WKE

MAR 13

PROJECT ID: 1060-33-71

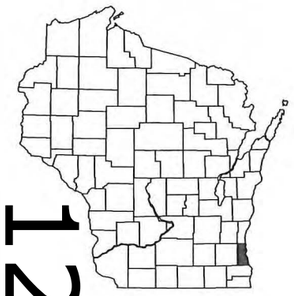
WITH: N/A

COUNTY: MILWAUKEE

ORDER OF SHEETS

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

TOTAL SHEETS = 500



12

N

DESIGN DESIGNATION

A.A.D.T. 2013	=	13,100
A.A.D.T. 2035	=	14,000
D.H.V. 2035	=	1,530
D.D.	=	58% NB/42% SB
T.	=	3.40%
DESIGN SPEED	=	35 MPH
ESALS	=	1,985,600

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)
- OVERHEAD ELECTRIC (OH)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE
- TRANSMISSION TOWER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ZOO IC - GLENVIEW AVENUE

BLUEMOUND ROAD (USH 18) TO WISCONSIN AVENUE

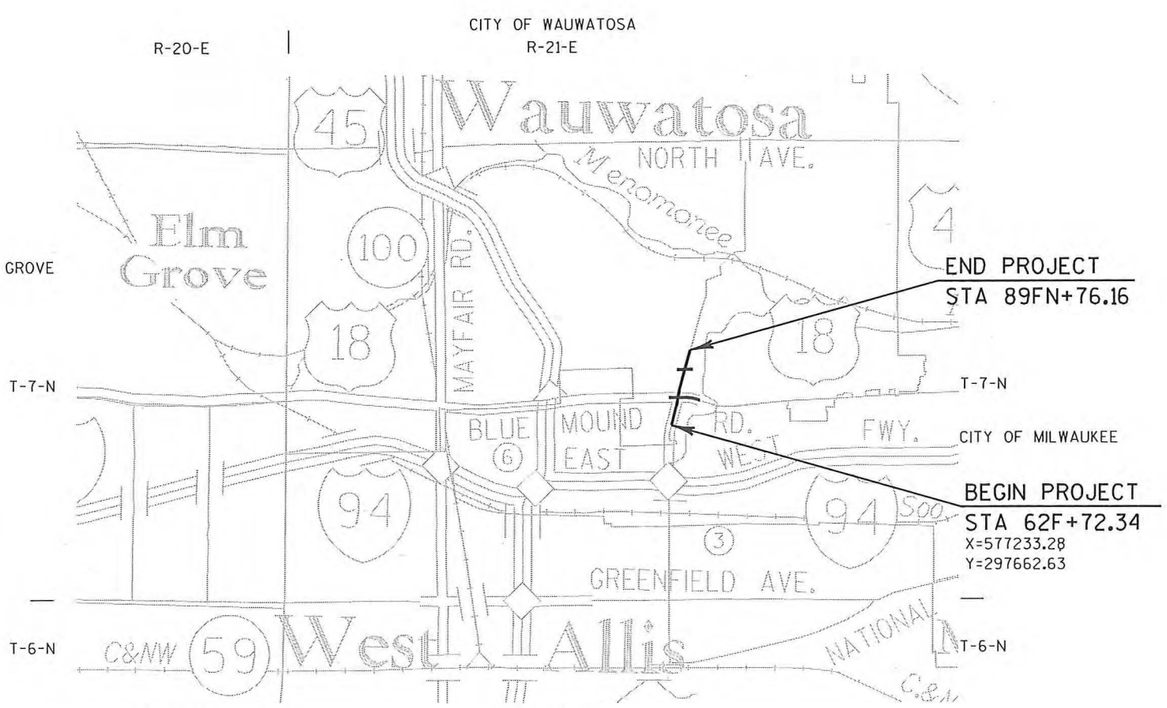
STH 181

MILWAUKEE COUNTY

STATE PROJECT NUMBER

1060-33-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1060-33-71	———	———



LAYOUT SCALE 0 0.5 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.512 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007)

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007)

FORWARD 45

ORIGINAL PLANS PREPARED BY MILWAUKEE, WISCONSIN

WISCONSIN
PAUL J JENSWOLD
E-34365
MILWAUKEE WI
PROFESSIONAL ENGINEER

11/1/12 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	FORWARD 45
Designer	FORWARD 45
Project Manager	JOSHUA LEVEQUE
Regional Examiner	
Regional Supervisor	ROBERTO GUTIERREZ
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 11/1/12 (Signature)

E

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FAX: (262) 547-1103
kbauer@sewrpc.org

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

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

DIGGERS HOTLINE

Call 811 3 Work Days Before You Dig
Or Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

GENERAL NOTES

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

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.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH COMPACTED BACKFILL GRANULAR UNLESS REGULATIONS REQUIRE OTHERWISE. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER. CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER.

EXISTING DRIVEWAYS SHALL BE RESTORED IN KIND AS DIRECTED BY THE ENGINEER IN THE FIELD AND AT THE LOCATION DETERMINED BY THE ENGINEER.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE REPLACED WITH 6-INCH TYPICAL DEPTH.

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

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

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

THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ALL PRIVATE EXISTING UTILITIES ARE TO BE ADJUSTED BY THE UTILITIES CONCERNED.

PLACE TOPSOIL IN ALL GRADED AREAS AS DESIGNATED BY THE ENGINEER IMMEDIATELY AFTER GRADING HAS BEEN COMPLETED. SEED, MULCH AND FERTILIZE OR SOD AND FERTILIZE ALL AREAS 5 CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL.

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

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

SAWCUT ASPHALTIC AND CONCRETE DRIVEWAYS AND/OR PARKING LOTS AT THE MATCHLINE AS SHOWN ON THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER.

UNLESS OTHERWISE SHOWN OR NOTED, TEMPORARY PAVEMENTS SHALL BE 5 INCHES OF ASPHALTIC SURFACE TEMPORARY OVER 10 INCHES OF BASE AGGREGATE DENSE, 1 ¼ INCH.

CONSTRUCT HMA PAVEMENT WITH THE FOLLOWING LAYERS AND GRADATIONS:

PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION	ASPHALTIC MATERIAL
E-3	3"	1-1/2" UPPER LAYER 1-1/2" LOWER LAYER	9.5 MM 9.5 MM	PG-58-28 PG-58-28
E-3	4"	1-3/4" UPPER LAYER 2-1/4" LOWER LAYER	12.5 MM 19.0 MM	PG-58-28 PG-58-28
E-3	5.5"	2-1/2" UPPER LAYER 3" LOWER LAYER	12.5 MM 19.0 MM	PG-58-28 PG-58-28
ASPHALTIC SURFACE	3" 5"		25.0 MM	
ASPHALTIC SURFACE TEMPORARY	3" 5"		25.0 MM	

THE CONTRACTOR SHALL PROVIDE A CONCRETE JOINT DETAIL 14 DAYS PRIOR TO PAVING FOR APPROVAL BY THE ENGINEER. 15-FOOT MAXIMUM SPACING FOR LONGITUDINAL JOINTS.

CONCRETE PAVEMENT TINING SHALL BE LONGITUDINAL.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL “IN USE” SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM TRAFFIC CONTROL COVERING SIGNS TYPE I AND TYPE II.

ALL INLETS IN DRIVING LANES DURING CONSTRUCTION MUST HAVE WELDED OR BOLTED COVERS. THIS WORK INCIDENTAL TO THE PROJECT.

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

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL EXISTING SECTIONS
TYPICAL FINISHED SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLANS
PLAN DETAILS
PAVING GRADES
FTMS
EROSION CONTROL
STORM SEWER
UTILITY PLANS
STREETSCAPING
SIGNING REMOVALS
PERMANENT SIGNING
LIGHTING
TRAFFIC SIGNALS
PAVEMENT MARKING
TRAFFIC CONTROL
STAGE CONSTRUCTION
DETOUR PLANS
ALIGNMENT LAYOUT

STANDARD ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
ASPH	ASPHALTIC
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTUCTION 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
EB	EASTBOUND
FE	FIELD ENTRANCE
FL	FLOW LINE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LP	LOW POINT
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PGL	PROFILE GRADE LINE
PLE	PERMANENT LIMITED EASMENT
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RRSP	RAILROAD SPIKE
RT	RIGHT
SALV	SALVAGED
SAPBC	SALVAGED ASPHALTIC PAVEMENT BASE COARSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT
WB	WESTBOUND

2

2

CONSTRUCTION LIMIT
STA 213BL+39.98

220BL

230BL

240BL

235BL

W. BLUEMOUND ROAD

RAVENSWOOD CIRCLE

W. WISCONSIN AVENUE

ELM SPRING AVENUE

N. ROBERTSON AVENUE

ROCKWAY PLACE

BROOKSIDE PLACE

AVON COURT

CITY OF WAUWATOSA

N

R/L BL

R/L F

S. 84TH STREET

50F

60F

70F

W. HILL STREET

N. GLENVIEW AVENUE

STH 181

BEGIN PROJECT
STA 62F+72.34

HONEY CREEK PARKWAY

CITY OF MILWAUKEE

CONSTRUCTION LIMIT
STA 252BL+64.74

CONSTRUCTION LIMIT
STA 313WX+34.01

R/L WX

CONSTRUCTION LIMIT
STA 308WX+11.38

80FN

310WX

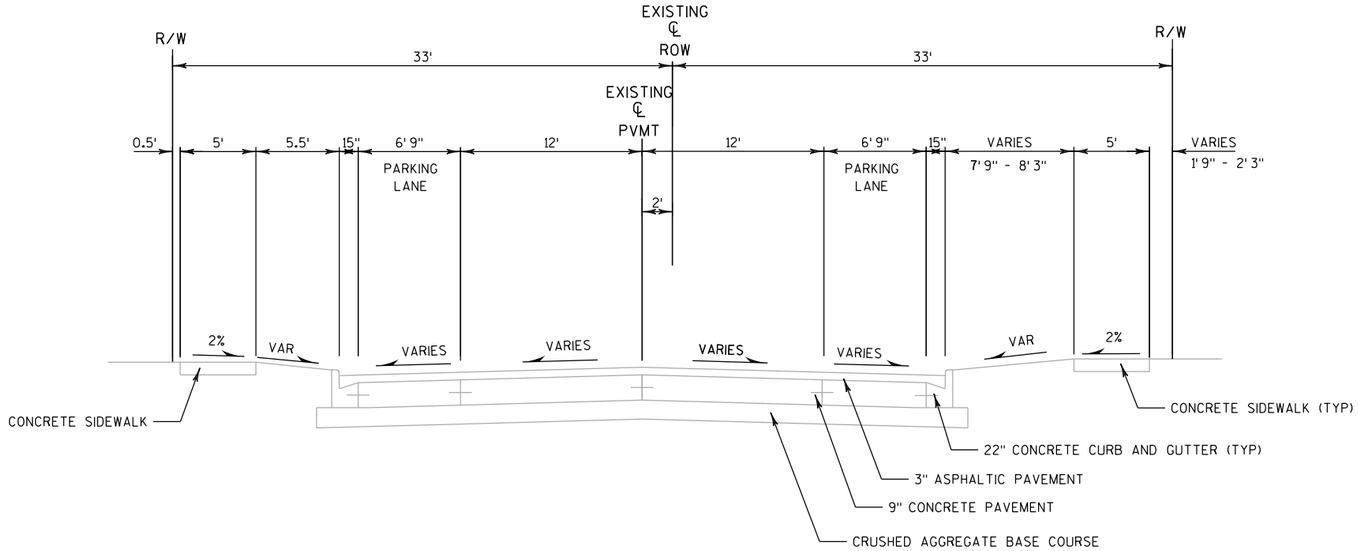
90FN

R/L FN

N. GLENVIEW AVENUE

END PROJECT
STA 89FN+76.16

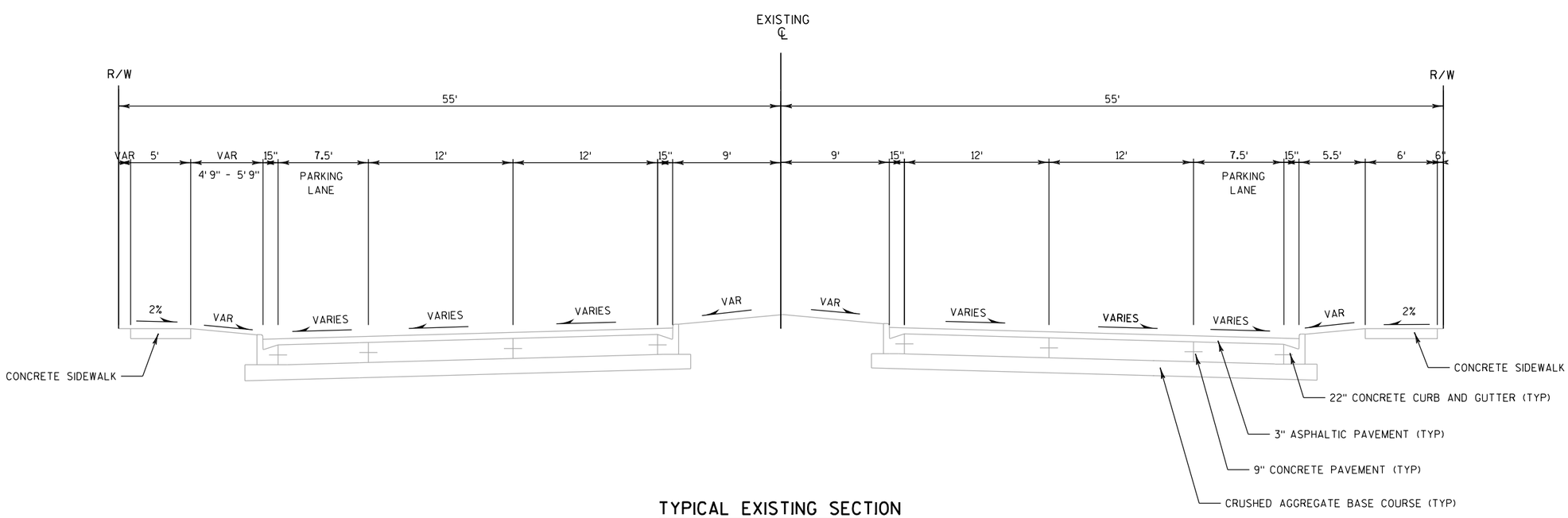
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET	E



TYPICAL EXISTING SECTION

N. GLENVIEW AVENUE

STA 72FN+79.34 TO STA 89FN+76.16

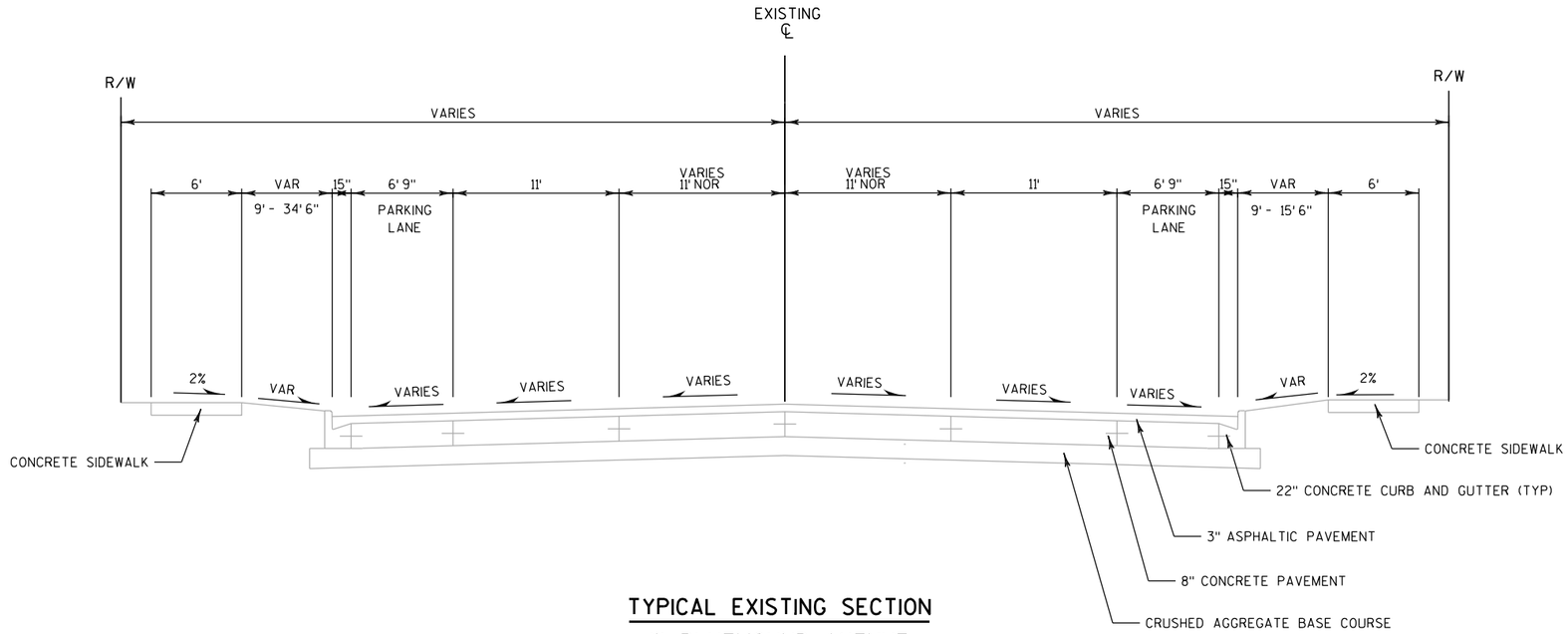


TYPICAL EXISTING SECTION

N. GLENVIEW AVENUE

STA 62F+72.34 TO STA 72F+85.03

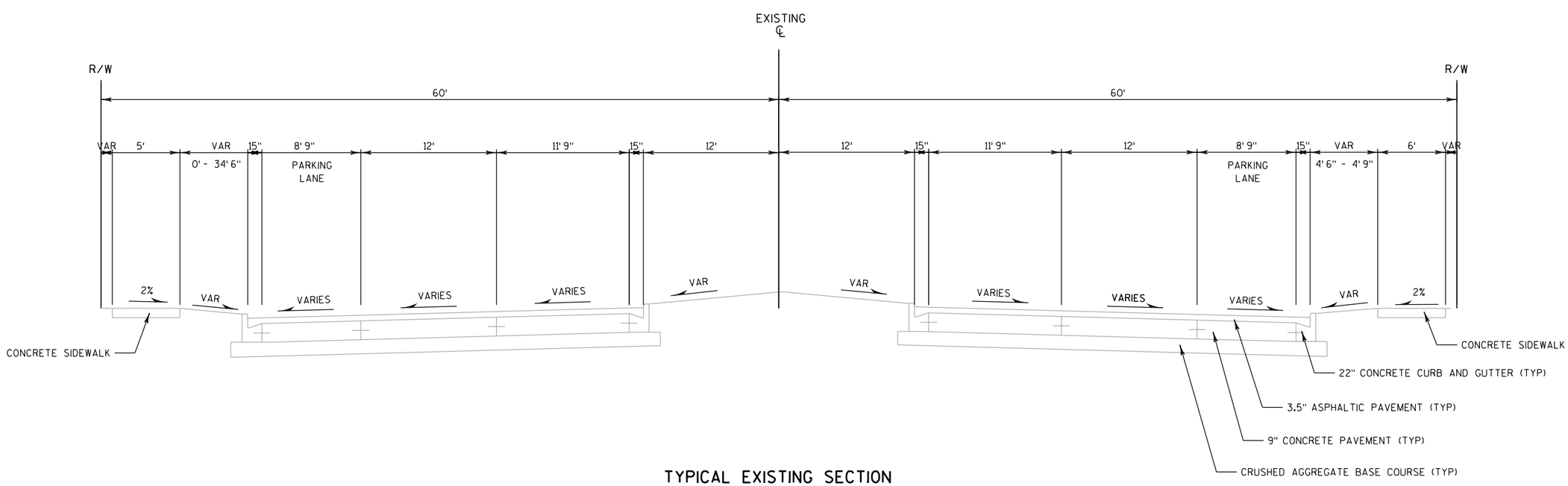
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



TYPICAL EXISTING SECTION

W. BLUEMOUND AVENUE

STA 247BL+24.00 TO STA 252BL+14.74



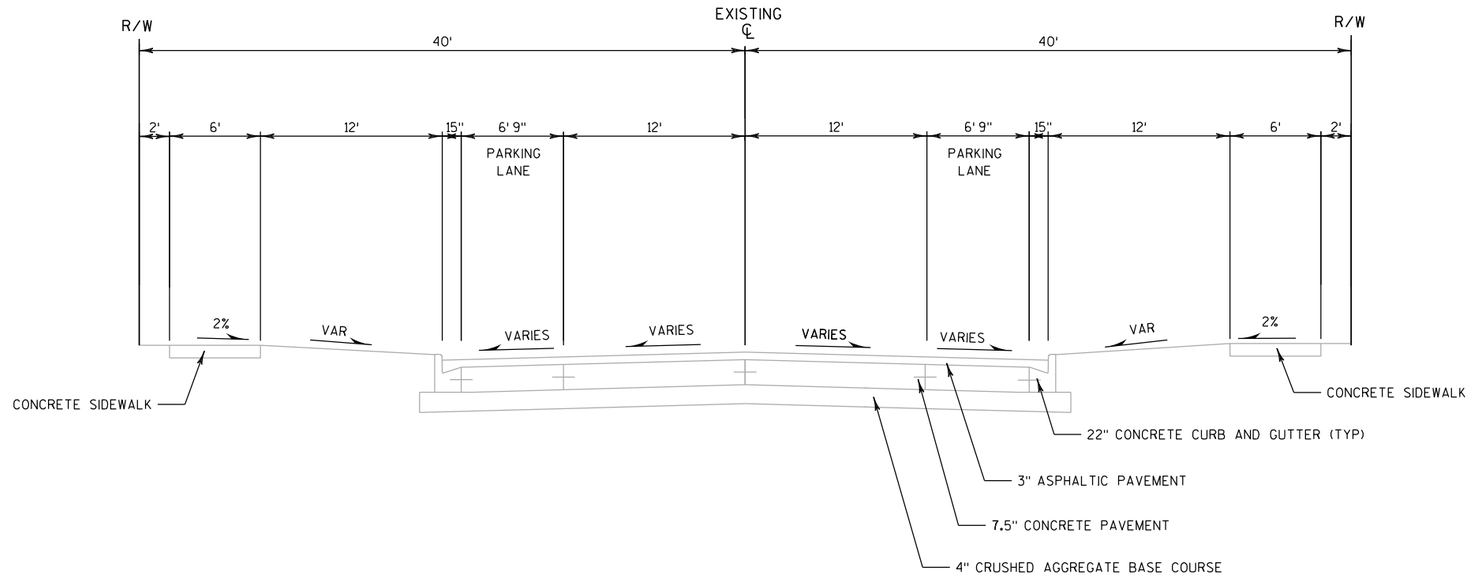
TYPICAL EXISTING SECTION

W. BLUEMOUND AVENUE

STA 240BL+35.29 TO STA 247BL+24.00

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



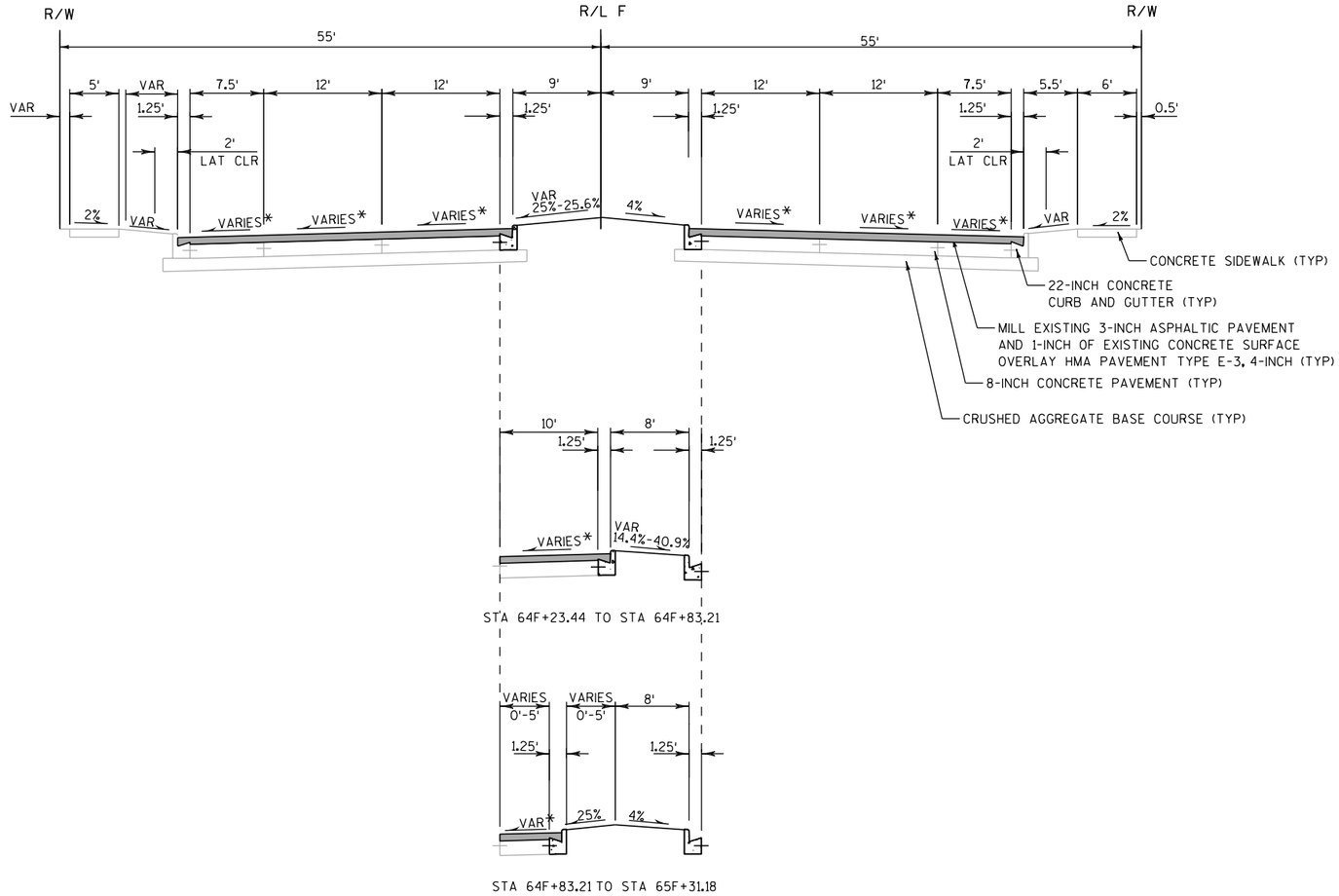
TYPICAL EXISTING SECTION

W. WISCONSIN AVENUE

STA 308WX+61.38 TO STA 312WX+84.01

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET E

2



TYPICAL FINISHED SECTION

N. GLENVIEW AVENUE

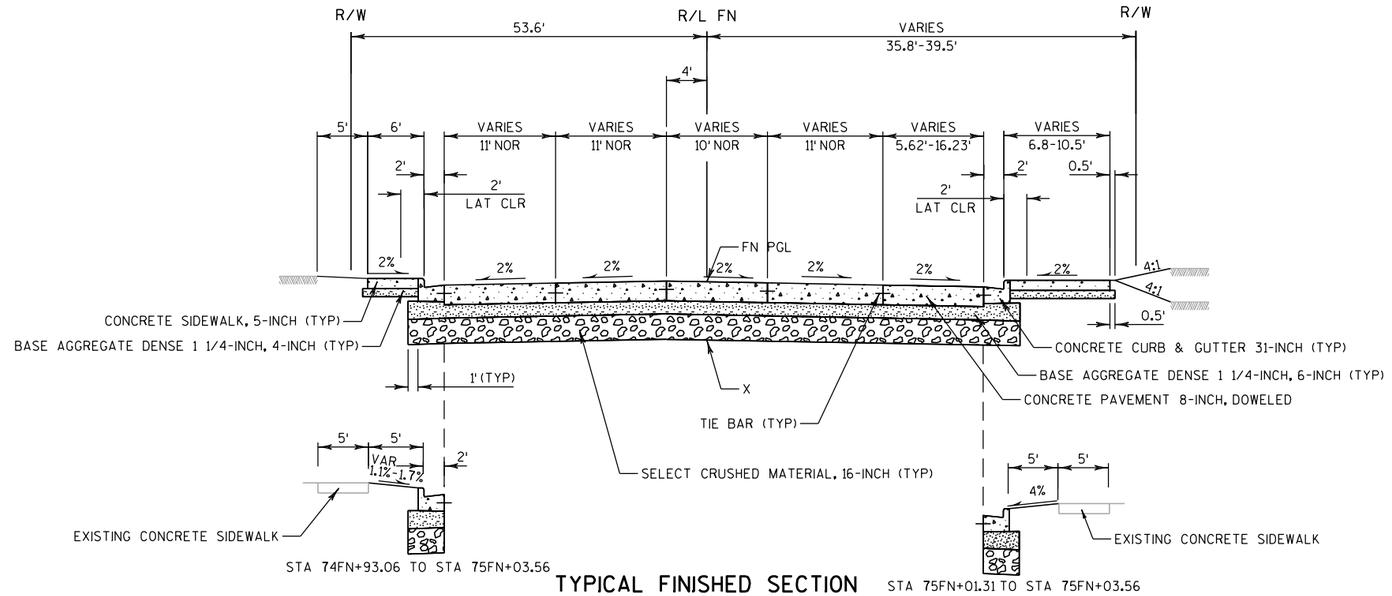
STA 62F+72.34 TO STA 67F+40.00

NOTE

ALL DISTURBED AREAS RESTORE WITH 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

*EXISTING SLOPES VARY. MILL AND REPLACE TO PRESERVE EXISTING SLOPES.

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



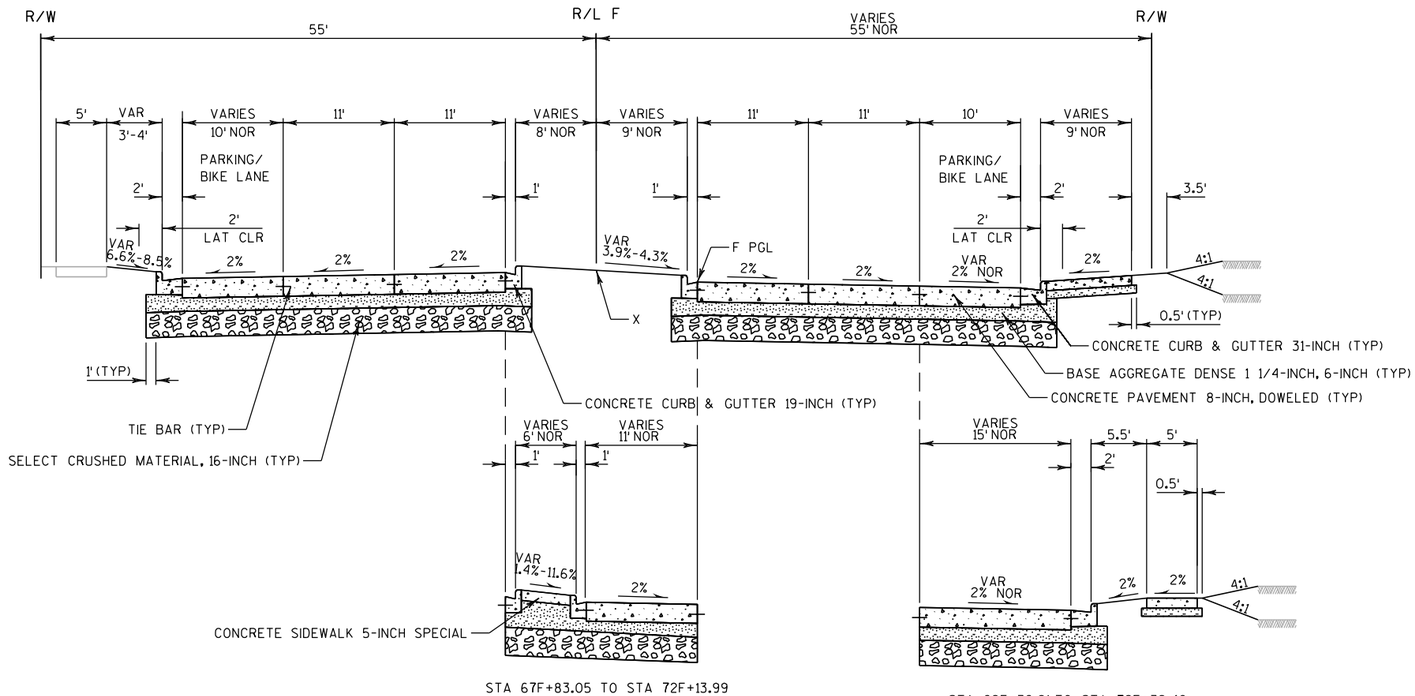
STA 74FN+93.06 TO STA 75FN+03.56

STA 75FN+01.31 TO STA 75FN+03.56

TYPICAL FINISHED SECTION

N. GLENVIEW AVENUE

STA 72FN+79.34 TO STA 75FN+03.56



STA 67F+83.05 TO STA 72F+13.99

STA 69F+36.81 TO STA 72F+38.46

TYPICAL FINISHED SECTION

N. GLENVIEW AVENUE

STA 67F+40.00 TO STA 72F+85.03

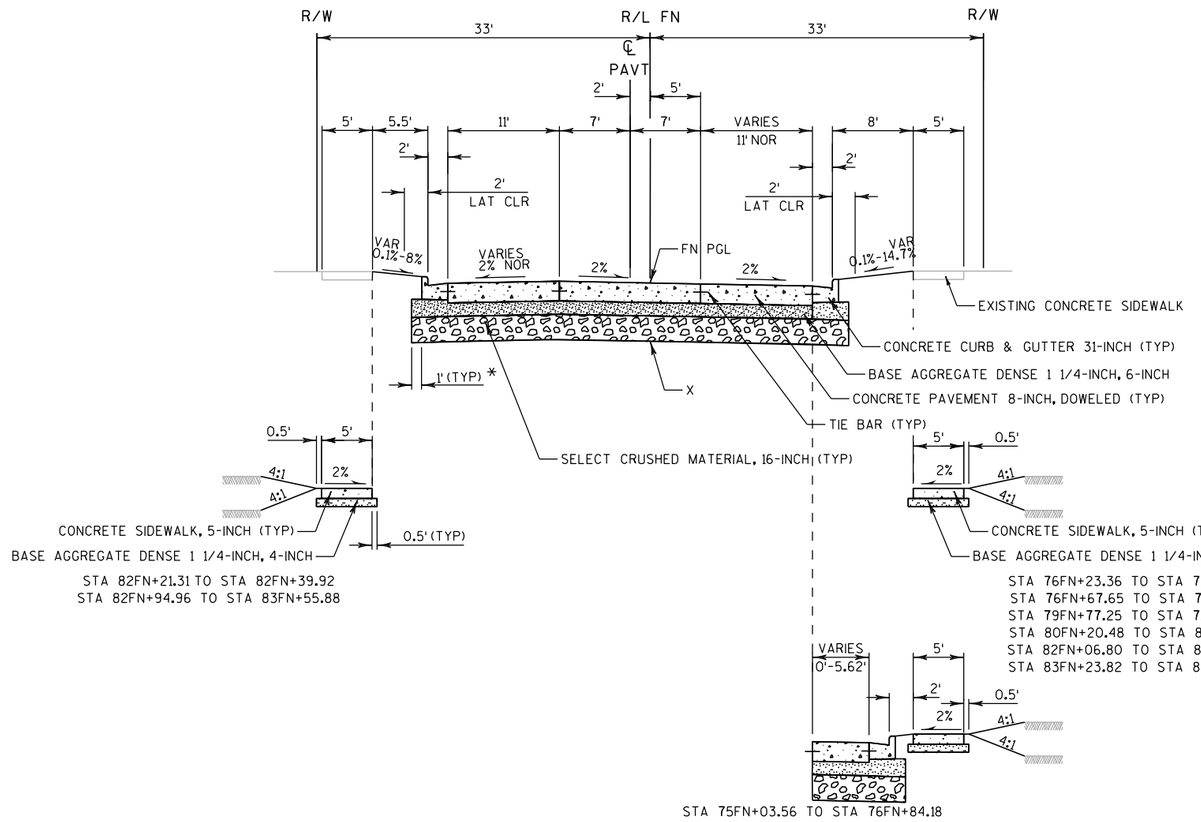
NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

ALL DISTURBED AREAS RESTORE WITH 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



TYPICAL FINISHED SECTION

N. GLENVIEW AVENUE

STA 75FN+03.56 TO STA 84FN+57.78

NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

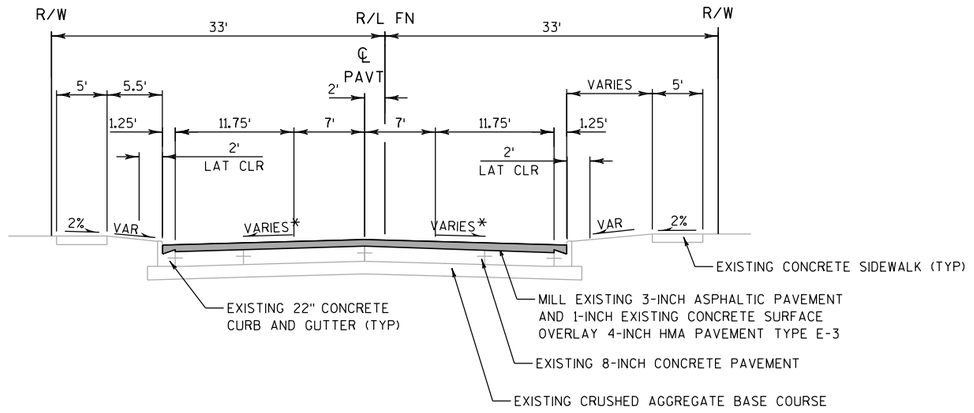
ALL DISTURBED AREAS RESTORE WITH 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

* 0.5' FROM STA 81FN+21 RT TO STA 81FN+31 RT TO PRESERVE TREE. HAND POUR CURB IF NECESSARY.

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\020401_ts.dgn PLOT DATE : 01-NOV-2012 05:26 PLOT BY : MSCD1S PLOT NAME : 020401_ts2 PLOT SCALE : 15:1
WISDOT/CADDS SHEET 42

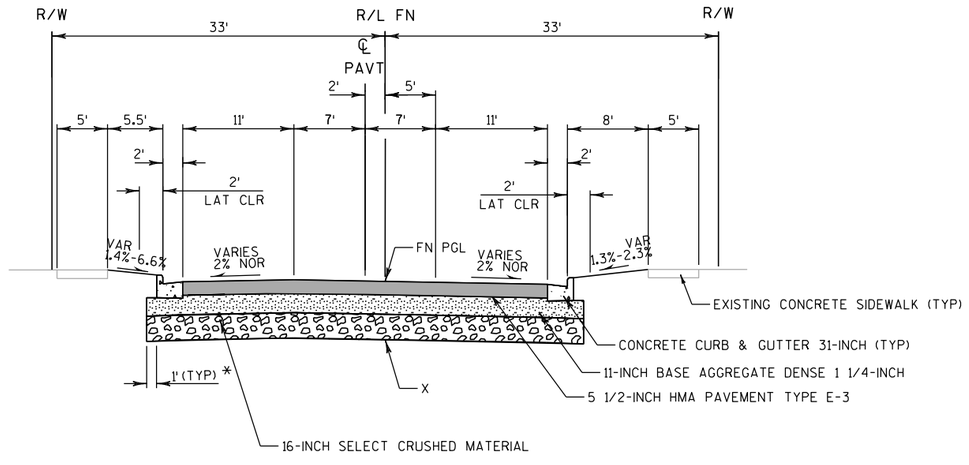
2



TYPICAL FINISHED SECTION

N. GLENVIEW AVENUE

STA 85FN+07.78 TO STA 89FN+76.16



TYPICAL FINISHED SECTION

N. GLENVIEW AVENUE

STA 84FN+57.78 TO STA 85FN+07.78

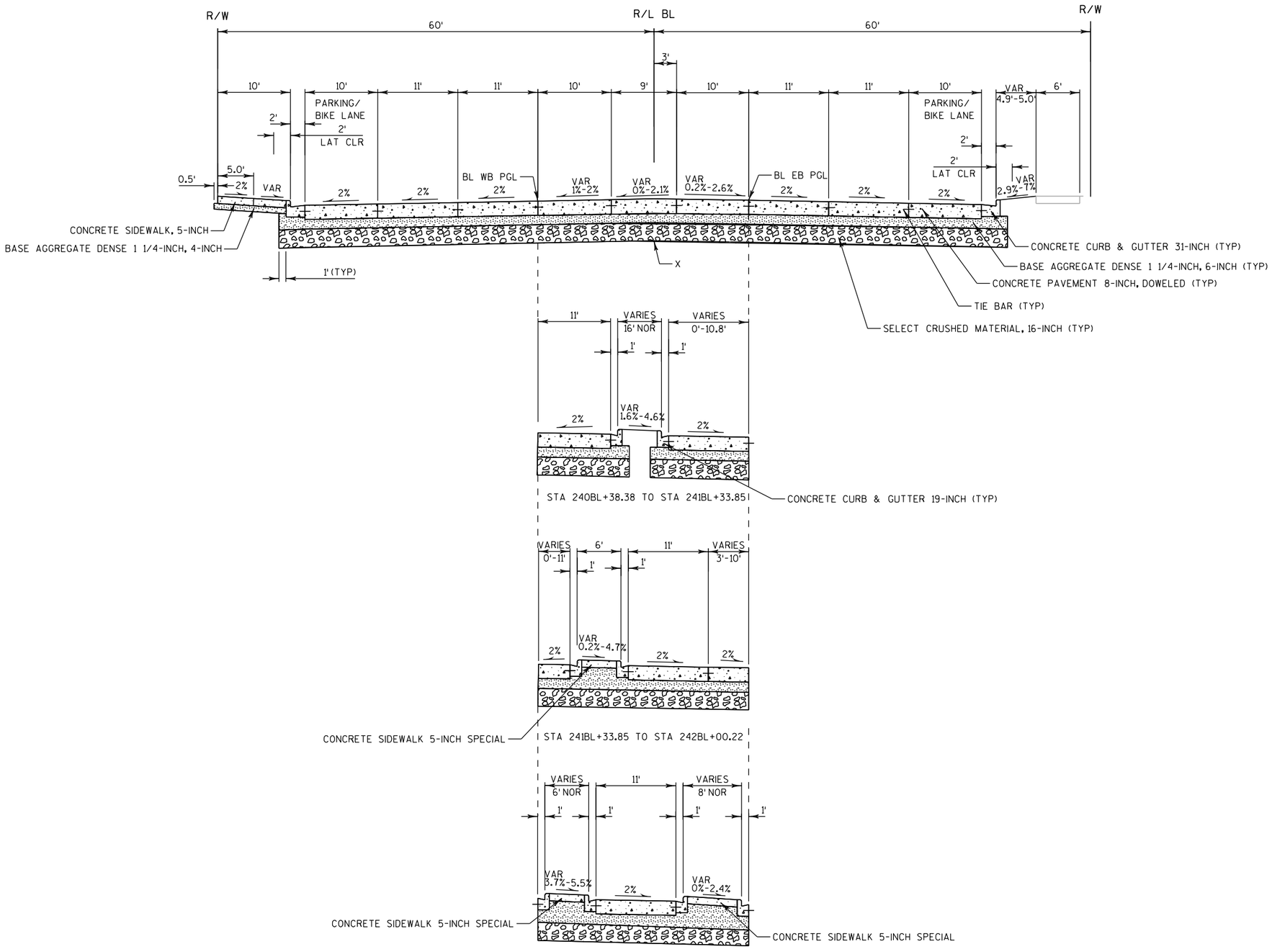
*EXISTING SLOPES VARY. MILL AND REPLACE TO PRESERVE EXISTING SLOPES.

NOTES

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

ALL DISTURBED AREAS RESTORE WITH 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



TYPICAL FINISHED SECTION

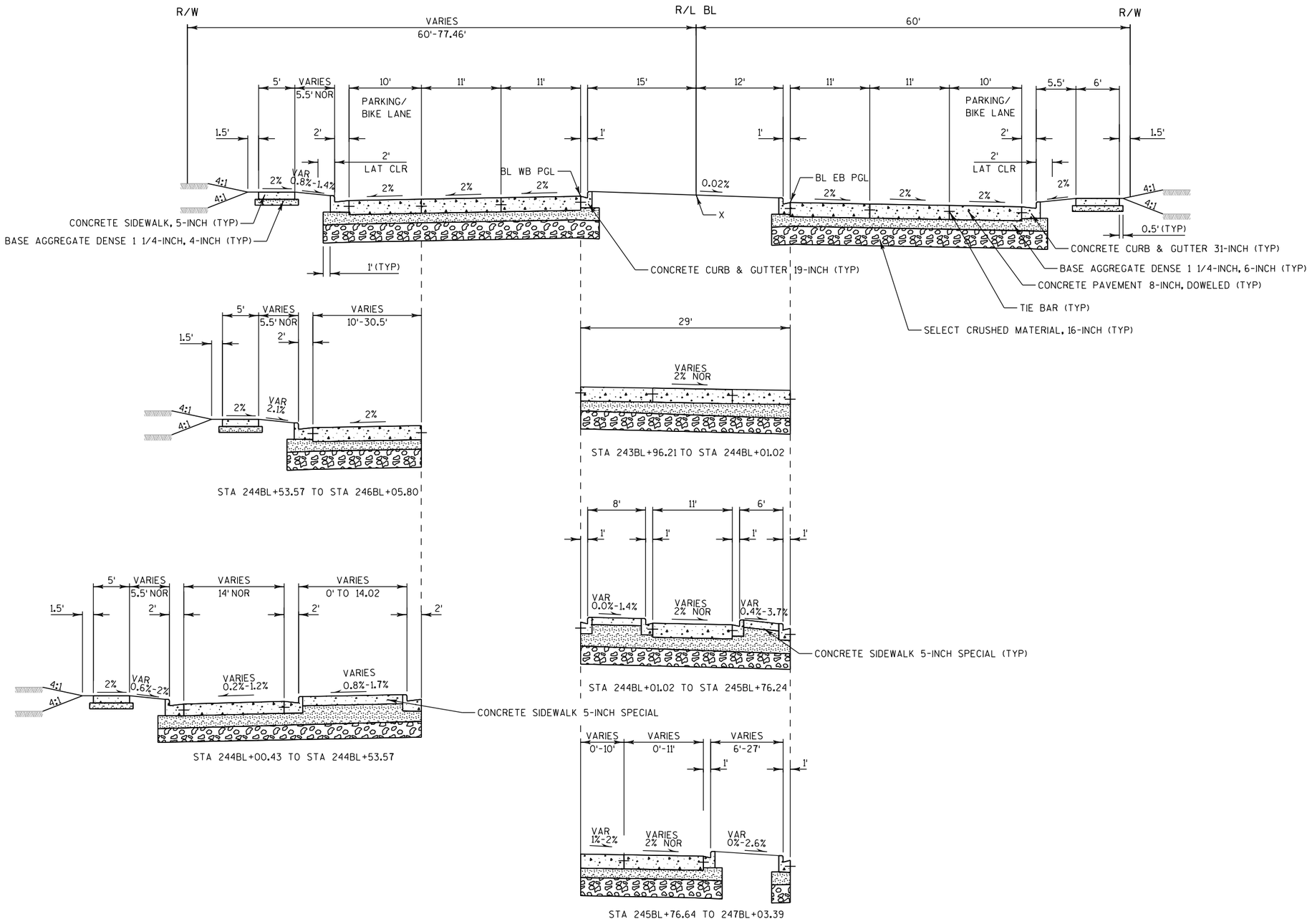
W. BLUEMOUND AVENUE

STA 240BL+35.29 TO STA 243BL+96.21

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

ALL DISTURBED AREAS RESTORE WITH 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



TYPICAL FINISHED SECTION

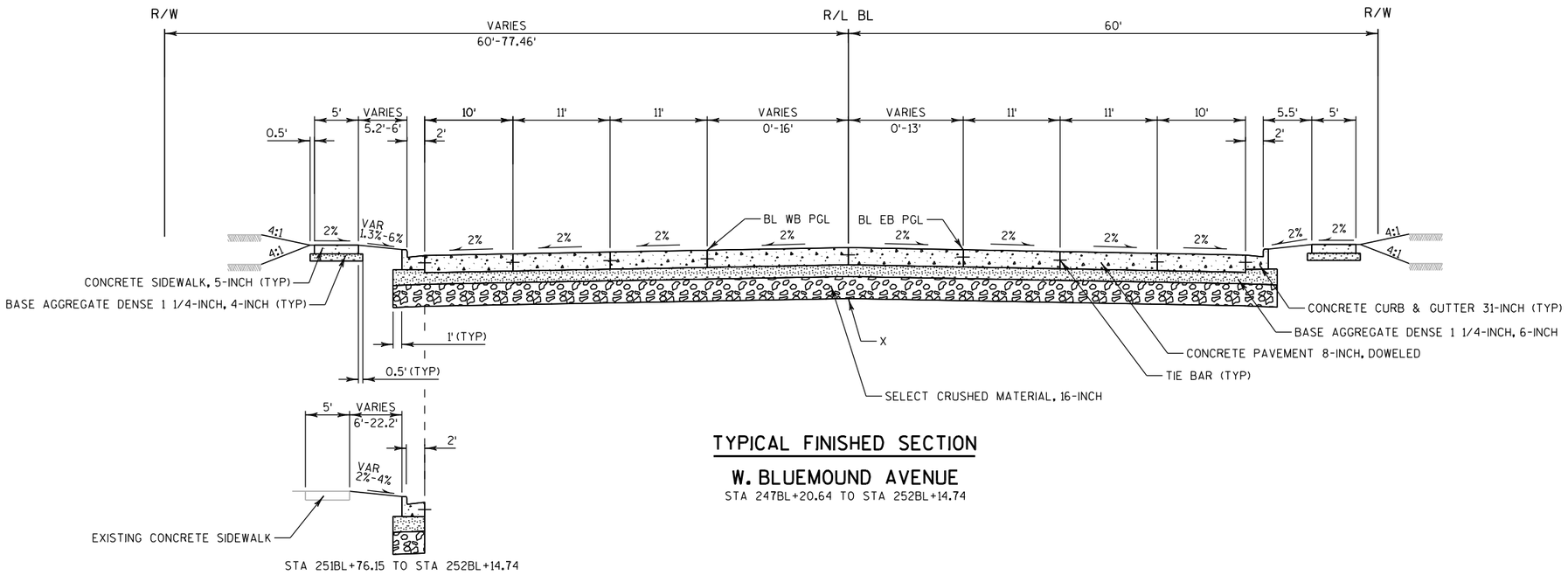
W. BLUEMOUND AVENUE

STA 243BL+96.21 TO STA 247BL+20.64

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

ALL DISTURBED AREAS RESTORE WITH 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

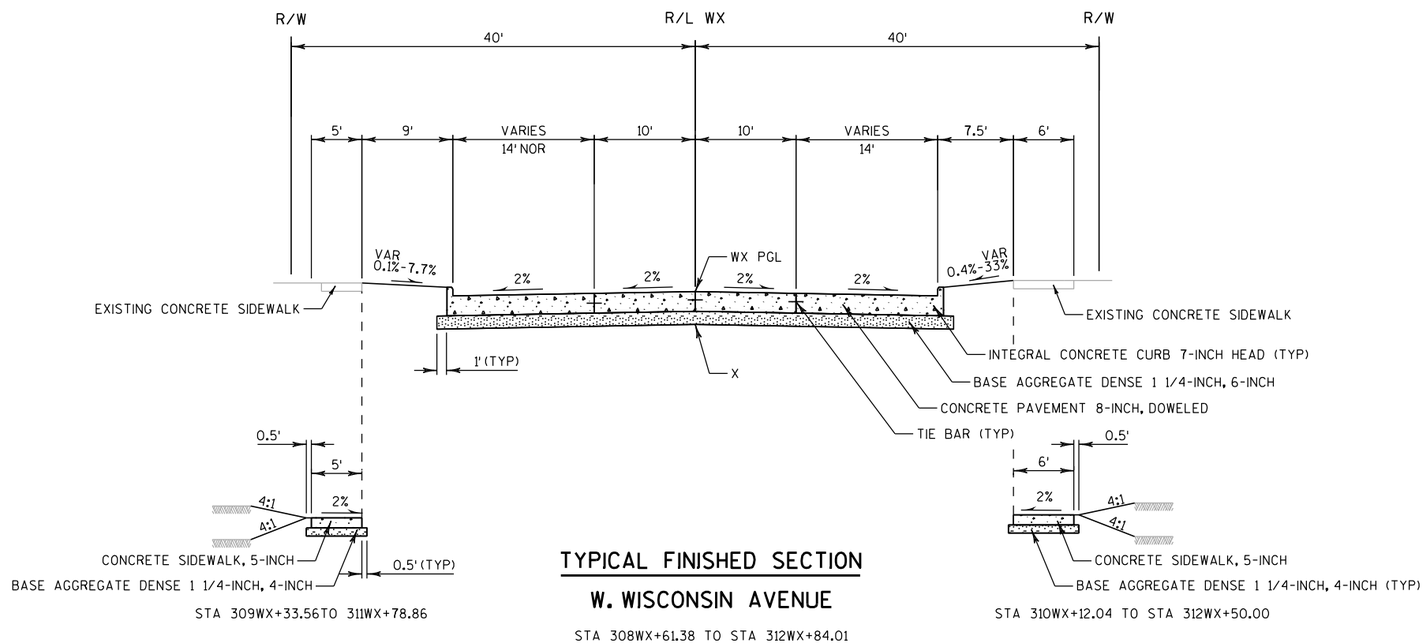
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



TYPICAL FINISHED SECTION

W. BLUEMOUND AVENUE

STA 247BL+20.64 TO STA 252BL+14.74



TYPICAL FINISHED SECTION

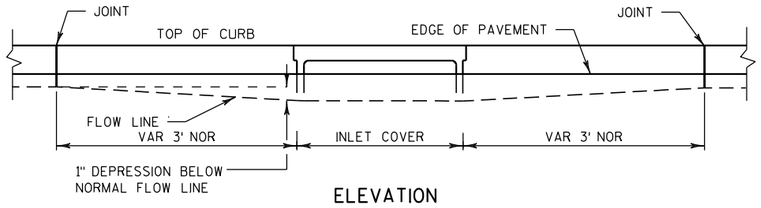
W. WISCONSIN AVENUE

STA 308WX+61.38 TO STA 312WX+84.01

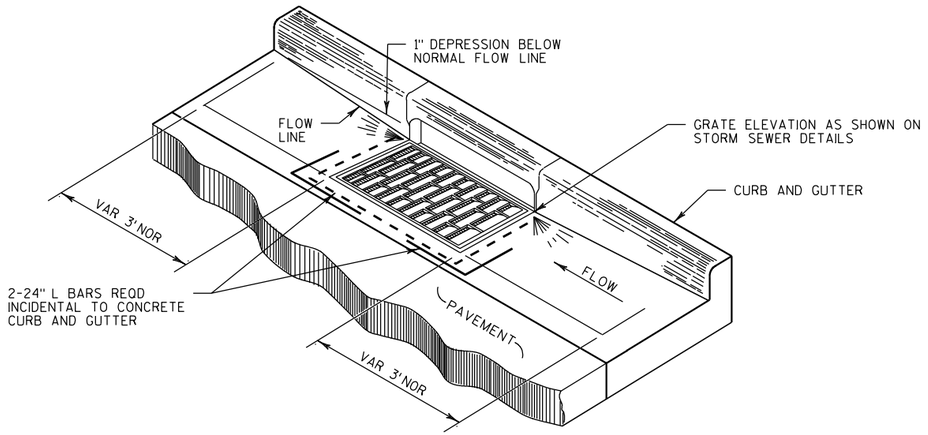
PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION

ALL DISTURBED AREAS RESTORE WITH 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

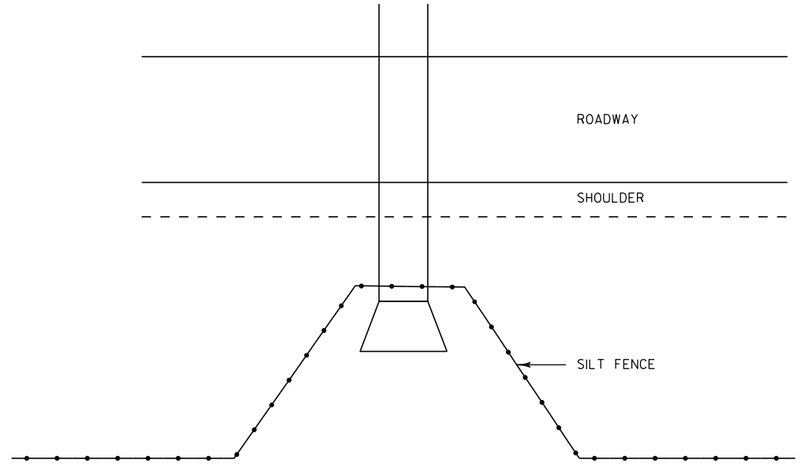


ELEVATION



DETAIL OF CURB AND GUTTER AT INLETS

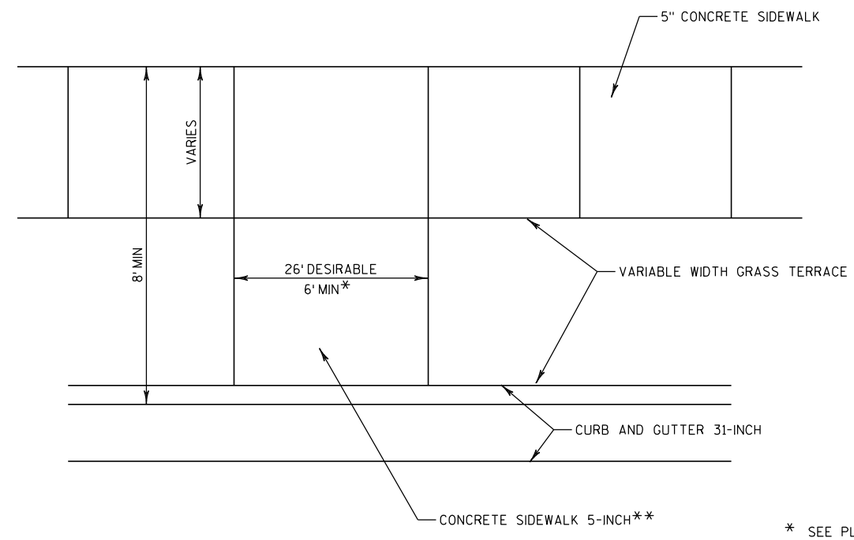
STRUCTURES F166 & F172
SEE STORM SEWER PLANS FOR LOCATIONS



TYPICAL SILT FENCE DETAIL AT PIPE INLET

NOTE

SEE SILT FENCE SDD FOR ADDITIONAL INFORMATION



TYPICAL DETAIL OF ADA BUS STOP

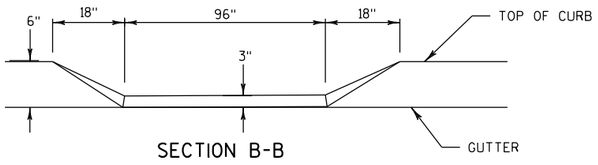
SEE PLAN DETAILS FOR ADA BUS STOP LOCATIONS

* SEE PLAN DETAILS FOR DIMENSION

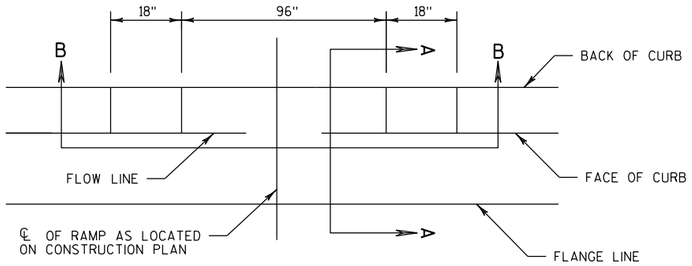
** CONCRETE SIDEWALK 6-INCH REQUIRED AT BUS SHELTER LOCATIONS

NOTES

1. MAXIMUM SLOPE OF BUS STOP SHALL BE 2%.
2. NON SLIP SURFACE REQUIRED (BROOM FINISH).



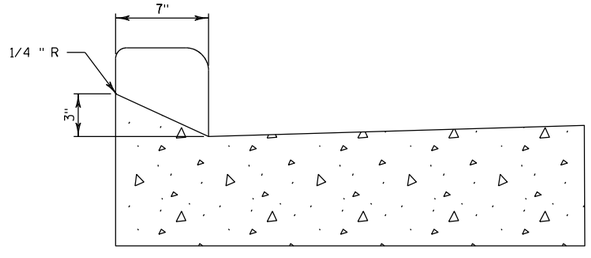
SECTION B-B



PLAN VIEW

NOTE

PAID FOR AS CURB AND GUTTER. MEASURED ALONG FLOW LINE.

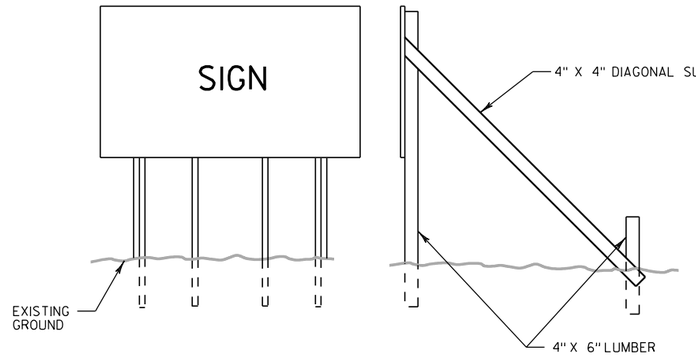


SECTION A-A

MAINTENANCE OPENING

LOCATIONS AS NOTED ON THE PLAN DETAILS

63F+45 LT
65F+06 LT
68F+20 RT
235BL+00 RT
238BL+75 RT
241BL+15 RT
246BL+50 LT

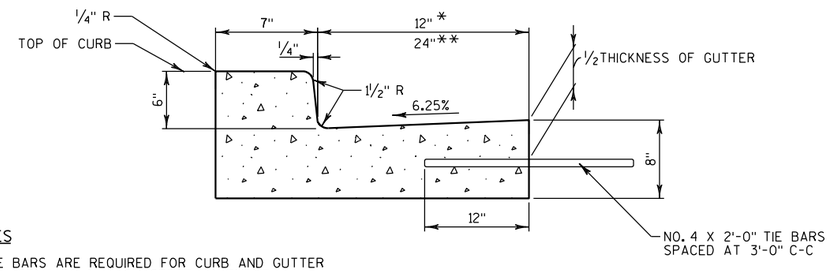


FRONT VIEW SIDE VIEW

NOTES

1) SEE TRAFFIC CONTROL SHEETS FOR SIGN LOCATIONS.
2) TWO DIAGONAL SUPPORTS TO BE AFFIXED TO THE OUTSIDE SUPPORTS FOR EACH SIGN AND TO BE INCIDENTAL TO "TRAFFIC CONTROL SIGNS FIXED MESSAGE".
3) SEE "TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS" SIGN PLATE FOR ADDITIONAL REQUIREMENTS.
4) ANGLE BRACES CAN ONLY BE USED WHEN BEHIND CURB AND GUTTER OR OTHER BARRIER.

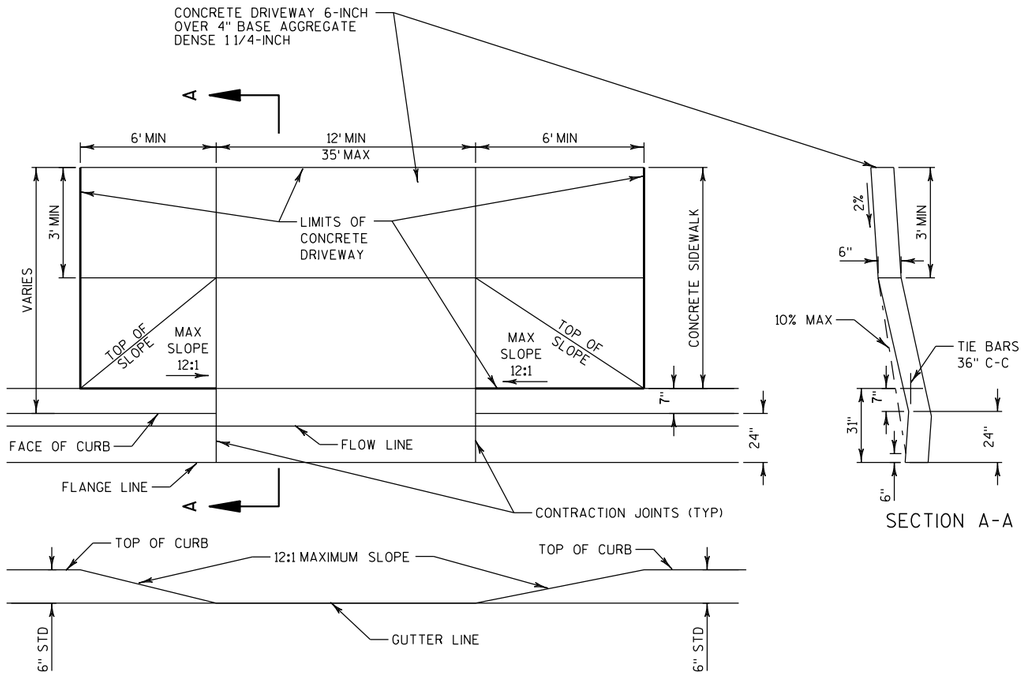
MOUNTING DETAIL FOR FIXED MESSAGE SIGNS



NOTES

1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER ADJACENT TO NEW CONCRETE PAVEMENT.
2) OMIT TIE BARS WHERE INTEGRAL CURB AND GUTTER IS REQUIRED.
3) SEE STANDARD DETAIL DRAWING FOR DETAILS NOT SHOWN HERE.

CONCRETE CURB AND GUTTER 19-INCH* AND 31-INCH**



SECTION A-A

NOTES

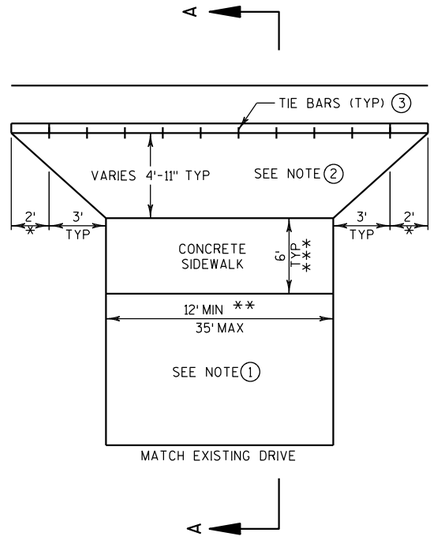
PLACE DUMMY JOINT AT CENTER OF DRIVEWAY WHEN DRIVEWAY IS 14 FEET OR MORE IN WIDTH

——— INDICATES 1/2" EXPANSION JOINT MATERIAL

— - — ALTERNATE FLOW LINE

DRIVEWAY ENTRANCE DETAIL WITH COMMERCIAL SIDEWALK

STA 73FN+65 LT
STA 74FN+10 LT
STA 242BL+40 LT



PLAN VIEW

NOTES

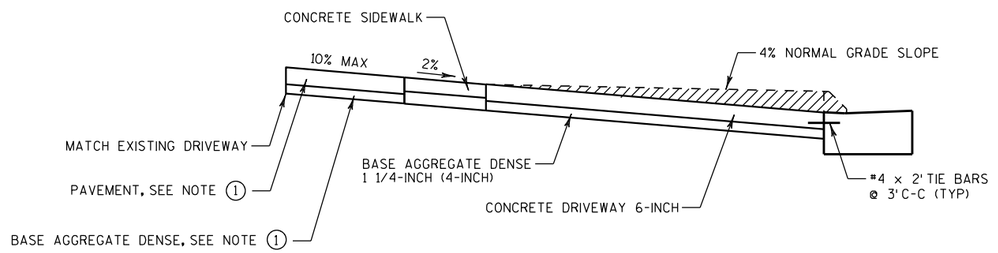
(1) DRIVEWAY SURFACE BEYOND APRON TO BE REPLACED IN-KIND WITH MINIMUM SECTION OF:

ASPHALTIC SURFACE (5-INCH) DRIVEWAYS AND FIELD ENTRANCES
OVER BASE AGGREGATE DENSE 1 1/4-INCH (10-INCH)
OR
CONCRETE DRIVEWAY 6-INCH OVER
BASE AGGREGATE DENSE 1 1/4-INCH (4-INCH)
OR
BASE AGGREGATE DENSE 1 1/4-INCH (6-INCH)

(2) ALL URBAN DRIVEWAYS TO BACK OF SIDEWALK TO BE PAID FOR AS CONCRETE DRIVEWAY 6-INCH

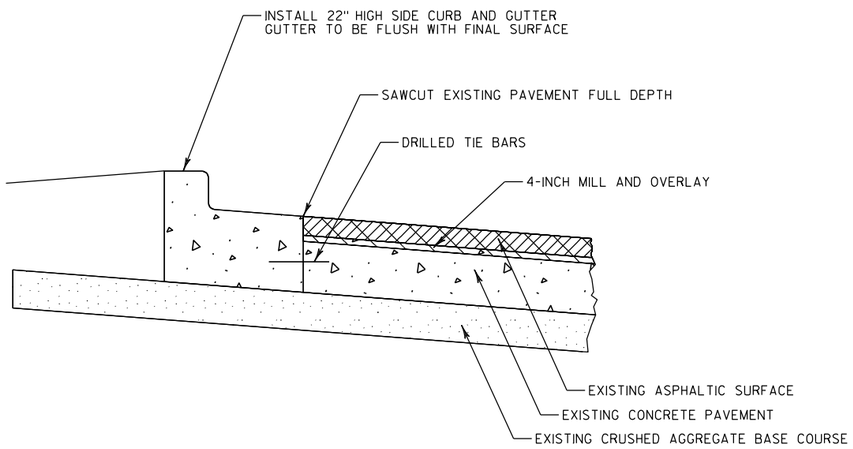
(3) TIE BARS ARE INCIDENTAL TO THE BID ITEM "CONCRETE DRIVEWAY 6-INCH"

* TAPER CURB HEAD
** SEE PLAN DETAILS FOR WIDTH REQUIRED
*** SEE CROSS SECTIONS FOR REQUIRED WIDTH

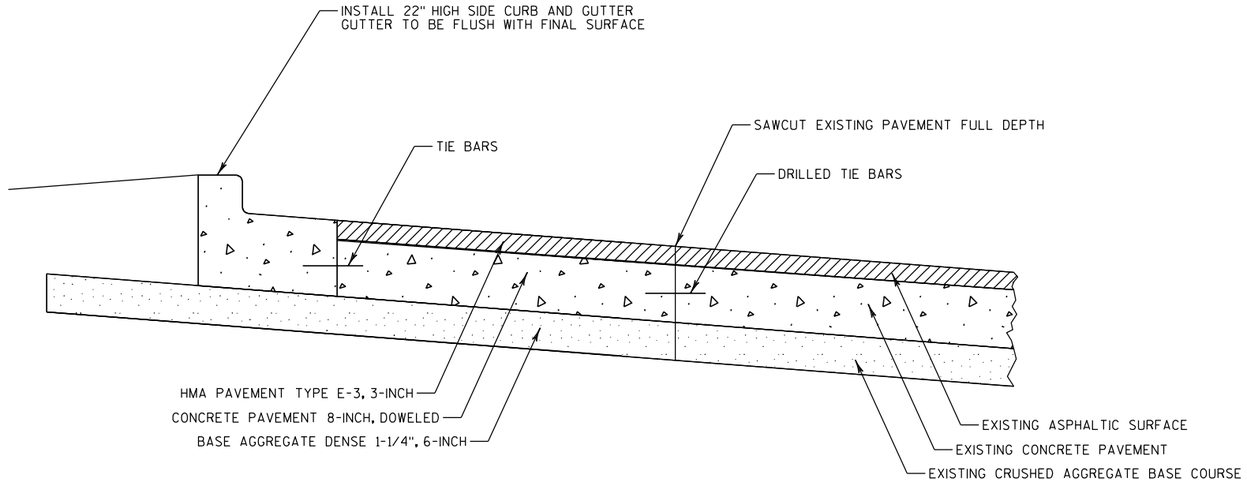


SECTION A-A

URBAN DRIVEWAY

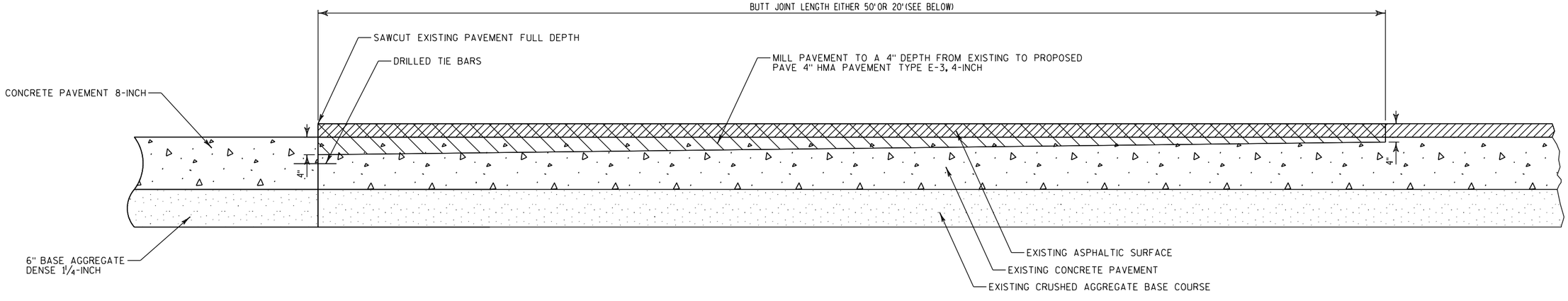


N. GLENVIEW AVENUE STA 62F+73.78 TO STA 67F+08.29



W. BLUEMOUND ROAD STA 234BL+65.76 TO STA 239BL+81.41

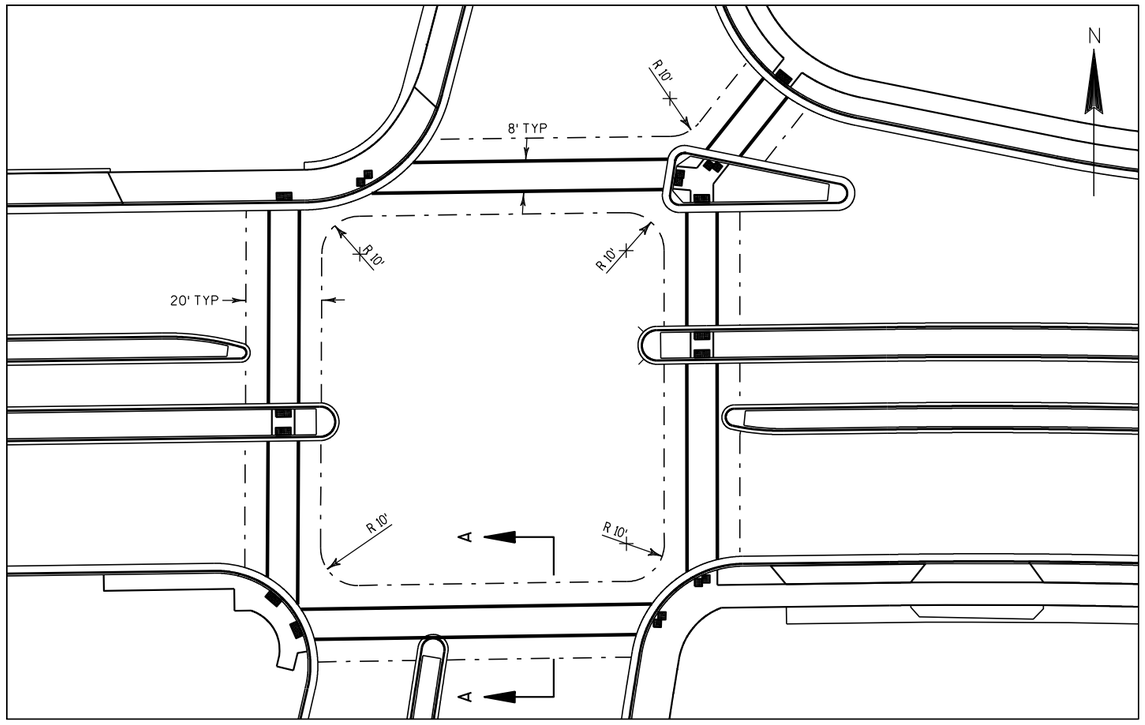
MEDIAN REPAIR DETAIL

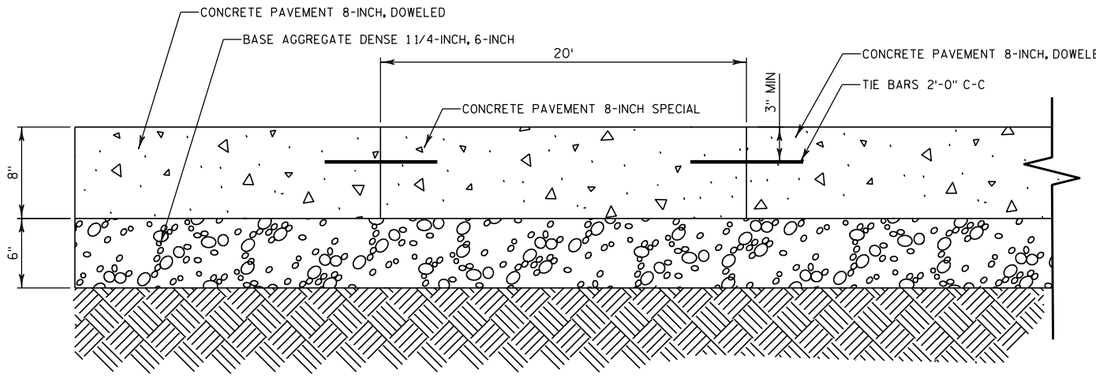


BUTT JOINT DETAIL

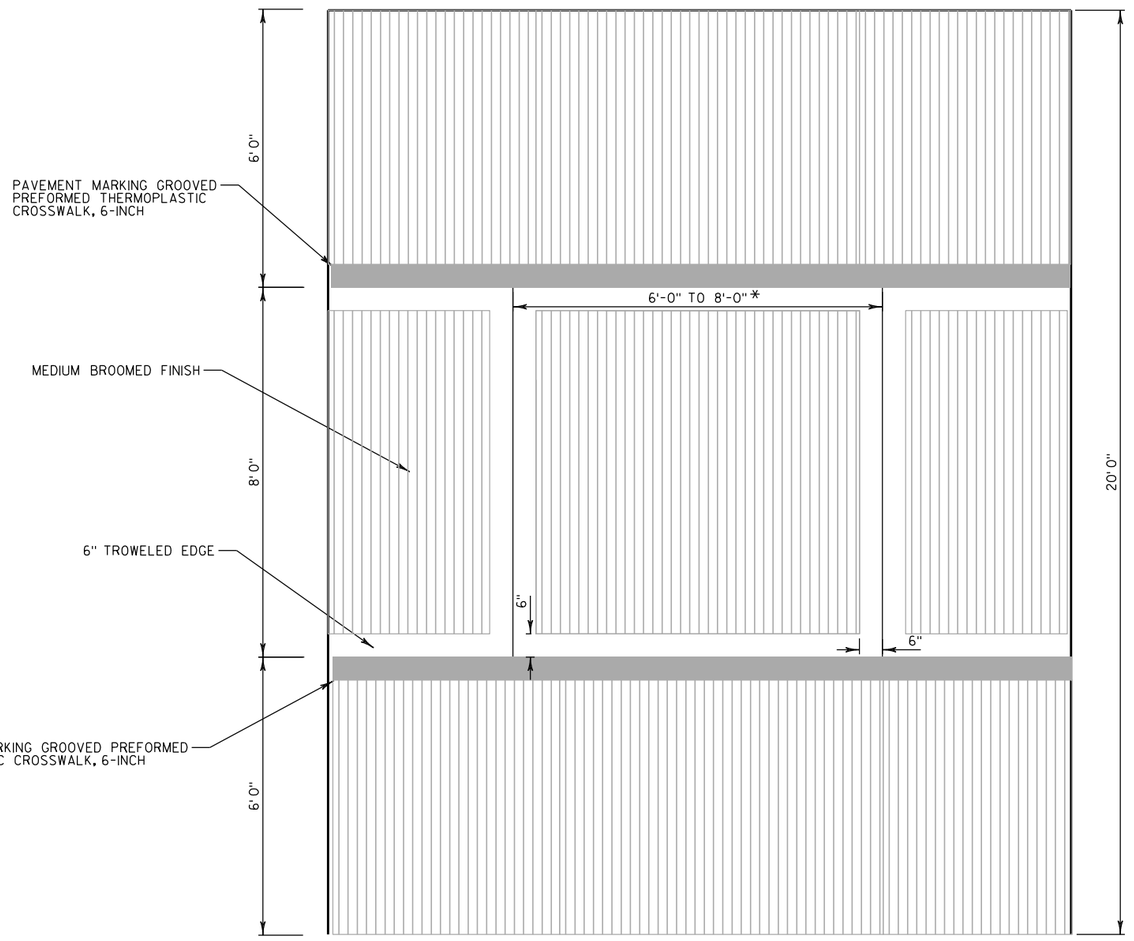
N. GLENVIEW AVENUE (SOUTH END) 50'
W. BLUEMOUND ROAD (WEST END) 50'
W. BLUEMOUND ROAD (EAST END) 50'
W. WISCONSIN AVENUE (WEST END) 50'
W. WISCONSIN AVENUE (EAST END) 50'
ROCKWAY PLACE 20'
BROOKSIDE PLACE 20'

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E





SECTION A-A PROFILE



SECTION A-A

NOTES

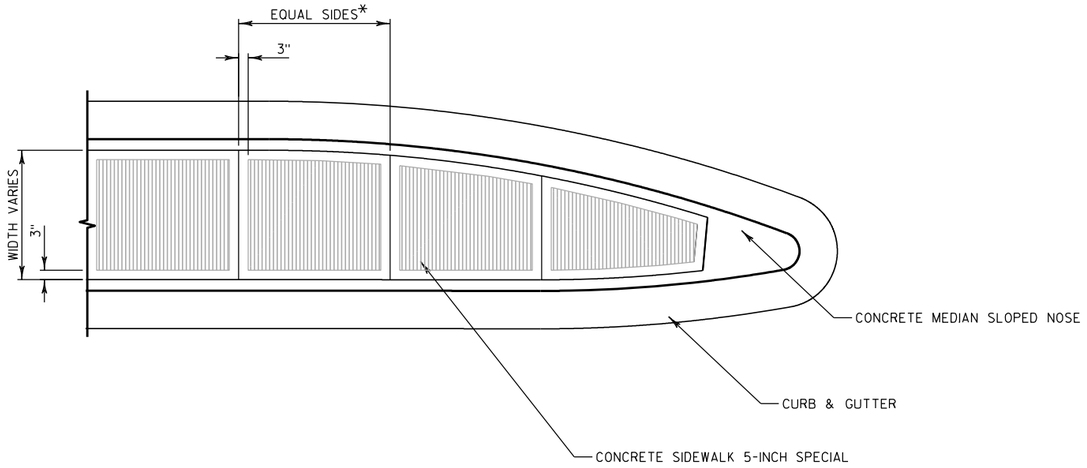
* DETERMINE JOINT SPACING IN THE FIELD

CONCRETE PAVEMENT 8-INCH SPECIAL

NOT TO SCALE
N. GLENVIEW AVENUE AND W. BLUEMOUND ROAD
N. GLENVIEW AVENUE AND W. WISCONSIN AVENUE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E

2



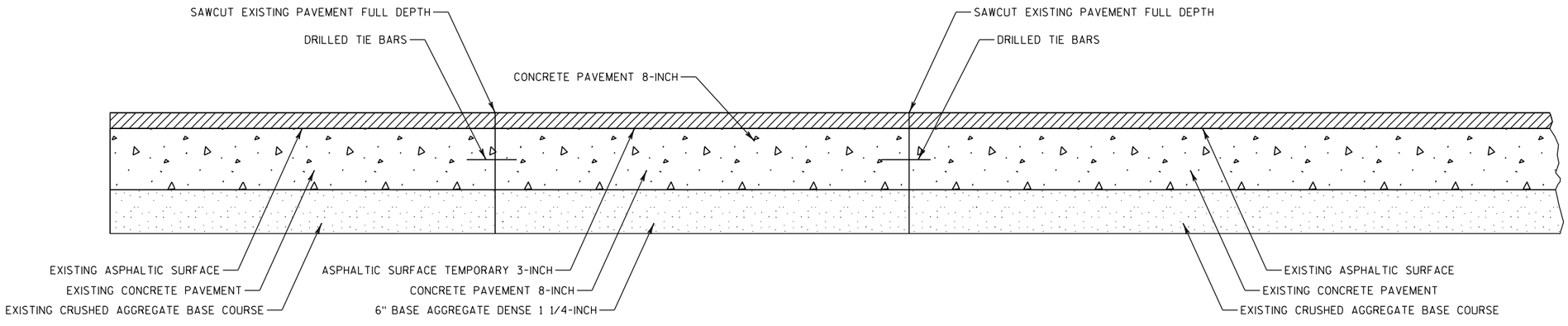
CONCRETE SIDEWALK 5-INCH SPECIAL - MEDIAN

NOT TO SCALE

NOTES

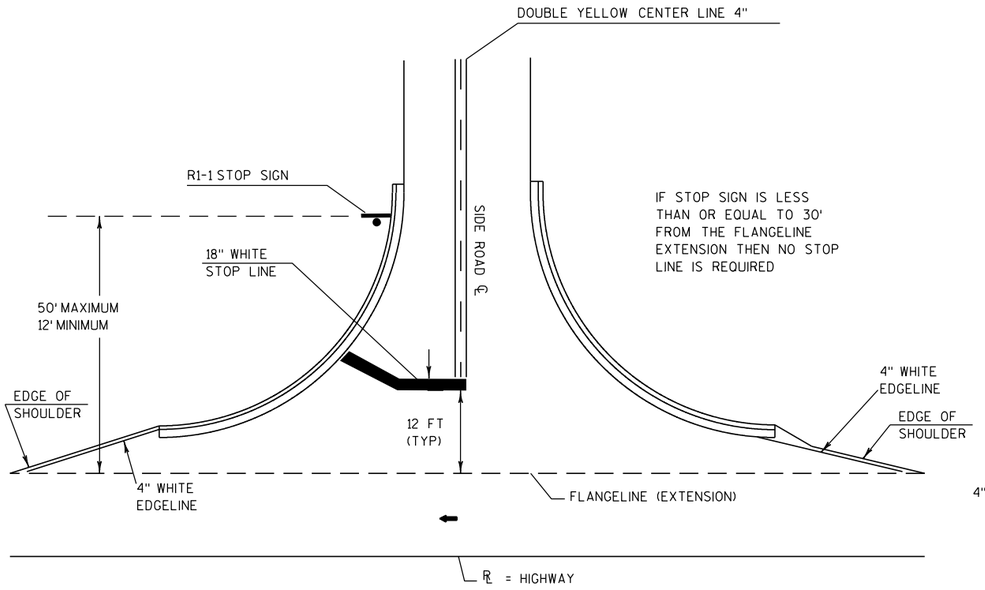
SEE PLAN DETAILS AND STREETSCPAING PLANS FOR LOCATIONS

* DETERMINE JOINT SPACING IN THE FIELD

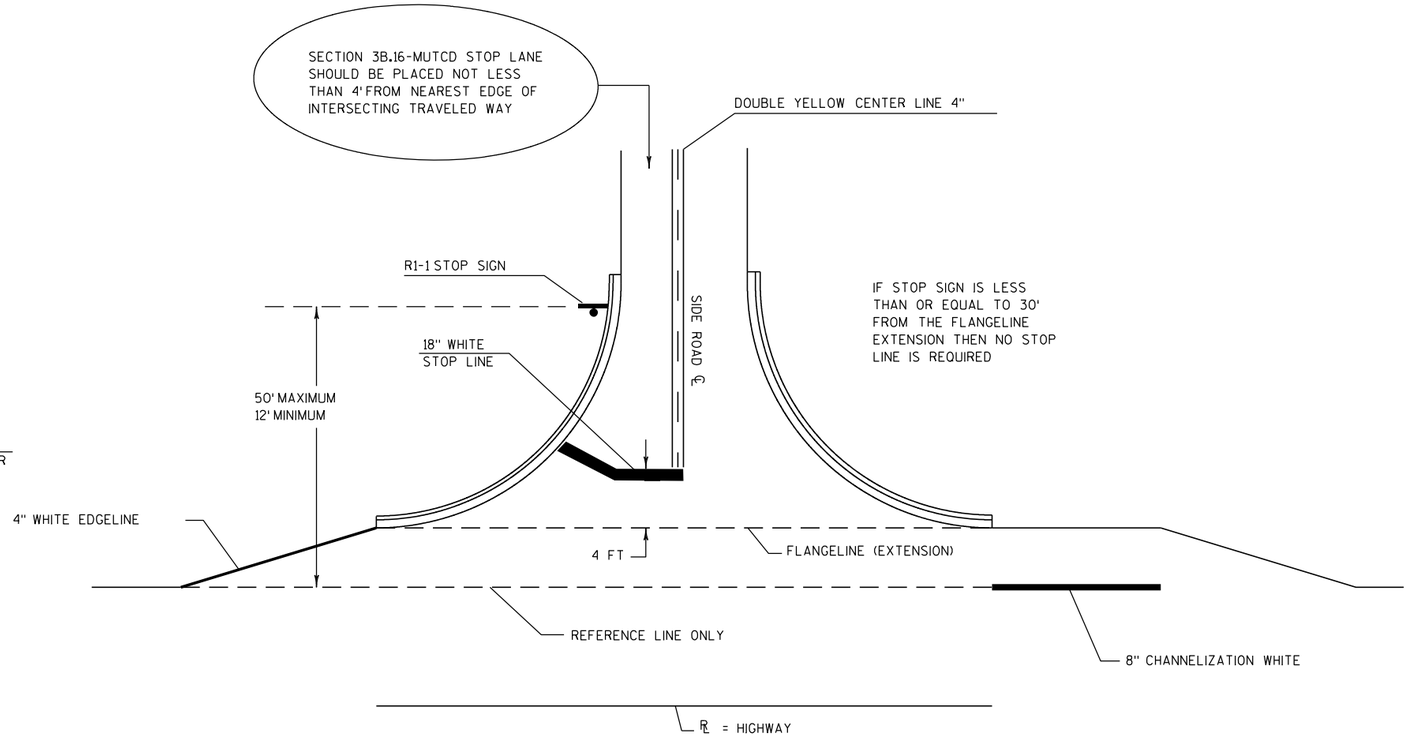


TRENCH REPAIR DETAIL

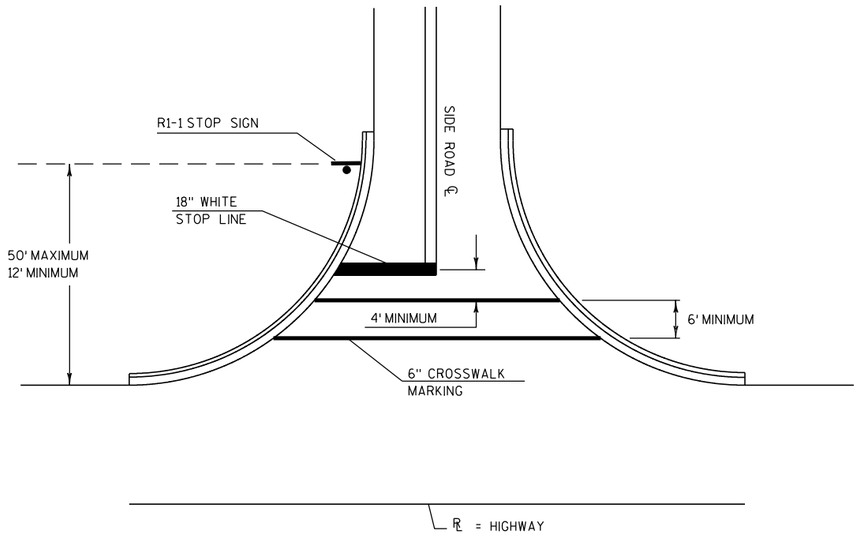
STA 62F+35 TO STA 67F+43
STA 213BL+40 TO STA 234BL+66



TYPICAL PAVEMENT MARKING FOR SIDEROADS



TYPICAL PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



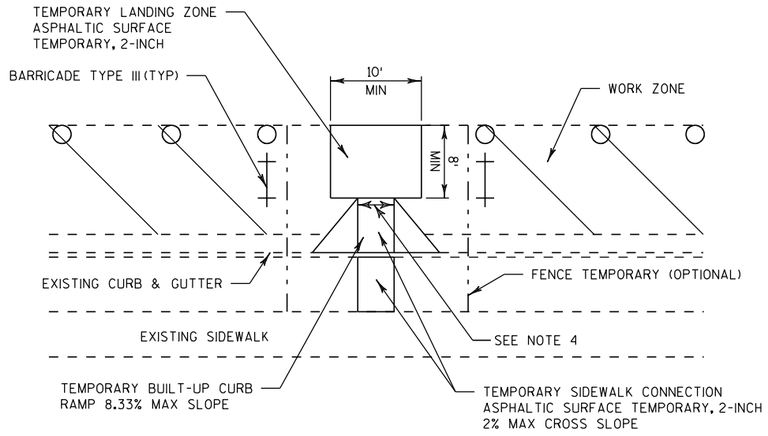
TYPICAL PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

NOTES

18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.

STOP LINES REQUIRED WHERE:

- CROSSWALK MARKINGS EXIST OR BEING PROVIDED
- LARGE RADII
- OFFSET LEFT TURNS WHERE STOP BAR FOR LEFT TURN IS SET BACK FROM THRU MOVEMENT



TEMPORARY CROSSWALK AND BUS STOP ACCESS

NOTES

1) MAINTAIN ACCESS TO BUS STOPS.
2) GAP SIDEWALK WORK TO MAINTAIN PEDESTRIAN ACCESS WHERE APPLICABLE.
3) ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.
4) 5' WIDE MIN WITH FENCE TEMPORARY, 10' WIDE MIN WITHOUT FENCE TEMPORARY.



TYPICAL CROSSWALK NON-INTERSECTION LADDER

CITY OF MILWAUKEE

NOTES

1) THIS CROSSWALK TYPICAL IS TO BE USED ONLY AT 67F+40.
2) USE PREFORMED PLASTIC FOR THE CONSTRUCTION OF THIS CROSSWALK.
3) WIDTH FOR STANDARD CROSSWALK COMPENSATED IN ESTIMATE.

GENERAL NOTES

1) ALL ITEMS ASSOCIATED WITH LIGHTING REMOVALS ARE SHOWN ON LIGHTING PLAN.

2) ALL ITEMS ASSOCIATED WITH SIGNAL REMOVALS ARE SHOWN ON SIGNAL PLAN.

3) ALL ITEMS ASSOCIATED WITH SIGNING REMOVALS ARE SHOWN ON SIGNING REMOVAL PLAN.

4) ALL ITEMS ASSOCIATED WITH FTMS REMOVALS ARE SHOWN ON FTMS PLAN.

5) ALL ITEMS ASSOCIATED WITH PAVEMENT MARKING REMOVALS ARE SHOWN ON TRAFFIC CONTROL PLAN.

6) REMOVAL PLANS DO NOT INCLUDE REMOVAL OF TEMPORARY PAVEMENT. SEE TRAFFIC CONTROL PLAN.

7) CLEARING AND GRUBBING SHALL BE PAID EITHER BY THE STATION OR INCH DIAMETER (I.D.).

8) FOR ADDITIONAL UTILITY INFORMATION, SEE EXISTING UTILITY PLAN.

9) SAVE ALL TREES NOT CALLED OUT FOR REMOVAL.

REMOVAL LEGEND

X CLEARING AND GRUBBING (I.D.)

CLEARING AND GRUBBING (STA.)

REMOVING PAVEMENT

REMOVING ASPHALTIC SURFACE MILLING

REMOVING CONCRETE SIDEWALK

REMOVING CURB AND GUTTER

SLOPE INTERCEPT

X X X SAWING ASPHALT

X X X X SAWING CONCRETE PAVEMENT

REMOVING INLETS

REMOVE AND CAP EXISTING DRAINAGE STRUCTURE

REMOVING MANHOLES

—RM— REMOVING STORM SEWER

*REMOVING ASPHALTIC SURFACE INCIDENTAL TO COMMON EXCAVATION

2

2

N

ROBERTSON STREET

MATCHLINE 240BL+00

REMOVING PAVEMENT BUTT JOINTS

REMOVING ASPHALTIC SURFACE*

REMOVING PAVEMENT

W. HILL STREET

REMOVING CONCRETE SIDEWALK

REMOVING PAVEMENT

REMOVING PAVEMENT

REMOVING CURB AND GUTTER (STAGE 1A)

62F

64F

66F

68F

70F

72F

74F

76EN

MATCHLINE 77FN+00

N. GLENVIEW AVENUE

REMOVING PAVEMENT BUTT JOINTS

REMOVING PAVEMENT BUTT JOINTS

EXISTING BOLLARD COLUMNS TO REMAIN

ROCKWAY PLACE

REMOVING CURB AND GUTTER (STAGE 1A)

REMOVING CURB AND GUTTER (STAGE 1A)

REMOVING ASPHALTIC SURFACE*

REMOVING ASPHALTIC SURFACE*

CAUTION

W. BLUEMOUND ROAD

242BL

246BL

248BL

MATCHLINE 248BL+25

PARKING

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021101_rm.dgn PLOT DATE : 01-NOV-2012 05:27 PLOT BY : MSCD1S PLOT NAME : 021101_rm PLOT SCALE : 100:1

2

2

ROBERTSON STREET

ROBERTSON STREET

REMOVING PAVEMENT BUTT JOINTS

308WX

W. WISCONSIN AVENUE

REMOVING CONCRETE SIDEWALK

REMOVING CONCRETE SIDEWALK

AVON COURT

310WX

N. GLENVIEW AVENUE

MATCHLINE 77FN+00

78FN

80FN

82FN

RM

RM

84FN

RM

86FN

88FN

90FN

REMOVING CONCRETE SIDEWALK

REMOVING PAVEMENT BUTT JOINTS

REMOVING CONCRETE SIDEWALK

MATURE HARDWOOD TREE (81+25 RT) TO BE SAVED. HAND POUR CURB PAST THE TREE.

312WX

ST JUDE COURT

ST JUDE COURT

WALL

PARKING

REC AREA

FP

REMOVING PAVEMENT BUTT JOINTS

314WX

PARKING

PARKING

BROOKSIDE PLACE

ROCKWAY PLACE

WALL

316W

*REMOVING ASPHALTIC SURFACE INCIDENTAL TO COMMON EXCAVATION

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021102_rm.dgn PLOT DATE : 01-NOV-2012 05:28 PLOT BY : MSCD1S PLOT NAME : 021102_rm PLOT SCALE : 100:1

2

N

2

N. 92ND STREET

N. 91ST STREET

W. BLUEMOUND ROAD

N. 90TH STREET

N. 89TH STREET

212BL

214BL

216BL

218BL

220BL

222BL

224BL

MATCHLINE 226BL+00

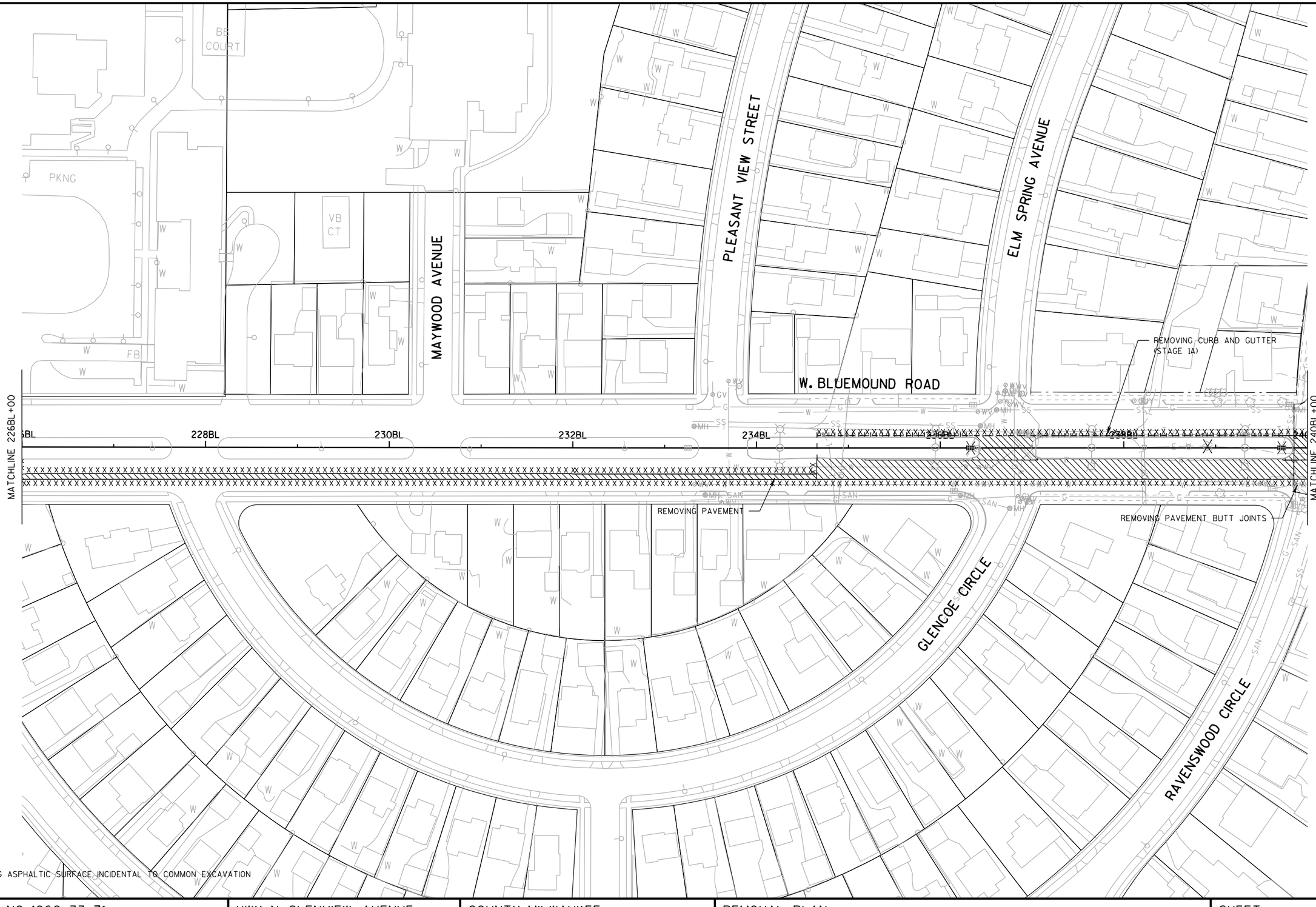
*REMOVING ASPHALTIC SURFACE INCIDENTAL TO COMMON EXCAVATION

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021102a_rm.dgn PLOT DATE : 31-JAN-2013 05:00 PLOT BY : MSCD1S PLOT NAME : 021102a_rm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



*REMOVING ASPHALTIC SURFACE INCIDENTAL TO COMMON EXCAVATION

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021103_rm.dgn PLOT DATE : 31-JAN-2013 05:01 PLOT BY : MSCD1S PLOT NAME : 021103_rm PLOT SCALE : 100:1

*REMOVING ASPHALTIC SURFACE INCIDENTAL TO COMMON EXCAVATION

2

2

HONEY CREEK

CONCRETE

CONCRETE

CONCRETE

PARKING

REMOVING CONCRETE SIDEWALK

W. BLUEMOUND ROAD

250BL

252BL

254BL

256BL

258BL

260BL

262BL

264BL

MATCHLINE 248BL+25

REMOVING PAVEMENT BUTT JOINTS

PARKING

PKNG

HONEY CREEK PARKWAY

HONEY CREEK PARKWAY

CREEK

N

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021104_rm.dgn PLOT DATE : 01-NOV-2012 05:28 PLOT BY : MSCD1S PLOT NAME : 021104_rm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

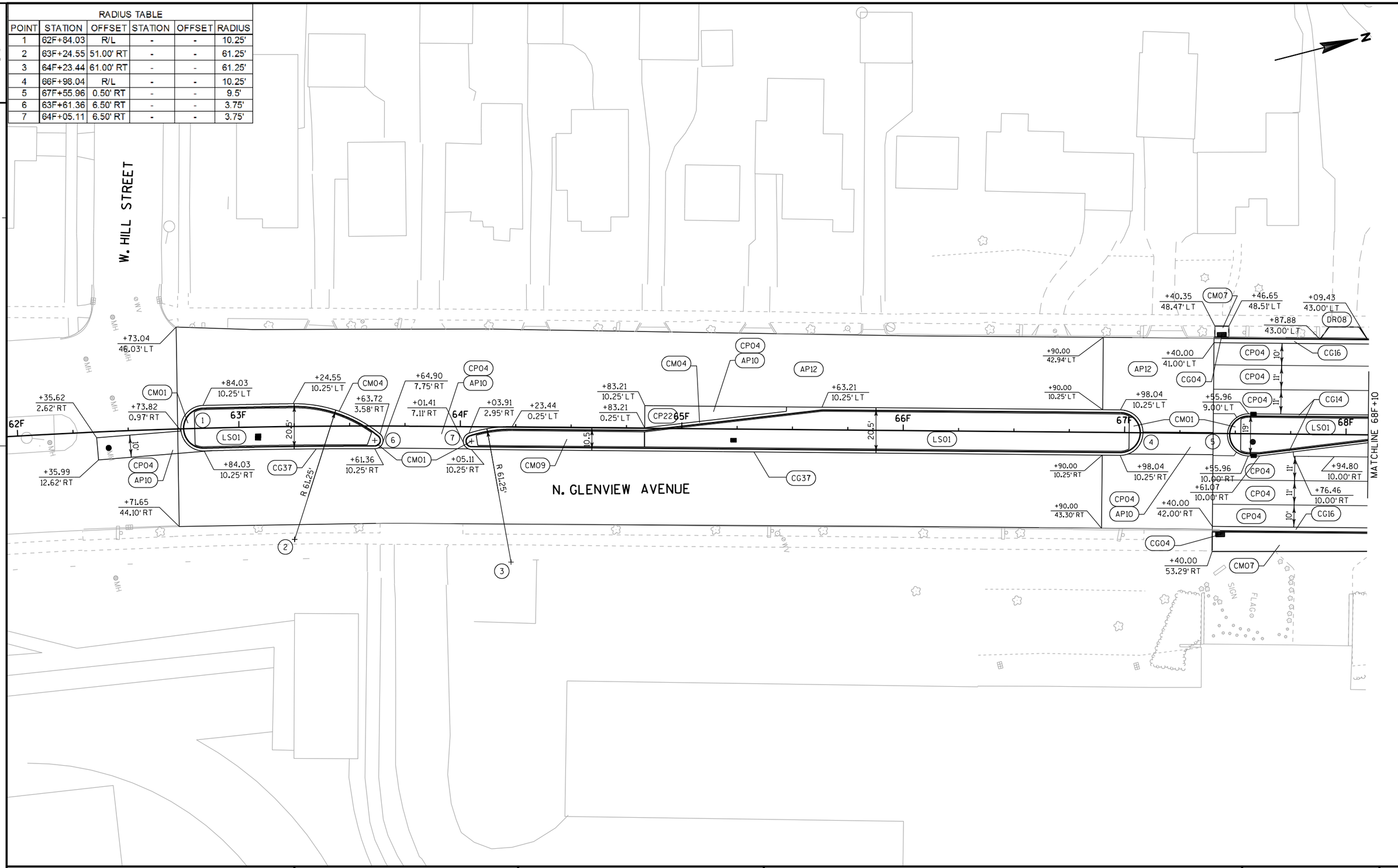
LEGEND

- (CP04) CONCRETE PAVEMENT 8-INCH, DOWELED
- (CP21) CONCRETE PAVEMENT 8-INCH SPECIAL
- (CP22) CONCRETE PAVEMENT HES 8-INCH, DOWELED
- (AP10) HMA PAVEMENT TYPE E-3, 3-INCH
- (AP12) HMA PAVEMENT TYPE E-3, 4-INCH
- (AP14) HMA PAVEMENT TYPE E-3, 5 1/2-INCH
- (PV10) ASPHALTIC SURFACE, 3-INCH
- (PV11) ASPHALTIC SURFACE, 5-INCH
- (CG01) CURB RAMP TYPE 1
- (CG03) CURB RAMP TYPE 2
- (CG04) CURB RAMP TYPE 3
- (CG07) CURB RAMP TYPE 5
- (CG08) CURB RAMP TYPE 6
- (CG14) CONCRETE CURB AND GUTTER 19-INCH
- (CG16) CONCRETE CURB AND GUTTER 31-INCH
- (CG18) CONCRETE CURB AND GUTTER INTEGRAL 31-INCH
- (CG37) CONCRETE CURB AND GUTTER 22-INCH REVERSE SLOPE
- (CM01) CONCRETE MEDIAN SLOPED NOSE TYPE 1
- (CM02) CONCRETE MEDIAN SLOPED NOSE TYPE 2
- (CM04) MAINTENANCE OPENING
- (CM07) CONCRETE SIDEWALK 5-INCH
- (CM08) CONCRETE SIDEWALK 6-INCH
- (CM09) CONCRETE SIDEWALK 5-INCH SPECIAL
- (DR08) CONCRETE DRIVEWAY HES 6-INCH
- (DR09) CONCRETE DRIVEWAY HES 7-INCH
- (LS01) SOD LAWN
- (BS01) BUS STOP

NOTES

RADIUS INFORMATION IS GIVEN TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE OF INTEGRAL CURB AND GUTTER AND CONCRETE CURB TYPE D.

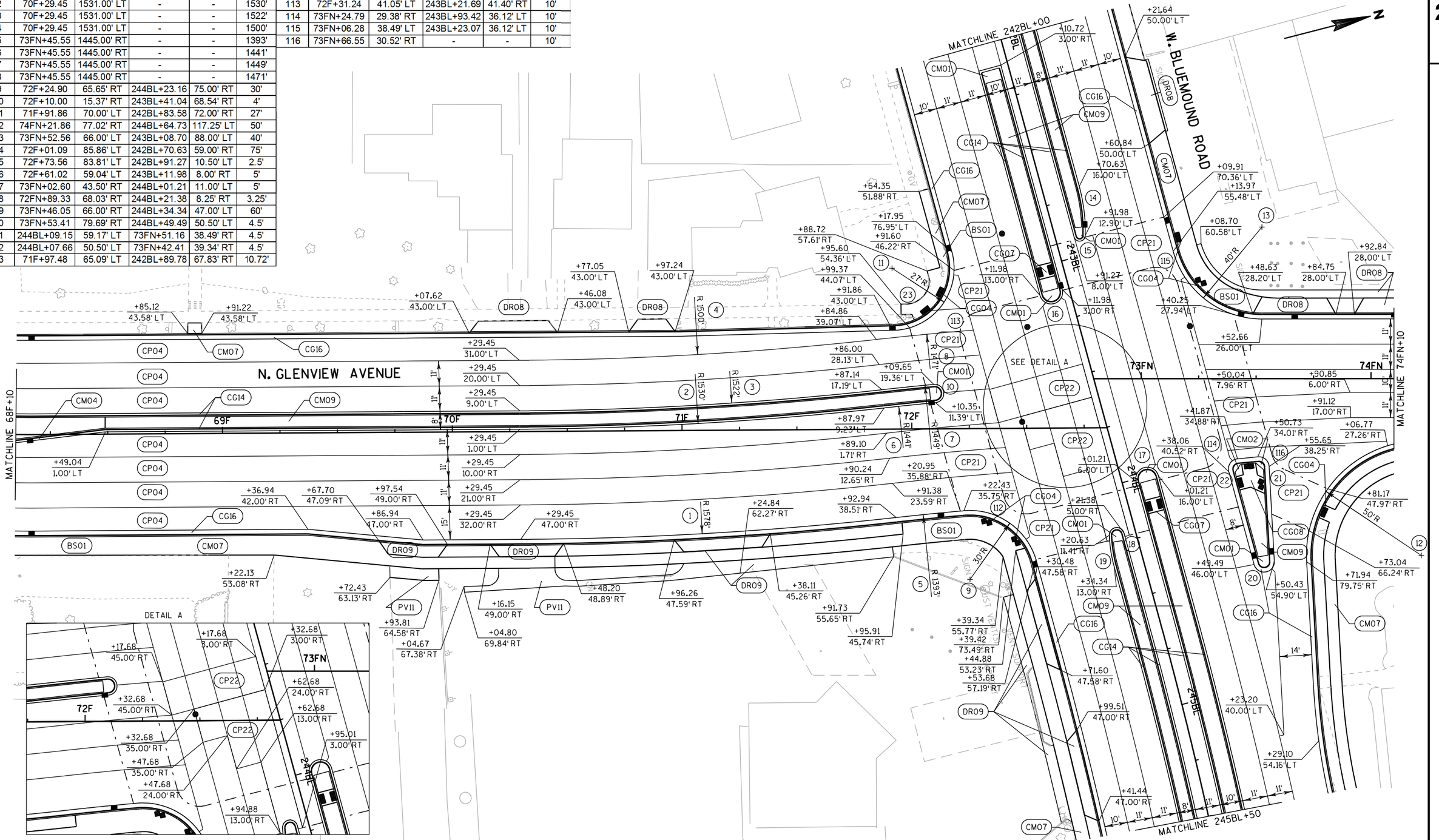
RADIUS TABLE					
POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
1	62F+84.03	R/L	-	-	10.25'
2	63F+24.55	51.00' RT	-	-	61.25'
3	64F+23.44	61.00' RT	-	-	61.25'
4	66F+98.04	R/L	-	-	10.25'
5	67F+55.96	0.50' RT	-	-	9.5'
6	63F+61.36	6.50' RT	-	-	3.75'
7	64F+05.11	6.50' RT	-	-	3.75'



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

RADIUS TABLE					
POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
1	70F+29.45	1531.00' LT	-	-	1578'
2	70F+29.45	1531.00' LT	-	-	1530'
3	70F+29.45	1531.00' LT	-	-	1522'
4	70F+29.45	1531.00' LT	-	-	1500'
5	73FN+45.55	1445.00' RT	-	-	1393'
6	73FN+45.55	1445.00' RT	-	-	1441'
7	73FN+45.55	1445.00' RT	-	-	1449'
8	73FN+45.55	1445.00' RT	-	-	1471'
9	72F+24.90	65.65' RT	244BL+23.16	75.00' RT	30'
10	72F+10.00	15.37' RT	243BL+41.04	68.54' RT	4'
11	71F+91.86	70.00' LT	242BL+83.58	72.00' RT	27'
12	74FN+21.86	77.02' RT	244BL+64.73	117.25' LT	50'
13	73FN+52.56	66.00' LT	243BL+08.70	88.00' LT	40'
14	72F+01.09	85.86' LT	242BL+70.63	59.00' RT	75'
15	72F+73.56	83.81' LT	242BL+91.27	10.50' LT	2.5'
16	72F+61.02	59.04' LT	243BL+11.98	8.00' RT	5'
17	73FN+02.60	43.50' RT	244BL+01.21	11.00' LT	5'
18	72FN+89.33	68.03' RT	244BL+21.38	8.25' RT	3.25'
19	73FN+46.05	66.00' RT	244BL+34.34	47.00' LT	60'
20	73FN+53.41	79.69' RT	244BL+49.49	50.50' LT	4.5'
21	244BL+09.15	59.17' LT	73FN+51.16	38.49' RT	4.5'
22	244BL+07.66	50.50' LT	73FN+42.41	39.34' RT	4.5'
23	71F+97.48	65.09' LT	242BL+89.78	67.83' RT	10.72'

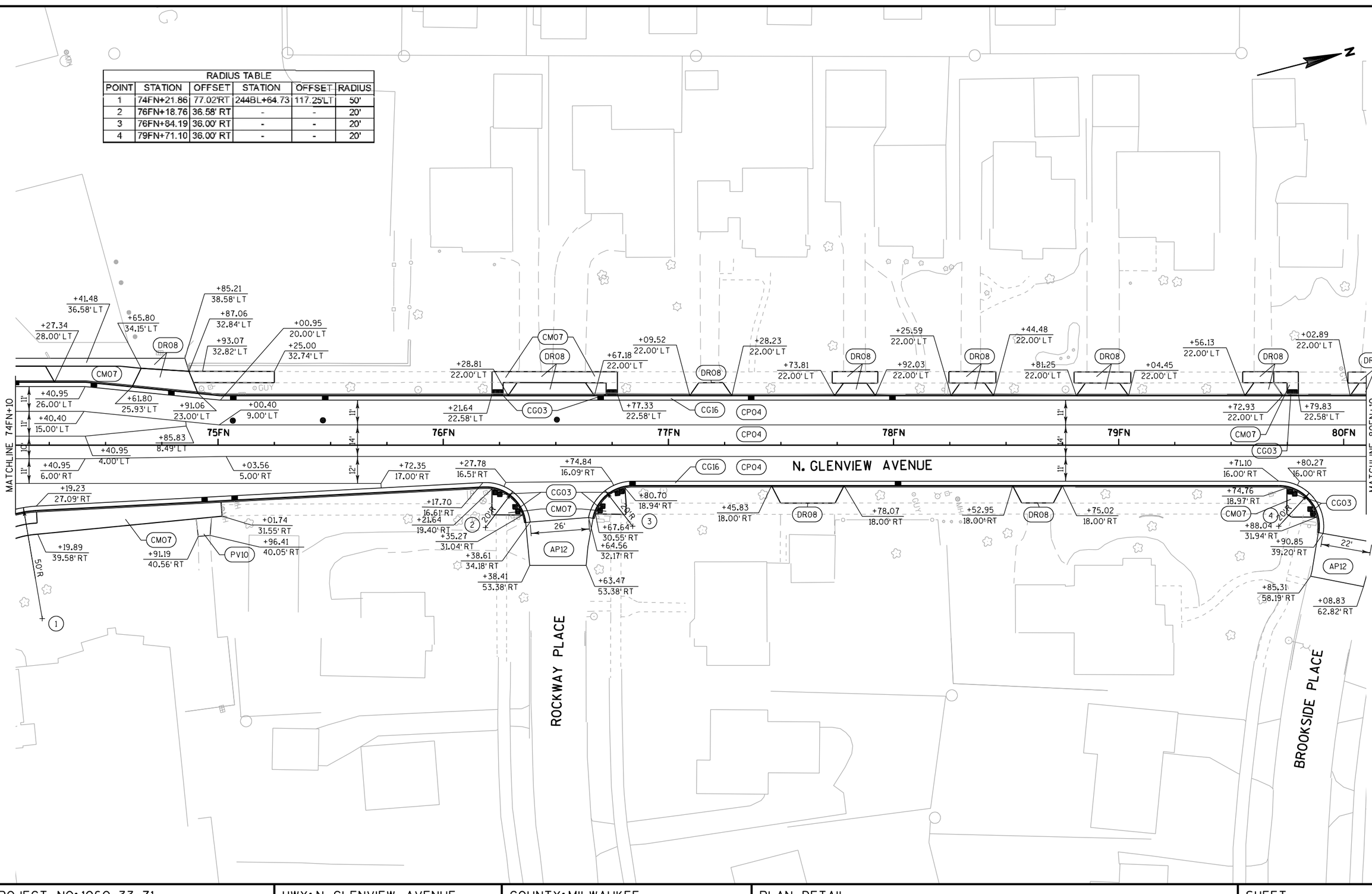
RADIUS TABLE					
POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
112	72F+49.59	27.28' RT	243BL+92.44	41.26' RT	10'
113	72F+31.24	41.05' LT	243BL+21.69	41.40' RT	10'
114	73FN+24.79	29.38' RT	243BL+93.42	36.12' LT	10'
115	73FN+06.28	38.49' LT	243BL+23.07	36.12' LT	10'
116	73FN+66.55	30.52' RT	-	-	10'



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

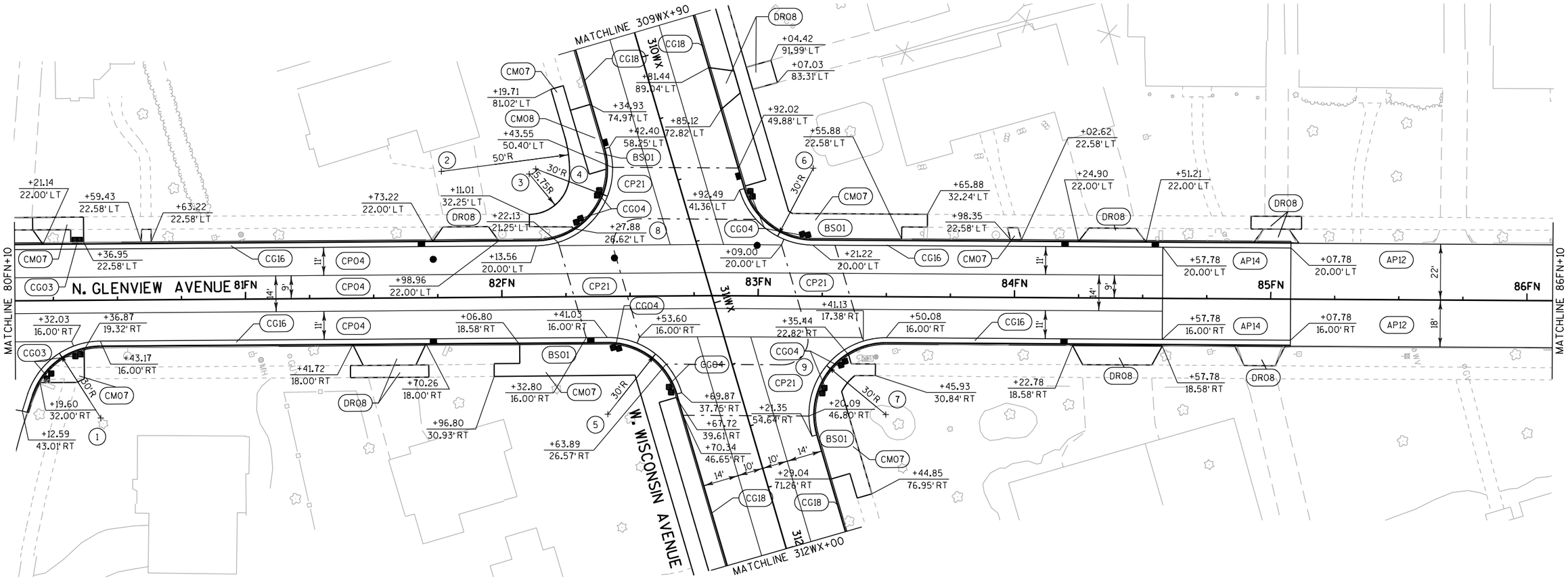
2

RADIUS TABLE					
POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
1	74FN+21.86	77.02' RT	244BL+64.73	117.25' LT	50'
2	76FN+18.76	36.58' RT	-	-	20'
3	76FN+84.19	36.00' RT	-	-	20'
4	79FN+71.10	36.00' RT	-	-	20'



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

RADIUS TABLE					
POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
1	80FN+43.17	46.00' RT	-	-	30'
2	81FN+76.78	49.28' LT	310WX+20.76	87.55' RT	50'
3	82FN+11.01	48.00' LT	310WX+31.40	55.00' RT	15.75'
4	82FN+13.56	50.00' LT	310WX+30.18	52.00' RT	30'
5	82FN+41.03	46.00' RT	311WX+30.03	52.00' RT	30'
6	83FN+21.22	50.00' LT	310WX+60.48	52.00' LT	30'
7	83FN+50.08	46.00' RT	311WX+60.73	52.00' LT	30'
8	82FN+53632	20.26' LT	310WX+69.79	21.66' RT	10'
9	83FN+09.62	16.80' RT	311WX+21.12	21.66' LT	10'



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021204_pd.dgn PLOT DATE : 01-NOV-2012 14:48 PLOT BY : MSCDYB PLOT NAME : 021204_pd PLOT SCALE : 40:1

2

2

N

AVON CT

MATCHLINE 86FN+10

22'

18'

AP12

87FN

88FN

89FN

90FN

91FN

N. GLENVIEW AVENUE

+30.71
31.64' RT

+63.15
31.94' RT

+11.76
31.93' RT

+44.32
31.98' RT

+76.16
18.11' RT

+76.16
21.80' LT

REC AREA

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021205_pd.dgn PLOT DATE : 01-NOV-2012 12:23 PLOT BY : MSCD1S PLOT NAME : 021205_pd PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

N. 92ND STREET

N. 91ST STREET

W. BLUEMOUND ROAD

213BL

214BL

215BL

216BL

217BL

218BL

+44.25
11.64' LT

+47.74
8.07' LT

+39.98
7.45' LT

+43.47
3.86' LT

+11.27
14.06' RT

+17.27
14.05' RT

+10.91
28.72' RT

+16.90
29.33' RT

+13.25
35.33' RT

CG18

CP04

AP10

MATCHLINE 218BL+50

N. 91ST STREET

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021205a_pd.dgn PLOT DATE : 31-JAN-2013 05:03 PLOT BY : MSCD1S PLOT NAME : 021205a_pd PLOT SCALE : 40:1

2

2

N

N. 90TH STREET

N. 89TH STREET

PKNG

PKNG

W. BLUEMOUND ROAD

MATCHLINE 218BL+50

MATCHLINE 224BL+25

219BL

220BL

221BL

222BL

223BL

224BL

+96.99
28.10' RT

+98.99
28.04' RT

+97.00
34.10' RT

+99.00
34.05' RT

+30.51
28.39' RT

+30.45
34.39' RT

+26.27
30.02' RT

+26.21
36.02' RT

CP04

AP10

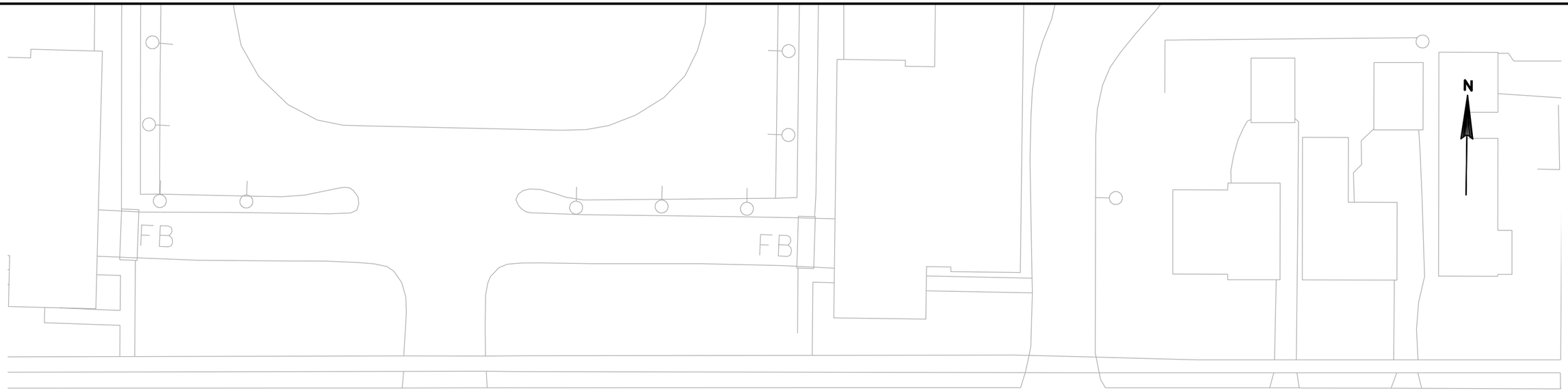
N. 91ST STREET

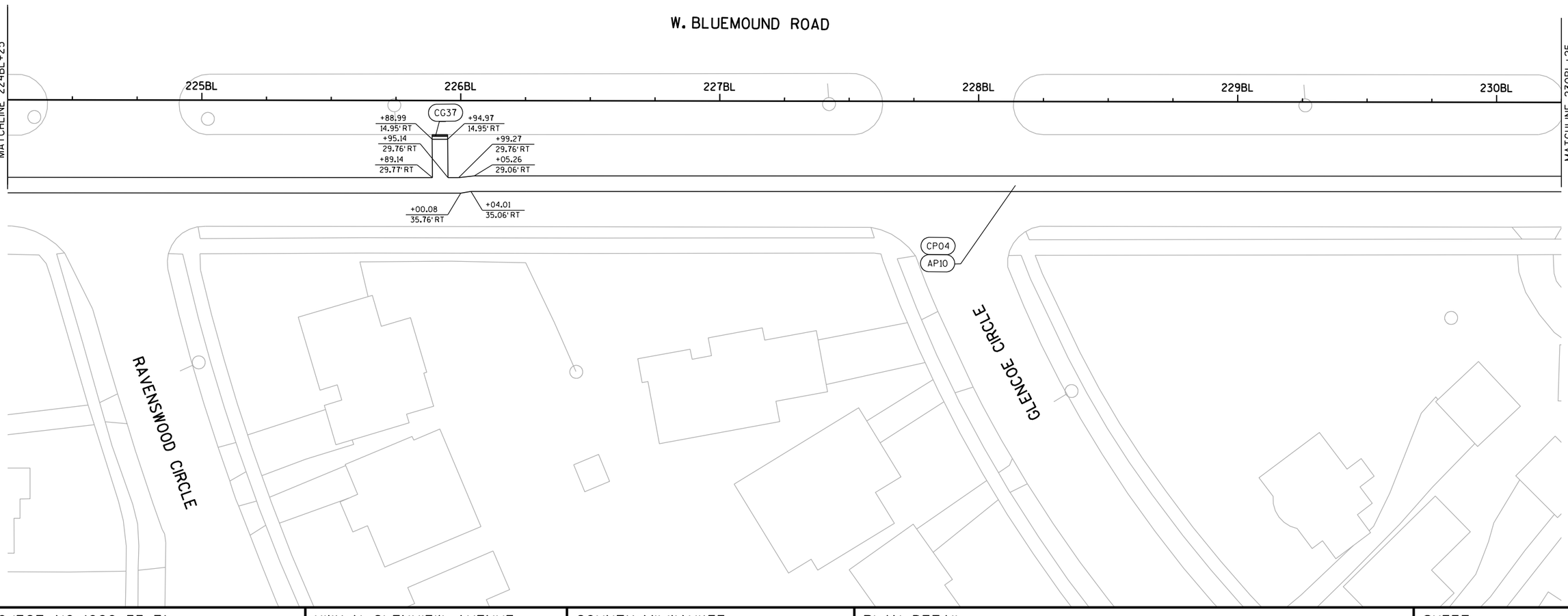
N. 90TH STREET

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021205b_pd.dgn PLOT DATE : 31-JAN-2013 05:03 PLOT BY : MSCD1S PLOT NAME : 021205b_pd PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2





PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

2

MAYWOOD AVENUE

PLEASANT VIEW STREET

N

MATCHLINE 230BL+25

231BL

232BL

233BL

234BL

235BL

236BL

MATCHLINE 236BL+10

W. BLUEMOUND ROAD

+97.83
28.22' RT

+01.81
28.53' RT

+97.84
34.22' RT

+01.82
34.53' RT

CP04

AP10

+65.94
13.25' LT

CG37

11'

11'

LS01

+90.08
2.25' RT

+02.08
13.25' RT

CM04

+65.52
28.25' RT

CG37

+65.52
13.25' RT

+65.53
34.23' RT

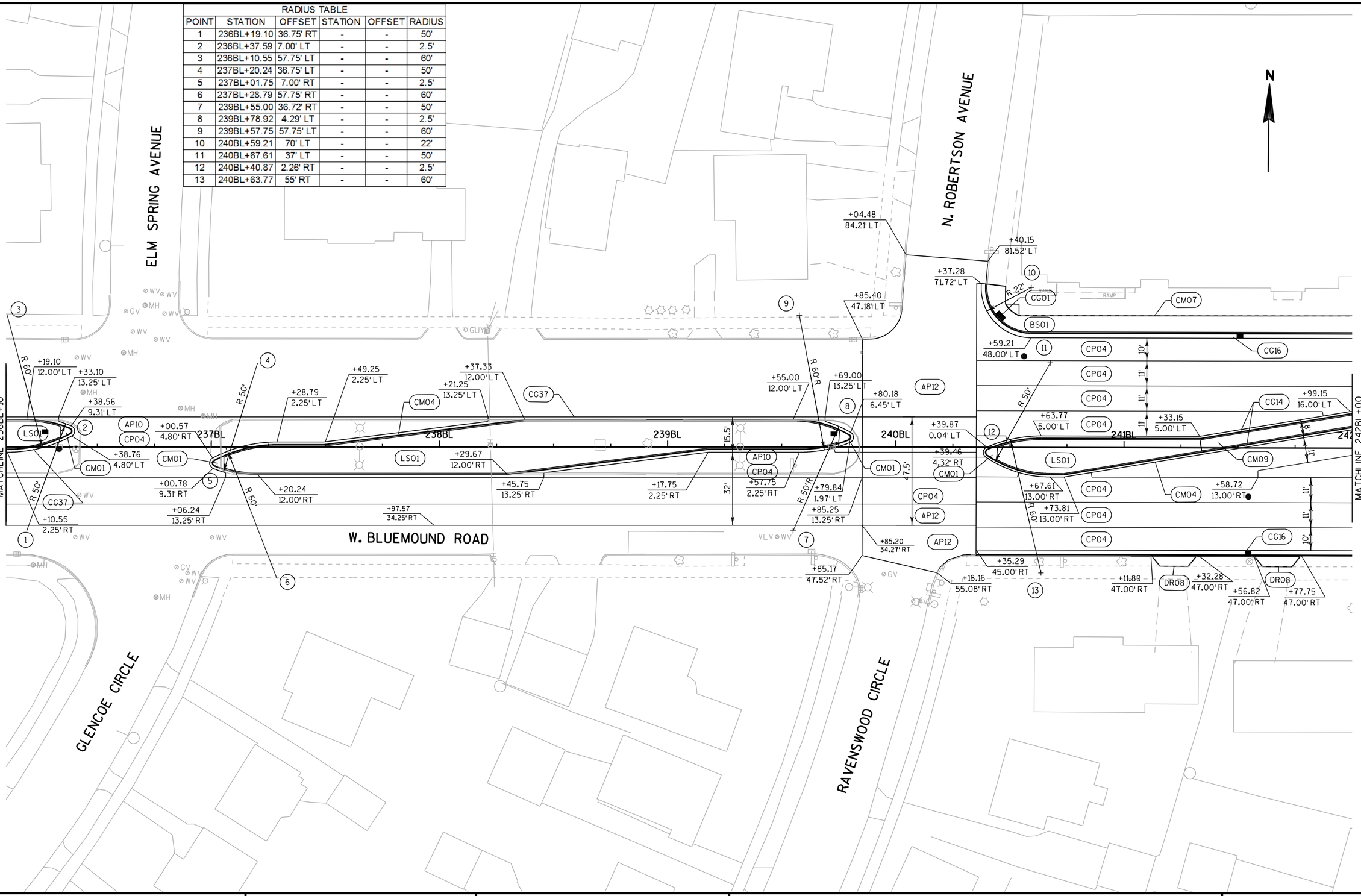
MH

WV

GV

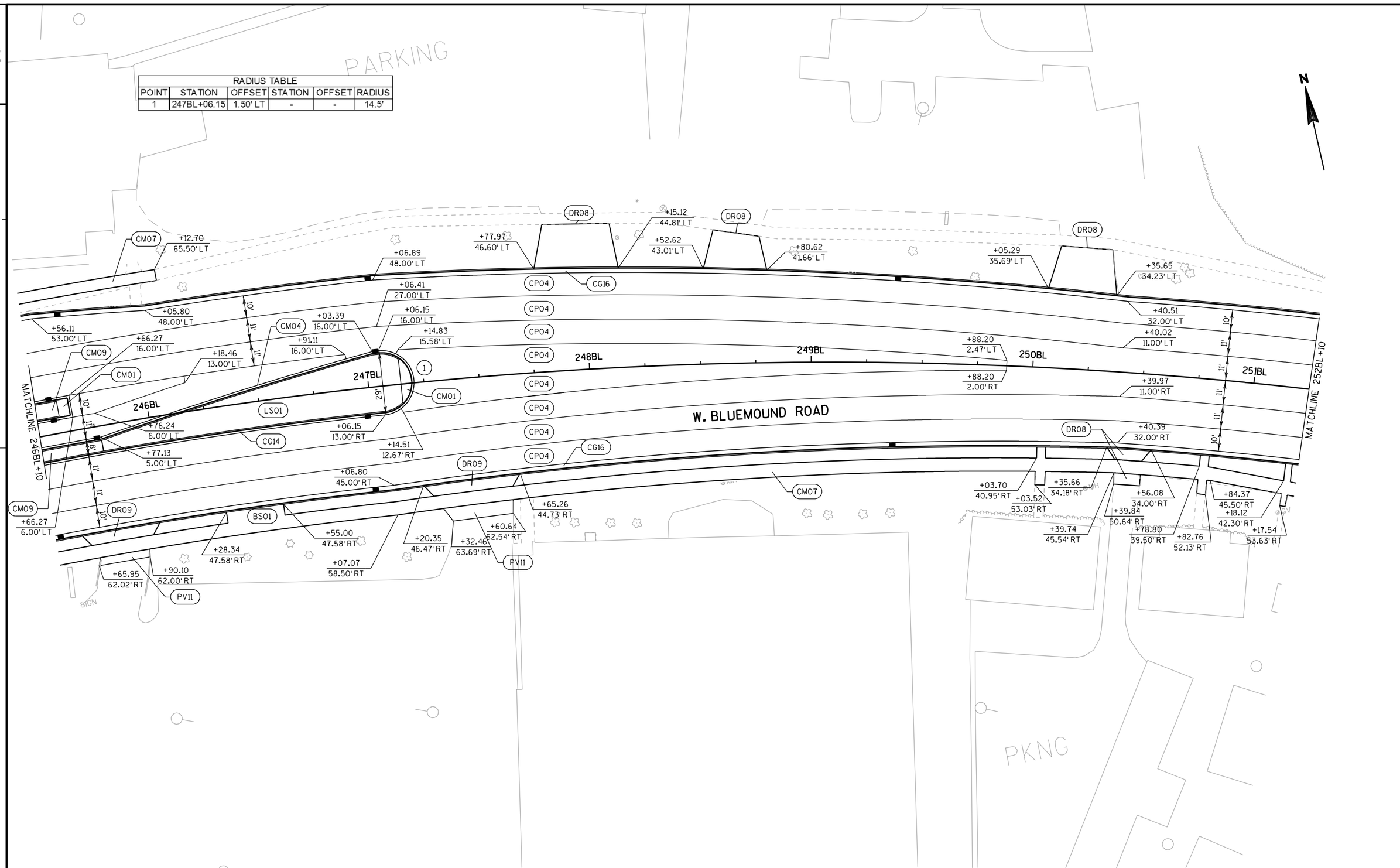
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

RADIUS TABLE					
POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
1	236BL+19.10	36.75' RT	-	-	50'
2	236BL+37.59	7.00' LT	-	-	2.5'
3	236BL+10.55	57.75' LT	-	-	60'
4	237BL+20.24	36.75' LT	-	-	50'
5	237BL+01.75	7.00' RT	-	-	2.5'
6	237BL+28.79	57.75' RT	-	-	60'
7	239BL+55.00	36.72' RT	-	-	50'
8	239BL+78.92	4.29' LT	-	-	2.5'
9	239BL+57.75	57.75' LT	-	-	60'
10	240BL+59.21	70' LT	-	-	22'
11	240BL+67.61	37' LT	-	-	50'
12	240BL+40.87	2.26' RT	-	-	2.5'
13	240BL+63.77	55' RT	-	-	60'



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

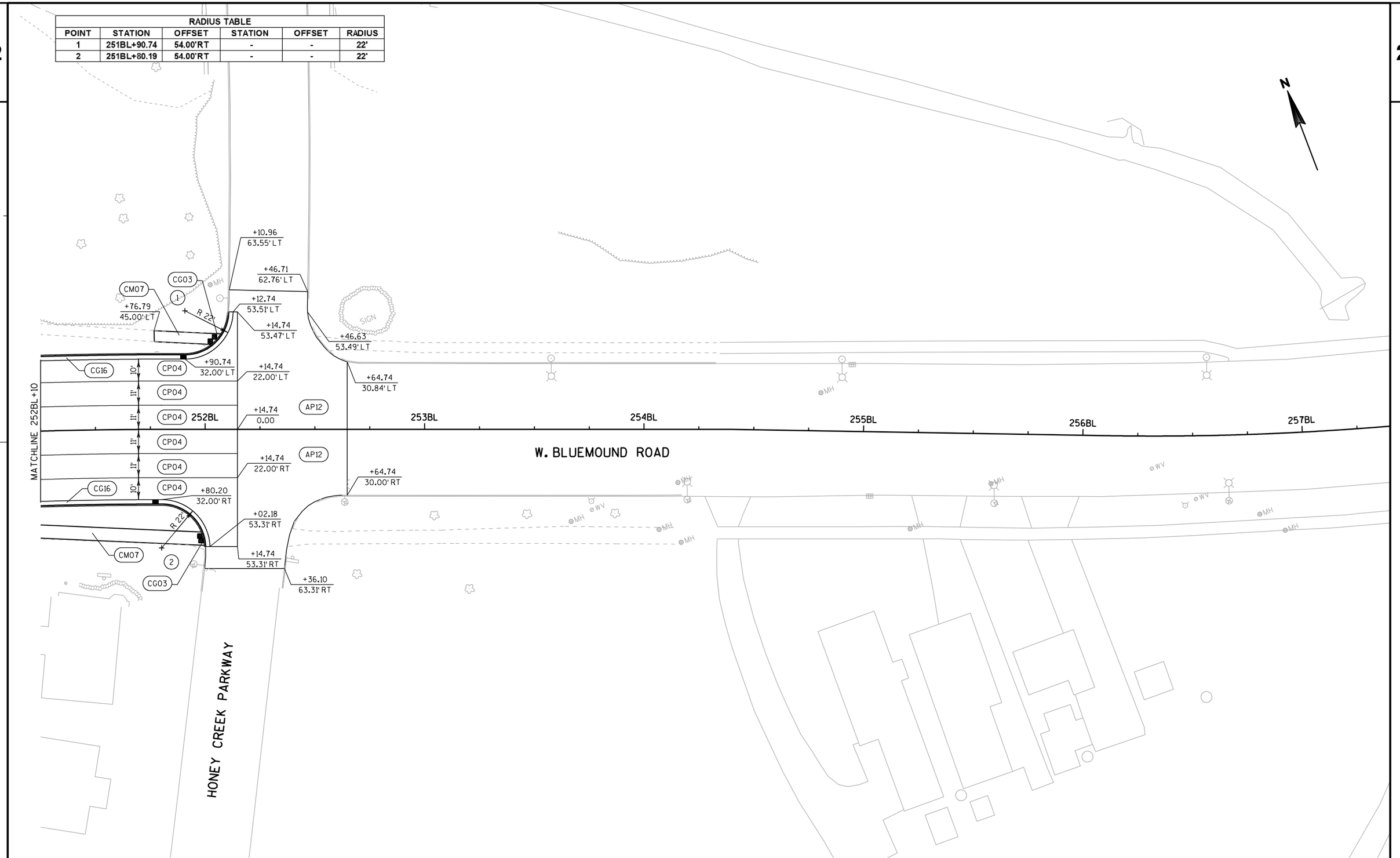
RADIUS TABLE					
POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
1	247BL+06.15	1.50' LT	-	-	14.5'



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021208_pd.dgn PLOT DATE : 01-NOV-2012 12:23 PLOT BY : MSCD1S PLOT NAME : 021208_pd PLOT SCALE : 40:1

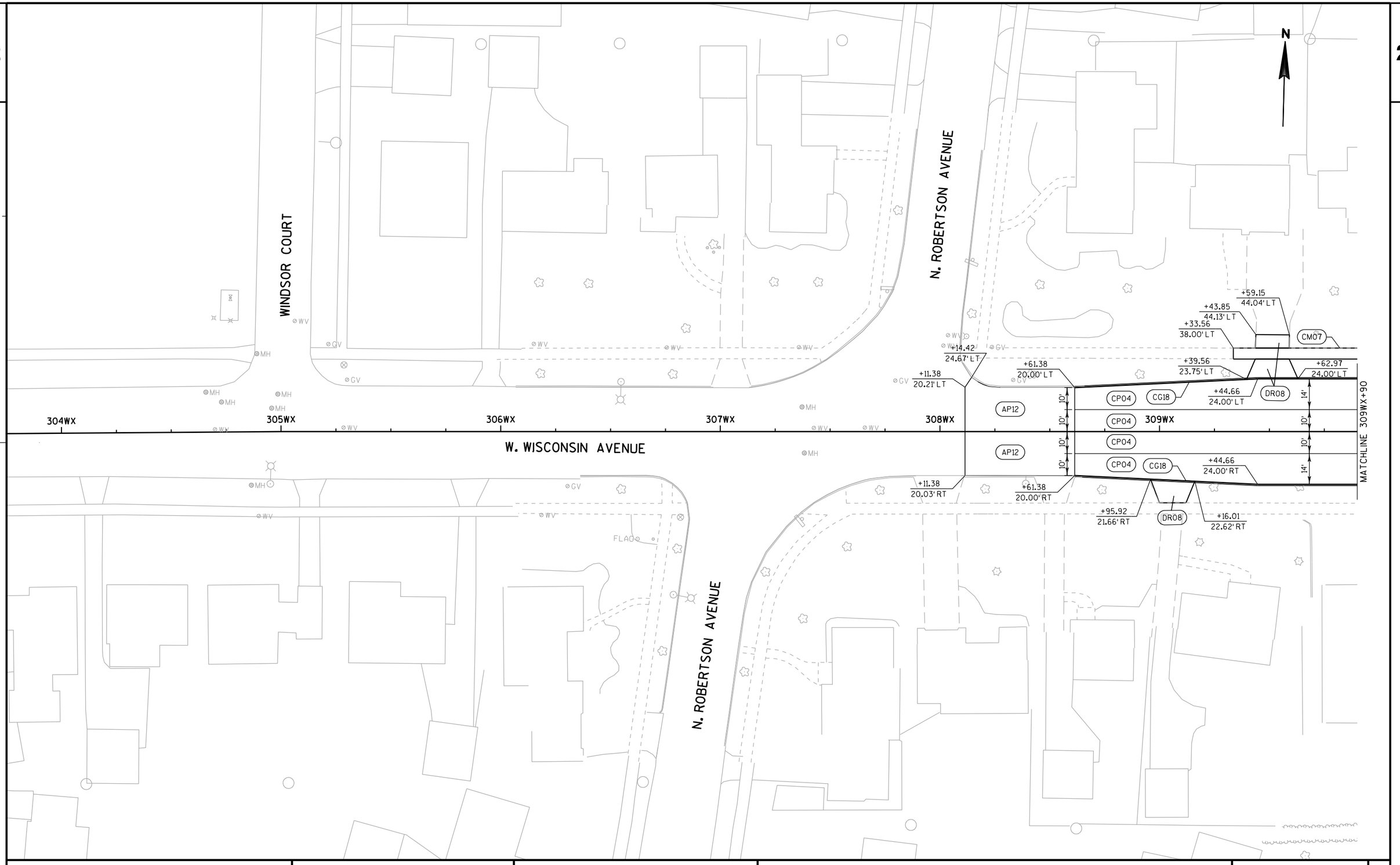
RADIUS TABLE					
POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
1	251BL+90.74	54.00'RT	-	-	22'
2	251BL+80.19	54.00'RT	-	-	22'



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021209_pd.dgn PLOT DATE : 01-NOV-2012 12:23 PLOT BY : MSCD1S PLOT NAME : 021209_pd PLOT SCALE : 40:1

2



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

2

2

N

WETLAND BOUNDARY

+12.96
24.00' LT

CM07

+16.40
23.25' LT

+78.38
20.27' LT

DR08

+98.79
20.00' LT

+34.01
20.00' LT

CP04

+84.01
20.00' LT

10'

10'

10'

AP12

312WX+00

312WX

313WX

314WX

315WX

316WX

317WX

318WX

MATCHLINE

W. WISCONSIN AVENUE

DR08

CP04

CP04

CP04

+84.01
20.00' RT

CM07

+05.87
23.75' RT

+10.94
41.29' RT

+21.22
41.35' RT

+23.44
41.37' RT

+31.68
41.42' RT

+36.07
22.30' RT

+50.00
37.52' RT

+34.01
20.00' RT

MH MH

GV

GV

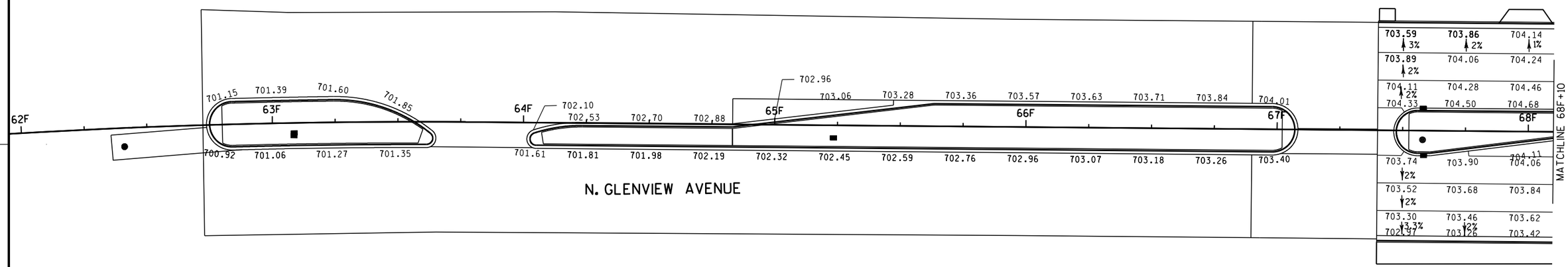
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021211_pd.dgn PLOT DATE : 01-NOV-2012 12:24 PLOT BY : MSCD1S PLOT NAME : 021211_pd PLOT SCALE : 40:1

NOTES

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER.

FLOWLINE (FL) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM CONSTRUCTION DETAIL.

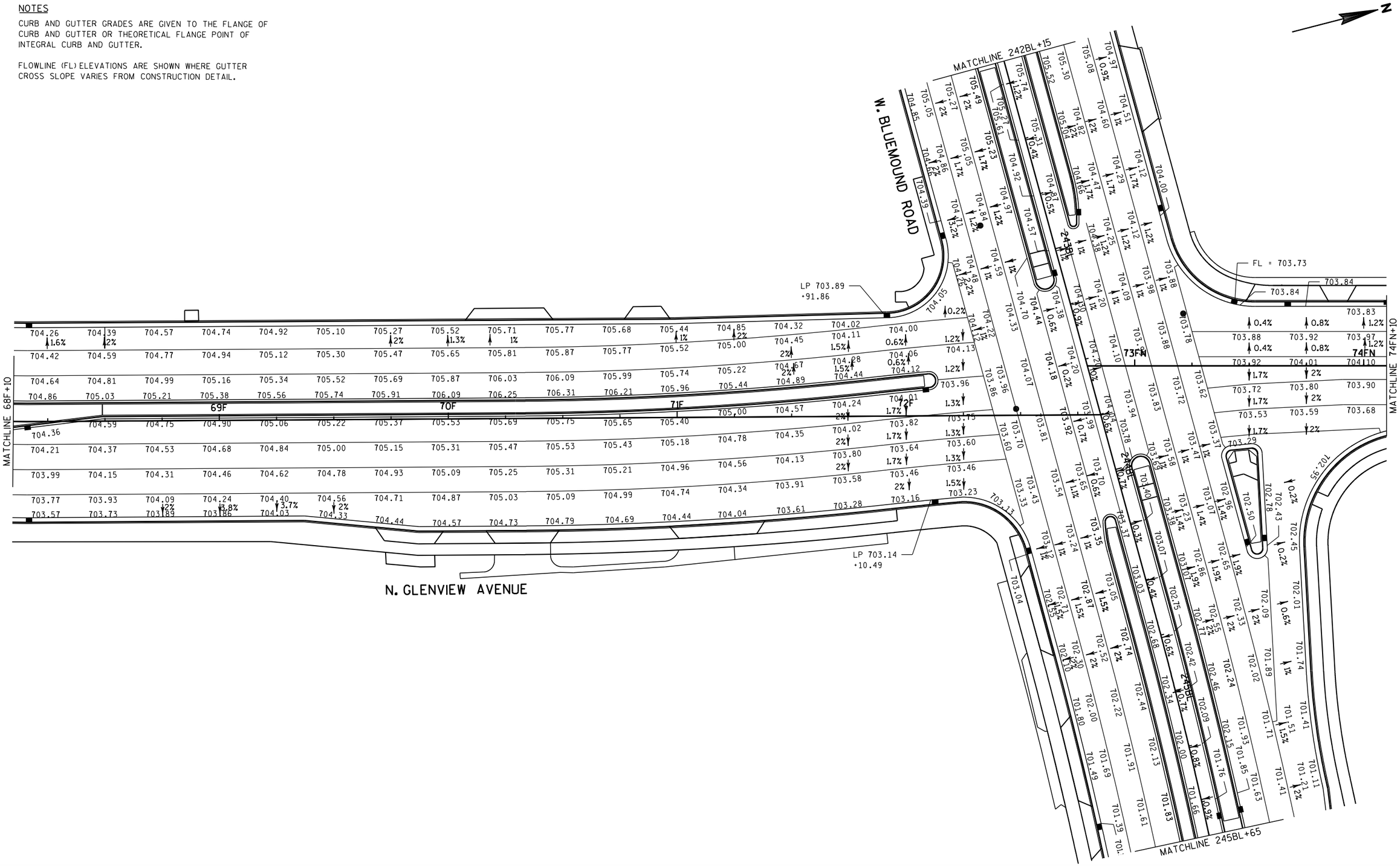


PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

NOTES

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER.

FLOWLINE (FL) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM CONSTRUCTION DETAIL.



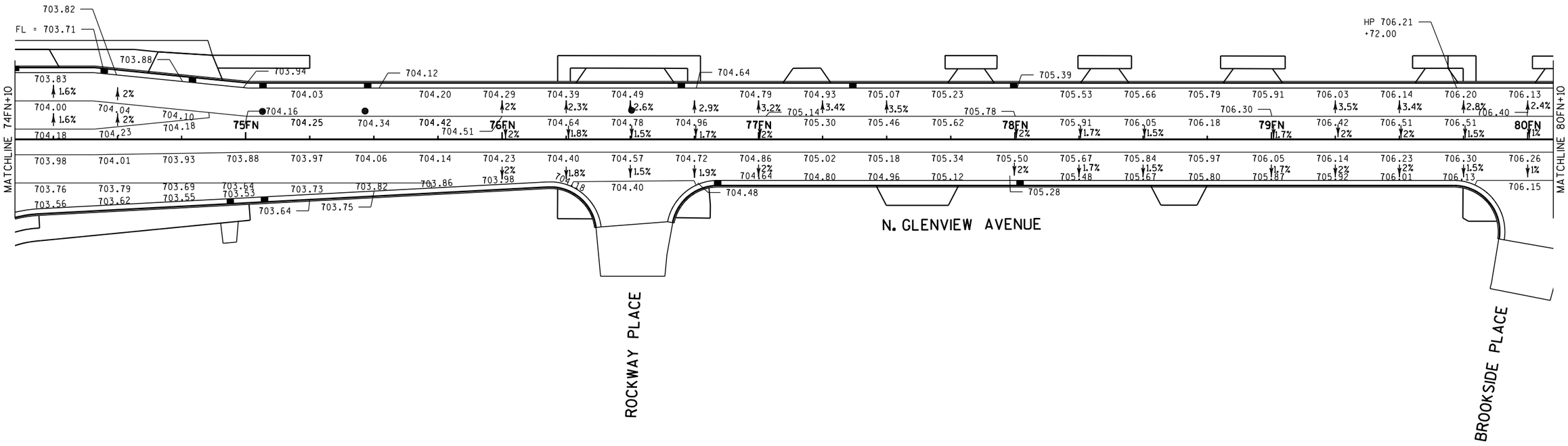
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021222_pg.dgn PLOT DATE : 01-NOV-2012 05:31 PLOT BY : MSCD1S PLOT NAME : 021222_pg PLOT SCALE : 40:1

NOTES

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER.

FLOWLINE (FL) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM CONSTRUCTION DETAIL.



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

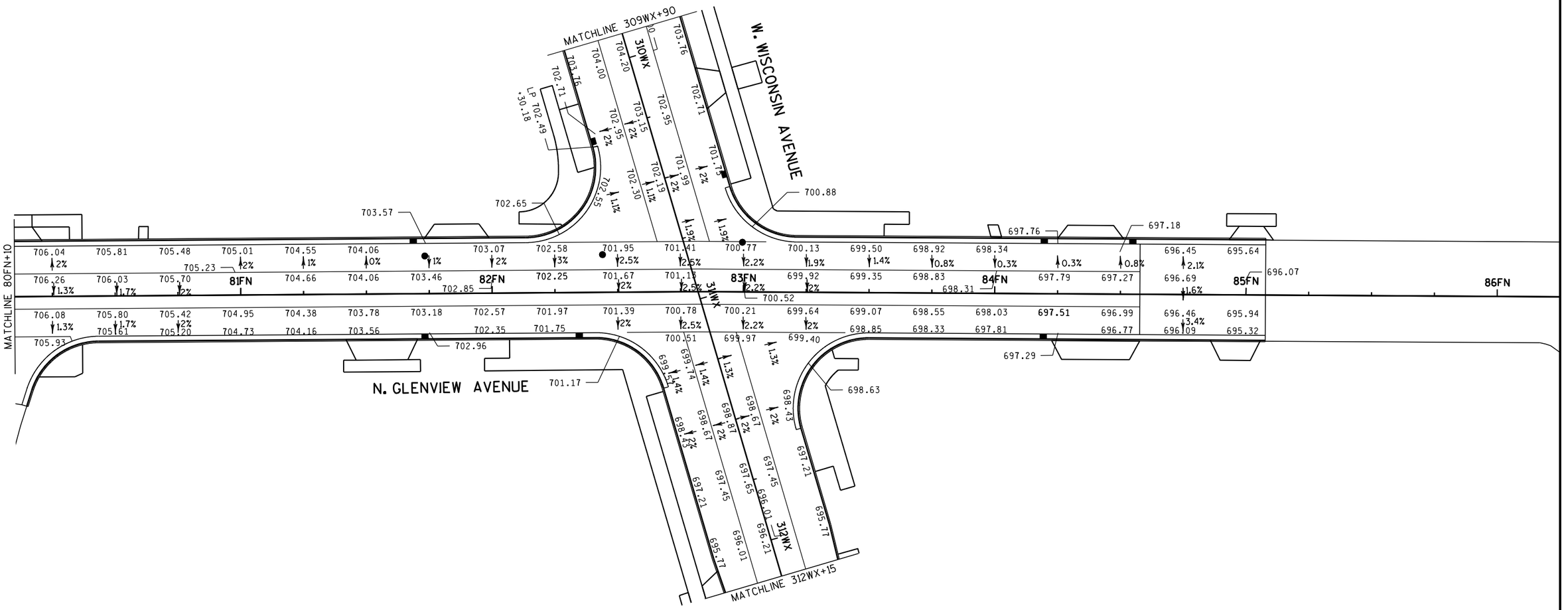
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WISDOT/CADDS SHEET 42

NOTES

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER.

FLOWLINE (FL) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM CONSTRUCTION DETAIL.



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

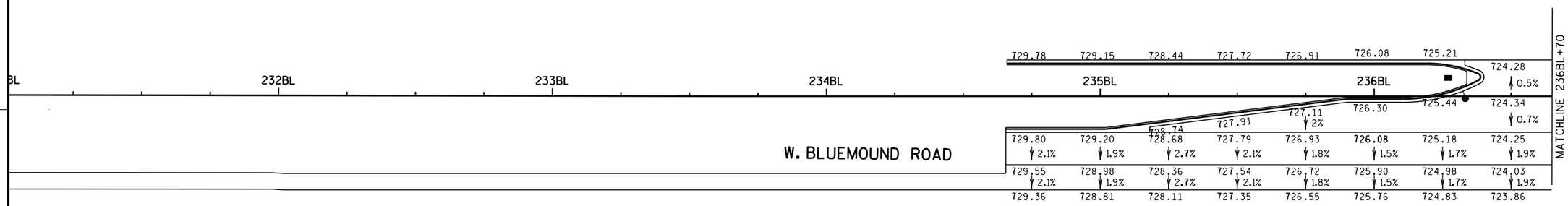
NOTES

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FLOWLINE (FL) ELEVATIONS ARE SHOWN WHERE GUTTER CROSS SLOPE VARIES FROM CONSTRUCTION DETAIL.

N

2

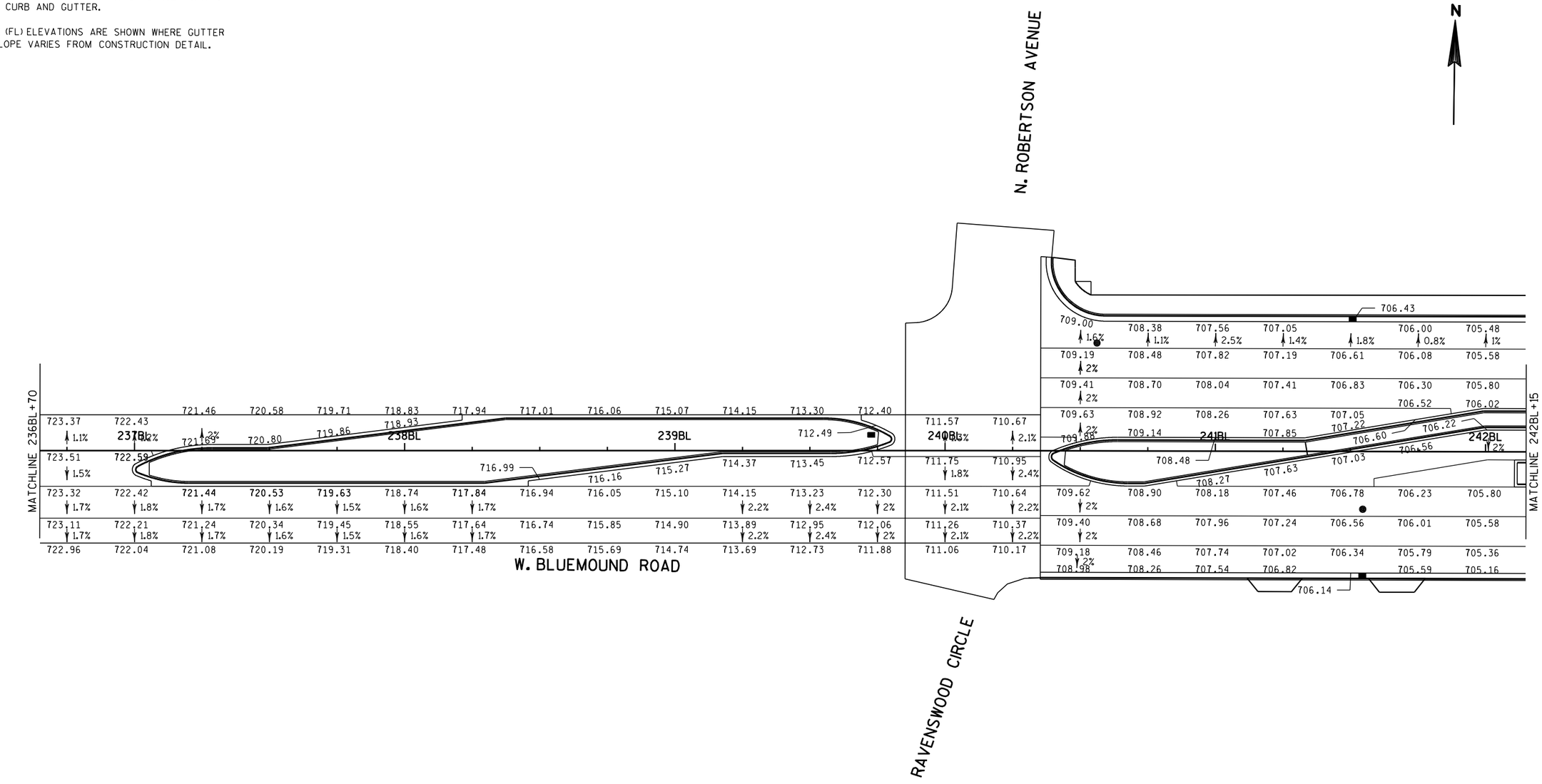


PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

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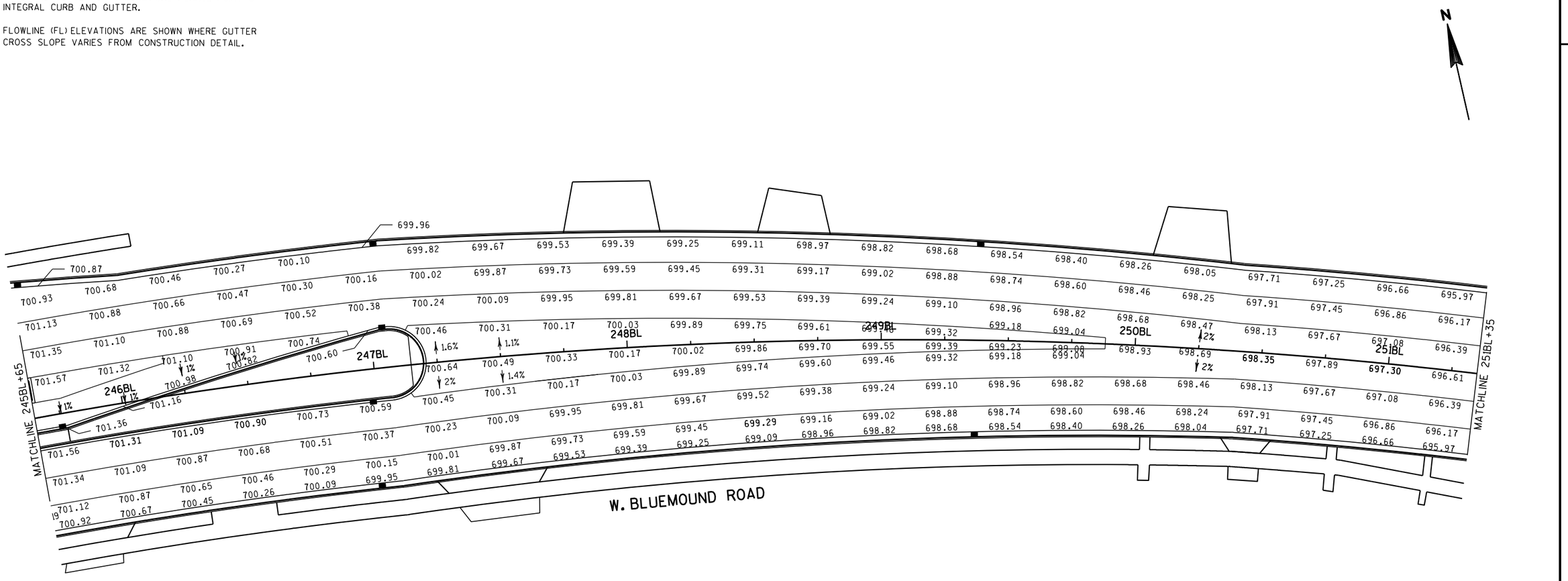
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

2

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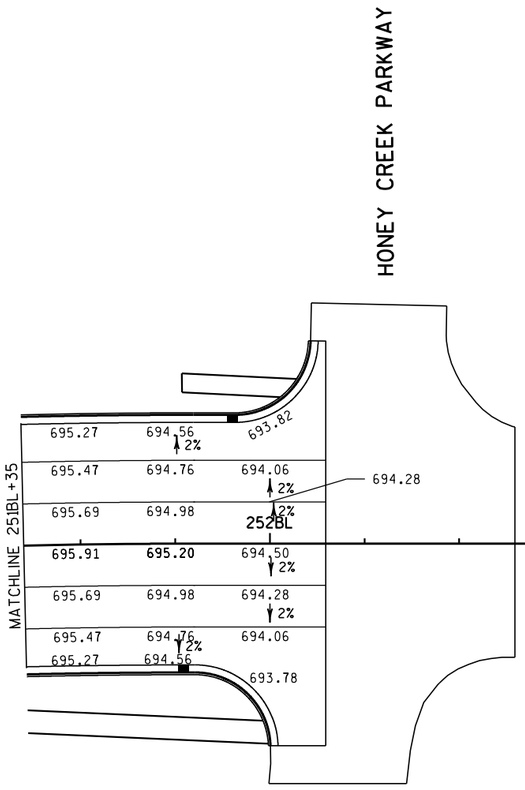


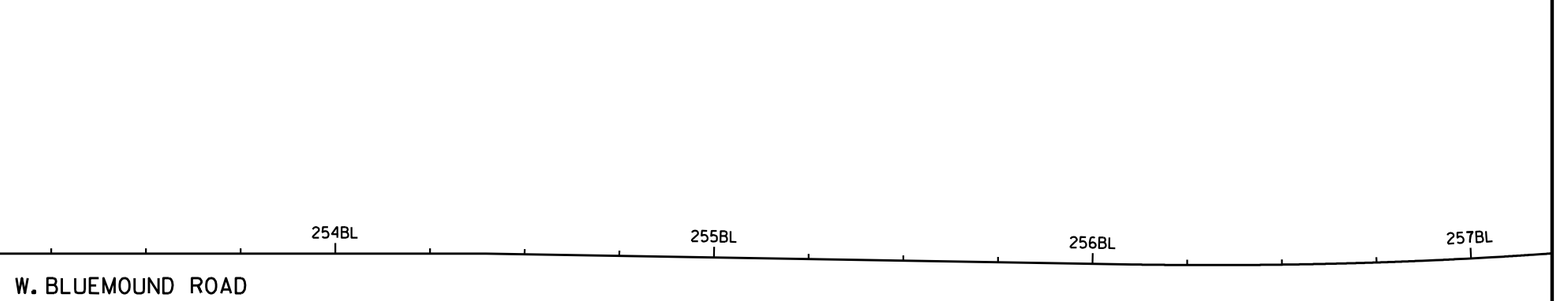
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

NOTES

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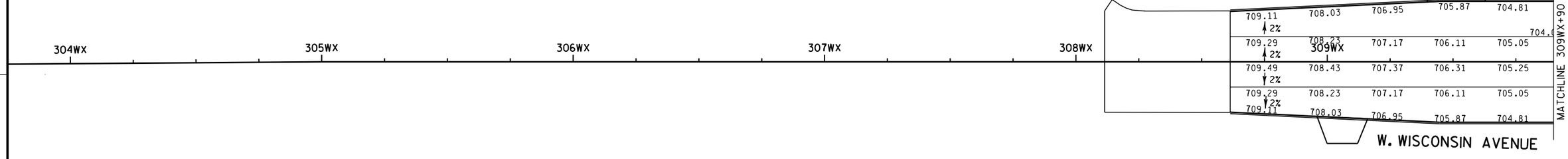
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

2

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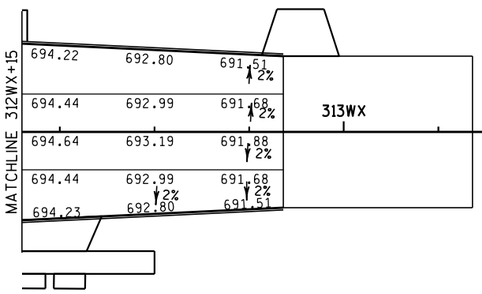
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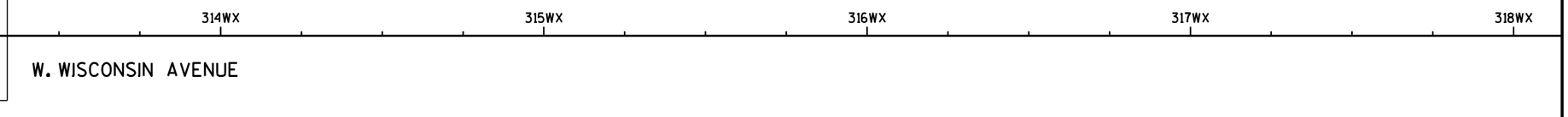
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NOTES

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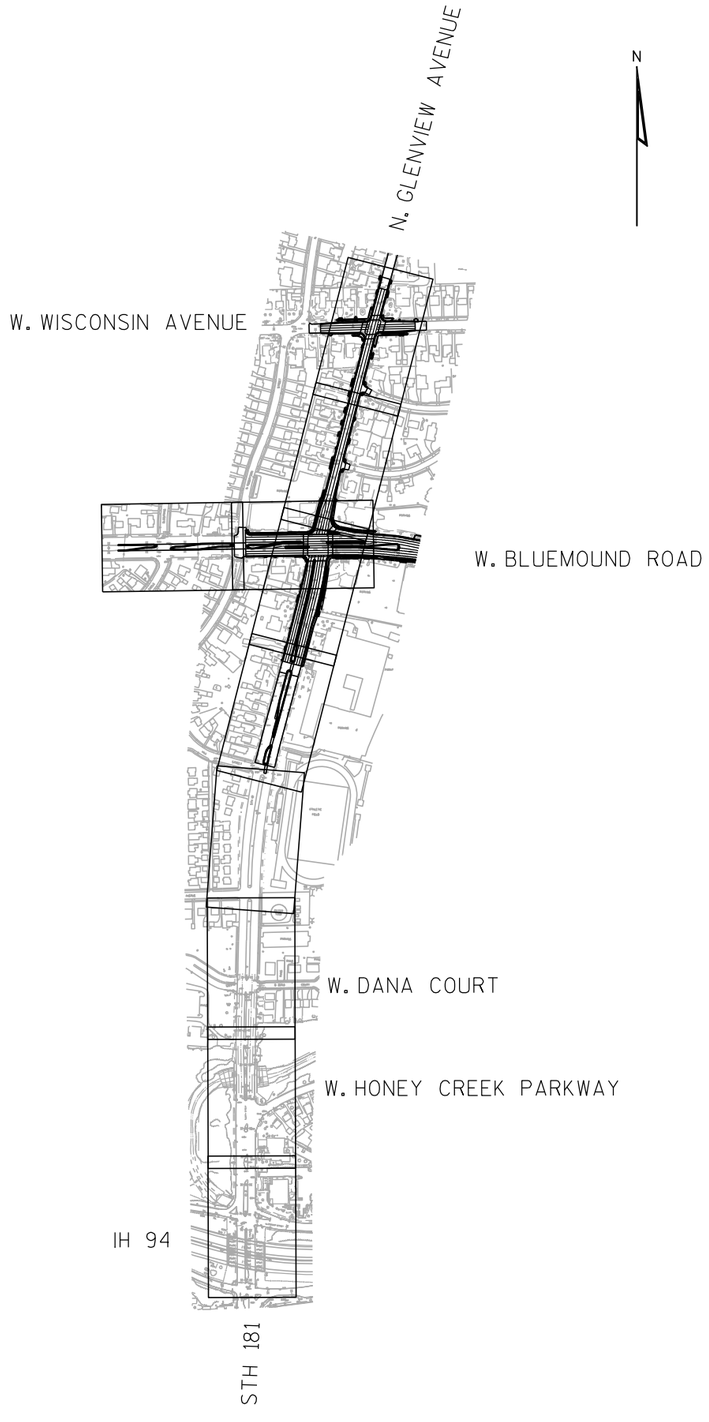


2

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVING GRADES	SHEET	E

LEGEND

	EXISTING	PROPOSED
FTMS CONVENTIONAL SYMBOLS		
CCTV CAMERA AND POLE		
FTMS FIELD CABINET AND BASE		
POLE MOUNTED CABINET		
METER BREAKER PEDESTAL		
24"X36" STEEL PULL BOX		
24"X42" STEEL PULL BOX		
ANTENNA		
MANHOLE		
ADVANCE FLASHER ASSEMBLY		
FTMS (ITS) CONDUIT		
BREAKER DISCONNECT BOX		
COMMUNICATIONS VAULT, TYPE 1		
RETAINING WALL		
DYNAMIC MESSAGE SIGN		

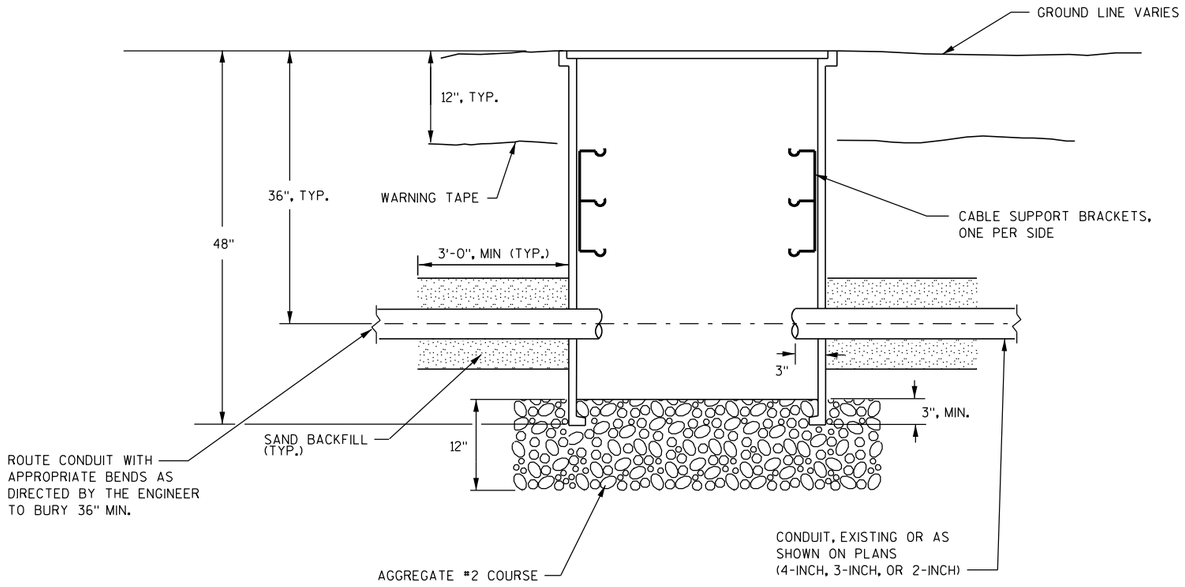


FTMS STANDARD ABBREVIATIONS

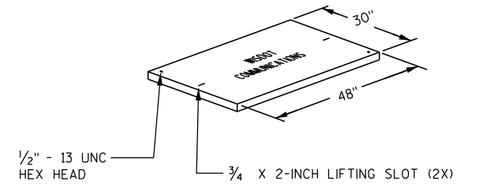
CB	CONTROLLER CABINET
CCTV	CLOSED CIRCUIT TELEVISION SITE
CV	COMMUNICATIONS VAULT
DMS	DYNAMIC MESSAGE SIGN
PB	PULL BOX
MB	METER BREAKER
MD	MICROWAVE DETECTOR
MH	MANHOLE
EXCMH	EXISTING CITY MANHOLE

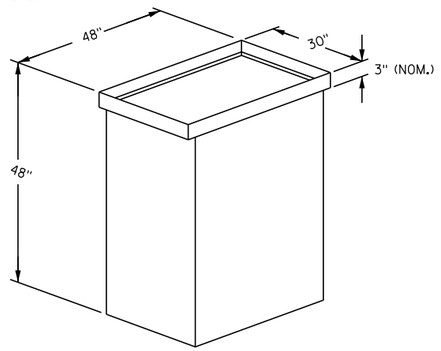
FTMS GENERAL NOTES

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 APPROVAL 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.
13. COORDINATE WITH PROJECT ID 1060-33-71 AND 1060-33-90 FOR TRAFFIC CONTROL NEEDS ON GLENVIEW AVENUE.

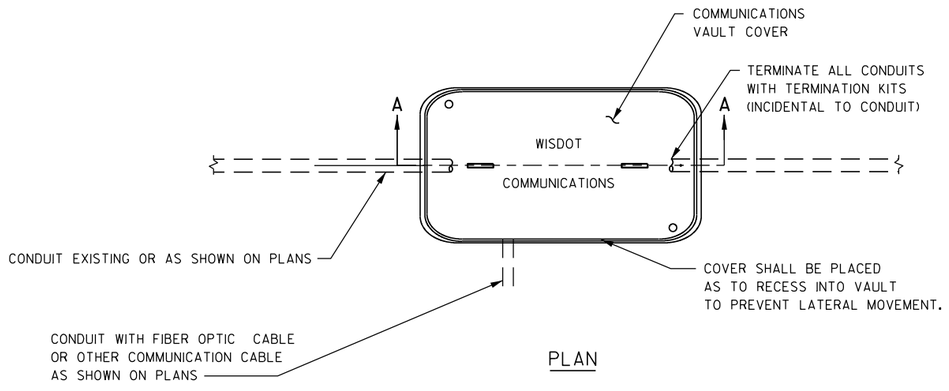


SECTION A-A





ISOMETRIC



PLAN

COMMUNICATIONS VAULT

NOTES

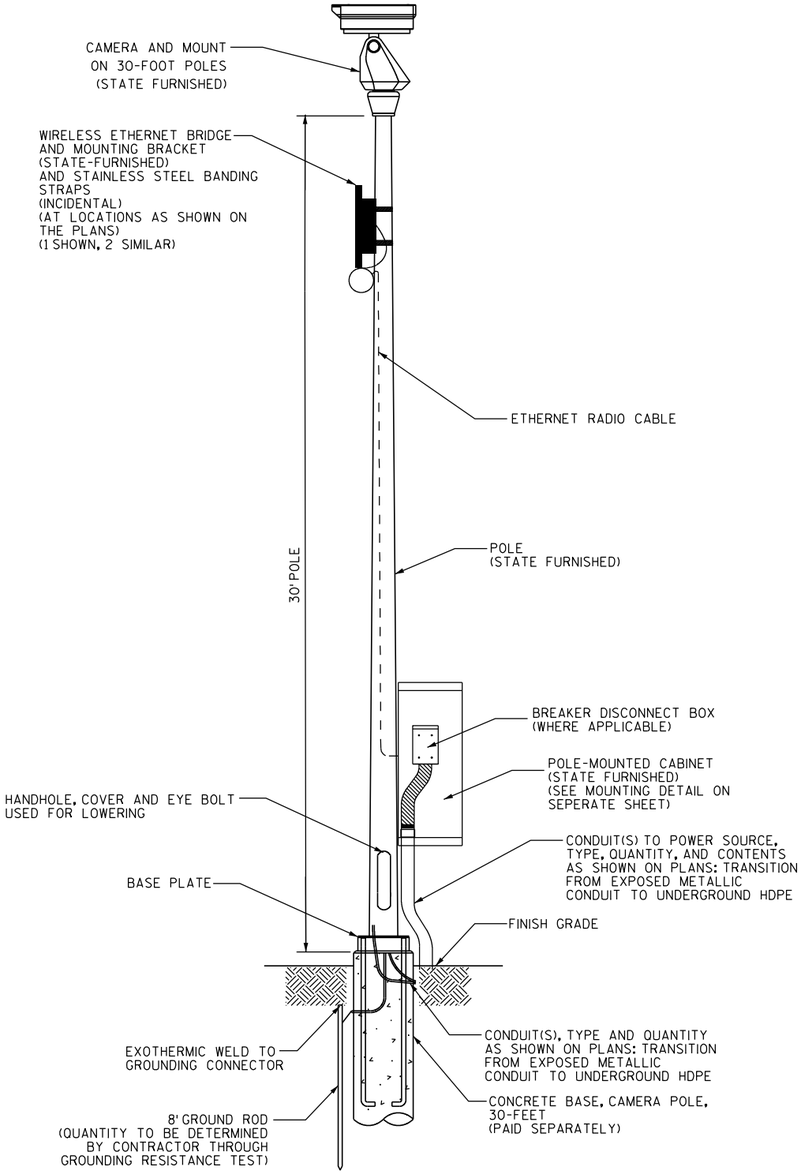
1) BOX SHALL HAVE AN OPEN BASE.

2) COVER SHALL HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

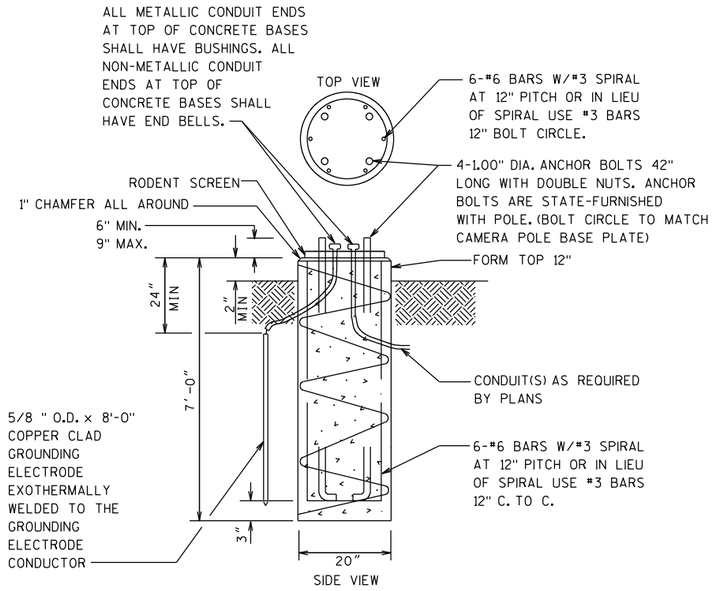
3) ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

4) VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

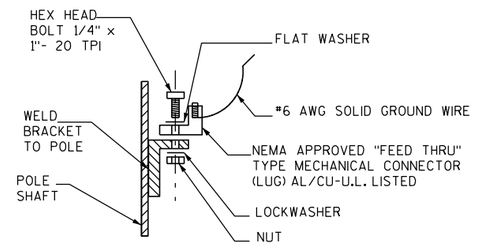
5) FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.



CAMERA POLE WITH CAMERA LOWERING HARDWARE



CONCRETE BASE, 30' CAMERA POLE



FIELD INSTALLED GROUNDING LUG

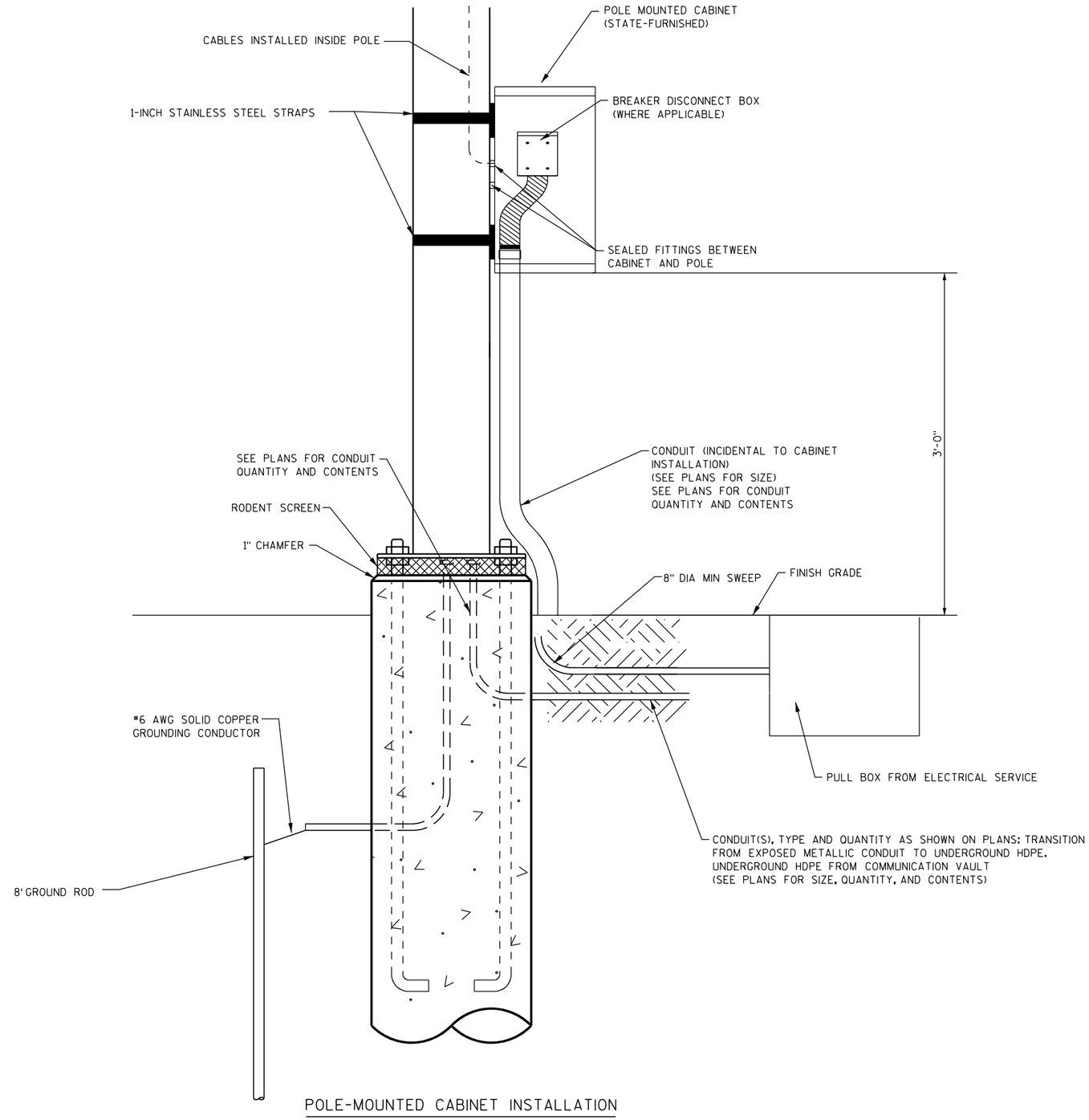
NOTES

1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL
2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE STATE FURNISHED.
3) CONTRACTOR SHALL CONFIRM BOLT PATTERN OF CAMERA POLE PRIOR TO CONSTRUCTION OF CONCRETE BASE.
4) CONTRACTOR SHALL INSTALL GROUNDING LUG AS SHOWN

CAMERA POLES & FOUNDATIONS

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

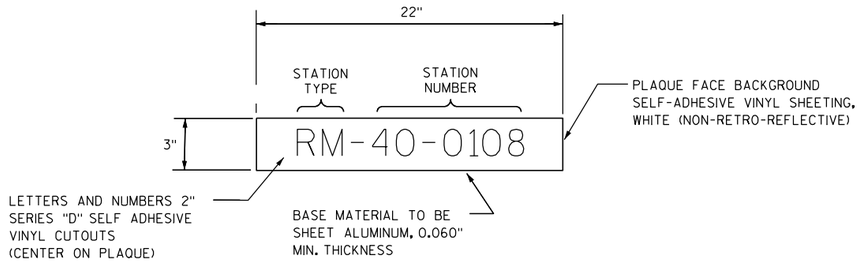
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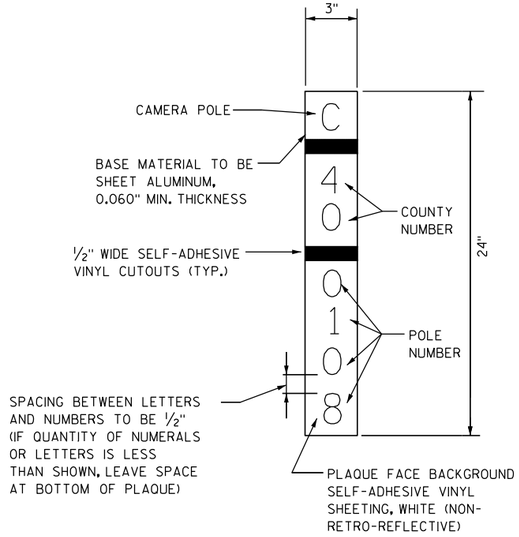
POLE-MOUNTED CABINET INSTALLATION

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

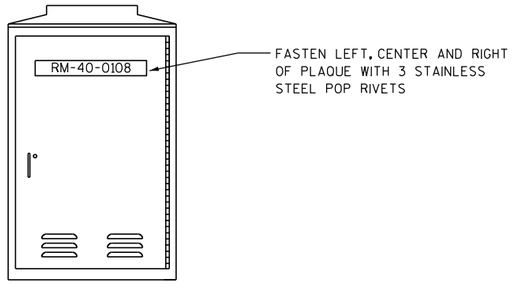
2



CONTROL CABINET IDENTIFICATION PLAQUE DETAIL



POLE IDENTIFICATION PLAQUE DETAIL



CONTROL CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)

LEGEND STATION TYPE

RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR

NOTES

1) TWO PLAQUES PER CABINET REQUIRED ON CONTROL CABINET.
2) FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.
3) FASTEN ONE PLAQUE ON SIDE FACING LOCAL STREET. IF NO LOCAL STREET NEARBY, OR IF SUCH LOCATION COINCIDES WITH LOCATION OF PLAQUE IN NOTE 2, FASTEN PLAQUE ON REAR OF CABINET, UPPER HALF.
4) COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021401_fm.dgn PLOT DATE : 01-NOV-2012 05:33 PLOT BY : MSCD1S PLOT NAME : 021401_fm3 PLOT SCALE : 2:1
WISDOT/CADDS SHEET 42

2

EXISTING 72-COUNT FIBER ON IH 94 TO ZOO INTERCHANGE

GREEN TUBE

FIBER OPTIC SPLICE ENCLOSURE

GREEN/AQUA
GREEN/ROSE
GREEN/VIOLET
GREEN/YELLOW
GREEN/BLACK
GREEN/RED
GREEN/WHITE
GREEN/SLATE
GREEN/BROWN
GREEN/GREEN
GREEN/ORANGE
GREEN/BLUE

BLUE/BLUE
BLUE/ORANGE
BLUE/GREEN
BLUE/BROWN
BLUE/SLATE
BLUE/BLACK
BLUE/YELLOW
BLUE/VIOLET
BLUE/ROSE
BLUE/AQUA

BLUE TUBE

GREEN TUBE

EXMH1

EXISTING 72-COUNT FIBER ON IH 94 TO DOWTOWN

72 COUNT FOC SOUTH ON GLENVIEW AVE.

DMS-40-0117

ADMS-40-0117

(STATE-FURNISHED)

Rx Tx

MULTIMODE / SINGLEMODE MEDIA CONVERTER

M.M F.O.
M.M F.O.

S-M F.O.
S-M F.O.

FACTORY INSTALLED TERMINATION MODULE

STRAND 1
STRAND 2

PRE-TERMINATED F.O.C.

SEE TRAFFIC SIGNAL INTERCONNECT PLANS AND COMMUNICATIONS DIAGRAMS

TO EXISTING FIBER OPTIC TERMINATION PANEL IN MILWAUKEE FIRE DEPARTMENT STATION

BLUE TUBE

BLUE TUBE

PRE-TERMINATED F.O.C.

BLUE/BLUE
BLUE/ORANGE
BLUE/GREEN
BLUE/BROWN
BLUE/SLATE
BLUE/WHITE
BLUE/RED
BLUE/BLACK
BLUE/YELLOW
BLUE/VIOLET
BLUE/ROSE
BLUE/AQUA

ORANGE/BLUE
ORANGE/ORANGE
ORANGE/GREEN
ORANGE/BROWN
ORANGE/SLATE
ORANGE/WHITE
ORANGE/RED
ORANGE/BLACK
ORANGE/YELLOW
ORANGE/VIOLET
ORANGE/ROSE
ORANGE/AQUA

BLUE TUBE

BLUE TUBE

ORANGE TUBE

ORANGE TUBE

CV51F

ONLY AFFECTED BUFFER TUBE SHOWN – OTHER BUFFER TUBES TO REMAIN UNALTERED

CB-CCTV-40-0149

ETHERNET VIDEO CODEC (STATE-FURNISHED)

RJ-45 RS-422 BNC

CCTV

CCTV-40-0149

ETHERNET SWITCH (STATE-FURNISHED)

E10/100 ETHERNET PORTS

SERIAL DATA PORTS RS232/RS485/RS422

Rx Tx Rx Tx RJ-45 RJ-45

DYNAMIC MESSAGE SIGN CONTROLLER

RJ-45 Rx Tx

MULTIMODE / SINGLEMODE MEDIA CONVERTER

M.M F.O.
M.M F.O.

S-M F.O.
S-M F.O.

PROPOSED FIBER OPTIC TERMINATION PANEL

BLUE/BLUE
BLUE/ORANGE
BLUE/GREEN
BLUE/BROWN
BLUE/SLATE
BLUE/WHITE

BLUE TUBE

BLUE TUBE

FIBER OPTIC SPLICE ENCLOSURE

BLUE TUBE

BLUE TUBE

ORANGE TUBE

SEE TRAFFIC SIGNAL INTERCONNECT PLANS AND COMMUNICATIONS DIAGRAMS

ORANGE TUBE

72 COUNT FOC NORTH ON GLENVIEW AVE.

CV72F-2

ONLY AFFECTED BUFFER TUBE SHOWN – OTHER BUFFER TUBES TO REMAIN UNALTERED

KEY

PROPOSED / EXISTING FUSION SPLICE

FIBER LEFT BARE

PROPOSED / EXISTING FIBER TERMINATION

EXISTING WIRELESS COMMUNICATIONS LINK

PROPOSED / EXISTING COMPONENT

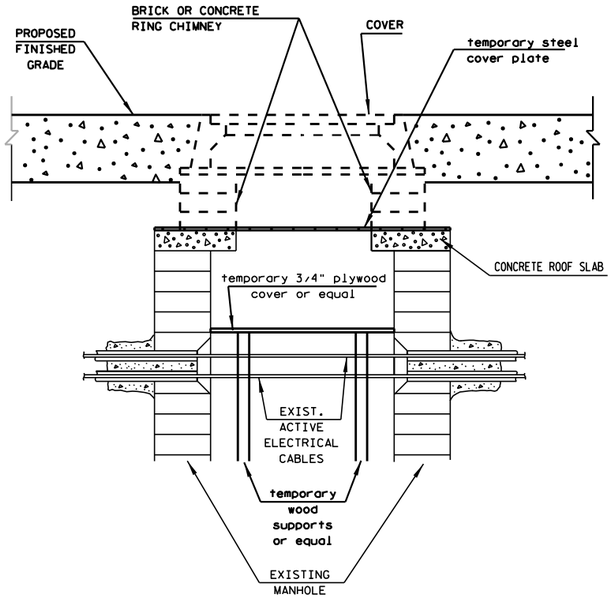
PROPOSED / EXISTING CCTV CAMERA

PROPOSED / EXISTING MICROWAVE DETECTOR

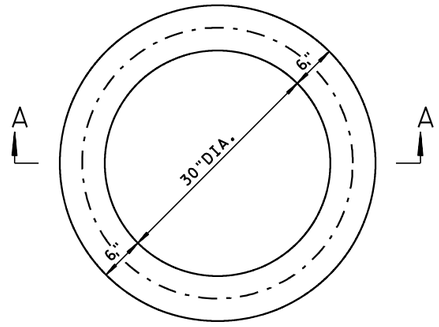
PROPOSED / EXISTING FIBER OPTIC CABLE

PROPOSED LOOP MONITOR

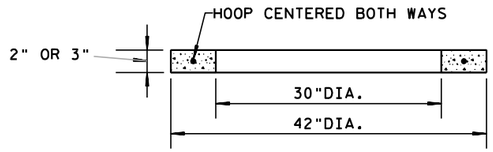
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS - COMMUNICATIONS DETAILS	SHEET 59	E



BLOCK OR PRECAST MANHOLE



PLAN



SECTION A-A

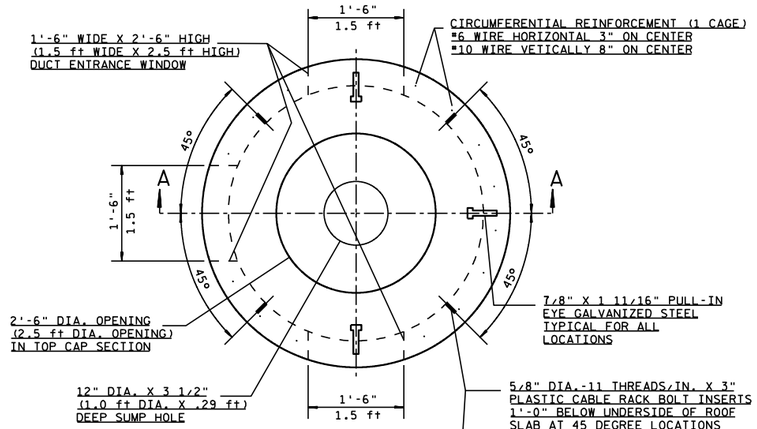
THE ADJUSTING RING SHALL BE 2" OR 3" IN HEIGHT.

THE CIRCUMFERENTIAL STEEL SHALL BE CENTERED WITHIN THE RING.

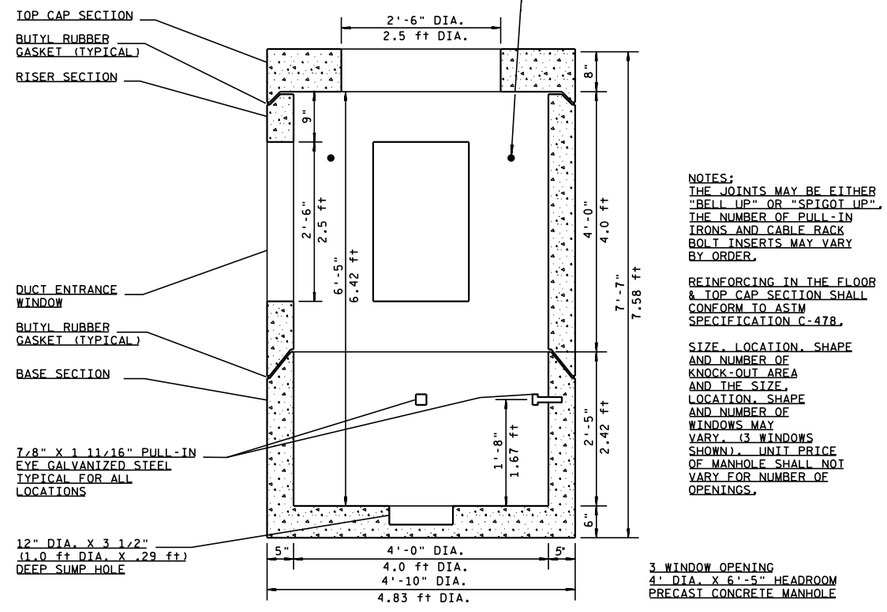
AREA OF CIRCUMFERENTIAL STEEL = 0.07 SQ. INCH PER VERTICAL FOOT WITH A MINIMUM OF .024 SQ. INCH IN ANY ONE RING.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE CORE SHALL BE 4000 P.S.I.

CONCRETE ADJUSTING RING



TOP VIEW



NOTES:
THE JOINTS MAY BE EITHER "BELL UP" OR "SPIGOT UP", THE NUMBER OF PULL-IN IRONS AND CABLE RACK BOLT INSERTS MAY VARY BY ORDER.

REINFORCING IN THE FLOOR & TOP CAP SECTION SHALL CONFORM TO ASTM SPECIFICATION C-478.

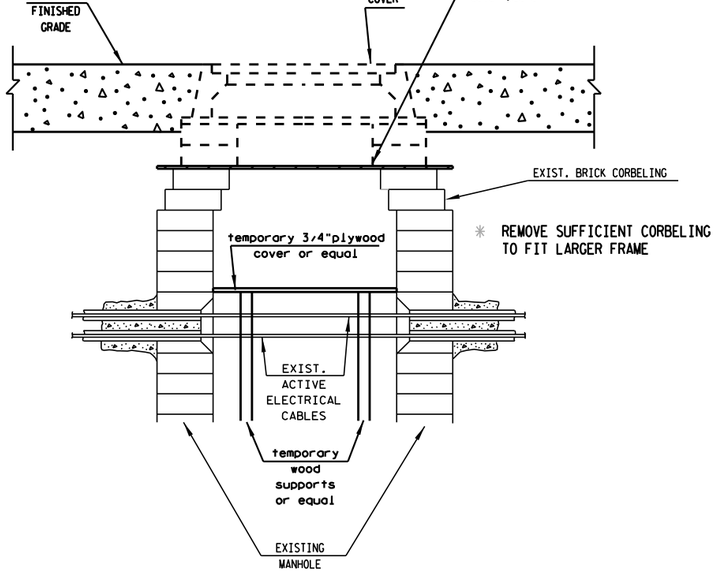
SIZE, LOCATION, SHAPE AND NUMBER OF KNOCK-OUT AREA AND THE SIZE, LOCATION, SHAPE AND NUMBER OF WINDOWS MAY VARY. (3 WINDOWS SHOWN). UNIT PRICE OF MANHOLE SHALL NOT VARY FOR NUMBER OF OPENINGS.

3 WINDOW OPENING
4' DIA. X 6'-5" HEADROOM
PRECAST CONCRETE MANHOLE

SECTION VIEW "A-A"

N.T.S.

4' DIAMETER STANDARD MANHOLE

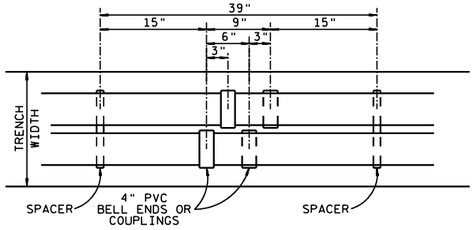


BRICK ROUND MANHOLE

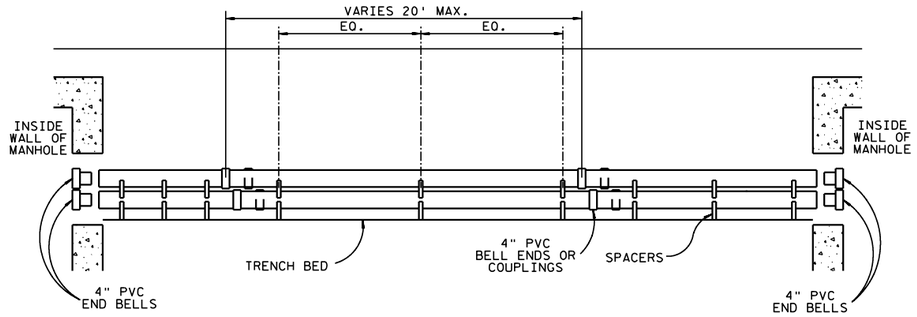
ADJUSTING TES MANHOLES

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS DETAILS - CITY OF MILWAUKEE	SHEET	E

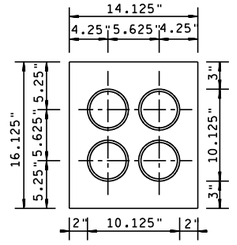
2

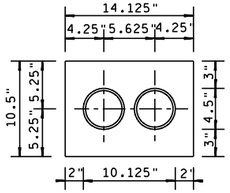


PLAN VIEW
N.T.S.

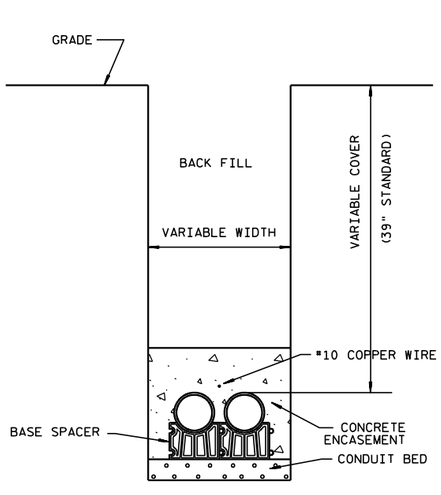


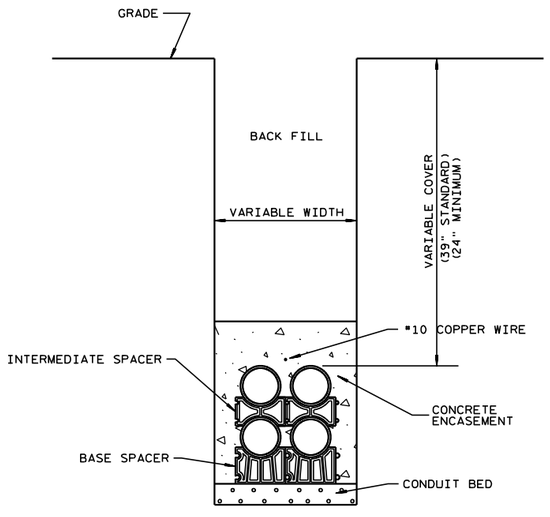
SECTION VIEW
N.T.S.





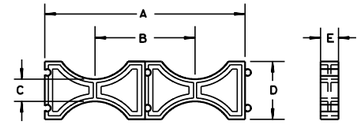
CROSS SECTION VIEW
N.T.S.





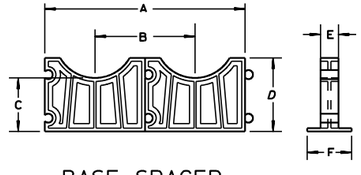
CROSS SECTION VIEW, TYP.
N.T.S.

COND.	3"	4"
A	10"	11 1/2"
B	5"	5 5/8"
C	1 1/2"	1 1/4"
D	3 1/4"	3 1/4"
E	1"	1"



INTERMEDIATE SPACER

COND.	3"	4"
A	10"	11 1/2"
B	5"	5 5/8"
C	3"	3"
D	3 1/8"	4 1/8"
E	1"	1"
F	2 1/2"	2 1/2"



BASE SPACER

INTERMEDIATE AND BASE SPACER DETAIL

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS DETAILS - CITY OF MILWAUKEE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021401_fm.dgn PLOT DATE : 31-JAN-2013 05:06 PLOT BY : MSCD1S PLOT NAME : 021401_fm5 PLOT SCALE : 2:1
WISDOT/CADDS SHEET 42

2

EXMH01
(1) INSTALL CONDUITS INTO EXISTING MANHOLE
(17) F.O. SPLICES IN NEW SPLICE ENCLOSURE (S-F)

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC

PB43F

INSTALL "SPLIT T" WITH 2.5" DIAMETER
AT END OF CITY OF MILWAUKEE
COMMUNICATION CONDUIT INTO PB43F
(INCIDENTAL TO PULLBOX INSTALLATION)

IN CITY OF MILWAUKEE
COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F)

EXCMH1

39F 40F 41F 42F 43F 44F

MATCHLINE 56F+50

S. 84TH STREET

IH 94 EB

IH 94 WB

N

2

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021421_fm.dgn PLOT DATE : 01-NOV-2012 05:34 PLOT BY : MSCD1S PLOT NAME : 021421_fm PLOT SCALE : 40:1

NOTE: CONTACT DEBBIE WILICHOWSKI AT (414) 286-8941
TO COORDINATE INSTALLATION OF FOC INTO CITY OF MILWAUKEE
FIRE HOUSE.

N

EXISTING DMS-40-0117
(1) F.O. MEDIA CONVERTER (S-F)

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 6-COUNT FOC (S-F)

IN CITY OF MILWAUKEE
COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F)
AND (1) 6-COUNT FOC (S-F)

EXPB50F

IN CITY OF MILWAUKEE
COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F)

S. 84TH STREET

EXCMH2

EXCMH3

EXCMH4

EXCMH5

MATCHLINE 56F+50

MATCHLINE 50F+75

46F

47F

48F

49F

50F

IN CITY OF MILWAUKEE COMMUNICATION CONDUIT
(1) 6-COUNT FOC TO (S-F)
TO FIRE HOUSE

IN CITY OF MILWAUKEE
COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F)
AND (1) 6-COUNT FOC (S-F)

TERMINATE 6-COUNT FOC
IN EXISTING TERMINATION PANEL
IN RACK AT CITY OF MILWAUKEE
FIRE HOUSE

CITY OF MILWAUKEE
FIRE HOUSE

HONEY CREEK PARKWAY

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021422_fm.dgn PLOT DATE : 01-NOV-2012 05:34 PLOT BY : MSCD1S PLOT NAME : 021422_fm PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

N

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 6-COUNT FOC (S-F)

V51F
(24) F.O. SPLICES IN
NEW SPLICE ENCLOSURE (S-F)
SEE TRAFFIC SIGNAL INTERCONNECT
PLANS IN PROJECT 1060-33-90
FOR ADDITIONAL CONNECTION IN CV51F

(3) 2-INCH HDPE DUCTS
(1) WITH (2) 72-COUNT FOC (S-F)
AND (1) 6-COUNT FOC (S-F)

CV51F

(3) 2-INCH HDPE DUCTS
(1) WITH (2) 72-COUNT FOC (S-F)
AND (1) 6-COUNT FOC (S-F)

INSTALL "SPLIT T" WITH 2.5" DIAMETER
AT END OF CITY OF MILWAUKEE
COMMUNICATION CONDUIT INTO PB52F
(INCIDENTAL TO PULL BOX INSTALLATION)

MATCHLINE 50F+75

51F

PB51F

52F

PB52F

53F

54F

55F

56F

MATCHLINE 56F+50

N. GLENVIEW AVENUE

W. DANA COURT

EXCMH6

IN CITY OF MILWAUKEE
COMMUNICATION CONDUIT
(2) 72-COUNT FOC (S-F)
AND (1) 6-COUNT FOC (S-F)

IN CITY OF MILWAUKEE
COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F)
AND (1) 6-COUNT FOC (S-F)

IN CITY OF MILWAUKEE
COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F)
AND (1) 6-COUNT FOC (S-F)

BUILDING

BUILDING

BUILDING

PKNG

PKNG

PARKING

WATER
TANK

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021423_fm.dgn PLOT DATE : 01-NOV-2012 05:34 PLOT BY : MSCD1S PLOT NAME : 021423_fm PLOT SCALE : 40:1

2

N

W. HAWTHORNE AVENUE

N. GLENVIEW AVENUE

MATCHLINE 56F+50

MATCHLINE 62F+25

57F

58F

59F

60F

61F

62F

EXCMH7

EXCMH8

IN CITY OF MILWAUKEE
COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F)

IN CITY OF MILWAUKEE
COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F)

BLEACHERS

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

2

W. HILL STREET

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC (S-F)

MATCHLINE 62F+25

CV63F

63F

64F

65F

66F

67F

MATCHLINE 68F+00

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC (S-F)

N. GLENVIEW AVENUE

EXCMH10

EXCMH9

(1) INSTALL CONDUITS INTO
EXISTING MANHOLE

IN CITY OF MILWAUKEE
COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F)

SIGN

FLAG

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021431_fm.dgn PLOT DATE : 01-NOV-2012 05:34 PLOT BY : MSCD1S PLOT NAME : 021431_fm PLOT SCALE : 40:1

2

2

N

W. BLUEMOUND ROAD

N. GLENVIEW AVENUE

MATCHLINE 68F+00

MATCHLINE 73F+75

CV68F

69F

70F

71F

72F

73FN

CV72F-1

CV72F-2

(12) F.O. SPLICES IN NEW SPLICE ENCLOSURE (S-F)

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC (S-F)

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC (S-F)

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC (S-F)

EXCMH11

PB72F

MB72F

(2) 2-INCH CONDUITS
(1) WITH (1) 6-COUNT FOC

(1) 2-INCH CONDUIT
(1) WITH (3) NO. 6 AWG LIGHTING WIRES
AND (1) NO. 10 AWG LIGHTING WIRE

CB-CCTV-40-0149

CCTV-40-0149
(1) 30-FOOT CCTV CAMERA POLE BASE
(1) 30-FOOT CCTV CAMERA POLE (S-F)
(1) BARREL CCTV CAMERA ASSEMBLY (S-F)
(1) POLE MOUNTED CONTROL CABINET (S-F)
(1) 12-CNT F.O. TERMINATION PANEL (S-F)
(1) ETHERNET SWITCH (S-F)
(1) VIDEO ENCODER (S-F)
(1) DMS CONTROLLER (S-F)
(6) F.O. TERMINATIONS
(1) F.O. MEDIA CONVERTER (S-F)

242BL

243BL

244BL

245BL

CV244BL

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

2

N

MATCHLINE 73F+75

MATCHLINE 79F+50

74FN

75FN

N. GLENVIEW AVENUE

77FN

78FN

79FN

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC (S-F)

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC (S-F)

CV74FN

ROCKWAY PLACE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021433_fm.dgn PLOT DATE : 01-NOV-2012 05:34 PLOT BY : MSCD1S PLOT NAME : 021433_fm PLOT SCALE : 40:1

2

2

N

MATCHLINE 79F+50

80FN

81FN

82FN

83FN

85FN

N. GLENVIEW AVENUE

CV310WX

310WX

(3) 2-INCH HDPE DUCTS

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC (S-F)

CV82FN
(1) NEW SPLICE ENCLOSURE (S-F)

(3) 2-INCH HDPE DUCTS

CV84FN

BROOKSIDE PLACE

W. WISCONSIN AVENUE

313WX

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021434_fm.dgn PLOT DATE : 01-NOV-2012 05:34 PLOT BY : MSCD1S PLOT NAME : 021434_fm PLOT SCALE : 40:1

2

2

N

ELM SPRING AVENUE

(3) 2-INCH HDPE DUCTS

CAUTION

CV235BL

234BL

235BL

236BL

237BL

238BL

239BL

240

MATCHLINE 240BL+00

W. BLUEMOUND ROAD

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021440_fm.dgn PLOT DATE : 01-NOV-2012 05:34 PLOT BY : MSCD1S PLOT NAME : 021440_fm PLOT SCALE : 40:1

2

2

N

N. ROBERTSON AVENUE

N. GLENVIEW AVENUE

W. BLUEMOUND ROAD

(3) 2-INCH HDPE DUCTS

MATCHLINE 240BL+00

240BL

241BL

242BL

243BL

244BL

245BL

246BL

CV244BL

74FN

73FN

72F

71F

RAMP

SIGN

VENT(3)

VENT SUPPORT

EMERGENCY TELEPHONE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021441_fm.dgn PLOT DATE : 01-NOV-2012 05:35 PLOT BY : MSCD1S PLOT NAME : 021441_fm PLOT SCALE : 40:1

NOTE:
1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
4. MAINTAIN A MINIMUM 6-INCH VERTICAL CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.

N

EXCMH11
STA. 213BL+45.5, 6.1' LT
EXISTING MANHOLE

INSTALL CONDUIT INTO
EXISTING MANHOLE

W. BLUEMOUND ROAD

(1) 2-INCH CONDUIT STUB

CV214BL

(2) 2-INCH HDPE DUCTS

85'
4 - 4" PVC CONDUIT
CEMENT ENCASED

CMH06
STA. 214BL+14.1, 32.5' RT
PROPOSED MANHOLE

585'
4 - 4" PVC CONDUIT
CEMENT ENCASED

N. 92ND STREET

211BL 212BL 213BL 214BL 215BL 216BL 217BL

MATCHLINE 217BL+00

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS - CITY OF MILWAUKEE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021440_fm.dgn PLOT DATE : 31-JAN-2013 05:07 PLOT BY : MSCD1S PLOT NAME : 021440_fm PLOT SCALE : 40:1

NOTE:
1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
4. MAINTAIN A MINIMUM 6-INCH VERTICAL CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.

N

N. 90TH STREET

W. BLUEMOUND ROAD

MATCHLINE 217BL+00

MATCHLINE 222BL+75

217BL

218BL

219BL

220BL

221BL

222BL

CAUTION

CMH05
STA. 219BL+99.0, 31.1' RT
PROPOSED MANHOLE

585'
4 - 4" PVC CONDUIT
CEMENT ENCASED

595'
4 - 4" PVC CONDUIT
CEMENT ENCASED

PKNG

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS - CITY OF MILWAUKEE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021441_fm.dgn PLOT DATE : 31-JAN-2013 05:08 PLOT BY : MSCD1S PLOT NAME : 021441_fm PLOT SCALE : 40:1

NOTE:
1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.

2. THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.

3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE. DUCT PACKAGE OR UTILITY.

4. MAINTAIN A MINIMUM 6-INCH VERTICAL CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.

N

N. 89TH STREET

W. BLUEMOUND ROAD

MATCHLINE 222BL+75

MATCHLINE 228BL+50

223BL 224BL 225BL 226BL 227BL 228BL

EXCMH13
STA. 225BL+92.2, 5.5' LT
EXISTING MANHOLE

INSTALL CONDUIT INTO EXISTING MANHOLE

WATER STATION

38'
1 - 4" PVC CONDUIT
CEMENT ENCASED

CMH04
STA. 225BL+92.2, 32.4' RT
PROPOSED MANHOLE

595'
4 - 4" PVC CONDUIT
CEMENT ENCASED

600'
4 - 4" PVC CONDUIT
CEMENT ENCASED

CAUTION

CAUTION

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS - CITY OF MILWAUKEE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021442_fm.dgn PLOT DATE : 31-JAN-2013 05:08 PLOT BY : MSCD1S PLOT NAME : 021442_fm PLOT SCALE : 40:1

2

NOTE:
1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
4. MAINTAIN A MINIMUM 6-INCH VERTICAL CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.

N

MAYWOOD AVENUE

W. BLUEMOUND ROAD

MATCHLINE 228BL+50

MATCHLINE 234BL+25

229BL 230BL 231BL 232BL 233BL 234BL

CMH03
STA. 231BL+99.8, 31.3' RT
PROPOSED MANHOLE

600'
4 - 4" PVC CONDUIT
CEMENT ENCASED

600'
4 - 4" PVC CONDUIT
CEMENT ENCASED

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS - CITY OF MILWAUKEE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\021443_fm.dgn PLOT DATE : 31-JAN-2013 05:08 PLOT BY : MSCD1S PLOT NAME : 021443_fm PLOT SCALE : 40:1

NOTE:
1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.

2. THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.

3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.

4. MAINTAIN A MINIMUM 6-INCH VERTICAL CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.

N

ELM SPRING AVENUE

W. BLUEMOUND ROAD

MATCHLINE 234BL+25

MATCHLINE 240BL+00

PB235BL

235BL

236BL

237BL

238BL

239BL

240

CV238BL

(3) 2-INCH HDPE DUCTS

(2) 2-INCH HDPE DUCTS

CAUTION

CAUTION

600'
4 - 4" PVC CONDUIT
CEMENT ENCASED

CMH02
STA. 237BL+99.6, 31.1' RT
PROPOSED MANHOLE

585'
4 - 4" PVC CONDUIT
CEMENT ENCASED

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS - CITY OF MILWAUKEE	SHEET	E

NOTE:
1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
4. MAINTAIN A MINIMUM 6-INCH VERTICAL CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.

N

N. ROBERTSON AVENUE

W. BLUEMOUND ROAD

N. GLENVIEW AVENUE

74FN

73FN

72P

(3) 2-INCH HDPE DUCTS

MATCHLINE 240BL+00

241BL

242BL

243BL

244BL

245BL

246BL

CV244BL

CMH01
STA. 243BL+80.5, 43.6'RT
PROPOSED MANHOLE

30'
4 - 4" PVC CONDUIT
CEMENT ENCASED

585'
4 - 4" PVC CONDUIT
CEMENT ENCASED

INSTALL CONDUIT INTO
EXISTING MANHOLE

EXCMH12
STA. 243BL+79.3, 72.5'RT
EXISTING MANHOLE

CAUTION

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	FTMS PLANS - CITY OF MILWAUKEE	SHEET	E

2

LEGEND

- SOD LAWN
- EROSION MAT CLASS II TYPE C
- SHREDDED BARK MULCH
- SILT FENCE
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- EROSION BALES
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D

NOTES

INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES.

INLET PROTECTION TYPE B, C, OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT.

CONTRACTOR WILL NOT STORE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS.

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL - LEGEND	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\022000_ec.dgn PLOT DATE : 01-NOV-2012 12:11 PLOT BY : MSCDYB PLOT NAME : 022000_ec PLOT SCALE : 100:1
WISDOT/CADDS SHEET 42

2

2

N

+75.54
49.02' LT

+74.86
49.00' LT

+65.04
5.06' LT

46F 48F 50F 52F 54F 56F 58F 60F

S. 84TH STREET

N. GLENVIEW AVENUE

W. HAWTHORNE AVE

DANA CT

HONEY CREEK PARKWAY

MATCHLINE 6JF+00

PKNG

PARKING

WATER TANK

BLEACHERS

FIELD

CONC

SIGN

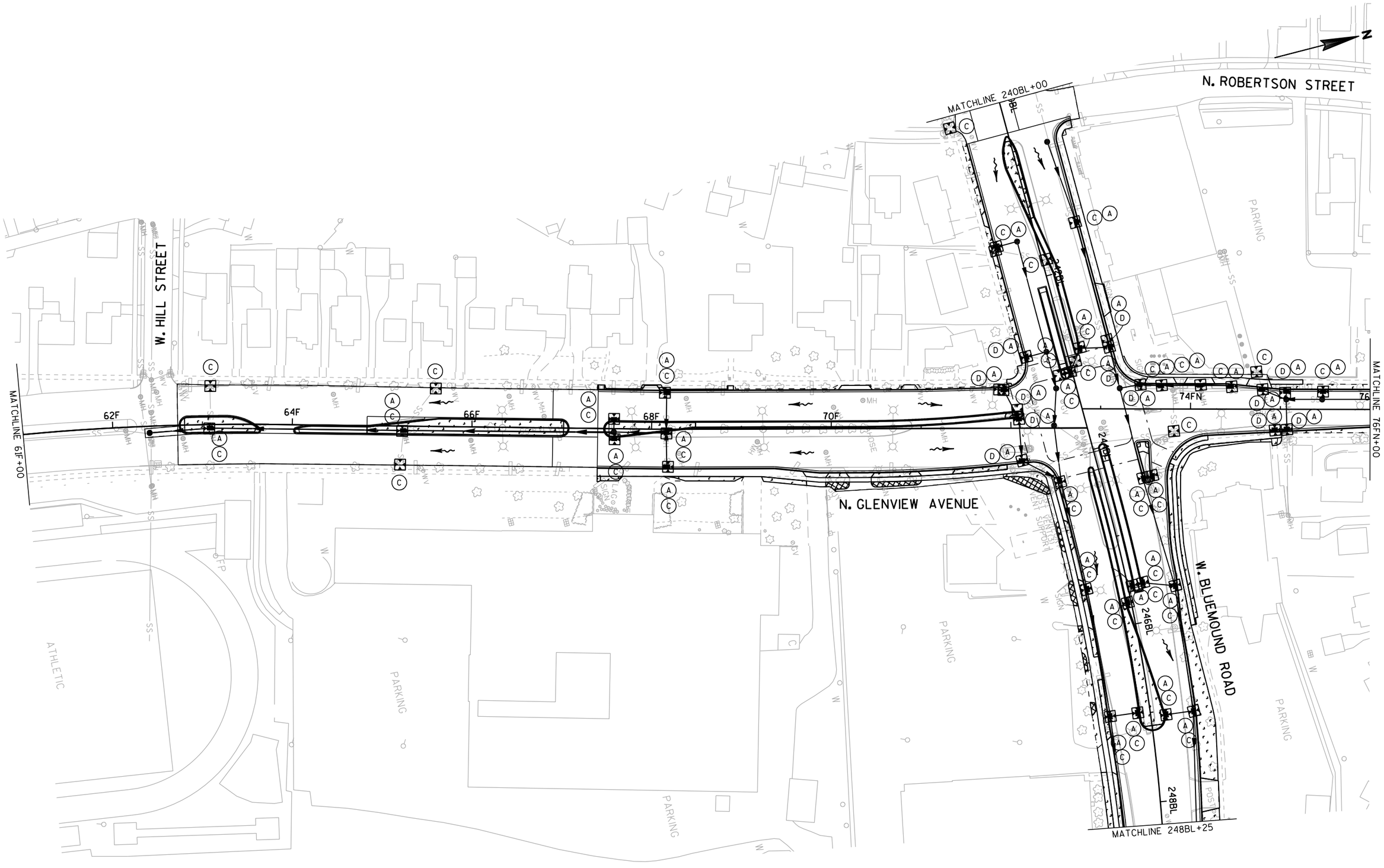
SS

MH

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\022001_ec.dgn PLOT DATE : 31-JAN-2013 05:09 PLOT BY : MSCD1S PLOT NAME : 022001_ec PLOT SCALE : 100:1

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PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

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WISDOT/CADDS SHEET 42

2

2

N. ROBERTSON STREET

N. ROBERTSON STREET

AVON COURT

W. WISCONSIN AVENUE

308WX

310WX

312WX

314WX

316WX

N. GLENVIEW AVENUE

MATCHLINE 76FN+00

78FN

80FN

82FN

84FN

86FN

88FN

90FN

ST JUDE COURT

ST JUDE COURT

ST JUDE COURT

WALL

PARKING

REC AREA

FP

PARKING

PARKING

WALL

BROOKSIDE PLACE

ROCKWAY PLACE

WETLAND BOUNDARY

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\022003_ec.dgn PLOT DATE : 31-JAN-2013 05:10 PLOT BY : MSCD1S PLOT NAME : 022003_ec PLOT SCALE : 100:1

2

N

W. BLUEMOUND ROAD

N 91ST STREET

N 90TH STREET

N 89TH STREET

N 92ND STREET

W ST PAUL AVE

RAVENSWOOD CIRCLE

212BL 214BL 216BL 218BL 220BL 222BL 224BL 226BL+00

MATCHLINE 226BL+00

FILLER CAPS

BOLLARD (4) CANOPY

vent pipe support

vent pipe (3)

SIGN

BOLLARD

PKNG

WALL

FB

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\022004_ec.dgn PLOT DATE : 31-JAN-2013 05:10 PLOT BY : MSCD1S PLOT NAME : 022004_ec PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

N

BB COURT

PKNG

VB CT

FB

PLEASANT VIEW STREET

ELM SPRING AVENUE

W. BLUEMOUND ROAD

MATCHLINE 226BL+00

228BL

230BL

232BL

234BL

236BL

238BL

MATCHLINE 240BL+00

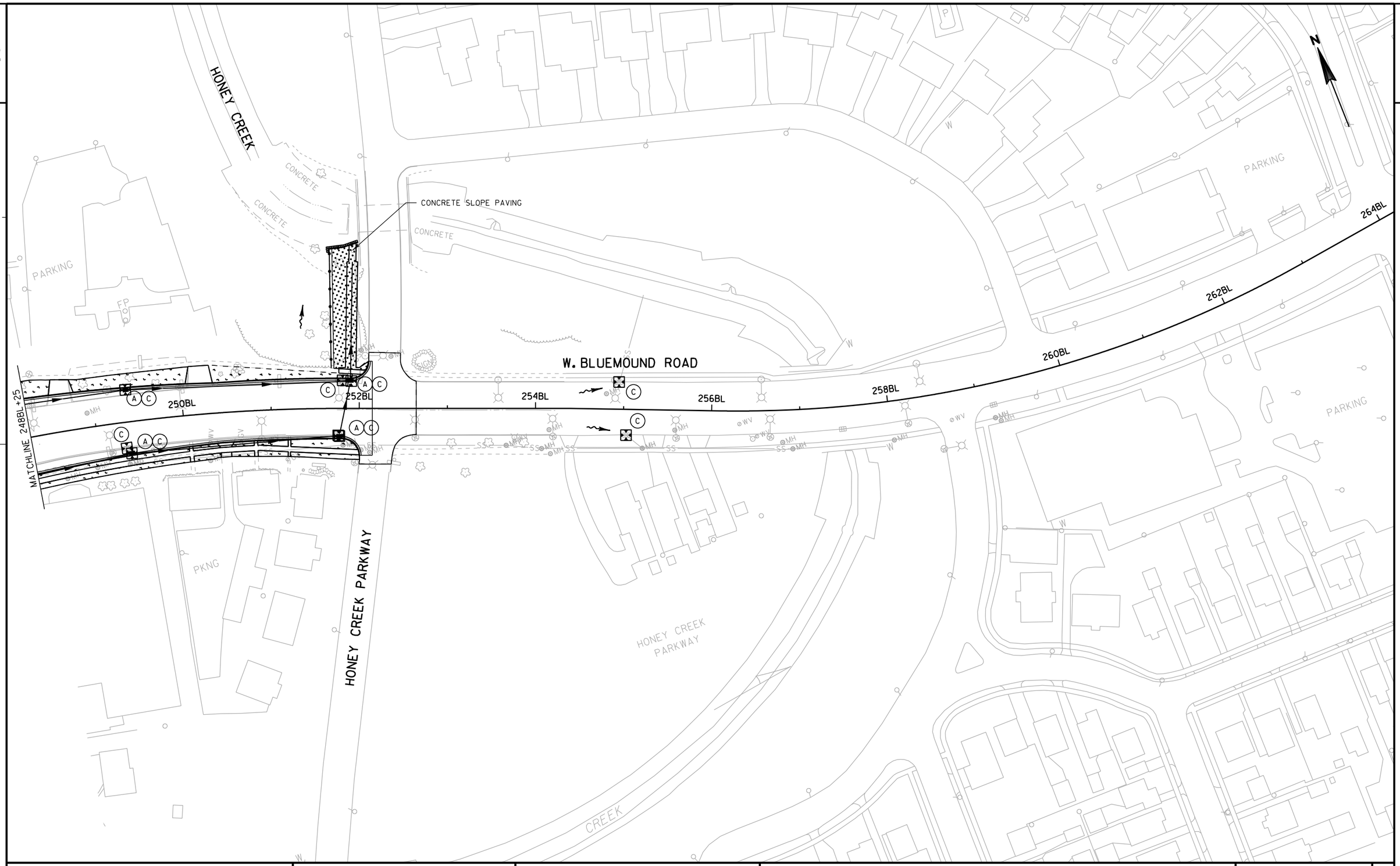
GLENCOE CIRCLE

RAVENSWOOD CIRCLE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

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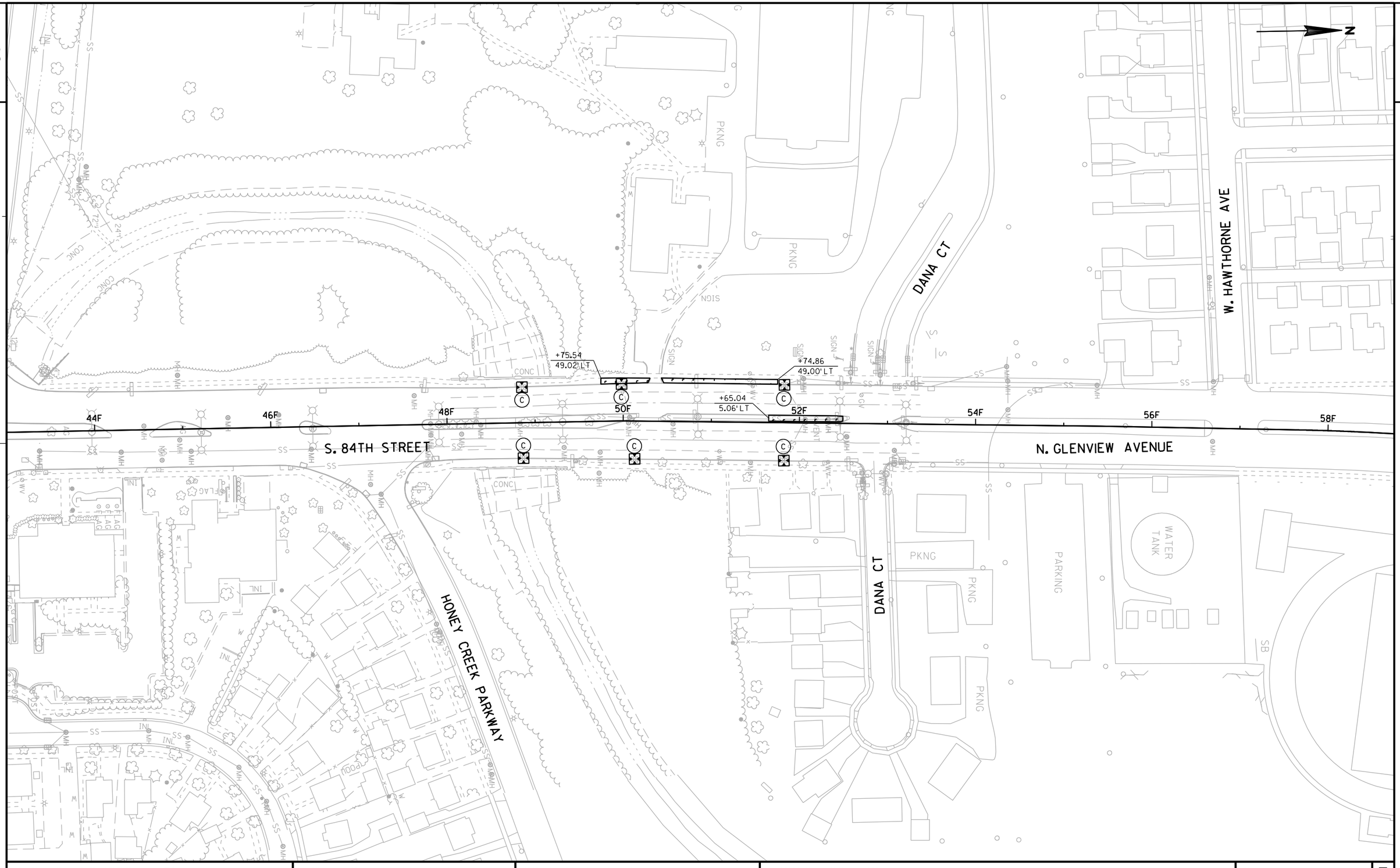


PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

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WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

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WISDOT/CADDS SHEET 42

2

GENERAL DRAINAGE NOTES

LOCATION OF STRUCTURES IN CURB AND GUTTER SECTION REFER TO FLOW LINE.
LOCATION OF STRUCTURES NOT IN CURB AND GUTTER SECTION REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLOW LINE OF INLET OR AT CENTER OF MANHOLE.

TOP OF STRUCTURE ELEVATIONS FOR ALL STRUCTURES IS DETERMINED BY SUBTRACTING CASTING DEPTH, SLAB THICKNESS, AND SIX INCH ADJUSTMENT FROM THE RIM ELEVATION. THIS EQUATION OVERRIDES THE STRUCTURE DEPTH SHOWN ON STANDARD DETAIL DRAWING. SEE STANDARD DETAILS OR STORM SEWERS DETAILS FOR CASTING DEPTH.

STRUCTURE DEPTH IS DETERMINED BY SUBTRACTING LOWEST INVERT ELEVATION FROM TOP OF STRUCTURE ELEVATION.

PLAN LENGTH REPRESENT LENGTH OF PIPE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND IS USED FOR ESTIMATING. PIPE LENGTH REPRESENT LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE AND IS USED TO COMPUTE PIPE SLOPE.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES AND PIPES SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

UTILITY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE. LOCATIONS SHOWN ARE TAKEN FROM EXISTING RECORDS AND BEST INFORMATION AVAILABLE FROM EXISTING PLANS. IT IS EXPECTED THAT THERE MAY BE DISCREPANCIES AND OMISSIONS IN THE LOCATION OF UTILITIES AND STRUCTURES SHOWN. VERIFY ALL LOCATIONS IN THE FIELD.

VERIFY THE EXISTING STORM SEWER SYSTEM CONNECTION LOCATIONS AND ELEVATIONS PRIOR TO ORDERING DRAINAGE STRUCTURES AND PIPES. NOTIFY THE ENGINEER OF ANY DEVIATIONS FROM THE INFORMATION SHOWN ON THE PLANS PRIOR TO INSTALLING THE PROPOSED STORM SEWER.

SEE REMOVAL PLANS FOR REMOVAL OF EXISTING STORM SEWER SYSTEM.

ALL DRAINAGE STRUCTURES, EXISTING OR PROPOSED, SUBJECT TO TRAFFIC LOADING SHALL HAVE NON-ROCKING COVERS AS DIRECTED BY THE ENGINEER IN THE FIELD. COST INCIDENTAL TO NEW COVER ON PROPOSED STRUCTURE OR "RECONSTRUCTING/ADJUSTING MANHOLES OR INLETS" ON EXISTING STRUCTURE.

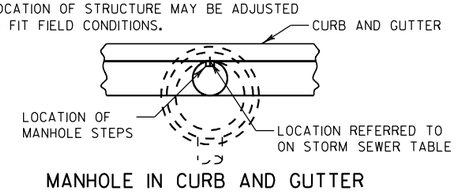
PROVIDE TEMPORARY POSITIVE DRAINAGE THROUGHOUT THE PROJECT DURING ALL PROJECT STAGES.

SUPPORTING UTILITIES DURING STORM SEWER CONSTRUCTION IS INCIDENTAL TO STORM SEWER PIPE AND/OR STORM SEWER STRUCTURE.

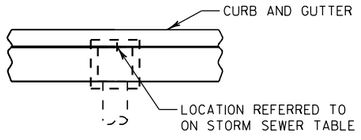
JOINT TIES FOR CONCRETE PIPE SHALL BE USED TO CONNECT ALL CONCRETE APRON ENDWALLS AND THE LAST THREE PIPE SEGMENTS PRECEDING THE APRON ENDWALL. THE COST OF JOINT TIES SHALL BE INCIDENTAL TO THE STORM SEWER PIPE.

NOTE

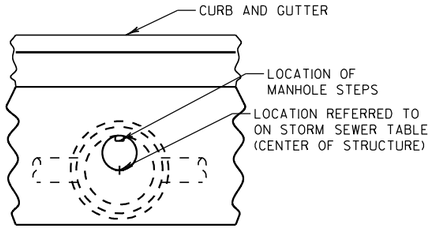
1) LOCATION OF STRUCTURE MAY BE ADJUSTED TO FIT FIELD CONDITIONS.



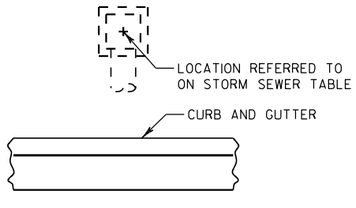
MANHOLE IN CURB AND GUTTER



INLET IN CURB AND GUTTER



MANHOLE NOT IN CURB AND GUTTER



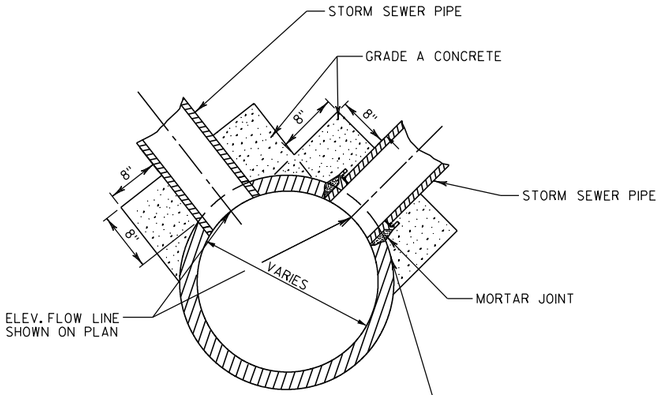
INLET NOT IN CURB AND GUTTER

STRUCTURE LOCATION DETAIL

STORM SEWER LEGEND

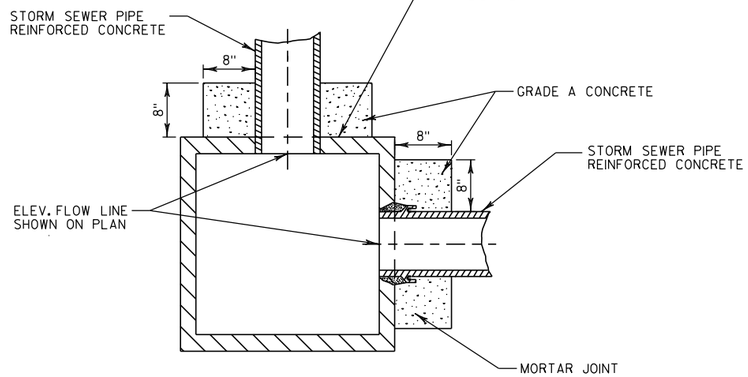
EXISTING
(FEXXX) EXISTING STRUCTURE TO BE ADJUSTED OR RECONSTRUCTED
(FXXX) PROPOSED DRAINAGE STRUCTURE
● PROPOSED MANHOLE
■ PROPOSED INLET
△ PROPOSED ENDWALL
EXISTING
PE*** EXISTING PIPE
P*** PROPOSED PIPE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STORM SEWER - CONSTRUCTION DETAILS	SHEET	E



AT MANHOLE

INCIDENTAL TO NEW STRUCTURE AND NEW PIPE ITEMS



AT STORM SEWER INLET

INCIDENTAL TO NEW STRUCTURE AND NEW PIPE ITEMS

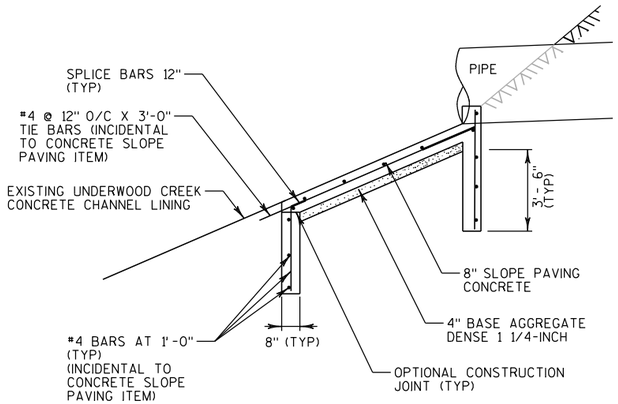
NOTE

CONCRETE COLLAR TO BE PAID AS A BID ITEM WHEN:

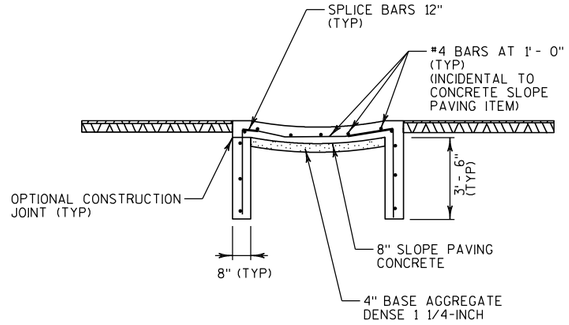
A) CONNECTING AN EXISTING PIPE TO A NEW STRUCTURE

B) CONNECTING AN EXISTING TRUCTURE TO AN NEW PIPE

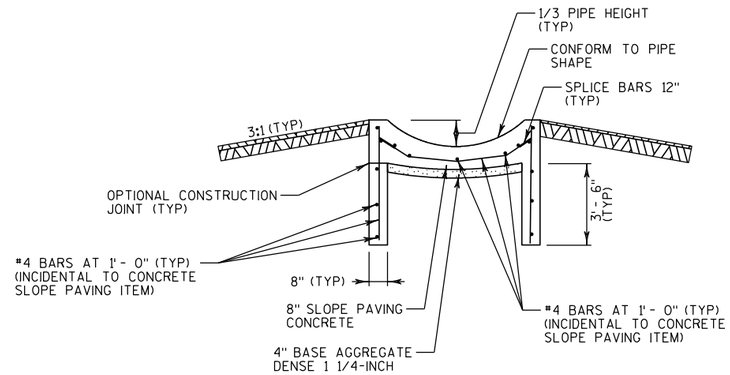
CONCRETE COLLAR DETAIL



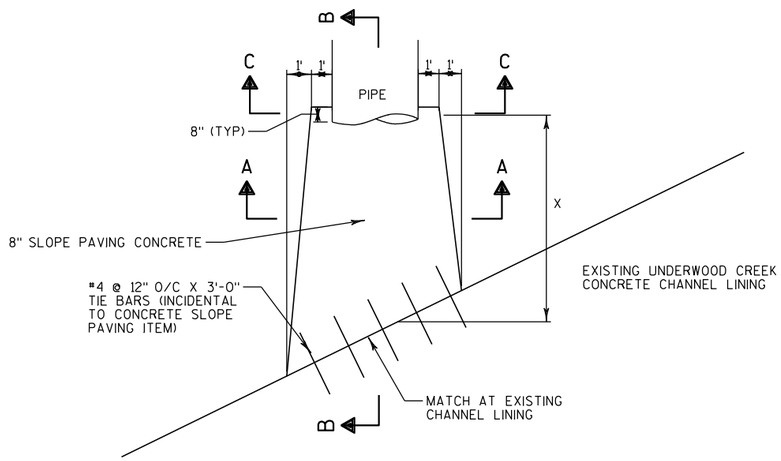
SECTION B-B



SECTION A-A



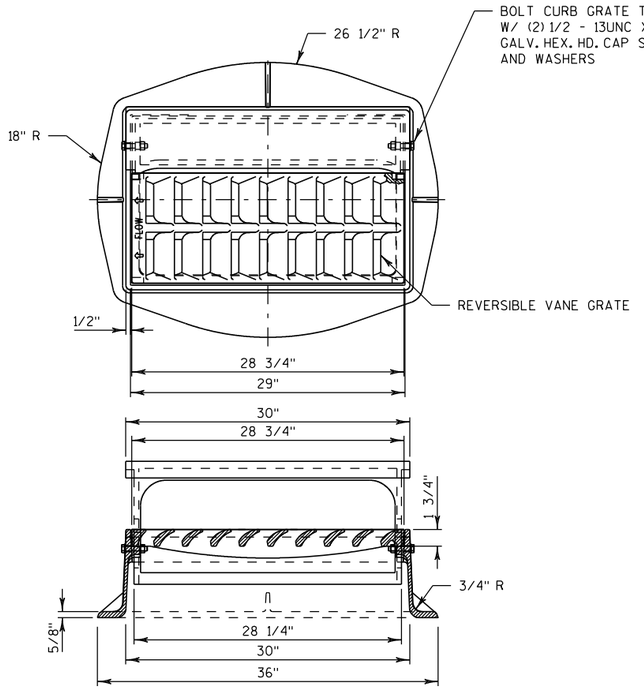
SECTION C-C

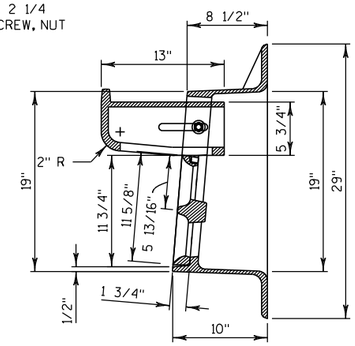


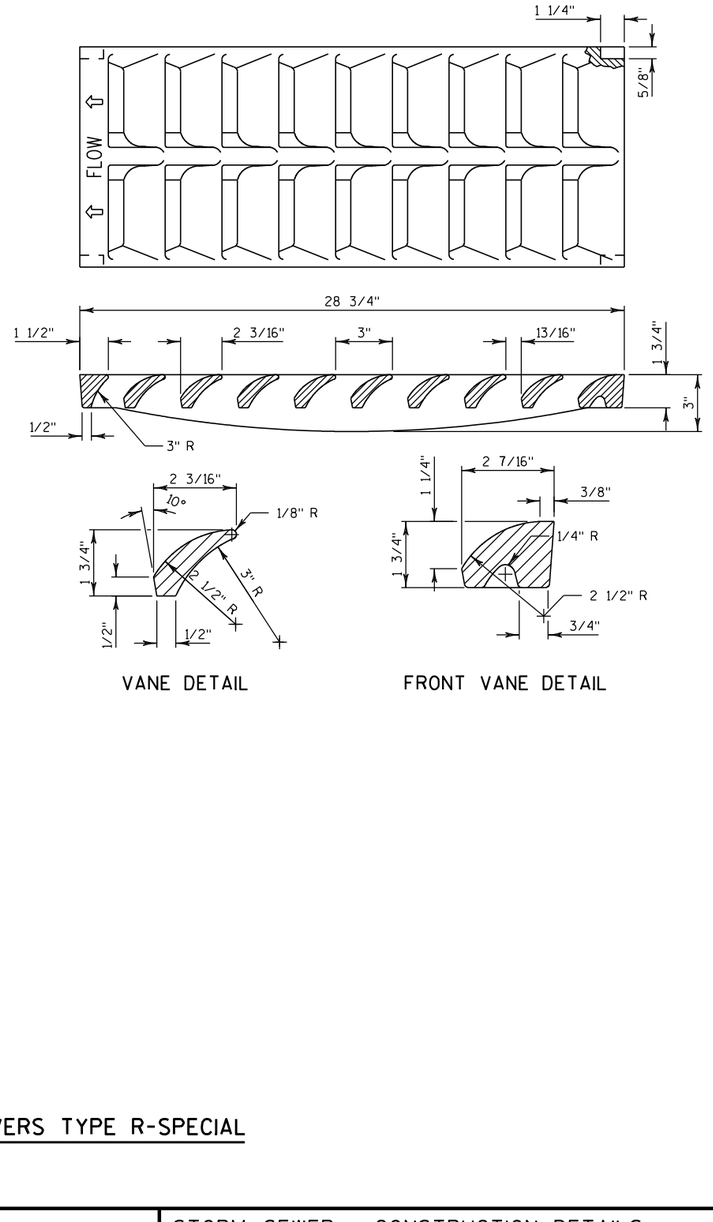
CONCRETE SLOPE PAVING AT STORM SEWER OUTFALL

STA 251BI+92.166' LT:X=20'

2

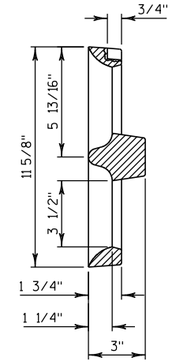


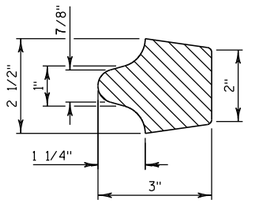




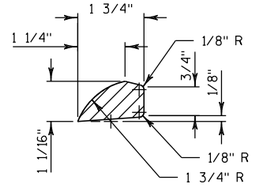
VANE DETAIL

FRONT VANE DETAIL





MIDDLE RIB DETAIL

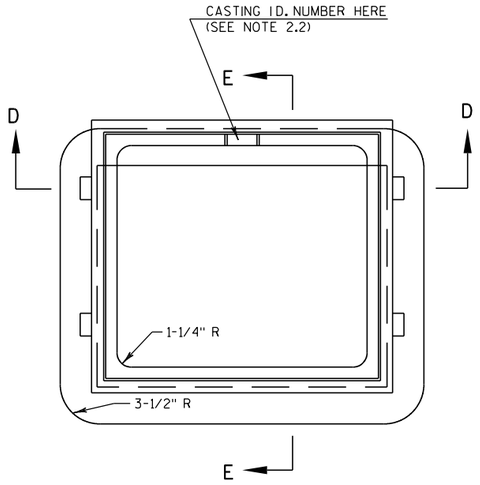


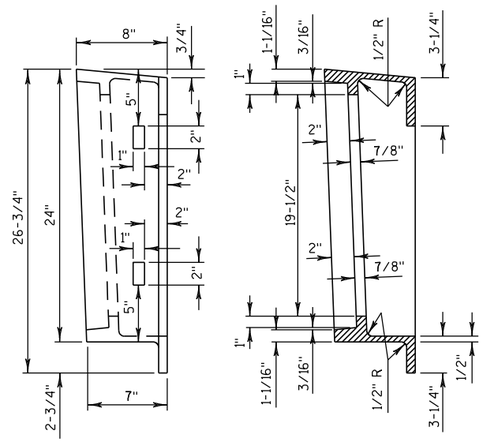
SIDE RIB DETAIL

INLET COVERS TYPE R-SPECIAL

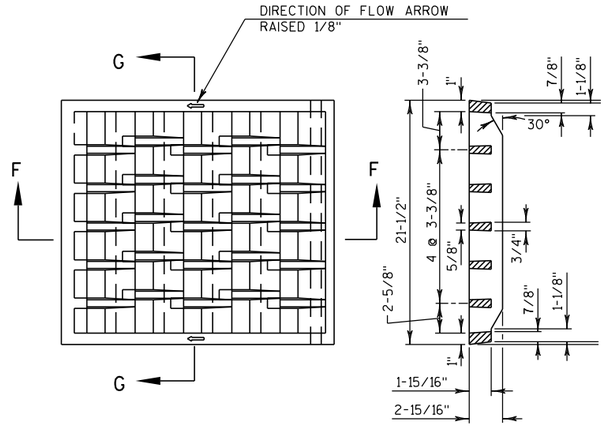
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STORM SEWER - CONSTRUCTION DETAILS	SHEET E

2



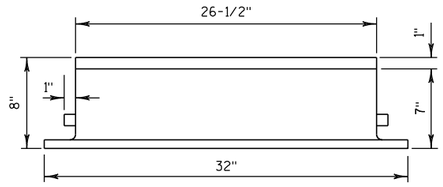


SECTION E-E

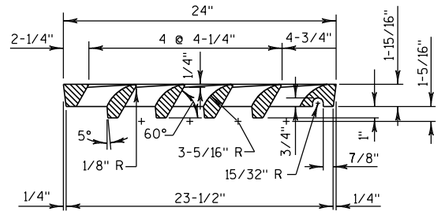


GRATE

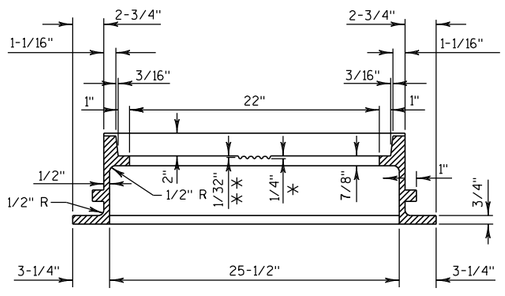
SECTION G-G



FRAME



SECTION F-F



SECTION D-D

* DEPRESSION FOR LETTERS

* * CLEARANCE FROM TOP OF LETTERS TO FACE OF SEAT

GENERAL NOTES

1. ALL EDGES ARE TO BE GROUND.

2. ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS IN THE FORM OF LEGIBLE LETTERS OR NUMERALS RAISED 1/8":

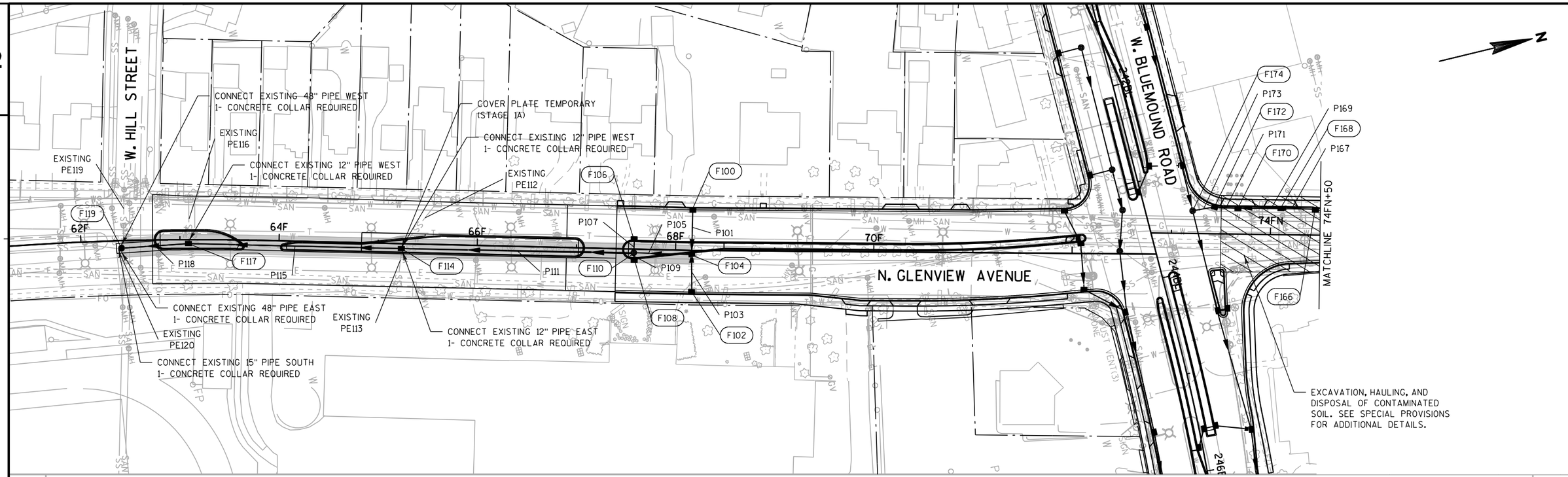
   ON THE FRAME
   1. ON THE UPPER FACE OF THE FLANGE IN 1 INCH HIGH LETTERS THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.

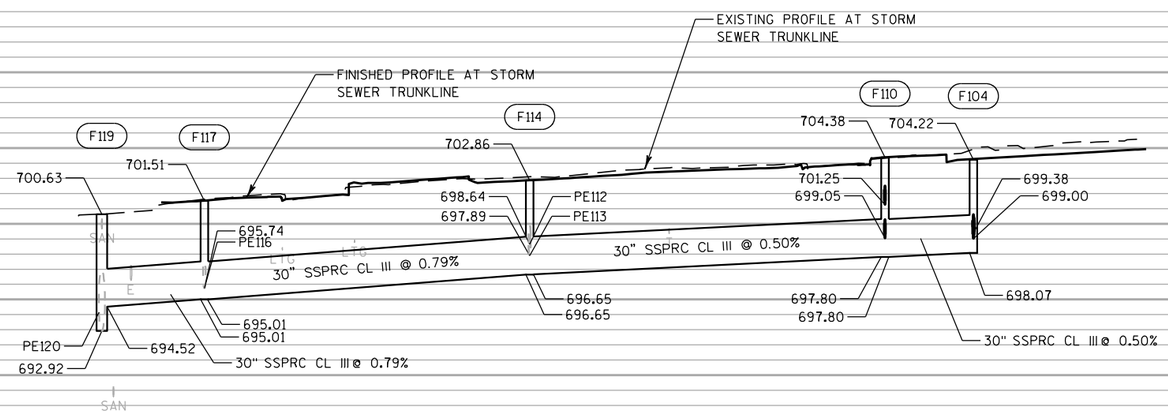
   2. ON THE SEAT OF THE FRAME IN 1 INCH HIGH LETTERS, THE CASTING IDENTIFICATION NUMBER (M.S.51).

   ON THE GRATE
   1. ON THE UPPER SIDE OF THE GRATE IN 1 INCH HIGH LETTERS, THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE, THE CASTING IDENTIFICATION NUMBER (M.S.57) AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.

CASTING - TYPE 57

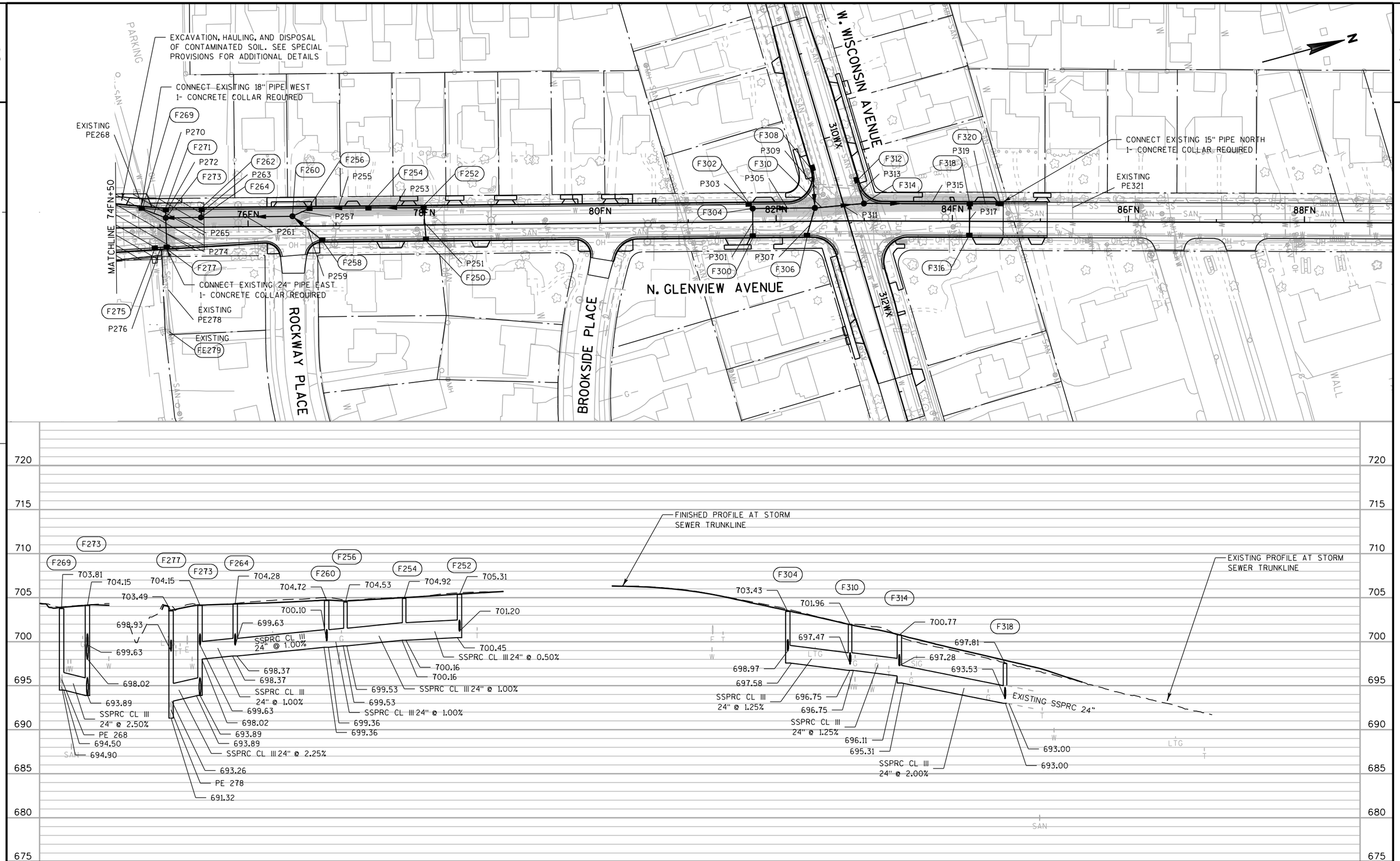
LID-145 LBS., FRAME-204 LBS.





