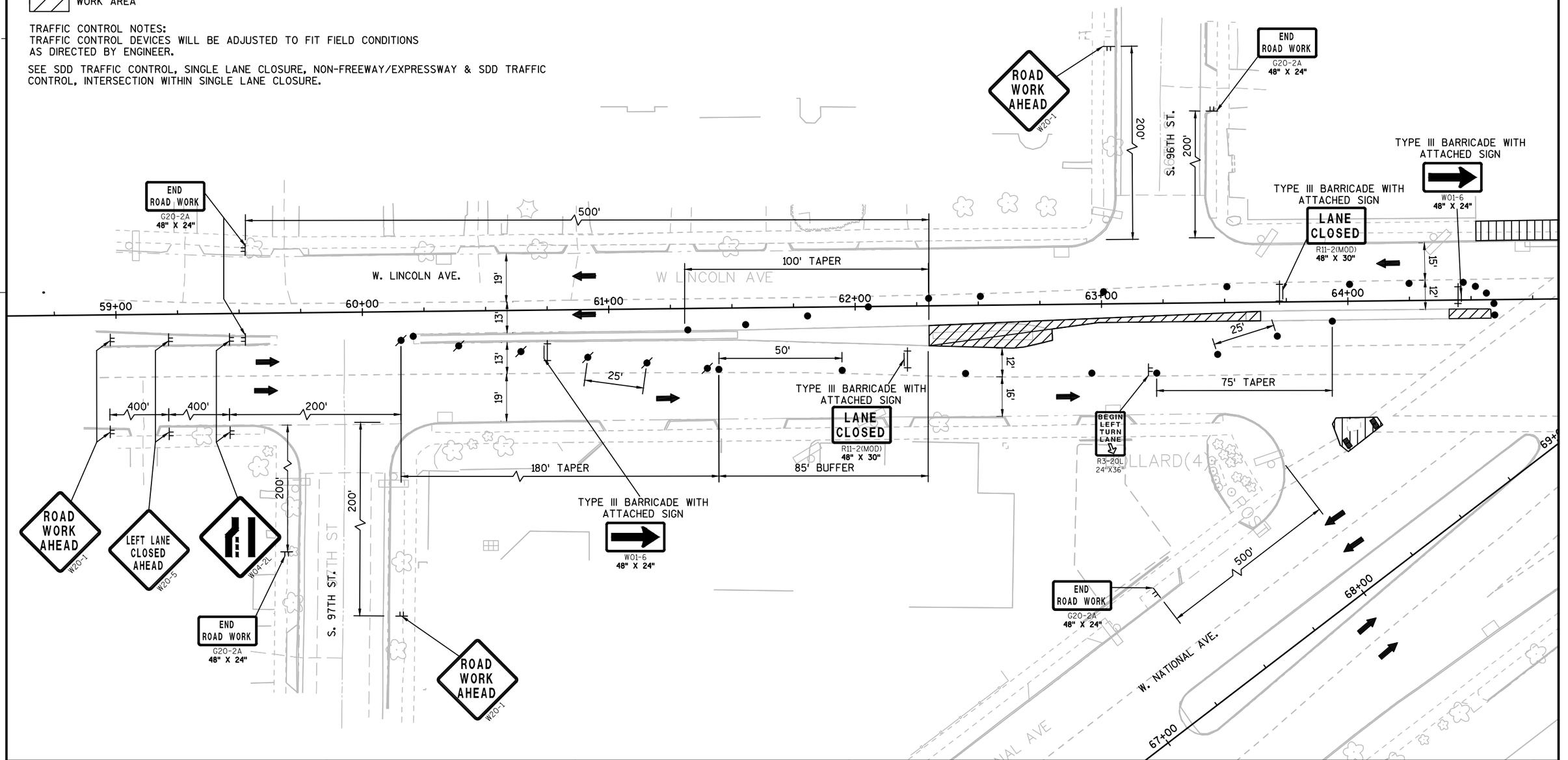
PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. LINCOLN AVE. & W. NATIONAL AVE.	SHEET 325	E

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. LINCOLN AVE. & W. NATIONAL AVE.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025007_TC.DWG PLOT DATE : 4/30/2014 8:19 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF
WISDOT/CADDS SHEET 42

2

N

ROAD WORK AHEAD W20-1

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

ROAD WORK AHEAD W20-1

S. 95TH ST.

200'

200'

W. NATIONAL AVE.

73+00

72+00

700'

500'

71+00

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

ROAD WORK AHEAD W20-1

S. 94TH ST.

500'

500'

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

W04-2L

LEFT LANE CLOSED AHEAD W20-5

ROAD WORK AHEAD W20-1

BEGIN LEFT TURN LANE R3-20L 24"X36"

50'

180' TAPER

200'

400'

400'

PI: 69+97.40

70+00

W. LINCOLN AVE.

25'

14'

13'

10'

12'

12'

25'

66+00

67+00

68+00

69+00

70+00

71+00

W LINCOLN AVE

TYPE III BARRICADE WITH ATTACHED SIGN

W01-6 48" X 24"

700'

500'

200'

200'

S. 95TH ST.

ROAD WORK AHEAD W20-1

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

ROAD WORK AHEAD W20-1

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

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. LINCOLN AVE. & W. NATIONAL AVE.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025007_TC.DWG PLOT DATE : 4/30/2014 8:19 AM PLOT BY : WAGNER, SCOTT H PLOT NAME :

WISDOT/CADDS SHEET 42

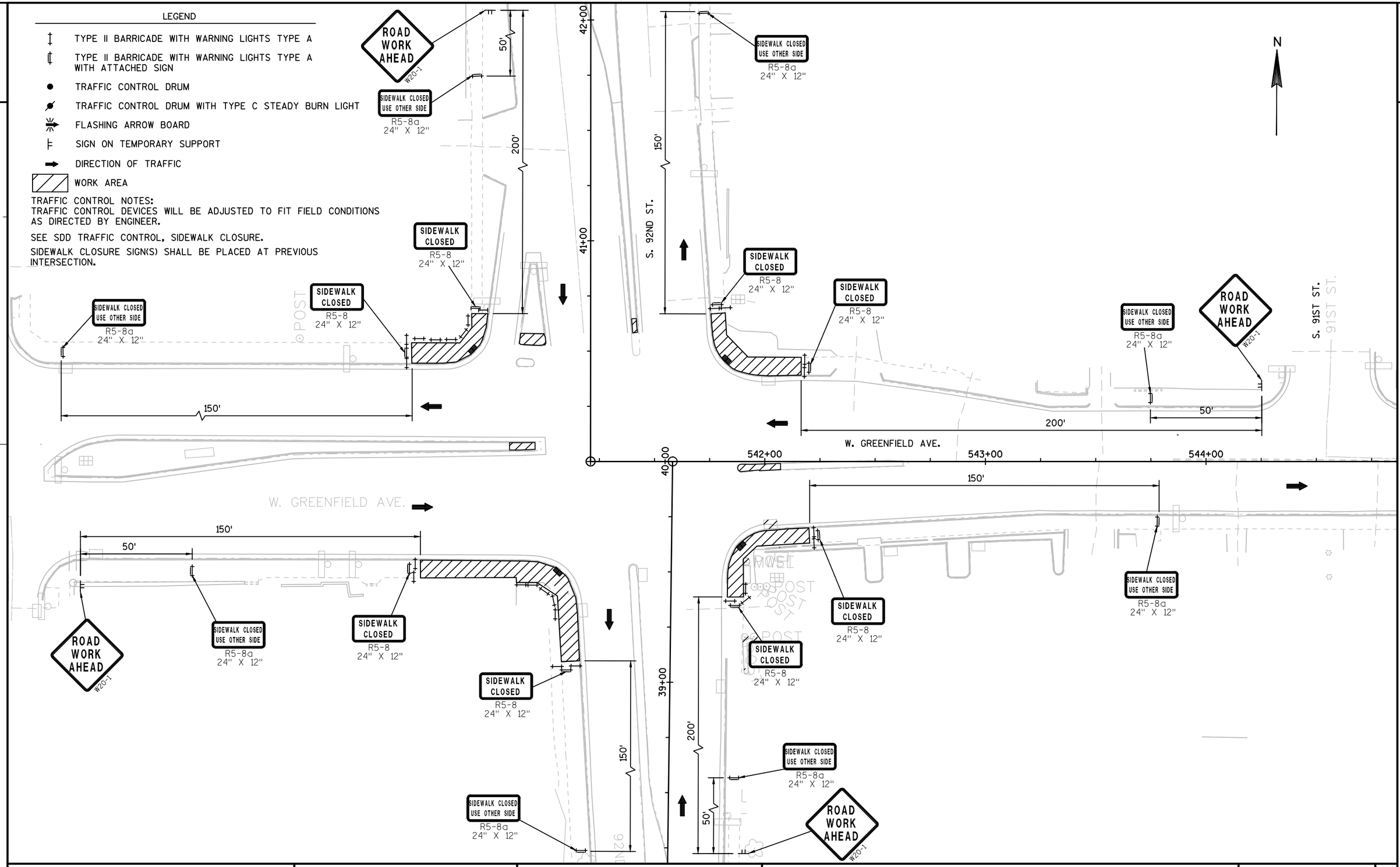
LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDEWALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. GREENFIELD AVE. & S. 92ND ST.	SHEET E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025008_TC.DWG PLOT DATE : 4/30/2014 8:20 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF
WISDOT/CADDS SHEET 42

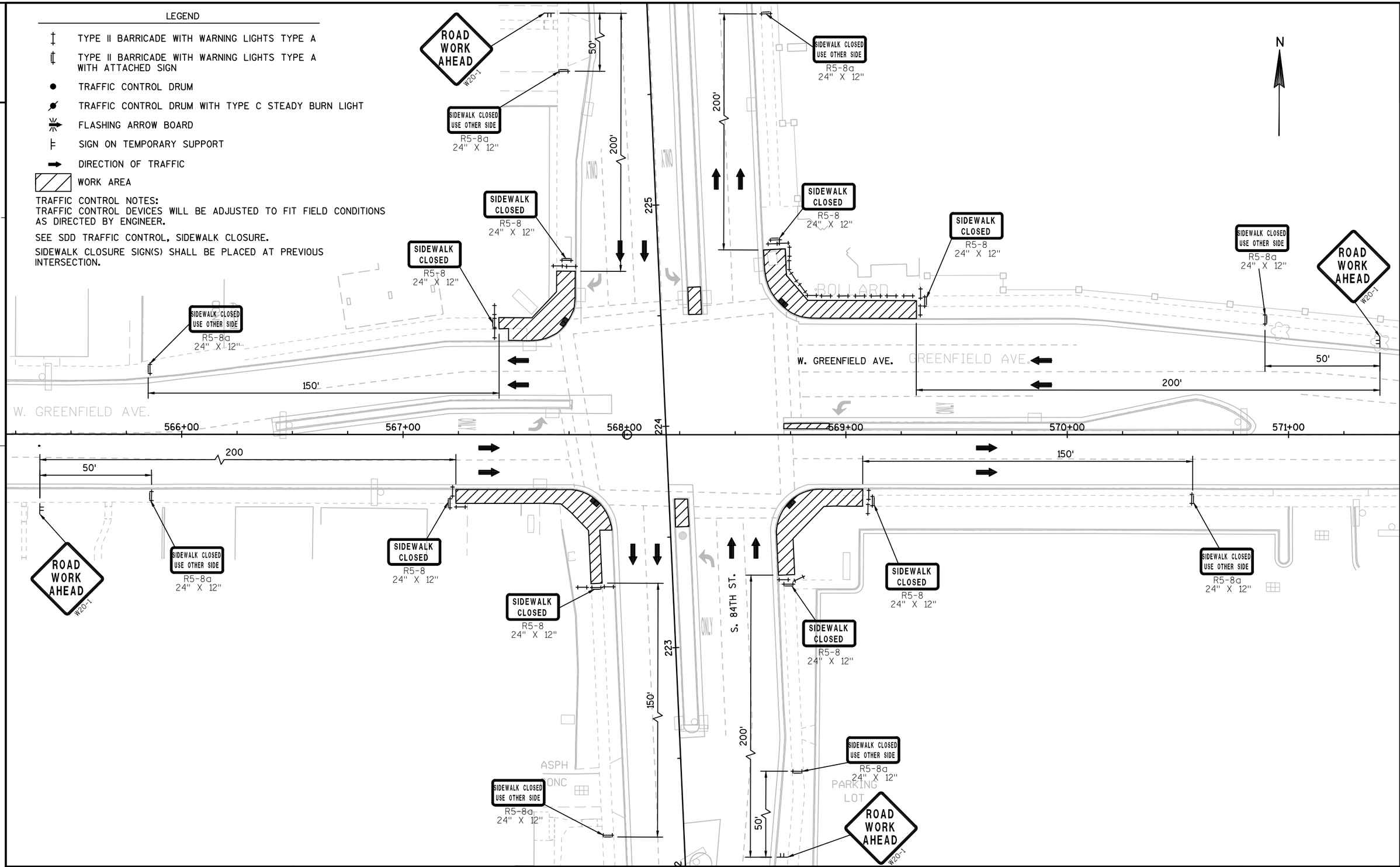
LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDEWALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.



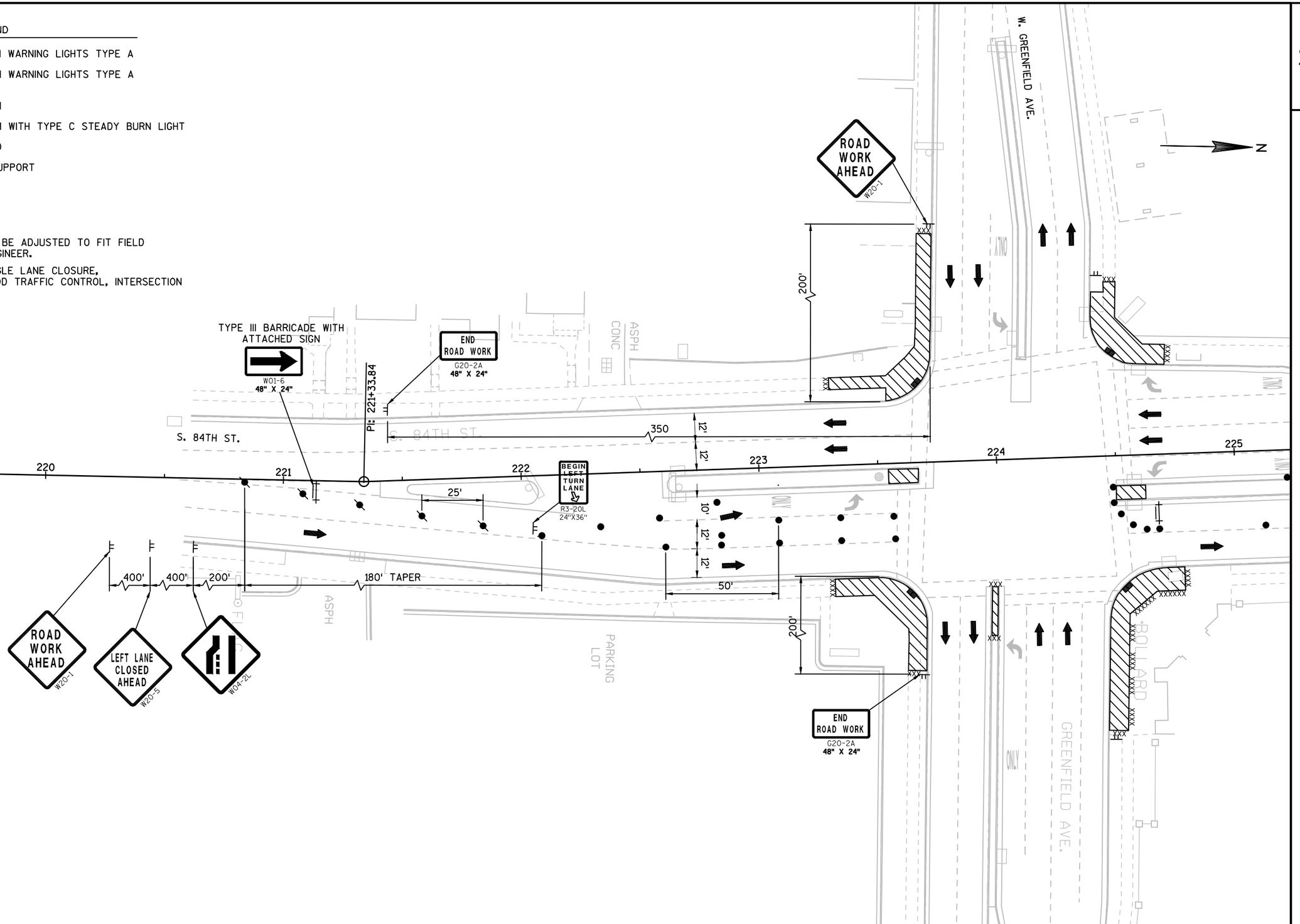
PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. GREENFIELD AVE. & S. 84TH ST.	SHEET 329	E

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

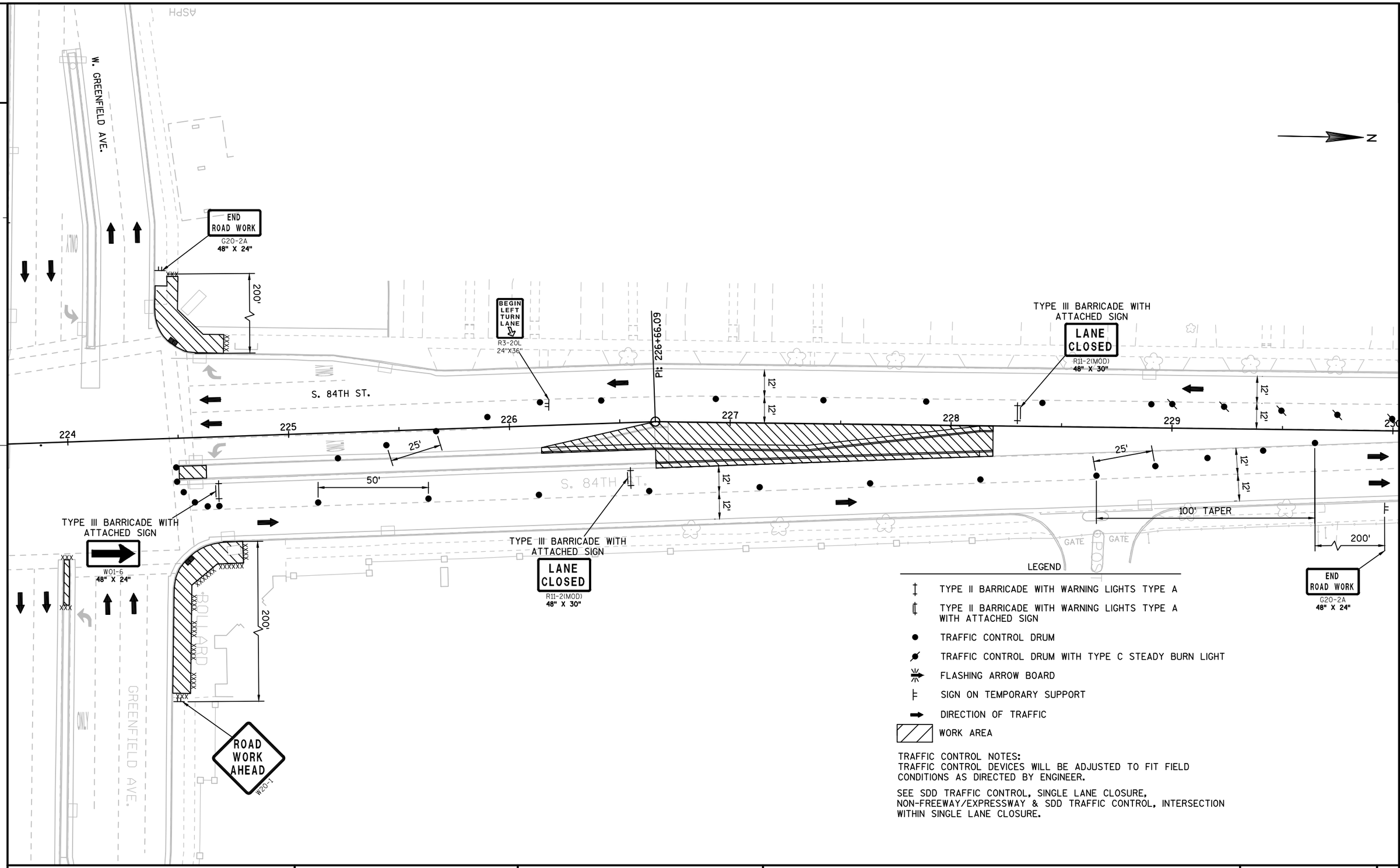
SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. GREENFIELD AVE. & S. 84TH ST.	SHEET 330	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025009_TC.DWG PLOT DATE : 4/30/2014 8:22 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. GREENFIELD AVE. & S. 84TH ST.	SHEET 331	E

2

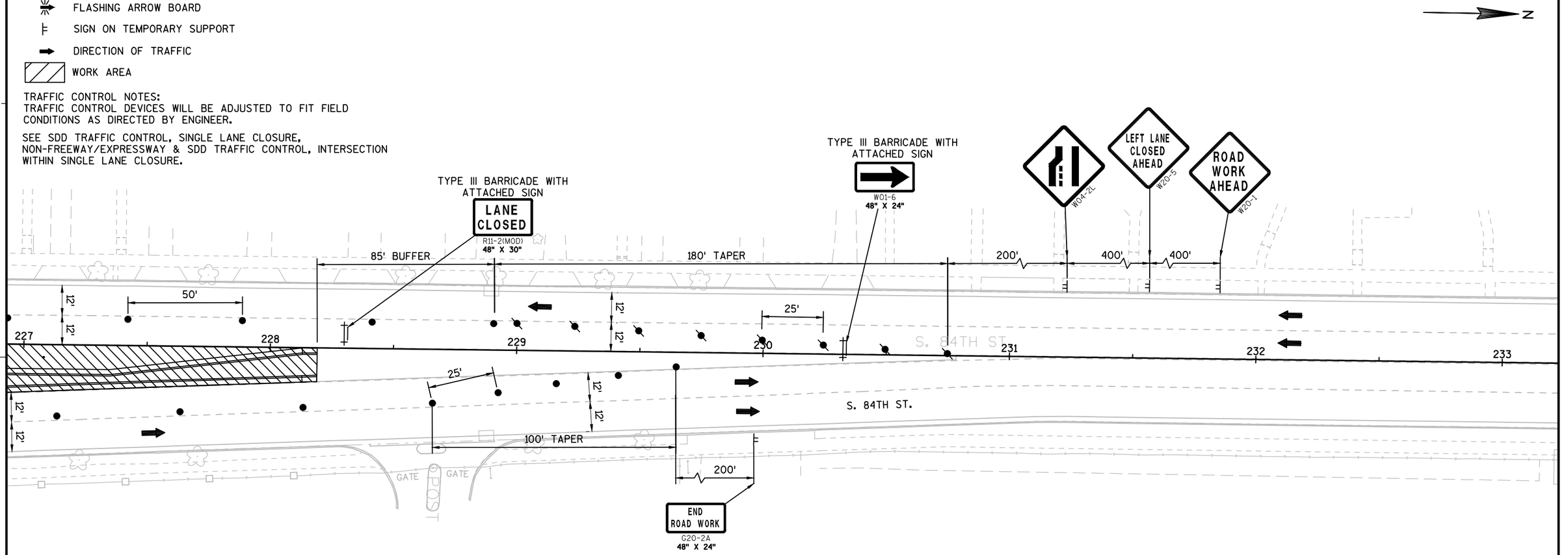
2

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. GREENFIELD AVE. & S. 84TH ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025009_TC.DWG PLOT DATE : 4/30/2014 8:22 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

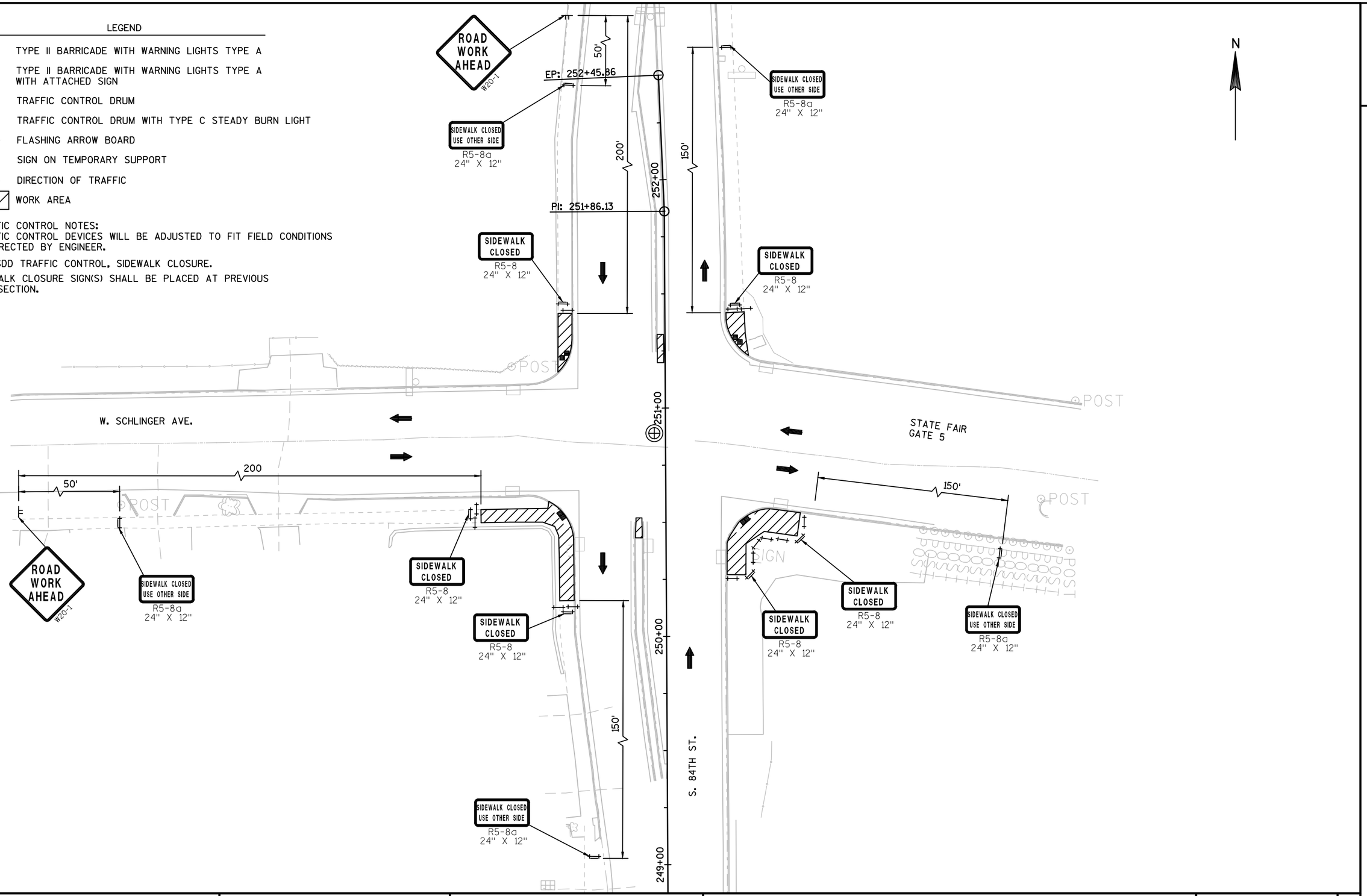
LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDEWALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - S. 84TH ST. & STATE FAIR GATE 5	SHEET 333	E

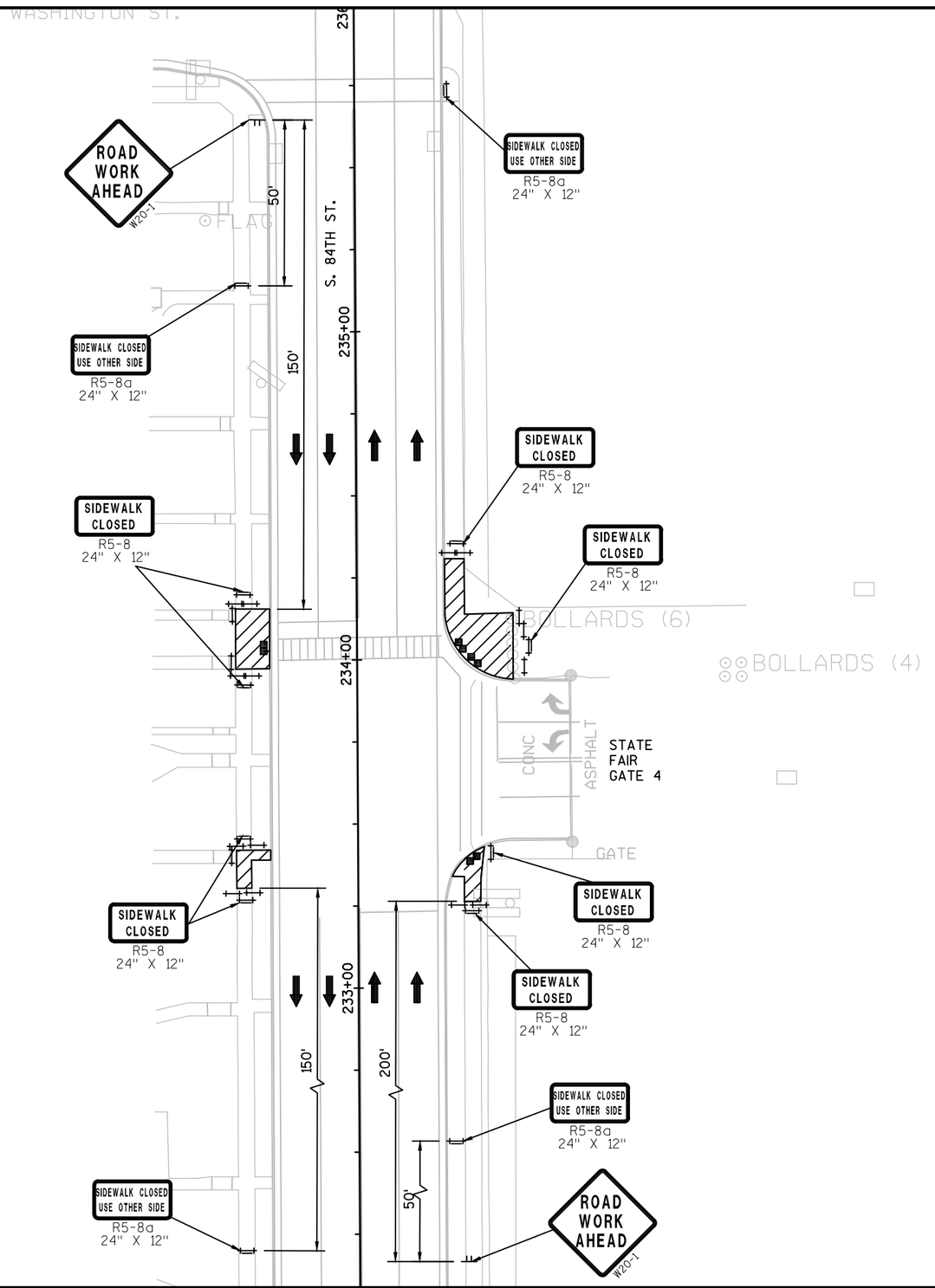
LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDEWALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - S. 84TH ST. & STATE FAIR GATE 4	SHEET 334	E

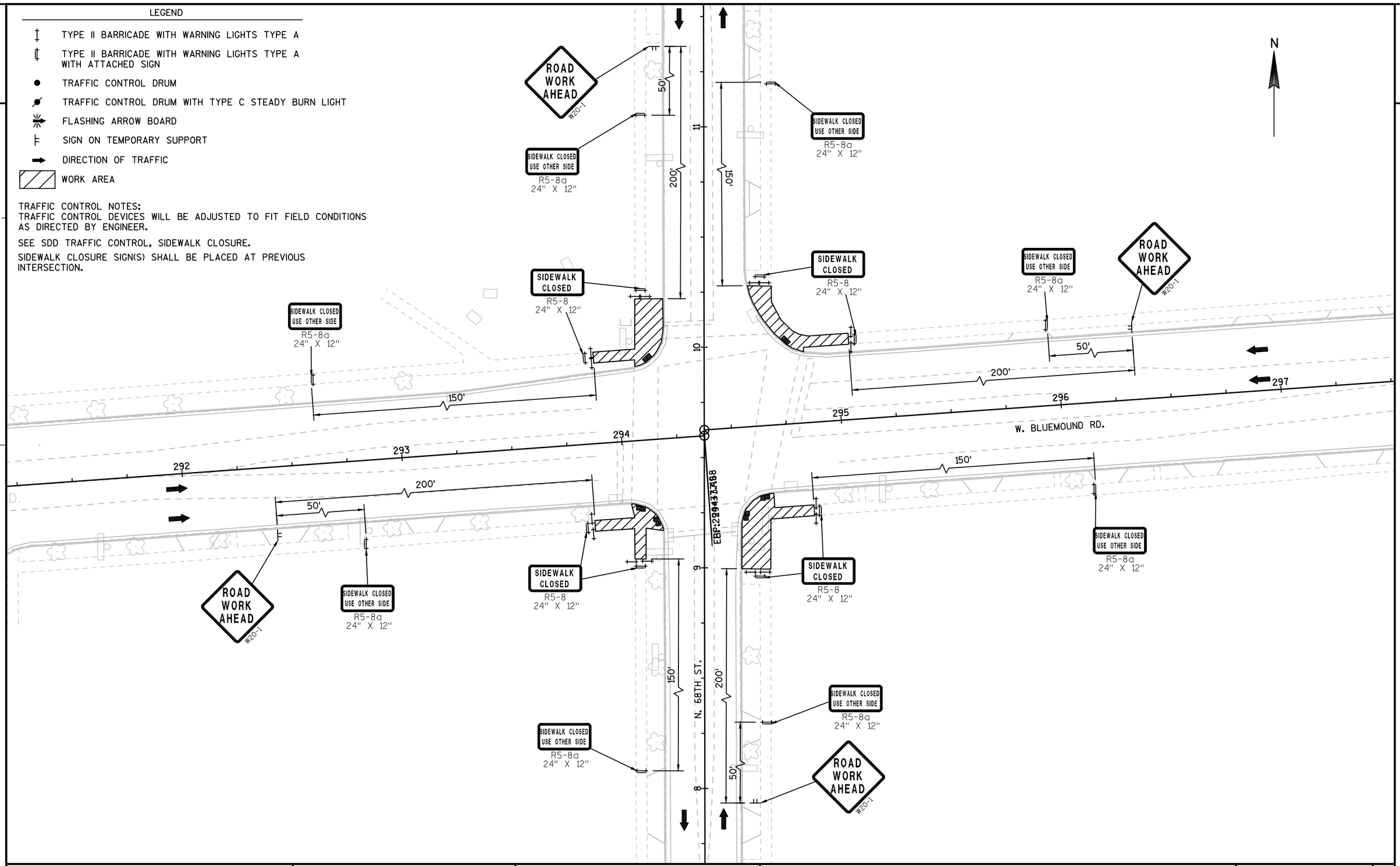
LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDEWALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.



PROJECT NO:1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. BLUEMOUND RD. & N. 68TH ST.	SHEET 335	E

2

N

SIDEWALK CLOSED
USE OTHER SIDE
R5-8a
24" X 12"

SIDEWALK CLOSED
R5-8
24" X 12"

150'

STH 100 (S. 108TH ST.)

515

514

513

512

BP: 20+00.00

21+00

22+00

23+00

MCDONALDS

FLAG

STOP

CHIS

W. LAPHAM ST.

STH 100 / S. 108TH ST.

TEMP SIGN

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDEWALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST.	SHEET 336	E

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.
SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

N

ROAD WORK AHEAD W20-1

LEFT LANE CLOSED AHEAD W20-5

W04-2L

BP: 500+00.00

500+00 501+00 502+00 503+00

LEFT TURN LANE R3-20L 24"X30"

STH 100 (S. 108TH ST.)

50'

11'

11'

11'

700' 700' 350'

W. MANOR PARK DR.

TYPE III BARRICADE WITH ATTACHED SIGN

LANE CLOSED R11-2(MOD) 48" X 30"

2

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 1	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\025999_S1.DWG PLOT DATE : 4/30/2014 8:29 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 1	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\026000_S1.DWG PLOT DATE : 4/30/2014 8:29 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

ROAD WORK AHEAD
W20-1

TYPE III BARRICADE WITH ATTACHED SIGN
W01-6
48" X 24"

W. LAPHAM ST.

250'

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

LEFT TURN LANE
R3-20L
24"X30"

25'

11'

12'

507+00 508+00 509+00 510+00 511+00 512+00 513+00 20+00

STH 100 (S. 108TH ST.)

50'

LEFT TURN LANE
R3-20L
24"X30"

TYPE III BARRICADE WITH ATTACHED SIGN
LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD WORK AHEAD
W20-1

W. MITCHELL ST.

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

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

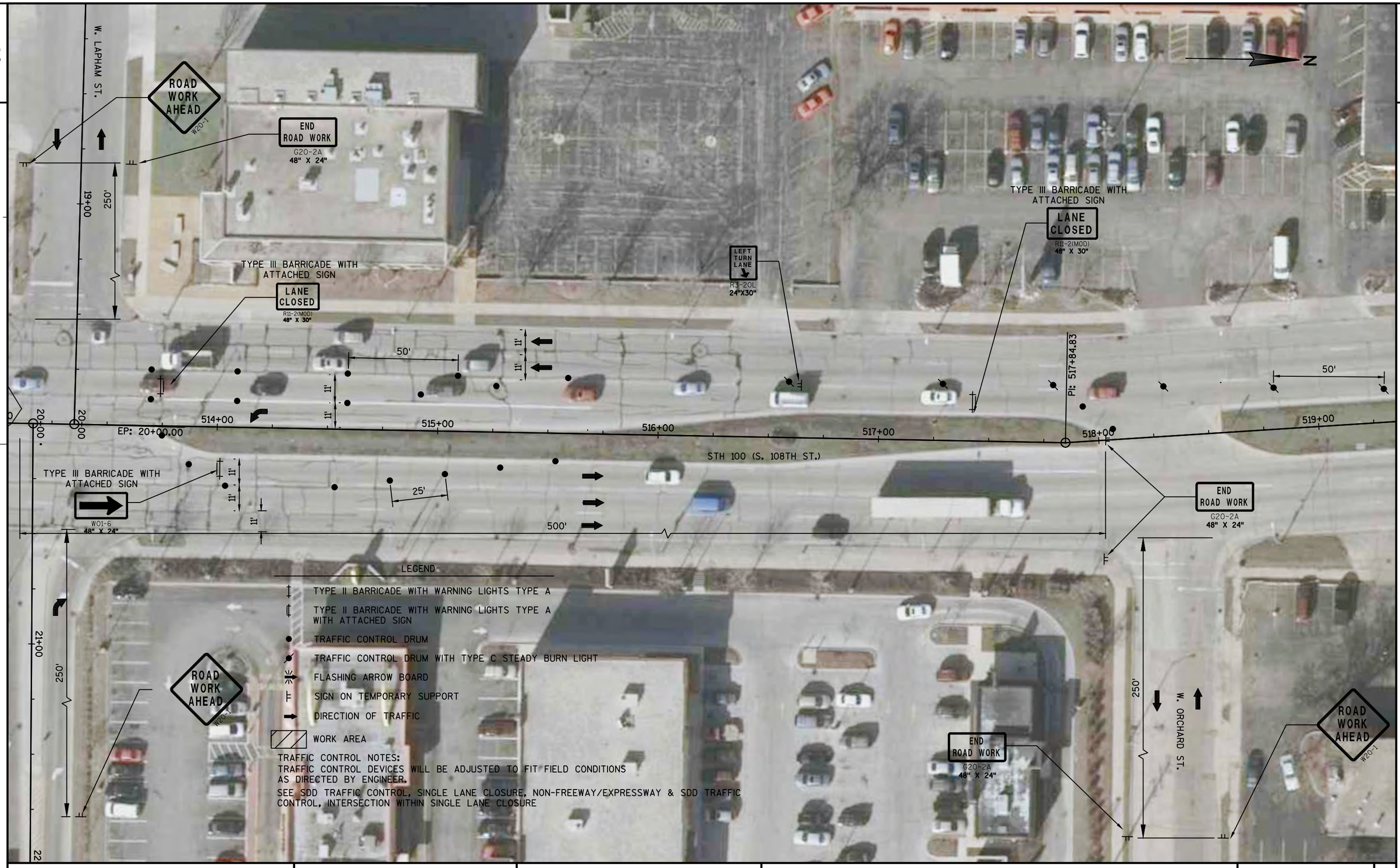
21+00

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 1	SHEET 339	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\026001_S1.DWG PLOT DATE : 4/30/2014 8:29 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 1	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\026002_S1.DWG PLOT DATE : 4/30/2014 8:29 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF
WISDOT/CADDS SHEET 42



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 1	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\026003_S1.DWG PLOT DATE : 4/30/2014 8:29 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITH SINGLE LANE CLOSURE.

N

BP: 500+00.00

500+00 501+00 502+00 503+00

ROAD WORK AHEAD W20-1

700' 700' 350'

50'

STH 100 (S. 108TH ST.)

11' 11' 11'

TYPE III BARRICADE WITH ATTACHED SIGN

LANE CLOSED R11-2(MOD) 48" X 30"

W. MANOR PARK DR.

RIGHT LANE CLOSED AHEAD W20-5

W04-2R

2

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 2	SHEET E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\026099_S2.DWG PLOT DATE : 4/30/2014 8:30 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

N

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

ROAD WORK AHEAD
W20-1

W. MITCHELL ST.

250'

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

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

503+00 504+00 505+00 506+00 507+00 508+00 509+00

STH 100(S. 108TH ST.)

TYPE III BARRICADE WITH ATTACHED SIGN
W01-6
48" X 24"

50'

12' 11' 11' 11'

TYPE III BARRICADE WITH ATTACHED SIGN
LANE CLOSED
R11-2(MOD)
48" X 30"

TYPE III BARRICADE WITH ATTACHED SIGN
W01-6
48" X 24"

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

250'

W. MITCHELL ST.

ROAD WORK AHEAD
W20-1

2

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 2	SHEET E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\026100_S2.DWG PLOT DATE : 4/30/2014 8:31 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

N

500' FROM SB9 (REFERENCE TRAFFIC SIGNAL PLAN)

W3-3

ROAD WORK AHEAD W20-1

END ROAD WORK C20-2A 48" X 24"

W. LAPHAM ST.

18+00

250'

W3-3

509+00 510+00 511+00 512+00 513+00 20+00 20+00 514+00 515+00

EP: 20+00.00

11' 11' 11' 11'

50'

W3-3

STH 100 (S. 108TH ST.)

500' FROM SB7 (REFERENCE TRAFFIC SIGNAL PLAN)

12'

11' 11'

500' FROM SB2 (REFERENCE TRAFFIC SIGNAL PLAN)

50'

11'

TYPE III BARRICADE WITH ATTACHED SIGN

LANE CLOSED R11-2(MOD) 48" X 30"

TYPE III BARRICADE WITH ATTACHED SIGN

LANE CLOSED R11-2(MOD) 48" X 30"

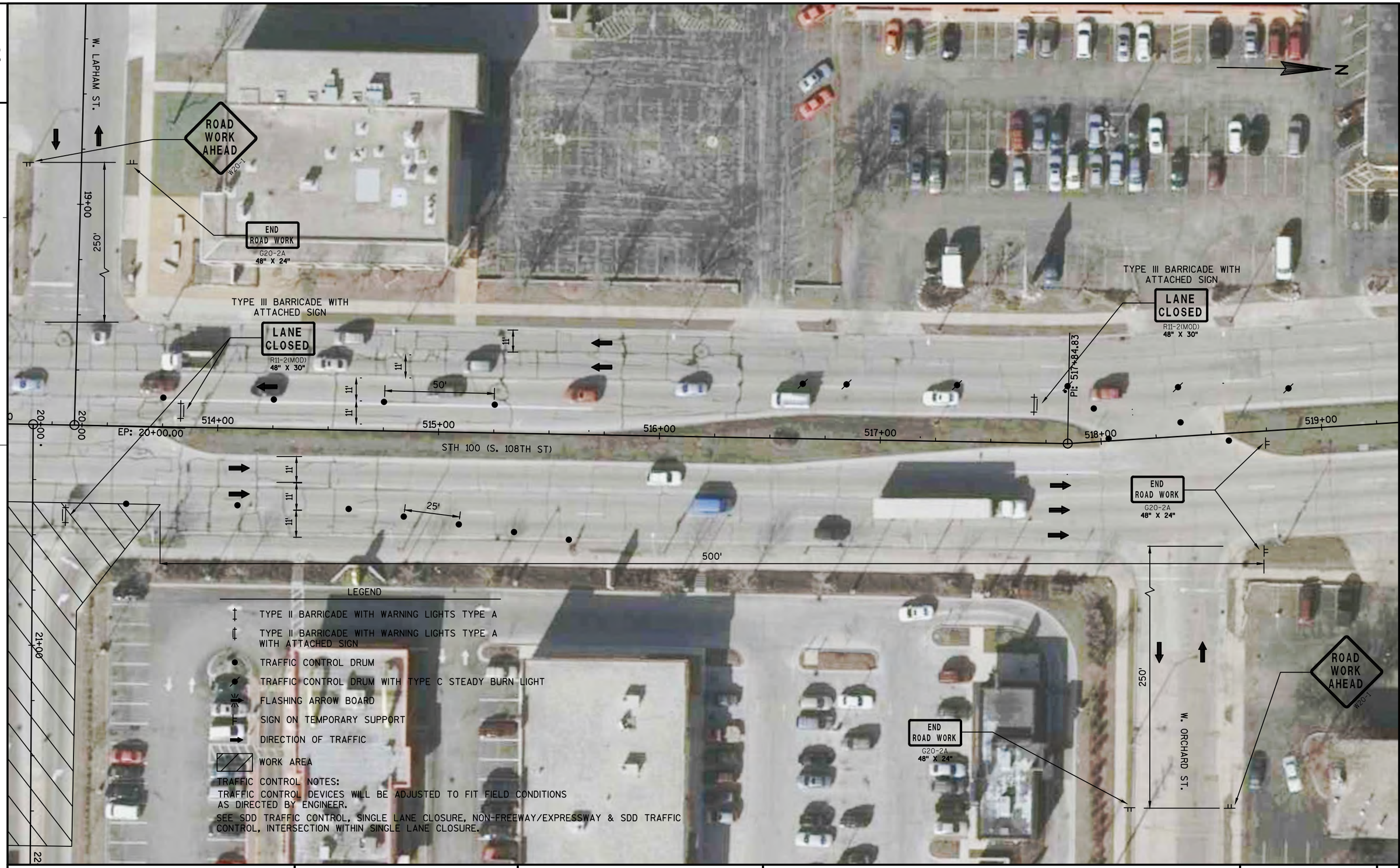
21+00

500' FROM SB4 (REFERENCE TRAFFIC SIGNAL PLAN)

W3-3

2

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 2	SHEET 344	E



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 2	SHEET E

2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 2	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\026103_S2.DWG PLOT DATE : 4/30/2014 8:31 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF
WISDOT/CADDS SHEET 42

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

ROAD WORK AHEAD W20-1

LEFT LANE CLOSED AHEAD W20-5

W4-2L

BP: 500+00.00

500+00 501+00 502+00 503+00

TYPE III BARRICADE WITH ATTACHED SIGN

LANE CLOSED R11-2(MOD) 48" X 30"

STH 100 (S. 108TH ST.)

50'

11' 11' 11'

700' 700' 350'

W. MARNOR PARK DR.

LEFT TURN LANE R3-20L 24"X30"

N

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 3	SHEET E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\026199_S3.DWG PLOT DATE : 4/30/2014 8:32 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

ROAD WORK AHEAD
W20-1

W. MITCHELL ST.

250'

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

N

TYPE III BARRICADE WITH ATTACHED SIGN
W01-6
48" X 24"

503+00 504+00 505+00 506+00 507+00 508+00 509+00

STH 100 (S. 108TH ST.)

11' . 11' . 11' . 12'

50'

TYPE III BARRICADE WITH ATTACHED SIGN
LANE CLOSED
R11-2(MOD)
48" X 30"

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

250'

W. MITCHELL ST.

ROAD WORK AHEAD
W20-1

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 3	SHEET 348	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\026200_S3.DWG PLOT DATE : 4/30/2014 8:32 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

ROAD WORK AHEAD
W20-1

N

250'

W. LAPHAM ST.

TYPE III BARRICADE WITH ATTACHED SIGN

W01-6
48" X 24"

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

LEFT TURN LANE
R3-20L
24"X30"

507+00 508+00 509+00 510+00 511+00 512+00 513+00 20+00

STH 100 (S. 108TH ST.)

12'

50'

11'

11'

11'

TYPE III BARRICADE WITH ATTACHED SIGN

LANE CLOSED
R11-2(MOD)
48" X 30"

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

250'

W. MITCHELL ST.

ROAD WORK AHEAD
W20-1

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

250'

21+00

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 3	SHEET E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\026201_S3.DWG PLOT DATE : 4/30/2014 8:32 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

W. LAPHAM ST.

ROAD WORK AHEAD
W20-1

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

19+00

250'

20+00

20+00

EP: 20+00.00

514+00

STH 100 (S. 108TH ST.)

11'

11'

11'

515+00

50'

11'

TYPE III BARRICADE WITH ATTACHED SIGN

LANE CLOSED
R11-2(MOD)
48" X 30"

LEFT TURN LANE
R3-20L
24"X30"

TYPE III BARRICADE WITH ATTACHED SIGN

LANE CLOSED
R11-2(MOD)
48" X 30"

50'

11'

11'

11'

PI 517+84.83

516+00

517+00

518+00

519+00

25'

N

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

21+00

250'

ROAD WORK AHEAD
W20-1

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

250'

W. ORCHARD ST.

ROAD WORK AHEAD
W20-1

22

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 3	SHEET 350	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\026202_S3.DWG PLOT DATE : 4/30/2014 8:32 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

2

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:

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

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

LEFT LANE CLOSED AHEAD W20-5

W04-2L

STH 59 (W. GREENFIELD AVE.)

50'

11'

519+00 520+00 521+00 522+00 523+00 524+00

TYPE III BARRICADE WITH ATTACHED SIGN

LANE CLOSED R11-2(MOD) 48" X 30"

STH 100 (S. 108TH ST.)

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

350' 700' 700'

ROAD WORK AHEAD W20-1

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 100 & W. LAPHAM ST. - STAGE 3	SHEET 351	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\026203_S3.DWG PLOT DATE : 4/30/2014 8:32 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

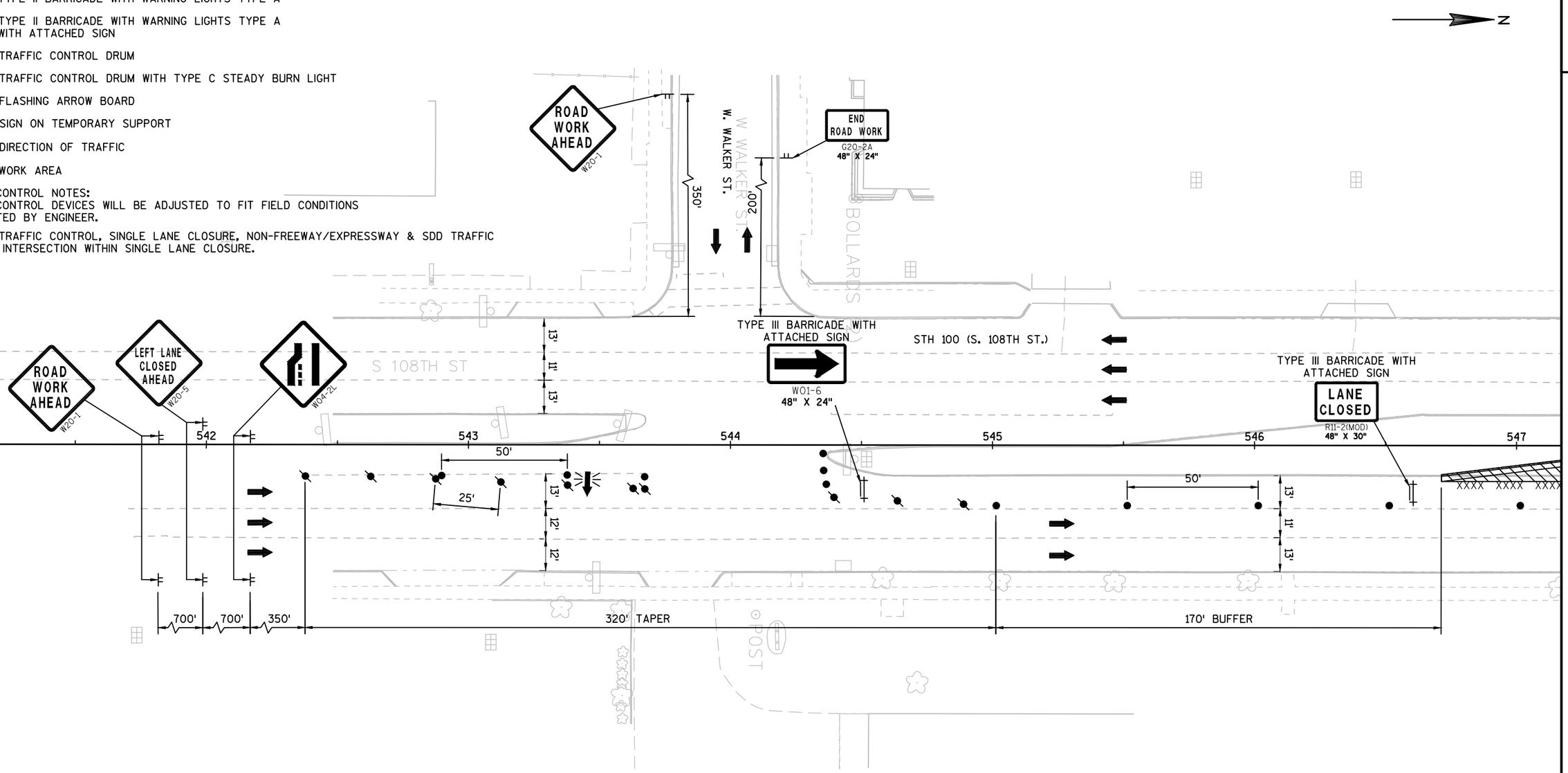
WISDOT/CADDS SHEET 42

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. THEO. TRECKER WAY & STH 100	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025014_TC.DWG
PLOT DATE : 4/30/2014 8:26 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF
WISDOT/CADDS SHEET 42

LEGEND

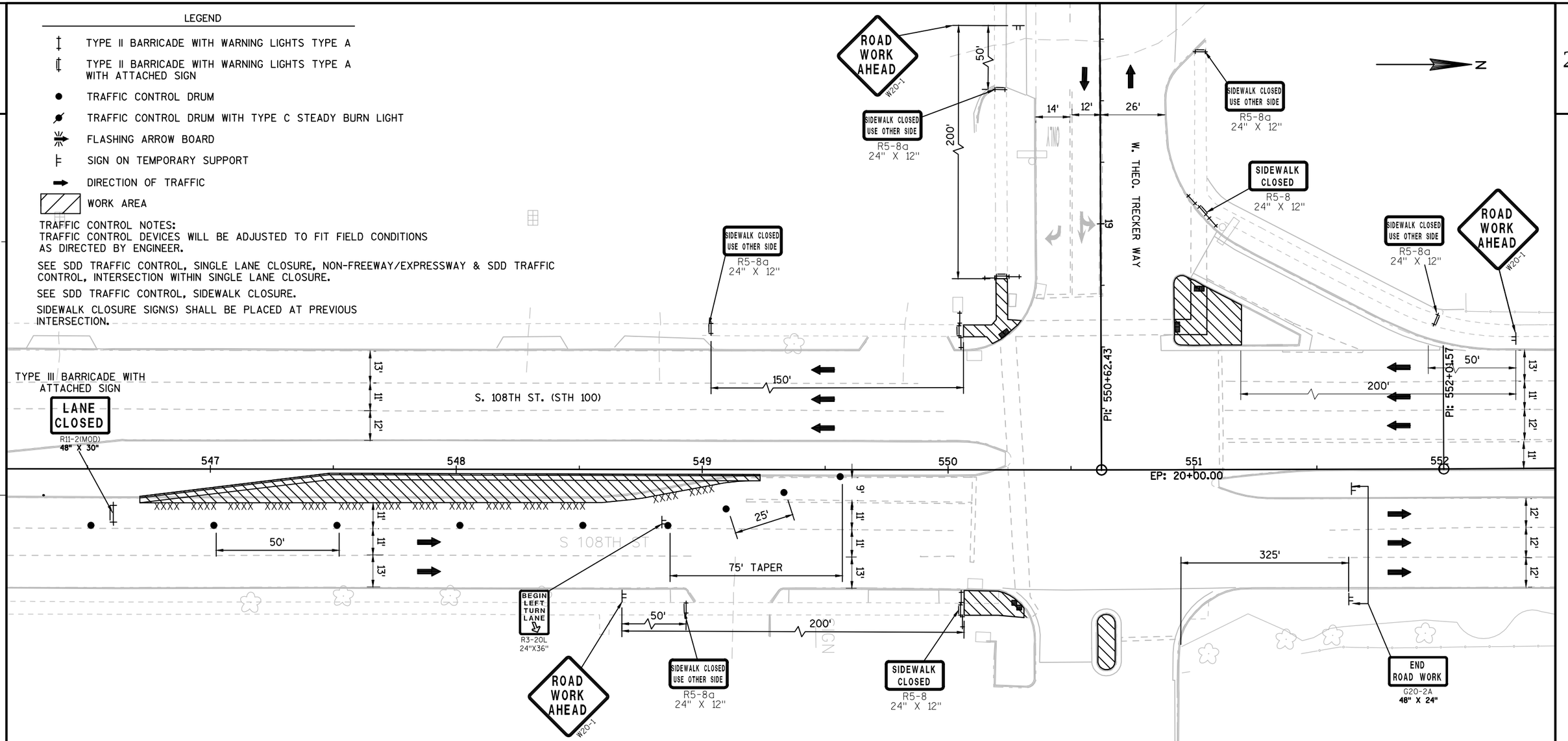
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

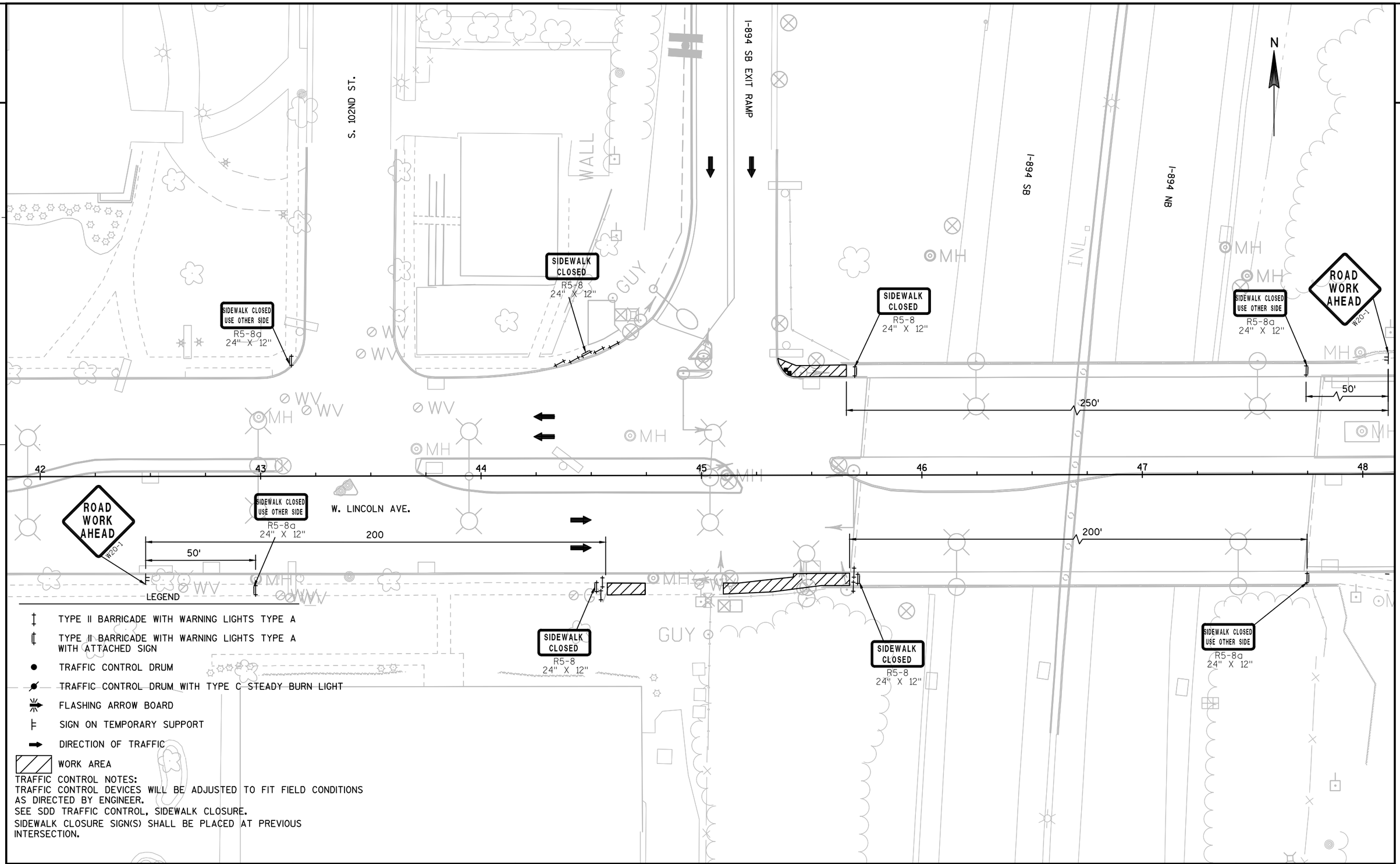
SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDEWALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. THEO. TRECKER WAY & STH 100	SHEET 353	E



LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.
SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.
SIDEWALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.

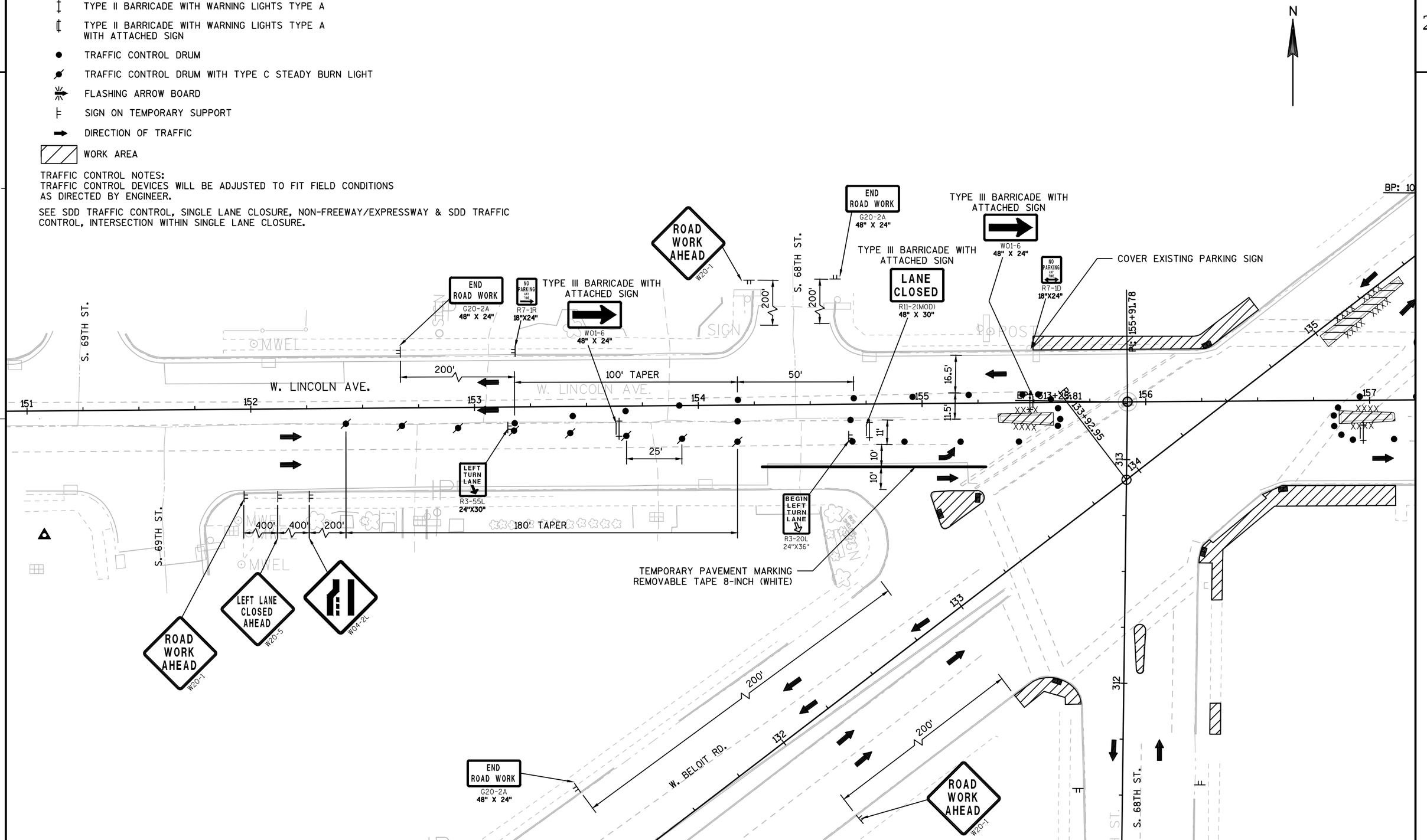
PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. LINCOLN AVE. & I-894 SB EXIT RAMP	SHEET 354	E

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. LINCOLN AVE. & W. BELOIT RD. - STAGE 1	SHEET 355	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025017_TC.DWG PLOT DATE : 4/30/2014 8:35 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

ROAD WORK AHEAD W20-1

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

ROAD WORK AHEAD W20-1

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

S. 67TH PL.

W. BELOIT RD.

137

200'

BP: 10+00.00

136

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)

TYPE III BARRICADE WITH ATTACHED SIGN

W01-6 48" X 24"

LEFT LANE CLOSED AHEAD W20-5

W04-2L

ROAD WORK AHEAD W20-1

180' TAPER

200' 400' 400'

BEGIN LEFT TURN LANE R3-20L 24"X36"

158+21.58, 12.5' LT

LEFT TURN LANE R3-55L 24"X30"

PT: 155+91.78

155

156

157

158

159

160

161

157+21.49, 12.6' LT

10'

10'

10'

PT: 313+28.81

133+92.95

313

134

WORK AREA

11'

17.5'

25'

W. LINCOLN AVE.

W. LINCOLN AVE.

TYPE III BARRICADE WITH ATTACHED SIGN

W01-6 48" X 24"

100' TAPER

200'

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

S. 67TH ST.

TYPE III BARRICADE WITH ATTACHED SIGN

LANE CLOSED R11-2(MOD) 48" X 30"

133

312

S. 68TH ST.

W. BELOIT RD.

200'

200'

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

ROAD WORK AHEAD W20-1

N

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. LINCOLN AVE. & W. BELOIT RD. - STAGE 1	SHEET 356	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025017_TC.DWG PLOT DATE : 4/30/2014 8:35 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

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

ROAD WORK AHEAD
W20-1

TYPE III BARRICADE WITH ATTACHED SIGN
W01-6
48" X 24"

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

BEGIN LEFT TURN LANE
R3-20L
24"X36"

LEFT LANE CLOSED AHEAD
W20-5

W04-2L

ROAD WORK AHEAD
W20-1

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

ROAD WORK AHEAD
W20-1

W. LINCOLN AVE.
W. BELOIT RD.
S. 68TH ST.
EP: 313+28.81
133+92.95
22.5'
13.5'
14'
22'
50'
25'
180' TAPER
400'
400'
200'
129
130
131
132
133
152
153
154
155
156
157
310
311
312
313
314

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. LINCOLN AVE. & W. BELOIT RD. - STAGE 2	SHEET 357	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025017_TC.DWG PLOT DATE : 4/30/2014 8:35 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

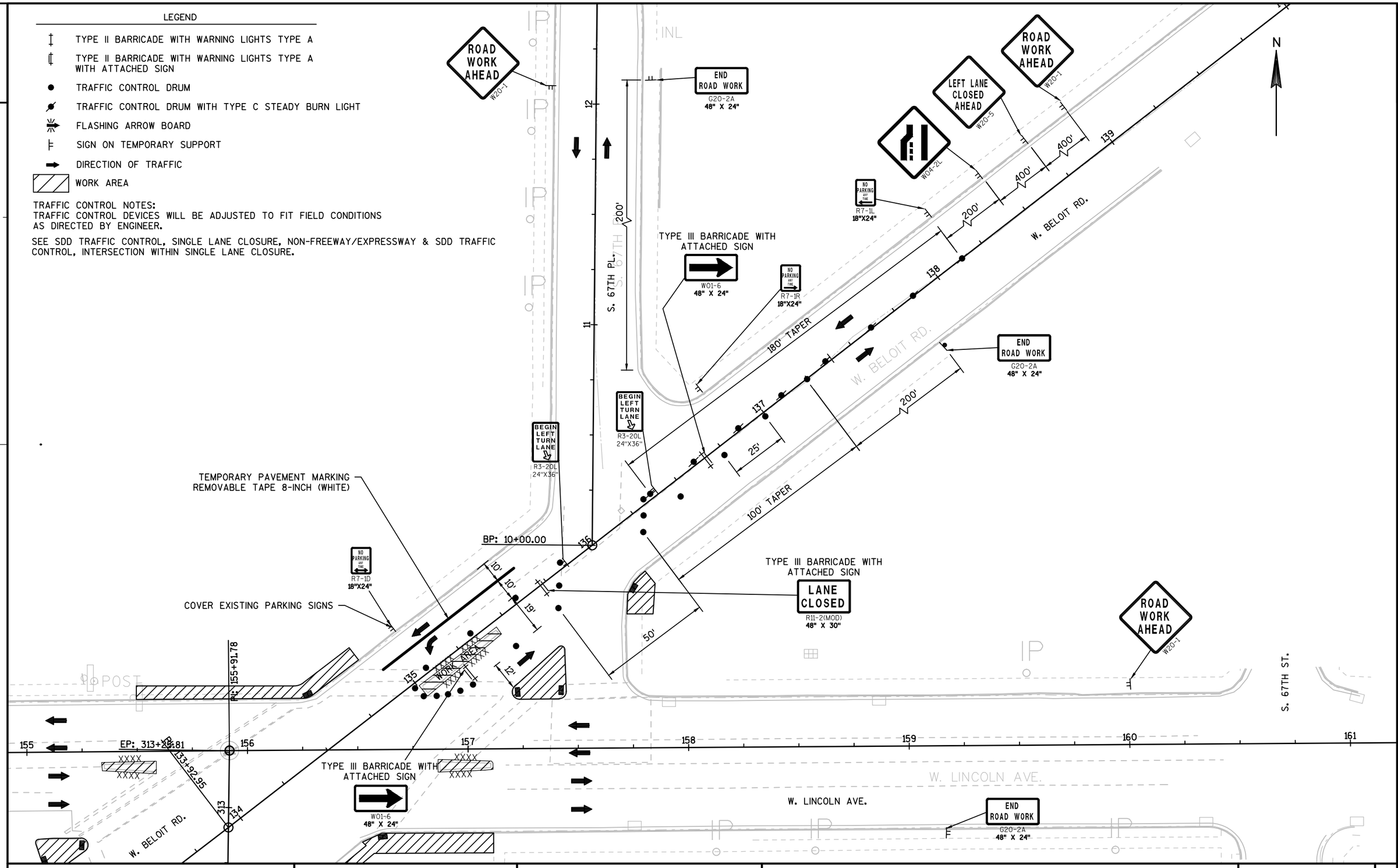
WISDOT/CADDS SHEET 42

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. LINCOLN AVE. & W. BELOIT RD. - STAGE 2	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025017_TC.DWG PLOT DATE : 4/30/2014 8:35 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF
WISDOT/CADDS SHEET 42

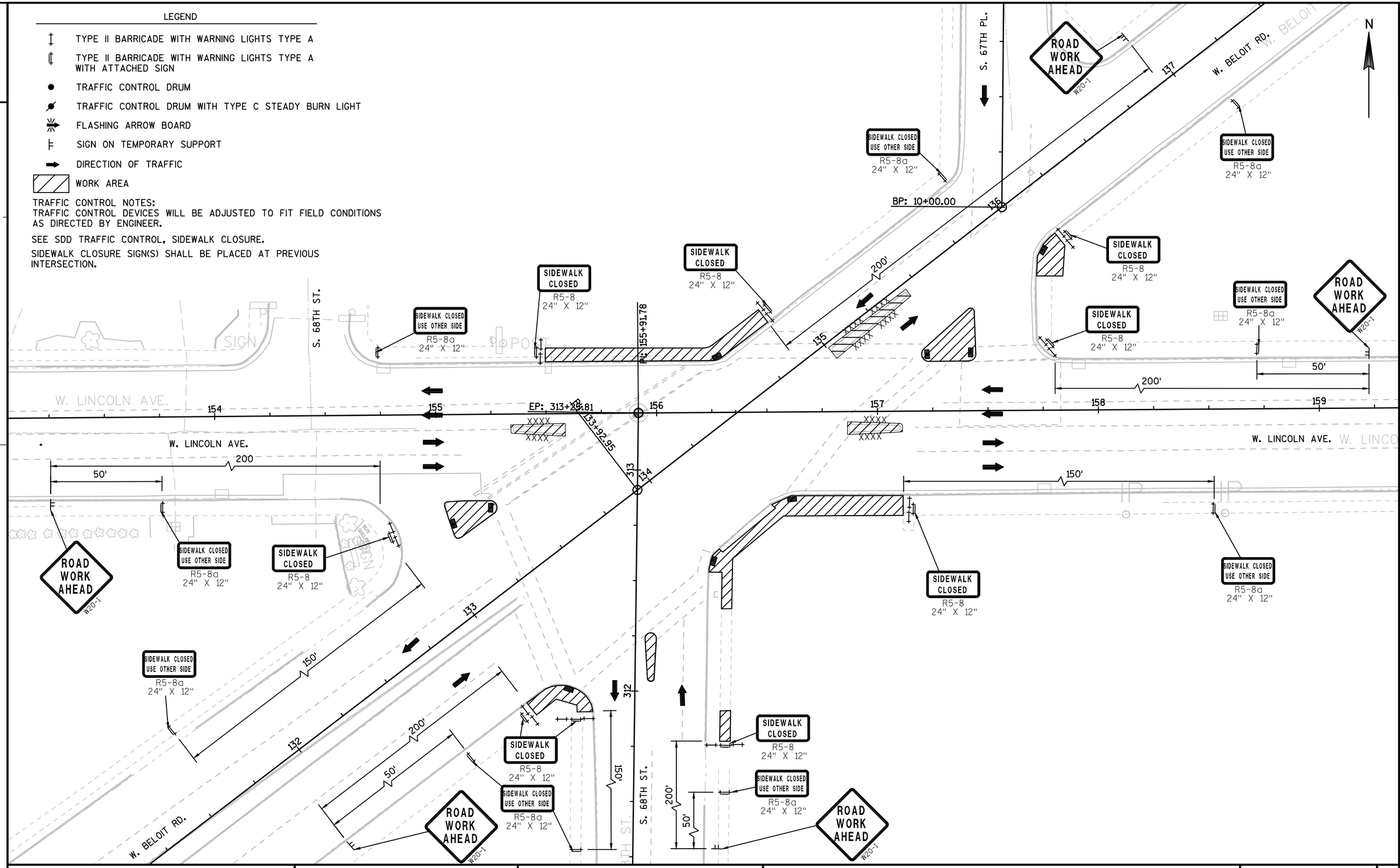
LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

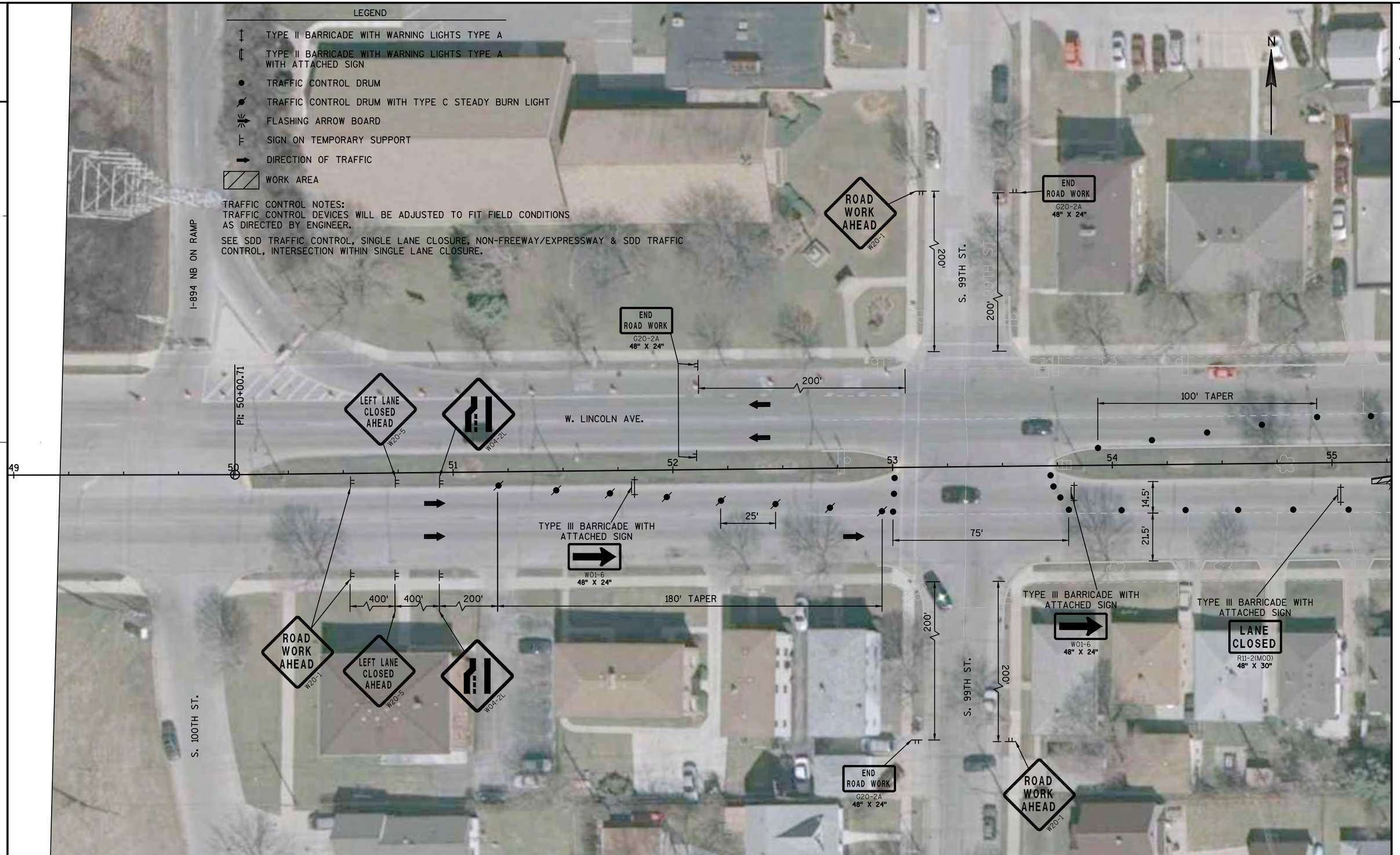
SEE SDD TRAFFIC CONTROL, SIDEWALK CLOSURE.

SIDEWALK CLOSURE SIGN(S) SHALL BE PLACED AT PREVIOUS INTERSECTION.



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. LINCOLN AVE. & W. BELOIT RD.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025017_TC.DWG PLOT DATE : 4/30/2014 8:35 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF
WISDOT/CADDS SHEET 42



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. LINCOLN AVE. & S. 98TH ST.	SHEET	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025018_TC.DWG PLOT DATE : 4/30/2014 8:37 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

LEGEND

- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE II BARRICADE WITH WARNING LIGHTS TYPE A WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL NOTES:
TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY & SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE.

ROAD WORK AHEAD W20-1

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

TYPE III BARRICADE WITH ATTACHED SIGN W01-6 48" X 24"

BEGIN LEFT TURN LANE R3-20L 24"X36"

LEFT LANE CLOSED AHEAD W20-5

W04-2L

S. 98TH ST.

W. LINCOLN AVE.

WORK AREA

200'

50'

180' TAPER

400'

25'

500'

23'

13.5'

19'

13'

11'

20.5'

55 56 57 58 59 60

S. 10TH ST.

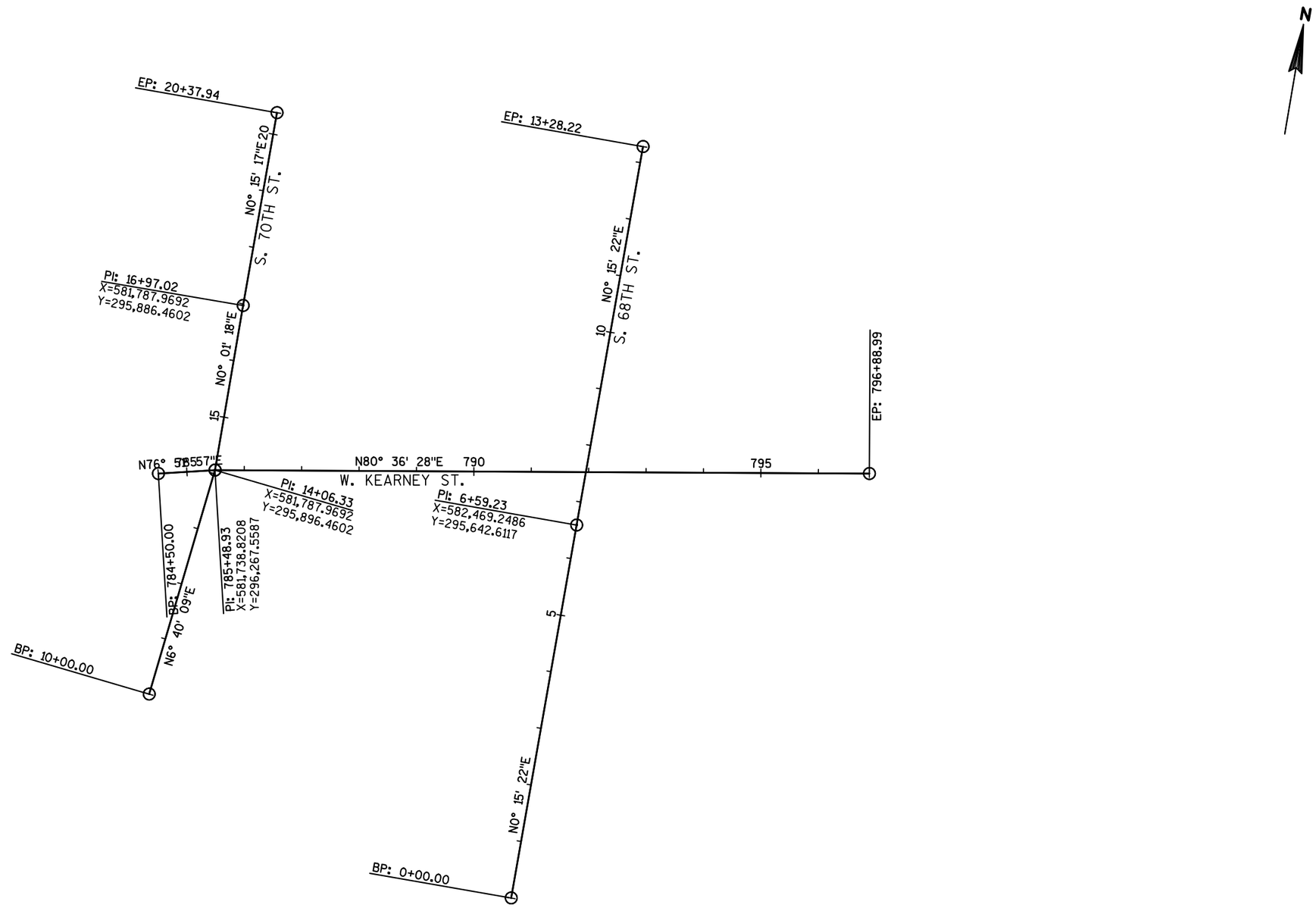
S. 97TH ST.

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	TRAFFIC CONTROL - W. LINCOLN AVE. & S. 98TH ST.	SHEET E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\PLAN\025018_TC.DWG PLOT DATE : 4/30/2014 8:37 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

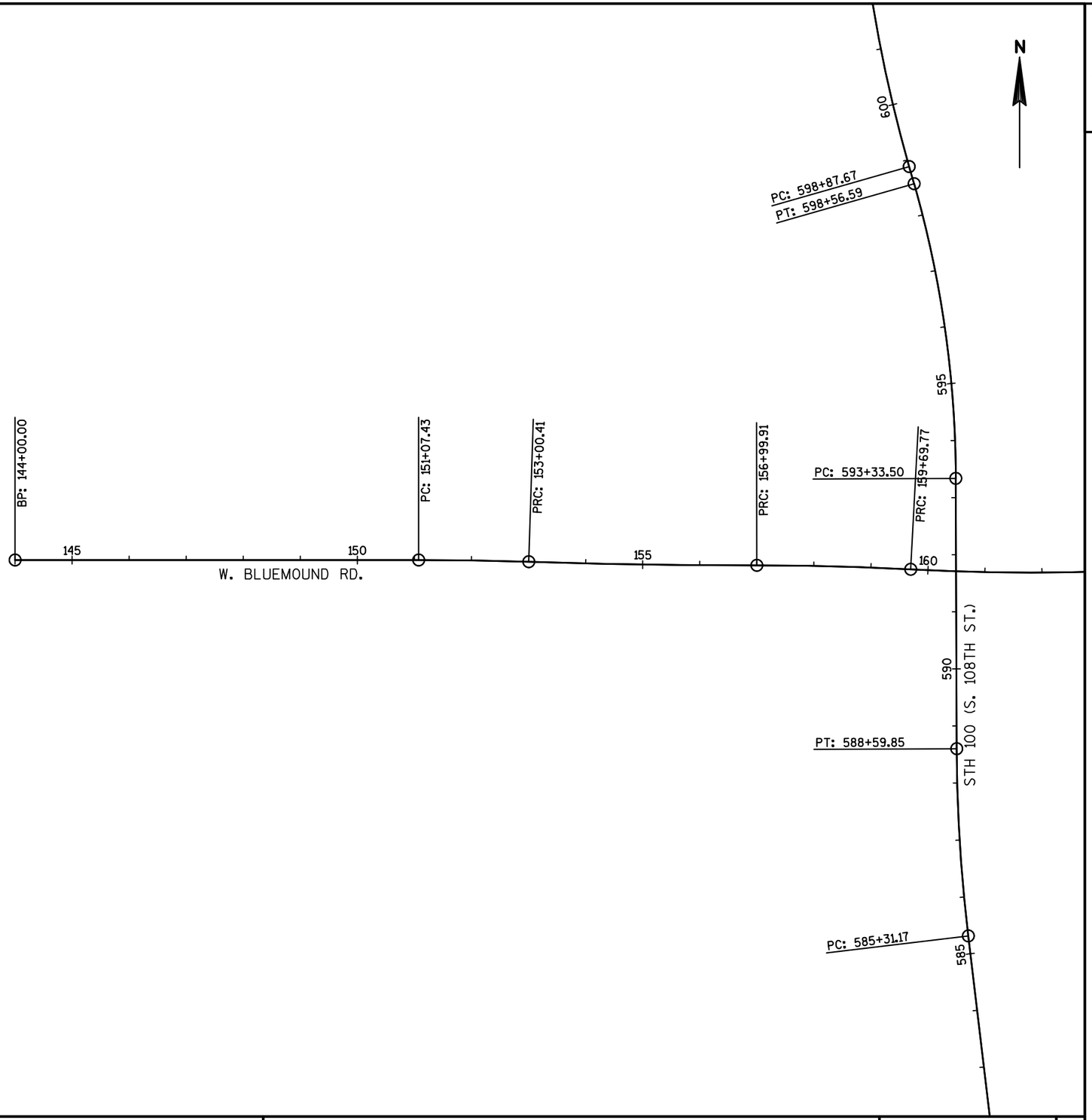
2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT-68TH ST. RAMP, S. 70TH ST., W. KEARNEY ST.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027201_AD.DWG PLOT DATE : 4/30/2014 8:39 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

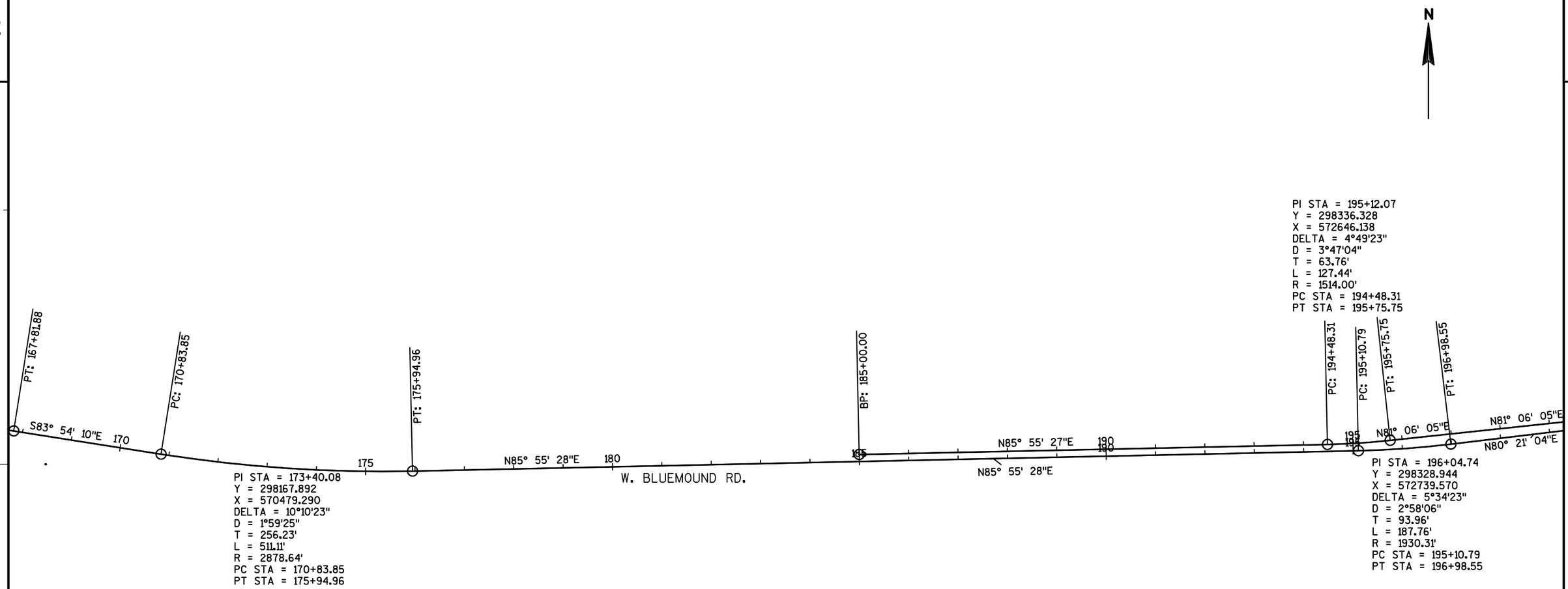
2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. BLUEMOUND BTWN N.103RD & N.99TH	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027226_AD.DWG PLOT DATE : 4/30/2014 8:42 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



2

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. BLUEMOUND BTWN N.103RD & N. 99TH	SHEET 364	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027227_AD.DWG PLOT DATE : 4/30/2014 8:42 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

N

PI STA = 195+12.07
Y = 298336.328
X = 572646.138
DELTA = 4°49'23"
D = 3°47'04"
T = 63.76'
L = 127.44'
R = 1514.00'
PC STA = 194+48.31
PT STA = 195+75.75

PC: 194+48.31
PC: 195+10.79
PT: 195+75.75
PT: 196+98.55
PI: 201+94.52
EP: 203+25.23
EP: 209+99.69

N85° 55' 27"E
N85° 55' 28"E
190
195
N81° 06' 05"E
200
N80° 21' 04"E
205
N80° 21' 05"E

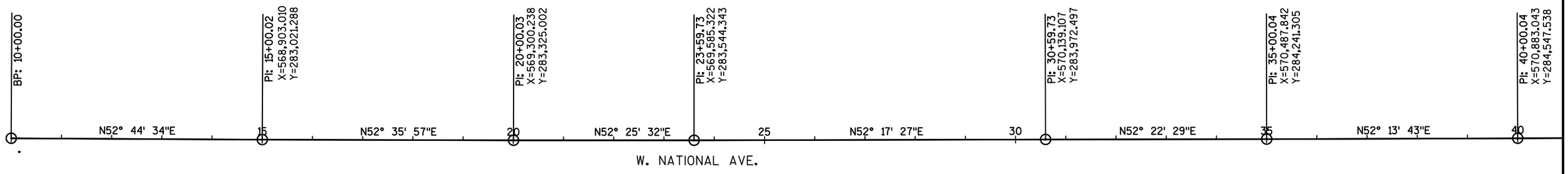
W. BLUEMOUND RD.

PI STA = 196+04.74
Y = 298328.944
X = 572739.570
DELTA = 5°34'23"
D = 2°58'06"
T = 93.96'
L = 187.76'
R = 1930.31'
PC STA = 195+10.79
PT STA = 196+98.55

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. BLUEMOUND BTWN N. 103RD & N. 99TH	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027228_AD.DWG PLOT DATE : 4/30/2014 8:42 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

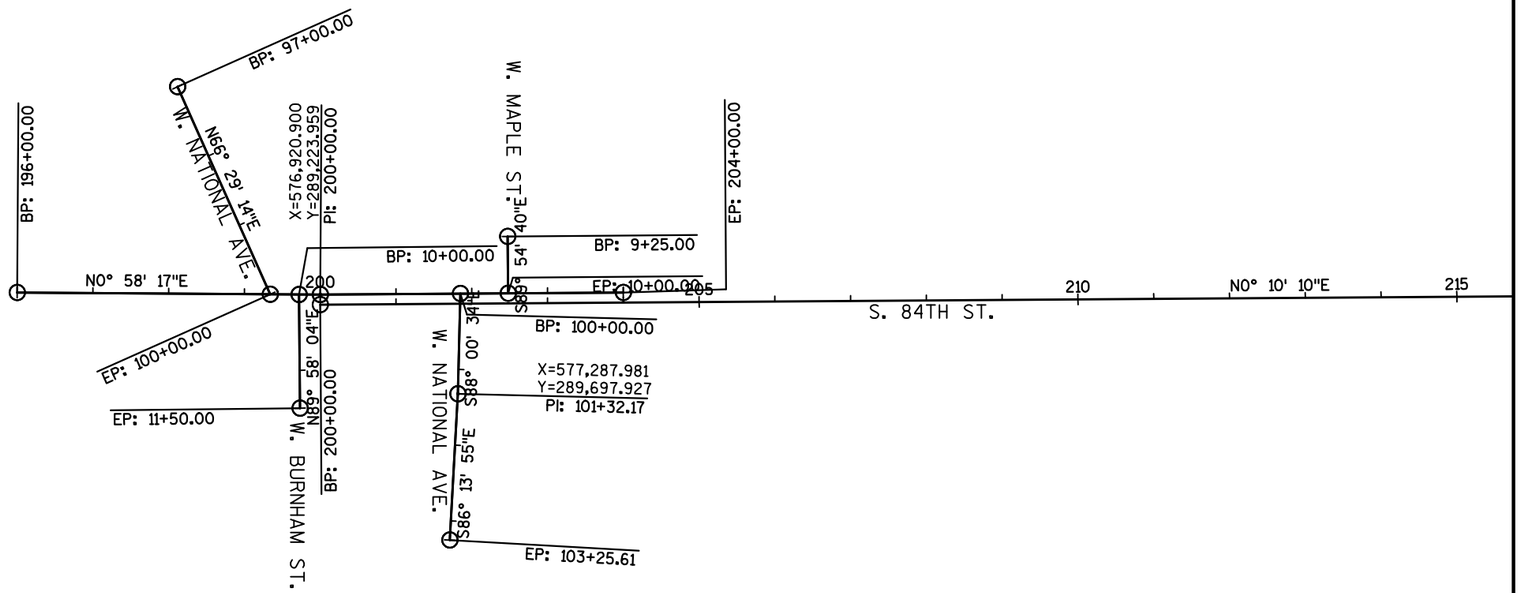


PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. NATIONAL AVE. & S. 102ND ST.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027202_AD.DWG PLOT DATE : 4/30/2014 8:39 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

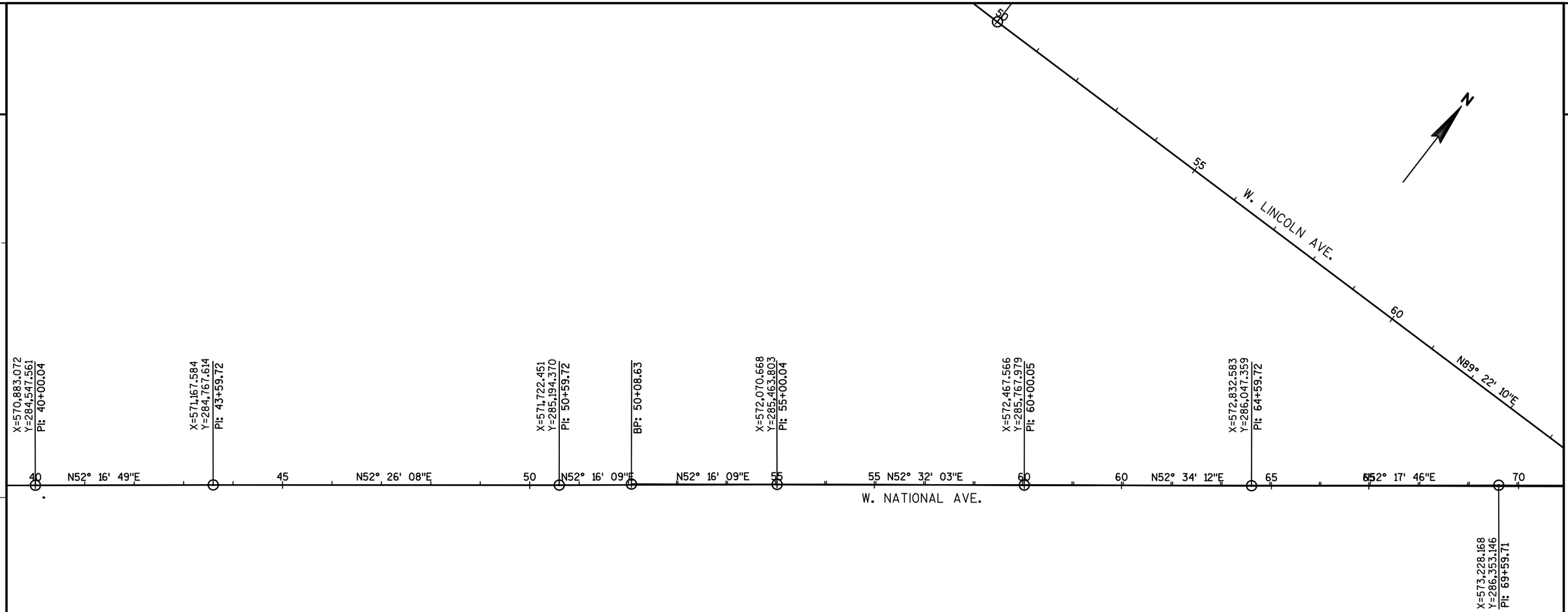
N



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - S. 84TH ST. & W. NATIONAL AVE.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027222_AD.DWG PLOT DATE : 4/30/2014 8:41 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. LINCOLN AVE. & W. NATIONAL AVE.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027203_AD.DWG PLOT DATE : 4/30/2014 8:39 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

N

55

N89° 22' 10"E

60

W. LINCOLN AVE.

65

PI: 60+00.05
X=572,467.526
Y=285,767.948

PI: 64+59.72
X=572,832.583
Y=286,047.359

PI: 69+97.40
X=573,415.446
Y=286,494.477

PI: 75+00.09
X=573,658.529
Y=286,679.948

EP: 80+10.12

EP: 83+64.10

60 N52° 34' 00"E 65 65 N52° 17' 46"E 70 N52° 47' 17"E 70 75 N52° 47' 17"E 75 75 N52° 37' 44"E 80 80 N52° 37' 55"E

W. NATIONAL AVE.

PI: 69+59.71
X=573,228.168
Y=286,353.146

70

N89° 22' 10"E

75

BP: 76+45.61

80

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. LINCOLN AVE. & W. NATIONAL AVE.	SHEET	E

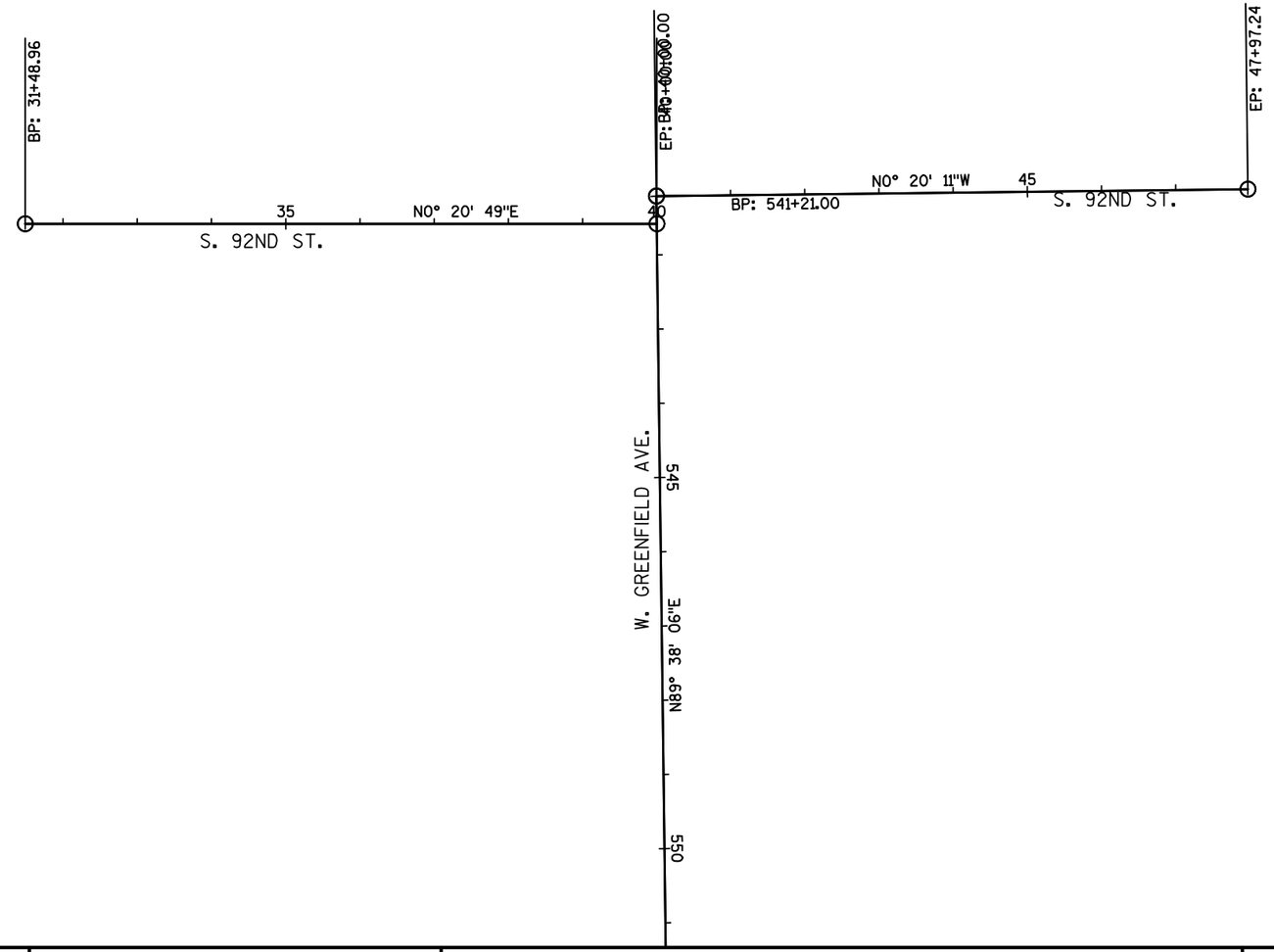
FILE NAME : W:\PDS\C3D\CAD\10603307\91\027204_AD.DWG PLOT DATE : 4/30/2014 8:40 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

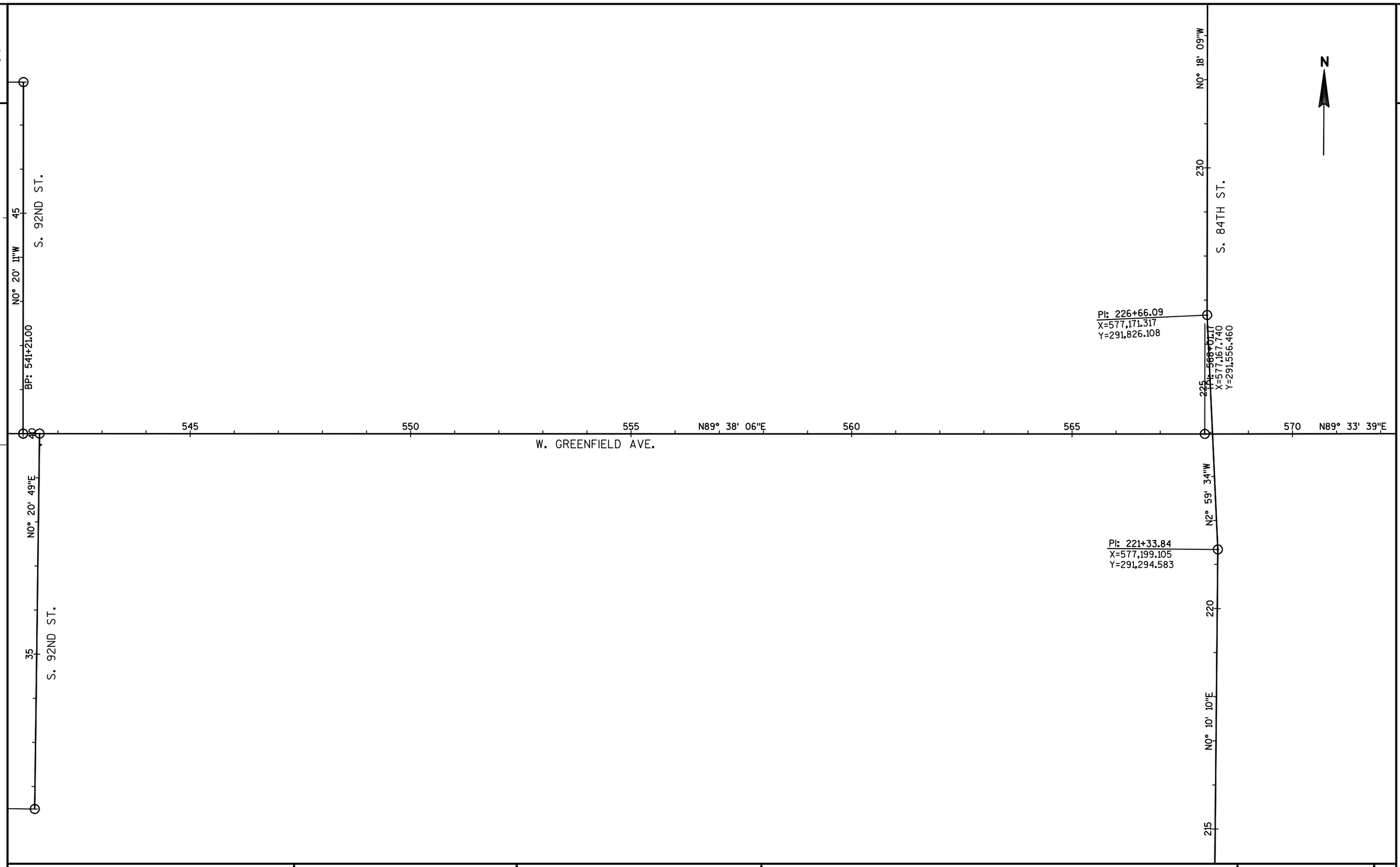
N



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. GREENFIELD AVE. & S. 92ND ST.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027205_AD.DWG PLOT DATE : 4/30/2014 8:40 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. GREENFIELD AVE. & S. 84TH ST.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027208_AD.DWG PLOT DATE : 4/30/2014 8:40 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

N

N0° 18' 09"W

230

225

PI: 566+01.17
X=577,167.740
Y=291,556.460

570

575

580

N89° 33' 39"E

585

590

EP: 594+39.19

W. GREENFIELD AVE.

N2° 59' 34"W

220

S. 84TH ST.

N0° 10' 10"E

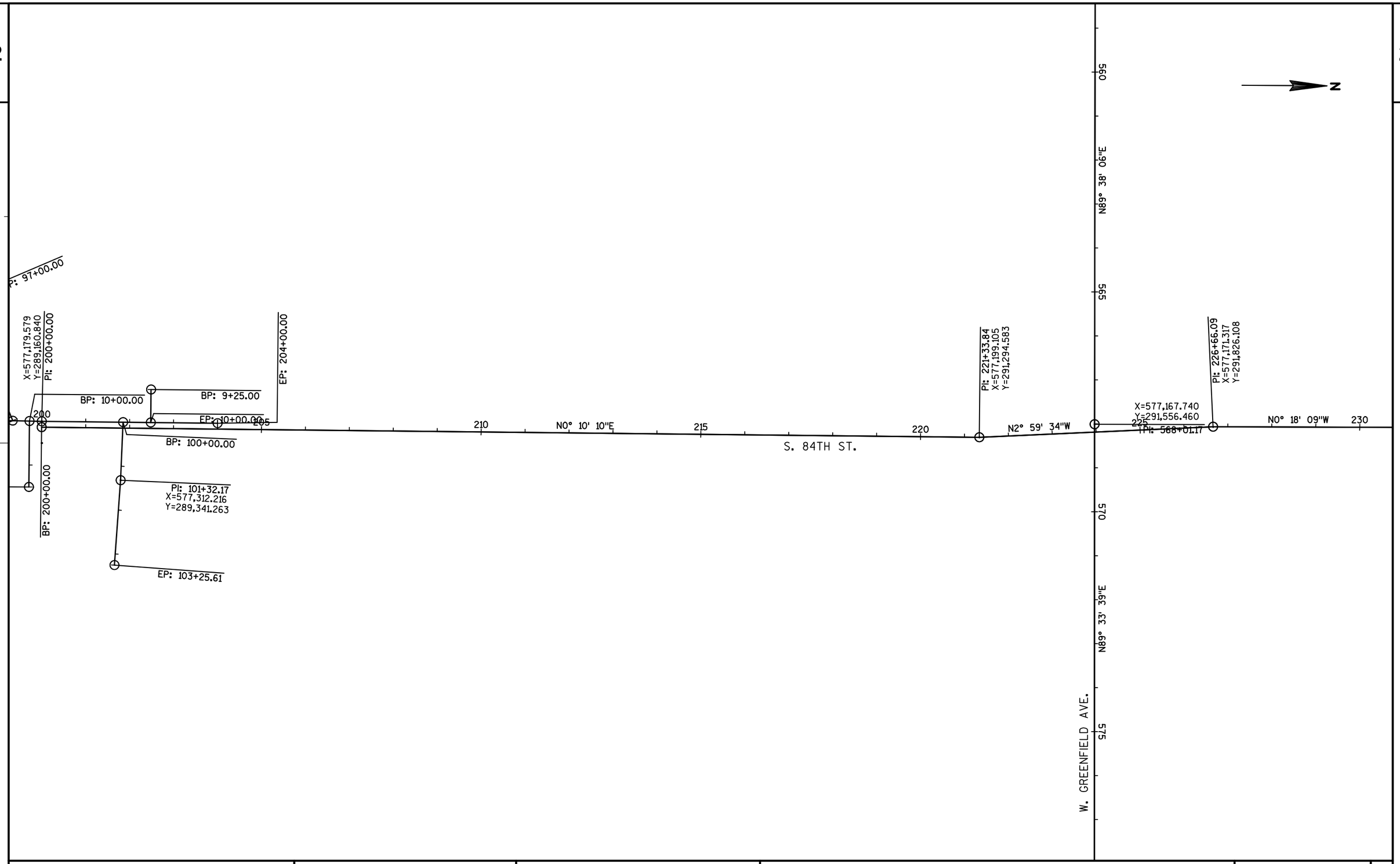
215

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. GREENFIELD AVE. & S. 84TH ST.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027209_AD.DWG PLOT DATE : 4/30/2014 8:40 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - S. 84TH ST. & W. GREENFIELD AVE.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027206_AD.DWG PLOT DATE : 4/30/2014 8:40 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

2

N

PI: 226+66.09
X=577,171.317
Y=291,826.108

X=577,158.017
Y=294,346.118
PI: 251+86.13

EP: 252+45.86

N2° 59' 34"W

568+01.11

230

235

N0° 18' 09"W

240

245

250

N2° 30' 52"W

S. 84TH ST.

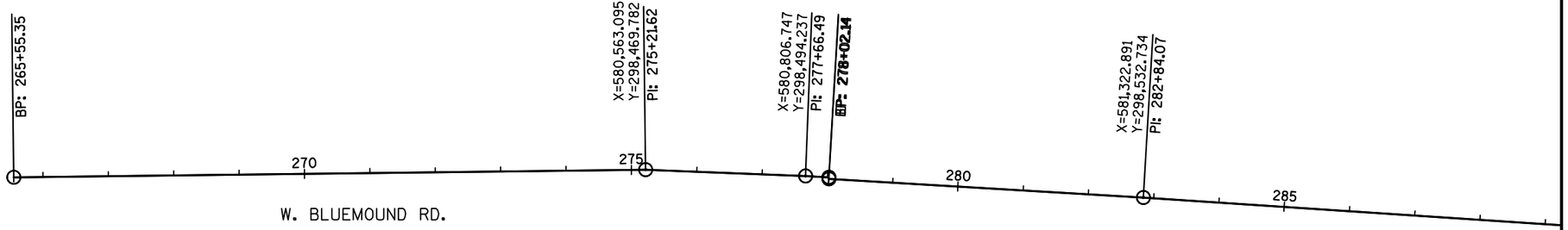
PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - S. 84TH ST., STATE FAIR GATE 4 & 5	SHEET 374	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027207_AD.DWG PLOT DATE : 4/30/2014 8:40 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

N

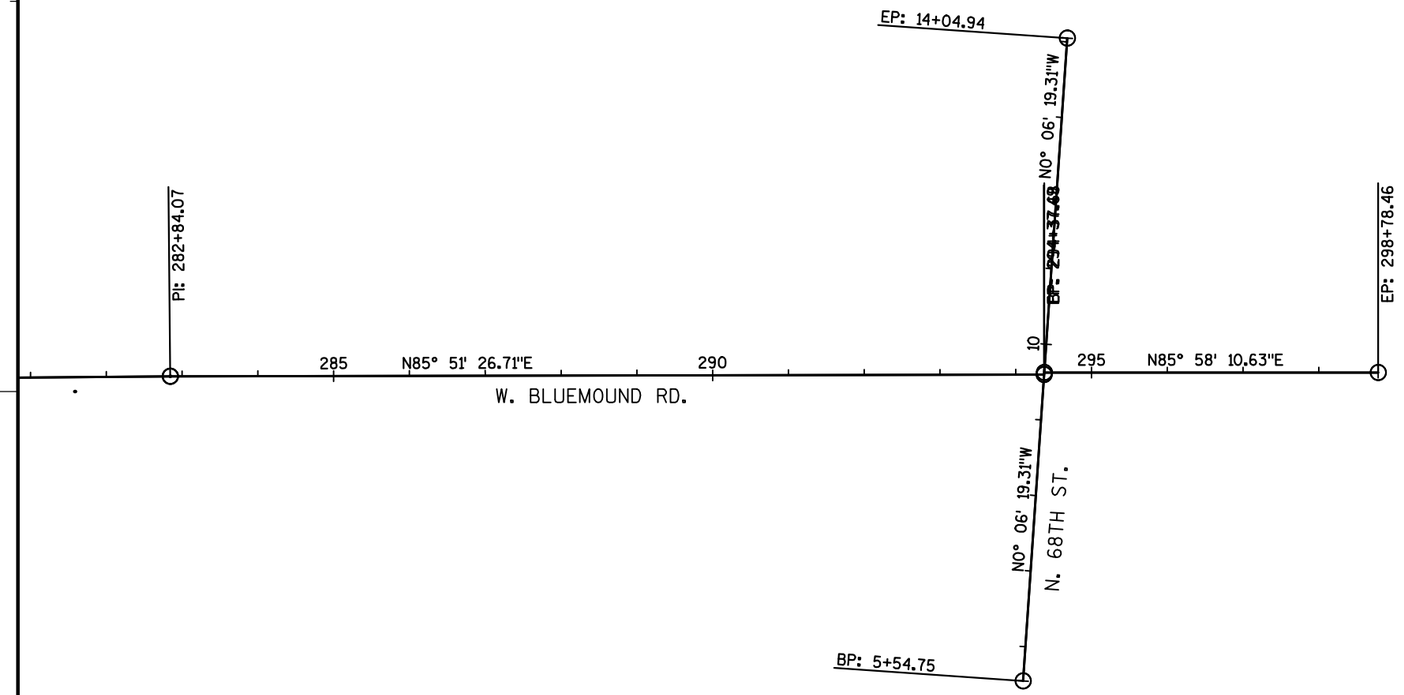


PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. BLUEMOUND RD.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027223_AD.DWG PLOT DATE : 4/30/2014 8:42 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

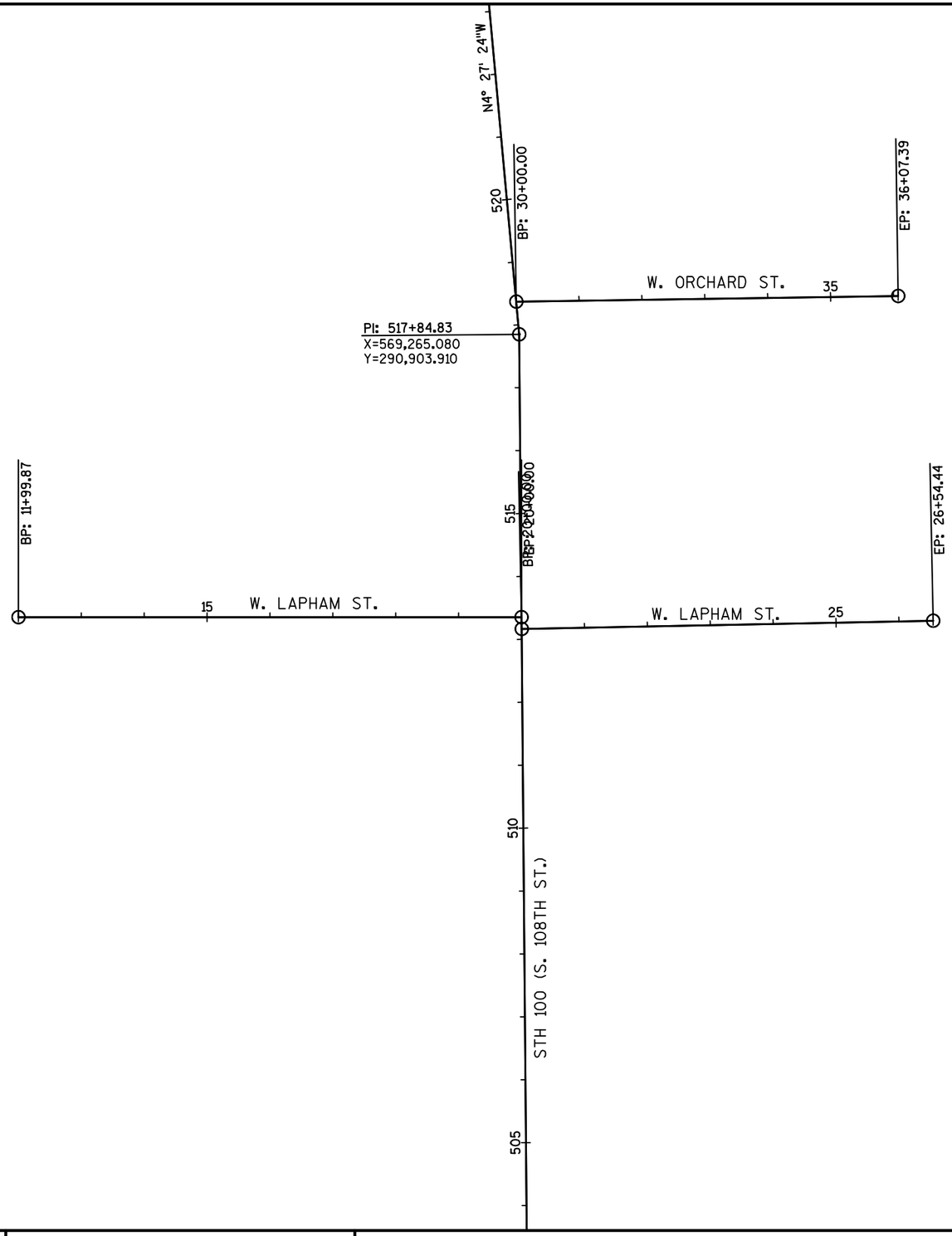
N



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. BLUEMOUND RD. & N. 68TH ST.	SHEET	E

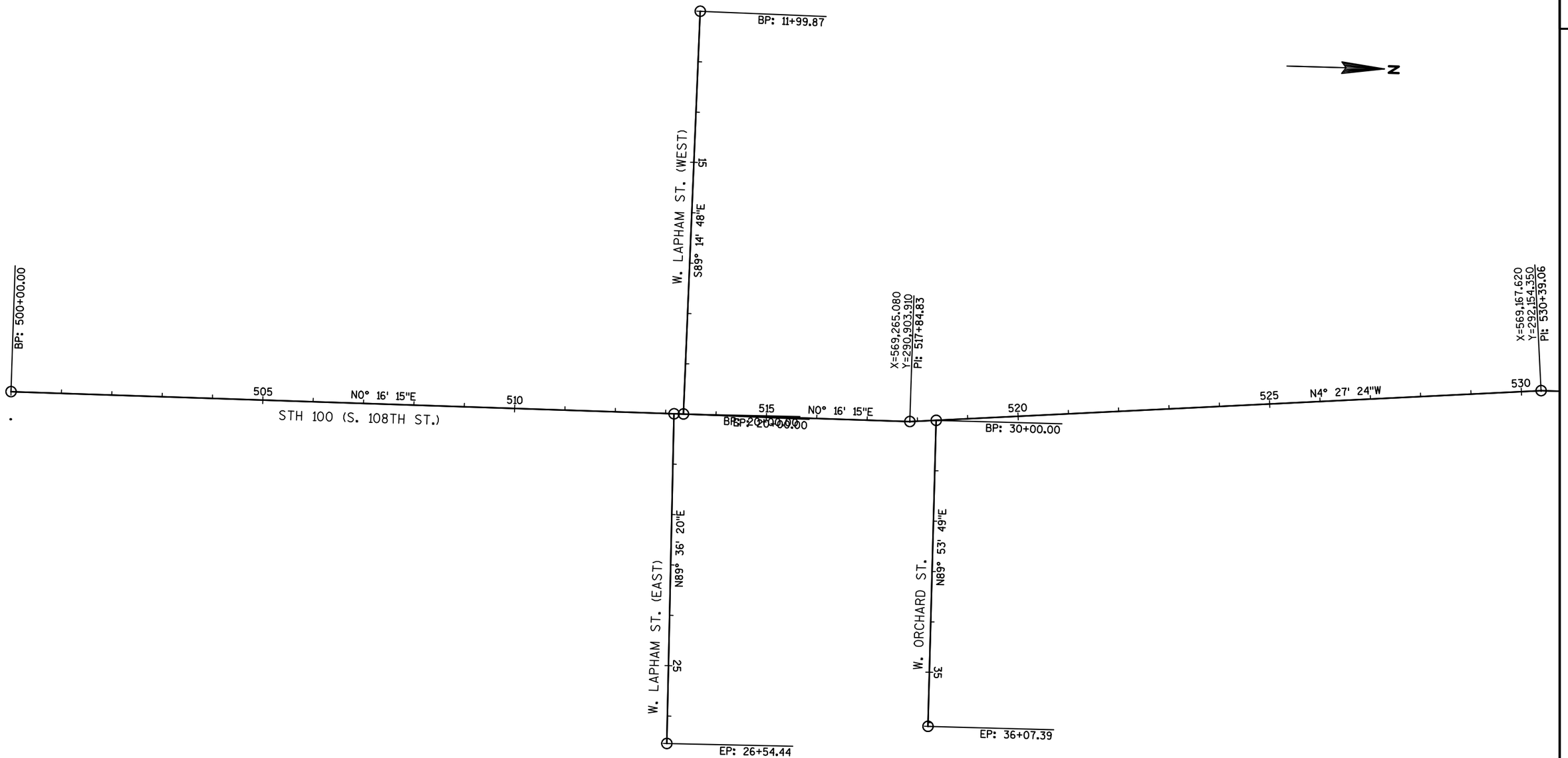
FILE NAME : W:\PDS\C3D\CAD\10603307\91\027224_AD.DWG PLOT DATE : 4/30/2014 8:42 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - STH 100 & LAPHAM ST.	SHEET 377	E

2



2

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - STH 100 & W. LAPHAM ST.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027212_AD.DWG PLOT DATE : 4/30/2014 8:41 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

N

W. THEO. TRECKER WAY

N89° 47' 47"E

X=569,162.620
Y=292,154.350
PI: 530+39.06

X=569,169.556
Y=284,177.714
PI: 550+62.43

X=569,169.151
Y=294,316.853
PI: 552+01.57

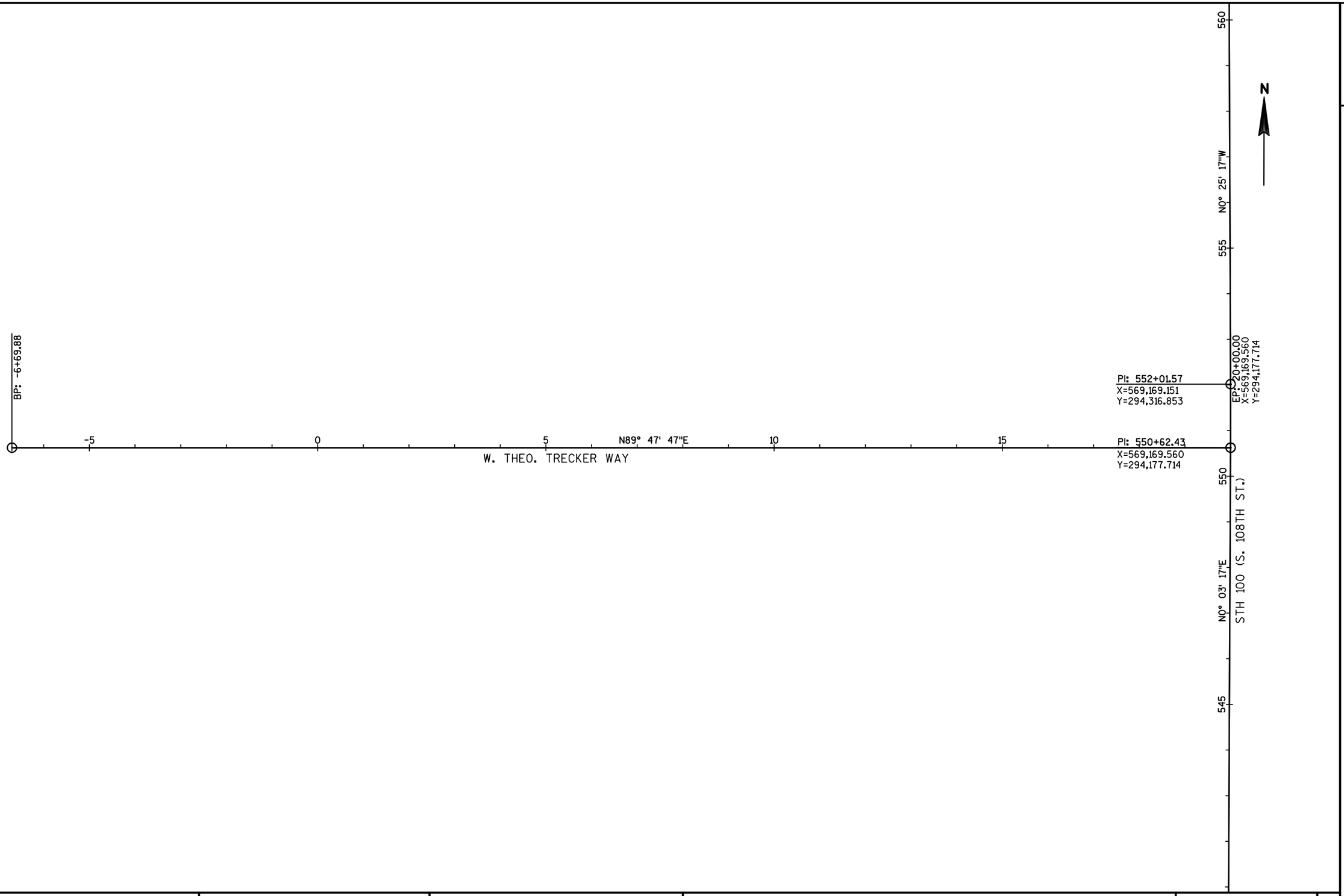
530 535 N0° 03' 17"E 540 545 550 555 N0° 25' 17"W 560

STH 100 (S. 108TH ST.)