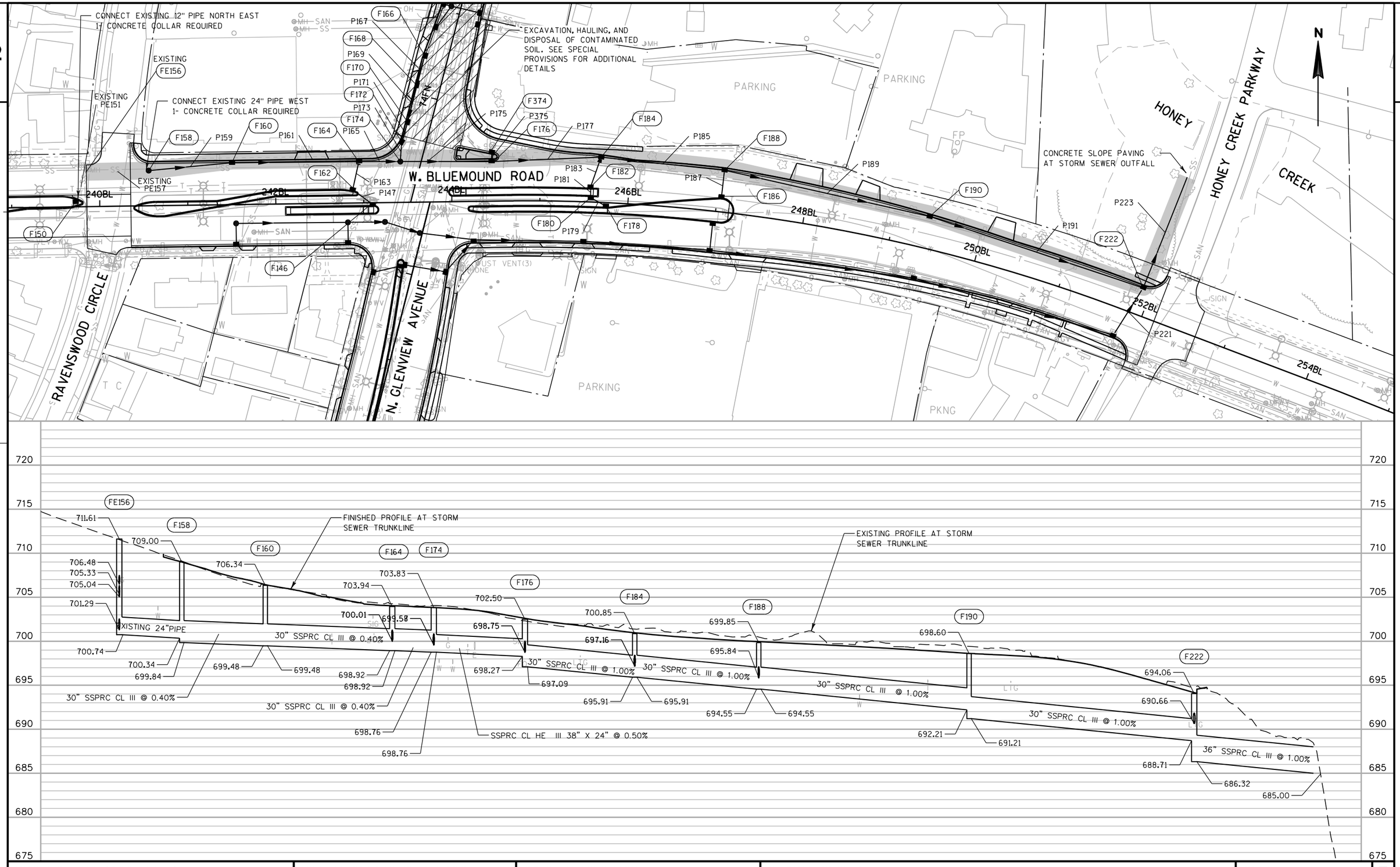
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\022501_ss.dgn PLOT DATE : 31-JAN-2013 05:12 PLOT BY : MSCD1S PLOT NAME : 022501_ss PLOT SCALE : 100:1



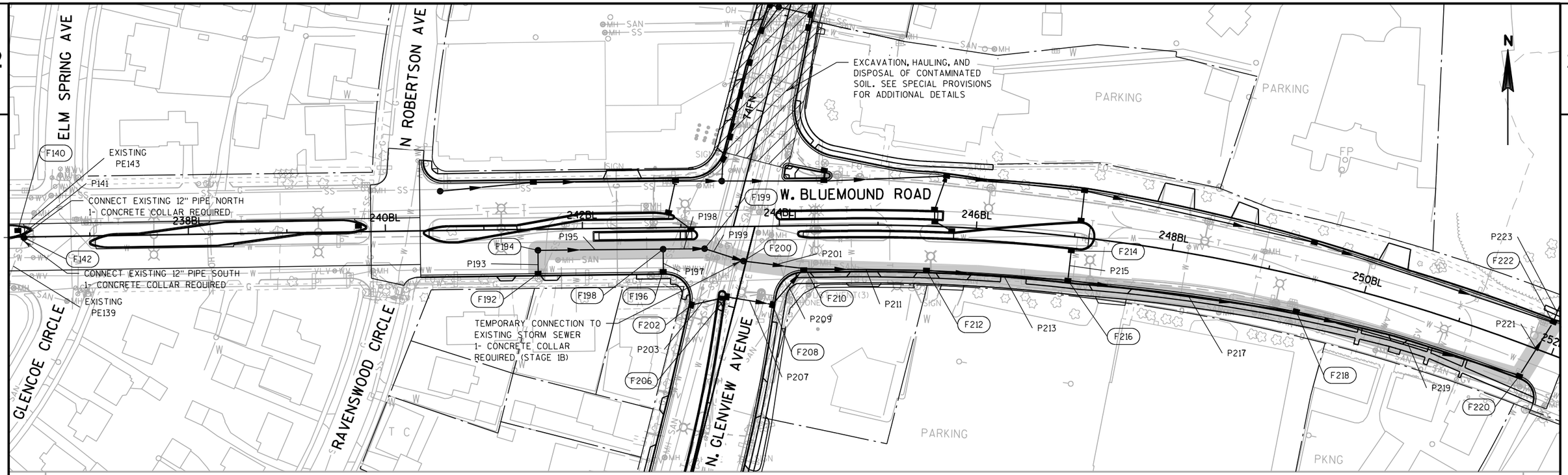
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

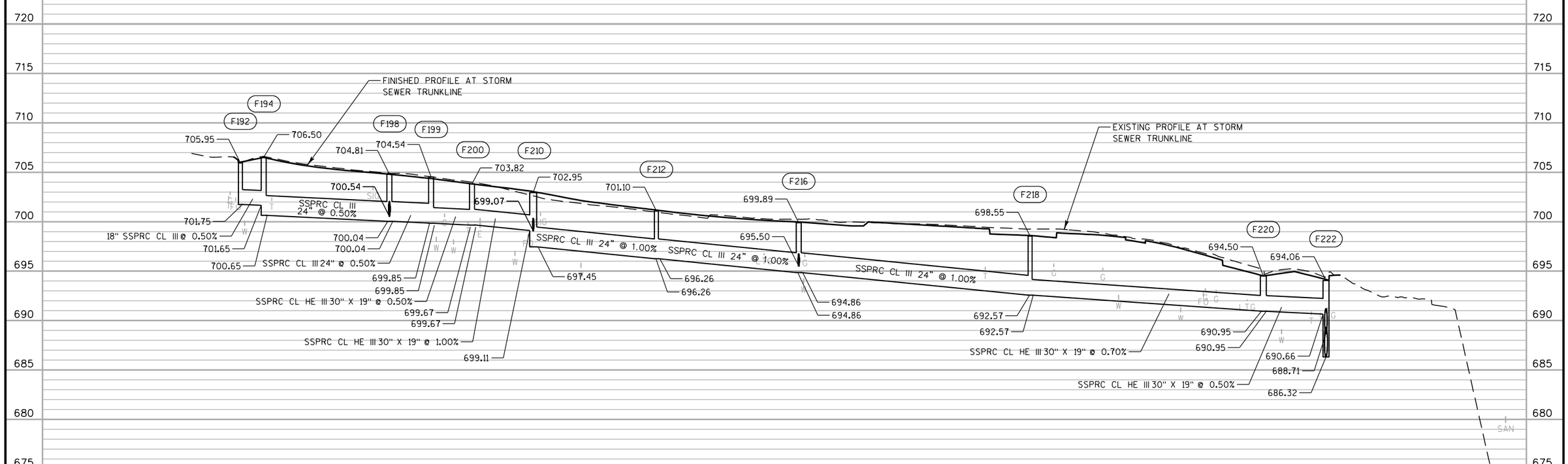
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PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STORM SEWER	SHEET E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\022503_ss.dgn PLOT DATE : 31-JAN-2013 05:13 PLOT BY : MSCD1S PLOT NAME : 022503_ss PLOT SCALE : 100:1

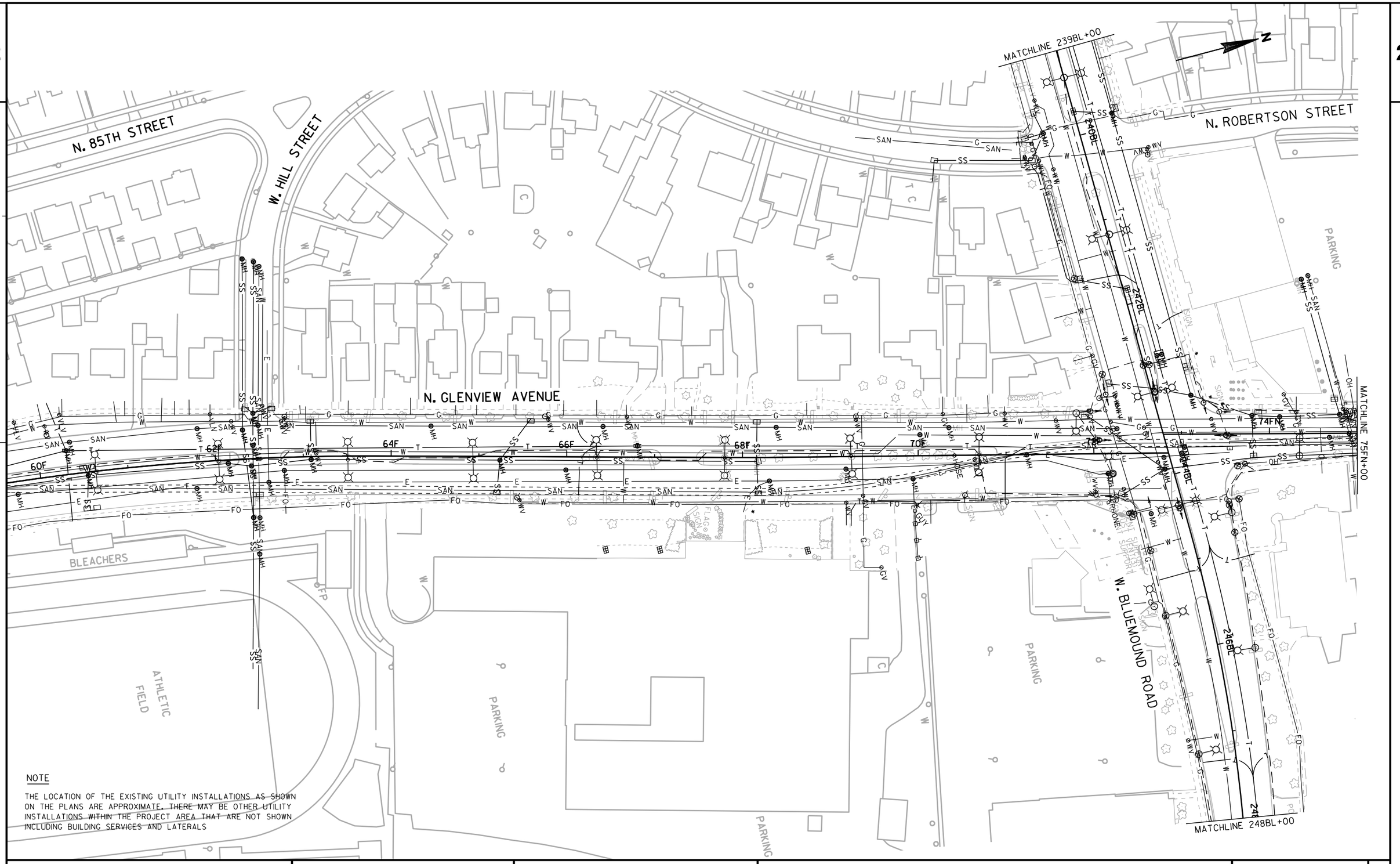




PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\022504_ss.dgn PLOT DATE : 31-JAN-2013 05:13 PLOT BY : MSCD1S PLOT NAME : 022504_ss PLOT SCALE : 100:1

2



NOTE

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

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	EXISTING UTILITY PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023001_up.dgn PLOT DATE : 01-NOV-2012 05:40 PLOT BY : MSCD1S PLOT NAME : 023001_up PLOT SCALE : 100:1

2

2

N. ROBERTSON STREET

N. ROBERTSON STREET

W. WISCONSIN AVENUE

N. GLENVIEW AVENUE

MATCHLINE 75FN+00

BROOKSIDE PLACE

ROCKWAY PLACE

PARKING

PARKING

PARKING

WALL

WALL

REC AREA

FP

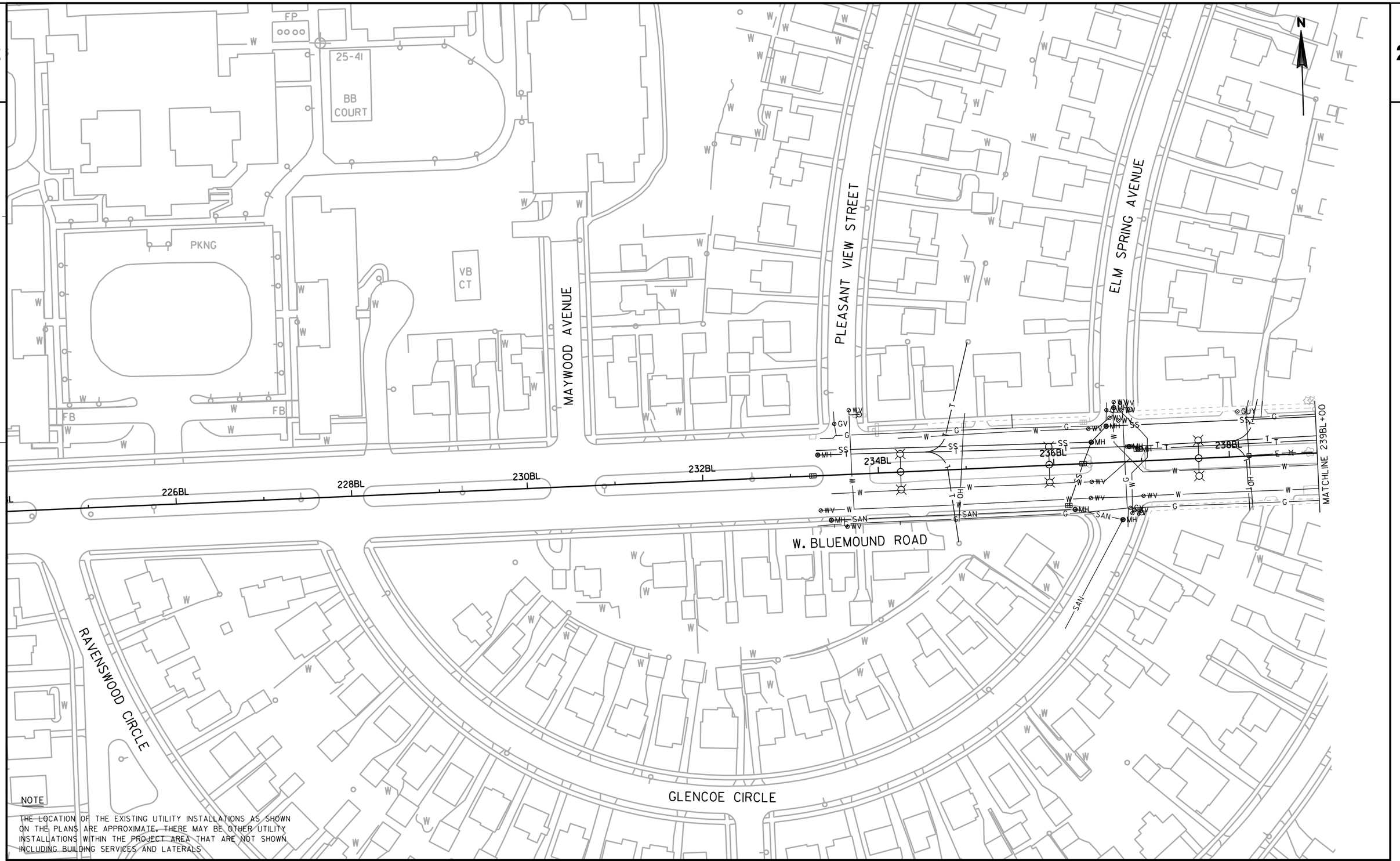
NOTE

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

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	EXISTING UTILITY PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023002_up.dgn PLOT DATE : 01-NOV-2012 05:41 PLOT BY : MSCD1S PLOT NAME : 023002_up PLOT SCALE : 100:1

2



NOTE

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PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	EXISTING UTILITY PLAN	SHEET	E

2

N

W. ST ANNE COURT

MATCHLINE 248BL+00

248BL

250BL

252BL

254BL

256BL

258BL

260BL

262BL

PARKING

FP

CONCRETE

PKNG

HONEY CREEK PARKWAY

HONEY CREEK PARKWAY

N. 79TH STREET

PARKING

PARKING

NOTE

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

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	EXISTING UTILITY PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023004_up.dgn PLOT DATE : 01-NOV-2012 05:41 PLOT BY : MSCD1S PLOT NAME : 023004_up PLOT SCALE : 100:1

STATE PROJECT NUMBER	SHEET NO.
1060-33-71	

ESTIMATE OF QUANTITIES

FOR BIDDING

FURNISH PIPE AND INSTALL

(DUCTILE IRON PUSH-ON RUBBER GASKET JOINT)

35 FT. - 8" WATER MAIN
17 FT. - 6" HYDRANT BRANCH

INSTALL

2 HYDRANTS
2 - 6" HYDRANT VALVE
1 - 8" VALVE
1 - R.S.B.
1 - R.C.S.

REMOVE

2 HYDRANT / MAJOR
8" VALVE

MATERIALS ON THIS CONSTRUCTION PLAN TO BE FURNISHED BY CITY

2 - H(7.0)
1 - ROADWAY SERVICE BOX
1 - SERVICE BOX
1 - 1" CURB STOP

GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF MILWAUKEE "WATER MAIN INSTALLATION SPECIFICATIONS", DATED JANUARY 2, 1987. ADDITIONALLY, ALL WORK SHALL BE DONE IN ACCORDANCE WITH "THE MILWAUKEE WATER WORKS STANDARD PLAN NOTES REGARDING WATER MAIN CONSTRUCTION", WHICH ARE ATTACHED AND MADE A PART OF THESE WATER MAIN PLANS AND CONTRACT DOCUMENTS. NOTES 4, 6, 16 THROUGH 18, AND 21 SHALL NOT APPLY TO THIS PROJECT.

THE CONTRACTOR SHALL FURNISH TEMPORARY TEST CAPS AND PLUGS, PIPE, FITTINGS AND ALL OTHER ITEMS REQUIRED TO COMPLETE THIS PROJECT, WITH THE EXCEPTION OF HYDRANTS, CURB STOPS AND SERVICE BOXES NOTED ON THE PLANS.

ALL VALVE BOXES SHALL BE INSTALLED ON GATE VALVES WITH THE USE OF VALVE BOX BASE ADAPTERS, "ADAPTOR II" AS MANUFACTURED BY ADAPTOR INC. OR AN APPROVED EQUAL.

THE ADAPTER SHALL BE INSTALLED IN ADDITION TO THE HARDWOOD BLOCKING.

ALL MATERIALS WILL REQUIRE INSPECTION BY THE CITY.

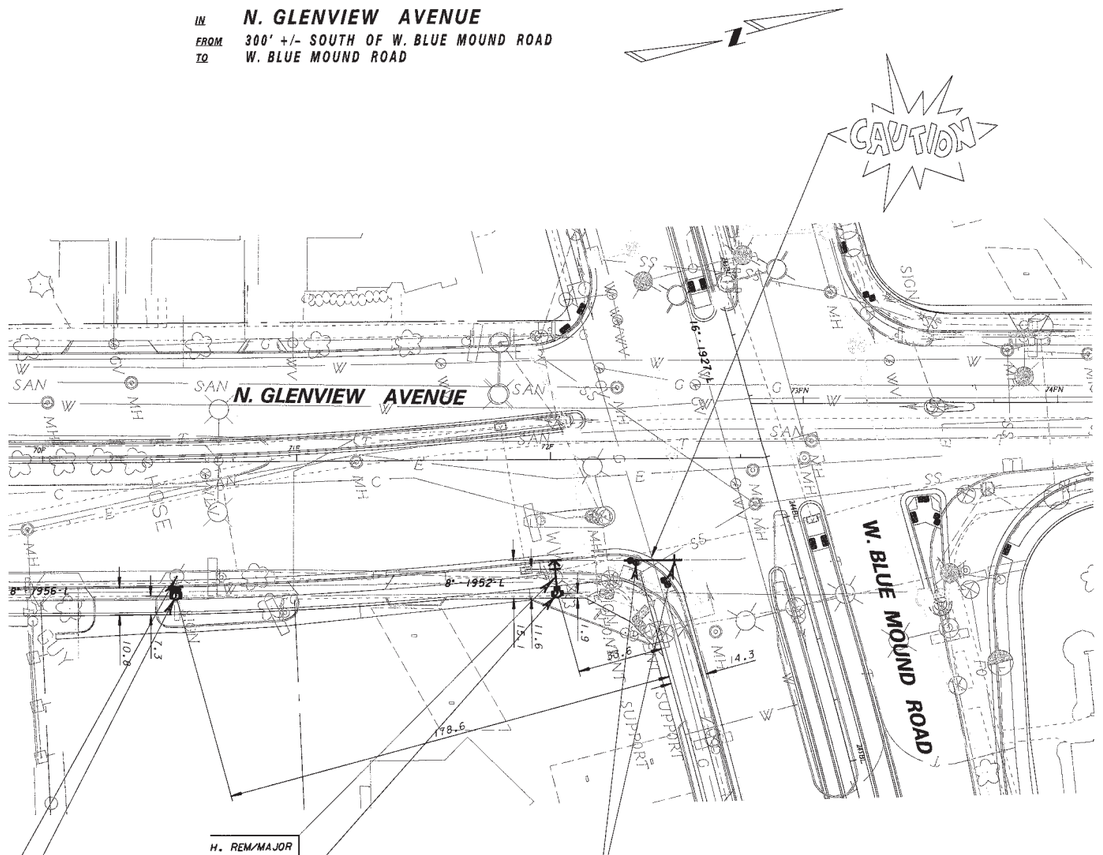
NOTIFY MR. STEVE BRENGOSZ AT 414-708-2808 OR MR. MARK SCHELLER AT 414-286-2427, FOR MATERIALS INSPECTION AND THE CITY OF MILWAUKEE'S CONSTRUCTION SECTION AT 414-286-2497, FOR INSTALLATION INSPECTION, FOUR DAYS PRIOR TO STARTING CONSTRUCTION.

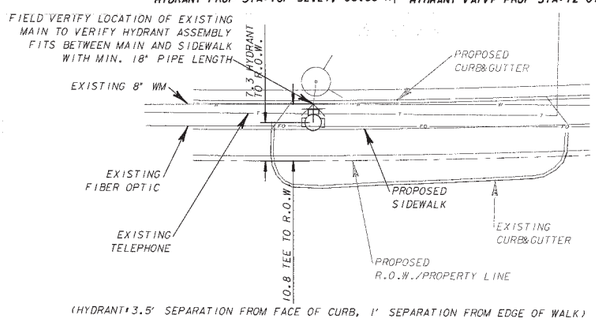
THE MILWAUKEE WATER WORKS WILL SHUT OFF THE WATER MAIN TO BE ALTERED AND PROVIDE TEMPORARY HOSE CONNECTIONS TO AFFECTED SERVICES AS REQUIRED.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENECED TO NGVD '88(2007). TO CONVERT TO CITY OF MILWAUKEE DATUM, SUBTRACT 580.29 FROM ELEVATIONS SHOWN.

THE CONTRACTOR SHALL RETURN ALL ABANDONED HYDRANTS TO THE DPW FIELD HEADQUARTERS - INFRASTRUCTURE, OPERATIONS, WATER WORKS.
CONTACT MR. BEN GLATZEL AT 414-708-2839 FOR ADDITIONAL INFORMATION.

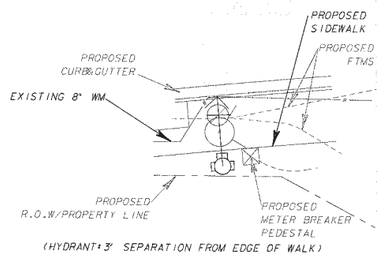
IN **N. GLENVIEW AVENUE**
FROM 300' +/- SOUTH OF W. BLUE MOUND ROAD
TO W. BLUE MOUND ROAD





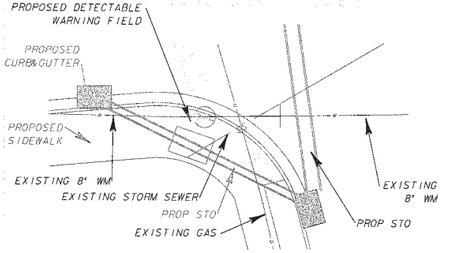
(HYDRANT=3.5' SEPARATION FROM FACE OF CURB, 1' SEPARATION FROM EDGE OF WALK)

STA:70F+52.24



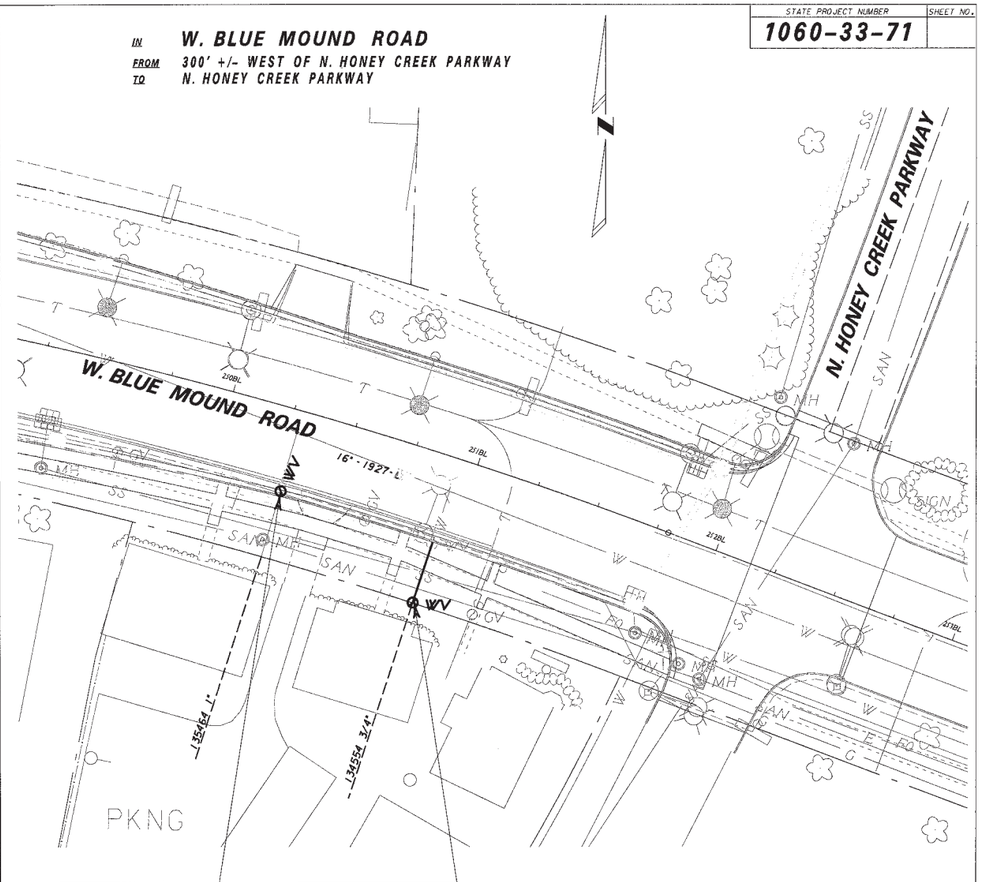
(HYDRANT=3' SEPARATION FROM EDGE OF WALK)

STA:72F+02.30



STA:72F+50

IN **W. BLUE MOUND ROAD**
FROM 300' +/- WEST OF N. HONEY CREEK PARKWAY
TO N. HONEY CREEK PARKWAY



WISCONSIN
GREGORY L. GOVERNATORI
E-36034
RACINE, WI
PROFESSIONAL ENGINEER
1/2/2013

PLAN LINE & UTILITY LEGEND

GAS ——— G	SANITARY SEWER ——— SAN	STREET LIGHTING
ELECTRIC ——— E	STORM SEWER ——— STO	CITY UNDERGROUND CONDUIT ——— CUC
TELEPHONE ——— T	COMBINED SEWER ——— CMB	PROPOSED CURB / PVMT
CABLE TELEVISION ——— TV	WATER MAIN ——— W	PAVING LIMITS
FIBER OPTICS ——— FO	WATER SERVICE	STRUCTURE / BUILDING
PROPOSED UTILITY	PRESSURE DISTRICT	FENCE ——— x

POWER POLES ○-CONCRETE ○-ALUMINUM ⊗-WOOD
WATER MAIN VALVES —|— GATE —|— BUTTERFLY ○W-SERVICE
UTILITIES ▣-TRAFFIC SIGNAL ▣-TRAFFIC CONTROL BOX ○G-GAS VALVE
HYDRANTS ⊖-1 NOZZLE ⊖-3 NOZZLE

CALL DIGGERS HOTLINE
1-800-242-6511
TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND BEFORE YOU DIG. WISCONSIN STATUTE 182.0175 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
7711 N. PORT WASHINGTON ROAD
MILWAUKEE, WISCONSIN 53217
Phone: 414.351.6668 Fax: 414.351.4117
www.kapurengineers.com

NO.	BY	REVISION	DATE
1			
2			
3			

Milwaukee Water Works — **Water Engineering**
Department of Public Works

WATER MAIN

IN **N. GLENVIEW AVENUE**
FROM 300' +/- SOUTH OF W. BLUE MOUND ROAD
TO W. BLUE MOUND ROAD

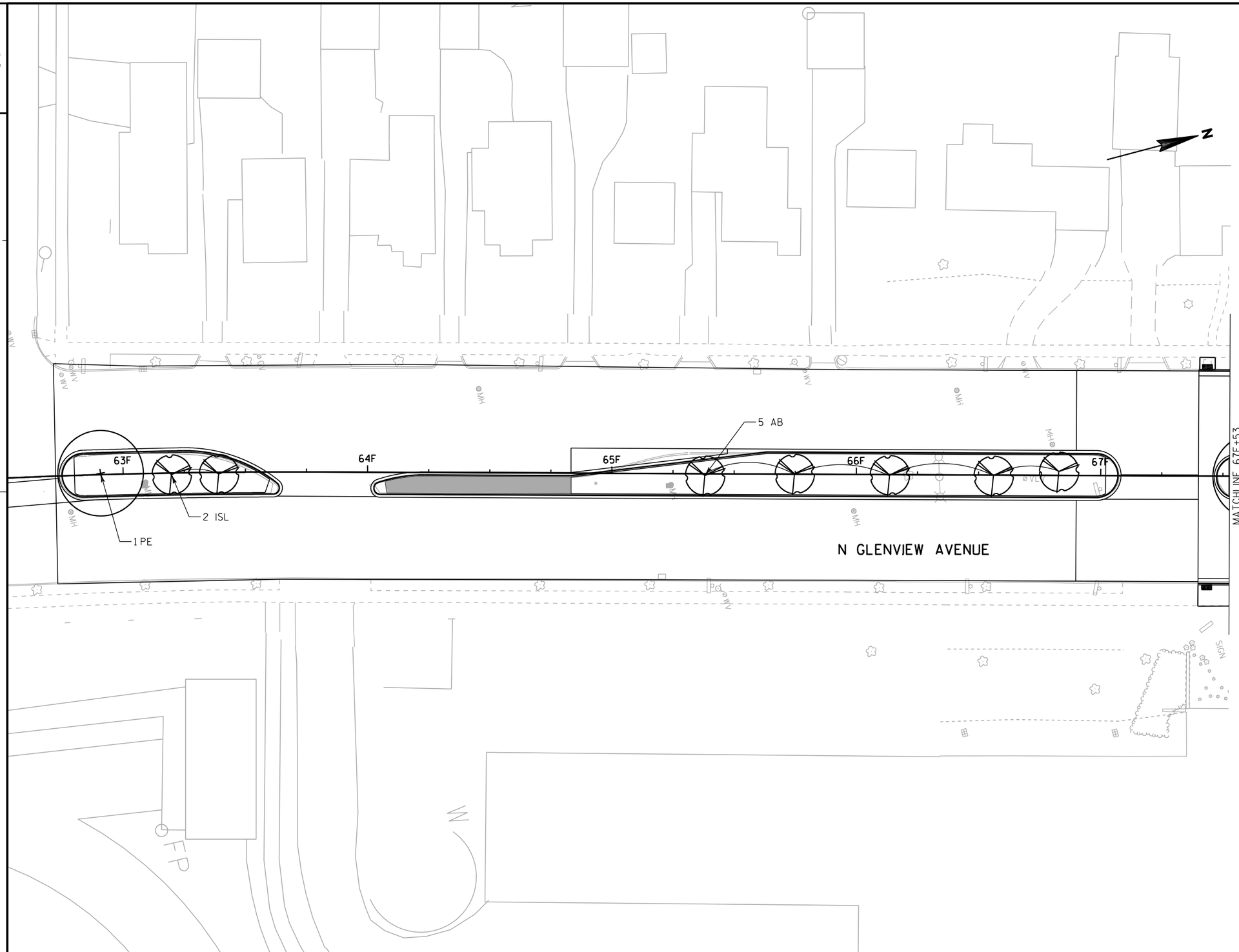
IN **W. BLUE MOUND ROAD**
FROM 300' +/- WEST OF N. HONEY CREEK PARKWAY
TO N. HONEY CREEK PARKWAY

		APPROVED	DATE
SCALE	1"=30'		
1/4 SEC. NO.	407		1-2-13 MAINS DESIGN ENGINEER
PLAN DATE	1/2/13		1-2-13 CHIEF DESIGN ENGINEER
DRAWN BY	B. JORS		1/2/13 SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS
CHECKED BY	G. GOVERNATORI		
SURVEY BY	FORWARD 45		

PROGRAM NO.	2013-501	CONTRACT NO. STATE	C.C. FILE NO.
WORK ORDER	WT4101305O1	O.M. & PROJECT NO. STATE	DATE ADOPTED

SHEET NO. 1 OF 1 PLAN FILE NO. 2013007

2



PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	G	GINKGO, MALE ONLY
	CH	HACKBERRY, COMMON
	CPO	OAK, CRIMSON SPIRE
DECIDUOUS TREES (ORNAMENTAL)		
	BA	ALDER, BLACK
	CC	CRABAPPLE, CAMELOT
	LC	CRABAPPLE, LANCELOT
	ISL	LILAC, IVORY SILK
	AB	PEAR, AUTUMN BLAZE
PERENNIALS, GRASSES & GROUNDCOVERS		
○	PPC	CORAL BELLS, PALACE PURPLE
⊙	KFG	GRASS, KARL FOERSTER REED
	AJS	SEDUM, AUTUMN JOY

LEGEND

EXISTING TREE

CONCRETE SIDEWALK
SPECIAL 5 - INCH

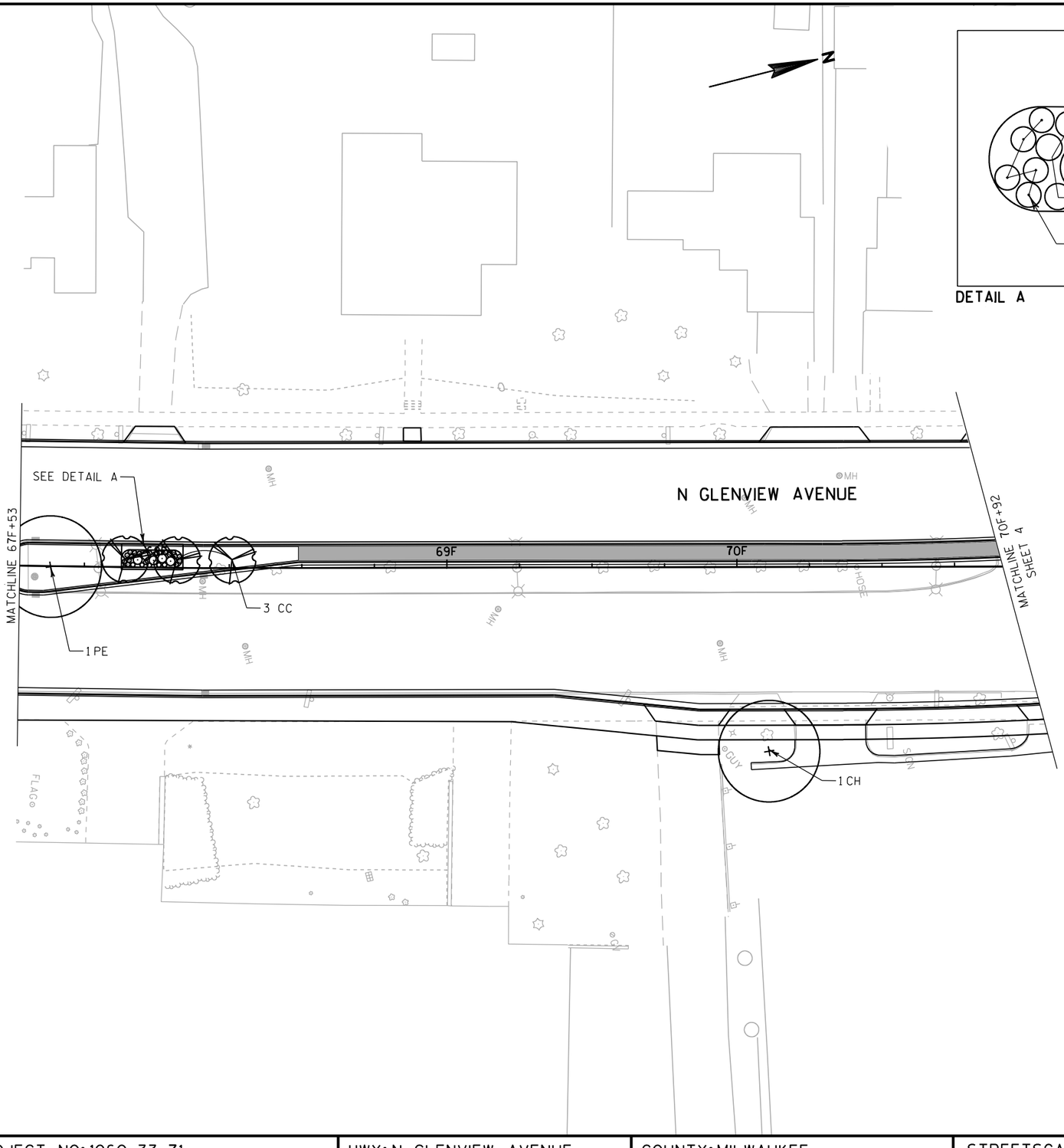
LIGHT POLE, ARM MOUNT
LUMINAIRE

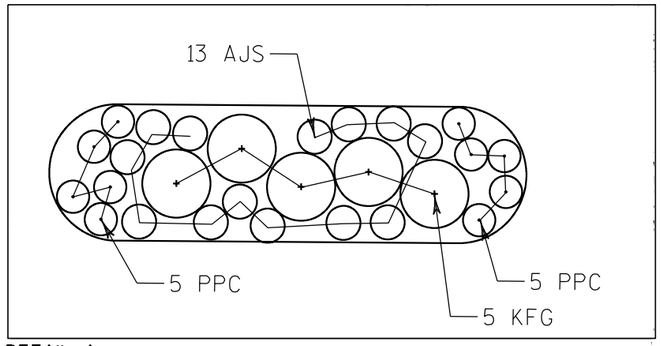
NOTE:
1. ADJUST PLANTING LOCATION MIN. 2'-0" LATERAL CLEARANCE FROM ALL MARKED UTILITY LINES AND FACE OF CURB
2. MULCH IS INCIDENTAL TO TREE PLANTING, SEE PLANT DATA CHART
3. CONTRACTOR SHALL MARK PLANT LOCATIONS. PLANTINGS SHALL NOT PROCEED WITHOUT APPROVAL OF THE ENGINEER.

SHEET 1 OF 7

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023101_p1.dgn PLOT DATE : 01-NOV-2012 05:42 PLOT BY : MSCD1S PLOT NAME : PLOT SCALE : 40:1





DETAIL A

PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	G	GINKGO, MALE ONLY
	CH	HACKBERRY, COMMON
	CPO	OAK, CRIMSON SPIRE
DECIDUOUS TREES (ORNAMENTAL)		
	BA	ALDER, BLACK
	CC	CRABAPPLE, CAMELOT
	LC	CRABAPPLE, LANCELOT
	ISL	LILAC, IVORY SILK
	AB	PEAR, AUTUMN BLAZE
PERENNIALS, GRASSES & GROUNDCOVERS		
○	PPC	CORAL BELLS, PALACE PURPLE
⊙	KFG	GRASS, KARL FOERSTER REED
	AJS	SEDUM, AUTUMN JOY

LEGEND

EXISTING TREE

CONCRETE SIDEWALK
SPECIAL 5 - INCH

LIGHT POLE, ARM MOUNT
LUMINAIRE

NOTE:
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SHEET 2 OF 7

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E

2

ELM SPRING AVE

N

SEE DETAIL B

1 CPO

1 CPO

EXISTING ANNUAL BED

EXISTING TREE TO REMAIN

235BL

236BL

237BL

238BL

239BL

MATCHLINE 239BL+46

1 G

W. BLUEMOUND ROAD

GLENCOE CIR

RAVENSWOOD CIR

9 AJS

5 PPC

4 AJS

5 KFG

5 PPC

DETAIL B

PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	G	GINKGO, MALE ONLY
	CH	HACKBERRY, COMMON
	CPO	OAK, CRIMSON SPIRE
DECIDUOUS TREES (ORNAMENTAL)		
	BA	ALDER, BLACK
	CC	CRABAPPLE, CAMELOT
	LC	CRABAPPLE, LANCELOT
	ISL	LILAC, IVORY SILK
	AB	PEAR, AUTUMN BLAZE
PERENNIALS, GRASSES & GROUNDCOVERS		
○	PPC	CORAL BELLS, PALACE PURPLE
⊙	KFG	GRASS, KARL FOERSTER REED
	AJS	SEDUM, AUTUMN JOY

LEGEND

EXISTING TREE

CONCRETE SIDEWALK SPECIAL 5 - INCH

LIGHT POLE, ARM MOUNT LUMINAIRE

NOTE:

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SHEET 3 OF 7

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E

MATCHLINE 74FN+69 TO 80FN+91 NORTH

N

N GLENVIEW AVE

74FN

73FN

72F

71F

RAMP

RAMP

SIGN

SIGN

RELOCATED ANNUAL BED

4 LC

240BL

241BL

242BL

243BL

244BL

MATCHLINE 239BL+46

MATCHLINE 244BL+26

COLORED CROSSWALK, TYPICAL

W. BLUEMOUND ROAD

RAVENSWOOD CIR

MATCHLINE 70F+92
SHEET 2

PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	G	GINKGO, MALE ONLY
	CH	HACKBERRY, COMMON
	CPO	OAK, CRIMSON SPIRE
DECIDUOUS TREES (ORNAMENTAL)		
	BA	ALDER, BLACK
	CC	CRABAPPLE, CAMELOT
	LC	CRABAPPLE, LANCELOT
	ISL	LILAC, IVORY SILK
	AB	PEAR, AUTUMN BLAZE
PERENNIALS, GRASSES & GROUNDCOVERS		
○	PPC	CORAL BELLS, PALACE PURPLE
⊙	KFG	GRASS, KARL FOERSTER REED
	AJS	SEDUM, AUTUMN JOY

LEGEND

EXISTING TREE

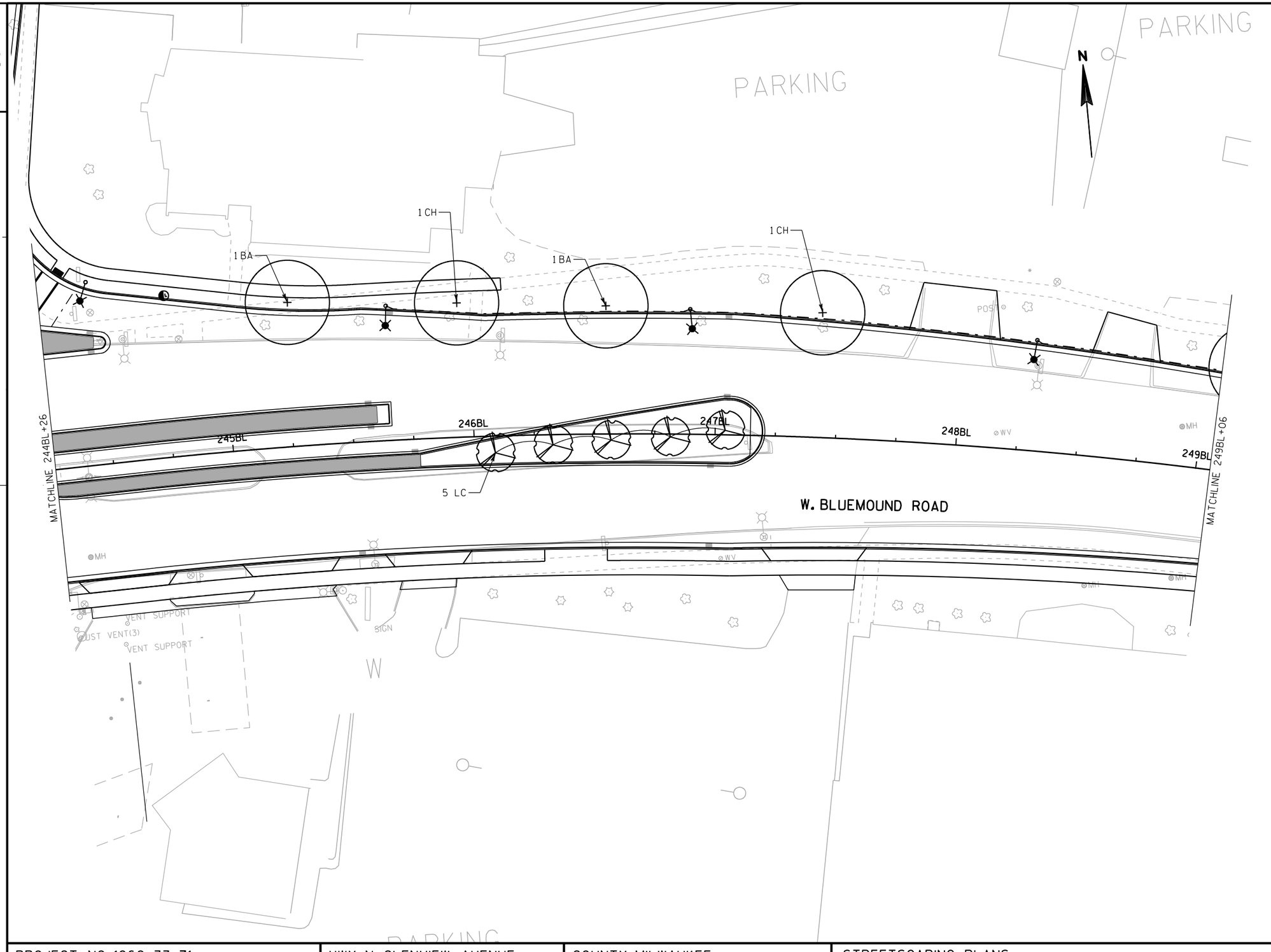
CONCRETE SIDEWALK
SPECIAL 5 - INCH

LIGHT POLE, ARM MOUNT
LUMINAIRE

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SHEET 4 OF 7

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E



PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	G	GINKGO, MALE ONLY
	CH	HACKBERRY, COMMON
	CPO	OAK, CRIMSON SPIRE
DECIDUOUS TREES (ORNAMENTAL)		
	BA	ALDER, BLACK
	CC	CRABAPPLE, CAMELOT
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	ISL	LILAC, IVORY SILK
	AB	PEAR, AUTUMN BLAZE
PERENNIALS, GRASSES & GROUNDCOVERS		
○	PPC	CORAL BELLS, PALACE PURPLE
○	KFG	GRASS, KARL FOERSTER REED
⊙	AJS	SEDUM, AUTUMN JOY

LEGEND

EXISTING TREE

CONCRETE SIDEWALK
SPECIAL 5 - INCH

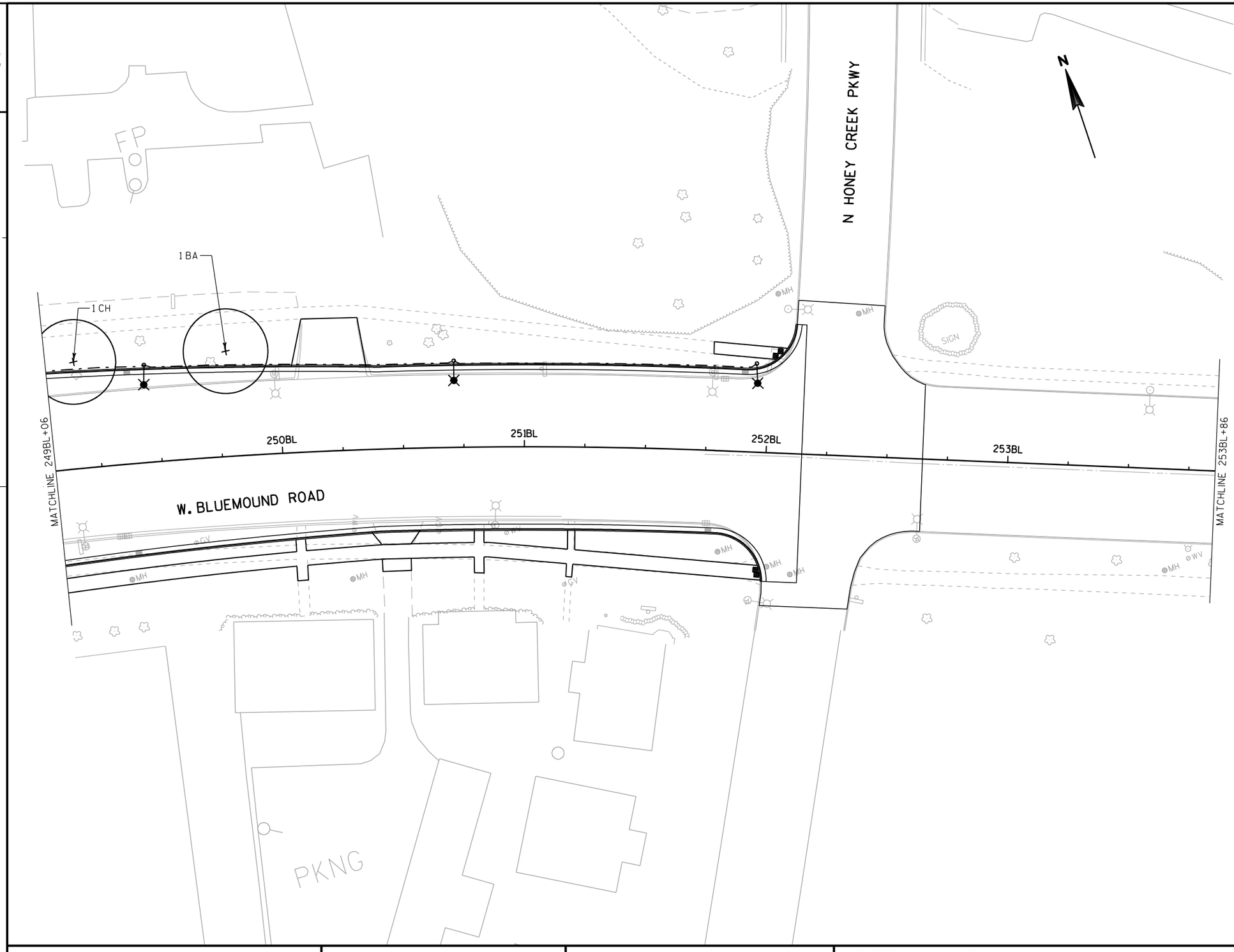
LIGHT POLE, ARM MOUNT
LUMINAIRE

NOTE:
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SHEET 5 OF 7

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023105_pl.dgn PLOT DATE : 01-NOV-2012 05:43 PLOT BY : MSCD1S PLOT NAME : PLOT SCALE : 40:1



PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	G	GINKGO, MALE ONLY
	CH	HACKBERRY, COMMON
	CPO	OAK, CRIMSON SPIRE
DECIDUOUS TREES (ORNAMENTAL)		
	BA	ALDER, BLACK
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	LC	CRABAPPLE, LANCELOT
	ISL	LILAC, IVORY SILK
	AB	PEAR, AUTUMN BLAZE
PERENNIALS, GRASSES & GROUNDCOVERS		
○	PPC	CORAL BELLS, PALACE PURPLE
⊙	KFG	GRASS, KARL FOERSTER REED
	AJS	SEDUM, AUTUMN JOY

LEGEND

EXISTING TREE

CONCRETE SIDEWALK
SPECIAL 5 - INCH

LIGHT POLE, ARM MOUNT
LUMINAIRE

NOTE:
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SHEET 6 OF 7

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E

2

N

84FN

83FN

82FN

81FN

308WX 309WX 310WX 311WX 312WX

COLORED CROSSWALK, TYPICAL

3 G

W. WISCONSIN AVENUE

N GLENVIEW AVENUE

MATCHLINE 80FN+91 TO 74FN+69 SOUTH

PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS TREES (SHADE)		
+	PE	ELM, PROSPECTOR
	G	GINKGO, MALE ONLY
	CH	HACKBERRY, COMMON
	CPO	OAK, CRIMSON SPIRE
DECIDUOUS TREES (ORNAMENTAL)		
	BA	ALDER, BLACK
	CC	CRABAPPLE, CAMELOT
	LC	CRABAPPLE, LANCELOT
	ISL	LILAC, IVORY SILK
	AB	PEAR, AUTUMN BLAZE
PERENNIALS, GRASSES & GROUNDCOVERS		
○	PPC	CORAL BELLS, PALACE PURPLE
⊙	KFG	GRASS, KARL FOERSTER REED
	AJS	SEDUM, AUTUMN JOY

LEGEND

EXISTING TREE

CONCRETE SIDEWALK
SPECIAL 5 - INCH

LIGHT POLE, ARM MOUNT
LUMINAIRE

NOTE:
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SHEET 7 OF 7

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STREETSCAPING PLANS	SHEET	E

SYM.	COMMON NAME	SCIENTIFIC NAME	AVE. MATURE HEIGHT	SIZE WHEN PLANTED	ROOT ZONE MODE	MINIMUM BALL OR POT SIZE		MINIMUM HOLE SIZE		BRACE OR GUY	FERT. UNITS REQ'D	RODENT PROT'CT REQ'D	MULCH RING DIAM.
						DIAM.	DEPTH	DIAM.	DEPTH				
	DECIDUOUS TREES (SHADE)												
PE	Elm, Prospector	Ulmus carpinifolia 'Prospector'	50'	2 1/2" CAL	B&B	28"	17"	52"	17"	GUY	4	NO	64"
G	Ginkgo - male only	Ginkgo biloba	60'	2 1/2" CAL	B&B	28"	17"	52"	17"	GUY	4	NO	64"
CH	Hackberry, Common	Celtis occidentalis	50'	2 1/2" CAL	B&B	28"	17"	52"	17"	GUY	4	NO	64"
CPO	Oak, Crimson Spire	Quercus robur x Quercus alba 'Crimschmidt	45'	2 1/2" CAL	B&B	28"	17"	52"	17"	GUY	4	NO	64"
	DECIDUOUS TREES (ORNAMENTAL)												
BA	Alder, Black	Alnus glutinosa	30'	2" CAL	B&B	24"	14"	48"	14"	BRACE	3	YES	60"
CC	Crabapple,Camelot	Malus 'Camzam'	10'	2" CAL	B&B	24"	14"	48"	14"	BRACE	3	YES	60"
LC	Crabapple, Lancelot	Malus 'Lanzam'	10'	2" CAL	B&B	24"	14"	48"	14"	BRACE	3	YES	60"
ISL	Lilac, Ivory Silk Tree	Syringa reticulata 'Ivory Silk'	20'	2" CAL	B&B	24"	14"	48"	14"	BRACE	3	YES	60"
AB	Pear, Autumn Blaze	Pyrus calleryana 'Autumn Blaze'	20'	2" CAL	B&B	24"	14"	48"	14"	BRACE	3	YES	60"
	PERENNIALS, GRASSES & GROUNDCOVERS												
PPC	Coral Bells, Palace Purple	Heuchera micrantha 'Palace Purple'	18"	6"	Cont.	9"	6"	18"	6"	n/a	n/a	NO	NONE
KFG	Grass, Karl Foerster Reed	Calamagrostis x acutiflora 'Karl Foerster'	4'	6"	Cont.	9"	6"	18"	6"	n/a	n/a	NO	NONE
AJS	Sedum, Autumn Joy	Sedum 'Autumn Joy'	2'	6"	Cont.	9"	6"	18"	6"	n/a	n/a	NO	NONE

2

2

W. HILL STREET

N. GLENVIEW AVENUE

62F 63F 64F 65F 66F 67F 68F

MATCHLINE 68F+10

STOP ESTR 102

BUS STOP ESTR 104

ESTR 105

107 ESTR

110 REMOVE SPEED LIMIT 30

112 ESTR

115 ESTR

116 REMOVE

118 REMOVE

114 REMOVE

BUS STOP ESTR 101

ESTR 103

JCT 18 REMOVE 106

ESTR 108

ESTR 109

REMOVE 111

WEST 18 EAST 18 REMOVE 113

NO STOPPING 7AM TO 9AM 2PM TO 4PM NO PARKING ANY TIME REMOVE 117

FLAG

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023201_es.dgn PLOT DATE : 01-NOV-2012 05:44 PLOT BY : MSCD1S PLOT NAME : 023201_es PLOT SCALE : 40:1

2

MATCHLINE 68F+10

69F

70F

71F

72F

73FN

74FN

MATCHLINE 74FN+10

N. GLENVIEW AVENUE

W. BLUEMOUND ROAD

MATCHLINE 242BL+25

243BL

244BL

245BL

MATCHLINE 245BL+50

119 REMOVE

121 REMOVE

Wisconsin Lutheran College

123 REMOVE

125 REMOVE

WEST 18 EAST 18

MOVE

128 REMOVE

SCHOOL SPEED LIMIT 20

129 REMOVE

130 REMOVE

PUSH BUTTON FOR WALK SIGNAL

131 REMOVE

BUS STOP

132 REMOVE

PUSH BUTTON FOR WALK SIGNAL

133 REMOVE

EAST 18

CITY OF MILWAUKEE NO PARKING 2 AM TO 6 AM

MOVE

134 REMOVE

135 REMOVE

TO INTERSTATE 94 NORTH SOUTH 181 181

136 MOVE

BUS STOP

PUSH BUTTON FOR WALK SIGNAL

REMOVE

137 REMOVE

EAST 18 WEST 18

138 REMOVE

PUSH BUTTON FOR WALK SIGNAL

NORTH 181

HELP WAUWATOSA RECYCLE 471-8422

MOVE

BUS STOP

MOVE

139 REMOVE

120 REMOVE

BUS STOP

NO STOPPING NO PARKING ANY TIME

ESTR 122

END SCHOOL ZONE

124 REMOVE

SPEED LIMIT 30

126 REMOVE

127 REMOVE

GUY

VENT(S)

VENT SUPPORT

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

(XXX) DENOTES SIGN NUMBER

ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023202_es.dgn PLOT DATE : 01-NOV-2012 05:44 PLOT BY : MSCD1S PLOT NAME : 023202_es PLOT SCALE : 40:1

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

(XXX) DENOTES SIGN NUMBER

ESTR EXISTING SIGN TO REMAIN

N

142 REMOVE

144 REMOVE

149 REMOVE

150 REMOVE

JCT 18 MOVE

GUY

MATCHLINE 74FN+10

75FN

76FN

77FN

78FN

79FN

80FN

MATCHLINE 80FN+10

N. GLENVIEW AVENUE

NORTH 181 Wauwatosa POPULATION 47,271 MOVE

WARNING MOVE

140 REMOVE

SPEED LIMIT 30 141 REMOVE

143 REMOVE

NO THRU STREET 145 REMOVE

ROCKWAY PLACE

STOP 146 REMOVE

WAUWATOSA RECYCLE FOR INFO CALL 471-8422

147 REMOVE

148 REMOVE

151 REMOVE

NO THRU STREET 152 REMOVE

BROOKSIDE PLACE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023203_es.dgn PLOT DATE : 01-NOV-2012 05:44 PLOT BY : MSCD1S PLOT NAME : 023203_es PLOT SCALE : 40:1

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

(XXX) DENOTES SIGN NUMBER

ESTR EXISTING SIGN TO REMAIN

N

MATCHLINE 309WX+50

W. WISCONSIN AVENUE

310WX

311WX

312WX

N. GLENVIEW AVENUE

81FN

82FN

83FN

84FN

85FN

86FN

MATCHLINE 80FN+10

MATCHLINE 313WX+31

MATCHLINE 312WX+50

158b REMOVE — BUS STOP, STOP

SOUTH 181, R, P 2 HR PARKING — REMOVE 156

NO TURN ON RED WHEN CHILDREN ARE PRESENT — REMOVE 158a

SPEED LIMIT 30 — REMOVE 162

FLAG

OMP

165 REMOVE — BUS STOP, STOP

163 REMOVE — NO TURN ON RED WHEN CHILDREN ARE PRESENT

168 REMOVE — R, ANYTIME

170 REMOVE — R, ANYTIME; R, 7AM - 9PM OR SUNDAYS

STOP — REMOVE 153

SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT — REMOVE 154

H HOSPITAL; R, 7AM - 9PM EXCEPT SAT SUN HOL; P 2 HR PARKING 9AM - 3PM EXCEPT SAT-SUN HOLIDAYS — REMOVE 155

R, BUS STOP — REMOVE 157

BUS STOP, STOP — REMOVE 159

NO TURN ON RED WHEN CHILDREN ARE PRESENT — REMOVE 160

REMOVE 161

NO TURN ON RED WHEN CHILDREN ARE PRESENT — REMOVE 166

164 REMOVE — R, BUS STOP

BUS STOP, STOP — REMOVE 167

R, 7AM - 9PM OR SUNDAYS — REMOVE 169

SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT — REMOVE 171

SCHOOL SPEED LIMIT 20 WHEN FLASHING — ON OVERHEAD ESTR 172

SIGN SUPPORT ESTR 173

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET	E

2

2

N

AVON COURT

177c
ESTR

178
ESTR

SCHOOL
SPEED LIMIT
20
WHEN CHILDREN ARE PRESENT

MATCHLINE 313WX+31

87FN 88FN 89FN 90FN 91FN

N. GLENVIEW AVENUE

OH OH OH HO HO OH OH

ONE WAY
ESTR
174

ONE WAY
ESTR
175

DO NOT ENTER
ESTR
176

ESTR
177a

STOP
ESTR
177b

SCHOOL
SPEED LIMIT
20
WHEN CHILDREN ARE PRESENT
ESTR
179

ELECTRONIC SIGN

LOCAL STREET SIGN

REC AREA

PA

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023205_es.dgn PLOT DATE : 01-NOV-2012 05:44 PLOT BY : MSCD1S PLOT NAME : 023205_es PLOT SCALE : 40:1

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

XXX DENOTES SIGN NUMBER

ESTR EXISTING SIGN TO REMAIN

PLEASANT VIEW STREET

N

187
ESTR

231BL 232BL 233BL 234BL 235BL 236BL

MATCHLINE 236BL+50

SPEED LIMIT 30 RADAR ENFORCED
ESTR
186

W. BLUEMOUND ROAD

SPEED LIMIT 30
ESTR
185

ESTR
188

GLENCOE CIRCLE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023206_es.dgn PLOT DATE : 01-NOV-2012 05:45 PLOT BY : MSCD1S PLOT NAME : 023206_es PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

N

ELM SPRING AVENUE

N. ROBERTSON AVENUE

W. BLUEMOUND ROAD

RAVENSWOOD CIRCLE

MATCHLINE 236BL+50

MATCHLINE 242BL+25

237BL 238BL 239BL 240BL 241BL 242BL

185 ESTR STOP

192 REMOVE SPEED LIMIT 30

191 REMOVE SPEED LIMIT 30

194 REMOVE JCT 181

196 REMOVE DO NOT BLOCK INTERSECTION

201 REMOVE BUS STOP

199 ESTR

202 REMOVE TO INTERSTATE 94 NORTH SOUTH 181 181

204 REMOVE

203 REMOVE WEST 18

REMOVE 190

ESTR 188

ESTR 189

REMOVE 193

MOVE 195

REMOVE 198 STOP

REMOVE 197

REMOVE 200

REMOVE NO PARKING ANY TIME 205

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023207_es.dgn PLOT DATE : 01-NOV-2012 05:45 PLOT BY : MSCD1S PLOT NAME : 023207_es PLOT SCALE : 40:1

2

PARKING

206
REMOVE
TO
INTERSTATE
94

208
REMOVE

210
REMOVE
SOUTH NORTH
181 181

212
REMOVE

246BL
247BL
248BL
249BL
250BL
25

MATCHLINE 245BL+50

MATCHLINE 251BL+00

W. BLUEMOUND ROAD

BUS STOP
REMOVE
207

NO ENGINE BRAKING EXCEPT IN EMERGENCY
REMOVE
209

REMOVE
211

PKNG

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

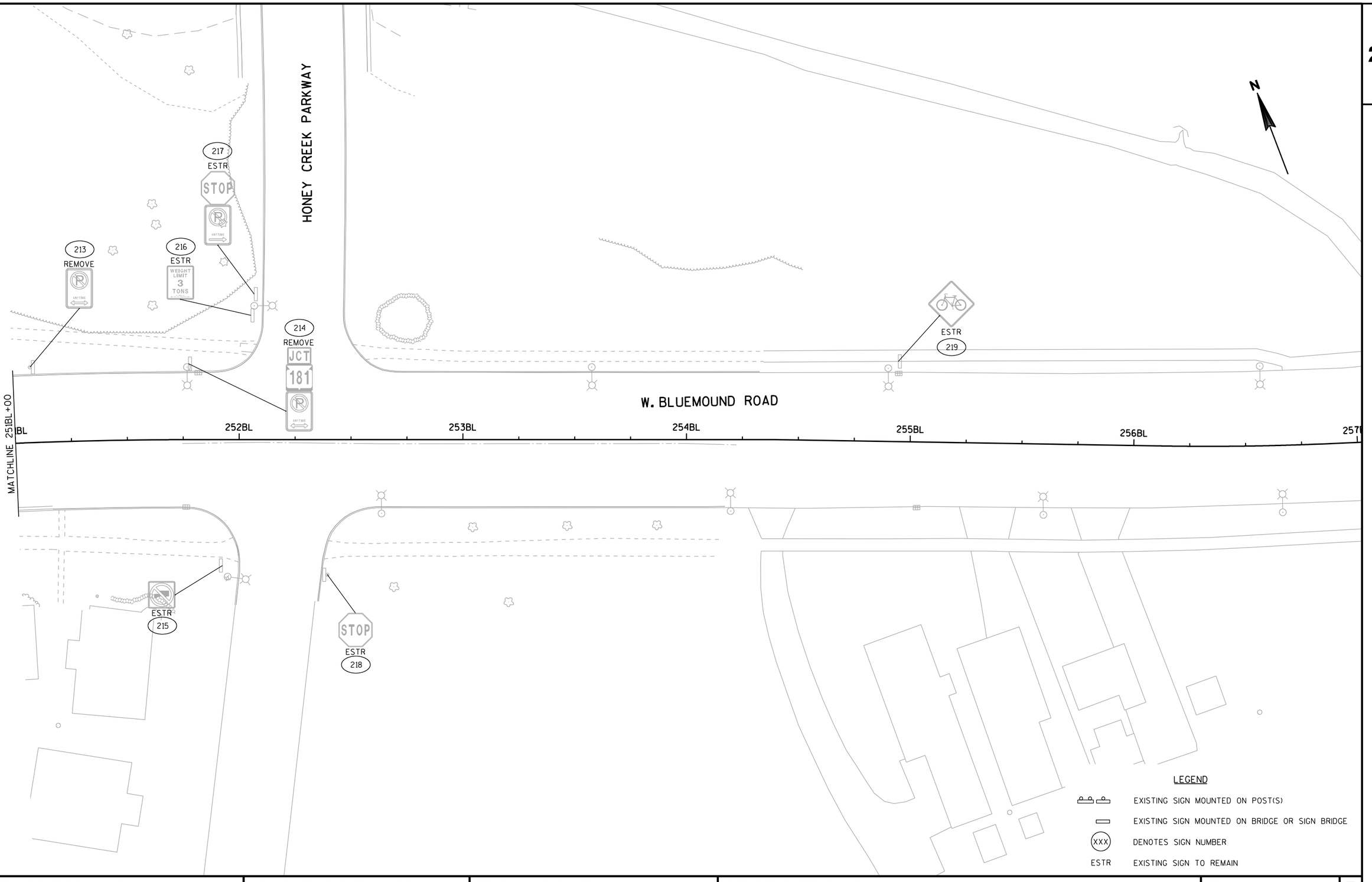
XXX DENOTES SIGN NUMBER

ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023208_es.dgn PLOT DATE : 01-NOV-2012 05:45 PLOT BY : MSCD1S PLOT NAME : 023208_es PLOT SCALE : 40:1

2



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023209_es.dgn PLOT DATE : 01-NOV-2012 05:45 PLOT BY : MSCD1S PLOT NAME : 023209_es PLOT SCALE : 40:1

2

WINDSOR COURT

N. ROBERTSON AVENUE

STOP
ESTR
181

ESTR
182

304WX 305WX 306WX 307WX 308WX 309WX

MATCHLINE 309WX+50

W. WISCONSIN AVENUE

N. ROBERTSON AVENUE

STOP
ESTR
180

SCHOOL
SPEED
LIMIT
20
ESTR
183

FLAG

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET	E

2

2

N

184

REMOVE

SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT

313WX

314WX

315WX

316WX

317WX

318WX

MATCHLINE 312WX+50

W. WISCONSIN AVENUE

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

(XXX) DENOTES SIGN NUMBER

ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023211_es.dgn PLOT DATE : 01-NOV-2012 12:17 PLOT BY : MSCDYB PLOT NAME : 023211_es PLOT SCALE : 40:1

2

W. HILL STREET

N. GLENVIEW AVENUE

STOP
ESTR

BUS STOP
ESTR

ESTR

ESTR

ESTR
P 2 HR PARKING 8AM - 6PM EXCEPT SUN - HOL

ESTR
ANYTIME
P 2 HR PARKING 8AM - 6PM EXCEPT SUN - HOL

1112
NO PARKING ANY TIME
R7-1D(2S)

1257
S1-1(2S)
WF16-7L(2S)

R4-7(2S)
1101

R4-7(2S)
1102

R4-7(2S)
1103

R4-7(2S)
1105

1111

62F
63F
64F
65F
66F
67F
68F

MATCHLINE 68F+10

BUS STOP
ESTR

SCHOOL DAYS 7AM TO 4PM
ESTR

JCT 18
J1-1(2S)
1104

SCHOOL DAYS 7AM TO 4PM
ESTR

NO STOPPING 7:30AM TO 9:00AM 3:00PM TO 6:00PM
NO PARKING ANY TIME
ESTR

S1-1(2S)
WF16-7R(2S)
1106

S1-1(2S)
WF16-7L(2S)
1115

R4-7(2S)
1107

LEFT TURN LANE
R3-55L(2S)
1110

WEST 18
EAST 18
J2-2(2S)
1108

NO PARKING ANY TIME
R7-1L(2S)
1109

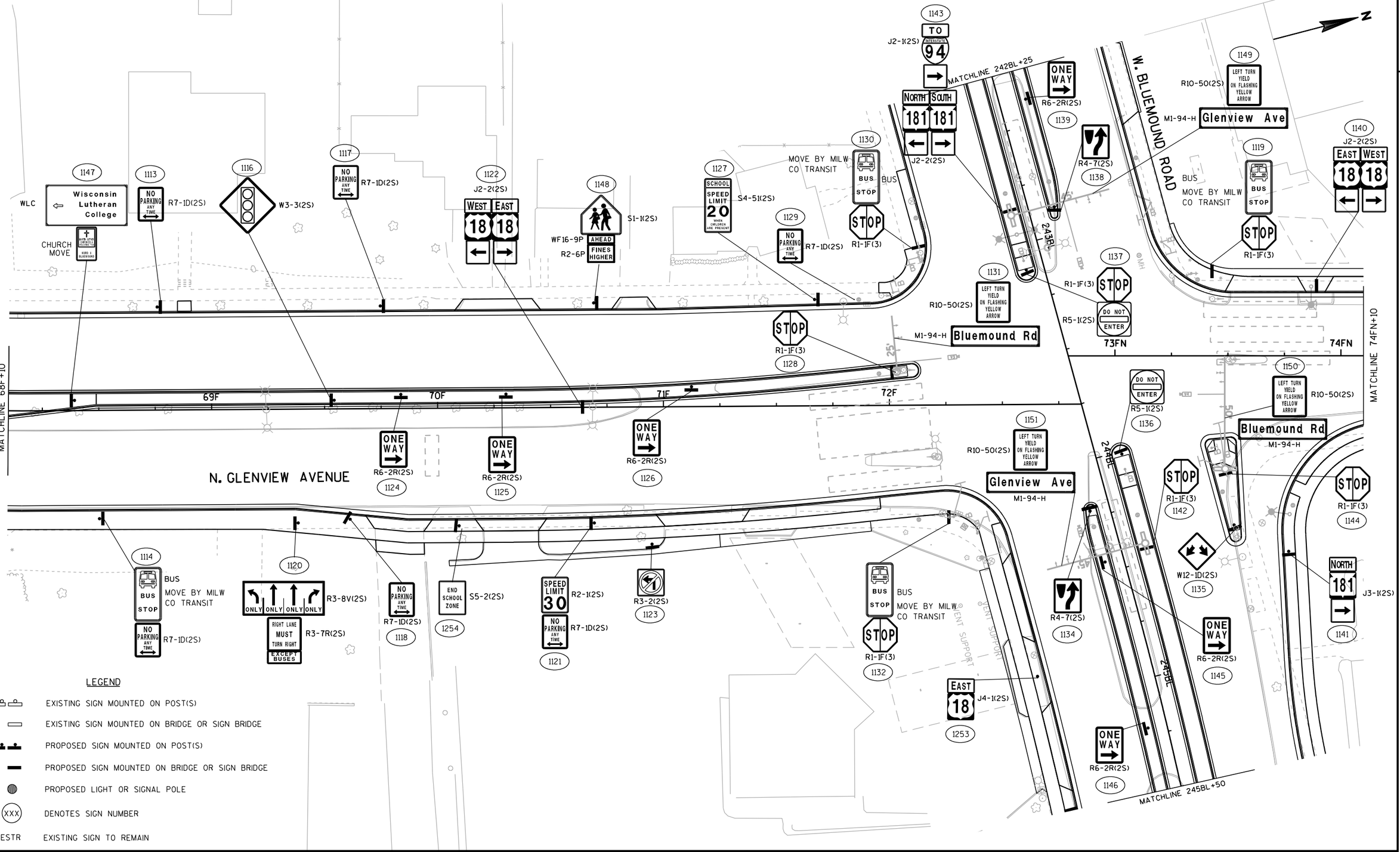
FLAG

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
- PROPOSED LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023221_ps.dgn PLOT DATE : 01-NOV-2012 05:46 PLOT BY : MSCD1S PLOT NAME : 023221_ps PLOT SCALE : 40:1



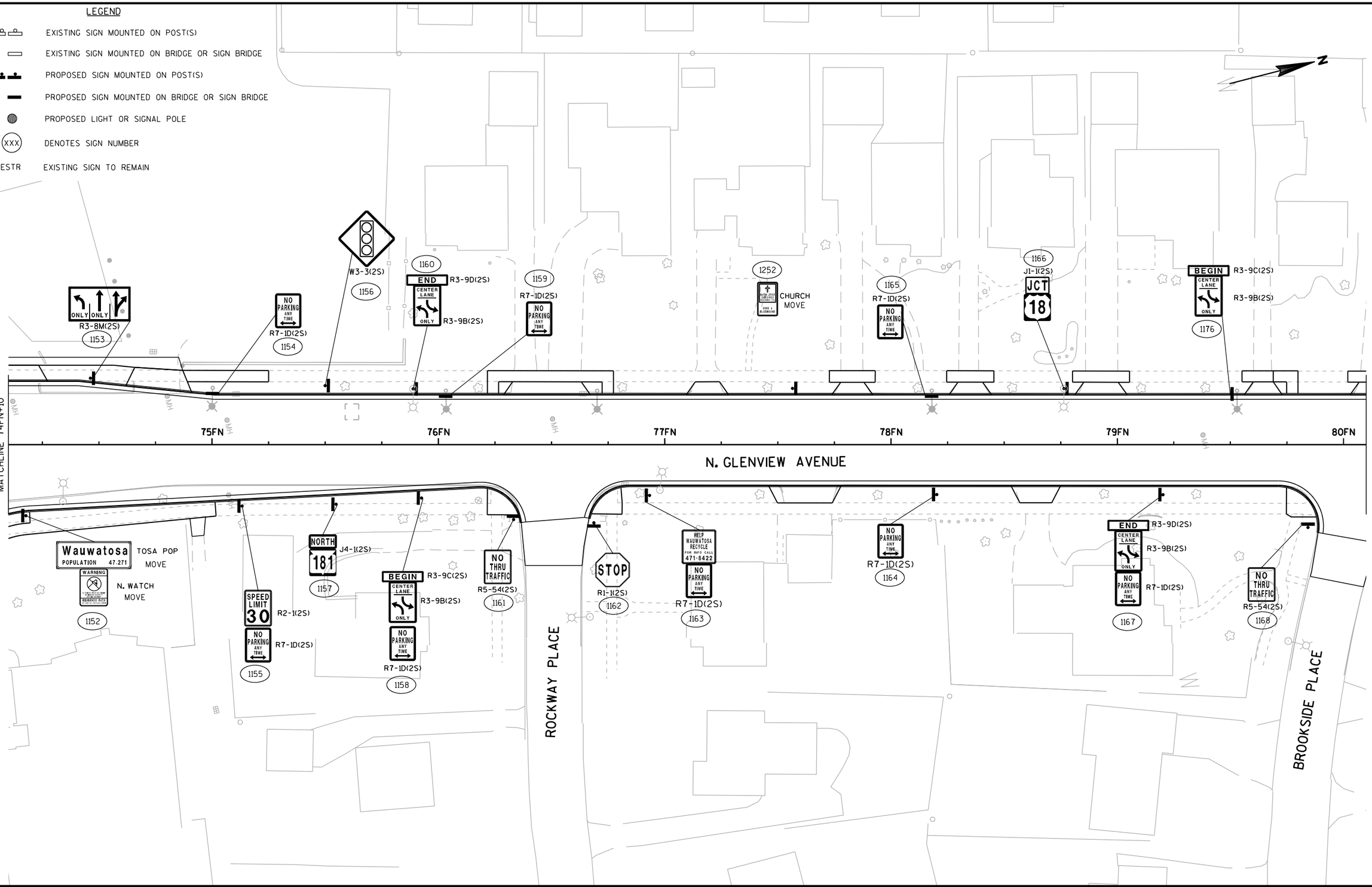
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023222_ps.dgn PLOT DATE : 01-NOV-2012 12:33 PLOT BY : MSCDYB PLOT NAME : 023222_ps PLOT SCALE : 40:1

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
- PROPOSED LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN

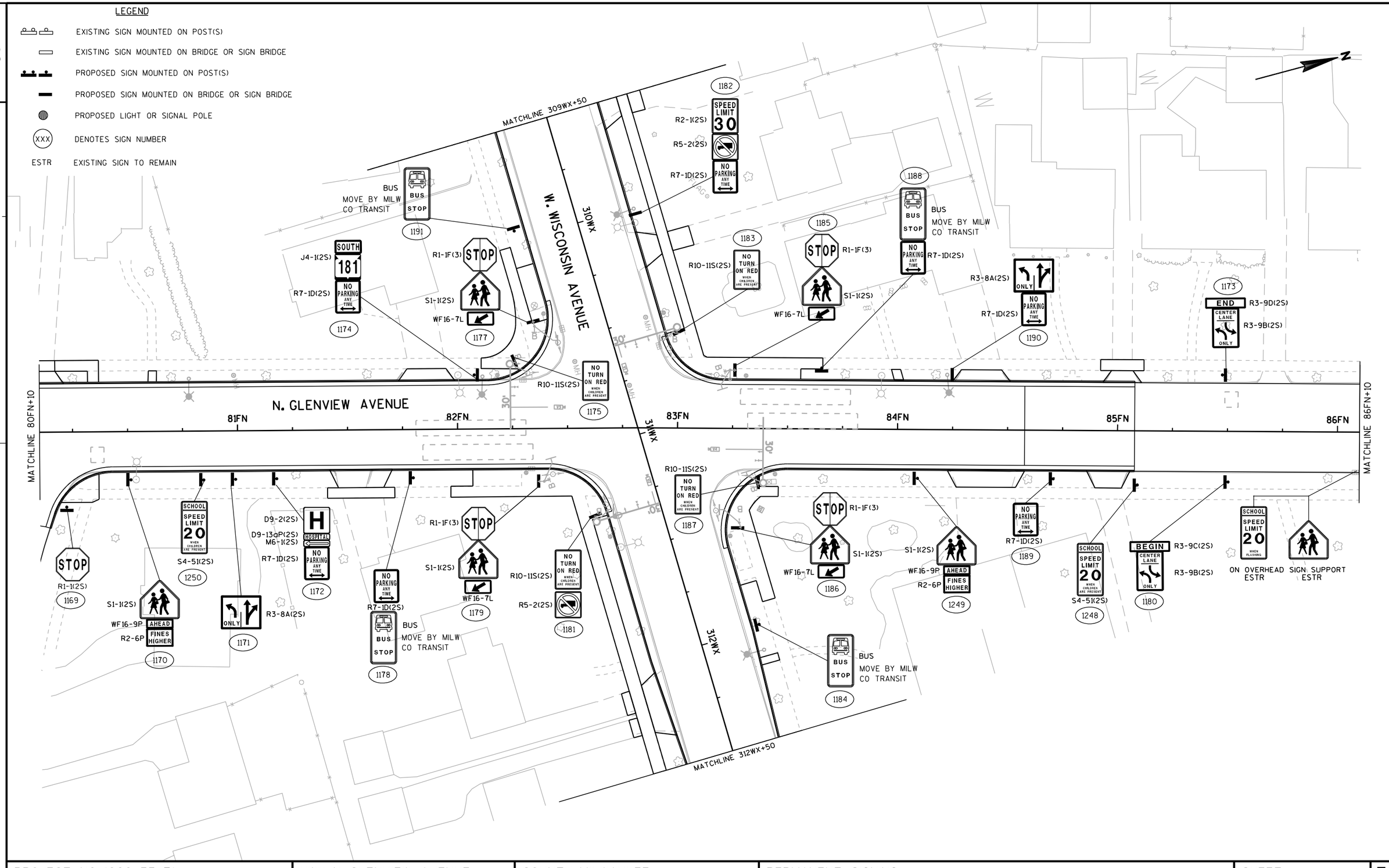


PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023223_ps.dgn PLOT DATE : 01-NOV-2012 05:46 PLOT BY : MSCD1S PLOT NAME : 023223_ps PLOT SCALE : 40:1

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
- PROPOSED LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023224_ps.dgn PLOT DATE : 01-NOV-2012 12:33 PLOT BY : MSCDYB PLOT NAME : 023224_ps PLOT SCALE : 40:1

2

N

AVON COURT

1246
S1-1(2S)
WF16-9P AHEAD
R2-6P FINES HIGHER

1247
SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT
S4-5I(2S)

1192
NO PARKING ANY TIME
R7-1D(2S)

1195
NO PARKING ANY TIME
BEGIN
CENTER LANE ONLY
R7-1L(2S)
R3-9C(2S)
R3-9B(2S)

MH

87FN 88FN 89FN 90FN 91FN

MATCHLINE 86FN+10

N. GLENVIEW AVENUE

ONE WAY ESTR

ONE WAY ESTR

DO NOT ENTER ESTR

ESTR

STOP ESTR

1245
S1-1(2S)
WF16-9P AHEAD
R2-6P FINES HIGHER

1193
NO PARKING ANY TIME
R7-1D(2S)

1244
SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT
S4-5I(2S)

1194
NO PARKING ANY TIME
END
CENTER LANE ONLY
R7-1R(2S)
R3-9D(2S)
R3-9B(2S)

LEGEND

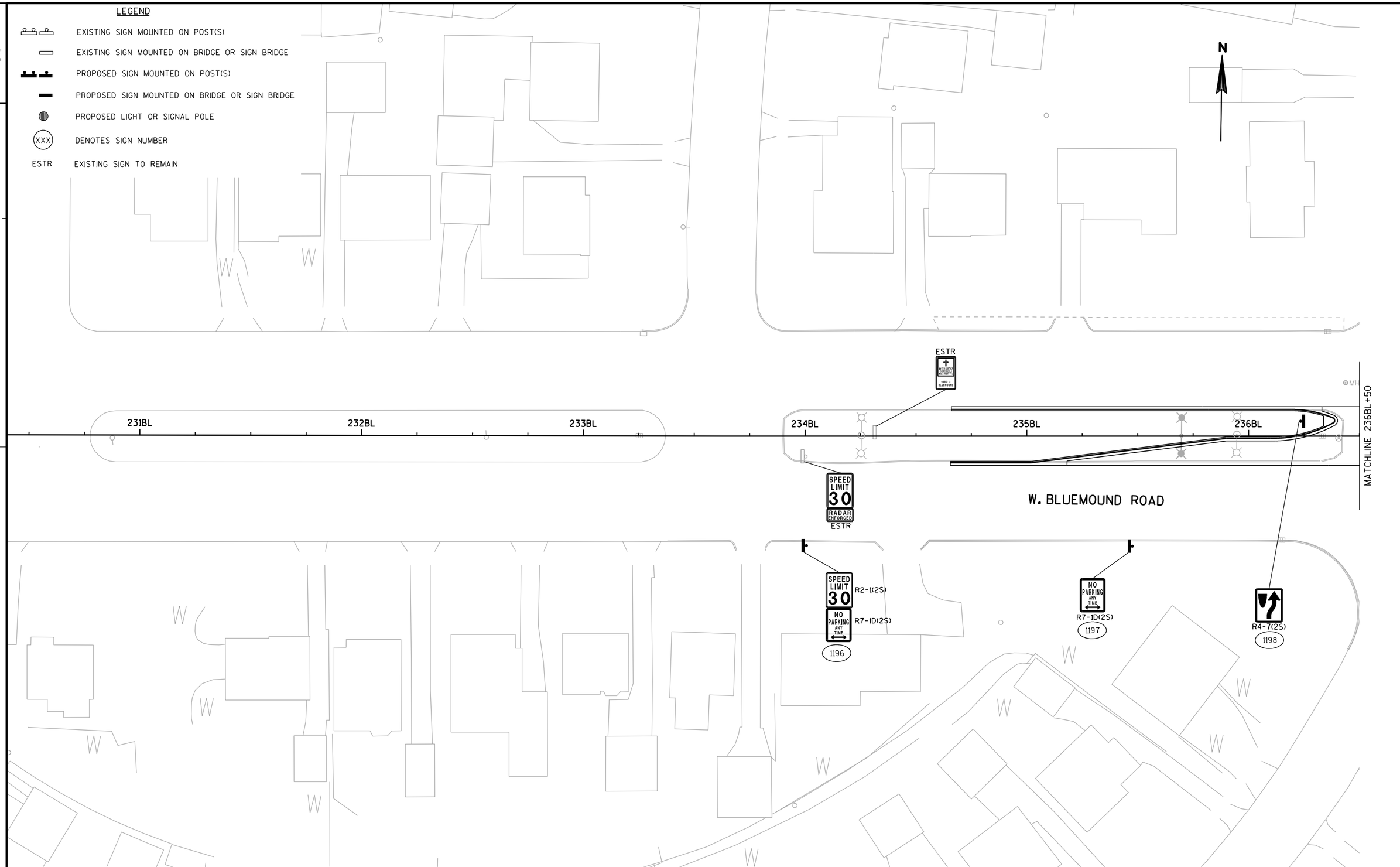
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

2

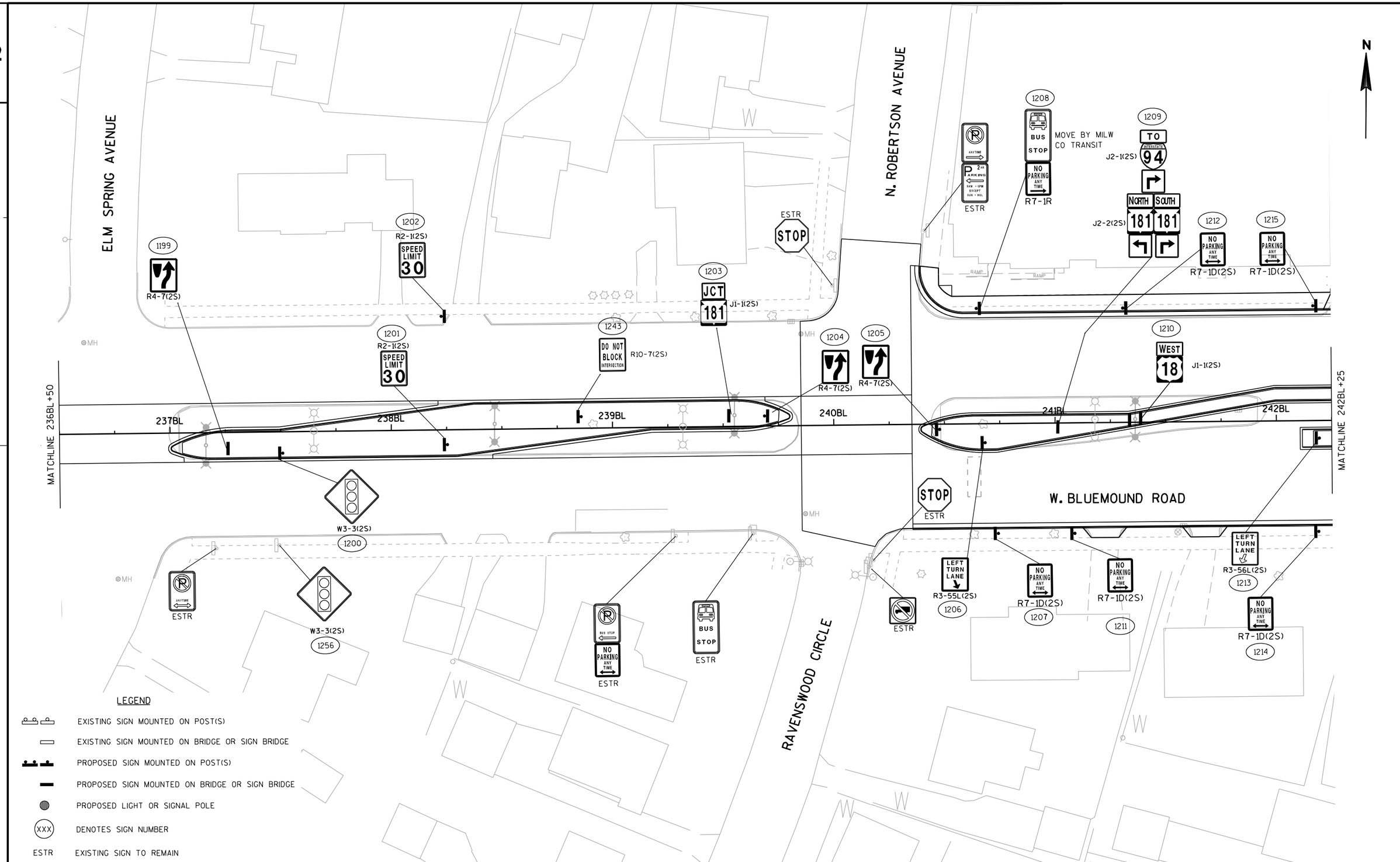
LEGEND

- 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
- PROPOSED LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023226_ps.dgn PLOT DATE : 01-NOV-2012 05:46 PLOT BY : MSCD1S PLOT NAME : 023226_ps PLOT SCALE : 40:1



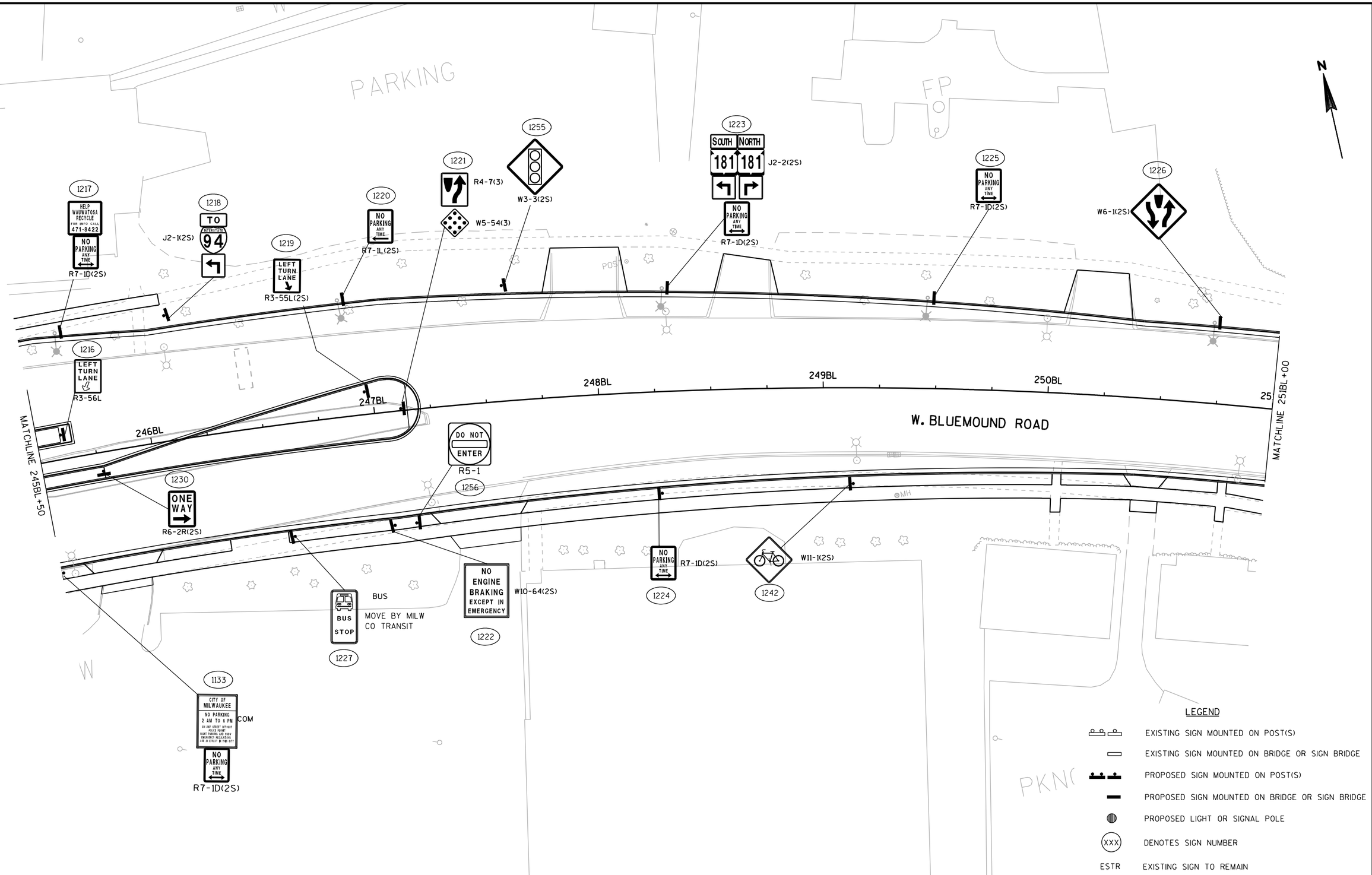
LEGEND

- 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
- PROPOSED LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023227_ps.dgn PLOT DATE : 01-NOV-2012 05:47 PLOT BY : MSCD1S PLOT NAME : 023227_ps PLOT SCALE : 40:1

2



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023228_ps.dgn PLOT DATE : 01-NOV-2012 05:47 PLOT BY : MSCD1S PLOT NAME : 023228_ps PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

HONEY CREEK PARKWAY

W. BLUEMOUND ROAD

MATCHLINE 251BL+00

252BL

253BL

254BL

255BL

256BL

257

1229

JCT

181

J1-1(2S)

NO PARKING ANY TIME

R7-1D

1228

NO PARKING ANY TIME

R7-1D(2S)

ESTR

STOP

ANY TIME

ESTR

WEIGHT LIMIT 3 TONS

ESTR

ESTR

ESTR

STOP

ESTR

MH

MH

MH

MH

N

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

PROPOSED LIGHT OR SIGNAL POLE

XXX DENOTES SIGN NUMBER

ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023229_ps.dgn PLOT DATE : 01-NOV-2012 05:47 PLOT BY : MSCD1S PLOT NAME : 023229_ps PLOT SCALE : 40:1

2

WINDSOR COURT

N. ROBERTSON AVENUE

STOP
ESTR

ESTR

1231
NO PARKING ANY TIME
R7-1D(2S)

304WX 305WX 306WX 307WX 308WX 309WX

MATCHLINE 309WX+50

W. WISCONSIN AVENUE

MH

S1-1(2S)
WF16-9P AHEAD
R2-6P FINES HIGHER
1241

N. ROBERTSON AVENUE

STOP
ESTR

SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT
S4-5I(2S)
1233

W3-3(2S)
1234

R3-8K(2S)
R7-1D(2S)
NO PARKING ANY TIME
1232

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
- PROPOSED LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023230_ps.dgn PLOT DATE : 01-NOV-2012 05:47 PLOT BY : MSCD1S PLOT NAME : 023230_ps PLOT SCALE : 40:1

2

2

N

1236
NO PARKING ANY TIME
R7-1L(2S)

1237
R3-8K(2S)

1238
SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT
S4-5I(2S)

1239
W3-3(2S)

1240
S1-1(2S)
WF16-9P AHEAD
R2-6P FINES HIGHER

313WX 314WX 315WX 316WX 317WX 318WX

MATCHLINE 312WX+50

W. WISCONSIN AVENUE

NO PARKING ANY TIME
R7-1R(2S)
1235

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
- PROPOSED LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET	E

2

2

CITY OF WAUWATOSA
DISTRIBUTION CENTER
TO REMAIN IN OPERATION DURING CONSTRUCTION

EXISTING UU	
A,B,C,D,E,F*	RED FOR EVEN NUMBER AND 'A' POLES BLACK FOR ODD NUMBER AND 'B' POLES
N	WHITE
GND	BARE OR GREEN
* CIRCUITS A,B,C,D,E,F ARE ALL 1 PHASE, 3 WIRE CIRCUITS (240/480V)	
240/480V, 1 PHASE, GROUNDED NEUTRAL	

N

CITY OF WAUWATOSA

CITY OF MILWAUKEE

W. BLUEMOUND ROAD

W. WISCONSIN AVENUE

W. HILL STREET

RAVENSWOOD CIRCLE

ELM SPRING AVENUE

N. ROBERTSON AVENUE

ROCKWAY PLACE

BROOKSIDE PLACE

AVON COURT

N. GLENVIEW AVENUE

HONEY CREEK PARKWAY

STH 181

R/L BL

R/L F

R/L WX

R/L FN

230BL

240BL

250BL

260BL

5OF

6OF

7OF

8OFN

9OFN

310WX

LIGHTING REMOVALS, ABOVE GROUND TEMPORARY & FINAL LIGHTING INCLUDING WIRING ON THE SOUTH SIDE OF BLUEMOUND ROAD EAST OF GLENVIEW AND ON GLENVIEW SOUTH OF BLUEMOUND ROAD TO BE DONE BY THE CITY OF MILWAUKEE.

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PROJECT OVERVIEW - LIGHTING - REMOVALS - CITY OF WAUWATOSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023501_lp.dgn PLOT DATE : 31-JAN-2013 05:20 PLOT BY : MSCD1S PLOT NAME : 023501_lp PLOT SCALE : 400:1

WISDOT/CADDS SHEET 42

2

2

CITY OF WAUWATOSA.
DISTRICT CENTER
**TO REMAIN IN OPERATION
DURING CONSTRUCTION**

EXISTING UU	
A,B,C,D,E,F*	RED FOR EVEN NUMBER AND 'A' POLES BLACK FOR ODD NUMBER AND 'B' POLES
N	WHITE
GND	BARE OR GREEN
* CIRCUITS A,B,C,D,E,F ARE ALL IN 1PHASE, 3 WIRE CIRCUITS (240/480V)	
240/480V, 1PHASE, GROUNDED NEUTRAL	

TEMPORARY	
T	
A,B	BLACK
GND	GREEN
A/B	30A
120/240V, 3W 1PHASE, ISOLATED NEUTRAL	

CITY OF WAUWATOSA

CITY OF MILWAUKEE

W. BLUEMOUND ROAD

W. WISCONSIN AVENUE

W. HILL STREET

RAVENSWOOD CIRCLE

ELM SPRING AVENUE

N. ROBERTSON AVENUE

ROCKWAY PLACE

BROOKSIDE PLACE

HONEY CREEK PARKWAY

N. GLENVIEW AVENUE

AVON COURT

INTERSECTION 25

STH 181

R/L BL

R/L F

R/L WX

R/L FN

50F

60F

70F

80FN

90FN

310MX

2308L

2406L

2502L

2606L

LIGHTING REMOVALS, ABOVE GROUND TEMPORARY & FINAL LIGHTING INCLUDING WIRING ON THE SOUTH SIDE OF BLUEMOUND ROAD EAST OF GLENVIEW AND ON GLENVIEW SOUTH OF BLUEMOUND ROAD TO BE DONE BY THE CITY OF MILWAUKEE.

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PROJECT OVERVIEW - LIGHTING - TEMPORARY-CITY OF WAUWATOSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023502_lp.dgn PLOT DATE : 31-JAN-2013 05:21 PLOT BY : MSCD1S PLOT NAME : 023502_lp PLOT SCALE : 400:1
WISDOT/CADDS SHEET 42

2

2

NEW

UU	
A,C,E, B,D,F*	BLACK FOR ODD NUMBER AND 'B' POLES RED FOR EVEN NUMBER AND 'A' POLES
N	WHITE
GND	BARE OR GREEN
240/480V, 1PHASE, ISOLATED NEUTRAL	
NOTE: EXISTING CIRCUITS A,B,C,D,E,F BEYOND NEW CONSTRUCTION ARE GROUNDED NEUTRAL	

CITY OF WAUWATOSA

CITY OF MILWAUKEE

W. BLUEMOUND ROAD

W. WISCONSIN AVENUE

ELM SPRING AVENUE

N. ROBERTSON AVENUE

N. ROBERTSON AVENUE

AVON COURT

N. GLENVIEW AVENUE

W. HILL STREET

RAVENSWOOD CIRCLE

ROCKWAY PLACE

BROOKSIDE PLACE

HONEY CREEK PARKWAY

STH 181

R/L BL

R/L F

R/L WX

R/L FN

230BL

240BL

250BL

260BL

50F

60F

70F

80FN

90FN

310WX

LIGHTING REMOVALS, ABOVE GROUND TEMPORARY & FINAL LIGHTING INCLUDING WIRING ON THE SOUTH SIDE OF BLUEMOUND ROAD EAST OF GLENVIEW AND ON GLENVIEW SOUTH OF BLUEMOUND ROAD TO BE DONE BY THE CITY OF MILWAUKEE.

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PROJECT OVERVIEW - FINAL LIGHTING - CITY OF WAUWATOSA	SHEET E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023503_lp.dgn PLOT DATE : 31-JAN-2013 05:23 PLOT BY : MSCD1S PLOT NAME : 023503_lp PLOT SCALE : 400:1

2

CITY OF WAUWATOSA STREET LIGHTING GENERAL NOTES

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

LOCATIONS OF THE PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION WILL REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED.

THE TRENCH SHALL NOT BE BACK FILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL CONDUITS SHALL BE CAPPED OR PLUGGED WITH ENGINEER APPROVED FITTINGS IMMEDIATELY AFTER INSTALLATION.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR IMMERSION 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 ALL CONDUITS.

PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED IN THE FUTURE. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX-OR-BASE TO BASE, ETC.) UNLESS OTHERWISE NOTED ON PLANS.

PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUITS.

CONTRACTOR SHALL SUPPLY AS-BUILT DRAWING FOR ALL THE WORK BEING DONE.

INSTALLATION OF LATERAL UNDERGROUND CONDUIT UNDER PAVEMENT SHALL BE INSTALLED MINIMUM 30 INCHES BELOW PROPOSED GRADE. CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ROADWAY CONSTRUCTION FOR CONDUIT LATERALS INSTALLATION.

PITCH ALL CONDUITS TOWARD PULL BOXES. INSTALL A 2" DRAIN DUCT TO STORM SEWER OR DRAIN SUMP AS REQUIRED FOR DAMAGE. THE 2" DRAIN DUCT OR SUMP IS INCIDENTAL TO THE PULL BOX BID ITEM AND IS NOT SHOWN.

THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE, IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

HAND DIGGING MAY BE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES. HAND EXCAVATION SHOULD BE ANTICIPATED & WILL BE CONSIDERED INCIDENTAL TO THE CONCRETE BASES TYPE 5 BID ITEM AND INSTALLATION OF TEMPORARY WOOD POLES. COORDINATE ALL WORK NEAR GAS LINE WITH WE ENERGIES.

STAGING NOTES

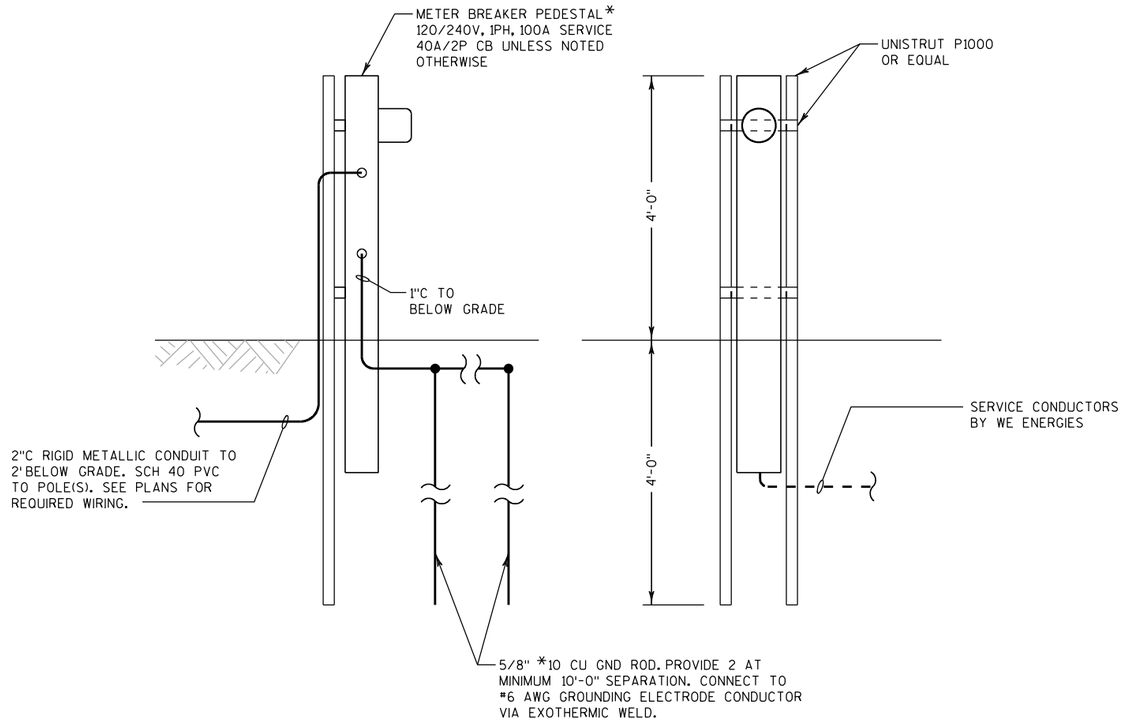
MAINTAIN LIGHTING AT ALL TIMES DURING CONSTRUCTION USING EXISTING LIGHTING, TEMPORARY LIGHTING, PROPOSED LIGHTING OR COMBINATIONS.

DO NOT REMOVE EXISTING LIGHTING UNTIL THE NEW OR TEMPORARY LIGHTING IS OPERATIONAL. REFER TO DRAWINGS FOR STAGING INFORMATION.

MAINTAINING SYSTEM CONTINUITY SHALL BE INCIDENTAL TO THE "REMOVE EXISTING STREET LIGHTS" BID ITEM.

DUE TO THE PHASING OF CONSTRUCTION SOME FINAL LIGHTING UNITS MAY BE ORPHANED UNTIL A LATER STAGE IS COMPLETE. IT IS AT THE DISCRETION OF THE CONTRACTOR TO SCHEDULE THESE ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE PLACEMENT OF RACEWAY THAT SPANS TWO DIFFERENT PHASES OF CONSTRUCTION.

2



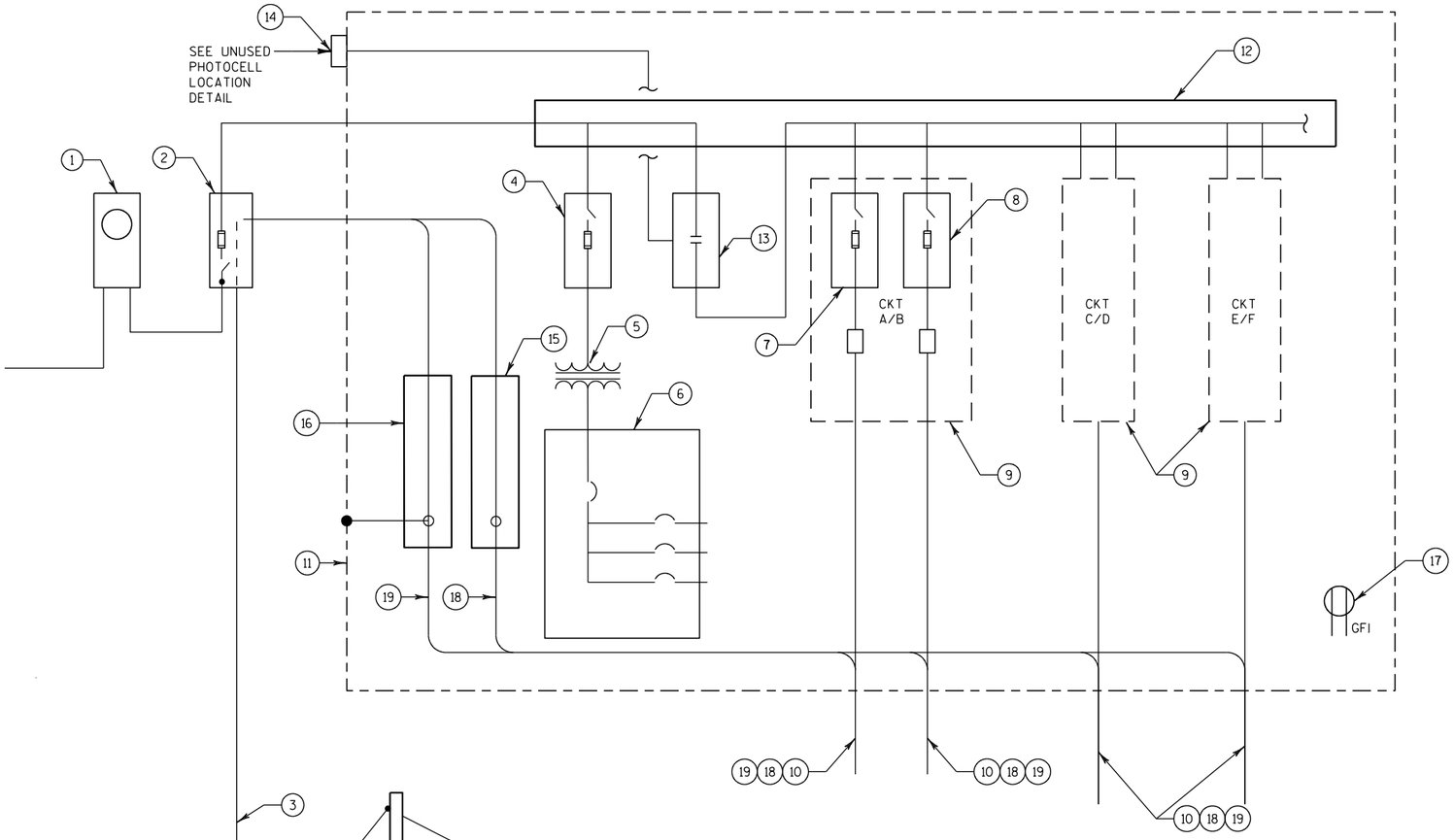
*SEE WE ENERGIES ELECTRIC SERVICE AND METERING MANUAL, PAGES U5, D11

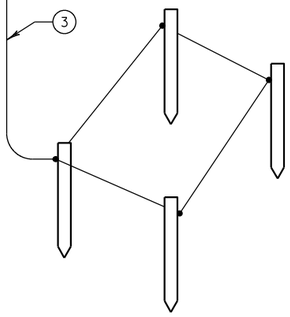
DETAIL - ELECTRICAL SERVICE METER BREAKER PEDESTAL

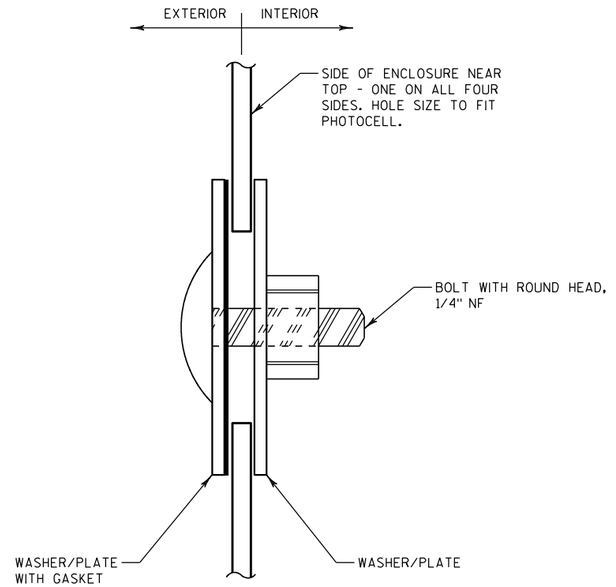
DETAIL FOR TEMPORARY DISTRIBUTION CENTER T LOCATED AT STA 79FN+81.4, 23.9'LT

BID ITEMS: SPV.0060.1152

NTS







PROVIDE 4 HOLE PLUGS (1 SPARE) PER CABINET. ENOUGH LEAD WIRE(S) TO ACCOMMODATE FURTHEST HOLE LOCATION SHALL BE PROVIDED.

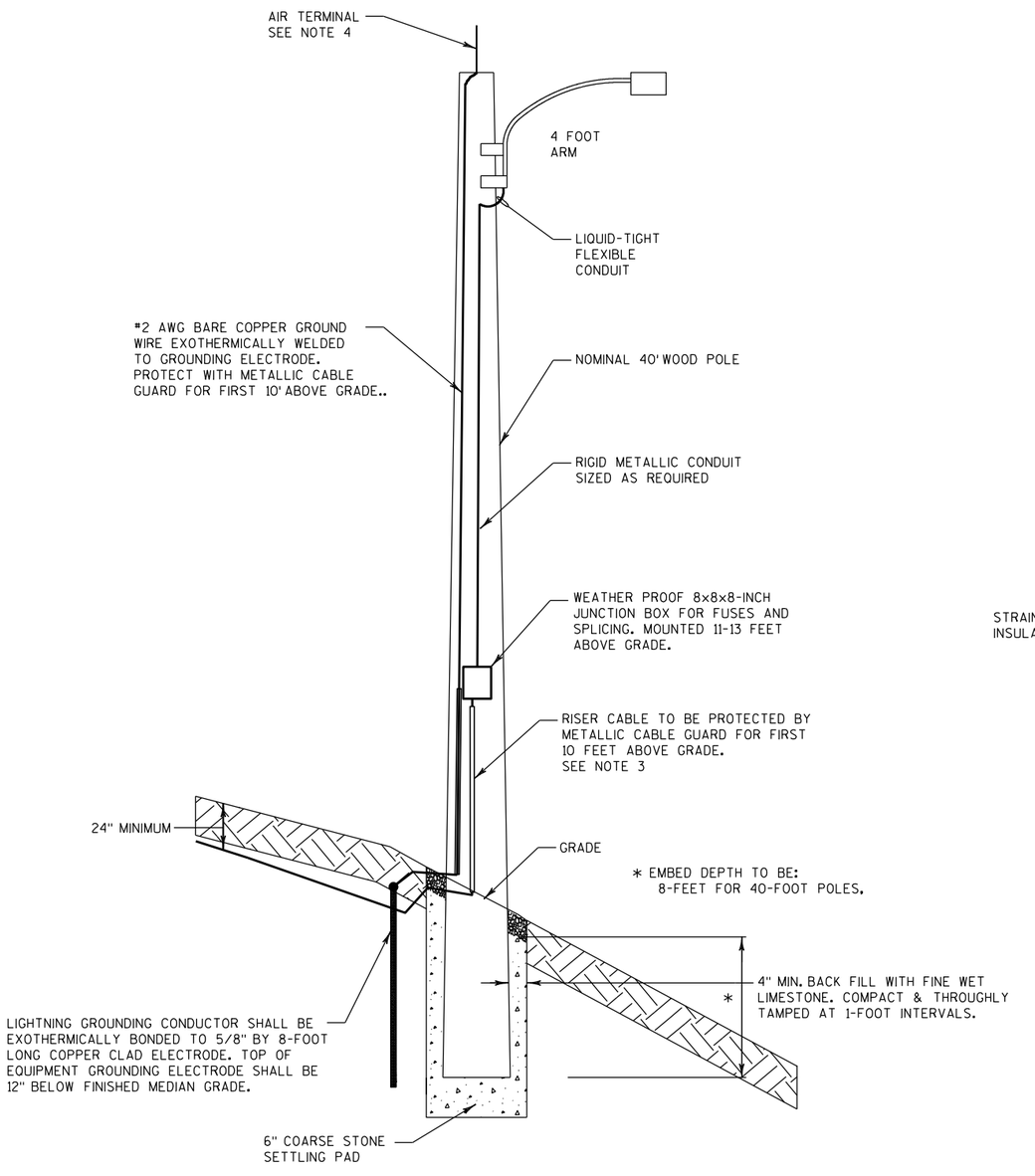
UNUSED PHOTOCELL LOCATION DETAIL

NTS

NOTES

1. METERING FOR 240/480V, 1PH, 100A, 3W SERVICE. COORDINATE WITH WE ENERGIES.
2. SERVICE DISCONNECT 100A 2P, NEMA 4X STAINLESS STEEL, FUSED DISCONNECT SWITCH.
3. BOND TO NEUTRAL GROUNDING ELECTRODE CONDUCTOR. SIZE GROUNDING ELECTRODE CONDUCTOR IN ACCORDANCE WITH TABLE 250.66 OF NEC. PROVIDE 4 OF 5/8" X 10' COPPER GROUND RODS, ONE PER CORNER OF THE DISTRIBUTION CENTER EQUIPMENT PAD. SPACE GROUND RODS A MINIMUM OF 8 FEET APART. USE EXOTHERMIC WELDS AT CONNECTIONS TO GROUND RODS. ACORN CLAMPS ARE NOT ALLOWED. INTERCONNECT THE GROUND RODS TO FORM A RING.
4. CONTROL POWER FUSED DISCONNECT SWITCH 30A, 2P FUSED DISCONNECT SWITCH, HEAVY DUTY, NEMA 1.
5. TRANSFORMER 10 KVA, 240-480/120-240 V, 1PH TRANSFORMER, 115 DEGREE TEMPERATURE RISE, 180 DEGREE INSULATION CLASS.
6. LOAD CENTER 100A COPPER BUS, 120/240V, 1PH, 50A/2P MCB. PROVIDE 20A/1P CIRCUIT BREAKER FOR LIGHTING CONTROL, 20A/1P FOR CABINET HEATER AND LIGHTS, AND 15A/1P FOR GFI RECEPTACLE IN ENCLOSURE.
7. LIGHTING CIRCUIT "A" FUSED DISCONNECT SWITCH NEMA 1, 30A, 1 POLE FUSED DISCONNECT SWITCH. POWER FROM L1.
8. LIGHTING CIRCUIT "B" FUSED DISCONNECT SWITCH NEMA 1, 30A, 1 POLE FUSED DISCONNECT SWITCH. POWER FROM L2. INSULATED TERMINATION LUG, 30A RATED. COORDINATE WITH CIRCUIT WIRE SIZE.
9. PAIR OF FUSED DISCONNECT SWITCHES SHOWN. PROVIDE SIMILAR FOR CIRCUITS C/D, E/F AS REQUIRED.
10. WIRING TO STREET LIGHTING, SEE SITE PLAN. PROVIDE ADDITIONAL CIRCUITS AS REQUIRED.
11. NEMA 3R, ALUMINUM, SINGLE OR DOUBLE DOOR ENCLOSURE. MINIMUM SIZE 77" H*44"W*26"D
12. WIREWAY, NIPPLE DOWN TO FUSED DISCONNECT SWITCH, 3" X 3" STEEL.
13. 100A 2P LIGHTING CONTACTOR WITH HOA SELECTOR SWITCH.
14. FLUSH MOUNTED PHOTOCELL ON NORTH OR EAST SIDE OF ENCLOSURE.
15. NEUTRAL BUS BAR (ISOLATED)
16. GROUNDING BUS BAR
17. GFI RECEPTACLE, 2#12, 1#12 GND IN 1/2" FLEXIBLE METALLIC CONDUIT TO LOAD CENTER.
18. GROUND CONDUCTOR (NEUTRAL)
19. EQUIPMENT GROUNDING CONDUCTOR (GND)

2

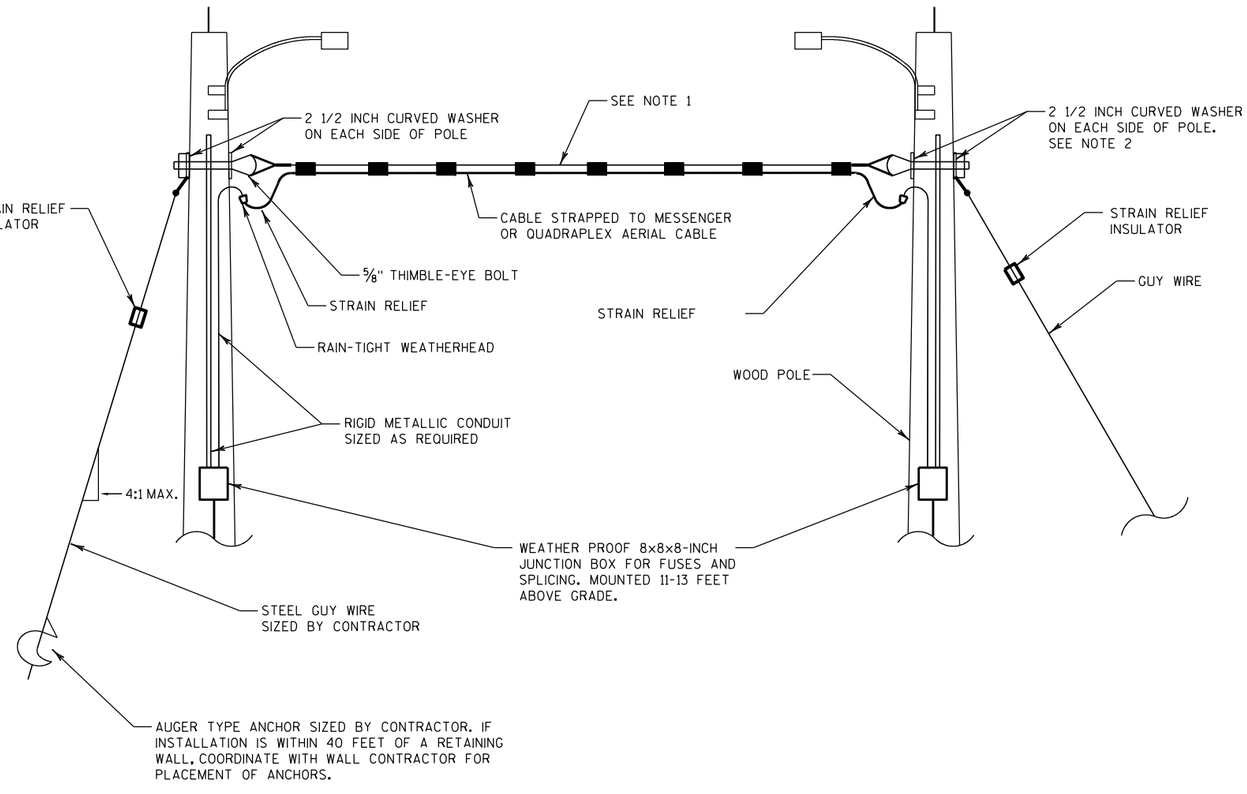


WOODEN POLE INSTALLATION DETAIL

SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION
NTS

NOTES

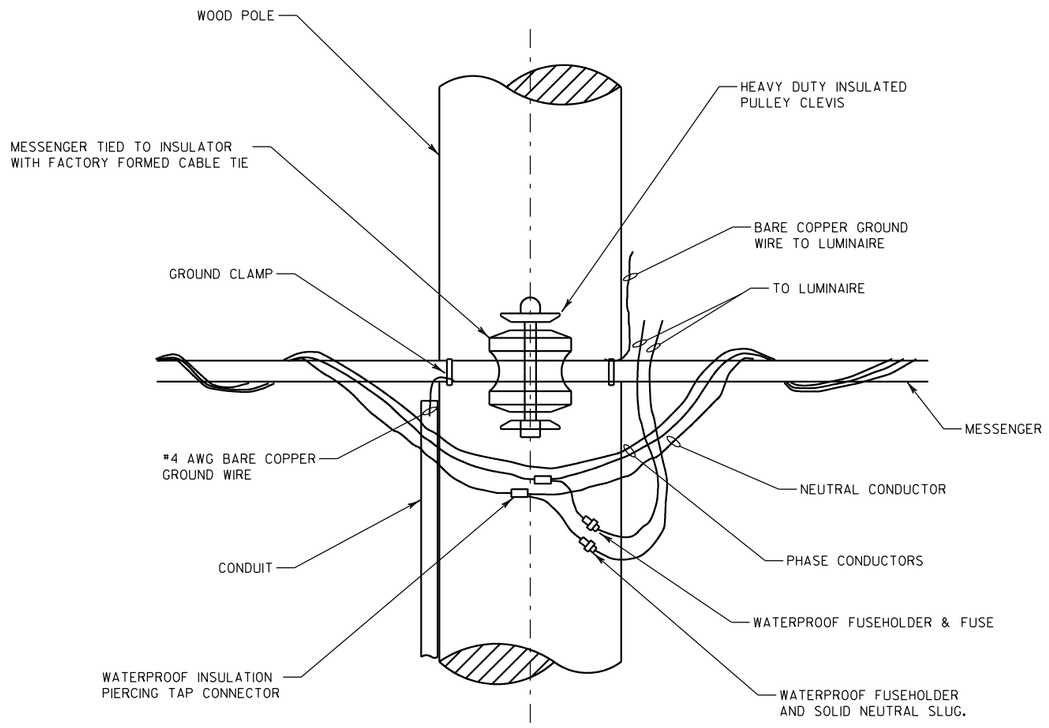
1. MINIMUM CLEARANCE AT CENTER OF SPAN: 20-FT. ABOVE ROADWAY OR GRADE.
2. CONSTRUCT DEAD ENDS WITH SECONDARY RACK, CLEVISES, OR OTHER APPROVED METHOD.
3. SECURELY BAND OR CLAMP RISERS TO POLES. USE METALLIC CABLE GUARD TO PROTECT RISERS FOR 10-FEET ABOVE GRADE.
4. PROVIDE AIR TERMINAL PROTRUDING 18" ABOVE HIGHEST FIXTURE WITH #2 AWG DOWN CONDUCTOR TO A 5/8" X 8-FOOT COPPER CLAD ELECTRODE FOR LIGHTNING PROTECTION. DOWN CONDUCTOR MAY TRAVEL ONLY IN A DOWNWARD DIRECTION UNTIL IT IS CONNECTED TO THE GROUNDING ELECTRODE. LIGHTNING PROTECTION GROUNDING ELECTRODE TO BE BONDED TO EQUIPMENT GROUNDING ELECTRODE WITH BARE, SOLID #2 COPPER CONDUCTOR; EXOTHERMIC WELDS ON BOTH ENDS.



OVERHEAD WIRE DETAIL

SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION
NTS

2



OVERHEAD CABLE SPLICE AT WOOD POLE

NTS

2

CITY OF MILWAUKEE STREET LIGHTING GENERAL NOTES

PRIOR TO CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED IN THE FIELD BY CONTACTING "DIGGERS HOT LINE."

STREET LIGHTING & TRAFFIC SIGNALS SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 652 EXCEPT:

THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC. OF STREET LIGHTING OR TRAFFIC SIGNAL FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING OR TRAFFIC SIGNAL DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED PERMISSION.

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

2. LOCATIONS OF THE PVC CONDUITS WHERE THEY ARE REQUIRED ARE IDENTIFIED IN THE PRINTS. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. ANY RELOCATIONS MUST BE APPROVED BY THE ENGINEER. FIELD MARK EACH CONDUIT LOCATION BY STAMPING AND PAINTING WITH RED PAINT ON TOP AND BACKSIDE OF CURB.

3. TYPICAL CONDUIT INSTALLED UP TO DIRECT BURIED STREET LIGHT POLES IS AS FOLLOWS 3-INCH OR 2.5-INCH (AS NOTED) SCHEDULE 40 RIGID PVC TO STREET LIGHTING METAL HOUSING (PEDESTAL), THE 1.5-INCH SCHEDULE 40 RIGID PVC TO STREET LIGHT POLE CABLE SLOT, AND THE 2-INCH SCHEDULE 40 RIGID PVC TO SIGNAL STANDARD BASE AND RISER FOR TRAFFIC SIGNAL ON STREET LIGHT POLE.

4. DEPTH OF CONDUIT INSTALLED BELOW THE STREETS, HIGHWAYS, ROADS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE)

5. CONDUIT INSTALLED BEHIND CURB, AND UNDER DRIVEWAYS SHALL BE INSTALLED AT THE BASE OF THE BACKSIDE OF THE CURB/GUTTER SECTION.

6. WHEN THERE IS MORE THAN ONE CONDUIT TO BE LAID BEHIND THE CURB, PLACE ALL CONDUITS IN THE SAME TRENCH.

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

8. THE TRENCH SHALL BE FREE OF DEBRIS AND OVERPOUR AND SHALL NOT BE BACK FILLED PRIOR TO INSPECTION OF THE CONDUIT.

9. 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.

10. ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS. (SEE NEC 352.28 2008 CODE)

11. PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED IN THE FUTURE. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

12. ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE UL LABEL FIRMLY ATTACHED.

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

14. PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUIT.

15. 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 UNLESS OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

16. WHEN ENDS OF CONDUIT DO NOT CONNECT TO A VAULT AND WILL END UP UNDER CONCRETE WALK. THE CONTRACTOR IS REQUIRED TO LEAVE A 24" X 24" BOX FORM CENTERED OVER THE END OF CONDUIT AND FILL THE BOXFORM WITH CRUSHED GRAVEL. (PER WISDOT SPEC 209.2.1(1) GRANULAR BACK FILL).

17. ALL PIPE CROSSINGS AND VAULTS SHALL BE AT LEAST SIX (6) FEET AWAY FROM FIRE HYDRANTS, UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.

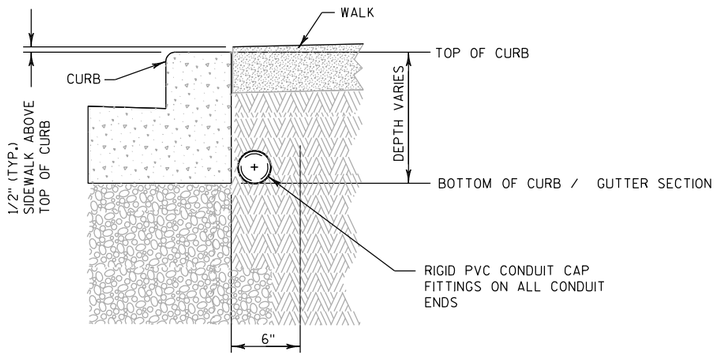
18. TYPICAL RECTANGULAR VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

19. COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES, AND VAULTS/ MANHOLES WITH CITY OF MILWAUKEE STREET LIGHTING. THE CITY REQUIRES THREE WORKING DAYS ADVANCED NOTICE.
CONTACT ELECTRICAL SUPERVISOR
STREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251 OR DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-3687 (CELL) 414-708-5148 OR DISPATCHER @ 414-286-3687

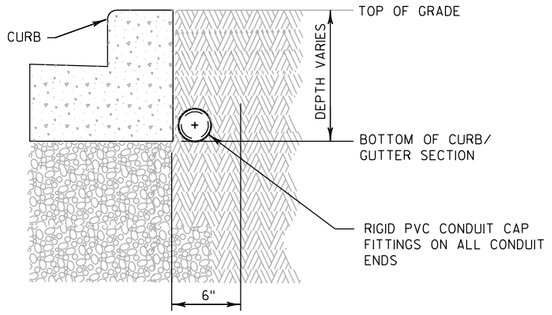
20. IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL VAULT, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONCRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK.
STREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251
STREET LIGHTING - GEORGE BERDINE (OFFICE) 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - THOMAS HUGHES (OFFICE) 414-286-3457 (CELL) 414-708-3175
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-3687 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

21. CONDUIT WILL ONLY BE INSTALLED AFTER THE CURB IS POURED, UNLESS APPROVED BY BOTH THE ENGINEER & STREET LIGHTING SHOP SUPERVISOR.

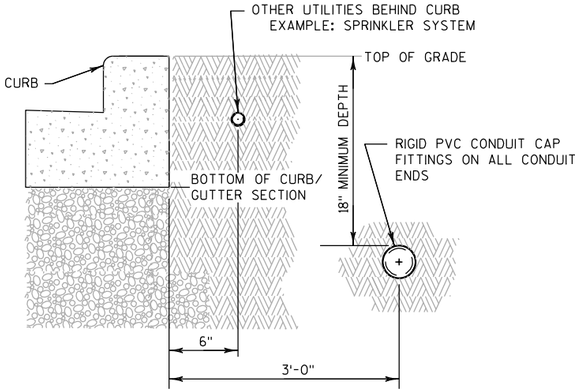
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DETAIL "A"



DETAIL "B"



DETAIL "C"

NOTES

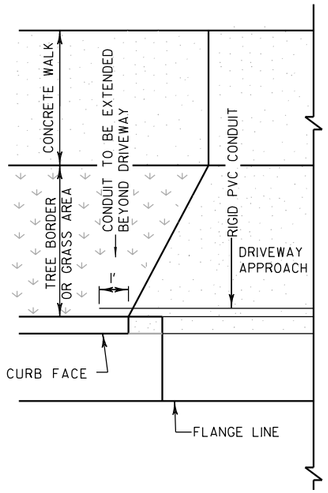
1. KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
2. CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.

MIL-100 - TYPICAL CONDUIT INSTALLATION BEHIND CURB

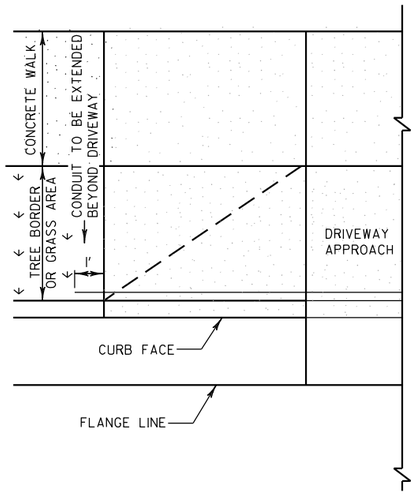
NTS

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM CITY OF MILWAUKEE STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

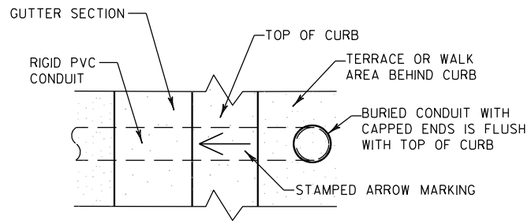
2



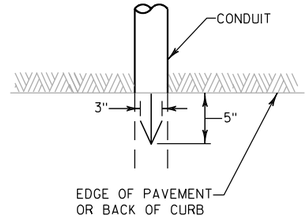
TYPICAL PLAN VIEW FOR
FLARED DRIVEWAY



TYPICAL PLAN VIEW FOR
DEPRESSED DRIVEWAY

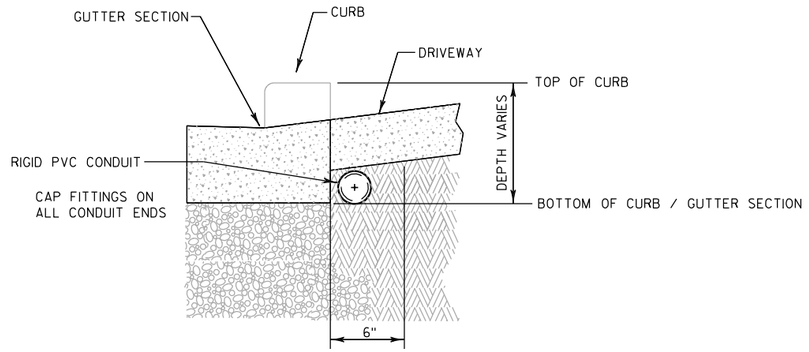


TOP VIEW OF CURB STAMPING

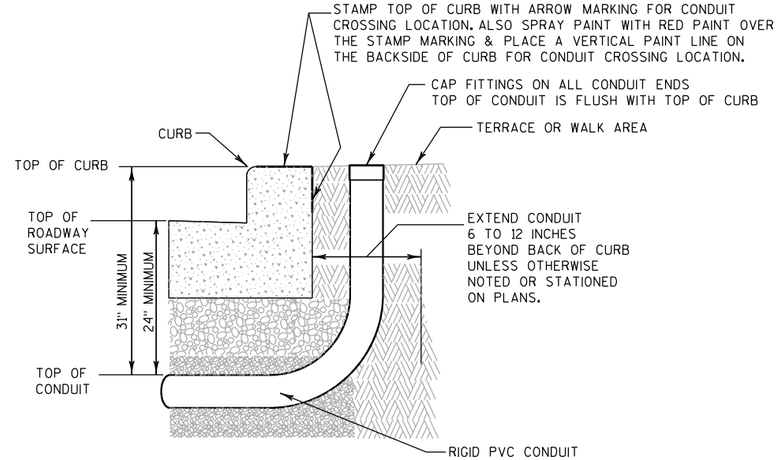


ARROW MARK

NOTE
ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1/4-INCH TO 3/8-INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.



MIL-101 - TYPICAL CONDUIT INSTALLATION
UNDER DRIVEWAYS OR PEDESTRIAN RAMPS
NTS

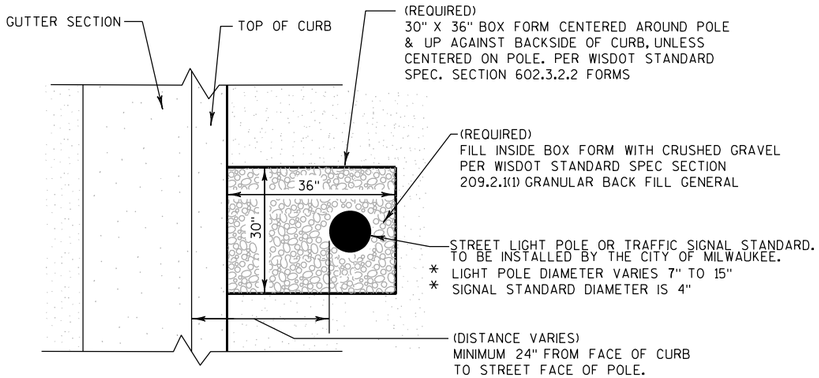


MIL-102 - TYPICAL CONDUIT INSTALLATION
FOR CROSSING ROADWAYS - DETAIL VERSION #2
NOTE: ALL ITEMS SHOWN HEREIN ARE TO BE SUPPLIED BY THE CONTRACTOR
NTS

NOTES

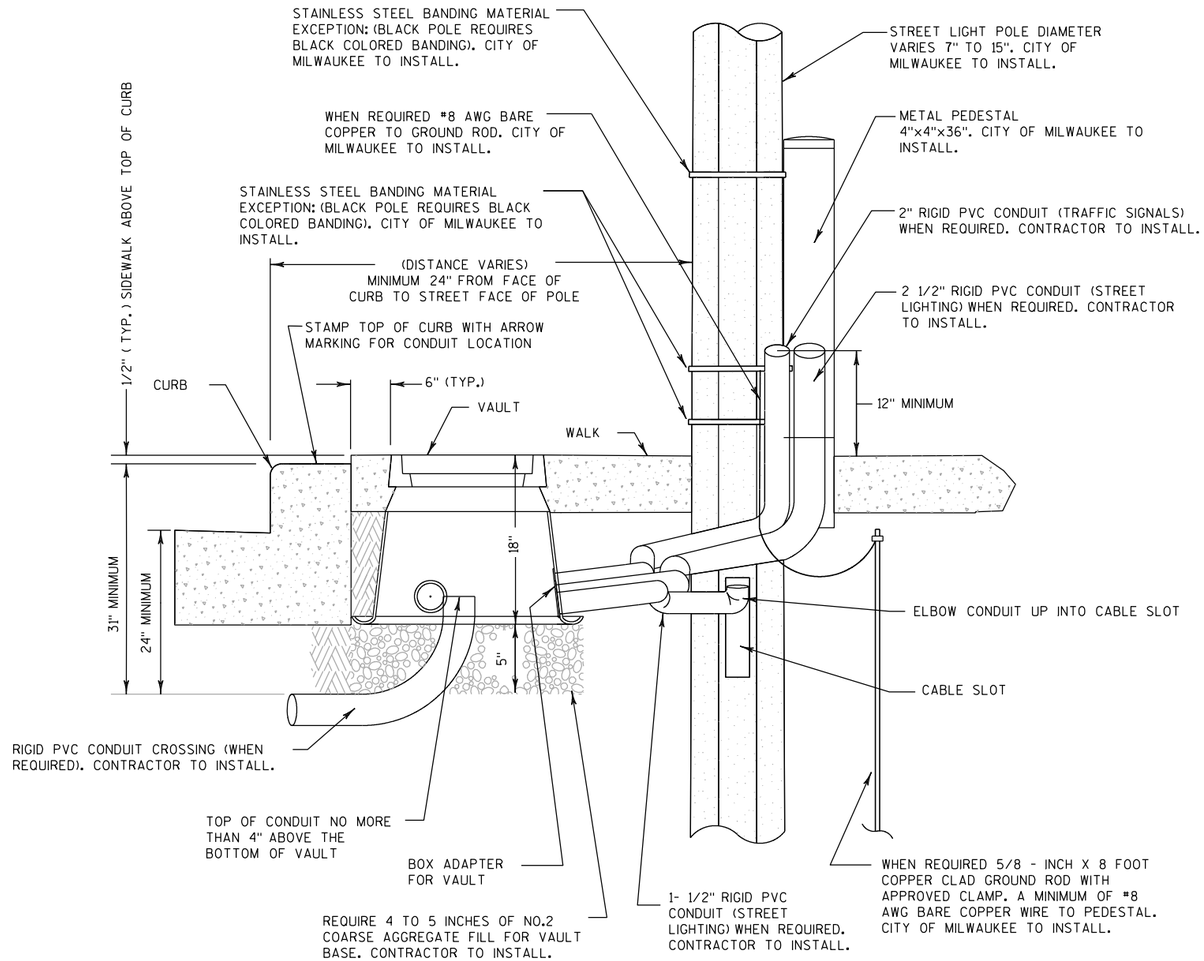
1. KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
2. CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM CITY OF MILWAUKEE STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



MIL-105 - DETAIL TYPICAL 30" X 36" BOX FORM AROUND STREET LIGHTING POLE OR TRAFFIC SIGNAL STANDARD

NTS



MIL-108 - TYPICAL CONTRACTOR CONDUIT INSTALLATION FROM VAULT TO POLE

NTS

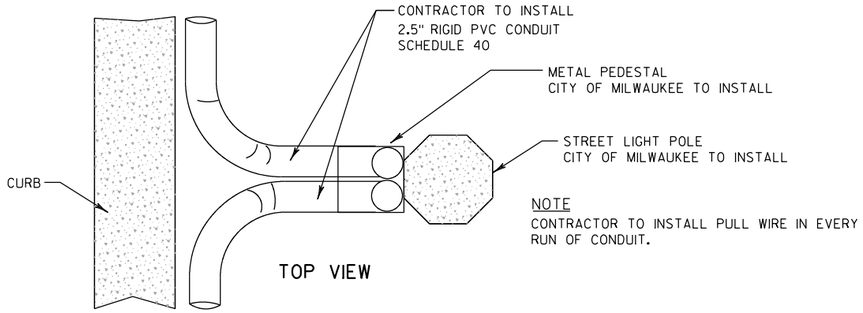
NOTES

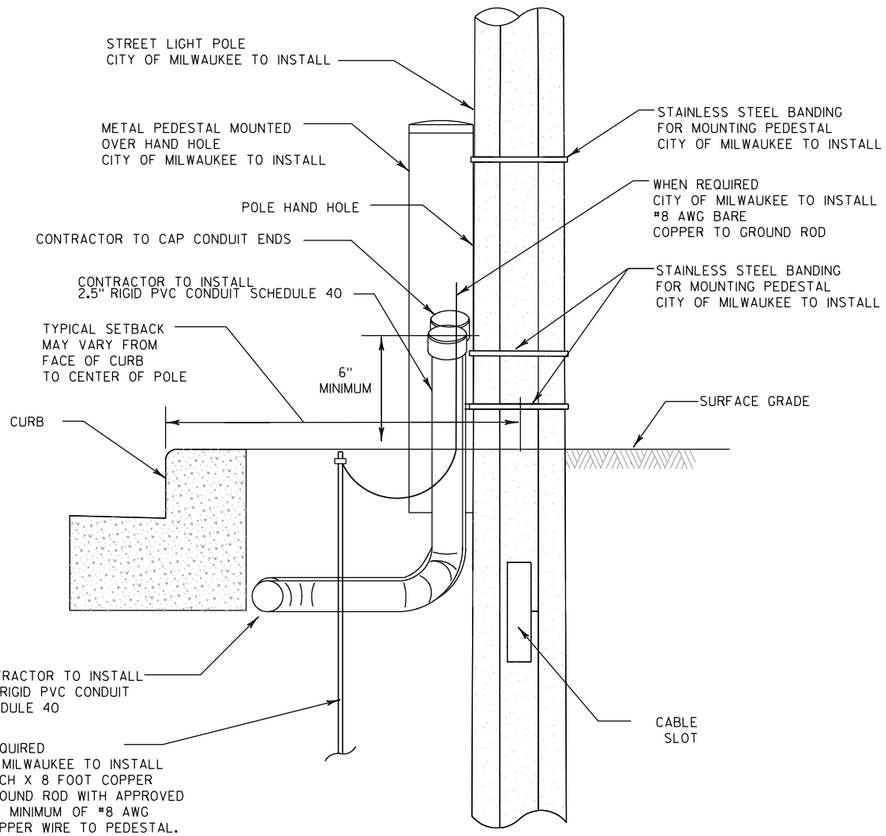
THE CONTRACTOR IS REQUIRED TO FORM OUT A OPENING IN THE CONCRETE WALK BEFORE POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)

THE CONTRACTOR IS REQUIRED TO FILL IN THE FORMED OUT AREA OPENING IN THE CONCRETE WALK WITH CRUSHED GRAVEL, AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM CITY OF MILWAUKEE STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

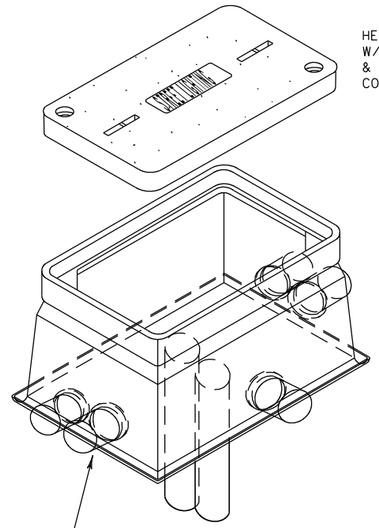
2

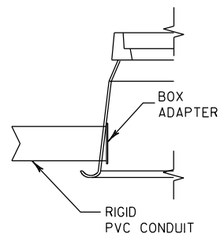


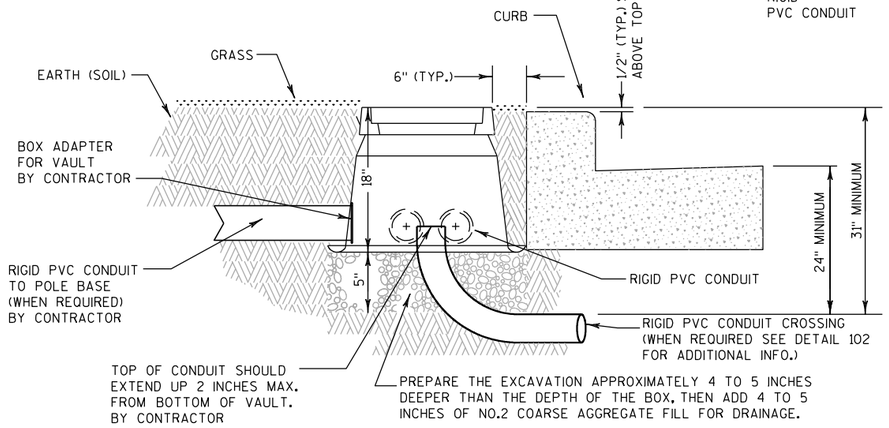


MIL-120 - TYPICAL CONTRACTOR CONDUIT INSTALLATION TO STREETSIDE PEDESTAL - NTS

NTS







MIL-121 - TYPICAL VAULT INSTALLATION IN GRASS AREA

NOTE: ALL ITEMS SHOWN HEREIN ARE TO BE SUPPLIED BY THE CONTRACTOR
NTS

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM CITY OF MILWAUKEE STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

2

REMOVAL LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- (xx) DENOTES THE REMOVAL STAGE NUMBER
- X-Y — EXISTING CITY OF WAUWATOSA LIGHTING POLE, WITH ARM MOUNTED LUMINAIRE. X - CIRCUIT ID, Y - POLE ID NUMBER
- X-Y / X-Y — EXISTING CITY OF WAUWATOSA LIGHTING POLE, WITH ARM MOUNTED TWIN LUMINAIRE. X - CIRCUIT ID, Y - POLE ID NUMBER
- DISTRIBUTION CENTER
- ELECTRIC METER SOCKET
- EXISTING PULL BOX - CITY OF WAUWATOSA

CITY OF WAUWATOSA DISTRIBUTION CENTER
TO REMAIN IN OPERATION DURING CONSTRUCTION
SEE NOTE 2

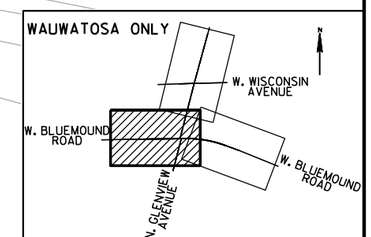
EXISTING UU	
A,B,C,D,E,F*	RED FOR EVEN NUMBER AND 'A' POLES; BLACK FOR ODD NUMBER AND 'B' POLES
N	WHITE
GND	BARE OR GREEN
* CIRCUITS A,B,C,D,E,F ARE ALL 1 PHASE, 3WIRE CIRCUITS (240/480V)	
240/480V., 1 PHASE, GROUNDED NEUTRAL	

PLEASANT VIEW STREET
ELM SPRING AVENUE
N. ROBERTSON STREET
W. BLUEMOUND ROAD
ROCKWAY PLACE
GLENCOE CIRCLE
RAVENSWOOD CIRCLE
N. GLENVIEW AVENUE
PARKING

MATCHLINE 77FN+50
MATCHLINE 246BL+50

UUB-6 (2A)
B-8 TO REMAIN
(2A) UUB-5
B CKT TO REMAIN
TO B-9
CAUTION
CKT "B"
UUB-4 (1A)
CKT "C"
UUC-1 (1A)
(1D) UUC-2
CKT "B" & "C"
(1A) UUB-3A SEE NOTE 3
(1E) EXISTING DISTRIBUTION CENTER UU SEE NOTE 2
CKT "D" TO REMAIN
UUB-1A (1A)
SEE NOTE 1
(1A) UUB-2A
CKT "E"
(1A) UUE-2A
(1A) UUE-1A
E-4A TO REMAIN
E-3A TO REMAIN
E-4B TO REMAIN
E-3B TO REMAIN
UUE-2B
UUB-1B (1A)
CKT "A" TO REMAIN
(1A) UUB-2B
(1A) UUB-3B SEE NOTE 3
CKT "F" TO REMAIN
A-1 TO REMAIN
(1A) UUE-1B
(1A) UUB-35
POWER POLE FOR ELECTRICAL SERVICE TO DISTRIBUTION CENTER TO REMAIN IN OPERATION DURING CONSTRUCTION.
REMOVAL BY CITY OF MILWAUKEE. LIGHTS IN MEDIAN OF N. GLENVIEW AVENUE, SOUTH OF W. BLUEMOUND ROAD AND ON THE SOUTH SIDE OF W. BLUEMOUND ROAD EAST OF N. GLENVIEW AVENUE, BELONG TO THE CITY OF MILWAUKEE.

WAUWATOSA ONLY



GENERAL NOTES

ALL CITY OF WAUWATOSA LIGHTING IN THIS CONTRACT IS POWERED FROM THE DISTRIBUITION CENTER UU, UNLESS NOTED OTHERWISE.

ALL UNDERGROUND WIRING AND CONDUIT IS ABANDONED IN PLACE UNLESS NOTED OTHERWISE. CONTRACTOR MAY SALVAGE ABANDONED WIRING AT HIS OWN EXPENSE.

COORDINATE WITH "LIGHTING PLANS - FINAL" FOR WIRING AND RACEWAY TO EXISTING LIGHTS THAT REMAIN AND ARE REUSED.

PLAN NOTES

1. CID UNDER ROADWAY WILL BE REUSED UNDER FINAL LIGHTING.
2. THE EXISTING DISTRIBUTION CENTER UU IS BEING REPLACED WITH A NEW DISTRIBUTION CENTER UU HAVING SECONDARY SERVICE. THE EXISTING DISTRIBUTION CENTER UU IS TO BE REMOVED WHEN THE TEMPORARY LIGHTING ON W. BLUEMOUND ROAD IS REMOVED IN STAGE 1E.
3. TRAFFIC SIGNALS ON POLE BELONG TO CITY OF MILWAUKEE. COORDINATE REMOVAL OF LIGHTING.

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - REMOVALS - CITY OF WAUWATOSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023516_lp.dgn PLOT DATE : 01-NOV-2012 05:52 PLOT BY : MSCD1S PLOT NAME : 023516_lp PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

REMOVAL LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- DENOTES THE REMOVAL STAGE NUMBER
- EXISTING CITY OF WAUWATOSA LIGHTING POLE, WITH ARM MOUNTED LUMINAIRE
  X - CIRCUIT ID
  Y - POLE ID NUMBER
- EXISTING CITY OF WAUWATOSA LIGHTING POLE, WITH ARM MOUNTED TWIN LUMINAIRE
  X - CIRCUIT ID
  Y - POLE ID NUMBER
- DISTRIBUTION CENTER
- ELECTRIC METER SOCKET
- EXISTING PULL BOX - CITY OF WAUWATOSA

ROCKWAY PLACE

CONCRETE

HONEY CREEK

CONCRETE

CONCRETE

PARKING

PARKING

POLE TO REMAIN. ROUTE OF CKT UNKNOWN

1D UUC-3

1D UUC-4

1D UUC-5

C-6 TO REMAIN

SIGN

POST

EO

W. BLUEMOUND ROAD

248BL

250BL

252BL

254BL

256BL

258BL

260BL

MATCHLINE 246BL+50

EXISTING LIGHTING ON SOUTH SIDE OF W. BLUEMOUND ROAD TO BE REMOVED BY THE CITY OF MILWAUKEE.

PKNG

HONEY CREEK PKWY

HONEY CREEK PARKWAY

CREEK

WAUWATOSA ONLY

W. WISCONSIN AVENUE

W. BLUEMOUND ROAD

W. BLUEMOUND ROAD

N. GLENVIEW AVENUE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - REMOVALS - CITY OF WAUWATOSA	SHEET	E

2

2

N. ROBERTSON STREET

N. ROBERTSON STREET

D-16
TO REMAIN

CKT "D"

D-6
TO REMAIN

W. WISCONSIN AVENUE

AVON COURT

N. GLENVIEW AVENUE

ST JUDE COURT

ST JUDE COURT

BROOKSIDE PLACE

PARKING

PARKING

REC AREA

MATCHLINE 77FN+50

CKT "B"

2A UUB-7

2B UUD-8

UUD-7 2B

PPC-29. FROM DISTRIBUTION CENTER "PP" LOCATED AT NE CORNER OF W. WATERTOWN PLANK ROAD & ELM LAWN (84TH).

2B

EXISTING "C CIRCUIT" (3#4) TO BE PROTECTED/REUSED.

C-24 TO REMAIN

C-28 TO REMAIN

UUD-13 2B

2B UUD-9

D-14
TO REMAIN

TO UUD-15

UUD-15
TO REMAIN

UUD-10 TO REMAIN

UUD-11 TO REMAIN

TO D-12

CAUTION

78FN

80FN

82FN

84FN

86FN

88FN

90FN

308MX

312MX

314MX

316MX

REMOVAL LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- XX DENOTES THE REMOVAL STAGE NUMBER
- X-Y EXISTING CITY OF WAUWATOSA LIGHTING POLE, WITH ARM MOUNTED LUMINAIRE
  X - CIRCUIT ID
  Y - POLE ID NUMBER
- X-Y / X-Y EXISTING CITY OF WAUWATOSA LIGHTING POLE, WITH ARM MOUNTED TWIN LUMINAIRE
  X - CIRCUIT ID
  Y - POLE ID NUMBER
- DISTRIBUTION CENTER
- ELECTRIC METER SOCKET
- EXISTING PULL BOX - CITY OF WAUWATOSA

N

WAUWATOSA ONLY

W. WISCONSIN AVENUE

W. BLUEMOUND ROAD

W. BLUEMOUND ROAD

N. GLENVIEW AVENUE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - REMOVALS - CITY OF WAUWATOSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023518_lp.dgn PLOT DATE : 01-NOV-2012 05:52 PLOT BY : MSCD1S PLOT NAME : 023518_lp PLOT SCALE : 100:1

LEGEND

—OH— OVERHEAD ELECTRIC LINE

— — 2" CONDUIT UNLESS OTHERWISE NOTED

DISTRIBUTION CENTER

ELECTRIC METER SOCKET

W / X LUMINAIRE ON WOOD POLE
W - STATION/OFFSET
X - POLE ID

PULL BOX, 18" x 36"

X/X DENOTES THE CONSTRUCTION STAGE NUMBER INSTALL/REMOVAL

CITY OF WAUWATOSA.
DISTRIBUTION CENTER
TO REMAIN IN OPERATION DURING CONSTRUCTION
SEE NOTES 2 & 6

EXISTING UU	
A,B,C,D,E,F*	RED FOR EVEN NUMBER AND 'A' POLES BLACK FOR ODD NUMBER AND 'B' POLES
N	WHITE
GND	BARE OR GREEN
* CIRCUITS A,B,C,D,E,F ARE ALL IN 1 PHASE, 3 WIRE CIRCUITS (240/480V)	
240/480V, 1 PHASE, GROUNDED NEUTRAL	

PLEASANT VIEW STREET

ELM SPRING AVENUE

N. ROBERTSON STREET

ROCKWAY PLACE

MATCHLINE 77FN+50

W. BLUEMOUND ROAD

N. GLENVIEW AVENUE

GLENCOE CIRCLE

RAVENSWOOD CIRCLE

PARKING

1A 2B #6 AL QUADRUPLEX A, A', N, AERIAL

1A 2B STA. 76FN+29.4, 24.5'LT T-2

1A 1E #6 AL QUADRUPLEX D, D', N, AERIAL
#4 AL QUADRUPLEX C, C', N, AERIAL
WP-1 TO TUU-1
WP-1 TO WP-5

1A 1E STA. 238BL+73.2, 1.7'LT
DISTRIBUTION CENTER UU
SEE NOTE 2, 4, 5 & 6

1A 1E STA. 237BL+10.8, 49.5'LT TUU-4

1A 1E STA. 238BL+45.6, 50.0'LT TUU-3
SPLICE D CKT @ TOP OF POLE

1A 1E #6 AL QUADRUPLEX D, D', N, AERIAL
TUU-3 TO TUU-5

1A 1E STA. 238BL+81.4, 0.5'LT WP-1
SPLICE D CKT @ TOP OF POLE
SEE NOTE 5

1A 1E STA. 239BL+61.1, 49.9'LT TUU-2

1A 1E STA. 243BL+40.5, 72.5'LT WP-6

1A 1E STA. 241BL+48.3, 51.7'LT TUU-1

1A 1E STA. 244BL+69.4, 70.8'LT WP-5
SEE NOTE 3

1A 1E 2"C, 4#4, C,C',N,GND
POLE TOP TO PB.
SEE NOTE 3.

1A STA. 244BL+77.6, 67.1'LT PB-UU25
SEE NOTE 3. WET SPLICES IN PB.
PB-UU25 USED FOR FINAL LIGHTING.

EXISTING PB
SEE NOTE 3

1A 1E STA. 234BL+35.5, 0.6'RT WP-3

1A 1E STA. 235BL+96.6, 50.3'LT TUU-5

1A 1E #4 AL QUADRUPLEX C, C', N, AERIAL
TO WP-5

SEE NOTE 1

SEE NOTE 7

E-3A

E-3B

INTERCEPT EXISTING CID AND PROVIDE A BURIED WET SPLICE. CID ON SOUTH SIDE OF POLE

1A 1E #4 AL QUADRUPLEX E, E', N, AERIAL
FROM WP-1 TO WP-3
SEE NOTE 6, TYP

1A 1E STA. 234BL+60.5, 49.5'RT WP-2

1A 1E STA. 235BL+87.9, 48.5'RT TUU-10

1A 1E STA. 237BL+14.8, 49.5'LT TUU-9

1A 1E STA. 238BL+46.0, 49.5'RT TUU-8

1A 1E STA. 239BL+61.6, 50.6'RT TUU-7

1A 1E #6 AL QUADRUPLEX D, D', N, AERIAL
FROM WP-1

1A 1E STA. 241BL+46.5, 51.2'RT TUU-6

232BL 234BL 236BL 238BL 240BL 242BL 244BL 246BL

WAUWATOSA ONLY

W. WISCONSIN AVENUE

W. BLUEMOUND ROAD

W. BLUEMOUND ROAD

N. GLENVIEW AVENUE

NOTES

1. PROVIDE 5'-0" MINIMUM CLEARANCE BETWEEN OVERHEAD LIGHTING LINES & WE ENERGIES LINES.

2. THE EXISTING UU DISTRIBUTION CENTER IS BEING REPLACED WITH A NEW UU DISTRIBUTION CENTER HAVING SECONDARY SERVICE. THE EXISTING UU DISTRIBUTION CENTER IS TO BE REMOVED WHEN THE TEMPORARY LIGHTING ON W. BLUEMOUND ROAD IS REMOVED IN STAGE 1E.

3. WIRING FROM POLE TO EXISTING PB IN STAGE 1A TO POWER THE EXISTING "C" CKT. IN STAGE 1D ROUTE TO NEW PB-UU-25 TO POWER NEW "C" CKT ON W. BLUEMOUND ROAD THRU STAGE 1E. CAUTION - FIBER OPTIC CABLE.

4. IN STAGE 1A, DISCONNECT STREET LIGHTING CKT D TO ALLOW USAGE FOR TEMPORARY LIGHTING. RECONNECT WHEN TEMPORARY LIGHTING IS REMOVED. IN STAGE 1E. CONDULET TEMP CONDUIT INTO EXISTING UU. COST INCIDENTAL TO RACEWAY.

5. 3"C, 8#4, C,C',N,GND, E,E',N,GND; 4#6, D,D',N,GND EXISTING UU DISTRIBUTION CENTER TO TOP OF WP-1.

6. CIRCUIT CONDUCTORS ARE IDENTIFIED AS X AND X' WHERE X=CIRCUIT ID. X=BLACK CONDUCTOR & X'=RED CONDUCTOR

7. EXISTING MEDIUM VOLTAGE WE ENERGIES POWER POLE FEEDING DISTRIBUTION CENTER UU. PROTECT DURING CONSTRUCTION.

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - TEMPORARY LIGHTING - CITY OF WAUWATOSA	SHEET	E

2

N. ROBERTSON STREET

N. ROBERTSON STREET

W. WISCONSIN AVENUE

AVON COURT

N. GLENVIEW AVENUE

ST JUDE COURT

ST JUDE COURT

BROOKSIDE PLACE

LEGEND

- OH — OVERHEAD ELECTRIC LINE
- — — 2" CONDUIT UNLESS OTHERWISE NOTED
- DISTRIBUTION CENTER
- ELECTRIC METER SOCKET
- W / X — LUMINAIRE ON WOOD POLE
  W - STATION/OFFSET
  X - POLE ID
- PULL BOX, 18" x 36"
- X/X — DENOTES THE CONSTRUCTION STAGE NUMBER INSTALL/REMOVAL

N

TEMPORARY 1A 2B

T	
A,B	BLACK
GND	GREEN
A/B	30A

120/240V, 3W
1 PHASE, ISOLATED NEUTRAL

STA. 78FN+13.2, 23.9'LT 1A 2B
WP-4

CAUTION

STA. 79FN+81.4, 23.9'LT 1A 2B
TEMPORARY
DISTRIBUTION CENTER T

STA. 80FN+0.8, 24.0'LT 1A 2B
T-1

LIGHTING OF INTERSECTION SHOWN ON TRAFFIC SIGNAL SHEETS

MATCHLINE 77FN+50

OH

78FN

80FN

82FN

84FN

86FN

88FN

90FN

#6 AL QUADRUPLEX 1A 2B
A, A',N, AERIAL
TO T-2

2"C, 4#6, A,A',N,GND
FROM DISTRIBUTION CENTER T 1A 2B
TO TOP OF POLE T-1

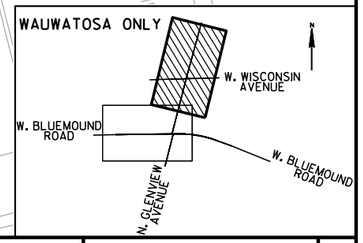
PARKING

REC AREA

PARKING

PARKING

WAUWATOSA ONLY



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - TEMPORARY LIGHTING - CITY OF WAUWATOSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023533_lp.dgn PLOT DATE : 01-NOV-2012 05:53 PLOT BY : MSCD1S PLOT NAME : 023533_lp PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

EXISTING DISTRIBUTION CENTER UU. REMOVE WHEN TEMPORARY LIGHTING IS REMOVED 1E

STA. 238BL+88.3, 4.0' LT
NEW DISTRIBUTION CENTER UU 1E

STA. 239BL+0.2, 5.0' LT
PB-UU04 1E

STA. 238BL+46.7, 2.4' LT
1E UUB1A

PROTECT POWER POLE DURING CONSTRUCTION

238BL

239BL

STA. 238BL+46.7, 2.4' LT
1E UUB1B

STA. 238BL+70.6, 4.6' RT
1E PB-UU02

STA. 238BL+80.0, 1.0' RT
PB-UU03 1E

NEW UU	
A,C,E, B,D,F*	BLACK FOR ODD NUMBER AND 'B' POLES RED FOR EVEN NUMBER AND 'A' POLES
N	WHITE
GND	BARE OR GREEN
240/480V, 1 PHASE, ISOLATED NEUTRAL	
NOTE: *EXISTING CIRCUITS A,B,C,D,E,F BEYOND NEW CONSTRUCTION ARE GROUNDED NEUTRAL.	

N. ROBERTSON STREET

STA. 238BL+88.3, 4.0' LT
NEW DISTRIBUTION CENTER UU 1E

MATCHLINE 77FN+50

STA. 76FN+70.1, 23.8' LT
2A UUB6B

STA. 76FN+16.0, 28.6' LT
2A PB-UU12

STA. 76FN+71.8, 38.9' RT
PB-UU14 2A

EXISTING B-8 TO REMAIN

ROCKWAY PLACE

STA. 76FN+03.3, 23.8' LT
2A UUB6A

CAUTION

STA. 75FN+0.3, 25.1' LT
2A UUB5B

CAUTION

STA. 76FN+16.8, 24.3' RT
PB-UU13 2A

DE-ENERGIZED DURING CONSTRUCTION. RE-ENERGIZE DURING FINAL INSTALLATION. WET SPLICE AT PB.

PARKING

STA. 73FN+98.9, 37.5' RT
PB-UU09 1D

STA. 73FN+93.0, 29.8' LT
1D PB-UU08

STA. 73FN+86.9, 30.7' LT
1D UUB5A

STA. 244BL+46.5, 76.1' LT
UUC1 1D

STA. 244BL+77.6, 67.1' LT
1A PB-UU25
INSTALLED AS PART OF TEMPORARY LIGHTING

STA. 243BL+2.7, 54.6' LT
1D PB-UU07

STA. 240BL+48.3, 2.6' RT
1E PB-UU26

STA. 241BL+36.2, 1.5' LT
1D UUB3A

STA. 245BL+66.3, 55.8' LT
UUC2 1D

MATCHLINE 246BL+50

STA. 242BL+95.3, 7.9' RT
1D UUB4B

246BL

240BL

241BL

STA. 241BL+36.2, 1.5' LT
1D UUB3B

W. BLUEMOUND ROAD

STA. 242BL+95.3, 7.9' RT
1D UUB4A

STA. 242BL+68.5, 11.9' LT
1D PB-UU06

STA. 239BL+65.5, 4.7' LT
PB-UU05 1E

STA. 239BL+55.1, 5.0' LT
UUB2B 1E

STA. 239BL+55.1, 5.0' LT
UUB2A 1E

SEE CITY OF MILWAUKEE LIGHTING SHEETS, HEREIN FOR NEW LIGHTING ON SOUTH SIDE OF W. BLUEMOUND ROAD EAST OF N. GLENVIEW AVENUE AND N. GLENVIEW AVENUE SOUTH OF BLUEMOUND ROAD.

N. GLENVIEW AVENUE

PARKING

PLEASANT VIEW STREET

ELM SPRING AVENUE

STA. 237BL+16.2, 5.7' RT
1E UUE1A

STA. 237BL+08.4, 6.6' RT
1E PB-UU23

STA. 236BL+28.6, 6.2' LT
1E PB-UU24

STA. 235BL+69.7, 0.2' LT
1E UUE2B

UUE3A TO REMAIN

UUE3B TO REMAIN

232BL

234BL

236BL

238BL

CAUTION

STA. 234BL+35.4, 0.4' RT
1E PB-UU01

STA. 237BL+16.2, 5.7' RT
1E UUE1B

STA. 235BL+69.7, 0.2' LT
1E UUE2A

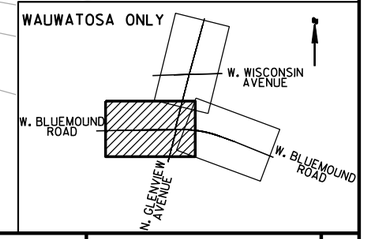
GLENCOE CIRCLE

RAVENSWOOD CIRCLE

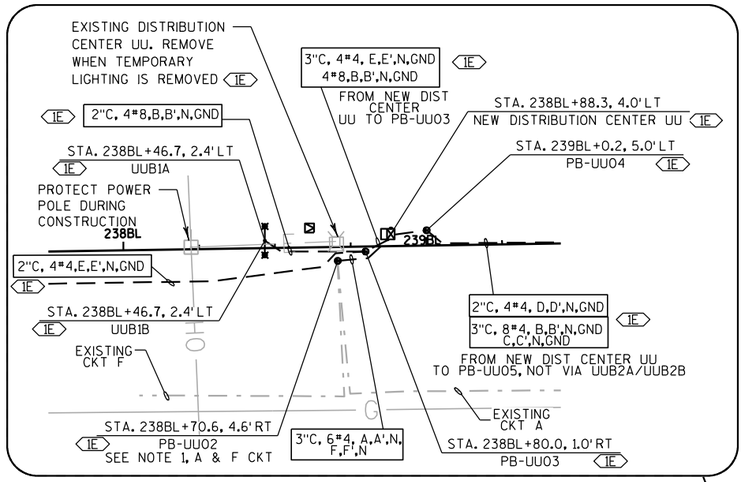
LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- XX DENOTES THE CONSTRUCTION STAGE NUMBER
- W / XXYZ — CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED LUMINAIRE
  W - STATION/OFFSET
  XX - DISTRIBUTION CENTER, Y - CIRCUIT,
  Z - POLE NUMBER
- W / XXYZ — CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED TWIN LUMINAIRE
  W - STATION/OFFSET
  XX - DISTRIBUTION CENTER, Y - CIRCUIT,
  Z - POLE NUMBER
- DISTRIBUTION CENTER
- PULL BOX 24" x 36"
- PULL BOX 24" x 42"
- ELECTRIC METER SOCKET
- ELECTRIC UTILITY TRANSFORMER

WAUWATOSA ONLY



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL - CITY OF WAUWATOSA	SHEET	E



NEW UU	
A,C,E, B,D,F*	BLACK FOR ODD NUMBER AND 'B' POLES RED FOR EVEN NUMBER AND 'A' POLES
N	WHITE
GND	BARE OR GREEN
240/480V, 1 PHASE, ISOLATED NEUTRAL	
NOTE: *EXISTING CIRCUITS A,B,C,D,E,F BEYOND NEW CONSTRUCTION ARE GROUNDED NEUTRAL.	

SEE NOTE 2

N. ROBERTSON STREET

MATCHLINE 77FN+50

2A 2"C, 4*8, B,B',N,GND
STA. 76FN+70.1, 23.8'LT 2A UUB6B
2A 2"C, 4*8, B,B',N,GND TO UUB7B
STA. 76FN+16.0, 28.6'LT 2A PB-UU12
2A 3"C, 8*4, B,B',N,GND, B,B',N,GND 4*8, B,N,B'GND
ONE SET TO PB-UU13, ONE SET TO PB-UU14 & *8 SET TO UUB6B
STA. 76FN+03.3, 23.8'LT 2A UUB6A
STA. 75FN+0.3, 25.1'LT 2A UUB5B
STA. 76FN+71.8, 38.9'RT PB-UU14 2A SEE NOTE 1, B CKT
EXISTING B-8 TO REMAIN
ROCKWAY PLACE
2"C, 4*4, B,B',N,GND 2A
STA. 76FN+16.8, 24.3'RT 2A PB-UU13 SEE NOTE 1, B CKT
DE-ENERGIZED DURING CONSTRUCTION. RE-ENERGIZE DURING FINAL INSTALLATION. WET SPLICE AT PB.
3"C, 8*4, B,B',N,GND, B,B',N,GND 1D
2"C, 4*4, C,C',N,GND 1D
2A 2"C, 4*4, B,B',N,GND FROM POLE UUB5A TO POLE UUB6A
STA. 73FN+98.9, 37.5'RT PB-UU09 1D
STA. 73FN+93.0, 29.8'LT 1D PB-UU08 DO NOT SPLICE IN PB
2"C, 4*4, C,C',N,GND 1D TO POLE UUC2
STA. 73FN+86.9, 30.7'LT 1D UUB5A SEE NOTE 3
STA. 244BL+46.5, 76.1'LT 1D UUC1
STA. 244BL+77.6, 67.1'LT 1A PB-UU25 INSTALLED AS PART OF TEMPORARY LIGHTING
STA. 245BL+66.3, 55.8'LT 1D UUC2
MATCHLINE 246BL+50
1D 4*4, C,C',N,GND
STA. 242BL+95.3, 7.9'RT 1D UUB4B
STA. 242BL+95.3, 7.9'RT UUB4A 1D
STA. 242BL+68.5, 11.9'LT 1D PB-UU06
3"C, 8*4, B,N,B'GND, B,N,B'GND 1D DO NOT SPLICE IN PB
SEE CITY OF MILWAUKEE LIGHTING SHEETS, HEREIN FOR NEW LIGHTING ON SOUTH SIDE OF W. BLUEMOUND ROAD EAST OF N. GLENVIEW AVENUE AND N. GLENVIEW AVENUE SOUTH OF BLUEMOUND ROAD.

PLEASANT VIEW STREET

ELM SPRING AVENUE

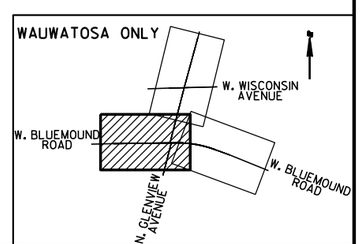
STA. 237BL+16.2, 5.7'RT 1E UUE1A
STA. 237BL+08.4, 6.6'RT 1E PB-UU23
STA. 236BL+28.6, 6.2'LT 1E PB-UU24
STA. 235BL+69.7, 0.2'LT 1E UUE2B
UUE3A TO REMAIN
EXISTING CKT E UUE3B TO REMAIN
232BL
234BL
236BL
238BL
240BL
242BL
244BL
246BL
STA. 234BL+35.4, 0.4'RT 1E PB-UU01 SEE NOTE 1, E CKT
STA. 235BL+69.7, 0.2'LT 1E UUE2A
STA. 237BL+16.2, 5.7'RT 1E UUE1B
1E 2"C, 4*4, E,E',N,GND FROM PB-UU03 TO PB-UU01
STA. 238BL+88.3, 4.0'LT NEW DISTRIBUTION CENTER UU 1E
EXISTING CKT D WET SPLICE IN PB
3"C, 8*4, B,B',N,GND, C,C',N,GND FROM PB-UU05 TO PB-UU08 1D
STA. 240BL+ 48.3, 2.6'RT PB-UU26 1E
STA. 243BL+2.7, 54.6'LT 1D PB-UU07
STA. 241BL+36.2, 1.5'LT UUB3A 1D
STA. 241BL+36.2, 1.5'LT 1D UUB3B
STA. 239BL+65.5, 4.7'LT PB-UU05 1E SEE NOTE 1, D CKT
STA. 239BL+55.1, 5.0'LT UUB2B 1E
STA. 239BL+55.1, 5.0'LT UUB2A 1E
3"C, 8*4, B,B',N,GND, B,B',N,GND 1E BETWEEN PB-UU05 AND UUB2A/UUB2B DO NOT SPLICE IN PB ONE SET EACH TO/FROM PB-UU05
W. BLUEMOUND ROAD
GLENCOE CIRCLE
RAVENSWOOD CIRCLE
N. GLENVIEW AVENUE
70F
72F
58F
GUY

LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- XX DENOTES THE CONSTRUCTION STAGE NUMBER
- W / XXYZ CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED LUMINAIRE
  W - STATION/OFFSET
  XX - DISTRIBUTION CENTER, Y - CIRCUIT,
  Z - POLE NUMBER
- W / XXYZ / W / XXYZ CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED TWIN LUMINAIRE
  W - STATION/OFFSET
  XX - DISTRIBUTION CENTER, Y - CIRCUIT,
  Z - POLE NUMBER
- DISTRIBUTION CENTER
- PULL BOX 24" x 36"
- PULL BOX 24" x 42"
- ELECTRIC METER SOCKET
- ELECTRIC UTILITY TRANSFORMER

NOTES

1. SPLICE TO EXISTING CIRCUIT (3*4). WET SPLICE. TERMINATE THE EQUIPMENT GROUNDING CONDUCTOR (GND) IN THE PB. DO NOT BOND TO THE NEUTRAL IN PB.
2. CONDUCTORS IDENTIFIED AS X & X' WHERE X=CIRCUIT ID. X=BLACK CONDUCTOR AND X'=RED CONDUCTOR.
3. 3"C, 12*4, B,B',N,GND, B,B',N,GND, C,C',N,GND. TWO SETS INSTALLED IN PHASE 1D; 3RD SET INSTALL IN 2A (TO PB-UU08 AND THEN TO UUB5B).



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC - CITY OF WAUWATOSA	SHEET E

2

LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- XX — DENOTES THE CONSTRUCTION STAGE NUMBER
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- W / XXYZ / W / XXYZ — CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED TWIN LUMINAIRE. W - STATION/OFFSET, XX - DISTRIBUTION CENTER, Y - CIRCUIT, Z - POLE NUMBER
- DISTRIBUTION CENTER
- PULL BOX 24" x 36"
- PULL BOX 24" x 42"
- ELECTRIC METER SOCKET
- ELECTRIC UTILITY TRANSFORMER

N

STA. 250BL+71.3, 35.8' LT
1D UUC5A

STA. 249BL+45.7, 40.3' LT
1D UUC4B

STA. 251BL+95.0, 37.6' LT
1D UUC5B

STA. 248BL+30.0, 45.9' LT
1D UUC4A

STA. 246BL+89.1, 51.8' LT
1D UUC3

POLE TO REMAIN. ROUTE OF CKT UNKNOWN

STA. 252BL+2.8, 49.1' LT
PB-UU10 1D

STA. 252BL+57.2, 47.3' LT
PB-UU11 1D

EXISTING C-6 TO REMAIN

HONEY CREEK

CONCRETE

PARKING

PKNG

W. BLUEMOUND ROAD

HONEY CREEK PKWY

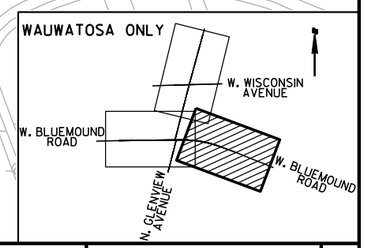
246BL 248BL 250BL 252BL 254BL 256BL 258BL 260BL

MATCHLINE 246BL+50

SEE CITY OF MILWAUKEE LIGHTING SHEETS, HEREIN FOR NEW LIGHTING ON SOUTH SIDE OF W. BLUEMOUND ROAD EAST OF N. GLENVIEW AVENUE AND N. GLENVIEW AVENUE SOUTH OF W. BLUEMOUND ROAD.

MILWAUKEE COUNTY POLE TO REMAIN ROUTE OF CKT UNKNOWN

WAUWATOSA ONLY



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL - CITY OF WAUWATOSA	SHEET	E

2

LEGEND

- CID (CABLE IN DUCT)
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- XX — DENOTES THE CONSTRUCTION STAGE NUMBER
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  W - STATION/OFFSET
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- W / XXYZ / W / XXYZ — CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED TWIN LUMINAIRE
  W - STATION/OFFSET
  XX - DISTRIBUTION CENTER, Y - CIRCUIT,
  Z - POLE NUMBER
- DISTRIBUTION CENTER
- PULL BOX 24" x 36"
- PULL BOX 24" x 42"
- ELECTRIC METER SOCKET
- ELECTRIC UTILITY TRANSFORMER

N

HONEY CREEK

STA. 250BL+71.3, 35.8'LT
1D UUC5A

STA. 249BL+45.7, 40.3'LT
1D UUC4B

STA. 251BL+95.0, 37.6'LT
1D UUC5B

POLE TO REMAIN. ROUTE OF CKT UNKNOWN

STA. 252BL+2.8, 49.1'LT
PB-UU10 1D

STA. 252BL+57.2, 47.3'LT
PB-UU11 1D
SEE NOTE 1

EXISTING C-6 TO REMAIN

STA. 248BL+30.0, 45.9'LT
1D UUC4A

4#4, C,C',N,GND CID
FROM POLE UUC1 TO POLE UUC5B

STA. 246BL+89.1, 51.8'LT
1D UUC3

2"C, 4#4, C,C',N,GND TO PB-UU11

246BL 248BL 250BL 252BL 254BL 256BL 258BL 260BL

W. BLUEMOUND ROAD

MATCHLINE 246BL+50

SEE CITY OF MILWAUKEE LIGHTING SHEETS, HEREIN FOR NEW LIGHTING ON SOUTH SIDE OF W. BLUEMOUND ROAD EAST OF N. GLENVIEW AVENUE AND N. GLENVIEW AVENUE SOUTH OF W. BLUEMOUND ROAD.

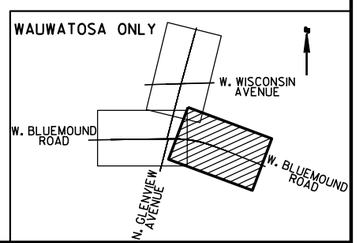
MILWAUKEE COUNTY POLE TO REMAIN ROUTE OF CKT UNKNOWN

HONEY CREEK PKWY

NOTE

1. SPLICE TO EXISTING "C" CIRCUIT (3#4). WET SPLICE. TERMINATE THE EQUIPMENT GROUNDING CONDUCTOR (GND) IN THE PB. DO NOT BOND TO THE NEUTRAL.

WAUWATOSA ONLY



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC - CITY OF WAUWATOSA	SHEET	E

2

2

LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- XX — DENOTES THE CONSTRUCTION STAGE NUMBER
- W XXYZ — CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED LUMINAIRE
  W - STATION/OFFSET
  XX - DISTRIBUTION CENTER, Y - CIRCUIT,
  Z - POLE NUMBER
- W XXYZ / W XXYZ — CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED TWIN LUMINAIRE
  W - STATION/OFFSET
  XX - DISTRIBUTION CENTER, Y - CIRCUIT,
  Z - POLE NUMBER
- DISTRIBUTION CENTER
- PULL BOX 24" x 36"
- PULL BOX 24" x 42"
- ELECTRIC METER SOCKET
- ELECTRIC UTILITY TRANSFORMER

N

N. ROBERTSON STREET

N. ROBERTSON STREET

EXISTING UUD6 TO REMAIN

STA. 308WX+95.6, 31.3'RT
2B PB-UU21

STA. 309WX+6.8, 28.5'LT
PB-UU22 2B

STA. 310WX+17.4, 28.3'RT
2B PB-UU20

STA. 310WX+1.0, 26.3'LT
UUD7 2B

STA. 82FN+11.5, 23.8'LT
2B UUD8

STA. 80FN+78.0, 23.8'LT
2B UUD13

STA. 310WX+42.2, 35.3'LT
PB-UU19 2B

STA. 80FN+14.6, 23.5'LT
2B PB-UU15

STA. 84FN+22.5, 25.0'LT
PPC29 2B

STA. 79FN+53.0, 23.9'LT
2A UUB7B

STA. 84FN+26.6, 25.0'LT
PB-PP1 2B

STA. 78FN+18.0, 23.9'LT
2A UUB7A

CAUTION

C-24 TO REMAIN

MATCHLINE 77FN+50

78FN 80FN 82FN 84FN 86FN 88FN 90FN

N. GLENVIEW AVENUE

SEE TRAFFIC SIGNAL SHEETS FOR ADDITIONAL LIGHTING

STA. 80FN+30.8, 27.8'RT
PB-UU16 2B

EXISTING UUD14 TO REMAIN

BROOKSIDE PLACE

W. WISCONSIN AVENUE

STA. 311WX+46.8, 33.5'LT
PB-UU18 2B

STA. 312WX+10.0, 26.6'LT
UUD9 2B

STA. 312WX+57.0, 28.4'LT
PB-UU17 2B

D-10 TO REMAIN

ST JUDE COURT

ST JUDE COURT

AVON COURT

PARKING

PARKING

PARKING

WAUWATOSA ONLY

W. WISCONSIN AVENUE

W. BLUEMOUND ROAD

W. BLUEMOUND ROAD

N. GLENVIEW AVENUE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL - CITY OF WAUWATOSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023555_lp.dgn PLOT DATE : 01-NOV-2012 05:54 PLOT BY : MSCD1S PLOT NAME : 023555_lp PLOT SCALE : 100:1
WISDOT/CADDS SHEET 42

2

LEGEND

- CID (CABLE IN DUCT)
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- XX — DENOTES THE CONSTRUCTION STAGE NUMBER
- W / XXYZ — CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED LUMINAIRE. W - STATION/OFFSET. XX - DISTRIBUTION CENTER, Y - CIRCUIT, Z - POLE NUMBER
- W / XXYZ / W / XXYZ — CITY OF WAUWATOSA LIGHT POLE, WITH ARM MOUNTED TWIN LUMINAIRE. W - STATION/OFFSET. XX - DISTRIBUTION CENTER, Y - CIRCUIT, Z - POLE NUMBER
- DISTRIBUTION CENTER
- PULL BOX 24" x 36"
- PULL BOX 24" x 42"
- ELECTRIC METER SOCKET
- ELECTRIC UTILITY TRANSFORMER

N

N. ROBERTSON STREET

N. ROBERTSON STREET

EXISTING CKT D
FROM DISTRIBUTION CENTER UU (3#4)

2"C, 3#4, D,D',N (2B)

EXISTING UUD6
TO REMAIN

STA. 309WX+6.8, 28.5'LT
PB-UU22 (2B)
SEE NOTE 2

STA. 308WX+95.6, 31.3'RT (2B)
PB-UU21
SEE NOTE 2

2"C, 3#4, D,D',N (2B)

STA. 310WX+17.4, 28.3'RT (2B) PB-UU20

STA. 310WX+1.0, 26.3'LT
UUD7 (2B)

STA. 82FN+11.5, 23.8'LT (2B) UUD8

2"C, 6#4, D,D',N,D,D',N (2B)
ONE SET FROM PB-UU20
ONE SET TO PB-UU18

STA. 80FN+78.0, 23.8'LT (2B) UUD13

STA. 310WX+42.2, 35.3'LT
PB-UU19 (2B)

STA. 80FN+14.6, 23.5'LT (2B) PB-UU15

STA. 84FN+22.5, 25.0'LT
PPC29 (2B)
SEE NOTE 1

STA. 79FN+53.0, 23.9'LT (2A) UUB7B

STA. 84FN+26.6, 25.0'LT
PB-PP1 (2B)
SEE NOTE 1

STA. 78FN+18.0, 23.9'LT (2A) UUB7A

2"C, 3#8, B',N,GND (2A)

EXISTING CKT C FROM
DISTRIBUTION CENTER PP (3#4)

C-24 TO REMAIN

MATCHLINE 77FN+50

78FN 80FN 82FN 84FN 86FN 88FN 90FN

N. GLENVIEW AVENUE

AVON COURT

2"C, 4#8,B,N,B',GND

2"C, 3#4, D,D',N (2B)
TO PB-UU20

SEE TRAFFIC SIGNAL SHEETS
FOR ADDITIONAL LIGHTING

C-28 TO
REMAIN

2"C, 3#6, C,C',N (2B)

ST JUDE COURT

ST JUDE COURT

STA. 80FN+30.8, 27.8'RT
PB-UU16 (2B)
SEE NOTE 2

STA. 311WX+46.8, 33.5'LT
PB-UU18 (2B)

EXISTING UUD14
TO REMAIN

STA. 312WX+10.0, 26.6'LT
UUD9 (2B)

2"C, 3#4, D,D',GND (2B)
TO PB-UU20
VIA UUD7

STA. 312WX+57.0, 28.4'LT
PB-UU17 (2B)
SEE NOTE 2

BROOKSIDE PLACE

W. WISCONSIN AVENUE

D-10 TO
REMAIN

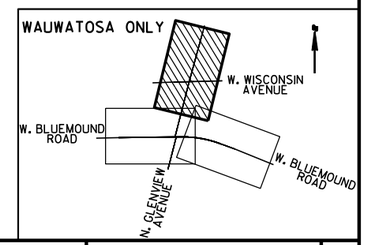
306WX 308WX 310WX 312WX 314WX 316

NOTE

1. SPLICE TO EXISTING "C" CIRCUIT. POWER FROM DISTRIBUTION CENTER PP LOCATED AT NE CORNER OF WATERTOWN PLANK ROAD AND ELM LAWN (84TH).

2. SPLICE INTO EXISTING "D" CIRCUIT FROM DISTRIBUTION CENTER UU (3#4). WET SPLICE

WAUWATOSA ONLY



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC - CITY OF WAUWATOSA	SHEET E

2

GENERAL NOTES

1. SEE DETAILS MIL-100 AND MIL-101 FOR CONDUIT INSTALLATION BEHIND CURB, TYPICAL, UNLESS OTHERWISE NOTED.
2. SEE DETAIL MIL-120 FOR CONTRACTOR CONDUIT INSTALLATION TO STREETSIDE PEDESTAL, TYPICAL, UNLESS OTHERWISE NOTED.
3. SEE DETAIL MIL-105 FOR TYPICAL CONSTRUCTION OF 30" X 36" BOX OUT AROUND STREET LIGHTING POLE OR TRAFFIC SIGNAL. SEE STATION CALLOUT IF BOX OUT IS LARGER.
4. ALL POLES, LUMINAIRES AND WIRES TO BE PROVIDED BY CITY OF MILWAUKEE UNDER FUTURE CONTRACT.
5. ALL CONDUITS TO BE INSTALLED WITH PULL ROPE ONLY. WIRING BY CITY OF MILWAUKEE. CONDUITS CAPPED MORE THAN 5'-0" FROM PULL BOX TO HAVE #14 AWG TRACE WIRE IN LIEU OF PULL ROPE. PULL ROPE AND TRACE WIRE INCIDENTAL TO CONDUIT.
6. ALL PULL BOXES ASSOCIATED WITH LIGHT POLES ARE LOCATED 6'-0" FROM C/L OF LIGHT POLE IN DIRECTION SHOWN UNLESS OTHERWISE SHOWN.

LEGEND

- W / X — FUTURE STREET POLE OR TRAFFIC SIGNAL. CITY OF MILWAUKEE TO SUPPLY AND INSTALL. W - STATION/OFFSET, X - POLE ID NUMBER
- W / X — VAULT, W - STATION/OFFSET, X - VAULT ID NUMBER
- BOX OUT CONSTRUCTION AROUND STREET POLE OR TRAFFIC SIGNAL, BO# INDICATES ID NUMBER
- CONDUIT - 2.5" EMPTY, UNLESS OTHERWISE SHOWN
- EXISTING POLE OR TRAFFIC SIGNAL
- XX — DENOTES STAGE OF CONSTRUCTION

N

N. GLENVIEW AVENUE

N. ROBERTSON STREET

W. BLUEMOUND ROAD

HONEY CREEK PKWY

RAVENSWOOD CIRCLE

LIGHTING BOX OUT, BO1
1B FROM STA. 244BL+18
TO STA. 244BL+23
FULL WIDTH OF MEDIAN

STA. 244BL+20.0, 11.0'LT
#8338

STA. 244BL+22.6, 11.0'LT
VAULT V6
SEE DETAIL MIL-108 1B

STA. 244BL+21.8, 48.3'RT
VAULT V1
1B SEE DETAIL MIL-121

STA. 71F+81.3, 48.3'LT
#437

STA. 72F+08.1, 40.9'RT
#436

LIGHTING BOX OUT, BO2
FROM STA. 72F+06
TO STA. 72F+10

STA. 72F+05.5, 40.5'RT
VAULT V2
SEE DETAIL MIL-108 1B

STA. 245BL+49.1, 49.5'LT
#8219

STA. 247BL+10.0, 49.5'LT
#8201

STA. 249BL+06.0, 44.0'LT
#8113

STA. 250BL+90.0, 37.8'LT
#8041

STA. 70F+70.9, 4.4'LT
#418 1C

LIGHTING BOX OUT, BO3
1B FROM STA. 70F+69
TO STA. 70F+73

STA. 70F+64.0, 44.1'LT
VAULT V5
SEE DETAIL MIL-121 1C

STA. 70F+66.1, 49.7'RT
VAULT V3
SEE DETAIL MIL-121 1B

STA. 70F+64.9, 4.3'LT
1B VAULT V4

MATCHLINE 70F+00

#375 EXISTING RUSTIC WOOD POLE. BRING CONDUIT VERTICAL ALONG SIDE OF POLE

PARKING

PKNG

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL - CITY OF MILWAUKEE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023557_lp.dgn PLOT DATE : 01-NOV-2012 05:54 PLOT BY : MSCD1S PLOT NAME : 023557_lp PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

GENERAL NOTES

1. SEE DETAILS MIL-100 AND MIL-101 FOR CONDUIT INSTALLATION BEHIND CURB, TYPICAL, UNLESS OTHERWISE NOTED.
2. SEE DETAIL MIL-120 FOR CONTRACTOR CONDUIT INSTALLATION TO STREETSIDE PEDESTAL, TYPICAL, UNLESS OTHERWISE NOTED.
3. SEE DETAIL MIL-105 FOR TYPICAL CONSTRUCTION OF 30" X 36" BOX OUT AROUND STREET LIGHTING POLE OR TRAFFIC SIGNAL. SEE STATION CALLOUT IF BOX OUT IS LARGER.
4. ALL POLES, LUMINAIRES AND WIRES TO BE PROVIDED BY CITY OF MILWAUKEE UNDER FUTURE CONTRACT.
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6. ALL PULL BOXES ASSOCIATED WITH LIGHT POLES ARE LOCATED 6'-0" FROM C/L OF LIGHT POLE IN DIRECTION SHOWN UNLESS OTHERWISE SHOWN.

LEGEND

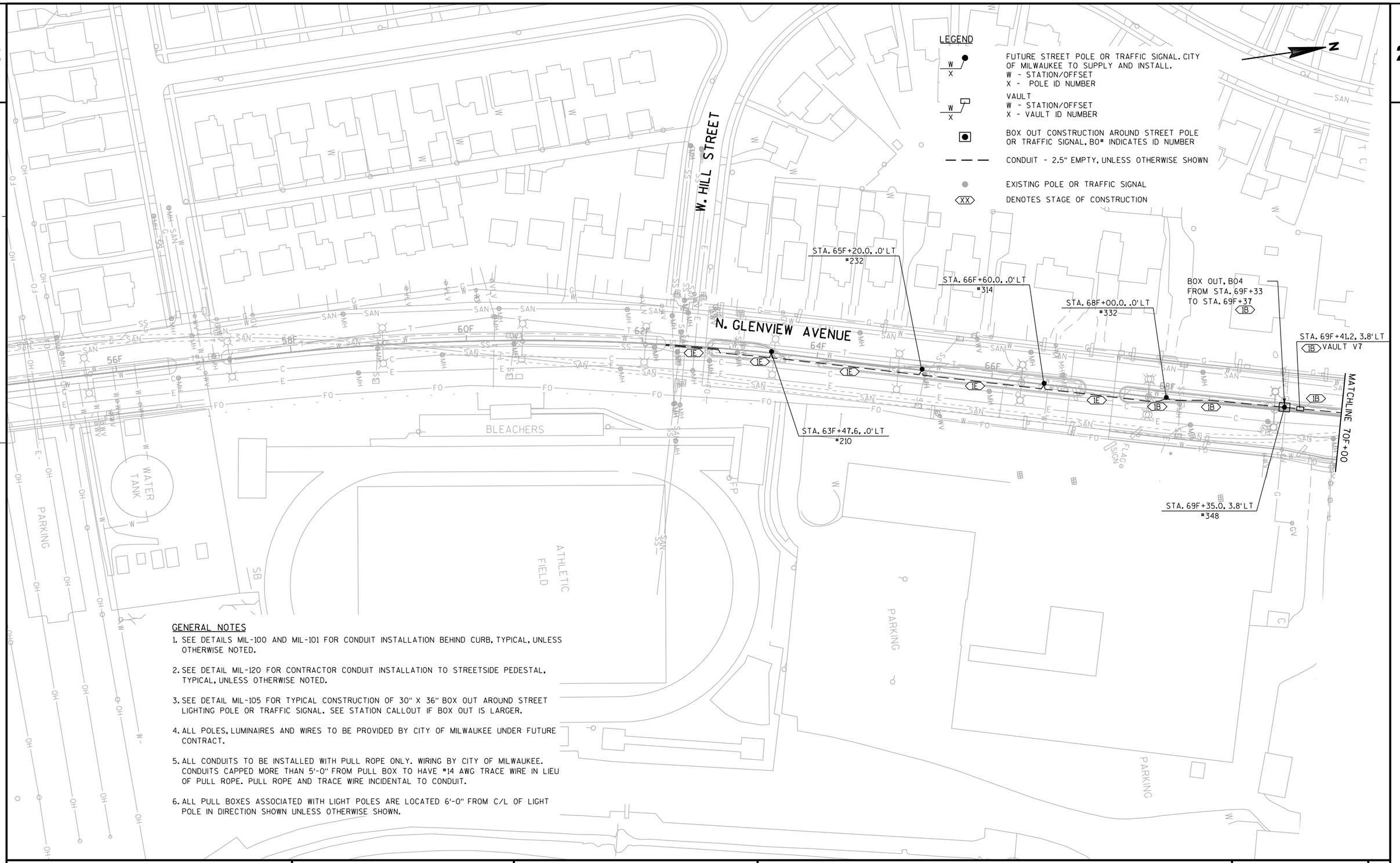
- W / X — FUTURE STREET POLE OR TRAFFIC SIGNAL. CITY OF MILWAUKEE TO SUPPLY AND INSTALL. W - STATION/OFFSET, X - POLE ID NUMBER
- W / X — VAULT, W - STATION/OFFSET, X - VAULT ID NUMBER
- BOX OUT CONSTRUCTION AROUND STREET POLE OR TRAFFIC SIGNAL, BO# INDICATES ID NUMBER
- CONDUIT - 2.5" EMPTY, UNLESS OTHERWISE SHOWN
- EXISTING POLE OR TRAFFIC SIGNAL
- XX — DENOTES STAGE OF CONSTRUCTION

N

N. ROBERTSON STREET
N. GLENVIEW AVENUE
W. BLUEMOUND ROAD
HONEY CREEK PKWY
RAVENSWOOD CIRCLE
HONEY CREEK PKWY
MATCHLINE 70F+00
78FN
76FN
74FN
72F
240BL
242BL
244BL
246BL
248BL
250BL
252BL
254BL
LIGHTING BOX OUT, BO1 FROM STA. 244BL+18 TO STA. 244BL+23 FULL WIDTH OF MEDIAN
STA. 244BL+20.0, 11.0'LT #8338
STA. 244BL+22.6, 11.0'LT VAULT V6 SEE DETAIL MIL-108
2.5"PVC, EMPTY
STA. 244BL+21.8, 48.3'RT VAULT V1 SEE DETAIL MIL-121
STA. 71F+81.3, 48.3'LT #437
STA. 70F+70.9, 4.4'LT #418
STA. 72F+08.1, 40.9'RT #436
LIGHTING BOX OUT, BO2 FROM STA. 72F+06 TO STA. 72F+10
STA. 245BL+49.1, 49.5'LT #8219
STA. 247BL+10.0, 49.5'LT #8201
STA. 249BL+06.0, 44.0'LT #8113
STA. 250BL+90.0, 37.8'LT #8041
LIGHTING BOX OUT, BO3 FROM STA. 70F+69 TO STA. 70F+73
STA. 70F+64.0, 44.1'LT VAULT V5 SEE DETAIL MIL-121
STA. 72F+05.5, 40.5'RT VAULT V2 SEE DETAIL MIL-108
2.5"PVC, EMPTY SEE DETAIL MIL-102
STA. 70F+66.1, 49.7'RT VAULT V3 SEE DETAIL MIL-121
STA. 70F+64.9, 4.3'LT VAULT V4
#375 EXISTING RUSTIC WOOD POLE. BRING CONDUIT VERTICAL ALONG SIDE OF POLE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC - CITY OF MILWAUKEE	SHEET E

2



GENERAL NOTES

1. SEE DETAILS MIL-100 AND MIL-101 FOR CONDUIT INSTALLATION BEHIND CURB, TYPICAL, UNLESS OTHERWISE NOTED.
2. SEE DETAIL MIL-120 FOR CONTRACTOR CONDUIT INSTALLATION TO STREETSIDE PEDESTAL, TYPICAL, UNLESS OTHERWISE NOTED.
3. SEE DETAIL MIL-105 FOR TYPICAL CONSTRUCTION OF 30" X 36" BOX OUT AROUND STREET LIGHTING POLE OR TRAFFIC SIGNAL. SEE STATION CALLOUT IF BOX OUT IS LARGER.
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6. ALL PULL BOXES ASSOCIATED WITH LIGHT POLES ARE LOCATED 6'-0" FROM C/L OF LIGHT POLE IN DIRECTION SHOWN UNLESS OTHERWISE SHOWN.

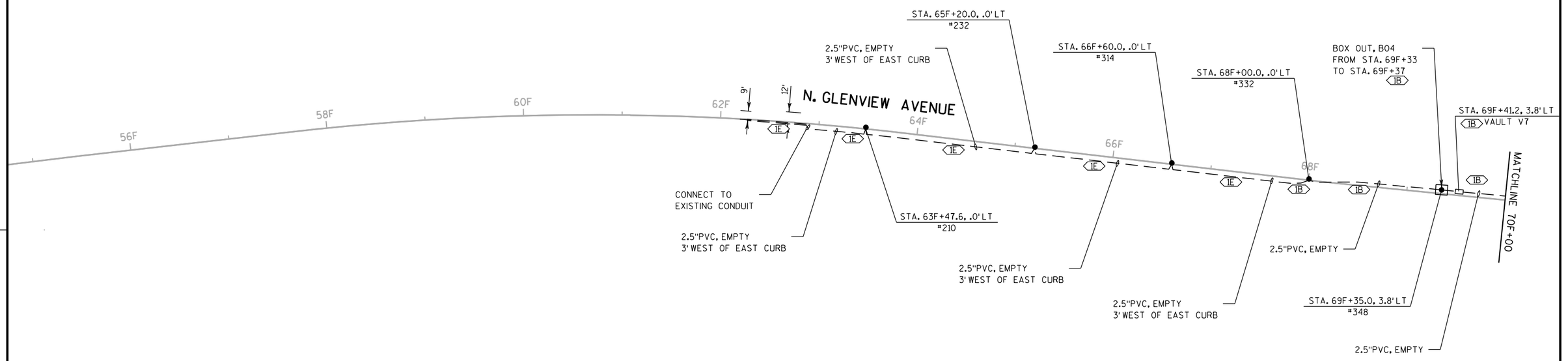
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL - CITY OF MILWAUKEE	SHEET	E

2

LEGEND

- W / X — FUTURE STREET POLE OR TRAFFIC SIGNAL. CITY OF MILWAUKEE TO SUPPLY AND INSTALL. W - STATION/OFFSET X - POLE ID NUMBER
- W / X — VAULT W - STATION/OFFSET X - VAULT ID NUMBER
- BOX OUT CONSTRUCTION AROUND STREET POLE OR TRAFFIC SIGNAL, BO# INDICATES ID NUMBER
- CONDUIT - 2.5" EMPTY, UNLESS OTHERWISE SHOWN
- EXISTING POLE OR TRAFFIC SIGNAL
- XX — DENOTES STAGE OF CONSTRUCTION

N

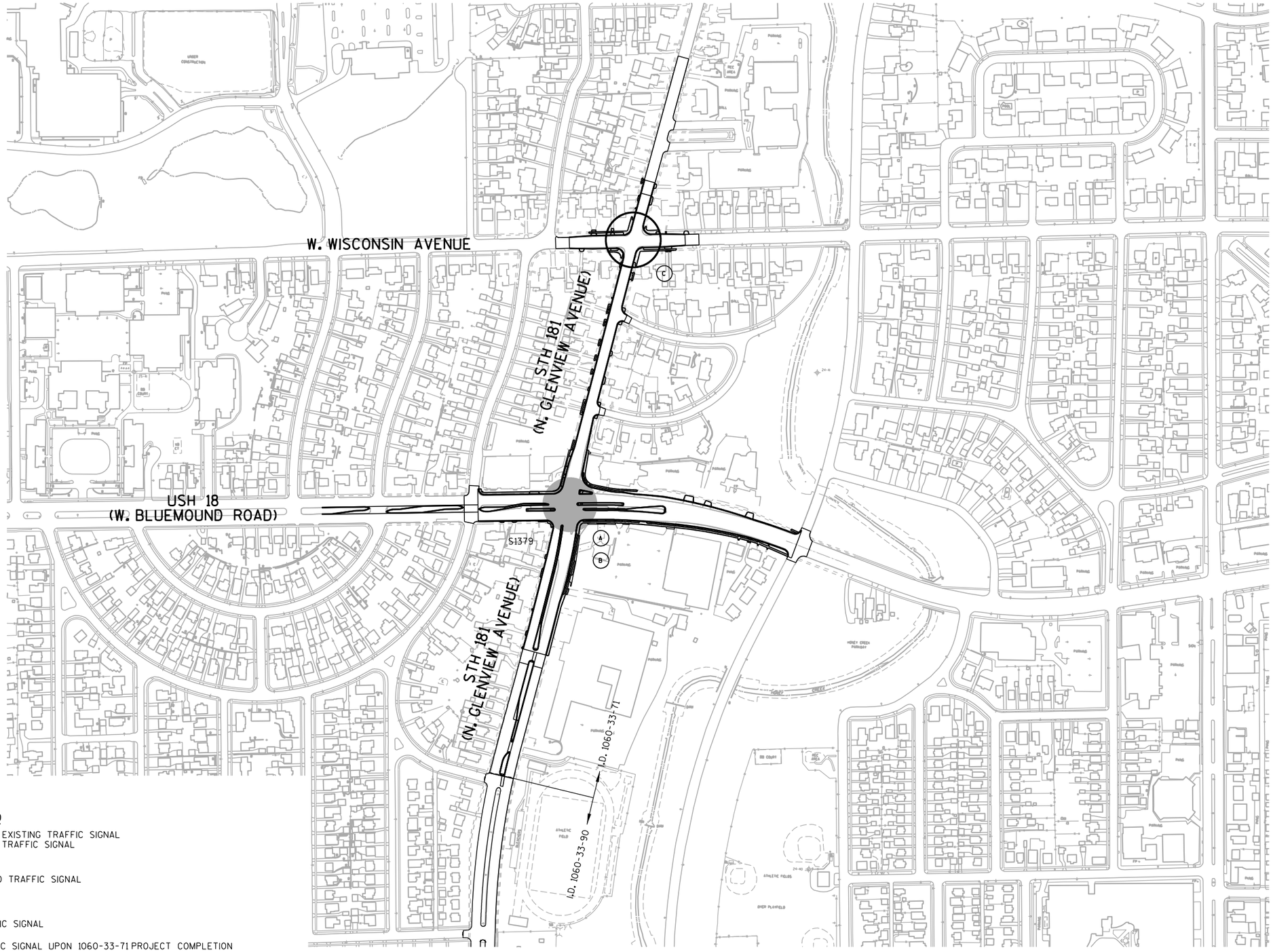


GENERAL NOTES

1. SEE DETAILS MIL-100 AND MIL-101 FOR CONDUIT INSTALLATION BEHIND CURB, TYPICAL, UNLESS OTHERWISE NOTED.
2. SEE DETAIL MIL-120 FOR CONTRACTOR CONDUIT INSTALLATION TO STREETSIDE PEDESTAL, TYPICAL, UNLESS OTHERWISE NOTED.
3. SEE DETAIL MIL-105 FOR TYPICAL CONSTRUCTION OF 30" X 36" BOX OUT AROUND STREET LIGHTING POLE OR TRAFFIC SIGNAL. SEE STATION CALLOUT IF BOX OUT IS LARGER.
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PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC - CITY OF MILWAUKEE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023560_lp.dgn PLOT DATE : 01-NOV-2012 05:55 PLOT BY : MSCD1S PLOT NAME : 023560_lp PLOT SCALE : 100:1
WISDOT/CADDS SHEET 42



LEGEND

SXXXX — CITY OF MILWAUKEE OWNED EXISTING TRAFFIC SIGNAL
WISDOT OWNED PERMANENT TRAFFIC SIGNAL

CITY OF WAUWATOSA OWNED TRAFFIC SIGNAL

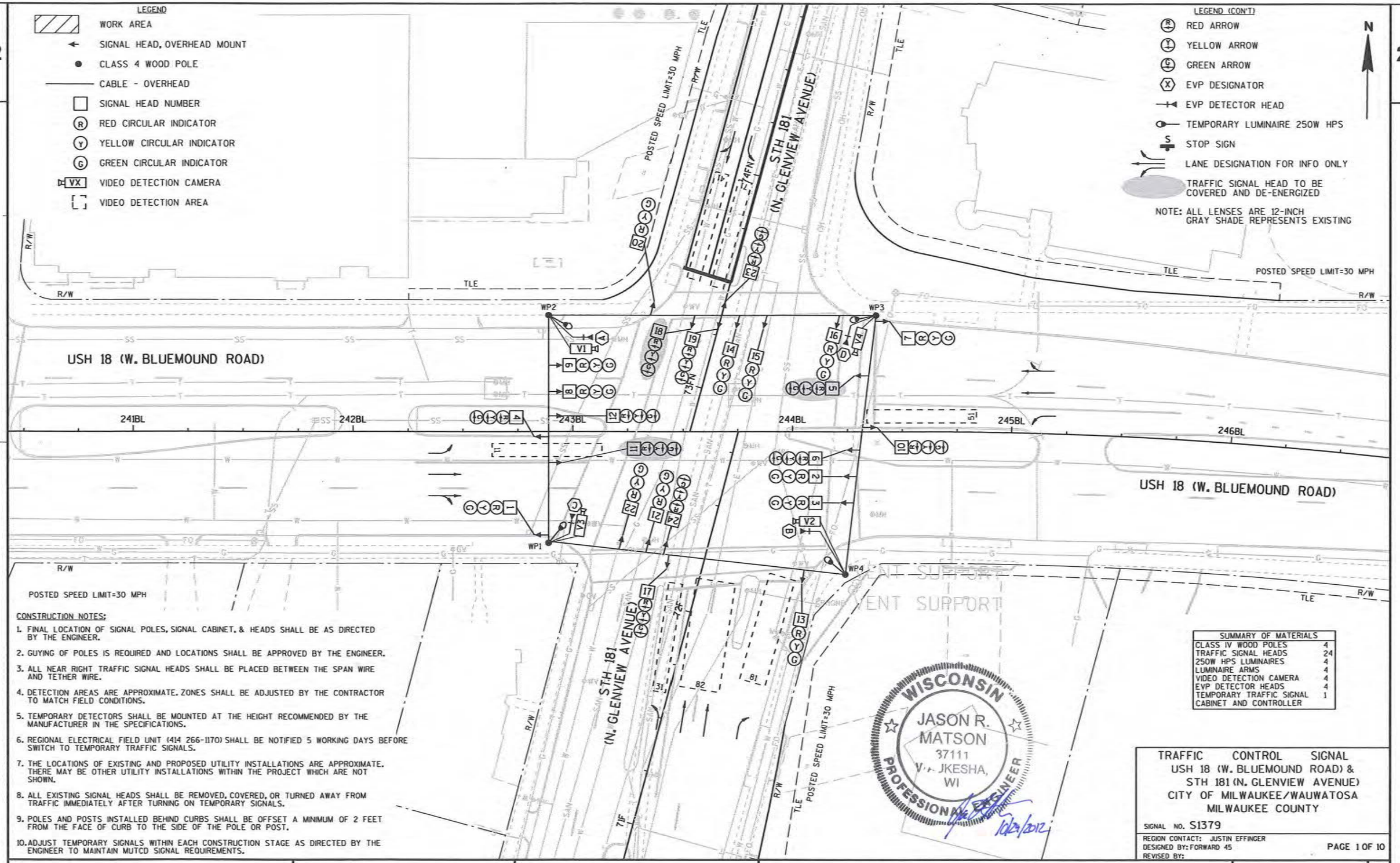
(A) INSTALL TEMPORARY TRAFFIC SIGNAL

(B) REMOVE TEMPORARY TRAFFIC SIGNAL UPON 1060-33-71 PROJECT COMPLETION

(C) TEMPORARY TRAFFIC SIGNAL NOT REQUIRED

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PROJECT OVERVIEW	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023901_sp_tmp_po.dgn PLOT DATE : 29-OCT-2012 13:47 PLOT BY : mscjym PLOT NAME : PLOT SCALE : 375:1



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. REGIONAL ELECTRICAL FIELD UNIT (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.

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 10

PROJECT NO: 1060-33-71	HWY: USH 18	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-STAGE 1A	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023910_sp_tmp.dgn PLOT DATE : 29-OCT-2012 13:48 PLOT BY : mscjym PLOT NAME : 023910_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- (S) STOP SIGN
- LANE DESIGNATION FOR INFO ONLY
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING

N

USH 18 (W. BLUEMOUND ROAD)

STH 181 (N. GLENVIEW AVENUE)

POSTED SPEED LIMIT=30 MPH

TLE

R/W

74FN

73FN

72F

71F

WP1 WP2 WP3 WP4

V1 V2 V3 V4

241BL 242BL 243BL 244BL 245BL 246BL

51

CONSTRUCTION NOTES:

1. STAGE 1A-O IS NIGHT WORK. SB LEFT-TURN IS PROHIBITED DURING STAGE 1A-O.

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 10

PROJECT NO: 1060-33-71	HWY: USH 18	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A-O	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023911A-0_sp_tmp.dgn PLOT DATE : 30-OCT-2012 09:28 PLOT BY : mscjym PLOT NAME : 023911A-0_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- (S) STOP SIGN
- LANE DESIGNATION FOR INFO ONLY
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING

N

USH 18 (W. BLUEMOUND ROAD)

STH 181 (N. GLENVIEW AVENUE)

POSTED SPEED LIMIT=30 MPH

TLE

R/W

WP1 WP2 WP3 WP4

V1 V2 V3

241BL 242BL 243BL 244BL 245BL 246BL

71F 72F 73F 74FN

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 3 OF 10

PROJECT NO: 1060-33-71	HWY: USH 18	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023911A-1_sp_tmp.dgn PLOT DATE : 29-OCT-2012 10:32 PLOT BY : mscjym PLOT NAME : 023911A-1_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- (S) STOP SIGN
- LANE DESIGNATION FOR INFO ONLY
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING

N

USH 18 (W. BLUEMOUND ROAD)

STH 181 (N. GLENVIEW AVENUE)

POSTED SPEED LIMIT=30 MPH

TLE

R/W

WP1 WP2 WP3 WP4

V1 V2 V3

241BL 242BL 243BL 244BL 245BL 246BL

72F 14FN 73FN 31 81 71F

PLANT SUPPORT
VENT SUPPORT

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 4 OF 10

PROJECT NO: 1060-33-71	HWY: USH 18	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023911B_sp_tmp.dgn PLOT DATE : 29-OCT-2012 10:33 PLOT BY : mscjym PLOT NAME : 023911B_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- (S) STOP SIGN
- LANE DESIGNATION FOR INFO ONLY
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING

N

2

2

USH 18 (W. BLUEMOUND ROAD)

STH 181 (N. GLENVIEW AVENUE)

POSTED SPEED LIMIT=30 MPH

R/W

TLE

WP1 WP2 WP3 WP4

V1 V2 V3

241BL 242BL 243BL 244BL 245BL 246BL

74FN 73FN 72F 71F

PLAT SUPPORT

VENT SUPPORT

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 5 OF 10

PROJECT NO: 1060-33-71	HWY: USH 18	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1C	SHEET E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023911C_sp_tmp.dgn PLOT DATE : 29-OCT-2012 10:33 PLOT BY : mscjym PLOT NAME : 023911C_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- (S) STOP SIGN
- LANE DESIGNATION FOR INFO ONLY
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING

N

2

2

STH 181 (N. GLENVIEW AVENUE)

POSTED SPEED LIMIT=30 MPH

TLE

R/W

WP1 WP2 WP3 WP4

V1 V2 V3

74FN 73FN 72F 71F

241BL 242BL 243BL 244BL 245BL 246BL

USH 18 (W. BLUEMOUND ROAD)

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 6 OF 10

PROJECT NO: 1060-33-71	HWY: USH 18	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1D	SHEET E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023911D_sp_tmp.dgn PLOT DATE : 29-OCT-2012 10:33 PLOT BY : mscjym PLOT NAME : 023911D_sp_tmp PLOT SCALE : 40:1

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- (S) STOP SIGN
- LANE DESIGNATION FOR INFO ONLY
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING

N

USH 18 (W. BLUEMOUND ROAD)

STH 181 (N. GLENVIEW AVENUE)

POSTED SPEED LIMIT=30 MPH

TLE

R/W

WP1 WP2 WP3 WP4

V1 V2 V3

241BL 242BL 243BL 244BL 245BL 246BL

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 7 OF 10

PROJECT NO: 1060-33-71	HWY: USH 18	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1E	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023911E_sp_tmp.dgn PLOT DATE : 29-OCT-2012 10:34 PLOT BY : mscjym PLOT NAME : 023911E_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- LANE DESIGNATION FOR INFO ONLY
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING

N

USH 18 (W. BLUEMOUND ROAD)

STH 181 (N. GLENVIEW AVENUE)

POSTED SPEED LIMIT=30 MPH

241BL 242BL 243BL 244BL 245BL 246BL

WP1 WP2 WP3 WP4 V1 V2 V3 V4

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 8 OF 10

PROJECT NO: 1060-33-71	HWY: USH 18	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2A	SHEET E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023912A_sp_tmp.dgn PLOT DATE : 29-OCT-2012 10:34 PLOT BY : mscjym PLOT NAME : 023912A_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- (S) STOP SIGN
- LANE DESIGNATION FOR INFO ONLY
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING

N

USH 18 (W. BLUEMOUND ROAD)

STH 181 (N. GLENVIEW AVENUE)

POSTED SPEED LIMIT=30 MPH

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 9 OF 10

PROJECT NO: 1060-33-71	HWY: USH 18	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2B	SHEET E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\023912B_sp_tmp.dgn PLOT DATE : 29-OCT-2012 10:35 PLOT BY : mscjym PLOT NAME : 023912B_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	4,5,6	G ←	Y ← R ←	R ←	R ← R ←	R ←	R ← R ←	R ←	R ← R ←	R ←
Ø2	7,8,9	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	20,21,22	R ←	R ← R ←	R ←	R ← R ←	R ←	R ← R ←	G ←	Y ← R ←	R ←
Ø5	10,11,12	R ←	R ← R ←	R ←	R ← R ←	R ←	R ← R ←	R ←	R ← R ←	R ←
Ø6	1,2,3	R ←	R ← R ←	R ←	R ← R ←	R ←	R ← R ←	R ←	R ← R ←	R ←
Ø7	23,24	R ←	R ← R ←	R ←	R ← R ←	R ←	R ← R ←	R ←	R ← R ←	R ←
Ø8	13,14,15,16	R ←	R ← R ←	R ←	R ← R ←	R ←	R ← R ←	R ←	R ← R ←	R ←
OLA										
OLB										
OLC										
OLD										
Ø2P										
Ø4P										
Ø6P										
Ø8P										

N

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

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

BARRIER

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		X			VIDEO
31		X			3	3		X			VIDEO
41		X			4	4		X			VIDEO
42		X			4	4		X			VIDEO
51		X			5	5		X			VIDEO
71		X			7	7		X			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		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	

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.)

USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379
CONTROLLER TYPE: TEMP
DATE 10/12
PAGE NO. 10 OF 10

PROJECT NO: 1060-33-71 | HWY: USH 18 | COUNTY: MILWAUKEE | TEMPORARY SEQUENCE OF OPERATIONS - ALL STAGES | SHEET E

2

N

W. WISCONSIN AVENUE

STH 181
(N. GLENVIEW AVENUE)

USH 18
(W. BLUEMOUND ROAD)

S1379

STH 181
(N. GLENVIEW AVENUE)

I.D. 1060-33-71

I.D. 1060-33-90

LEGEND

CITY OF MILWAUKEE OWNED EXISTING TRAFFIC SIGNAL
WISDOT OWNED PERMANENT TRAFFIC SIGNAL

SXXXX

CITY OF WAUWATOSA OWNED TRAFFIC SIGNAL

1 REMOVE TRAFFIC SIGNAL

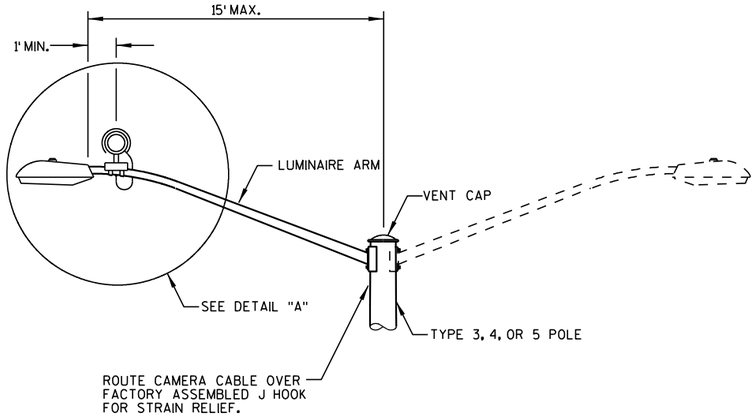
2 CITY OF MILWAUKEE TO REMOVE ABOVEGROUND TRAFFIC SIGNAL EQUIPMENT

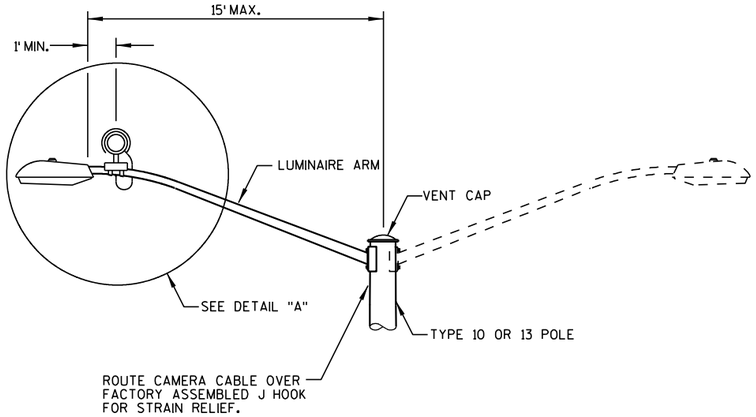
3 REMOVE REMAINING TRAFFIC SIGNAL EQUIPMENT

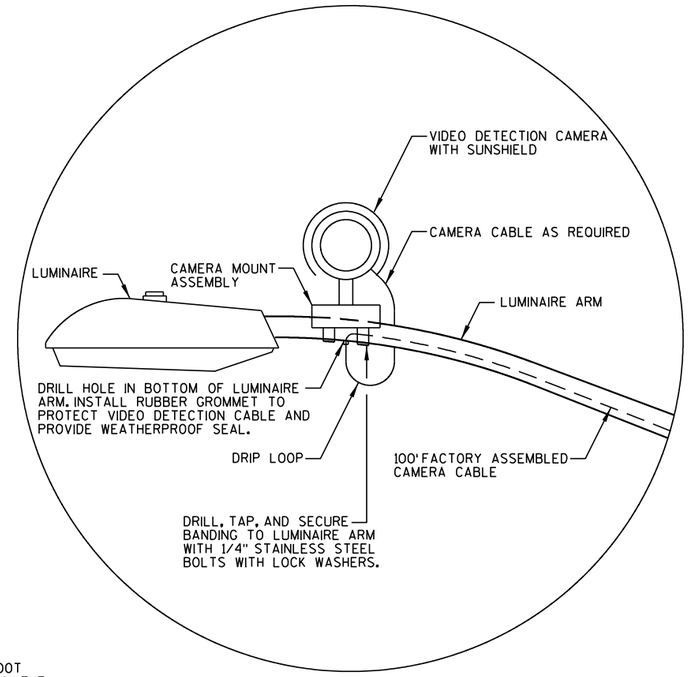
4 INSTALL COMPLETE PERMANENT TRAFFIC SIGNAL

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PROJECT OVERVIEW	SHEET	E

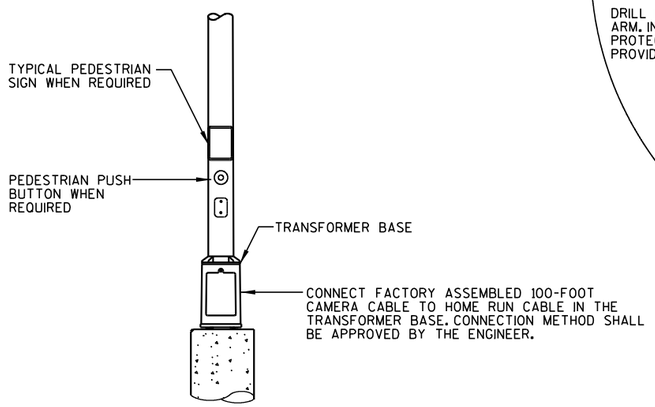
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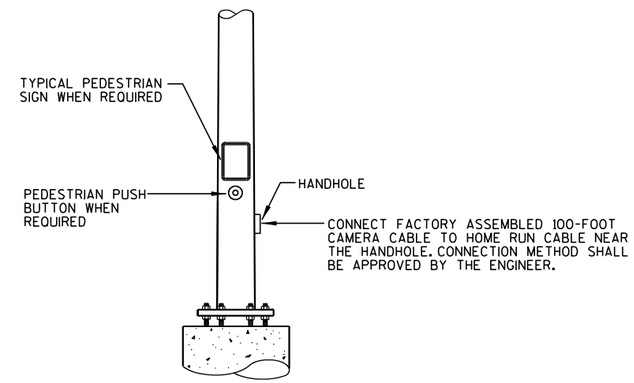




DETAIL "A"



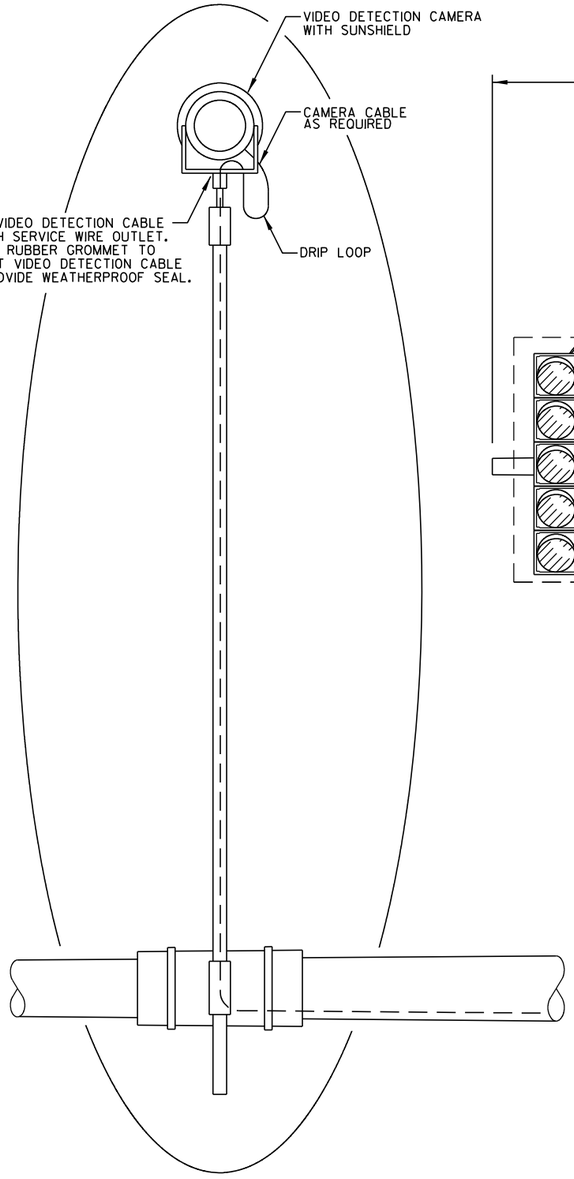
TYPE 3, 4, OR 5
MOUNTING CONFIGURATION



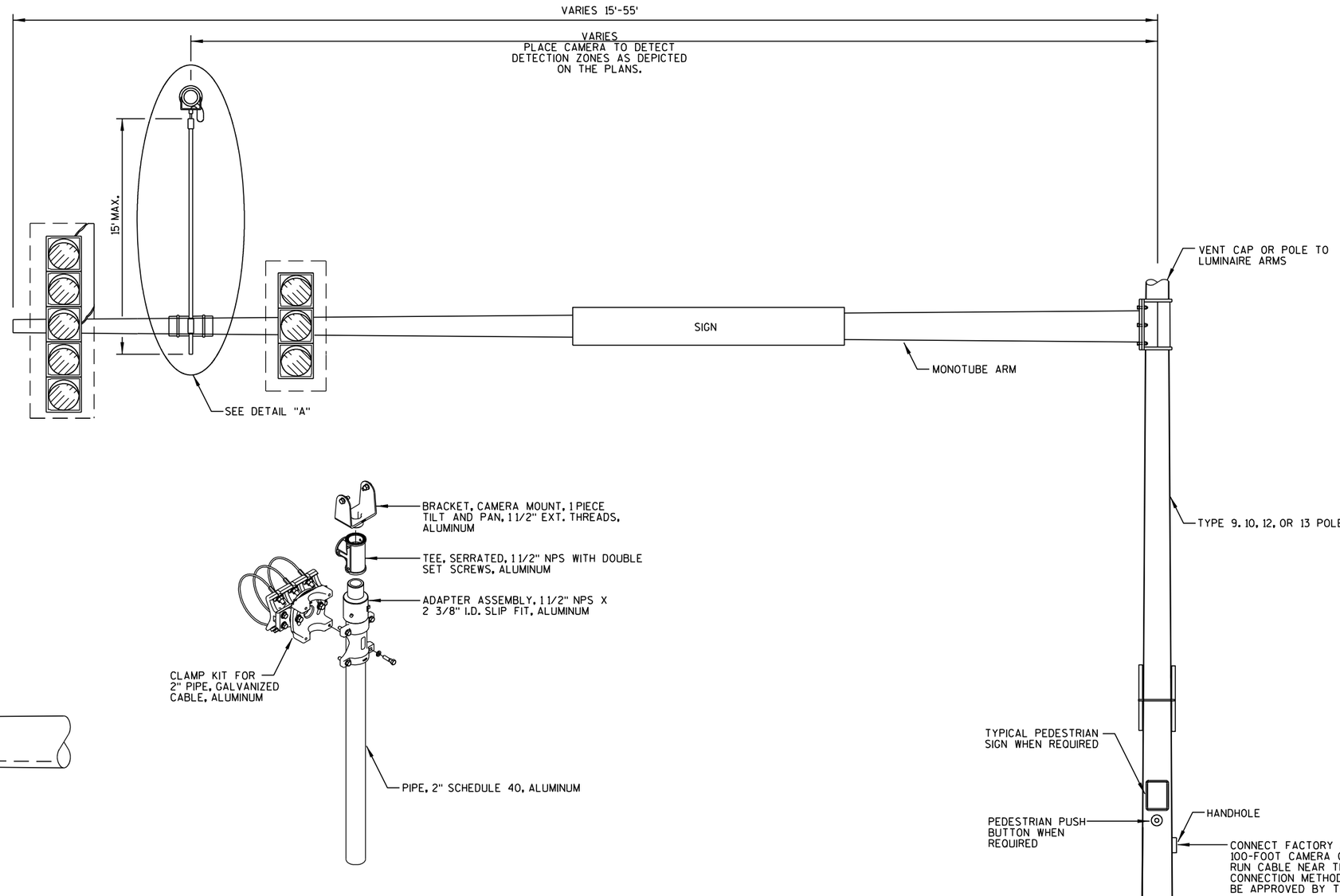
TYPE 10 OR 13
MOUNTING CONFIGURATION

VIDEO DETECTION MOUNTING DETAIL (LUMINAIRE ARM MOUNT)

2



DETAIL "A"



EXTENSION ARM

VIDEO DETECTION MOUNTING DETAIL
(MAST ARM MOUNT)

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL DETAILS	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\024002_sp_cd.dgn PLOT DATE : 29-OCT-2012 10:36 PLOT BY : mscjym PLOT NAME : PLOT SCALE : 200:1

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- CITY OF MILWAUKEE PULL BOX, 18"X24"
- CITY OF MILWAUKEE VAULT
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 12" (COUNTDOWN TIMER MOUNTED BELOW)
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- PUSH BUTTON MOUNTED ON SIGN POST
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW

LEGEND (CON'T)

- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT

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

N

USH 18 (W. BLUEMOUND ROAD)

STH 181 (N. GLENVIEW AVENUE)

241BL 242BL 243BL 244BL 245BL 246BL

ABANDON

CV1 CV2 CV3 CV4 CV5 CV6 CV7 CV8 CV9 CV10 CV11 CV12 CV13

VENT SUPPORT

WISCONSIN
JASON R. MATSON
37111
WAUKESHA, WI
PROFESSIONAL ENGINEER
01/04/2013

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 TRAFFIC SIGNAL CONDUCTORS REMAINING IN THE CONDUIT.
3. CITY OF MILWAUKEE FORCES TO REMOVE ALL ABOVEGROUND TRAFFIC SIGNAL EQUIPMENT AND CONCRETE BASES. CONTRACTOR TO REMOVE VAULTS DEPICTED ON THIS PLAN SHEET.

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-33-71	HWY: USH 18	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\024011_sp_rm.dgn PLOT DATE : 06-JAN-2013 11:37 PLOT BY : mscjym PLOT NAME : 024011_sp_rm PLOT SCALE : 40:1 WISDOT/CADDS

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
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 42"
- COMMUNICATIONS VAULT
- 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
- (R) RED ARROW
- (FY) (Y) YELLOW ARROW
- (G) GREEN ARROW
- S STOP SIGN

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

N

USH 18 (W. BLUEMOUND ROAD)

STH 181 (N. GLENVIEW AVENUE)

DETAIL "A"

POSTED SPEED LIMIT=30 MPH

225' TO NEAR RIGHT SIGNAL

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. 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. PROPOSED STORM SEWER, LIGHTING, DETECTABLE WARNING FIELDS, AND FTMS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

STRUCTURE NUMBERS

SB2 = S-40-1347
SB6 = S-40-1348
SB10 = S-40-1341
SB13 = S-40-1342

WISCONSIN JASON R. MATSON 37111 WAUKESHA, WI PROFESSIONAL ENGINEER 10/29/2012

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

CABINET TYPE: TS-2
SIGNAL NO. S1379 CONTROLLER TYPE: EPAC M51

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 10/29/12 David A. Pfaehler, P.E. REGION TRAFFIC ENGINEER

APPROVED
Date 11/13/12 Joanna L. Bush STATE TRAFFIC ENGINEER

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

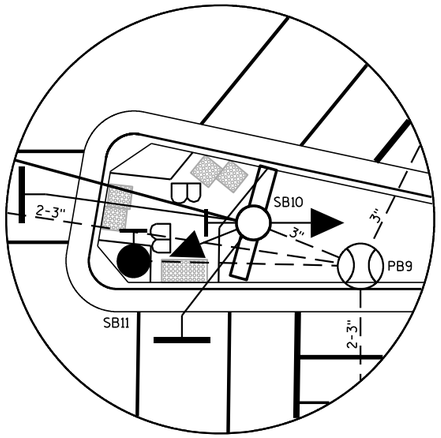
PAGE 1 OF 3

JBE 10/29/2012

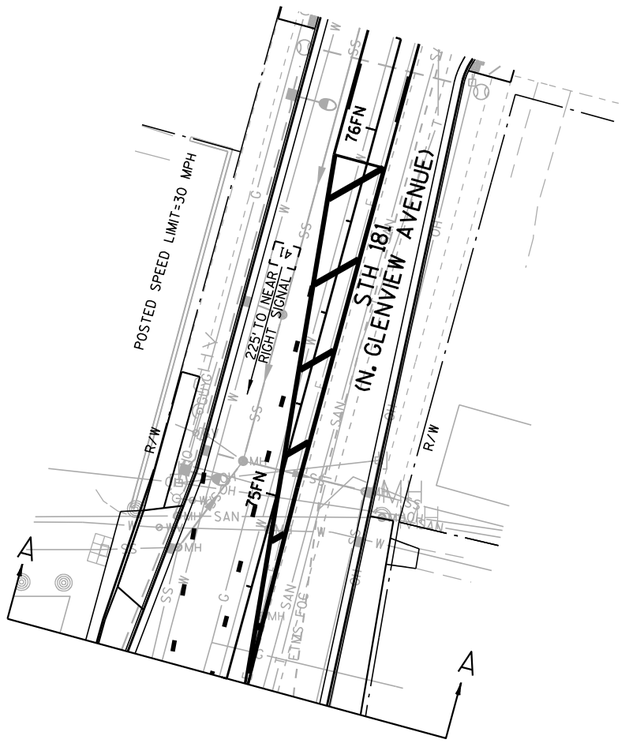
PROJECT NO: 1060-33-71	HWY: USH 18	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

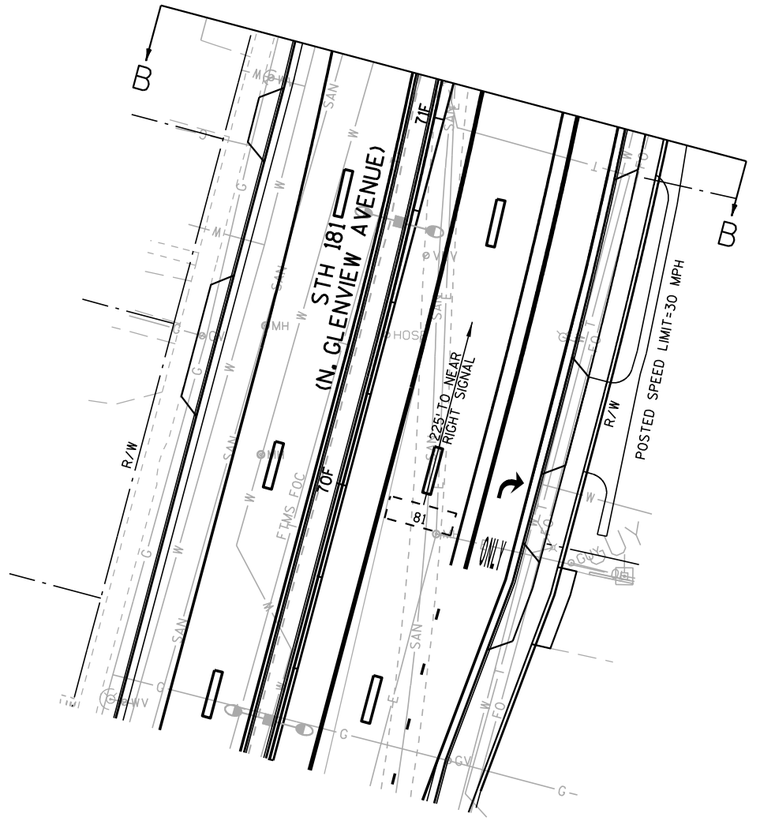
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WISDOT/CADDS SHEET 42



DETAIL "A"





N

2

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PROJECT NO: 1060-33-71	HWY: USH 18	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\024016_sp.dgn PLOT DATE : 29-OCT-2012 10:43 PLOT BY : mscjym PLOT NAME : 024016_sp 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	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 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	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

** 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

NOT USED

N

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11	3	X			1	1					VIDEO
21	4	X			2	2					VIDEO
31	1	X			3	3					VIDEO
41	2			X		4			X		VIDEO
42	7	X			4	4		X			VIDEO
43	8	X			4	4					VIDEO
44	5	X			4	4		X			VIDEO
51	6	X			5	5					VIDEO
61	11	X			6	6					VIDEO
81	12			X		8			X		VIDEO
82	9	X			8	8		X			VIDEO
83	10	X			8	8					VIDEO

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

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	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	x
RADIO	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

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

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
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	B	C	D
MOVEMENT	FY	FY	FY FY	FY
PHASE	2+5	6+1	4 AND 8	8+3

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

AFTER PREEMPTION SEQUENCE 4 AND 8 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.)

USH 18 (W. BLUEMOUND ROAD) &
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379

CONTROLLER TYPE: EPAC M51

DATE 10/12 PAGE NO. 3 OF 3

10/24/2012 JPB

10/24/12 DB

PROJECT NO: 1060-33-71 | HWY: USH 18 | COUNTY: MILWAUKEE | SEQUENCE OF OPERATIONS | SHEET E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\024019_sp_ph.dgn PLOT DATE : 29-OCT-2012 10:38 PLOT BY : mscjym PLOT NAME : 024019_sp_ph PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

USH 18 (W. BLUEMOUND ROAD) & STH 181 (N. GLENVIEW AVENUE)

2

PROJECT ID:	1060-33-71
INTERSECTION:	USH 18 & STH 181 (N. GLENVIEW 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	11	RED	ORG	GRN								
		19				RED/BLK	ORG/BLK		BLK/WHT				
		27								BLK	BLU		
		B										WHT/BLK	
SB2	12	17	RED	ORG	GRN								
		18	RED	ORG	GRN								
		20				RED/BLK	ORG/BLK		BLK/WHT				
SB3	7	21								BLK	BLU		
		B										WHT/BLK	
SB4	15	1	RED	ORG	GRN								
		9				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		28								BLK	BLU		
		B										WHT/BLK	
SB5	7	B										WHT/BLK	
SB6	12	7	RED	ORG	GRN								
		8	RED	ORG	GRN								
		10				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB7	7	22								BLK	BLU		
		B										WHT/BLK	
SB8	7	23								BLK	BLU		
		B										WHT/BLK	
SB9	12	14				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		16	RED	ORG	GRN								
SB10 (CABLE 1)	12	4				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		6	RED	ORG	GRN								
SB10 (CABLE 2)	12	12	RED	ORG	GRN								
		13	RED	ORG	GRN								
		15				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		24								BLK	BLU		
		25								RED/WHT	GRN/WHT		
		B										WHT/BLK	
SB11	7	B										WHT/BLK	
SB12	7	B										WHT/BLK	
SB13	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB14	7	26								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. MATSON
37111
WAUKESHA, WI
PROFESSIONAL ENGINEER
10/23/2012

PROJECT NO: 1060-33-71	HWY: USH 18	COUNTY: MILWAUKEE	CABLE ROUTING	SHEET:	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\024020_sp_cr.ppt PLOT DATE : 10/29/2012 9:34:12 AM PLOT BY : MSCD1S PLOT NAME : 024020_sp_cr1 PLOT SCALE : 1:1

(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	SB14
SB14	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	SB1
PB2	SB2
PB3	SB3
PB4	SB4
PB5	SB6
PB6	SB6
PB7	SB7
PB8	SB8
PB9	SB10
PB10	SB11
PB11	SB13
PB12	SB13
PB13	SB14

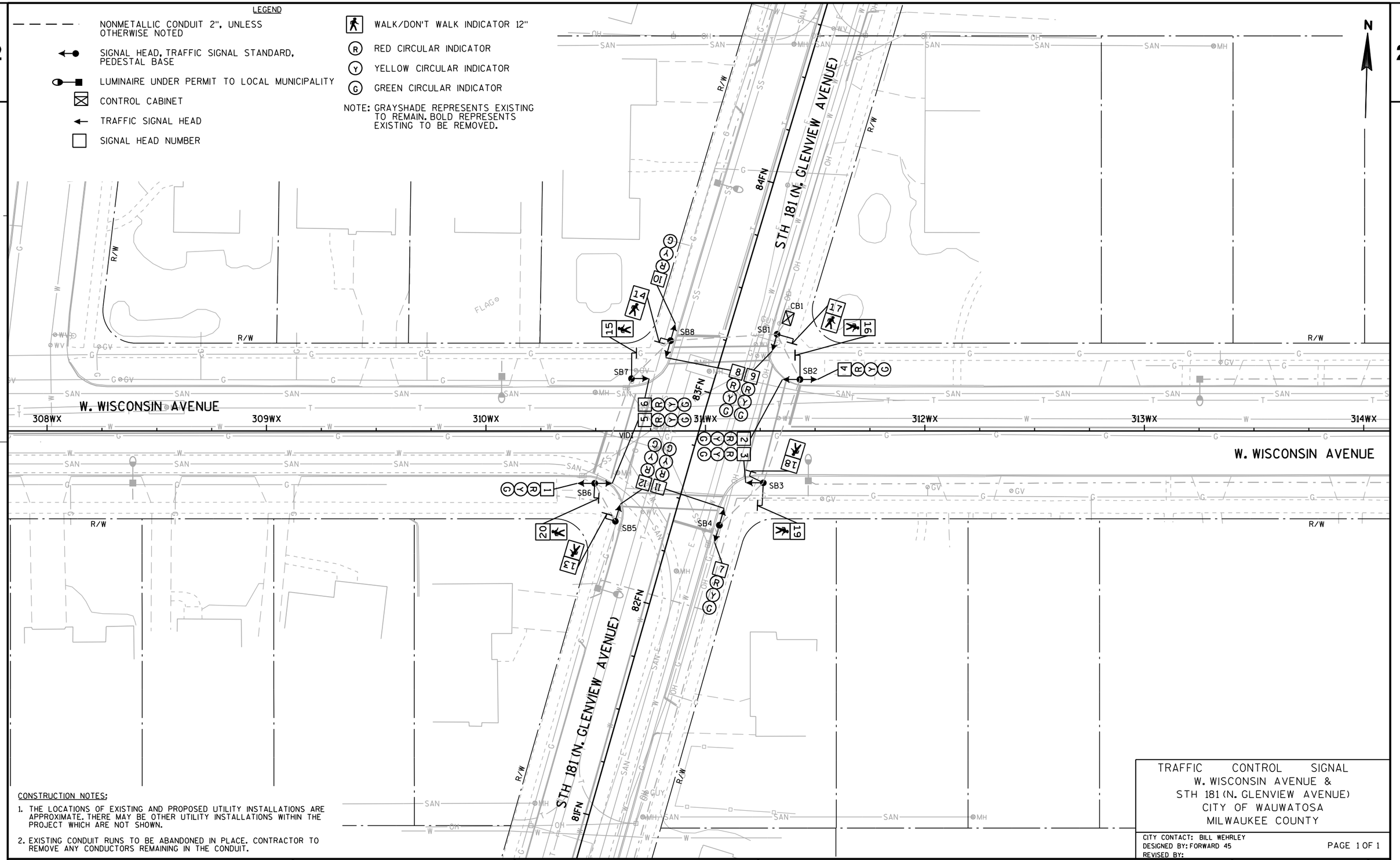
VIDEO DETECTION CABLE	
FROM	TO
CB1	V1 (SB7)
CB1	V2 (SB13)
CB1	V3 (SB2)
CB1	V4 (SB10)

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB2 (HEAD C)
CB1	SB6 (HEAD A)
CB1	SB10 (HEAD D)
CB1	SB13 (HEAD B)

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
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 12"
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR

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.

TRAFFIC CONTROL SIGNAL
W. WISCONSIN AVENUE &
STH 181 (N. GLENVIEW AVENUE)
CITY OF WAUWATOSA
MILWAUKEE COUNTY

CITY CONTACT: BILL WEHRLEY
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\024021_sp_rm.dgn PLOT DATE : 29-OCT-2012 07:32 PLOT BY : mscjym PLOT NAME : 024021_sp_rm 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
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 42"
- COMMUNICATIONS VAULT
- 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
- (R) RED ARROW
- (FY) (Y) YELLOW ARROW
- (G) GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

N

W. WISCONSIN AVENUE

STH 181 (N. GLENVIEW AVENUE)

POSTED SPEED LIMIT=30 MPH

POSTED SPEED LIMIT = 30 MPH

225' TO NEAR RIGHT SIGNAL

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED. CONTACT THE CITY OF WAUWATOSA 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. ALL LUMINAIRES ARE LED UNLESS OTHERWISE NOTED.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. PROPOSED STORM SEWER, LIGHTING, DETECTABLE WARNING FIELDS, AND FTMS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC CONTROL SIGNAL
W. WISCONSIN AVENUE &
STH 181 (N. GLENVIEW AVENUE)
CITY OF WAUWATOSA
MILWAUKEE COUNTY

CITY CONTACT: BILL WEHRLEY
DESIGNED BY: FORWARD 45
REVISED BY:

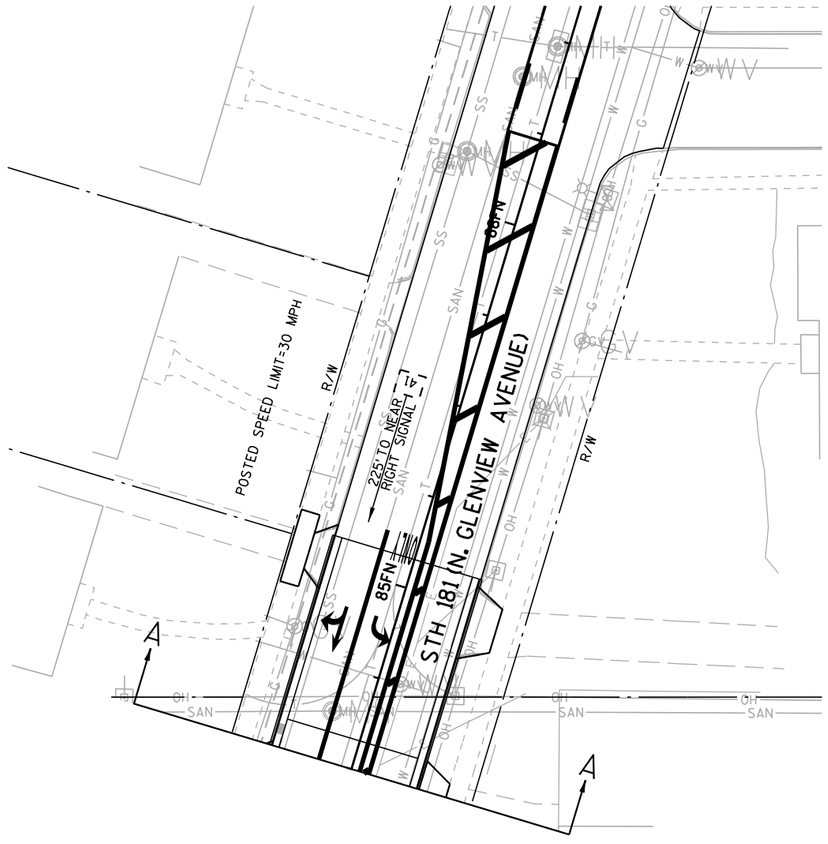
PAGE 1 OF 3

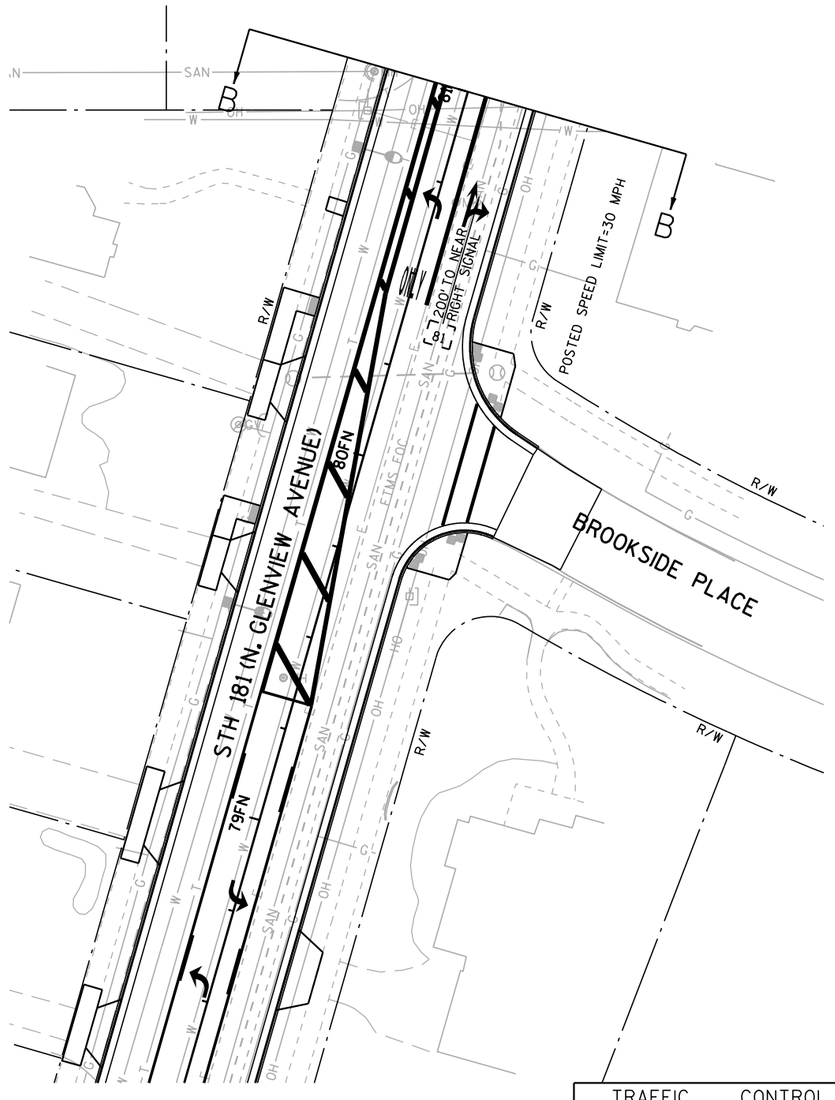
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\024025_sp.dgn PLOT DATE : 29-OCT-2012 07:32 PLOT BY : mscjym PLOT NAME : 024025_sp PLOT SCALE : 40:1

2

N





TRAFFIC CONTROL SIGNAL
W. WISCONSIN AVENUE &
STH 181 (N. GLENVIEW AVENUE)
CITY OF WAUWATOSA
MILWAUKEE COUNTY

CITY CONTACT: BILL WEHRLEY
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\024026_sp.dgn PLOT DATE : 29-OCT-2012 07:32 PLOT BY : mscjym PLOT NAME : 024026_sp 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										
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										
Ø8	7,8,9			R R R		R R R		R R R		R
ØLA										
ØLB	10,11			R R R		- Y R		FY Y R		R
ØLC										
ØLD	15,16			R R R		R R R		R R R		R
Ø2P	19,20			* D D		D D D		D D D		
Ø4P	17,18			D D D		D D D		* D D		
Ø6P	23,24			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	
Ø3	10,11			- - -				- - -	
Ø4	12,13,14			R R R				R R R	
Ø5									
Ø6	1,2,3			G Y R				R R R	
Ø7									
Ø8	7,8,9			R R R				G Y R	
ØLA									
ØLB	10,11			R R R				R R R	
ØLC									
ØLD	15,16			R R R				FY Y R	
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

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
21	3	X			2	2					VIDEO
31	4	X			3	3		X			VIDEO
41	1			X		4			X		VIDEO
42	2	X			4	4		X			VIDEO
43	7	X			4	4		X			VIDEO
61	8	X			6	6					VIDEO
81	5			X		8			X		VIDEO
82	6	X			8	8		X			VIDEO

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				
8		4		X

SPECIAL OVERLAPS

	PROTECTIVE	PERMISSIVE
O.L. "A" =		
O.L. "B" =	3	4
O.L. "C" =		
O.L. "D" =		8

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 PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	x
GTT	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	3,4,8
3	8	2,4,6
4	8	2,3,6
5		
6	2	3,4,8
7		
8	3 OR 4	2,6

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C	CHANNEL D
MOVEMENT	←	→	FY, FY	FY
PHASE	2	6	4 AND 8	8+3

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

AFTER PREEMPTION SEQUENCE 4 AND 8 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.)

W. WISCONSIN AVENUE &
STH 181 (N. GLENVIEW AVENUE)
CITY OF WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO.

CONTROLLER TYPE: EPAC

DATE 10/12

PAGE NO. 3 OF 3

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET E

PROJECT ID:	1060-33-71
INTERSECTION:	W. WISCONSIN AVENUE & STH 181 (N. GLENVIEW 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	4	RED	ORG	GRN								
		21								BLK	BLU		
		B										WHT/BLK	
SB2	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		22								BLK	BLU		
		B										WHT/BLK	
SB3	12	7	RED	ORG	GRN								
		15				RED/BLK	ORG/BLK		BLK/WHT				
		23								BLK	BLU		
		B										WHT/BLK	
SB4	12	13	RED	ORG	GRN								
		14	RED	ORG	GRN								
		16				RED/BLK	ORG/BLK		BLK/WHT				
		24								BLK	BLU		
		B										WHT/BLK	
SB5	12	1	RED	ORG	GRN								
		17								BLK	BLU		
		B										WHT/BLK	
SB6	12	5	RED	ORG	GRN								
		6	RED	ORG	GRN								
		18								BLK	BLU		
		B										WHT/BLK	
SB7	15	10				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		12	RED	ORG	GRN								
		19								BLK	BLU		
		B										WHT/BLK	
SB8	15	8	RED	ORG	GRN								
		9	RED	ORG	GRN								
		11				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		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	CB1

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB2
CB1	SB7

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

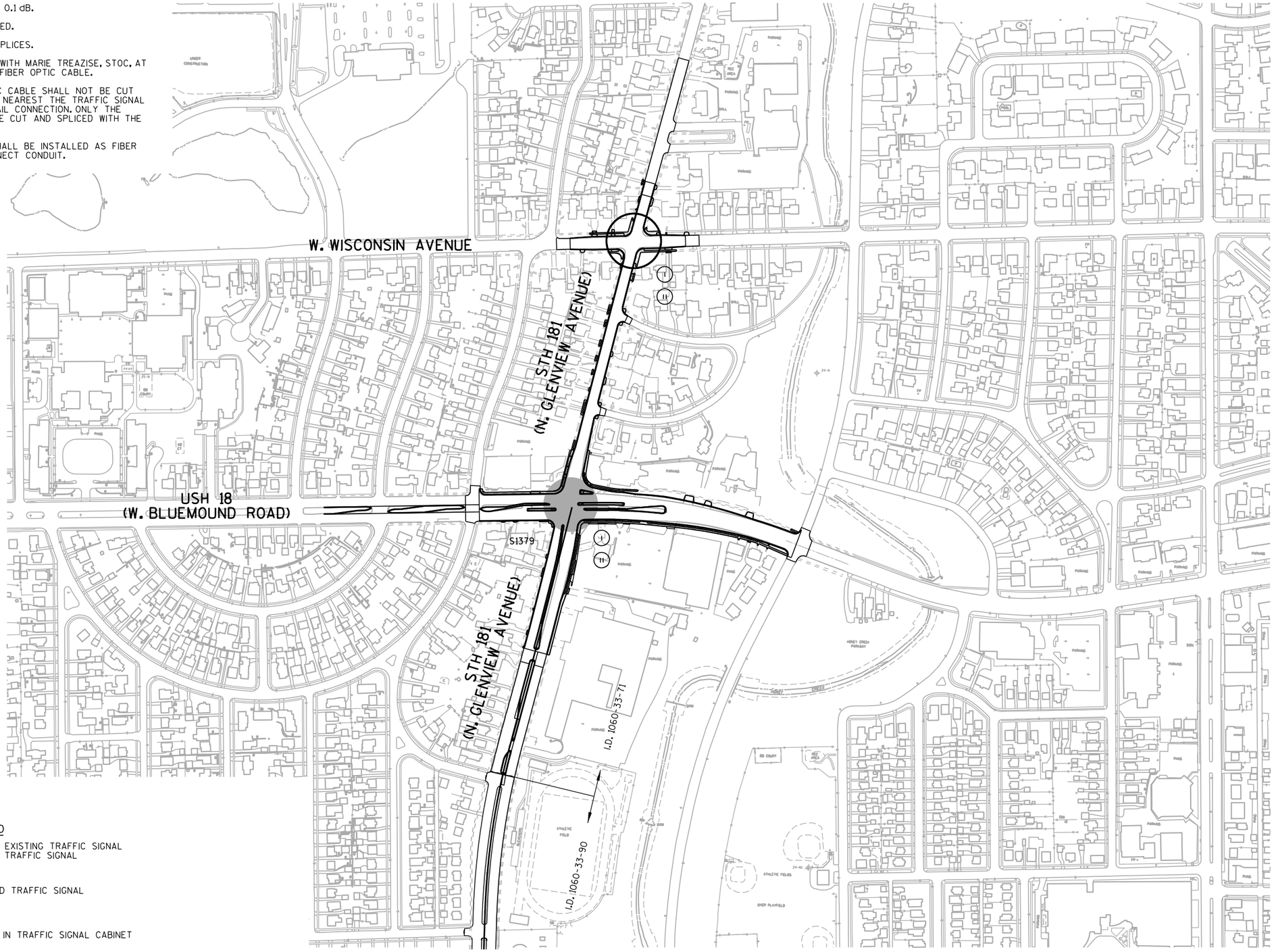
VIDEO DETECTION CABLE	
FROM	TO
CB1	V1
CB1	V2
CB1	V3
CB1	V4

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB6 (HEAD A)
CB1	SB2 (HEAD B)
CB1	SB4 (HEAD C)
CB1	SB8 (HEAD D)

PAGE 2 OF 2

CONSTRUCTION NOTES:

1. MAXIMUM SPLICE LOSS SHALL BE 0.1 dB.
2. NO INTERMEDIATE SPLICES ALLOWED.
3. ALL SPLICES SHALL BE FUSION SPLICES.
4. COORDINATE FIBER ASSIGNMENTS WITH MARIE TREAZISE, STOC, AT (414) 225-3720 BEFORE SPLICING FIBER OPTIC CABLE.
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 SHALL BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.



LEGEND

- CITY OF MILWAUKEE OWNED EXISTING TRAFFIC SIGNAL
  WISDOT OWNED PERMANENT TRAFFIC SIGNAL
- SXXXX
- CITY OF WAUWATOSA OWNED TRAFFIC SIGNAL
- (I) INSTALL ETHERNET SWITCH IN TRAFFIC SIGNAL CABINET
- (II) INSTALL PRE-TERMINATED PATCH PANEL IN TRAFFIC SIGNAL CABINET AND 8-CT SINGLE MODE FIBER OPTIC PIGTAIL IN CONDUIT

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PROJECT OVERVIEW	SHEET E

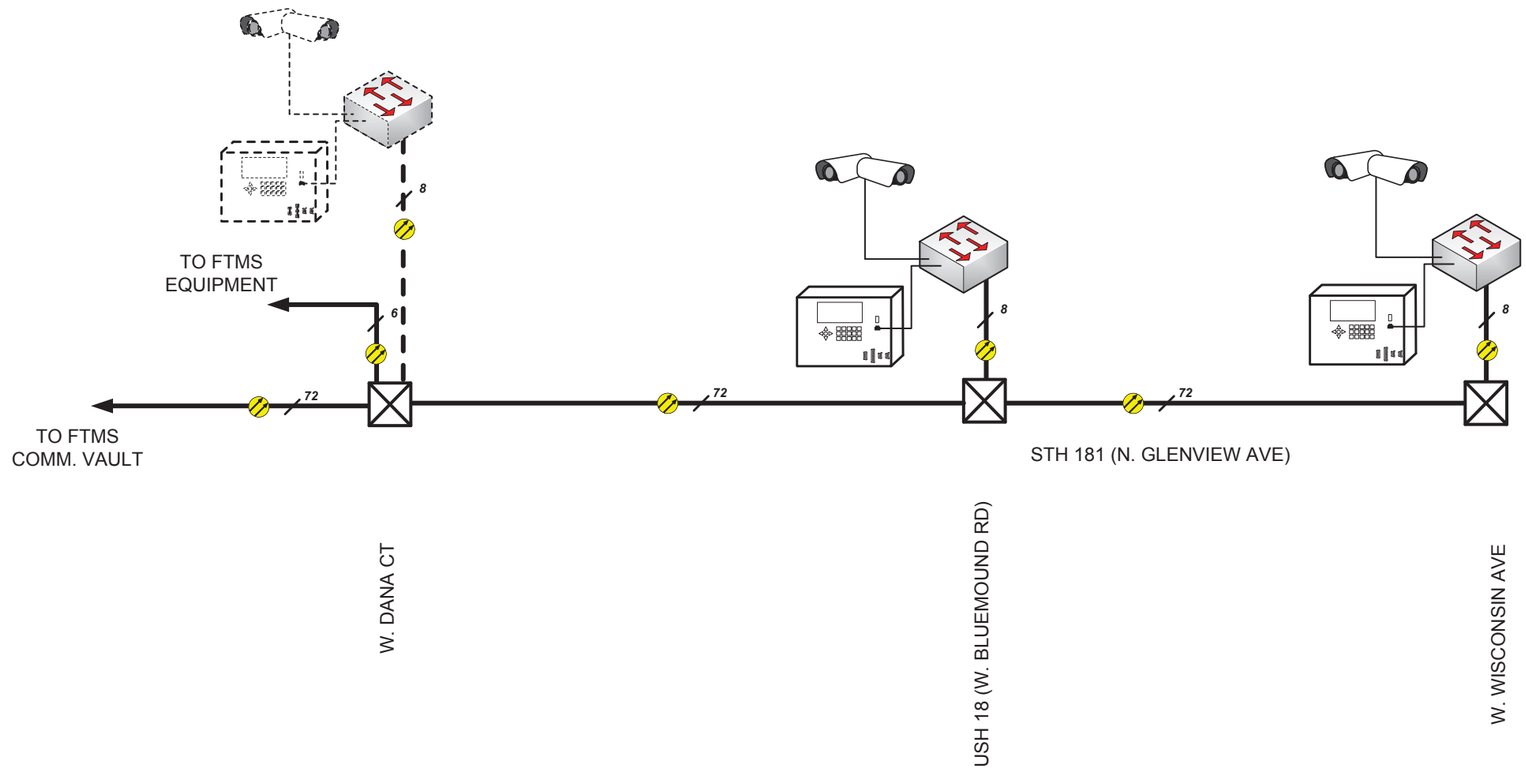
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2

— Z →

LEGEND

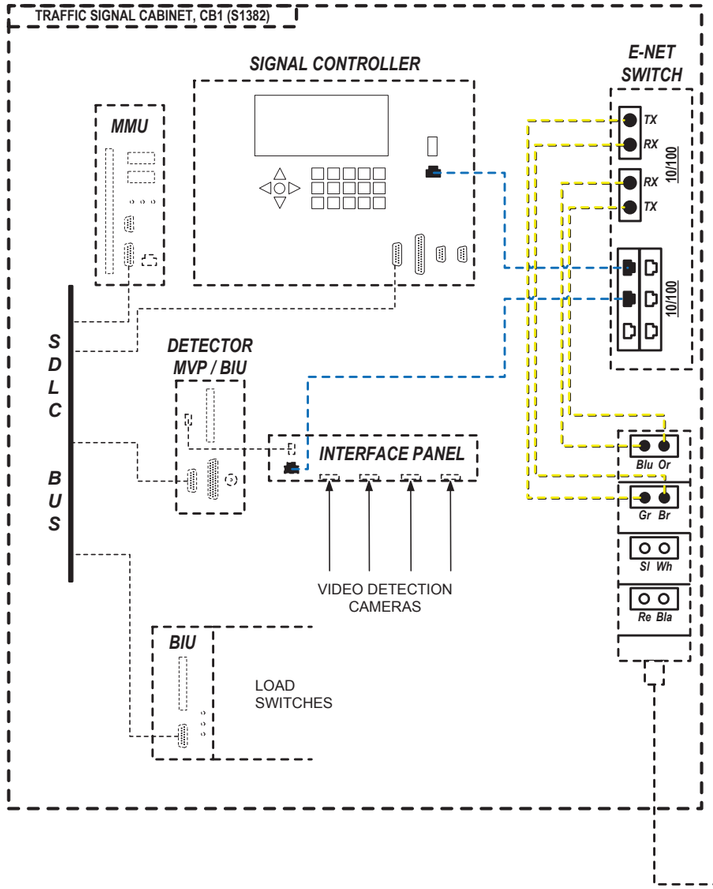
- 72 — SM FIBER OPTIC CABLE (# STRANDS)
- CAT 5E PATCH CORD
- SPLICE CLOSURE
- HARDENED ETHERNET SWITCH
- VIDEO DETECTION CAMERAS
- TRAFFIC SIGNAL CONTROLLER

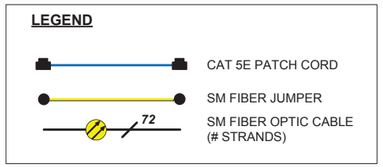


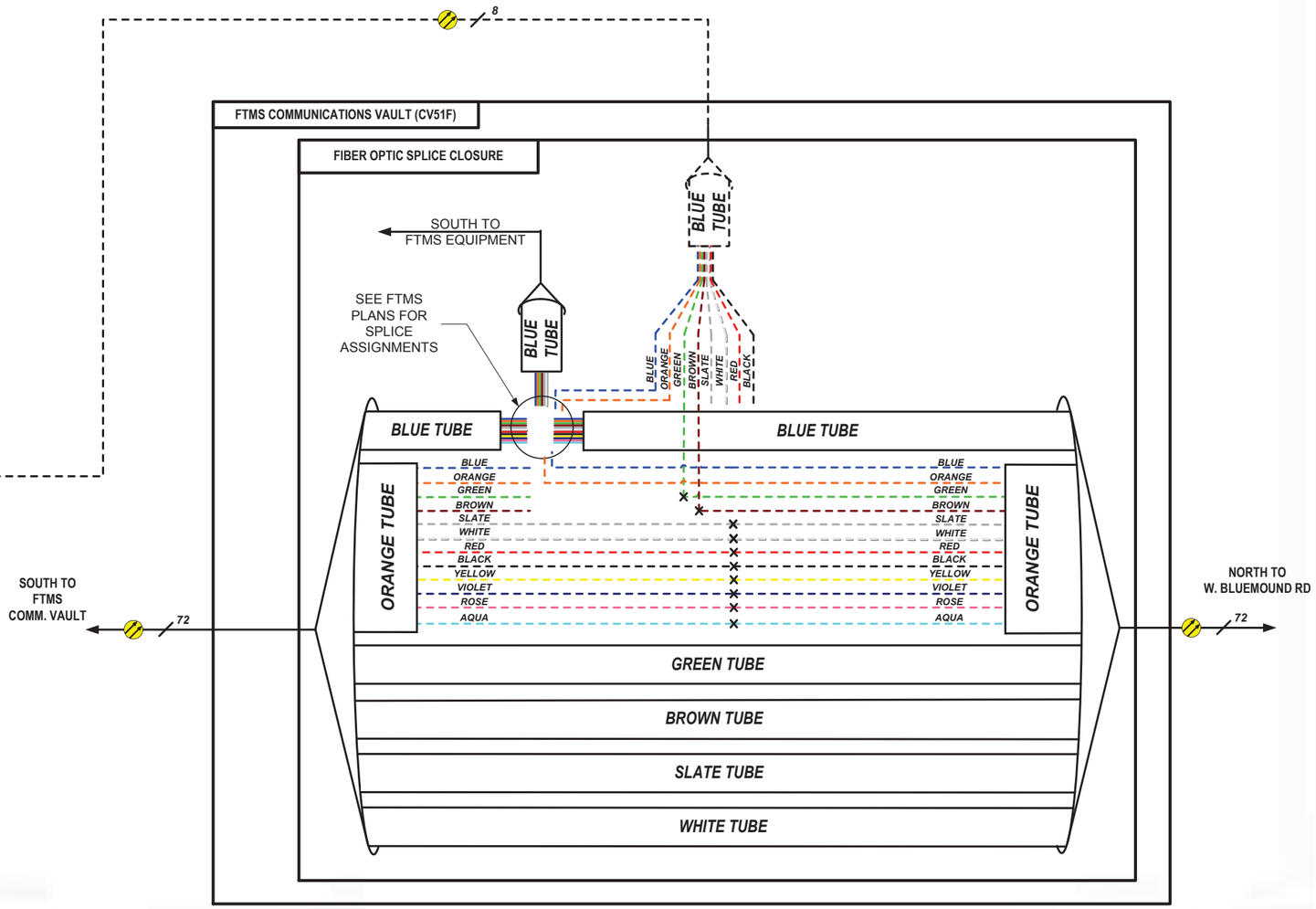
NOTES:

1. WORK IN THIS PROJECT 1060-33-71 INVOLVES NEW TRAFFIC SIGNAL INSTALLATIONS AT THE BLUE MOUND RD AND WISCONSIN AVE INTERSECTIONS, INSTALLATION OF A NEW 72-COUNT FIBER-OPTIC TRUNK CABLE, AND INSTALLATION AND FUSION SPLICING OF 8-COUNT FIBER-OPTIC DROP CABLES TO INTERCONNECT THE TRAFFIC SIGNAL CONTROLLERS.
2. DASHED LINES INDICATE ITEMS INSTALLED UNDER PROJECT 1060-33-90.