EP: 20+00.00

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - STH 100 & W. TRECKER WAY	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027214_AD.DWG PLOT DATE : 4/30/2014 8:41 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT



2

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. THEO. TRECKER WAY & STH 100	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027210_AD.DWG
PLOT DATE : 4/30/2014 8:41 AM
PLOT BY : WAGNER, SCOTT H
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

2

N

BP: 23+56.52

25 30 35 40 45 50

W. LINCOLN AVE.

X=571,852.370
Y=286,477.284
PI: 50+00.71

PI: 55+00.04

55+

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. LINCOLN AVE. & I-894 RAMP, S. 98TH ST.	SHEET 381	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027219_AD.DWG PLOT DATE : 4/30/2014 8:41 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N

EP: 141+21.10

140

W. BELOIT RD.

135

PI: 133+92.95
X=582,443.339
Y=286,526.688

X=582,443.790
Y=286,561.560
PI: 155+91.78

0

145

150

EP: 313+25.81

155

160

165

170

W. LINCOLN AVE.

BP: 127+09.27

130

310

S. 68TH ST.

305

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - W. LINCOLN AVE. & W. BELOIT RD.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\027225_AD.DWG PLOT DATE : 4/30/2014 8:42 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

DATE 10JUN14 — E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-35-91 QUANTITY
0010	108.4400	CPM PROGRESS SCHEDULE	EACH	1.000	1.000
0020	204.0100	REMOVING PAVEMENT	SY	504.000	504.000
0030	204.0110	REMOVING ASPHALTIC SURFACE	SY	38.000	38.000
0040	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	475.000	475.000
0050	204.0150	REMOVING CURB & GUTTER	LF	2,206.000	2,206.000
0060	204.0155	REMOVING CONCRETE SIDEWALK	SY	3,072.000	3,072.000
0070	204.0195	REMOVING CONCRETE BASES	EACH	171.000	171.000
0080	204.0250	ABANDONING MANHOLES	EACH	3.000	3.000
0090	205.0100	EXCAVATION COMMON	CY	983.000	983.000
0100	213.0100	FINISHING ROADWAY (PROJECT) 0001. 1060-35-91	EACH	1.000	1.000
0110	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	1,184.000	1,184.000
0120	310.0115	BASE AGGREGATE OPEN GRADED	CY	58.000	58.000
0130	415.0080	CONCRETE PAVEMENT 8-INCH	SY	137.000	137.000
0140	416.0610	DRILLED TIE BARS	EACH	257.000	257.000
0150	455.0105	ASPHALTIC MATERIAL PG58-28	TON	16.000	16.000
0160	455.0115	ASPHALTIC MATERIAL PG64-22	TON	12.000	12.000
0170	455.0605	TACK COAT	GAL	43.000	43.000
0180	460.1103	HMA PAVEMENT TYPE E-3	TON	462.000	462.000
0190	520.8000	CONCRETE COLLARS FOR PIPE	EACH	1.000	1.000
0200	601.0331	CONCRETE CURB & GUTTER 31-INCH	LF	2,298.000	2,298.000
0210	602.0410	CONCRETE SIDEWALK 5-INCH	SF	3,000.000	3,000.000
0220	602.0420	CONCRETE SIDEWALK 7-INCH	SF	21,352.000	21,352.000
0230	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	520.000	520.000
0240	602.2400	CONCRETE SAFETY ISLANDS	SF	2,003.000	2,003.000
0250	603.1436	CONCRETE BARRIER TYPE S36C	LF	238.000	238.000
0260	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	5.000	5.000
0270	608.0318	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	8.000	8.000
0280	611.0430	RECONSTRUCTING INLETS	EACH	2.000	2.000
0290	611.0600	INLET COVERS TYPE A	EACH	2.000	2.000
0300	611.3220	INLETS 2X2-FT	EACH	3.000	3.000
0310	611.8110	ADJUSTING MANHOLE COVERS	EACH	2.000	2.000
0320	611.8115	ADJUSTING INLET COVERS	EACH	5.000	5.000
0330	611.9710	SALVAGED INLET COVERS	EACH	1.000	1.000
0340	612.0408	PIPE UNDERDRAIN WRAPPED 8-INCH	LF	474.000	474.000
0350	614.0200	STEEL THRIE BEAM STRUCTURE APPROACH	LF	21.000	21.000
0360	614.0345	STEEL PLATE BEAM GUARD SHORT RADIUS	LF	25.000	25.000
0370	614.0390	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL	EACH	1.000	1.000
0380	614.2300	MGS GUARDRAIL 3	LF	18.750	18.750
0390	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	1.000	1.000
0400	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 0001. 1060-35-91	EACH	1.000	1.000
0410	619.1000	MOBILIZATION	EACH	1.000	1.000
0420	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	100.000	100.000
0430	628.1504	SILT FENCE	LF	616.000	616.000
0440	628.1520	SILT FENCE MAINTENANCE	LF	616.000	616.000
0450	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	4.000	4.000
0460	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	4.000	4.000
0470	628.7005	INLET PROTECTION TYPE A	EACH	4.000	4.000
0480	628.7015	INLET PROTECTION TYPE C	EACH	55.000	55.000
0490	629.0210	FERTILIZER TYPE B	CWT	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-35-91 QUANTITY
0500	631.0300	SOD WATER	MGAL	14.000	14.000
0510	631.1000	SOD LAWN	SY	832.000	832.000
0520	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	28.000	28.000
0530	634.0622	POSTS WOOD 4X6-INCH X 22-FT	EACH	2.000	2.000
0540	634.0816	POSTS TUBULAR STEEL 2X2-INCH X 16-FT	EACH	30.000	30.000
0550	637.2210	SIGNS TYPE II REFLECTIVE H	SF	1,158.500	1,158.500
0560	637.2215	SIGNS TYPE II REFLECTIVE H FOLDING	SF	358.080	358.080
0570	637.2230	SIGNS TYPE II REFLECTIVE F	SF	282.500	282.500
0580	638.2102	MOVING SIGNS TYPE II	EACH	18.000	18.000
0590	638.2602	REMOVING SIGNS TYPE II	EACH	102.000	102.000
0600	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	27.000	27.000
0610	641.8100	OVERHEAD SIGN SUPPORT (STRUCTURE) 0001. S-40-994	LS	1.000	1.000
0620	643.0100	TRAFFIC CONTROL (PROJECT) 0001. 1060-35-91	EACH	1.000	1.000
0630	643.0300	TRAFFIC CONTROL DRUMS	DAY	4,601.000	4,601.000
0640	643.0410	TRAFFIC CONTROL BARRICADES TYPE II	DAY	11,791.000	11,791.000
0650	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	436.000	436.000
0660	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	12,663.000	12,663.000
0670	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	1,072.000	1,072.000
0680	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	66.000	66.000
0690	643.0900	TRAFFIC CONTROL SIGNS	DAY	9,266.000	9,266.000
0700	645.0111	GEOTEXTILE FABRIC TYPE DF SCHEDULE A	SY	343.000	343.000
0710	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	6,698.000	6,698.000
0720	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	2,884.000	2,884.000
0730	647.0156	PAVEMENT MARKING ARROWS EPOXY TYPE 1	EACH	3.000	3.000
0740	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	22.000	22.000
0750	647.0176	PAVEMENT MARKING ARROWS EPOXY TYPE 3	EACH	6.000	6.000
0760	647.0356	PAVEMENT MARKING WORDS EPOXY	EACH	18.000	18.000
0770	647.0456	PAVEMENT MARKING CURB EPOXY	LF	106.000	106.000
0780	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	987.000	987.000
0790	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	1.000	1.000
0800	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	387.000	387.000
0810	647.0766	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	LF	3,395.000	3,395.000
0820	647.0796	PAVEMENT MARKING CROSSWALK EPOXY 24-INCH	LF	150.000	150.000
0830	647.0955	REMOVING PAVEMENT MARKINGS ARROWS	EACH	3.000	3.000
0840	647.0965	REMOVING PAVEMENT MARKINGS WORDS	EACH	2.000	2.000
0850	649.0701	TEMPORARY PAVEMENT MARKING 8-INCH	LF	976.000	976.000
0860	649.0801	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	LF	354.000	354.000
0870	649.0900	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH	LF	17.000	17.000
0880	649.1200	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH	LF	22.000	22.000
0890	649.1700	TEMPORARY PAVEMENT MARKING ARROWS	EACH	2.000	2.000
0900	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	2,466.000	2,466.000
0910	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	6,169.000	6,169.000
0920	652.0240	CONDUIT RIGID NONMETALLIC SCHEDULE 40 4-INCH	LF	44.000	44.000
0930	652.0605	CONDUIT SPECIAL 2-INCH	LF	3,943.000	3,943.000
0940	652.0615	CONDUIT SPECIAL 3-INCH	LF	9,238.000	9,238.000
0950	652.0625	CONDUIT SPECIAL 4-INCH	LF	138.000	138.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-35-91 QUANTITY
0960	652.0700.S	INSTALL CONDUIT INTO EXISTING ITEM	EACH	19.000	19.000
0970	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	8.000	8.000
0980	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	130.000	130.000
0990	653.0905	REMOVING PULL BOXES	EACH	77.000	77.000
1000	654.0101	CONCRETE BASES TYPE 1	EACH	74.000	74.000
1010	654.0102	CONCRETE BASES TYPE 2	EACH	23.000	23.000
1020	654.0105	CONCRETE BASES TYPE 5	EACH	13.000	13.000
1030	654.0110	CONCRETE BASES TYPE 10	EACH	23.000	23.000
1040	654.0113	CONCRETE BASES TYPE 13	EACH	25.000	25.000
1050	654.0217	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	EACH	9.000	9.000
1060	655.0230	CABLE TRAFFIC SIGNAL 5-14 AWG	LF	7,969.000	7,969.000
1070	655.0240	CABLE TRAFFIC SIGNAL 7-14 AWG	LF	7,494.000	7,494.000
1080	655.0250	CABLE TRAFFIC SIGNAL 9-14 AWG	LF	240.000	240.000
1090	655.0260	CABLE TRAFFIC SIGNAL 12-14 AWG	LF	21,845.000	21,845.000
1100	655.0265	CABLE TRAFFIC SIGNAL 15-12 AWG	LF	572.000	572.000
1110	655.0270	CABLE TRAFFIC SIGNAL 15-14 AWG	LF	1,943.000	1,943.000
1120	655.0290	CABLE TRAFFIC SIGNAL 21-14 AWG	LF	83.000	83.000
1130	655.0305	CABLE TYPE UF 2-12 AWG GROUNDED	LF	525.000	525.000
1140	655.0320	CABLE TYPE UF 2-10 AWG GROUNDED	LF	9,284.000	9,284.000
1150	655.0505	ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG	LF	650.000	650.000
1160	655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	LF	20,941.000	20,941.000
1170	655.0520	ELECTRICAL WIRE TRAFFIC SIGNALS 8 AWG	LF	286.000	286.000
1180	655.0610	ELECTRICAL WIRE LIGHTING 12 AWG	LF	7,812.000	7,812.000
1190	655.0700	LOOP DETECTOR LEAD IN CABLE	LF	84.000	84.000
1200	655.0900	TRAFFIC SIGNAL EVP DETECTOR CABLE	LF	13,612.000	13,612.000
1210	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3001. STH 100 & W. LAPHAM STREET	LS	1.000	1.000
1220	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3002. STH 100 & W THEO TRECKER WAY	LS	1.000	1.000
1230	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3004. STH 59 & S. 92ND STREET	LS	1.000	1.000
1240	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3005. STH 59 & STH 181	LS	1.000	1.000
1250	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3006. STH 181 & STATE FAIR PARK GATE 4	LS	1.000	1.000
1260	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3007. STH 181 & W. SCHLINGER AVENUE	LS	1.000	1.000
1270	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3008. IH 894/USH 45 EB OFF RAMP & W. LINCOLN AVENUE	LS	1.000	1.000
1280	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3101. W. NATIONAL AVENUE & S. 102ND ST.	LS	1.000	1.000
1290	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3102. W. NATIONAL AVENUE & W. LINCOLN AVENUE	LS	1.000	1.000
1300	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3103. W. NATIONAL A ENUE & S. 84TH ST.	LS	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-35-91 QUANTITY
1310	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3104. USH 18 AND N. 68TH ST.	LS	1.000	1.000
1320	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3105. USH 18 HAWK	LS	1.000	1.000
1330	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3106. W. LINCOLN AND W. BELOIT RD.	LS	1.000	1.000
1340	657.0100	PEDESTAL BASES	EACH	74.000	74.000
1350	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	32.000	32.000
1360	657.0305	POLES TYPE 2	EACH	8.000	8.000
1370	657.0310	POLES TYPE 3	EACH	9.000	9.000
1380	657.0322	POLES TYPE 5-ALUMINUM	EACH	4.000	4.000
1390	657.0405	TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT	EACH	1.000	1.000
1400	657.0420	TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT	EACH	23.000	23.000
1410	657.0425	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	EACH	23.000	23.000
1420	657.0430	TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT	EACH	24.000	24.000
1430	657.0609	LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT	EACH	11.000	11.000
1440	657.0610	LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT	EACH	4.000	4.000
1450	657.1345	INSTALL POLES TYPE 9	EACH	8.000	8.000
1460	657.1350	INSTALL POLES TYPE 10	EACH	15.000	15.000
1470	657.1355	INSTALL POLES TYPE 12	EACH	4.000	4.000
1480	657.1360	INSTALL POLES TYPE 13	EACH	21.000	21.000
1490	657.1515	INSTALL MONOTUBE ARMS 15-FT	EACH	1.000	1.000
1500	657.1520	INSTALL MONOTUBE ARMS 20-FT	EACH	1.000	1.000
1510	657.1525	INSTALL MONOTUBE ARMS 25-FT	EACH	7.000	7.000
1520	657.1530	INSTALL MONOTUBE ARMS 30-FT	EACH	14.000	14.000
1530	657.1535	INSTALL MONOTUBE ARMS 35-FT	EACH	8.000	8.000
1540	657.1540	INSTALL MONOTUBE ARMS 40-FT	EACH	11.000	11.000
1550	657.1545	INSTALL MONOTUBE ARMS 45-FT	EACH	5.000	5.000
1560	657.1550	INSTALL MONOTUBE ARMS 50-FT	EACH	1.000	1.000
1570	657.1808	INSTALL LUMINAIRE ARMS STEEL 8-FT	EACH	38.000	38.000
1580	657.1815	INSTALL LUMINAIRE ARMS STEEL 15-FT	EACH	4.000	4.000
1590	658.0110	TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	EACH	159.000	159.000
1600	658.0115	TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL	EACH	46.000	46.000
1610	658.0120	TRAFFIC SIGNAL FACE 5-12 INCH VERTICAL	EACH	10.000	10.000
1620	658.0215	BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	EACH	159.000	159.000
1630	658.0220	BACKPLATES SIGNAL FACE 4 SECTION 12-INCH	EACH	46.000	46.000
1640	658.0225	BACKPLATES SIGNAL FACE 5 SECTION 12-INCH	EACH	10.000	10.000
1650	658.0412	PEDESTRIAN SIGNAL FACE 12-INCH	EACH	16.000	16.000
1660	658.0416	PEDESTRIAN SIGNAL FACE 16-INCH	EACH	85.000	85.000
1670	658.0500	PEDESTRIAN PUSH BUTTONS	EACH	86.000	86.000
1680	658.0600	LED MODULES 12-INCH RED BALL	EACH	167.000	167.000
1690	658.0605	LED MODULES 12-INCH YELLOW BALL	EACH	163.000	163.000
1700	658.0610	LED MODULES 12-INCH GREEN BALL	EACH	159.000	159.000
1710	658.0615	LED MODULES 12-INCH RED ARROW	EACH	48.000	48.000
1720	658.0620	LED MODULES 12-INCH YELLOW ARROW	EACH	108.000	108.000
1730	658.0625	LED MODULES 12-INCH GREEN ARROW	EACH	66.000	66.000
1740	658.0635	LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH	EACH	85.000	85.000
1750	658.0660	LED MODULES COUNTDWN TIMER 12-INCH	EACH	16.000	16.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-35-91 QUANTITY
1760	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3001. STH 100 & W. LAPHAM STREET	LS	1.000	1.000
1770	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3002. STH 100 & W. THEO TRECKER WAY	LS	1.000	1.000
1780	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3003. STH 100 & STH 59	LS	1.000	1.000
1790	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3004. STH 59 & S. 92ND STREET	LS	1.000	1.000
1800	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3005. STH 59 & STH 181	LS	1.000	1.000
1810	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3006. STH 181 & STATE FAIR PARK GATE 4	LS	1.000	1.000
1820	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3007. STH 181 & W. SCHLINGER AVENUE	LS	1.000	1.000
1830	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3008. IH 894/USH 45 EB OFF RAMP & W. LINCOLN AVENUE	LS	1.000	1.000
1840	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3101. W. NATIONAL AVENUE & 102ND STREET	LS	1.000	1.000
1850	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3102. W. NATIONAL AVENUE & W. LINCOLN AV	LS	1.000	1.000
1860	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3103. W. NATIONAL AVENUE & S. 84TH ST	LS	1.000	1.000
1870	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3105. USH 18 HAWK	LS	1.000	1.000
1880	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3106. USH 18 & N. 68TH STREET	LS	1.000	1.000
1890	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3107. W. LINCOLN AND W. BELOIT RD.	LS	1.000	1.000
1900	659.1120	LUMINAIRES UTILITY LED B	EACH	32.000	32.000
1910	659.1125	LUMINAIRES UTILITY LED C	EACH	31.000	31.000
1920	659.1130	LUMINAIRES UTILITY LED D	EACH	2.000	2.000
1930	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3001. STH 100 & W. LAPHAM STREET	LS	1.000	1.000
1940	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3002. STH 100 & W. THEO TRECKER WAY	LS	1.000	1.000
1950	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3004. STH 59 & S 92ND STREET	LS	1.000	1.000
1960	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3005. STH 59 & STH 181	LS	1.000	1.000
1970	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3007. STH 181 & W. SCHLINGER	LS	1.000	1.000
1980	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3008. IH 894/USH 45 EB OFF RAMP & W. LINCOLN AVENUE	LS	1.000	1.000
1990	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3101. W. NATIONAL AVENUE & S. 102ND ST	LS	1.000	1.000
2000	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3102. W. NATIONAL AVENUE & W. LINCOLN AV	LS	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-35-91 QUANTITY
2010	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3103. W. NATIONAL AVENUE & S. 84TH ST (SOUTH)	LS	1.000	1.000
2020	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3104. W. NATIONAL AVENUE & S. 84TH ST (NORTH)	LS	1.000	1.000
2030	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3105. USH 18 & N. 68TH STREET	LS	1.000	1.000
2040	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3106. W. LINCOLN AVENUE & W. BELOIT ROAD	LS	1.000	1.000
2050	661.0300	GENERATORS	DAY	20.000	20.000
2060	662.1040.S	RAMP CLOSURE GATES HARDWIRED 40-FT	EACH	1.000	1.000
2070	670.0100	FIELD SYSTEM INTEGRATOR 2001. FTMS	LS	1.000	1.000
2080	670.0100	FIELD SYSTEM INTEGRATOR 3001. STH 100	LS	1.000	1.000
2090	670.0100	FIELD SYSTEM INTEGRATOR 3002. STH 59	LS	1.000	1.000
2100	670.0100	FIELD SYSTEM INTEGRATOR 3003. STH 181	LS	1.000	1.000
2110	670.0100	FIELD SYSTEM INTEGRATOR 3006. USH 18	LS	1.000	1.000
2120	670.0100	FIELD SYSTEM INTEGRATOR 3104. W. NATIONAL AVENUE	LS	1.000	1.000
2130	670.0100	FIELD SYSTEM INTEGRATOR 3105. W. LINCOLN AVENUE	LS	1.000	1.000
2140	670.0200	ITS DOCUMENTATION 2001. FTMS	LS	1.000	1.000
2150	670.0200	ITS DOCUMENTATION 3001. STH 100	LS	1.000	1.000
2160	670.0200	ITS DOCUMENTATION 3002. STH 59	LS	1.000	1.000
2170	670.0200	ITS DOCUMENTATION 3003. STH 181	LS	1.000	1.000
2180	670.0200	ITS DOCUMENTATION 3006. USH 18	LS	1.000	1.000
2190	670.0200	ITS DOCUMENTATION 3104. W. NATIONAL AVENUE	LS	1.000	1.000
2200	670.0200	ITS DOCUMENTATION 3105. W. LINCOLN AVENUE	LS	1.000	1.000
2210	674.0300	REMOVE CABLE	LF	955.000	955.000
2220	675.0400.S	INSTALL ETHERNET SWITCH	EACH	1.000	1.000
2230	676.0105	SIGNAL ASSEMBLY RAMP CONTROL OVERHEAD	EACH	2.000	2.000
2240	676.0300	SIGNAL ASSEMBLY ADVANCE FLASHER TYPE 1	EACH	2.000	2.000
2250	676.9002.S	REMOVING ADVANCE FLASHER ASSEMBLIES TYPE 2	EACH	1.000	1.000
2260	677.0200	INSTALL CAMERA ASSEMBLY	EACH	6.000	6.000
2270	677.0300.S	INSTALL VIDEO ENCODER	EACH	6.000	6.000
2280	677.9051.S	REMOVING 50-FOOT CAMERA POLE	EACH	1.000	1.000
2290	677.9200.S	REMOVING CCTV CAMERA	EACH	1.000	1.000
2300	678.0006	INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT	LF	5,035.000	5,035.000
2310	678.0300	FIBER OPTIC SPLICE	EACH	79.000	79.000
2320	678.0400	FIBER OPTIC TERMINATION	EACH	48.000	48.000
2330	678.0500	COMMUNICATION SYSTEM TESTING 2001. FTMS	LS	1.000	1.000
2340	678.0500	COMMUNICATION SYSTEM TESTING 3001. STH 100	LS	1.000	1.000
2350	678.0500	COMMUNICATION SYSTEM TESTING 3002. STH 59	LS	1.000	1.000
2360	678.0500	COMMUNICATION SYSTEM TESTING 3003. STH 181	LS	1.000	1.000
2370	678.0500	COMMUNICATION SYSTEM TESTING 3006. USH 18	LS	1.000	1.000
2380	678.0500	COMMUNICATION SYSTEM TESTING 3104. W. NATIONAL AVENUE	LS	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-35-91 QUANTITY
2390	678.0500	COMMUNICATION SYSTEM TESTING 3105. W. LINCOLN AVENUE	LS	1.000	1.000
2400	690.0150	SAWING ASPHALT	LF	193.000	193.000
2410	690.0250	SAWING CONCRETE	LF	4,876.000	4,876.000
2420	SPV.0060	SPECIAL 0001. TRAFFIC CONTROL LOCAL ROAD LANE CLOSURES	EACH	34.000	34.000
2430	SPV.0060	SPECIAL 0002. EXPOSING EXISTING UTILITY UNPAVED AREA	EACH	6.000	6.000
2440	SPV.0060	SPECIAL 0003. EXPOSING EXISTING UTILITY PAVED AREA	EACH	24.000	24.000
2450	SPV.0060	SPECIAL 2001. INSTALL WIRELESS MODEM	EACH	2.000	2.000
2460	SPV.0060	SPECIAL 2002. INSTALL BLUETOOTH DETECTOR	EACH	5.000	5.000
2470	SPV.0060	SPECIAL 2003. SALVAGE WIRELESS TRAFFIC SENSOR REPEATER	EACH	2.000	2.000
2480	SPV.0060	SPECIAL 2004. INSTALL WIRELESS TRAFFIC SENSOR REPEATER	EACH	1.000	1.000
2490	SPV.0060	SPECIAL 2005. SALVAGE AND INSTALL WIRELESS TRAFFIC SENSOR ACCESS POINT	EACH	1.000	1.000
2500	SPV.0060	SPECIAL 2006. WIRELESS TRAFFIC SENSOR	EACH	12.000	12.000
2510	SPV.0060	SPECIAL 2007. REMOVING RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT	EACH	2.000	2.000
2520	SPV.0060	SPECIAL 2008. INSTALL SALVAGED RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT	EACH	1.000	1.000
2530	SPV.0060	SPECIAL 2009. INSTALL 5.8 GHZ ETHERNET BRIDGE	EACH	3.000	3.000
2540	SPV.0060	SPECIAL 2010. REMOVING ON-RAMP CLOSURE GATE	EACH	1.000	1.000
2550	SPV.0060	SPECIAL 2011. SALVAGE CITY OF WEST ALLIS CAMER A ASSEMBLY	EACH	2.000	2.000
2560	SPV.0060	SPECIAL 2012. INSTALL CITY OF WEST ALLIS CAMERA ASSSEMBLY	EACH	2.000	2.000
2570	SPV.0060	SPECIAL 2013. INSTALL PORTABLE VIDEO SURVEILLANCE SYSTEM	EACH	1.000	1.000
2580	SPV.0060	SPECIAL 2014. RELOCATING PORTABLE VIDEO SURVEILLANCE SYSTEM	EACH	1.000	1.000
2590	SPV.0060	SPECIAL 2015. REMOVING CONTROLLER CABINET	EACH	1.000	1.000
2600	SPV.0060	SPECIAL 2016. REMOVING CONTROLLER CABINET BASE	EACH	1.000	1.000
2610	SPV.0060	SPECIAL 3101. EVP DETECTOR TYPE I	EACH	22.000	22.000
2620	SPV.0060	SPECIAL 3102. EVP DISCRIMINATOR TYPE IV	EACH	6.000	6.000
2630	SPV.0060	SPECIAL 3103. EVP CONFIRMATION LIGHT ASSEMBLY TYPE I	EACH	21.000	21.000
2640	SPV.0060	SPECIAL 3104. REMOVING AND SALVAGING LIGHT POLES, LUMINAIRES, AND ARMS	EACH	49.000	49.000
2650	SPV.0060	SPECIAL 3105. LIGHTING UNIT SINGLE	EACH	13.000	13.000
2660	SPV.0060	SPECIAL 3106. TRAFFIC SIGNAL CONTROLLER PROGRAMMING	EACH	5.000	5.000
2670	SPV.0060	SPECIAL 3107. PEDESTRIAN HYBIRD BEACON	EACH	4.000	4.000
2680	SPV.0060	SPECIAL 3109. INSTALL TRAFFIC CABINET BASE	EACH	1.000	1.000
2690	SPV.0060	SPECIAL 3110. CONCRETE CONTROL CABINET BASE TYPE 9 SPECIAL (MOD.)	EACH	3.000	3.000
2700	SPV.0090	SPECIAL 0001. REMOVING PAVEMENT MARKINGS WATER BLASTING	LF	1,627.000	1,627.000
2710	SPV.0090	SPECIAL 0002. GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH	LF	210.000	210.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-35-91 QUANTITY
2720	SPV.0090	SPECIAL 0003. GROOVED PREFORMED THERMOPLASTIC CROSSWALK 24-INCH	LF	315.000	315.000
2730	SPV.0090	SPECIAL 0004. GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH	LF	83.000	83.000
2740	SPV.0090	SPECIAL 3001. CABLE TYPE UF 2-14 AWG	LF	12,907.000	12,907.000
2750	SPV.0090	SPECIAL 3101. SERIES CIRCUIT POWER CABLE	LF	2,615.000	2,615.000
2760	SPV.0105	SPECIAL 0001. PAVEMENT CLEANUP PROJ. 1060-35-91	LS	1.000	1.000
2770	SPV.0105	SPECIAL 0002. SURVEY PROJECT 1060-35-91	LS	1.000	1.000
2780	SPV.0105	SPECIAL 0003. MODULAR CURB SYSTEM WITH VERTICAL PANELS	LS	1.000	1.000
2790	SPV.0105	SPECIAL 3001. REMOVE TRAFFIC SIGNALS STH 100 & W. LAPHAM STREET	LS	1.000	1.000
2800	SPV.0105	SPECIAL 3002. REMOVE TRAFFIC SIGNALS STH 100 & THEO TRECKER WAY	LS	1.000	1.000
2810	SPV.0105	SPECIAL 3003. REMOVE TRAFFIC SIGNALS STH 100 & STH 59	LS	1.000	1.000
2820	SPV.0105	SPECIAL 3004. REMOVE TRAFFIC SIGNALS STH 59 & S. 92ND STREET	LS	1.000	1.000
2830	SPV.0105	SPECIAL 3005. REMOVE TRAFFIC SIGNALS STH 59 & STH 181	LS	1.000	1.000
2840	SPV.0105	SPECIAL 3006. REMOVE TRAFFIC SIGNALS STH 181 & STATE FAIR PARK GATE 4	LS	1.000	1.000
2850	SPV.0105	SPECIAL 3007. REMOVE TRAFFIC SIGNALS STH 181 & W. SCHLINGER AVE	LS	1.000	1.000
2860	SPV.0105	SPECIAL 3008. REMOVE TRAFFIC SIGNALS IH894/USH45 EB OFF RAMP & W. LINCOLN AVENUE	LS	1.000	1.000
2870	SPV.0105	SPECIAL 3009. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET STH 100 & W. LAPHAM ST	LS	1.000	1.000
2880	SPV.0105	SPECIAL 3010. INSTALL STATE FURN. TRAFFIC SIGNAL CABINET STH 100 & W. THEO TRECKER WAY	LS	1.000	1.000
2890	SPV.0105	SPECIAL 3011. INSTALL STATE FURN. TRAFFIC SIGNAL CABINET STH 59 & S. 92ND STREET	LS	1.000	1.000
2900	SPV.0105	SPECIAL 3012. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET STH 59 & STH 181	LS	1.000	1.000
2910	SPV.0105	SPECIAL 3013. INSTALL STATE FURNISHED TRAFF. SIG CABINET STH 181 & STATE FAIR PARK GATE 4	LS	1.000	1.000
2920	SPV.0105	SPECIAL 3014. INSTALL STATE FURNISHED TRAFF. SIG CABINET STH 181 & W. SCHLINGER AVENUE	LS	1.000	1.000
2930	SPV.0105	SPECIAL 3015. INSTALL STATE FURN. TRAFF SIG CAB IH894/USH45 EB OFF RAMP & W LINCOLN AVE	LS	1.000	1.000
2940	SPV.0105	SPECIAL 3016. TRANSPORTING SIGNAL AND LIGHTING MATERIALS STH100 & W. LAPHAM STREET	LS	1.000	1.000
2950	SPV.0105	SPECIAL 3017. TRANSPORTING SIGNAL AND LIGHTING MATERIALS STH 100 & W. THEO TRECKER WAY	LS	1.000	1.000
2960	SPV.0105	SPECIAL 3018. TRANSPORTING SIGNAL AND LIGHTING MATERIALS STH 59 & S. 92ND STREET	LS	1.000	1.000
2970	SPV.0105	SPECIAL 3019. TRANSPORTING SIGNAL AND LIGHTING MATERIALS STH 59 & STH 181	LS	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-35-91 QUANTITY
2980	SPV.0105	SPECIAL 3020. TRANSPORTING SIGNAL AND LIGHTING MATERIALS STH181 & STATE FAIR PARK GATE4	LS	1.000	1.000
2990	SPV.0105	SPECIAL 3021. TRANSPORTING SIGNAL AND LIGHTING MATERIALS STH 181 & W SCHLINGER AVENUE	LS	1.000	1.000
3000	SPV.0105	SPECIAL 3022. TRANSPORTING SIGNAL AND LIGHTING MAT. IH894/USH45 EB OFF RAMP & W LINCOLN	LS	1.000	1.000
3010	SPV.0105	SPECIAL 3023. TRANSP. AND INST. STATE FURNISHED RADAR DETECTION SYS STH100 & LAPHAM ST	LS	1.000	1.000
3020	SPV.0105	SPECIAL 3024. TRANSP & INST STATE FURN RADAR DET SYS STH 100 & THEO TRECKER WAY	LS	1.000	1.000
3030	SPV.0105	SPECIAL 3025. TRANSP AND INST STATE FURNISHED RADAR DETECTION SYS STH 59 & S 92ND ST	LS	1.000	1.000
3040	SPV.0105	SPECIAL 3026. TRANSP AND INST STATE FURNISHED RADAR DETECTION SYS STH 59 & STH 181	LS	1.000	1.000
3050	SPV.0105	SPECIAL 3027. TRANSP AND INST STATE FURNISHED RADAR DET SYS STH181 & ST FAIR GATE 4	LS	1.000	1.000
3060	SPV.0105	SPECIAL 3028. TRANSP AND INST STATE FURNISHED RADAR DETECTION SYS STH 181 & SCHLINGER	LS	1.000	1.000
3070	SPV.0105	SPECIAL 3029. TRANSP AND INST STATE FURN RADAR DET SYS IH894/USH45 EB OFF RAMP &LINCOLN	LS	1.000	1.000
3080	SPV.0105	SPECIAL 3030. INSTALL STATE FURNISHED EVP DETECTOR HEADS STH 100 & W LAPHAM ST	LS	1.000	1.000
3090	SPV.0105	SPECIAL 3031. INSTALL STATE FURN EVP DETECTOR HEADS STH 100 & W THEO TRECKER WAY	LS	1.000	1.000
3100	SPV.0105	SPECIAL 3032. INSTALL STATE FURN EVP DETECTOR HEADS STH 59 & S. 92ND STREET	LS	1.000	1.000
3110	SPV.0105	SPECIAL 3033. INSTALL STATE FURN EVP DETECTOR HEADS STH 59 & STH 181	LS	1.000	1.000
3120	SPV.0105	SPECIAL 3034. INSTALL STATE FURN EVP DETECTOR HEADS STH 181 & STATE FAIR PARK GATE 4	LS	1.000	1.000
3130	SPV.0105	SPECIAL 3035. INSTALL STATE FURN EVP DETECTOR HEADS STH 181 W. SCHLINGER AVENUE	LS	1.000	1.000
3140	SPV.0105	SPECIAL 3036. INSTALL STATE FURN EVP DETECTOR HEADS IH894/USH45 EB OFF RAMP & LINCOLN	LS	1.000	1.000
3150	SPV.0105	SPECIAL 3037. TEMPORARY EVP SYSTEM STH 100 & W. THEO TRECKER WAY	LS	1.000	1.000
3160	SPV.0105	SPECIAL 3038. TEMPORARY EVP SYSTEM STH 59 & S. 92ND STREET	LS	1.000	1.000
3170	SPV.0105	SPECIAL 3039. TEMPORARY EVP SYSTEM STH 59 & STH 181	LS	1.000	1.000
3180	SPV.0105	SPECIAL 3040. TEMPORARY EVP SYSTEM STH 181 & W. SCHLINGER AVENUE	LS	1.000	1.000
3190	SPV.0105	SPECIAL 3041. TEMPORARY EVP SYSTEM IH894/USH45 EB OFF RAMP & W. LINCOLN AVENUE	LS	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-35-91 QUANTITY
3200	SPV.0105	SPECIAL 3042. REMOVE LOOP DETECTOR WIRE AND LEAD IN CABLE STH 100 & W THEO TRECKER WAY	LS	1.000	1.000
3210	SPV.0105	SPECIAL 3043. REMOVE LOOP DETECTOR WIRE AND LEAD IN CABLE STH181 & STATE FAIR PARK GATE 4	LS	1.000	1.000
3220	SPV.0105	SPECIAL 3044. REMOVE LOOP DETECTOR WIRE AND LEAD IN CABLE STH 181 & W SCHLINGER AVENUE	LS	1.000	1.000
3230	SPV.0105	SPECIAL 3045. REMOVE LOOP DET WIRE AND LEAD-IN CABLE IH894/USH45 EB OFF RAMP & LINCOLN	LS	1.000	1.000
3240	SPV.0105	SPECIAL 3050. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & W. LAPHAM STREET	LS	1.000	1.000
3250	SPV.0105	SPECIAL 3051. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH100 & THEO TRECKER WAY	LS	1.000	1.000
3260	SPV.0105	SPECIAL 3054. INSTALL FIBER OPTIC COMMUNICATIONS IN CAB IH894/USH45 EB RAMPS & W. LINCOLN	LS	1.000	1.000
3270	SPV.0105	SPECIAL 3056. TEMPORARY EVP SYSTEM STH 100 & W. LAPHAM ST	LS	1.000	1.000
3280	SPV.0105	SPECIAL 3101. REMOVE TRAFFIC SIGNALS W NATIONAL AVENUE & S. 102ND STREET	LS	1.000	1.000
3290	SPV.0105	SPECIAL 3102. REMOVE TRAFFIC SIGNALS W. NATIONAL AVENUE & W. LINCOLN AVENUE	LS	1.000	1.000
3300	SPV.0105	SPECIAL 3103. REMOVE TRAFFIC SIGNALS W. NATIONAL AVENUE & S. 84TH STREET (SOUTH)	LS	1.000	1.000
3310	SPV.0105	SPECIAL 3104. REMOVE TRAFFIC SIGNALS W. NATIONAL AVENUE & S. 84TH STREET (NORTH)	LS	1.000	1.000
3320	SPV.0105	SPECIAL 3105. REMOVE TRAFFIC SIGNALS USH 18 & ST. CAMILLUS DRIVEWAY	LS	1.000	1.000
3330	SPV.0105	SPECIAL 3106. REMOVE TRAFFIC SIGNALS USH 18 & N. 68TH STREET	LS	1.000	1.000
3340	SPV.0105	SPECIAL 3107. INSTALL STATE FURN MUN TRAFF SIG CAB W NATIONAL AVE & S 102ND STREET	LS	1.000	1.000
3350	SPV.0105	SPECIAL 3108. INSTALL STATE FURN MUN TRAFF SIG CAB W NATIONAL AVE & W LINCOLN AVE	LS	1.000	1.000
3360	SPV.0105	SPECIAL 3109. INSTALL STATE FURN MUN TRAFF SIG CAB W NATIONAL AVE & S 84TH ST (SOUTH)	LS	1.000	1.000
3370	SPV.0105	SPECIAL 3110. INST STAT FURN MUNC TRAF SIG CAB W. NATIONAL AVE & S. 84TH ST (NORTH)	LS	1.000	1.000
3380	SPV.0105	SPECIAL 3111. INSTALL STATE FURN MUNICIP TRAFFIC SIGNAL CABINET USH 18 HAWK	LS	1.000	1.000
3390	SPV.0105	SPECIAL 3112. TRANSP MUNICIP SIG AND LIGHTING MAT W NATIONAL AVE & S 102ND STREET	LS	1.000	1.000
3400	SPV.0105	SPECIAL 3113. TRANSP MUNICIP SIG AND LIGHTING MAT W NATIONAL AVE & W LINCOLN AVE	LS	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-35-91 QUANTITY
3410	SPV.0105	SPECIAL 3114. TRANSP MUNICIP SIG AND LIGHTING MAT W. NATIONAL AVE & S. 84TH STREET	LS	1.000	1.000
3420	SPV.0105	SPECIAL 3115. TRANSP MUNC SIGNAL & LIGHTING MAT W. LINCOLN AVE AND W. BELOIT RD	LS	1.000	1.000
3430	SPV.0105	SPECIAL 3116. TRANSPORTING MUNICIPAL SIGNAL AND LIGHTING MATERIALS USH 18 HAWK	LS	1.000	1.000
3440	SPV.0105	SPECIAL 3117. TRANSP & INST STATE FURN MICROWAVE DET SYS W. NATIONAL AVE & 102ND STREET	LS	1.000	1.000
3450	SPV.0105	SPECIAL 3118. TRANSP & INST STATE FURN MICROWAVE DET SYS W. NATIONAL AVE & W. LINCOLN AVE	LS	1.000	1.000
3460	SPV.0105	SPECIAL 3119. TRANSP & INST STATE FURN MICROWAVE DET SYS W. NATIONAL AVE & S. 84TH STREET	LS	1.000	1.000
3470	SPV.0105	SPECIAL 3120. TRANSP & INST STATE FURN MICROWAVE DETECTION SYS W. LINCOLN & W. BELOIT RD	LS	1.000	1.000
3480	SPV.0105	SPECIAL 3121. TRANSP & INST STATE FURN MICROWAVE DETECTION SYSTEM USH 18 & N. 68TH ST.	LS	1.000	1.000
3490	SPV.0105	SPECIAL 3122. TEMPORARY EVP SYSTEM W. NATIONAL AVENUE & S. 102ND STREET	LS	1.000	1.000
3500	SPV.0105	SPECIAL 3123. TEMPORARY EVP SYSTEM W. NATIONAL AVENUE & W. LINCOLN AVENUE	LS	1.000	1.000
3510	SPV.0105	SPECIAL 3124. TEMPORARY EVP SYSTEM W. NATIONAL AVENUE & S. 84TH STREET (SOUTH)	LS	1.000	1.000
3520	SPV.0105	SPECIAL 3125. TEMPORARY EVP SYSTEM W. NATIONAL AVENUE & S. 84TH STREET (NORTH)	LS	1.000	1.000
3530	SPV.0105	SPECIAL 3126. INST STATE FURN MUNC TRAF SIG CAB W. LINCOLN AVE & W. BELOIT RD	LS	1.000	1.000
3540	SPV.0105	SPECIAL 3127. REMOVE TRAFFIC SIGNALS W. LINCOLN AND W. BELOIT RD	LS	1.000	1.000
3550	SPV.0105	SPECIAL 3128. TEMPORARY EVP SYSTEM W. LINCOLN AVENUE AND W. BELOIT ROAD	LS	1.000	1.000
3560	SPV.0105	SPECIAL 3129. TRANSP MUNC SIG AND LIGHTING MAT USH 18 AND N. 68TH ST	LS	1.000	1.000
3570	SPV.0105	SPECIAL 3130. TEMPORARY EVP SYSTEM USH 18 AND N. 68TH ST.	LS	1.000	1.000
3580	SPV.0105	SPECIAL 3131. TRANSP & INST ACCESSIBLE PEDES SIGNAL PUSH BUTTONS	LS	1.000	1.000
3590	SPV.0105	SPECIAL 3132. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET USH 18 HAWK	LS	1.000	1.000
3600	SPV.0105	SPECIAL 3133. INSTALL FIBER OPTIC COMMUNICATIONS IN CAB W. NATIONAL AVE & 102ND ST	LS	1.000	1.000
3610	SPV.0105	SPECIAL 3134. INSTALL FIBER OPTIC COMMUNICATIONS IN CAB W. NATIONAL AVE & W. LINCOLN AVE	LS	1.000	1.000
3620	SPV.0180	SPECIAL 0001. TOPSOIL SPECIAL	SY	832.000	832.000

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REMOVALS

CATEGORY	LOCATION	STATION	TO STATION	204.0100 REMOVING PAVEMENT SY	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
1000	S. 70TH ST.	14+36	15+90	6	--	--	169	141	--	200
	S. 70TH ST.	16+85	16+99	--	--	--	--	3	--	43
	S. 68TH ST. ON RAMP AT IH 94	792+08	796+70	--	--	--	910	36	--	910
	S. 68TH ST. ON RAMP AT IH-94 (KEARNEY ST.)	786+00	792+25	--	--	--	--	--	--	--
	W. BLUEMOUND RD. BETWEEN N. 103RD & N. 99TH	181+08	185+49	--	--	--	--	62	--	36
	S. 84TH ST. & W. NATIONAL AVE.	197+50	203+00	--	--	--	--	396	--	139
	W. NATIONAL AVE. & S. 102ND ST.	35+86	37+25	--	--	--	--	165	--	50
	W. LINCOLN AVE. & W. NATIONAL AVE.	62+30	66+60	58	29	--		407	193	485
	W. GREENFIELD AVE. & S. 84TH ST.	226+14	228+19	--	--	--	58	289	--	358
	S. 84TH ST. & STATE FAIR GATE 5	250+00	251+50	--	--	--	--	132	--	92
	S. 84TH ST. & STATE FAIR GATE 4	233+00	234+50	--	--	--	--	85	--	70
	W. GREENFIELD AVE. & S. 84TH ST.	566+00	571+00	--	--	--	--	283	--	91
	W. GREENFIELD AVE. & S. 92ND ST.	39+15	40+70	--	--	--	--	235	--	141
	W. BLUEMOUND RD. & N. 68TH ST.	293+69	295+03	--	--	--		167	--	54
	W. THEO TRECKER WAY & STH 100	546+71	551+50	--	--	--	253	125	--	285
	STH 100 & W. LAPHAM ST.	515+70	518+81	335	--		219	--	--	516
	STH 100 & W. LAPHAM ST.	512+50	514+00	105	--	475	459	132	--	685
	W. LINCOLN & I 894 SB EXIT RAMP	44+50	45+70	--	--	--	--	63	--	26
	W. LINCOLN AVE. & W. BELOIT RD.	132+50	136+25	--	--	--	--	351	--	549
	W. LINCOLN AVE. & S. 98TH ST.	55+00	56+50	--	9	--	138	--	--	146
	TOTAL:			504	38	475	2,206	3,072	193	4,876

PAVEMENT MARKING REMOVALS

CATEGORY	LOCATION	STATION	TO STATION	647.0955 REMOVING PAVEMENT MARKINGS ARROWS EACH	647.0965 REMOVING PAVEMENT MARKINGS WORDS EACH	SPV.0090.0001* REMOVING PAVEMENT MARKINGS WATER BLASTING LF
1000	S. 70TH ST.	12+90	14+00	--	--	175
	S. 70TH ST.	14+36	15+90	--	--	276
	S. 70TH ST.	16+85	16+99	--	--	268
	S. 68TH ST. ON RAMP AT IH 94	792+08	796+70	1	1	--
	S. 68TH ST. ON RAMP AT IH-94 (KEARNEY ST.)	786+00	792+25	1	--	865
	TOTAL:			2	1	1,584

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

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ROADWAY ITEMS

CATEGORY	LOCATION	108.4400 CPM PROGRESS SCHEDULE EACH	213.0100 FINISHING ROADWAY (1060-35-91) EACH	618.0100 MAINTENANCE AND REPAIR HAUL ROADS (1060-35-91) EACH	SPV.0105.0001 PAVEMENT CLEANUP PROJECT (1060-35-91) LS	SPV.0105.0002 SURVEY PROJECT (1060-35-91) LS
1000	PROJECT	1	1	1	1	1
	TOTAL:	1	1	1	1	1

COMMON EXCAVATION

CATEGORY	LOCATION	STATION	TO STATION	205.0100 EXCAVATION COMMON CY	
1000	S. 68TH ST. ON RAMP AT IH-94	792+08	796+70	557	*
	S. 70TH ST.	14+36	15+90	72	
	S. 84TH ST.	226+15	228+20	23	
	W. THEO TRECKER WAY & STH 100	546+71	549+23	69	
	STH 100 & W. LAPHAM ST.	512+31	518+81	262	
	TOTAL:			983	

* SEE EARTHWORK SUMMARY FOR DETAILS

MOBILIZATION

CATEGORY	PROJECT	619.1000 MOBILIZATION EACH	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
1000	1060-35-91	1	4	4
	TOTAL:	1	4	4

CONCRETE ITEMS

CATEGORY	LOCATION	STATION	TO STATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	415.0080 CONCRETE PAVEMENT 8-INCH SY	416.0610 DRILLED TIE BARS EA	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0420 CONCRETE SIDEWALK 7-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
1000	S. 70TH ST.	14+36	15+90	91	--	--	470	--	--
	S. 70TH ST.	16+85	16+99	9	--	--	30	--	--
	S. 68TH ST. ON RAMP AT IH-94	792+08	796+70	539	--	--	340	--	24
	W. BLUEMOUND RD. BETWEEN N. 103RD & N. 99TH	181+08	185+49	7	--	--	560	--	--
	W. NATIONAL AVE. & S. 102ND ST.	35+86	37+25	20	--	--	--	1,658	56
	S 84TH ST. & W NATIONAL AVE.	197+50	203+00	44	--	--	--	3,566	80
	W. LINCOLN AVE. & W. NATIONAL AVE.	62+30	66+60	46	--	--	--	3,758	56
	W. GREENFIELD AVE. & S. 84TH ST.	566+00	571+00	32	--	--	--	2,600	32
	W. GREENFIELD AVE. & S. 84TH ST.	226+14	228+19	40	137	257	--	830	
	S. 84TH ST. & STATE FAIR GATE 5	250+00	251+50	14	--	--	--	1,186	48
	S. 84TH ST. & STATE FAIR GATE 4	233+00	234+50	9	--	--	--	764	32
	W. GREENFIELD AVE. & S. 92ND ST.	39+15	40+70	26	--	--	--	2,118	32
	W. BLUEMOUND RD. & N. 68TH ST.	293+69	295+03	20	--	--	1,600	--	16
	W. THEO TRECKER WAY & STH 100	546+71	550+51	10	--	--	--	1,195	24
	STH 100 & W. LAPHAM ST.	512+31	518+81	196	--	--	--	1,144	40
	W. LINCOLN & I 894 SB EXIT RAMP	44+50	45+70	7	--	--	--	563	8
	W. LINCOLN AVE. & W. BELOIT RD.	155+00	158+00	24	--	--	--	1,970	72
	W. LINCOLN AVE. & S. 98TH ST.	55+00	56+50	50	--	--	--	--	
	TOTAL:			1,184	137	257	3,000	21,352	520

ASPHALT PAVEMENT ITEMS

CATEGORY	LOCATION	STATION	TO STATION	455.0105 ASPHALTIC MATERIAL PG58-28 TON	455.0115 ASPHALTIC MATERIAL PG64-22 TON	455.0605 TACK COAT GAL	460.1103 HMA PAVEMENT TYPE E-3 TON
1000	S. 68TH ST. ON RAMP	792+08	796+70	--	10	12	172
	S. 70TH ST.	14+36	15+90	--	2	3	39
	W. LINCOLN & W. NATIONAL AVE.	62+29	62+80	1	--	1	7
	W. THEO TRECKER WAY & STH 100	546+71	549+23	1	--	3	5
	STH 100 & W. LAPHAM ST.	512+50	513+62	8	--	20	131
	STH 100 & W. LAPHAM ST.	515+68	517+85	3	--	2	52
	W. LINCOLN & W. BELOIT RD.	155+00	158+00	1	--	1	18
	W. LINCOLN AVE. & S. 98TH ST.	55+00	56+50	2	--	1	38
	TOTAL:			16	12	43	462

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CURB & GUTTER, SAFETY ISLANDS, CONCRETE BARRIER

CATEGORY	LOCATION	STATION	TO STATION	601.0331 CONCRETE CURB & GUTTER 31-INCH LF	602.2400 CONCRETE SAFETY ISLANDS SF	603.1436 CONCRETE BARRIER TYPE S36C LF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	SPV.0105.0003 MODULAR CURB SYSTEM WITH VERTICAL PANELS LS
1000	S. 70TH ST.	14+36	15+90	176	--	--	--	--
	S. 70TH ST.	16+85	16+99	38	--	--	--	--
	S. 68TH ST. ON RAMP AT IH-94	792+08	796+70	643	--	238	--	--
	W. NATIONAL AVE. & S. 102ND ST.	35+86	37+25	--	--	--	--	--
	W. LINCOLN AVE. & W. NATIONAL AVE.	62+30	66+60	--	1,225	--	--	--
	W. BLUEMOUND RD. BETWEEN N. 103RD & N. 99TH	185+25		--	--	--	--	1
	W. GREENFIELD AVE. & S. 84TH ST.	226+14	228+19	358	--	--	--	--
	S. 84TH ST. & STATE FAIR GATE 5	250+00	251+50	--	--	--	--	--
	S. 84TH ST. & STATE FAIR GATE 4	233+00	234+50	--	--	--	--	--
	W. GREENFIELD AVE. & S. 84TH ST.	566+00	571+00	--	--	--	--	--
	W. GREENFIELD AVE. & S. 92ND ST.	541+00	542+07	--	60	--	--	--
	W. THEO TRECKER WAY & STH 100	546+71	549+23	253	--	--	--	--
	STH 100 & W. LAPHAM ST.	515+50	518+81	516	--	--	--	--
	STH 100 & W. LAPHAM ST.	512+31	514+00	207	--	--	31	--
	W. LINCOLN AVE. & W. BELOIT RD.	132+50	136+25	--	718	--	--	--
	W. LINCOLN AVE. & S. 98TH ST.	55+00	56+50	107	--	--	69	--
	TOTAL:			2,298	2,003	238	100	1

BEAMGUARD

CATEGORY	LOCATION	STATION	TO STATION	614.0200 STEEL THRIE BEAM STRUCTURE APPROACH LF	614.0345 STEEL PLATE BEAM GUARD SHORT RADIUS LF	614.0390 STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL EACH	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
1000	S. 68TH ST. ON RAMP	792+50	792+89.6	21	25	1	--	--
	S. 68TH ST. ON RAMP	794+81	795+56	--	--	--	18.75	1
	TOTAL:			21	25	1	18.75	1

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STORM SEWER ITEMS

CATEGORY	LOCATION	STATION	INLET ELEV.	DISCH ELEV.	611.0430 RECONSTRUCTING INLETS EACH	611.0600 INLET COVERS TYPE A EACH	611.3220 INLETS 2 x 2 FT EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH	611.9710 SALVAGED INLET COVERS EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	520.8000.S CULVERT PIPE CONCRETE COLLAR EACH
1000	S. 68TH ST. ON RAMP	792+19, 14.8' RT			1	--	--	--	--	--	--	--
	S. 68TH ST. ON RAMP	792+69, 16.0' RT			--	--	--	--	1	--	--	--
	S. 68TH ST. ON RAMP	792+69, 10.5' RT			--	--	--	--	1	--	--	--
	S. 68TH ST. ON RAMP	792+83, 20.5' RT			--	--	--	--	1	--	--	--
	S. 68TH ST. ON RAMP	793+19, 10.5' RT			1	--	--	--	--	--	--	--
	S. 68TH ST. ON RAMP	793+57, 20.0' RT			--	--	--	--	1	--	--	--
	STH 100	512+56, 57'RT			--	--	--	1	--	--	--	--
	STH 100	512+83, 66' RT			--	--	--	--	--	--	--	1
	STH 100	512+85, 58' RT			--	--	--	1	--	--	--	--
	STH 100	513+12, 81' RT			--	--	--	--	1	--	--	--
			RIM ELEV.	DEPTH (FT.)								
	STH 100	512+78, 69' LT	735.25	3.69	--	--	1	--	--	1	1	--
	S. 68TH ST. ON RAMP	792+21, 19.3 RT	709.60	4.10	--	1	1	--	--	--	1	--
	S. 68TH ST. ON RAMP	793+19, 16' RT	709.97	4.58	--	1	1	--	--	--	1	--
	TOTAL:				2	2	3	2	5	1	3	1

NOTE: ALL LOCATIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.

STORM SEWER PIPES

CATEGORY	LOCATION	PIPE	FROM	TO	INLET ELEV.	DISCH. ELEV.	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12 - INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18 - INCH LF
1000	S. 68TH ST. ON RAMP	P-2	6	7	705.50	705.43	--	4
	S. 68TH ST. ON RAMP	P-3	12	11	705.47	705.30	--	4
	STH 100 & LAPHAM	P-1	1	2	731.56	731.48	5	--
	TOTAL:						5	8

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DRAIN TILE

CATEGORY	LOCATION	STATION	TO STATION	310.0115 BASE AGGREGATE OPEN GRADED CY	612.0408 PIPE UNDERDRAIN WRAPPED 8-INCH LF	645.0111 GEOTEXTILE FABRIC TYPE DF SCHEDULE A SY
1000	S. 68TH ST. ON RAMP	796+70.7	792+33.3	58	474	343
	TOTAL:			58	474	343

RESTORATION ITEMS

CATEGORY	LOCATION	STATION	TO STATION	629.0210 FERTILIZER TYPE B CWT	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY	SPV.0180.0001 TOPSOIL SPECIAL SY
1000	S. 68TH ST. ON RAMP	792+08	796+70	0.04	0.6	56	56
	W. BLUEMOUND RD. & ST. CAMILLUS	181+08	185+49	0.01	0.2	18	18
	S. 84TH ST. & W. NATIONAL AVE.	197+50	203+00	0.03	0.3	53	53
	W. NATIONAL AVE. & S. 102ND ST.	35+86	37+25	0.07	1.2	110	110
	W. LINCOLN AVE. & W. NATIONAL AVE.	62+30	66+60	0.01	0.2	31	31
	S. 84TH ST. & STATE FAIR GATE 5	250+00	251+50	0.01	0.1	6	6
	S. 84TH ST. & STATE FAIR GATE 4	233+00	234+50	0.01	0.1	7	7
	W. GREENFIELD AVE. & S. 84TH ST.	566+00	571+00	0.01	0.2	16	16
	W. GREENFIELD AVE. & S. 92ND ST.	39+00	40+75	0.01	0.2	14	14
	W. BLUEMOUND RD. & N. 68TH ST.	293+69	295+03	0.03	0.3	46	46
	W. THEO TRECKER WAY & STH 100	550+00	551+50	0.01	0.1	9	9
	STH 100 & W. LAPHAM ST.	512+31	518+81	0.50	10.0	454	454
	W. LINCOLN & I 894 SB EXIT RAMP	44+50	45+70	0.01	0.2	12	12
	TOTAL:			1	14	832	832

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EROSION CONTROL

CATEGORY	LOCATION	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH
1000	68TH ST. ON RAMP AT IH 94 (KEARNEY ST.)	786+13	LT	--	--	--	1
	68TH ST. ON RAMP AT IH 94 (KEARNEY ST.)	786+98	RT	--	--	--	1
	68TH ST. ON RAMP AT IH 94 (KEARNEY ST.)	791+65	RT	--	--	--	1
	68TH ST. ON RAMP AT IH 94		LT	466	466	--	--
	68TH ST. ON RAMP AT IH 94	792+19	RT	--	--	--	1
	68TH ST. ON RAMP AT IH 94	792+69	RT	--	--	--	1
	68TH ST. ON RAMP AT IH 94	792+69	RT	--	--	1	--
	68TH ST. ON RAMP AT IH 94	792+84	LT	--	--	1	--
	68TH ST. ON RAMP AT IH 94	793+19	RT	--	--	--	1
	68TH ST. ON RAMP AT IH 94	793+58	RT	--	--	1	--
	68TH ST. ON RAMP AT IH 94	798+44	RT	--	--	--	1
	S. 70TH ST.	16+28	RT	--	--	--	1
	S. 70TH ST.	16+34	LT	--	--	--	1
	S. 70TH ST.	17+16	LT	--	--	--	1
	S. 70TH ST.	17+18	RT	--	--	--	1
	W. NATIONAL AVE. & S. 102ND ST.	36+00	LT	--	--	--	1
	W. NATIONAL AVE. & S. 102ND ST.	36+30	RT	--	--	--	1
	W. NATIONAL AVE. & S. 102ND ST.	36+50	RT	--	--	--	1
	W. NATIONAL AVE. & S. 102ND ST.	36+75	RT	--	--	--	1
	W. NATIONAL AVE. & S. 102ND ST.	36+95	RT	--	--	--	1
	W. NATIONAL AVE. & S. 102ND ST.	37+20	LT	--	--	--	1
	W. LINCOLN AVE. & W. NATIONAL AVE.	64+30	RT	--	--	--	1
	W. LINCOLN AVE. & W. NATIONAL AVE.	66+20	LT	--	--	--	1
	S. 84TH ST. & STATE FAIR GATE 5	250+30	RT	--	--	--	1
	S. 84TH ST. & STATE FAIR GATE 5	250+40	LT	--	--	--	1
	S. 84TH ST. & STATE FAIR GATE 5	250+55	RT	--	--	--	1
	W. GREENFIELD AVE. & S. 92ND ST.	39+30	LT	--	--	--	1
	W. GREENFIELD AVE. & S. 92ND ST.	39+70	RT	--	--	--	1
	W. GREENFIELD AVE. & S. 92ND ST.	40+30	RT	--	--	--	1
	W. GREENFIELD AVE. & S. 84TH ST.	567+55	LT	--	--	--	1
	W. GREENFIELD AVE. & S. 84TH ST.	567+55	RT	--	--	--	1
	W. GREENFIELD AVE. & S. 84TH ST.	224+63	LT	--	--	--	1
	W. GREENFIELD AVE. & S. 84TH ST.	224+70	RT	--	--	--	1
	W. GREENFIELD AVE. & S. 84TH ST.	225+20	RT,LT	--	--	--	2
	W. GREENFIELD AVE. & S. 84TH ST.	228+85	RT,LT	--	--	--	2
	W. BLUEMOUND RD. & N. 68TH ST.	10+13	RT	--	--	--	1
	W. BLUEMOUND RD. & N. 68TH ST.	9+16	LT	--	--	--	1
	W. BLUEMOUND RD. & N. 68TH ST.	9+17	RT	--	--	--	1
	W. THEO TRECKER WAY & STH 100	550+07	RT	--	--	--	1
	STH 100	512+17	LT	--	--	--	1
	SUBTOTALS:			466	466	3	38

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EROSION CONTROL (CONTINUED)

CATEGORY	LOCATION	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH
1000	STH 100	512+17	RT	--	--	--	1
	STH 100	512+78	RT	--	--	--	1
	STH 100	512+82	RT	--	--	--	1
	STH 100	513+15	LT	--	--	--	1
	STH 100	513+36	RT	--	--	--	1
	STH 100	513+54	LT	--	--	--	1
	STH 100	513+72	RT	--	--	--	1
	STH 100	513+81	LT	--	--	--	1
	STH 100	516+79	LT	--	--	--	1
	STH 100	516+82	RT	--	--	--	1
	STH 100	518+12	LT	--	--	--	1
	STH 100	518+12	RT	--	--	--	1
	STH 100	518+49	RT	--	--	--	1
	STH 100	518+77	RT	--	--	--	1
	STH 100	518+87	LT	--	--	--	1
	STH 100	518+98	RT	--	--	1	
	STH 100		SE QUAD	150	150	--	--
	W. LINCOLN AVE. & I-894 SB EXIT RAMP	45+52	RT	--	--	--	1
	W. LINCOLN AVE. & I-894 SB EXIT RAMP	45+52	LT	--	--	--	1
	SUBTOTALS:			150	150	1	17
	TOTAL:			616	616	4	55

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TRAFFIC CONTROL

CATEGORY	STAGE	LOCATION	STATION	TO STATION	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0900 TRAFFIC CONTROL SIGNS DAY
1000	1	S. 68TH ST ON RAMP AT IH-94	785+80	797+00	272	--	17	34	--	306
	2	S. 68TH ST ON RAMP AT IH-94	785+80	798+00	340	--	17	34	51	306
		S. 70TH ST.	13+50	19+75	225	--	36	72	45	162
		W. BLUEMOUND RD. N. 103RD ST. to 99TH ST. (SIDEWALK)	183+00	188+00	--	418	--	418	--	242
		W. NATIONAL AVE. & S. 102ND ST. (SIDEWALK)	35+86	37+25	--	928	--	928	--	580
		S 84TH ST. & W. NATIONAL AVE. (SIDEWALK)	196+00	205+00	--	1,350	--	1,350	--	690
		W. LINCOLN AVE. & W. NATIONAL AVE. (SIDEWALK)	62+00	68+00	--	930	--	930	--	620
		W. LINCOLN AVE. & W. NATIONAL AVE.	59+00	66+60	232	--	20	40	48	132
		W. GREENFIELD AVE. & S. 92ND ST. (SIDEWALK)	39+15	40+70	--	1,260	--	1,260	--	600
		W. GREENFIELD AVE. & S. 84TH ST. (SIDEWALK)	566+00	571+00	--	1,462	--	1,462	--	680
		W. GREENFIELD AVE. & S. 84TH ST.			385		35	70	91	133
		S. 84TH ST. & STATE FAIR GATE 5 (SIDEWALK)	250+15	251+40	--	768	--	768	--	416
		S. 84TH ST. & STATE FAIR GATE 4 (SIDEWALK)	233+25	234+30	--	870	--	870	--	406
		W. BLUEMOUND RD. & N. 68TH ST. (SIDEWALK)	293+69	295+03	--	448	--	448	--	280
		STH 100 & W. LAPHAM ST. (SIDEWALK)	511+75	515+00	--	986	--	986	--	408
	1	STH 100 & W. LAPHAM ST.	500+00	524+00	630	--	56	112	119	245
	2	STH 100 & W. LAPHAM ST.	500+00	524+00	540	--	70	140	160	380
	3	STH 100 & W. LAPHAM ST.	500+00	524+00	720	--	72	144	144	342
		W. THEO TRECKER WAY & STH 100 (SIDEWALK)			--	532	--	532	--	456
		W. THEO TRECKER WAY & STH 100	541+00	552+00	140		10	20	50	55
		W. LINCOLN AVE. & I-894 EXIT RAMP (SIDEWALK)	44+57	45+67	--	544	--	544	--	340
		W. LINCOLN AVE. & W. BELOIT RD. (SIDEWALK)	153+00	159+00	--	1,295	--	1,295	--	805
	1	W. LINCOLN AVE. & W. BELOIT RD.	152+00	160+00	364	--	42	84	112	210
	2	W. LINCOLN AVE. & W. BELOIT RD.	130+00	139+00	273	--	21	42	112	182
		W. LINCOLN & S. 98TH ST.	50+00	60+00	480	--	40	80	140	290
		TOTAL:			4,601	11,791	436	12,663	1,072	9,266

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TRAFFIC CONTROL (CONTINUED)

CATEGORY	STAGE	LOCATION	STATION	TO STATION	643.0100 TRAFFIC CONTROL (1060-35-91) EACH	643.0800 TRAFFIC CONTROL ARROW BOARDS DAYS	SPV.0060.0001 TRAFFIC CONTROL LOCAL ROAD LANE CLOSURES EACH
1000							
		S. 70TH ST.	18+55		--	9	--
	1	STH 100 & W. LAPHAM ST.	500+00	524+00	--	14	--
	2	STH 100 & W. LAPHAM ST.	500+00	524+00	--	20	--
	3	STH 100 & W. LAPHAM ST.	500+00	524+00	--	18	--
		W. THEO TRECKER WAY & STH 100	543+40		--	5	--
		UNDISTRIBUTED			1	--	34
		TOTAL:			1	66	34

TEMPORARY PAVEMENT MARKINGS

					647.0955	647.0965	SPV.0090.0001*	649.0701	649.0801	649.0900	649.1200	649.1700
					REMOVING PAVEMENT MARKINGS			TEMPORARY PAVEMENT MARKING				
CATEGORY	STAGE	LOCATION	STATION	TO STATION	ARROWS EACH	WORDS EACH	WATER BLASTING LF	8 - INCH LF	REMOVABLE TAPE 8 - INCH LF	STOP LINE 12 - INCH LF	REMOVABLE TAPE STOP LINE 18 - INCH LF	ARROWS EACH
1000	1	S. 68TH ST. ON RAMP AT IH-94	788+94.4	789+99.7	--	--	--	27	--	--	--	--
		S. 68TH ST. ON RAMP AT IH-94	791+21.7		--	--	--	--	--	--	--	2
		S. 68TH ST. ON RAMP AT IH-94	791+61.2	792+31.8	--	--	--	18	--	--	--	--
		S. 68TH ST. ON RAMP AT IH-94	792+36.5	796+89.0	--	--	--	453	--	--	--	--
	2	S. 68TH ST. ON RAMP AT IH-94	794+90		--	--	--	--	--	17	--	--
		S. 68TH ST. ON RAMP AT IH-94	791+61	792+28	--	--	--	17	--	--	--	--
		S. 68TH ST. ON RAMP AT IH-94	792+28	796+89	--	--	--	461	--	--	--	--
		S. 70TH ST.	16+15	17+33	--	--	43	--	--	--	--	--
		S. 70TH ST.	16+70		1	--	--	--	--	--	--	--
		S. 70TH ST.	16+25		--	1	--	--	--	--	--	--
		S. 70TH ST.	16+18.9	16+96.9	--	--	--	--	78	--	--	--
		S. 70TH ST.	16+96		--	--	--	--	--	--	22	--
	1	W. LINCOLN AVE. & W. BELOIT RD.	154+30	155+30	--	--	--	--	100	--	--	--
	1	W. LINCOLN AVE. & W. BELOIT RD.	157+21.5	158+21.6	--	--	--	--	100	--	--	--
	2	W. LINCOLN AVE. & W. BELOIT RD.	134+80	135+60	--	--	--	--	76	--	--	--
		TOTAL:			1	1	43	976	354	17	22	2

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

Division	From/To Station	Location	Common Excavation (1)	(item # 205.0100)	Salvaged/Unusable Pavement Material (4)	Available Material (5)	Reduced EBS in Fill (6)	Expanded EBS Backfill	Unexpanded Fill	Expanded Fill (7)	Mass Ordinate +/- (8)	Waste	Borrow
			Cut (2)	EBS Excavation (3)			Factor 0.80	Factor 1.30		Factor 1.25			(item #208.0100)
Division 1													
STAGE 1	792+48/796+70.66		261	0	0	261	0	0	52	65	196	196	0
Division 1 Subtotal			261	0	0	261	0	0	52	65	196	196	0
Division 2													
STAGE 2	792+33/796+28.4		297	0	0	297	0	0	18	22	275	275	0
Division 2 Subtotal			297	0	0	297	0	0	18	22	275	275	0
Grand Total			557	0	0	557	0	0	70	87	471	471	0
		Total Common Exc		557									

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 Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
6) Reduced EBS in Fill - Excavated EBS material is usuable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
7) Expanded Fill. Factor = 1.25
Depending on selections: **Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor**
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor) * Fill Factor
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 Division.

PAVEMENT MARKING

CATEOGRY	LOCATION	STATION	TO STATION	YELLOW	646.0106 PAVEMENT MARKING WHITE	646.0106 PAVEMENT MARKING EPOXY 4-INCH 12.5 FT LINE 37.5 SKIP DASHED WHITE	646.0106 PAVEMENT MARKING 3 FT LINE 9 FT SKIP DOT PATTERN WHITE	646.0126 PAVEMENT MARKING EPOXY 8-INCH WHITE	647.0156 ARROWS EPOXY TYPE 1	647.0166 ARROWS EPOXY TYPE 2	647.0176 ARROWS EPOXY TYPE 3	647.0356 WORDS EPOXY WHITE
				LF	LF	LF	LF	LF	EA	EA	EA	EA
1000												
	S. 68TH ST. ON RAMP AT IH-94 (KEARNEY ST.)	789+99.7	791+51.5	--	--	--	--	301	1	1	1	2
	S. 68TH ST. ON RAMP AT IH-94 (KEARNEY ST.)	12+90.3	786+61.7	--	--	--	--	312	--	--	--	--
	S. 68TH ST. ON RAMP AT IH-94 (KEARNEY ST.)	788+63.5		--	--	--	--	--	--	--	--	2
	S. 68TH ST. ON RAMP AT IH-94 (KEARNEY ST.)	789+03.5		--	--	--	--	--	1	1	1	--
	S. 68TH ST. ON RAMP AT IH-94 (KEARNEY ST.)	786+61.7	789+99.7	--	--	--	85	--	--	--	--	--
	S. 68TH ST. ON RAMP AT IH-94 (KEARNEY ST.)	785+93.8	789+99.7	--	--	102	--	--	--	--	--	--
	S. 68TH ST. ON RAMP AT IH-94	792+31.2	796+70.7	--	440	--	--	--	--	--	--	--
	S. 68TH ST. ON RAMP AT IH-94	792+34.5	794+90.6	--	--	64	--	--	--	--	--	--
	S. 68TH ST. ON RAMP AT IH-94	792+37.8	794+90.5	--	--	63	--	--	--	--	--	--
	S. 68TH ST. ON RAMP AT IH-94	792+44.5	796+28.4	384	--	--	--	--	--	--	--	--
	S. 70TH ST.	14+50	15+90	--	--	--	--	--	--	1	--	--
	S. 70TH ST.	15+90	16+96.2	--	106	--	--	--	--	1	--	1
	S. 70TH ST.	16+96.2	17+44.9	--	--	--	18	--	--	--	--	--
	S. 70TH ST.	14+51.5	16+94.1	--	--	61	21	--	--	--	--	--
	W. GREENFIELD AVE. 92ND ST.TO S. 84TH ST.	541+94.8	542+49.8	--	--	--	--	55	--	--	--	--
	W. GREENFIELD AVE. 92ND ST.TO S. 84TH ST.	541+94.9	543+28.5	--	--	--	--	134	1	1	1	
	W. GREENFIELD AVE. 92ND ST.TO S. 84TH ST.	542+49.8	543+22.8	--	--	--	19	--	--	--	--	--
	W. GREENFIELD AVE. 92ND ST.TO S. 84TH ST.	543+28.5	567+75	--	--	612	--	--	--	--	--	--
	W. GREENFIELD AVE. 92ND ST.TO S. 84TH ST.	544+00	565+75	2,954	--	--	--	--	--	--	--	--
	W. GREENFIELD AVE. 92ND ST.TO S. 84TH ST.	565+00	567.75	--	--	69	--	--	--	--	--	--
	W. GREENFIELD AVE. 92ND ST.TO S. 84TH ST.	567+16	567+48	--	--	--	--	32	--	1	--	1
	W. LINCOLN AVE. & W. BELOIT RD.	152+53.8	154+19.8	664	--	--	--	--	--	--	--	--
	W. LINCOLN AVE. & W. BELOIT RD.	152+55.2	155+36	--	--	71	--	--	--	--	--	--
	W. LINCOLN AVE. & W. BELOIT RD.	152+58.7	155+71.3	--	--	78	--	--	--	--	--	--
	W. LINCOLN AVE. & W. BELOIT RD.	154+19.8	155+34	--	--	--	--	115	--	2	--	1
	W. LINCOLN AVE. & W. BELOIT RD.(68TH ST.)	311+03.3	312+32	--	--	--	19	54	--	1	--	1
	W. LINCOLN AVE. & W. BELOIT RD.	156+93.5	160+06.8	--	--	79	--	--	--	--	--	--
	W. LINCOLN AVE. & W. BELOIT RD.	157+12	158+42.4	--	--	--	--	131	--	2	--	1
	W. LINCOLN AVE. & W. BELOIT RD.	157+34	160+06.1	--	--	41	--	--	--	--	--	--
	W. LINCOLN AVE. & W. BELOIT RD.	157+42	157+58	--	--	--	--	56	--	--	--	--
	W. LINCOLN AVE. & W. BELOIT RD.	158+42.4	160+08.4	664	--	--	--	--	--		--	
	STH 100 & LAPHAM	511+66.8	512+89.8	--	--	--	--	123	--	2	--	1
	STH 100 & LAPHAM	511+76.9	512+89.7	--	--	30	--	--	--	--	--	--
	STH 100 & LAPHAM	513+92	517+18	--	--	--	--	326	--	2	--	2
	STH 100 & LAPHAM	17+87.1	19+37.2	--	--	--	--	300	--	2	2	1
	STH 100 & LAPHAM	20+63	21+76.1	--	--	--	--	226	--	1	1	1
	W. THEO TRECKER WAY & STH 100	547+48.6	550+09.7	--	--	--	--	261	--	2	--	2
	W. LINCOLN AVE. & W. NATIONAL AVE.	62+64.6	64+78.8	--	--	54	--	--	--	--	--	--
	W. LINCOLN AVE. & W. NATIONAL AVE.	62+98.8	64+47.4	--	--	--	--	149	--	--	--	--
	W. GREENFIELD AVE. & S. 84TH ST.	224+56.99	227+35	--	--	--	--	278	--	2	--	2
	W. LINCOLN & S. 98TH ST.	55+94.39	56+25.31	--	--	--	--	31	--	--	--	--
	SUBTOTAL			4,666	546	1,324	162	2,884	3	22	6	18
	TOTAL:					6,698		2,884	3	22	6	18

CONTINUED ON NEXT PAGE

PAVEMENT MARKING (CONTINUED)

CATEOGRY	LOCATION	STATION	TO STATION	647.0456 CURB EPOXY LF	647.0566 STOP LINE EPOXY 18 INCH LF	647.0606 ISLAND NOSE EPOXY EACH	647.0726 DIAGONAL EPOXY 12-INCH WHITE LF	647.0726 DIAGONAL EPOXY 12-INCH YELLOW LF	647.0766 CROSSWALK EPOXY 6-INCH LF	647.0796 CROSSWALK EPOXY 24-INCH LF	SPV.0090.0002 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH LF	SPV.0090.0003 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 24-INCH LF	SPV.0090.0004 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH LF
1000	S. 68TH ST. ON RAMP AT IH-94 (KEARNEY ST.)	791+50		--	35	--	--	--	--	--	--	--	--
	S. 68TH ST. ON RAMP AT IH-94 (KEARNEY ST.)	12+90.3	786+61.7	--	--	--	113	--	--	--	--	--	--
	S. 68TH ST. ON RAMP AT IH-94 (KEARNEY ST.)	791+57.4	792+15.0	--	17	--	--	--	116	--	--	--	--
	S. 68TH ST. ON RAMP AT IH-94 (KEARNEY ST.)	792+22.7	792+35.9	--	--	--	--	--	86	--	--	--	--
	S. 68TH ST. ON RAMP AT IH-94	794+90.4		--	36	--	--	--	--	--	--	--	--
	S. 70TH ST.	14+85.5		--	26	--	--	--	--	--	--	--	--
	S. 70TH ST.	16+96.2		--	28	--	--	--	--	--	--	--	--
	W. BLUEMOUND RD. BTWN N. 103RD & N. 99TH	184+63		--	--	--	--	--	--	--	--	--	47
	W. BLUEMOUND RD. BTWN N. 103RD & N. 99TH	185+25		--	--	--	--	--	--	--	210	315	--
	W. BLUEMOUND RD. BTWN N. 103RD & N. 99TH	186+14		--	--	--	--	--	--	--	--	--	36
	S. 84TH ST. & W. NATIONAL AVE.	198+10	19+53	--	43	--	--	--	85	--	--	--	--
	S. 84TH ST. & W. NATIONAL AVE.	198+02	198+22.4	--	--	--	--	--	75	--	--	--	--
	S. 84TH ST. & W. NATIONAL AVE.	198+29	198+46	--	34	--	--	--	67	--	--	--	--
	S. 84TH ST. & W. NATIONAL AVE.	198+71	198+92	--	29	--	--	--	--	--	--	--	--
	S. 84TH ST. & W. NATIONAL AVE.	199+16	199+41	--	35	--	--	--	70	--	--	--	--
	S. 84TH ST. & W. NATIONAL AVE.	199+44	199+66	--	--	--	--	--	46	--	--	--	--
	S. 84TH ST. & W. NATIONAL AVE.	201+00	201+30	--	35	--	--	--	70	--	--	--	--
	S. 84TH ST. & W. NATIONAL AVE.	201+55	201+65	--	18	--	--	--	--	--	--	--	--
	S. 84TH ST. & W. NATIONAL AVE.	201+75	202+15	--	39	--	--	--	80	--	--	--	--
	S. 84TH ST. & W. NATIONAL AVE.	201+80	201+89	--	38	--	--	--	80	--	--	--	--
	S. 84TH ST. & W. NATIONAL AVE.	202+06	202+15	--	--	--	--	--	35	--	--	--	--
	S. 84TH ST. & W. NATIONAL AVE.	202+28	202+68	--	--	--	--	--	72	--	--	--	--
	S. 84TH ST. & W. NATIONAL AVE.	202+52	202+68	--	--	--	--	--	40	--	--	--	--
	S.84TH ST. & STATE FAIR GATE 5	250+25	251+50	--	140	--	--	--	418	--	--	--	--
	S.84TH ST. & STATE FAIR GATE 4	233+00	234+25	--	86	--	--	--	214	150	--	--	--
	W. LINCOLN AVE. & W. BELOIT RD.	152+53.8	154+19.8	--	--	--	--	72	--	--	--	--	--
	W. LINCOLN AVE. & W. BELOIT RD.	155+17	157+31.4	--	228	--	--	--	890	--	--	--	--
	W. LINCOLN AVE. & W. BELOIT RD.	157+42	157+58	--	--	--	130	--	--	--	--	--	--
	W. LINCOLN AVE. & W. BELOIT RD.	158+42.4	160+08.4	--	--	--	--	72	--	--	--	--	--
	W. GREENFIELD AVE. 92ND ST.TO S. 84TH ST.	558+00	558+75	--	--	--	--	--	365	--	--	--	--
	W. GREENFIELD AVE. 92ND ST.TO S. 84TH ST.	567+48		--	36	--	--	--	--	--	--	--	--
	STH 100 & LAPHAM	512+89.8		--	16	--	--	--	--	--	--	--	--
	STH 100 & LAPHAM	513+51.4		--	--	--	--	--	172	--	--	--	--
	STH 100 & LAPHAM	513+71.9		--	12	--	--	--	--	--	--	--	--
	STH 100 & LAPHAM	19+37.1		--	25	--	--	--	--	--	--	--	--
	STH 100 & LAPHAM	513+04.7		--	--	--	--	--	206	--	--	--	--
	STH 100 & LAPHAM	20+63		--	31	--	--	--	--	--	--	--	--
	STH 100 & LAPHAM	512+52.2		--	--	--	--	--	208	--	--	--	--
	STH 100 & LAPHAM	512+71	513+00	60	--	--	--	--	--	--	--	--	--
	W. LINCOLN & S. 98TH ST.	55+94.39	56+25.31	46	--	1	--	--	--	--	--	--	--
	W. LINCOLN AVE. & W. NATIONAL AVE.	62+79.3	63+58.2	--	--	--	--	--	--	--	--	--	--
	W. LINCOLN AVE. & W. NATIONAL AVE.	62+98.8	63+53.1	--	--	--	--		--	--	--	--	--
	W. THEO TRECKER WAY & STH 100	547+48.6	549+18	--	--	--	--	--	--	--	--	--	--
	SUBTOTAL			106	987	1	243	144	3,395	150	210	315	83
	TOTAL:			106	987	1	387		3,395	150	210	315	83

3

EXPOSING EXISTING UTILITIES

CATEGORY	LOCATION	SPV.0060.0002 EXPOSING EXISTING UTILITY UNPAVED AREA EACH	SPV.0060.0003 EXPOSING EXISTING UTILITY PAVED AREA EACH
1000	UNDISTRIBUTED	6	24
	TOTAL:	6	24

3

FTMS PULL BOXES & COMMUNICATION VAULTS

CATEGORY	ROADWAY	EQUIPMENT ID	STATION	OFFSET	COORDINATES X	COORDINATES Y	653.0135* PULL BOXES STEEL 24 X 36 - INCH EACH	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
1300								
	68TH STREET ENTRANCE RAMP	PB2001	792+38.27	21' RT	582518.6798	296381.8165	1	--
		PB2002	792+46.74	23' LT	582519.9419	296426.1430	1	--
		PB2003	793+50.87	26' LT	582622.1433	296446.3416	1	--
		PB2004	795+09.03	23' LT	582778.6870	296469.0799	1	--
		PB2005	794+95.32	23' RT	582772.6035	296421.8554	1	--
		PB2006	795+45.07	22' RT	582821.4555	296431.3648	1	--
		EXPB2001	-	-	582981.3100	296458.3598	--	1
		EXMH2001	793+21.08	42' LT	582590.0930	296457.5390	--	1
					TOTALS		6	2

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

FTMS CONDUIT

CATEGORY	ROADWAY	EQUIPMENT ID	LINEAR DISTANCE	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615* CONDUIT SPECIAL 3-INCH LF
1300	68TH STREET ENTRANCE RAMP					
		PB2001 - FY2001	5	10	--	--
		PB2001 - PB2002	45	--	--	90
		PB2002 - FY2002	5	10	--	--
		PB2002 - G-40-88	5	10	--	--
		PB2002 - PB2003	110	--	330	--
		PB2003 - EXMH2001	35	70	--	--
		PB2003 - PB2004	160	--	640	--
		PB2004 - SB2001	20	40	--	--
		PB2004 - PB2005	25	--	100	--
		PB2005 - PB2006	50	--	250	--
		PB2006 - SB2002	5	10	--	--
		PB2006 - EXPB2001	165	--	825	--
		TOTALS		150	2,145	90

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

3

FTMS WIRE

CATEGORY	ROADWAY	EQUIPMENT ID	LINEAR DISTANCE	655.0230* CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0250 CABLE TRAFFIC SIGNAL 9-14 AWG LF	655.0505 ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG LF
1300							
	68TH STREET ENTRANCE RAMP	PB2001 - FY2001	5	20	--	--	5
		PB2001 - PB2002	45	60	--	--	45
		PB2002 - FY2002	5	40	--	--	5
		PB2002 - PB2003	110	125	--	--	110
		PB2003 - EXCCTV-40-0142	15	--	--	--	15
		PB2003 - EXMH2001	35	--	--	--	35
		PB2003 - PB2004	160	175	--	--	160
		PB2004 - SB2001	20	--	35	--	20
		PB2004 - PB2005	25	40	40	--	25
		PB2005 - PB2006	50	65	65	--	50
		PB2006 - SB2002	5	--	--	35	5
		PB2006 - EXPB2001	165	180	--	180	165
		EXPB2001 - EXCB-RM-40-0007	10	25	--	25	10
		TOTALS		730	140	240	650

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

FTMS CABLE

CATEGORY	ROADWAY	EQUIPMENT ID	LINEAR DISTANCE	678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT LF
1300				
	68TH STREET ENTRANCE RAMP	PB2003 - EXMH2001	35	170
		PB2003 - PB2004	160	370
		PB2004 - PB2005	50	150
		PB2005 - PB2006	50	150
		PB2006 - EXPB2001	165	380
		EXPB2001 - EXCB-RM-40-0007	10	70
	S. 84TH STREET	EXPB2901 - CB1 (29)	25	100
		EXPB2901 - EXPB2902	115	165
		EXPB2902 - EXPB2903	115	165
		EXPB2903 - EXPB3001	880	930
		EXPB3001 - PB1 (30)	95	145
		EXPB3001 - EXPB3101	755	805
		EXPB3101 - EXPB3301	865	915
		EXPB3301 - PB6 (33)	85	135
		PB6 (33) - PB7 (33)	70	120
		PB7 (33) - PB8 (33)	50	100
		PB8 (33) - PB9 (33)	55	105
		PB9 (33) - CB1 (33)	10	60
		PROJECT TOTALS		5,035

FTMS COMMUNICATIONS (CABINETS)

CATEGORY	ROADWAY	EQUIPMENT ID	STATION	OFFSET	COORDINATES X	COORDINATES Y	677.0300.S INSTALL VIDEO ENCODER EACH	678.0300 FIBER OPTIC SPLICE EACH	678.0400 FIBER OPTIC TERMINATION EACH	SPV.0060.2001 INSTALL WIRELESS MODEM EACH	SPV.0060.2002 INSTALL BLUETOOTH DETECTOR EACH	SPV.0060.2009 INSTALL 5.8 GHZ ETHERNET BRIDGE EACH
1300												
	68TH ST. EB ENTRANCE RAMP	EXMH2001	793+21.08	42 'LT	582590.0930	296457.5390	--	9	--	--	--	--
	68TH ST. EB ENTRANCE RAMP	EXCB-RM-40-0007	-	-	582980.9300	296452.6600	--	--	12	1	--	--
	64TH ST AND IH 94	EXCB-SDS-40-0002	-	-	583819.9705	296503.8207	--	--	--	1	--	--
	68TH ST. EB ENTRANCE RAMP	EXCCTV-40-0142	793+46.90	38 'LT	582616.2356	296457.7371	--	--	--	--	--	1
	NATIONAL AVE AND LINCOLN AVE	CB1 (22)	66+39.08	68 'RT	573492.1002	286427.0005	1	--	--	--	--	--
	NATIONAL AVE AND LINCOLN AVE	CCTV-40-0197	66+07.38	52 'RT	573460.2306	286442.5307	--	--	--	--	1	--
	THEODORE TRECKER WAY AND STH 100	CB1 (23)	50+34.90	150 'LT	569019.4358	294212.1761	1	--	--	--	--	--
	THEODORE TRECKER WAY AND STH 100	CCTV-40-0194	50+69.00	8 'RT	569177.3587	294246.7330	--	--	--	--	1	--
	W. BLUEMOUND ROAD	CB1 (24)	185+28.72	80 'LT	571660.5705	298332.4490	1	--	--	--	--	--
	GREENFIELD AVE AND 92ND ST	CB1 (25)	40+56.41	59 'LT	574428.2843	291595.4559	1	--	--	--	--	--
	GREENFIELD AVE AND 92ND ST	CCTV-40-0212	40+52.98	71 'LT	574416.1927	291591.9516	--	--	--	--	1	--
	GREENFIELD AVE AND 84TH ST	CCTV-40-0116	224+51.14	63 'LT	577119.4683	291608.1536	--	--	--	--	1	--
	GREENFIELD AVE AND 84TH ST	CB1 (29)	223+55.46	40 'LT	577147.1327	291513.7844	1	--	12	--	--	--
	PARKING LOT ENTRANCE AND 84TH ST	CB1 (30)	234+17.18	35 'RT	577202.5599	292577.3761	--	--	12	--	--	--
	SCHLINGER AVE AND 84TH ST	CCTV-40-0213	251+34.44	37 'RT	577195.2892	294294.6202	--	--	--	--	1	--
	SCHLINGER AVE AND 84TH ST	CB1 (33)	251+19.32	75 'LT	577083.5192	294278.9100	1	--	6	--	--	--
	LINCOLN AVE AND USH 45 SB OFF RAMP	EXCB-CCTV-40-0034	45+12.94	59 'RT	571365.4200	286417.2400	--	--	6	--	--	--
	TOTALS						6	9	48	2	5	1

RAMP GATES

CATEGORY	ROADWAY	ITEM ID	STATION	OFFSET	COORDINATES X	COORDINATES Y	662.1040.S RAMP CLOSURE GATES HARDWIRED 40-FT EACH
1300							
	68TH ST ENTRANCE RAMP	G-40-88	792+47.38	26 'LT	582520.0046	296429.6589	1
	TOTALS						1

FTMS LUMP SUM ITEMS

CATEGORY	ROADWAY	670.0100.2001 FIELD SYSTEM INTEGRATOR (FTMS) LS	670.0200.2001 ITS DOCUMENTATION (FTMS) LS	678.0500.2001 COMMUNICATION SYSTEM TESTING (FTMS) LS
1300				
	IH 94	1	1	1
	TOTALS	1	1	1

RAMP GATE CABLE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	655.0305 CABLE TYPE UF2-12 AWG GROUNDED LF
1300				
	68TH ST ENTRANCE RAMP	G-40-88 - EXCB-RM-40-0007	510	525
	TOTALS			525

TEMPORARY ITEMS

CATEGORY	ROADWAY	ITEM ID	SPV.0060.2013 INSTALL PORTABLE VIDEO SURVEILLANCE SYSTEM EACH	SPV.0060.2014 RELOCATING PORTABLE VIDEO SURVEILLANCE SYSTEM EACH
1300				
	70TH STREET ENTRANCE RAMP		1	1
	TOTALS		1	1

3

FTMS BASES, SIGNALS, AND FLASHER ASSEMBLIES

CATEGORY	ROADWAY	ITEM ID	STATION	OFFSET	COORDINATES X	COORDINATES Y	654.0101* CONCRETE BASES TYPE 1 EACH	654.0105 CONCRETE BASES TYPE 5 EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	676.0105 SIGNAL ASSEMBLY RAMP CONTROL OVERHEAD EACH	676.0300 SIGNAL ASSEMBLY ADVANCE FLASHER TYPE 1 EACH	SPV.0060.2008 INSTALL SALVAGED RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT EACH
1300	68TH ST ENTRANCE RAMP											
		FY2001	792+43.29	21' RT	582523.6383	296383' RT	1	--	--	--	1	--
		FY2002	792+51.72	22' LT	582524.8625	296427' RT	1	--	--	--	1	--
		SB2001	794+89.66	23' LT	582759.5531	296466' RT	1	--	--	--	--	1
		SB2002	795+50.00	22' RT	582826.3894	296432' RT	--	--	--	2	--	--
		G-40-88	792+47.38	26' LT	582520.0046	296430' RT	--	1	1	--	--	--
		TOTALS					3	1	1	2	2	1

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

FTMS REMOVALS

CATEGORY	ROADWAY	ITEM ID	674.0300 REMOVE CABLE LF
1300			
	68TH STREET ENTRANCE RAMP	EXRG01 - EXPB01	25
		EXPB01 - EXPB02	40
		EXPB02 - EXPB03	50
		EXPB02 - EXMH01	30
		EXPB03 - EXCCTV-40-0142	30
		EXPB03 - EXPB04	150
		EXPB04 - EXPB08	25
		EXPB04 - EXSB01	15
		EXPB04 - EXPB05	35
		EXPB05 - EXSB02	5
		EXPB05 - EXPB10	215
		EXPB10 - EXCB-RM-40-0007	10
		EXFY01 - EXPB06	10
		EXPB06 - EXPB05	255
	GREENFIELD AVE AND 84TH ST	EXCB-CCTV-40-0116 - EXPB11	10
		EXPB11 - EXPB12	45
		EXPB12 - EXCCTV-40-0116	5
		TOTALS	955

FTMS EQUIPMENT

CATEGORY	EQUIPMENT ID	STATION	OFFSET	COORDINATES X	COORDINATES Y	677.0200 INSTALL CAMERA ASSEMBLY EACH	SPV.0060.2004 INSTALL WIRELESS TRAFFIC SENSOR REPEATER EACH	SPV.0060.2005 SALVAGE AND INSTALL WIRELESS TRAFFIC SENSOR ACCESS POINT EACH	SPV.0060.2012 INSTALL CITY OF WEST ALLIS CAMERA ASSEMBLY EACH
1300									
	FY2002	792+51.72	22 'LT	582524.8625	296426.8886	--	1	--	--
	SB2002	795+50.00	22 'RT	582826.3894	296431.7831	--	--	1	--
	CCTV-40-0197	66+07.38	52 'RT	573460.2306	286442.5307	1	--	--	--
	CCTV-40-0194	50+69.00	8 'RT	569177.3587	294246.7330	1	--	--	--
	CCTV-40-0211	185+33.71	22 'LT	571669.6827	298274.7667	1	--	--	--
	CCTV-40-0212	40+52.98	71 'LT	574416.1927	291591.9516	1	--	--	--
	CCTV-40-0116	224+51.14	63 'LT	577119.4683	291608.1536	1	--	--	--
	CCTV-40-0213	251+34.44	37 'RT	577195.2892	294294.6202	1	--	--	--
	WCCTV2901	223+61.72	77 'RT	577264.5651	291526.2007	--	--	--	1
	WCCTV3301	251+34.44	37 'RT	577195.2892	294294.6202	--	--	--	1
	TOTALS			TOTALS		6	1	1	2

FTMS RAMP METER DETECTORS

CATEGORY	ROADWAY	ITEM ID	LOCATION	OFFSET	LOOP NUMBER	SPV.0060.2006 WIRELESS TRAFFIC SENSOR EACH
1300						
	68TH ST ENTRANCE RAMP	RM-40-0007	794+89.43	10'LT	DEMAND A	2
			794+89.55	'LT	DEMAND B	2
			794+89.67	10'RT	DEMAND C	2
			795+03.43	10'LT	PASSAGE A	1
			795+03.55	'LT	PASSAGE B	1
			795+03.67	10'RT	PASSAGE C	1
			792+50.00	11'LT	ENTRANCE A	1
			792+50.00	1'LT	ENTRANCE B	1
			792+50.00	10'RT	ENTRANCE C	1
		TOTALS				12

3

FTMS REMOVALS

CATEGORY	ITEM	DESCRIPTION	STATION	OFFSET	COORDINATES X	COORDINATES Y	204.0195* REMOVING CONCRETE BASES EACH	653.0905* REMOVING PULL BOXES EACH	676.9002.S REMOVING ADVANCE FLASHER ASSEMBLIES TYPE 2 EACH	677.9051.S REMOVING 50-FOOT CAMERA POLE EACH	677.9200.S REMOVING CCTV CAMERA EACH	SPV.0060.2003 SALVAGE WIRELESS TRAFFIC SENSOR REPEATER EACH	SPV.0060.2007 REMOVING RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT EACH	SPV.0060.2010 REMOVING ON-RAMP CLOSURE GATE EACH	SPV.0060.2011 SALVAGE CITY OF WEST ALLIS CAMERA ASSEMBLY EACH	SPV.0060.2015 REMOVING CONTROLLER CABINET EACH	SPV.0060.2016 REMOVING CONTROLLER CABINET BASE EACH
1300																	
	EXFY01	ADVANCE FLASHER	792+53.75	16' RT	582533.1130	296389.4550	--	--	1	--	--	--	--	--	--	--	--
	EXRG01	RAMP GATE	792+55.86	17' LT	582529.8273	296422.2284	1	--	--	--	--	--	--	1	--	--	--
	EXWTSR01	WTS REPEATER	794+93.18	15' LT	582764.3592	296458.5701	--	--	--	--	--	1	--	--	--	--	--
	EXWTSR02	WTS REPEATER	793+46.90	38' LT	582616.2356	296457.7371	--	--	--	--	--	1	--	--	--	--	--
	EXPB01	PULL BOX	792+80.44	16' LT	582554.2990	296424.9228	--	1	--	--	--	--	--	--	--	--	--
	EXPB02	PULL BOX	793+19.18	16' LT	582592.4460	296431.6662	--	1	--	--	--	--	--	--	--	--	--
	EXPB03	PULL BOX	793+62.14	17' LT	582634.6270	296439.9292	--	1	--	--	--	--	--	--	--	--	--
	EXPB04	PULL BOX	795+06.72	16' LT	582777.5700	296461.6898	--	1	--	--	--	--	--	--	--	--	--
	EXSB01	SIGNAL BASE	794+93.18	15' LT	582764.3592	296458.5701	1	--	--	--	--	--	1	--	--	--	--
	EXSB02	SIGNAL BASE	794+93.59	16' RT	582769.7793	296428.3104	1	--	--	--	--	--	1	--	--	--	--
	EXPB05	PULL BOX	794+96.87	15' RT	582772.8643	296429.7869	--	1	--	--	--	--	--	--	--	--	--
	EXPB06	PULL BOX	792+45.73	20' RT	582525.9230	296383.7452	--	1	--	--	--	--	--	--	--	--	--
	EXCCTV-40-0116	CCTV	223+50.36	8' RT	577195.7979	291511.2277	1	--	--	1	1	--	--	--	--	--	--
	EXCB-CCTV-40-0116	CONTROLLER CABINET	223+42.56	45' LT	577143.2200	291500.6700	--	--	--	--	--	--	--	--	--	1	1
	EXWCCTV01	WEST ALLIS CAMERA	223+56.72	5' RT	577192.6907	291517.4296	--	--	--	--	--	--	--	--	1	--	--
	EXWCCTV02	WEST ALLIS CAMERA	251+42.43	28' RT	577185.7580	294302.5630	--	--	--	--	--	--	--	--	1	--	--
							4	6	1	1	1	2	2	1	2	1	1

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\030214_mq_fm.ppt PLOT DATE : 4/30/2014 7:41:20 AM PLOT BY : MSCCEJ PLOT NAME : 030214_mq_fm4 PLOT SCALE : 1:1

3

3

OVERHEAD SIGN SUPPORTS - MISC QUANTITIES IH 94 at 68th street on ramp 1060-35-91

LOCATION	OVERHEAD SIGN SUPPORT STRUCTURE S-40-994 L.S. 641.8100.0001
IH 94 EB ON RAMP FROM 68TH STREET	1
TOTAL	1

SHEET 1 OF 1

PROJECT NO: 1060-35-91	HWY: I-94 EB KEARNEY @ 68TH ST RAMP	COUNTY: MILWAUKEE	OVERHEAD SIGN SUPPORT QUANTITIES	SHEET 412	E

TYPE I&II PERMANENT SIGNING -

1060-35-91

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
1	R3-4(2S)	--	24	X	24	4.000	--	--	--	--	--	--	--	--	--	SIGNAL POLE
2	R1-1F (3)	--	36	X	36	--	--	7.460	1	--	--	--	--	--	--	SIGNAL POLE
3	R3-7L(2S)	--	30	X	30	6.250	--	--	--	--	--	--	--	1	--	--
4	R4-7(2S)	--	24	X	30	5.000	--	--	1	--	--	--	--	--	3	--
5	J3-1 (2S)	--	24	X	57	9.500	--	--	1	1	--	--	--	--	3	--
	MB3-1	--	24	X	12	--	--	--	--	--	--	--	--	--	--	--
	M1-1	IH 94	24	X	24	--	--	--	--	--	--	--	--	--	--	--
	MB6-1	--	21	X	21	--	--	--	--	--	--	--	--	--	--	--
6	R4-7(2S)	--	24	X	30	5.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
7	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
8	R3-18(2S)	--	24	X	24	4.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
9	R7-1	--	--	X	--	--	--	--	--	--	1	--	--	--	--	LIGHT POLE
10	R3-7R(3)	--	36	X	36	9.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
11	--	AT 68TH ST	30	X	9	1.875	--	--	--	--	--	--	--	--	--	LIGHT POLE
12	R3-8L (2S)	--	54	X	30	11.250	--	--	--	--	--	--	--	2	--	--
13	R3-7R(3)	--	36	X	36	9.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
14	R3-5A	--	--	X	--	--	--	--	1	--	--	--	--	--	--	LIGHT POLE
15	R3-8L (2S)	--	54	X	30	11.250	--	--	--	--	--	--	--	2	--	--
16	W3-8(2S)	--	48	X	48	--	16.000	--	1	--	--	--	--	--	--	SIGNAL POLE
17	R5-57(4)	--	36	X	36	9.000	--	--	--	--	--	1	--	--	--	--
18	R10-6(2S)	--	24	X	36	6.000	--	--	--	--	--	1	--	--	--	--
19	R10-65C(2S)	--	24	X	30	5.000	--	--	--	--	--	--	--	--	--	MOUNT ON OVERHEAD SIGN SUPPORT S-40-994 BRACKETS INCIDENTAL
20	R10-65R(2S)	--	24	X	30	5.000	--	--	--	--	--	--	--	--	--	MOUNT ON OVERHEAD SIGN SUPPORT S-40-994 BRACKETS INCIDENTAL
21	R10-6(2S) MODIFIED	--	24	X	36	6.000	--	--	--	--	--	--	--	--	--	SIGNAL POLE
22	R10-65L (2S)	--	24	X	30	5.000	--	--	--	--	--	--	--	--	--	SIGNAL POLE
23	J2-1 (2S)	--	24	X	57	9.500	--	--	1	--	--	--	--	--	--	LIGHT POLE
	MB3-4	--	24	X	12	--	--	--	--	--	--	--	--	--	--	--
	M1-1	IH 94	24	X	24	--	--	--	--	--	--	--	--	--	--	--
	MB5-1L	--	21	X	21	--	--	--	--	--	--	--	--	--	--	--
24	M1-94H	W SCHLINGER AVE GATE 5	90	X	36	22.500	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM . BRACKET INCIDENTAL
25	M1-94H	W SCHLINGER AVE GATE 5	90	X	36	22.500	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM. BRACKET INCIDENTAL
26	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	ON EXISTING POST
27	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	1	--	--	--	--
28	M1-94S	181 S 84TH ST	72	X	18	9.000	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM. BRACKET INCIDENTAL
29	M1-94S	181 S 84TH ST	72	X	18	9.000	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM. BRACKET INCIDENTAL
30	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE

TYPE I&II PERMANENT SIGNING -

1060-35-91

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
31	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	1	--	--	--	--
32	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
33	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
34	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
35	M1-94H	GATE 4	48	X	18	6.000	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM. BRACKET INCIDENTAL
36	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
37	R7-1D (2S)	--	18	X	24	3.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
38	M1-94H	GATE 4	48	X	18	6.000	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM. BRACKET INCIDENTAL
39	R7-1R (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	SIGNAL POLE
40	--	LOCAL ACCESS ONLY	--	X	--	--	--	--	--	--	1	--	--	--	--	SIGNAL POLE
41	R5-2(2S)	--	24	X	24	4.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
42	M1-94S	59 W GREENFIELD AVE	126	X	24	21.000	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM. BRACKET INCIDENTAL
43	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	1	--	--	--	--
44	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
45	M1-94H	S 92ND ST	66	X	24	11.000	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM. BRACKET INCIDENTAL
46	M1-94H	S. 92ND ST	66	X	24	11.000	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM. BRACKET INCIDENTAL
47	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	1	--	--
48	--	NO PARKING TIME	--	X	--	--	--	--	1	1	--	--	--	--	--	--
49	--	NO PARKING	--	X	--	--	--	--	1	--	--	--	--	--	--	--
50	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	284	--
51	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
52	M1-94S	59 S GREENFIELD AVE	126	X	24	21.000	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM. BRACKET INCIDENTAL
53	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	280	--
54	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
55	R1-1F(3)	--	36	X	36	--	--	7.460	1	--	--	1	--	--	--	--
56	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	278	--
57	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
58	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
59	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
60	--	NO PARKING	--	X	--	--	--	--	1	--	--	--	--	--	--	LIGHT POLE
61	--	ONE HOUR PARKING	--	X	--	--	--	--	1	--	--	--	--	--	--	LIGHT POLE
62	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
63	--	ONE HOUR PARKING	--	X	--	--	--	--	1	--	--	--	--	--	--	LIGHT POLE
64	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
65	--	NO PARKING	--	X	--	--	--	--	1	--	--	--	--	--	--	LIGHT POLE
66	--	ONE HOUR PARKING	--	X	--	--	--	--	1	--	--	--	--	--	--	LIGHT POLE
67	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
68	--	ONE HOUR PARKING	--	X	--	--	--	--	1	--	--	--	--	--	--	LIGHT POLE
69	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
70	--	ONE HOUR PARKING	--	X	--	--	--	--	1	--	--	--	--	--	--	LIGHT POLE

TYPE I&II PERMANENT SIGNING -

1060-35-91

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
71	M1-94S	59 W GREENFIELD AVE	126	X	24	21.000	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM. BRACKET INCIDENTAL
72	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	286	--
73	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
74	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
75	J3-1 (2S)	--	24	X	57	9.500	--	--	--	--	--	--	--	--	--	SIGNAL POLE
	M3-4	--	24	X	12	--	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 59	24	X	24	--	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21	X	21	--	--	--	--	--	--	--	--	--	--	--
76	M1-94S	181 S 84TH ST	90	X	24	15.000	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM. BRACKET INCIDENTAL
77	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
78	J3-1 (2S)	--	24	X	57	9.500	--	--	--	--	--	1	--	--	--	--
	M3-2	--	24	X	12	--	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 59	24	X	24	--	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21	X	21	--	--	--	--	--	--	--	--	--	--	--
79	--	RIGHT LANE MUST TURN RIGHT EXCEPT BUSES	--	X	--	--	--	--	--	--	1	--	--	--	--	SIGNAL POLE
80	J3-1 (2S)	--	24	X	57	9.500	--	--	1	--	--	--	--	--	--	SIGNAL POLE
	M3-1	--	24	X	12	--	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 181	24	X	24	--	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21	X	21	--	--	--	--	--	--	--	--	--	--	--
81	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	288	--
82	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
83	M1-94S	59 W GREENFIELD AVE	126	X	24	21.000	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM. BRACKET INCIDENTAL
84	R4-7(2S)	--	24	X	30	5.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
85	R4-7(2S)	--	24	X	30	5.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
86	W5-52L	--	12	X	36	--	3.000	--	--	--	--	--	--	--	--	SIGNAL POLE
87	W5-52L	--	12	X	36	--	3.000	--	--	--	--	--	--	--	--	SIGNAL POLE
88	--	RIGHT LANE MUST TURN RIGHT EXCEPT BUSES	--	X	--	--	--	--	--	1	1	--	--	1	--	--
89	J3-1	--	24	X	57	9.500	--	--	--	--	--	--	--	--	88	--
	M3-4	--	24	X	12	--	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 59	24	X	24	--	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21	X	21	--	--	--	--	--	--	--	--	--	--	--
90	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
91	M1-94S	181 S 84TH ST	90	X	15	9.375	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM. BRACKET INCIDENTAL
92	J3-1(2S)	--	24	X	57	9.500	--	--	--	1	--	--	--	--	--	SIGNAL POLE
	M3-2	--	24	X	12	--	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 59	24	X	24	--	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21	X	21	--	--	--	--	--	--	--	--	--	--	--

SHEET: 3 OF 9

PROJECT NO: 1060-35-91	HWY: VARIOUS	COUNTY: MILWAUKEE	PERMANENT SIGNING QUANTITIES	SHEET:	E

TYPE I&II PERMANENT SIGNING -

1060-35-91

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
93	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
94	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
95	--	ONE HOUR PARKING	--	X	--	--	--	--	1	--	--	--	--	--	--	LIGHT POLE
96	R3-20L(2S)	--	24	X	36	6.000	--	--	--	--	--	--	--	1	--	--
97	R4-7	--	--	X	--	--	--	--	1	1	--	--	--	--	--	--
98	W3-3(2S)	--	36	X	36	--	9.000	--	1	1	--	1	--	--	--	--
99	R6-2R(2S)	--	24	X	30	5.000	--	--	--	--	--	1	--	--	--	--
100	R5-1(2S)	--	30	X	30	5.000	--	--	--	--	--	1	--	--	--	--
101	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
102	R1-1F (3)	--	36	X	36	--	--	7.460	1	--	--	--	--	--	--	SIGNAL POLE
103	R1-1F (3)	--	36	X	36	--	--	7.460	1	--	--	1	--	--	--	--
104	M1-94S	100 S 108TH ST	96	X	24	16.000	--	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL ARM. BRACKET INCIDENTAL
105	R1-1F (3)	--	36	X	36	--	--	7.460	1	--	--	--	--	--	--	SIGNAL POLE
106	M1-94H	W THEO TRECKER WAY	132	X	24	22.000	--	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL ARM. BRACKET INCIDENTAL
107	M1-94H	W THEO TRECKER WAY	132	X	24	22.000	--	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL ARM. BRACKET INCIDENTAL
108	R1-1F (3)	--	36	X	36	--	--	7.460	1	--	--	--	--	--	--	SIGNAL POLE
109	R1-1F (3)	--	36	X	36	--	--	7.460	1	--	--	--	--	--	--	SIGNAL POLE
110	R3-20L(2S)	--	24	X	36	6.000	--	--	--	--	--	1	--	--	--	--
111	M1-94S	100 S 108TH ST	96	X	24	16.000	--	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL ARM. BRACKET INCIDENTAL
112	R5-1(3)	--	36	X	36	9.000	--	--	--	--	--	--	--	--	--	SIGNAL POLE
113	R3-2 (2S)	--	--	X	--	--	--	--	1	1	--	--	--	--	--	--
114	R3-7L (2S)	--	30	X	30	6.250	--	--	--	--	--	--	--	1	--	--
115	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
116	R6-2L (2M)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
117	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	1	--	--	--	--
118	R3-4	--	--	X	--	--	--	--	1	1	--	--	--	--	--	--
119	R5-1 (3)	--	36	X	36	9.000	--	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
120	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
121	M1-94S	100 S 108TH ST	96	X	24	16.000	--	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL ARM. BRACKET INCIDENTAL
122	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
123	R3-7L (2S)	--	30	X	30	6.250	--	--	--	--	--	--	--	1	--	--
124	R1-1	--	--	X	--	--	--	--	1	1	--	--	--	--	--	--
125	R6-2L (2M)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL POLE
126	M1-94H	W LAPHAM ST	84	X	24	14.000	--	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL ARM. BRACKET INCIDENTAL
127	M1-94H	W LAPHAM ST	84	X	24	14.000	--	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL ARM. BRACKET INCIDENTAL
128	R3-4	--	--	X	--	--	--	--	1	1	--	--	--	--	--	--

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TYPE I&II PERMANENT SIGNING -

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SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
129	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
130	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
131	R4-7 (3)	--	36	X	48	12.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
132	R4-7 (3)	--	36	X	48	12.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
133	R12-1(2M)	--	24	X	30	5.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
134	R1-1F (3)	--	36	X	36	--	--	7.460	--	1	--	1	--	--	--	--
135	R3-18(2S)	--	24	X	24	4.000	--	--	--	1	--	--	--	--	134	--
136	R1-1F (3)	--	36	X	36	--	--	7.460	--	1	--	--	--	--	--	SIGNAL POLE
137	R6-2L (2M)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL POLE
138	R1-1F (3)	--	36	X	36	--	--	7.460	1	--	--	--	--	--	--	SIGNAL POLE
139	R4-7(3)	--	36	X	48	12.000	--	--	--	--	--	--	--	--	--	SIGNAL POLE
140	R3-1 (2S)	--	24	X	24	4.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
141	R5-1(3)	--	36	X	36	9.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
142	R5-1A (2S)	--	24	X	36	6.000	--	--	--	--	--	--	--	--	--	ON SIGNAL POLE 3 FOOT MOUNTING HEIGHT
143	S1-1(2M)	--	36	X	36	--	6.750	--	--	1	--	1	--	--	--	--
144	S16-7L (2M)	--	30	X	18	--	3.750	--	--	1	--	--	--	--	143	SIGNAL POLE
145	R3-2(2S)	--	24	X	24	4.000	--	--	1	1	--	--	--	1	--	--
146	--	3 TO 6 PM MON TO FRI	--	X	--	--	--	--	1	--	--	--	--	--	--	--
147	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
148	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
149	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
150	R3-2(2S)	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
151	--	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
152	R4-7(2S)	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
153	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
154	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	LIGHT POLE
155	R3-2(2S)	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
156	--	3 TO 6 PM MON TO FRI	--	X	--	--	--	--	1	--	--	--	--	--	--	--
157	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	SIGNAL POLE
158	M1-94H	W LINCOLN AVE	90	X	24	15.000	--	--	--	--	--	--	--	--	--	MOUNT ON MAST ARM. BRACKET INCIDENTAL
159	R4-7(2S)	--	24	X	30	5.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
160	W5-52L (2S)	--	12	X	36	--	3.000	--	1	--	--	--	--	--	--	SIGNAL POLE
161	R4-7(2S)	--	24	X	30	5.000	--	--	1	--	--	1	--	--	--	--
162	R4-7(2S)	--	24	X	30	5.000	--	--	1	--	--	1	--	--	--	--
163	W5-52L (2S)	--	12	X	36	--	3.000	--	1	--	--	--	--	--	--	SIGNAL POLE

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SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
164	W5-52L (2S)	--	12	X	36	--	3.000	--	1	--	--	--	--	--	--	SIGNAL POLE
165	W12-1D (2S)	--	24	X	24	--	4.000	--	--	--	--	1	--	--	--	2 FOOT MOUNTING HEIGHT
166	M1-94H	W NATIONAL AVE	96	X	24	16.000	--	--	--	--	--	--	--	--	--	MOUNT ON MAST ARM. BRACKET INCIDENTAL
167	M1-94H	W LINCOLN AVE	90	X	24	15.000	--	--	--	--	--	--	--	--	--	MOUNT ON MAST ARM. BRACKET INCIDENTAL
168	M1-94H	W NATIONAL AVE	96	X	24	16.000	--	--	--	--	--	--	--	--	--	MOUNT ON MAST ARM. BRACKET INCIDENTAL
169	--	STATE FAIR ARROW AHEAD	--	X	--	--	--	--	--	--	1	--	--	--	--	SIGNAL POLE
170	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
171	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
172	R5-1(2S)	--	30	X	30	6.250	--	--	--	--	--	--	--	--	--	MOUNT ON BACK OF EXISTING SIGN
173	R6-2L(2S)	--	24	X	30	5.000	--	--	--	--	--	--	--	--	--	SIGNAL POLE
174	R6-2L(2S)	--	24	X	30	5.000	--	--	--	--	--	--	--	--	--	SIGNAL POLE
175	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
176	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE
177	R5-1 (2S)	--	30	X	30	6.250	--	--	--	--	--	--	--	--	--	SIGNAL POLE
178	M1-94H	W NATIONAL AVE	96	X	24	16.000	--	--	--	--	--	--	--	--	--	ON MAST ARM - BRACKET INCIDENTAL
179	M1-94H	W NATIONAL AVE	96	X	24	16.000	--	--	--	--	--	--	--	--	--	ON MAST ARM. BRACKET INCIDENTAL
180	NOT USED	--	--	X	--	--	--	--	--	--	--	--	--	--	--	--
181	R1-1F (3)	--	36	X	36	--	--	7.460	--	--	--	1	--	--	--	--
182	M1-94H	S 102ND ST	72	X	24	12.000	--	--	--	--	--	--	--	--	--	ON MAST ARM. BRACKET INCIDENTAL
183	M1-94H	S 102ND ST	72	X	24	12.000	--	--	--	--	--		--	--	--	ON MAST ARM. BRACKET INCIDENTAL
184	W11-2 (2M)	--	36	X	36	--	9.000	--	--	--	--	1	--	--	--	--
185	W11-2 (2M)	--	36	X	36	--	9.000	--	--	--	--	1	--	--	--	--
186	W16-9P (2M)	--	30	X	18	--	3.750	--	--	--	--	--	--	--	184	--
187	W16-9P (2M)	--	30	X	18	--	3.750	--	--	--	--	--	--	--	185	--
188	R10-23 (2M)	--	24	X	30	5.000	--	--	--	--	--	--	--	--	--	MOUNT ON ARM NEXT TO SIGNAL, BRACKET INCIDENTAL
189	R10-23 (2M)	--	24	X	30	5.000	--	--	--	--	--	--	--	--	--	MOUNT ON ARM NEXT TO SIGNAL, BRACKET INCIDENTAL
190	W11-2 (2M)	--	36	X	36	--	9.000	--	--	--	--	--	--	1	--	--
191	W16-9P (2M)	--	30	X	18	--	3.750	--	--	--	--	--	--	--	190	--
192	W11-2 (2M)	--	36	X	36	--	9.000	--	--	--	--	--	--	--	--	SIGNAL POLE
193	W11-2 (2M)	--	36	X	36	--	9.000	--	--	--	--	--	--	--	--	SIGNAL POLE
194	W16-7R(2M)	--	30	X	18	--	3.750	--	--	--	--	--	--	--	192	--
195	W16-7L(2M)	--	30	X	18	--	3.750	--	--	--	--	--	--	--	193	--
196	R10-6(2S)	--	24	X	36	6.000	--	--	--	--	--	--	--	1	--	--
197	R10-6(2S)	--	24	X	36	6.000	--	--	--	--	--	--	--	1	--	--
198	W11-2 (2M)	--	36	X	36	--	9.000	--	--	--	--	--	--	1	--	--

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SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
199	W16-7L(2M)	--	30	X	18	--	3.750	--	--	--	--	--	--	--	198	--
200	W11-2 (2M)	--	36	X	36	--	9.000	--	--	--	--	--	--	1	--	--
201	W16-9P (2M)	--	30	X	18	--	3.750	--	--	--	--	--	--	--	200	--
202	W11-2 (2M)	--	36	X	36	--	9.000	--	--	--	--	--	--	1	--	--
203	W16-9P (2M)	--	30	X	18	--	3.750	--	--	--	--	--	--	--	202	--
204	W11-2	--	--	X	--	--	--	--	1	1	--	--	--	--	--	--
205	W11-2	--	--	X	--	--	--	--	1	1	--	--	--	--	--	--
206	W13-1	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
207	W13-1	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
208	R1-6	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
209	R1-6	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
210	W13-1	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
211	R1-6	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
212	R1-6	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
213	W13-1	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
214	W11-2	--	--	X	--	--	--	--	1	1	--	--	--	--	--	--
215	W11-2	--	--	X	--	--	--	--	1	1	--	--	--	--	--	--
216	W11-2	--	--	X	--	--	--	--	1	1	--	--	--	--	--	--
217	W16-7	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
218	W11-2	--	--	X	--	--	--	--	1	1	--	--	--	--	--	--
219	W16-7	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
220	W3-3(2S)	--	36	X	36	--	9.000	--	--	--	--	--	--	1	--	16 X 16 TEMP FLAGS INCIDENTAL
221	W3-3(2S)	--	36	X	36	--	9.000	--	--	--	--	--	--	1	--	16 X 16 TEMP FLAGS INCIDENTAL
222	R10-11S(2S)	--	24	X	36	6.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
223	R10-11S(2S)	--	24	X	36	6.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
224	R10-11S(2S)	--	24	X	36	6.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
225	R1-1F	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
226	R1-1F	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
227	R1-1F	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
228	R10-11S(2S)	--	24	X	36	6.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
229	R1-1F	--	--	X	--	--	--	--	1	--	--	--	--	--	--	--
230	M1-94S	100 S 108TH ST	96	X	24	16.000	--	--	--	--	--	--	--	--	--	MOUNT ON MAST ARM - BRACKET INCIDENTAL - SHEET 15
231	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL POLE - SHEET 17
232	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL ARM, BRACKET INCIDENTAL - SHEET 17
233	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL ARM; BRACKET INCIDENTAL - SHEET 8

TYPE I&II PERMANENT SIGNING -

1060-35-91

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
234	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL ARM; BRACKET INCIDENTAL - SHEET 8
235	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL ARM; BRACKET INCIDENTAL - SHEET 8
236	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL ARM; BRACKET INCIDENTAL - SHEET 8
237	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL POLE - SHEET 12
238	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL ARM; BRACKET INCIDENTAL - SHEET 12
239	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL ARM; BRACKET INCIDENTAL - SHEET 12
240	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL POLE - SHEET 12
241	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL ARM; BRACKET INCIDENTAL - SHEET 6
242	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL BRACKET INCIDENTAL - SHEET 6
243	NOT USED	--	--	X	--		--	--	--	--	--	--	--	--	--	--
244	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL ARM; BRACKET INCIDENTAL - SHEET 21
245	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL ARM; BRACKET INCIDENTAL - SHEET 21
246	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL ARM; BRACKET INCIDENTAL - SHEET 20
247	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	SIGNAL POLE - SHEET 20
248	--	15 MIN PARKING	--	X	--	--	--	--	1	1	--	--	--	--	--	SHEET 9
249	R7-1D (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	--	--	LIGHT POLE - SHEET 9
250	R1-1F(3)	--	36	X	36	--	--	7.460	--	--	--	--	--	--	--	SIGNAL POLE - SHEET 16
251	R7-1L (2S)	--	18	X	24	3.000	--	--	--	--	--	--	--	1	--	SHEET 19
252	R4-7 (2S)	--	24	X	30	5.000	--	--	--	--	--	1	--	--	--	SHEET 20
253	W5-52L (2S)	--	12	X	36	--	3.000	--	--	--	--	--	--	--	252	SHEET 20
254	W3-3(2S)	--	36	X	36	--	9.000	--	--	--	--	--	--	1	--	16 X 16 FLAGS INCIDENTAL - SHEET 22
255	W3-3(2S)	--	36	X	36	--	9.000	--	--	--	--	--	--	1	--	16 X 16 FLAGS INCIDENTAL - SHEET 22
256	NOT USED	--	--	X	--	--	--	--	--	--	--	--	--	--	--	--
257	R4-7 (2S)	--	24	X	30	5.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
258	W5-52R (2S)	--	12	X	36	--	3.000	--	1	1	--	--	--	1	--	--
259	R3-18(2S)	--	24	X	24	4.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
260	R3-3 (2S)	--	24	X	24	4.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
261	W1-6 (2S)	--	48	X	24	--	8.000	--	1	2	--	--	--	2	--	--
262	--	DO NOT CROSS	--	X	--	--	--	--	--	--	1	--	--	--	--	SIGNAL POLE
263	R5-1A (2S)	--	36	X	24	6.000	--	--	1	1	--	--	--	1	--	--
264	R3-18 (2S)	--	24	X	24	4.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
265	--	DO NOT CROSS	--	X	--	--	--	--	1	--	--	--	--	--	--	SIGNAL POLE
266	R5-1 (2S)	--	30	X	30	5.000	--	--	--	--	--	--	--	--	--	SIGNAL POLE
267	W4-2R (2S)	--	36	X	36	--	9.000	--	1	--	--	--	--	--	--	LIGHT POLE
268	MI-94H	W NATIONAL AVE	96	X	24	16.000	--	--	--	--	--	--	--	--	--	SIGNAL ARM; BRACKET INCIDENTAL

TYPE I&II PERMANENT SIGNING -

1060-35-91

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
269	R3-18 (2S)	--	24	X	24	4.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
270	W1-8 (2S)	--	18	X	24	--	3.000	--	1	--	--	--	--	1	--	4' HEIGHT
271	W1-8 (2S)	--	18	X	24	--	3.000	--	1	--	--	--	--	1	--	4' HEIGHT
272	R3-3 (2S)	--	24	X	24	4.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
273	R3-3 (2S)	--	24	X	24	4.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
274	M1-94H	W NATIONAL AVE	96	X	24	16.000	--	--	--	--	--	--	--	--	--	SIGNAL ARM; BRACKET INCIDENTAL
275	W5-52L (2S)	--	12	X	36	--	3.000	--	1	--	--	--	--	--	--	SIGNAL POLE
276	R10-11B (2S)	--	24	X	24	4.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
277	R3-18 (2S)	--	24	X	24	4.000	--	--	1	--	--	--	--	--	--	SIGNAL POLE
278	R4-7	--	--	X	--	--	--	--	--	--	1	1	--	--	278	SHEET 8
279	W5-52	--	--	X	--	--	--	--	--	--	1	--	--	--	--	SHEET 8
280	R4-7	--	--	X	--	--	--	--	--	--	1	1	--	--	--	SHEET 8
281	W5-52	--	--	X	--	--	--	--	--	--	1	--	--	--	280	SHEET 8
282	R4-7	--	--	X	--	--	--	--	--	--	1	1	--	--	--	SHEET 8
283	W5-52	--	--	X	--	--	--	--	--	--	1	--	--	--	282	SHEET 8
284	R4-7	--	--	X	--	--	--	--	--	--	1	1	--	--	--	SHEET 8
285	W5-52	--	--	X	--	--	--	--	--	--	1	--	--	--	284	SHEET 8
286	R4-7	--	--	X	--	--	--	--	--	--	1	1	--	--	--	SHEET 12
287	W5-52	--	--	X	--	--	--	--	--	--	1	--	--	--	--	SHEET 12
288	R4-7	--	--	X	--	--	--	--	--	--	1	1	--	--	--	SHEET 12
289	W5-52	--	--	X	--	--	--	--	--	--	1	--	--	--	288	SHEET 12
290	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM; BRACKET INCIDENTAL - SHEET 17
291	R10-50L(2S)	--	30	X	36	7.500	--	--	--	--	--	--	--	--	--	ON SIGNAL ARM; BRACKET INCIDENTAL - SHEET 17
292	R3-8A(2S)	--	36	X	30	7.500	--	--	--	--	--	--	--	1	--	SHEET 19
293	R3-4 (2S)	--	24	X	24	4.000	--	--	--	--	--	--	--	1	--	SHEET 22
294	R3-4 (2S)	--	24	X	24	4.000	--	--	--	--	--	--	--	--	--	ON LIGHT POLE - SHEET 22
295	S1-1(2S)	--	36	X	36	--	6.750	--	1.000	--	--	--	--	--	--	ON LIGHT POLE
296	S16-9P(2S)	--	30	X	18	--	3.750	--	--	--	--	--	--	--	--	ON LIGHT POLE
297	S4-51(2S)	--	24	X	48	--	8.000	--	1.000	--	--	--	--	--	--	ON LIGHT POLE
298	S1-1(2S)	--	36	X	36	--	6.750	--	1.000	--	--	--	--	--	--	ON LIGHT POLE
299	S16-7L(2S)	--	30	X	18	--	3.750	--	--	--	--	--	--	--	--	ON LIGHT POLE
300	S1-1(2S)	--	36	X	36	--	6.750	--	1.000	--	--	--	--	--	--	ON LIGHT POLE
301	S16-7L(2S)	--	30	X	18	--	3.750	--	--	--	--	--	--	--	--	ON LIGHT POLE
302	S4-51(2S)	--	24	X	48	--	8.000	--	1.000	--	--	--	--	--	--	ON LIGHT POLE
303	S1-1(2S)	--	36	X	36	--	6.750	--	1.000	--	--	--	--	--	--	ON LIGHT POLE
304	S16-9P(2S)	--	30	X	18	--	3.750	--	--	--	--	--	--	--	--	ON LIGHT POLE
--	--	--	--	X	--	--	--	--	--	--	--	--	--	--	--	--
	UNDISTRIBUTED	--	--	X	--	--	--	--	--	--	--	--	2	--	--	--
TOTALS						1158.500	282.500	358.080	102	27	18	28	2	30		

SHEET: 9 OF 9

PROJECT NO: 1060-35-91	HWY: VARIOUS	COUNTY: MILWAUKEE	PERMANENT SIGNING QUANTITIES	SHEET:	E

STREET LIGHTING

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

REMOVING CONCRETE BASES

INTERSECTION	EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH	SPV.0060.3104 REMOVING AND SALVAGING LIGHT POLES, LUMINAIRES, AND ARMS EACH
STH 100 & LAPHAM STREET	SB1	1	1
	SB2	1	1
	SB6	1	1
STH 100 & THEO TRECKER WAY	SB1	1	1
	SB3	1	1
	SB10	1	1
STH 59 & 92ND STREET	SB2	1	1
	SB5	1	1
	SB6	1	1
	LB1	1	1
STH 59 & STH 181	SB1	1	1
	SB5	1	1
	SB7	1	1
	SB11	1	1
	LB1	1	1
STH 181 & STATE FAIR GATE 4	SB2	1	1
	SB6	1	1
STH 181 & SCHLINGER AVENUE	SB3	1	1
	SB5	1	1
	SB8	1	1
	SB10	1	1
NATIONAL AVENUE & 102ND STREET	SB4	1	1
	SB5	1	1
	SB9	1	1
	SB9	1	1
NATIONAL AVENUE & LINCOLN AVENUE	SB1	1	1
	SB3	1	1
	SB4	1	1
	SB7	1	1
	SB9	1	1
LINCOLN AVENUE & IH 894	SB5	1	1
LINCOLN AVENUE & BELOIT ROAD	SB1	1	1
	SB4	1	1
	SB5	1	1
	SB8	1	1
	SB12	1	1
	SB14	1	1
LINCOLN AVENUE & 98TH STREET	LB1	1	1
	*** TOTALS	38	38

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONDUIT

INTERSECTION	FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF
STH 100 & LAPHAM STREET	EXT 1	EXT 2	--	89
	EXT 3	EXT 4	--	144
STH 100 & THEO TRECKER WAY	EXT 5	EXT 6	--	56
	EXT 7	EXT 8	--	217
	EXT 9	EXT 10	--	102
STH 59 & 92ND STREET	EXT 11	EXT 12	--	67
	EXT 13	EXT 14	32	--
	EXT 15	EXT 16	--	65
STH 59 & STH 181	EXT 17	EXT 18	--	78
	EXT 19	EXT 20	--	89
	EXT 20	EXT 21	35	--
	EXT 21	EXT 22	--	78
STH 181 & SCHLINGER AVENUE	EXT 23	EXT 24	--	69
	EXT 24	EXT 25	55	--
	EXT 26	EXT 27	--	52
NATIONAL AVENUE & 102ND STREET	EXT 28	EXT 29	--	100
	EXT 30	EXT 31	--	121
	EXT 32	EXT 33	--	66
NATIONAL AVENUE & LINCOLN AVENUE	EXT 34	EXT 35	--	120
	EXT 35	EXT 36	45	--
	EXT 36	EXT 37	--	74
LINCOLN AVENUE & BELOIT ROAD	EXT 38	EXT 39	--	84
	EXT 40	EXT 41	--	50
	EXT 42	EXT 43	--	116
	EXT 44	EXT 45	111	--
	*** TOTALS		278	1837

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030100_mq_lp.ppt PLOT DATE : 4/29/2014 10:58:07 AM PLOT BY : MSCCEJ PLOT NAME : 030100_mq_lp1 PLOT SCALE : 1:1

CONCRETE BASES

INTERSECTION	BASE NO.	STATION	LOCATION	654.0105 CONCRETE BASES TYPE 5 EACH
LINCOLN AVENUE & 98TH STREET	LB1	55+97.2	5.0' LT	1
			*** TOTALS	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

STREET LIGHTING

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

SERIES CIRCUIT POWER CABLE

INTERSECTION	FROM	TO	SPV.0090.3101 SERIES CIRCUIT POWER CABLE LF
STH 100 & LAPHAM STREET	EXT 1	EXT 2	109
	EXT 3	EXT 4	164
STH 100 & THEO TRECKER WAY	EXT 5	EXT 6	76
	EXT 7	EXT 8	237
	EXT 9	EXT 10	122
STH 59 & 92ND STREET	EXT 11	EXT 12	87
	EXT 13	EXT 14	52
	EXT 15	EXT 16	85
STH 59 & STH 181	EXT 17	EXT 18	98
	EXT 19	EXT 20	109
	EXT 20	EXT 21	55
	EXT 21	EXT 22	98
STH 181 & SCHLINGER AVENUE	EXT 23	EXT 24	89
	EXT 24	EXT 25	75
	EXT 26	EXT 27	72
NATIONAL AVENUE & 102ND STREET	EXT 28	EXT 29	120
	EXT 30	EXT 31	141
	EXT 32	EXT 33	86
NATIONAL AVENUE & LINCOLN AVENUE	EXT 34	EXT 35	140
	EXT 35	EXT 36	65
	EXT 36	EXT 37	94
LINCOLN AVENUE & BELOIT ROAD	EXT 38	EXT 39	104
	EXT 40	EXT 41	70
	EXT 42	EXT 43	136
	EXT 44	EXT 45	131
		*** TOTAL	2615

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030100_mq_lp.ppt PLOT DATE : 4/29/2014 10:58:07 AM PLOT BY : MSCCEJ PLOT NAME : 030100_mq_lp2 PLOT SCALE : 1:1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
1	EACH	POLES TYPE 12
3	EACH	POLES TYPE 13
4	EACH	MONOTUBE ARMS 40-FT
5	EACH	LUMINAIRE ARMS STEEL 8-FT
1	EACH	RADAR DETECTION SYSTEM
5	EACH	EVP DETECTOR HEADS

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	15	--	--
PB1	PB2	--	56	--	108
PB2	PB3	--	--	--	106
PB3	PB4	--	--	--	104
PB4	PB7	--	--	--	280
PB5	PB6	--	--	--	70
PB6	PB7	--	37	--	--
PB7	PB8	--	--	--	122
PB8	PB9	--	--	--	102
PB9	PB10	--	64	--	--
PB10	PB11	--	--	206	--
PB10	PB12	--	--	--	96
PB12	CB1	--	15	--	--
PB1	SB1	4	--	--	--
PB2	SB2	13	--	--	--
PB3	SB3	--	11	--	--
PB4	SB4	22	--	--	--
PB5	SB5	--	9	--	--
PB6	SB6	5	--	--	--
PB7	SB7	7	--	--	--
PB8	SB8	--	15	--	--
PB10	SB9	5	--	--	--
PB11	SB10	5	--	--	--
PB12	SB11	--	15	--	--
*** TOTALS		61	237	206	988

STH 100 & W. LAPHAM STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
CB1	1
SB3	1
SB4	1
SB5	1
SB7	1
SB8	1
	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