2

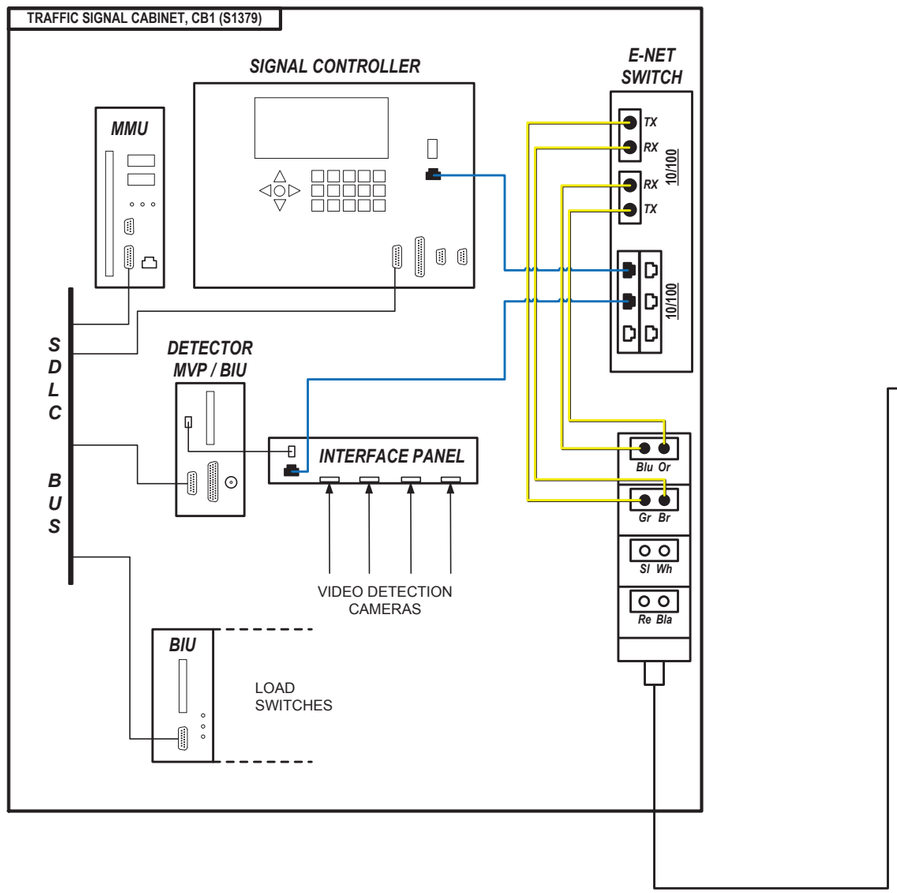


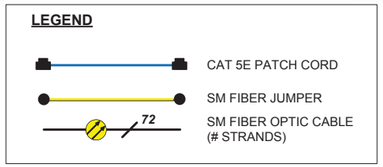


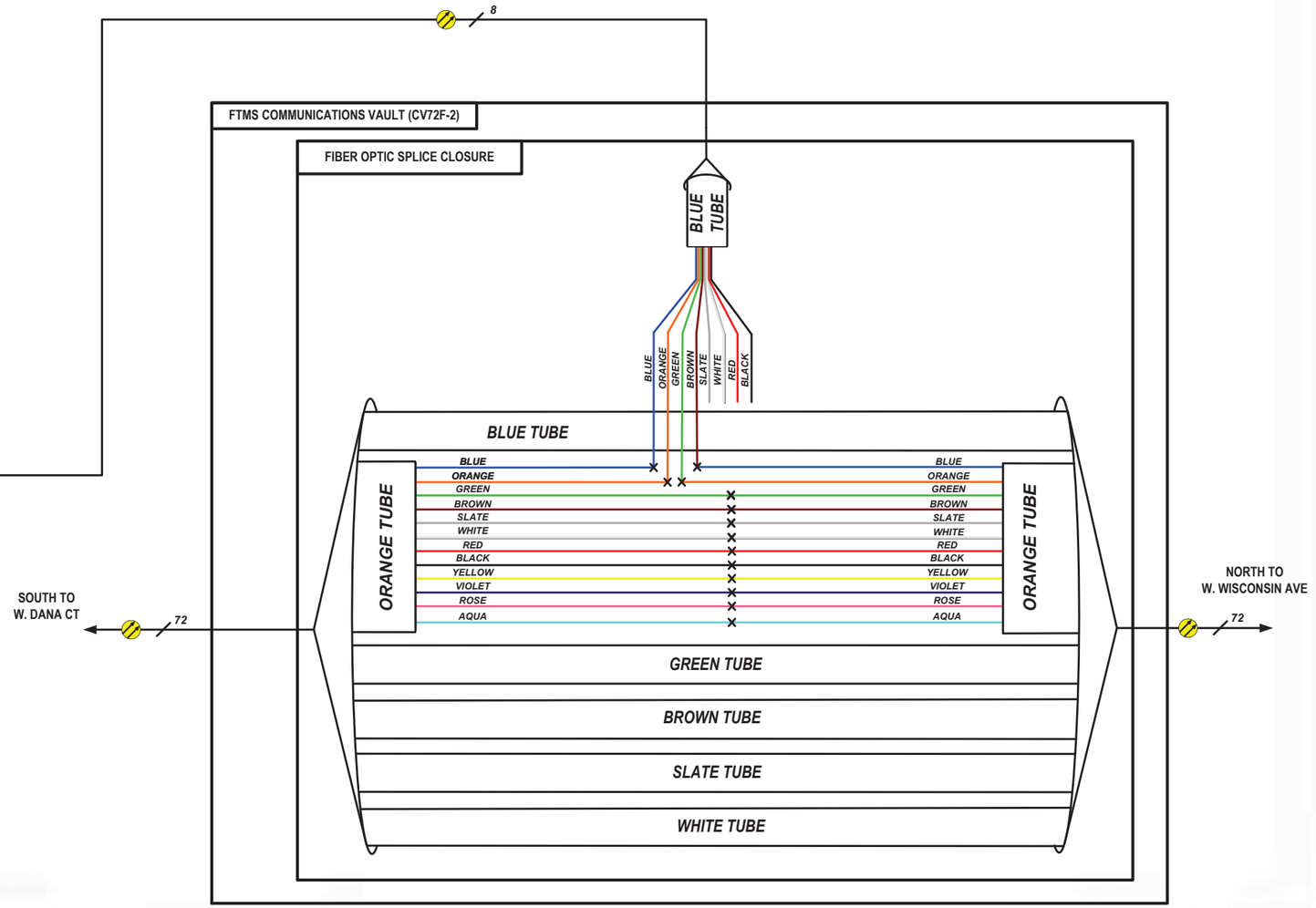


NOTE:
DASHED LINES INDICATE ITEMS INSTALLED UNDER PROJECT NO. 1060-33-90.

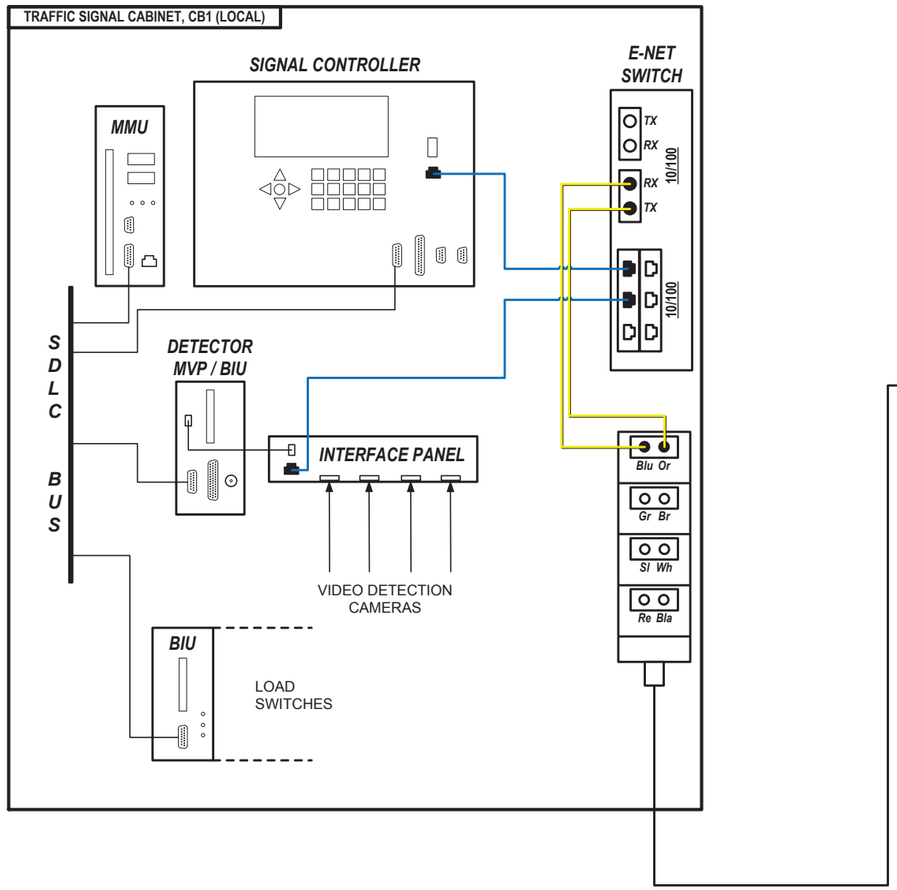
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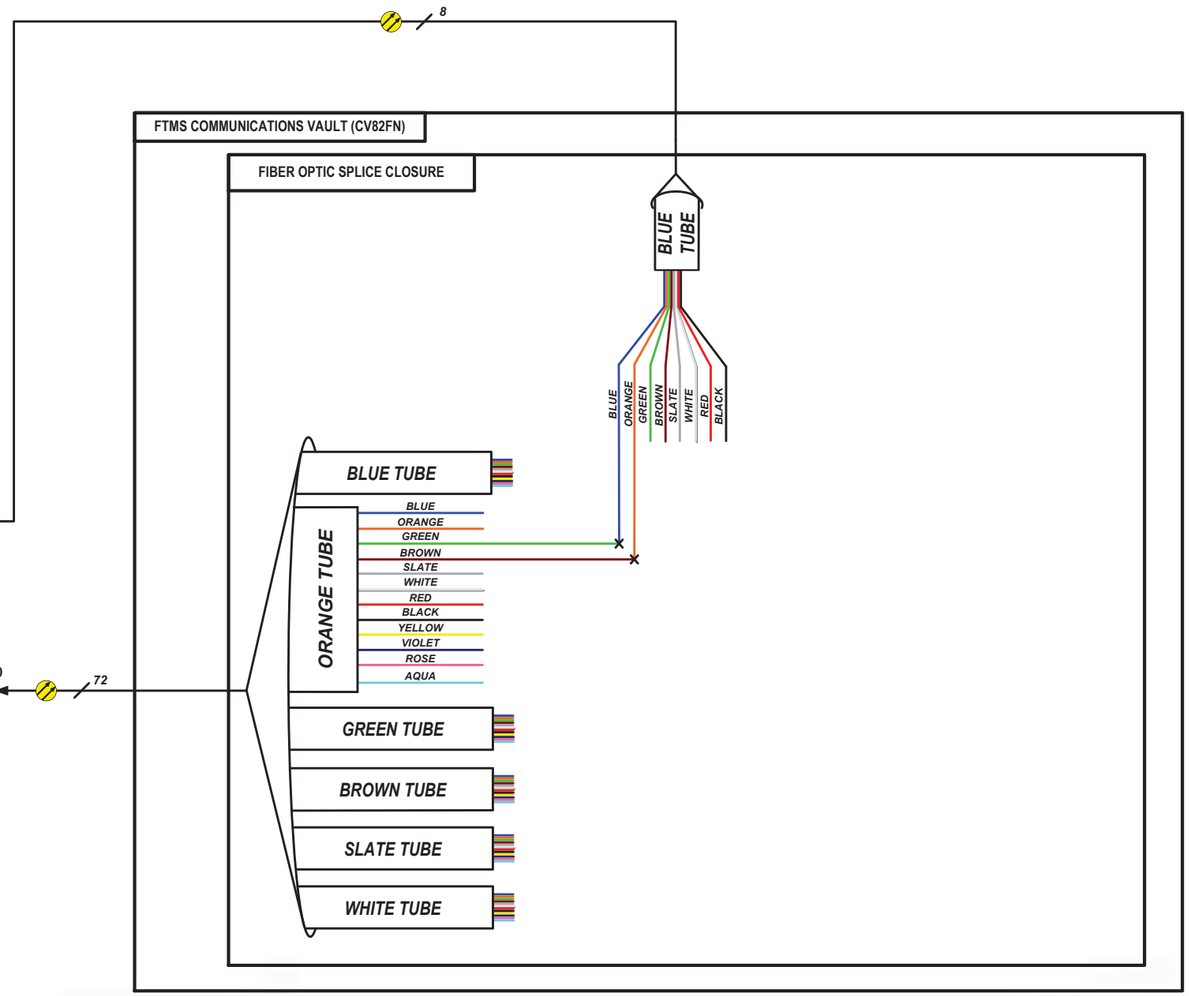

TRAFFIC SIGNAL CABINET, CB1 (S1379)
SIGNAL CONTROLLER
MMU
E-NET SWITCH
TX
RX
RX
TX
10/100
10/100
SDLC BUS
DETECTOR MVP / BIU
INTERFACE PANEL
Blu Or
Gr Br
Sl Wh
Re Bla
VIDEO DETECTION CAMERAS
BIU
LOAD SWITCHES

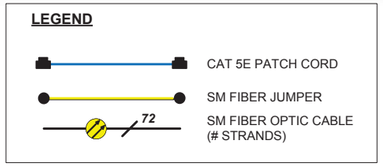

LEGEND
CAT 5E PATCH CORD
SM FIBER JUMPER
72
SM FIBER OPTIC CABLE (# STRANDS)


8
FTMS COMMUNICATIONS VAULT (CV72F-2)
FIBER OPTIC SPLICE CLOSURE
BLUE TUBE
BLUE
ORANGE
GREEN
BROWN
SLATE
WHITE
RED
BLACK
BLUE TUBE
ORANGE TUBE
BLUE
ORANGE
GREEN
BROWN
SLATE
WHITE
RED
BLACK
YELLOW
VIOLET
ROSE
AQUA
ORANGE TUBE
SOUTH TO W. DANA CT
72
NORTH TO W. WISCONSIN AVE
72
GREEN TUBE
BROWN TUBE
SLATE TUBE
WHITE TUBE

2


TRAFFIC SIGNAL CABINET, CB1 (LOCAL)
SIGNAL CONTROLLER
E-NET SWITCH
MMU
TX
RX
RX
TX
10/100
10/100
SDLC BUS
DETECTOR MVP / BIU
INTERFACE PANEL
Blu Or
Gr Br
Sl Wh
Re Bla
VIDEO DETECTION CAMERAS
BIU
LOAD SWITCHES


8
FTMS COMMUNICATIONS VAULT (CV82FN)
FIBER OPTIC SPLICE CLOSURE
BLUE TUBE
BLUE
ORANGE
GREEN
BROWN
SLATE
WHITE
RED
BLACK
BLUE TUBE
ORANGE TUBE
BLUE
ORANGE
GREEN
BROWN
SLATE
WHITE
RED
BLACK
YELLOW
VIOLET
ROSE
AQUA
GREEN TUBE
BROWN TUBE
SLATE TUBE
WHITE TUBE
SOUTH TO BLUEMOUND RD
72


LEGEND
CAT 5E PATCH CORD
SM FIBER JUMPER
72
SM FIBER OPTIC CABLE (# STRANDS)

LEGEND

NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

FTMS HDPE MULTIDUCT CONDUIT WITH FO CABLE, SEE FTMS PLANS FOR DETAILS

FTMS VAULT

CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING

USH 18 (W. BLUEMOUND ROAD)

STH 181 (N. GLENVIEW AVENUE)

241BL 242BL 243BL 244BL 245BL 246BL

71F 72F 73F 74F

CBI (S1379)

1¼" FO CABLE PIGTAIL 8-CT FIBER OPTIC TRACER CABLE

FIBER OPTIC SPLICE (14) USE FIBER OPTIC SPLICE ENCLOSURE SHOWN IN FTMS PLANS

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 STORM SEWER, LIGHTING, FTMS, DETECTABLE WARNING FIELDS, AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC CONTROL INTERCONNECT
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379,LOCAL

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\024311_co.dgn PLOT DATE : 30-OCT-2012 09:48 PLOT BY : mscjym PLOT NAME : 024311_co PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

FTMS HDPE MULTIDUCT CONDUIT WITH FO CABLE, SEE FTMS PLANS FOR DETAILS

FTMS VAULT

CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING

N

W. WISCONSIN AVENUE

STH 181 (N. GLENVIEW AVENUE)

CB1 (LOCAL)

1¼" FO CABLE PIGTAIL 8-CT FIBER OPTIC TRACER CABLE

3-2" FTMS HDPE FO CABLE PIGTAIL 8-CT

84FN

83FN

82FN

81FN

CV84FN

CV310WX

CV82FN

FIBER OPTIC SPLICE (2) USE FIBER OPTIC SPLICE ENCLOSURE SHOWN IN FTMS PLANS

308WX 309WX 310WX 311WX 312WX 313WX 314WX

R/W

FLAG

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 CITY OF WAUWATOSA 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. 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 STORM SEWER, LIGHTING, FTMS, DETECTABLE WARNING FIELDS, AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC CONTROL INTERCONNECT
STH 181 (N. GLENVIEW AVENUE)
CITY OF MILWAUKEE/WAUWATOSA
MILWAUKEE COUNTY

SIGNAL NO. S1379,LOCAL

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

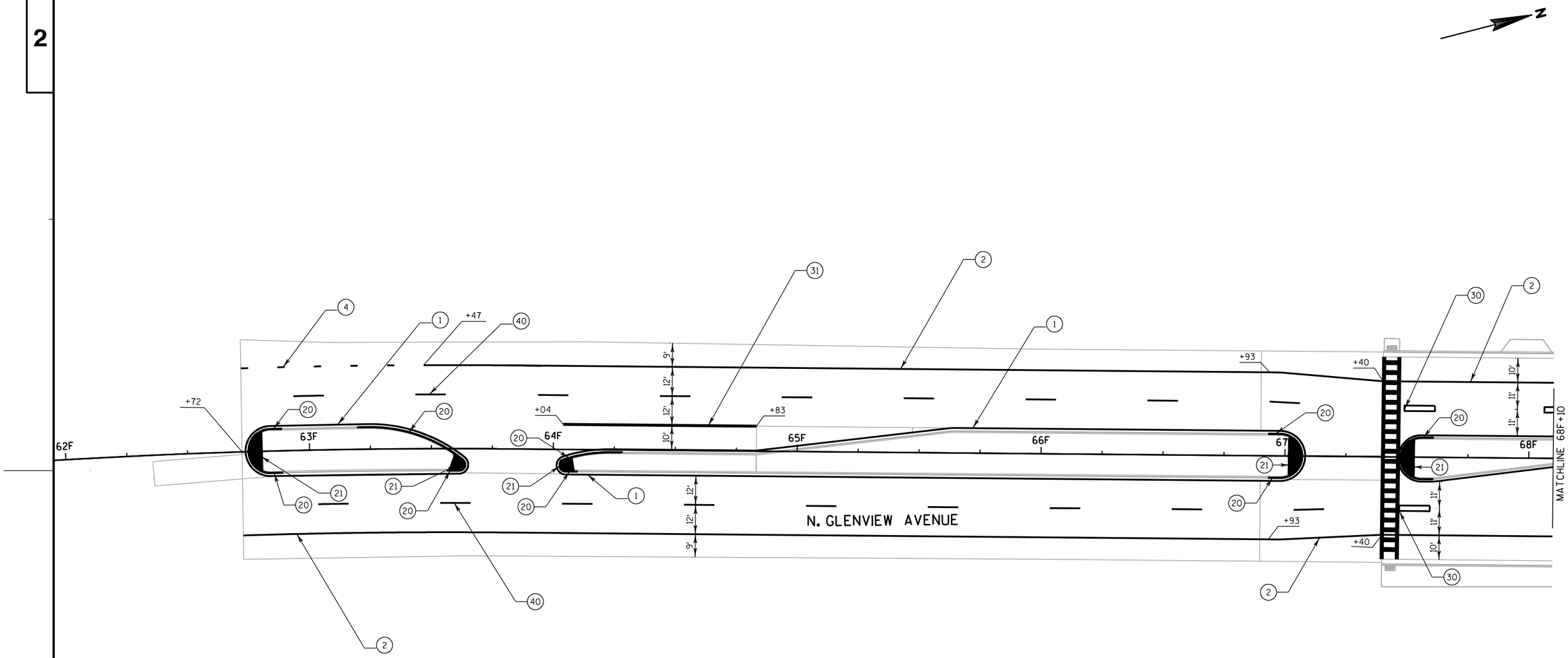
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2

LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2	PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
10	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20	PAVEMENT MARKING CURB EPOXY (YELLOW)
21	PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
29	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
30	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
31	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE)
36	PAVEMENT MARKING EPOXY 4-INCH (DASHED YELLOW) (12.5 FT LINE 37.5 FT SKIP)
39	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
40	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
55	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
57	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
62	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 1 (WHITE)
63	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 2 (WHITE)
64	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 3 (WHITE)
67	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS (WHITE)
68	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH (WHITE)
70	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH (WHITE)

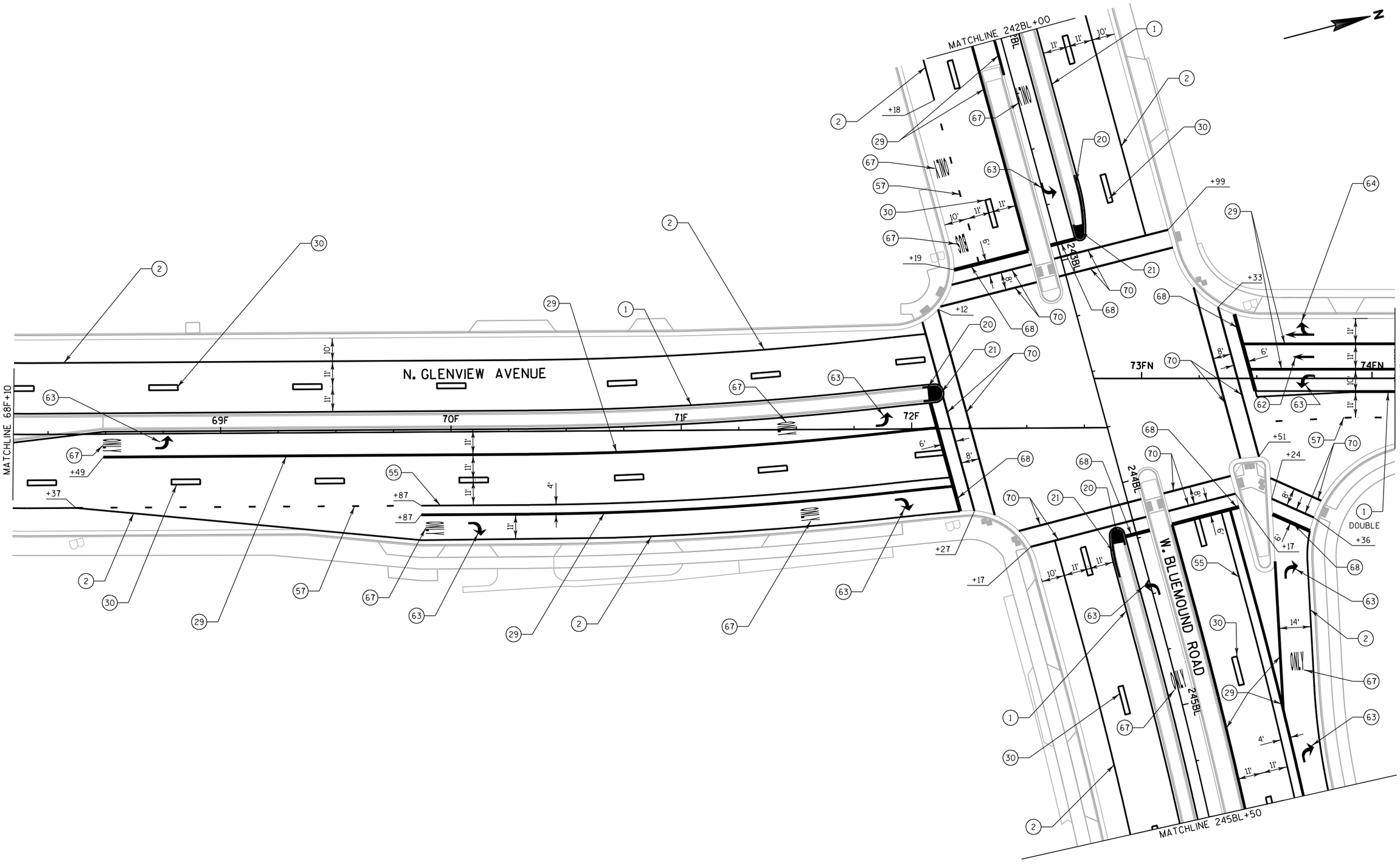
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PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

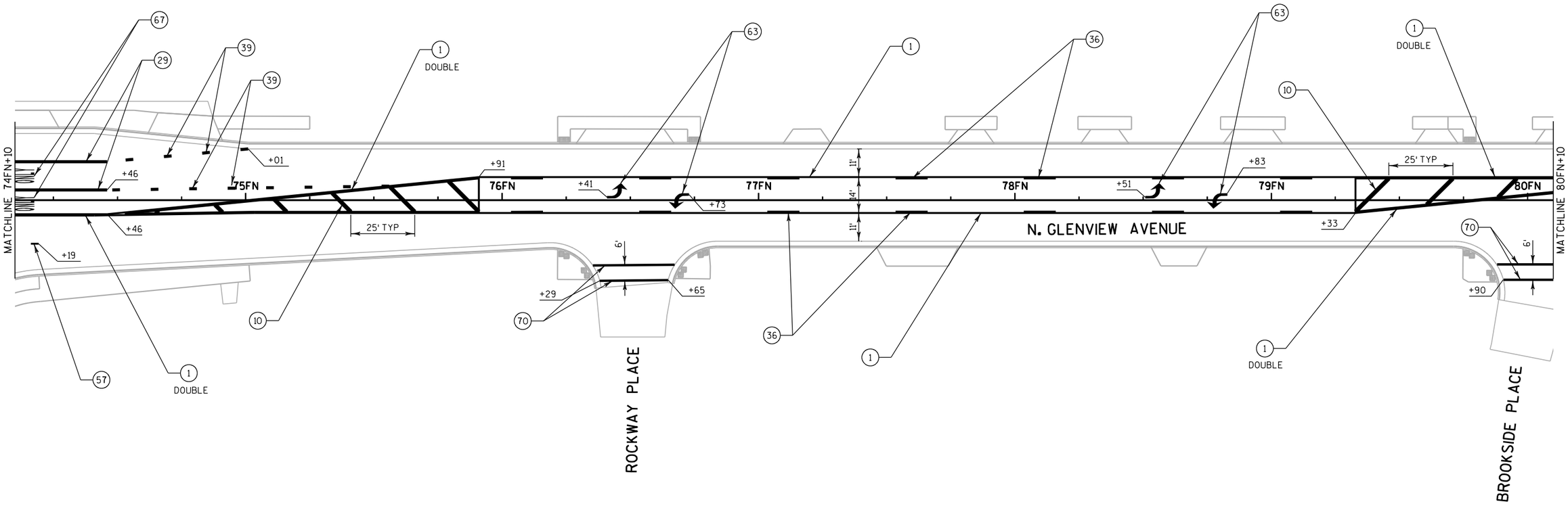
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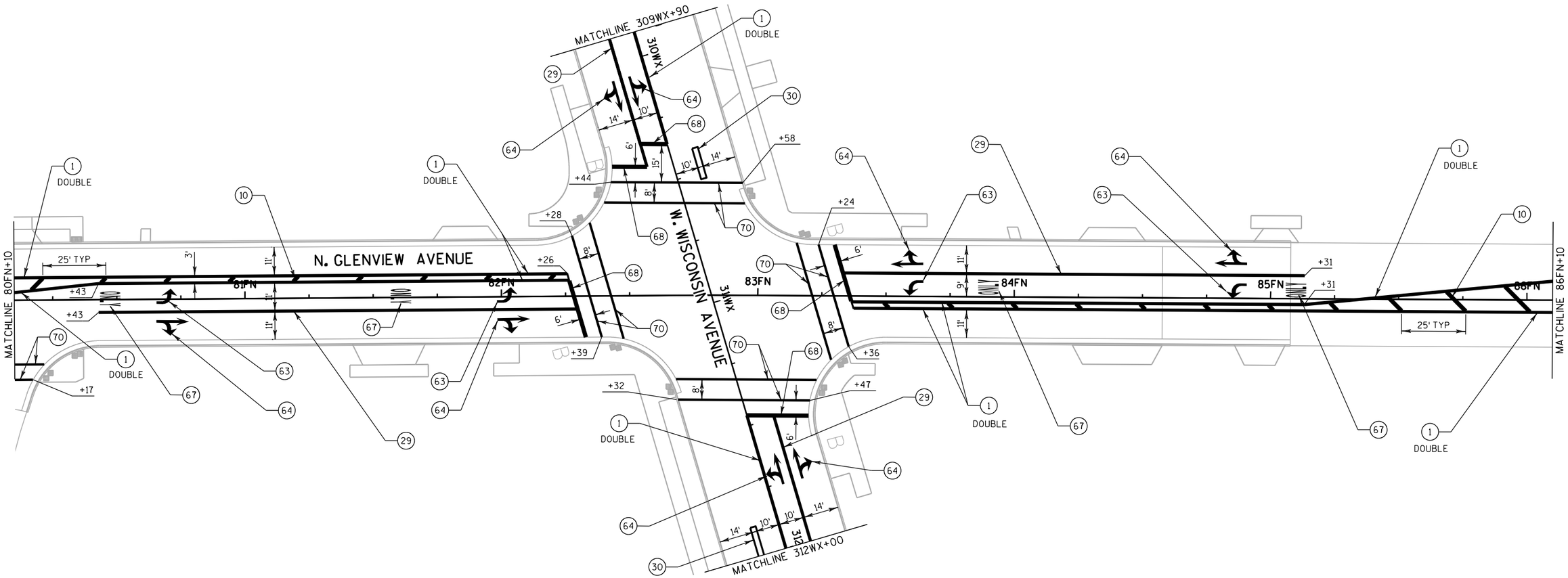
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

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PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

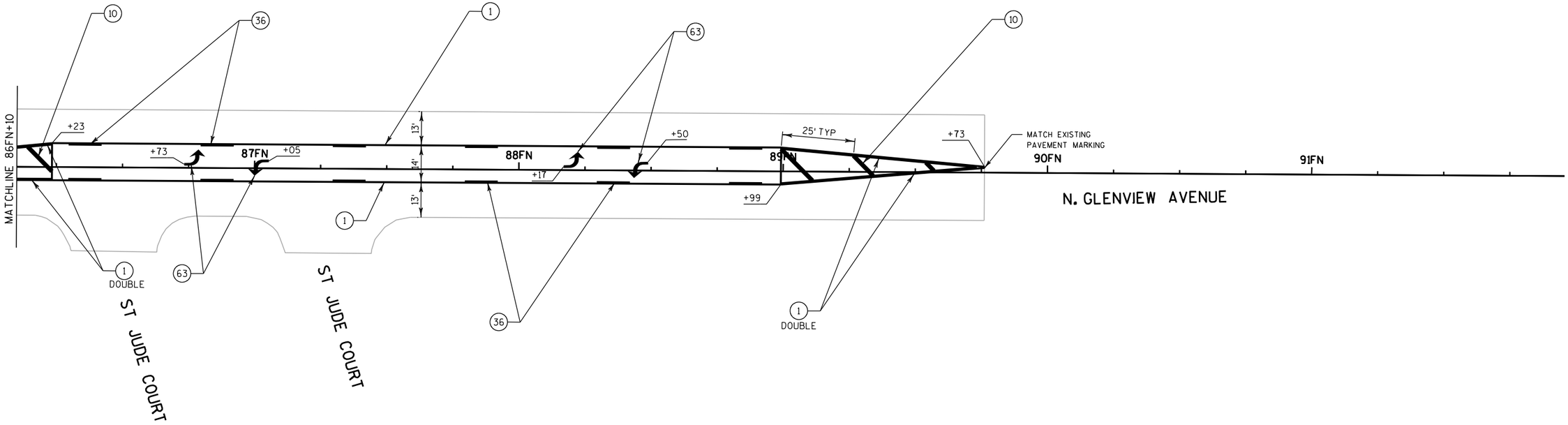
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PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

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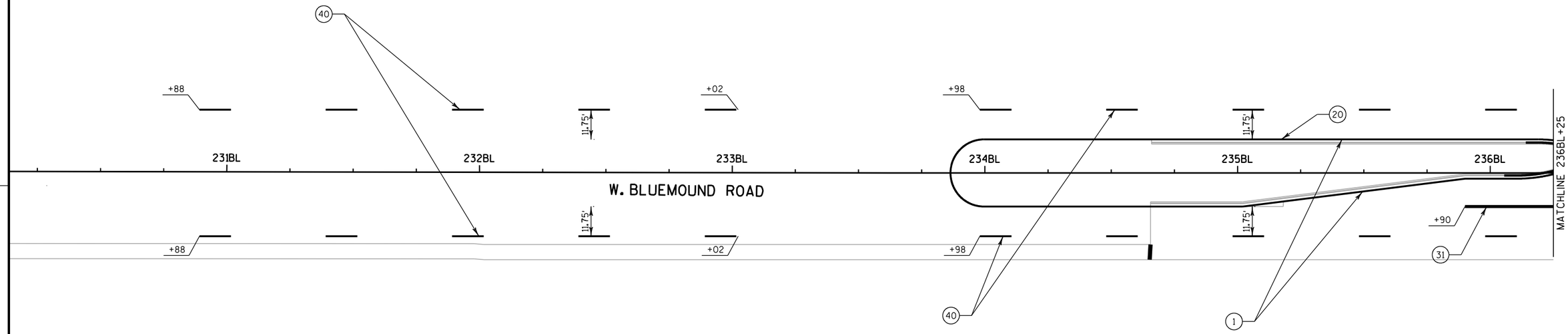
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PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2

N

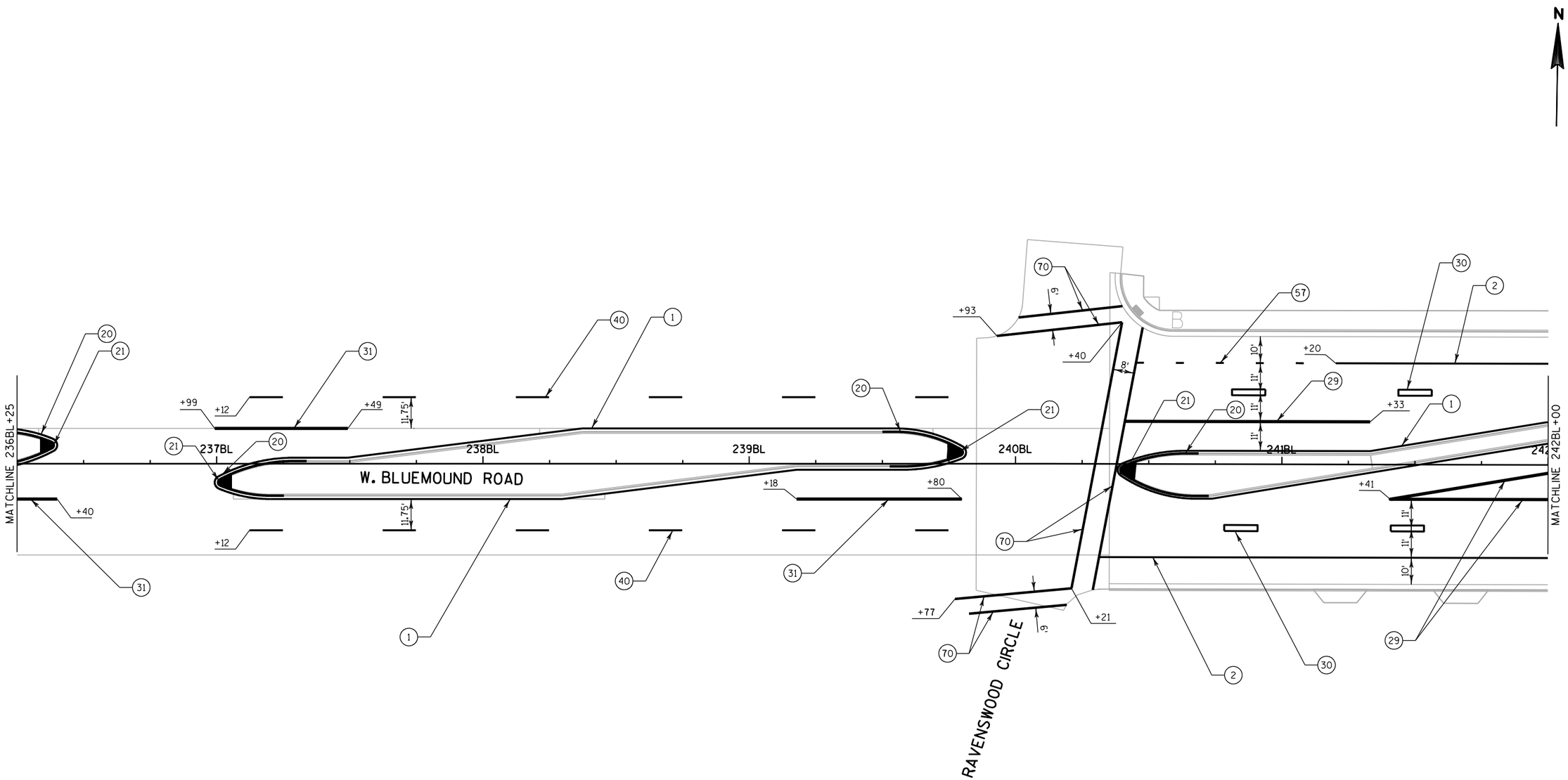


PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

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WISDOT/CADDS SHEET 42

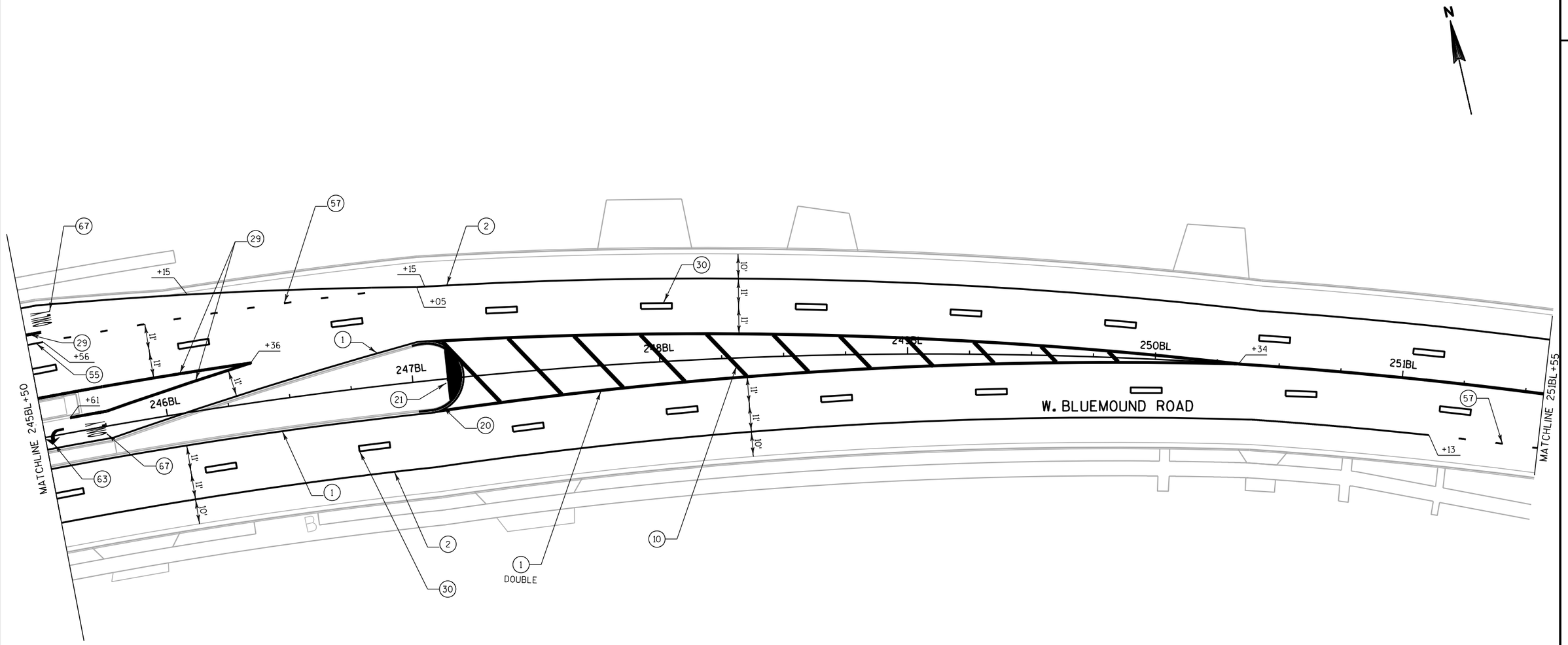
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PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

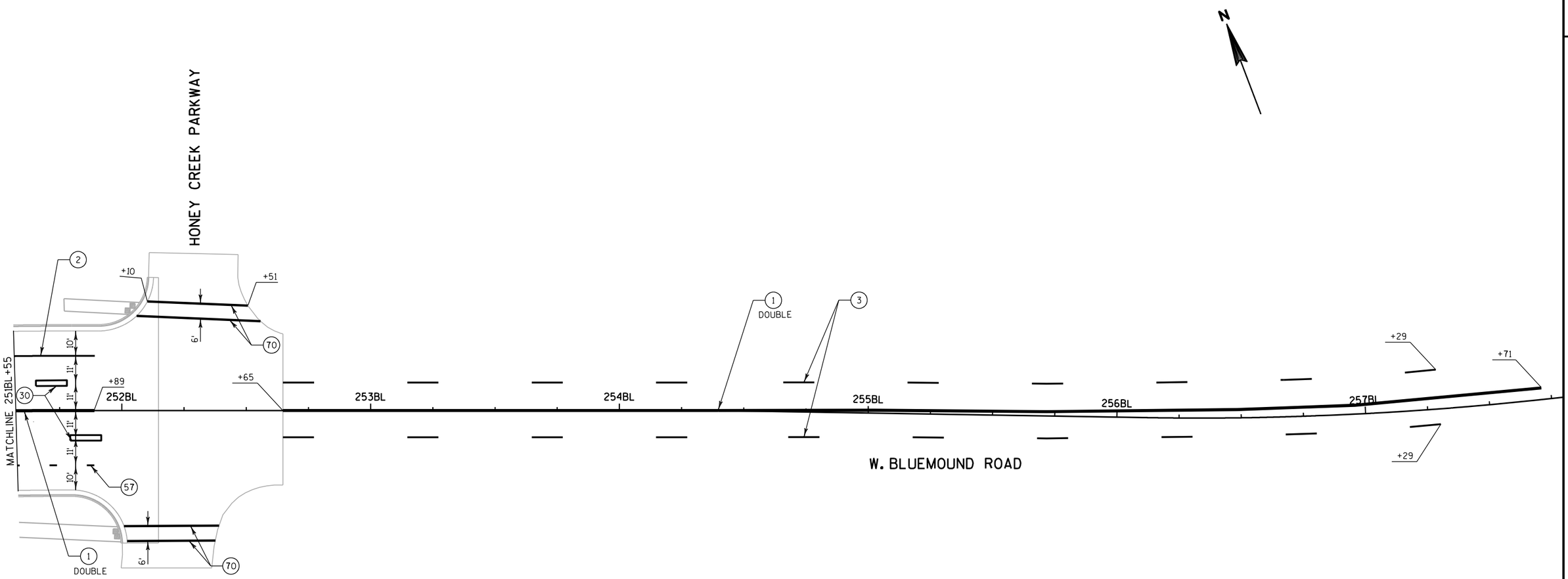
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PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

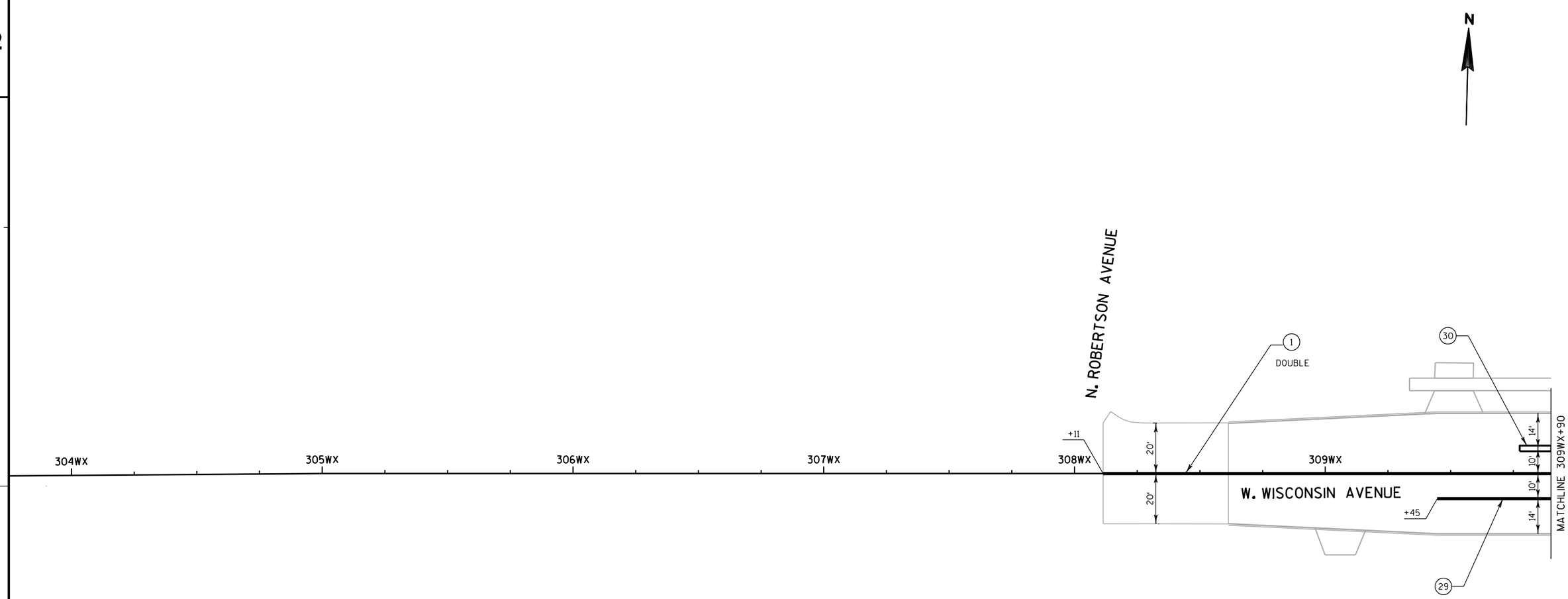
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PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

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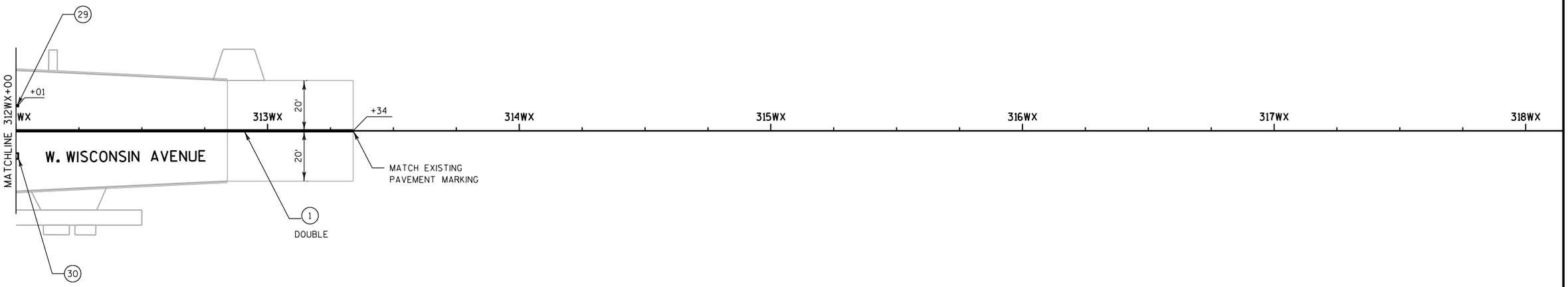


PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

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N



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

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WISDOT/CADDS SHEET 42

STAGING LEGEND

- TRAFFIC CONTROL BARRICADE TYPE III WITH LIGHTS TYPE A
- TRAFFIC CONTROL BARRICADE TYPE III WITH LIGHTS TYPE A AND ATTACHED SIGN
- FIXED MESSAGE SIGN GROUND MOUNT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- TRAFFIC CONTROL DRUM WITH LIGHT TYPE C
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER PLACED IN PRIOR STAGE
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CONCRETE BARRIER TEMPORARY PRECAST PLACED IN PRIOR STAGE
- TRAFFIC FLOW ARROW
- WORK ZONE THIS STAGE
- TEMPORARY PAVEMENT
- TCBS — TEMPORARY CROSSWALK AND BUS STOP ACCESS

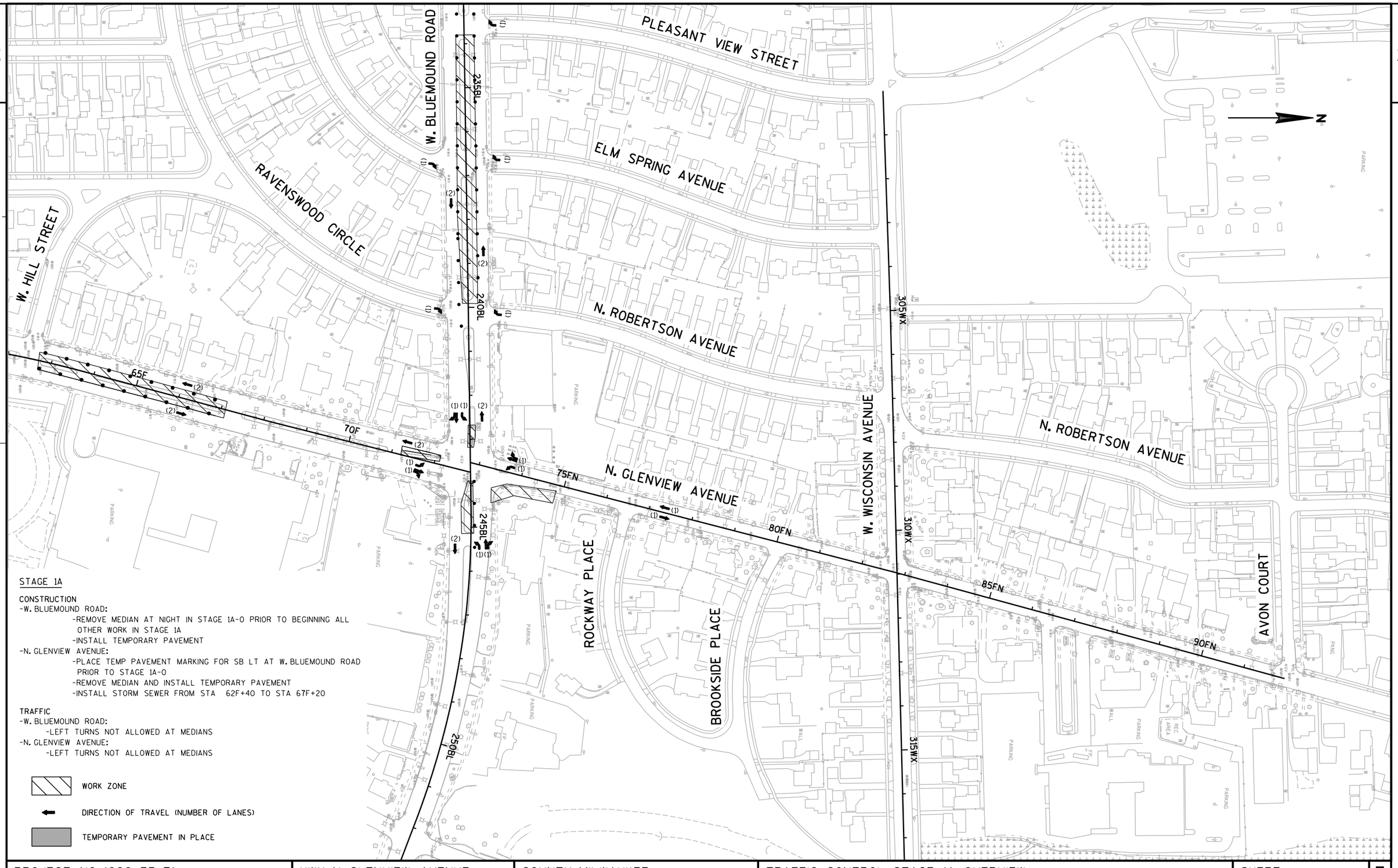
TEMPORARY PAVEMENT MARKING LEGEND

- (45) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- (46) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- (47) PAVEMENT MARKING WET REFLECTIVE TAPE 4-INCH (YELLOW)
- (48) PAVEMENT MARKING WET REFLECTIVE TAPE 4-INCH (YELLOW)
- (49) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
- (50) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (DOT PATTERN WHITE)
- (51) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- (52) TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- (P) PERMANENT PAVEMENT MARKING
- (R) REMOVE PAVEMENT MARKING

2

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL - DETAILS	SHEET	E

2



STAGE 1A

CONSTRUCTION
-W. BLUEMOUND ROAD:
-REMOVE MEDIAN AT NIGHT IN STAGE 1A-O PRIOR TO BEGINNING ALL OTHER WORK IN STAGE 1A
-INSTALL TEMPORARY PAVEMENT
-N. GLENVIEW AVENUE:
-PLACE TEMP PAVEMENT MARKING FOR SB LT AT W. BLUEMOUND ROAD PRIOR TO STAGE 1A-O
-REMOVE MEDIAN AND INSTALL TEMPORARY PAVEMENT
-INSTALL STORM SEWER FROM STA 62F+40 TO STA 67F+20

TRAFFIC
-W. BLUEMOUND ROAD:
-LEFT TURNS NOT ALLOWED AT MEDIANS
-N. GLENVIEW AVENUE:
-LEFT TURNS NOT ALLOWED AT MEDIANS

WORK ZONE

DIRECTION OF TRAVEL (NUMBER OF LANES)

TEMPORARY PAVEMENT IN PLACE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1A OVERVIEW	SHEET	E

2

N. 85TH STREET

W. HAWTHORNE AVENUE

W. HILL STREET

N. GLENVIEW AVENUE

ROAD WORK AHEAD W20-1

ROAD WORK 1000 FT W20-1

ROAD WORK 500 FT W20-1

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

W1-4B

R3-2 24" X 24"

159'

ROAD WORK AHEAD W20-1

NO PARKING ANY TIME R7-1D 18" X 24"

LANE CLOSED R11-2(MOD) 48" X 30"

+51.67 31.72' LT

+30.09 40.77' LT

+39.13 28.61' RT

+80.03 41.65' LT

+71.69 42.67' RT

+10.68 42.29' RT

25'

50'

11'

54F

56F

58F

60F

62F

64F

66F

45

46

500'

400'

500'

200'

W04-2R

NO PARKING ANY TIME R7-1D 18" X 24"

MATCHLINE 67F+75

BLEACHERS

WATER TANK

PARKING

PKNG

PKNG

SB

ATHLETIC FIELD

FLAG POLE

PARKING

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1A CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026001_s1a.dgn PLOT DATE : 01-NOV-2012 10:35 PLOT BY : MSCDYB PLOT NAME : 026001_s1a PLOT SCALE : 100:1

2

STAGE 1A-0

MEDIAN REPLACEMENT TO BE CONSTRUCTED FIRST

NO LEFT TURN UNTIL MEDIAN REPLACEMENT IS COMPLETED

+62.54
21.37' LT

+83.84
11.83' LT

R3-2
24" X 24"

N. GLENVIEW AVENUE

74FN

+50.78
22.78' LT

2

N

ELM SPRING AVENUE

N. ROBERTSON AVENUE

MATCHLINE 76FN+50

76FN

ROAD WORK AHEAD W20-1

ROAD WORK 500 FT W20-1

200'

R3-2
24" X 24"

NO PARKING ANY TIME
R7-1D
18" X 24"

LEFT TURN LANE
R3-55L
24" X 30"

+62.50
11.42' LT

+83.84
11.83' LT

MOUNTED ON TYPE II BARRICADE
SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

SEE DETAIL A

COVER PLATE TEMPORARY

+50.78
22.78' LT

74FN

+72.78
34.08' LT

+44.57
26.91' LT

+57.69
22.57' LT

+07.84
5.41' LT

+91.35
36.10' LT

+90.81
14.12' LT

+54.31
45.21' LT

+42.39
45.03' LT

+97.43
45.06' LT

+33.82
38.01' LT

+09.19
8.85' RT

244BL

246BL

248BL

238BL

240BL

242BL

MATCHLINE 236BL+00

MATCHLINE 249BL+00

W. BLUEMOUND ROAD

+42.20
46.27' RT

+15.71
47.36' LT

+49.45
26.57' LT

+17.74
17.27' RT

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

LEFT LANE MUST TURN LEFT
R3-7L
30" X 30"

+76.69
20.54' RT

MOUNTED ON TYPE II BARRICADE

+41.00
16.76' RT

+83.78
46.04' RT

+02.35
43.79' LT

+84.95
23.45' RT

+80.98
44.55' RT

+04.42
22.15' RT

+21.08
44.95' RT

+36.76
42.25' RT

+00.24
42.58' RT

GLENCOE CIRCLE

RAVENSWOOD CIRCLE

CAUTION ELECTRICAL DISTRIBUTION CENTER

WO12-1D
24" X 24"

+21.40
13.85' RT

+53.81
30.58' RT

N. GLENVIEW AVENUE

70F

68F

MATCHLINE 67F+75

PARKING

DETAIL A

+81.16
18.14' RT

+25.58
38.10' RT

+87.58
37.99' RT

+89.50
41.52' RT

+90.80
45.46' RT

+59.21
61.80' RT

+59.28
66.56' RT

+49.41
63.52' RT

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1A CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026002_s1a.dgn PLOT DATE : 01-NOV-2012 10:35 PLOT BY : MSCDYB PLOT NAME : 026002_s1a PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N. ROBERTSON AVENUE

N. ROBERTSON AVENUE

AVON COURT

W. WISCONSIN AVENUE

308WX

310WX

312WX

314WX

316WX

MATCHLINE 76FN+50

N. GLENVIEW AVENUE

78FN

80FN

82FN

84FN

86FN

88FN

90FN

+92.67
13.10' LT

+56.38
13.16' LT

25'

+06.72
22.13' LT

350'

700'

700'

NO PARKING ANY TIME
R7-1D
18" X 24"

NO PARKING ANY TIME
R7-1D
18" X 24"

W04-2R

RIGHT LANE CLOSED AHEAD
W20-5

ROAD WORK AHEAD
W20-1

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

ROCKWAY PLACE

BROOKSIDE PLACE

WALL

PARKING

REC AREA

WALL

PARKING

FP

PARKING

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1A CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026003_s1a.dgn PLOT DATE : 01-NOV-2012 10:36 PLOT BY : MSCDYB PLOT NAME : 026003_s1a PLOT SCALE : 100:1

2

2

N

N. 89TH STREET

PKNG

WALL

BB COURT

VB CT

MAYWOOD AVENUE

PLEASANT VIEW STREET

200'

ROAD WORK AHEAD
W20-1

ROAD WORK 1000 FT
W20-1

ROAD WORK 500 FT
W20-1

W1-4B

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

R3-2
24" X 24"

NO PARKING ANY TIME
R7-1D
18" X 24"

COVER PLATE TEMPORARY

+82.97
44.84' LT

+38.64
44.76' LT

+99.69
22.60' LT

+98.39
35.00' RT

+29.05
40.72' RT

25'

50'

W. BLUEMOUND ROAD

222BL

224BL

226BL

228BL

230BL

232BL

234BL

MATCHLINE 236BL+00

LANE CLOSED
R11-2(MOD)
48" X 30"

500'

400'

500'

200'

N. 90TH STREET

RAVENSWOOD CIRCLE

GLENCOE CIRCLE

GLENCOE CIRCLE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1A CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026004_s1a.dgn PLOT DATE : 01-NOV-2012 10:37 PLOT BY : MSCDYB PLOT NAME : 026004_s1a PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N

ROAD WORK AHEAD W20-1

PARKING

LEFT LANE MUST TURN LEFT R3-7L 30" X 30"

ROAD WORK 500 FT W20-1

W. BLUEMOUND ROAD

250BL 252BL 254BL 256BL 258BL 260BL 262BL

MATCHLINE 249BL+00

CONCRETE

CONCRETE

CONCRETE

FPC

PKNG

HONEY CREEK PKWY

HONEY CREEK PARKWAY

SIGN

MH

GV

WV

W

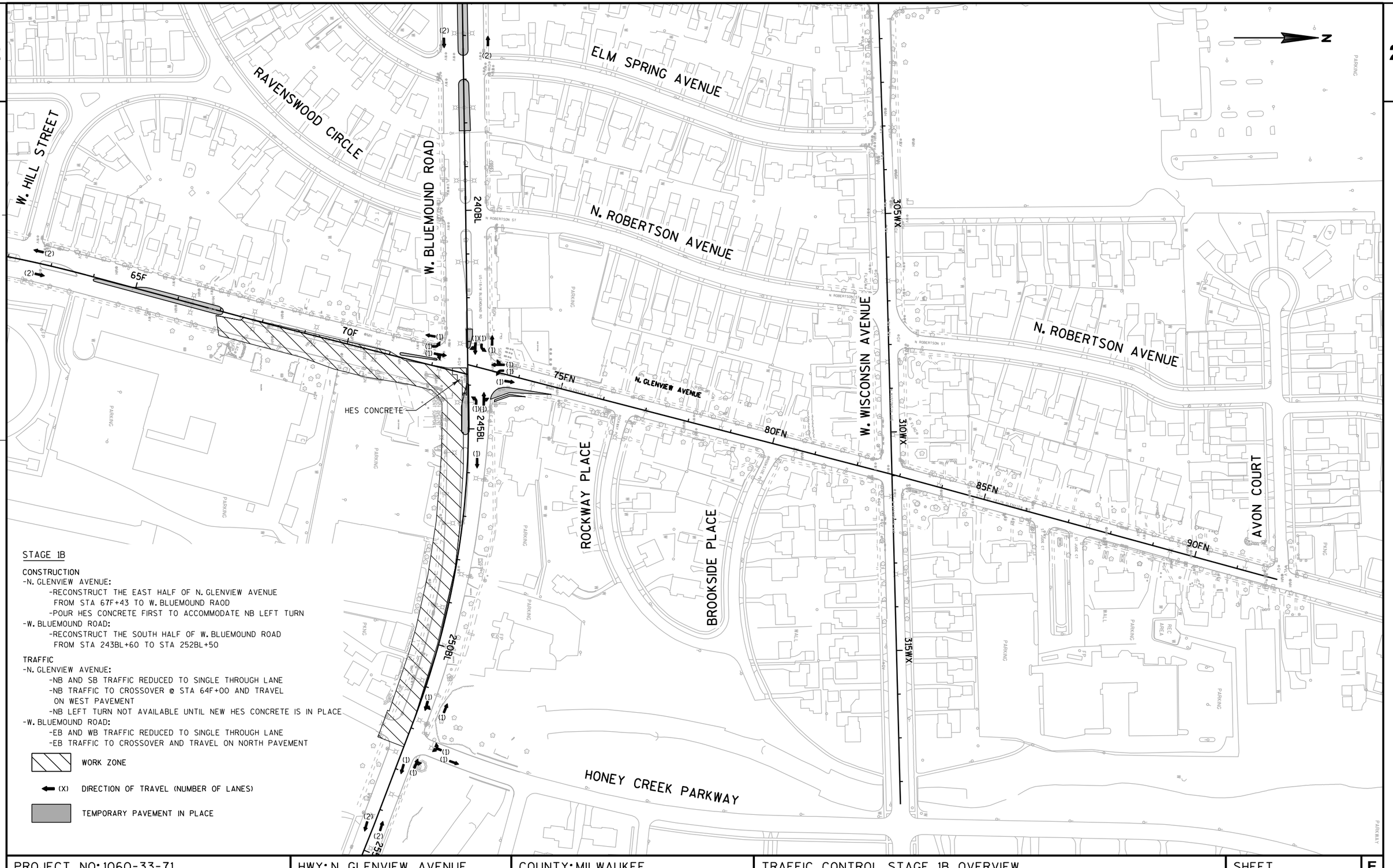
P

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1A CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026005_s1a.dgn PLOT DATE : 01-NOV-2012 10:37 PLOT BY : MSCDYB PLOT NAME : 026005_s1a PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



STAGE 1B

CONSTRUCTION
-N. GLENVIEW AVENUE:
- -RECONSTRUCT THE EAST HALF OF N. GLENVIEW AVENUE FROM STA 67F+43 TO W. BLUEMOUND RAOD
- -POUR HES CONCRETE FIRST TO ACCOMMODATE NB LEFT TURN

-W. BLUEMOUND ROAD:
- -RECONSTRUCT THE SOUTH HALF OF W. BLUEMOUND ROAD FROM STA 243BL+60 TO STA 252BL+50

TRAFFIC
-N. GLENVIEW AVENUE:
- -NB AND SB TRAFFIC REDUCED TO SINGLE THROUGH LANE
- -NB TRAFFIC TO CROSSOVER @ STA 64F+00 AND TRAVEL ON WEST PAVEMENT
- -NB LEFT TURN NOT AVAILABLE UNTIL NEW HES CONCRETE IS IN PLACE

-W. BLUEMOUND ROAD:
- -EB AND WB TRAFFIC REDUCED TO SINGLE THROUGH LANE
- -EB TRAFFIC TO CROSSOVER AND TRAVEL ON NORTH PAVEMENT

WORK ZONE

(X) DIRECTION OF TRAVEL (NUMBER OF LANES)

TEMPORARY PAVEMENT IN PLACE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1B OVERVIEW	SHEET	E

2

N. 85TH STREET

W. HAWTHORNE AVENUE

W. HILL STREET

N. GLENVIEW AVENUE

N

ROAD WORK AHEAD
W20-1

RIGHT LANE CLOSED AHEAD
W20-5

W04-2R

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

ROAD WORK AHEAD
W20-1

56F

58F

60F

62F

64F

66F

68F

+34.77
7.57' LT

+85.19
22.19' RT

+39.68
43.99' RT

25'

+31.53
8.50' LT

+45.74
42.08' LT

+26.80
31.12' LT

+11.58
16.00' RT

+51.74
20.64' RT

45

46

700'

700'

350'

BLEACHERS

W01-6
48" X 24"

W01-4L

LANE CLOSED
R11-2(MOD)
48" X 30"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"
MOUNTED ON
TYPE II BARRICADE

TCBS

MATCHLINE 69F+00

WATER TANK

PARKING

PKNG

PKNG

ATHLETIC FIELD

SB

PARKING

PARKING

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE IB CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026101_s1b.dgn PLOT DATE : 31-JAN-2013 11:04 PLOT BY : MSCRYS PLOT NAME : 026101_s1b PLOT SCALE : 100:1

2

MATCHLINE 240BL+00

N. ROBERTSON STREET

ROAD WORK AHEAD W20-1

N. ROBERTSON STREET

308WX

W. WISCONSIN AVENUE

310WX

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12" MOUNTED ON TYPE II BARRICADE

LEFT TURN LANE R3-55L 24" X 30"

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12" MOUNTED ON TYPE II BARRICADE

+56.00 23.93'LT

+02.40 23.87'LT

+45.86 34.83'LT

+38.52 33.94'LT DOUBLE

242BL

PARKING

+30.46 21.93'LT

+97.45 31.45'LT

DOUBLE

+02.15 44.36'LT

+13.38 11.66'LT

+37.99 35.25'LT

+07.22 45.69'LT

+50.74 21.53'LT

+07.09 11.95'LT

+49.91 0.47'RT

+83.80 0.57'RT

+62.44 10.37'LT

NO PARKING ANY TIME R7-1D 18" X 24"

LEFT TURN LANE R3-55L 24" X 30"

+92.88 13.17'LT

+56.48 13.11'LT

+06.63 2.06'LT

74FN

76FN

78FN

80FN

82FN

84FN

350'

700'

700'

25'

MATCHLINE 69F+00

70F

72F

244BL

N. GLENVIEW AVENUE

TCBS

DOUBLE

R3-2 24" X 24"

DOUBLE

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

W04-2R

RIGHT LANE CLOSED AHEAD W20-5

ROAD WORK AHEAD W20-1

312WX

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12" MOUNTED ON TYPE II BARRICADE

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12" MOUNTED ON TYPE II BARRICADE

DOUBLE

+60.64 19.01'LT

+86.43 17.49'LT

LEFT TURN LANE R3-55L 24" X 30"

+65.85 24.71'LT

+07.03 17.23'LT

+56.21 12.83'LT

246BL

TCBS

W. BLUEMOUND ROAD

ROCKWAY PLACE

BROOKSIDE PLACE

314WX

316WX

MATCHLINE 249BL+00

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE IB CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026102_s1b.dgn PLOT DATE : 31-JAN-2013 11:04 PLOT BY : MSCRYS PLOT NAME : 026102_s1b PLOT SCALE : 100:1

2

2

N

BB COURT

PKNG

VB CT

FB

MAYWOOD AVENUE

PLEASANT VIEW STREET

ELM SPRING AVENUE

ROAD WORK AHEAD W20-1

ROAD WORK AHEAD W20-1

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

RIGHT LANE CLOSED AHEAD W20-5

W04-2R

W. BLUEMOUND ROAD

226BL

228BL

230BL

232BL

234BL

236BL

238BL

240BL

MATCHLINE 240BL+00

+76.70 13.36' RT

+97.90 13.50' LT

+09.42 13.80' LT

+16.31 24.64' LT

25'

+84.02 12.79' RT

+84.02 12.79' RT

+42.77 24.31' RT

45

46

W01-6 48" X 24"

W01-4R

ROAD CLOSED R11-2 48" X 30"

CAUTION ELECTRICAL DISTRIBUTION CENTER

ROAD WORK AHEAD W20-1

700'

700'

350'

GLENCOE CIRCLE

GLENCOE CIRCLE

RAVENSWOOD CIRCLE

ROAD CLOSED 500 FT W20-3

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE IB CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026103_s1b.dgn PLOT DATE : 01-NOV-2012 10:40 PLOT BY : MSCDYB PLOT NAME : 026103_s1b PLOT SCALE : 100:1 WISDOT/CADDS SHEET 42

2

2

W. ST ANNE COURT

W. BLUEMOUND ROAD

N. 77TH STREET

N. 79TH STREET

HONEY CREEK PKWY

HONEY CREEK PARKWAY

PARKING

PKNG

CONCRETE

ROAD WORK AHEAD
W20-1

LEFT LANE CLOSED AHEAD
W20-5

W04-2L

ROAD CLOSED
R11-2
48" X 30"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"
MOUNTED ON
TYPE II BARRICADE

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

MATCHLINE 249BL+00

250BL
252BL
254BL
256BL
258BL
260BL
262BL
264BL

DOUBLE 45

+78.50
23.63' LT

+46.72
0.00' LT

+67.37
31.55' LT

+99.67
15.53' LT

+55.06
6.48' LT

+52.49
17.70' RT

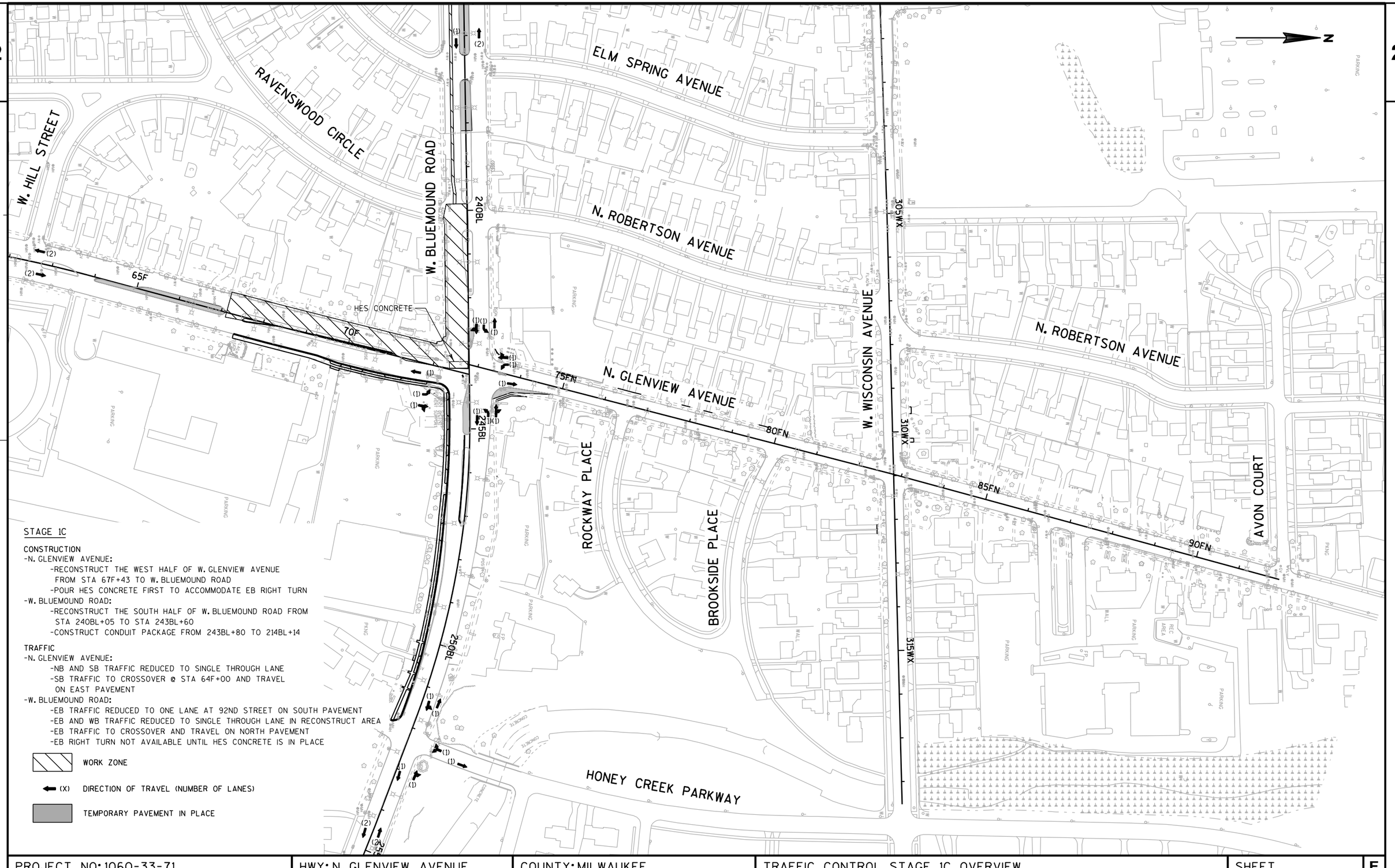
25'

350'
700'
700'

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE IB CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026104_s1b.dgn PLOT DATE : 31-JAN-2013 11:05 PLOT BY : MSCRYS PLOT NAME : 026104_s1b PLOT SCALE : 100:1

2



STAGE 1C

CONSTRUCTION
-N. GLENVIEW AVENUE:
- -RECONSTRUCT THE WEST HALF OF W. GLENVIEW AVENUE FROM STA 67F+43 TO W. BLUEMOUND ROAD
- -POUR HES CONCRETE FIRST TO ACCOMMODATE EB RIGHT TURN

-W. BLUEMOUND ROAD:
- -RECONSTRUCT THE SOUTH HALF OF W. BLUEMOUND ROAD FROM STA 240BL+05 TO STA 243BL+60
- -CONSTRUCT CONDUIT PACKAGE FROM 243BL+80 TO 214BL+14

TRAFFIC
-N. GLENVIEW AVENUE:
- -NB AND SB TRAFFIC REDUCED TO SINGLE THROUGH LANE
- -SB TRAFFIC TO CROSSOVER @ STA 64F+00 AND TRAVEL ON EAST PAVEMENT

-W. BLUEMOUND ROAD:
- -EB TRAFFIC REDUCED TO ONE LANE AT 92ND STREET ON SOUTH PAVEMENT
- -EB AND WB TRAFFIC REDUCED TO SINGLE THROUGH LANE IN RECONSTRUCT AREA
- -EB TRAFFIC TO CROSSOVER AND TRAVEL ON NORTH PAVEMENT
- -EB RIGHT TURN NOT AVAILABLE UNTIL HES CONCRETE IS IN PLACE

WORK ZONE

(X) DIRECTION OF TRAVEL (NUMBER OF LANES)

TEMPORARY PAVEMENT IN PLACE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1C OVERVIEW	SHEET	E

2

N. 85TH STREET

W. HAWTHORNE AVENUE

W. HILL STREET

N. GLENVIEW AVENUE

ROAD WORK AHEAD
W20-1

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

ROAD WORK 1000 FT
W20-1

W04-2L

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"
MOUNTED ON TYPE II BARRICADE

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"
MOUNTED ON TYPE II BARRICADE

48" X 30"
R11-2(MOD)
CLOSED LANE

W01-4R

54F
56F
58F
60F
62F
64F
66F
68F

700'
700'
350'
50'
25'
12'
11'

+68.27
31.11' LT

+67.62
44.12' RT

+83.11
23.25' RT

+62.38
22.03' RT

46
45
46

BLEACHERS

WATER TANK

PARKING

PKNG

PKNG

ATHLETIC FIELD

SB

FP

W

PARKING

PARKING

NO PARKING ANY TIME
R7-1D
18" X 24"

FLAG SIGN

MATCHLINE 69F+00

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1C CONSTRUCTION	SHEET	E

2

MATCHLINE 240BL+00

N. ROBERTSON STREET

ROAD WORK AHEAD W20-1

N. ROBERTSON STREET

W. WISCONSIN AVENUE

N

+56.00 23.93'LT

+02.40 23.87'LT

+45.86 34.83'LT

+38.52 33.94'LT DOUBLE

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12" MOUNTED ON TYPE II BARRICADE

LEFT TURN LANE R3-55L 24" X 30"

TCBS

N. GLENVIEW AVENUE

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12" MOUNTED ON TYPE II BARRICADE

NO PARKING ANY TIME R7-1D 18" X 24"

NO PARKING ANY TIME R7-1D 18" X 24"

+07.22 45.69'LT

+07.09 11.95'LT

+51.33 .64'LT

+81.77 21.43'LT

+62.44 10.37'LT

+92.88 13.17'LT

+56.48 13.11'LT

+06.72 20.67'LT

+06.63 2.06'LT

350'

700'

700'

MATCHLINE 69F+00

70F

72F

74FN

76FN

78FN

80FN

82FN

84FN

+37.99 35.25'LT

+14.49 3.33'RT

244BL

LEFT TURN LANE R3-55L 24" X 30"

N. GLENVIEW AVENUE

W04-2R

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

RIGHT LANE CLOSED AHEAD W20-5

ROAD WORK AHEAD W20-1

308WX

310WX

312WX

314WX

316WX

+41.29 32.06'RT

DOUBLE

+42.16 31.94'RT

+17.30 36.21'RT

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12" MOUNTED ON TYPE II BARRICADE

TCBS

246BL

DOUBLE

+60.64 19.01'LT

+86.43 17.49'LT

LEFT TURN LANE R3-55L 24" X 30"

+65.85 24.71'LT

+07.03 17.23'LT

+56.21 12.83'LT

W. BLUEMOUND ROAD

ROCKWAY PLACE

BROOKSIDE PLACE

MATCHLINE 249BL+00

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1C CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026202_s1c.dgn PLOT DATE : 31-JAN-2013 11:07 PLOT BY : MSCRYS PLOT NAME : 026202_s1c PLOT SCALE : 100:1

2

2

USH 45 SB

USH 45 NB

N. 95TH STREET

N. 94TH STREET

N. 93RD STREET

W. BLUEMOUND ROAD

204BL

206BL

208BL

210BL

212BL+00

MATCHLINE 212BL+00

RIGHT LANE CLOSED AHEAD W20-5

W04-2R

ROAD WORK AHEAD W20-1

700'

700'

350'

+51.86
44.99' RT

+21.95
25.94' RT

46

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1C CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026203_s1c.dgn PLOT DATE : 31-JAN-2013 11:08 PLOT BY : MSCRYS PLOT NAME : 026203_s1c PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

N

N. 92ND STREET

N. 91ST STREET

N. 90TH STREET

N. 89TH STREET

W. BLUEMOUND ROAD

MATCHLINE 212BL+00

MATCHLINE 226BL+00

212BL 214BL 216BL 218BL 220BL 222BL 224BL

+83.71
14.01' RT

+10.31
26.46' RT

50'

49

46

TCBS

LANE CLOSED
R11-2(MOD)
48" X 30"

W01-6
48" X 24"

ROAD CLOSED
R11-2
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

ROAD WORK AHEAD
W20-1

ROAD WORK AHEAD
W20-1

ROAD WORK AHEAD
W20-1

RAVENSWOOD CIRCLE

PKNG

WALL

CANOPY

SIGN

BOLLARD

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1C CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026204_s1c.dgn PLOT DATE : 31-JAN-2013 11:09 PLOT BY : MSCRYS PLOT NAME : 026204_s1c PLOT SCALE : 100:1

2

2

BB COURT

PKNG

VB CT

MAYWOOD AVENUE

PLEASANT VIEW STREET

ELM SPRING AVENUE

N. ROBERTSON AVENUE

GLENCOE CIRCLE

N

ROAD WORK AHEAD
W20-1

ROAD WORK AHEAD
W20-1

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

ROAD CLOSED
R11-2
48" X 30"

MATCHLINE 226BL+00

228BL

230BL

232BL

234BL

236BL

238BL

240BL

MATCHLINE 240BL+00

50'

25'

+97.90
13.50' LT

+09.42
13.80' LT

+17.97
24.81' LT

+84.02
12.79' RT

+42.77
24.31' RT

45

46

TCBS

W01-4R

ROAD CLOSED
R11-2
48" X 30"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"
MOUNTED ON
TYPE II BARRICADE

CAUTION
ELECTRICAL
DISTRIBUTION
CENTER

LANE CLOSED
R11-2(MOD)
48" X 30"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"
MOUNTED ON
TYPE II BARRICADE

ROAD CLOSED 500 FT
W20-3

ROAD CLOSED 500 FT
W20-3

ROAD CLOSED 500 FT
W20-3

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1C CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026205_s1c.dgn PLOT DATE : 31-JAN-2013 11:11 PLOT BY : MSCRYS PLOT NAME : 026205_s1c PLOT SCALE : 100:1

2

N

MATCHLINE 249BL+00

250BL

252BL

254BL

256BL

258BL

260BL

262BL

264BL

25'

CONCRETE

CONCRETE

CONCRETE

LANE CLOSED
R11-2(MOD)
48" X 30"

W01-4L

PARKING

PARKING

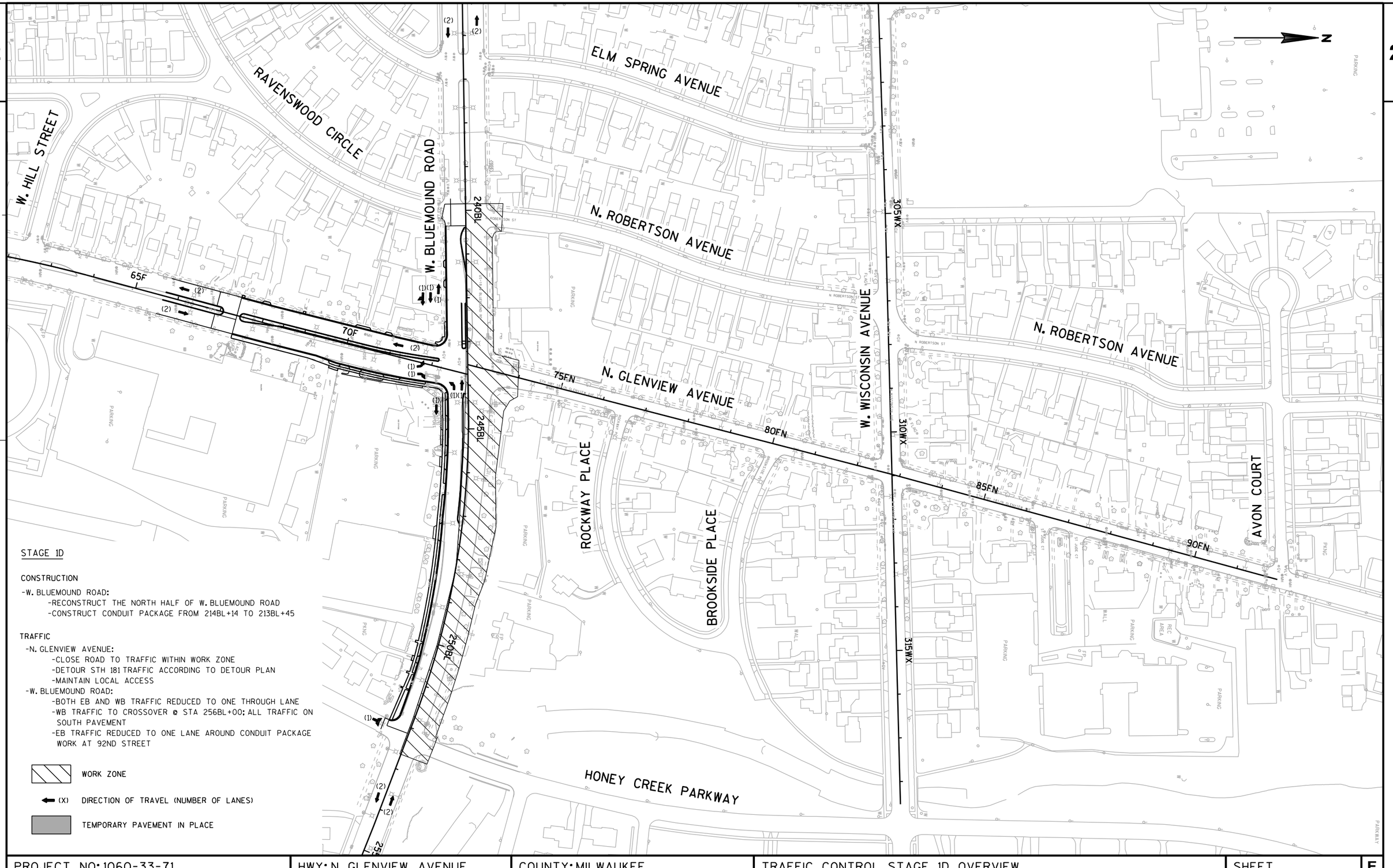
PKNG

HONEY CREEK PARKWAY

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1C CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026206_s1c.dgn PLOT DATE : 31-JAN-2013 11:11 PLOT BY : MSCRYS PLOT NAME : 026206_s1c PLOT SCALE : 100:1

2



STAGE 1D

CONSTRUCTION

-W. BLUEMOUND ROAD:
- -RECONSTRUCT THE NORTH HALF OF W. BLUEMOUND ROAD
- -CONSTRUCT CONDUIT PACKAGE FROM 214BL+14 TO 213BL+45

TRAFFIC

-N. GLENVIEW AVENUE:
- -CLOSE ROAD TO TRAFFIC WITHIN WORK ZONE
- -DETOUR STH 181 TRAFFIC ACCORDING TO DETOUR PLAN
- -MAINTAIN LOCAL ACCESS

-W. BLUEMOUND ROAD:
- -BOTH EB AND WB TRAFFIC REDUCED TO ONE THROUGH LANE
- -WB TRAFFIC TO CROSSOVER @ STA 256BL+00; ALL TRAFFIC ON SOUTH PAVEMENT
- -EB TRAFFIC REDUCED TO ONE LANE AROUND CONDUIT PACKAGE WORK AT 92ND STREET

WORK ZONE

(X) DIRECTION OF TRAVEL (NUMBER OF LANES)

TEMPORARY PAVEMENT IN PLACE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1D OVERVIEW	SHEET	E

2

2

N. 85TH STREET

W. HAWTHORNE AVENUE

W. HILL STREET

N. GLENVIEW AVENUE

54F 56F 58F 60F 62F 64F 66F 68F

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

ROAD CLOSED AHEAD
W20-3

ROAD WORK 500 FT
W20-1

LEFT LANE MUST TURN LEFT
R3-7L
30" X 30"

RIGHT LANE MUST TURN RIGHT
R3-7R
30" X 30"

+49.91
10.00' RT

+56.00
32.00' RT

+84.34
20.96' RT

25'

46

MATCHLINE 69F+00

WATER TANK

PARKING

PKNG

PKNG

SB

ATHLETIC FIELD

FFD

PARKING

PARKING

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026301_s1d.dgn PLOT DATE : 01-NOV-2012 10:44 PLOT BY : MSCDYB PLOT NAME : 026301_s1d PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

MATCHLINE 240BL+00

ROAD CLOSED
R11-2
48" X 30"

SIDEWALK CLOSED
R9-9
24" X 12"
MOUNTED ON
TYPE II BARRICADE

TCBS

RIGHT LANE MUST TURN RIGHT
R3-7R
30" X 30"

+09.38
45.90' RT

242BL

+83.98
34.94' RT

48" X 24"
W01-6

SIDEWALK CLOSED
R9-9
24" X 12"
MOUNTED ON
TYPE II BARRICADE

+83.58
46.00' RT

+12.79
55' LT

244BL

+20.98
35.87' RT

+36.94
42.00' RT

ROAD CLOSED
R11-2
48" X 30"

W01-6
48" X 24"

DOUBLE

+37.72
35.00' LT

+88.82
45.00' LT

+13.07
24.00' LT

LEFT TURN LANE
R3-55L
24" X 30"

246BL

248BL

+46.38
28.54' LT

MATCHLINE 249BL+00

MATCHLINE 69F+00

70F

74FN

+36.34
12.02' RT

ROAD CLOSED
R11-2
48" X 30"

SIDEWALK CLOSED
R9-9
24" X 12"
MOUNTED ON
TYPE II BARRICADE

N. ROBERTSON STREET

ROAD CLOSED AHEAD
W20-3

N. GLENVIEW AVENUE

76FN

78FN

80FN

MATCHLINE 81FN+00

W. BLUEMOUND ROAD

ROCKWAY PLACE

BROOKSIDE PLACE

PARKING

WALL

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026302_s1d.dgn PLOT DATE : 01-NOV-2012 10:44 PLOT BY : MSCDYB PLOT NAME : 026302_s1d PLOT SCALE : 100:1

2

USH 45 SB

USH 45 NB

N. 95TH STREET

N. 94TH STREET

N. 93RDSTREET

W. BLUEMOUND ROAD

LEFT LANE CLOSED AHEAD
W20-5

W04-2L

ROAD WORK AHEAD
W20-1

204BL

206BL

208BL

210BL

700'

700'

350'

+62.61
14.17' RT

25'

W012-1D
24" X 24"
MOUNT ON
BARREL

+92.60
2.23' RT

+31.41
26.41' RT

+35.83
24.18' RT

LANE CLOSED
R11-2(MOD)
48" X 30"

46

49

MATCHLINE 212BL+00

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026302a_s1d.dgn PLOT DATE : 31-JAN-2013 11:14 PLOT BY : MSCRYS PLOT NAME : 026302a_s1d PLOT SCALE : 100:1

2

N

W. BLUEMOUND ROAD

N. 92ND STREET

N. 91ST STREET

N. 90TH STREET

N. 89TH STREET

RAVENSWOOD CIRCLE

MATCHLINE 212BL+00

MATCHLINE 225BL+75

212BL

214BL

216BL

218BL

220BL

222BL

224BL

50'

46

+86.43
1.87' RT

+53.64
69.16' RT

+12.80
35.34' RT

+52.87
166.50' RT

+61.48
228.99' RT

12'

TCBS

W012-1D
24" X 24"
MOUNT ON
BARREL

LANE
CLOSED
R11-2(MOD)
48" X 30"

WALL

PKNG

SIGN

CANOPY

BOLLARD

MH

GV

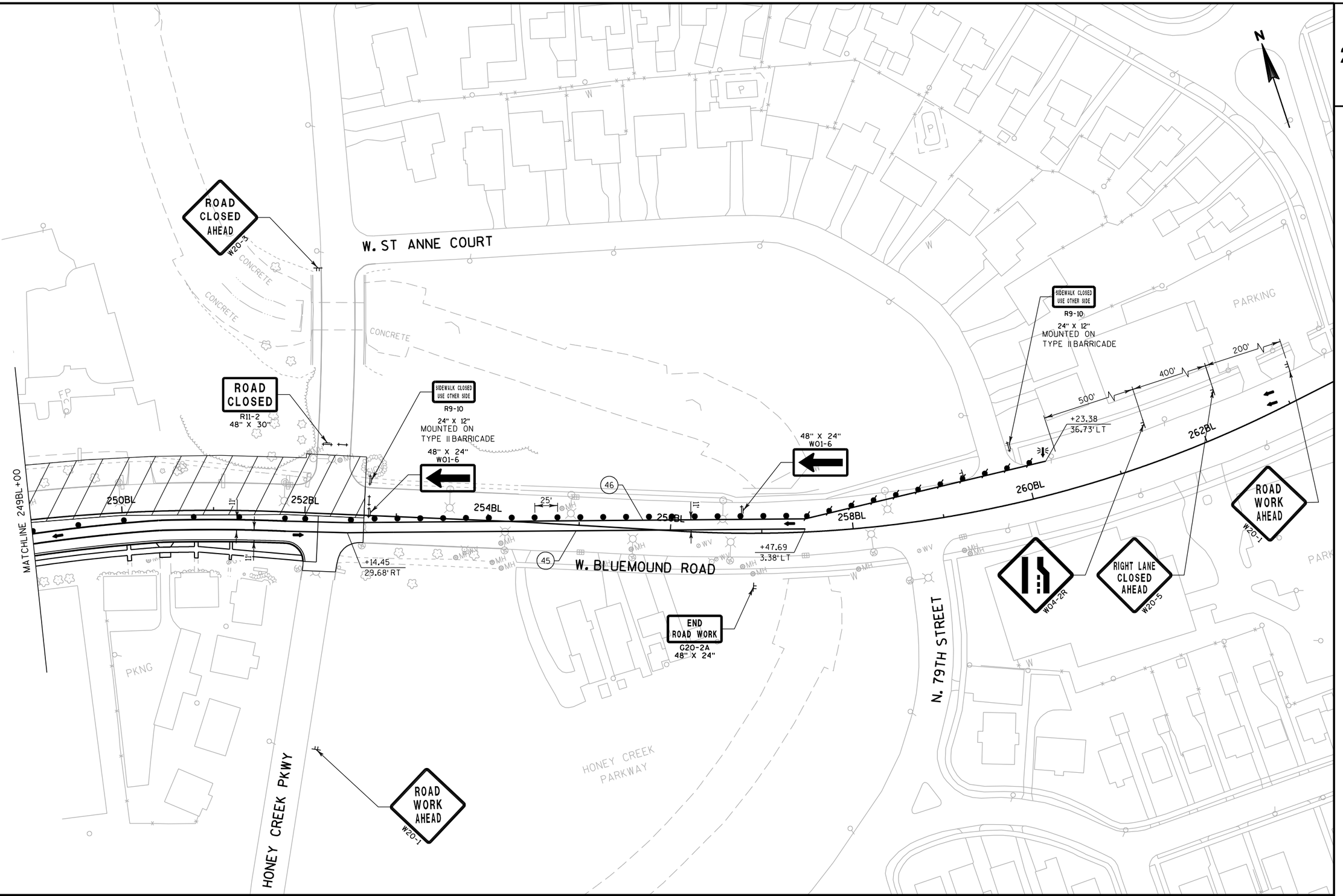
VLV

INL

W

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

2

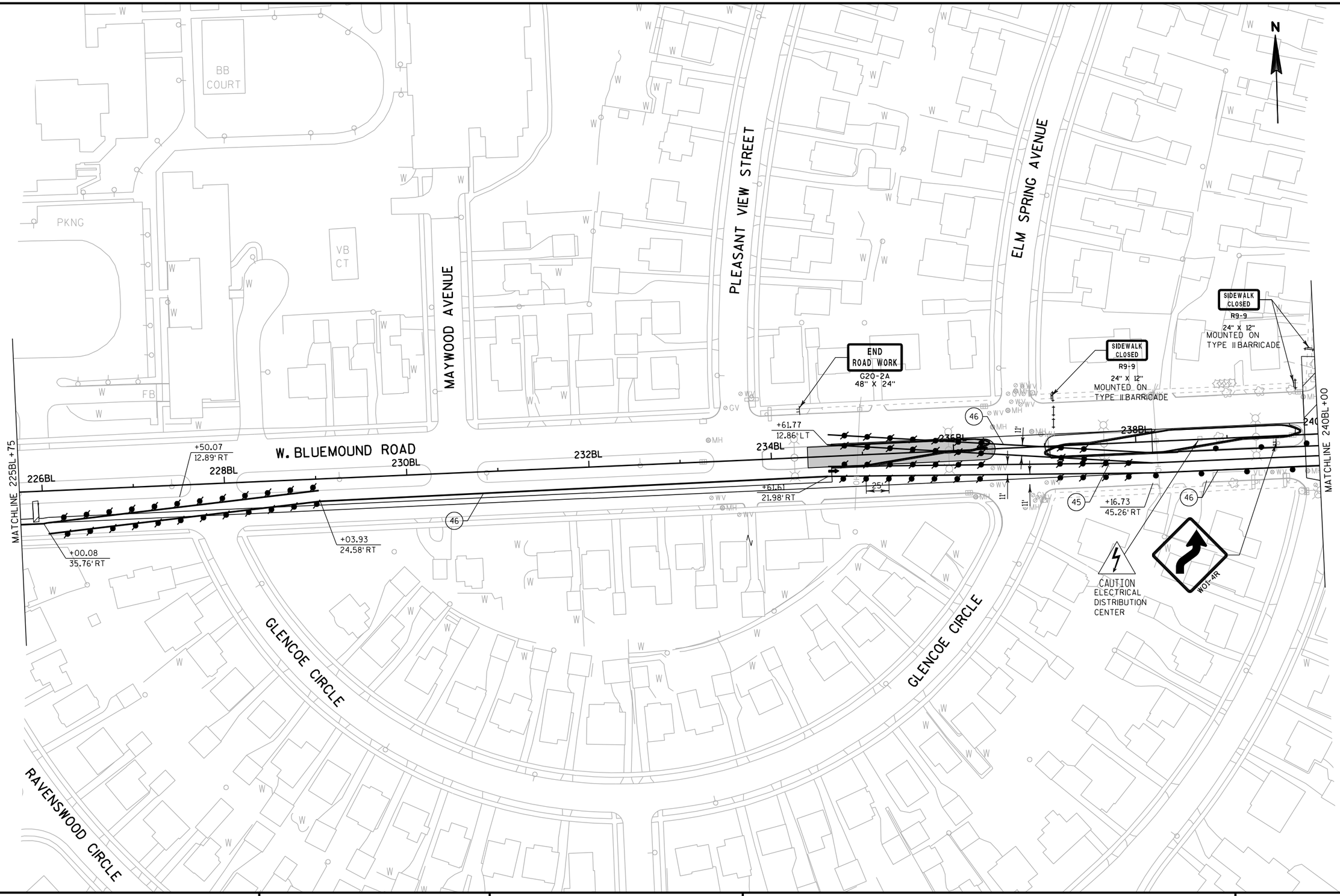


PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026303_s1d.dgn PLOT DATE : 01-NOV-2012 10:44 PLOT BY : MSCDYB PLOT NAME : 026303_s1d PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

2

N

N. ROBERTSON STREET

N. GLENVIEW AVENUE

W. WISCONSIN AVENUE

WALL

FP

PARKING

ROAD WORK AHEAD W20-1

ROAD WORK 1000 FT W20-1

ROAD WORK 500 FT W20-1

R3-1 24" X 24"

ROAD CLOSED AHEAD W20-3

ROAD CLOSED 1000 FT W20-3

ROAD CLOSED 500 FT W20-3

R3-2 24" X 24"

ROAD WORK 500 FT W20-1

ROAD WORK 1000 FT W20-1

ROAD WORK AHEAD W20-1

ROAD CLOSED R11-2 48" X 30"

86FN

84FN

82FN

400'

500'

500'

500'

500'

500'

400'

500'

500'

400'

304WX

306WX

308WX

310WX

312WX

314WX

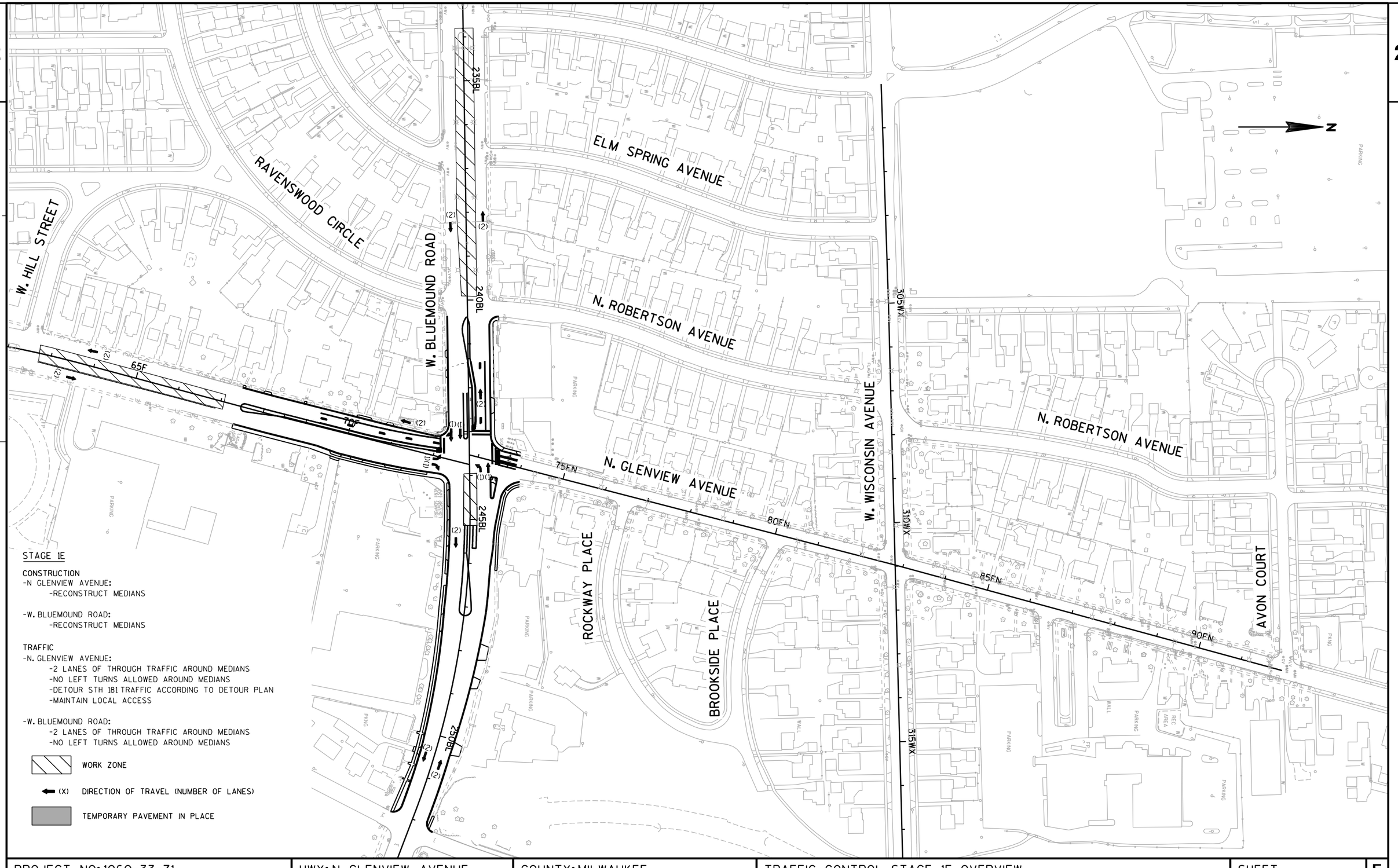
316WX

318WX

MATCHLINE 81FN+00

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026305_s1d.dgn PLOT DATE : 01-NOV-2012 10:45 PLOT BY : MSCDYB PLOT NAME : 026305_s1d PLOT SCALE : 100:1



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1E OVERVIEW	SHEET E

2

N. 85TH STREET

W. HAWTHORNE AVENUE

W. HILL STREET

N. GLENVIEW AVENUE

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

W1-4R

ROAD WORK AHEAD
W20-1

ROAD WORK 500 FT
W20-1

ROAD WORK AHEAD
W20-1

W01-6
48" X 24"

W01-6
48" X 24"

54F
56F
58F
60F
62F
64F
66F
68F

+44.84
22.67' LT

+43.50
18.66' RT

+69.61
41.80' LT

+71.73
44.10' RT

+08.65
42.02' LT

+83.84
42.31' RT

+48.96
10.00' RT

45
46

25'

700'
700'
350'

BLEACHERS

MATCHLINE 69F+00

LEFT LANE
MUST
TURN LEFT
R3-7L
30" X 30"

RIGHT LANE
MUST
TURN RIGHT
R3-7R
30" X 30"

WATER TANK

PARKING

PKNG

PKNG

ATHLETIC FIELD

SB

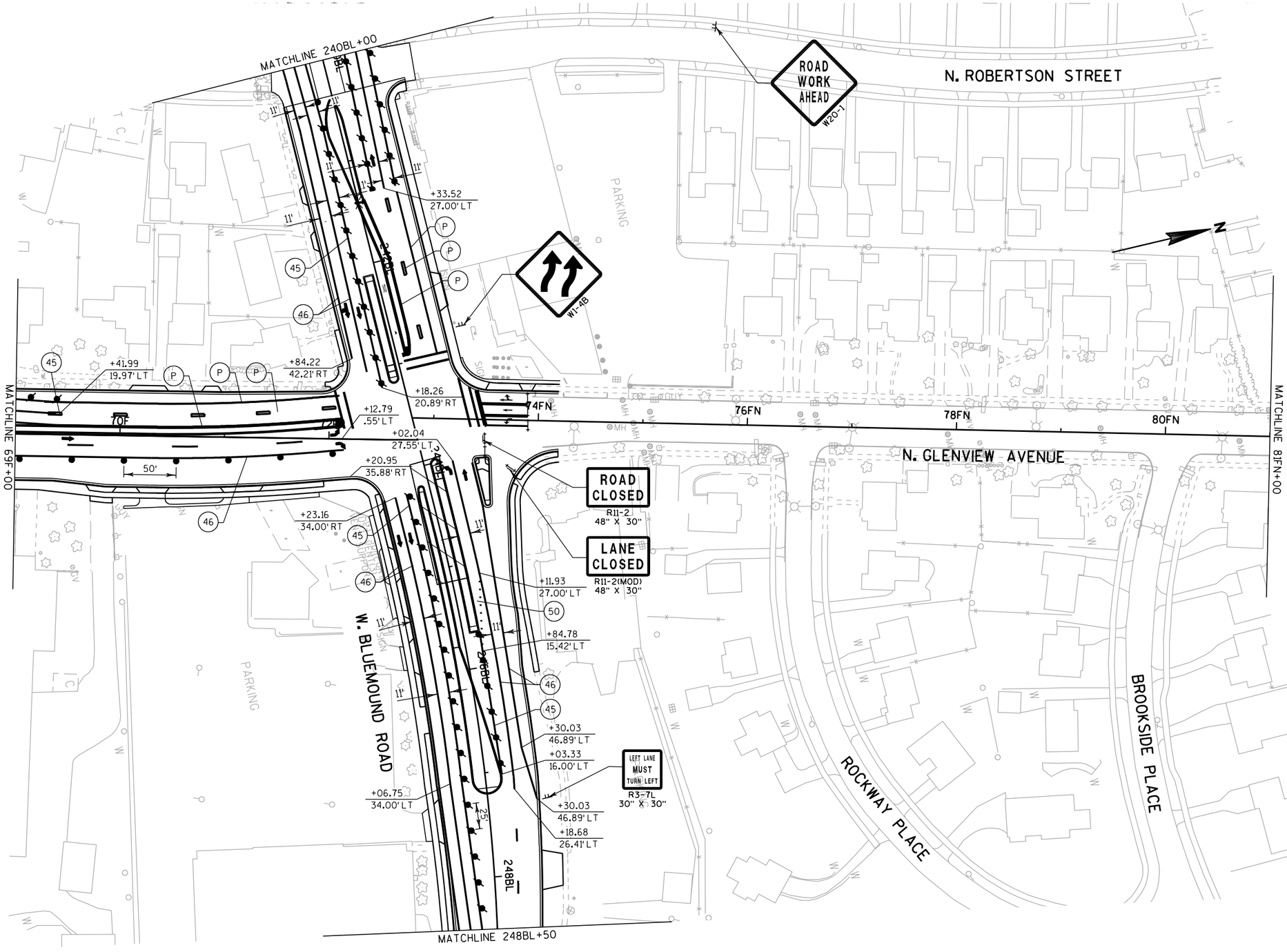
PARKING

PARKING

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1E CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026401_s1e.dgn PLOT DATE : 01-NOV-2012 10:48 PLOT BY : MSCDYB PLOT NAME : 026401_s1e PLOT SCALE : 100:1

2



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1E CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026402_s1e.dgn PLOT DATE : 01-NOV-2012 10:48 PLOT BY : MSCDYB PLOT NAME : 026402_s1e PLOT SCALE : 100:1
WISDOT/CADDS SHEET 42

2

N

N. ROBERTSON STREET

N. GLENVIEW AVENUE

W. WISCONSIN AVENUE

WALL

FP

PARKING

ROAD WORK AHEAD W20-1

ROAD WORK 1000 FT W20-1

ROAD WORK 500 FT W20-1

R3-1 24" X 24"

ROAD CLOSED AHEAD W20-3

ROAD CLOSED 1000 FT W20-3

ROAD CLOSED 500 FT W20-3

R3-2 24" X 24"

ROAD CLOSED R11-2 48" X 30"

ROAD WORK 500 FT W20-1

ROAD WORK 1000 FT W20-1

ROAD WORK AHEAD W20-1

304WX 306WX 308WX 310WX 312WX 314WX 316WX 318WX

400' 500' 500' 500' 500' 400' 500' 500' 400'

86FN 84FN 82FN

MATCHLINE 81FN+00

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1E CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026403_s1e.dgn PLOT DATE : 01-NOV-2012 10:48 PLOT BY : MSCDYB PLOT NAME : 026403_s1e PLOT SCALE : 100:1

2

N

BB COURT

PKNG

VB CT

FB

MAYWOOD AVENUE

PLEASANT VIEW STREET

ELM SPRING AVENUE

W. BLUEMOUND ROAD

ROAD WORK AHEAD W20-1

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

W01-6 48" X 24"

RECONSTRUCT INLET

W01-6 48" X 24"

+00.51 22.96' LT

+35.40 44.76' LT

+88.75 44.84' LT

+44.12 45.03' LT

+95.47 45.06' LT

+54.50 45.25' LT

226BL

228BL

230BL

232BL

234BL

236BL

238BL

240BL

700'

700'

350'

+99.31 24.05' RT

25'

+29.06 40.72' RT

50'

+39.00 43.30' RT

MATCHLINE 240BL +00

ROAD WORK AHEAD W20-1

ROAD WORK 500 FT W20-1

W1-4B

W01-6 48" X 24"

CAUTION ELECTRICAL DISTRIBUTION CENTER

GLENCOE CIRCLE

GLENCOE CIRCLE

RAVENSWOOD CIRCLE

RAVENSWOOD CIRCLE

ROAD WORK AHEAD W20-1

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1E CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026404_s1e.dgn PLOT DATE : 01-NOV-2012 10:49 PLOT BY : MSCDYB PLOT NAME : 026404_s1e PLOT SCALE : 100:1

2

2

W. ST ANNE COURT

W. BLUEMOUND ROAD

N. 79TH STREET

HONEY CREEK PARKWAY

HONEY CREEK PARKWAY

MATCHLINE 248BL +50

250BL

252BL

254BL

256BL

258BL

260BL

262BL

+37.75
3.96' LT

LEFT LANE MUST TURN LEFT
R3-7L
30" X 30"

ROAD WORK 500 FT
W20-1

ROAD WORK AHEAD
W20-1

CONCRETE

CONCRETE

CONCRETE

PARKING

PARKING

PARKING

PKNG

FP

SIGN

MH

WV

W

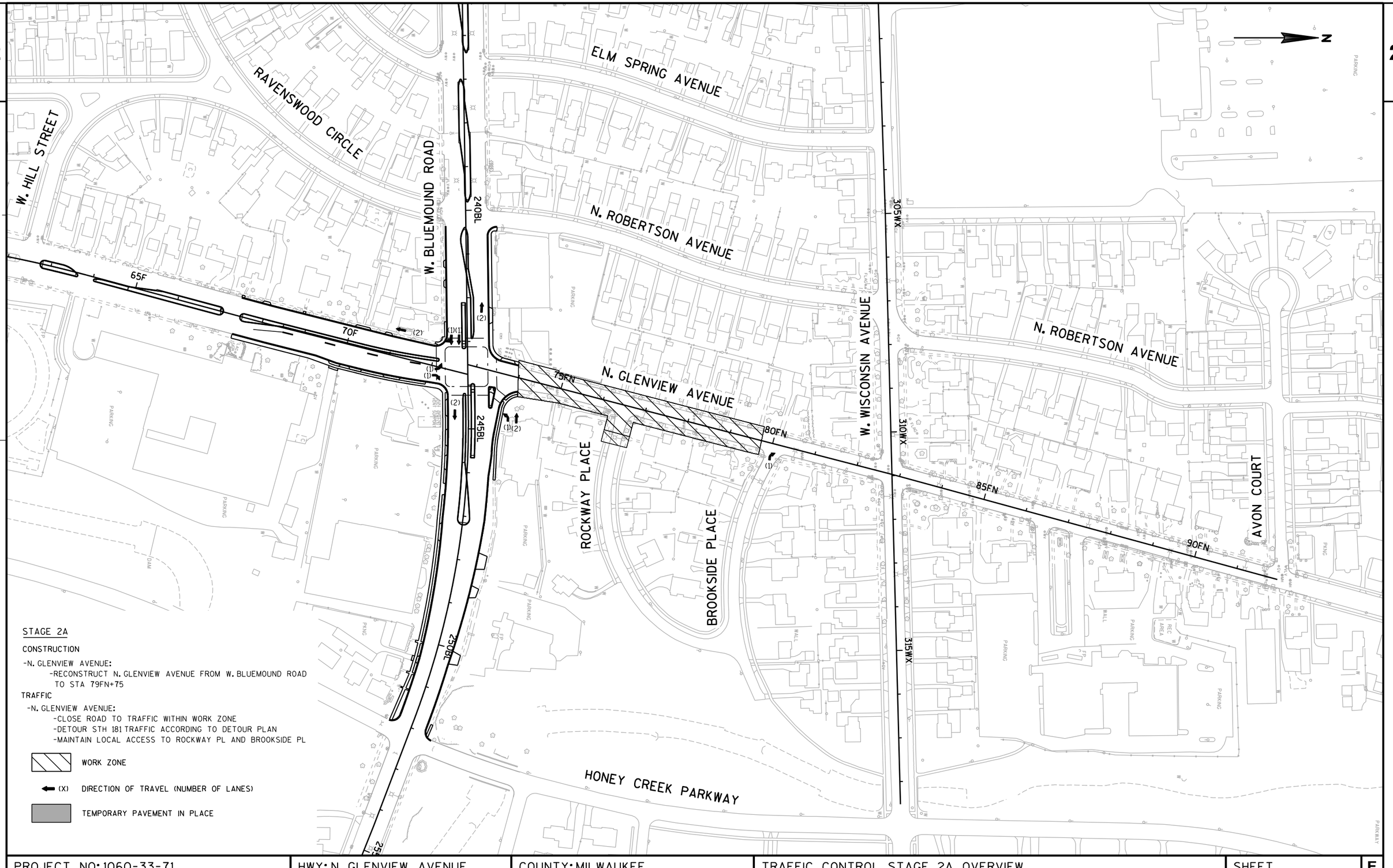
P

N

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 1E CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026405_s1e.dgn PLOT DATE : 01-NOV-2012 10:49 PLOT BY : MSCDYB PLOT NAME : 026405_s1e PLOT SCALE : 100:1

2



STAGE 2A

CONSTRUCTION

-N. GLENVIEW AVENUE:
  -RECONSTRUCT N. GLENVIEW AVENUE FROM W. BLUEMOUND ROAD TO STA 79FN+75

TRAFFIC

-N. GLENVIEW AVENUE:
  -CLOSE ROAD TO TRAFFIC WITHIN WORK ZONE
  -DETOUR STH 181 TRAFFIC ACCORDING TO DETOUR PLAN
  -MAINTAIN LOCAL ACCESS TO ROCKWAY PL AND BROOKSIDE PL

WORK ZONE

(X) DIRECTION OF TRAVEL (NUMBER OF LANES)

TEMPORARY PAVEMENT IN PLACE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2A OVERVIEW	SHEET	E

2

MATCHLINE 239BL+00

N. ROBERTSON STREET

W. HILL STREET

N. GLENVIEW AVENUE

R3-2
24" X 24"

240BL

25'

240BL

PARKING

SIDEWALK CLOSED
R9-9
24" X 12"
MOUNTED ON
TYPE II BARRICADE

ROAD CLOSED
R11-2
48" X 30"

74FN

76FN

MATCHLINE 77FN+70

64E

66F

68F

70F

400'

500'

25'

ROAD CLOSED AHEAD
W20-3

LEFT LANE MUST TURN LEFT
R3-7L
30" X 30"

RIGHT LANE MUST TURN RIGHT
R3-7R
30" X 30"

ROAD CLOSED 1000 FT
W20-3

ROAD CLOSED 500 FT
W20-3

+56.45
21.00' RT

+84.14
21.00' RT

+50.78
21.00' RT

+14.00
10.41' RT

54

46

W. BLUEMOUND ROAD

PARKING

SIDEWALK CLOSED
R9-9
24" X 12"
MOUNTED ON
TYPE II BARRICADE

ROAD CLOSED
R11-2
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

R3-1
24" X 24"

MATCHLINE 248BL+00

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 2A CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026501_s2a.dgn PLOT DATE : 01-NOV-2012 10:51 PLOT BY : MSCDYB PLOT NAME : 026501_s2a PLOT SCALE : 100:1

2

2

N

N. ROBERTSON STREET

ROAD WORK AHEAD W20-1

ROAD WORK 1000 FT W20-1

ROAD WORK 500 FT W20-1

R3-1 24" X 24"

304WX

306WX

308WX

310WX

400'

500'

500'

W. WISCONSIN AVENUE

ROAD CLOSED AHEAD W20-3

86FN

ROAD CLOSED 1000 FT W20-3

400'

500'

84FN

ROAD CLOSED 500 FT W20-3

PARKING

500'

500'

400'

312WX

314WX

316WX

318WX

R3-2 24" X 24"

ROAD WORK 500 FT W20-1

ROAD WORK 1000 FT W20-1

ROAD WORK AHEAD W20-1

82FN

ROAD CLOSED R11-2 48" X 30"

WALL

80FN

N. ROBERTSON STREET

N. GLENVIEW AVENUE

78FN

BROOKSIDE PLACE

ROAD CLOSED AHEAD W20-3

MATCHLINE 77FN+70

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 2A CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026502_s2a.dgn PLOT DATE : 01-NOV-2012 10:52 PLOT BY : MSCDYB PLOT NAME : 026502_s2a PLOT SCALE : 100:1

2

2

N

W. ST ANNE COURT

W. BLUEMOUND ROAD

HONEY CREEK PARKWAY

N. 79TH STREET

MATCHLINE 248BL +00

248BL

250BL

252BL

254BL

256BL

258BL

260BL

262BL

ROAD WORK 500 FT W20-1

ROAD WORK AHEAD W20-1

PARKING

FP

CONCRETE

PKNG

HONEY CREEK PARKWAY

SIGN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 2A CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026503_s2a.dgn PLOT DATE : 01-NOV-2012 10:52 PLOT BY : MSCDYB PLOT NAME : 026503_s2a PLOT SCALE : 100:1

2

2

N

MAYWOOD AVENUE

PLEASANT VIEW STREET

ELM SPRING AVENUE

W. BLUEMOUND ROAD

BB COURT

PKNG

VB CT

FP

FB

226BL

228BL

230BL

232BL

234BL

236BL

238BL

239BL+00

MATCHLINE 239BL+00

ROAD WORK AHEAD

W20-1

ROAD WORK 500 FT

W20-1

GLENCOE CIRCLE

GLENCOE CIRCLE

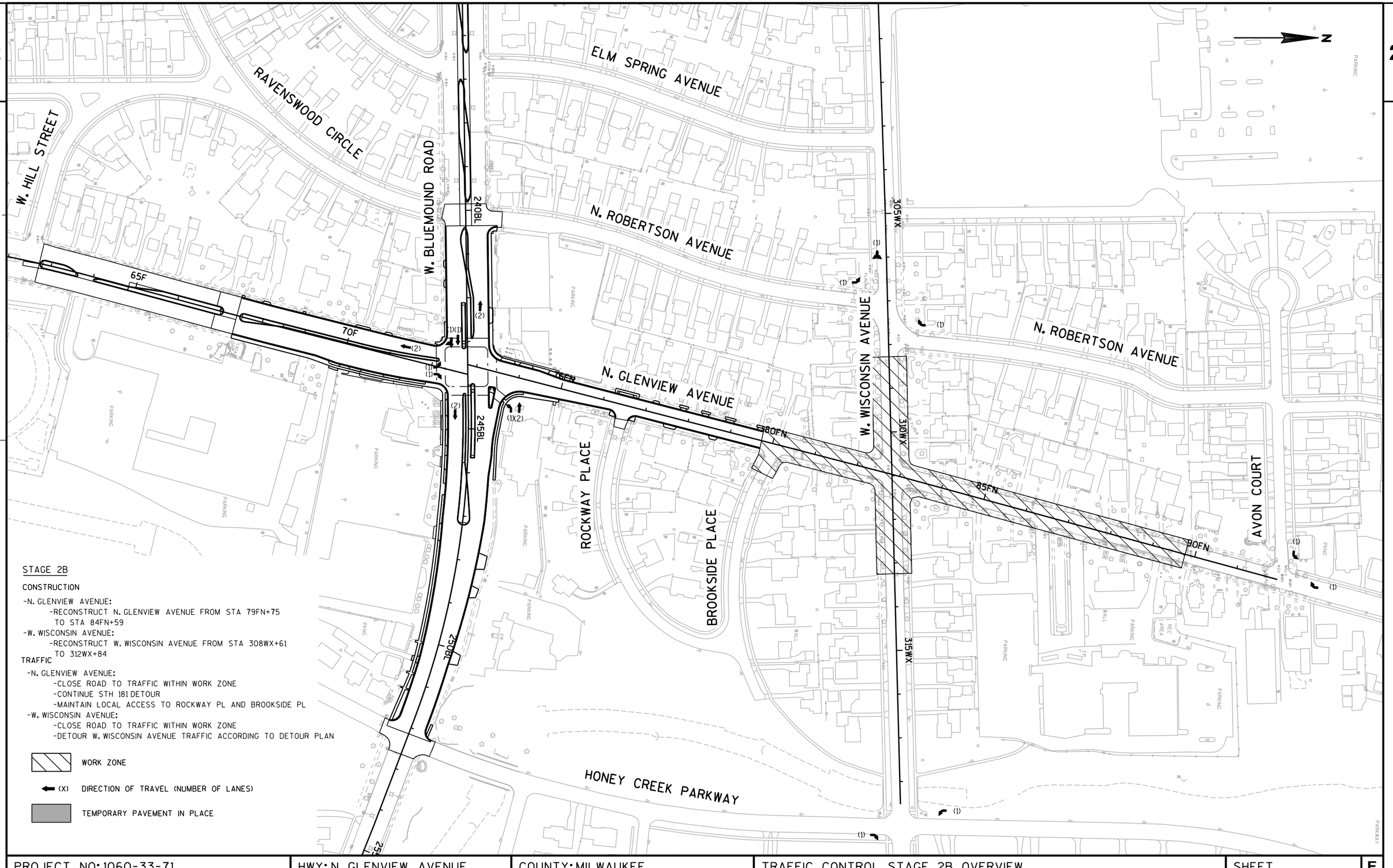
RAVENSWOOD CIRCLE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 2A CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026504_s2a.dgn PLOT DATE : 01-NOV-2012 10:52 PLOT BY : MSCDYB PLOT NAME : 026504_s2a PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



STAGE 2B

CONSTRUCTION

-N. GLENVIEW AVENUE:
  -RECONSTRUCT N. GLENVIEW AVENUE FROM STA 79FN+75 TO STA 84FN+59
-W. WISCONSIN AVENUE:
  -RECONSTRUCT W. WISCONSIN AVENUE FROM STA 308WX+61 TO 312WX+84

TRAFFIC

-N. GLENVIEW AVENUE:
  -CLOSE ROAD TO TRAFFIC WITHIN WORK ZONE
  -CONTINUE STH 181 DETOUR
  -MAINTAIN LOCAL ACCESS TO ROCKWAY PL AND BROOKSIDE PL
-W. WISCONSIN AVENUE:
  -CLOSE ROAD TO TRAFFIC WITHIN WORK ZONE
  -DETOUR W. WISCONSIN AVENUE TRAFFIC ACCORDING TO DETOUR PLAN

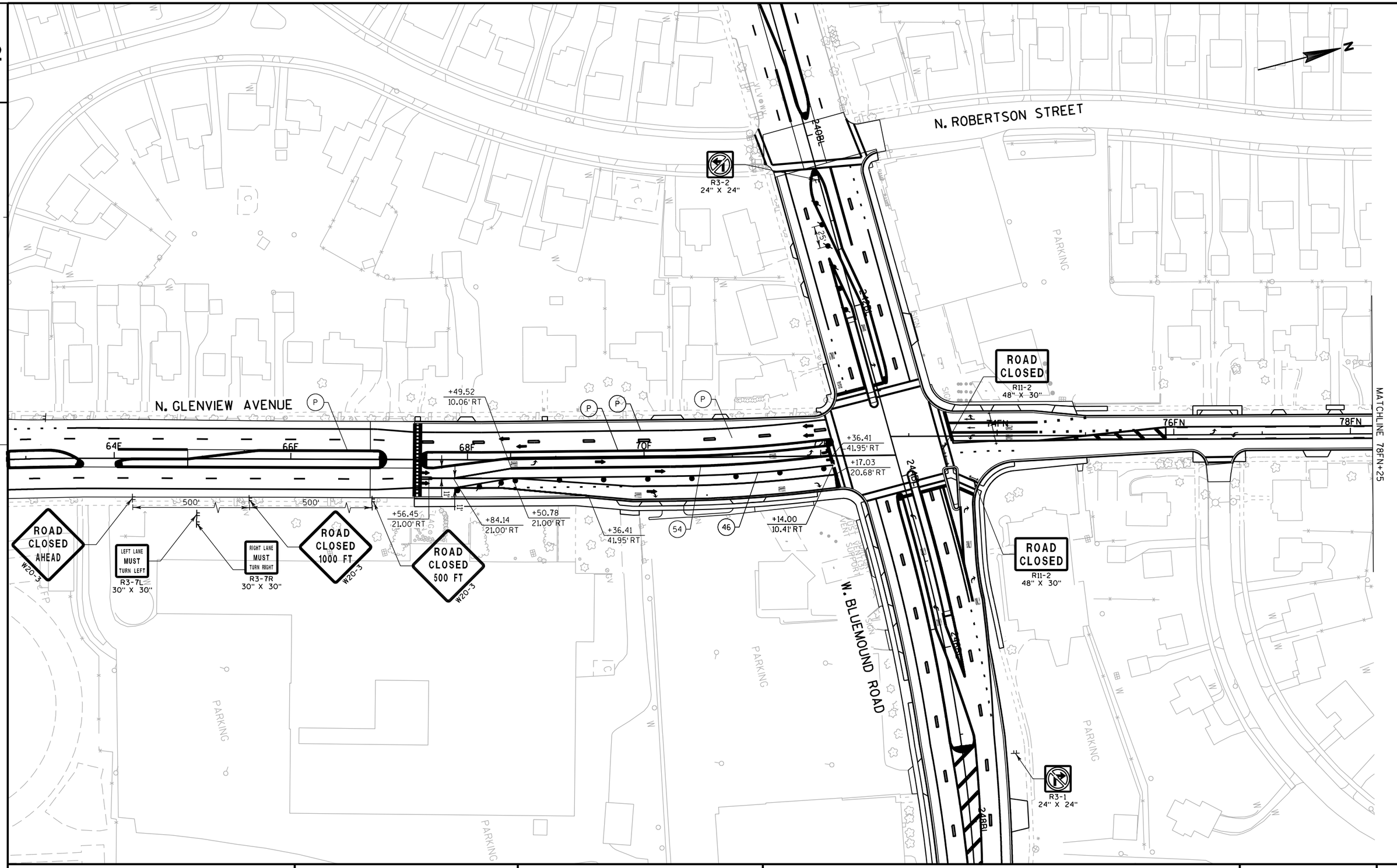
WORK ZONE

(X) DIRECTION OF TRAVEL (NUMBER OF LANES)

TEMPORARY PAVEMENT IN PLACE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2B OVERVIEW	SHEET	E

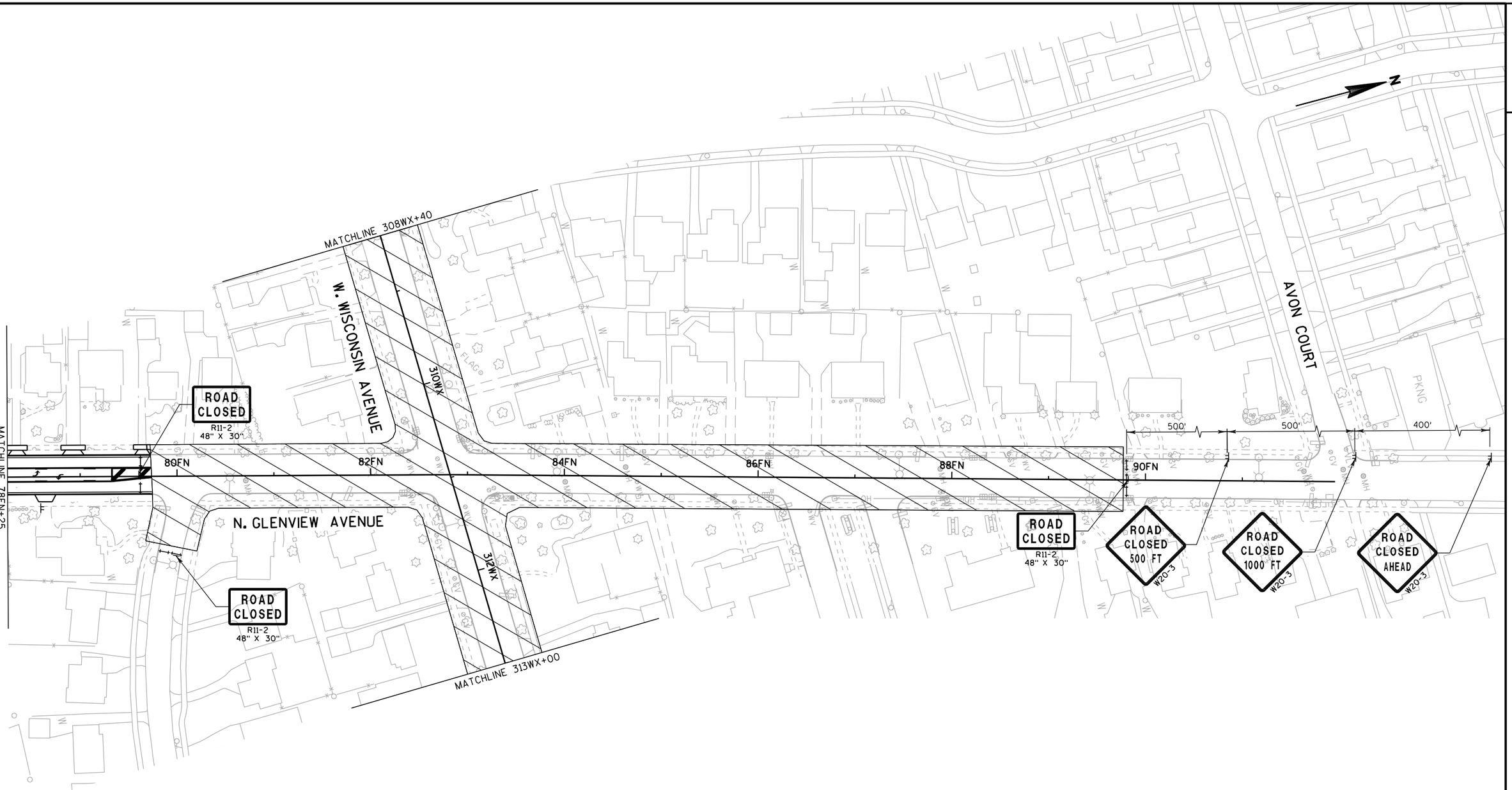
2



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 2B CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026601_s2b.dgn PLOT DATE : 01-NOV-2012 10:55 PLOT BY : MSCDYB PLOT NAME : 026601_s2b PLOT SCALE : 100:1

2

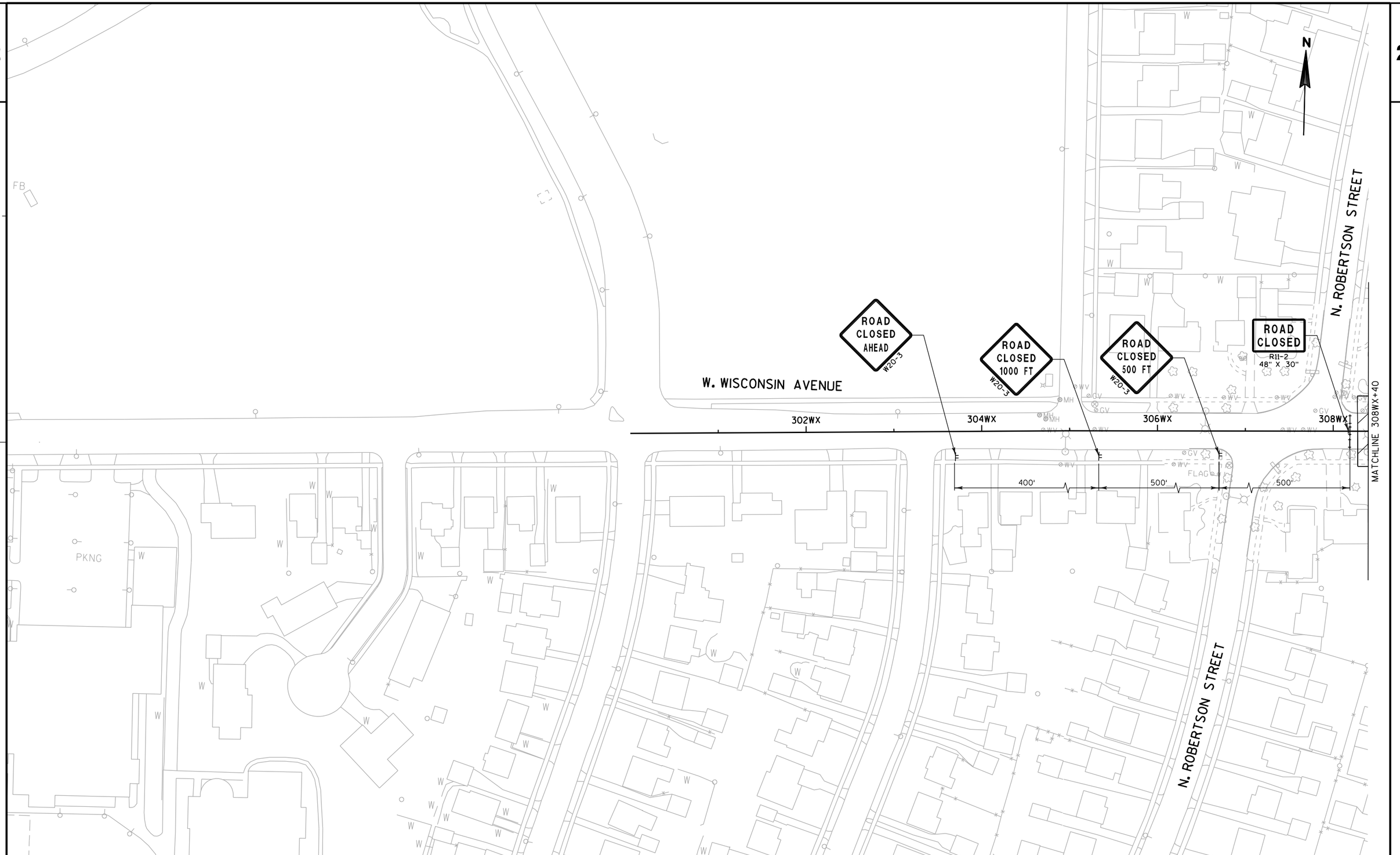


PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 2B CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026602_s2b.dgn PLOT DATE : 01-NOV-2012 10:55 PLOT BY : MSCDYB PLOT NAME : 026602_s2b PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 2B CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026603_s2b.dgn PLOT DATE : 01-NOV-2012 10:56 PLOT BY : MSCDYB PLOT NAME : 026603_s2b PLOT SCALE : 100:1

2

N

W. WISCONSIN AVENUE

MATCHLINE 313WX+00

500'

500'

400'

314WX

316WX

318WX

ROAD CLOSED
R11-2
48" X 30"

ROAD CLOSED
500 FT
W20-3

ROAD CLOSED
1000 FT
W20-3

ROAD CLOSED AHEAD
W20-3

ROAD CLOSED AHEAD
W20-3

BROOKSIDE PLACE

PARKING

WALL

POOL

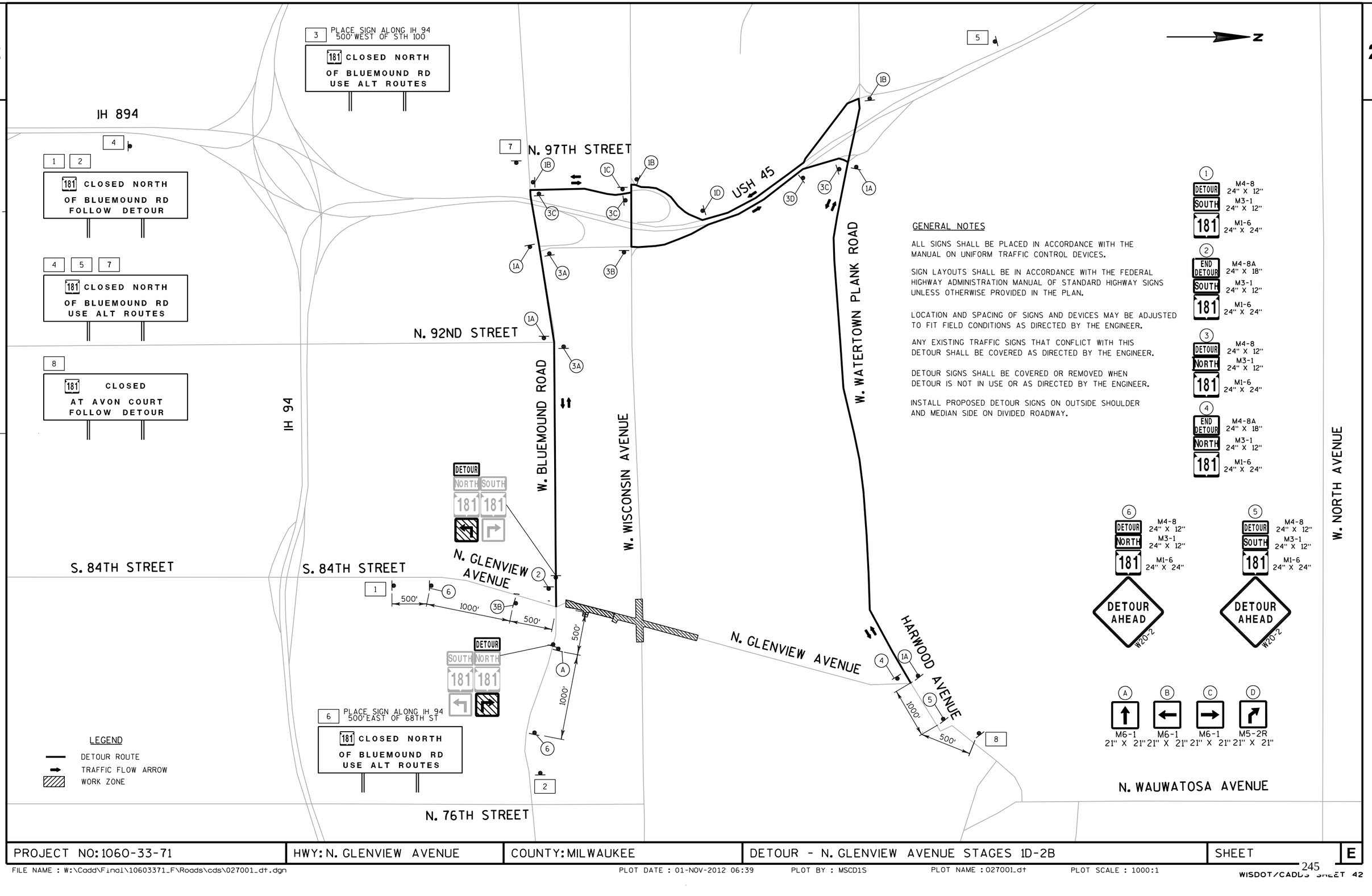
FP

W

P

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	STAGE 2B CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\026604_s2b.dgn PLOT DATE : 01-NOV-2012 10:56 PLOT BY : MSCDYB PLOT NAME : 026604_s2b PLOT SCALE : 100:1



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	DETOUR - N. GLENVIEW AVENUE STAGES 1D-2B	SHEET	E

2

2

N

W. WATERTOWN PLANK ROAD

HARWOOD AVENUE

USH 45

N. GLENVIEW AVENUE

W. WISCONSIN AVENUE

W. BLUEMOUND ROAD

IH 94

N. 97TH STREET

N. 92ND STREET

N. GLENVIEW AVENUE

S. 84TH STREET

N. 76TH STREET

N. 68TH STREET

1 — DETOUR / EAST — M4-8 24" X 12", M3-1 24" X 12" — WISCONSIN AVE

2 — DETOUR / WEST — M4-8 24" X 12", M3-1 24" X 12" — WISCONSIN AVE

3 — END DETOUR / EAST — M4-8A 24" X 18", M3-1 24" X 12" — WISCONSIN AVE

4 — END DETOUR / WEST — M4-8A 24" X 18", M3-1 24" X 12" — WISCONSIN AVE

5 — EAST — M3-1 24" X 12" — WISCONSIN AVE — DETOUR AHEAD W20-2

6 — WEST — M3-1 24" X 12" — WISCONSIN AVE — DETOUR AHEAD W20-2

WISCONSIN AVE
CLOSED AT 181
FOLLOW DETOUR

WISCONSIN AVE
OPEN TO HOSPITAL

WISCONSIN AVE

500' 500' 1000' 500'

1000' 500'

GENERAL NOTES

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

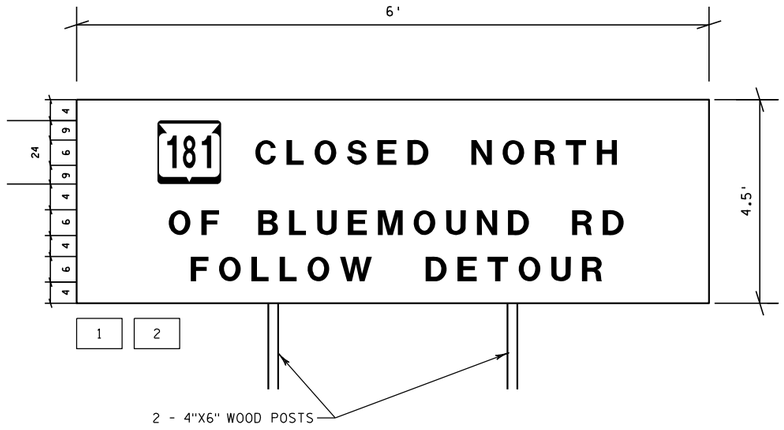
LEGEND

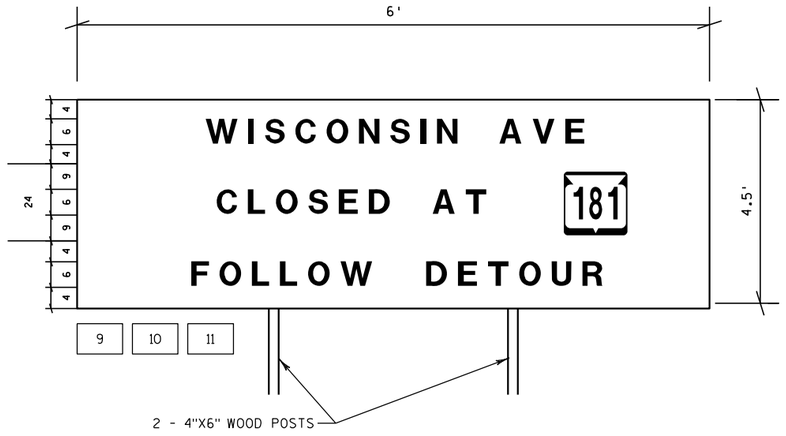
- DETOUR ROUTE
- TRAFFIC FLOW ARROW
- WORK ZONE

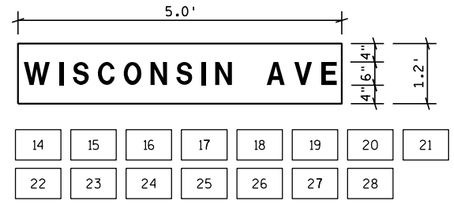
A — M6-1 21" X 21" — B — M6-1 21" X 21" — C — M6-1 21" X 21"

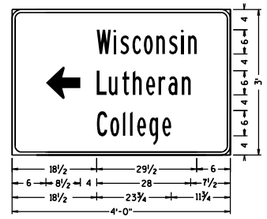
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	DETOUR - W. WISCONSIN AVENUE STAGE 2B	SHEET E

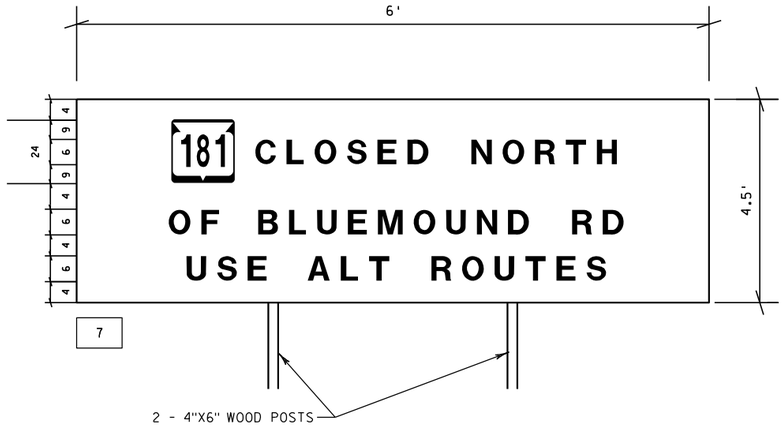
FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\027002_dt.dgn PLOT DATE : 01-NOV-2012 06:39 PLOT BY : MSCD1S PLOT NAME : 027002_dt PLOT SCALE : 1000:1

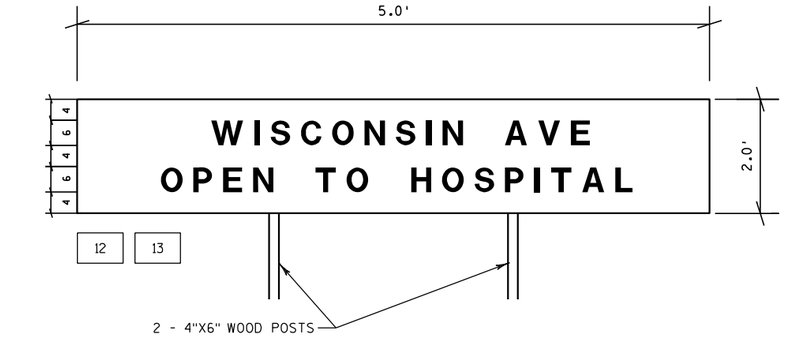


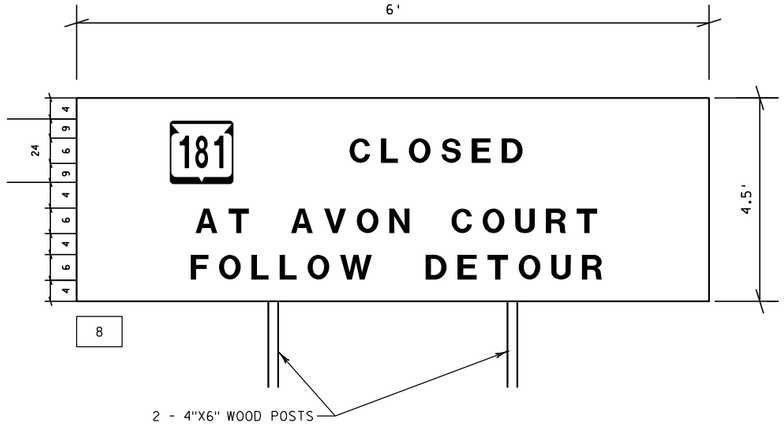


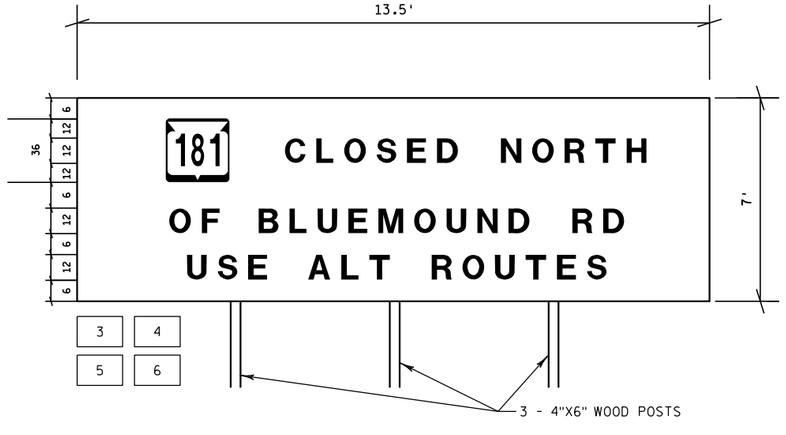












1. ALL SIGNS TO HAVE FLUORESCENT REFLECTIVE SHEETING - REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," LATEST EDITION.
2. AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE PROJECT ENGINEER SHALL VERIFY EACH SIGN LOCATION.
3. ALL SIGNS TO BE MOUNTED ON WOODEN POST SUPPORTS (4"x6"). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN.
4. SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "TRAFFIC CONTROL SIGNS FIXED MESSAGE."
5. SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE FLUORESCENT REFLECTIVE BACKGROUND PER SECTIONS 643 & 637.
6. ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS: 6" CAPS SHALL BE SERIES "C"
7. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.
8. SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTIONS 643 & 637.
9. SIGNS TO BE IN PLACE 10 DAYS PRIOR TO CONSTRUCTION.
10. CONTRACTOR SHOULD LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY EXISTING TYPE "I" SIGN.
11. SEE FIXED MESSAGE SIGNS LAYOUT SHEETS FOR MORE INFORMATION.
12. COVER DETOUR SIGNING WHEN NOT IN USE. INCIDENTAL TO WORK ZONE TRAFFIC CONTROL SIGNING.

XX = SIGN NUMBER

PROJECT NO: 1060-33-71	HWY: GLENVIEW AVENUE	COUNTY: MILWAUKEE	FIXED MESSAGE SIGNS	SHEET	E

CURVE DATA											
CURVE NO.	PI	PI COORDINATES X	PI COORDINATES Y	Δ	D	T	L	E	R	PC	PT
F1	60F+73.45	577178.82	297468.49	13°05'42"	2°07'04"	310.54	618.37	17.76	2705.63	57F+62.92	63F+81.28
BL1	248BL+25.11	577936.95	298648.89	21°32'17"	2°59'59"	363.30	718.02	34.24	1910.08	244BL+61.81	251BL+79.83

2

2

N

1/4 LINE 2675.91' N0°30'55"W

N88°05'24"E 305WX

PI 305WX+00.32
X = 577119.35
Y = 299598.00

X=574448.90
Y=299508.94

T 7 N R 21 E
29 28
29 28

X=577095.28
Y=302273.80

T 7 N R 21 E
21 21
28 28

PI 240BL+13.30
X = 577125.21
Y = 298638.18

X=577119.35
Y=299598.00

T 7 N R 21 E
28 28
28 28

N88°31'26"E

240BL

1/4 LINE 2660.25' N0°32'35"W

X=577144.57
Y=296937.87

T 7 N R 21 E
33 28
33 33

END PROJECT 1060-33-71
89FN+76.16
X = 577898.57
Y = 300283.10

243BL+53.12 W. BLUEMOUND ROAD =
72FN+79.34 N. GLENVIEW AVENUE
X = 577464.99
Y = 298642.66

N 89°14'37" E

310WX+97.06 W. WISCONSIN AVENUE =
82FN+81.95 N. GLENVIEW AVENUE
X = 577715.89
Y = 299613.37

310WX

PT
F1

65F
N15°02'55"E

70F
N14°09'49"E

75FN
80FN
N14°29'31"E

85FN
90FN
N15°15'26"E

CURVE F1

PI 68F+16.08
X = 577372.33
Y = 298188.26

63F+81.28 N. GLENVIEW AVENUE
X = 577259.44
Y = 297768.38

PC
BL1

245BL

243BL+75.21 W. BLUEMOUND ROAD =
72F+85.03 N. GLENVIEW AVENUE
X = 577487.08
Y = 298642.95

PI 82FN+81.95
X = 577715.89
Y = 299613.37

PI 91FN+95.69
X = 577956.35
Y = 300494.90

BEGIN PROJECT 1060-33-71
62F+72.34
X = 577233.28
Y = 297662.63

CURVE BL1

PI
BL1

250BL

PT
BL1

254BL+39.73 W. BLUEMOUND ROAD
X = 578519.60
Y = 298427.78

S 69°13'06" E

255BL

S 68°15'53

315WX
N88°31'26"E

318WX+51.76 W. WISCONSIN AVENUE
X = 578470.35
Y = 299632.81

1/4 LINE 2702.90' N88°31'26"E

X=579821.35
Y=299667.63

T 7 N R 21 E
28 27
28 27

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\027201_ad.dgn PLOT DATE : 31-JAN-2013 06:07 PLOT BY : MSCD1S PLOT NAME : 027201_ad PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

2

2

N

305WX

1/4 LINE 2671.93' N88°05'24"E

T 7 N
29 28
29 28
R 21 E

X=574448.90
Y=299508.94

T 7 N
28 28
28 28
R 21 E

X=577119.35
Y=299598.00

PI 213BL+72.52
X = 574484.61
Y = 298611.35

PI 222BL+69.09
X = 575381.18
Y = 298612.82

PI 233BL+62.89
X = 576474.88
Y = 298628.02

PI 240BL+13.30
X = 577125.21
Y = 298638.18

210BL
N 80°21'05" E

215BL
N 89°57'44" E

220BL
N 89°34'59" E

225BL
N 89°12'14" E

230BL

235BL
N 89°06'18" E

240BL

PI 221BL+36.76
X = 575248.86
Y = 298611.86

1/4 LINE 2660.25' N0°32'35"W

T 7 N
29 28
32 33
R 21 E

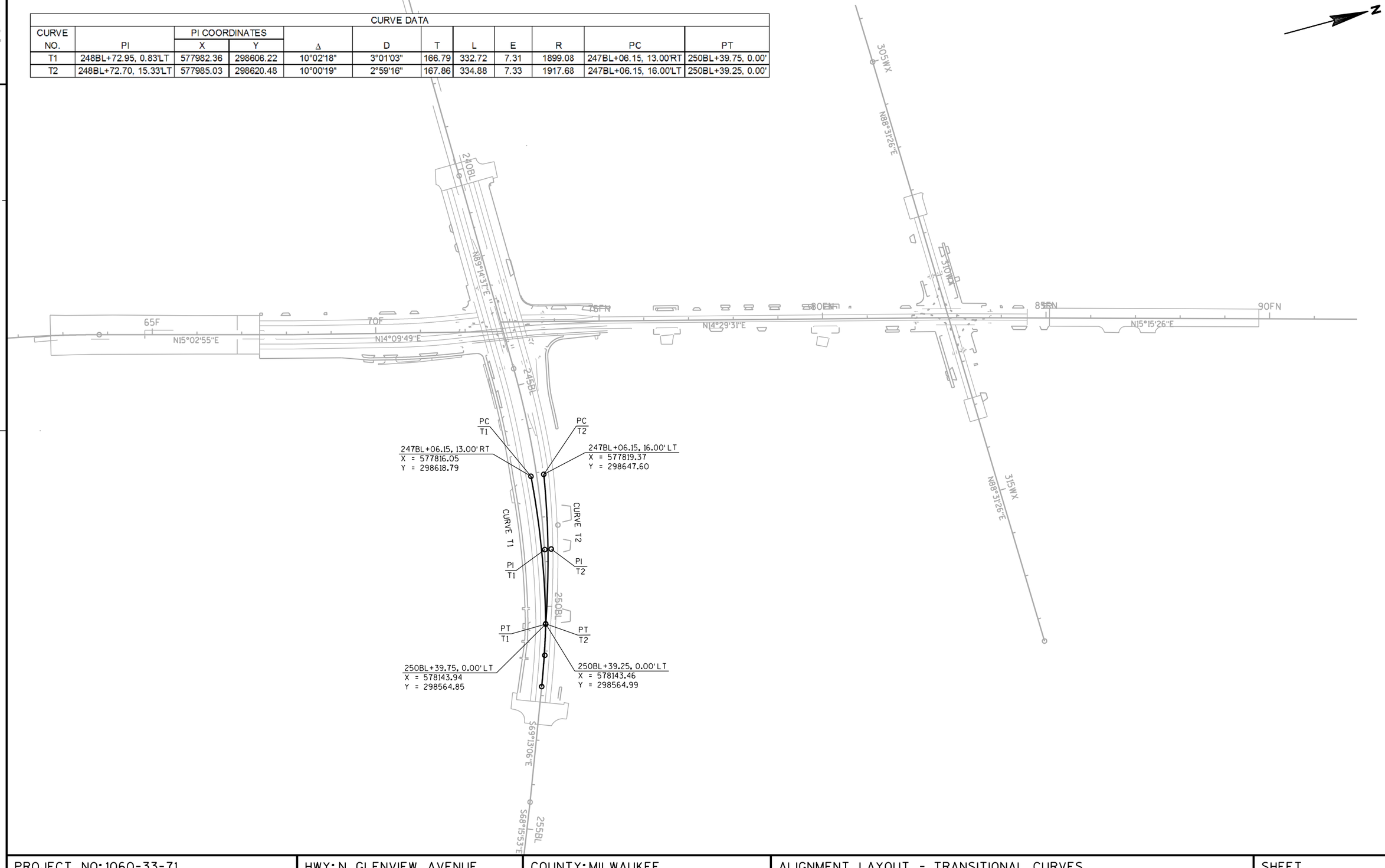
X= 574458.84
Y= 296853.91

T 7 N
28 28
33 33
R 21 E

X=577144.57
Y=296937.87

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET	E

CURVE DATA											
CURVE NO.	PI	PI COORDINATES X	PI COORDINATES Y	Δ	D	T	L	E	R	PC	PT
T1	248BL+72.95, 0.83'LT	577982.36	298606.22	10°02'18"	3°01'03"	166.79	332.72	7.31	1899.08	247BL+06.15, 13.00'RT	250BL+39.75, 0.00'
T2	248BL+72.70, 15.33'LT	577985.03	298620.48	10°00'19"	2°59'16"	167.86	334.88	7.33	1917.68	247BL+06.15, 16.00'LT	250BL+39.25, 0.00'



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - TRANSITIONAL CURVES	SHEET	E

DATE 01FEB13 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	1060-33-71 QUANTITY
0010	108.4400	CPM PROGRESS SCHEDULE	EACH	0.500	0.500
0020	201.0105	CLEARING	STA	2.000	2.000
0030	201.0120	CLEARING	ID	280.000	280.000
0040	201.0205	GRUBBING	STA	2.000	2.000
0050	201.0220	GRUBBING	ID	280.000	280.000
0060	204.0100	REMOVING PAVEMENT	SY	25,662.000	25,662.000
0070	204.0105	REMOVING PAVEMENT BUTT JOINTS	SY	2,467.000	2,467.000
0080	204.0109.S	REMOVING CONCRETE SURFACE PARTIAL DEPTH	SF	53,598.000	53,598.000
0100	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	6,755.000	6,755.000
0110	204.0150	REMOVING CURB & GUTTER	LF	1,622.000	1,622.000
0120	204.0155	REMOVING CONCRETE SIDEWALK	SY	2,126.000	2,126.000
0130	204.0195	REMOVING CONCRETE BASES	EACH	10.000	10.000
0140	204.0210	REMOVING MANHOLES	EACH	15.000	15.000
0150	204.0220	REMOVING INLETS	EACH	23.000	23.000
0160	204.0245	REMOVING STORM SEWER (SIZE) 0001. 12-INCH	LF	2,052.000	2,052.000
0170	204.0245	REMOVING STORM SEWER (SIZE) 0002. 15-INCH	LF	430.000	430.000
0180	204.0245	REMOVING STORM SEWER (SIZE) 0003. 18-INCH	LF	340.000	340.000
0190	204.0245	REMOVING STORM SEWER (SIZE) 0004. 24-INCH	LF	525.000	525.000
0200	205.0100	EXCAVATION COMMON	CY	25,103.000	25,103.000
0210	205.0501.S	EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	TON	400.000	400.000
0220	213.0100	FINISHING ROADWAY (PROJECT) 0001. 1060-33-71	EACH	1.000	1.000
0250	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	10,819.000	10,819.000
0260	312.0110	SELECT CRUSHED MATERIAL	TON	20,750.000	20,750.000
0270	415.0080	CONCRETE PAVEMENT 8-INCH	SY	27,395.000	27,395.000
0280	415.0210	CONCRETE PAVEMENT GAPS	EACH	5.000	5.000
0290	415.1080	CONCRETE PAVEMENT HES 8-INCH	SY	172.000	172.000
0300	416.0260	CONCRETE DRIVEWAY HES 6-INCH	SY	977.000	977.000
0310	416.0270	CONCRETE DRIVEWAY HES 7-INCH	SY	330.000	330.000
0330	416.0610	DRILLED TIE BARS	EACH	2,758.000	2,758.000
0340	440.4410.S	INCENTIVE IRI RIDE	DOL	5,806.000	5,806.000
0350	455.0105	ASPHALTIC MATERIAL PG58-28	TON	141.000	141.000
0360	455.0605	TACK COAT	GAL	273.000	273.000
0370	460.1103	HMA PAVEMENT TYPE E-3	TON	2,351.000	2,351.000
0380	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	840.000	840.000
0390	465.0105	ASPHALTIC SURFACE	TON	194.000	194.000
0400	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	685.000	685.000
0410	520.8000	CONCRETE COLLARS FOR PIPE	EACH	14.000	14.000
0420	601.0319	CONCRETE CURB & GUTTER 19-INCH	LF	2,666.000	2,666.000
0430	601.0322	CONCRETE CURB & GUTTER 22-INCH	LF	1,802.000	1,802.000
0440	601.0331	CONCRETE CURB & GUTTER 31-INCH	LF	6,123.000	6,123.000
0450	602.0410	CONCRETE SIDEWALK 5-INCH	SF	17,375.000	17,375.000
0460	602.0415	CONCRETE SIDEWALK 6-INCH	SF	204.000	204.000
0480	602.0515	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA	SF	312.000	312.000
0490	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	46.000	46.000
0500	608.0315	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	LF	777.000	777.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-71 QUANTITY
0510	608.0318	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	47.000	47.000
0520	608.0324	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	1,339.000	1,339.000
0530	608.0330	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	LF	1,622.000	1,622.000
0540	608.0336	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	LF	135.000	135.000
0550	610.0119	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH	LF	402.000	402.000
0560	610.0124	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH	LF	104.000	104.000
0570	611.0535	MANHOLE COVERS TYPE J-SPECIAL	EACH	15.000	15.000
0580	611.0612	INLET COVERS TYPE C	EACH	4.000	4.000
0590	611.0648	INLET COVERS TYPE R	EACH	38.000	38.000
0600	611.2004	MANHOLES 4-FT DIAMETER	EACH	2.000	2.000
0610	611.2005	MANHOLES 5-FT DIAMETER	EACH	21.000	21.000
0620	611.2006	MANHOLES 6-FT DIAMETER	EACH	5.000	5.000
0630	611.2007	MANHOLES 7-FT DIAMETER	EACH	3.000	3.000
0640	611.3003	INLETS 3-FT DIAMETER	EACH	9.000	9.000
0650	611.3004	INLETS 4-FT DIAMETER	EACH	29.000	29.000
0660	611.3225	INLETS 2X2.5-FT	EACH	1.000	1.000
0670	611.8120.S	COVER PLATES TEMPORARY	EACH	3.000	3.000
0680	611.9800.S	PIPE GRATES	EACH	1.000	1.000
0690	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 0001. 1060-33-71	EACH	1.000	1.000
0700	619.1000	MOBILIZATION	EACH	0.800	0.800
0710	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	597.000	597.000
0720	623.0200	DUST CONTROL SURFACE TREATMENT	SY	29,776.000	29,776.000
0730	624.0100	WATER	MGAL	53.000	53.000
0740	625.0100	TOPSOIL	SY	5,543.000	5,543.000
0750	627.0200	MULCHING	SY	130.000	130.000
0760	628.1104	EROSION BALES	EACH	15.000	15.000
0770	628.1504	SILT FENCE	LF	213.000	213.000
0780	628.1520	SILT FENCE MAINTENANCE	LF	213.000	213.000
0790	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	3.000	3.000
0800	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	3.000	3.000
0810	628.2027	EROSION MAT CLASS II TYPE C	SY	531.000	531.000
0820	628.7005	INLET PROTECTION TYPE A	EACH	58.000	58.000
0840	628.7015	INLET PROTECTION TYPE C	EACH	103.000	103.000
0850	628.7020	INLET PROTECTION TYPE D	EACH	12.000	12.000
0860	628.7560	TRACKING PADS	EACH	1.000	1.000
0870	628.7570	ROCK BAGS	EACH	100.000	100.000
0880	629.0210	FERTILIZER TYPE B	CWT	4.000	4.000
0890	630.0120	SEEDING MIXTURE NO. 20	LB	8.000	8.000
0900	631.0300	SOD WATER	MGAL	125.000	125.000
0910	631.1000	SOD LAWN	SY	5,232.000	5,232.000
0920	632.0101	TREES (SPECIES, ROOT, SIZE) 0001. ELM PROSPECTOR B&B 2 1/2-INCH CAL	EACH	2.000	2.000
0930	632.0101	TREES (SPECIES, ROOT, SIZE) 0003. GINKGO MALE ONLY B&B 2 1/2-INCH CAL	EACH	4.000	4.000
0940	632.0101	TREES (SPECIES, ROOT, SIZE) 0005. HACKBERRY COMMON B&B 2 1/2-INCH CAL	EACH	4.000	4.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-71 QUANTITY
0950	632.0101	TREES (SPECIES, ROOT, SIZE) 0007. OAK CRIMSON SPRIRE B&B 2 1/2-INCH CAL	EACH	2.000	2.000
0960	632.0101	TREES (SPECIES, ROOT, SIZE) 0009. ALDER BLACK B&B 2-INCH CAL	EACH	3.000	3.000
0970	632.0101	TREES (SPECIES, ROOT, SIZE) 0011. CRABAPPLE CAMELOT B&B 2-INCH CAL	EACH	3.000	3.000
0980	632.0101	TREES (SPECIES, ROOT, SIZE) 0013. CRABAPPLE LANCELOT B&B 2-INCH CAL	EACH	9.000	9.000
0990	632.0101	TREES (SPECIES, ROOT, SIZE) 0015. LILAC IVORY SILK TREE B&B 2-INCH CAL	EACH	2.000	2.000
1000	632.0101	TREES (SPECIES, ROOT, SIZE) 0017. PEAR AUTUMN BLAZE B&B 2-INCH CAL	EACH	5.000	5.000
1010	632.9101	LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	EACH	24.000	24.000
1020	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	109.000	109.000
1030	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	5.000	5.000
1050	637.0202	SIGNS REFLECTIVE TYPE II	SF	1,100.170	1,100.170
1060	637.0402	SIGNS REFLECTIVE FOLDING TYPE II	SF	82.060	82.060
1070	638.2102	MOVING SIGNS TYPE II	EACH	13.000	13.000
1080	638.2602	REMOVING SIGNS TYPE II	EACH	177.000	177.000
1090	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	82.000	82.000
1100	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 0001. 1060-33-71	DAY	102.000	102.000
1120	643.0300	TRAFFIC CONTROL DRUMS	DAY	16,942.000	16,942.000
1130	643.0410	TRAFFIC CONTROL BARRICADES TYPE II	DAY	309.000	309.000
1140	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	1,647.000	1,647.000
1150	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	7,560.000	7,560.000
1160	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	153.000	153.000
1170	643.0900	TRAFFIC CONTROL SIGNS	DAY	4,005.000	4,005.000
1180	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	4.000	4.000
1190	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	846.000	846.000
1200	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 0001. 1060-33-71	EACH	1.000	1.000
1210	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	6,178.000	6,178.000
1220	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	17,907.000	17,907.000
1270	646.0600	REMOVING PAVEMENT MARKINGS	LF	6,026.000	6,026.000
1280	646.0841.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	LF	856.000	856.000
1290	646.0843.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	LF	2,103.000	2,103.000
1300	646.0881.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH	LF	625.000	625.000
1310	646.0883.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH	LF	241.000	241.000
1320	647.0456	PAVEMENT MARKING CURB EPOXY	LF	4,174.000	4,174.000
1340	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	13.000	13.000
1350	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	435.000	435.000
1380	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	54,378.000	54,378.000
1390	649.0801	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	LF	1,216.000	1,216.000
1400	649.1200	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH	LF	317.000	317.000
1410	652.0215	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/4-INCH	LF	64.000	64.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-71 QUANTITY
1420	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	3,034.000	3,034.000
1430	652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	2,223.000	2,223.000
1440	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	2,887.000	2,887.000
1450	652.0610	CONDUIT SPECIAL 2 1/2-INCH	LF	65.000	65.000
1470	652.0700.S	INSTALL CONDUIT INTO EXISTING ITEM	EACH	3.000	3.000
1480	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	10.000	10.000
1490	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	43.000	43.000
1500	654.0101	CONCRETE BASES TYPE 1	EACH	13.000	13.000
1510	654.0102	CONCRETE BASES TYPE 2	EACH	1.000	1.000
1520	654.0105	CONCRETE BASES TYPE 5	EACH	24.000	24.000
1530	654.0110	CONCRETE BASES TYPE 10	EACH	1.000	1.000
1540	654.0113	CONCRETE BASES TYPE 13	EACH	3.000	3.000
1550	654.0217	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	EACH	3.000	3.000
1560	655.0144	CABLE IN DUCT 4-4 AWG	LF	720.000	720.000
1570	655.0230	CABLE TRAFFIC SIGNAL 5-14 AWG	LF	1,340.000	1,340.000
1580	655.0240	CABLE TRAFFIC SIGNAL 7-14 AWG	LF	1,752.000	1,752.000
1590	655.0260	CABLE TRAFFIC SIGNAL 12-14 AWG	LF	2,082.000	2,082.000
1600	655.0270	CABLE TRAFFIC SIGNAL 15-14 AWG	LF	366.000	366.000
1610	655.0320	CABLE TYPE UF 2-10 AWG GROUNDED	LF	200.000	200.000
1620	655.0505	ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG	LF	2,890.000	2,890.000
1630	655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	LF	2,435.000	2,435.000
1640	655.0610	ELECTRICAL WIRE LIGHTING 12 AWG	LF	3,666.000	3,666.000
1650	655.0615	ELECTRICAL WIRE LIGHTING 10 AWG	LF	47.000	47.000
1660	655.0620	ELECTRICAL WIRE LIGHTING 8 AWG	LF	1,800.000	1,800.000
1670	655.0625	ELECTRICAL WIRE LIGHTING 6 AWG	LF	728.000	728.000
1680	655.0630	ELECTRICAL WIRE LIGHTING 4 AWG	LF	15,871.000	15,871.000
1690	655.0900	TRAFFIC SIGNAL EVP DETECTOR CABLE	LF	1,552.000	1,552.000
1700	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 0001. USH 18 & STH 181	LS	1.000	1.000
1710	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 0002. W. WISCONSIN AVENUE & STH 181	LS	1.000	1.000
1720	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 0003. CCTV-40-0100	LS	1.000	1.000
1740	656.0400	ELECTRICAL SERVICE MAIN LUGS ONLY METER PEDESTAL (LOCATION) 0001. NEW UU	LS	1.000	1.000
1750	657.0100	PEDESTAL BASES	EACH	13.000	13.000
1760	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	25.000	25.000
1770	657.0315	POLES TYPE 4	EACH	1.000	1.000
1780	657.0322	POLES TYPE 5-ALUMINUM	EACH	24.000	24.000
1790	657.0405	TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT	EACH	3.000	3.000
1800	657.0420	TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT	EACH	4.000	4.000
1810	657.0425	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	EACH	2.000	2.000
1820	657.0430	TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT	EACH	4.000	4.000
1830	657.0605	LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 4-FT	EACH	30.000	30.000
1840	657.0609	LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT	EACH	1.000	1.000
1850	657.1345	INSTALL POLES TYPE 9	EACH	1.000	1.000
1860	657.1355	INSTALL POLES TYPE 12	EACH	3.000	3.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-71 QUANTITY
1880	657.1525	INSTALL MONOTUBE ARMS 25-FT	EACH	1.000	1.000
1900	657.1545	INSTALL MONOTUBE ARMS 45-FT	EACH	2.000	2.000
1910	657.1550	INSTALL MONOTUBE ARMS 50-FT	EACH	1.000	1.000
1920	658.0110	TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	EACH	28.000	28.000
1930	658.0115	TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL	EACH	8.000	8.000
1940	658.0215	BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	EACH	28.000	28.000
1950	658.0220	BACKPLATES SIGNAL FACE 4 SECTION 12-INCH	EACH	8.000	8.000
1960	658.0416	PEDESTRIAN SIGNAL FACE 16-INCH	EACH	16.000	16.000
1970	658.0500	PEDESTRIAN PUSH BUTTONS	EACH	18.000	18.000
1980	658.0600	LED MODULES 12-INCH RED BALL	EACH	24.000	24.000
1990	658.0605	LED MODULES 12-INCH YELLOW BALL	EACH	24.000	24.000
2000	658.0610	LED MODULES 12-INCH GREEN BALL	EACH	24.000	24.000
2010	658.0615	LED MODULES 12-INCH RED ARROW	EACH	12.000	12.000
2020	658.0620	LED MODULES 12-INCH YELLOW ARROW	EACH	24.000	24.000
2030	658.0625	LED MODULES 12-INCH GREEN ARROW	EACH	8.000	8.000
2040	658.0635	LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH	EACH	16.000	16.000
2050	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 0001. USH 18 & STH 181	LS	1.000	1.000
2060	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 0002. W. WISCONSIN AVENUE & STH 181	LS	1.000	1.000
2080	659.0125	LUMINAIRES UTILITY HPS 250 WATTS	EACH	12.000	12.000
2090	659.0802	PLAQUES SEQUENCE IDENTIFICATION	EACH	46.000	46.000
2100	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 0001. STH 18 & STH 181	LS	1.000	1.000
2110	661.0300	GENERATORS	DAY	2.000	2.000
2120	670.0100	FIELD SYSTEM INTEGRATOR 0001. FTMS	LS	1.000	1.000
2130	670.0100	FIELD SYSTEM INTEGRATOR 0002. W. WISCONSIN AVENUE & STH 181	LS	1.000	1.000
2150	670.0200	ITS DOCUMENTATION 0001. FTMS	LS	1.000	1.000
2160	670.0200	ITS DOCUMENTATION 0002. W. WISCONSIN AVENUE & STH 181	LS	1.000	1.000
2180	671.0122	CONDUIT HDPE 2-DUCT 2-INCH	LF	65.000	65.000
2190	671.0132	CONDUIT HDPE 3-DUCT 2-INCH	LF	2,940.000	2,940.000
2200	672.0230	BASE CAMERA POLE 30-FT	EACH	1.000	1.000
2210	673.0105	COMMUNICATION VAULT TYPE 1	EACH	11.000	11.000
2220	673.0225.S	INSTALL POLE MOUNTED CABINET	EACH	1.000	1.000
2230	675.0400.S	INSTALL ETHERNET SWITCH	EACH	1.000	1.000
2240	677.0100	INSTALL CAMERA POLE	EACH	1.000	1.000
2250	677.0200	INSTALL CAMERA ASSEMBLY	EACH	1.000	1.000
2260	677.0300.S	INSTALL VIDEO ENCODER	EACH	1.000	1.000
2270	678.0006	INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT	LF	1,453.000	1,453.000
2280	678.0072	INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 72-CT	LF	4,214.000	4,214.000
2290	678.0300	FIBER OPTIC SPLICE	EACH	59.000	59.000
2300	678.0400	FIBER OPTIC TERMINATION	EACH	12.000	12.000
2310	678.0500	COMMUNICATION SYSTEM TESTING 0001. FTMS	LS	1.000	1.000
2320	678.0500	COMMUNICATION SYSTEM TESTING 0002. W. WISCONSIN AVENUE & STH 181	LS	1.000	1.000
2340	690.0150	SAWING ASPHALT	LF	311.000	311.000
2350	690.0250	SAWING CONCRETE	LF	11,238.000	11,238.000
2360	SPV.0035	SPECIAL 7001. SHREDDED BARK MULCH	CY	38.300	38.300

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-71 QUANTITY
2370	SPV.0035	SPECIAL 8003. CONCRETE SLOPE PAVING AT STORM SEWER OUTFALL	CY	8.000	8.000
2380	SPV.0045	SPECIAL 0001. TEMPORARY CROSSWALK AND BUS STOP ACCESS	DAY	119.000	119.000
2390	SPV.0060	SPECIAL 0001. EXPOSING EXISTING UTILITY	EACH	3.000	3.000
2400	SPV.0060	SPECIAL 0002. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1	EACH	1.000	1.000
2410	SPV.0060	SPECIAL 0003. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2	EACH	22.000	22.000
2420	SPV.0060	SPECIAL 0004. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3	EACH	9.000	9.000
2430	SPV.0060	SPECIAL 0005. PAVEMENT MARKING GROOVED PREFORMED WORDS	EACH	17.000	17.000
2440	SPV.0060	SPECIAL 1003. LIGHTING BOX OUT CITY OF MILWAUKEE	EACH	4.000	4.000
2450	SPV.0060	SPECIAL 1005. POLYMER CONCRETE PULL BOX CITY OF MILWAUKEE	EACH	7.000	7.000
2460	SPV.0060	SPECIAL 1010. LAMP DISPOSAL HIGH INTENSITY DISCHARGE	EACH	25.000	25.000
2470	SPV.0060	SPECIAL 1023. SALVAGING LUMINAIRES - WAUWATOSA	EACH	25.000	25.000
2480	SPV.0060	SPECIAL 1032. REMOVING CONCRETE LIGHT POLE AND ARM	EACH	20.000	20.000
2490	SPV.0060	SPECIAL 1060. LUMINAIRE LED	EACH	31.000	31.000
2500	SPV.0060	SPECIAL 1070. TEMPORARY WOOD LIGHTING POLE	EACH	12.000	12.000
2510	SPV.0060	SPECIAL 1080. TEMPORARY WOOD POLE 40 FT	EACH	6.000	6.000
2520	SPV.0060	SPECIAL 1090. SALVAGE DISTRIBUTION CENTERS	EACH	1.000	1.000
2530	SPV.0060	SPECIAL 1110. DISTRIBUTION CENTER LIGHTING	EACH	1.000	1.000
2540	SPV.0060	SPECIAL 1152. ELECTRIC SERVICE METER BREAKER PEDESTAL TEMPORARY LIGHTING	EACH	1.000	1.000
2550	SPV.0060	SPECIAL 1153. REMOVING ELECTRIC SERVICE METER PEDESTAL LIGHTING	EACH	1.000	1.000
2560	SPV.0060	SPECIAL 2001. INSTALL FIBER OPTIC MEDIA CONVERTE	EACH	2.000	2.000
2570	SPV.0060	SPECIAL 2002. GROUND ROD	EACH	1.000	1.000
2580	SPV.0060	SPECIAL 2003. INSTALLING CONDUIT INTO EXISTING MANHOLES	EACH	3.000	3.000
2590	SPV.0060	SPECIAL 2004. 4-FOOT DIAMETER MANHOLE TYPE TES	EACH	6.000	6.000
2600	SPV.0060	SPECIAL 3001. POLES TYPE 9	EACH	3.000	3.000
2610	SPV.0060	SPECIAL 3002 POLES TYPE 10	EACH	1.000	1.000
2620	SPV.0060	SPECIAL 3003. MONOTUBE ARMS 30-FT	EACH	4.000	4.000
2630	SPV.0060	SPECIAL 3004. LUMINAIRE ARMS STEELS 6-FT	EACH	1.000	1.000
2640	SPV.0060	SPECIAL 3005. EVP DETECTOR TYPE 1	EACH	4.000	4.000
2650	SPV.0060	SPECIAL 3006. EVP DISCRIMINATOR TYPE IV	EACH	1.000	1.000
2660	SPV.0060	SPECIAL 3008. EVP CONFIRMATION LIGHT ASSEMBLY TYPE I	EACH	4.000	4.000
2670	SPV.0060	SPECIAL 3009. CONCRETE BASES TYPE 10, CONTRACTOR SUPPLIED ANCHOR BOLTS & ROD TEMPLATE	EACH	4.000	4.000
2680	SPV.0060	SPECIAL 3010. REMOVING TRAFFIC SIGNAL VAULT	EACH	13.000	13.000
2700	SPV.0060	SPECIAL 5011. ADJUSTING SANITARY MANHOLES	EACH	13.000	13.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-71 QUANTITY
2710	SPV.0060	SPECIAL 5014. ADJUSTING WATER MANHOLES	EACH	2.000	2.000
2720	SPV.0060	SPECIAL 5019. ADJUSTING WATER VALVES - WAUWATOSA	EACH	13.000	13.000
2730	SPV.0060	SPECIAL 5020. HYDRANT REMOVAL	EACH	2.000	2.000
2740	SPV.0060	SPECIAL 5021. HYDRANT INSTALLATION	EACH	2.000	2.000
2750	SPV.0060	SPECIAL 5022. ADJUSTING WATER VALVES - MILWAUKEE	EACH	3.000	3.000
2760	SPV.0060	SPECIAL 5023. CURB STOP INSTALLATION	EACH	1.000	1.000
2770	SPV.0060	SPECIAL 5024. ROADWAY SERVICE BOX INSTALLATION	EACH	1.000	1.000
2780	SPV.0060	SPECIAL 7001. CORAL BELLS PALACE PURPLE CONT 6 INCH	EACH	20.000	20.000
2790	SPV.0060	SPECIAL 7003. GRASS KARL FOERSTER REED CONT 6 INCH	EACH	10.000	10.000
2800	SPV.0060	SPECIAL 7005. SEDUM AUTUMN JOY CONT 6 INCH	EACH	26.000	26.000
2810	SPV.0060	SPECIAL 8004. INLET COVERS TYPE 57	EACH	3.000	3.000
2820	SPV.0060	SPECIAL 8006. INLET COVERS TYPE R SPECIAL	EACH	10.000	10.000
2830	SPV.0060	SPECIAL 8007. RECONNECT STORM SEWER LATERALS	EACH	5.000	5.000
2840	SPV.0090	SPECIAL 0001. PAVEMENT MARKING GROOVED PREFORMEDTHERMOPLASTIC STOP LINE 18-INCH	LF	282.000	282.000
2850	SPV.0090	SPECIAL 0002. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH	LF	2,337.000	2,337.000
2870	SPV.0090	SPECIAL 1020. TEMPORARY OVERHEAD CABLE QUADRUPLEX 6 AWG	LF	1,448.000	1,448.000
2880	SPV.0090	SPECIAL 1021. TEMPORARY OVERHEAD CABLE QUADRUPLEX 4 AWG	LF	1,564.000	1,564.000
2890	SPV.0090	SPECIAL 2001. 4-DUCT CONDUITCEMENT ENCASED 4-INCH CONDUIT DB-60	LF	3,080.000	3,080.000
2900	SPV.0090	SPECIAL 2002. 1-DUCT CONDUITCEMENT ENCASED 4-INCH CONDUIT DB-60	LF	25.000	25.000
2910	SPV.0090	SPECIAL 3001. TYPE UF CABLE 2 CONDUCTOR NO. 14	LF	750.000	750.000
2920	SPV.0090	SPECIAL 5020. DUCTILE IRON HYDRANT BRANCH 6-INCH	LF	17.000	17.000
2930	SPV.0090	SPECIAL 5021. DUCTILE IRON HYDRANT BRANCH 8-INCH	LF	33.000	33.000
2940	SPV.0105	SPECIAL 0001. SURVEY PROJECT 1060-33-71	LS	1.000	1.000
2950	SPV.0105	SPECIAL 0002. PAVEMENT CLEANUP PROJECT 1060-33-71	LS	1.000	1.000
2980	SPV.0105	SPECIAL 0006. CONCRETE PAVEMENTJOINT LAYOUT	LS	1.000	1.000
2990	SPV.0105	SPECIAL 1005. MAINTENANCE OF LIGHTING SYSTEM	LS	1.000	1.000
3000	SPV.0105	SPECIAL 3001. REMOVE TRAFFIC SIGNALS USH 18 & STH 181	LS	1.000	1.000
3010	SPV.0105	SPECIAL 3002. REMOVE TRAFFIC SIGNALS W. WISCONSIN AVENUE & STH 181	LS	1.000	1.000
3020	SPV.0105	SPECIAL 3003. REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE USH 18 & STH 181	LS	1.000	1.000
3030	SPV.0105	SPECIAL 3004. TRANSPORTING SIGNAL AND LIGHTING MATERIALS USH 18 & STH 181	LS	1.000	1.000
3040	SPV.0105	SPECIAL 3005. INSTALL VENDOR SUPPLIED TRAFFIC SIGNAL CABINET USH 18 & STH 181	LS	1.000	1.000

3

DATE 01FEB13 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	1060-33-71 QUANTITY
3050	SPV.0105	SPECIAL 3006. TRNSPRT. & INSTLL. S-F AUTOSCOPE VIDEO DETECTION SYSTEM USH 18 & STH 181	LS	1.000	1.000
3060	SPV.0105	SPECIAL 3007. EVP DETECTOR HEAD INSTALLATION USH 18 & STH 181	LS	1.000	1.000
3070	SPV.0105	SPECIAL 3008. TEMPORARY EVP SYSTEM USH 18 & STH 181	LS	1.000	1.000
3080	SPV.0105	SPECIAL 3009. INST VENDOR MUNCPL SUPPLIED TRAF SIG CABINET W. WISCONSIN AVE & STH 181	LS	1.000	1.000
3090	SPV.0105	SPECIAL 3010. VIDEO VEHICLE DETECTION SYSTEM W. WISONSIN AVENUE & STH 181	LS	1.000	1.000
3100	SPV.0105	SPECIAL 3011. INSTALL FIBER OPTIC COMMUNICATION IN CABINET USH 18 & STH 181	LS	1.000	1.000
3110	SPV.0105	SPECIAL 3012. INSTALL FIBER OPTIC COMMUNICATION IN CABINET W. WISCONSIN AVENUE & STH 181	LS	1.000	1.000
3190	SPV.0165	SPECIAL 0001. CONCRETE SIDEWALK 5-INCH SPECIAL	SF	5,569.000	5,569.000
3200	SPV.0165	SPECIAL 0011. FIXED MESSAGE SIGN SPECIAL	SF	15.000	15.000
3210	SPV.0180	SPECIAL 0002. CONCRETE PAVEMENT 8-INCH SPECIAL	SY	1,242.000	1,242.000

CLEARING AND GRUBBING ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO STATION	OFFSET	201.0105 CLEARING STA	201.0205 GRUBBING STA	201.0120 CLEARING ID	201.0220 GRUBBING ID
1000	1	N. GLENVIEW AVENUE							
			66F+21		' RT	--	--	13	13
			68F+22		1' RT	--	--	2	2
			68F+41		' LT	--	--	5	5
			68F+81		1' LT	--	--	8	8
			69F+54		' LT	--	--	2	2
			69F+72		1' LT	--	--	2	2
			69F+92		' LT	--	--	8	8
			70F+08		1' LT	--	--	4	4
			70F+09		58' RT	--	--	11	11
			70F+23		' LT	--	--	5	5
			70F+36		1' LT	--	--	5	5
			70F+84		46' RT	--	--	1	1
			70F+90		57' RT	--	--	4	4
	1	W. BLUEMOUND ROAD							
			238BL+91		2' LT	--	--	24	24
			240BL+67		' RT	--	--	4	4
			245BL+17		51' LT	--	--	17	17
			245BL+56		50' LT	--	--	14	14
			245BL+92		50' LT	--	--	13	13
			246BL+46		47' LT	--	--	11	11
			246BL+94		47' LT	--	--	15	15
			247BL+43		46' LT	--	--	14	14
			249BL+19		39' LT	--	--	7	7
			249BL+72		40' LT		--	10	10
			249BL+93	250BL+08	' RT	2	2	--	--
		SUBTOTAL				2	2	196	196
1000	2	W. WISCONSIN AVENUE							
			309WX+63		25' RT	--	--	23	23
			310WX+03		25' RT	--	--	20	20
			311WX+86		25' RT	--	--	25	25
			312WX+48		25' RT	--	--	16	16
		SUBTOTAL				--	--	84	84
		TOTAL				2	2	280	280

REMOVING INLETS

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	204.0220 REMOVING INLETS EACH
1000	1	N. GLENVIEW AVENUE			
			68F+16	41' LT	1
			68F+16	11' RT	1
			68F+16	39' RT	1
			71F+93	44' LT	1
			72F+30	46' RT	1
			73FN+79	26' RT	1
			73FN+82	22' LT	1
		W. BLUEMOUND ROAD			
			236BL+33	0' RT	1
			239BL+71	2' LT	1
			241BL+51	45' RT	1
			241BL+83	5' RT	1
			242BL+80	45' RT	1
			242BL+84	46' LT	1
			242BL+96	4' LT	1
			249BL+33	28' RT	1
			251BL+75	28' RT	1
			251BL+83	27' LT	1
		SUBTOTAL			17
1000	2	N. GLENVIEW AVENUE			
			74FN+80	36' LT	1
			75FN+08	21' LT	1
			82FN+30	22' LT	1
			82FN+34	18' RT	1
		W. WISCONSIN AVENUE			
			310WX+44	20' RT	1
			310WX+64	20' LT	1
		SUBTOTAL			6
		TOTAL			23

CONTINUED ON NEXT SHEET

REMOVING STORM SEWER

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0245.0001 12-INCH LF	204.0245.0002 15-INCH LF	204.0245.0003 18-INCH LF	204.0245.0004 24-INCH LF
1000	1	N. GLENVIEW AVENUE								
			62F+45		63F+08	RT	--	73	--	--
			63F+10		65F+23	LT/RT	651	--	--	--
			68F+16			RT	37	--	--	--
			68F+16			LT	44	--	--	--
			71F+93		72F+80	LT/RT	106	--	--	--
			72F+30		72F+80	RT	57	--	--	--
			72F+81		73FN+79	RT	98	--	--	--
			73FN+81			RT/LT	--	48	--	--
			73FN+12		73FN+80	LT	--		--	71
			73FN+81		73FN+83	LT	--	5	--	--
			73FN+81		73FN+99	LT	--	14	--	--
			73FN+82		73FN+99	RT	--	23	--	--
		W. BLUEMOUND ROAD					--			
			236BL+63		243BL+18	LT	10	4	321	332
			239BL+72		239BL+75	LT	40	--	--	--
			241BL+57		241BL+83	RT	55	--	--	--
			241BL+83		243BL+00	LT	--	113	--	--
			242BL+80		243BL+00	RT	52		--	--
			242BL+97		243BL+18	LT	--	40	--	--
			249BL+32		252BL+41	RT	320	--	--	--
			251BL+78		252BL+02	LT	166	--	--	--
		SUBTOTALS					1,635	320	321	403
1000	2	N. GLENVIEW AVENUE								
			73FN+99		74FN+07	RT	--	103	--	--
			73FN+99		74FN+12	LT	--	7	--	
			74FN+07		74FN+80	LT	--	--	--	66
			74FN+80			LT	--	--	19	--
			74FN+80		75FN+07	LT	--	--	--	26
			75FN+07			LT/RT	--	--	--	31
			75FN+07		75FN+11	LT	10	--	--	--
			76FN+50		76FN+64	LT	15	--	--	--
			76FN+50		76FN+83	RT	41	--	--	--
			82FN+36		82FN+78	RT/LT	59	--	--	--
			82FN+78		85FN+08	LT	230	--	--	--
	2	W. WISCONSIN AVENUE								
			310WX+44		310WX+77	RT	40	--	--	--
			310WX+64		310WX+77	LT	22	--	--	--
		SUBTOTALS					417	110	19	122
		TOTALS					2,052	430	340	525

REMOVING MANHOLES

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	204.0210 REMOVING MANHOLES EACH
1000	1	N. GLENVIEW AVENUE			
			63F+09	3' RT	1
			65F+24	4' RT	1
			72F+81	18' RT	1
			73F+80	21' LT	1
		W. BLUEMOUND ROAD			
			243BL+19	42' LT	1
			249BL+33	48' RT	1
			251BL+81	42' RT	1
			252BL+02	66' LT	1
		SUBTOTAL			8
1000	2	N. GLENVIEW AVENUE			
			74FN+12	19' LT	1
			74FN+80	21' LT	1
			75FN+07	11' LT	1
			75FN+08	22' RT	1
			76FN+50	11' LT	1
		W. WISCONSIN AVENUE			
			310WX+61	19' RT	1
			310WX+77	2' LT	1
		SUBTOTAL			7
		TOTAL			15

REMOVING PAVEMENT BUTT JOINTS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0105 REMOVING PAVEMENT BUTT JOINTS SY
1000	1	N. GLENVIEW AVENUE	67F+08		67BL+43	LT/RT	453
		W. BLUEMOUND ROAD					
			239BL+85		240BL+35	LT/RT	668
			252BL+07		252BL+65	LT/RT	584
		SUBTOTAL					1,705
	2						
		N. GLENVIEW AVENUE					
			76FN+35		76FN+67		60
			79FN+88		80FN+15		55
			84FN+58		85FN+08		200
		W. WISCONSIN AVENUE					
			308WX+11		308WX+61		226
			312WX-84		313WX+34		221
		SUBTOTAL					762
		TOTAL					2,467

REMOVING PAVEMENT

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0100 REMOVING PAVEMENT SY
1000	1	N. GLENVIEW AVENUE	67F+40		74FN+00	RT/LT	5709
		W. BLUEMOUND ROAD	213BL+40		239BL+84	RT/LT	2836
			239BL+84		252BL+15	RT/LT	9780
		SUBTOTAL					18,325
1000	2	N. GLENVIEW AVENUE	74FN+00		85FN+08	RT/LT	5429
		W WISCONSIN AVENUE	308WX+61		312WX+84	RT/LT	1908
		SUBTOTAL					7,337
		TOTAL					25,662

REMOVING CURB & GUTTER

CATEGORY	STAGE	ROADWAY	FROM STATION	OFFSET	TO STATION	OFFSET	204.0150 REMOVING CURB & GUTTER LF
1000	1	N. GLENVIEW AVENUE					
			62F+74	RT/LT	63F+65	RT/LT	195
			64F+01	RT/LT	67F+08	RT/LT	527
		W. BLUEMOUND ROAD	234BL+65	RT/LT	236BL+47	RT/LT	339
			237BL+00	RT/LT	249BL+84	RT/LT	561
		TOTAL					1,622

MILLING ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0109.S REMOVING CONCRETE SURFACE PARTIAL DEPTH SF
1000	1	N. GLENVIEW AVENUE					
			62F+72		67F+44	3,750	33,749
		SUBTOTAL				3,750	33,749
	2	N. GLENVIEW AVENUE					
			85FN+08		89FN+76	2,205	19,849
		SUBTOTAL				2,205	19,849
		UNDISTRIBUTED*				800	--
		TOTALS				6,755	53,598

REMOVING CONCRETE SIDEWALK

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0155 REMOVING CONCRETE SIDEWALK SY
1000	1	N. GLENVIEW AVENUE					
			67F+43		67F+46	LT	3
			67F+43		72F+52	RT	439
			68F+85		68F+91	LT	3
			71F+23		71F+92	RT	29
			71F+95		72F+15	LF	16
			73FN+50		73FN+99	RT	56
			73FN+50		73FN+99	LT	21
		W. BLUEMOUND ROAD					
			240BL+36		243BL+49	LT	191
			244BL+32		244BL+32	LT	130
			244BL+32		252BL+00	RT	522
			251BL+80		252BL+28	LT	18
		SUBTOTAL					1,428
1000	2	N. GLENVIEW AVENUE					
			74FN+00		75FN+02	RT	52
			74FN+00		74FN+62	LT	22
			76FN+23		76FN+36	RT	12
			76FN+29		76FN+67	LT	22
			76FN+67		76FN+70	RT	12
			77FN+74		77FN+92	RT	19
			78FN+26		78FN+44	LT	12
			78FN+81		79FN+05	LT	14
			79FN+56		79FN+73	LT	10
			79FN+77		79FN+87	RT	5
			80FN+03		80FN+20	LT	11
			80FN+18		80FN+40	RT	7
			80FN+59		80FN+63	LT	2
			81FN+42		81FN+70	RT	21
			81FN+97		82FN+70	RT	65
			82FN+36		82FN+46	LT	20
			83FN+03		83FN+66	LT	52
			83FN+99		84FN+03	LT	2
			84FN+92		85FN+12	LT	11
		W. WISCONSIN AVENUE					
			309WX+33		310WX+70	LT	78
			310WX+02		310WX+59	RT	59
			311WX+28		311WX+89	LT	102
			312WX+13		312WX+17	LT	4
			311WX+25		312WX+52	RT	84
		SUBTOTAL					698
		TOTAL					2,126

Division	From/To Station	Location	Excavation Common (1)	item 205.0100	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Reduced EBS in Fill (6)	Expanded EBS Backfill (7)	Estimated Disposal Area Outside 1:1 Slope (8)	Unexpanded Fill	Expanded Fill (9)	Mass Ordinate +/- (10)	Waste	Borrow	Comment:
			Cut (2)	EBS Excavation (3)			Factor 0.80	Factor 1.30			Factor 1.20			item 208.0100	
1	67+99 TO 72+50	Glenview South (F)	5,113	0	1,744	3,369	0	0	0	13	15	3,353	3,353		
1	213+40 TO 252+00	Bluemound (BL)	12,031	0	3,855	8,176	0	0	0	96	116	8,061	8,061		
Division 1 Subtotal			17,144	0	5,599	11,545	0	0	0	109	131	11,414	11,414		
2	74+00 TO 84+58	Glenview North (F_N)	6,724	0	1,889	4,835	0	0	0	68	82	4,753	4,753		
2	306+61 TO 312+84	Wisconsin (WX)	1,235	0	583	652	0	0	0	0	0	651	651		
Division 2 Subtotal			7,958	0	2,472	5,487	0	0	0	68	82	5,405	5,405		
Grand Total			25,103	0	8,071	17,032	0	0	0	178	213	16,819	16,819		
			Total Excavation Common	25,103											

EARTHWORK SUMMARY NOTES:

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 Borrow or Cut.
4) Salvaged/Unusable Pavement Material - Not shown in Earthwork Detail Sheets - Includes 230 cy of Petroleum Contaminated Soil removed from N. Glenview Avenue
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 EBS Backfill - This is to be filled with Borrow or Cut material. EBS Backfill Factor = 1.3.
8) The estimated area outside the 1:1 fill slopes where excavated EBS or excess topsoil material is placed.
9) Expanded Fill. Factor = 1.20
   Expanded Fill = (Unexpanded Fill - Reduced EBS) * Fill Factor
   If Reduced EBS > than volume available outside of the 1:1 slope
   Subtract only available volume. Remaining volume or reduced EBS is considered waste.
10) 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. (Incl. Salv/Unusable Pavement Quantities shown in this table)
    The Mass Ordinate number will vary between the summary and individual detail sheets due to the Salvaged/Unusable Pavement Material being shown in the summary sheet only.
11) Cut for conduit trench from 213BL+00 to 234BL+66 not calculated by end area. 684 cy was added to Division 1 on summary sheet.

DRILLED TIE BAR

CATEGORY	STAGE	ROADWAY	LOCATION	416.0610 DRILLED TIE BARS EACH
1000	1	N. GLENVIEW AVENUE		
			62F+36 TO 67F+40	416
			67F+40	31
		W. BLUEMOUND ROAD		
			213BL+40 TO 234BL+66	1,736
			234BL+66 TO 240BL+35	463
			240BL+35	30
			252BL+15	50
		SUBTOTAL		2726
1000	2	W. WISCONSIN AVENUE		
			308WX+61	16
			312WX+84	16
		SUBTOTAL		32
		TOTAL		2,758

CONCRETE MEDIAN SLOPED NOSE

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	620.0300 CONCRETE MEDIAN SLOPED NOSE TYPE 1 SF	CONCRETE MEDIAN SLOPED NOSE TYPE 2 SF
1000	1	N. GLENVIEW AVENUE				
			62F+75	LT/RT	57	--
			63F+60	3'RT	25	--
			64F+01	LT/RT	23	--
			67F+02	LT/RT	57	--
			67F+47	LT/RT	56	--
			72F+08	LT/RT	26	--
		W. BLUEMOUND ROAD				
			236BL+41	LT	19	
			237BL+00	RT	19	--
			239BL+75	LT	19	--
			240BL+42	LT/RT	22	--
			242BL+17	RT	40	--
			242BL+88	LT	16	--
			243BL+11	RT	33	--
			243BL+97	LT	33	
			244BL+03	LT	--	15
			244BL+47	LT	23	--
			245BL+60	LT	40	--
			247BL+15	LT/RT	73	--
		SUBTOTAL			581	15
		TOTAL			597	

CONCRETE CURB & GUTTER

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	601.0319 CONCRETE CURB & GUTTER 19-INCH LF	601.0322 CONCRETE CURB & GUTTER 22-INCH LF	601.0331 CONCRETE CURB & GUTTER 31-INCH LF
1000	1	N. GLENVIEW AVENUE							
			62F+73		63F+65	RT/LT	--	198	--
			64F+01		67F+08	RT/LT	--	632	--
			64F+47		72F+14	RT/LT	942	--	--
			67F+40		71F+92	LT	--	--	452
			67F+40		72F+22	RT	--	--	482
			73F+53		73F+99	LT	--	--	41
		W. BLUEMOUND ROAD							
			214BL+11		214BL+17	RT	--	--	6
			225BL+89		225BL+95	RT	--	6	--
			234BL+66		236BL+47	RT/LT	--	378	--
			236BL+99		239BL+81	RT/LT	--	590	--
			240BL+35		243BL+10	RT	--	--	298
			240BL+35		243BL+47	LT	--	--	338
			240BL+38		242BL+94	RT/LT	516	--	--
			242BL+11		243BL+17	RT	228	--	--
			243BL+94		252BL+02	RT	--	--	794
			243BL+96		245BL+66	LT	357	--	--
			244BL+01		244BL+45	LT	0	--	126
			244BL+15		252BL+13	LT	--	--	849
			244BL+18		247BL+21	RT/LT	623	--	--
		SUBTOTALS					2,666	1,802	3,385
	2	N. GLENVIEW AVENUE							
			73FN+99		82FN+15	LT	--	--	821
			73FN+99		82FN+41	RT	--	--	831
			83FN+21		84FN+58	LT	--	--	187
			83FN+50		84FN+58	RT	--	--	158
		W. WISCONSIN AVENUE							
			308WX+61		310WX+89	RT/LT			370
			311WX+01		318WX+51	RT/LT			372
		SUBTOTALS					--	--	2,739
		TOTALS					2,666	1,802	6,123

3

CONCRETE SIDEWALK

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0415 CONCRETE SIDEWALK 6-INCH SF	416.0260 CONCRETE DRIVEWAY HES 6-INCH SY	416.0270 CONCRETE DRIVEWAY HES 7-INCH SY	SPV.0165.0001 CONCRETE SIDEWALK 5-INCH SPECIAL SF
1000	1	N. GLENVIEW AVENUE									
			64F+07		64F+83	RT	--	--	--	--	506
			67F+40		67F+47	LT	31	--	--	--	--
			67F+43		72F+49	RT	3,432	--	--	--	--
			67F+88		68F+09	LT	--	--	11	--	--
			68F+49		72F+08	LT	--	--	--	--	1,738
			68F+85		68F+91	LT	28	--	--	--	--
			69F+68		69+97	RT	--	--		28	--
			70F+08		70F+38	LT	--	--	20	--	--
			70F+17		70F+48	RT	--	--		31	--
			70F+55		70F+92	RT	--	--		78	
			70F+77		70F+97	LT	--	--	10	--	--
			73FN+24		73FN+99	LT	--	--	23	--	--
			73FN+49		73FN+85	LT	--	--	24	--	--
			73FN+53		73FN+99	LT	81	--	--	--	--
		W. BLUEMOUND ROAD								--	
			240BL+40		243BL+37	LT	2,097	--	--	--	--
			241BL+12		241BL+32	RT	--	--	9	--	--
			241BL+33		242BL+88	LT/RT	--	--	--	--	738
			241BL+57		241BL+78	RT	--	--	10	--	--
			242BL+17		243BL+11	RT	41	--	--	--	564
			242BL+22		242BL+60	LT	--	--	37	--	--
			242BL+55		242BL+ 95	RT	161	--	--	--	--
			244BL+02		245BL+60	LT	41	--	--	--	1,043
			244BL+04		244BL+47	LT	100	--	--	--	245
			244BL+17		251BL+99	RT	4,017	--	--	--	--
			244BL+23		246BL+13	LT	1,088	--	--	--	--
			244BL+24		245BL+75	RT		--	--	--	735
			244BL+30		244BL+85	RT	--	--	--	54	--
			244BL+85		245BL+41	RT	--	--	--	57	--
			245BL+61		245BL+97	RT	--	--	--	36	--
			247BL+21		247BL+65	RT	--	--	--	46	--
			247BL+78		248BL+15	LT	--	--	76	--	--
			248BL+53		248BL+81	LT	--	--	45	--	--
			250BL+06		250BL+36	LT	--	--	60	--	--
			250BL+36		250BL+56	RT	--	--	27	--	--
			252BL+77		252BL+07	LT	142	--	--	--	--
SUBTOTALS							11,259	--	352	330	5,569

CONCRETE SIDEWALK (CONTINUED)

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0415 CONCRETE SIDEWALK 6-INCH SF	416.0260 CONCRETE DRIVEWAY HES 6-INCH SY	416.0270 CONCRETE DRIVEWAY HES 7-INCH SY	SPV.0165.0001 CONCRETE SIDEWALK 5-INCH SPECIAL SF
1000	2	N. GLENVIEW AVENUE									
			73FN+92		74FN+27	LT	--	--	26	--	--
			73FN+99		74FN+87	LT	--	--	41	--	--
			74FN+28		75FN+25	LT	460	--	--	--	--
			74FN+07		75FN+01	RT	724	--	--	--	--
			74FN+62		74FN+90	LT	--	--	24	--	--
			76FN+23		76FN+35	RT	109	--	--	--	--
			76FN+29		76FN+67	LT	--	--	58	--	--
			76FN+68		76FN+79	RT	109	--	--	--	--
			77FN+10		77FN+28	LT	--	--	9	--	--
			77FN+46		77FN+78	RT	--	--	24	--	--
			77FN+74		77FN+92	LT	--	--	20	--	--
			78FN+26		78FN+44	LT	--	--	21	--	--
			78FN+53		78FN+75	RT	--	--	15	--	--
			78FN+81		79FN+05	LT	--	--	26	--	--
			79FN+56		79FN+73	LT	--	--	24	--	--
			79FN+75		79FN+88	RT	118	--	--	--	--
			80FN+02		80FN+37	LT	98	--	20	--	--
			80FN+20		80FN+37	RT	139	--	--	--	--
			80FN+59		80FN+60	LT	19	--	--	--	--
			81FN+41		81FN+71	RT	--	--	39	--	
			81FN+73		81FN+99	LT	--		13	--	--
			82FN+07		82FN+68	RT	805	--	--	--	--
			83FN+06		83FN+66	LT	536	--	--	--	--
			83FN+98		84FN+02	LT	20	--	--	--	--
			84FN+23		84FN+35	RT	--	--	26	--	--
			84FN+25		84FN+51	LT	--	--	13	--	--
			84FN+86		85FN+06	RT	--	--	14	--	--
			84FN+93		85FN+12	LT	--	--	19	--	
										--	
		W. WISCONSIN AVENUE								--	
			308WX+96		309WX+16	RT	--	--	18	--	--
			309WX+34		311WX+00	LT	1,203	--	--	--	--
			309WX+40		309WX+63	LT	--	--	38	--	--
			310WX+12		310WX+57	RT	536	204	--	--	--
			310WX+11		310WX+28	LT	--	--	28	--	--
			311WX+31		312WX+50	RT	583	--	--	--	--
			311WX+34		31WX+89	LT	629	--	--	--	--
			312WX+06		312WX+36	RT	--	--	47	--	--
			312WX+13		312WX+16	LT	28	--	--	--	--
			312WX+78		312WX+99	RT	--	--	23	--	--
SUBTOTALS							6,115	204	624	--	--
TOTALS							17,375	204	977	330	5,569

CONCRETE PAVEMENT

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.1080 CONCRETE PAVEMENT HES 8-INCH SY	SPV.0180.0002 CONCRETE PAVEMENT 8-INCH SPECIAL SY
1000	1	N. GLENVIEW AVE						
			62F+36		65F+40	3,832	--	--
			67F+40		72F+49	4,074	--	--
			73FN+48		73FN+99	370	--	--
		W. BLUEMOUND ROAD						
			213BL+40		234BL+66	2,656	--	--
			234BL+66		240BL+35	458	--	--
			240BL+35		242BL+93	2,302	--	--
			242BL+93		244BL+23	--	--	797
			243BL+13		244BL+03	788	172	--
			244BL+23		252BL+15	6,704	--	--
		SUBTOTALS				21,184	172	797
	2	N. GLENVIEW AVE						
			73FN+99		82FN+28	3,680	--	--
			82FN+49		83FN+15	401	--	--
			82FN+28		83FN+36	--	--	445
			83FN+36		84FN+58	491	--	--
		W. WISCONSIN AVENUE						
			308WX+61		310WX+45	941	--	--
			311WX+46		312WX+84	698	--	--
		SUBTOTALS				6,211	--	445
		TOTALS				27,395	172	1,242

CURB RAMP

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	602.0515 DETECTABLE WARNING FIELD NATURAL PATINA SF
1000	1	N. GLENVIEW AVENUE			
			67F+42	45'RT	8
			67F+42	45'LT	8
			72F+30	40'RT	8
			72F+43	48'RT	8
		W. BLUEMOUND ROAD			
			240BL+44	58'RT	8
			242BL+96	54'RT	8
			243BL+00	05'RT	8
			243BL+00	09'RT	8
			243BL+01	50'LT	8
			243BL+23	55'LT	8
			243BL+03	61'LT	8
			244BL+06	53'LT	8
			244BL+11	08'LT	8
			244BL+11	12'LT	8
			244BL+12	49'LT	8
			244BL+14	58'LT	8
			244BL+32	82'LT	8
			251BL+97	48'RT	8
			252BL+01	39'LT	8
		SUBTOTAL			152
1000	2	N. GLENVIEW AVENUE			
			76FN+22	22'LT	8
			76FN+22	20'RT	8
			76FN+31	27'RT	8
			76FN+69	28'RT	8
			76FN+73	23'LT	8
			76FN+76	20'RT	8
			79FN+75	20'RT	8
			79FN+75	23'LT	8
			79FN+84	27'RT	8
			80FN+21	30'RT	8
			80FN+32	21'RT	8
			80FN+32	23'LT	8
			82FN+28	30'LT	8
			82FN+36	38'LT	8
			82FN+42	19'RT	8
			82FN+64	35'RT	8
		W. WISCONSIN AVENUE			
			310WX+61	25'LT	8
			310WX+83	40'LT	8
			311WX+36	40'LT	8
			311WX+43	31'LT	8
		SUBTOTAL			160
		TOTAL			312

ASPHALTIC ITEMS

MATERIAL UNIT WEIGHTS USED		
HMA Pavement	110	LB/SY/IN

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	455.0105 ASPHALTIC MATERIAL PG 58-28 TON	455.0605 TACK COAT GAL	460.1103 HMA PAVEMENT TYPE E-3 TON	465.0105 ASPHALTIC SURFACE 3-INCH TON	465.0105 ASPHALTIC SURFACE 5-INCH TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON
1000	1	N. GLENVIEW AVENUE									
			62F+72		66F+93	52	94	862	--	--	--
			62F+35		67+46	--	--	--	--	--	22
			64F+01		67F+07	--	--	--	--	--	141
			69F+72		69F+94	--	--	--	--	3	--
			70F+05		71F+92	--	--	--	--	56	--
		W. BLUEMOUND ROAD					--	--	--		
			213BL+40		234BL+66	29	71	489	--	--	--
			234BL+20		236BL+46	--	--	--	--	--	130
			239BL+85		240BL+35	10	18	166	124	--	--
			237BL+00		239BL+84	--	--	--	--	--	205
			242BL+25		242BL+56	--	--	--	--	1	--
			245BL+67		245BL+90	--	--	--	--	3	--
			247BL+29		247BL+61	--	--	--	--	6	--
			252BL+14		252BL+50	8	15	134	--	--	--
		SUBTOTALS				99	198	1,651	124	69	498
1000	2	N. GLENVIEW AVENUE									
			74FN+90		74FN+97	--	--	--	1	--	
			76FN+36		76FN+67	1	2	14	--	--	--
			79FN+88		80FN+14	1	1	13	--	--	--
			84FN+58		85FN+08	4	5	63	--	--	--
			85FN+08		89FN+76	30	55	507	--	--	--
		W. WISCONSIN AVENUE									
			308WX+12		308WX+49	3	6	52	--	--	--
						3	6	51	--	--	--
		SUBTOTALS				42	75	700	1	--	--
		UNDISTRIBUTED				--	--	--	--	--	187
		TOTAL				141	273	2,351	194		685

BASE AGGREGATE ITEMS

AGGREGATE UNIT WEIGHTS USED	
Base Aggregate Dense	2.1
Select Crushed Material	1.8

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON
1000	1	N. GLENVIEW AVENUE					
			62F+72		73FN+99	2,093	4,085
		W. BLUEMOUND ROAD					
			213BL+40		235BL+18	970	--
			235BL+18		252BL+07	5,620	10,883
			235BL+18		340BL+35	252	
		SUBTOTALS				7,713	14,968
	2	N. GLENVIEW AVENUE					
			73FN+92		85FN+08	2,320	4,794
		SUBTOTALS				2,320	4,794
		W. WISCONSIN AVENUE					
			308WX+96		312WX+99	271	--
		SUBTOTALS				2,591	4,794
		UNDISTRIBUTED				515	988
		TOTALS				10,819	20,750

CONCRETE PAVEMENT GAPS

CATEGORY	STAGE	ROADWAY	STATION	415.0210 CONCRETE PAVEMENT GAPS EACH
1000	1	W. BLUEMOUND ROAD	243BL+75	1
		SUBTOTAL		1
		UNDISTRIBUTED		4
		TOTAL		5

FINISHING ROADWAY PROJECT ID 1060-33-71

CATEGORY	STAGE	LOCATION	213.0100.0001 EACH
1000	ALL	PROJECT	1
		TOTAL	1

QMP RIDE; INCENTIVE IRI RIDE

CATEGORY	LOCATION	440.4410.S DOL
1000	PROJECT 1060-33-71	5,806
	TOTAL	5,806

STORM SEWER STRUCTURES

ROADWAY	STR NO.	STAGE	STATION	OFFSET FT	LOCATION	RIM OR FLOW ELEV	STR DEPTH FT	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.3003 INLETS 3-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0612 INLET COVERS TYPE C EACH	611.0648 INLET COVERS TYPE R[1] EACH	SPV.0060.8004 INLET COVERS TYPE 57[2] EACH	SPV.0060.8006 INLET COVERS TYPE R-SPECIAL[3] EACH	COMMENTS
Glenview Avenue	F100	1	68F+17.03	-43.0	LT	704.15	3.07	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F102	1	68F+16.65	44.0	RT	703.94	2.56	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F104	1	68F+16.06	1.8	RT	704.22	4.15	---	1	---	---	---	---	---	---	---	---	---	1	---
Glenview Avenue	F106	1	67F+58.15	-8.0	LT	704.31	1.18	---	---	---	---	---	---	1	---	---	---	---	1	---
Glenview Avenue	F108	1	67F+58.36	9.0	RT	703.80	2.91	---	---	---	---	1	---	---	---	---	---	---	1	---
Glenview Avenue	F110	1	67F+57.94	3.7	RT	704.38	4.66	---	1	---	---	---	---	---	1	---	---	---	---	---
Glenview Avenue								---	---	---	---	---	---	---	---	---	---	---	---	---
Glenview Avenue								---	---	---	---	---	---	---	---	---	---	---	---	---
Glenview Avenue	F114	1	65F+23.46	5.0	RT	702.86	4.29	---	---	---	1	---	---	---	---	1	---	---	---	---
Glenview Avenue								---	---	---	---	---	---	---	---	---	---	---	---	---
Glenview Avenue	F117	1	63F+08.60	4.0	RT	701.51	4.58	---	1	---	---	---	---	---	---	1	---	---	---	---
Glenview Avenue								---	---	---	---	---	---	---	---	---	---	---	---	---
Glenview Avenue	F119	1	62F+40.82	7.4	RT	700.63	5.79	---	---	---	1	---	---	---	1	---	---	---	---	---
Bluemound Road								---	---	---	---	---	---	---	---	---	---	---	---	---
Bluemound Road	F140	1	236BL+27.02	-6.7	LT	725.53	4.94	---	---	---	---	1	---	---	---	1	---	---	---	---
Bluemound Road	F142	2	236BL+33.26	0.8	RT	725.12	6.79	1	---	---	---	---	---	---	1	---	---	---	---	---
Bluemound Road	F146	2	243BL+10.22	4.0	RT	704.44	2.40	---	---	---	---	---	1	---	---	---	---	---	1	---
Bluemound Road	F150	2	239BL+72.75	-5.8	LT	713.11	5.62	---	---	---	---	1	---	---	---	1	---	---	---	---
Bluemound Road								---	---	---	---	---	---	---	---	---	---	---	---	---
Bluemound Road	F158	1	240BL+56.11	-39.9	LT	709.00	7.24	---	1	---	---	---	---	---	1	---	---	---	---	---
Bluemound Road	F160	1	241BL+50.71	-50.0	LT	706.34	5.02	---	1	---	---	---	---	---	---	---	1	---	---	---
Bluemound Road	F162	1	242BL+87.14	-13.2	LT	704.47	2.64	---	---	---	---	---	1	---	---	---	1	---	---	---
Bluemound Road	F164	1	242BL+94.95	-50.0	LT	703.94	3.18	---	---	1	---	---	---	---	---	---	1	---	---	---
Glenview Avenue	F166	2	74FN+44.69	-27.6	LT	703.74	1.95	---	---	---	---	1	---	---	---	---	1	---	---	---
Glenview Avenue	F168	1	74FN+09.85	-28.0	LT	703.71	2.08	---	---	---	---	1	---	---	---	---	---	1	---	---
Glenview Avenue	F170	1	73FN+66.70	-28.0	LT	703.76	2.33	---	---	---	---	---	1	---	---	---	---	1	---	---
Glenview Avenue	F172	1	73FN+43.70	-29.1	LT	703.78	2.45	---	---	---	---	---	1	---	---	---	1	---	---	---
Bluemound Road	F174	1	243BL+42.06	-46.4	LT	703.83	3.15	---	---	1	---	---	---	---	1	---	---	---	---	---
Bluemound Road	F374	1	244BL+45.85	-53.8	LT	702.43	1.98	---	---	---	---	1	---	---	---	---	1	---	---	---
Bluemound Road	F176	1	244BL+45.66	-48.0	LT	702.50	3.57	---	---	1	---	---	---	---	---	---	1	---	---	---

STORM SEWER STRUCTURES CONTINUED

ROADWAY	STR NO.	STAGE	STATION	OFFSET FT	LOCATION	RIM OR FLOW ELEV	STR DEPTH FT	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.3003 INLETS 3-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0612 INLET COVERS TYPE C EACH	611.0648 INLET COVERS TYPE R[1] EACH	SPV.0060.8004 INLET COVERS TYPE 57[2] EACH	SPV.0060.8006 INLET COVERS TYPE R-SPECIAL[3] EACH	COMMENTS
Bluemound Road	F178	1	245BL+75.31	6.0	RT	701.33	2.06	---	---	---	---	---	1	---	---	---	---	---	1	---
Bluemound Road	F180	1	245BL+57.50	-7.0	LT	701.61	2.42	---	---	---	---	---	1	---	---	---	---	---	1	---
Bluemound Road	F182	1	245BL+56.98	-15.0	LT	701.69	2.54	---	---	---	---	---	1	---	---	---	---	---	1	---
Bluemound Road	F184	1	245BL+67.69	-53.8	LT	700.85	3.10	---	1	---	---	---	---	---	---	---	1	---	---	---
Bluemound Road	F186	1	247BL+04.81	-15.0	LT	700.52	2.72	---	---	---	---	1	---	---	---	---	---	---	1	---
Bluemound Road	F188	1	247BL+04.75	-50.0	LT	699.85	3.46	---	1	---	---	---	---	---	---	---	1	---	---	---
Bluemound Road	F190	1	249BL+38.47	-38.9	LT	698.60	5.55	---	1	---	---	---	---	---	---	---	1	---	---	---
Bluemound Road	F192	1	241BL+54.57	47.0	RT	705.95	2.53	---	---	---	---	---	1	---	---	---	1	---	---	---
Bluemound Road	F194	1	241BL+54.58	21.4	RT	706.50	3.93	---	1	---	---	---	---	---	1	---	---	---	---	---
Bluemound Road	F196	1	242BL+81.62	47.0	RT	704.26	1.96	---	---	---	---	---	1	---	---	---	1	---	---	---
Bluemound Road	F198	1	242BL+81.62	21.9	RT	704.81	2.85	---	1	---	---	---	---	---	1	---	---	---	---	---
Bluemound Road	F199	2	243BL+23.72	22.0	RT	704.54	2.77	---	1	---	---	---	---	---	1	---	---	---	---	---
Bluemound Road	F200	1	243BL+63.00	35.0	RT	703.82	2.23	---	1	---	---	---	---	---	1	---	---	---	---	---
Glenview Avenue	F202	1	71F+91.82	-45.0	LT	703.82	1.90	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F206	1	72F+08.52	-12.2	LT	703.96	2.04	---	---	---	---	---	1	---	---	---	---	---	1	---
Glenview Avenue	F208	1	72F+12.50	38.5	RT	703.56	2.39	---	---	---	---	---	1	---	---	---	1	---	---	---
Bluemound Road	F210	1	244BL+24.33	47.0	RT	702.95	3.66	---	---	---	1	---	---	---	---	---	1	---	---	---
Bluemound Road	F212	1	245BL+50.96	47.0	RT	701.10	3.17	---	---	---	---	---	1	---	---	---	1	---	---	---
Bluemound Road	F214	1	246BL+98.23	12.0	RT	700.52	2.92	---	---	---	---	1	---	---	---	---	---	---	1	---
Bluemound Road	F216	1	246BL+98.25	47.0	RT	699.89	3.19	---	1	---	---	---	---	---	---	---	1	---	---	---
Bluemound Road	F218	1	249BL+37.23	38.0	RT	698.55	4.31	---	---	---	---	---	1	---	---	---	1	---	---	---
Bluemound Road	F220	1	251BL+77.28	34.0	RT	694.50	2.05	---	---	1	---	---	---	---	---	---	1	---	---	2" ADJUSTMENT ASSUMED
Bluemound Road	F222	1	251BL+89.99	-34.0	LT	694.06	5.90	---	---	1	---	---	---	---	---	---	1	---	---	---
Glenview Avenue	F250	2	78FN+02.02	18.0	RT	705.22	2.19	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F252	2	77FN+99.52	-22.0	LT	705.31	3.02	---	1	---	---	---	---	---	---	---	1	---	---	---
Glenview Avenue	F254	2	77FN+36.68	-22.0	LT	704.92	3.09	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F256	2	76FN+69.87	-22.0	LT	704.53	3.33	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F258	2	76FN+84.19	18.0	RT	704.49	2.52	---	---	---	---	1	---	---	---	---	1	---	---	---
Glenview Avenue	F260	2	76FN+50.48	-11.3	LT	704.72	3.44	---	1	---	---	---	---	---	1	---	---	---	---	---
Glenview Avenue	F262	2	75FN+47.41	-22.0	LT	704.03	2.69	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F264	2	75FN+46.55	-11.0	LT	704.28	3.99	---	1	---	---	---	---	---	1	---	---	---	---	---

STORM SEWER STRUCTURES CONTINUED

ROADWAY	STR NO.	STAGE	STATION	OFFSET FT	LOCATION	RIM OR FLOW ELEV	STR DEPTH FT	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.3003 INLETS 3-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0612 INLET COVERS TYPE C EACH	611.0648 INLET COVERS TYPE R[1] EACH	SPV.0060.8004 INLET COVERS TYPE 57[2] EACH	SPV.0060.8006 INLET COVERS TYPE R-SPECIAL[3] EACH	COMMENTS
Glenview Avenue		2						---	---	---	---	---	---	---	---	---	---	---	---	---
Glenview Avenue	F269	2	74FN+79.23	-24.2	LT	703.81	7.47	---	1	---	---	---	---	---	---	---	---	1	---	---
Glenview Avenue	F271	2	75FN+06.59	-22.0	LT	703.89	2.54	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F273	2	75FN+06.55	-10.9	LT	704.15	8.34	---	1	---	---	---	---	---	1	---	---	---	---	---
Glenview Avenue	F275	2	74FN+94.11	25.1	RT	703.42	2.74	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F277	2	75FN+07.35	24.4	RT	703.49	10.33	---	1	---	---	---	---	---	---	---	1	---	---	---
Glenview Avenue	F300	2	81FN+73.26	18.0	RT	702.93	2.16	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F302	2	81FN+68.71	-22.0	LT	703.62	2.96	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F304	2	81FN+73.33	-15.0	LT	703.55	4.05	---	1	---	---	---	---	---	1	---	---	---	---	---
Glenview Avenue	F306	2	82FN+34.73	18.0	RT	701.46	2.18	---	---	---	---	---	1	---	---	---	1	---	---	---
Wisconsin Avenue	F308	2	310WX+28.04	24.0	RT	702.55	2.99	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F310	2	82FN+44.04	-15.0	LT	701.96	3.46	1	---	---	---	---	---	---	1	---	---	---	---	---
Wisconsin Avenue	F312	2	310WX+55.14	-24.0	LT	701.54	2.36	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F314	2	82FN+99.50	-19.8	LT	700.77	3.54	---	1	---	---	---	---	---	1	---	---	---	---	---
Glenview Avenue	F316	2	84FN+19.47	18.0	RT	697.33	1.97	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F318	2	84FN+19.65	-22.0	LT	697.81	3.14	---	---	---	---	---	1	---	---	---	1	---	---	---
Glenview Avenue	F320	2	84FN+54.79	-22.0	LT	697.01	3.02	---	---	---	---	---	1	---	---	---	1	---	---	---
							TOTAL	2	21	5	3	9	29	1	15	4	38	3	10	

[1] TOP SLAB OPENINGS FOR INLET COVERS TYPE R SHALL BE 2'-0" X 2'-1" & TYPE R GRATES ARE R-1 PER S.D.D. 8D 17-6

[2] TOP SLAB OPENINGS FOR INLET COVERS TYPE 57 SHALL BE 2'-0" x 2'-0"

[3] TOP SLAB OPENINGS FOR INLET COVERS TYPE R SPECIAL SHALL BE 1'-7" x 2'-6"

	STORM SEWER PIPES																	
CATEGORY	ROADWAY	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE^ %	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	610.0119 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH LF	610.0124 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH LF	PIPE LENGTH (FT)	COMMENTS
1000	Glenview Avenue	P101	1	F100	F104	699.41	699.00	1.00	---	---	45	---	---	---	---	---	41	---
1000	Glenview Avenue	P103	1	F102	F104	699.71	699.38	1.00	---	38	---	---	---	---	---	---	33	---
1000	Glenview Avenue	P105	1	F104	F110	698.07	697.80	0.50	---	---	---	---	58	---	---	---	53	---
1000	Glenview Avenue	P107	1	F106	F110	701.30	701.25	0.50	---	13	---	---	---	---	---	---	9	---
1000	Glenview Avenue	P109	1	F108	F110	699.06	699.05	0.50	---	7	---	---	---	---	---	---	3	---
1000	Glenview Avenue	P111	1	F110	F114	697.80	696.65	0.50	---	---	---	---	234	---	---	---	229	---
1000	Glenview Avenue	PE112	1	---	F114	---	698.64	---	---	---	---	---	---	---	---	---	56	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
1000	Glenview Avenue	PE113	1	---	F114	---	697.89	---	---	---	---	---	---	---	---	---	36	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
1000	Glenview Avenue	P115	1	F114	F117	696.65	695.01	0.79	---	---	---	---	215	---	---	---	209	---
1000	Glenview Avenue	PE116	1	---	F117	---	695.74	---	---	---	---	---	---	---	---	---	42	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
1000	Glenview Avenue	P118	1	F117	F119	695.01	694.52	0.79	---	---	---	---	68	---	---	---	62	---
1000	Glenview Avenue	PE119	1	---	F119	---	692.98	---	---	---	---	---	---	---	---	---	19	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
1000	Glenview Avenue	PE120	1	F119	---	692.92	---	---	---	---	---	---	---	---	---	---	15	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
1000	Bluemound Road	PE139	1	---	F142	---	719.33	---	---	---	---	---	---	---	---	---	47	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
1000	Bluemound Road	P141	1	F140	F142	718.84	718.78	1.00	10	---	---	---	---	---	---	---	6	---
1000	Bluemound Road	PE143	2	F142	---	716.58	---	---	---	---	---	---	---	---	---	---	24	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
1000	Bluemound Road	P147	2	F146	F162	700.21	700.16	0.20	---	---	---	28	---	---	---	---	24	---
1000	Bluemound Road	PE151	2	F150	FE156	705.74	705.33	1.30	36	---	---	---	---	---	---	---	31	---
1000	Bluemound Road	PE157	1	---	F158	---	700.34	---	---	---	---	---	---	---	---	---	66	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
1000	Bluemound Road	P159	1	F158	F160	699.84	699.48	0.40	---	---	---	---	95	---	---	---	90	---
1000	Bluemound Road	P161	1	F160	F164	699.48	698.92	0.40	---	---	---	---	144	---	---	---	139	---
1000	Bluemound Road	P163	1	F162	F164	700.16	700.01	0.50	---	33	---	---	---	---	---	---	28	---
1000	Bluemound Road	P165	1	F164	F174	698.92	698.76	0.40	---	---	---	---	47	---	---	---	41	---
1000	Glenview Avenue	P167	2	F166	F168	700.12	699.96	0.50	---	35	---	---	---	---	---	---	32	---
1000	Glenview Avenue	P169	1	F168	F170	699.96	699.76	0.50	---	43	---	---	---	---	---	---	40	---
1000	Glenview Avenue	P171	1	F170	F172	699.76	699.66	0.50	---	24	---	---	---	---	---	---	20	---
1000	Glenview Avenue	P173	1	F172	F174	699.66	699.57	0.50	---	22	---	---	---	---	---	---	17	---
1000	Bluemound Road	P175	1	F174	F176	698.76	698.27	0.50	---	---	---	---	---	---	---	104	98	---
1000	Bluemound Road	P375	1	F374	F176	698.78	698.75	0.50	---	10	---	---	---	---	---	---	6	---
1000	Bluemound Road	P177	1	F176	F184	697.09	695.91	1.00	---	---	---	---	125	---	---	---	119	---

	STORM SEWER PIPES CONTINUED																	
CATEGORY	ROADWAY	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE^ %	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	610.0119 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH LF	610.0124 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH LF	PIPE LENGTH (FT)	COMMENTS
1000	Bluemound Road	P179	1	F178	F180	697.44	697.36	0.50	---	20	---	---	---	---	---	---	16	---
1000	Bluemound Road	P181	1	F180	F182	697.36	697.32	0.50	---	12	---	---	---	---	---	---	8	---
1000	Bluemound Road	P183	1	F182	F184	697.32	697.16	0.50	---	36	---	---	---	---	---	---	31	---
1000	Bluemound Road	P185	1	F184	F188	695.91	694.55	1.00	---	---	---	---	141	---	---	---	136	---
1000	Bluemound Road	P187	1	F186	F188	695.97	695.84	0.50	---	31	---	---	---	---	---	---	27	---
1000	Bluemound Road	P189	1	F188	F190	694.55	692.21	1.00	---	---	---	---	239	---	---	---	234	---
1000	Bluemound Road	P191	1	F190	F222	691.21	688.71	1.00	---	---	---	---	256	---	---	---	250	---
1000	Bluemound Road	P193	1	F192	F194	701.75	701.65	0.50	---	---	24	---	---	---	---	---	19	---
1000	Bluemound Road	P195	1	F194	F198	700.65	700.04	0.50	---	---	---	127	---	---	---	---	122	---
1000	Bluemound Road	P197	1	F196	F198	700.63	700.54	0.50	---	---	23	---	---	---	---	---	19	---
1000	Bluemound Road	P198	1	F198	F199	700.04	699.85	0.50	---	---	---	42	---	---	---	---	37	---
1000	Bluemound Road	P199	2	F199	F200	699.85	699.67	0.50	---	---	---	---	---	---	41	---	36	---
1000	Bluemound Road	P201	1	F200	F210	699.67	699.11	1.00	---	---	---	---	---	---	62	---	56	---
1000	Glenview Avenue	P203	1	F202	F206	700.25	700.09	0.50	---	37	---	---	---	---	---	---	33	---
1000	Glenview Avenue	P207	1	F206	F208	700.09	699.50	1.38	---	47	---	---	---	---	---	---	43	---
1000	Glenview Avenue	P209	1	F208	F210	699.50	699.07	1.00	---	49	---	---	---	---	---	---	43	---
1000	Bluemound Road	P211	2	F210	F212	697.45	696.26	1.00	---	---	---	125	---	---	---	---	119	---
1000	Bluemound Road	P213	2	F212	F216	696.26	694.86	1.00	---	---	---	144	---	---	---	---	139	---
1000	Bluemound Road	P215	2	F214	F216	695.77	695.50	1.00	---	31	---	---	---	---	---	---	27	---
1000	Bluemound Road	P217	2	F216	F218	694.86	692.57	1.00	---	---	---	234	---	---	---	---	229	---
1000	Bluemound Road	P219	2	F218	F220	692.57	690.95	0.70	---	---	---	---	---	---	236	---	231	---
1000	Bluemound Road	P221	2	F220	F222	690.95	690.66	0.50	---	---	---	---	---	---	63	---	57	---
1000	Bluemound Road	P223	2	F222	SLOPE PAVING	686.32	685.00	1.00	---	---	---	---	---	135	---	---	132	---
1000	Glenview Avenue	P251	2	F250	F252	701.36	701.20	0.50	---	36	---	---	---	---	---	---	31	---
1000	Glenview Avenue	P253	2	F252	F254	700.45	700.16	0.50	---	---	---	63	---	---	---	---	58	---
1000	Glenview Avenue	P255	2	F254	F256	700.16	699.53	1.00	---	---	---	67	---	---	---	---	63	---
1000	Glenview Avenue	P257	2	F256	F260	699.53	699.36	1.00	---	---	---	21	---	---	---	---	17	---
1000	Glenview Avenue	P259	2	F258	F260	700.30	700.10	0.50	---	44	---	---	---	---	---	---	40	---
1000	Glenview Avenue	P261	2	F260	F264	699.36	698.37	1.00	---	---	---	104	---	---	---	---	99	---
1000	Glenview Avenue	P263	2	F262	F264	699.67	699.63	1.00	---	9	---	---	---	---	---	---	5	---
1000	Glenview Avenue	P265	2	F264	F273	698.37	698.02	1.00	---	---	---	40	---	---	---	---	35	---

	STORM SEWER PIPES CONTINUED																	
CATEGORY	ROADWAY	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE^ %	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	610.0119 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH LF	610.0124 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH LF	PIPE LENGTH (FT)	COMMENTS
1000	Glenview Avenue	PE268	2	---	F269	---	694.90	---	---	---	---	---	---	---	---	---	16	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
1000	Glenview Avenue	P270	2	F269	F273	694.50	693.89	2.50	---	---	---	29	---	---	---	---	24	---
1000	Glenview Avenue	P272	2	F271	F273	699.68	699.63	1.00	---	9	---	---	---	---	---	---	5	---
1000	Glenview Avenue	P274	2	F273	F277	693.89	693.26	2.25	---	---	---	33	---	---	---	---	28	---
1000	Glenview Avenue	P276	2	F275	277	699.01	698.93	1.00	---	13	---	---	---	---	---	---	9	---
1000	Glenview Avenue	PE278	2	F277	---	691.32	---	---	---	---	---	---	---	---	---	---	91	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
1000	Glenview Avenue	P301	2	F300	F304	699.10	698.97	0.50	---	31	---	---	---	---	---	---	27	---
1000	Glenview Avenue	P303	2	F302	F304	698.99	698.97	1.00	---	7	---	---	---	---	---	---	2	---
1000	Glenview Avenue	P305	2	F304	F310	697.58	696.75	1.25	---	---	---	71	---	---	---	---	66	---
1000	Glenview Avenue	P307	2	F306	F310	697.61	697.47	0.50	---	32	---	---	---	---	---	---	28	---
1000	Wisconsin Avenue	P309	2	F308	F310	697.89	697.47	1.00	---	45	---	---	---	---	---	---	41	---
1000	Glenview Avenue	P311	2	F310	F314	696.75	696.11	1.25	---	---	---	56	---	---	---	---	51	---
1000	Wisconsin Avenue	P313	2	F312	F314	697.51	697.28	1.00	---	28	---	---	---	---	---	---	24	---
1000	Glenview Avenue	P315	2	F314	F318	695.31	693.00	2.00	---	---	---	120	---	---	---	---	116	---
1000	Glenview Avenue	P317	2	F316	F318	693.69	693.53	0.50	---	36	---	---	---	---	---	---	32	---
1000	Glenview Avenue	P319	2	F318	F320	693.00	692.38	2.00	---	---	---	35	---	---	---	---	31	---
1000	Glenview Avenue	PE321	2	F320	---	692.32	---	---	---	---	---	---	---	---	---	---	157	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
								TOTAL	46	777	47	1,339	1,622	135	402	104	0	

^ SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE.