WISCONSIN JASON R. MA... V... JKEGHA, WI PROFESSIONAL ENGINEER 04/2/2017

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	513+60.2	64.4' LT	1
PB2	513+84.0	51.0' LT	1
PB3	513+84.0	1.5' RT	1
PB4	513+84.0	53.0' RT	1
PB5	513+45.5	70.9' RT	1
PB6	512+75.1	71.7' RT	1
PB7	512+43.5	52.6' RT	1
PB8	512+64.6	4.5' LT	1
PB9	512+82.2	52.0' LT	1
PB10	513+08.7	66.8' LT	1
PB11	17+27.1	27.0' RT	1
PB12	513+56.2	66.4' LT	1
		*** TOTALS	12

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 424	E

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030120_mq_sp.ppt PLOT DATE : 4/29/2014 10:46:01 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp1 PLOT SCALE : 1:1

REMOVING PULL BOXES

EXISTING PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
TOTAL	3

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	513+59.8	60.9' LT	1	--	--	--
SB2	513+70.8	52.2' LT	1	--	--	--
SB3	513+95.0	3.5' RT	--	--	1	--
SB4	513+62.3	53.7' RT	1	--	--	--
SB5	513+44.4	79.7' RT	--	--	1	--
SB6	512+78.2	75.6' RT	--	1	--	--
SB7	512+50.7	54.6' RT	1	--	--	--
SB8	512+80.0	6.0' LT	--	--	1	--
SB9	513+07.9	61.1' LT	1	--	--	--
SB10	17+22.1	27.0' RT	--	1	--	--
SB11	513+59.8	83.8' LT	--	--	1	--
CB1	513+60.2	69.4' LT	--	--	--	1
		*** TOTALS	5	2	4	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 100 & W. LAPHAM STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 25	14	--
SB2	HEAD 5	--	22
SB2	HEAD 7	19	--
SB2	HEAD 24	14	--
SB3	HEAD 2	44	--
SB3	HEAD 3	55	--
SB3	HEAD 4	67	--
SB3	HEAD 6	--	30
SB4	HEAD 26	14	--
SB4	HEAD 27	14	--
SB5	HEAD 13	19	--
SB5	HEAD 19	66	--
SB5	HEAD 21	--	22
SB5	HEAD 22	--	44
SB6	HEAD 20	19	--
SB7	HEAD 1	19	--
SB7	HEAD 11	--	22
SB7	HEAD 28	14	--
SB8	HEAD 8	40	--
SB8	HEAD 9	51	--
SB8	HEAD 10	62	--
SB8	HEAD 12	--	30
SB9	HEAD 16	--	22
SB9	HEAD 18	19	--
SB9	HEAD 23	14	--
SB11	HEAD 14	44	--
SB11	HEAD 15	19	--
SB11	HEAD 17	--	68
	*** TOTALS	627	260

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030120_mq_sp.ppt PLOT DATE : 4/29/2014 10:46:01 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp2 PLOT SCALE : 1:1

STH 100 & W. LAPHAM STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1	36	--
CB1	SB2	--	89
CB1	SB3	--	156
CB1	SB4	--	235
CB1	SB5	--	436
CB1	SB6	346	--
CB1	SB7	--	295
CB1	SB8	--	226
CB1	SB9	--	102
CB1	SB11	--	47
	*** TOTALS	382	1586

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING WIRE

FROM	TO	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB3	156	--
SB3	LUMIN	--	246
CB1	SB11	47	--
SB11	LUMIN	--	123
SB11	SB8	233	--
SB8	LUMIN	--	246
SB8	SB6	174	--
SB6	LUMIN	--	117
	*** TOTALS	610	732

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	36
SB1	SB2	85
SB2	SB3	117
SB3	SB4	125
SB4	SB5	350
SB5	SB6	124
SB6	SB7	89
SB7	SB8	123
SB8	SB9	160
SB9	SB10	257
SB10	SB11	330
SB11	CB1	47
PB1	SB1	24
PB2	SB2	33
PB3	SB3	31
PB4	SB4	42
PB5	SB5	29
PB6	SB6	25
PB7	SB7	27
PB8	SB8	35
PB9	SB9	74
PB10	SB9	26
PB11	SB10	25
PB12	CB1	28
	*** TOTAL	2242

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF
CB1	SB8 (HEAD A)	296	296
CB1	SB3 (HEAD B)	196	196
CB1	SB10 (HEAD C)	363	--
CB1	SB5 (HEAD C)	506	506
CB1	SB11 (HEAD D)	117	117
	*** TOTALS	1478	1115

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
STH 100 & W. LAPHAM STREET

BASE NO.	656.0200.3001 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 426	E

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030120_mq_sp.ppt PLOT DATE : 4/29/2014 10:46:01 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp3 PLOT SCALE : 1:1

3

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASE BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0310 POLES TYPE 3 EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.1355 INSTALL POLES TYPE 12 EACH	657.1360 INSTALL POLES TYPE 13 EACH
SB1	1	--	--	--	--	1	--	--	--
SB2	1	--	--	--	1	--	--	--	--
SB3	--	--	--	--	--	--	--	--	1
SB4	1	--	--	--	--	1	--	--	--
SB5	--	--	--	--	--	--	--	1	--
SB6	--	1	--	1	--	--	1	--	--
SB7	1	--	--	--	1	--	--	--	--
SB8	--	--	--	--	--	--	--	--	1
SB9	1	--	--	--	1	--	--	--	--
SB10	--	1	1	--	--	--	--	--	--
SB11	--	--	--	--	--	--	--	--	1
*** TOTALS	5	2	1	1	3	2	1	1	3

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.1540 INSTALL MONOTUBE ARMS 40-FT EACH	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	--	--	1	--
SB2	--	--	1	--
SB3	1	2	--	2
SB4	--	--	2	--
SB5	1	--	--	--
SB6	--	--	--	1
SB7	--	--	1	--
SB8	1	2	--	2
SB9	--	--	1	--
SB10	--	--	--	--
SB11	1	1	--	1
*** TOTALS	4	5	6	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB7	1	--	1	--	--	1	1	1	--	--	--	--
2	SB3	1	--	1	--	--	1	1	1	--	--	--	--
3	SB3	1	--	1	--	--	1	1	1	--	--	--	--
4	SB3	1	--	1	--	--	1	1	1	--	--	--	--
5	SB2	--	1	--	1	--	--	--	--	1	2	1	--
6	SB3	--	1	--	1	--	--	--	--	1	2	1	--
7	SB2	1	--	1	--	--	1	1	1	--	--	--	--
8	SB8	1	--	1	--	--	1	1	1	--	--	--	--
9	SB8	1	--	1	--	--	1	1	1	--	--	--	--
10	SB8	1	--	1	--	--	1	1	1	--	--	--	--
11	SB7	--	1	--	1	--	--	--	--	1	2	1	--
12	SB8	--	1	--	1	--	--	--	--	1	2	1	--
13	SB5	1	--	1	--	--	1	1	1	--	--	--	--
14	SB11	1	--	1	--	--	1	1	1	--	--	--	--
15	SB11	1	--	1	--	--	1	1	1	--	--	--	--
16	SB9	--	1	--	1	--	--	--	--	1	2	1	--
17	SB11	--	1	--	1	--	--	--	--	1	2	1	--
18	SB9	1	--	1	--	--	1	1	1	--	--	--	--
19	SB5	1	--	1	--	--	1	1	1	--	--	--	--
20	SB6	1	--	1	--	--	1	1	1	--	--	--	--
21	SB5	--	1	--	1	--	--	--	--	1	2	1	--
22	SB5	--	1	--	1	--	--	--	--	1	2	1	--
23	SB9	--	--	--	--	1	--	--	--	--	--	--	1
24	SB2	--	--	--	--	1	--	--	--	--	--	--	1
25	SB1	--	--	--	--	1	--	--	--	--	--	--	1
26	SB4	--	--	--	--	1	--	--	--	--	--	--	1
27	SB4	--	--	--	--	1	--	--	--	--	--	--	1
28	SB7	--	--	--	--	1	--	--	--	--	--	--	1
*** TOTALS		14	8	14	8	6	14	14	14	8	16	8	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SIGNAL MOUNTING HARDWARE
STH 100 & W. LAPHAM STREET

LOCATION	658.5069.3001 SIGNAL MOUNTING HARDWARE LS
STH 100 (S. 108TH STREET) & W. LAPHAM STREET	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
STH 100 & W. LAPHAM STREET

LOCATION	661.0200.3001 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS	661.0300 GENERATORS DAY
STH 100 (S. 108TH STREET) & W. LAPHAM STREET	1	2
TOTAL	1	2

REMOVE TRAFFIC SIGNALS
STH 100 & W. LAPHAM STREET

LOCATION	SPV.0105.3001 REMOVE TRAFFIC SIGNALS LS
STH 100 (S. 108TH STREET) & W. LAPHAM STREET	1
TOTAL	1

STH 100 & W. LAPHAM STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM
STH 100 & W. LAPHAM STREET

LOCATION	SPV.0105.3023 TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM LS
STH 100 (S.108TH STREET) & W. LAPHAM STREET	1
TOTAL	1

3

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET
STH 100 & W. LAPHAM STREET

LOCATION	SPV.0105.3009 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET LS
STH 100 (S. 108TH STREET) & W. LAPHAM STREET	1
TOTAL	1

INSTALL STATE FURNISHED EVP DETECTOR HEADS
STH 100 & W. LAPHAM STREET

LOCATION	SPV.0105.3030 INSTALL STATE FURNISHED EVP DETECTOR HEADS LS
STH 100 (S. 108TH STREET) & W. LAPHAM STREET	1
TOTAL	1

TRANSPORTING SIGNAL AND LIGHTING MATERIALS
STH 100 & W. LAPHAM STREET

LOCATION	SPV.0105.3016 TRANSPORTING SIGNAL AND LIGHTING MATERIALS LS
STH 100 (S. 108TH STREET) & W. LAPHAM STREET	1
TOTAL	1

TEMPORARY EVP SYSTEM
STH 100 & W. LAPHAM STREET

LOCATION	SPV.0105.3056 TEMPORARY EVP SYSTEM LS
STH 100 (S. 108TH STREET) & W. LAPHAM STREET	1
TOTAL	1

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030120_mq_sp.ppt PLOT DATE : 4/29/2014 10:46:01 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp6 PLOT SCALE : 1:1

STH 100 & W. THEODORE TRECKER WAY

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

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SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
2	EACH	POLES TYPE 10
2	EACH	POLES TYPE 13
2	EACH	MONOTUBE ARMS 30-FT
2	EACH	MONOTUBE ARMS 35-FT
6	EACH	LUMINAIRE ARMS STEEL 8-FT
1	EACH	RADAR DETECTION SYSTEM
4	EACH	EVP DETECTOR HEADS

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	30	--
PB1	PB2	--	--	144
PB2	PB3	--	42	--
PB3	PB4	--	--	136
PB4	PB5	--	--	98
PB5	PB6	--	--	206
PB6	PB7	--	--	112
PB7	PB8	--	--	100
PB8	PB9	--	42	--
PB9	PB10	--	138	--
PB10	PB11	--	--	124
PB11	CB1	--	45	--
PB2	SB1	--	5	--
PB3	SB2	11	--	--
PB4	SB3	--	14	--
PB5	SB4	10	--	--
PB6	SB5	--	7	--
PB7	SB6	--	9	--
PB8	SB7	10	--	--
PB9	SB8	5	--	--
*** TOTALS		36	332	920

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

WISCONSIN JASON R. MATSON 3711 V... JKE... WI PROFESSIONAL ENGINEER 01/21/2014

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
CB1	1
SB2	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
SB9	1
SB11	1
	9

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	18+60.0	34.5' LT	1
PB2	50+34.5	68.0' LT	1
PB3	50+55.0	62.0' LT	1
PB4	50+55.0	6.0' RT	1
PB5	50+55.0	55.0' RT	1
PB6	49+52.0	53.0' RT	1
PB7	49+52.0	2.5' LT	1
PB8	49+52.0	52.0' LT	1
PB9	49+67.2	66.6' LT	1
PB10	18+64.0	32.5' RT	1
PB11	18+64.0	29.5' LT	1
		*** TOTALS	11

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 430	E

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030130_mq_sp.ppt PLOT DATE : 4/29/2014 10:47:18 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp1 PLOT SCALE : 1:1

REMOVING PULL BOXES

EXISTING PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
PB10	1
PB11	1
PB12	1
PB13	1
PB14	1
PB15	1
PB16	1
TOTAL	15

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	50+33.5	63.1' LT	--	1	--	--
SB2	50+47.5	54.0' LT	1	--	--	--
SB3	50+69.0	8.0' RT	--	--	1	--
SB4	50+45.1	58.0' RT	1	--	--	--
SB5	49+57.5	57.5' RT	--	1	--	--
SB6	49+45.0	7.5' LT	--	--	1	--
SB7	49+56.2	61.0' LT	1	--	--	--
SB8	49+68.7	71.4' LT	1	--	--	--
CB1	18+50.0	35.0' LT	--	--	--	1
		*** TOTALS	4	2	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 100 & W. THEODORE TRECKER WAY

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 15	54	--
SB1	HEAD 22	14	--
SB2	HEAD 5	--	22
SB2	HEAD 7	19	--
SB3	HEAD 2	38	--
SB3	HEAD 3	50	--
SB3	HEAD 4	62	--
SB3	HEAD 6	--	30
SB4	HEAD 13	19	--
SB5	HEAD 1	19	--
SB5	HEAD 11	--	22
SB5	HEAD 17	56	--
SB5	HEAD 18	44	--
SB5	HEAD 19	14	--
SB6	HEAD 8	38	--
SB6	HEAD 9	49	--
SB6	HEAD 10	61	--
SB6	HEAD 12	--	30
SB7	HEAD 20	14	--
SB7	HEAD 21	14	--
SB8	HEAD 14	19	--
SB8	HEAD 16	19	--
	*** TOTALS	603	104

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG LF
CB1	SB1	--	130	--
CB1	SB2	--	173	--
CB1	SB3	--	260	--
CB1	SB4	321	--	--
CB1	SB5	--	--	387
CB1	SB6	--	317	--
CB1	SB7	--	252	--
CB1	SB8	--	210	--
	*** TOTALS	321	1342	387

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING WIRE

FROM	TO	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB1	130	--
SB1	LUMIN	--	123
SB1	SB3	164	--
SB3	LUMIN	--	246
CB1	SB6	317	--
SB6	LUMIN	--	246
SB6	SB5	112	--
SB5	LUMIN	--	123
	*** TOTALS	723	738

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	130
SB1	SB2	77
SB2	SB3	133
SB3	SB4	113
SB4	SB5	160
SB5	SB6	112
SB6	SB7	109
SB7	SB8	76
SB8	CB1	210
PB1	CB1	33
PB2	SB1	25
PB3	SB2	31
PB4	SB3	34
PB5	SB4	30
PB6	SB5	27
PB7	SB6	29
PB8	SB7	30
PB9	SB8	25
PB10	SB8	110
PB11	CB1	38
	*** TOTAL	1532

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 100 & W. THEODORE TRECKER WAY

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF
CB1	SB6 (HEAD A)	382	382
CB1	SB3 (HEAD B)	325	325
CB1	SB5 (HEAD C)	447	447
CB1	SB1 (HEAD D)	190	190
	*** TOTALS	1344	1344

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
STH 100 (S. 108TH STREET) & W. THEODORE TRECKER WAY

BASE NO.	656.0200.3002 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030130_mq_sp.ppt PLOT DATE : 4/29/2014 10:47:18 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp3 PLOT SCALE : 1:1

3

3

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1360 INSTALL POLES TYPE 13 EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1535 INSTALL MONOTUBE ARMS 35-FT EACH	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT EACH
SB1	--	--	--	--	1	--	1	--	1
SB2	1	--	1	--	--	--	--	--	--
SB3	--	--	--	--	--	1	--	1	2
SB4	1	1	--	--	--	--	--	--	--
SB5	--	--	--	--	1	--	1	--	1
SB6	--	--	--	--	--	1	--	1	2
SB7	1	--	--	1	--	--	--	--	--
SB8	1	1	--	--	--	--	--	--	--
*** TOTALS	4	2	1	1	2	2	2	2	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	1	1
SB2	--	--
SB3	--	2
SB4	--	--
SB5	1	1
SB6	--	2
SB7	2	--
SB8	--	--
*** TOTALS	4	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB5	1	--	1	--	--	1	1	1	--	--	--	--
2	SB3	1	--	1	--	--	1	1	1	--	--	--	--
3	SB3	1	--	1	--	--	1	1	1	--	--	--	--
4	SB3	1	--	1	--	--	1	1	1	--	--	--	--
5	SB2	--	1	--	1	--	--	--	--	1	2	1	--
6	SB3	--	1	--	1	--	--	--	--	1	2	1	--
7	SB2	1	--	1	--	--	1	1	1	--	--	--	--
8	SB6	1	--	1	--	--	1	1	1	--	--	--	--
9	SB6	1	--	1	--	--	1	1	1	--	--	--	--
10	SB6	1	--	1	--	--	1	1	1	--	--	--	--
11	SB5	--	1	--	1	--	--	--	--	1	2	1	--
12	SB6	--	1	--	1	--	--	--	--	1	2	1	--
13	SB4	1	--	1	--	--	1	1	1	--	--	--	--
14	SB8	1	--	1	--	--	1	1	1	--	--	--	--
15	SB1	1	--	1	--	--	1	1	1	--	--	--	--
16	SB8	1	--	1	--	--	1	1	1	--	--	--	--
17	SB5	1	--	1	--	--	1	1	1	--	--	--	--
18	SB5	1	--	1	--	--	1	1	1	--	--	--	--
19	SB5	--	--	--	--	1	--	--	--	--	--	--	1
20	SB7	--	--	--	--	1	--	--	--	--	--	--	1
21	SB7	--	--	--	--	1	--	--	--	--	--	--	1
22	SB1	--	--	--	--	1	--	--	--	--	--	--	1
*** TOTALS		14	4	14	4	4	14	14	14	4	8	4	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SIGNAL MOUNTING HARDWARE
STH 100 & W. THEO TRECKER WAY

LOCATION	658.5069.3002 SIGNAL MOUNTING HARDWARE LS
STH 100 (S. 108TH STREET) & W. THEODORE TRECKER WAY	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
STH 100 & W. THEO TRECKER WAY

LOCATION	661.0200.3002 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS	661.0300 GENERATORS DAY
STH 100 (S. 108TH STREET) & W. THEODORE TRECKER WAY	1	2
*** TOTALS	1	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 100 & W. THEODORE TRECKER WAY

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

REMOVE TRAFFIC SIGNALS
STH 100 & W. THEO TRECKER WAY

LOCATION	SPV.0105.3002 REMOVE TRAFFIC SIGNALS LS
STH 100 (S. 108TH STREET) & W. THEODORE TRECKER WAY	1
TOTAL	1

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET
STH 100 & W. THEO TRECKER WAY

LOCATION	SPV.0105.3010 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET LS
STH 100 (S. 108TH STREET) & W. THEODORE TRECKER WAY	1
TOTAL	1

TRANSPORTING SIGNAL AND LIGHTING MATERIALS
STH 100 & W. THEO TRECKER WAY

LOCATION	SPV.0105.3017 TRANSPORTING SIGNAL AND LIGHTING MATERIALS LS
STH 100 (S. 108TH STREET) & W. THEODORE TRECKER WAY	1
TOTAL	1

INSTALL STATE FURNISHED EVP DETECTOR HEADS
STH 100 & W. THEO TRECKER WAY

LOCATION	SPV.0105.3031 INSTALL STATE FURNISHED EVP DETECTOR HEADS LS
STH 100 (S.108TH STREET) & W. THEODORE TRECKER WAY	1
TOTAL	1

TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM
STH 100 & W. THEO TRECKER WAY

LOCATION	SPV.0105.3024 TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM LS
STH 100 (S.108TH STREET) & W. THEODORE TRECKER WAY	1
TOTAL	1

TEMPORARY EVP SYSTEM
STH 100 & W. THEO TRECKER WAY

LOCATION	SPV.0105.3037 TEMPORARY EVP SYSTEM LS
STH 100 (S. 108TH STREET) & W. THEODORE TRECKER WAY	1
TOTAL	1

REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE
STH 100 & W. THEO TRECKER WAY

LOCATION	SPV.0105.3042 REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE LS
STH 100 & W. THEODORE TRECKER WAY	1
TOTAL	1

STH 100 & STH 59 (W. GREENFIELD AVENUE)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1	104
	*** TOTALS	104

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 33	--	36
SB6	HEAD 6	--	22
SB6	HEAD 25	14	--
	*** TOTALS	14	58

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

SIGNAL MOUNTING HARDWARE
STH 100 & STH 59

LOCATION	658.5069.3003 SIGNAL MOUNTING HARDWARE LS
STH 100 (S. 108TH STREET) & STH 59 (W. GREENFIELD AVENUE)	1
TOTAL	1

WISCONSIN
JASON R. MATSON
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PROFESSIONAL ENGINEER
04/21/2014

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH
SB6	1	1	1
*** TOTALS	1	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-35-91	HWY: STH 100	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 436	E

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030220_mq_sp.ppt PLOT DATE : 4/29/2014 10:47:56 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp1 PLOT SCALE : 1:1

3

3

REMOVE TRAFFIC SIGNALS
STH 100 & STH 59

LOCATION	SPV.0105.3003 REMOVE TRAFFIC SIGNALS LS
STH 100 (S. 108TH STREET) & STH 59 (W. GREENFIELD AVENUE)	1
TOTAL	1

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0120 TRAFFIC SIGNAL FACE 5-12 INCH VERTICAL EACH	658.0225 BACKPLATES SIGNAL FACE 5 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
6	SB6	1	1	--	1	1	1	1	1	--
25	SB6	--	--	1	--	--	--	--	--	1
33	SB2	1	1	--	1	1	1	1	1	--
	*** TOTALS	2	2	1	2	2	2	2	2	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 59 & S. 92ND STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
4	EACH	POLES TYPE 13
2	EACH	MONOTUBE ARMS 40-FT
1	EACH	MONOTUBE ARMS 45-FT
1	EACH	MONOTUBE ARMS 50-FT
4	EACH	LUMINAIRE ARMS STEEL 8-FT
1	EACH	RADAR DETECTION SYSTEM
4	EACH	EVP DETECTOR HEADS

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	12	--
PB1	PB2	--	--	58
PB2	PB3	--	--	170
PB3	PB4	--	88	--
PB4	PB5	--	--	146
PB5	PB6	--	90	--
PB6	PB7	--	--	146
PB7	PB8	--	48	--
PB8	PB9	--	68	--
PB9	PB10		--	186
PB10	CB1	--	30	--
PB2	SB1	7	--	--
PB3	SB2	--	12	--
PB4	SB3	21	--	--
PB5	SB4	--	4	--
PB5	SB5	19	--	--
PB6	SB6	6	--	--
PB7	SB7	3	--	--
PB7	SB8	--	23	--
PB8	SB9	8	--	--
PB9	SB10	9	--	--
PB10	SB11	--	11	--
*** TOTALS		73	386	706

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
SB1	1
SB3	1
SB4	1
SB6	1
SB7	1
SB9	1
SB10	1
SB11	1
SB12	1
CB1	1
*** TOTAL	10

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

WISCONSIN JASON R. MATSON E-[illegible] PROFESSIONAL ENGINEER 4/29/2014

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	40+60.0	57.0' LT	1
PB2	40+60.0	28.0' LT	1
PB3	40+60.0	56.7' RT	1
PB4	542+09.5	40.5' LT	1
PB5	542+13.1	32.0' RT	1
PB6	541+84.5	54.4' RT	1
PB7	39+41.5	45.6' LT	1
PB8	39+52.7	64.6' LT	1
PB9	39+52.3	98.2' LT	1
PB10	40+46.6	61.6' LT	1
		*** TOTAL	10

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 438	E

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030230_mq_sp.ppt PLOT DATE : 4/29/2014 10:48:25 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp1 PLOT SCALE : 1:1

STH 59 & S. 92ND STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

REMOVING PULL BOXES

EXISTING PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
PB10	1
PB11	1
PB12	1
*** TOTAL	12

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0290 CABLE TRAFFIC SIGNAL 21-14 AWG LF
CB1	SB1	--	--	83
CB1	SB2	--	189	--
CB1	SB3	--	258	--
CB1	SB4	--	333	--
CB1	SB5	345	--	--
CB1	SB6	--	331	--
CB1	SB7	239	--	--
CB1	SB8	--	259	--
CB1	SB9	--	204	--
CB1	SB11	--	48	--
	*** TOTALS	584	1622	83

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 14	--	22
SB1	HEAD 16	19	--
SB1	HEAD 22	14	--
SB1	HEAD 23	14	--
SB2	HEAD 12	65	--
SB2	HEAD 13	53	--
SB2	HEAD 15	--	75
SB2	HEAD 25	14	--
SB3	HEAD 4	--	22
SB3	HEAD 6	19	--
SB3	HEAD 24	14	--
SB4	HEAD 2	53	--
SB4	HEAD 3	43	--
SB4	HEAD 5	--	65
SB5	HEAD 27	14	--
SB6	HEAD 11	19	--
SB6	HEAD 19	--	22
SB6	HEAD 26	14	--
SB7	HEAD 21	14	--
SB8	HEAD 17	55	--
SB8	HEAD 18	44	--
SB8	HEAD 20	--	66
SB9	HEAD 1	19	--
SB9	HEAD 9	--	22
SB9	HEAD 28	14	--
SB11	HEAD 7	63	--
SB11	HEAD 8	51	--
SB11	HEAD 10	--	79
	*** TOTALS	615	373

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0105 CONCRETE BASES TYPE 5 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	40+54.2	23.7' LT	--	1	--	--	--
SB2	541+87.2	53.0' LT	--	--	--	1	--
SB3	541+89.1	43.8' LT	1	--	--	--	--
SB4	542+12.3	36.0' RT	--	--	--	1	--
SB5	541+94.0	35.3' RT	1	--	--	--	--
SB6	541+85.4	48.7' RT	1	--	--	--	--
SB7	39+43.8	47.8' LT	1	--	--	--	--
SB8	39+18.6	49.2' LT	--	--	--	1	--
SB9	39+49.8	57.2' LT	1	--	--	--	--
SB10	39+52.2	107.2' LT	--	--	1	--	--
SB11	40+53.0	71.1' LT	--	--	--	1	--
CB1	40+56.4	59.0' LT	--	--	--	--	1
		*** TOTALS	5	1	1	4	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 439	E

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030230_mq_sp.ppt PLOT DATE : 4/29/2014 10:48:25 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp2 PLOT SCALE : 1:1

STH 59 & S. 92ND STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

LIGHTING WIRE

FROM	TO	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB1	83	--
SB1	LUMIN	--	117
SB1	SB2	144	--
SB2	LUMIN	--	123
SB2	SB4	192	--
SB4	LUMIN	--	123
CB1	SB11	48	--
SB11	LUMIN	--	123
SB11	SB10	153	--
SB10	LUMIN	--	117
SB10	SB8	146	--
SB8	LUMIN	--	123
*** TOTALS		766	726

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	83
SB1	SB2	144
SB2	SB3	117
SB3	SB4	141
SB4	SB5	50
SB5	SB6	110
SB6	SB7	122
SB7	SB8	50
SB8	SB9	95
SB9	SB10	91
SB10	SB11	153
SB11	CB1	48
PB1	CB1	27
PB2	SB1	27
PB3	SB2	32
PB4	SB3	41
PB5	SB4	27
PB6	SB6	26
PB7	SB7	23
PB8	SB9	28
PB9	SB10	29
PB10	CB1	33
*** TOTAL		1497

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF
CB1	SB11 (HEAD A)	128	128
CB1	SB4 (HEAD B)	403	403
CB1	SB8 (HEAD C)	329	329
CB1	SB2 (HEAD D)	264	264
*** TOTAL		1124	1124

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
STH 59 & S. 92ND STREET

BASE NO.	656.0200.3004 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
***TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** QUANTITIES LISTED ELSEWHERE ON PLAN

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030230_mq_sp.ppt PLOT DATE : 4/29/2014 10:48:25 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp3 PLOT SCALE : 1:1

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASE BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0322 POLES TYPE 5-ALUMINUM EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT EACH	657.1360 INSTALL POLES TYPE 13 EACH
SB1	--	1	1	--	--	--	1	--	--
SB2	--	--	--	--	--	--	--	--	1
SB3	1	--	--	--	1	--	--	--	--
SB4	--	--	--	--	--	--	--	--	1
SB5	1	--	--	--	--	1	--	--	--
SB6	1	--	--	--	1	--	--	--	--
SB7	1	--	--	--	--	1	--	--	--
SB8	--	--	--	--	--	--	--	--	1
SB9	1	--	--	--	1	--	--	--	--
SB10	--	1	--	1	--	--	--	1	--
SB11	--	--	--	--	--	--	--	--	1
*** TOTALS	5	2	1	1	3	2	1	1	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.1540 INSTALL MONOTUBE ARMS 40-FT EACH	657.1545 INSTALL MONOTUBE ARMS 45-FT EACH	657.1550 INSTALL MONOTUBE ARMS 50-FT EACH	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1120 LUMINAIRES UTILITY LED B EACH
SB1	--	--	--	--	2	1
SB2	--	1	--	1	1	1
SB3	--	--	--	--	1	--
SB4	1	--	--	1	--	1
SB5	--	--	--	--	2	--
SB6	--	--	--	--	--	--
SB7	--	--	--	--	1	--
SB8	1	--	--	1	--	1
SB9	--	--	--	--	1	--
SB10	--	--	--	--	--	1
SB11	--	--	1	1	--	1
*** TOTALS	2	1	1	4	8	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB9	1	--	1	--	--	1	1	1	--	--	--	--
2	SB4	1	--	1	--	--	1	1	1	--	--	--	--
3	SB4	1	--	1	--	--	1	1	1	--	--	--	--
4	SB3	--	1	--	1	--	--	--	--	1	2	1	--
5	SB4	--	1	--	1	--	--	--	--	1	2	1	--
6	SB3	1	--	1	--	--	1	1	1	--	--	--	--
7	SB11	1	--	1	--	--	1	1	1	--	--	--	--
8	SB11	1	--	1	--	--	1	1	1	--	--	--	--
9	SB9	--	1	--	1	--	--	--	--	1	2	1	--
10	SB11	--	1	--	1	--	--	--	--	1	2	1	--
11	SB6	1	--	1	--	--	1	1	1	--	--	--	--
12	SB2	1	--	1	--	--	1	1	1	--	--	--	--
13	SB2	1	--	1	--	--	1	1	1	--	--	--	--
14	SB1	--	1	--	1	--	--	--	--	1	2	1	--
15	SB2	--	1	--	1	--	--	--	--	1	2	1	--
16	SB1	1	--	1	--	--	1	1	1	--	--	--	--
17	SB8	1	--	1	--	--	1	1	1	--	--	--	--
18	SB8	1	--	1	--	--	1	1	1	--	--	--	--
19	SB6	--	1	--	1	--	--	--	--	1	2	1	--
20	SB8	--	1	--	1	--	--	--	--	1	2	1	--
21	SB7	--	--	--	--	1	--	--	--	--	--	--	1
22	SB1	--	--	--	--	1	--	--	--	--	--	--	1
23	SB1	--	--	--	--	1	--	--	--	--	--	--	1
24	SB3	--	--	--	--	1	--	--	--	--	--	--	1
25	SB2	--	--	--	--	1	--	--	--	--	--	--	1
26	SB6	--	--	--	--	1	--	--	--	--	--	--	1
27	SB4	--	--	--	--	1	--	--	--	--	--	--	1
28	SB9	--	--	--	--	1	--	--	--	--	--	--	1
	*** TOTALS	12	8	12	8	8	12	12	12	8	16	8	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

SIGNAL MOUNTING HARDWARE
STH 59 & S. 92ND STREET

LOCATION	658.5069.3004 SIGNAL MOUNTING HARDWARE LS
STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET	1
TOTAL	1

STH 59 & S. 92ND STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
STH 59 & S. 92ND STREET

LOCATION	661.0200.3004 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS	661.0300 GENERATORS DAYS
STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET	1	2
*** TOTALS	1	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED AUTOSCOPE VIDEO DETECTION SYSTEM
STH 59 & S. 92ND STREET

LOCATION	SPV.0105.3025 TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM LS
STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET	1
TOTAL	1

3

REMOVE TRAFFIC SIGNALS
STH 59 & S. 92ND STREET

LOCATION	SPV.0105.3004 REMOVE TRAFFIC SIGNALS LS
STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET	1
TOTAL	1

INSTALL STATE FURNISHED EVP DETECTOR HEADS
STH 59 & S. 92ND STREET

LOCATION	SPV.0105.3032 INSTALL STATE FURNISHED EVP DETECTOR HEADS LS
STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET	1
TOTAL	1

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET
STH 59 & S. 92ND STREET

LOCATION	SPV.0105.3011 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET LS
STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET	1
TOTAL	1

TEMPORARY EVP SYSTEM
STH 59 & S. 92ND STREET

LOCATION	SPV.0105.3038 TEMPORARY EVP SYSTEM LS
STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET	1
TOTAL	1

TRANSPORTING SIGNAL AND LIGHTING MATERIALS
STH 59 & S. 92ND STREET

LOCATION	SPV.0105.3018 TRANSPORTING SIGNAL AND LIGHTING MATERIALS LS
STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET	1
TOTAL	1

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030230_mq_sp.ppt PLOT DATE : 4/29/2014 10:48:25 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp6 PLOT SCALE : 1:1

STH 59 & STH 181 (S. 84TH STREET)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
2	EACH	POLES TYPE 10
2	EACH	POLES TYPE 13
2	EACH	MONOTUBE ARMS 30-FT
1	EACH	MONOTUBE ARMS 40-FT
1	EACH	MONOTUBE ARMS 45-FT
4	EACH	LUMINAIRE ARMS STEEL 8-FT
1	EACH	RADAR DETECTION SYSTEM
4	EACH	EVP DETECTOR HEADS

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	81	--
PB1	PB2	--	--	142
PB2	PB3	--	56	--
PB3	PB4	--	--	110
PB4	PB5	--	--	70
PB5	PB6	--	56	--
PB6	PB7	--	--	160
PB7	PB8	--	66	--
PB8	PB9	--	--	88
PB9	PB10	--	--	88
PB10	CB1	--	54	--
PB1	SB1	21	--	--
PB1	SB2	30	--	--
PB2	SB3	--	10	--
PB2	SB4	9	--	--
PB3	SB5	10	--	--
PB4	SB6	5	--	--
PB5	SB7	--	6	--
PB5	SB8	5	--	--
PB6	SB9	11	--	--
PB6	SB10	40	--	--
PB7	SB11	--	14	--
PB7	SB12	6	--	--
PB8	SB13	19	--	--
PB9	SB14	21	--	--
PB10	SB15	--	11	--
PB10	SB16	26	--	--
*** TOTALS		203	354	658

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE



REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
SB2	1
SB3	1
SB4	1
SB6	1
SB8	1
SB9	1
SB10	1
SB12	1
CB1	1
*** TOTAL	9

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	567+60.0	26.0' RT	1
PB2	567+60.0	44.5' LT	1
PB3	567+76.2	66.8' LT	1
PB4	568+31.3	69.3' LT	1
PB5	568+65.7	70.8' LT	1
PB6	568+85.0	54.0' LT	1
PB7	568+85.0	26.4' RT	1
PB8	568+70.9	56.4' RT	1
PB9	568+26.7	58.4' RT	1
PB10	567+82.6	60.4' RT	1
		*** TOTAL	10

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 444	E

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030240_mq_sp.ppt PLOT DATE : 4/29/2014 10:49:03 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp1 PLOT SCALE : 1:1

REMOVING PULL BOXES

EXISTING PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
PB10	1
PB11	1
PB12	1
PB13	1
*** TOTAL	13

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1	--	75
CB1	SB3	--	151
CB1	SB4	150	--
CB1	SB5	--	195
CB1	SB6	--	261
CB1	SB7	--	313
CB1	SB8	312	--
CB1	SB9	--	321
CB1	SB11	--	228
CB1	SB12	220	--
CB1	SB13	--	184
CB1	SB14	--	126
CB1	SB15	--	56
CB1	SB16	71	--
*** TOTALS		753	1910

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0105 CONCRETE BASES TYPE 5 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	567+80.4	28.3' RT	1	--	--	--	--	--
SB2	567+30.4	26.0' RT	--	--	1	--	--	--
SB3	567+53.2	52.0' LT	--	--	--	--	1	--
SB4	567+68.1	48.2' LT	1	--	--	--	--	--
SB5	567+74.2	56.5' LT	1	--	--	--	--	--
SB6	568+31.5	64.7' LT	--	1	--	--	--	--
SB7	568+66.5	77.1' LT	--	--	--	1	--	--
SB8	568+68.7	67.3' LT	1	--	--	--	--	--
SB9	568+75.4	59.4' LT	1	--	--	--	--	--
SB10	569+25.4	54.0' LT	--	--	1	--	--	--
SB11	568+01.8	31.0' RT	--	--	--	--	1	--
SB12	568+80.0	29.3' RT	1	--	--	--	--	--
SB13	568+72.6	37.3' RT	1	--	--	--	--	--
SB14	568+25.8	38.2' RT	--	1	--	--	--	--
SB15	567+91.1	53.0' RT	--	--	--	1	--	--
SB16	567+89.2	35.4' RT	1	--	--	--	--	--
CB1	567+80.3	42.5' RT	--	--	--	--	--	1
		*** TOTALS	8	2	2	2	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 59 & STH 181 (S. 84TH STREET)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 1	19	--
SB1	HEAD 9	--	22
SB1	HEAD 28	14	--
SB3	HEAD 7	56	--
SB3	HEAD 8	44	--
SB3	HEAD 10	--	70
SB4	HEAD 23	14	--
SB5	HEAD 14	--	22
SB5	HEAD 16	19	--
SB5	HEAD 22	14	--
SB6	HEAD 15	--	27
SB7	HEAD 12	52	--
SB7	HEAD 13	40	--
SB8	HEAD 25	14	--
SB9	HEAD 4	--	22
SB9	HEAD 6	19	--
SB9	HEAD 24	14	--
SB11	HEAD 2	54	--
SB11	HEAD 3	43	--
SB11	HEAD 5	--	66
SB12	HEAD 27	14	--
SB13	HEAD 11	19	--
SB13	HEAD 19	--	22
SB13	HEAD 26	14	--
SB14	HEAD 20	--	27
SB15	HEAD 17	52	--
SB15	HEAD 18	40	--
SB16	HEAD 21	14	--
*** TOTALS		569	278

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-35-91	HWY: STH 59	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 445	E

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030240_mq_sp.ppt PLOT DATE : 4/29/2014 10:49:03 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp2 PLOT SCALE : 1:1

LIGHTING WIRE

FROM	TO	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB2	84	--
SB2	LUMIN	--	117
SB2	SB3	151	--
SB3	LUMIN	--	123
SB3	SB7	206	--
SB7	LUMIN	--	123
CB1	SB15	56	--
SB15	LUMIN	--	123
SB15	SB11	218	--
SB11	LUMIN	--	123
SB11	SB10	174	--
SB10	LUMIN	--	117
*** TOTALS		889	726

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	75
SB1	SB3	142
SB3	SB4	43
SB4	SB5	87
SB5	SB6	110
SB6	SB7	86
SB7	SB8	35
SB8	SB9	84
SB9	SB11	145
SB11	SB12	44
SB12	SB13	98
SB13	SB14	124
SB14	SB15	116
SB15	SB16	61
SB16	CB1	71
PB1	CB1	50
PB2	SB4	29
PB3	SB5	30
PB4	SB6	25
PB5	SB8	25
PB6	SB9	31
PB7	SB12	26
PB8	SB13	39
PB9	SB14	41
PB10	SB15	31
*** TOTAL		1648

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 59 & STH 181 (S. 84TH STREET)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF
CB1	SB3 (HEAD A)	226	226
CB1	SB11 (HEAD B)	298	298
CB1	SB15 (HEAD C)	116	116
CB1	SB7 (HEAD D)	373	373
*** TOTAL		1013	1013

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
STH 59 & STH 181

BASE NO.	656.0200.3005 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
***TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** QUANTITIES LISTED ELSEWHERE ON PLAN

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030240_mq_sp.ppt PLOT DATE : 4/29/2014 10:49:03 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp3 PLOT SCALE : 1:1

3

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASE BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0322 POLES TYPE 5-ALUMINUM EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1360 INSTALL POLES TYPE 13 EACH
SB1	1	--	--	--	1	--	--	--	--
SB2	--	1	--	1	--	--	1	--	--
SB3	--	--	--	--	--	--	--	--	1
SB4	1	--	--	--	--	1	--	--	--
SB5	1	--	--	--	1	--	--	--	--
SB6	1	--	1	--	--	--	--	--	--
SB7	--	--	--	--	--	--	--	1	--
SB8	1	--	--	--	--	1	--	--	--
SB9	1	--	--	--	1	--	--	--	--
SB10	--	1	--	1	--	--	1	--	--
SB11	--	--	--	--	--	--	--	--	1
SB12	1	--	--	--	--	1	--	--	--
SB13	1	--	--	--	1	--	--	--	--
SB14	1	--	1	--	--	--	--	--	--
SB15	--	--	--	--	--	--	--	1	--
SB16	1	--	--	--	--	1	--	--	--
*** TOTALS	10	2	2	2	4	4	2	2	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1540 INSTALL MONOTUBE ARMS 40-FT EACH	657.1545 INSTALL MONOTUBE ARMS 45-FT EACH	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1120 LUMINAIRES UTILITY LED B EACH
SB1	--	--	--	--	1	--
SB2	--	--	--	--	--	1
SB3	--	--	1	1	--	1
SB4	--	--	--	--	1	--
SB5	--	--	--	--	1	--
SB6	--	--	--	--	--	--
SB7	1	--	--	1	--	1
SB8	--	--	--	--	1	--
SB9	--	--	--	--	1	--
SB10	--	--	--	--	--	1
SB11	--	1	--	1	--	1
SB12	--	--	--	--	1	--
SB13	--	--	--	--	1	--
SB14	--	--	--	--	--	--
SB15	1	--	--	1	--	1
SB16	--	--	--	--	1	--
*** TOTALS	2	1	1	4	8	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB1	1	--	1	--	--	1	1	1	--	--	--	--
2	SB11	1	--	1	--	--	1	1	1	--	--	--	--
3	SB11	1	--	1	--	--	1	1	1	--	--	--	--
4	SB9	--	1	--	1	--	--	--	--	1	2	1	--
5	SB11	--	1	--	1	--	--	--	--	1	2	1	--
6	SB9	1	--	1	--	--	1	1	1	--	--	--	--
7	SB3	1	--	1	--	--	1	1	1	--	--	--	--
8	SB3	1	--	1	--	--	1	1	1	--	--	--	--
9	SB1	--	1	--	1	--	--	--	--	1	2	1	--
10	SB3	--	1	--	1	--	--	--	--	1	2	1	--
11	SB13	1	--	1	--	--	1	1	1	--	--	--	--
12	SB7	1	--	1	--	--	1	1	1	--	--	--	--
13	SB7	1	--	1	--	--	1	1	1	--	--	--	--
14	SB5	--	1	--	1	--	--	--	--	1	2	1	--
15	SB6	--	1	--	1	--	--	--	--	1	2	1	--
16	SB5	1	--	1	--	--	1	1	1	--	--	--	--
17	SB15	1	--	1	--	--	1	1	1	--	--	--	--
18	SB15	1	--	1	--	--	1	1	1	--	--	--	--
19	SB13	--	1	--	1	--	--	--	--	1	2	1	--
20	SB14	--	1	--	1	--	--	--	--	1	2	1	--
21	SB16	--	--	--	--	1	--	--	--	--	--	--	1
22	SB5	--	--	--	--	1	--	--	--	--	--	--	1
23	SB4	--	--	--	--	1	--	--	--	--	--	--	1
24	SB9	--	--	--	--	1	--	--	--	--	--	--	1
25	SB8	--	--	--	--	1	--	--	--	--	--	--	1
26	SB13	--	--	--	--	1	--	--	--	--	--	--	1
27	SB12	--	--	--	--	1	--	--	--	--	--	--	1
28	SB1	--	--	--	--	1	--	--	--	--	--	--	1
*** TOTALS		12	8	12	8	8	12	12	12	8	16	8	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SIGNAL MOUNTING HARDWARE
STH 59 & STH 181

LOCATION	658.5069.3005 SIGNAL MOUNTING HARDWARE LS
STH 59 (W. GREENFIELD AVENUE) & STH 181 (S. 84TH STREET)	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
STH 59 & STH 181

LOCATION	661.0200.3005 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS	661.0300 GENERATORS DAYS
STH 59 (W. GREENFIELD AVENUE) & STH 181 (S. 84TH STREET)	1	2
*** TOTALS	1	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 59 & STH 181 (S. 84TH STREET)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

REMOVE TRAFFIC SIGNALS
STH 59 & STH 181

LOCATION	SPV.0105.3005 REMOVE TRAFFIC SIGNALS LS
STH 59 (W. GREENFIELD AVENUE) & STH 181 (S. 84TH STREET)	1
TOTAL	1

TRANSPORTING AND INSTALLING STATE FURNISHED AUTOSCOPE VIDEO DETECTION SYSTEM
STH 59 & STH 181

LOCATION	SPV.0105.3026 TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM LS
STH 59 (W. GREENFIELD AVENUE) & STH 181 (S. 84TH STREET)	1
TOTAL	1

3

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET
STH 59 & STH 181

LOCATION	SPV.0105.3012 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET LS
STH 59 (W. GREENFIELD AVENUE) & STH 181 (S. 84TH STREET)	1
TOTAL	1

INSTALL STATE FURNISHED EVP DETECTOR HEADS
STH 59 & STH 181

LOCATION	SPV.0105.3033 INSTALL STATE FURNISHED EVP DETECTOR HEADS LS
STH 59 (W. GREENFIELD AVENUE) & STH 181 (S. 84TH STREET)	1
TOTAL	1

TRANSPORTING SIGNAL AND LIGHTING MATERIALS
STH 59 & STH 181

LOCATION	SPV.0105.3019 TRANSPORTING SIGNAL AND LIGHTING MATERIALS LS
STH 59 (W. GREENFIELD AVENUE) & STH 181 (S. 84TH STREET)	1
TOTAL	1

TEMPORARY EVP SYSTEM
STH 59 & STH 181

LOCATION	SPV.0105.3039 TEMPORARY EVP SYSTEM LS
STH 59 (W. GREENFIELD AVENUE) & STH 181 (S. 84TH STREET)	1
TOTAL	1

STH 181 (S. 84TH STREET) & STATE FAIR PARK GATE 4

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
2	EACH	POLES TYPE 10
2	EACH	MONOTUBE ARMS 30-FT
2	EACH	LUMINAIRE ARMS STEEL 8-FT
1	EACH	RADAR DETECTION SYSTEM

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
SB3	1
SB4	1
SB7	1
	3

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF
PB1	SB1	14	--
PB1	SB7	--	20
PB1	SB8	10	--
PB3	SB2	6	--
PB4	SB3	--	4
PB5	SB4	17	--
PB5	SB5	3	--
PB5	SB6	15	--
*** TOTALS		65	24

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE



INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
*** TOTAL	5

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BASES TYPE 10 EACH
SB2	233+32.8	31.0' RT	--	1	--
SB3	233+37.2	30.5' LT	--	--	1
SB4	233+77.9	29.5' LT	--	1	--
SB6	234+09.0	30.5' LT	1	--	--
SB7	234+24.2	35.0' RT	--	--	1
SB8	234+11.0	29.3' RT	1	--	--
		*** TOTALS	2	2	2

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 450	E

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030320_mq_sp.ppt PLOT DATE : 4/29/2014 10:50:02 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp1 PLOT SCALE : 1:1

STH 181 (S. 84TH STREET) & STATE FAIR PARK GATE 4

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF
SB1	HEAD 7	19
SB1	HEAD 11	14
SB2	HEAD 1	19
SB2	HEAD 13	14
SB3	HEAD 5	53
SB3	HEAD 6	42
SB4	HEAD 8	19
SB5	HEAD 9	19
SB6	HEAD 4	19
SB6	HEAD 10	14
SB7	HEAD 2	56
SB7	HEAD 3	45
SB8	HEAD 12	14
	*** TOTALS	347

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING WIRE

FROM	TO	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB2	141	--
SB2	LUMIN	--	117
SB2	SB3	111	--
SB3	LUMIN	--	123
CB1	SB7	54	--
SB7	LUMIN	--	123
	*** TOTALS	306	363

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF
CB1	SB3 (HEAD A)	276	276
CB1	SB7 (HEAD B)	114	114
CB1	SB4 (HEAD D)	179	179
	*** TOTALS	569	569

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1	--	48
CB1	SB2	--	141
CB1	SB3	--	216
CB1	SB4	--	139
CB1	SB5	--	125
CB1	SB6	--	137
CB1	SB7	--	54
CB1	SB8	44	--
	*** TOTALS	44	860

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	48
SB1	SB2	145
SB2	SB3	111
SB3	SB4	122
SB4	SB5	44
SB5	SB6	42
SB6	SB7	147
SB7	SB8	54
SB8	CB1	44
PB1	CB1	30
PB3	SB2	26
PB4	SB3	24
PB5	SB5	23
	*** TOTAL	860

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
STH 181 & STATE FAIR PARK GATE 4

BASE NO.	656.0200.3006 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030320_mq_sp.ppt PLOT DATE : 4/29/2014 10:50:02 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp2 PLOT SCALE : 1:1

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASE BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0310 POLES TYPE 3 EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH
SB2	--	1	--	1	--	--	1
SB3	--	--	--	--	--	--	--
SB4	--	1	1	--	--	--	--
SB6	1	--	--	--	1	--	--
SB7	--	--	--	--	--	--	--
SB8	1	--	--	--	--	1	--
*** TOTALS	2	2	1	1	1	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.1350 INSTALL POLES TYPE 10 EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1120 LUMINAIRES UTILITY LED B EACH
SB2	--	--	--	1	1
SB3	1	1	1	--	1
SB4	--	--	--	--	--
SB6	--	--	--	1	--
SB7	1	1	1	--	1
SB8	--	--	--	1	--
*** TOTALS	2	2	2	3	3

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB2	1	1	--	1	1	1	--
2	SB7	1	1	--	1	1	1	--
3	SB7	1	1	--	1	1	1	--
4	SB6	1	1	--	1	1	1	--
5	SB3	1	1	--	1	1	1	--
6	SB3	1	1	--	1	1	1	--
7	SB1	1	1	--	1	1	1	--
8	SB4	1	1	--	1	1	1	--
9	SB5	1	1	--	1	1	1	--
10	SB6	--	--	1	--	--	--	1
11	SB1	--	--	1	--	--	--	1
12	SB8	--	--	1	--	--	--	1
13	SB2	--	--	1	--	--	--	1
*** TOTALS		9	9	4	9	9	9	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 181 (S. 84TH STREET) & STATE FAIR PARK GATE 4

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

SIGNAL MOUNTING HARDWARE
STH 181 & STATE FAIR PARK GATE 4

LOCATION	658.5069.3006 SIGNAL MOUNTING HARDWARE LS
STH 181 (S. 84TH STREET) & STATE FAIR PARK GATE 4	1
TOTAL	1

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET
STH 181 & STATE FAIR PARK GATE 4

LOCATION	SPV.0105.3013 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET LS
STH 181 (S. 84TH STREET) & STATE FAIR PARK GATE 4	1
TOTAL	1

3

REMOVE TRAFFIC SIGNALS
STH 181 & STATE FAIR PARK GATE 4

LOCATION	SPV.0105.3006 REMOVE TRAFFIC SIGNALS LS
STH 181 (S. 84TH STREET) & STATE FAIR PARK GATE 4	1
TOTAL	1

TRANSPORTING SIGNAL AND LIGHTING MATERIALS
STH 181 & STATE FAIR PARK GATE 4

LOCATION	SPV.0105.3020 TRANSPORTING SIGNAL AND LIGHTING MATERIALS LS
STH 181 (S. 84TH STREET) & STATE FAIR PARK GATE 4	1
TOTAL	1

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030320_mq_sp.ppt PLOT DATE : 4/29/2014 10:50:02 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp5 PLOT SCALE : 1:1

INSTALL STATE FURNISHED EVP DETECTOR HEADS
STH 181 & STATE FAIR PARK GATE 4

LOCATION	SPV.0105.3034 INSTALL STATE FURNISHED EVP DETECTOR HEADS LS
STH 181 (S. 84TH STREET) & STATE FAIR PARK GATE 4	1
TOTAL	1

TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM
STH 181 & STATE FAIR PARK GATE 4

LOCATION	SPV.0105.3027 TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM LS
STH 181 (S. 84TH STREET) & STATE FAIR PARK GATE 4	1
TOTAL	1

STH 181 (S. 84TH STREET) & STATE FAIR PARK GATE 4

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE
STH 181 & STATE FAIR PARK GATE 4

LOCATION	SPV.0105.3043 REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE LS
STH 181 (S. 84TH STREET) & STATE FAIR PARK GATE 4	1
TOTAL	1

STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
2	EACH	POLES TYPE 10
2	EACH	POLES TYPE 13
1	EACH	MONOTUBE ARMS 25-FT
1	EACH	MONOTUBE ARMS 30-FT
1	EACH	MONOTUBE ARMS 35-FT
1	EACH	MONOTUBE ARMS 45-FT
4	EACH	LUMINAIRE ARMS STEEL 8-FT
1	EACH	RADAR DETECTION SYSTEM
4	EACH	EVP DETECTOR HEADS

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	27	--
PB1	PB2	--	86	--
PB2	PB3	--	--	142
PB3	PB4	--	50	--
PB4	PB5	--	--	136
PB5	PB6	--	64	--
PB6	PB7	--	--	140
PB7	PB8	--	102	--
PB8	PB9	--	--	104
PB9	CB1	--	21	--
PB1	SB1	--	10	--
PB2	SB2	5	--	--
PB3	SB3	--	8	--
PB4	SB4	11	--	--
PB5	SB5	--	5	--
PB5	SB6	6	--	--
PB6	SB7	12	--	--
PB7	SB8	--	8	--
PB7	SB9	12	--	--
PB8	SB10	24	--	--
*** TOTALS		70	381	522

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

WISCONSIN JASON R. MATSON 37 WI PROFESSIONAL ENGINEER 04/24/2014

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
SB1	1
SB2	1
SB4	1
SB6	1
SB7	1
SB9	1
*** TOTAL	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	251+12.0	69.8' LT	1
PB2	251+34.7	42.0' LT	1
PB3	251+34.7	29.1' RT	1
PB4	251+21.2	47.6' RT	1
PB5	250+53.6	47.6' RT	1
PB6	250+33.9	28.0' RT	1
PB7	250+33.9	42.0' LT	1
PB8	250+59.9	74.1' LT	1
PB9	251+11.9	74.8' LT	1
		*** TOTAL	9

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING PULL BOXES

EXISTING PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
PB10	1
PB11	1
PB12	1
PB13	1
*** TOTAL	13

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	251+14.1	59.9' LT	--	1	--	--
SB2	251+29.6	42.8' LT	1	--	--	--
SB3	251+34.4	37.0' RT	--	--	1	--
SB4	251+24.5	37.3' RT	1	--	--	--
SB5	250+51.0	51.9' RT	--	1	--	--
SB6	250+52.7	42.1' RT	1	--	--	--
SB7	250+45.5	32.0' RT	1	--	--	--
SB8	250+25.9	43.0' LT	--	--	1	--
SB9	250+45.9	43.4' LT	1	--	--	--
SB10	250+55.6	50.9' LT	1	--	--	--
CB1	251+19.3	74.9' LT	--	--	--	1
		*** TOTALS	6	2	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 12	48	--
SB1	HEAD 13	19	--
SB1	HEAD 15	--	58
SB2	HEAD 4	--	22
SB2	HEAD 6	19	--
SB2	HEAD 22	14	--
SB3	HEAD 2	58	--
SB3	HEAD 3	47	--
SB3	HEAD 5	--	69
SB3	HEAD 23	14	--
SB4	HEAD 11	19	--
SB5	HEAD 17	52	--
SB5	HEAD 18	40	--
SB6	HEAD 19	14	--
SB7	HEAD 1	19	--
SB7	HEAD 9	--	22
SB7	HEAD 24	14	--
SB8	HEAD 7	50	--
SB8	HEAD 8	39	--
SB8	HEAD 10	--	63
SB9	HEAD 21	14	--
SB10	HEAD 14	--	22
SB10	HEAD 16	19	--
SB10	HEAD 20	14	--
	*** TOTALS	513	256

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030330_mq_sp.ppt PLOT DATE : 4/29/2014 10:50:43 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp2 PLOT SCALE : 1:1

STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1	--	46
CB1	SB2	--	100
CB1	SB3	--	190
CB1	SB4	--	234
CB1	SB5	--	312
CB1	SB6	313	--
CB1	SB7	--	267
CB1	SB8	--	177
CB1	SB9	181	--
CB1	SB10	--	126
*** TOTALS		494	1452

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	46
SB1	SB2	98
SB2	SB3	124
SB3	SB4	84
SB4	SB5	124
SB5	SB6	35
SB6	SB7	90
SB7	SB8	130
SB8	SB9	44
SB9	SB10	127
SB10	CB1	126
PB1	CB1	32
PB2	SB2	25
PB3	SB3	28
PB4	SB4	31
PB5	SB5	25
PB6	SB7	32
PB7	SB8	28
PB8	SB10	44
PB9	CB1	30
*** TOTAL		1303

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF
CB1	SB8 (HEAD A)	242	242
CB1	SB3 (HEAD B)	265	265
CB1	SB5 (HEAD C)	367	367
CB1	SB1 (HEAD D)	106	106
*** TOTAL		980	980

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING WIRE

FROM	TO	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB1	46	--
SB1	LUMIN	--	123
SB1	SB3	188	--
SB3	LUMIN	--	123
CB1	SB8	177	--
SB8	LUMIN	--	123
SB8	SB5	171	--
SB5	LUMIN	--	123
*** TOTALS		582	492

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
STH 181 & W. SCHLINGER AVENUE

BASE NO.	656.0200.3007 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
***TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** QUANTITIES LISTED ELSEWHERE ON PLAN

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030330_mq_sp.ppt PLOT DATE : 4/29/2014 10:50:43 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp3 PLOT SCALE : 1:1

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1360 INSTALL POLES TYPE 13 EACH
SB1	--	--	--	--	1	--
SB2	1	--	1	--	--	--
SB3	--	--	--	--	--	1
SB4	1	1	--	--	--	--
SB5	--	--	--	--	1	--
SB6	1	--	--	1	--	--
SB7	1	--	1	--	--	--
SB8	--	--	--	--	--	1
SB9	1	--	--	1	--	--
SB10	1	--	1	--	--	--
*** TOTALS	6	1	3	2	2	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.1525 INSTALL MONOTUBE ARMS 25-FT EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1535 INSTALL MONOTUBE ARMS 35-FT EACH	657.1545 INSTALL MONOTUBE ARMS 45-FT EACH	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1120 LUMINAIRES UTILITY LED B EACH
SB1	--	1	--	--	1	--	1
SB2	--	--	--	--	--	1	--
SB3	--	--	--	1	1	--	1
SB4	--	--	--	--	--	1	--
SB5	1	--	--	--	1	--	1
SB6	--	--	--	--	--	1	--
SB7	--	--	--	--	--	1	--
SB8	--	--	1	--	1	--	1
SB9	--	--	--	--	--	1	--
SB10	--	--	--	--	--	1	--
*** TOTALS	1	1	1	1	4	6	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB7	1	--	1	--	--	1	1	1	--	--	--	--
2	SB3	1	--	1	--	--	1	1	1	--	--	--	--
3	SB3	1	--	1	--	--	1	1	1	--	--	--	--
4	SB2	--	1	--	1	--	--	--	--	1	2	1	--
5	SB3	--	1	--	1	--	--	--	--	1	2	1	--
6	SB2	1	--	1	--	--	1	1	1	--	--	--	--
7	SB8	1	--	1	--	--	1	1	1	--	--	--	--
8	SB8	1	--	1	--	--	1	1	1	--	--	--	--
9	SB7	--	1	--	1	--	--	--	--	1	2	1	--
10	SB8	--	1	--	1	--	--	--	--	1	2	1	--
11	SB4	1	--	1	--	--	1	1	1	--	--	--	--
12	SB1	1	--	1	--	--	1	1	1	--	--	--	--
13	SB1	1	--	1	--	--	1	1	1	--	--	--	--
14	SB10	--	1	--	1	--	--	--	--	1	2	1	--
15	SB1	--	1	--	1	--	--	--	--	1	2	1	--
16	SB10	1	--	1	--	--	1	1	1	--	--	--	--
17	SB5	1	--	1	--	--	1	1	1	--	--	--	--
18	SB5	1	--	1	--	--	1	1	1	--	--	--	--
19	SB6	--	--	--	--	1	--	--	--	--	--	--	1
20	SB10	--	--	--	--	1	--	--	--	--	--	--	1
21	SB9	--	--	--	--	1	--	--	--	--	--	--	1
22	SB2	--	--	--	--	1	--	--	--	--	--	--	1
23	SB3	--	--	--	--	1	--	--	--	--	--	--	1
24	SB7	--	--	--	--	1	--	--	--	--	--	--	1
*** TOTALS		12	6	12	6	6	12	12	12	6	12	6	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SIGNAL MOUNTING HARDWARE
STH 181 & W. SCHLINGER AVENUE

LOCATION	658.5069.3007 SIGNAL MOUNTING HARDWARE LS
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
STH 181 & W. SCHLINGER AVENUE

LOCATION	661.0200.3007 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS	661.0300 GENERATORS DAYS
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE	1	2
*** TOTALS	1	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-35-91	HWY: STH 181	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 460	E

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030330_mq_sp.ppt PLOT DATE : 4/29/2014 10:50:43 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp5 PLOT SCALE : 1:1

STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

REMOVE TRAFFIC SIGNALS
STH 181 & W. SCHLINGER AVENUE

LOCATION	SPV.0105.3007 REMOVE TRAFFIC SIGNALS LS
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE	1
TOTAL	1

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET
STH 181 & W. SCHLINGER AVENUE

LOCATION	SPV.0105.3014 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET LS
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE	1
TOTAL	1

TRANSPORTING SIGNAL AND LIGHTING MATERIALS
STH 181 & W. SCHLINGER AVENUE

LOCATION	SPV.0105.3021 TRANSPORTING SIGNAL AND LIGHTING MATERIALS LS
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE	1
TOTAL	1

TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM
STH 181 & W. SCHLINGER AVENUE

LOCATION	SPV.0105.3028 TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM LS
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE	1
TOTAL	1

INSTALL STATE FURNISHED EVP DETECTOR HEADS
STH 181 & W. SCHLINGER AVENUE

LOCATION	SPV.0105.3035 INSTALL STATE FURNISHED EVP DETECTOR HEADS LS
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE	1
TOTAL	1

TEMPORARY EVP SYSTEM
STH 181 & W. SCHLINGER AVENUE

LOCATION	SPV.0105.3040 TEMPORARY EVP SYSTEM LS
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE	1
TOTAL	1

REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE
STH 181 & W. SCHLINGER AVENUE

LOCATION	SPV.0105.3044 REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE LS
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE	1
TOTAL	1

W. NATIONAL AVENUE & S. 102ND STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
2	EACH	POLES TYPE 10
2	EACH	POLES TYPE 12
1	EACH	MONOTUBE ARMS 20-FT
1	EACH	MONOTUBE ARMS 25-FT
2	EACH	MONOTUBE ARMS 35-FT
2	EACH	LUMINAIRE ARMS STEEL 8-FT
1	EACH	MICROWAVE DETECTION SYSTEM

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB6	1
SB7	1
SB8	1
SB11	1
TOTAL	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	21	--
PB1	PB2	--	--	158
PB2	PB3	--	72	--
PB3	PB4	--	--	112
PB4	PB5	--	--	96
PB5	PB6	--	--	58
PB6	PB7	--	112	--
PB7	PB8	--	--	72
PB8	PB9	--	86	--
PB9	PB10	--	--	58
PB10	PB11	--	--	106
PB11	PB12	--	--	120
PB12	CB1	--	24	--
PB1	SB1	10	--	--
PB2	SB2	--	4	--
PB2	SB3	8	--	--
PB3	SB4	21	--	--
PB4	SB5	10	--	--
PB5	SB6	--	15	--
PB5	SB7	28	--	--
PB7	SB8	12	--	--
PB8	SB9	--	12	--
PB10	SB10	8	--	--
PB11	SB11	4	--	--
PB12	SB12	--	13	--
PB12	SB13	9	--	--
	*** TOTALS	110	359	780

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	36+16.1	71.0' LT	1
PB2	36+95.2	73.7' LT	1
PB3	37+23.3	51.3' LT	1
PB4	37+20.9	4.4' RT	1
PB5	37+18.9	52.0' RT	1
PB6	37+17.7	80.4' RT	1
PB7	36+79.1	102.0' RT	1
PB8	36+43.2	101.9' RT	1
PB9	36+16.5	80.3' RT	1
PB10	36+14.3	51.4' RT	1
PB11	36+10.3	1.0' LT	1
PB12	36+06.7	60.8' LT	1
		*** TOTALS	12

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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W. NATIONAL AVENUE & S. 102ND STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	SPV.0060.3110 CONCRETE CONTROL CABINET BASE TYPE 9 SPECIAL (MOD.) EACH
SB1	36+24.4	66.4' LT	1	--	--	--	--
SB2	36+95.3	70.1' LT	--	--	1	--	--
SB3	36+97.8	65.9' LT	1	--	--	--	--
SB4	37+02.8	54.4' LT	1	--	--	--	--
SB5	37+10.6	5.6' RT	--	1	--	--	--
SB6	37+03.6	51.8' RT	--	--	--	1	--
SB7	36+91.1	52.6' RT	1	--	--	--	--
SB8	36+82.0	90.6' RT	1	--	--	--	--
SB9	36+39.9	90.5' RT	--	--	1	--	--
SB10	36+22.6	52.6' RT	1	--	--	--	--
SB11	36+11.9	4.8' LT	--	1	--	--	--
SB12	35+96.1	52.7' LT	--	--	--	1	--
SB13	36+11.1	52.8' LT	1	--	--	--	--
CB1	36+13.6	64.8' LT	--	--	--	--	1
		*** TOTALS	7	2	2	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 14	19	--
SB1	HEAD 17	14	--
SB2	HEAD 12	51	--
SB2	HEAD 13	19	--
SB3	HEAD 18	14	--
SB4	HEAD 4	--	22
SB4	HEAD 6	19	--
SB4	HEAD 19	14	--
SB5	HEAD 5	--	27
SB6	HEAD 2	60	--
SB6	HEAD 3	46	--
SB7	HEAD 20	14	--
SB8	HEAD 11	19	--
SB8	HEAD 21	14	--
SB9	HEAD 15	44	--
SB9	HEAD 16	19	--
SB9	HEAD 22	14	--
SB10	HEAD 1	19	--
SB10	HEAD 9	--	22
SB10	HEAD 23	14	--
SB11	HEAD 10	--	27
SB12	HEAD 7	61	--
SB12	HEAD 8	49	--
SB13	HEAD 24	14	--
	*** TOTALS	537	98

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1	--	44
CB1	SB2	--	133
CB1	SB3	137	--
CB1	SB4	--	202
CB1	SB5	--	263
CB1	SB6	--	332
CB1	SB7	345	--
CB1	SB8	--	348
CB1	SB9	--	296
CB1	SB10	--	188
CB1	SB11	--	115
CB1	SB12	--	48
CB1	SB13	44	--
	*** TOTALS	526	1969

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING WIRE

FROM	TO	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB2	133	--
SB1	LUMIN	--	123
SB2	SB5	162	--
SB5	LUMIN	--	246
CB1	SB11	115	--
SB11	LUMIN	--	123
SB11	SB9	213	--
SB9	LUMIN	--	123
	*** TOTALS	623	615

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	44
SB1	SB2	133
SB2	SB3	36
SB3	SB4	105
SB4	SB5	127
SB5	SB6	113
SB6	SB7	67
SB7	SB8	181
SB8	SB9	100
SB9	SB10	148
SB10	SB11	105
SB11	SB12	117
SB12	SB13	46
SB13	CB1	44
PB1	CB1	30
PB2	SB2	24
PB3	SB4	41
PB4	SB5	30
PB5	SB6	35
PB6	SB6	80
PB7	SB8	32
PB8	SB9	32
PB9	SB10	73
PB10	SB10	28
PB11	SB11	24
PB12	SB13	29
	*** TOTAL	1824

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

W. NATIONAL AVENUE & S. 102ND STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF
CB1	SB12 (HEAD A)	113	113
CB1	SB6 (HEAD B)	397	397
CB1	SB9 (HEAD C)	346	346
CB1	SB2 (HEAD D)	188	188
	*** TOTALS	1044	1044

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
W. NATIONAL AVENUE & S. 102ND STREET

BASE NO.	656.0200.3101 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 464	E

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CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASE BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1355 INSTALL POLES TYPE 12 EACH
SB1	1	--	--	1	--	--	--	--	--
SB2	--	--	--	--	--	--	--	1	--
SB3	1	--	--	--	--	1	--	--	--
SB4	1	--	--	--	1	--	--	--	--
SB5	--	1	1	--	--	--	2	--	--
SB6	--	--	--	--	--	--	--	--	1
SB7	1	--	--	--	--	1	--	--	--
SB8	1	--	--	1	--	--	--	--	--
SB9	--	--	--	--	--	--	--	1	--
SB10	1	--	--	--	1	--	--	--	--
SB11	--	1	1	--	--	--	2	--	--
SB12	--	--	--	--	--	--	--	--	1
SB13	1	--	--	--	--	1	--	--	--
*** TOTALS	7	2	2	2	2	3	4	2	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.1520 INSTALL MONOTUBE ARMS 20-FT EACH	657.1525 INSTALL MONOTUBE ARMS 25-FT EACH	657.1535 INSTALL MONOTUBE ARMS 35-FT EACH	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	--	--	--	--	1	--
SB2	--	1	--	1	--	1
SB3	--	--	--	--	1	--
SB4	--	--	--	--	1	--
SB5	--	--	--	--	--	2
SB6	--	--	1	--	--	--
SB7	--	--	--	--	1	--
SB8	--	--	--	--	1	--
SB9	1	--	--	1	1	1
SB10	--	--	--	--	1	--
SB11	--	--	--	---	--	2
SB12	--	--	1	--	--	--
SB13	--	--	--	--	1	--
*** TOTALS	1	1	2	2	8	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

W. NATIONAL AVENUE & S. 102ND STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110* TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115* TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416* PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB10	1	--	1	--	--	1	1	1	--	--	--	--
2	SB6	1	--	1	--	--	1	1	1	--	--	--	--
3	SB6	1	--	1	--	--	1	1	1	--	--	--	--
4	SB4	--	1	--	1	--	--	--	--	1	2	1	--
5	SB5	--	1	--	1	--	--	--	--	1	2	1	--
6	SB4	1	--	1	--	--	1	1	1	--	--	--	--
7	SB12	1	--	1	--	--	1	1	1	--	--	--	--
8	SB12	1	--	1	--	--	1	1	1	--	--	--	--
9	SB10	--	1	--	1	--	--	--	--	1	2	1	--
10	SB11	--	1	--	1	--	--	--	--	1	2	1	--
11	SB8	1	--	1	--	--	1	1	1	--	--	--	--
12	SB2	1	--	1	--	--	1	1	1	--	--	--	--
13	SB2	1	--	1	--	--	1	1	1	--	--	--	--
14	SB1	1	--	1	--	--	1	1	1	--	--	--	--
15	SB9	1	--	1	--	--	1	1	1	--	--	--	--
16	SB9	1	--	1	--	--	1	1	1	--	--	--	--
17	SB1	--	--	--	--	1	--	--	--	--	--	--	1
18	SB3	--	--	--	--	1	--	--	--	--	--	--	1
19	SB4	--	--	--	--	1	--	--	--	--	--	--	1
20	SB7	--	--	--	--	1	--	--	--	--	--	--	1
21	SB8	--	--	--	--	1	--	--	--	--	--	--	1
22	SB9	--	--	--	--	1	--	--	--	--	--	--	1
23	SB10	--	--	--	--	1	--	--	--	--	--	--	1
24	SB13	--	--	--	--	1	--	--	--	--	--	--	1
*** TOTALS		12	4	12	4	8	12	12	12	4	8	4	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE
* TRAFFIC SIGNAL HOUSING SHALL BE BLACK IN COLOR

SIGNAL MOUNTING HARDWARE
W. NATIONAL AVENUE & S. 102ND STREET

LOCATION	658.5069.3101 SIGNAL MOUNTING HARDWARE LS
W. NATIONAL AVENUE & S. 102ND STREET	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
W. NATIONAL AVENUE & S. 102ND STREET

LOCATION	661.0200.3101 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS	661.0300 GENERATORS DAY
W. NATIONAL AVENUE & S. 102ND STREET	1	2
*** TOTALS	1	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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EMERGENCY VEHICLE PREEMPTION

LOCATION	SPV.0060.3101 EVP DETECTOR TYPE I EACH	SPV.0060.3102 EVP DISCRIMINATOR TYPE IV EACH	SPV.0060.3103 EVP CONFIRMATION LIGHT ASSEMBLY TYPE I EACH
CB1	--	1	--
SB2	1	--	1
SB6	1	--	1
SB9	1	--	1
SB12	1	--	1
*** TOTALS	4	1	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

W. NATIONAL AVENUE & S. 102ND STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

TRANSPORTING MUNICIPAL SIGNAL AND LIGHTING MATERIALS
W. NATIONAL AVENUE & S. 102ND STREET

LOCATION	SPV.0105.3112 TRANSPORTING MUNICIPAL SIGNAL AND LIGHTING MATERIALS LS
W. NATIONAL AVENUE & S. 102ND STREET	1
TOTAL	1

3

REMOVE TRAFFIC SIGNALS
W. NATIONAL AVENUE & S. 102ND STREET

LOCATION	SPV.0105.3101 REMOVE TRAFFIC SIGNALS LS
W. NATIONAL AVENUE & S. 102ND STREET	1
TOTAL	1

INSTALL STATE SUPPLIED MICROWAVE DETECTION SYSTEM
W. NATIONAL AVENUE & S. 102ND STREET

LOCATION	SPV.0105.3117 TRANSPORTING AND INSTALLING STATE FURNISHED MICROWAVE DETECTION SYSTEM LS
W. NATIONAL AVENUE & S. 102ND STREET	1

INSTALL STATE FURNISHED MUNICIPAL TRAFFIC SIGNAL CABINET
W. NATIONAL AVENUE & S. 102ND STREET

LOCATION	SPV.0060.3106 TRAFFIC SIGNAL CONTROLLER PROGRAMMING EACH	SPV.0105.3107 INSTALL STATE FURNISHED MUNICIPAL TRAFFIC SIGNAL CABINET LS
W. NATIONAL AVENUE & S. 102ND STREET	1	1
TOTAL	1	1

TEMPORARY EVP SYSTEM
W. NATIONAL AVENUE & S. 102ND STREET

LOCATION	SPV.0105.3122 TEMPORARY EVP SYSTEM LS
W. NATIONAL AVENUE & S. 102ND STREET	1
TOTAL	1

W. NATIONAL AVENUE & W. LINCOLN AVENUE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
1	EACH	POLES TYPE 10
3	EACH	POLES TYPE 13
1	EACH	MONOTUBE ARMS 30-FT
1	EACH	MONOTUBE ARMS 35-FT
2	EACH	MONOTUBE ARMS 40-FT
5	EACH	LUMINAIRE ARMS STEEL 8-FT
1	EACH	MICROWAVE DETECTION SYSTEM

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	126	--
PB1	PB2	--	148	--
PB2	PB3	--	--	58
PB3	PB4	--	--	100
PB4	PB5	--	--	144
PB5	PB6	--	--	250
PB6	PB7	--	72	--
PB7	PB8	--	--	264
PB8	PB9	--	--	190
PB9	CB1	--	18	--
PB1	SB1	--	6	--
PB3	SB2	25	--	--
PB4	SB3	--	32	--
PB5	SB4	5	--	--
PB6	SB5	--	36	--
PB6	SB6	3	--	--
PB7	SB7	4	--	--
PB8	SB8	--	4	--
*** TOTALS		37	442	1006

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
CB1	1
SB2	1
SB5	1
SB6	1
SB8	1
SB10	1
	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	70+07.5	66.9' RT	1
PB2	69+37.4	53.4' RT	1
PB3	69+18.3	31.5' RT	1
PB4	68+85.1	5.8' LT	1
PB5	68+34.6	57.5' LT	1
PB6	69+59.5	60.7' LT	1
PB7	69+89.8	48.7' LT	1
PB8	70+92.8	33.8' RT	1
PB9	70+21.1	96.0' RT	1
		*** TOTAL	9

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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REMOVING PULL BOXES

EXISTING PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
*** TOTAL	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	SPV.0060.3110 CONCRETE CONTROL CABINET BASE TYPE 9 SPECIAL (MOD.) EACH
SB1	70+01.5	68.5' RT	--	--	--	1	--
SB2	69+43.4	31.4' RT	1	--	--	--	--
SB3	68+55.2	5.4' LT	--	--	--	1	--
SB4	68+39.0	55.9' LT	1	--	--	--	--
SB5	69+33.8	85.8' LT	--	--	--	1	--
SB6	69+61.7	59.3' LT	1	--	--	--	--
SB7	69+86.3	50.4' LT	--	1	--	--	--
SB8	70+89.2	33.1' RT	--	--	1	--	--
CB1	70+17.2	100.2' RT	--	--	--	--	1
		*** TOTALS	3	1	1	3	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

W. NATIONAL AVENUE & W. LINCOLN AVENUE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 13	55	--
SB1	HEAD 14	43	--
SB1	HEAD 16	--	65
SB2	HEAD 1	19	--
SB2	HEAD 17	14	--
SB2	HEAD 24	14	--
SB3	HEAD 5	41	--
SB3	HEAD 6	60	--
SB4	HEAD 10	--	22
SB4	HEAD 12	19	--
SB4	HEAD 18	14	--
SB4	HEAD 19	14	--
SB5	HEAD 8	55	--
SB5	HEAD 9	43	--
SB5	HEAD 11	--	66
SB6	HEAD 20	14	--
SB7	HEAD 4	19	--
SB7	HEAD 21	14	--
SB8	HEAD 2	56	--
SB8	HEAD 3	37	--
SB8	HEAD 7	19	--
SB8	HEAD 15	--	22
SB8	HEAD 22	14	--
SB8	HEAD 23	14	--
*** TOTALS		578	175

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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W. NATIONAL AVENUE & W. LINCOLN AVENUE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG LF
CB1	SB1	--	75	--
CB1	SB2	--	229	--
CB1	SB3	--	302	--
CB1	SB4	--	--	363
CB1	SB5	--	380	--
CB1	SB6	347	--	--
CB1	SB7	--	296	--
CB1	SB8 (CABLE 1)	--	148	--
CB1	SB8 (CABLE 2)	--	148	--
	*** TOTALS	347	1578	363

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING WIRE

FROM	TO	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB1	75	--
SB1	LUMIN	--	123
SB1	SB3	263	--
SB3	LUMIN	--	246
CB1	SB8	148	--
SB8	LUMIN	--	123
SB8	SB7	180	--
SB7	LUMIN	--	117
SB7	SB5	116	--
SB5	LUMIN	--	123
	*** TOTALS	782	732

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	75
SB1	SB2	190
SB2	SB3	147
SB3	SB4	149
SB4	SB5	206
SB5	SB6	63
SB6	SB7	83
SB7	SB8	180
SB8	CB1	148
PB1	SB1	26
PB2	SB1	116
PB3	SB2	45
PB4	SB3	52
PB5	SB4	25
PB6	SB6	23
PB7	SB7	24
PB8	SB8	24
PB9	CB1	29
	*** TOTAL	1605

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF
CB1	SB3 (HEAD A)	367	367
CB1	SB8 (HEAD B)	208	208
CB1	SB1 (HEAD C)	145	145
CB1	SB5 (HEAD D)	450	450
	*** TOTALS	1170	1170

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
W. NATIONAL AVENUE & W. LINCOLN AVENUE

BASE NO.	656.0200.3102 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

3

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1360 INSTALL POLES TYPE 13 EACH
SB1	--	--	--	--	--	--	--	--	1
SB2	1	--	--	1	--	--	--	--	--
SB3	--	--	--	--	--	--	--	--	1
SB4	1	--	--	--	1	--	--	--	--
SB5	--	--	--	--	--	--	--	--	1
SB6	1	--	--	--	--	1	--	--	--
SB7	--	1	1	--	--	--	1	--	--
SB8	--	--	--	--	--	--	--	1	--
*** TOTALS	3	1	1	1	1	1	1	1	3

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1535 INSTALL MONOTUBE ARMS 35-FT EACH	657.1540 INSTALL MONOTUBE ARMS 40-FT EACH	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	--	--	1	1	--	1
SB2	--	--	--	--	2	--
SB3	--	1	--	2	--	2
SB4	--	--	--	--	2	--
SB5	--	--	1	1	--	1
SB6	--	--	--	--	1	--
SB7	--	--	--	--	1	1
SB8	1	--	--	1	2	1
*** TOTALS	1	1	2	5	8	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

W. NATIONAL AVENUE & W. LINCOLN AVENUE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110* TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115* TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416* PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600** LED MODULES 12-INCH RED BALL EACH	658.0605** LED MODULES 12-INCH YELLOW BALL EACH	658.0610** LED MODULES 12-INCH GREEN BALL EACH	658.0615** LED MODULES 12-INCH RED ARROW EACH	658.0620** LED MODULES 12-INCH YELLOW ARROW EACH	658.0625** LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB2	1	--	1	--	--	1	1	1	--	--	--	--
2	SB8	1	--	1	--	--	1	1	1	--	--	--	--
3	SB8	1	--	1	--	--	1	1	1	--	--	--	--
4	SB7	1	--	1	--	--	1	1	1	--	--	--	--
5	SB3	1	--	1	--	--	1	1	1	--	--	--	--
6	SB3	1	--	1	--	--	1	1	1	--	--	--	--
7	SB8	1	--	1	--	--	1	1	1	--	--	--	--
8	SB5	1	--	1	--	--	1	1	1	--	--	--	--
9	SB5	1	--	1	--	--	1	1	1	--	--	--	--
10	SB4	--	1	--	1	--	--	--	--	1	2	1	--
11	SB5	--	1	--	1	--	--	--	--	1	2	1	--
12	SB4	1	--	1	--	--	1	1	1	--	--	--	--
13	SB1	1	--	1	--	--	1	1	1	--	--	--	--
14	SB1	1	--	1	--	--	1	1	1	--	--	--	--
15	SB8	--	1	--	1	--	--	--	--	1	2	1	--
16	SB1	--	1	--	1	--	--	--	--	1	2	1	--
17	SB2	--	--	--	--	1	--	--	--	--	--	--	1
18	SB4	--	--	--	--	1	--	--	--	--	--	--	1
19	SB4	--	--	--	--	1	--	--	--	--	--	--	1
20	SB6	--	--	--	--	1	--	--	--	--	--	--	1
21	SB7	--	--	--	--	1	--	--	--	--	--	--	1
22	SB8	--	--	--	--	1	--	--	--	--	--	--	1
23	SB8	--	--	--	--	1	--	--	--	--	--	--	1
24	SB2	--	--	--	--	1	--	--	--	--	--	--	1
*** TOTALS		12	4	12	4	8	12	12	12	4	8	4	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE
** TUNNEL VISOR REQUIRED
*TRAFFIC SIGNAL HOUSING SHALL BE BLACK IN COLOR

SIGNAL MOUNTING HARDWARE
W. NATIONAL AVENUE & W. LINCOLN AVENUE

LOCATION	658.5069.3102 SIGNAL MOUNTING HARDWARE LS
W. NATIONAL AVENUE & W. LINCOLN AVENUE	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
W. NATIONAL AVENUE & W. LINCOLN AVENUE

LOCATION	661.0200.3102 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS	661.0300 GENERATORS DAY
W. NATIONAL AVENUE & W. LINCOLN AVENUE	1	2
*** TOTALS	1	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 472	E

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030430_mq_sp.ppt PLOT DATE : 4/29/2014 10:52:24 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp5 PLOT SCALE : 1:1

EMERGENCY VEHICLE PREEMPTION

LOCATION	SPV.0060.3101 EVP DETECTOR TYPE I EACH	SPV.0060.3102 EVP DISCRIMINATOR TYPE IV EACH	SPV.0060.3103 EVP CONFIRMATION LIGHT ASSEMBLY TYPE I EACH
CB1	--	1	--
SB1	1	--	1
SB3	1	--	1
SB5	1	--	1
SB8	1	--	1
*** TOTALS	4	1	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

W. NATIONAL AVENUE & W. LINCOLN AVENUE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

TRANSPORTING MUNICIPAL SIGNAL AND LIGHTING MATERIALS
W. NATIONAL AVENUE & W. LINCOLN AVENUE

LOCATION	SPV.0105.3113 TRANSPORTING MUNICIPAL SIGNAL AND LIGHTING MATERIALS LS
W. NATIONAL AVENUE & W. LINCOLN AVENUE	1
TOTAL	1

REMOVE TRAFFIC SIGNALS
W. NATIONAL AVENUE & W. LINCOLN AVENUE

LOCATION	SPV.0105.3102 REMOVE TRAFFIC SIGNALS LS
W. NATIONAL AVENUE & W. LINCOLN AVENUE	1
TOTAL	1

INSTALL STATE SUPPLIED MICROWAVE DETECTION SYSTEM
W. NATIONAL AVENUE & W. LINCOLN AVENUE

LOCATION	SPV.0105.3118 TRANSPORTING AND INSTALLING STATE FURNISHED MICROWAVE DETECTION SYSTEM LS
W. NATIONAL AVENUE & W. LINCOLN AVENUE	1
TOTAL	1

INSTALL STATE FURNISHED MUNICIPAL TRAFFIC SIGNAL CABINET
W. NATIONAL AVENUE & W. LINCOLN AVENUE

LOCATION	SPV.0060.3106 TRAFFIC SIGNAL CONTROLLER PROGRAMMING EACH	SPV.0105.3108 INSTALL STATE FURNISHED MUNICIPAL TRAFFIC SIGNAL CABINET LS
W. NATIONAL AVENUE & W. LINCOLN AVENUE	1	1
TOTAL	1	1

TEMPORARY EVP SYSTEM
W. NATIONAL AVENUE & W. LINCOLN AVENUE

LOCATION	SPV.0105.3123 TEMPORARY EVP SYSTEM LS
W. NATIONAL AVENUE & W. LINCOLN AVENUE	1
TOTAL	1

3

SIGNAL BASES AND POLES

LOCATION	SIG. BASE NO.	657.0100 PEDESTAL BASE EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.1345 INSTALL POLES TYPE 9 EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1360 INSTALL POLES TYPE 13 EACH	657.1515 INSTALL MONOTUBE ARMS 15-FT EACH	657.1525 INSTALL MONOTUBE ARMS 25-FT EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1545 INSTALL MONOTUBE ARMS 45-FT EACH	657.1815 INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	SPV.0060.3105 LIGHTING UNIT SINGLE EACH	659.1120 LUMINAIRES UTILITY LED B EACH
84TH ST & NATIONAL AVE																
(SOUTH INTERSECTION)	SB 1	1		1										1		
	SB 2	1		1										1		
	SB 3		1												1	1
	SB 4	1		1												
	SB 5		1												1	1
	SB 6							1				1	1			
	SB 7						1				1		1			
	SB 8		1												1	1
	SB 9		1												1	1
	SB 10	1		1										1		
	SB 11		1												1	1
	SB 12	1		1												
	SB13	1			1									1		
	SB14					1				1						
	SB15	1			1									1		
	SB16		1											1	1	1
	SB17	1		1										1		
(NORTH INTERSECTION)	SB18						1				1		1			
	SB19		1												1	1
	SB20		1											1	1	1
	SB21	1		1												
	SB22	1		1										1		
	SB23					1			1							
	SB24	1			1									1		
	SB25		1											1	1	1
	SB26		1												1	1
	SB27	1		1										1		
	SB28	1		1										1		
	SB29	1		1										1		
	SB30		1												1	1
	SB31		1												1	1
	SB32	1		1												
	SB33		1												1	1
	SB34							1				1	1			
PROJECT TOTAL		15	13	12	3	2	2	2	1	1	2	2	4	14	13	13

3

REMOVAL QUANTITIES

LOCATION		ITEM NO.	204.0195 REMOVING CONCRETE BASES EACH	204.0250 ABANDONING MANHOLES EACH
84TH ST & NATIONAL AVE		CB1	1	
	(SOUTH INTERSECTION)	SB1	1	
		SB2	1	
		SB3	1	
		SB4	1	
		SB5	1	
		SB6	1	
		SB7	1	
		SB8	1	
		SB9	1	
		SB10	1	
		SB11	1	
		SB12	1	
		SB13	1	
		SB14	1	
		SB15	1	
		MH1		1
		MH2		1
	(NORTH INTERSECTION)	CB2	1	
		SB16	1	
		SB17	1	
		SB18	1	
		SB19	1	
		SB20	1	
		SB21	1	
		SB22	1	
		SB23	1	
		SB24	1	
		SB25	1	
		SB26	1	
		SB 27	1	
		SB 28	1	
		SB 29	1	
		MH4		1
PROJECT TOTAL			31	3

REMOVING AND SALVAGING LIGHT POLES, LUMINAIRES, AND ARMS

LOCATION		SPV.0060.3104 REMOVING AND SALVAGING LIGHT POLES, LUMINAIRES, AND ARMS EACH
84TH ST & NATIONAL AVE		
(SOUTH INTERSECTION)	SB2	1
	SB7	1
	SB10	1
	SB14	1
	SB15	1
(NORTH INTERSECTION)	SB17	1
	SB24	1
	SB26	1
	SB27	1
	SB28	1
	SB29	1
Total		11

REMOVE TRAFFIC SIGNALS

LOCATION	SPV.0105.3103 REMOVE TRAFFIC SIGNALS W. NATIONAL AVENUE AND S. 84TH STREET (SOUTH) L.S.	SPV.0105.3104 REMOVE TRAFFIC SIGNALS W. NATIONAL AVENUE AND S. 84TH STREET (NORTH) L.S.
84TH ST & NATIONAL AVE (SOUTH)	1	
84TH ST & NATIONAL AVE (NORTH)		1
Total	1	1

CONCRETE BASES

LOCATION	SIGNAL BASE NO.	STATION/OFFSET	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0105 CONCRETE BASES TYPE 5 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASE TYPE 9 SPECIAL EACH	SPV.0060.3110 CONCRETE CONTROL CABINET BASE TYPE 9 SPECIAL (MOD.) EACH
84TH ST & NATIONAL AVE	CB1	198+74, 32.0' LT							1
(SOUTH INTERSECTION)	SB1	199+12, 28.4' LT	1						
	SB2	199+41, 60.3' LT	1						
	SB3	199+67, 35.3' LT			1				
	SB4	199+24, 12.8' LT	1						
	SB5	199+04, 17.7' RT		1					
	SB6	199+11, 31.5' RT					1		
	SB7	199+27, 37.0' RT				1			
	SB8	199+91, 81.0' RT			1				
	SB9	198+97, 75.0' RT			1				
	SB10	198+49, 65.3' RT	1						
	SB11	197+49, 36.0' RT			1				
	SB12	198+26, 26.6' RT	1						
	SB13	198+41, 24.2' RT	1						
	SB14	198+14, 13.8' RT				1			
	SB15	197+96, 25.2' RT	1						
	SB16	198+11, 41.9' RT		1					
	SB17	198+63, 30.6' RT	1						
(NORTH INTERSECTION)	CB2	201+07, 30.0' RT						1	
	SB18	201+04, 21.9' RT				1			
	SB19	200+93, 21.0' RT			1				
	SB20	201+90, 22.1' RT		1					
	SB21	201+98, 18.8' RT	1						
	SB22	201+95, 27.6' RT	1						
	SB23	202+18, 33.7' RT				1			
	SB24	202+35, 54.9' RT	1						
	SB25	202+20, 68.3' RT		1					
	SB26	102N+02, 51.0' LT			1				
	SB27	201+68, 73.6' RT	1						
	SB28	201+42, 77.8' RT	1						
	SB29	201+06, 100.0' RT	1						
	SB30	200+82, 85.8' RT			1				
	SB31	101N+98, 39.2' RT			1				
	SB32	201+32, 66.6' RT	1						
	SB33	201+49, 46.1' RT		1					
	SB34	201+41, 36.0' RT					1		
PROJECT TOTAL			15	5	8	4	2	1	1

PULL BOXES

LOCATION	PULL BOX NO.	653.0140 PULL BOXES STEEL 24" x 42" EACH
84TH ST & NATIONAL AVE	PB1	1
(SOUTH INTERSECTION)	PB2	1
	PB3	1
	PB4	1
	PB5	1
	PB6	1
	PB7	1
	PB8	1
	PB9	1
	PB10	1
	PB11	1
	PB12	1
	LPB1	1
	LPB2	1
(NORTH INTERSECTION)		
	PB13	1
	PB14	1
	PB15	1
	PB16	1
	PB17	1
	PB18	1
	PB19	1
	PB20	1
	PB21	1
	PB22	1
	LPB3	1
	LPB4	1
	LPB5	1
	LPB6	1
PROJECT TOTAL		28

METER BREAKER PEDESTAL

LOCATION	656.0200.3103 ELECTRICAL SERVICE METER BREAKER PEDESTAL W. NATIONAL AVENUE AND S. 84TH STREET L.S.
84TH ST & NATIONAL AVE	1
Total	1

3

SIGNAL FACES

LOCATION	SIG. BASE NO.	SIG. HEAD NO.	TYPE OF MOUNT	658.0110 3-12" VERT. EACH	658.0600 LED RED BALL EACH	658.0605 LED YELLOW BALL EACH	658.0610 LED GREEN BALL EACH	658.0615 LED RED ARROW EACH	658.0620 LED YELLOW ARROW EACH	658.0625 LED GREEN ARROW EACH	658.0215 BCKPLT 3-SEC. EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0635 PEDESTRIAN COUNTDOWN TIMER 16" EACH
84TH ST & NATIONAL AVE (SOUTH INTERSECTION)	SB1	14	POST MOUNT VERTICAL	1	1	1	1				1		
		16	PEDESTRIAN									1	1
	SB2	15	POST MOUNT VERTICAL	1	1	1	1				1		
		17	PEDESTRIAN									1	1
	SB4	10	POST MOUNT VERTICAL	1	1	1				1	1		
		13	POST MOUNT VERTICAL	1				1	1	1	1		
	SB5	9	POST MOUNT VERTICAL	1	1	1				1	1		
	SB6	7	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1				1		
		8	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1				1		
	SB7	3	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1				1		
		4	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1				1		
	SB10	2	POST MOUNT VERTICAL	1	1	1	1				1		
		23	PEDESTRIAN									1	1
	SB12	1	POST MOUNT VERTICAL	1	1	1	1				1		
	SB13	21	PEDESTRIAN									1	1
		22	PEDESTRIAN									1	1
	SB 14	11	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1				1		
		12	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1				1		
	SB15	19	PEDESTRIAN									1	1
	SB16	6	POST MOUNT VERTICAL	1	1	1	1				1		
		20	PEDESTRIAN									1	1
	SB17	5	POST MOUNT VERTICAL	1	1	1	1				1		
		18	PEDESTRIAN									1	1

(Additional Quantities Shown on Next Page)

(Continued from Previous Page)

SIGNAL FACES

LOCATION	SIG. BASE NO.	SIG. HEAD NO.	TYPE OF MOUNT	658.0110 3-12" VERT. EACH	658.0600 LED RED BALL EACH	658.0605 LED YELLOW BALL EACH	658.0610 LED GREEN BALL EACH	658.0615 LED RED ARROW EACH	658.0620 LED YELLOW ARROW EACH	658.0625 LED GREEN ARROW EACH	658.0215 BCKPLT 3-SEC. EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0635 PEDESTRIAN COUNTDOWN TIMER 16" EACH
(NORTH INTERSECTION)	SB18	26	MONOTUNE ARM MOUNT VERTICAL	1	1	1	1				1		
		27	MONOTUNE ARM MOUNT VERTICAL	1	1	1	1				1		
	SB20	25	POST MOUNT VERTICAL	1	1	1	1				1		
		39	PEDESTRIAN									1	1
	SB21	24	POST MOUNT VERTICAL	1	1	1	1				1		
	SB22	40	PEDESTRIAN									1	1
		41	PEDESTRIAN									1	1
	SB23	34	POST MOUNT VERTICAL	1	1	1	1				1		
		35	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1				1		
	SB24	43	PEDESTRIAN									1	1
	SB25	29	POST MOUNT VERTICAL	1	1	1	1				1		
		42	PEDESTRIAN									1	1
	SB27	28	POST MOUNT VERTICAL	1	1	1	1				1		
		44	PEDESTRIAN									1	1
	SB28	37	POST MOUNT VERTICAL	1	1	1	1				1		
		45	PEDESTRIAN									1	1
	SB29	38	POST MOUNT VERTICAL	1	1	1	1				1		
		46	PEDESTRIAN									1	1
	SB32	33	POST MOUNT VERTICAL	1	1	1				1	1		
		36	POST MOUNT VERTICAL	1				1	1	1	1		
	SB33	32	POST MOUNT VERTICAL	1	1	1				1	1		
	SB34	30	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1				1		
		31	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1				1		
PROJECT TOTAL				30	28	28	24	2	2	6	30	16	16

3

CONDUIT ITEMS

LOCATION	FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF.	652.0240 CONDUIT RIGID NONMETALLIC SCHEDULE 40 4-INCH LF.	652.0605 CONDUIT SPECIAL 2-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF.	652.0625 CONDUIT SPECIAL 4-INCH LF.	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
84TH ST & NATIONAL AVE	CB1	PB1		30					
(SOUTH INTERSECTION)	PB1	PB2			44				
	PB2	PB3				46			
	PB2	SB1	7						
	PB2	SB4	26						
	PB2	PB4						138	
	PB3	SB2	5						
	PB3	SB3				72			
	PB4	PB5		13					
	PB4	SB7		8					
	PB4	PB6					100		
	PB4	CB2					344		
	PB5	SB5	31						
	PB5	SB6		9					
	PB6	SB8				67			
	PB6	SB9	31						
	PB7	SB9		136					
	PB7	SB10	17						
	PB7	SB11	88						
	PB7	PB8					100		
	PB8	SB12	18						
	PB8	SB13	30						
	PB8	SB14		5					
	PB8	PB9					92		
	PB9	SB15	5						
	PB9	PB10		46					
	PB10	SB16	6						
	PB10	PB11					92		
	PB11	SB17	10						
	PB11	PB12		24					
	PB12	CB1		30					
	L-5 CKT	LPB1				80			1
	LPB1	LPB2				130			
	LPB2	LPB3				400			

(Additional Quantities Shown on Next Page)

(Continued from Previous Page)

CONDUIT ITEMS

LOCATION	FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF.	652.0240 CONDUIT RIGID NONMETALLIC SCHEDULE 40 4-INCH LF.	652.0605 CONDUIT SPECIAL 2-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF.	652.0625 CONDUIT SPECIAL 4-INCH LF.	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
(NORTH INTERSECTION)	CB2	PB13		36					
	PB13	SB18		19					
	PB13	PB14					105		
	PB14	SB19	14						
	PB14	PB15	184						
	PB15	SB20	7						
	PB15	PB16					96		
	PB16	SB21	12						
	PB16	SB22	15						
	PB16	SB23		14					
	PB16	PB17					106		
	PB17	SB24	18						
	PB17	SB25	9						
	PB17	PB18				35			
	PB18	SB26	120						
	PB17	PB19					140		
	PB19	SB27	15						
	PB19	SB32	27						
	PB19	PB20	20						
	PB19	PB22					84		
	PB20	SB28	7						
	PB20	PB21				44			
	PB21	SB29	6						
	PB21	SB30	38						
	PB21	SB31	110						
	PB22	SB33	19						
	PB22	SB34		8					
	PB22	CB2		60					
	LPB3	LPB4				115			
	LBP3	EXMH1				110			1
	EXMH1	LPB6				140			
	LPB6	L-4 / L-5 CKT				20			
	LPB4	L-5 CKT				110			
	L-5 CKT (EAST)	LPB5				160			
	LPB5	L-5 CKT (NORTH)				20			
PROJECT TOTAL			895	438	44	1549	1259	138	2

3

TRANSPORTING MUNICIPAL SIGNAL AND LIGHTING MATERIALS

LOCATION	SPV.0105.3114 TRANSPORTING MUNICIPAL SIGNAL AND LIGHTING MATERIALS W. NATIONAL AVENUE & S. 84TH STREET L.S.
84TH ST & NATIONAL AVE	1
Total	1

EMERGENCY VEHICLE PREEMPTION

LOCATION	SPV.0060.3101 EVP DETECTOR TYPE I EACH	SPV.0060.3102 EVP DISCRIMINATOR TYPE IV EACH	SPV.0060.3103 EVP CONFIRMATION LIGHT ASSEMBLY TYPE I EACH
84TH ST & NATIONAL AVE	4	1	4
Total	4	1	4

3

TRANSPORTING AND INSTALLING STATE-FURNISHED MICROWAVE DETECTION SYSTEM

LOCATION	SPV.0105.3119 TRANSPORTING AND INSTALLING STATE-FURNISHED MICROWAVE DETECTION SYSTEM W. NATIONAL AVENUE & S. 84TH STREET L.S.
84TH ST & NATIONAL AVE	1
Total	1

SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.3103 SIGNAL MOUNTING HARDWARE W. NATIONAL AVENUE AND S. 84TH STREET L.S.
84TH ST & NATIONAL AVE	1
Total	1

TRAFFIC SIGNAL CONTROLLER PROGRAMMING

LOCATION	SPV.0060.3106 TRAFFIC SIGNAL CONTROLLER PROGRAMMING EACH
84TH ST & NATIONAL AVE	1
Total	1

INSTALL STATE FURNISHED MUNICIPAL TRAFFIC SIGNAL CABINET

LOCATION	SPV.0105.3109 INSTALL STATE FURNISHED MUNICIPAL TRAFFIC SIGNAL CABINET W. NATIONAL AVENUE & S. 84TH STREET (SOUTH) L.S.	SPV.0105.3110 INSTALL STATE FURNISHED MUNICIPAL TRAFFIC SIGNAL CABINET W. NATIONAL AVENUE & S. 84TH STREET (NORTH) L.S.
84TH ST & NATIONAL AVE - SOUTH	1	
84TH ST & NATIONAL AVE - NORTH		1
Total	1	1

TEMPORARY TRAFFIC SIGNALS

LOCATION	661.0200.3103 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS W. NATIONAL AVENUE & S. 84TH STREET (SOUTH) L.S.	661.0200.3104 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS W. NATIONAL AVENUE & S. 84TH STREET (NORTH) L.S.
84TH ST & NATIONAL AVE - SOUTH	1	
84TH ST & NATIONAL AVE - NORTH		1
Total	1	1

TEMPORARY EVP SYSTEM

LOCATION	SPV.0105.3124 TEMPORARY EVP SYSTEM W. NATIONAL AVENUE & S. 84TH STREET (SOUTH) L.S.	SPV.0105.3125 TEMPORARY EVP SYSTEM W. NATIONAL AVENUE & S. 84TH STREET (NORTH) L.S.
84TH ST & NATIONAL AVE-SOUTH	1	
84TH ST & NATIONAL AVE-NORTH		1
Total	1	1

3

TRAFFIC SIGNAL CABLE

LOCATION	LOC.	TO	LOC.	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 LF.	655.0265 CABLE TRAFFIC SIGNAL 15-12 AWG LF.	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED L.F.	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.	655.0520 ELECTRICAL WIRE TRAFFIC SIGNALS 8 AWG L.F.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.	655.0700 LOOP DETECTOR LEAD-IN CABLE L.F.	655.0900 EVP DETECTOR CABLE L.F.	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF	(INCIDENTAL) MICROWAVE CABLE L.F.
84TH ST & NATIONAL AVE	CB1		SB1			81			81						
(SOUTH INTERSECTION)	CB1		SB2			139									
	CB1		SB3					175							
	CB1		SB4			100									
	CB1		SB5			206									
	CB1		SB6			194							194	194	194
	CB1		SB7			166							166	166	166
	CB1		SB10			313									
	CB1		SB12		250	250									
	CB1		SB13			262									
	CB1		SB14			237									
	CB1		SB15		176	176									
	CB1		SB16			131		131							
	CB1		SB17			74			74						
	CB1		SB18										321	321	321
	CB1		SB34										321	321	321
	SB1		SB2						97						
	SB2		SB4						116						
	SB3		SB5					259							
	SB4		SB5						184						
	SB5		SB6						56						
	SB5		SB8					205							
	SB6		SB7						71						
	SB7		SB10						227						
	SB10		SB12						124						
	SB12		SB13						73						
	SB13		SB14						60						
	SB14		SB15						94						
	SB15		SB16						82						
	SB16		SB17						102						
	SB8		SB9					122							
	SB11		SB16					289							
	PB1		CB1						33						
	PB2		SB1						27						
	PB3		SB2						24						
	PB4		SB7						29						
	PB5		SB6						29						
	PB6		SB9						51						
	PB7		SB10						37						
	PB8		SB14						25						
	PB9		SB15						24						
	PB10		SB16						26						
	PB11		SB17						30						
	PB12		CB1						32						
	CB1		CB2			572		286				286			

(Additional Quantities Shown on Next Page)

(Continued from Previous Page)

LOCATION	LOC.	TO LOC.	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 LF.	655.0265 CABLE TRAFFIC SIGNAL 15-12 AWG LF.	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED L.F.	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.	655.0520 ELECTRICAL WIRE TRAFFIC SIGNALS 8 AWG L.F.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.	655.0700 LOOP DETECTOR LEAD-IN CABLE L.F.	655.0900 EVP DETECTOR CABLE L.F.	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF	(INCIDENTAL) MICROWAVE CABLE L.F.
84TH ST & NATIONAL AVE (SOUTH INTERSECTION)	SB1	HEAD 14	19											
	SB1	HEAD 16	15											
	SB1	PB									6			
	SB2	HEAD 15	19											
	SB2	HEAD 17	15											
	SB2	PB									6			
	SB3	LUMINAIRE								123				
	SB4	HEAD 10	19											
	SB4	HEAD 13	19											
	SB5	HEAD 9	19											
	SB5	LUMINAIRE								123				
	SB6	HEAD 7	70											
	SB6	HEAD 8	70											
	SB7	HEAD 3	55											
	SB7	HEAD 4	55											
	SB8	LUMINAIRE								123				
	SB9	LUMINAIRE								123				
	SB10	HEAD 2	19											
	SB10	HEAD 23	15											
	SB10	PB									6			
	SB11	LUMINAIRE								123				
	SB12	HEAD 1	19											
	SB13	HEAD 21	15											
	SB13	HEAD 22	15											
	SB13	PB									6			
	SB14	HEAD 11	50											
	SB14	HEAD 12	50											
	SB15	HEAD 19	15											
	SB15	PB									6			
	SB16	HEAD 6	19											
	SB16	HEAD 20	15											
	SB16	PB									6			
	SB16	LUMINAIRE								123				
	SB17	HEAD 5	19											
	SB17	HEAD 18	15											
	SB17	PB									6			
INTERSECTION TOTAL			641	426	2329	572	1467	1808	286	738	42	1002	1002	1002

(Additional Quantities Shown on Next Page)

(Continued from Previous Page)

TRAFFIC SIGNAL CABLE

LOCATION	LOC.	TO	LOC.	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 LF.	655.0265 CABLE TRAFFIC SIGNAL 15-12 AWG LF.	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED L.F.	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.	655.0520 ELECTRICAL WIRE TRAFFIC SIGNALS 8 AWG L.F.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.	655.0700 LOOP DETECTOR LEAD-IN CABLE L.F.	655.0900 EVP DETECTOR CABLE L.F.	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF	(INCIDENTAL) MICROWAVE CABLE L.F.
84TH ST & NATIONAL AVE	CB2		SB18			66			66						
(NORTH INTERSECTION)	CB2		SB19					128							
	CB2		SB20			227									
	CB2		SB21		295	295									
	CB2		SB22			298									
	CB2		SB23			297									
	CB2		SB24		214	214									
	CB2		SB25			205									
	CB2		SB27			129									
	CB2		SB28			155									
	CB2		SB29			212									
	CB2		SB32			141									
	CB2		SB33			77		77							
	CB2		SB34			66			66						
	CB2		CB1					286							
	SB18		SB20						224						
	SB19		SB20					152							
	SB20		SB21						107						
	SB20		SB25					171							
	SB21		SB22						52						
	SB22		SB23						54						
	SB23		SB24						124						
	SB24		SB25						52						
	SB25		SB26					201							
	SB25		SB27						133						
	SB27		SB28						81						
	SB28		SB29						98						
	SB29		SB32						150						
	SB30		SB31					159							
	SB32		SB33						127						
	SB33		SB34						52						
	SB33		SB30					228							
	PB13		SB18						39						
	PB14		SB18						106						
	PB15		SB20						27						
	PB16		SB21						32						
	PB17		SB25						29						
	PB19		SB27						35						
	PB20		SB28						26						
	PB21		SB29						26						
	PB22		SB34						28						

(Additional Quantities Shown on Next Page)

(Continued from Previous Page)

LOCATION	LOC.	TO LOC.	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 LF.	655.0265 CABLE TRAFFIC SIGNAL 15-12 AWG LF.	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED L.F.	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.	655.0520 ELECTRICAL WIRE TRAFFIC SIGNALS 8 AWG L.F.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.	655.0700 LOOP DETECTOR LEAD-IN CABLE L.F.	655.0900 EVP DETECTOR CABLE L.F.	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF	(INCIDENTAL) MICROWAVE CABLE L.F.
84TH ST & NATIONAL AVE (NORTH INTERSECTION)	SB18	HEAD 27	55											
	SB18	HEAD 28	55											
	SB19	LUMINAIRE								123				
	SB20	HEAD 25	19											
	SB20	LUMINAIRE								123				
	SB20	PB									6			
	SB20	HEAD 39	15											
	SB21	HEAD 24	19											
	SB22	HEAD 40	15											
	SB22	HEAD 41	15											
	SB22	PB									6			
	SB23	HEAD 34	40											
	SB23	HEAD 35	40											
	SB24	HEAD 43	15											
	SB24	PB									6			
	SB25	HEAD 29	19											
	SB25	HEAD 42	15											
	SB25	PB									6			
	SB25	LUMINAIRE								123				
	SB26	LUMINAIRE								123				
	SB27	HEAD 28	19											
	SB27	HEAD 44	15											
	SB27	PB									6			
	SB28	HEAD 37	19											
	SB28	HEAD 45	15											
	SB28	PB									6			
	SB29	HEAD 38	19											
	SB29	HEAD 46	15											
	SB29	PB									6			
	SB30	LUMINAIRE								123				
	SB31	LUMINAIRE								123				
	SB32	HEAD 33	19											
	SB32	HEAD 36	19											
	SB33	HEAD 32	19											
	SB33	LUMINAIRE								123				
	SB34	HEAD 30	70											
	SB34	HEAD 31	70											
INTERSECTION TOTAL			621	509	2382	0	1402	1734	0	861	42	0	0	0
PROJECT TOTAL			**1262**	**935**	**4711**	**572**	**2869**	**3542**	**286**	**1599**	**84**	**1002**	**1002**	**1002**

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
1	EACH	POLES TYPE 10
1	EACH	POLES TYPE 12
1	EACH	MONOTUBE ARMS 25-FT
1	EACH	MONOTUBE ARMS 40-FT
2	EACH	LUMINAIRE ARMS STEEL 8-FT
1	EACH	RADAR DETECTION SYSTEM
3	EACH	EVP DETECTOR HEADS

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	18	--
PB1	PB2	--	--	32
PB1	PB3	--	--	132
PB3	PB4	--	50	--
PB4	PB5	--	--	214
PB5	PB6	--	74	--
PB6	PB7	--	106	--
PB7	PB8	--	--	102
PB8	PB9	--	29	--
PB8	PB10	--	--	124
PB10	CB1	--	24	--
PB2	SB1	2	--	--
PB3	SB2	19	--	--
PB5	SB3	--	10	--
PB6	SB4	8	--	--
PB6	SB5	4	--	--
PB8	SB7	20	--	--
PB8	SB8	35	--	--
PB9	SB6	--	7	--
*** TOTALS		88	318	604

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
SB9	1
	10

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

WISCONSIN PROFESSIONAL ENGINEER
ALICIA M. DOUGHERTY
E-43022
PEWAUKEE, WI
Alicia M. Dougherty
04/29/14

3

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0135 PULL BOXES STEEL 24X36-INCH EACH	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	44+70.4	68.9' LT	--	1
PB2	45+00.5	56.7' LT	--	1
PB3	45+36.8	68.8' LT	--	1
PB4	45+56.3	53.4' LT	--	1
PB5	45+56.1	53.2' RT	--	1
PB6	45+19.1	46.6' RT	1	--
PB7	44+66.7	46.9' RT	--	1
PB8	44+66.8	3.7' LT	--	1
PB9	44+95.2	3.7' LT	1	--
PB10	44+66.9	65.7' LT	--	1
		*** TOTALS	2	8

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030520_mq_sp.ppt PLOT DATE : 4/29/2014 10:54:11 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp1 PLOT SCALE : 1:1

IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

REMOVING PULL BOXES

EXISTING PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
TOTAL	9

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	45+02.4	55.7' LT	1	--	--	--	--
SB2	45+44.9	51.2' LT	1	--	--	--	--
SB3	45+66.1	53.2' RT	--	--	--	1	--
SB4	45+24.5	46.1' RT	--	1	--	--	--
SB5	45+13.0	46.2' RT	1	--	--	--	--
SB6	45+01.8	3.7' LT	--	--	1	--	--
SB7	44+46.7	4.0' LT	--	1	--	--	--
SB8	44+31.9	4.0' LT	--	1	--	--	--
CB1	44+65.9	72.6' LT	--	--	--	--	1
		*** TOTALS	3	3	1	1	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF
SB1	HEAD 7	19
SB1	HEAD 12	14
SB2	HEAD 4	19
SB2	HEAD 13	14
SB3	HEAD 2	66
SB3	HEAD 3	53
SB4	HEAD 8	19
SB5	HEAD 1	19
SB5	HEAD 9	19
SB6	HEAD 5	38
SB6	HEAD 6	51
SB7	HEAD 10	26
SB8	HEAD 11	26
	*** TOTALS	383

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1	83
CB1	SB2	134
CB1	SB3	289
CB1	SB4	255
CB1	SB5	253
CB1	SB6	165
CB1	SB7	133
CB1	SB8	148
	*** TOTALS	1460

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	83
SB1	SB2	159
SB2	SB3	217
SB3	SB4	95
SB4	SB5	36
SB5	SB6	216
SB6	SB7	96
SB7	SB8	79
SB8	CB1	148
PB1	CB1	29
PB2	SB1	23
PB3	SB2	39
PB4	SB2	80
PB5	SB3	30
PB6	SB5	24
PB7	SB5	93
PB8	SB7	40
PB9	SB6	27
PB10	CB1	31
	*** TOTAL	1545

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF
CB1	SB6 (HEAD A)	220	220
CB1	SB3 (HEAD B)	359	359
CB1	SB4 (HEAD C)	326	326
	*** TOTALS	905	905

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING WIRE

FROM	TO	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB6	165	--
SB6	LUMIN	--	246
	*** TOTALS	165	246

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

BASE NO.	656.0200.3008 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030520_mq_sp.ppt PLOT DATE : 4/29/2014 10:54:11 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp3 PLOT SCALE : 1:1

3

3

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASE BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1355 INSTALL POLES TYPE 12 EACH
SB1	1	--	--	1	--	--
SB2	1	--	--	1	--	--
SB3	--	--	--	--	--	1
SB4	--	1	1	--	--	--
SB5	1	--	--	1	--	--
SB6	--	--	--	--	1	--
SB7	--	1	1	--	--	--
SB8	--	1	1	--	--	--
*** TOTALS	3	3	3	3	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.1525 INSTALL MONOTUBE ARMS 25-FT EACH	657.1540 INSTALL MONOTUBE ARMS 40-FT EACH	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1130 LUMINAIRES UTILITY LED D EACH
SB1	--	--	--	1	--
SB2	--	--	--	1	--
SB3	--	1	--	--	--
SB4	--	--	--	--	--
SB5	--	--	--	--	--
SB6	1	--	2	--	2
SB7	--	--	--	--	--
SB8	--	--	--	--	--
*** TOTALS	1	1	2	2	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB5	1	1	--	1	1	1	--	--	--
2	SB3	1	1	--	1	1	1	--	--	--
3	SB3	1	1	--	1	1	1	--	--	--
4	SB2	1	1	--	1	1	1	--	--	--
5	SB6	1	1	--	1	1	1	--	--	--
6	SB6	1	1	--	1	1	1	--	--	--
7	SB1	1	1	--	1	1	1	--	--	--
8	SB4	1	1	--	1	--	--	1	1	--
9	SB5	1	1	--	1	--	--	1	1	--
10	SB7	1	1	--	1	--	--	1	1	--
11	SB8	1	1	--	1	--	--	1	1	--
12	SB1	--	--	1	--	--	--	--	--	1
13	SB2	--	--	1	--	--	--	--	--	1
*** TOTALS		11	11	2	11	7	7	4	4	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

SIGNAL MOUNTING HARDWARE
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

LOCATION	658.5069.3008 SIGNAL MOUNTING HARDWARE LS
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

LOCATION	661.0200.3008 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS	661.0300 GENERATORS DAY
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE	1	2
*** TOTALS	1	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

REMOVE TRAFFIC SIGNALS
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

LOCATION	SPV.0105.3008 REMOVE TRAFFIC SIGNALS LS
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE	1
TOTAL	1

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

LOCATION	SPV.0105.3015 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET LS
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE	1
TOTAL	1

TRANSPORTING SIGNAL AND LIGHTING MATERIALS
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

LOCATION	SPV.0105.3022 TRANSPORTING SIGNAL AND LIGHTING MATERIALS LS
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE	1
TOTAL	1

TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

LOCATION	SPV.0105.3029 TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM LS
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE	1
TOTAL	1

INSTALL STATE FURNISHED EVP DETECTOR HEADS
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

LOCATION	SPV.0105.3036 INSTALL STATE FURNISHED EVP DETECTOR HEADS LS
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE	1
TOTAL	1

TEMPORARY EVP SYSTEM
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

LOCATION	SPV.0105.3041 TEMPORARY EVP SYSTEM LS
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE	1
TOTAL	1

REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE

LOCATION	SPV.0105.3045 REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE LS
IH 894 / USH 45 EB OFF RAMP & W. LINCOLN AVENUE	1
TOTAL	1

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W. LINCOLN AVENUE & W. BELOIT ROAD

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
1	EACH	POLES TYPE 10
3	EACH	POLES TYPE 13
1	EACH	MONOTUBE ARMS 25-FT
2	EACH	MONOTUBE ARMS 35-FT
1	EACH	MONOTUBE ARMS 40-FT
1	EACH	MICROWAVE DETECTION SYSTEM
4	EACH	LUMINAIRE ARMS STREEL 8-FT

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	18	--
PB1	PB2	--	--	138
PB2	PB3	--	36	--
PB3	PB4	--	--	190
PB4	PB5	--	--	230
PB5	PB6	--	100	--
PB6	PB7	--	--	190
PB7	PB8	--	--	41
PB7	PB9	--	--	206
PB9	PB10	--	144	--
PB10	CB1	--	18	--
PB2	SB1	3	--	--
PB3	SB2	4	--	--
PB4	SB3	--	10	--
PB4	SB4	10	--	--
PB5	SB5	--	39	--
PB5	SB6	5	--	--
PB5	SB7	14	--	--
PB6	SB8	9	--	--
PB8	SB9	5	--	--
PB7	SB10	--	12	--
PB9	SB11	--	26	--
PB9	SB12	4	--	--
PB10	SB13	5	--	--
	*** TOTALS	59	403	995

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
SB9	1
SB10	1
SB11	1
SB12	1
SB13	1
SB14	1
TOTAL	15

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	156+25.6	95.2' RT	1
PB2	311+92.5	21.6' LT	1
PB3	311+98.4	39.0' LT	1
PB4	155+07.4	42.2' RT	1
PB5	156+00.8	25.4' LT	1
PB6	156+45.5	40.1' LT	1
PB7	157+40.7	35.6' LT	1
PB8	157+75.1	57.8' LT	1
PB9	156+71.1	40.8' RT	1
PB10	156+25.4	83.7' RT	1
		*** TOTALS	10

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030530_mq_sp.ppt PLOT DATE : 4/29/2014 10:55:51 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp1 PLOT SCALE : 1:1

W. LINCOLN AVENUE & W. BELOIT ROAD

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	311+96.8	24.7' LT	1	--	--	--	--
SB2	311+99.3	35.1' LT	--	1	--	--	--
SB3	155+13.4	49.8' RT	--	--	--	1	--
SB4	155+17.6	42.1' RT	1	--	--	--	--
SB5	155+61.7	26.9' LT	--	--	--	1	--
SB6	155+96.2	25.1' LT	--	1	--	--	--
SB7	156+14.9	25.6' LT	--	1	--	--	--
SB8	156+38.0	34.6' LT	1	--	--	--	--
SB9	157+75.1	62.6' LT	--	1	--	--	--
SB10	157+30.3	30.2' LT	--	--	1	--	--
SB11	156+97.2	45.4' RT	--	--	--	1	--
SB12	156+67.3	40.9' RT	1	--	--	--	--
SB13	156+28.1	74.3' RT	--	1	--	--	--
CB1	156+24.8	89.7' RT	--	--	--	--	1
		*** TOTALS	4	5	1	3	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 29	14	--
SB2	HEAD 1	19	--
SB2	HEAD 20	14	--
SB3	HEAD 5	61	--
SB3	HEAD 6	43	--
SB4	HEAD 10	--	22
SB4	HEAD 12	19	--
SB4	HEAD 21	14	--
SB4	HEAD 22	14	--
SB5	HEAD 8	51	--
SB5	HEAD 9	39	--
SB5	HEAD 11	--	62
SB6	HEAD 18	26	--
SB7	HEAD 19	26	--
SB7	HEAD 23	14	--
SB8	HEAD 4	19	--
SB8	HEAD 24	14	--
SB10	HEAD 2	49	--
SB10	HEAD 3	38	--
SB10	HEAD 7	19	--
SB10	HEAD 15	--	22
SB10	HEAD 25	14	--
SB10	HEAD 26	14	--
SB11	HEAD 13	54	--
SB11	HEAD 14	43	--
SB11	HEAD 16	--	65
SB12	HEAD 27	14	--
SB13	HEAD 17	19	--
SB13	HEAD 28	14	--
	*** TOTALS	665	171

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG LF
CB1	SB1	121	--	--
CB1	SB2	--	156	--
CB1	SB3	--	273	--
CB1	SB4	--	--	273
CB1	SB5	--	433	--
CB1	SB6	--	399	--
CB1	SB7	--	408	--
CB1	SB8	--	360	--
CB1	SB10 (CABLE 1)	--	252	--
CB1	SB10 (CABLE 2)	--	252	--
CB1	SB11	--	147	--
CB1	SB12	125	--	--
CB1	SB13	--	38	--
	*** TOTALS	246	2718	273

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING WIRE

FROM	TO	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB2	156	--
SB2	LUMIN	--	123
SB2	SB3	149	--
SB6	LUMIN	--	123
SB3	SB5	204	--
SB5	LUMIN	--	123
CB1	SB13	38	--
SB13	LUMIN	--	117
SB13	SB11	143	--
SB11	LUMIN	--	123
SB11	SB10	181	--
SB10	LUMIN	--	117
SB10	SB9	98	--
SB9	LUMIN	--	117
	*** TOTALS	969	843

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	121
SB1	SB2	31
SB2	SB3	148
SB3	SB4	44
SB4	SB5	204
SB5	SB6	68
SB6	SB7	43
SB7	SB8	113
SB8	SB9	206
SB9	SB10	98
SB10	SB11	181
SB10	SB12	54
SB12	SB13	121
SB13	CB1	38
PB1	CB1	29
PB2	SB1	23
PB3	SB2	24
PB4	SB3	30
PB5	SB6	25
PB6	SB8	29
PB7	SB10	32
PB8	SB9	25
PB9	SB12	24
PB10	SB13	25
	*** TOTAL	1736

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

W. LINCOLN AVENUE & W. BELOIT ROAD

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF
CB1	SB5 (HEAD A)	498	498
CB1	SB11 (HEAD B)	217	217
CB1	SB3 (HEAD C)	338	338
CB1	SB9 (HEAD C)	342	--
CB1	SB10 (HEAD D)	307	307
CB1	SB7 (HEAD E)	448	448
	*** TOTALS	2150	1808

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
W. LINCOLN AVENUE & W. BELOIT ROAD

BASE NO.	656.0200.3106 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

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W. LINCOLN AVENUE & W. BELOIT ROAD

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0310 POLES TYPE 3 EACH	657.0322 POLES TYPE 5-ALUMINUM EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT EACH
SB1	1	--	--	--	--	--	--	1	--	--
SB2	1	--	--	1	--	--	--	--	1	--
SB3	--	--	--	--	--	--	--	--	--	--
SB4	1	--	--	--	--	--	1	--	--	--
SB5	--	--	--	--	--	--	--	--	--	--
SB6	--	1	1	--	--	--	--	--	--	--
SB7	--	1	--	1	--	--	--	--	1	--
SB8	1	--	--	--	--	1	--	--	--	--
SB9	--	1	--	--	1	--	--	--	--	1
SB10	--	--	--	--	--	--	--	--	--	--
SB11	--	--	--	--	--	--	--	--	--	--
SB12	1	--	--	--	--	--	--	1	--	--
SB13	--	1	--	1	--	--	--	--	1	--
*** TOTALS	5	4	1	3	1	1	1	2	3	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.1350 INSTALL POLES TYPE 10 EACH	657.1360 INSTALL POLES TYPE 13 EACH	657.1525 INSTALL MONOTUBE ARMS 25-FT EACH	657.1535 INSTALL MONOTUBE ARMS 35-FT EACH	657.1540 INSTALL MONOTUBE ARMS 40-FT EACH	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	--	--	--	--	--	--	1	--
SB2	--	--	--	--	--	--	1	1
SB3	--	1	--	1	--	1	--	1
SB4	--	--	--	--	--	--	2	--
SB5	--	1	--	1	--	1	--	1
SB6	--	--	--	--	--	--	--	--
SB7	--	--	--	--	--	--	1	--
SB8	--	--	--	--	--	--	1	--
SB9	--	--	--	--	--	--	--	1
SB10	1	--	1	--	--	1	2	1
SB11	--	1	--	--	1	1	--	1
SB12	--	--	--	--	--	--	1	--
SB13	--	--	--	--	--	--	1	1
*** TOTALS	1	3	1	2	1	4	10	7

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-35-91	HWY: W. LINCOLN AVENUE	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 496	E

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TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110* TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115* TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416* PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600** LED MODULES 12-INCH RED BALL EACH	658.0605** LED MODULES 12-INCH YELLOW BALL EACH	658.0610** LED MODULES 12-INCH GREEN BALL EACH	658.0615** LED MODULES 12-INCH RED ARROW EACH	658.0620** LED MODULES 12-INCH YELLOW ARROW EACH	658.0625** LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB2	1	--	1	--	--	1	1	1	--	--	--	--
2	SB10	1	--	1	--	--	1	1	1	--	--	--	--
3	SB10	1	--	1	--	--	1	1	1	--	--	--	--
4	SB8	1	--	1	--	--	1	1	1	--	--	--	--
5	SB3	1	--	1	--	--	1	1	1	--	--	--	--
6	SB3	1	--	1	--	--	1	1	1	--	--	--	--
7	SB10	1	--	1	--	--	1	1	1	--	--	--	--
8	SB5	1	--	1	--	--	1	1	1	--	--	--	--
9	SB5	1	--	1	--	--	1	1	1	--	--	--	--
10	SB4	--	1	--	1	--	--	--	--	1	2	1	--
11	SB5	--	1	--	1	--	--	--	--	1	2	1	--
12	SB4	1	--	1	--	--	1	1	1	--	--	--	--
13	SB11	1	--	1	--	--	1	1	1	--	--	--	--
14	SB11	1	--	1	--	--	1	1	1	--	--	--	--
15	SB10	--	1	--	1	--	--	--	--	1	2	1	--
16	SB11	--	1	--	1	--	--	--	--	1	2	1	--
17	SB13	1	--	1	--	--	1	1	1	--	--	--	--
18	SB6	1	--	1	--	--	1	1	1	--	--	--	--
19	SB7	1	--	1	--	--	1	1	1	--	--	--	--
20	SB2	--	--	--	--	1	--	--	--	--	--	--	1
21	SB4	--	--	--	--	1	--	--	--	--	--	--	1
22	SB4	--	--	--	--	1	--	--	--	--	--	--	1
23	SB7	--	--	--	--	1	--	--	--	--	--	--	1
24	SB8	--	--	--	--	1	--	--	--	--	--	--	1
25	SB10	--	--	--	--	1	--	--	--	--	--	--	1
26	SB10	--	--	--	--	1	--	--	--	--	--	--	1
27	SB12	--	--	--	--	1	--	--	--	--	--	--	1
28	SB13	--	--	--	--	1	--	--	--	--	--	--	1
29	SB1	--	--	--	--	1	--	--	--	--	--	--	1
	*** TOTALS	15	4	15	4	10	15	15	15	4	8	4	10

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE
** TUNNEL VISOR REQUIRED
TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL MOUNTING HARDWARE
W. LINCOLN AVENUE & W. BELOIT ROAD

LOCATION	658.5069.3107 SIGNAL MOUNTING HARDWARE LS
W. LINCOLN AVENUE & W. BELOIT ROAD	1
TOTAL	1

W. LINCOLN AVENUE & W. BELOIT ROAD

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
W. LINCOLN AVENUE & W. BELOIT ROAD

LOCATION	661.0200.3106 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS	661.0300 GENERATORS DAY
W. LINCOLN AVENUE & W. BELOIT ROAD	1	2
*** TOTALS	1	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVE TRAFFIC SIGNALS
W. LINCOLN AVENUE & W. BELOIT ROAD

LOCATION	SPV.0105.3127 REMOVE TRAFFIC SIGNALS LS
W. LINCOLN AVENUE & W. BELOIT ROAD	1
TOTAL	1

EMERGENCY VEHICLE PREEMPTION

LOCATION	SPV.0060.3101 EVP DETECTOR TYPE I EACH	SPV.0060.3102 EVP DISCRIMINATOR TYPE IV EACH	SPV.0060.3103 EVP CONFIRMATION LIGHT ASSEMBLY TYPE I EACH
CB1	--	2	--
SB3	1	--	1
SB5	1	--	1
SB7	1	--	1
SB9	1	--	--
SB10	1	--	1
SB11	1	--	1
*** TOTALS	6	2	5

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TEMPORARY EVP SYSTEM
W. LINCOLN AVENUE & W. BELOIT ROAD

LOCATION	SPV.0105.3128 TEMPORARY EVP SYSTEM LS
W. LINCOLN AVENUE & W. BELOIT ROAD	1
TOTAL	1

INSTALL STATE FURNISHED MICROWAVE DETECTION SYSTEM
W. LINCOLN AVENUE & W. BELOIT ROAD

LOCATION	SPV.0105.3120 TRANSPORTING AND INSTALLING STATE FURNISHED MICROWAVE DETECTION SYSTEM LS
W. LINCOLN AVENUE & W. BELOIT ROAD	1

INSTALL STATE FURNISHED MUNICIPAL TRAFFIC SIGNAL CABINET
W. LINCOLN AVENUE & W. BELOIT ROAD

LOCATION	SPV.0060.3106 TRAFFIC SIGNAL CONTROLLER PROGRAMMING EACH	SPV.0105.3126 INSTALL STATE FURNISHED MUNICIPAL TRAFFIC SIGNAL CABINET LS
W. LINCOLN AVENUE & W. BELOIT ROAD	1	1
TOTAL	1	1