PIPE GRATES

ROADWAY	PIPE ID	PIPE DISCHARGE ELEV	END OF PIPE STATION	END OF PIPE OFFSET	611.9800.S PIPE GRATES EACH
W. BLUEMOUND ROAD	P223	685.00	251BL+92	166'LT	1
TOTAL					1

NOTES

1) PIPE DISCHARGE STATION / OFFSET ARE TO END CENTER OF PIPE

RECONNECT STORM SEWER LATERALS

ROADWAY	SPV.0060.8007 RECONNECT STORM SEWER LATERALS EACH	NOTES:
UNDISTRIBUTED	5	5 ASSUMED ROOF DRAIN CONNECTIONS
TOTAL	5	

COVER PLATE TEMPORARY

STAGE	ROADWAY	STATION	OFFSET	611.8120.S COVER PLATE TEMPORARY EACH
1	N. GLENVIEW AVENUE			
		65F+23	5' RT	1
		74FN+09	26'RT	1
	SUBTOTAL			2
1	W. BLUEMOUND ROAD			
		236BL+33	1' RT	1
	SUBTOTAL			1
	TOTAL			3

CONCRETE COLLAR

ROADWAY	STATION	OFFSET	520.8000 CONCRETE COLLARS FOR PIPE EACH
N. GLENVIEW AVENUE			
	62F+40	7'RT	3
	63F+09	1'RT	1
	65F+24	5'RT	2
	74FN+79	24'LT	1
	75FN+06	25'RT	1
	84FN+59	20'LT	1
W. BLUEMOUND ROAD			
	236BL+33	1' RT	2
	239BL+73	7'LT	1
	240BL+53	40'LT	1
	243BL+60	34'RT	1
TOTAL			14

CONCRETE SLOPE PAVING

ROADWAY	PIPE ID	STATION	OFFSET	SPV.0035.8003 CONCRETE SLOPE PAVING AT STORM SEWER OUTFALL CY
W. BLUEMOUND ROAD	P223	251BL+92	166'LT	8
TOTAL				8

EROSION CONTROL ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2027 EROSION MAT CLASS II TYPE C SY	628.7570 ROCK BAGS EACH
1000	1	W. BLUEMOUND ROAD											
			251BL+68		251BL+99	46' - 188'	15	170	170	--	--		--
			251BL+71		251BL+84	45' -184'				--	--	425	--
		SUBTOTALS					15	170	170	--	--	425	--
		UNDISTRIBUTED					--	43	43	3	3	106	100
		TOTALS					15	213	213	3	3	531	100

TRACKING PADS

CATEGORY	STAGE	LOCATION	628.7560 TRACKING PADS EACH
1000	1	UNDISTRIBUTED	1
		TOTAL	1

PAVEMENT CLEANUP

CATEGORY	STAGE	LOCATION	SPV.0105.0002 PAVEMENT CLEANUP LS
1000	ALL	PROJECT	1
		TOTAL	1

INLET PROTECTION

CATEGORY	STAGE	LOCATION	628.7005 TYPE A EACH	628.7015 TYPE C EACH	628.7020 TYPE D EACH
1000	1	N. GLENVIEW AVENUE			
		48F+75 TO 73F+99	11	18	5
		W. BLUEMOUND ROAD			
		214BL +40 TO 243BL+53	9	35	3
		243BL+53 TO 252BL+15	18	22	--
		SUBTOTALS	38	75	8
	2				
		N. GLENVIEW AVENUE			
		73FN+99 TO 89FN+76	18	24	4
		W. WISCONSIN AVENUE			
		310WX+00 TO 310WX+66	2	4	--
		SUBTOTALS	20	28	4
		TOTALS	58	103	12

3

RESTORATION ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIX NO. 20 LB	630.0200 SEEDING TEMPORARY LB	631.1000 SOD LAWN SY	631.0300 SOD WATER MGAL	SPV.0035.7001 SHREDDED BARK MULCH CY
1000	1	N. GLENVIEW AVENUE											
			62F+80		63F+59	134	--	0.08	--	--	134	4	--
			64F+83		67F+02	364	--	0.23	--	--	364	9	--
			67F+43		67F+68	--	--	0.01	--	--	12	--	--
			67F+48		68F+49	133	--	0.08	--	--	133	3	--
			68F+14		69F+02	--	--	0.02	--	--	38	1	--
			69F+22		69F+72	27	--	0.02	--	--	27	1	--
			69F+94		70F+20	33	20	0.02	1	--	13		5
			70F+44		71F+01	59	31	0.04	1	--	29	1	8
			71F+35		71F+95	79	--	0.05	--	--	79	2	--
			71F+92		72F+44	34	--	0.02	--	--	34	1	--
			73FN+81		73FN+99	28	--	0.02	--	--	28	1	--
		W. BLUEMOUND ROAD											
			214BL+11		214BL+17	--	--	--	--	--	12	--	--
			225BL+89		225BL+95	--	--	--	--	--	6	--	--
			234BL+66		236BL+34	313	--	0.20	--	--	313	8	--
			237BL+05		239BL+75	442	--	0.28	--	--	442	11	--
			240BL+35		242BL+95	91	--	0.06	--	--	91	2	--
			240BL+45		241BL+34	107	--	0.07	--	--	107	3	--
			244BL+16		244BL+34	9	--	0.01	--	--	9	--	--
			244BL+38		252BL+03	678		0.43			665	16	3
			244BL+67		245BL+04	67	50	0.04	--	--	17	--	13
			245BL+39		245BL+67	30	30	0.02	--	--	--	--	7
			245BL+77		247BL+15	245	--	0.15	--	--	245	6	--
			245BL+90		252BL+00	746	--	0.47	--	--	746	18	--
			251BL+71		251BL+96	417	--	0.26	6	--	179	4	--
		SUBTOTALS				4,036	130	2.57	8		3,725	89	36
	2	N. GLENVIEW AVENUE											
			73FN+99		76FN+37	95	--	0.06	--	--	95	2	--
			74FN+93		82FN+28	341	--	0.22	--	--	341	8	--
			76FN+65		79FN+89	107	--	0.07	--	--	107	3	--
			80FN+14		82FN+49	154	--	0.10	--	--	154	4	--
			83FN+21		84FN+58	142	--	0.09	--	--	142	3	--
		W. WISCONSIN AVENUE								--			
			308WX+61		310WX+77	430	--	0.27	--	--	430	10	--
			311WX+18		312WX+84	238	--	0.15	--	--	238	6	--
		SUBTOTALS				1,507	--	0.95	--		1,507	36	--
		TOTALS				5,543	130	4	8	0	5,232	125	36

3

TRAFFIC CONTROL ITEMS

CATEGORY	STAGE	STAGE DURATION	643.0200.0001 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE 1060-33-71	643.0300 TRAFFIC CONTROL DRUMS		643.0410 TRAFFIC CONTROL BARRICADES TYPE II		643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0800 TRAFFIC CONTROL ARROW BOARDS		643.0900 TRAFFIC CONTROL SIGNS	
		DAYS	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS
1000	1A	3	3	322	966	--	--	22	66	211	633	4	12	52	156
	1B	22	22	213	4,686	4	88	11	242	105	2,310	4	88	43	946
	1C	15	15	269	4,035	4	60	20	300	135	2,025	2	30	51	765
	1D	23	23	179	4,117	7	161	20	460	66	1,518	1	23	49	1,127
	1E	3	3	290	870	--	--	31	93	142	426			37	111
	STAGE 1 SUBTOTALS		66		14,674		309		1,161		6,912		153		3,105
1000	2A	18	18	63	1,134	--	--	9	162	18	324			28	504
	2B	18	18	63	1,134		--	18	324	18	324			22	396
	STAGE 2 SUBTOTALS		36		2,268		--		486		648		--		900
	TOTALS		102		16,942		309		1,647		7,560		153		4,005

TRAFFIC CONTROL PAVEMENT MARKING

CATEGORY	STAGE	646.0600 REMOVING PAVEMENT MARKINGS LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE 4-INCH LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE DOTTED WHITE 4-INCH LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE YELLOW 4-INCH LF	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WHITE 8-INCH LF	649.1200 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE WHITE 18-INCH LF
1000	1A	4,261	4,559	259	13,022	362	88
	1B	1,765	6,317	419	5,647	419	88
	1C	--	3,313	304	2,962	304	--
	1D	--	6,454	131	2,786	131	75
	1E	--	6,454	--	2,863	--	66
	STAGE 1 SUBTOTALS	6,026	27,097	1,113	27,281	1,216	317
	2A	--	--	--	--	--	--
	2B	--	--	--	--	--	--
	STAGE 2 SUBTOTALS	--	--	--	--	--	--
	TOTALS	6,026		54,378		1,216	317

[1] DASHED WHITE = 12.5-FT DASH, 37.5-FT SKIP
[2] DOTTED PATTERN WHITE = 3-FT LINE, 9-FT SKIP

TRAFFIC CONTROL ITEMS (DETOUR)

CATEGORY	LOCATION	STAGE DURATION DAYS	643.3000 TRAFFIC CONTROL DETOUR SIGNS EACH	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.2000 TRAFFIC CONTROL DETOUR 1060-33-71 EACH
1000	N. GLENVIEW AVENUE	36	92	3,312	2	--
		--	--	--	--	--
	W. WISCONSIN AVENUE	18	64	2,304	--	--
	SUBTOTAL			5,616	2	0
	UNDISTRIBUTED			562	2	1
	TOTALS			6,178	4	1

TRAFFIC CONTROL SIGNS FIXED MESSAGE

CATEGORY	STAGE	SIGN NO.	SIGN SIZE W X H FT X FT	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	SIGN MESSAGE
1000	1D	1	6 X 4.5	27.00	181 CLOSED NORTH OF BLUEMOUND FOLLOW DETOUR
		2	6 X 4.5	27.00	181 CLOSED NORTH OF BLUEMOUND FOLLOW DETOUR
		3	13.5 X 7	94.50	181 CLOSED NORTH OF BLUEMOUND USE ALTERNATE ROUTE
		4	13.5 X 7	94.50	181 CLOSED NORTH OF BLUEMOUND USE ALTERNATE ROUTE
		5	13.5 X 7	94.50	181 CLOSED NORTH OF BLUEMOUND USE ALTERNATE ROUTE
		6	13.5 X 7	94.50	181 CLOSED NORTH OF BLUEMOUND USE ALTERNATE ROUTE
		7	6 X 4.5	27.00	181 CLOSED NORTH OF BLUEMOUND USE ALTERNATE ROUTE
		8	6 X 4.5	27.00	181 CLOSED AT AVON COURT FOLLOW DETOUR
	2B	9	6 X 4.5	27.00	WISCONSIN AVENUE CLOSED AT 181 FOLLOW DETOUR
		10	6 X 4.5	27.00	WISCONSIN AVENUE CLOSED AT 181 FOLLOW DETOUR
		11	6 X 4.5	27.00	WISCONSIN AVENUE CLOSED AT 181 FOLLOW DETOUR
		12	5 X 2	10.00	WISCONSIN AVENUE OPEN TO HOSPITAL
		13	5 X 2	10.00	WISCONSIN AVENUE OPEN TO HOSPITAL
		14	5x1.2	6.00	WISCONSIN AVE
		15	5x1.2	6.00	WISCONSIN AVE
		16	5x1.2	6.00	WISCONSIN AVE
		17	5x1.2	6.00	WISCONSIN AVE
		18	5x1.2	6.00	WISCONSIN AVE
		19	5x1.2	6.00	WISCONSIN AVE
		20	5x1.2	6.00	WISCONSIN AVE
		21	5x1.2	6.00	WISCONSIN AVE
		22	5x1.2	6.00	WISCONSIN AVE
		23	5x1.2	6.00	WISCONSIN AVE
		24	5x1.2	6.00	WISCONSIN AVE
		25	5x1.2	6.00	WISCONSIN AVE
		26	5x1.2	6.00	WISCONSIN AVE
		27	5x1.2	6.00	WISCONSIN AVE
		28	5x1.2	6.00	WISCONSIN AVE
	SUBTOTAL			677.00	
	UNDISTRIBUTED			169.00	
	TOTAL			846.00	

FIXED MESSAGE SIGN SPECIAL

CATEGORY	STAGE	SIGN NO.	SIGN SIZE W X H FT X FT	SPV.0165.0011 FIXED MESSAGE SIGN SPECIAL SF	SIGN MESSAGE
1000	1D	1	3 X 4	12.00	WISCONSIN LUTHERAN COLLEGE
	SUBTOTAL			12.00	
	UNDISTRIBUTED			3.00	
	TOTAL			15.00	

PAVEMENT MARKING ITEMS

CATEGORY	STAGE	LOCATION	STATION	STATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH 12.5 FT LINE WHITE LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH 12.5 FT LINE YELLOW LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH YELLOW LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH WHITE LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH 12.5 FT LINE, 37.5FT SKIP WHITE LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH 3 FT LINE, 9 FT SKIP WHITE LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH 3 FT LINE, 9 FT SKIP LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH WHITE LF	646.0881.S PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH 12.5 FT LINE, 37.5FT SKIP WHITE LF	646.0883.S PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH WHITE LF
1000	1	N. GLENVIEW AVE	60F+50	72F+13	1,704	1,797	--	--	200	30	--	595	225	79
		N. GLENVIEW AVE	73FN+25	73FN+99	--	83	--	--	--	9	--	90	--	--
		W. BLUEMOUND RD	230BL+75	243BL+25	366	1,751	--	--	100	30	--	320	400	162
		W. BLUEMOUND RD	243BL+90	252BL+00	1,349	2,227	--	76	325	42	--	432	--	--
		W. BLUEMOUND RD	252BL+50	258BL+25	--	1,014	--	--	--	--	--	--	--	--
	2	N. GLENVIEW AVE	73FN+99	82FN+50	--	4,614	175	--	--	6	36	300	--	--
		N. GLENVIEW AVE	83FN+21	90FN+00	--	2,002	--	--	--	--	--	180	--	--
		W. WISCONSIN AVE	308WX+00	310WX+75	--	449	--	--	25	--	--	98	--	--
		W. WISCONSIN AVE	311WX+25	313WX+35	--	376	--	--	13	--	--	52	--	--
		SUBTOTALS			3,419	14,313	175	76	663	117	36	2,067	625	241
		TOTALS				17,907			856		2,103		625	241

PAVEMENT MARKING ITEMS (CONTINUED)

CATEGORY	STAGE	LOCATION	STATION	STATION	SPV.0060.0002 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1 WHITE EACH	SPV.0060.0003 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2 WHITE EACH	SPV.0060.0004 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3 WHITE EACH	SPV.0060.0005 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS WHITE EACH	647.0456 PAVEMENT MARKING CURB EPOXY YELLOW LF	SPV.0090.0001 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH WHITE LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY YELLOW EACH	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH YELLOW LF	SPV.0090.0002 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH WHITE LF
1000	1	N. GLENVIEW AVE	60F+50	72F+13	--	4	--	4	1,797	49	6	--	593
		N. GLENVIEW AVE	73FN+25	73FN+95	1	1	1	--	--	35	--	--	144
		W. BLUEMOUND RD	230BL+75	243BL+25	--	1	--	3	1,751	45	5	--	550
		W. BLUEMOUND RD	243BL+90	252BL+00	--	4	--	4	626	59	2	225	375
		W. BLUEMOUND RD	252BL+50	258BL+25	--	--	--	--	--	--	--	--	164
	2	N. GLENVIEW AVE	73FN+99	82FN+50	--	6	2	4	--	23	--	113	207
		N. GLENVIEW AVE	83FN+21	90FN+00	--	6	2	2	--	23	--	97	90
		W. WISCONSIN AVE	308WX+00	310WX+75	--	--	2	--	--	24	--	--	107
		W. WISCONSIN AVE	311WX+25	313WX+35	--	--	2	--	--	24	--	--	107
		SUBTOTALS			1	22	9	17	4,174	282	13	435	2,337
		TOTALS			1	22	9	17	4,174	282	13	435	2,337

SAW CUTTING ITEMS

CATEGORY	STAGE	ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
1000	1	N. GLENVIEW AVENUE						
			62F+35	LT/RT	67F+56	LT/RT	--	1141
			67F+91	53'RT	68F+13	53'RT	--	45
			67F+91	48'LT	68F+03	48'LT	--	14
			68F+85	48'LT	68F+90	48'LT	--	5
			69F+02	53'RT	69F+22	53'RT	--	20
			69F+74	63'RT	71F+23	61'RT	144	--
			70F+12	48'LT	70F+42	48'LT	--	31
			70F+82	49'LT	70F+93	49'LT	--	13
			70F+88	7'LT	72+77	13'LT	--	195
			71F+22	62'RT	71F+92	54'RT	--	69
			71F+23	9'LT	72F+08	15'LT	--	177
			73FN+51	39'LT	73FN+94	39'LT	--	43
			73FN+99	LT/RT	73FN+99	LT/RT	--	50
		W. BLUEMOUND ROAD						
			213BL+40	7' LT	234BL+66	34' RT	--	2,138
			213BL+40	7' LT	214BL+11	29' RT	--	104
			214BL+17	11' RT	225BL+89	30' RT	--	1,205
			225BL+95	29' RT	234BL+66	11' RT	--	903
			234BL+66	13'LT/RT	236BL+47	0'	--	378
			236BL+99	0'	239BL+88	0'	--	619
			239BL+88	0'	240BL+48	0'	--	60
			240BL+35	LT/RT	240BL+35	LT/RT	--	92
			240BL+35	72'LT	240BL+25	57'LT	--	203
			241BL+16	52'RT	241BL+29	52'RT	--	13
			241BL+62	52'RT	241BL+75	52'RT	--	13
			241BL+75	0'	242BL+29	0'	--	36
			242BL+25	58'LT	242BL+70	58'LT	53	--
			242BL+78	58'LT	243BL+40	78'LT	--	67
			243BL+13	0'	243BL+98	3'RT	--	85
			244BL+34	63'RT	245BL+35	63'RT	--	102
			245BL+12	8'RT	245BL+40	8'RT	--	30
			245BL+04	71'LT	245BL+09	70'LT	--	5
			245BL+66	62'RT	245BL+90	62'RT	--	23
			246BL+13	61'LT	245BL+91	65'LT	--	5
			247BL+22	5'RT	252BL+15	0'	--	492
			247BL+32	58'RT	247BL+61	63'RT	57	--
			247BL+62	56'RT	247BL+68	56'RT	--	6
			247BL+83	66'LT	248BL+17	65'LT	--	30
			248BL+57	60'LT	248BL+77	57'LT	--	21
			250BL+08	55'LT	250BL+31	55'LT	--	23
			251BL+79	40'LT	251BL+79	45'LT	--	5
			252BL+00	LT/RT	252BL+15	LT/RT	--	126
SUBTOTALS							254	8,586

SAW CUTTING ITEMS (CONTINUED)

CATEGORY	STAGE	ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
1000	2	N. GLENVIEW AVENUE						
			73FN+94	39'LT	74FN+66	39'LT	--	73
			74FN+66	39'LT	74FN+87	33'LT	--	25
			74FN+87	33'LT	74FN+89	28'LT	--	5
			74FN+91	40'RT	74FN+96	40'RT	5	--
			75FN+01	27'LT	75FN+01	33'RT	--	10
			76FN+23	31'RT	76FN+35	31'RT	--	10
			76FN+33	28'LT	76FN+63	28'LT	--	30
			76FN+35	31'RT	76FN+67	30'RT	--	31
			76FN+74	31'RT	76FN+79	31'RT	--	10
			77FN+14	28'LT	77FN+24	28'LT	--	10
			77FN+53	26'RT	77FN+74	25'RT	--	21
			77FN+78	28'LT	77FN+88	28'LT	--	10
			78FN+30	28'LT	78FN+40	28'LT	--	11
			78FN+57	26'RT	78FN+71	26'RT	--	14
			78FN+85	28'LT	79FN+00	28'LT	--	15
			79FN+60	28'LT	79FN+69	28'LT	--	9
			79FN+98	LT/RT	79FN+98	LT/RT	--	46
			79FN+88	39'RT	80FN+14	44'RT	--	27
			80FN+07	28'LT	80FN+17	28'LT	--	10
			80FN+34	26'RT	80FN+34	31'RT	--	4
			80FN+60	28'LT	80FN+63	28'LT	--	4
			81FN+46	26'RT	81FN+58	26'RT	--	12
			81FN+77	28'LT	81FN+95	28'LT	--	18
			81FN+97	26'RT	81FN+97	31'RT	--	10
			82FB+11	27'LT	82FB+11	32'LT	--	10
			83FN+66	27'LT	83FN+66	32'LT	--	55
			83FN+98	22'LT	84FN+03	22'LT	--	10
			24FN+27	26'RT	84FN+52	26'RT	--	27
			84FN+29	27'LT	84FN+47	27'LT	--	18
			84FN+92	27'LT	85FN+12	27'LT	--	20
			84FN+90	26'RT	85FN+02	26'RT	--	12
			85FN+08	LT/RT	85FN+08	LT/RT	--	41
		W. WISCONSIN AVENUE						
			308WX+61	LT/RT	308WX+61	LT/RT	--	41
			309WX+00	32'RT	309WX+12	32'RT	--	12
			309WX+34	33'LT	309WX+34	38'LT	--	5
			309WX+44	44'LT	309WX+59	44'LT	--	15
			310WX+02	33'RT	310WX+02	38'RT	--	5
			311WX+41	54'LT	311WX+45	52'LT	--	5
			311WX+89	32'LR	311WX+89	38'LT	--	6
			312WX+11	41'RT	312WX+32	41'RT	--	19
			312WX+13	32'LT	312WX+16	32'LT	--	3
			312WX+51	31'RT	312WX+51	37'RT	--	6
			312WX+83	32'LT	312WX+94	32'LT	--	12
			312WX+84	LT/RT	312WX+84	LT/RT	--	41
SUBTOTALS							5	778
UNDISTRIBUTED							52	1,873
TOTALS							311	11,238

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\030203_mq_misc.ppt PLOT DATE : 1/31/2013 6:14:48 AM PLOT BY : MSCCEJ PLOT NAME : 030203_mq_misc6 PLOT SCALE : 1:1

3

MOBILIZATION

CATEGORY	STAGE	LOCATION	619.1000 MOBILIZATION EACH
1000	ALL	PROJECT	0.8
		TOTAL	0.8

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	STAGE	LOCATION	618.0100 PROJECT ID 1060-33-71 EACH
1000	ALL	PROJECT	1
		TOTAL	1

EXPOSING EXISTING UTILITY

CATEGORY	LOCATION	SPV.0060.0001 EXPOSING EXIXTING UTILITY EACH
1000	UNDISTRIBUTED	3
	TOTAL	3

3

DUST CONTROL SURFACE TREATMENT

CATEGORY	STAGE	LOCATION	623.0200 DUST CONTROL TREATMENT SURFACE SY
1000	ALL	PROJECT	29,776
		TOTAL	29,776

SURVEY PROJECT

CATEGORY	STAGE	LOCATION	SPV.0105.0001 SURVEY PROJECT 1060-33-71 LS
1000	ALL	PROJECT	1
		TOTAL	1

CPM PROGRESS SCHEDULE

CATEGORY	STAGE	LOCATION	108.4400 CPM PROGRESS SCHEDULE EACH
1000	ALL	PROJECT	0.5
		TOTAL	0.5

WATER

CATEGORY	STAGE	LOCATION	624.0100 WATER MGAL
1000	ALL	PROJECT - BASE AGGREGATE	20
		PROJECT - EXCAVATION	33
		TOTAL	53

CONCRETE PAVEMENT JOINT LAYOUT

CATEGORY	STAGE	LOCATION	SPV.0105.0006 CONCRETE PAVEMENT JOINT LAYOUT LS
1000	ALL	PROJECT	1
		TOTAL	1

INCENTIVE DENSITY HMA PAVEMENT

CATEGORY	STAGE	LOCATION	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOLLARS
1000	ALL	PROJECT	840
		TOTAL	840

3

TEMPORARY CROSSWALK AND BUS STOP ACCESS

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	SPV.0045.0001 TEMPORARY CROSSWALK AND BUS STOP ACCESS DAY
1000	1B	N. GLENVIEW AVENUE			
			68F+38	RT	22
			72F+15	RT	22
		W. BLUEMOUND ROAD			
			246BL+51	RT	22
	1C	W. BLUEMOUND ROAD			
			239BL+54	RT	15
			242BL+82	RT	15
	1D	W. BLUEMOUND ROAD			
			240BL+60	LT	23
		TOTAL			119

EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL

CATEGORY	STAGE	LOCATION	205.0501.S EXCAVATION HAULING AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL TON
1000	1	N. GLENVIEW AVENUE	400
		TOTAL	400

3

SIGNING REMOVAL SUMMARY

CATEGORY	SIGN #	SIGN CODE	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REMOVING SMALL SIGN SUPPORTS (EA)	REMARKS
1000	101	BUS	--	--	ESTR
	102	R1-1	--	--	ESTR
	103	R7-2D	--	--	ESTR
	104	BUS	--	--	ESTR
	105	R7-7L	--	--	ESTR
	106	M2-1	1	1	
		M1-4	1	--	
	107	R7-5D	--	--	ESTR
	108	R7-2D	--	--	ESTR
	109	MKE-NPC	--	--	ESTR
	110	R2-1	--	--	ESTR
		R7-5D	--	--	ESTR
	111	S1-1	--	--	ESTR
		WF16-7R	--	--	ESTR
	112	R7-5-L	--	--	ESTR
	113	M3-4	1	1	
		M3-2	1	--	
		M1-4	1	--	
		M1-4	1	--	
		M5-1L	1	--	
		M5-1R	1	--	
	114	S1-1	1	1	
		WF16-7R	1	--	
	115	S1-1	1	1	
	116	S1-1	1	1	
		WF16-7R	1	--	
	117	MKE-NPCU	1	1	
	118	R7-1D	1	1	
	119	R7-1R	1	1	
		R7-5R	1	--	
	120	MKE-NPC	1	1	
		BUS	1	--	
	121	WLC	1	1	MOVE
	122	R7-1D	1	1	
		R7-4D	1	--	
	123	R7-5D	1	1	
	124	S5-2	1	1	
	125	M3-4	1	1	
		M3-2	1	--	
		M1-4	1	--	
		M1-4	1	--	
		M6-1	1	--	
		M6-1	1	--	
		CHURCH	1	--	MOVE
	126	R2-1	1	1	
		R7-1D	1	--	
	127	R3-2	1	1	
	128	S1-1	1	1	
		S4-51	1	--	
	129	R7-5-D	1	1	

SIGNING REMOVAL SUMMARY (CONTINUED)

CATEGORY	SIGN #	SIGN CODE	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REMOVING SMALL SIGN SUPPORTS (EA)	REMARKS
1000	130	R10-4	1	1	
	131	BUS	1	1	
	132	R10-4	1	1	
	133	M3-2	1	1	
		COM	1	--	MOVE
		M1-4	1	--	
		R7-1D	1	--	
	134	R4-7	1	1	
	135	M4-5	1	1	
		M1-1	1	--	
		M6-1	1	--	
		M3-1	1	--	
		M3-3	1	--	
		M1-6	1	--	
		M1-6	1	--	
		M6-1	1	--	
		M6-1	1	--	
	136	BUS	1	1	
		R10-4	1	--	
	137	M3-4	1	1	
		M3-2	1	--	
		M1-6-3	1	--	
		M1-6-3	1	--	
		M6-1	1	--	
		M6-1	1	--	
	138	R10-4	1	1	
	139	M3-1	1	1	
		M1-6-3	1	--	
		M6-1	1	--	
		Recycle	1	--	MOVE
		BUS	1	--	
	140	M3-1	1	1	
		M1-6-3	1	--	
		TOSA POP	1	--	MOVE
		N. WATCH	1	--	MOVE
		R7-2D	1	--	
		R7-5-D	1	--	
	141	R2-1	1	1	
	142	R7-1L	1	1	
		R7-5-D	1	--	
	143	R7-1D	1	1	
		R7-5-D	1	--	
	144	R7-1D	1	1	
		R7-5-D	1	--	
	145	R5-54	1	1	
	146	R1-1	1	1	
	147	Recycle	1	1	MOVE
		R7-5-D	1	--	
		R7-1D	1	--	
	148	R7-1D	1	1	

SIGNING REMOVAL SUMMARY (CONTINUED)

CATEGORY	SIGN #	SIGN CODE	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REMOVING SMALL SIGN SUPPORTS (EA)	REMARKS
1000		R7-5-D	1	--	
	149	R7-1D	1	1	
		R7-5-D	1	--	
	150	M2-1	1	1	
		M1-4	1	--	
		CHURCH	1	--	MOVE
	151	R7-2D	1	1	
		R7-5-D	1	--	
	152	R5-54	1	1	
	153	R1-1	1	1	
	154	S1-1	1	1	
		S4-51	1	--	
	155	D9-2	1	1	
		D9-13aP	1	--	
		M6-1	1	--	
		R7-5-D	1	--	
		R7-1D	1	--	
	156	M3-2	1	1	
		M1-6-3	1	--	
		R7-5-D	1	--	
	157	R7-1L	1	1	
	158a	BUS	1	1	
		R1-1	1	--	
		S1-1	1	--	
	158b	R10-11S	1	1	
	159	BUS	1	1	
		R1-1F	1	--	
		S1-1	1	--	
	160	R10-11S	1	1	
	161	R5-2	1	1	
	162	R2-1	1	1	
		R5-2	1	--	
		R7-1D	1	--	
	163	R10-11S	1	1	
	164	R7-1L	1	1	
	165	Bus	1	1	
		R1-1F	1	--	
		S1-1	1	--	
	166	R7-1L	1	1	
	167	Bus	1	1	
		R1-1F	1	--	
		S1-1	1	--	
	168	R7-1D	1	1	
	169	R7-2D	1	1	
	170	R7-1L	1	1	
		R7-1R	1	--	
	171	S1-1	--	--	ESTR
		S4-51	--	--	ESTR
	172	S4-51	--	--	ESTR
	173	S1-1	--	--	ESTR

CONTINUED ON NEXT SHEET

SIGNING REMOVAL SUMMARY (CONTINUED)

CATEGORY	SIGN #	SIGN CODE	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REMOVING SMALL SIGN SUPPORTS (EA)	REMARKS
1000	174	R6-2L	--	--	ESTR
	175	R6-2R	--	--	ESTR
	176	R5-1	--	--	ESTR
	177a	R3-2	--	--	ESTR
	177b	R1-1	--	--	ESTR
	177c	S1-1	--	--	ESTR
		S4-51	--	--	ESTR
	178	R7-1L	--	--	ESTR
	179	S1-1	--	--	ESTR
		S4-51	--	--	ESTR
	180	R1-1	--	--	ESTR
	181	R1-1	--	--	ESTR
	182	R5-1	--	--	ESTR
	183	S1-1	--	--	ESTR
		S4-51	--	--	ESTR
	184	S1-1	--	--	ESTR
		S4-51	--	--	ESTR
	185	R7-2D	--	--	ESTR
		R2-1	--	--	ESTR
	186	R2-1	--	--	ESTR
		W16-RADAR	--	--	ESTR
	187	Chruch	1	1	MOVE
	188a	R7-2D	--	--	ESTR
	188b	R7-1D	--	--	ESTR
	189	W3-3	1	--	
	190	W3-3	--	--	ESTR
	191	R2-1	--	--	ESTR
	192	R2-1	1	1	
	193	R7-1L	--	--	ESTR
		R7-1R	--	--	ESTR
	194	M2-1	1	1	
		M1-6-3	1	--	
	195	BUS	--	--	ESTR
	196	R10-7	1	1	
	197	R5-2	--	--	ESTR
	198	R1-1	1	1	
	199	R7-1R	--	--	ESTR
		R7-5-L	--	--	ESTR
	200	R7-1D	1	1	
	201	R7-1R	1	1	
		BUS	1	--	
	202	M4-5	1	1	
		M1-1	1	--	
		M6-1	1	--	
		M3-1	1	--	
		M3-3	1	--	
		M1-6-3	1	--	
		M1-6-3	1	--	
		M5-1L	1	--	
		M5-1R	1	--	

SIGNING REMOVAL SUMMARY (CONTINUED)

CATEGORY	SIGN #	SIGN CODE	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REMOVING SMALL SIGN SUPPORTS (EA)	REMARKS
1000	203	M3-4	1	1	
		M1-4	1	--	
	204	R7-5D	1	1	
	205	R7-1D	1	1	
	206	M4-5	1	1	
		M1-1	1	--	
		M5-1L	1	--	
	207	BUS	1	1	
	208	R4-7	1	1	
	209	W10-64	1	1	
	210	M3-3	1	1	
		M3-1	1	--	
		M1-6-3	1	--	
		M1-6-3	1	--	
		M5-1L	1	--	
		M5-1R	1	--	
		R7-1D	1	--	
	211	W11-1	1	1	
		R7-1D	1	--	
	212	R7-1D	1	1	
	213	R7-1D	1	1	
	214	M2-1	1	1	
		M1-6-3	1	--	
		R7-1D	1	--	
	215	R5-2	--	--	ESTR
	216	R12-1	--	--	ESTR
	217	R1-1	--	--	ESTR
		R7-1R	--	--	ESTR
	218	R1-1	--	--	ESTR
	219	W11-1	--	--	ESTR
	220	R1-1	--	--	ESTR
	221	R1-1	--	--	ESTR
	222	S1-1	--	--	ESTR
		S4-51	--	--	ESTR
	223	R7-1D	1	1	
	224	R7-1D	1	1	
TOTALS			178	82	

PERMANENT SIGNING SUMMARY

CATEGORY	SIGN #	SIGN CODE	SIGN MESSAGE	LENGTH	WIDTH	SIGN SIZE	TYPE II SIGN SIZE W X H [IN.] X [IN.]	637.0202 SIGNS REFLECTIVE TYPE II SF	637.0402 SIGNS REFLECTIVE FOLDING TYPE II SF	634.0616 WOOD POST 4X6-INCH X16-FT EACH	634.0618 WOOD POST 4X6-INCH X18-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
1000	1101	R4-7		24	30	2S	24 X 30	5.00	--	1	--	--	
	1102	R4-7		24	30	2S	24 X 30	5.00	--	1	--	--	
	1103	R4-7		24	30	2S	24 X 30	5.00	--	1	--	--	
	1104	J1-1											ON LIGHT POLE
		M2-1		21	15	2	21 X 15	2.19	--	--	--	--	
		M1-4	USH 18	24	24	2	24 X 24	4.00	--	--	--	--	
	1105	R4-7		24	30	2S	24 X 30	5.00	--	1	--	--	
	1106	S1-1		36	36	2	36 X 36	6.75	--	1	--	--	
		WF16-7R		30	18	2S	30 x 18	3.75	--	--	--	--	
	1107	R4-7		24	30	2S	24 X 30	5.00	--	--	--	--	
	1108	J2-2											ON LIGHT POLE
		M3-4		24	12	2	24 X 12	2.00	--	--	--	--	
		M3-2		24	12	2	24 X 12	2.00	--	--	--	--	
		M1-4	USH 18	24	24	2	24 X 24	4.00	--	--	--	--	
		M1-4	USH 18	24	24	2	24 X 24	4.00	--	--	--	--	
		M5-1L		21	21	2	21 X 21	3.06	--	--	--	--	
		M5-1R		21	21	2	21 X 21	3.06	--	--	--	--	
	1109	R7-1L		18	24	2S	18 X 24	3.00	--	1	--	--	
	1110	R3-55L		24	30	2	24 X 30	5.00	--	1	--	--	
	1111	S1-1		36	36	2	36 X 36	6.75	--	--	--	--	ON LIGHT POLE
		WF16-7R		30	18	2s	30 X 18	3.75	--	--	--	--	
	1112	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1113	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1114	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
		BUS		--	--	--	--	--	--	--	--	--	MOVE BY MILW CO TRANSIT
	1115	S1-1		36	36	2	36 X 36	6.75	--	1	--	--	
		WF16-7L		30	18	2S	30 x 18	3.75	--	--	--	--	
	1116	W3-3		36	36	2S	36 X 36	9.00	--	--	--	--	ON LIGHT POLE
	1117	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1118	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1119	R1-1F		36	36	3	36 x 36	--	7.46	--	--	--	ON SIGNAL POLE
		BUS		--	--	--	--	--	--	--	--	--	MOVE BY MILW CO TRANSIT
	1120	R3-8V		72	30	2S	72 X 30	15.00	--	--	2	--	
		R3-7R		30	30	2S	30 x 30	6.25	--	--	--	--	
	1121	R2-1	30 MPH	24	30	2S	24 X 30	5.00	--	1	--	--	
		R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	
	1122	J2-2											ON LIGHT POLE
		M3-4		24	12	2	24 X 12	2.00	--	--	--	--	
		M3-2		24	12	2	24 X 12	2.00	--	--	--	--	
		M1-4	USH 18	24	24	2	24 X 24	4.00	--	--	--	--	
		M1-4	USH 18	24	24	2	24 X 24	4.00	--	--	--	--	
		M6-1L		21	21	2	21 X 21	3.06	--	--	--	--	
		M6-1R		21	21	2	21 X 21	3.06	--	--	--	--	
	1123	R3-2		24	24	2S	24 X 24	4.00	--	1	--	--	
	1124	R6-2R		24	30	2S	24 X 30	5.00	--	1	--	--	
	1125	R6-2R		24	30	2S	24 X 30	5.00	--	1	--	--	
	1126	R6-2R		24	30	2S	24 X 30	5.00	--	1	--	--	
	1127	S4-51	20 MPH	24	48	2	24 X 48	8.00	--	--	--	--	
	1128	R1-1F		36	36	3	36 x 36	--	7.46				ON SIGNAL POLE
	1129	R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	ON SIGNAL POLE

CONTINUED ON NEXT SHEET

PERMANENT SIGNING SUMMARY

CATEGORY	SIGN #	SIGN CODE	SIGN MESSAGE	LENGTH	WIDTH	SIGN SIZE	TYPE II SIGN SIZE W X H [IN.] X [IN.]	637.0202 SIGNS REFLECTIVE TYPE II SF	637.0402 SIGNS REFLECTIVE FOLDING TYPE II SF	634.0616 WOOD POST 4X6-INCH X16-FT EACH	634.0618 WOOD POST 4X6-INCH X18-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
1000	1130	R1-1F		36	36	3	36 x 36	--	7.46	--	--	--	ON SIGNAL POLE
		BUS		--	--	--	--	--	--	--	--	--	MOVE BY MILW CO TRANSIT
	1131	R10-50		30	36	2S	30 X 36	7.50	--	--	--	--	ON SIGNAL POLE
		M1-94H	Bluemound Rd	78	18	2S	78X18	9.75					
	1132	R1-1F		36	36	3	36 x 36	--	7.46	--	--	--	ON SIGNAL POLE
		BUS		--	--	--	--	--	--	--	--	--	MOVE BY MILW CO TRANSIT
	1133	COM		--	--	--	--	--	--	--	--	1	MOVE
		R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	
	1134	R4-7		24	30	2S	24 X 30	5.00	--	1	--	--	
	1135	W12-1D		24	24	2S	24 X 24	4.00	--	--	1	--	
	1136	R5-1		30	30	2S	30 x 30	6.25	--	1	--	--	
	1137	R5-1		30	30	2S	30 x 30	6.25	--	1	--	--	
		R1-1F		36	36	3	36 x 36	--	7.46	--	--	--	
	1138	R4-7		24	30	2S	24 X 30	5.00	--	--	--	--	ON SIGNAL POLE
	1139	R6-2R		24	30	2S	24 X 30	5.00	--	1	--	--	
	1140	J2-2											ON LIGHT POLE
		M3-4		24	12	2	24 X 12	2.00	--	--	--	--	
		M3-2		24	12	2	24 X 12	2.00	--	--	--	--	
		M1-4	USH 18	24	24	2	24 X 24	4.00	--	--	--	--	
		M1-4	USH 18	24	24	2	24 X 24	4.00	--	--	--	--	
		M6-1L		21	21	2	21 X 21	3.06	--	--	--	--	
		M6-1R		21	21	2	21 X 21	3.06	--	--	--	--	
	1141	J3-1											
		M3-1		24	12	2	24 X 12	2.00	--	--	1	--	
		M1-6	STH 181	24	24	2	24 X 24	4.00	--	--	--	--	
		M6-1R		21	21	2	21 X 21	3.06	--	--	--	--	
	1142	R1-1F		36	36	3	36 x 36	--	7.46	--	--	--	ON SIGNAL POLE
	1143	J2-1											ON SIGNAL POLE
		MB4-5		24	12	2	24 X 12	2.00	--	--	--	--	
		M1-1	IH 94	24	24	2	24 X 24	4.00	--	--	--	--	
		MB6-1R		21	21	2	21 X 21	3.06	--	--	--	--	
		J2-2											
		M3-1		24	12	2	24 X 12	2.00	--	--	--	--	
		M3-3		24	12	2	24 X 12	2.00	--	--	--	--	
		M1-6	STH 181	24	24	2	24 X 24	4.00	--	--	--	--	
		M1-6	STH 181	24	24	2	24 X 24	4.00	--	--	--	--	
		M6-1L		21	21	2	21 X 21	3.06	--	--	--	--	
		M6-1R		21	21	2	21 X 21	3.06	--	--	--	--	
	1144	R1-1F		36	36	3	36 x 36	--	7.46	--	--	--	ON SIGNAL POLE
	1145	R6-2R		24	30	2S	24 X 30	5.00	--	1	--	--	
	1146	R6-2R		24	30	2S	24 X 30	5.00	--	1	--	--	
	1147	WLC		48	36	--	48 X 36	--	--	1	--	--	PAID AS FIXED MESSAGE SIGN SPECIAL
		CHURCH		--	--	--	--	--	--	--	--	1	MOVE
	1148	S1-1		36	36	2	36 X 36	6.75	--	--	--	--	
		WF16-9P		30	18	2S	30 X 18	3.75	--	--	--	--	
		R2-6P		24	18	2S	24 X 18	3.00	--	--	--	--	
	1149	R10-50		30	36	2	30 X 36	7.50	--	--	--	--	ON SIGNAL POLE
		M1-94H	Glenview Ave	78	18	2S	78X18	9.75	--	--	--	--	
	1150	R10-50		30	36	2	30 X 36	7.50	--	--	--	--	ON SIGNAL POLE
		M1-94H	Bluemound Rd	78	18	2S	78X18	9.75	--	--	--	--	

CONTINUED ON NEXT SHEET

PERMANENT SIGNING SUMMARY

CATEGORY	SIGN #	SIGN CODE	SIGN MESSAGE	LENGTH	WIDTH	SIGN SIZE	TYPE II SIGN SIZE W X H [IN.] X [IN.]	637.0202 SIGNS REFLECTIVE TYPE II SF	637.0402 SIGNS REFLECTIVE FOLDING TYPE II SF	634.0616 WOOD POST 4X6-INCH X16-FT EACH	634.0618 WOOD POST 4X6-INCH X18-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
1000	1151	R10-50		30	36	2	30 X 36	7.50	--	--	--	--	ON SIGNAL POLE
		M1-94H	Glenview Ave	78	18	2S	78X18	9.75	--	--	--	--	
	1152	TOSA POP		--	--	--	--	--	--	1	--	1	MOVE
		N. WATCH		--	--	--	--	--	--	--	--	1	MOVE
	1153	R3-8M		54	30	2S	54 X 30	11.25	--	2	--	--	
	1154	R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	ON LIGHT POLE
	1155	R2-1	30 MPH	24	30	2S	24 X 30	5.00	--	1	--	--	
		R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	
	1156	W3-3		36	36	2S	36 x 36	9.00	--	1	--	--	
	1157	J4-1											
		M3-1		24	12	2	24 X 12	2.00	--	--	1	--	
		M1-6	STH 181	24	24	2	24 X 24	4.00	--	--	--	--	
	1158	R3-9C		24	6	2S	24 X 6	1.00	--	1	--	--	
		R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
		R3-9B		24	36	2S	24 x 36	6.00	--	1	--	--	
	1159	R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	ON LIGHT POLE
	1160	R3-9D		24	6	2S	24 X 6	1.00	--	1	--	--	
		R3-9B		24	36	2	24 x 36	6.00	--	--	--	--	
	1161	R5-54		24	30	2S	24 X 30	5.00	--	1	--	--	
	1162	R1-1		30	30	2S	30 x 30	5.18	--	1	--	--	
	1163	Recycle		--	--	--	--	--	--	1	--	1	MOVE
		R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	
	1164	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1165	R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	ON LIGHT POLE
	1166	J1-1											
		M2-1		21	15	2	24 X 15	2.19	--	1	--	--	
		M1-4	USH 18	24	24	2	24 X 24	4.00	--	--	--	--	
	1167	R3-9B		24	36	2S	24 x 36	6.00	--	1	--	--	
		R3-9D		24	6	2S	24 X 6	1.00	--	--	--	--	
		R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	
	1168	R5-54		24	30	2S	24 X 30	5.00	--	1	--	--	
	1169	R1-1		30	30	2S	30 x 30	5.18	--	1	--	--	
	1170	S1-1		36	36	2	36 x 36	6.75	--	1		--	
		WF16-9P		30	18	2S	30 X 18	3.75	--	--	--	--	
		R2-6P		24	18	2S	24 X 18	3.00	--	--	--	--	
	1171	R3-8A		36	30	2S	36 X 36	7.50	--	1	--	--	
	1172	D9-2		24	24	2	24 X 24	4.00	--	1	--	--	
		D9-13aP		24	12	2	24 X 12	2.00	--	--	--	--	
		M6-1		21	21	2	21 X 21	3.06	--	--	--	--	
		R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	
	1173	R3-9D		24	6	2S	24 X 6	1.00	--	1	--	--	
		R3-9B		24	36	2S	24 x 36	6.00	--	--	--	--	
	1174	J4-1											ON SIGNAL POLE
		M3-2		24	12	2	24 X 12	2.00	--	--	--	--	
		M1-6	STH 181	24	24	2	24 X 24	4.00	--	--	--	--	
		R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	
	1175	R10-11S		24	36	2S	24 X 36	6.00	--	--	--	--	ON SIGNAL POLE
	1176	R3-9B		24	36	2S	24 x 36	6.00	--	--	--	--	ON LIGHT POLE
		R3-9C		24	6	2S	24 X 6	1.00	--	--	--	--	

CONTINUED ON NEXT SHEET

PERMANENT SIGNING SUMMARY

CATEGORY	SIGN #	SIGN CODE	SIGN MESSAGE	LENGTH	WIDTH	SIGN SIZE	TYPE II SIGN SIZE W X H [IN.] X [IN.]	637.0202 SIGNS REFLECTIVE TYPE II SF	637.0402 SIGNS REFLECTIVE FOLDING TYPE II SF	634.0616 WOOD POST 4X6-INCH X16-FT EACH	634.0618 WOOD POST 4X6-INCH X18-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
1000	1177	R1-1F		36	36	3	36 x 36	--	7.46	--	--	--	ON SIGNAL POLE
		S1-1		36	36	2	36 x 36	6.75	--	--	--	--	
		WF16-7L		30	18	2S	30 X 18	3.75	--	--	--	--	
	1178	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
		BUS		--	--	--	--	--	--	--	--	--	MOVE BY MILW CO TRANSIT
	1179	R1-1F		36	36	3	36 x 36	--	7.46	--	--	--	ON SIGNAL POLE
		S1-1		36	36	2	36 x 36	6.75	--	--	--	--	
		WF16-7L		30	18	2S	30 X 18	3.75	--	--	--	--	
	1180	R3-9B		24	36	2S	24 x 36	6.00	--	1	--	--	
		R3-9C		24	6	2S	24 X 6	1.00	--	--	--	--	
	1181	R10-11S		24	36	2S	24 x 36	6.00	--	--	--	--	ON SIGNAL POLE
		R5-2		24	24	2S	24 x 24	4.00	--	--	--	--	
	1182	R2-1	30 MPH	24	30	2S	24 X 30	5.00	--	--	--	--	ON LIGHT POLE
		R5-2		24	24	2S	24 x 24	4.00	--	--	--	--	
		R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	
	1183	R10-11S		24	36	2S	24 x36	6.00	--	--	--	--	ON SIGNAL POLE
	1184	BUS		--	--	--	--	--	--	1	--	--	MOVE BY MILW CO TRANSIT
	1185	R1-1F		36	36	3	36 X 36	--	7.46	--	--	--	ON SIGNAL POLE
		S1-1		36	36	2	36 x 36	6.75	--	--	--	--	
		WF16-7L		30	18	2s	30 X 18	3.75	--	--	--	--	
	1186	R1-1F		36	36	3	36 x 36	--	7.46	--	--	--	ON SIGNAL POLE
		S1-1		36	36	2	36 x 36	6.75	--	--	--	--	
		WF16-7L		30	18	2s	30 X 18	3.75	--	--	--	--	
	1187	R10-11S		24	36	2S	24 X 36	6.00	--	--	--	--	ON SIGNAL POLE
	1188	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
		BUS		--	--	--	--	--	--	--	--	--	MOVE BY MILW CO TRANSIT
	1189	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1190	R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	ON LIGHT POLE
		R3-8A		36	30	2S	36 X 30	7.50	--	--	--	--	
	1191	BUS		--	--	--	--	--	--	1	--	--	MOVE BY MILW CO TRANSIT
	1192	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1193	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1194	R7-1R		18	24	2S	18 X 24	3.00	--	1	--	--	
		R3-9D		24	6	2S	24 X 6	1.00	--	--	--	--	
		R3-9B		24	36	2S	24 x 36	6.00	--	--	--	--	
	1195	R7-1L		18	24	2S	18 X 24	3.00	--	1	--	--	
		R3-9B		24	36	2S	24 x 36	6.00	--	--	--	--	
		R3-9C		24	6	2S	24 X 6	1.00	--	--	--	--	
	1196	R2-1	30 MPH	24	30	2S	24 X 30	5.00	--	1	--	--	
		R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	
	1197	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1198	R4-7		24	30	2S	24 X 30	5.00	--	1	--	--	
	1199	R4-7		24	30	2S	24 X 30	5.00	--	--	--	--	ON LIGHT POLE
	1200	W3-3		36	36	2S	36 X 36	9.00	--	1	--	--	
	1201	R2-1	30 MPH	24	30	2S	24 X 30	5.00	--	1	--	--	
	1202	R2-1	30 MPH	24	30	2S	24 X 30	5.00	--	1	--	--	
	1203	J1-1											ON LIGHT POLE
		M2-1		21	15	2	21 X 15	2.19	--	--	--	--	
		M1-6	STH 181	24	24	2	24 X 24	4.00	--	--	--	--	
	1204	R4-7		24	30	2S	24 X 30	5.00	--	1	--	--	
	1205	R4-7		24	30	2S	24 X 30	5.00	--	1	--	--	
	1206	R3-55L		24	30	2	24 X 30	5.00	--	1	--	--	

CONTINUED ON NEXT SHEET

PERMANENT SIGNING SUMMARY

CATEGORY	SIGN #	SIGN CODE	SIGN MESSAGE	LENGTH	WIDTH	SIGN SIZE	TYPE II SIGN SIZE W X H [IN.] X [IN.]	637.0202 SIGNS REFLECTIVE TYPE II SF	637.0402 SIGNS REFLECTIVE FOLDING TYPE II SF	634.0616 WOOD POST 4X6-INCH X16-FT EACH	634.0618 WOOD POST 4X6-INCH X18-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
1000	1207	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1208	BUS		--	--	--	--	--	--	1	--	--	MOVE BY MILW CO TRANSIT
		R7-1R		18	24	2S	18 X 24	3.00	--	--	--	--	
	1209	J2-1											ON LIGHT POLE
		MB4-5		24	12	2	24 X 12	2.00	--	--	--	--	
		M1-1	IH 94	24	24	2	24 X 24	4.00	--	--	--	--	
		MB5-1R		21	21	2	21 X 21	3.06	--	--	--	--	
		J2-2											
		M3-1		24	12	2	24 X 12	2.00	--	--	--	--	
		M3-3		24	12	2	24 X 12	2.00	--	--	--	--	
		M1-6	STH 181	24	24	2	24 X 24	4.00	--	--	--	--	
		M1-6	STH 181	24	24	2	24 X 24	4.00	--	--	--	--	
		M5-1L		21	21	2	21 X 21	3.06	--	--	--	--	
		M5-1R		21	21	2	21 X 21	3.06	--	--	--	--	
	1210	J1-1											ON LIGHT POLE
		M3-4		24	12	2	24 X 12	2.00	--	--	--	--	
		M1-4	USH 18	24	24	2	24 X 24	4.00	--	--	--	--	
	1211	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1212	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1213	R3-56L		24	30	2S	24 X 30	5.00	--	1	--	--	
	1214	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1215	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1216	R3-56L		24	30	2S	24 X 30	5.00	--	1	--	--	
	1217	R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	ON LIGHT POLE
		Recycle		--	--	--	--	--	--	--	--	1	MOVE
	1218	J2-1											
		MB4-5		24	12	2	24 X 12	2.00	--	1	--	--	
		M1-1	IH 94	24	24	2	24 X 24	4.00	--	--	--	--	
		MB5-1L		21	21	2	21 X 21	3.06	--	--	--	--	
	1219	R3-55L		24	30	2	24 X 30	5.00	--	1	--	--	
	1220	R7-1L		18	24	2S	18 X 24	3.00	--	--	--	--	ON LIGHT POLE
	1221	R4-7		36	48	3	36 X 48	12.00	--	1	--	--	
		W5-54D		18	18	2S	18 X 18	2.25		--	--	--	
	1222	W10-64		42	48	2	42 X 48	14.00	--	1	--	--	
	1223	J2-2											ON LIGHT POLE
		M3-3		24	12	2	36 X 36	2.00	--	--	--	--	
		M3-1		24	12	2	36 x 36	2.00	--	--	--	--	
		M1-6	STH 181	24	24	2	24 X 24	4.00	--	--	--	--	
		M1-6	STH 181	24	24	2	24 X 24	4.00	--	--	--	--	
		M5-1L		21	21	2	21 X 21	3.06	--	--	--	--	
		M5-1R		21	21	2	21 X 21	3.06	--	--	--	--	
		R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	
	1224	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1225	R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	ON LIGHT POLE
	1226	W6-1		36	36	2S	36 X 36	9.00	--	--	--	--	ON LIGHT POLE
	1227	BUS		--	--	--	--	--	--	1	--	--	MOVE BY MILW CO TRANSIT
	1228	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	

CONTINUED ON NEXT SHEET

PERMANENT SIGNING SUMMARY

CATEGORY	SIGN #	SIGN CODE	SIGN MESSAGE	LENGTH	WIDTH	SIGN SIZE	TYPE II SIGN SIZE W X H [IN.] X [IN.]	637.0202 SIGNS REFLECTIVE TYPE II SF	637.0402 SIGNS REFLECTIVE FOLDING TYPE II SF	634.0616 WOOD POST 4X6-INCH X16-FT EACH	634.0618 WOOD POST 4X6-INCH X18-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
1000	1229	J1-1											ON LIGHT POLE
		M2-1		21	15	2	21 X 15	2.19	--	--	--	--	
		M1-6	STH 181	24	24	2	24 X 24	4.00	--	--	--	--	
		R7-1D		18	24	2S	18 X 24	3.00	--	--	--	--	
	1230	R6-2R		24	30	2S	24 X 30	5.00	--	1	--	--	
	1231	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
	1232	R7-1D		18	24	2S	18 X 24	3.00	--	1	--	--	
		R3-8K		36	30	2S	36 X 30	7.50	--	--	--	--	
	1233	S4-51	20 MPH	24	48	2	24 X 48	8.00	--	1	--	--	
	1234	W3-3		36	36	2S	36 X 36	9.00	--	1	--	--	
	1235	R7-1R		18	24	2S	18 X 24	3.00	--	1	--	--	
	1236	R7-1L		18	24	2S	18 X 24	3.00	--	1	--	--	
	1237	R3-8K		36	30	2S	36 X 30	7.50	--	1	--	--	
	1238	S4-51	20 MPH	24	48	2	24 X 48	8.00	--	1	--	--	
	1239	W3-3		36	36	2S	36 X 36	9.00	--	1	--	--	
	1240	S1-1		36	36	2	36 X 36	6.75	--	1	--	--	
		WF16-9P		30	18	2S	30 X 18	3.75	--	--	--	--	
		R2-6P		24	18	2S	24 X 18	3.00	--	--	--	--	
	1241	S1-1		36	36	2	36 X 36	6.75	--	1	--	--	
		WF16-9P		30	18	2S	30 X 18	3.75	--	--	--	--	
		R2-6P		24	18	2S	24 X 18	3.00	--	--	--	--	
	1242	W11-1		30	30	2S	30 x 30	6.25	--	1	--	--	
	1243	R10-7		24	30	2S	24 X 30	5.00	--	1	--	--	
	1244	S4-51	20 MPH	24	48	2	24 X 48	8.00	--	1	--	--	
	1245	S1-1		36	36	2	36 X 36	6.75	--	1	--	--	
		WF16-9P		30	18	2S	30 X 18	3.75	--	--	--	--	
		R2-6P		24	18	2S	24 X 18	3.00	--	--	--	--	
	1246	S1-1		36	36	2	36 X 36	6.75	--	1	--	--	
		WF16-9P		30	18	2S	30 X 18	3.75	--	--	--	--	
		R2-6P		24	18	2S	24 X 18	3.00	--	--	--	--	
	1247	S4-51	20 MPH	24	48	2	24 X 48	8.00	--	1	--	--	
	1248	S4-51	20 MPH	24	48	2	24 X 48	8.00	--	1	--	--	
	1249	S1-1		36	36	2	36 X 36	6.75	--	1	--	--	
		WF16-9P		30	18	2S	30 X 18	3.75	--	--	--	--	
		R2-6P		24	18	2S	24 X 18	3.00	--	--	--	--	
	1250	S4-51	20 MPH	24	48	2	24 X 48	8.00	--	1	--	--	
	1252	CHURCH		--	--	--	--	--	--	1	--	1	MOVE
	1253	J4-1											
		M3-2		24	12	2	24 X 12	2.00	--	1	--	--	
		M1-6	STH 181	24	24	2	24 X 24	4.00	--	--	--	--	
	1254	S5-2		24	30	2	24 X 30	5.00	--	1	--	--	
	1255	W3-3		36	36	2S	36 X 36	9.00	--	1	--	--	
	1256	W3-3		36	36	2S	36 X 36	9.00	--	--	--	--	
	1115	S1-1		36	36	2	36 X 36	6.75	--	1	--	--	
		WF16-7L		30	18	2S	30 x 18	3.75	--	--	--	--	
TOTALS								1100.17	82.06	109	5	13	

FTMS PULL BOXES & COMMUNICATION VAULTS

CATEGORY	ROADWAY	ITEM ID	LOCATION STATION	LOCATION OFFSET	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH	653.0135* PULL BOXES STEEL 24 X 36 - INCH EACH	653.0140 PULL BOXES STEEL 24 X 42 - INCH EACH	673.0105 COMMUNICATION VAULT TYPE 1 EACH	678.0300* FIBER OPTIC SPLICE EACH
1300	STH 181								
		EXMH01	41FN+84	108' LT	1	--	--	--	17
		PB43F	42FN+29	50' LT	1	--	--	--	--
		EXPB50F	49FN+77	46' LT	--	1	--	--	--
		CV51F	51FN+70	45' LT	--	--	--	1	14
		PB51F	51FN+70	3' LT	--	--	1	--	--
		PB52F	52WX+50	5' LT	--	1	--	--	--
		EXCMH9	62F+78	15' RT	1	--	--	--	--
		CV63F	62F+83	2' LT	--	--	--	1	--
		CV68F	68F+43	5' LT	--	--	--	1	--
		CV72F-1	71F+80	13' LT	--	--	--	1	--
		CV72F-2	71F+90	44' RT	--	--	--	1	12
		PB72F	72F+22	53' RT	--	1	--	--	--
		CV82FN	82FN+48	33' RT	--	--	--	1	--
		CV84FN	83FN+50	25' RT	--	--	--	1	--
		CV31WX	309WX+97	27' RT	--	--	--	1	--
		PB235BL	234BL+68	9' LT	--	1	--	--	--
		CV244BL	244BL+04	11' LT	--	--	--	1	--
		CV238BL	238BL+00	9' RT	--	--	--	1	--
		CV214BL	214BL+14	14' RT	--	--	--	1	--
		TOTALS			3	4	1	11	43

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

FTMS CONDUIT AND TRACER WIRE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	671.0122 CONDUIT HDPE 2 DUCT 2-INCH LF	671.0132 CONDUIT HDPE 3 DUCT 2-INCH LF	655.0505 ELECTRICAL WIRE TRAFFIC SIGNAL 14 AWG LF
1300	STH 181						
		EXMH01 - PB43F	77	--	--	102	77
		EXPB50F - CV51F	195	--	--	220	195
		CV51F - PB51F	42	--	--	52	42
		PB51F - PB52F	82	--	--	92	82
		EXCMH9 - CV63F	18	--	--	43	18
		CV63F - CV68F	563	--	--	573	563
		CV68F - CV72F-1	337	--	--	347	337
		CV72F-1 - CV72F-2	58	--	--	68	58
		CV72F-2 - CCTV-40-0100	51	152	--	--	51
		CCTV-40-0100 - PB72F	13	19	--	--	13
		PB72F - MB72F	16	22	--	--	16
		CV72F-2 - CV244BL	115	--	--	125	115
		CV235BL - CV244BL	941	--	--	951	941
		CV244BL - CV82FN	95	--	--	105	95
		CV82FN - CV84FN	105	--	--	115	105
		CV82FN - CV310WX	137	--	--	147	137
		CV238BL - CHM02	20	--	30	--	20
		CV214BL - CHM06	25	--	35	--	25
		TOTALS		193	65	2940	2890

FTMS CABLE AND WIRE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF
1300	STH 181				
		CCTV-40-0100 - PB27F	13	25	75
		PB72F - MB72F	16	22	66
		TOTALS		47	141

FTMS CABLE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT LF	678.0072 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 72-CT LF
1300	STH 181				
		EXMH01 - PB43F	77	--	102
		PB43F - EXCMH1	37	--	62
		EXCMH01 - EXCMH2	323	--	348
		EXCMH2 - FIRE HOUSE	58	183	--
		EXCMH2 - EXCMH3	80	105	105
		EXCMH3 - EXCMH4	227	252	252
		EXCMH4 - EXCMH5	50	75	75
		EXCMH5 - EXCMH6	373	398	398
		EXPB50F - CV51F	195	220	--
		CV51F - PB51F	42	67	134
		PB51F - PB52F	82	107	214
		PB52F - EXCMH6	21	46	92
		EXCMH6 - EXCMH7	415	--	440
		EXCMH7 - EXCMH8	301	--	326
		EXCMH8 - EXCMH9	305	--	330
		EXCMH9 - CV63F	18	--	43
		CV63F - CV68F	563	--	588
		CV68F - CV72F-1	337	--	362
		CV72F-1 - CV72F-2	58	--	83
		CV72F-2 - CV-CCTV-40-0149	51	--	--
		CV72F-2 - CV244BL	115	--	140
		CV244BL - CV82FN	95	--	120
		TOTALS		1,453	4,214

3

FTMS BASES, POLES AND EQUIPMENT

CATEGORY	ITEM ID	LOCATION	OFFSET	659.0802 PLAQUES SEQUENCE INDENTIFICATION EACH	672.0230 BASE CAMERA POLE 30-FT EACH	677.0100 INSTALL CAMERA POLE EACH	677.0200 INSTALL CAMERA ASSEMBLY EACH	673.0225.S INSTALL POLE MOUNTED CABINET EACH	SPV.0060.2002 GROUND ROD EACH
1300									
	CCTV-40-0100	72F+33	64'RT	2	1	1	1	1	1
	TOTALS			2	1	1	1	1	1

FIELD SYSTEM INTEGRATOR

CATEGORY	ROADWAY	670.0100.0001 LS
1300		
	STH 181	1
	TOTALS	1

3

FTMS ELECTRICAL SERVICE

CATEGORY	ITEM ID	LOCATION	OFFSET	656.0200.0003 ELECTRICAL SERVICE METER BREAKER PEDESTAL (CB-CCTV-40-0100) LS
1300				
	MB72F	72F+08	51'RT	1
	TOTALS			1

ITS DOCUMENTATION

CATEGORY	ROADWAY	670.0200.0001 LS
1300		
	STH 181	1
	TOTALS	1

FTMS COMMUNICATIONS

CATEGORY	ROADWAY	ITEM ID	LOCATION STATION	LOCATION OFFSET	675.0400.S INSTALL ETHERNET SWITCH EACH	677.0300.S INSTALL VIDEO ENCODER EACH	678.0400 FIBER OPTIC TERMINATION EACH	SPV.0060.2001 INSTALL FIBER OPTIC MEDIA CONVERTER EACH
1300	STH 181	CCTV-40-0100	72F+33	64'RT	1	1	6	1
		EXISTING DMS-40-0117	49F+58	50'LT	--	--	--	1
		FIRE HOUSE	45F+75	--	--	--	6	--
		TOTALS			1	1	12	2

COMMUNICATION SYSTEM TESTING

CATEGORY	ROADWAY	678.0500.0001 FTMS LS
1300		
	STH 181	1
	TOTALS	1

CITY MANHOLES

CATEGORY	ROADWAY	ITEM ID	LOCATION STATION	LOCATION OFFSET	SPV.0060.2003 INSTALLING CONDUIT INTO EXISTING MANHOLE EACH	SPV.0060.2004 4' DIAMETER MANHOLE TYPE TES EACH
7070	BLUEMOUND ROAD					
		EXCMH12	243BL+79	73' RT	1	--
		CMH01	243BL+81	44' RT	--	1
		CMH02	238BL+00	31' RT	--	1
		CMH03	232BL+00	31' RT	--	1
		CMH04	225BL+92	32' RT	--	1
		CMH05	219BL+99	31' RT	--	1
		CMH06	214BL+14	33' RT	--	1
		EXCMH11	213BL+46	6' LT	1	--
		EXCMH13	225BL+92	6' LT	1	--
	TOTALS				3	6

CITY CONDUIT

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	SPV.0090.2001 4-DUCT CONDUIT CEMENT ENCASED 4-INCH CONDUIT DB-60 LF	SPV.0090.2002 1-DUCT CONDUIT CEMENT ENCASED 4-INCH CONDUIT DB-60 LF
7070	BLUEMOUND ROAD				
		EXCMH12 - CMH01	30	30	--
		CMH01 - CMH02	585	585	--
		CMH02 - CMH03	600	600	--
		CMH03 - CMH04	600	600	--
		CMH04 - CMH05	595	595	--
		CMH05 - CMH06	585	585	--
		CMH06 - EXCMH11	85	85	--
		CMH04 - EXWBS	25	--	25
		TOTALS		3080	25

CITY OF MILWAUKEE - WATER

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	TO	STATION	OFFSET	SPV.0060.5020 HYDRANT REMOVAL EACH	SPV.0060.5021 HYDRANT INSTALLATION EACH	SPV.0060.5022 ADJUSTING WATER VALVES - MILWAUKEE EACH	SPV.0060.5023 CURB STOP INSTALLATION EACH	SPV.0060.5024 ROADWAY SERVICE BOX INSTALLATION EACH	SPV.0090.5020 DUCTILE IRON HYDRANT BRANCH 6-INCH LF	SPV.0090.5021 DUCTILE IRON HYDRANT 8-INCH LF
7060	1	N. GLENVIEW AVENUE												
			69F+17	52' RT		--	--	--	--	1	--	--	--	--
			70F+49	49' RT		70F+55	49'RT	--	--	--	--	--	--	6
			70F+52	49' RT		70F+52	53'RT	--	--	--	--	--	4	--
			70F+52	45'RT		--	--	1	--	--	--	--	--	--
			70F+52	53'RT		--	--	--	1	--	--	--	--	--
			71F+99	40' RT		72F+04	40'RT	--	--	--	--	--	--	5
			72F+01	40'RT		72F+02	53'RT	--	--	--	--	--	13	--
			72F+02	47' RT		--	--	1	--	--	--	--	--	--
			72F+02	53'RT		--	--	--	1	--	--	--	--	--
			72F+29	40'RT		72F+51	40'RT	--	--	--	--	--	--	22
			72F+72	10'RT		--	--	--	--	1	--	--	--	--
		W. BLUEMOUND ROAD												
			248BL+16	6'LT		--	--	--	--	1	--	--	--	--
			250BL+28	33'RT		--	--	--	--	--	--	1	--	--
			250BL+92	35'RT		--	--	--	--	--	1	--	--	--
		TOTALS						2	2	3	1	1	17	33

CITY OF MILWAUKEE - SANITARY SEWER MANHOLES

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	SPV.0060.5011 ADJUSTING SANITARY MANHOLES EACH
7050	1	W. BLUEMOUND ROAD			
			244BL+69	36'RT	1
			252BL+02	47'RT	1
		N. GLENVIEW AVENUE			
			71F+27	14'RT	1
		TOTAL			3

CITY OF WAUWATOSA - WATER

CATEGORY	ROADWAY	SPV.0060.5019 ADJUSTING WATER VALVES - WAUWATOSA EACH	SPV.0060.5014 ADJUSTING WATER MANHOLES EACH
7030	N. GLENVIEW AVENUE		
	UNDISTRIBUTED	13	2
	TOTALS	13	2

CITY OF WAUWATOSA - SANITARY SEWER MANHOLES

CATEGORY	ROADWAY	SPV.0060.5011 ADJUSTING SANITARY MANHOLES EACH
7020	W. BLUEMOUND ROAD	
	UNDISTRIBUTED	10
	TOTAL	10

Items are category 6000

			PLANTING LAYOUT SHEET NUMBERS							TOTALS
			1	2	3	4	5	6	7	
BID ITEMS	SYM.	COMMON NAME	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
		DECIDUOUS TREES (SHADE)								
632.0101.0001	PE	Elm, Prospector	1	1						2
632.0101.0003	G	Ginkgo - male only			1				3	4
632.0101.0005	CH	Hackberry, Common		1			2	1		4
632.0101.0007	CPO	Oak, Crimson Spire			2					2
		DECIDUOUS TREES (ORNAMENTAL)								
632.0101.0009	BA	Alder, Black					2	1		3
632.0101.0011	CC	Crabapple,Camelot		3						3
632.0101.0013	LC	Crabapple, Lancelot				4	5			9
632.0101.0015	ISL	Lilac, Ivory Silk Tree	2							2
632.0101.0017	AB	Pear, Autumn Blaze	5							5
		PERENNIALS, GRASSES & GROUNDCOVERS								
SPV.0060.7001	PPC	Coral Bells, Palace Purple		10	10					20
SPV.0060.7003	KFG	Grass, Karl Foerster Reed		5	5					10
SPV.0060.7005	AJS	Sedum, Autumn Joy		13	13					26

STREETSCAPING ITEMS

CATEGORY	PROJECT NUMBER	632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES EACH	SPV.0035.7001 SHREDDED BARK MULCH CY
6000	1060-33-71	24	2.3
	TOTALS	24	2.3

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVE	COUNTY: MILWAUKEE	PLANTING LAYOUT SHEET	SHEET NO: 295	E

LIGHTING - REMOVAL - CITY OF WAUWATOSA

CATEGORY	STAGE	DESCRIPTION	LOCATION	SPV.0060.1010 LAMP DISPOSAL HIGH INTENSITY DISCHARGE EACH	SPV.0060.1023 SALVAGING LUMINAIRES - WAUWATOSA EACH	SPV.0060.1032 REMOVING CONCRETE LIGHT POLE AND ARM EA	SPV.0105.1005 MAINTENANCE OF LIGHTING SYSTEMS LS
1100	1	MAINTENANCE	SYSTEM WIDE	--	--	--	1
		UUE-2A/UUE-2B	STA. 235BL+95.0, 0' LT	2	2	1	--
		UUE-1A/UUE-1B	STA. 237BL+65.0, 0' LT	2	2	1	--
		UUB-1A/UUB-1B	STA. 239BL+31.9, .1' LT	2	2	1	--
		UUB-2A/UUB-2B	STA. 241BL+17.5, 1.7' LT	2	2	1	--
		UUB-3A/UUB-3B	STA. 243BL+04.5, 3.7' LT	2	2	1	--
		UUB-35	STA. 71F+80.0, 46.1' LT	1	1	1	--
		UUC-2	STA. 246BL+11.9, 41.6' LT	1	1	1	--
		UUC-1	STA. 244BL+59.5, 51.2' LT	1	1	1	--
		UUB-4	STA. 74FN+34.1, 25.1' RT	1	1	1	--
		UUC-3	STA. 248BL+31.4, 35.5' LT	1	1	1	--
		UUC-4	STA. 249BL+98.1, 33.3' LT	1	1	1	--
		UUC-5	STA. 251BL+76.7, 32.4' LT	1	1	1	--
1100	1		SUBTOTAL	17	17	12	1
1100	2	UUB-5	STA. 75FN+88.9, 24.6' LT	1	1	1	--
		UUB-6	STA. 76FN+97.9, 20.0' RT	1	1	1	--
		UUB-7	STA. 78FN+76.4, 24.8' LT	1	1	1	--
		UUD-13	STA. 80FN+53.8, 21.8' RT	1	1	1	--
		UUD-8	STA. 82FN+00.3, 24.6' LT	1	1	1	--
		UUD-9	STA. 311WX+46.8, 22.7' RT	1	1	1	--
		UUD-7	STA. 310WX+07.2, 24.9' LT	1	1	1	--
		PPC-29	STA. 83FN+92.6, 24.4' LT	1	1	1	--
1100	2		SUBTOTAL	8	8	8	0
1100			TOTAL	25	25	20	1

LIGHTING AND MISCELLANEOUS - CITY OF WAUWATOSA

CATEGORY	STAGE	DESCRIPTION	LOCATION	** 653.0135 PULL BOXES STEEL 24x36-INCH EA	** 653.0140 PULL BOXES STEEL 24x42-INCH EA	654.0105 CONCRETE BASES TYPE 5 EA	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5 ALUMINUM EA	657.0605 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 4-FT EA	659.0125 LUMINAIRES UTILITY HPS 250 WATTS EA	** 659.0802 PLAQUES SEQUENCE IDENTIFICATION EA	SPV.0060.1060 LUMINAIRE LED EA	SPV.0060.1070 TEMPORARY WOOD LIGHTING POLES EA	SPV.0060.1080 TEMPORARY WOOD POLES 40 FT EA	REMARKS
1100	1A	T-1	STA. 80FN+0.8, 24.0' LT	--	--	--	--	--	--	--	1	1	--	1	--	REMOVED IN 2B
		T-2	STA. 76FN+29.4, 24.5' LT	--	--	--	--	--	--	--	1	1	--	1	--	REMOVED IN 2B
		TUU-1	STA. 241BL+48.3, 51.7' LT	--	--	--	--	--	--	--	1	1	--	1	--	REMOVED IN 1E
		TUU-2	STA. 239BL+61.1, 49.9' LT	--	--	--	--	--	--	--	1	1	--	1	--	REMOVED IN 1E
		TUU-3	STA. 238BL+45.6, 50.0' LT	--	--	--	--	--	--	--	1	1	--	1	--	REMOVED IN 1E
		TUU-4	STA. 237BL+10.8, 49.5' LT	--	--	--	--	--	--	--	1	1	--	1	--	REMOVED IN 1E
		TUU-5	STA. 235BL+96.6, 50.3' LT	--	--	--	--	--	--	--	1	1	--	1	--	REMOVED IN 1E
		TUU-6	STA. 241BL+46.5, 51.2' RT	--	--	--	--	--	--	--	1	1	--	1	--	REMOVED IN 1E
		TUU-7	STA. 239BL+61.6, 50.6' RT	--	--	--	--	--	--	--	1	1	--	1	--	REMOVED IN 1E
		TUU-8	STA. 238BL+46.0, 49.5' RT	--	--	--	--	--	--	--	1	1	--	1	--	REMOVED IN 1E
		TUU-9	STA. 237BL+14.8, 49.5' RT	--	--	--	--	--	--	--	1	1	--	1	--	REMOVED IN 1E
		TUU-10	STA. 235BL+87.9, 48.5' RT	--	--	--	--	--	--	--	1	1	--	1	--	REMOVED IN 1E
		WP-1	STA. 238BL+81.4, 0.5' LT	--	--	--	--	--	--	--	--	--	--	--	1	REMOVED IN 1E
		WP-2	STA. 234BL+60.5, 49.5' RT	--	--	--	--	--	--	--	--	--	--	--	1	REMOVED IN 1E
		WP-3	STA. 234BL+35.5, 0.6' RT	--	--	--	--	--	--	--	--	--	--	--	1	REMOVED IN 1E
		WP-4	STA. 78FN+13.2, 23.9' LT	--	--	--	--	--	--	--	--	--	--	--	1	REMOVED IN 2B
		WP-5	STA. 244BL+69.4, 70.8' LT	--	--	--	--	--	--	--	--	--	--	--	1	REMOVED IN 1E
		WP-6	STA. 243BL+40.5, 72.5' LT	--	--	--	--	--	--	--	--	--	--	--	1	REMOVED IN 1E
		PB-UU25	STA. 244BL+77.6, 67.1' LT	--	1	--	--	--	--	--	--	--	--	--	--	USE FOR FINAL
1100	1A		SUBTOTAL	0	1	0	0	0	0	0	12	12	0	12	6	
110	1D	UUB3A/UUB3B	STA. 241BL+36.2, 1.5' LT	--	--	1	176	1	1	2	--	2	2	--	--	
		PB-UU06	STA. 242BL+68.5, 11.9' LT	--	1	--	--	--	--	--	--	--	--	--	--	
		UUB4A/UUB4B	STA. 242BL+95.3, 7.9' RT	--	--	1	176	1	1	2	--	2	2	--	--	
		PB-UU07	STA. 243BL+2.7, 54.6' LT	--	1	--	--	--	--	--	--	--	--	--	--	
		UUB5A	STA. 73FN+86.9, 30.7' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		PB-UU08	STA. 73FN+93.0, 29.8' LT	--	1	--	--	--	--	--	--	--	--	--	--	
		PB-UU09	STA. 73FN+98.9, 37.5' RT	--	1	--	--	--	--	--	--	--	--	--	--	
		UUC1	STA. 244BL+46.5, 76.1' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		UUC2	STA. 245BL+66.3, 55.8' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		UUC3	STA. 246BL+89.1, 51.8' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		UUC4A	STA. 248BL+30.0, 45.9' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		UUC4B	STA. 249BL+45.7, 40.3' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		UUC5A	STA. 250BL+71.3, 35.8' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		UUC5B	STA. 251BL+95.0, 37.6' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		PB-UU10	STA. 252BL+2.8, 49.1' LT	--	1	--	--	--	--	--	--	--	--	--	--	
		PB-UU11	STA. 252BL+57.2, 47.3' LT	--	1	--	--	--	--	--	--	--	--	--	--	
1100	1D		SUBTOTAL	0	6	10	1408	10	10	12	0	12	12	0	0	

LIGHTING AND MISCELLANEOUS - CITY OF WAUWATOSA

CATEGORY	STAGE	DESCRIPTION	LOCATION	** 653.0135 PULL BOXES STEEL 24x36-INCH EA	** 653.0140 PULL BOXES STEEL 24x42-INCH EA	654.0105 CONCRETE BASES TYPE 5 EA	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5 ALUMINUM EA	657.0605 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 4-FT EA	659.0125 LUMINAIRES UTILITY HPS 250 WATTS EA	** 659.0802 PLAQUES SEQUENCE IDENTIFICATION EA	SPV.0060.1060 LUMINAIRE LED EA	SPV.0060.1070 TEMPORARY WOOD LIGHTING POLES EA	SPV.0060.1080 TEMPORARY WOOD POLES 40 FT EA	REMARKS
1100	1E	PB-UU01	STA. 234BL+35.4, 0.4' RT	1	--	--	--	--	--	--	--	--	--	--	--	
		UUE2A/UUE2B	STA. 235BL+69.7, 0.2' LT	--	--	1	176	1	1	2	--	2	2	--	--	
		PB-UU24	STA. 236BL+28.6, 6.2' LT	--	1	--	--	--	--	--	--	--	--	--	--	
		PB-UU23	STA. 237BL+08.4, 6.6' RT	--	1	--	--	--	--	--	--	--	--	--	--	
		UUE1A/UUE1B	STA. 237BL+16.2, 5.7' RT	--	--	1	176	1	1	2	--	2	2	--	--	
		UUB1A/UUB1B	STA. 238BL+46.7, 2.4' LT	--	--	1	176	1	1	2	--	2	2	--	--	
		PB-UU02	STA. 238BL+70.6, 4.6' RT	1	--	--	--	--	--	--	--	--	--	--	--	
		PB-UU03	STA. 238BL+80.0, 1.0' RT	1	--	--	--	--	--	--	--	--	--	--	--	
		PB-UU04	STA. 239BL+0.2, 5.0' LT	1	--	--	--	--	--	--	--	--	--	--	--	
		UUB2A/UUB2B	STA. 239BL+55.1, 5.0' LT	--	--	1	176	1	1	2	--	2	2	--	--	
		PB-UU05	STA. 239BL+65.5, 4.7' LT	--	1	--	--	--	--	--	--	--	--	--	--	
		PB-UU26	STA 240BL+48.3, 2.6' RT	--	1	--	--	--	--	--	--	--	--	--	--	
1100	1E		SUBTOTAL	4	4	4	704	4	4	8	0	8	8	0	0	
1100	2A	UUB5B	STA. 75FN+0.3, 25.1' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		UUB6A	STA. 76FN+03.3, 23.8' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		PB-UU12	STA. 76FN+16.0, 28.6' LT	--	1	--	--	--	--	--	--	--	--	--	--	
		UUB6B	STA. 76FN+70.1, 23.8' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		PB-UU13	STA. 76FN+16.8, 24.3' RT	--	1	--	--	--	--	--	--	--	--	--	--	
		PB-UU14	STA. 76FN+71.8, 38.9' RT	--	1	--	--	--	--	--	--	--	--	--	--	
		UUB7A	STA. 78FN+18.0, 23.9' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		UUB7B	STA. 79FN+53.0, 23.9' LT	--	--	1	132	1	1	1	--	1	1	--	--	
1100	2A		SUBTOTAL	0	3	5	660	5	5	5	0	5	5	0	0	
1100	2B	PB-UU16	STA. 80FN+30.8, 27.8' RT	--	1	--	--	--	--	--	--	--	--	--	--	
		PB-UU15	STA. 80FN+14.6, 23.5' LT	--	1	--	--	--	--	--	--	--	--	--	--	
		UUD13	STA. 80FN+78.0, 23.8' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		UUD8	STA. 82FN+11.5, 23.8' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		PB-UU20	STA. 310WX+17.4, 28.3' RT	--	1	--	--	--	--	--	--	--	--	--	--	
		PB-UU21	STA. 308WX+95.6, 31.3' RT	--	1	--	--	--	--	--	--	--	--	--	--	
		PB-UU22	STA. 309WX+6.8, 28.5' LT	--	1	--	--	--	--	--	--	--	--	--	--	
		UUD7	STA. 310WX+1.0, 26.3' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		PB-UU19	STA. 310WX+42.2, 35.3' LT	--	1	--	--	--	--	--	--	--	--	--	--	
		PB-UU18	STA. 311WX+46.8, 33.5' LT	--	1	--	--	--	--	--	--	--	--	--	--	
		UUD9	STA. 312WX+10.0, 26.6' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		PB-UU17	STA. 312WX+57.0, 28.4' LT	1	--	--	--	--	--	--	--	--	--	--	--	
		PPC29	STA. 84FN+22.5, 25.0' LT	--	--	1	132	1	1	1	--	1	1	--	--	
		PB-PP1	STA. 84FN+26.6, 25.0' LT	1	--	--	--	--	--	--	--	--	--	--	--	
1100	2B		SUBTOTAL	2	7	5	660	5	5	5	0	5	5	0	0	
1100			TOTAL	6	21	24	3432	24	24	30	12	42	30	12	6	

** = ADDITIONAL QUANTITIES ARE SHOWN ELSEWHERTE

LIGHTING - WIRE AND CONDUIT - CITY OF WAUWATOSA

CAT.	STAGE	FROM	TO	** 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 -INCH LF	** 652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3 -INCH LF	655.0144 CABLE IN DUCT 4-4 AWG LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF	SPV.0090.1020 TEMPORARY OVERHEAD CABLE QUADRUPLEX 6 AWG LF	SPV.0090.1021 TEMPORARY OVERHEAD CABLE QUADRUPLEX 4 AWG LF	REMARKS
1100	1A	DIST. CENTER T	T-1	55	--	--	--	248	--	--	--	REMOVED IN 1E
		T-1	WP-4	--	--	--	--	--	--	211	--	REMOVED IN 1E
		WP-4	T-2	--	--	--	--	--	--	204	--	REMOVED IN 1E
		WP-3	WP-2	--	--	--	--	--	--	--	76	REMOVED IN 1E
		WP-2	TUU-10	--	--	--	--	--	--	--	148	REMOVED IN 1E
		TUU-10	TUU-9	--	--	--	--	--	--	--	147	REMOVED IN 1E
		TUU-9	TUU-8	--	--	--	--	--	--	--	152	REMOVED IN 1E
		TUU-8	TUU-7	--	--	--	--	--	--	--	137	REMOVED IN 1E
		TUU-7	TUU-6	--	--	--	--	--	--	203	--	REMOVED IN 1E
		TUU-7	WP-1	--	--	--	--	--	--	115	115	REMOVED IN 1E
		WP-1	TUU-3	--	--	--	--	--	--	82	82	REMOVED IN 1E
		TUU-5	TUU-4	--	--	--	--	--	--	135	--	REMOVED IN 1E
		TUU-4	TUU-3	--	--	--	--	--	--	155	--	REMOVED IN 1E
		TUU-3	TUU-2	--	--	--	--	--	--	136	136	REMOVED IN 1E
		TUU-2	TUU-1	--	--	--	--	--	--	207	207	REMOVED IN 1E
		TUU-1	WP-6	--	--	--	--	--	--	--	214	REMOVED IN 1E
		WP-6	WP-5	--	--	--	--	--	--	--	150	REMOVED IN 1E
		WP-5	EXIST. PB	45	--	--	--	--	208	--	--	PB-UU25 TO REMAIN
		EXIST DIST CENTER UU	WP-1	--	65	--	--	288	576	--	--	REMOVED IN 1E
1100	1A		SUBTOTAL	100	65	0	0	536	784	1448	1564	
1100	1D	WP-5	PB-UU25	25	--	--	--	--	128	--	--	
		PB-UU05	UUB3A/UUB3B	--	172	--	--	--	1432	--	--	
		UUB3A/UUB3B	PB-UU06	--	135	--	--	--	1136	--	--	
		PB-UU06	UUB4A/UUB4B	--	43	--	--	--	400	--	--	
		PB-UU06	PB-UU07	--	55	--	--	--	496	--	--	
		PB-UU07	PB-UU08	--	89	--	--	--	768	--	--	
		PB-UU08	UUB5A	--	25	--	--	--	256	--	--	
		PB-UU08	PB-UU09	73	--	--	--	--	320	--	--	
		PB-UU09	UUC1	45	--	--	--	--	208	--	--	
		UUC1	PB-UU25	35	--	--	--	--	168	--	--	
		PB-UU25	UUC2	95	--	--	--	--	408	--	--	

LIGHTING - WIRE AND CONDUIT - CITY OF WAUWATOSA

CAT.	STAGE	FROM	TO	** 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 -INCH LF	** 652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3 -INCH LF	655.0144 CABLE IN DUCT 4-4 AWG LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF	SPV.0090.1020 TEMPORARY OVERHEAD CABLE QUADRUPLEX 6 AWG LF	SPV.0090.1021 TEMPORARY OVERHEAD CABLE QUADRUPLEX 4 AWG LF	REMARKS
		UUC2	UUC3	--	--	158	--	--	--	--	--	
		UUC3	UUC4A	--	--	152	--	--	--	--	--	
		UUC4A	UUC4B	--	--	131	--	--	--	--	--	
		UUC4B	UUC5A	--	--	141	--	--	--	--	--	
		UUC5A	UUC5B	--	--	138	--	--	--	--	--	
		UUC5B	PB-UU10	20	--	--	--	--	108	--	--	
		PB-UU10	PB-UU11	60	--	--	--	--	268	--	--	
1100	1D		SUBTOTAL	353	519	720	0	0	6096	0	0	
1100	1E	PB-UU01	UUE3A/UUE3B	25	--	--	--	--	128	--	--	
		PB-UU01	UUE2A/UUE2B	135	--	--	--	--	568	--	--	
		UUE2A/UUE2B	PB-UU24	75	--	--	--	--	328	--	--	
		PB-UU24	PB-UU23	85	--	--	--	--	368	--	--	EXISTING CID UNDER ROAD
		PB-UU23	UUE1A/UUE1B	20	--	--	--	--	108	--	--	
		UUE1A/UUE1B	PB-UU03	165	--	--	--	--	688	--	--	
		PB-UU03	NEW DIST CENTER UU	--	20	--	108	--	108	--	--	
		PB-UU03	UUB1A/UUB1B	45	--	--	208	--	--	--	--	
		NEW DIST CENTER UU	PB-UU02	--	25	--	--	--	192	--	--	
		NEW DIST CENTER UU	PB-UU04	20	--	--	--	--	108	--	--	
		NEW DIST CENTER UU	PB-UU04	--	20	--	--	--	216	--	--	
		PB-UU04	PB-UU05	67	--	--	--	--	296	--	--	
		PB-UU04	PB-UU05	--	67	--	--	--	592	--	--	
		PB-UU05	UUB2A/UUB2B	--	20	--	--	--	216	--	--	
1100	1E		SUBTOTAL	637	152	0	316	0	3916	0	0	
1100	2A	UUB5A	PB-UU08	15	--	--	--	--	88	--	--	
		PB-UU08	UUB5B	113	--	--	--	--	480	--	--	
		UUB5B	UUB6A	109	--	--	--	--	464	--	--	
		UUB6A	PB-UU12	--	20	--	108	--	216	--	--	
		PB-UU12	UUB6B	65	--	--	288	--	--	--	--	
		PB-UU12	PB-UU13	--	59	--	--	--	528	--	--	
		PB-UU13	PB-UU14	64	--	--	--	--	284	--	--	
		UUB6B	UUB7A	154	--	--	644	--	--	--	--	
		UUB7A	UUB7B	141	--	--	444	--	--	--	--	
1100	2A		SUBTOTAL	661	79	0	1484	0	2060	0	0	

LIGHTING - WIRE AND CONDUIT - CITY OF WAUWATOSA

CAT.	STAGE	FROM	TO	** 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 -INCH LF	** 652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3 -INCH LF	655.0144 CABLE IN DUCT 4-4 AWG LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF	SPV.0090.1020 TEMPORARY OVERHEAD CABLE QUADRUPLEX 6 AWG LF	SPV.0090.1021 TEMPORARY OVERHEAD CABLE QUADRUPLEX 4 AWG LF	REMARKS
1100	2B	PB-UU16	PB-UU15	59	--	--	--	--	198	--	--	
		PB-UU15	UUD13	68	--	--	--	--	225	--	--	
		UUD13	UUD8	139	--	--	--	--	438	--	--	
		UUD8	PB-UU20	57	--	--	--	--	192	--	--	
		PB-UU20	PB-UU19	71	--	--	--	--	234	--	--	
		PB-UU19	UUD7	51	--	--	--	--	348	--	--	
		PB-UU19	PB-UU18	107	--	--	--	--	342	--	--	
		PB-UU18	UUD9	72	--	--	--	--	237	--	--	
		UUD9	PB-UU17	51	--	--	--	--	174	--	--	
		PB-UU20	PB-UU21	125	--	--	--	--	396	--	--	
		PB-UU21	PB-UU22	70	--	--	--	--	231	--	--	
		PPC29	PB-PP1	10	--	--	--	51	--	--	--	
1100	2B		SUBTOTAL	880	0	0	0	51	3015	0	0	
1100			TOTAL	2631	815	720	1800	587	15871	1448	1564	

NOTES

1. MULTIPLE ENTRIES IN TABLE IF MULTIPLE CONDUITS BETWEEN THE "FROM" AND "TO" ITEMS.
2. ** = ADDITRIONAL QUANTITIES ARE SHOWN ELSEWHERE.

LIGHTING -DISTRIBUTION CENTERS - CITY OF WAUWATOSA

CATEGORY	STAGE	DESCRIPTION	LOCATION	204.0195 REMOVING CONCRETE BASES EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH	656.0400.0001 ELECTRIC SERVICE MAIN LUGS ONLY METER PEDESTAL - NEW UU LS	** 659.0802 PLAQUES SEQUENCE IDENTIFICATION EACH	SPV.0060.1090 SALVAGE DISTRIBUTION CENTERS EACH	SPV.0060.1110 DISTRIBUTION CENTER LIGHTING EACH	SPV.0060.1152 ELECTRIC SERVICE METER BREAKER PEDESTAL TEMPORARY LIGHTING EACH	SPV.0060.1153 REMOVING ELECTRIC SERVICE METER BREAKER PEDESTAL LIGHTING EA	REMARKS
1100	1A	T DISTRIBUTION CENTER	STA. 79FN+81.4, 23.9' LT	--	--	--	1	--	--	1	--	120/240, 1PH, 100A
1100	1A		SUBTOTAL	0	0	0	1	0	0	1	0	
1100	1E	NEW DISTRIBUTION CENTER UU	238BL+88.3, 4.0' LT	--	1	1	1	--	1	--	--	240/480V, 1 PH 100A
		EXISTING DISTRIBUTION CENTER UU	238BL+70.2 1.8 LT	1	--	--	--	1	--	--	--	
1100	1E		SUBTOTAL	1	1	1	1	1	1	0	0	
1100	2B	T DISTRIBUTION CENTER	STA. 79FN+81.4, 23.9' LT	--	--	--	--	--	--	--	1	REMOVED IN STAGE 2B
1100	2B		SUBTOTAL	0	0	0	0	0	0	0	1	
1100			TOTAL	1	1	1	2	1	1	1	1	

** = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING AND MISCELLANEOUS - CITY OF MILWAUKEE

CATEGORY	STAGE	DESCRIPTION	LOCATION FROM	LOCATION TO	SPV.0060.1003 LIGHTING BOX OUT EA	SPV.0060.1005 POLYMER CONCRETE PULL POX EA	REMARKS
1100	1	VAULT V6	STA. 244BL+22.6, 11.0' LT	--	--	1	
		BOX OUT BO1	STA. 244BL+18	STA. 244BL+23	1	--	
		VAULT V1	STA. 244BL+21.8, 48.3' RT	--	--	1	
		BOX OUT BO2	STA. 72F+06	STA. 72F+10	1	--	
		VAULT V2	STA. 72F+05.5, 40.5' RT	--	--	1	
		VAULT V3	STA. 70F+66.1, 49.7' RT	--	--	1	
		BOX OUT BO3	STA. 70F+69	STA. 70F+73	1	--	
		VAULT V5	STA. 70F+64.0, 44.1' LT	--	--	1	
		VAULT V4	STA. 70F+64.9, 4.3' LT	--	--	1	
		VAULT V7	STA. 69F+41.2, 3.8' LT	--	--	1	
		BOX OUT BO4	STA. 69F+33	STA. 69F+37	1	--	
1100	1	SUBTOTAL			4	7	

3

LIGHTING - EMPTY CONDUIT - CITY OF MILWAUKEE

CAT.	STAGE	FROM	TO	652.0230 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2.5 -INCH LF	652.0610 CONDUIT SPECIAL 2 1/2-INCH LF	REMARKS
1100	1	EXISTING #375	#8041	140	--	
		#8041	#8113	189	--	
		#8113	#8201	200	--	
		#8201	#8219	165	--	
		#8219	VAULT V1	130	--	
		VAULT V1	#8338 / BO1	64	--	
		#8338 / BO1	VAULT V6	20	--	
		VAULT V1	VAULT V2	55	--	
		VAULT V2	#436 / BO2	20	--	(2) CONDUITS IN PARALLEL
		VAULT V2	VAULT V3	125	--	
		VAULT V3	VAULT V4	57	--	
		VAULT V4	VAULT V5	43	--	
		VAULT V4	BO3 / #418	22	--	(2) CONDUITS IN PARALLEL
		VAULT V5	#437	109	--	
		VAULT V4	VAULT V7	109	--	
		VAULT V7	BO4 / #348	38	--	(2) CONDUITS IN PARALLEL
		#332	#332	155	--	
		#332	#314	85	15	
		#314	#232	153	--	
		#232	#210	185	--	
		#210	EXISTING CONDUIT	159	50	
1100	1		SUBTOTAL	2223	65	

NOTES

1. MULTIPLE ENTRIES IN TABLE IF MULTIPLE CONDUITS BETWEEN THE "FROM" AND "TO" ITEMS UNLESS NOTED OTHERWISE.

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
1	EACH	POLES TYPE 9
3	EACH	POLES TYPE 12
1	EACH	MONOTUBE ARMS 25-FT
2	EACH	MONOTUBE ARMS 45-FT
1	EACH	MONOTUBE ARMS 50-FT
1	EACH	VIDEO DETECTION SYSTEM
4	EACH	EVP DETECTOR HEADS



USH 18 (W. BLUEMOUND ROAD) & STH 181 (N. GLENVIEW AVENUE)

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
CB1	PB1		63
PB1	PB2		134
PB2	PB3		68
PB3	PB4		112
PB4	PB5		82
PB5	PB6		40
PB6	PB7		80
PB7	PB8		124
PB8	PB9		190
PB9	PB10		32
PB9	PB11		78
PB11	PB12		40
PB12	PB13		104
PB13	CB1		48
PB1	SB1	15	
PB2	SB2		8
PB3	SB3	16	
PB4	SB4	17	
PB5	SB5	31	
PB5	SB6		10
PB7	SB7	21	
PB8	SB8	23	
PB8	SB9	4	
PB9	SB10		10
PB9	SB11	20	
PB11	SB12	21	
PB11	SB13		13
PB13	SB14	11	
*** TOTALS		179	1236

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

USH 18 (W. BLUEMOUND ROAD) & STH 181
(N. GLENVIEW AVENUE)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	72F+12.7	50.6' RT	1
PB2	71F+95.5	14.0' LT	1
PB3	71F+86.7	46.9' LT	1
PB4	242BL+76.4	49.0' RT	1
PB5	242BL+76.4	8.0' RT	1
PB6	242BL+76.4	12.0' LT	1
PB7	242BL+76.4	52.0' LT	1
PB8	73FN+36.6	33.7' LT	1
PB9	244BL+29.1	50.0' LT	1
PB10	244BL+43.1	78.5' LT	1
PB11	244BL+29.1	11.0' LT	1
PB12	244BL+29.1	9.0' RT	1
PB13	244BL+29.1	60.5' RT	1
		*** TOTALS	13

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING VAULTS

EXISTING STRUCTURE NO.	SPV.0060.3010 REMOVING TRAFFIC SIGNAL VAULT EACH
CV1	1
CV2	1
CV3	1
CV4	1
CV5	1
CV6	1
CV7	1
CV8	1
CV9	1
CV10	1
CV11	1
CV12	1
CV13	1
TOTALS	13

3

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	72F+28.1	49.5' RT	1			
SB2	72F+03.4	14.8' LT		1		
SB3	72F+01.9	49.9' LT	1			
SB4	242BL+93.5	52.4' RT	1			
SB5	243BL+07.3	8.0' RT	1			
SB6	242BL+86.4	8.0' RT			1	
SB7	242BL+97.4	53.0' LT	1			
SB8	243BL+15.3	53.1' LT	1			
SB9	73FN+33.8	36.5' LT	1			
SB10	73FN+48.8	50.0' RT			1	
SB11	244BL+09.1	50.5' LT	1			
SB12	244BL+08.1	11.0' LT	1			
SB13	244BL+42.1	11.0' LT			1	
SB14	244BL+18.2	59.5' RT	1			
CB1	244BL+13.7	64.1' RT				1
		*** TOTALS	10	1	3	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** 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	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG LF
CB1	SB1		53	
CB1	SB2		119	
CB1	SB3	167		
CB1	SB4			230
CB1	SB5	291		
CB1	SB6		270	
CB1	SB7	353		
CB1	SB8	286		
CB1	SB9		267	
CB1	SB10 (CABLE 1)		172	
CB1	SB10 (CABLE 2)		172	
CB1	SB11	182		
CB1	SB12	138		
CB1	SB13		130	
CB1	SB14	44		
	*** TOTALS	1461	1183	230

*** 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 11	19	
SB1	HEAD 19	19	
SB1	HEAD 27	18	
SB2	HEAD 17	38	
SB2	HEAD 18	49	
SB2	HEAD 20	30	
SB3	HEAD 21	15	
SB4	HEAD 1	21	
SB4	HEAD 9		22
SB4	HEAD 28	20	
SB6	HEAD 7	58	
SB6	HEAD 8	69	
SB6	HEAD 10		37
SB7	HEAD 22	15	
SB8	HEAD 23	15	
SB9	HEAD 14		22
SB9	HEAD 16	21	
SB10	HEAD 6	21	
SB10	HEAD 4		22
SB10	HEAD 12	67	
SB10	HEAD 13	56	
SB10	HEAD 15		75
SB10	HEAD 24	20	
SB10	HEAD 25	20	
SB13	HEAD 2	58	
SB13	HEAD 3	69	
SB13	HEAD 5		37
SB14	HEAD 26	15	
	*** TOTALS	733	215

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

USH 18 (W. BLUEMOUND ROAD) & STH 181
(N. GLENVIEW 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	53
SB1	SB2	110
SB2	SB3	78
SB3	SB4	109
SB4	SB5	109
SB5	SB6	55
SB6	SB7	117
SB7	SB8	126
SB8	SB9	41
SB9	SB10	129
SB10	SB11	44
SB11	SB12	100
SB12	SB13	48
SB13	SB14	122
SB14	CB1	44
PB1	SB1	25
PB2	SB2	18
PB3	SB3	26
PB4	SB4	27
PB5	SB6	20
PB6	SB6	46
PB7	SB7	31
PB8	SB8	14
PB9	SB10	20
PB11	SB13	23
PB12	SB13	49
PB13	SB14	21
*** TOTAL		1605

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF
CB1	SB2 (HEAD C)	174
CB1	SB6 (HEAD A)	345
CB1	SB10 (HEAD D)	252
CB1	SB13 (HEAD B)	205
*** TOTAL		802

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
USH 18 & STH 181

BASE NO.	656.0200.0001 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE
USH 18 & STH 181

LOCATION	658.5069.0001 SIGNAL MOUNTING HARDWARE LS
USH 18 (W. BLUEMOUND ROAD) & STH 181 (N. GLENVIEW AVENUE)	1
TOTAL	1

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\030241_mq_sp.ppt PLOT DATE : 10/29/2012 9:37:19 AM PLOT BY : MSCCEJ PLOT NAME : 030241_mq_sp5 PLOT SCALE : 1:1

USH 18 (W. BLUEMOUND ROAD) & STH 181
(N. GLENVIEW AVENUE)

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	657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT 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	657.1345 INSTALL POLES TYPE 9 EACH	657.1355 INSTALL POLES TYPE 12 EACH	657.1525 INSTALL MONOTUBE ARMS 25-FT EACH	657.1545 INSTALL MONOTUBE ARMS 45-FT EACH	657.1550 INSTALL MONOTUBE ARMS 50-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									1
SB6							1		1		
SB7	1				1						1
SB8	1				1						1
SB9	1			1							
SB10							1			1	1
SB11	1	1									1
SB12	1	1									1
SB13							1		1		
SB14	1				1						1
*** TOTALS	10	3	1	2	4	1	3	1	2	1	10

*** ADDITIONAL QUANTITIES SH

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 310	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\030241_mq_sp.ppt PLOT DATE : 10/29/2012 9:37:19 AM PLOT BY : MSCCEJ PLOT NAME : 030241_mq_sp6 PLOT SCALE : 1:1

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	SB4	1		1			1	1	1				
2	SB13	1		1			1	1	1				
3	SB13	1		1			1	1	1				
4	SB10		1		1					1	2	1	
5	SB13		1		1					1	2	1	
6	SB10	1		1			1	1	1				
7	SB6	1		1			1	1	1				
8	SB6	1		1			1	1	1				
9	SB4		1		1					1	2	1	
10	SB6		1		1					1	2	1	
11	SB1	1		1			1	1	1				
12	SB10	1		1			1	1	1				
13	SB10	1		1			1	1	1				
14	SB9		1		1					1	2	1	
15	SB10		1		1					1	2	1	
16	SB9	1		1			1	1	1				
17	SB2	1		1			1	1	1				
18	SB2	1		1			1	1	1				
19	SB1	1		1						1	2		
20	SB2	1		1						1	2		
21	SB3					1							1
22	SB7					1							1
23	SB8					1							1
24	SB10					1							1
25	SB10					1							1
26	SB14					1							1
27	SB1					1							1
28	SB4					1							1
	*** TOTALS	14	6	14	6	8	12	12	12	8	16	6	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

USH 18 (W. BLUEMOUND ROAD) & STH 181 (N. GLENVIEW AVENUE)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
USH 18 & STH 181

LOCATION	661.0200.0001 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS	661.0300 GENERATORS DAYS
USH 18 (W. BLUEMOUND ROAD) & STH 181 (N. GLENVIEW AVENUE)	1	2
TOTALS	1	2

TRANSPORTING AND INSTALLING STATE FURNISHED AUTOSCOPE VIDEO DETECTION SYSTEM
USH 18 & STH 181

LOCATION	SPV.0105.3006 TRANSPORTING AND INSTALLING STATE FURNISHED AUTOSCOPE VIDEO DETECTION SYSTEM LS
USH 18 (W. BLUEMOUND ROAD) & STH 181 (N. GLENVIEW AVENUE)	1
TOTAL	1

3

REMOVE TRAFFIC SIGNALS
USH 18 & STH 181

LOCATION	SPV.0105.3001 REMOVE TRAFFIC SIGNALS LS	SPV.0105.3003 REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE LS
USH 18 (W. BLUEMOUND ROAD) & STH 181 (N. GLENVIEW AVENUE)	1	1
TOTALS	1	1

EVP DETECTOR HEAD INSTALLATION
USH 18 & STH 181

LOCATION	SPV.0105.3007 EVP DETECTOR HEAD INSTALLATION LS
USH 18 (W. BLUEMOUND ROAD) & STH 181 (N. GLENVIEW AVENUE)	1
TOTAL	1

TRANSPORTING SIGNAL AND LIGHTING MATERIALS
USH 18 & STH 181

LOCATION	SPV.0105.3004 TRANSPORTING SIGNAL AND LIGHTING MATERIALS LS
USH 18 (W. BLUEMOUND ROAD) & STH 181 (N. GLENVIEW AVENUE)	1
TOTAL	1

TEMPORARY EVP SYSTEM
USH 18 & STH 181

LOCATION	SPV.0105.3008 TEMPORARY EVP SYSTEM LS
USH 18 (W. BLUEMOUND ROAD) & STH 181 (N. GLENVIEW AVENUE)	1
TOTAL	1

INSTALL VENDOR SUPPLIED TRAFFIC SIGNAL CABINET
USH 18 & STH 181

LOCATION	SPV.0105.3005 INSTALL VENDOR SUPPLIED TRAFFIC SIGNAL CABINET LS
USH 18 (W. BLUEMOUND ROAD) & STH 181 (N. GLENVIEW AVENUE)	1
TOTAL	1

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\030241_mq_sp.ppt PLOT DATE : 10/29/2012 9:37:19 AM PLOT BY : MSCCEJ PLOT NAME : 030241_mq_sp8 PLOT SCALE : 1:1

W. WISCONSIN AVENUE & STH 181
(N. GLENVIEW AVENUE)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
CB1	1
*** TOTAL	9

*** 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
CB1	PB1		54
PB1	PB2		110
PB2	PB3		110
PB3	PB4		92
PB4	PB5		76
PB5	PB6		110
PB6	PB7		106
PB7	PB8		94
PB8	CB1		51
PB1	SB1	7	
PB2	SB2		9
PB3	SB3	9	
PB4	SB4		8
PB5	SB5	7	
PB6	SB6		9
PB7	SB7	8	
PB8	SB8		7
*** TOTALS		31	836

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	311WX+56.0	26.4' LT	1
PB2	311WX+41.0	26.0' RT	1
PB3	82FN+31.0	20.0' RT	1
PB4	82FN+18.3	24.4' LT	1
PB5	310WX+35.1	26.5' RT	1
PB6	310WX+50.2	26.0' LT	1
PB7	83FN+31.0	24.0' LT	1
PB8	83FN+44.4	20.6' RT	1
		*** TOTALS	8

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET:	E

3

3

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH	SPV.0060.3009 CONCRETE BASES TYPE 10 CONTRACTOR SUPPLIED ANCHOR BOLTS AND ANCHOR ROD TEMPLATE EACH
SB1	311WX+51.4	32.1' LT	1			
SB2	311WX+32.7	30.0' RT				1
SB3	82FN+39.3	24.0' RT	1			
SB4	82FN+23.9	29.5' LT				1
SB5	310WX+39.5	32.1' RT	1			
SB6	310WX+58.2	30.0' LT				1
SB7	83FN+23.7	26.5' LT		1		
SB8	83FN+39.1	24.6' RT				1
CB1	83FN+37.7	36.5' RT			1	
		*** TOTALS	3	1	1	4

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG LF
CB1	SB1	42	
CB1	SB2	105	
CB1	SB3	166	
CB1	SB4	217	
CB1	SB5	214	
CB1	SB6	155	
CB1	SB7		95
CB1	SB8		41
	*** TOTALS	899	136

*** 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 4	19	
SB1	HEAD 21	18	
SB2	HEAD 2	53	
SB2	HEAD 3	42	
SB2	HEAD 22	18	
SB3	HEAD 7	19	
SB3	HEAD 15	19	
SB3	HEAD 23	18	
SB4	HEAD 13	42	
SB4	HEAD 14	19	
SB4	HEAD 16	54	
SB4	HEAD 24	18	
SB5	HEAD 1	19	
SB5	HEAD 21	18	
SB6	HEAD 5	53	
SB6	HEAD 6	42	
SB6	HEAD 18	18	
SB7	HEAD 10		22
SB7	HEAD 12	21	
SB7	HEAD 19	18	
SB8	HEAD 8	42	
SB8	HEAD 9	19	
SB8	HEAD 11		54
SB8	HEAD 20	18	
	*** TOTALS	607	76

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

W. WISCONSIN AVENUE & STH 181
(N. GLENVIEW AVENUE)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

LIGHTING WIRE

FROM	TO	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB2	105	
SB7	LUMIN		117
CB1	SB7	95	
SB7	LUMIN		117
*** TOTALS		200	234

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	42
SB1	SB2	91
SB2	SB3	93
SB3	SB4	83
SB4	SB5	73
SB5	SB6	91
SB6	SB7	90
SB7	SB8	82
SB8	CB1	41
PB1	SB1	17
PB2	SB2	19
PB3	SB3	19
PB4	SB4	18
PB5	SB5	17
PB6	SB6	19
PB7	SB7	18
PB8	SB8	17
*** TOTAL		830

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF
CB1	SB2 (HEAD B)	163
CB1	SB4 (HEAD C)	275
CB1	SB6 (HEAD A)	213
CB1	SB8 (HEAD D)	99
*** TOTAL		750

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
W. WISCONSIN AVENUE & STH 181

BASE NO.	656.0200.0002 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE
W. WISCONSIN AVENUE & STH 181

LOCATION	658.5069.0002 SIGNAL MOUNTING HARDWARE LS
W. WISCONSIN AVENUE & STH 181 (N. GLENVIEW AVENUE)	1
TOTAL	1

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\030242_mq_sp.ppt PLOT DATE : 10/29/2012 9:35:52 AM PLOT BY : MSCCEJ PLOT NAME : 030242_mq_sp4 PLOT SCALE : 1:1

3

W. WISCONSIN AVENUE & STH 181
(N. GLENVIEW AVENUE)

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	657.0315 POLES TYPE 4 EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	SPV.0060.1060 LED LUMINAIRE EACH	SPV.0060.3001 POLES TYPE 9 EACH	SPV.0060.3002 POLES TYPE 10 EACH	SPV.0060.3003 MONOTUBE ARMS 30-FT EACH	SPV.0060.3004 LUMINAIRE ARMS STEEL 6-FT EACH
SB1	1			1		1					
SB2						1			1	1	1
SB3	1			1		1					
SB4						1		1		1	
SB5	1			1		1					
SB6						1		1		1	
SB7		1	1		1	1	1				
SB8						1		1		1	
*** TOTALS	3	1	1	3	1	8	1	3	1	4	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET:	E

3

W. WISCONSIN AVENUE & STH 181
(N. GLENVIEW 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	SB5	1		1			1	1	1				
2	SB2	1		1			1	1	1				
3	SB2	1		1			1	1	1				
4	SB1	1		1			1	1	1				
5	SB6	1		1			1	1	1				
6	SB6	1		1			1	1	1				
7	SB3	1		1			1	1	1				
8	SB8	1		1			1	1	1				
9	SB8	1		1			1	1	1				
10	SB7		1		1					1	2	1	
11	SB8		1		1					1	2	1	
12	SB7	1		1			1	1	1				
13	SB4	1		1			1	1	1				
14	SB4	1		1			1	1	1				
15	SB3	1		1						1	2		
16	SB4	1		1						1	2		
17	SB5					1							1
18	SB6					1							1
19	SB7					1							1
20	SB8					1							1
21	SB1					1							1
22	SB2					1							1
23	SB3					1							1
24	SB4					1							1
*** TOTALS		14	2	14	2	8	12	12	12	4	8	2	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

EMERGENCY VEHICLE PREEMPTION

LOCATION	SPV.0060.3005 EVP DETECTOR TYPE I EACH	SPV.0060.3006 EVP DISCRIMINATOR TYPE IV EACH	SPV.0060.3008 EVP CONFIRMATION LIGHT ASSEMBLY TYPE I EACH
CB1		1	
SB2	1		1
SB4	1		1
SB6	1		1
SB8	1		1
TOTALS	4	1	4

CONFIRMATION LIGHT CABLE

FROM	TO	SPV.0090.3001 TYPE UF CABLE 2 CONDUCTOR NO. 14 LF
CB1	SB2 (HEAD B)	163
CB1	SB4 (HEAD C)	275
CB1	SB6 (HEAD A)	213
CB1	SB8 (HEAD D)	99
	TOTAL	750

W. WISCONSIN AVENUE & STH 181 (N. GLENVIEW AVENUE)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

REMOVE TRAFFIC SIGNALS
W. WISCONSIN AVENUE & STH 181

LOCATION	SPV.0105.3002 REMOVE TRAFFIC SIGNALS LS
W. WISCONSIN AVENUE & STH 181 (N. GLENVIEW AVENUE)	1
TOTAL	1

INSTALL VENDOR SUPPLIED MUNICIPAL TRAFFIC SIGNAL CABINET
W. WISCONSIN AVENUE & STH 181

LOCATION	SPV.0105.3009 INSTALL VENDOR SUPPLIED MUNICIPAL TRAFFIC SIGNAL CABINET LS
W. WISCONSIN AVENUE & STH 181 (N. GLENVIEW AVENUE)	1
TOTAL	1

VIDEO VEHICLE DETECTION SYSTEM
W. WISCONSIN AVENUE & STH 181

LOCATION	SPV.0105.3010 VIDEO VEHICLE DETECTION SYSTEM LS
W. WISCONSIN AVENUE & STH 181 (N. GLENVIEW AVENUE)	1
TOTAL	1

CAMERA NUMBER	SIGNAL BASE NO.
V1	SB6
V2	SB2
V3	SB4
V4	SB8

USH 18/STH 181 TRAFFIC SIGNAL INTERCONNECT

ALL ITEMS ARE CATEGORY 1500

3

CONDUIT

FROM	TO	652.0215 CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/4-INCH L.F.
CV72F-2	CB1 (S1379)	40
CV84FN	CB1 (LOCAL)	24
	TOTAL	64

FIBER OPTIC

LOCATION	678.0300 FIBER OPTIC SPLICE EACH
CV72F-2	14
CV82FN	2
*** TOTAL	16

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ITS

LOCATION	670.0100.0002 FIELD SYSTEM INTEGRATOR LS	670.0200.0002 ITS DOCUMENTATION LS	678.0500.0002 COMMUNICATION SYSTEM TESTING LS
1060-33-71 CATEGORY 1500	1	1	1
TOTALS	1	1	1

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET
USH 18 & STH 181

LOCATION	*** SPV.0105.3011 LS
CB1 (S1379)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
140	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
53	LF	TRACER WIRE
2	EACH	CAT-5E CABLE 1-METER

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET
W. WISCONSIN AVENUE & STH 181

LOCATION	SPV.0105.3012 LS
CB1 (LOCAL)	1
TOTAL	1

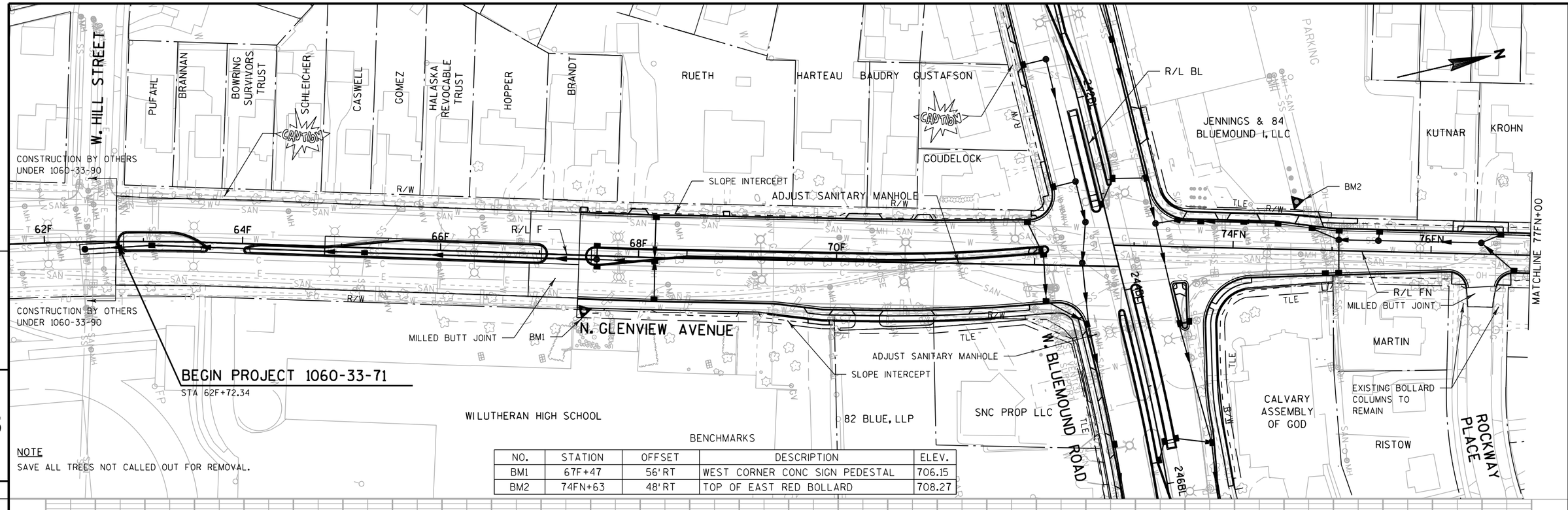
*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
332	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
43	LF	TRACER WIRE
2	EACH	CAT-5E CABLE 1-METER



5

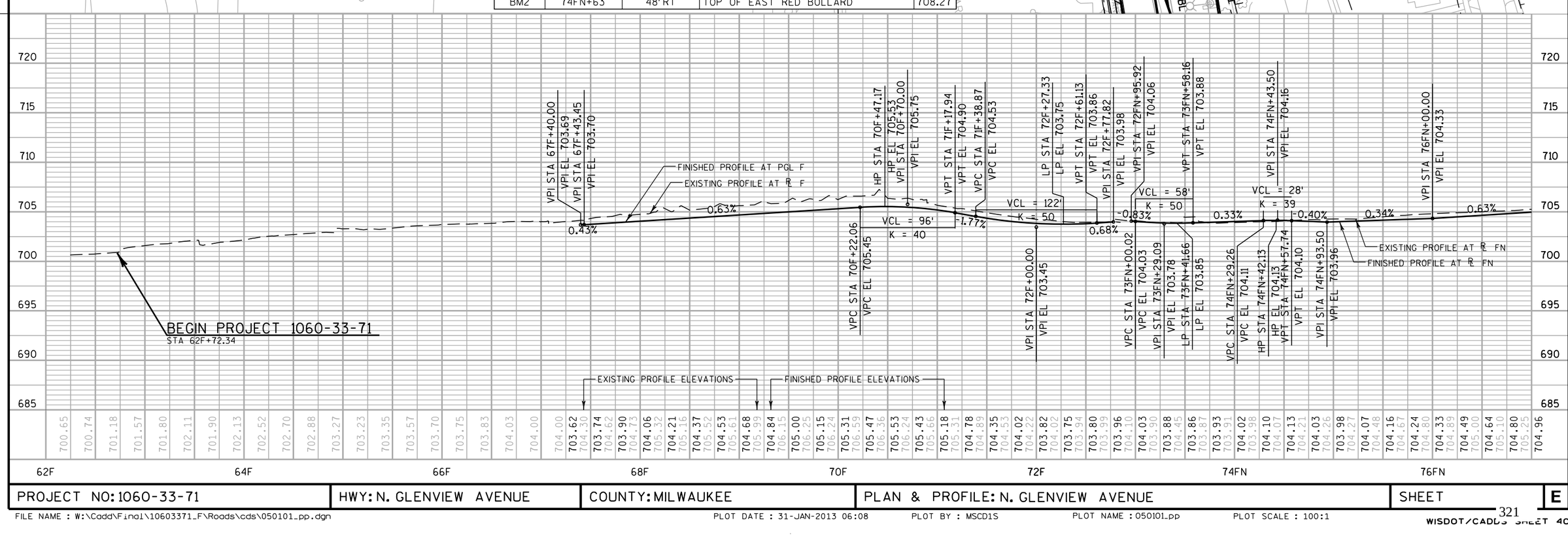
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NOTE

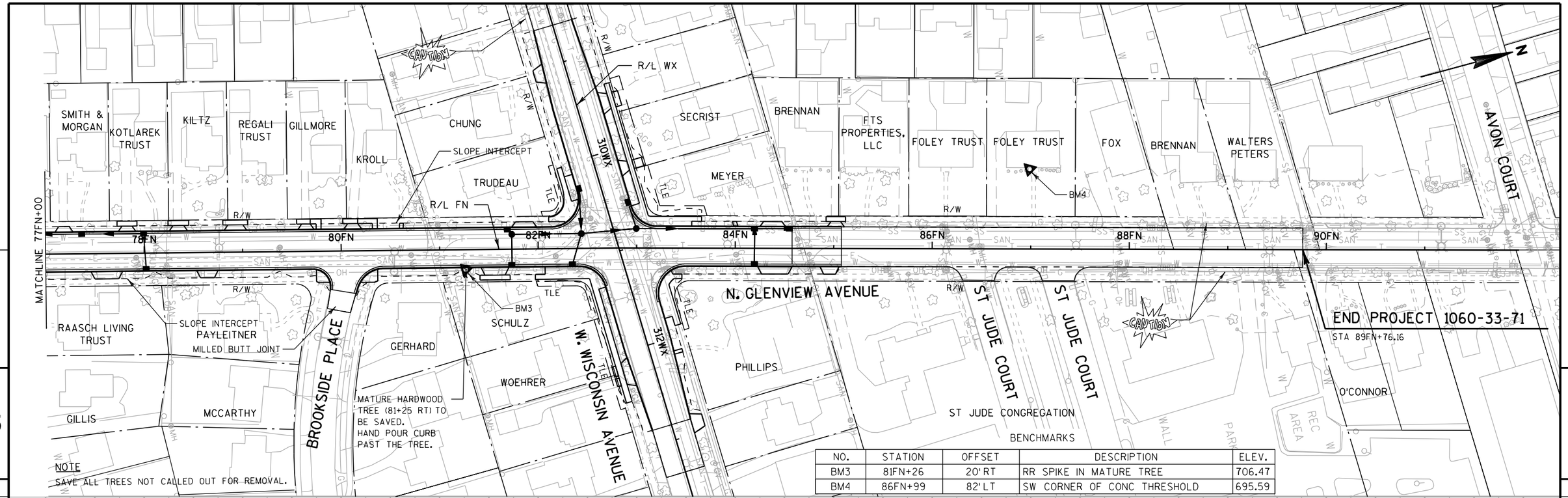
SAVE ALL TREES NOT CALLED OUT FOR REMOVAL.

BENCHMARKS

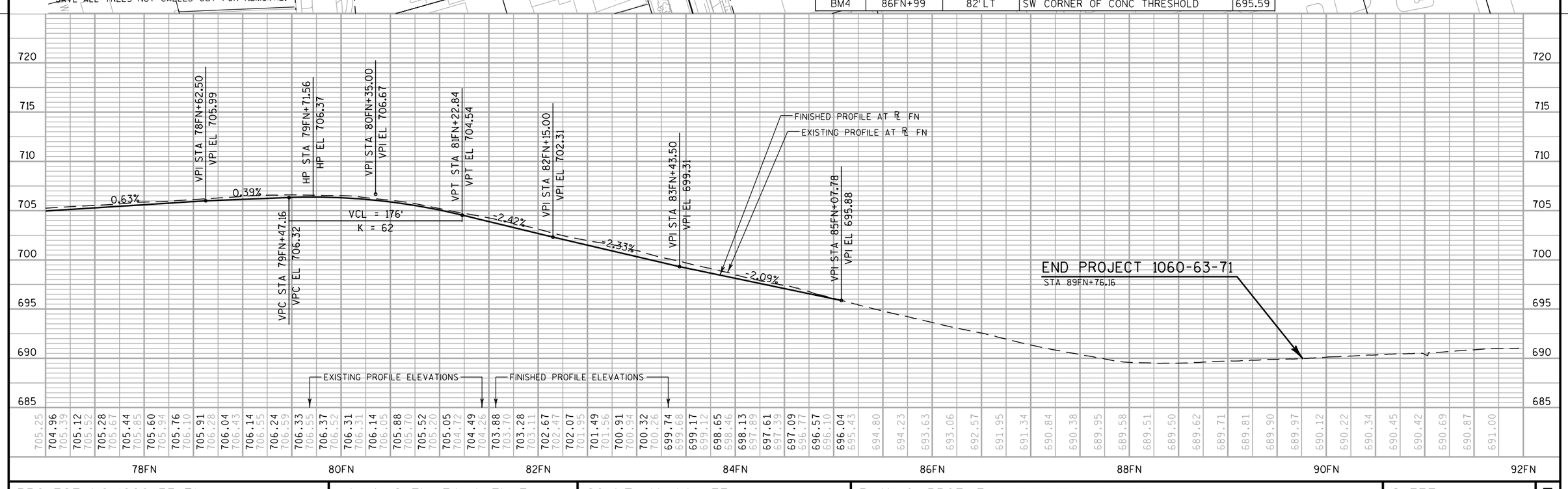
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
BM1	67F+47	56'RT	WEST CORNER CONC SIGN PEDESTAL	706.15
BM2	74FN+63	48'RT	TOP OF EAST RED BOLLARD	708.27



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN & PROFILE: N. GLENVIEW AVENUE	SHEET	E



NO.	STATION	OFFSET	DESCRIPTION	ELEV.
BM3	81FN+26	20' RT	RR SPIKE IN MATURE TREE	706.47
BM4	86FN+99	82' LT	SW CORNER OF CONC THRESHOLD	695.59



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN & PROFILE: N. GLENVIEW AVENUE	SHEET E

BENCHMARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
BM1	67F+47	56'RT	WEST CORNER CONC SIGN PEDESTAL	706.15
BM2	74FN+63	48'LT	TOP OF EAST RED BOLLARD	708.27

BEGIN CONSTRUCTION
STA 213BL+39.98

END CONSTRUCTION
STA 252BL+64.74

N. ROBERTSON AVENUE
RAVENSWOOD CIRCLE
N. GLENVIEW AVENUE
W. BLUEMOUND ROAD
HONEY CREEK PARKWAY
GOUDELOCK
SMITH
GUSTAFSON
JENNINGS LEANDER R. & 84 BLUEMOUND I, LLC.
CALVARY ASSEMBLY OF GOD
SNC PROP LLC
82 BLUE, LLP
PARKING
PKNG
MILLED BUTT JOINT
SLOPE INTERCEPT
ADJUST SANITARY MANHOLE
PGL WB
PGL EB
R/L BL
R/L F
R/L FN
74FN
238BL
240BL
242BL
244BL
246BL
248BL
250BL
252BL
R/W
TLE
CAUTION
ELECTRICAL
DISTRICTION
CENTER

NOTE
SAVE ALL TREES NOT CALLED OUT FOR REMOVAL.

5

5

720
715
710
705
700
695
690
685

BEGIN CONSTRUCTION
STA 234BL+65.94

VPI STA 240+35.31
VPI EL 710.04
-2.88%
VPC STA 241+29.18
VPC EL 707.34
VCL = 92'
K = 50
VPT STA 242+20.82
VPT EL 705.54
VPI STA 241+75.00
VPI EL 706.02
-1.05%
VPI STA 244+00.15
VPI EL 703.65
-1.22%
VPC STA 245+35.00
VPC EL 702.01
VCL = 150'
K = 230
VPT STA 246+85.00
VPT EL 700.68
VPI STA 246+10.00
VPI EL 701.10
FINISHED PROFILE AT PGL EB
EXISTING PROFILE AT R/L BL
-0.57%
VPC STA 249+98.51
VPC EL 698.90
VPI STA 250+54.66
VPI EL 698.59
VCL = 112'
K = 50
VPT STA 251+10.81
VPT EL 697.01
-2.81%
VPI STA 252+14.74
VPI EL 694.09
END CONSTRUCTION
STA 252BL+64.74

NOTE:
WESTBOUND PROFILE SHOWN
AFTER EASTBOUND SHEET

EXISTING PROFILE ELEVATIONS
FINISHED PROFILE ELEVATIONS

238BL	240BL	242BL	244BL	246BL	248BL	250BL	252BL
718.99 / 718.25	710.49 / 709.62 / 709.36	708.90 / 708.40 / 708.18 / 707.79	707.46 / 707.20 / 706.78 / 706.67	706.23 / 706.16 / 705.80 / 705.86	705.49 / 705.85 / 705.23 / 705.60	704.97 / 705.25 / 704.70 / 704.68	704.44 / 704.29 / 704.18 / 703.94
703.92 / 703.97 / 703.65 / 703.43	703.35 / 703.23 / 703.05 / 702.89	702.74 / 702.58 / 702.44 / 701.94	702.13 / 702.12 / 701.83 / 701.65	701.56 / 701.42 / 701.31 / 701.27	701.09 / 701.07 / 700.90 / 700.87	700.73 / 700.72 / 700.59 / 700.36	700.45 / 700.17 / 700.31 / 700.12
700.17 / 700.06 / 700.03 / 699.99	699.89 / 699.97 / 699.74 / 699.85	699.60 / 699.70 / 699.46 / 699.57	699.32 / 699.43 / 699.18 / 699.27	699.04 / 699.07 / 698.90 / 698.79	698.68 / 698.43 / 698.35 / 697.97	697.89 / 697.41 / 697.30 / 696.77	696.61 / 696.14 / 695.91 / 695.46	695.20 / 694.75 / 694.50 / 694.05	693.36 / 692.69 / 692.12

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN & PROFILE: W. BLUEMOUND ROAD EB	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\050103_pp.dgn
PLOT DATE : 31-JAN-2013 06:09
PLOT BY : MSCD1S
PLOT NAME : 050103_pp
PLOT SCALE : 100:1

BENCHMARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
BM1	67F+47	56'RT	WEST CORNER CONC SIGN PEDESTAL	706.15
BM2	74FN+63	48'LT	TOP OF EAST RED BOLLARD	708.27

BEGIN CONSTRUCTION
STA 213BL+39.98

END CONSTRUCTION
STA 252BL+64.74

N. ROBERTSON AVENUE
RAVENSWOOD CIRCLE
N. GLENVIEW AVENUE
HONEY CREEK PARKWAY
W. BLUEMOUND ROAD

JENNINGS LEANDER R. & 84 BLUEMOUND I, LLC.
CALVARY ASSEMBLY OF GOD
SMITH
GUSTAFSON
GOUDELOCK
SNC PROP LLC
82 BLUE, LLP

BM2
74FN
R/L FN
R/L BL
R/L F
PGL WB
PGL EB
MILLED BUTT JOINT
SLOPE INTERCEPT
CAUTION
ELECTRICAL DISTRIBUTION CENTER
238BL
240BL
242BL
244BL
246BL
248BL
250BL
252BL
R/W
TLE
PARKING
PKNG
FP

NOTE
SAVE ALL TREES NOT CALLED OUT FOR REMOVAL.

VPI STA 240+35.31
VPI EL 710.04
VPC STA 240+65.22
VPC EL 709.20
-2.83%
VCL = 120'
K = 142
VPT STA 241+84.78
VPT EL 706.32
VPI STA 241+25.00
VPI EL 707.51
-1.99%
VPC STA 242+35.47
VPC EL 705.31
VCL = 94'
K = 60
VPI STA 242+82.47
VPI EL 704.38
VPT STA 243+29.46
VPT EL 704.18
-0.42%
VPI STA 243+75.00
VPI EL 703.99
VPT STA 243+99.34
VPT EL 703.69
VCL = 49'
K = 60
VPC STA 243+50.66
VPC EL 704.09
-1.23%
VPC STA 245+35.00
VPC EL 702.03
VCL = 150'
K = 227
VPI STA 246+10.00
VPI EL 701.11
VPT STA 246+85.00
VPT EL 700.68
FINISHED PROFILE AT PGL WB
EXISTING PROFILE AT R BL
-0.57%
VPC STA 249+98.56
VPC EL 698.91
VPI STA 250+54.66
VPI EL 698.59
VCL = 112'
K = 50
VPT STA 251+10.77
VPT EL 697.01
-2.81%
VPI STA 252+14.74
VPI EL 694.09

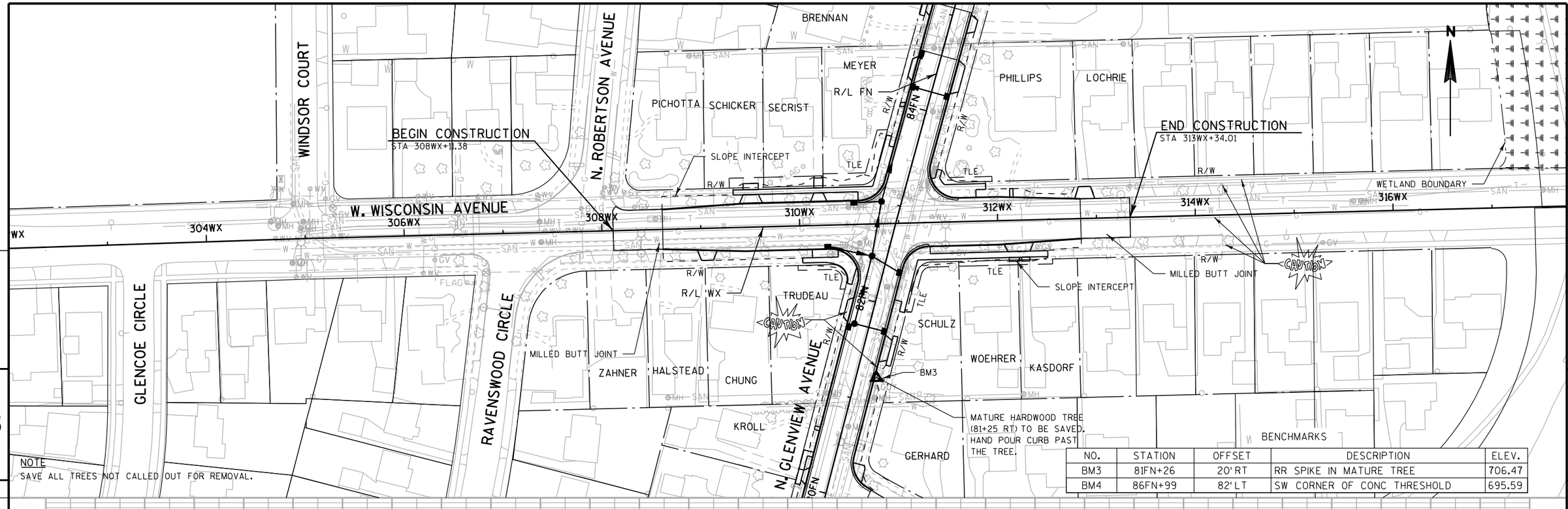
EXISTING PROFILE ELEVATIONS
FINISHED PROFILE ELEVATIONS

720 715 710 705 700 695 690 685

238BL	240BL	242BL	244BL	246BL	248BL	250BL	252BL
718.99	718.25	717.36	716.68	715.55	714.38	713.60	712.71	711.75	710.95	710.49	709.63	709.36	708.92	708.40	708.26	707.79	707.63	707.20	707.05	706.67	706.52	706.16	706.02	705.86	705.52	705.85	705.04	705.60	704.66	705.25	704.38	704.68	704.20	704.29	704.10	703.94	703.94	703.97	703.69	703.43	703.38	703.23	703.07	702.89	702.77	702.58	702.46	701.94	702.15	702.12	701.85	701.65	701.57	701.42	701.32	701.27	701.10	701.07	700.91	700.87	700.74	700.72	700.60	700.36	700.46	700.17	700.31	700.12	700.17	700.06	700.03	699.99	699.89	699.97	699.75	699.85	699.61	699.70	699.46	699.57	699.32	699.43	699.18	699.27	699.04	699.07	698.90	698.79	698.69	698.43	698.35	697.97	697.89	697.41	697.30	696.77	696.61	696.14	695.91	695.46	695.20	694.75	694.50	694.05	693.36	692.69	692.12

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN & PROFILE: W. BLUEMOUND ROAD WB	SHEET	E

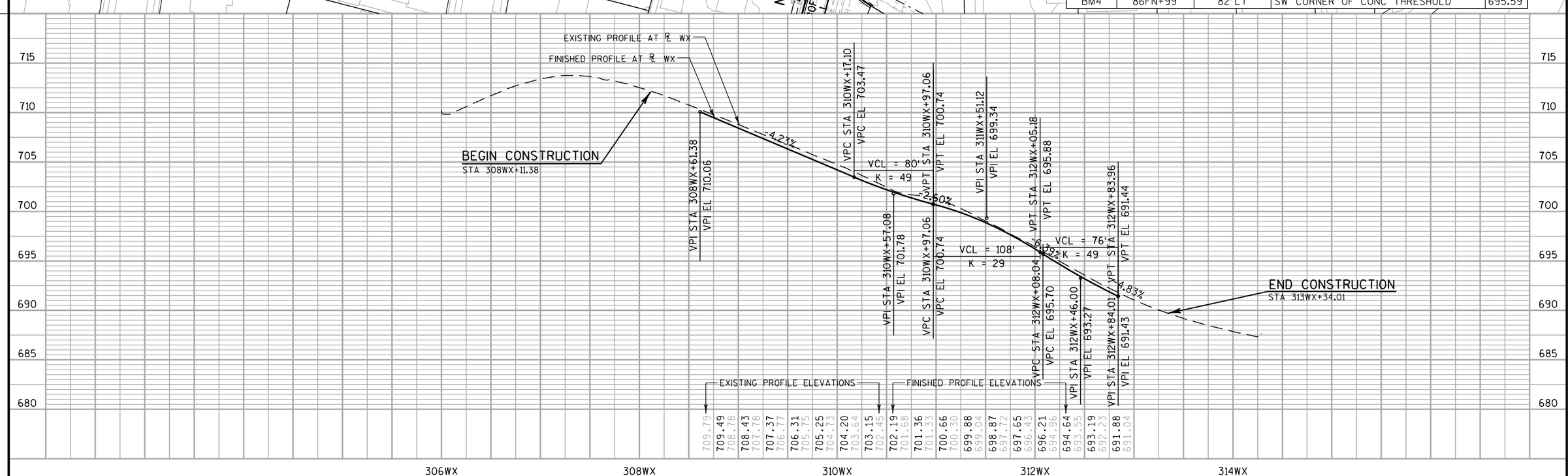
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PLOT DATE : 31-JAN-2013 06:09
PLOT BY : MSCD1S
PLOT NAME : 050104_pp
PLOT SCALE : 100:1



NOTE
SAVE ALL TREES NOT CALLED OUT FOR REMOVAL.

BENCHMARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
BM3	81FN+26	20' RT	RR SPIKE IN MATURE TREE	706.47
BM4	86FN+99	82' LT	SW CORNER OF CONC THRESHOLD	695.59



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	PLAN & PROFILE: W. WISCONSIN AVENUE	SHEET	E

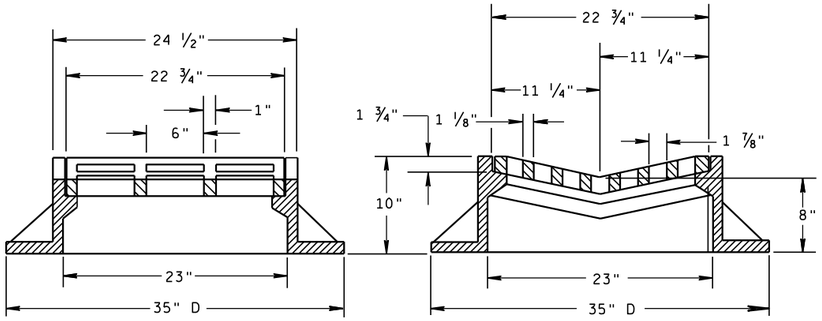
Standard Detail Drawing List

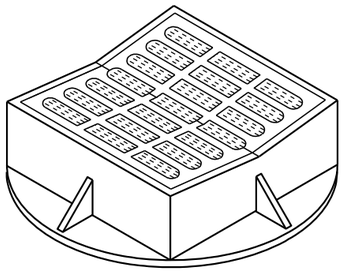
08A05-16B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-18D	INLET COVER, TYPE BW, Z MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D05-14A	CURB RAMPS TYPES 1 AND 1-A
08D05-14B	CURB RAMPS TYPES 2 AND 3
08D05-14C	CURB RAMPS TYPE 4A
08D05-14D	CURB RAMPS TYPE 4B
08D05-14E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08D17-06	MANHOLES, MANHOLE & INLET COVERS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-07	CONDUIT
09B04-09	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09C06-05	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-02	CONCRETE BASE TYPE 10
09C12-02A	CONCRETE BASE TYPE 13
09C12-02B	CONCRETE BASE TYPE 13
09C13-01	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09D01-04	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-02	SIGNAL OR LIGHTING CONTROL CABINET
09E01-11C	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4
09E01-11D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-11G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-04	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-04	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
09E08-04E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
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
10A01-02	ELECTRICAL HANDHOLE WIRING
10A02-02	IDENTIFICATION PLAQUES LIGHT POLES
10A05-02	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A06-02	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES GROUNDED NEUTRAL SYSTEMS
11B02-02	CONCRETE MEDIAN NOSE
13C01-15	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-07	URBAN DOWELED CONCRETE PAVEMENT
13C18-01A	CONCRETE PAVEMENT JOINTING
13C18-01B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-01C	CONCRETE PAVEMENT JOINT TIES
13C18-01D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14A02-01	TREE PLANTING DETAIL
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C05-01	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-14A	PAVEMENT MARKING (MAINLINE)
15C08-14E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-14F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)

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Standard Detail Drawing List

15C18-03	MEDIAN ISLAND MARKING
15D05-02	TRAFFIC CONTROL, SINGLE LANE CROSSOVER ENTRANCE WITH BARRIER
15D20-01	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-01	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D22-01	TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE

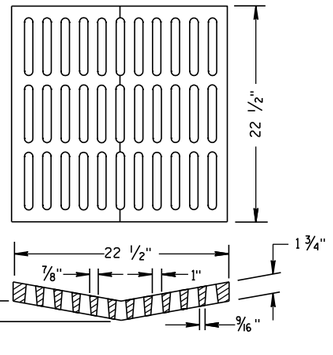




TYPE "B"

(APPROXIMATE WEIGHT 395 LBS.)

FRAME..... 285 LBS.
GRATE..... 110 LBS.

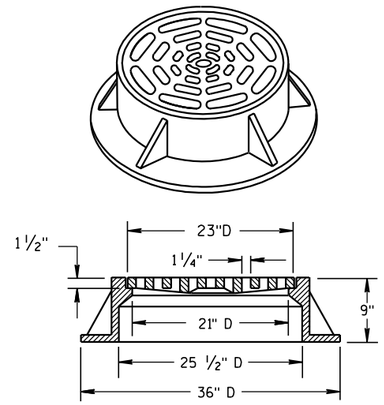


ALTERNATIVE GRATE FOR TYPE "B" COVER

(APPROXIMATE GRATE WEIGHT 125 LBS.)
GRATE.....125 LBS.

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.

NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

(APPROXIMATE WEIGHT 340 LBS.)

FRAME..... 235 LBS.
GRATE..... 105 LBS.

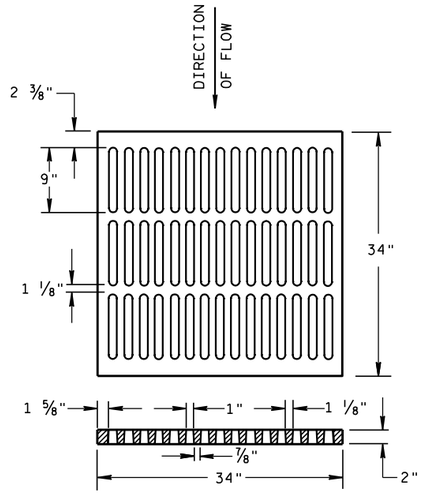
GENERAL NOTES

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.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

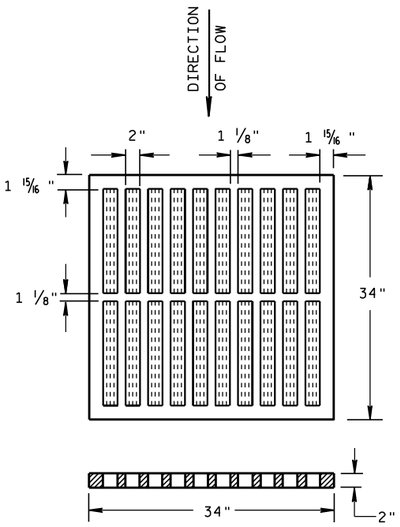


ALTERNATIVE TYPE "MS"

(APPROXIMATE GRATE WEIGHT 365 LBS.)
GRATE.....365 LBS.

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED

NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

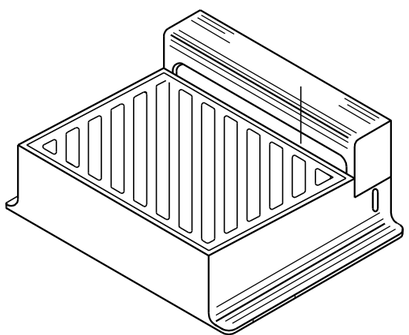


TYPE "MS"

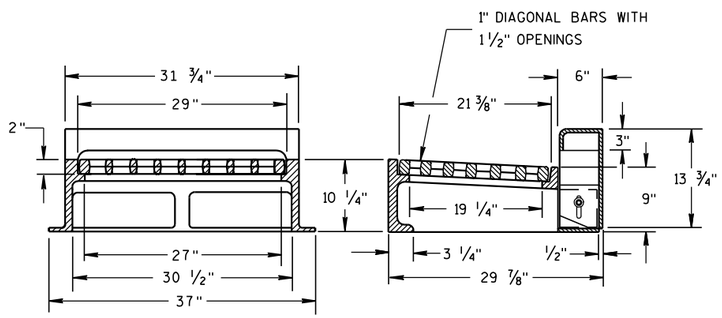
(APPROXIMATE GRATE WEIGHT 270 LBS.)
GRATE.....270 LBS.

USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

(APPROXIMATE WEIGHT 670 LBS.)

FRAME..... 360 LBS.
GRATE..... 160 LBS.
CURB BOX..... 150 LBS.

INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

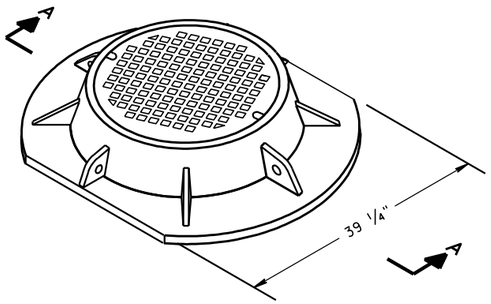
10/4/1999
DATE

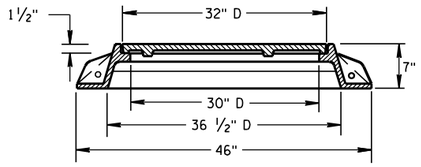
/S/ Rory L. Rhinesmith
CHEIF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 A 5-16b



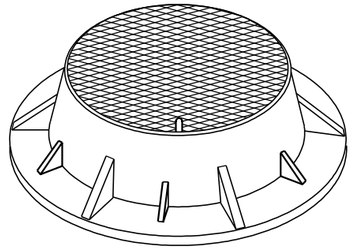


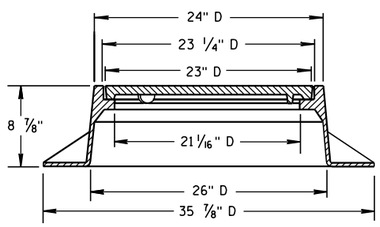
SECTION A-A

TYPE "K"

(APPROXIMATE WEIGHT 439 LBS.)

FRAME.....216 LBS.
LID.....223 LBS.

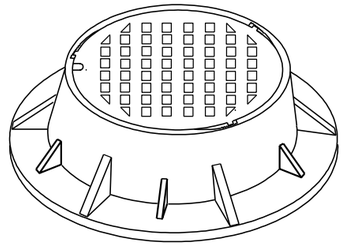


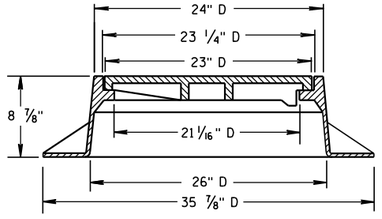


TYPE "J"

(APPROXIMATE WEIGHT 267 LBS.)

FRAME.....152 LBS.
LID.....115 LBS.





TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID

(APPROXIMATE WEIGHT 267 LBS.)

FRAME.....158 LBS.
LID.....109 LBS.

(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

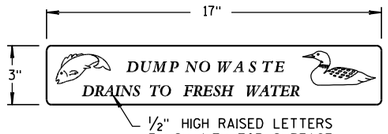
GENERAL NOTES

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

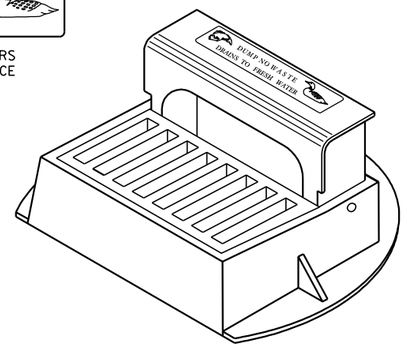
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

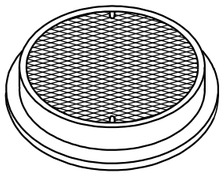
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

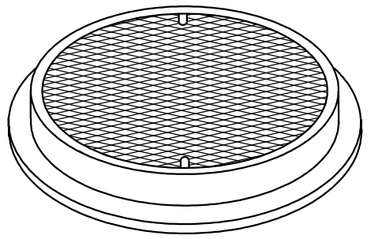
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

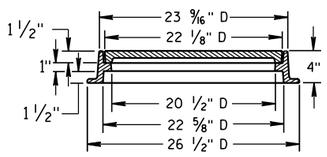


LOGO DETAIL





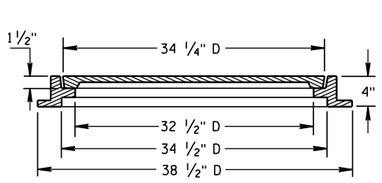




TYPE "L"

(APPROXIMATE WEIGHT 158 LBS.)

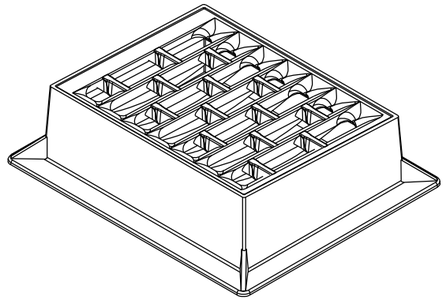
FRAME.....81 LBS.
LID.....77 LBS.

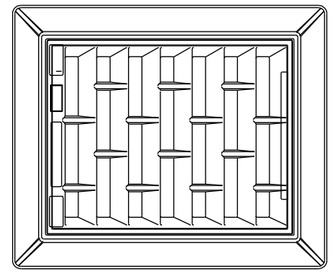


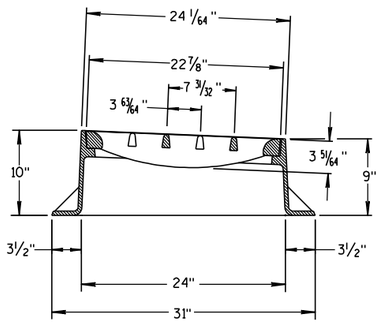
TYPE "M"

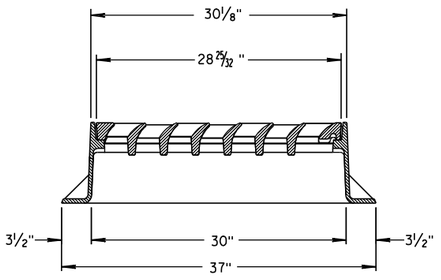
(APPROXIMATE WEIGHT 377 LBS.)

FRAME..... 125 LBS.
LID..... 252 LBS.

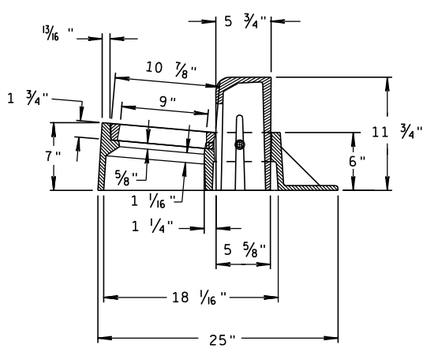








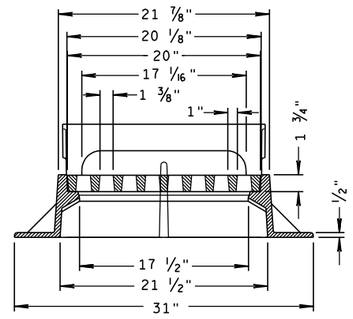
INLET COVER TYPE "BW"



INLET COVER TYPE "Z"

(APPROXIMATE WEIGHT 344 LBS.)

FRAME.....206 LBS.
GRATE..... 46 LBS.
CURB BOX..... 92 LBS.



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

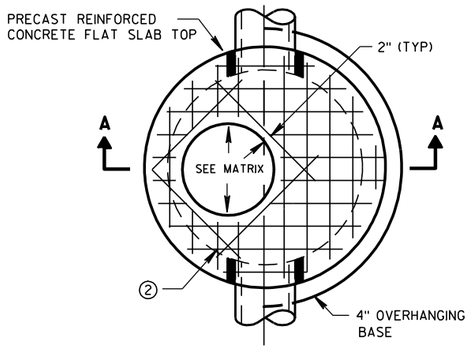
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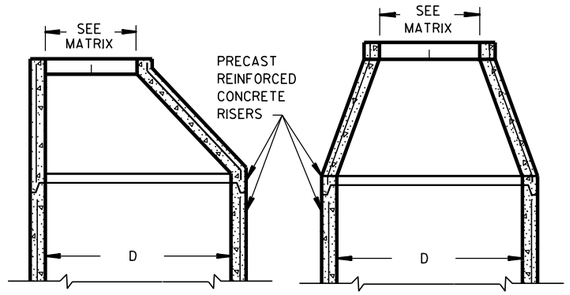
S.D.D. 8 A 5-18d

6

S.D.D. 8 A 5-18d

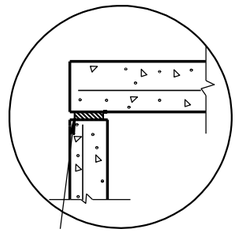


PLAN VIEW CIRCULAR OPENING

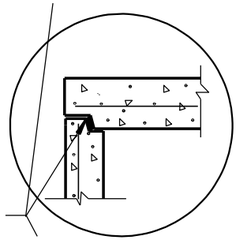


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

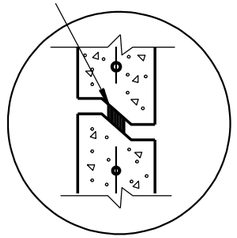


TOP WITH PLAIN END JOINT



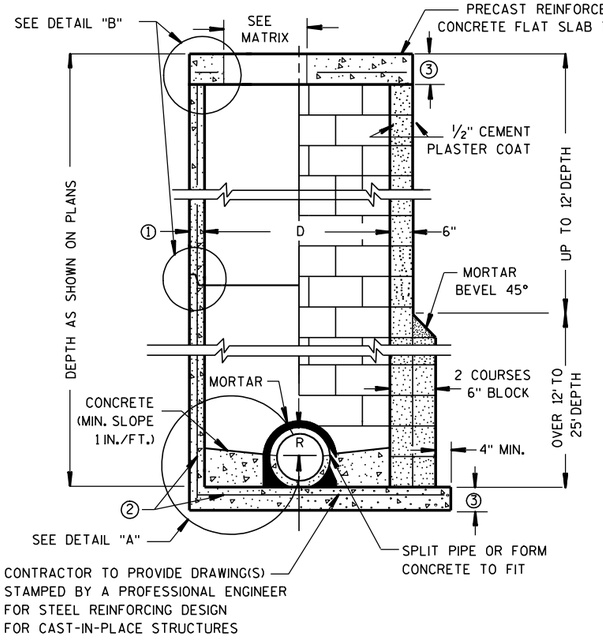
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



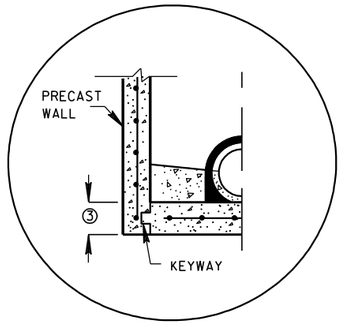
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

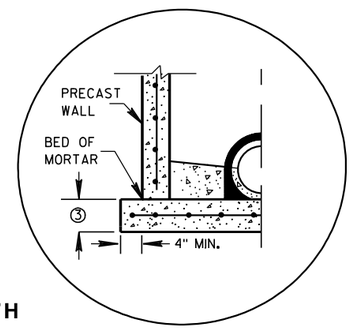


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

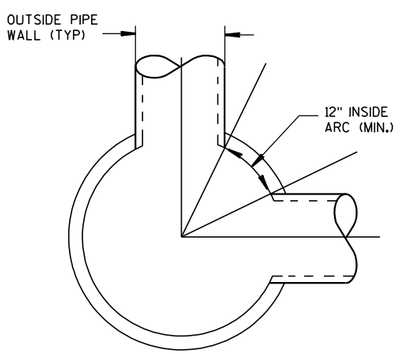


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

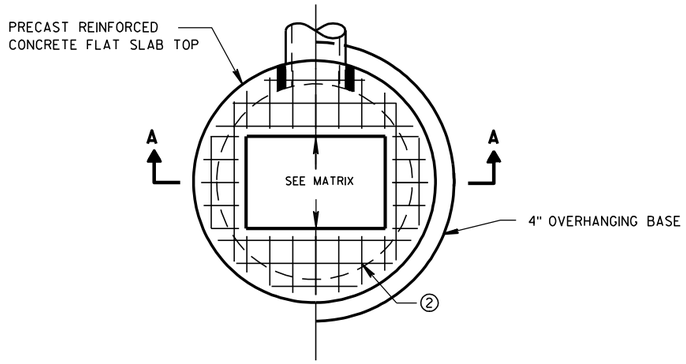
APPROVED

6/5/2012
DATE

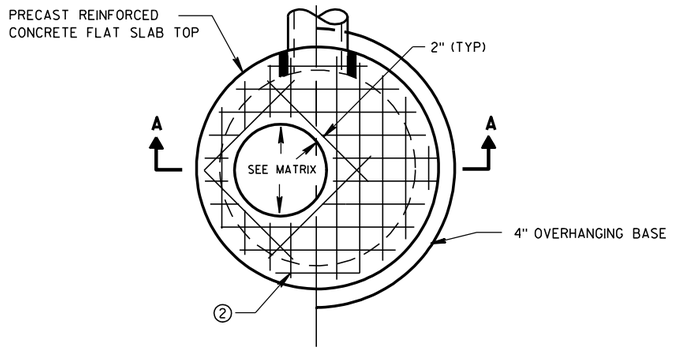
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

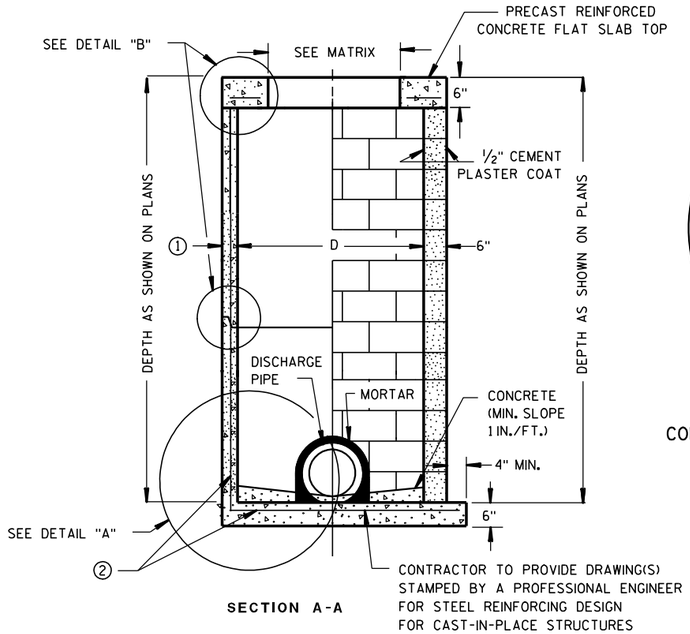
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PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

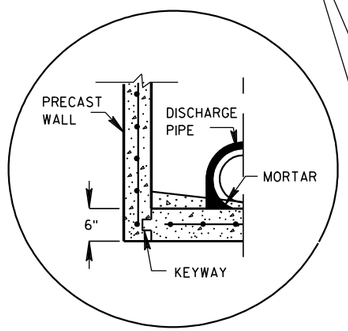


SECTION A-A

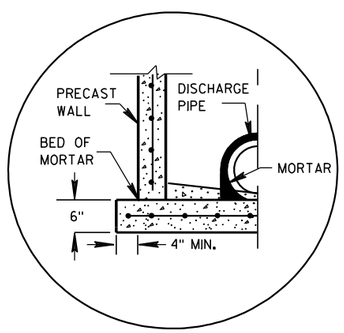
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

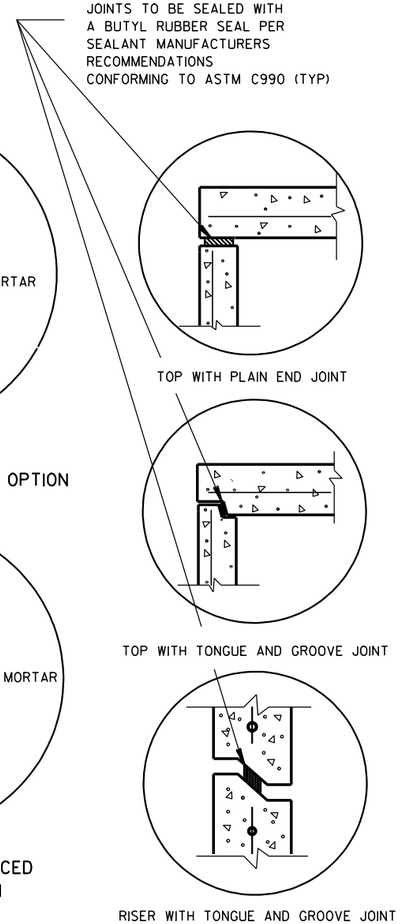


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST 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 DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

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

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

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

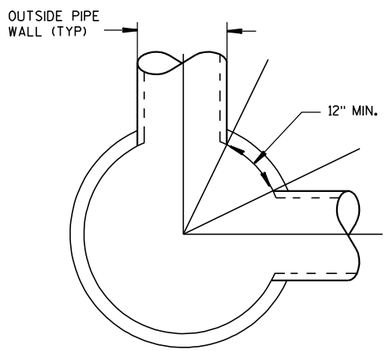
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

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

INLET COVER OPENING MATRIX

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



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

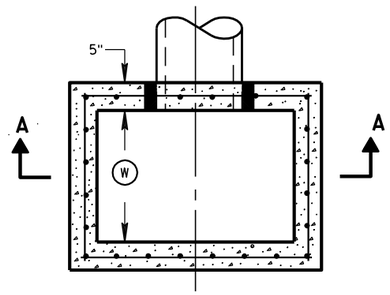
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

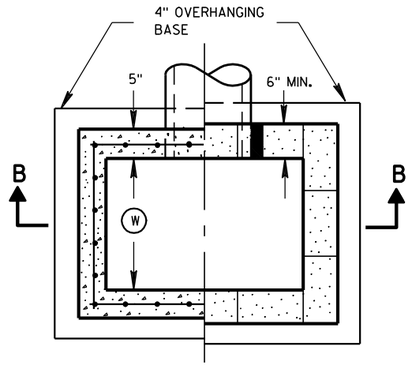
S.D.D. 8 C 6-1

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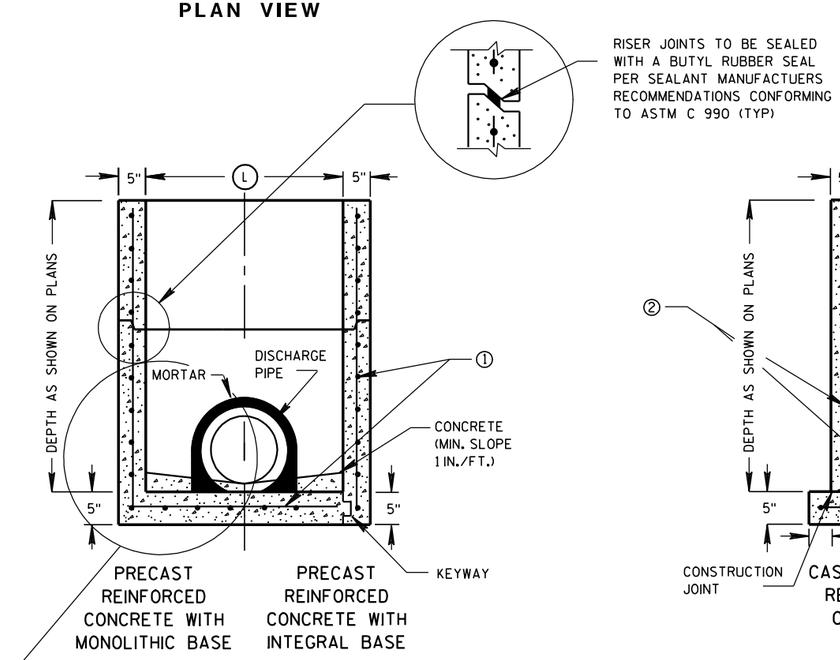
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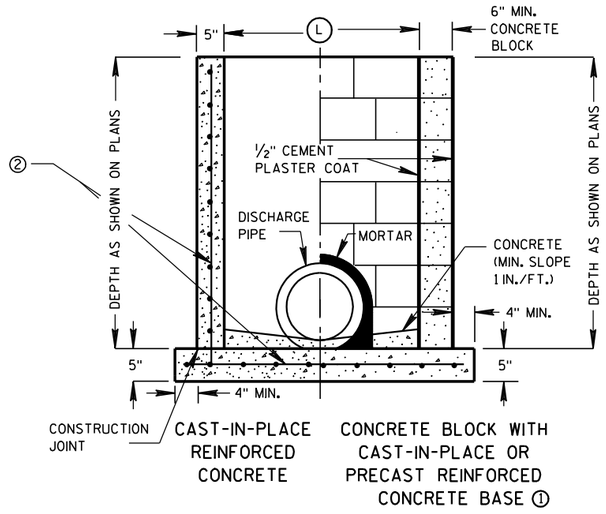
PLAN VIEW



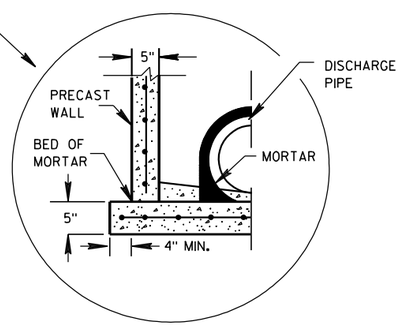
PLAN VIEW



SECTION A-A



SECTION B-B



SEPERATE 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.

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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 SEPERATE 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.

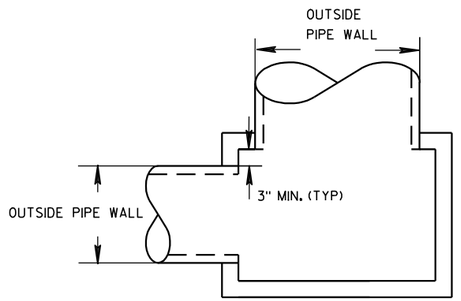
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

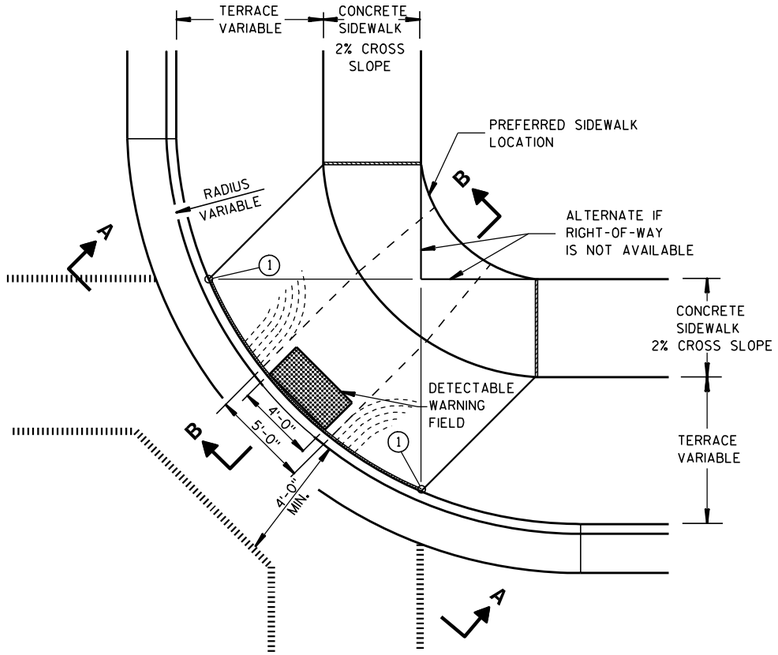
APPROVED
6/5/2012
DATE
/S/ Jerry H. Zoda
ROADWAY STANDARDS D 332
ENGINEER
IT
FHWA

6

S.D.D. 8 C 7-1

6

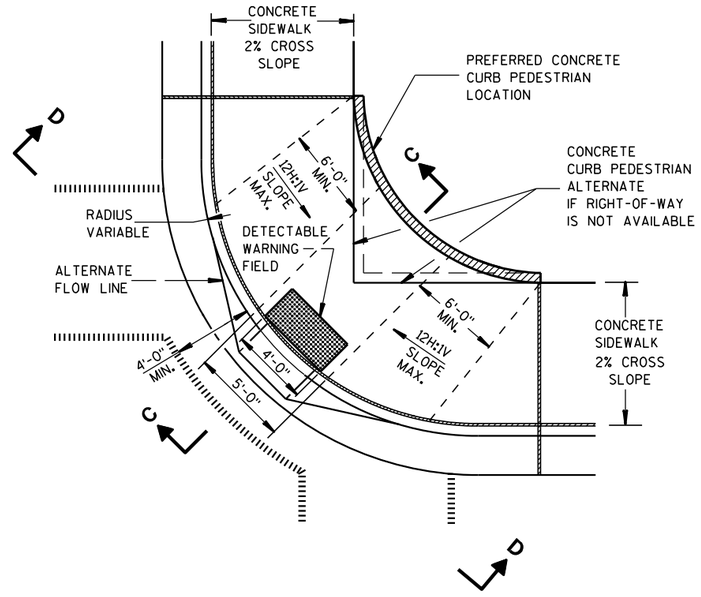
S.D.D. 8 C 7-1



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".

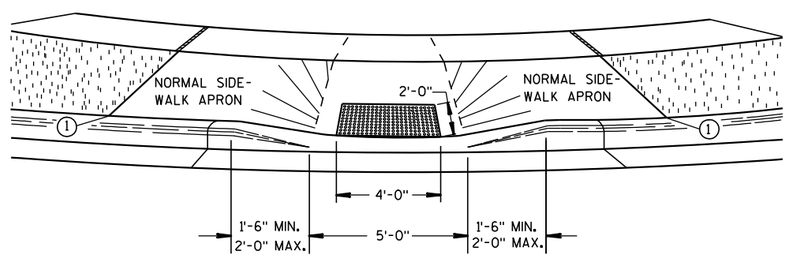
SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

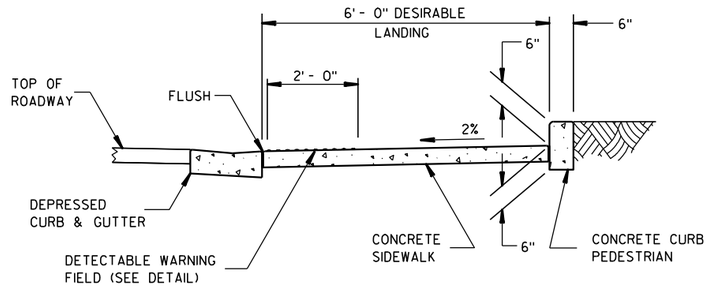
(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

LEGEND

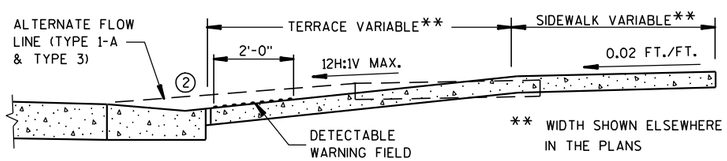
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



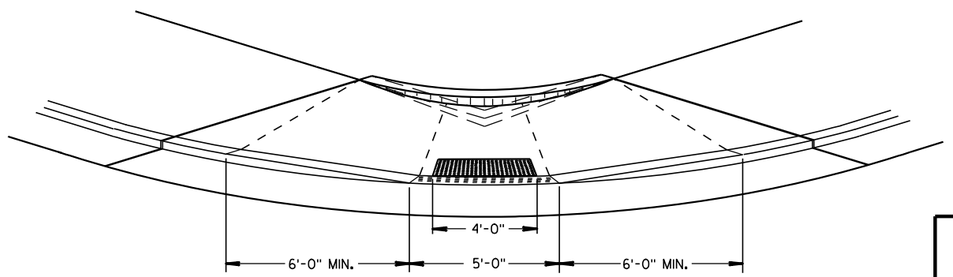
VIEW A-A



SECTION C-C



SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

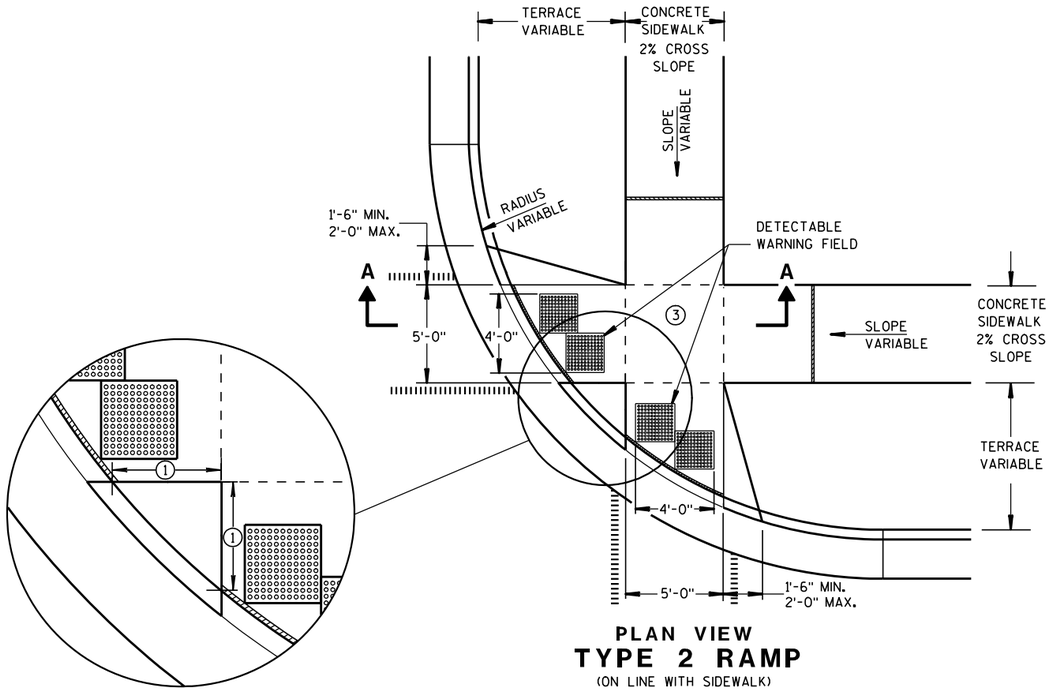
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

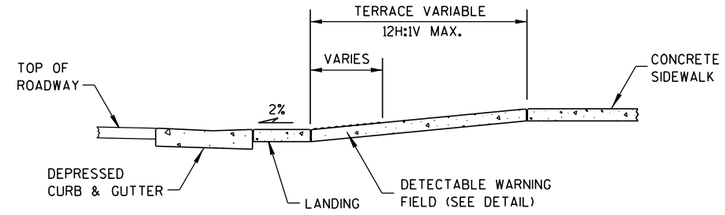
S.D.D. 8 D 5-14a

6

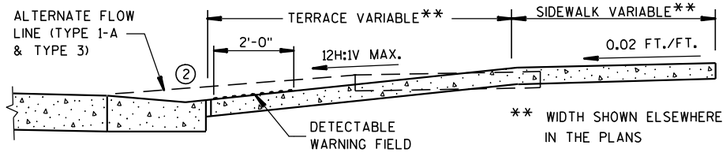
S.D.D. 8 D 5-14a



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.

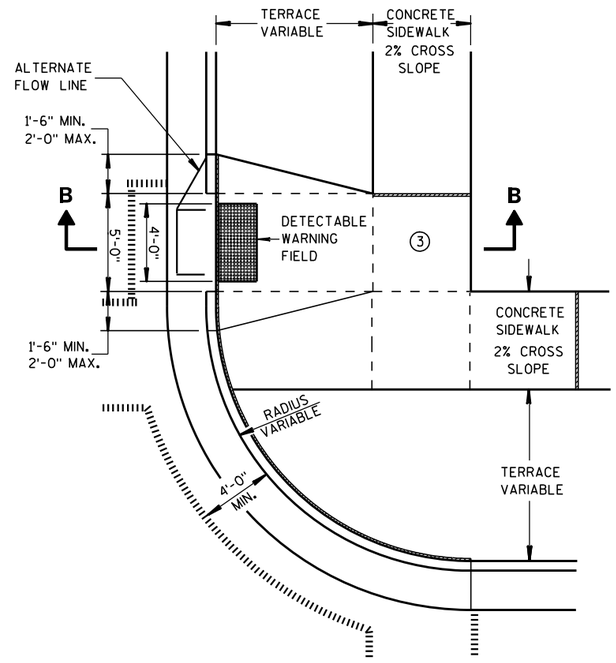
(1) WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

(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) PROVIDE LANDING AT TOP OF RAMP WITH NO MORE THAN 2% SLOPE IN ANY DIRECTION.

LEGEND

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

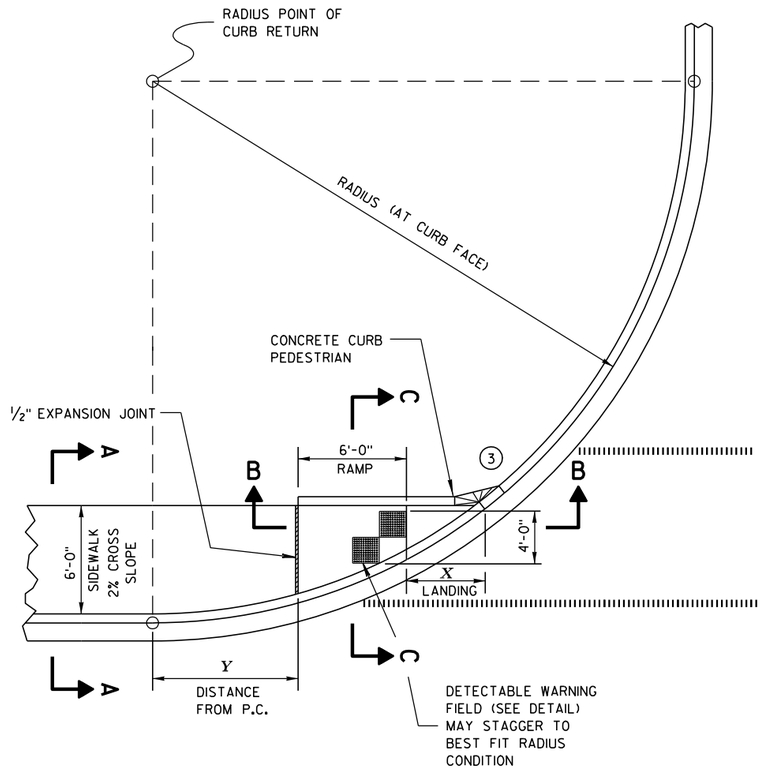


PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

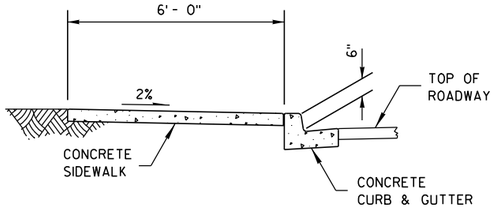
6
S.D.D. 8 D 5-14b



CURB RAMP TYPE 4A
PLAN VIEW

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

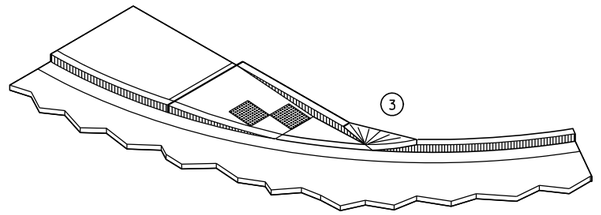
GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

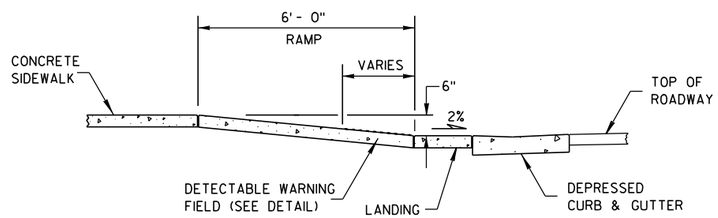
RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

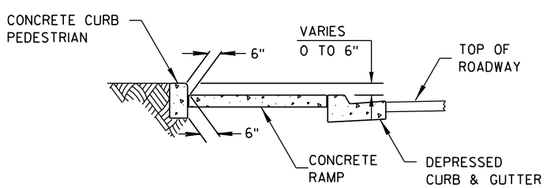
(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW



SECTION B-B



SECTION C-C

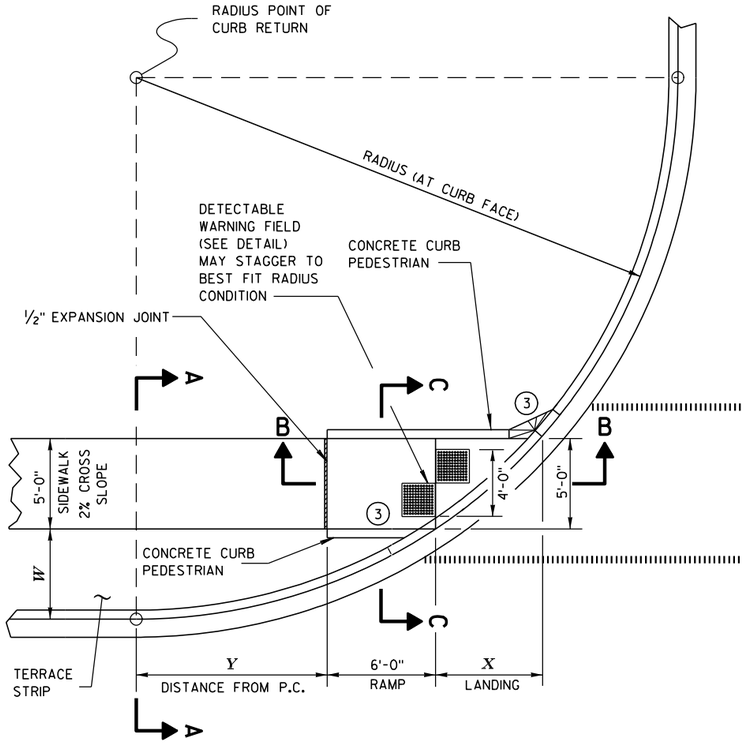
LEGEND

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

CURB RAMPS
TYPE 4A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 8 D 5-14c



CURB RAMP TYPE 4B
PLAN VIEW

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

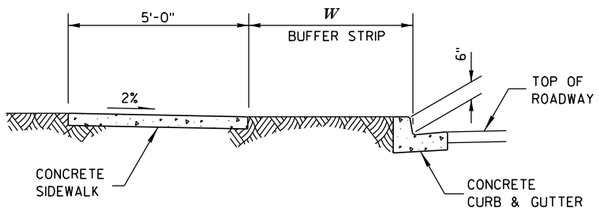
RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

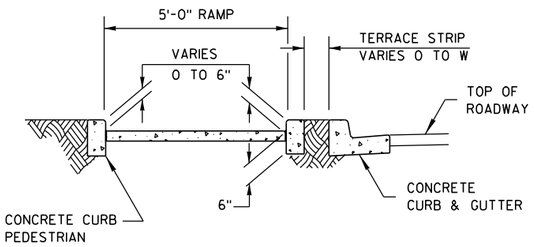
(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

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"
70 FEET	12'-2¾"	14'-3¼"	11'-¼"	17'-4"	10'-1"	19'-11¾"	9'-3¾"	22'-4¼"	8'-8¼"	24'-6¼"
80 FEET	13'-2"	15'-8½"	11'-10½"	18'-11¾"	10'-10¾"	21'-10"	10'-1"	24'-4¾"	9'-5"	26'-8¾"
90 FEET	14'- ½"	17'-½"	12'-8¼"	20'-6½"	11'-7¾"	23'-7"	10'-9¾"	26'-3¾"	10'-1¼"	28'-9½"
100 FEET	14'-10½"	18'-3¾"	13'-5½"	22'-0"	12'-4¼"	25'-2¾"	11'-5¾"	28'-1½"	10'-9"	30'-9"

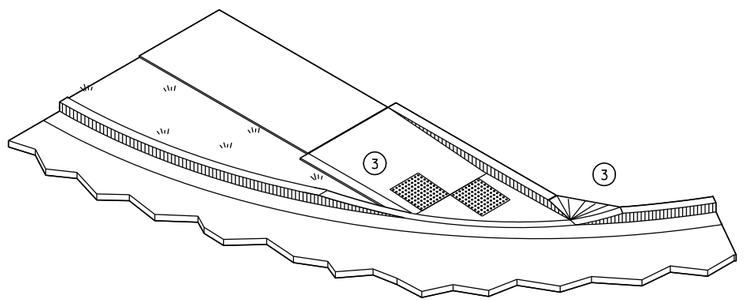
INTERMEDIATE RADII CAN BE INTERPOLATED



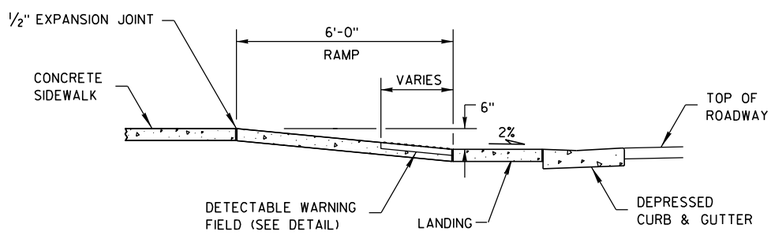
SECTION A-A



SECTION C-C



ISOMETRIC VIEW



SECTION B-B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

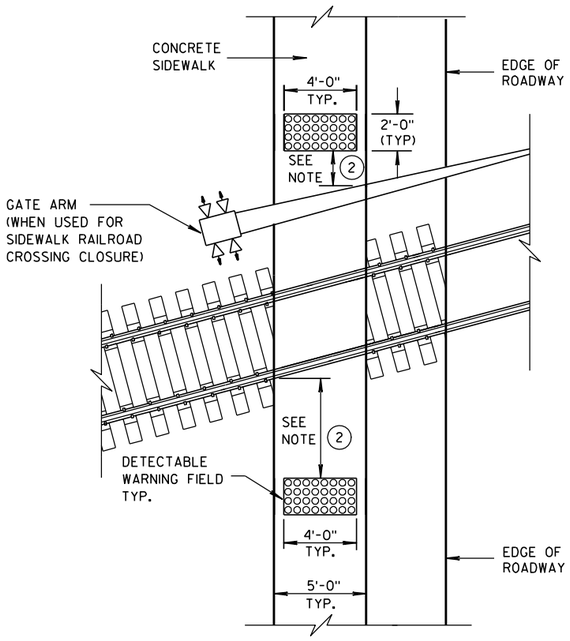
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 4B

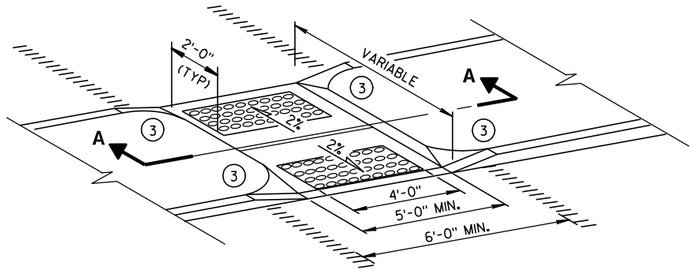
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

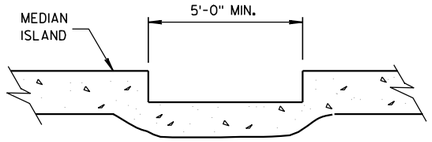
S.D.D. 8 D 5-14d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



SECTION A-A

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

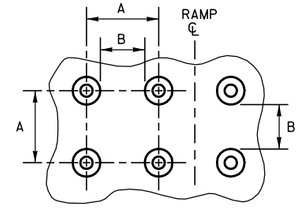
(1) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(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.

LEGEND

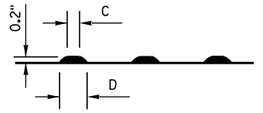
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



PLAN VIEW

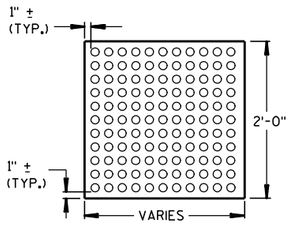
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

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



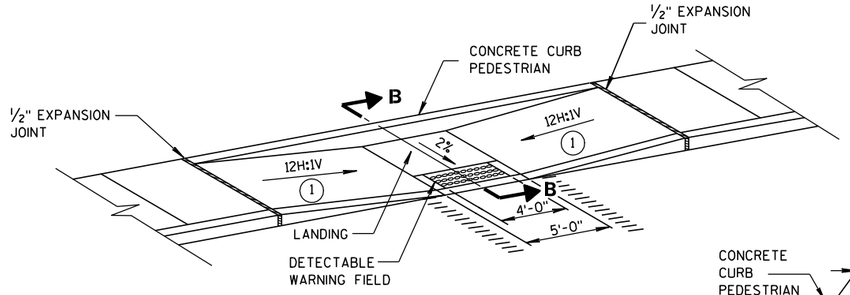
ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

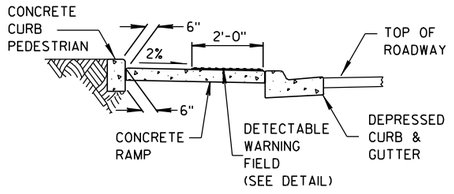


PLAN VIEW

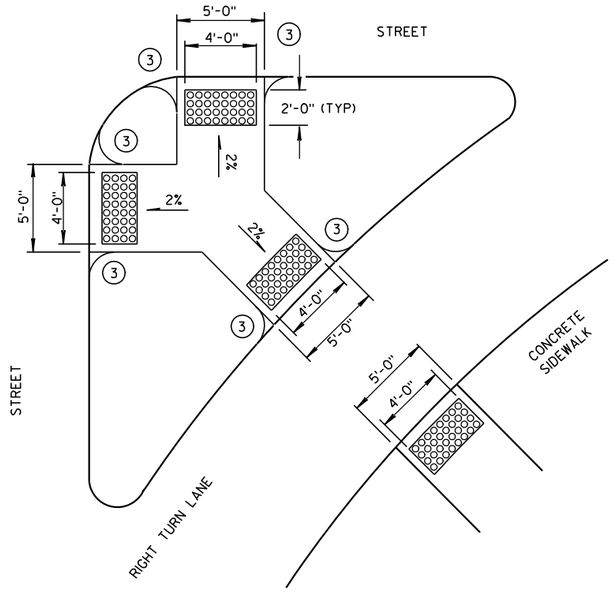
DETECTABLE WARNING FIELD (TYPICAL)



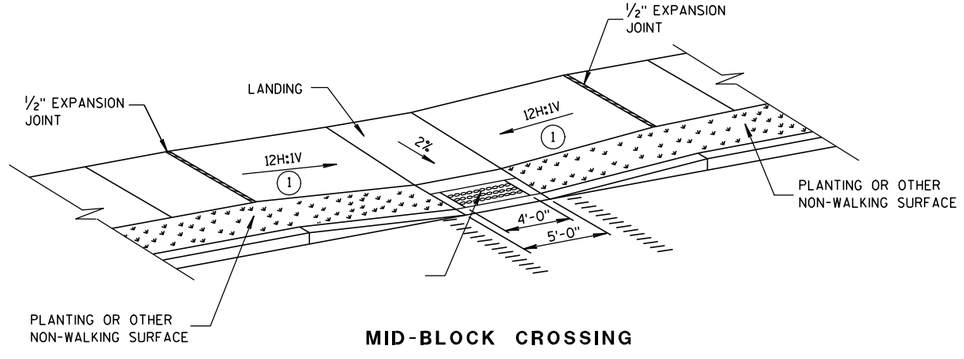
MID-BLOCK CROSSING
TYPE 7A



SECTION B-B



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.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

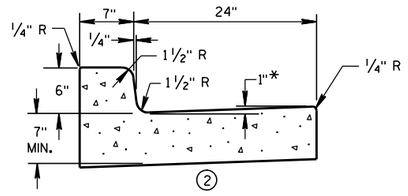
APPROVED
2-9-10 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER 337 ENT
FHWA

6

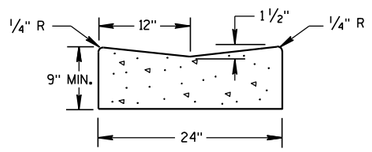
S.D.D. 8 D 5-14e

6

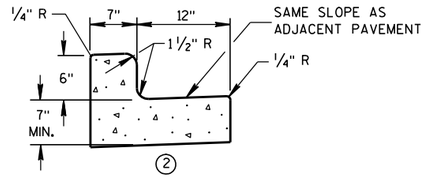
S.D.D. 8 D 5-14e



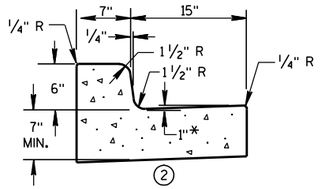
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

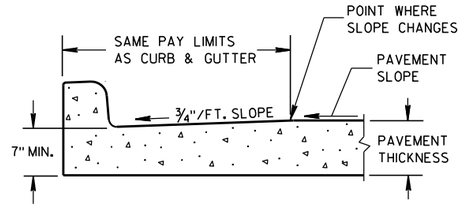


① CONCRETE CURB & GUTTER 19"



① CONCRETE CURB & GUTTER 22"

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

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

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

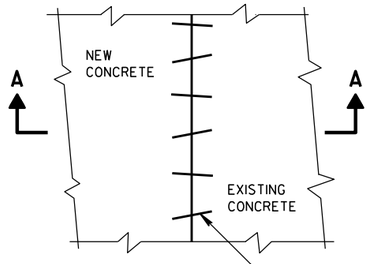
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURB.

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MIMIMUM GUTTER THICKNESS IS MAINTAINED.

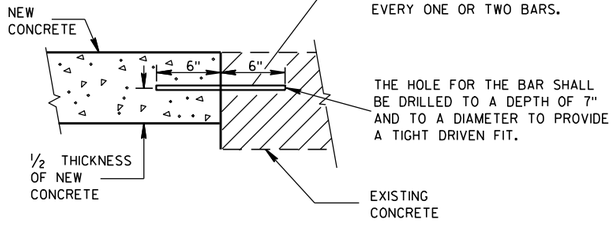
③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

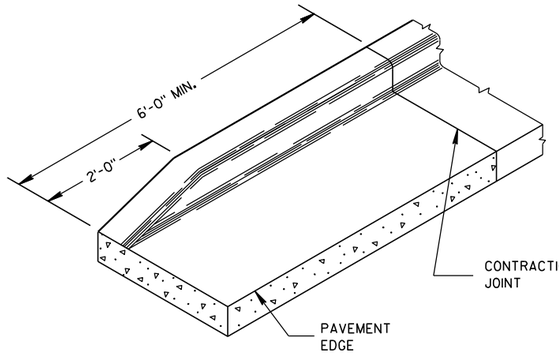
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



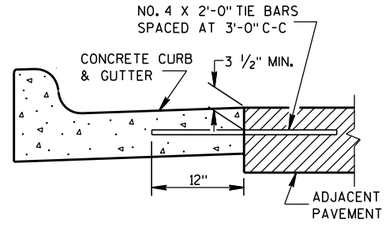
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A

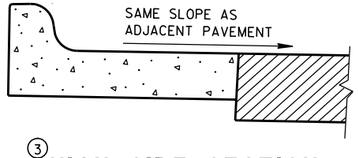
PAVEMENT TIES



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION

(TYPICAL FOR ALL CURB & GUTTER)

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional Use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/2/2010 — DATE

/S/ Jerry Zogg — ROADWAY STANDARDS ENGINEER

FHWA

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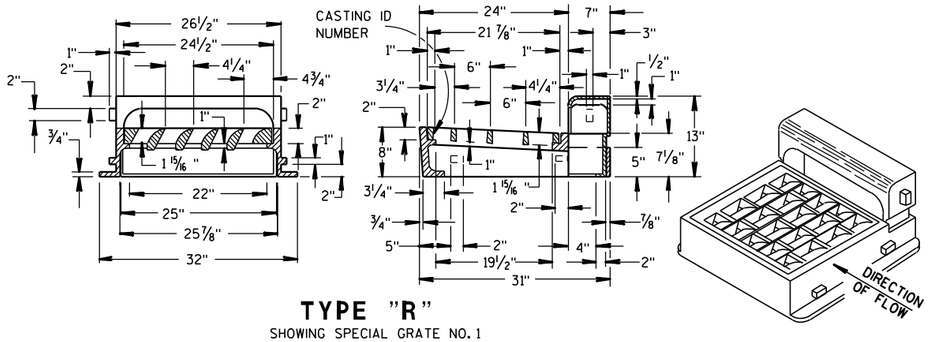
6

S.D.D. 8 D 16-10

6

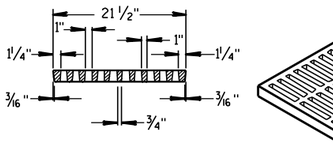
S.D.D. 8 D 16-10

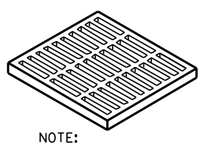
INLET COVERS



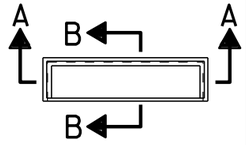
TYPE "R"

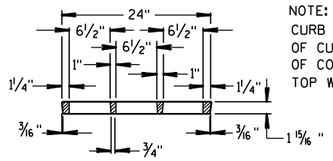
SHOWING SPECIAL GRATE NO. 1
(TO BE NOTED AS R-1 IN DRAINAGE TABLE)



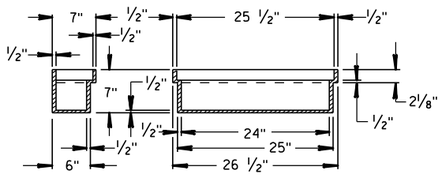


(APPROX. WEIGHT - 510 LBS.)
FRAME..... 245 LBS.
CURB..... 120 LBS.
GRATE..... 145 LBS.





NOTE:
CURB PLUG USED IN PLACE OF CURB BOX IN ABSENCE OF CONC. CURB. FILL TO TOP WITH CONCRETE.



GRATE FOR TYPE "R" INLET COVER

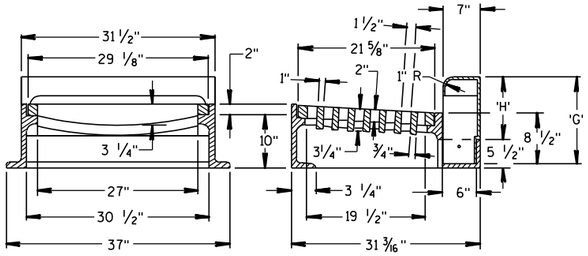
(GRATE..... 150 LBS.)
(TO BE USED UNLESS OTHERWISE NOTED IN DRAINAGE TABLE)

SECTION B-B SECTION A-A

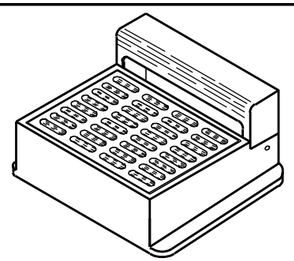
SPECIAL CURB PLUG "P"

(CURB PLUG..... 85 LBS.)
(TO BE NOTED AS R-P IN DRAINAGE TABLE)

'H' = 9" FOR 6" CURB
'H' = 11" FOR 8" CURB
'G' = 13 3/4" FOR 6" CURB
'G' = 15 3/4" FOR 8" CURB



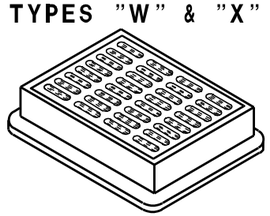
TYPE "W"

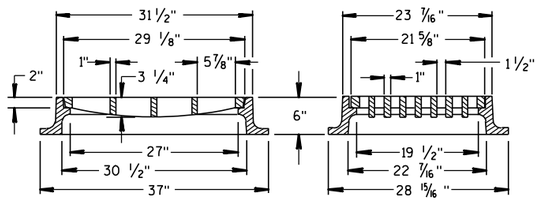


(APPROX. WEIGHT - 670 LBS.)
FRAME..... 350 LBS.
CURB BOX..... 135 LBS.
GRATE..... 185 LBS.

ALTERNATE GRATE
(FOR EXPRESSWAY RAMPS)

TYPES "W" & "X"

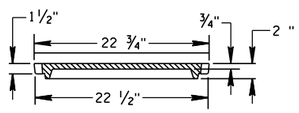




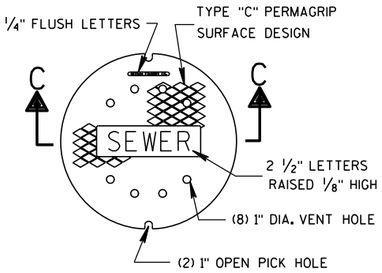
TYPE "X"

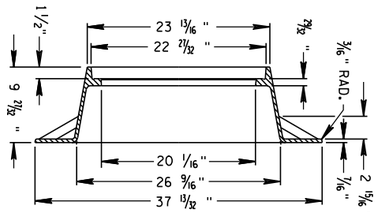
(APPROX. WEIGHT - 470 LBS.)

MANHOLE COVER



SECTION C-C





TYPE "Q"

(APPROX. WEIGHT - 290 LBS.)

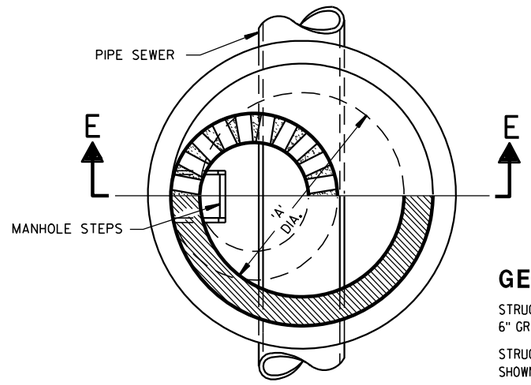
TABLE OF DIMENSIONS

TYPE	'A'	'B'	'C'
11	3'-6"	2'-8"	12" - 36"*
12	4'-0"	3'-8"	12" - 42"**
13	5'-0"	5'-8"	42" - 48"
14	6'-0"	7'-8"	54" - 60"

* 12" - 21" FOR PRECAST MANHOLES
** 12" - 24" FOR PRECAST MANHOLES

THE FIRST STEP SHALL BE PLACED 16" ABOVE THE BENCH.

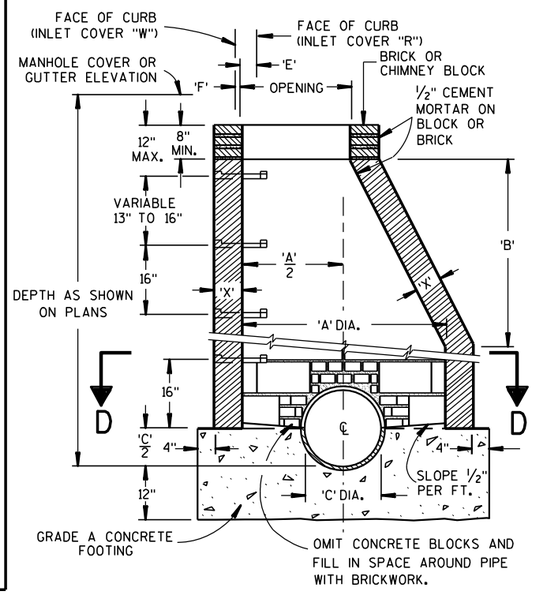
MANHOLE



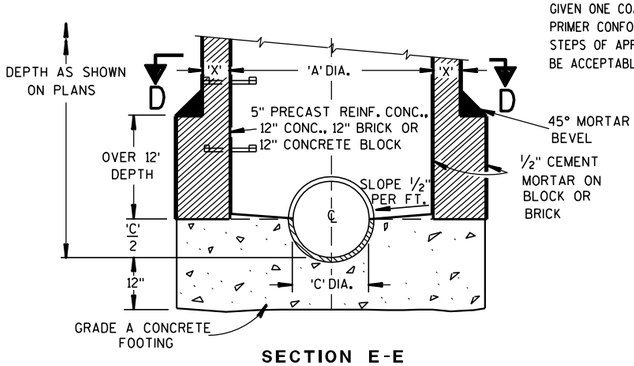
HALF SECTION D-D

TABLE OF OPENING DIMENSIONS

COVER TYPE	COVER DESCRIPTION	OPENING	'E'	'F'
"O"	ROUND	2'-2" DIA.	—	—
"W"	CURB BOX	1'-8" X 2'-6"	—	1"
"X"	INLET	1'-10" X 2'-6"	—	—
"R"	CURB BOX	2'-0" X 2'-1"	4"	—



SECTION E-E



SECTION E-E

TYPES 11, 12, 13 & 14

GENERAL NOTES

STRUCTURE WALL THICKNESS 'X' TO BE 8" BRICK, 6" CONCRETE BLOCK, 6" GRADE A CONCRETE OR 5" PRECAST REINFORCED CONCRETE.

STRUCTURE FOOTINGS ARE TO BE GRADE A CONCRETE OF THE THICKNESS SHOWN IN THE DETAIL OR 5" PRECAST REINFORCED CONCRETE.

REINFORCEMENT FOR 5" PRECAST REINFORCED CONCRETE SHALL BE 6" X 6" W16 X W16 WELDED SREEL WIRE FABRIC AND SHALL BE EMBEDDED 2" CLEAR.

PRECAST INLET UNITS AND BASES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

PRECAST CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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

SET FRAME ELEVATION 0.03 FT. LOWER THAN ELEVATION INDICATED ON THE PLANS.

THE CONTRACTOR MAY FORM AND POUR MONOLITHIC CONCRETE INVERT PROVIDED THE PIPE ENDS ARE EXTENDED INTO THE M.H. AND NOT TERMINATED WITHIN THE M.H. WALLS.

MANHOLE STEPS

STEPS MEETING THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH; 16 INCH C-C MAX. SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM WALL EMBEDMENT OF 3 INCHES IN PRECAST MANHOLE AND 6 INCHES IN 8 INCH BRICK OR 6 INCH BLOCK MANHOLE; TREAD OF STEP SHALL HAVE A NON-SKID SURFACE AND BE FLANKED BY CLEATS, WITH A MINIMUM OF 10 INCHES CLEAR BETWEEN CLEATS, TO PREVENT FOOT SLIPPING OFF THE EDGE CLEATS SHALL BE A MINIMUM OF 3/4 INCH HIGH BY 3/4 INCH WIDE HAVING A MINIMUM THICKNESS OF 3/8 INCH. STEPS SHALL BE CAPABLE OF SUPPORTING A CONCENTRATED LOAD OF 300 LBS. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

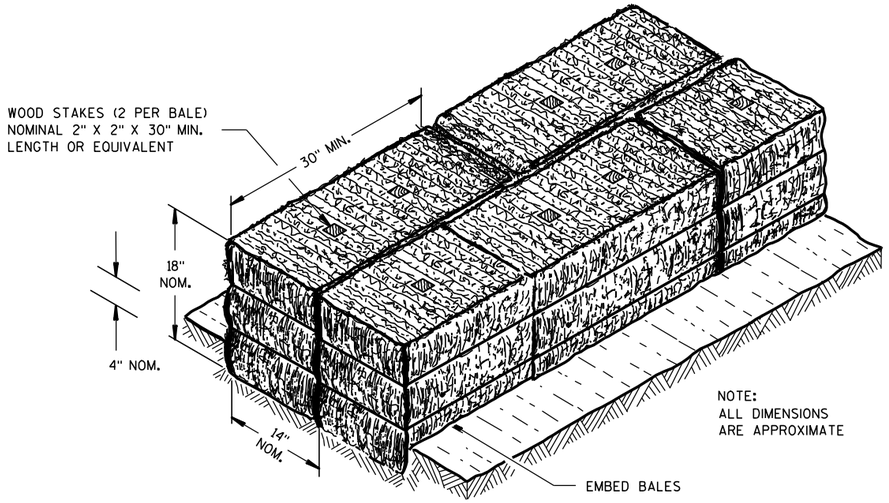
SOLID ALUMINUM STEPS SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 0.75 INCH. ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE SHALL BE GIVEN ONE COAT OF SUITABLE QUALITY PAINT, SUCH AS ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645 OR EQUIVALENT. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCING BAR WILL BE ACCEPTABLE.

MANHOLES, MANHOLE & INLET COVERS

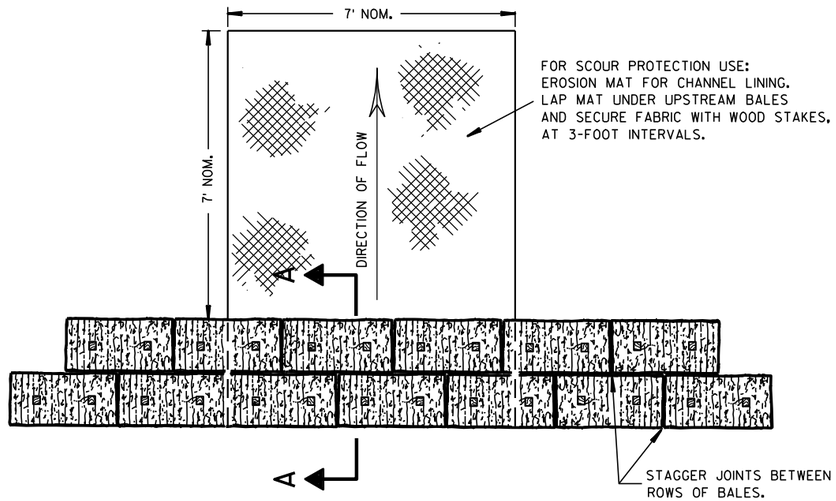
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/12/2011 — DATE
/S/ Jerry H. Zogg — ROADSIDE STANDARDS ENGINEER
FHWA

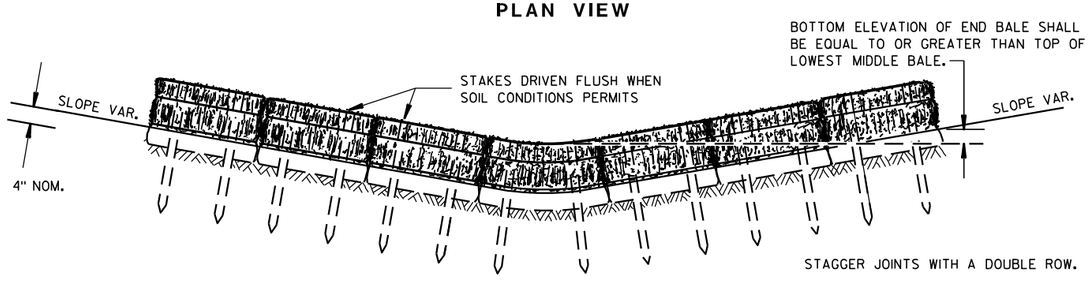
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S.D.D. 8 D 17-6



SECTION A-A



PLAN VIEW



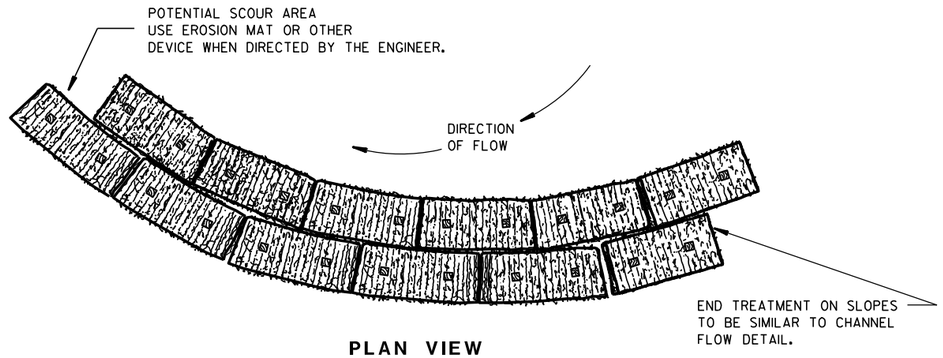
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

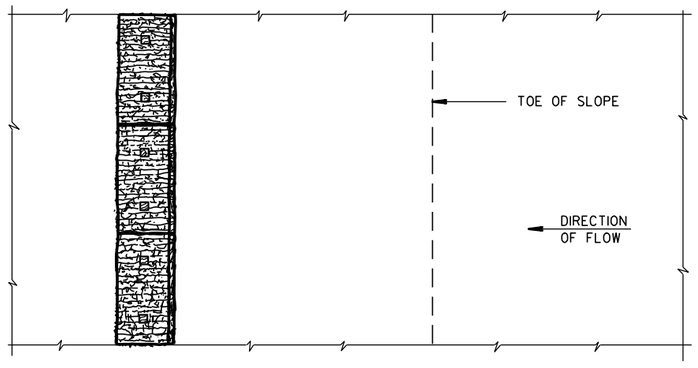
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

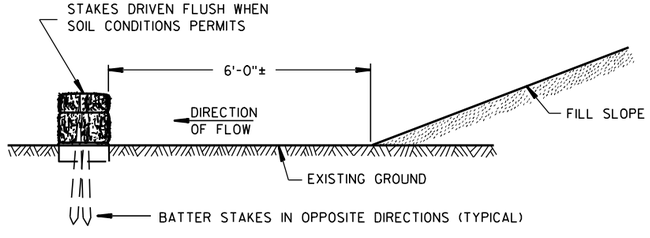


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

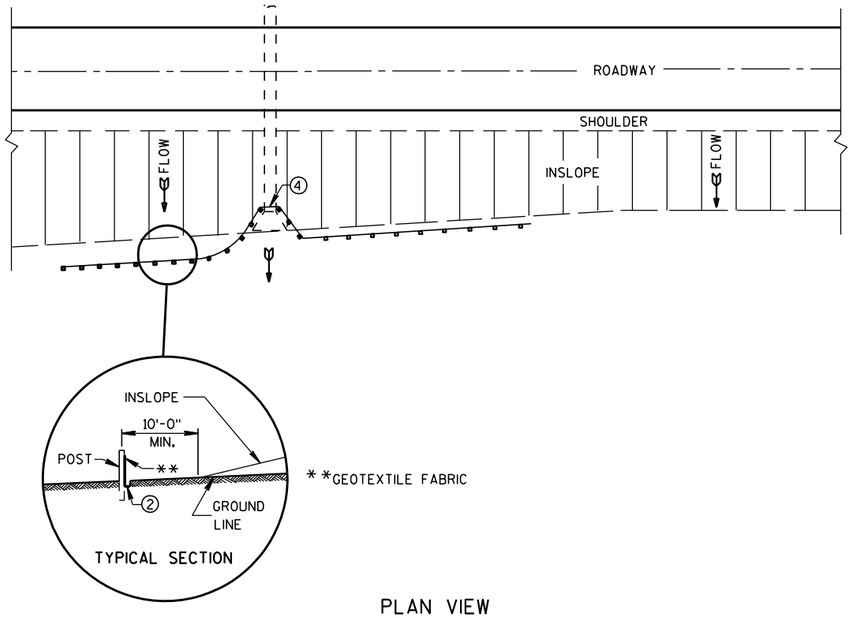
EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

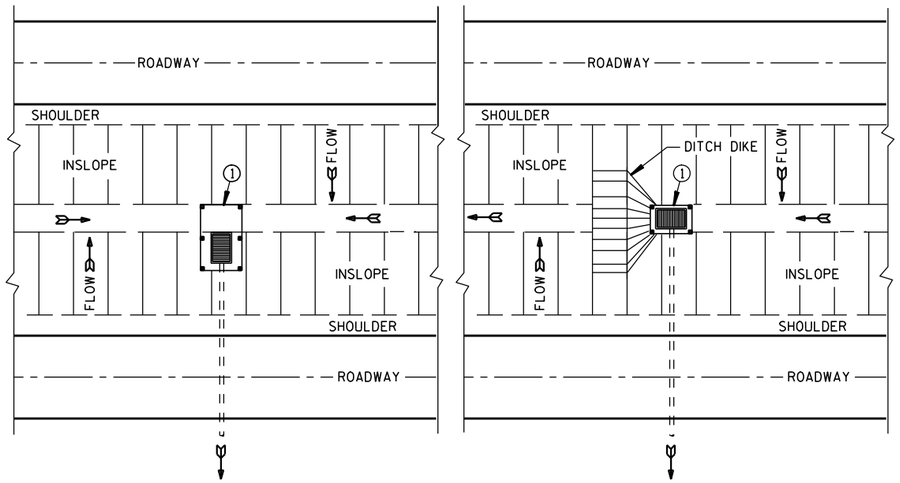
APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



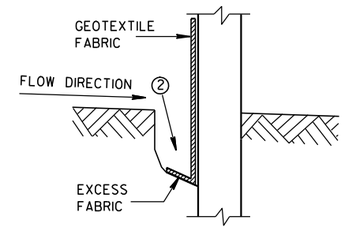
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

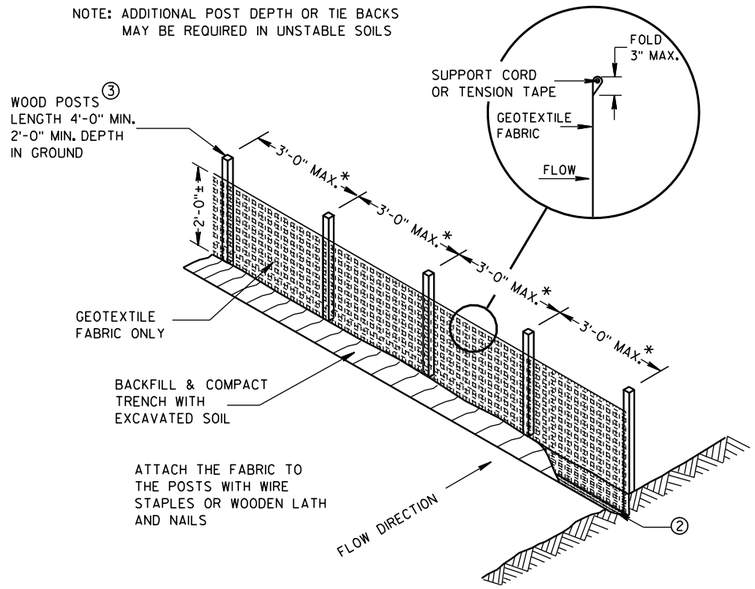
GENERAL NOTES

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

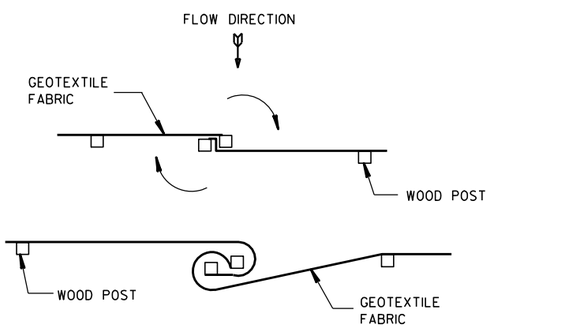
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



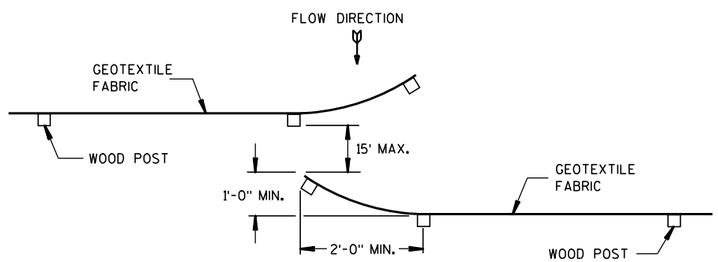
TRENCH DETAIL



SILT FENCE

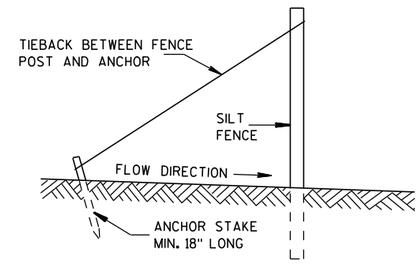


TWIST METHOD



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

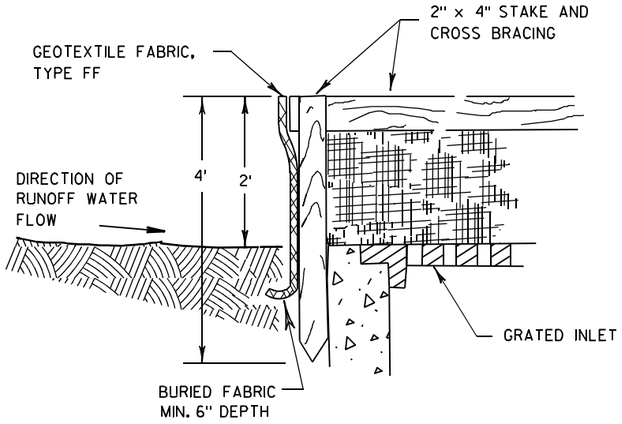
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

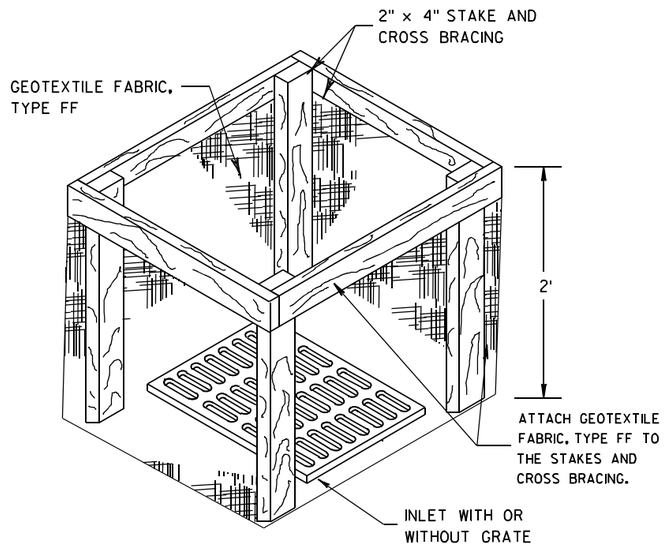
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S.D.D. 8 E 9-6

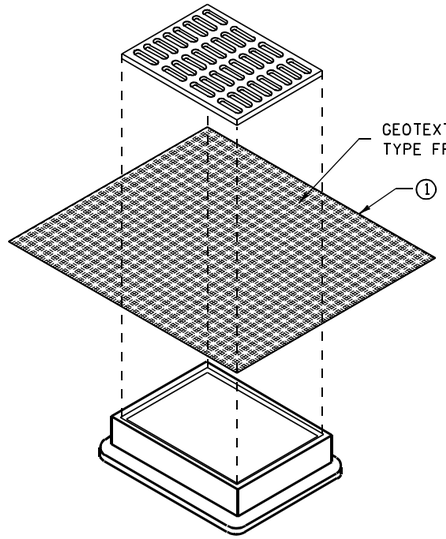
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S.D.D. 8 E 9-6



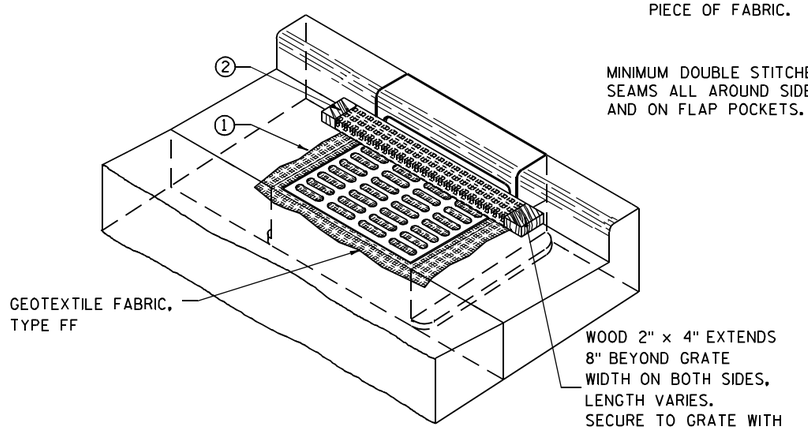


INLET PROTECTION, TYPE A

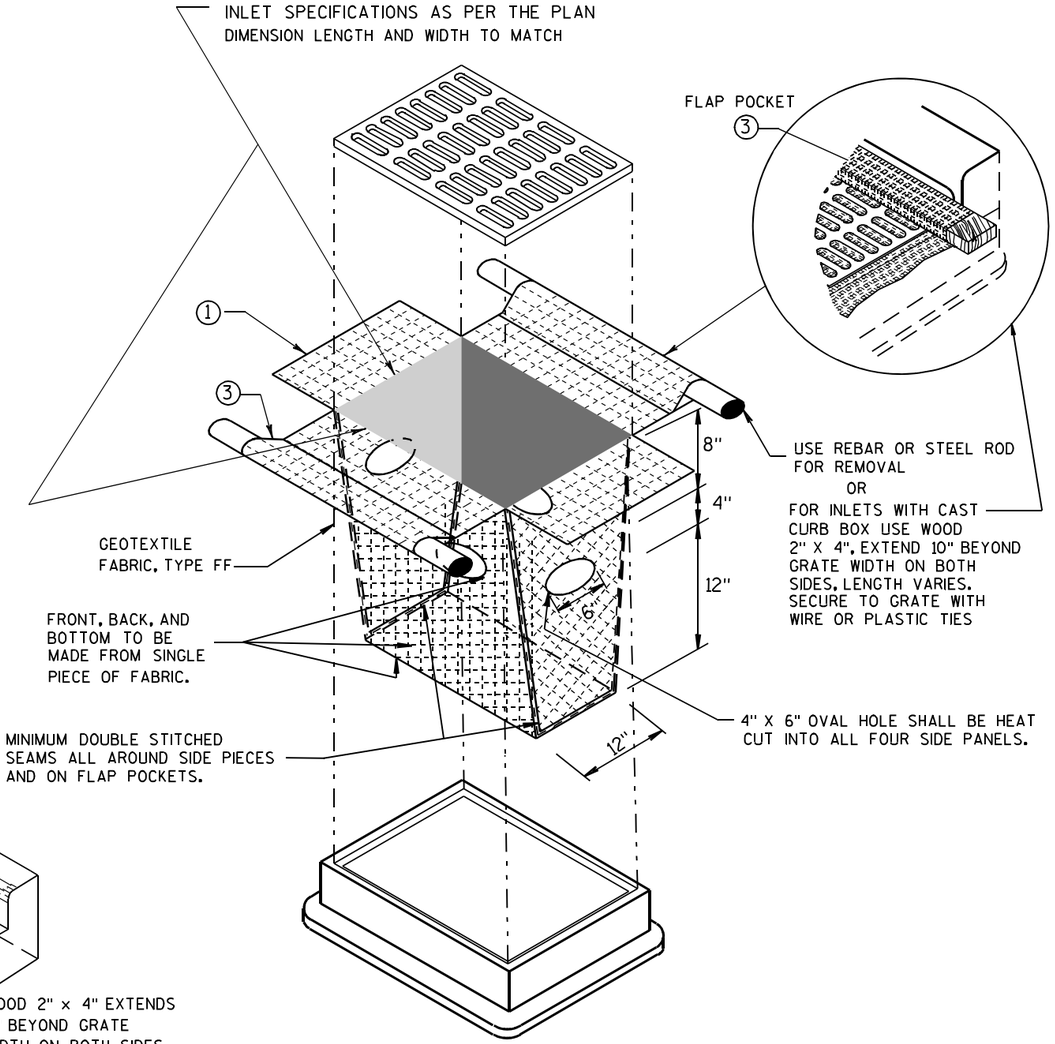


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 8 E 10-2

GENERAL NOTES

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

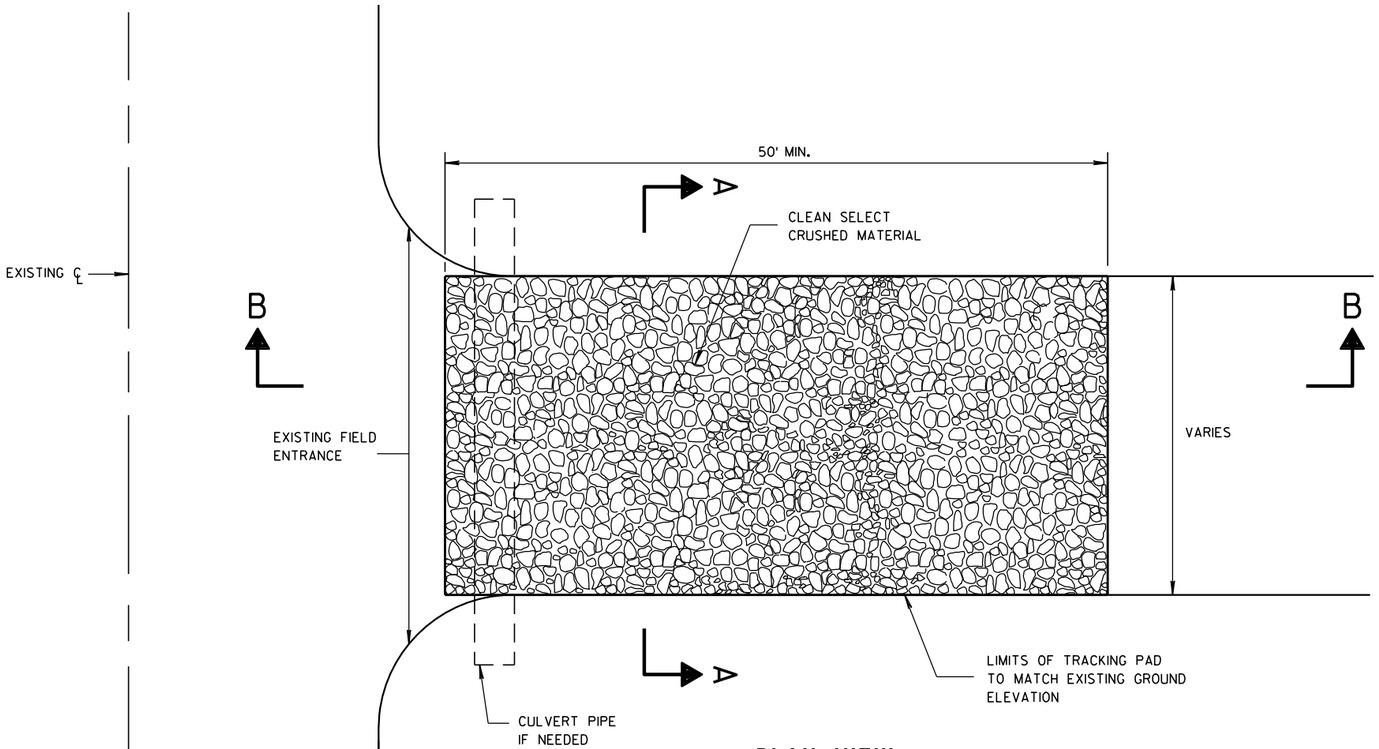
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

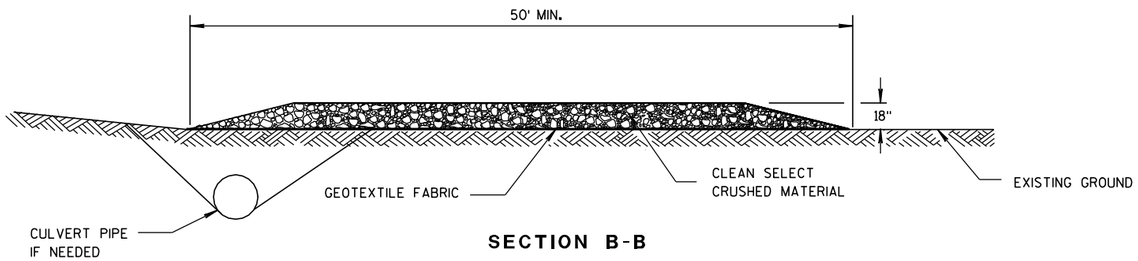
SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

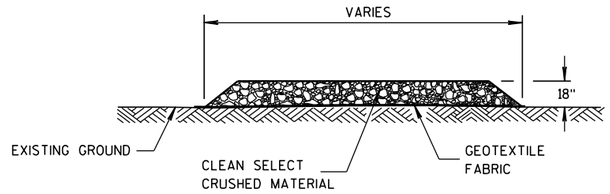
THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



PLAN VIEW



SECTION B-B



SECTION A-A

TRACKING PAD

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 E 14-1

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

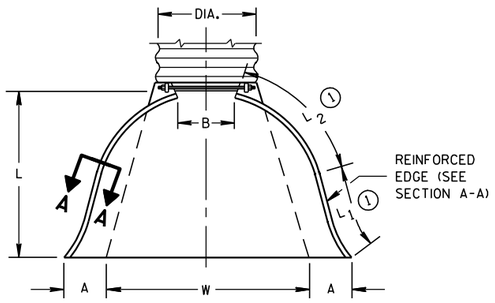
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

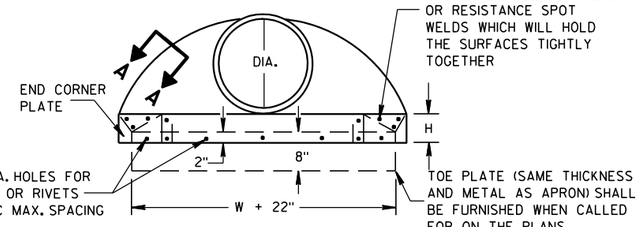
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

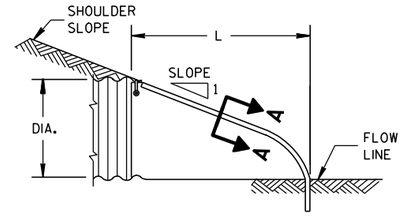
*MINIMUM
**MAXIMUM



PLAN VIEW

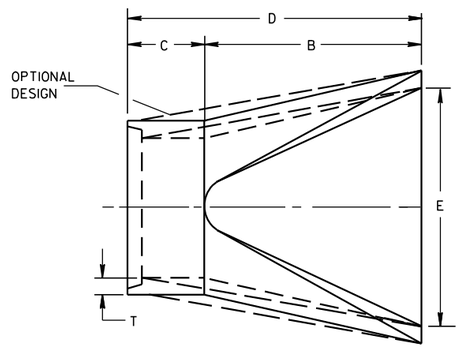


END VIEW

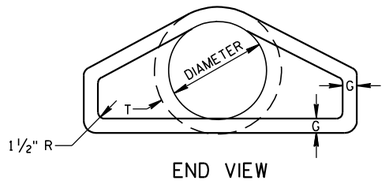


SIDE ELEVATION

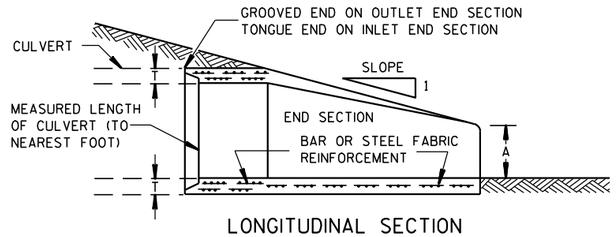
METAL ENDWALLS



PLAN

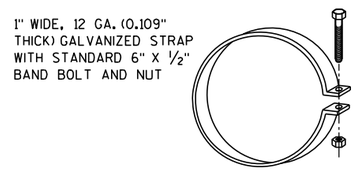


END VIEW



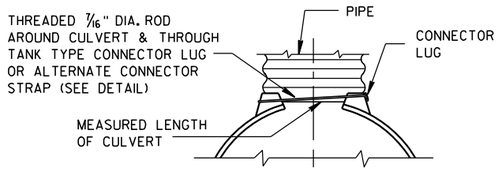
LONGITUDINAL SECTION

CONCRETE ENDWALLS

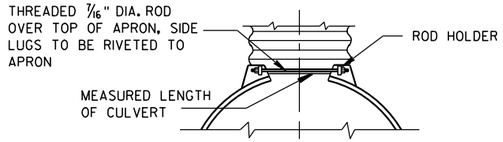


ALTERNATE FOR TYPE 1 CONNECTION

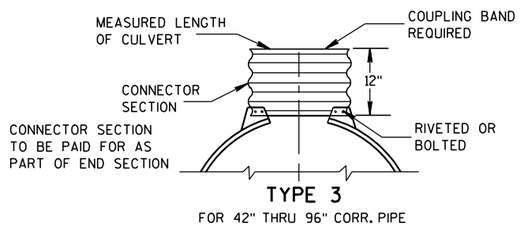
END SECTION CONNECTOR STRAP



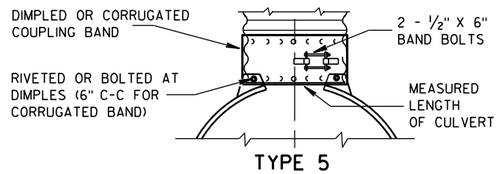
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

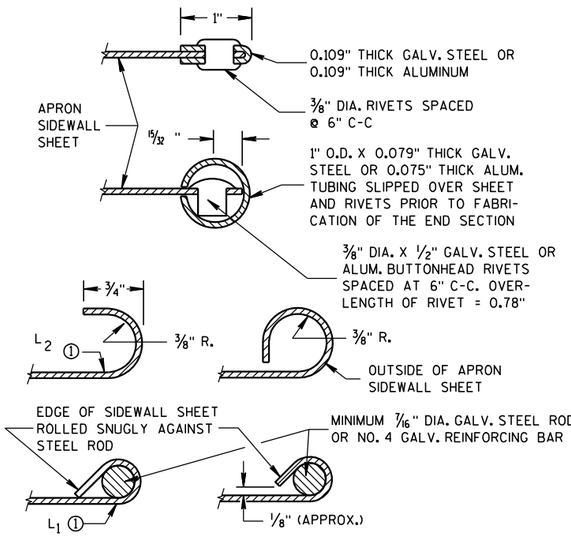
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

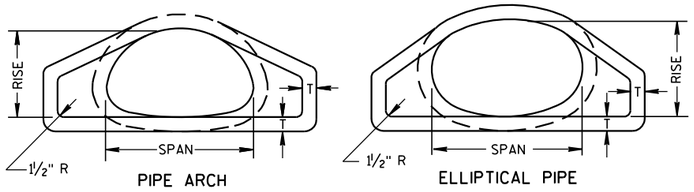
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

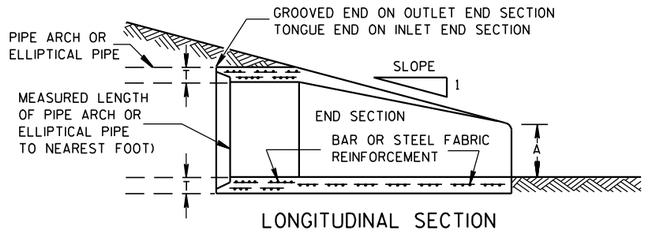
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

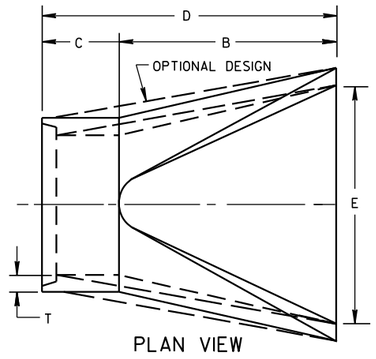
6
S.D.D. 8 F 1-11



END VIEW

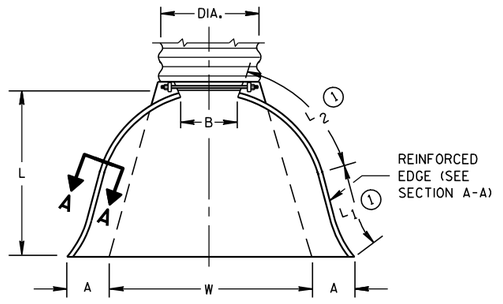


LONGITUDINAL SECTION

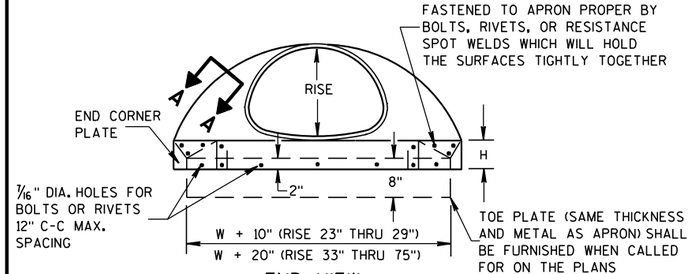


PLAN VIEW

CONCRETE ENDWALLS

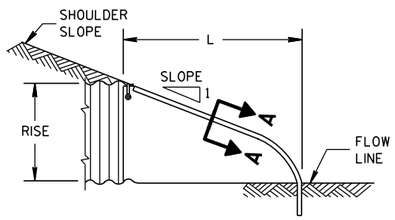


PLAN VIEW



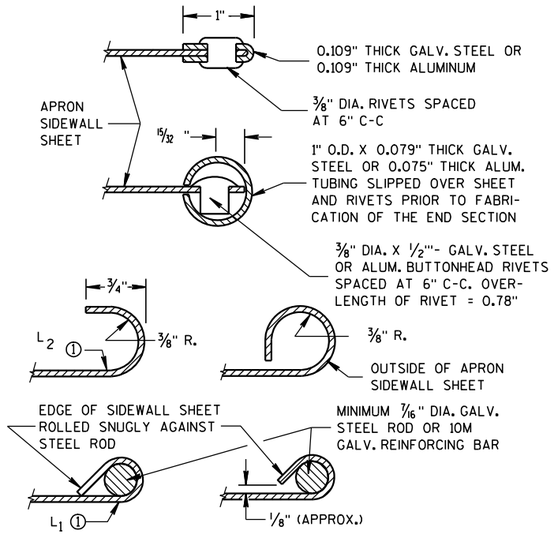
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

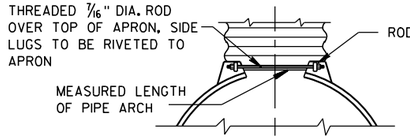
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

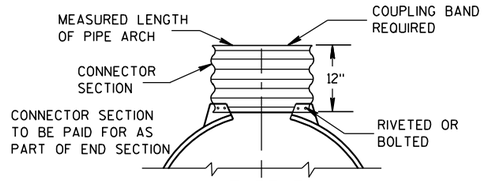
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



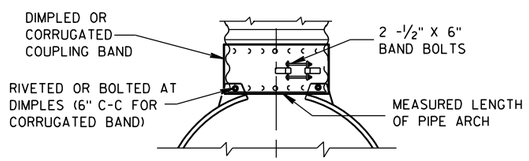
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

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.

CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

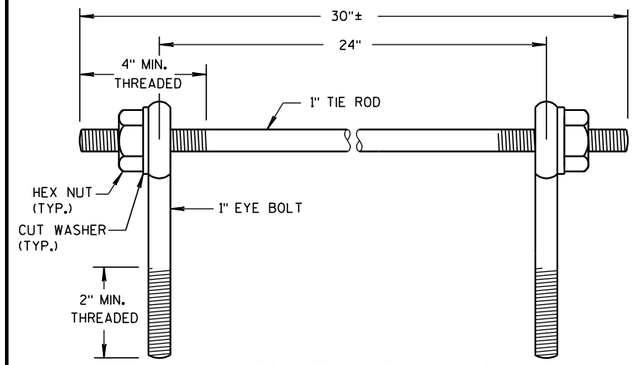
FHWA

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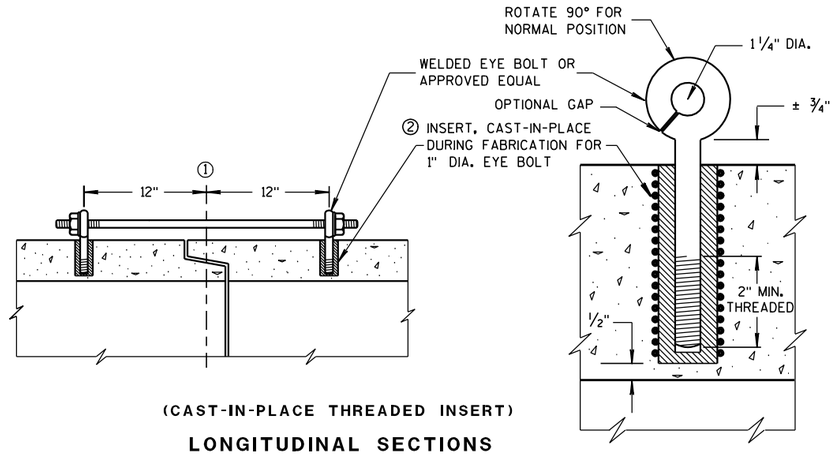
S.D.D. 8 F 2-1

6

S.D.D. 8 F 2-1



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.

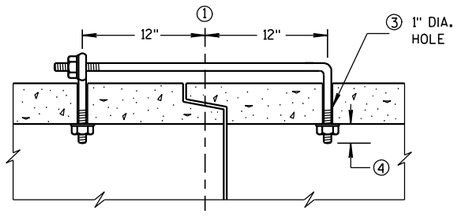
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

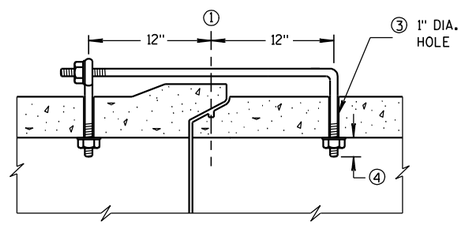
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

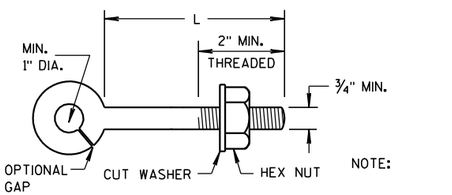


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

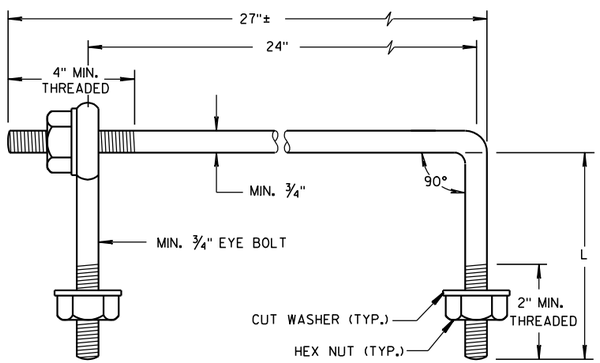
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

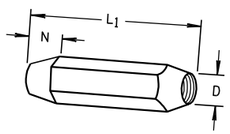
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

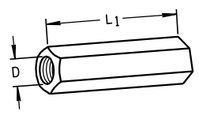
ADJUSTABLE TIE ROD TABLE

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



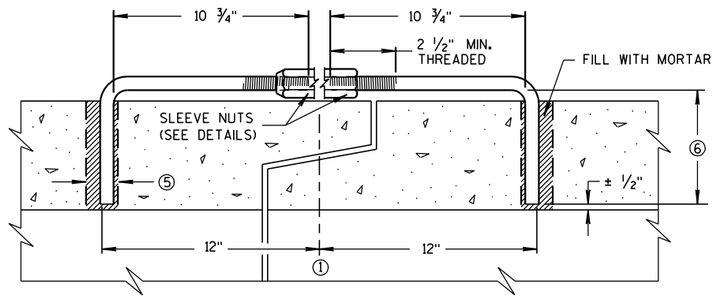
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PLAIN

RIGHT AND LEFT THREADS

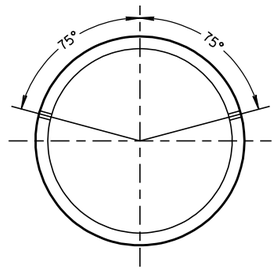
SLEEVE NUTS



LONGITUDINAL SECTION

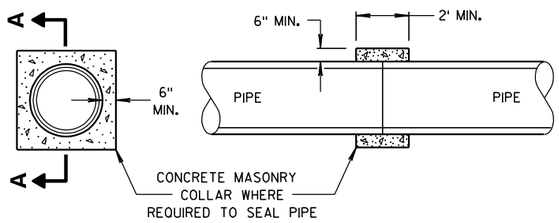
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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

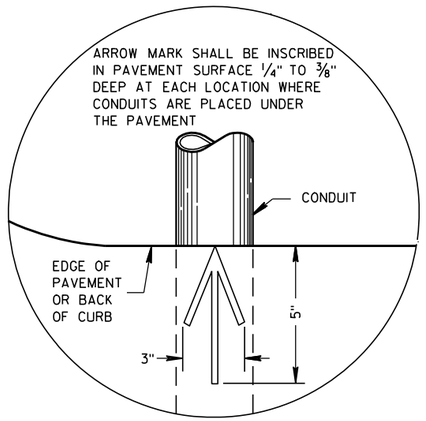
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 F 4-7

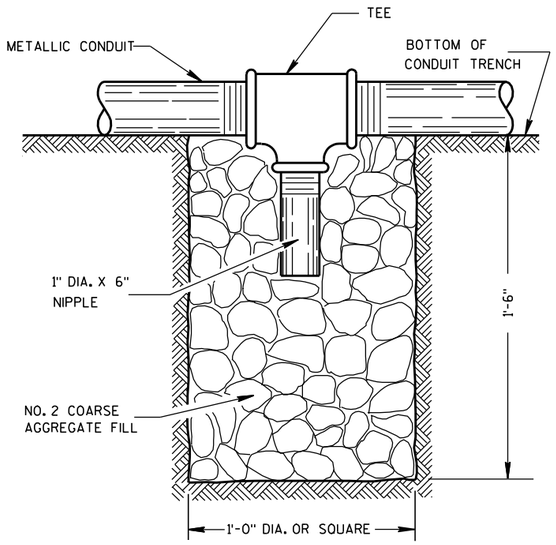
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S.D.D. 8 F 4-7



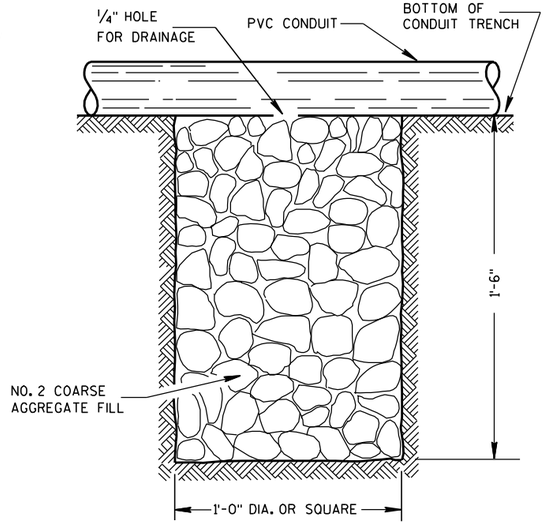
PLAN VIEW

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.

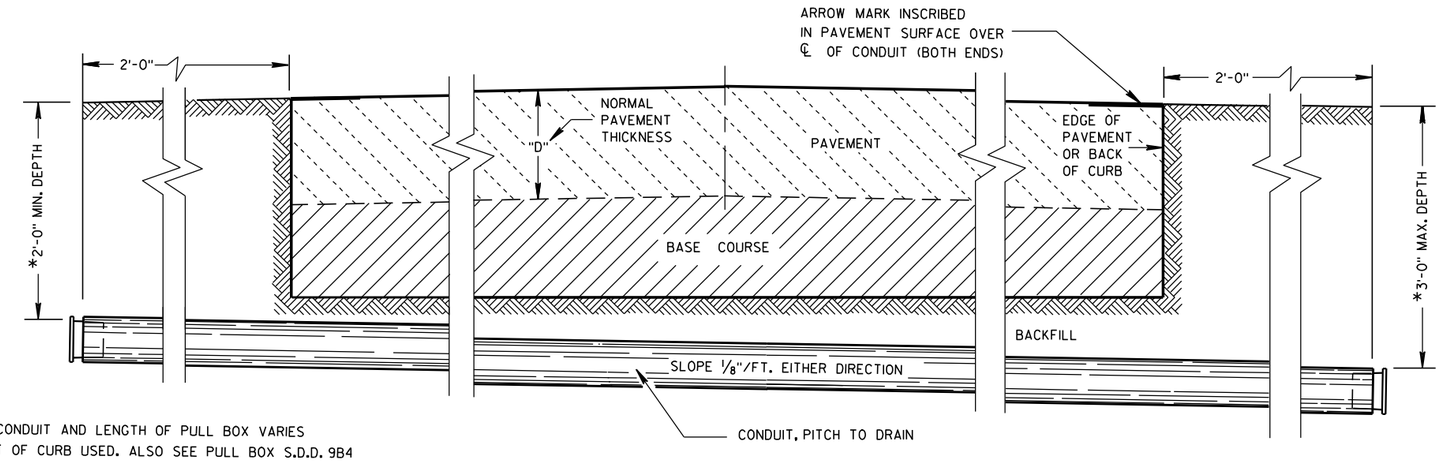
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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 347 HWYS

FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

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

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

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

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. THE MECHANICAL CONNECTION (INSIDE AND OUTSIDE) TO THE PULL BOX, SHALL BE TOTALLY AND PERMANENTLY SEALED WITH A SILICONE OR RUBBERIZED CAULKING COMPOUND AS APPROVED BY THE ENGINEER.

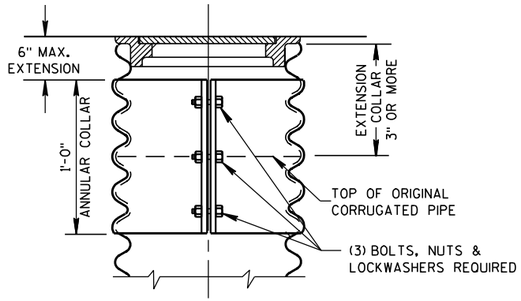
GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

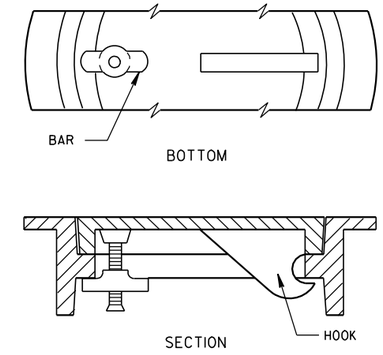
S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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.

IF PULL BOX EQUIPMENT GROUNDING IS REQUIRED USING AN EQUIPMENT GROUNDING ELECTRODE IN EACH PULL BOX, THE EQUIPMENT GROUNDING ELECTRODE SHALL BE 5/8" X 8'-0", COPPERCLAD AND BE EXOTHERMICALLY WELDED TO A #4 AWG, COPPER, STRANDED WIRE (BARE OR GREEN INSULATED). THE #4 AWG WIRE SHALL BE 4 FEET IN LENGTH, NEATLY COILED, TAPED AND AVAILABLE FOR USE WHEN REQUIRED.

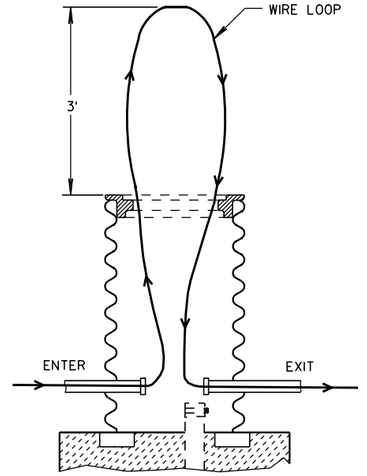


CORRUGATED PIPE EXTENDER

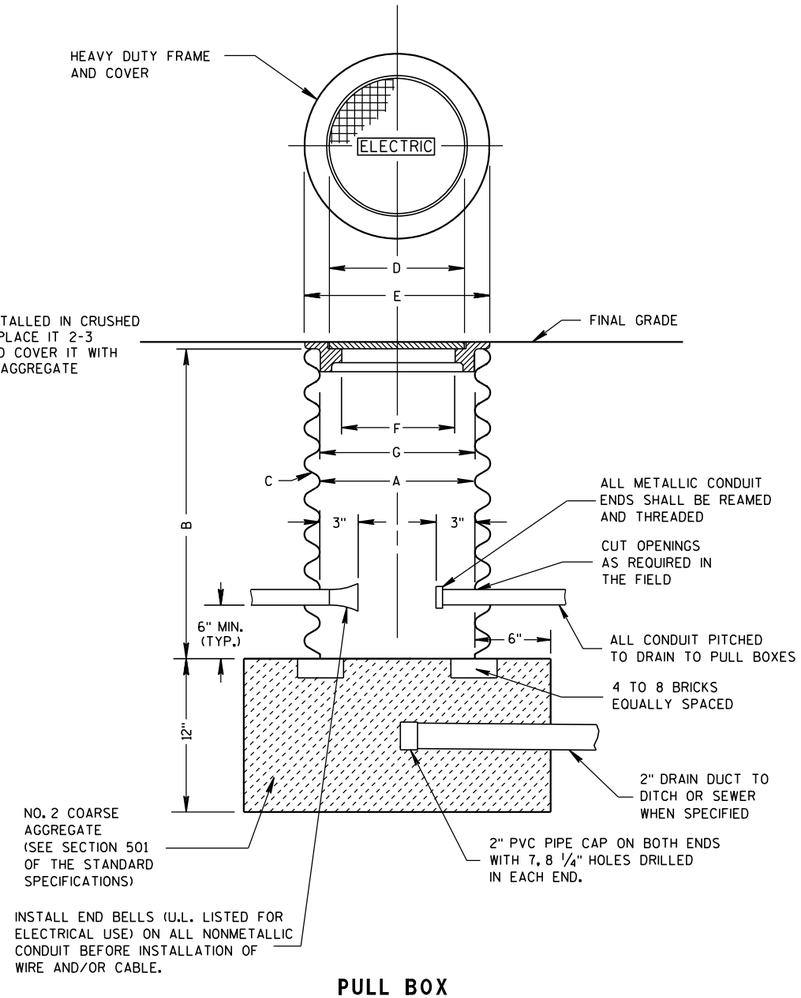


ALTERNATE COVER (LOCKING)

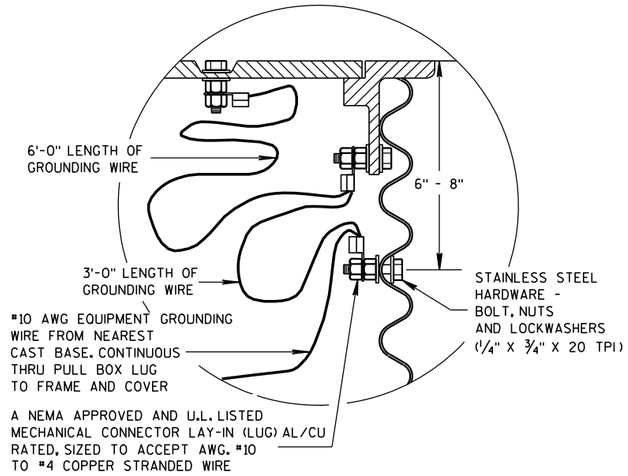
TIGHTENING BAR TYPE



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/27/06 DATE

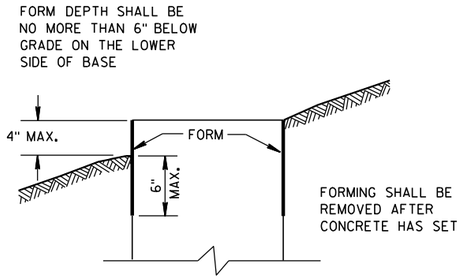
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI

HWYS

FHWA

6

S.D.D. 9 B 4-9



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.

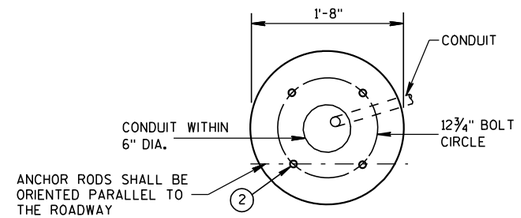
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

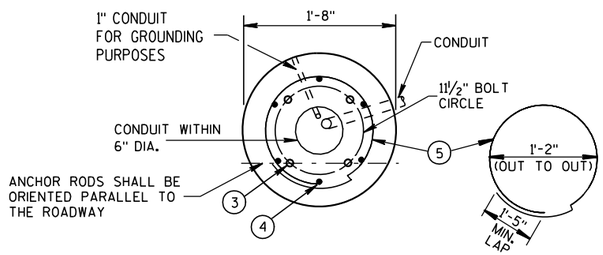
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

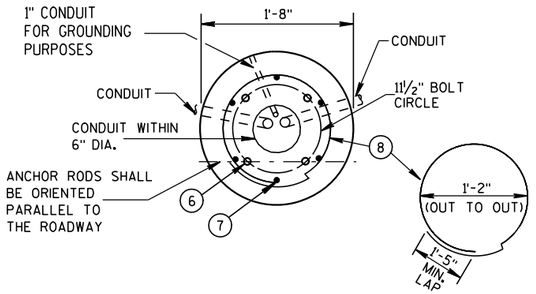
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

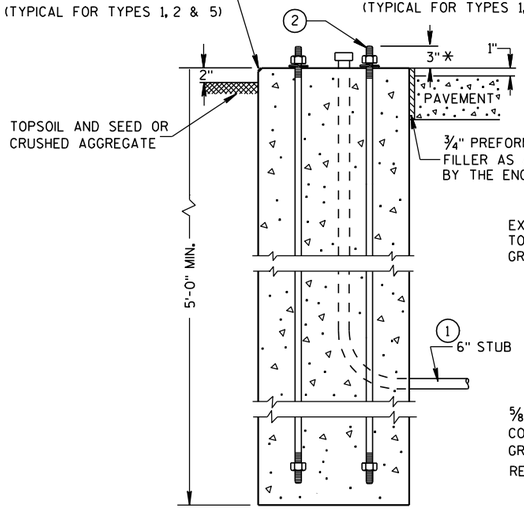






FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

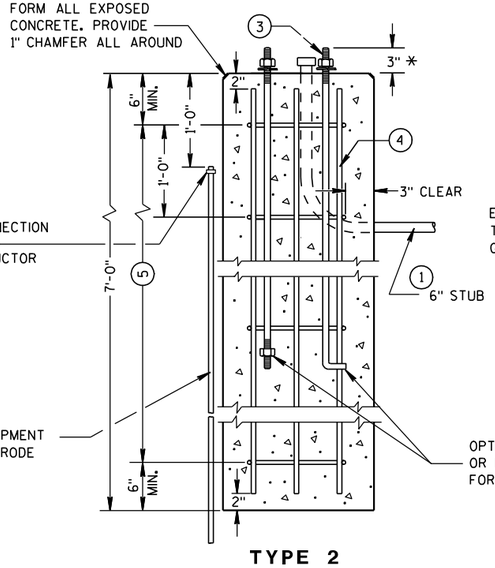
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)



HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2 & 5)

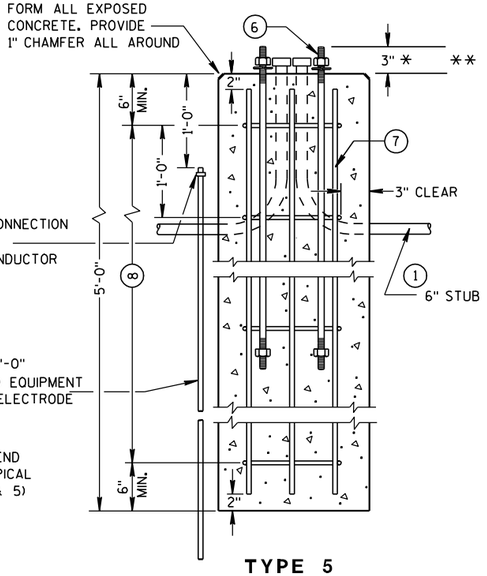
TYPE 1

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



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
349 — HWYS
FHWA

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.

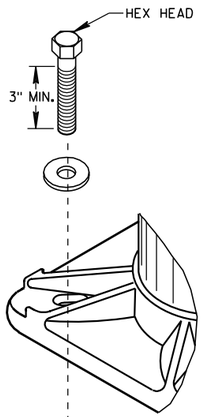
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

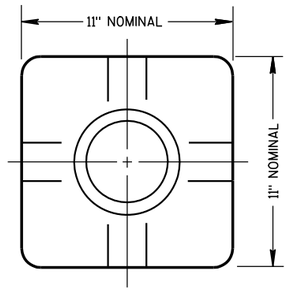
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

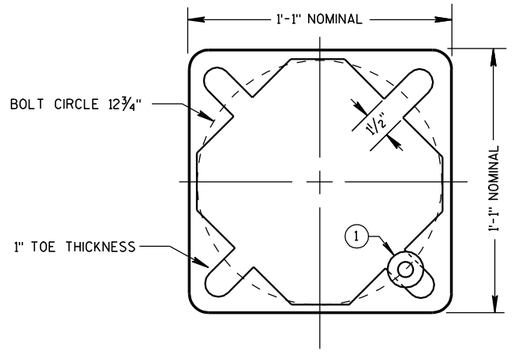
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

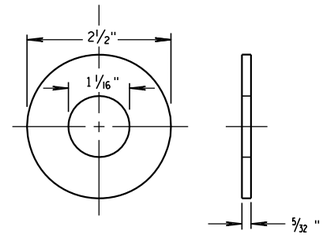




TOP VIEW
(PEDESTAL BASE)

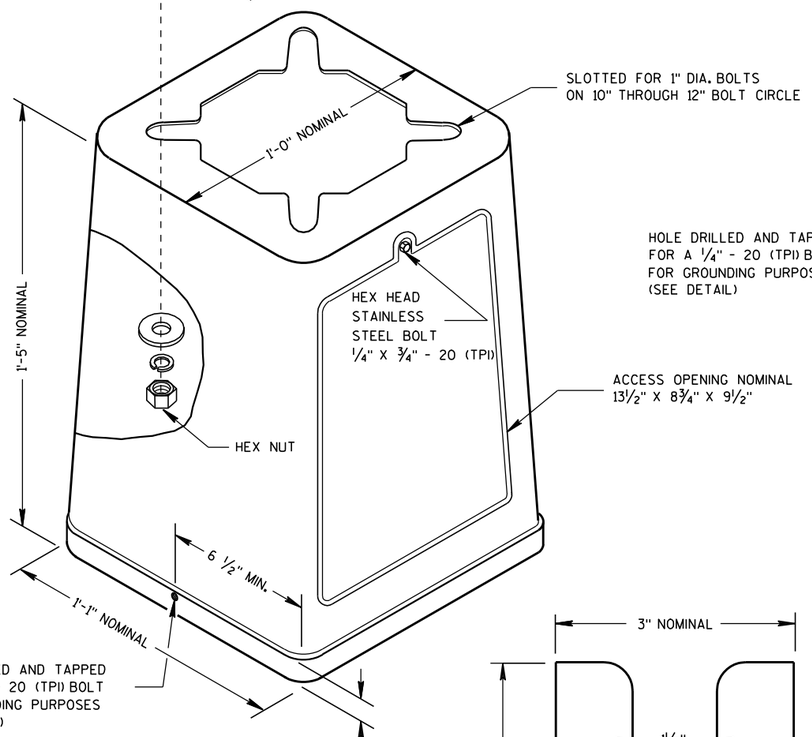


BOTTOM VIEW
(PEDESTAL BASE)

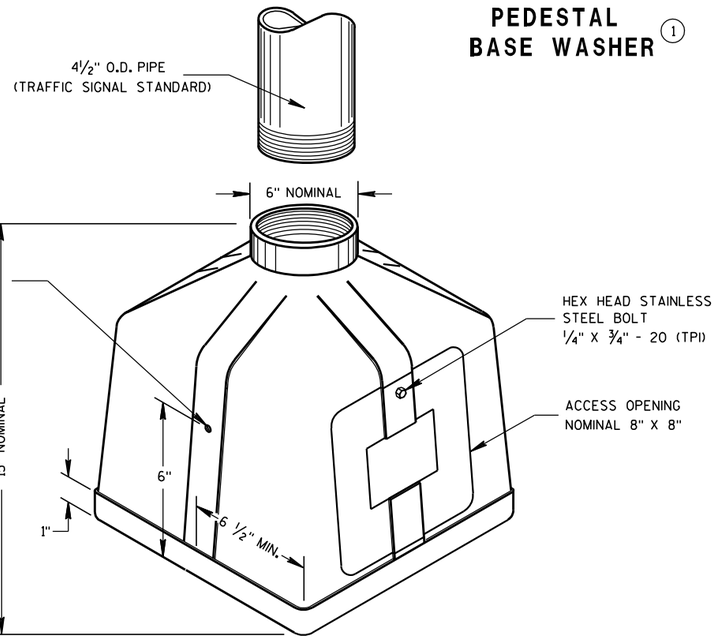


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

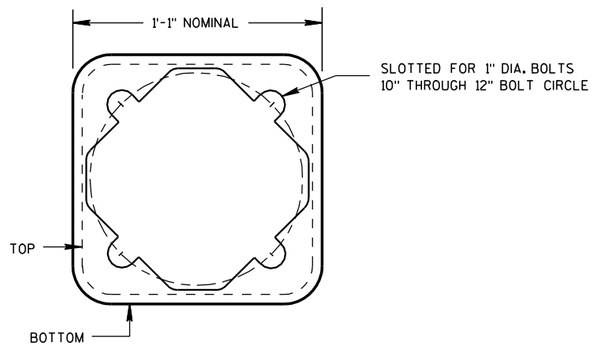


ISOMETRIC VIEW

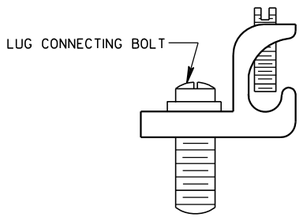


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

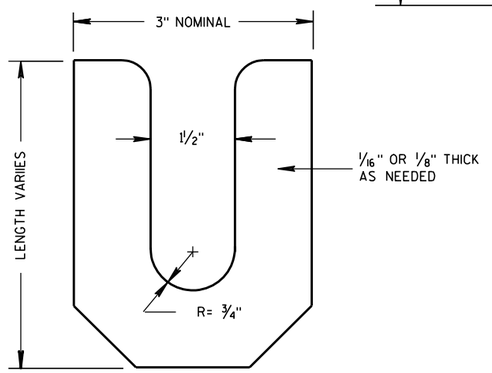


TYPICAL MECHANICAL CONNECTOR LUG

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

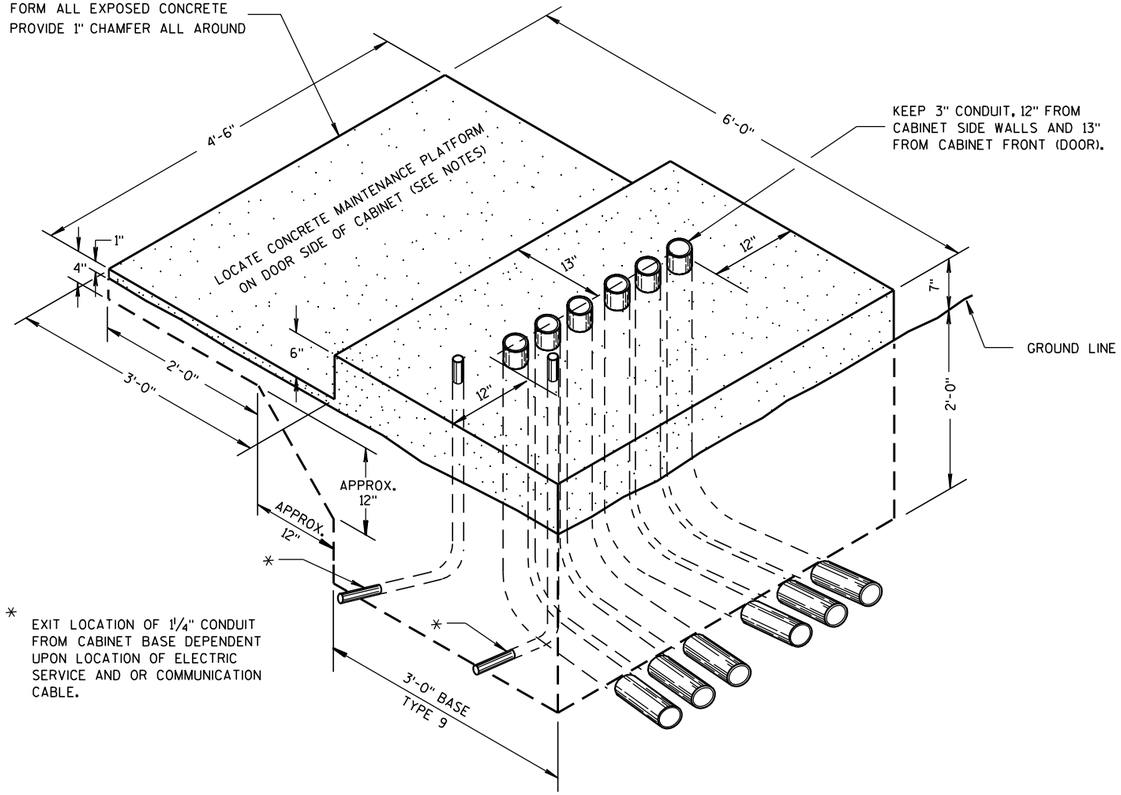
APPROVED
10/27/09 — DATE
/S/ Joanna L. [illegible] — STATE ELECTRICAL ENGI
350
HWYS
FHWA

6

S.D.D. 9 C 3-3

6

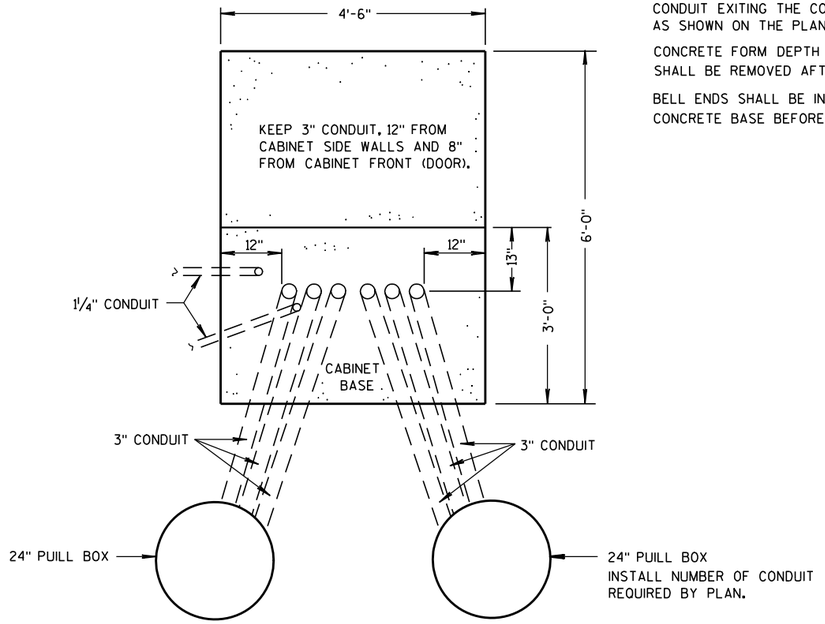
S.D.D. 9 C 3-3



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

2/27/07 — DATE

/S/ Balu Ananthapadmanabhan — STATE ELECTRICAL ENGI 351 HWYS

FHWA

6

6

S.D.D. 9 C 6-5

S.D.D. 9 C 6-5

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).

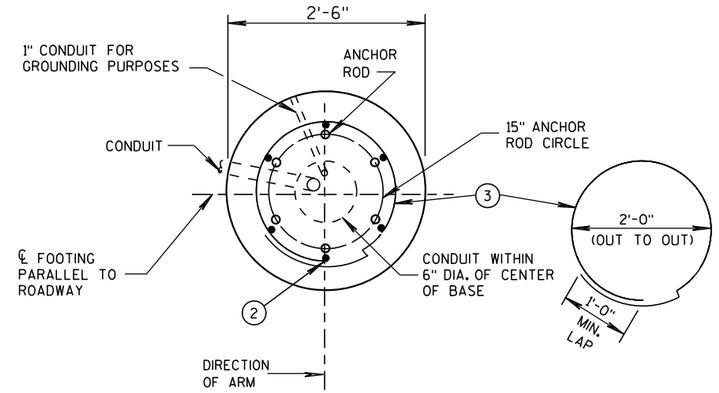
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

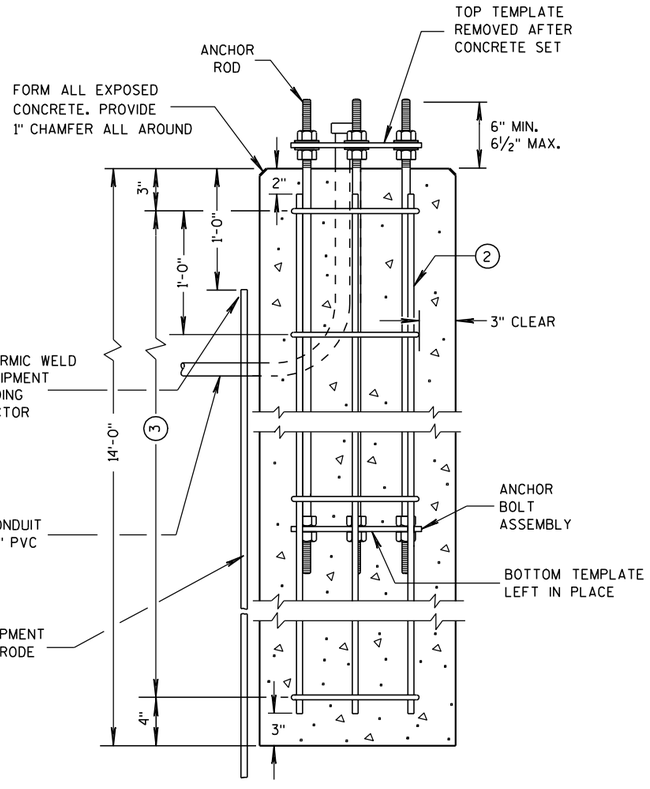
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES. (GREATER THAN 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.

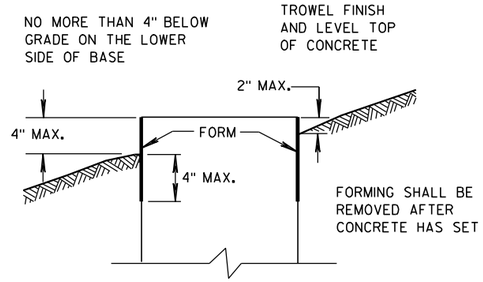
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



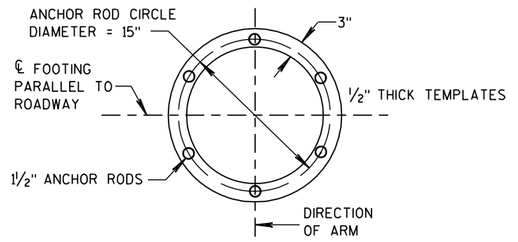


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

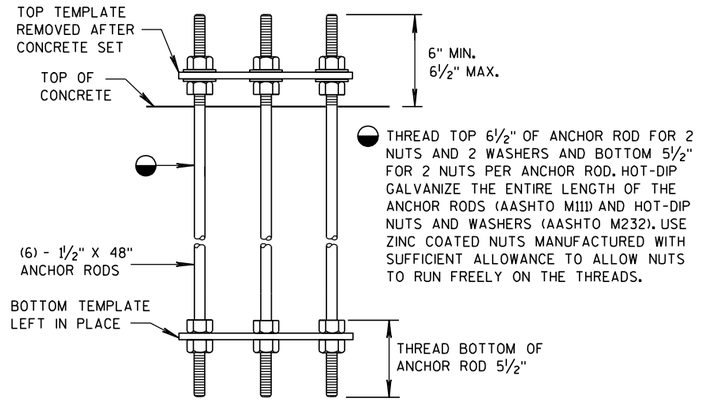
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-1 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



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

3-2-11 DATE

/S/ Thomas J. Corrigan
STATE ELECTRICAL ENGI

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HWYS

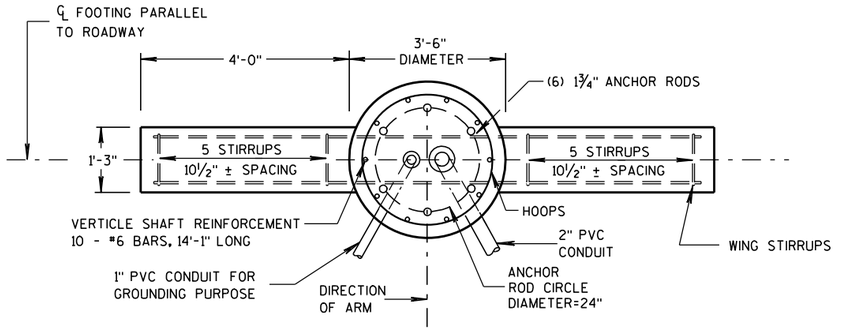
FHWA

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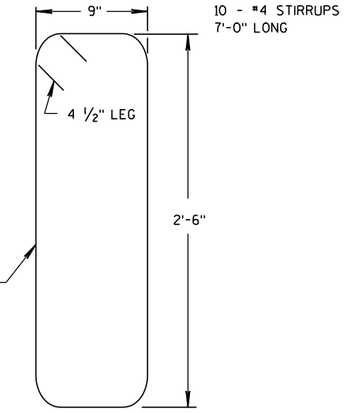
S.D.D. 9 C 11-2

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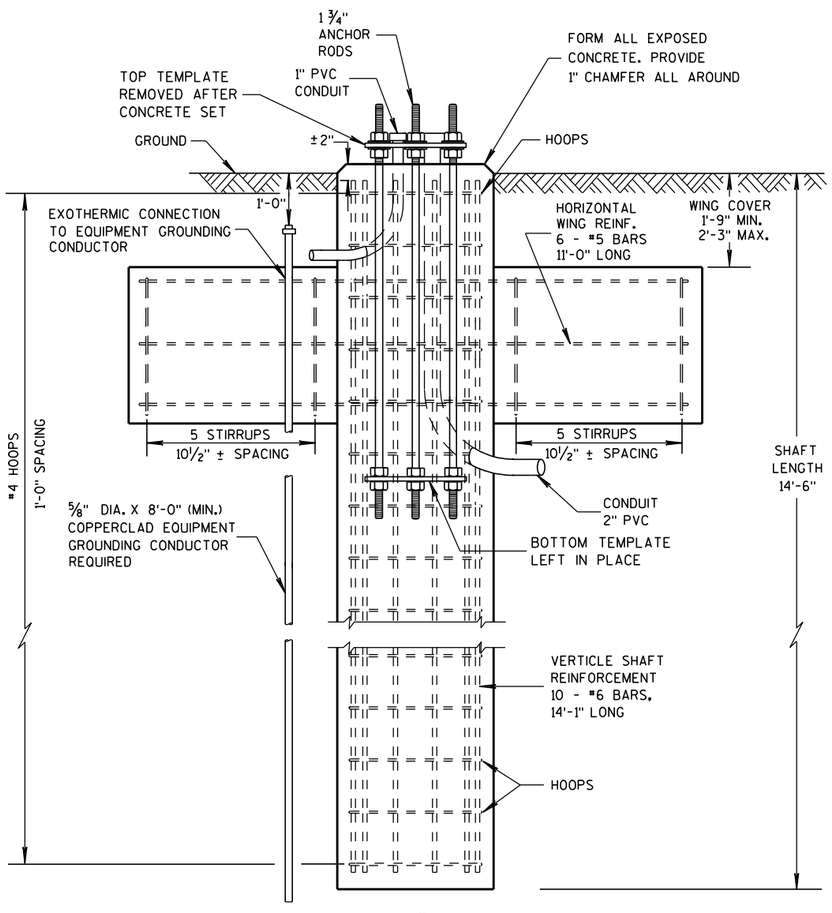
S.D.D. 9 C 11-2



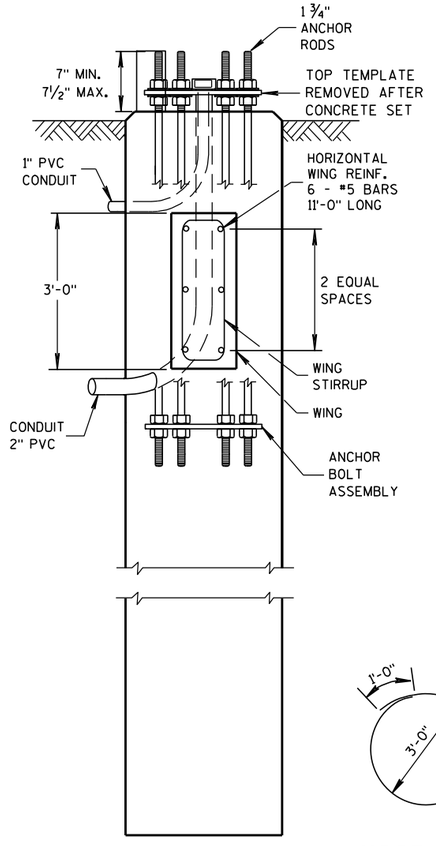
PLAN VIEW



WING STIRRUP

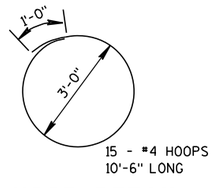


ELEVATION VIEW



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.

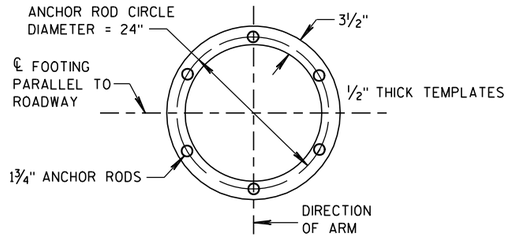
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-1 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 13

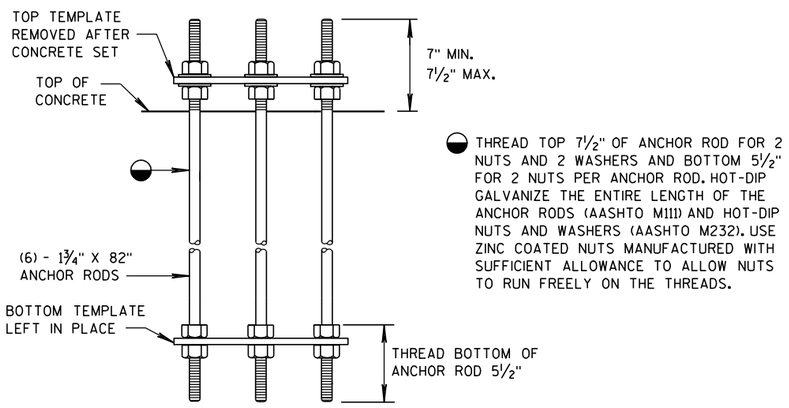
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 9 C 12-2a
S.D.D. 9 C 12 -2a

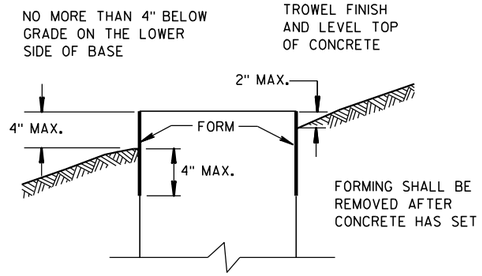


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3-2-11 DATE

/S/ Thomas J. Cearlock
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S.D.D. 9 C 12-2b

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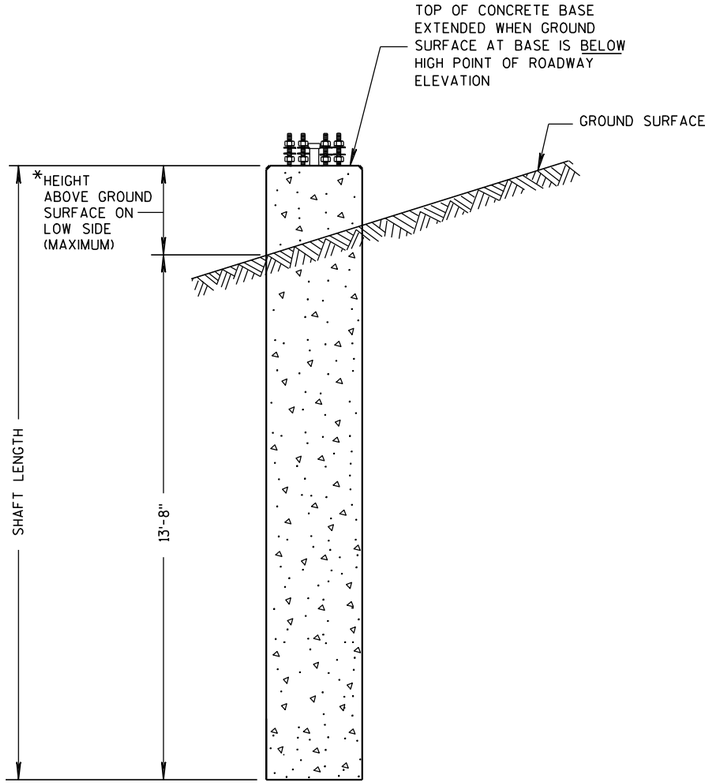
S.D.D. 9 C 12-2b

REINFORCEMENT AND CONCRETE QUANTITIES ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

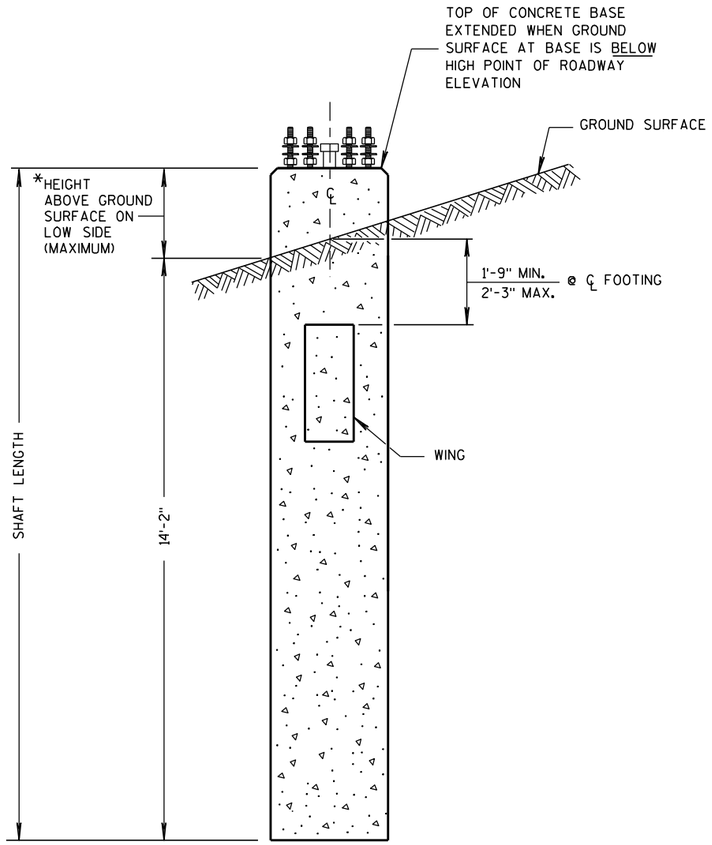
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 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

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 10 (EXTENDED)



CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3-3-10 DATE — /S/ Joanna L. Rush STATE ELECTRICAL ENGI — HWYS

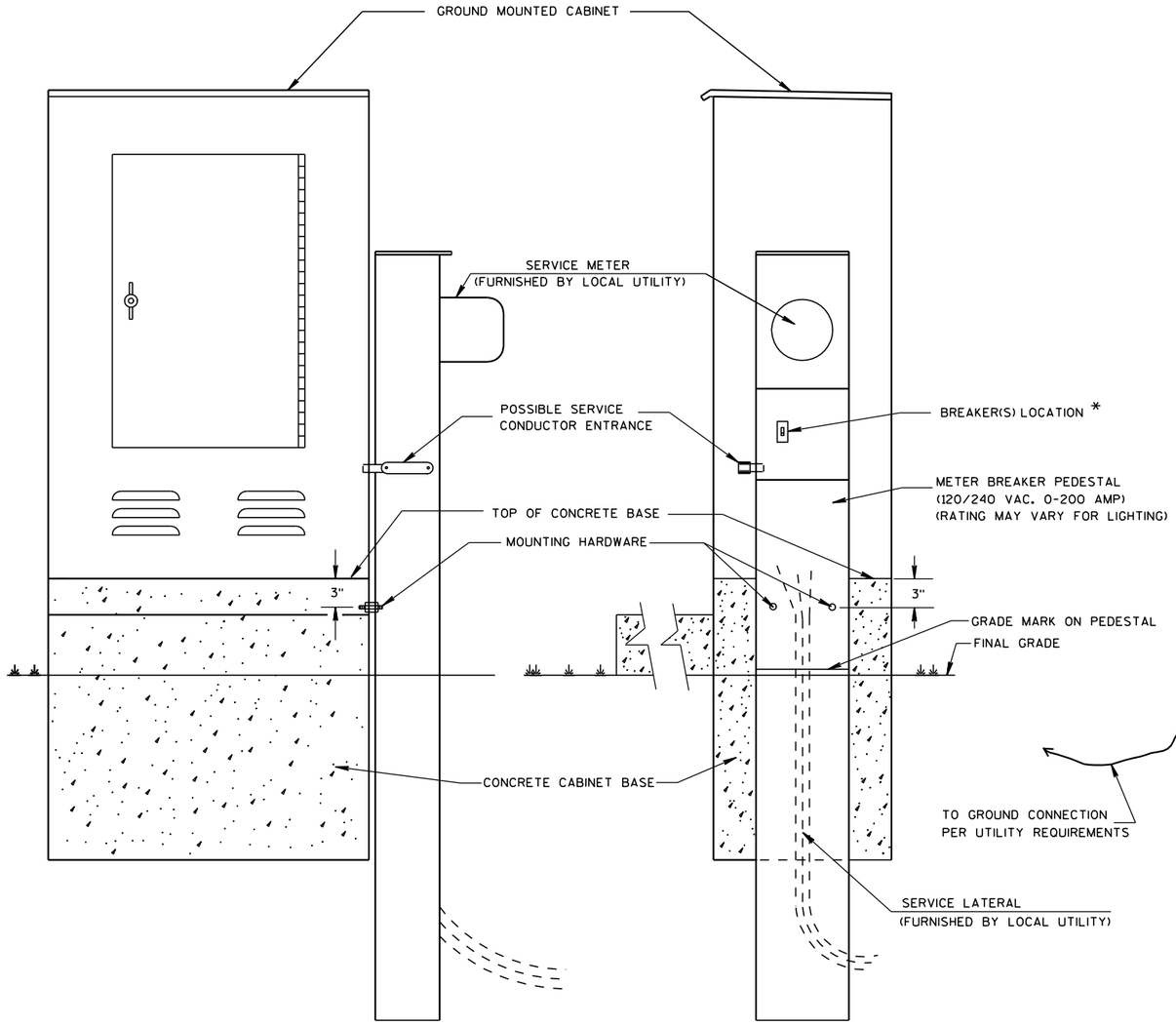
FHWA

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S.D.D. 9 C 13-1

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S.D.D. 9 C 13-1



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.

6

S.D.D. 9 D 1-4

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S.D.D. 9 D 1-4

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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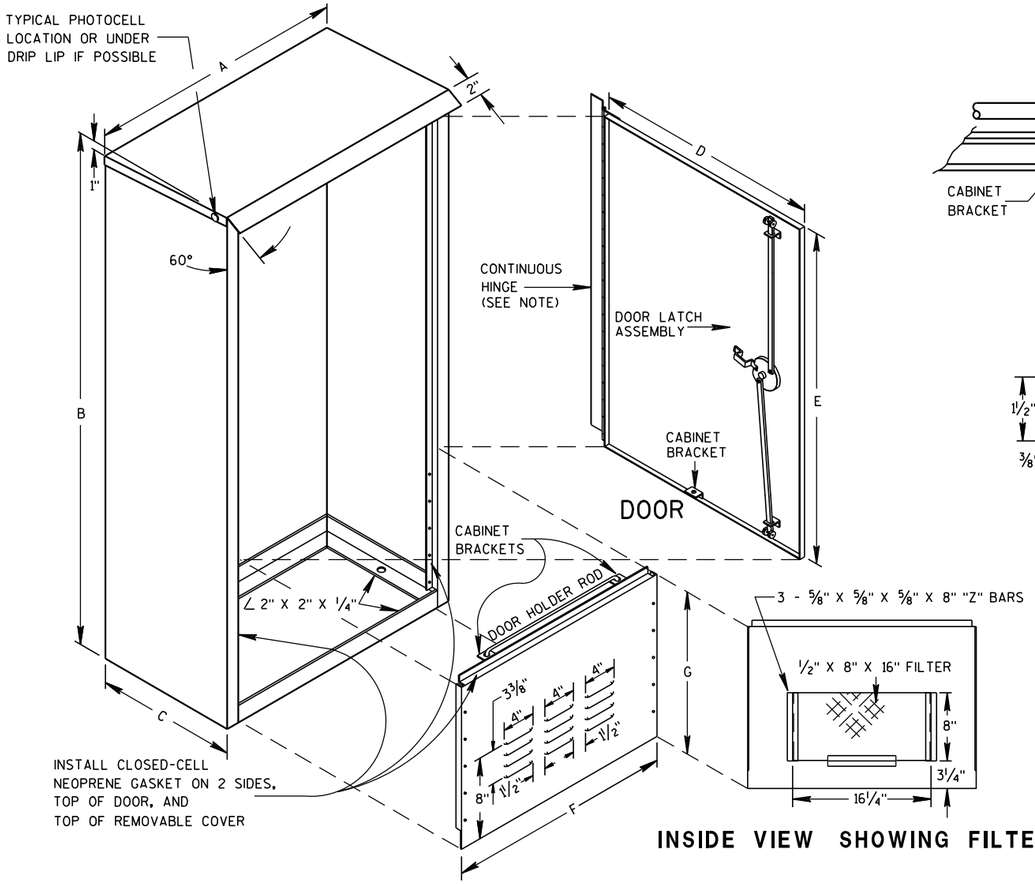
10/27/09
DATE

/S/ Joanna L. Bush
STATE ELECTRICAL ENGI

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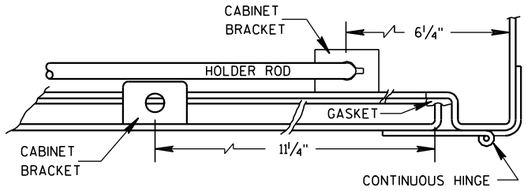
HWYS

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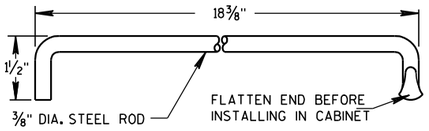


REMOVABLE COVER

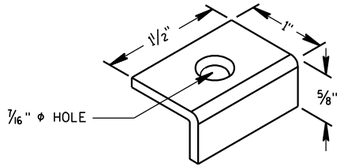
INSIDE VIEW SHOWING FILTER



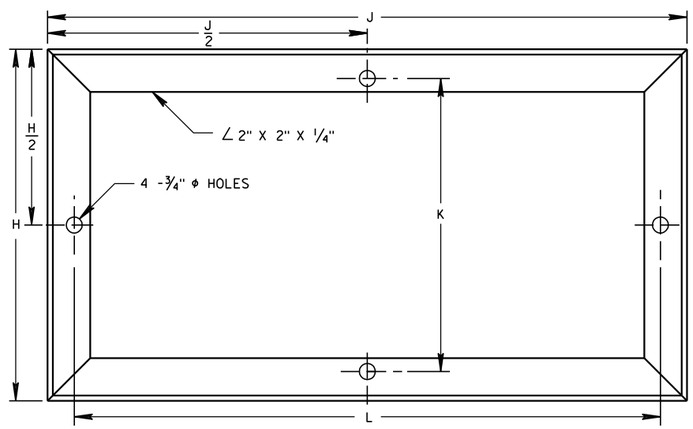
HINGE & DOOR HOLDER



HOLDER ROD



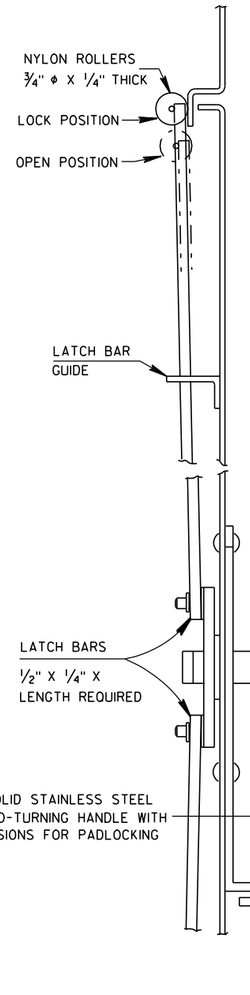
CABINET BRACKET



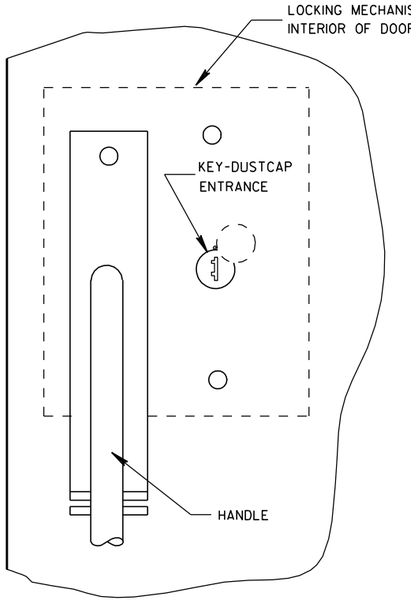
MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2

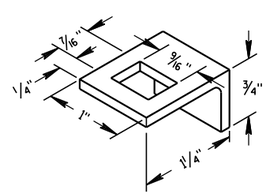


SIDE VIEW



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.

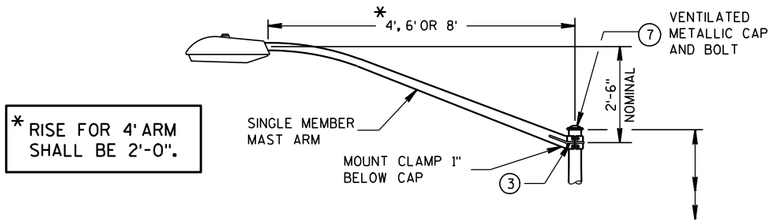
A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE AN APPROVED TYPE.

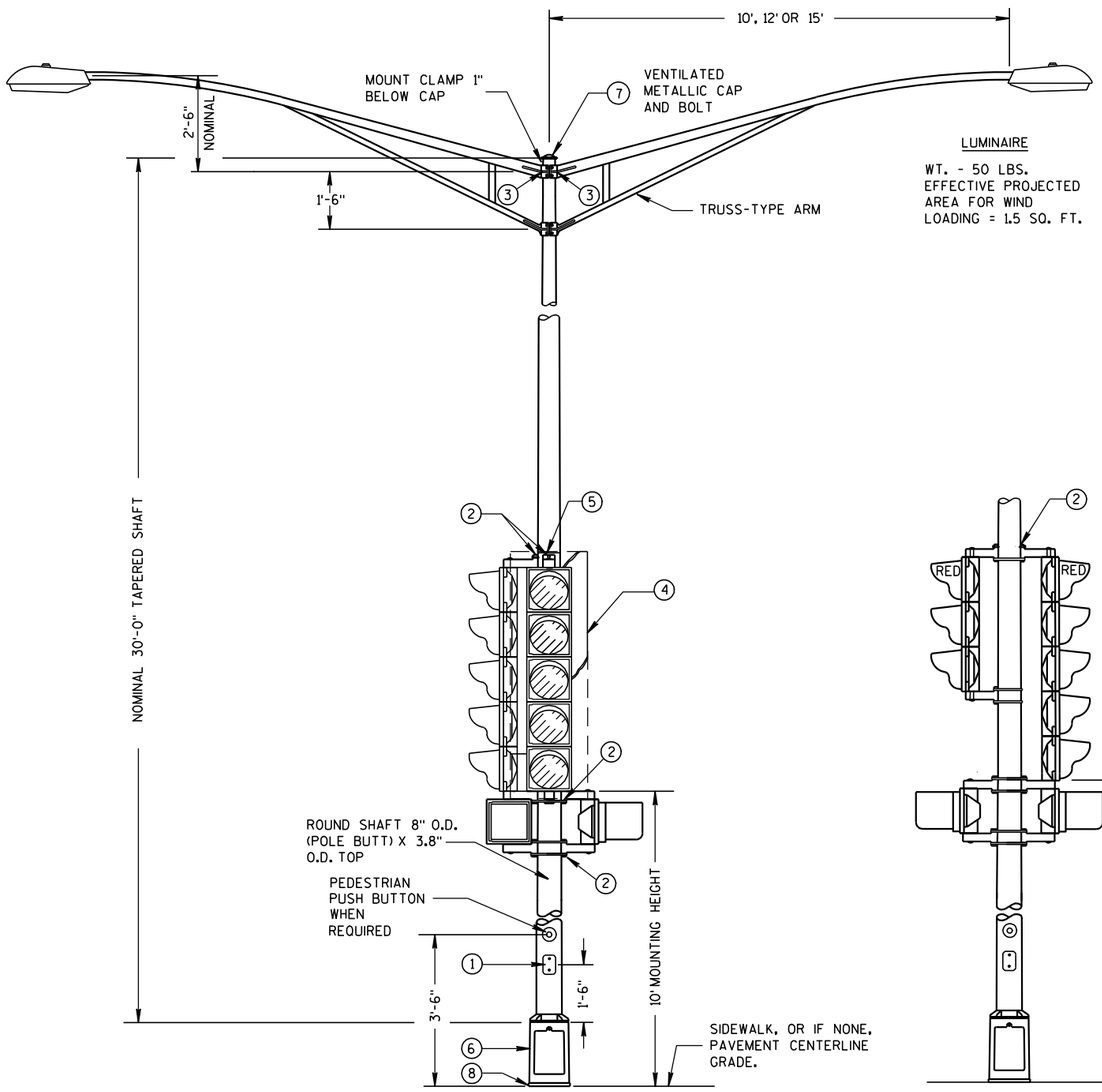
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.

SIGNAL OR LIGHTING CONTROL CABINET

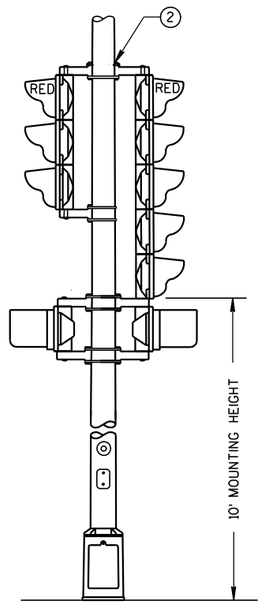
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/21/96 — DATE
/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI 357 HWYS
FHWA

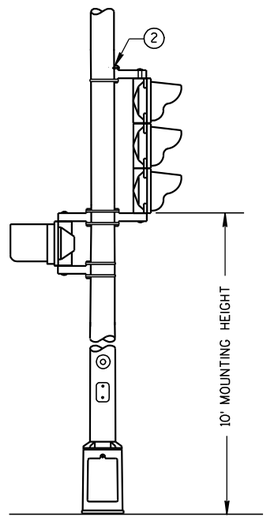




(MAXIMUM LOAD)

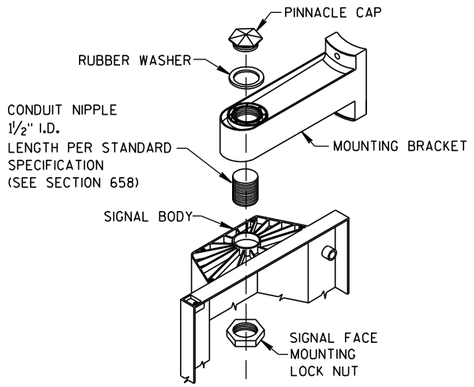


TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 4 POLE MOUNTING CONFIGURATION



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.

ALL TYPE 4 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

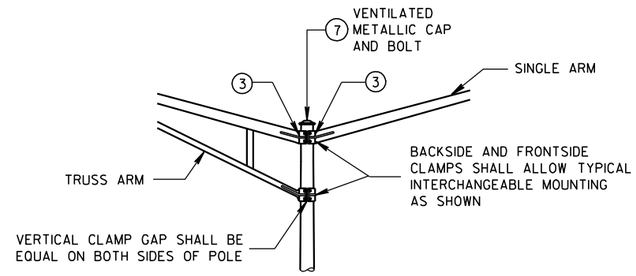
POLES SHALL BE GALVANIZED STEEL WITH A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

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

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, 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. CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
7. FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
8. SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.



INTERCHANGEABLE MOUNTING DETAIL

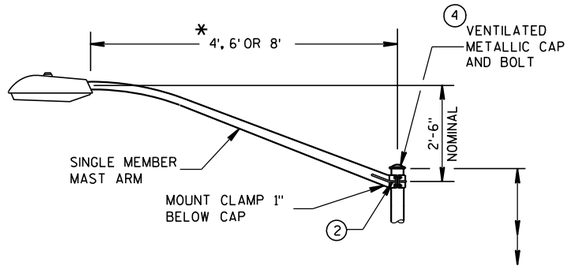
POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4

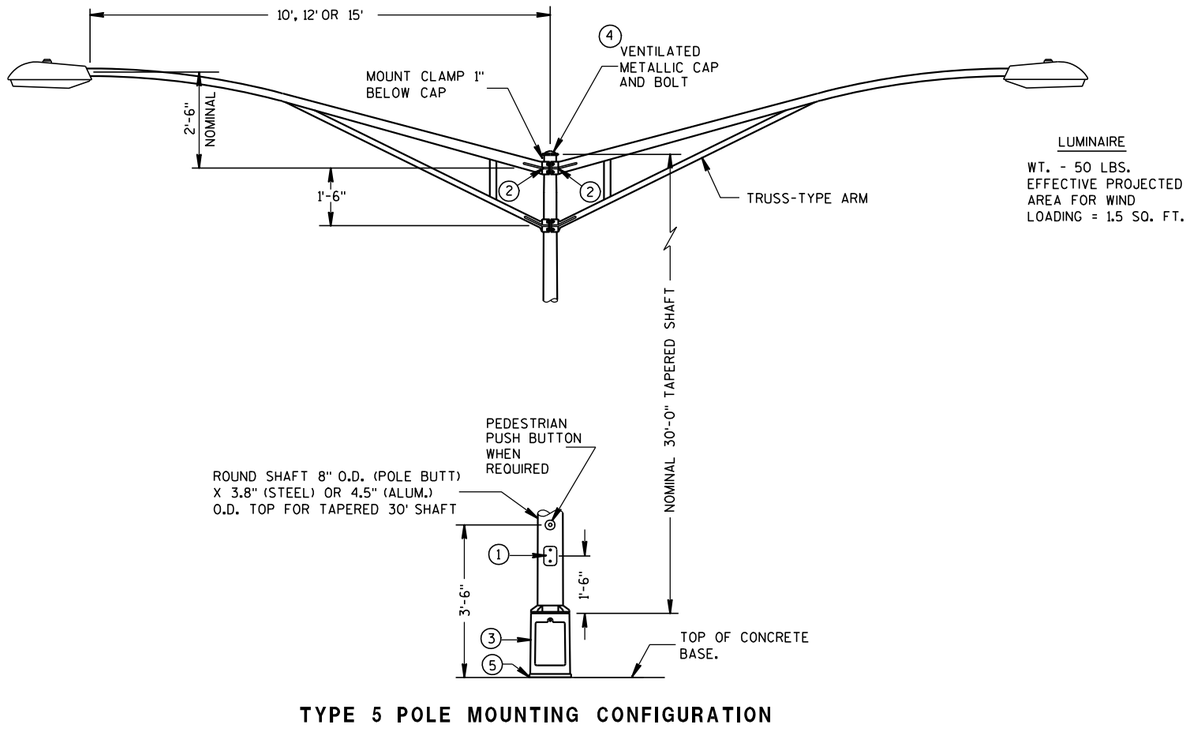
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

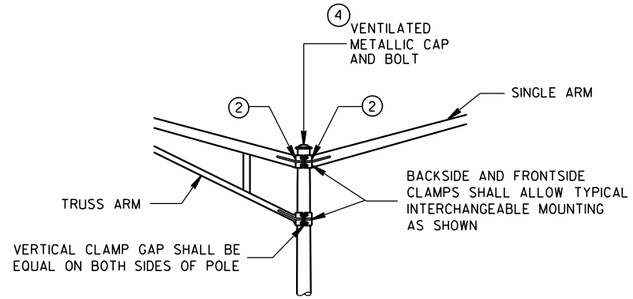
S.D.D. 9 E 1-11c

*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

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.

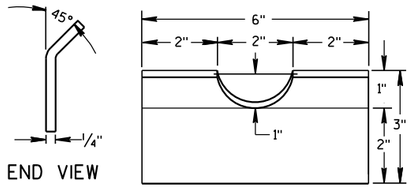
WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

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.

POLE MONTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)

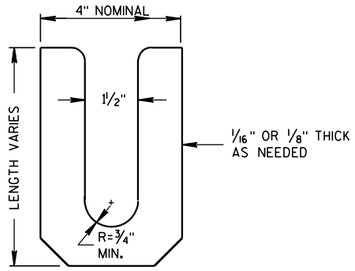
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 9 E 1-11d



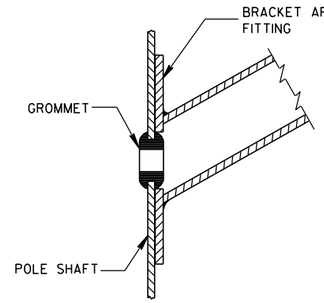
RECTANGULAR CLAMP SHIM

(4 TO A SET)

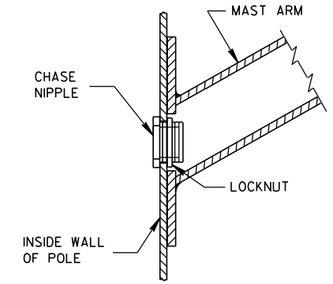


LEVELING SHIM (15)

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".

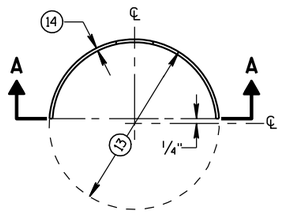
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.

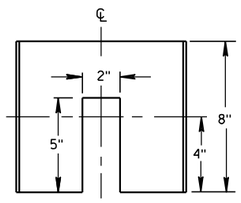
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

(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.



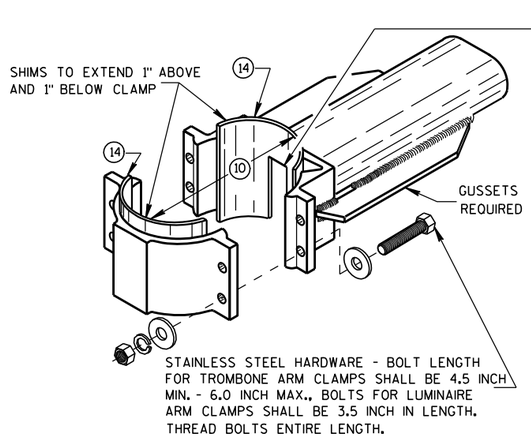
PLAN VIEW



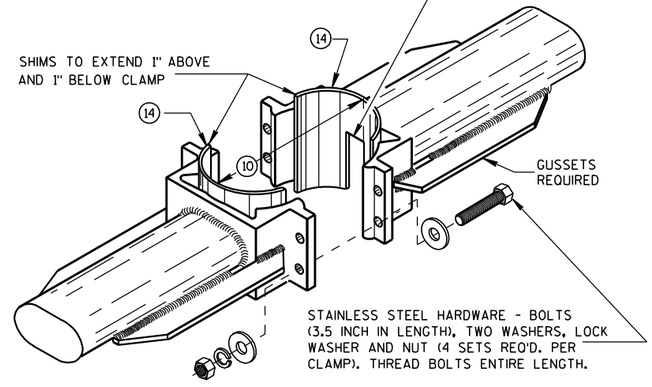
SECTION A-A

CIRCULAR CLAMP SHIM

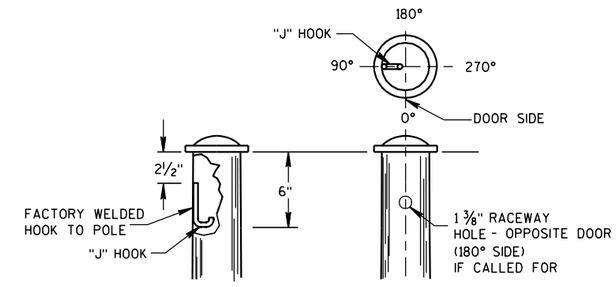
(2 TO A SET)



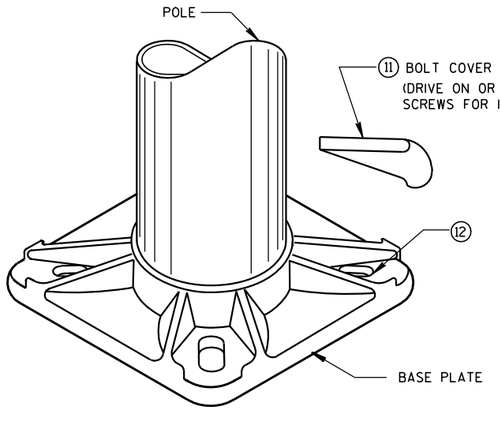
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



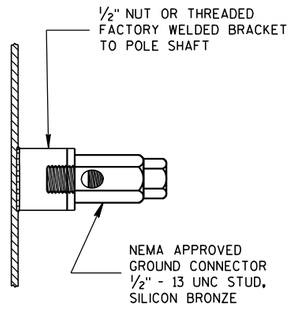
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

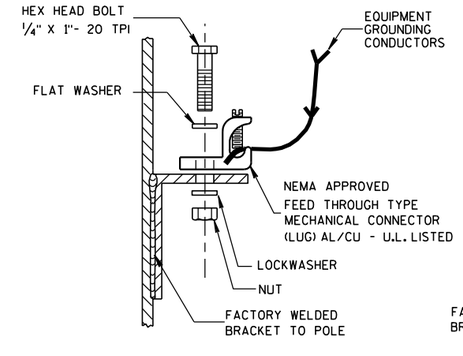


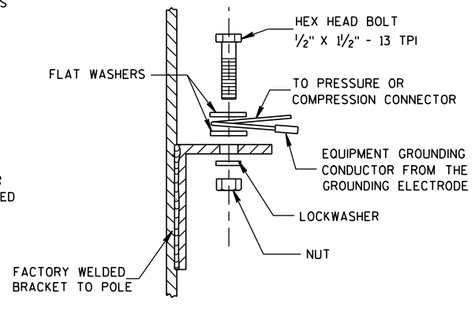
TYPICAL "J" HOOK LOCATION



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

3/2/11 — DATE

/S/ Thomas J. Goerlinger — STATE ELECTRICAL ENGI

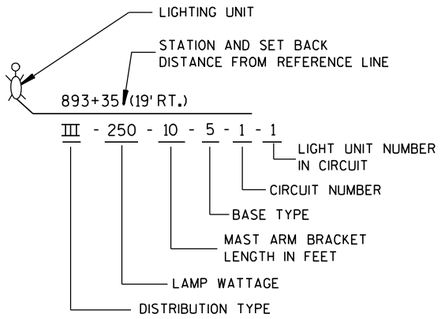
360

HWYS

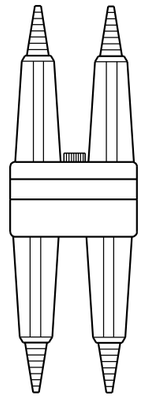
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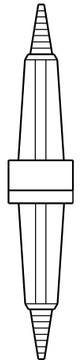
S.D.D. 9 E 1-11g



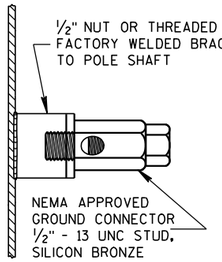
LIGHTING UNIT CODE
(TYPICAL)

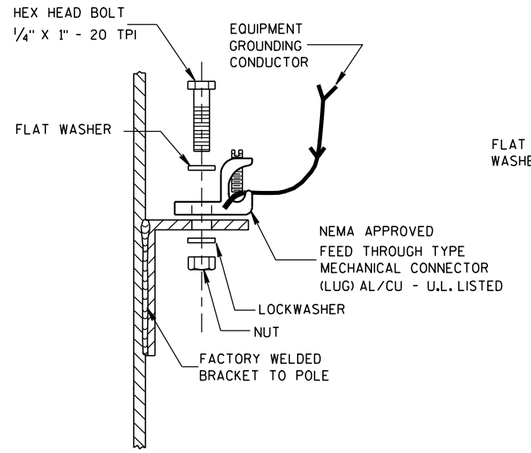


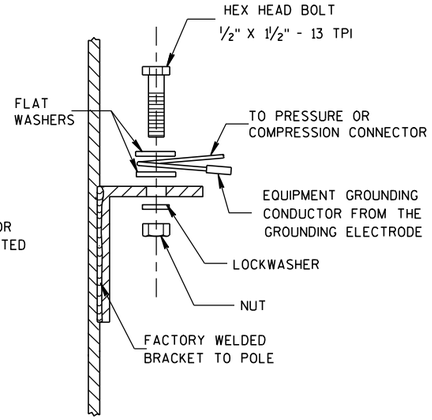
DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



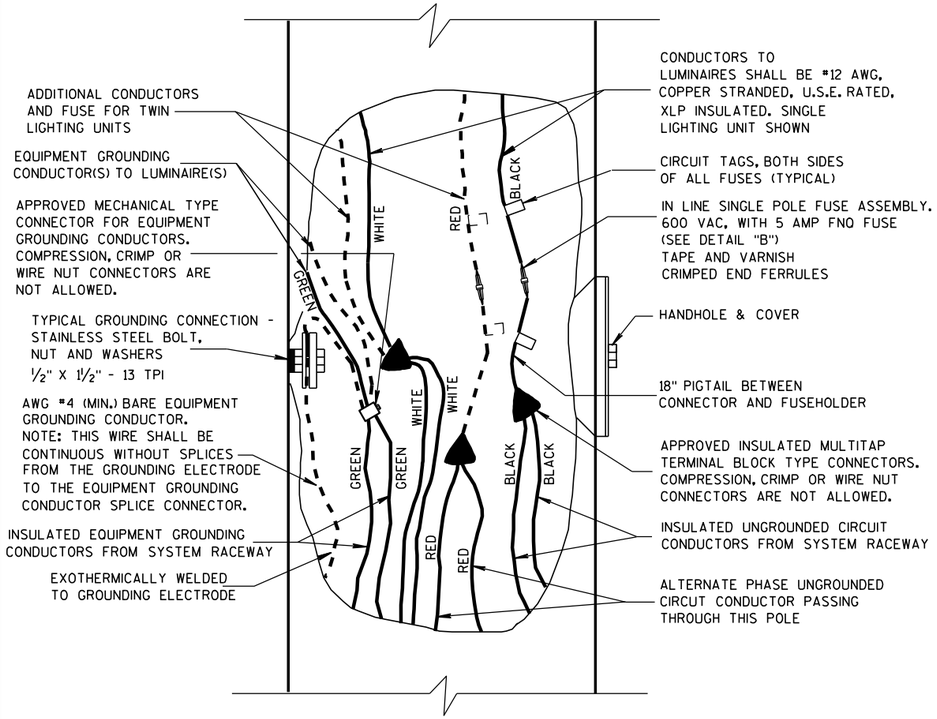
DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



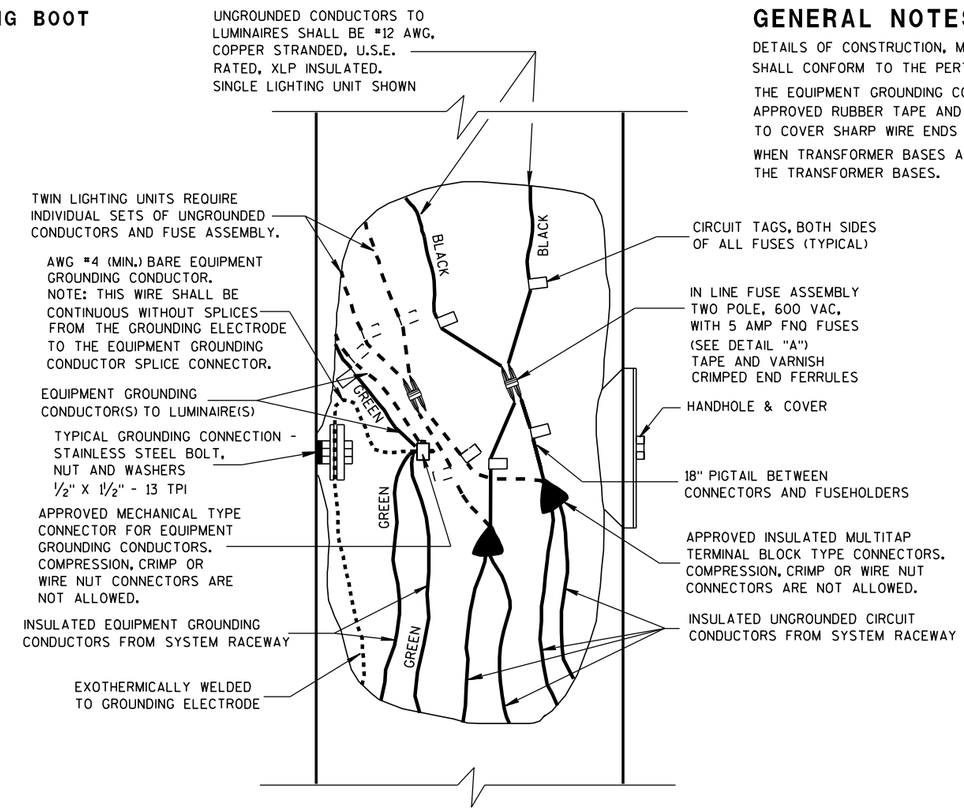




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



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

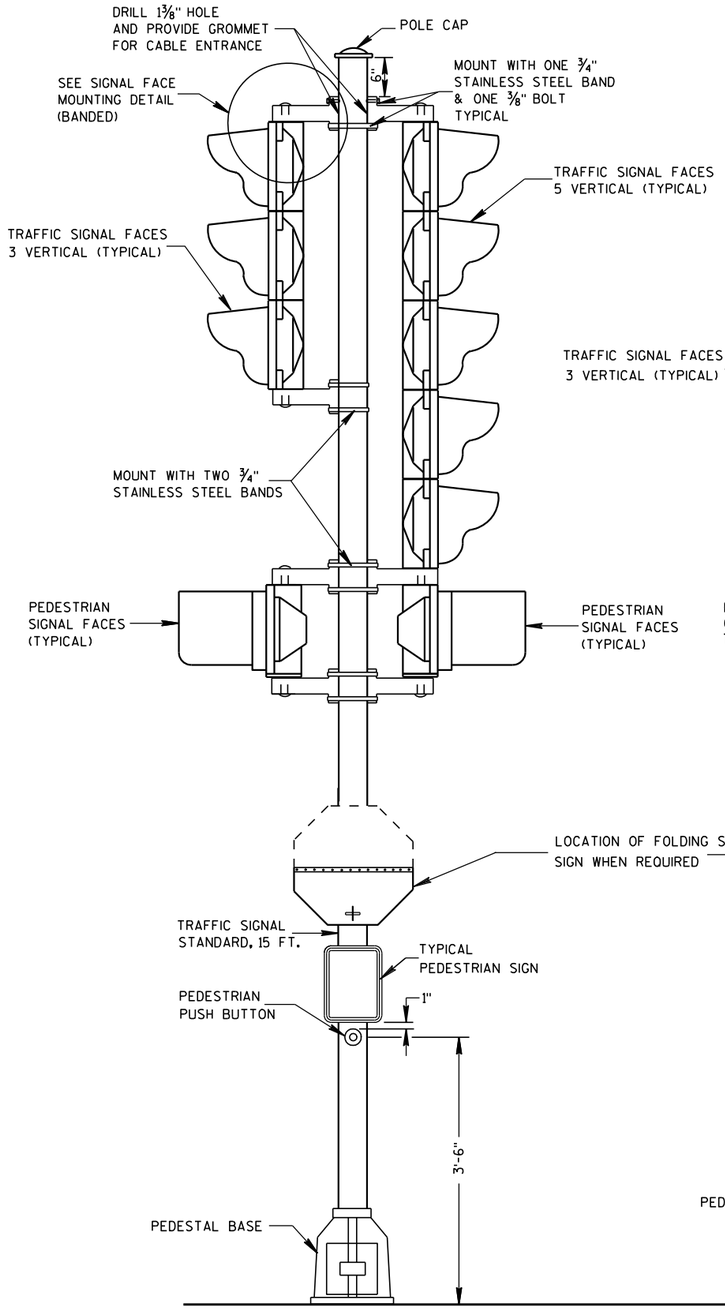
/S/ Thomas J. Gosnine — STATE ELECTRICAL ENGI

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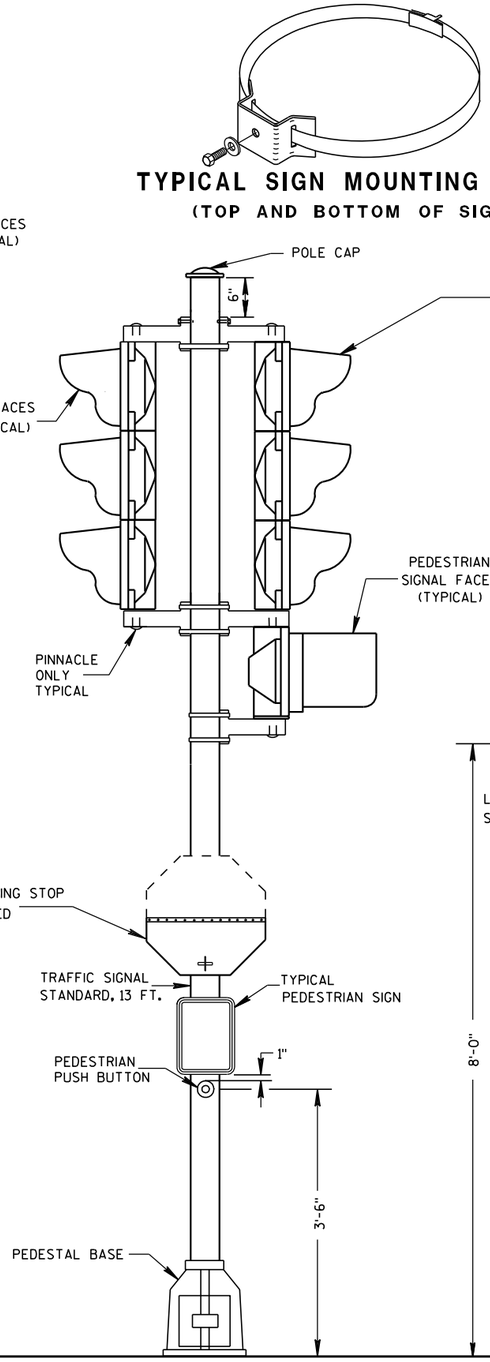
HWYS

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S.D.D. 9 E 3-4

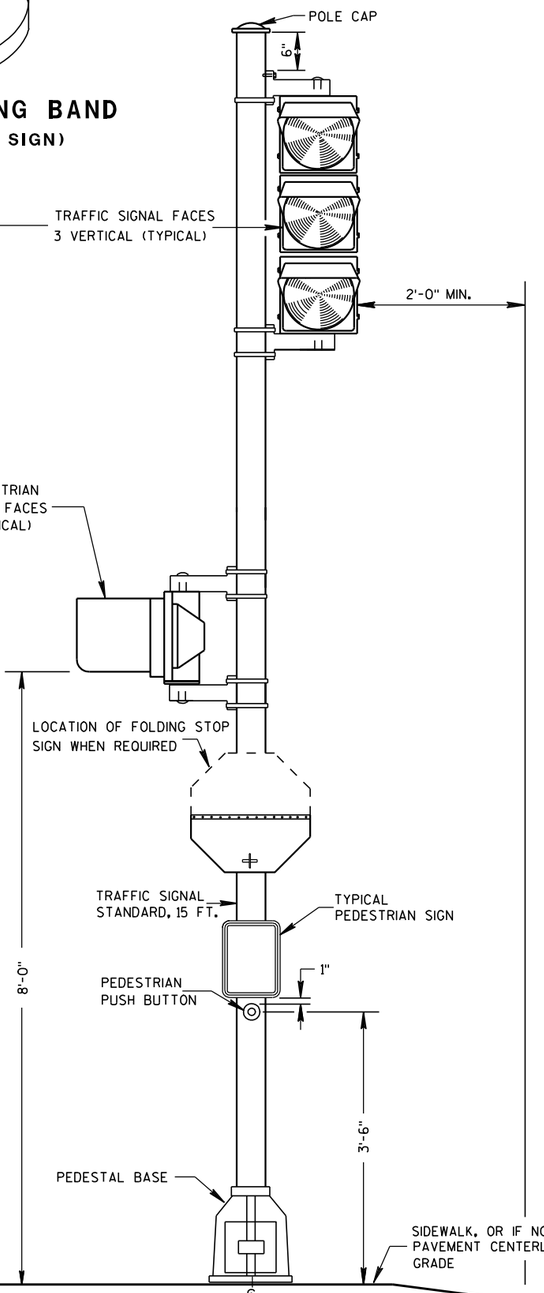


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



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

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

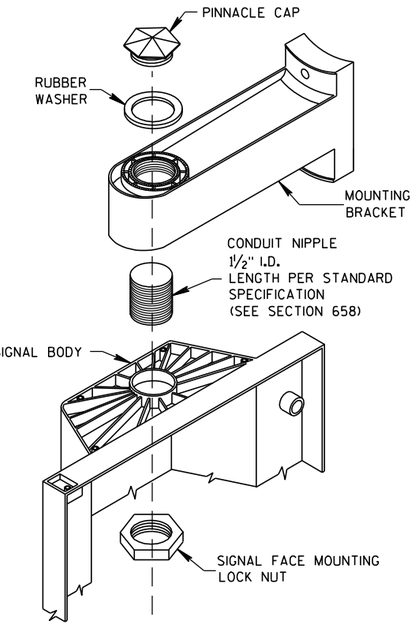
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE DISTRICT 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) 1/4" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



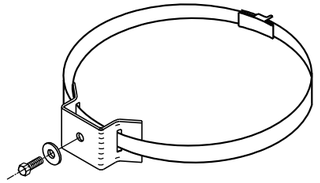
SIGNAL FACE MOUNTING DETAIL
(BANDED)

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

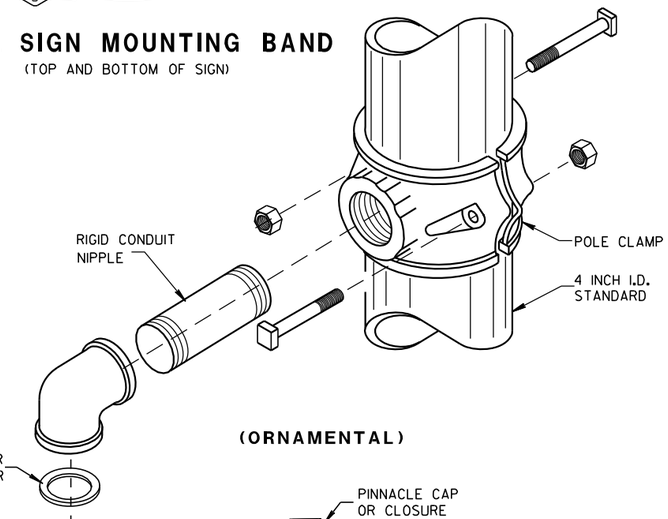
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/11/10 DATE
/S/ John Corbin STATE ELECTRICAL ENGI
362
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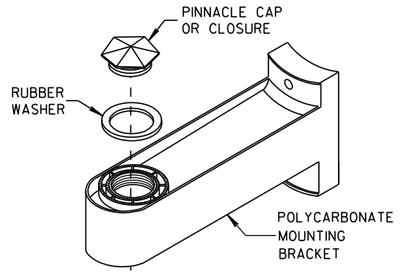
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S.D.D. 9 E 6-4



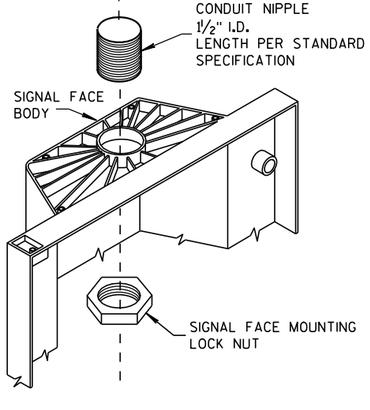
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



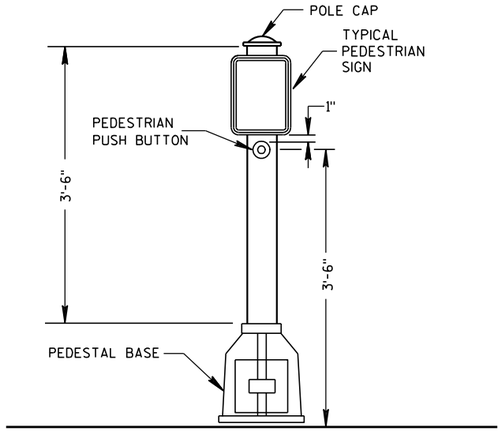
(ORNAMENTAL)



(BANDED)



SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

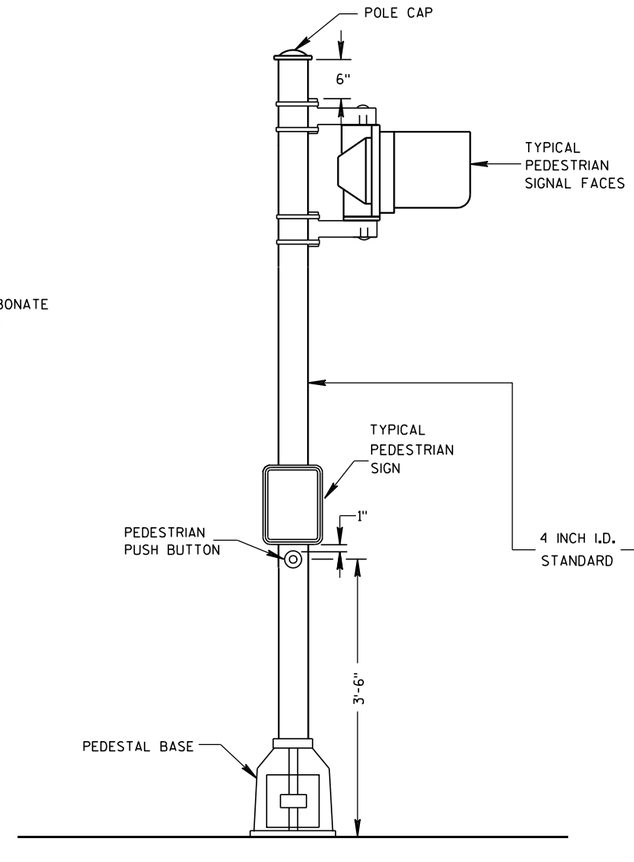
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

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

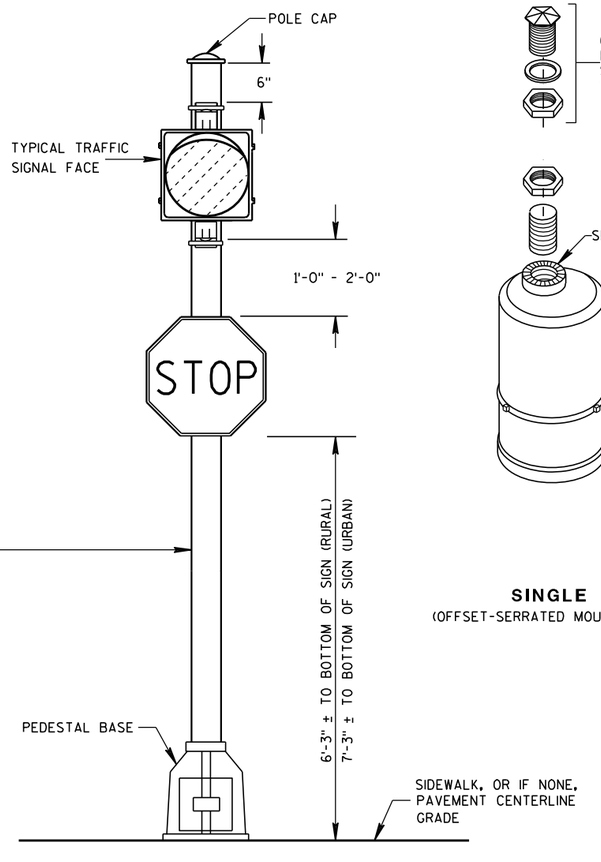
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

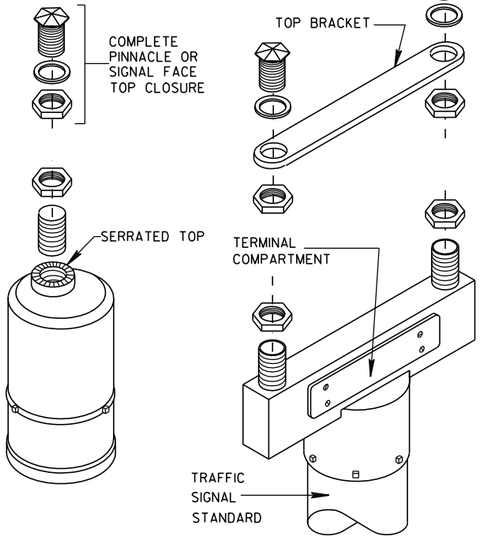
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



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



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



SINGLE
(OFFSET-SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/11/10
DATE

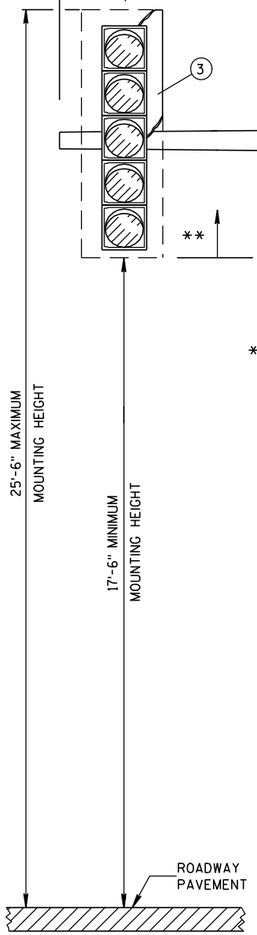
/S/ John Corbin
STATE ELECTRICAL ENGI

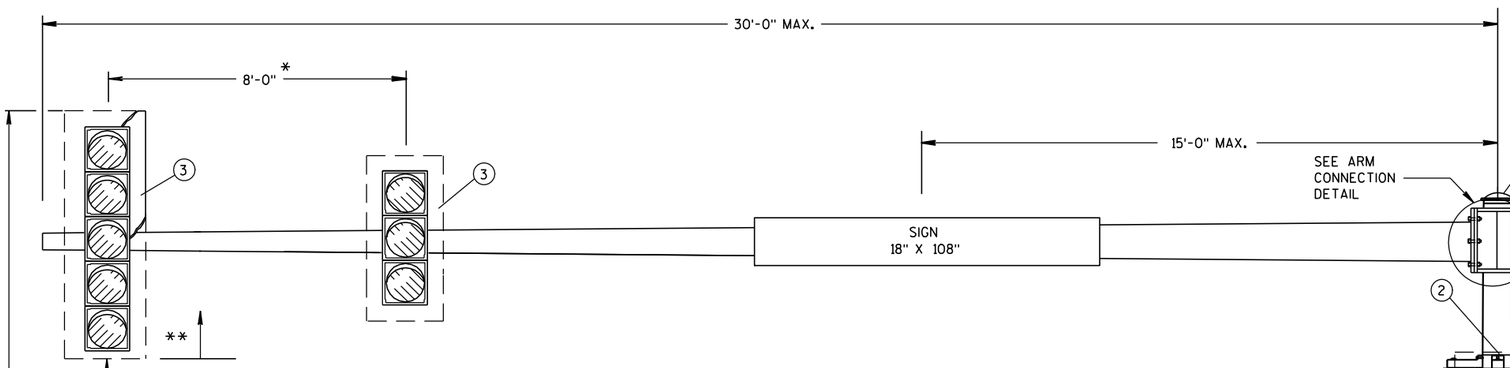
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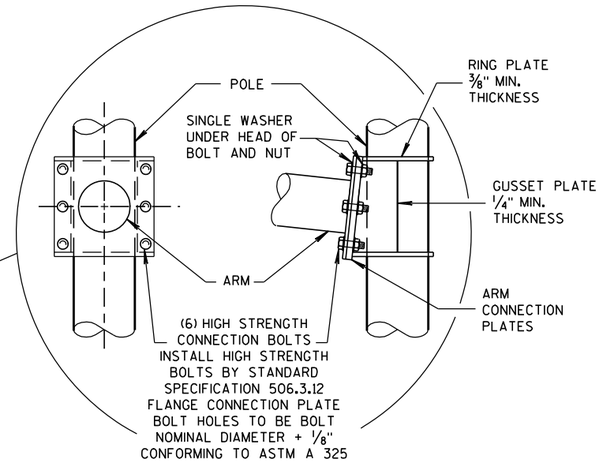
S.D.D. 9 E 7-5



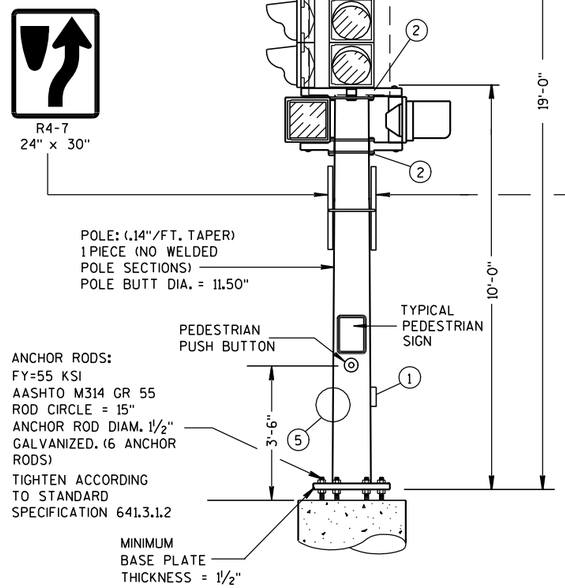


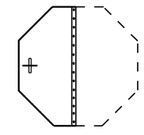
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY. NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

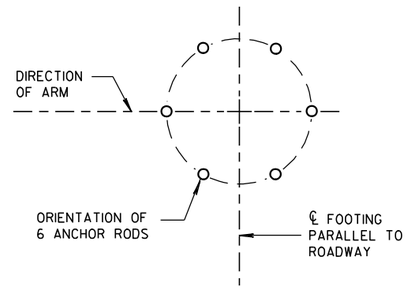
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



6 BOLT ARM CONNECTION DETAIL







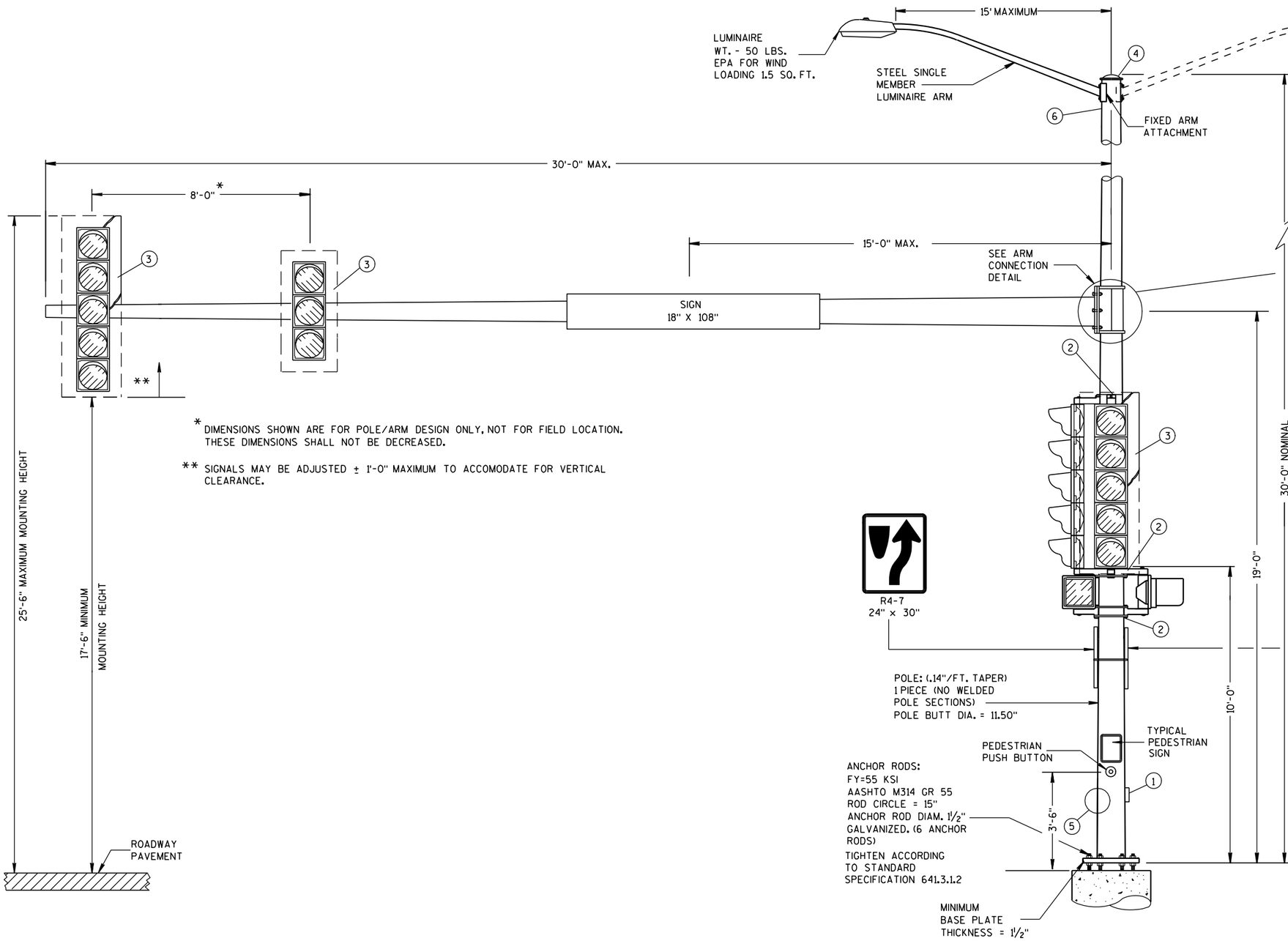
ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 9 POLE 15'- 30' MONOTUBE ARM

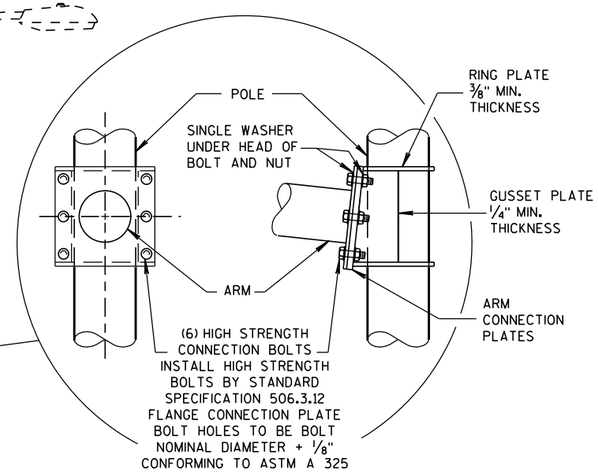
TYPE 9 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/2/2011 DATE	/S/ Thomas J. Gosling STATE ELECTRICAL ENGI
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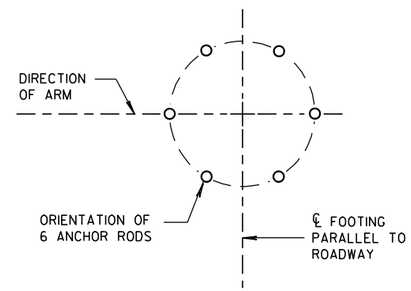


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



6 BOLT ARM CONNECTION DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 10 POLE
15'- 30' MONOTUBE ARM

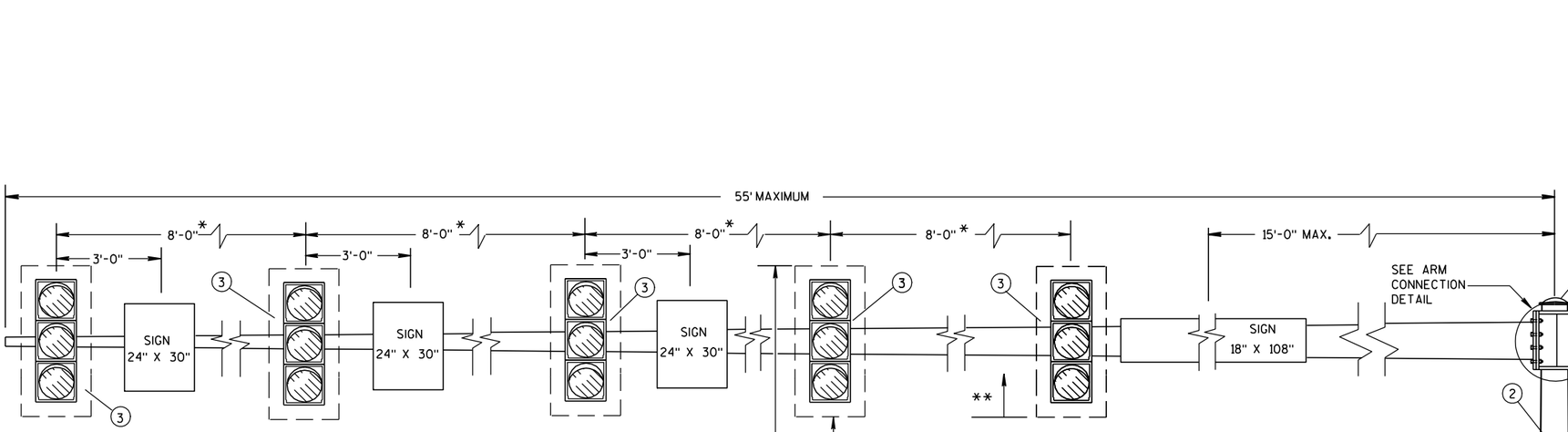
TYPE 10 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/2/2011 DATE	/S/ Thomas J. Conrine STATE ELECTRICAL ENGI 365 HWYS
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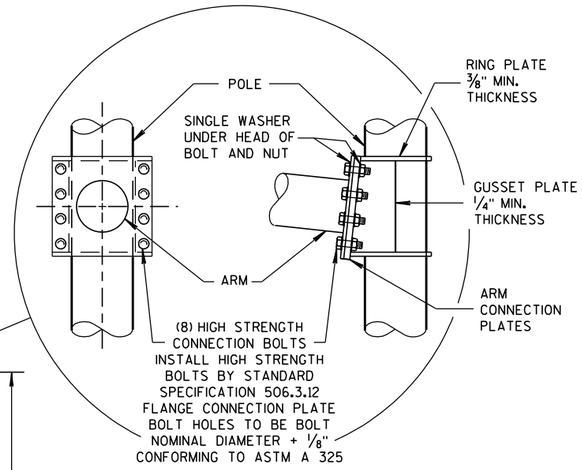
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S.D.D. 9 E 8-4b

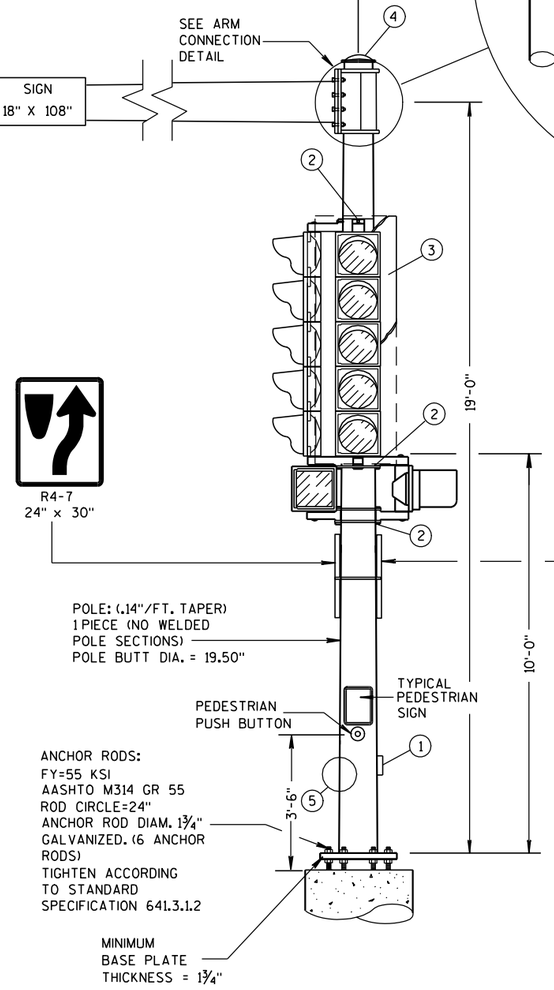


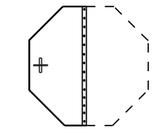
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

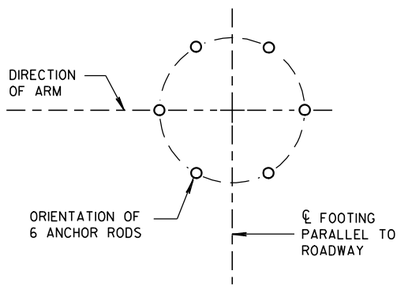
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



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
366 — HWYS
FHWA

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S.D.D. 9 E 8-4c

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S.D.D. 9 E 8-4c

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.

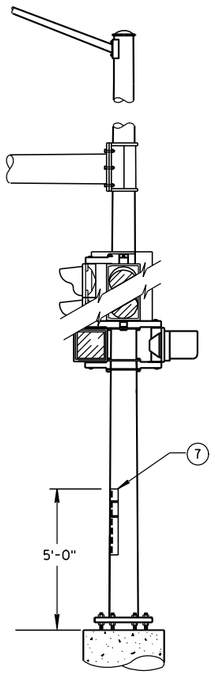
(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

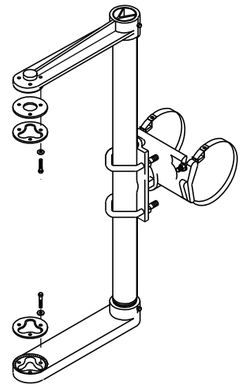
(7) INSTALL DEPARTMENT PROVIDED STRUCTURAL IDENTIFICATION PLAQUES.

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.

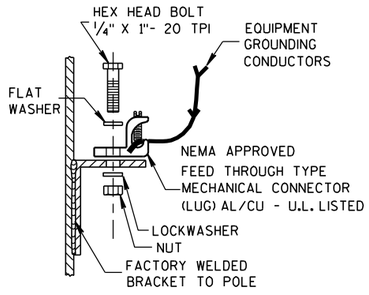


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



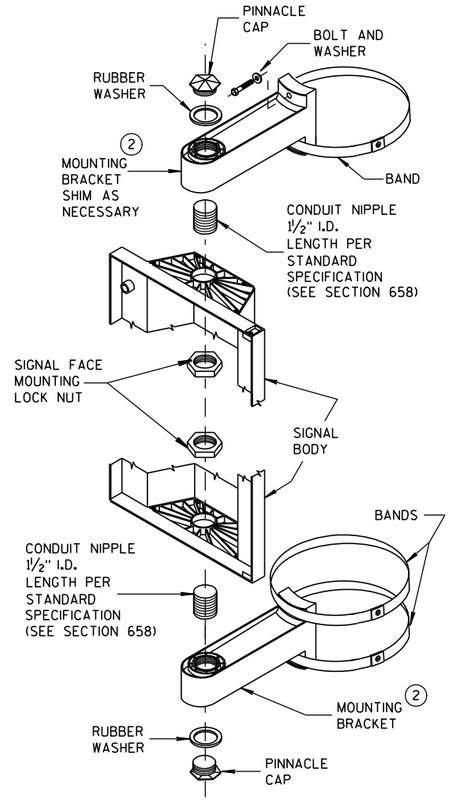
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

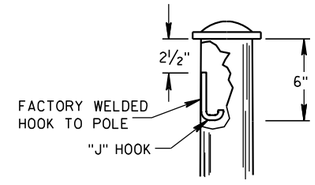


TYPICAL GROUNDING CONNECTIONS (5)

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

HWYS

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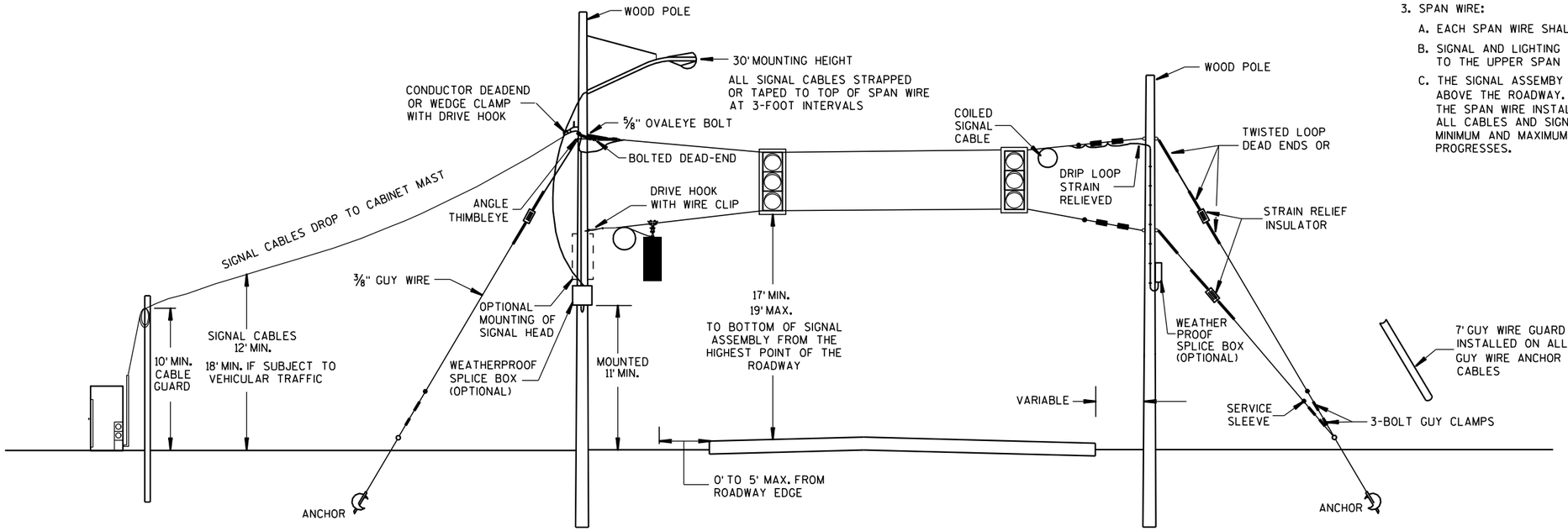
GENERAL NOTES

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

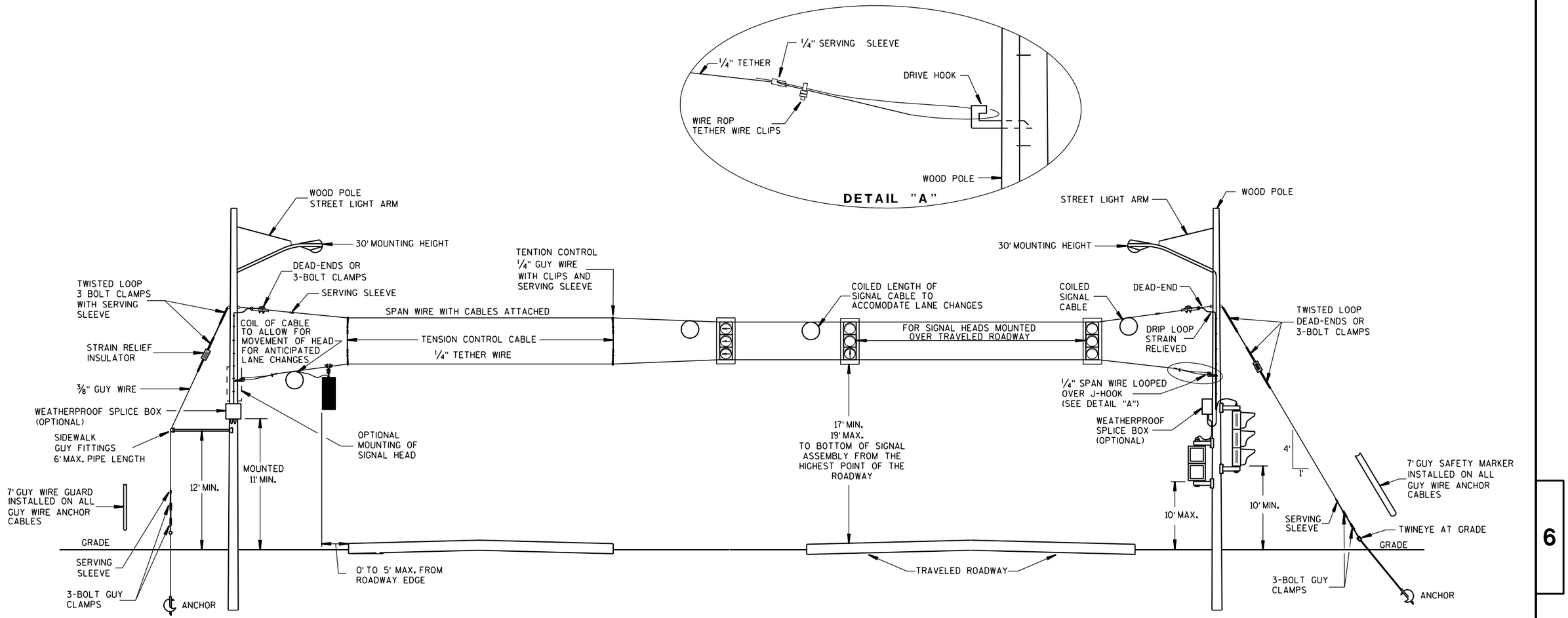
MINIMUM POLE LENGTHS	POLE BURIEL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7-14-08 DATE
/S/ Balu Ananthar [illegible] n
STATE ELECTRICAL ENGI 368 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.

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   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
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
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

APPROVED

7-14-08 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 369 HWYS

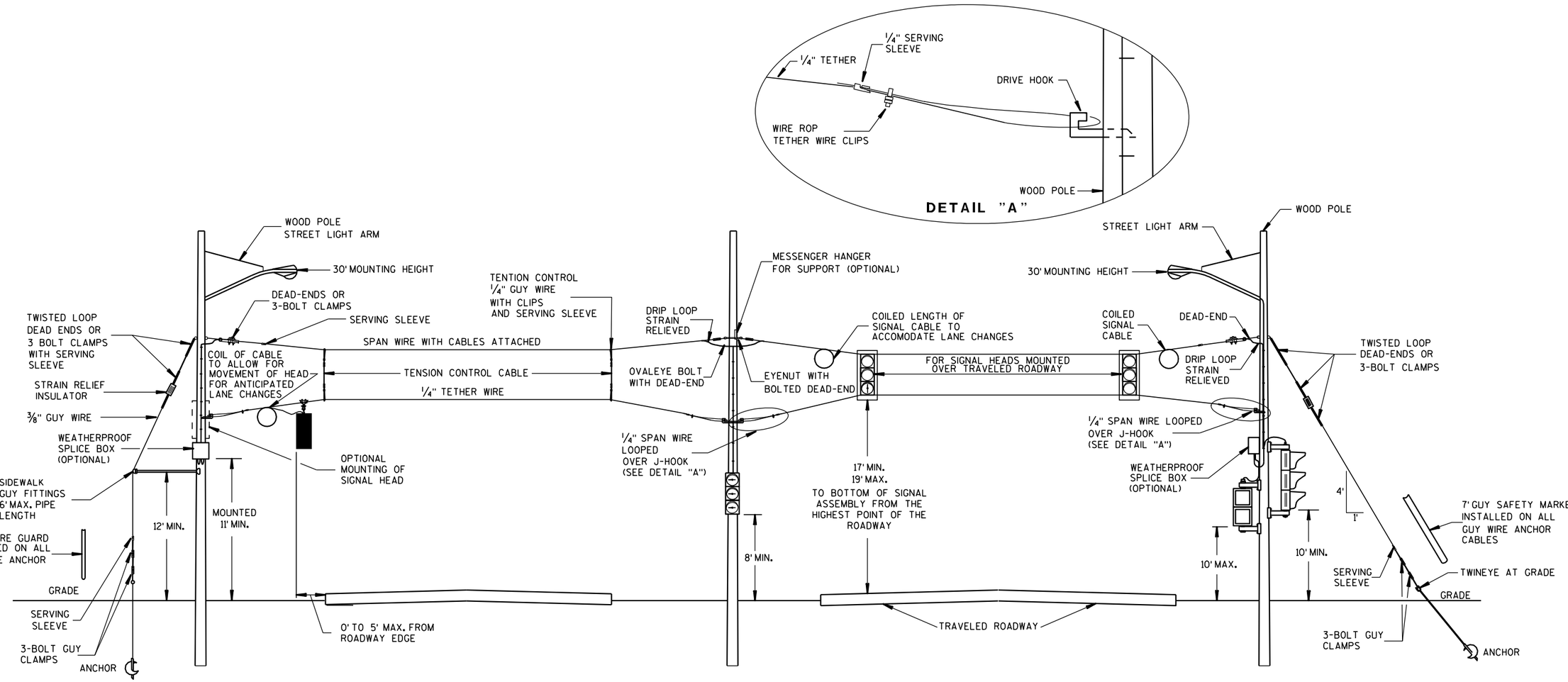
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S.D.D. 9 G 1-3b



SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

GENERAL NOTES

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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

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI

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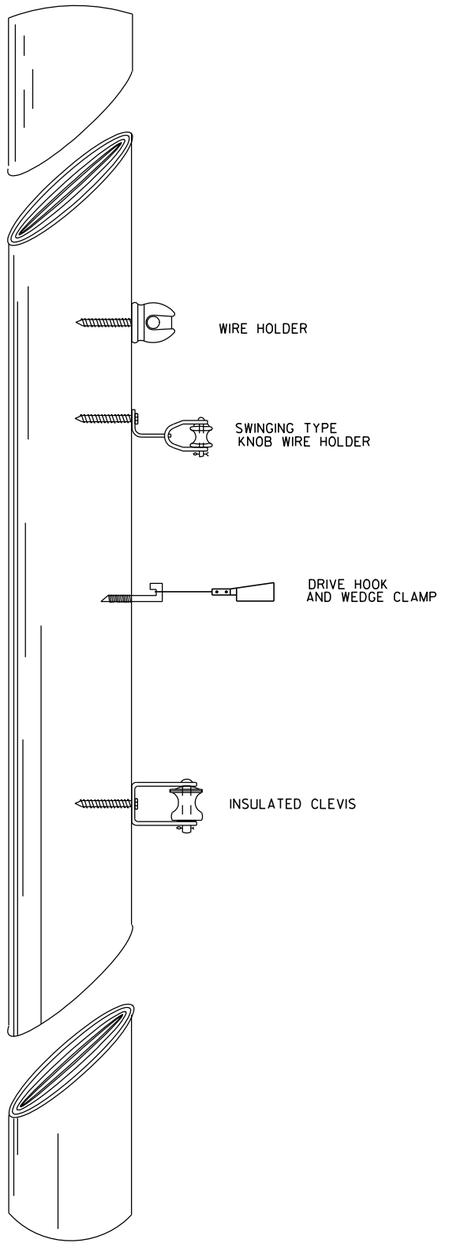
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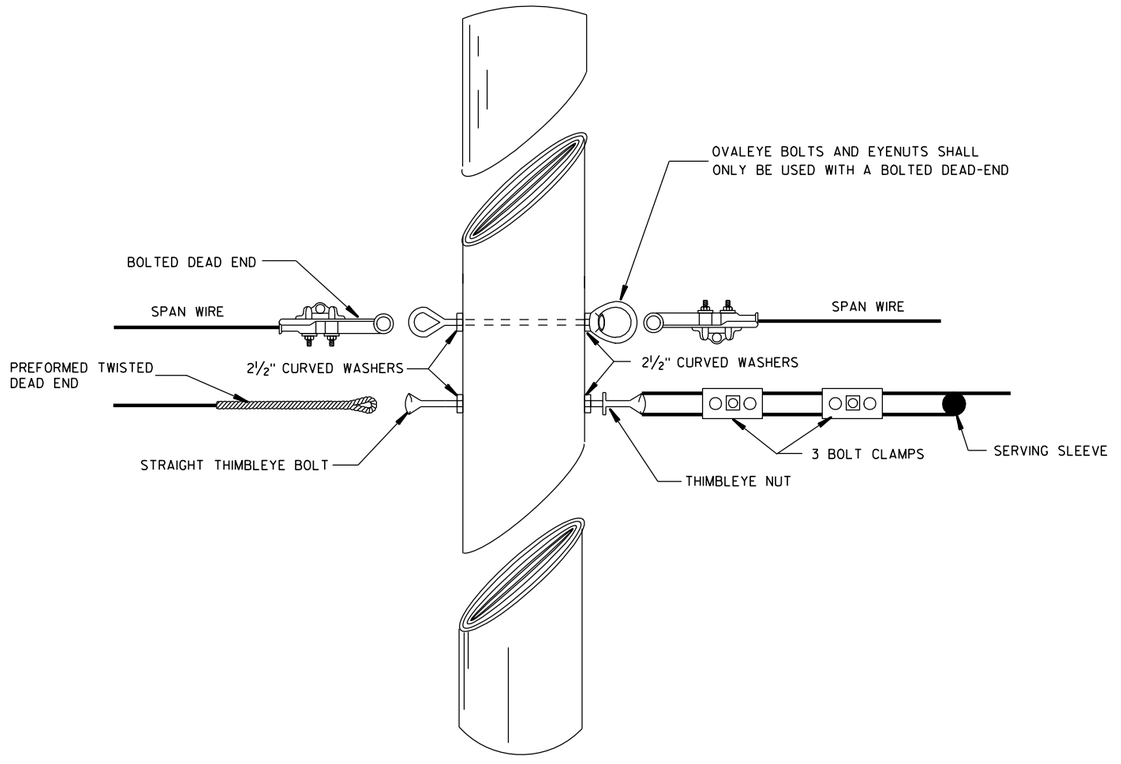
S.D.D. 9 G 1-3c

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S.D.D. 9 G 1-3c



TYPICAL CABLE HANGERS



TYPICAL DEAD-ENDING

6

6

S.D.D. 9 G 1-3d

S.D.D. 9 G 1-3d

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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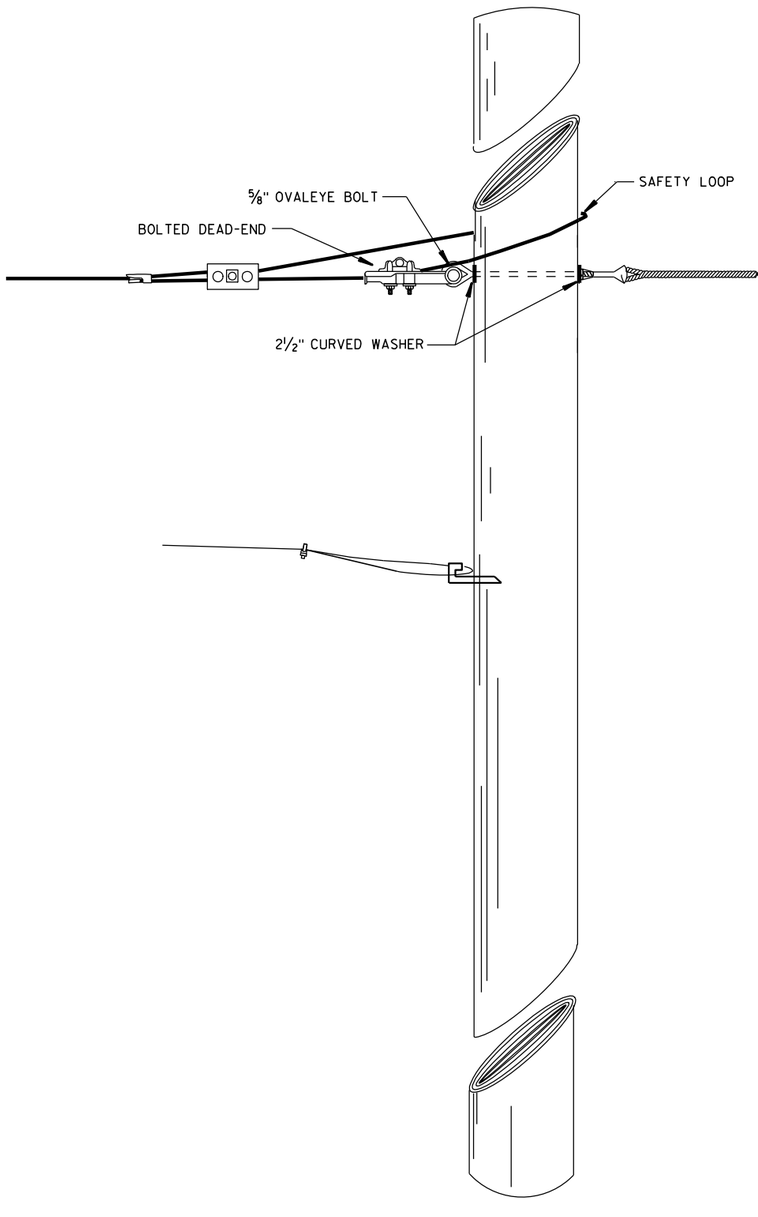
7-14-08
DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 371 HWYS

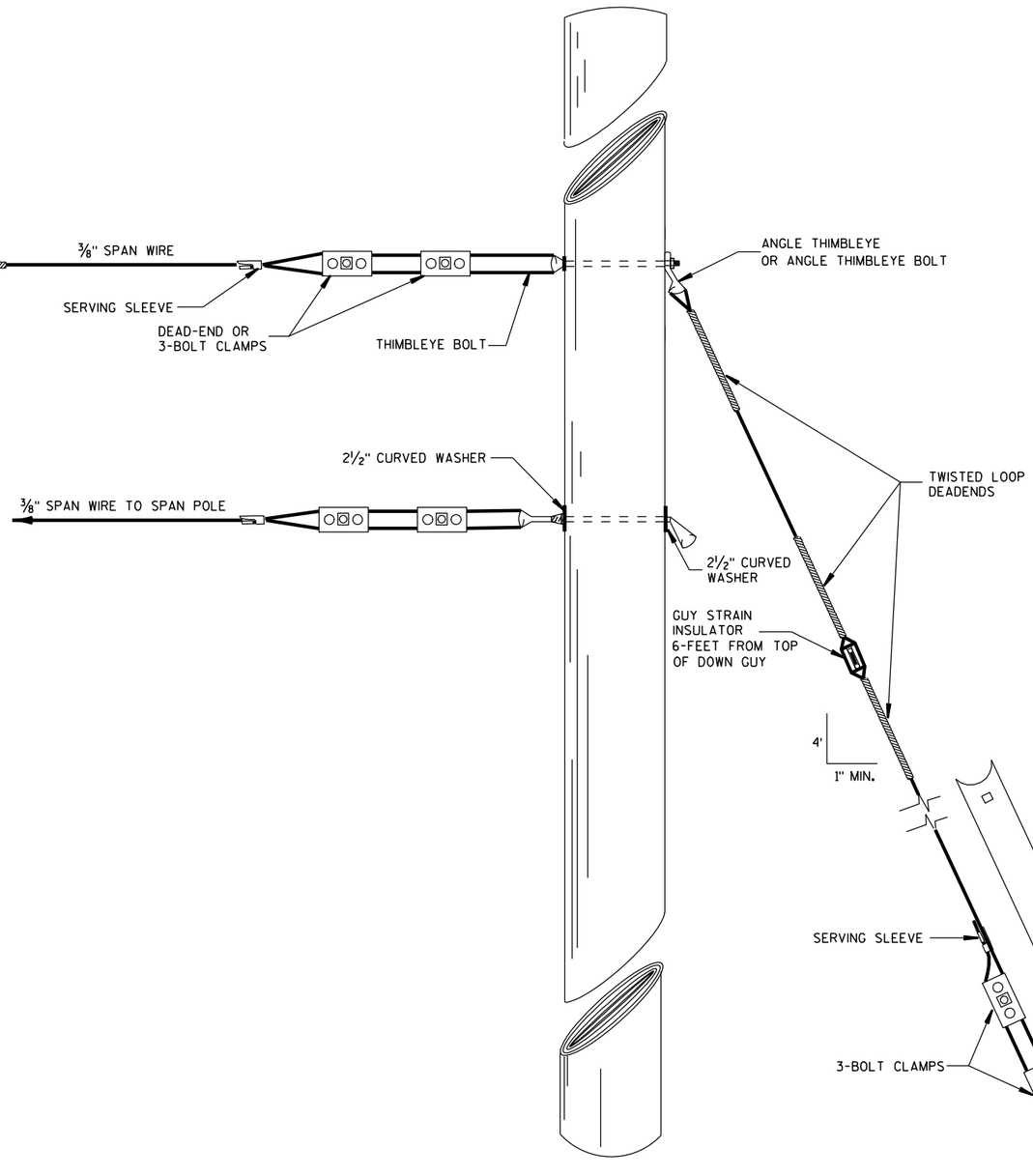
FHWA

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

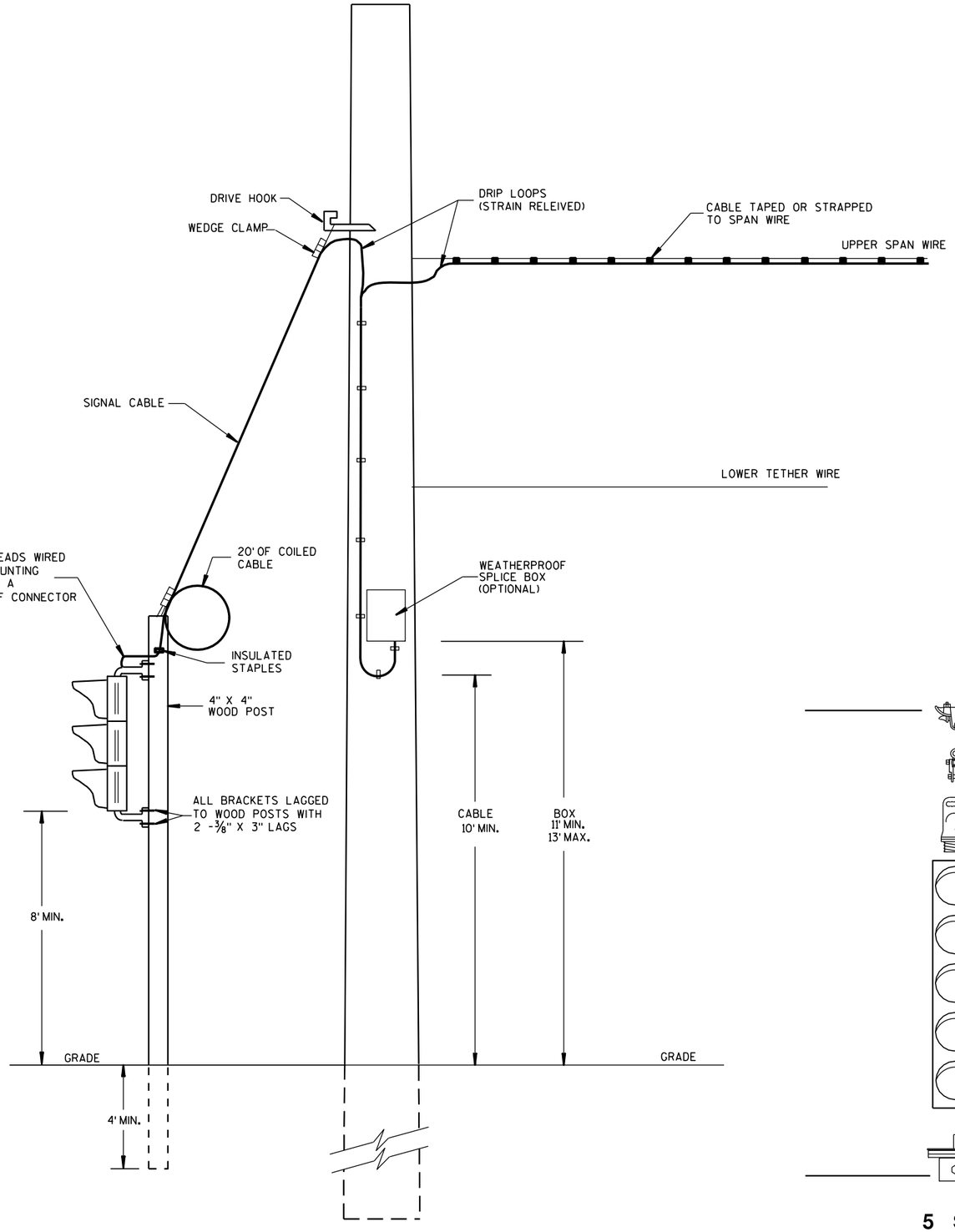
TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

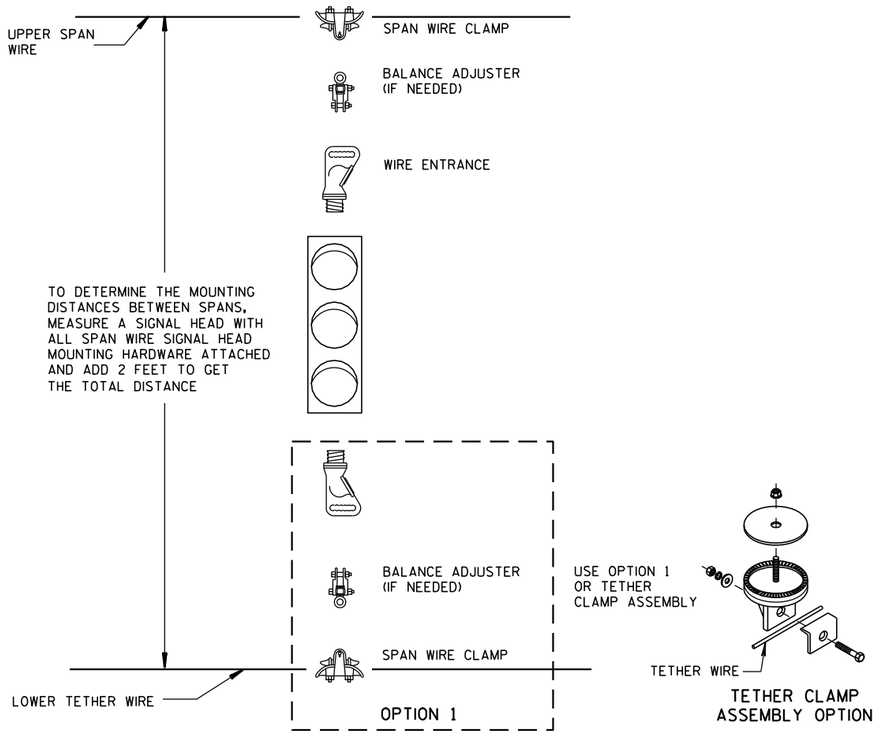
STATE OF WISCONSIN
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APPROVED
7-14-08 DATE
/S/ Balu Aganthanarayanan
STATE ELECTRICAL ENGI 372 HWYS
FHWA

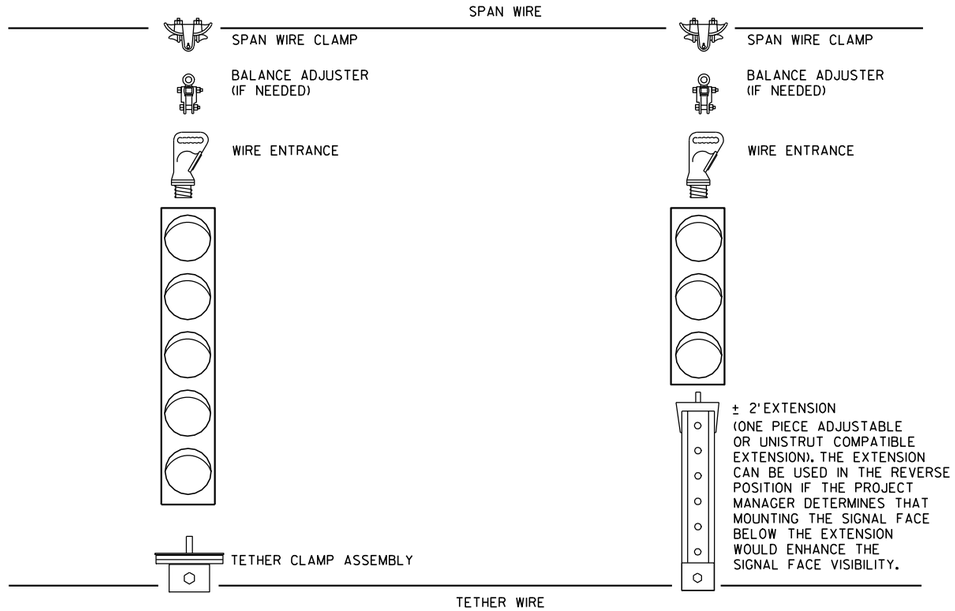
6
S.D.D. 9 G 1-3e



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

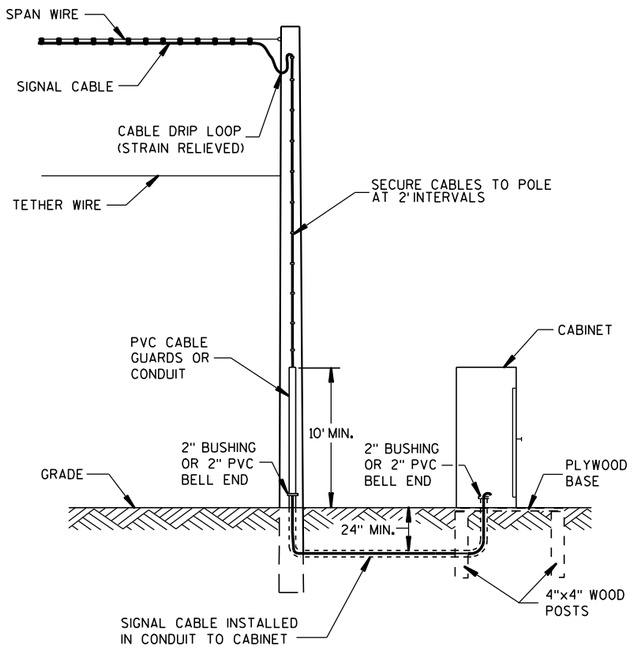
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI

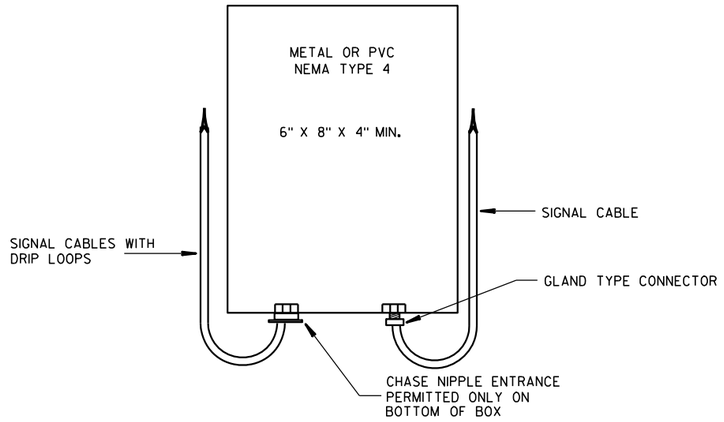
373

HWYS

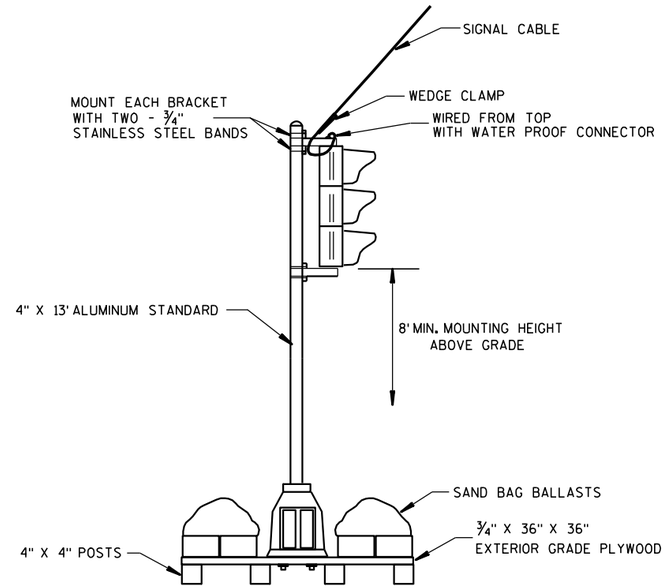
FHWA

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S.D.D. 9 G 1-3f

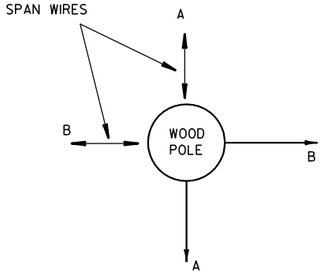




SPLICE BOX

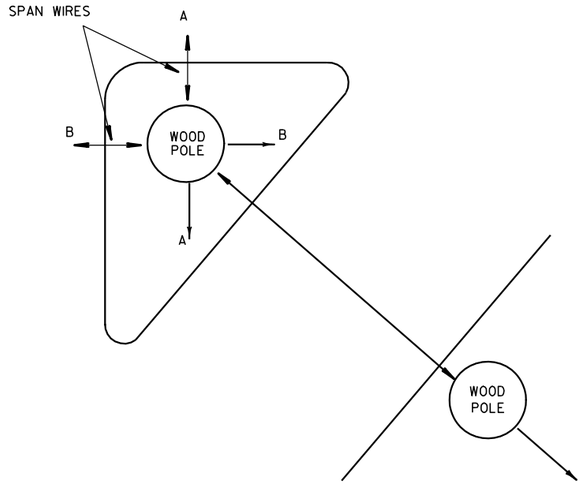


TYPICAL SKID TYPE TEMPORARY

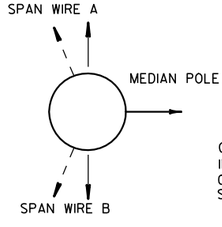


ALL DOWN OR SIDEWALK GUYS SHALL BE INSTALLED IN THE OPPOSITE DIRECTION OF THE STRAIN OF THE SPAN WIRE

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 374 HWYS

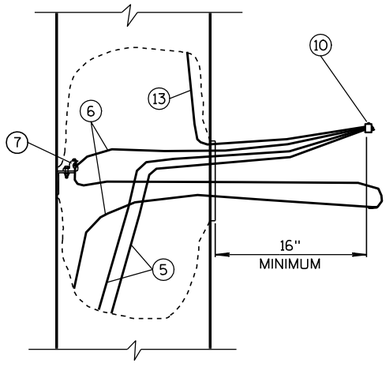
FHWA

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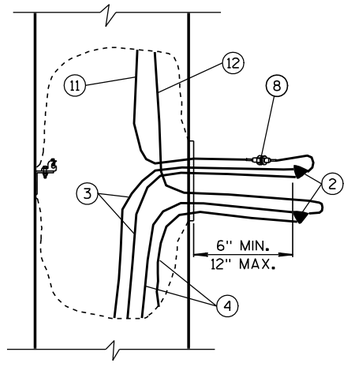
S.D.D. 9 G 1-3g

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S.D.D. 9 G 1-3g

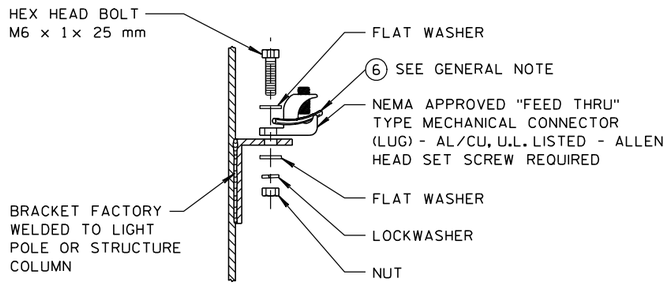


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



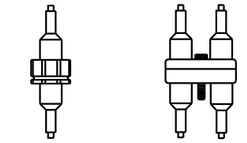
HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	*
4	GROUNDED LINE WIRE	WHITE
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	BARE
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



FUSE ASSEMBLIES

GENERAL NOTES

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

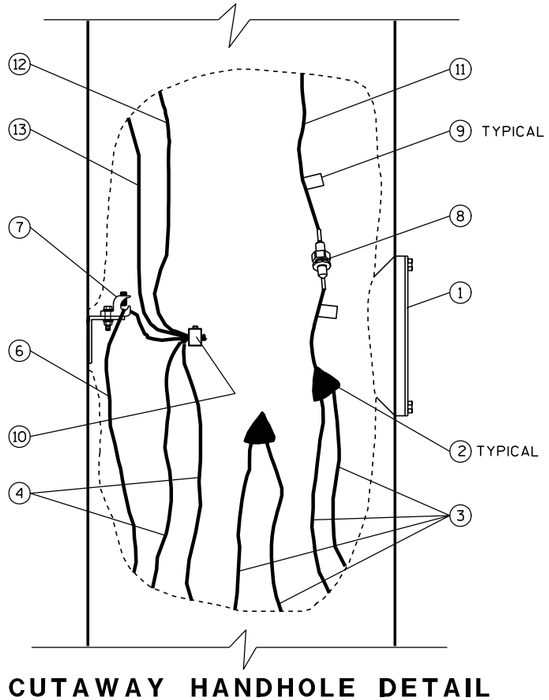
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

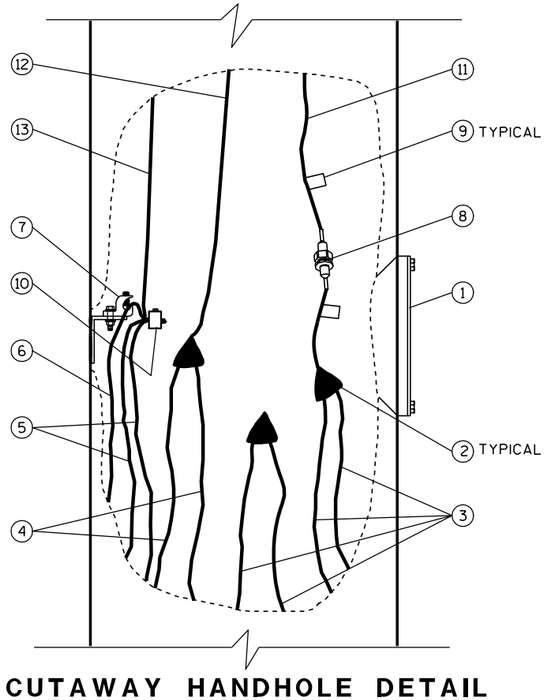
IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



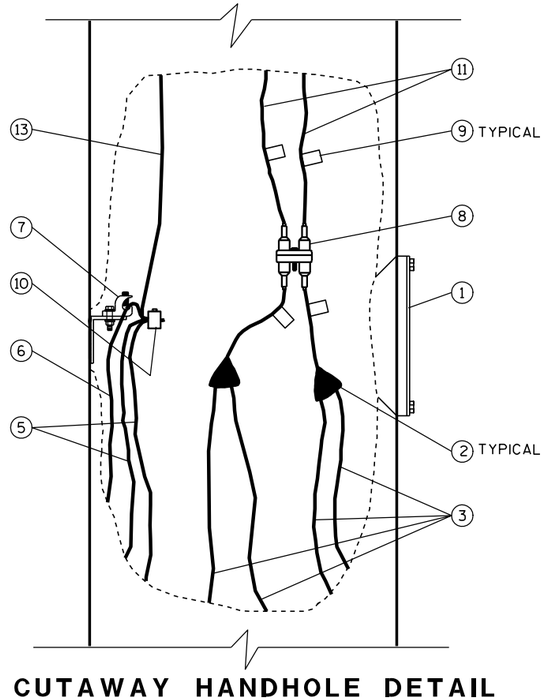
CUTAWAY HANDHOLE DETAIL

GROUNDED NEUTRAL SYSTEMS
1-φ



CUTAWAY HANDHOLE DETAIL

ISOLATED NEUTRAL SYSTEMS
1-φ SHOWN; 3-φ WYE SIMILAR
(SEE GENERAL NOTE)



CUTAWAY HANDHOLE DETAIL

PHASE-TO-PHASE SYSTEMS
1-φ SHOWN; 3-φ DELTA SIMILAR
(SEE GENERAL NOTE)

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

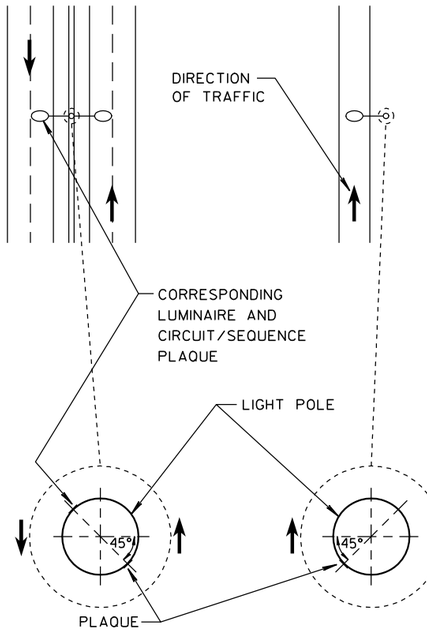
1. HANDHOLE AND COVER
2. INSULATED SPLICE
3. UNGROUNDED LINE WIRE
4. GROUNDED LINE WIRE
5. SYSTEM GROUNDING LINE WIRE
6. GROUNDING ELECTRODE CONDUCTOR
7. HANDHOLE GROUNDING LUG
8. FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
9. CIRCUIT TAG (SEE GENERAL NOTE)
10. REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
11. UNGROUNDED POLE WIRE
12. GROUNDED POLE WIRE
13. EQUIPMENT GROUNDING POLE WIRE

ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 DATE
/S/ John Corbin STATE ELECTRICAL ENGI 375 HWYS
FHWA

6
S.D.D. 10 A 1-2



MEDIAN POLE SINGLE ARM POLE

LOCATION OF LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

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

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

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

ALUMINUM SHAFTS - ALUMINUM POP RIVETS

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

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

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

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

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

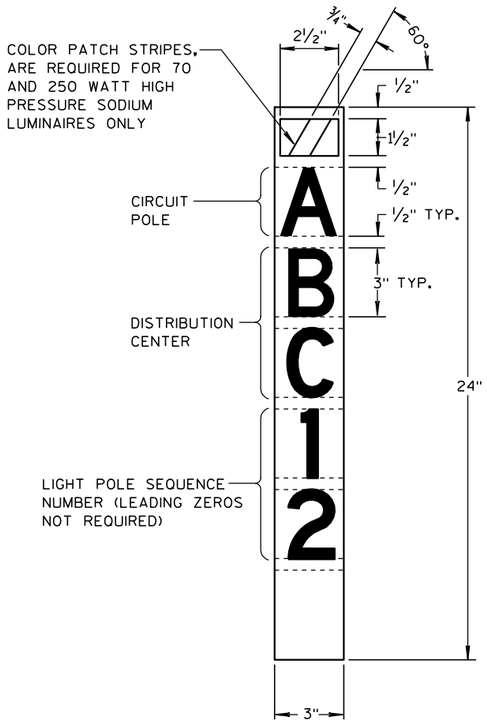
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM POLES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

COLOR PATCH CODE FOR HPS LUMINAIRES

1000 WATT - NO PATCH
400 WATT - ORANGE
310 WATT - BLUE
250 WATT - ORANGE WITH WHITE STRIPE
200 WATT - RED
150 WATT - GREEN
100 WATT - BROWN
70 WATT - BROWN WITH WHITE STRIPE



LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

6

6

S.D.D. 10 A 2-2

S.D.D. 10 A 2-2

IDENTIFICATION PLAQUES LIGHT POLES

STATE OF WISCONSIN
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10/25/2010 DATE
/S/ John Corbin
STATE ELECTRICAL ENGI 376 HWYS
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GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

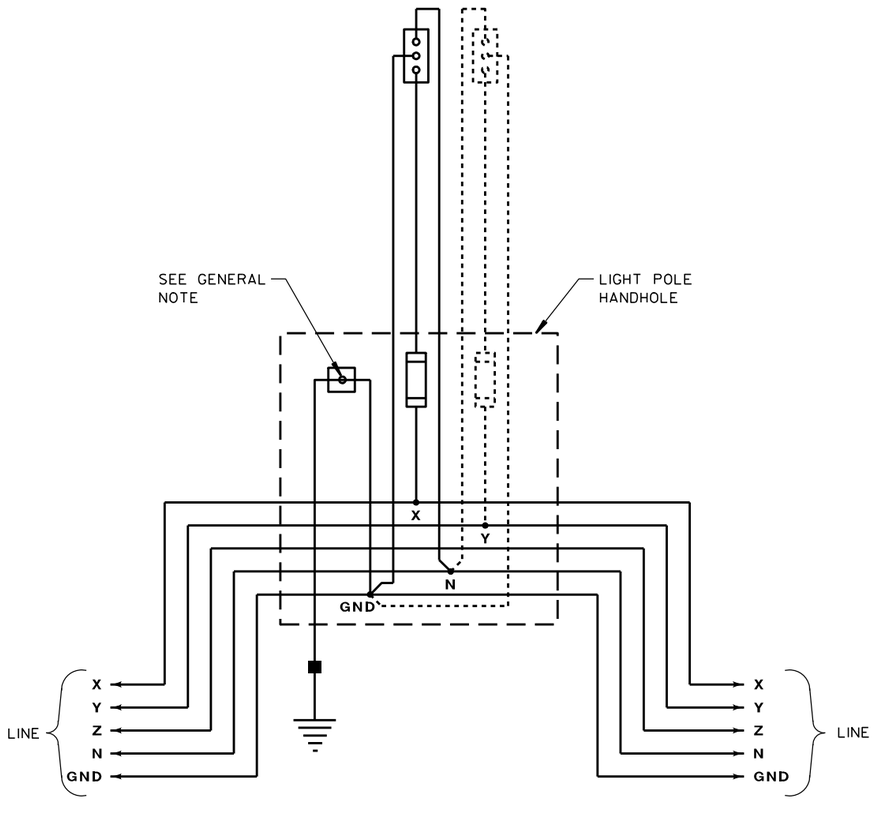
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

HANDHOLE FUSE SCHEDULES

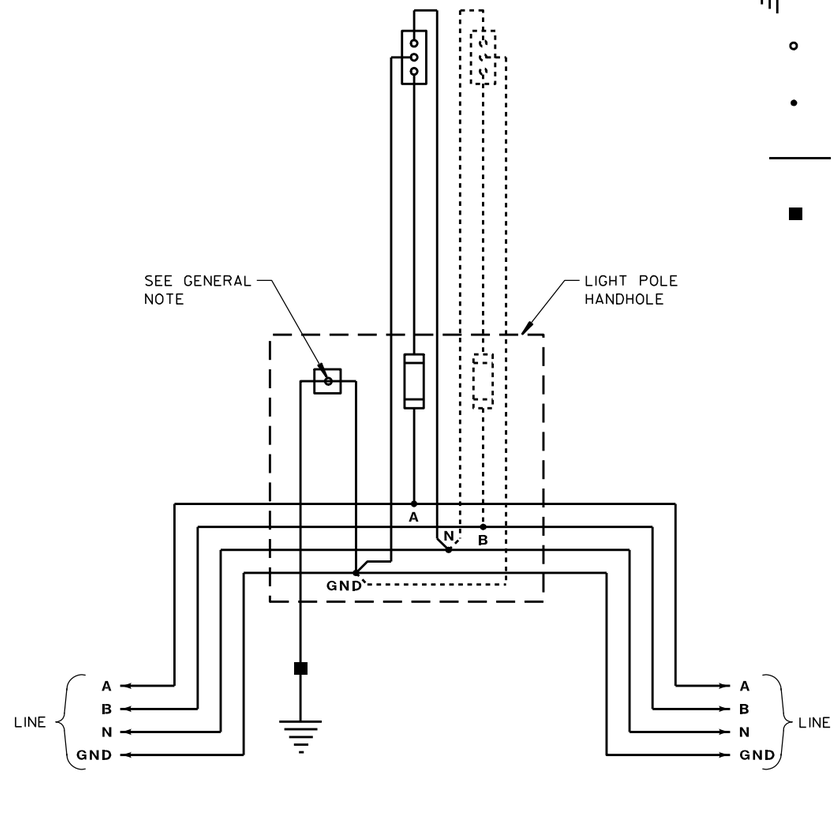
LINE VOLTAGE	BALLAST WATTAGE	
φ-GROUND	70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
φ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
3-φ 208Y/120VAC OR 480Y/277VAC 4 WIRE



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
1-φ 120/240VAC OR 240/480VAC 3 WIRE

ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEM

STATE OF WISCONSIN
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S.D.D. 10 A 5-2

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S.D.D. 10 A 5-2

GENERAL NOTES

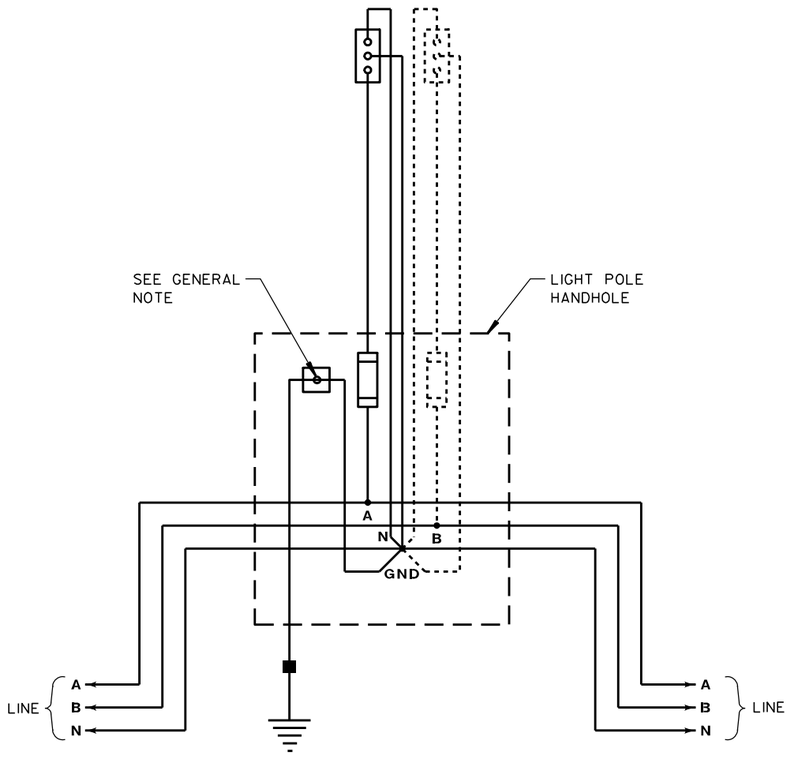
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.



TYPICAL WIRING DIAGRAM
GROUNDED NEUTRAL SYSTEM
1-ϕ 240/480VAC 3 WIRE OR 480VAC 2 WIRE

HANDHOLE FUSE SCHEDULES

LINE VOLTAGE ϕ-GROUND	BALLAST WATTAGE 70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

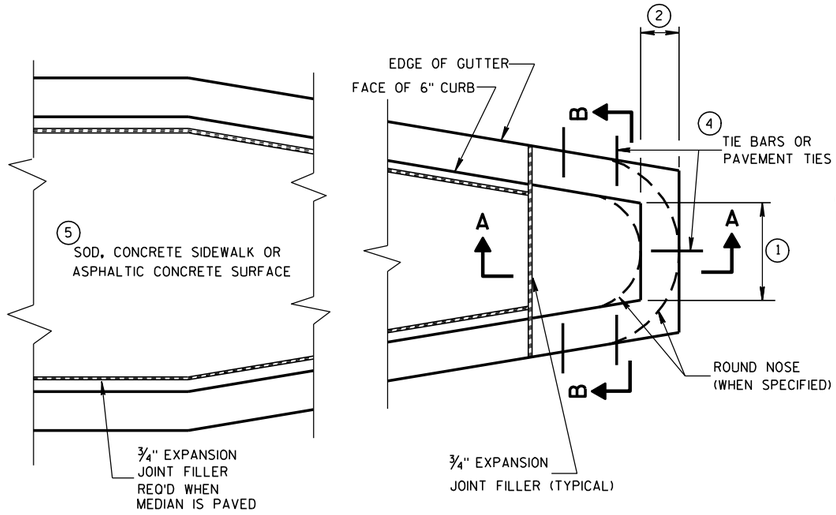
LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD

ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
GROUNDED NEUTRAL SYSTEMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010
DATE
/S/ John Corbin
STATE ELECTRICAL ENGI 378 HWYS
FHWA



CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

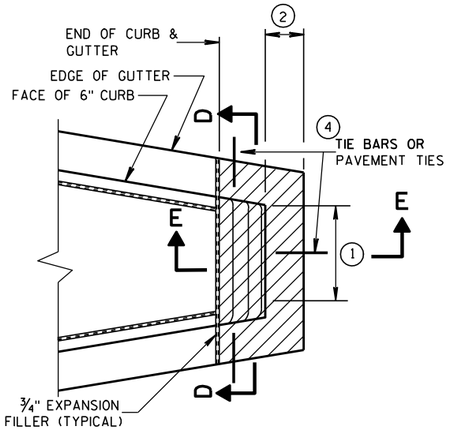
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

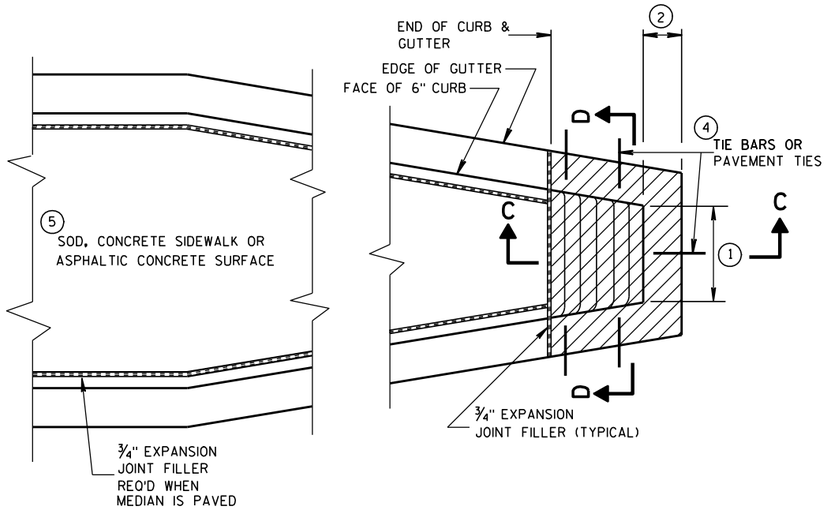
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

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

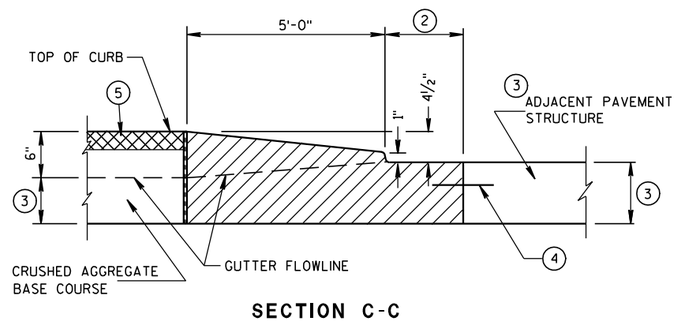
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

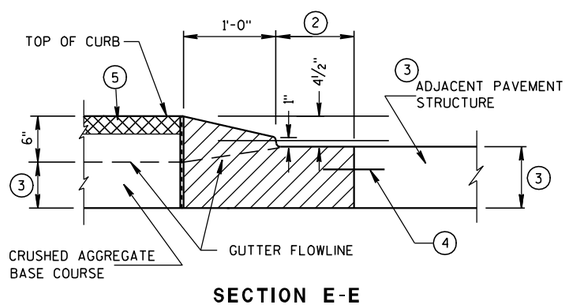
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



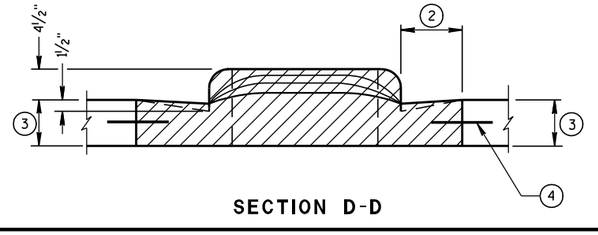


CONCRETE MEDIAN SLOPED NOSE TYPE 1





CONCRETE MEDIAN SLOPED NOSE TYPE 2



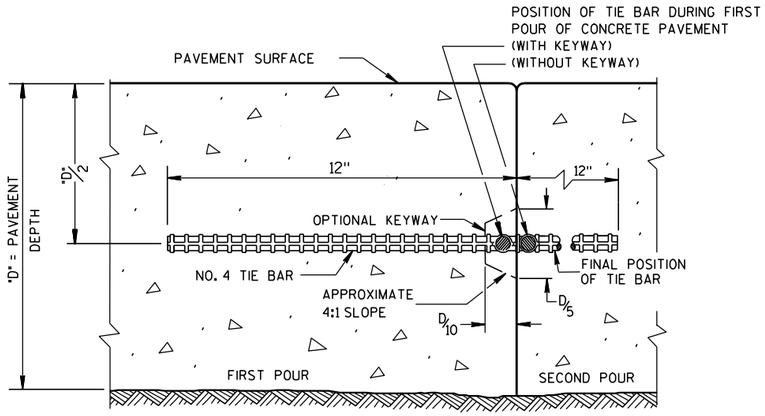
CONCRETE MEDIAN NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE FHWA	/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER 379 NT

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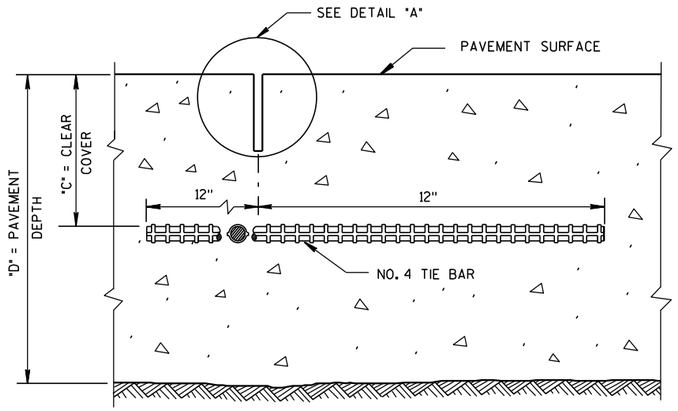
S.D.D. 11 B 2-2

6

S.D.D. 11 B 2-2



CONSTRUCTION JOINT



SAWED JOINT

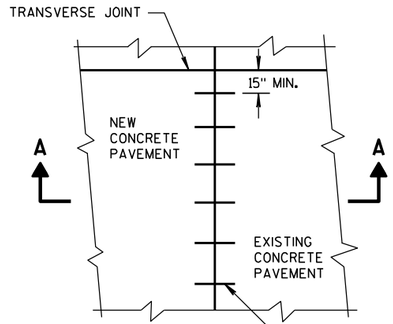
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

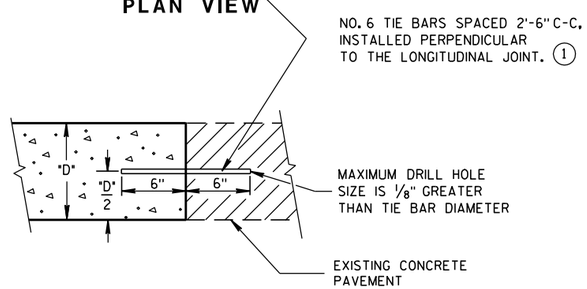
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

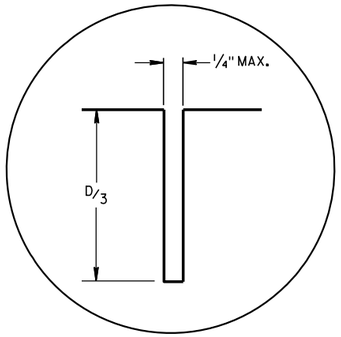
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

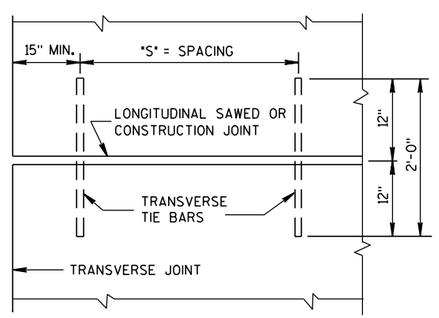


SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"

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

10-5-2010
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DI 380 INEER

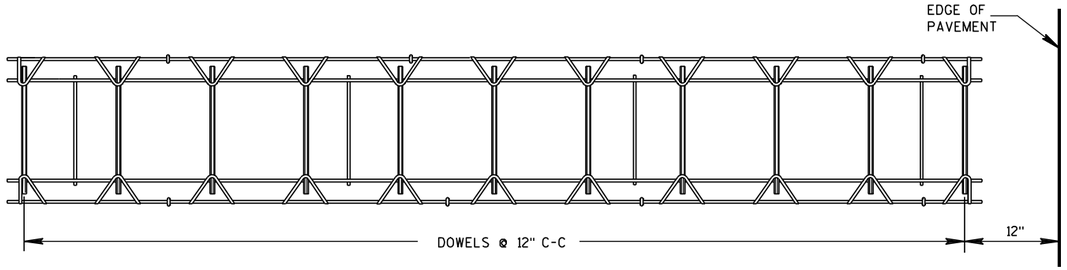
FHWA

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S.D.D. 13 C 1-15

6

S.D.D. 13 C 1-15

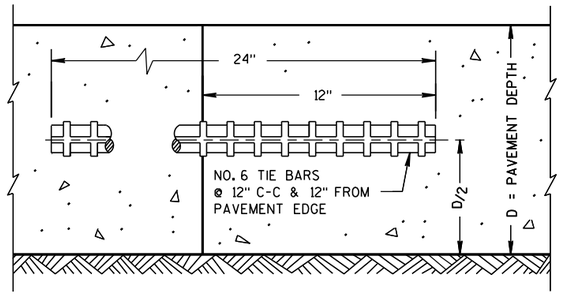


PLAN VIEW



SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



TRANSVERSE CONSTRUCTION JOINT

GENERAL NOTES

CONTRACTION JOINTS

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

DO NOT SEAL OR FILL CONTRACTION JOINTS.

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

FOR PAVEMENT SLABS OF VARYING WIDTHS, CENTER THE DOWEL ASSEMBLY ACROSS THE LANES. LOCATE THE INNER AND OUTER MOST DOWEL BARS SO THAT THE CENTER OF THE BARS ARE A MINIMUM OF 6 INCHES AND A MAXIMUM OF 12 INCHES FROM THE LONGITUDINAL JOINT AND THE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

① THE ENGINEER MAY APPROVE THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. THE CONTRACTOR MAY USE MECHANICAL DOWEL BAR INSERTERS INSTEAD OF DOWEL ASSEMBLIES.

② ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY.

③ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

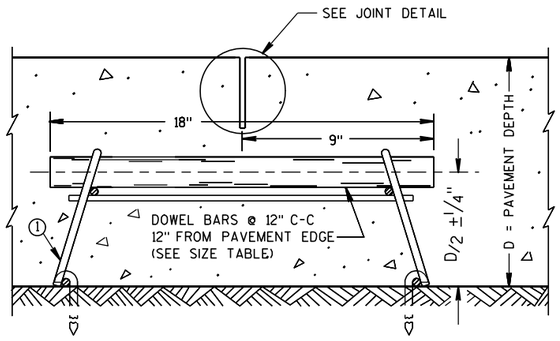
④ SPACE DOWEL BARS INSTALLED BY DRILLING 1'-3" ON CENTER. CENTER THE GROUPING OF DOWEL BARS INSIDE THE SLAB BASED ON ALL THE FOLLOWING SITUATIONS:

BETWEEN THE EDGES OF PAVEMENTS WITHOUT LONGITUDINAL JOINTS OR BETWEEN THE EDGE OF PAVEMENT AND NEAREST LONGITUDINAL JOINT OR BETWEEN TWO ADJACENT LONGITUDINAL JOINTS.

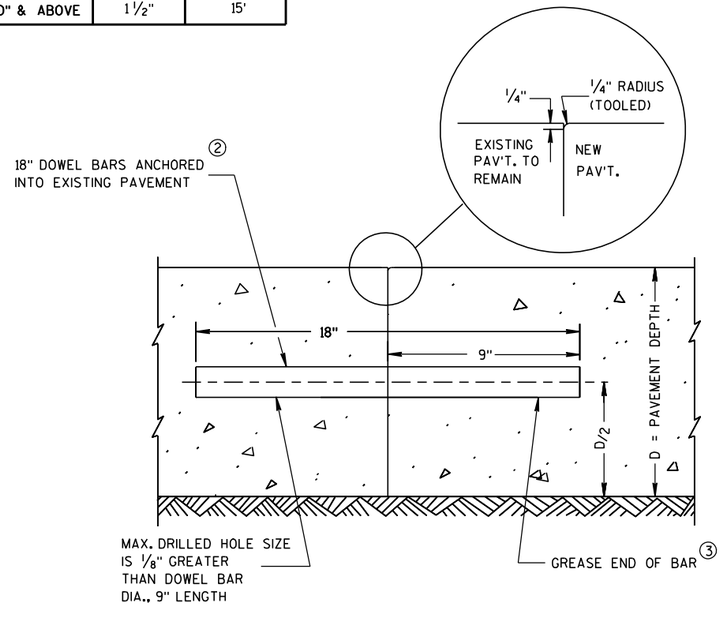
⑤ SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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

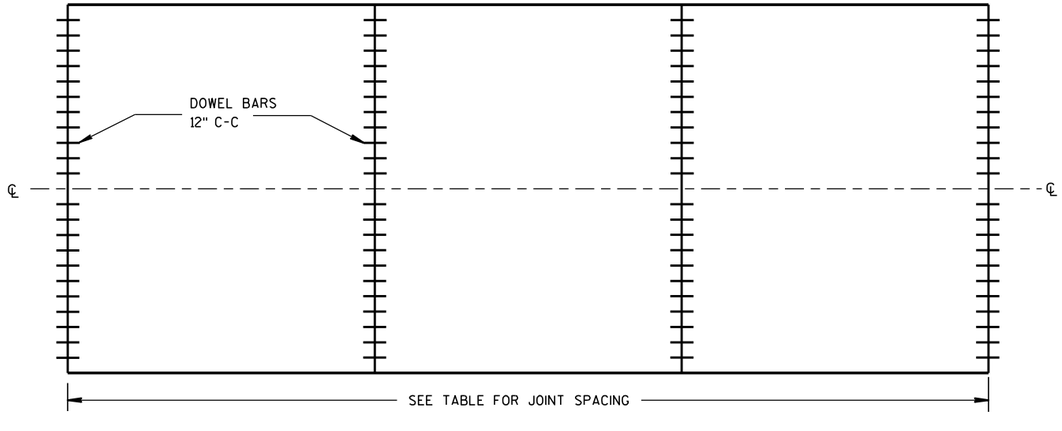


DOWELED CONTRACTION JOINT

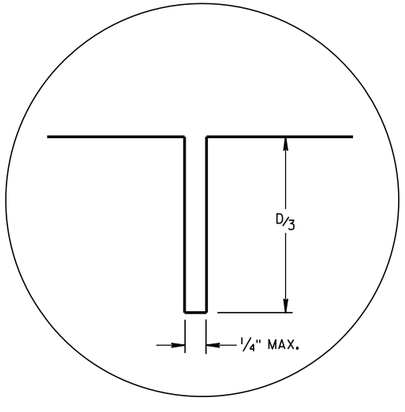


TRANSVERSE CONTRACTION JOINTS ABUTTING EXISTING PAVEMENT

④ DOWEL BAR DETAIL



CONTRACTION JOINT LOCATIONS



JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

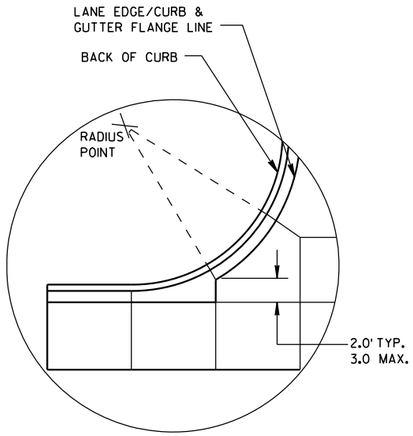
APPROVED
12/11/2009 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DE NEER
FHWA

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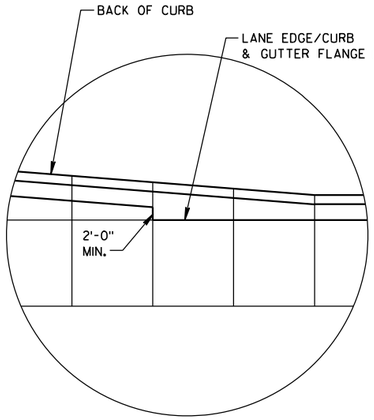
S.D.D. 13 C 13-7

6

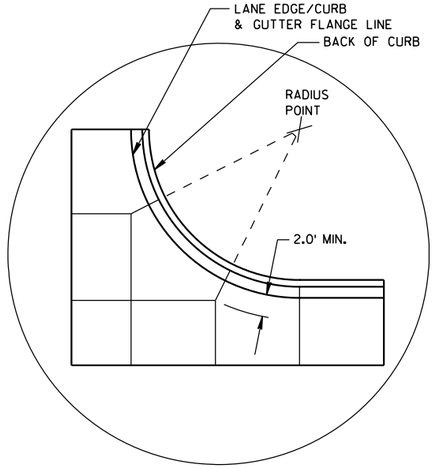
S.D.D. 13 C 13-7



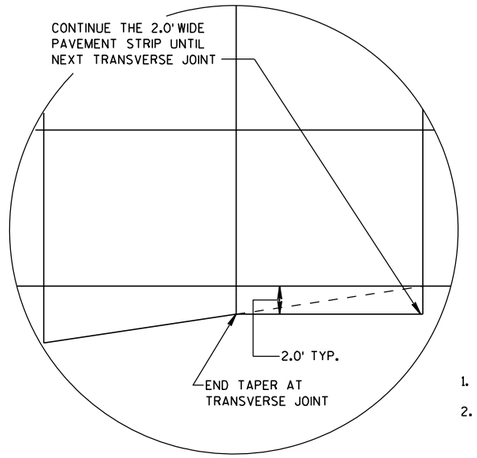
DETAIL "A"



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.

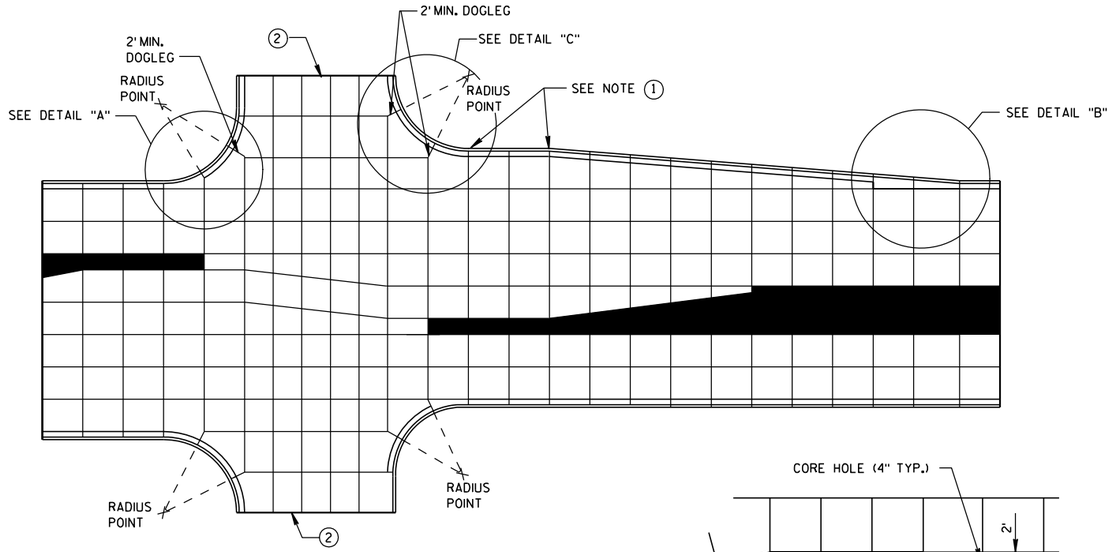
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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.

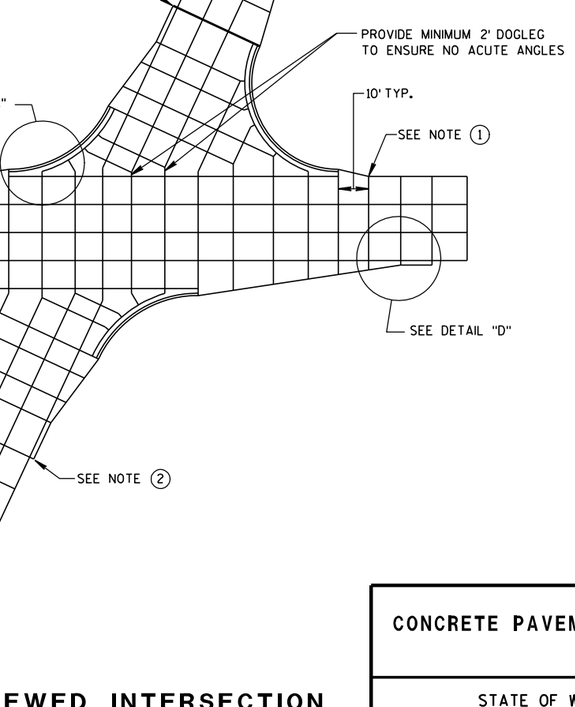
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM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



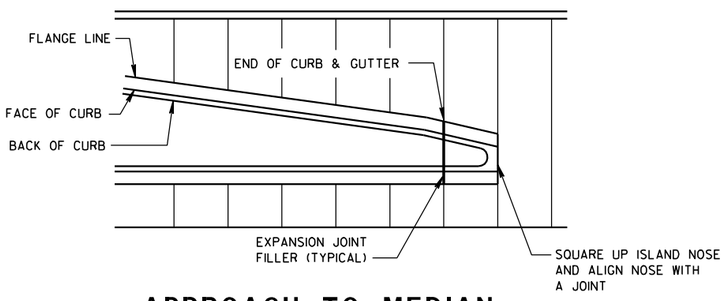
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

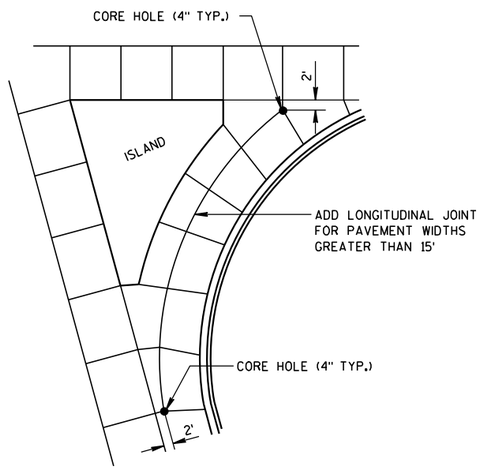
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

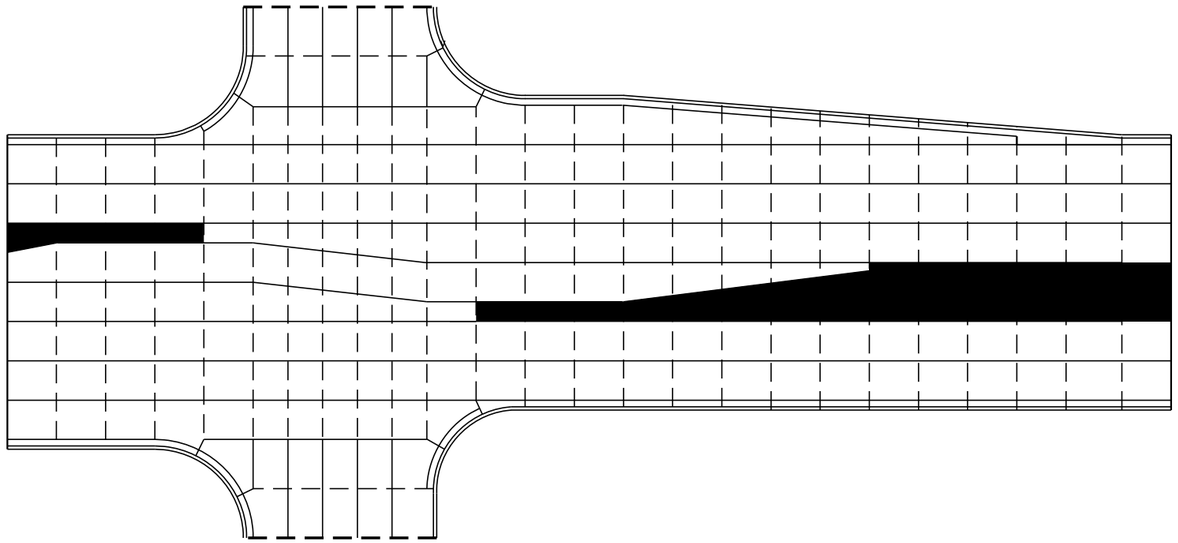
S.D.D. 13 C 18-1a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

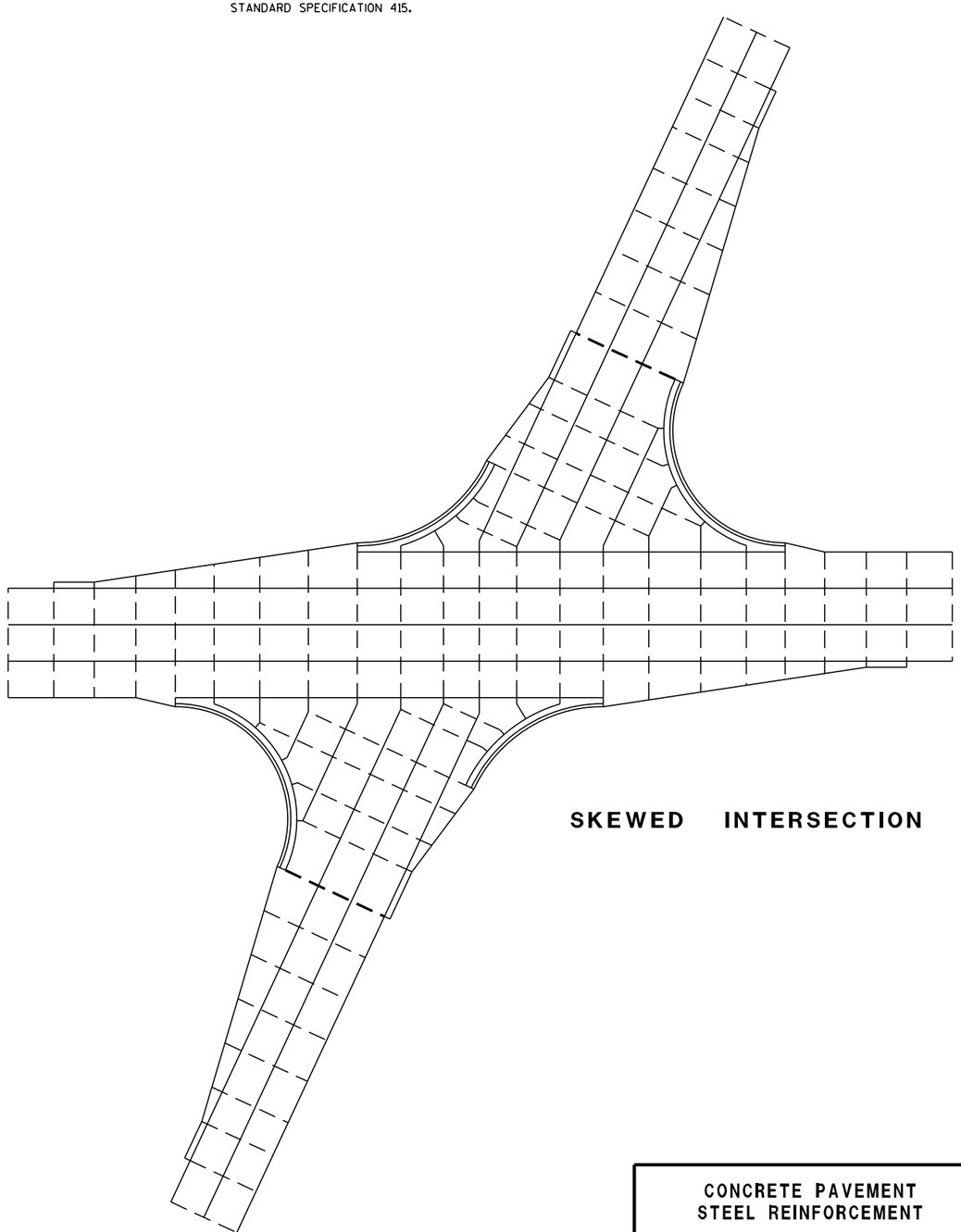
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

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



SKEWED INTERSECTION

6

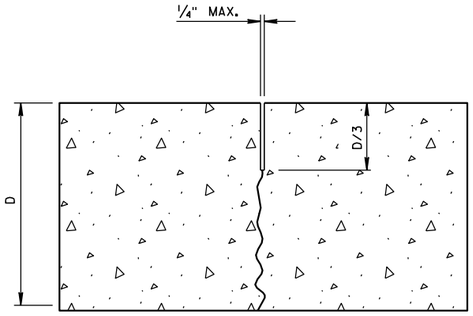
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S.D.D. 13 C 18-1b

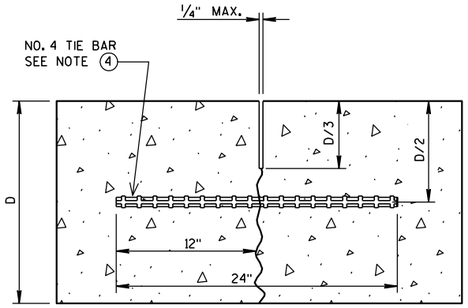
S.D.D. 13 C 18-1b

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



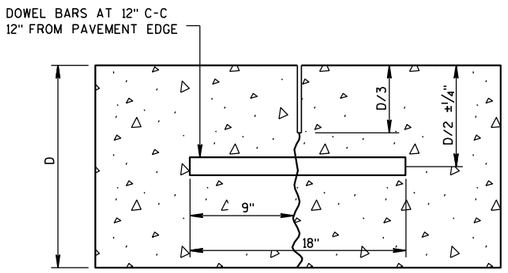
UNDOWELED-TRANSVERSE



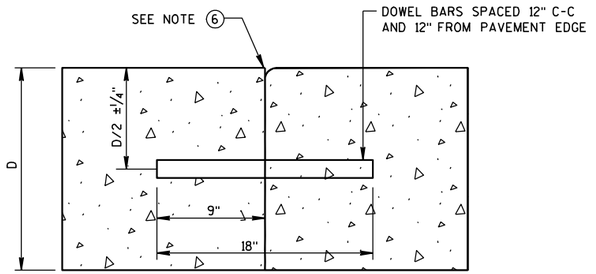
TIED LONGITUDINAL

GENERAL NOTES

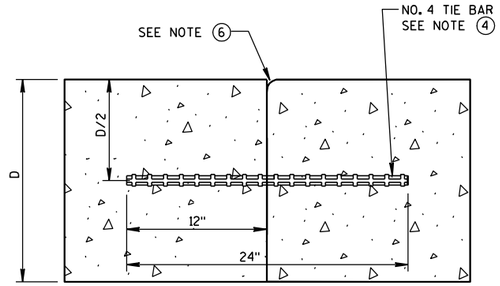
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE 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



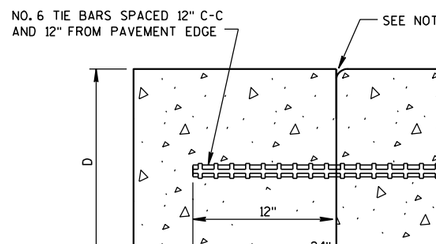
DOWELED TRANSVERSE



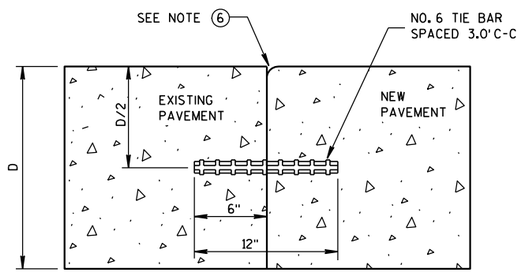
TIED LONGITUDINAL

CONTRACTION JOINTS

SEE NOTE (2)



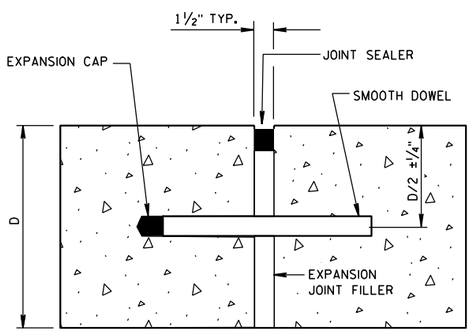
TIED TRANSVERSE
SEE NOTE (3)



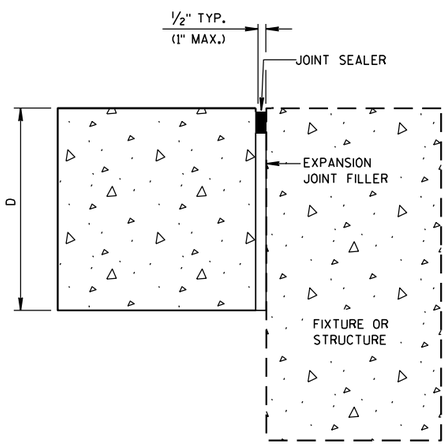
TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE
SEE NOTE (1)



UNTIED-LONGITUDINAL

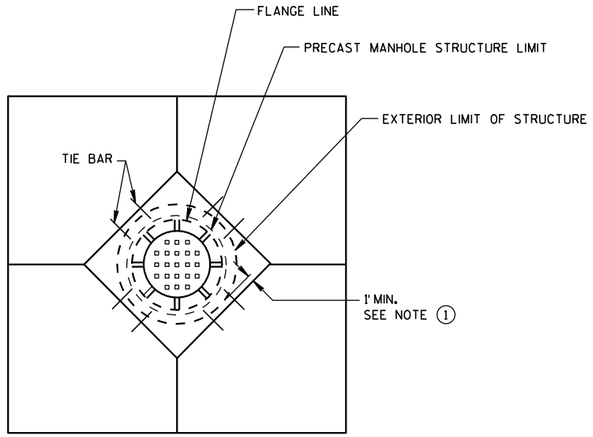
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

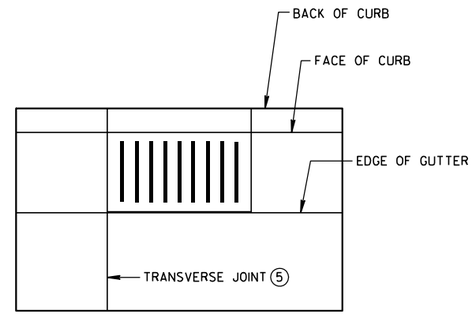
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

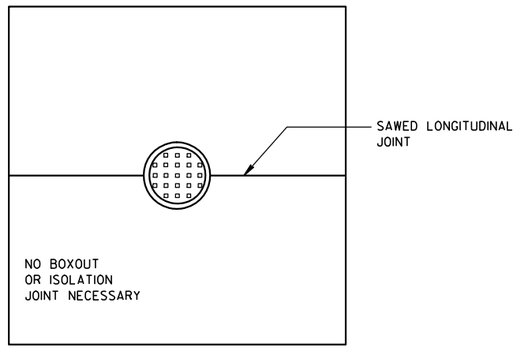
S.D.D. 13 C 18-1c



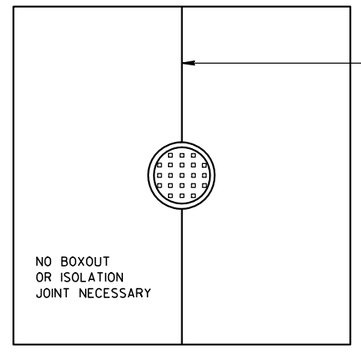
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



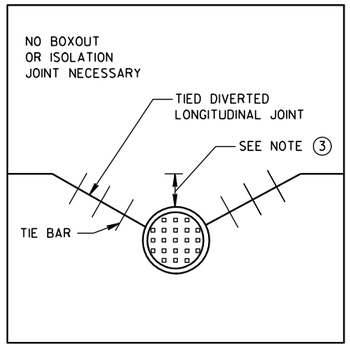
INLET WITH TRANSVERSE JOINT



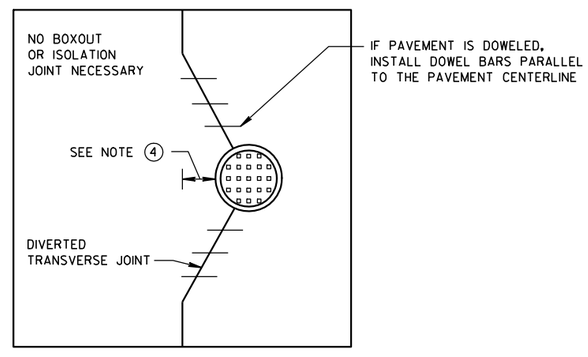
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

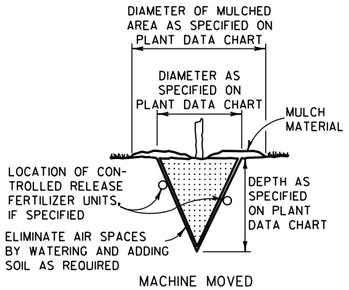
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS GREATER THAN 2 FEET, DO NOT DIVERT JOINT AND SAW LONGITUDINAL JOINT AS NORMAL. IF DISTANCE IS 2 FEET OR LESS, DIVERT LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE.
4. IF DISTANCE FROM THE EDGE OF MANHOLE TO THE NEAREST TRANSVERSE JOINT IS GREATER THAN 4 FEET, REDIRECT JOINT TO INTERSECT MANHOLE. IF DISTANCE IS 4 FEET OR LESS, PLACE REBAR REINFORCEMENT AROUND MANHOLE.
5. ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

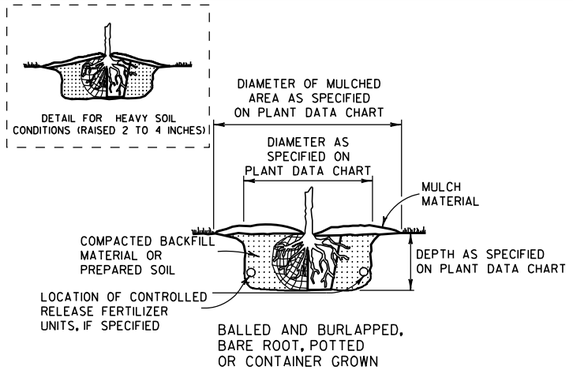
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-5-2010
DATE
/S/ Deb Bischoff
PAVEMENT POLICY & D 385 ENGINEER
FHWA

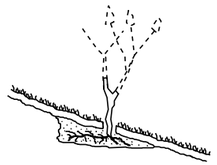
6
S.D.D. 13 C 18-1d



MACHINE MOVED

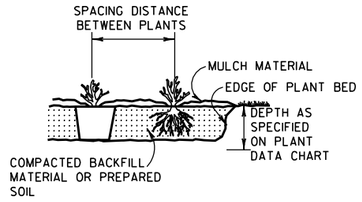


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



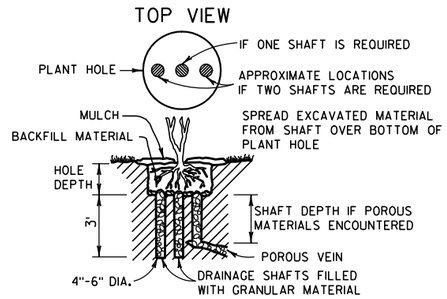
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



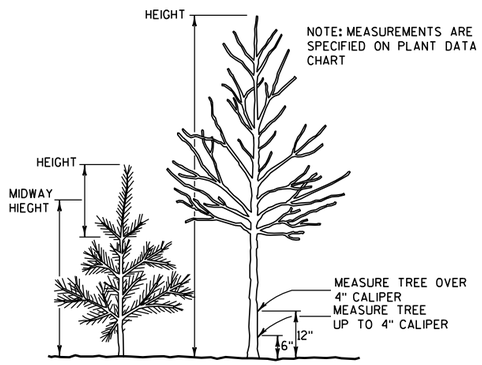
PREPARED BED (BARE ROOT AND POTTED)

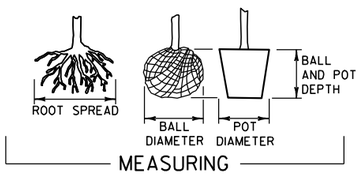
PLANTING



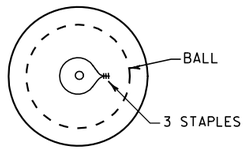
NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

DRAINING

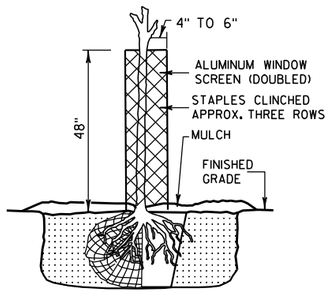




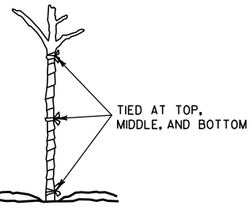
MEASURING



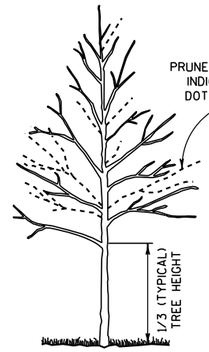
TOP VIEW



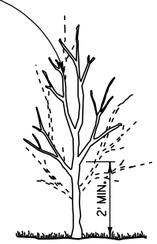
RODENT PROTECTION



WRAPPING



TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)



SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)



MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

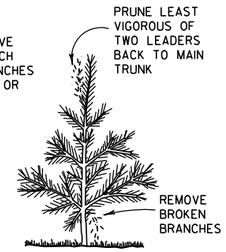
NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES



SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

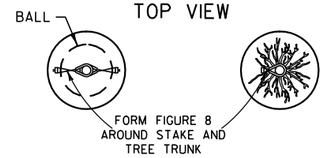


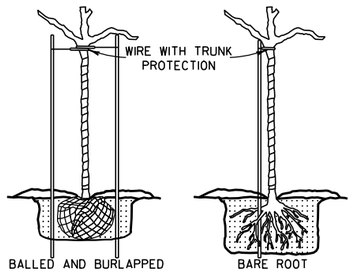
SUMAC

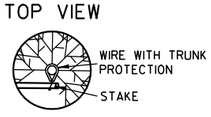


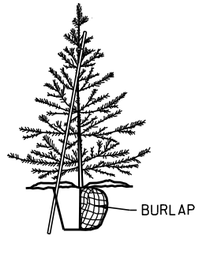
TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

PRUNING



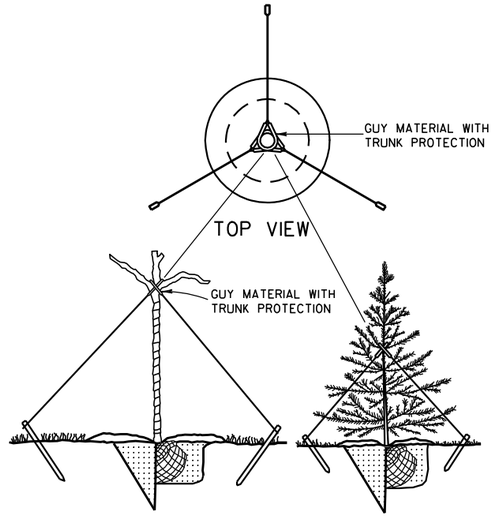






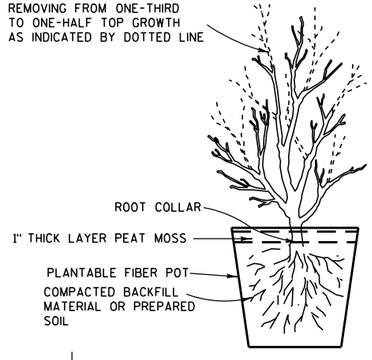
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.

BRACING



GUYING

PRUNE LARGER SHRUBS BY REMOVING FROM ONE-THIRD TO ONE-HALF TOP GROWTH AS INDICATED BY DOTTED LINE



POTTING

NOTES

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

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

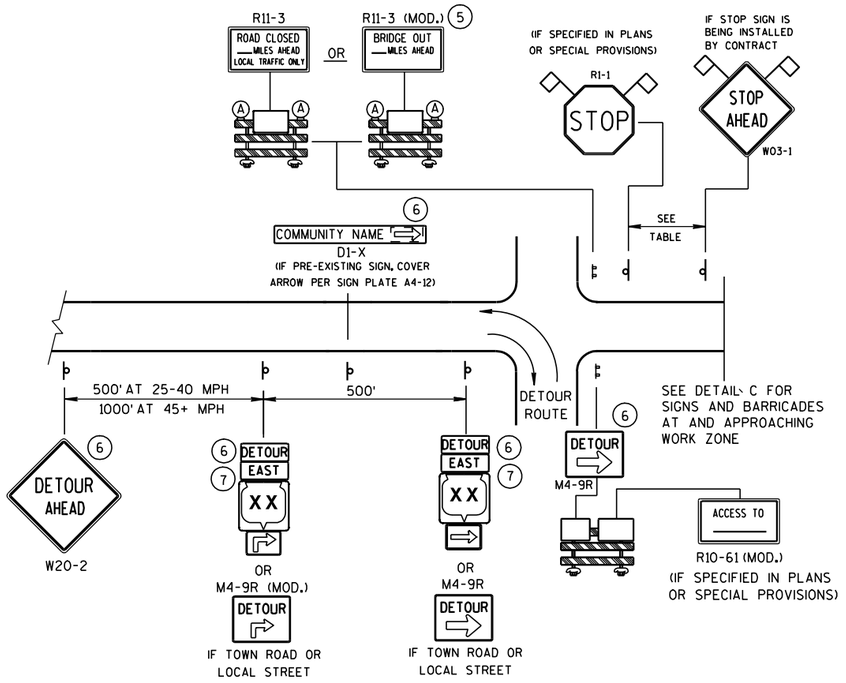
TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/11/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

S.D.D. 14 A 2-1

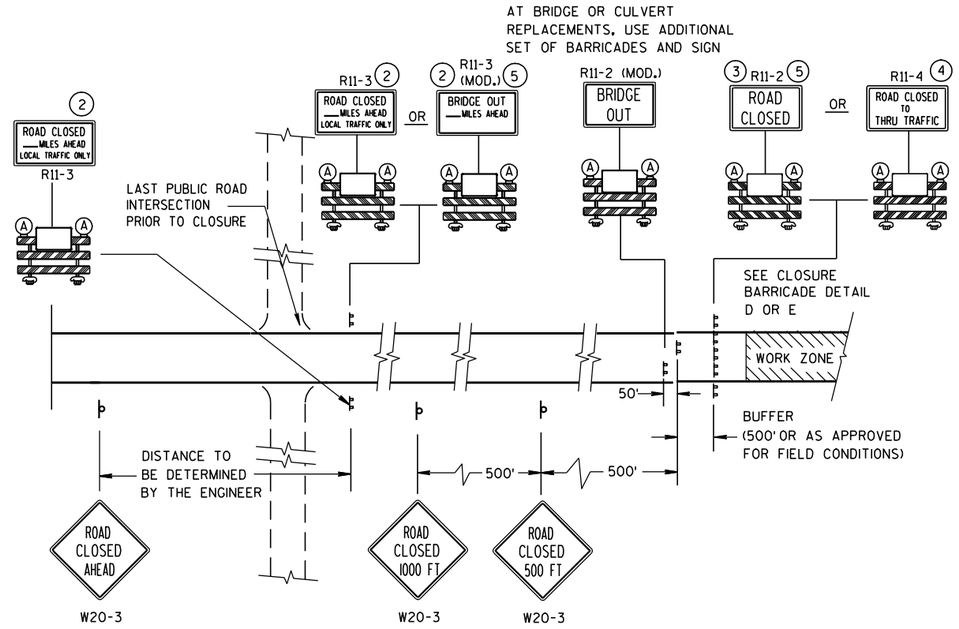
6



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

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

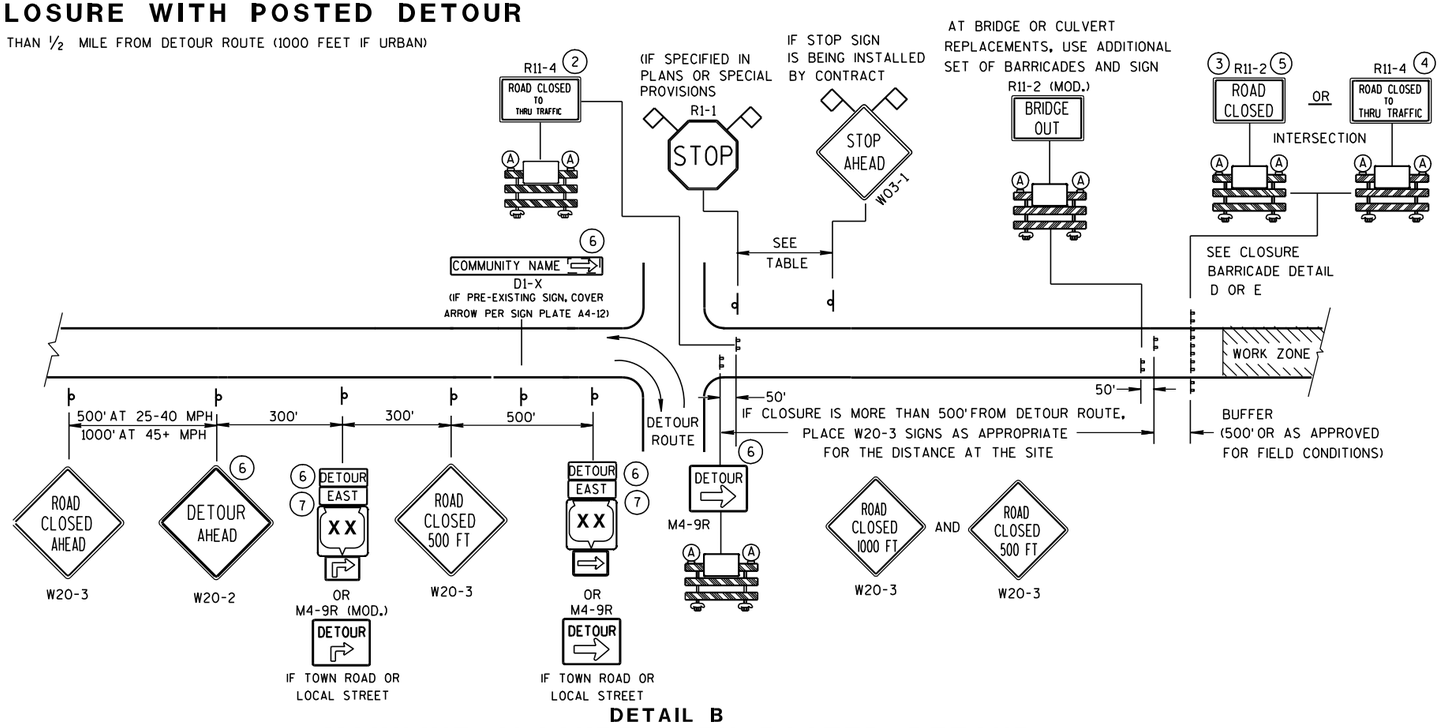


DETAIL C

MAINLINE CLOSURE, NO POSTED DETOUR

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

SEE SDD 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

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

LEGEND

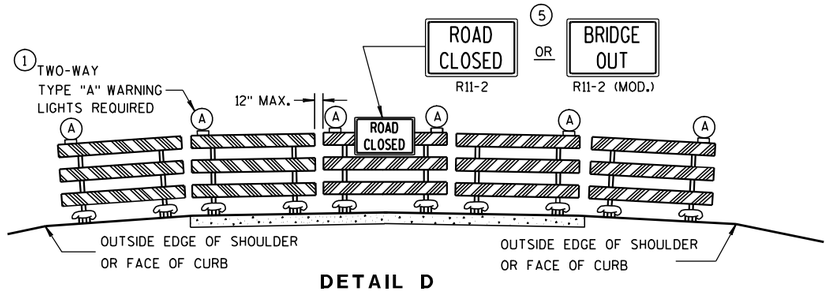
- POST MOUNTED SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1; M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

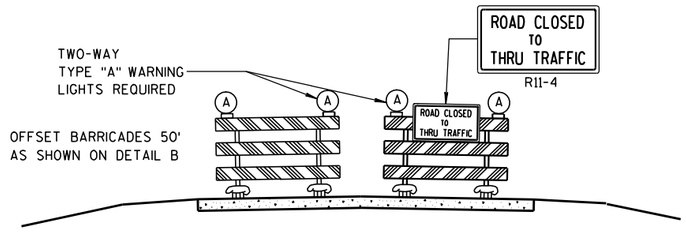
S.D.D. 15 C 2-4a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-4a FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/16/03
DATE

/S/ Thomas N. N[illegible]
CHIEF SIGNS AND MARKING ENGINEER

FHWA

6

S.D.D. 15 C 2-4b

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

GENERAL NOTES

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

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

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

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

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

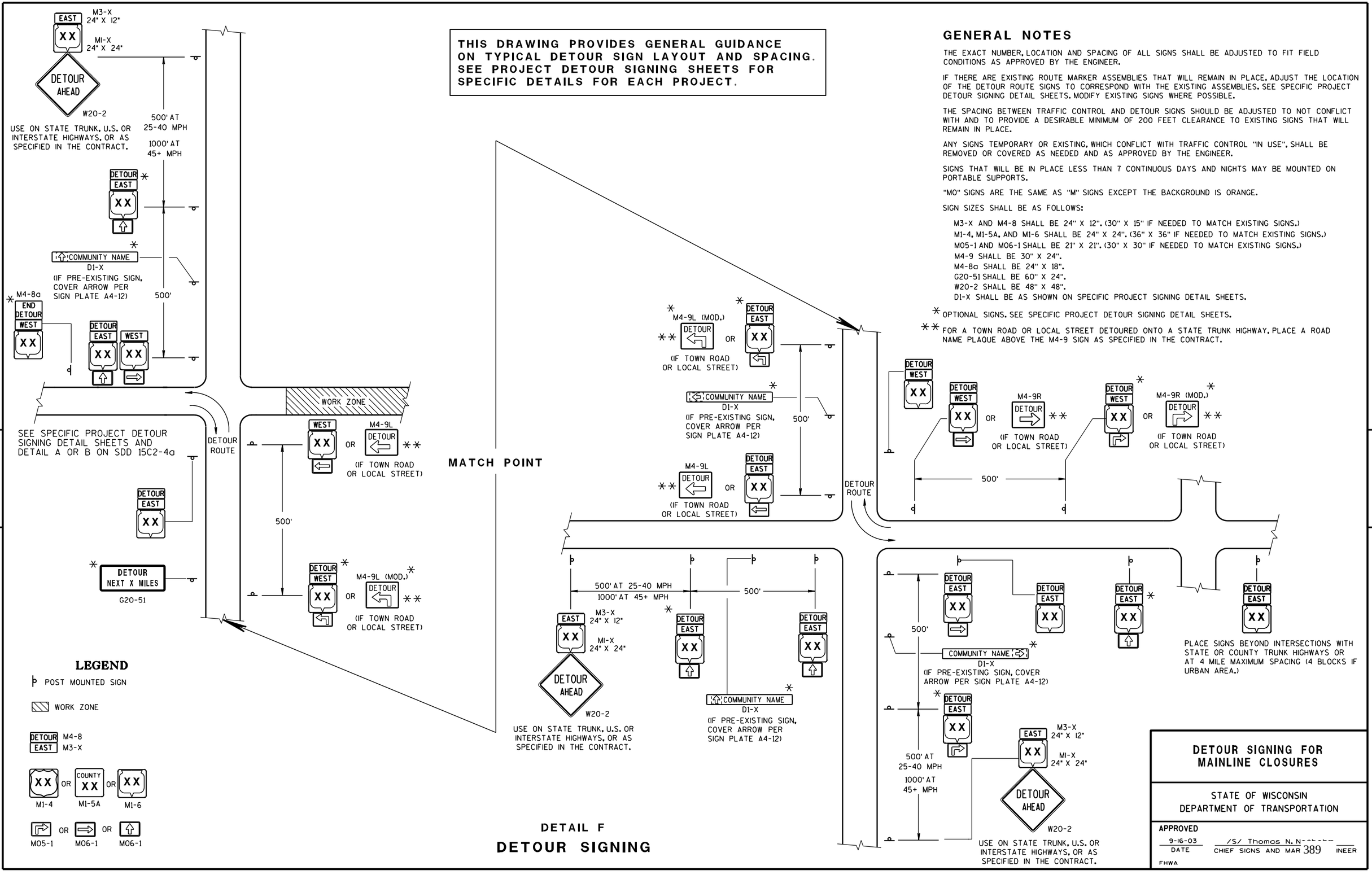
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
M4-9 SHALL BE 30" X 24".
M4-8a SHALL BE 24" X 18".
G20-51 SHALL BE 60" X 24".
W20-2 SHALL BE 48" X 48".
D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

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

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



DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

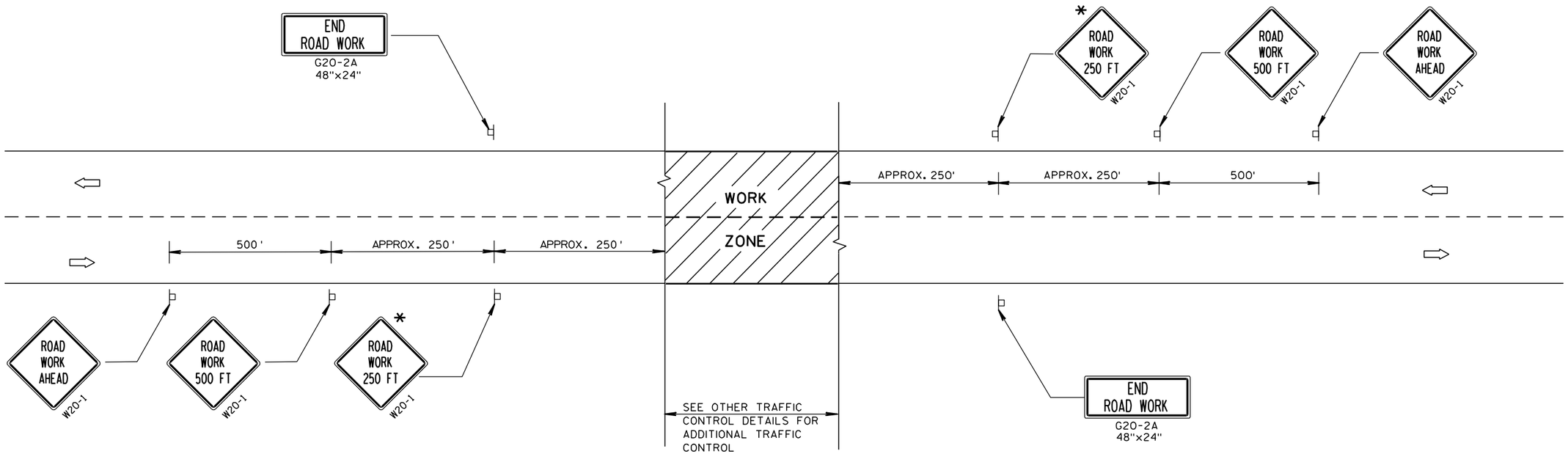
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-16-03 DATE — /S/ Thomas N. Nottbusch CHIEF SIGNS AND MARKINGS ENGINEER

FHWA

6 S.D.D. 15 C 2-4c



GENERAL NOTES

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

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

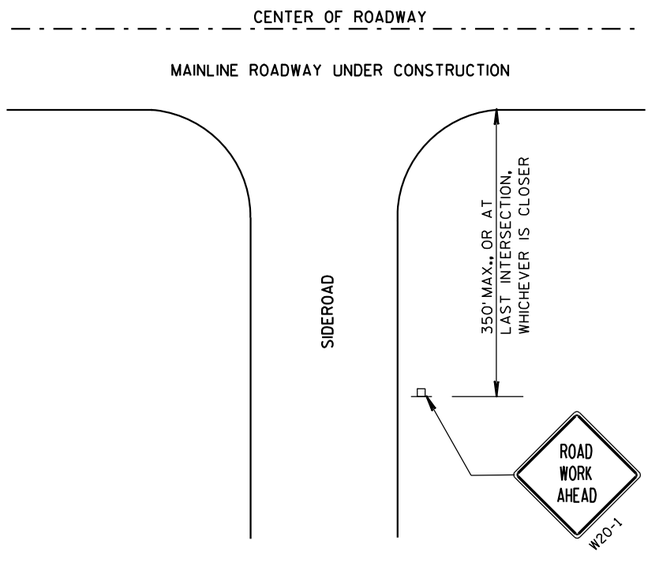
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



LEGEND

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/00
DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKING ENGINEER

FHWA

6

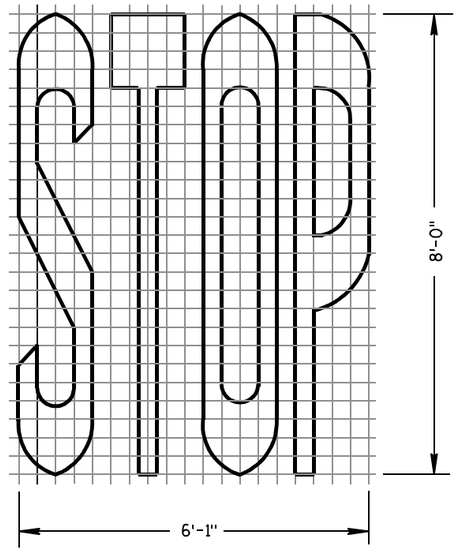
S.D.D. 15 C 5-1

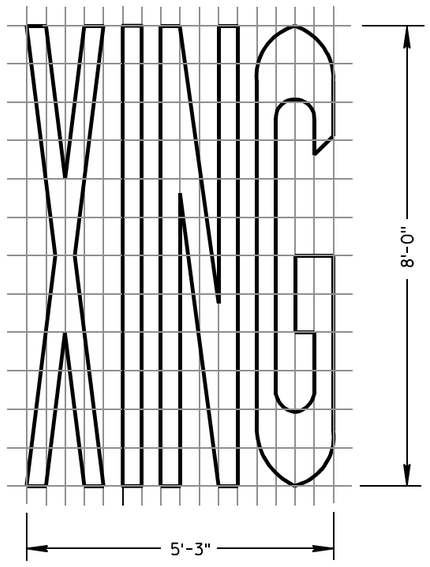
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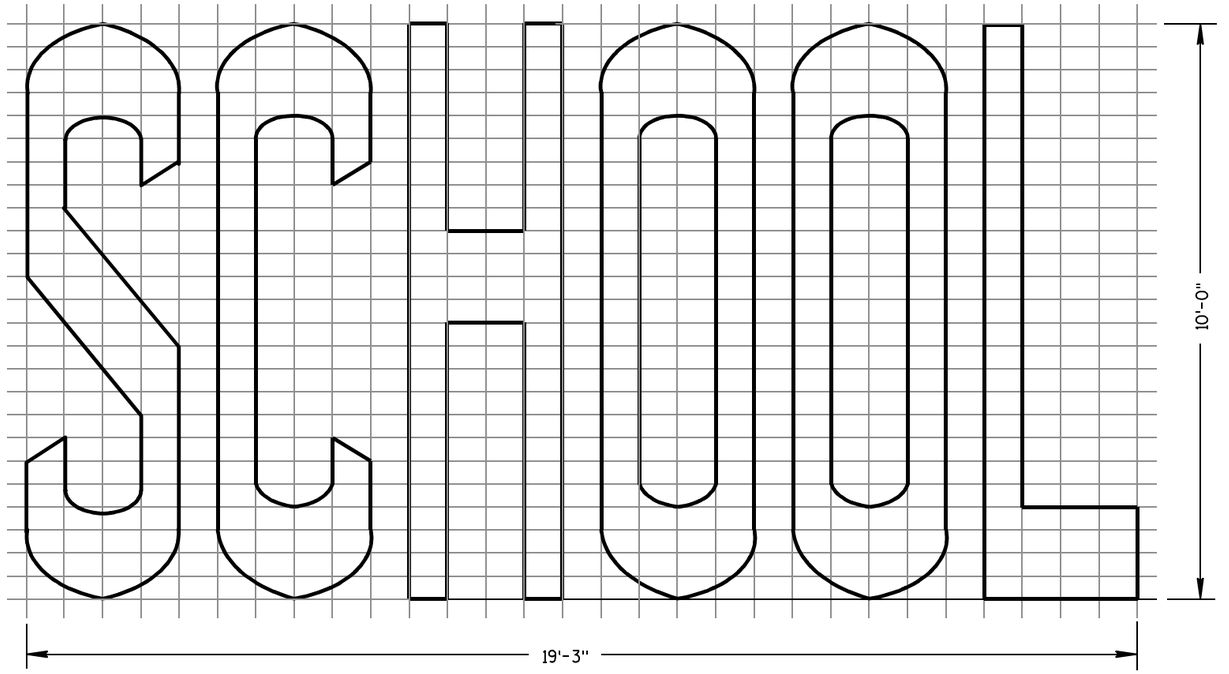
GENERAL NOTES

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.

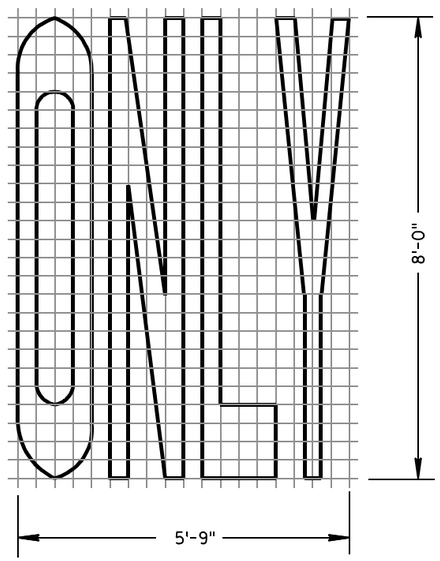
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

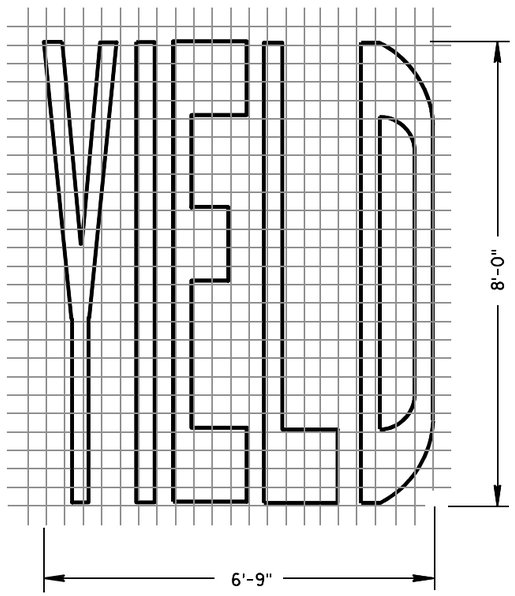


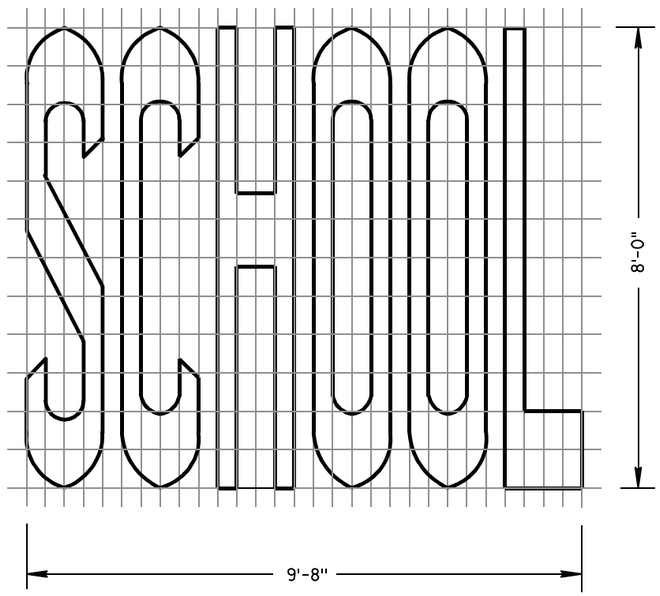




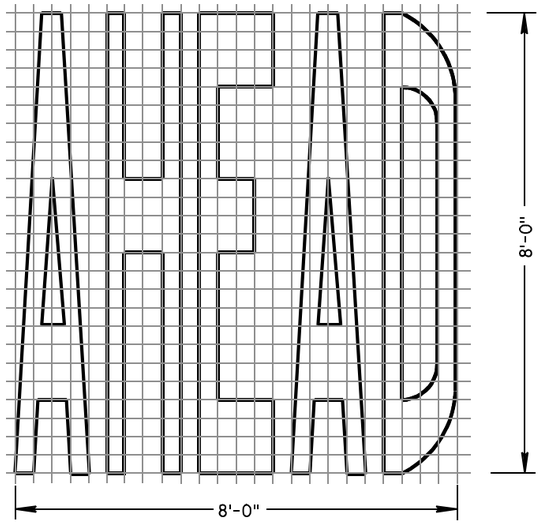
TWO-LANE







SINGLE-LANE



PAVEMENT MARKING WORDS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7-1-11 DATE	/S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER
FHWA	

6

S.D.D. 15 C 7-12b

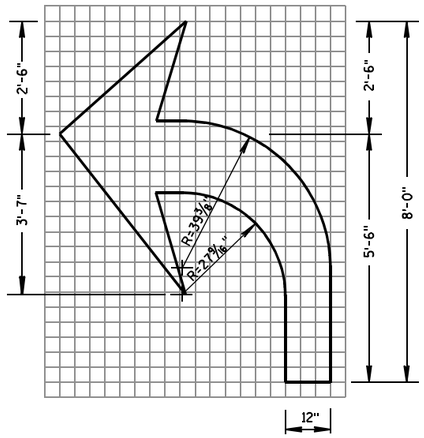
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S.D.D. 15 C 7-12b

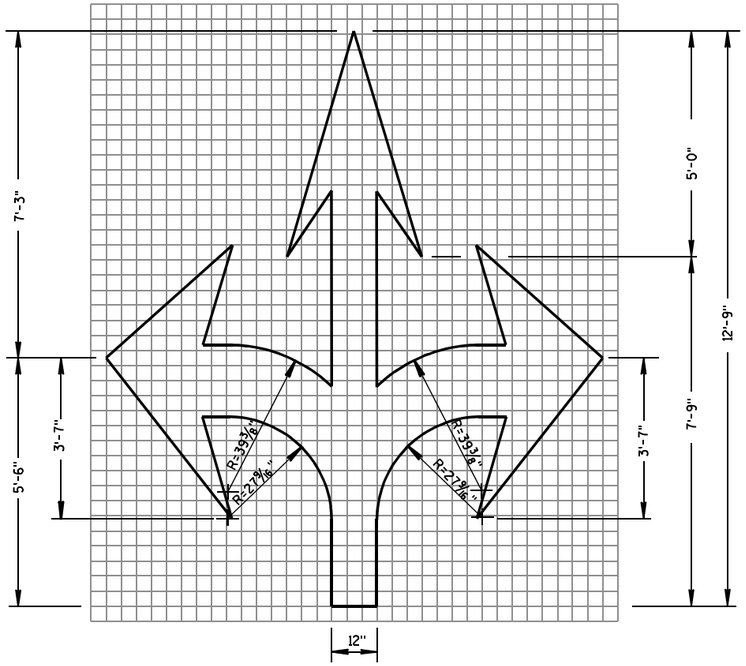
GENERAL NOTES

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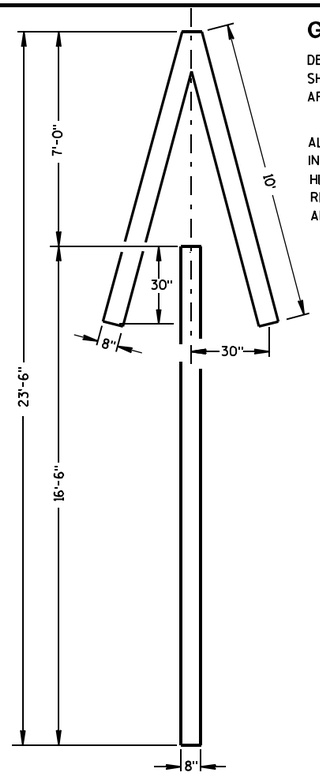
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



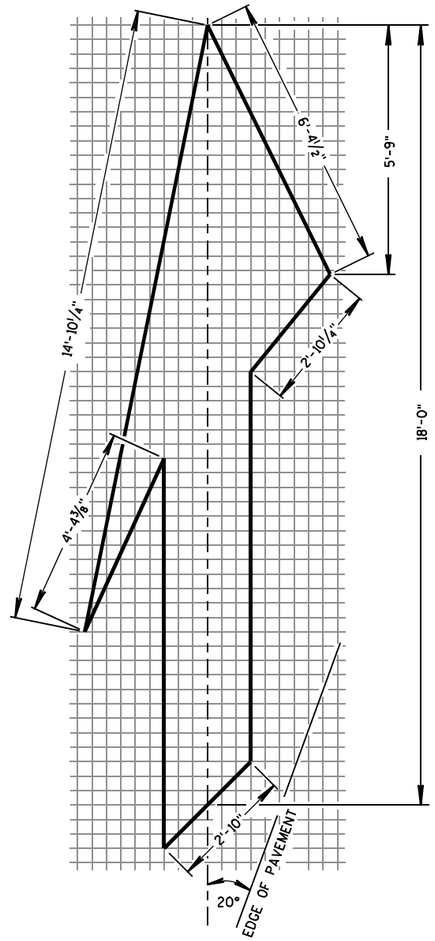
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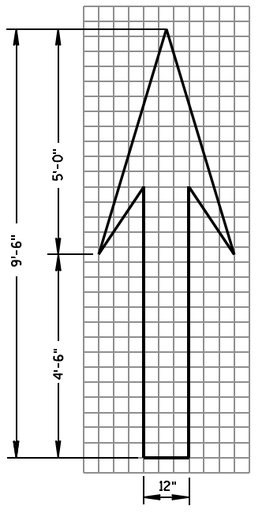
TYPE 6



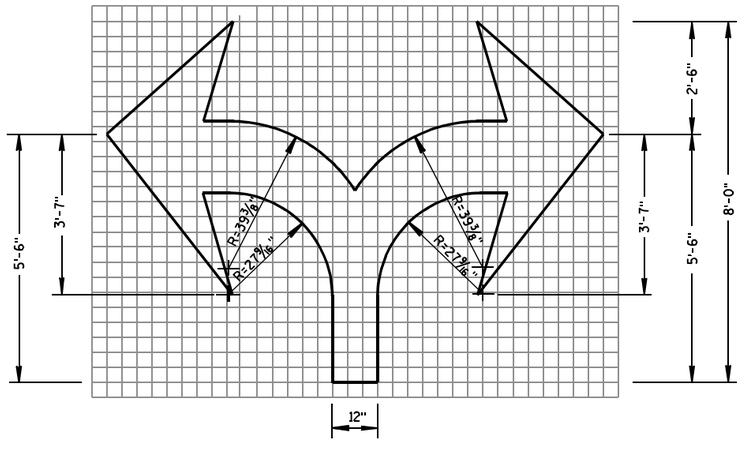
TYPE 4



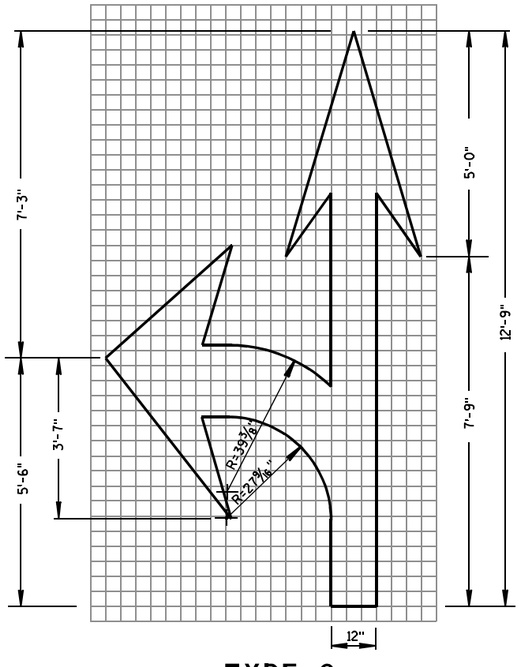
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

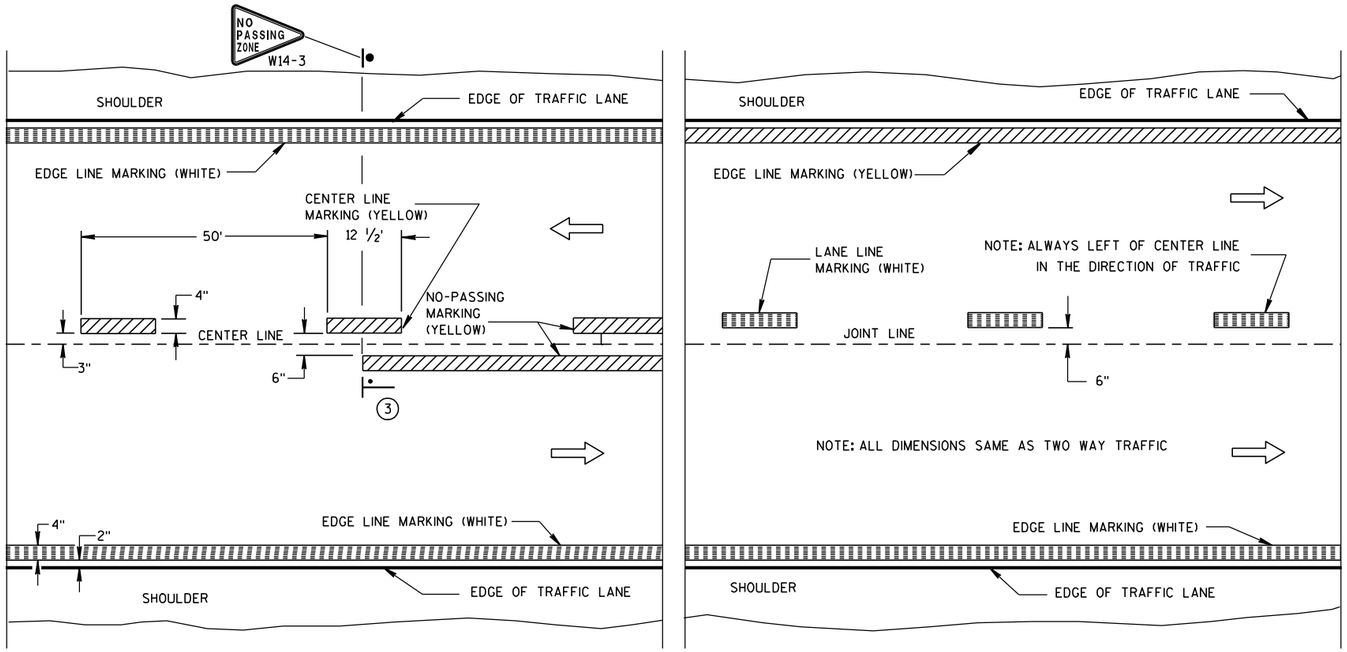
7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

FHWA

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S.D.D. 15 C 7-12c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

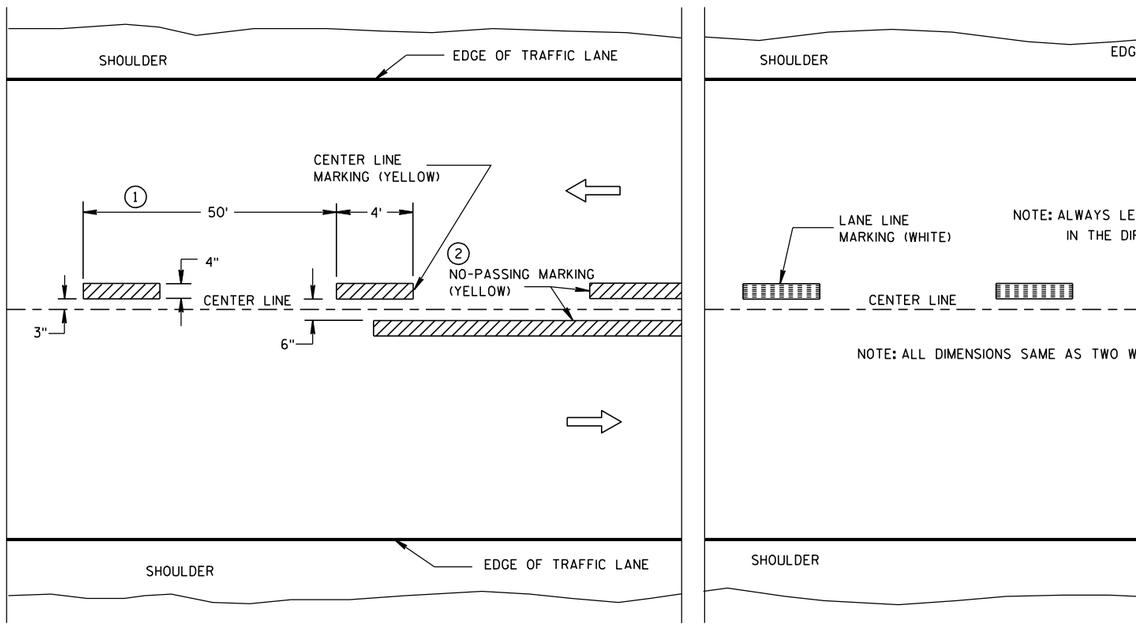
GENERAL NOTES

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

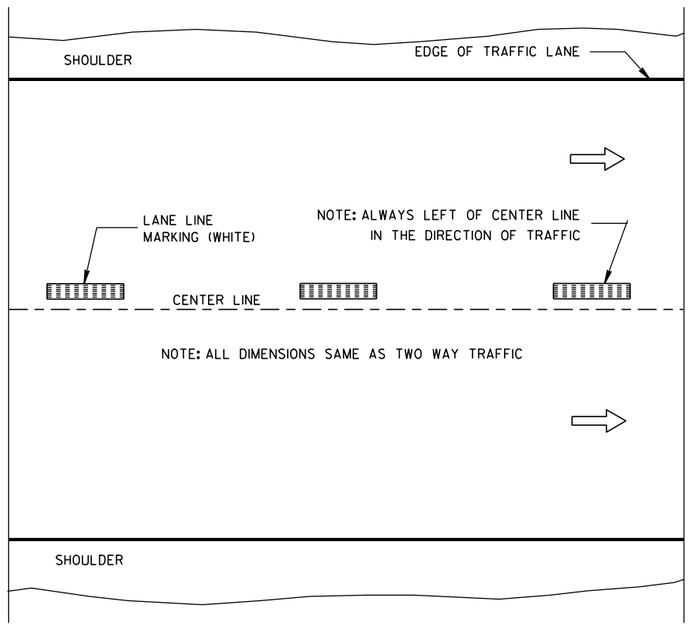
1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING 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.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



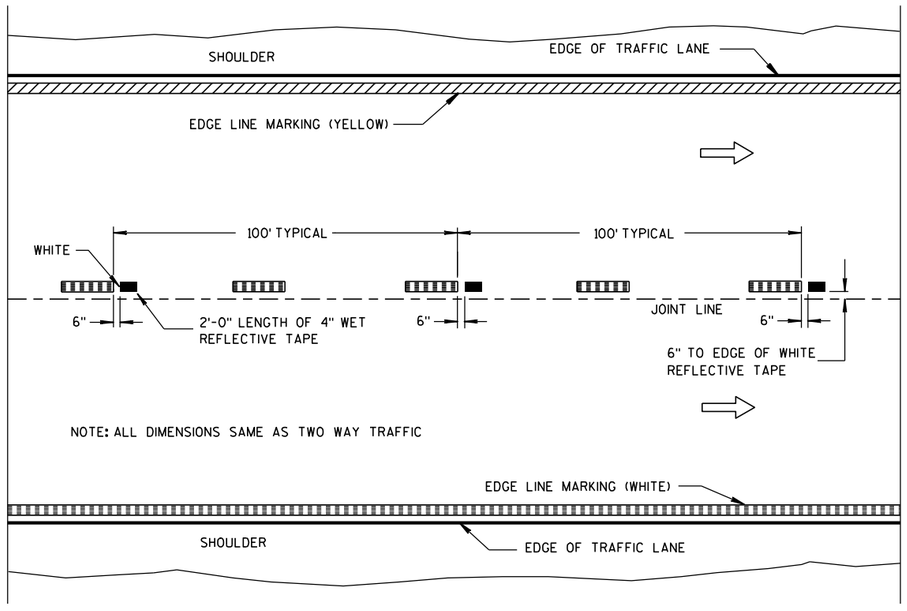
TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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



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

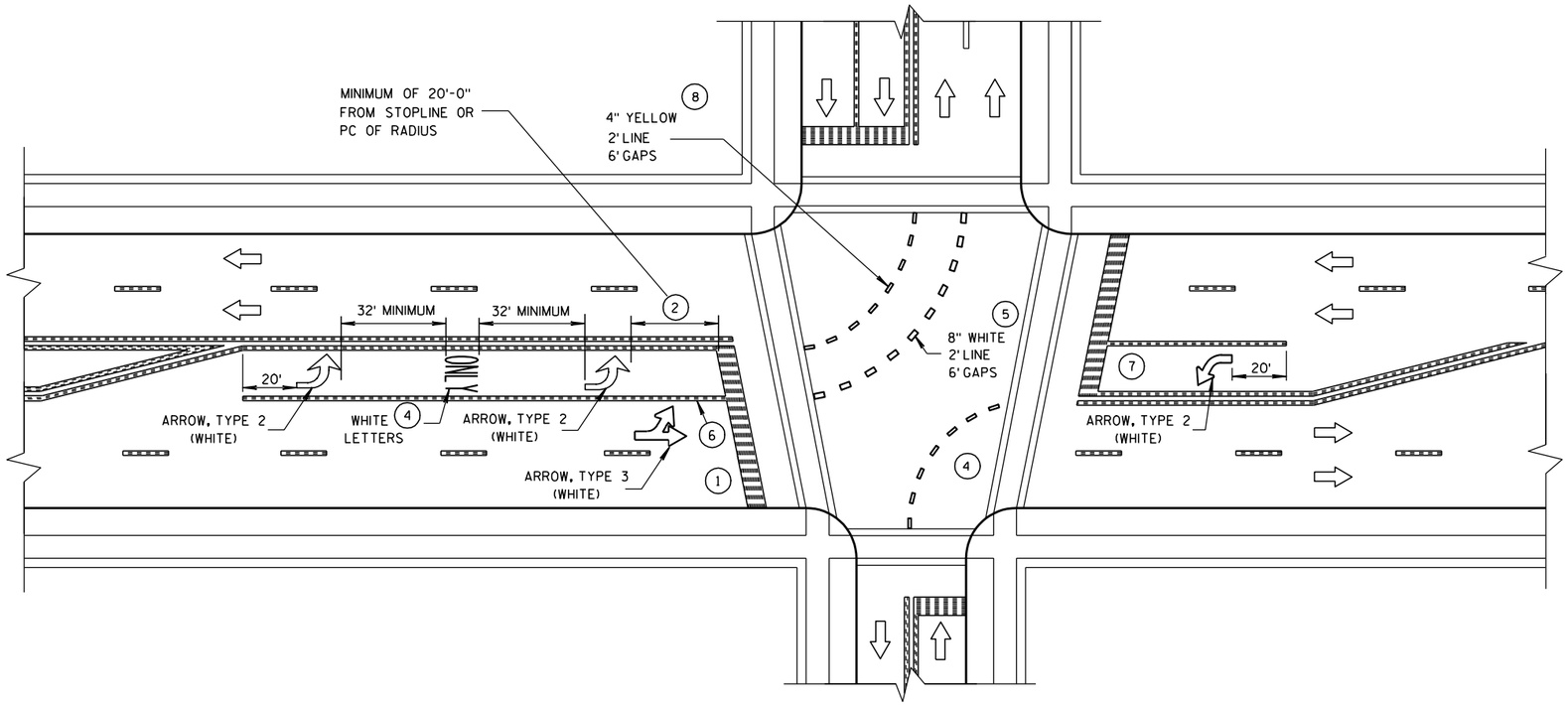
APPROVED
6-23-11 DATE
/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 8-14a

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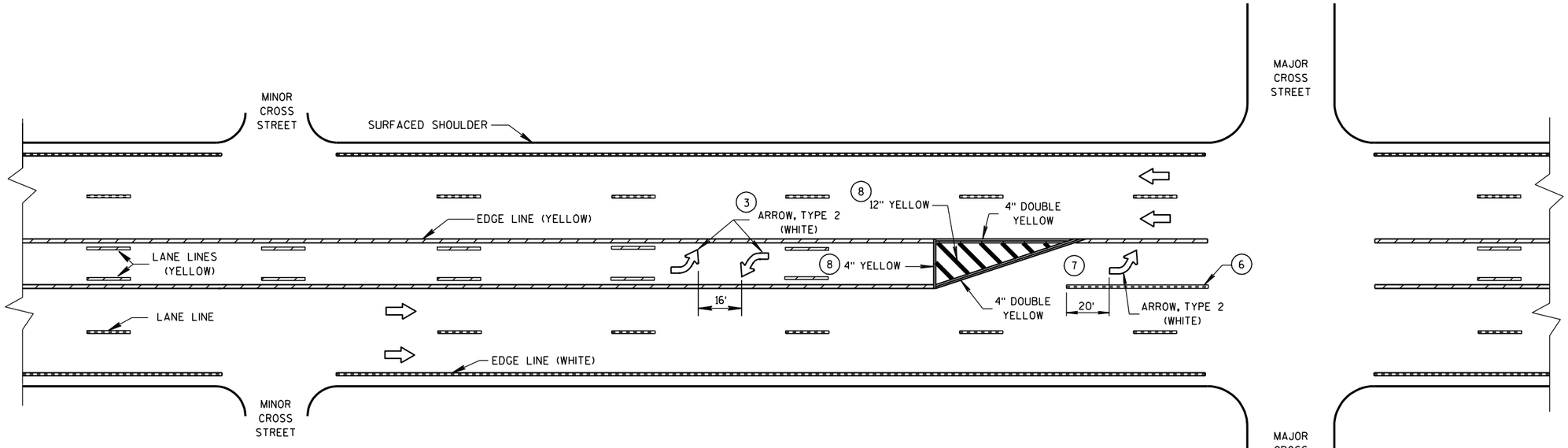
S.D.D. 15 C 8-14a



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' OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA ARROW AND ONLY PER 160' 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'.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



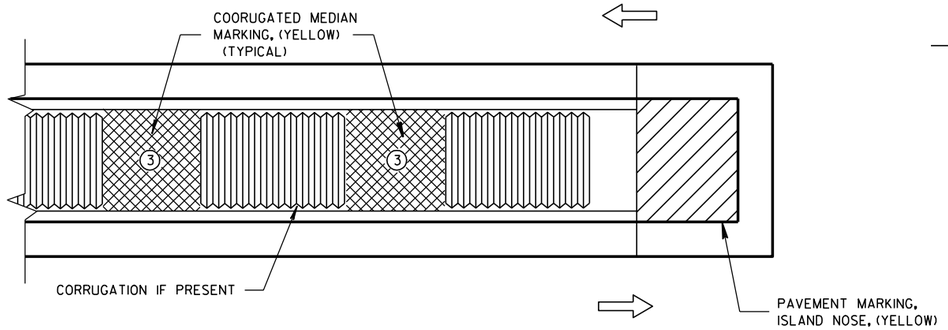
TWO WAY LEFT TURN LANE

PAVEMENT MARKING
(LEFT TURN LANE)

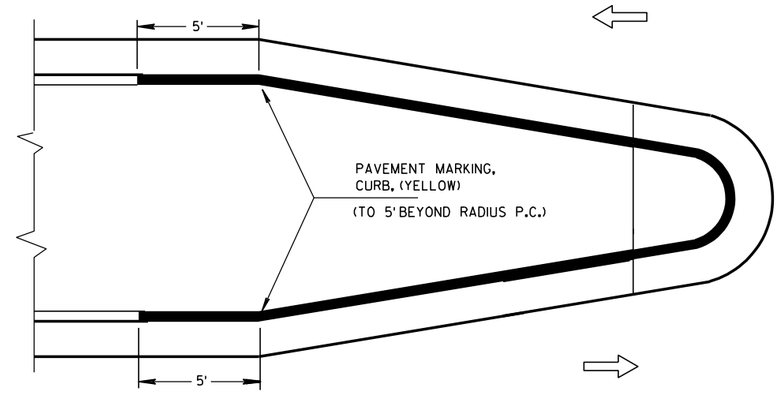
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

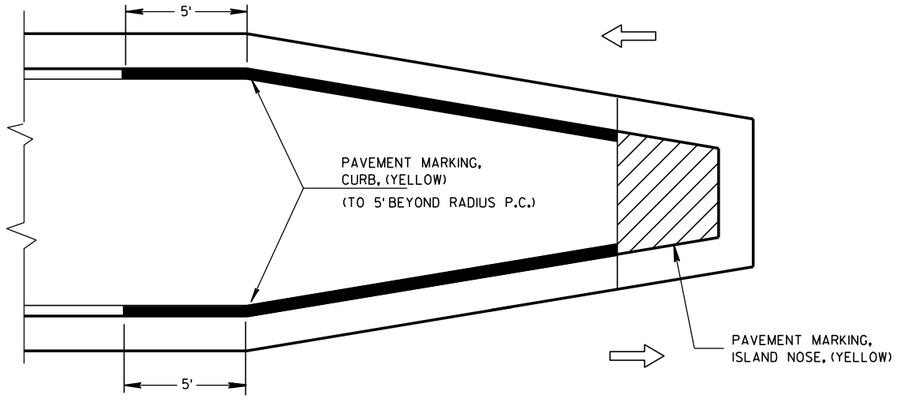
S.D.D. 15 C 8-14e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

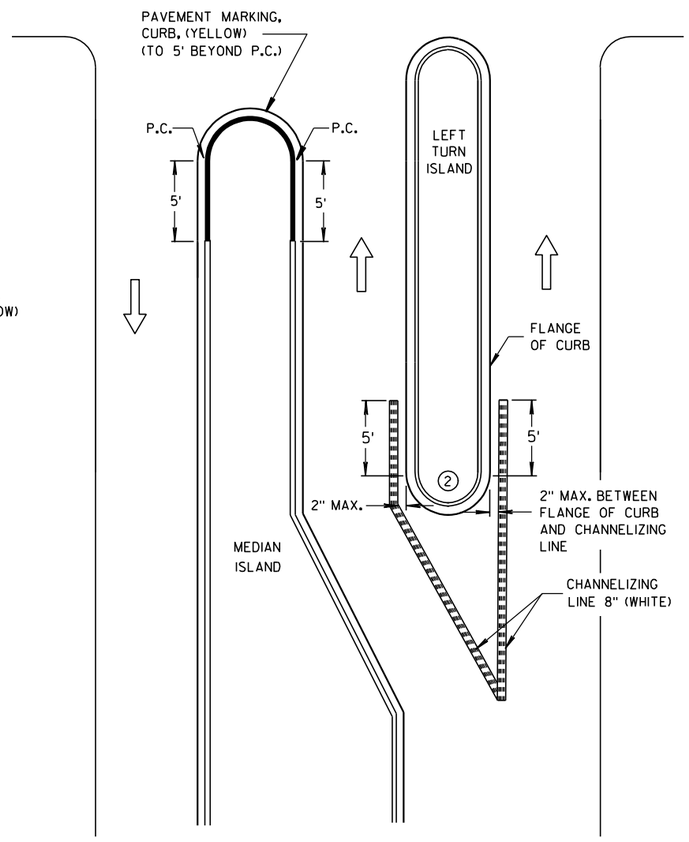


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

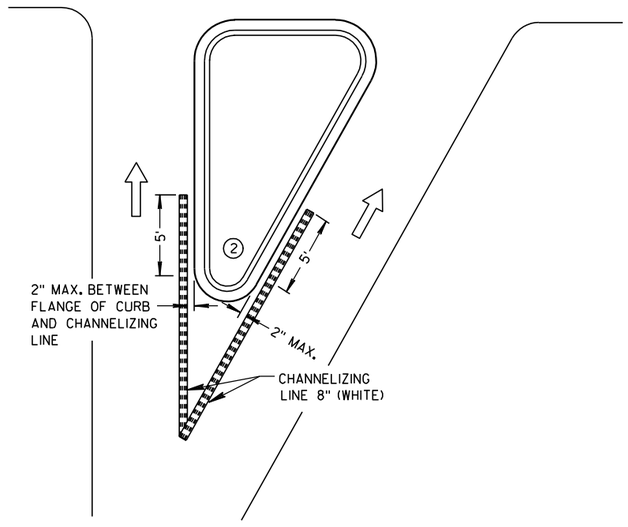
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



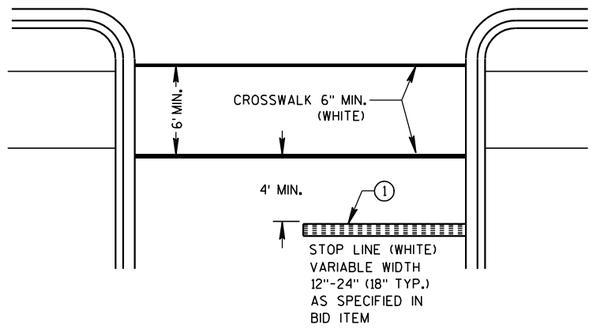
LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
3. 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



STOP LINE AND CROSSWALK

LEGEND

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

PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)

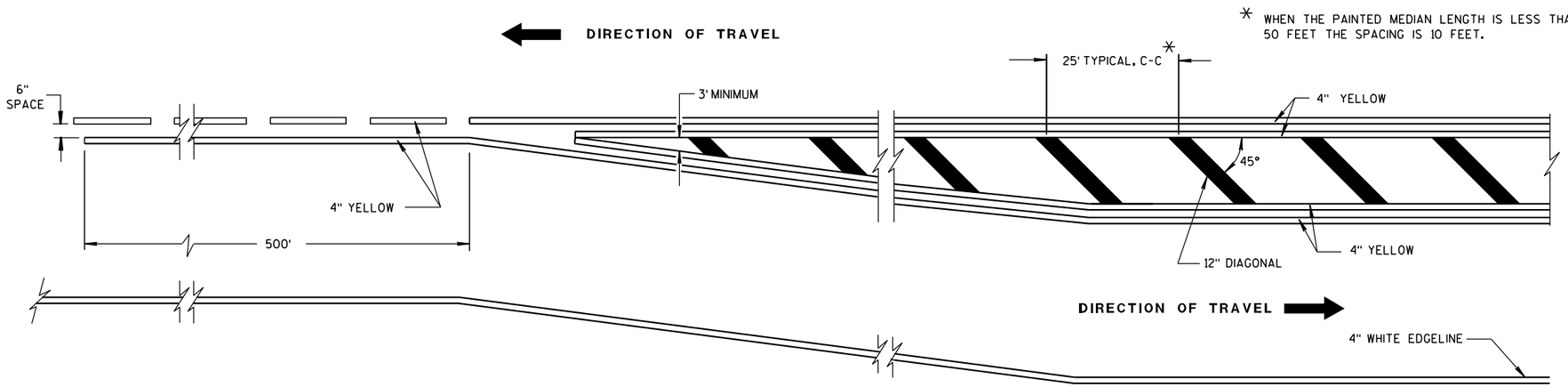
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 8-14f

6

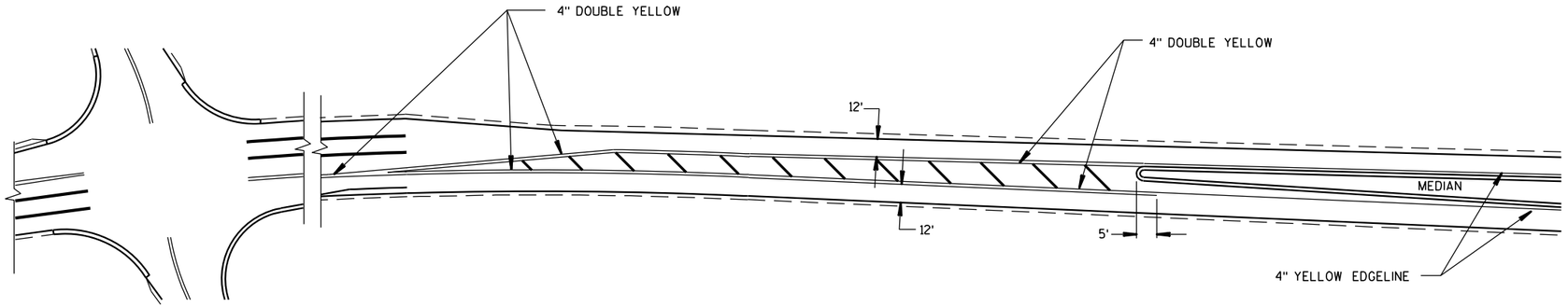
S.D.D. 15 C 8-14f



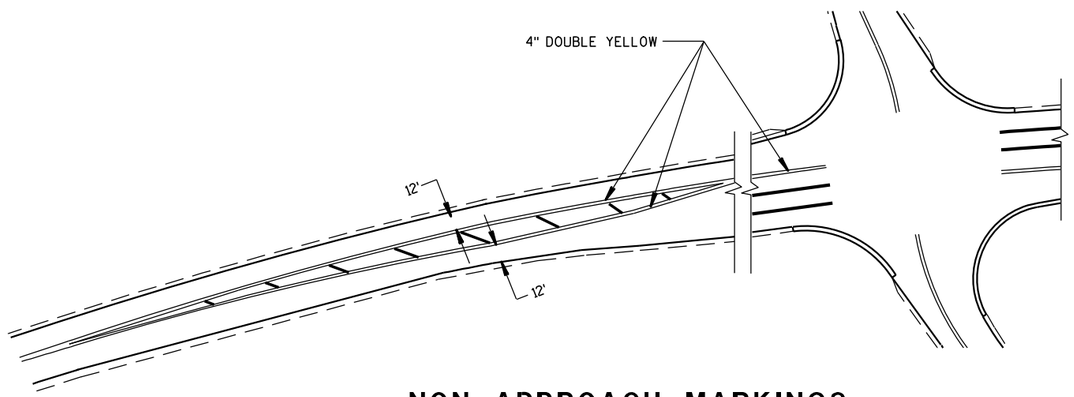
MEDIAN ISLAND DETAIL

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

6

6

S.D.D. 15 C 18-3

S.D.D. 15 C 18-3

MEDIAN ISLAND MARKING

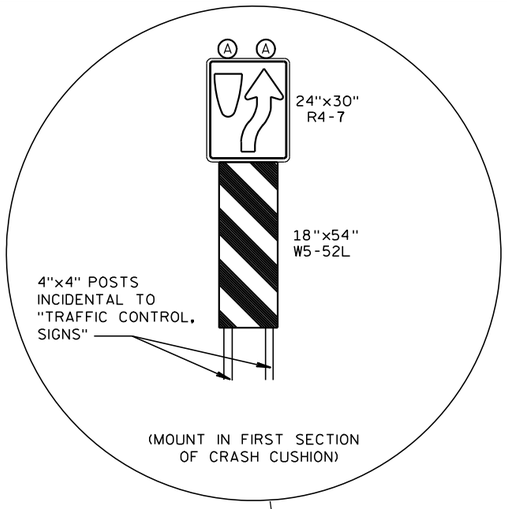
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2-5-09 DATE

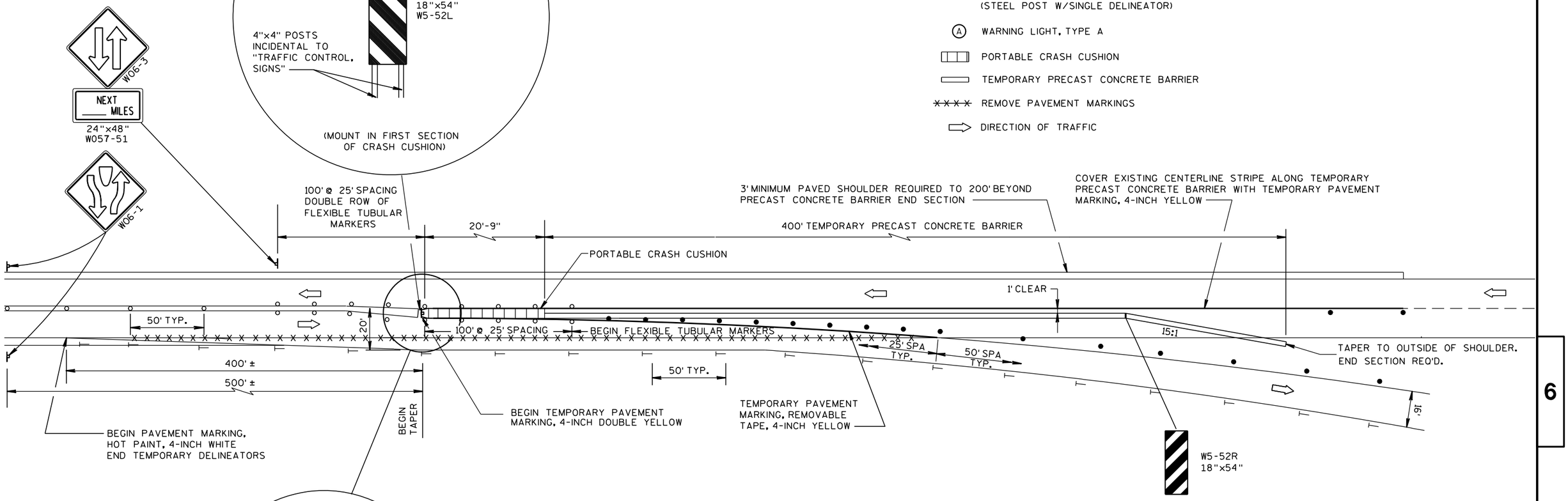
/S/ Thomas N. Nothohm
STATE TRAFFIC ENGINEER

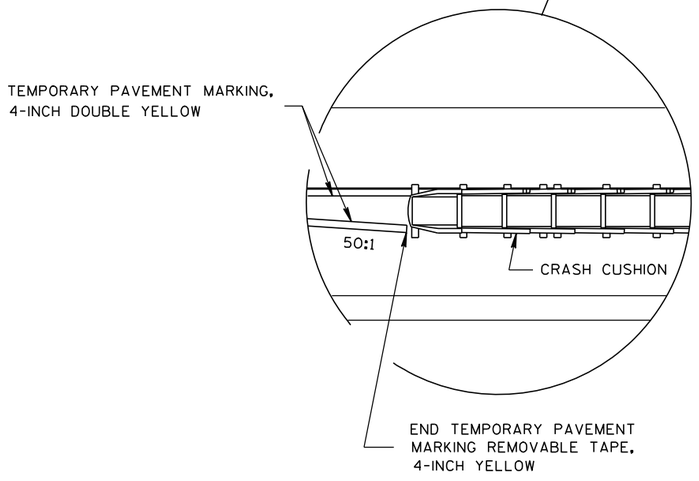
FHWA



LEGEND

- POST WITH ATTACHED SIGN
- DRUM
- FLEXIBLE TUBULAR MARKER POST AND BASE
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR)
- (A) WARNING LIGHT, TYPE A
- PORTABLE CRASH CUSHION
- TEMPORARY PRECAST CONCRETE BARRIER
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC





GENERAL NOTES :

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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 TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER.

TRAFFIC CONTROL, SINGLE LANE CROSSOVER ENTRANCE WITH BARRIER

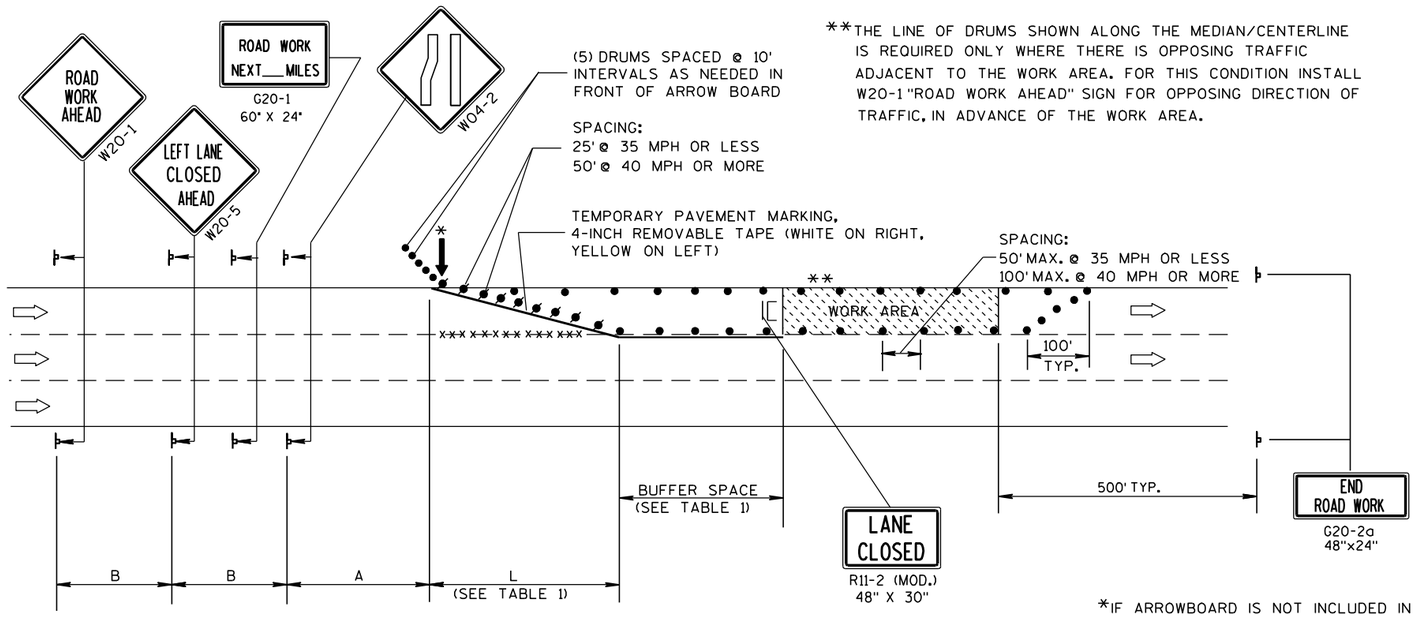
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-7-95
DATE

/S/ Chester J. [illegible]
DIRECTOR, OFFICE OF [illegible]

FHWA



**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"

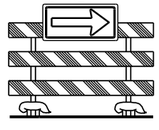


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

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

- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- POST MOUNTED SIGN
- ARROW BOARD
- TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS, TYPE A (FLASHING) WITH/WITHOUT SIGN
- DIRECTION OF TRAFFIC FLOW
- xxxx REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

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 7 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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

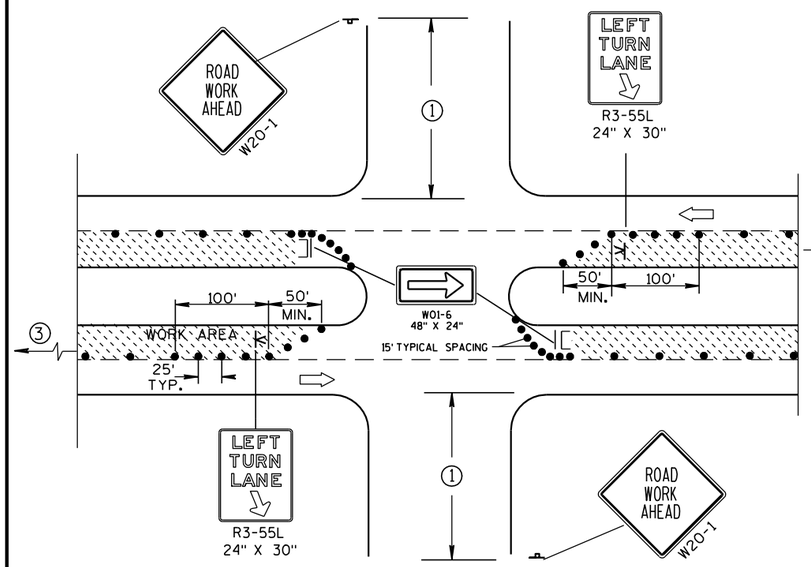
5/23/00
DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKINGS ENGINEER

FHWA

6

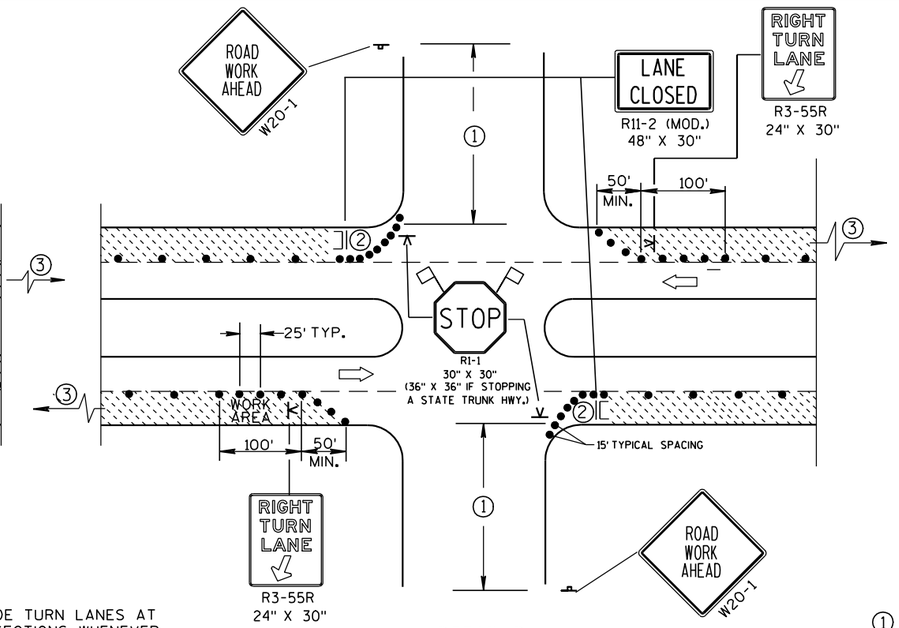
S.D.D. 15 D 20-1



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

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

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.

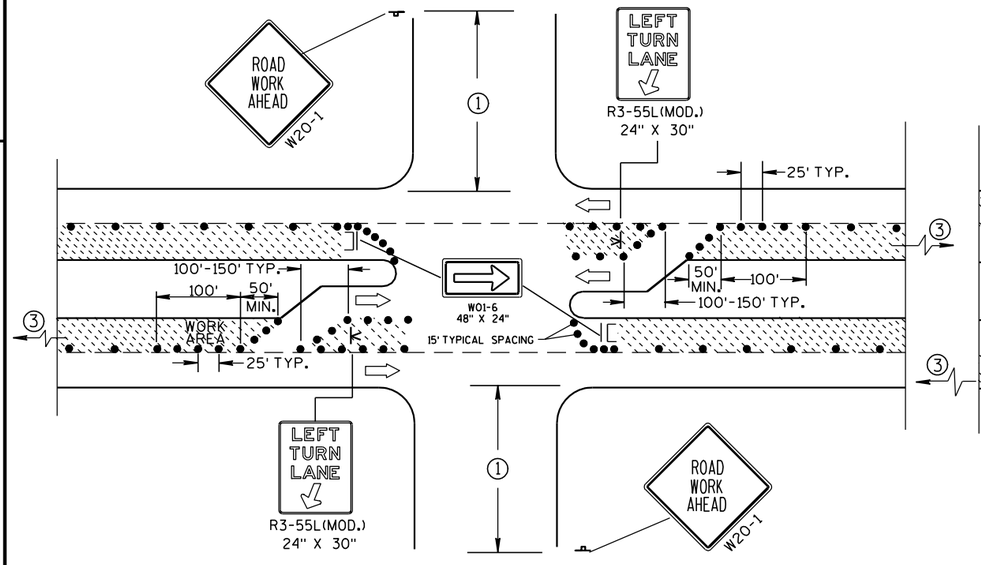
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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.

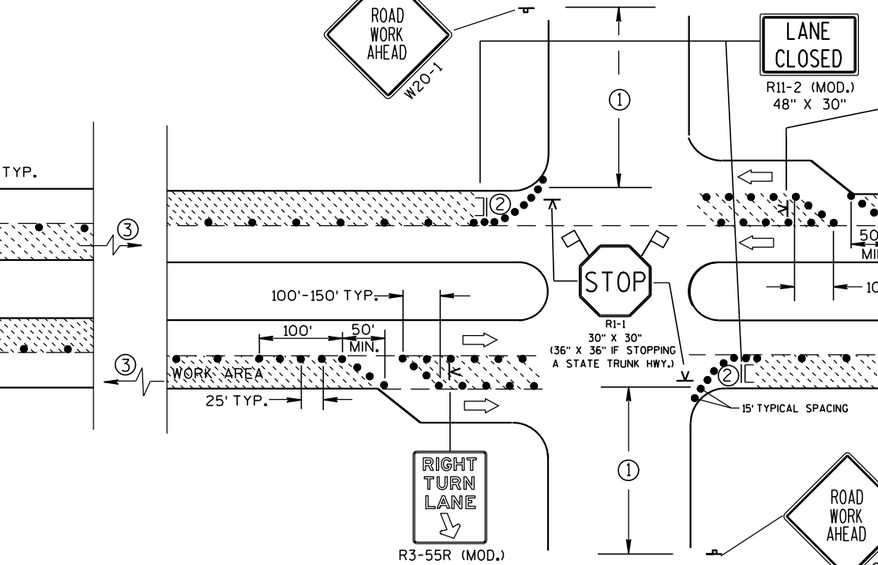
② ALSO USE BARRICADE AND 15' TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

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

- DRUM
- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHT, TYPE A (FLASHING) WITH SIGN
- DIRECTION OF TRAFFIC FLOW
- FLAGS, 16" X 16" MIN., ORANGE

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/00 — DATE

/S/ Chester J. Spang — CHIEF SIGNS AND MARKINGS ENGINEER

FHWA

6

S.D.D. 15 D 21-1

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

- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT
- ARROW BOARD
- TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS, TYPE A (FLASHING) WITH/WITHOUT SIGN
- DIRECTION OF TRAFFIC FLOW
- xxxx REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

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

THE SPACING BETWEEN 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 THE 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 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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.

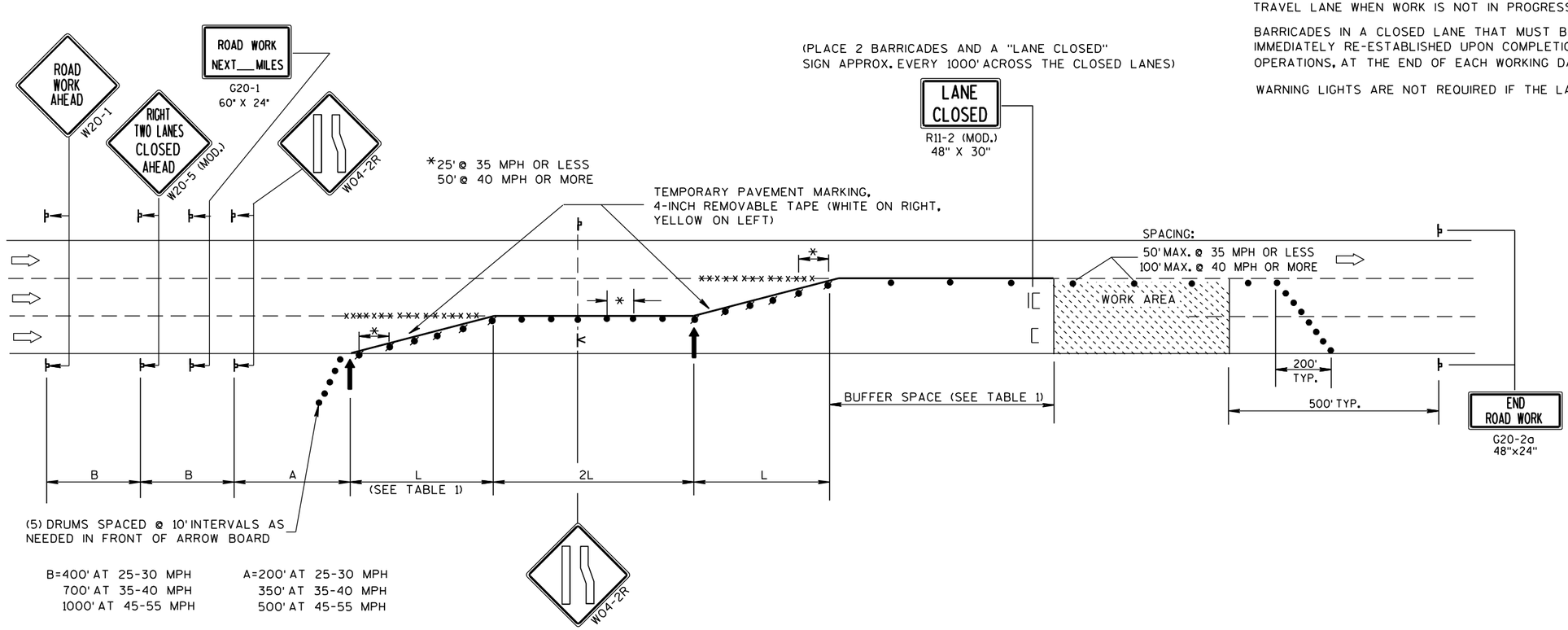
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO LOCATE THE ARROWBOARD AS SHOWN, PLACE THE ARROWBOARD IN THE LANE CLOSURE TAPER AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE TAPER.

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.



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

TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00 DATE
/S/ Cester J. [illegible] 400
CHIEF SIGNS AND MARKINGS ENGINEER
FHWA

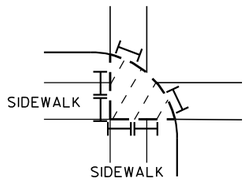
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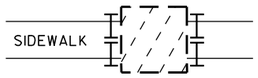
S.D.D. 15 D 22-1

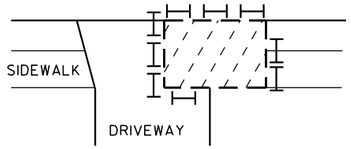
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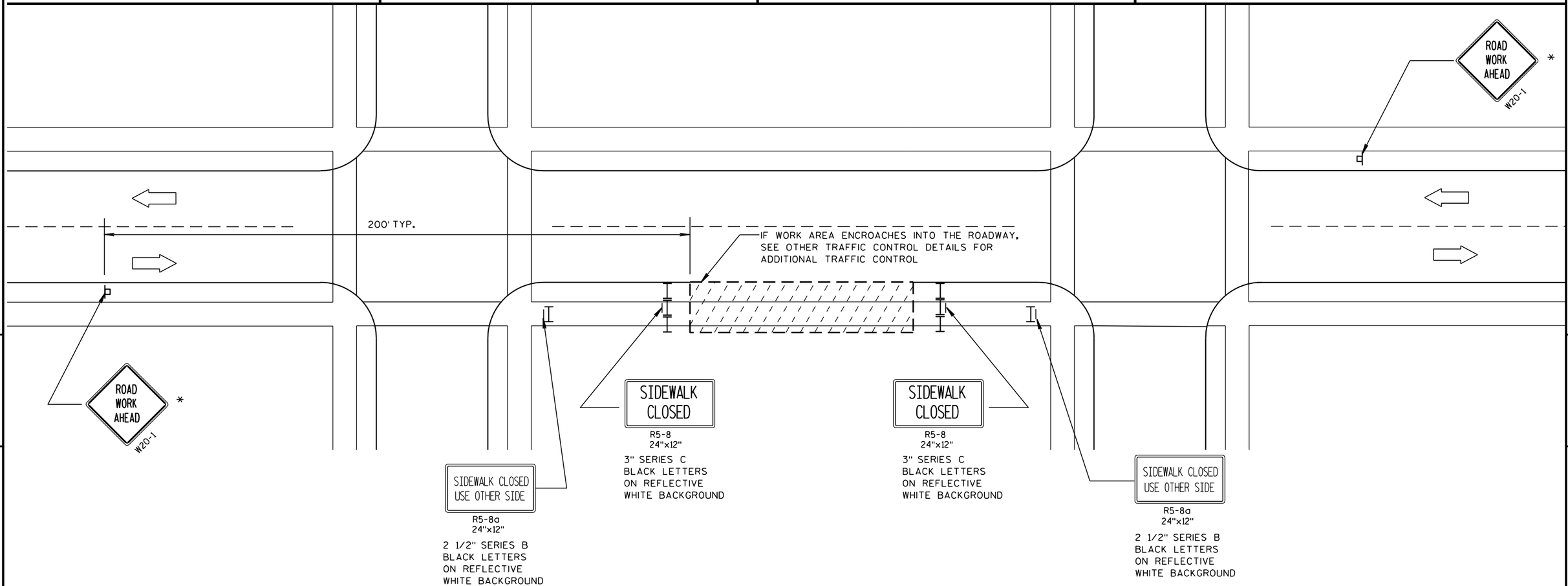
S.D.D. 15 D 22-1

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

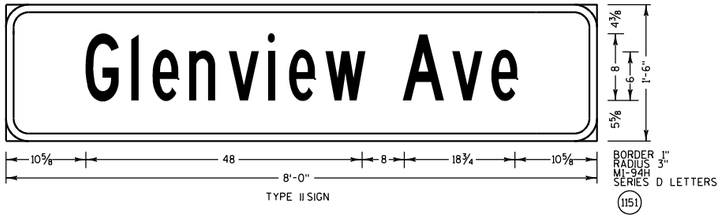
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible]NEER
FHWA

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S.D.D. 15 D 30-1

2



TYPE II SIGN

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 SHWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE OTED, TYE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". †YPE I SIGNS SHALL HAVE TYPE SH REFECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LWER CASE MESSAGES WITH AN INITAIL UPPER CASE LETTER SHAL BE "SERIES E".

6. TYPE I SIGNS - ALL
UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHAL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGES WITH AN INITIAL UPPER CASE LATTER SHALL BE SERIES "E" MODIFIED aLL CAP WORDS ARE "SERIES E"

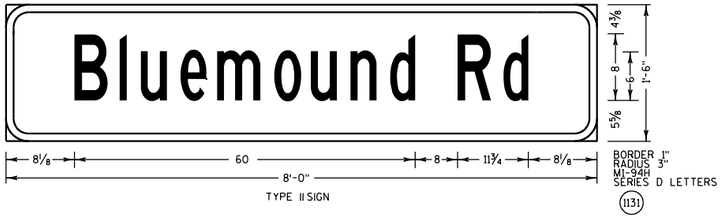
7. UNLESS OTHERWISE NOTED, ALL SIGNSSHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

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 ALL - 7 AND ALL- 10.

11. DO NOT SCALE.



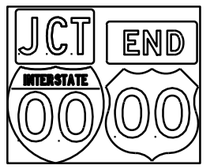
TYPE II SIGN

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E

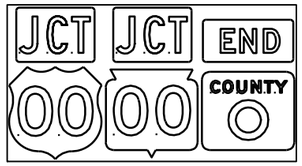
TYPICAL ASSEMBLIES



J1-1



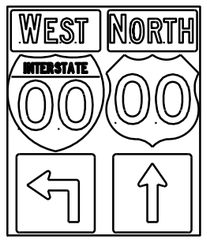
J1-2



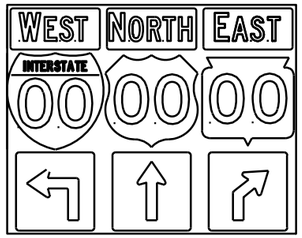
J1-3



J2-1



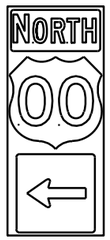
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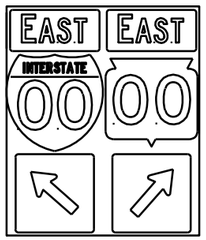
J2-3



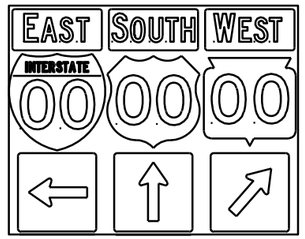
JV



J3-1



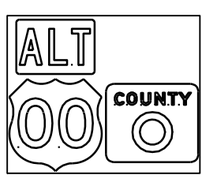
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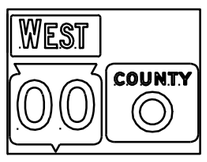
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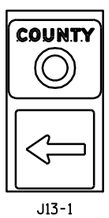
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



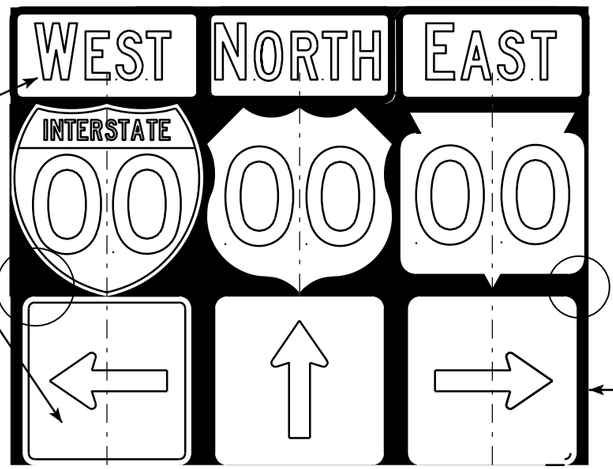
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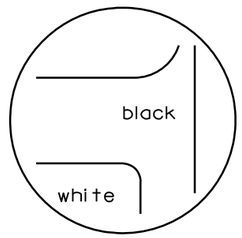


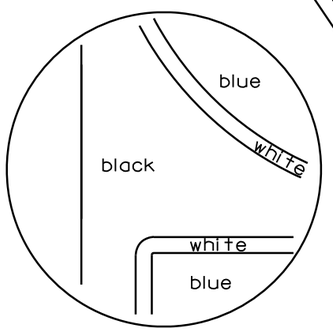
J22-1

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 since base material is plywood.
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.







ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 10/21/09 PLATE NO. A2-1S.6

7

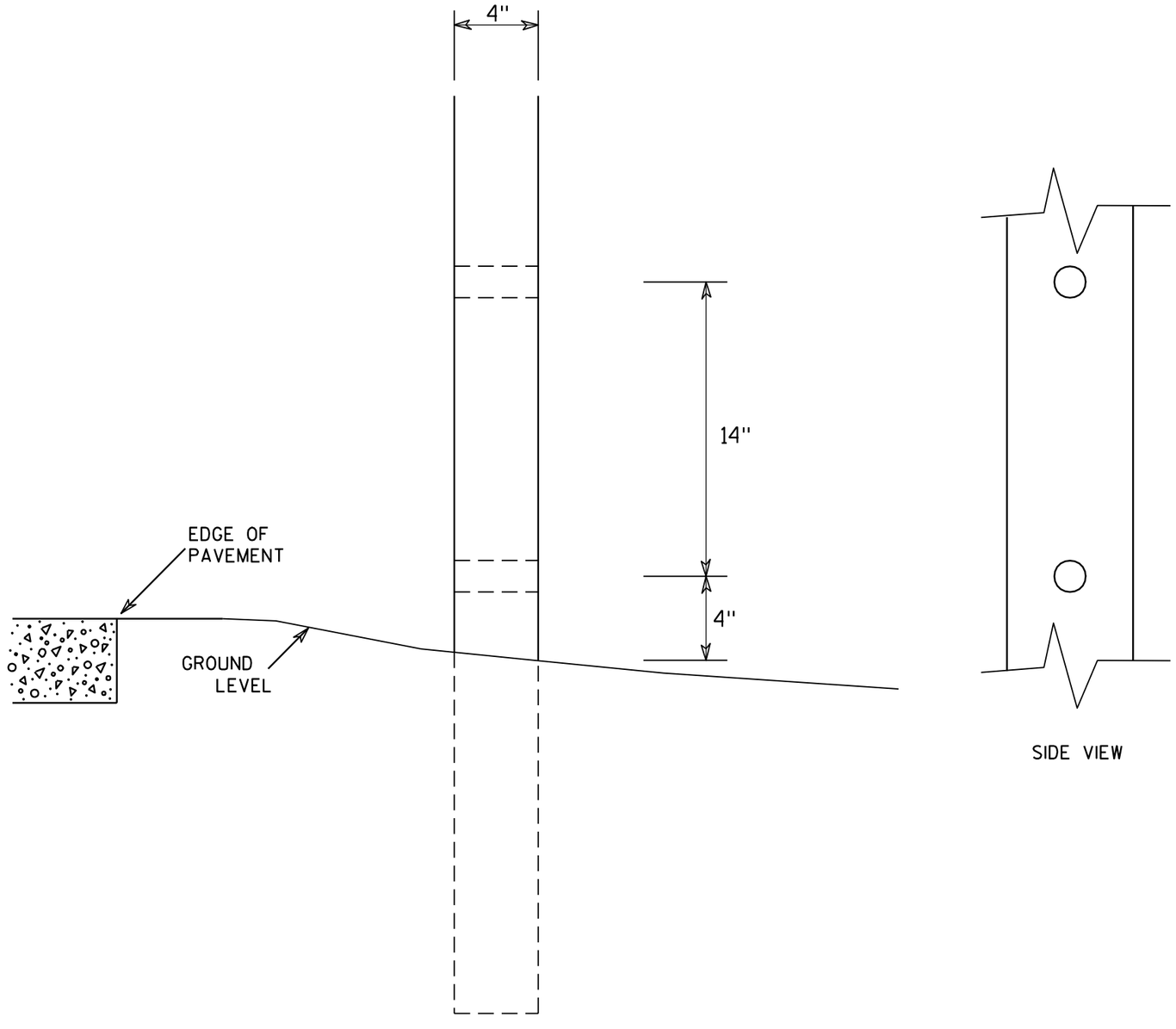
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PROJECT NO:

SHEET NO: 403 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A21S.DGN PLOT DATE : 21-OCT-2009 09:27 PLOT BY : ditjph 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

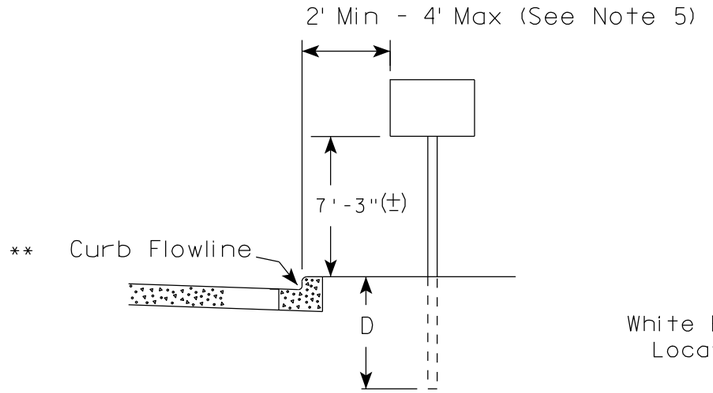
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

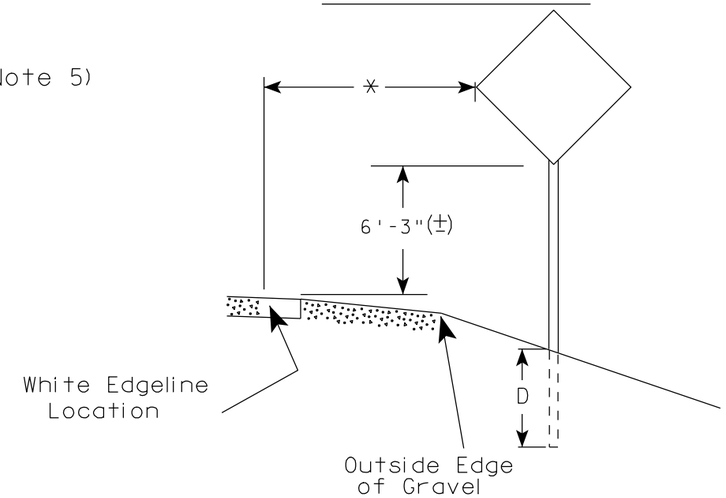
DATE 3/27/97 PLATE NO. A4-11.2

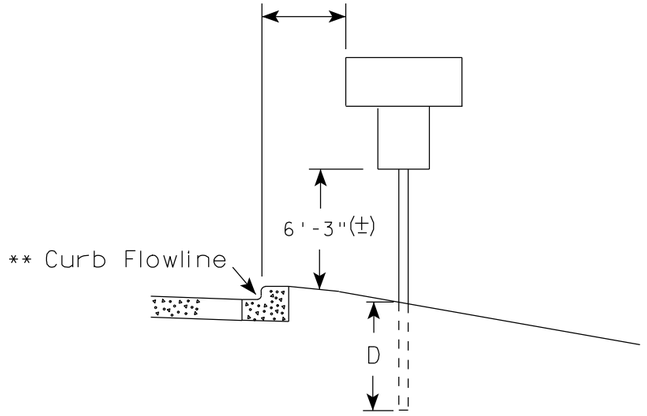
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 404	E

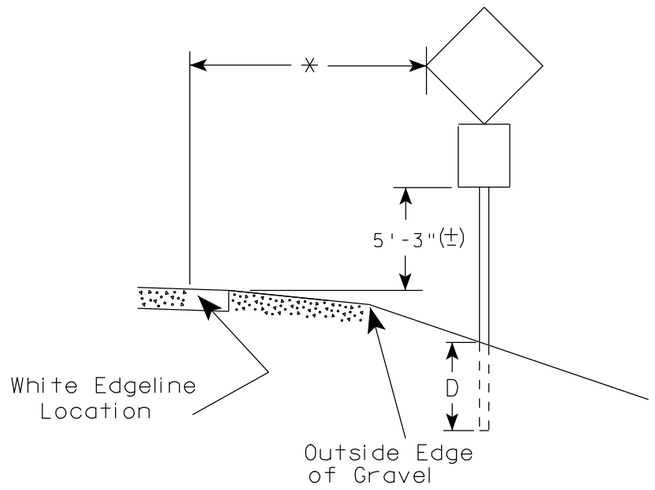
URBAN AREA



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 or larger than 20 sq. ft. 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), 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" (±).

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

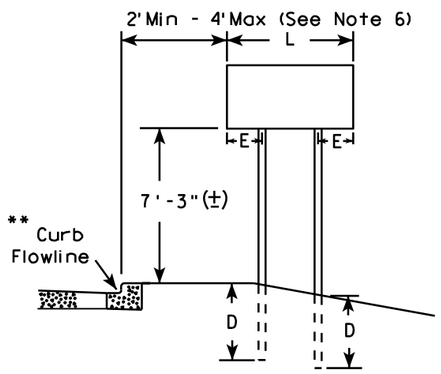
DATE 9/21/2011 PLATE NO. A4-3.16

7

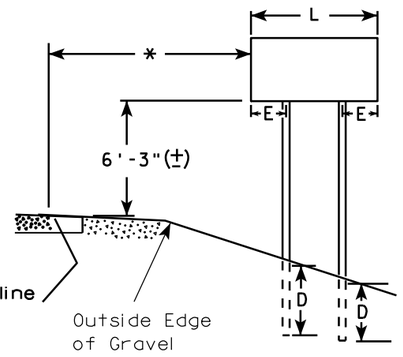
7

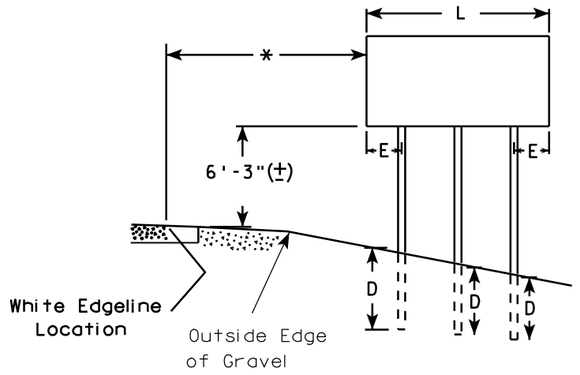
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 405	E

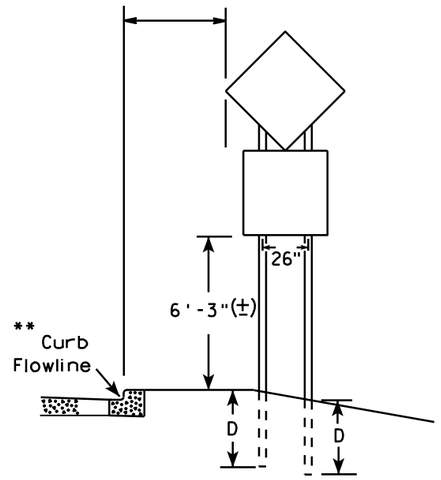
URBAN AREA



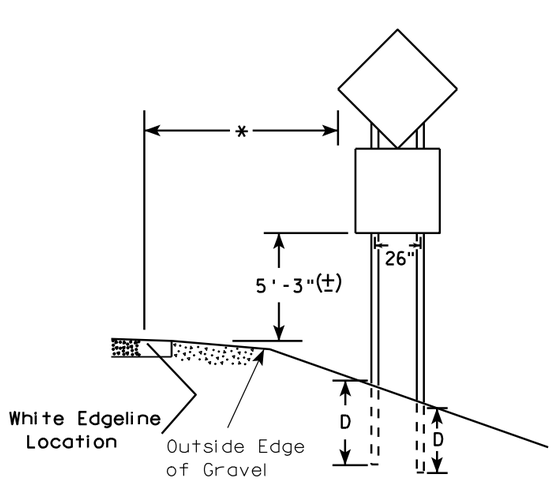
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	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'

GENERAL NOTES

1. For multiple 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 20 S.F. or less in area.

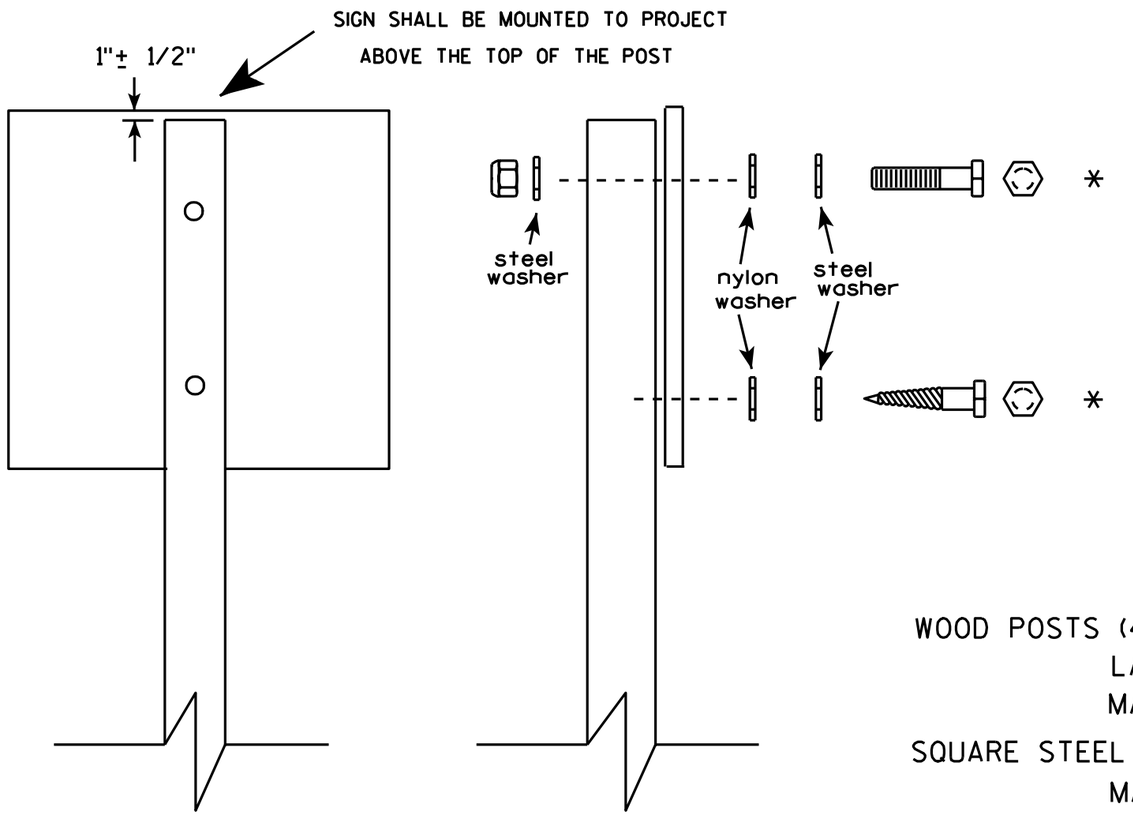
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-4.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 406	E



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

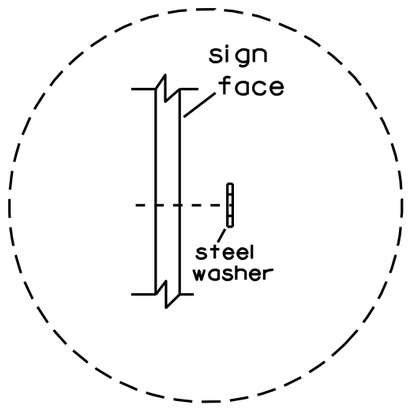
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

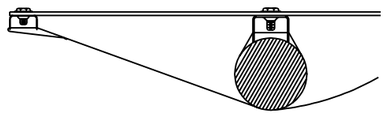
7

7

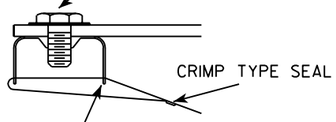
PROJECT NO:

SHEET NO: 407 E

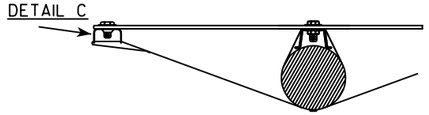
BRACE BANDING

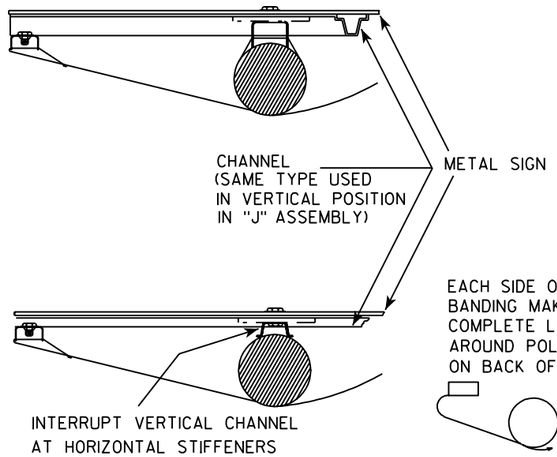


DETAIL C
CADMIUM PLATED STEEL BOLT
THROUGH BLACK BORDER



DETAIL C

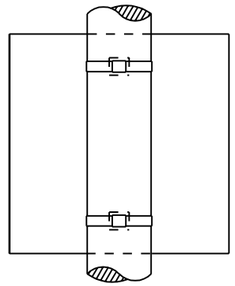


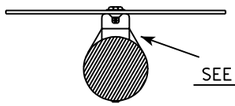


EACH SIDE OF BRACE
BANDING MAKES ONE
COMPLETE LOOP
AROUND POLE-SEAL
ON BACK OF POLE

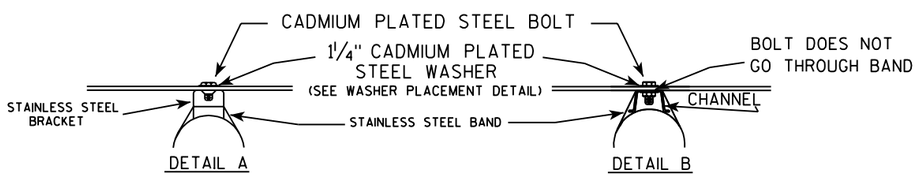
BRACKET BANDING

SINGLE SIGN





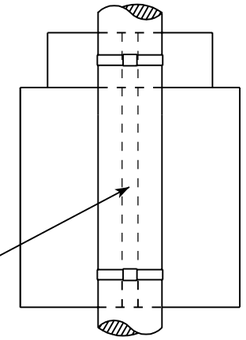
SEE DETAIL A



DETAIL A

DETAIL B

"J" ASSEMBLY

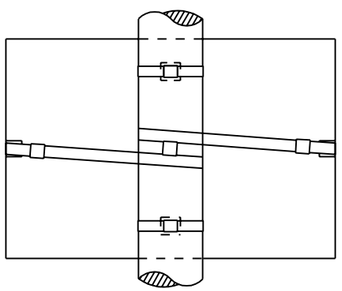


CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

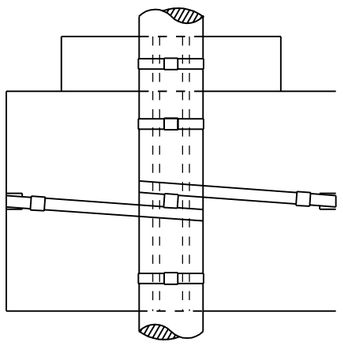
GENERAL NOTES

1. Signs 4' or greater in width shall have one brace band installed at the center of the sign.
2. Signs 3' or greater in height shall have three bracket bands installed. Signs less than 3' in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

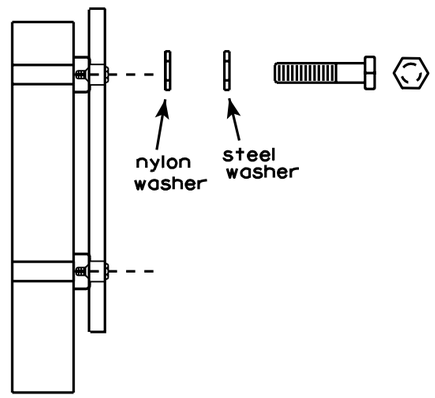


BRACE BANDING

BRACE BANDING SHALL BE TIGHTENED FIRMLY BUT NOT SO TIGHT AS TO APPRECIABLY CURVE FACE OF SIGN.