TRANSPORTING MUNICIPAL SIGNAL AND LIGHTING MATERIALS
W. LINCOLN AVENUE & W. BELOIT ROAD

LOCATION	SPV.0105.3115 TRANSPORTING MUNICIPAL SIGNAL AND LIGHTING MATERIALS LS
W. LINCOLN AVENUE & W. BELOIT ROAD	1
TOTAL	1

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USH 18 HAWK

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

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SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
2	EACH	POLES TYPE 9
2	EACH	MONOTUBE ARMS 30-FT
1	EACH	ACCESSIBLE PEDESTRIAN SIGNAL PUSH BUTTONS

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
	7

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	42	42	--
PB1	PB2	--	--	86
PB2	PB3	--	--	134
PB1	SB1	4	--	--
PB2	SB2	--	7	--
PB3	SB4	23	--	--
	*** TOTALS	69	49	220

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	185+40.0	49.0' LT	1
PB2	185+40.0	6.0' LT	1
PB3	185+40.0	60.5' RT	1
		*** TOTALS	3

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030620_mq_sp.ppt PLOT DATE : 4/29/2014 10:56:50 AM PLOT BY : MSCCEJ PLOT NAME : 030125_mq_sp1 PLOT SCALE : 1:1

USH 18 HAWK

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	185+36.3	51.0' LT	1	--	--
SB2	185+33.7	8.0' LT	--	1	--
SB3	185+33.7	8.0' RT	--	1	--
SB4	185+17.2	61.5' RT	1	--	--
CB1	185+28.7	66.2' LT	1	--	1
		*** TOTALS	3	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1	52	--
CB1	SB2	--	114
CB1	SB3	--	123
CB1	SB4	213	--
	*** TOTALS	265	237

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF
SB1	HEAD 5	14
SB2	HEAD 3	44
SB2	HEAD 4	56
SB2	HEAD 6	14
SB3	HEAD 1	44
SB3	HEAD 2	56
SB3	HEAD 7	14
SB4	HEAD 8	14
	*** TOTALS	256

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

USH 18 HAWK

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	52
SB1	SB2	94
SB2	SB3	47
SB3	SB4	146
PB1	SB1	24
PB2	SB2	27
PB3	SB4	43
	*** TOTAL	433

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SIGNAL MOUNTING HARDWARE
USH 18 HAWK

LOCATION	658.5069.3105 SIGNAL MOUNTING HARDWARE LS
USH 18 HAWK	1
TOTAL	1

ELECTRICAL SERVICE METER BREAKER PEDESTAL
USH 18 HAWK

BASE NO.	656.0200.3105 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	SPV.0060.3107 PEDESTRIAN HYBRID BEACON EACH	658.0416* PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB3	1	--	--
2	SB3	1	--	--
3	SB2	1	--	--
4	SB2	1	--	--
5	SB1	--	1	1
6	SB2	--	1	1
7	SB3	--	1	1
8	SB4	--	1	1
	*** TOTALS	4	4	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE
* TRAFFIC SIGNAL HOUSING SHALL BE BLACK IN COLOR

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USH 18 HAWK

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.1345 INSTALL POLES TYPE 9 EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	PEDESTRIAN PUSH BUTTONS** EACH
SB1	1	1	--	--	1
SB2	--	--	1	1	1
SB3	--	--	1	1	1
SB4	1	1	--	--	1
*** TOTALS	2	2	2	2	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE
** ITEM INSTALLED UNDER SEPARATE BID ITEM

TRANSPORTING SIGNAL AND LIGHTING MATERIALS
USH 18 HAWK

LOCATION	SPV.0105.3116 TRANSPORTING MUNICIPAL SIGNAL AND LIGHTING MATERIALS LS
USH 18 HAWK	1
TOTAL	1

3

INSTALL STATE FURNISHED MUNICIPAL TRAFFIC SIGNAL CABINET
USH 18 HAWK

LOCATION	SPV.0060.3106 TRAFFIC SIGNAL CONTROLLER PROGRAMMING EACH	SPV.0105.3111 INSTALL STATE FURNISHED MUNICIPAL TRAFFIC SIGNAL CABINET LS
USH 18 HAWK	1	1
TOTAL	1	1

REMOVE TRAFFIC SIGNALS
USH 18 & ST. CAMILLUS DRIVEWAY

LOCATION	SPV.0105.3105 REMOVE TRAFFIC SIGNALS LS
USH 18 (W. BLUEMOUND ROAD) & ST. CAMILLUS DRIVEWAY	1
TOTAL	1

TRANSPORTING AND INSTALLING ACCESSIBLE PEDESTRIAN SIGNAL PUSH BUTTONS
USH 18 HAWK

LOCATION	SPV.0105.3131 TRANSPORTING AND INSTALLING ACCESSIBLE PEDESTRIAN SIGNAL PUSH BUTTONS LS
USH 18 HAWK	1
TOTAL	1

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SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1*	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
4	EACH	POLES TYPE 9
2	EACH	MONOTUBE ARMS 25-FT
2	EACH	MONOTUBE ARMS 35-FT
1	EACH	MICROWAVE DETECTION SYSTEM

*SUPPLIED BY CITY OF MILWAUKEE

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
	9

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

USH 18 & N. 68TH STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	39	--
PB1	PB2	--	--	120
PB2	PB3	--	78	--
PB3	PB4	--	--	136
PB4	PB5	--	76	--
PB5	PB6	--	--	86
PB6	PB7	--	56	--
PB7	PB8	--	--	148
PB8	CB1	--	24	--
PB1	SB1	18	--	--
PB2	SB2	--	5	--
PB2	SB3	8	--	--
PB3	SB4	12	--	--
PB4	SB5	--	4	--
PB4	SB6	12	--	--
PB5	SB7	9	--	--
PB6	SB8	--	6	--
PB7	SB9	10	--	--
PB8	SB10	--	13	--
*** TOTALS		69	301	490

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	294+08.2	60.3' LT	1
PB2	294+67.7	53.5' LT	1
PB3	294+99.5	32.5' LT	1
PB4	294+55.5	32.5' RT	1
PB5	294+54.0	53.8' RT	1
PB6	294+11.0	48.1' RT	1
PB7	293+90.4	30.0' RT	1
PB8	293+95.6	43.5' LT	1
		*** TOTALS	8

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030630_mq_sp.ppt PLOT DATE : 4/29/2014 10:57:27 AM PLOT BY : MSCCEJ PLOT NAME : 030630_mq_sp1 PLOT SCALE : 1:1

USH 18 & N. 68TH STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	SPV.0060.3109 INSTALL TRAFFIC CABINET BASE EACH
SB1	294+18.1	45.3' LT	1	--	--
SB2	294+65.7	58.0' LT	--	1	--
SB3	294+72.0	46.3' LT	1	--	--
SB4	294+87.2	34.4' LT	1	--	--
SB5	294+77.1	35.0' RT	--	1	--
SB6	294+69.1	35.0' RT	1	--	--
SB7	294+54.2	44.5' RT	1	--	--
SB8	294+09.8	41.5' RT	--	1	--
SB9	294+00.8	31.0' RT	1	--	--
SB10	294+06.4	35.8' LT	--	1	--
CB1	294+01.5	49.4' LT	--	--	1
		*** TOTALS	6	4	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 10	--	23
SB1	HEAD 12	21	--
SB1	HEAD 16	14	--
SB2	HEAD 11	--	47
SB3	HEAD 19	14	--
SB4	HEAD 2	--	23
SB4	HEAD 5	21	--
SB4	HEAD 18	14	--
SB5	HEAD 3	--	54
SB5	HEAD 4	36	--
SB5	HEAD 21	14	--
SB7	HEAD 9	21	--
SB7	HEAD 13	--	23
SB7	HEAD 20	14	--
SB8	HEAD 14	--	46
SB8	HEAD 15	14	--
SB9	HEAD 1	21	--
SB9	HEAD 6	--	23
SB9	HEAD 22	14	--
SB10	HEAD 7	--	54
SB10	HEAD 8	38	--
SB10	HEAD 17	14	--
	*** TOTALS	270	293

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG LF
CB1	SB1	--	--	58
CB1	SB2	--	121	--
CB1	SB3	124	--	--
CB1	SB4	--	--	183
CB1	SB5	--	--	259
CB1	SB6	267	--	--
CB1	SB7	--	--	237
CB1	SB8	--	175	--
CB1	SB9	--	--	135
CB1	SB10	--	--	48
	*** TOTALS	391	296	920

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	58
SB1	SB2	123
SB2	SB3	37
SB3	SB4	99
SB4	SB5	124
SB5	SB6	40
SB6	SB7	99
SB7	SB8	98
SB8	SB9	84
SB9	SB10	137
SB10	CB1	48
PB1	CB1	33
PB2	SB2	25
PB3	SB4	32
PB4	SB5	24
PB5	SB7	29
PB6	SB8	26
PB7	SB9	30
PB8	CB1	28
	*** TOTAL	1174

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

USH 18 & N. 68TH STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF
CB1	SB10 (HEAD A)	108	108
CB1	SB5 (HEAD B)	319	319
CB1	SB8 (HEAD C)	230	230
CB1	SB2 (HEAD D)	176	176
	*** TOTALS	833	833

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
USH 18 & N. 68TH STREET

BASE NO.	656.0200.3104 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.1345 INSTALL POLES TYPE 9 EACH	657.1525 INSTALL MONOTUBE ARMS 25-FT EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH
SB1	1	--	1	--	--	--	--	1
SB2	--	--	--	--	1	1	--	--
SB3	1	--	--	1	--	--	--	1
SB4	1	--	1	--	--	--	--	1
SB5	--	--	--	--	1	--	1	--
SB6	1	1	--	--	--	--	--	1
SB7	1	--	1	--	--	--	--	1
SB8	--	--	--	--	1	1	--	1
SB9	1	--	1	--	--	--	--	1
SB10	--	--	--	--	1	--	1	1
*** TOTALS	6	1	4	1	4	2	2	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0120 TRAFFIC SIGNAL FACE 5-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0225 BACKPLATES SIGNAL FACE 5 SECTION 12-INCH EACH	658.0412 PEDESTRIAN SIGNAL FACE 12-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0660 LED MODULES PEDESTRIAN COUNTDOWN TIMER 12-INCH EACH
1	SB8	1	--	1	--	--	1	1	1	--	--	--
2	SB4	--	1	--	1	--	1	1	1	1	1	--
3	SB5	--	1	--	1	--	1	1	1	1	1	--
4	SB5	1	--	1	--	--	1	1	1	--	--	--
5	SB4	1	--	1	--	--	1	1	1	--	--	--
6	SB9	--	1	--	1	--	1	1	1	1	1	--
7	SB10	--	1	--	1	--	1	1	1	1	1	--
8	SB10	1	--	1	--	--	1	1	1	--	--	--
9	SB7	1	--	1	--	--	1	1	1	--	--	--
10	SB1	--	1	--	1	--	1	1	1	1	1	--
11	SB2	--	1	--	1	--	1	1	1	1	1	--
12	SB1	1	--	1	--	--	1	1	1	--	--	--
13	SB7	--	1	--	1	--	1	1	1	1	1	--
14	SB8	--	1	--	1	--	1	1	1	1	1	--
15	SB8	--	--	--	--	2	--	--	--	--	--	2
16	SB1	--	--	--	--	2	--	--	--	--	--	2
17	SB10	--	--	--	--	2	--	--	--	--	--	2
18	SB4	--	--	--	--	2	--	--	--	--	--	2
19	SB3	--	--	--	--	2	--	--	--	--	--	2
20	SB7	--	--	--	--	2	--	--	--	--	--	2
21	SB5	--	--	--	--	2	--	--	--	--	--	2
22	SB9	--	--	--	--	2	--	--	--	--	--	2
*** TOTALS		6	8	6	8	16	14	14	14	8	8	16

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

USH 18 & N. 68TH STREET

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

SIGNAL MOUNTING HARDWARE
USH 18 & N. 68TH STREET

LOCATION	658.5069.3106 SIGNAL MOUNTING HARDWARE LS
USH 18 & N. 68TH STREET	1
TOTAL	1

EMERGENCY VEHICLE PREEMPTION

LOCATION	SPV.0060.3101 EVP DETECTOR TYPE I EACH	SPV.0060.3102 EVP DISCRIMINATOR TYPE IV EACH	SPV.0060.3103 EVP CONFIRMATION LIGHT ASSEMBLY TYPE I EACH
CB1	--	1	--
SB2	1	--	1
SB5	1	--	1
SB8	1	--	1
SB10	1	--	1
*** TOTALS	4	1	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
USH 18 & N. 68TH STREET

LOCATION	661.0200.3105 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS	661.0300 GENERATORS DAY
USH 18 & N. 68TH STREET	1	2
*** TOTALS	1	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVE TRAFFIC SIGNALS
USH 18 & N. 68TH STREET

LOCATION	SPV.0105.3106 REMOVE TRAFFIC SIGNALS LS
USH 18 & N. 68TH STREET	1
TOTAL	1

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3

INSTALL STATE SUPPLIED MICROWAVE DETECTION SYSTEM
USH 18 & N. 68TH STREET

LOCATION	SPV.0105.3121 TRANSPORTING AND INSTALLING STATE FURNISHED MICROWAVE DETECTION SYSTEM LS
USH 18 & N. 68TH STREET	1
TOTAL	1

TRANSPORTINGMUNICIPAL SIGNAL AND LIGHTING MATERIALS
USH 18 & N. 68TH STREET

LOCATION	SPV.0105.3129 TRANSPORTING MUNICIPAL SIGNAL AND LIGHTING MATERIALS LS
USH 18 & N. 68TH STREET	1
TOTAL	1

TEMPORARY EVP SYSTEM
USH 18 & N. 68TH STREET

LOCATION	SPV.0105.3130 TEMPORARY EVP SYSTEM LS
USH 18 & N. 68TH STREET	1
TOTAL	1

3

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF
EXPB5904	PB9 (S40-1408)	9
EXPB5905	PB9 (S40-1122)	3
	*** TOTALS	12

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL INTERCONNECT

LOCATION	670.0100.3001 FIELD SYSTEM INTEGRATOR LS	670.0200.3001 ITS DOCUMENTATION LS	678.0500.3001 COMMUNICATION SYSTEM TESTING LS
1060-35-91 CATEGORY 1500 STH 100	1	1	1
*** TOTALS	1	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
EXPB5904	1
EXPB5905	1
*** TOTAL	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FIBER OPTIC

LOCATION	678.0300 FIBER OPTIC SPLICE EACH
EXCV5901	14
EXCV5903	14
*** TOTAL	28

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & W. LAPHAM STREET

LOCATION	*** SPV.0105.3050 LS
CB1 (S40-1408)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
603	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT
1	EACH	ETHERNET SWITCH

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
379	LF	TRACER WIRE
2	EACH	CAT-5E CABLE 1-METER

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & W. THEODORE TRECKER WAY

LOCATION	*** SPV.0105.3051 LS
CB1 (S40-1122)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
459	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT
1	EACH	ETHERNET SWITCH

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
319	LF	TRACER WIRE
2	EACH	CAT-5E CABLE 1-METER

3

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF
EXPB2901	PB10 (S40-1388)	8
	*** TOTALS	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
EXPB2901	1
*** TOTAL	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL INTERCONNECT

LOCATION	670.0100.3002 FIELD SYSTEM INTEGRATOR LS	670.0200.3002 ITS DOCUMENTATION LS	678.0500.3002 COMMUNICATION SYSTEM TESTING LS
1060-35-91 CATEGORY 1500 STH 59	1	1	1
*** TOTALS	1	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL ETHERNET SWITCH

LOCATION	675.0400.S INSTALL ETHERNET SWITCH EACH
CB1 (S40-1387)	1
*** TOTAL	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL 5.8 GHZ ETHERNET BRIDGE

LOCATION	SPV.0060.2009 INSTALL 5.8 GHZ ETHERNET BRIDGE EACH
SB10 (S40-1100)	1
SB11 (S40-1387)	1
	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF
EXPB3001	PB3 (S40-1389)	5
EXPB3301	PB6 (S40-1390)	85
	*** TOTALS	90

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
PB3 (S40-1389)	1
EXPB3001	1
EXPB3301	1
*** TOTAL	3

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL INTERCONNECT

LOCATION	670.0100.3003 FIELD SYSTEM INTEGRATOR LS	670.0200.3003 ITS DOCUMENTATION LS	678.0500.3003 COMMUNICATION SYSTEM TESTING LS
1060-35-91 CATEGORY 1500 STH 181	1	1	1
*** TOTALS	1	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

W. NATIONAL AVENUE COMMUNICATIONS

ALL ITEMS ARE CATEGORY 1500

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF
PB43A	PB12 (102ND)	24
CV6301	PB5 (LINCOLN)	9
	*** TOTALS	33

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL INTERCONNECT

LOCATION	670.0100.3104 FIELD SYSTEM INTEGRATOR LS	670.0200.3104 ITS DOCUMENTATION LS	678.0500.3104 COMMUNICATION SYSTEM TESTING LS
1060-35-91 CATEGORY 1500 W. NATIONAL AVENUE	1	1	1
*** TOTALS	1	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
PB43A	1
CV6301	1
*** TOTAL	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FIBER OPTIC

LOCATION	678.0300 FIBER OPTIC SPLICE EACH
CV43	14
CV6301	14
*** TOTAL	28

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-35-91	HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET:	E

W. NATIONAL AVENUE COMMUNICATIONS

ALL ITEMS ARE CATEGORY 1500

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET W. NATIONAL AVENUE & S. 102ND STREET

LOCATION	*** SPV.0105.3133 LS
CB1 (102ND)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
249	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT
1	EACH	ETHERNET SWITCH

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
137	LF	TRACER WIRE
2	EACH	CAT-5E CABLE 1-METER

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET W. NATIONAL AVENUE & W. LINCOLN AVENUE

LOCATION	*** SPV.0105.3134 LS
CB1 (LINCOLN)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
431	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT
1	EACH	ETHERNET SWITCH

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
291	LF	TRACER WIRE
2	EACH	CAT-5E CABLE 1-METER

W. LINCOLN AVENUE COMMUNICATIONS

ALL ITEMS ARE CATEGORY 1500

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF
EXPB5001	ICPB1001	55	--
ICPB1001	ICPB1002	--	116
ICPB1002	CB1 (S40-1162)	5	--
	*** TOTALS	60	116

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL INTERCONNECT

LOCATION	670.0100.3105 FIELD SYSTEM INTEGRATOR LS	670.0200.3105 ITS DOCUMENTATION LS	678.0500.3105 COMMUNICATION SYSTEM TESTING LS
1060-35-91 CATEGORY 1500 W. LINCOLN AVENUE	1	1	1
*** TOTALS	1	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
EXPB5001	1
*** TOTAL	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET IH 894/USH 45 SB OFF RAMP & W. LINCOLN AVENUE

LOCATION	*** SPV.0105.3054 LS
CB1 (S40-1162)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
289	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT
1	EACH	ETHERNET SWITCH

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
247	LF	TRACER WIRE
2	EACH	CAT-5E CABLE 1-METER

USH 18 COMMUNICATIONS

ALL ITEMS ARE CATEGORY 1500

CONDUIT

FROM	TO	652.0605 CONDUIT SPECIAL 2-INCH LF
EXCV1802	PB2 (HAWK)	235
	*** TOTALS	235

INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
EXCV1802	1
*** TOTAL	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL INTERCONNECT

LOCATION	670.0100.3006 FIELD SYSTEM INTEGRATOR LS	670.0200.3006 ITS DOCUMENTATION LS	678.0500.3006 COMMUNICATION SYSTEM TESTING LS
1060-35-91 CATEGORY 1500 USH 18	1	1	1
*** TOTALS	1	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FIBER OPTIC

LOCATION	678.0300 FIBER OPTIC SPLICE EACH
EXCV1802	14
*** TOTAL	14

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET USH 18 (W. BLUEMOUND ROAD) HAWK SIGNAL

LOCATION	*** SPV.0105.3132 LS
CB1 (HAWK)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
466	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT
1	EACH	ETHERNET SWITCH

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
354	LF	TRACER WIRE
2	EACH	CAT-5E CABLE 1-METER

Standard Detail Drawing List

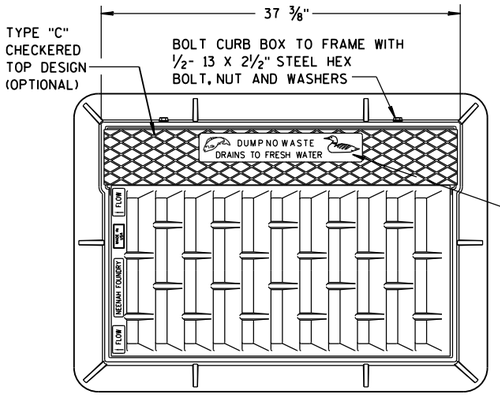
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-07	CONDUIT
09B04-10	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09C06-06	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-04	CONCRETE BASE TYPE 10
09C12-04A	CONCRETE BASE TYPE 10
09C12-04B	CONCRETE BASE TYPE 13
09C13-02	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09D01-04	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-02	SIGNAL OR LIGHTING CONTROL CABINET
09E01-12A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-12B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-12D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-12G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-04	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
09E08-04A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-04B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-04C	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-04D	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-04E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09F15-03B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09G01-03A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
11B02-02	CONCRETE MEDIAN NOSE
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C04-16	URBAN NON-DOWELED CONCRETE PAVEMENT
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02C	CONCRETE PAVEMENT JOINT TIES
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B27-01A	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01B	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01C	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B32-02A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-02B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C18-03	MEDIAN ISLAND MARKING
15C23-02	30" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

6

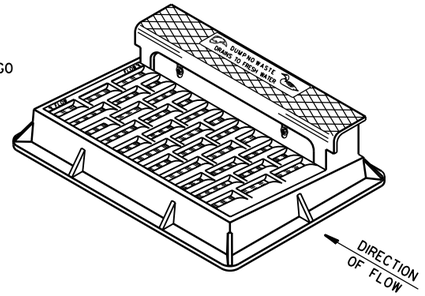
Standard Detail Drawing List

15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-02	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE

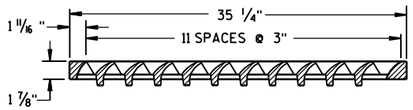
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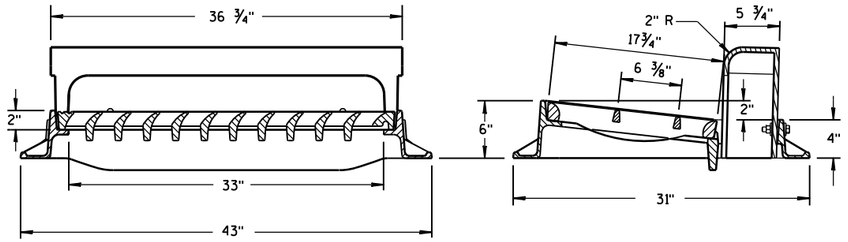


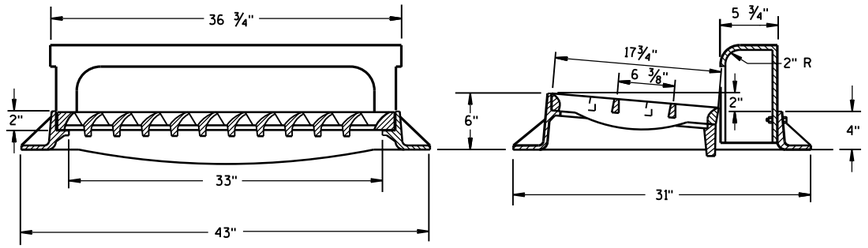
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

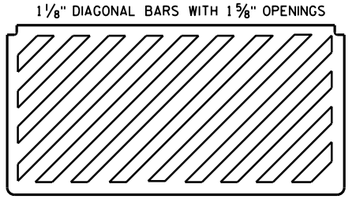






TYPE "H"

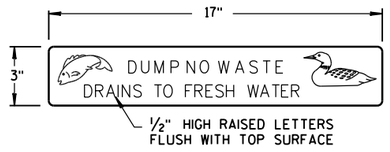
NOTE: EITHER CASTING IS ACCEPTABLE



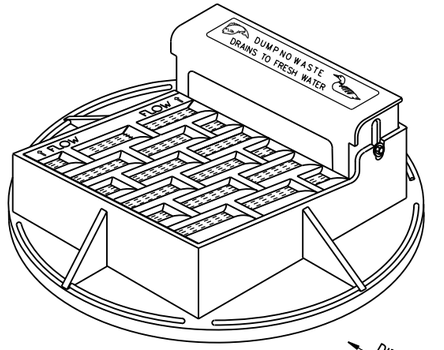
SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

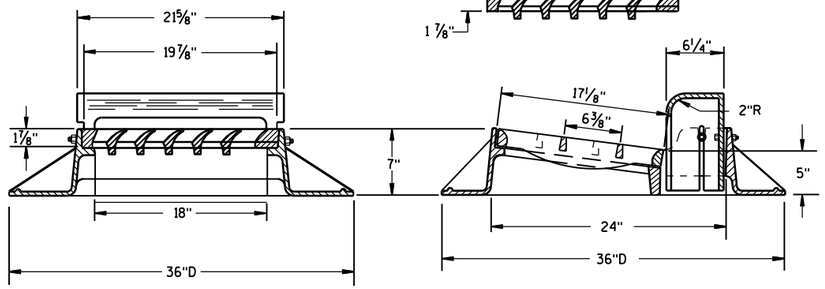


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



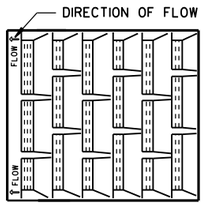
TYPE "A"

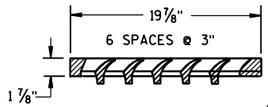
GENERAL NOTES

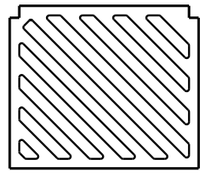
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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



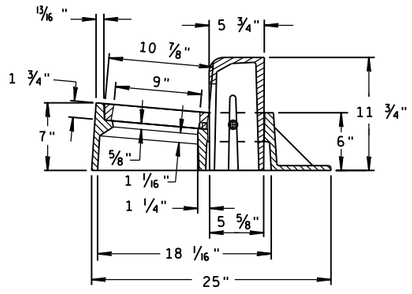


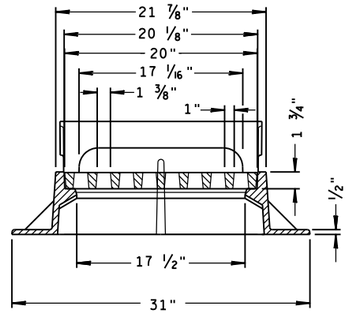


SPECIAL GRATE FOR TYPE "A" COVER

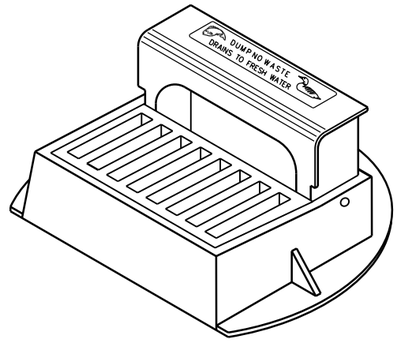
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"



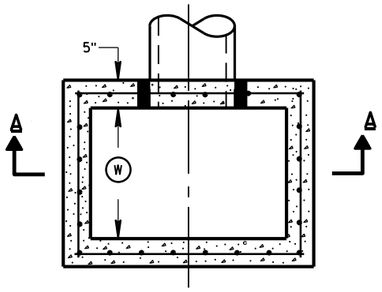
INLET COVERS
TYPE A, H, A-S, H-S & Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

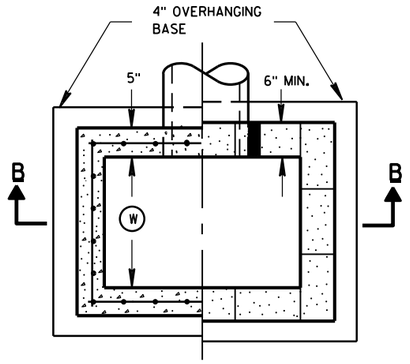
APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

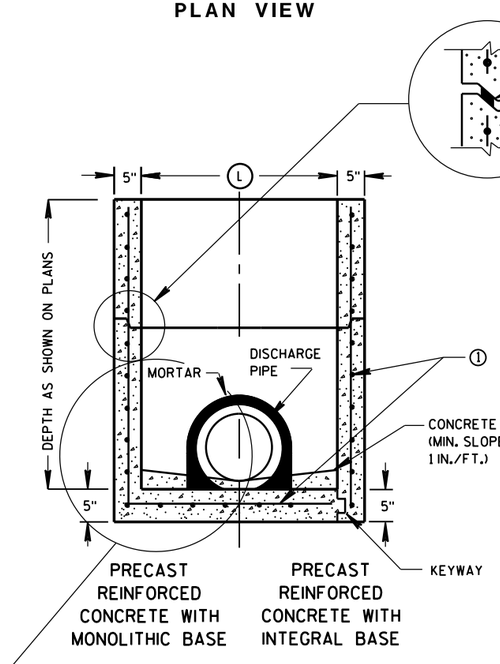
S.D.D. 8 A 5-19a



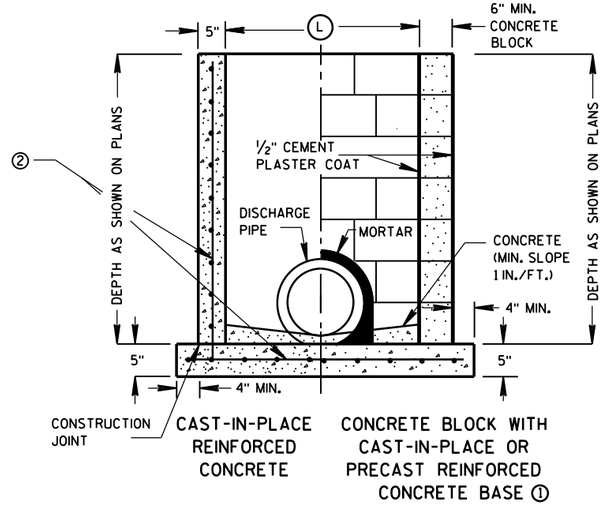
PLAN VIEW



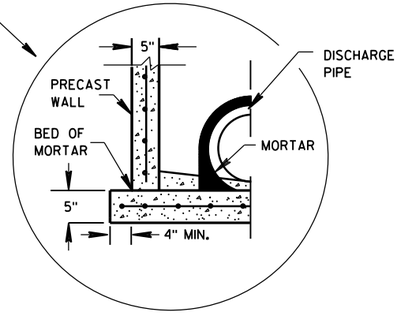
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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 INLET 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 INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

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

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

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

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

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

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

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

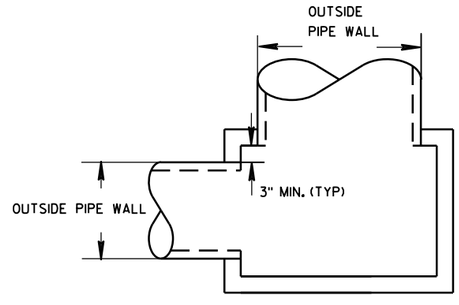
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

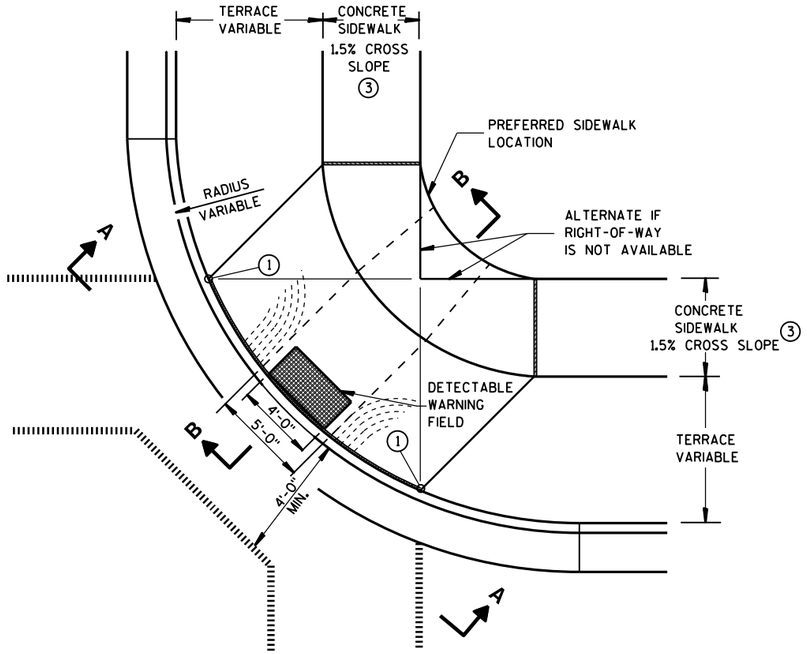
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DE
ENGINEER

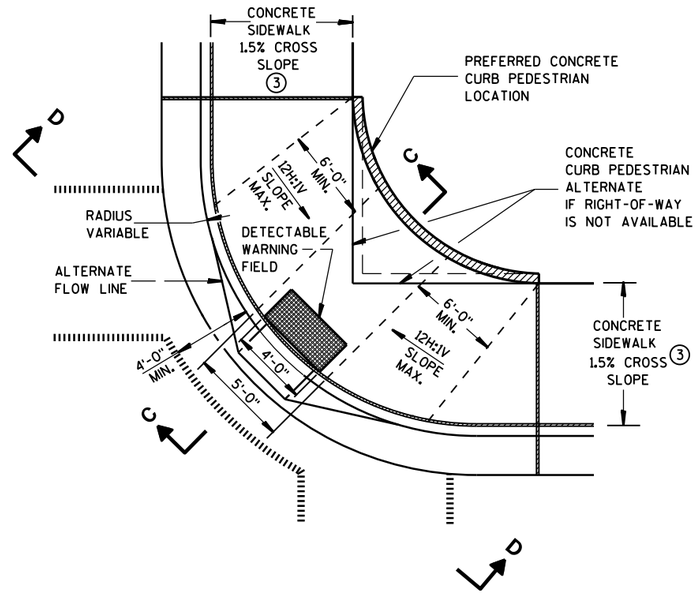
6
S.D.D. 8 C 7-1



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

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.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. 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.

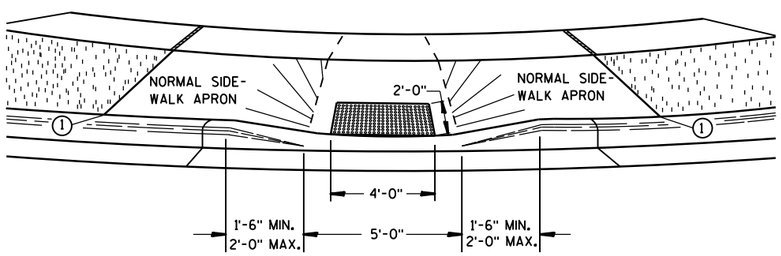
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

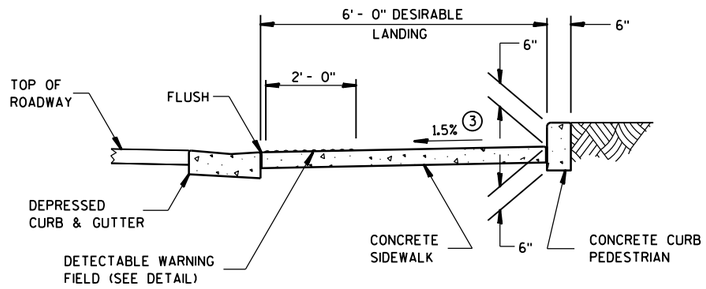
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

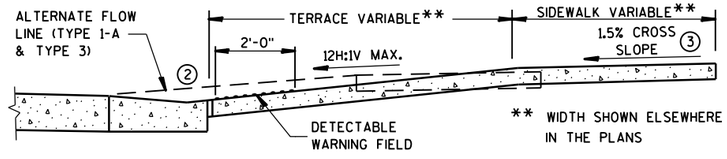
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



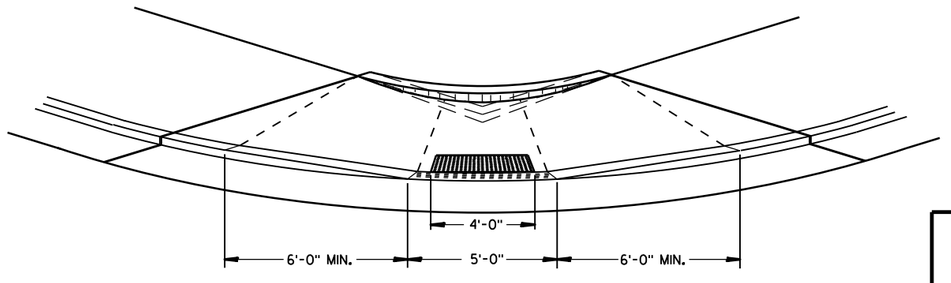
VIEW A-A



SECTION C-C



SECTION B-B



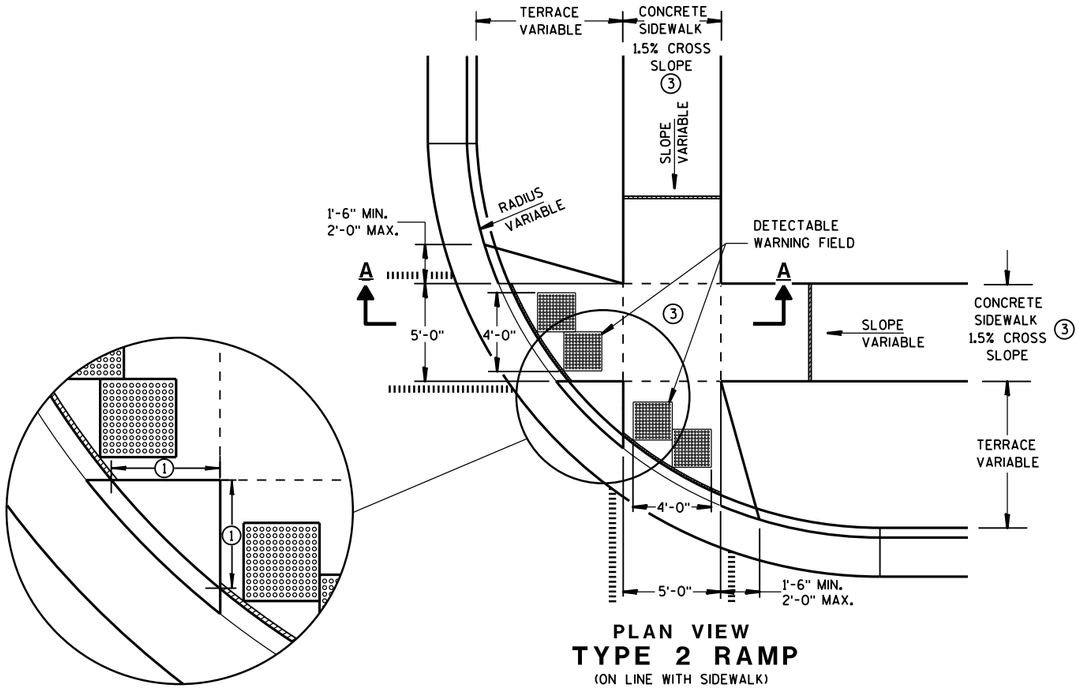
VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

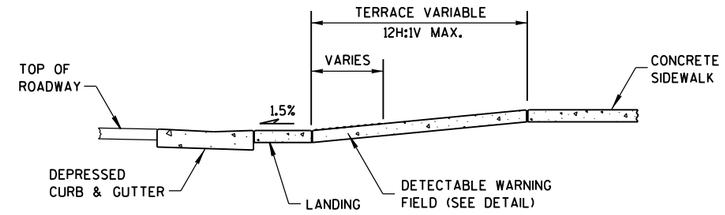
S.D.D. 8 D 5-15a



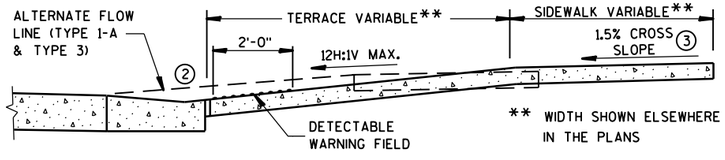
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

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

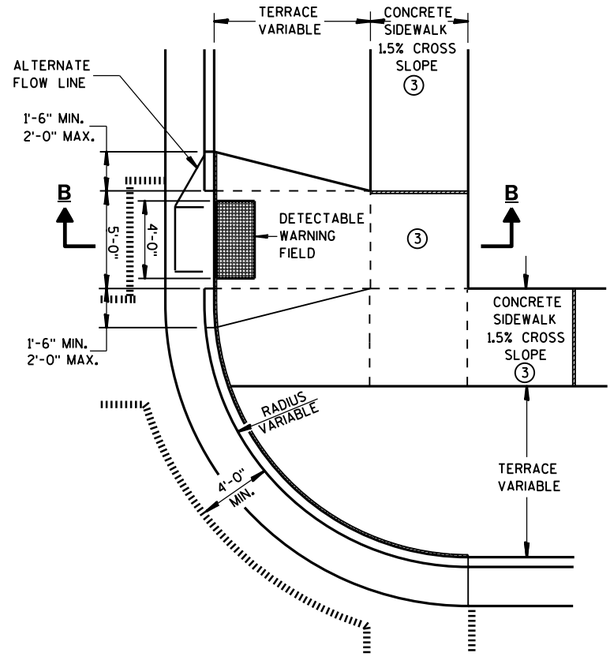
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

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



PLAN VIEW

TYPE 3 RAMP

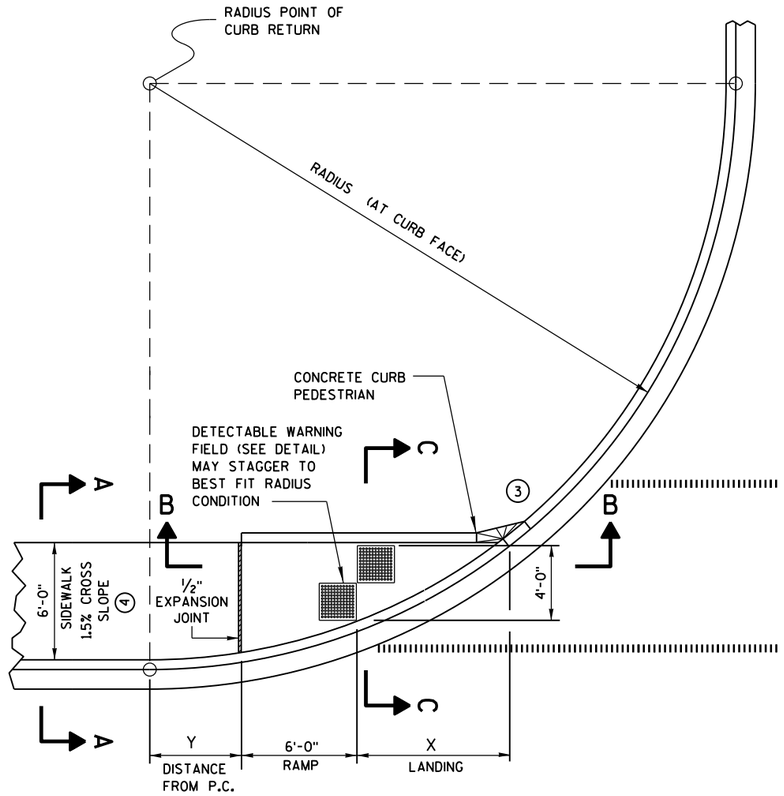
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

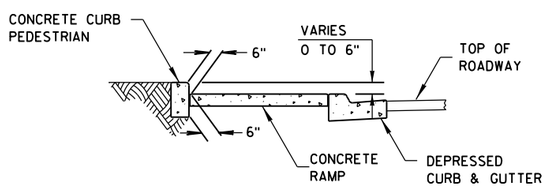
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

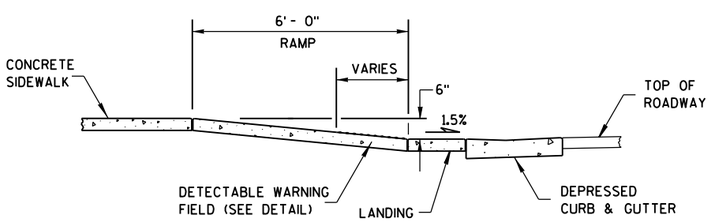
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



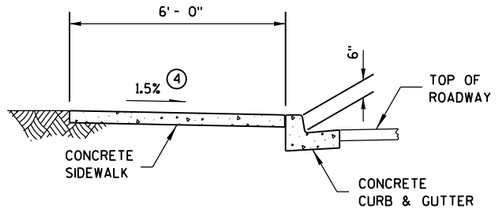
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

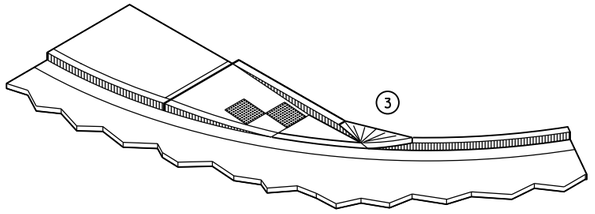
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

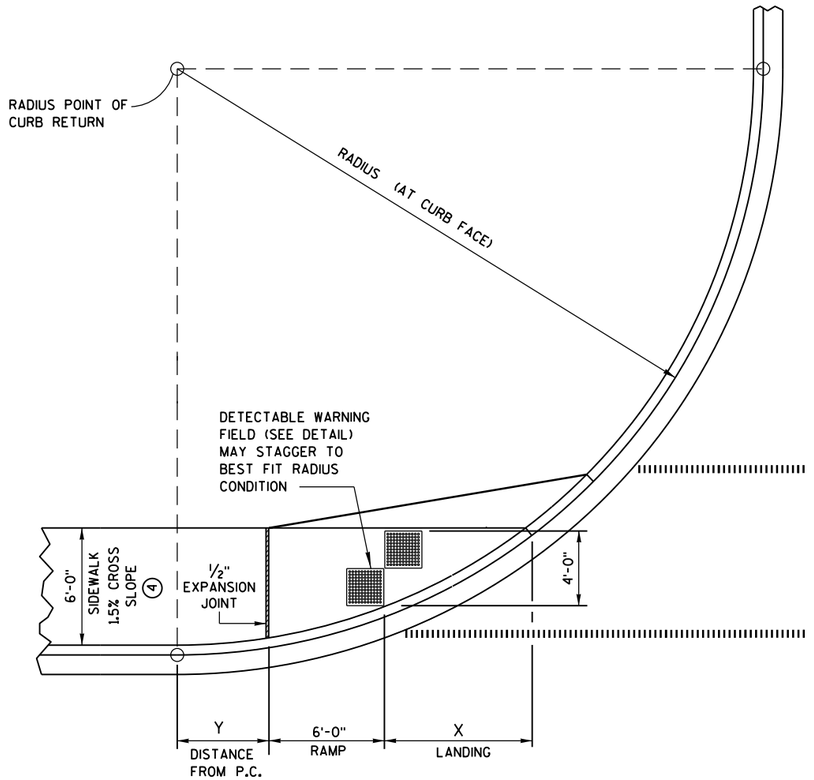
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

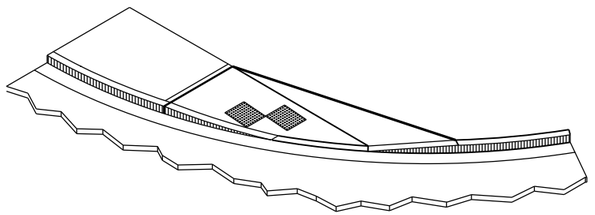
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

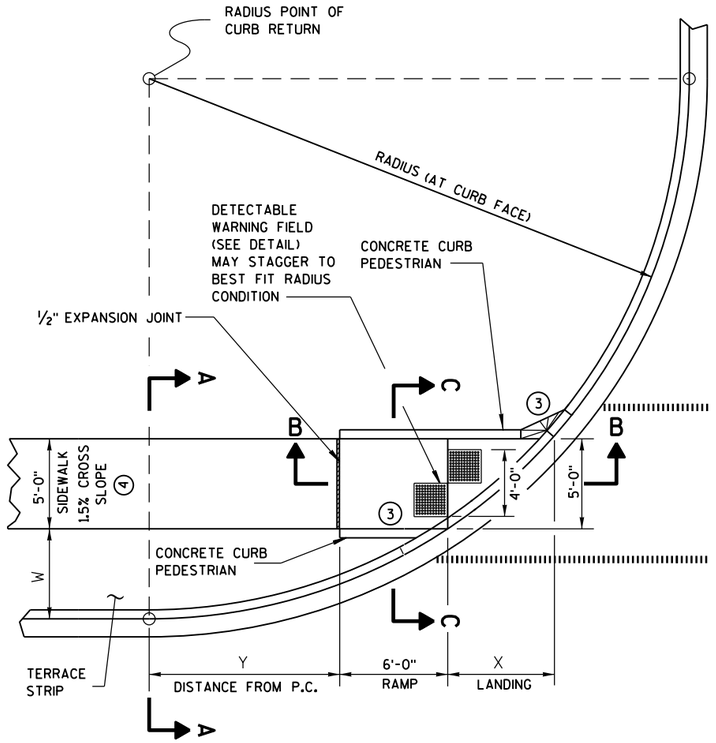
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

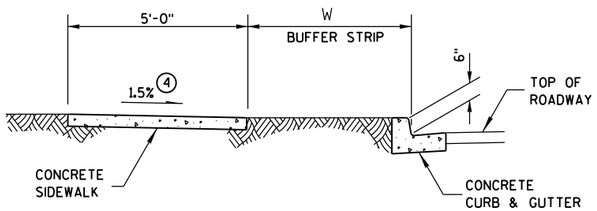
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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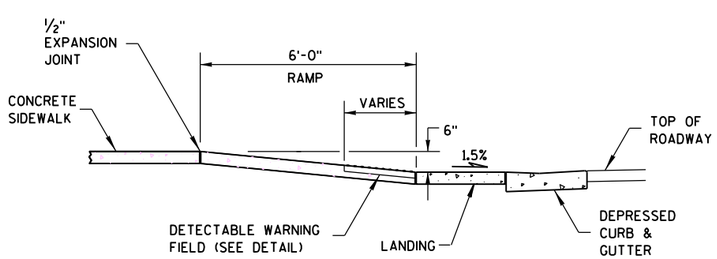
S.D.D. 8 D 5-15c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



SECTION B-B FOR TYPE 4B

LEGEND

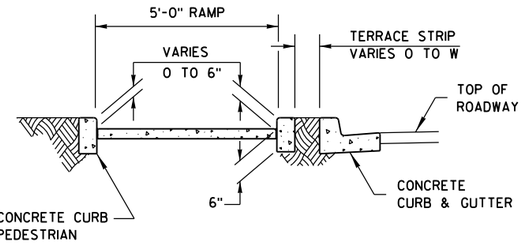
½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION C-C FOR TYPE 4B

GENERAL NOTES

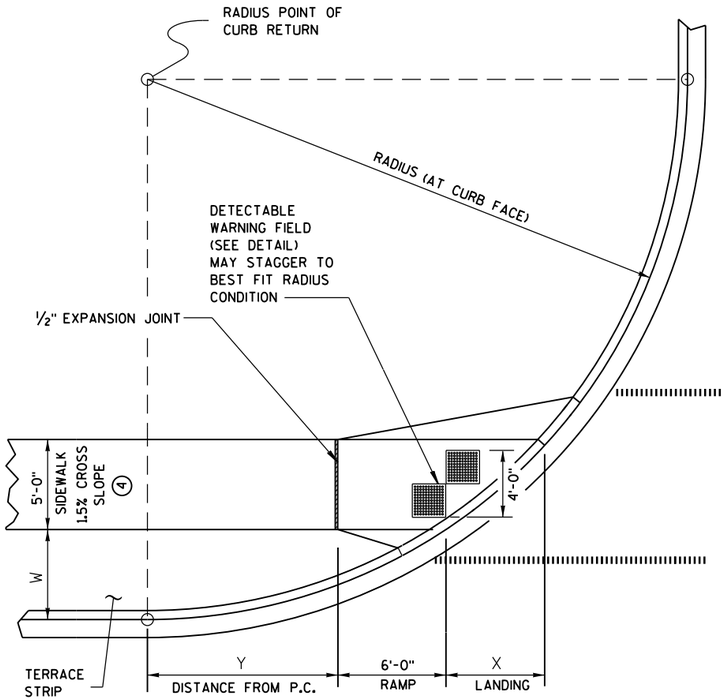
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

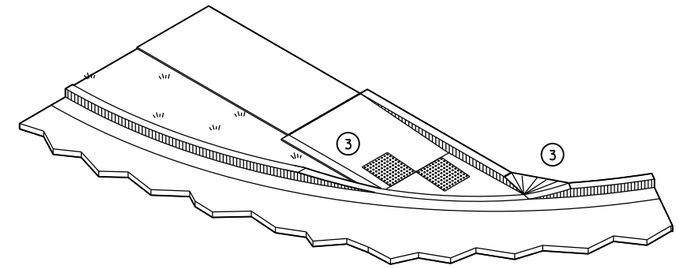
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

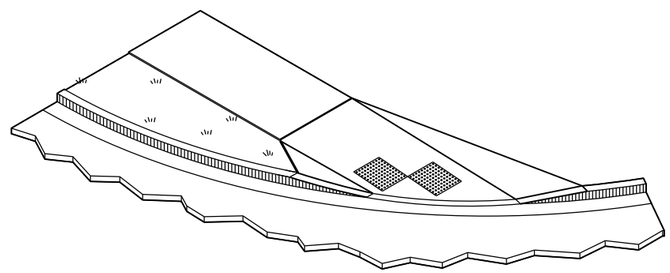
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



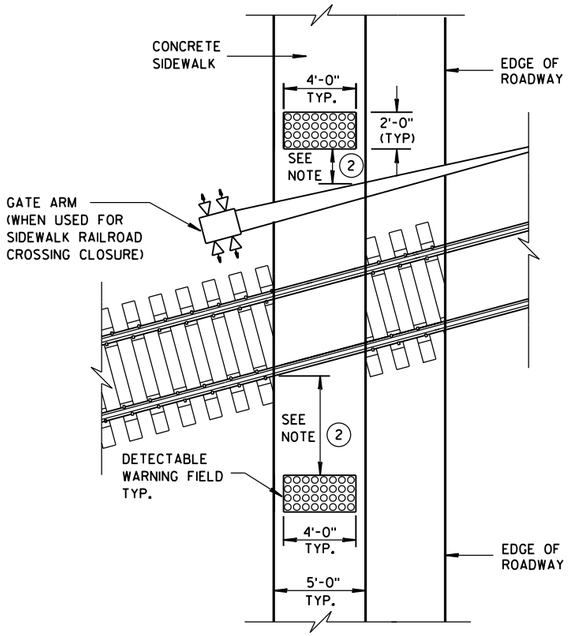
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

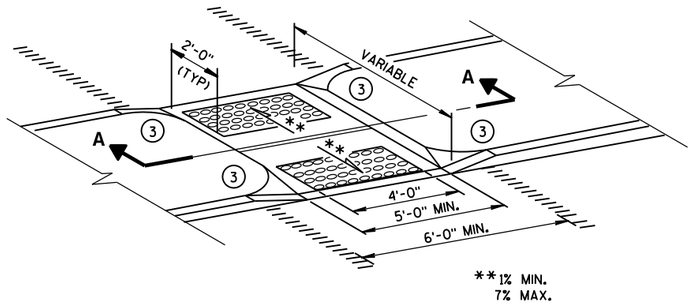
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 8 D 5-15d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

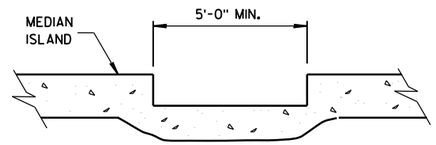
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

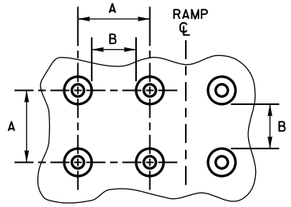
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET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

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

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



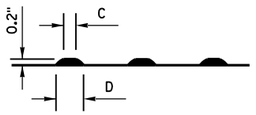
SECTION A-A



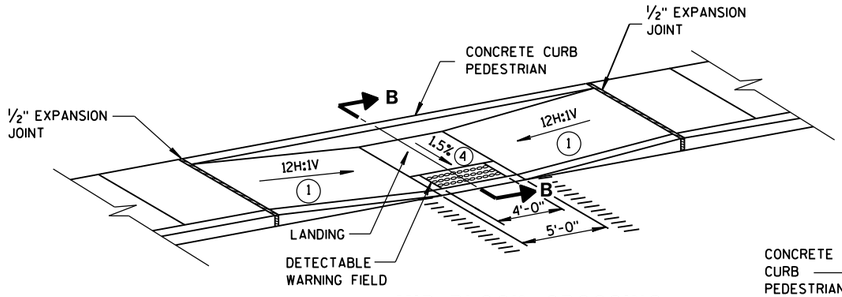
PLAN VIEW

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

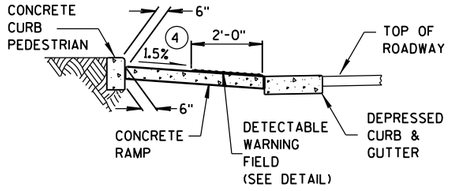
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

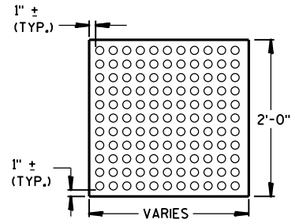


MID-BLOCK CROSSING
TYPE 7A



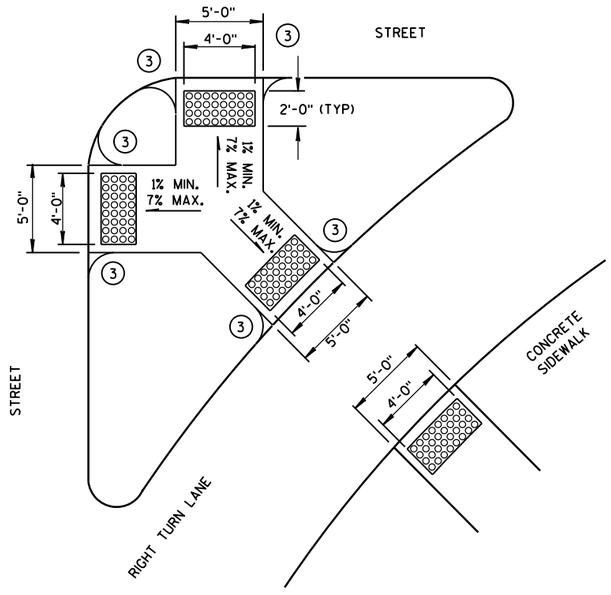
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

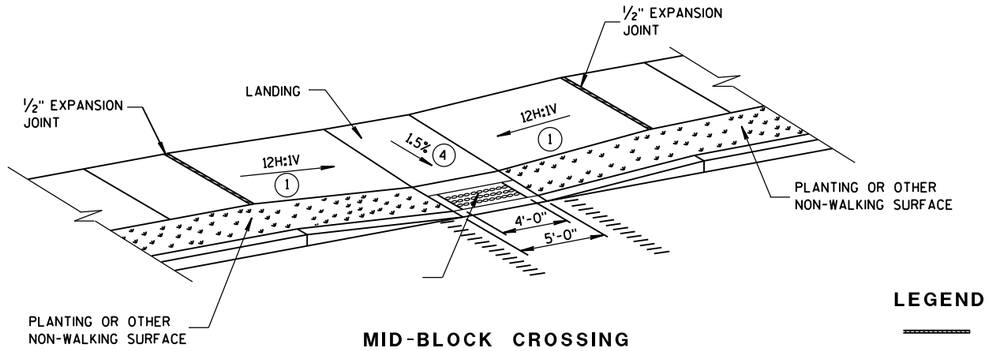


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



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)

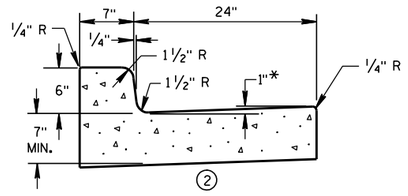
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

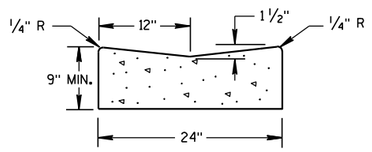
APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS [illegible] ENGINEER
FHWA

6

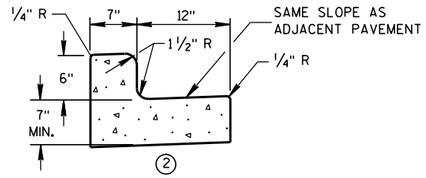
S.D.D. 8 D 5-15e



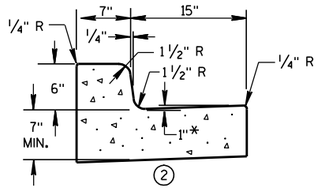
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

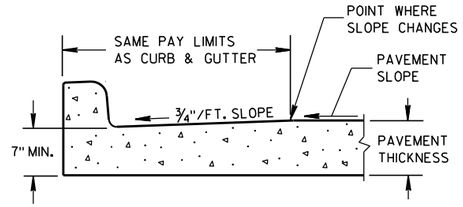


① CONCRETE CURB & GUTTER 19"



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.

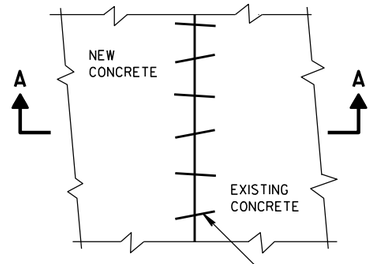
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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.

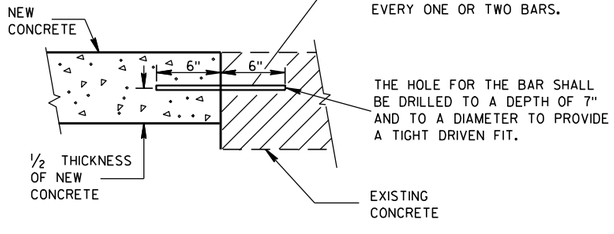
③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

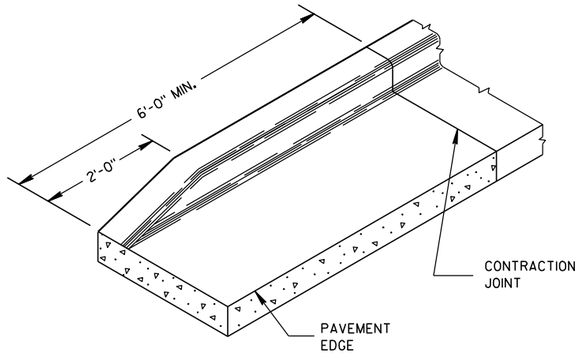
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



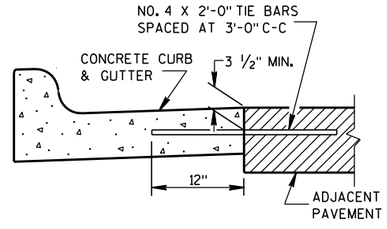
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A

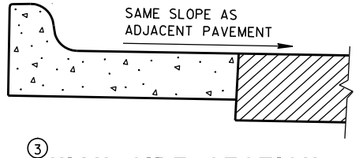
PAVEMENT TIES



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

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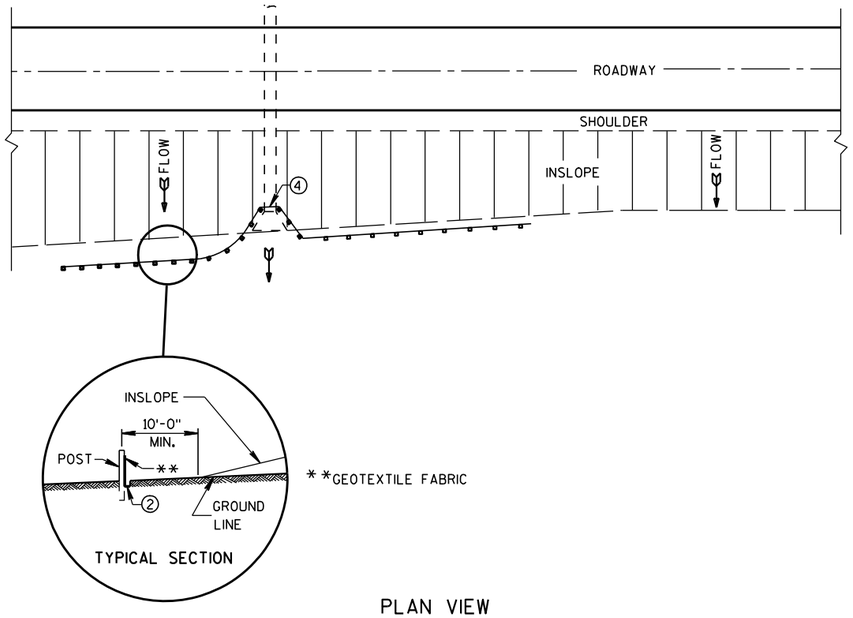
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S.D.D. 8 D 16-10

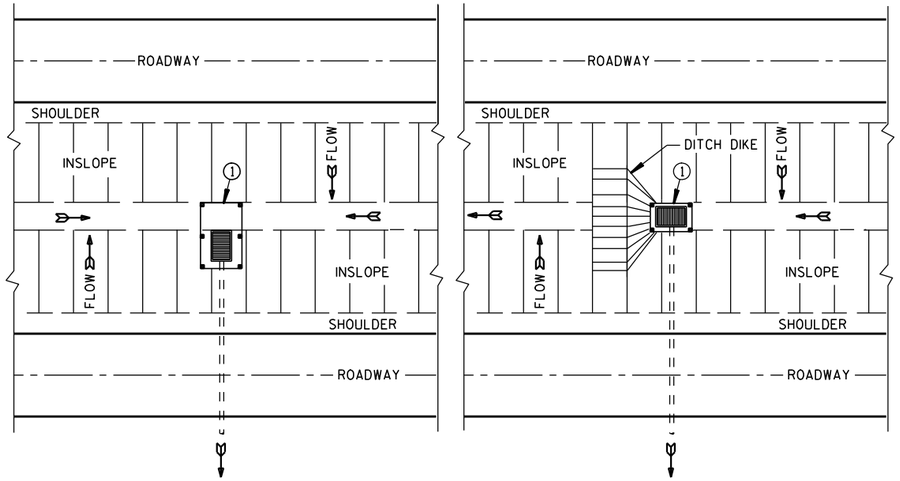
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S.D.D. 8 D 16-10



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.

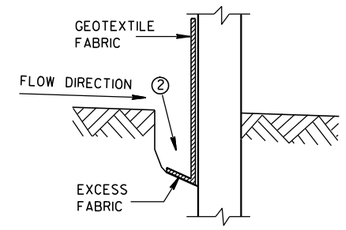
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

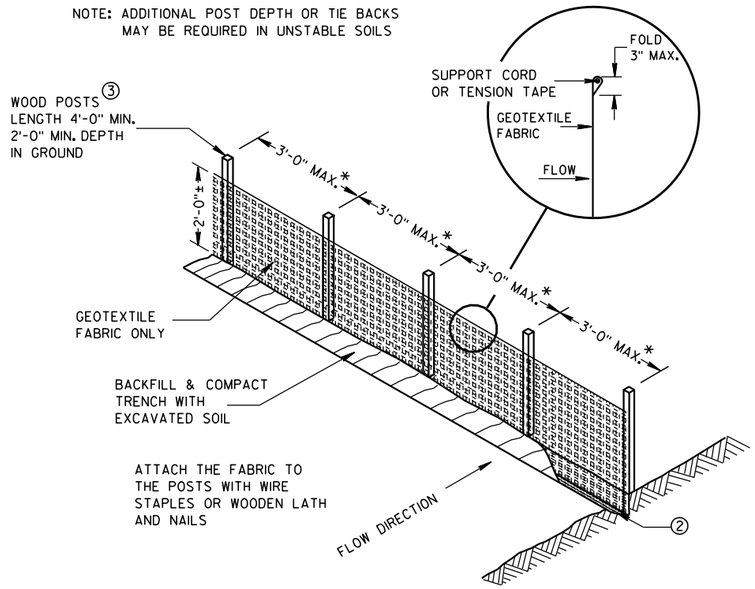
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

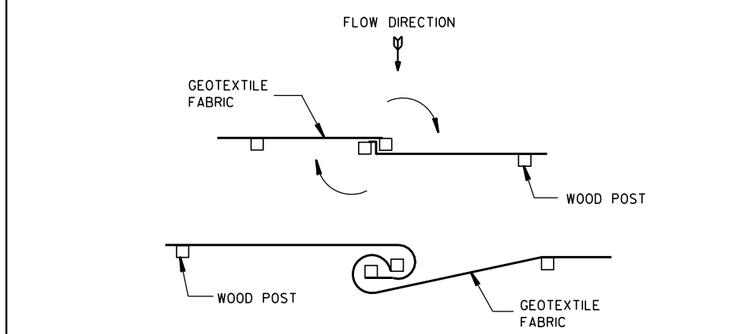
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



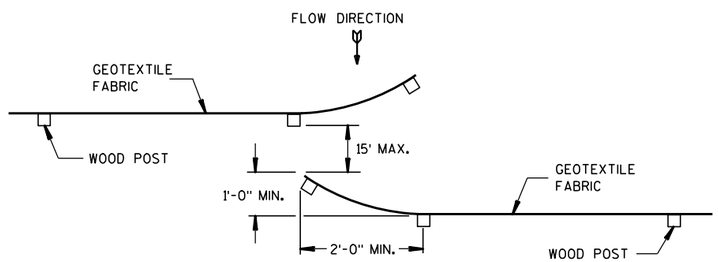
TRENCH DETAIL



SILT FENCE

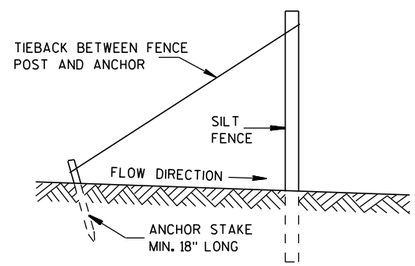


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

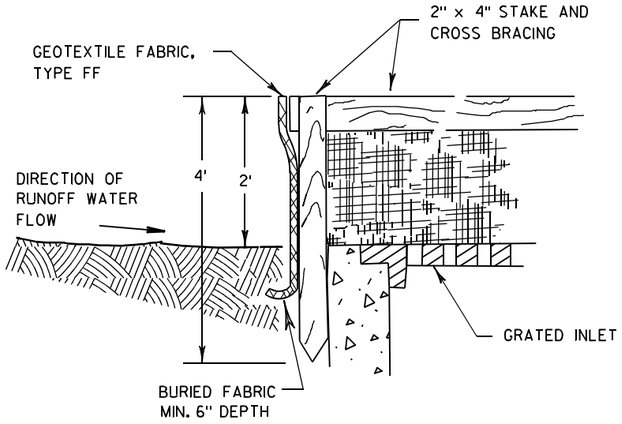
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

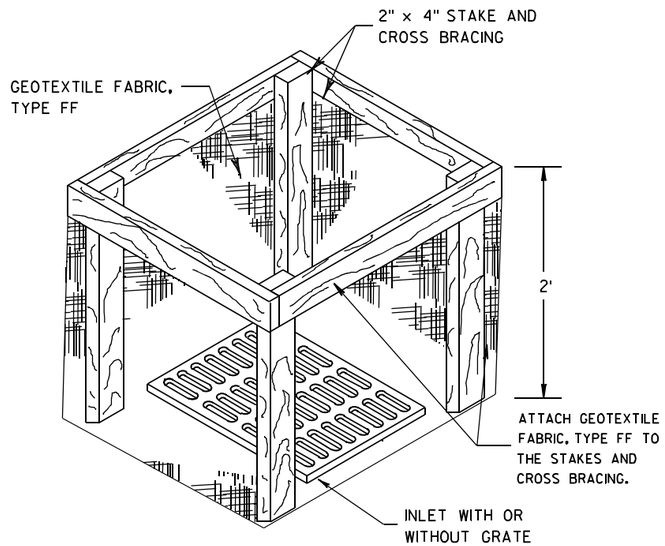
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S.D.D. 8 E 9-6

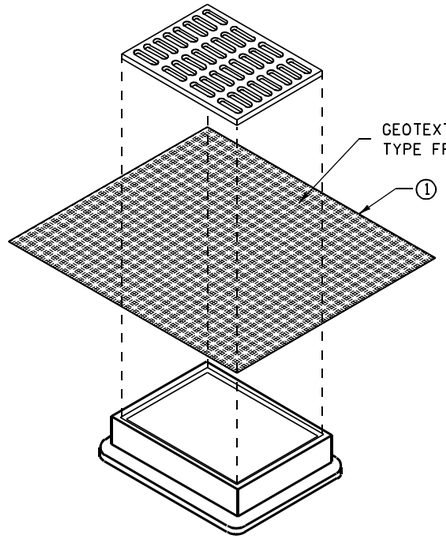
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S.D.D. 8 E 9-6



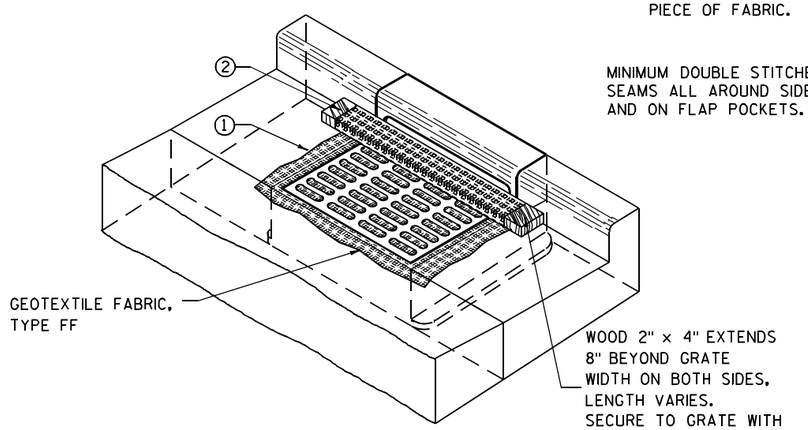


INLET PROTECTION, TYPE A

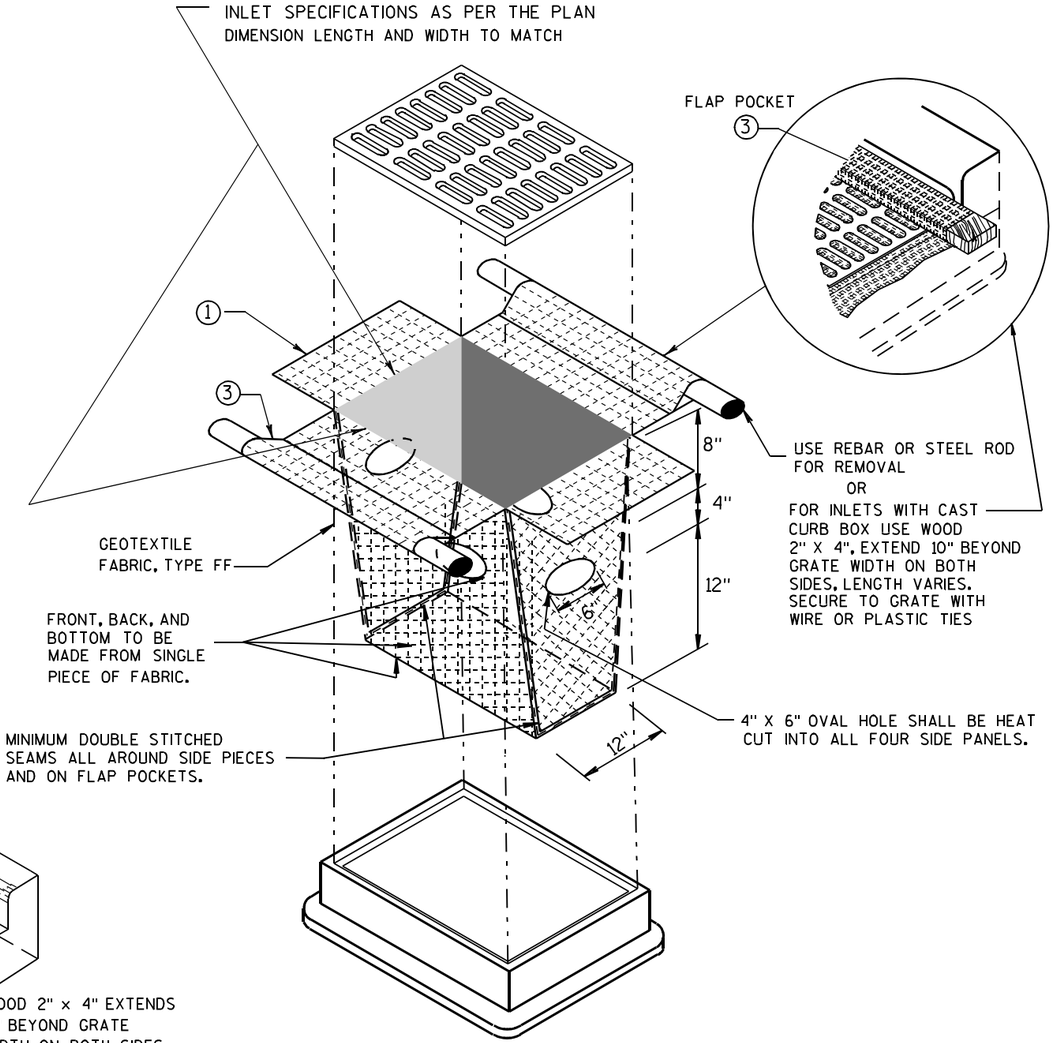


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

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DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

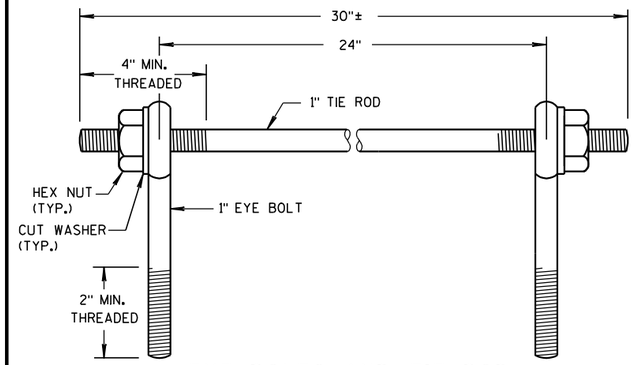
FHWA

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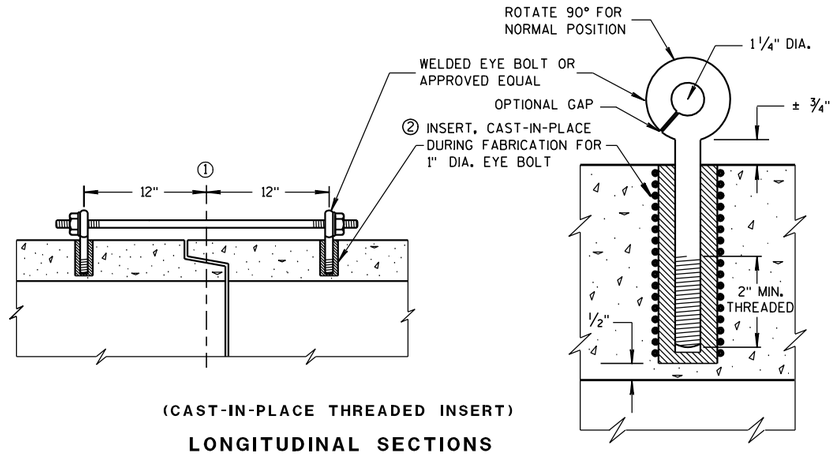
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S.D.D. 8 E 10-2



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

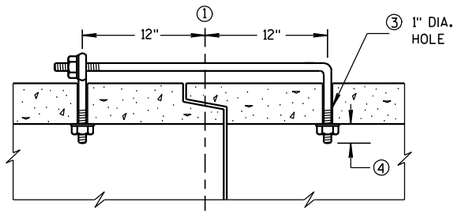
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

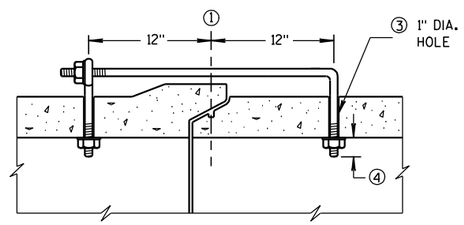
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

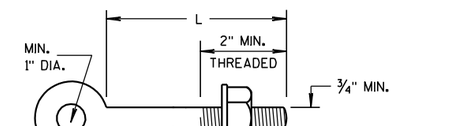


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

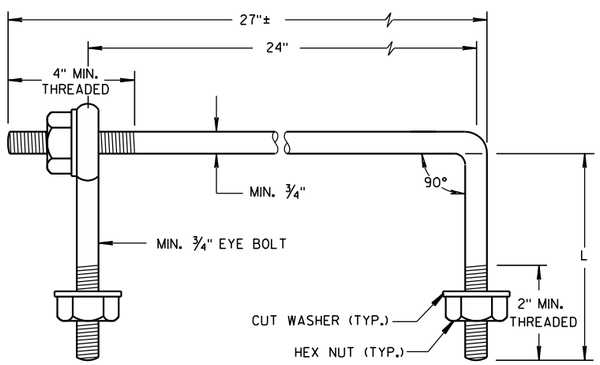
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

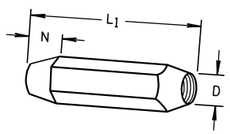
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

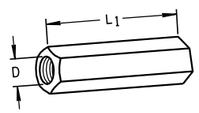
ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES



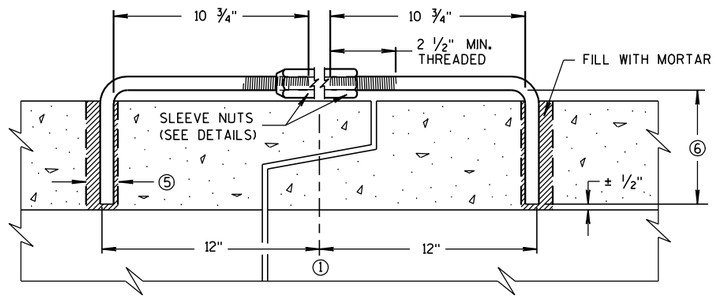
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PLAIN

RIGHT AND LEFT THREADS

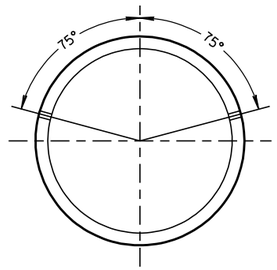
SLEEVE NUTS



LONGITUDINAL SECTION

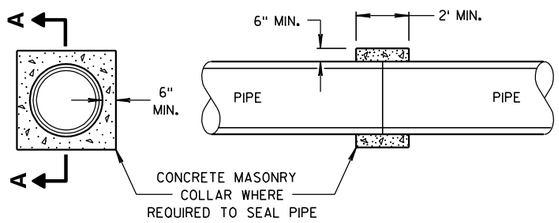
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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

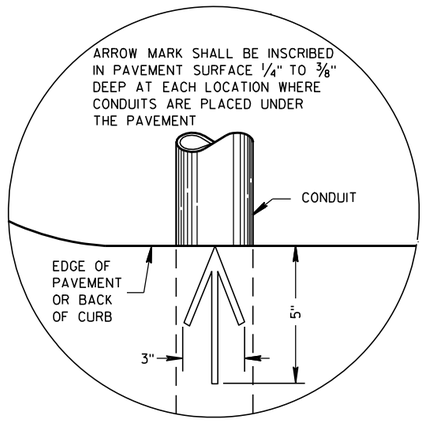
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
529
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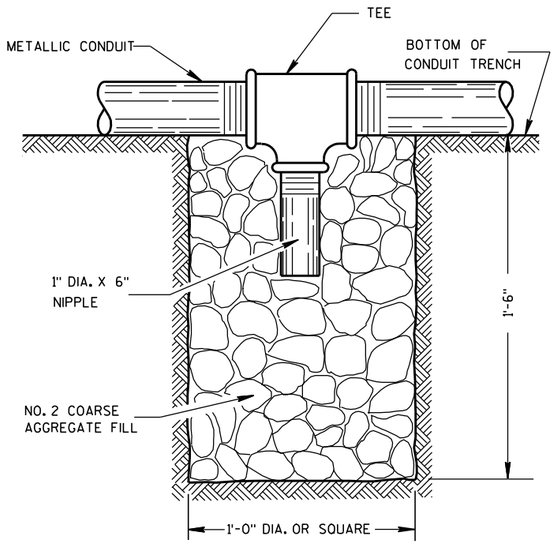
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S.D.D. 8 F 4-7



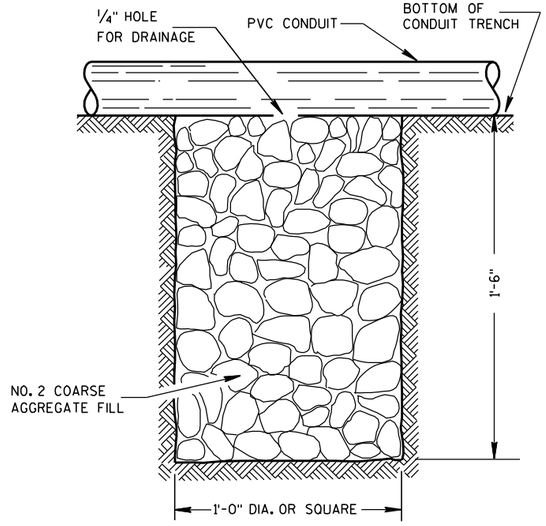
PLAN VIEW

ARROW MARK



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

DRAIN SUMP FOR METALLIC CONDUIT



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

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

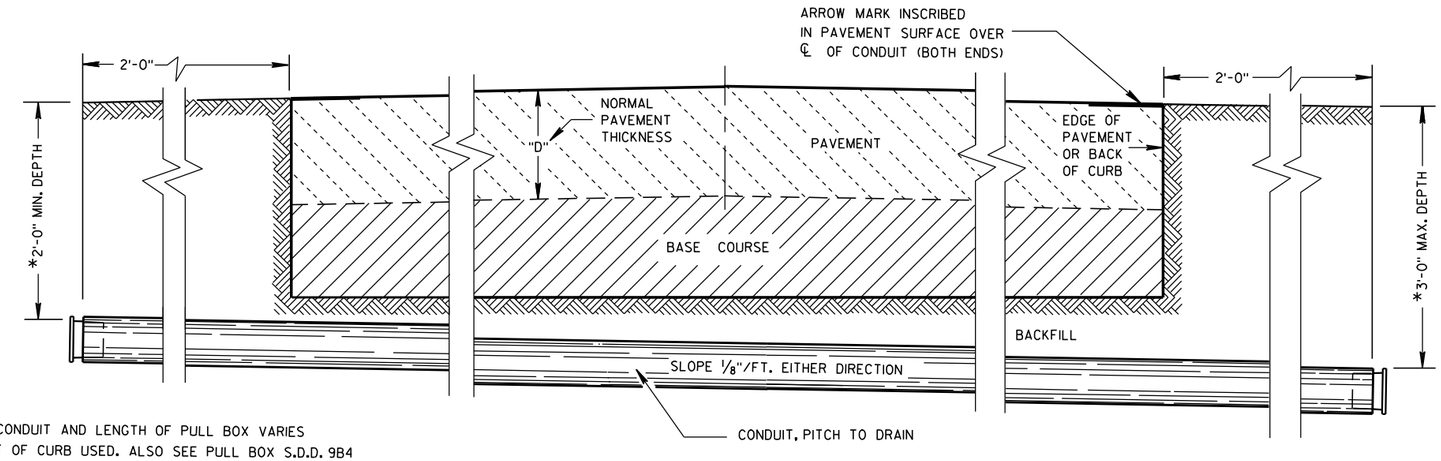
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

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

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

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



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 530 HWYS

FHWA

6

S.D.D. 9 B 2-7

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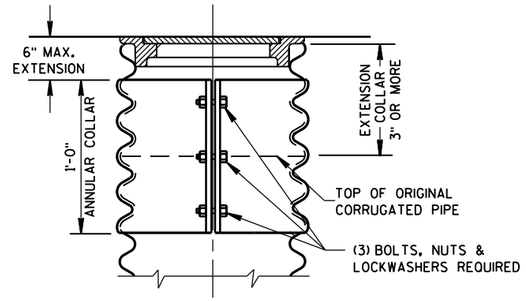
S.D.D. 9 B 2-7

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

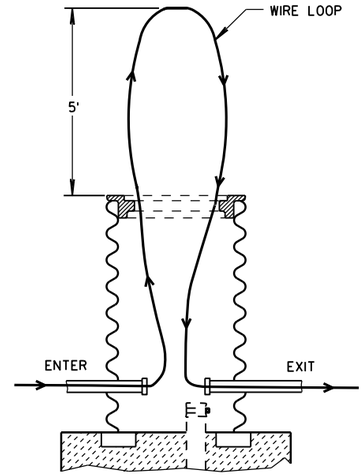
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	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.

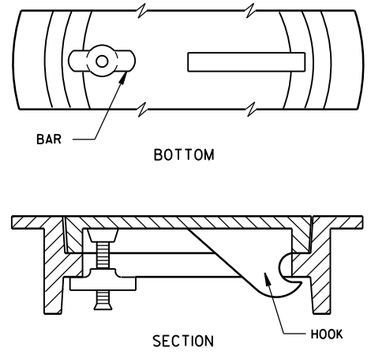
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

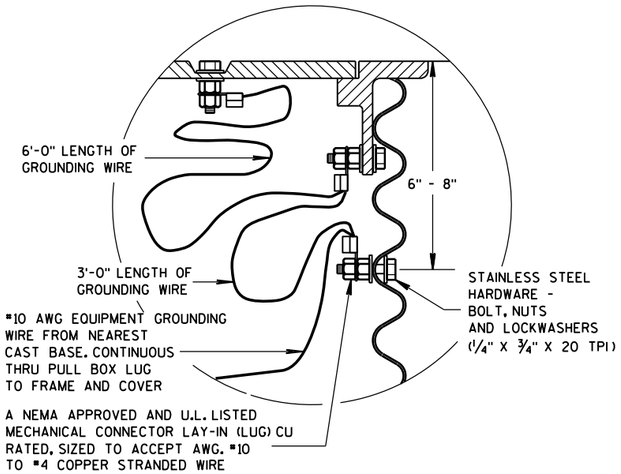


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

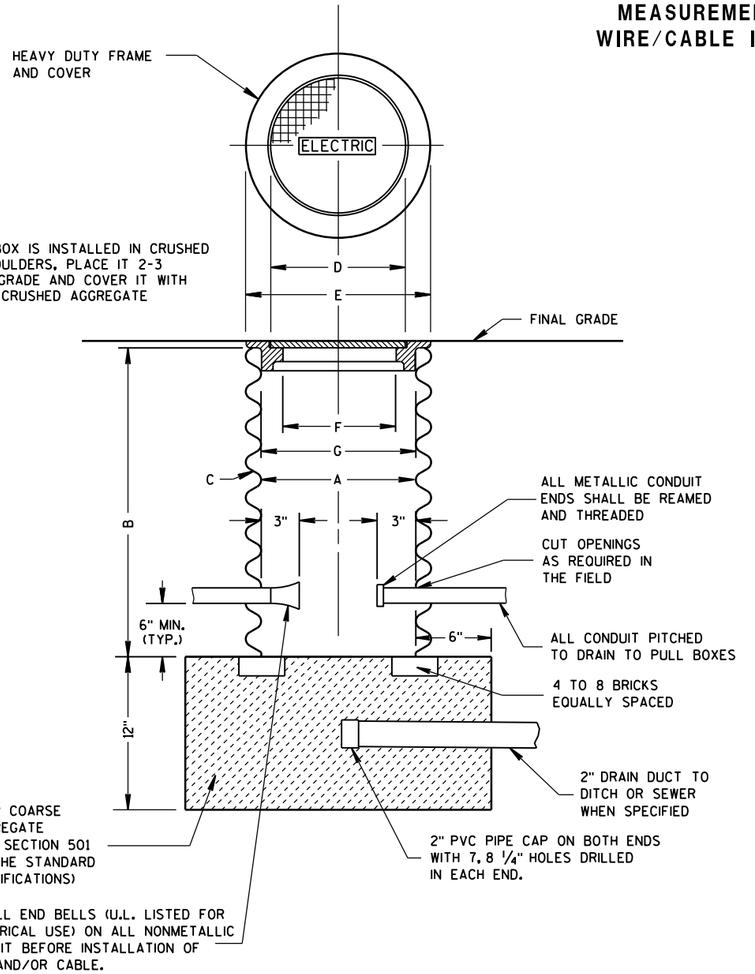


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

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.

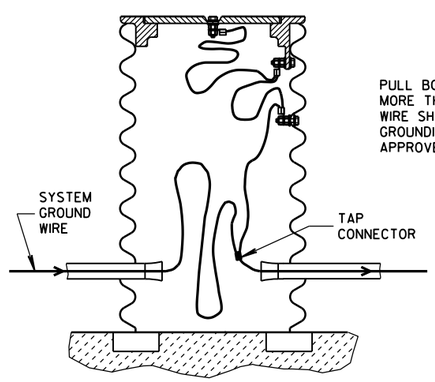
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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



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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

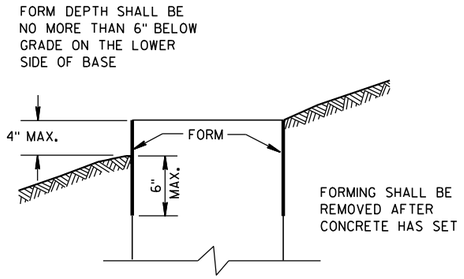
APPROVED
2-7-2013 DATE
/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA

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S.D.D. 9 B 4-10

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S.D.D. 9 B 4-10



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5
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 2 AND TYPE 5 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 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

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.

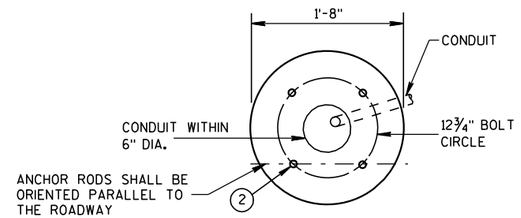
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

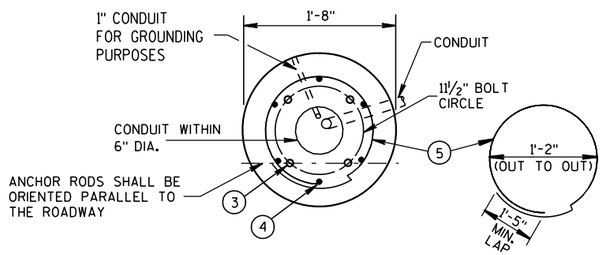
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

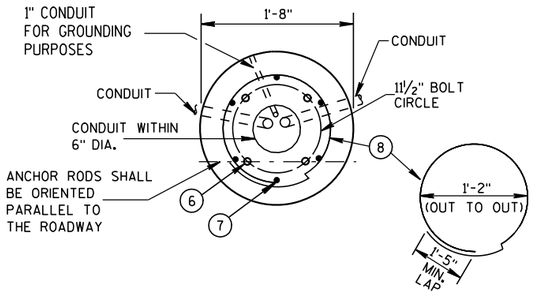
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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



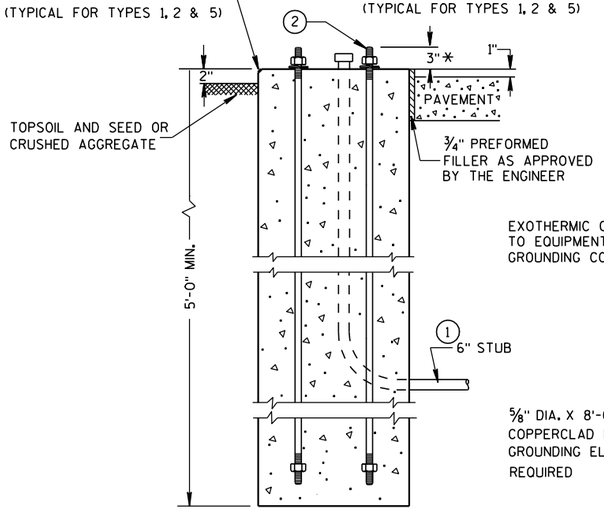




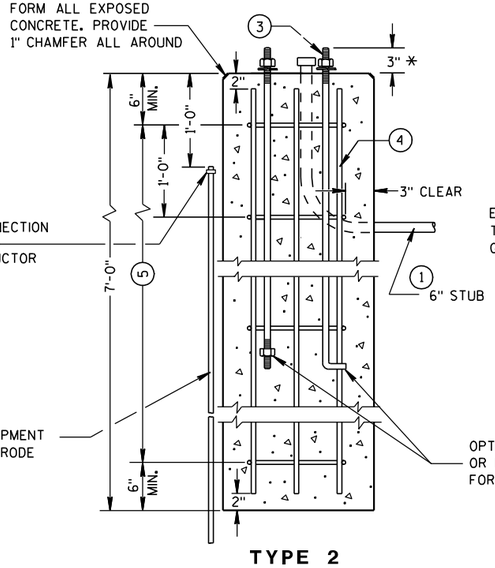
FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)

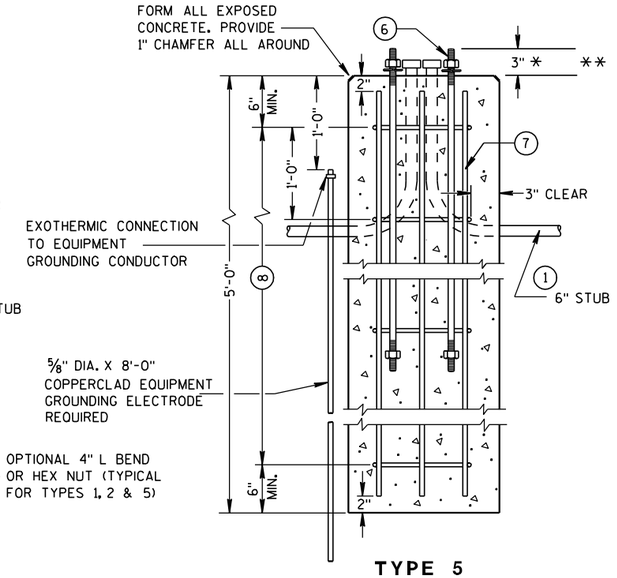
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2 & 5)



TYPE 1



TYPE 2



TYPE 5

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 — DATE
/S/ Joanna L. Rush — STATE ELECTRICAL ENGI 532 — HWYS
FHWA

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S.D.D. 9 C 2-6

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S.D.D. 9 C 2-6

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, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

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 AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

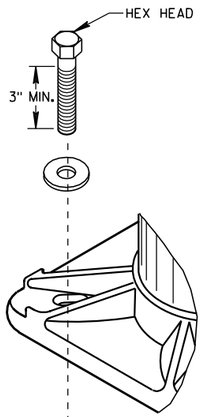
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

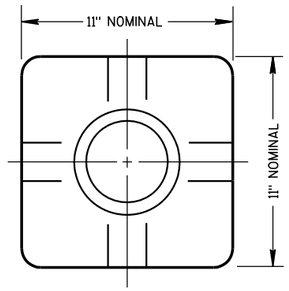
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

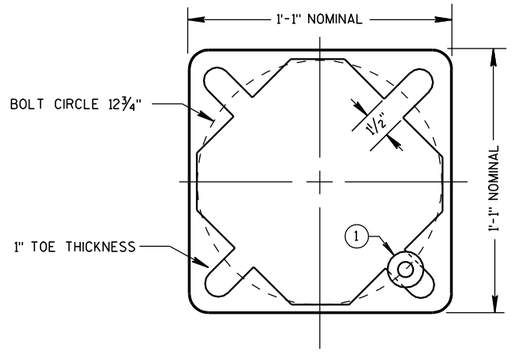
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

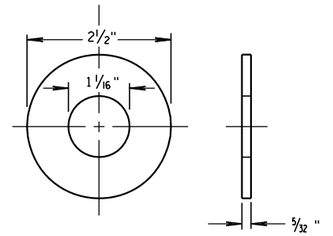




TOP VIEW
(PEDESTAL BASE)

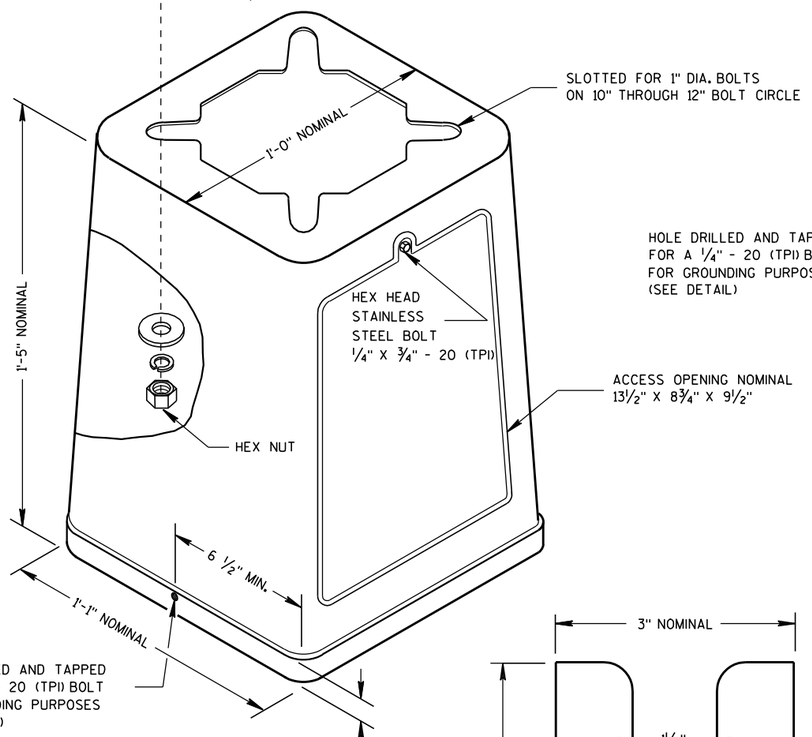


BOTTOM VIEW
(PEDESTAL BASE)

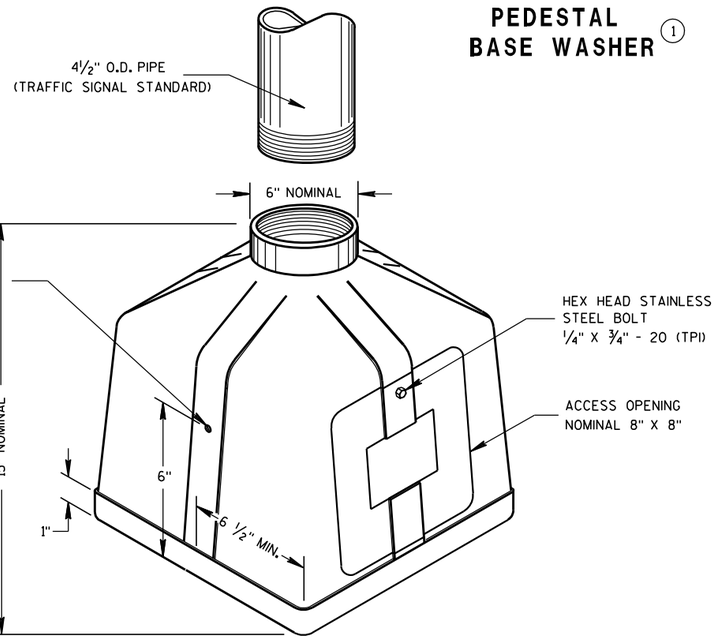


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

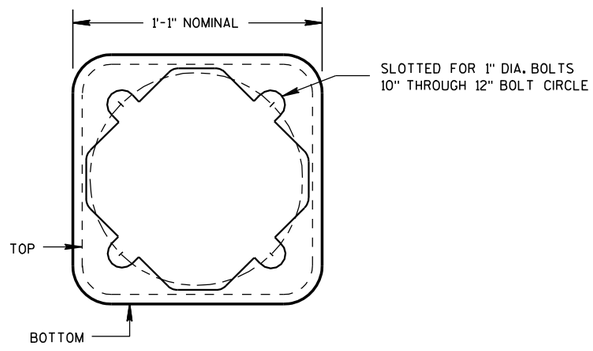


ISOMETRIC VIEW

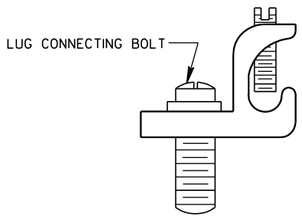


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

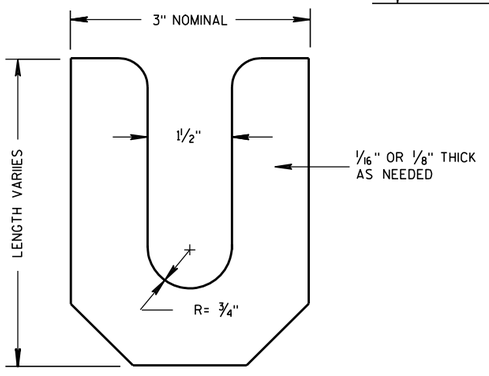


TYPICAL MECHANICAL CONNECTOR LUG

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

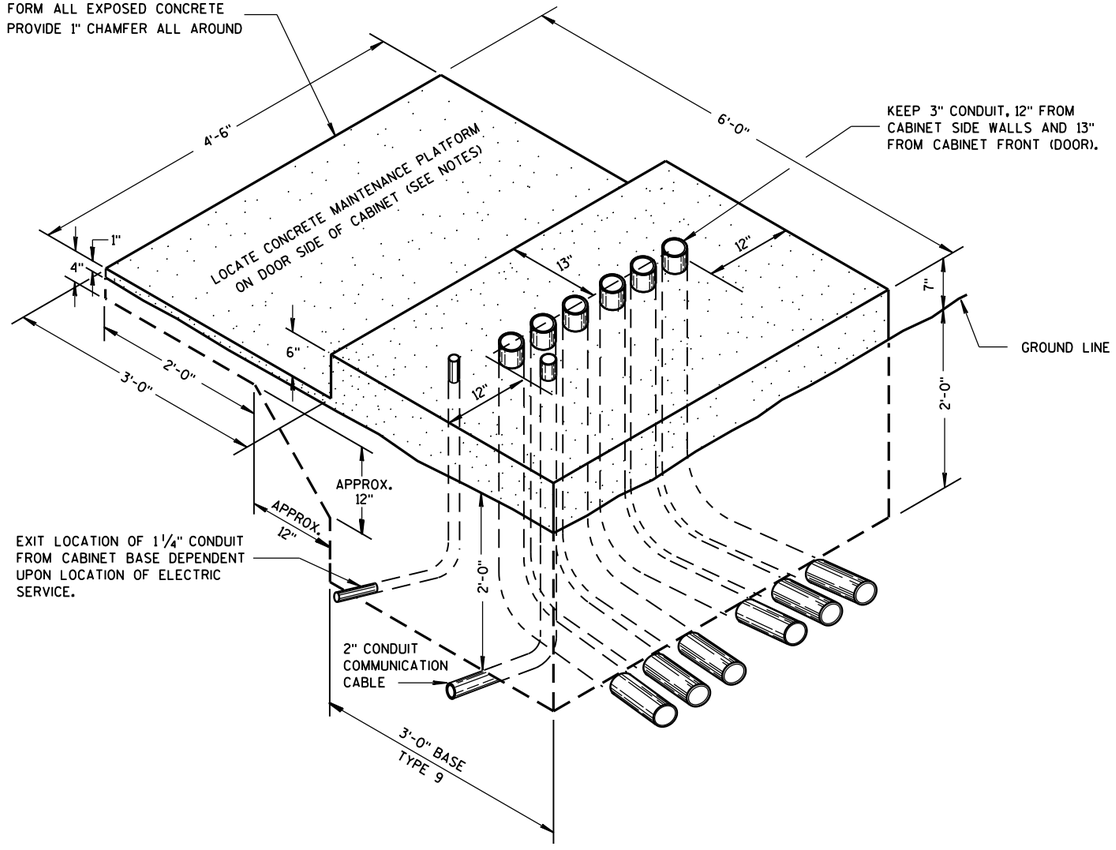
APPROVED
10/27/09 — DATE
/S/ Joanna L. [illegible] — STATE ELECTRICAL ENGI
533 — HWYS
FHWA

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S.D.D. 9 C 3-3

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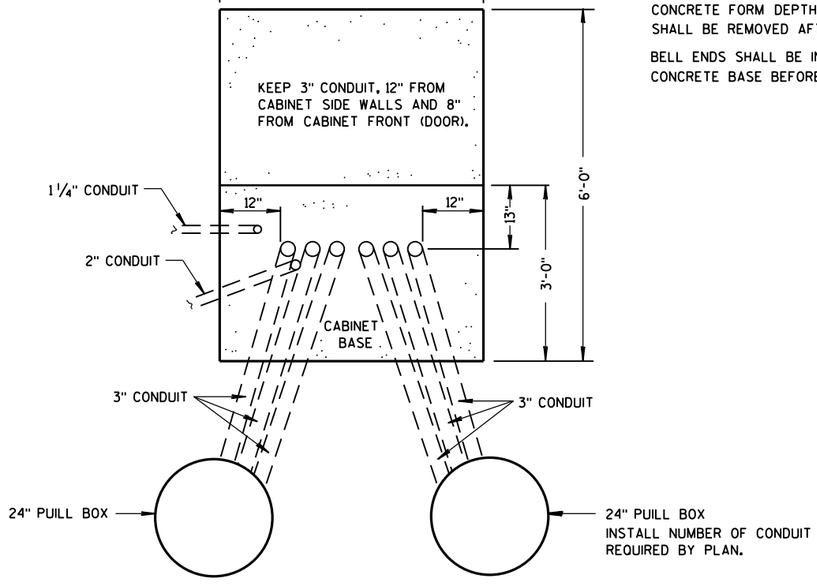
S.D.D. 9 C 3-3



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 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
11/26/2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL 534
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).

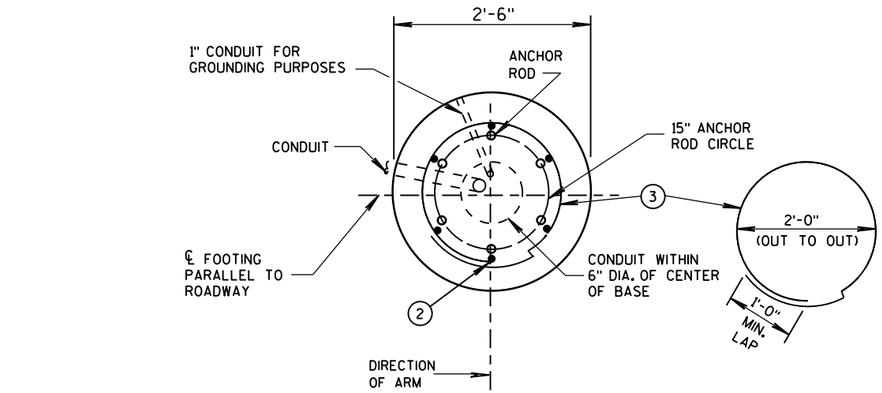
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

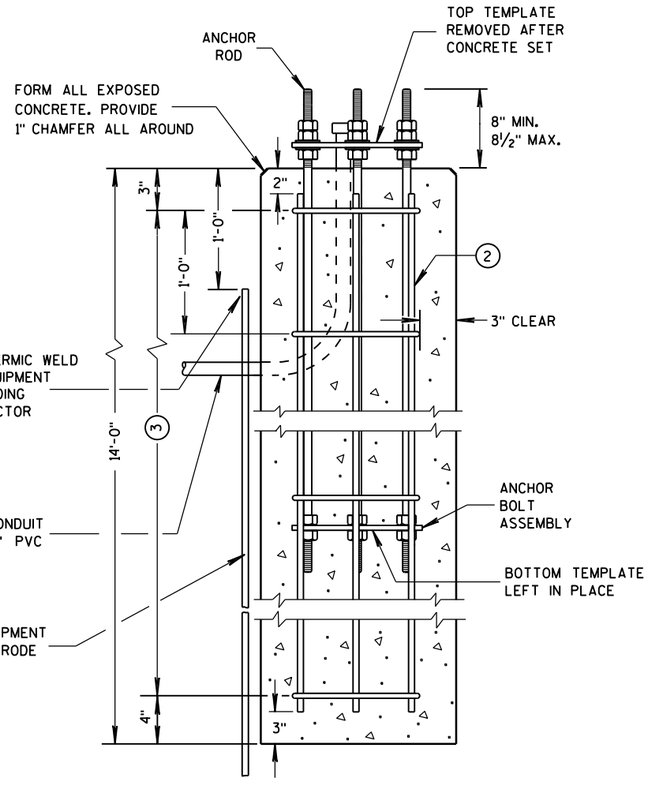
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 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) (15) NO. 4 X 7'-4" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

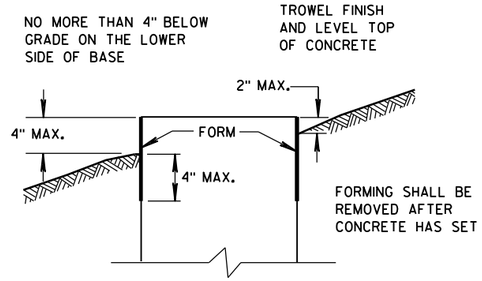
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



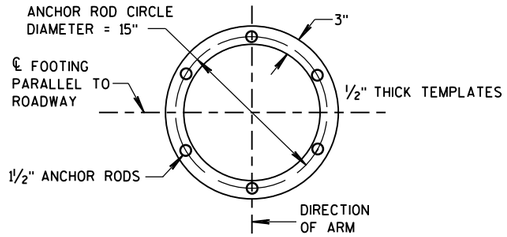


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

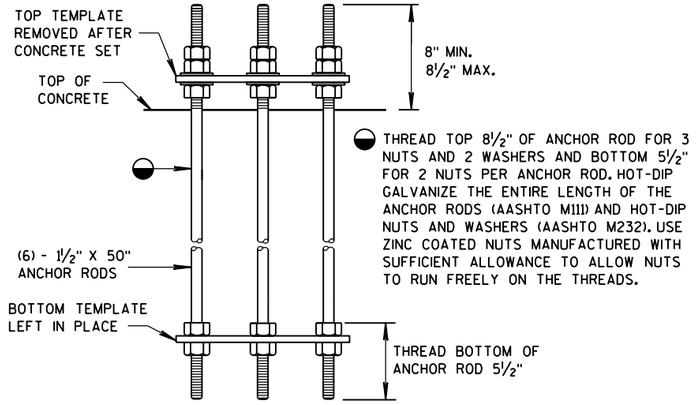
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



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	69
LBS. OF VERTICAL BAR STEEL	122

CONCRETE BASE TYPE 10

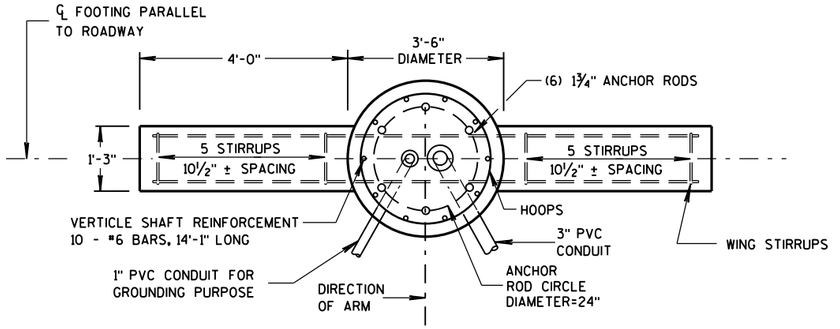
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-26-2013
DATE

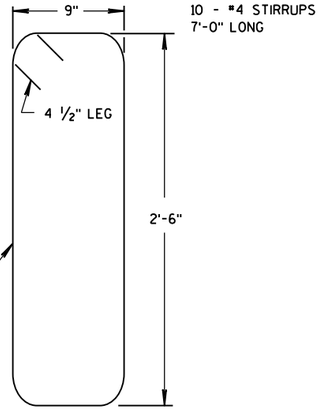
/S/ Ahmet Demirbilek
STATE ELECTRICAL 535

FHWA

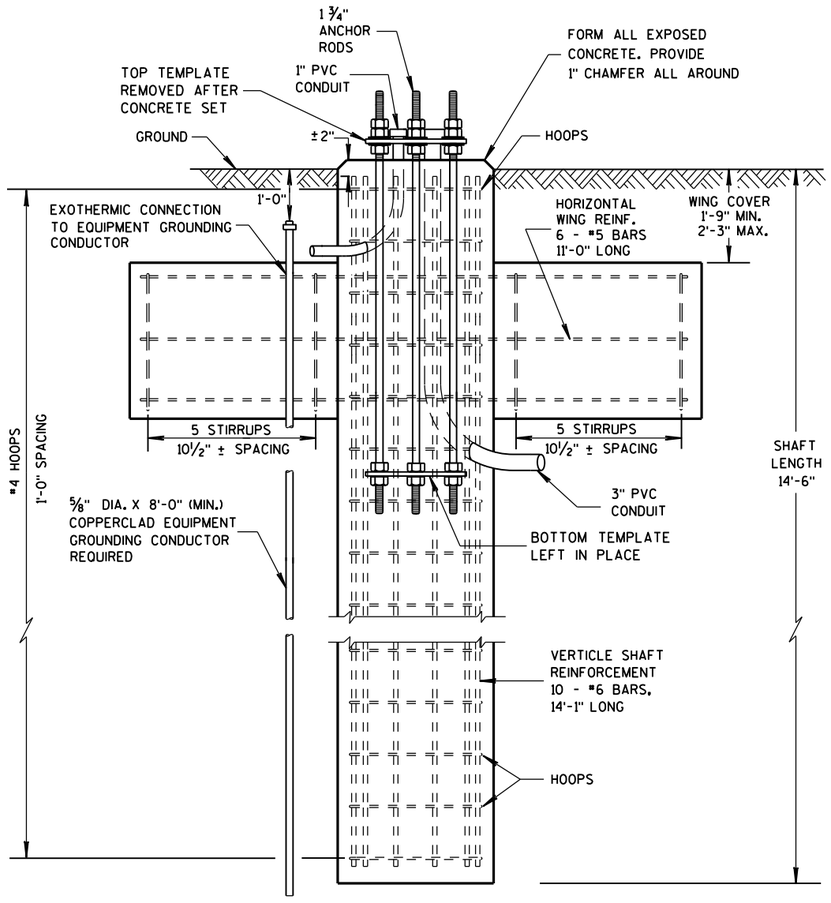
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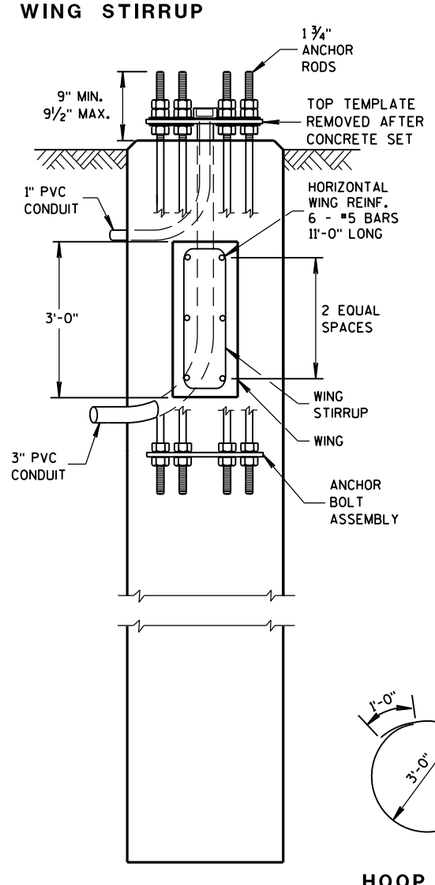
PLAN VIEW



WING STIRRUP

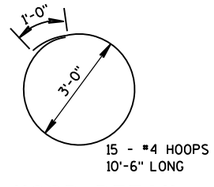


ELEVATION VIEW



SIDE VIEW

DOES NOT SHOW HOOPS OR VERTICAL SHAFT REINFORCEMENT



15 - #4 HOOPS 10'-6" LONG

HOOP DETAIL

GENERAL NOTES

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

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

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

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUNG THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF THE 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 THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

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 BE FURNISHED AND INSTALLED TO 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.

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

THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL 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 THE WRITTEN APPROVAL OF THE ENGINEER.

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

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 POLES)

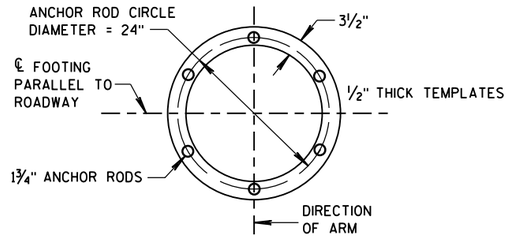
CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 433 LBS.

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.

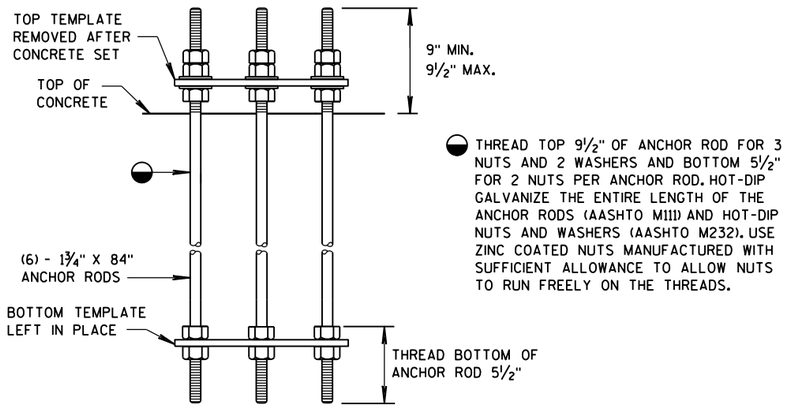
CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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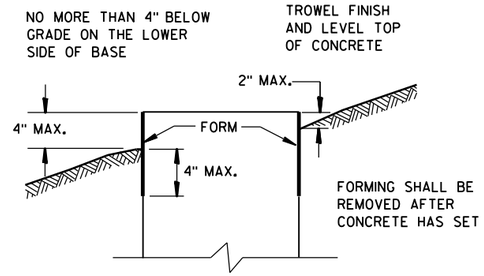


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

CONCRETE BASE TYPE 13	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11-26-2013 DATE FHWA	/S/ Ahmet Demirbilek STATE ELECTRICAL 537

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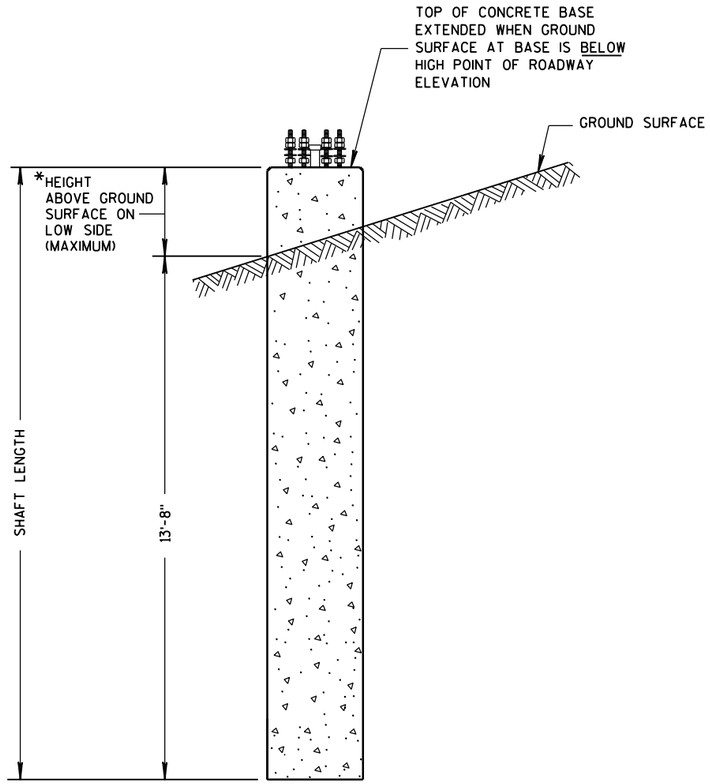
S.D.D. 9 C 12-4b

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S.D.D. 9 C 12-4b

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

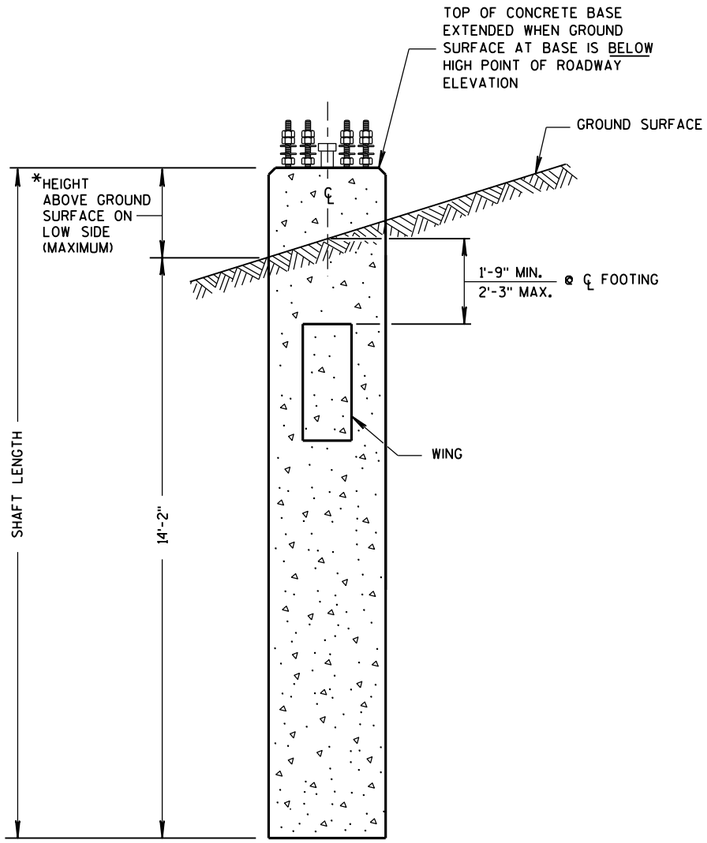
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141



CONCRETE BASE TYPE 10 (EXTENDED)

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476



CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE
TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

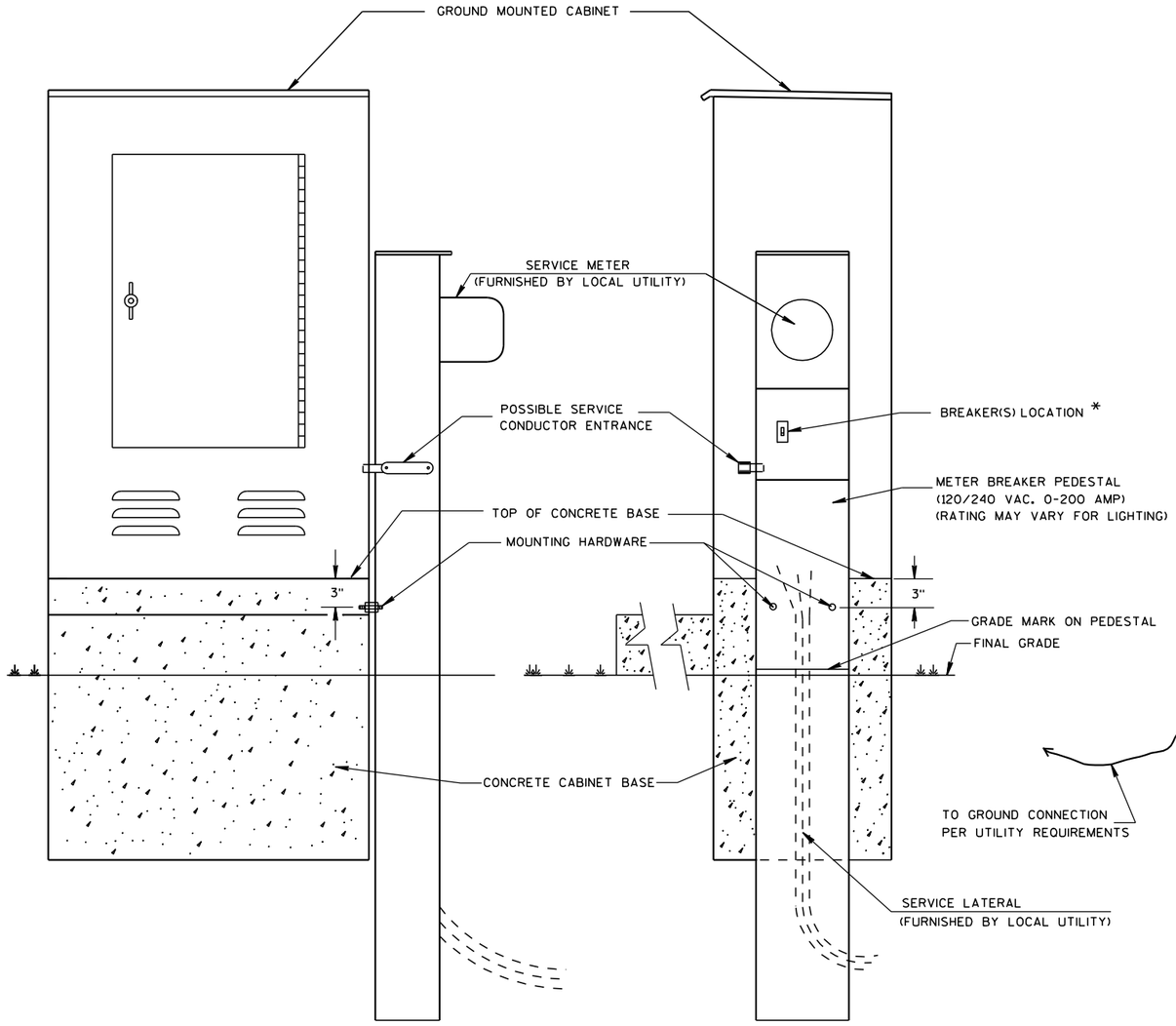
APPROVED
11-26-2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL 538
FHWA

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S.D.D. 9 C 13-2

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S.D.D. 9 C 13-2



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.

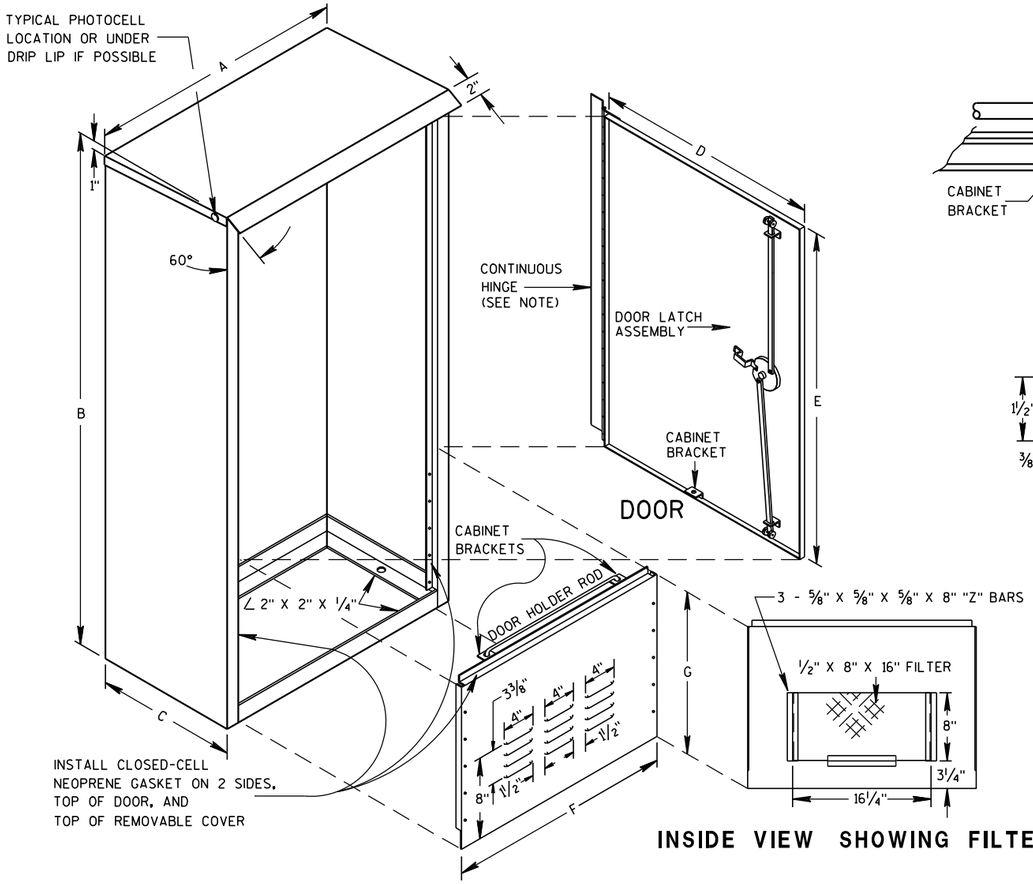
IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

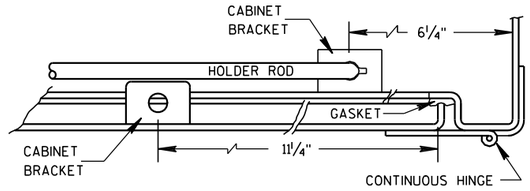
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/27/09 DATE
/S/ Joanna L. Bush
STATE ELECTRICAL ENGI 539 HWYS
FHWA

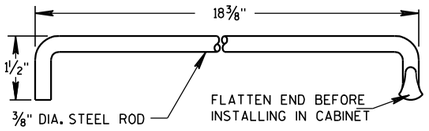


REMOVABLE COVER

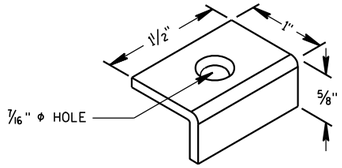
INSIDE VIEW SHOWING FILTER



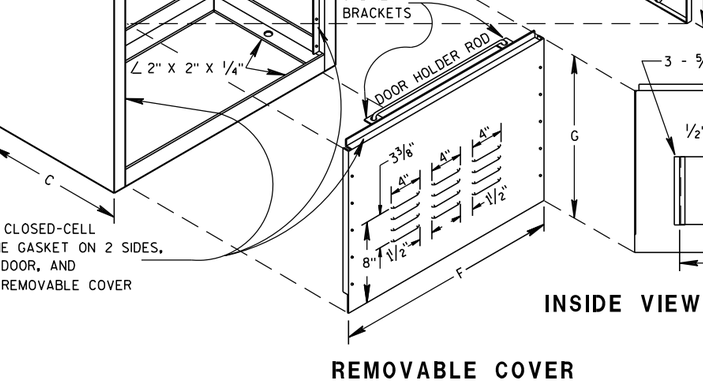
HINGE & DOOR HOLDER



HOLDER ROD



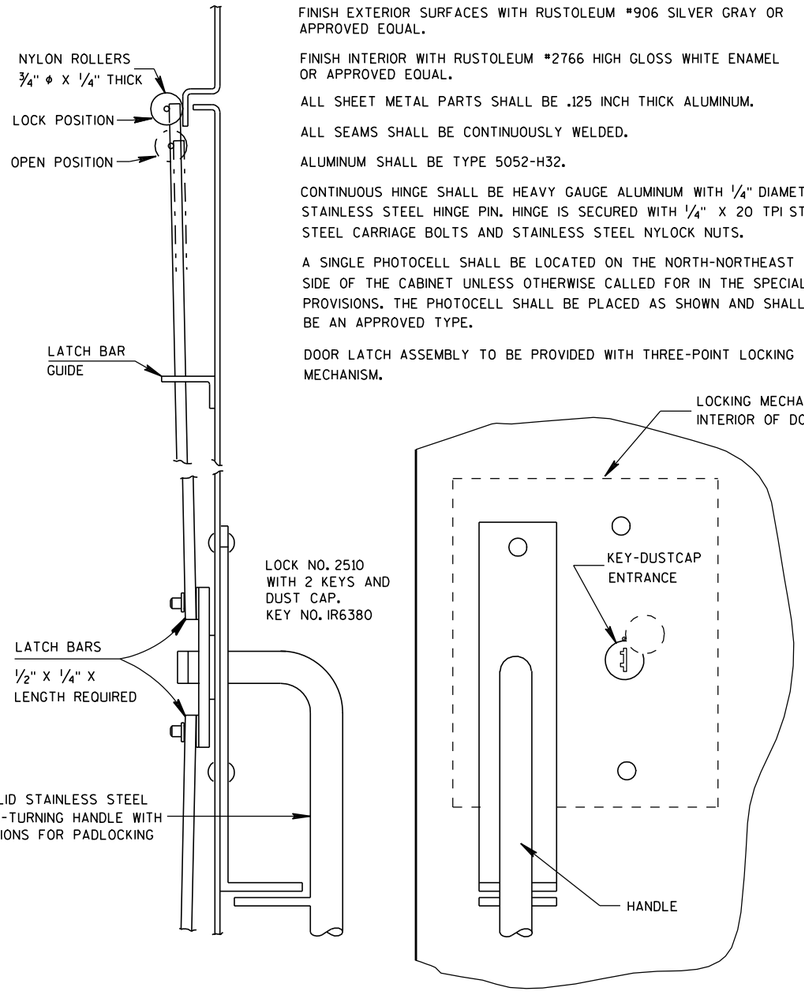
CABINET BRACKET



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

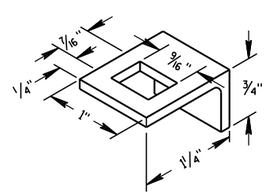
MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

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 AN APPROVED TYPE.

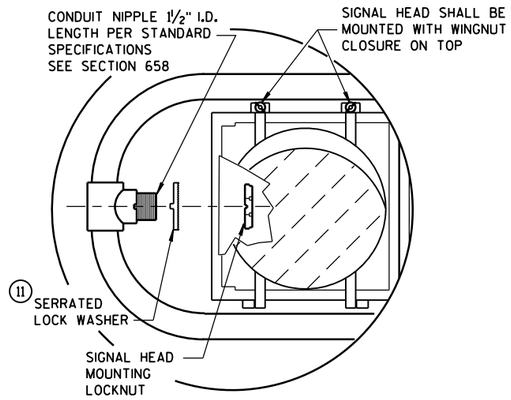
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.

SIGNAL OR LIGHTING CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

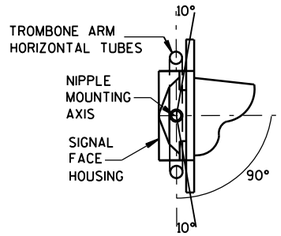
APPROVED
10/21/96 — DATE
/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI
540 — HWYS
FHWA

6
S.D.D. 9 D 2-2



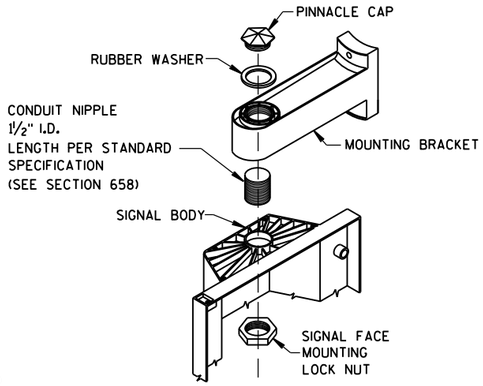
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL *

* 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.

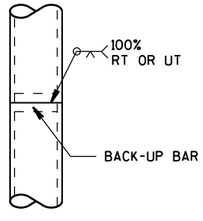
(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

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

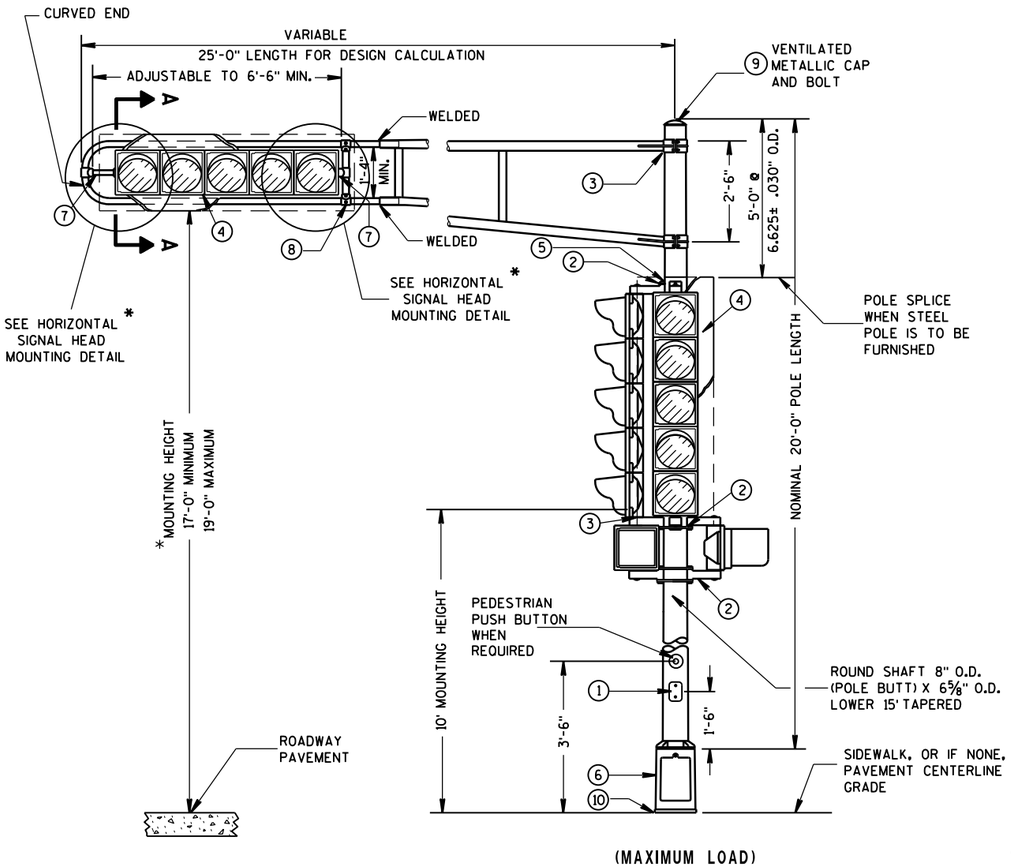
*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.

FOR MANUFACTURERS USE ONLY

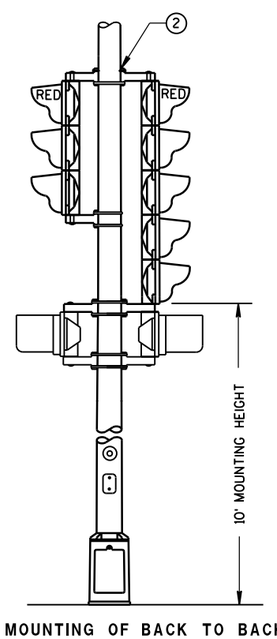
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



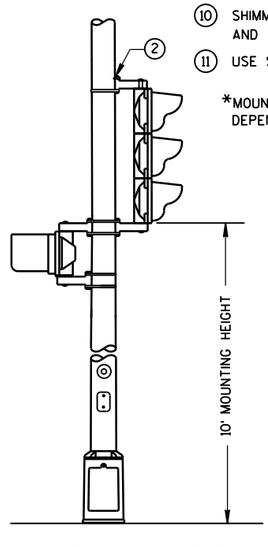
POLE SPLICE DETAIL



(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 1-12a

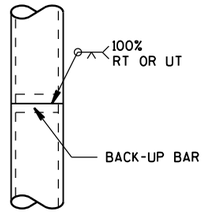
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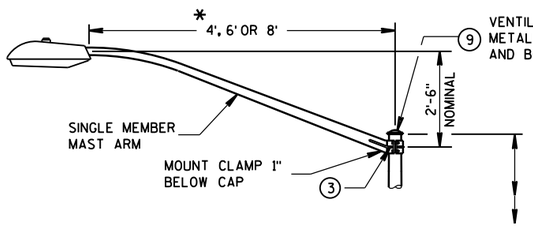
S.D.D. 9 E 1-12a

FOR MANUFACTURERS USE ONLY

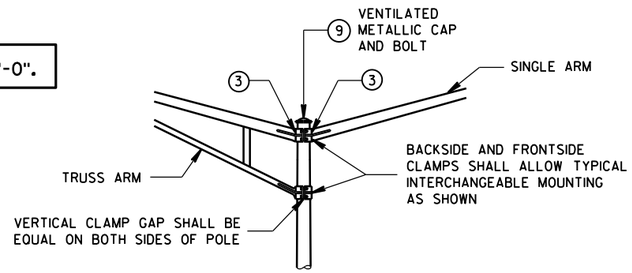
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.

*RISE FOR 4' ARM SHALL BE 2'-0".





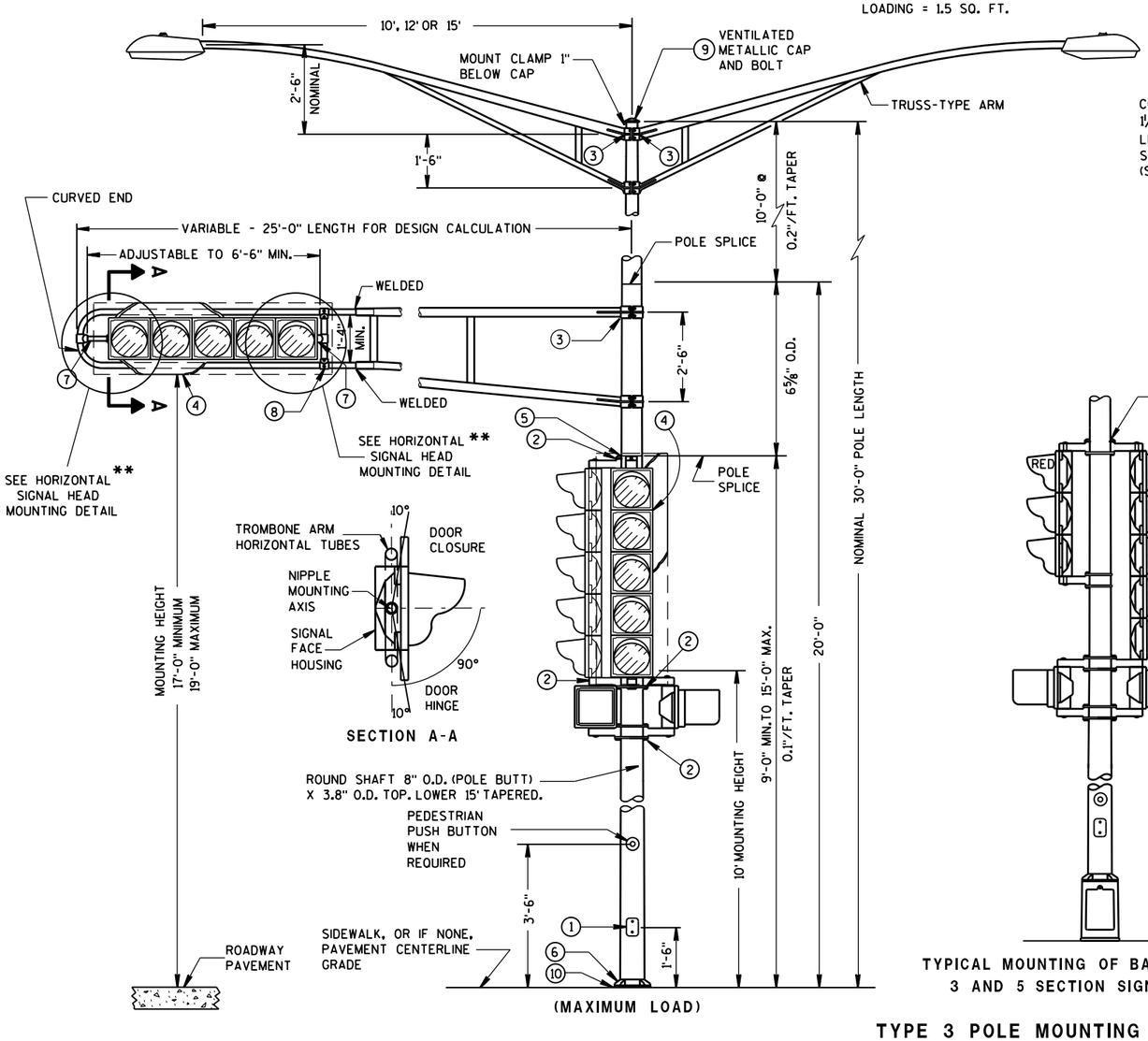
POLE SPLICE DETAIL



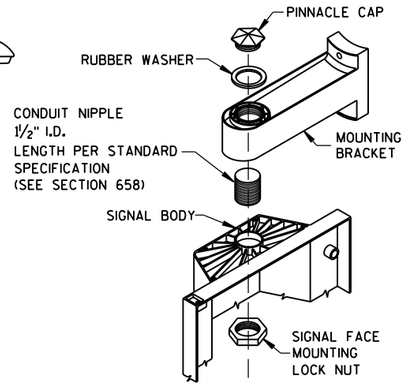
INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

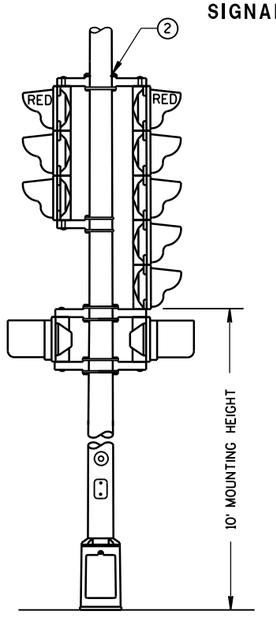
WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.



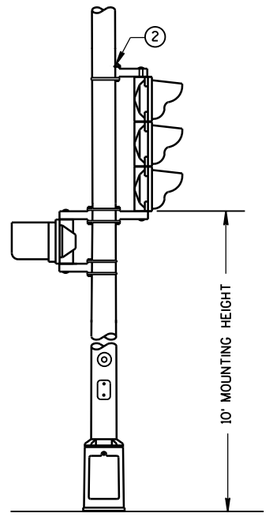
TYPE 3 POLE MOUNTING CONFIGURATION



SIGNAL FACE MOUNTING DETAIL
(BANDED)



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



TYPICAL MOUNTING OF 3 SECTION
SIGNAL FACE

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

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.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

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 FACE.

(6) TYPE 3 POLE CONFIGURATIONS SHALL BE MOUNTED DIRECTLY TO THEIR CONCRETE BASES.

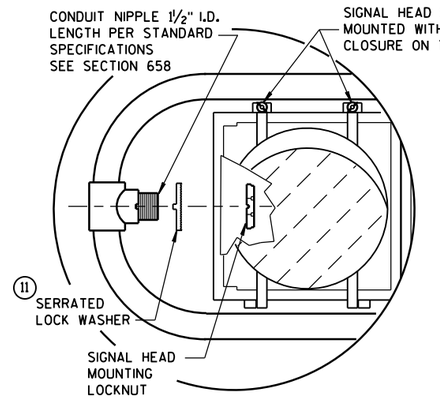
(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4 " X ¾" -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 POLE.

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



HORIZONTAL SIGNAL HEAD MOUNTING DETAIL**

** SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR

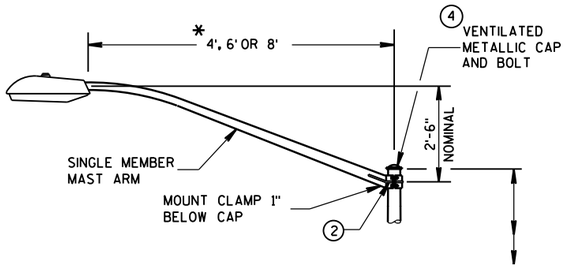
POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)

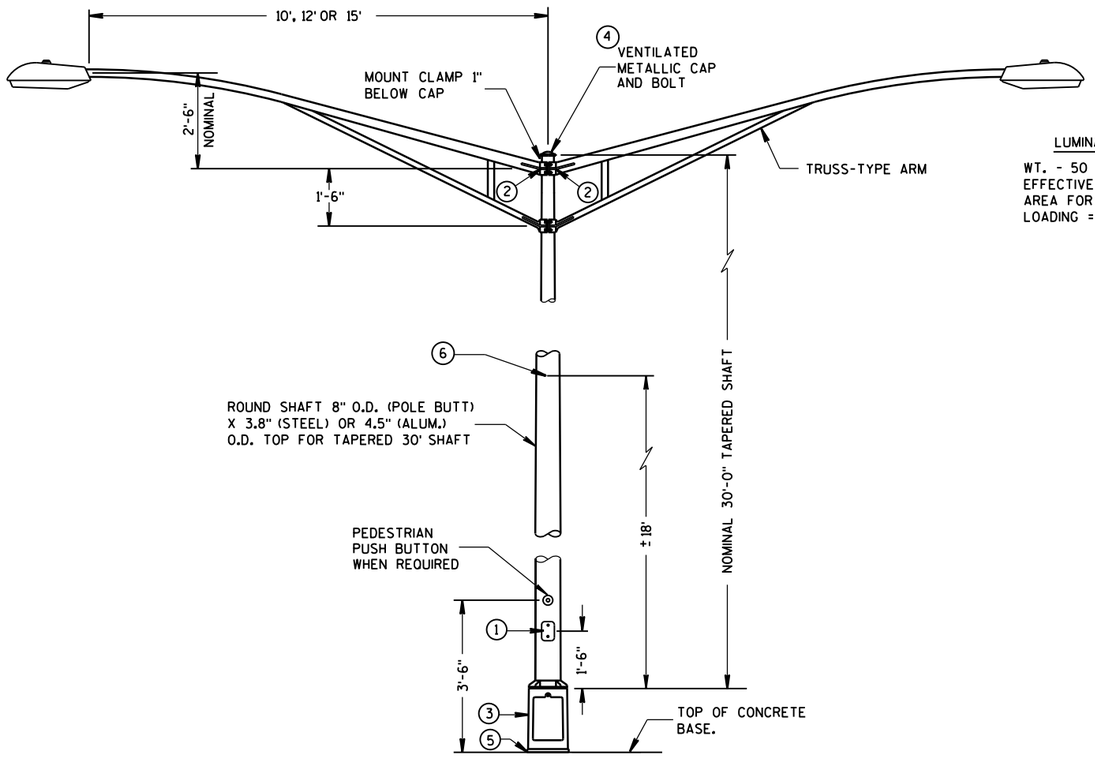
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

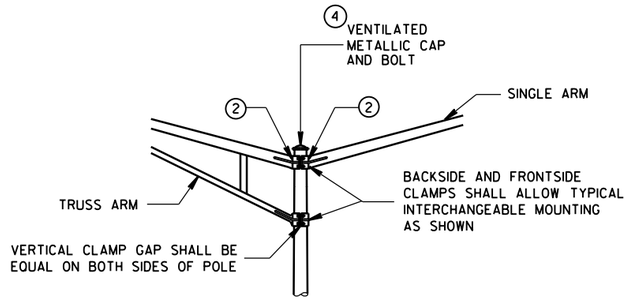
S.D.D. 9 E 1-12b

*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

GENERAL NOTES

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

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

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS 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) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

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

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

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

6

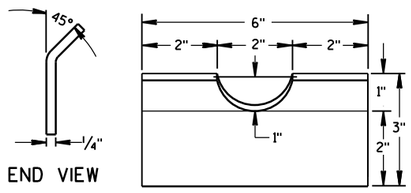
S.D.D. 9 E 1-12d

POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 9 E 1-12d

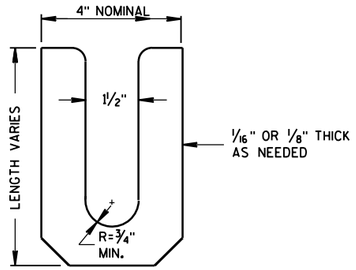


END VIEW

FRONT VIEW

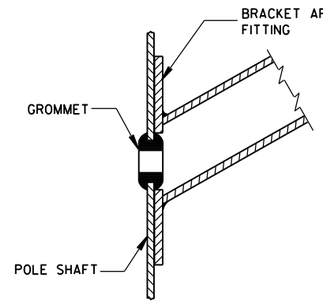
RECTANGULAR CLAMP SHIM

(4 TO A SET)

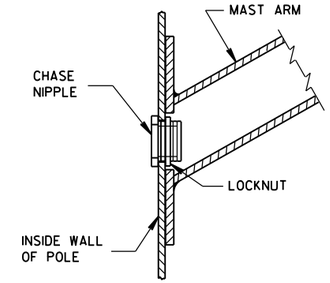


LEVELING SHIM (15)

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) OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM)
(6.625" O.D. FOR TROMBONE MAST ARM)

(14) VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")

SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.25", 0.35", 0.53" OR 0.70".

SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10", 0.25" OR 0.35".

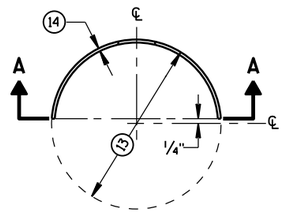
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.

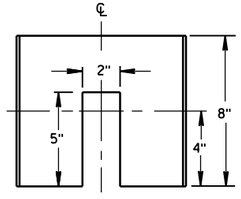
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

(15) 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.



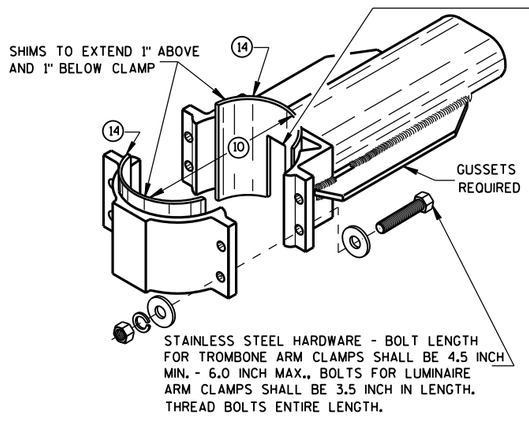
PLAN VIEW



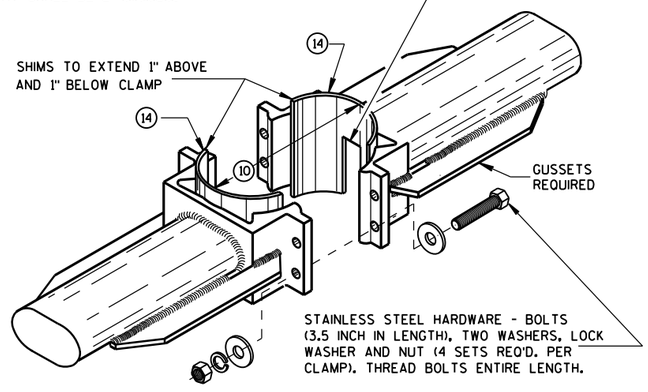
SECTION A-A

CIRCULAR CLAMP SHIM

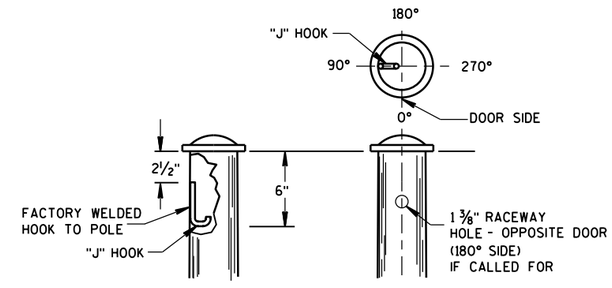
(2 TO A SET)



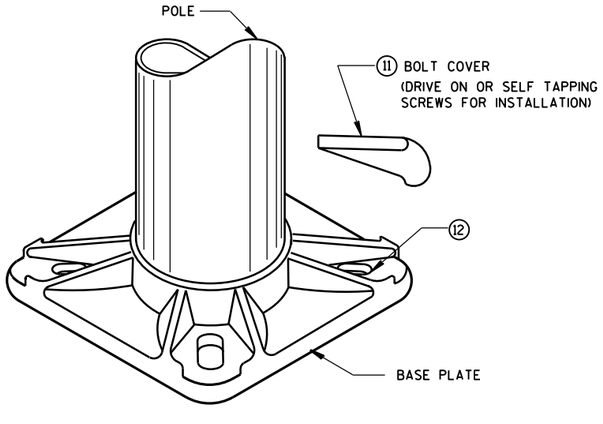
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



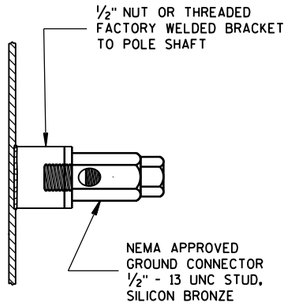
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

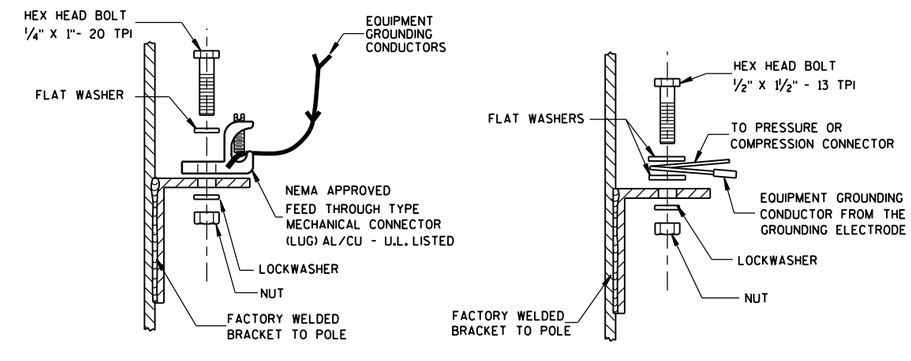


TYPICAL "J" HOOK LOCATION



BASE PLATE





TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

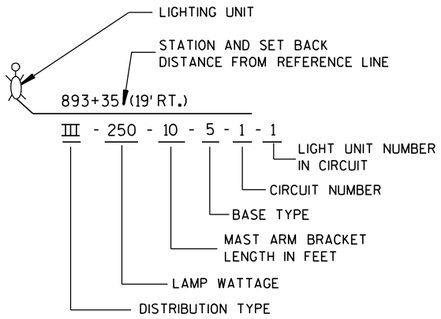
HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

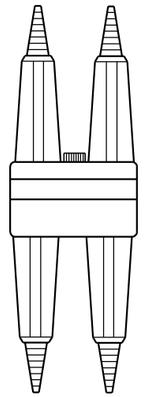
APPROVED
2/7/2013 DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

6

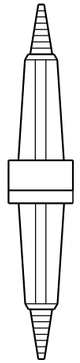
S.D.D. 9 E 1-12g



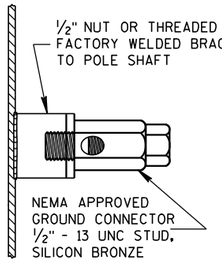
LIGHTING UNIT CODE
(TYPICAL)

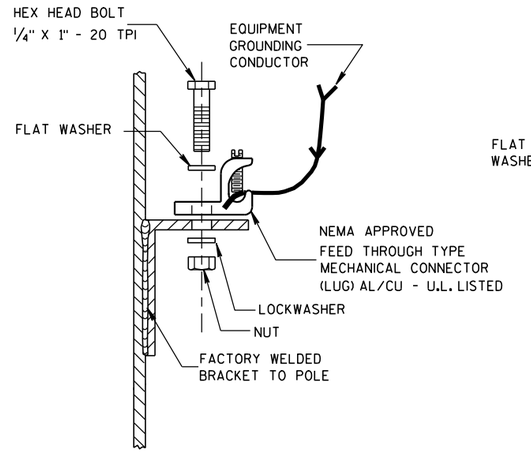


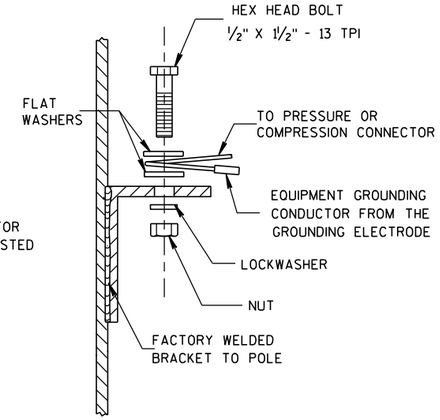
DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



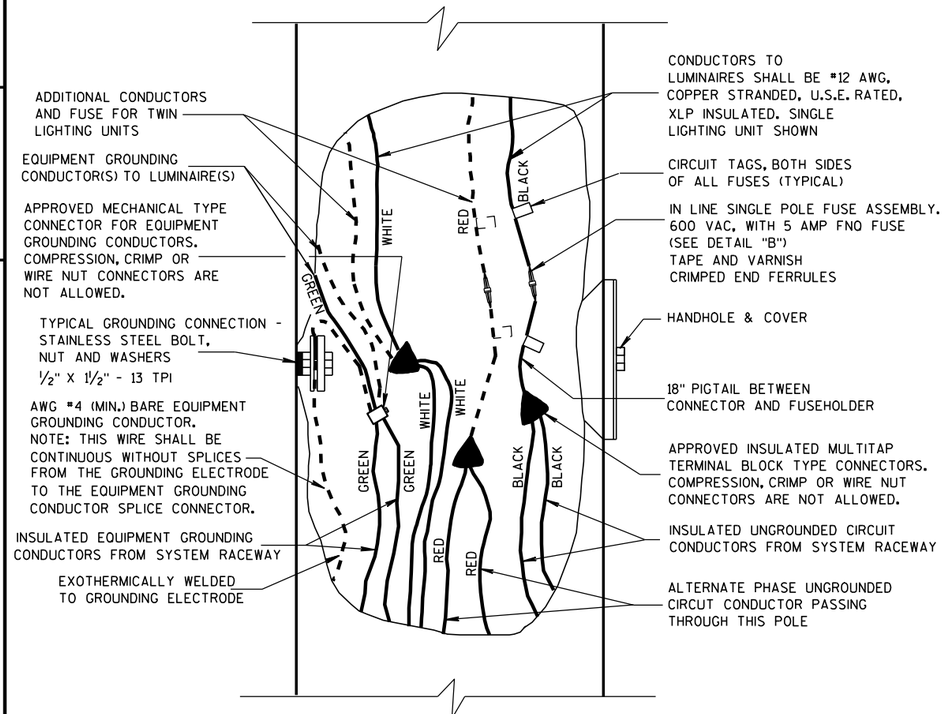
DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



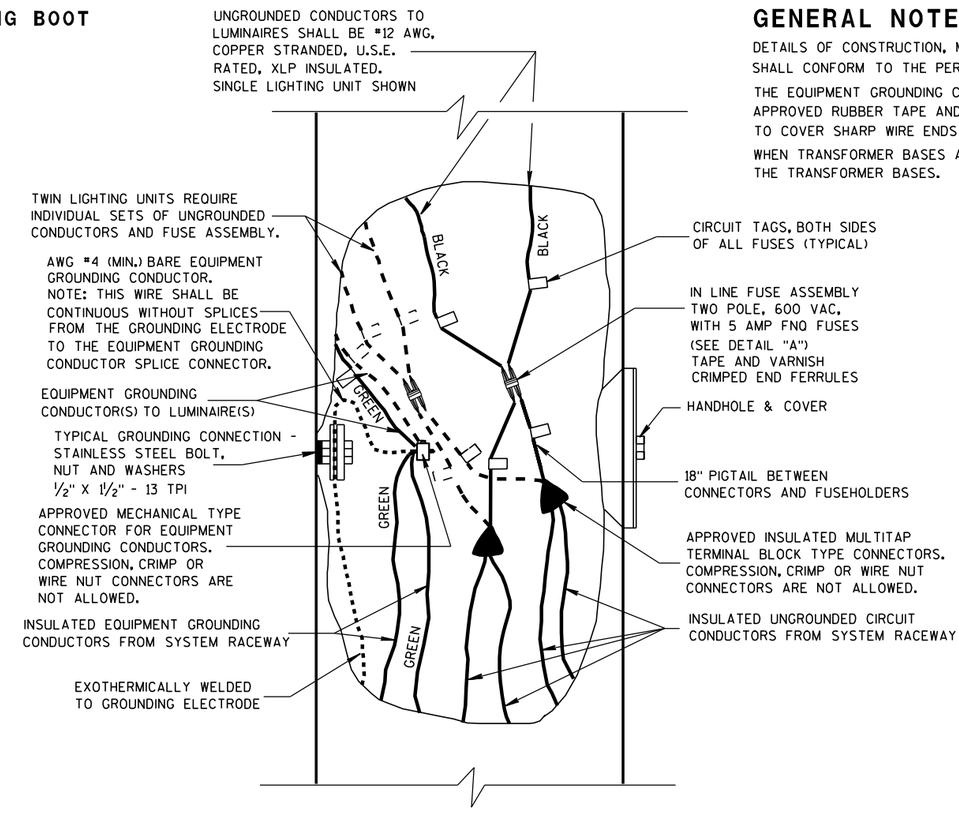




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



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

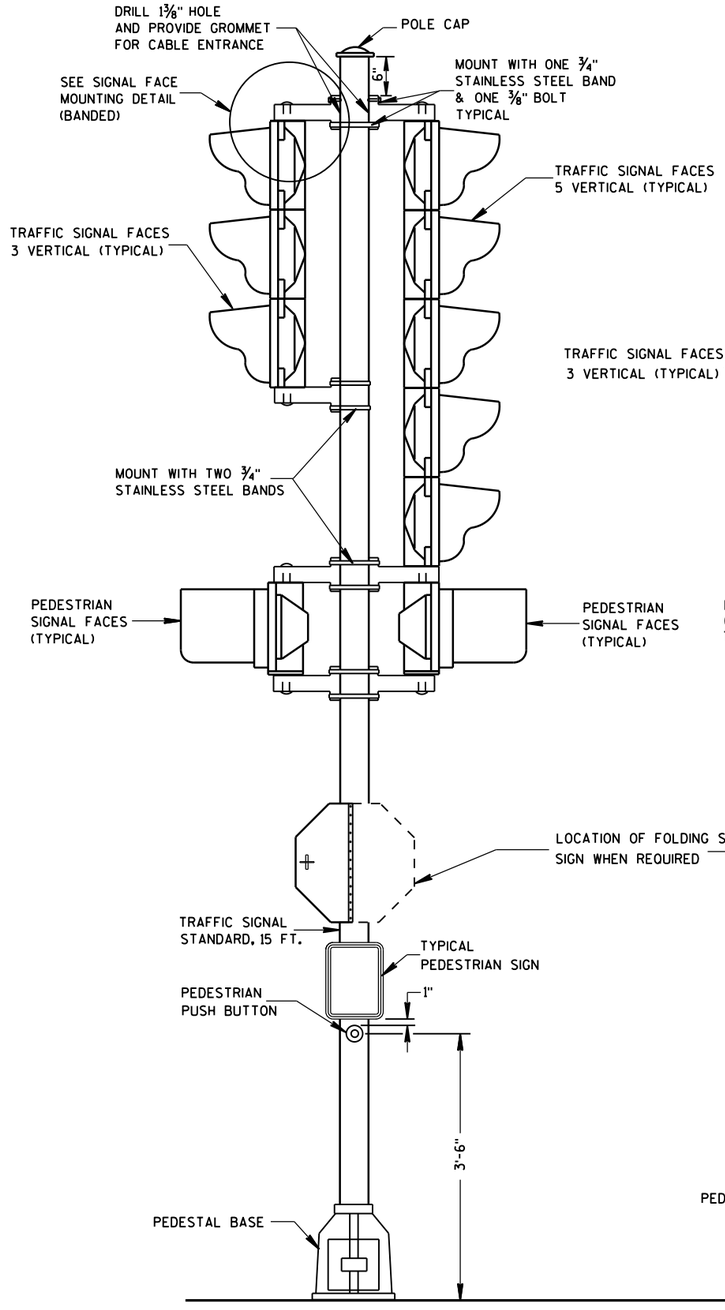
APPROVED

3/2/2011
DATE

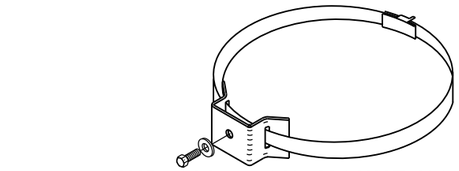
/S/ Thomas J. Gosnine
STATE ELECTRICAL ENGI

545
HWYS

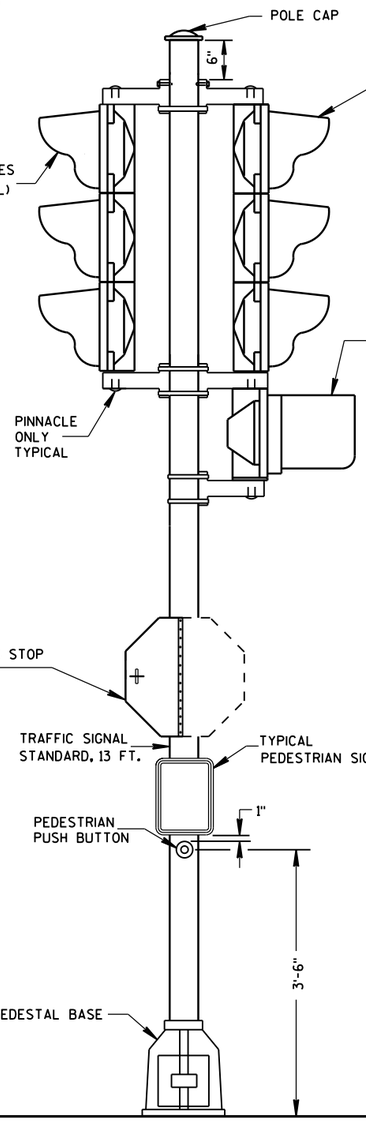
FHWA



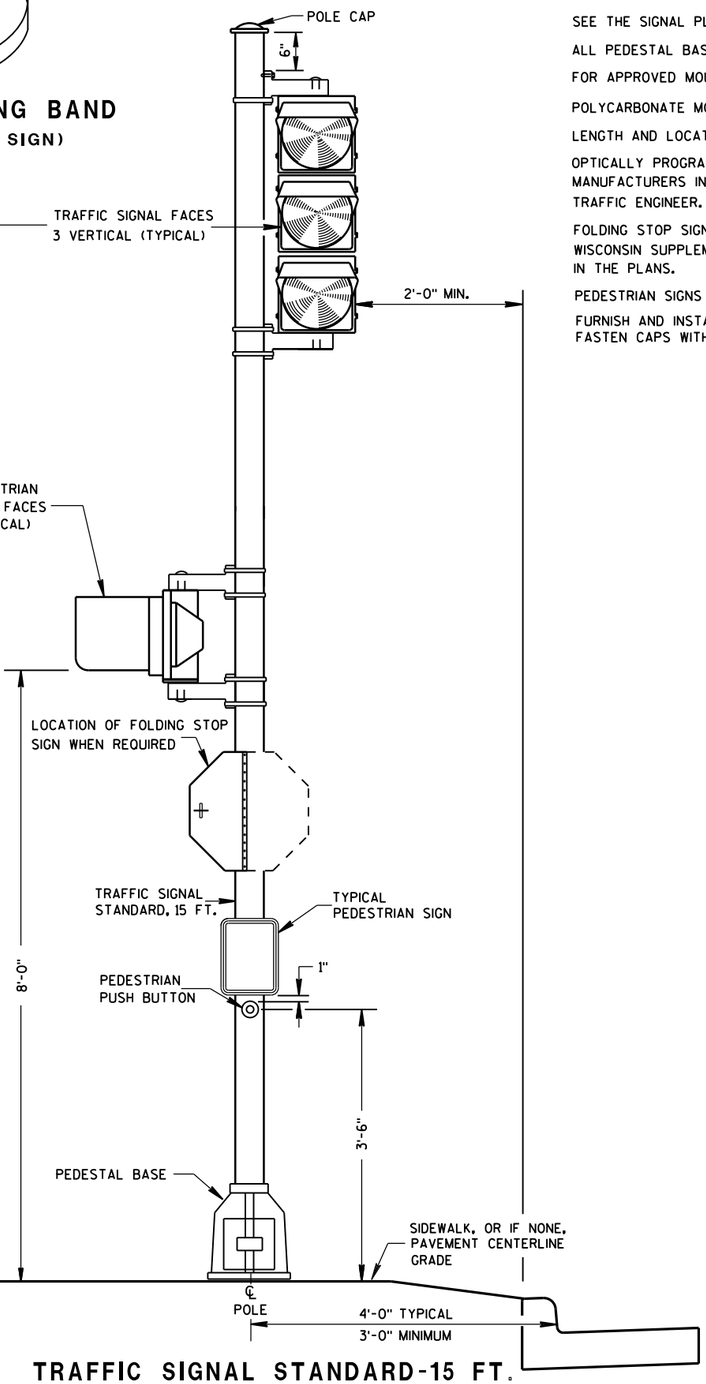
TRAFFIC SIGNAL STANDARD-15 FT.



TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



TRAFFIC SIGNAL STANDARD-13 FT.



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.

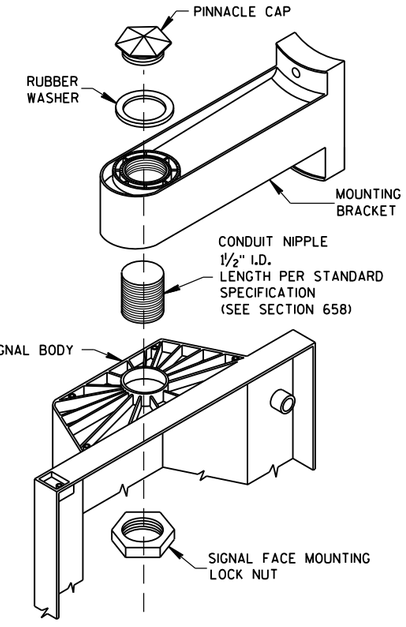
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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)

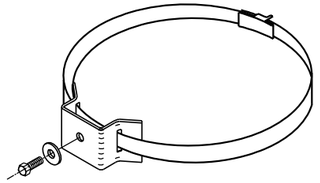
TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

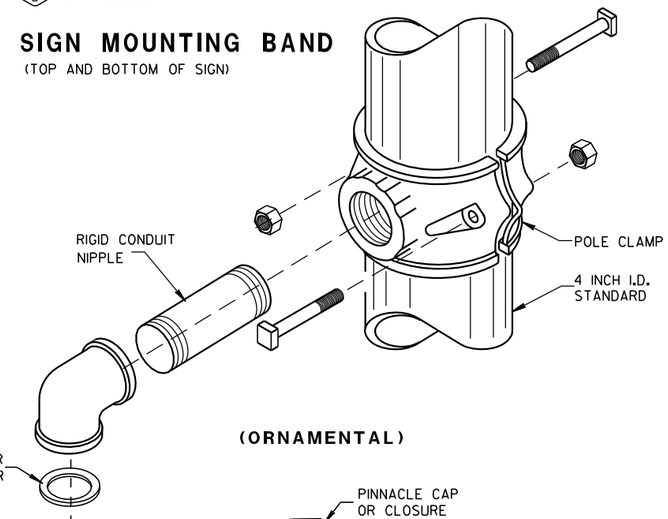
APPROVED
2/28/2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

6

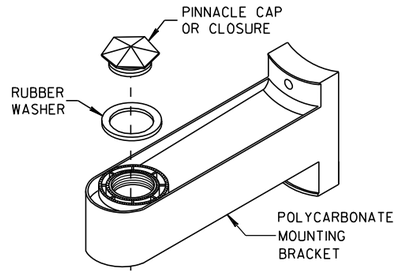
S.D.D. 9 E 6-5



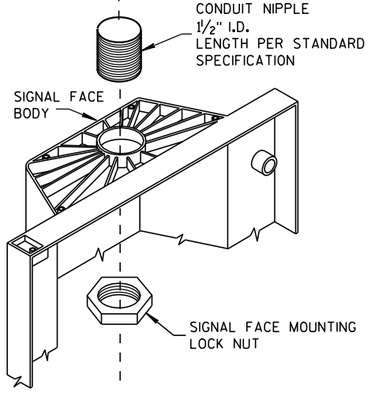
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



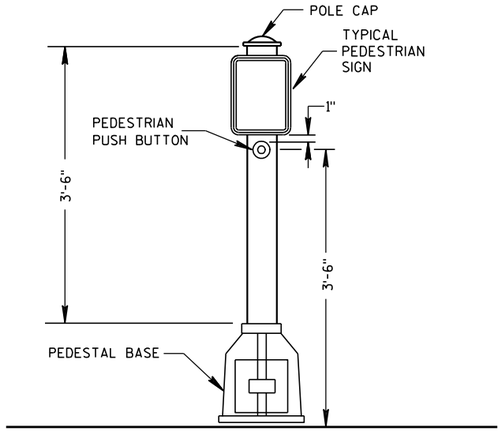
(ORNAMENTAL)



(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.

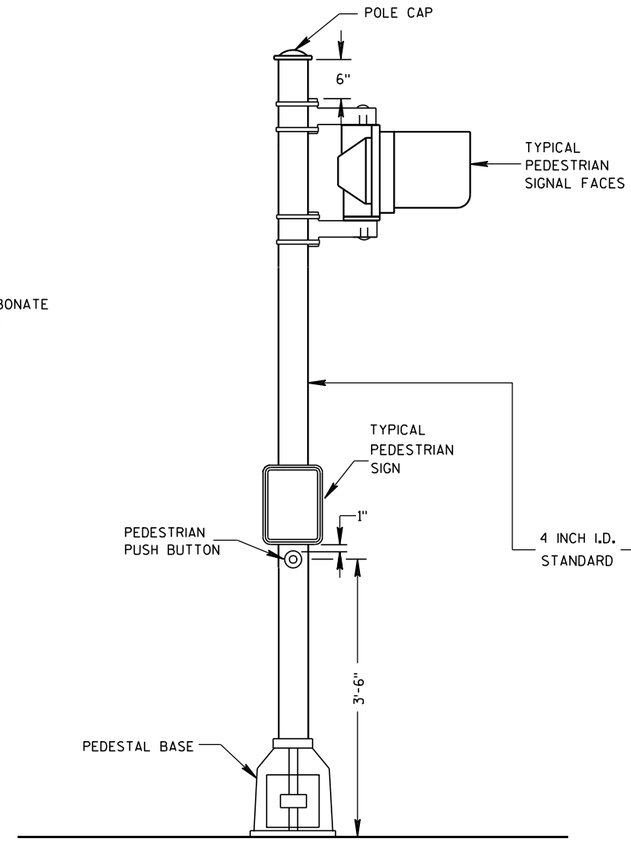
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

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

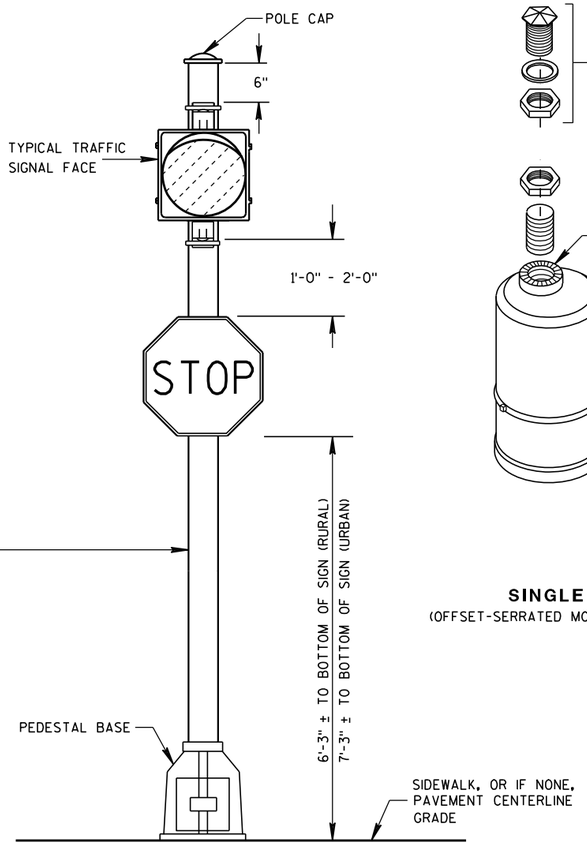
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

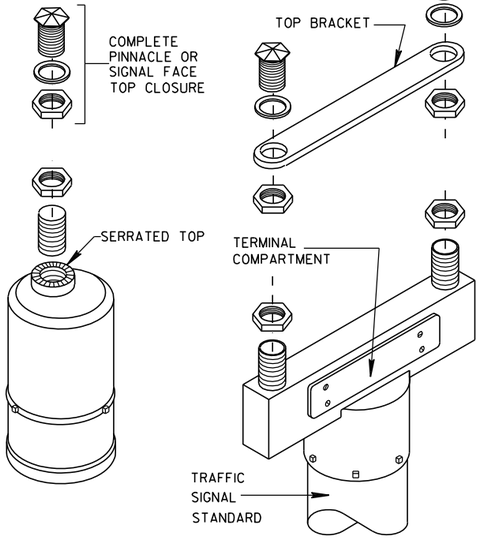
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



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

547

HWYS

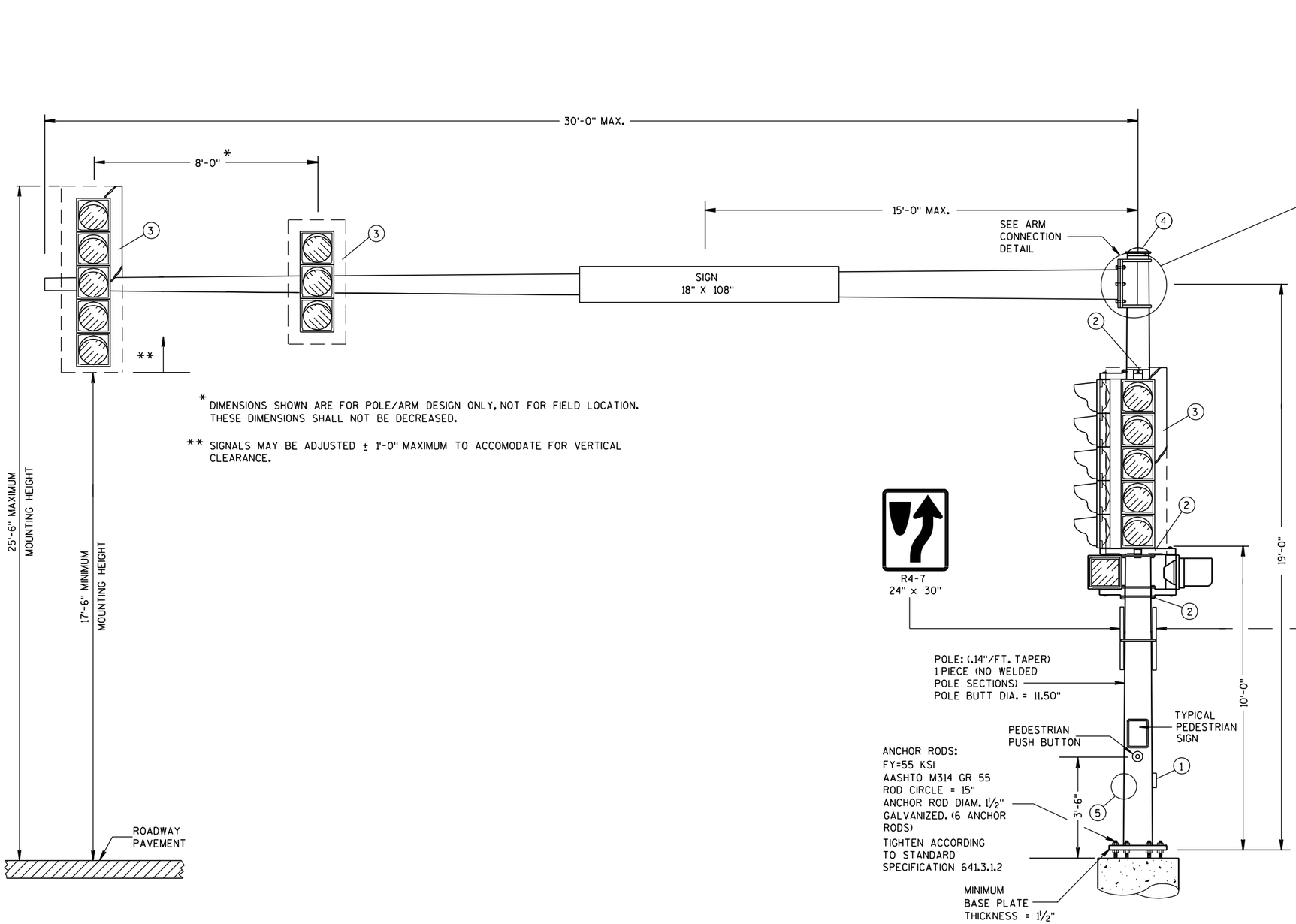
FHWA

6

S.D.D. 9 E 7-5

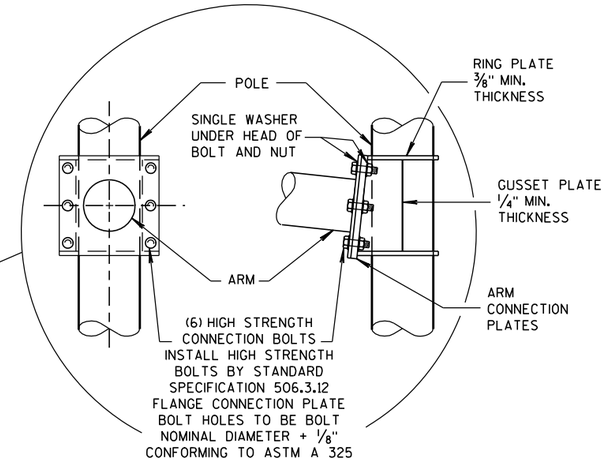
6

S.D.D. 9 E 7-5



* 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

ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 9 POLE 15'- 30' MONOTUBE ARM

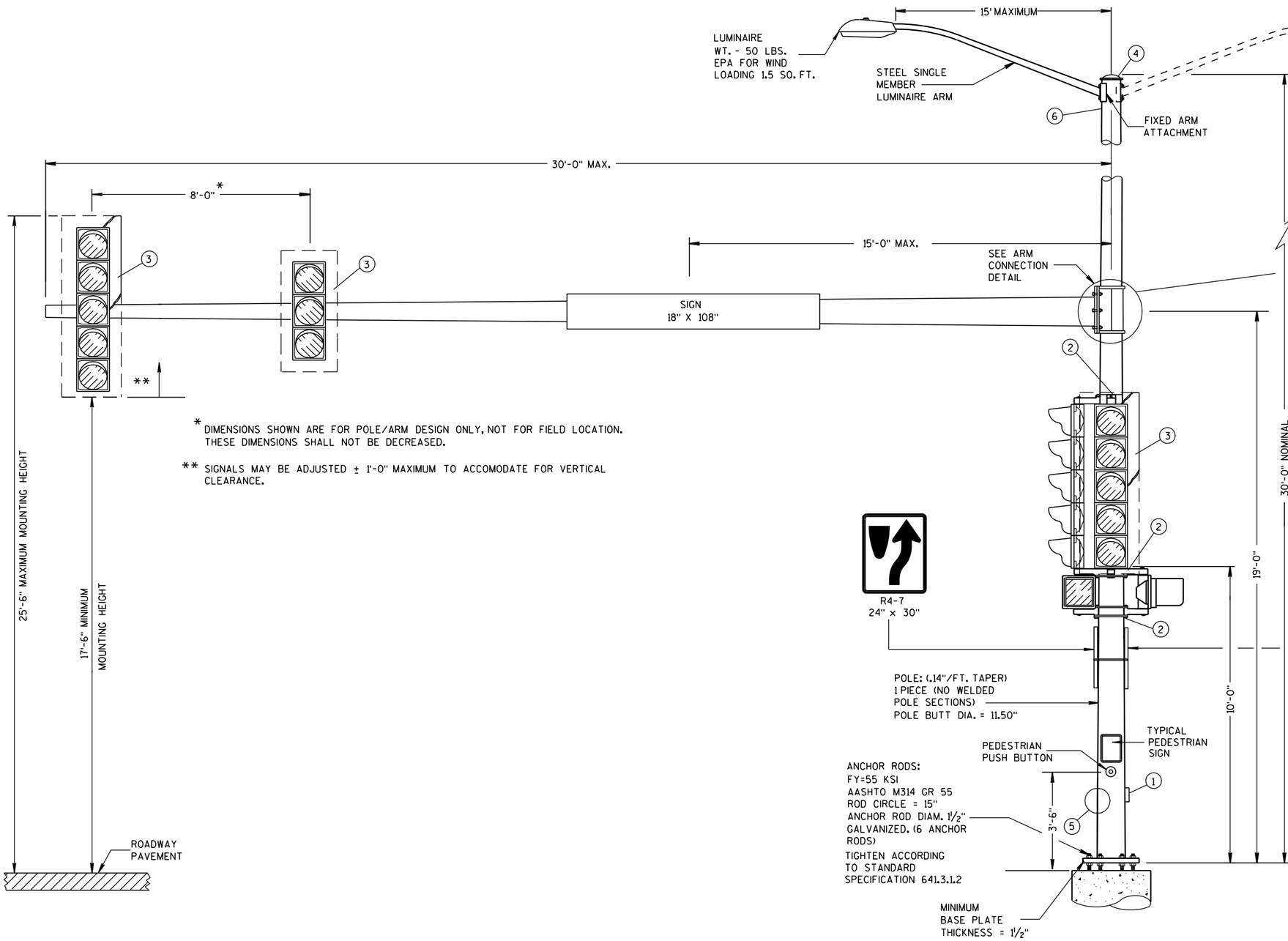
TYPE 9 POLE
15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/2/2011 DATE
/S/ Thomas J. Corrigan
STATE ELECTRICAL ENGI 548 HWYS
FHWA

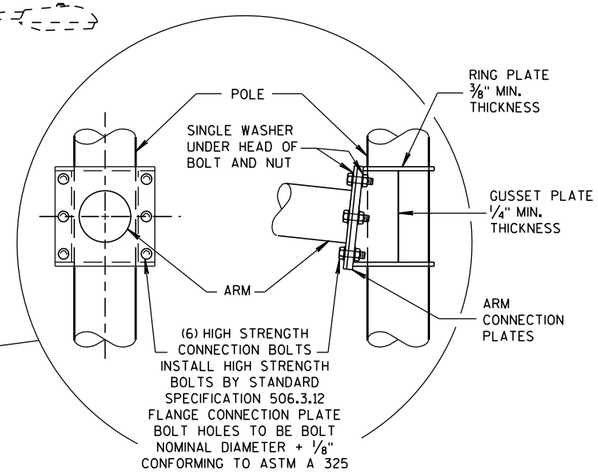
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S.D.D. 9 E 8-4a

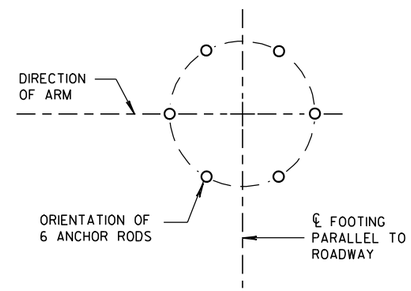


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



6 BOLT ARM CONNECTION DETAIL



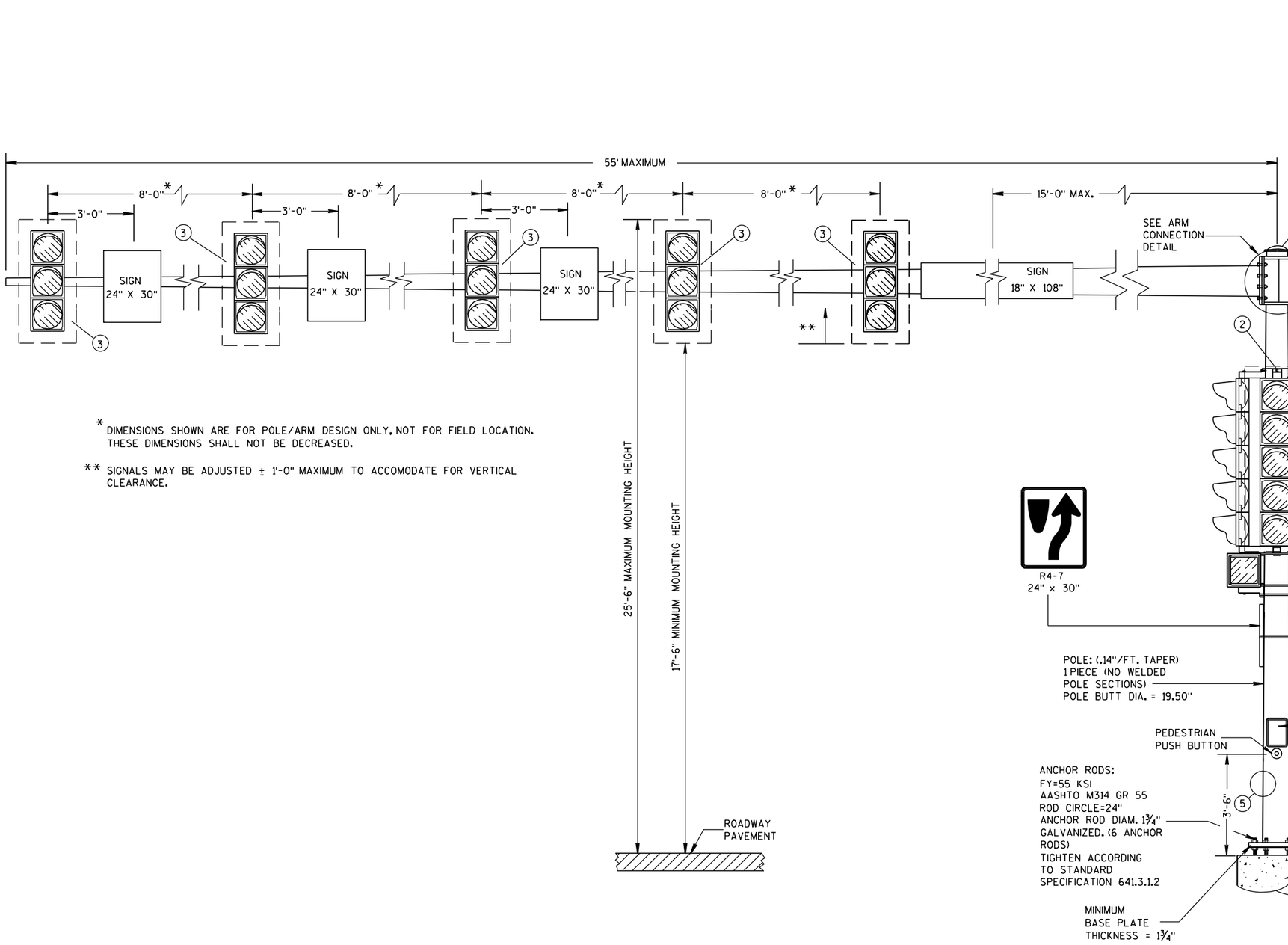
ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 10 POLE
15'- 30' MONOTUBE ARM

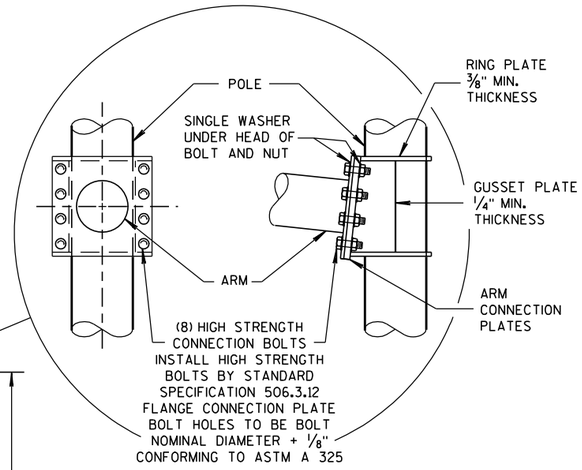
TYPE 10 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/2/2011 DATE	/S/ Thomas J. Corsiglia STATE ELECTRICAL ENGI 549 HWYS
FHWA	

6
S.D.D. 9 E 8-4b

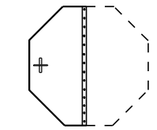


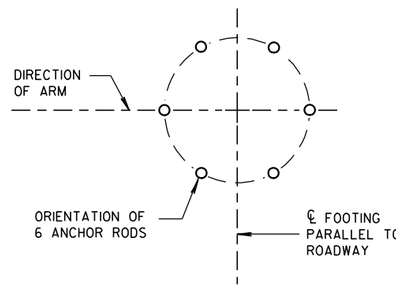
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



8 BOLT ARM CONNECTION DETAIL





ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 12 POLE 35'- 55' MONOTUBE ARM

TYPE 12 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

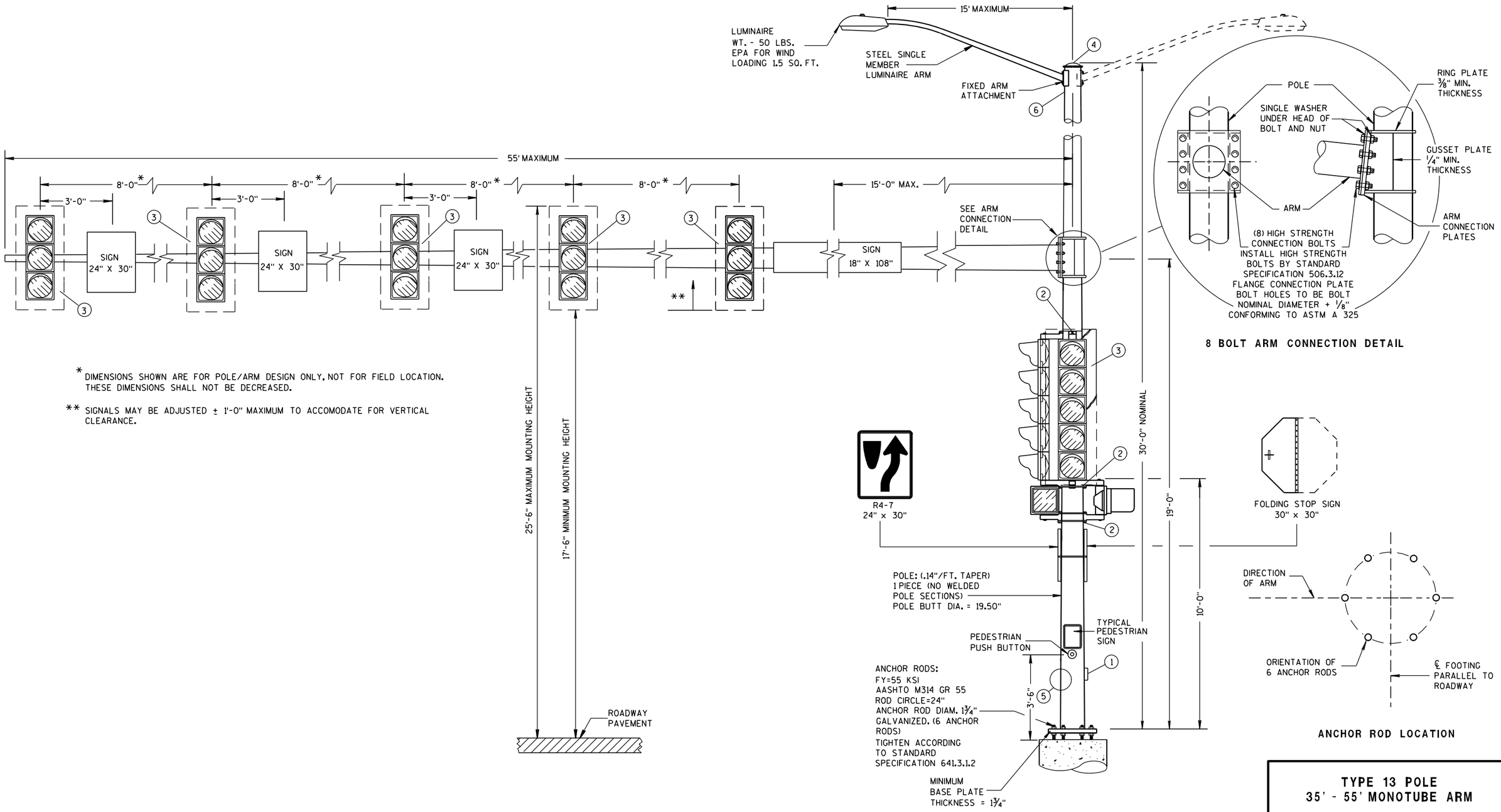
APPROVED
3/2/2011 DATE
/S/ Thomas J. Gorring
STATE ELECTRICAL ENGI 550 HWYS
FHWA

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S.D.D. 9 E 8-4c

6

S.D.D. 9 E 8-4c



* 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.

8 BOLT ARM CONNECTION DETAIL

(MAXIMUM LOAD)

TYPE 13 POLE 35'- 55' MONOTUBE ARM

ANCHOR ROD LOCATION

TYPE 13 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011 — DATE

/S/ Thomas J. Cannon — STATE ELECTRICAL ENGI 551 HWYS

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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 LATEST AASHTO 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.

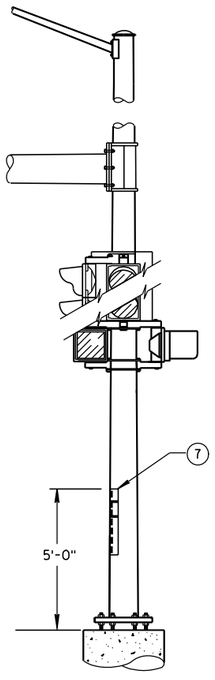
(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

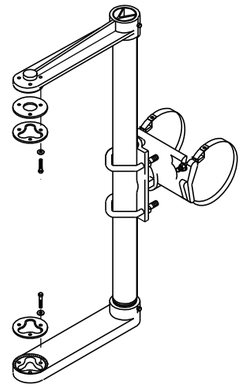
(7) INSTALL DEPARTMENT PROVIDED STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

MOUNTING HEIGHT SHALL BE 5'-0" ABOVE THE CURB OR SHOULDER . ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

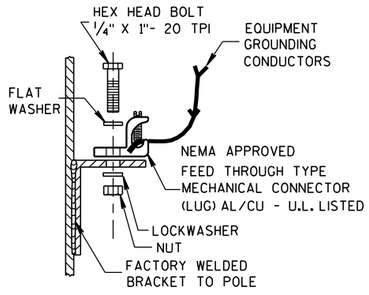


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



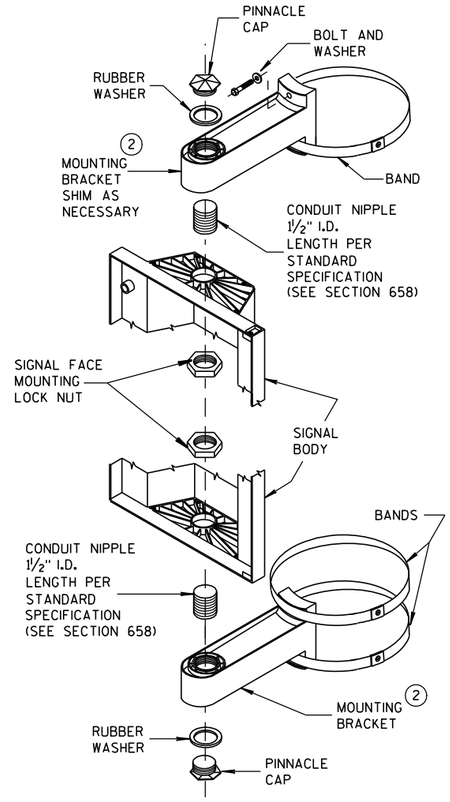
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

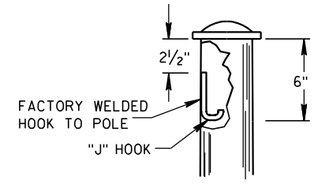


TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



"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

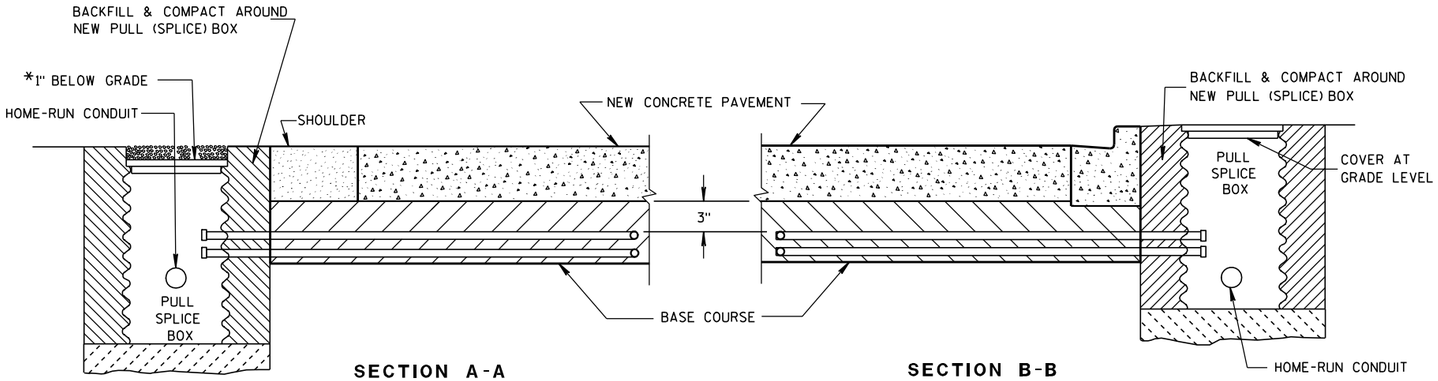
3/2/2011 DATE

/S/ Thomas J. Corrigan
STATE ELECTRICAL ENGI 552 HWYS

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SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

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

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

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

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

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS SUCH AS 3M TYPE 82A1 OR APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

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

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

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

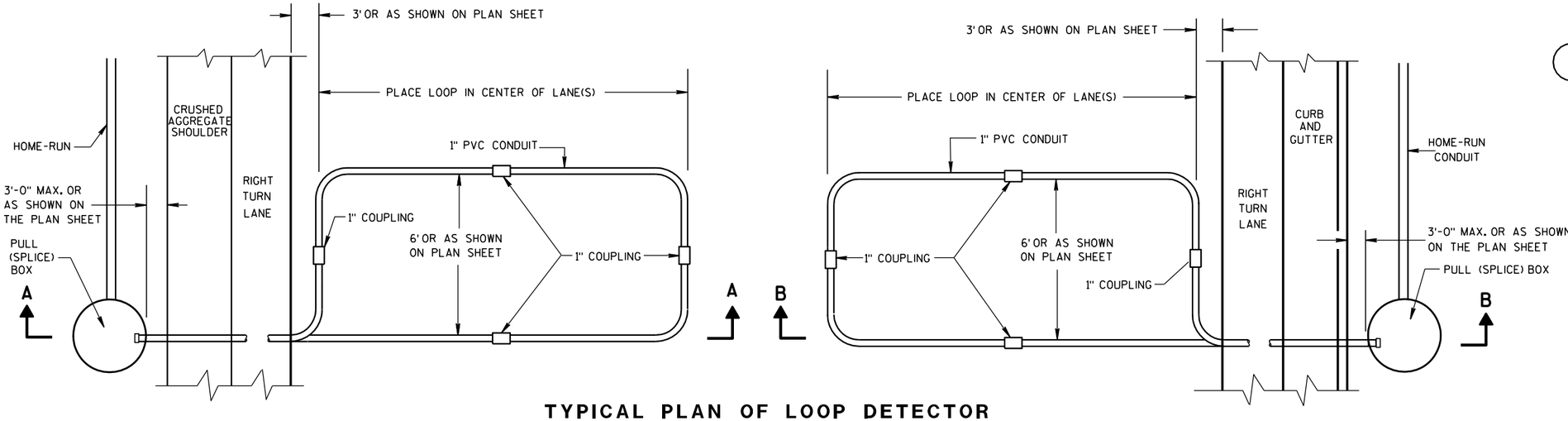
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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

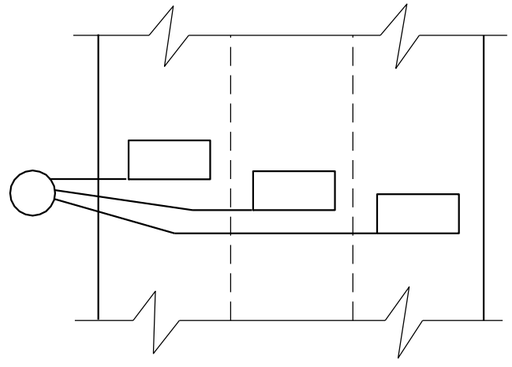
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

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

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



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



MULTI-LANE INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/7/06 DATE
/S/ Balu Anantharaman
STATE ELECTRICAL ENGI 553 HWYS
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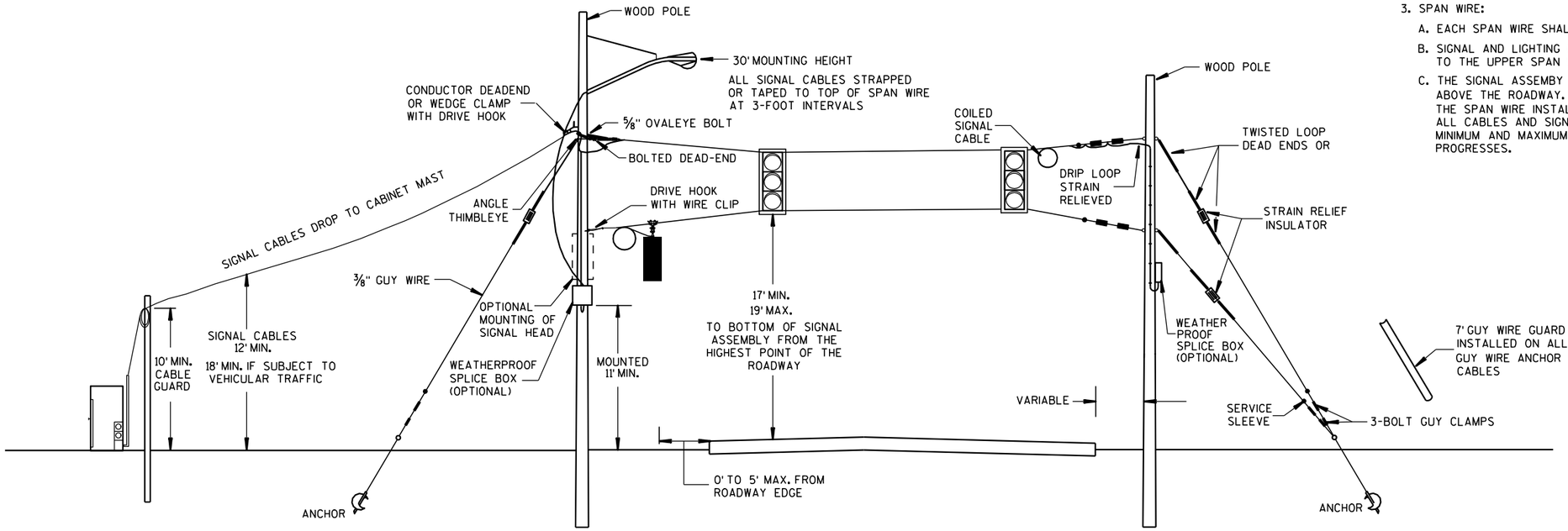
GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.

2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.

3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE
TEMPORARY SIGNALS

MINIMUM POLE LENGTHS	POLE BURIEL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Ananthar [illegible]n
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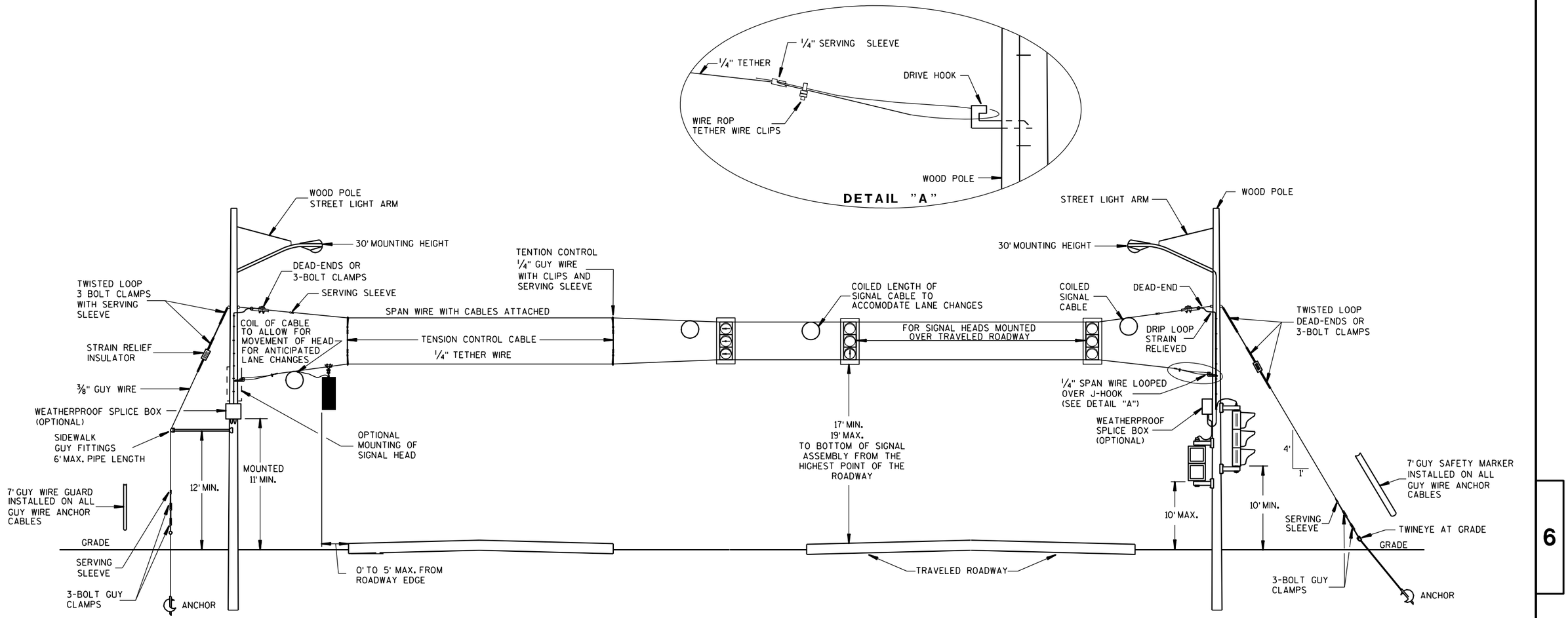
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GENERAL NOTES

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   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
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SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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7-14-08 DATE

/S/ Balu Ananthanarayanan
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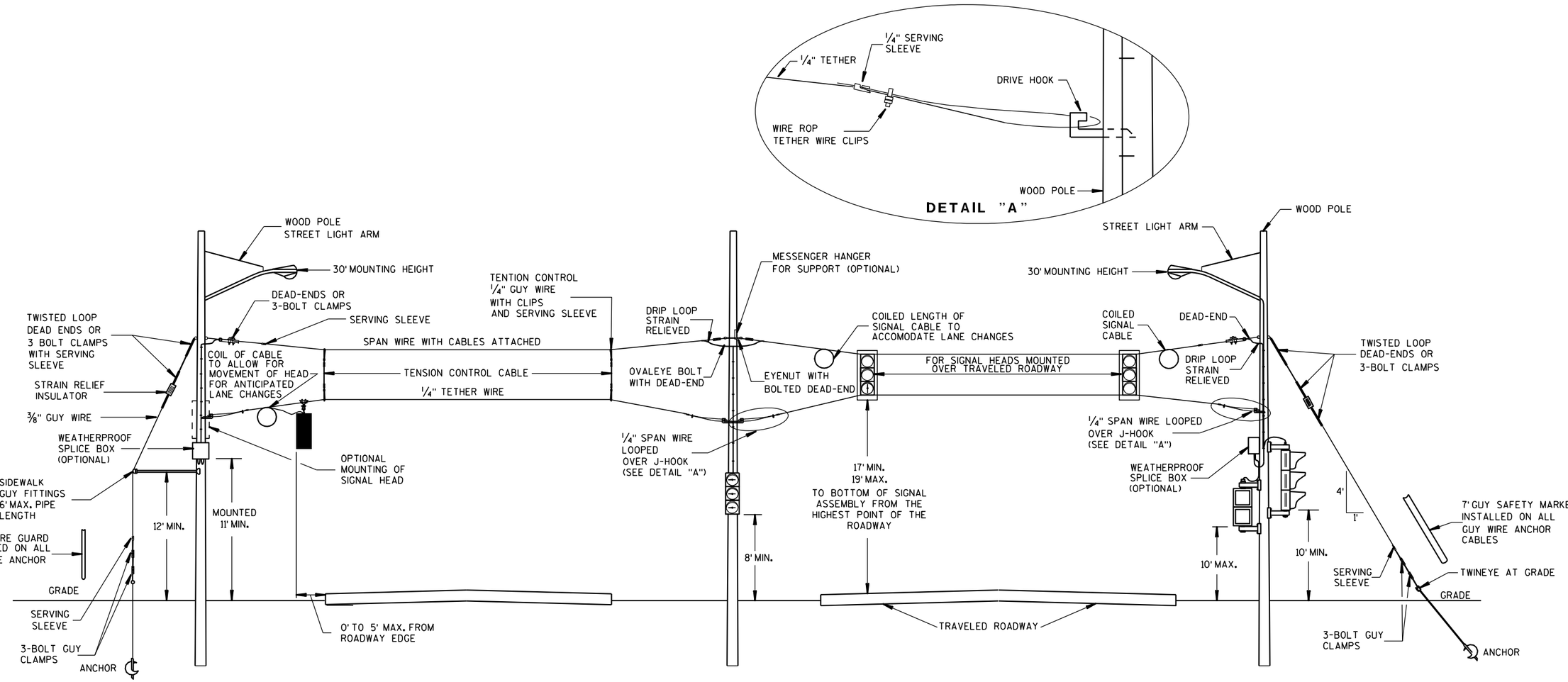
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SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

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MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

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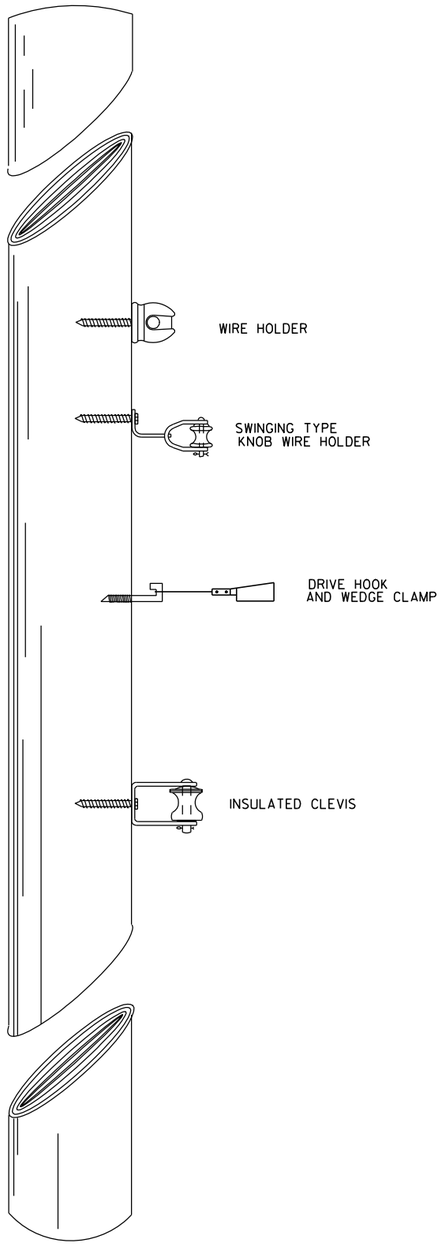
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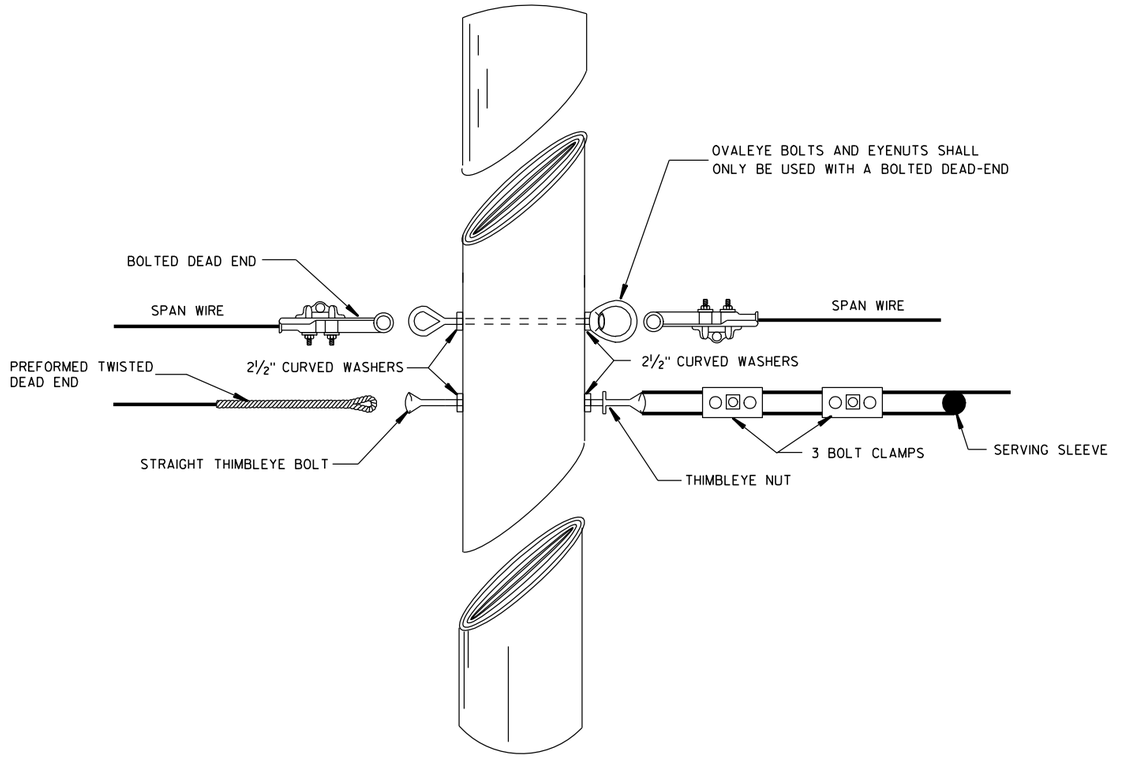
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TYPICAL CABLE HANGERS



TYPICAL DEAD-ENDING

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SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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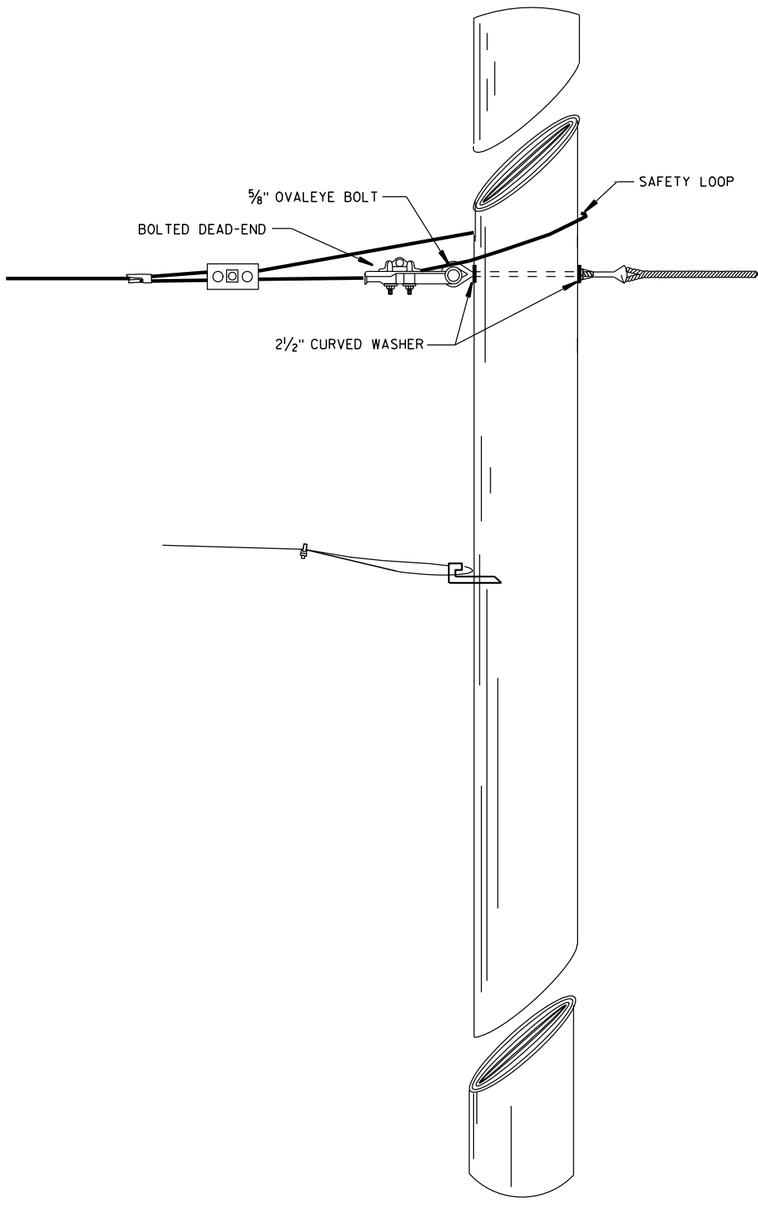
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DATE

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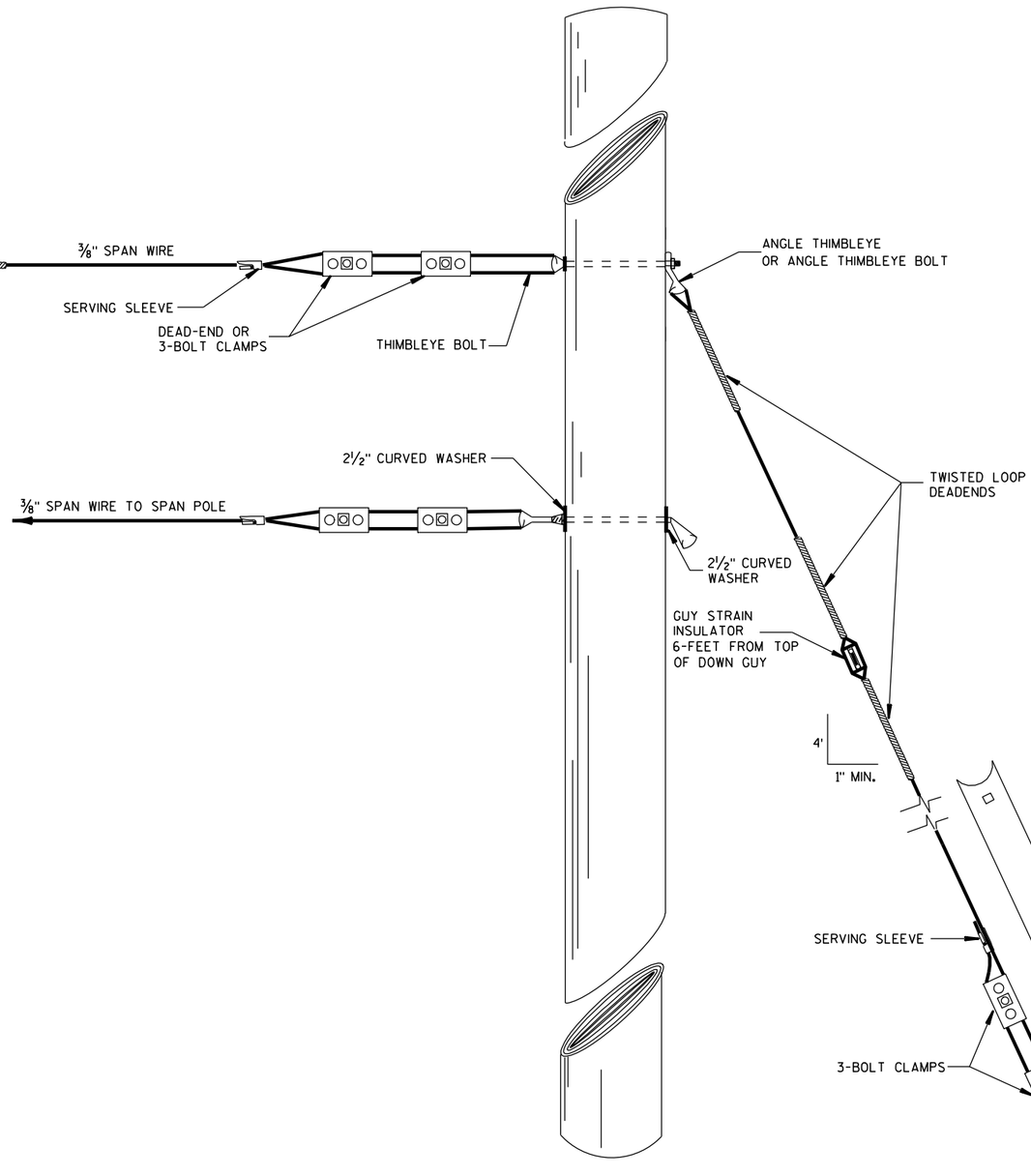
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GENERAL NOTES

1. USE ¾" DRILL IN WOOD POLE TO PROVIDE HOLE FOR ⅝" BOLTS.
2. SAFTY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE



GUY POLE

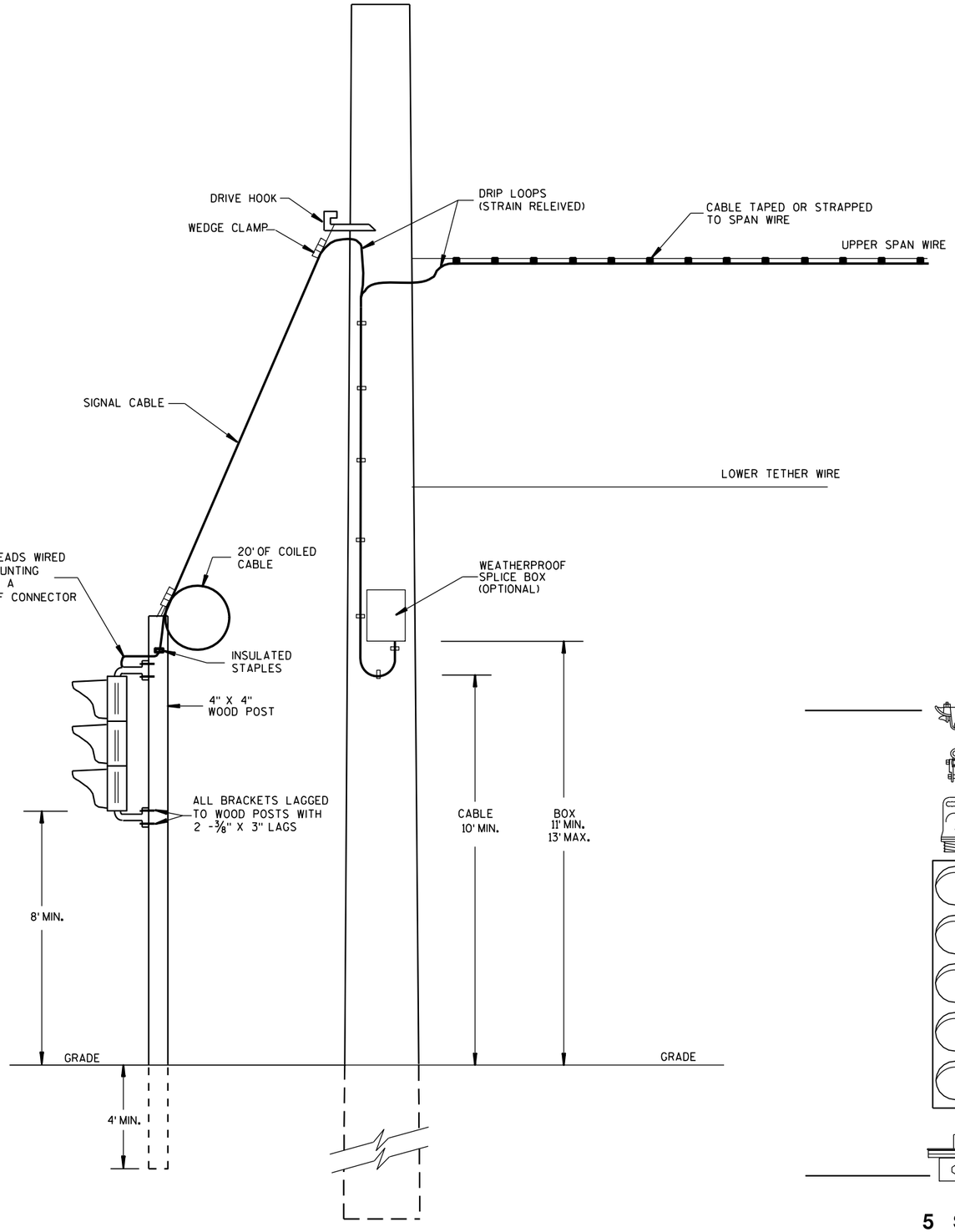
TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

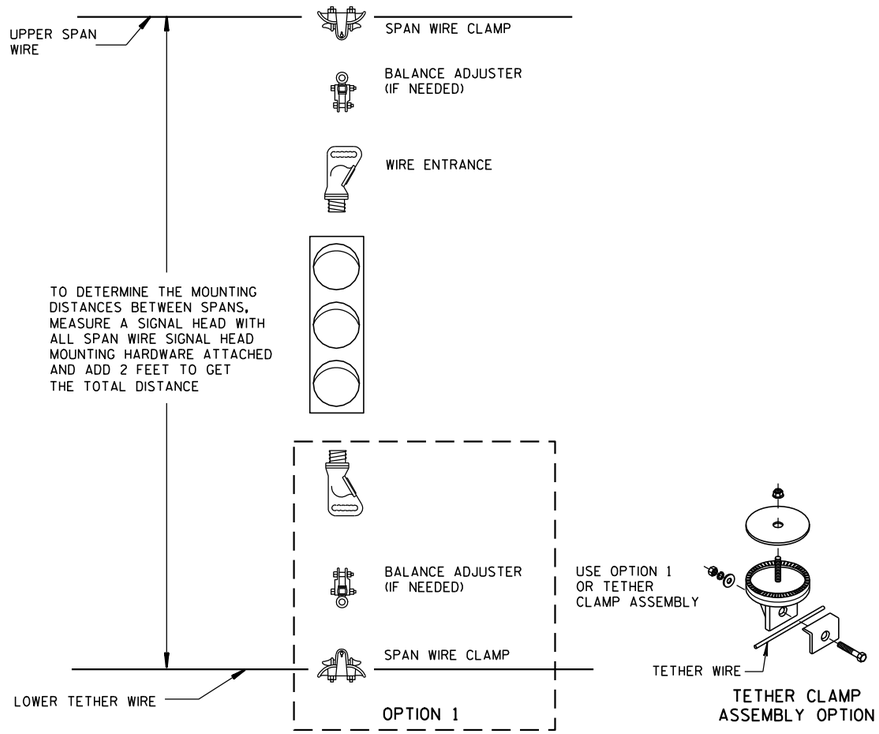
STATE OF WISCONSIN
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7-14-08 DATE
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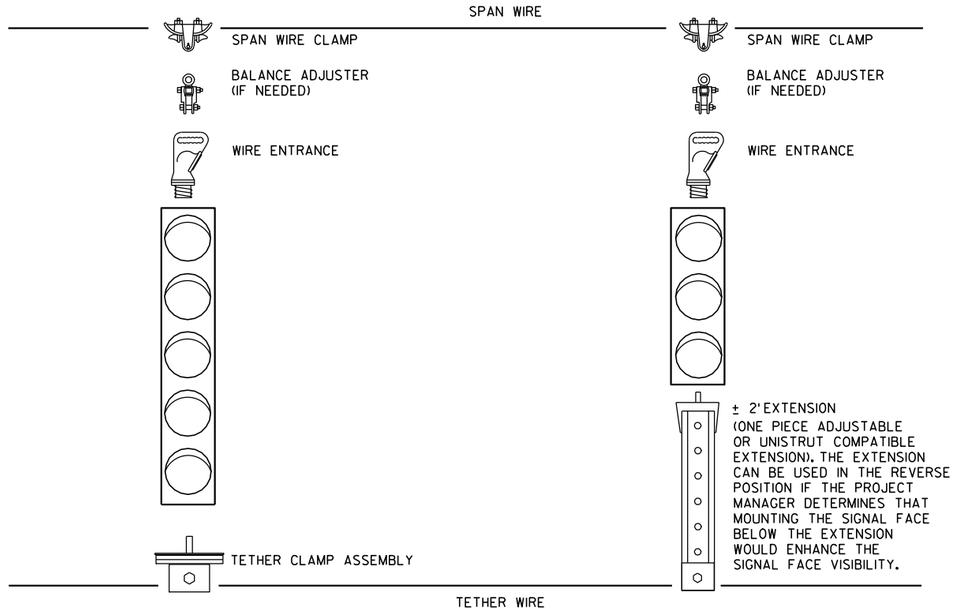
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TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TYPICAL SPAN WIRE MOUNTING HARDWARE



5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

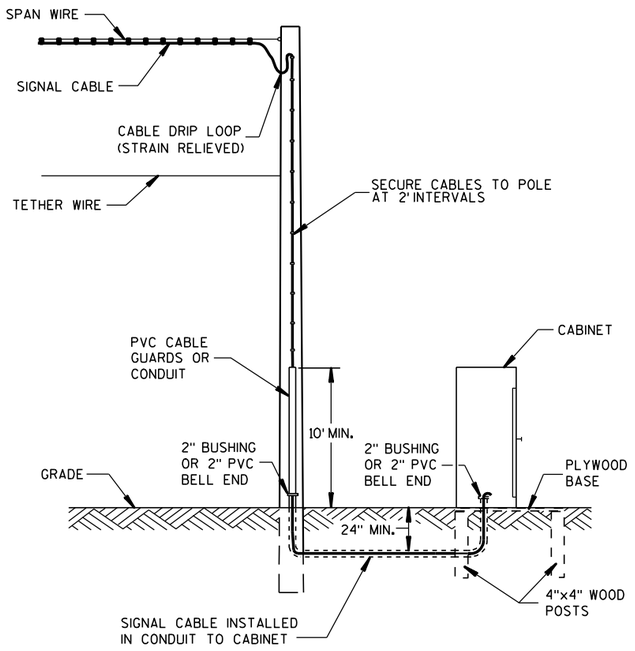
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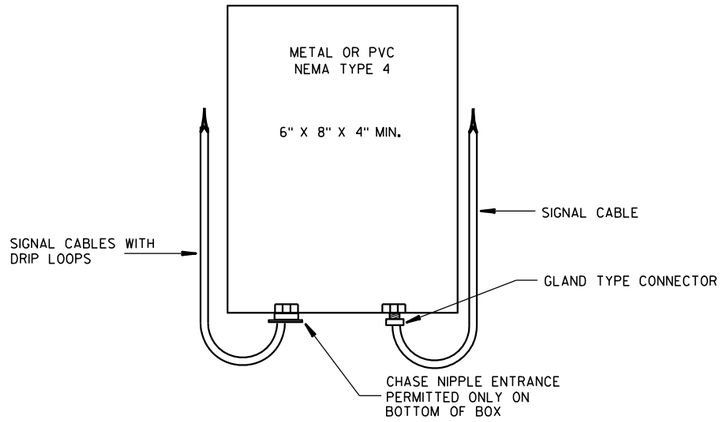
7-14-08
DATE

/S/ Balu Aganthangarayanan
STATE ELECTRICAL ENGI 559 HWYS

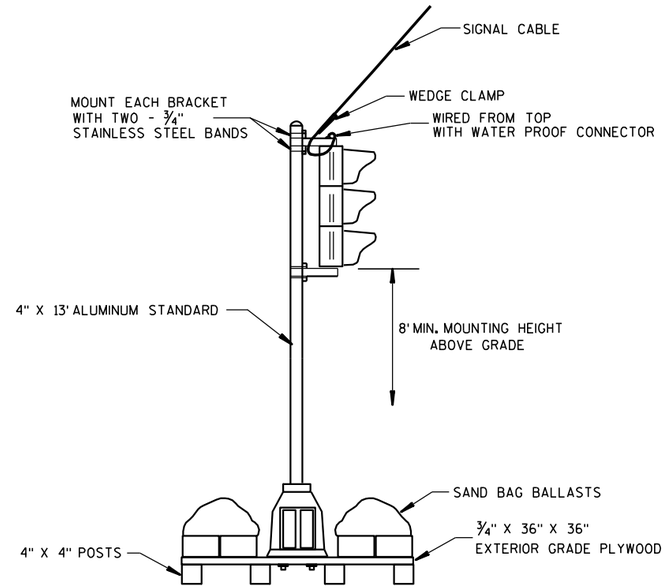
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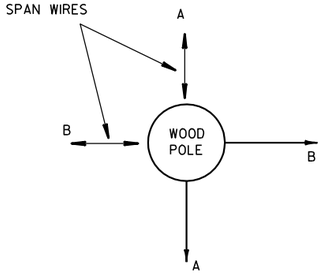




SPLICE BOX

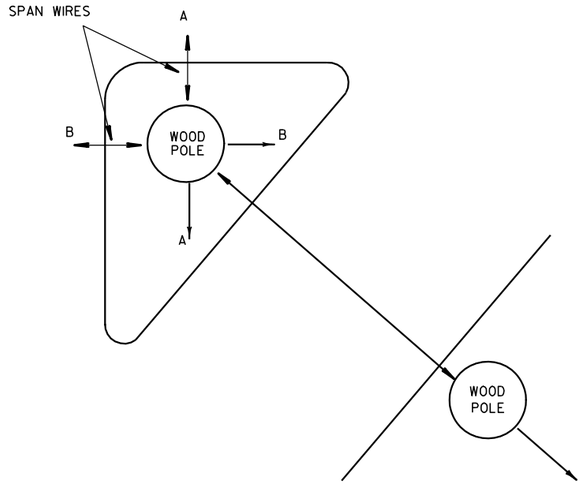


TYPICAL SKID TYPE TEMPORARY

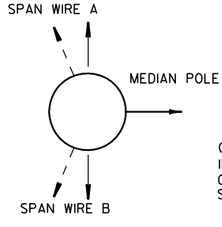


ALL DOWN OR SIDEWALK GUYS SHALL BE INSTALLED IN THE OPPOSITE DIRECTION OF THE STRAIN OF THE SPAN WIRE

CORNER POLES



ISLAND POLES



GUY AWAY FROM INTERSECTION OR IN OPPOSITE DIRECTION OF THE SPAN LOADING

MEDIAN POLES

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 560 HWYS

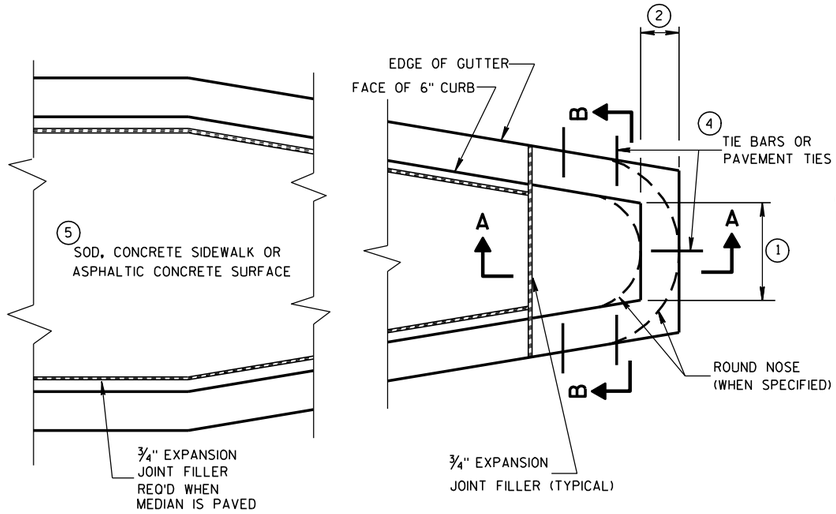
FHWA

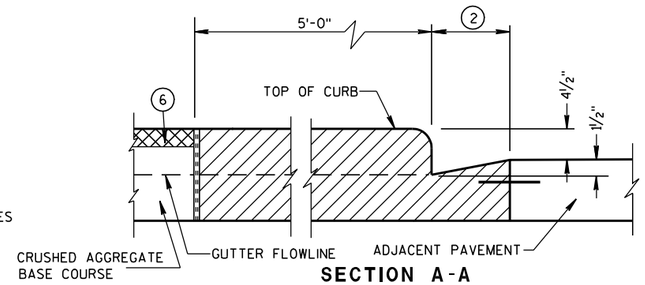
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S.D.D. 9 G 1-3g

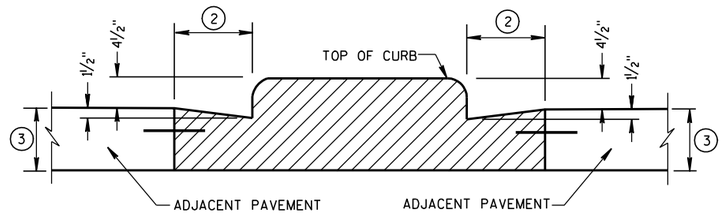
6

S.D.D. 9 G 1-3g





SECTION A-A



SECTION B-B

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.

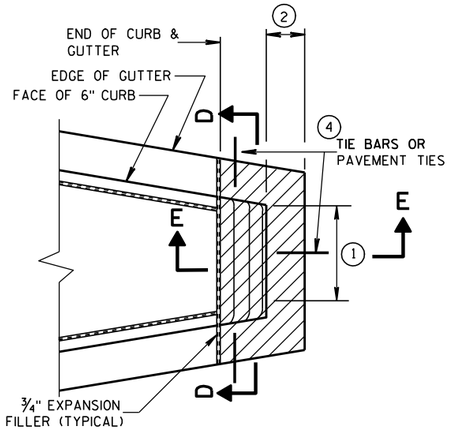
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

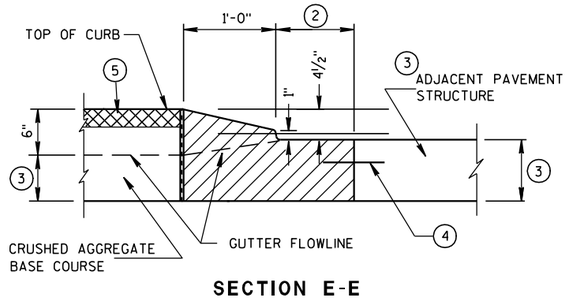
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(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.

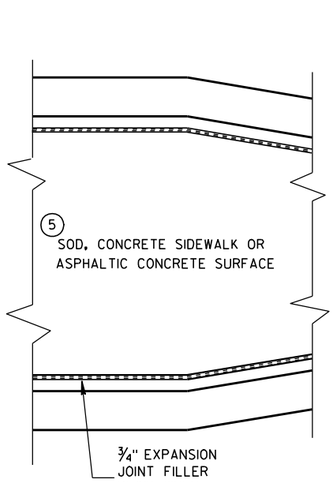
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

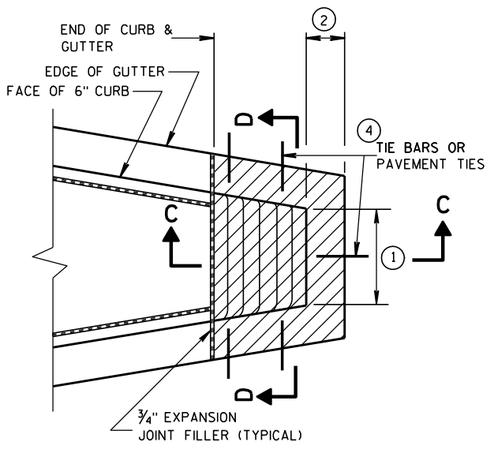




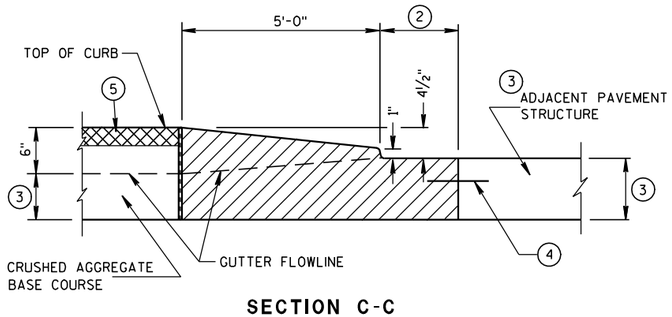
SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2

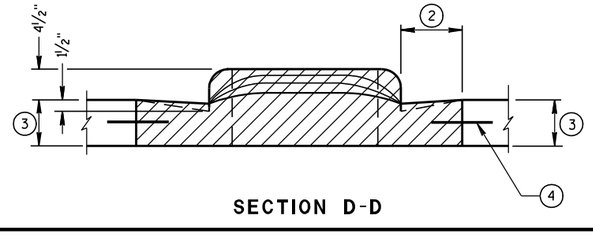




CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION C-C



SECTION D-D

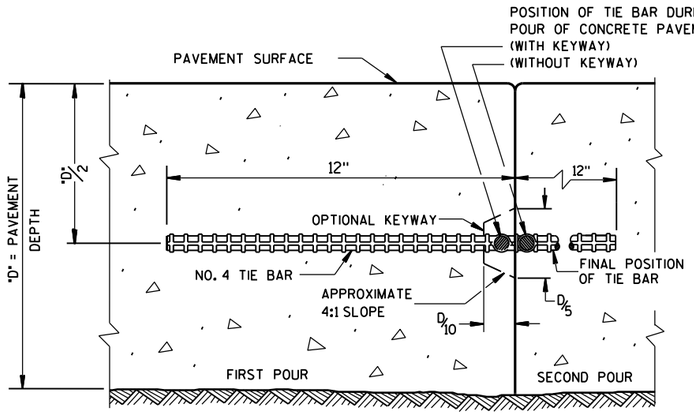
CONCRETE MEDIAN NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE FHWA	/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER 561 NT

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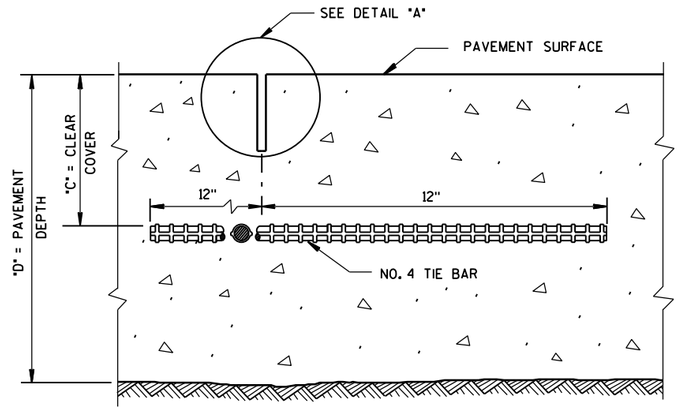
S.D.D. 11 B 2-2

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S.D.D. 11 B 2-2



CONSTRUCTION JOINT



SAWED JOINT

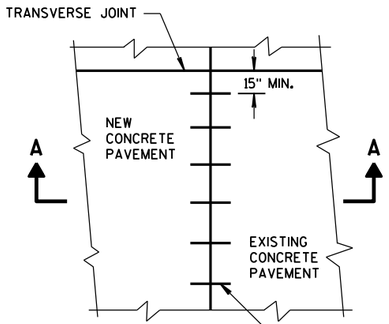
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

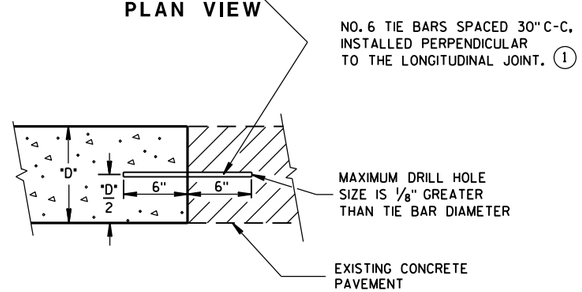
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

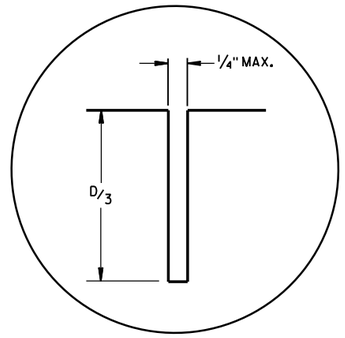


PLAN VIEW



SECTION A-A

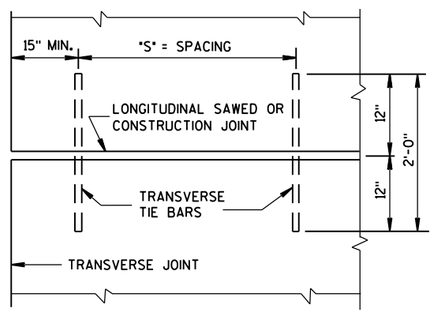
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 1/2"	3"±1/2"	48"	42"
7, 7 1/2"	3 1/4"±1"	45"	36"
8, 8 1/2"	3 3/4"±1"	39"	30"
9, 9 1/2"	4 1/4"±1"	33"	27"
10, 10 1/2"	4 3/4"±1"	30"	24"
11, 11 1/2"	5 1/4"±1"	27"	21"
12"	5 3/4"±1"	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

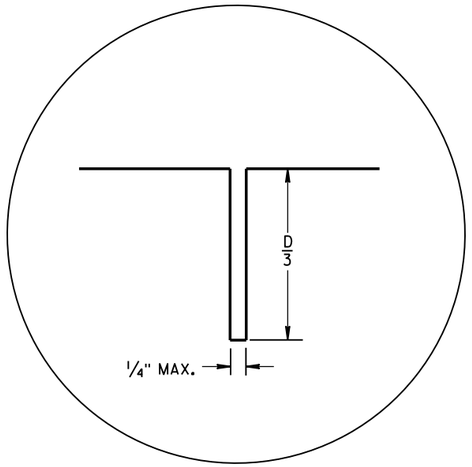
5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER

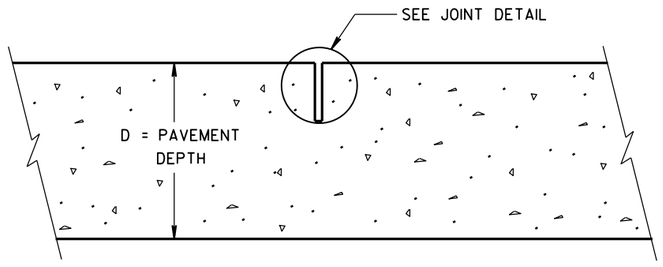
FHWA

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S.D.D. 13 C 1-16



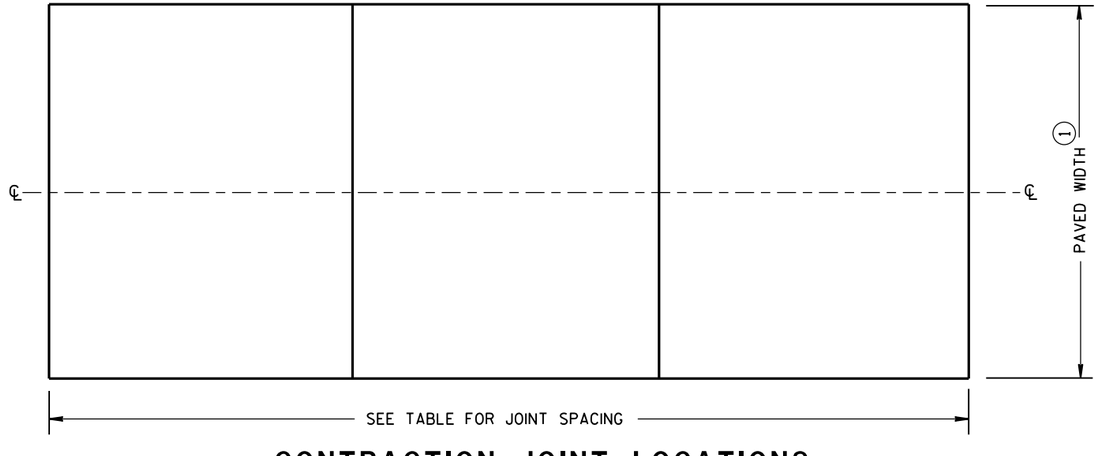
JOINT DETAIL



CONTRACTION JOINT

PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE.

LOCATE AND ORIENT CONTRACTION JOINTS THROUGH INTERSECTIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

CONSTRUCTION JOINTS

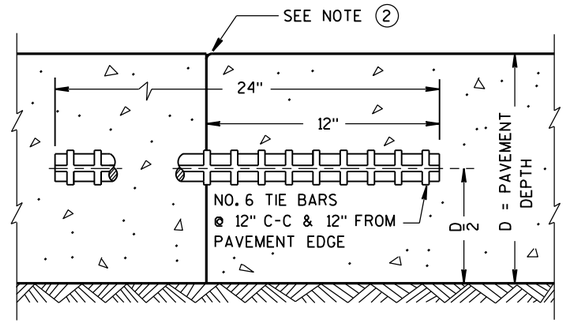
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

FORM OR SAW CONSTRUCTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

(1) REFER TO TYPICAL CROSS SECTIONS FOR PAVED WIDTH AND LOCATION OF LONGITUDINAL JOINTS.

(2) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.