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

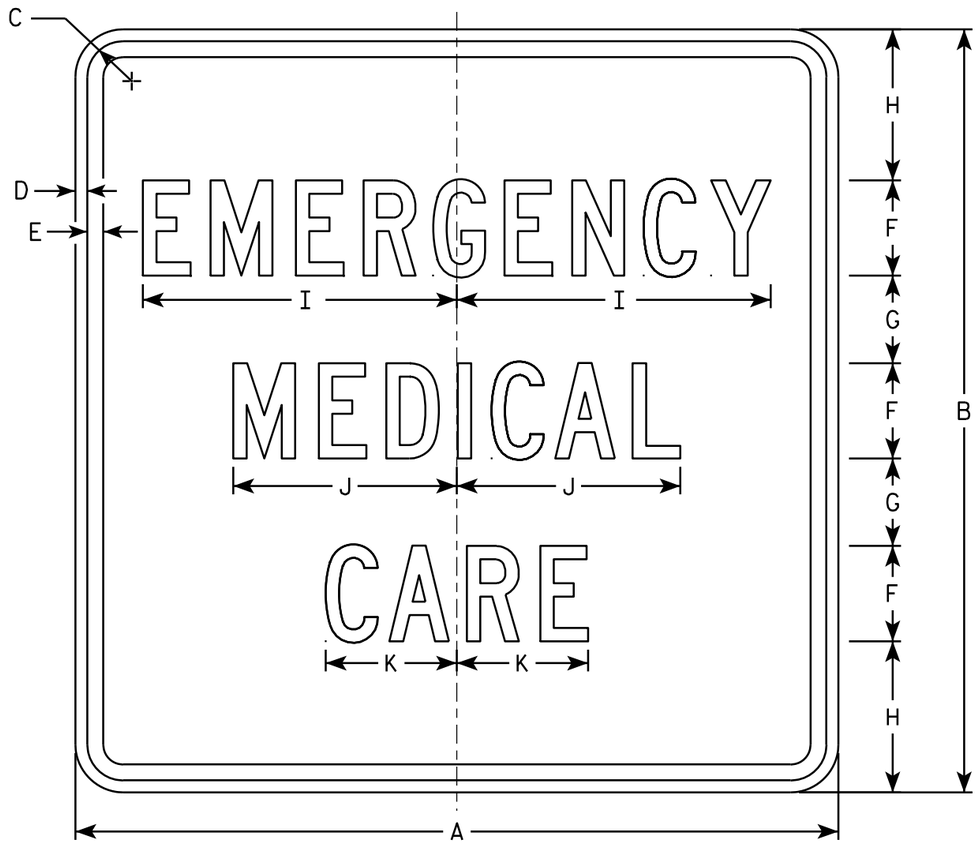
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 11/08/05 PLATE NO. A5-9.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 408	E



D9-13C

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White
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																											
2	24	24	1 1/8	3/8	1/2	3	2 3/4	4 3/4	9 7/8	7	4 1/8																4.0
3	36	36	1 5/8	5/8	3/4	5	4	6 1/2	16 1/2	11 3/4	6 7/8																9.0
4																											
5																											

STANDARD SIGN
D9-13C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/12 PLATE NO. D9-13C.2

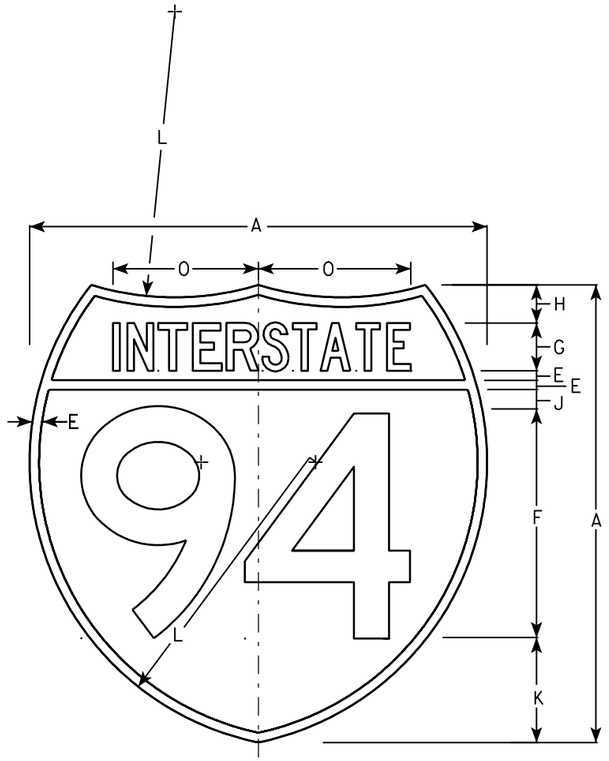
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 409	E

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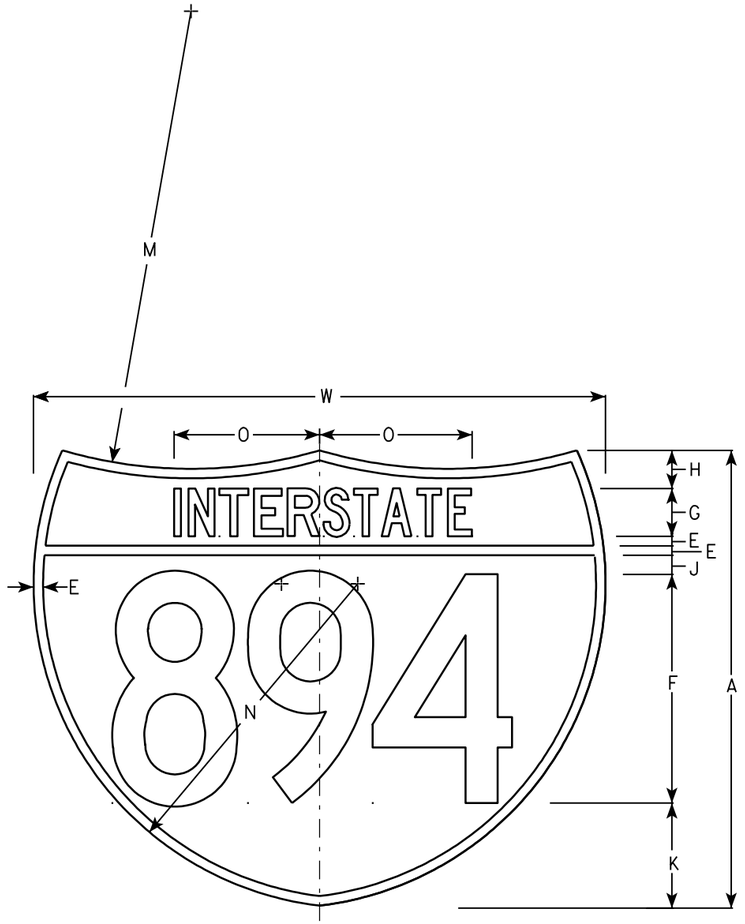
WISDOT/CADDS SHEET 42

7

7



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

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

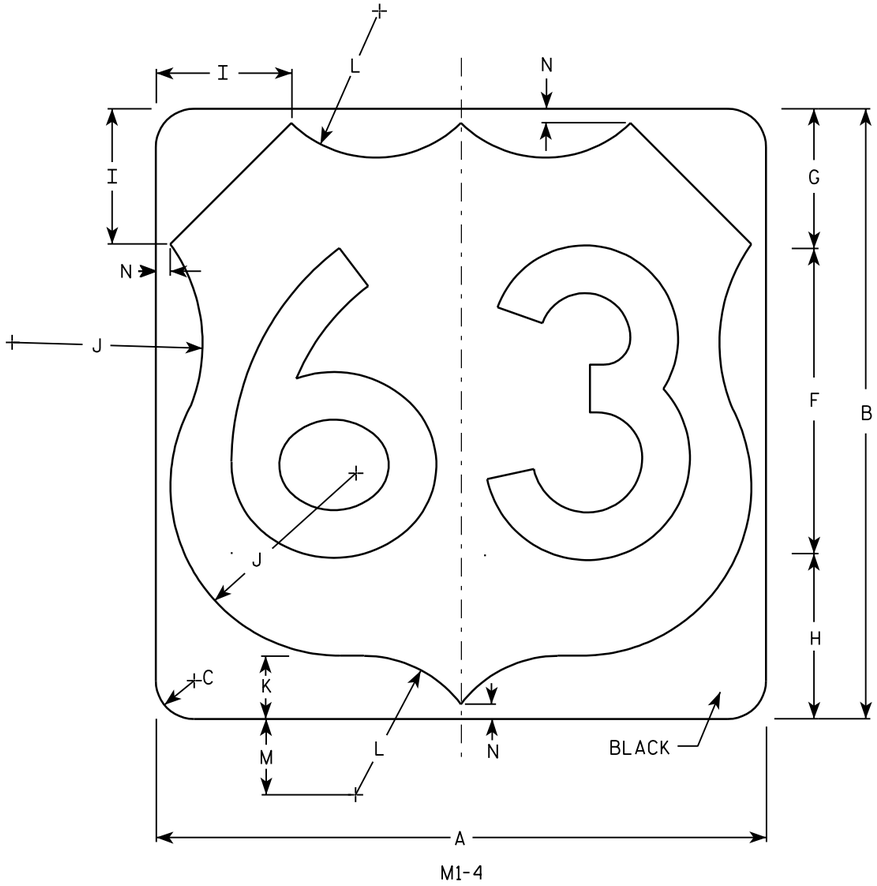
APPROVED Matthew R Rauch
for State Traffic Engineer

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

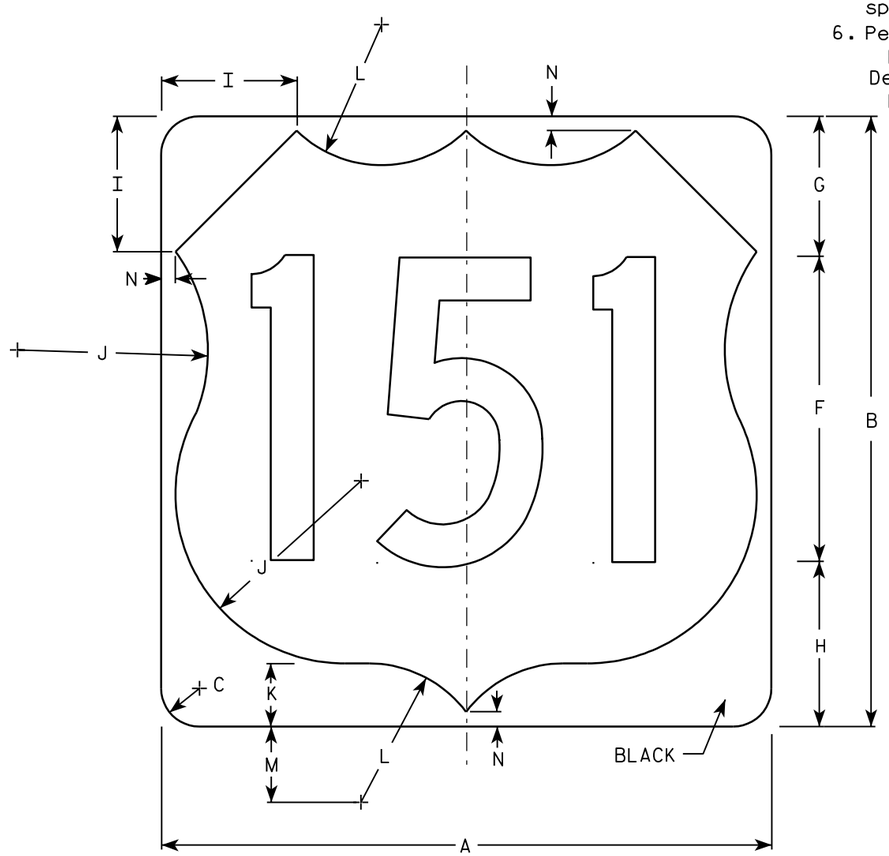
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 410	E

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 numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective



M1-4



M1-4

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	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

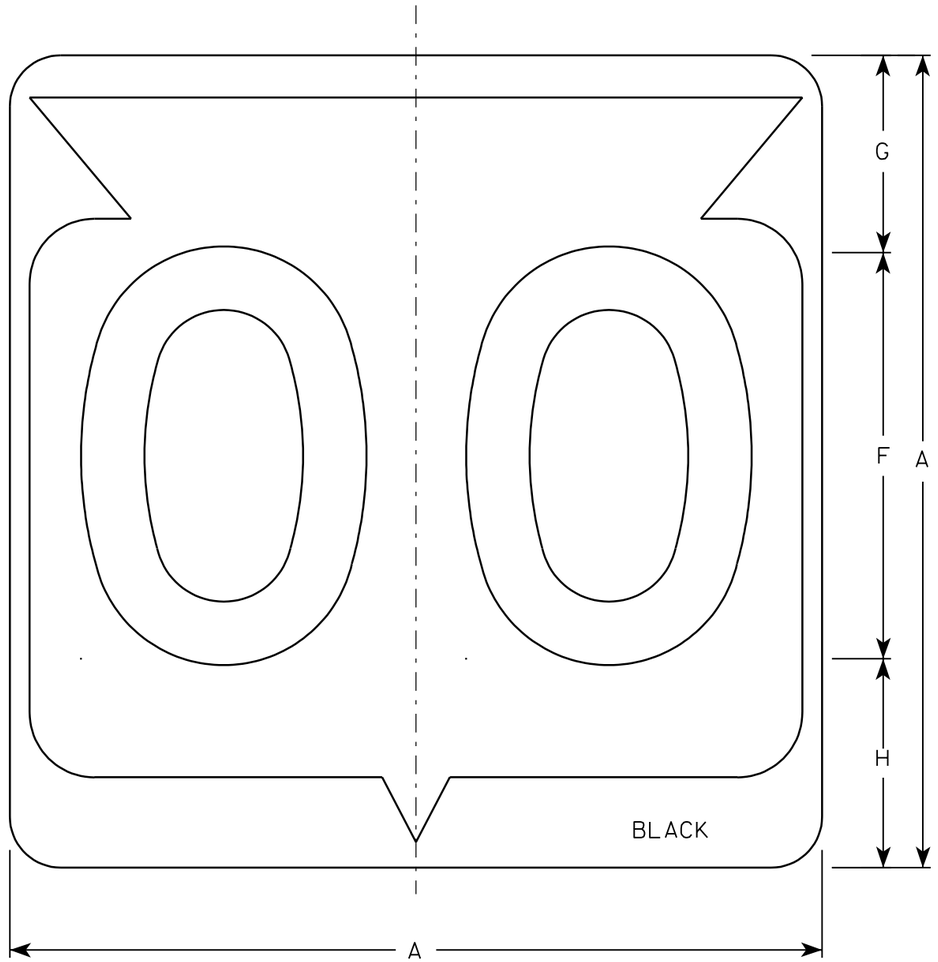
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/25/05 PLATE NO. M1-4.9

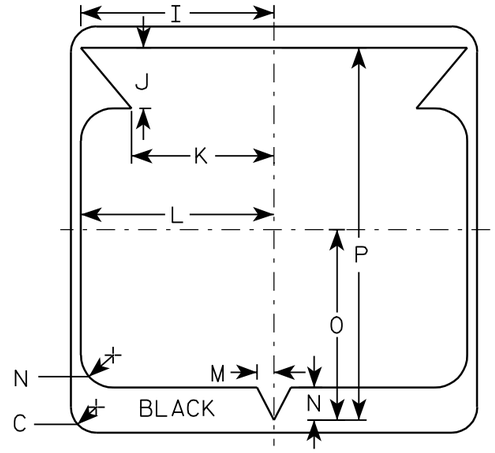
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 411 | E



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

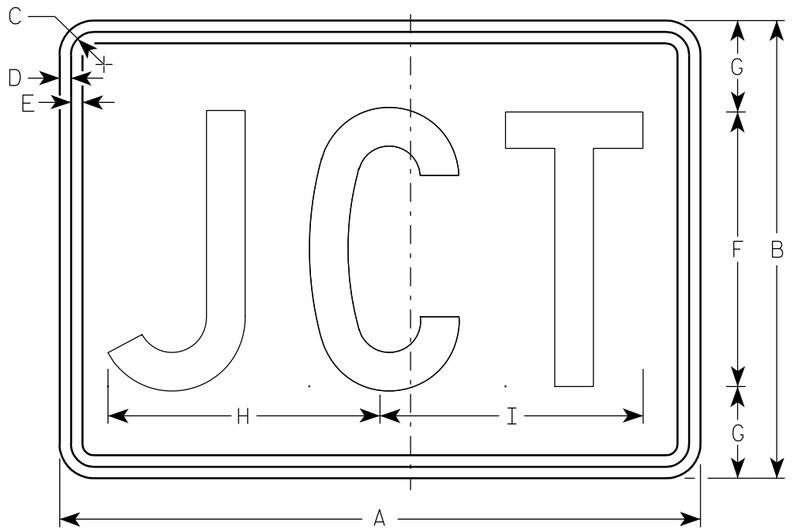
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

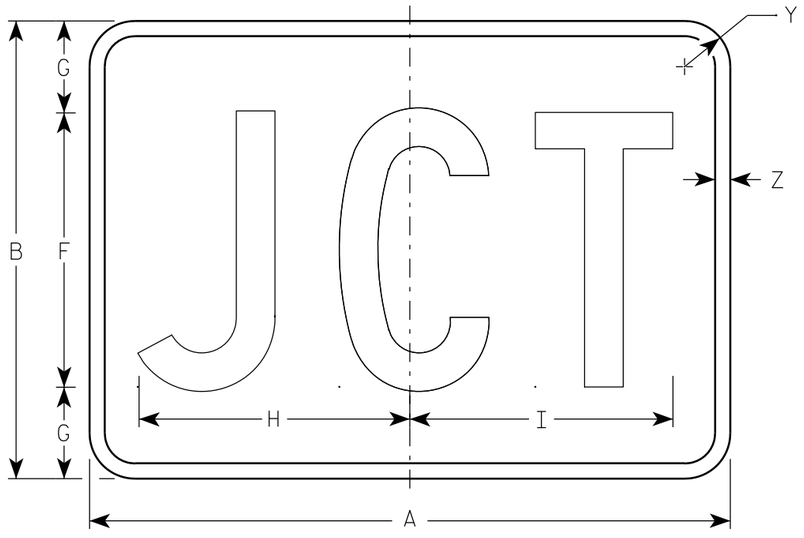
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 412	E



M2-1
MK2-1
MM2-1
MR2-1



MB2-1
MG2-1
MN2-1

NOTES

1. Sign is 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. M2-1 Background - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   Message - Black
   MB2-1 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   MG2-1 Background - Green
   Message - White - Type H Reflective
   MK2-1 Background - Green
   Message - White - Type H Reflective
   MM2-1 Background - White - Type H Reflective
   Message - Green
   MN2-1 Background - Brown
   Message - White - Type H Reflective
   MR2-1 Background - Brown
   Message - Yellow - Type H Reflective

Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 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	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20

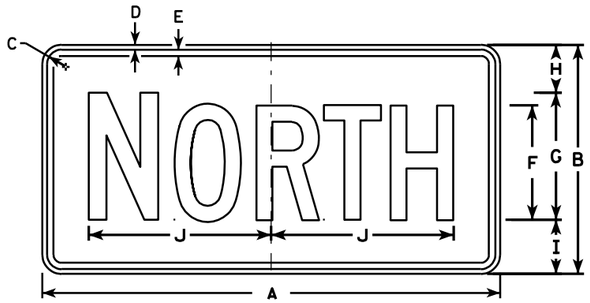
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

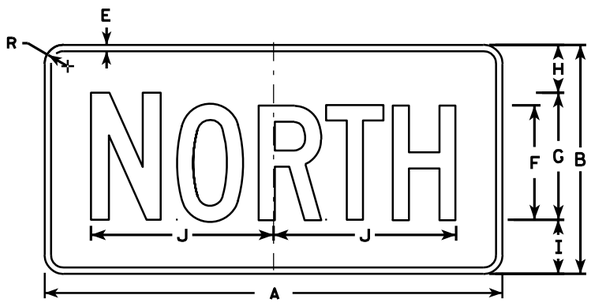
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M2-1.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 413	E



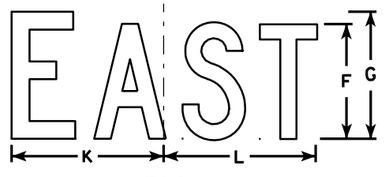
M3-1
MK3-1
MO3-1



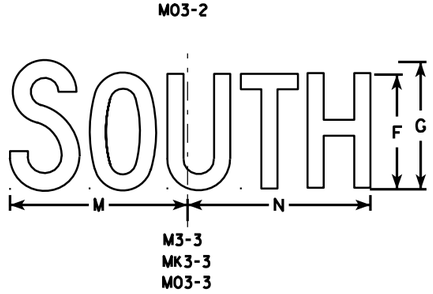
MB3-1
MG3-1
MM3-1
MN3-1



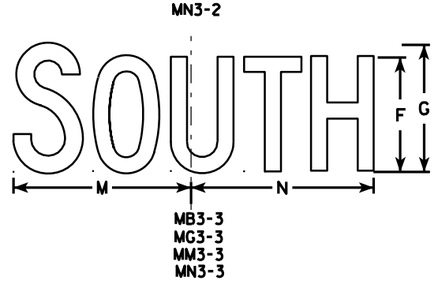
M3-2
MK3-2
MO3-2



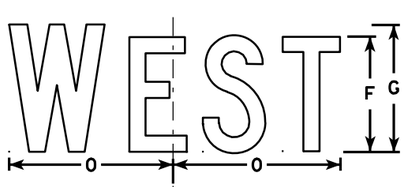
MB3-2
MG3-2
MM3-2
MN3-2



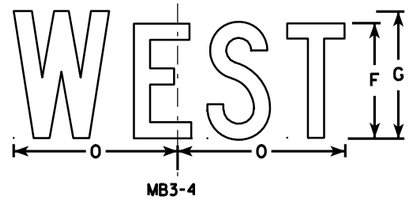
M3-3
MK3-3
MO3-3



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

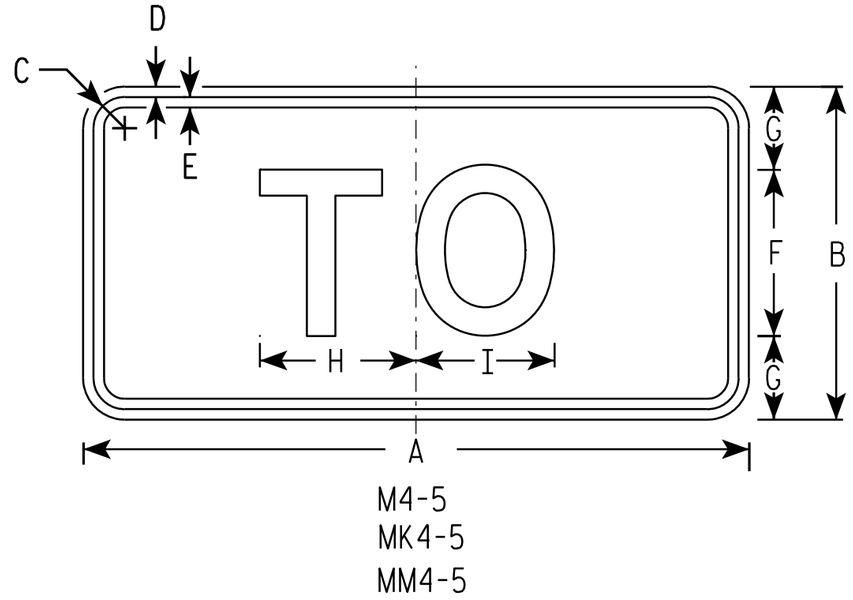
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

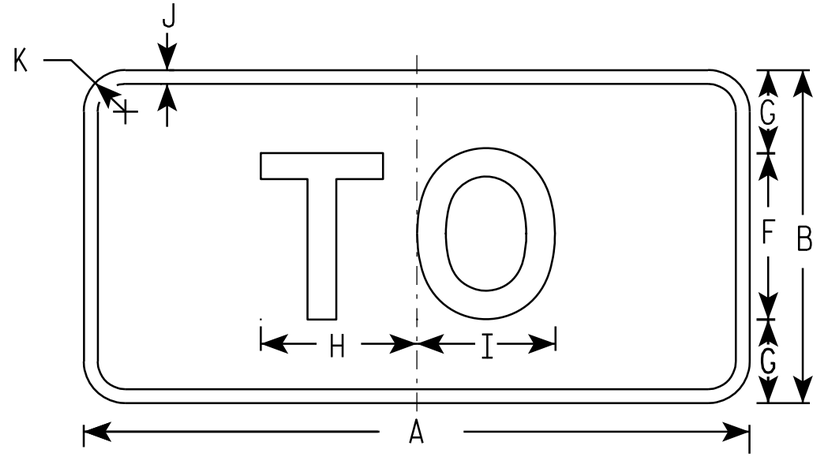
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 414	E



M4-5
MK4-5
MM4-5



MB4-5
MG4-5
MN4-5

NOTES

1. Sign is 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 - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White - Type H Reflective (Detour or temporary Signs - Reflective)
   Message - Black
   MB4-5 Background - Blue
   Message - White - Type H Reflective (Detour or temporary Signs - Reflective)
   MG4-5 Background - Green
   Message - White - Type H Reflective
   MK4-5 Background - Green
   Message - White - Type H Reflective
   MM4-5 Background - White - Type H Reflective
   Message - Green
   MN4-5 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	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

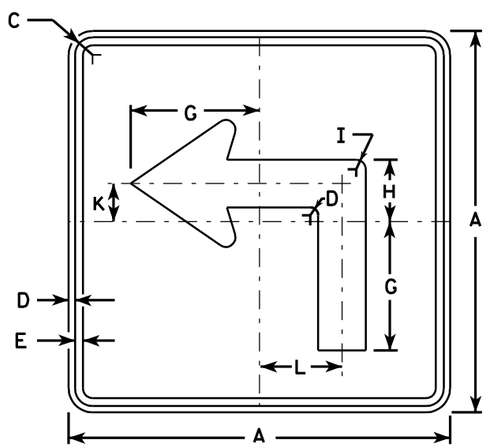
STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

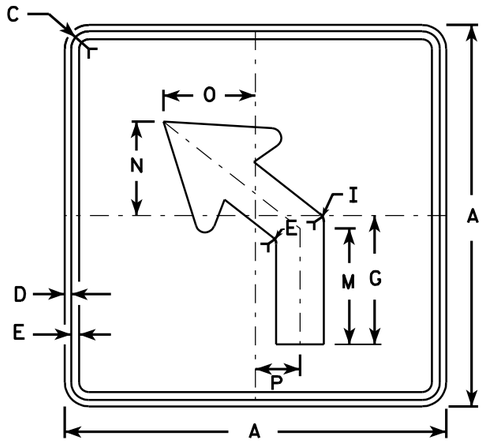
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-5.6

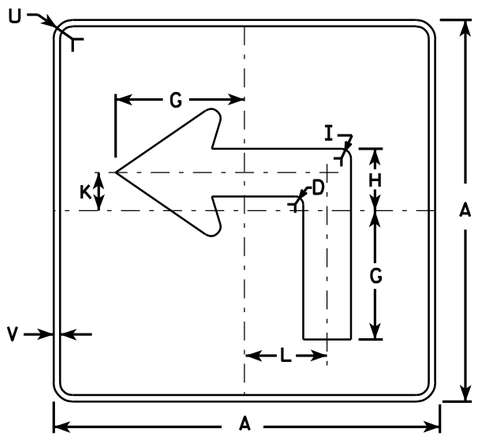
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 415 | E



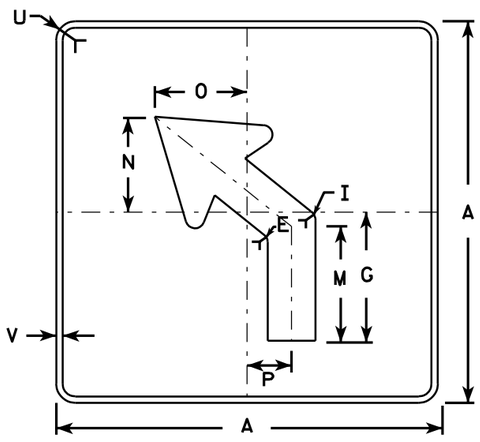
M5-1L
MK5-1L
MM5-1L
MO5-1L
MR5-1L



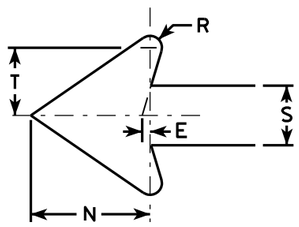
M5-2L
MK5-2L
MM5-2L
MO5-2L
MR5-2L



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 (Detour or temporary Signs - Reflective) Message - Black
   MB5-1 and MB5-2 Background - Blue Message - White - Type H Reflective (Detour or temporary Signs - 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 - Reflective Message - Black
   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.

Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 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	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	0.28
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	0.56
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56

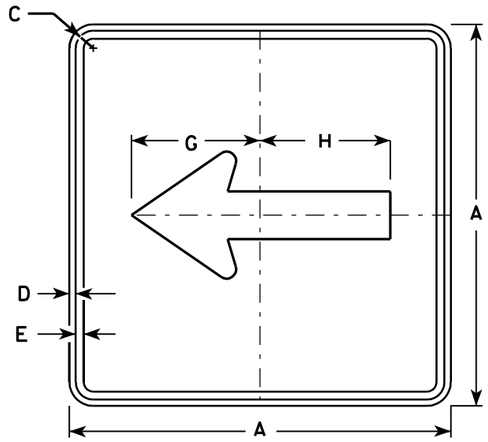
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

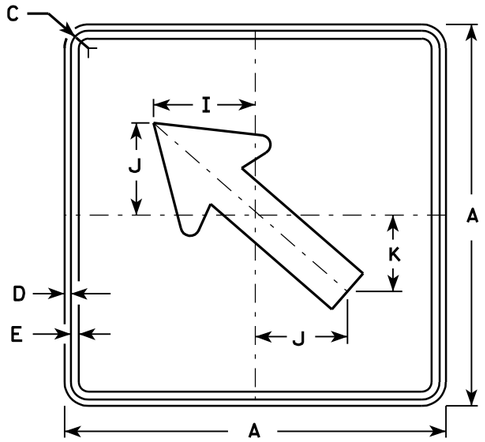
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M5-1.11

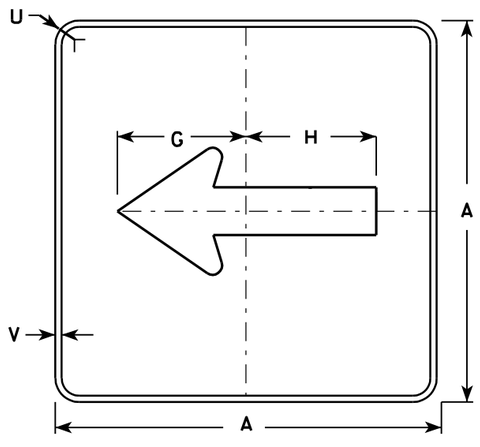
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 416	E



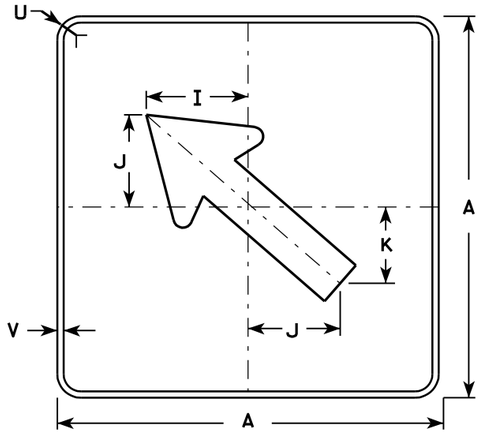
M6-1
MK6-1
MM6-1
MO6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MR6-2



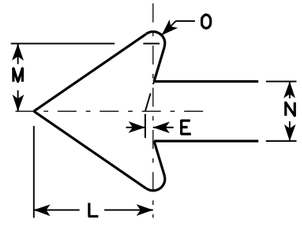
MB6-1
MG6-1
MN6-1



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 (Detour or temporary Signs - Reflective) Message - Black
   MB6-1 and MB6-2 Background - Blue Message - White - Type H Reflective (Detour or temporary Signs - 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 - Reflective Message - Black
   MR6-1 and MR6-2 Background - Brown Message - Yellow - Type H Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 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	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	0.28
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	0.56
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	0.56
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	0.56

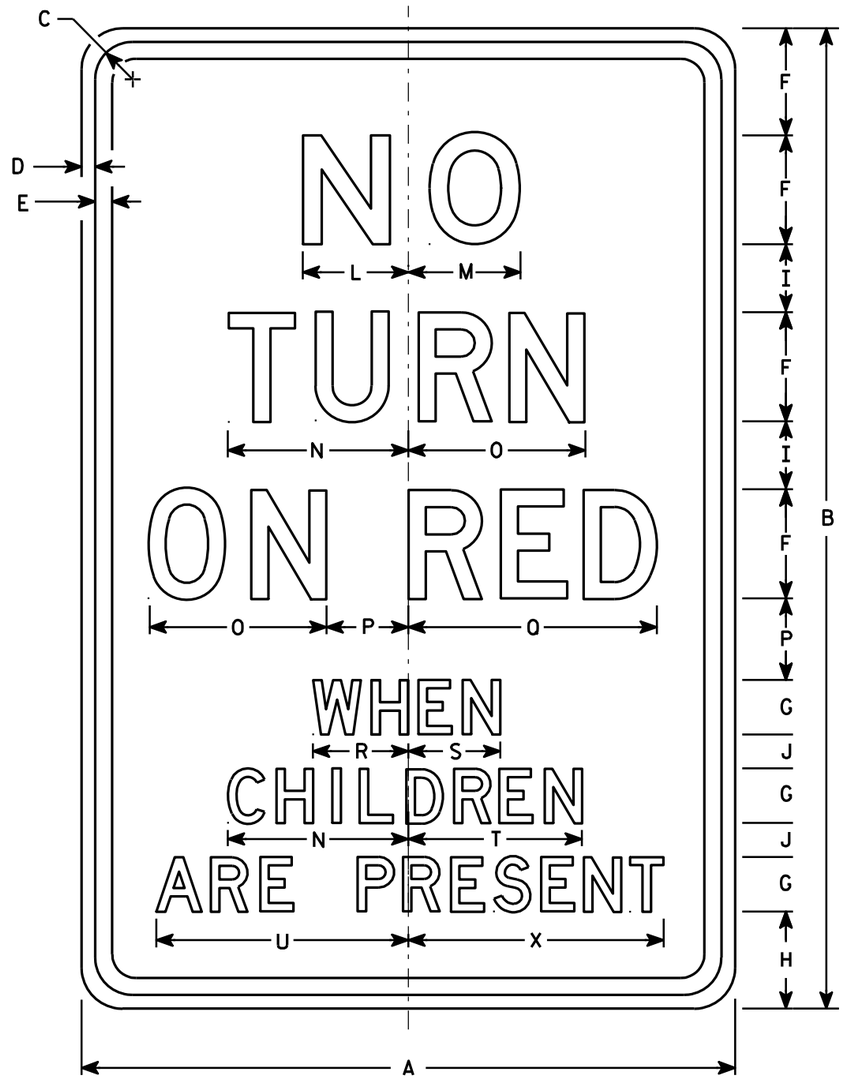
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M6-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 417	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

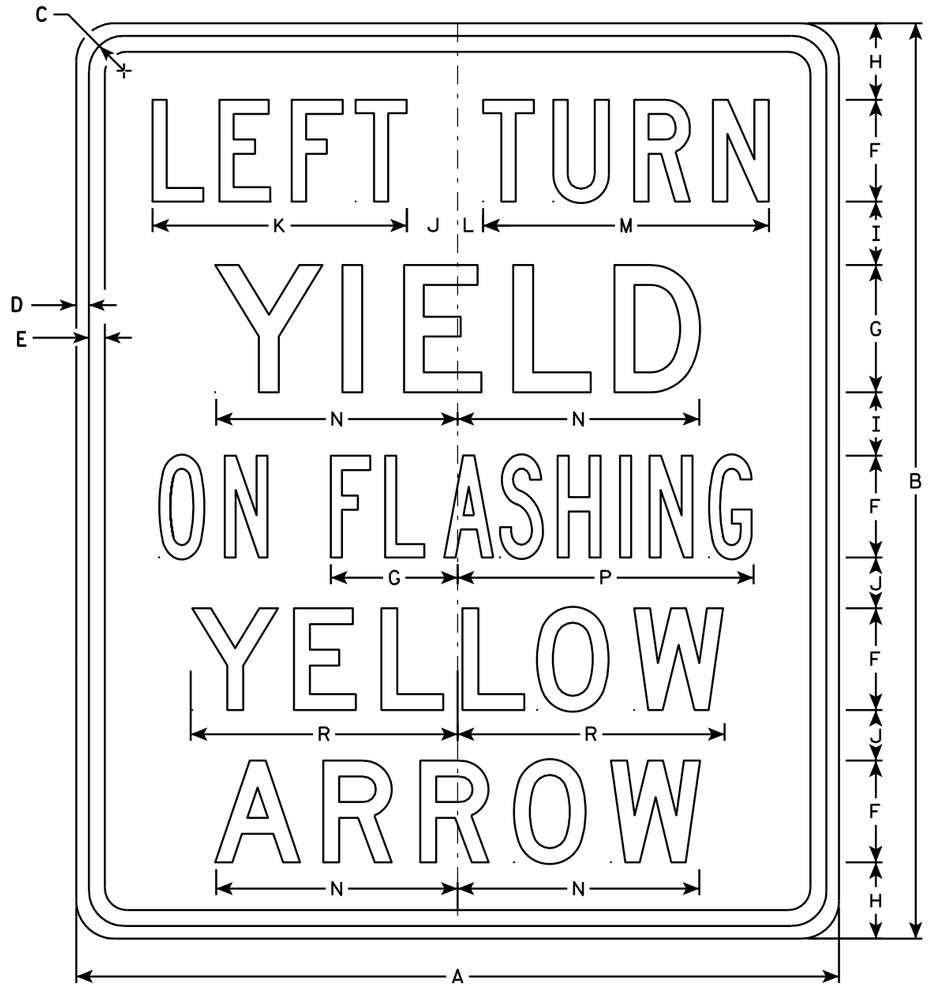
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-11S.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 418	E



R10-50

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.

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									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									7.5
3																											
4																											
5																											

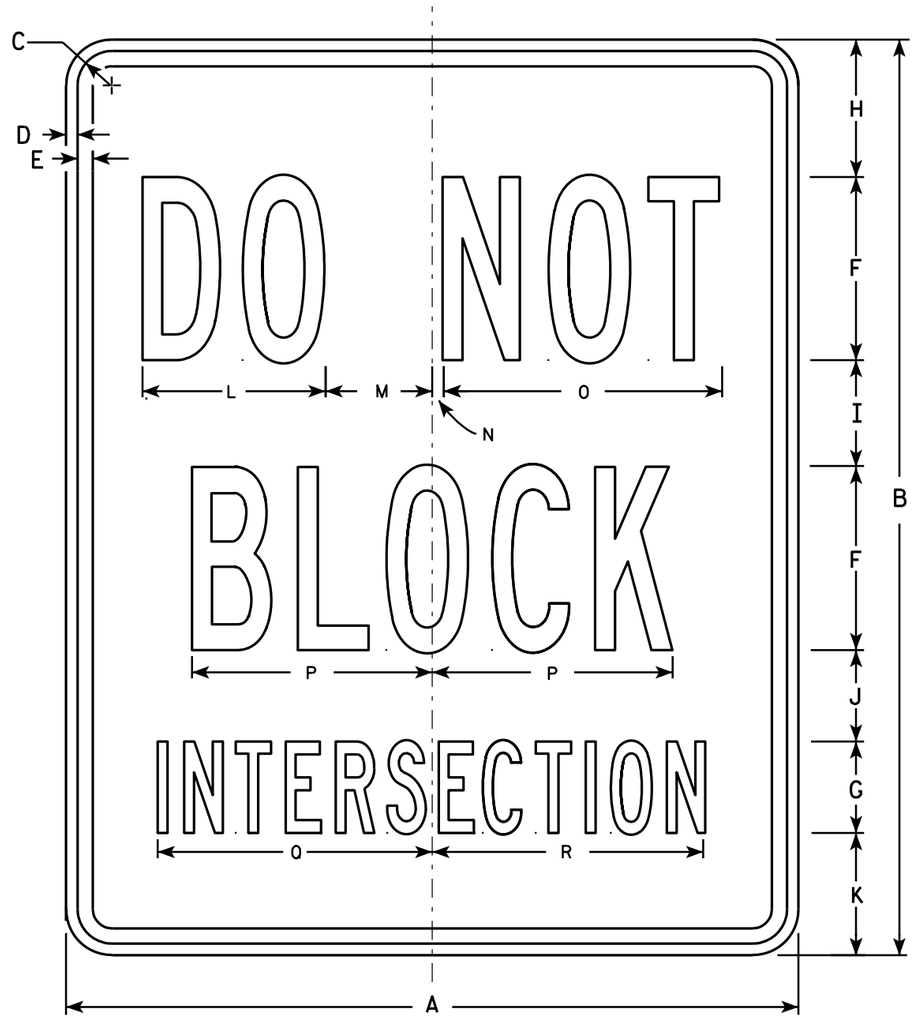
STANDARD SIGN
R10-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/21/10 PLATE NO. R10-50.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 419	E



R10-7

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	6	3	4 1/2	3 1/2	3	4	6	3 1/2	3/8	9 1/8	7 7/8	9	8 7/8									5.0
2M	24	30	1 1/8	3/8	1/2	6	3	4 1/2	3 1/2	3	4	6	3 1/2	3/8	9 1/8	7 7/8	9	8 7/8									5.0
3	36	48	1 3/8	1/2	5/8	10	5	7	5 1/4	4 1/2	6 1/4	10	5 5/8	1/2	15 1/8	13 1/8	15	14 7/8									12.0
4																											
5																											

STANDARD SIGN
R10-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-7.5

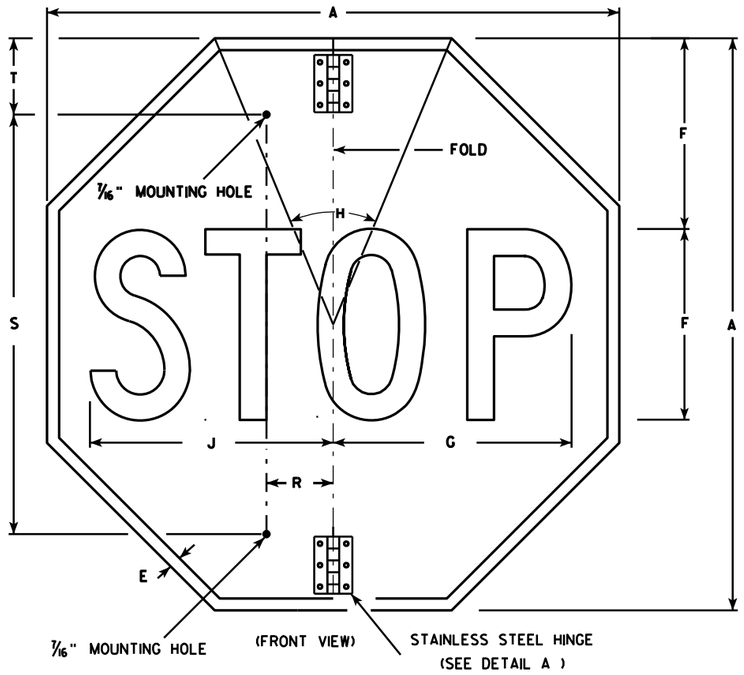
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 420	E

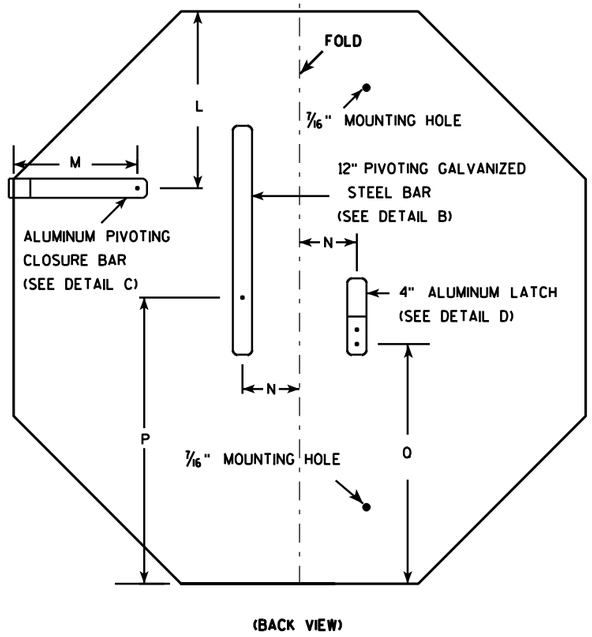
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R107.DGN PLOT DATE : 05-APR-2011 09:44 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.965868:1.000000

WISDOT/CADDS SHEET 42

7

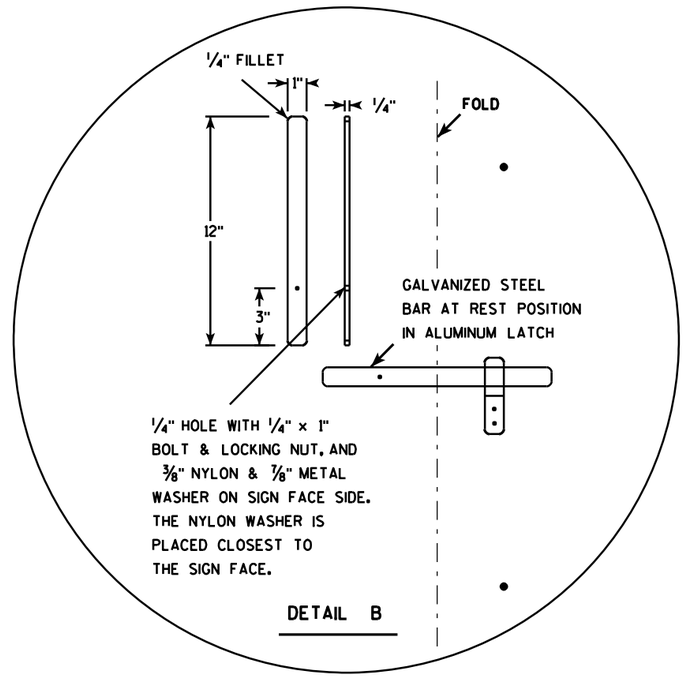
7

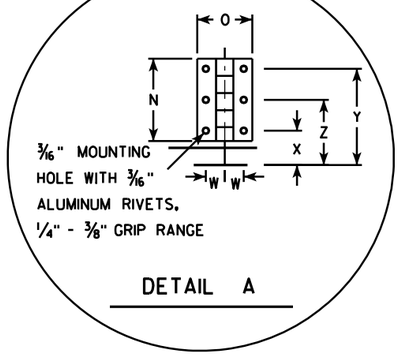


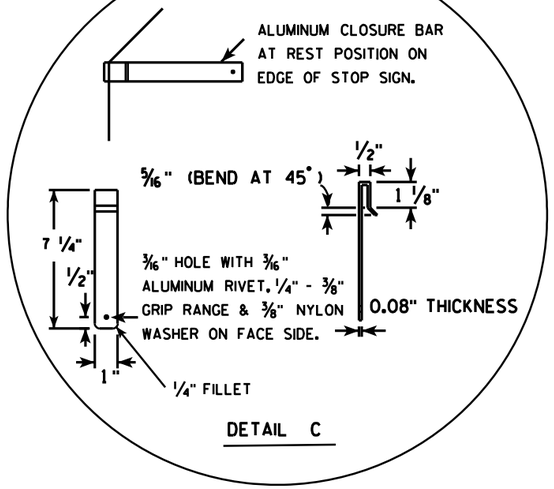


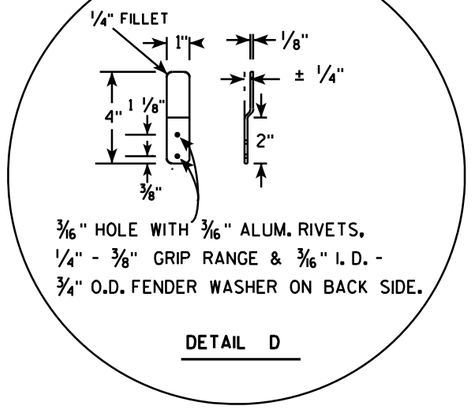
NOTES

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

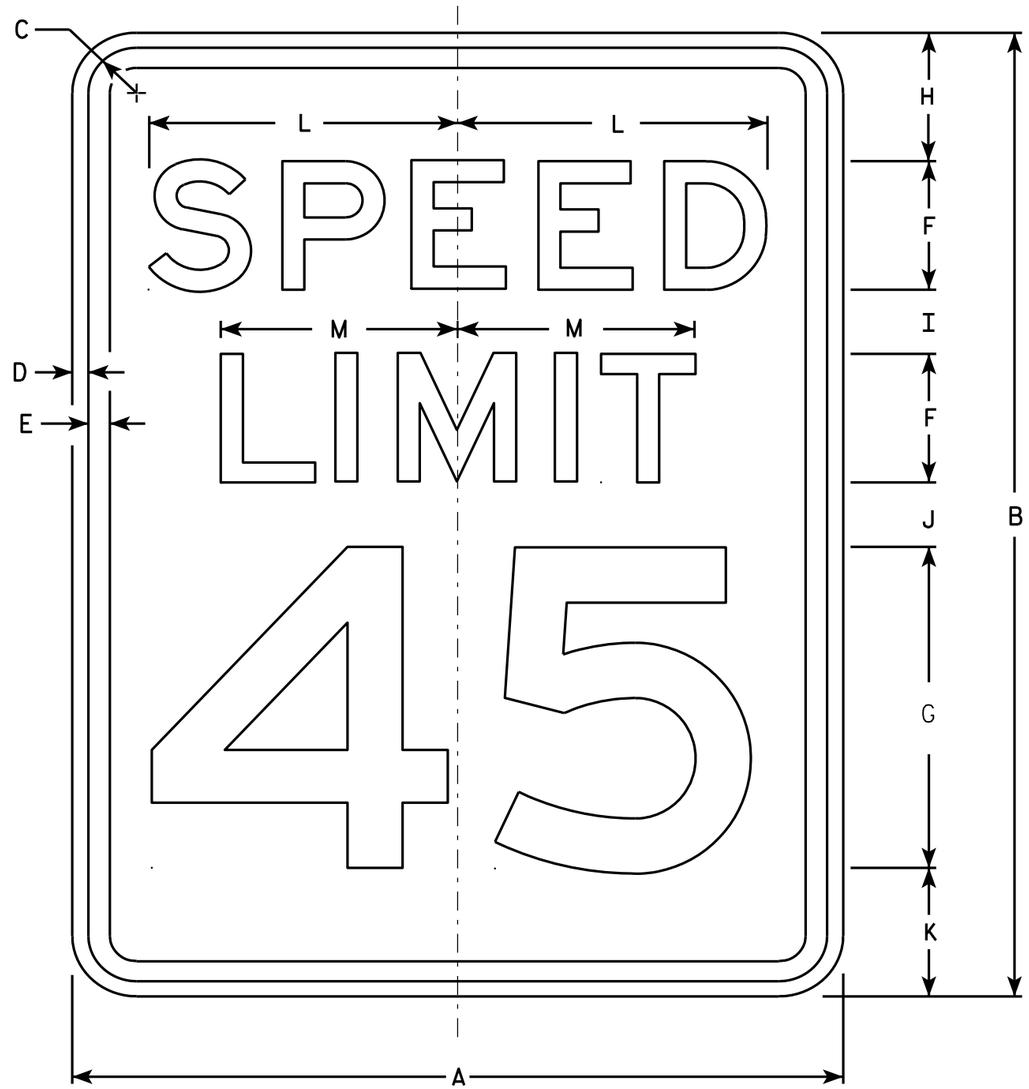
STANDARD SIGN
R1-1F

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: 421 | E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

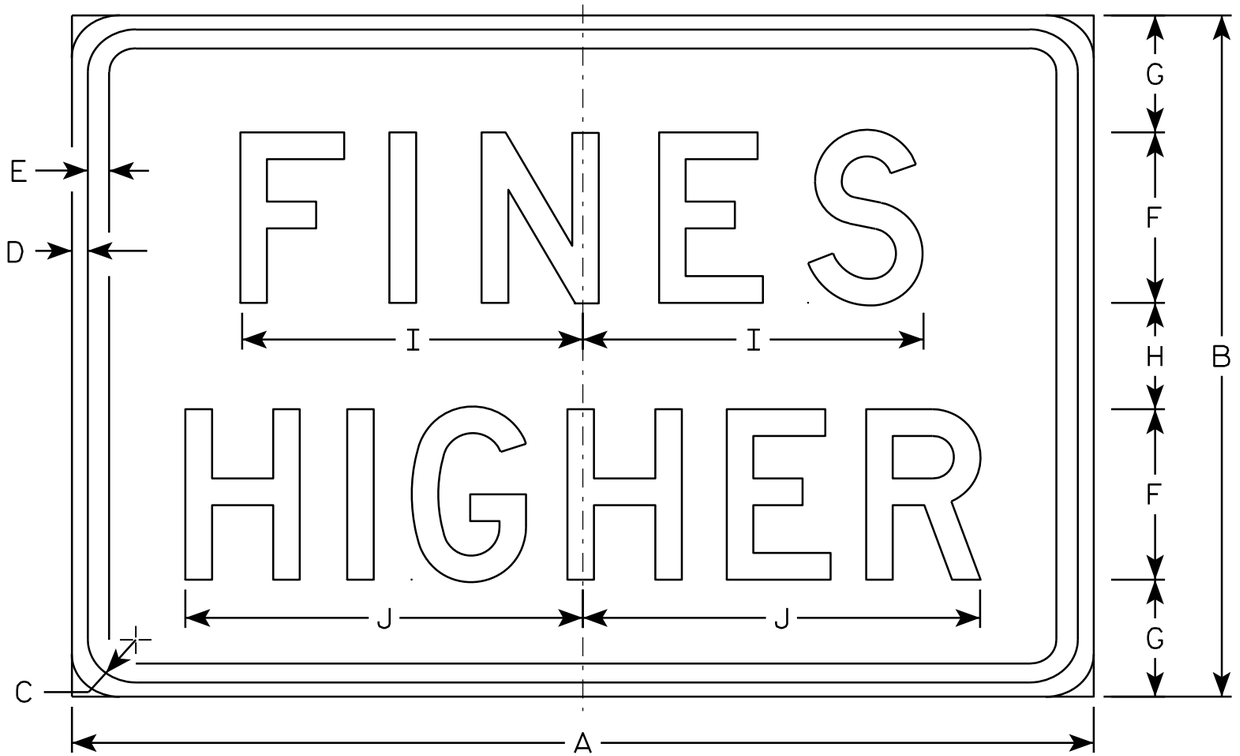
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 422 | E



R2-6P

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.

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	18	1 1/8	3/8	3/8	4	3 1/2	3	7 5/8	9 1/4																	3.0
2M	24	18	1 1/8	3/8	3/8	4	3 1/2	3	7 5/8	9 1/4																	3.0
3	36	24	1 1/8	3/8	1/2	6	4 1/8	3 3/4	12	14																	6.0
4	36	24	1 1/8	3/8	1/2	6	4 1/8	3 3/4	12	14																	6.0
5	48	36	1 3/8	1/2	5/8	8	7	6	15 1/8	19																	12.0

STANDARD SIGN
R2-6P

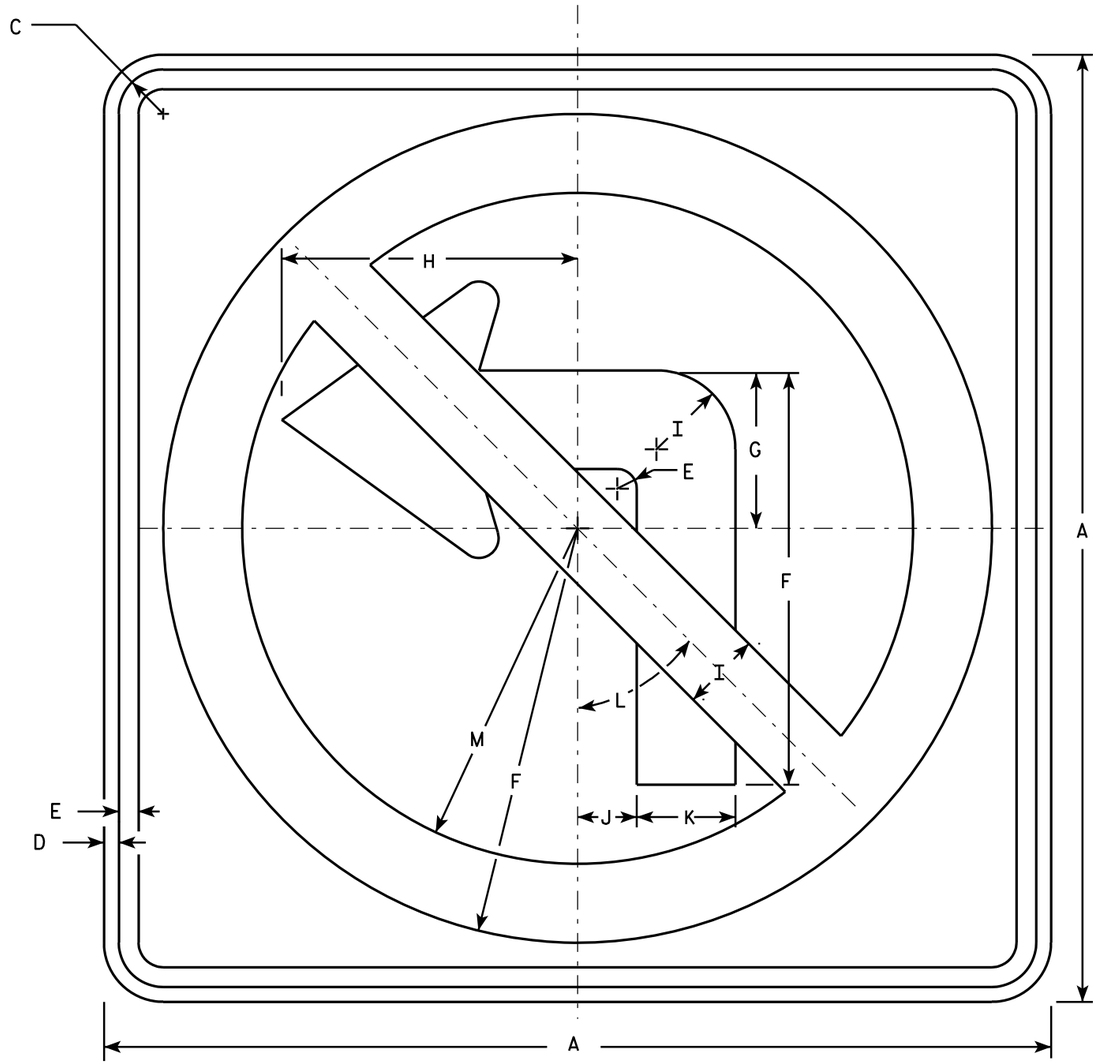
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/20/10 PLATE NO. R2-6P.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 423 | E

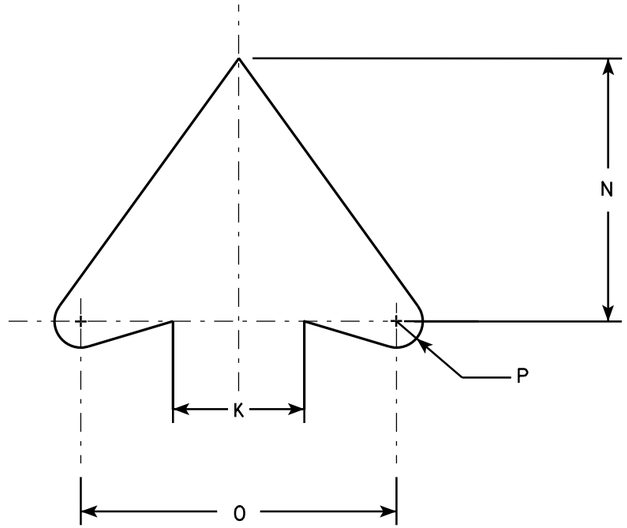
7



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

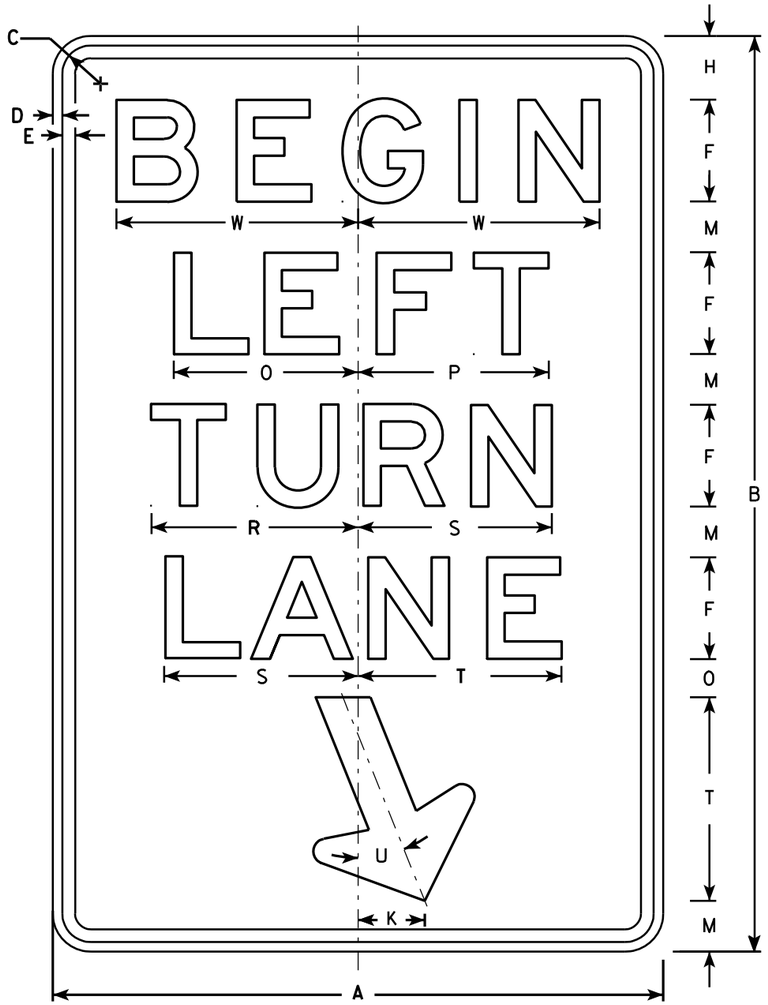
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

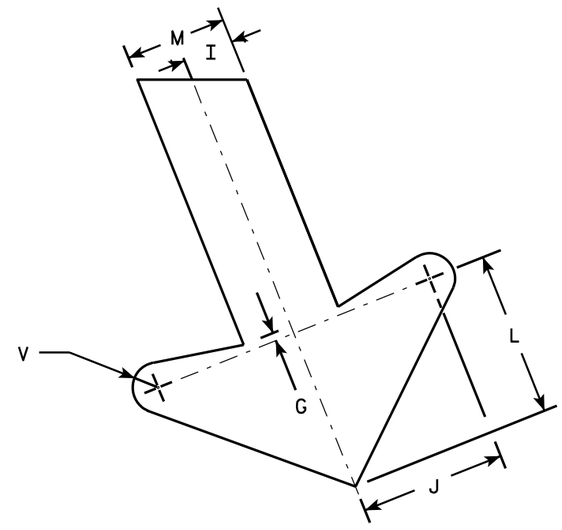
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 424	E



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																											

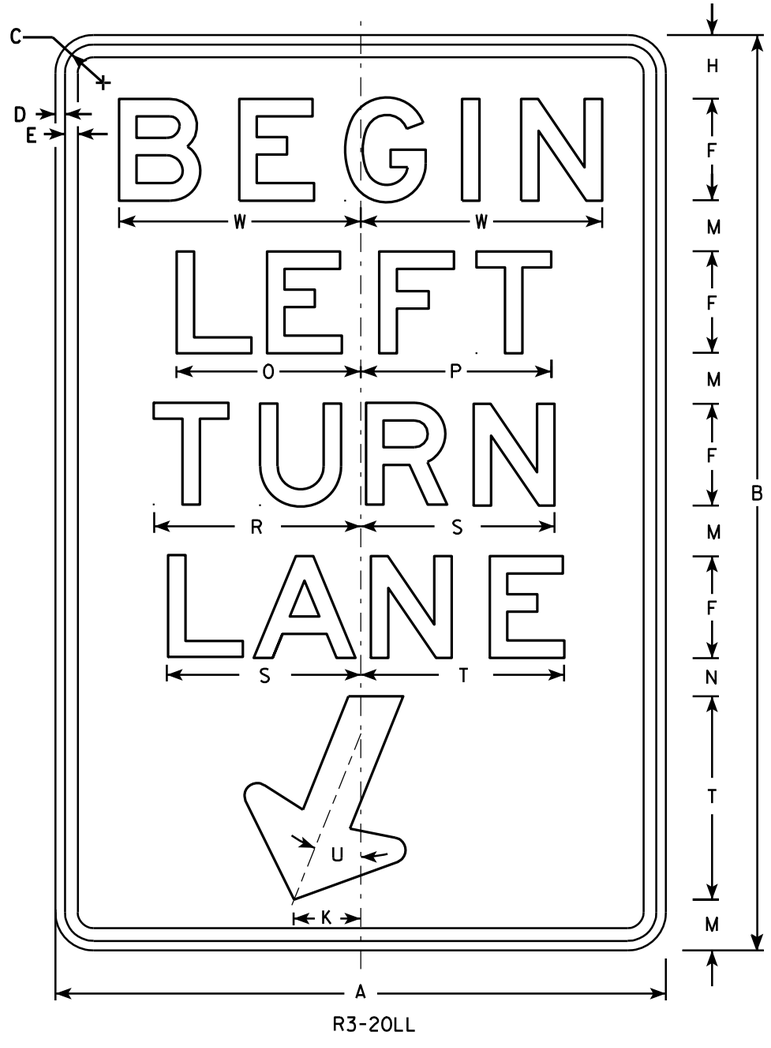
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

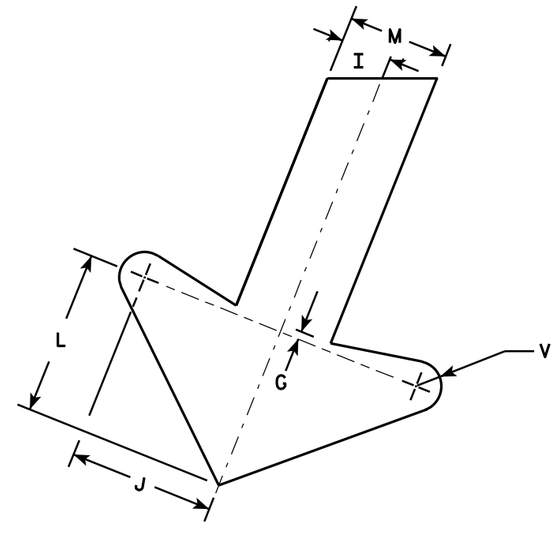
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 425 | E



R3-20LL

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
R3-20LL

WISCONSIN DEPT OF TRANSPORTATION

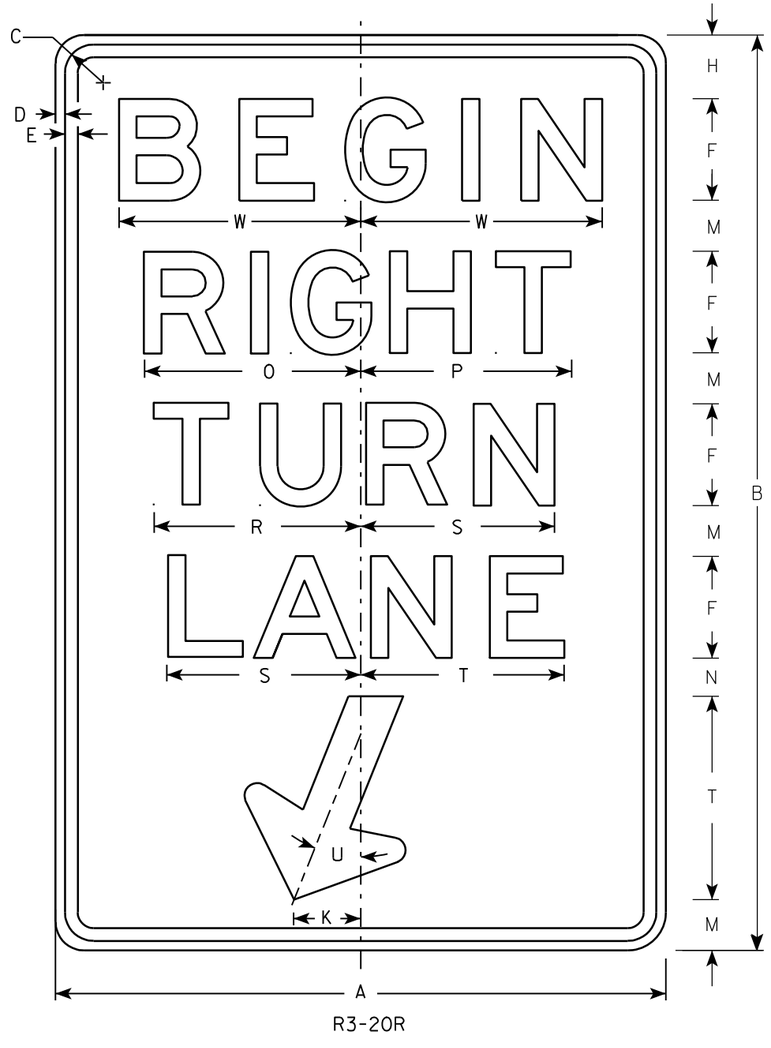
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20LL.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 426 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R320LL.DGN PLOT DATE : 15-OCT-2010 14:38 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

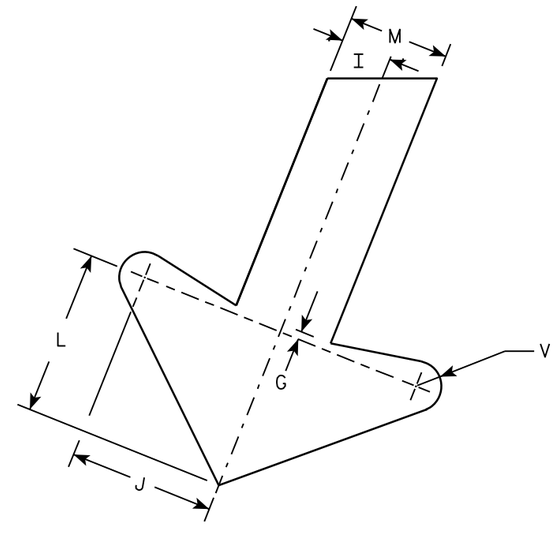
WISDOT/CADDS SHEET 42



R3-20R

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	8 1/2	8 1/4		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	8 1/2	8 1/4		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	12 3/4	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

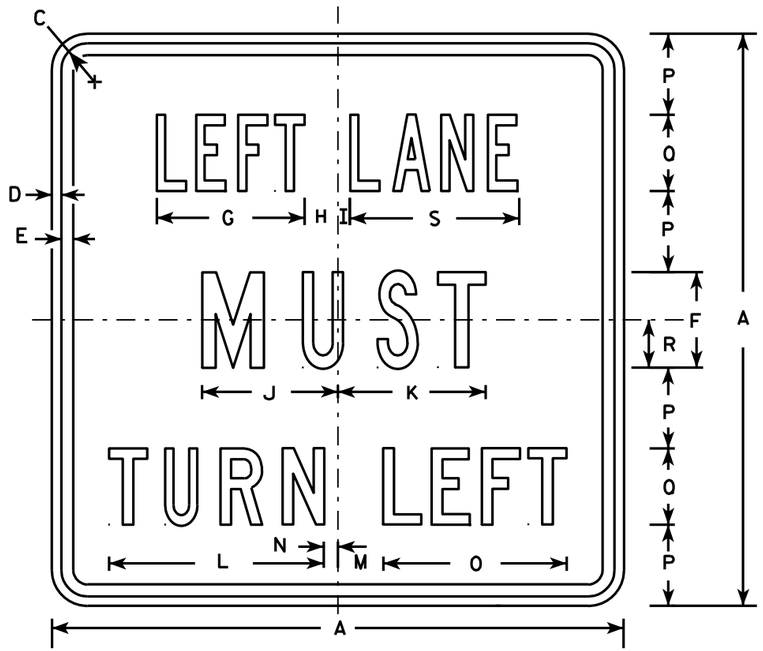
STANDARD SIGN
R3-20R

WISCONSIN DEPT OF TRANSPORTATION

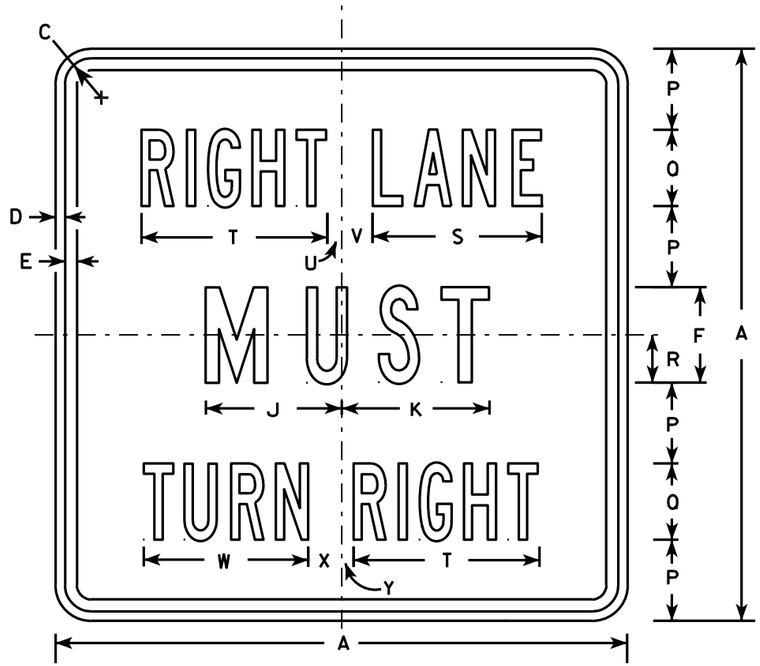
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20R.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 427 | 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																											

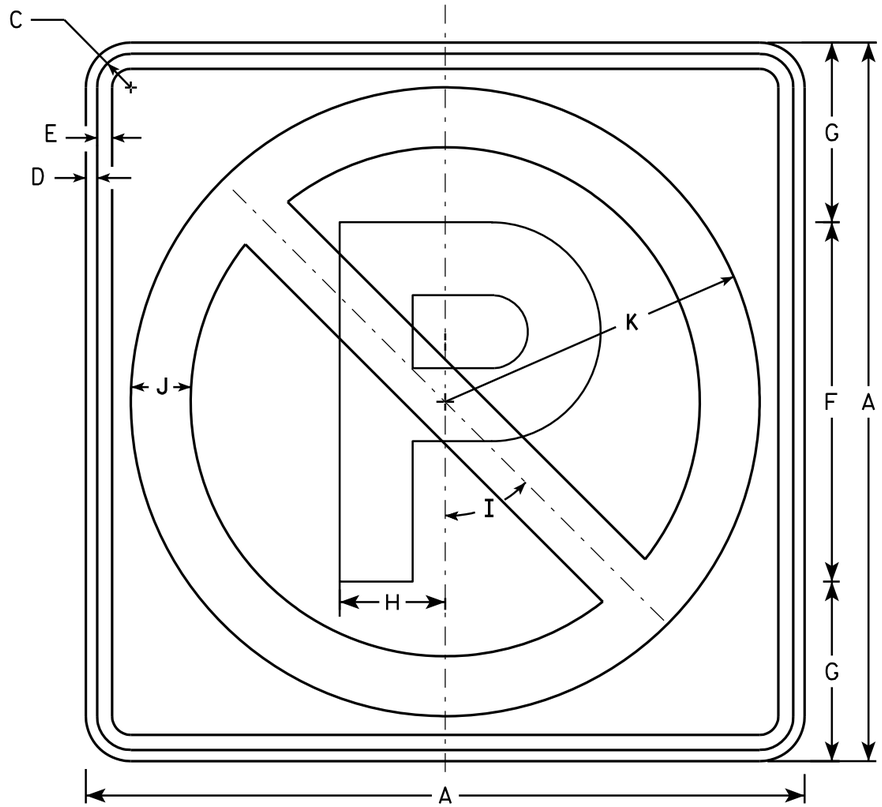
STANDARD SIGN
R3-7L & R3-7R

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: 428 | 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

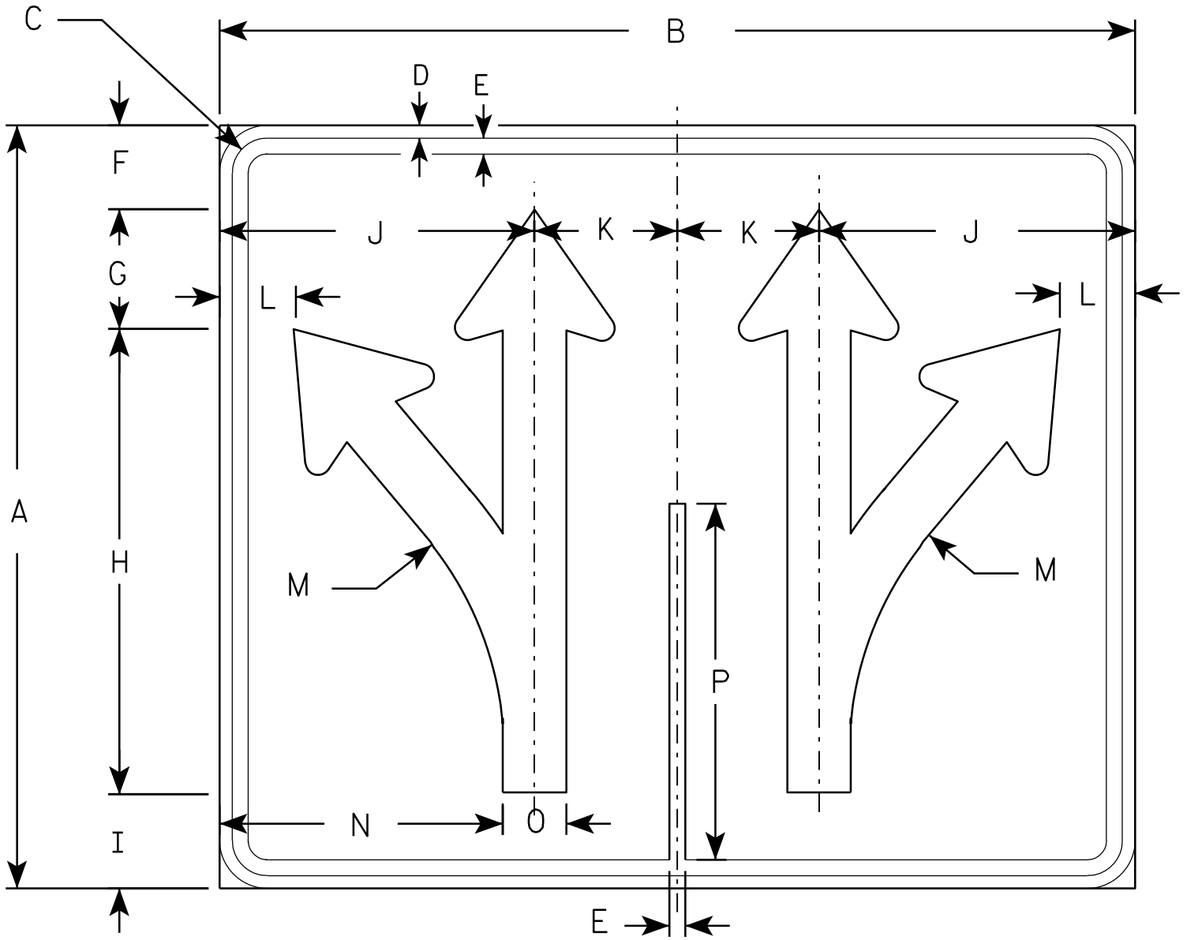
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/01/12 PLATE NO. R3-8A.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 429 | E

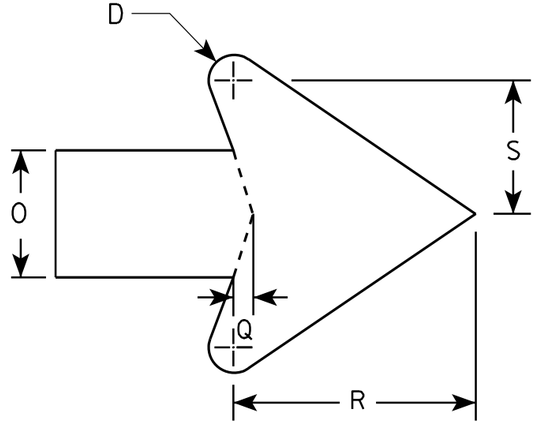
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R38A.DGN PLOT DATE : 01-AUG-2012 12:39 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.061135:1.000000 WISDOT/CADDS SHEET 42



R3-8K

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	30	36	1 3/8	1/2	5/8	3 1/4	4 3/4	18 1/4	3 3/4	12 3/8	5 5/8	3	13 1/4	11 1/8	2 1/2	14	3/8	4 3/4	2 5/8								7.5
2M	30	36	1 3/8	1/2	5/8	3 1/4	4 3/4	18 1/4	3 3/4	12 3/8	5 5/8	3	13 1/4	11 1/8	2 1/2	14	3/8	4 3/4	2 5/8								7.5
3																											
4	48	54	2 1/4	3/4	1	5 1/4	7 1/2	29 1/4	5 7/8	18 5/8	8 3/8	4 3/8	22 1/4	16 3/4	3 3/4	22 3/8	5/8	7 1/8	4								18.0
5	48	54	2 1/4	3/4	1	5 1/4	7 1/2	29 1/4	5 7/8	18 5/8	8 3/8	4 3/8	22 1/4	16 3/4	3 3/4	22 3/8	5/8	7 1/8	4								18.0

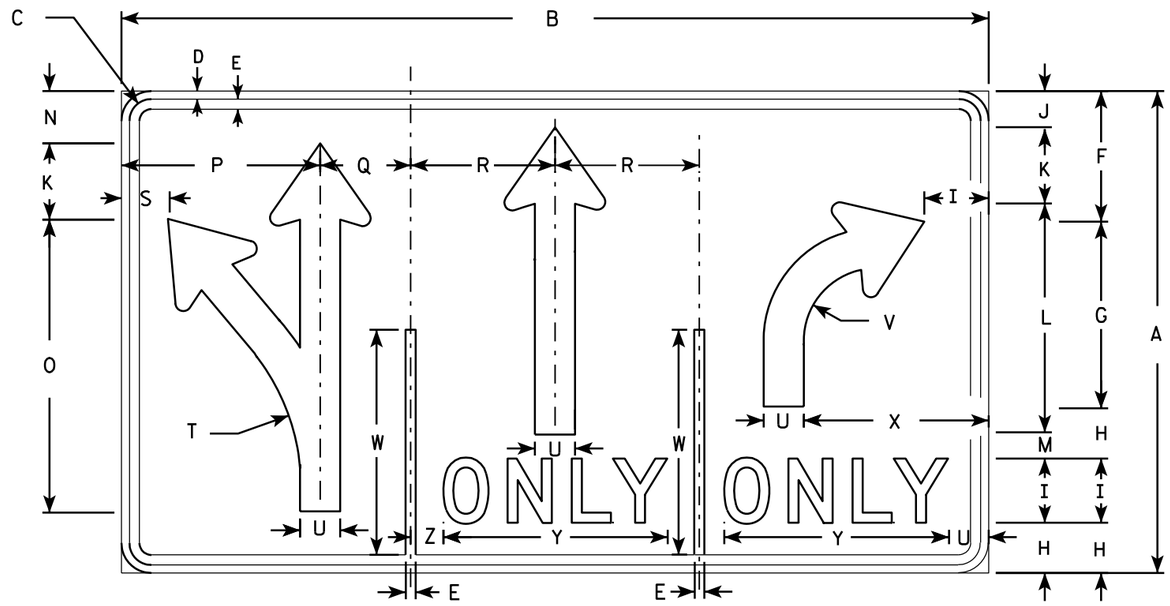
STANDARD SIGN
R3-8K

WISCONSIN DEPT OF TRANSPORTATION

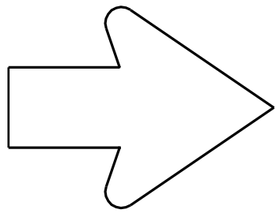
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/2011 PLATE NO. R3-8K.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 430	E



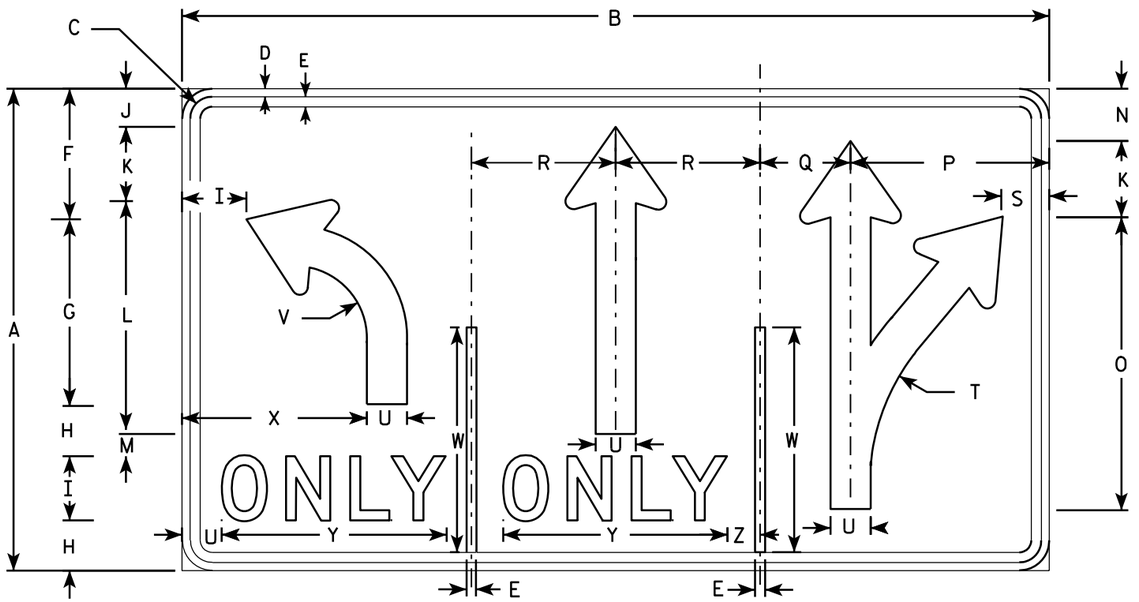
R3-8L



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

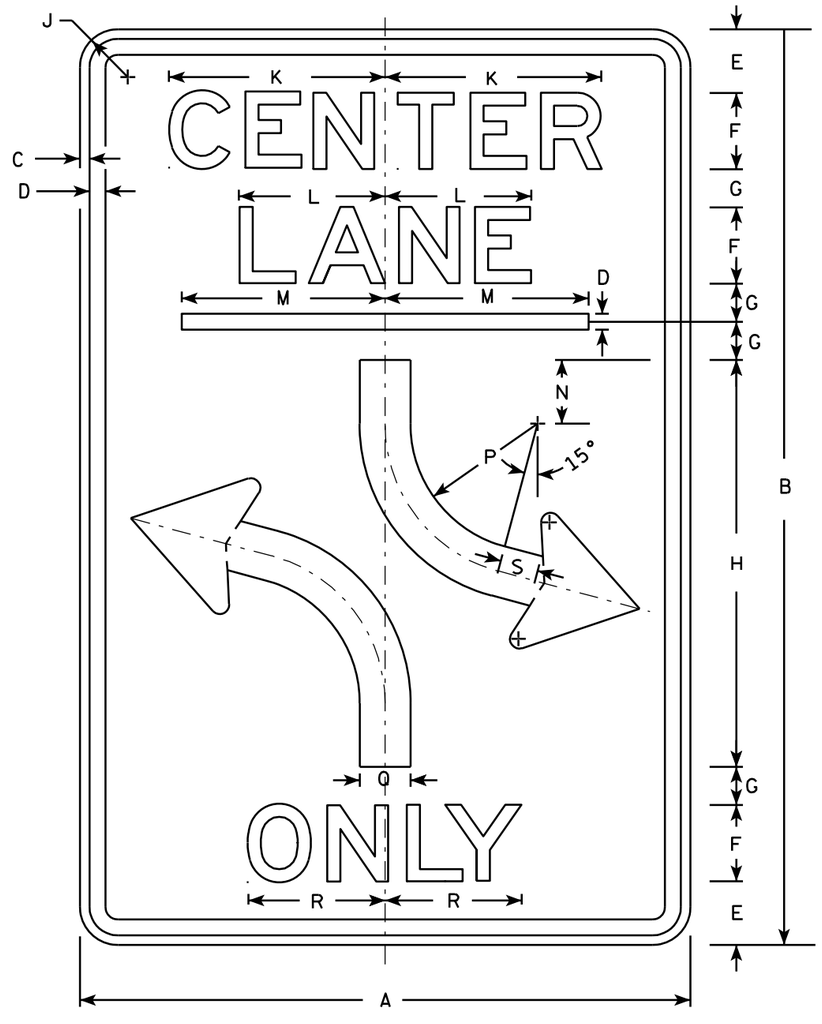
DATE 3/21/2011 PLATE NO. R3-8L.2

PROJECT NO:

SHEET NO: 431 E

7

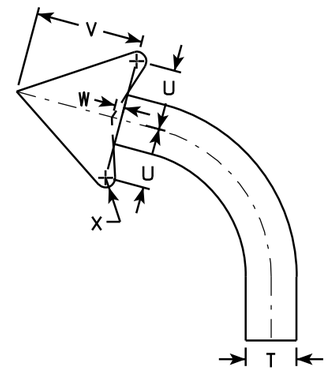
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R38L.DGN PLOT DATE : 21-MAR-2011 14:39 PLOT BY : mscsja PLOT NAME :



R3-9B

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	3/8	1/2	2 1/2	3	1 1/2	16		1 1/2	8 1/2	5 3/4	8	2 1/2		6	2	5 1/8	1 1/2		2 3/8	4 3/8	3/8				6.0
2M	24	36	3/8	1/2	2 1/2	3	1 1/2	16		1 1/2	8 1/2	5 3/4	8	2 1/2		6	2	5 1/8	1 1/2		2 3/8	4 3/8	3/8				6.0
3	36	48	5/8	7/8	3 1/2	5	1 1/2	20		2 1/4	14 1/8	9 1/2	12	3		4	3	9 7/8	2		3 1/2	6 1/8	1/2				12.0
4																											
5																											

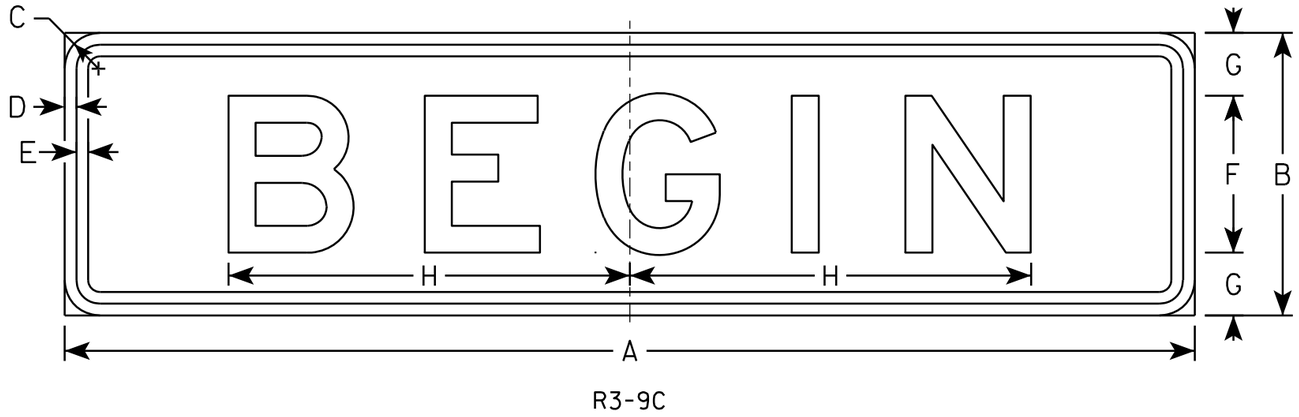
STANDARD SIGN
R3-9B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-9B.5

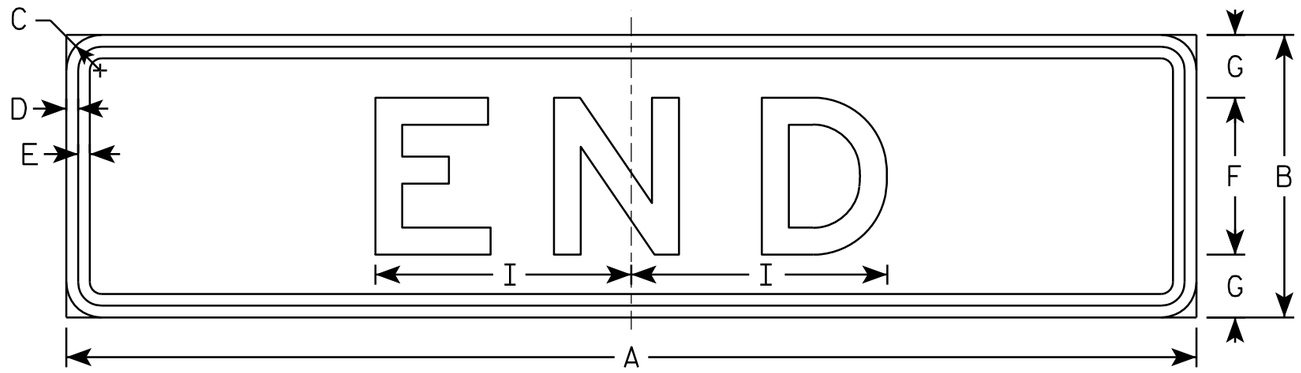
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 432	E



R3-9C

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.



R3-9D

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	6	1 1/8	3/8	3/8	3	1 1/2	7 3/4	4 7/8																		1.0
2M	24	6	1 1/8	3/8	3/8	3	1 1/2	7 3/4	4 7/8																		1.0
3	36	9	1 1/8	3/8	3/8	5	2	12 3/4	8 1/8																		1.86
4																											
5																											

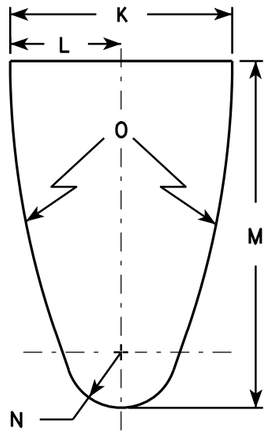
STANDARD SIGN
R3-9C & R3-9D

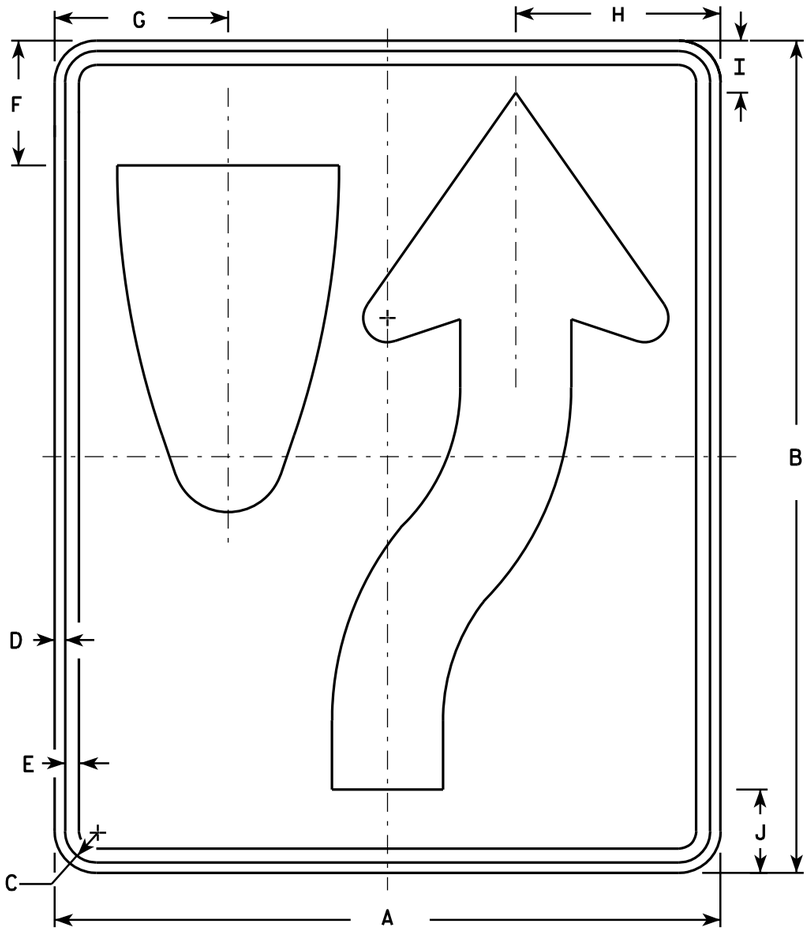
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-9C.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 433	E

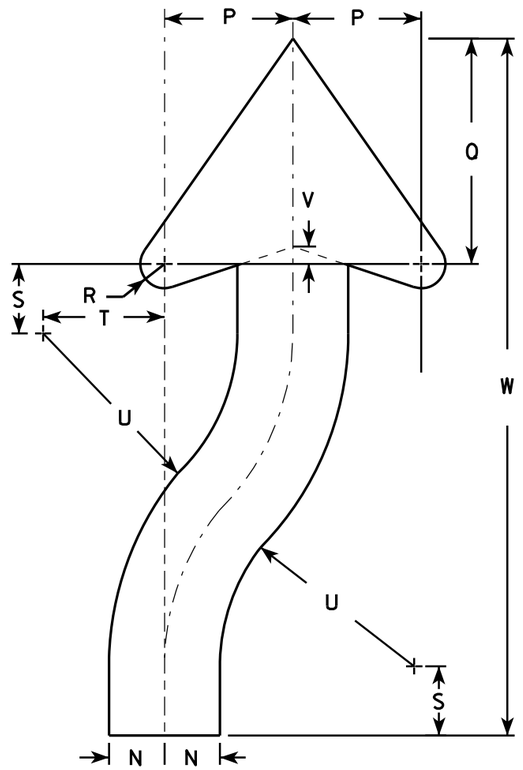




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

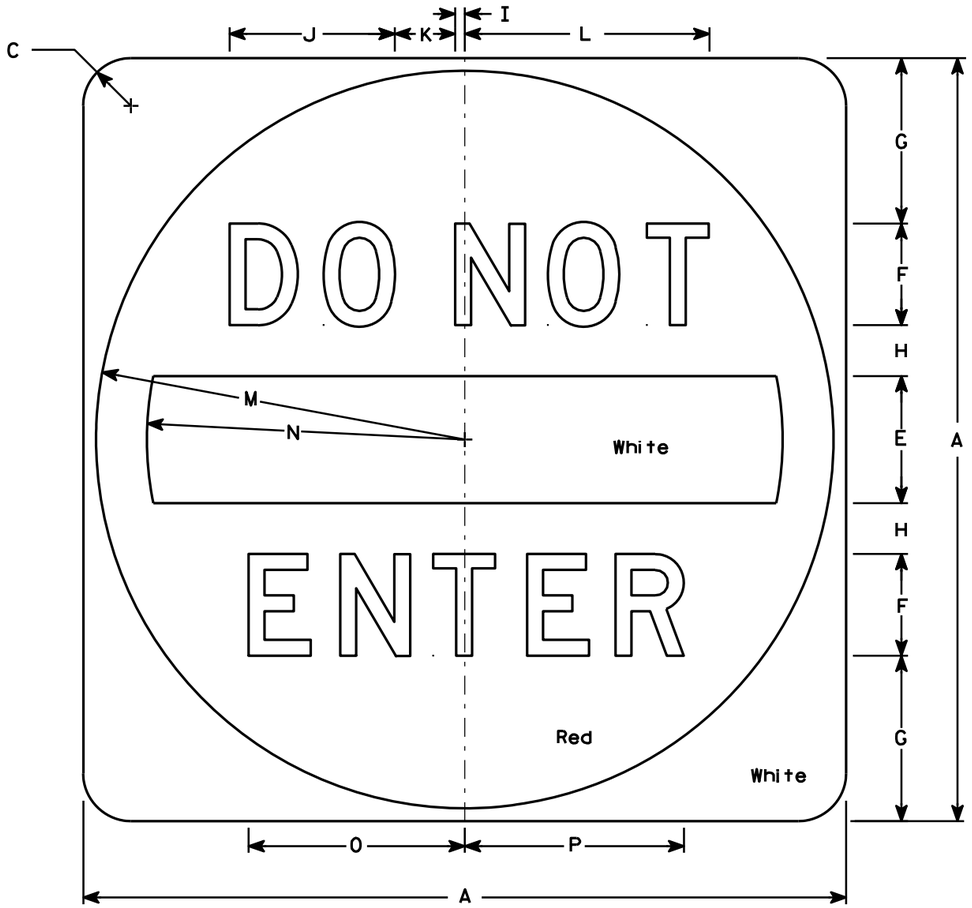
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 434	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

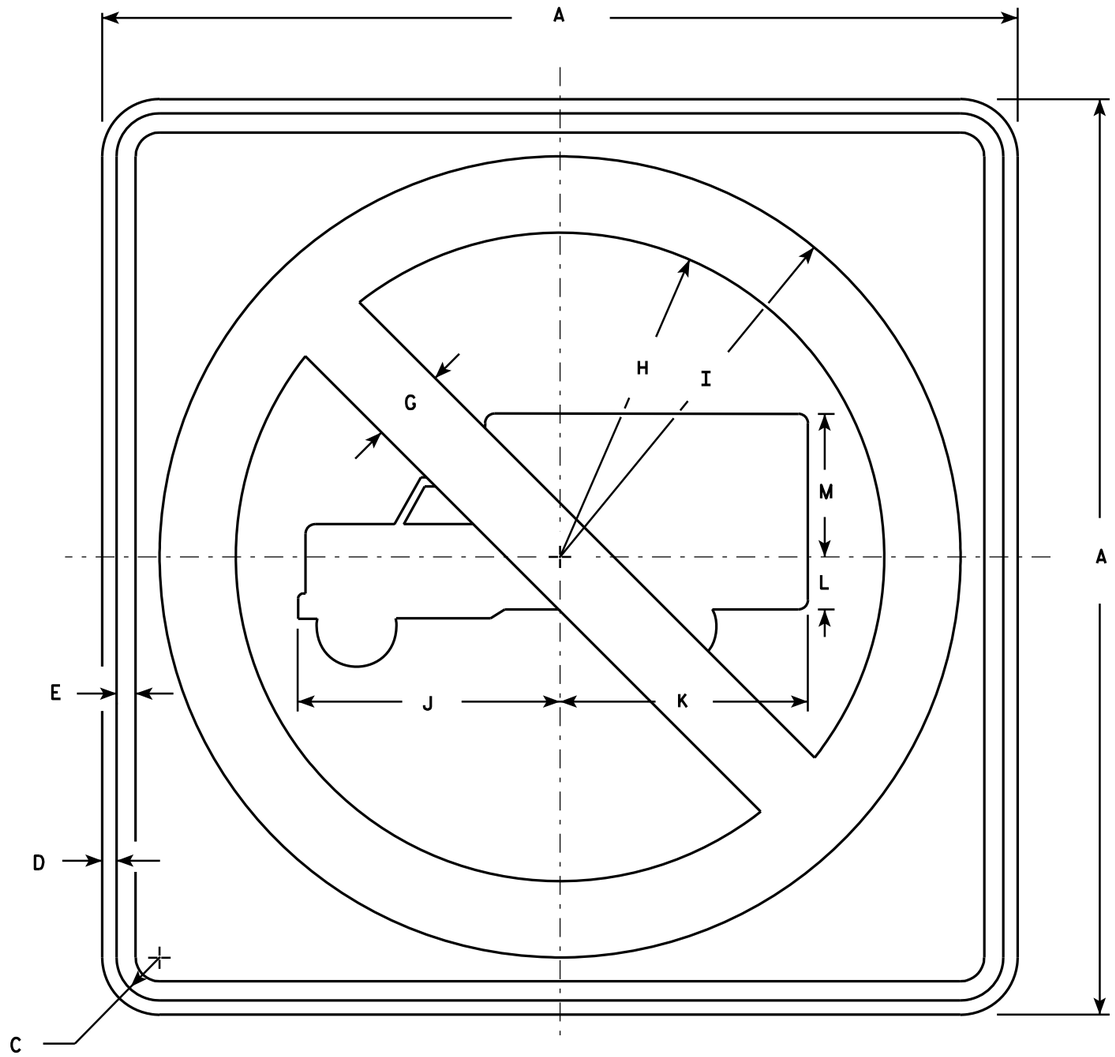
STANDARD SIGN
R5-1

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: 435 | E



R5-2

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
2M	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
3	30		1 3/8	1/2	5/8		2 1/2	10 5/8	13 1/8	8 1/2	8 1/8	1 5/8	4 3/4														6.25
4	36		1 5/8	5/8	3/4		3	12 3/4	15 3/4	10 1/4	9 3/4	2	5 3/4														9.0
5	48		2 1/4	3/4	1		4	17	21	13 5/8	13	2 5/8	7 5/8														16.0

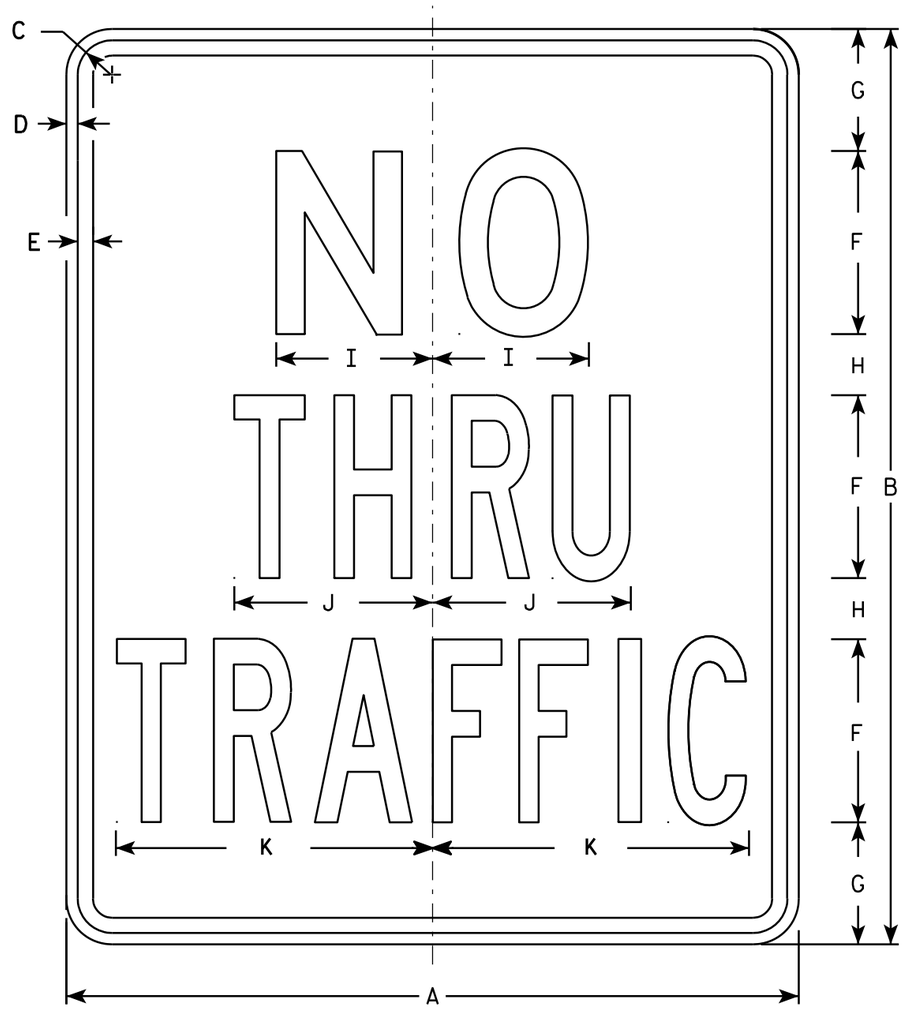
STANDARD SIGN
R5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 436	E



R5-54

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. Line 1 is Series D and Lines 2 and 3 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	24	30	1 1/8	3/8	1/2	6	4	2	5 1/8	6 1/2	10 3/8																5.0
2M	24	30	1 1/8	3/8	1/2	6	4	2	5 1/8	6 1/2	10 3/8																5.0
3																											
4																											
5																											

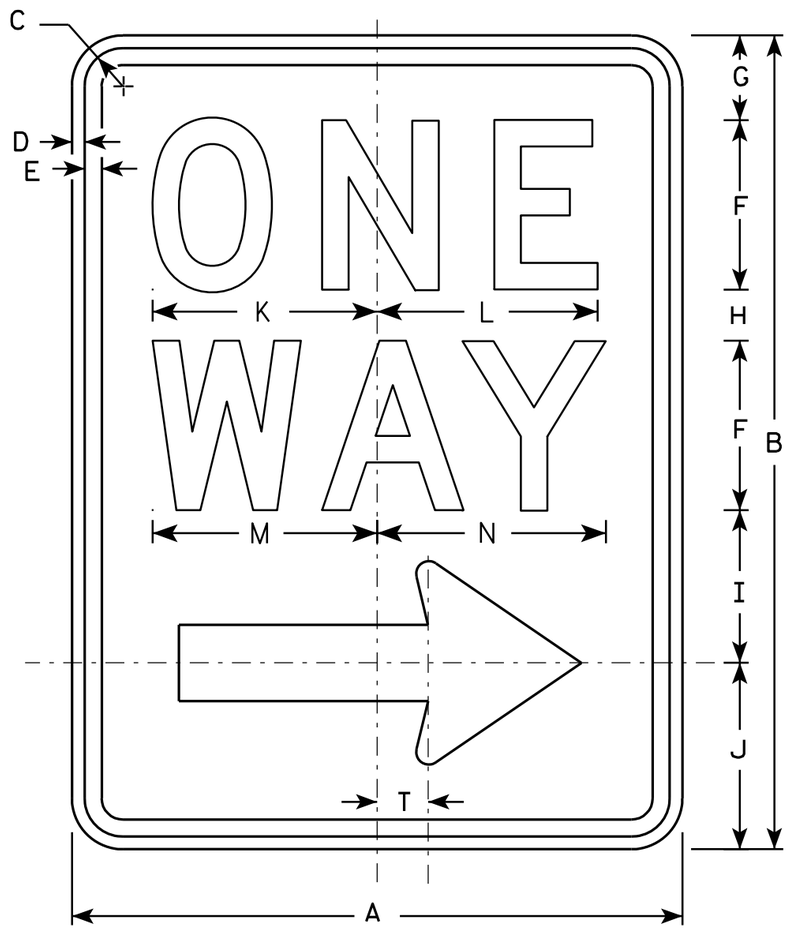
STANDARD SIGN
R5-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-54.6

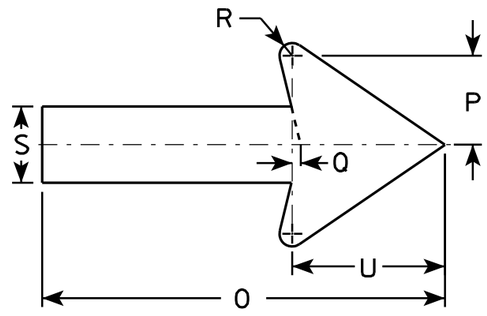
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 437	E



R6-2R

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	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																										

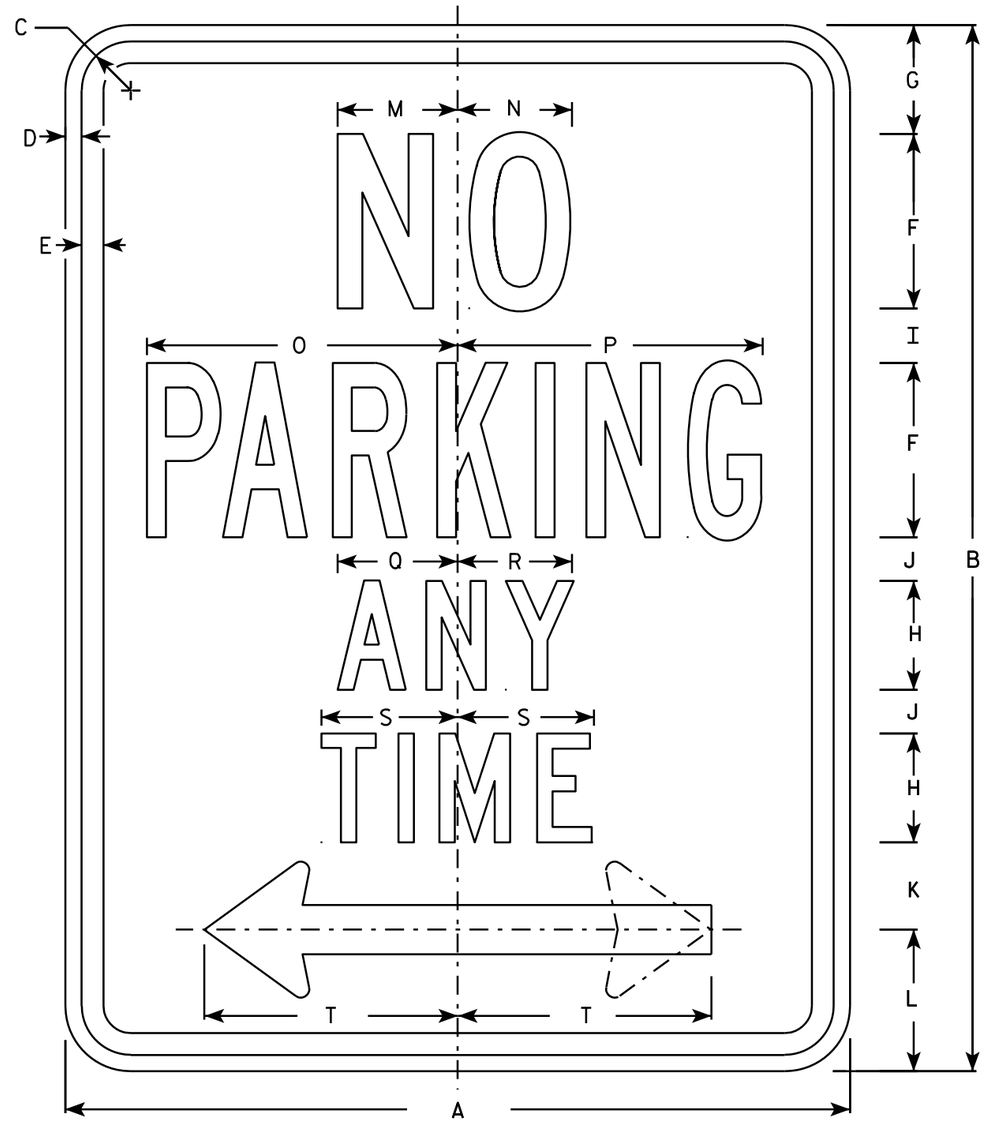
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

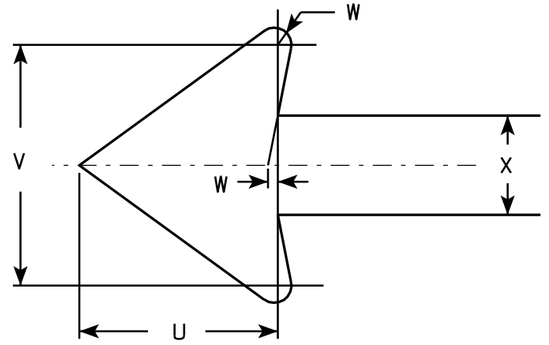
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 438	E



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																											

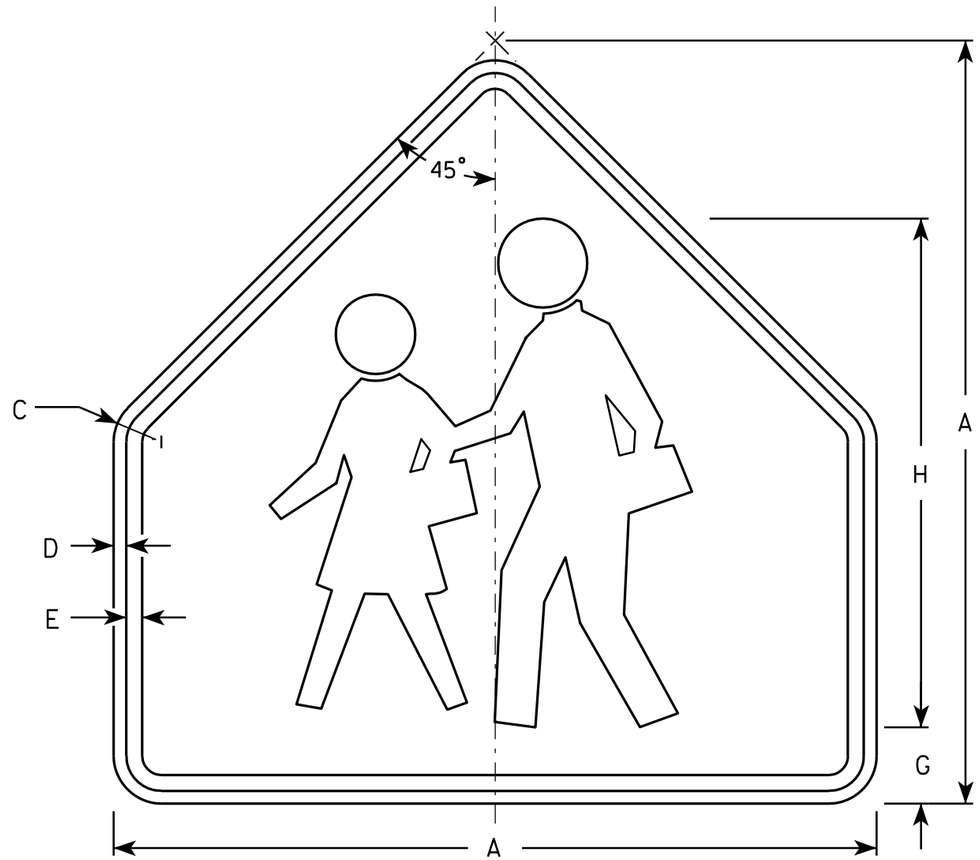
STANDARD SIGN
R7-1

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: 439	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																											

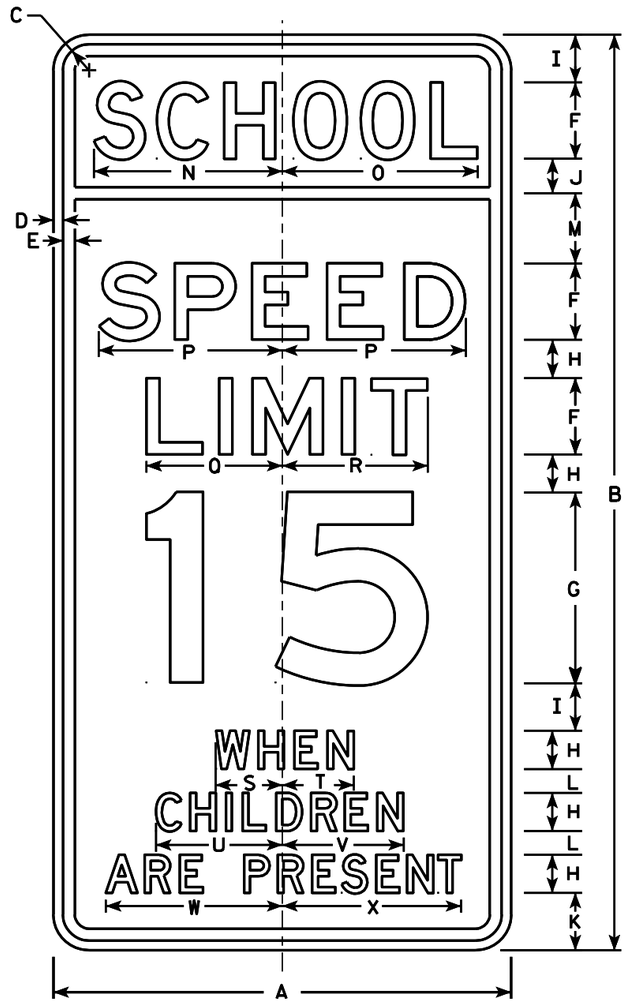
STANDARD SIGN
S1-1

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: 440	E



S4-51

NOTES

1. Sign is Type II - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. (See note 5).
2. Color:
   Background - See note 5
   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. Top panel (SCHOOL) background - Yellow Green -Type F Reflective.
   Lower panel background - White -Type H Reflective.
6. From top to bottom:
   Lines 1, 5, 6 & 7 are series D
   Lines 2, 3 & 4 are series E
7. Line 4 substitute appropriate numerals and adjust spacing to achieve proper balance.

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 1200 mm
3	900 mm X 1800 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	48	1 3/8	1/2	5/8	4	10	2	2 1/2	1 3/4	3	1 1/4	3 3/4	9 7/8	10 1/4	9 5/8	7 1/8	7 5/8	3 1/2	3 3/8	6 5/8	6 3/8	9 1/4	9 3/8			8.00	0.72
3	36	72	2 1/4	3/4	1	6	15	3	3 3/4	2 3/4	4 1/2	1 7/8	5 1/2	15	15 1/4	14 1/2	11 1/4	11 1/2	5 1/2	5 3/4	10	9 3/4	14	14 1/8			18.00	1.62
4																												
5																												

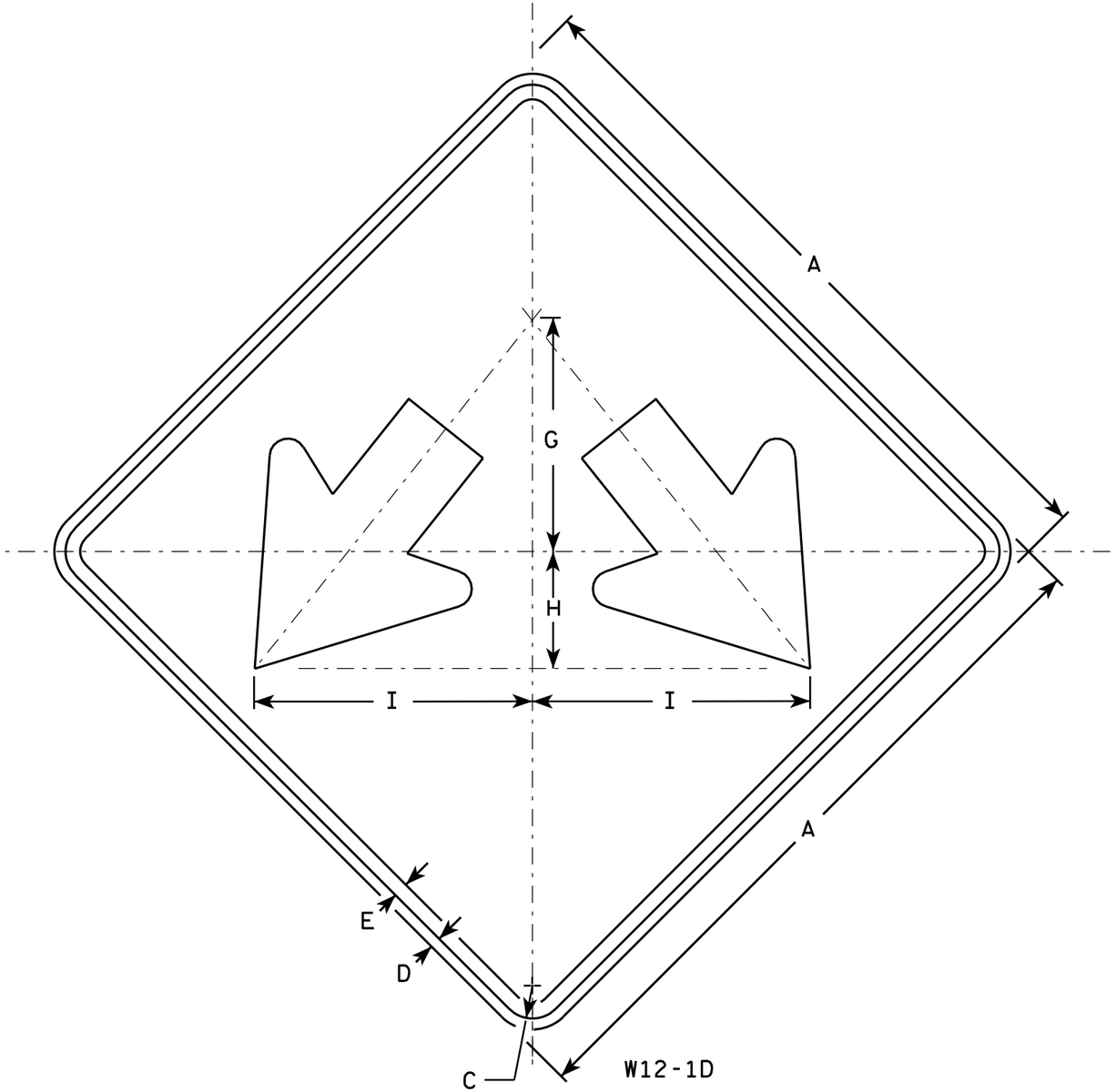
STANDARD SIGN
S4-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

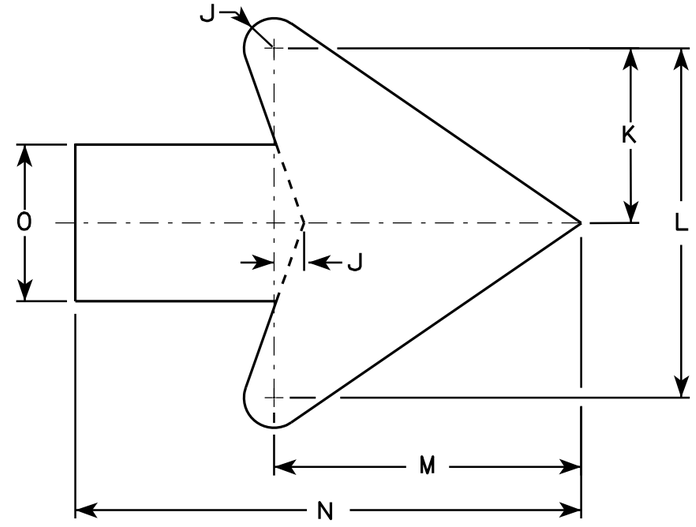
DATE 4/26/10 PLATE NO. S4-51.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 441	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 - 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 3/15/11 PLATE NO. W12-1D.14

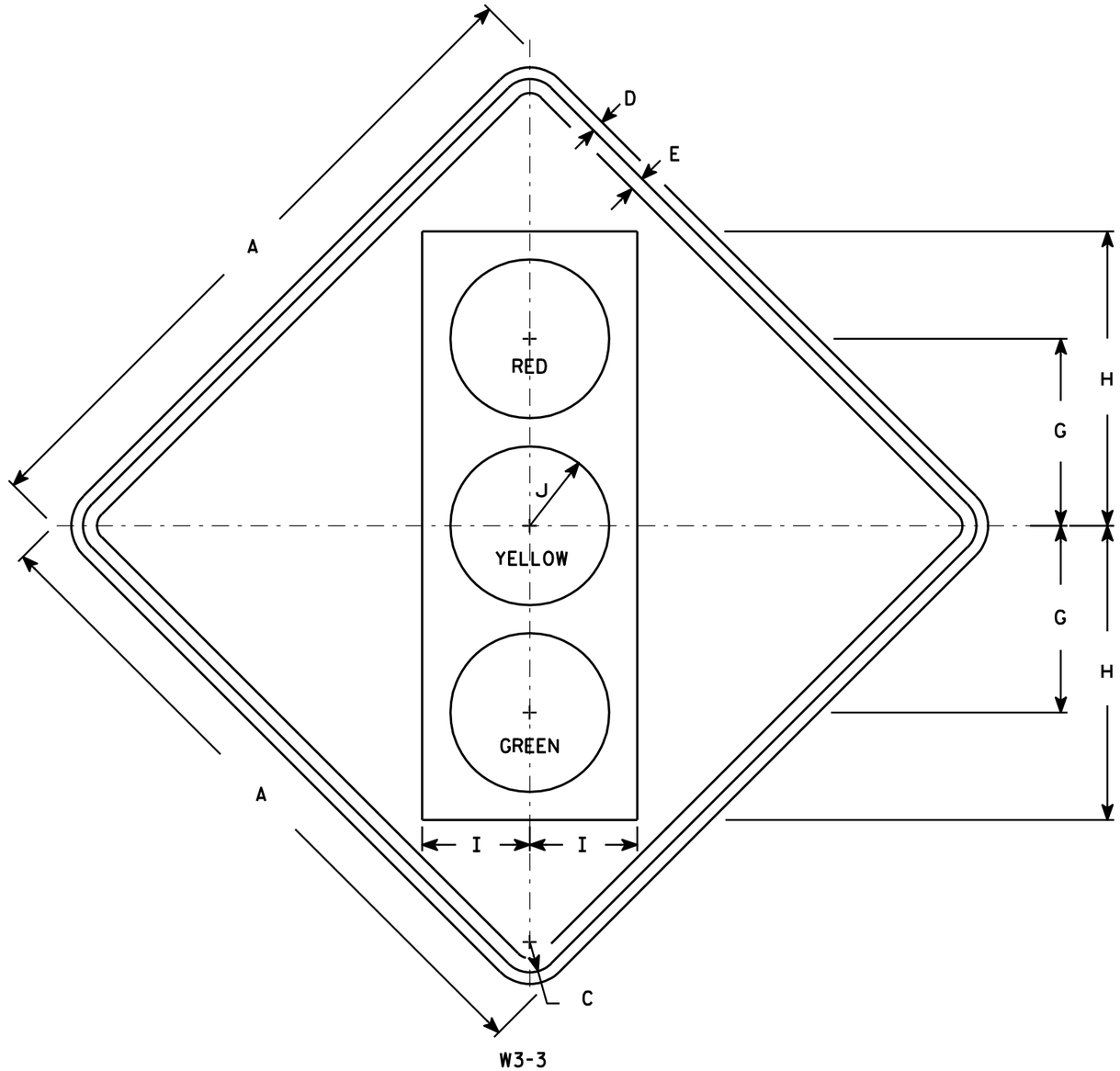
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 442	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W121D.DGN PLOT DATE : 16-MAR-2011 14:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.717577:1.000000

WISDOT/CADDS SHEET 42

7

7



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - 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

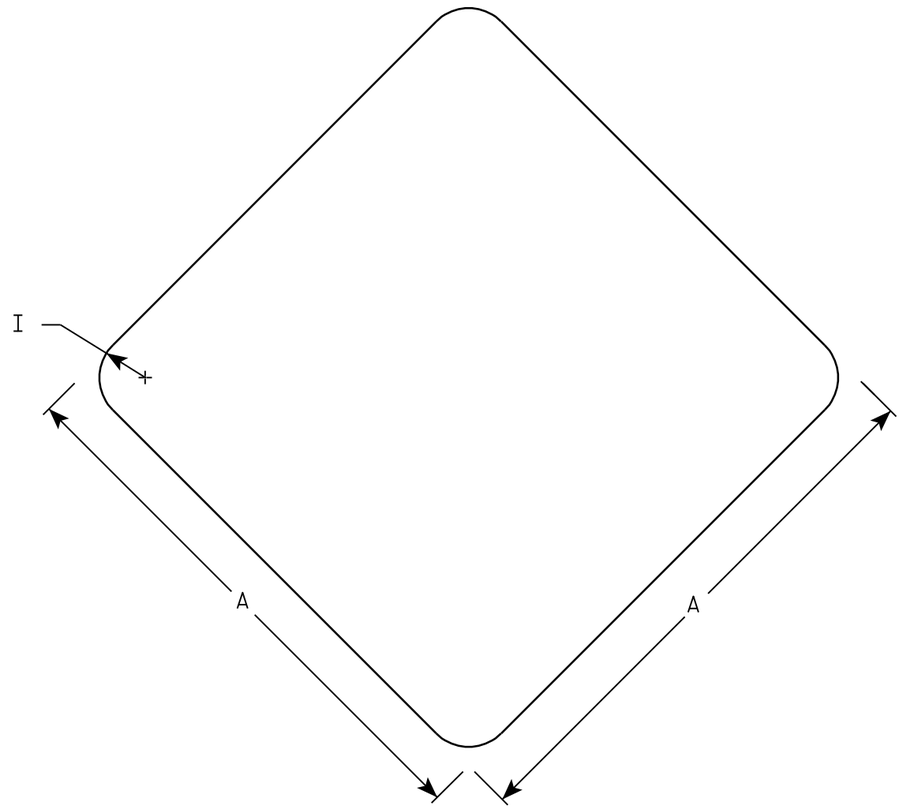
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 443 | 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
WISDOT/CADDS SHEET 42



W5-54

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
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners 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								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

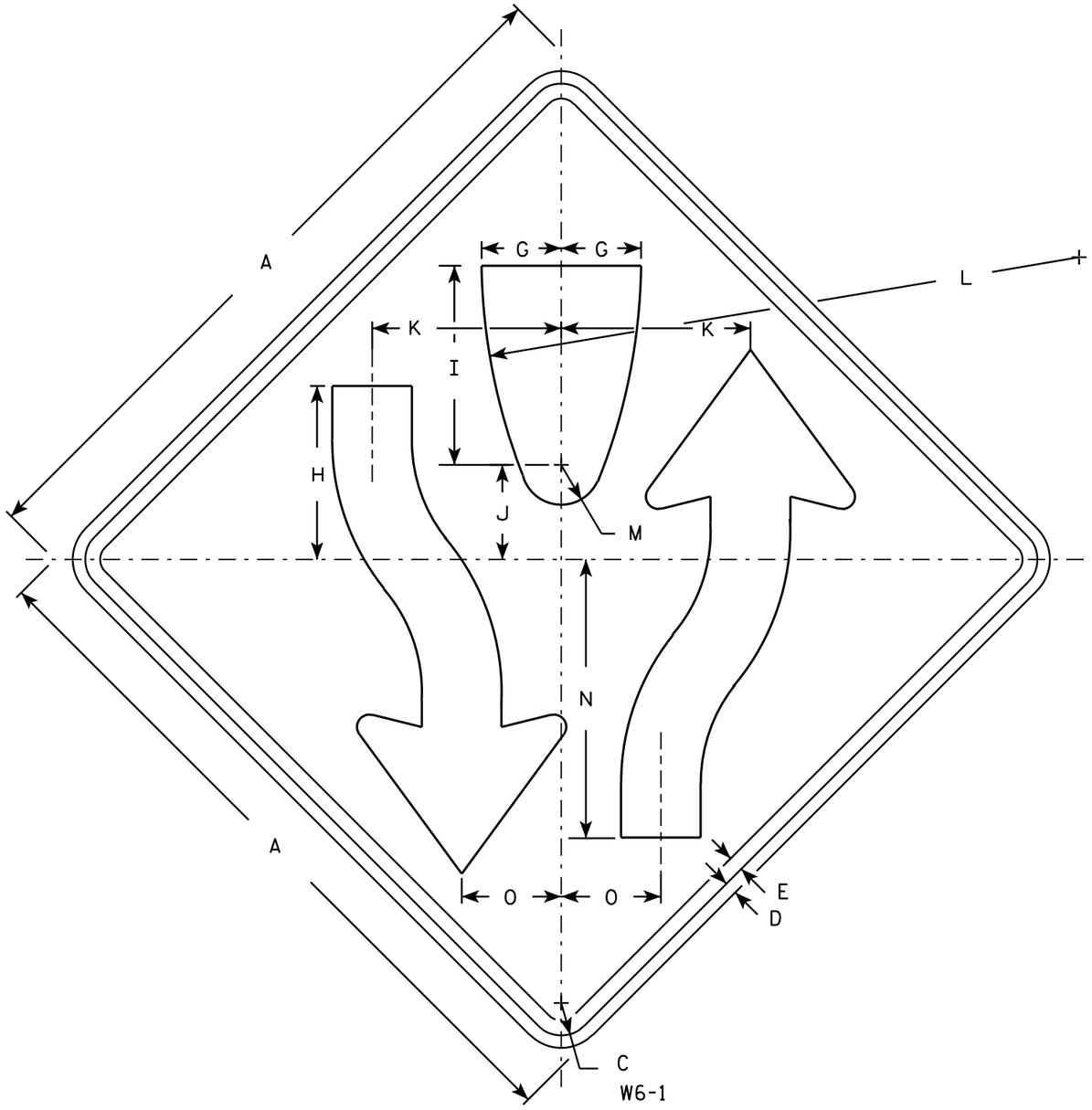
STANDARD SIGN
W5-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

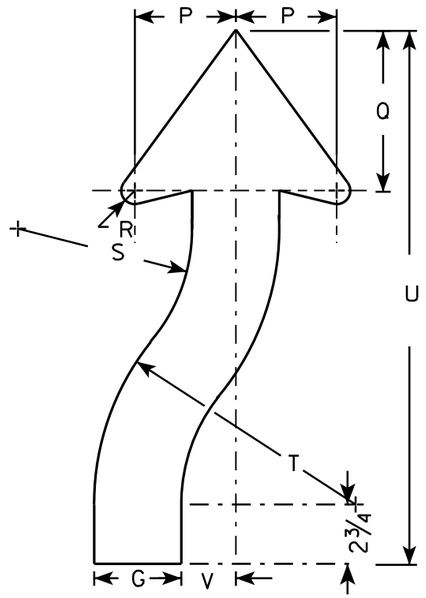
DATE 11/3/10 PLATE NO. W5-54.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 444 | 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 - 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. W6-2 same as W6-1 but is rotated 180° when mounted.



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	30		1 3/8	1/2	5/8		3 1/4	8	8 1/4	4 1/8	7 7/8	25	1 3/4	11 5/8	4 1/8	3 7/8	6 3/4	5/8	6 5/8	9 7/8	21 5/8	2					6.25
2S	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
2M	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
3																											
4	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
5	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0

STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

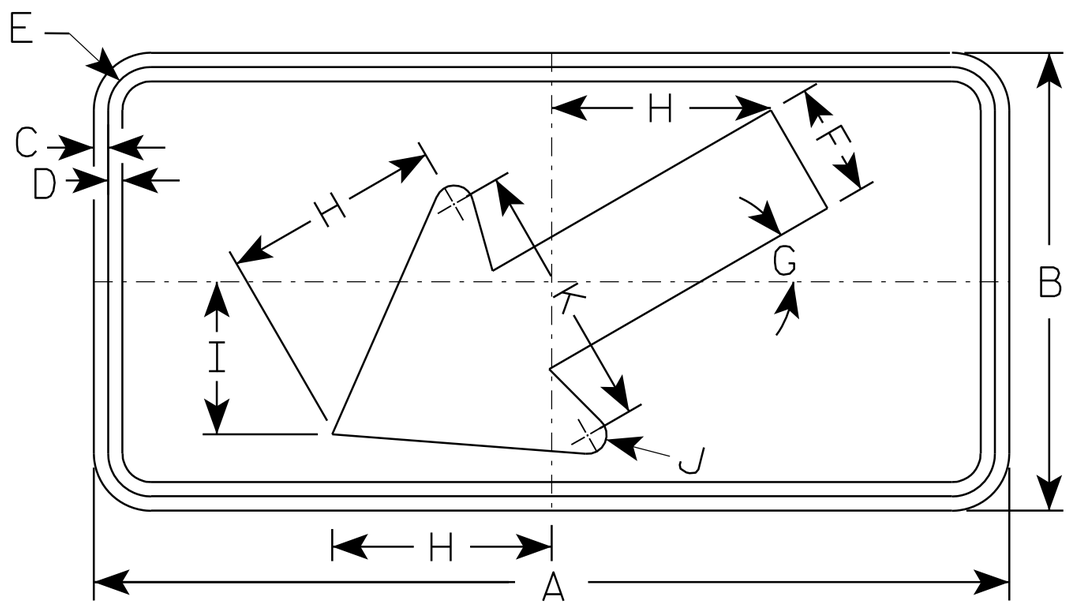
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/22/11 PLATE NO. W6-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 445	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W61.DGN PLOT DATE : 22-MAR-2011 13:21 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.952219:1.000000

WISDOT/CADDS SHEET 42



WF16-7L

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. WF16-7R are the same as WF-16-7L 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																											

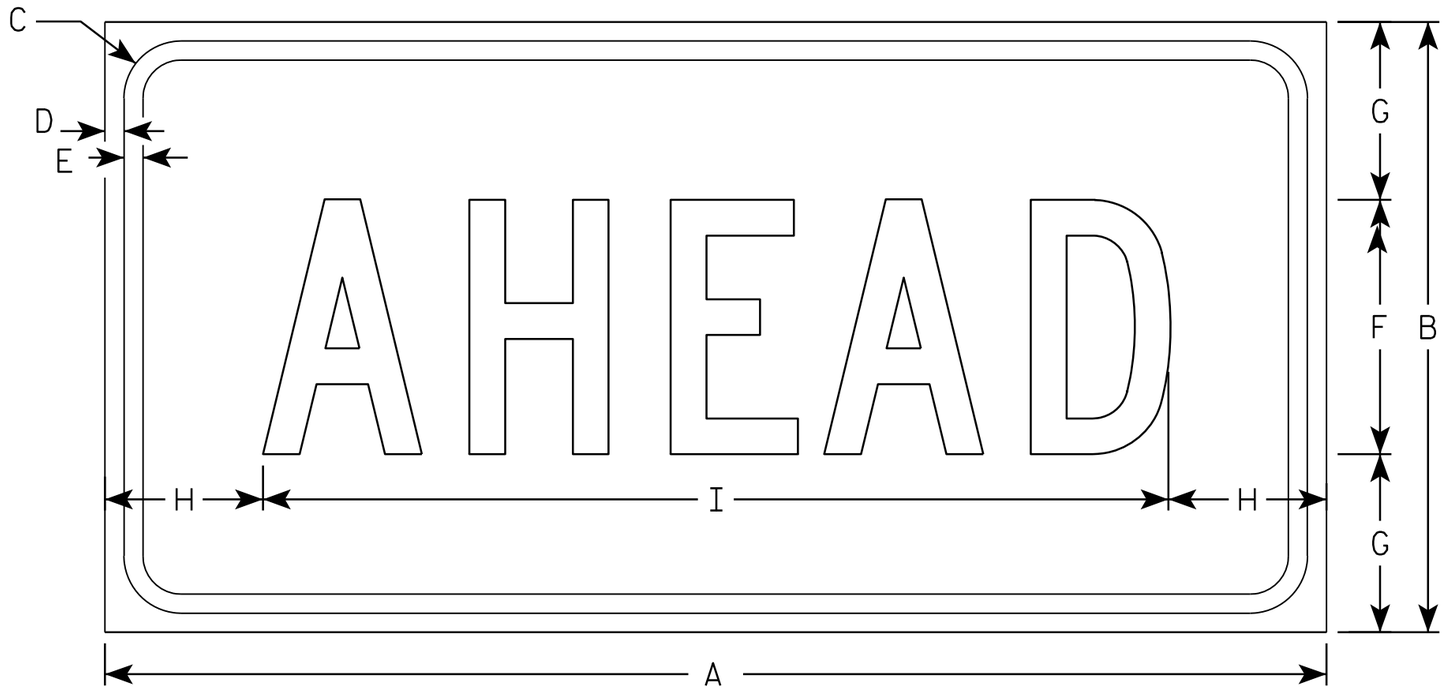
STANDARD SIGN
WF16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/21/10 PLATE NO. WF16-7.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 446 | E



WF16-9P

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-Green
   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	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2S	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
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
WF16-9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/29/2012 PLATE NO. WF16-9P.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 447	E

E

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	EBS	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 1.20	Expanded EBS Backfill 1.30 Note 4	Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
62+80.00	6280.00	0.00	8.51		0.55	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00
63+00.00	6300.00	20.00	10.09		0.27	0.00	6.89		0.30	0.00	6.89	0.36	0.00	0.00	6.52
63+50.00	6350.00	50.00	8.78		0.1	0.00	17.47		0.34	0.00	24.36	0.78	0.00	0.00	23.59
64+00.00	6400.00	50.00	14.34		0	0.00	21.41		0.09	0.00	45.77	0.89	0.00	0.00	44.88
64+50.00	6450.00	50.00	10.27		0	0.00	22.79		0.00	0.00	68.56	0.89	0.00	0.00	67.67
65+00.00	6500.00	50.00	20.46		0.17	0.00	28.45		0.16	0.00	97.01	1.08	0.00	0.00	95.93
65+50.00	6550.00	50.00	14.54		0.2	0.00	32.41		0.34	0.00	129.42	1.49	0.00	0.00	127.93
66+00.00	6600.00	50.00	12.4		0.14	0.00	24.94		0.31	0.00	154.36	1.86	0.00	0.00	152.50
66+50.00	6650.00	50.00	11.53		0.12	0.00	22.16		0.24	0.00	176.52	2.15	0.00	0.00	174.37
67+00.00	6700.00	50.00	10.01		0.37	0.00	19.94		0.45	0.00	196.46	2.70	0.00	0.00	193.77
67+50.00	6750.00	50.00	216.63		1.38	0.00	209.85		1.62	0.00	406.31	4.64	0.00	0.00	401.67
68+00.00	6800.00	50.00	227.31		0.25	0.00	420.94		0.46	0.00	827.26	5.20	0.00	0.00	812.17
68+50.00	6850.00	50.00	250.62		0.43	0.00	442.53		0.63	0.00	1269.79	5.95	0.00	0.00	1253.94
69+00.00	6900.00	50.00	259.41		0	0.00	472.25		0.40	0.00	1742.04	6.43	0.00	0.00	1725.72
69+50.00	6950.00	50.00	261.88		0.57	0.00	482.68		0.53	0.00	2224.71	7.06	0.00	0.00	2207.76
69+87.50	6987.50	37.50	281.99		0	0.00	377.69		0.40	0.00	2602.40	7.54	0.00	0.00	2584.97
70+00.00	7000.00	12.50	270.96		0.84	0.00	128.00		0.19	0.00	2730.40	7.77	0.00	0.00	2712.74
70+25.00	7025.00	25.00	279.03		0	0.00	254.63		0.39	0.00	2985.02	8.24	0.00	0.00	2966.89
70+50.00	7050.00	25.00	264.71		0.69	0.00	251.73		0.32	0.00	3236.75	8.62	0.00	0.00	3218.24
70+87.50	7087.50	37.50	264.89		0	0.00	367.78		0.48	0.00	3604.53	9.20	0.00	0.00	3585.45
71+00.00	7100.00	12.50	268.11		0	0.00	123.38		0.00	0.00	3727.91	9.20	0.00	0.00	3708.83
71+25.00	7125.00	25.00	282.91		0	0.00	255.10		0.00	0.00	3983.01	9.20	0.00	0.00	3963.93
71+50.00	7150.00	25.00	283.42		0	0.00	262.19		0.00	0.00	4245.20	9.20	0.00	0.00	4226.12
72+00.00	7200.00	50.00	261.85		3.34	0.00	504.88		3.09	0.00	4750.08	12.91	0.00	0.00	4727.29
72+33.85	7233.85	33.85	317.36		0	0.00	363.08		2.09	0.00	5113.16	15.42	0.00	0.00	5087.85
					Column totals		5113.16	0.00	12.85	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow

9

9

FN

			AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				
STATION	Real Station	Distance	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut 1.00	Expanded Fill 1.20	Expanded EBS Backfill 1.30	Reduced EBS In Fill 0.80	Mass Ordinate
							Note 1	Note 2	Note 3		Note 1		Note 4	Note 5	Note 6
73+28.00	7328.00	0.00	433.2		1.72	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00
73+50.00	7350.00	22.00	252.13		47.45	0.00	279.21		20.03	0.00	279.21	24.04	0.00	0.00	255.17
73+75.00	7375.00	25.00	277.19		0	0.00	245.06		21.97	0.00	524.26	50.40	0.00	0.00	473.86
74+00.00	7400.00	25.00	168.06		0.57	0.00	206.13		0.26	0.00	730.40	50.72	0.00	0.00	679.68
74+12.50	7412.50	12.50	152.74		1.23	0.00	74.26		0.42	0.00	804.66	51.22	0.00	0.00	753.44
74+50.00	7450.00	37.50	149.58		0.26	0.00	209.94		1.03	0.00	1014.60	52.46	0.00	0.00	962.14
74+75.00	7475.00	25.00	158.32		0.04	0.00	142.55		0.14	0.00	1157.15	52.62	0.00	0.00	1104.52
74+95.00	7495.00	20.00	150.74		0.05	0.00	114.47		0.03	0.00	1271.62	52.66	0.00	0.00	1218.95
75+00.00	7500.00	5.00	142.36		0.67	0.00	27.14		0.07	0.00	1298.75	52.74	0.00	0.00	1246.01
75+50.00	7550.00	50.00	126.4		0.34	0.00	248.85		0.94	0.00	1547.61	53.87	0.00	0.00	1493.74
76+00.00	7600.00	50.00	125.21		0.29	0.00	232.97		0.58	0.00	1780.58	54.57	0.00	0.00	1726.01
76+50.00	7650.00	50.00	162.04		0	0.00	265.97		0.27	0.00	2046.55	54.89	0.00	0.00	1991.66
77+00.00	7700.00	50.00	116.03		0.45	0.00	257.47		0.83	0.00	2304.02	55.89	0.00	0.00	2248.13
77+20.00	7720.00	20.00	118.12		0.43	0.00	86.72		0.33	0.00	2390.74	56.28	0.00	0.00	2334.46
77+50.00	7750.00	30.00	113.67		0.31	0.00	128.77		0.41	0.00	2519.52	56.77	0.00	0.00	2462.74
77+62.50	7762.50	12.50	113.23		0.31	0.00	52.52		0.14	0.00	2572.04	56.95	0.00	0.00	2515.09
77+87.50	7787.50	25.00	123.16		0.31	0.00	109.44		0.29	0.00	2681.48	57.29	0.00	0.00	2624.19
78+00.00	7800.00	12.50	115.29		0.36	0.00	55.20		0.16	0.00	2736.68	57.48	0.00	0.00	2679.20
78+37.50	7837.50	37.50	120.08		0.31	0.00	163.45		0.47	0.00	2900.13	58.03	0.00	0.00	2842.09
78+50.00	7850.00	12.50	112.8		0.27	0.00	53.91		0.13	0.00	2954.04	58.20	0.00	0.00	2895.84
78+62.50	7862.50	12.50	112.96		0.15	0.00	52.26		0.10	0.00	3006.29	58.31	0.00	0.00	2947.98
78+90.00	7890.00	27.50	122.47		0.22	0.00	119.89		0.19	0.00	3126.19	58.54	0.00	0.00	3067.65
79+00.00	7900.00	10.00	124.21		0.05	0.00	45.68		0.05	0.00	3171.87	58.60	0.00	0.00	3113.27
79+50.00	7950.00	50.00	115.17		0.6	0.00	221.65		0.60	0.00	3393.52	59.32	0.00	0.00	3334.20
79+62.50	7962.50	12.50	119.37		0.73	0.00	54.29		0.31	0.00	3447.81	59.69	0.00	0.00	3388.12
80+00.00	8000.00	37.50	165.28		0.12	0.00	197.67		0.59	0.00	3645.48	60.40	0.00	0.00	3585.09
80+12.50	8012.50	12.50	180.47		0	0.00	80.03		0.03	0.00	3725.52	60.43	0.00	0.00	3665.09
80+50.00	8050.00	37.50	110.2		0.85	0.00	201.85		0.59	0.00	3927.37	61.14	0.00	0.00	3866.23
81+00.00	8100.00	50.00	109.43		1.69	0.00	203.36		2.35	0.00	4130.73	63.96	0.00	0.00	4066.77
81+25.00	8120.00	20.00	111.38		0.21	0.00	81.78		0.68	0.00	0.00	0.00	0.00	0.00	4147.74
81+50.00	8150.00	30.00	122.25		0.42	0.00	129.79		0.35	0.00	129.79	0.42	0.00	0.00	4277.11
81+87.50	8187.50	37.50	121.78		0	0.00	169.47		0.29	0.00	299.26	0.77	0.00	0.00	4446.23
82+00.00	8200.00	12.50	123.19		0.58	0.00	56.71		0.13	0.00	355.97	0.93	0.00	0.00	4502.77
82+50.00	8250.00	50.00	251.12		5.38	0.00	346.58		5.52	0.00	702.55	7.55	0.00	0.00	4842.73
83+00.00	8300.00	50.00	400.16		0	0.00	603.04		4.98	0.00	1305.59	13.53	0.00	0.00	5439.79
83+50.00	8350.00	50.00	140.04		0	0.00	500.19		0.00	0.00	1805.77	13.53	0.00	0.00	5939.98
84+00.00	8400.00	50.00	113.31		0.96	0.00	234.58		0.89	0.00	2040.35	14.60	0.00	0.00	6173.50
84+37.50	8437.50	37.50	111.52		0	0.00	156.13		0.67	0.00	2196.49	15.40	0.00	0.00	6328.83
84+50.00	8450.00	12.50	113.46		0	0.00	52.08		0.00	0.00	2248.57	15.40	0.00	0.00	6380.91
85+00.00	8500.00	50.00	130.55		0	0.00	225.94		0.00	0.00	2474.50	15.40	0.00	0.00	6606.84
85+07.78	8507.78	7.78	125.71		0.05	0.00	36.92		1.43	0.00	392.89	2.65	0.00	0.00	6642.04
					Column totals		6723.94	0.00	68.25	0.00					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow

9

9

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	EARTHWORK	SHEET:	E

BL

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/ Unusable Pavement Material	Fill	Rock Exc	EBS	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 1.20	Expanded EBS Backfill 1.30 Note 4	Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
234+66.00	23466.00	0.00	40.95		0.47	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00
235+00.00	23500.00	34.00	42.7		0.35	0.00	0.00	52.67		0.52	0.00	52.67	0.62	0.00	0.00	52.05
235+50.00	23550.00	50.00	48.6		0.95	0.00	0.00	84.54		1.20	0.00	137.21	2.06	0.00	0.00	135.14
236+00.00	23600.00	50.00	53.54		4.46	0.00	0.00	94.57		5.01	0.00	231.78	8.08	0.00	0.00	223.70
236+35.00	23635.00	35.00	71.94		0	0.00	0.00	81.33		2.89	0.00	313.11	11.54	0.00	0.00	301.57
236+50.00	23650.00	15.00	68.59		0	0.00	0.00	39.04		0.00	0.00	352.15	11.54	0.00	0.00	340.60
237+00.00	23700.00	50.00	68.89		0	0.00	0.00	127.30		0.00	0.00	479.44	11.54	0.00	0.00	467.90
237+12.00	23712.00	12.00	61.72		2.25	0.00	0.00	29.02		0.50	0.00	508.47	12.14	0.00	0.00	496.32
237+50.00	23750.00	38.00	56.56		2.94	0.00	0.00	83.23		3.65	0.00	591.70	16.53	0.00	0.00	575.17
238+00.00	23800.00	50.00	47.3		3.92	0.00	0.00	96.17		6.35	0.00	687.87	24.15	0.00	0.00	663.72
238+50.00	23850.00	50.00	44		0.7	0.00	0.00	84.54		4.28	0.00	772.40	29.28	0.00	0.00	743.12
239+00.00	23900.00	50.00	55.42		0.42	0.00	0.00	92.06		1.04	0.00	864.46	30.53	0.00	0.00	833.93
239+50.00	23950.00	50.00	56.88		1.12	0.00	0.00	103.98		1.43	0.00	968.44	32.24	0.00	0.00	936.20
240+00.00	24000.00	50.00	68.22		0	0.00	0.00	115.83		1.04	0.00	1084.27	33.48	0.00	0.00	1050.79
240+35.31	24035.31	35.31	324.35		0	0.00	0.00	256.70		0.00	0.00	1340.97	33.48	0.00	0.00	1307.49
240+50.00	24050.00	14.69	264.76		0.15	0.00	0.00	160.26		0.04	0.00	1501.23	33.53	0.00	0.00	1467.70
241+00.00	24100.00	50.00	228.44		3.31	0.00	0.00	456.67		3.20	0.00	1957.90	37.38	0.00	0.00	1920.52
241+25.00	24125.00	25.00	238.07		1.6	0.00	0.00	215.98		2.27	0.00	2173.87	40.10	0.00	0.00	2133.77
241+50.00	24150.00	25.00	248.78		0.3	0.00	0.00	225.39		0.88	0.00	2399.27	41.16	0.00	0.00	2358.11
241+62.50	24162.50	12.50	251.53		0	0.00	0.00	115.81		0.07	0.00	2515.08	41.24	0.00	0.00	2473.84
242+00.00	24200.00	37.50	254.56		0.14	0.00	0.00	351.45		0.10	0.00	2866.53	41.36	0.00	0.00	2825.17
242+50.00	24250.00	50.00	273.72		0.06	0.00	0.00	489.15		0.19	0.00	3355.68	41.58	0.00	0.00	3314.10
243+00.00	24300.00	50.00	280.15		0	0.00	0.00	512.84		0.06	0.00	3868.52	41.65	0.00	0.00	3826.87
243+50.00	24350.00	50.00	245.43		0	0.00	0.00	486.65		0.00	0.00	4355.17	41.65	0.00	0.00	4313.52
244+00.00	24400.00	50.00	222.26		0	0.00	0.00	433.05		0.00	0.00	4788.22	41.65	0.00	0.00	4746.57
244+50.00	24450.00	50.00	308.57		8.88	0.00	0.00	491.51		8.22	0.00	5279.73	51.51	0.00	0.00	5228.21
245+00.00	24500.00	50.00	270.27		3.05	0.00	0.00	535.96		11.05	0.00	5815.69	64.77	0.00	0.00	5750.92
245+25.00	24525.00	25.00	253.31		4.83	0.00	0.00	242.40		3.65	0.00	6058.09	69.15	0.00	0.00	5988.94
245+50.00	24550.00	25.00	265.79		1.38	0.00	0.00	240.32		2.88	0.00	6298.41	72.60	0.00	0.00	6225.81
245+75.00	24575.00	25.00	239.25		3.81	0.00	0.00	233.81		2.40	0.00	6532.23	75.48	0.00	0.00	6456.75
246+00.00	24600.00	25.00	236.47		2.84	0.00	0.00	220.24		3.08	0.00	6752.47	79.18	0.00	0.00	6673.29
246+50.00	24650.00	50.00	209.88		4.25	0.00	0.00	413.29		6.56	0.00	7165.75	87.05	0.00	0.00	7078.70
247+00.00	24700.00	50.00	194.11		10.28	0.00	0.00	374.06		13.45	0.00	7539.82	103.20	0.00	0.00	7436.62
247+50.00	24750.00	50.00	0		0	0.00	0.00	179.73		9.52	0.00	7719.55	114.62	0.00	0.00	7604.93
248+00.00	24800.00	50.00	255.56		0.21	0.00	0.00	236.63		0.19	0.00	7956.18	114.85	0.00	0.00	7841.33
248+50.00	24850.00	50.00	240.19		0	0.00	0.00	459.03		0.19	0.00	8415.21	115.09	0.00	0.00	8300.12
248+62.50	24862.50	12.50	251.58		0.1	0.00	0.00	113.84		0.02	0.00	8529.04	115.11	0.00	0.00	8413.93
249+00.00	24900.00	37.50	238.23		0.21	0.00	0.00	340.15		0.22	0.00	8869.19	115.37	0.00	0.00	8753.82
249+50.00	24950.00	50.00	236.42		0	0.00	0.00	439.49		0.19	0.00	9308.68	115.61	0.00	0.00	9193.07
250+00.00	25000.00	50.00	220.14		0	0.00	0.00	422.74		0.00	0.00	9731.42	115.61	0.00	0.00	9615.81
250+25.00	25025.00	25.00	224.21		0	0.00	0.00	205.72		0.00	0.00	9937.14	115.61	0.00	0.00	9821.53
250+50.00	25050.00	25.00	195.13		0	0.00	0.00	194.14		0.00	0.00	10131.28	115.61	0.00	0.00	10015.67
251+00.00	25100.00	50.00	206.81		0	0.00	0.00	372.17		0.00	0.00	10503.44	115.61	0.00	0.00	10387.84
251+50.00	25150.00	50.00	213.03		0	0.00	0.00	388.74		0.00	0.00	10892.18	115.61	0.00	0.00	10776.58
252+00.00	25200.00	50.00	178.23		0	0.00	0.00	362.28		0.00	0.00	11254.46	115.61	0.00	0.00	11138.86
252+14.73	25214.73	14.73	160.99		0	0.00	0.00	92.53		0.00	0.00	11346.99	115.61	0.00	0.00	11231.39
							Column totals	11346.99	0.00	96.34	0.00					

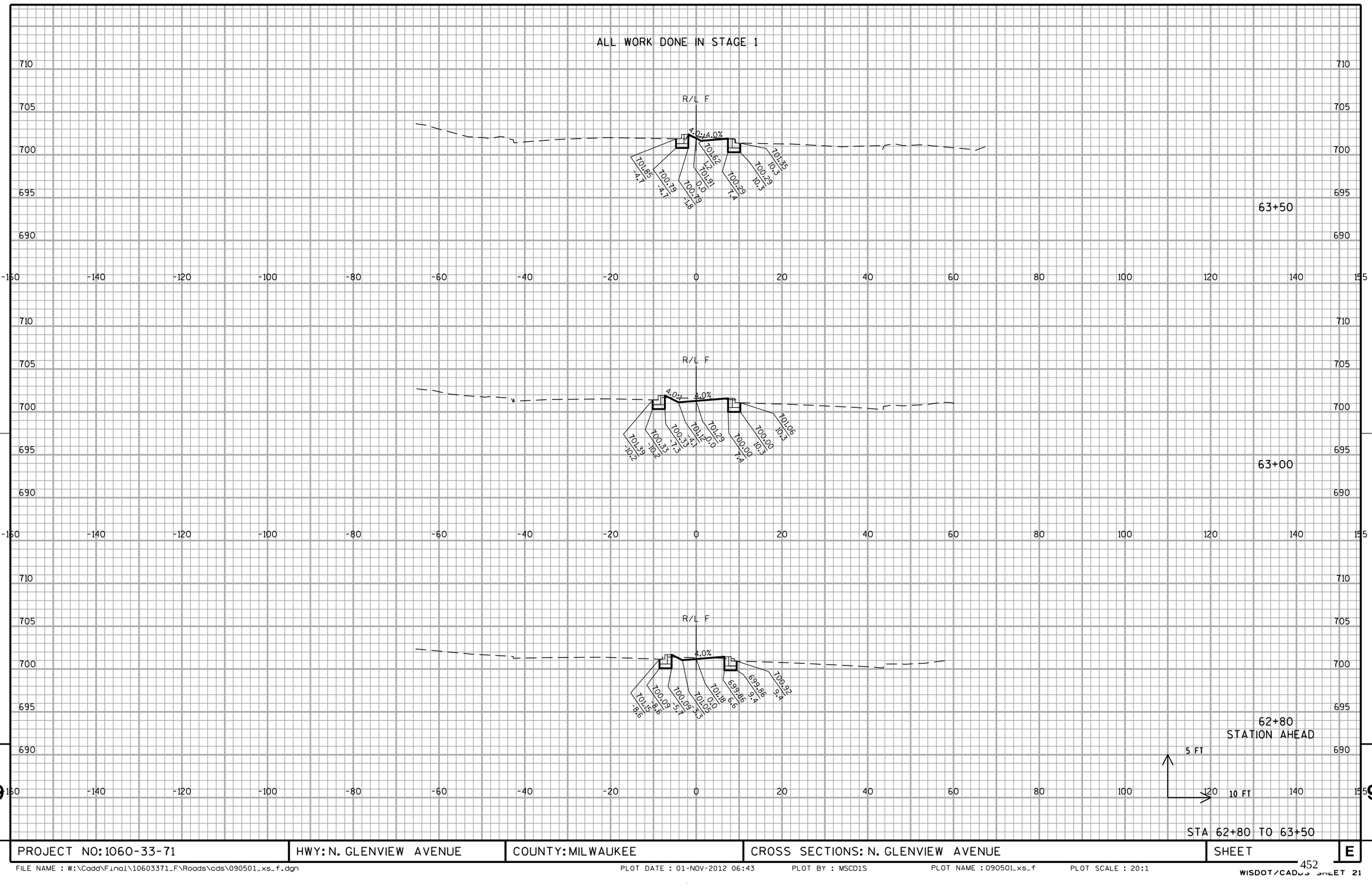
Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow

WX

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) Rock Exc	AREA (SF) EBS	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 1.20	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
308+61.39	30861.39	0.00	0		0	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00
309+00.00	30900.00	38.61	82.23		0.01	0.00	0.00	58.79		0.01	0.00	58.79	0.01	0.00	0.00	58.79
309+05.00	30905.00	5.00	81.23		0.02	0.00	0.00	15.14		0.00	0.00	73.93	0.01	0.00	0.00	73.92
309+50.00	30950.00	45.00	104.09		0	0.00	0.00	154.43		0.02	0.00	228.36	0.03	0.00	0.00	228.33
310+00.00	31000.00	50.00	95.41		0	0.00	0.00	184.72		0.00	0.00	413.09	0.03	0.00	0.00	413.05
310+20.00	31020.00	20.00	132.58		0	0.00	0.00	84.44		0.00	0.00	497.53	0.03	0.00	0.00	497.49
310+50.00	31050.00	30.00	92.79		0.03	0.00	0.00	125.21		0.02	0.00	622.73	0.05	0.00	0.00	622.68
310+76.00	31076.00	26.00	81.32		0	0.00	0.00	83.83		0.01	0.00	706.56	0.07	0.00	0.00	706.49
311+14.00	31114.00	38.00	91.38		0.08	0.00	0.00	121.53		0.06	0.00	828.09	0.14	0.00	0.00	827.96
311+50.00	31150.00	36.00	110.12		0	0.00	0.00	134.33		0.05	0.00	962.43	0.20	0.00	0.00	962.22
312+00.00	31200.00	0.00	83.2		0	0.00	0.00	0.00		0.00	0.00	962.43	0.20	0.00	0.00	962.22
312+12.00	31212.00	12.00	92.86		0	0.00	0.00	39.12		0.00	0.00	1001.55	0.20	0.00	0.00	1001.35
312+25.00	31225.00	13.00	96.85		0	0.00	0.00	45.67		0.00	0.00	1047.22	0.20	0.00	0.00	1047.02
312+50.00	31250.00	25.00	84.39		0.04	0.00	0.00	83.91		0.02	0.00	1131.13	0.22	0.00	0.00	1130.90
312+84.00	31284.00	34.00	79.83		0	0.00	0.00	103.40		0.03	0.00	1234.53	0.25	0.00	0.00	1234.27
						Column totals		1234.53	0.00	0.21	0.00					

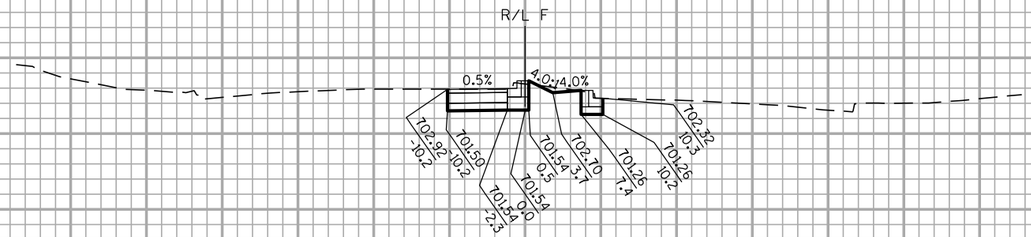
Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections nor is it shown in these sheets. Refer to Summary Table for this roadway's quantity.
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Borrow

ALL WORK DONE IN STAGE 1

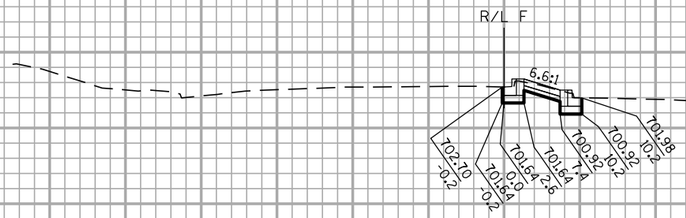


PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

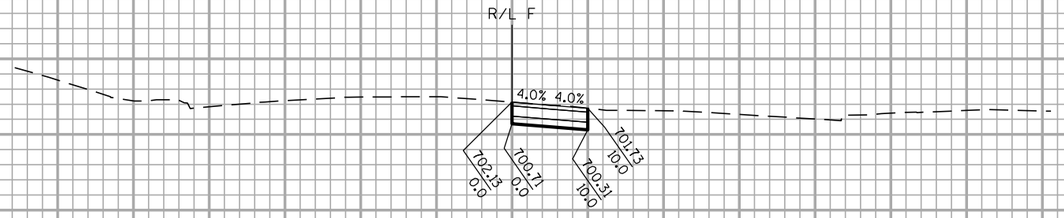
ALL WORK DONE IN STAGE 1



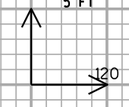
65+00



64+50



64+00

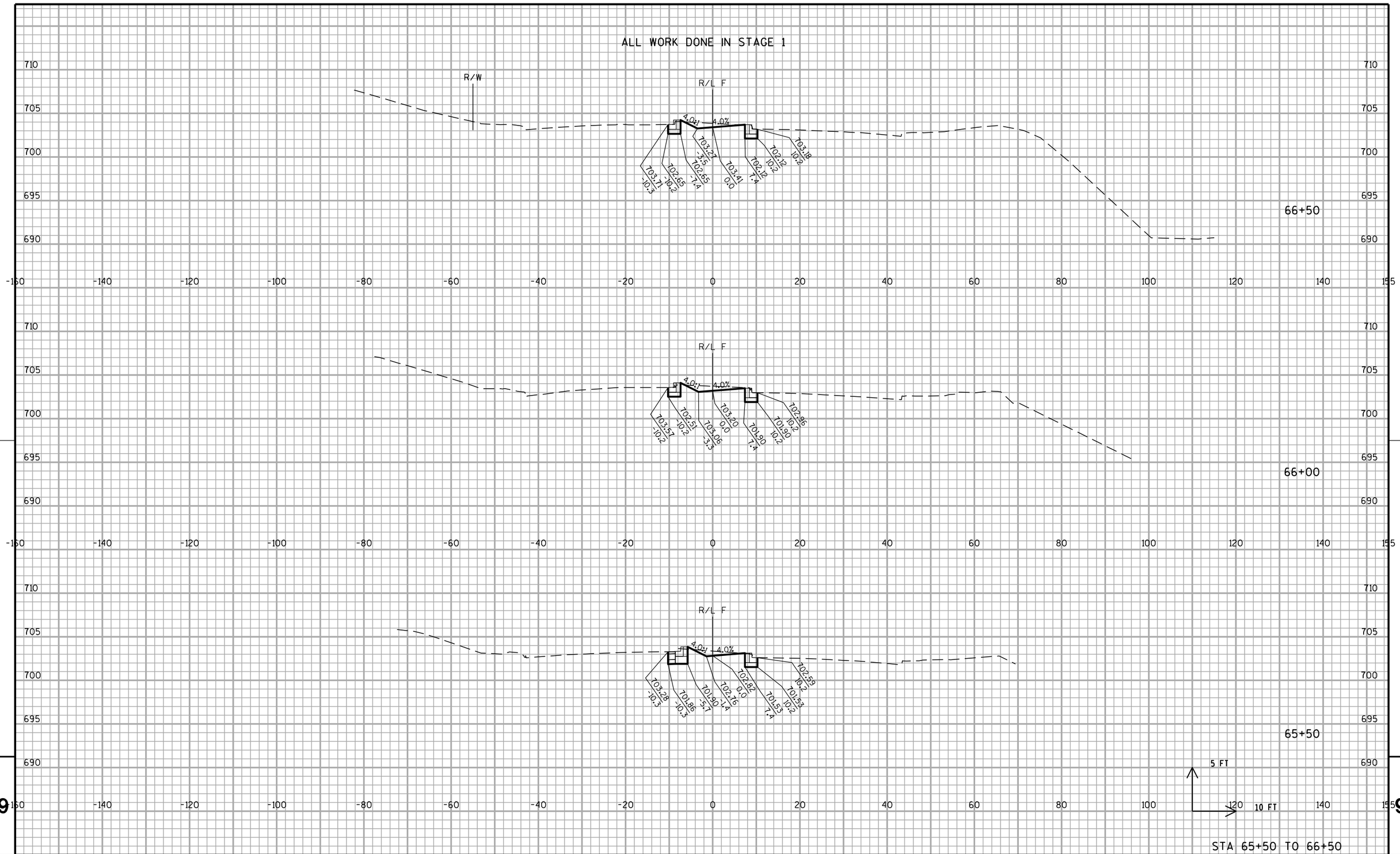


STA 64+00 TO 65+00

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090501_xs_f.dgn PLOT DATE : 01-NOV-2012 06:43 PLOT BY : MSCD1S PLOT NAME : 090501_xs_f1 PLOT SCALE : 20:1

ALL WORK DONE IN STAGE 1

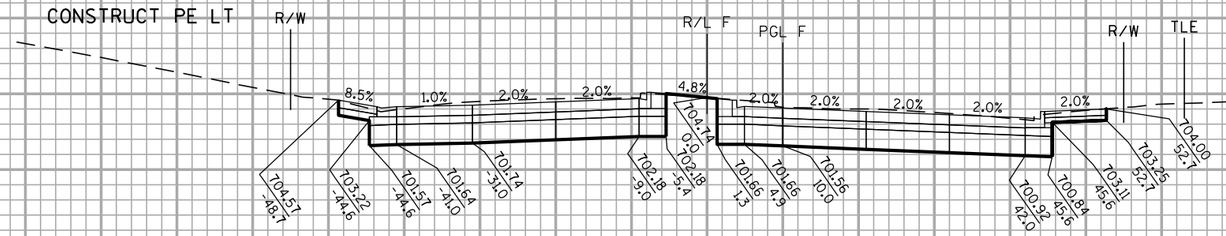


STA 65+50 TO 66+50

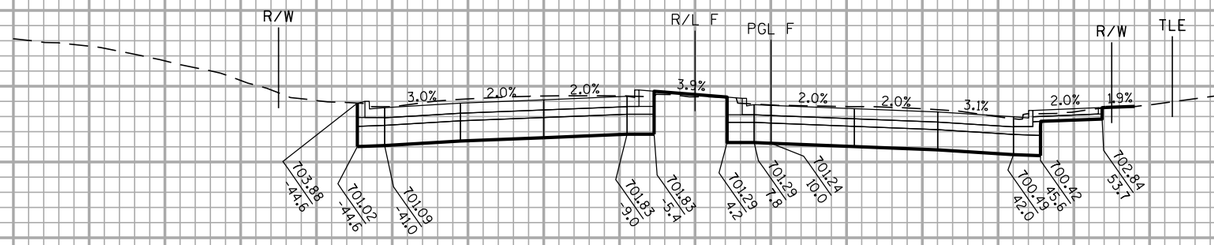
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

ALL WORK DONE IN STAGE 1

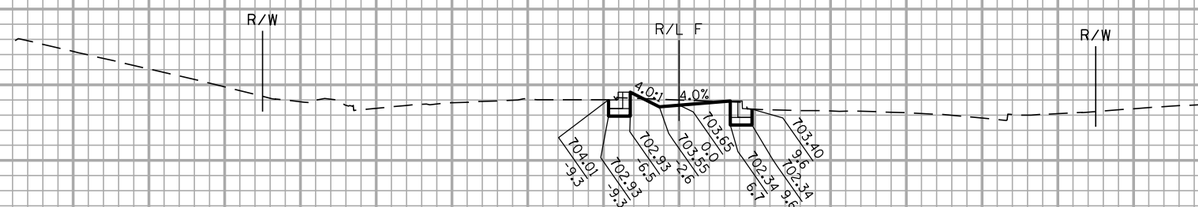
STATION 68F+00
CONSTRUCT PE LT



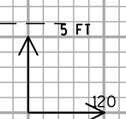
68+00



67+50



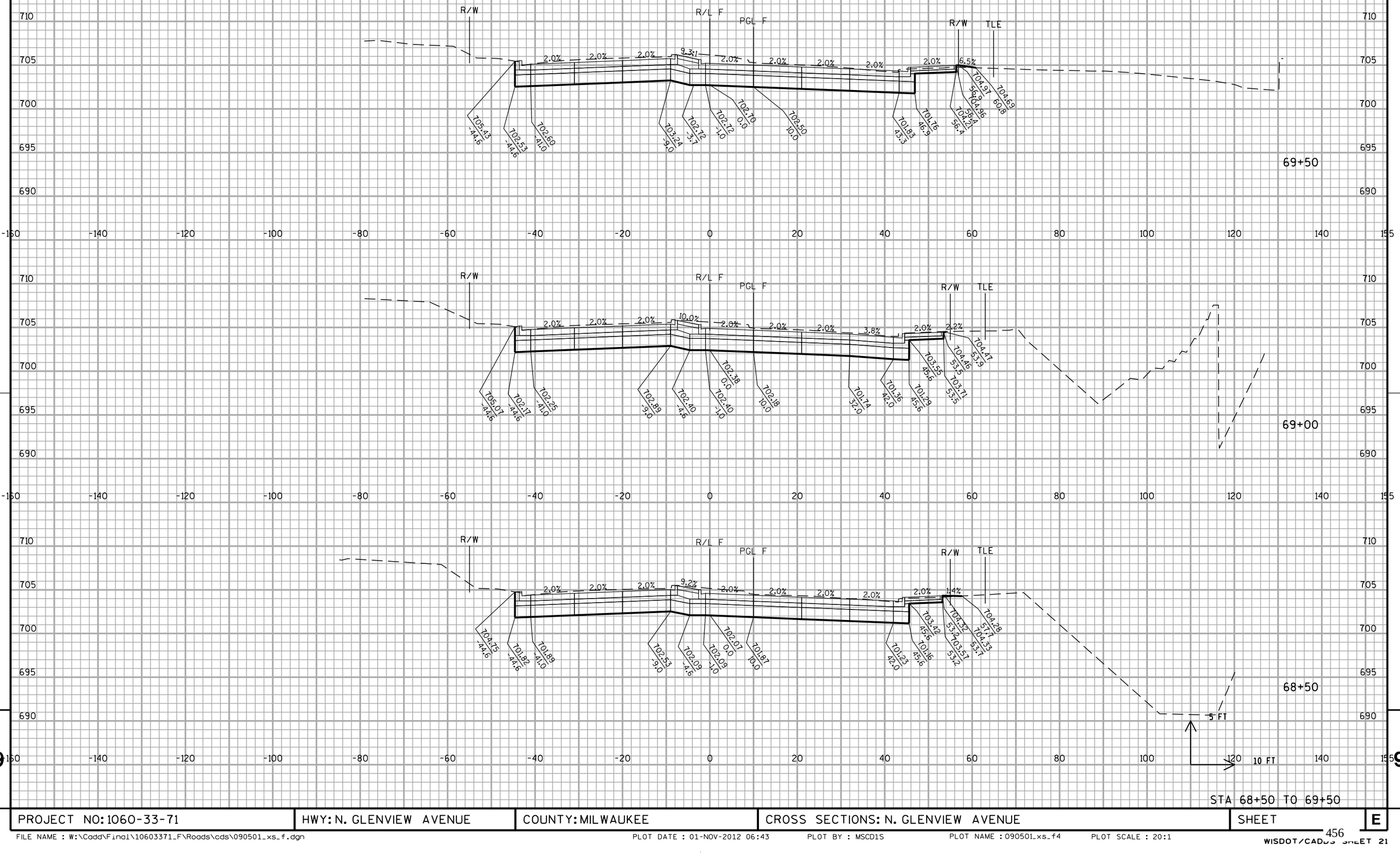
67+00



STA 67+00 TO 68+00

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

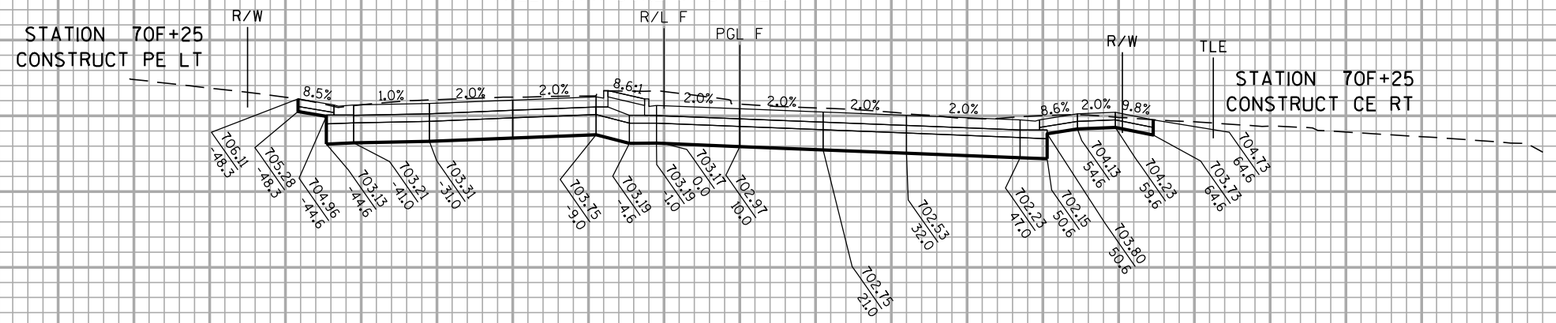
ALL WORK DONE IN STAGE 1



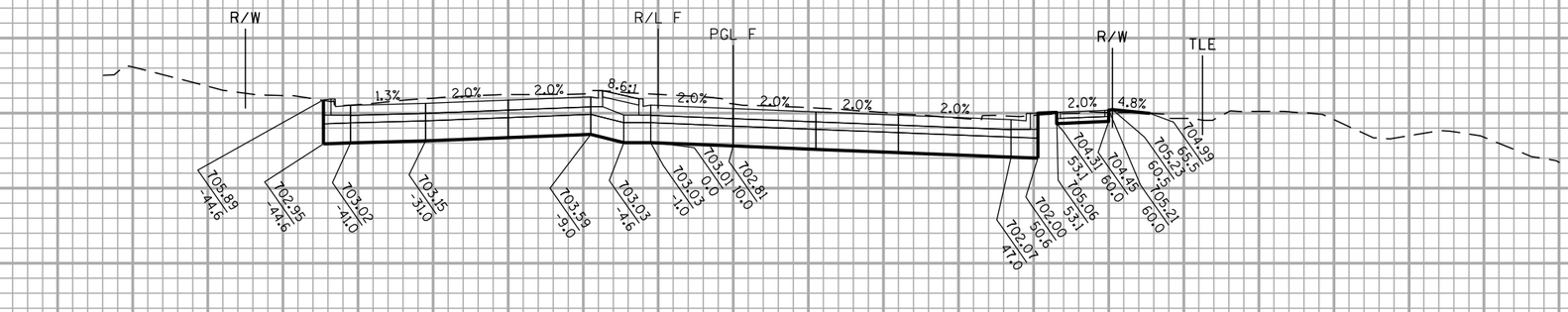
STA 68+50 TO 69+50

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

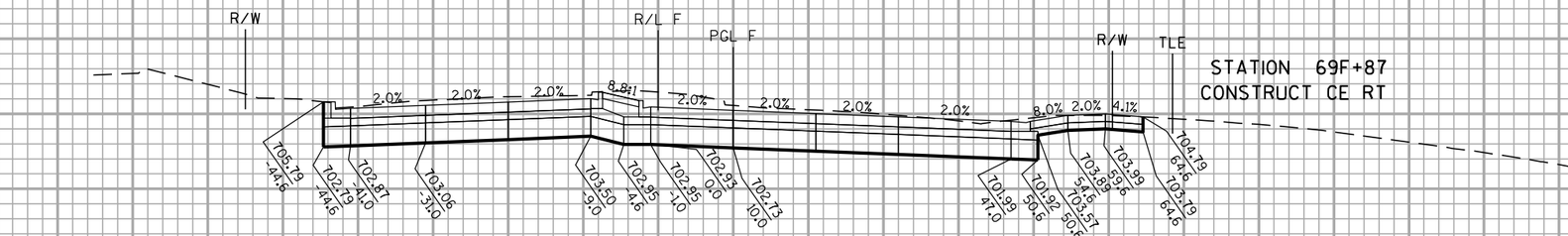
ALL WORK DONE IN STAGE 1



70+25



70+00



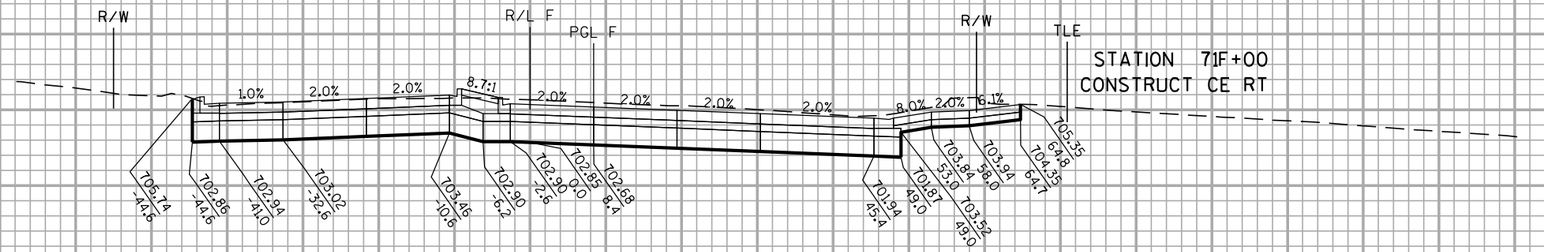
69+87

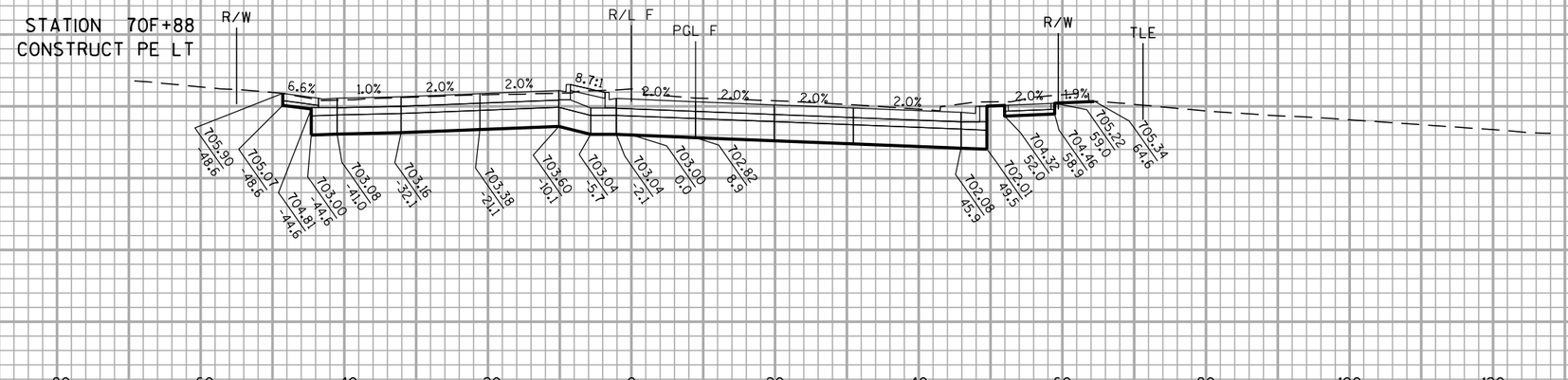
5 FT
10 FT

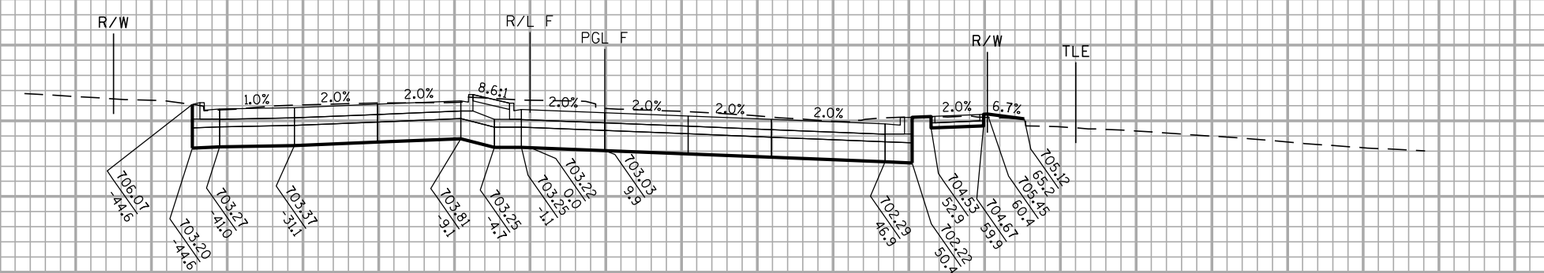
STA 69+87 TO 70+25

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

ALL WORK DONE IN STAGE 1



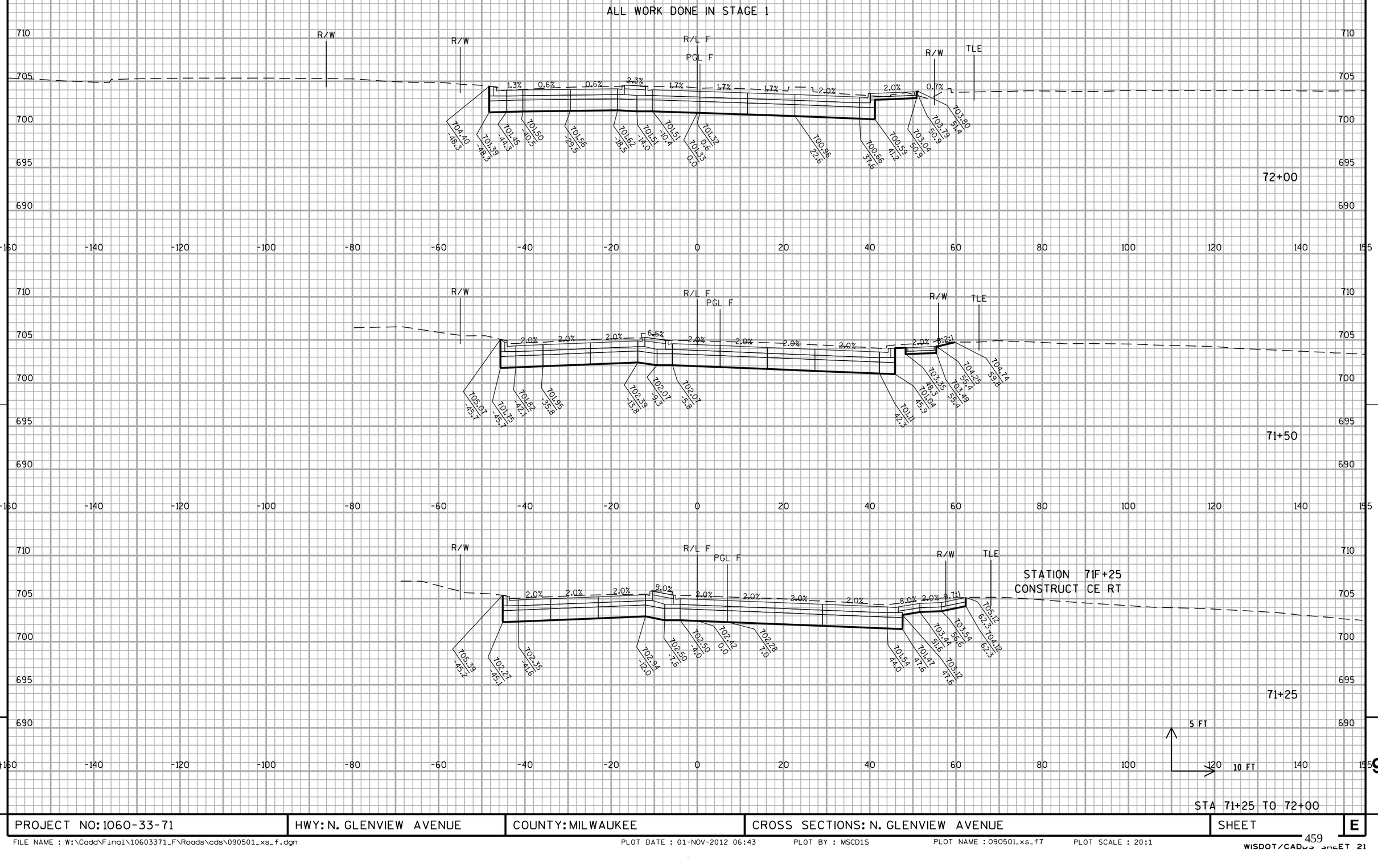




9

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

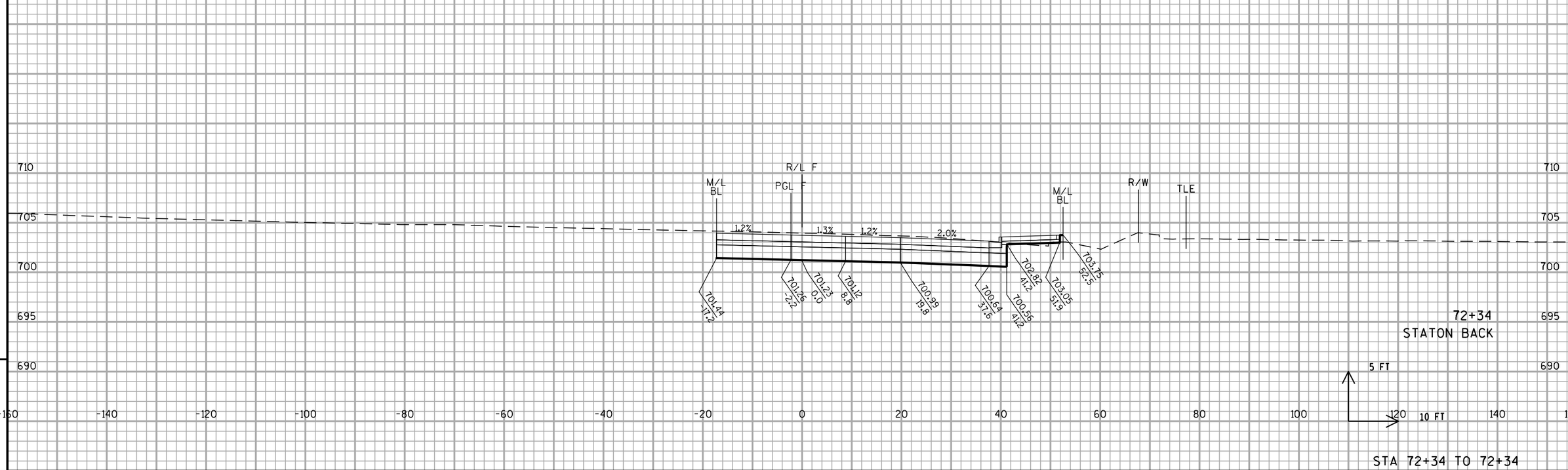
ALL WORK DONE IN STAGE 1



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090501_xs_f.dgn PLOT DATE : 01-NOV-2012 06:43 PLOT BY : MSCD1S PLOT NAME : 090501_xs_f7 PLOT SCALE : 20:1

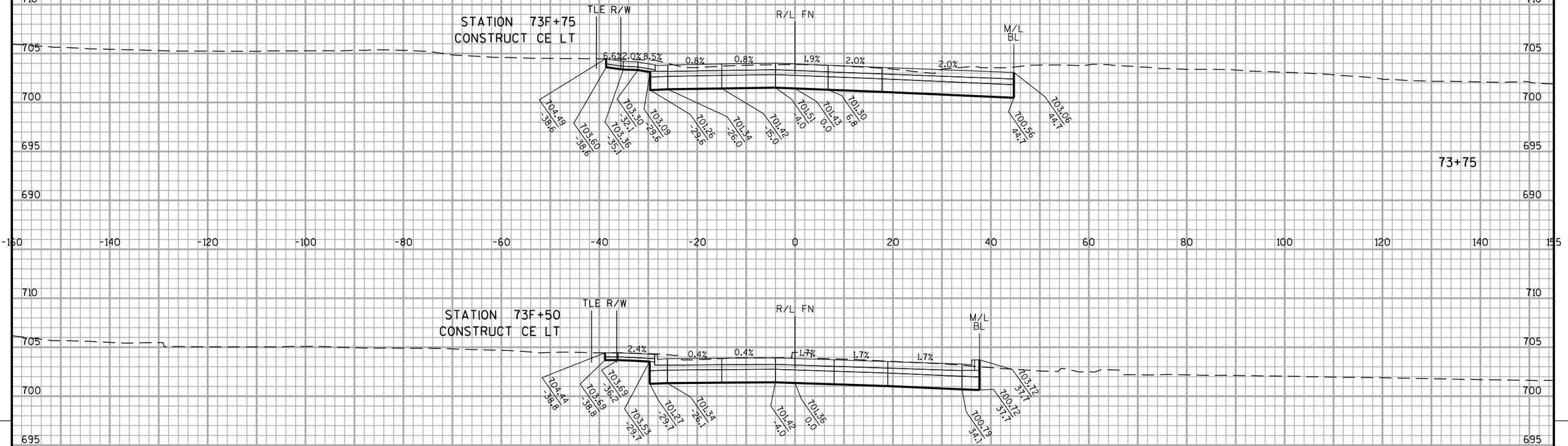
ALL WORK DONE IN STAGE 1



STA 72+34 TO 72+34

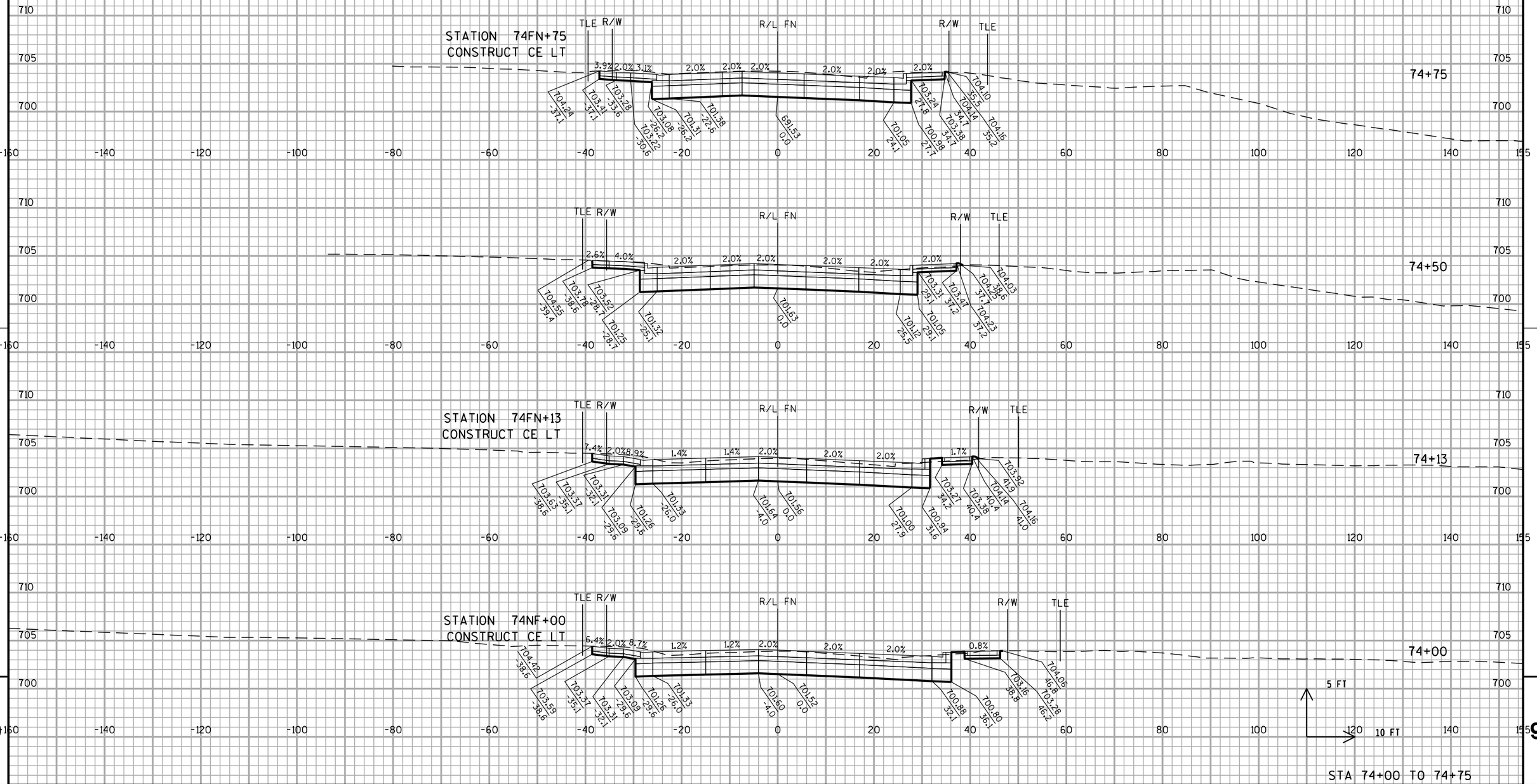
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

ALL WORK DONE IN STAGE 1



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

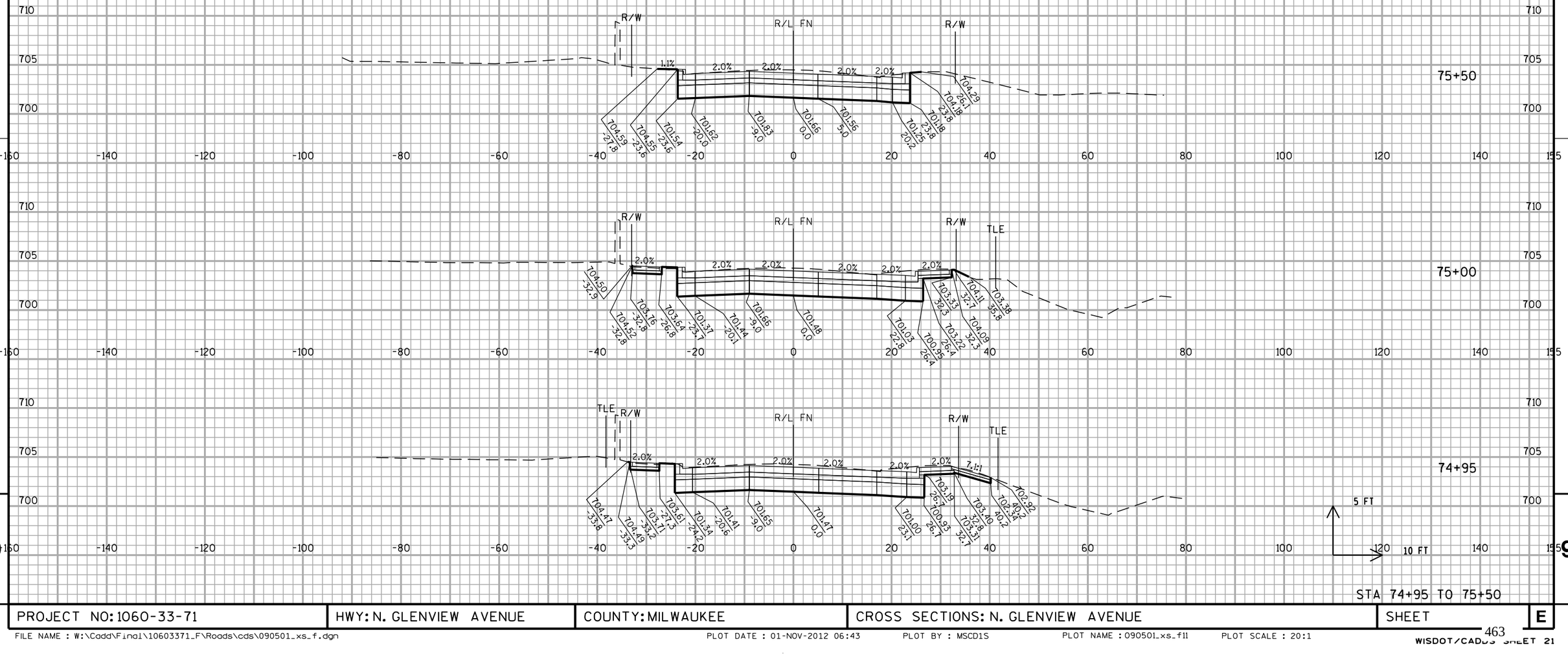
ALL WORK DONE IN STAGE 2



STA 74+00 TO 74+75

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

ALL WORK DONE IN STAGE 2

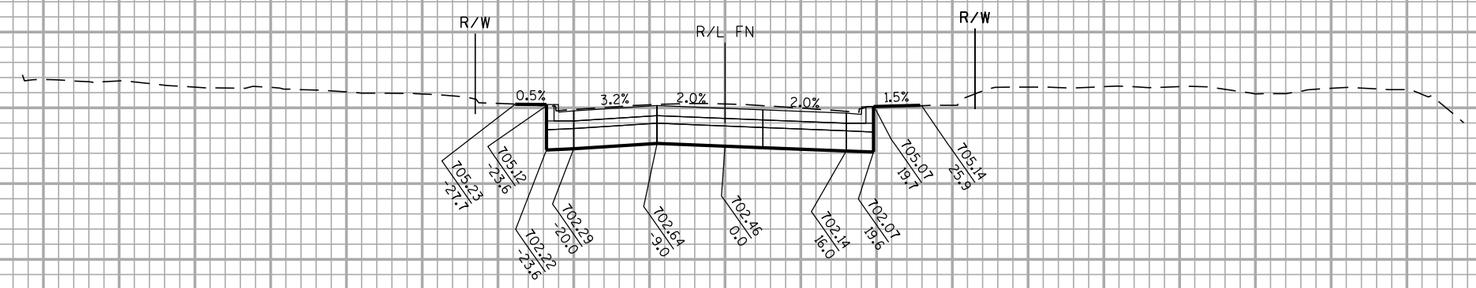


STA 74+95 TO 75+50

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

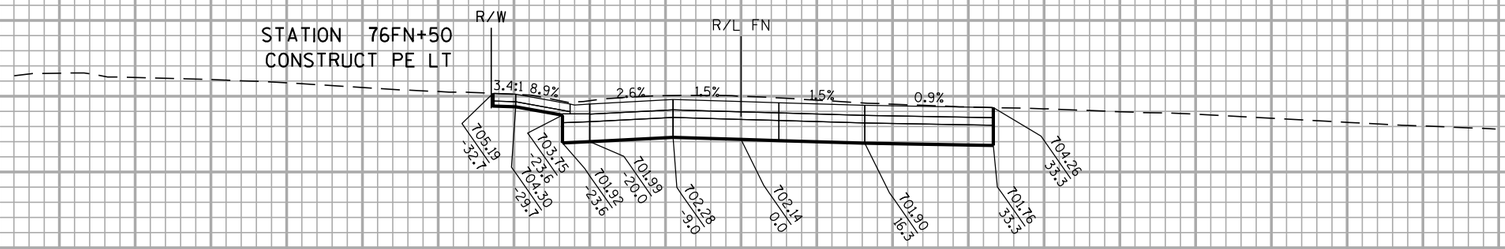
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ALL WORK DONE IN STAGE 2

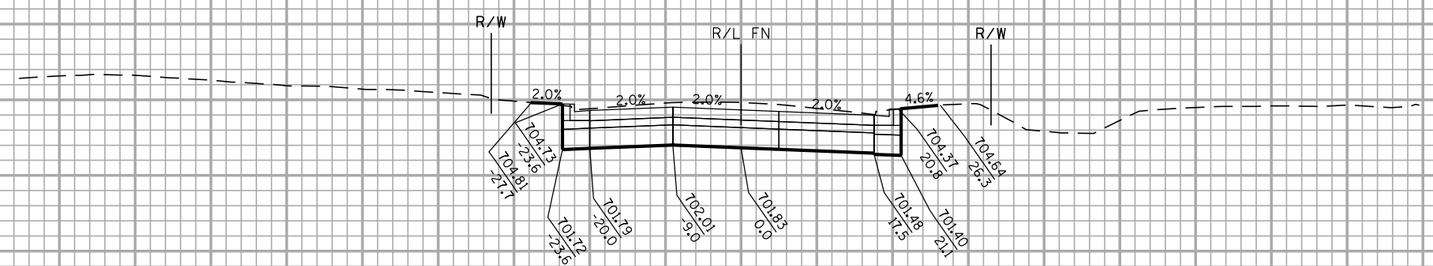


77+00

STATION 76FN+50
CONSTRUCT PE LT



76+50



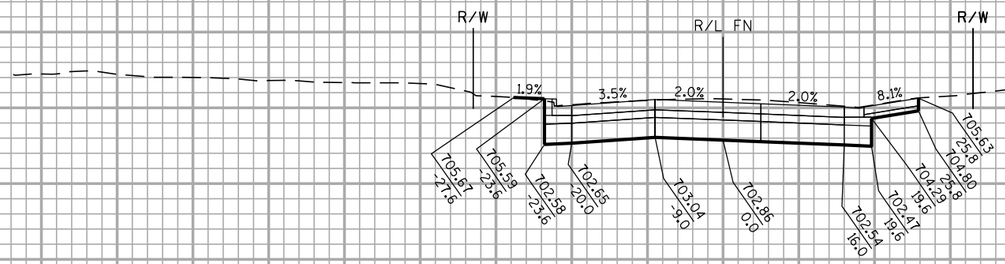
76+00

5 FT
10 FT

STA 76+00 TO 77+00

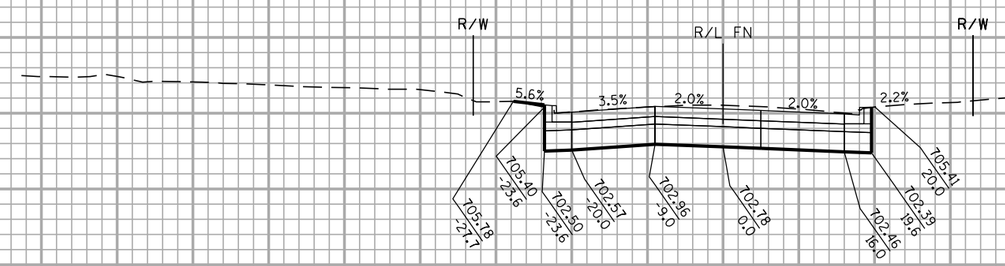
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

ALL WORK DONE IN STAGE 2

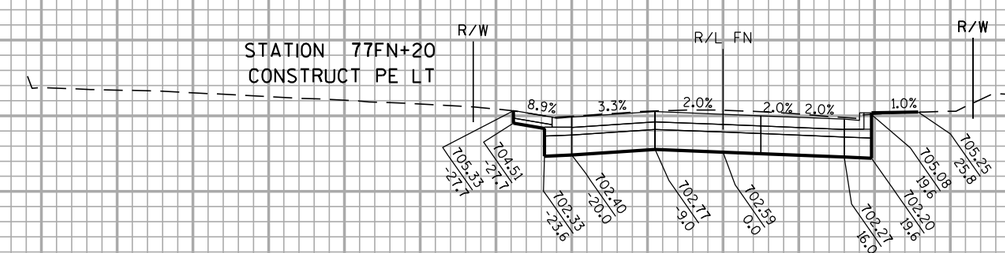


STATION 77FN+62
CONSTRUCT PE RT

77+62



77+50



STATION 77FN+20
CONSTRUCT PE LT

77+20

5 FT
10 FT

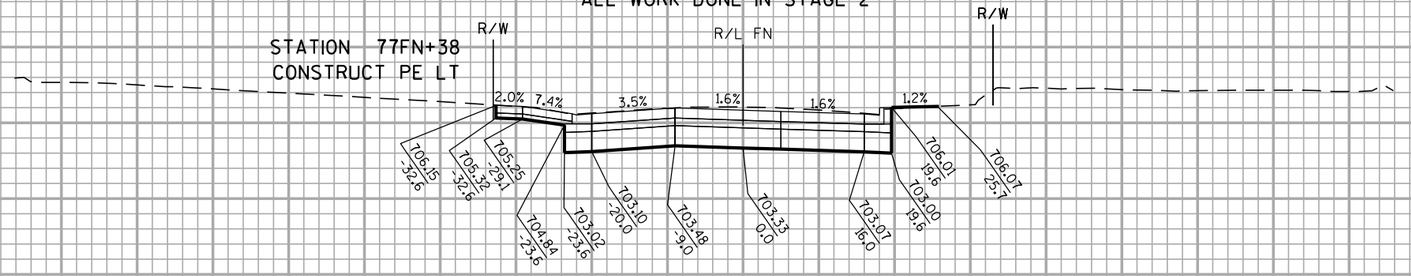
STA 77+20 TO 77+62

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

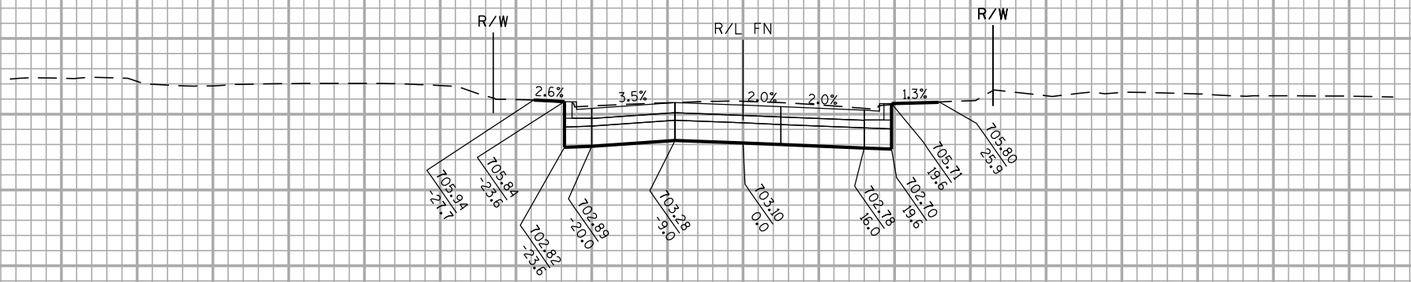
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ALL WORK DONE IN STAGE 2

STATION 77FN+38
CONSTRUCT PE LT

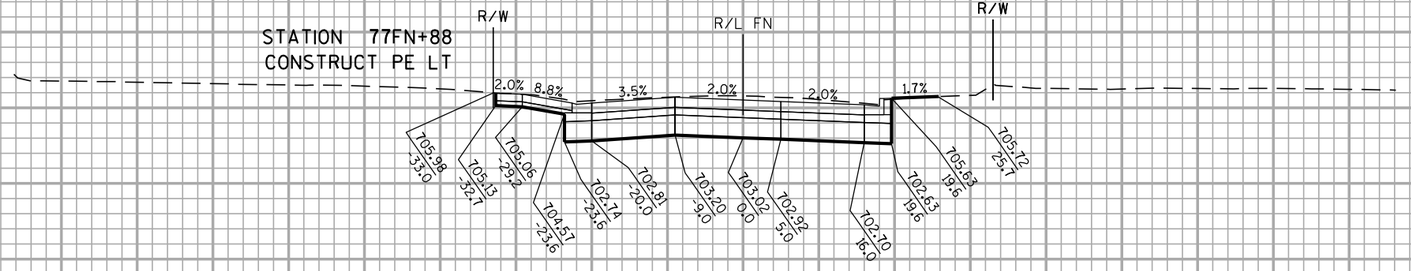


78+38



78+00

STATION 77FN+88
CONSTRUCT PE LT



77+88

5 FT
10 FT

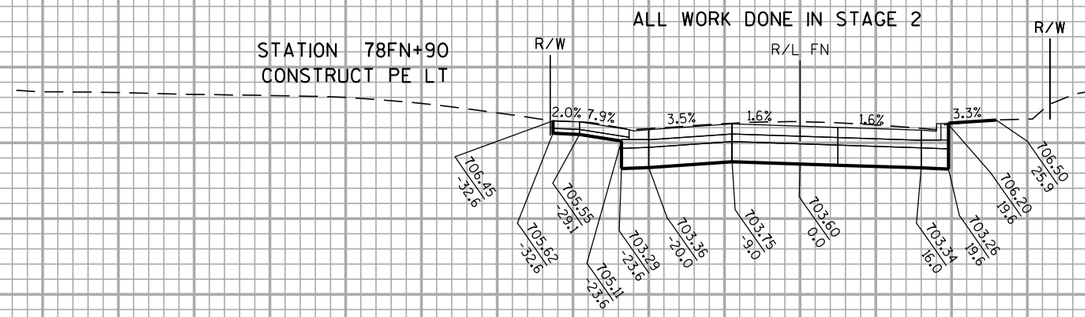
STA 77+88 TO 78+38

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

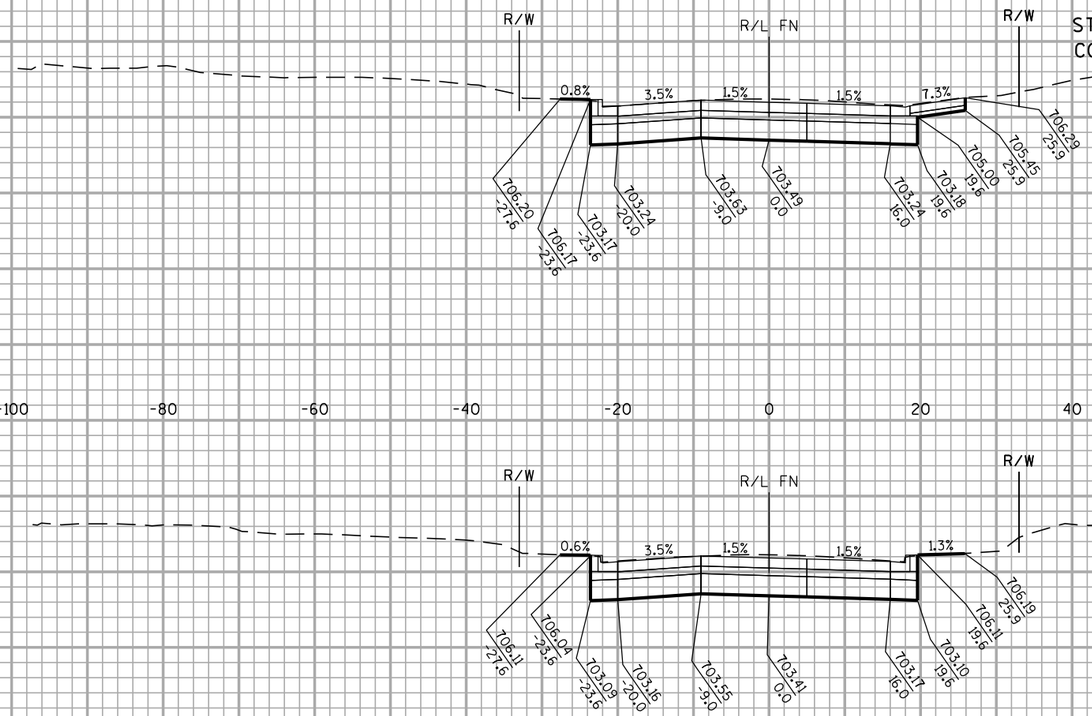
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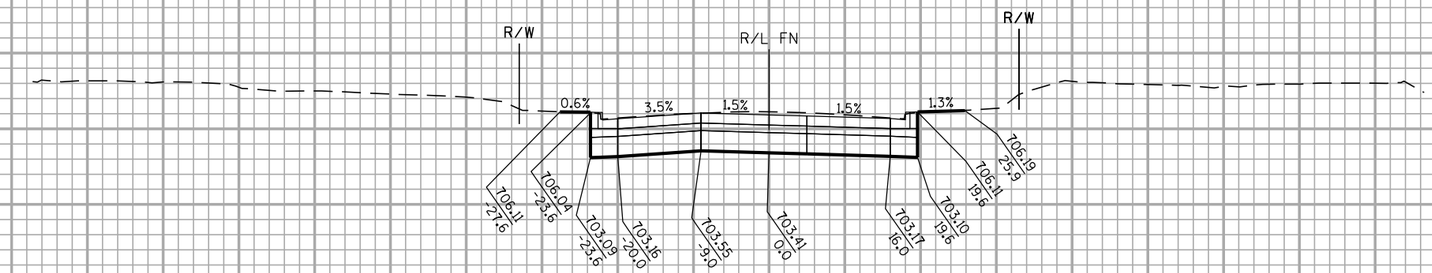
ALL WORK DONE IN STAGE 2

STATION 78FN+90
CONSTRUCT PE LT



STATION 78FN+63
CONSTRUCT PE RT



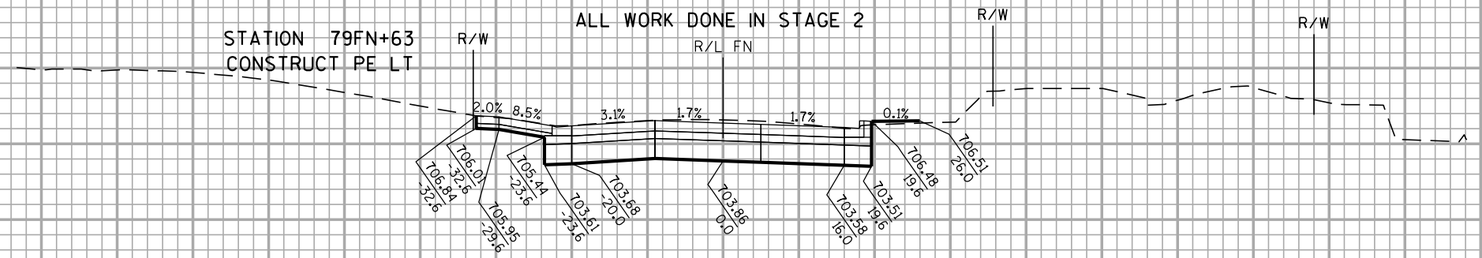


STA 78+50 TO 78+90

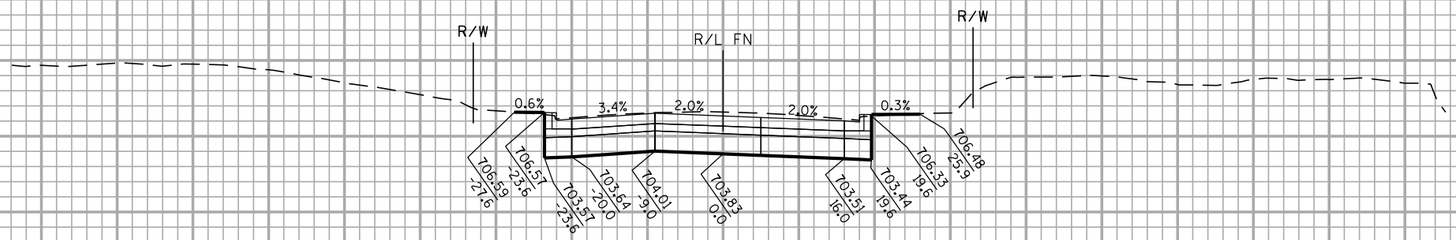
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

ALL WORK DONE IN STAGE 2

STATION 79FN+63
CONSTRUCT PE LT

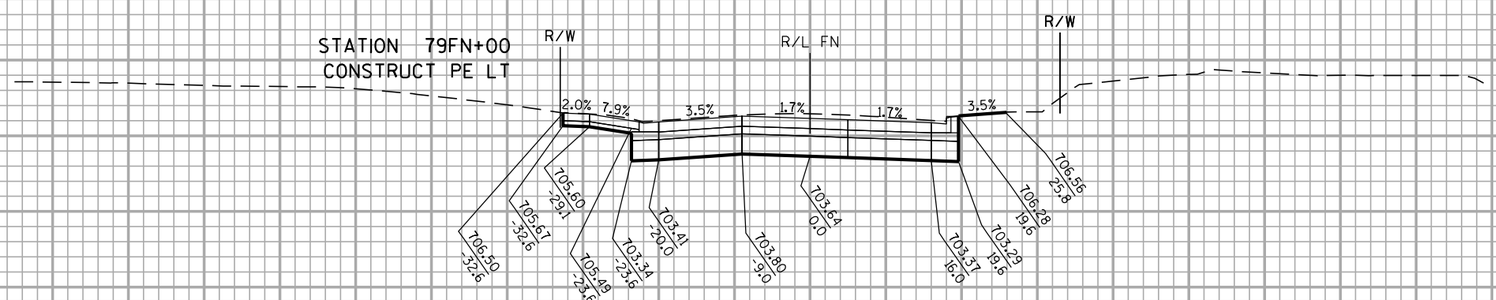


79+63



79+50

STATION 79FN+00
CONSTRUCT PE LT



79+00

5 FT
10 FT

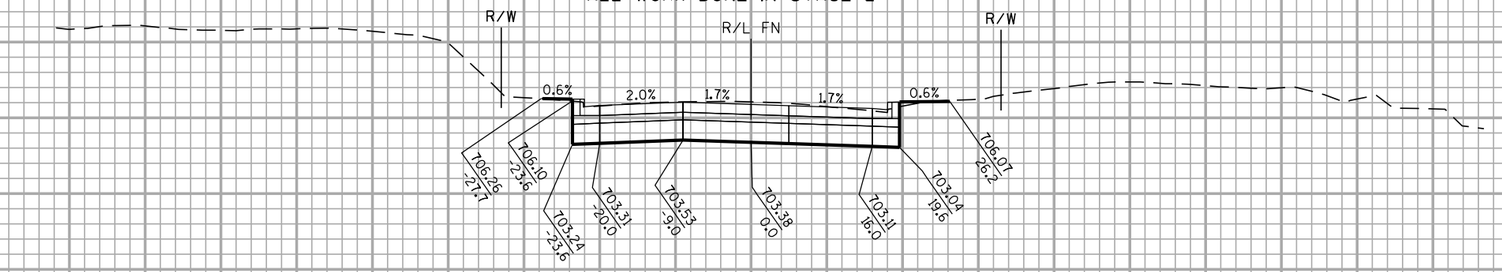
STA 79+00 TO 79+63

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

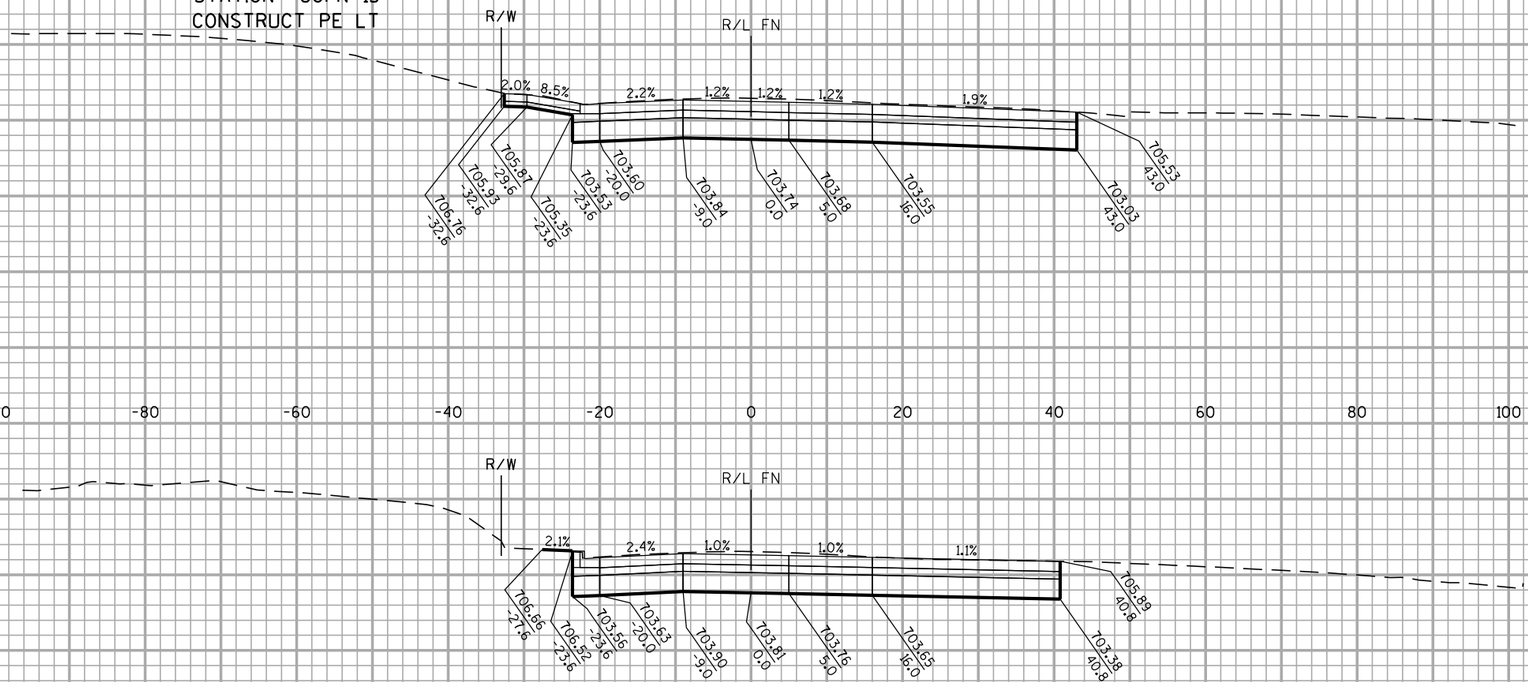
FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090501_xs_f.dgn PLOT DATE : 01-NOV-2012 06:43 PLOT BY : MSCD1S PLOT NAME : 090501_xs_f16 PLOT SCALE : 20:1

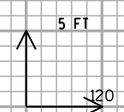
WISDOT/CADDS SHEET 21

ALL WORK DONE IN STAGE 2



STATION 80FN+13
CONSTRUCT PE LT





STA 80+00 TO 80+50

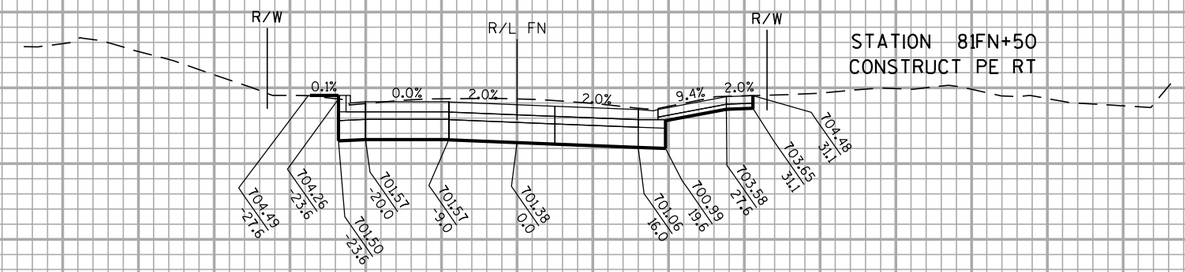
9 9

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090501_xs_f.dgn PLOT DATE : 01-NOV-2012 06:43 PLOT BY : MSCD1S PLOT NAME : 090501_xs_f17 PLOT SCALE : 20:1

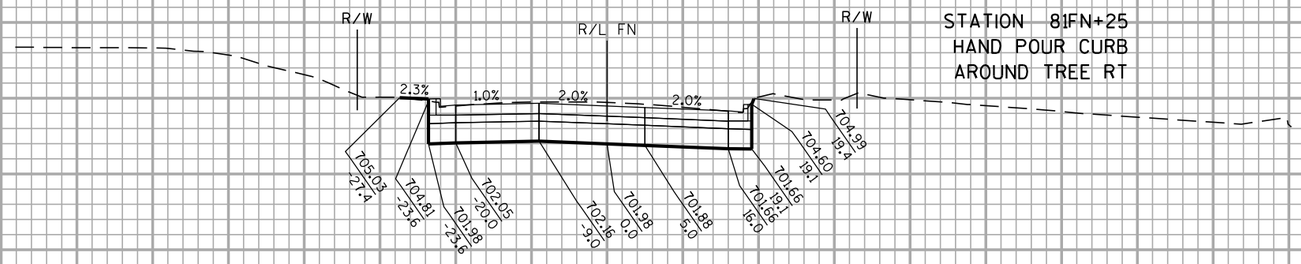
WISDOT/CADDS SHEET 21

ALL WORK DONE IN STAGE 2



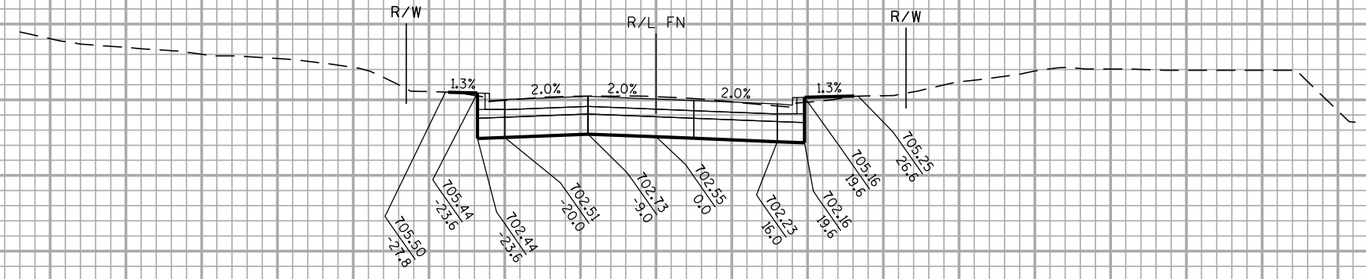
STATION 81FN+50
CONSTRUCT PE RT

81+50



STATION 81FN+25
HAND POUR CURB
AROUND TREE RT

81+25



81+00

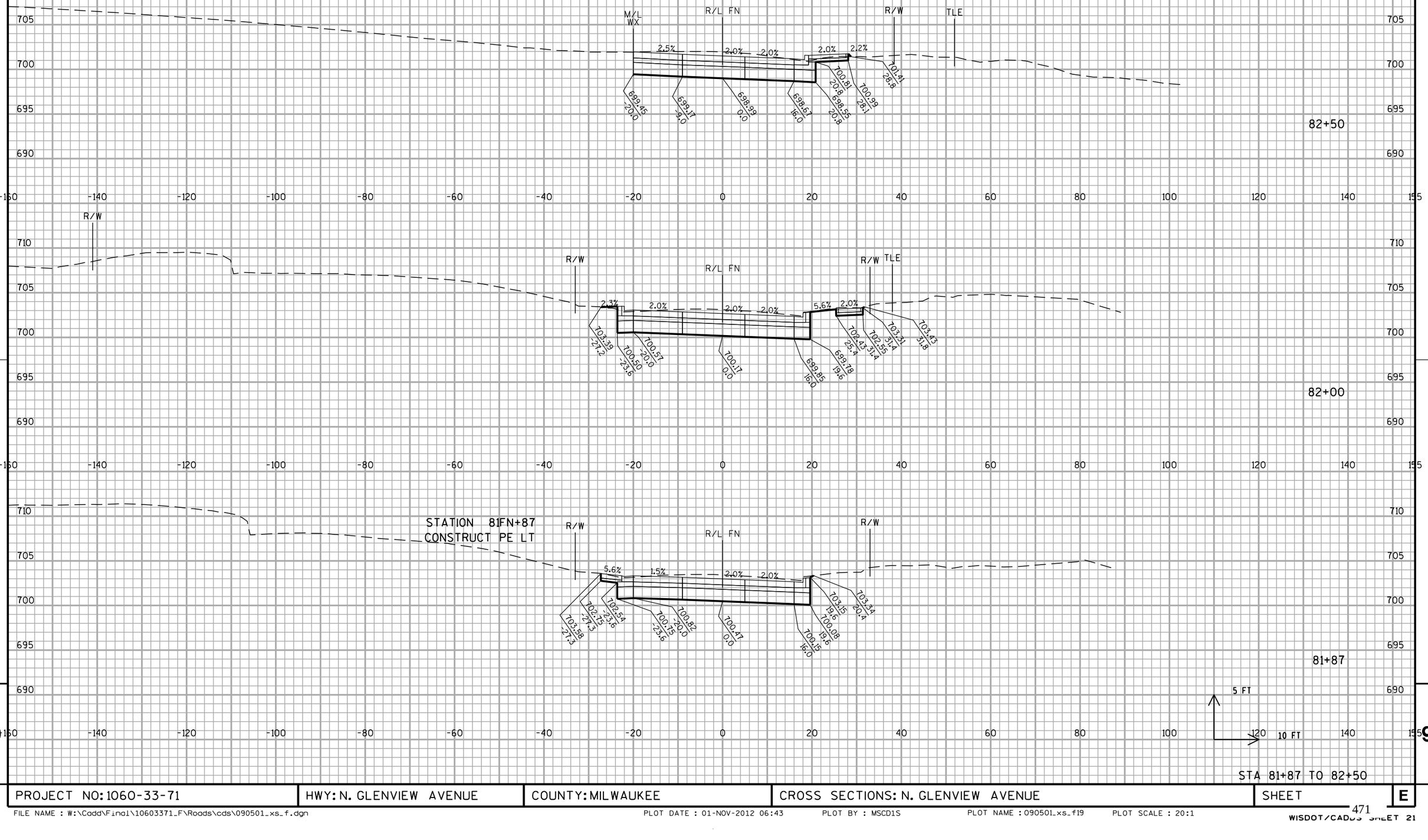
5 FT
10 FT

STA 81+00 TO 81+50

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090501_xs_f.dgn PLOT DATE : 01-NOV-2012 06:43 PLOT BY : MSCD1S PLOT NAME : 090501_xs_f18 PLOT SCALE : 20:1

ALL WORK DONE IN STAGE 2



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

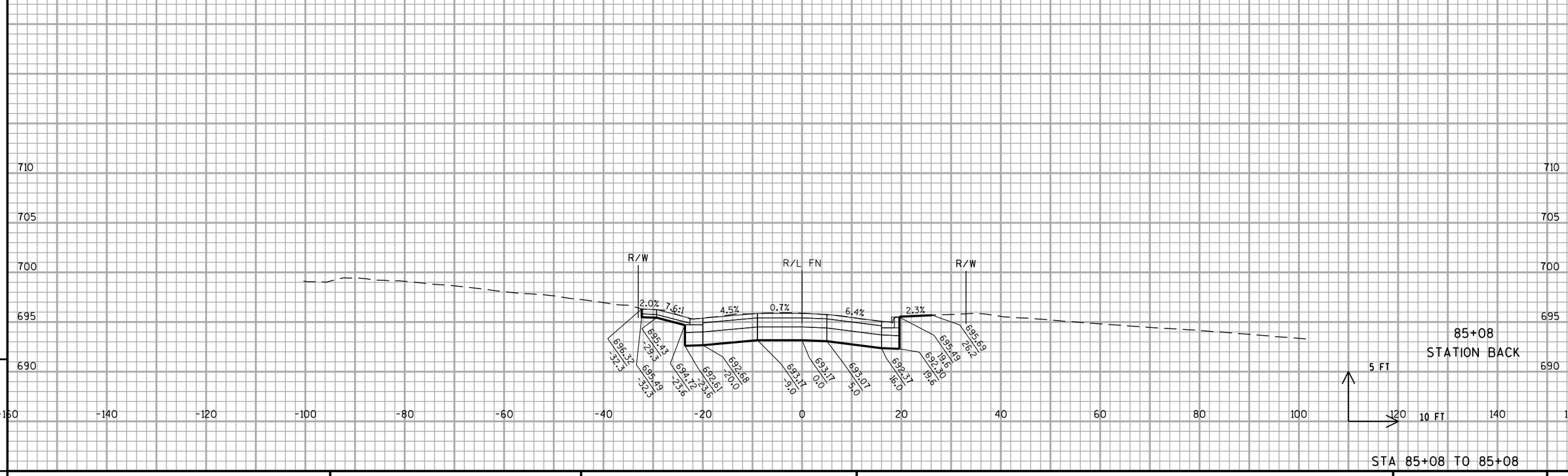
ALL WORK DONE IN STAGE 2

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

ALL WORK DONE IN STAGE 2

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

ALL WORK DONE IN STAGE 2



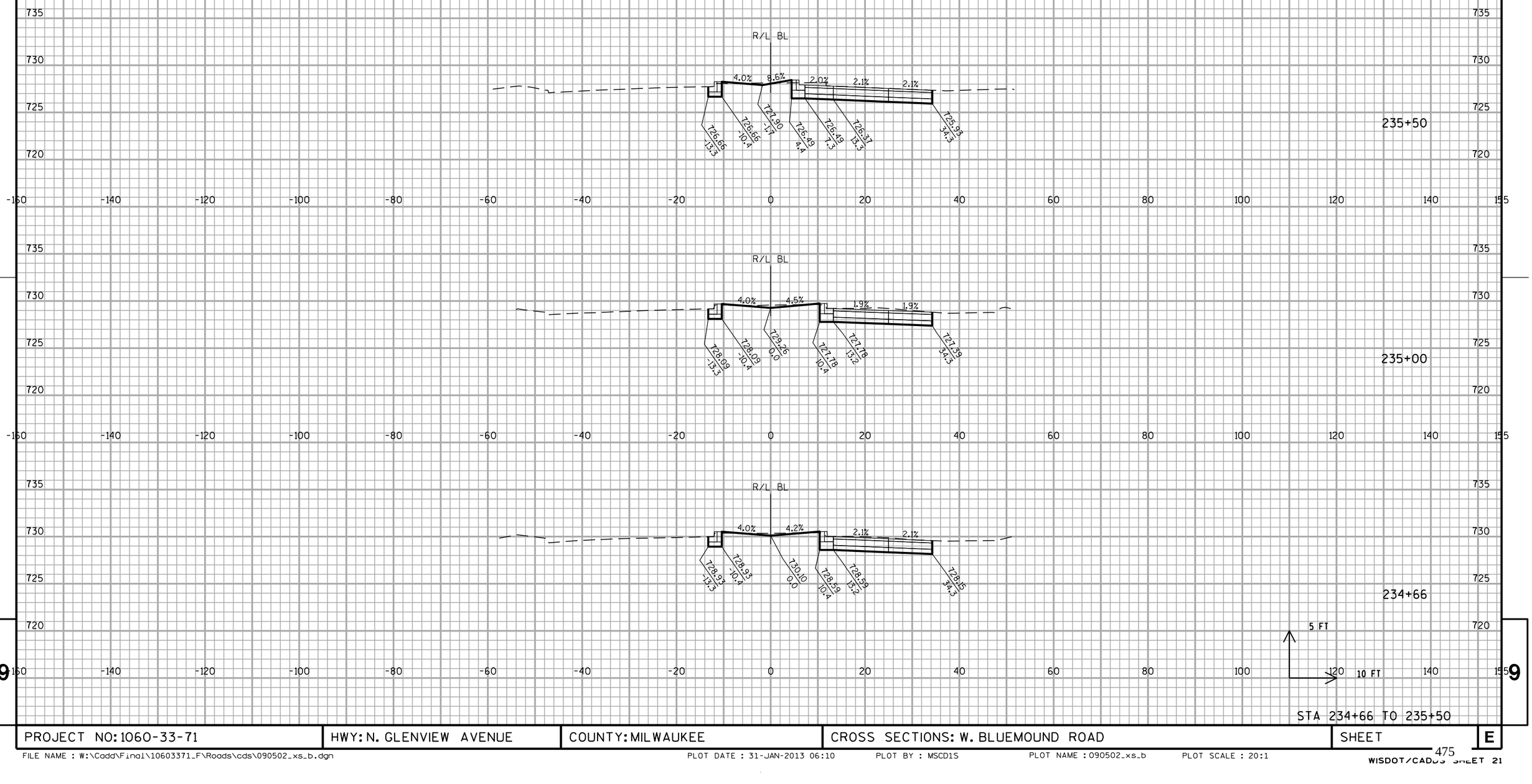
STA 85+08 TO 85+08

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: N. GLENVIEW AVENUE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090501_xs_f.dgn PLOT DATE : 01-NOV-2012 06:43 PLOT BY : MSCD1S PLOT NAME : 090501_xs_f22 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

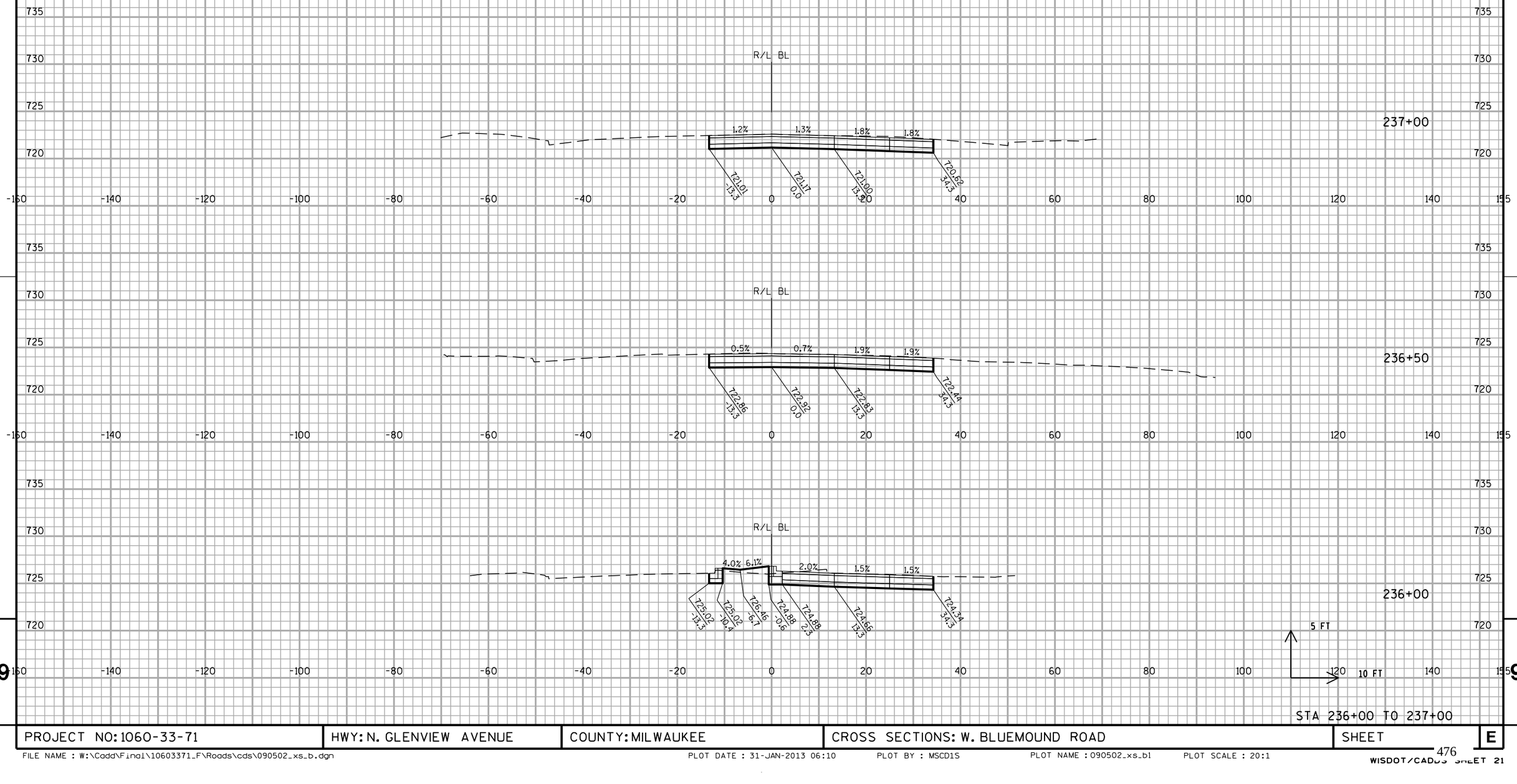
ALL WORK DONE IN STAGE 1



STA 234+66 TO 235+50

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

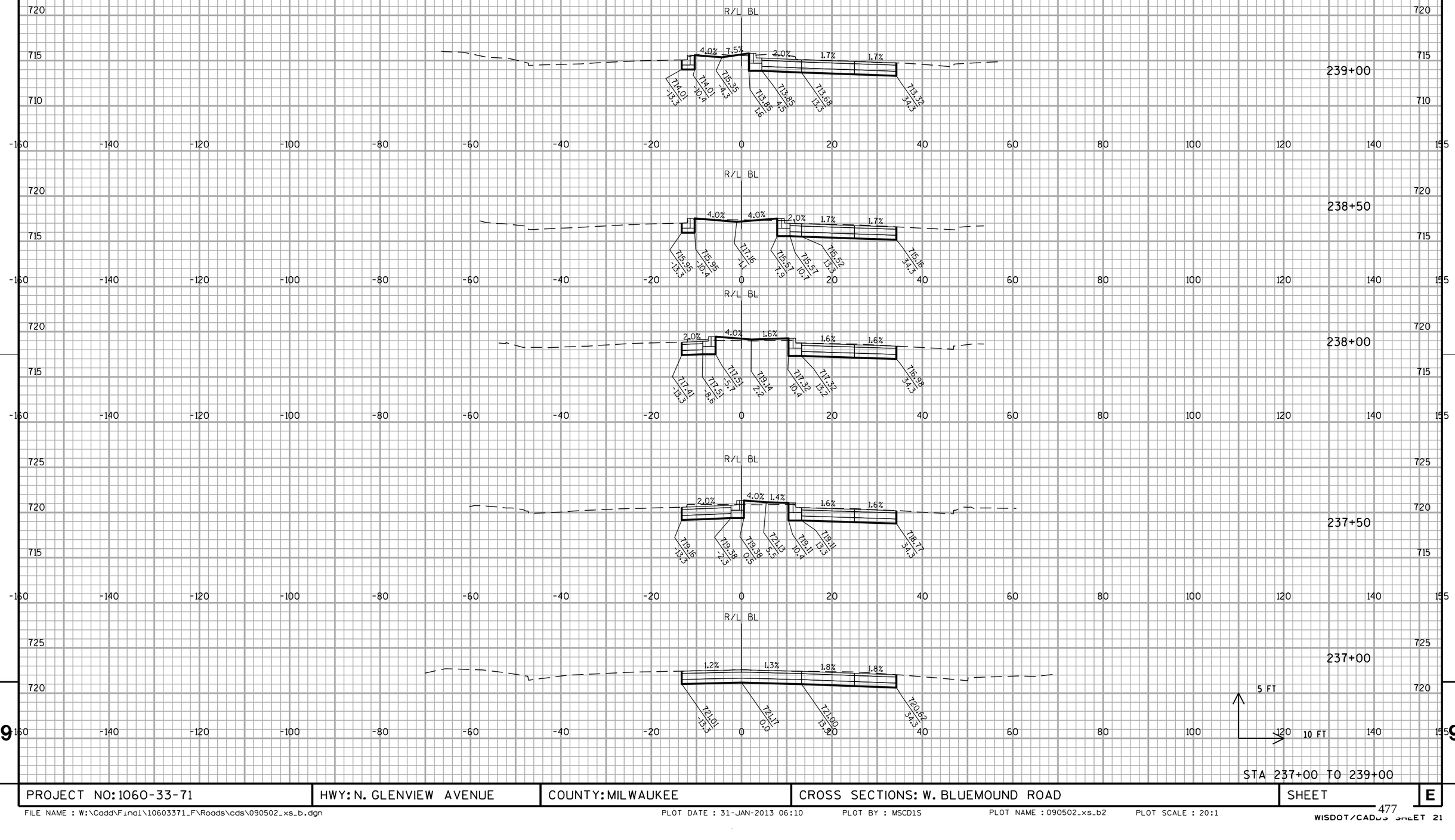
ALL WORK DONE IN STAGE 1



STA 236+00 TO 237+00

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

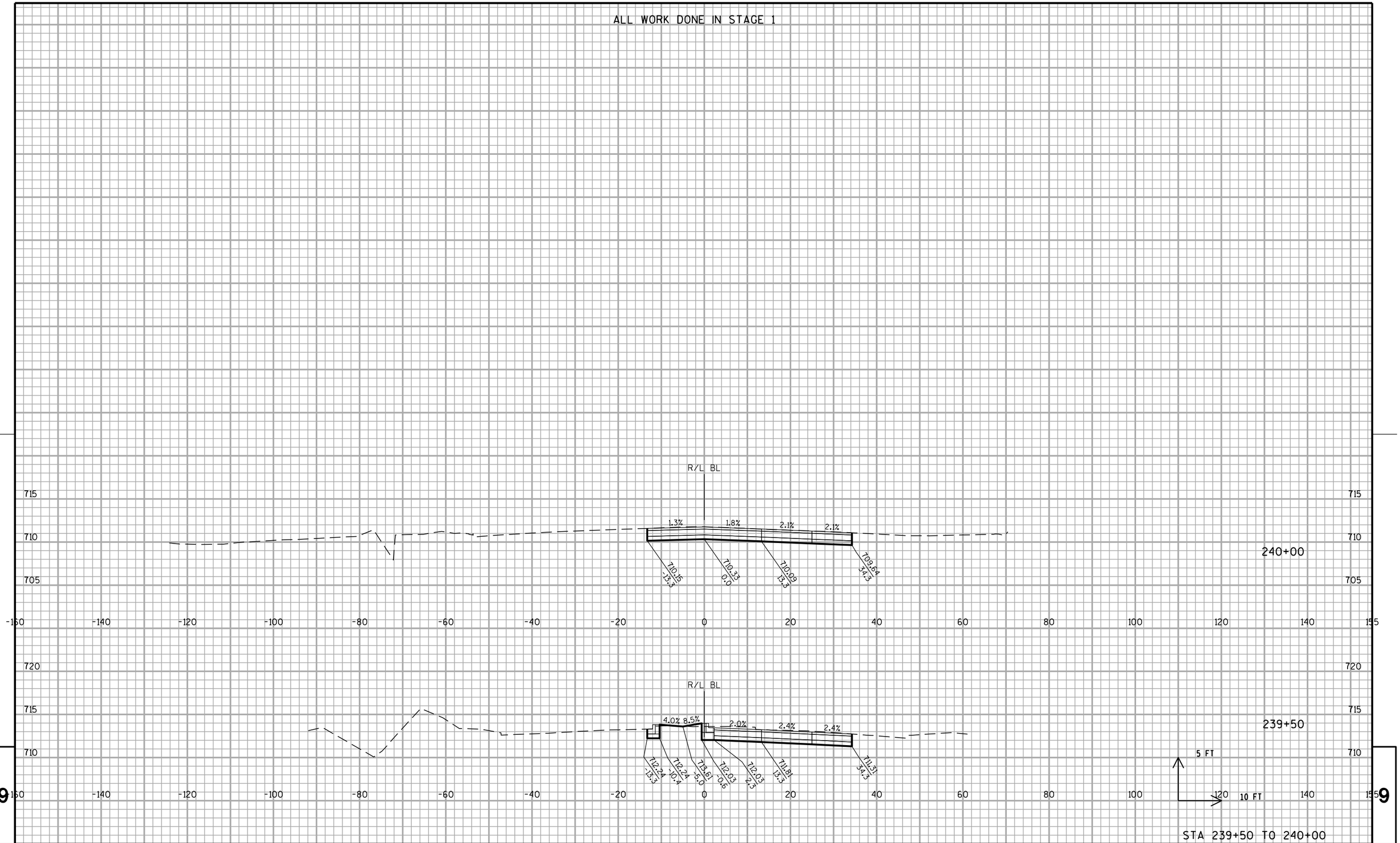
ALL WORK DONE IN STAGE 1



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090502_xs_b.dgn PLOT DATE : 31-JAN-2013 06:10 PLOT BY : MSCD1S PLOT NAME : 090502_xs_b2 PLOT SCALE : 20:1

ALL WORK DONE IN STAGE 1



STA 239+50 TO 240+00

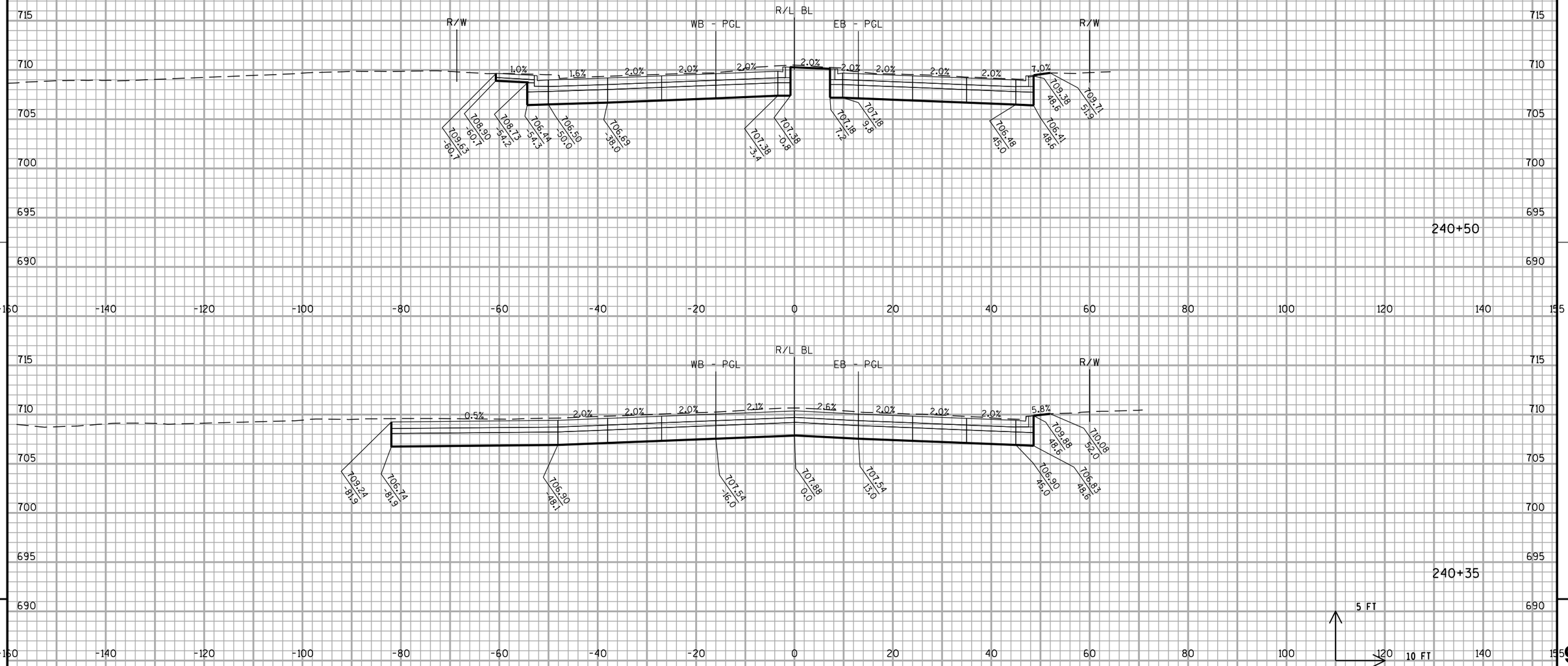
9

9

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090502_xs_b.dgn PLOT DATE : 31-JAN-2013 06:10 PLOT BY : MSCD1S PLOT NAME : 090502_xs_b3 PLOT SCALE : 20:1

ALL WORK DONE IN STAGE 1

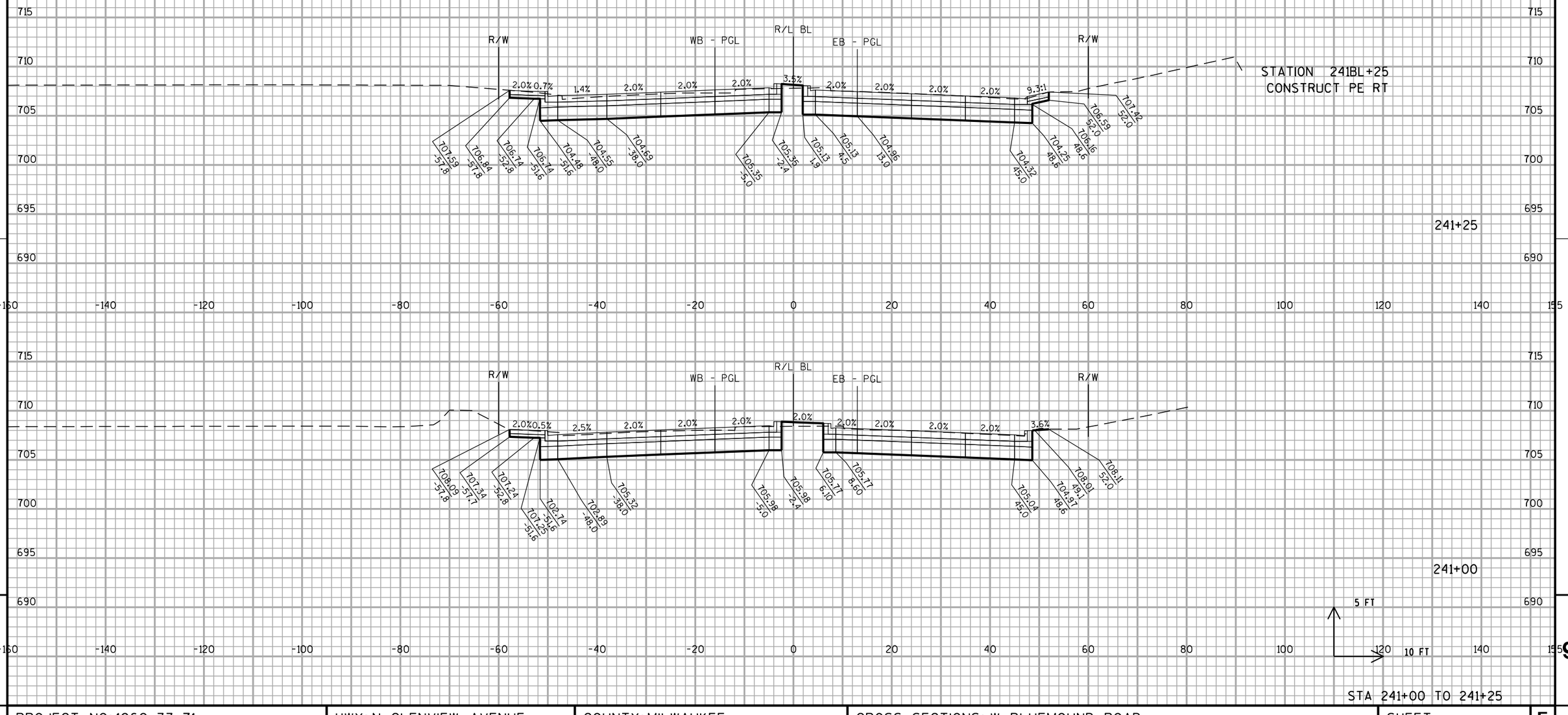


STA 240+35 TO 240+50

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090502_xs_b.dgn PLOT DATE : 01-NOV-2012 06:43 PLOT BY : MSCD1S PLOT NAME : 090502_xs_b4 PLOT SCALE : 20:1

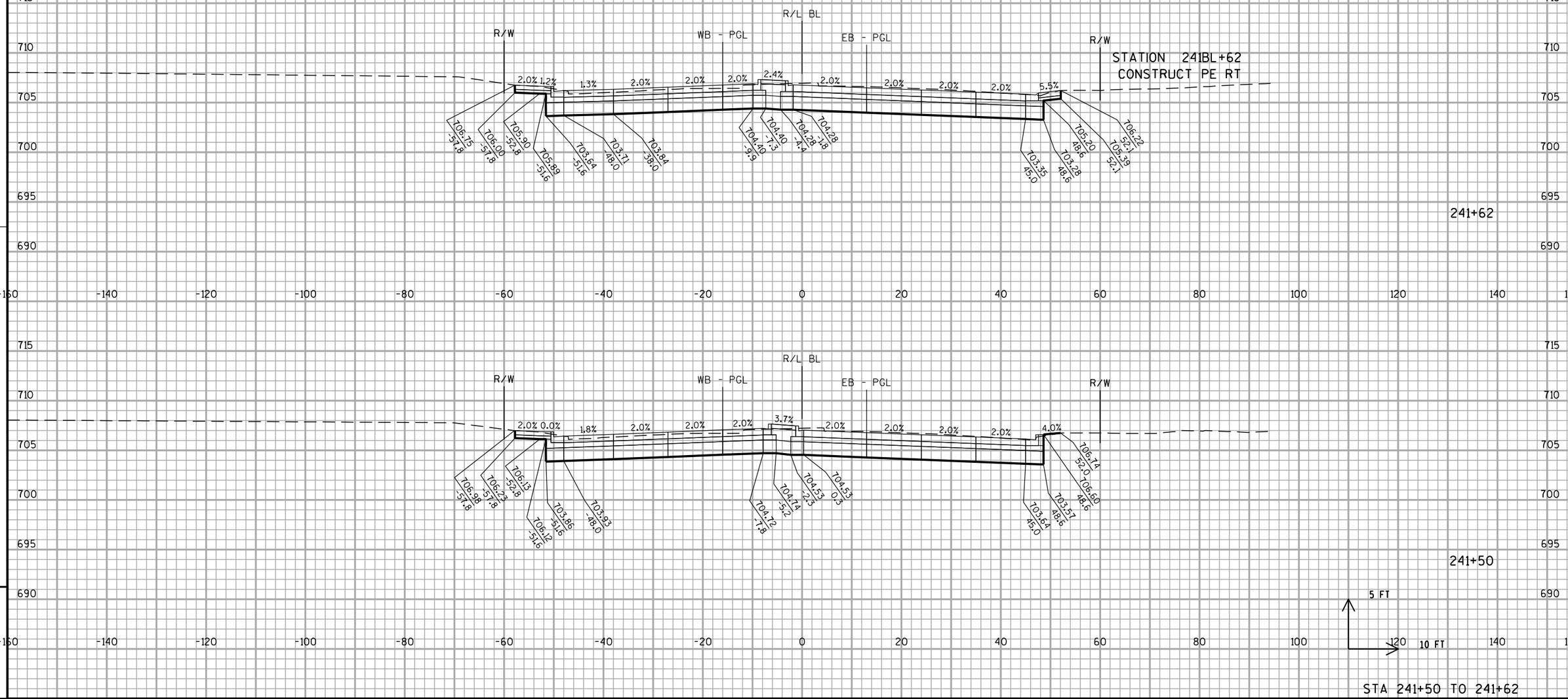
ALL WORK DONE IN STAGE 1



STA 241+00 TO 241+25

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

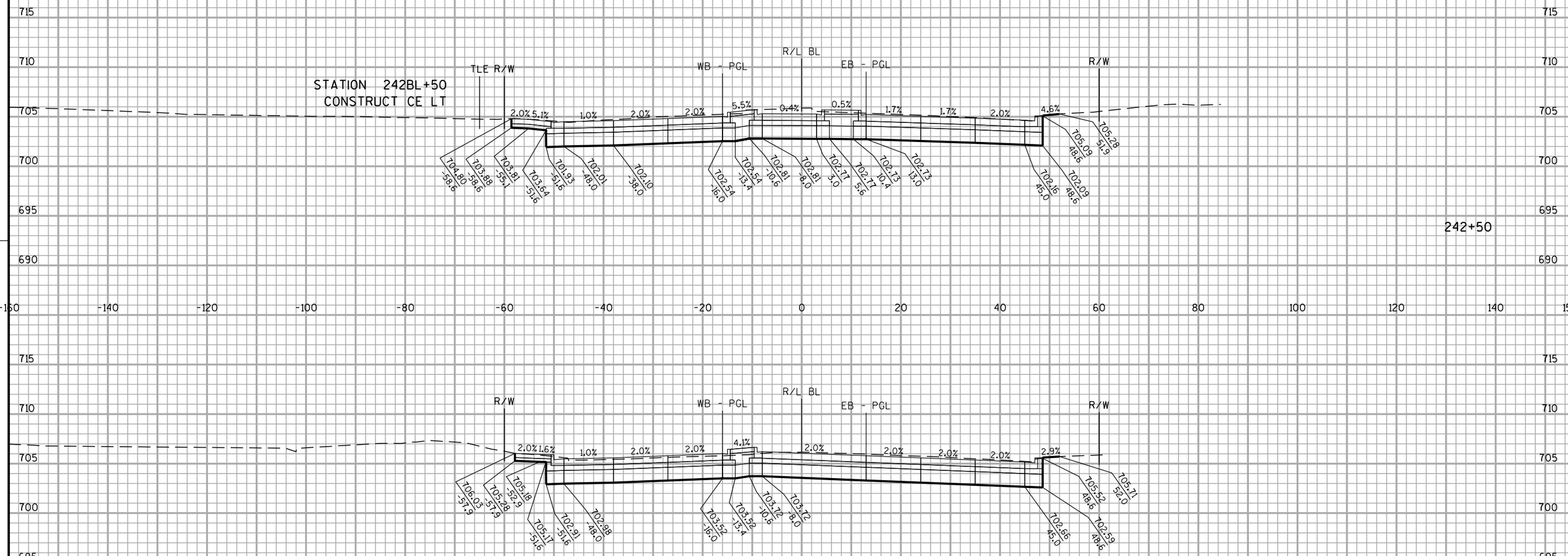
ALL WORK DONE IN STAGE 1



STA 241+50 TO 241+62

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

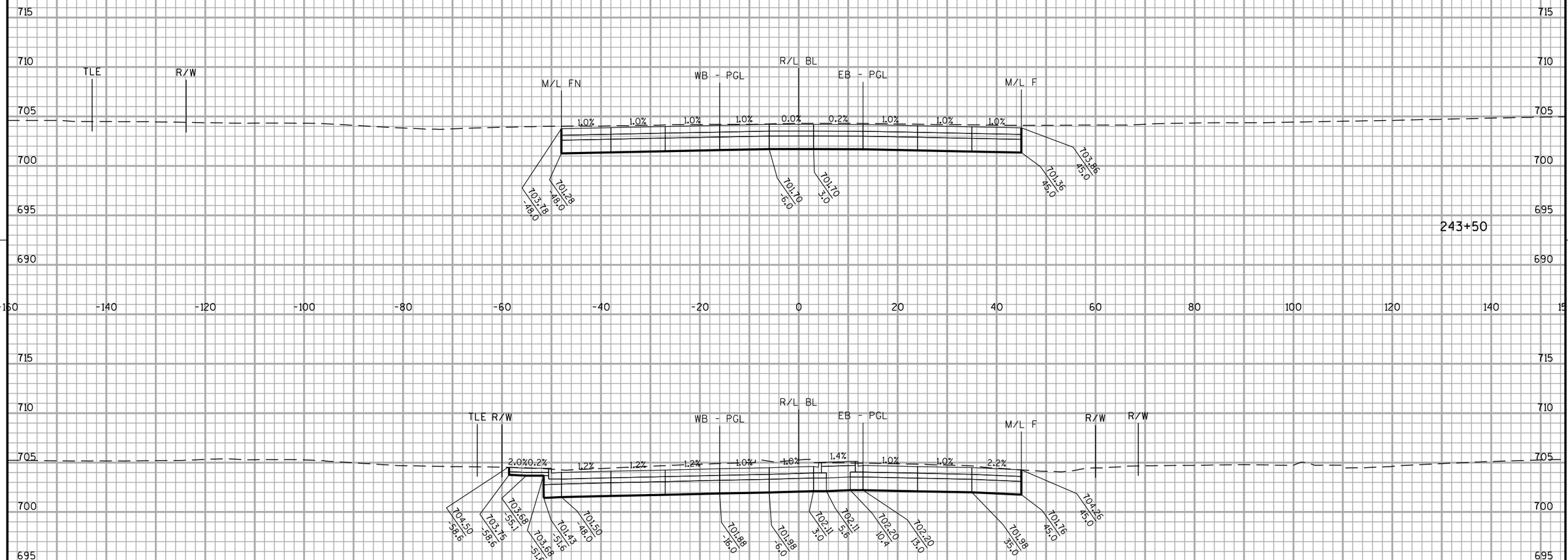
ALL WORK DONE IN STAGE 1



STA 242+00 TO 242+50

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

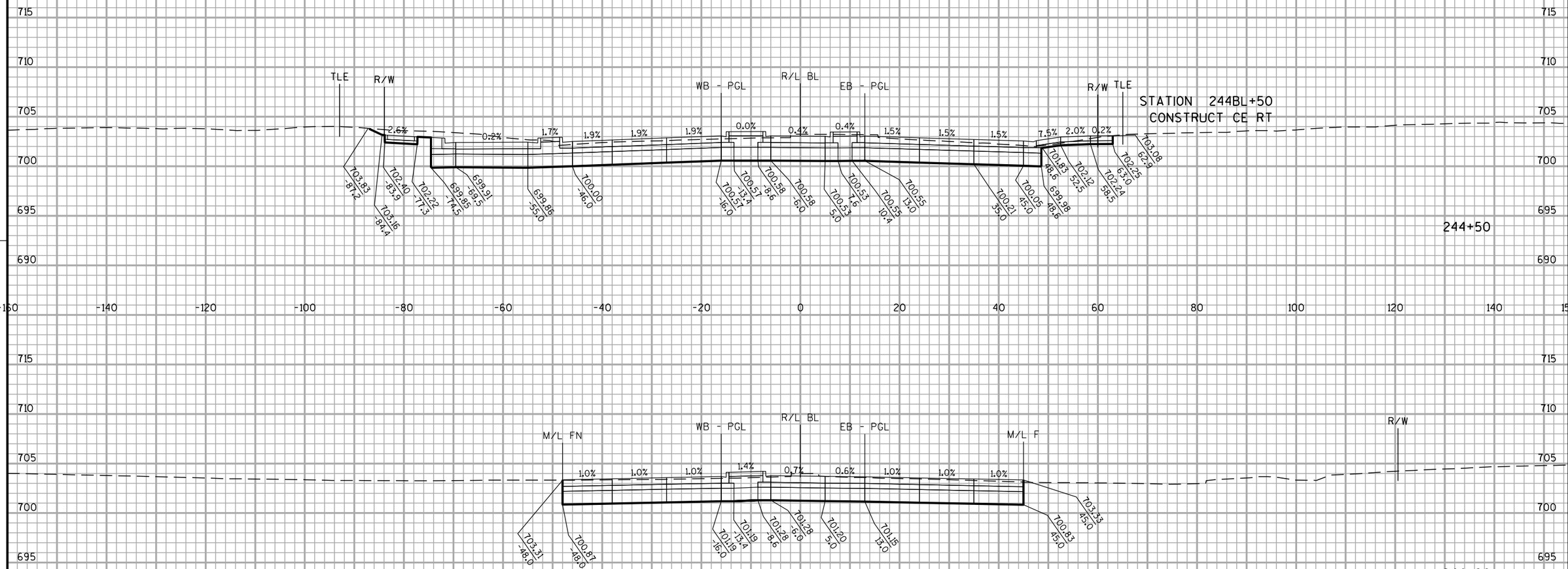
ALL WORK DONE IN STAGE 1



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

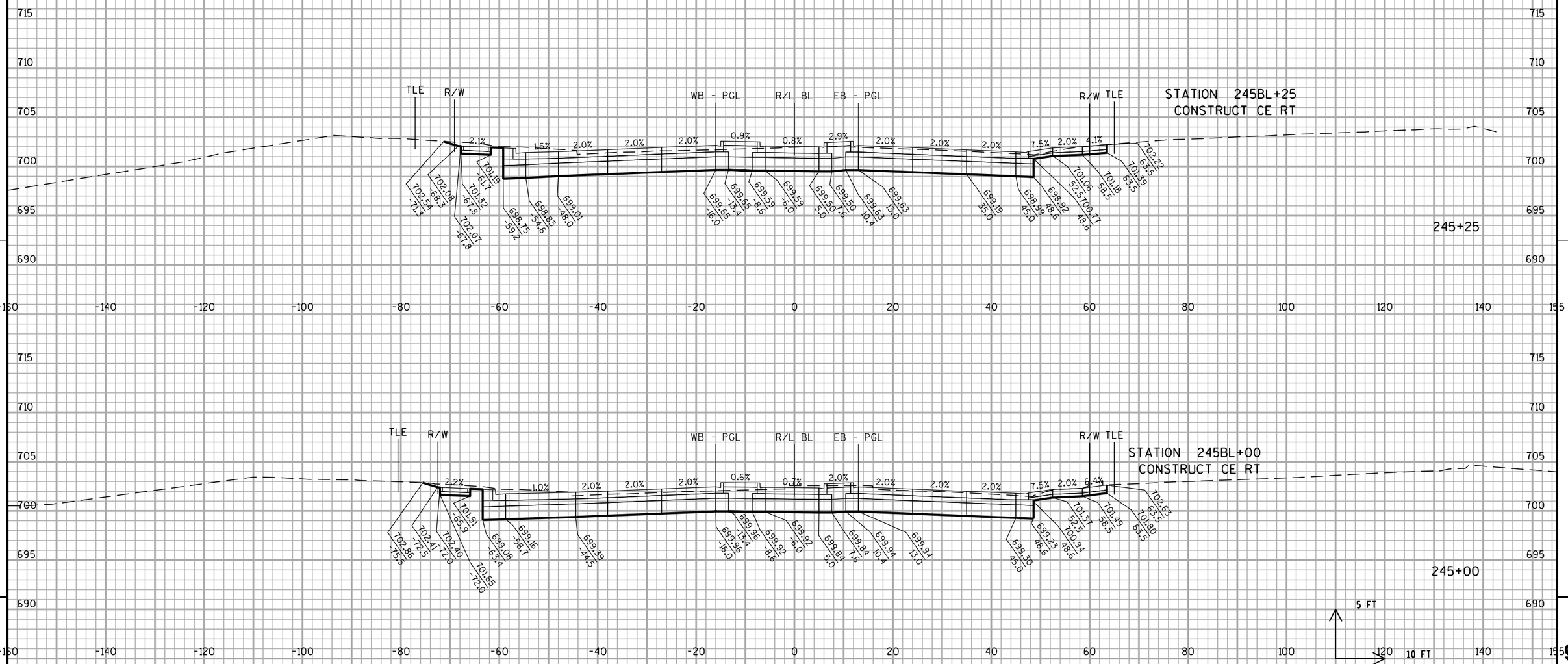
FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090502_xs_b.dgn PLOT DATE : 01-NOV-2012 06:43 PLOT BY : MSCD1S PLOT NAME : 090502_xs_b8 PLOT SCALE : 20:1

ALL WORK DONE IN STAGE 1



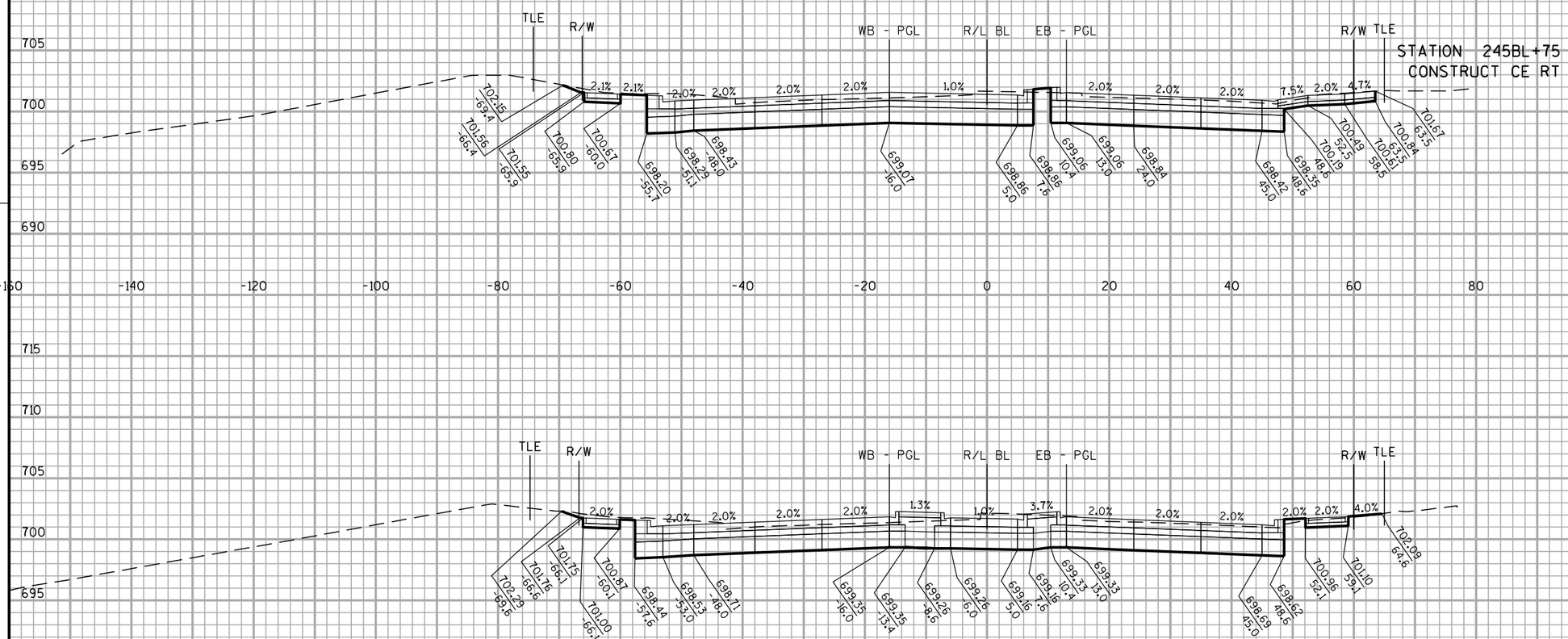
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