TIED TRANSVERSE CONSTRUCTION JOINT

6

6

S.D.D. 13 C 4-16

S.D.D. 13 C 4-16

URBAN NON-DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

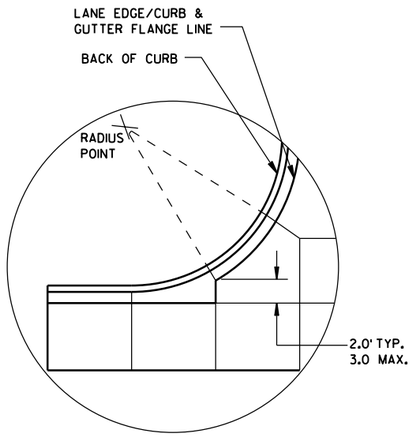
APPROVED

5/3/2013
DATE

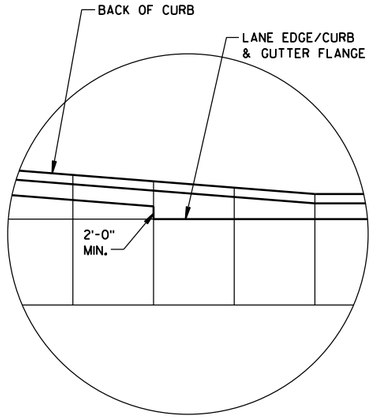
/S/ Deb Bischoff
PAVEMENT POLICY & DE

IEER

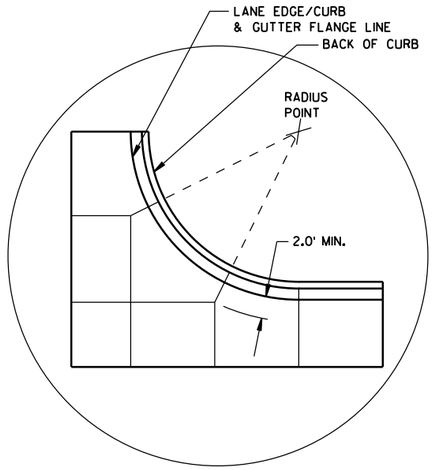
FHWA



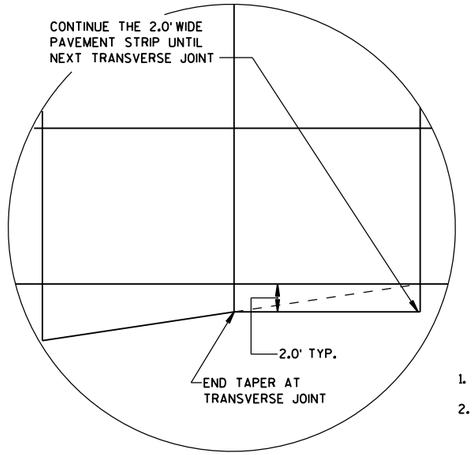
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

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

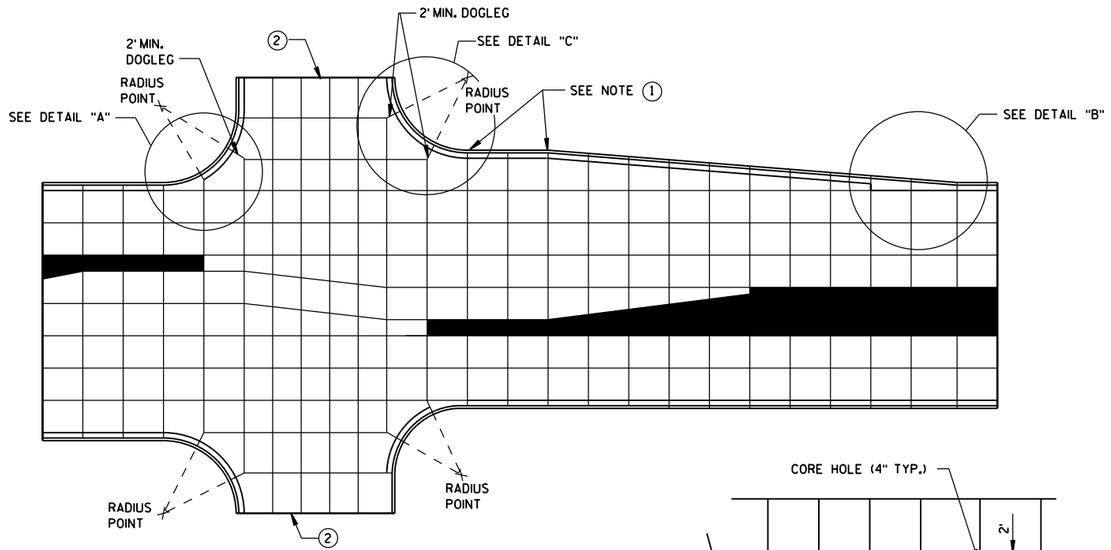
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

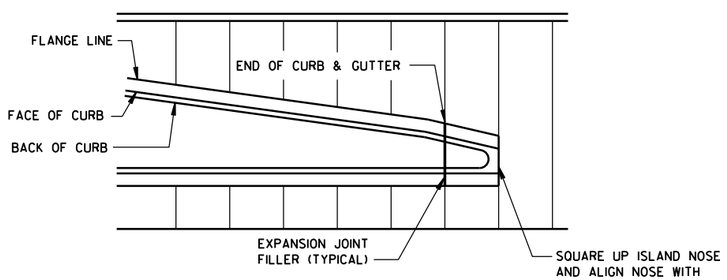


STANDARD INTERSECTION

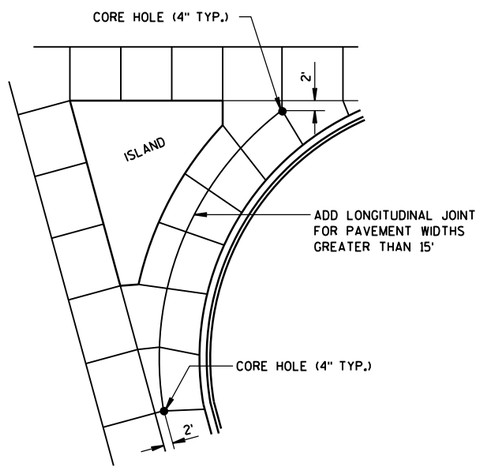
PAVEMENT DEPTH AND JOINT SPACING TABLE

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

SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

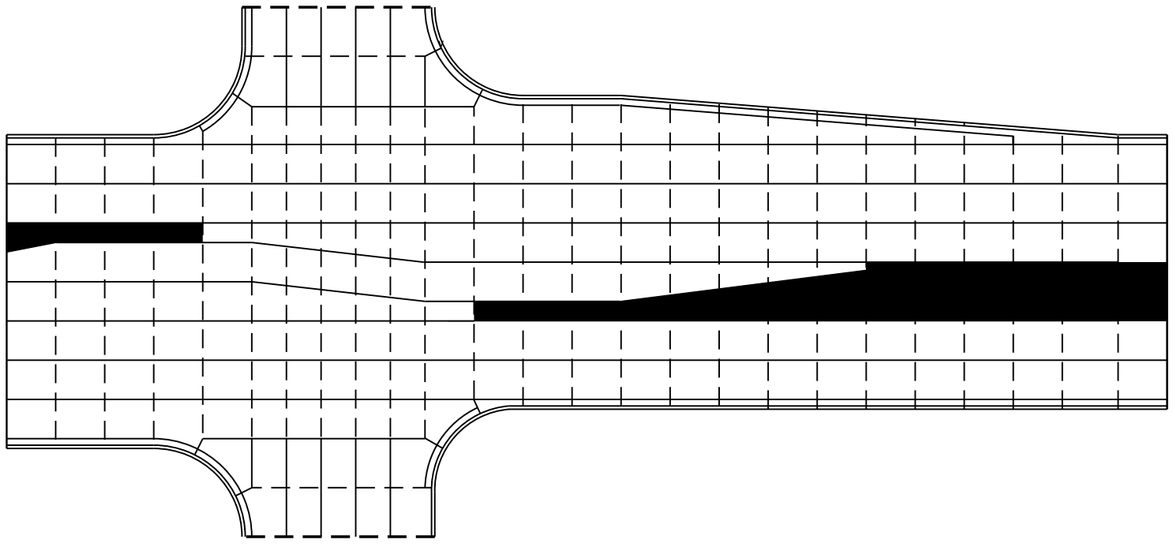
S.D.D. 13 C 18-2a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

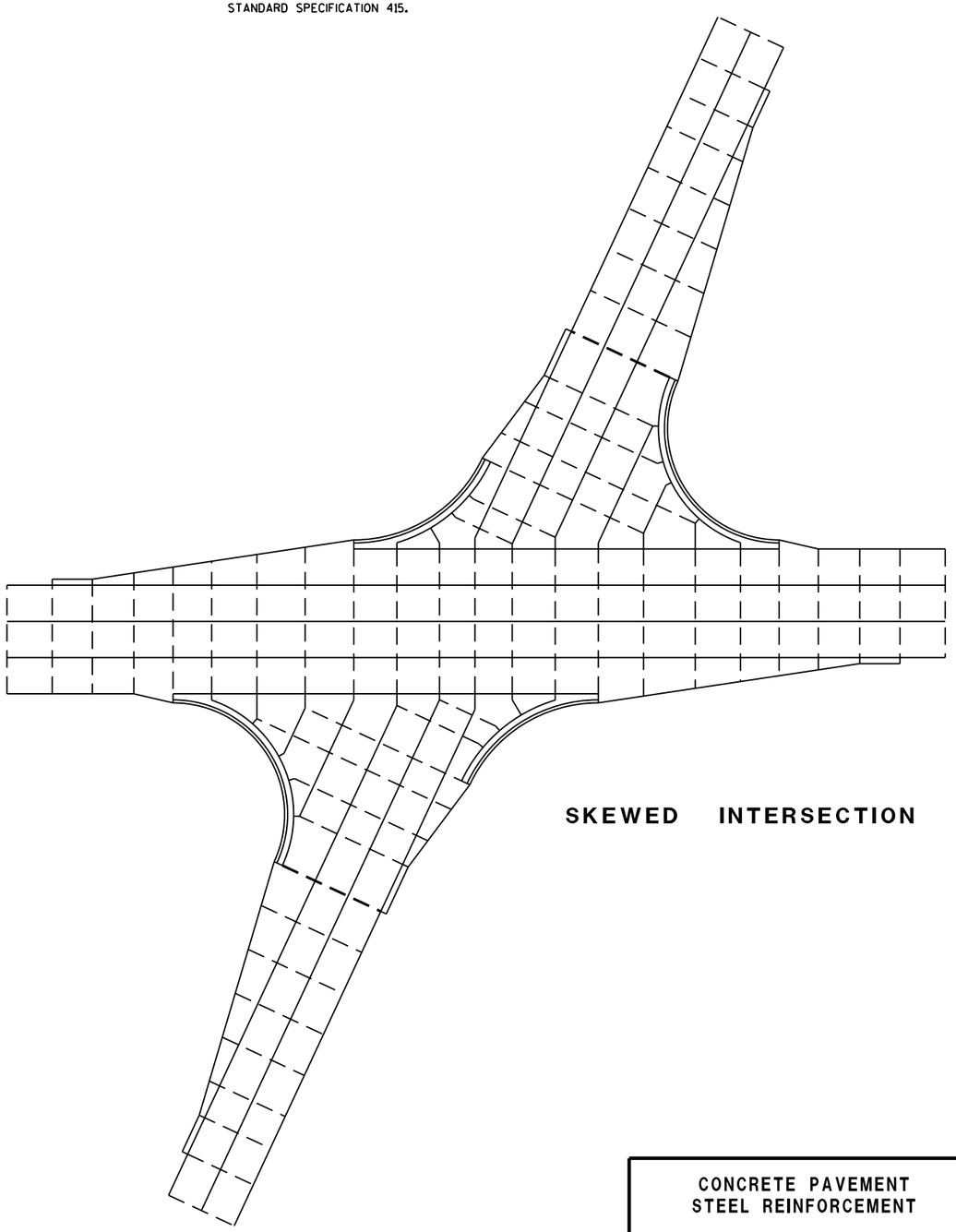
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

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



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

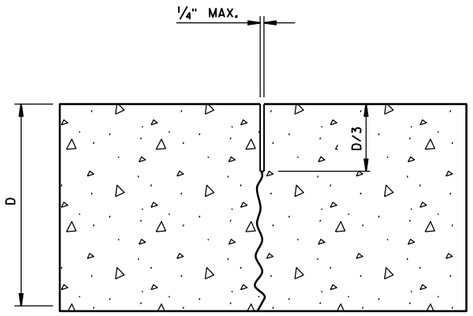
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 565

6

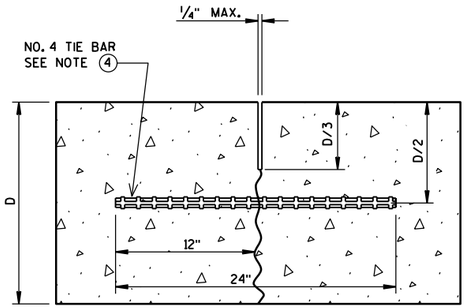
S.D.D. 13 C 18-2b

6

S.D.D. 13 C 18-2b



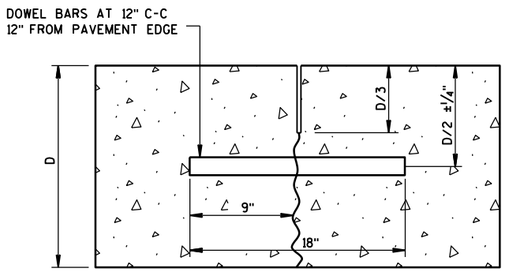
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

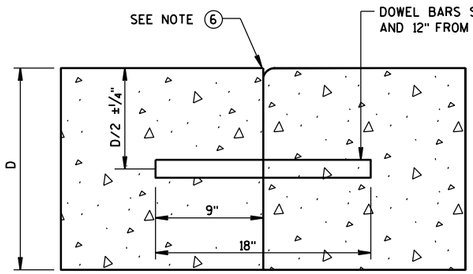
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.



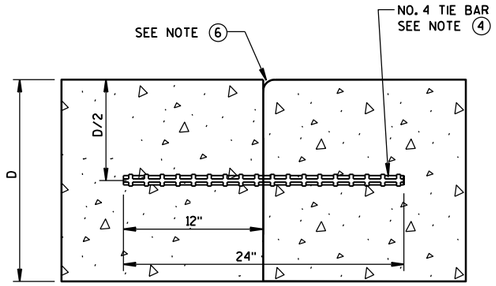
DOWELED-TRANSVERSE

CONTRACTION JOINTS

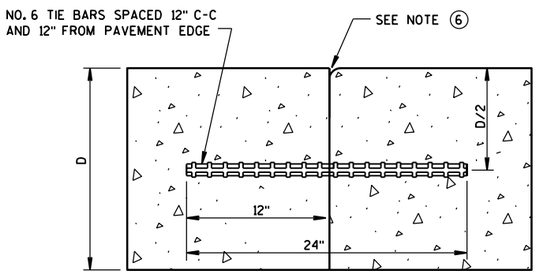
SEE NOTE (2)



DOWELED TRANSVERSE

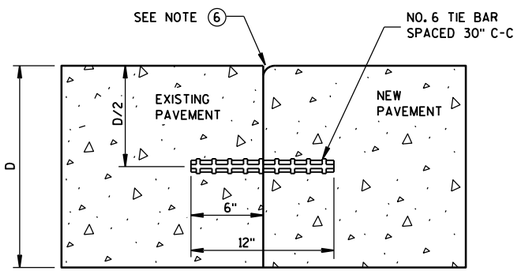


TIED LONGITUDINAL



TIED TRANSVERSE

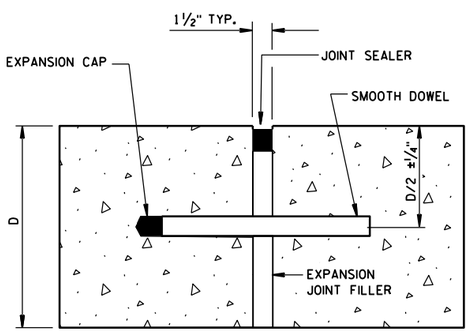
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

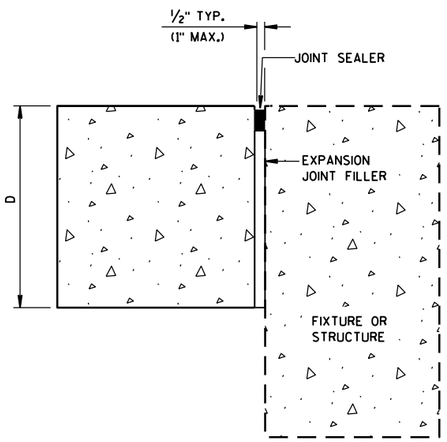
CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

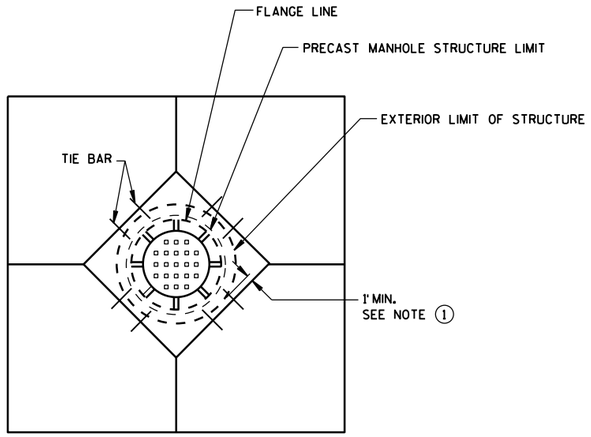
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

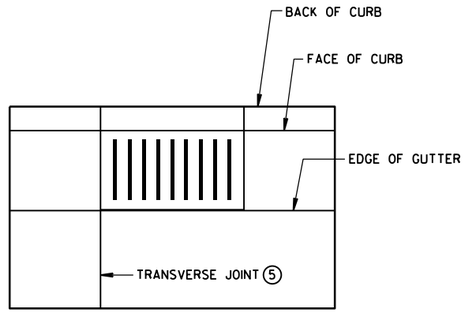
S.D.D. 13 C 18-2c

6

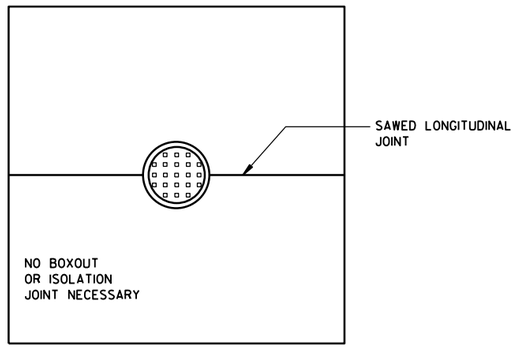
S.D.D. 13 C 18-2c



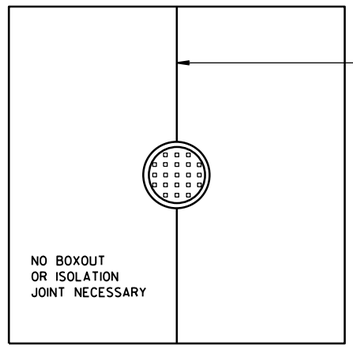
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



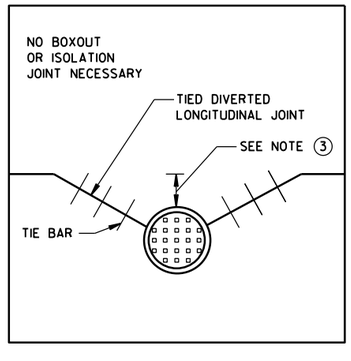
INLET WITH TRANSVERSE JOINT



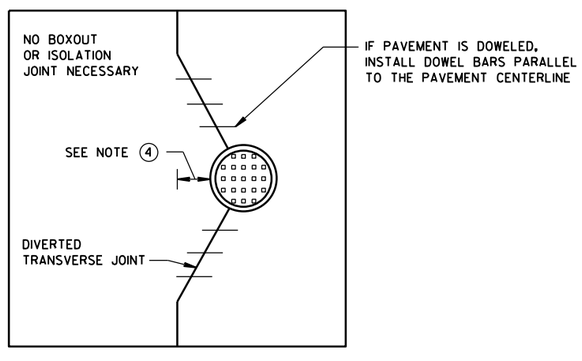
MANHOLE WITH LONGITUDINAL JOINT



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

5-3-2013 DATE

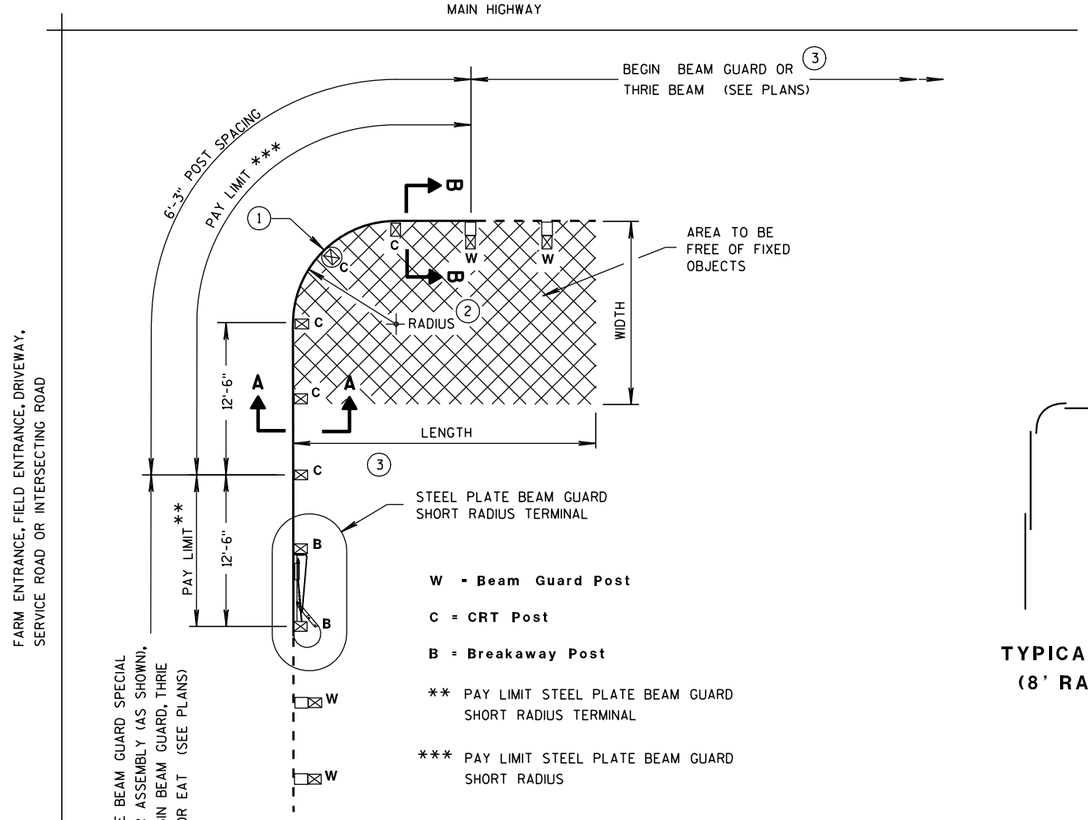
/S/ Deb Bischoff
PAVEMENT POLICY & DE

NEER

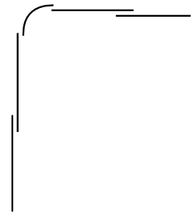
FHWA

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S.D.D. 13 C 18-2d



TYPICAL LAYOUT
(8' RADIUS SHOWN)



TYPICAL LAP SPLICES
(8' RADIUS SHOWN)

GENERAL NOTES

ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 AND THE STRUCTURAL TUBING SHALL CONFORM TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. PUNCHING, DRILLING, CUTTING, OR WELDING WILL NOT BE PERMITTED AFTER GALVANIZING. FURNISH AND INSTALL HARDWARE PER STANDARD SPECIFICATION 614.2. UNLESS NOTED OTHERWISE.

SHOP BEND CURVED RAIL SECTIONS.

SEE STANDARD DETAIL DRAWING 14 B 15 FOR OTHER DETAIL.

(1) ON THE 8 FOOT RADIUS INSTALLATION, DO NOT INSTALL BUTTON HEAD BOLT AT CENTER CRT POST.

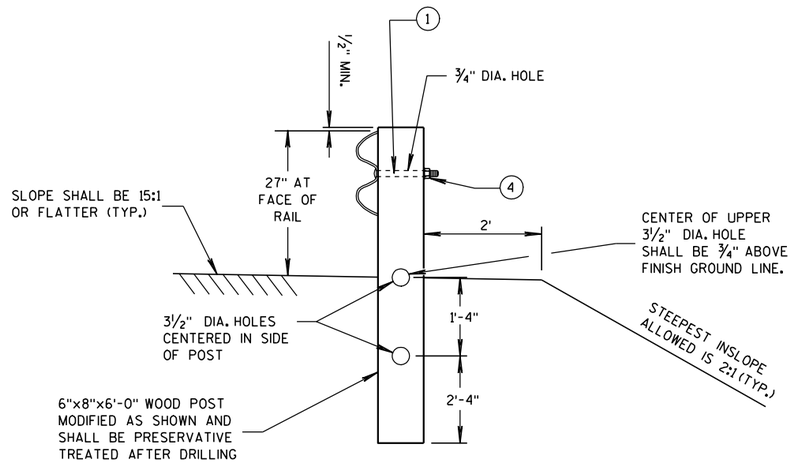
(2) RADIUS FROM 8' - 36'. SEE PLAN.

(3) HEIGHT TRANSITION MAY BE REQUIRED. SEE PLAN OR PROJECT ENGINEER.

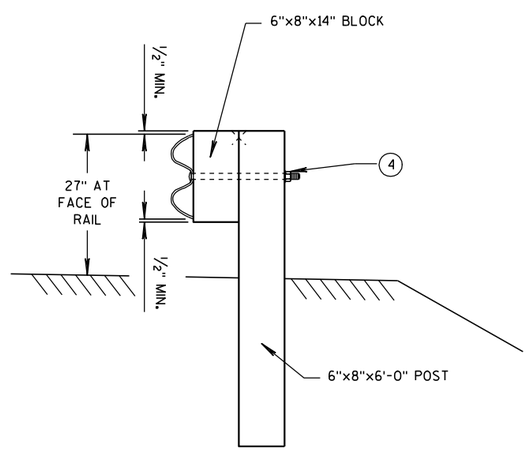
(4) 5/8" ø X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

RADIUS	NUMBER OF CRT POSTS	*NUMBER AND LENGTH OF CURVED RAILS	REQUIRED AREA FREE OF FIXED OBJECTS (LENGTH x WIDTH)
8'	5	1 at 12.5'	25' x 15'
16'	7	1 at 25'	30' x 15'
24'	9	1 at 25' and 1 at 12.5'	40' x 20'
32'	11	2 at 25'	50' x 20'

* THE NUMBER OF RAILS IS BASED ON A 90° INTERSECTION. SEE PLAN FOR NON 90° INSTALLATIONS.



SECTION A-A
(CRT POST)



SECTION B-B
(BEAM GUARD POST)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

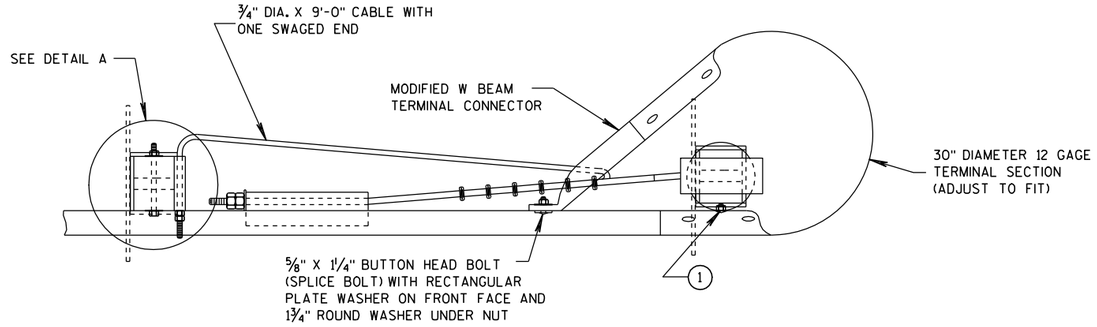
STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	

6

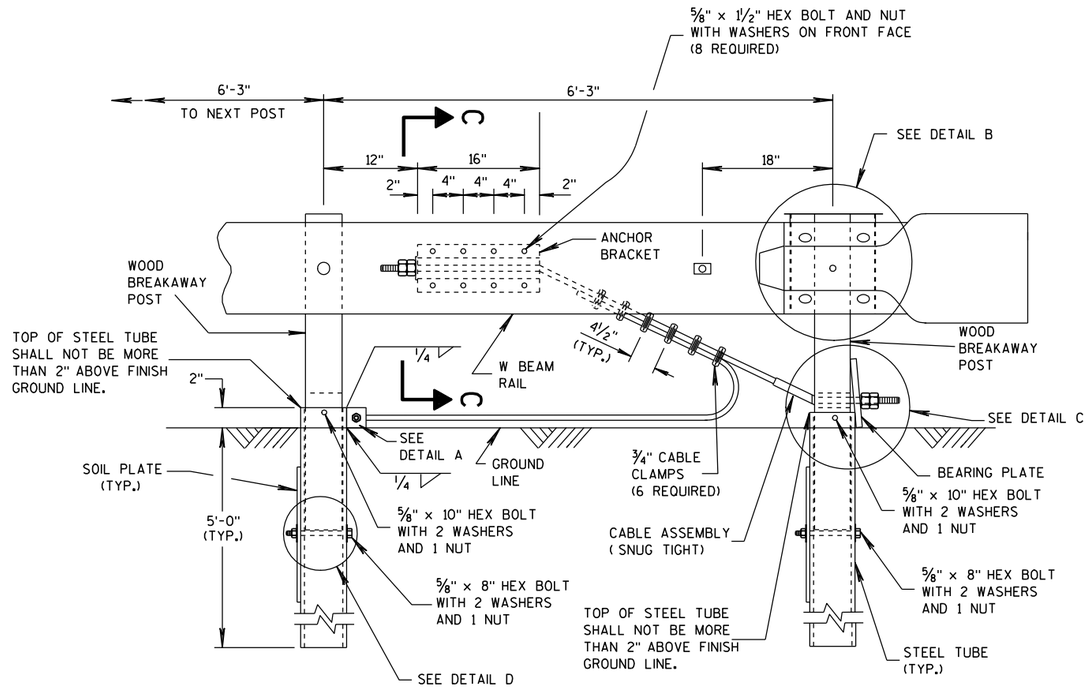
S.D.D. 14 B 27-1a

6

S.D.D. 14 B 27-1a



PLAN VIEW



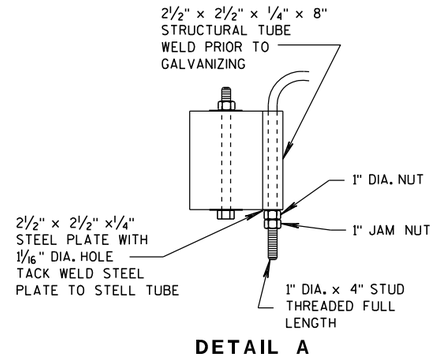
ELEVATION VIEW

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

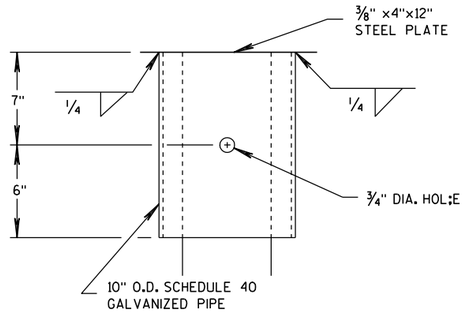
GENERAL NOTES

(1) ATTACH W BEAM RAIL TO THE STEEL PIPE WITH A ⅝" X 2" BUTTON HEAD BOLT WITH NO WASHER. CONNECTION TO THE POST IS NOT REQUIRED.

INSTALL GALVANIZED ¾" (6X19) PREFORMED WIRE OR INDEPENDENT WIRE ROPE CORE CONFORMING TO AASHTO M 30. MANUFACTURE WIRE ROPE OUT OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,800 PSI.



DETAIL A



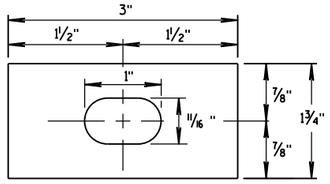
DETAIL B

(BEAM GUARD AND TERMINAL SECTION NOT SHOWN)

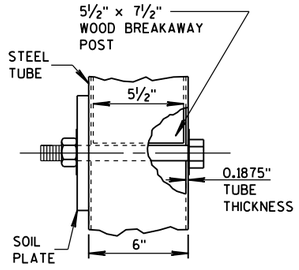
STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

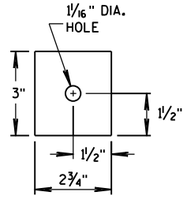
6
S.D.D. 14 B 27-1b



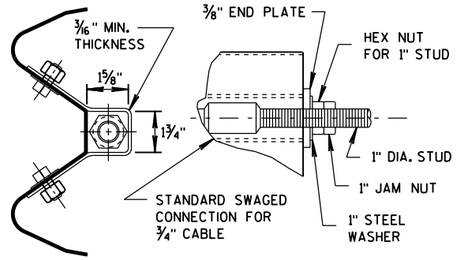
RECTANGULAR PLATE WASHER



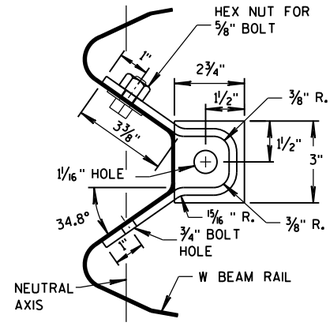
DETAIL D



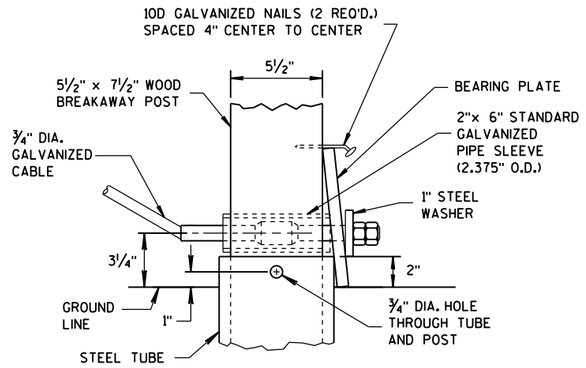
END PLATE



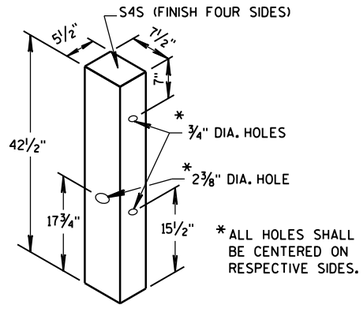
SECTION C-C
(END PLATE REMOVED)



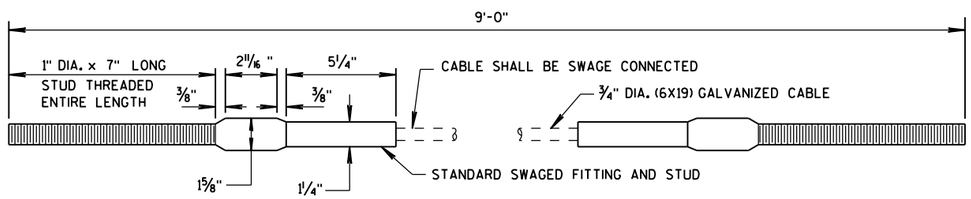
ANCHOR BRACKET



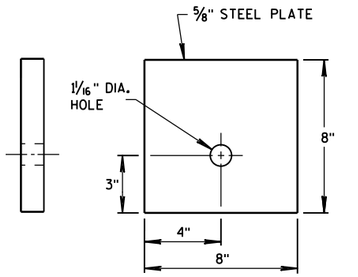
DETAIL C



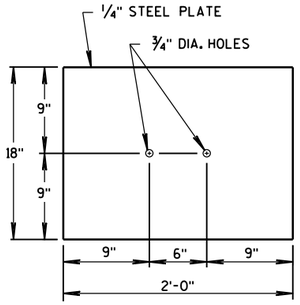
WOOD BREAKAWAY POST



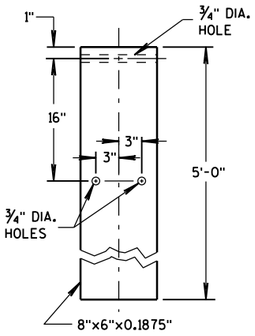
CABLE ASSEMBLY



BEARING PLATE



SOIL PLATE



STEEL TUBE

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

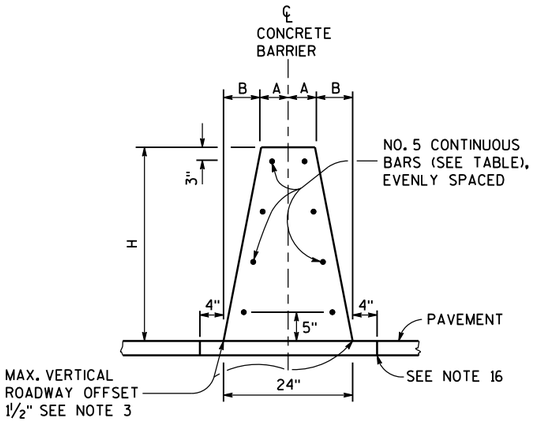
APPROVED
12/18/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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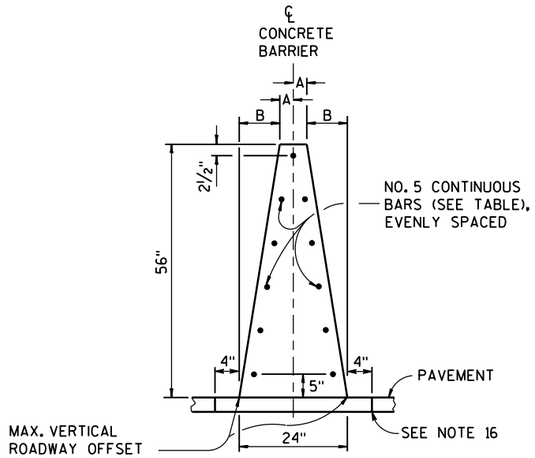
S.D.D. 14 B 27-1c

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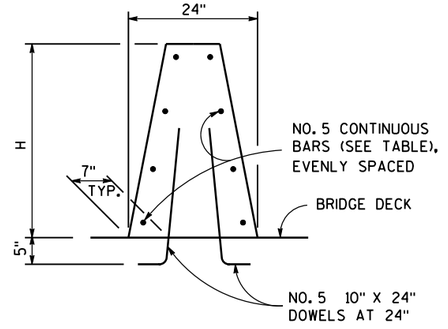
S.D.D. 14 B 27-1c



32-INCH, 36-INCH OR 42-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S32, TYPE S36, AND TYPE S42)



56-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S56)



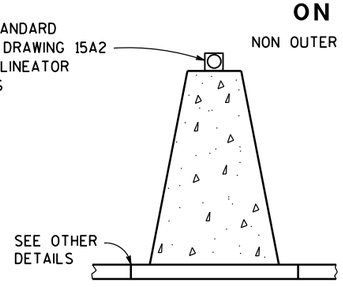
SINGLE SLOPE CONCRETE BARRIER ON BRIDGE

NON OUTER PARAPET APPLICATION

GENERAL NOTES

1. WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.
2. EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL DECK, PAVEMENT AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL SHALL BE THE SAME SIZE AS JOINT OR ½" MINIMUM.
3. WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1½", USE TYPE A
4. PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.
5. EXCEPT IN ANCHORS, VERTICAL REINFORCING STIRRUP NOT REQUIRED FOR ROADWAY OFFSETS LESS THAN 1'-0".
6. FOR TYPE S32, TYPE S36, TYPE S42, AND S56 MONOLITHIC FOOTING OR DOWELED FOOTING WITH 2-#8 x 8" @ 2'-0".
7. STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL 2 FEET. BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.
8. 4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.
9. WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.
10. USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.
11. 2" CLEAR COVER TYPICAL.
12. COLD-JOINTS MAY BE USED BETWEEN ANCHOR INSTALLATIONS. WHEN A COLD JOINT IS NEEDED, 3 FEET OF LAP OF LONGITUDINAL STEEL IS REQUIRED. LAPS TO BE FIRMLY TIED.
13. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 NO ADDITIONAL VERTICAL STEEL NEEDED. IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A REQUIRES VERTICAL STEEL. SEE OTHER DETAIL.
14. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 DEPTH OF FOOTING 10". IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A MATCH TOTAL HEIGHT OF SINGLE SLOPE BARRIER RETAINING WALL.
15. FOR ALL BARRIER TYPES SHOWN, ANCHOR IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN ON DRAWING OR DETAILS SHOWN ON S.D.D. 14B33. ANCHORS INCIDENTAL TO CBSS.
16. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCERET BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11



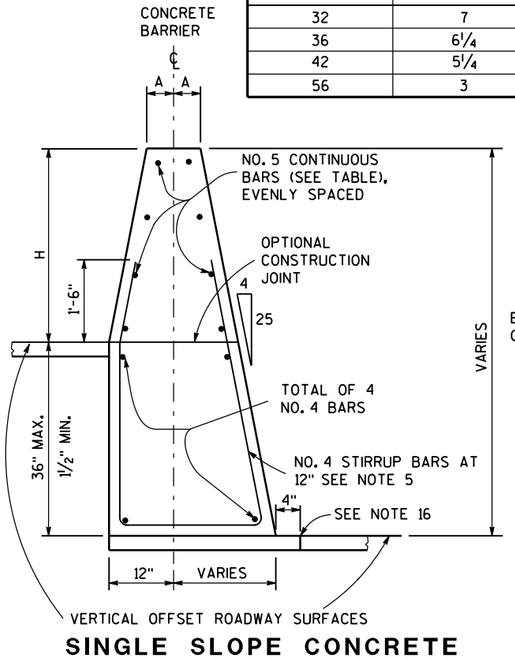
DELINEATION

DELINEATOR SPACING ON HORIZONTAL CURVES

RADIUS OF CURVE	APPROXIMATE SPACING ON CURVE
50 FEET	20 FEET
115 FEET	25 FEET
180 FEET	35 FEET
250 FEET	40 FEET
300 FEET	50 FEET
400 FEET	55 FEET
500 FEET	65 FEET
600 FEET	70 FEET
700 FEET	75 FEET
800 FEET	80 FEET
900 FEET	85 FEET
1000 FEET	90 FEET

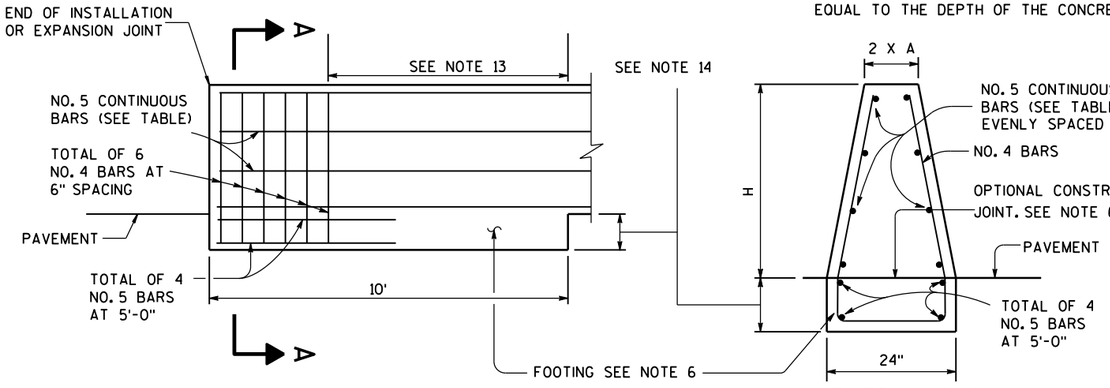
DELINEATOR SPACING ON RADIUS GREATER THAN 1000 FEET OR TANGENT SECTIONS

	LENGTH OF BARRIER	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2	



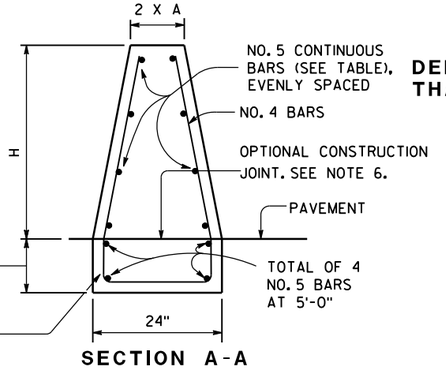
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)

(BETWEEN ADJACENT ROADWAYS)



END ANCHOR SINGLE SLOPE CONCRETE BARRIER

AT CONSTRUCTION JOINT

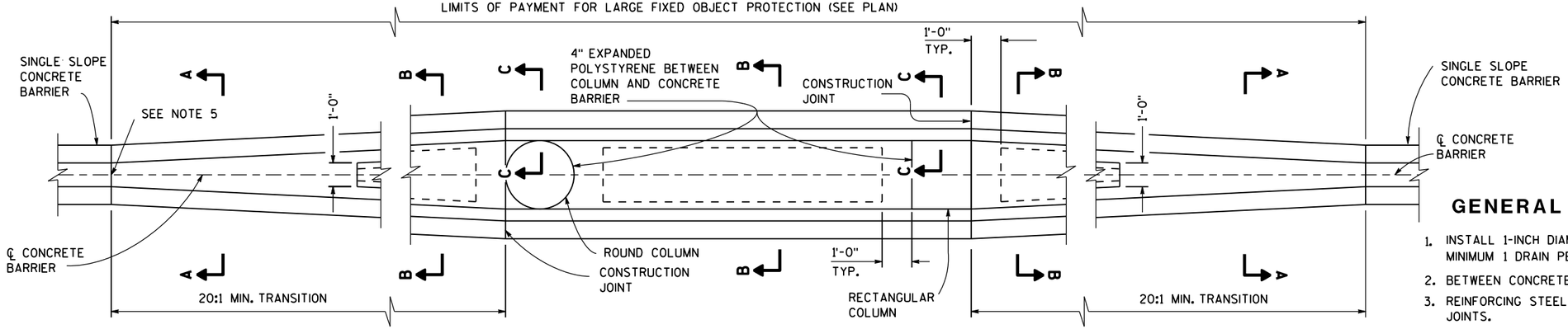


SECTION A-A

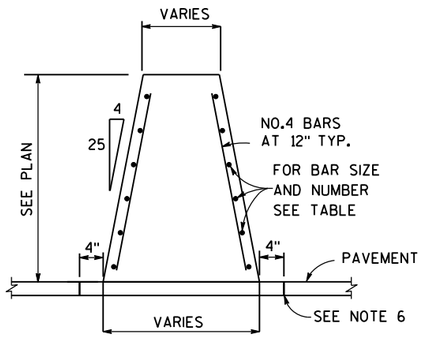
CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

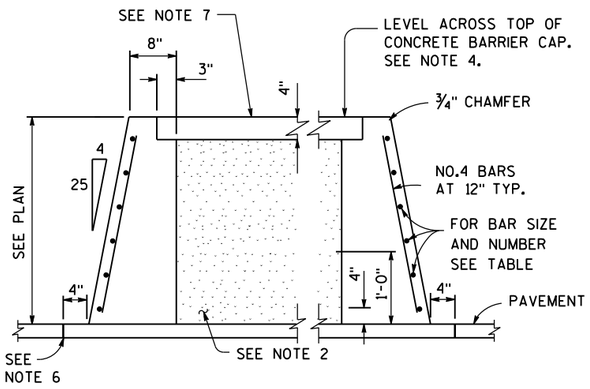
6
S.D.D. 14 B 32-2a



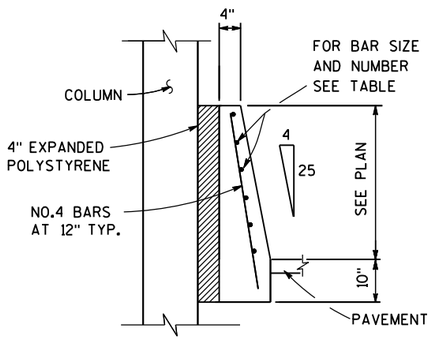
LARGE FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56



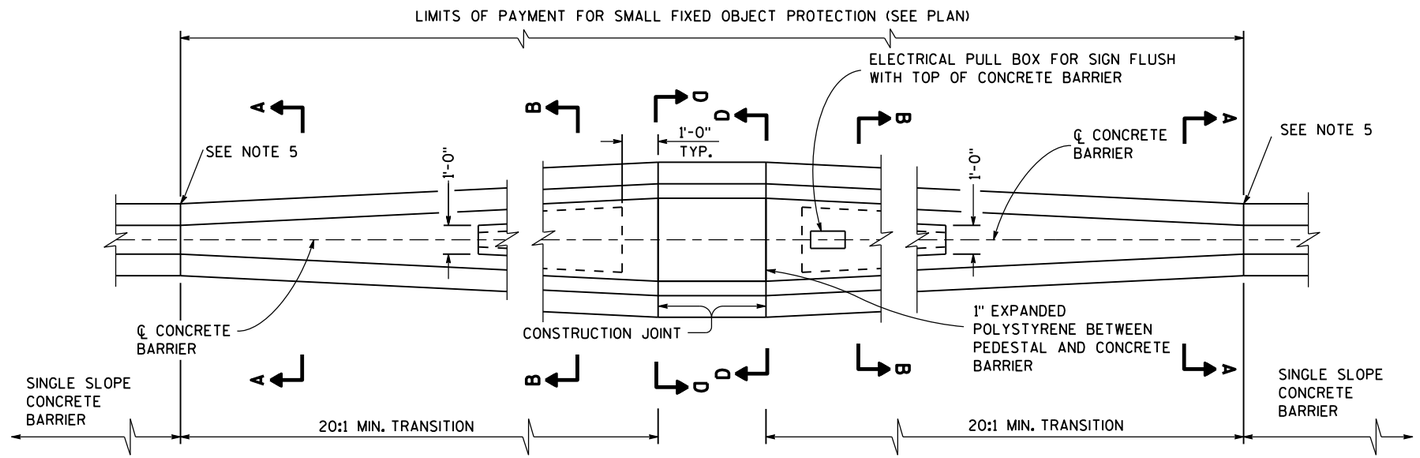
SECTION A-A



SECTION B-B



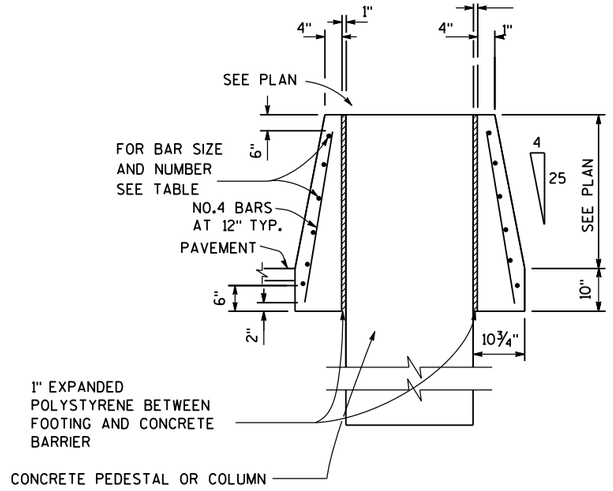
SECTION C-C



SMALL FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56

GENERAL NOTES

1. INSTALL 1-INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B-B. MINIMUM 1 DRAIN PER CAVITY.
2. BETWEEN CONCRETE BARRIER WALLS FILL WITH GRANULAR BACKFILL GRADE 2
3. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.
5. IF FIXED OBJECT PROTECTION IS INSTALLED FIRST, USE COLD JOINTS. IF CBSS PLACED FIRST, USE EXPANSION JOINT.
6. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.
7. USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.



SECTION D-D

BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	9

CONCRETE BARRIER SINGLE SLOPE (CBSS)

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GENERAL NOTES

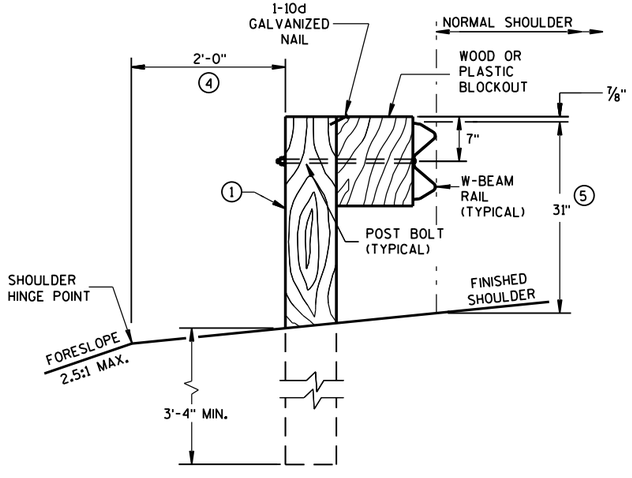
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

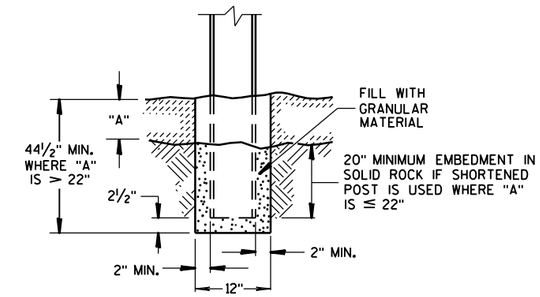
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".



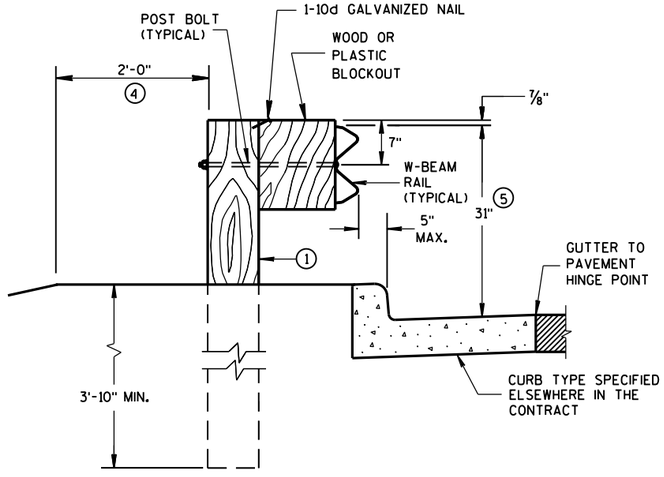
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



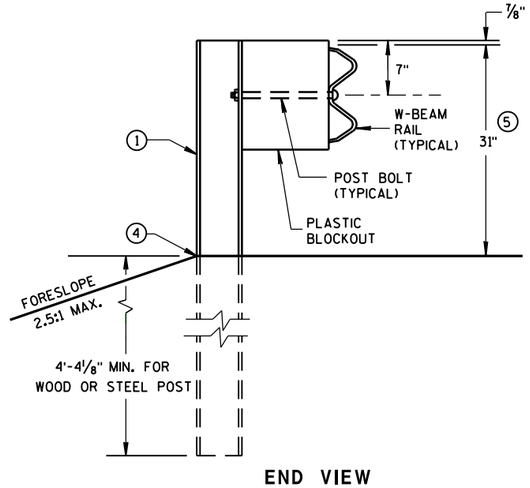
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



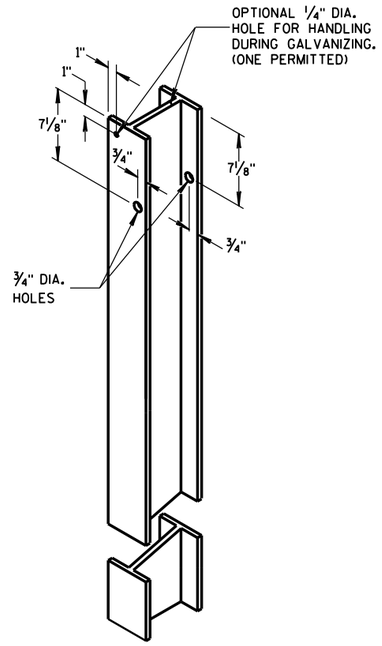
END VIEW

LOCATED ALONG A CURBED ROADWAY

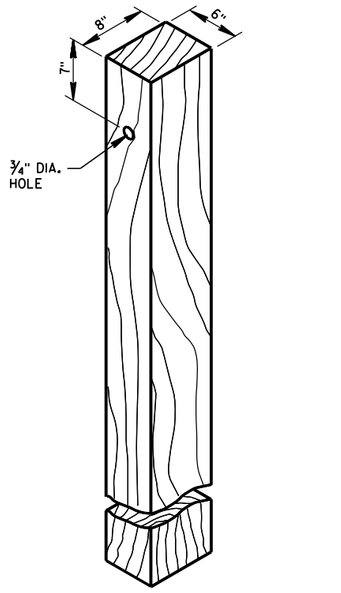


END VIEW

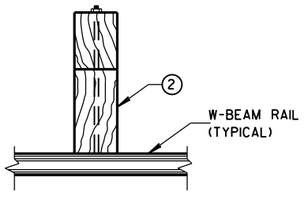
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



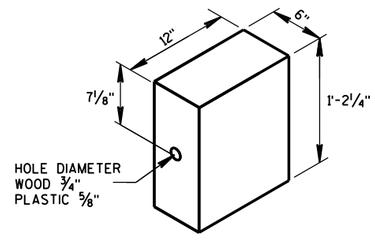
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



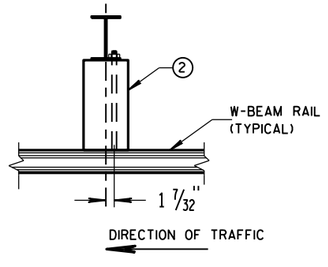
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

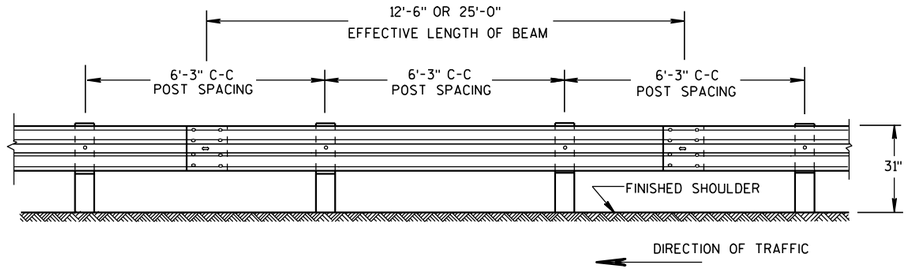


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

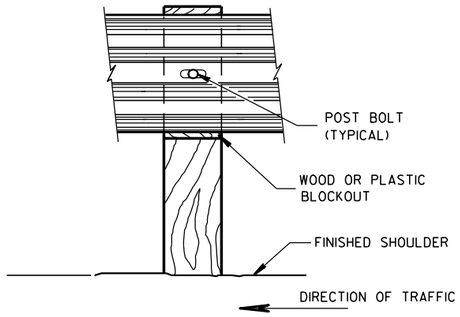
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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FRONT VIEW

POST SPACING STANDARD INSTALLATION



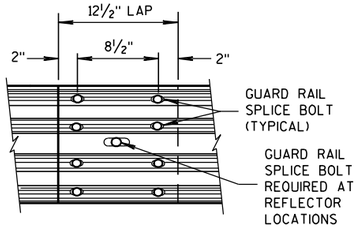
FRONT VIEW AT WOOD POST

GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

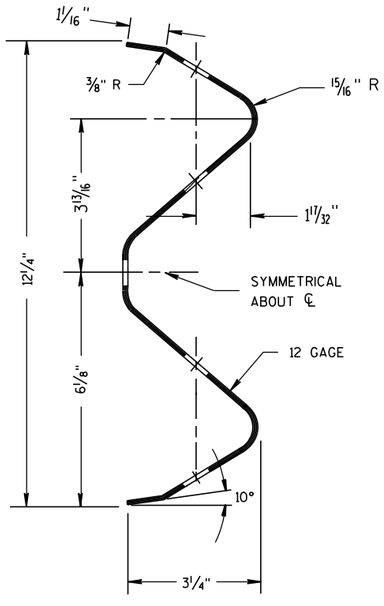
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

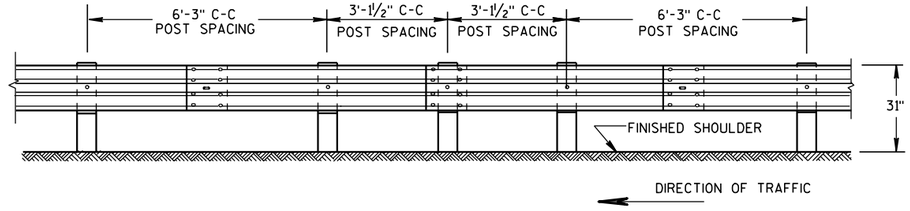


FRONT VIEW

MID-SPAN BEAM SPLICE

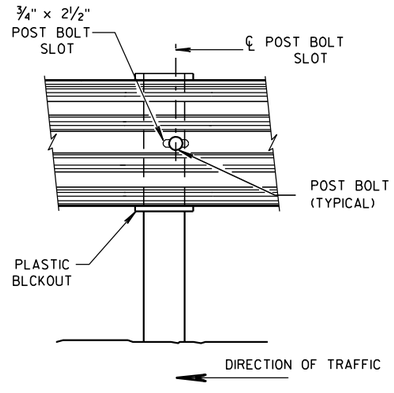


SECTION THRU W-BEAM RAIL



FRONT VIEW

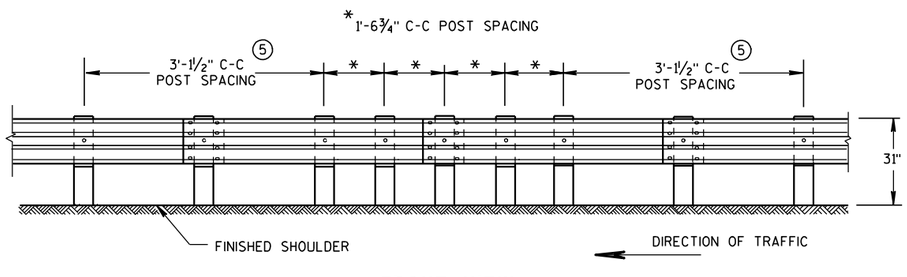
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



FRONT VIEW AT STEEL POST

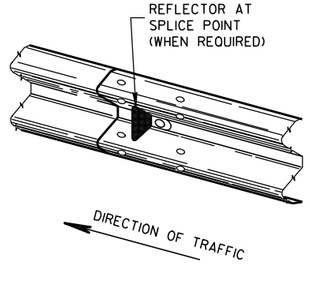
REFLECTOR SPACING (2)

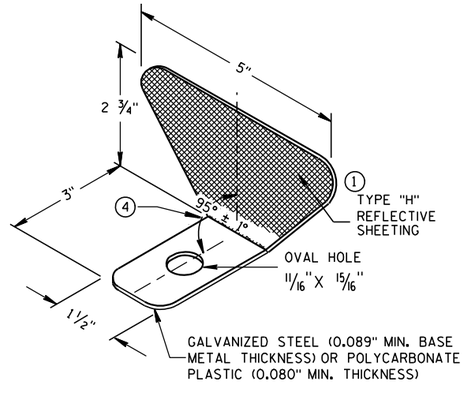
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 (3) 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 (4) 2	3



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (1)

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

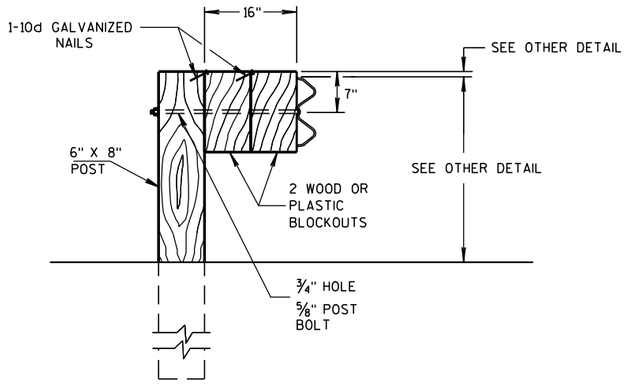
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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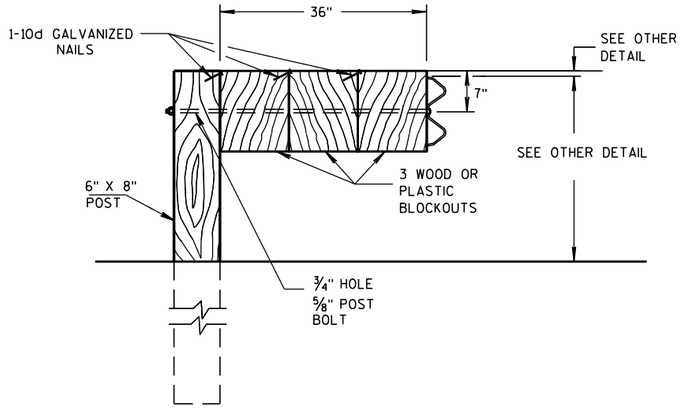
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S.D.D. 14 B 42-2b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

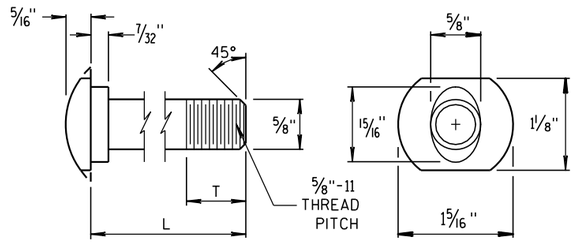


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

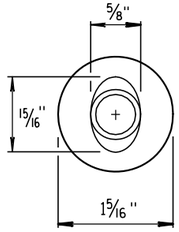
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

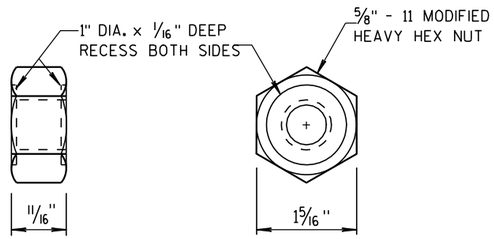


POST BOLT TABLE

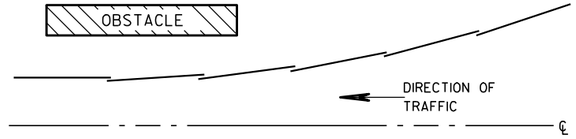
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

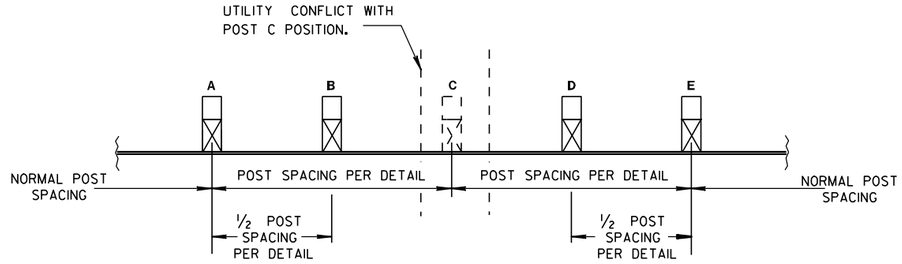


POST BOLT AND RECESS NUT

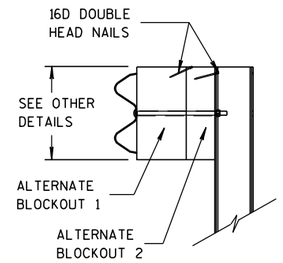


PLAN VIEW

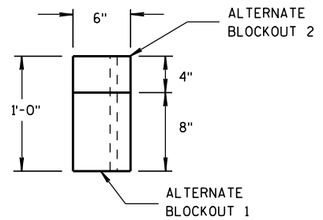
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

575

FHWA

ENT

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S.D.D. 14 B 42-2c

6

S.D.D. 14 B 42-2c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL),AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

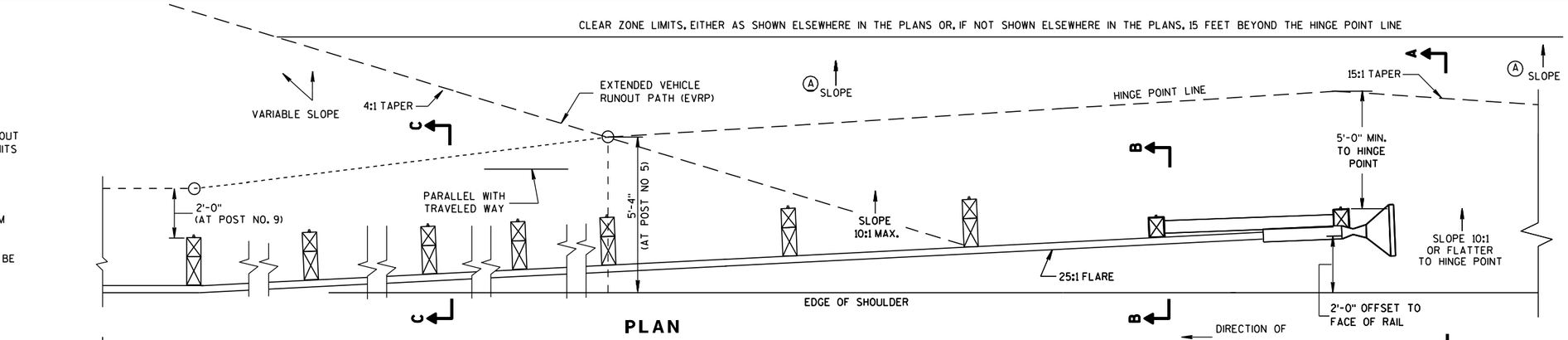
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

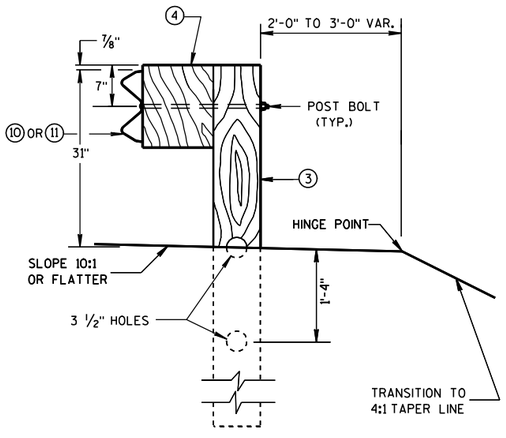
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

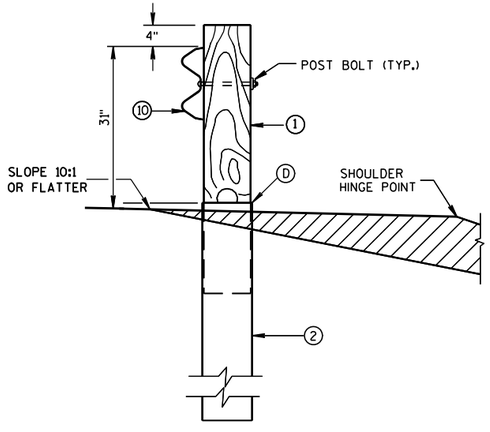
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± ¾")

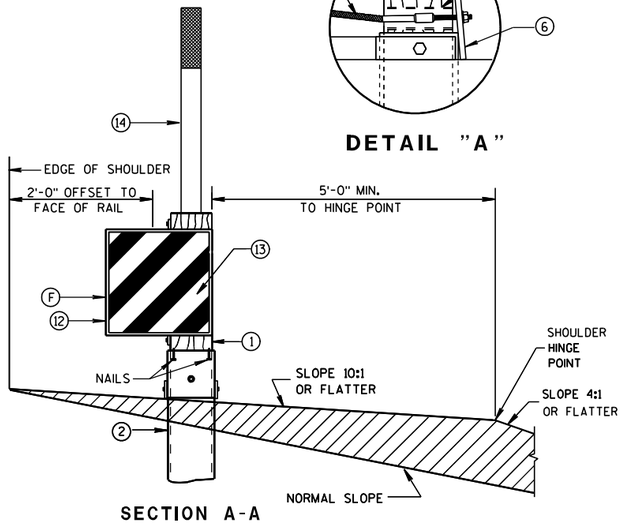




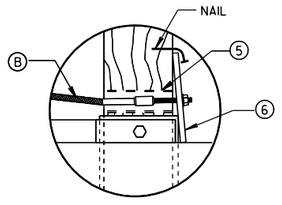
SECTION C-C
TYPICAL AT POST NOS. 3-9



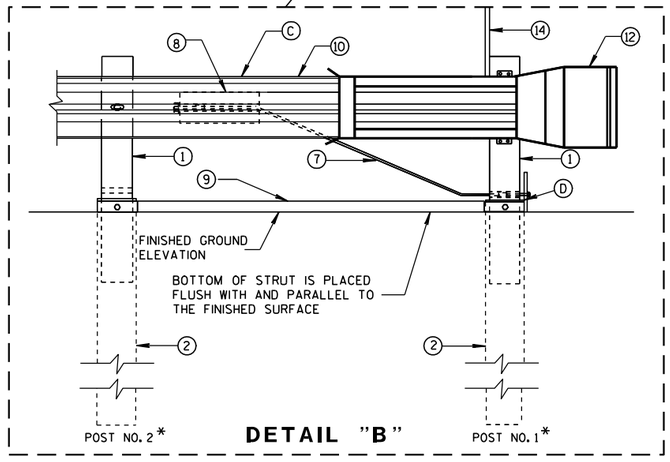
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



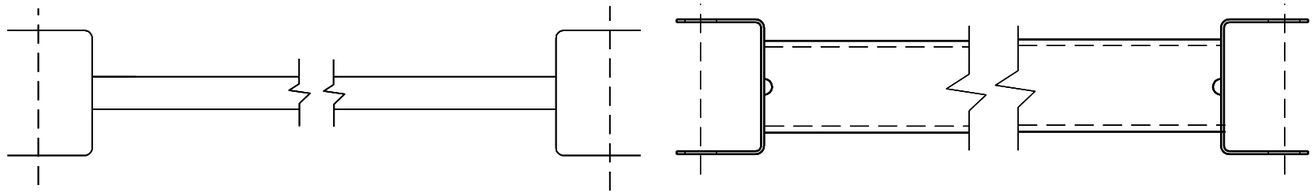
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
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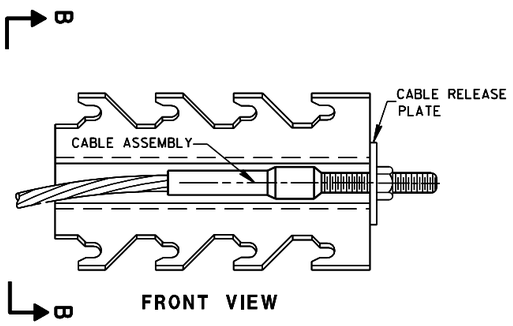


(9) (H)

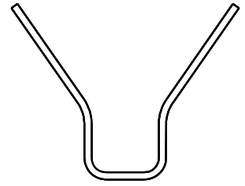
GENERIC GROUND STRUT

BILL OF MATERIALS

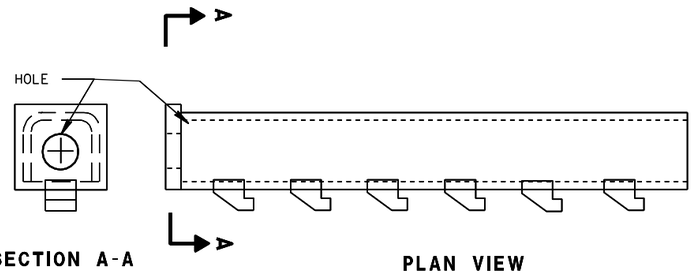
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



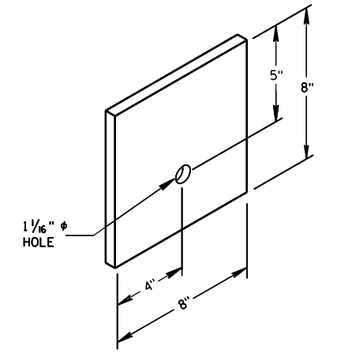
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



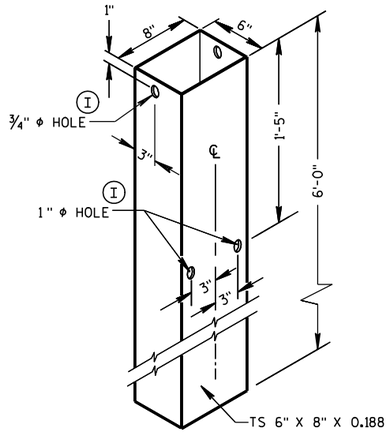
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

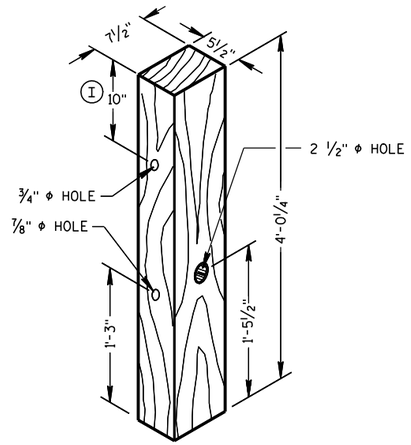
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1b

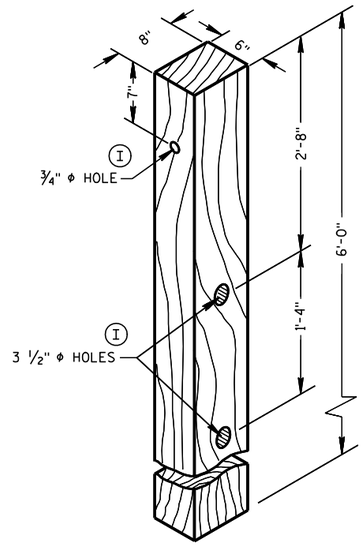


FOUNDATION TUBE (2)



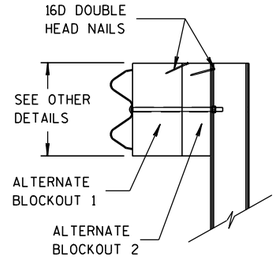
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

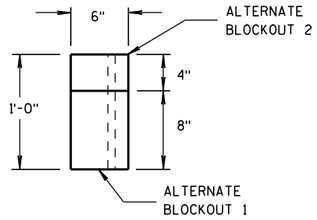


POSTS NUMBER 3-9

WOOD CRT POST (3)

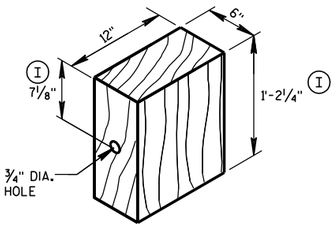


SIDE VIEW



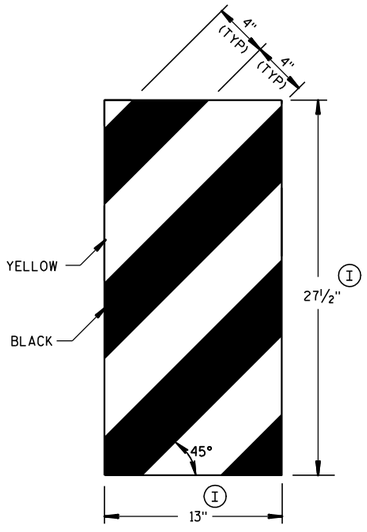
TOP VIEW

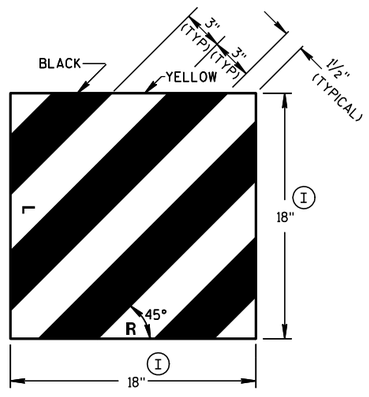
ALTERNATE WOOD BLOCKOUT DETAIL



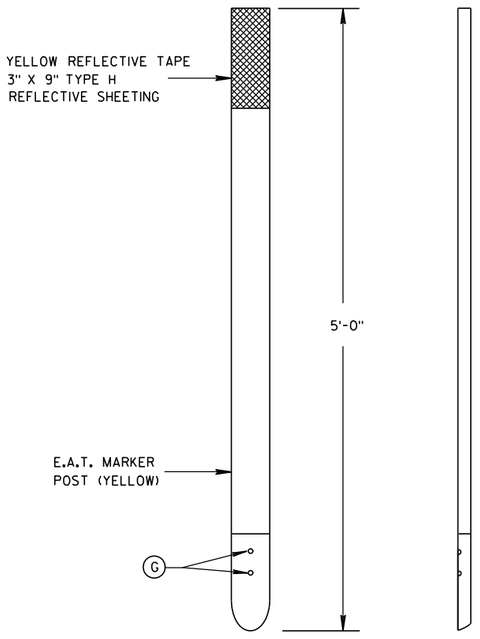
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





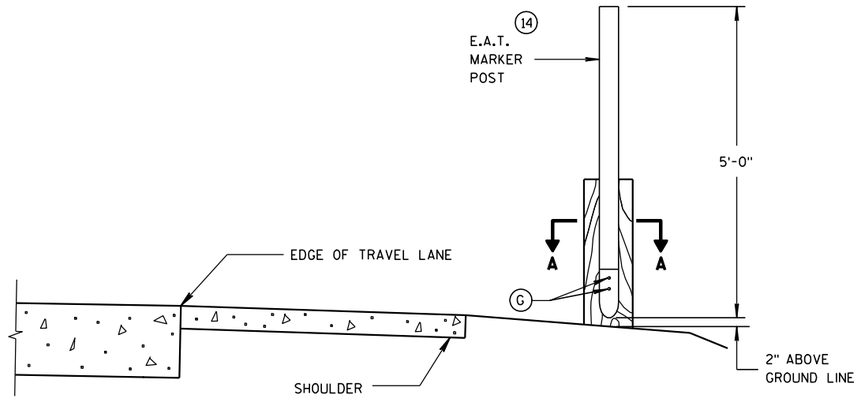
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

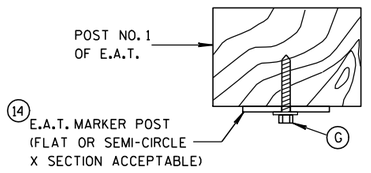
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2011
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS 578 [illegible]
ENGINEER
FHWA

6

S.D.D. 14 B 44-1c

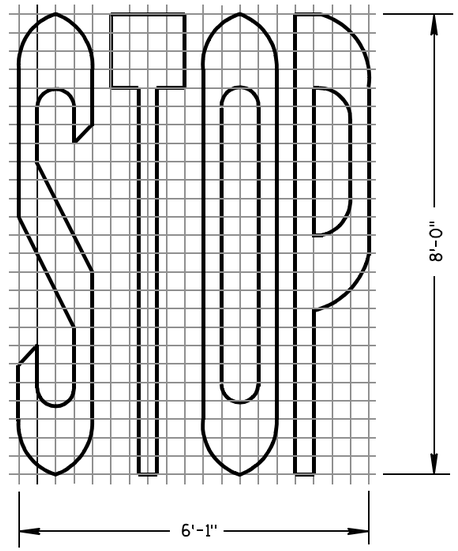
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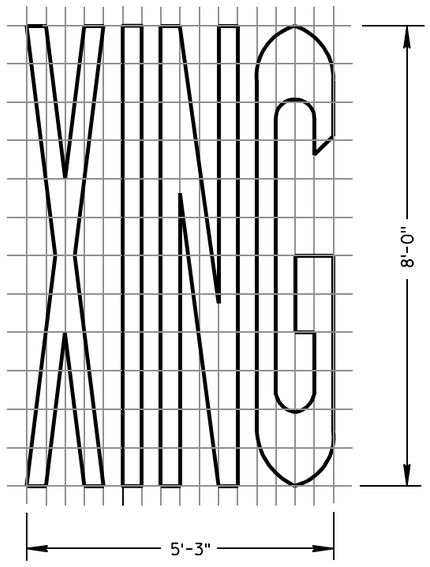
S.D.D. 14 B 44-1c

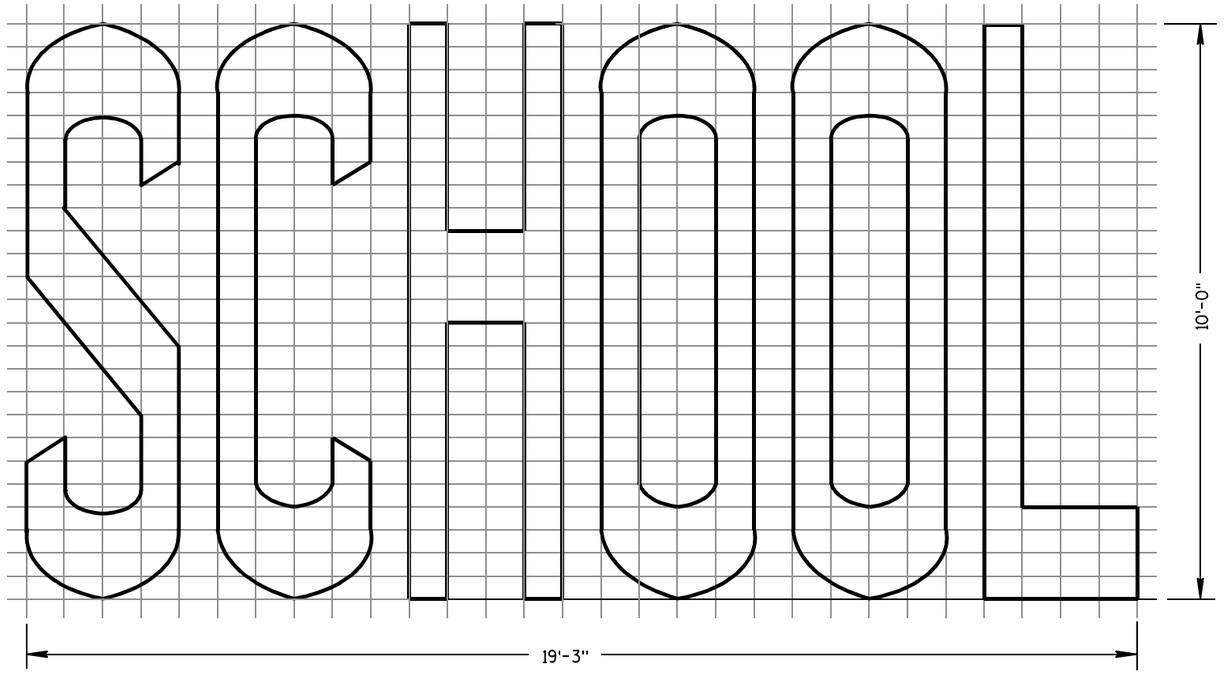
GENERAL NOTES

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.

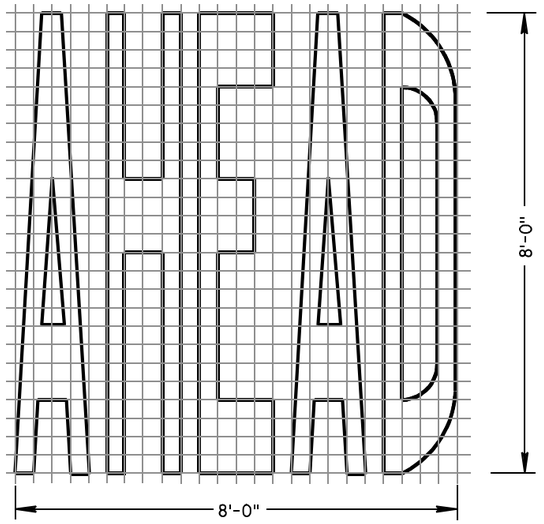
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

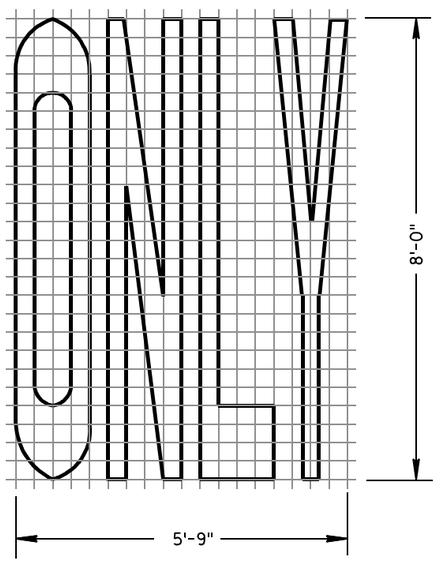


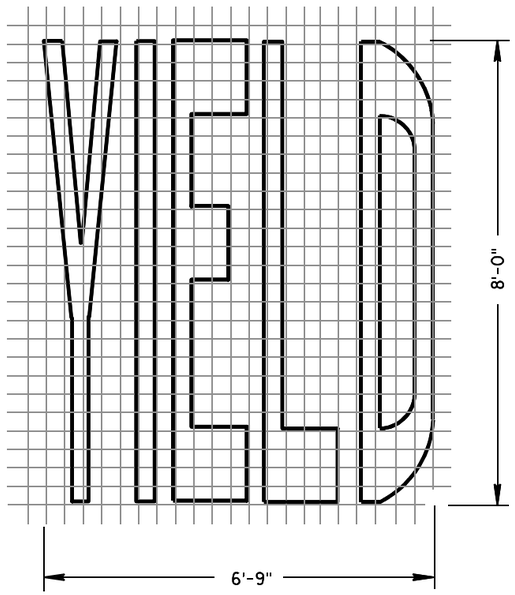


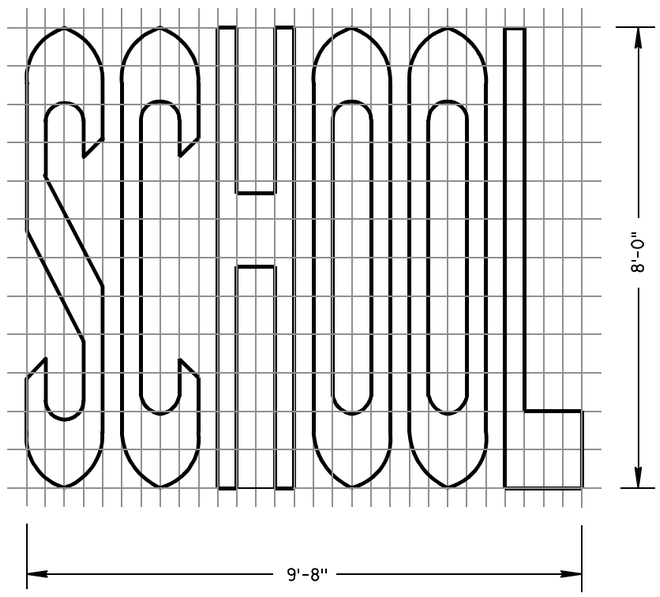


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE

/S/ Thomas N. Nothohm
STATE TRAFFIC ENGINEER

579

IGN

FHWA

6

S.D.D. 15 C 7-12b

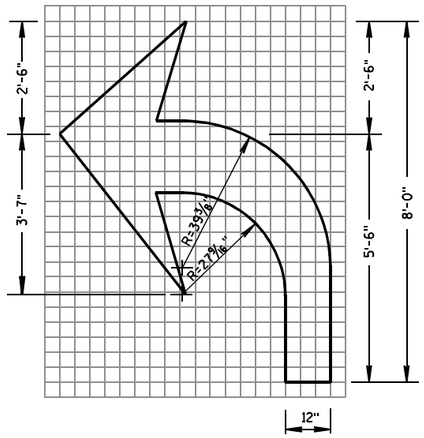
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S.D.D. 15 C 7-12b

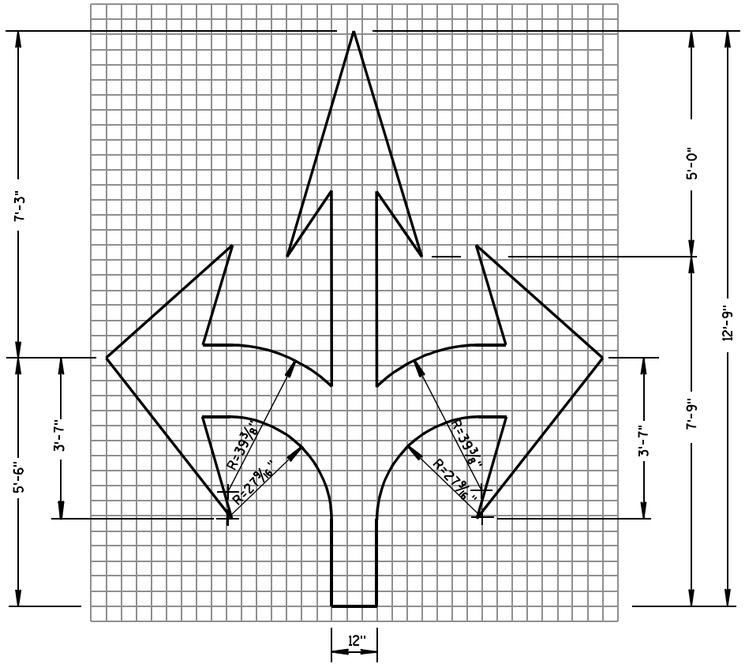
GENERAL NOTES

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.

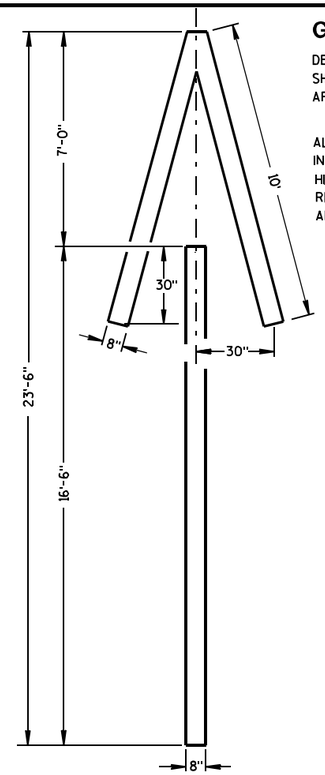
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



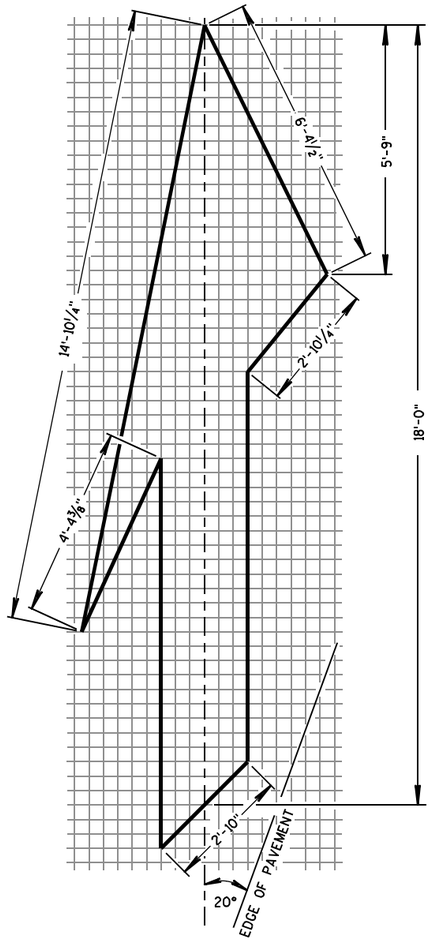
TYPE 2



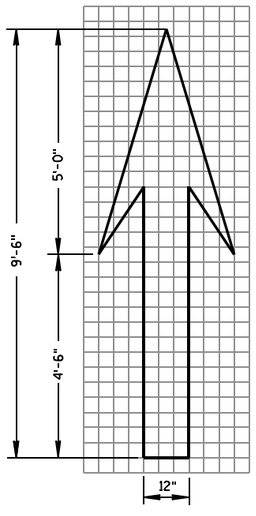
TYPE 6



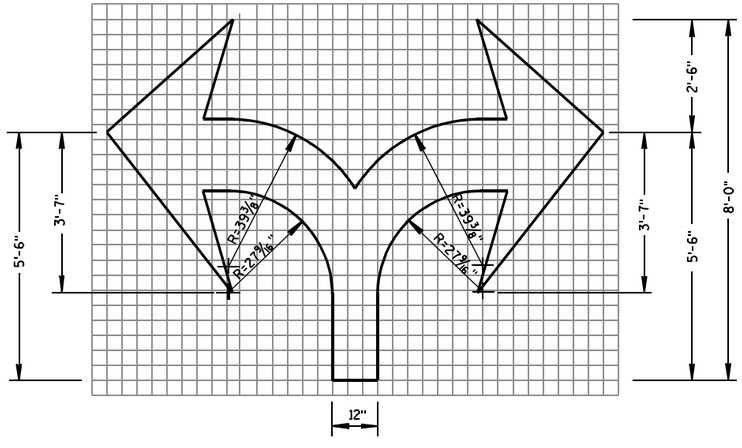
TYPE 4



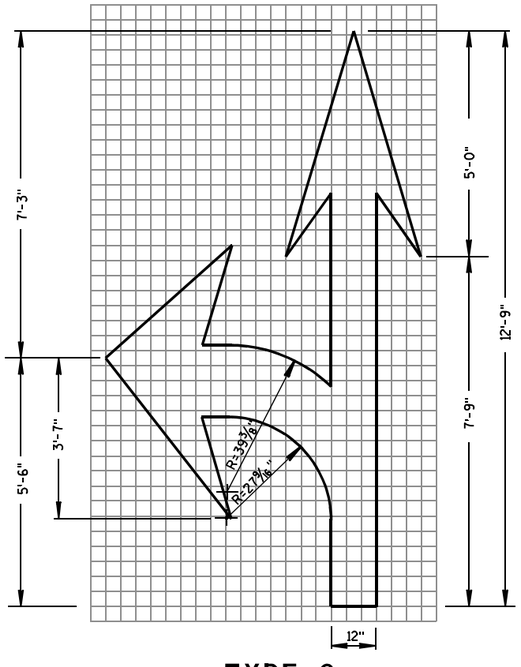
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurm — STATE TRAFFIC ENGINEER

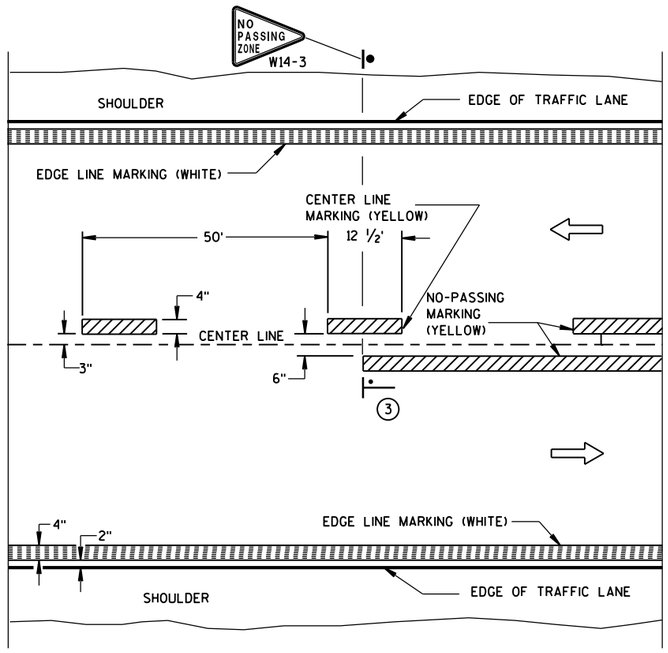
FHWA

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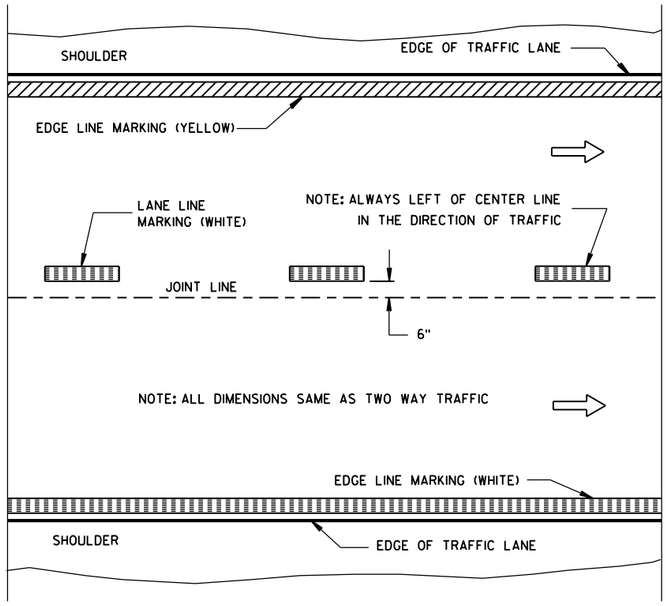
S.D.D. 15 C 7-12c

6

S.D.D. 15 C 7-12c

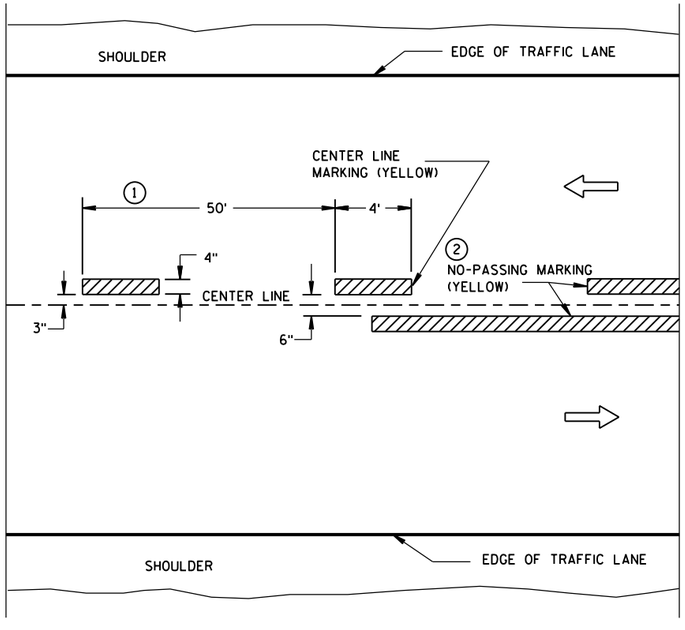


TWO WAY TRAFFIC

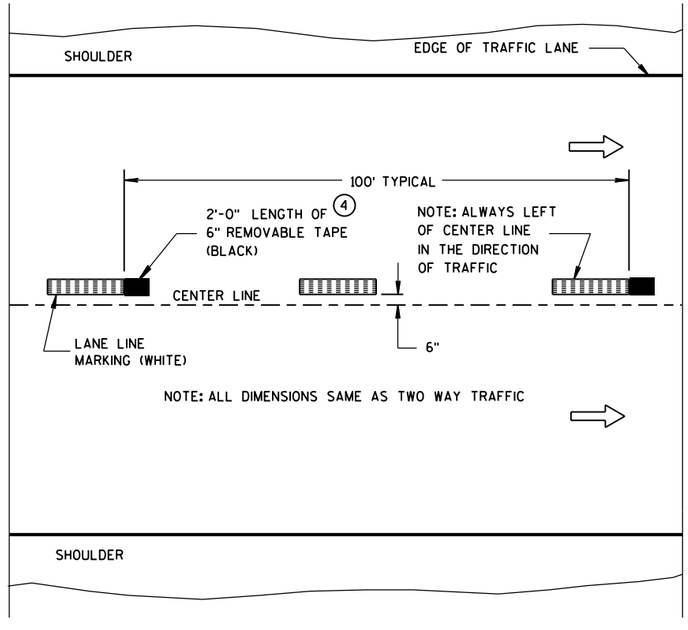


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

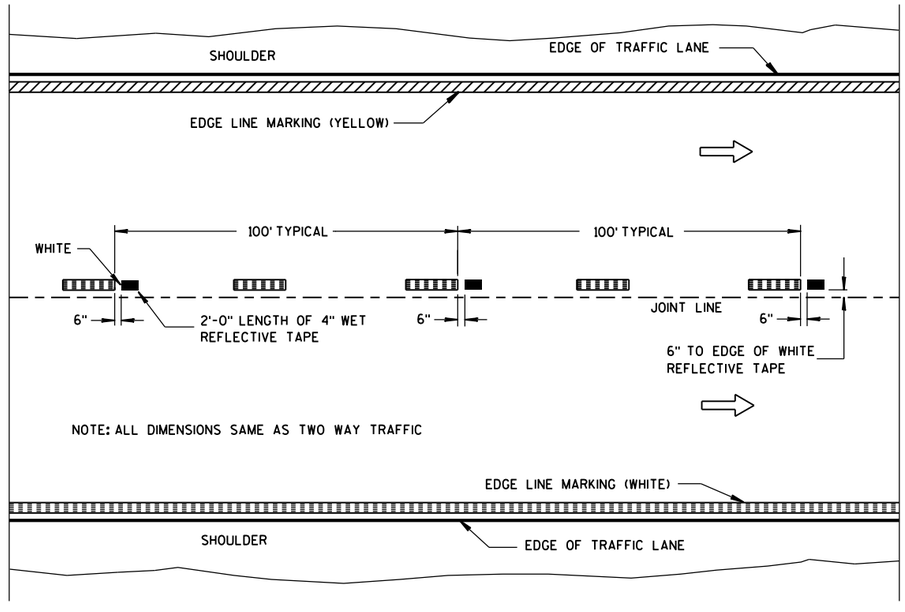
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

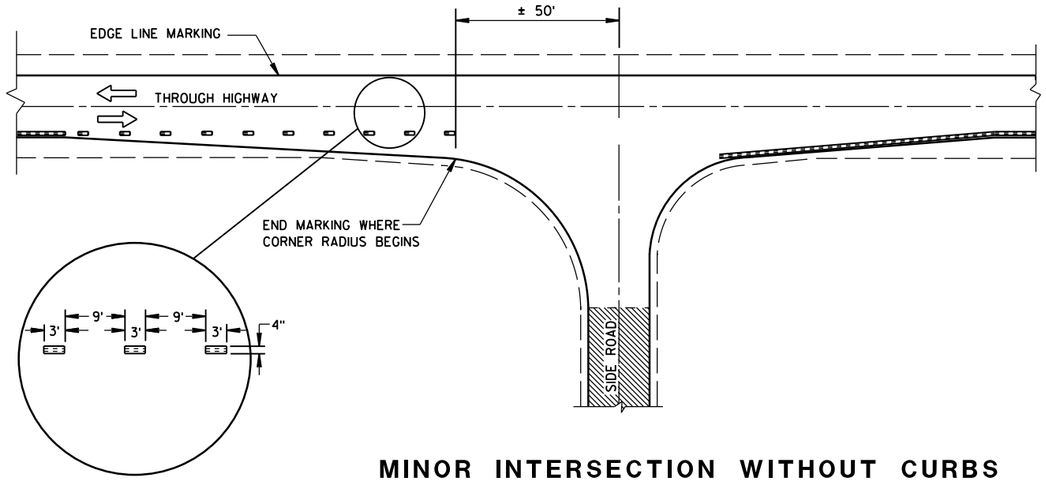
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

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

6

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



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

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

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

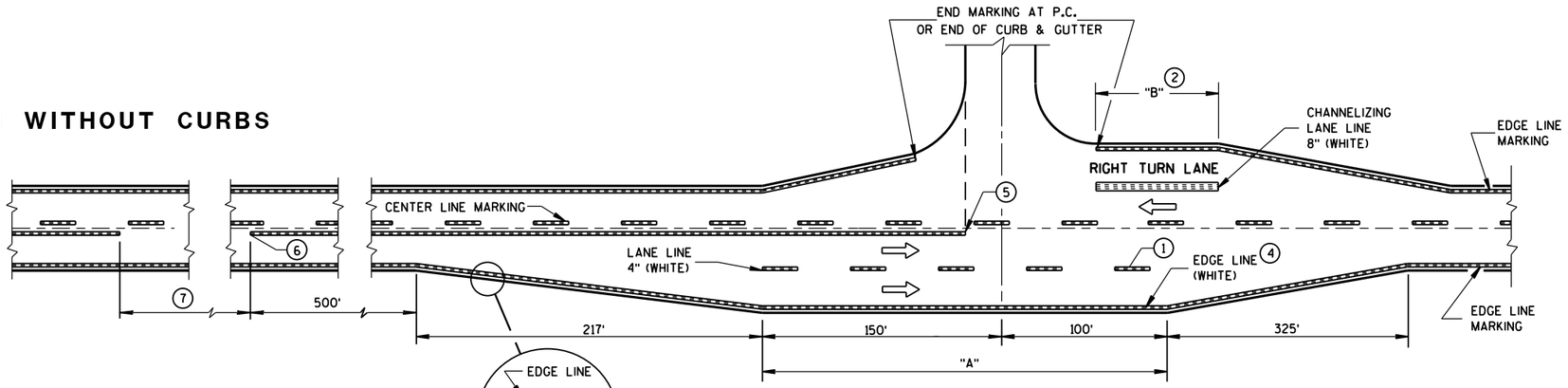
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

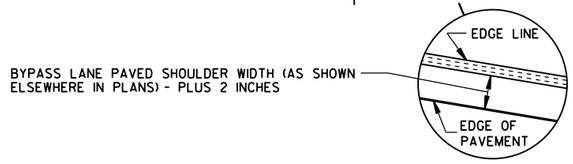
(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

(7)

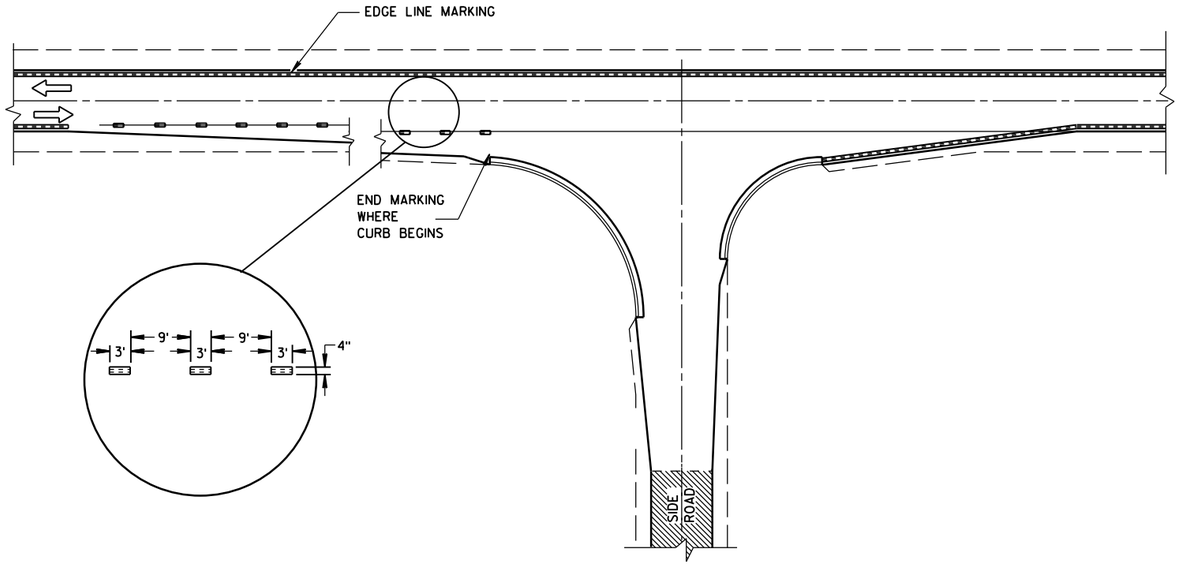
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792





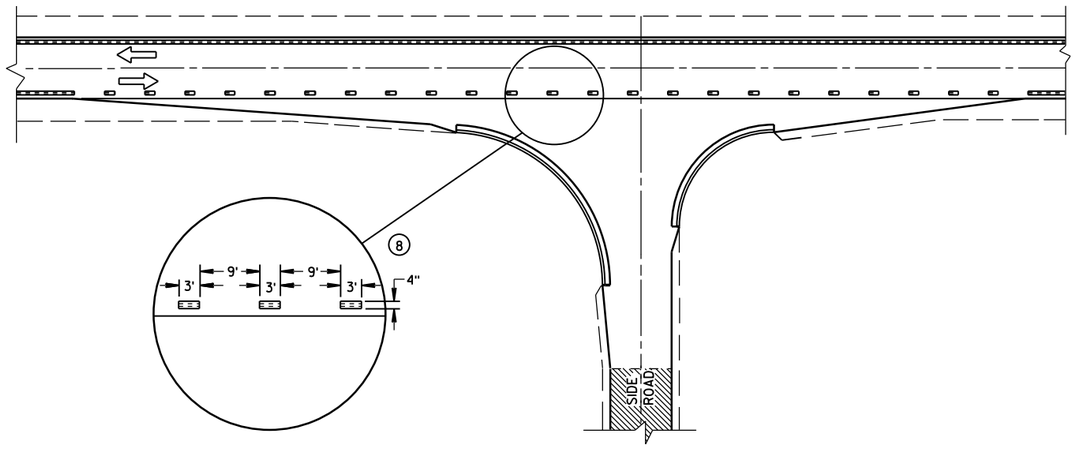
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

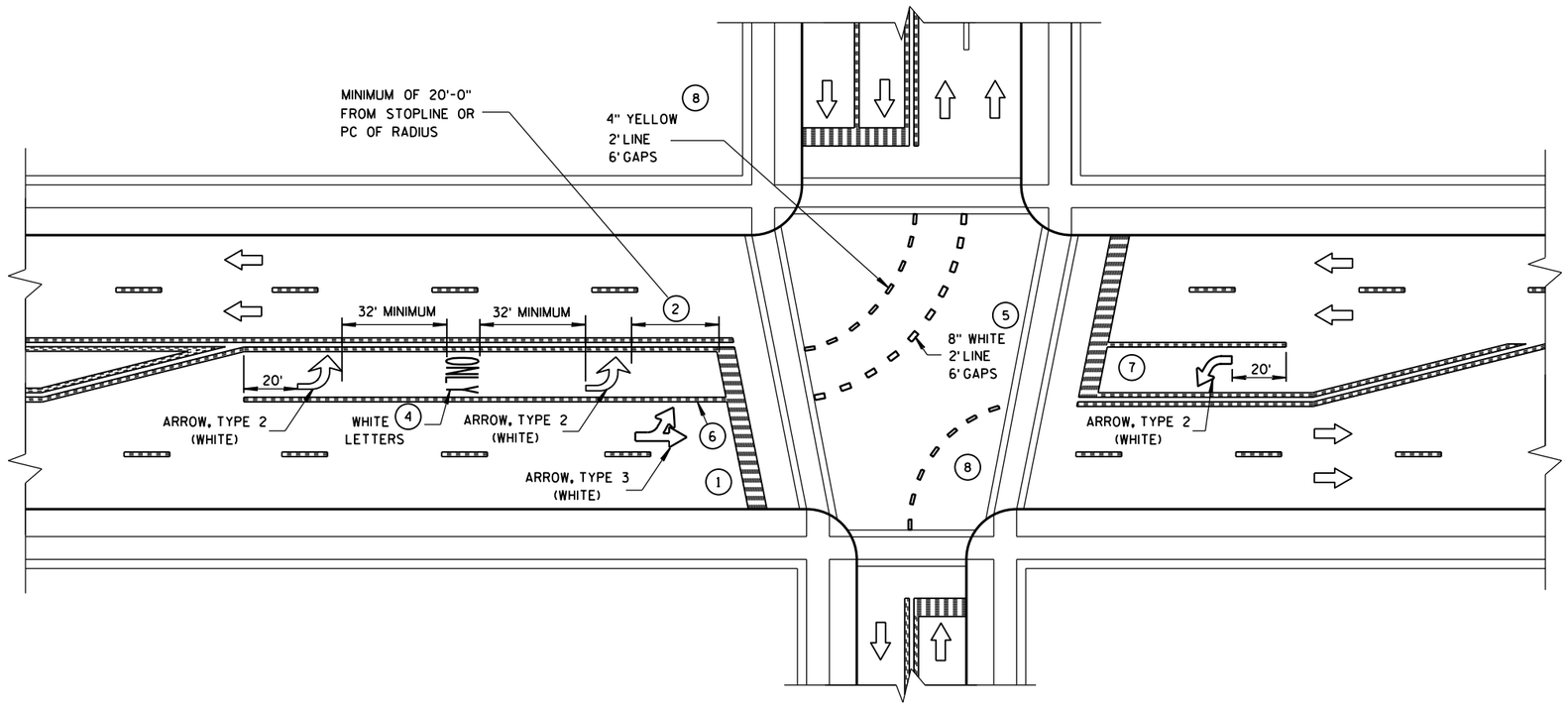
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

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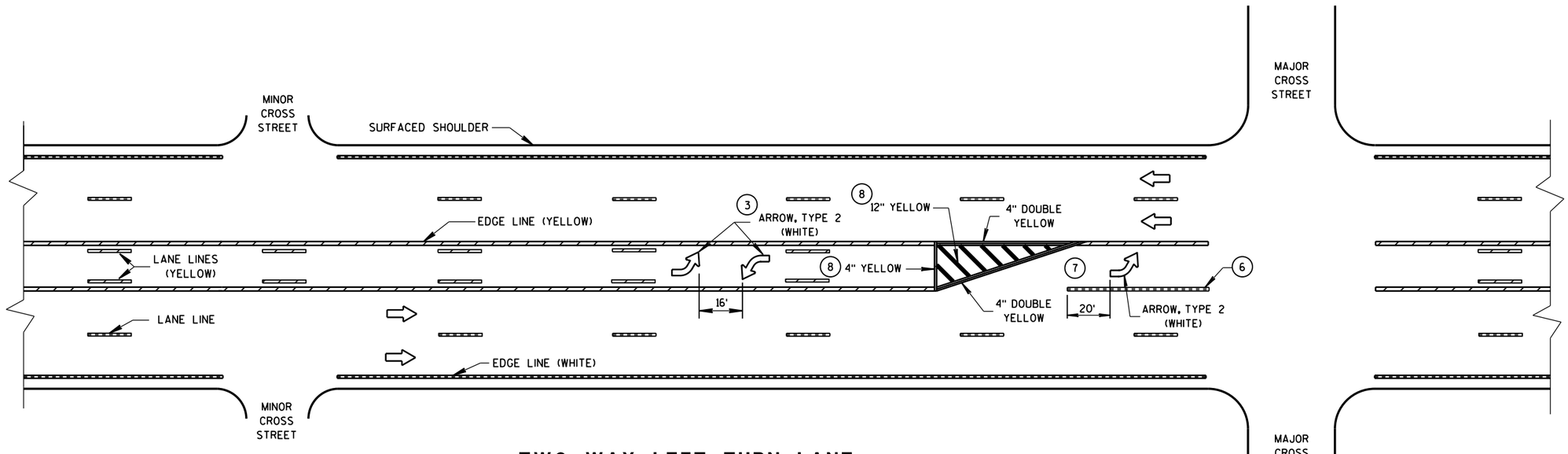
S.D.D. 15 C 8-16b



GENERAL NOTES

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

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

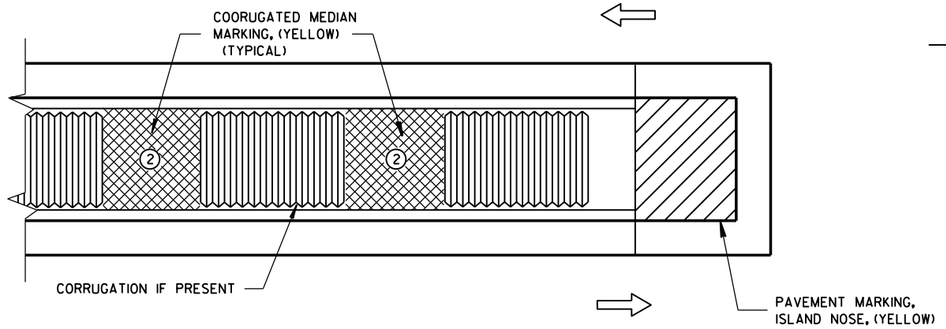
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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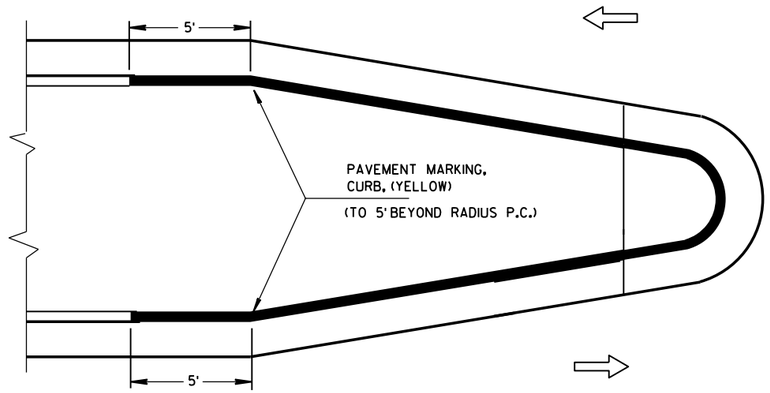
S.D.D. 15 C 8-16e

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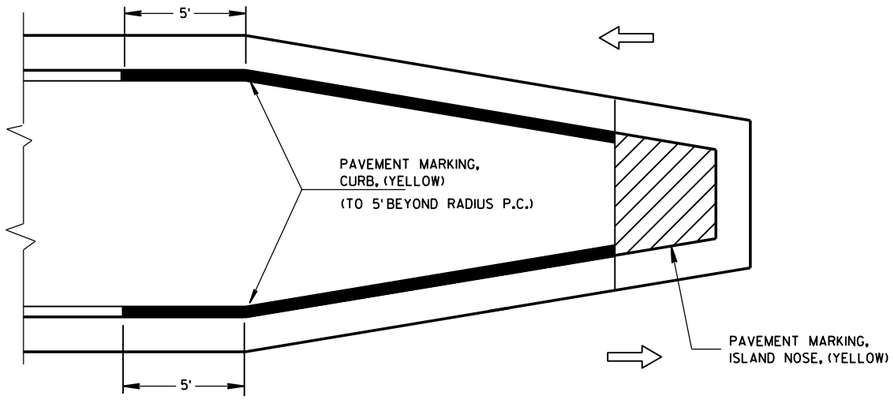
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MEDIAN ISLAND WITH SQUARE BLUNT NOSE

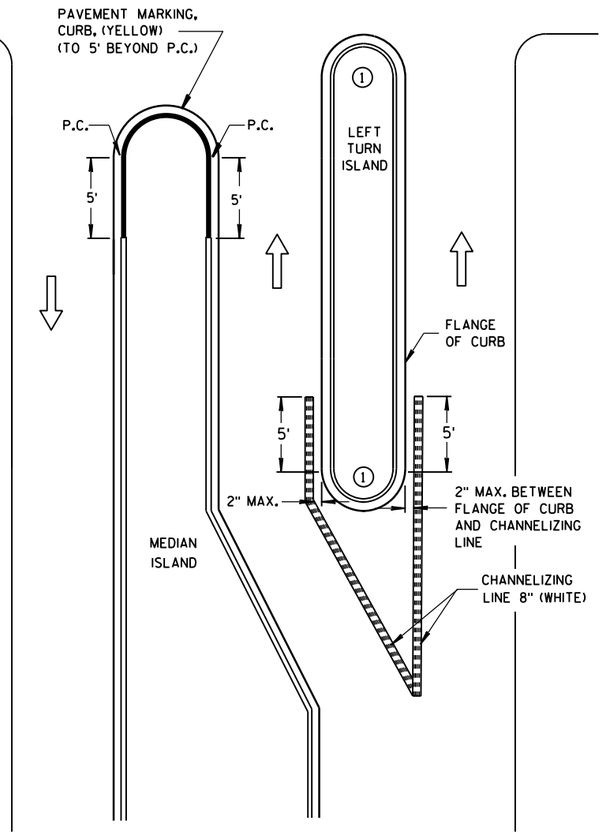


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

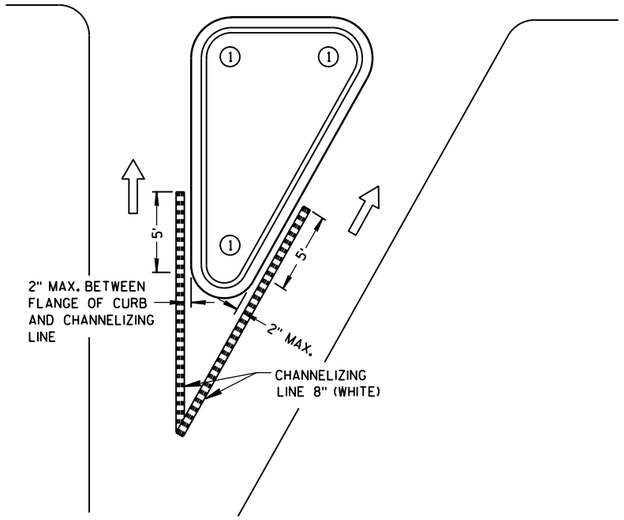


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

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

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



RIGHT TURN ISLAND

LEGEND

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

PAVEMENT MARKING
(ISLANDS)

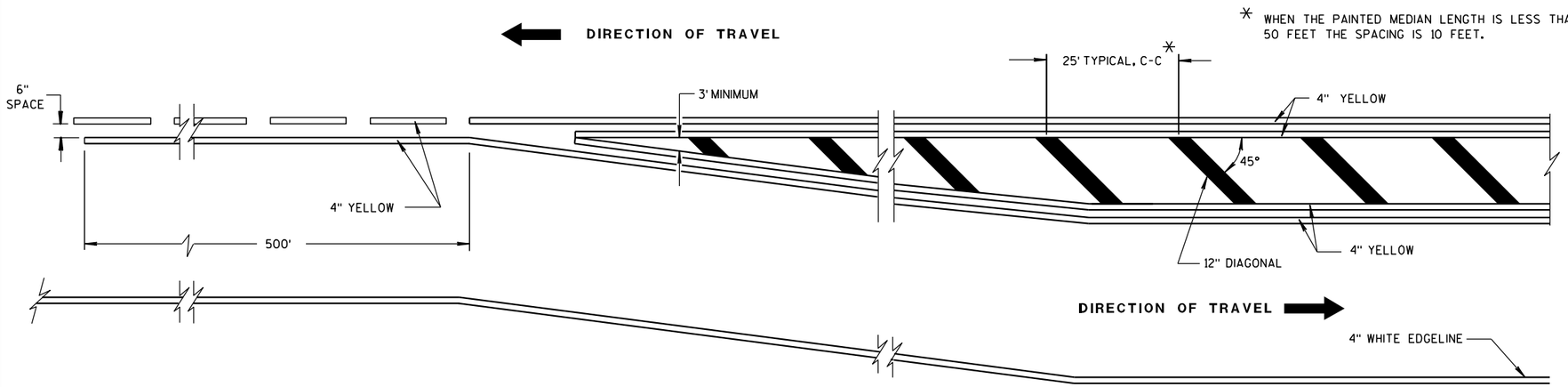
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

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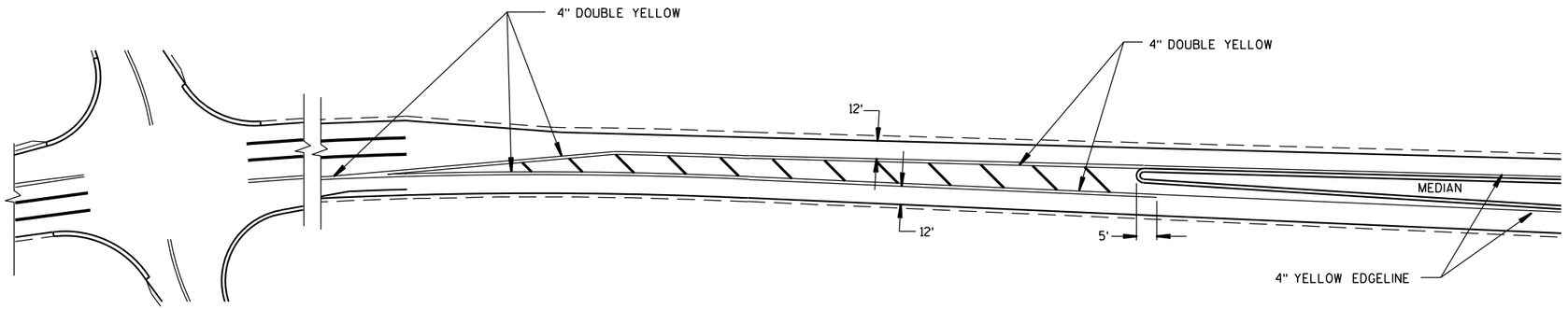
S.D.D. 15 C 8-16f



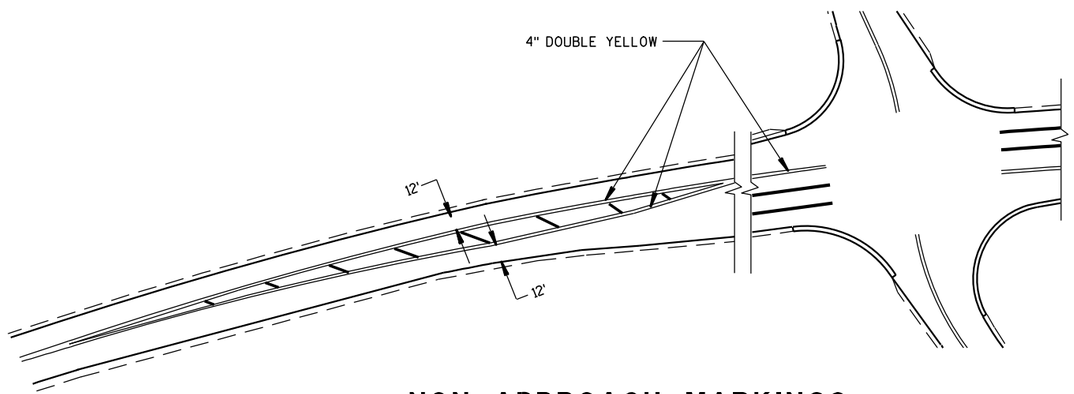
MEDIAN ISLAND DETAIL

GENERAL NOTE

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



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER 585 IGN
FHWA	

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S.D.D. 15 C 18-3

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S.D.D. 15 C 18-3

GENERAL NOTES

ORIENT ANCHOR BOLTS IN FOOTING AND PROVIDE ANCHOR BOLT STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER FABRICATION DRAWING.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

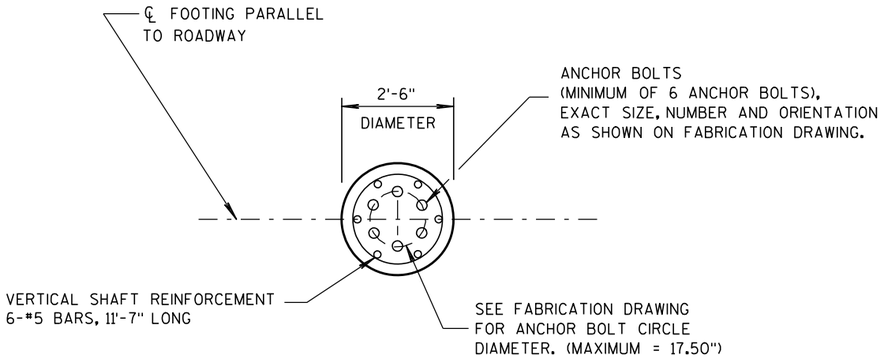
IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

THE REINFORCEMENT AND ANCHOR BOLTS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ANY DAMAGE TO THE CONCRETE BASE DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

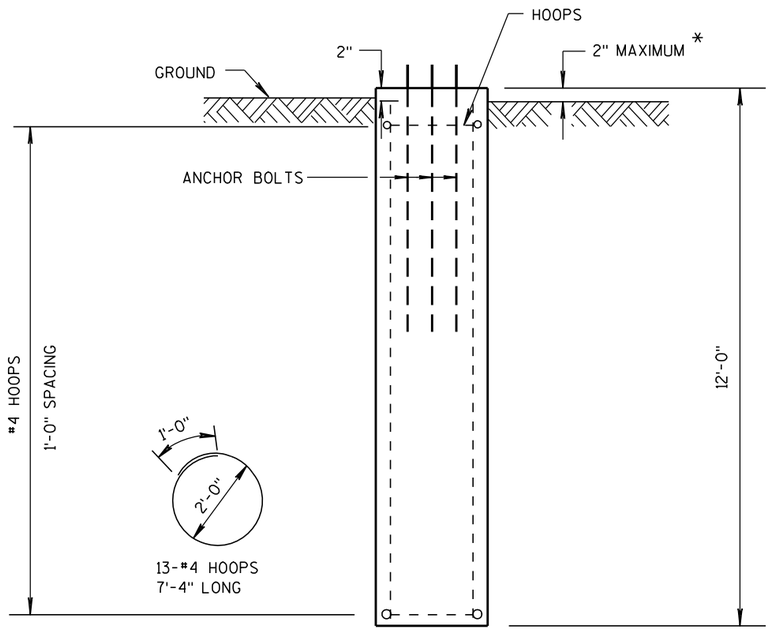
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR BOLTS	AASHTO M314 GRADE 55

THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



PLAN VIEW

* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.