ALL WORK DONE IN STAGE 1



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

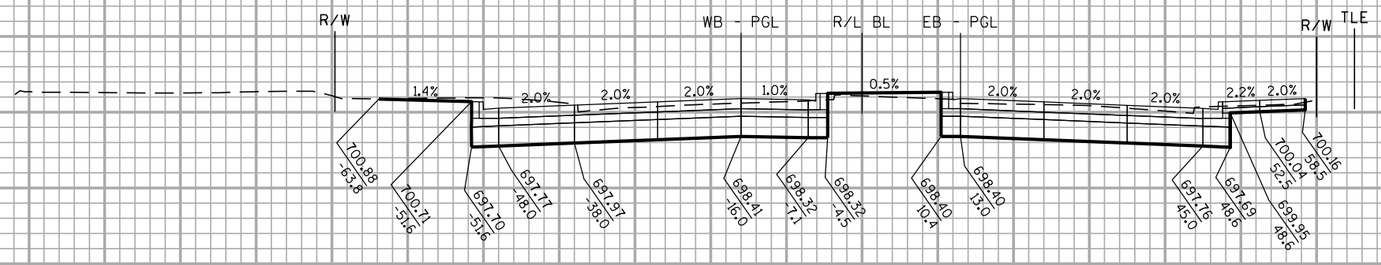
ALL WORK DONE IN STAGE 1



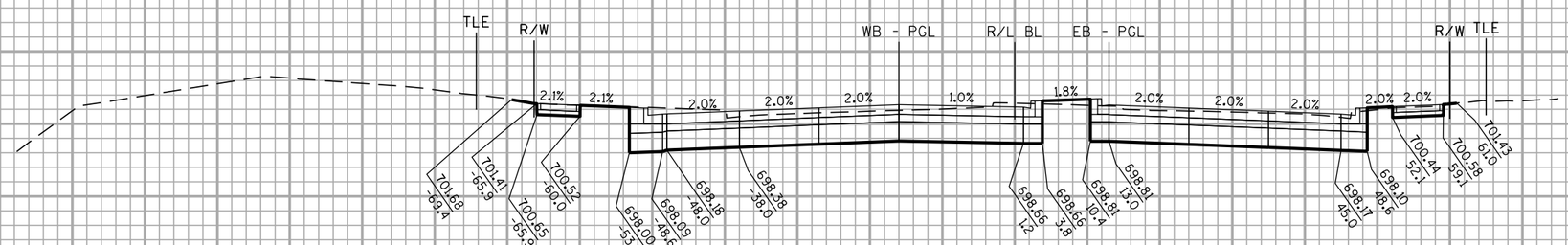
STA 245+50 TO 245+75

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

ALL WORK DONE IN STAGE 1



246+50



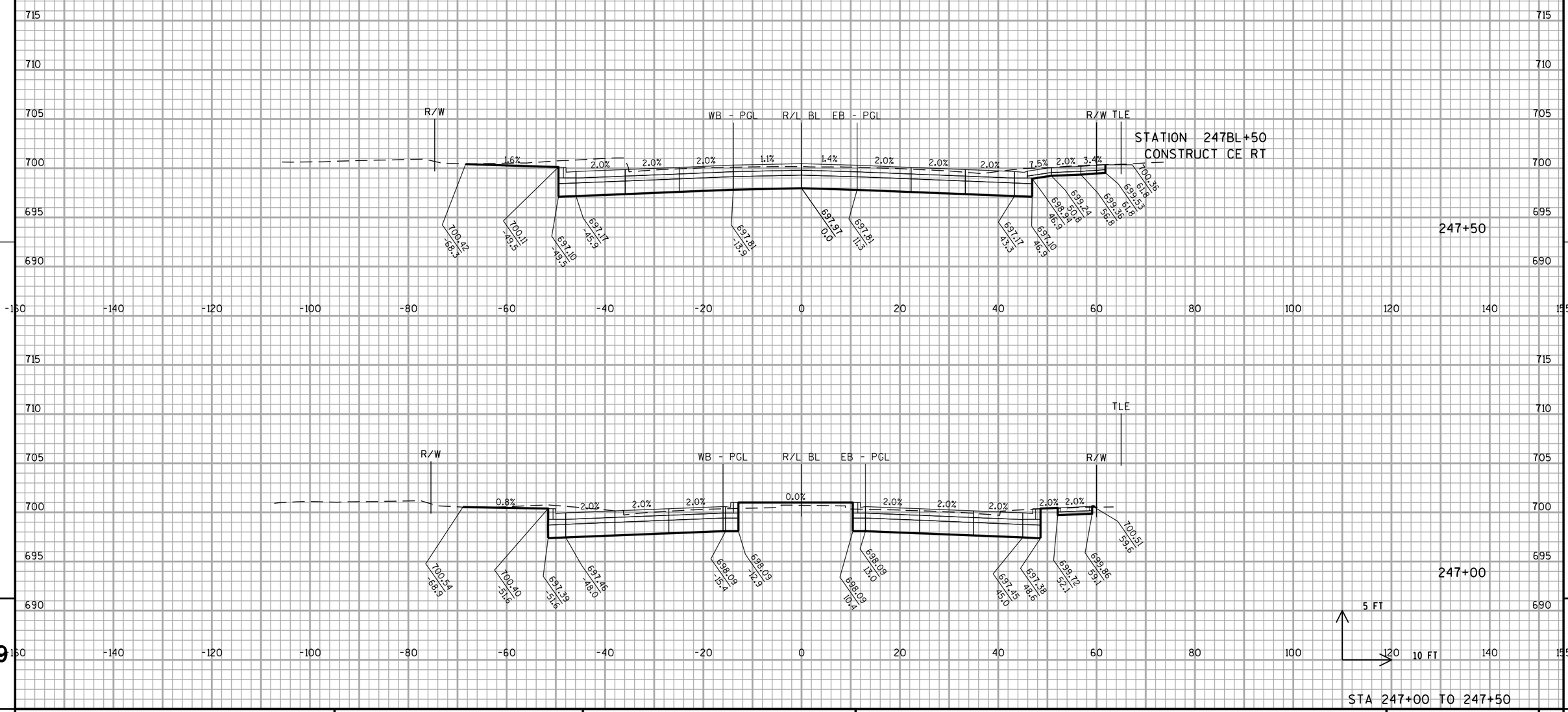
246+00

5 FT
10 FT

STA 246+00 TO 246+50

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

ALL WORK DONE IN STAGE 1

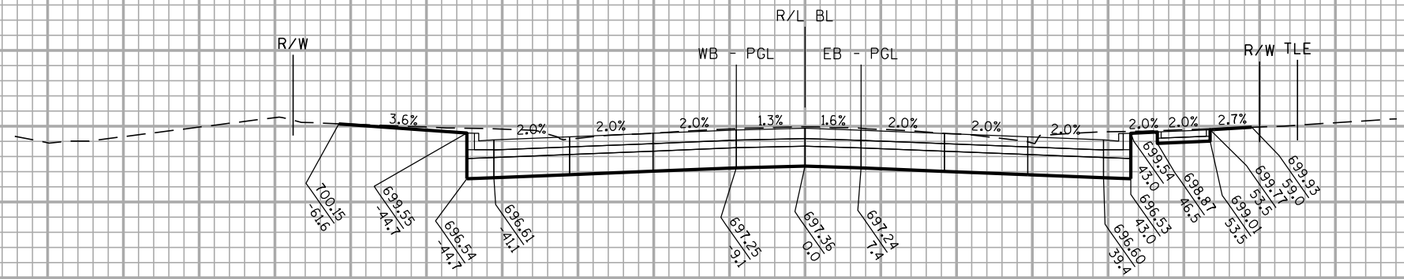


STA 247+00 TO 247+50

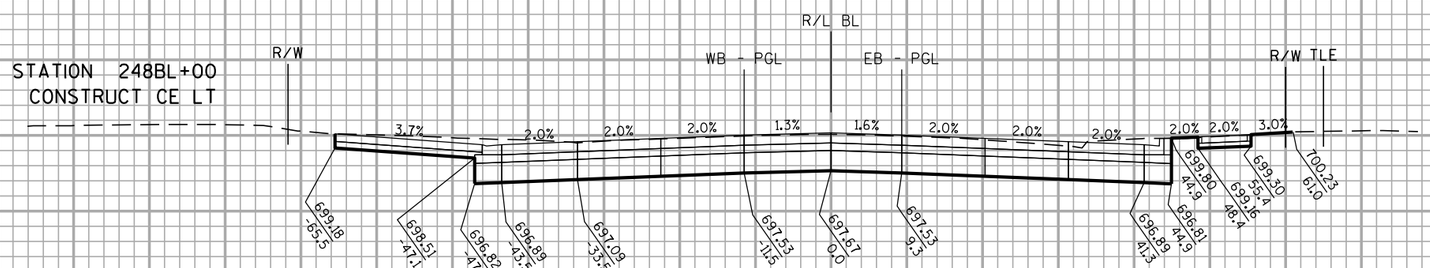
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090502_xs_b.dgn PLOT DATE : 01-NOV-2012 06:44 PLOT BY : MSCD1S PLOT NAME : 090502_xs_b13 PLOT SCALE : 20:1

ALL WORK DONE IN STAGE 1



248+50



248+00

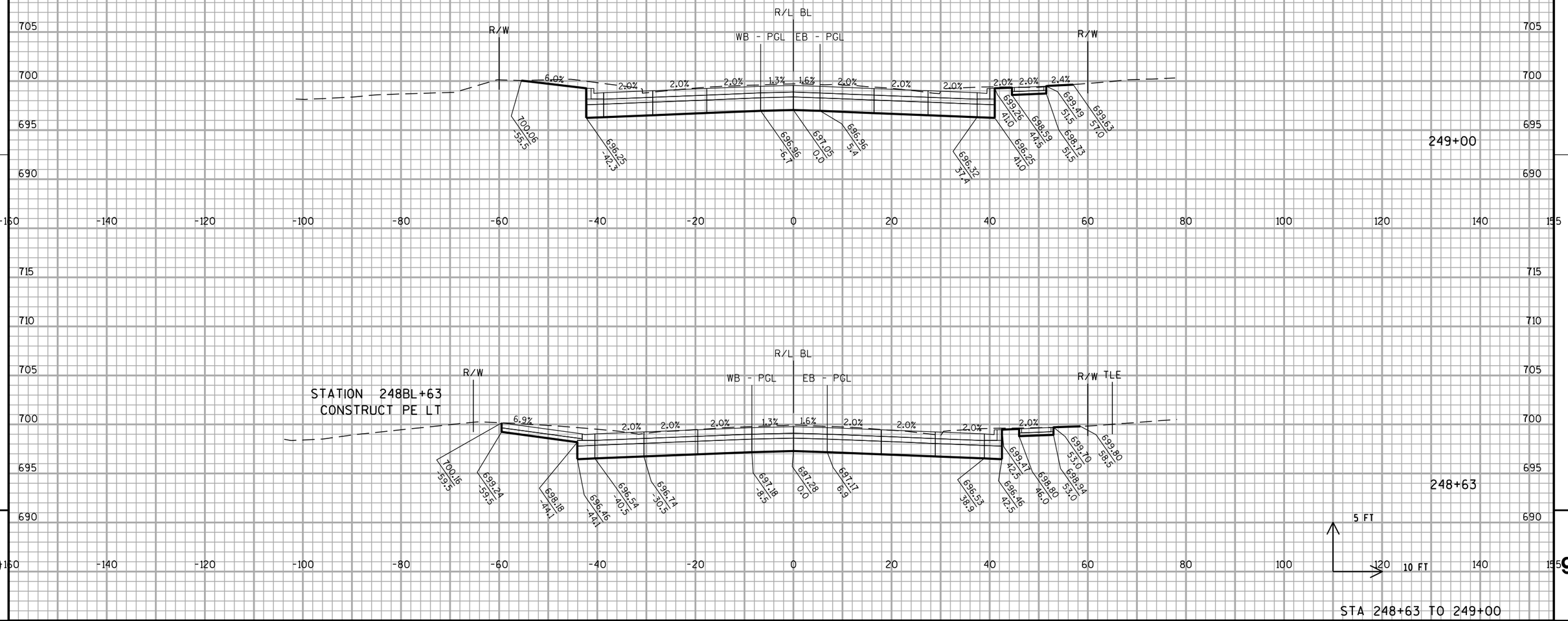
5 FT
10 FT

STA 248+00 TO 248+50

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090502_xs_b.dgn PLOT DATE : 01-NOV-2012 06:44 PLOT BY : MSCD1S PLOT NAME : 090502_xs_b14 PLOT SCALE : 20:1

ALL WORK DONE IN STAGE 1

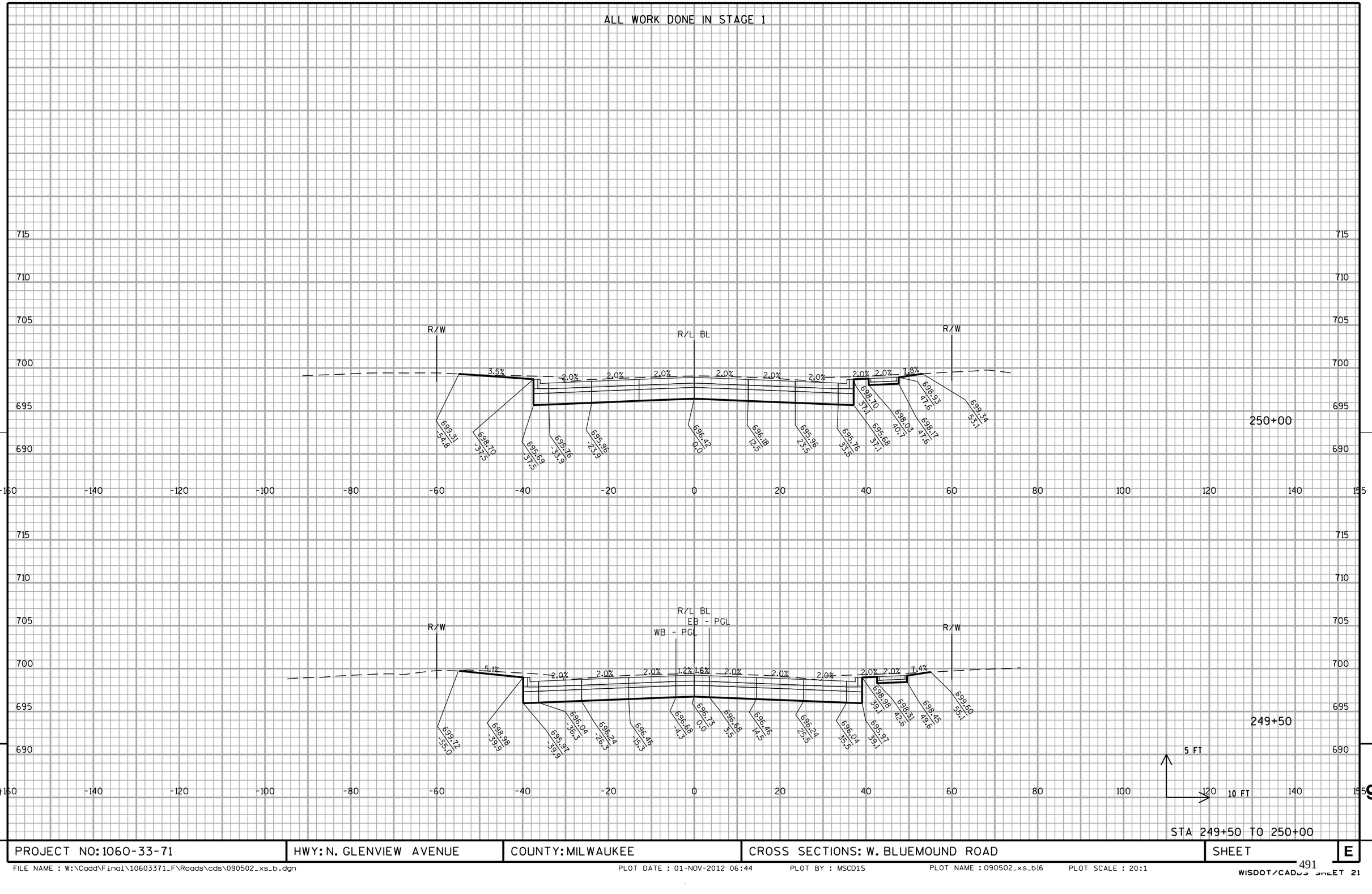


STA 248+63 TO 249+00

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

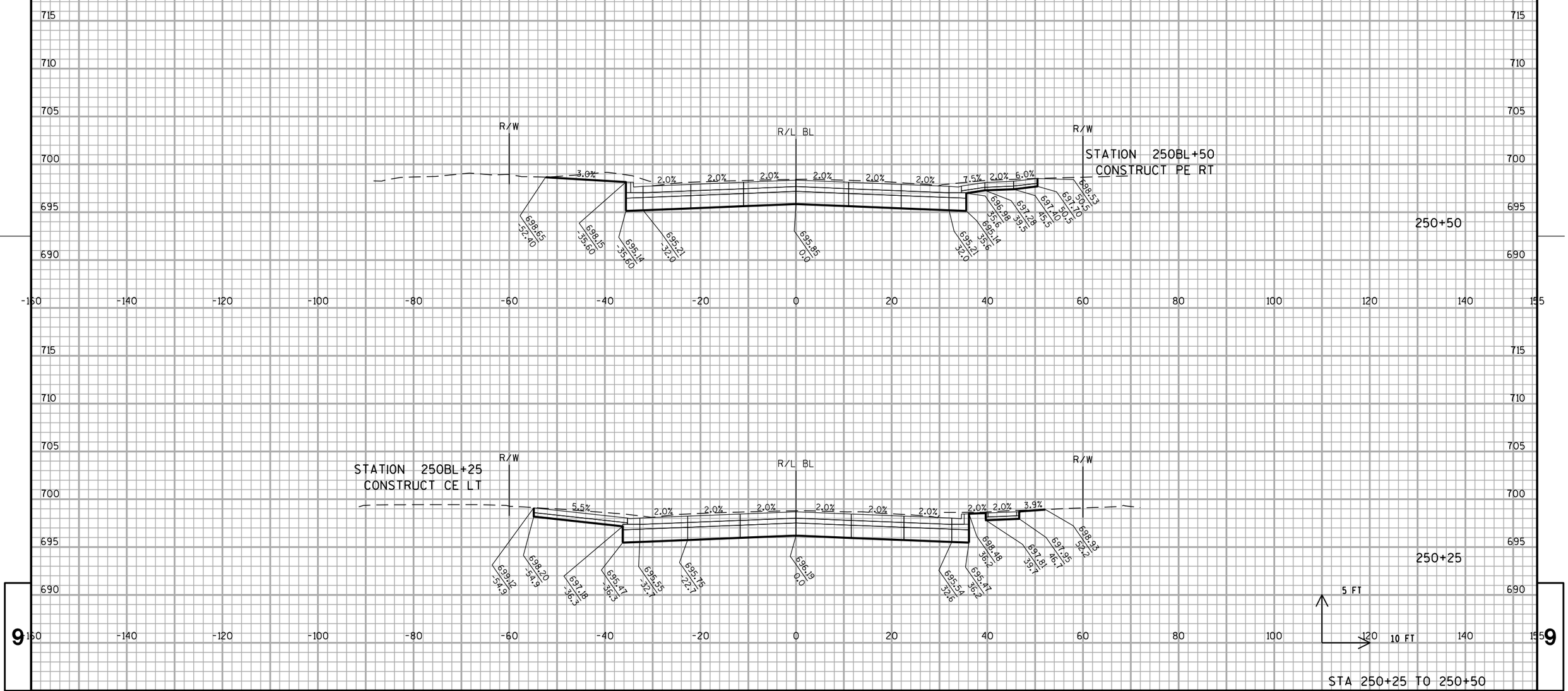
FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090502_xs_b.dgn PLOT DATE : 01-NOV-2012 06:44 PLOT BY : MSCD1S PLOT NAME : 090502_xs_b15 PLOT SCALE : 20:1

ALL WORK DONE IN STAGE 1



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

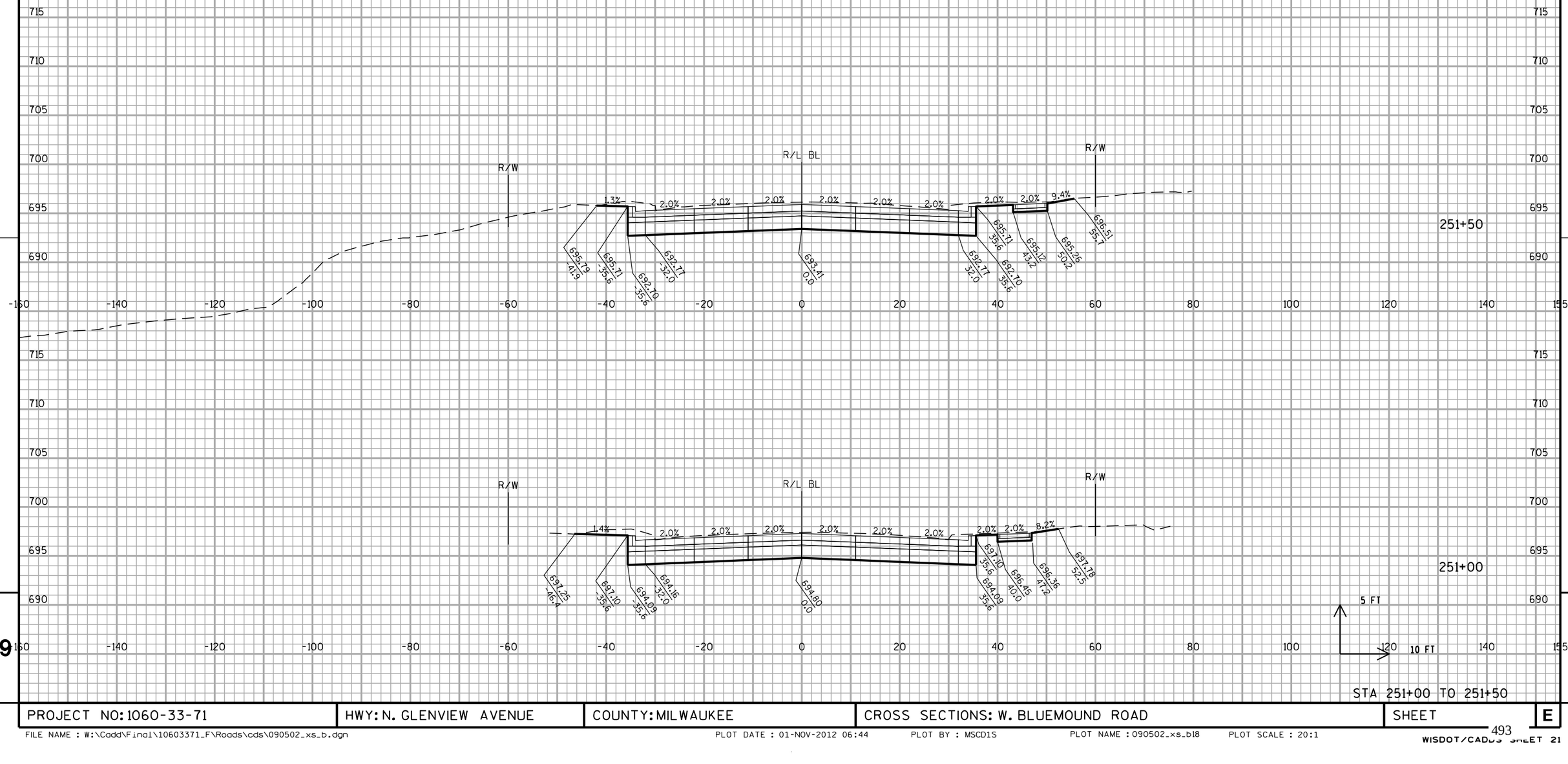
ALL WORK DONE IN STAGE 1



PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090502_xs_b.dgn PLOT DATE : 01-NOV-2012 06:44 PLOT BY : MSCD1S PLOT NAME : 090502_xs_b17 PLOT SCALE : 20:1

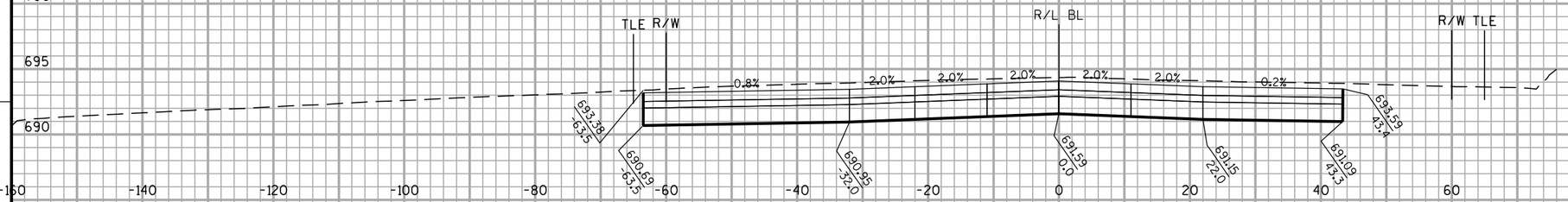
ALL WORK DONE IN STAGE 1

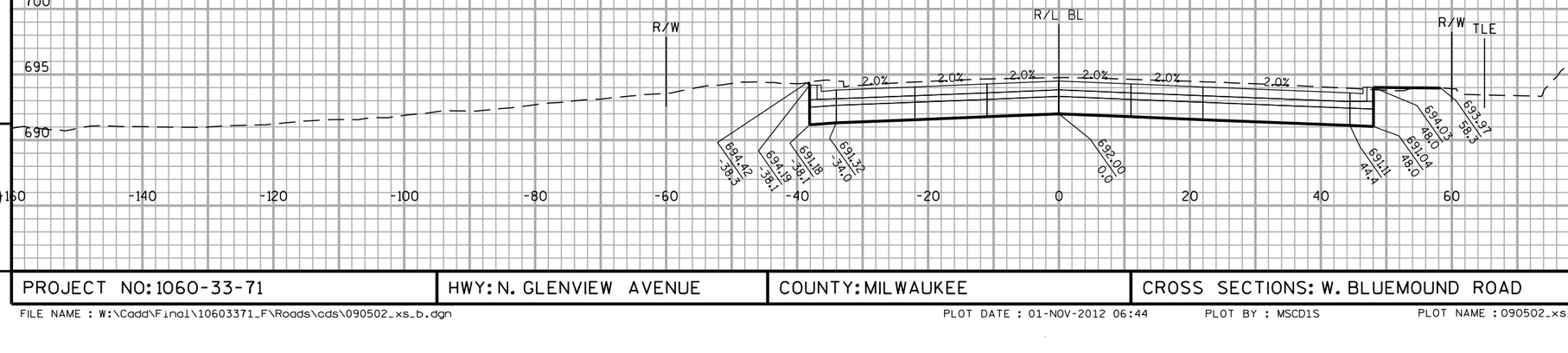


PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090502_xs_b.dgn PLOT DATE : 01-NOV-2012 06:44 PLOT BY : MSCD1S PLOT NAME : 090502_xs_b18 PLOT SCALE : 20:1

ALL WORK DONE IN STAGE 1



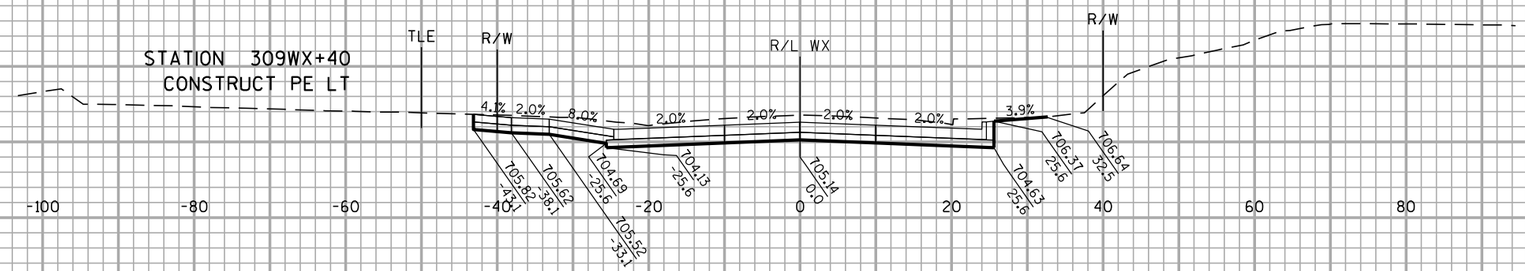


PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. BLUEMOUND ROAD	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090502_xs_b.dgn PLOT DATE : 01-NOV-2012 06:44 PLOT BY : MSCD1S PLOT NAME : 090502_xs_b19 PLOT SCALE : 20:1

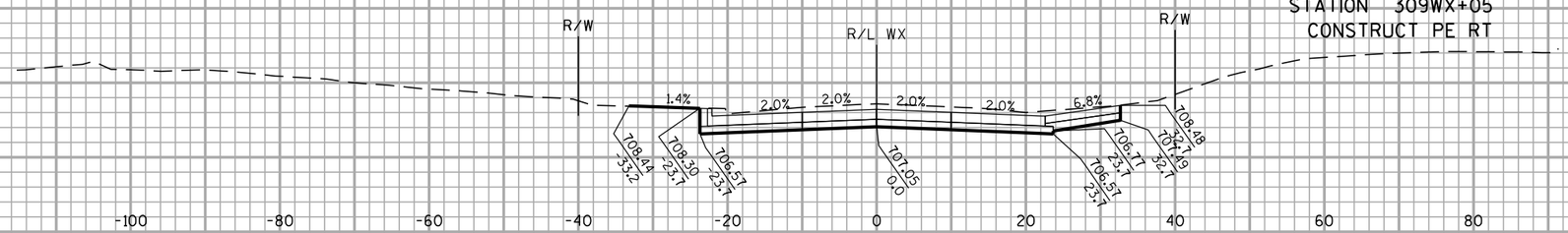
ALL WORK DONE IN STAGE 2

STATION 309WX+40
CONSTRUCT PE LT



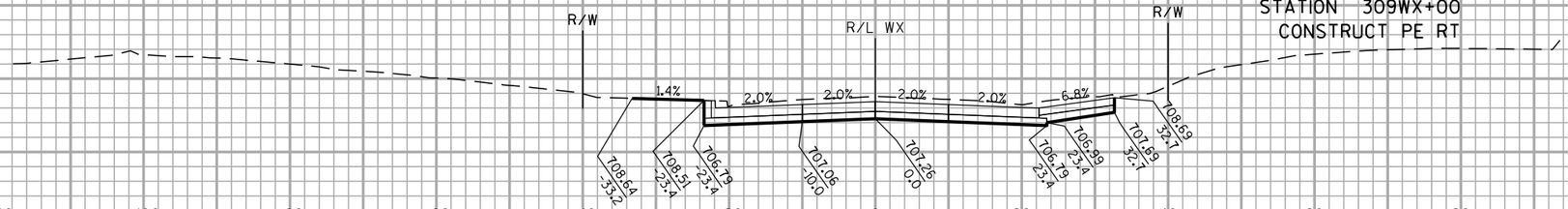
309+50

STATION 309WX+05
CONSTRUCT PE RT

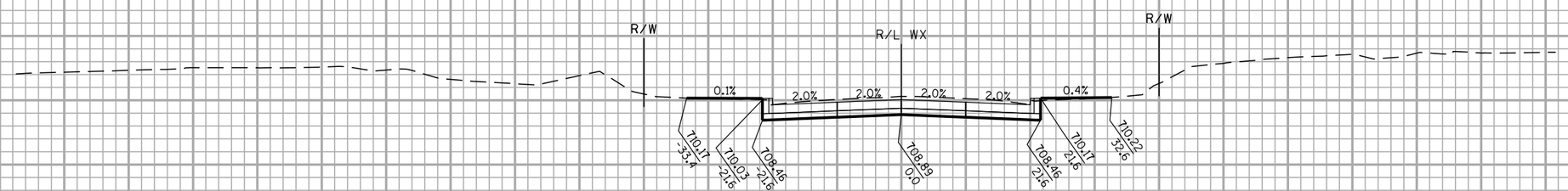


309+05

STATION 309WX+00
CONSTRUCT PE RT



309+00



308+61
STATION AHEAD

5 FT
10 FT

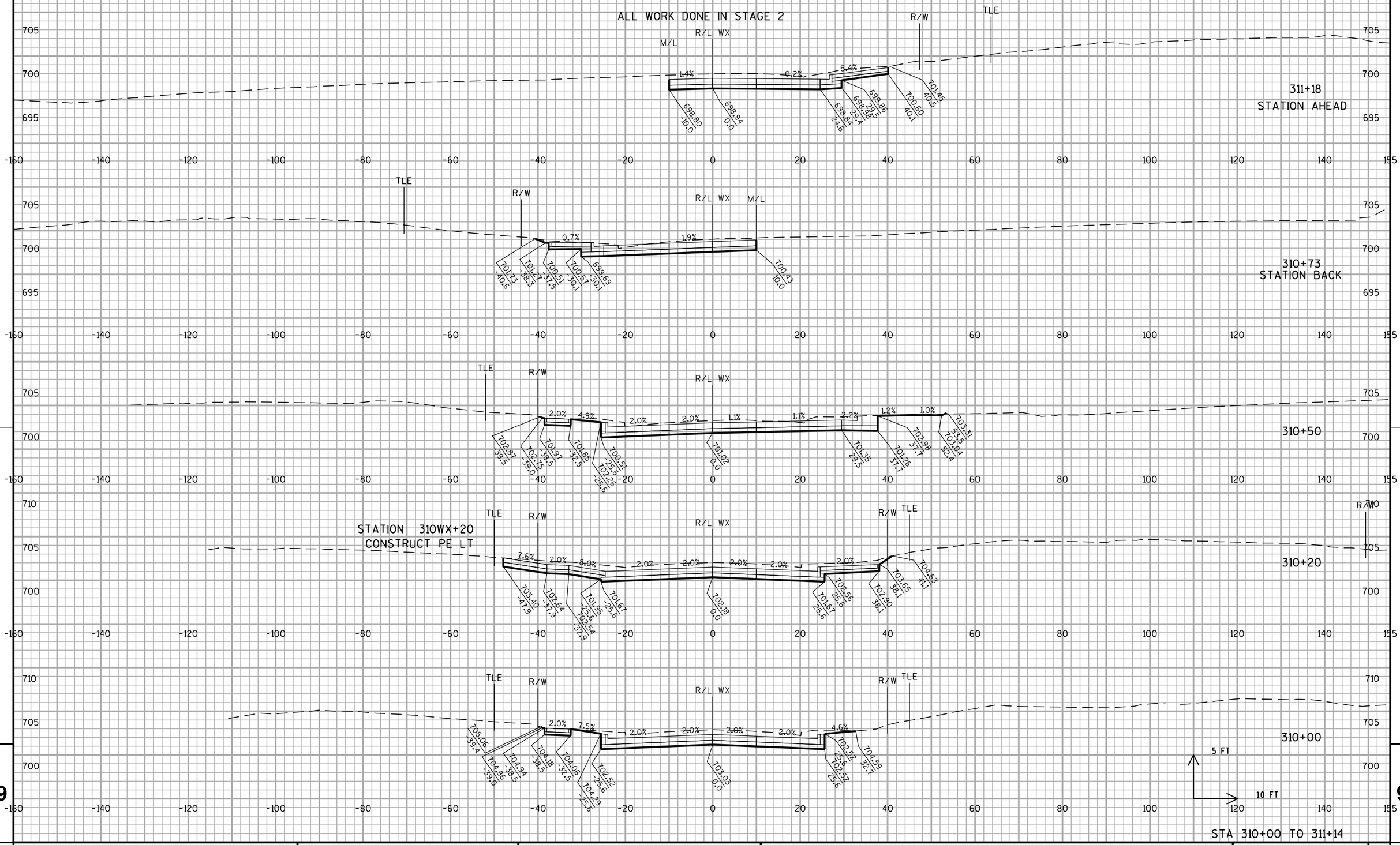
STA 308+61 TO 309+50

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. WISCONSIN AVENUE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090503_xs_wx.dgn PLOT DATE : 01-NOV-2012 06:44 PLOT BY : MSCD1S PLOT NAME : 090503_xs_wx PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE IN STAGE 2

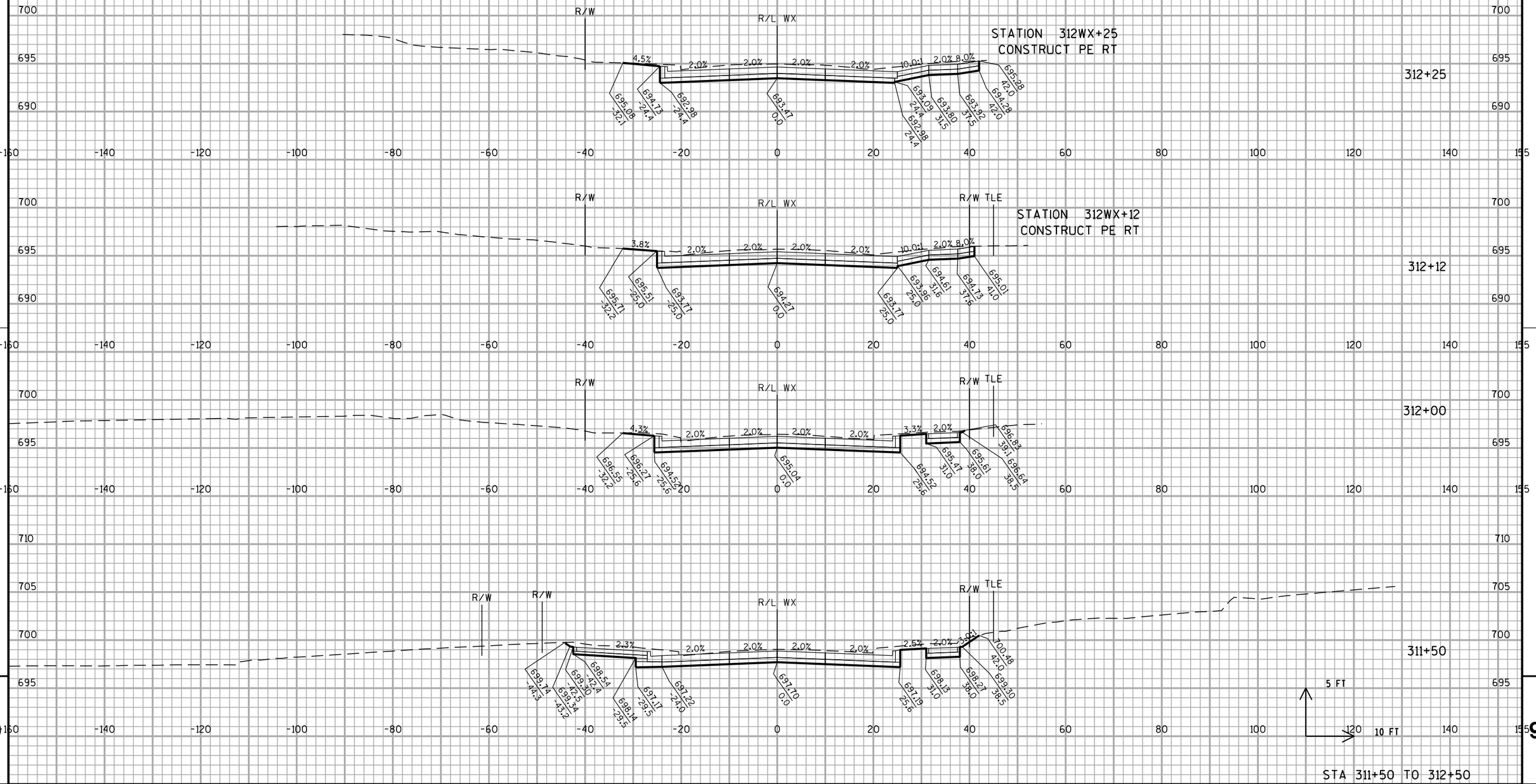


STA 310+00 TO 311+14

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. WISCONSIN AVENUE	SHEET	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\090503_xs_wx.dgn PLOT DATE : 01-NOV-2012 06:44 PLOT BY : MSCD1S PLOT NAME : 090503_xs_wx1 PLOT SCALE : 20:1

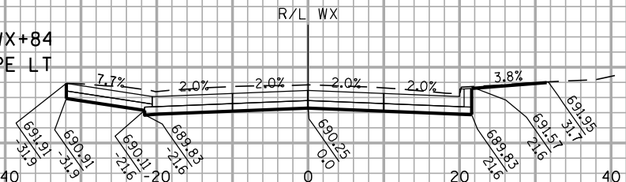
ALL WORK DONE IN STAGE 2



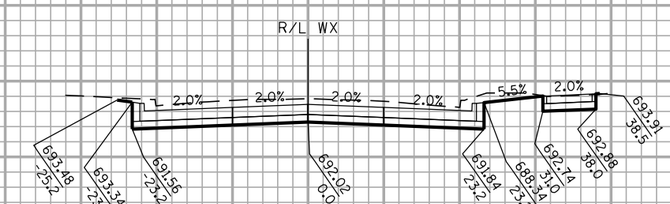
PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. WISCONSIN AVENUE	SHEET	E

ALL WORK DONE IN STAGE 2

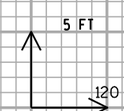
STATION 312WX+84
CONSTRUCT PE LT



312+84
STATION BACK



312+50



STA 312+50 TO 312+84

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	CROSS SECTIONS: W. WISCONSIN AVENUE	SHEET	E

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

WKE

MAR 13

PROJECT ID: 1060-33-90

COUNTY: MILWAUKEE

ORDER OF SHEETS

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

TOTAL SHEETS = 184

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1060-33-90		

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ZOO IC TRAFFIC MITIGATION, 84TH ST

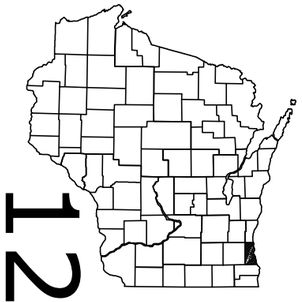
ADLER STREET TO BLUEMOUND ROAD

STH 181

MILWAUKEE COUNTY

STATE PROJECT NUMBER

1060-33-90



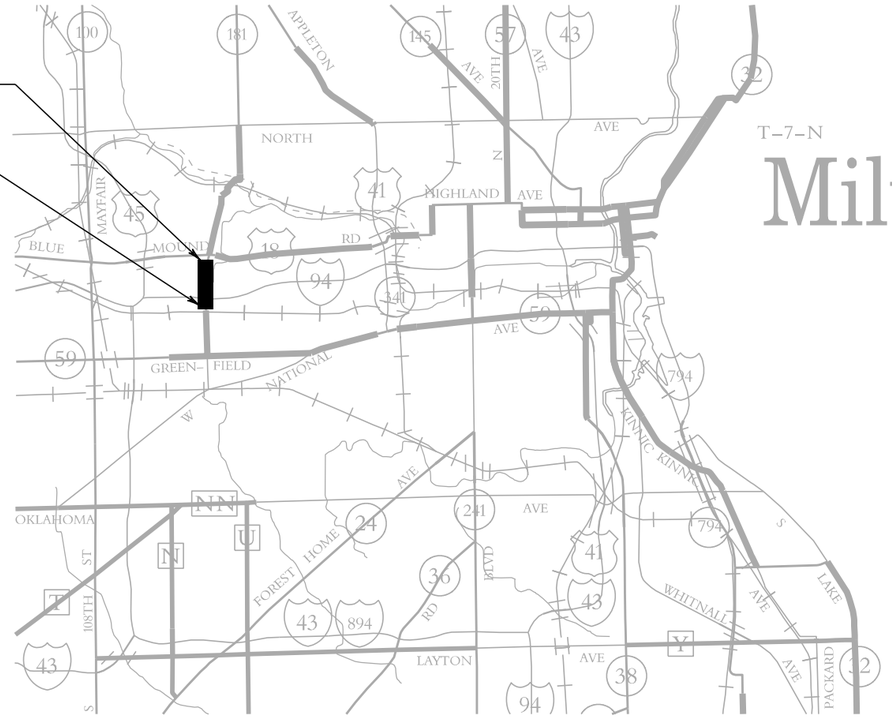
12

N

END PROJECT 1060-33-90
STA. 62+73

T-7-N

BEGIN PROJECT 1060-33-90
STA. 33+46
X = 577151.89
Y = 294741.53



T-7-N

Milwaukee

R-21-E

R-22-E

DESIGN DESIGNATION

A.A.D.T. (2013)	=	12,070
A.A.D.T. (2033)	=	15,516
D.H.V.	=	
D.D.	=	50/50
T.	=	3.5%
DESIGN SPEED	=	35mph
ESALS	=	1,963,700

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

LAYOUT

SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.554 MI.

"ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 NAVD 88 (2007)."

"COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), 'MILWAUKEE' COUNTY, NAD 1983 (2007)."

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	
Designer	REBECCA KLEIN
Project Manager	JOSH LEVEQUE
Regional Examiner	
Regional Supervisor	
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 11/01/2012 (Signature)

E

FILE NAME : j:\projects\d2_10603394\90\010101_TI.dgn PLOT DATE : 18-JUN-2012 11:55 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 200:1

WISDOT/CADDS SHEET 10

STANDARD ABBREVIATIONS

AEW	APRON ENDWALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCHMARK
C&G	CURB AND GUTTER
CE	COMMERCIAL ENTRANCE
CL OR $^{C}_{L}$	CENTER OR CONSTRUCTION LINE
CMCP	CULVERT PIPE CORRUGATED METAL
CONC	CONCRETE
COR	CORNER
CP	CULVERT PIPE
CPCS	CULVERT PIPE CORRUGATED STEEL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
EBS	EXCAVATION BELOW SUBGRADE
EX	EXISTING
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALTIC
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
M/L	MAINLINE
MON	MONUMENT
NB	NORTHBOUND
NC	NORMAL CROWN
NOR	NORMAL
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PP	POWER POLE
PT	POINT OF TANGENT
R	RADIUS OF CURVE
RC	REVERSE CROWN
RCAEW	APRON END WALL FOR CULVERT PIPE REINFORCED CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
R/L	REFERENCE LINE
RO	RUN OFF LENGTH
RRSP	RAILROAD SPIKE
RT	RIGHT
R/W	RIGHT OF WAY
SALV	SALVAGED
SAPBC	SALVAGED ASPHALTIC PAVEMENT BASE COURSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
SI	SLOPE INTERCEPT
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 OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
UTILITY INFORMATION PLANS
EROSION CONTROL PLANS
PERMANENT SIGNING PLANS
TRAFFIC SIGNAL PLANS
PAVEMENT MARKING PLANS
TRAFFIC CONTROL PLANS
ALIGNMENT PLANS

UTILITY CONTACTS

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Joshua.iwen@milwaukee.gov

MILWAUKEE, CITY OF - CABLE
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dan.sande@we-energies.com

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CELL: (414) 587-0655
jason.chapin@we-energies.com

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CELL: (414) 750-2836
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DUTY ENGINEER
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WAUKESHA, WI 53187
PHONE: (414) 750-2605

ELECTRICAL FIELD UNIT
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WEST ALLIS, WI 53214
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Csmeltzer@milwcnty.com

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dziarek@mcts.org

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MR. DAN LARSEN
WEST ALLIS/WEST MIL. SCHOOL DIST.
1205 SOUTH 70TH STREET
WEST ALLIS, WI 53214
PHONE: (414) 604-3040
LarsenD@wawm.k12.wi.us

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

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

DIGGERS HOTLINE

Call 811 3 Work Days Before You Dig
Or Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

2

GENERAL NOTES

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF 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 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 IS 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.

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

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 WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

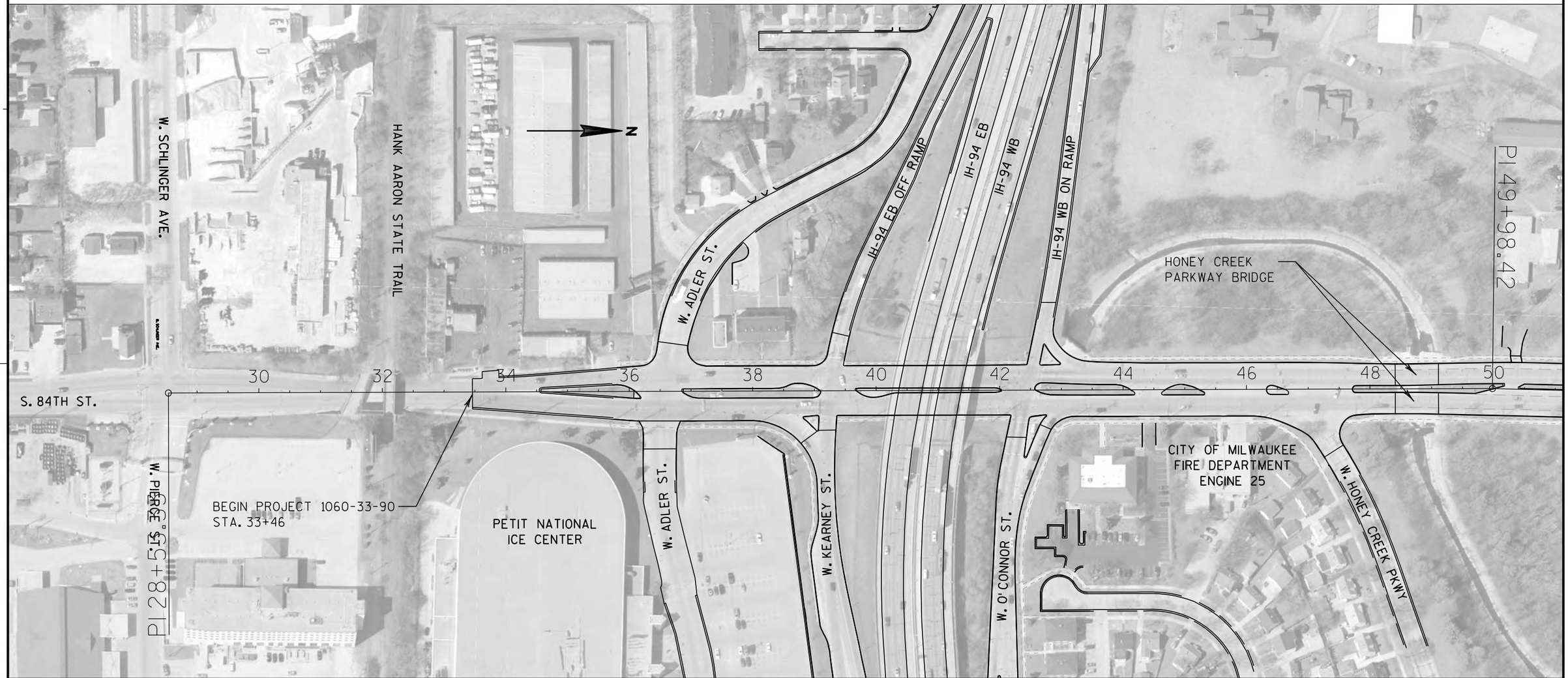
THE LOCATION TO KNOWN EXISTING UTILITIES IN THE VICINITY OF THE PROJECT ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

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

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

PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION	ASPHALTIC MATERIAL
HMA E-3	2 1/4"	LOWER LAYER	19.0 MM	PG58-28
HMA E-3	1 3/4"	UPPER LAYER	12.5 MM	PG58-28

2



PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET	E

2

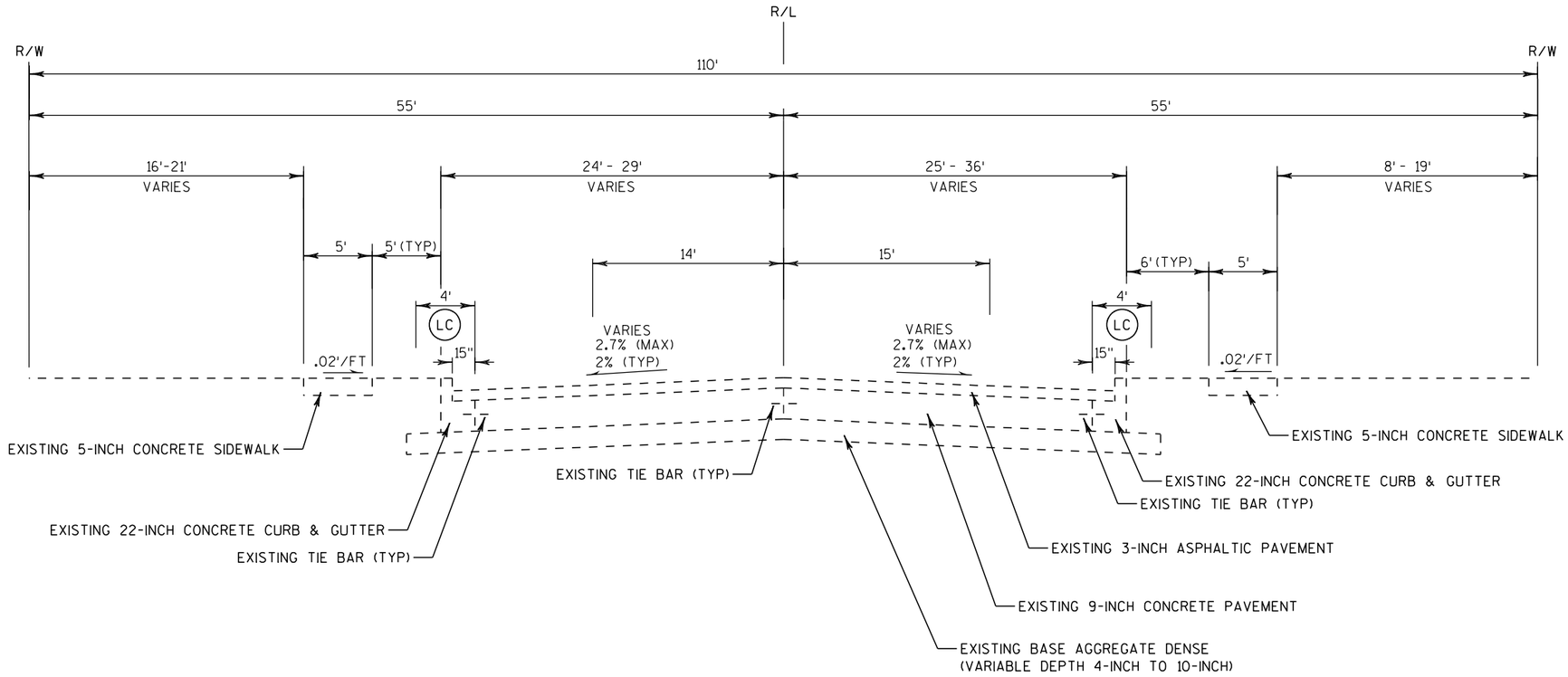


PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\020202_po.dgn PLOT DATE : 14-SEP-2012 09:45 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 160:1

WISDOT/CADDS SHEET 42

2

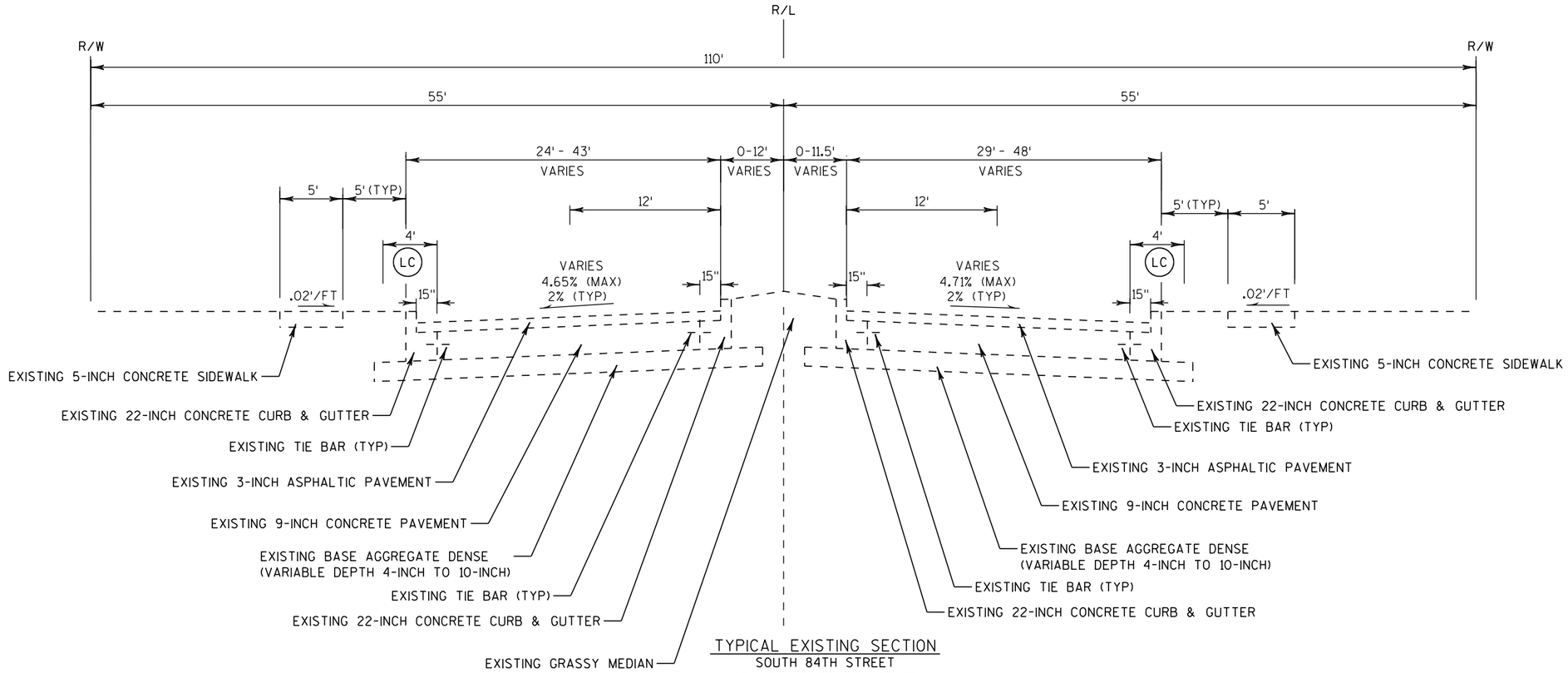


TYPICAL EXISTING SECTION
SOUTH 84TH STREET
STA. 33+46 TO STA. 34+60

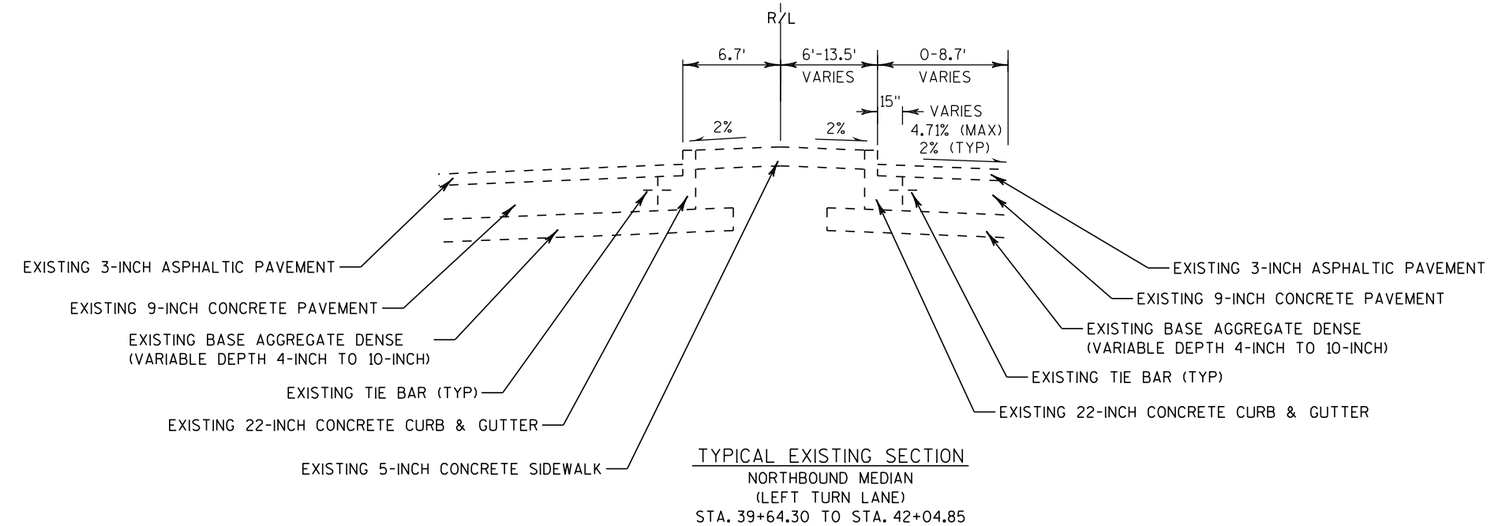
(LC) = LATERAL CLEARANCE

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TYPICAL SECTION	SHEET	E

2



TYPICAL EXISTING SECTION
SOUTH 84TH STREET
STA. 34+60 TO STA. 62+73



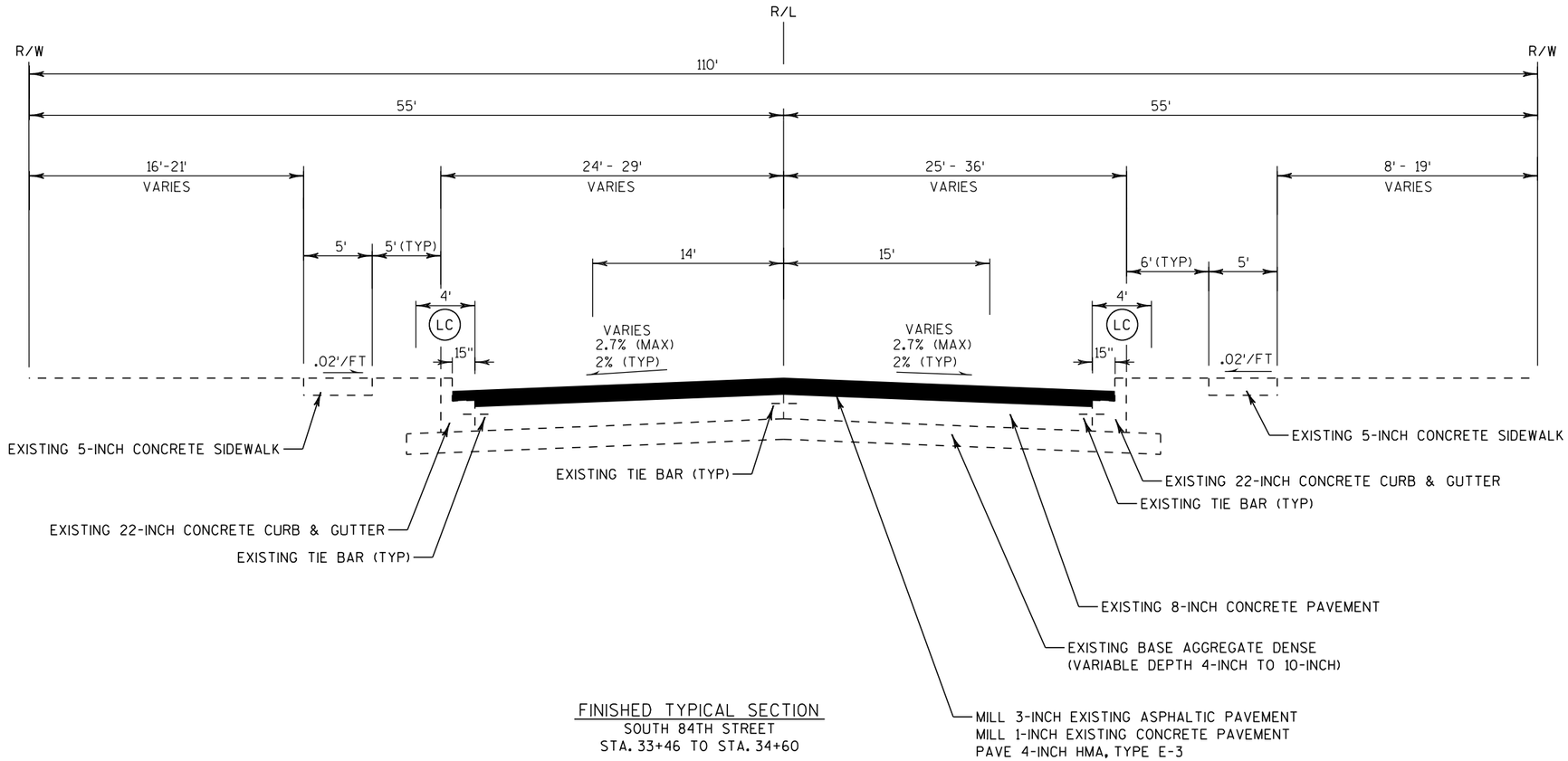
TYPICAL EXISTING SECTION
NORTHBOUND MEDIAN
(LEFT TURN LANE)
STA. 39+64.30 TO STA. 42+04.85

(LC) = LATERAL CLEARANCE

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TYPICAL SECTION	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\020301_TS.dgn PLOT DATE : 20-JUN-2012 11:13 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 200:1

2

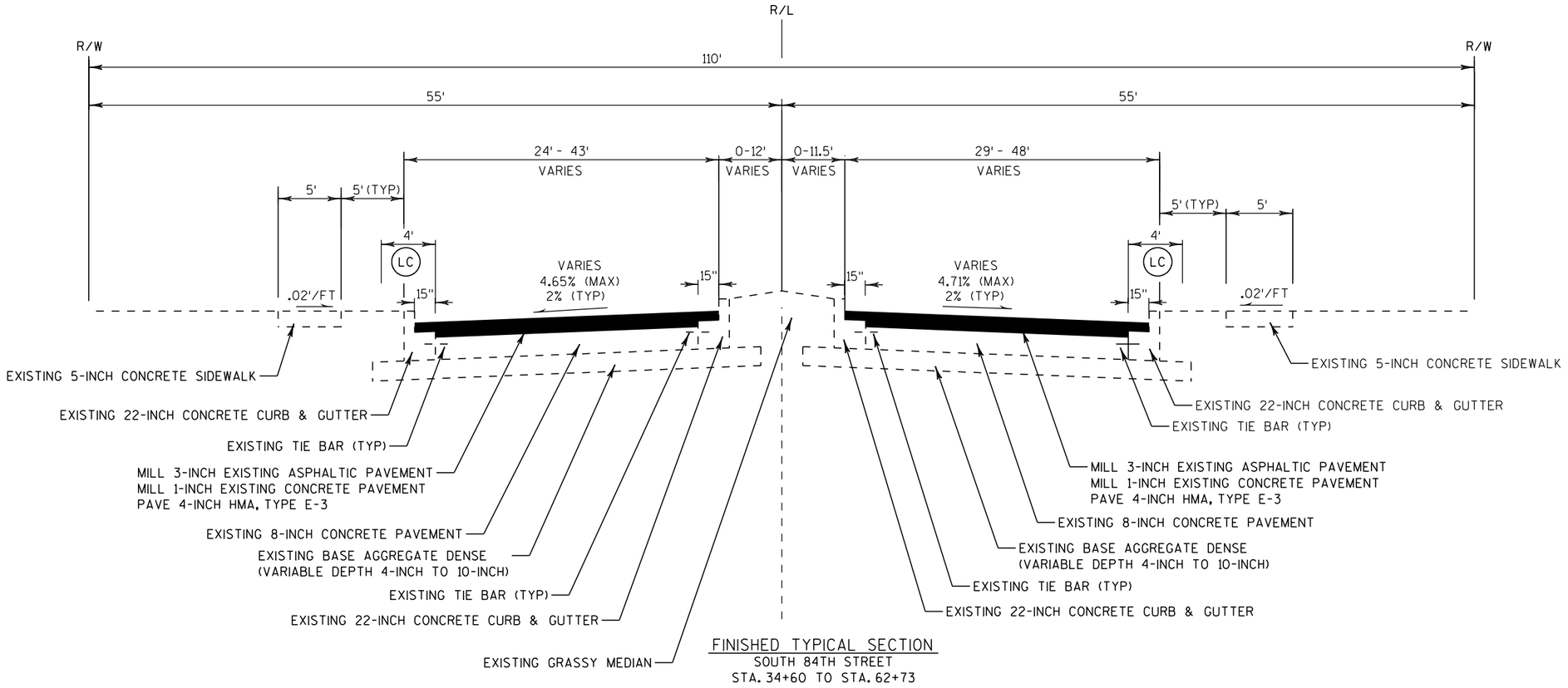


FINISHED TYPICAL SECTION
SOUTH 84TH STREET
STA. 33+46 TO STA. 34+60

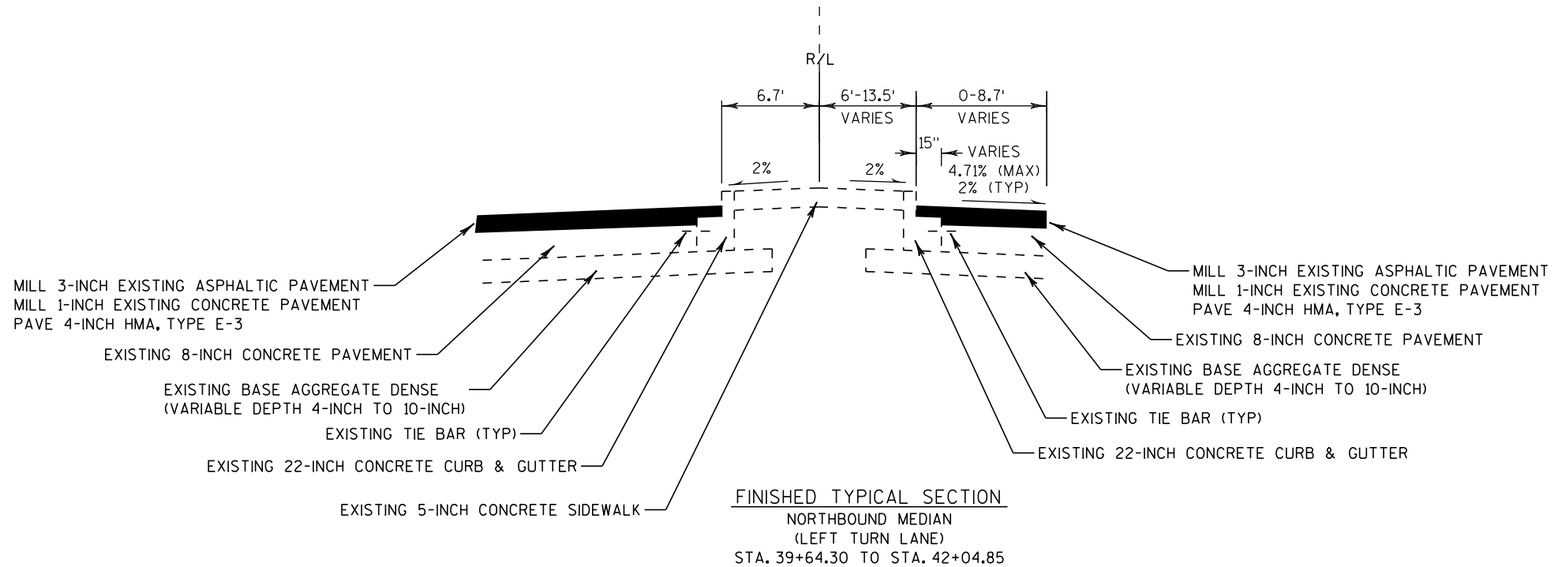
(LC) = LATERAL CLEARANCE

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TYPICAL SECTION	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\020302_TS.dgn PLOT DATE : 20-JUN-2012 11:13 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 200:1



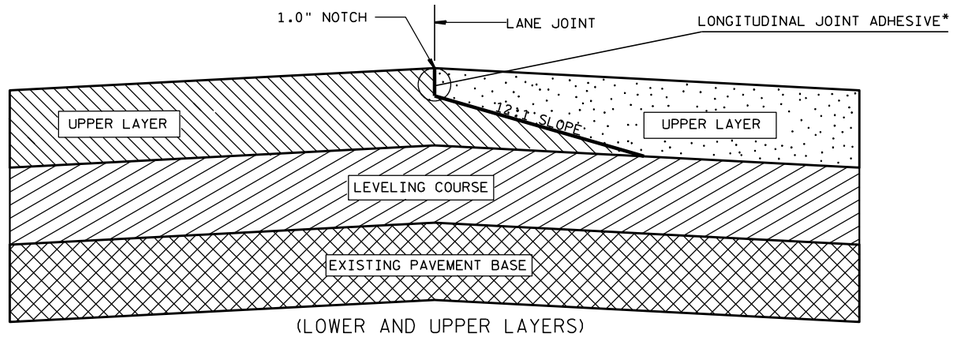
FINISHED TYPICAL SECTION
SOUTH 84TH STREET
STA. 34+60 TO STA. 62+73



FINISHED TYPICAL SECTION
NORTHBOUND MEDIAN
(LEFT TURN LANE)
STA. 39+64.30 TO STA. 42+04.85

(LC) = LATERAL CLEARANCE

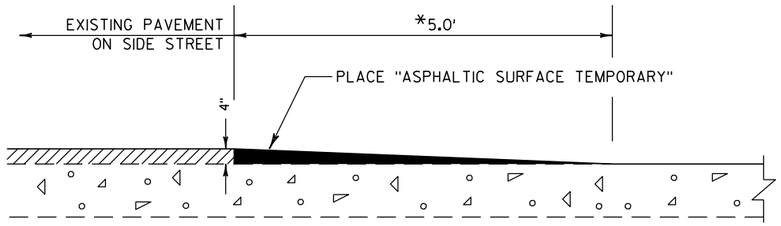
PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TYPICAL SECTION	SHEET	E



(LOWER AND UPPER LAYERS)

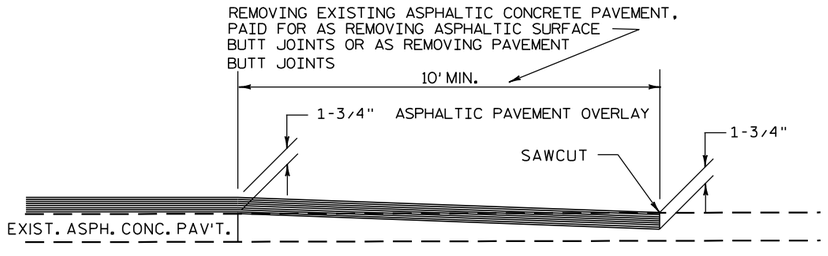
TYPICAL PAVEMENT CROSS SECTIONS OF
TAPERED AND NOTCHED LONGITUDINAL JOINTS
*AT CENTERLINE - OUTSIDE EDGELINE

*10.0' AT PROJECT LIMITS ON S. 84TH STREET

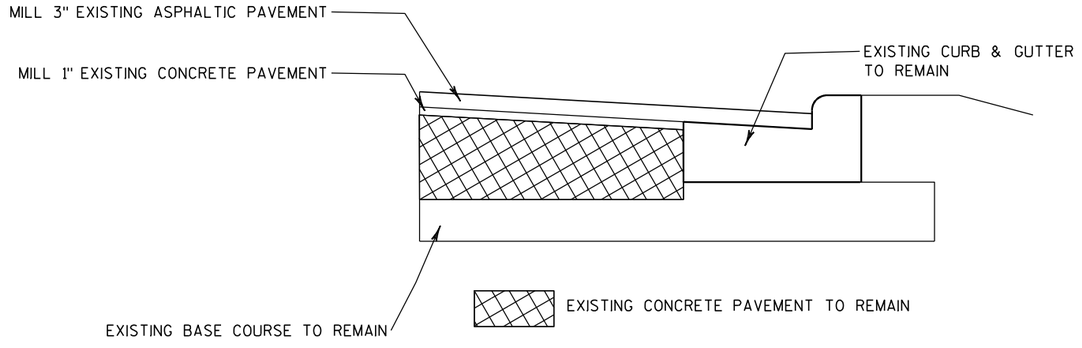


NOTE:
REMOVAL OF ASPHALTIC WEDGES WILL BE PAID FOR AS
"REMOVING ASPHALTIC SURFACE, BUTT JOINTS"

TEMPORARY WEDGES AT SIDE STREETS/MEDIAN OPENINGS



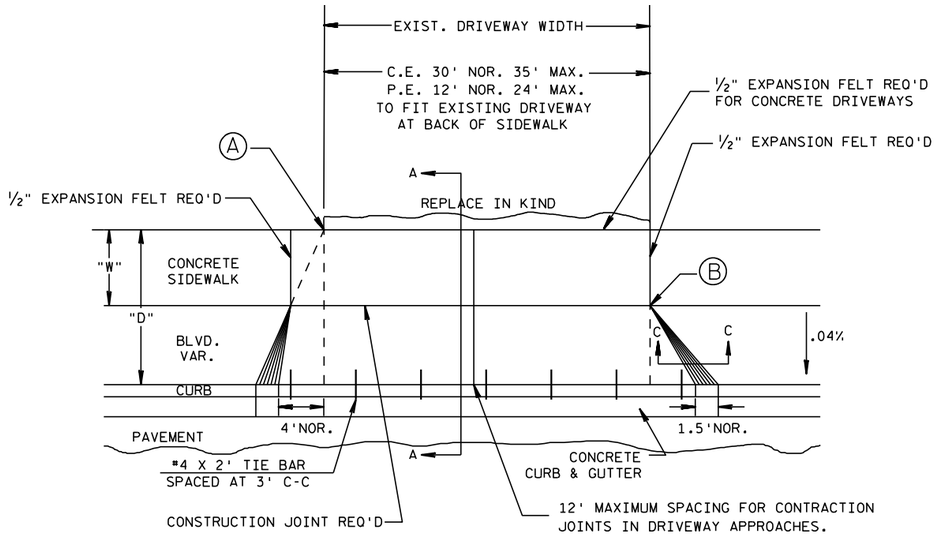
BUTT JOINT DETAIL



MILLING DETAIL AT CURB & GUTTER SECTION

2

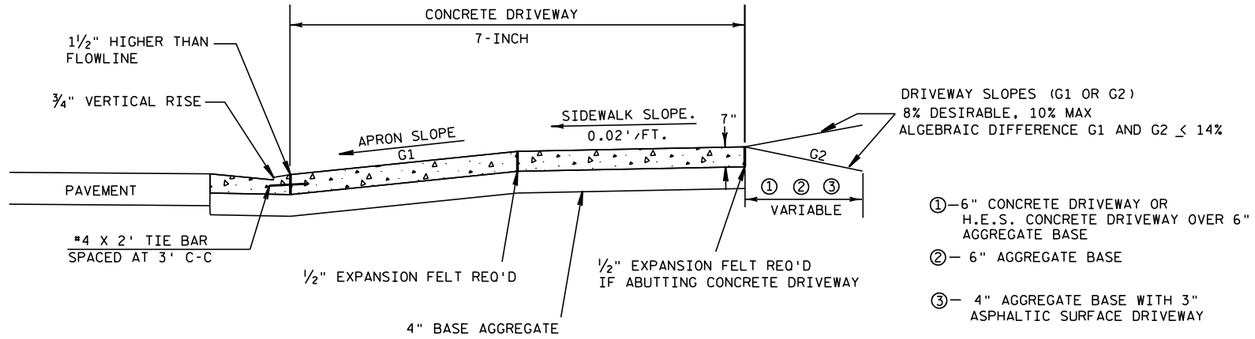
DRIVEWAY ENTRANCE DETAIL WITH SIDEWALK, CURB & GUTTER



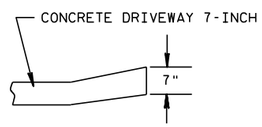
PLAN VIEW

Ⓐ WHEN "D" IS 13' OR LESS, ALIGN TAPER WITH BACK OF SIDEWALK

Ⓑ WHEN "D" IS GREATER THAN 13', ALIGN TAPER WITH FRONT OF SIDEWALK



SECTION A-A

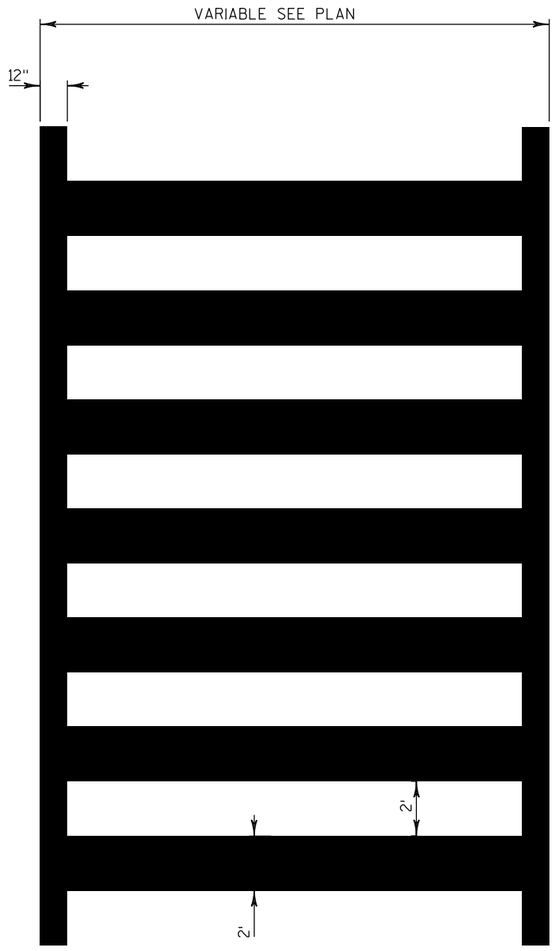


SECTION C-C

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\021009_cd.dgn PLOT DATE : 14-SEP-2012 09:16 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 200:1 WISDOT/CADDS SHEET 42

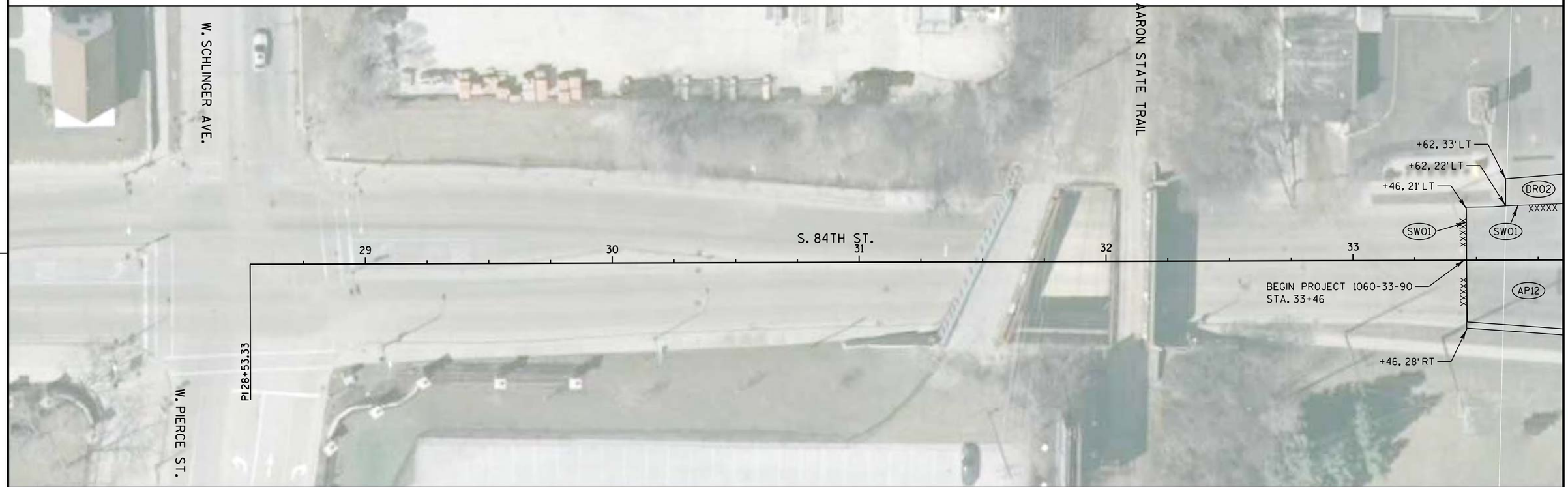
2



CROSSWALK
NON-INTERSECTION LADDER

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 13	E

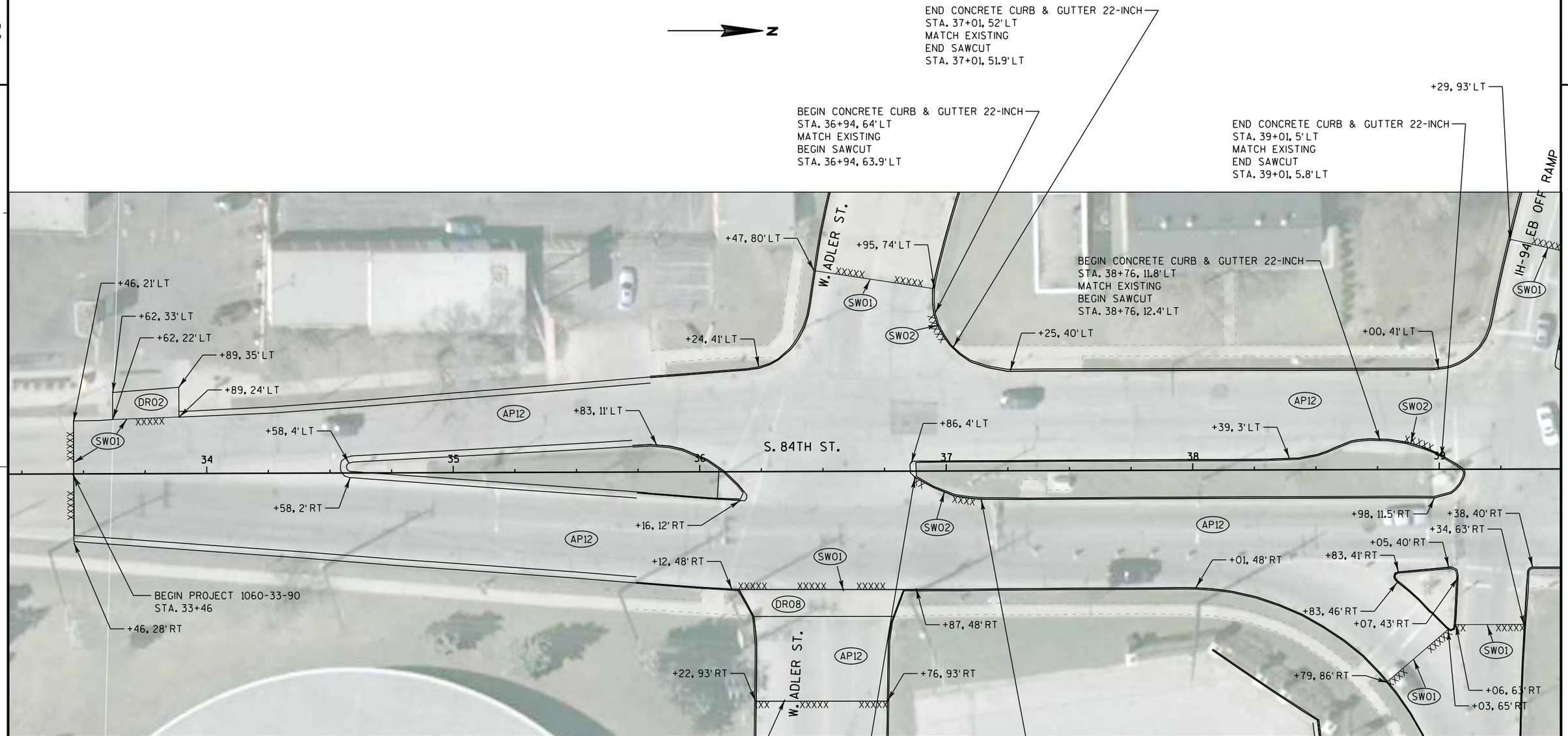
2



LEGEND

- (AP12) HMA PAVEMENT TYPE E-3, 4-INCH
- (CG03) CURB RAMP TYPE 2
- (CG04) CURB RAMP TYPE 3
- (CM07) CONCRETE SIDEWALK 5-INCH
- (DR02) CONCRETE DRIVEWAY 7-INCH
- (DR08) CONCRETE DRIVEWAY 8-INCH
- (SW01) SAWING ASPHALT
- (SW02) SAWING CONCRETE
- REMOVAL SIDEWALK

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 14	E



LEGEND

- AP12 HMA PAVEMENT TYPE E-3, 4-INCH
- CG03 CURB RAMP TYPE 2
- CG04 CURB RAMP TYPE 3
- CM07 CONCRETE SIDEWALK 5-INCH
- DR02 CONCRETE DRIVEWAY 7-INCH
- DR08 CONCRETE DRIVEWAY 8-INCH
- SW01 SAWING ASPHALT
- SW02 SAWING CONCRETE
- REMOVAL SIDEWALK

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET E

FILE NAME : J:\projects\d2_10603394\90\021202_pd.dgn PLOT DATE : 03-JAN-2013 10:19 PLOT BY : dotjqp PLOT NAME : PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

2

N

IH-94 EB OFF RAMP

IH-94 EB

IH-94 WB

IH-94 WB ON RAMP

HONEY CREEK

BEGIN CONCRETE CURB & GUTTER 22-INCH
STA. 44+15, 1.9' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 44+15, 1.4' RT

SW01
XXXXX
+68, 142' LT
+92, 142' LT

BEGIN CONCRETE CURB & GUTTER 22-INCH
STA. 42+65, 47' LT
MATCH EXISTING
BEGIN SAWCUT
STA. 42+65, 47' LT

END CONCRETE CURB & GUTTER 22-INCH
STA. 44+15, 8.5' RT
MATCH EXISTING
END SAWCUT
STA. 44+15, 8.5' RT

END CONCRETE CURB & GUTTER 22-INCH
STA. 44+66, 8' RT
MATCH EXISTING
END SAWCUT
STA. 44+66, 8.6' RT

BEGIN CONCRETE CURB & GUTTER 22-INCH
STA. 44+66, 2' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 44+66, 2.5' RT

+29, 93' LT
XXXXX
+57, 87' LT

AP12

+74, 72.5' LT

END CONCRETE CURB & GUTTER 22-INCH
STA. 42+69 40.9' LT
MATCH EXISTING
END SAWCUT
STA. 42+69 40.4' LT

SW02

+50, 40' LT

+99, 45' LT

+46, 46' LT

+51, 43' LT

+43, 41' LT

+97, 41' LT

S. 84TH ST.

AP12

+67, 4' LT

+94, 4' LT

+69, 12' LT

+88, 8' LT

+29, 4' RT

40

41

42

43

44

45

+93, 11' RT

+31, 4' RT

+93, 4' RT

+82, 8' RT

SW02

+28, 9' RT

AP12

+38, 40' RT

+34, 63' RT

+16, 40' RT

+51, 42' RT

+20, 42.5' RT

SW02

XXXXX

XX

SW02

BEGIN CONCRETE CURB & GUTTER 22-INCH
STA. 42+72, 40.6' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 42+72, 40' RT

XXXXX

+65, 56' RT

SW01

XXXXX

+11, 76' RT

XXXXX

SW01

+43, 76' RT

+84, 63' RT

W. KEARNEY ST.

W. O'CONNOR ST.

END CONCRETE CURB & GUTTER 22-INCH
STA. 42+73, 44.6' RT
MATCH EXISTING
END SAWCUT
STA. 42+73, 45' RT

END CONCRETE CURB & GUTTER 22-INCH
STA. 44+23, 43.5' RT
MATCH EXISTING
END SAWCUT
STA. 44+23, 42.9' RT

BEGIN CONCRETE CURB & GUTTER 22-INCH
STA. 43+95, 43.5' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 43+95, 42.9' RT

LEGEND

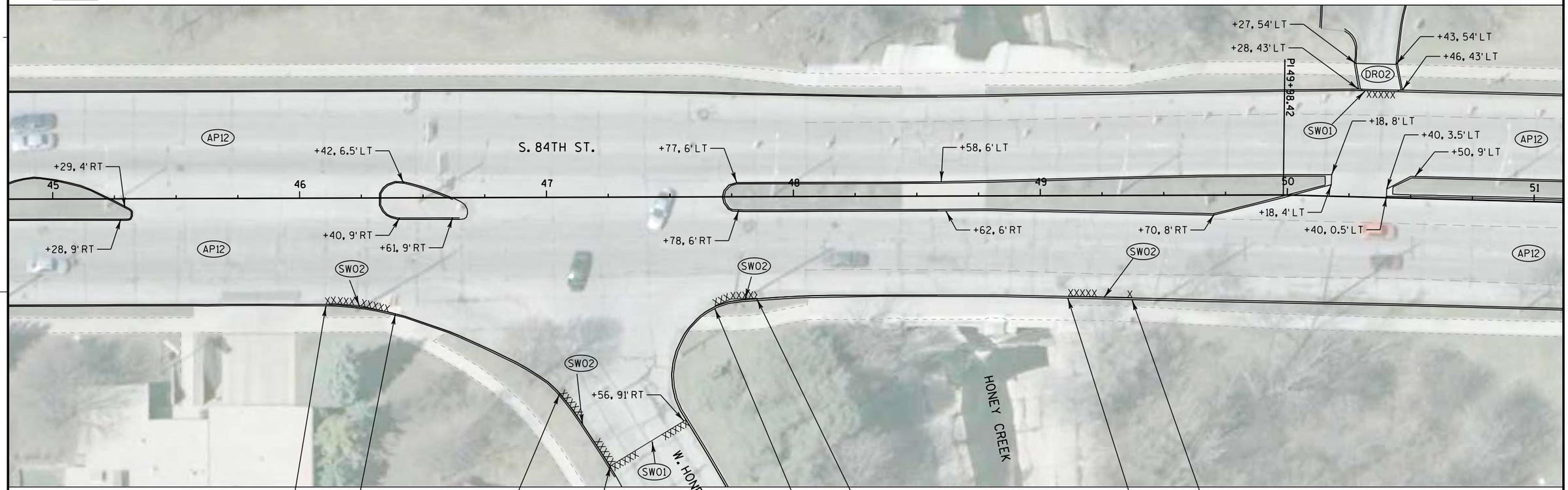
- (AP12) HMA PAVEMENT TYPE E-3, 4-INCH
- (CG03) CURB RAMP TYPE 2
- (CG04) CURB RAMP TYPE 3
- (CM07) CONCRETE SIDEWALK 5-INCH
- (DR02) CONCRETE DRIVEWAY 7-INCH
- (DR08) CONCRETE DRIVEWAY 8-INCH
- (SW01) SAWING ASPHALT
- (SW02) SAWING CONCRETE
- REMOVAL SIDEWALK

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 16	E

LEGEND

- (AP12) HMA PAVEMENT TYPE E-3, 4-INCH
- (CG03) CURB RAMP TYPE 2
- (CG04) CURB RAMP TYPE 3
- (CM07) CONCRETE SIDEWALK 5-INCH
- (DR02) CONCRETE DRIVEWAY 7-INCH
- (DR08) CONCRETE DRIVEWAY 8-INCH
- (SW01) SAWING ASPHALT
- (SW02) SAWING CONCRETE
- REMOVAL SIDEWALK

N



BEGIN CONCRETE CURB & GUTTER 22-INCH
STA. 46+14, 43.7' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 46+14, 43.1' RT

END CONCRETE CURB & GUTTER 22-INCH
STA. 46+38, 47.5' RT
MATCH EXISTING
END SAWCUT
STA. 46+38, 46.9' RT

BEGIN CONCRETE CURB & GUTTER 22-INCH
STA. 47+05, 79.6' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 47+05, 79' RT

END CONCRETE CURB & GUTTER 22-INCH
STA. 47+25, 109.4' RT
MATCH EXISTING
END SAWCUT
STA. 47+25, 109' RT

END CONCRETE CURB & GUTTER 22-INCH
STA. 47+85, 42' RT
MATCH EXISTING
END SAWCUT
STA. 47+85, 41.3' RT

BEGIN CONCRETE CURB & GUTTER 22-INCH
STA. 47+68, 45.2' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 47+68, 44.5' RT

END CONCRETE CURB & GUTTER 22-INCH
STA. 49+37, 42.2' RT
MATCH EXISTING
END SAWCUT
STA. 49+37, 41.4' RT

BEGIN CONCRETE CURB & GUTTER 22-INCH
STA. 49+11, 41.5' RT
MATCH EXISTING
BEGIN SAWCUT
STA. 49+11, 40.8' RT

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 17	E

2

2

BEGIN REMOVAL OF CONCRETE SIDEWALK 5-INCH
STA. 51+98
BEGIN CONCRETE SIDEWALK 5-INCH
STA. 51+98, MATCH EXISTING

BEGIN REMOVAL OF CONCRETE SIDEWALK 5-INCH
STA. 52+43
BEGIN CONCRETE SIDEWALK 5-INCH
STA. 52+43, MATCH EXISTING

END REMOVAL OF CONCRETE SIDEWALK 5-INCH
STA. 53+42
END CONCRETE SIDEWALK 5-INCH
STA. 53+42, MATCH EXISTING

LEGEND

- AP12 HMA PAVEMENT TYPE E-3, 4-INCH
- CG03 CURB RAMP TYPE 2
- CG04 CURB RAMP TYPE 3
- CM07 CONCRETE SIDEWALK 5-INCH
- DR02 CONCRETE DRIVEWAY 7-INCH
- DR08 CONCRETE DRIVEWAY 8-INCH
- SW01 SAWING ASPHALT
- SW02 SAWING CONCRETE
- REMOVAL SIDEWALK

N

END CONCRETE CURB & GUTTER 22-INCH
STA. 56+60, 8'LT
MATCH EXISTING
END SAWCUT
STA. 56+60, 8'LT

+96, 76'LT
+86, 76'LT
W. DANA ST.
+62, 76'LT
+20, 76'LT
+75, 73'LT
+58, 43'LT
+45, 55'LT
+66, 55'LT
+39, 43'LT
+72, 43'LT
+22, 43'LT
+58, 43'LT
+56, 9'LT
+26, 9'LT
S. 84TH ST.
PI 55+42.89
+48, 1.5'LT
+40, 9'RT
+62, 43'RT
+11, 42'RT
W. DANA ST.

END REMOVAL OF CONCRETE SIDEWALK 5-INCH
STA. 53+42
END CONCRETE SIDEWALK 5-INCH
STA. 53+42, MATCH EXISTING

BEGIN REMOVAL OF CONCRETE SIDEWALK 5-INCH
STA. 53+30
BEGIN CONCRETE SIDEWALK 5-INCH
STA. 53+30, MATCH EXISTING

END REMOVAL OF CONCRETE SIDEWALK 5-INCH
STA. 53+15
END CONCRETE SIDEWALK 5-INCH
STA. 53+15, MATCH EXISTING

BEGIN REMOVAL OF CONCRETE SIDEWALK 5-INCH
STA. 53+05
BEGIN CONCRETE SIDEWALK 5-INCH
STA. 53+05, MATCH EXISTING

END REMOVAL OF CONCRETE SIDEWALK 5-INCH
STA. 52+43
END CONCRETE SIDEWALK 5-INCH
STA. 52+43, MATCH EXISTING

BEGIN REMOVAL OF CONCRETE SIDEWALK 5-INCH
STA. 52+25
BEGIN CONCRETE SIDEWALK 5-INCH
STA. 52+25, MATCH EXISTING

END REMOVAL OF CONCRETE SIDEWALK 5-INCH
STA. 52+62
END CONCRETE SIDEWALK 5-INCH
STA. 52+62, MATCH EXISTING

BEGIN REMOVAL OF CONCRETE SIDEWALK 5-INCH
STA. 52+57
BEGIN CONCRETE SIDEWALK 5-INCH
STA. 52+57, MATCH EXISTING

BEGIN CONCRETE CURB & GUTTER 22-INCH
STA. 56+60, 10'RT
MATCH EXISTING
BEGIN SAWCUT
STA. 56+60, 10'RT

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 18	E

2

N

W. HAWTHORNE AVE.

+75, 73' LT

XXXXX

SW01

+01, 73' LT

+58, 43' LT

+19, 43' LT

AP12

+60, 8' LT

XXX

SW02

+61, 10' RT

+26, 10' LT

+26, 8' RT

S. 84TH ST.

57

58

59

60

61

62

PC 57+62.93

PI60+73.45

AP12

AP12

+57' LT

XXXXX

SW01

+21, 43' LT

W. HILL ST.

+15, 9' LT

+15, 8' RT

AP12

SW01

XXXXX

+72, 43'RT

LEGEND

- AP12 HMA PAVEMENT TYPE E-3, 4-INCH
- CG03 CURB RAMP TYPE 2
- CG04 CURB RAMP TYPE 3
- CM07 CONCRETE SIDEWALK 5-INCH
- DR02 CONCRETE DRIVEWAY 7-INCH
- DR08 CONCRETE DRIVEWAY 8-INCH
- SW01 SAWING ASPHALT
- SW02 SAWING CONCRETE
- REMOVAL SIDEWALK

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 19	E

2

2

N

HILL ST.

SW01

+68, 57'LT

XXXXX

+72, 48'LT

+38, 57'LT

SW01

END PROJECT
STA. 62+73

AP12

S. 84TH ST.

63

64

65

66

67

68

AP12

SW01

PT 63+81.26

+72, 43'RT

PT 68+16.07

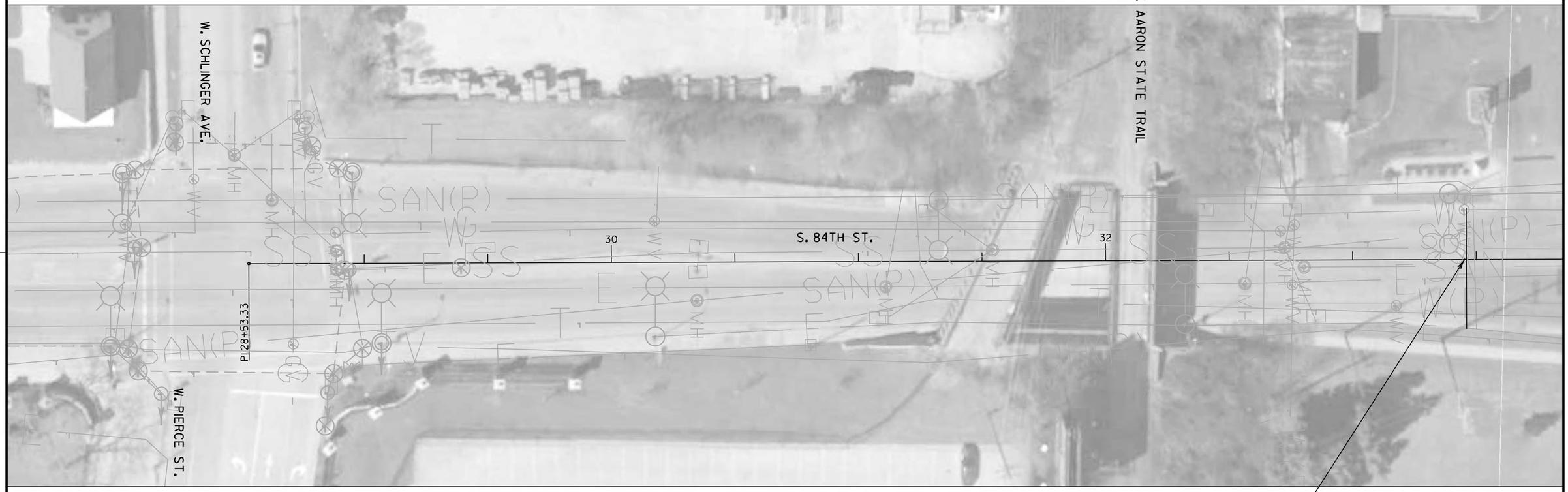
LEGEND

- (AP12) HMA PAVEMENT TYPE E-3, 4-INCH
- (CG03) CURB RAMP TYPE 2
- (CG04) CURB RAMP TYPE 3
- (CM07) CONCRETE SIDEWALK 5-INCH
- (DR02) CONCRETE DRIVEWAY 7-INCH
- (DR08) CONCRETE DRIVEWAY 8-INCH
- (SW01) SAWING ASPHALT
- (SW02) SAWING CONCRETE
- REMOVAL SIDEWALK

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 20	E

2

N



FOR INFORMATION ONLY

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	UTILITY INFORMATION	SHEET	E

2

N

W. ADLER ST.

IH-94 EB OFF RAMP

S. 84TH ST.

34

36

38

BEGIN PROJECT 1060-33-90
STA. 33+46

W. ADLER ST.

W. KEARNEY ST.

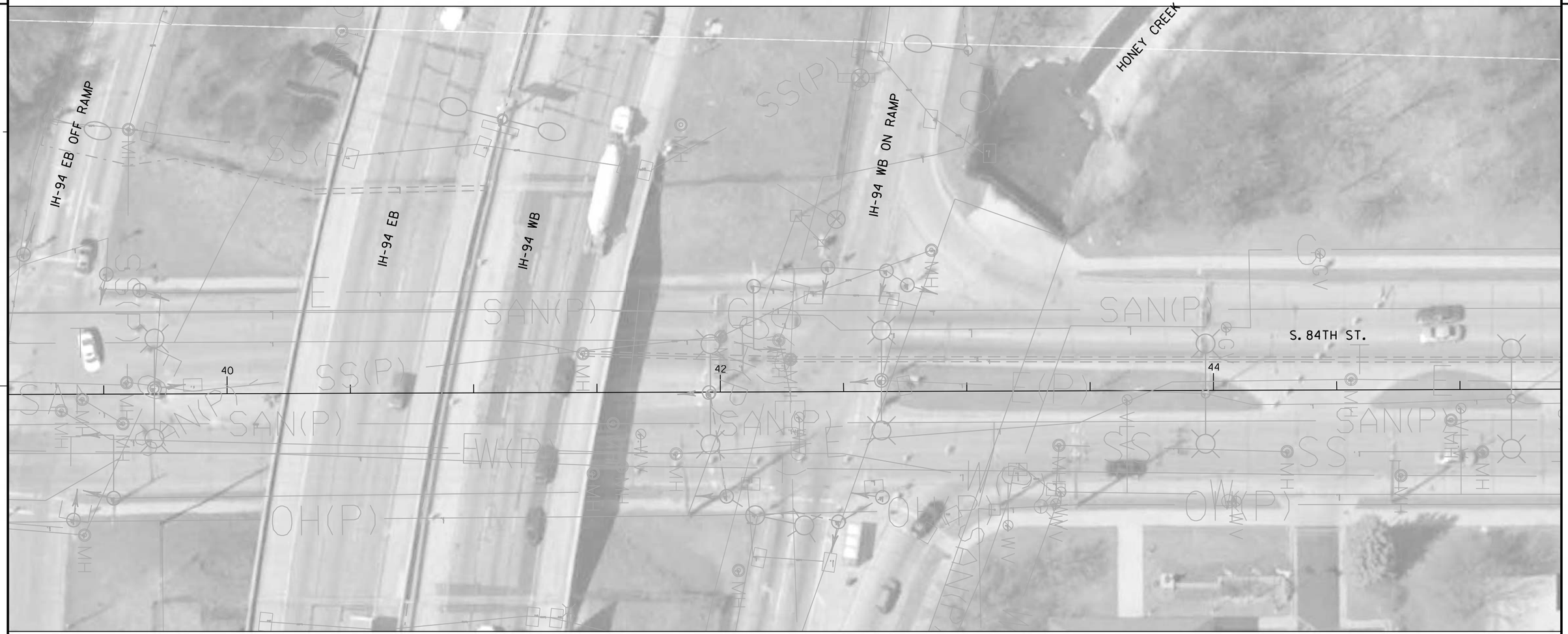
FOR INFORMATION ONLY

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	UTILITY INFORMATION	SHEET	E

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2

N



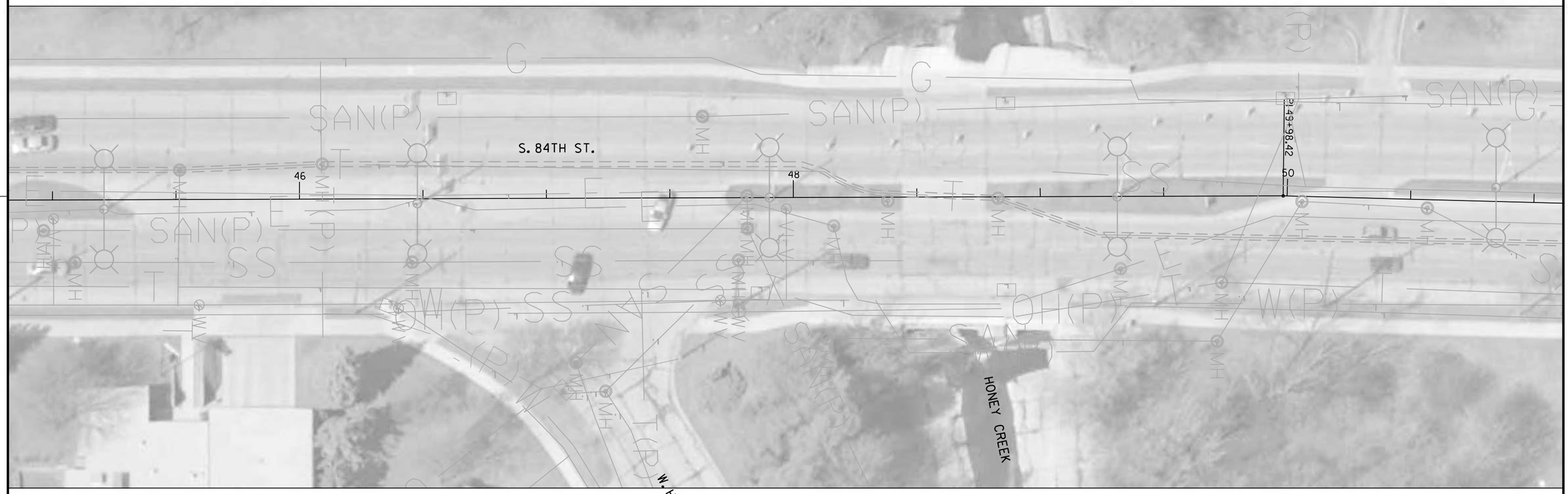
FOR INFORMATION ONLY

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	UTILITY INFORMATION	SHEET	E

2

2

N



FOR INFORMATION ONLY

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	UTILITY INFORMATION	SHEET	E

2

N

W. DANA ST.

S. 84TH ST.

52

54

56

PI 55+42.89

W. DANA ST.

FOR INFORMATION ONLY

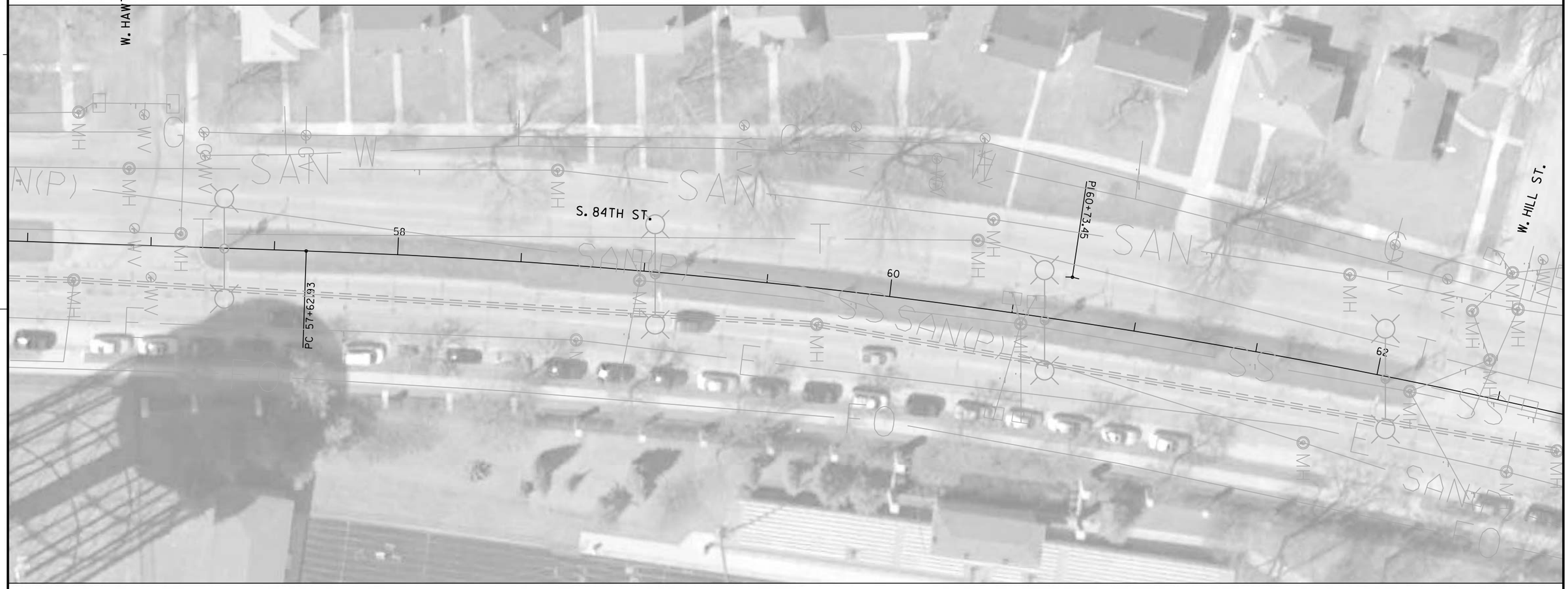
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FILE NAME : j:\projects\d2_10603394\90\021305_IO.dgn PLOT DATE : 18-JUN-2012 11:58 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1

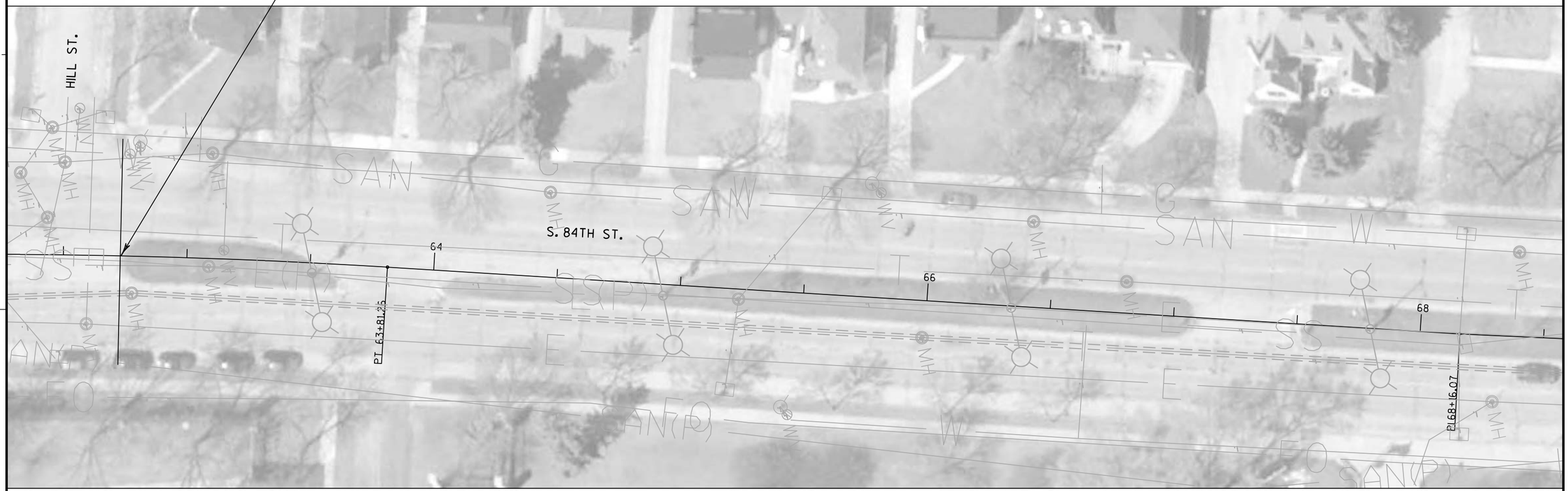
2

N

2


W. HAWTHORNE AVE.
S. 84TH ST.
W. HILL ST.
PC 57+62.93
PI60+73.45
58
60
62
SAN
SAN(P)
SS
SAN(P)
SAN
F0
F0
F0
MH
MH
MH

2



FOR INFORMATION ONLY

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	UTILITY INFORMATION	SHEET	E

2

2

N

W. SCHLINGER AVE.

S. 84TH ST.

HANK AARON STATE TRAIL

30

32

P128+53.33

W. PIERCE ST.

XXXXX

BEGIN PROJECT 1060-33-90
STA. 33+46

LEGEND

INLET PROTECTION TYPE B
UNLESS OTHERWISE NOTED

INLET PROTECTION TYPE A

INLET PROTECTION TYPE C

INLET PROTECTION TYPE D

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\022001_ec.dgn PLOT DATE : 18-JUN-2012 11:58 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1

2

N

W. ADLER ST.

IH-94 EB OFF RAMP

S. 84TH ST.

34

36

38

A

BEGIN PROJECT 1060-33-90
STA. 33+46

W. ADLER ST.

W. KEARNEY ST.

LEGEND

- INLET PROTECTION TYPE B UNLESS OTHERWISE NOTED
- Ⓐ INLET PROTECTION TYPE A
- Ⓒ INLET PROTECTION TYPE C
- Ⓓ INLET PROTECTION TYPE D

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

2

N

2

IH-94 EB OFF RAMP

IH-94 EB

IH-94 WB

IH-94 WB ON RAMP

HONEY CREEK

S. 84TH ST.

40 41 42 43 44 45

W. KEARNEY ST.

W. O'CONNOR ST.

LEGEND

- INLET PROTECTION TYPE B UNLESS OTHERWISE NOTED
- Ⓐ INLET PROTECTION TYPE A
- Ⓒ INLET PROTECTION TYPE C
- Ⓓ INLET PROTECTION TYPE D

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

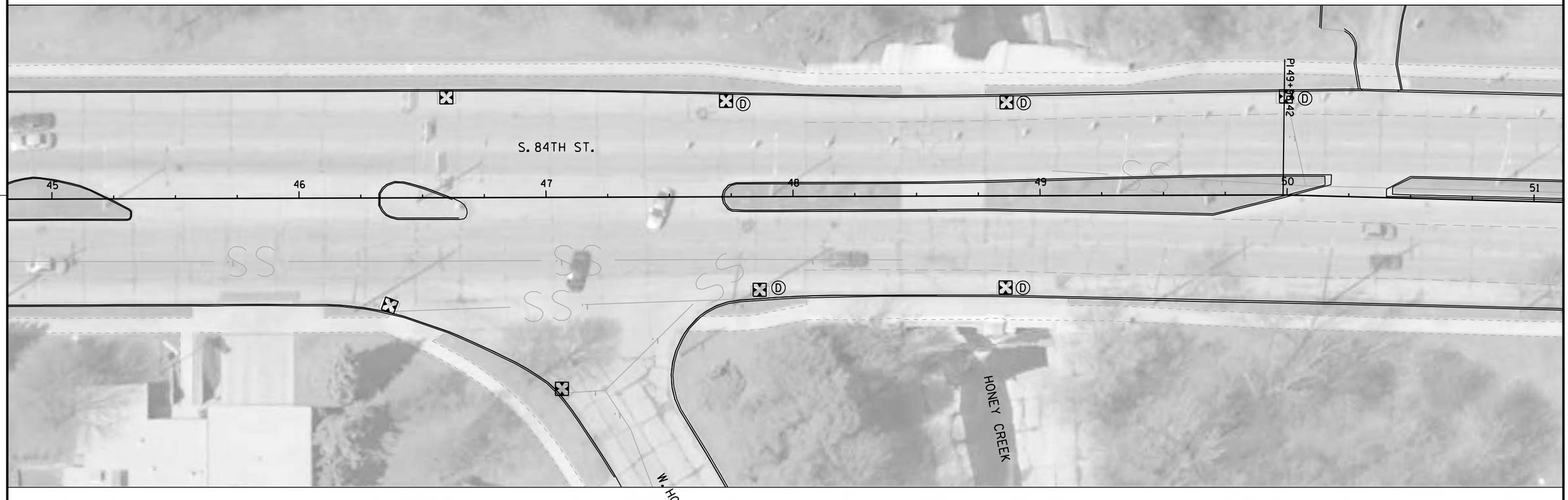
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2

LEGEND

- INLET PROTECTION TYPE B UNLESS OTHERWISE NOTED
- Ⓐ INLET PROTECTION TYPE A
- Ⓒ INLET PROTECTION TYPE C
- Ⓓ INLET PROTECTION TYPE D

N



PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET 31	E

2

N

W. DANA ST.

S. 84TH ST.

PI 55+42.89

52

54

56

SS

LEGEND

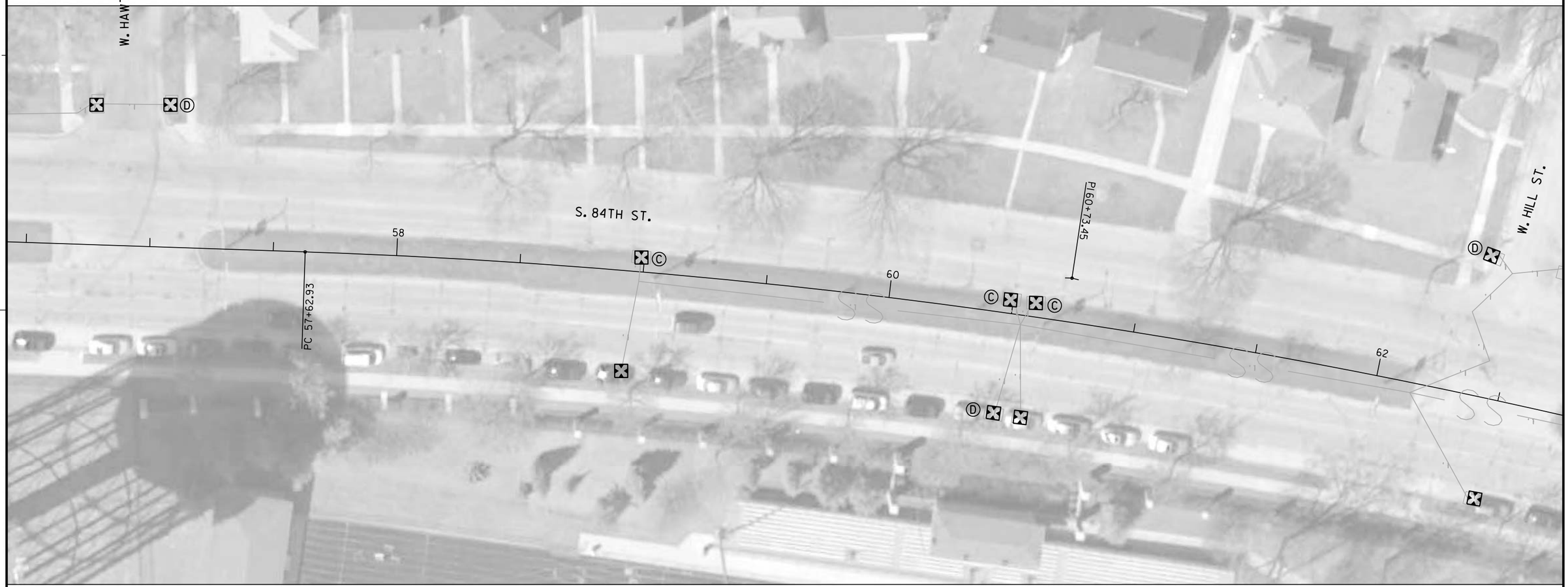
- INLET PROTECTION TYPE B UNLESS OTHERWISE NOTED
- Ⓐ INLET PROTECTION TYPE A
- Ⓒ INLET PROTECTION TYPE C
- Ⓓ INLET PROTECTION TYPE D

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\022005_ec.dgn PLOT DATE : 18-JUN-2012 12:00 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1 WISDOT/CADDS SHEET 42

2

N



LEGEND

- ☒ INLET PROTECTION TYPE B UNLESS OTHERWISE NOTED
- ☒Ⓐ INLET PROTECTION TYPE A
- ☒Ⓒ INLET PROTECTION TYPE C
- ☒Ⓓ INLET PROTECTION TYPE D

PROJECT NO:1060-33-90	HWY:IH-94 / 84TH ST.	COUNTY:MILWAUKEE	EROSION CONTROL	SHEET	E

2



LEGEND

- ⊠ INLET PROTECTION TYPE B UNLESS OTHERWISE NOTED
- ⊠Ⓐ INLET PROTECTION TYPE A
- ⊠Ⓒ INLET PROTECTION TYPE C
- ⊠Ⓓ INLET PROTECTION TYPE D

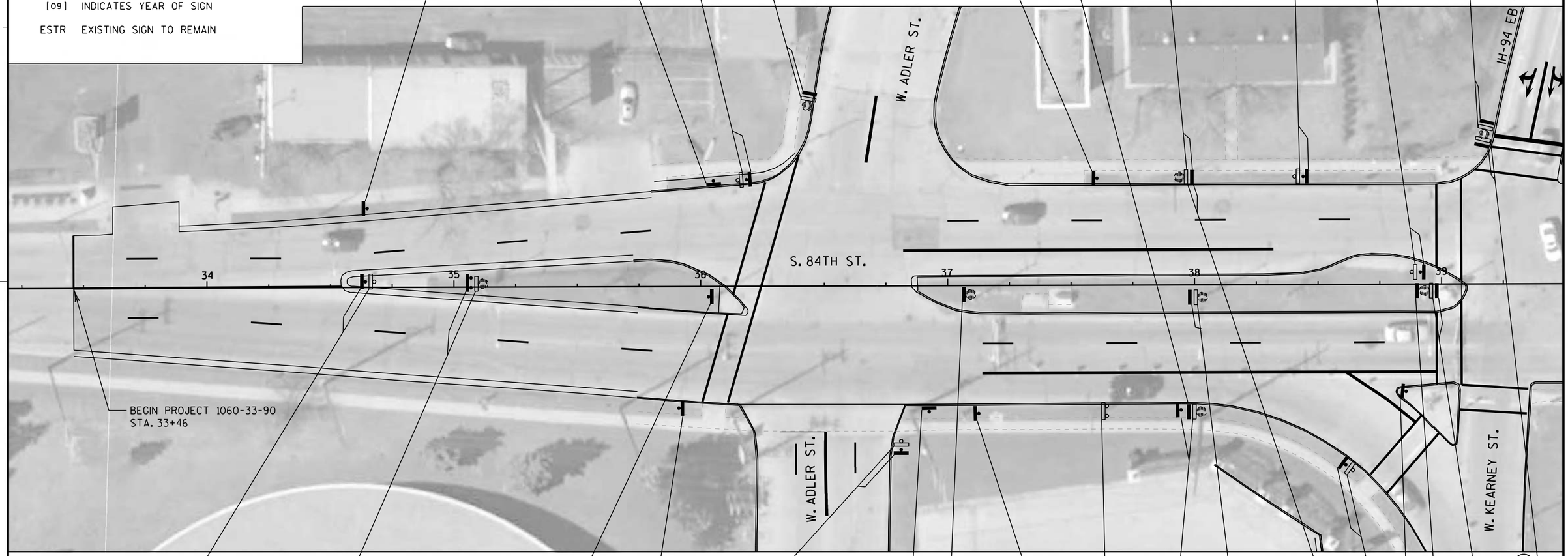
PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

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
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- [09] INDICATES YEAR OF SIGN
- ESTR EXISTING SIGN TO REMAIN

N



129 DO NOT ENTER R5-1(2S)

27 ONE WAY R6-2L(2S)

26 14'-4" W12-2(2S)

14'-4" REMOVE

STOP REMOVE

25 STOP R1-1(2S) ON LIGHT POLE

24 DO NOT ENTER R5-1(2S)

21 EAST MB3-2 INTERSTATE 94 M1-1 MB6-1 J3-1(2S) ON LIGHT POLE

NO PARKING ANY TIME REMOVE

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

SOUTH 181 REMOVE

SOUTH M3-3 20 181 M1-6 J4-1(2S) OAK LEAF TRAIL CITY OF MILWAUKEE TO MOVE TO NEW POST

EAST MB3-2 19 INTERSTATE 94 M1-1 MB6-1 J3-1(2S)

EAST INTERSTATE 94 REMOVE

REMOVE

16 S1-1(2S)

17 WF16-7L(2M) ON SIGNAL POLE

1 R4-7(2S)

2 W5-52L(2S) REMOVE

3 WEST MB3-4 NORTH M3-1 EAST MB3-2 INTERSTATE 94 M1-1 181 M1-6 INTERSTATE 94 M1-1 USE LEFT LANE M4-20L M6-1 MB5-1R J2-3(2S)

WEST NORTH EAST INTERSTATE 94 181 INTERSTATE 94 REMOVE

5 R4-7(2S)

4 DO NOT ENTER R5-1(2S)

6 STOP R1-1(2S) STOP REMOVE

NOTE:
DO NOT PLACE STREET NAME SIGN ON TOP OF STOP SIGNS.

7 ONE WAY R6-2L(2S)

8 R4-7(2S) ON LIGHT POLE

9 BEGIN RIGHT TURN LANE R3-20R(2S)

10 RESTRICTED LANE RAMP RIGHT LANE REMOVE

11 NO PARKING ANY TIME R7-1D(2S) NO PARKING ANY TIME REMOVE

EAST MB3-2 INTERSTATE 94 12 M1-1 MB6-1 J3-1(2S) ON LIGHT POLE

EAST INTERSTATE 94 REMOVE

22 SPEED LIMIT 30 R2-1(2S) SPEED LIMIT 30 REMOVE

YIELD 13 R1-2(2S) YIELD REMOVE

14 W12-1D(2S) 2' MOUNTING HEIGHT

128 R3-2(2S) ON LIGHT POLE

18 R4-7(2S) ON LIGHT POLE REMOVE

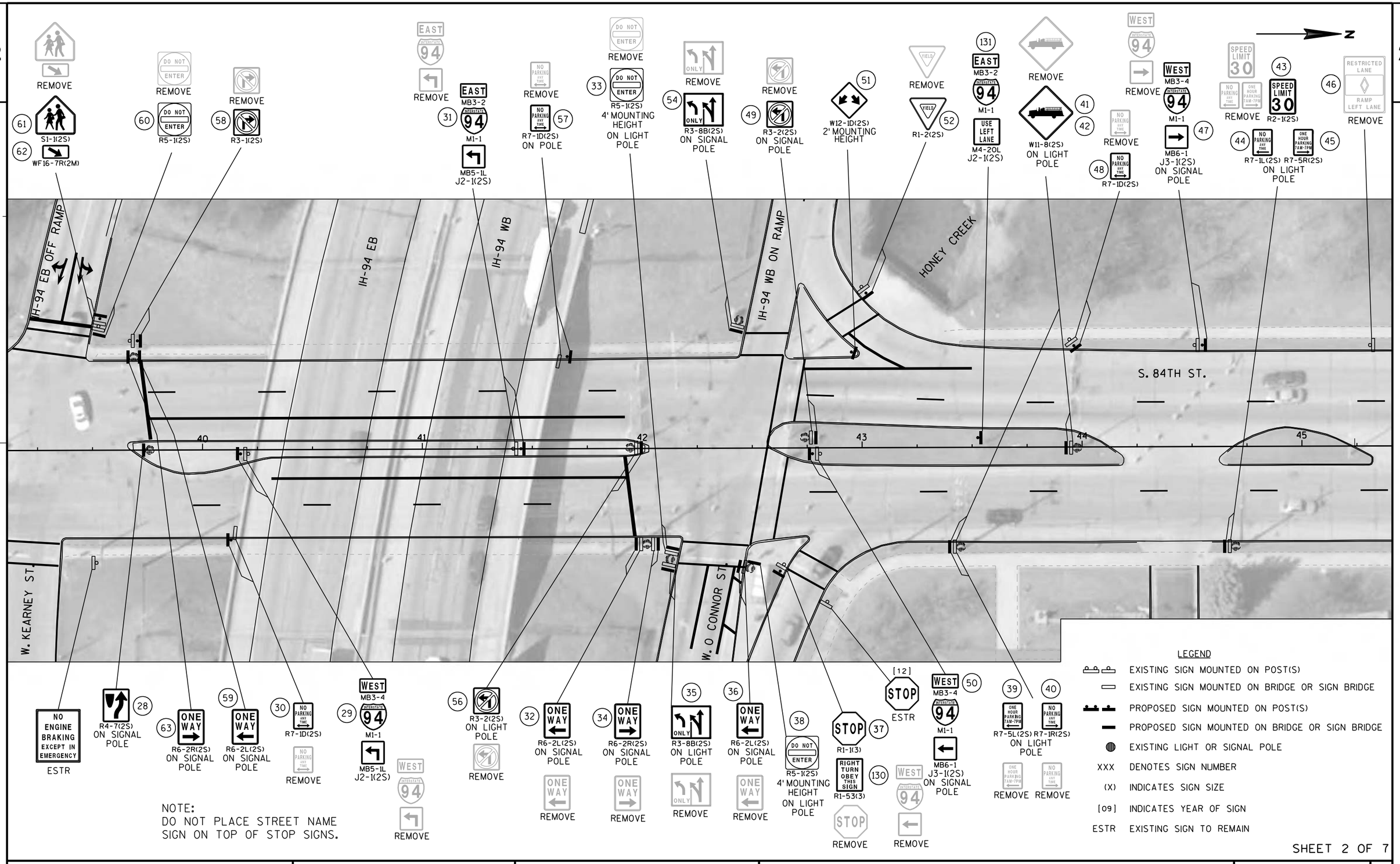
15 DO NOT ENTER R5-1(2S) ON SIGNAL POLE DO NOT ENTER REMOVE

SHEET 1 OF 7

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\sign\sign_01.dgn PLOT DATE : 15-OCT-2012 09:30 PLOT BY : MSCMWB 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
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- [09] INDICATES YEAR OF SIGN
- ESTR EXISTING SIGN TO REMAIN

SHEET 2 OF 7

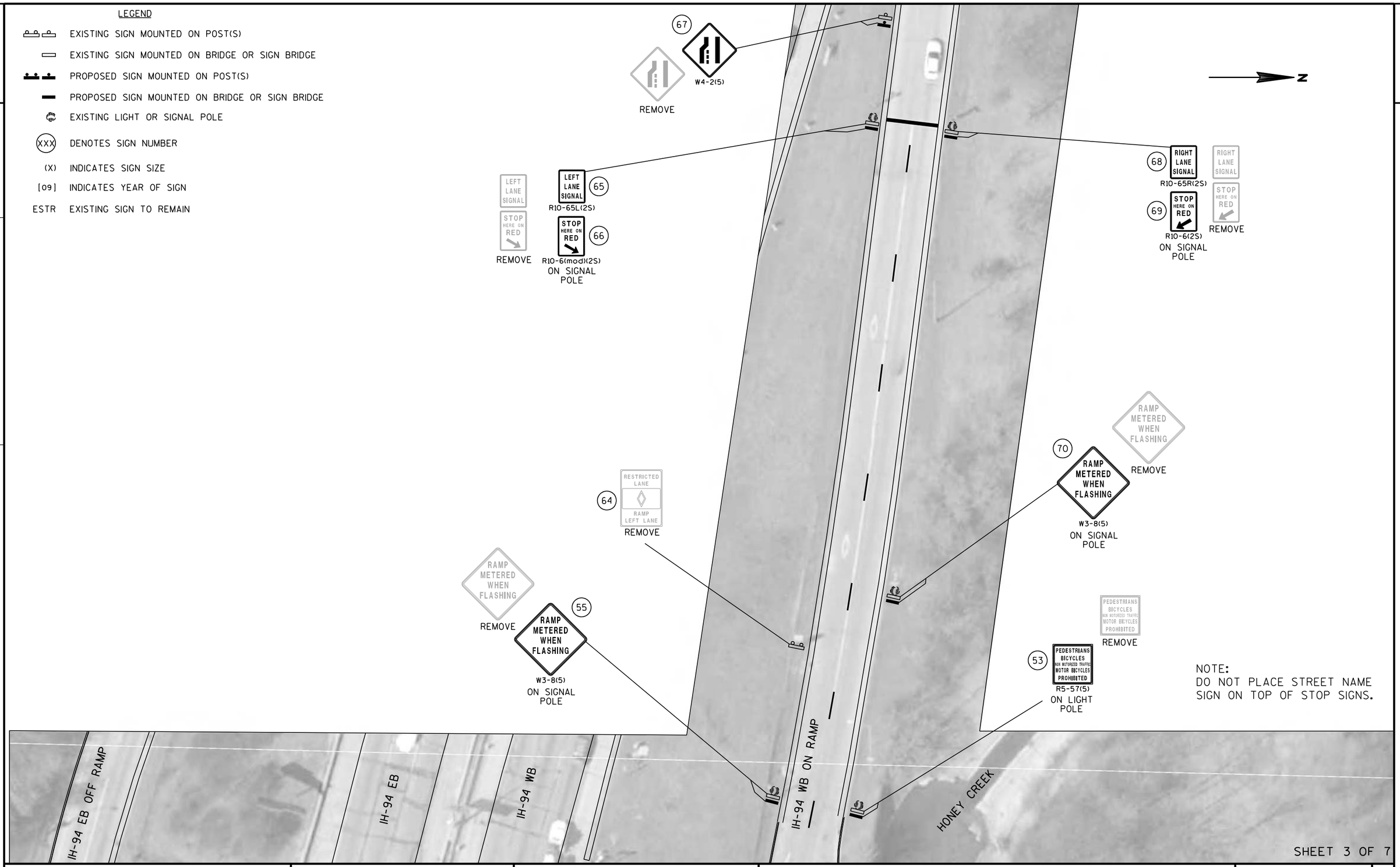
PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET E

FILE NAME : j:\projects\d2_10603394\90\sign\sign_02.dgn PLOT DATE : 15-OCT-2012 09:30 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

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
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- [09] INDICATES YEAR OF SIGN
- ESTR EXISTING SIGN TO REMAIN



NOTE:
DO NOT PLACE STREET NAME SIGN ON TOP OF STOP SIGNS.

SHEET 3 OF 7

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\sign\sign_03.dgn PLOT DATE : 15-OCT-2012 09:30 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

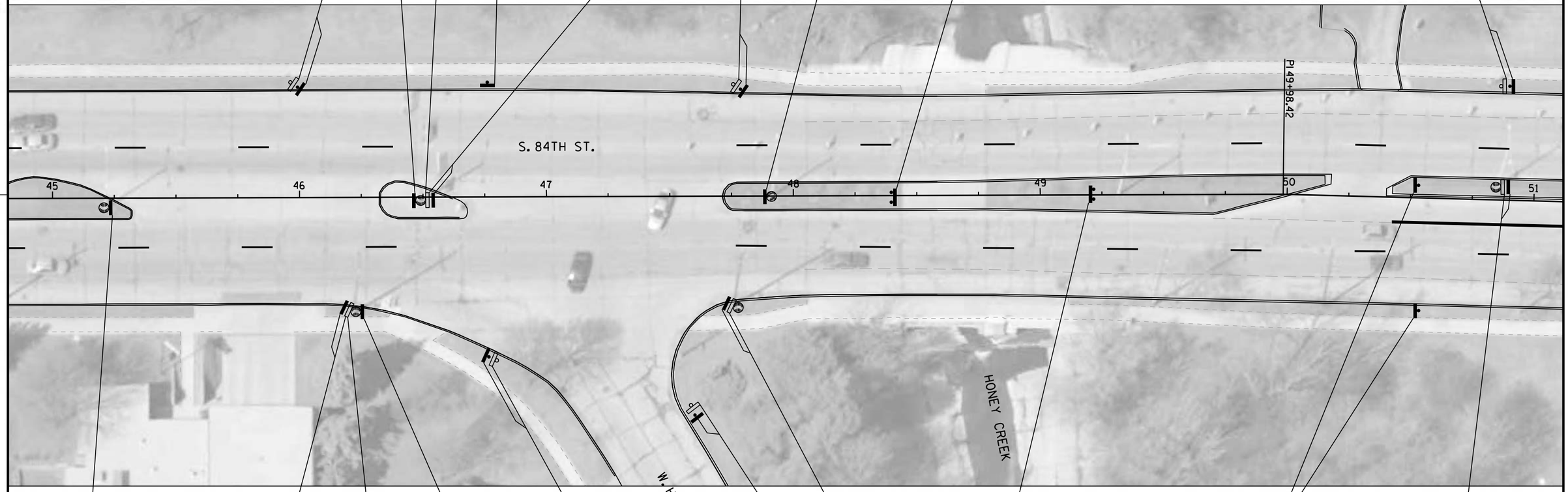
2

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
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- [09] INDICATES YEAR OF SIGN
- ESTR EXISTING SIGN TO REMAIN

NOTE:
DO NOT PLACE STREET NAME SIGN ON TOP OF STOP SIGNS.

N



(71) R4-7(2S) ON LIGHT POLE

(72) R7-1D(2S) ON LIGHT POLE
REMOVE

ESTR

(73) R5-1(2S) ON LIGHT POLE

(74) R5-2(2S)
REMOVE

(75) R1-1(2S)
REMOVE

(76) R7-7L(2S) ON LIGHT POLE
REMOVE

(77) Dana St
NEXT SIGNAL
D1-65(2)

(78) (79) W3-3(2S)

(80) W11-8(2S) ON LIGHT POLE
REMOVE

(81) W11-8(2S)
REMOVE

(82) EAST MB3-2 M1-1 | SOUTH M3-3 M1-6 | WEST MB3-4 M1-1
USE LEFT LANE M4-20L | M6-1 | MB5-1R
J2-3(2S)

(83) R4-7(2S) ON LIGHT POLE

(84) R7-1L(2S)
REMOVE

(85) R6-2L(2S)

(86) EAST SOUTH WEST 94 181 94
REMOVE

(87) R4-7(2S) ON LIGHT POLE
REMOVE

(88) R4-7(2S) ON LIGHT POLE

(89) R7-1D(2S)
REMOVE

SHEET 4 OF 7

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET	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
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- [09] INDICATES YEAR OF SIGN
- ESTR EXISTING SIGN TO REMAIN

N

91 R4-7(2S) ON SIGNAL POLE

REMOVE

103 ONE WAY R6-2L(2S)

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

102 R4-7(2S) ON SIGNAL POLE

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

REMOVE

94 R4-7(2S) ON SIGNAL POLE

REMOVE

100 JCT MB2-1 INTERSTATE 94 M1-1 J1-1(2S) ON LIGHT POLE

REMOVE

99 SPEED LIMIT 30 R2-1(2S)

97 98 W3-3(2S)

W. DANA ST.

S. 84TH ST.

51 52 53 54 55 56

90 DO NOT ENTER R5-1(2S) ON LIGHT POLE

92 DEAD END W14-1(2S) ON SIGNAL POLE

DEAD END REMOVE

93 ONE WAY R6-2L(2S) ON SIGNAL POLE

W. DANA ST.

95 Dana St NEXT SIGNAL D1-65(2)

96 Milwaukee POPULATION 602,782 I2-3(2)

Milwaukee POPULATION 602,782 REMOVE

NOTE:
DO NOT PLACE STREET NAME SIGN ON TOP OF STOP SIGNS.

SHEET 5 OF 7

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\sign\sign_05.dgn PLOT DATE : 15-OCT-2012 09:30 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

REMOVE
(124) STOP
R1-1(2S)

STREET NAME SIGN TO BE REMOVED BY CITY OF WAUWATOSA

(104) R4-7(2S)

(123) DO NOT ENTER
R5-1(2S)

ESTR
NO PARKING BUS STOP

REMOVE
(121) TWO HOUR PARKING 9AM-7PM
R7-5D(2S)

REMOVE
(120) TWO HOUR PARKING 9AM-7PM
R7-5D(2S)

N

REMOVE
(119) TWO HOUR PARKING 9AM-7PM
R7-5D(2S)

REMOVE
(118) STOP
R1-1(2S)

STREET NAME SIGN TO BE REMOVED BY CITY OF WAUWATOSA

W. HAWTHORNE AVE.

S. 84TH ST.

W. HILL ST.

57 58 59 60 61 62

PC 57+62.93

P160+73.45

(109) S1-1(2S)
AHEAD
WF16-9P(2S) (110)
FINES HIGHER
R2-6P(2M) (111)
ON LIGHT POLE

REMOVE
AHEAD
FINES HIGHER

(106) S1-1(2S)
AHEAD
WF16-9P(2S) (107)
FINES HIGHER
R2-6P(2M) (108)

REMOVE
AHEAD
FINES HIGHER

(105) ONE WAY
R6-2L(2S)

(112) SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT
S4-5I(2)

REMOVE
SCHOOL SPEED LIMIT 15 WHEN CHILDREN ARE PRESENT

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

REMOVE
SCHOOL SPEED LIMIT 15 WHEN CHILDREN ARE PRESENT

(114) NO PARKING BUS STOP
R7-7L(2S)

REMOVE
NO PARKING BUS STOP

(115) R4-7(2S)
ON LIGHT POLE

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

(117) NO PARKING BUS STOP
R7-7R(2S)

REMOVE
NO PARKING ANY TIME
NO PARKING BUS STOP

LEGEND

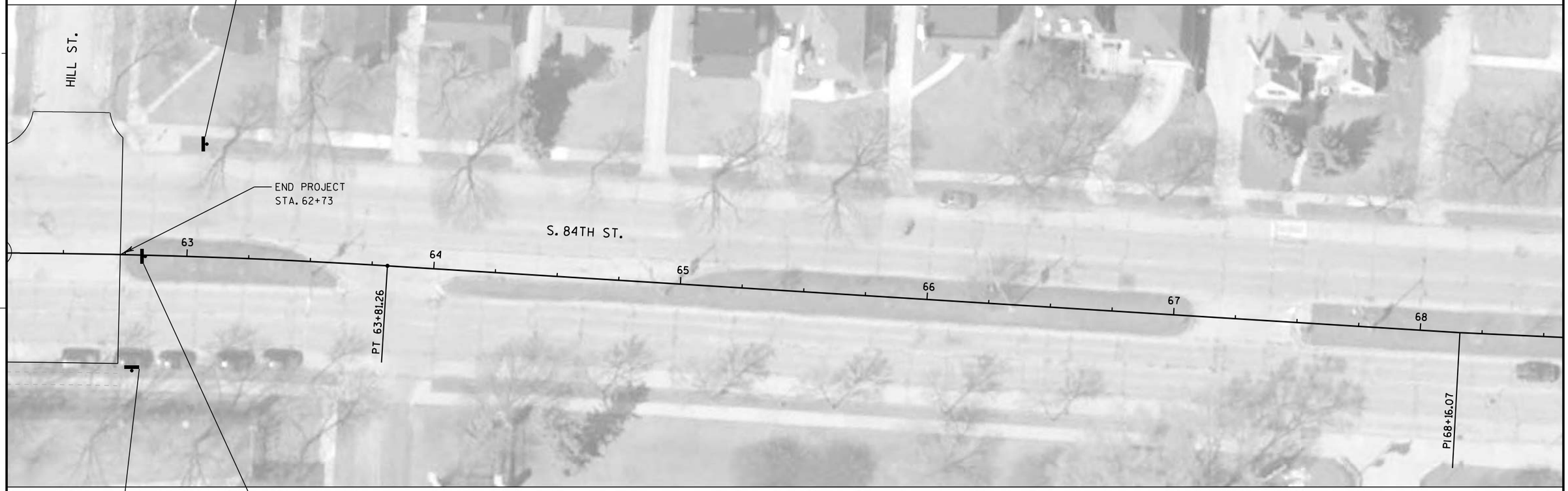
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- [09] INDICATES YEAR OF SIGN
- ESTR EXISTING SIGN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

NOTE:
DO NOT PLACE STREET NAME SIGN ON TOP OF STOP SIGNS.

SHEET 6 OF 7

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 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
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- [09] INDICATES YEAR OF SIGN
- ESTR EXISTING SIGN TO REMAIN

NOTE:
DO NOT PLACE STREET NAME SIGN ON TOP OF STOP SIGNS.

SHEET 7 OF 7

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET	E



LEGEND

CITY OF MILWAUKEE OWNED EXISTING TRAFFIC SIGNAL
WISDOT OWNED PERMANENT TRAFFIC SIGNAL

SXXXX

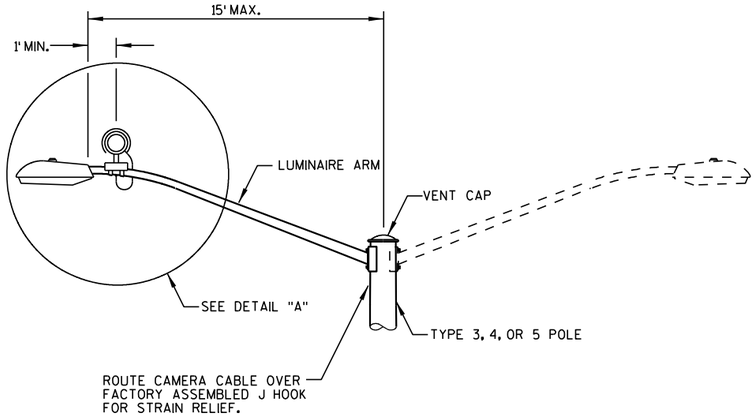
CITY OF MILWAUKEE OWNED EXISTING TRAFFIC SIGNAL
FUTURE WISDOT OWNED PERMANENT TRAFFIC SIGNAL

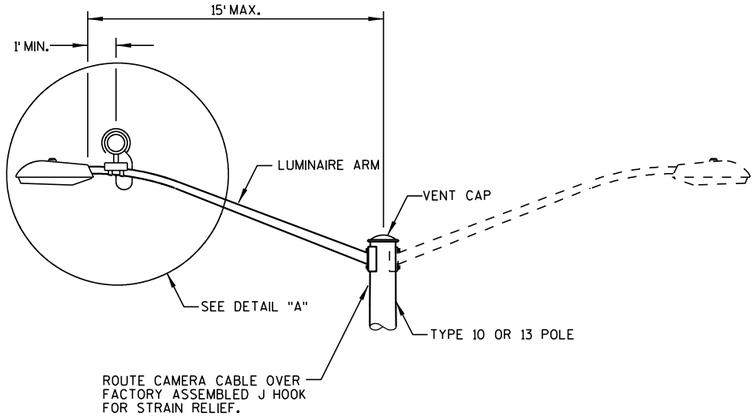
(1) CITY OF MILWAUKEE TO REMOVE ABOVEGROUND TRAFFIC SIGNAL EQUIPMENT

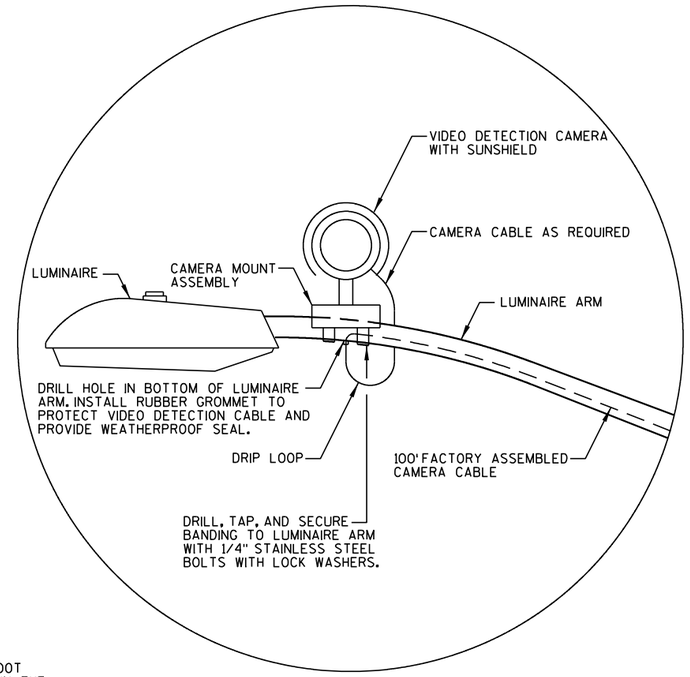
(2) REMOVE REMAINING TRAFFIC SIGNAL EQUIPMENT

(3) INSTALL COMPLETE PERMANENT TRAFFIC SIGNAL

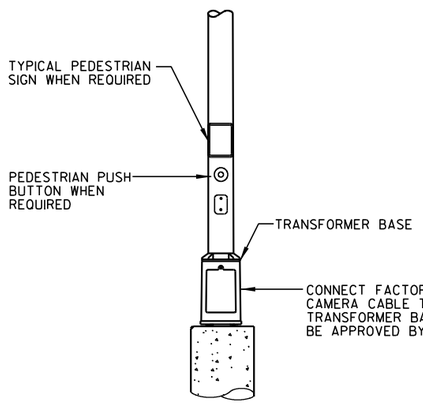
PROJECT NO: 1060-33-90	HWY: STH 181	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PROJECT OVERVIEW	SHEET	E



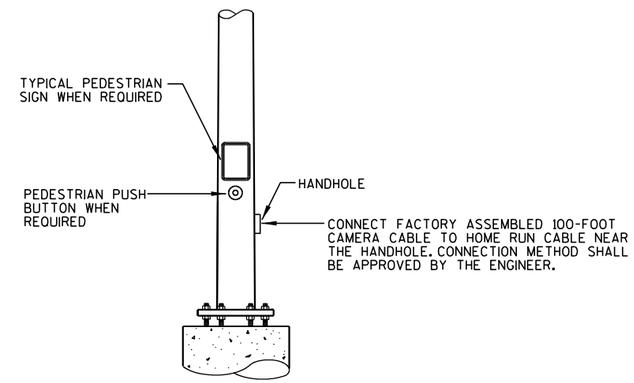




DETAIL "A"



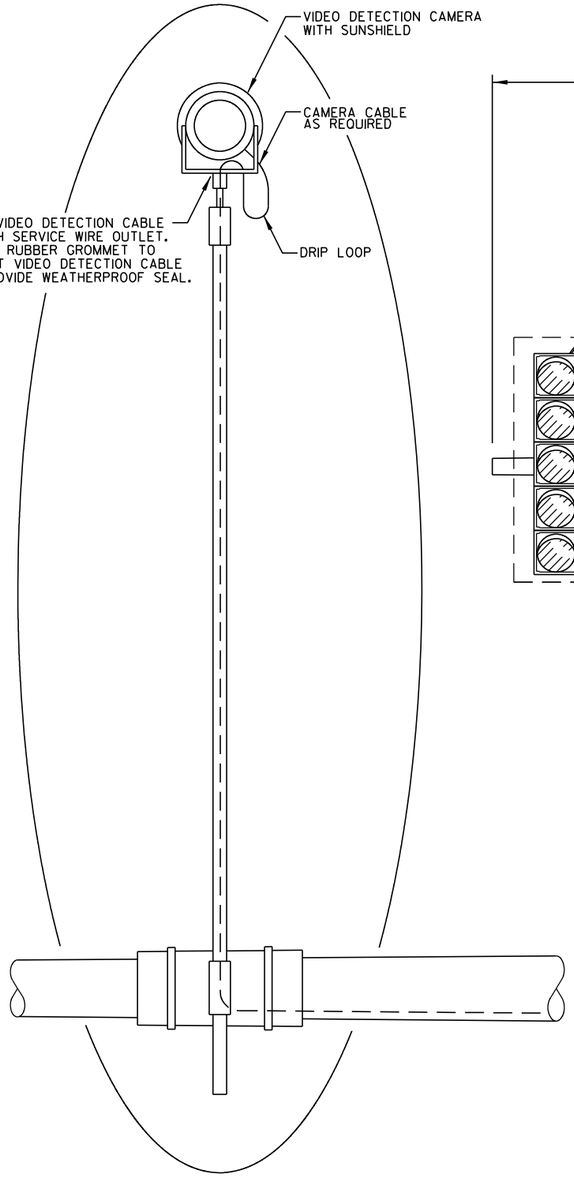
TYPE 3, 4, OR 5
MOUNTING CONFIGURATION



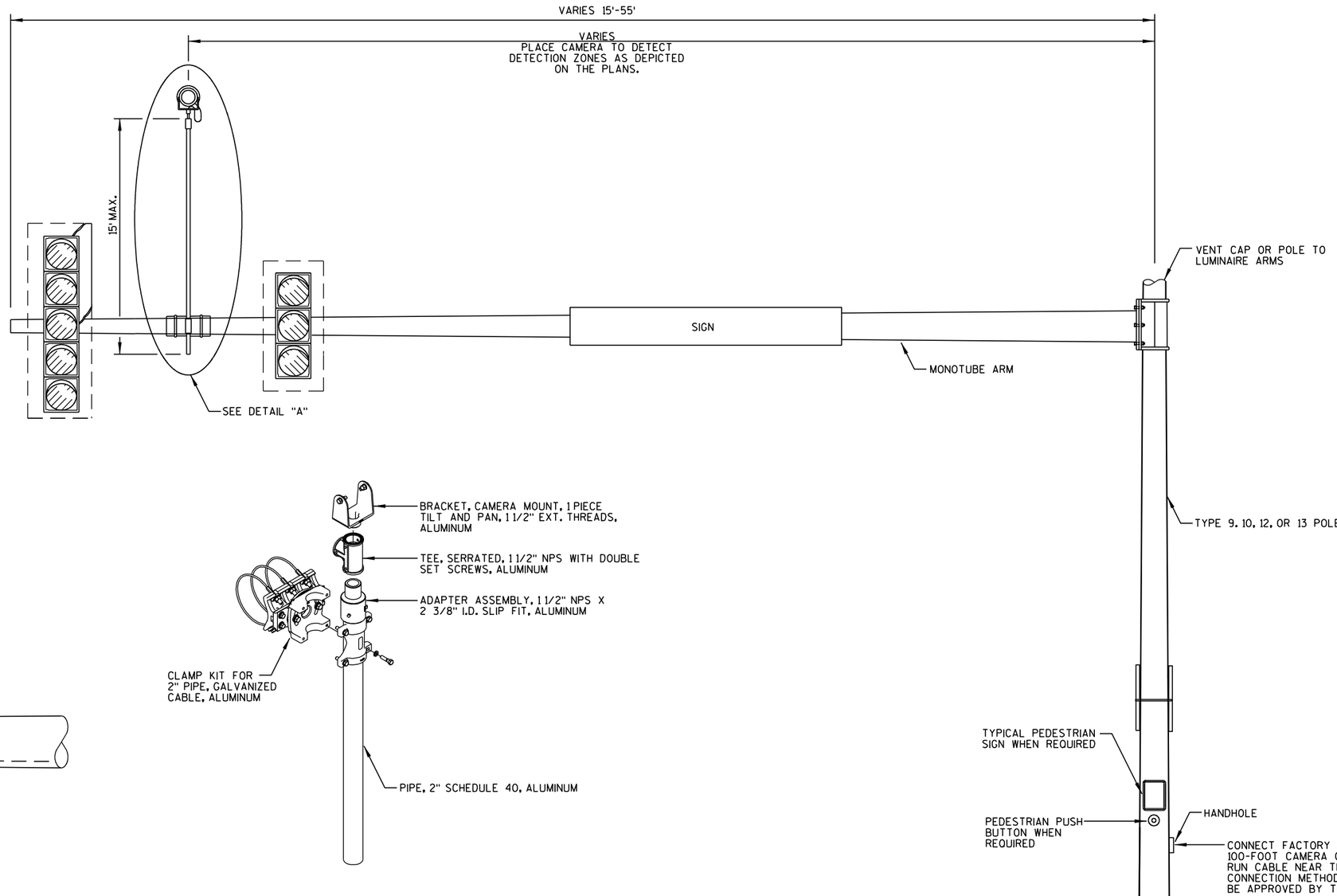
TYPE 10 OR 13
MOUNTING CONFIGURATION

VIDEO DETECTION MOUNTING DETAIL (LUMINAIRE ARM MOUNT)

2



DETAIL "A"



EXTENSION ARM

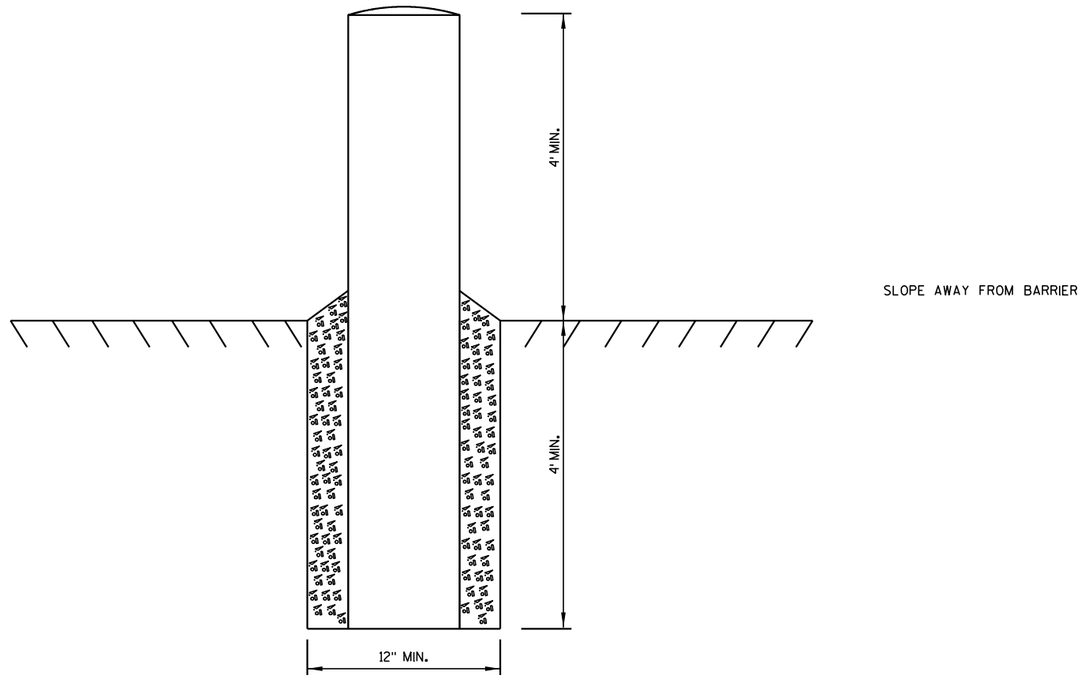
VIDEO DETECTION MOUNTING DETAIL
(MAST ARM MOUNT)

PROJECT NO: 1060-33-71	HWY: N. GLENVIEW AVENUE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL DETAILS	SHEET	E

FILE NAME : W:\Cadd\Final\10603390_F\Roads\cds\024002_sp_cd.dgn PLOT DATE : 29-OCT-2012 07:39 PLOT BY : mscjym PLOT NAME : PLOT SCALE : 200:1

NOTES:

1. GALVANIZED STEEL PIPE, SCHEDULE 40, 6" DIAMETER BY 8' MINIMUM LENGTH AND FILLED WITH CONCRETE. APPROXIMATELY 4 CU. FT. OF CONCRETE IS REQUIRED FOR THE FOUNDATION AND FILLING THE PIPE.
2. A CONCRETE FORMING TUBE IS REQUIRED FOR FOOTING TO PREVENT HEAVING DUE TO FROST.
3. FIELD LOCATION TO BE VERIFIED BY WISDOT ELECTRICAL FIELD UNIT.



HEAVY DUTY GUARD

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

SIGNAL HEAD NUMBER

WALK/DON'T WALK INDICATOR 12" (COUNTDOWN TIMER MOUNTED BELOW)

PEDESTRIAN HEAD WITH PUSH BUTTON

PUSH BUTTON

(R) RED CIRCULAR INDICATOR

(Y) YELLOW CIRCULAR INDICATOR

(G) GREEN CIRCULAR INDICATOR

LEGEND (CON'T)

(X) EVP DESIGNATOR

EVP DETECTOR HEAD

CONFIRMATION LIGHT

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

N

HONEY CREEK DRIVEWAY

STH 181 (S. 84TH STREET)

W. DANA COURT

ABANDON

PKNG

R/W



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 TRAFFIC SIGNAL CONDUCTORS REMAINING IN THE CONDUIT.
3. CITY OF MILWAUKEE FORCES TO REMOVE ALL ABOVEGROUND TRAFFIC SIGNAL EQUIPMENT AND CONCRETE BASES.

TRAFFIC CONTROL SIGNAL
STH 181 (S. 84TH STREET) &
W. DANA COURT
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1382

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-33-90	HWY: STH 181	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603390_TM1\Roads\cds\024011_sp.dgn PLOT DATE : 06-JAN-2013 12:14 PLOT BY : mscjym PLOT NAME : 024011_sp PLOT SCALE : 40:1 WISDOT/CADDS

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- BOLLARD
- PULL BOX, 24" X 42"
- COMMUNICATIONS VAULT
- 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
- RA RED ARROW
- YA YELLOW ARROW

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

N

STH 181 (S. 84TH STREET)

STH 181 (S. 84TH STREET)

HONEY CREEK DRIVEWAY

DRIVEWAY SPEED LIMIT=25 MPH

POSTED SPEED LIMIT=30 MPH

225' TO NEAR RIGHT SIGNAL

225' TO NEAR RIGHT SIGNAL

W. DANA COURT

POSTED SPEED LIMIT=25 MPH

POSTED SPEED LIMIT=30 MPH

PKNG

R/W

FTMS FOC

FTMS FOC IN CITY OF MILWAUKEE CONDUIT

1/4" FO I/C

3-3"

2-3"

SB1 SB2 SB3 SB4 SB5 SB6 SB7 SB8

PB1 PB2 PB3 PB4 PB5 PB6 PB7 PB8 PB9

CB1

V1 V2 V3

EXCMH6

XXXXX

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. 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. PROPOSED STORM SEWER, LIGHTING, DETECTABLE WARNING FIELDS, AND FTMS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

WISCONSIN JASON R. MATSON 37111 WAUKESHA, WI PROFESSIONAL ENGINEER 10/29/2012

STRUCTURE NUMBERS	
SB2	S-40-1343
SB3	S-40-1344
SB5	S-40-1345
SB7	S-40-1346

TRAFFIC CONTROL SIGNAL
STH 181 (S. 84TH STREET) &
W. DANA COURT
CITY OF MILWAUKEE
MILWAUKEE COUNTY

CABINET TYPE: TS-2
SIGNAL NO. S1382 CONTROLLER TYPE: EPAC M51

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 10/29/12 David A. Pabst, P.E. REGION TRAFFIC ENGINEER

APPROVED
Date 11/13/12 Joanna L. Bush STATE TRAFFIC ENGINEER

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 1060-33-90	HWY: STH 181	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET E

JRE 10/29/2012

FILE NAME : W:\Cadd\Final\10603390_F\Roads\cds\024015_sp.dgn PLOT DATE : 29-OCT-2012 13:57 PLOT BY : mscjym PLOT NAME : 024015_sp PLOT SCALE : 40:1 WISDOT/CADD SHEET 42

SEQUENCE OF OPERATION

RING 1

	HEAD NUMBERS	Ø1 NOT USED R/W	Ø1 CLEAR TO **	Ø2 OLA R/W	Ø2 CLEAR TO **	Ø3 NOT USED R/W	Ø3 CLEAR TO **	Ø4 R/W	Ø4 CLEAR TO **	FLASH
Ø1										
Ø2	6,7,8			G	Y R			R	R R	R
Ø3										
Ø4	12,13,14			R	R R			G	Y R	R
Ø5										
Ø6	1,2,3			R	R R			R	R R	R
Ø7										
Ø8	9,10,11			R	R R			R	R R	R
OLA	4,5			FY	Y R			R	R R	R
OLB										
OLC										
OLD										
Ø2P	17,18			*	D D			D	D D	
Ø4P	15,16			D	D D			*	D D	
Ø6P	19,20			D	D D			D	D D	
Ø8P										

RING 2

	HEAD NUMBERS	Ø5 NOT USED R/W	Ø5 CLEAR TO **	Ø6 R/W	Ø6 CLEAR TO **	Ø7 NOT USED R/W	Ø7 CLEAR TO **	Ø8 R/W	Ø8 CLEAR TO **
Ø1									
Ø2	6,7,8			R	R R			R	R R
Ø3									
Ø4	12,13,14			R	R R			R	R R
Ø5									
Ø6	1,2,3			G	Y R			R	R R
Ø7									
Ø8	9,10,11			R	R R			G	Y R
OLA	4,5			R	R R			R	R R
OLB									
OLC									
OLD									
Ø2P	17,18			D	D D			D	D D
Ø4P	15,16			D	D D			D	D D
Ø6P	19,20			*	D D			D	D D
Ø8P									

** 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	CALLS ONLY	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
21	4	X			2	2					VIDEO
41	1	X			4	4		X			VIDEO
42	2	X			4	4					VIDEO
61	7	X			6	6					VIDEO
81	8	X			8	8		X			VIDEO

CONTROLLER LOGIC

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

SPECIAL OVERLAPS

	PROTECTIVE	PERMISSIVE
O.L. "A" =		2
O.L. "B" =		
O.L. "C" =		
O.L. "D" =		

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

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
1		
2	6	4,8
3		
4	8	2,6
5		
6	2	4,8
7		
8	4	2,6

N

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A
MOVEMENT	← / FY →
PHASE	2 AND 6

AFTER PREEMPTION SEQUENCE 2 AND 6, CONTROLLER SHALL RETURN TO PHASES 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.)

STH 181 (S. 84TH STREET) & W. DANA COURT
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1382

CONTROLLER TYPE: EPAC M51

DATE 10/12 PAGE NO. 2 OF 2

10/29/2012 JRS
10/29/12 DMS

PROJECT NO: 1060-33-90	HWY: STH 181	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET	E

STH 181 (S. 84TH STREET) & W. DANA COURT

2

PROJECT ID:	1060-33-90
INTERSECTION:	STH 181 (S. 84TH STREET) & W. DANA COURT

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	12	RED	ORG	GRN								
		16								BLK	BLU		
		17								RED/BLK	GRN/BLK		
		B										WHT/BLK	
SB2 (CABLE 1)	12	4				RED/BLK	ORG/BLK		BLK/WHT				
		6	RED	ORG	GRN								
		18								BLU	BLU		
		B										WHT/BLK	
SB2 (CABLE 2)	12	10	RED	ORG	GRN								
		11	RED	ORG	GRN								
SB3	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		5				RED/BLK	ORG/BLK		BLK/WHT				
SB4	12	9	RED	ORG	GRN								
		19								BLK	BLU		
		B										WHT/BLK	
SB5	12	13	RED	ORG	GRN								
		14	RED	ORG	GRN								
		B										WHT/BLK	
SB6	12	1	RED	ORG	GRN								
		15								BLK	BLU		
		20								RED/BLK	GRN/BLK		
		B										WHT/BLK	
SB7	12	7	RED	ORG	GRN								
		8	RED	ORG	GRN								
SB8	5	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	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	SB8
PB9	CB1

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

VIDEO DETECTION CABLE	
FROM	TO
CB1	V1 (SB7)
CB1	V2 (SB3)
CB1	V3 (SB5)
CB1	V4 (SB2)



PROJECT NO: 1060-33-90	HWY: USH 18	COUNTY: MILWAUKEE	CABLE ROUTING	SHEET: 49	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\024020_sp_cr.ppt PLOT DATE : 10/29/2012 7:12:06 AM PLOT BY : MSCD1S PLOT NAME : 024020_sp_cr1 PLOT SCALE : 1:1

CONSTRUCTION NOTES:

1. MAXIMUM SPLICE LOSS SHALL BE 0.1 dB.
2. NO INTERMEDIATE SPLICES ALLOWED.
3. ALL SPLICES SHALL BE FUSION SPLICES.
4. COORDINATE FIBER ASSIGNMENTS WITH MARIE TREAZISE, STOC, AT (414) 225-3720 BEFORE SPLICING FIBER OPTIC CABLE.
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 SHALL BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.



LEGEND

- SXXXX — CITY OF MILWAUKEE OWNED EXISTING TRAFFIC SIGNAL WISDOT OWNED PERMANENT TRAFFIC SIGNAL
- ○ — CITY OF MILWAUKEE OWNED EXISTING TRAFFIC SIGNAL FUTURE WISDOT OWNED PERMANENT TRAFFIC SIGNAL
- (I) — INSTALL ETHERNET SWITCH IN TRAFFIC SIGNAL CABINET
- (II) — INSTALL PRE-TERMINATED PATCH PANEL IN TRAFFIC SIGNAL CABINET AND 8-CT SINGLE MODE FIBER OPTIC PIGTAIL IN CONDUIT

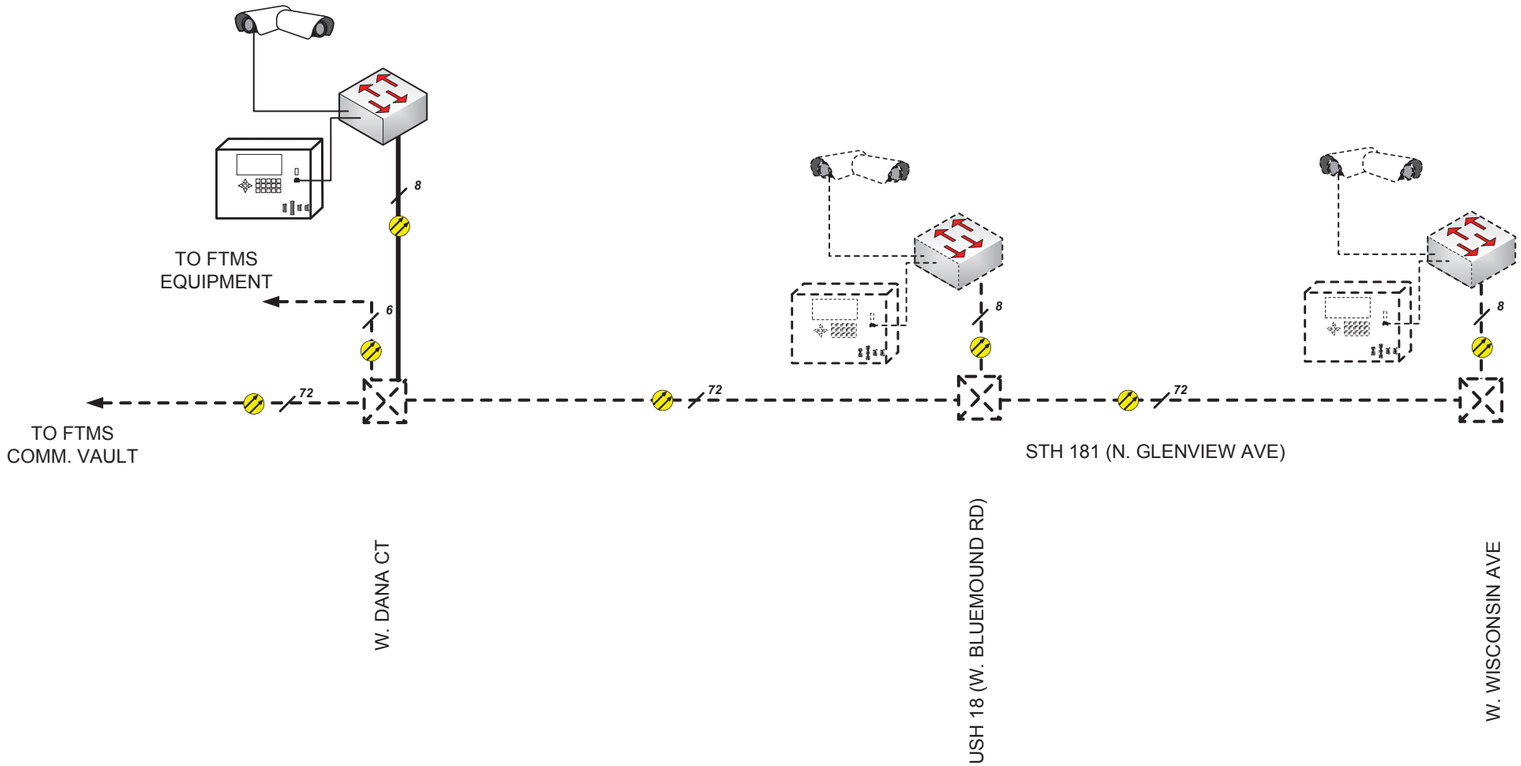
PROJECT NO: 1060-33-90	HWY: STH 181	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PROJECT OVERVIEW	SHEET	E

2

— Z →

LEGEND

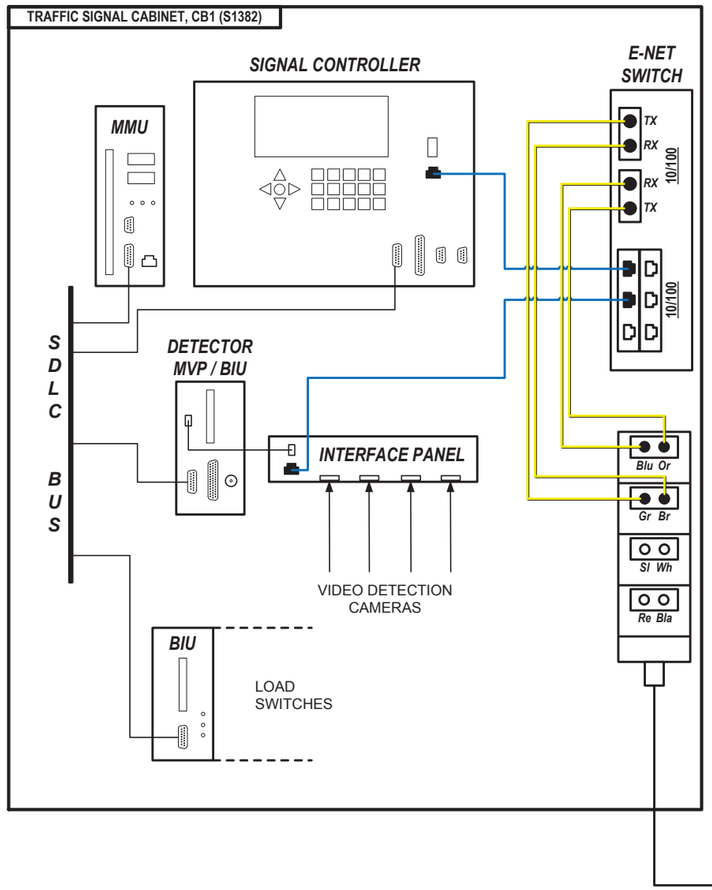
- 72 — SM FIBER OPTIC CABLE (# STRANDS)
- CAT 5E PATCH CORD
- SPLICE CLOSURE
- HARDENED ETHERNET SWITCH
- VIDEO DETECTION CAMERAS
- TRAFFIC SIGNAL CONTROLLER

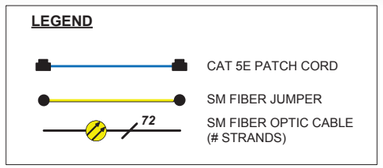


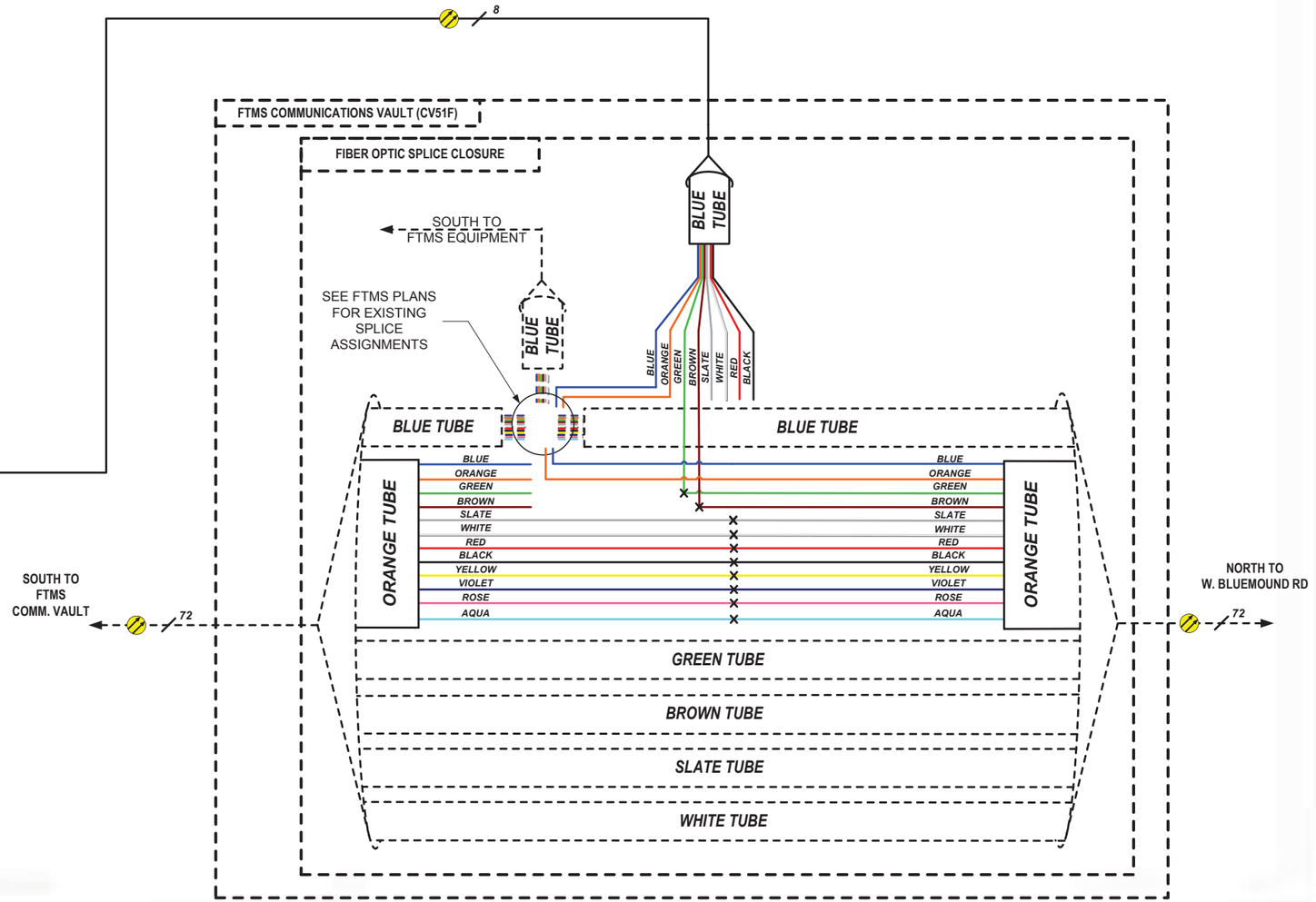
NOTES:

1. WORK IN THIS PROJECT 1060-33-90 INVOLVES A NEW TRAFFIC SIGNAL INSTALLATION AT THE DANA CT. INTERSECTION, 8-COUNT FIBER-OPTIC DROP CABLE, AND FUSION SPLICING TO AN EXISTING 72-COUNT FIBER-OPTIC TRUNK CABLE.
2. DASHED LINES INDICATE ITEMS INSTALLED UNDER PROJECT 1060-33-71.

2







NOTE:
DASHED LINES INDICATE ITEMS INSTALLED UNDER PROJECT NO. 1060-33-71.

LEGEND

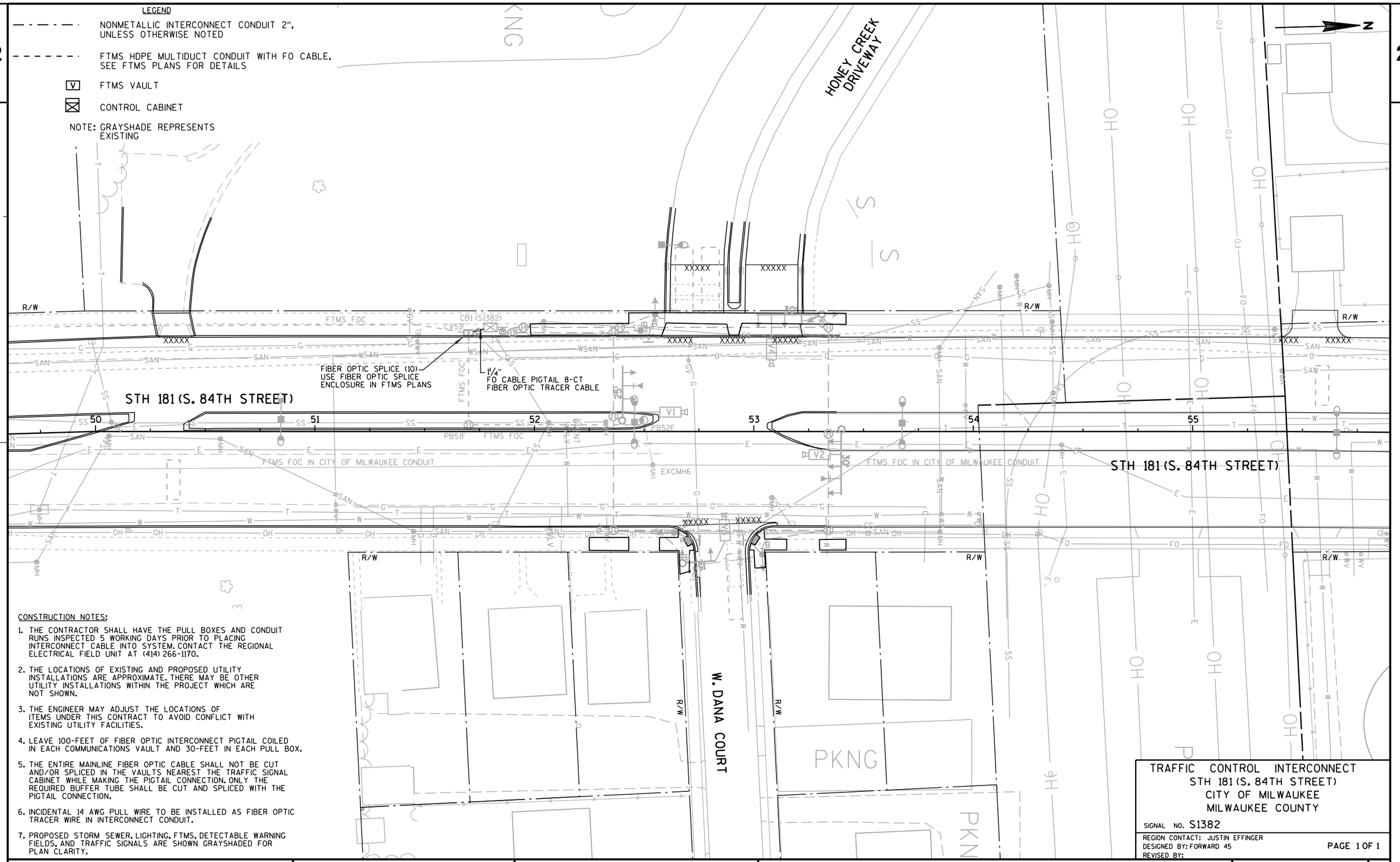
NONMETALLIC INTERCONNECT CONDUIT 2", UNLESS OTHERWISE NOTED

FTMS HDPE MULTIDUCT CONDUIT WITH FO CABLE, SEE FTMS PLANS FOR DETAILS

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 STORM SEWER, LIGHTING, FTMS, DETECTABLE WARNING FIELDS, AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC CONTROL INTERCONNECT
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1382

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-33-90	HWY: STH 181	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603390_F\Roads\cds\024311_co.dgn PLOT DATE : 01-NOV-2012 09:53 PLOT BY : mscjym PLOT NAME : 024311_co PLOT SCALE : 40:1

2

LEGEND

(11) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)

(30) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

(31) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE)

(64) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 3 (WHITE)

(68) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH (WHITE)

(70) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH (WHITE)

(89) PAVEMENT MARKING PREFORMED PLASTIC 8-INCH (WHITE)

(91) PAVEMENT MARKING STOPLINE PREFORMED PLASTIC 12-INCH (WHITE)

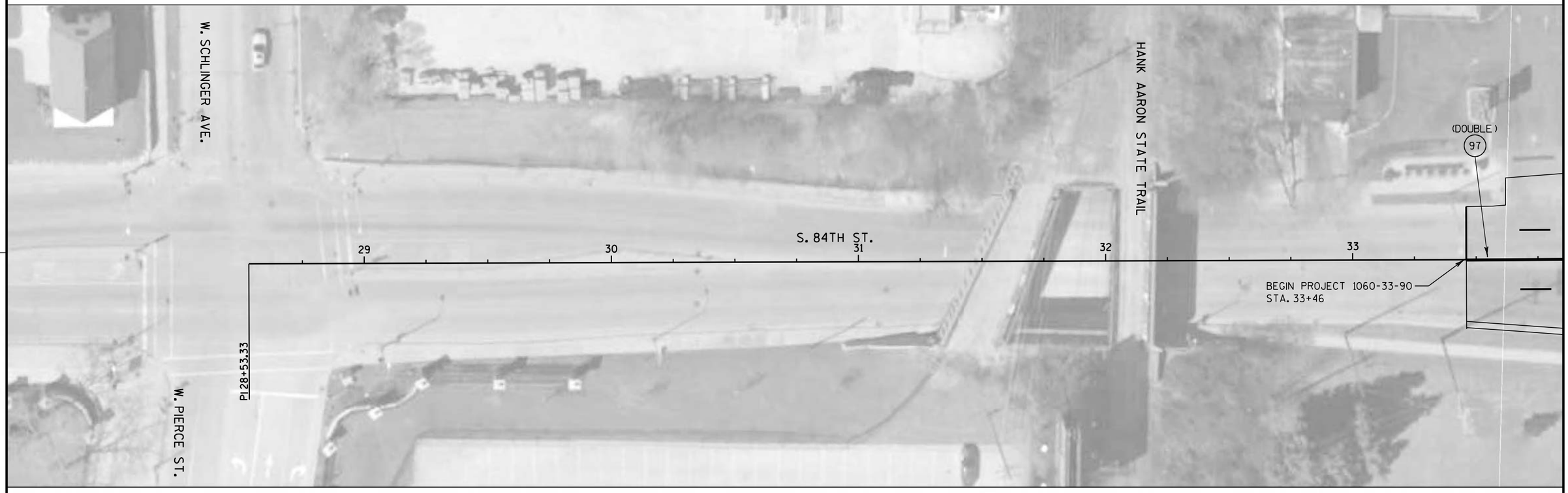
(97) PAVEMENT MARKING PREFORMED PLASTIC 4-INCH (YELLOW)

(102) PAVEMENT MARKING PREFORMED PLASTIC 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

(122) PAVEMENT MARKING CROSSWALK PREFORMED PLASTIC 12-INCH (WHITE)

(123) PAVEMENT MARKING PREFORMED PLASTIC 12-INCH (WHITE)

N



PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\024501_PM.dgn PLOT DATE : 17-OCT-2012 11:09 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

(11) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)

(30) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

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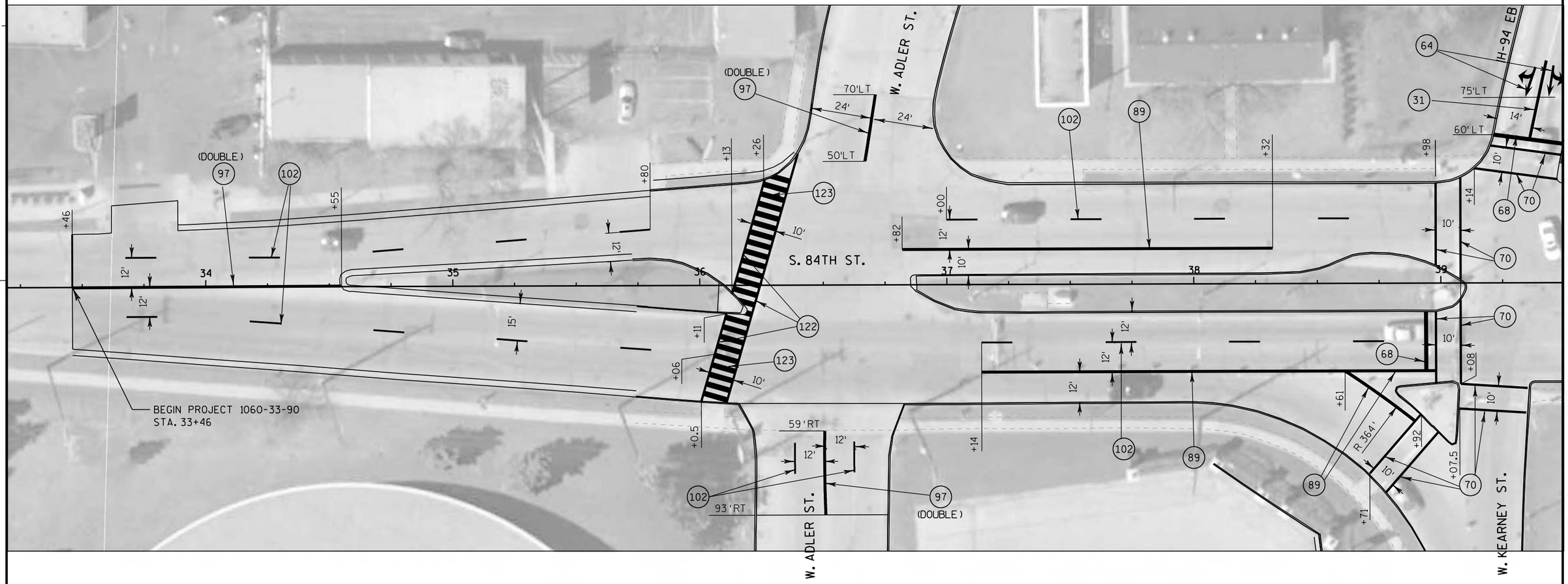
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(97) PAVEMENT MARKING PREFORMED PLASTIC 4-INCH (YELLOW)

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(122) PAVEMENT MARKING CROSSWALK PREFORMED PLASTIC 12-INCH (WHITE)

(123) PAVEMENT MARKING PREFORMED PLASTIC 12-INCH (WHITE)



PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

LEGEND

(11) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)

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(122) PAVEMENT MARKING CROSSWALK PREFORMED PLASTIC 12-INCH (WHITE)

(123) PAVEMENT MARKING PREFORMED PLASTIC 12-INCH (WHITE)

N

IH-94 EB OFF RAMP

IH-94 EB

IH-94 WB

REMOVING PAVEMENT MARKING (4-INCH)

IH-94 WB ON RAMP

HONEY CREEK

S. 84TH ST.

W. KEARNEY ST.

W. O' CONNOR ST.

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\024503_PM.dgn PLOT DATE : 17-OCT-2012 11:10 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1

2

LEGEND

(11) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)

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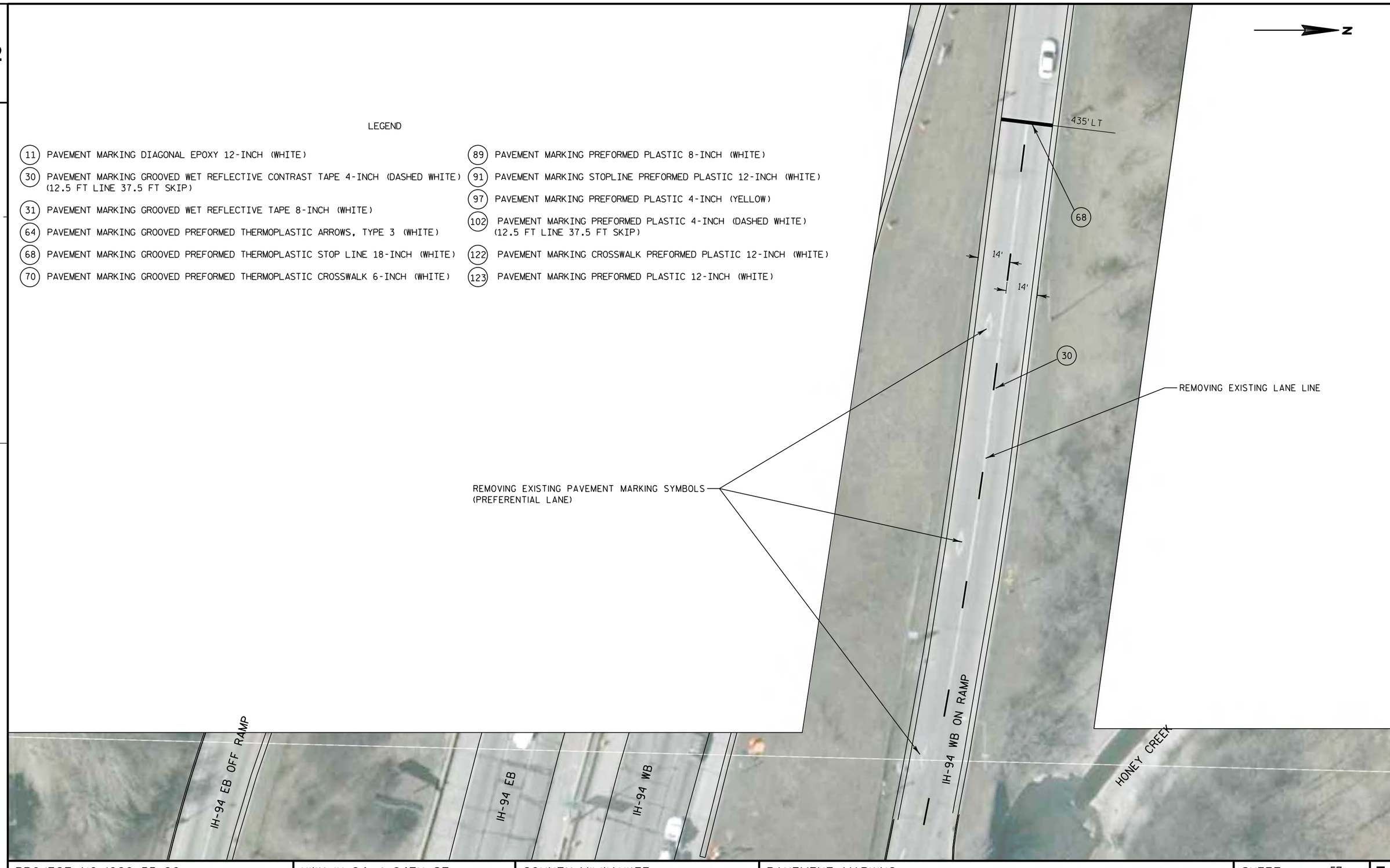
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(123) PAVEMENT MARKING PREFORMED PLASTIC 12-INCH (WHITE)



2

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 57	E

2

2

LEGEND

(11) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)

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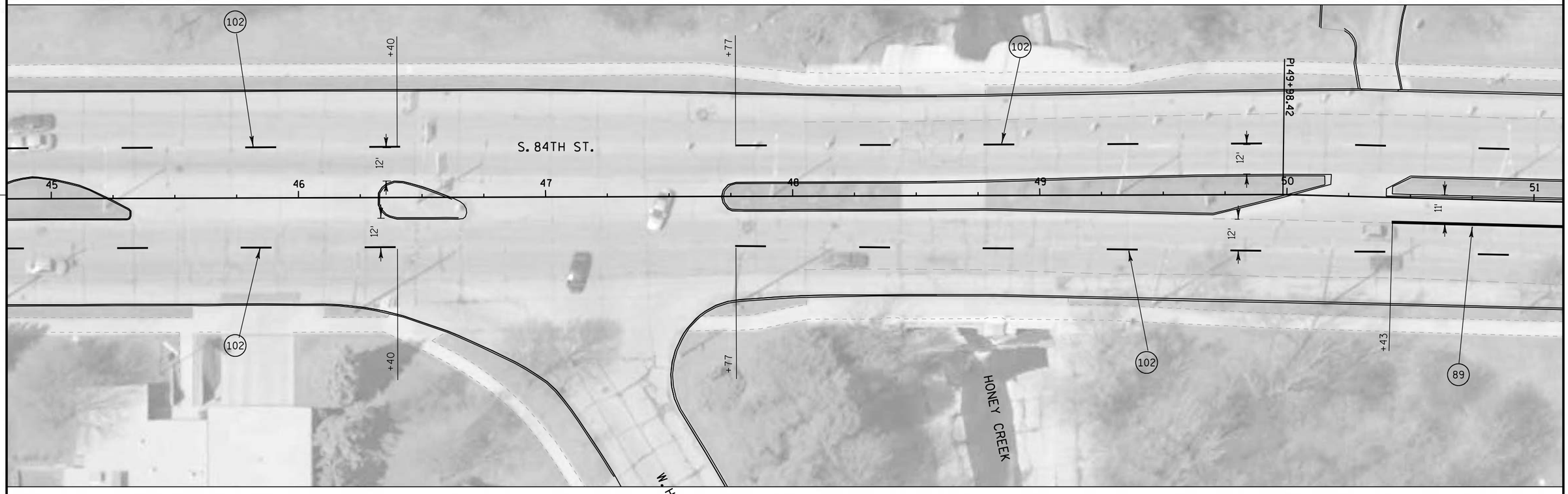
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N



PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

LEGEND

(11) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)

(30) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

(31) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE)

(64) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 3 (WHITE)

(68) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH (WHITE)

(70) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH (WHITE)

(89) PAVEMENT MARKING PREFORMED PLASTIC 8-INCH (WHITE)

(91) PAVEMENT MARKING STOPLINE PREFORMED PLASTIC 12-INCH (WHITE)

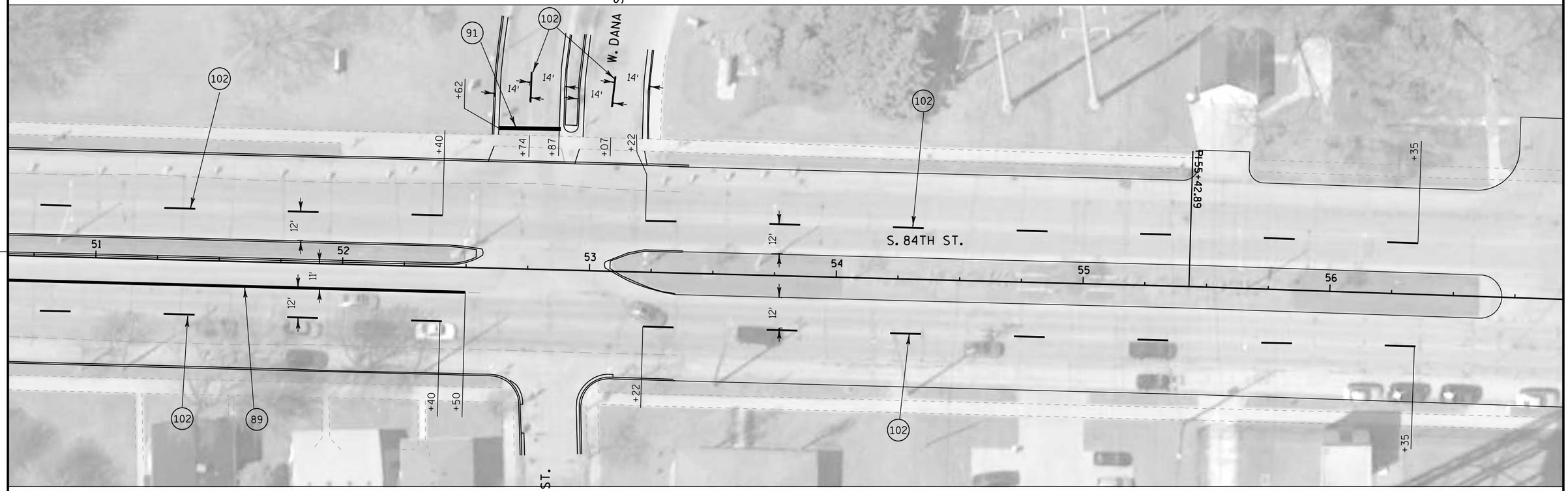
(97) PAVEMENT MARKING PREFORMED PLASTIC 4-INCH (YELLOW)

(102) PAVEMENT MARKING PREFORMED PLASTIC 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

(122) PAVEMENT MARKING CROSSWALK PREFORMED PLASTIC 12-INCH (WHITE)

(123) PAVEMENT MARKING PREFORMED PLASTIC 12-INCH (WHITE)

N

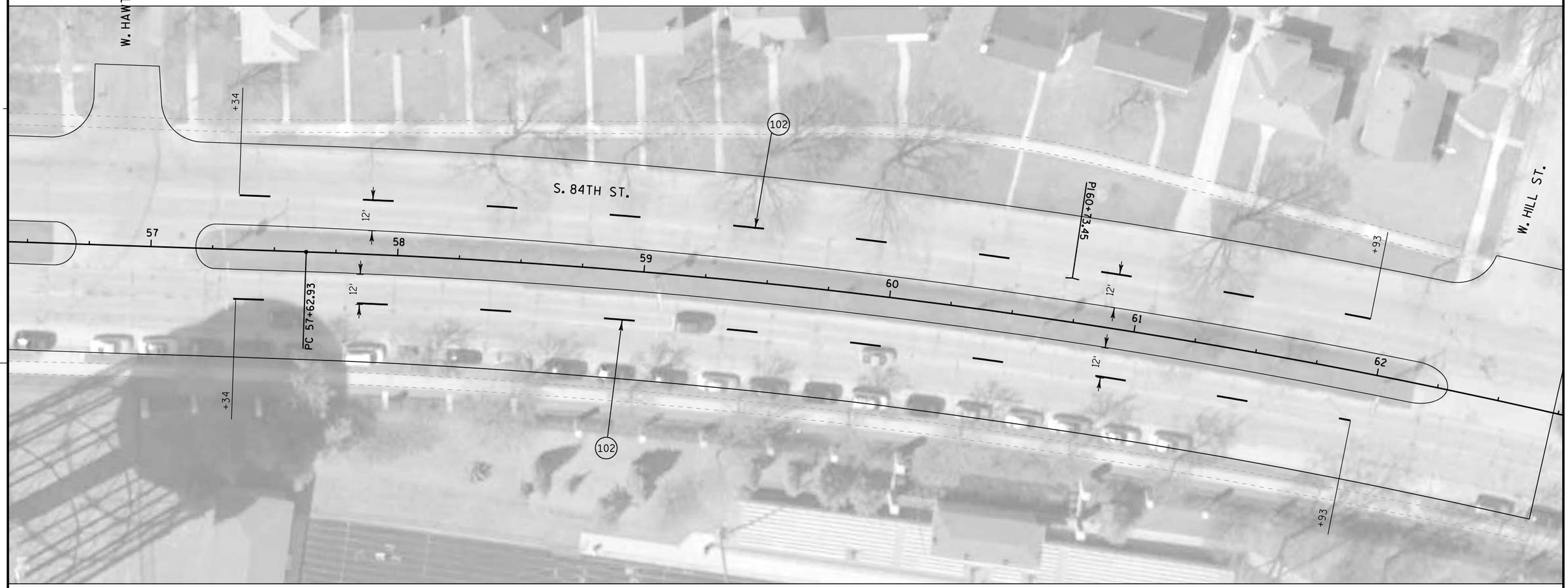


PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\024505_PM.dgn PLOT DATE : 17-OCT-2012 11:10 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

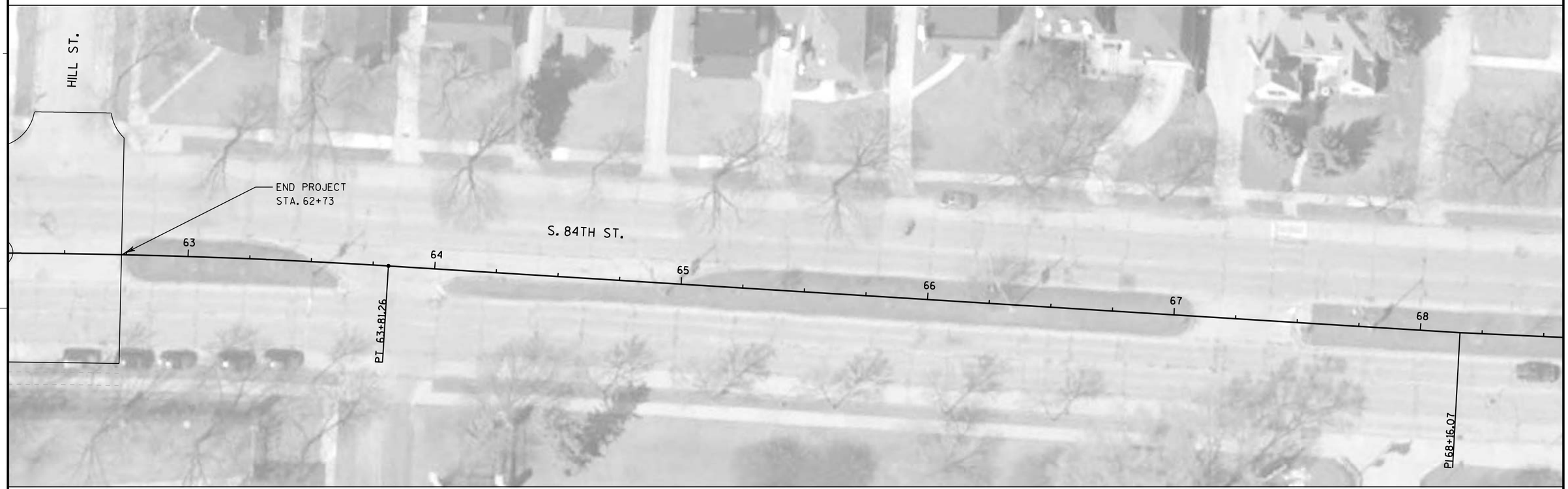


LEGEND

- (11) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- (30) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- (31) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE)
- (64) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 3 (WHITE)
- (68) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH (WHITE)
- (70) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH (WHITE)
- (89) PAVEMENT MARKING PREFORMED PLASTIC 8-INCH (WHITE)
- (91) PAVEMENT MARKING STOPLINE PREFORMED PLASTIC 12-INCH (WHITE)
- (97) PAVEMENT MARKING PREFORMED PLASTIC 4-INCH (YELLOW)
- (102) PAVEMENT MARKING PREFORMED PLASTIC 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- (122) PAVEMENT MARKING CROSSWALK PREFORMED PLASTIC 12-INCH (WHITE)
- (123) PAVEMENT MARKING PREFORMED PLASTIC 12-INCH (WHITE)

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2



LEGEND

(11) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)

(30) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

(31) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE)

(64) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 3 (WHITE)

(68) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH (WHITE)

(70) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH (WHITE)

(89) PAVEMENT MARKING PREFORMED PLASTIC 8-INCH (WHITE)

(91) PAVEMENT MARKING STOPLINE PREFORMED PLASTIC 12-INCH (WHITE)

(97) PAVEMENT MARKING PREFORMED PLASTIC 4-INCH (YELLOW)

(102) PAVEMENT MARKING PREFORMED PLASTIC 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

(122) PAVEMENT MARKING CROSSWALK PREFORMED PLASTIC 12-INCH (WHITE)

(123) PAVEMENT MARKING PREFORMED PLASTIC 12-INCH (WHITE)

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2



PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B OVERVIEW	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\026200_S1B.dgn PLOT DATE : 17-OCT-2012 09:27 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 134.4:1

2



PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B OVERVIEW	SHEET	E

2

ROAD WORK AHEAD
W20-1

W. SCHLINGER AVE.

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

500'

HANK AARON STATE TRAIL

BEGIN PROJECT 1060-33-90
STA. 33+46

100'

25'

S. 84TH ST.

29 30 31 32 33

25'

12'

25'

100'

P1 28+53.33

W. PIERCE ST.

200'

400' 400' 200'

180'

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD WORK AHEAD
W20-1

RIGHT LANE CLOSED AHEAD
W20-5

W04-2R

ROAD WORK AHEAD
W20-1

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

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\026201_S1B.dgn PLOT DATE : 17-OCT-2012 09:27 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

ROAD WORK AHEAD W20-1

200'

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

N

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

SEE SDD SINGLE LANE CLOSURE NON-FREEWAY/EXPRESSWAY

LANE CLOSED R11-2(MOD) 48" X 30"

W. ADLER ST.

SEE SDD SINGLE LANE CLOSURE NON-FREEWAY/EXPRESSWAY
SEE SDD INTERSECTION WITHIN SINGLE LANE CLOSURE

IH-94 EB OFF RAMP

S. 84TH ST.

34 35 36 37 38 39

12' 25' 22' 14'

BEGIN PROJECT 1060-33-90
STA. 33+46

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

W. ADLER ST.

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

RIGHT TURN LANE R3-55R(MOD) 24" X 30"

W. KEARNEY ST.

NOTES:
MAINTAIN RIGHT TURN LANE AT INTERCHANGE UNTIL WORK IS ONGOING. CLOSE DURING OFF PEAK HOURS ONLY

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B	SHEET	E

2

2

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

IH-94 EB OFF RAMP

IH-94 EB

IH-94 WB

IH-94 WB ON RAMP

HONEY CREEK

500'

100'

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

N

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

LANE
CLOSED
R11-2(MOD)
48" X 30"

RIGHT
TURN
LANE
R3-55R(MOD)
24" X 30"

LANE
CLOSED
R11-2(MOD)
48" X 30"

14'

25'

22'

S. 84TH ST.

40 41 42 43 44 45

12'

LANE
CLOSED
R11-2(MOD)
48" X 30"

LANE
CLOSED
R11-2(MOD)
48" X 30"

W. KEARNEY ST.

W. O CONNOR ST.

200'

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

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

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY

NOTES:
MAINTAIN RIGHT TURN LANE AT
INTERCHANGE UNTIL WORK IS ONGOING.
CLOSE DURING OFF PEAK HOURS ONLY

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\026203_S1B.dgn PLOT DATE : 17-OCT-2012 09:27 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

N

LEFT LANE CLOSED AHEAD W20-5

RAMP WORK AHEAD W20-1

200'

500'

25'

14'

IH-94 EB OFF RAMP

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

S. 84TH ST.

40

12'

25'

25'

IH-94 EB

IH-94 WB

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\026203a_S1B.dgn PLOT DATE : 17-OCT-2012 09:28 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

N

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

LANE CLOSED
R11-2(MOD)
48" X 30"

S. 84TH ST.

45 46 47 48 49 50 51

PI 49+88.42

12' 25' 12' 12' 25' 23' 25'

W. HONEY CREEK PKWY

HONEY CREEK

200' 500'

ROAD WORK AHEAD
W20-1

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY
SEE SDD INTERSECTION WITHIN
SINGLE LANE CLOSURE

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY

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

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

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B	SHEET	E

2

ROAD WORK AHEAD
W20-1

RIGHT LANE CLOSED AHEAD
W20-5R

W04-2R

LANE CLOSED
R11-2(MOD)
48" X 30"

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

W. DANA ST.

200'

100'

25'

12'

24'

N

LANE CLOSED
R11-2(MOD)
48" X 30"

W. HAWTHORNE AVE.

R155+42.89

S. 84TH ST.

51 52 53 54 55 56

W. DANA ST.

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

ROAD WORK AHEAD
W20-1

LANE CLOSED
R11-2(MOD)
48" X 30"

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

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY
SEE SDD INTERSECTION WITHIN
SINGLE LANE CLOSURE

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

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B	SHEET 69	E

FILE NAME : J:\projects\d2_10603394\90\026205_S1B.dgn PLOT DATE : 18-OCT-2012 06:17 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1

2

N

ROAD WORK AHEAD
W20-1

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

W. HAWTHORNE AVE.

200'

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY
SEE SDD INTERSECTION WITHIN
SINGLE LANE CLOSURE

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD WORK AHEAD
W20-1

W. HILL ST.

200'

12'

S. 84TH ST.

25'

PI 60+13.45

57

58

59

60

61

62

PC 57+62.93

12'

25'

LANE CLOSED
R11-2(MOD)
48" X 30"

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY
SEE SDD INTERSECTION WITHIN
SINGLE LANE CLOSURE

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

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

NOTES:
W. HAWTHORNE AVE. AND W. HILL ST. WILL BE COMPLETED UNDER TRAFFIC.
CONTRACTOR SHALL REFERENCE SDD SINGLE LANE CLOSURE NON-FREEWAY/
EXPRESSWAY FOR TRAFFIC CONTROL MEASURES.

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B	SHEET	E

2

N

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

W. HILL ST.

200'

S. 84TH ST.

END PROJECT
STA. 62+73

* CONTRACTOR MUST COORDINATE
WITH PROJECT #1060-33-71
TRAFFIC CONTROL PLANS

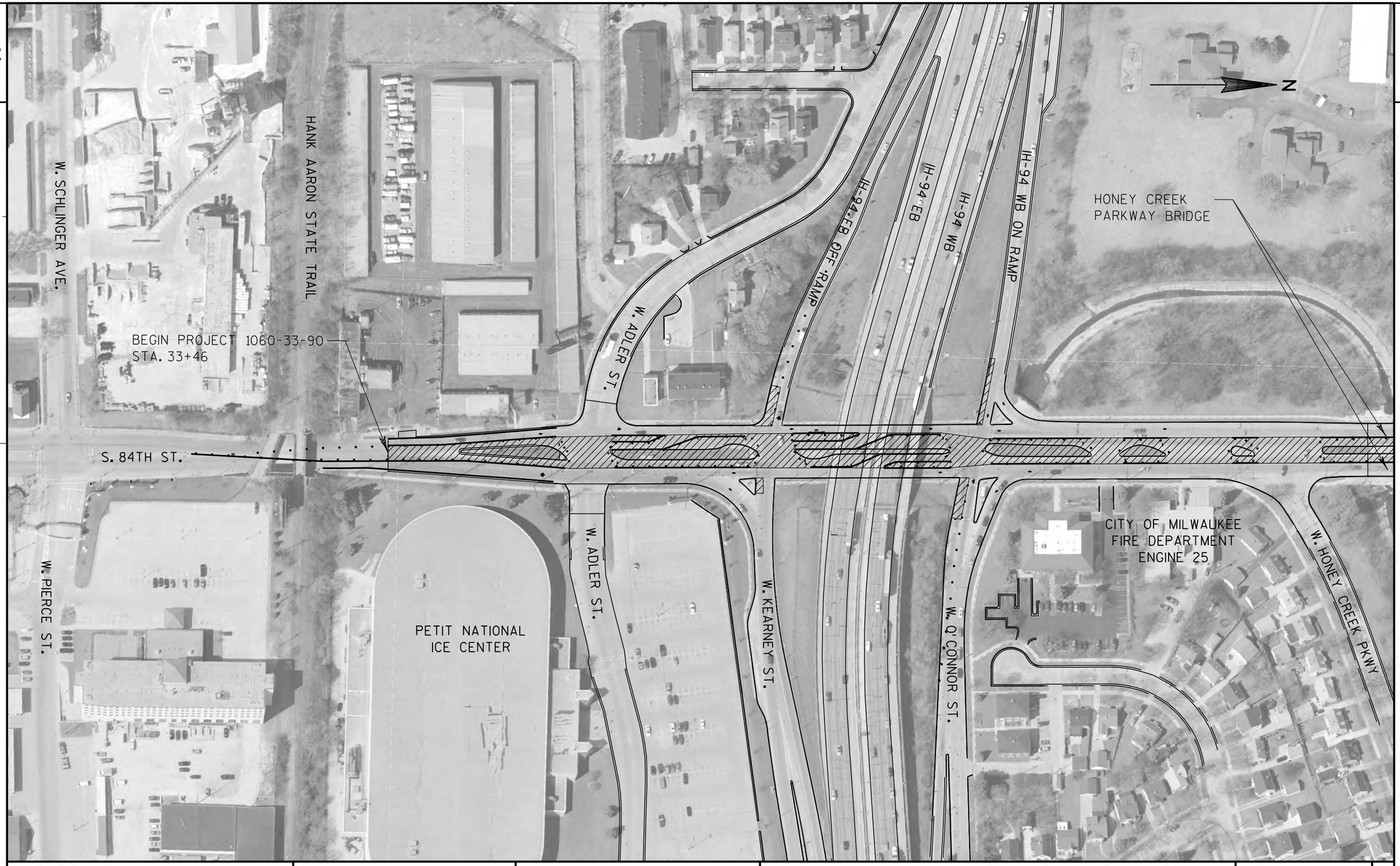
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

NOTES:
W. HAWTHORNE AVE. AND W. HILL ST. WILL BE COMPLETED UNDER TRAFFIC.
CONTRACTOR SHALL REFERENCE SDD SINGLE LANE CLOSURE NON-FREEWAY/
EXPRESSWAY FOR TRAFFIC CONTROL MEASURES.

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1B	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\026207_S1B.dgn PLOT DATE : 17-OCT-2012 09:28 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1 WISDOT/CADDS SHEET 42



PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1C OVERVIEW	SHEET E

FILE NAME : j:\projects\d2_10603394\90\026300_S1C.dgn PLOT DATE : 17-OCT-2012 09:35 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 134.4:1

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1C OVERVIEW	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\026300a_S1C.dgn PLOT DATE : 17-OCT-2012 09:36 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 134.4:1

2

ROAD WORK AHEAD
W20-1

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

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

N

W. SCHLINGER AVE.

200'

500'

S. 84TH ST.

HANK AARON STATE TRAIL

BEGIN PROJECT 1060-33-90
STA. 33+46

100'

25'

25'

25'

29

30

31

32

33

12'

12'

100'

P1 28+53.33

W. PIERCE ST.

400'

400'

200'

200'

LANE CLOSED
R11-2(MOD)
48" X 30"

LEFT LANE CLOSED AHEAD
W20-5

W04-2L

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

200'

ROAD WORK AHEAD
W20-1

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

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1C	SHEET	E

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

N

ROAD WORK AHEAD W20-1

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

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

LANE CLOSED R11-2(MOD) 48" X 30"

W. ADLER ST.

200'

W012-1D 24" X 24"

LEFT TURN LANE R3-55L 24" X 30"

IH-94 EB OFF RAMP

25' 50' 25'

12' 28' 12'

S. 84TH ST.

34 35 36 37 38 39

25' 12' 25'

W. ADLER ST.

200'

LANE CLOSED R11-2(MOD) 48" X 30"

BEGIN PROJECT 1060-33-90 STA. 33+46

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

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

LANE CLOSED R11-2(MOD) 48" X 30"

ROAD WORK AHEAD W20-1

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

W. KEARNEY ST.

200'

LANE CLOSED R11-2(MOD) 48" X 30"

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

NOTES:
W. ADLER ST. INSIDE LANE WILL BE COMPLETED UNDER TRAFFIC.
CONTRACTOR SHALL REFERENCE SDD SINGLE LANE CLOSURE NON-FREEWAY/ EXPRESSWAY FOR TRAFFIC CONTROL MEASURES.
LEFT TURN LANES TO REMAIN OPEN UNTIL WORK IS ONGOING.
CLOSE DURING OFF PEAK HOURS ONLY.

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1C	SHEET 75	E

2

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY
SEE SDD INTERSECTION WITHIN
SINGLE LANE CLOSURE

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

LANE CLOSED
R11-2(MOD)
48" X 30"

500'

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

100'

25'

N

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

2

IH-94 EB OFF RAMP

IH-94 EB

IH-94 WB

IH-94 WB ON RAMP

HONEY CREEK

LANE CLOSED
R11-2(MOD)
48" X 30"

W012-1D
24" X 24"

LEFT TURN LANE
R3-55L
24" X 30"

25'

50'

25'

22'

S. 84TH ST.

40

41

42

43

44

45

12'

25'

50'

25'

22'

12'

25'

LEFT TURN LANE
R3-55L
24" X 30"

W012-1D
24" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

W. KEARNEY ST.

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

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY
SEE SDD INTERSECTION WITHIN
SINGLE LANE CLOSURE

LANE CLOSED
R11-2(MOD)
48" X 30"

W. O CONNOR ST.

LANE CLOSED
R11-2(MOD)
48" X 30"

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY
SEE SDD INTERSECTION WITHIN
SINGLE LANE CLOSURE

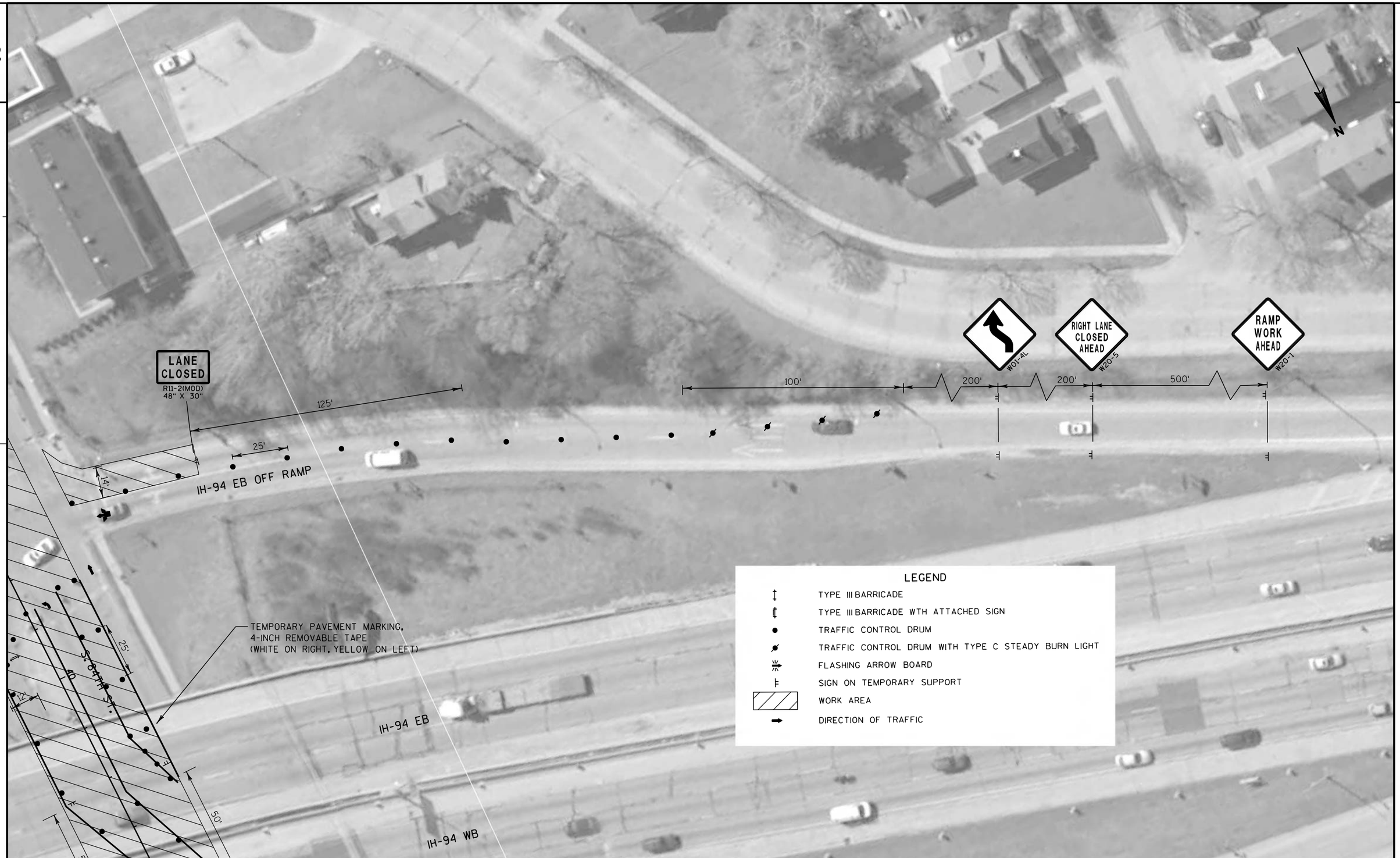
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

NOTES:
LEFT TURN LANES TO REMAIN OPEN UNTIL WORK IS ONGOING.
CLOSE DURING OFF PEAK HOURS ONLY.

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1C	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\026303_S1C.dgn PLOT DATE : 17-OCT-2012 09:36 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1

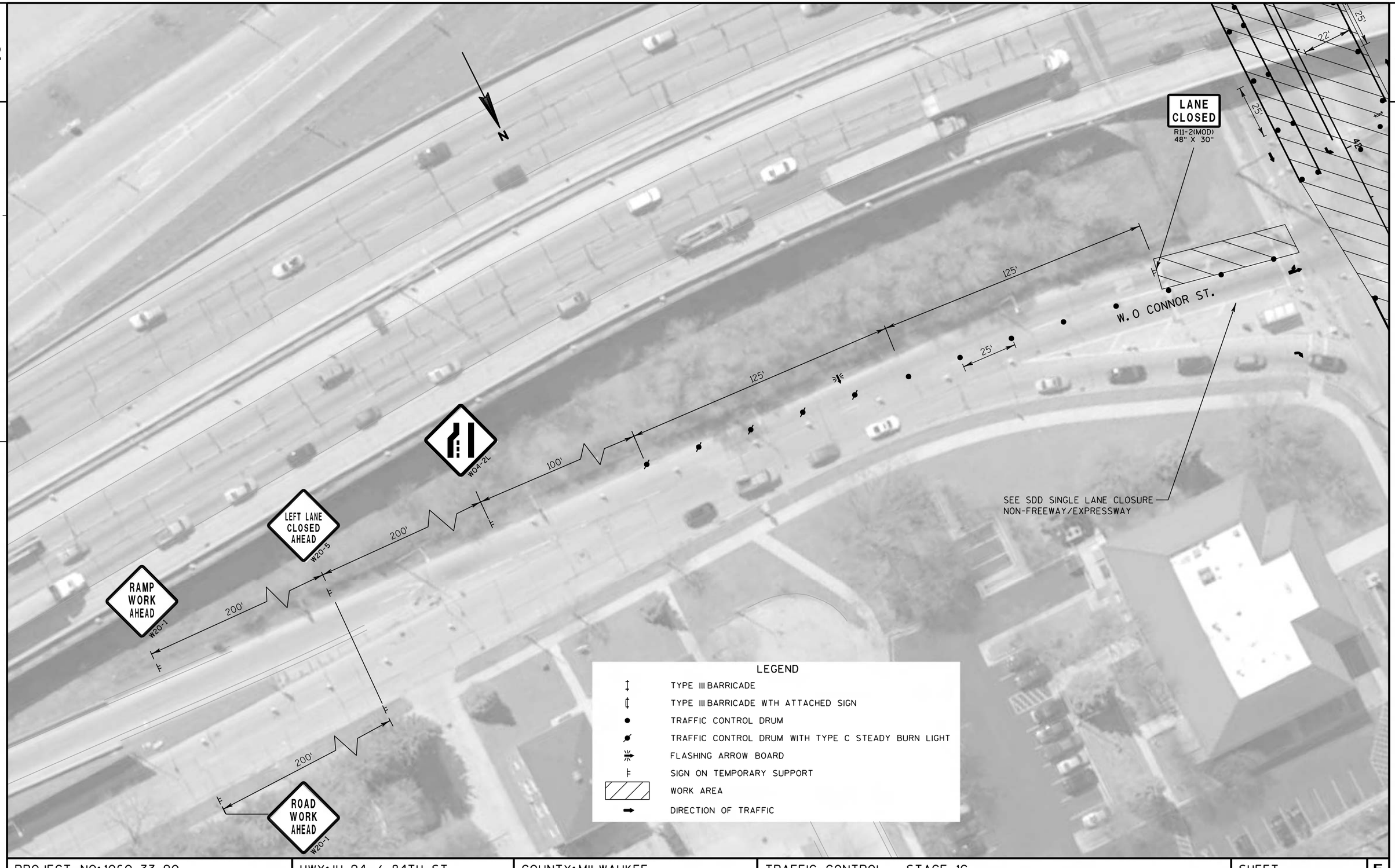


PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1C	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\026303A_S1C.dgn PLOT DATE : 17-OCT-2012 09:36 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1C	SHEET	E

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

N

LANE CLOSED
R11-2(MOD)
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

PI 49+88.42

S. 84TH ST.

45 46 47 48 49 50 51

25' 12' 25' 12' 25' 25'

200'

ROAD WORK AHEAD
W20-1

HONEY CREEK

W. HONEY CREEK PKWY

500'

LANE CLOSED
R11-2(MOD)
48" X 30"

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY
SEE SDD INTERSECTION WITHIN
SINGLE LANE CLOSURE

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

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

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

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY
SEE SDD INTERSECTION WITHIN
SINGLE LANE CLOSURE

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1C	SHEET	E

NOTES:
W. DANA ST. INSIDE LANE WILL BE COMPLETED UNDER TRAFFIC.
CONTRACTOR SHALL REFERENCE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY FOR TRAFFIC CONTROL MEASURES.

N

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD WORK AHEAD
W20-1

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

W. DANA ST.

500'

200'

+43' LT

LANE CLOSED
R11-2(MOD)
48" X 30"

W. HAWTHORNE AVE.

RT 55+42.89

25'

S. 84TH ST.

12'

24'

50'

25'

51 52 53 54 55 56

LEFT TURN LANE
R3-55L
24" X 30"

W012-1D
24" X 24"

200'

W. DANA ST.

200'

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

ROAD WORK AHEAD
W20-1

LANE CLOSED
R11-2(MOD)
48" X 30"

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

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY
SEE SDD INTERSECTION WITHIN
SINGLE LANE CLOSURE

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

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1C	SHEET E

FILE NAME : j:\projects\d2_10603394\90\026305_S1C.dgn PLOT DATE : 17-OCT-2012 09:37 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 40:1

2

N

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

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY
SEE SDD INTERSECTION WITHIN
SINGLE LANE CLOSURE

W. HAWTHORNE AVE.

200'

ROAD
WORK
AHEAD
W20-1

200'

W. HILL ST.

R3-2
24" X 24"

S. 84TH ST.

25'

2'

12'

57

58

59

60

61

62

PC 57+68.93

PI60+73.45

25'

LANE
CLOSED
R11-2(MOD)
48" X 30"

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

LANE
CLOSED
R11-2(MOD)
48" X 30"

SEE SDD SINGLE LANE CLOSURE
NON-FREEWAY/EXPRESSWAY
SEE SDD INTERSECTION WITHIN
SINGLE LANE CLOSURE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1C	SHEET	E

2

N

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

200'

W. HILL ST.

S. 84TH ST.

63

64

65

66

67

68

PI 63+81.26

PI 68+16.07

END PROJECT
STA. 62+73

* CONTRACTOR MUST COORDINATE
WITH PROJECT #1060-33-71
TRAFFIC CONTROL PLANS

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1C	SHEET	E

2

N

2658.11'
S00°17'03"E
SECTION LINE

POINT 7135
Y=296853.91
X=574458.84

POINT 7148
Y=294195.84
X=574472.02

SECTION LINE
2682.04'
N88°52'01"E

POINT 7136
Y=296937.87
X=577144.57

SECTION LINE
2687.05'
S88°12'34"W

PI 49+98.42

PI 55+42.89

30 35 SECTION LINE 40 45 50 55

2689.01'
S00°11'27"E

2145.10'
N00°11'28"W

544.47'
N01°30'37"E

220.04'
N01°57'14"E

R/L 84TH ST.

PC 57+62.93

PI 28+53.33

2685.24'
N88°58'00"E

POINT 7149
Y=294248.88
X=577153.53

2687.50'
N88°42'04"E

2689.01'
S00°11'27"E

2660.25'
N00°32'35"W

N88°42'04"E
16.16'

PI 55+42.89

544.47'
N01°30'37"E

220.04'
N01°57'14"E

SECTION LINE

POINT 7150
Y=294344.15
X=579837.07

SECTION LINE

2654.65'
S00°07'23"E
SECTION LINE

POINT 7137
Y=296998.79
X=579831.37

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	ALIGNMENT PLAN	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\027201_ad.dgn PLOT DATE : 20-JUN-2012 17:39 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

2

2

POINT 7135
Y=296853.91
X=574458.84

2655.05'
SECTION LINE
S00°12'52"E

POINT 7122
Y=299508.94
X=574448.90

SECTION LINE
S88°12'34"W
2687.05'

SECTION LINE
N88°05'24"E
2671.94'

PI55+42.89

PI60+73.45

55

60

65

70

544.47'
N01°30'37"E

220.04'
N01°57'14"E

SECTION LINE
2660.25'
N00°32'35"W

CUR1

PC 57+62.93

PT 63+81.26

434.81'
N15°02'53"E

R/L 84TH ST.

PI68+16.07

468.95'
N14°09'50"E

PI72+85.02

POINT 7136
Y=296937.87
X=577144.57

N88°42'04"E
2687.50'

2660.25'
N00°32'35"W

N88°42'04"E
16.16'

PI55+42.89

544.47'
N01°30'37"E

220.04'
N01°57'14"E

SECTION LINE

POINT 7123
Y=299598.00
X=577119.35

N88°31'26"E
2702.90'

SECTION LINE

POINT 7137
Y=296998.79
X=579831.37

SECTION LINE
2668.86'
S00°12'54"E

POINT 7124
Y=299667.63
X=579821.35

CURVE DATA

	PI COORDINATES							EXTERNAL		PC COORDINATES			PT COORDINATES		
CURVE	PI STA.	X	Y	DELTA	DEG	TAN	LENGTH	DISTANCE	RADIUS	PC STA.	X	Y	PT STA.	X	Y
CUR1	60+73.45	577178.82	297468.49	13° 05'39.08"	2° 07'03.54"	310.52'	618.34'	17.76'	2705.63'	57+62.93	577168.23	297158.15	63+81.26	577259.44	297768.36

PROJECT NO:1060-33-90	HWY:IH-94 / 84TH ST.	COUNTY:MILWAUKEE	ALIGNMENT PLAN	SHEET	E

FILE NAME : j:\projects\d2_10603394\90\027202_ad.dgn PLOT DATE : 20-JUN-2012 17:40 PLOT BY : dotslk PLOT NAME : PLOT SCALE : 200:1
WISDOT/CADDS SHEET 42

DATE 01FEB13 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	1060-33-90 QUANTITY
0010	108.4400	CPM PROGRESS SCHEDULE	EACH	0.500	0.500
0060	204.0100	REMOVING PAVEMENT	SY	225.000	225.000
0080	204.0109.S	REMOVING CONCRETE SURFACE PARTIAL DEPTH	SF	229,200.000	229,200.000
0090	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	2,600.000	2,600.000
0100	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	25,826.000	25,826.000
0110	204.0150	REMOVING CURB & GUTTER	LF	280.000	280.000
0120	204.0155	REMOVING CONCRETE SIDEWALK	SY	147.000	147.000
0230	213.0100	FINISHING ROADWAY (PROJECT) 0002. 1060-33-90	EACH	1.000	1.000
0240	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	99.000	99.000
0310	416.0270	CONCRETE DRIVEWAY HES 7-INCH	SY	150.000	150.000
0320	416.0280	CONCRETE DRIVEWAY HES 8-INCH	SY	74.000	74.000
0330	416.0610	DRILLED TIE BARS	EACH	186.000	186.000
0340	440.4410.S	INCENTIVE IRI RIDE	DOL	8,070.000	8,070.000
0350	455.0105	ASPHALTIC MATERIAL PG58-28	TON	695.000	695.000
0360	455.0605	TACK COAT	GAL	2,600.000	2,600.000
0370	460.1103	HMA PAVEMENT TYPE E-3	TON	12,600.000	12,600.000
0380	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	4,432.000	4,432.000
0430	601.0322	CONCRETE CURB & GUTTER 22-INCH	LF	487.000	487.000
0450	602.0410	CONCRETE SIDEWALK 5-INCH	SF	1,280.000	1,280.000
0470	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	32.000	32.000
0700	619.1000	MOBILIZATION	EACH	0.200	0.200
0790	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	6.000	6.000
0800	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0820	628.7005	INLET PROTECTION TYPE A	EACH	3.000	3.000
0830	628.7010	INLET PROTECTION TYPE B	EACH	37.000	37.000
0840	628.7015	INLET PROTECTION TYPE C	EACH	4.000	4.000
0850	628.7020	INLET PROTECTION TYPE D	EACH	11.000	11.000
1030	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	11.000	11.000
1040	634.0812	POSTS TUBULAR STEEL 2X2-INCH X 12-FT	EACH	55.000	55.000
1050	637.0202	SIGNS REFLECTIVE TYPE II	SF	787.160	787.160
1080	638.2602	REMOVING SIGNS TYPE II	EACH	87.000	87.000
1090	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	32.000	32.000
1110	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 0002. 1060-33-90	DAY	33.000	33.000
1120	643.0300	TRAFFIC CONTROL DRUMS	DAY	25,839.000	25,839.000
1140	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	2,013.000	2,013.000
1150	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	924.000	924.000
1160	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	132.000	132.000
1170	643.0900	TRAFFIC CONTROL SIGNS	DAY	4,653.000	4,653.000
1230	646.0109	PAVEMENT MARKING PREFORMED PLASTIC 4-INCH	LF	1,445.000	1,445.000
1240	646.0129	PAVEMENT MARKING PREFORMED PLASTIC 8-INCH	LF	685.000	685.000
1250	646.0136	PAVEMENT MARKING EPOXY 12-INCH	LF	12.000	12.000
1260	646.0139	PAVEMENT MARKING PREFORMED PLASTIC 12-INCH	LF	500.000	500.000
1280	646.0841.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	LF	190.000	190.000
1310	646.0883.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH	LF	450.000	450.000
1330	647.0559	PAVEMENT MARKING STOP LINE PREFORMED PLASTIC 12-INCH	LF	25.000	25.000

3

DATE 01FEB13 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	1060-33-90 QUANTITY
1360	647.0779	PAVEMENT MARKING CROSSWALK PREFORMED PLASTIC 12-INCH	LF	190.000	190.000
1370	647.0960	REMOVING PAVEMENT MARKINGS SYMBOLS	EACH	3.000	3.000
1380	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	14,478.000	14,478.000
1410	652.0215	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/4-INCH	LF	10.000	10.000
1420	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	92.000	92.000
1440	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	500.000	500.000
1460	652.0615	CONDUIT SPECIAL 3-INCH	LF	562.000	562.000
1490	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	9.000	9.000
1500	654.0101	CONCRETE BASES TYPE 1	EACH	4.000	4.000
1530	654.0110	CONCRETE BASES TYPE 10	EACH	4.000	4.000
1550	654.0217	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	EACH	1.000	1.000
1570	655.0230	CABLE TRAFFIC SIGNAL 5-14 AWG	LF	680.000	680.000
1590	655.0260	CABLE TRAFFIC SIGNAL 12-14 AWG	LF	1,598.000	1,598.000
1630	655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	LF	1,195.000	1,195.000
1690	655.0900	TRAFFIC SIGNAL EVP DETECTOR CABLE	LF	182.000	182.000
1730	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 0021. STH 181 & W. DANA COURT	LS	1.000	1.000
1750	657.0100	PEDESTAL BASES	EACH	4.000	4.000
1790	657.0405	TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT	EACH	1.000	1.000
1800	657.0420	TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT	EACH	3.000	3.000
1850	657.1345	INSTALL POLES TYPE 9	EACH	4.000	4.000
1870	657.1515	INSTALL MONOTUBE ARMS 15-FT	EACH	1.000	1.000
1880	657.1525	INSTALL MONOTUBE ARMS 25-FT	EACH	1.000	1.000
1890	657.1530	INSTALL MONOTUBE ARMS 30-FT	EACH	2.000	2.000
1920	658.0110	TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	EACH	14.000	14.000
1940	658.0215	BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	EACH	14.000	14.000
1960	658.0416	PEDESTRIAN SIGNAL FACE 16-INCH	EACH	6.000	6.000
1970	658.0500	PEDESTRIAN PUSH BUTTONS	EACH	6.000	6.000
1980	658.0600	LED MODULES 12-INCH RED BALL	EACH	12.000	12.000
1990	658.0605	LED MODULES 12-INCH YELLOW BALL	EACH	12.000	12.000
2000	658.0610	LED MODULES 12-INCH GREEN BALL	EACH	12.000	12.000
2010	658.0615	LED MODULES 12-INCH RED ARROW	EACH	2.000	2.000
2020	658.0620	LED MODULES 12-INCH YELLOW ARROW	EACH	4.000	4.000
2040	658.0635	LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH	EACH	6.000	6.000
2070	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 0021. STH 181 & W. DANA COURT	LS	1.000	1.000
2140	670.0100	FIELD SYSTEM INTEGRATOR 0021. STH 181 & W. DANA COURT	LS	1.000	1.000
2170	670.0200	ITS DOCUMENTATION 0021. STH 181 & W. DANA COURT	LS	1.000	1.000
2290	678.0300	FIBER OPTIC SPLICE	EACH	10.000	10.000
2330	678.0500	COMMUNICATION SYSTEM TESTING 0021. STH 181 & W. DANA COURT	LS	1.000	1.000
2350	690.0250	SAWING CONCRETE	LF	1,050.000	1,050.000
2420	SPV.0060	SPECIAL 0004. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3	EACH	2.000	2.000
2690	SPV.0060	SPECIAL 3021. BOLLARDS	EACH	2.000	2.000

3

DATE 01FEB13 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	1060-33-90 QUANTITY
2840	SPV.0090	SPECIAL 0001. PAVEMENT MARKING GROOVED PREFORMEDTHERMOPLASTIC STOP LINE 18-INCH	LF	200.000	200.000
2850	SPV.0090	SPECIAL 0002. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH	LF	655.000	655.000
2860	SPV.0090	SPECIAL 0003. REMOVING PAVEMENT MARKING WATER BLASTING	LF	40.000	40.000
2960	SPV.0105	SPECIAL 0003. PAVEMENT CLEANUP PROJECT 1060-33-90	LS	1.000	1.000
2970	SPV.0105	SPECIAL 0004. SURVEY PROJECT 1060-33-90	LS	1.000	1.000
3120	SPV.0105	SPECIAL 3021. REMOVE TRAFFIC SIGNALS STH 181 & W. DANA COURT	LS	1.000	1.000
3130	SPV.0105	SPECIAL 3022. REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE STH 181 & W. DANA COURT	LS	1.000	1.000
3140	SPV.0105	SPECIAL 3023. TRANSPORTING SIGNAL AND LIGHTING MATERIALS STH 181 & W. DANA COURT	LS	1.000	1.000
3150	SPV.0105	SPECIAL 3024. INSTALL VENDOR SUPPLIED TRAFFIC SIGNAL CABINET STH 181 & W. DANA COURT	LS	1.000	1.000
3160	SPV.0105	SPECIAL 3025. TRANSPORTING & INST. SF AUTOSCOPE VIDEO DET. SYS. STH181 & W. DANA COURT	LS	1.000	1.000
3170	SPV.0105	SPECIAL 3026. EVP DETECTOR HEAD INSTALLATION STH 181 & W. DANA COURT	LS	1.000	1.000
3180	SPV.0105	SPECIAL 3027. INSTALL FIBER OPTIC COMM. CABINET STH 181 & W. DANA COURT	LS	1.000	1.000

TYPE II PERMANENT SIGNING - CATEGORY CODE 0010

1060-33-90 84TH ST

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.0202 SIGNS REFLC TYPE II [SF]	638.2602 REM SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP (EA)	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0812 POSTS TUBULAR STEEL 2"X2"X12' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
1	R4-7(2S)	--	24 x 30	5.000	1	1	--	1	--	--
2	W5-52L(2S)	--	12 x 36	3.000	1	--	--	--	#1	--
3	J2-3(2S)	--	72 x 60	30.000	1	--	2	--	--	--
	MB3-4	--	24 x 12							
	M1-1	I-94	24 x 24							
	M4-20L	--	24 x 24							
	M3-1	--	24 x 12							
	M1-6	STH 181	24 x 24							
	M6-1	--	21 x 21							
	MB3-2	--	24 x 12							
	M1-1	I-94	24 x 24							
	MB5-1R	--	21 x 21							
4	R5-1(2S)	--	30 x 30	6.250	--	--	--	1	--	--
5	R4-7(2S)	--	24 x 30	5.000	--	--	--	1	--	--
6	R1-1(2S)	--	30 x 30	5.180	1	1	--	1	--	--
7	R6-2L(2S)	--	24 x 30	5.000	--	--	--	1	--	--
8	R4-7(2S)	--	24 x 30	5.000	--	--	--	--	--	MOUNT ON LIGHT POLE
9	R3-20R(2S)	--	24 x 36	6.000	--	--	--	1	--	--
10	R3-10	--	-- x --	--	1	2	--	--	--	--
11	R7-1D(2S)	--	18 x 24	3.000	1	--	--	1	--	--
12	J3-1(2S)	--	24 x 57	9.500	1	--	--	--	--	MOUNT ON LIGHT POLE
	MB3-2	--	24 x 12							
	M1-1	I-94	24 x 24							
	MB6-1	--	21 x 21							
13	R1-2(2S)	--	36 x 31	3.880	1	1	--	1	--	--
14	W12-1D(2S)	--	24 x 24	4.000	--	--	--	1	--	2' MOUNTING HEIGHT
15	R5-1(2S)	--	30 x 30	6.250	1	--	--	--	--	MOUNT ON SIGNAL POLE
16	S1-1(2S)	--	36 x 36	6.750	1	--	--	--	--	MOUNT ON SIGNAL POLE
17	WF16-7L(2M)	--	30 x 18	3.750	1	--	--	--	#16	MOUNT ON SIGNAL POLE
18	R4-7(2S)	--	24 x 30	5.000	1	--	--	--	--	MOUNT ON LIGHT POLE
19	J3-1(2S)	--	24 x 57	9.500	1	1	1	--	--	--
	MB3-2	--	24 x 12							
	M1-1	I-94	24 x 24							
	MB6-1	--	21 x 21							
20	J4-1(2S)	--	24 x 36	6.000	1	1	1	--	--	--
	M3-3	--	24 x 12							
	M1-6	STH 181	24 x 24							

SHEET 1 OF 5

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PERMANENT SIGNING QUANTITIES	SHEET E

FILE NAME : j:\projects\d2_10603394\90\sign\030201_mq.dgn PLOT DATE : 15-OCT-2012 09:02 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 200:1 WISDOT/CADDS SHEET 43

TYPE II PERMANENT SIGNING - CATEGORY CODE 0010

1060-33-90 84TH ST

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.0202 SIGNS REFLC TYPE II [SF]	638.2602 REM SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP (EA)	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0812 POSTS TUBULAR STEEL 2"X2"X12' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
21	J3-1(2S)	--	24 x 57	9.500	--	--	--	--	--	MOUNT ON LIGHT POLE
	MB3-2	--	24 x 12							
	M1-1	I-94	24 x 24							
	MB6-1	--	21 x 21							
22	R2-1(2S)	SPEED LIMIT 30	24 x 30	5.000	1	--	--	1	--	--
23	R7-1D(2S)	--	18 x 24	3.000	1	--	--	--	--	MOUNT ON LIGHT POLE
24	R5-1(2S)	--	30 x 30	6.250	--	--	--	1	--	--
25	R1-1(2S)	--	30 x 30	5.180	1	--	--	--	--	MOUNT ON LIGHT POLE
26	W12-2(2S)	14'-4"	36 x 36	9.000	1	1	--	1	--	--
27	R6-2L(2S)	--	24 x 30	5.000	--	--	--	1	--	--
28	R4-7(2S)	--	24 x 30	5.000	--	--	--	--	--	MOUNT ON SIGNAL POLE
29	J2-1(2S)	--	24 x 57	9.500	1	--	1	--	--	REMOVE SIGN FROM BRIDGE COL
	MB3-4	--	24 x 12							
	M1-1	I-94	24 x 24							
	MB5-1L	--	21 x 21							
30	R7-1D(2S)	--	18 x 24	3.000	1	--	--	1	--	REMOVE SIGN FROM BRIDGE COL
31	J2-1(2S)	--	24 x 57	9.500	1	--	1	--	--	REMOVE SIGN FROM BRIDGE COL
	MB3-2	--	24 x 12							
	M1-1	I-94	24 x 24							
	MB5-1L	--	21 x 21							
32	R6-2L(2S)	--	24 x 30	5.000	1	--	--	--	--	MOUNT ON SIGNAL POLE
33	R5-1(2S)	--	30 x 30	6.250	1	--	--	--	--	MOUNT ON LIGHT POLE 4' MOUNTING HEIGHT
34	R6-2L(2S)	--	24 x 30	5.000	1	--	--	--	--	MOUNT ON SIGNAL POLE
35	R3-8B(2S)	--	30 x 36	7.500	1	--	--	--	--	MOUNT ON LIGHT POLE
36	R6-2L(2S)	--	24 x 30	5.000	1	--	--	--	--	MOUNT ON SIGNAL POLE
37	R1-1(3)	--	36 x 36	9.000	1	1	--	1	--	--
38	R5-1(2S)	--	30 x 30	6.250	--	--	--	--	--	MOUNT ON LIGHT POLE 4' MOUNTING HEIGHT
39	R7-5L(2S)	--	18 x 24	3.000	1	--	--	--	--	MOUNT ON LIGHT POLE
40	R7-1R(2S)	--	18 x 24	3.000	1	--	--	--	#39	MOUNT ON LIGHT POLE
41	W11-8(2S)	--	30 x 30	6.250	1	--	--	--	--	MOUNT ON LIGHT POLE
42	W11-8(2S)	--	30 x 30	6.250	1	--	--	--	--	MOUNT ON LIGHT POLE
43	R2-1(2S)	--	24 x 30	5.000	1	--	--	--	--	MOUNT ON LIGHT POLE
44	R7-1L(2S)	--	18 x 24	3.000	1	--	--	--	--	MOUNT ON LIGHT POLE
45	R7-5R(2S)	--	18 x 24	3.000	1	--	--	--	--	MOUNT ON LIGHT POLE
46	R3-10	--	-- x --	--	1	--	--	--	--	--

SHEET 2 OF 5

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PERMANENT SIGNING QUANTITIES	SHEET E

FILE NAME : j:\projects\d2_10603394\90\sign\030201_mq.dgn PLOT DATE : 15-OCT-2012 09:02 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 200:1 WISDOT/CADDS SHEET 43

TYPE II PERMANENT SIGNING - CATEGORY CODE 0010

1060-33-90 84TH ST

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.0202 SIGNS REFLC TYPE II [SF]	638.2602 REM SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP (EA)	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0812 POSTS TUBULAR STEEL 2"X2"X12' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
47	J3-1(2S)	--	24 x 57	9.500	1	1	1	--	--	--
	MB3-4	--	24 x 12							
	M1-1	I-94	24 x 24							
	MB6-1	--	21 x 21							
48	R7-1D(2S)	--	18 x 24	3.000	1	1	--	1	--	--
49	R3-2(2S)	--	24 x 24	4.000	1	--	--	--	--	MOUNT ON SIGNAL POLE
50	J3-1(2S)	--	24 x 57	9.500	1	1	1	--	--	--
	MB3-4	--	24 x 12							
	M1-1	I-94	24 x 24							
	MB6-1	--	21 x 21							
51	W12-1D(2S)	--	24 x 24	4.000	--	--	--	1	--	2' MOUNTING HEIGHT
52	R1-2(2S)	--	31 x 36	3.880	1	1	--	1	--	--
53	R5-57(5)	--	36 x 36	9.000	1	--	--	--	--	MOUNT ON LIGHT POLE
54	R3-8B(2S)	--	30 x 36	7.500	1	--	--	--	--	MOUNT ON SIGNAL POLE
55	W3-8(5)	--	48 x 48	16.000	1	--	--	--	--	MOUNT ON SIGNAL POLE
56	R3-2(2S)	--	24 x 24	4.000	1	--	--	--	--	MOUNT ON LIGHT POLE
57	R7-1D(2S)	--	18 x 24	3.000	1	--	--	1	--	REMOVE SIGN FROM BRIDGE COL
58	R3-1(2S)	--	24 x 24	4.000	1	1	--	1	--	--
59	R6-2L(2S)	--	24 x 30	5.000	--	--	--	--	--	MOUNT ON SIGNAL POLE
60	R5-1(2S)	--	30 x 30	6.250	1	1	--	1	--	--
61	S1-1(2S)	--	36 x 36	6.750	1	--	--	--	--	BACK OF SIGN #60
62	WF16-7L(2M)	--	30 x 18	3.750	1	--	--	--	#61	--
63	R6-2R(2S)	--	24 x 30	5.000	--	--	--	--	--	MOUNT ON SIGNAL POLE
64	R3-11	--	-- x --	--	1	2	--	--	--	--
65	R10-65L(2S)	--	24 x 30	5.000	1	--	--	--	--	MOUNT ON SIGNAL POLE
66	R10-6(mod)(2S)	--	24 x 36	6.000	1	--	--	--	--	MOUNT ON SIGNAL POLE
67	W4-2L(5)	--	48 x 48	16.000	1	1	--	1	--	--
68	R10-65R(2S)	--	24 x 30	5.000	1	--	--	--	--	MOUNT ON SIGNAL POLE
69	R10-6(2S)	--	24 x 36	6.000	1	--	--	--	--	MOUNT ON SIGNAL POLE
70	W3-8(5)	--	48 x 48	16.000	1	--	--	--	--	MOUNT ON SIGNAL POLE
71	R4-7(2S)	--	24 x 30	5.000	--	--	--	--	--	MOUNT ON LIGHT POLE
72	R7-1D(2S)	--	18 x 24	3.000	1	--	--	--	--	MOUNT ON LIGHT POLE
73	R5-1(2S)	--	30 x 30	6.250	--	--	--	--	--	MOUNT ON LIGHT POLE
74	R5-2(2S)	--	24 x 24	4.000	1	1	--	1	--	--
75	R1-1(2S)	--	30 x 30	5.180	1	1	--	1	--	--
76	R7-7L(2S)	--	18 x 24	3.000	1	--	--	--	--	MOUNT ON LIGHT POLE
77	D1-65(2)	DANA ST NEXT SIGNAL	54 x 30	11.250	--	--	--	2	--	--

TYPE II PERMANENT SIGNING - CATEGORY CODE 0010

1060-33-90 84TH ST

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.0202 SIGNS REFLC TYPE II [SF]	638.2602 REM SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP (EA)	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0812 POSTS TUBULAR STEEL 2"X2"X12' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
78	W3-3(2S)	--	36 x 36	9.000	--	--	--	1	--	--
79	W3-3(2S)	--	36 x 36	9.000	--	--	--	1	--	--
80	W11-8(2S)	--	30 x 30	6.250	1	--	--	--	--	MOUNT ON LIGHT POLE
81	W11-8(2S)	--	30 x 30	6.250	1	1	--	1	--	--
82	J2-3(2S)	--	72 x 60	30.000	--	--	2	--	--	--
	MB3-2	--	24 x 12							
	M1-1	I-94	24 x 24							
	M4-20L	--	24 x 24							
	M3-3	--	24 x 12							
	M1-6	STH 181	24 x 24							
	M6-1	--	21 x 21							
	MB3-4	--	24 x 12							
	M1-1	I-94	24 x 24							
	MB5-1R	--	21 x 21							
83	R4-7(2S)	--	24 x 30	5.000	--	--	--	--	--	MOUNT ON LIGHT POLE
84	R7-1L(2S)	--	18 x 24	3.000	1	1	--	1	--	--
85	R6-2L(2S)	--	24 x 30	5.000	--	--	--	1	--	--
86	J2-3	--	-- x --	--	1	--	--	--	--	--
87	R4-7(2S)	--	24 x 30	5.000	1	--	--	--	--	MOUNT ON LIGHT POLE
88	R4-7(2S)	--	24 x 30	5.000	--	--	--	--	--	MOUNT ON LIGHT POLE
89	R7-1D(2S)	--	18 x 24	3.000	1	1	--	1	--	--
90	R5-1(2S)	--	30 x 30	6.250	--	--	--	--	--	MOUNT ON LIGHT POLE
91	R4-7(2S)	--	24 x 30	5.000	1	--	--	--	--	MOUNT ON SIGNAL POLE
92	W14-1(2S)	--	30 x 30	6.250	1	--	--	--	--	MOUNT ON SIGNAL POLE
93	R6-2L(2S)	--	24 x 30	5.000	--	--	--	--	--	MOUNT ON SIGNAL POLE
94	R4-7(2S)	--	24 x 30	5.000	--	--	--	--	--	MOUNT ON SIGNAL POLE
95	D1-65(2)	DANA ST NEXT SIGNAL	54 x 30	11.250	--	--	--	2	--	--
96	I2-3(2)	MILWAUKEE POPULATION 602,782	72 x 24	12.000	1	--	--	2	--	--
97	W3-3(2S)	--	36 x 36	9.000	--	--	--	1	--	--
98	W3-3(2S)	--	36 x 36	9.000	--	--	--	1	--	--
99	R2-1(2S)	SPEED LIMIT 30	24 x 30	5.000	1	1	--	1	--	--

TYPE II PERMANENT SIGNING - CATEGORY CODE 0010

1060-33-90 84TH ST

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.0202 SIGNS REFLC TYPE II [SF]	638.2602 REM SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP (EA)	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0812 POSTS TUBULAR STEEL 2"X2"X12' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
100	J1-1(2S)	--	24 x 39	6.500	1	--	--	--	--	MOUNT ON LIGHT POLE
	MB2-1	--	21 x 15							
	M1-1	I-94	24 x 24							
101	R5-1(2S)	--	30 x 30	6.250	--	--	--	--	--	MOUNT ON SIGNAL POLE
102	R4-7(2S)	--	24 x 30	5.000	--	--	--	--	--	MOUNT ON SIGNAL POLE
103	R6-2L(2S)	--	24 x 30	5.000	--	--	--	1	--	--
104	R4-7(2S)	--	24 x 30	5.000	--	--	--	1	--	--
105	R6-2L(2S)	--	24 x 30	5.000	--	--	--	1	--	--
106	S1-1(2S)	--	36 x 36	6.750	1	--	--	1	--	--
107	WF16-9(2S)	--	24 x 12	2.000	1	--	--	--	#106	--
108	R2-6P(2M)	--	24 x 18	3.000	1	--	--	--	#106	--
109	S1-1(2S)	--	36 x 36	6.750	1	--	--	--	--	MOUNT ON LIGHT POLE
110	WF16-9(2S)	--	24 x 12	2.000	1	--	--	--	#109	--
111	R2-6P(2M)	--	24 x 18	3.000	1	--	--	--	#109	--
112	S4-51(2)	SPEED LIMIT 20	24 x 48	8.000	1	1	--	1	--	--
113	S4-51(2)	SPEED LIMIT 20	24 x 48	8.000	1	--	--	--	--	MOUNT ON LIGHT POLE
114	R7-7L(2S)	--	18 x 24	3.000	1	1	--	1	--	--
115	R4-7(2S)	--	24 x 30	5.000	--	--	--	--	--	MOUNT ON LIGHT POLE
116	R7-1L(2S)	--	18 x 24	3.000	1	1	--	1	--	--
117	R7-7R(2S)	--	18 x 24	3.000	1	--	--	--	#116	--
118	R1-1(2S)	--	30 x 30	5.180	1	1	--	1	--	REMOVE STREET NAME SIGN
119	R7-5D(2S)	2 HOUR 9AM TO 6PM	18 x 24	3.000	1	1	--	1	--	--
120	R7-5D(2S)	2 HOUR 9AM TO 6PM	18 x 24	3.000	1	1	--	1	--	--
121	R7-5D(2S)	2 HOUR 9AM TO 6PM	18 x 24	3.000	1	1	--	1	--	--
122	*NOT USED*	--	-- x --	--	--	--	--	--	--	--
123	R5-1(2S)	--	30 x 30	6.250	--	--	--	--	--	--
124	R1-1(2S)	--	30 x 30	5.180	1	1	--	1	--	REMOVE STREET NAME SIGN
125	R4-7(2S)	--	24 x 30	5.000	--	--	--	1	--	--
126	R5-1(2S)	--	30 x 30	6.250	--	--	--	1	--	--
127	R6-2L(2S)	--	24 x 30	5.000	--	--	--	1	--	--
128	R3-2(2S)	--	24 x 24	4.000	--	--	--	--	--	MOUNT ON LIGHT POLE
129	R5-1(2S)	--	30 x 30	6.250	--	--	--	1	--	--
130	R1-53(2S)	--	24 x 30	5.000	--	--	--	--	#37	--
131	J2-1(2S)	--	24 x 60	10.000	--	--	1	--	--	--
	MB3-2	--	24 x 12							
	M1-1	--	24 x 24							
	M4-20L	--	24 x 24							
132	R5-1(2S)	--	30 x 30	6.250	--	--	--	--	--	MOUNT ON SIGNAL POLE
	TOTALS			787.160	87	32	11	55	--	--

SHEET 5 OF 5

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	PERMANENT SIGNING QUANTITIES	SHEET E

FILE NAME : j:\projects\d2_10603394\90\sign\030201_mq.dgn PLOT DATE : 15-OCT-2012 09:02 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 200:1 WISDOT/CADDS SHEET 43

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
4	EACH	POLES TYPE 9
1	EACH	MONOTUBE ARMS 15-FT
1	EACH	MONOTUBE ARMS 25-FT
2	EACH	MONOTUBE ARMS 30-FT
1	EACH	VIDEO DETECTION SYSTEM
2	EACH	EVP DETECTOR HEADS



STH 181 (S. 84TH STREET) & W. DANA COURT

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		45	
PB1	PB2		88	
PB2	PB3		190	
PB3	PB4			98
PB4	PB5			88
PB5	PB6			196
PB6	PB7			104
PB7	PB8			76
PB8	PB9		92	
PB9	CB1		30	
PB2	SB1	17		
PB3	SB2		7	
PB4	SB3		6	
PB5	SB4	35		
PB6	SB5		38	
PB6	SB6	28		
PB7	SB7		4	
PB8	SB8	12		
	TOTALS	92	500	562

PROJECT NO: 1060-33-90	HWY: STH 181	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: F

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\030241_mq_sp.ppt PLOT DATE : 1/6/2013 12:16:58 PM PLOT BY : MSCCEJ PLOT NAME : 030241_mq_sp1 PLOT SCALE : 1:1

3

3

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	51F+95.0	47.5' LT	1
PB2	52F+39.0	47.5' LT	1
PB3	53F+34.0	47.5' LT	1
PB4	53F+34.0	1.0' RT	1
PB5	53F+34.0	45.0' RT	1
PB6	52F+36.0	45.0' RT	1
PB7	52F+36.0	7.0' LT	1
PB8	52F+36.0	45.0' LT	1
PB9	51F+90.0	45.0' LT	1
		TOTALS	9

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

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	52F+55.0	53.5' LT	1		
SB2	53F+31.0	53.5' LT		1	
SB3	53F+40.0	1.0' LT		1	
SB4	53F+03.9	56.0' RT	1		
SB5	52F+67.6	60.0' RT		1	
SB6	52F+63.6	46.0' RT	1		
SB7	52F+40.0	5.0' LT		1	
SB8	52F+48.4	46.0' LT	1		
CB1	51F+80.0	47.5' LT			1
		TOTALS	4	4	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

STH 181 (S. 84TH STREET) & W. DANA COURT

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1		99
CB1	SB2 (CABLE 1)		190
CB1	SB2 (CABLE 2)		190
CB1	SB3		244
CB1	SB4		320
CB1	SB5		219
CB1	SB6		209
CB1	SB7		127
CB1	SB8	91	
	TOTAL	91	1598

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF
SB1	HEAD 12	19
SB1	HEAD 16	18
SB1	HEAD 17	18
SB2	HEAD 4	19
SB2	HEAD 6	19
SB2	HEAD 10	57
SB2	HEAD 11	45
SB2	HEAD 18	18
SB3	HEAD 2	45
SB3	HEAD 3	57
SB3	HEAD 5	34
SB4	HEAD 9	19
SB4	HEAD 19	18
SB5	HEAD 13	41
SB5	HEAD 14	19
SB6	HEAD 1	19
SB6	HEAD 15	18
SB6	HEAD 20	18
SB7	HEAD 7	38
SB7	HEAD 8	50
	TOTAL	589

STH 181 (S. 84TH STREET) & W. DANA COURT

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	99
SB1	SB2	139
SB2	SB3	82
SB3	SB4	105
SB4	SB5	191
SB5	SB6	80
SB6	SB7	104
SB7	SB8	74
SB8	CB1	91
PB1	CB1	28
PB2	SB1	27
PB3	SB2	17
PB4	SB3	16
PB5	SB4	45
PB6	SB6	38
PB7	SB7	14
PB8	SB8	22
PB9	CB1	23
	TOTAL	1195

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF
CB1	SB3 (HEAD A)	252
CB1	SB7 (HEAD A)	182
	TOTAL	182

ELECTRICAL SERVICE METER BREAKER PEDESTAL
STH 181 & W. DANA COURT

BASE NO.	656.0200.0021 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE
STH 181 & W. DANA COURT

LOCATION	658.5069.0021 SIGNAL MOUNTING HARDWARE LS
STH 181 (S. 84TH STREET) & W. DANA COURT	1
TOTAL	1

STH 181 (S. 84TH STREET) & W. DANA COURT

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	657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.1345 INSTALL POLES TYPE 9 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	658.0500 PEDESTRIAN PUSH BUTTONS EACH
SB1	1		1					1
SB2				1			1	1
SB3				1			1	
SB4	1		1					1
SB5				1	1			1
SB6	1		1					1
SB7				1		1		
SB8	1	1						1
TOTALS	4	1	3	4	1	1	2	6

PROJECT NO: 1060-33-90	HWY: STH 181	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 97	E

FILE NAME : W:\Cadd\Final\10603371_F\Roads\cds\030241_mq_sp.ppt PLOT DATE : 10/29/2012 7:12:43 AM PLOT BY : MSCCEJ PLOT NAME : 030241_mq_sp5 PLOT SCALE : 1:1

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	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB6	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	
5	SB3	1	1					1	2	
6	SB2	1	1		1	1	1			
7	SB7	1	1		1	1	1			
8	SB7	1	1		1	1	1			
9	SB4	1	1		1	1	1			
10	SB2	1	1		1	1	1			
11	SB2	1	1		1	1	1			
12	SB1	1	1		1	1	1			
13	SB5	1	1		1	1	1			
14	SB5	1	1		1	1	1			
15	SB6			1						1
16	SB1			1						1
17	SB1			1						1
18	SB2			1						1
19	SB4			1						1
20	SB6			1						1
	TOTALS	14	14	6	12	12	12	2	4	6

STH 181 (S. 84TH STREET) & W. DANA COURT

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

BOLLARDS

STATION	LOCATION	SPV.0060.3021 BOLLARDS EACH
51F+74.5	45.5' LT	1
52F+85.5	45.5' LT	1
	TOTAL	2

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

INSTALL VENDOR SUPPLIED TRAFFIC SIGNAL CABINET
STH 181 & W. DANA COURT

LOCATION	SPV.0105.3024 INSTALL VENDOR SUPPLIED TRAFFIC SIGNAL CABINET LS
STH 181 (S. 84TH STREET) & W. DANA COURT	1
TOTAL	1

3

REMOVE TRAFFIC SIGNALS
STH 181 & W. DANA COURT

LOCATION	SPV.0105.3021 REMOVE TRAFFIC SIGNALS LS	SPV.0105.3022 REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE LS
STH 181 (S. 84TH STREET) & W. DANA COURT	1	1
TOTALS	1	1

TRANSPORTING AND INSTALLING STATE FURNISHED AUTOSCOPE VIDEO DETECTION SYSTEM
STH 181 & W. DANA COURT

LOCATION	SPV.0105.3025 TRANSPORTING AND INSTALLING STATE FURNISHED AUTOSCOPE VIDEO DETECTION SYSTEM LS
STH 181 (S. 84TH STREET) & W. DANA COURT	1
TOTAL	1

TRANSPORTING SIGNAL AND LIGHTING MATERIALS
STH 181 & W. DANA COURT

LOCATION	SPV.0105.3023 TRANSPORTING SIGNAL AND LIGHTING MATERIALS LS
STH 181 (S. 84TH STREET) & W. DANA COURT	1
TOTAL	1

EVP DETECTOR HEAD INSTALLATION
STH 181 & W. DANA COURT

LOCATION	SPV.0105.3026 EVP DETECTOR HEAD INSTALLATION LS
STH 181 (S. 84TH STREET) & W. DANA COURT	1
TOTAL	1

STH 181 TRAFFIC SIGNAL INTERCONNECT

ALL ITEMS ARE CATEGORY 1500

3

CONDUIT

FROM	TO	652.0215 CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/4-INCH L.F.
CV51F	CB1 (S1382)	10
	TOTAL	10

FIBER OPTIC

LOCATION	678.0300 FIBER OPTIC SPLICE EACH
CV51F	10
*** TOTAL	10

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ITS

LOCATION	670.0100.0021 FIELD SYSTEM INTEGRATOR LS	670.0200.0021 ITS DOCUMENTATION LS	678.0500.0021 COMMUNICATION SYSTEM TESTING LS
1060-33-90 CATEGORY 1500	1	1	1
TOTALS	1	1	1

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET
STH 181 & W. DANA COURT

LOCATION	*** SPV.0105.3027 LS
CB1 (S1382)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
110	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
23	LF	TRACER WIRE
2	EACH	CAT-5E CABLE 1-METER

PAGE 1 OF 1

3

REMOVAL ITEMS

CATEGORY	LOCATION	204.0100 REMOVING PAVEMENT SY	204.0109.S REMOVING CONCRETE SURFACE PARTIAL DEPTH SF	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	647.0960 REMOVING PAVEMENT MARKING SYMBOLS EA	690.0250 SAWING CONCRETE LF	SPV.0090.0003 REMOVING PAVEMENT MARKINGS WATER BLASTING LF
1000										
	NB ON-RAMP	--	--	--	--	--	--	3	--	40
	STA. 33+46 - STA. 62+73	--	229,200	2,600	25,500	--	--	--	1,050	--
	STA. 33+75.51, 22.45' LT	34	--	--	--	--	--	--	--	--
	STA. 36+50.81, 47.90' RT	74	--	--	206	--	--	--	--	--
	STA. 36+87, 2' RT	--	--	--	--	28	--	--	--	--
	STA. 36+94, 64' LT	--	--	--	--	14	--	--	--	--
	STA. 38+76, 11.8' LT	--	--	--	--	26	--	--	--	--
	STA. 42+65, 47' LT	--	--	--	--	10	--	--	--	--
	STA. 42+72, 40.6' RT	--	--	--	--	10	--	--	--	--
	STA. 43+95, 43.5' RT	--	--	--	--	28	--	--	--	--
	STA. 44+15, 1.9' RT	--	--	--	--	14	--	--	--	--
	STA. 44+66, 8' RT	--	--	--	--	11	--	--	--	--
	STA. 46+14, 43.7' RT	--	--	--	--	24	--	--	--	--
	STA. 47+05, 79.6' RT	--	--	--	--	36	--	--	--	--
	STA. 47+68, 45.2' RT	--	--	--	--	23	--	--	--	--
	STA. 49+11, 41.5' RT	--	--	--	--	26	--	--	--	--
	STA. 50+36.91, 43.61' LT	20	--	--	--	--	--	--	--	--
	STA. 51+98, 43.9' LT	--	--	--	--	--	95	--	--	--
	STA. 52+25, 48.3' RT	--	--	--	--	--	15	--	--	--
	STA. 52+57, 48.3' RT	--	--	--	--	--	15	--	--	--
	STA. 52+73.36, 43.84' LT	34	--	--	60	--	--	--	--	--
	STA. 53+05, 49' RT	--	--	--	--	--	15	--	--	--
	STA. 53+06.81, 43.90, LT	32	--	--	60	--	--	--	--	--
	STA. 53+30, 49.2' RT	--	--	--	--	--	7	--	--	--
	STA. 55+55.79, 43.10' LT	30	--	--	--	--	--	--	--	--
	STA. 56+60, 8' LT	--	--	--	--	30	--	--	--	--
	TOTALS:	225	229,200	2,600	25,826	280	147	3	1,050	40

ROADWAY ITEMS

CATEGORY	LOCATION	108.4400 CPM PROGRESS SCHEDULE EACH	213.0100 FINISHING ROADWAY 1060-33-90 EACH	440.4410.S INCENTIVE IRI RIDE DOL	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOL	SPV.0105.0003 PAVEMENT CLEANUP PROJECT 1060-33-90 LS
1000						
	PROJECT	0.5	1	8,070	4,432	1
	TOTAL:	0.5	1	8,070	4,432	1

BASE AGGREGATE

CATEGORY	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON
1000		
	STA. 33+75.51, 22.45' LT	8
	STA. 36+50.81, 47.90' RT	16
	STA. 36+87, 2' RT	2
	STA. 36+94, 64' LT	1
	STA. 38+76, 11.8' LT	2
	STA. 42+65, 47' LT	1
	STA. 42+72, 40.6' RT	1
	STA. 43+95, 43.5' RT	2
	STA. 44+15, 1.9' RT	1
	STA. 44+66, 8' RT	1
	STA. 46+14, 43.7' RT	2
	STA. 47+05, 79.6' RT	2
	STA. 47+68, 45.2' RT	2
	STA. 49+11, 41.5' RT	2
	STA. 50+36.91, 43.61' LT	4
	STA. 51+98, 43.9' LT	20
	STA. 52+25, 48.3' RT	3
	STA. 52+57, 48.3' RT	3
	STA. 52+73.36, 43.84' LT	7
	STA. 53+05, 49' RT	3
	STA. 53+06.81, 43.90, LT	7
	STA. 53+30, 49.2' RT	2
	STA. 55+55.79, 43.10' LT	7
	STA. 56+60, 8' LT	2
	TOTALS:	99

HMA PAVEMENT ITEMS

CATEGORY	LOCATION	455.0105 ASPHALTIC MATERIAL PG58-28 TON	455.0605 TACK COAT GAL	460.1103 HMA PAVEMENT TYPE E-3 TON
1000				
	STA. 33+46 - STA. 62+73	695	2,600	12,600
	TOTALS:	695	2,600	12,600

CONCRETE PAVEMENT ITEMS

CATEGORY	LOCATION	416.0270 CONCRETE DRIVEWAY HES 7-INCH SY	416.0280 CONCRETE DRIVEWAY HES 8-INCH SY	416.0610 DRILLED TIE BARS EACH
1000				
	STA. 33+46 - STA. 62+73	--	--	109
	STA. 33+75.51, 22.45' LT	34	--	10
	STA. 36+50.81, 47.90' RT	--	74	26
	STA. 50+36.91, 43.61' LT	20	--	7
	STA. 52+73.36, 43.84' LT	34	--	11
	STA. 53+06.81, 43.90, LT	32	--	11
	STA. 55+55.79, 43.10' LT	30	--	12
	TOTALS:	150	74	186

3

CONCRETE ITEMS

CATEGORY	LOCATION	601.0322 CONCRETE CURB & GUTTER 22-INCH LF	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
1000				
	STA. 33+75.51, 22.45' LT	27	--	--
	STA. 36+50.81, 47.90' RT	65	--	--
	STA. 36+87, 2' RT	28	--	--
	STA. 36+94, 64' LT	14	--	--
	STA. 38+76, 11.8' LT	26	--	--
	STA. 42+65, 47' LT	10	--	--
	STA. 42+72, 40.6' RT	10	--	--
	STA. 43+95, 43.5' RT	28	--	--
	STA. 44+15, 1.9' RT	14	--	--
	STA. 44+66, 8' RT	11	--	--
	STA. 46+14, 43.7' RT	24	--	--
	STA. 47+05, 79.6' RT	36	--	--
	STA. 47+68, 45.2' RT	23	--	--
	STA. 49+11, 41.5' RT	26	--	--
	STA. 50+36.91, 43.61' LT	18	--	--
	STA. 51+98, 43.9' LT	--	840	--
	STA. 52+25, 48.3' RT	--	110	--
	STA. 52+54, 43' LT	--	--	8
	STA. 52+57, 48.3' RT	--	140	--
	STA. 52+69, 50.2' RT	--	--	16
	STA. 52+73.36, 43.84' LT	32	--	--
	STA. 53+00, 49.5' RT	--	--	16
	STA. 53+05, 49' RT	--	130	
	STA. 53+06.81, 43.90, LT	32	--	--
	STA. 53+30, 49.2' RT	--	60	--
	STA. 55+55.79, 43.10' LT	33	--	--
	STA. 56+60, 8' LT	30	--	--
	TOTALS:	487	1,280	40

3

EROSION CONTROL ITEMS*

CATEGORY	LOCATION	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH
1000					
	STA. 32+39.96, 20.52' LT	--	1	--	--
	STA. 32+75.63, 20.34' LT	--	1	--	--
	STA. 32+85.16, 22.64' RT	--	1	--	--
	STA. 34+62.58, 34.02' RT	--	1	--	--
	STA. 34+64.59, 27.49' LT	--	1	--	--
	STA. 35+82.24, 0.04' RT	1	--	--	--
	STA. 36+11.71, 41.02' LT	--	1	--	--
	STA. 36+15.02, 46.12' RT	--	1	--	--
	STA. 36+23.33, 123.33' RT	--	1	--	--
	STA. 36+39.60, 50.53' LT	--	1	--	--
	STA. 36+51.41, 96.82' LT	--	1	--	--
	STA. 36+73.89, 124.07' RT	--	1	--	--
	STA. 36+93.53, 66.81' LT	--	1	--	--
	STA. 37+03.66, 111.51' LT	--	1	--	--
	STA. 38+84.06, 6.52' LT	1	--	--	--
	STA. 38+67.70, 70.80' RT	--	1	--	--
	STA. 38+86.44, 40.61' LT	--	1	--	--
	STA. 39+33.38, 100.41' RT	--	1	--	--
	STA. 39+86.15, 3.60' LT	--	1	--	--
	STA. 42+11.28, 37.25' RT	--	--	--	1
	STA. 42+14.56, 66.71' RT	--	1	--	--
	STA. 42+37.91, 38.17' LT	--	1	--	--
	STA. 42+44.80, 69.22' RT	--	1	--	--
	STA. 42+61.73, 38.52' RT	--	--	--	1
	STA. 42+65.79, 137.63' LT	--	1	--	--
	STA. 42+68.72, 37.72' LT	--	--	--	1
	STA. 42+75.65, 2.37' LT	1	--	--	--
	STA. 42+86.77, 110.52' LT	--	1	--	--
	SUBTOTALS:	3	22	--	3

* QUANTITIES SHOWN ELSEWHERE

3

EROSION CONTROL ITEMS (CONTINUED)

CATEGORY	LOCATION	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH
1000					
	STA. 42+92.42, 50.17' RT	--	1	--	--
	STA. 43+36.08, 40.05' RT	--	1	--	--
	STA. 46+36.24, 43.47' RT	--	1	--	--
	STA. 46+60.08, 40.56' LT	--	1	--	--
	STA. 47+06.23, 77.48' RT	--	1	--	--
	STA. 47+73.00, 38.83' LT	--	--	--	1
	STA. 47+86.65, 38.64' RT	--	--	--	1
	STA. 48+85.94, 37.68' RT	--	--	--	1
	STA. 48+86.65, 37.86' LT	--	--	--	1
	STA. 49+99.96, 39.42' LT	--	--	--	1
	STA. 51+81.16, 40.49' LT	--	1	--	--
	STA. 51+81.95, 40.49' RT	--	1	--	--
	STA. 53+09.03, 41.07' LT	--	1	--	--
	STA. 53+17.59, 40.85' RT	--	1	--	--
	STA. 53+49.78, 41.20' LT	--	1	--	--
	STA. 54+71.56, 40.66' LT	--	1	--	--
	STA. 56+75.56, 57.03' LT	--	1	--	--
	STA. 57+07.45, 57.70' LT	--	--	--	1
	STA. 58+93.06, 40.81' RT	--	1	--	--
	STA. 58+98.92, 5.95' LT	--	--	1	--
	STA. 60+47.59, 41.11' RT	--	--	--	1
	STA. 60+48.95, 5.77' LT	--	--	1	--
	STA. 60+58.65, 41.08' RT	--	1	--	--
	STA. 60+59.39, 5.73' LT	--	--	1	--
	STA. 62+35.18, 60.67' LT	--	--	--	1
	STA. 62+48.41, 37.07' RT	--	1	--	--
	STA. 62+65.93, 60.01' LT	--	--	1	--
	TOTALS:	3	37	4	11

3

3

PAVEMENT MARKING*

CATEGORY	LOCATION	646.0109 PAVEMENT MARKING PREFORMED PLASTIC 4-INCH YELLOW LF	646.0109 PAVEMENT MARKING PREFORMED PLASTIC 4-INCH DASHED WHITE 12.5 FT LINE 37.5 SKIP LF	646.0129 PAVEMENT MARKING PREFORMED PLASTIC 8-INCH (WHITE) LF	646.0136 PAVEMENT MARKING EPOXY 12-INCH (WHITE) LF	646.0139 PAVEMENT MARKING PREFORMED PLASTIC 12-INCH (WHITE) LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 SKIP) LF
1000							
	STA. 33+46 - STA. 62+73	345	1,100	685	12	500	190
	TOTALS:		1,445	685	12	500	190

* QUANTITIES SHOWN ELSEWHERE

PAVEMENT MARKING (CONTINUED)

CATEGORY	LOCATION	646.0883.S PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE) LF	647.0559 PAVEMENT MARKING STOP LINE PREFORMED PLASTIC 12-INCH (WHITE) LF	647.0779 PAVEMENT MARKING CROSSWALK PREFORMED PLASTIC 12-INCH (WHITE) LF	SPV.0060.0004 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3 (WHITE) EA	SPV.0090.0001 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH (WHITE) LF	SPV.0090.0002 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH (WHITE) LF
1000							
	STA. 33+46 - STA. 62+73	450	25	190	2	200	655
	TOTALS:	450	25	190	2	200	655

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST.	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET:	E

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

3

MOBILIZATION

CATEGORY	PROJECT	619.1000 MOBILIZATION EACH	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
1000				
	1060-33-90	0.2	6	2
	TOTAL:	0.2	6	2

SURVEY ITEMS

CATEGORY	LOCATION	SPV.0105.0004 SURVEY PROJECT 1060-33-90 LS
1000		
	STA. 33+46 - STA. 62+73	1
	TOTALS:	1

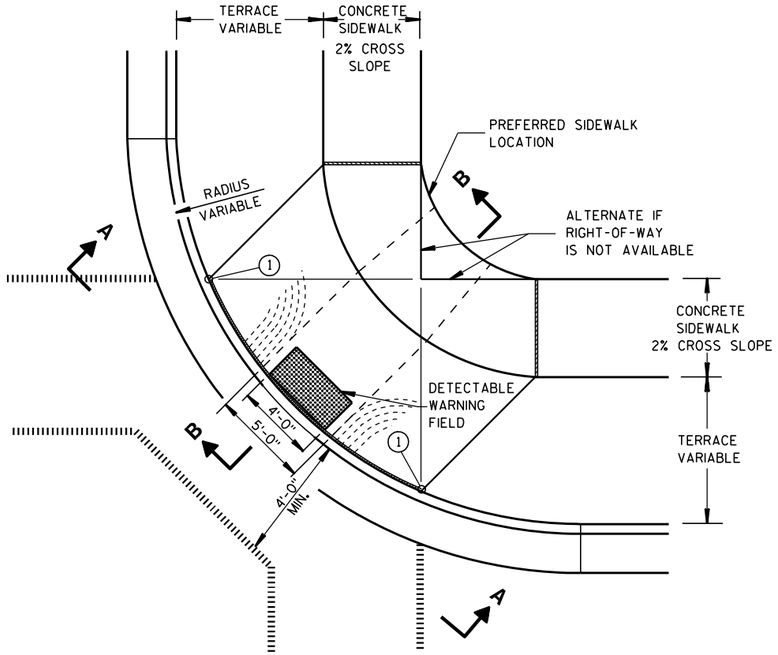
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TRAFFIC CONTROL ITEMS

CATEGORY	LOCATION	ESTIMATED CALENDAR DAYS	643.0200.0002 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (1060-33-90) DAYS	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	643.0800 TRAFFIC CONTROL ARROW BOARDS DAYS	643.0900 TRAFFIC CONTROL SIGNS DAYS	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH WHITE LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH YELLOW LF
1000										
	STA. 33+46 - STA. 62+73	33	33	25,839	2,013	924	132	4,653	6,570	7,908
	TOTALS:	33	33	25,839	2,013	924	132	4,653	14,478	

Standard Detail Drawing List

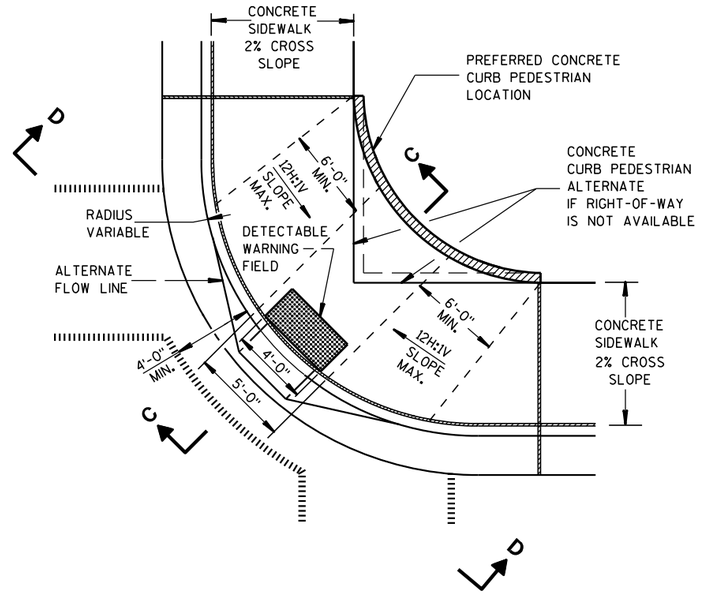
08D05-14A	CURB RAMPS TYPES 1 AND 1-A
08D05-14B	CURB RAMPS TYPES 2 AND 3
08D05-14C	CURB RAMPS TYPE 4A
08D05-14D	CURB RAMPS TYPE 4B
08D05-14E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-07	CONDUIT
09B04-09	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09C06-05	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-02	CONCRETE BASE TYPE 10
09C13-01	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09D01-04	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-02	SIGNAL OR LIGHTING CONTROL CABINET
09E01-11G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E06-04	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
09E08-04E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-14A	PAVEMENT MARKING (MAINLINE)
15C08-14B	PAVEMENT MARKING (INTERSECTIONS)
15C08-14F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C27-01	DOUBLE ARROW WARNING SIGN PLACEMENT
15D20-01	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-01	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE



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".