ELEVATION VIEW

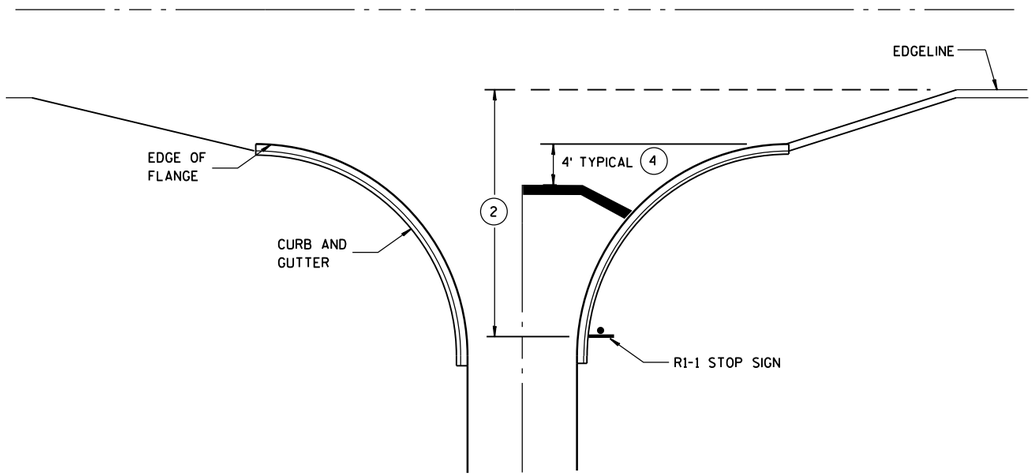
CONCRETE - 2.2 C.Y. PER FOOTING
H.S. REINFORCEMENT - 136 LBS. PER FOOTING

30" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

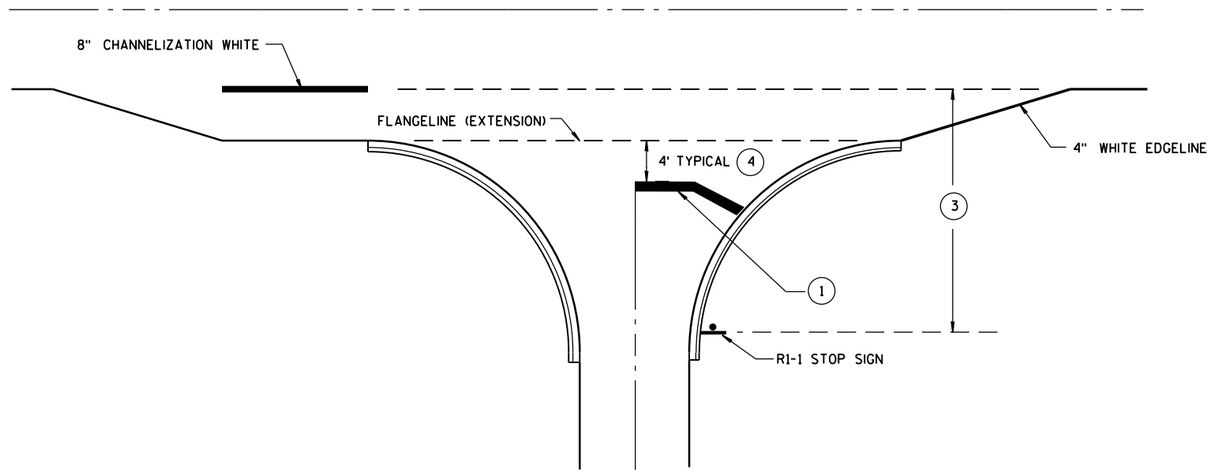
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/17/2009 DATE
/S/ Thomas N. N[illegible] STATE TRAFFIC ENGINEER
586
SIGN
FHWA

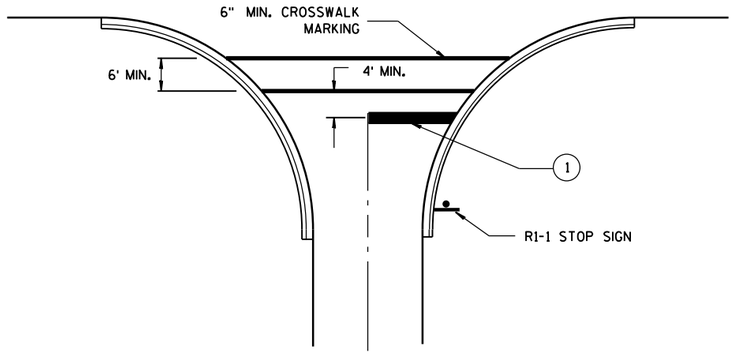
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S.D.D. 15 C 23-2



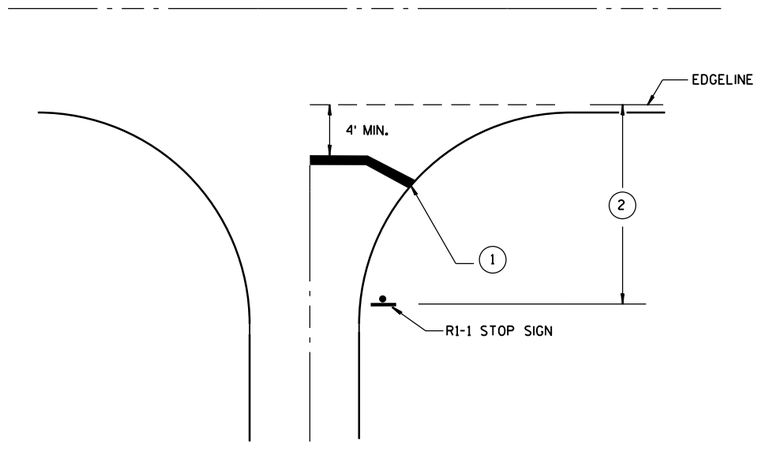
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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.

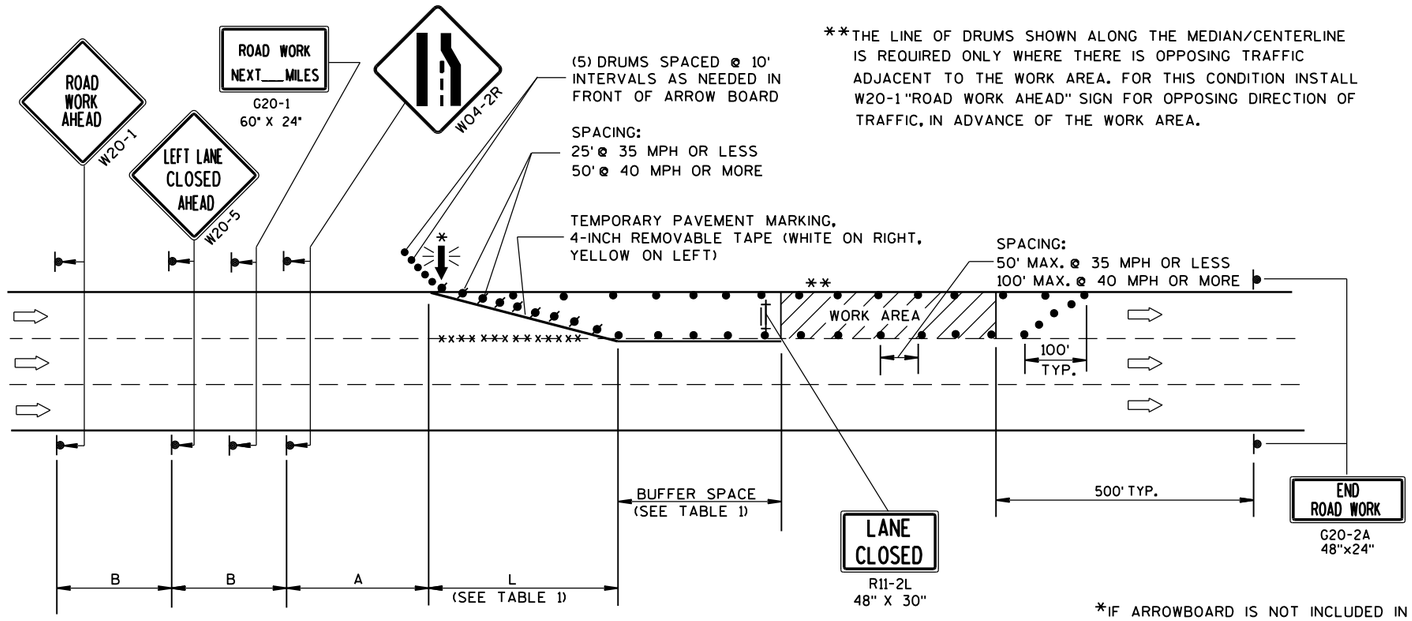
STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/30/2013 DATE
/S/ Travis Feltes
STATE TRAFFIC EI
FHWA

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S.D.D. 15 C 33-1



**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"

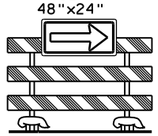


TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

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.

W20-1, 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

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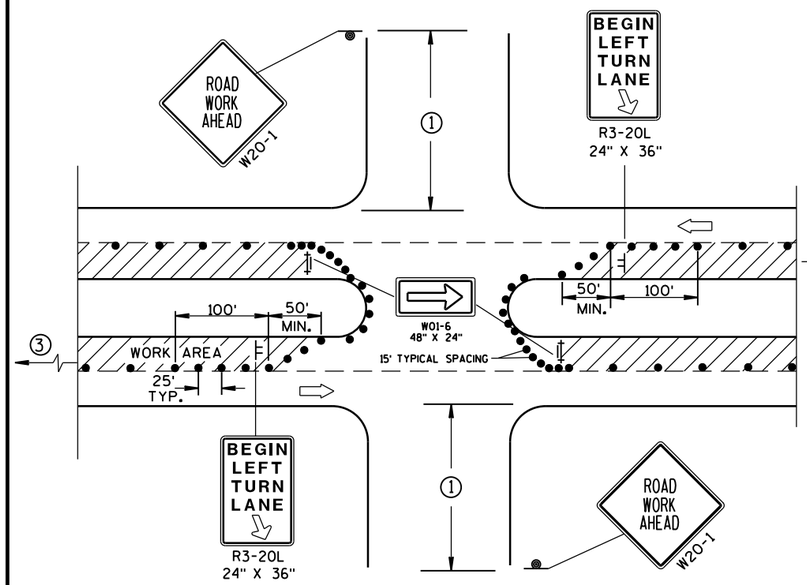
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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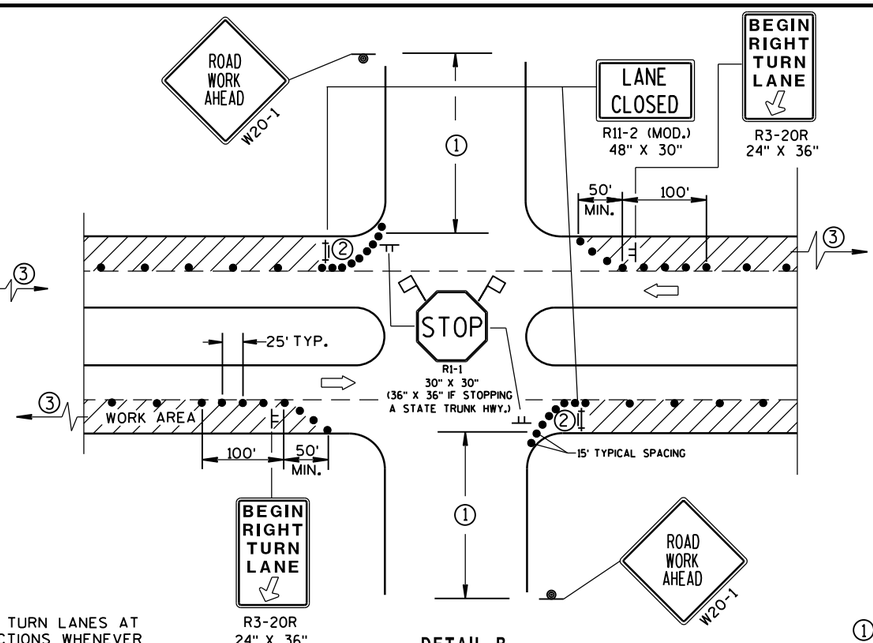
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DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

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



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

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

ALL SIGNS ARE 48"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.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

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

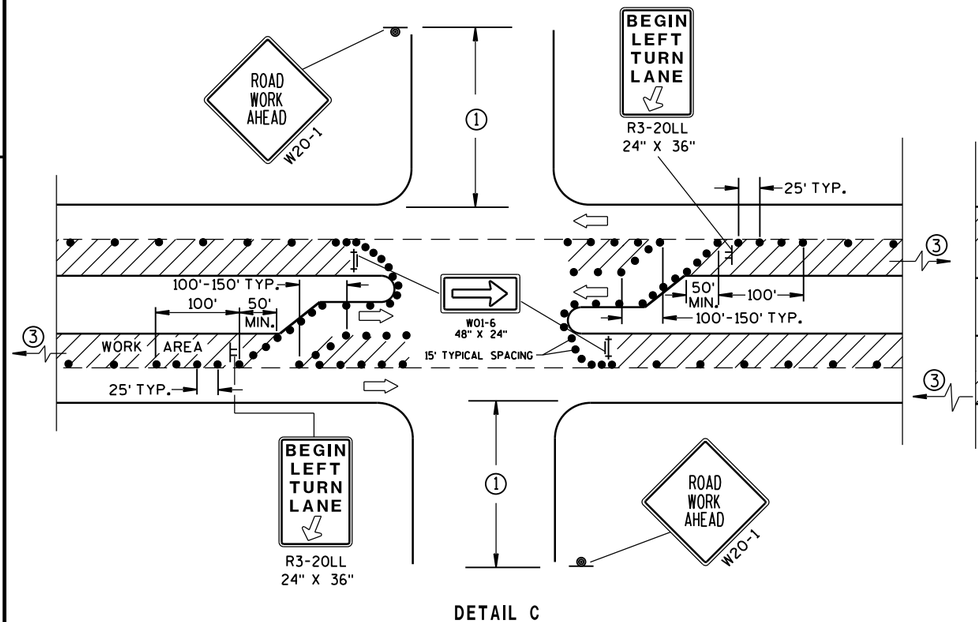
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

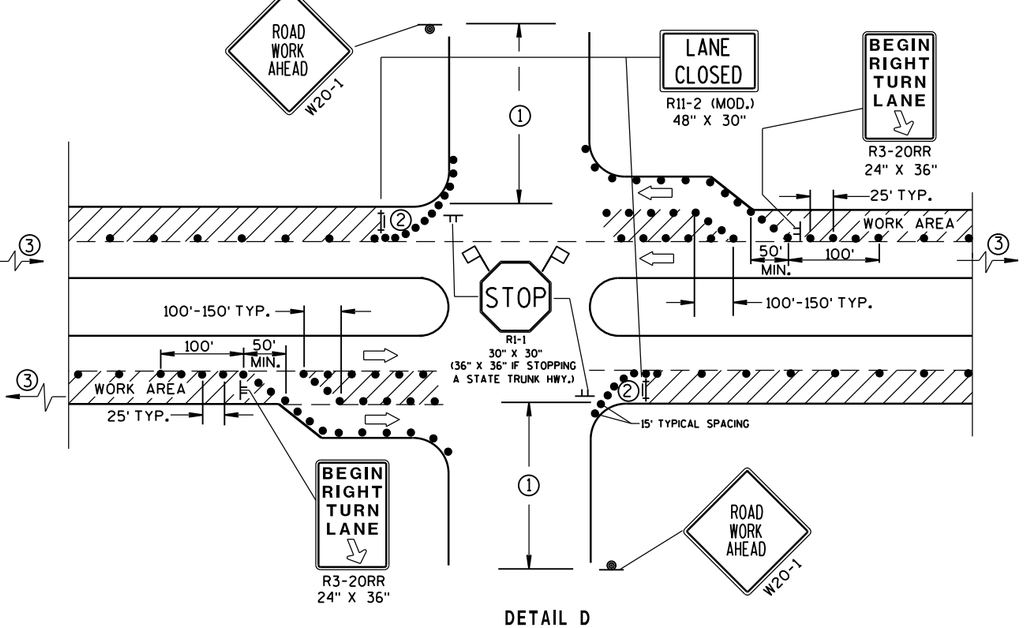
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

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



DETAIL D

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

LEGEND

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

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

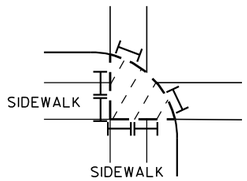
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

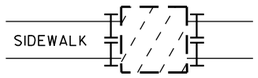
FHWA

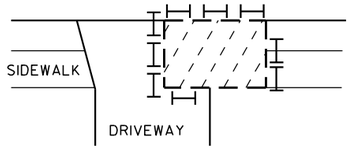
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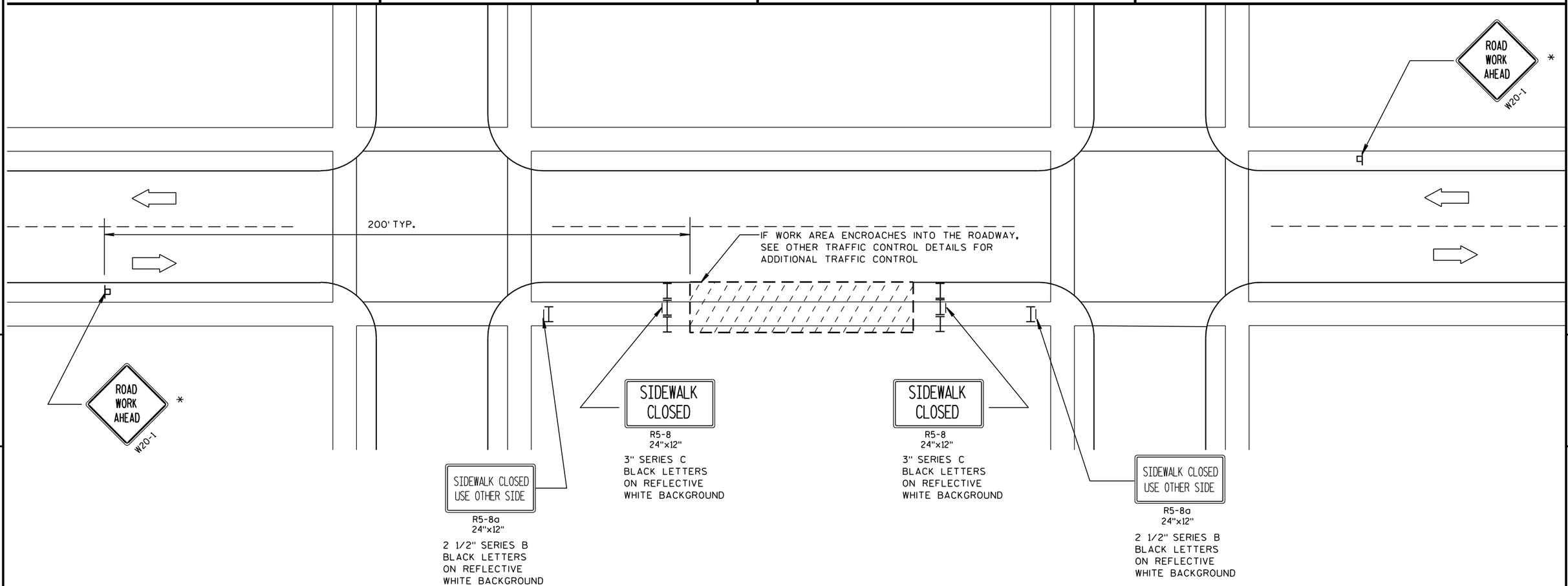
S.D.D. 15 D 21-2

WARNING OF LOCALIZED SIDEWALK WORK AREAS









LEGEND

- POST MOUNTED SIGN
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

GENERAL NOTES :

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, IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

* "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.

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

TRAFFIC CONTROL, SIDEWALK CLOSURE

TRAFFIC CONTROL, SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

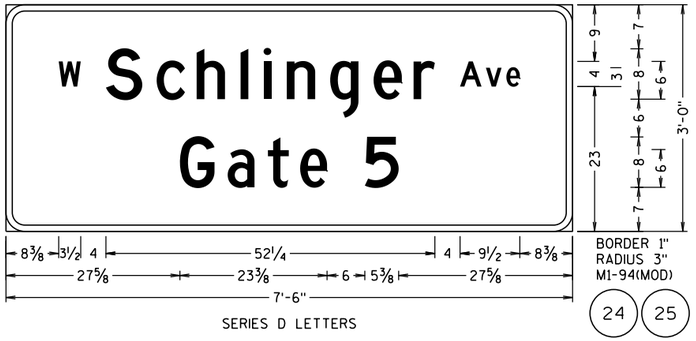
APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK 590 NEER
FHWA

6

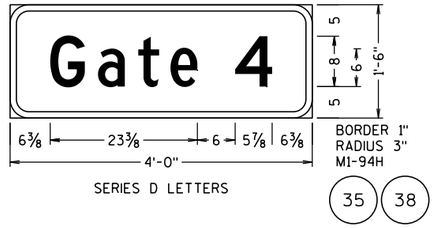
S.D.D. 15 D 30-1

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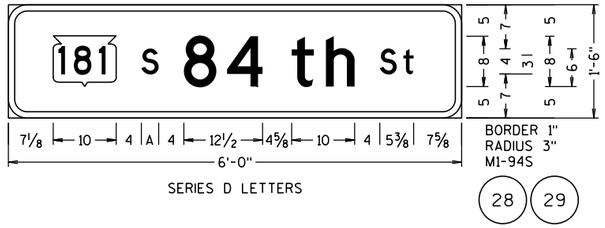
S.D.D. 15 D 30-1



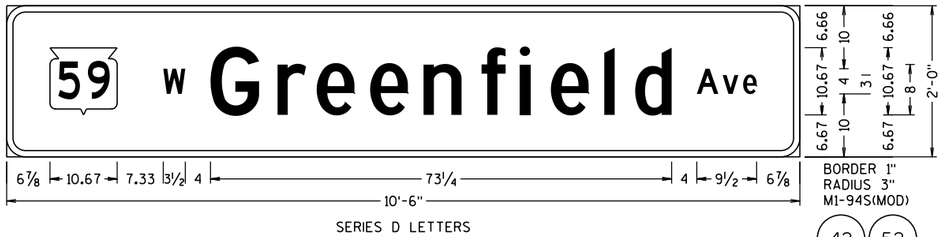
SERIES D LETTERS



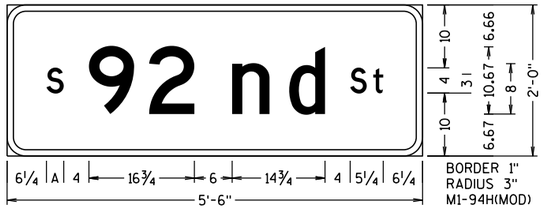
SERIES D LETTERS



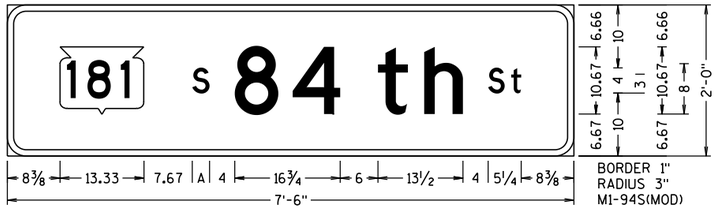
SERIES D LETTERS



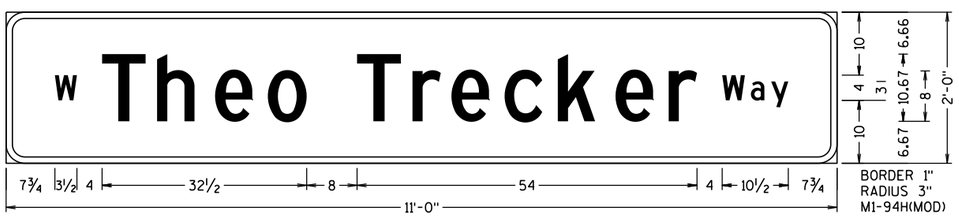
SERIES D LETTERS



SERIES D LETTERS



SERIES D LETTERS



SERIES D LETTERS

GENERAL NOTES:

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

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE II".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

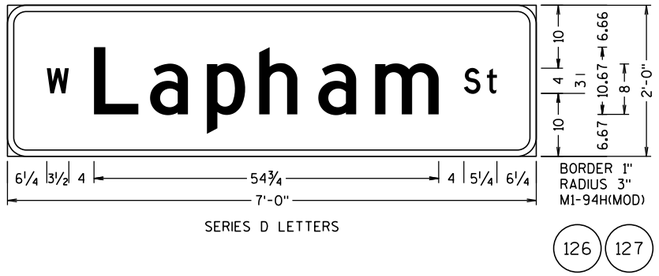
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

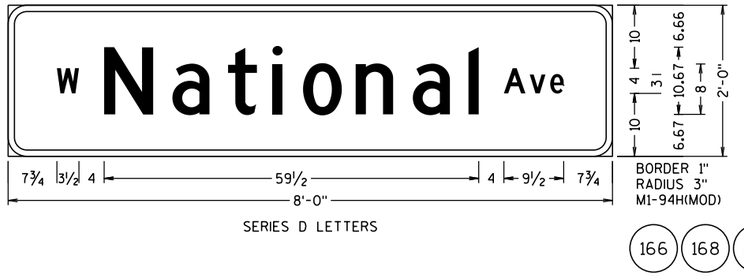
11. DO NOT SCALE.

PROJECT NO: 1060-35-91	HWY: VARIOUS	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE II SIGNS	SCALE: 0 ½" 1"	SHEET 591	E

FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\070101_ms.dgn PLOT DATE : 30-MAY-2014 09:38 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 48.125:1
WISDOT/CADDS SHEET 47



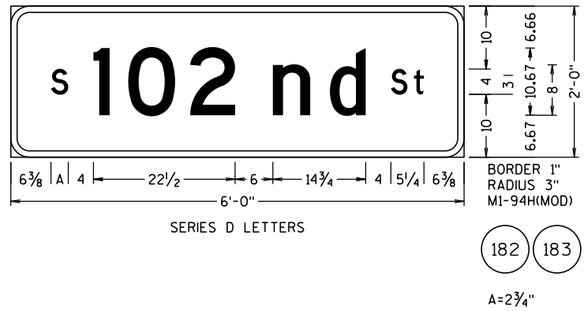
SERIES D LETTERS



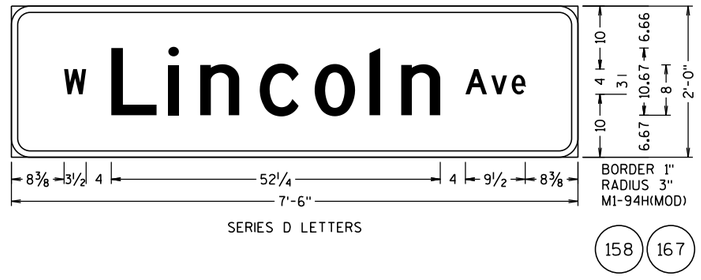
SERIES D LETTERS

GENERAL NOTES:

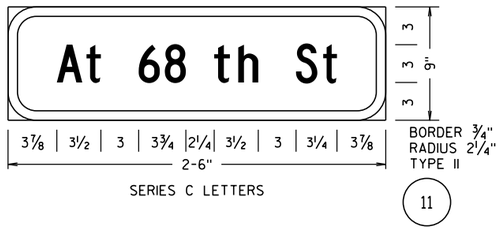
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11. DO NOT SCALE.



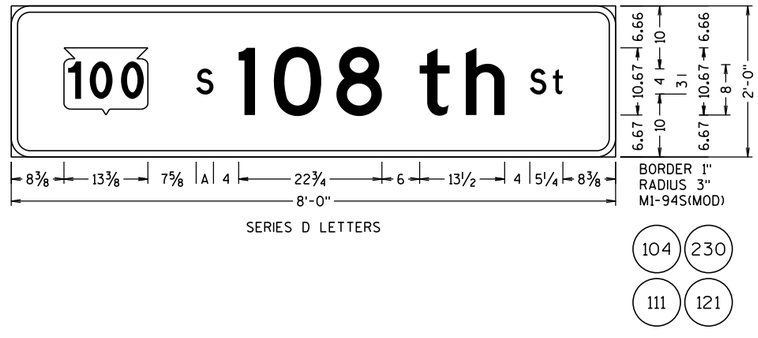
SERIES D LETTERS



SERIES D LETTERS



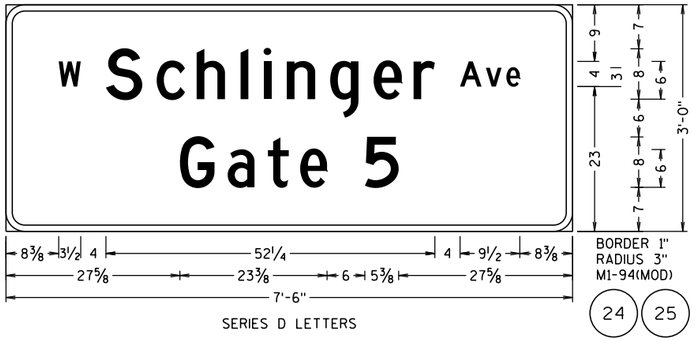
SERIES C LETTERS



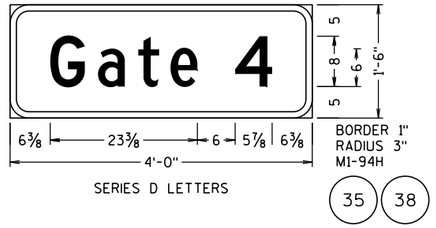
SERIES D LETTERS

PROJECT NO: 1060-35-91	HWY: VARIOUS	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE II SIGNS	SCALE: 0 ½" 1"	SHEET 592	E

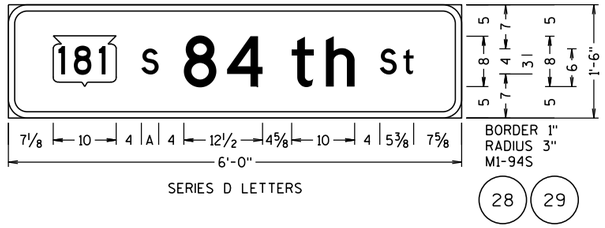
FILE NAME : W:\PDS\C3D\CAD\10603307\91\SHEETOTHERS\070101_ms.dgn PLOT DATE : 30-MAY-2014 09:38 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 48.125:1
WISDOT/CADDS SHEET 47



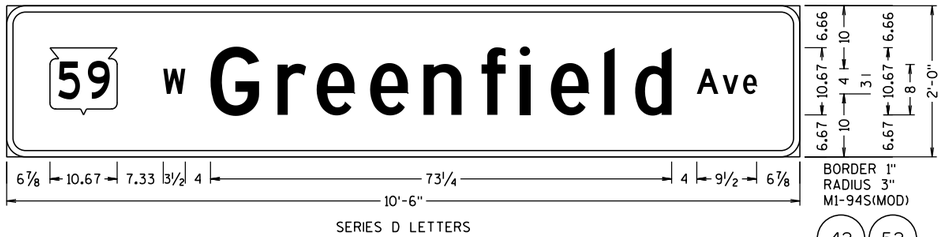
SERIES D LETTERS



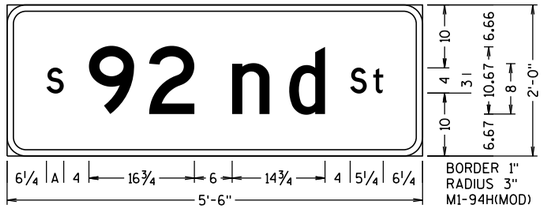
SERIES D LETTERS



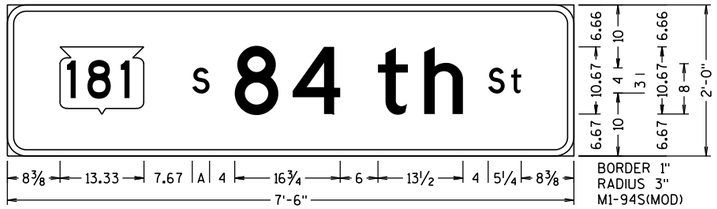
SERIES D LETTERS



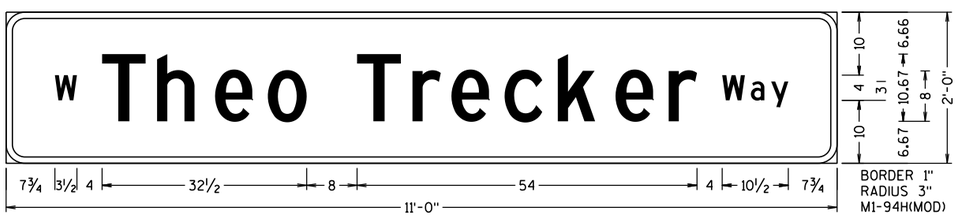
SERIES D LETTERS



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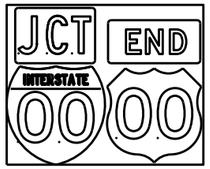
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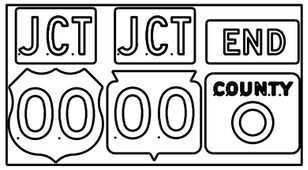
TYPICAL ASSEMBLIES



J1-1



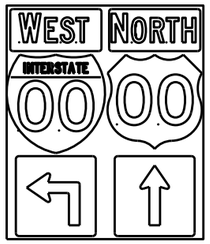
J1-2



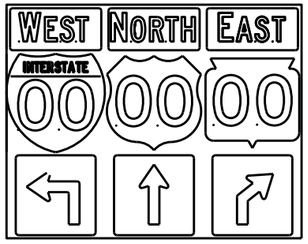
J1-3



J2-1



J2-2

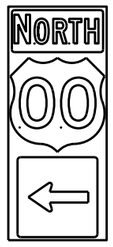


J2-3

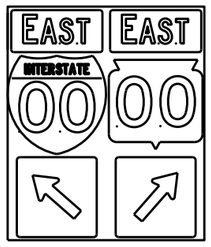


JV

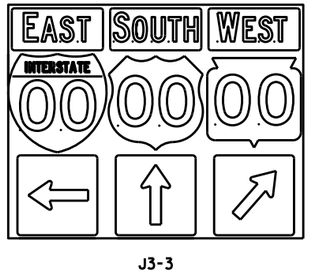
(Typical Vertical J-Assembly
See Note 10 and 11)



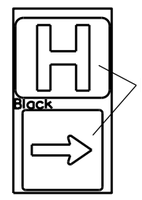
J3-1



J3-2



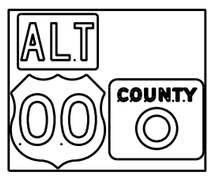
J3-3



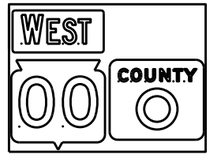
JH-1



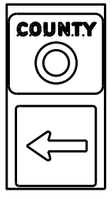
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

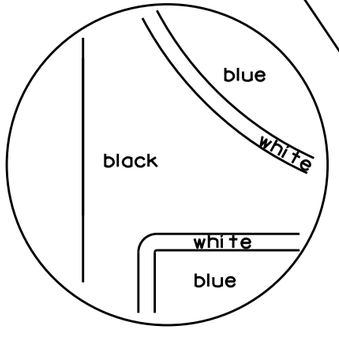


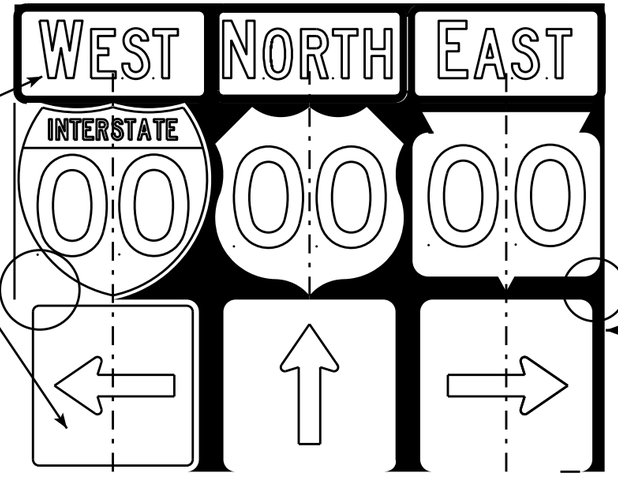
J23-1

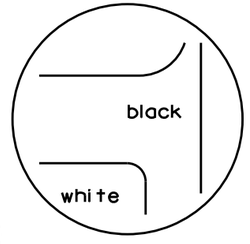


J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

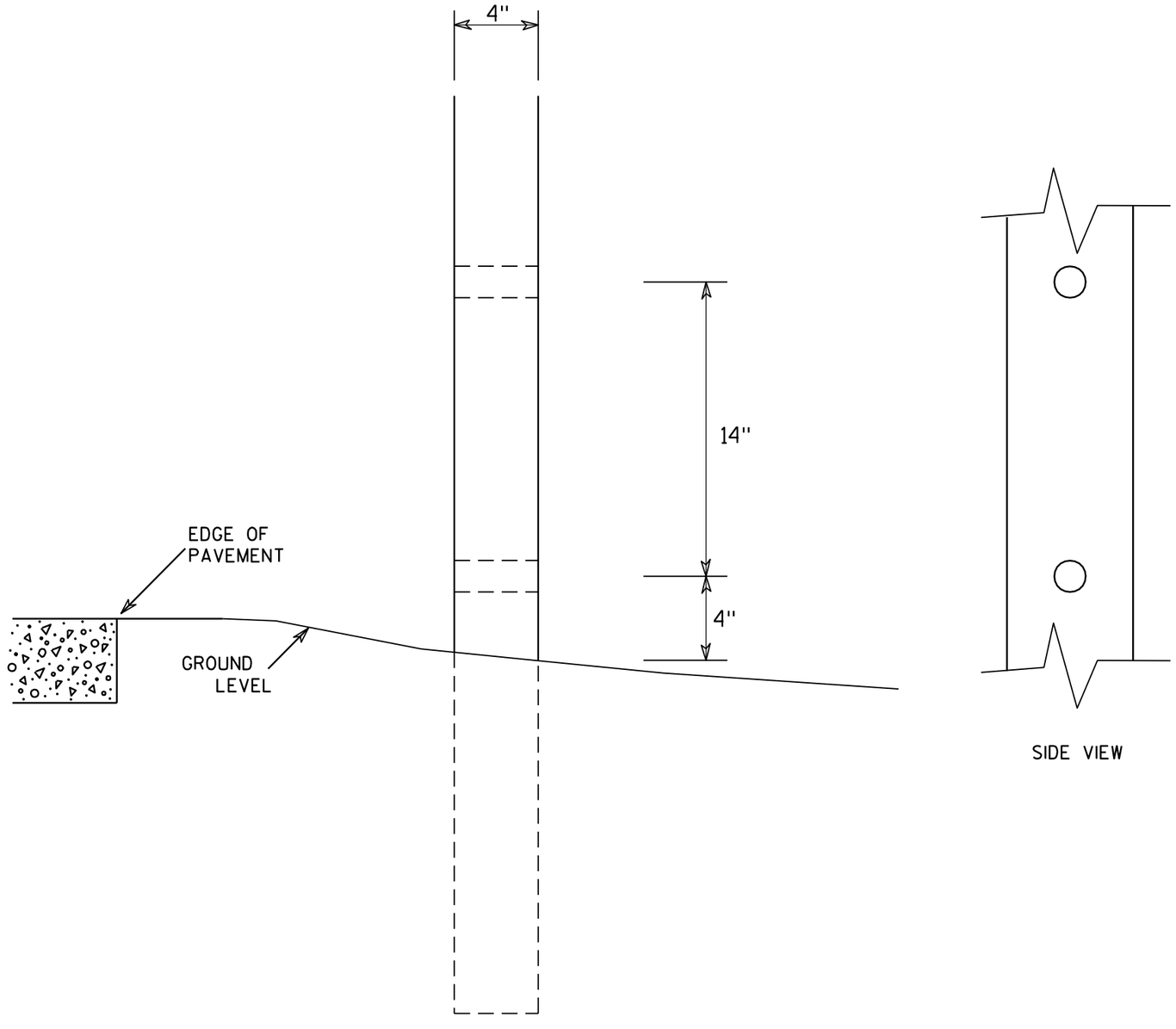
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

PROJECT NO: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

4 X 6 WOOD POST MODIFICATIONS

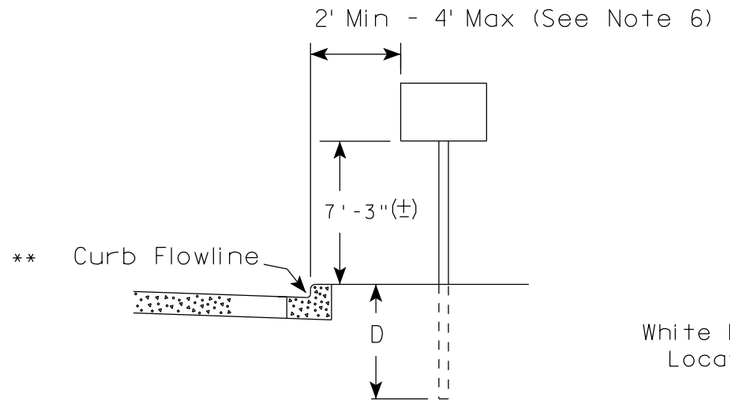
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

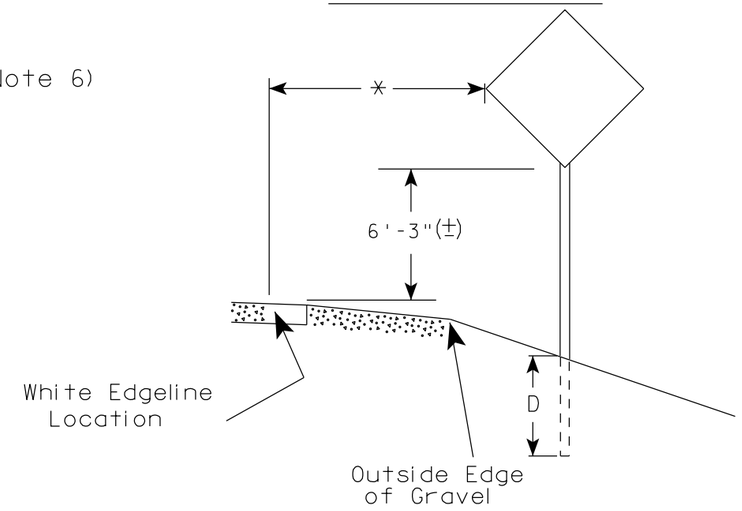
DATE 3/27/97 PLATE NO. A4-11.2

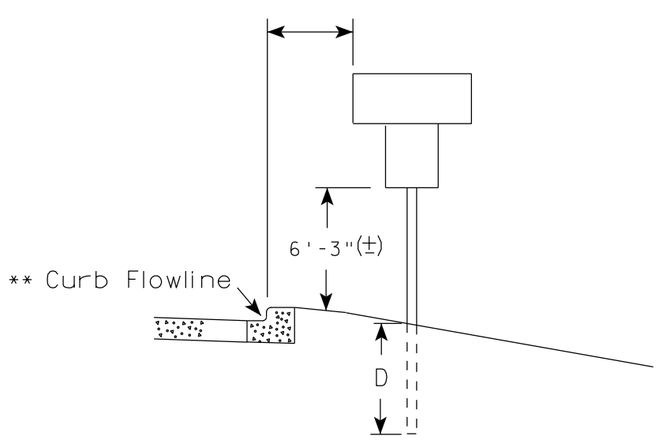
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 595	E

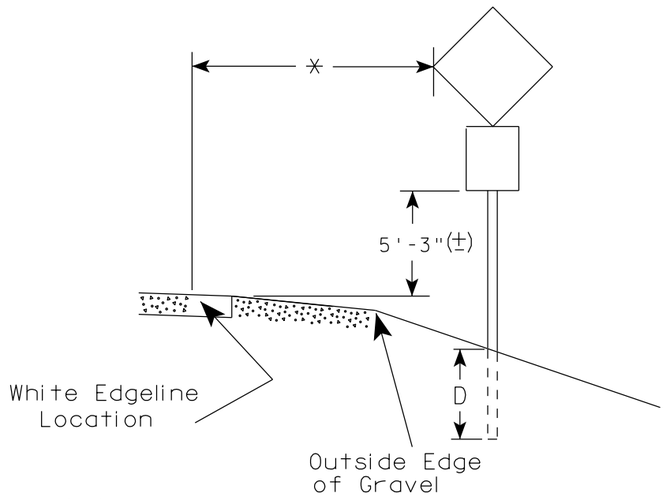
URBAN AREA



RURAL AREA (See Note 2)







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

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

GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

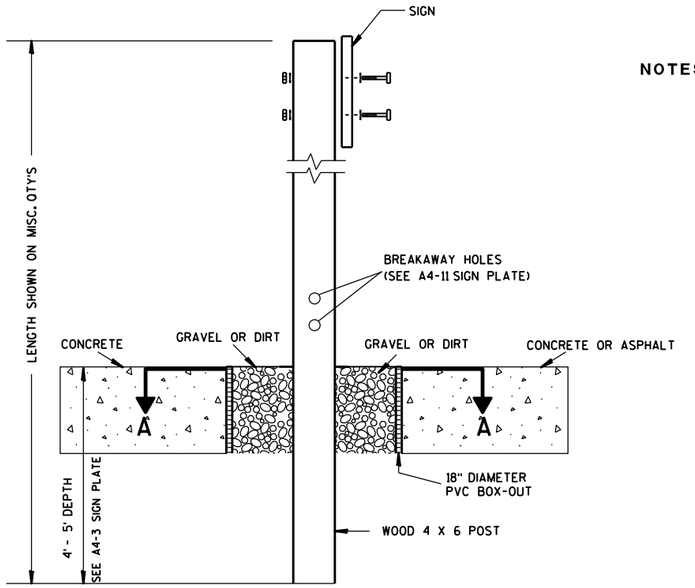
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

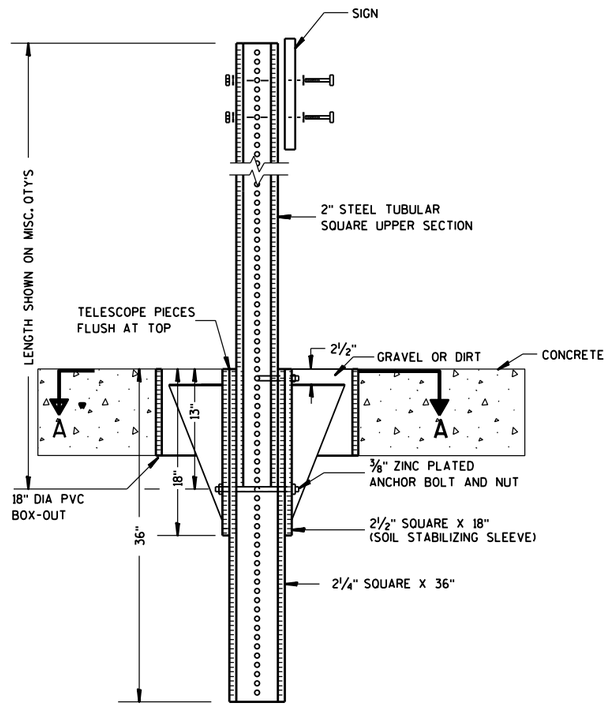
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 30-SEP-2013 13:25 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 99.237937:1.000000 WISDOT/CADDS SHEET 42



ELEVATION VIEW

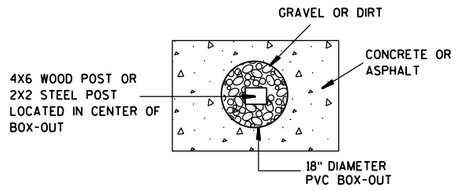
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

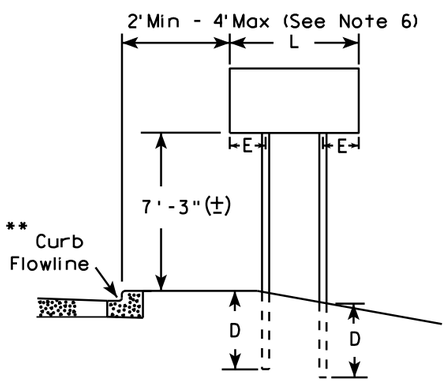
APPROVED Matthew R Rauch
for State Traffic Engineer

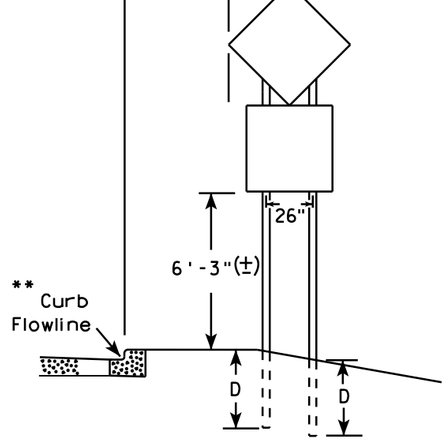
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

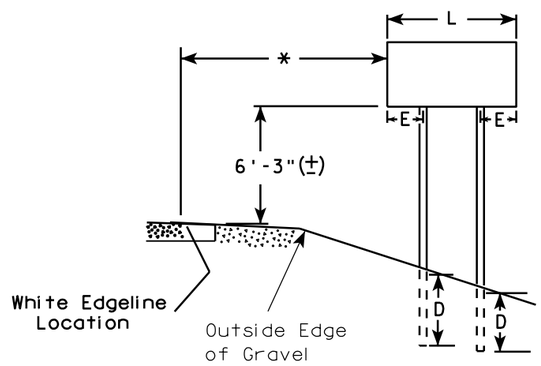
URBAN AREA

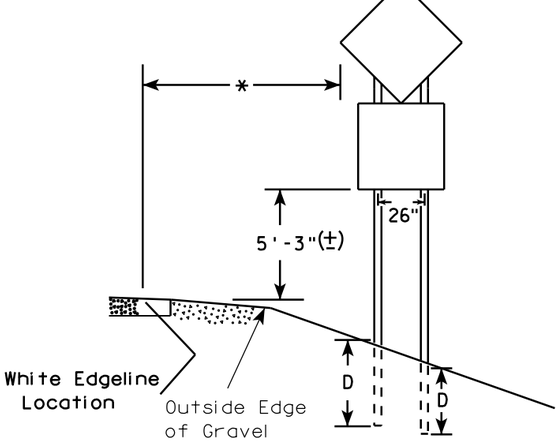




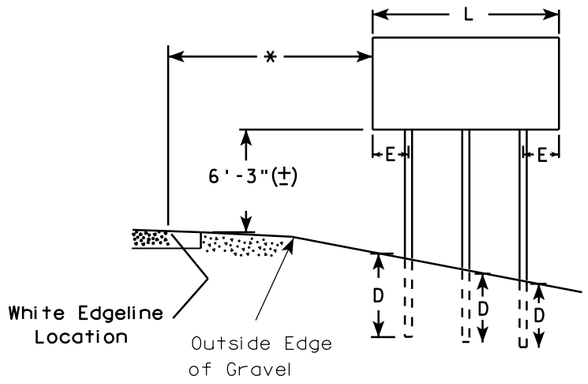
48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)





48" DIAMOND WARNING SIGN



GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

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

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

*** See A4-3 sign plate for signs 4' or less in width or less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

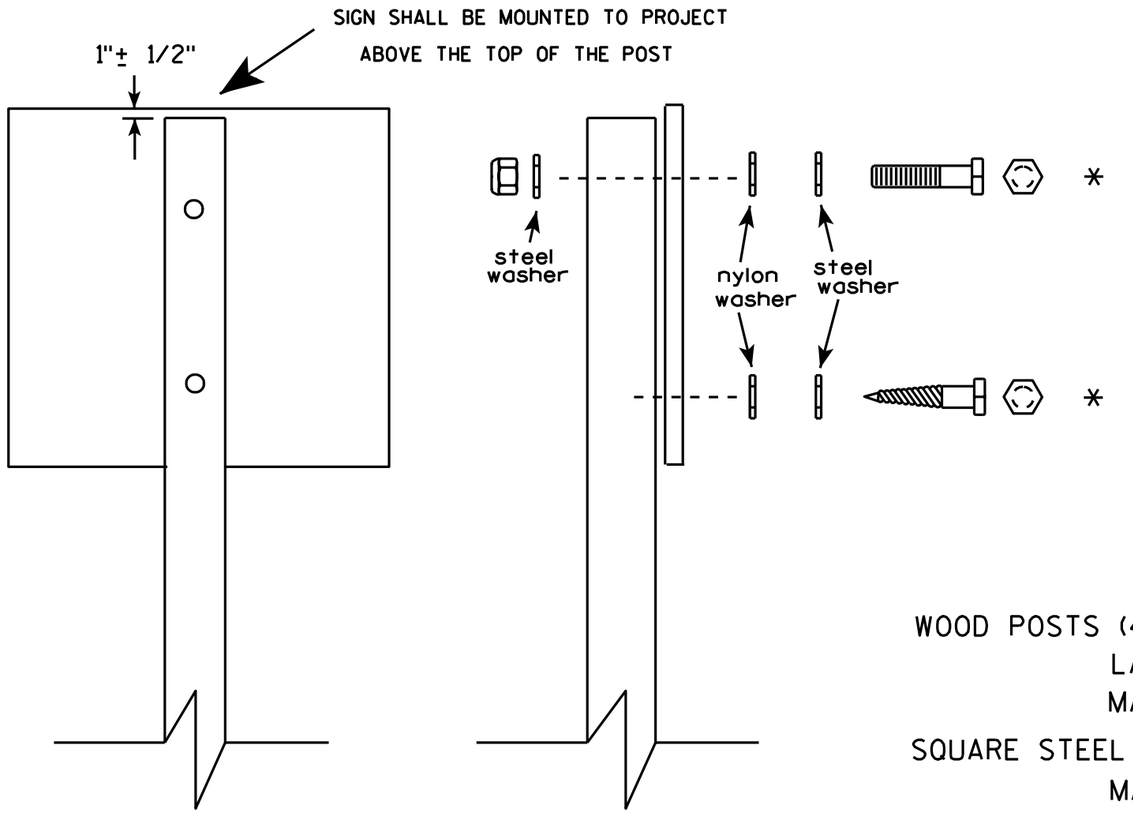
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/29/14 PLATE NO. A4-4 13
598

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 30-APR-2014 13:10 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 107.021305:1.000000

7 7



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

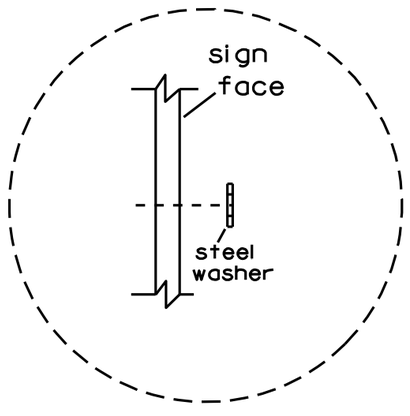
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7

7

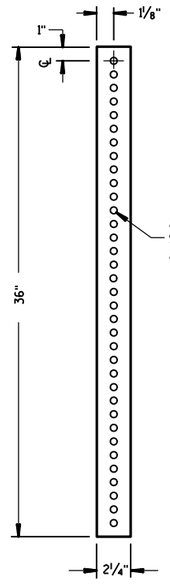
7

PROJECT NO:

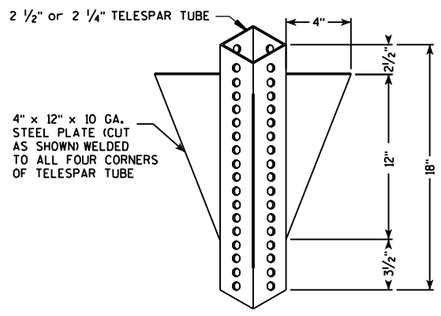
SHEET NO: 599 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

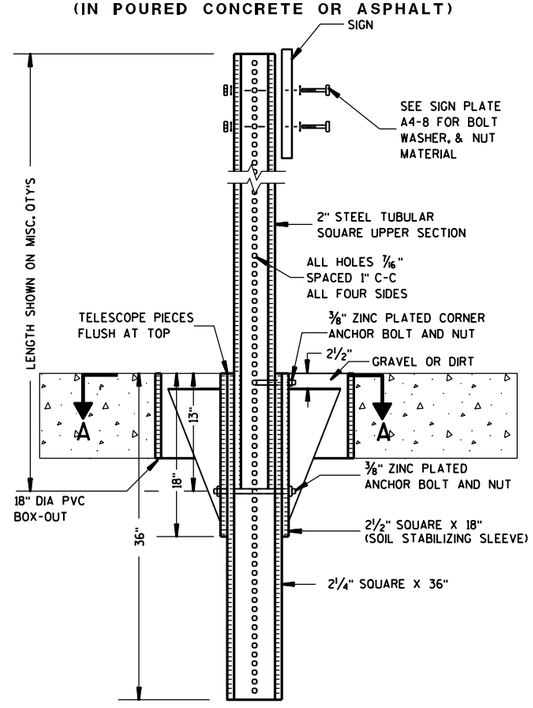
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



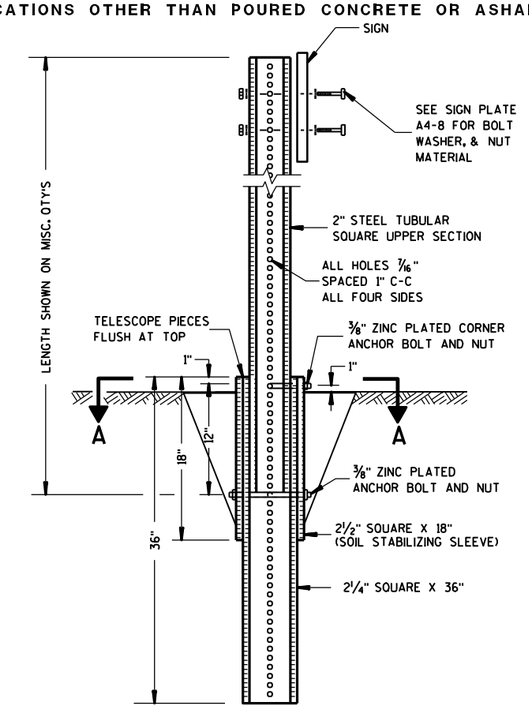
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

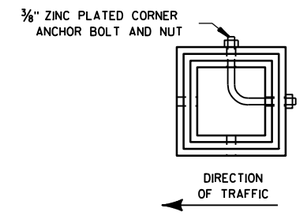


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

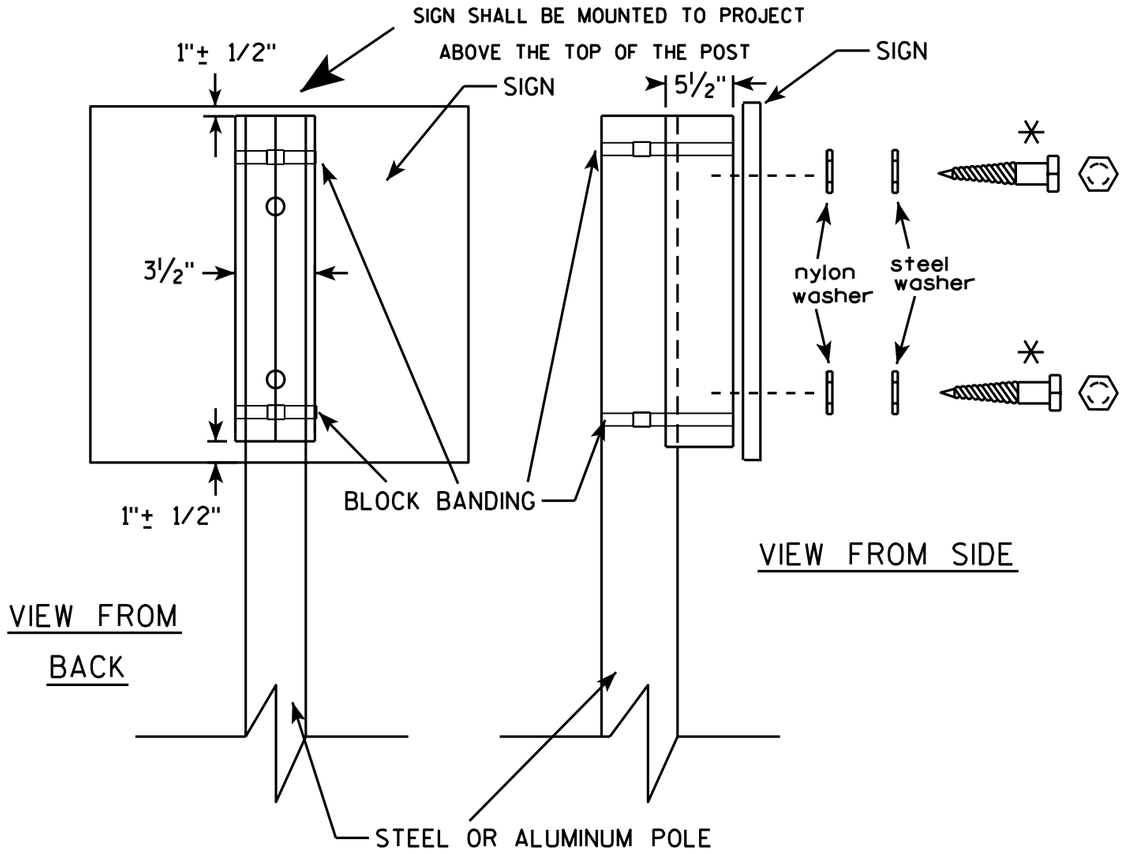
TUBULAR STEEL SIGN POST A4-9

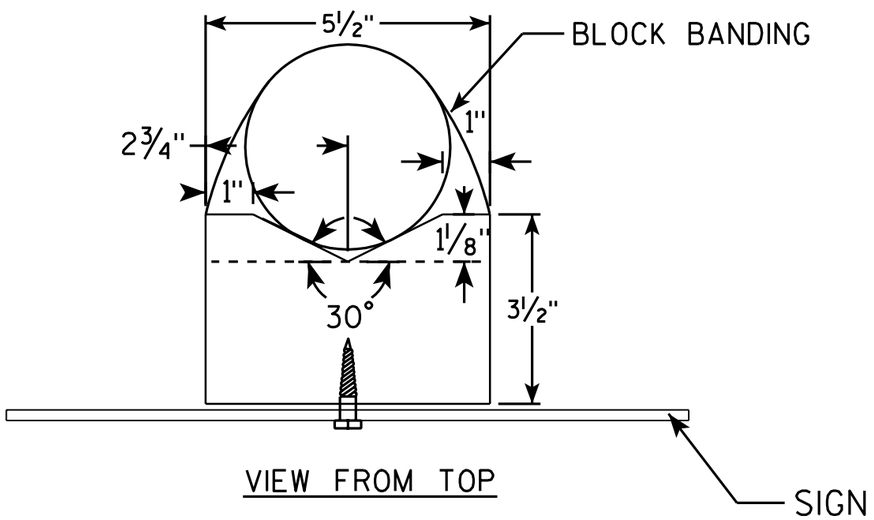
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/30/12 PLATE NO. A4-9.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 600	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

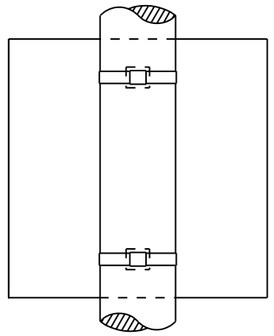
DATE 7/12/07 PLATE NO. A5-10.1

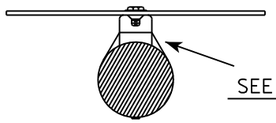
PROJECT NO:

SHEET NO: 601 E

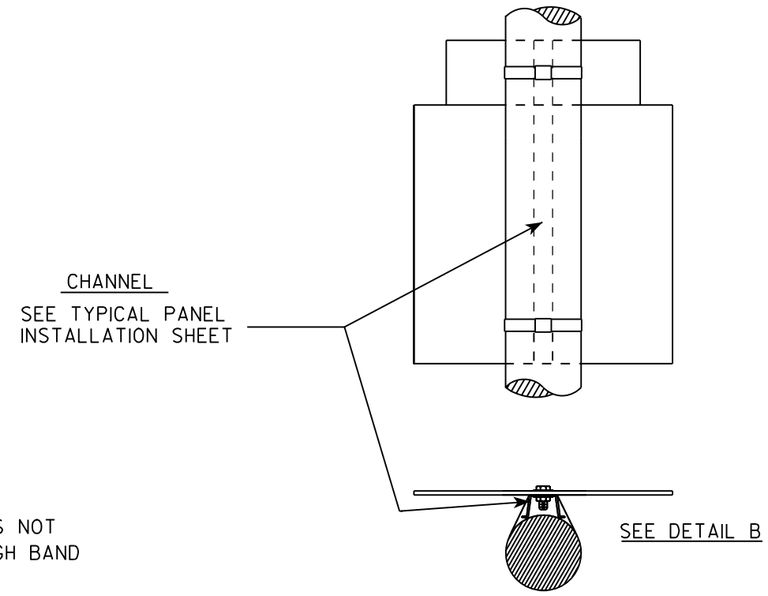
BANDING

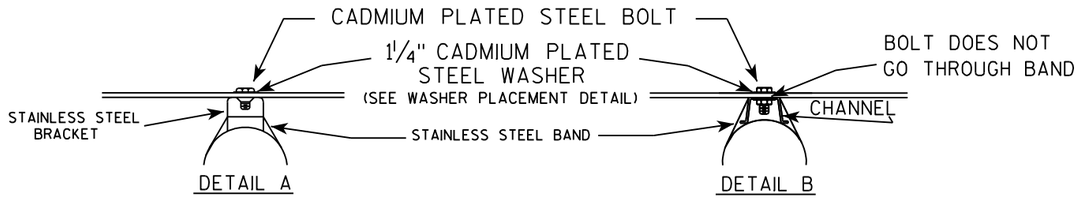
SINGLE SIGN



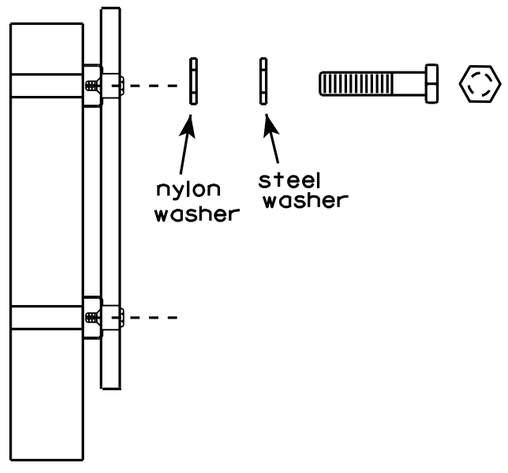


"J" ASSEMBLY





WASHER PLACEMENT



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

GENERAL NOTES

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

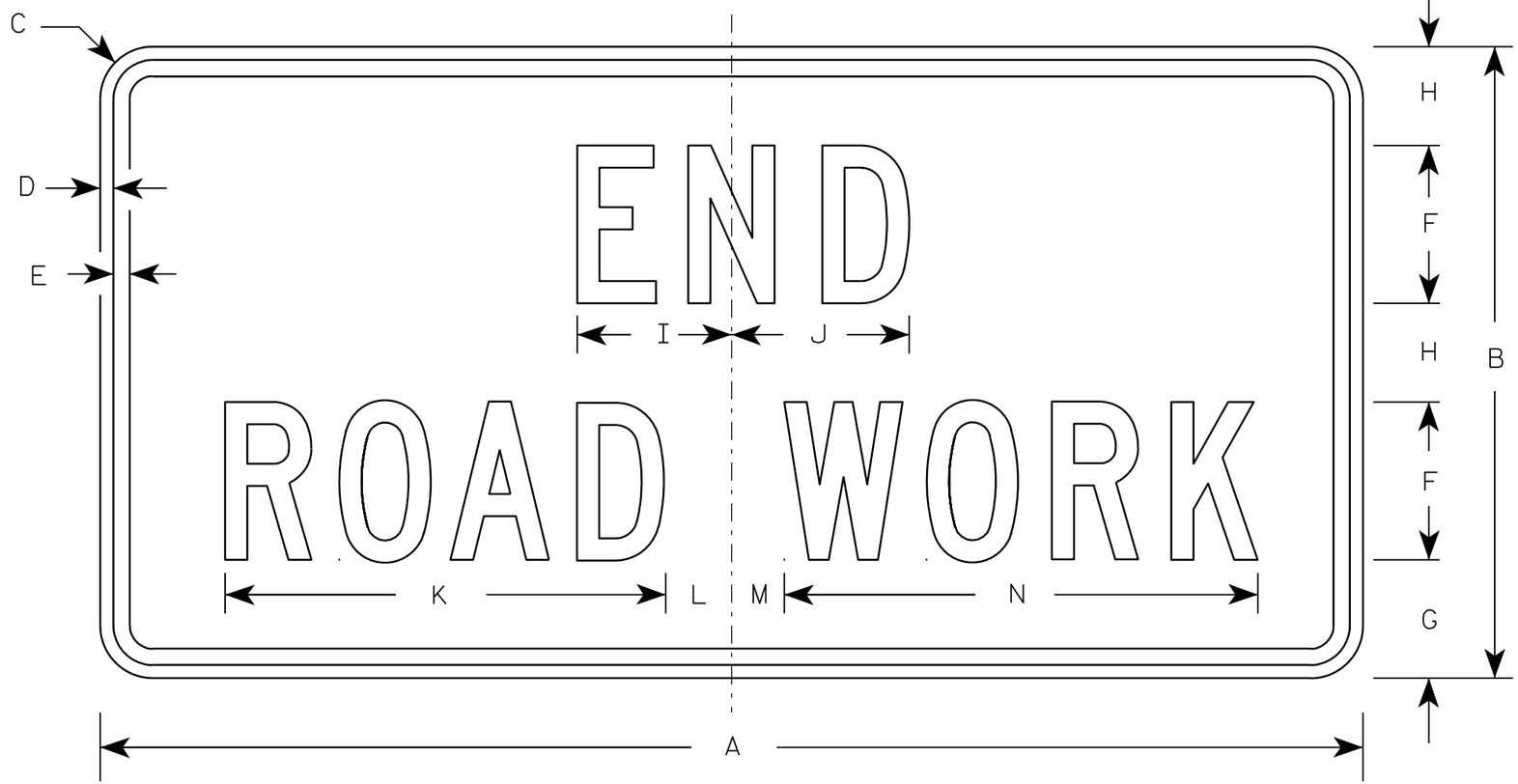
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 602	E



G20-2A

NOTES

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

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

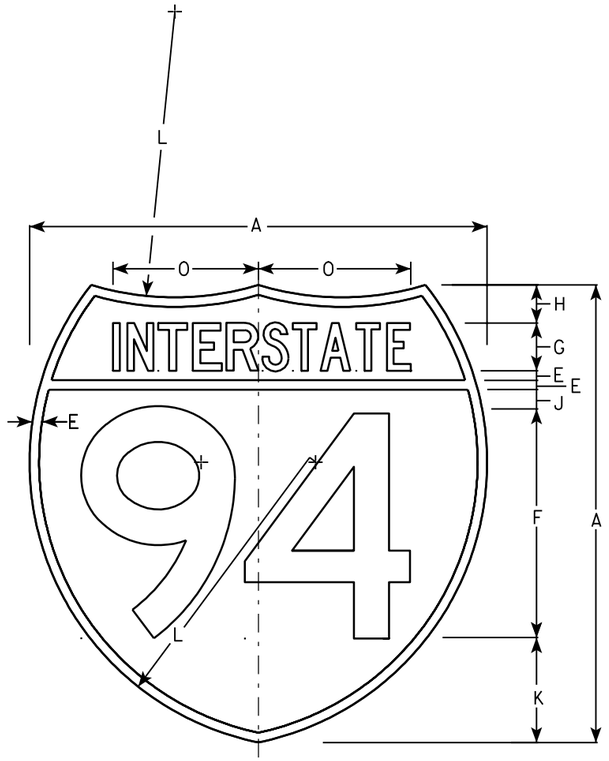
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

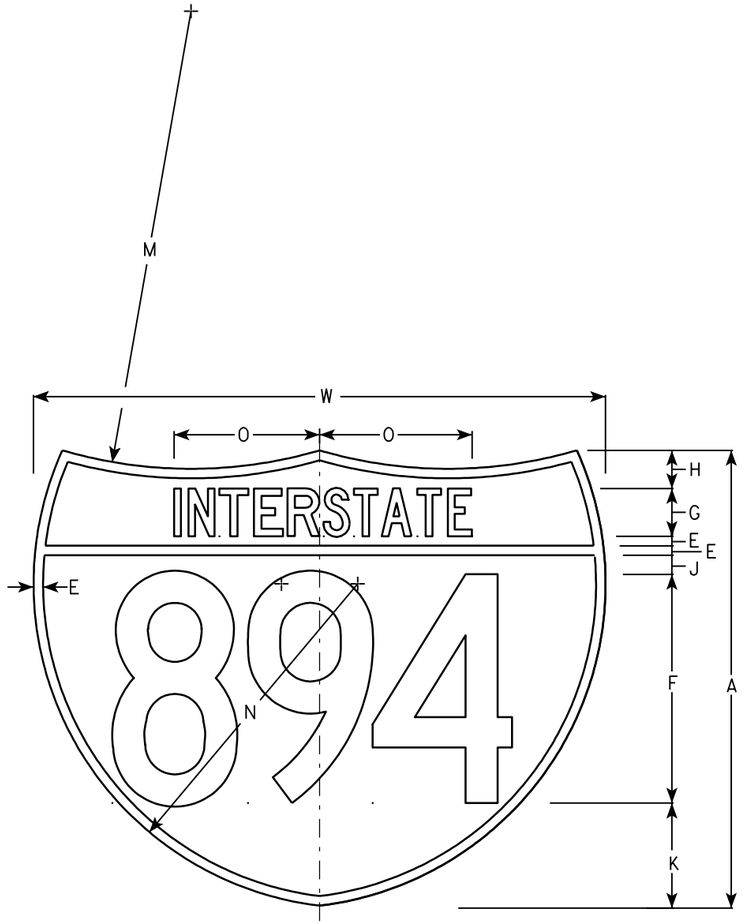
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 603	E



M1-1



M1-1A

NOTES

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

7

7

Metric equivalent for these signs are:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

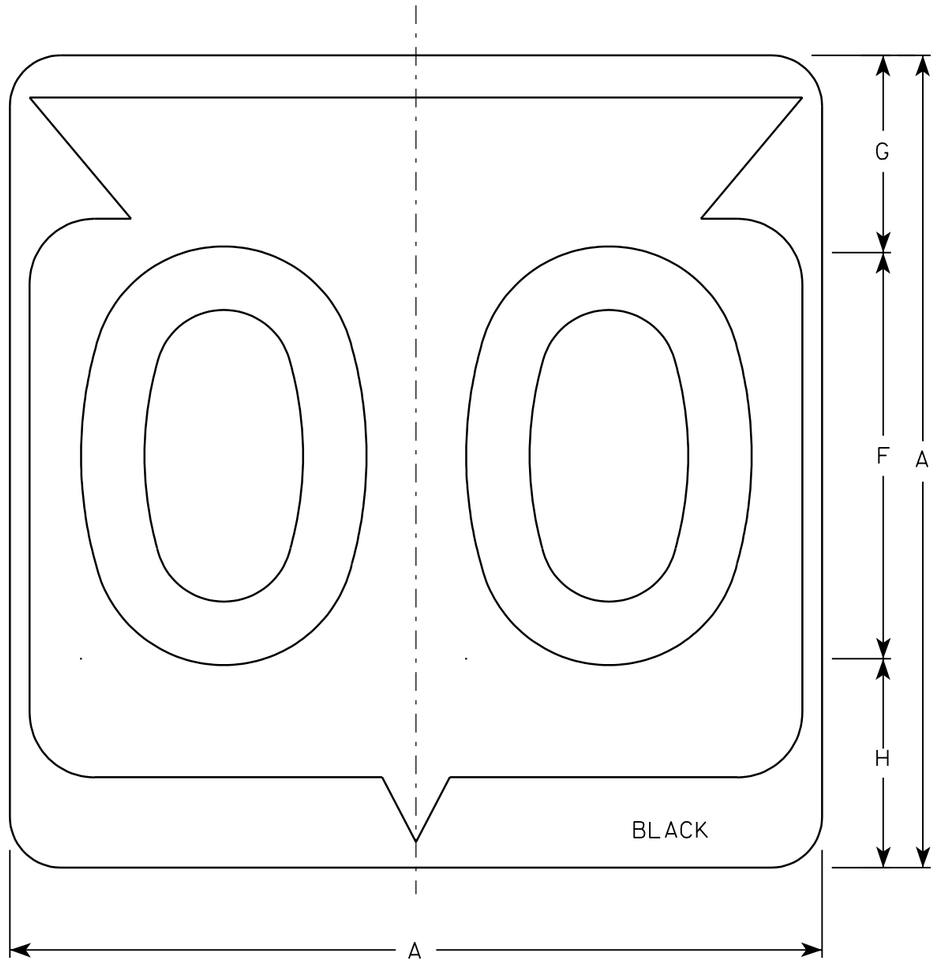
INTERSTATE ROUTE MARKER M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

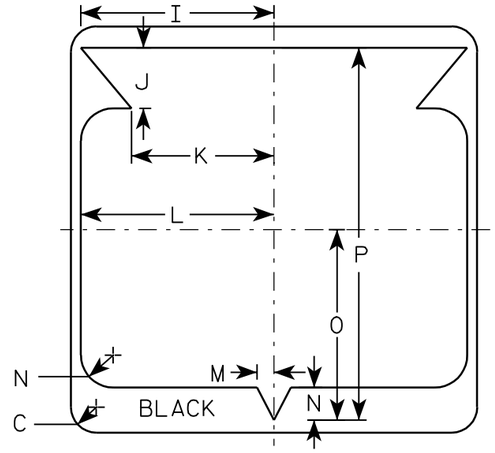
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 604	E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   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. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 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																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

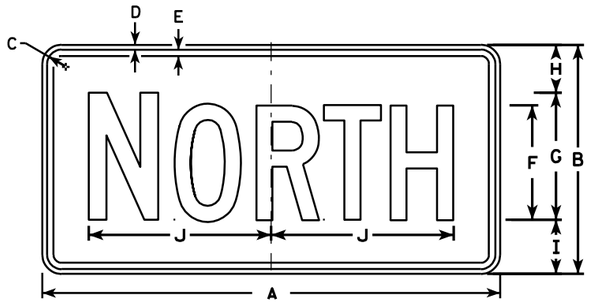
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

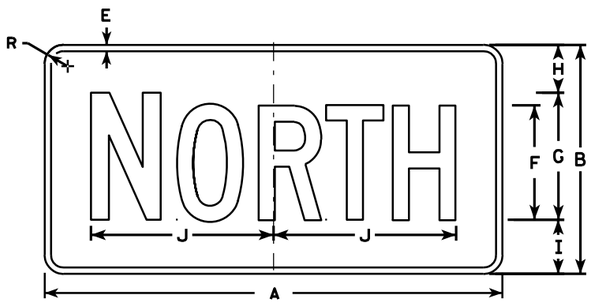
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 605	E



M3-1
MK3-1
MO3-1



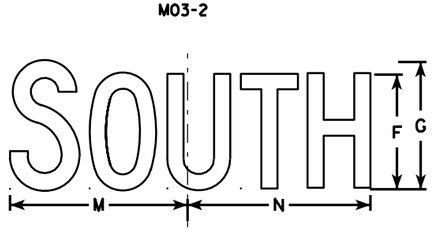
MB3-1
MG3-1
MM3-1
MN3-1



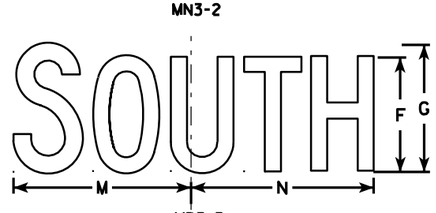
M3-2
MK3-2
MO3-2



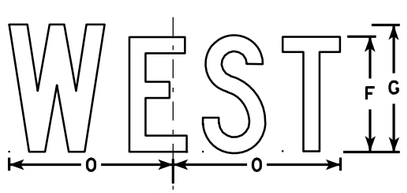
MB3-2
MG3-2
MM3-2
MN3-2



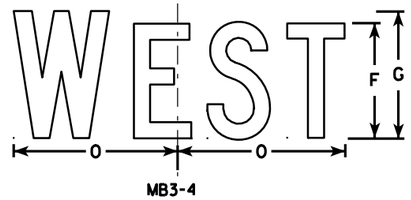
M3-3
MK3-3
MO3-3



MB3-3
MG3-3
MM3-3
MN3-3



M3-4
MK3-4
MO3-4



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   MG3-1 thru MG3-4 Background - Green
   Message - White - Type H Reflective
   MK3-1 thru MK3-4 Background - Green
   Message - White - Type H Reflective
   MM3-1 thru MM3-4 Background - White - Type H Reflective
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White - Type H Reflective
   M03-1 thru M03-4 Background - Orange - Reflective
   Message - Black
6. Note the first letter of each direction is larger than the remainder of the message.

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

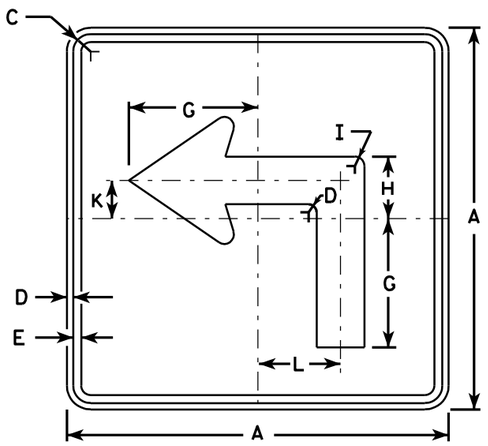
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

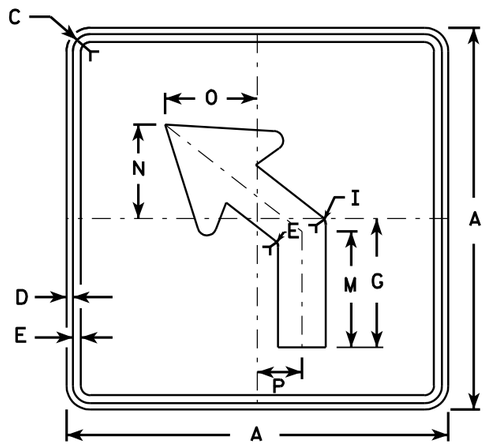
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

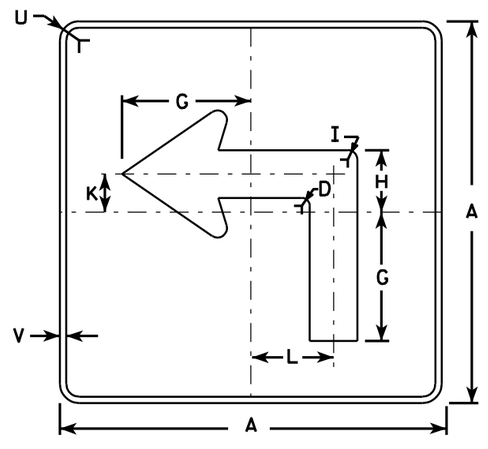
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 606	E



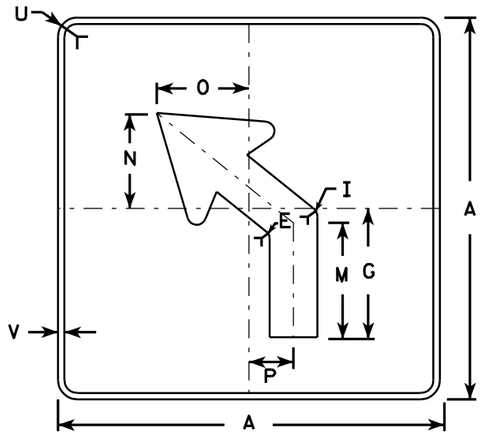
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



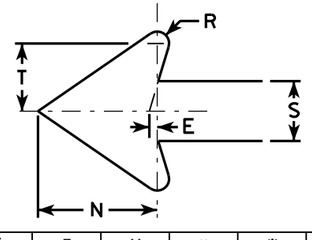
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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 - Type H Reflective
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White - Type H Reflective
   MG5-1 and MG5-2 Background - Green
   Message - White - Type H Reflective
   MK5-1 and MK5-2 Background - Green
   Message - White Type H Reflective
   MM5-1 and MM5-2 Background - White - Type H Reflective
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White - Type H Reflective
   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 - Type H Reflective
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 1/8	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 1/8	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 1/8	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

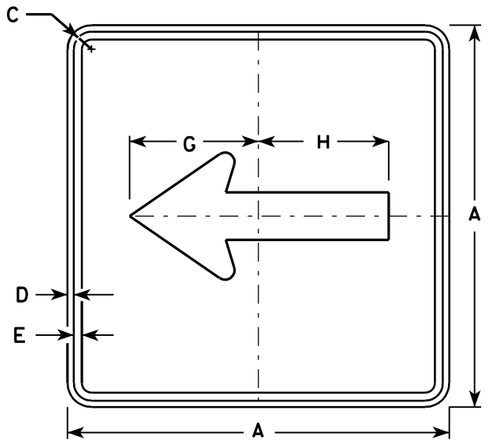
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

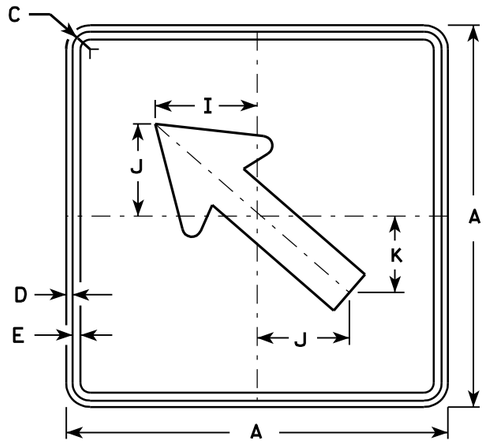
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 607	E

7

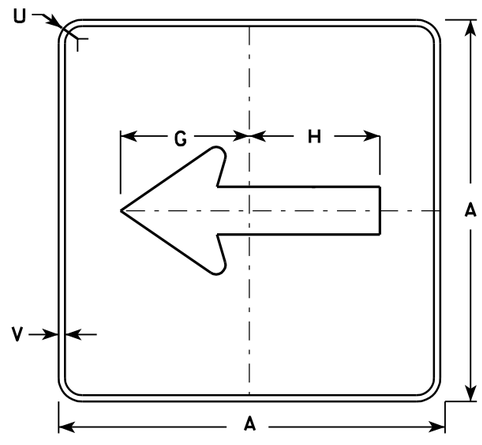
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 29-JUL-2013 13:34 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.908552:1.000000



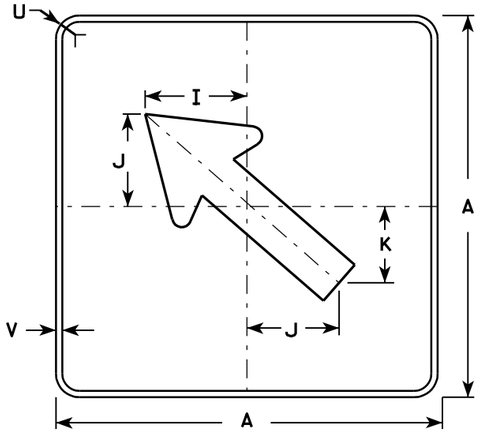
M6-1
MK6-1
MM6-1
MO6-1
MP6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MP6-2
MR6-2



MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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 - Type H Reflective
   Message - Black

   MB6-1 and MB6-2 Background - Blue
   Message - White - Type H Reflective

   MG6-1 and MG6-2 Background - Green
   Message - White - Type H Reflective

   MK6-1 and MK6-2 Background - Green
   Message - White - Type H Reflective

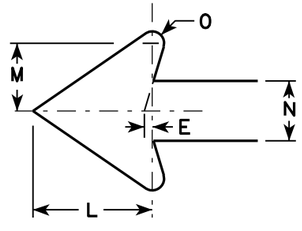
   MM6-1 and MM6-2 Background - White - Type H Reflective
   Message - Green

   MN6-1 and MN6-2 Background - Brown
   Message - White - Type H Reflective

   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black

   MP6-1 and MP6-2 Background - White - Type H Reflective
   Message - Blue

   MR6-1 and MR6-2 Background - Brown
   Message - White - Type H Reflective



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

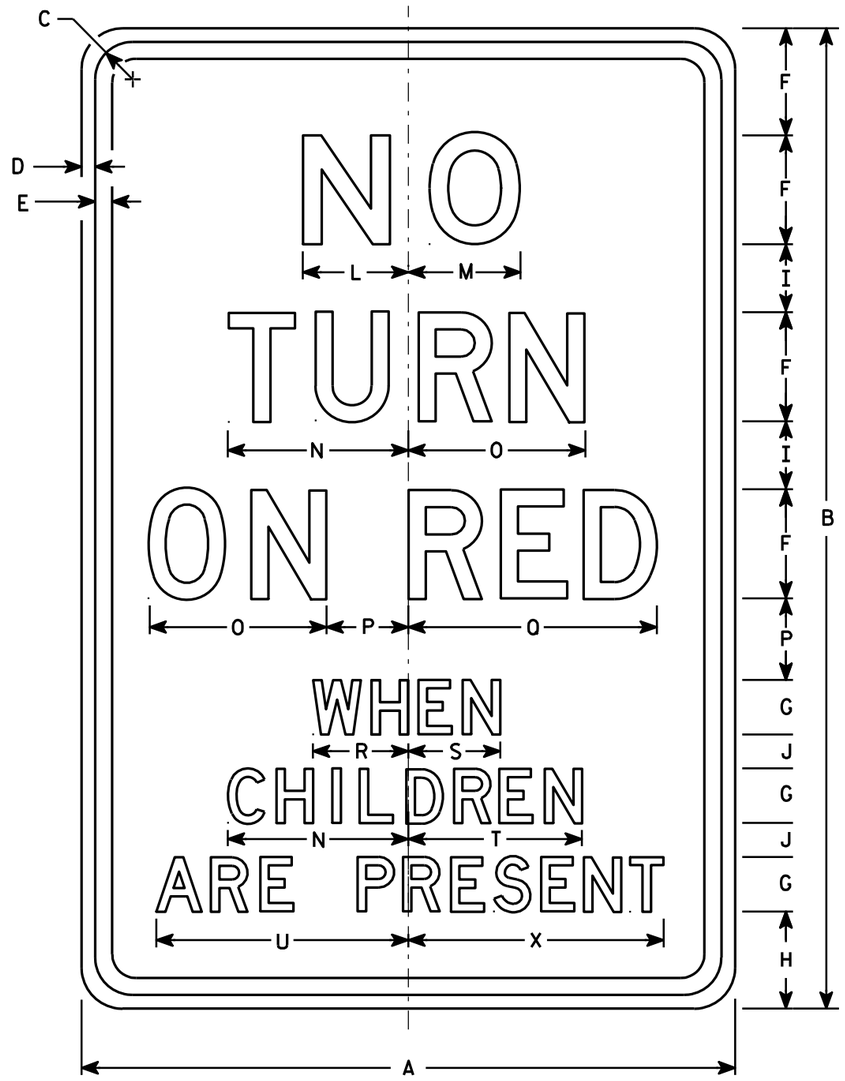
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M6-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 608	E



R10-11S

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 thru 6 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																											
2S	24	36	1 1/8	3/8	1/2	4	2	3 1/2	2 1/2	1 1/4	4 1/2	3 7/8	4 1/8	6 5/8	6 1/2	3	9 1/8	3 1/2	3 3/8	6 3/8	9 1/4			9 3/8			6.0
2M	24	36	1 1/8	3/8	1/2	4	2	3 1/2	2 1/2	1 1/4	4 1/2	3 7/8	4 1/8	6 5/8	6 1/2	3	9 1/8	3 1/2	3 3/8	6 3/8	9 1/4			9 3/8			6.0
3																											
4																											
5																											

STANDARD SIGN
R10-11S

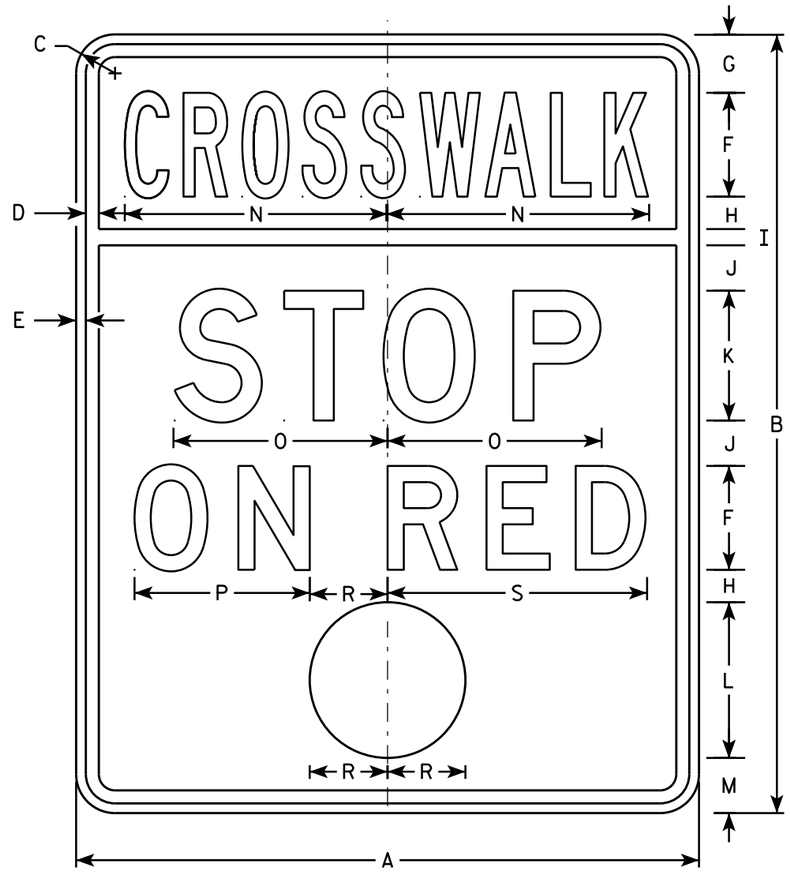
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-11S.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 609 | E



R10-23

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 (See Note 5)
3. Message Series - D except Line 1 is 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.
5. The circle shall be Red Type H reflective sheeting.

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 1/2	1/2	3/8	4	2 1/4	1 1/4	5/8	1 3/4	5	6	2 1/8	10 1/8	8 1/4	6 3/4		3	10								5.0
2M	24	30	1 1/2	1/2	3/8	4	2 1/4	1 1/4	5/8	1 3/4	5	6	2 1/8	10 1/8	8 1/4	6 3/4		3	10								5.0
3																											
4																											
5																											

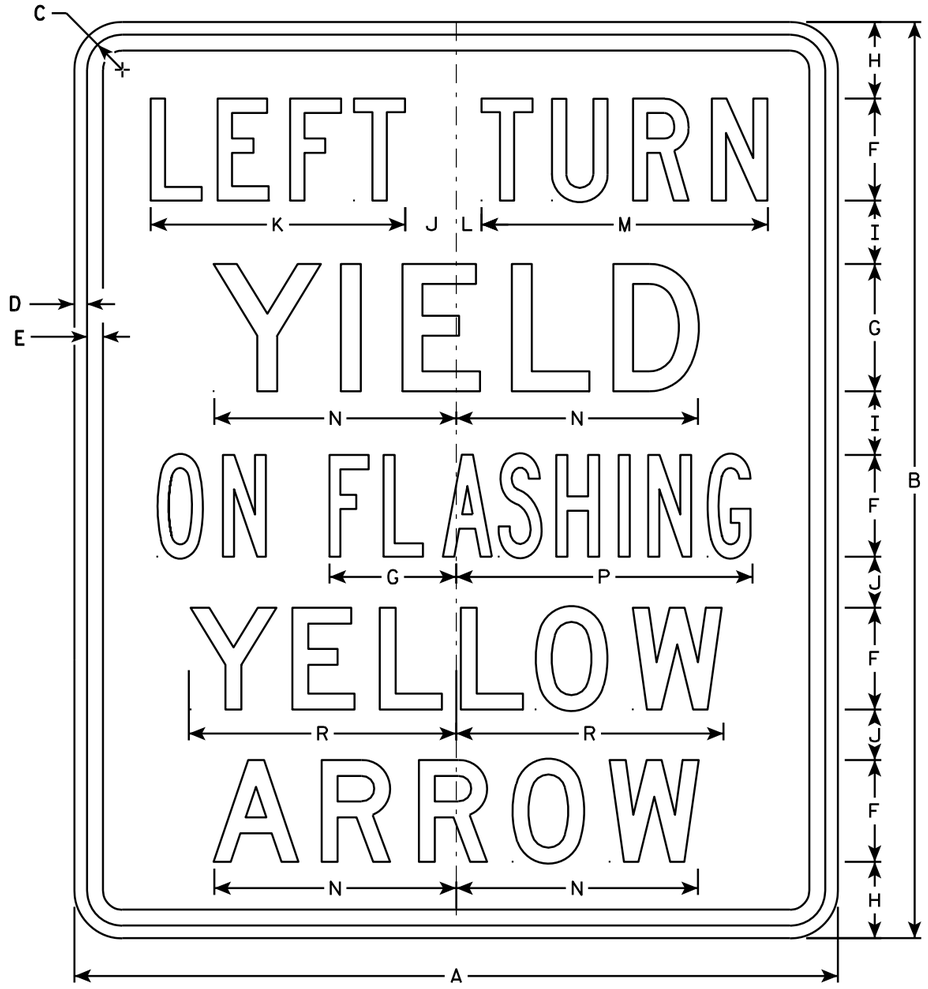
STANDARD SIGN
R10-23

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/2/2013 PLA 610 R10-23.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

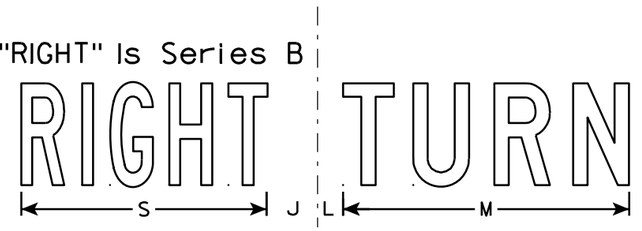


R10-50L

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																											

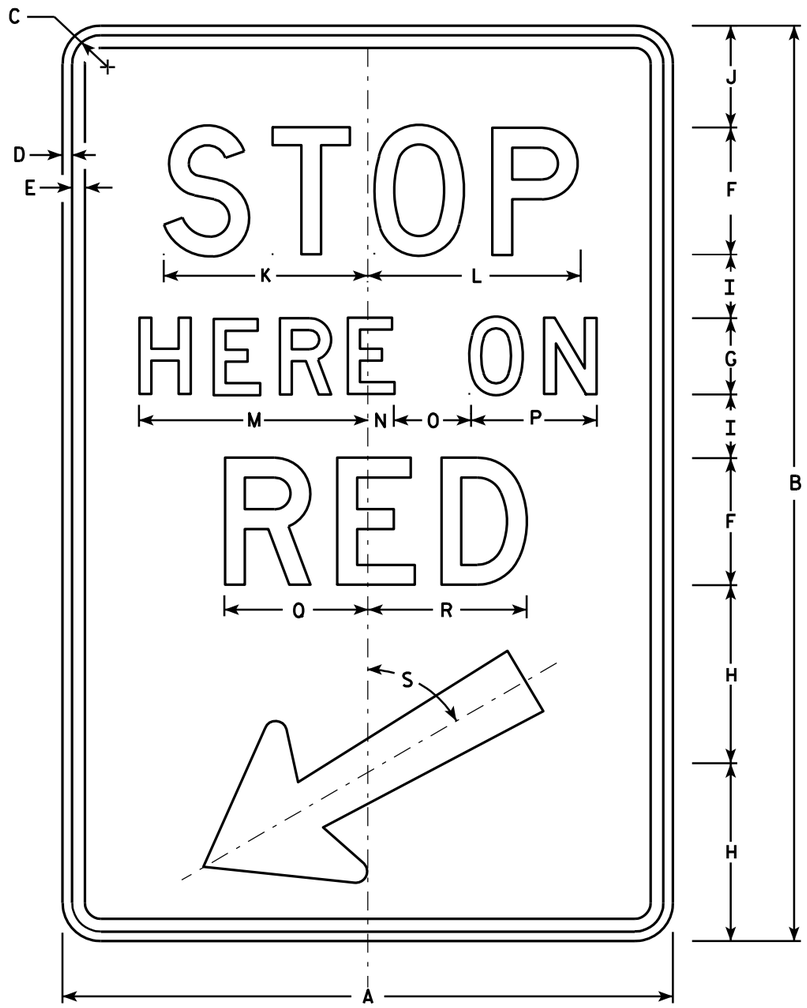
STANDARD SIGN
R10-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/11/13 PLATE NO. R10-50.2

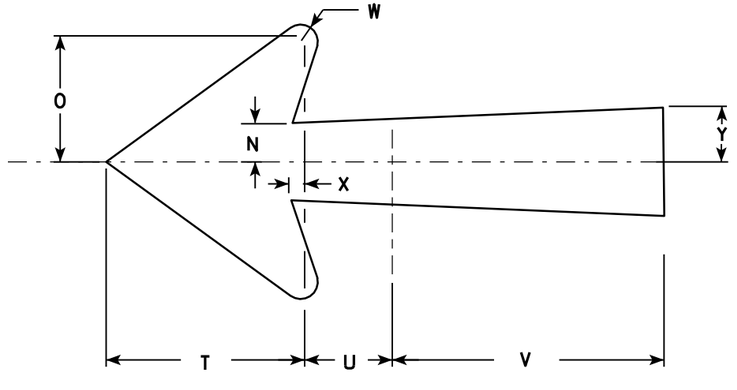
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 611	E



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																											

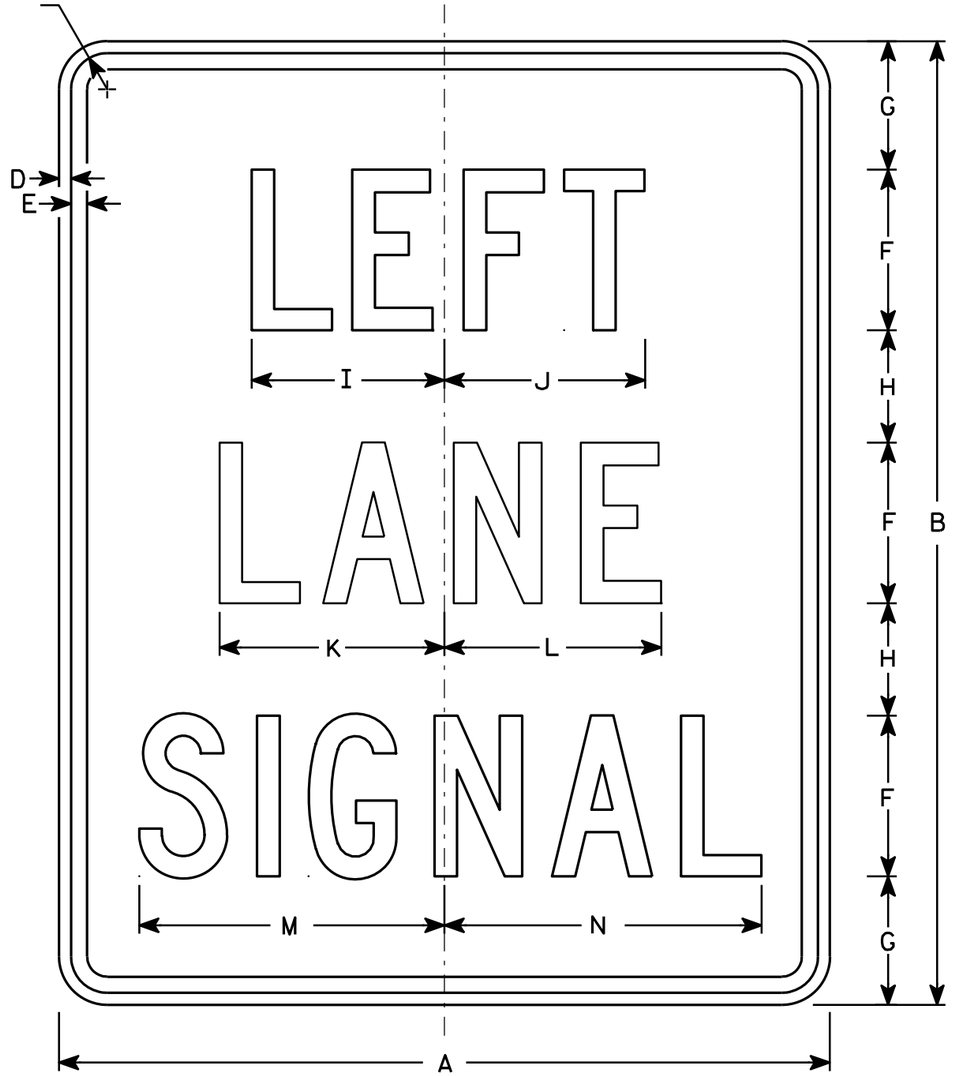
STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

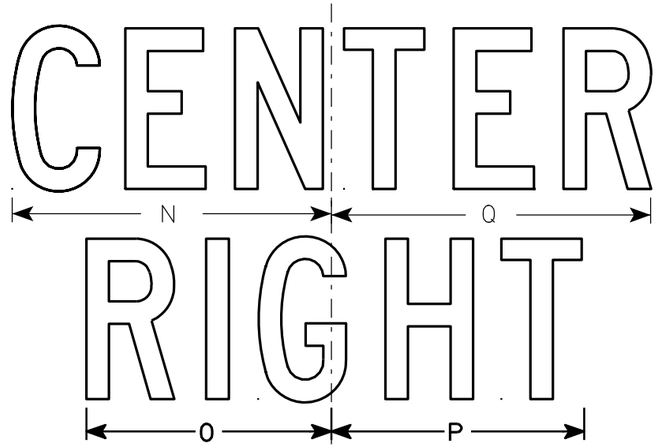
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 612	E



R10-65L

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.



R10-65C

R10-65R

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	4	3 1/2	6	6 1/4	7	6 3/4	9 1/2	9 7/8	7 5/8	7 7/8	10										5.0
2M	24	30	1 1/8	3/8	1/2	5	4	3 1/2	6	6 1/4	7	6 3/4	9 1/2	9 7/8	7 5/8	7 7/8	10										5.0
3																											
4																											
5																											

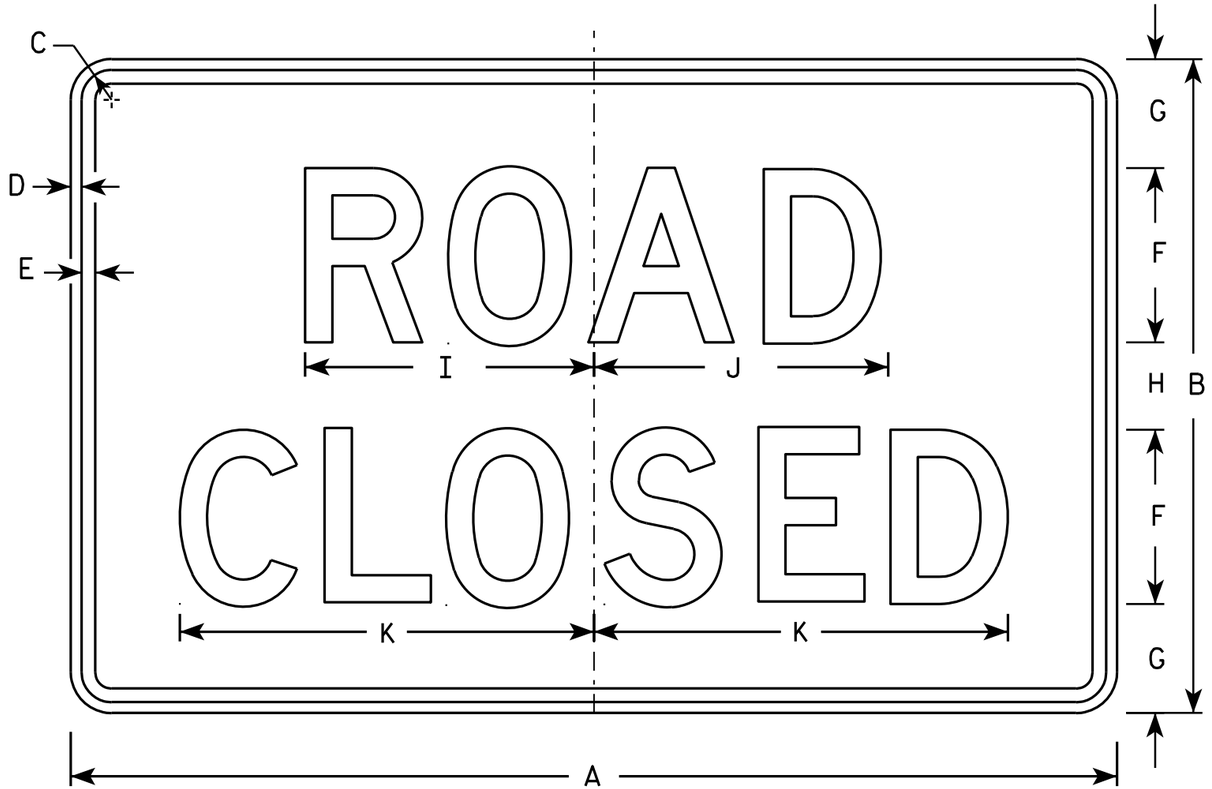
STANDARD SIGN
R10-65

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-65.2

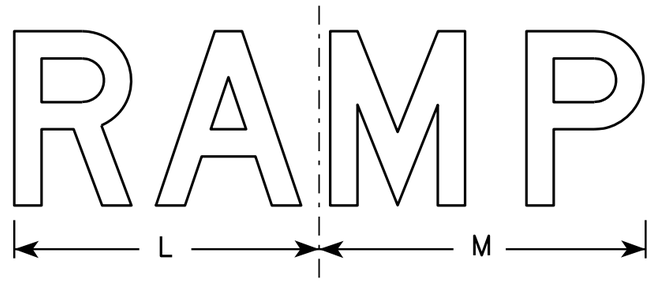
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 613 | E



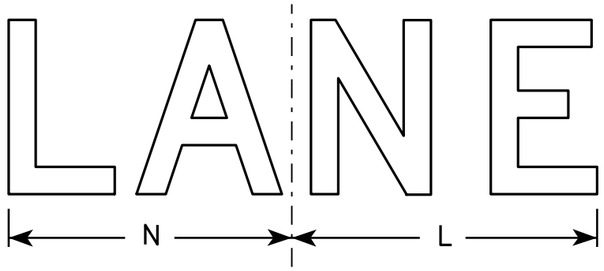
R11-2

NOTES

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



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

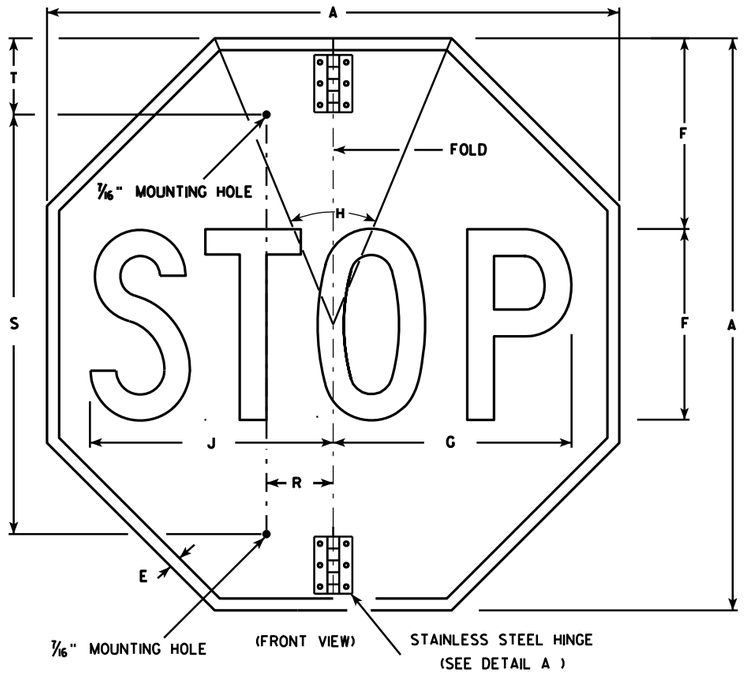
STANDARD SIGN
R11-2

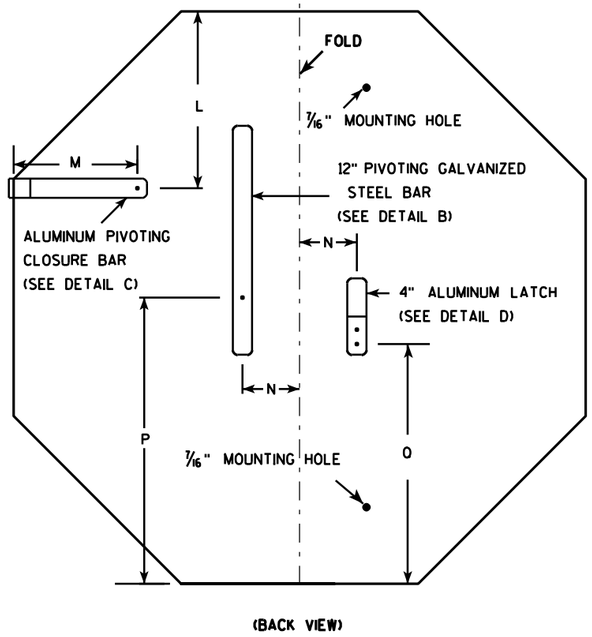
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

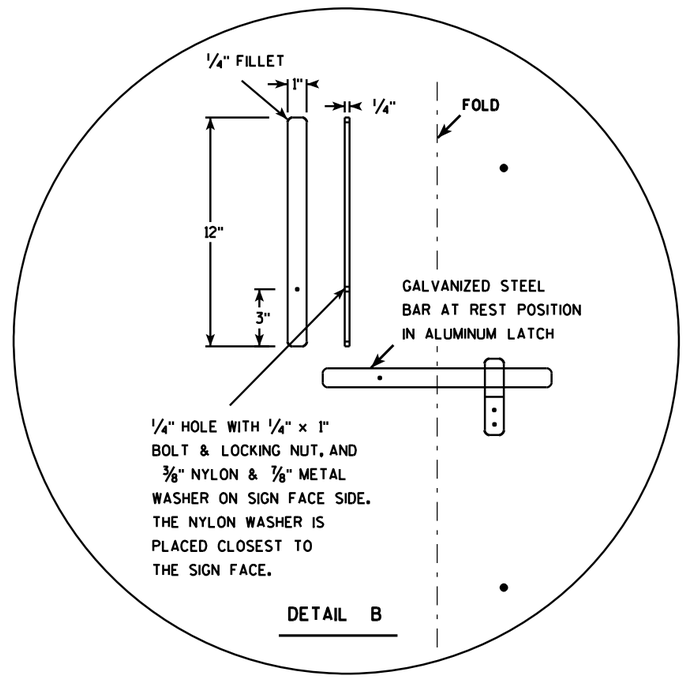
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 614	E

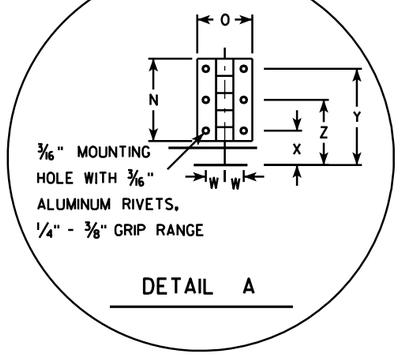


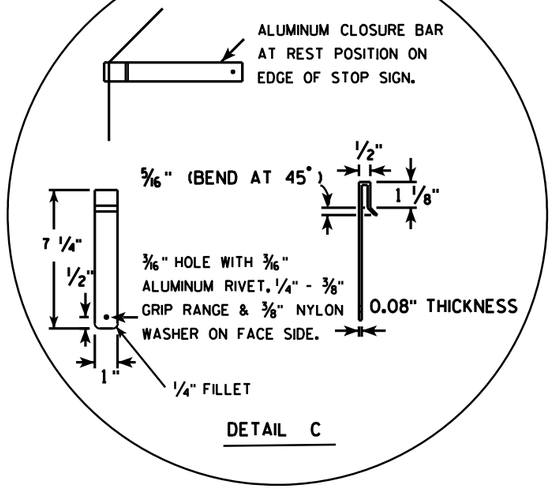


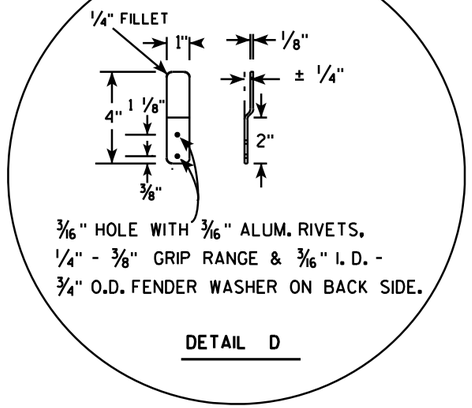
NOTES

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









SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

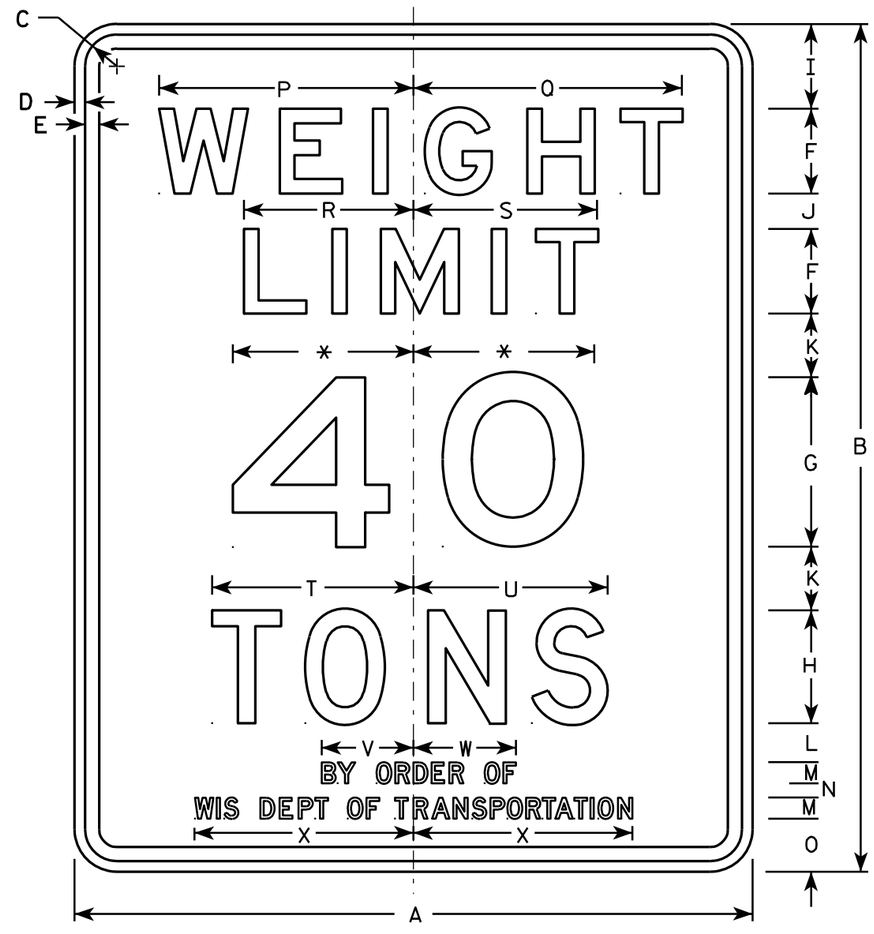
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 615	E



R12-1

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 - 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, 2 & 3 are series E
   Lines 4, 5, & 6 are series D.
6. Substitute appropriate numeral and optically adjust spacing to achieve proper balance.
7. Substitute name of county or town on County Trunk and Town Highways respectively. Community name on City or Village Streets including Connecting Highways is optional.

* Varies (see note 6)

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	30	1 1/8	3/8	1/2	3	6	4	3	1 1/4	2 1/4	1 3/8	3/4	1/2	1 7/8	9	9 1/2	6	6 1/2	7 1/8	6 7/8	3 1/4	3 5/8	7 3/4			5.0
2S	24	30	1 1/8	3/8	1/2	3	6	4	3	1 1/4	2 1/4	1 3/8	3/4	1/2	1 7/8	9	9 1/2	6	6 1/2	7 1/8	6 7/8	3 1/4	3 5/8	7 3/4			5.0
2M	24	30	1 1/8	3/8	1/2	3	6	4	3	1 1/4	2 1/4	1 3/8	3/4	1/2	1 7/8	9	9 1/2	6	6 1/2	7 1/8	6 7/8	3 1/4	3 5/8	7 3/4			5.0
3	36	48	1 3/8	1/2	5/8	6	10	8	4 1/2	2 1/2	2 1/4	1 1/2	3/4	1/2	3	13 1/2	14 1/4	9	9 3/4	10 5/8	10 1/4	3 1/4	3 5/8	7 3/4			12.0
4	48	60	2 1/4	3/4	1	6	12	8	6	2 1/2	4 1/2	2 3/4	1 1/2	1	3 3/4	18	19	12	13	14 1/4	13 3/4	6 1/2	7 1/4	15 1/2			20.0
5																											

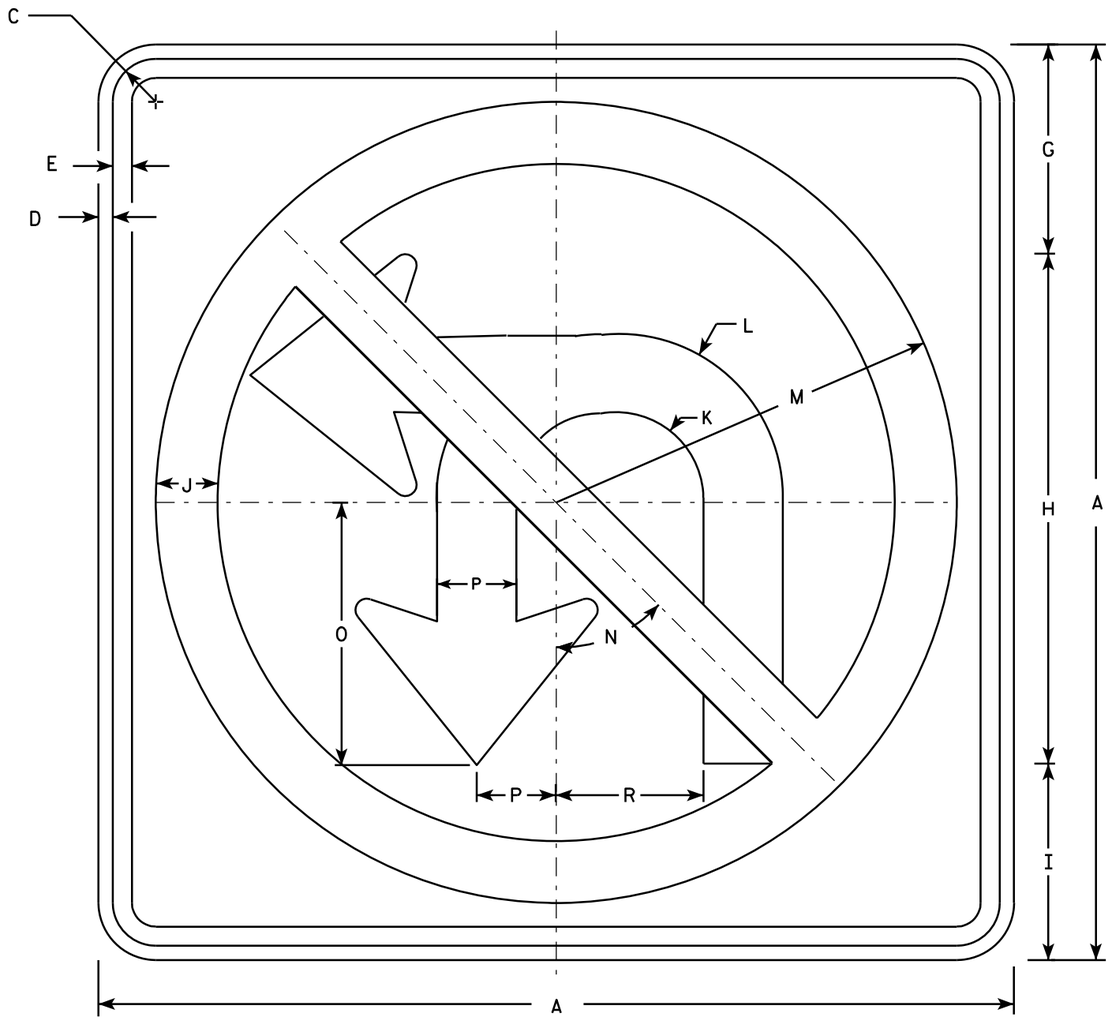
STANDARD SIGN
R12-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R12-1.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 616 | E



R3-18

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.

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		5 1/2	13 3/8	5 1/8	1 5/8	2 1/4	4 1/4	10 1/2	45°	6 7/8	2 1/8		3 7/8									4.0
2M	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8		5 3/4									9.0
3	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
4	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
5	48		2 1/4	3/4	1		11	26 3/4	10 1/4	3 1/4	4 5/8	8 5/8	21	45°	13 3/4	4 1/8		7 3/4									16.0

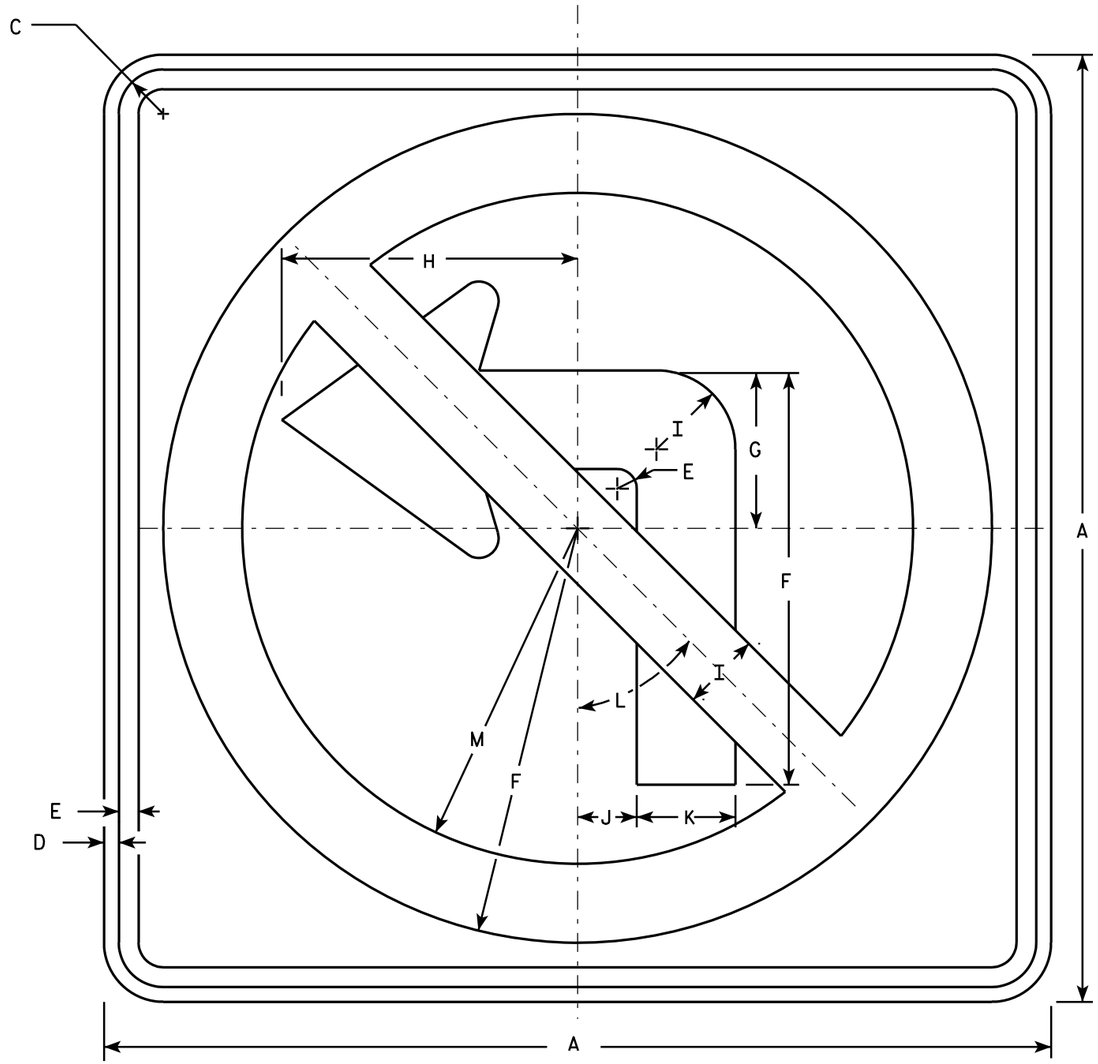
STANDARD SIGN
R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

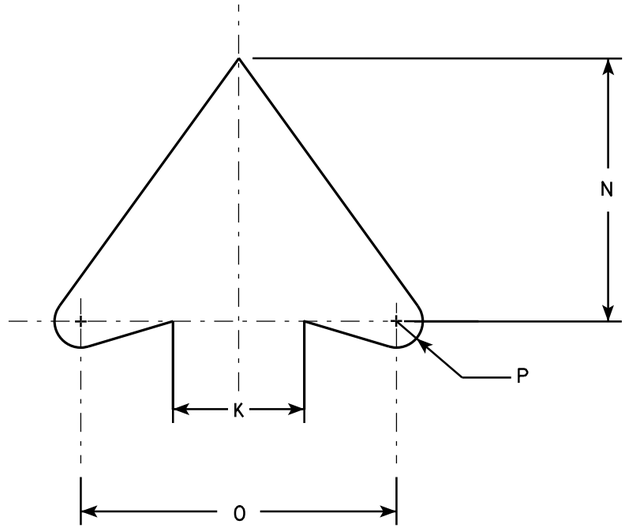
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 617	E



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

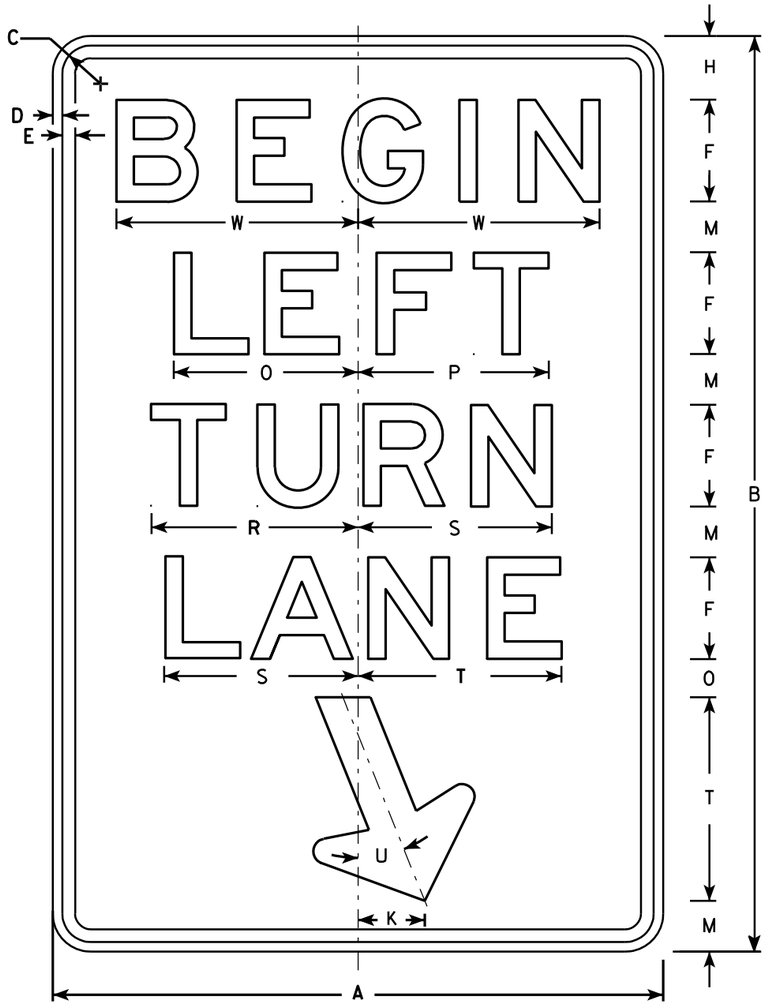
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

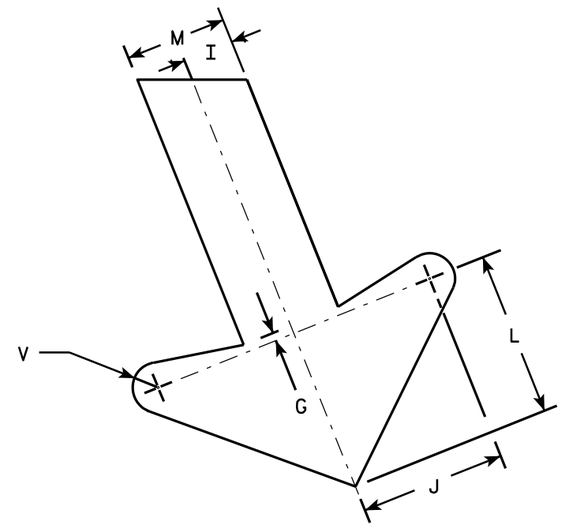
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 618	E



R3-20L

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.



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	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

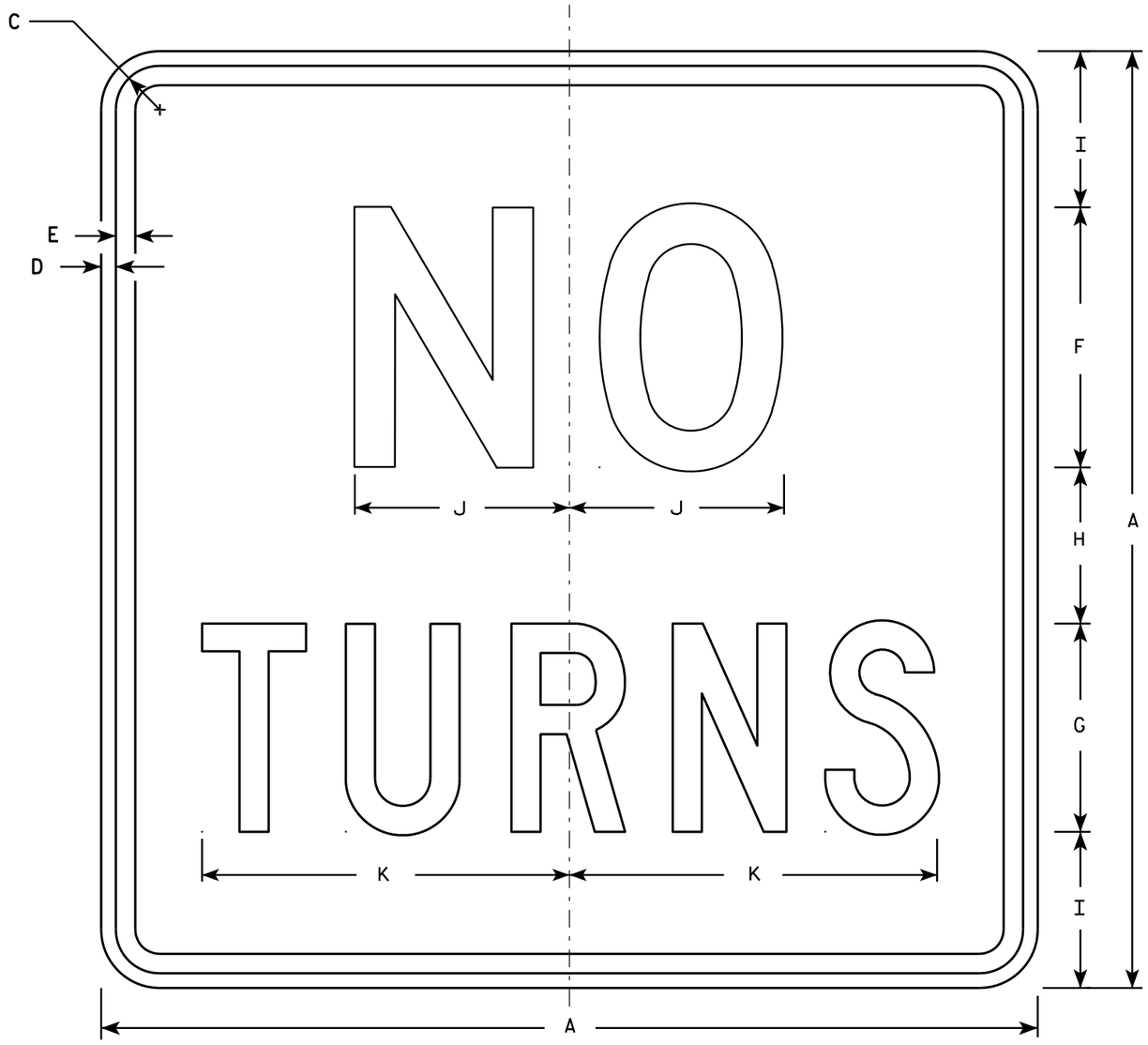
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 619 | E



R3-3

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 D and Line 2 is 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																											
2S	24		1 1/8	3/8	1/2	6	5	4	4 1/2	5 1/8	8 3/4																4.0
2M	36		1 5/8	5/8	3/4	10	8	6	6	8 1/4	14 1/8																9.0
3	36		1 5/8	5/8	3/4	10	8	6	6	8 1/4	14 1/8																9.0
4	36		1 5/8	5/8	3/4	10	8	6	6	8 1/4	14 1/8																9.0
5	48		2 1/4	3/4	1	12	10	8	9	10 1/4	17 5/8																16.0

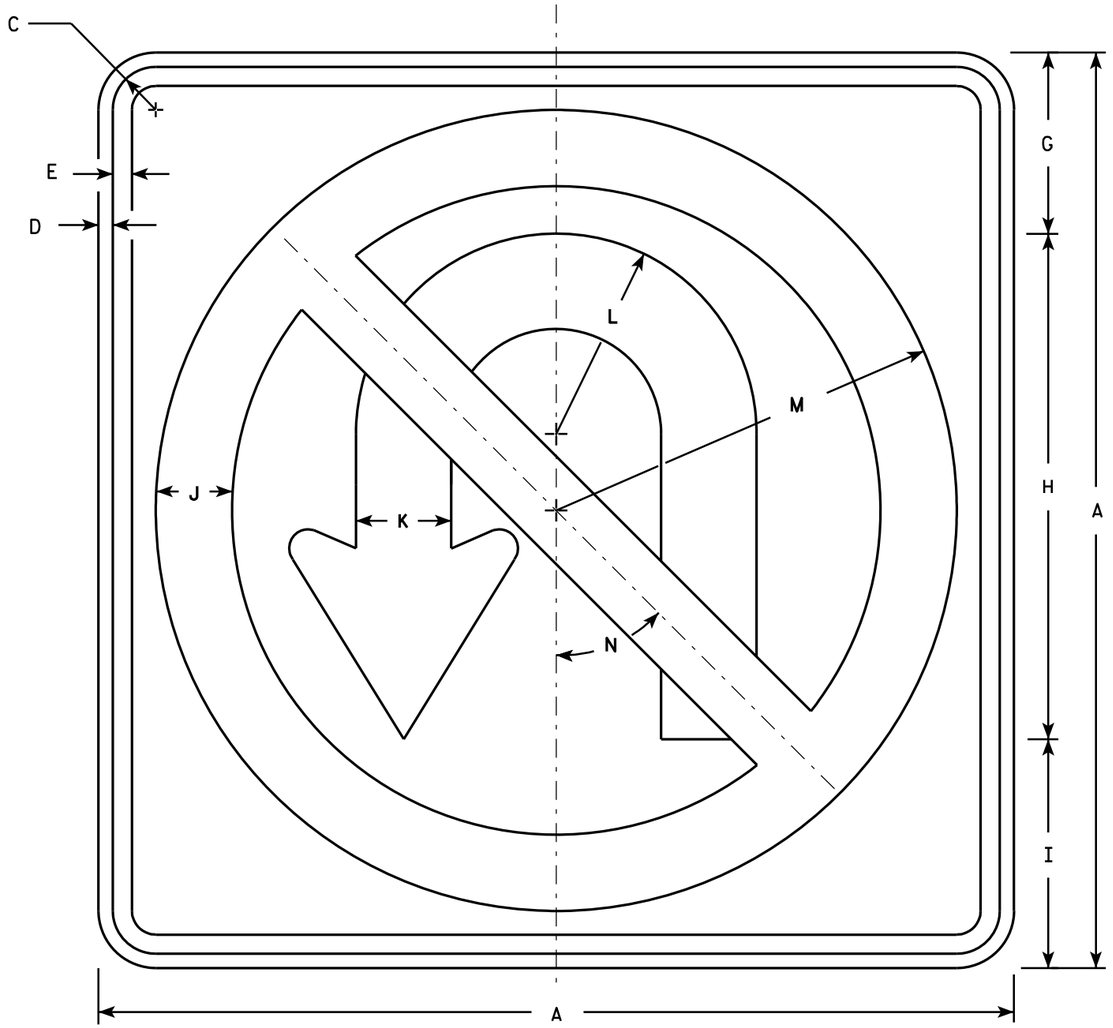
STANDARD SIGN
R3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-3.10

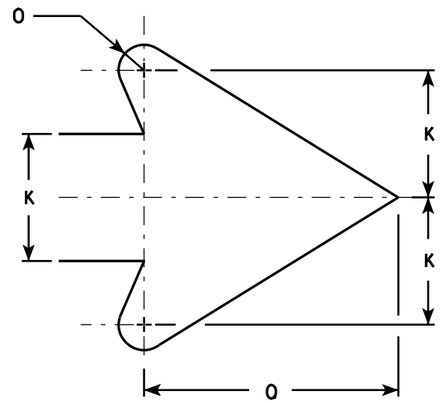
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 620 | E



R3-4

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 - 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	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		4 3/4	13 1/4	6	2	2 1/2	5 1/4	10 1/2	45°	1/2		5										4.0
2M	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
3	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
4	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
5	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0

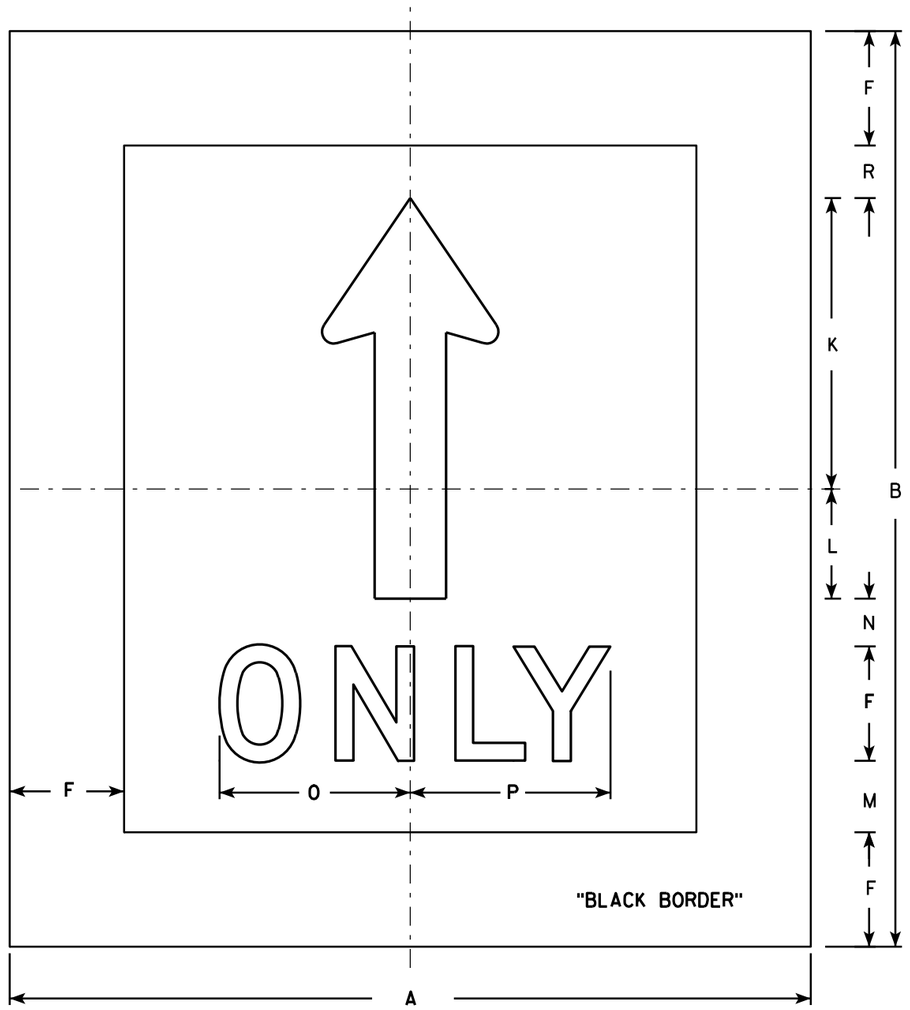
STANDARD SIGN
R3-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-4.11

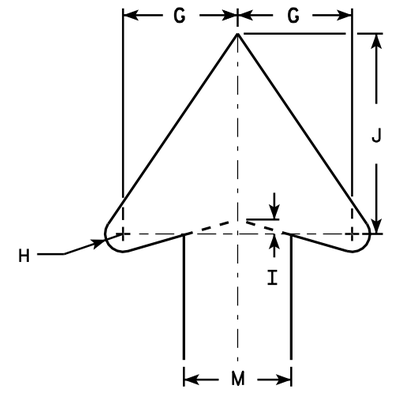
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 621	E



R3-5A

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. When base material is metal, the corners shall be rounded.
5. The 6" border is non-reflective black.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	48				6	4	5/8	1/2	7	15 1/4	5 3/4	3 3/4	2 1/2	10	10 1/2		2 3/4									1.26
2M	42	48				6	4	5/8	1/2	7	15 1/4	5 3/4	3 3/4	2 1/2	10	10 1/2		2 3/4									1.26
3																											
4																											
5																											

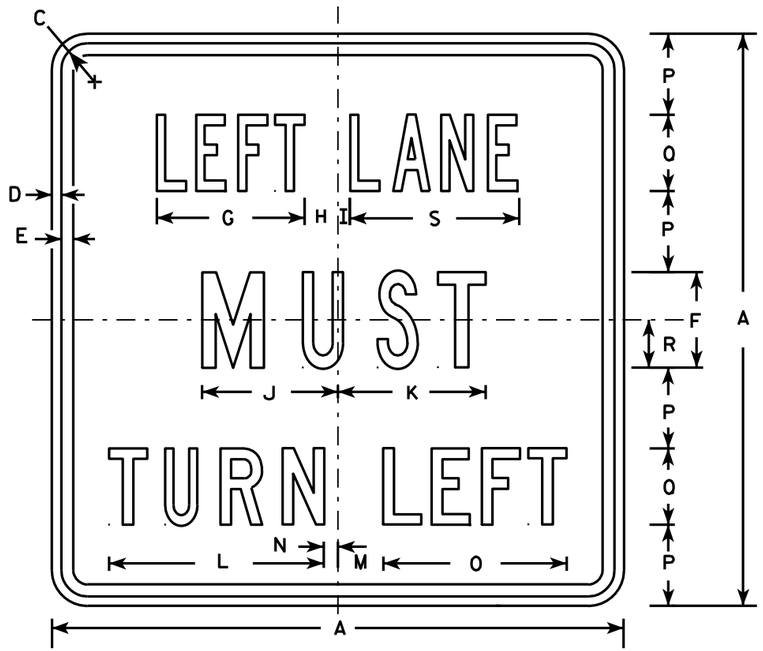
STANDARD SIGN
R3-5A

WISCONSIN DEPT OF TRANSPORTATION

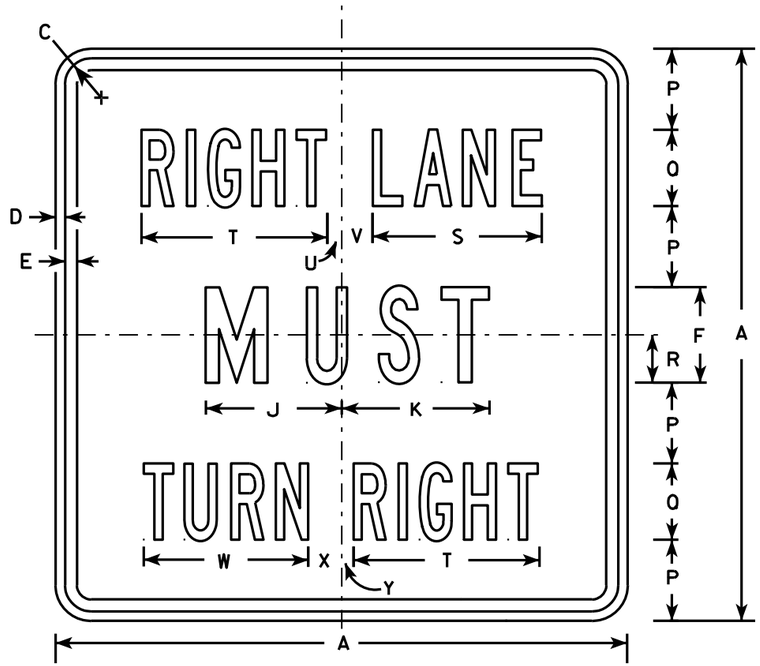
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/24/11 PLATE NO. R3-5A.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 622	E



R3-7L



R3-7R

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 - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
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	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

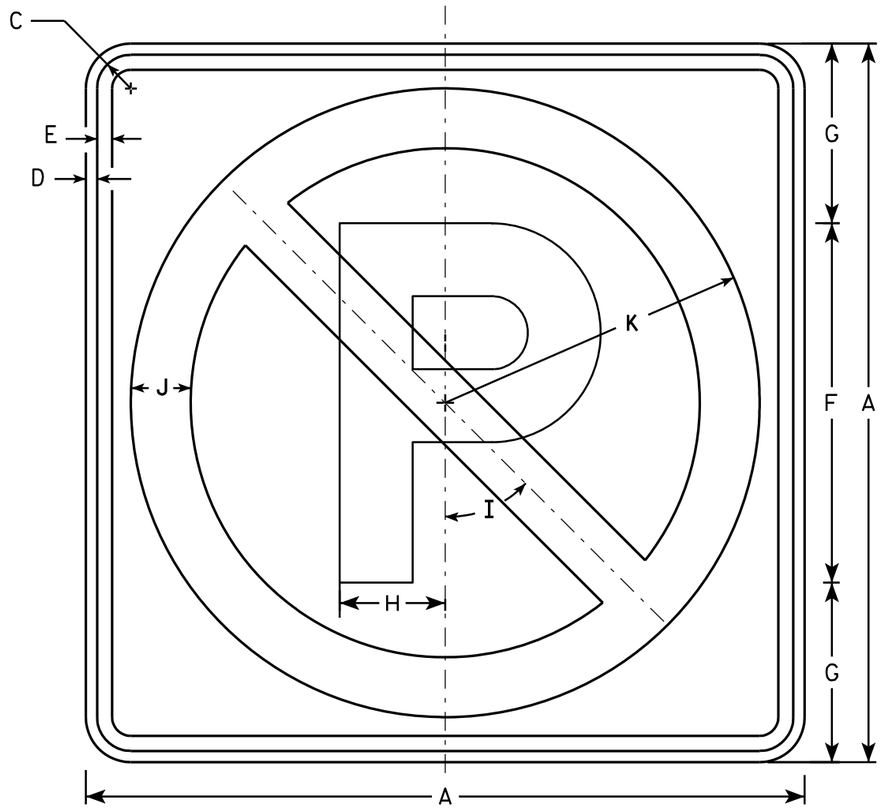
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 623 | E



R3-8A

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 & Letter P are non reflective black, the circle with diagonal bar is reflective red.

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	12	6	3 1/2	45°	2	10 1/2																4.0
2M	24		1 1/8	3/8	1/2	12	6	3 1/2	45°	2	10 1/2																4.0
3																											
4																											
5																											

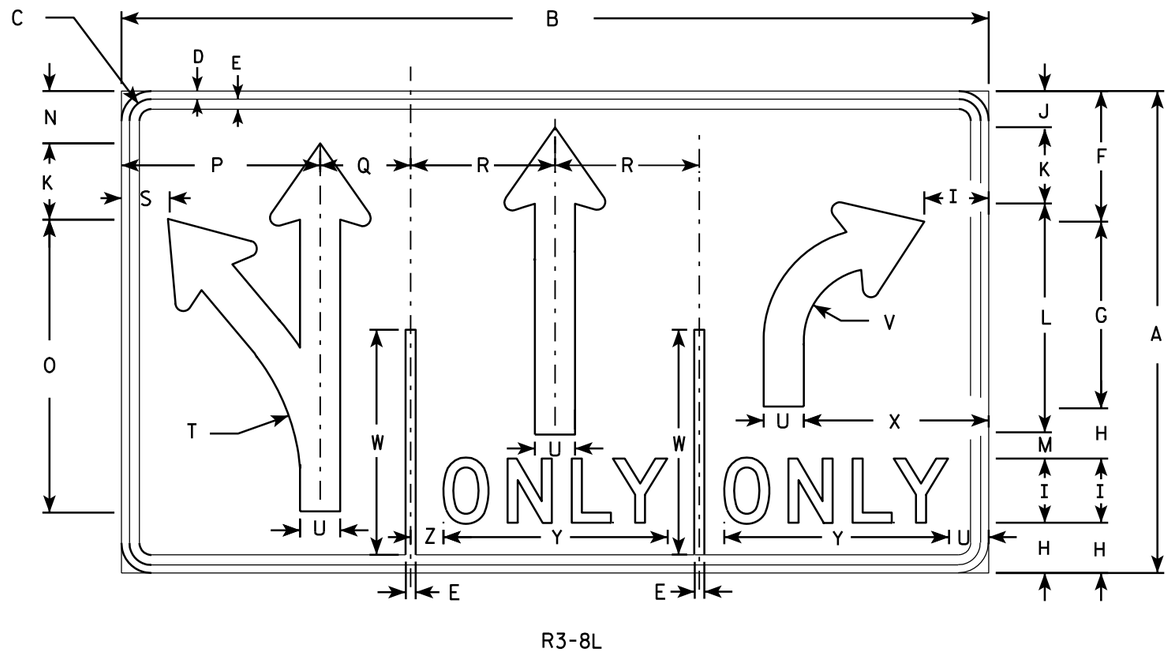
STANDARD SIGN
R3-8A

WISCONSIN DEPT OF TRANSPORTATION

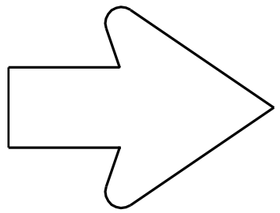
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/01/12 PLATE NO. R3-8A.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 624 | E



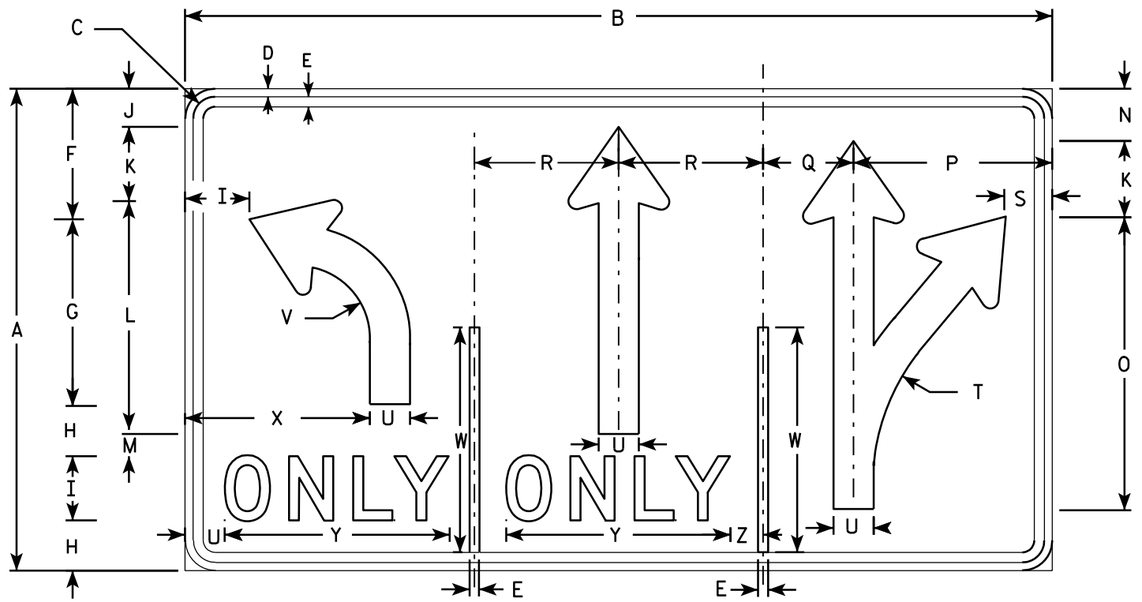
R3-8L



SEE R3-8 FOR ARROW DETAIL

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.



R3-8M

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	3 1/4	18 1/4	12 3/8	5 5/8	9	3	13 1/4	2 1/2	4 1/2	14	11 1/2	14	2	11.25
2M	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	3 1/4	18 1/4	12 3/8	5 5/8	9	3	13 1/4	2 1/2	4 1/2	14	11 1/2	14	2	11.25
3																											
4	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/2	7	29 1/8	2 7/8	5 1/4	29 1/8	18 5/8	8 3/4	14	4 3/8	21 7/8	3 3/4	7 1/4	22 3/8	17 1/4	20 5/8	3 1/4	28.0
5	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/2	7	29 1/8	2 7/8	5 1/4	29 1/8	18 5/8	8 3/4	14	4 3/8	21 7/8	3 3/4	7 1/4	22 3/8	17 1/4	20 5/8	3 1/4	28.0

STANDARD SIGN
R3-8L & R3-8M

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/2011 PLATE NO. R3-8L.2

PROJECT NO:

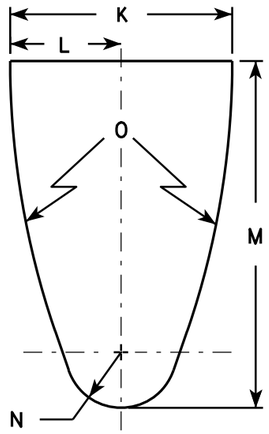
SHEET NO: 625 E

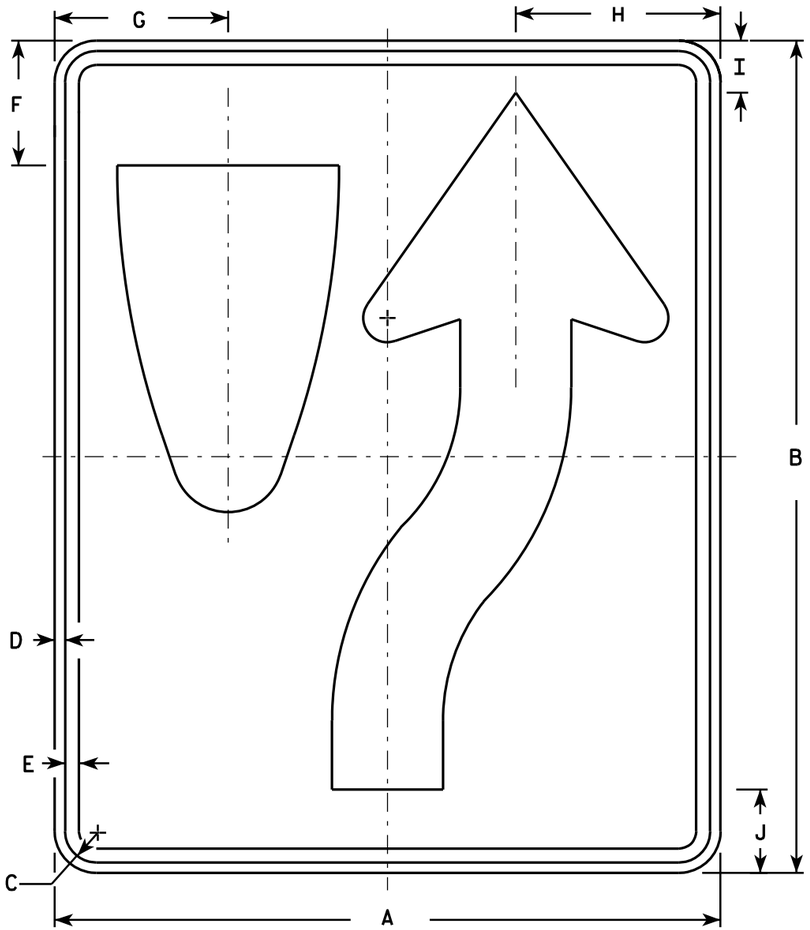
7

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R38L.DGN PLOT DATE : 21-MAR-2011 14:39 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42

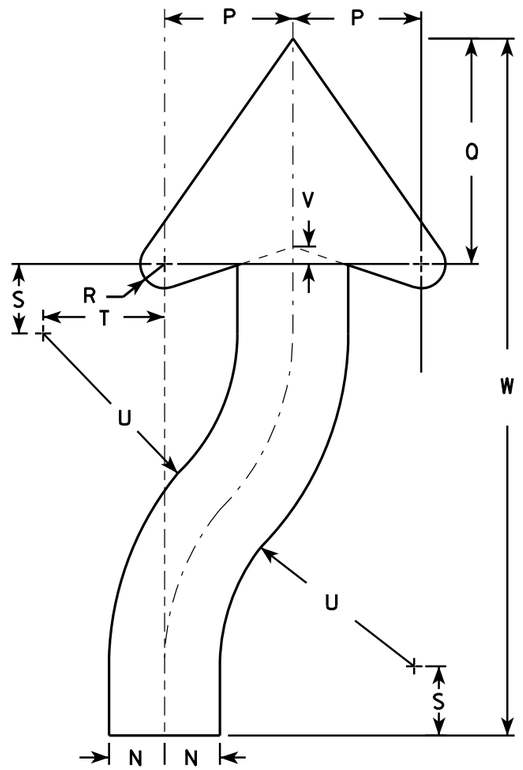




R4-7

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

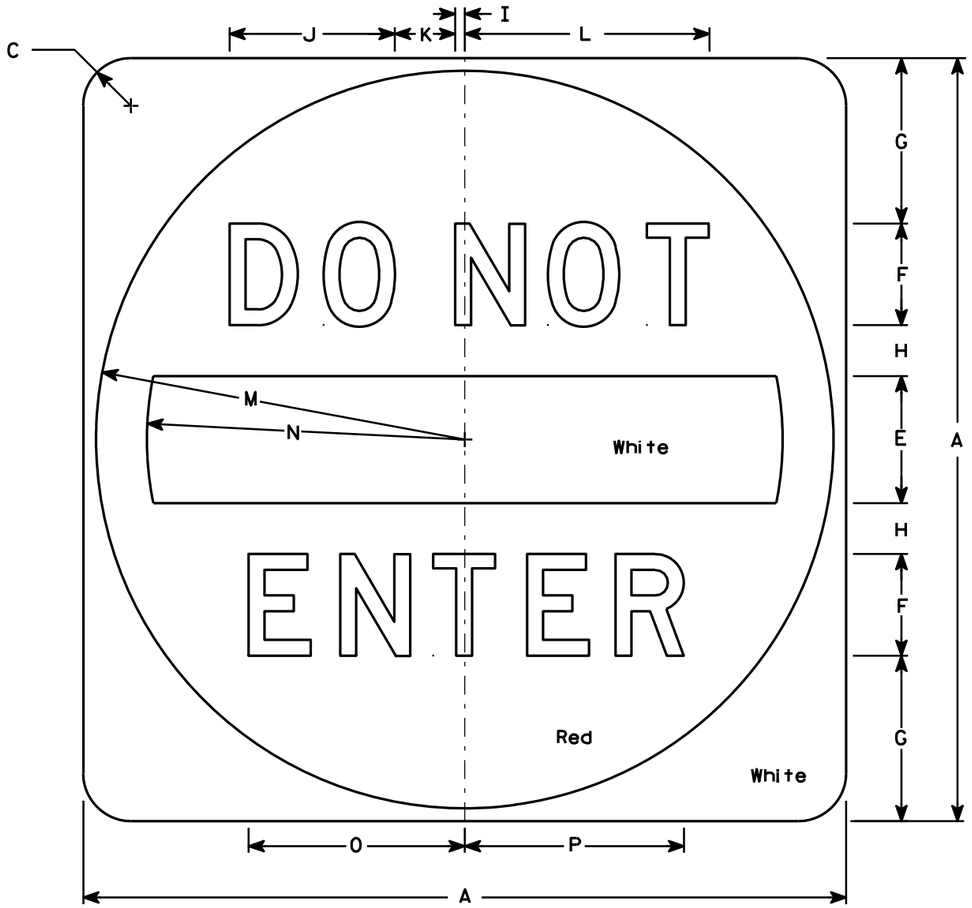
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 626	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: | HWY: | COUNTY: | SHEET NO: 627 | E



R5-57

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 - Lines 1, 2, and 5 are Series C.
   Lines 3 and 4 are 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																											
2S																											
2M																											
3																											
4	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0
5	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0

STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

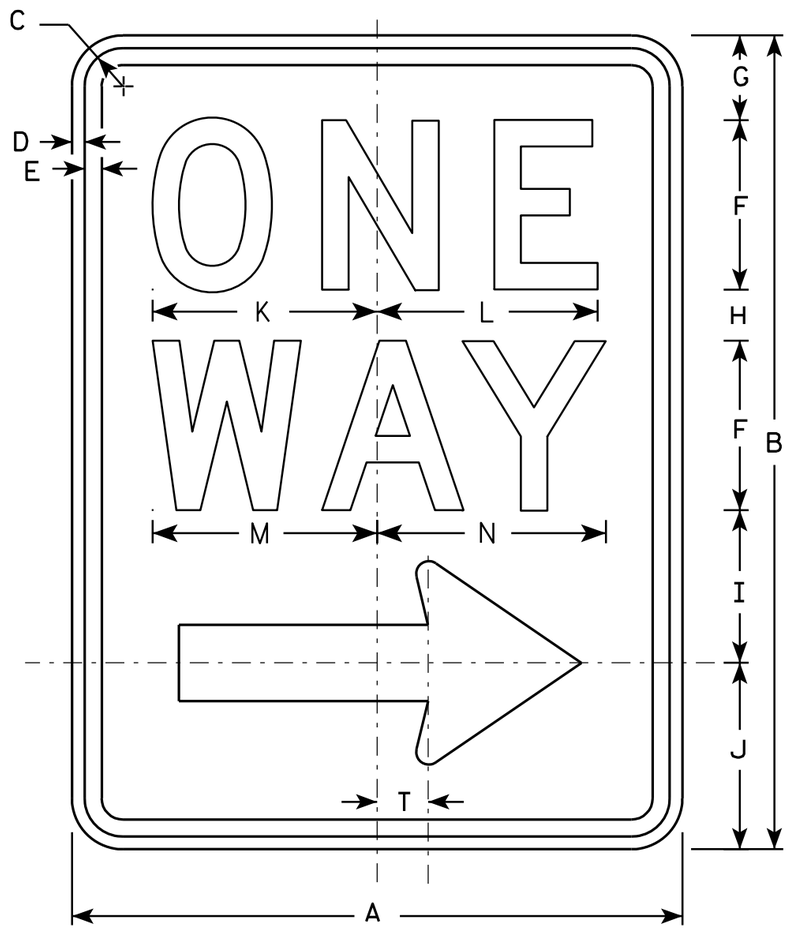
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 628 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R557.DGN PLOT DATE : 29-MAR-2011 14:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

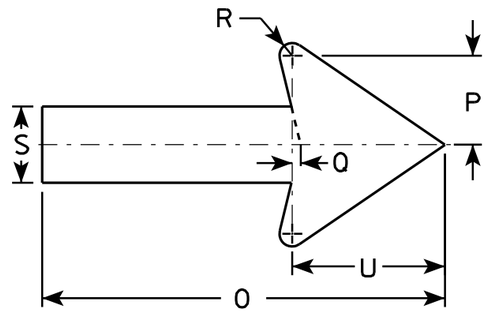
7



R6-2R

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 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																										

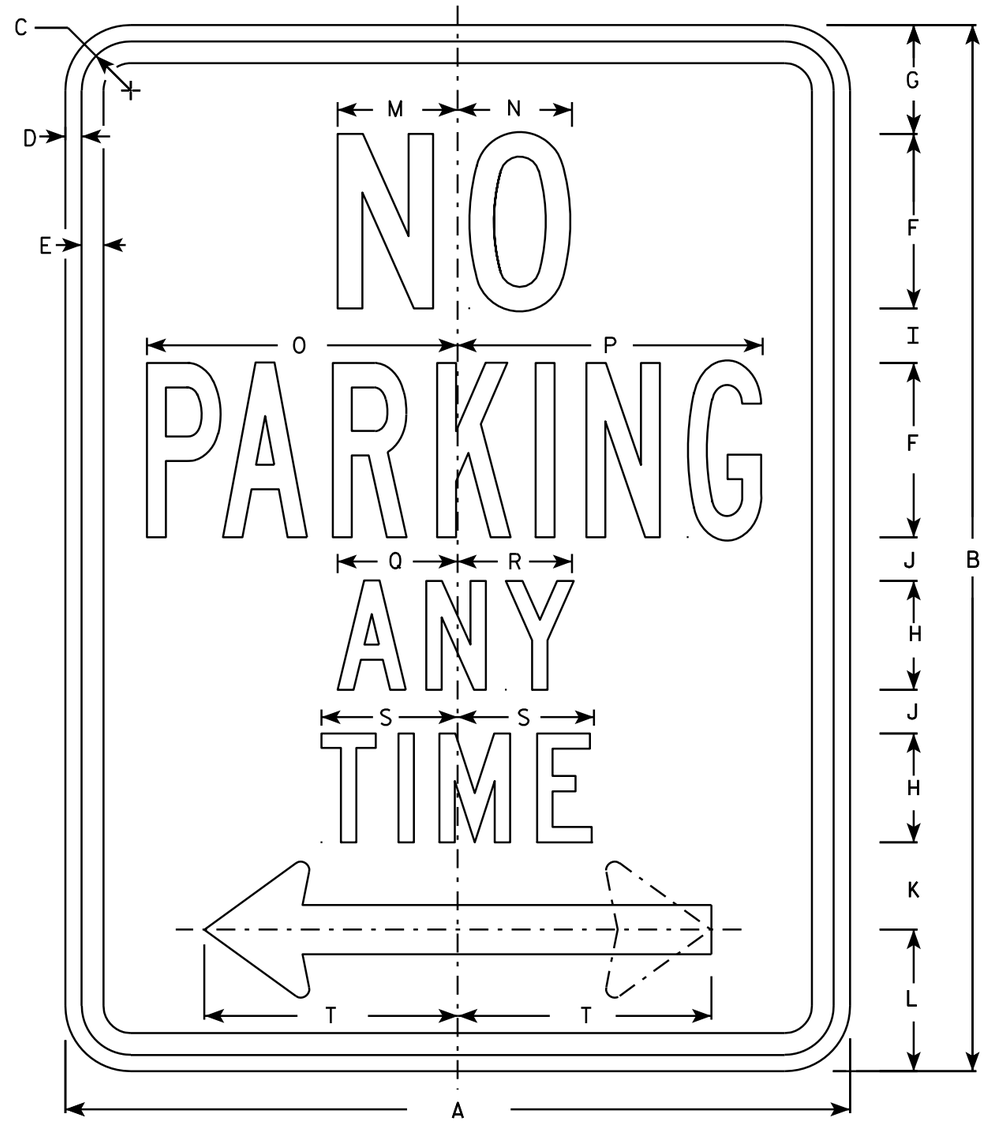
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

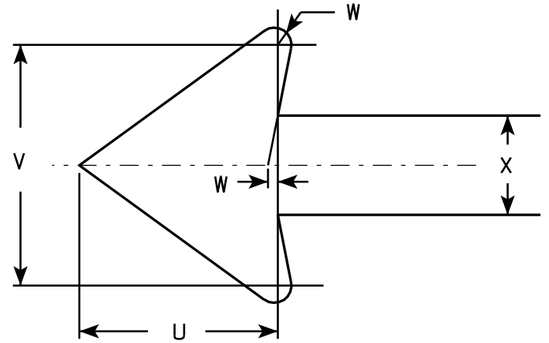
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 629	E



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																											

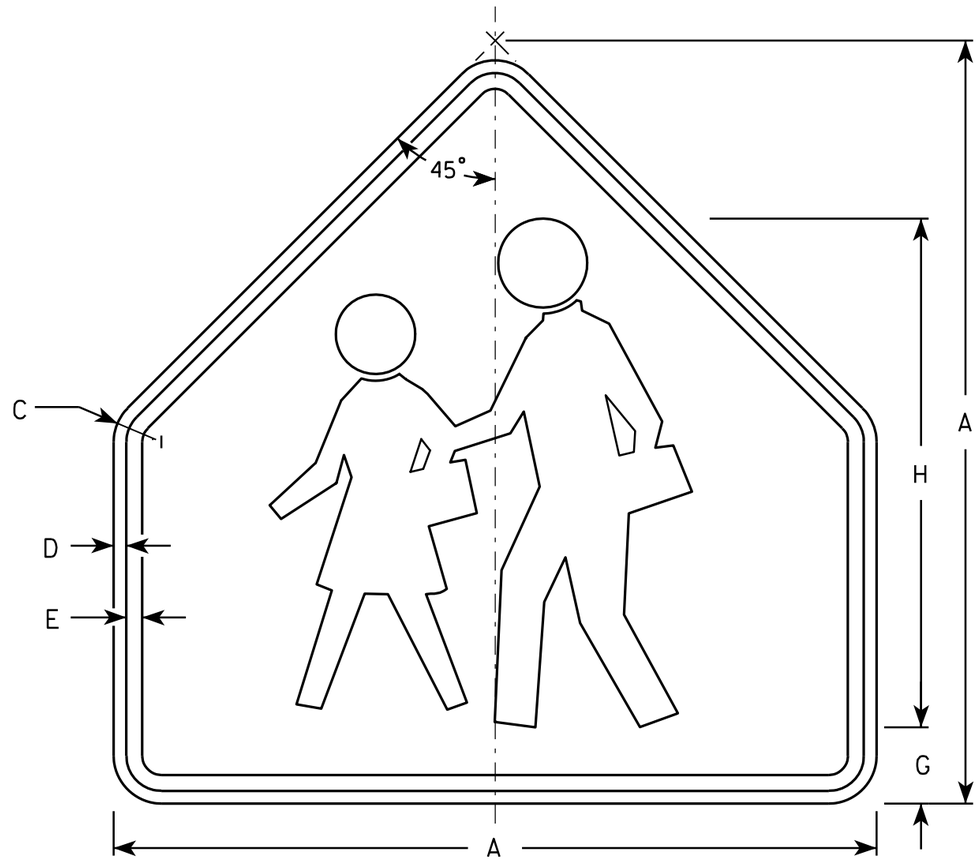
STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 630	E



S1-1

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		3	20																			4.69
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
4	48		2 1/4	3/4	1		4 3/4	32																			12
5																											

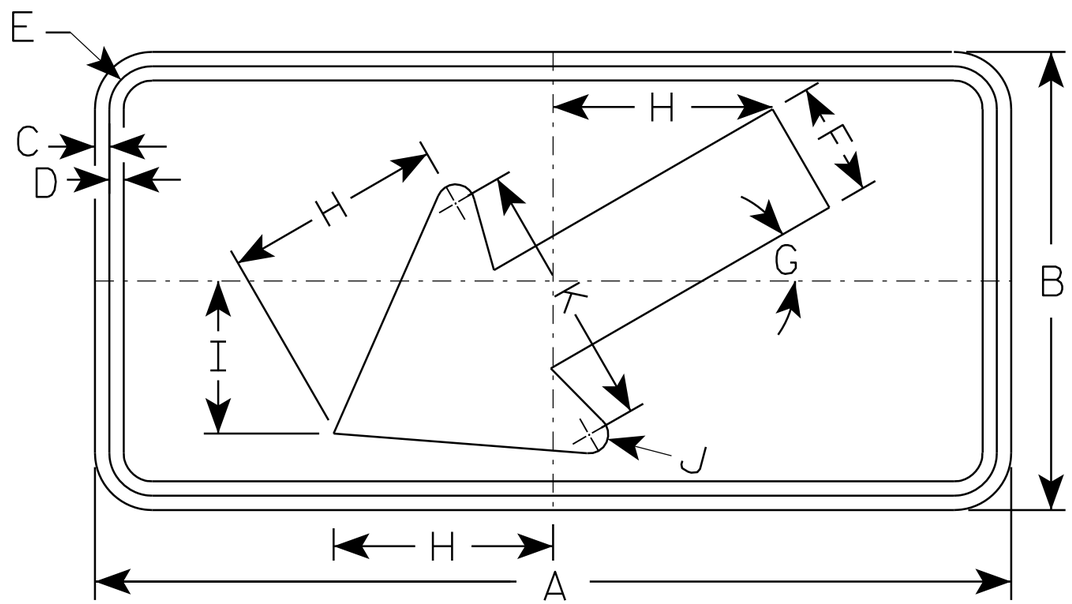
STANDARD SIGN
S1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/05 PLATE NO. S1-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 631	E



S16-7L

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow-Green
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. S16-7R are the same as S16-7L except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2S	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0
5																											

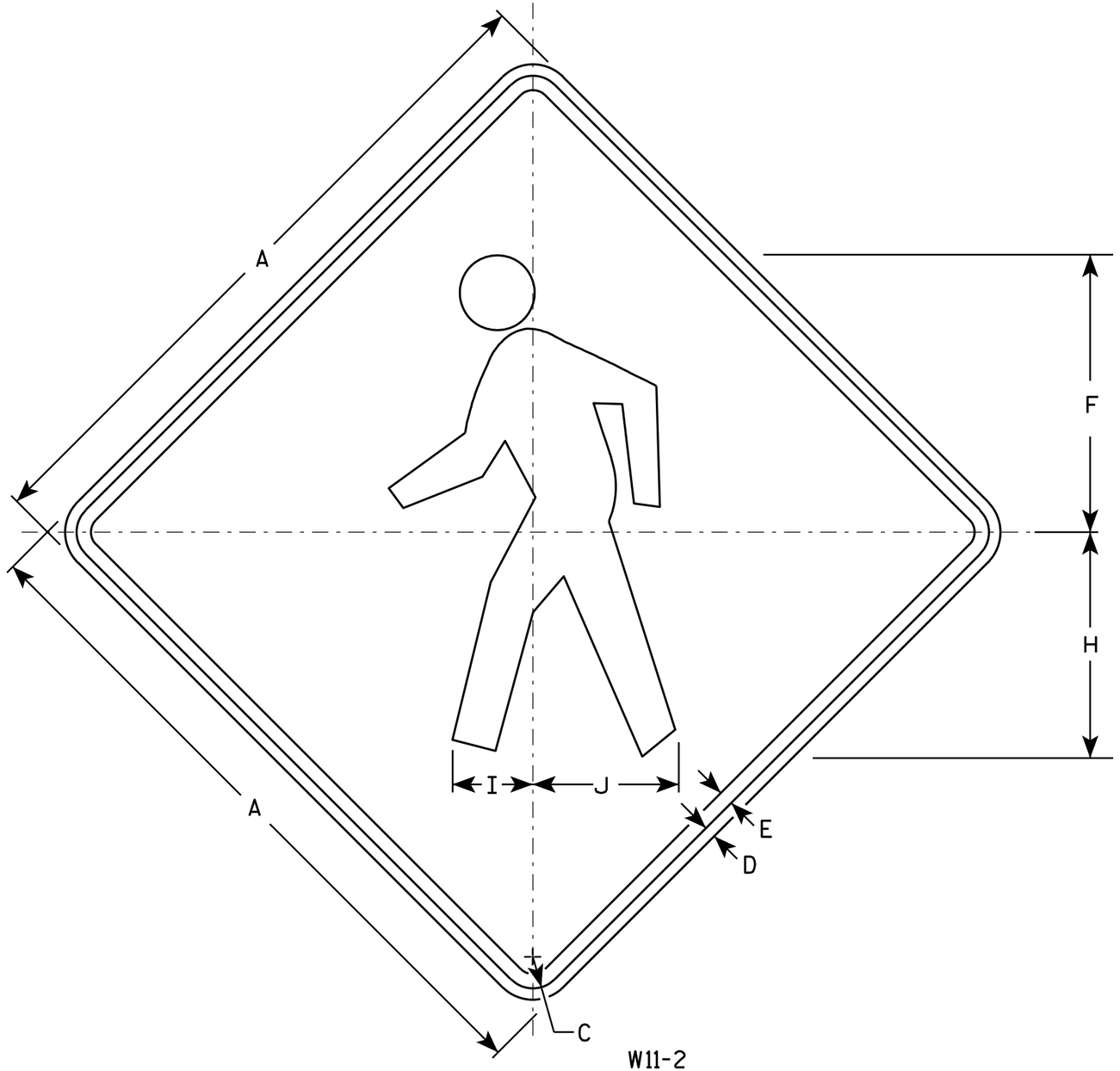
STANDARD SIGN
S16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/22/13 PLATE NO. S16-7.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 632 | E



W11-2

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. 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	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

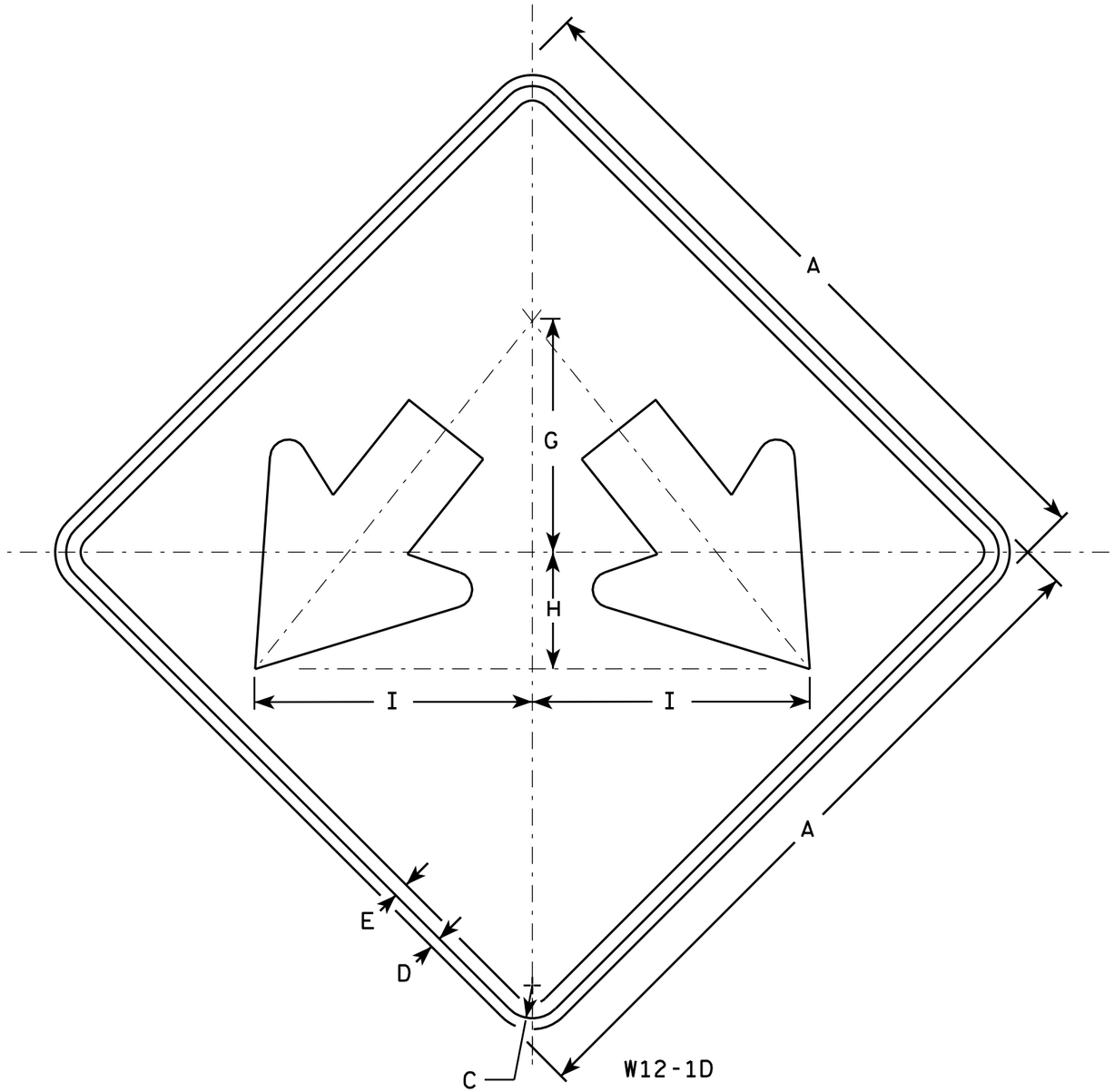
STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

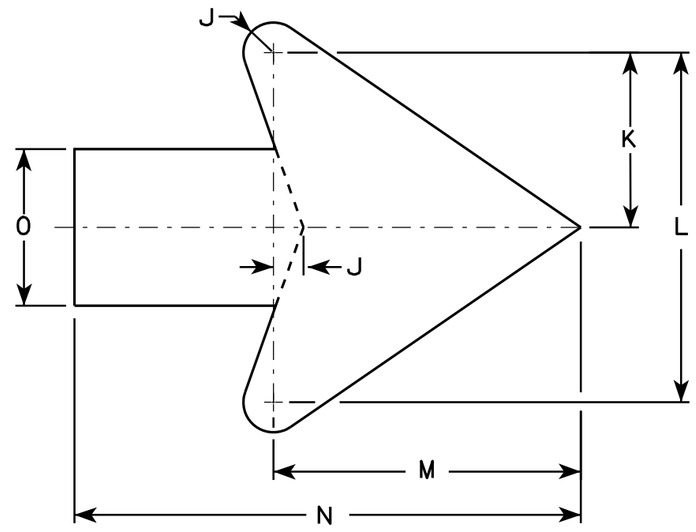
DATE 6/7/10 PLATE NO. W11-2.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 633	E



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

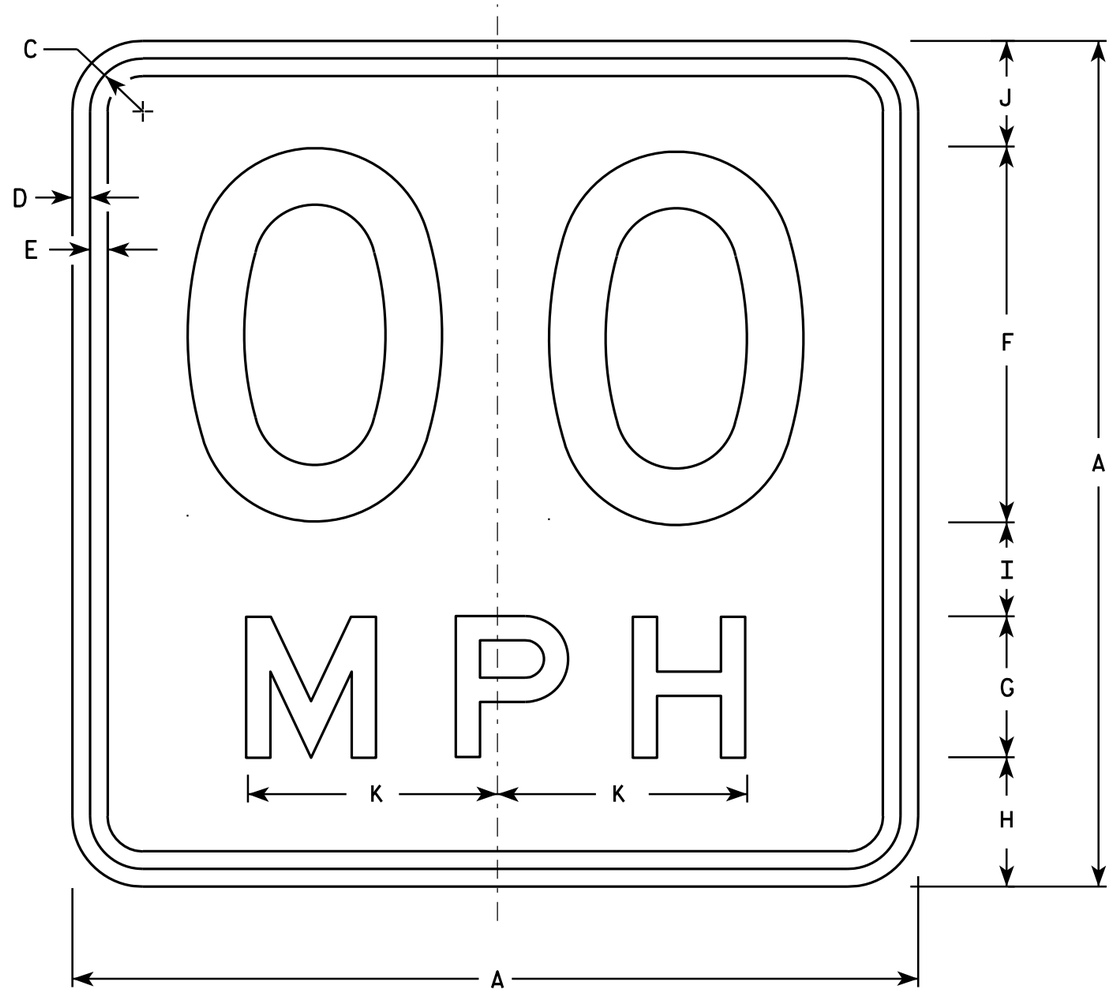
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 634	E



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

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 - 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. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	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	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

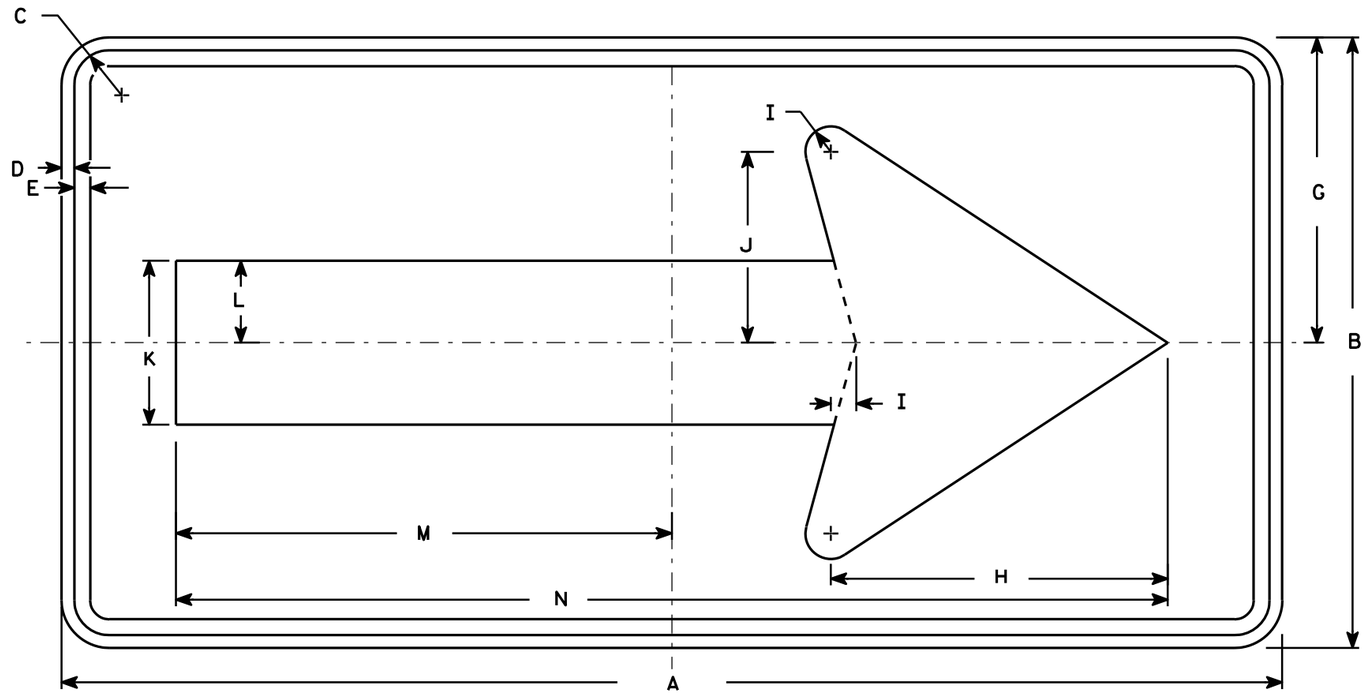
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 635 | E

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.



W1-6

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 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

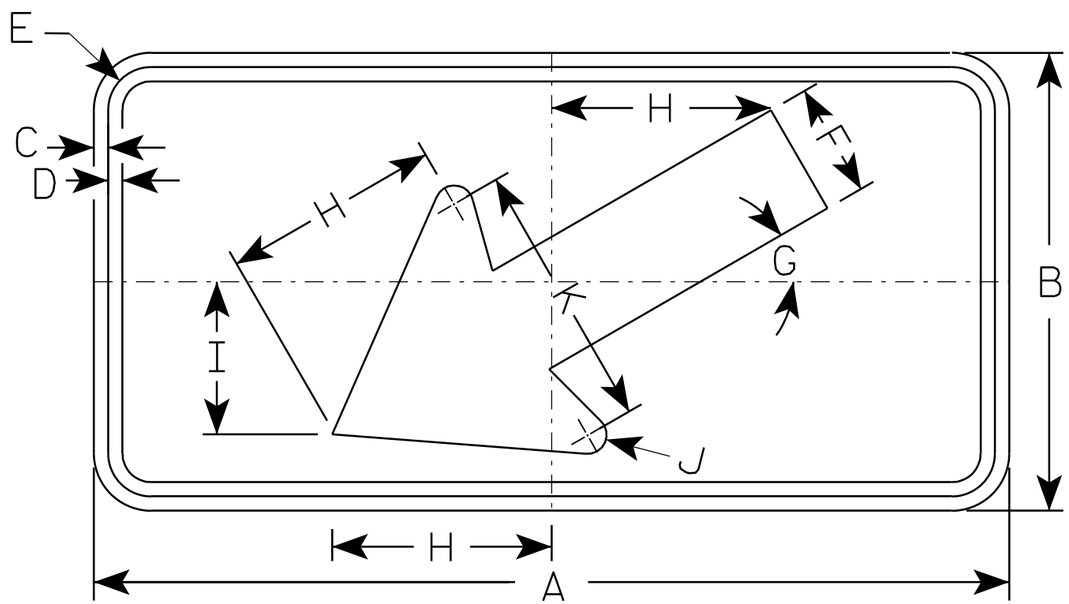
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 636



W16-7L

NOTES

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

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	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4																											8
5																											8

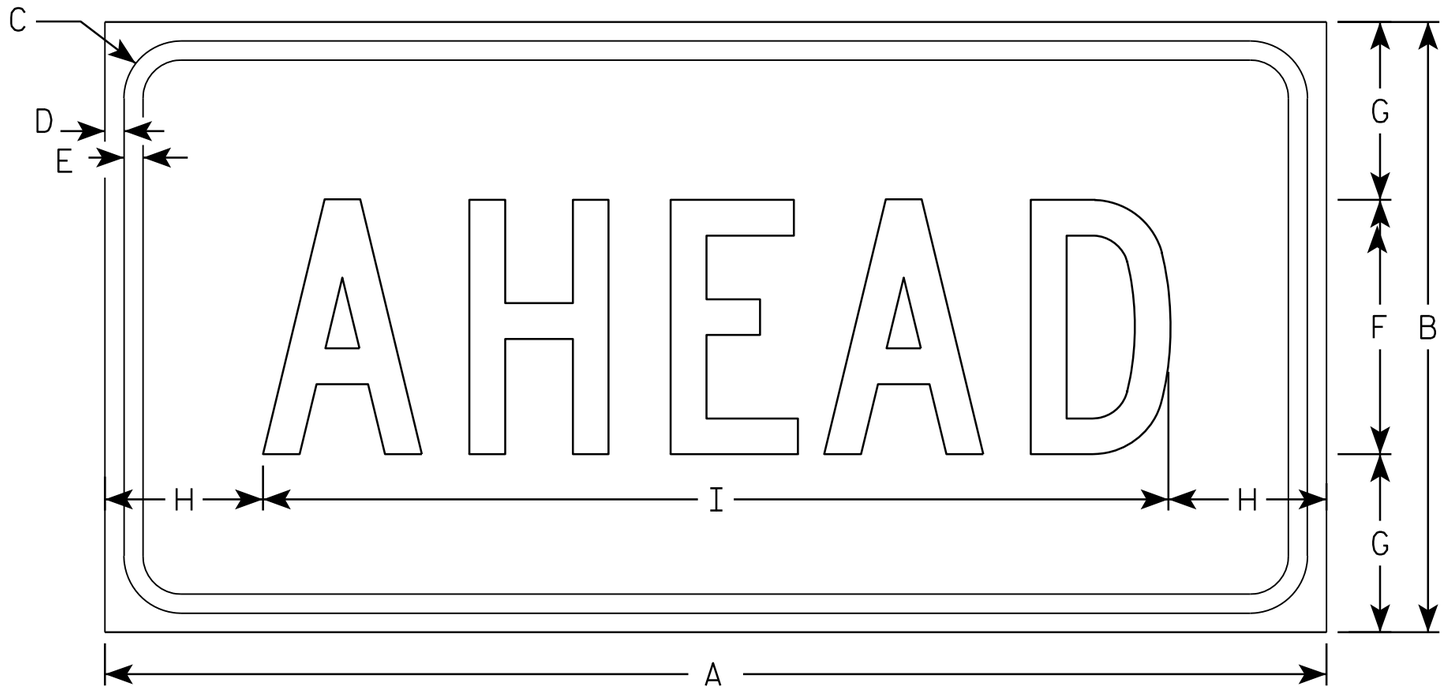
STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 637	E



W16-9P

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 - 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	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN
W16-9P

WISCONSIN DEPT OF TRANSPORTATION

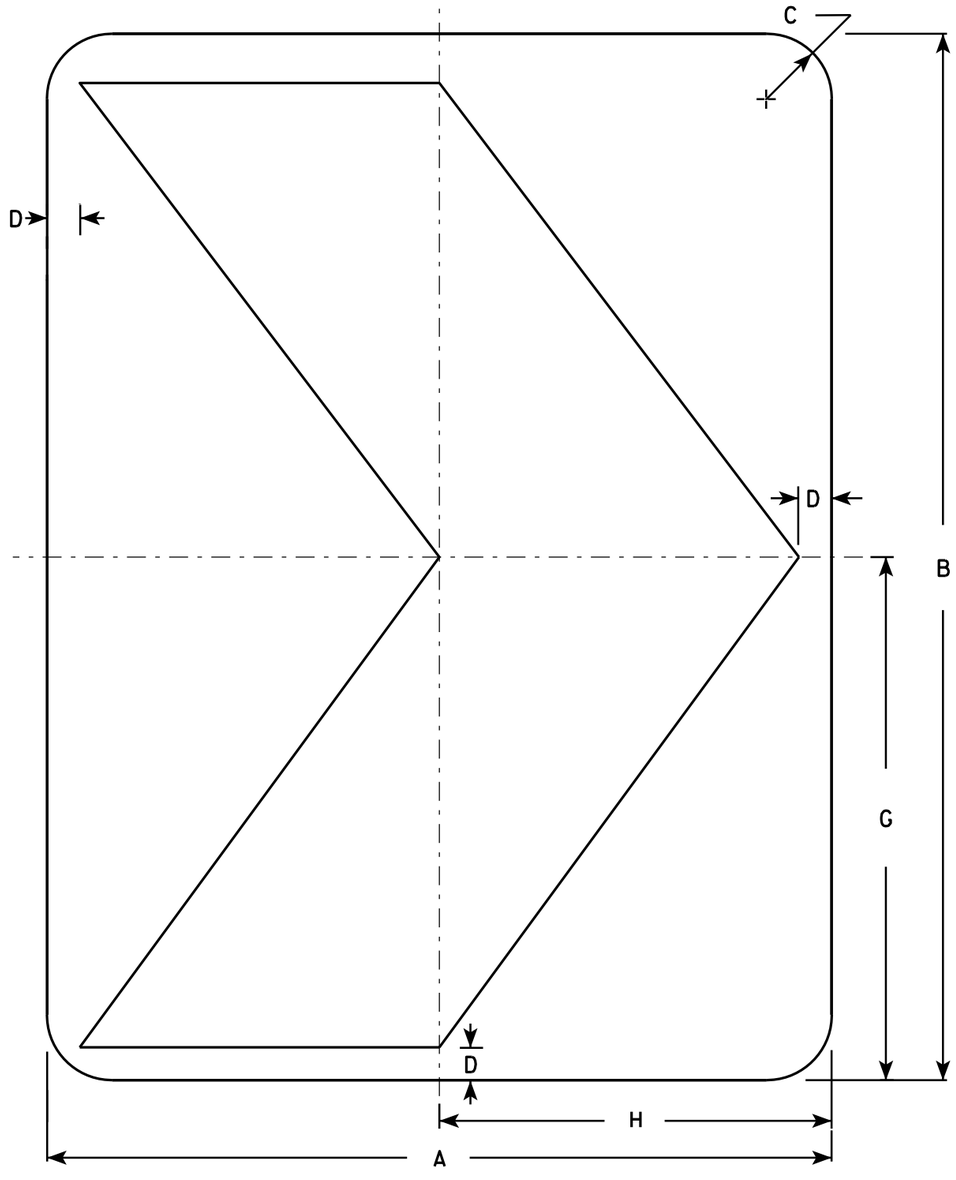
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/28/10 PLATE NO. W16-9P.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 638 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W169P.DGN PLOT DATE : 28-DEC-2010 13:39 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 2.979524:1.000000



W1-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - 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	12	18	1 ½	½			9	6																			1.5
2S	18	24	1 ½	¾			12	9																			3.0
2M	18	24	1 ½	¾			12	9																			3.0
3	24	30	1 ½	1			15	12																			5.0
4	30	36	1 ⅞	1 ¼			18	15																			7.5
5	36	48	2 ¼	1 ½			24	18																			12.0

STANDARD SIGN
W1-8

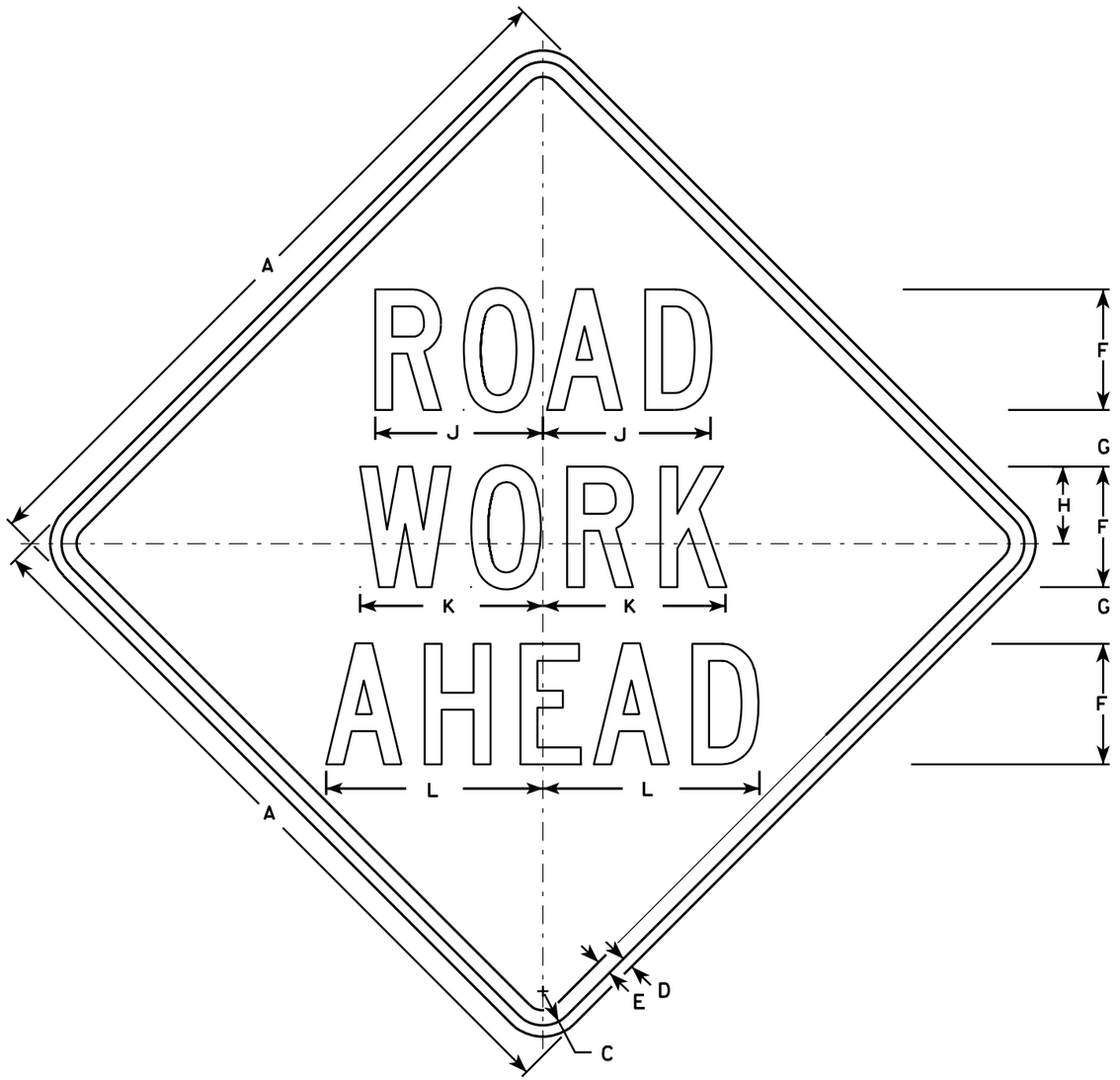
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

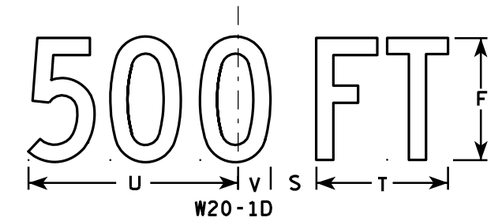
DATE 6/7/10 PLATE NO. W1-8.6

PROJECT NO:

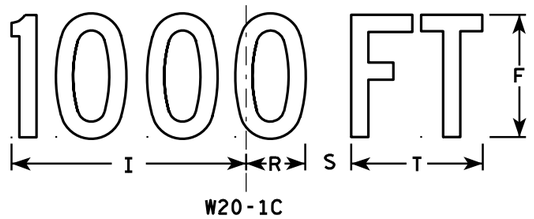
SHEET NO: 639 E



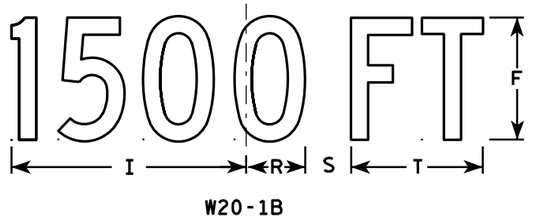
W20-1A



W20-1D



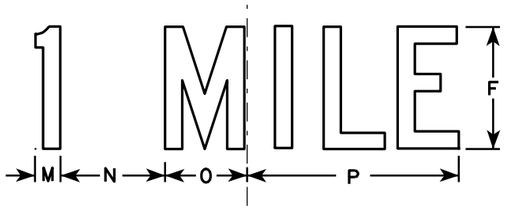
W20-1C



W20-1B



W20-1G



W20-1F

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.

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	1 7/8	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		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		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		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		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		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 Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-1.9

PROJECT NO:

SHEET NO: 640 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W201.DGN PLOT DATE : 18-MAR-2011 09:56 PLOT BY : mscj9h

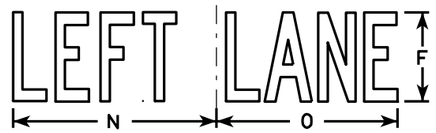
WISDOT/CADDS SHEET 42

7

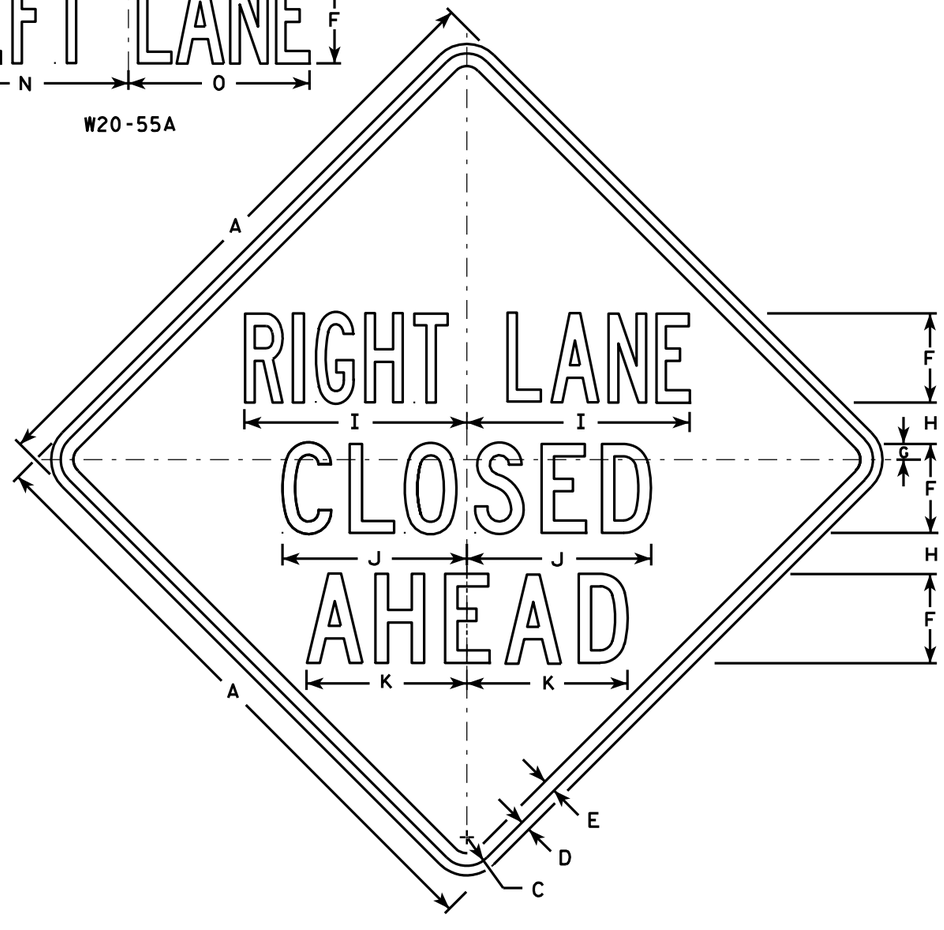
7



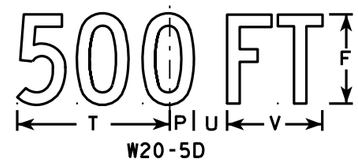
W20-56A



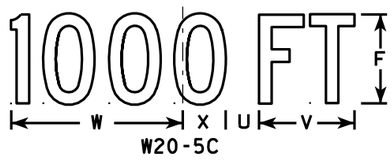
W20-55A



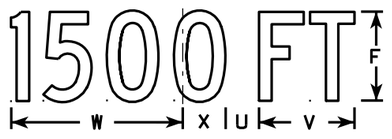
W20-5A



W20-5D



W20-5C



W20-5B



W20-5G



W20-5F

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. " _____ LANE" is Series B.
   All other copy is 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	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

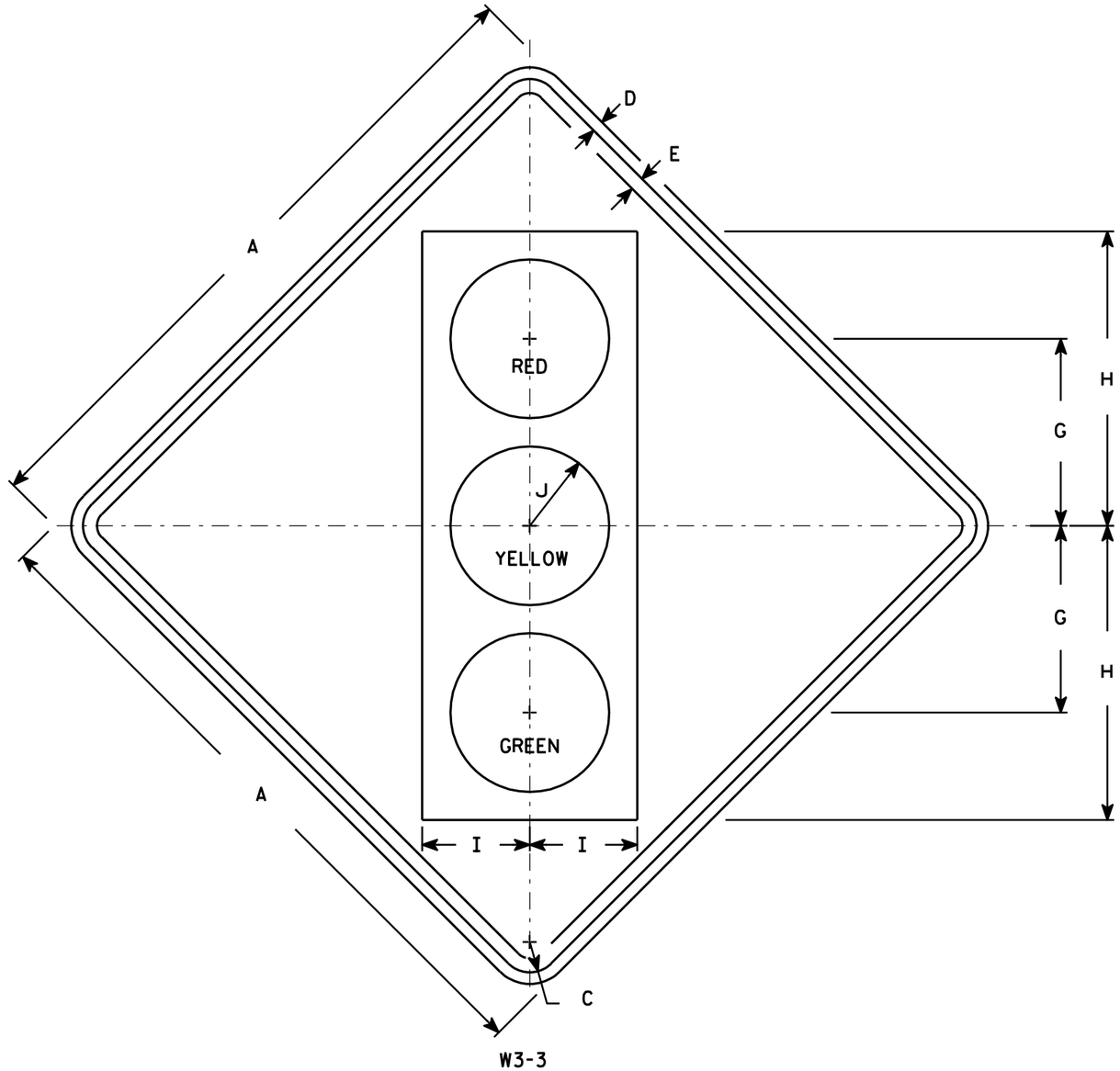
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 641	E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000 WISDOT/CADDS SHEET 42



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - 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. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN
W3-3

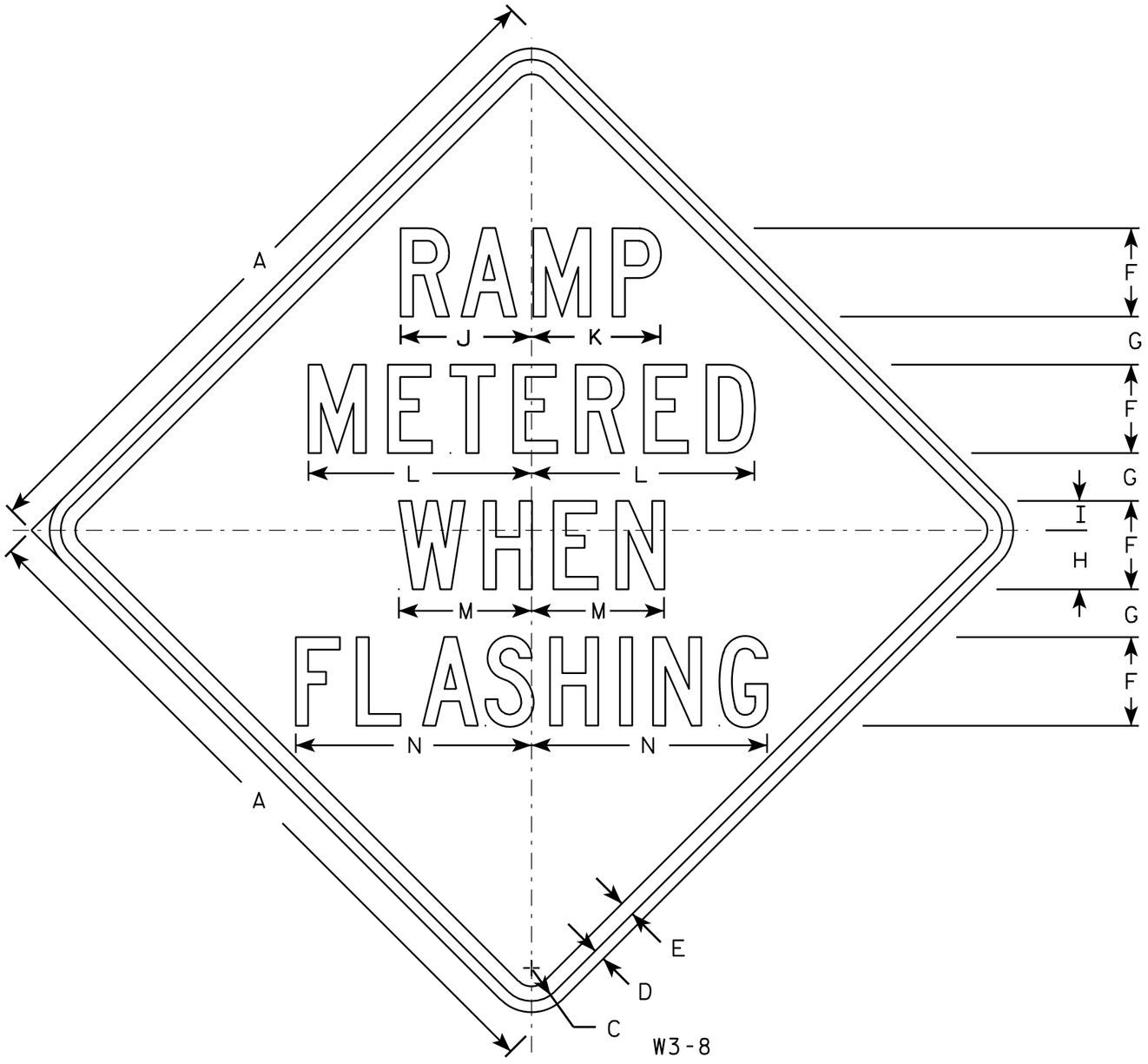
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 642 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W33.DGN PLOT DATE : 07-JUN-2010 13:07 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 7.448805:1.000000



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 - 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	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
2M	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
3	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
4	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
5	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0

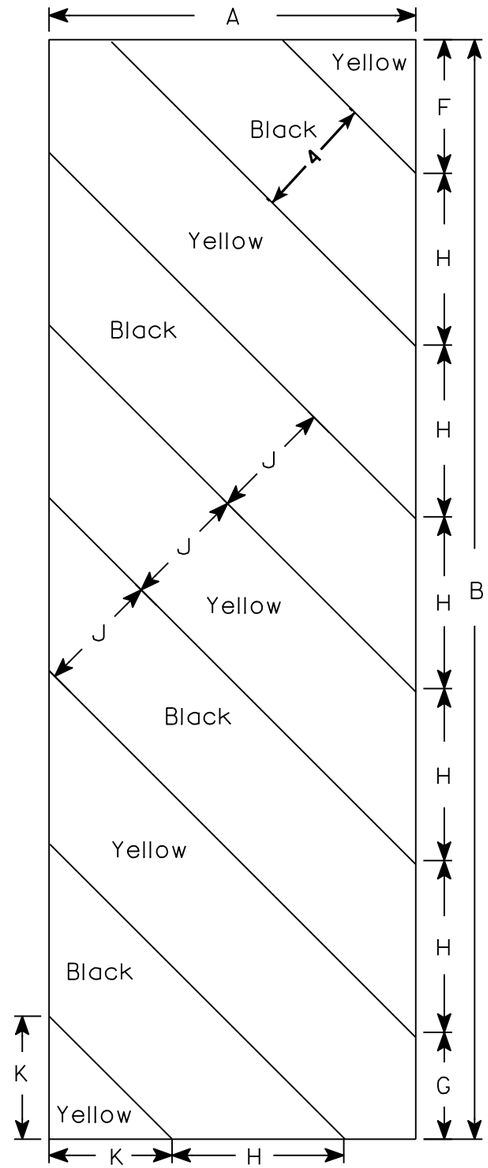
STANDARD SIGN
W3-8

WISCONSIN DEPT OF TRANSPORTATION

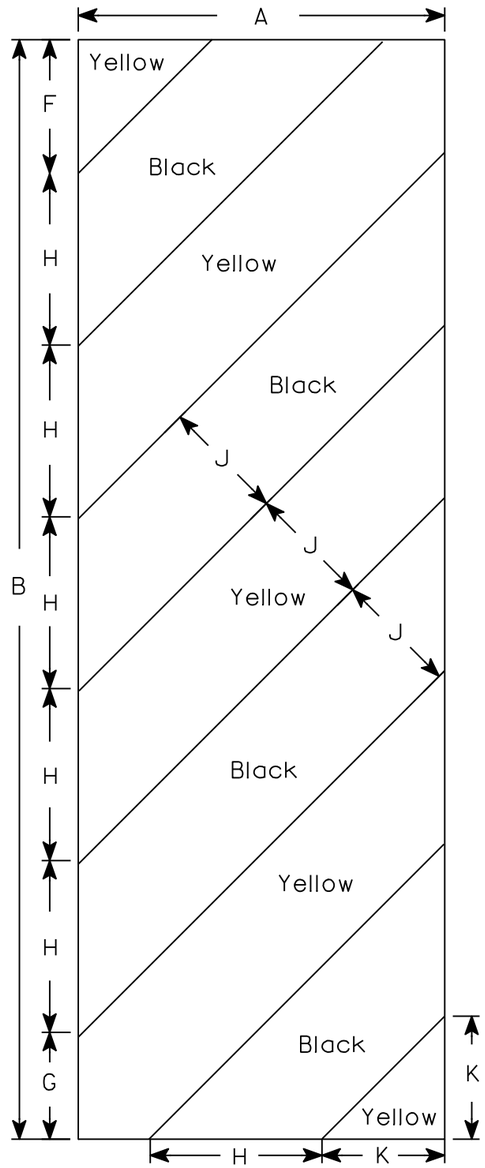
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W3-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 643	E



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

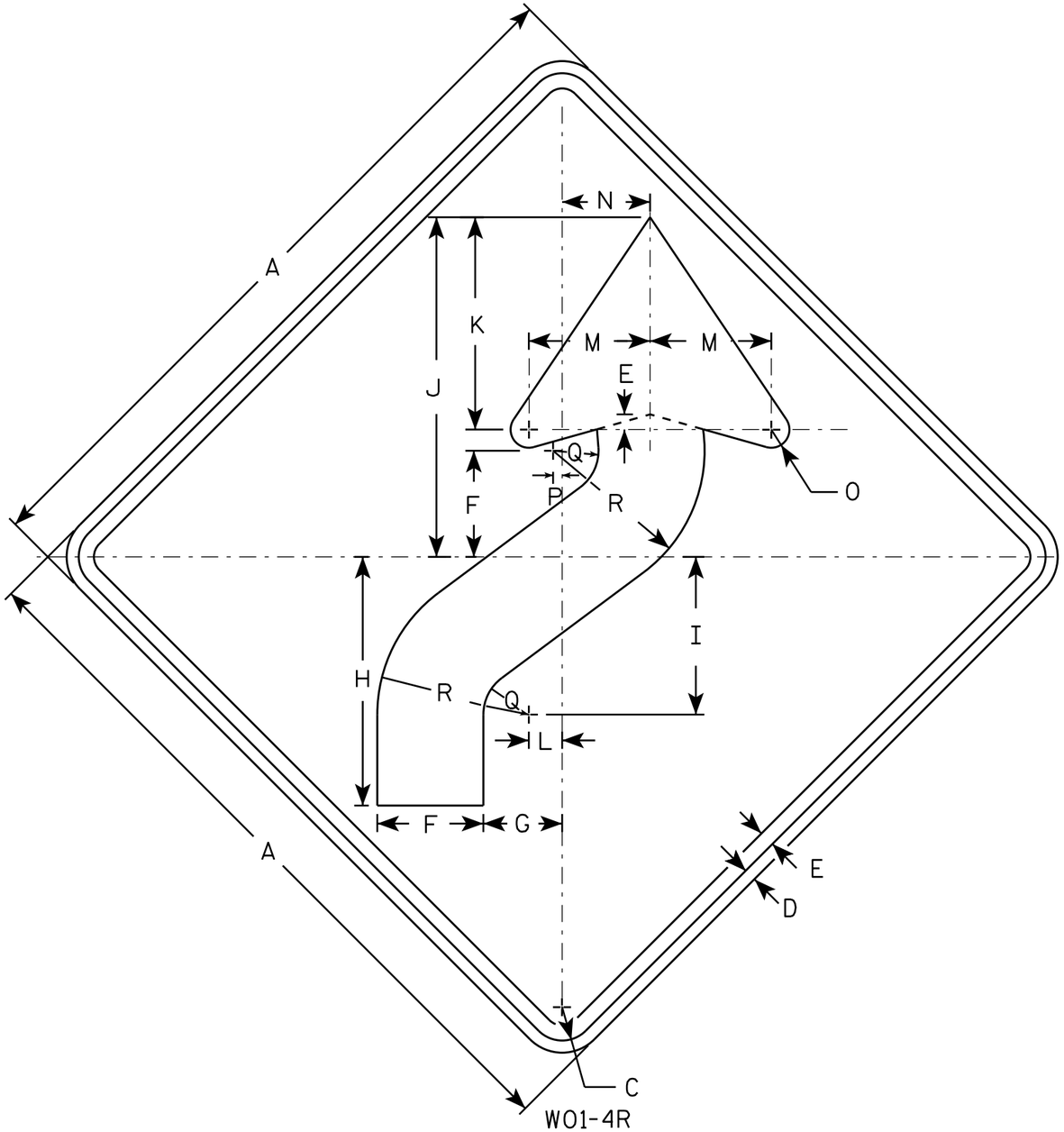
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 644	E



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

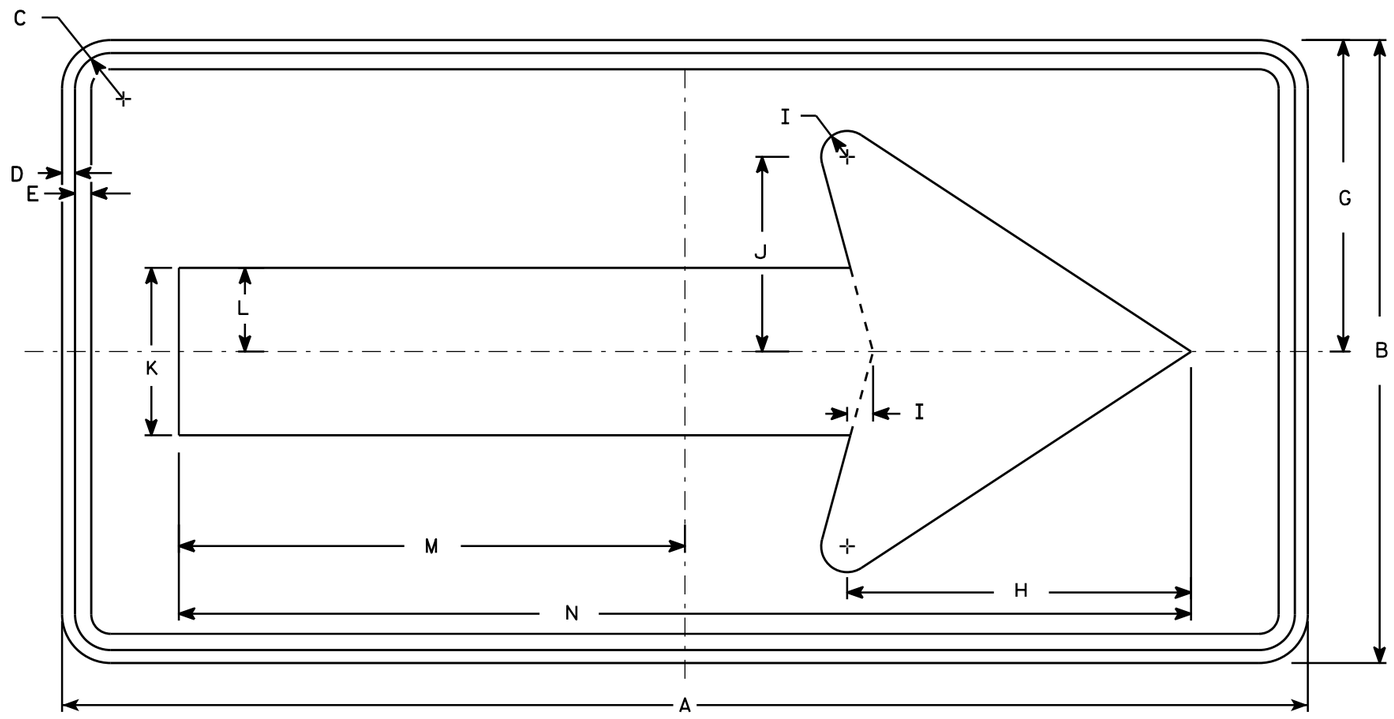
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-4.1

PROJECT NO: | HWY: | COUNTY: | 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



WO1-6

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.

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	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
WO1-6

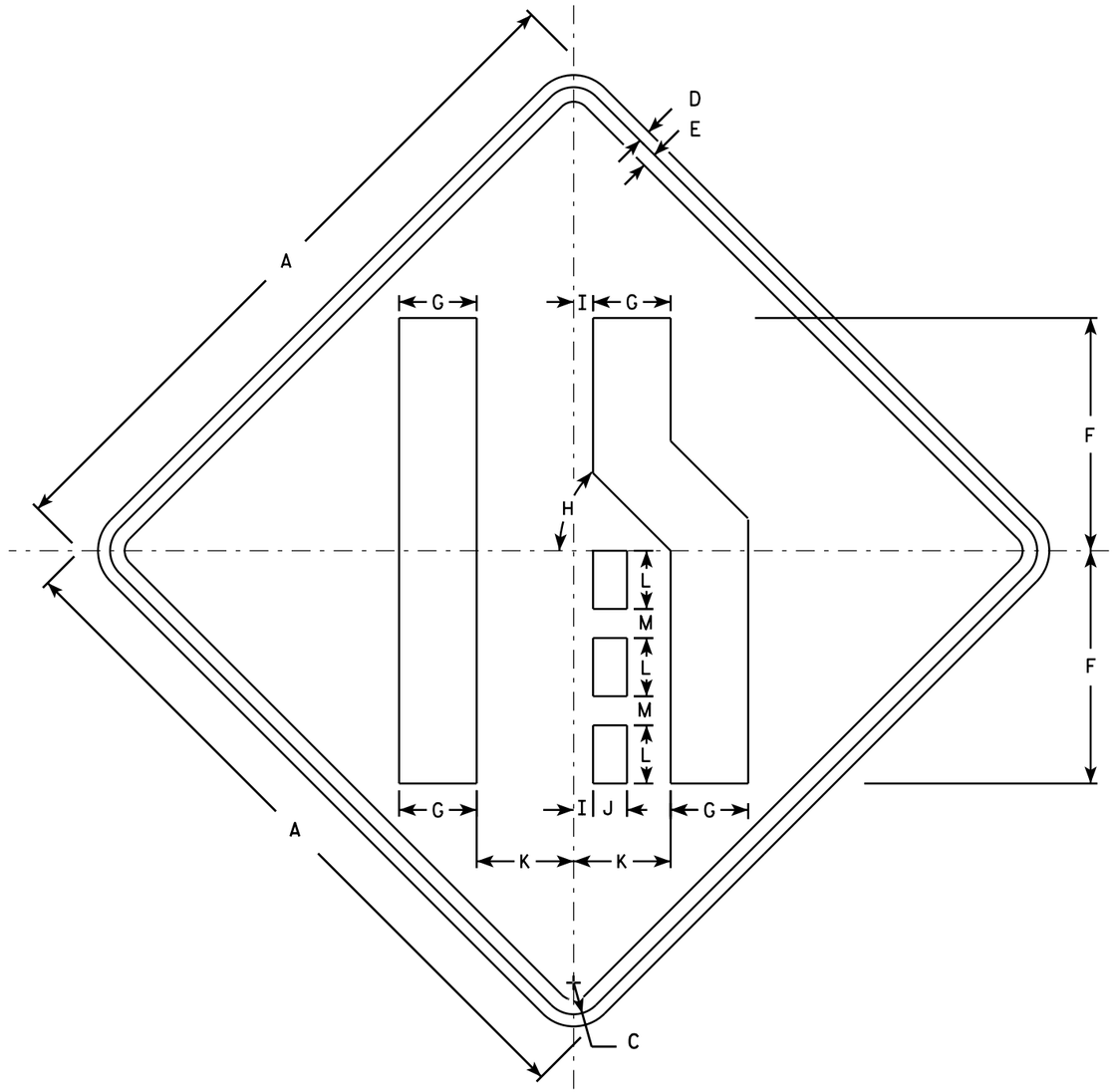
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. WO1-6.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\WO16.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



W04-2R

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. W04-2L is the same as W04-2R except the symbol 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	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 647 W04-2.1

PROJECT NO: | SHEET NO: E

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Expanded EBS Backfill 1.30 Note 4	Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
792+33	79233.00	0.00	23.38	0.00	0.00	0	0	0	0	0	0	0	0.00	0.00
792+40	79240.00	7.00	28.90	0.00	0.00	7	0	0	0	7	0	0	0.00	6.78
792+50	**79250.00**	**10.00**	**24.58**	**0.00**	**0.00**	**10**	**0**	**0**	**0**	**17**	**0**	**0**	**0.00**	**16.68**
792+60	79260.00	10.00	24.38	0.00	0.00	9	0	0	0	26	0	0	0.00	25.75
792+70	79270.00	10.00	18.24	0.00	0.09	8	0	0	0	34	0	0	0.00	33.62
792+80	79280.00	10.00	19.75	0.00	0.03	7	0	0	0	41	0	0	0.00	40.63
792+90	79290.00	10.00	21.13	0.00	0.00	8	0	0	0	48	0	0	0.00	48.19
793+00	**79300.00**	**10.00**	**20.15**	**0.00**	**0.00**	**8**	**0**	**0**	**0**	**56**	**0**	**0**	**0.00**	**55.84**
793+10	79310.00	10.00	20.84	0.00	0.00	8	0	0	0	63	0	0	0.00	63.43
793+20	79320.00	10.00	21.51	0.00	0.00	8	0	0	0	71	0	0	0.00	71.27
793+30	79330.00	10.00	20.06	0.00	0.00	8	0	0	0	79	0	0	0.00	78.97
793+40	79340.00	10.00	19.89	0.00	0.00	7	0	0	0	86	0	0	0.00	86.37
793+50	**79350.00**	**10.00**	**18.23**	**0.00**	**0.16**	**7**	**0**	**0**	**0**	**93**	**0**	**0**	**0.00**	**93.39**
793+60	79360.00	10.00	15.39	0.00	1.68	6	0	0	0	100	1	0	0.00	99.19
793+70	79370.00	10.00	17.32	0.00	0.35	6	0	0	0	106	1	0	0.00	104.78
793+80	79380.00	10.00	16.74	0.00	0.70	6	0	0	0	112	1	0	0.00	110.84
793+90	79390.00	10.00	18.97	0.00	0.00	7	0	0	0	119	1	0	0.00	117.30
794+00	**79400.00**	**10.00**	**21.59**	**0.00**	**0.00**	**8**	**0**	**0**	**0**	**126**	**1**	**0**	**0.00**	**124.81**
794+10	79410.00	10.00	21.76	0.00	0.00	8	0	0	0	134	1	0	0.00	132.83
794+20	79420.00	10.00	19.19	0.00	0.00	8	0	0	0	142	1	0	0.00	140.41
794+30	79430.00	10.00	17.40	0.00	0.05	7	0	0	0	149	1	0	0.00	147.18
794+40	79440.00	10.00	15.95	0.00	0.68	6	0	0	0	155	2	0	0.00	153.18
794+50	**79450.00**	**10.00**	**15.36**	**0.00**	**4.11**	**6**	**0**	**1**	**0**	**161**	**3**	**0**	**0.00**	**157.87**
794+60	79460.00	10.00	14.65	0.00	5.55	6	0	2	0	166	5	0	0.00	161.20
794+70	79470.00	10.00	14.77	0.00	10.30	5	0	3	0	172	9	0	0.00	162.97
794+80	79480.00	10.00	14.46	0.00	8.44	5	0	3	0	177	13	0	0.00	164.05
794+90	79490.00	10.00	15.89	0.00	8.87	6	0	3	0	183	17	0	0.00	165.66
795+00	**79500.00**	**10.00**	**14.58**	**0.00**	**9.58**	**6**	**0**	**3**	**0**	**188**	**21**	**0**	**0.00**	**167.04**
795+10	79510.00	10.00	13.71	0.00	13.37	5	0	4	0	193	27	0	0.00	166.96
795+20	79520.00	10.00	13.91	0.00	9.63	5	0	4	0	199	32	0	0.00	166.76
795+30	79530.00	10.00	13.00	0.00	8.49	5	0	3	0	204	36	0	0.00	167.54
795+40	79540.00	10.00	12.67	0.00	7.41	5	0	3	0	208	40	0	0.00	168.61
795+50	**79550.00**	**10.00**	**12.29**	**0.00**	**12.28**	**5**	**0**	**4**	**0**	**213**	**44**	**0**	**0.00**	**168.68**
795+60	79560.00	10.00	12.22	0.00	9.42	5	0	4	0	217	49	0	0.00	168.19
795+70	79570.00	10.00	12.37	0.00	7.59	5	0	3	0	222	53	0	0.00	168.81
795+80	79580.00	10.00	12.60	0.00	4.47	5	0	2	0	227	56	0	0.00	170.64
795+90	79590.00	10.00	11.69	0.00	4.82	4	0	2	0	231	58	0	0.00	172.99
796+00	**79600.00**	**10.00**	**12.10**	**0.00**	**1.54**	**4**	**0**	**1**	**0**	**236**	**60**	**0**	**0.00**	**175.92**
796+10	79610.00	10.00	12.64	0.00	0.99	5	0	0	0	240	60	0	0.00	179.92
796+20	79620.00	10.00	10.33	0.00	1.49	4	0	0	0	244	61	0	0.00	183.60
796+30	79630.00	10.00	9.72	0.00	1.90	4	0	1	0	248	62	0	0.00	186.53
796+40	79640.00	10.00	8.77	0.00	2.13	3	0	1	0	252	63	0	0.00	189.02
796+50	**79650.00**	**10.00**	**7.98**	**0.00**	**1.77**	**3**	**0**	**1**	**0**	**255**	**63**	**0**	**0.00**	**191.22**
796+60	79660.00	10.00	7.81	0.00	1.43	3	0	1	0	258	64	0	0.00	193.40
796+70	79670.00	10.00	7.26	0.00	1.44	3	0	1	0	260	65	0	0.00	195.53
796+70.66	79670.66	0.66	7.24	0.00	1.44	0	0	0	0	261	65	0	0.00	195.66
			STAGE 1 COLUMN TOTALS			261	0	52	0					

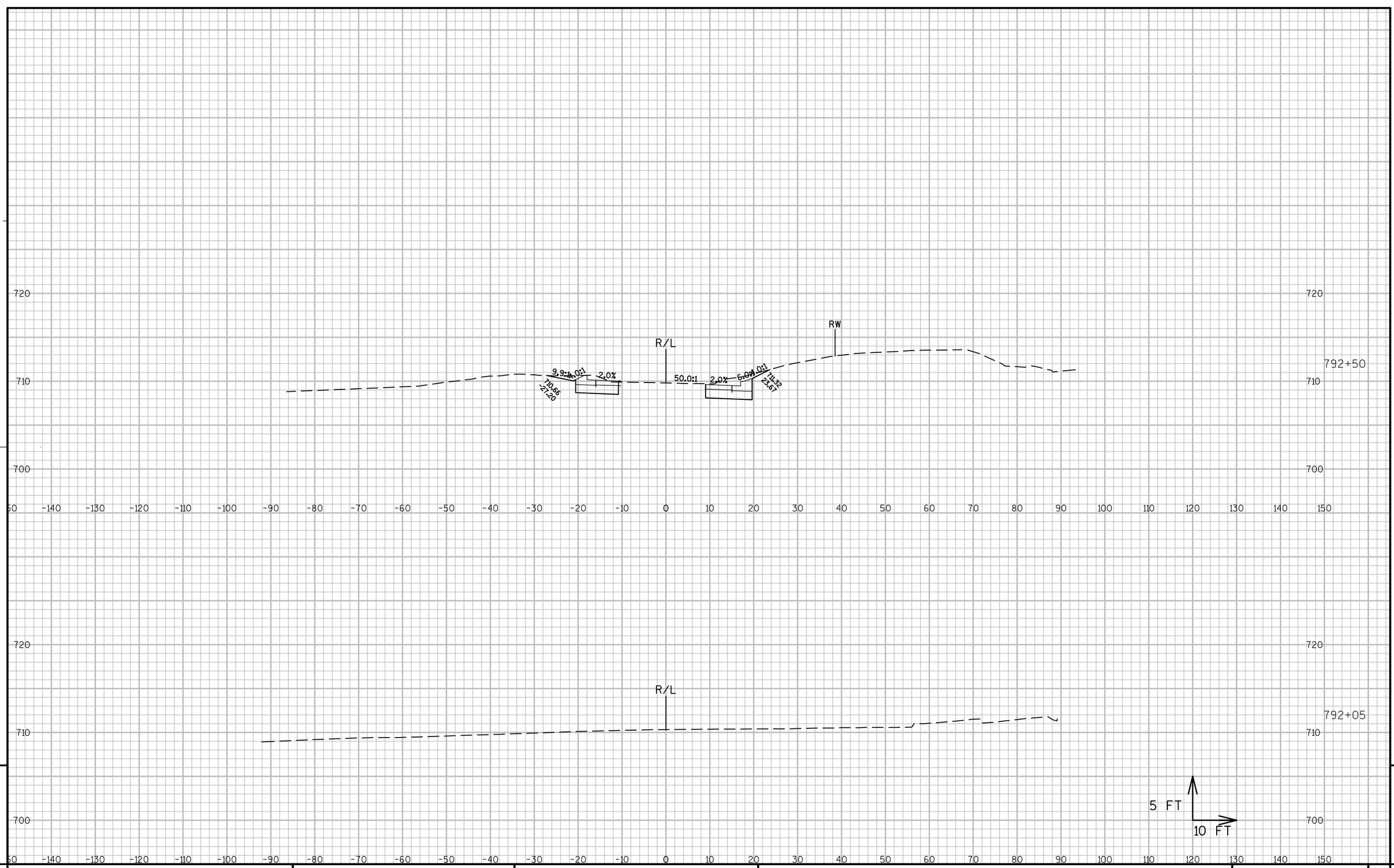
Notes:

1 - Cut	Cut includes Salvaged/Unusable Pavement Material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not inclued Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can used in Fill
6 - Mass Ordinate	If EBS to be Backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
792+48	79248.00	0.00	19.77	0.00	0.13	0	0	0	0	0	0	0	0.00	0.00
792+50	**79250.00**	**2.00**	**19.51**	**0.00**	**0.06**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0.00**	**1.45**
792+60	79260.00	10.00	20.06	0.00	0.43	7	0	0	0	9	0	0	0.00	8.66
792+70	79270.00	10.00	23.62	0.00	0.00	8	0	0	0	17	0	0	0.00	16.65
792+80	79280.00	10.00	17.02	0.00	1.82	8	0	0	0	24	1	0	0.00	23.76
792+90	79290.00	10.00	21.67	0.00	5.60	7	0	1	0	32	2	0	0.00	29.20
793+00	**79300.00**	**10.00**	**25.70**	**0.00**	**3.12**	**9**	**0**	**2**	**0**	**40**	**4**	**0**	**0.00**	**35.96**
793+10	79310.00	10.00	29.66	0.00	0.00	10	0	1	0	51	5	0	0.00	45.49
793+20	79320.00	10.00	27.01	0.00	0.24	10	0	0	0	61	5	0	0.00	55.93
793+30	79330.00	10.00	27.67	0.00	0.00	10	0	0	0	71	5	0	0.00	66.00
793+40	79340.00	10.00	27.36	0.00	0.20	10	0	0	0	81	5	0	0.00	76.14
793+50	**79350.00**	**10.00**	**26.88**	**0.00**	**0.69**	**10**	**0**	**0**	**0**	**91**	**5**	**0**	**0.00**	**85.98**
793+60	79360.00	10.00	26.99	0.00	1.52	10	0	0	0	101	6	0	0.00	95.45
793+70	79370.00	10.00	26.22	0.00	2.39	10	0	1	0	111	7	0	0.00	104.39
793+80	79380.00	10.00	25.43	0.00	3.86	10	0	1	0	121	8	0	0.00	112.51
793+90	79390.00	10.00	26.28	0.00	3.00	10	0	1	0	130	10	0	0.00	120.50
794+00	**79400.00**	**10.00**	**26.01**	**0.00**	**3.34**	**10**	**0**	**1**	**0**	**140**	**11**	**0**	**0.00**	**128.72**
794+10	79410.00	10.00	25.85	0.00	3.34	10	0	1	0	150	13	0	0.00	136.77
794+20	79420.00	10.00	25.19	0.00	3.23	9	0	1	0	159	14	0	0.00	144.71
794+30	79430.00	10.00	25.21	0.00	2.27	9	0	1	0	168	16	0	0.00	152.77
794+40	79440.00	10.00	24.73	0.00	1.86	9	0	1	0	178	17	0	0.00	161.06
794+50	**79450.00**	**10.00**	**24.42**	**0.00**	**2.79**	**9**	**0**	**1**	**0**	**187**	**18**	**0**	**0.00**	**169.09**
794+60	79460.00	10.00	24.37	0.00	1.63	9	0	1	0	196	19	0	0.00	177.10
794+70	79470.00	10.00	24.47	0.00	0.89	9	0	0	0	205	19	0	0.00	185.56
794+80	79480.00	10.00	24.78	0.00	1.13	9	0	0	0	214	20	0	0.00	194.22
794+90	79490.00	10.00	26.97	0.00	0.09	10	0	0	0	224	20	0	0.00	203.52
795+00	**79500.00**	**10.00**	**24.70**	**0.00**	**0.94**	**10**	**0**	**0**	**0**	**233**	**20**	**0**	**0.00**	**212.85**
795+10	79510.00	10.00	21.84	0.00	0.68	9	0	0	0	242	21	0	0.00	221.09
795+20	79520.00	10.00	19.11	0.00	0.85	8	0	0	0	249	21	0	0.00	228.32
795+30	79530.00	10.00	14.87	0.00	0.94	6	0	0	0	256	21	0	0.00	234.20
795+40	79540.00	10.00	14.70	0.00	0.25	5	0	0	0	261	22	0	0.00	239.41
795+50	**79550.00**	**10.00**	**12.98**	**0.00**	**0.25**	**5**	**0**	**0**	**0**	**266**	**22**	**0**	**0.00**	**244.42**
795+60	79560.00	10.00	11.96	0.00	0.18	5	0	0	0	271	22	0	0.00	248.94
795+70	79570.00	10.00	11.71	0.00	0.03	4	0	0	0	275	22	0	0.00	253.28
795+80	79580.00	10.00	12.03	0.00	0.00	4	0	0	0	280	22	0	0.00	257.67
795+90	79590.00	10.00	11.18	0.00	0.00	4	0	0	0	284	22	0	0.00	261.97
796+00	**79600.00**	**10.00**	**10.15**	**0.00**	**0.01**	**4**	**0**	**0**	**0**	**288**	**22**	**0**	**0.00**	**265.91**
796+10	79610.00	10.00	9.65	0.00	0.00	4	0	0	0	292	22	0	0.00	269.58
796+20	79620.00	10.00	9.07	0.00	0.00	3	0	0	0	295	22	0	0.00	273.04
796+28.4	79628.40	8.40	2.64	0.00	0.00	2	0	0	0	297	22	0	0.00	274.87
			STAGE 2 COLUMN TOTALS			297	0	18	0					

Notes:

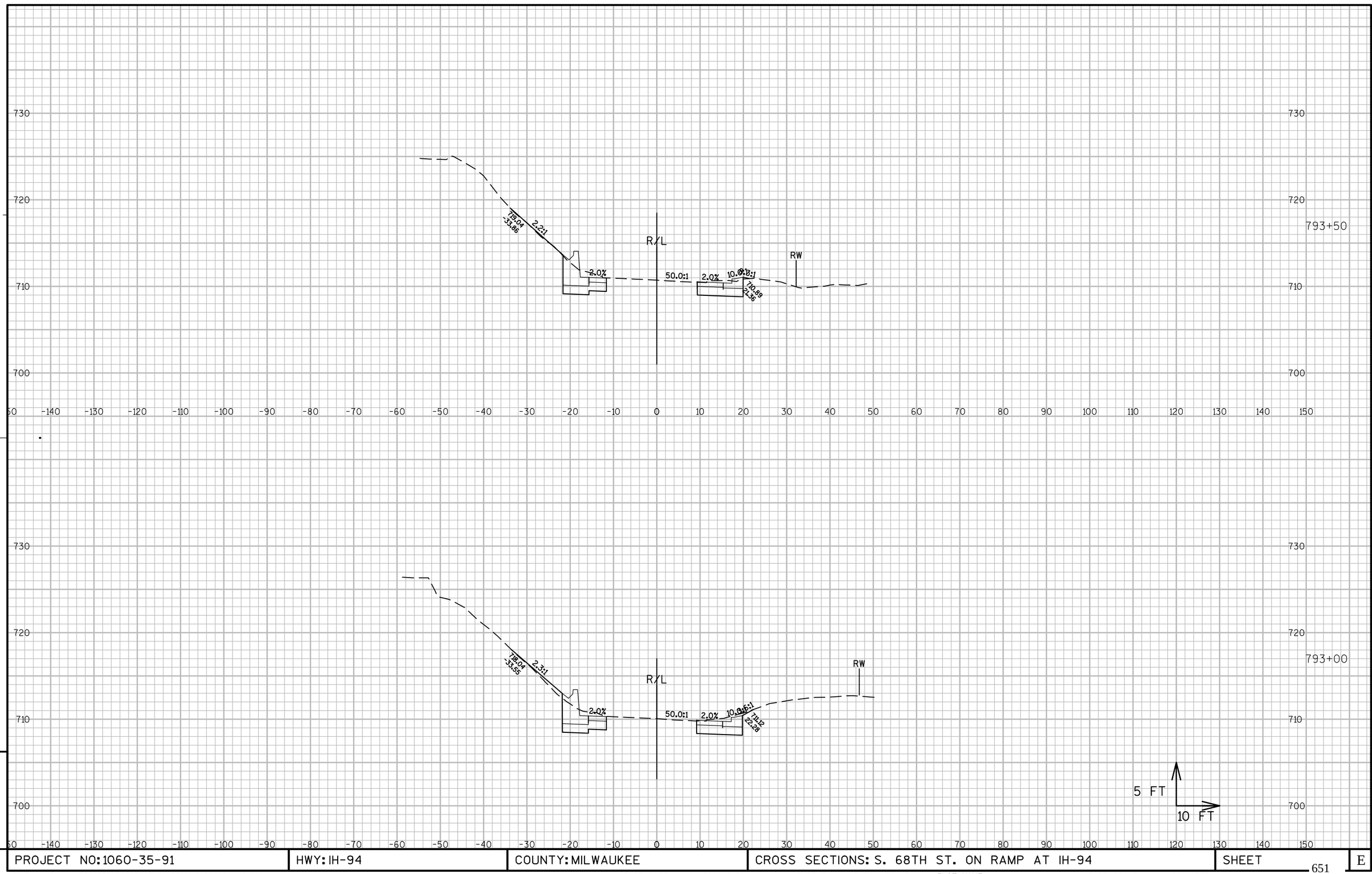
1 - Cut	Cut includes Salvaged/Unusable Pavement Material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not inclued Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow
5 - Reduced EBS in Fill	Reduced EBS Excavation that can used in Fill
6 - Mass Ordinate	If EBS to be Backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor)]



PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 68TH ST. ON RAMP AT IH-94	SHEET 650	E

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WISDOT/CADDS SHEET 49



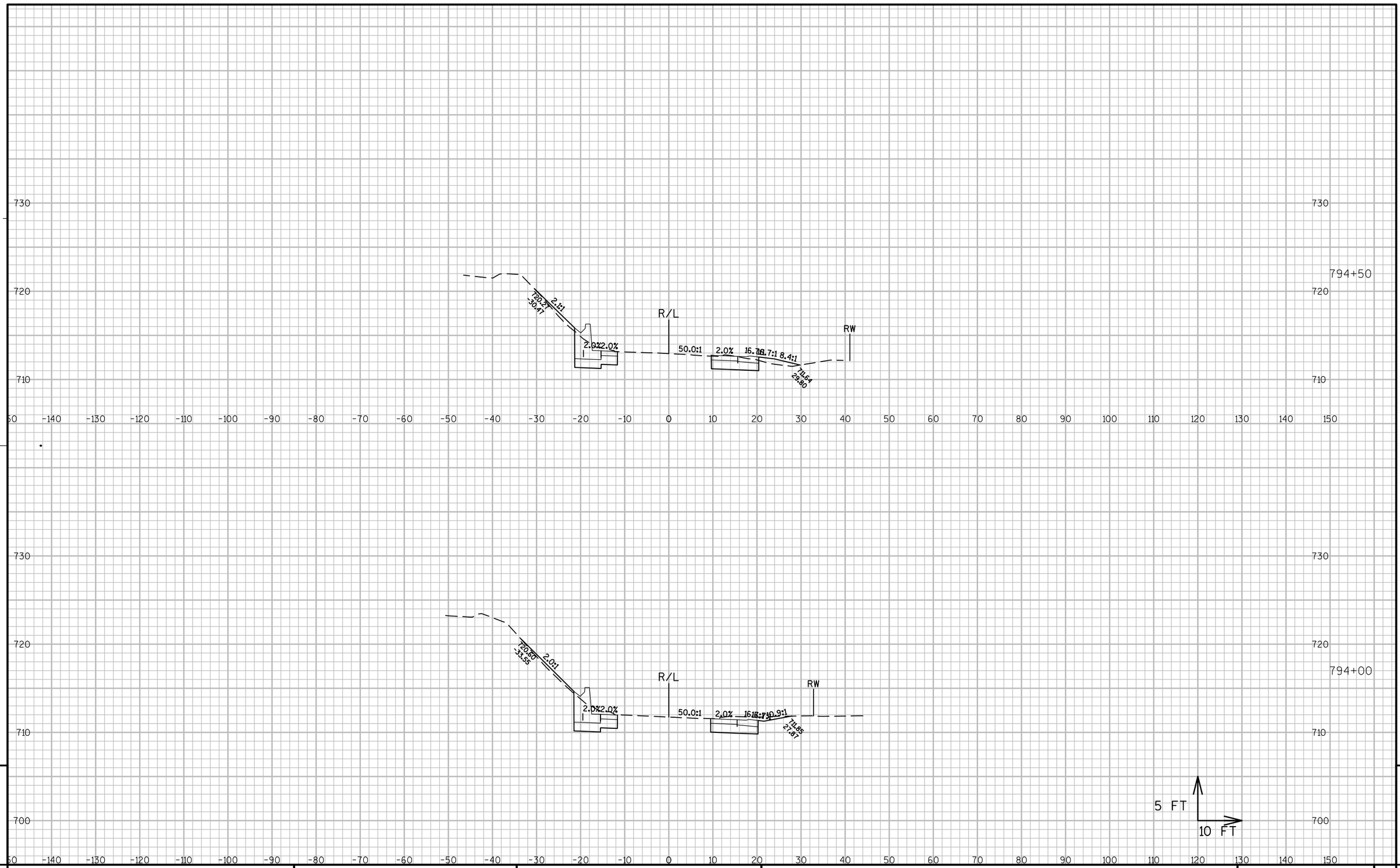
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9

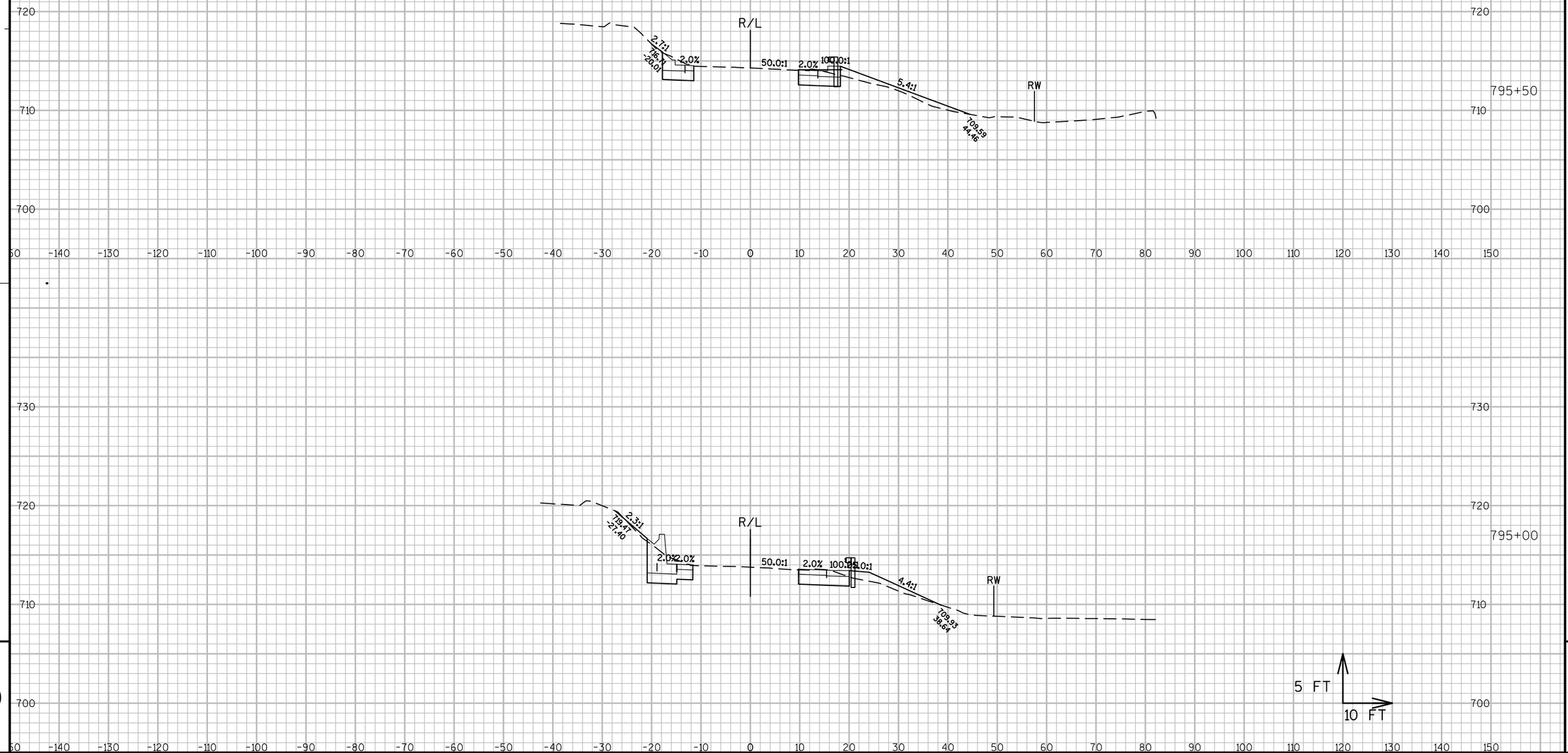
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WISDOT/CADDS SHEET 49



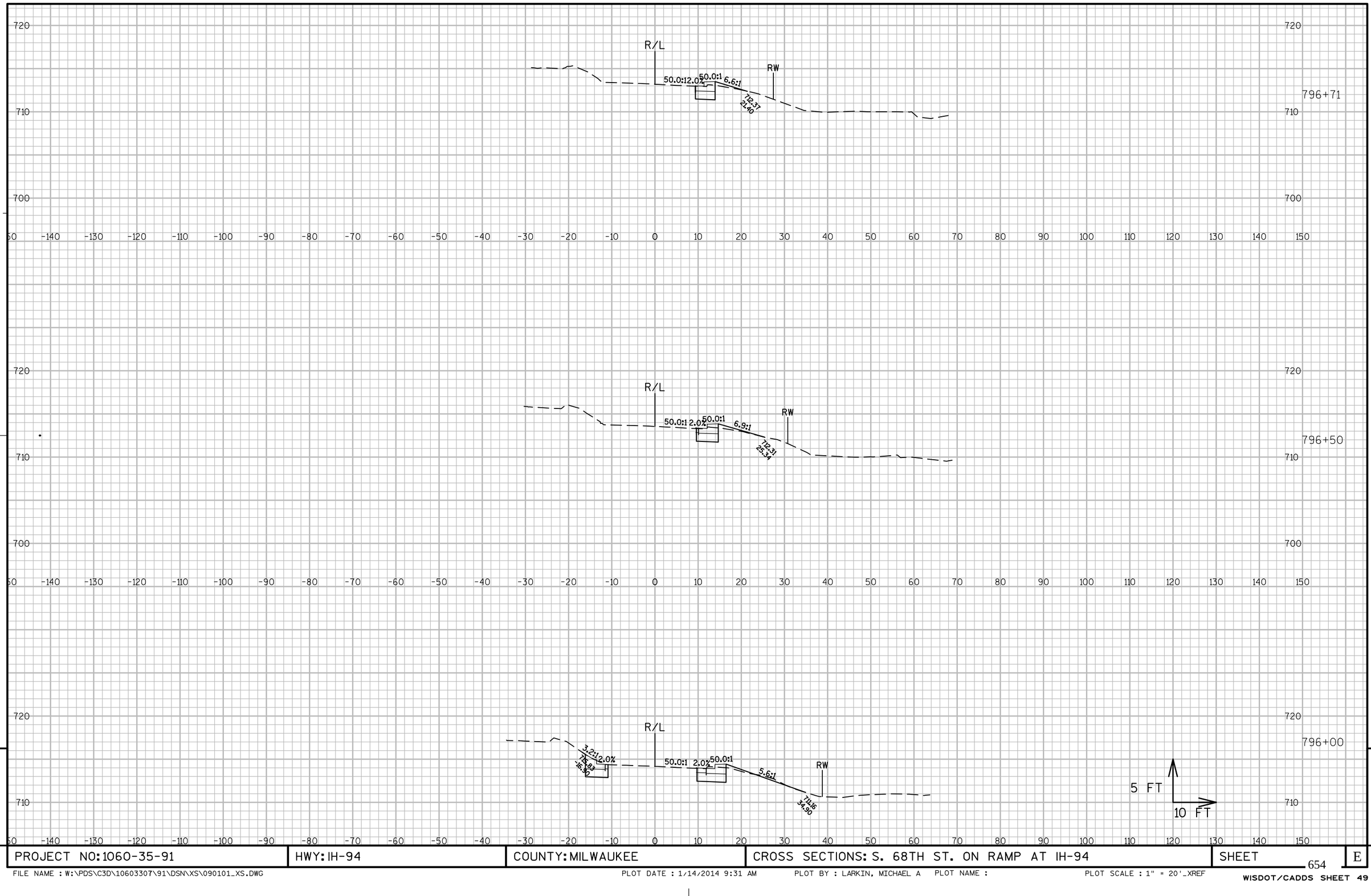
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PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 68TH ST. ON RAMP AT IH-94	SHEET 653	E

FILE NAME : W:\PDS\C3D\10603307\91\DSN\XS\090101_XS.DWG PLOT DATE : 1/14/2014 9:31 AM PLOT BY : LARKIN, MICHAEL A PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



9

PROJECT NO: 1060-35-91	HWY: IH-94	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 68TH ST. ON RAMP AT IH-94	SHEET 654	E

9

FILE NAME : W:\PDS\C3D\10603307\91\DSN\XS\090101_XS.DWG PLOT DATE : 1/14/2014 9:31 AM PLOT BY : LARKIN, MICHAEL A PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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