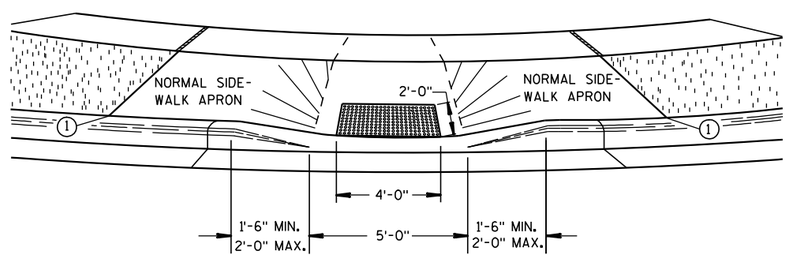
SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

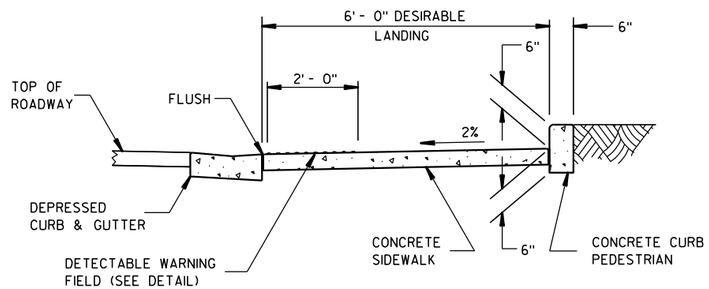
(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

LEGEND

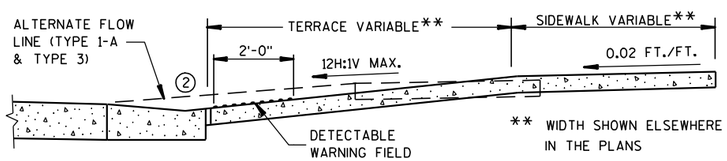
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



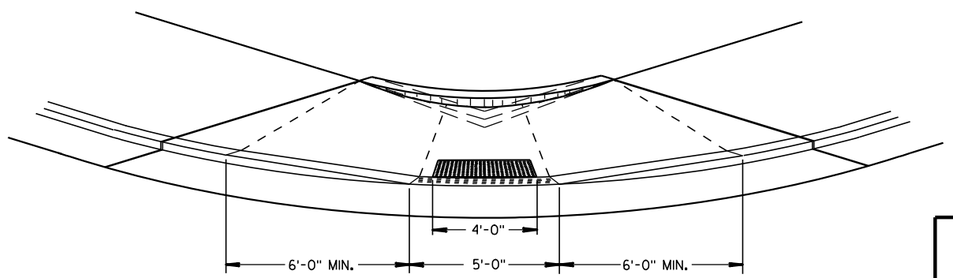
VIEW A-A



SECTION C-C



SECTION B-B



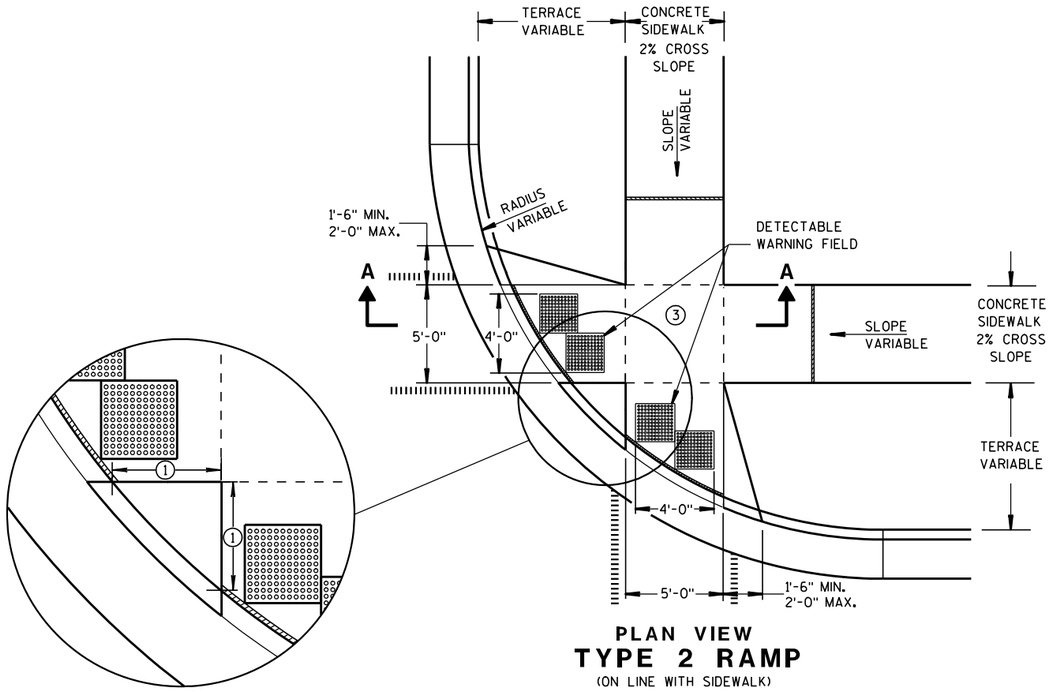
VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

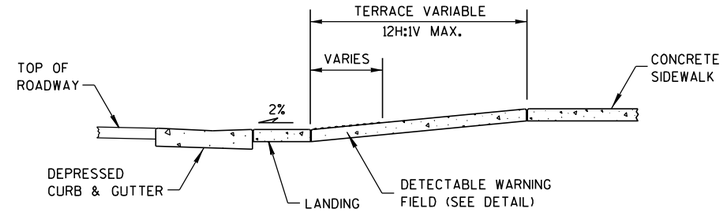
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

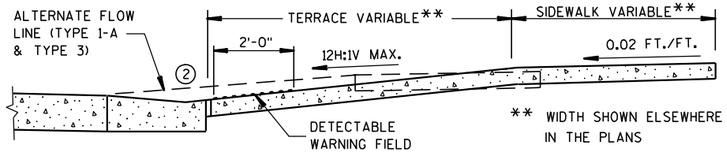
S.D.D. 8 D 5-14a



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.

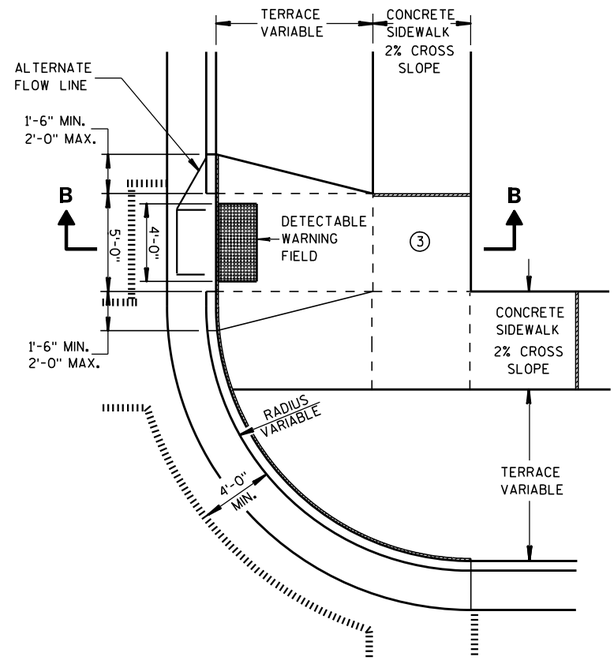
(1) WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

(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) PROVIDE LANDING AT TOP OF RAMP WITH NO MORE THAN 2% SLOPE IN ANY DIRECTION.

LEGEND

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

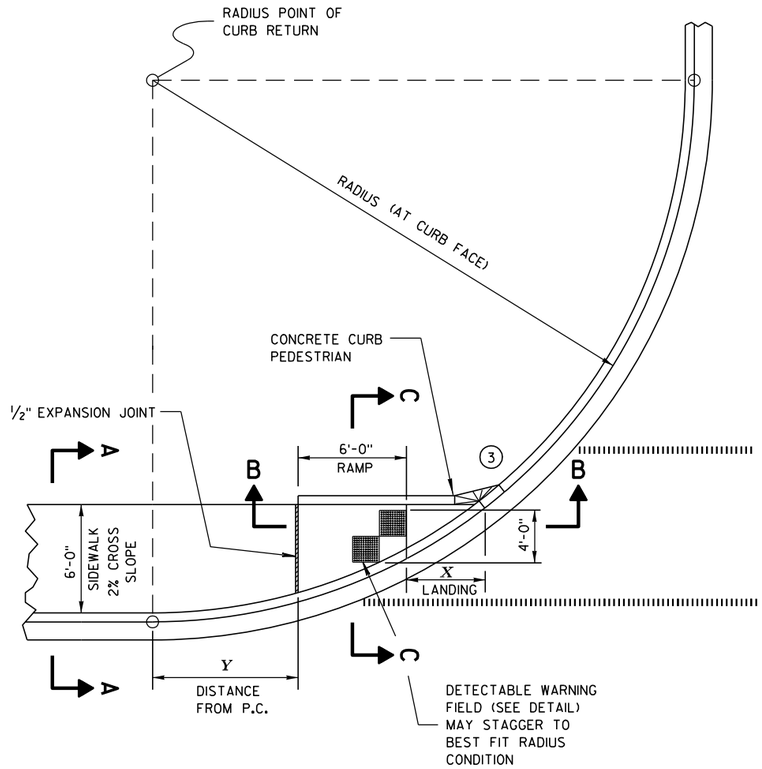


PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

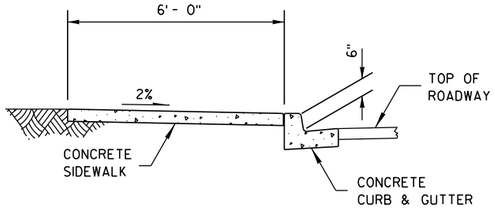
6
S.D.D. 8 D 5-14b



CURB RAMP TYPE 4A
PLAN VIEW

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

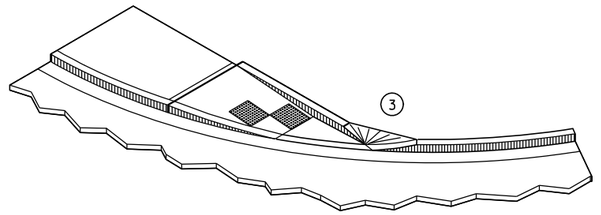
GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

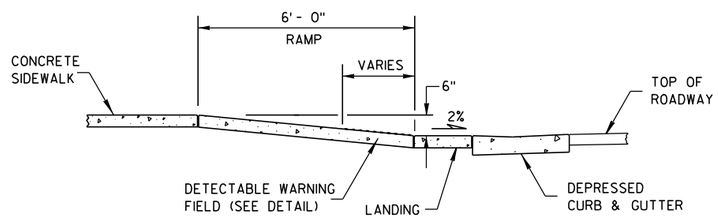
RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

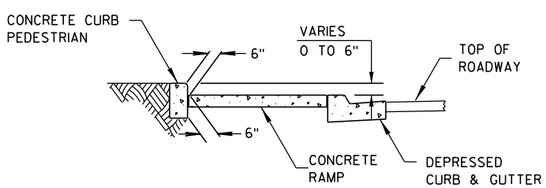
(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW



SECTION B-B



SECTION C-C

LEGEND

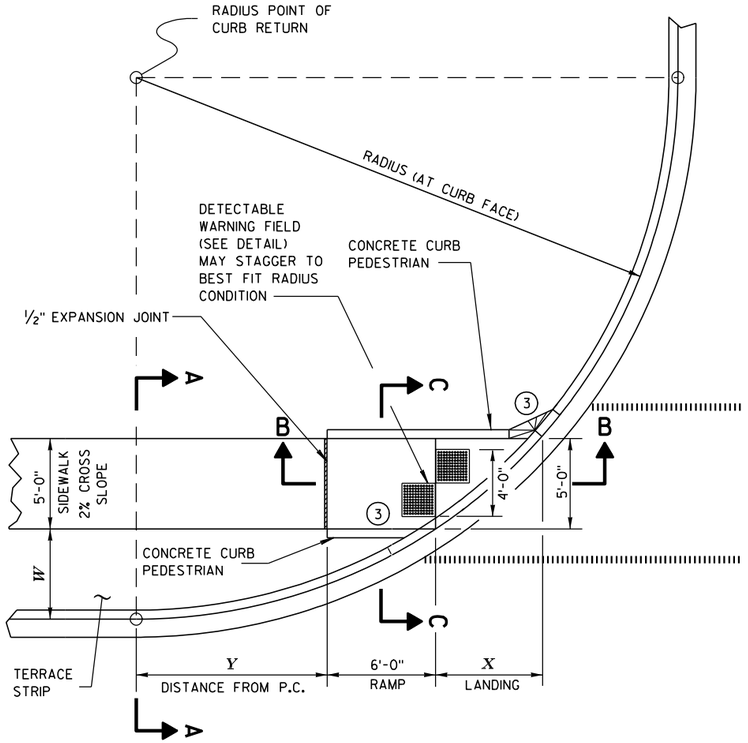
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 4A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 8 D 5-14c



CURB RAMP TYPE 4B
PLAN VIEW

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

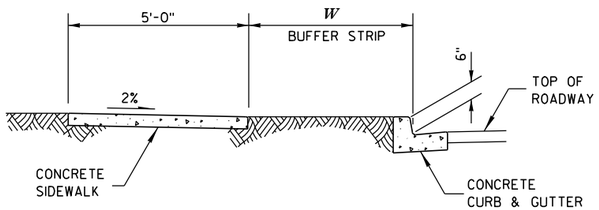
RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

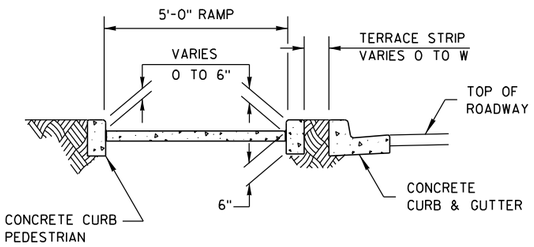
(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

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"
70 FEET	12'-2¾"	14'-3¼"	11'-¼"	17'-4"	10'-1"	19'-11¾"	9'-3¾"	22'-4¼"	8'-8¼"	24'-6¼"
80 FEET	13'-2"	15'-8½"	11'-10½"	18'-11¾"	10'-10¾"	21'-10"	10'-1"	24'-4¾"	9'-5"	26'-8¾"
90 FEET	14'- ½"	17'-½"	12'-8¼"	20'-6½"	11'-7¾"	23'-7"	10'-9¾"	26'-3¾"	10'-1¼"	28'-9½"
100 FEET	14'-10½"	18'-3¾"	13'-5½"	22'-0"	12'-4¼"	25'-2¾"	11'-5¾"	28'-1½"	10'-9"	30'-9"

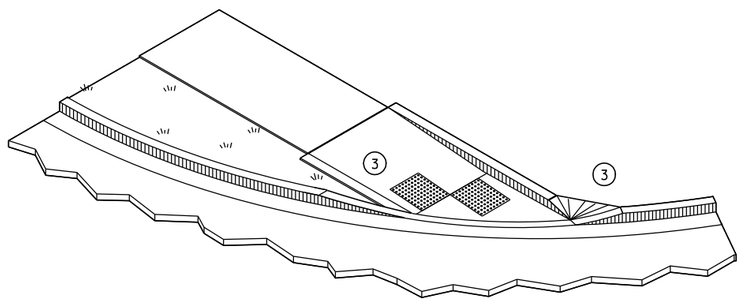
INTERMEDIATE RADII CAN BE INTERPOLATED



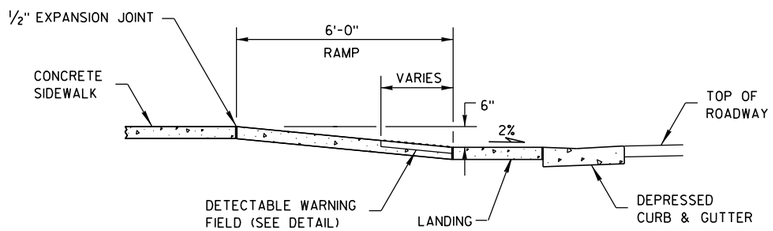
SECTION A-A



SECTION C-C



ISOMETRIC VIEW



SECTION B-B

LEGEND

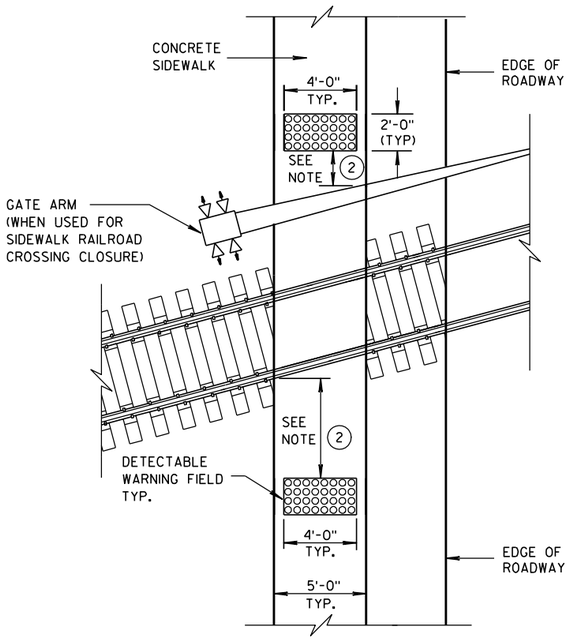
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 4B

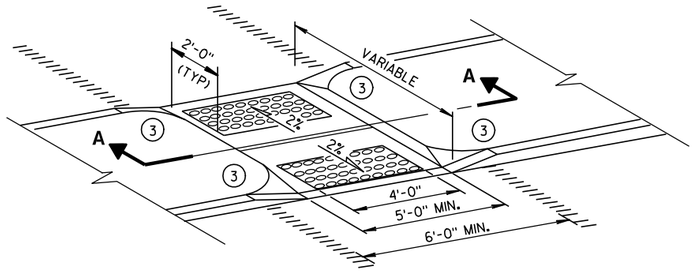
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

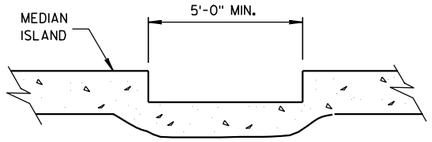
S.D.D. 8 D 5-14d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



SECTION A-A

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

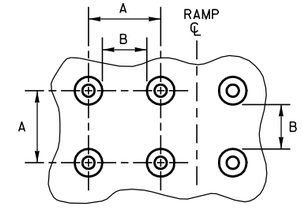
(1) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(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.

LEGEND

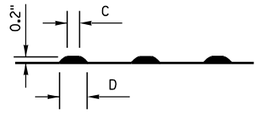
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



PLAN VIEW

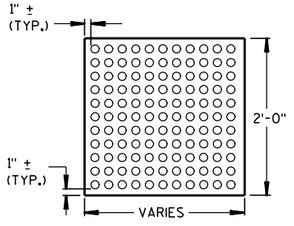
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

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



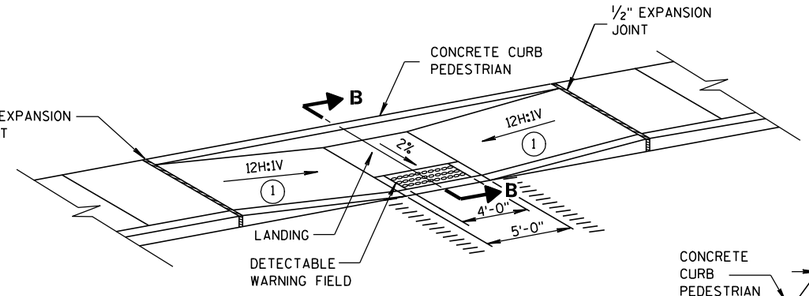
ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

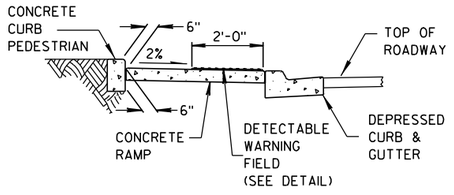


PLAN VIEW

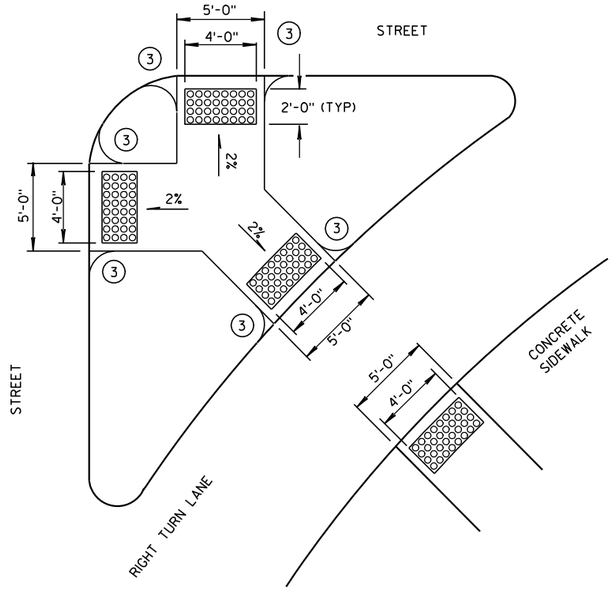
DETECTABLE WARNING FIELD (TYPICAL)



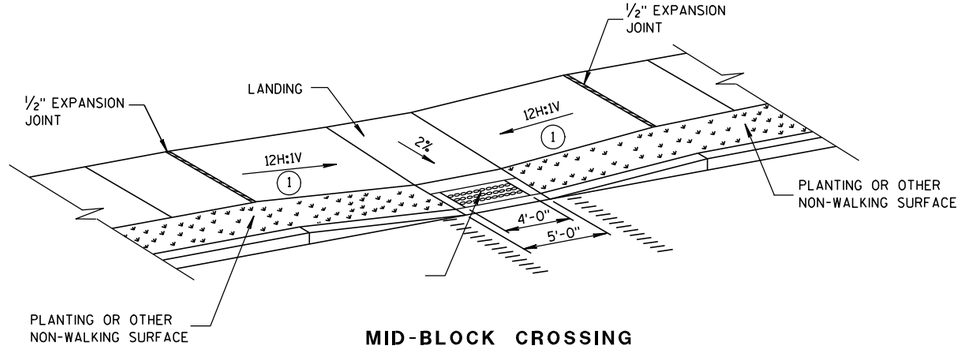
MID-BLOCK CROSSING
TYPE 7A



SECTION B-B



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.

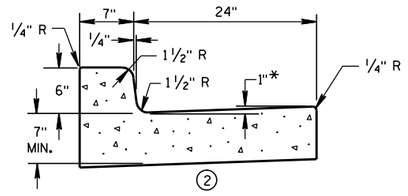
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

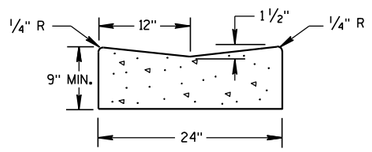
APPROVED
2-9-10 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

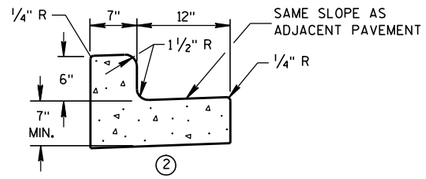
S.D.D. 8 D 5-14e



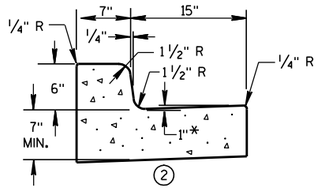
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

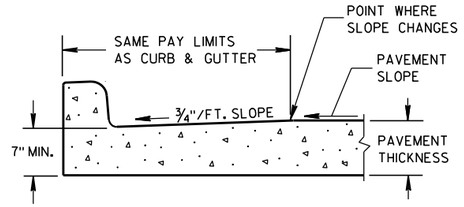


① CONCRETE CURB & GUTTER 19"



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.

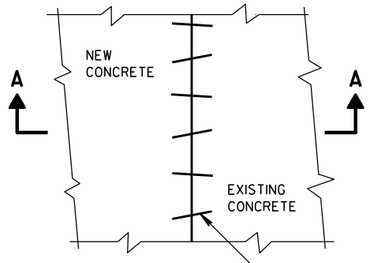
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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.

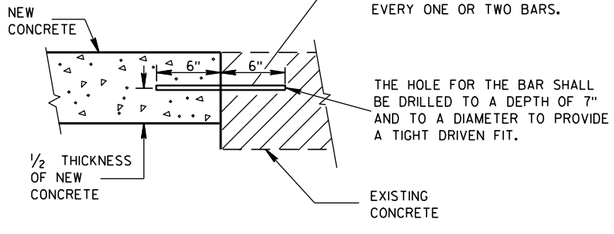
③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

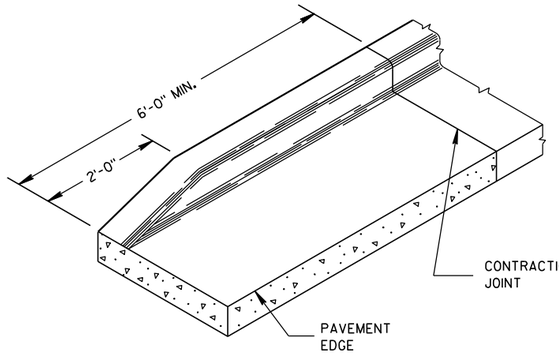
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



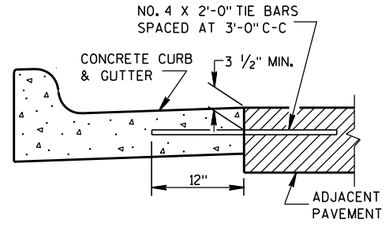
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A

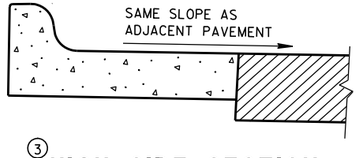
PAVEMENT TIES



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

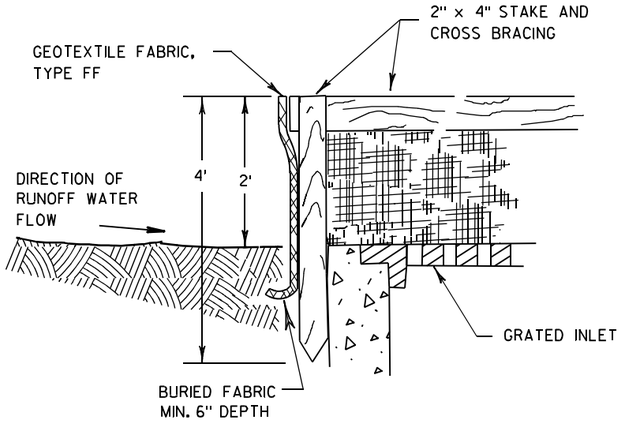
/S/ Jerry Zogg — ROADWAY STANDARDS ENGINEER

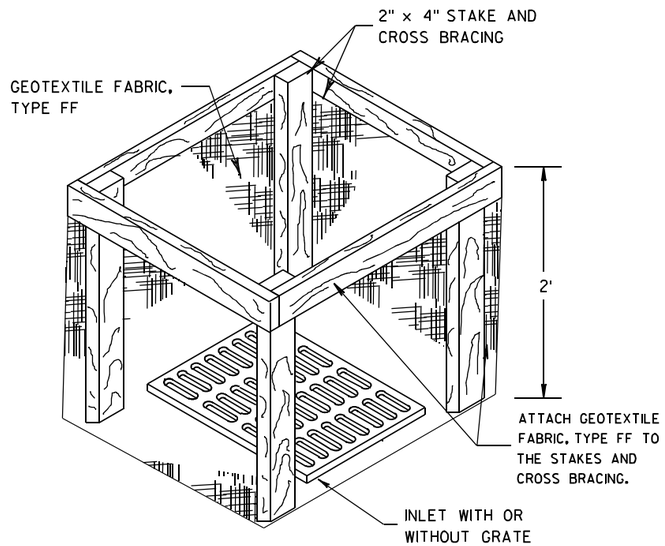
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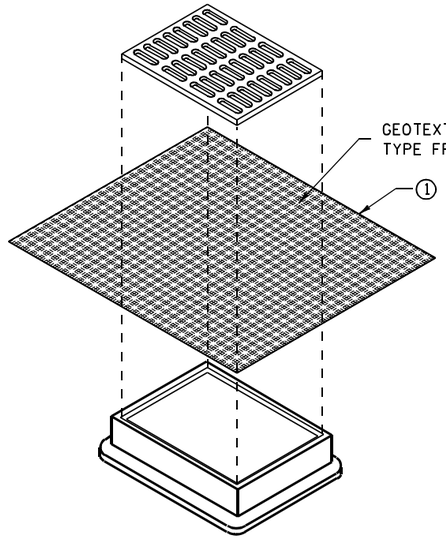
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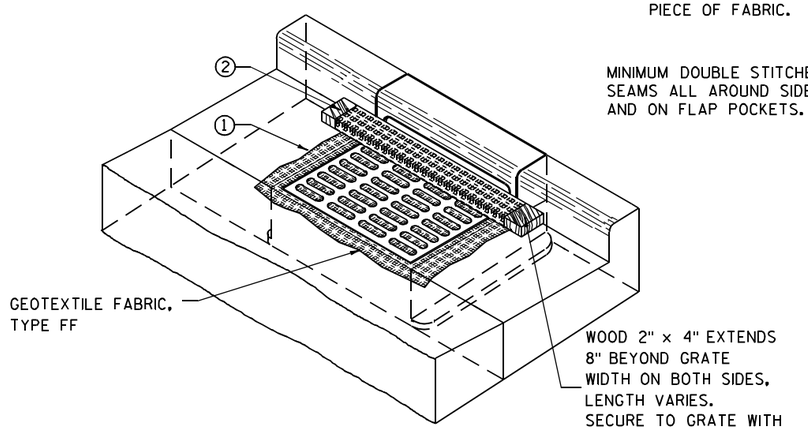


INLET PROTECTION, TYPE A

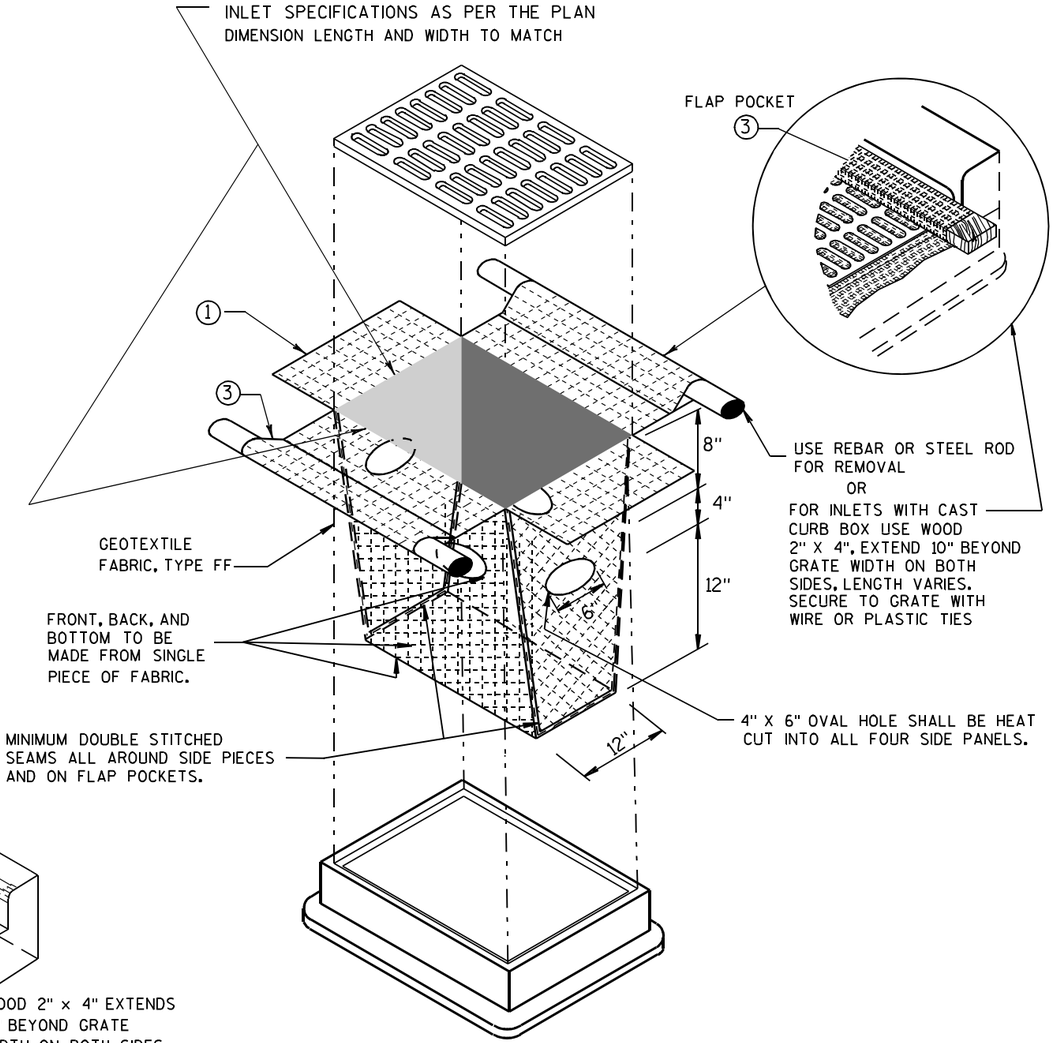


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

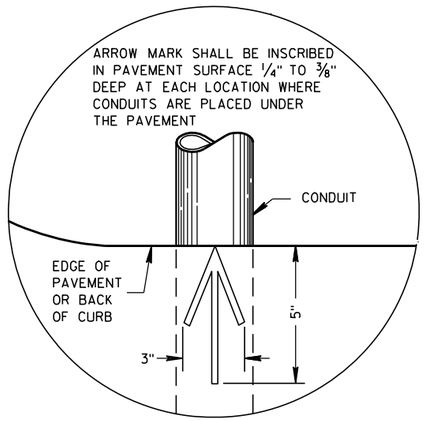
APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

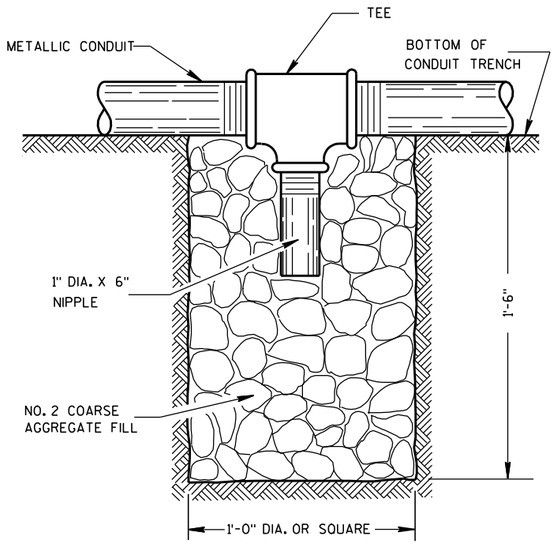
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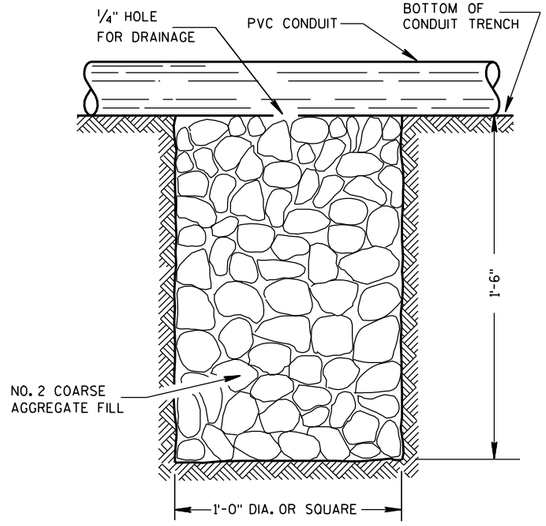
PLAN VIEW

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.

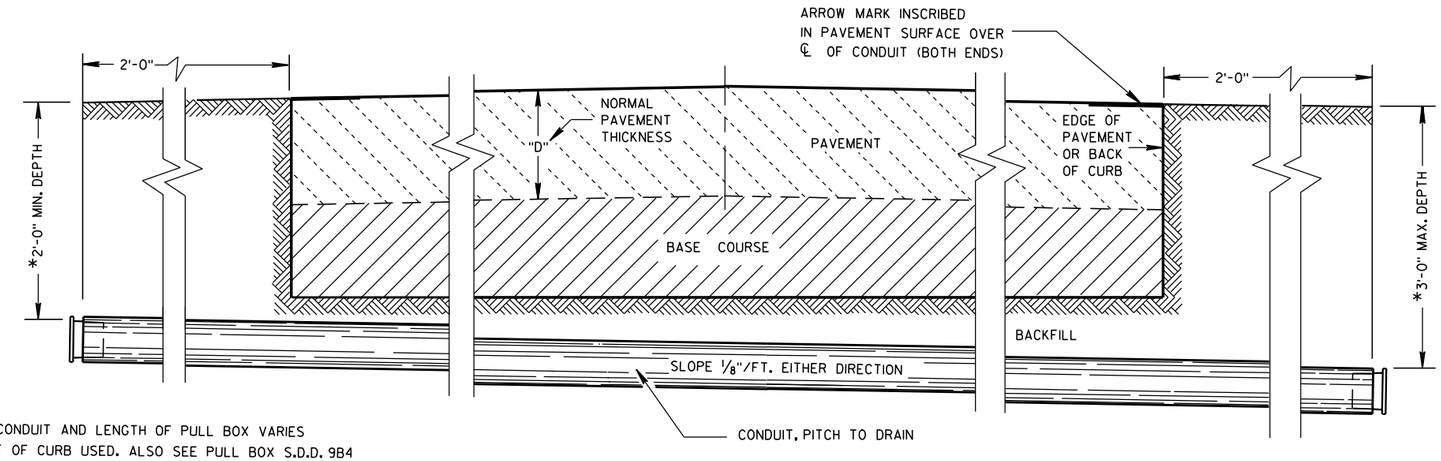
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

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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.

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. THE MECHANICAL CONNECTION (INSIDE AND OUTSIDE) TO THE PULL BOX, SHALL BE TOTALLY AND PERMANENTLY SEALED WITH A SILICONE OR RUBBERIZED CAULKING COMPOUND AS APPROVED BY THE ENGINEER.

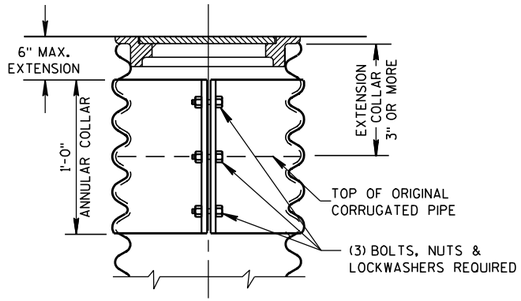
GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

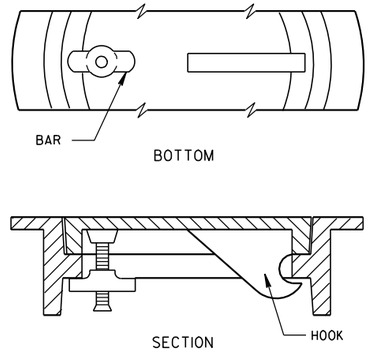
S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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.

IF PULL BOX EQUIPMENT GROUNDING IS REQUIRED USING AN EQUIPMENT GROUNDING ELECTRODE IN EACH PULL BOX, THE EQUIPMENT GROUNDING ELECTRODE SHALL BE 5/8" X 8'-0", COPPERCLAD AND BE EXOTHERMICALLY WELDED TO A #4 AWG, COPPER, STRANDED WIRE (BARE OR GREEN INSULATED). THE #4 AWG WIRE SHALL BE 4 FEET IN LENGTH, NEATLY COILED, TAPED AND AVAILABLE FOR USE WHEN REQUIRED.

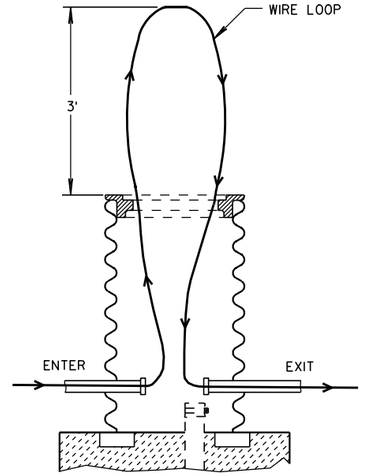


CORRUGATED PIPE EXTENDER

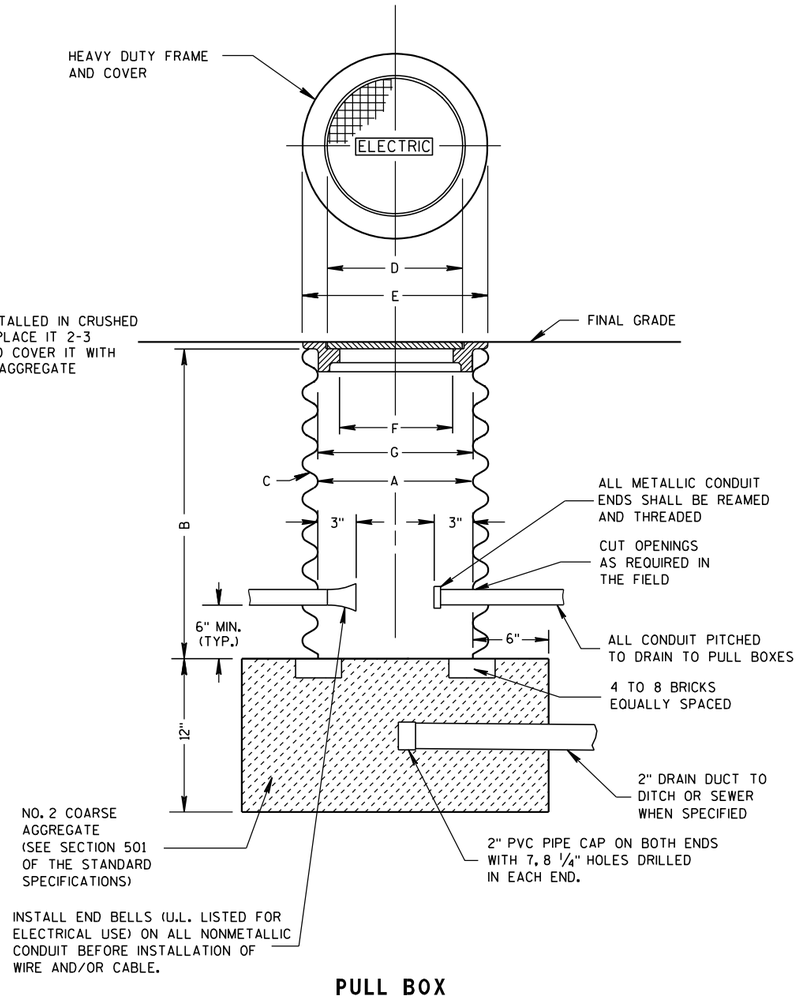


ALTERNATE COVER (LOCKING)

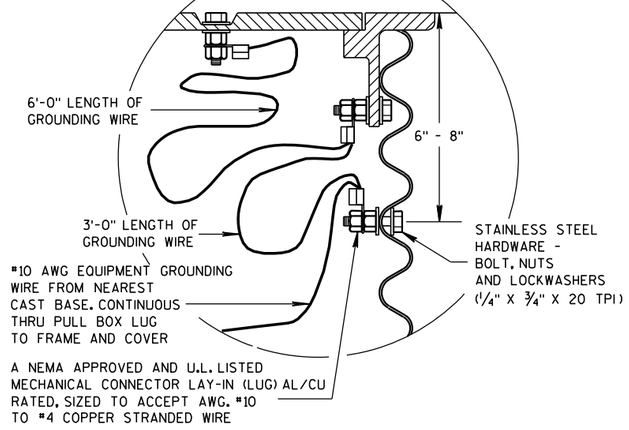
TIGHTENING BAR TYPE



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

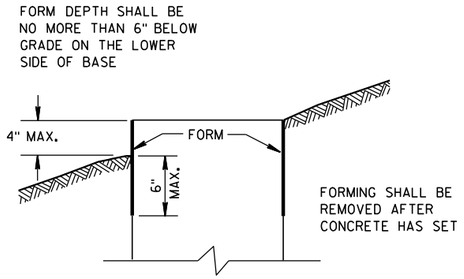
APPROVED

9/27/06 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI

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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.

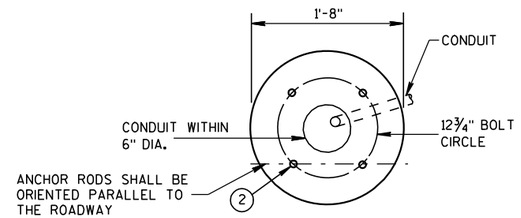
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

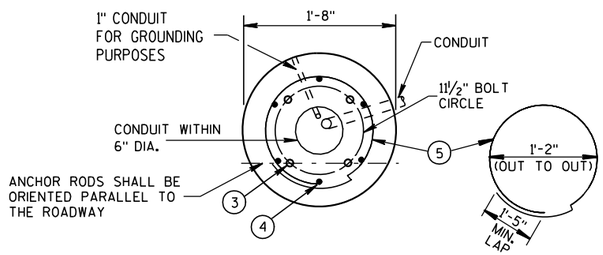
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

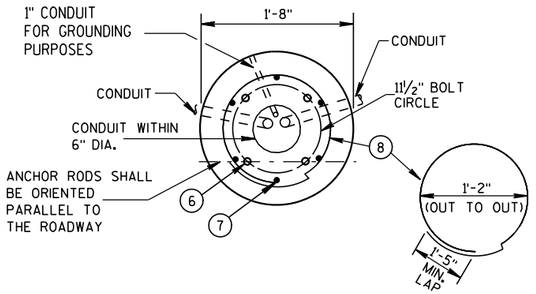
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

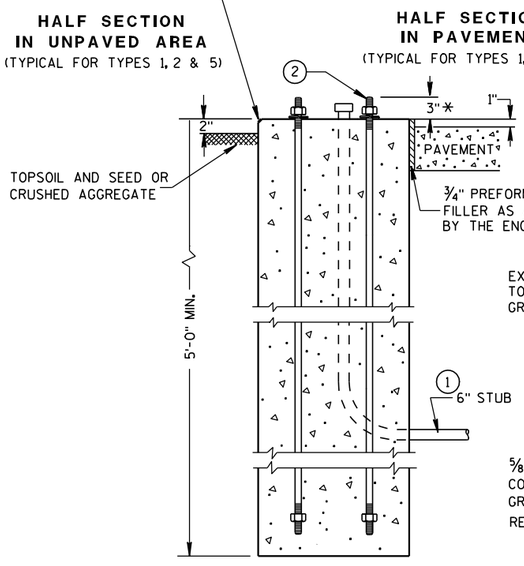






FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

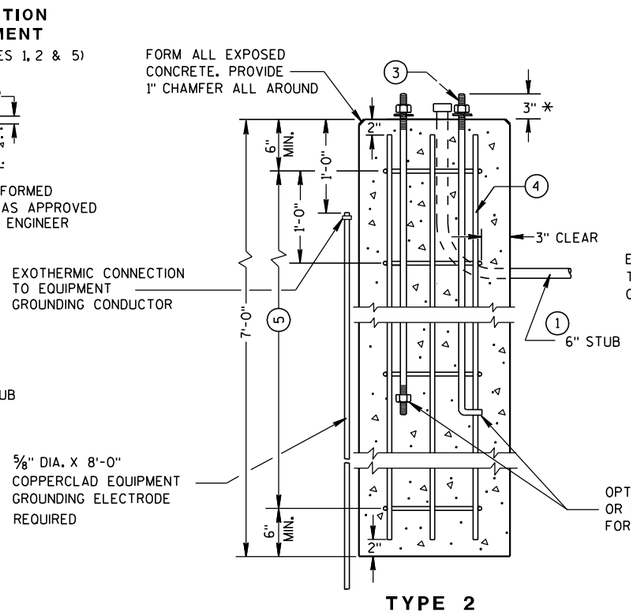
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)



HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2 & 5)

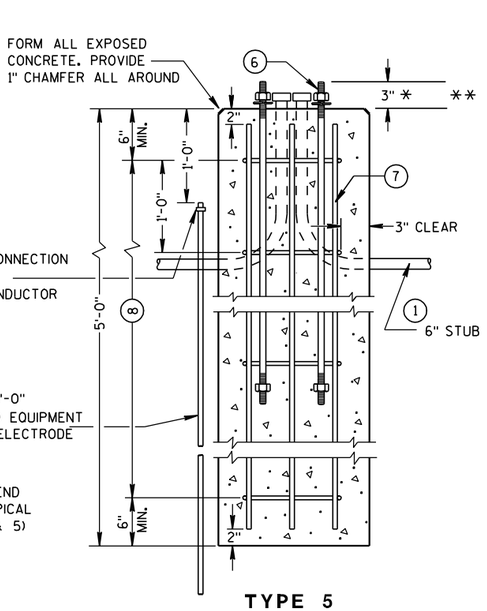
TYPE 1

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



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
118
HWYS
FHWA

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.

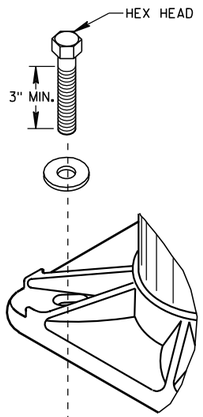
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

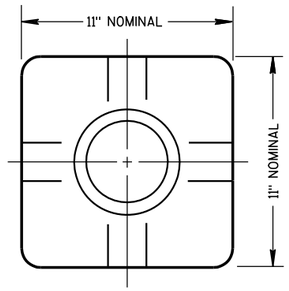
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

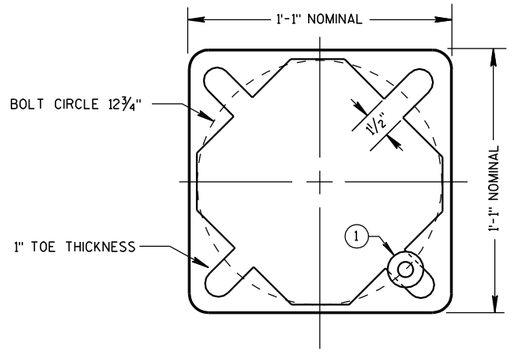
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

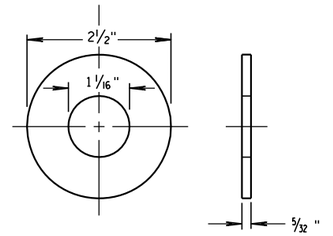




TOP VIEW
(PEDESTAL BASE)

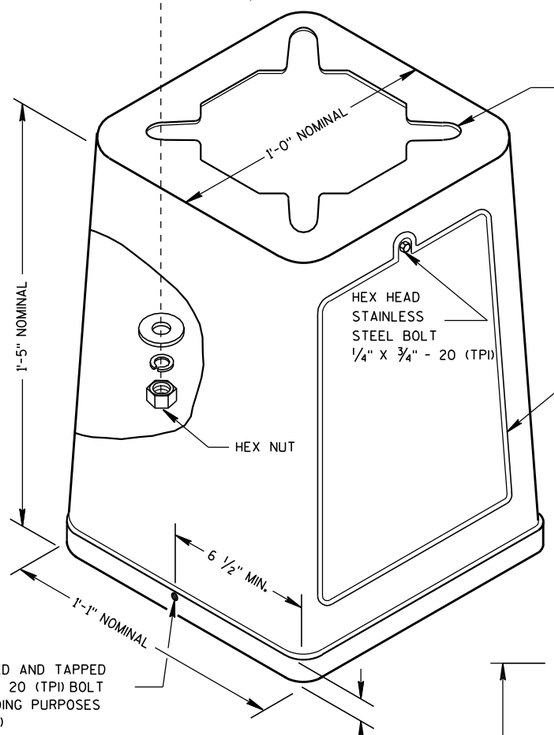


BOTTOM VIEW
(PEDESTAL BASE)

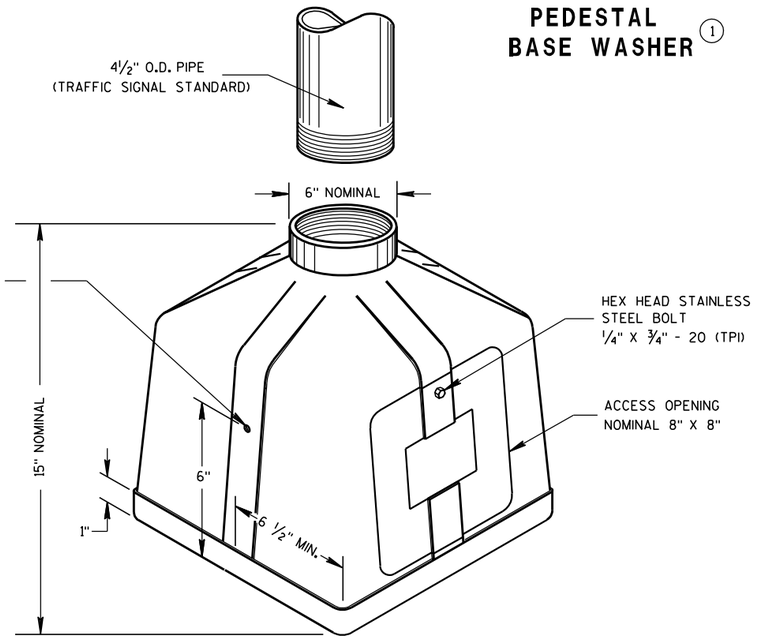


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

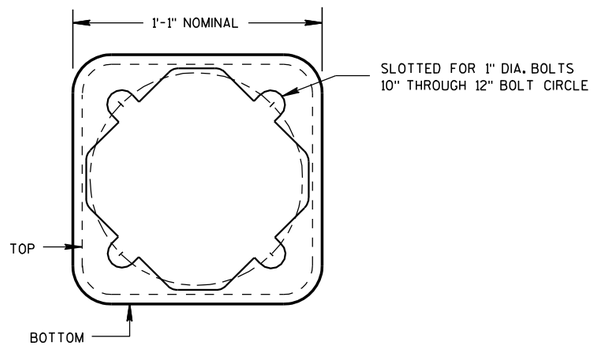


ISOMETRIC VIEW

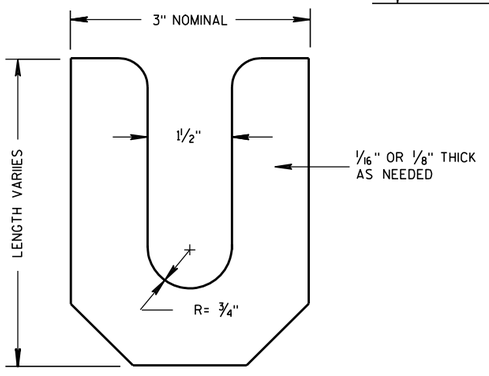


ISOMETRIC VIEW

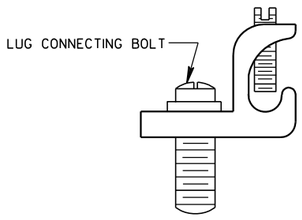
PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)



LEVELING SHIM



TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

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

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

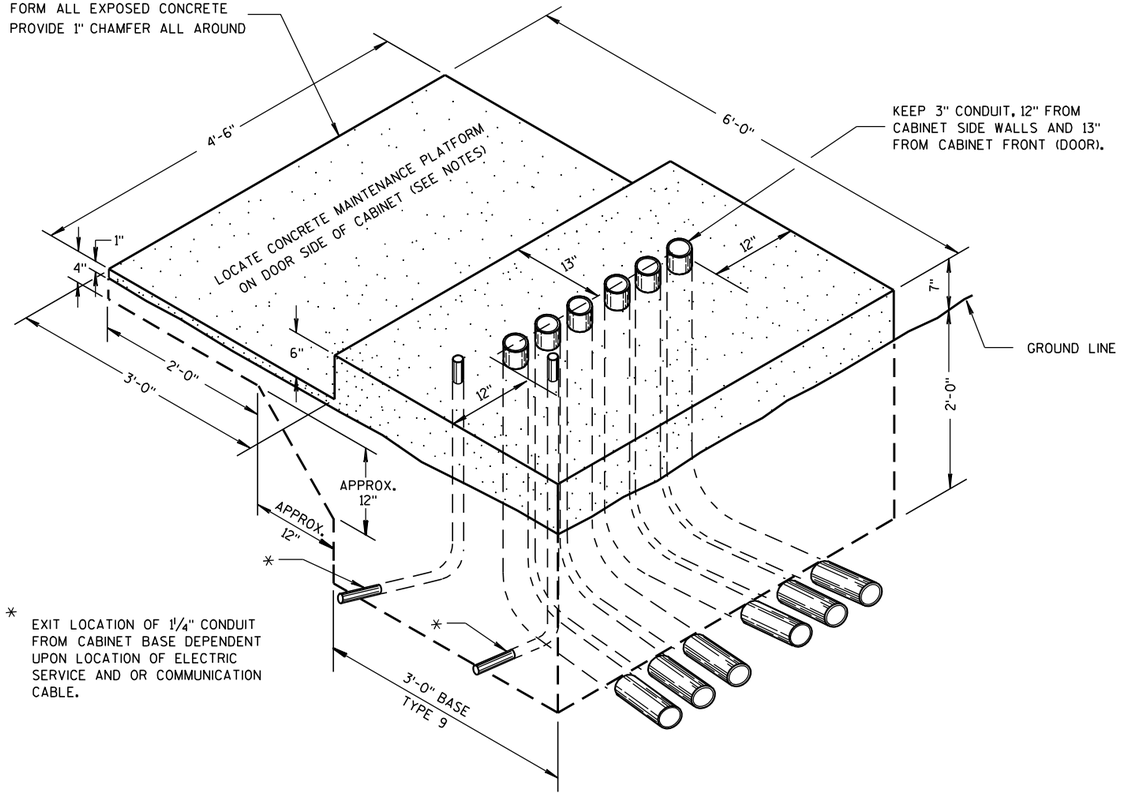
APPROVED
10/27/09 — DATE
/S/ Joanna L. Rich — STATE ELECTRICAL ENGI
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S.D.D. 9 C 3-3

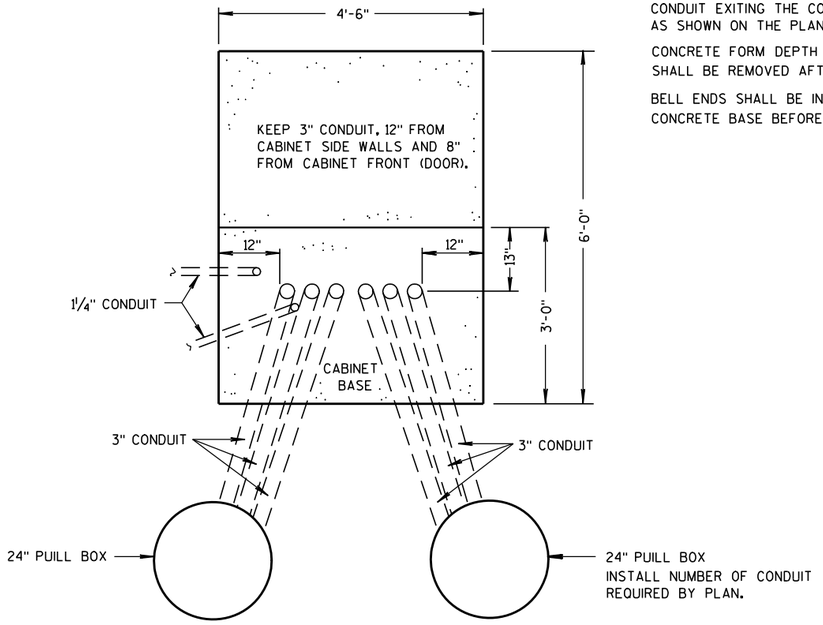


* EXIT LOCATION OF 1¼" CONDUIT FROM CABINET BASE DEPENDENT UPON LOCATION OF ELECTRIC SERVICE AND OR COMMUNICATION CABLE.

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

2/27/07 — DATE

/S/ Balu Ananthapadmanabhan — STATE ELECTRICAL ENGI

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S.D.D. 9 C 6-5

S.D.D. 9 C 6-5

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).

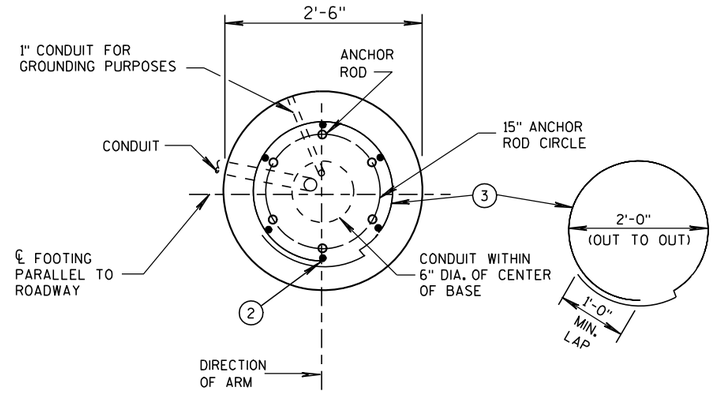
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

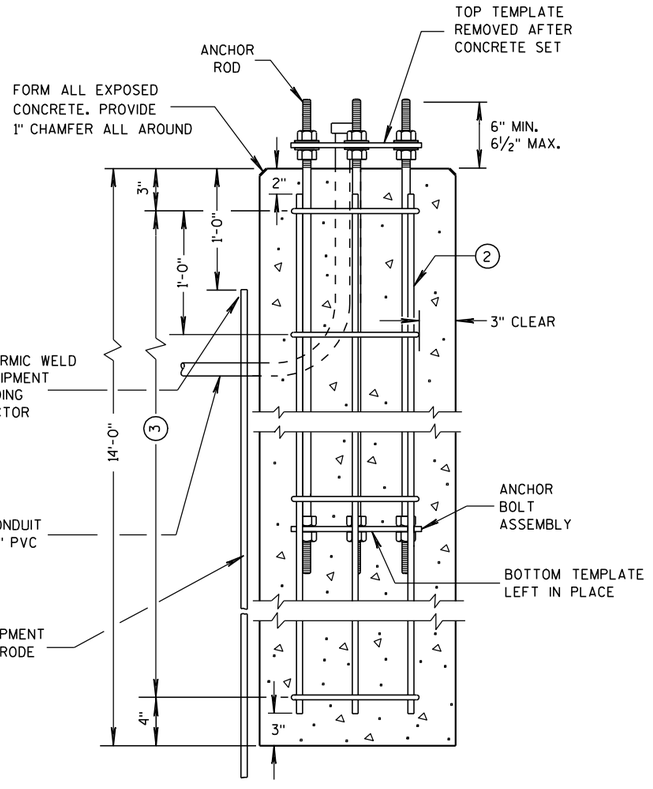
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES. (GREATER THAN 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.

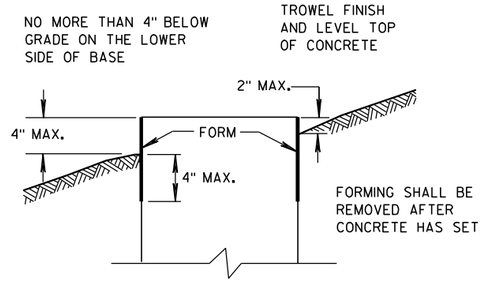
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



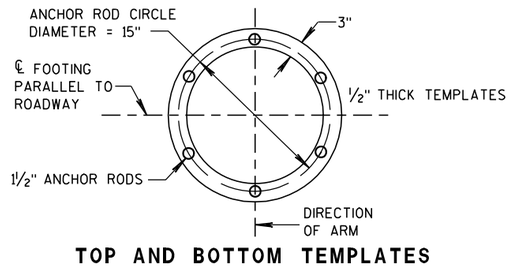


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

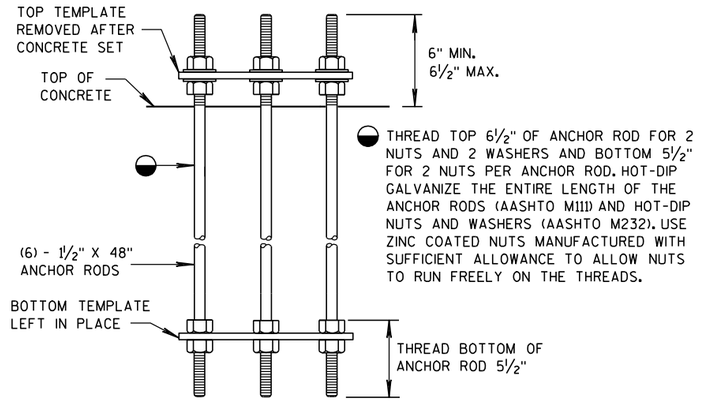
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-1 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



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

3-2-11 DATE

/S/ Thomas J. Cornips STATE ELECTRICAL ENGI HWYS

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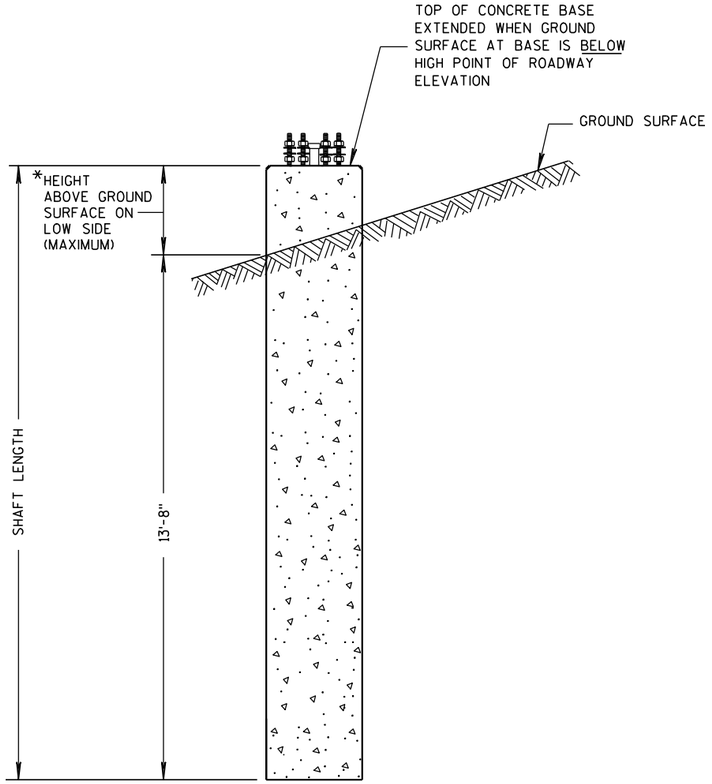
S.D.D. 9 C 11-2

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

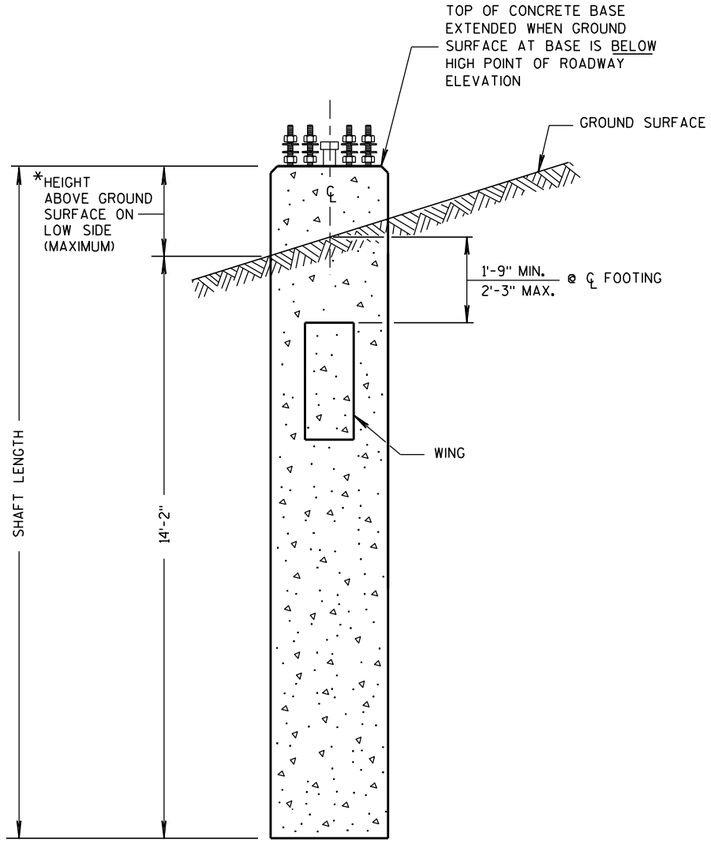
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 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

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 10 (EXTENDED)



CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE
TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3-3-10 DATE — /S/ Joanna L. Rush STATE ELECTRICAL ENGI — HWYS

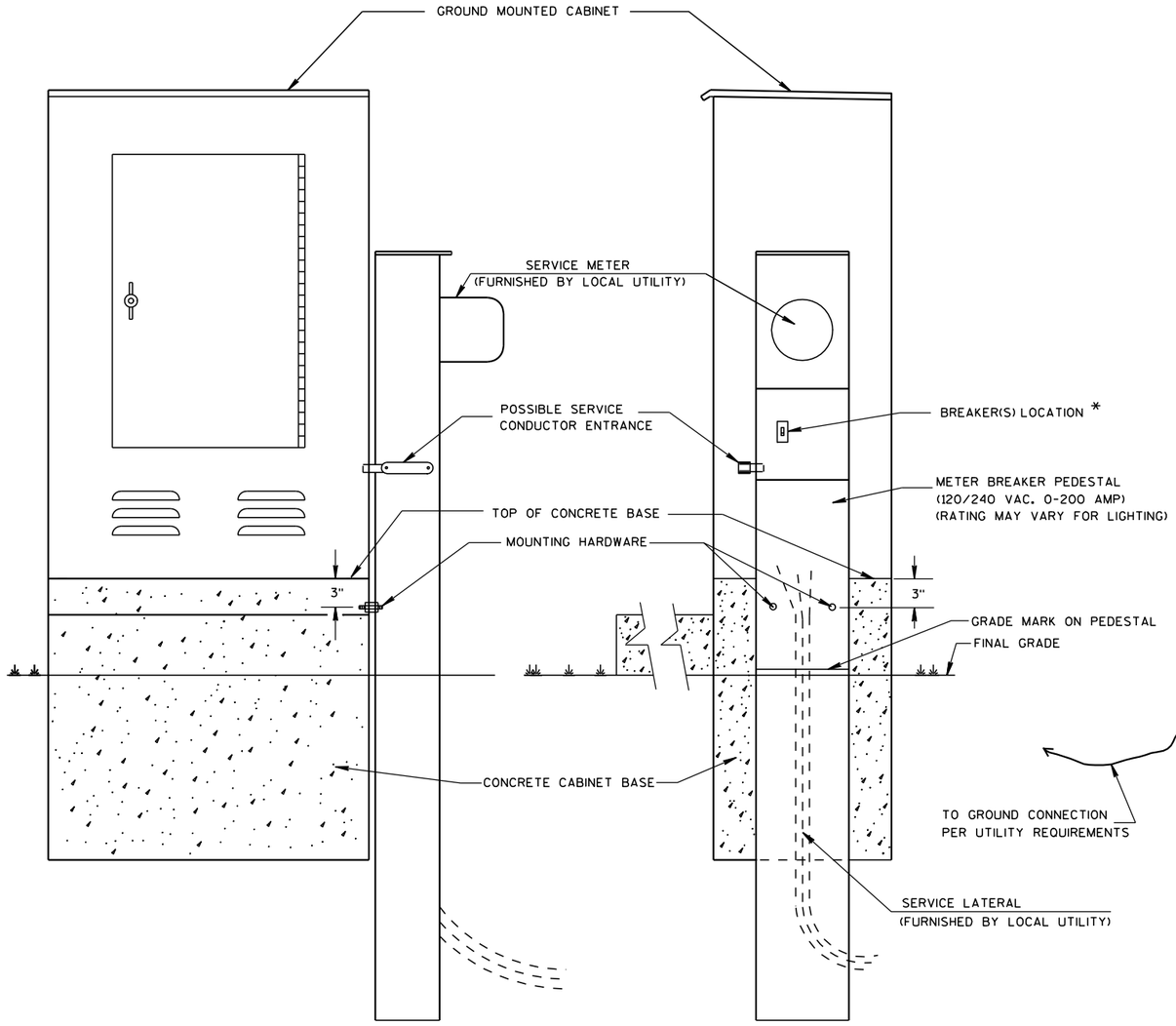
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S.D.D. 9 C 13-1



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
FHWA

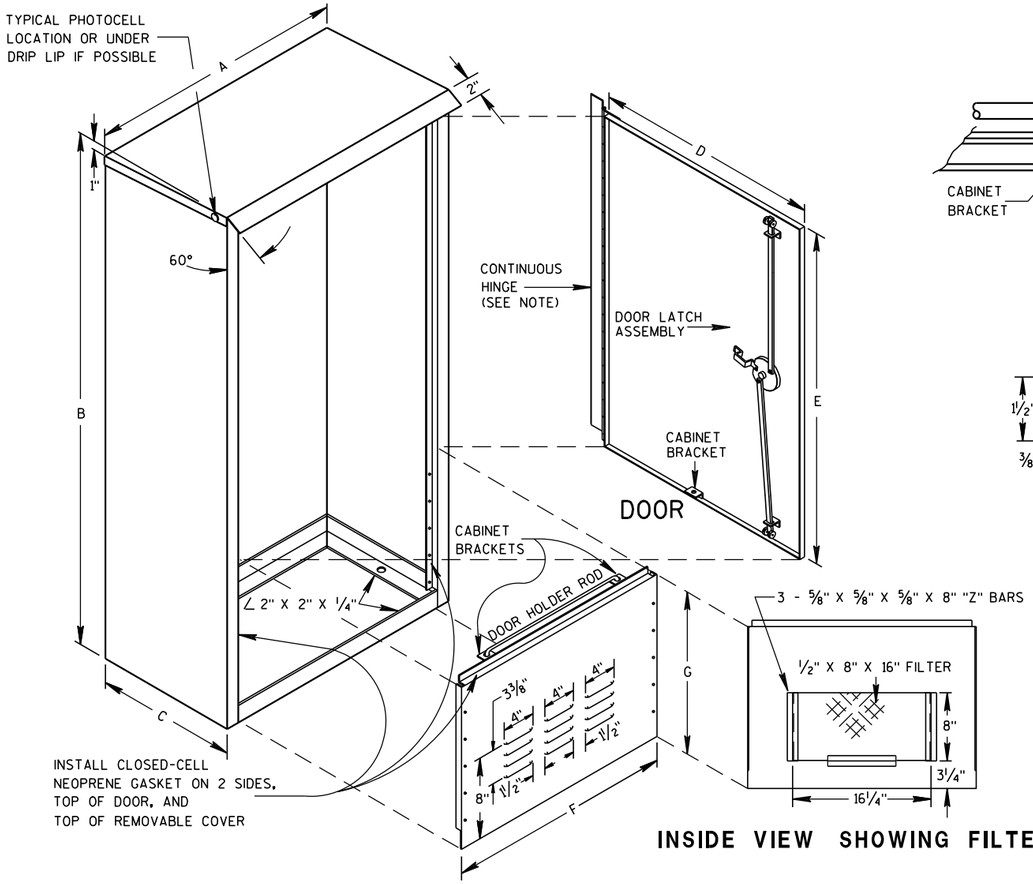
HWYS

6

S.D.D. 9 D 1-4

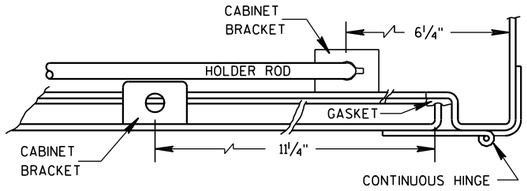
6

S.D.D. 9 D 1-4

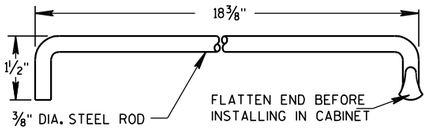


REMOVABLE COVER

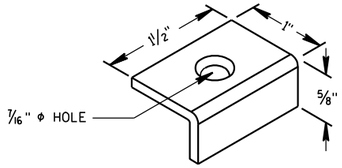
INSIDE VIEW SHOWING FILTER



HINGE & DOOR HOLDER



HOLDER ROD

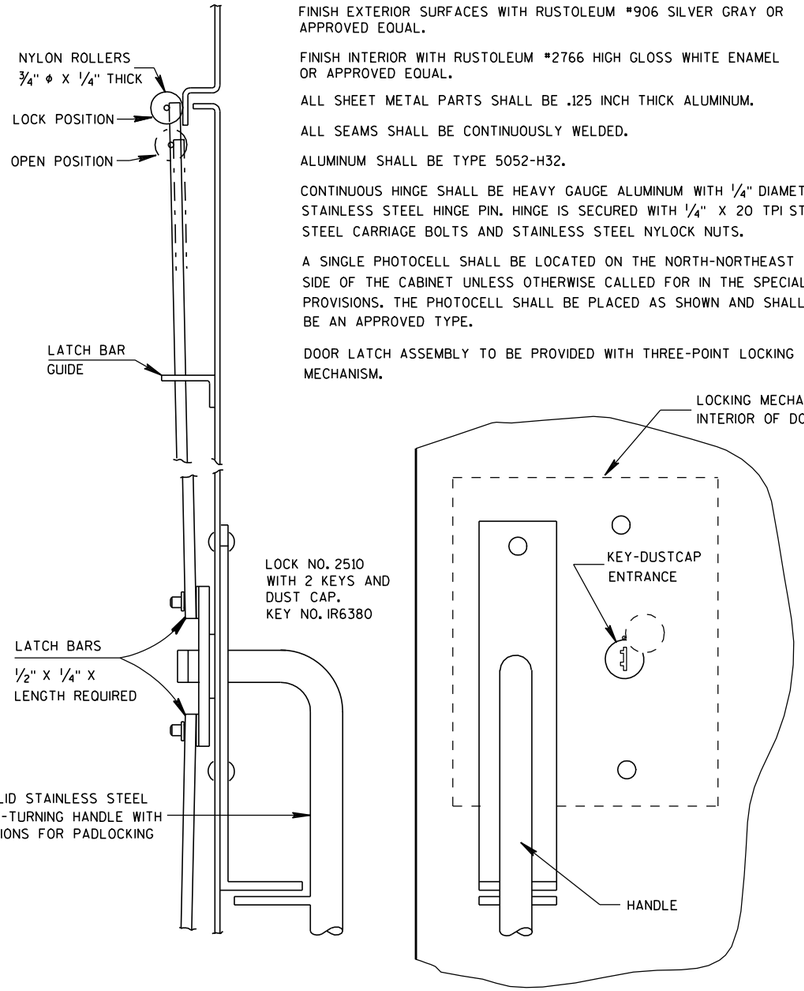


CABINET BRACKET

MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

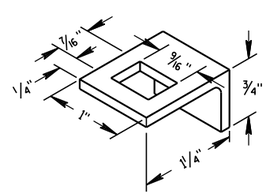
MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2



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.

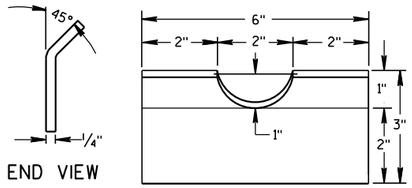
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.

SIGNAL OR LIGHTING CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

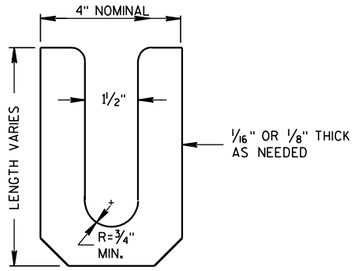
APPROVED
10/21/96 — DATE
/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI — HWYS
FHWA

6
S.D.D. 9 D 2-2



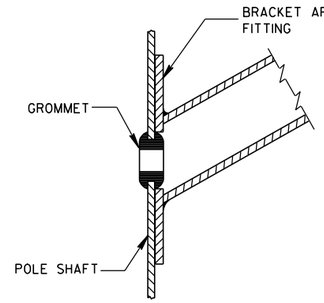
RECTANGULAR CLAMP SHIM

(4 TO A SET)

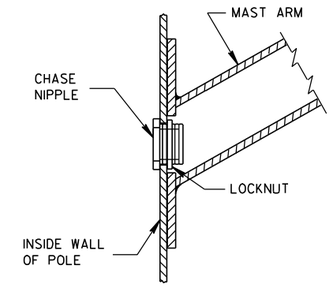


LEVELING SHIM (15)

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".

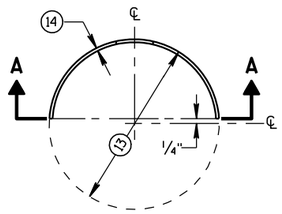
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.

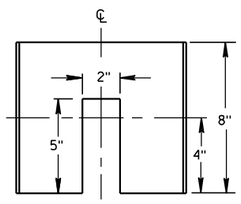
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

(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.



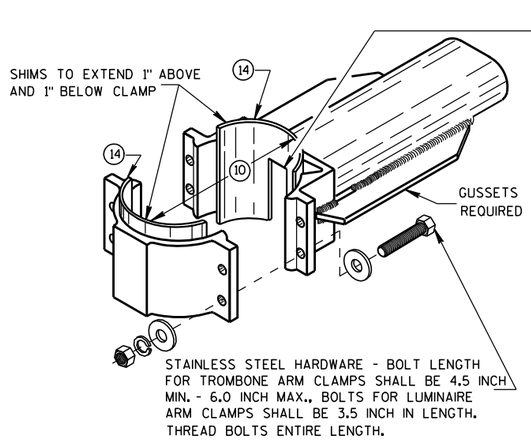
PLAN VIEW



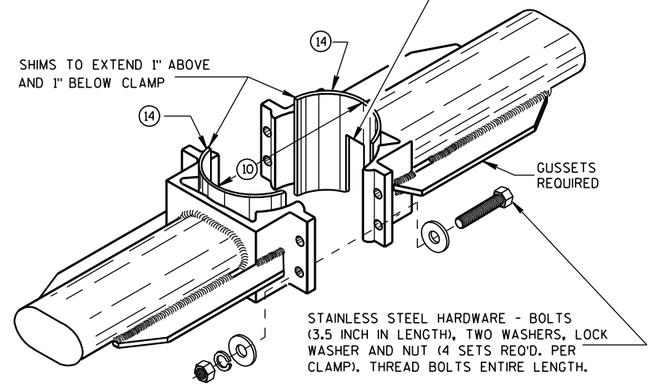
SECTION A-A

CIRCULAR CLAMP SHIM

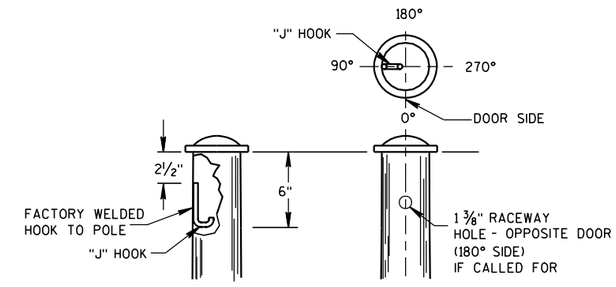
(2 TO A SET)



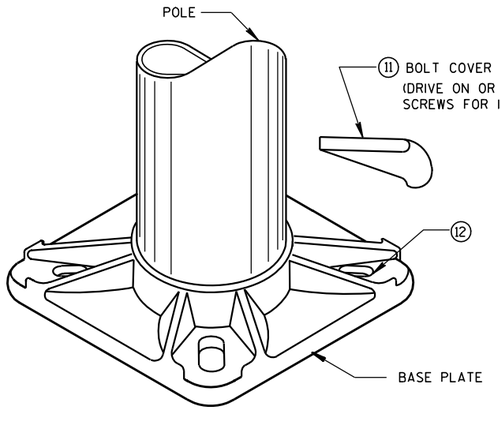
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



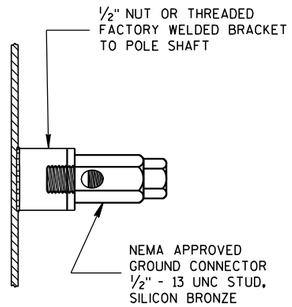
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

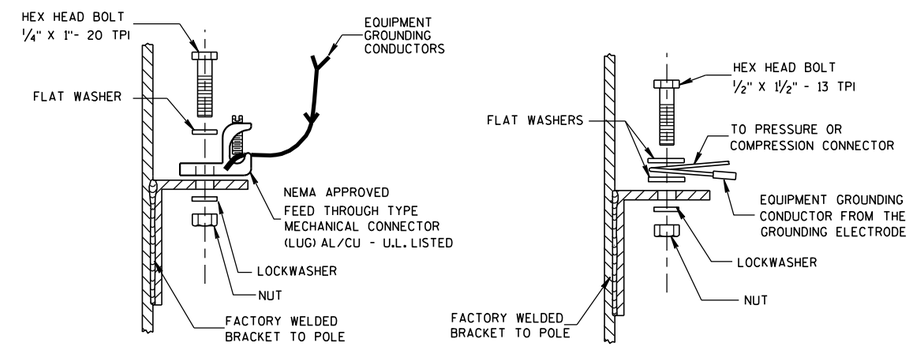


TYPICAL "J" HOOK LOCATION



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

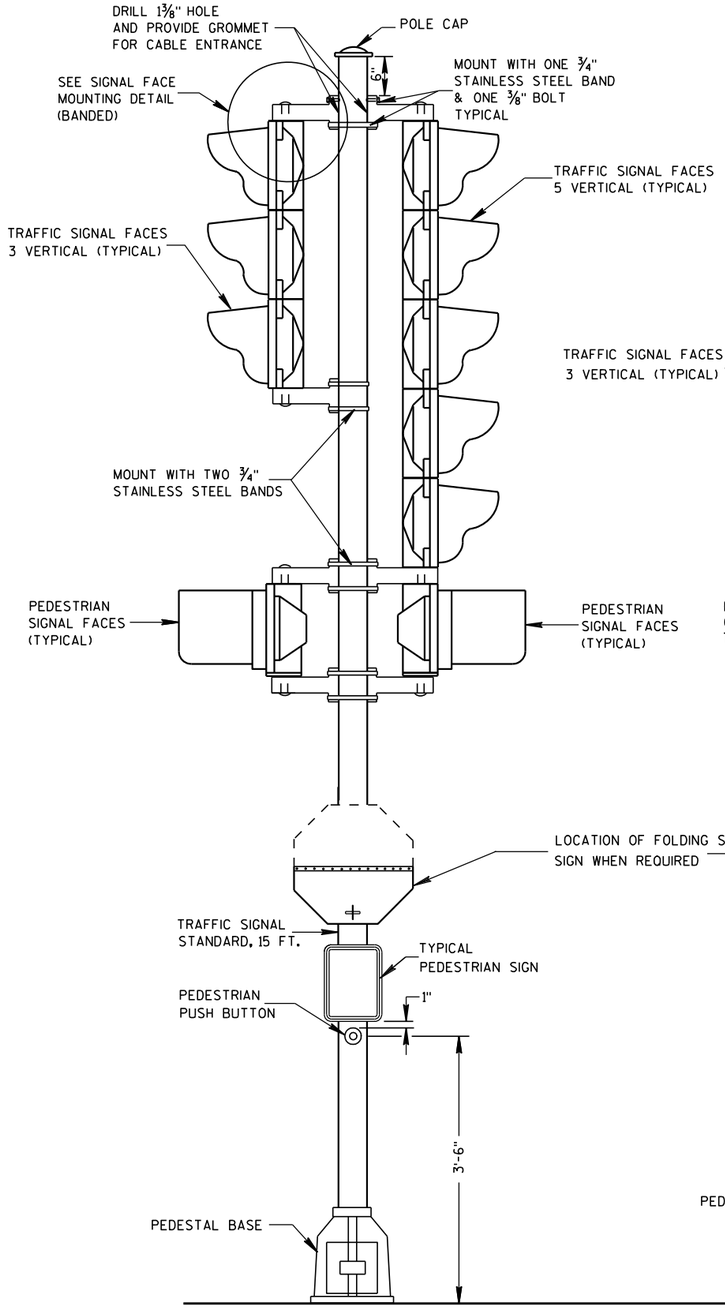
3/2/11 — DATE

/S/ Thomas J. Gosling — STATE ELECTRICAL ENGI

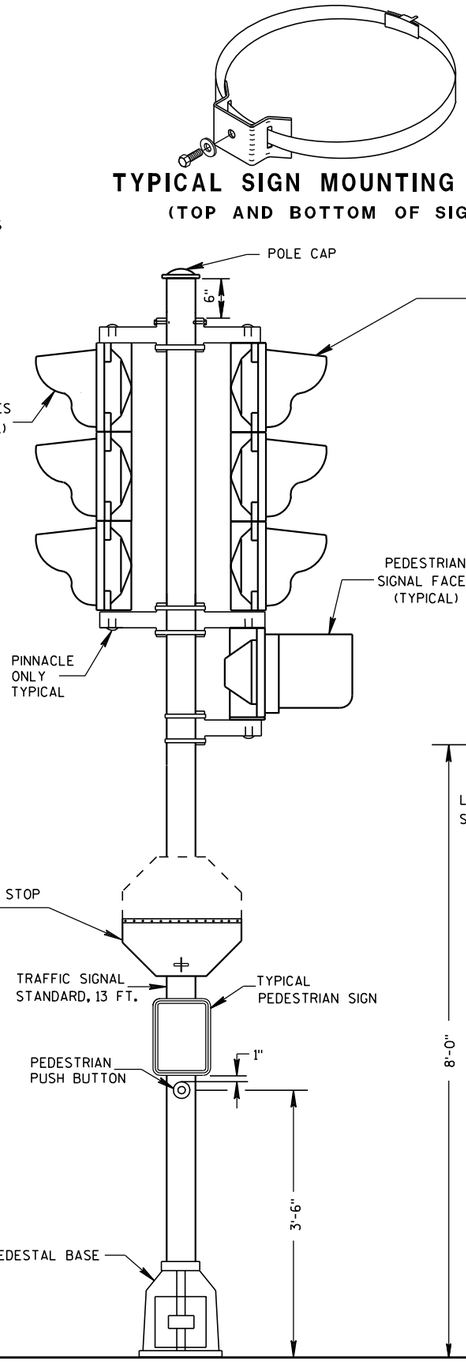
FHWA

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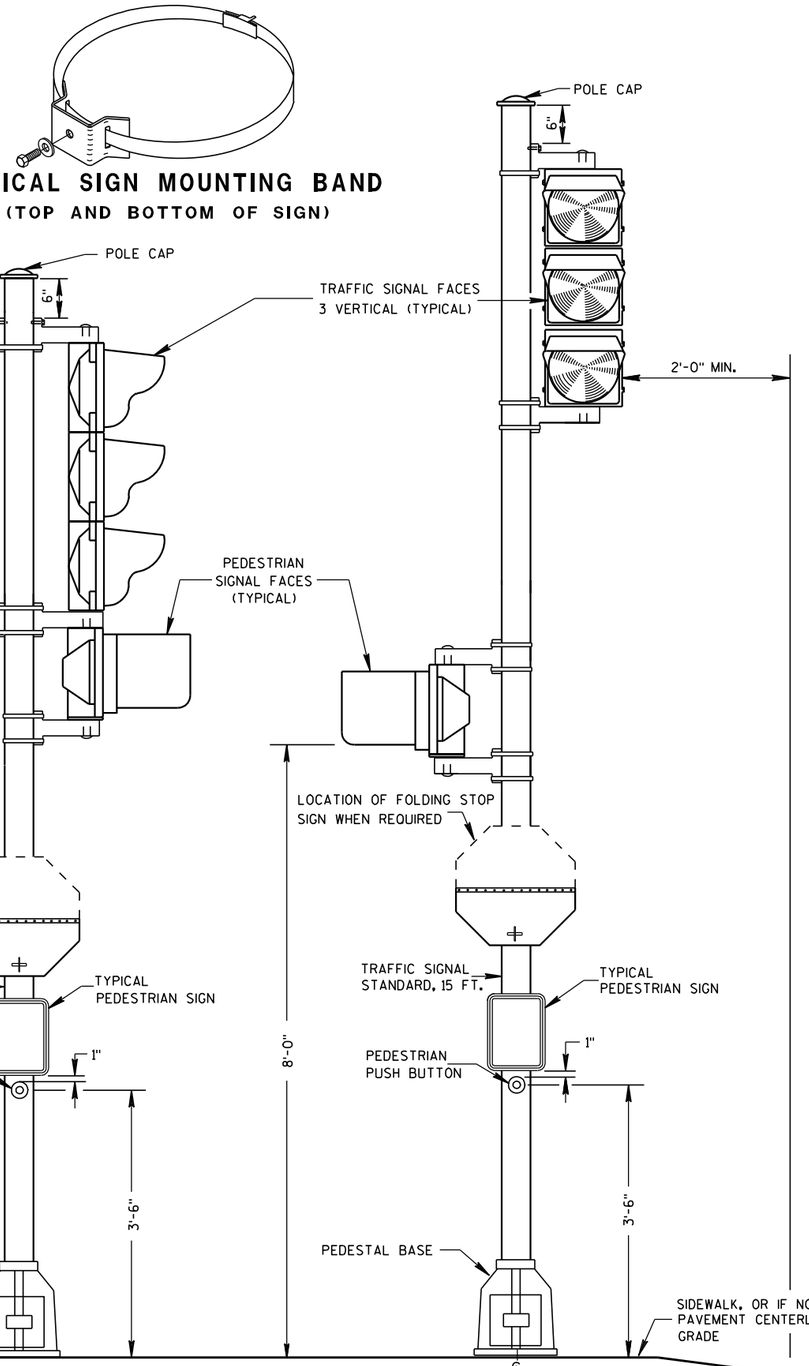
S.D.D. 9 E 1-11g



TRAFFIC SIGNAL STANDARD-15 FT.



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.

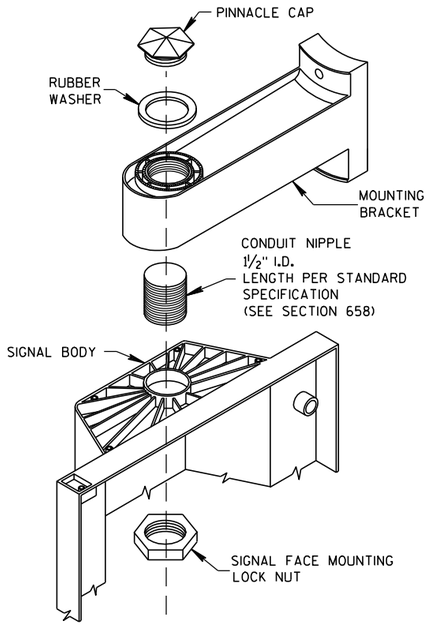
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE DISTRICT 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) 1/4" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



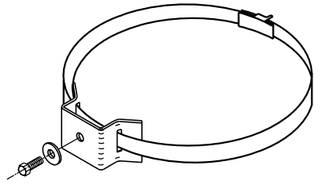
SIGNAL FACE MOUNTING DETAIL
(BANDED)

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

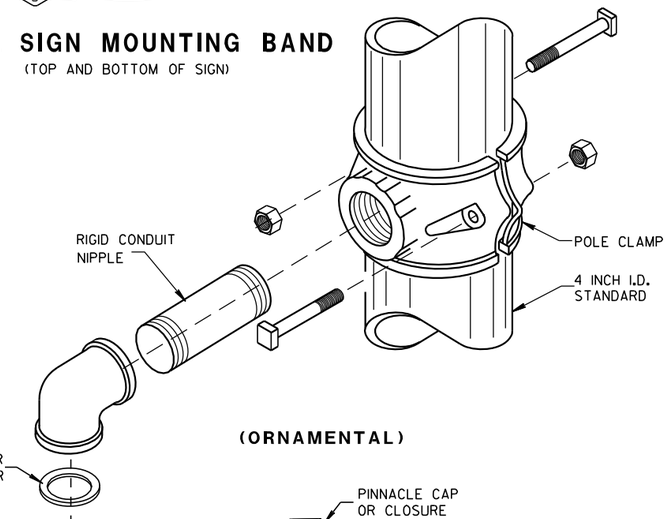
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/11/10 DATE
/S/ John Corbin
STATE ELECTRICAL ENGI
HWYS
FHWA

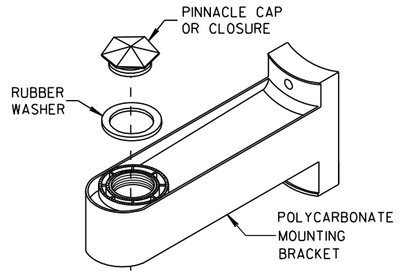
6
S.D.D. 9 E 6-4



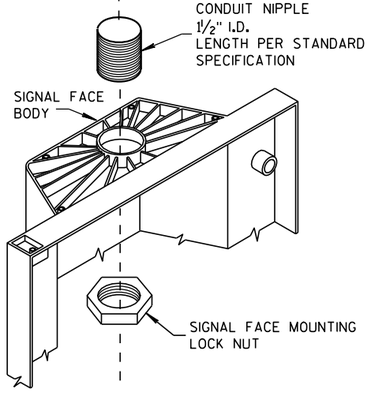
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



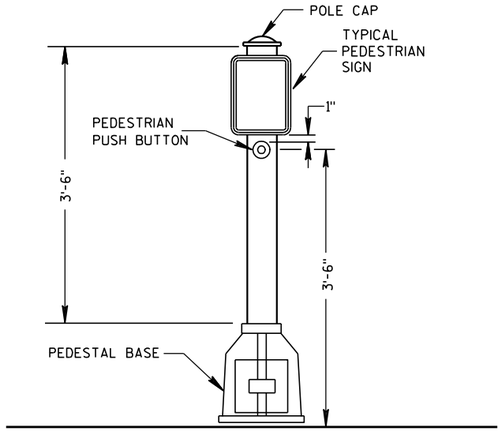
(ORNAMENTAL)



(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.

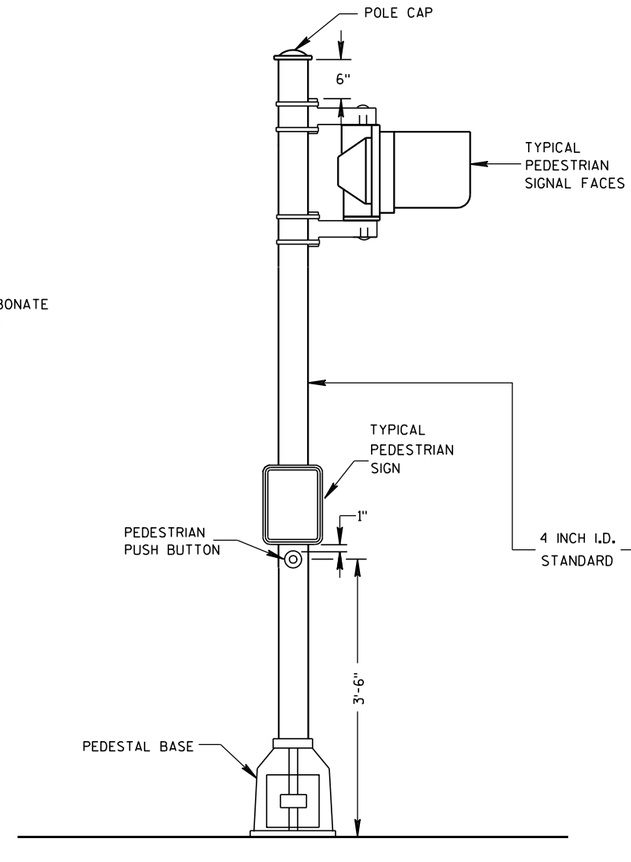
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

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

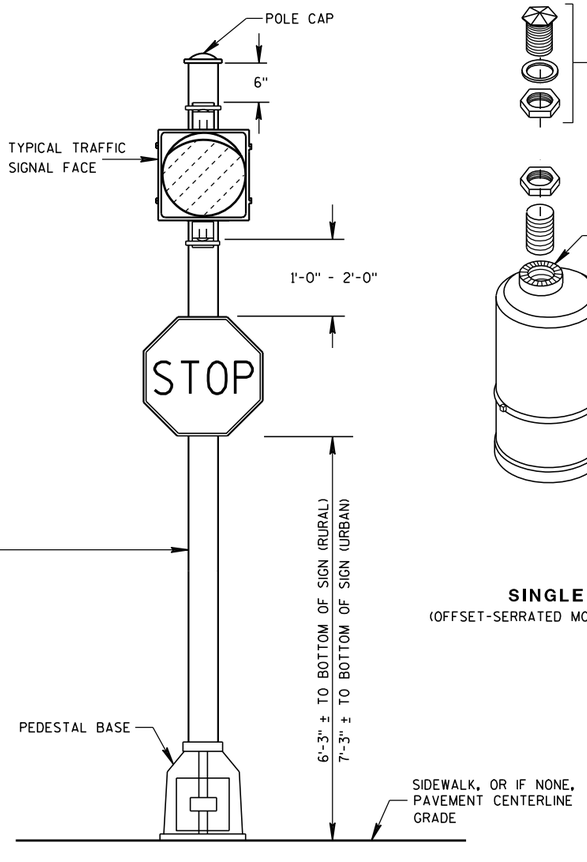
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

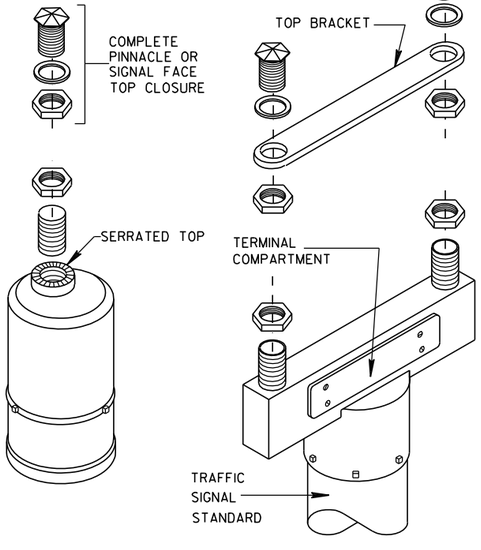
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



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)

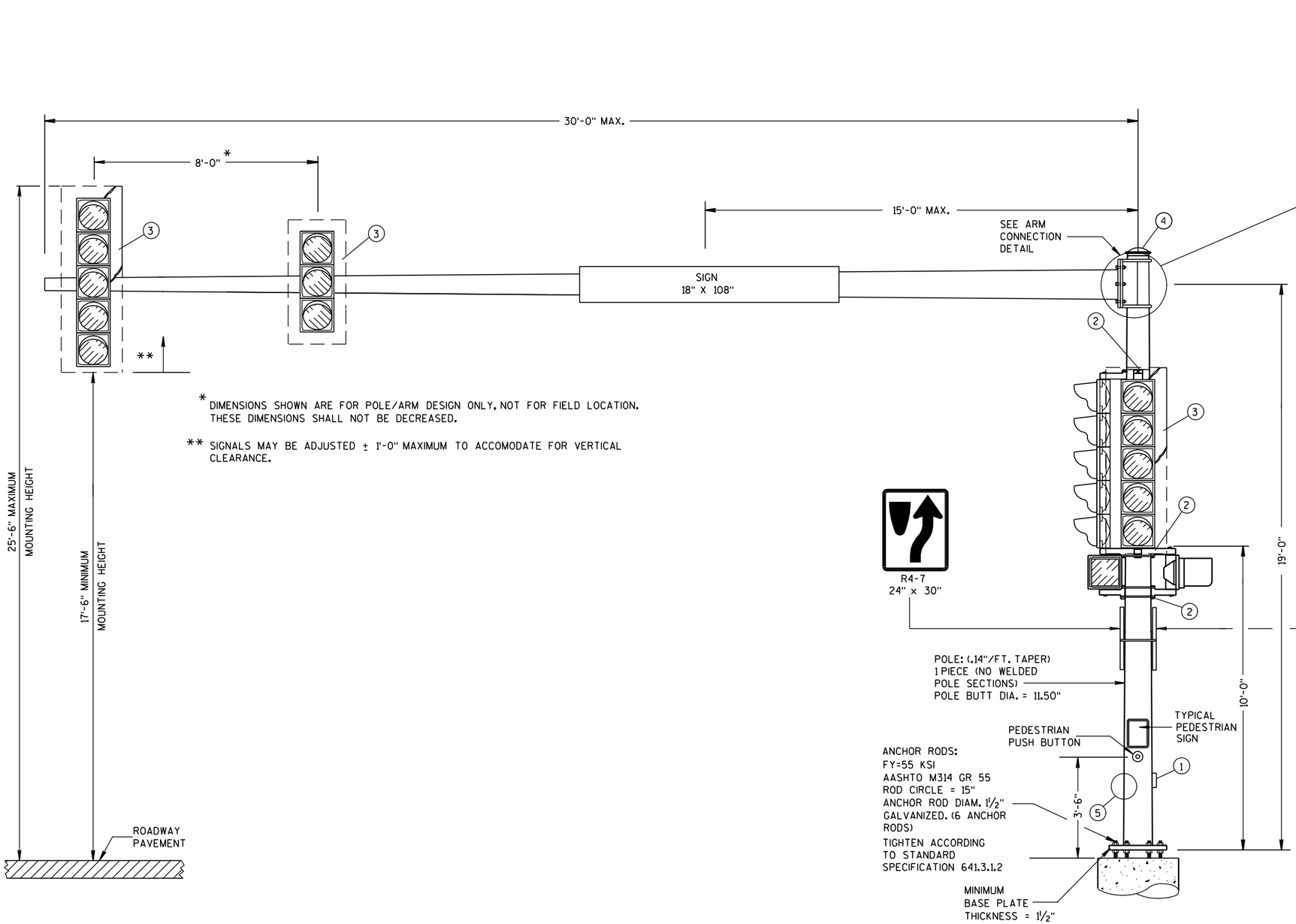
SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

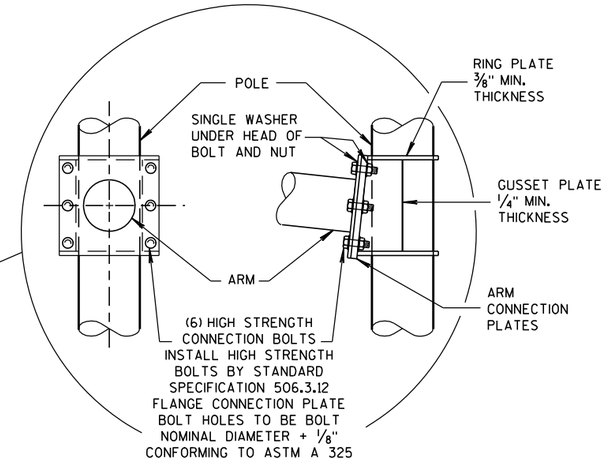
APPROVED
5/11/10 DATE
/S/ John Corbin STATE ELECTRICAL ENGI
FHWA HWYS

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
HWYS
FHWA

S.D.D. 9 E 8-4a

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.

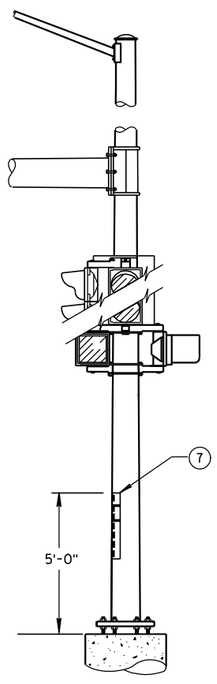
(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

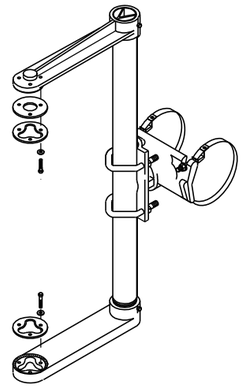
(7) INSTALL DEPARTMENT PROVIDED STRUCTURAL IDENTIFICATION PLAQUES.

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.

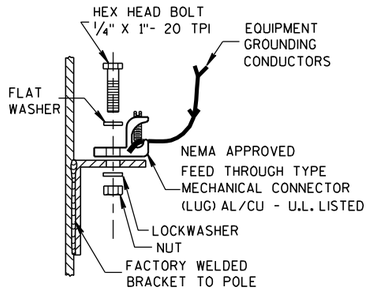


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



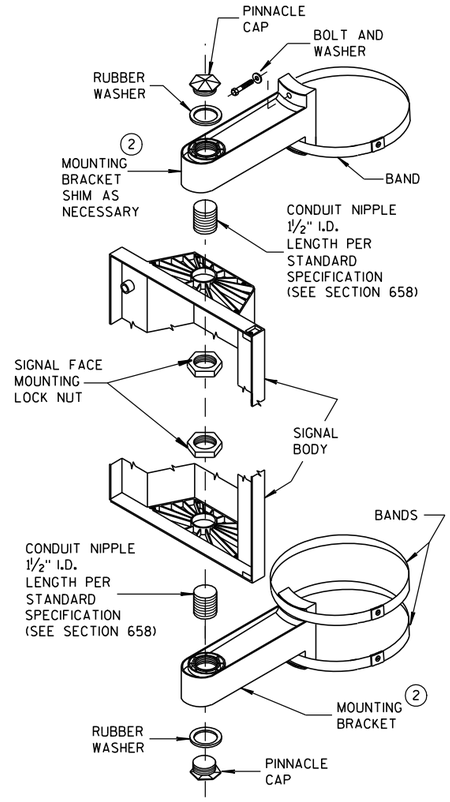
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

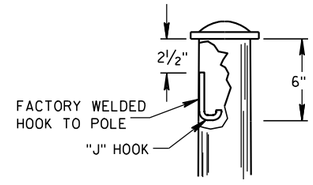


TYPICAL GROUNDING CONNECTIONS (5)

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

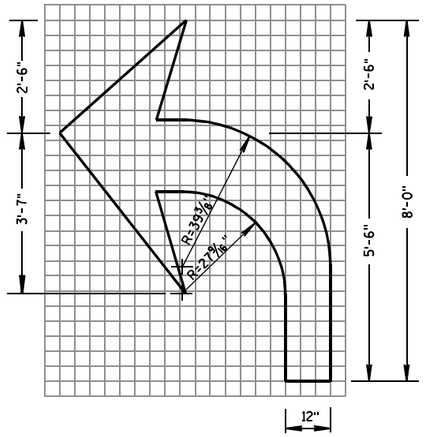
/S/ Thomas J. Corrigan
STATE ELECTRICAL ENGI

HWYS

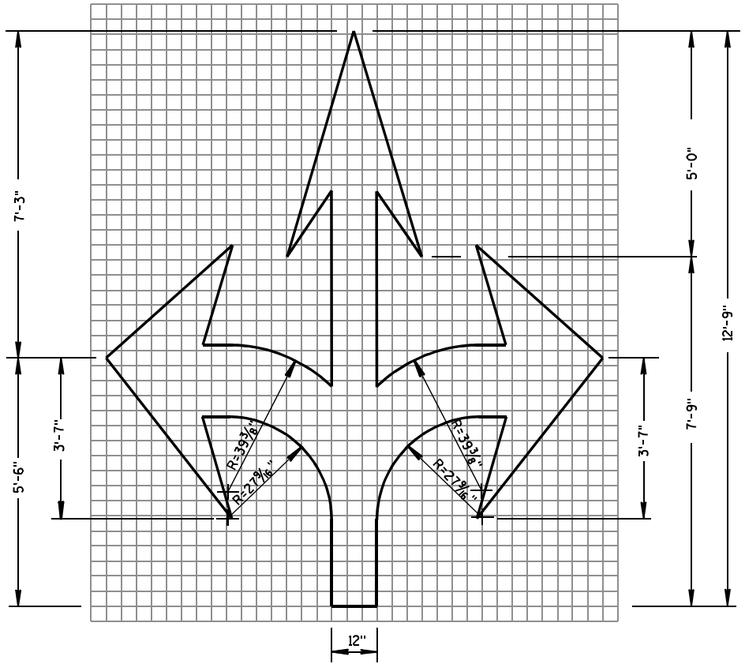
FHWA

6

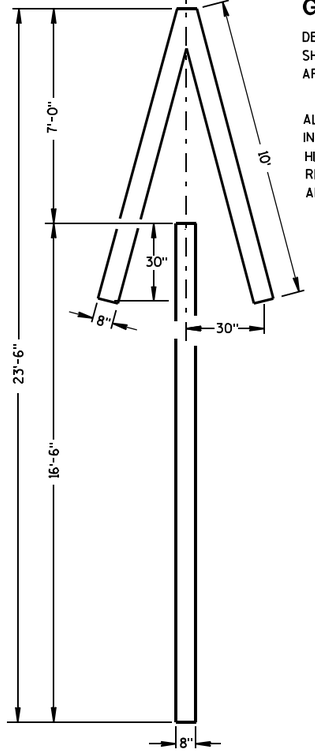
S.D.D. 9 E 8-4e



TYPE 2



TYPE 6

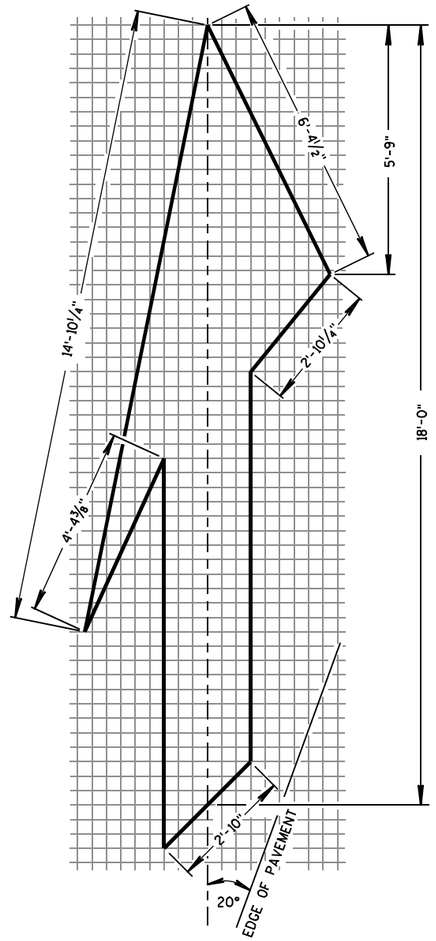


TYPE 4

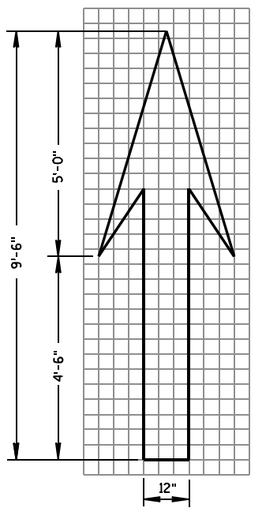
GENERAL NOTES

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

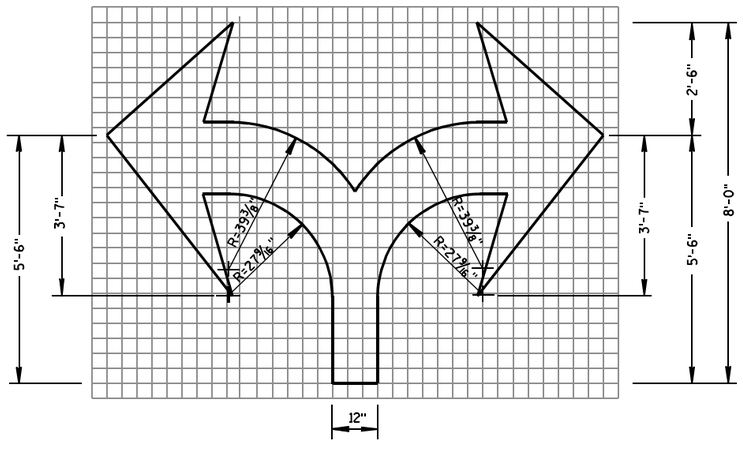
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



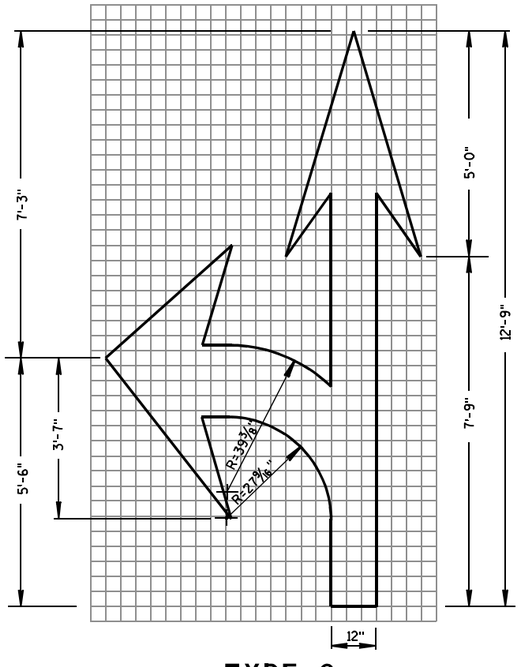
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

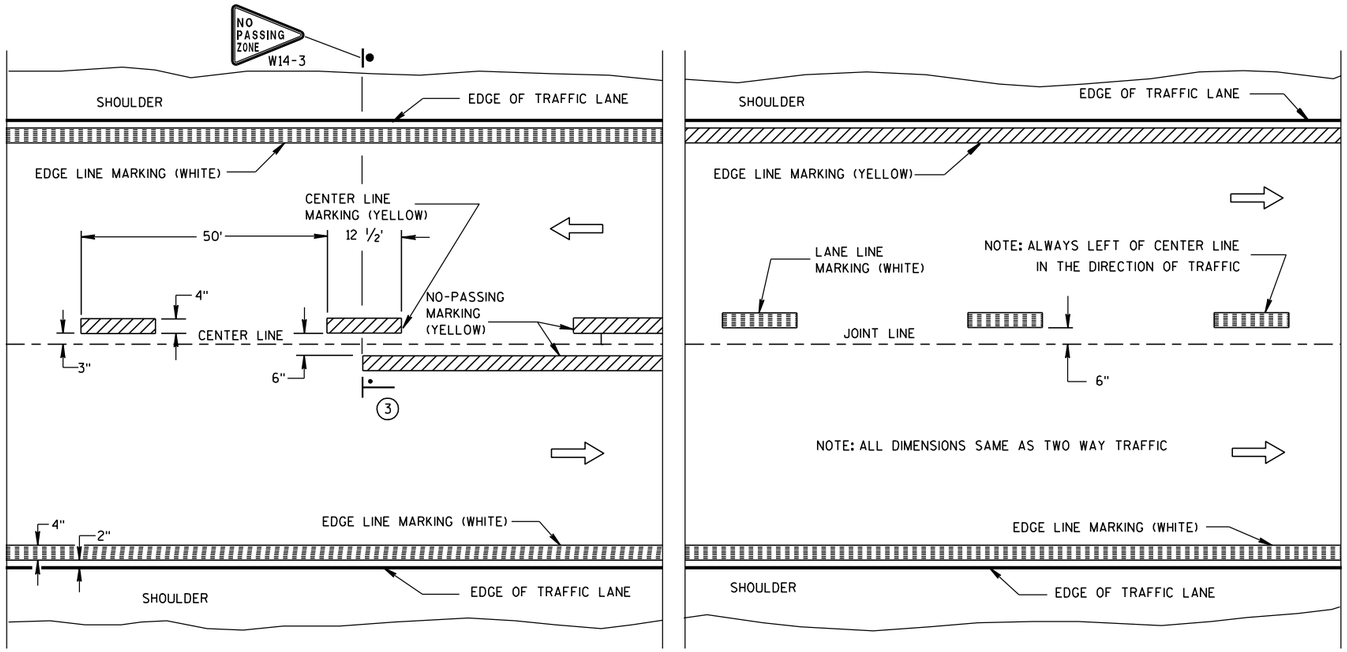
FHWA

6

S.D.D. 15 C 7-12c

6

S.D.D. 15 C 7-12c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

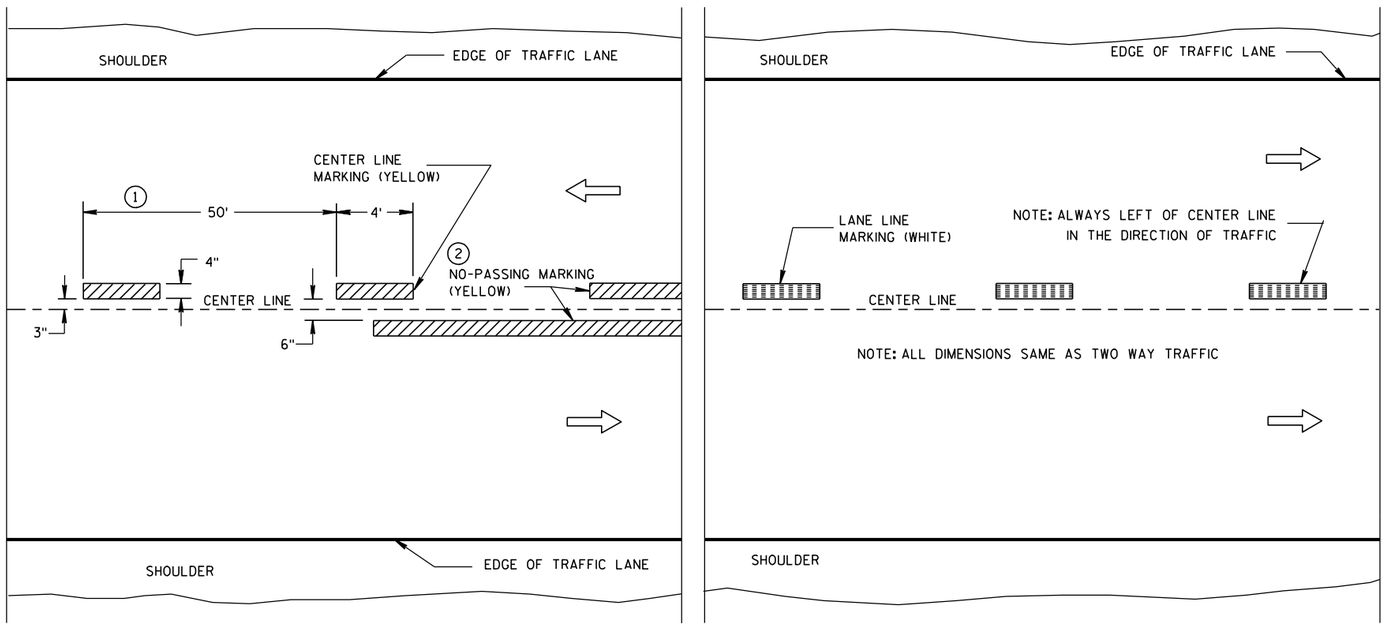
(1) HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.

(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.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

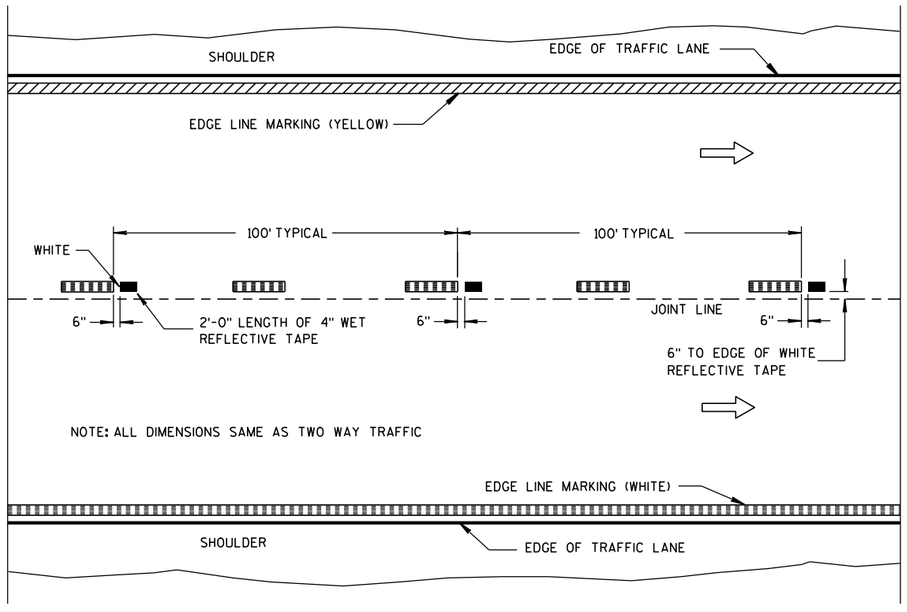


TWO WAY TRAFFIC

ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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



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
6-23-11 DATE
/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER

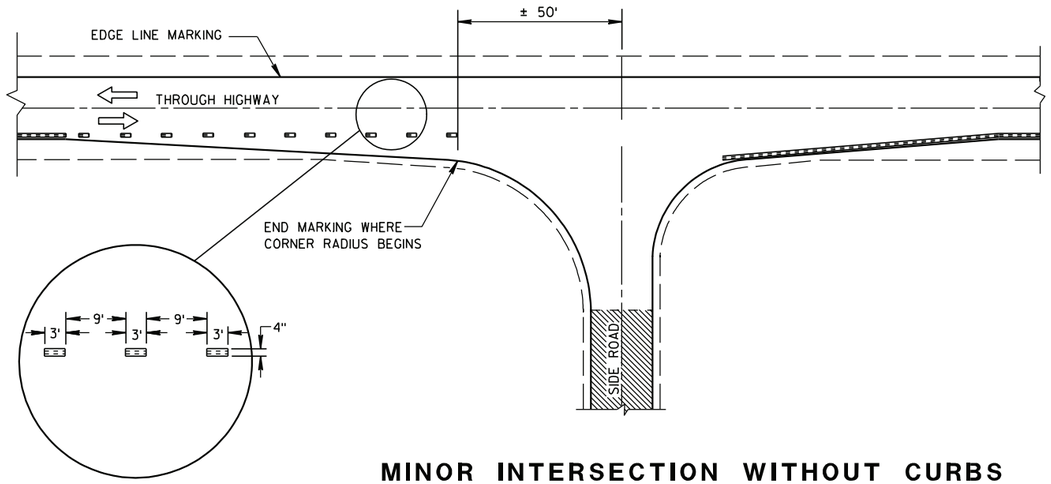
FHWA

6

S.D.D. 15 C 8-14a

6

S.D.D. 15 C 8-14a



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.

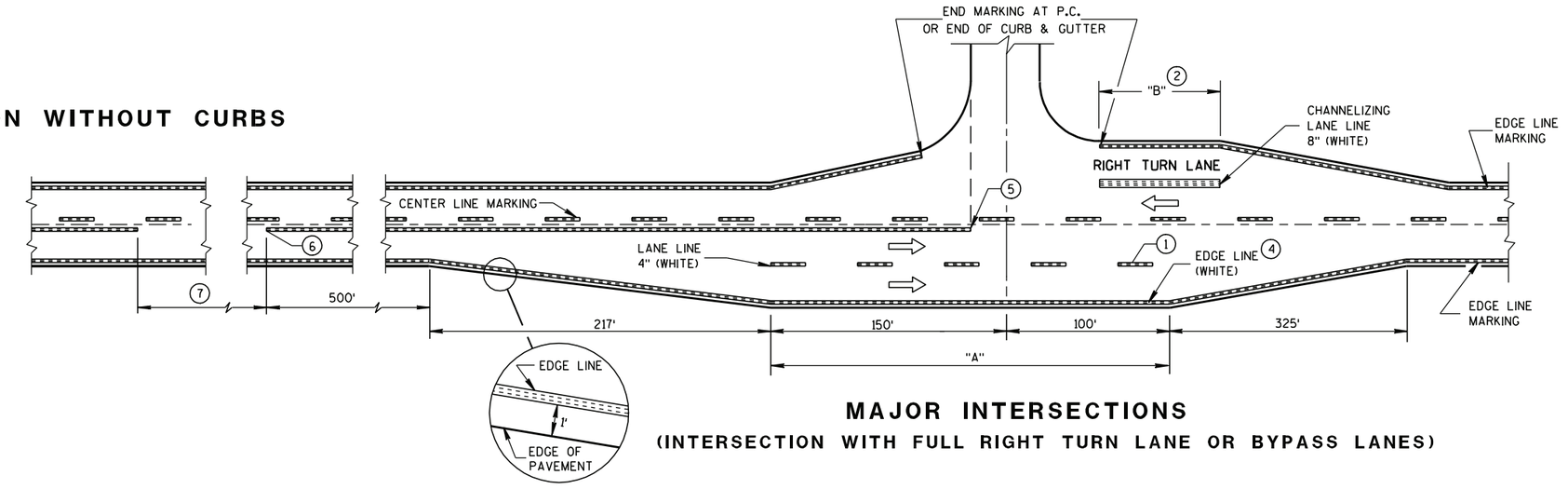
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

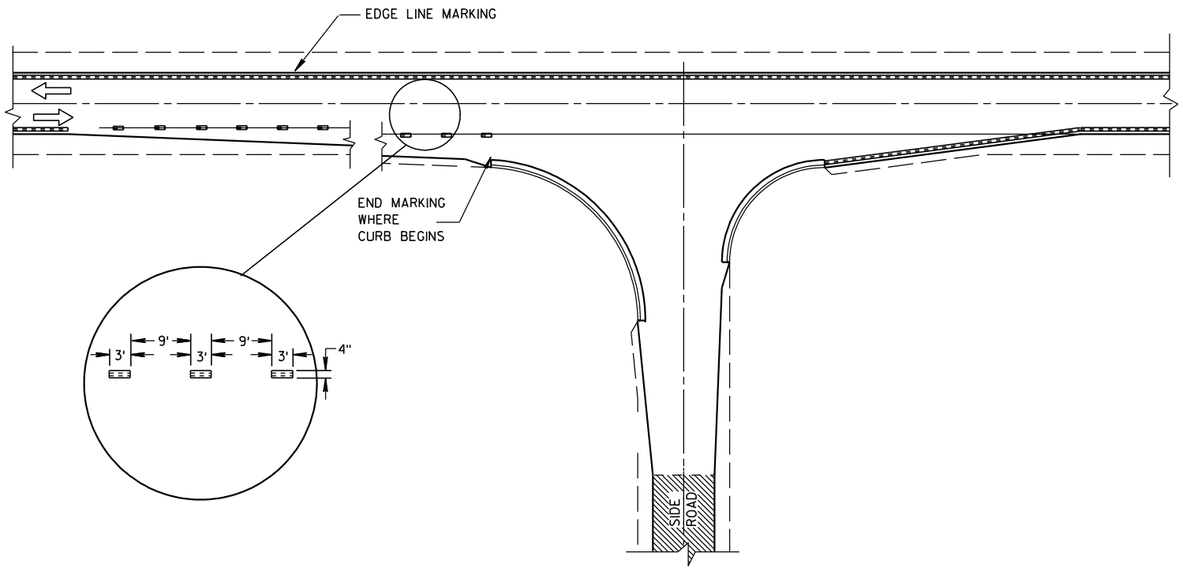
ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

(7)

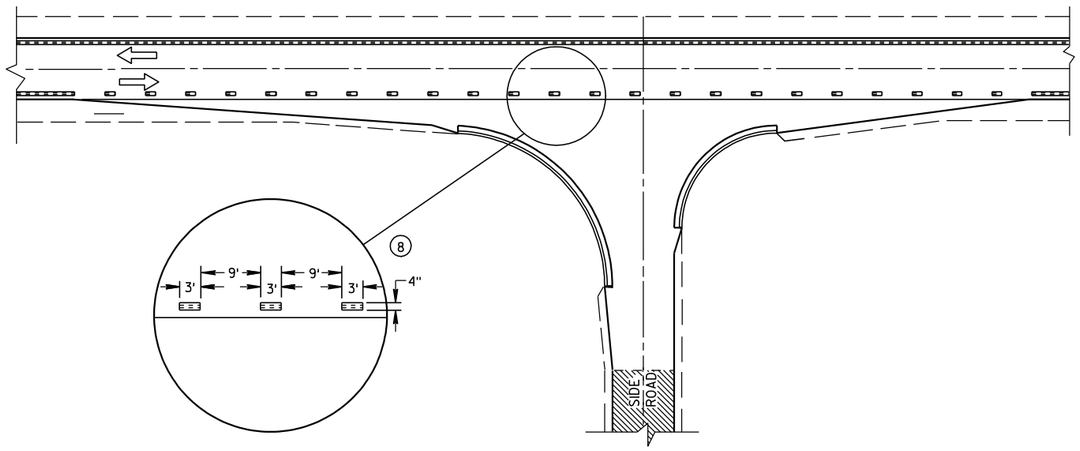
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



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)

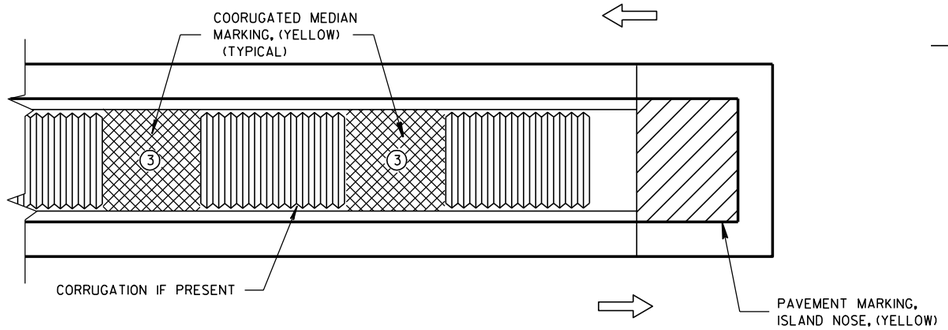
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

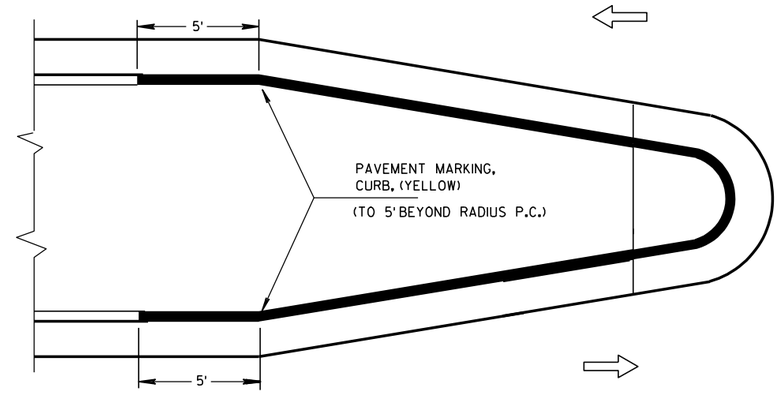
S.D.D. 15 C 8-14b

6

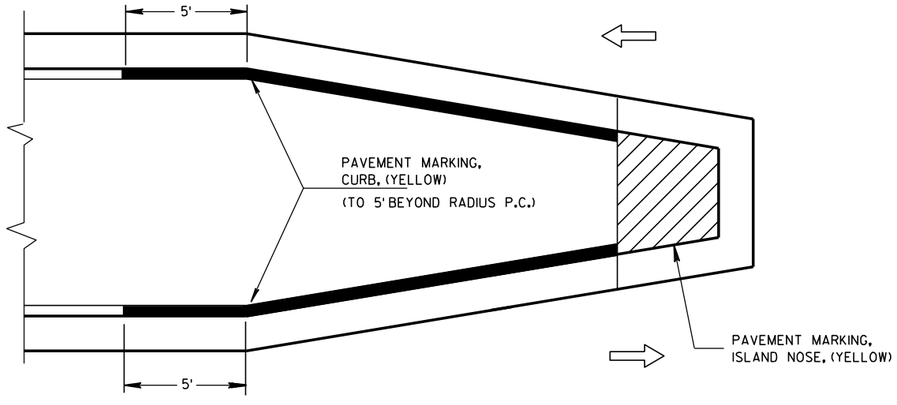
S.D.D. 15 C 8-14b



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

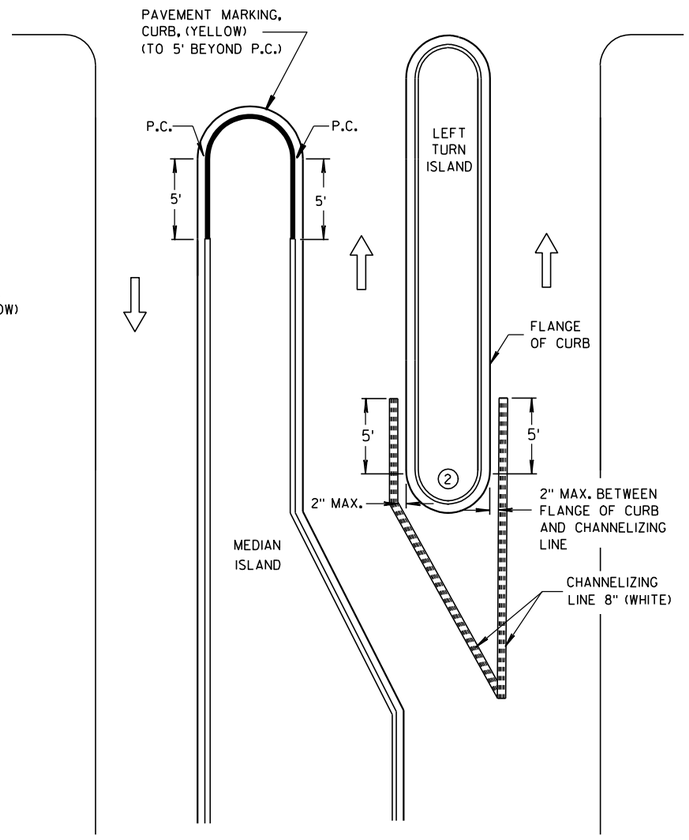


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

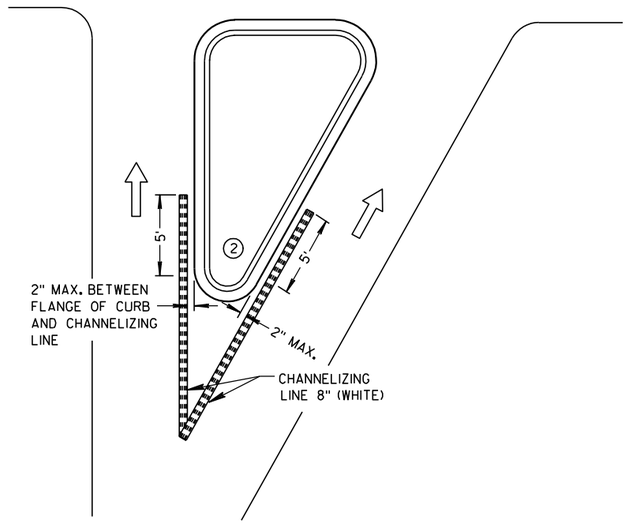
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



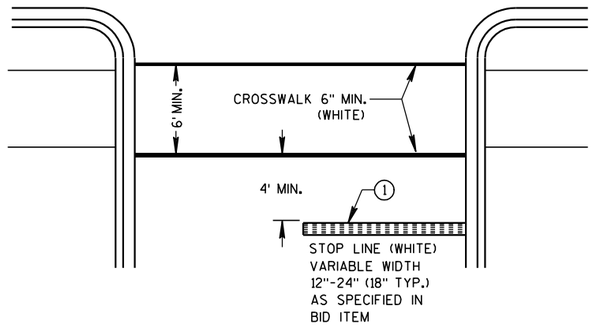
LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
3. 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



STOP LINE AND CROSSWALK

LEGEND

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

PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 8-14f

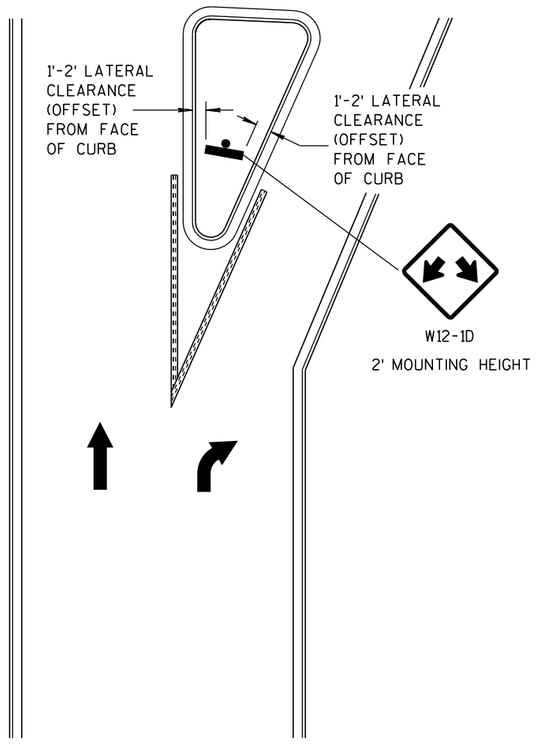
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S.D.D. 15 C 8-14f

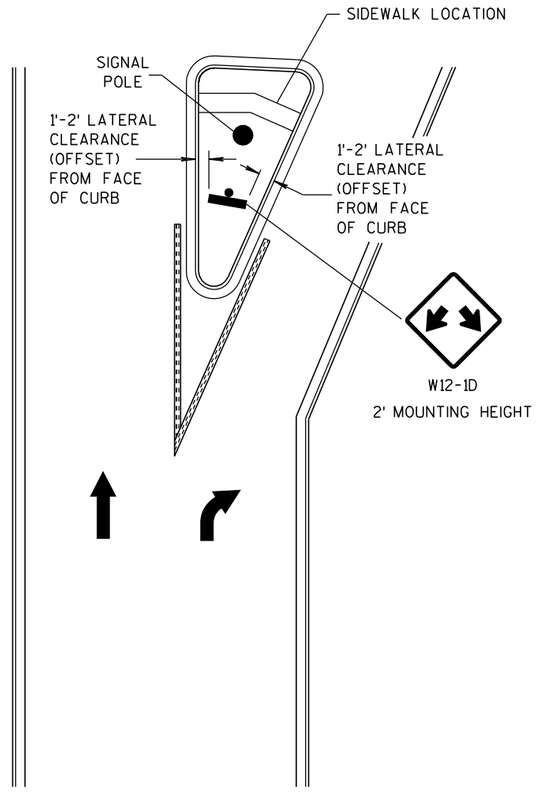
GENERAL NOTE

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

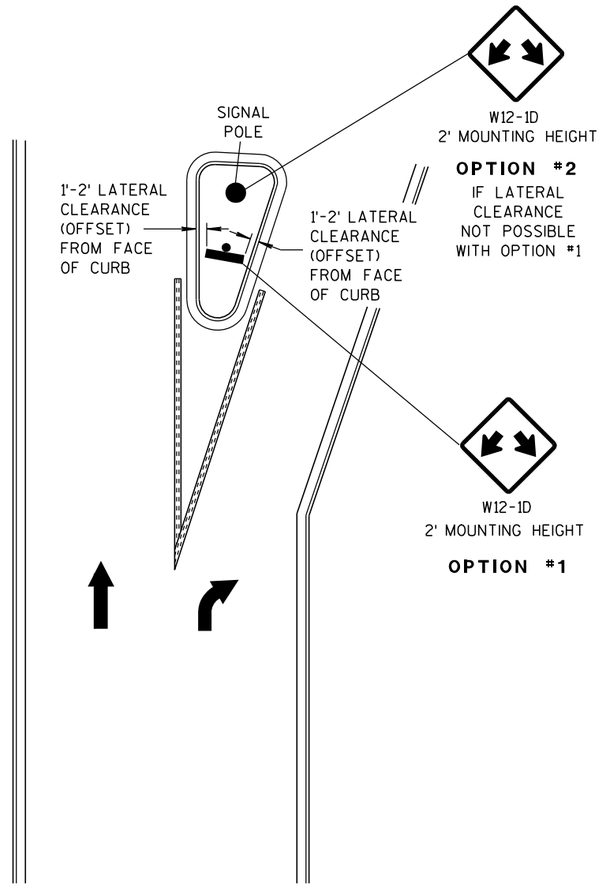
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.



LARGE RIGHT TURN ISLAND



LARGE RIGHT TURN ISLAND
WITH SIGNAL POLE



SMALL RIGHT TURN ISLAND

DOUBLE ARROW WARNING SIGN PLACEMENT

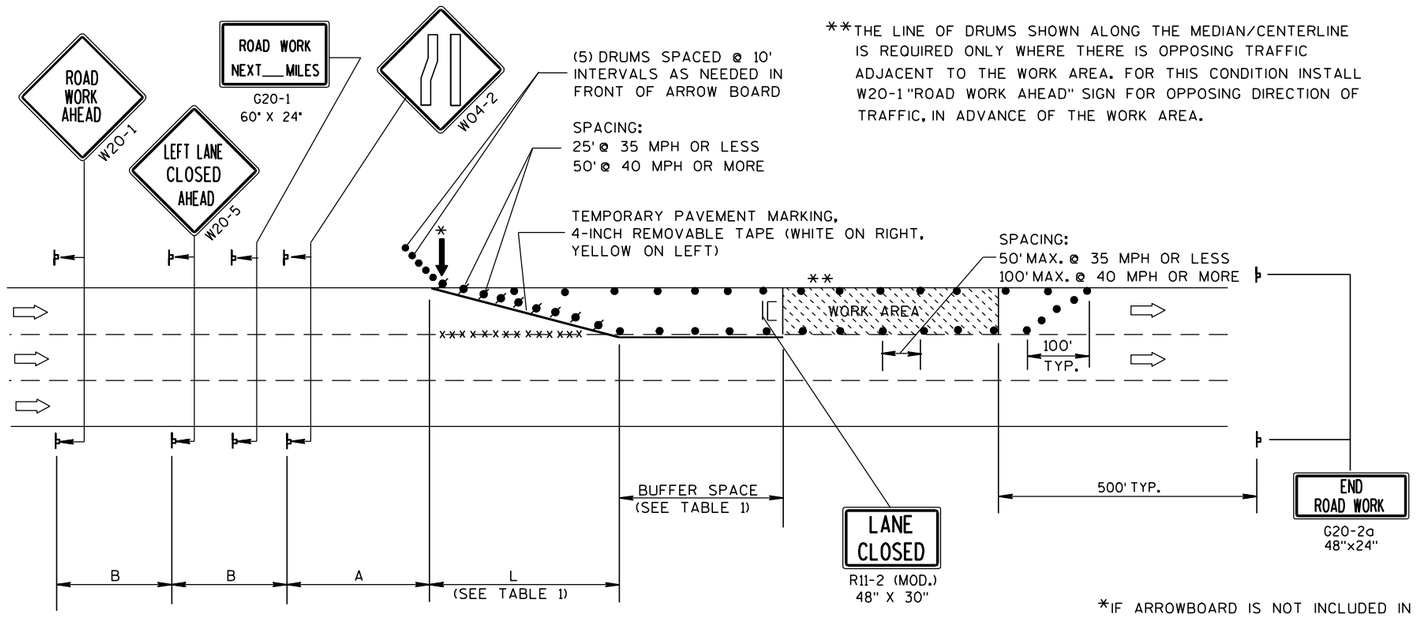
DOUBLE ARROW WARNING SIGN PLACEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
10-22-08 DATE	/S/ Thomas N. Nothdurft STATE TRAFFIC ENGINEER
FHWA	

6

S.D.D. 15 C 27-1

6

S.D.D. 15 C 27-1



**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"

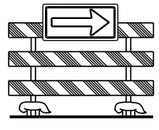


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

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

- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- POST MOUNTED SIGN
- ARROW BOARD
- TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS, TYPE A (FLASHING) WITH/WITHOUT SIGN
- DIRECTION OF TRAFFIC FLOW
- xxxx REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

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 7 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.

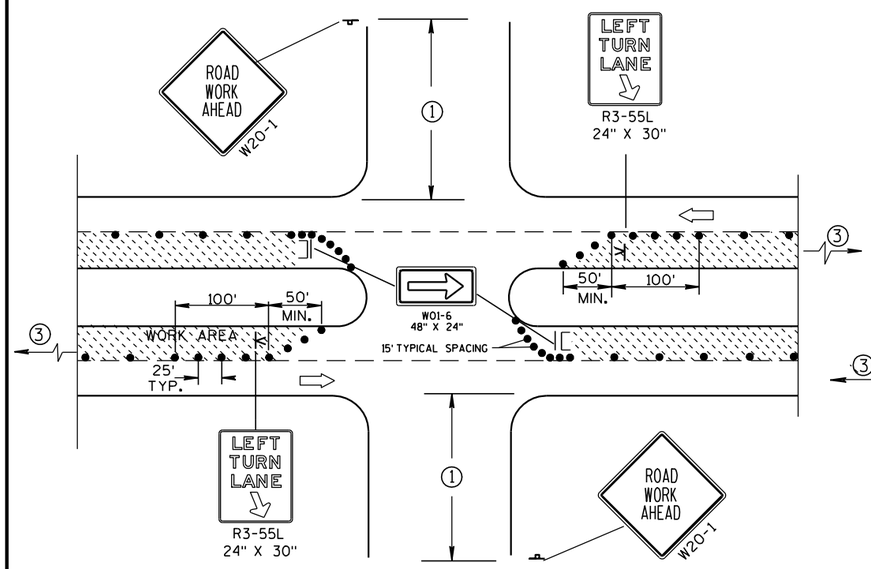
TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00 DATE
/S/ Chester J. [illegible] CHIEF SIGNS AND MARI[illegible]INEER
FHWA

6

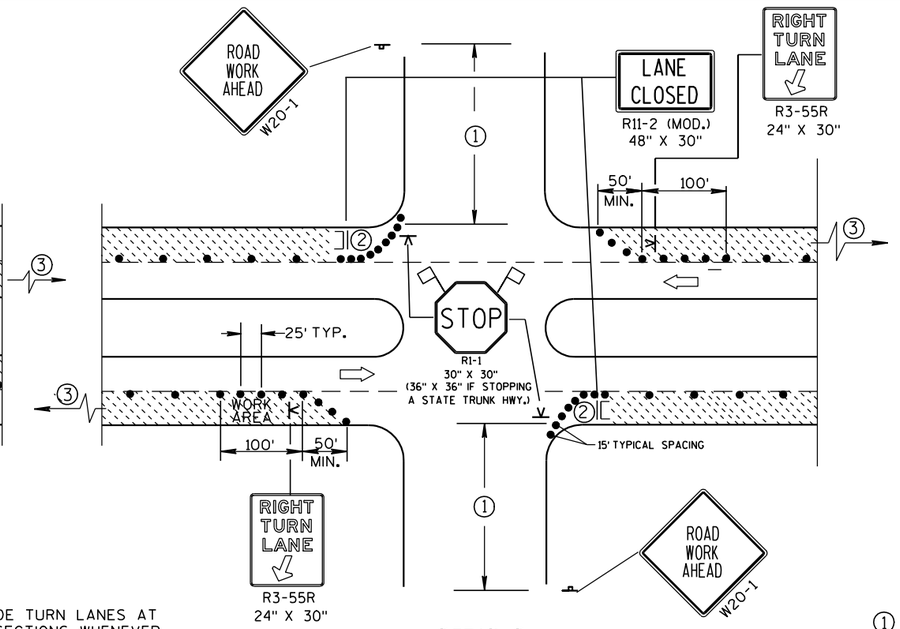
S.D.D. 15 D 20-1



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

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

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.

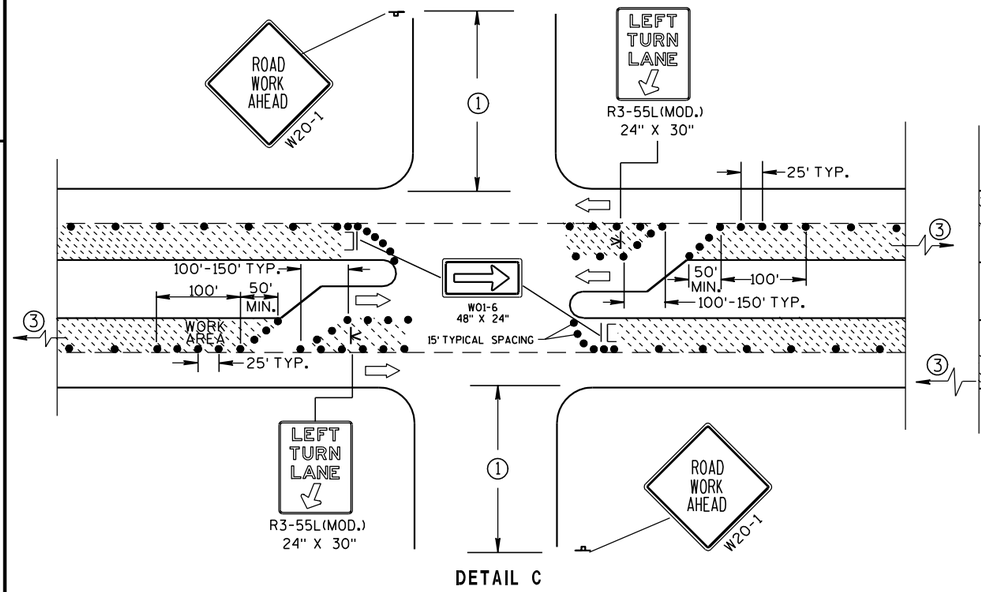
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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.

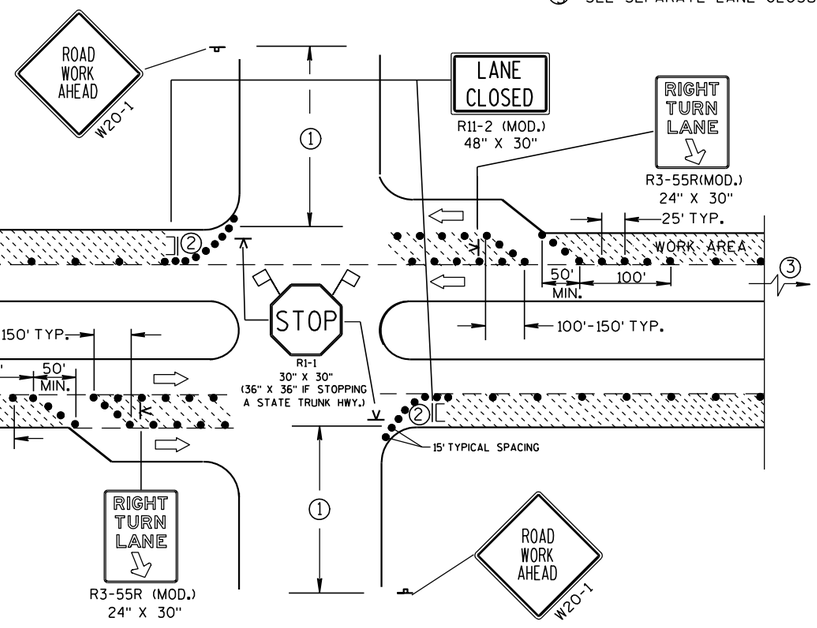
② ALSO USE BARRICADE AND 15' TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

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

- DRUM
- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHT, TYPE A (FLASHING) WITH SIGN
- DIRECTION OF TRAFFIC FLOW
- FLAGS, 16" X 16" MIN., ORANGE

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

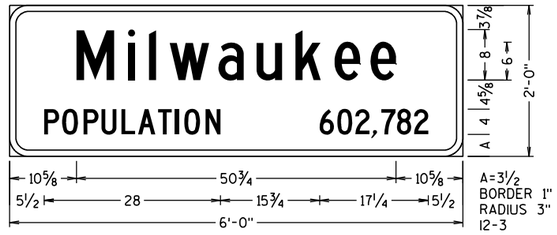
APPROVED
5/23/00 (DATE)
/S/ Chester J. Spang (CHIEF SIGNS AND MARKINGS ENGINEER)
FHWA

6

S.D.D. 15 D 21-1

6

S.D.D. 15 D 21-1



96

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"

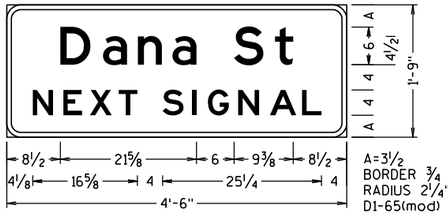
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

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.



77 95

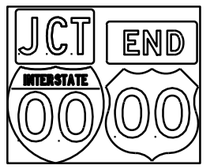
SHEET 1 OF 1

PROJECT NO: 1060-33-90	HWY: IH-94 / 84TH ST	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE II SIGNS	SCALE: 0 ½" 1"	SHEET	E

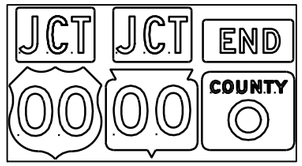
TYPICAL ASSEMBLIES



J1-1



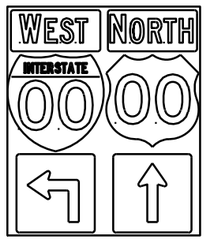
J1-2



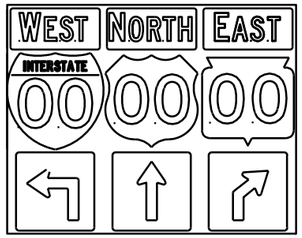
J1-3



J2-1



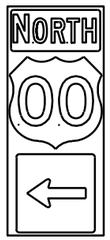
J2-2



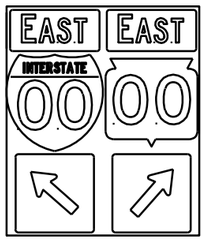
J2-3



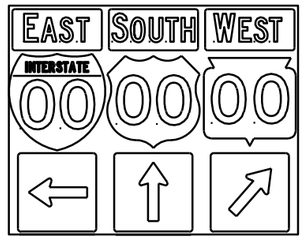
JV



J3-1



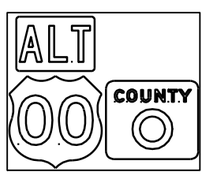
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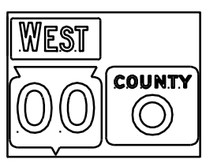
J3-3



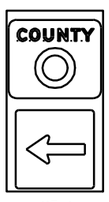
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



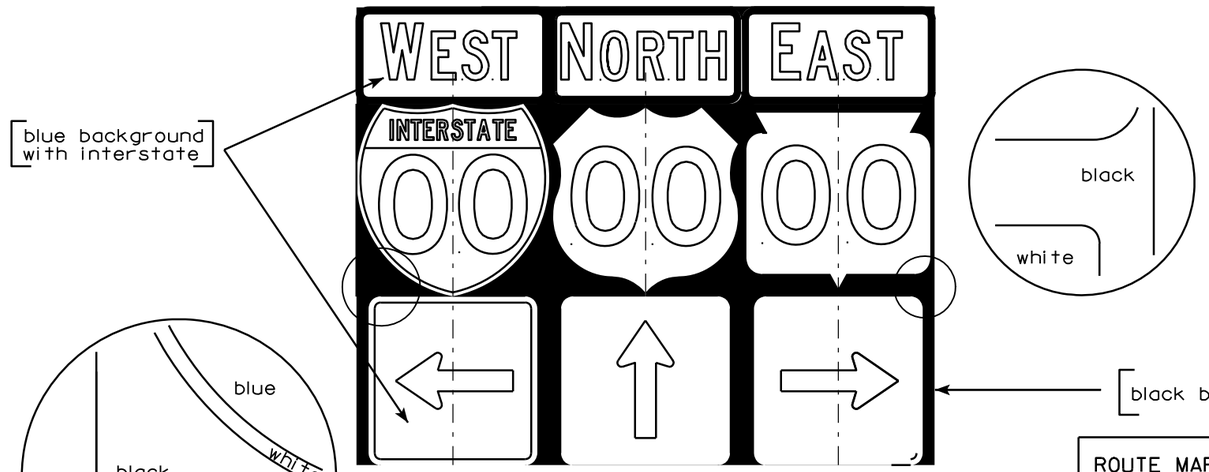
J23-1



J22-1

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 since base material is plywood.
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.



ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

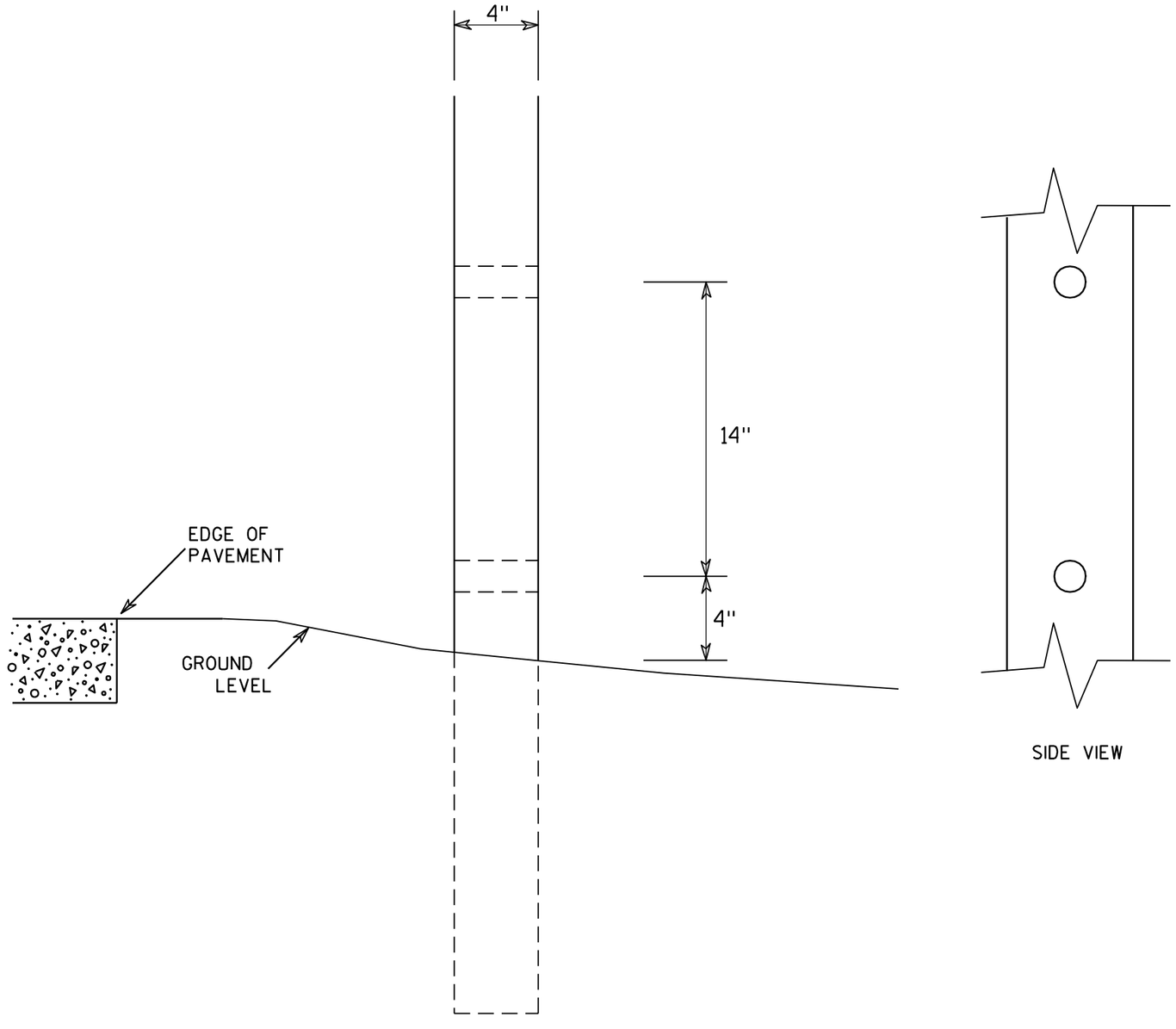
DATE 10/21/09 PLATE NO. A2-1S.6

7

7

PROJECT NO:

SHEET NO: 138 E



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

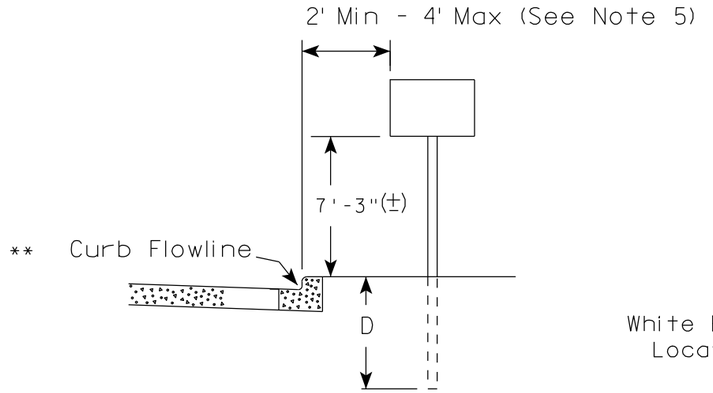
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

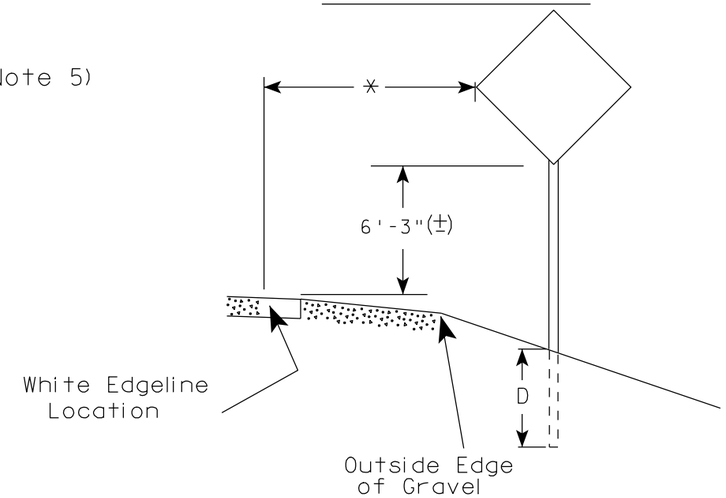
DATE 3/27/97 PLATE NO. A4-11.2

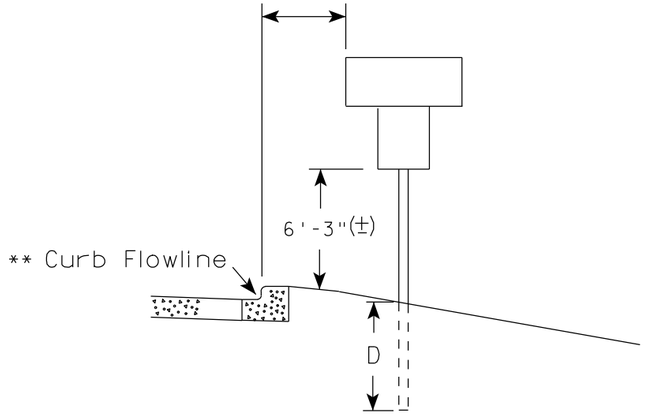
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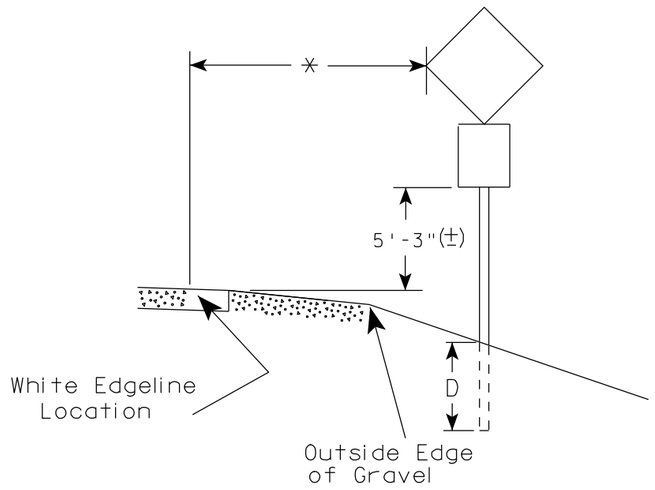
URBAN AREA



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 or larger than 20 sq. ft. 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), 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" (±).

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

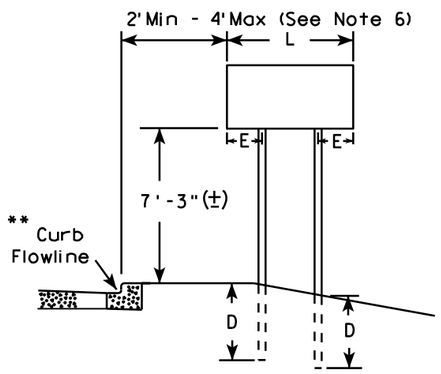
DATE 9/21/2011 PLATE NO. A4-3.16

7

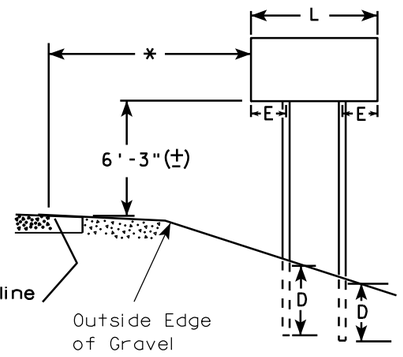
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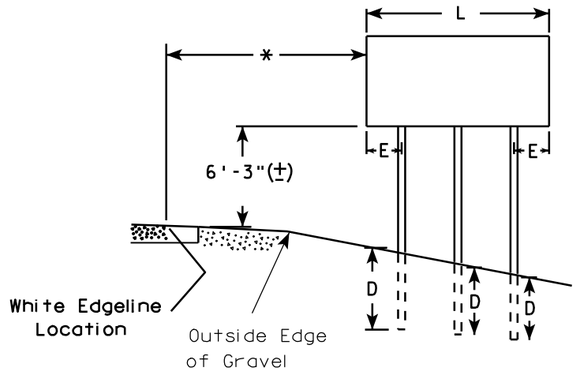
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 140 | E

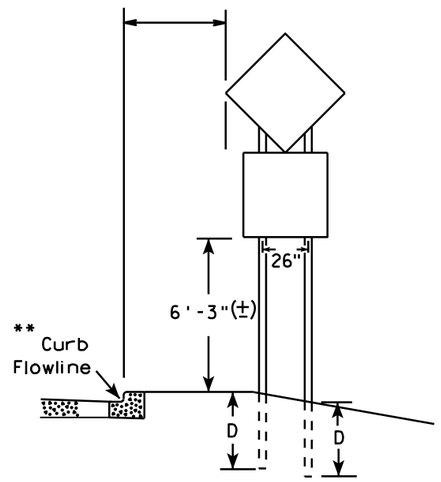
URBAN AREA



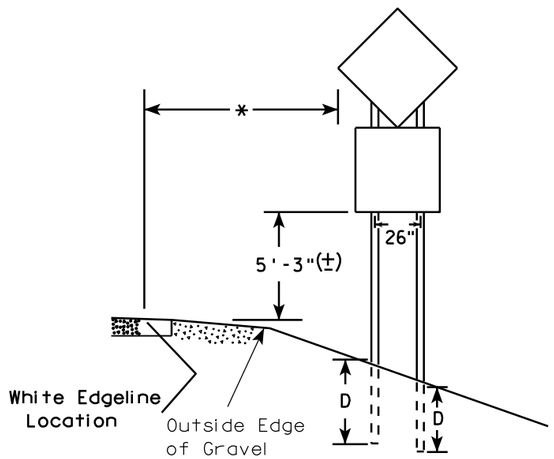
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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'

GENERAL NOTES

1. For multiple 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 20 S.F. or less in area.

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

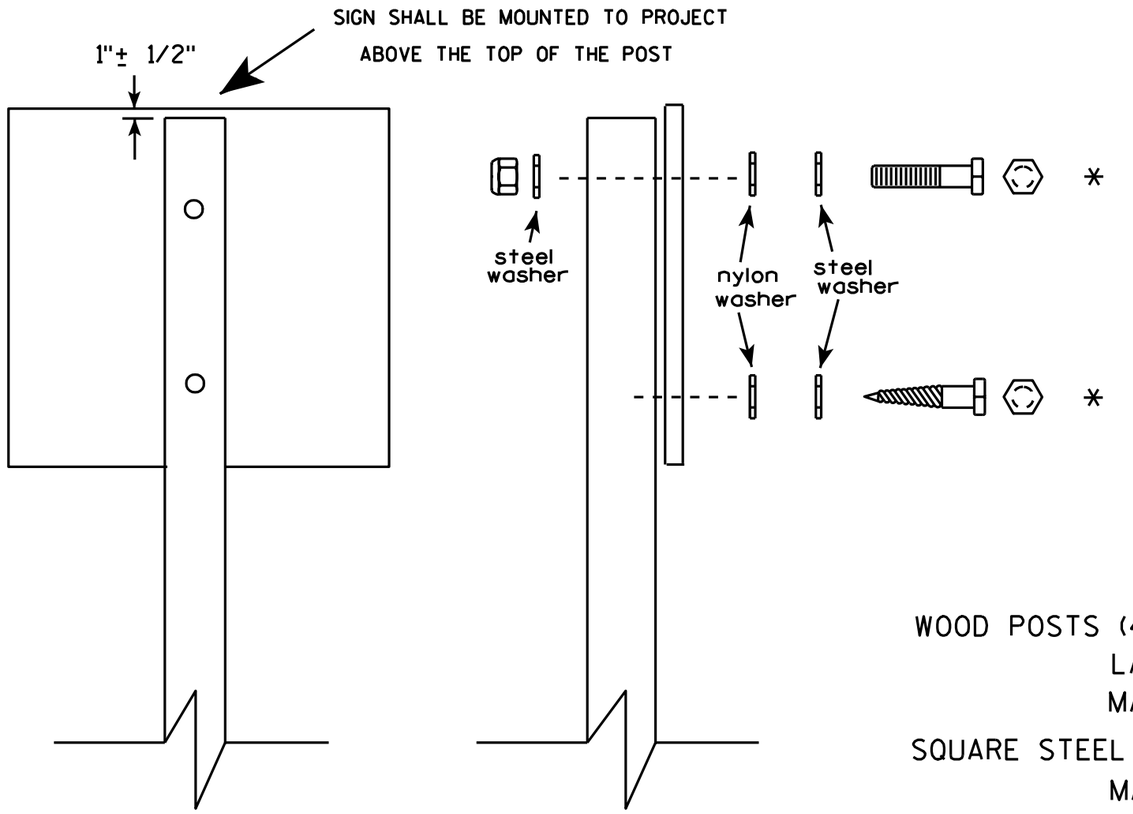
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-4.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 141	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A44.DGN PLOT DATE : 21-SEP-2011 13:36 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 109.249131:1.000000 WISDOT/CADDS SHEET 42



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

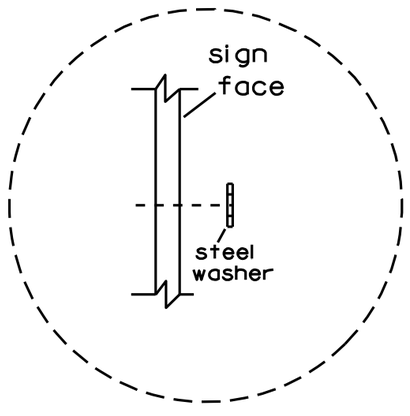
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

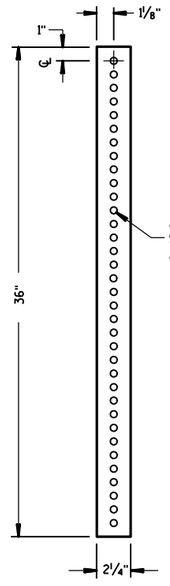
7

PROJECT NO:

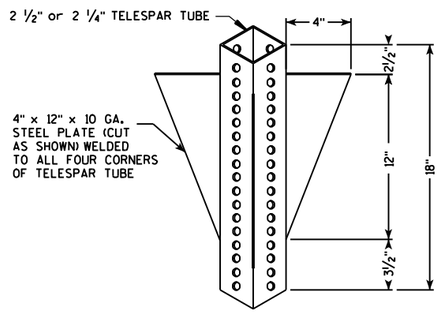
SHEET NO: 142 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

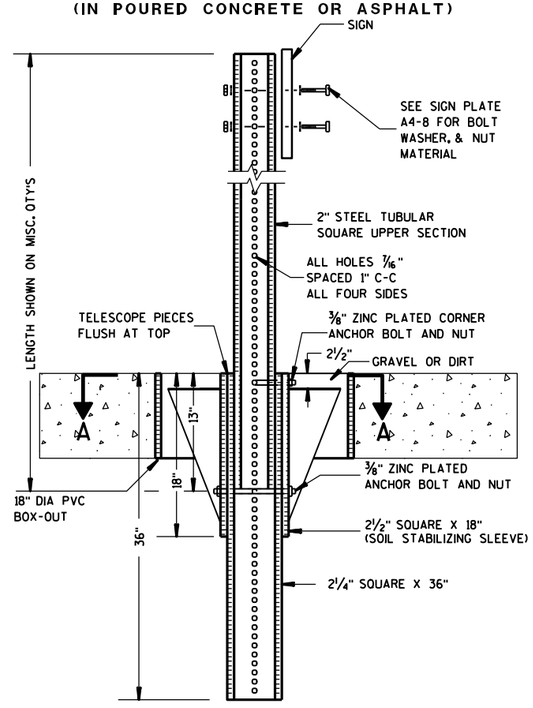
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



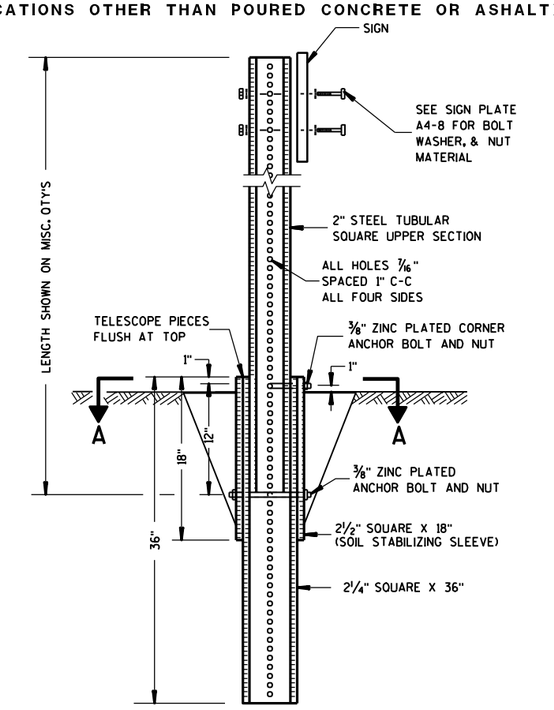
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

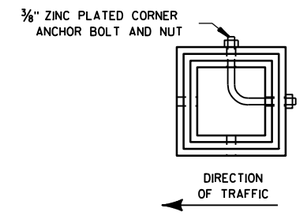


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

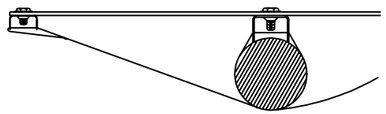
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

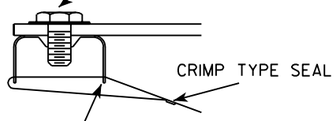
DATE 5/30/12 PLATE NO. A4-9.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 143	E

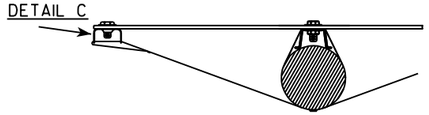
BRACE BANDING

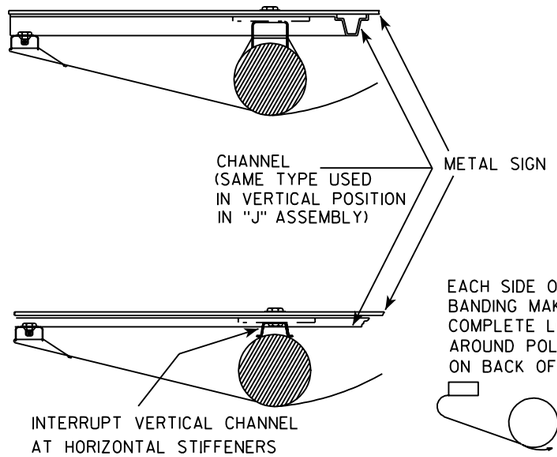


DETAIL C
CADMIUM PLATED STEEL BOLT
THROUGH BLACK BORDER



DETAIL C

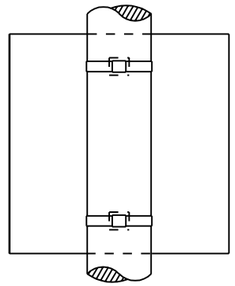


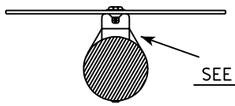


EACH SIDE OF BRACE
BANDING MAKES ONE
COMPLETE LOOP
AROUND POLE-SEAL
ON BACK OF POLE

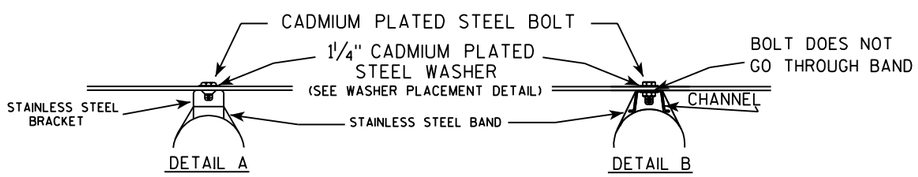
BRACKET BANDING

SINGLE SIGN





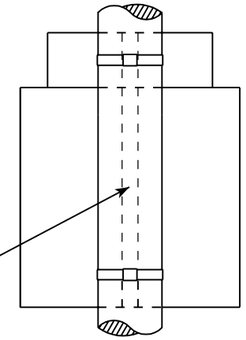
SEE DETAIL A



DETAIL A

DETAIL B

"J" ASSEMBLY

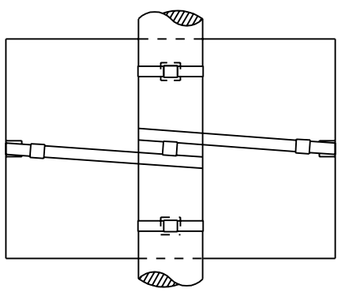


CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

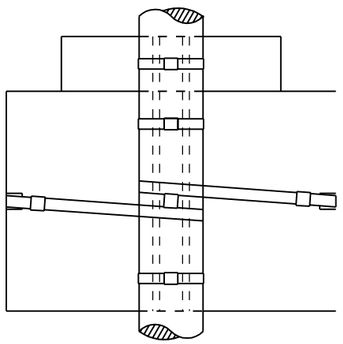
GENERAL NOTES

1. Signs 4' or greater in width shall have one brace band installed at the center of the sign.
2. Signs 3' or greater in height shall have three bracket bands installed. Signs less than 3' in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

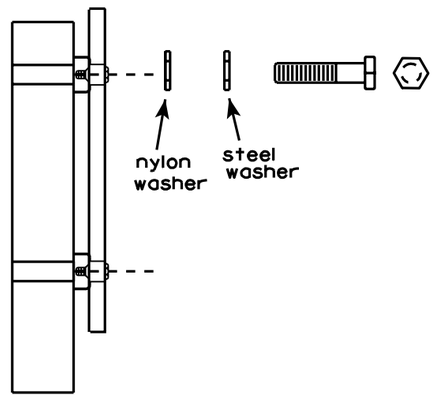


BRACE BANDING

BRACE BANDING SHALL BE TIGHTENED FIRMLY BUT NOT SO TIGHT AS TO APPRECIABLY CURVE FACE OF SIGN.



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

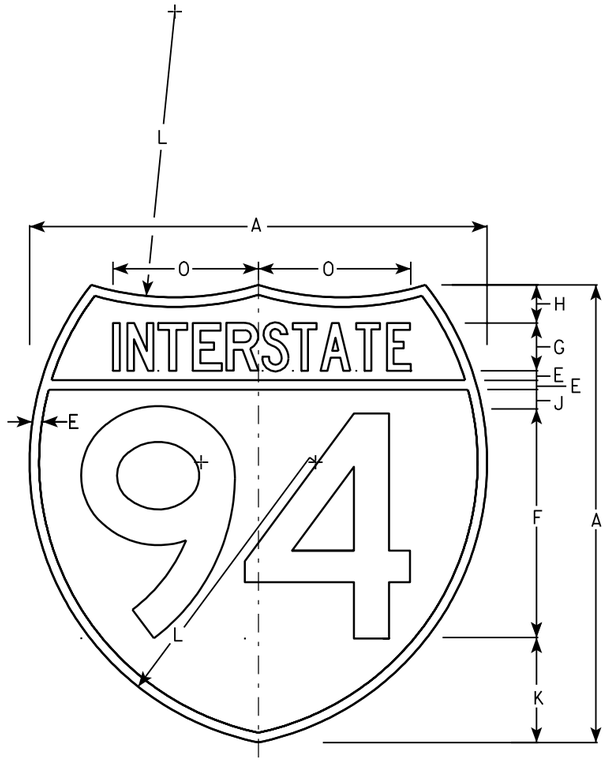
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

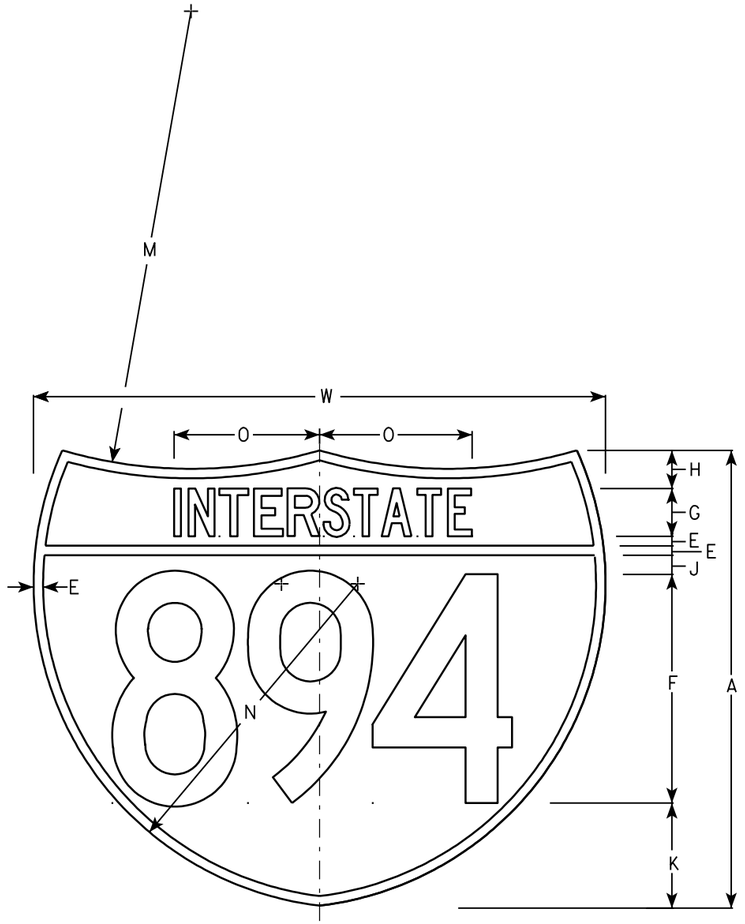
APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 11/08/05 PLATE NO. A5-9.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 144	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

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

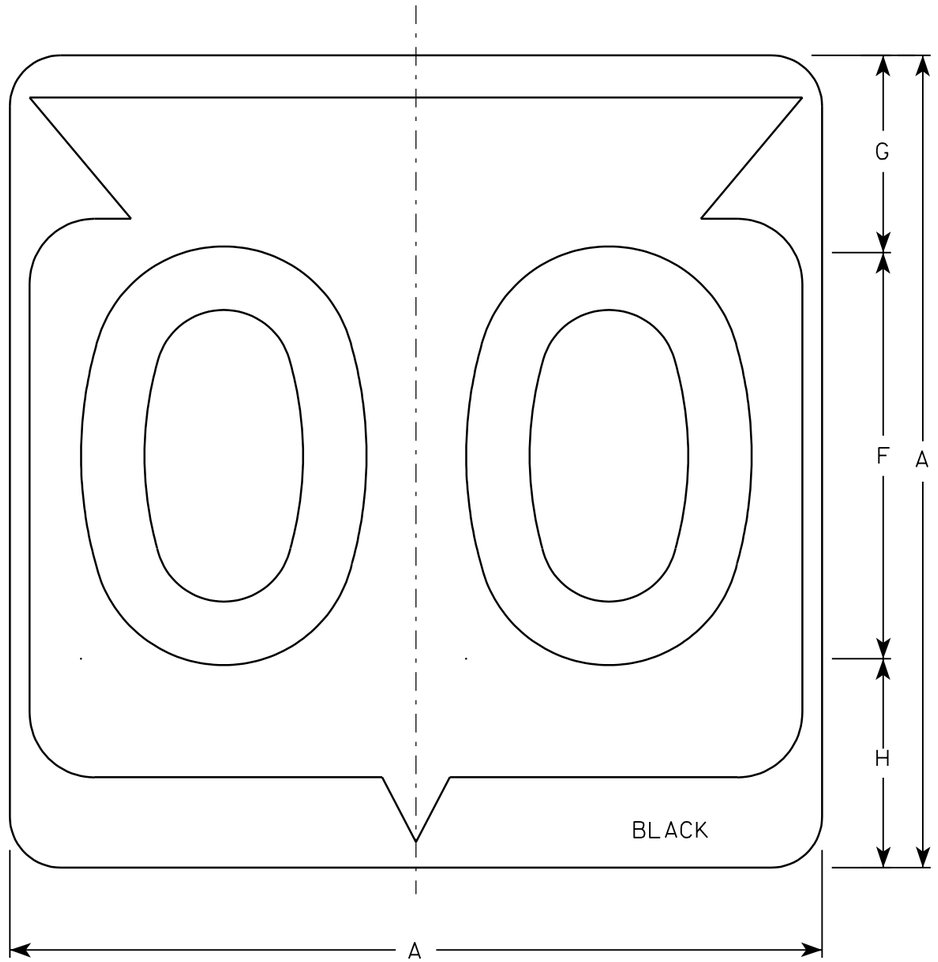
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

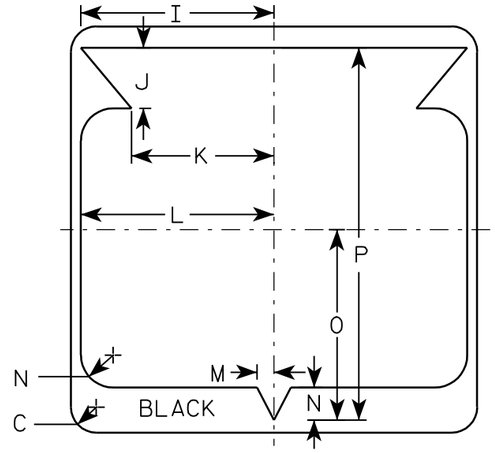
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 145	E



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

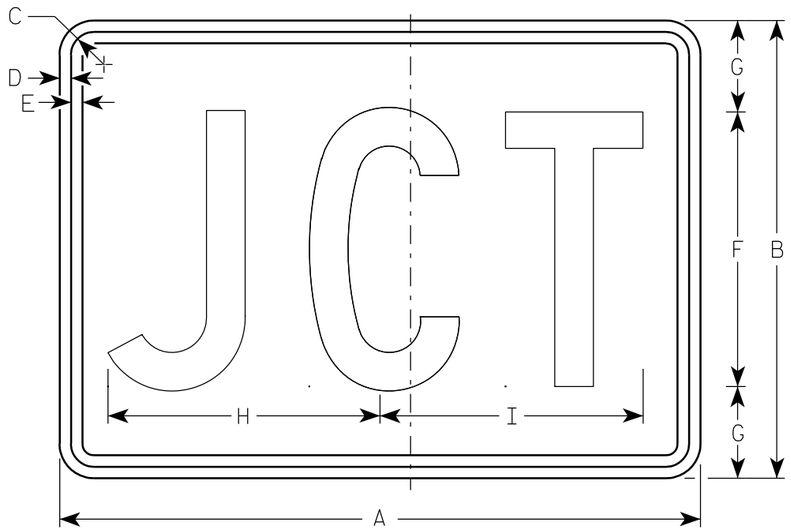
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

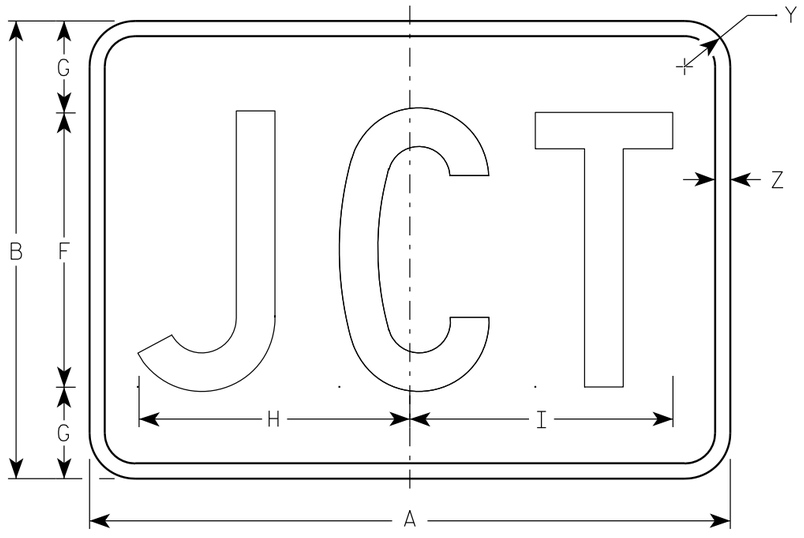
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 146	E



M2-1
MK2-1
MM2-1
MR2-1



MB2-1
MG2-1
MN2-1

NOTES

1. Sign is 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. M2-1 Background - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   Message - Black
   MB2-1 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   MG2-1 Background - Green
   Message - White - Type H Reflective
   MK2-1 Background - Green
   Message - White - Type H Reflective
   MM2-1 Background - White - Type H Reflective
   Message - Green
   MN2-1 Background - Brown
   Message - White - Type H Reflective
   MR2-1 Background - Brown
   Message - Yellow - Type H Reflective

Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 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	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20

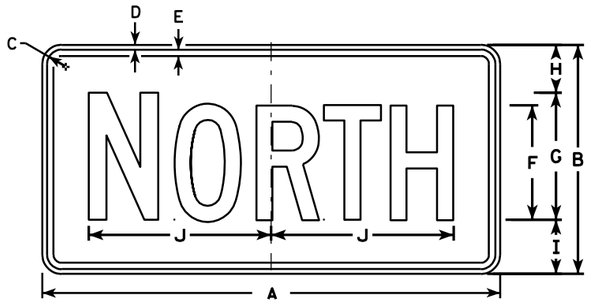
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

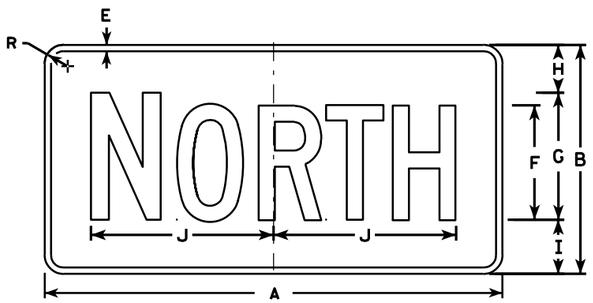
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M2-1.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 147	E



M3-1
MK3-1
MO3-1



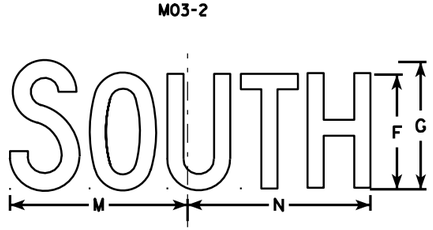
MB3-1
MG3-1
MM3-1
MN3-1



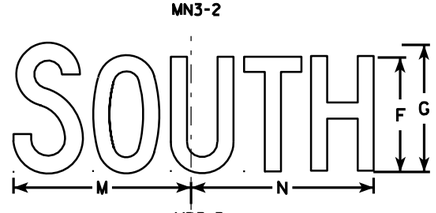
M3-2
MK3-2
MO3-2



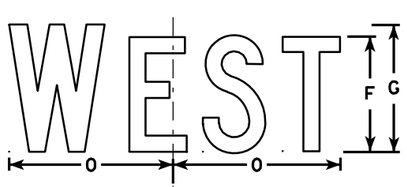
MB3-2
MG3-2
MM3-2
MN3-2



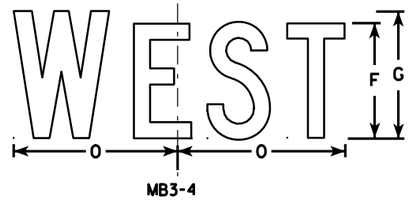
M3-3
MK3-3
MO3-3



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

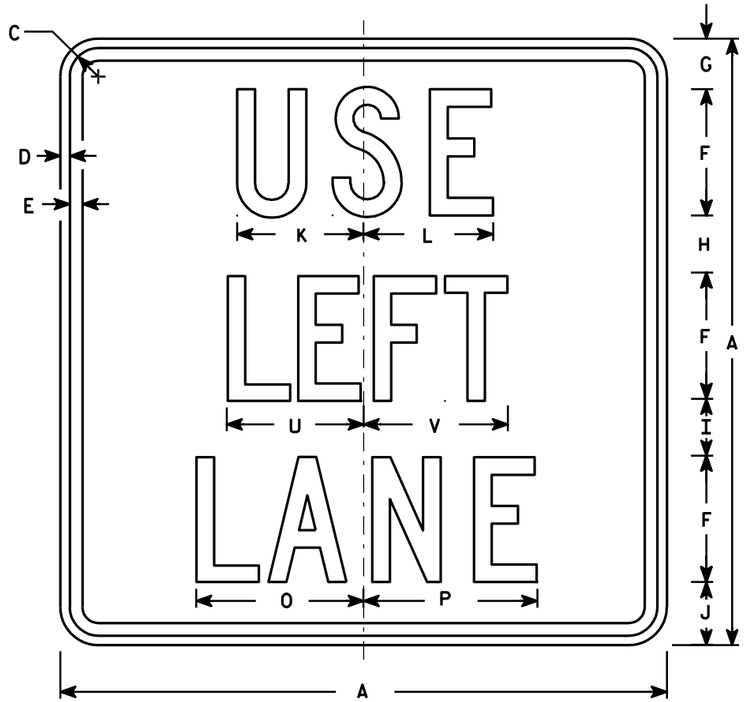
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

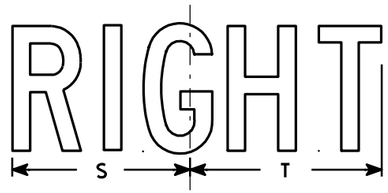
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 148	E



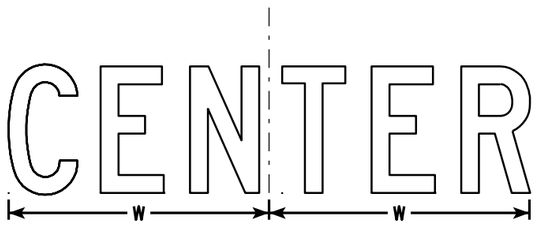
M4-20L

NOTES

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



M4-20R



M4-20C

7

7

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8			6 5/8	6 7/8			7	7 5/8	5 3/8	5 3/4	10 1/4				4.0	0.36
3	36		1 5/8	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4			9 7/8	10 1/4			10 3/8	11 3/8	8	8 5/8	14 3/8				9.0	0.81
4																												
5																												

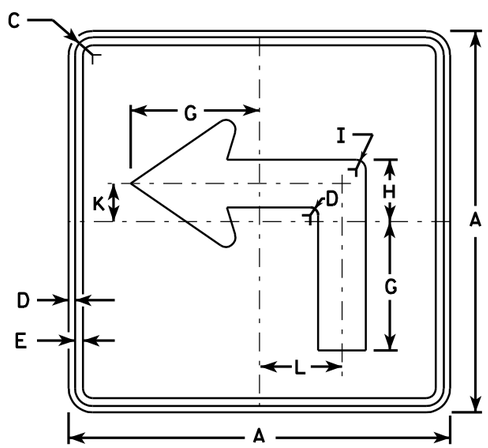
STANDARD SIGN
M4-20

WISCONSIN DEPT OF TRANSPORTATION

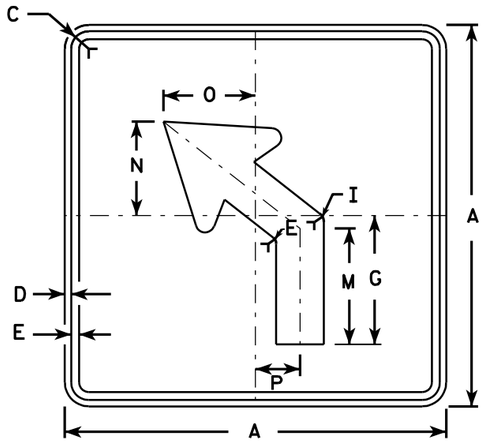
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/09 PLATE NO. M4-20.2

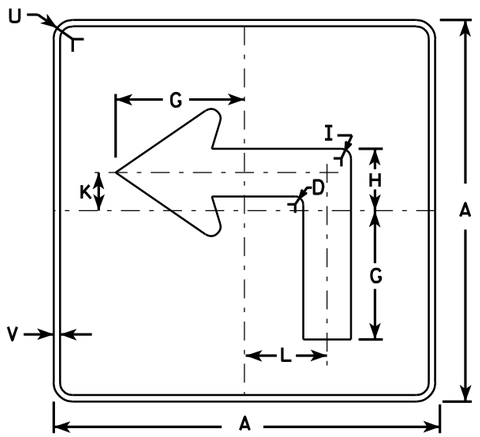
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 149	E



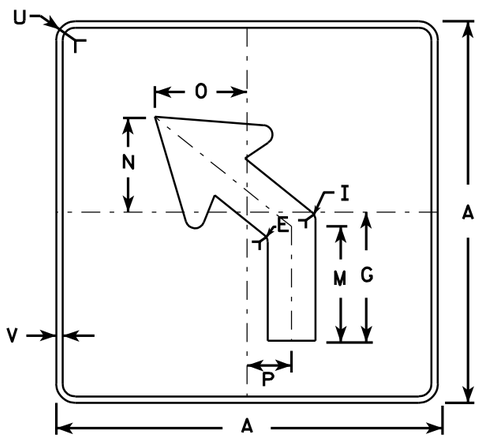
M5-1L
MK5-1L
MM5-1L
MO5-1L
MR5-1L



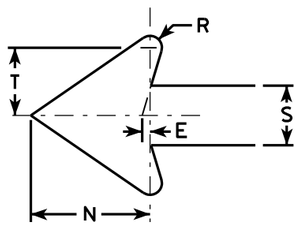
M5-2L
MK5-2L
MM5-2L
MO5-2L
MR5-2L



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 (Detour or temporary Signs - Reflective) Message - Black
   MB5-1 and MB5-2 Background - Blue Message - White - Type H Reflective (Detour or temporary Signs - 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 - Reflective Message - Black
   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.

Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 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	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	0.28
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	0.56
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56

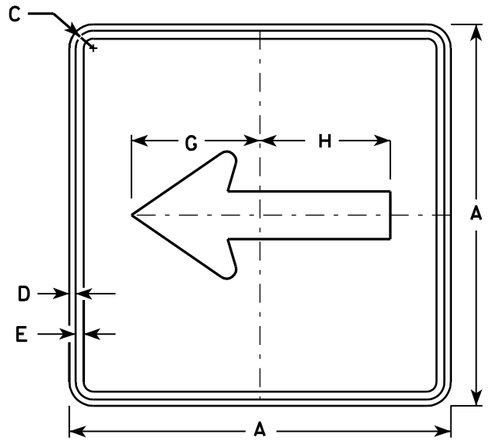
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

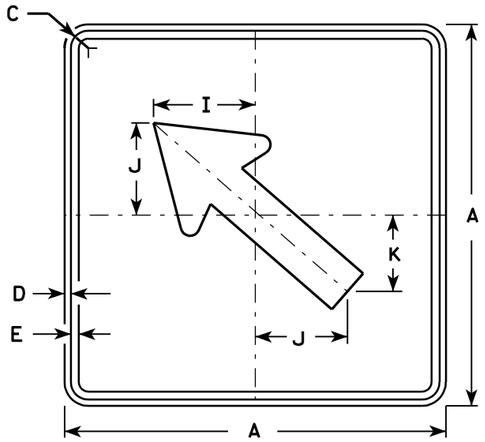
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M5-1.11

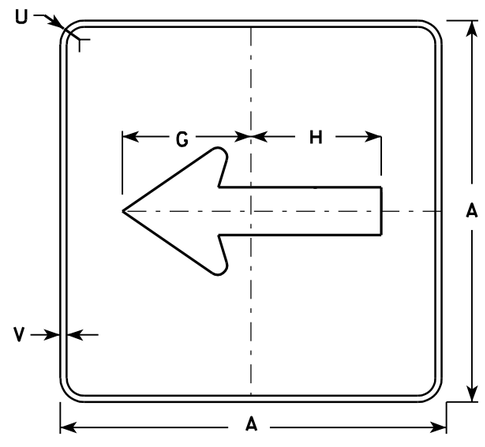
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 150	E



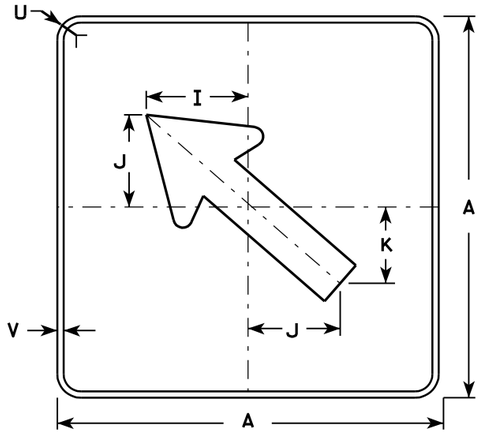
M6-1
MK6-1
MM6-1
MO6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MR6-2



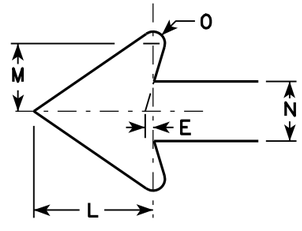
MB6-1
MG6-1
MN6-1



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 (Detour or temporary Signs - Reflective) Message - Black
   MB6-1 and MB6-2 Background - Blue Message - White - Type H Reflective (Detour or temporary Signs - 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 - Reflective Message - Black
   MR6-1 and MR6-2 Background - Brown Message - Yellow - Type H Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 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	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	0.28
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	0.56
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	0.56
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	0.56

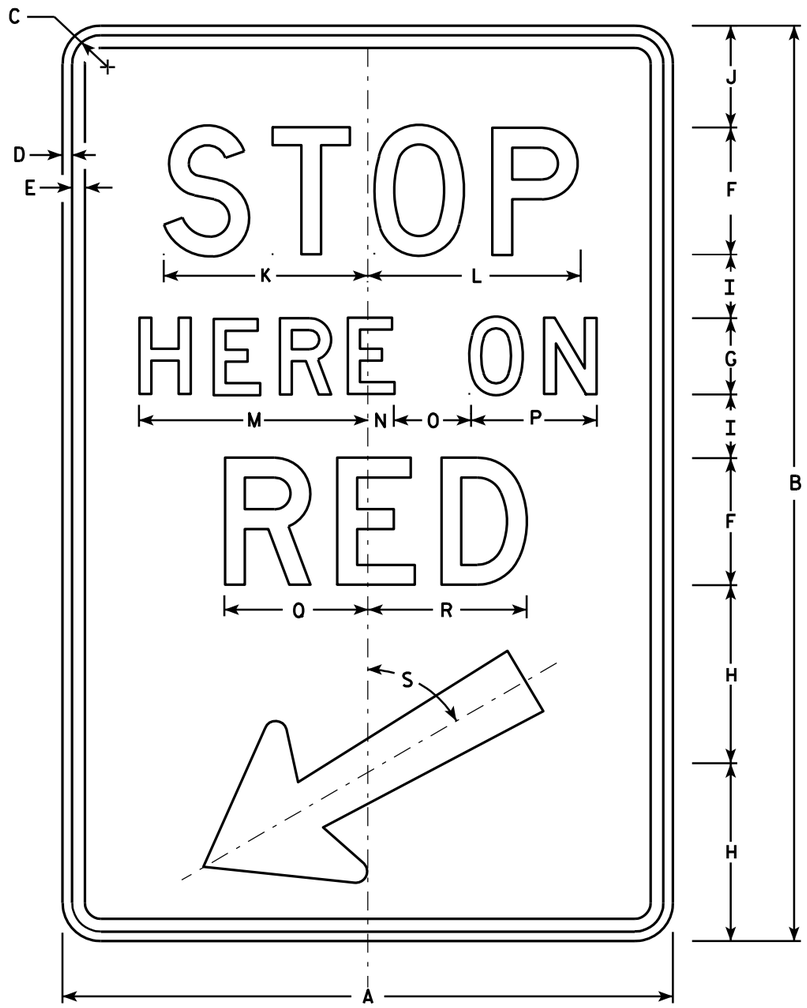
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M6-1.12

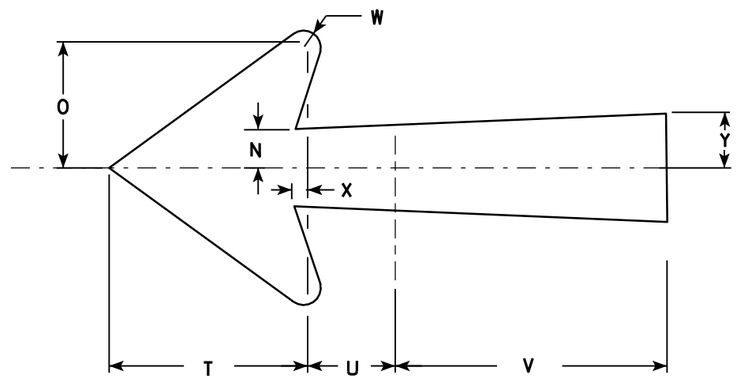
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 151	E



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																											

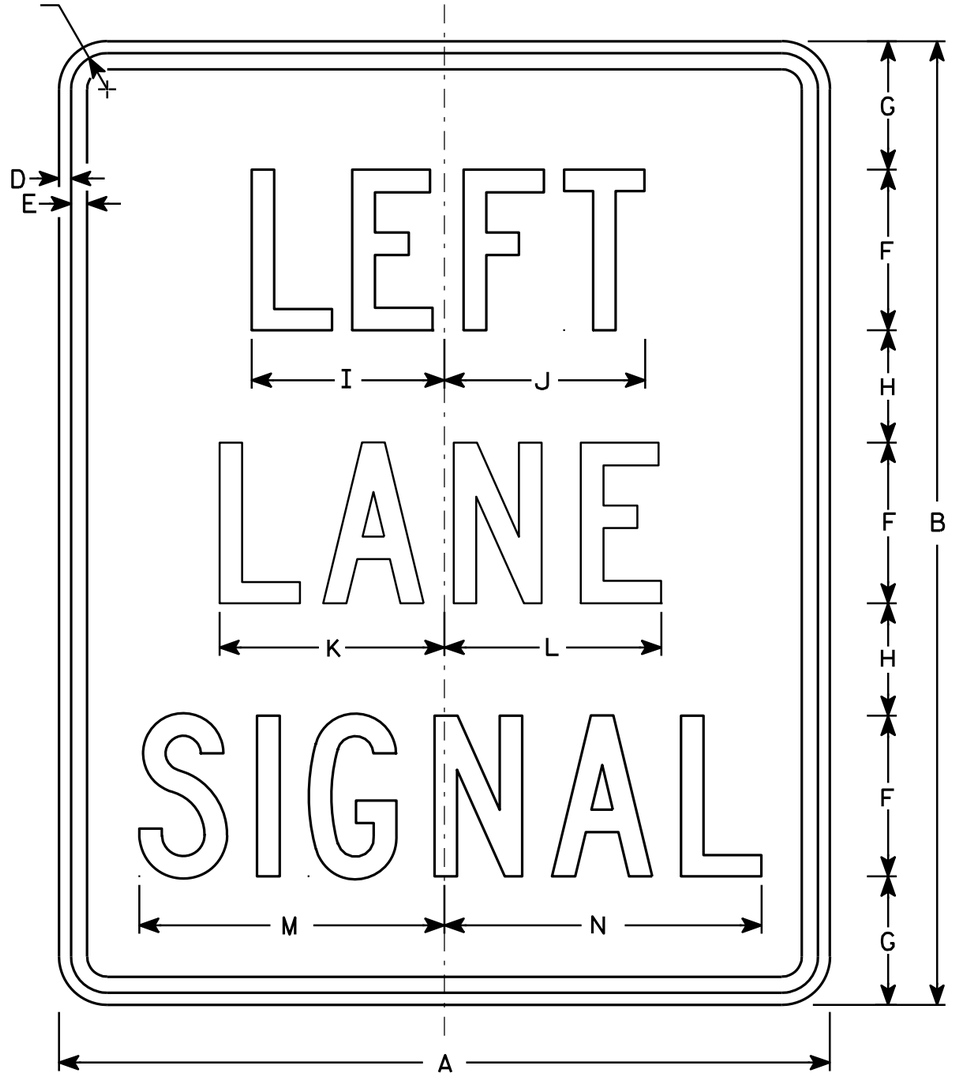
STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

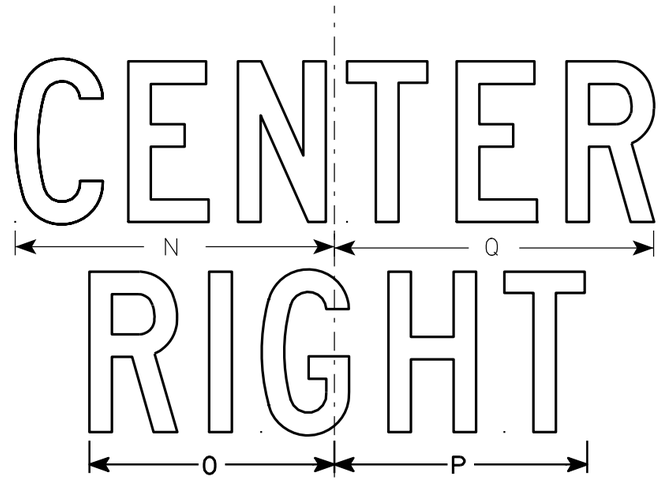
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 152	E



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																											

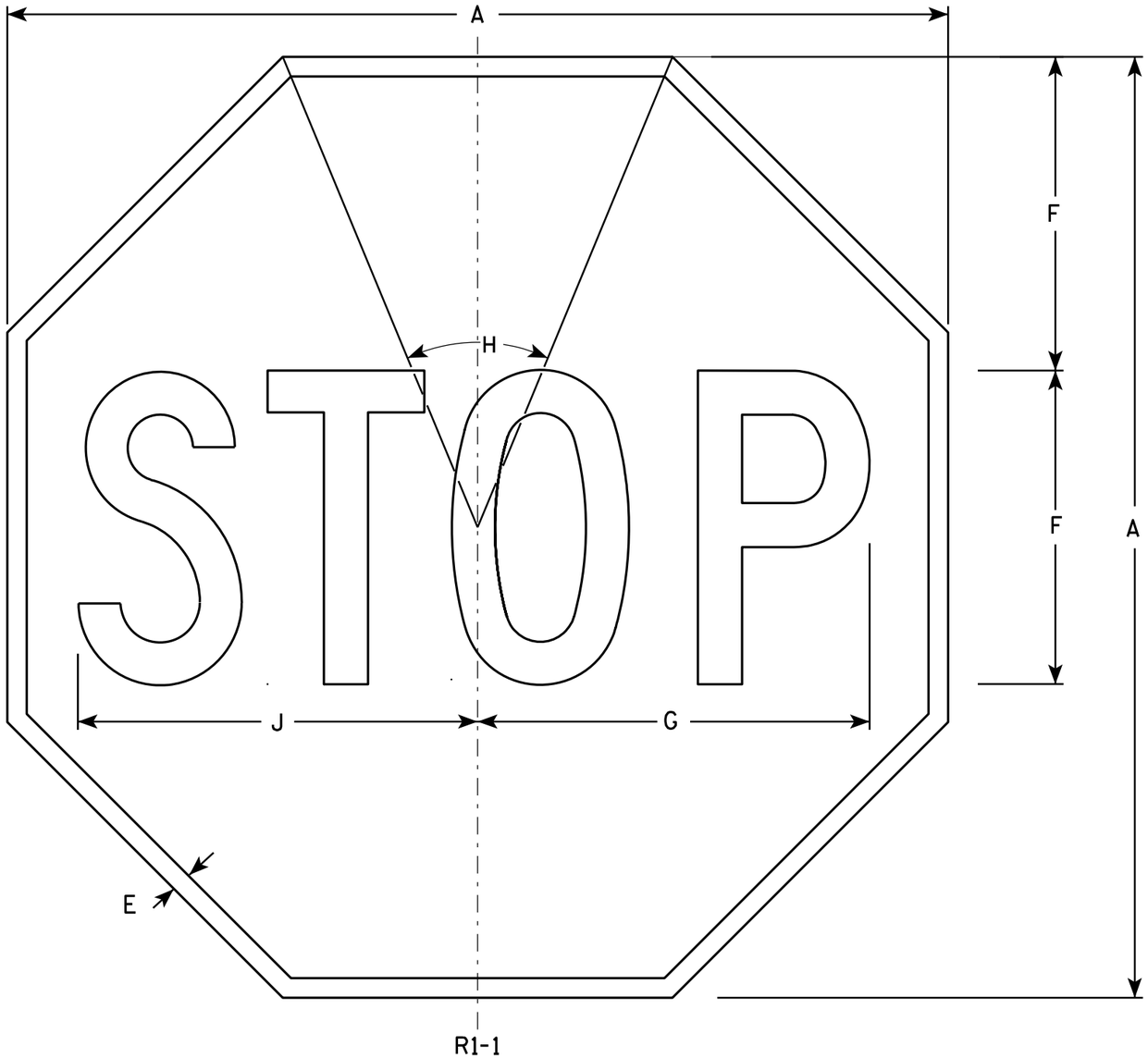
STANDARD SIGN
R10-65

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: 153	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

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				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

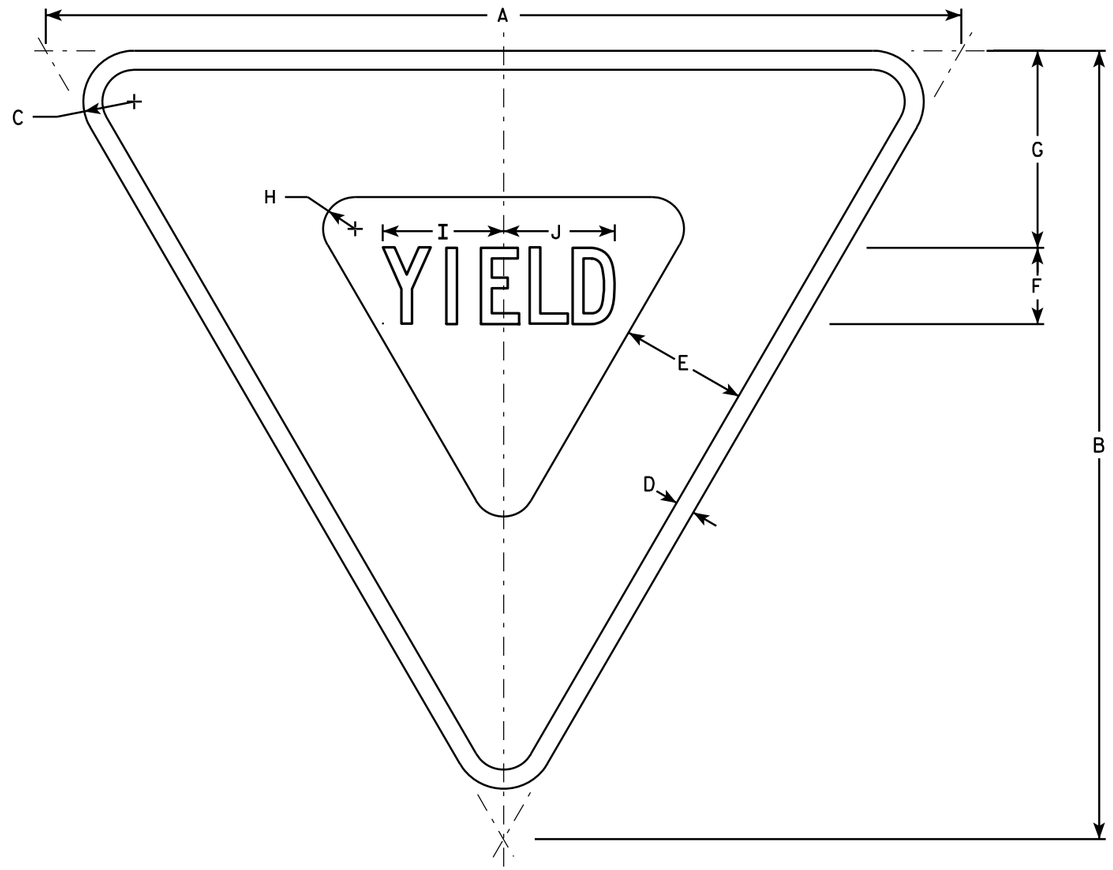
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 154	E



R1-2

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 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. The border strip and word message are reflectorized 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	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6	24	21	1 1/2	3/8	3	2	4 3/4	7/8	3 1/4	3																	1.75
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

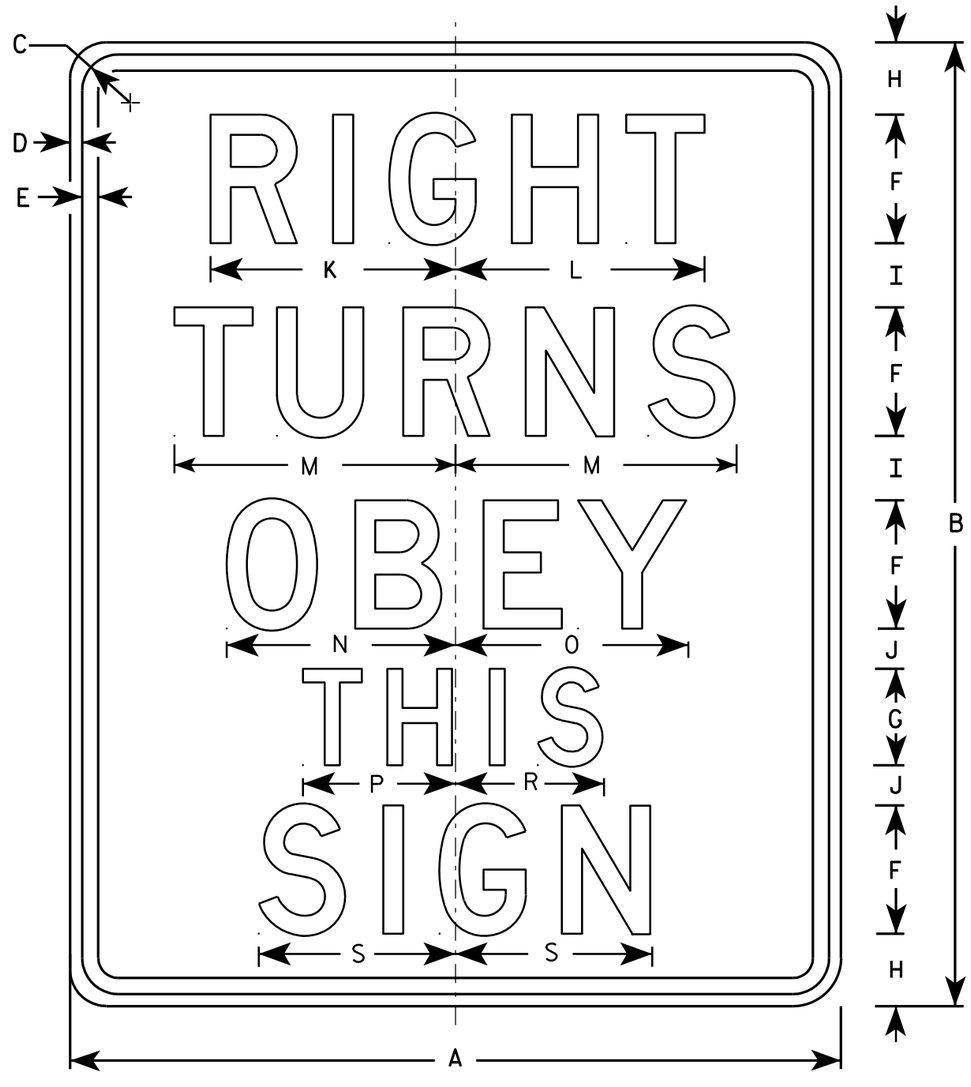
STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. R1-2.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 155 | E



R1-53

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.

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	4	3	2 1/4	2	1 1/4	7 5/8	7 3/4	8 3/4	7 1/8	7 1/4	4 3/4		4 5/8	6 1/8								5.0
2M	24	30	1 1/8	3/8	1/2	4	3	2 1/4	2	1 1/4	7 5/8	7 3/4	8 3/4	7 1/8	7 1/4	4 3/4		4 5/8	6 1/8								5.0
3																											
4																											
5																											

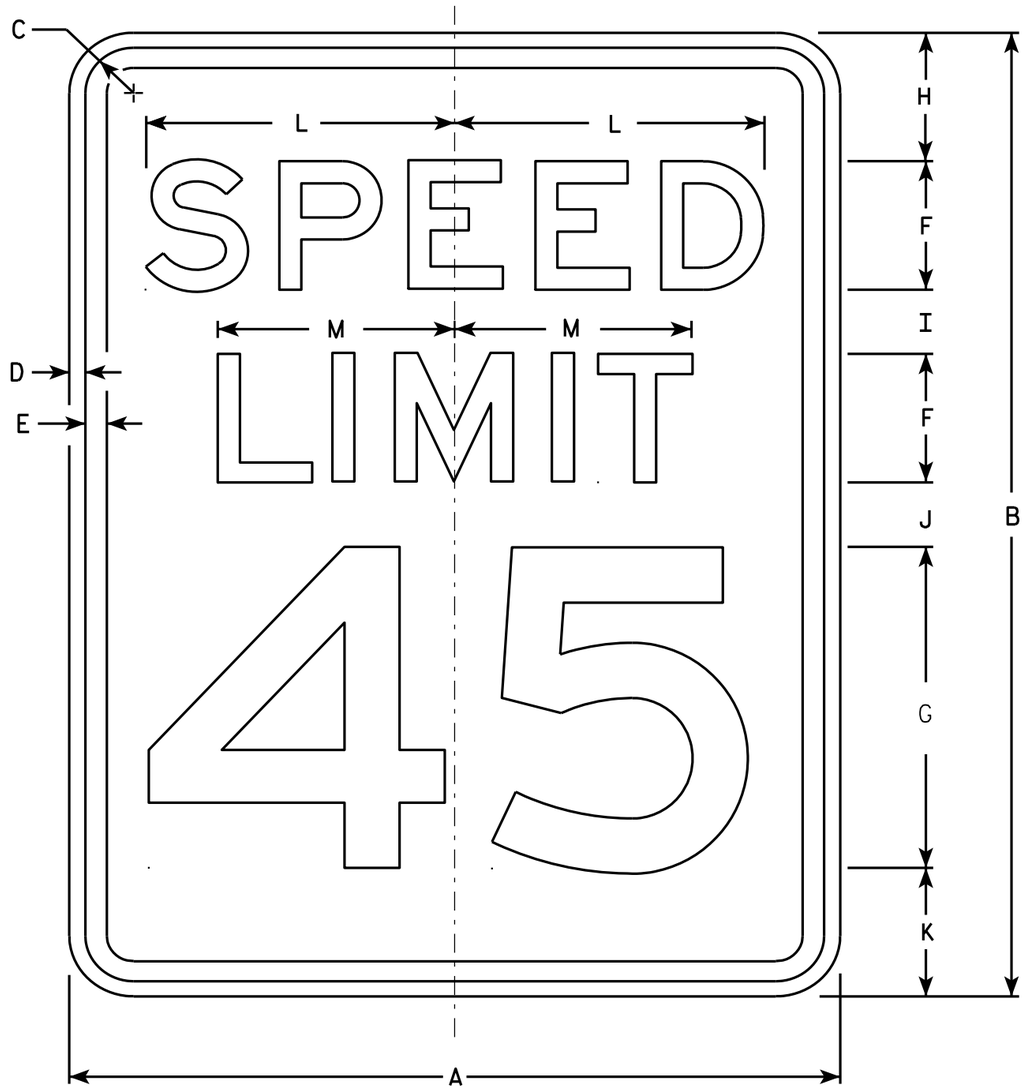
STANDARD SIGN
R1-53

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-53.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 156 | E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

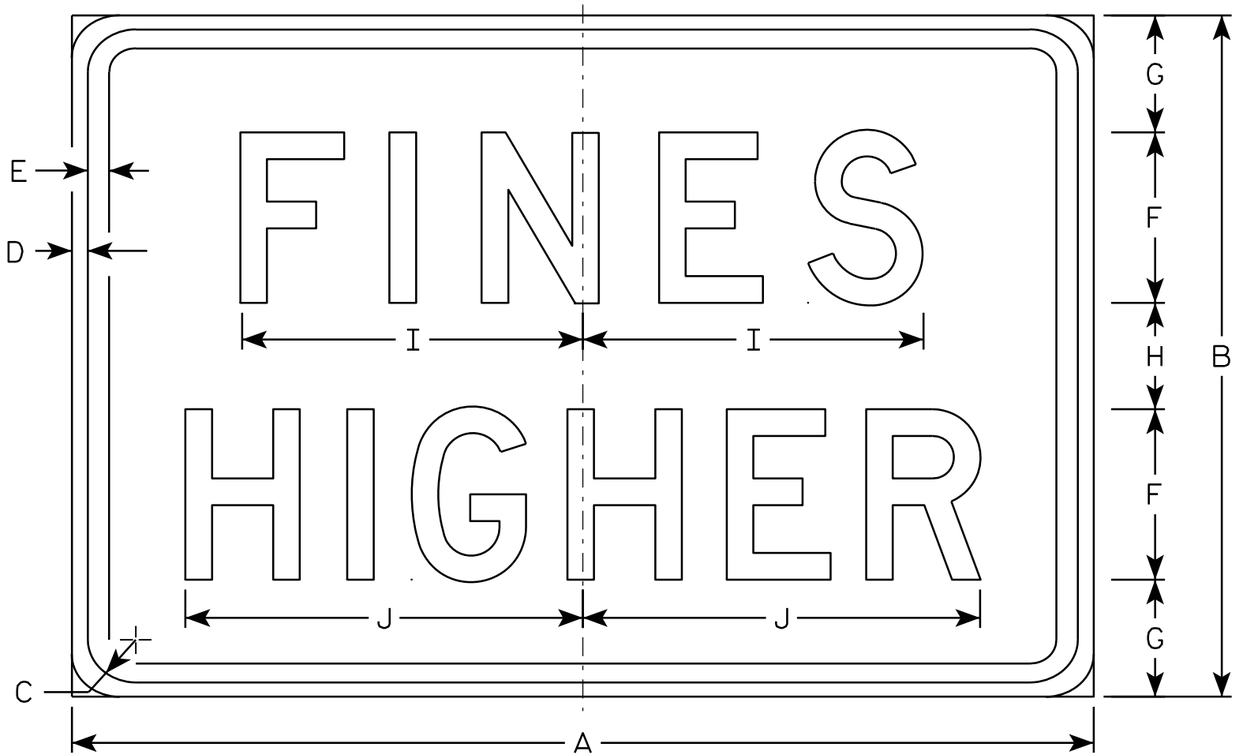
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 157 | E



R2-6P

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.

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	18	1 1/8	3/8	3/8	4	3 1/2	3	7 5/8	9 1/4																	3.0
2M	24	18	1 1/8	3/8	3/8	4	3 1/2	3	7 5/8	9 1/4																	3.0
3	36	24	1 1/8	3/8	1/2	6	4 1/8	3 3/4	12	14																	6.0
4	36	24	1 1/8	3/8	1/2	6	4 1/8	3 3/4	12	14																	6.0
5	48	36	1 3/8	1/2	5/8	8	7	6	15 1/8	19																	12.0

STANDARD SIGN
R2-6P

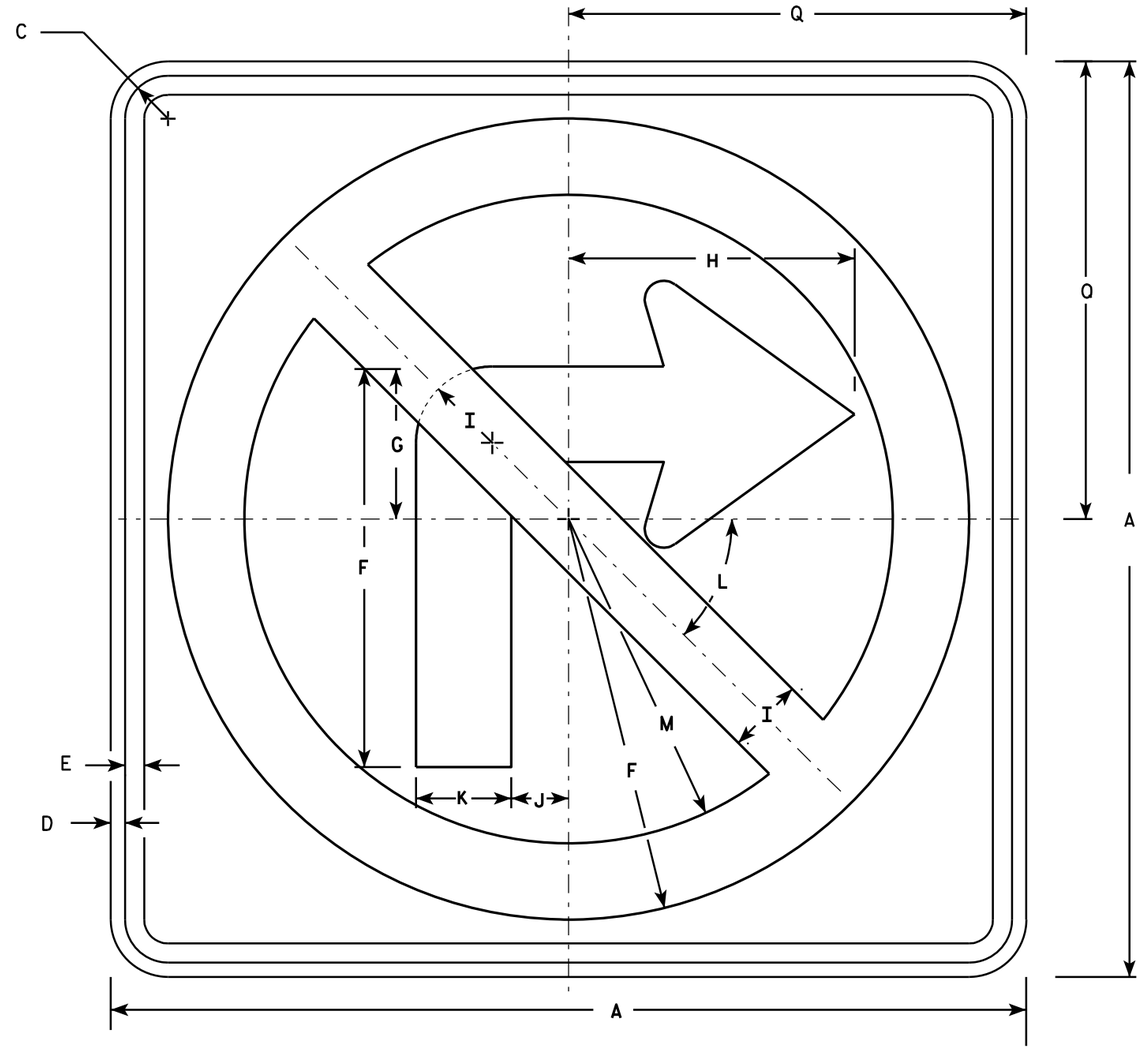
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/20/10 PLATE NO. R2-6P.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 158 | E

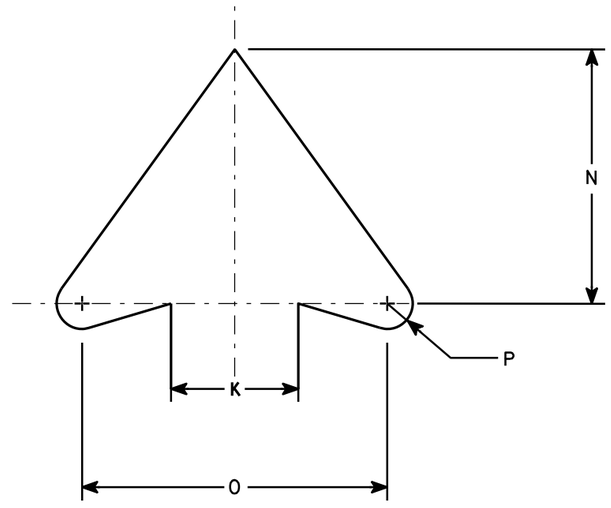
7



R3-1

NOTES

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



ARROW DETAIL

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

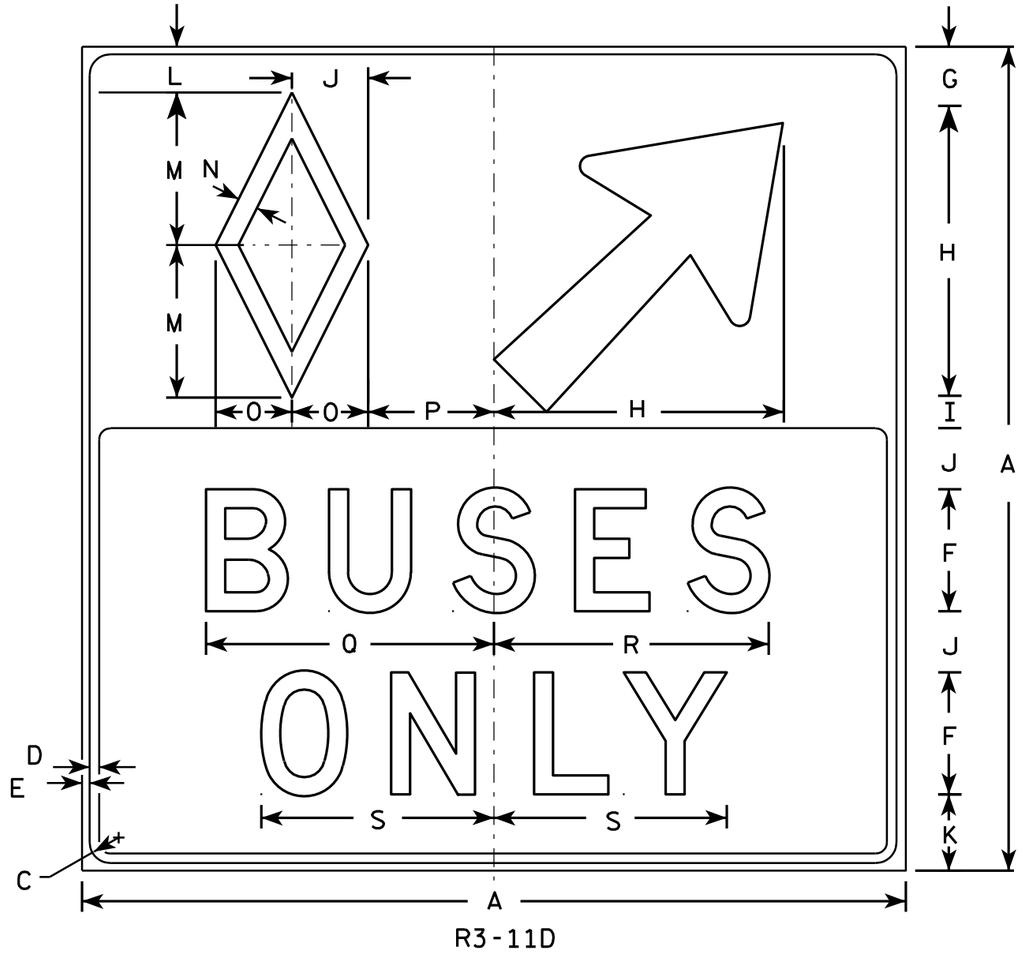
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

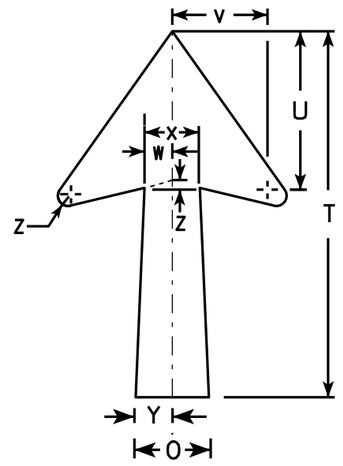
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 159	E



R3-11D

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
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. Top symbol and legend are White Type H Reflective with a black background.
   Bottom legend is Black with White Type H Reflective background.



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	54		2 1/4	3/4	1	8	3 7/8	19	2 1/8	4	5	3	10	1 1/2	5	8 1/4	18 7/8	18	15 1/4	24	10 3/8	6 1/4	1 3/4	3 1/2	2 1/2	5/8	20.25
2M	54		2 1/4	3/4	1	8	3 7/8	19	2 1/8	4	5	3	10	1 1/2	5	8 1/4	18 7/8	18	15 1/4	24	10 3/8	6 1/4	1 3/4	3 1/2	2 1/2	5/8	20.25
3																											
4																											
5																											

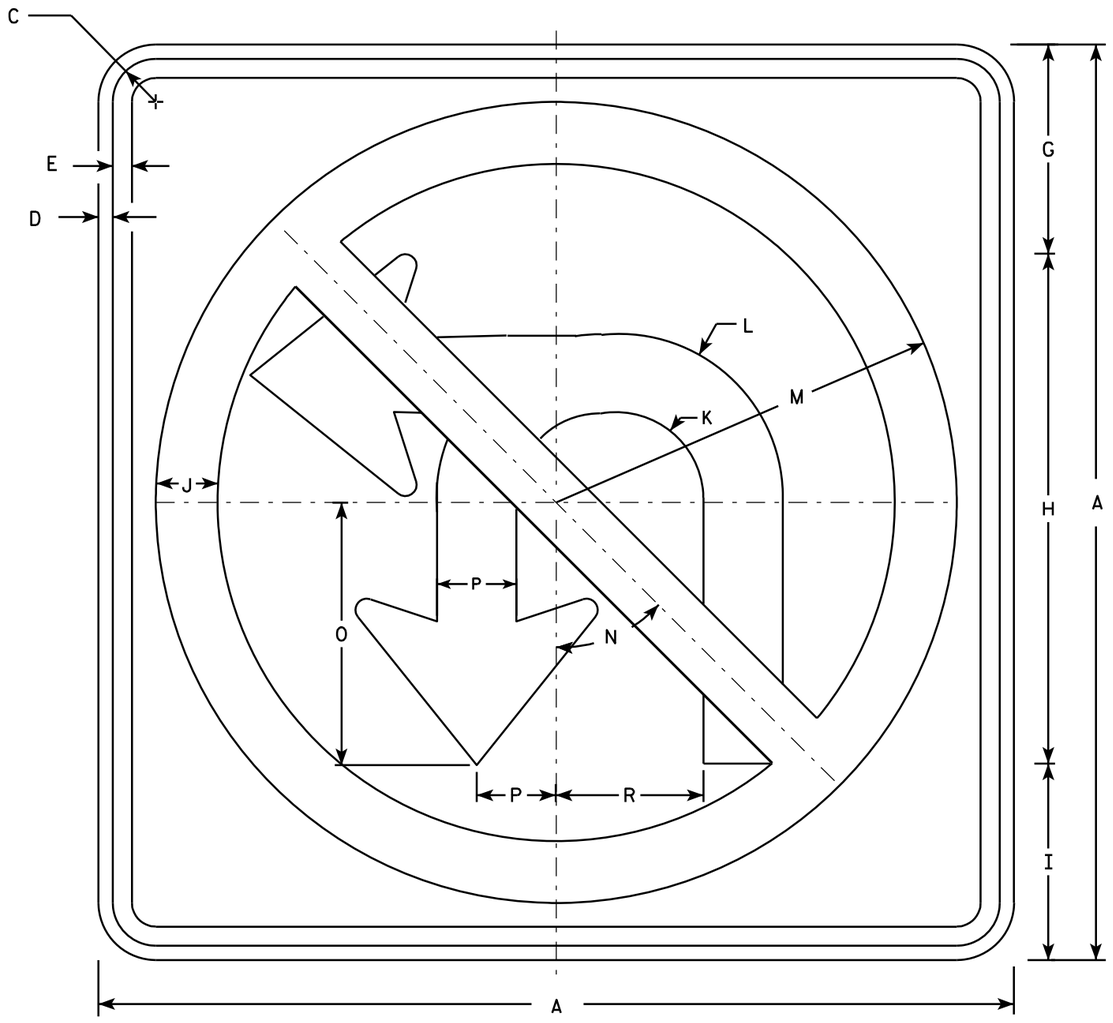
STANDARD SIGN
R3-11D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/22/10 PLATE NO. R3-11D.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 160	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

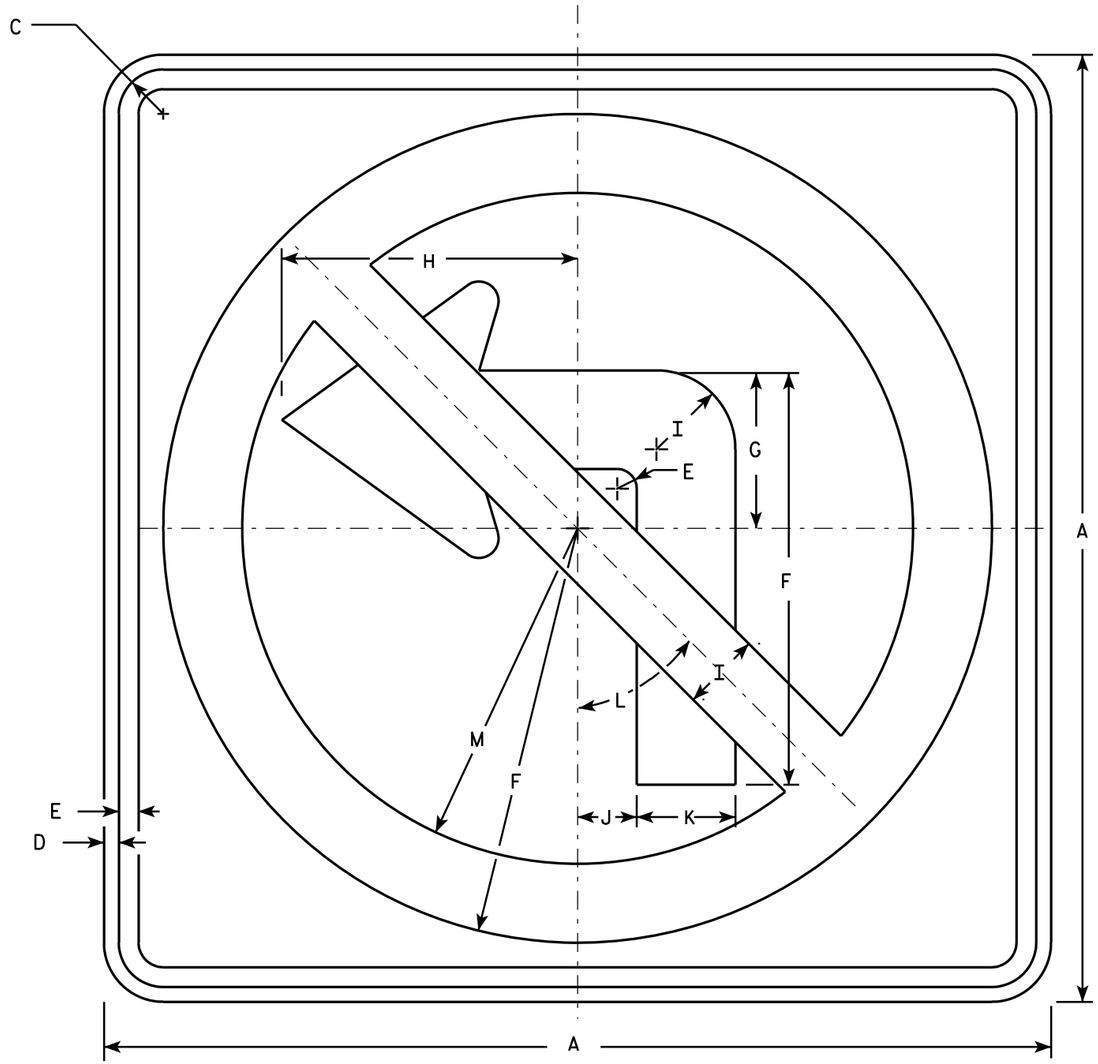
STANDARD SIGN
R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

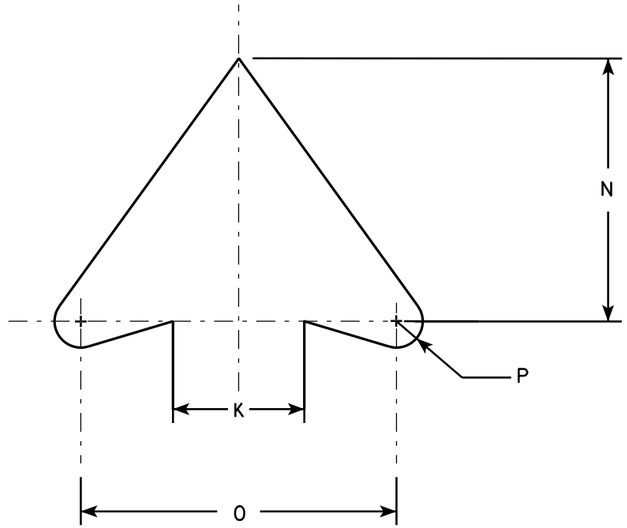
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 161	E



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

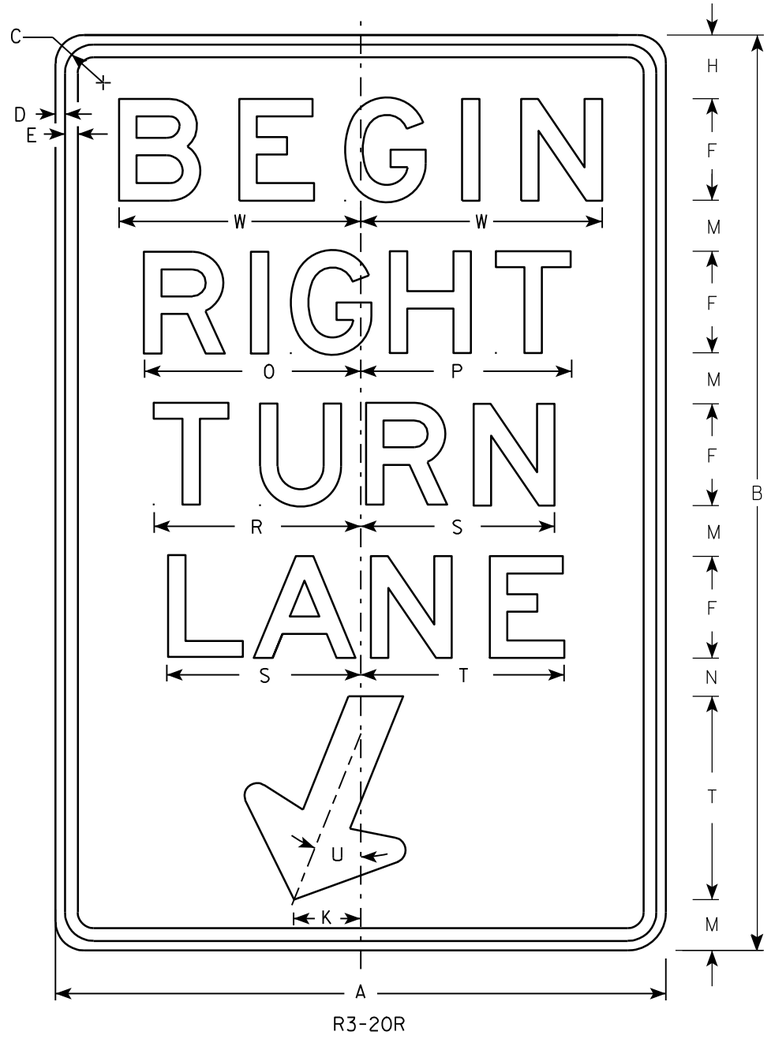
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

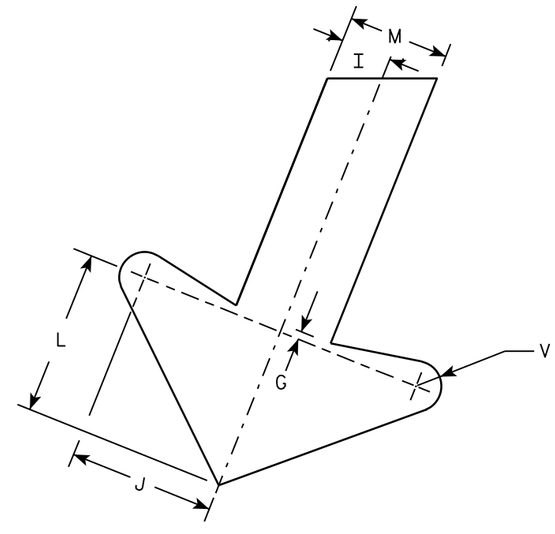
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 162	E



R3-20R

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	8 1/2	8 1/4		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	8 1/2	8 1/4		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	12 3/4	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

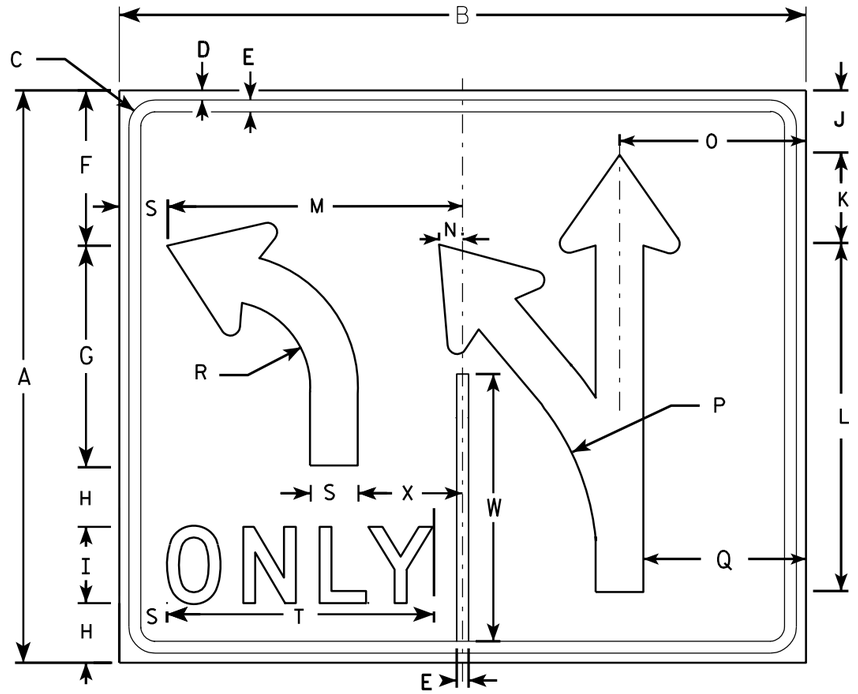
STANDARD SIGN
R3-20R

WISCONSIN DEPT OF TRANSPORTATION

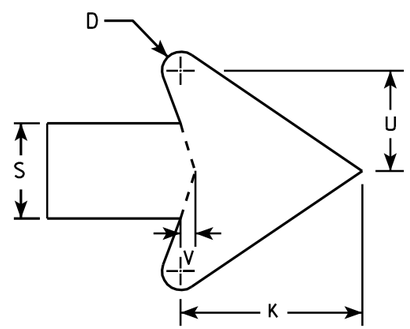
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20R.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 163 | E



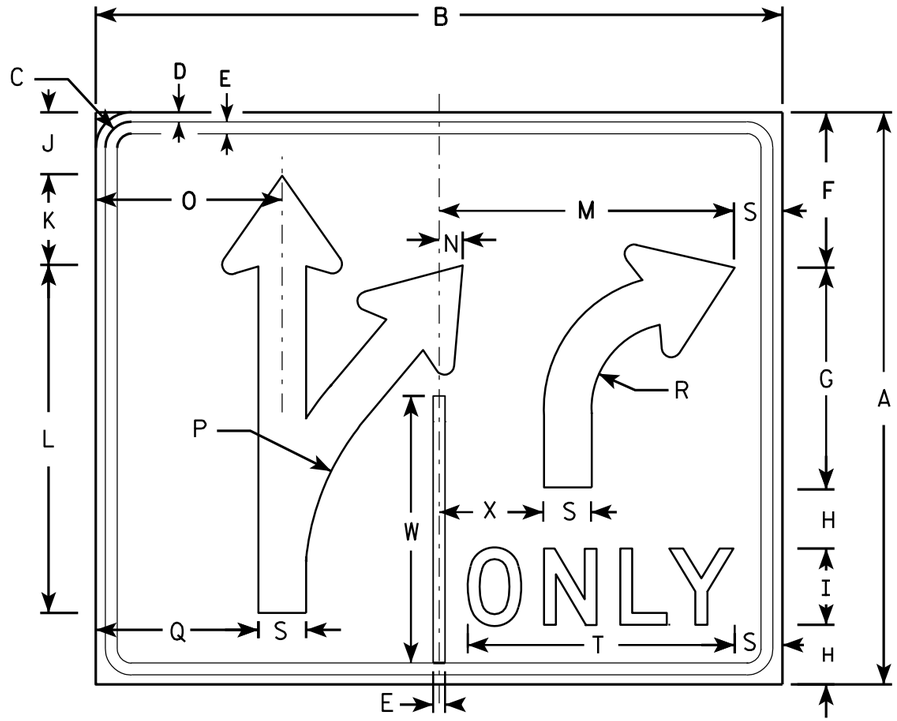
R3-8B



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.
5. R3-8B & R3-8C is the same but reversed.



R3-8C

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	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	15 1/2	1 1/4	9 3/4	13 1/4	8 1/2	4 1/2	2 1/2	14	2 5/8	3/8	14	5 1/4			7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	15 1/2	1 1/4	9 3/4	13 1/4	8 1/2	4 1/2	2 1/2	14	2 5/8	3/8	14	5 1/4			7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 5/8	23 1/8	1 7/8	14 5/8	21 7/8	12 3/4	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	8 1/8			18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 5/8	23 1/8	1 7/8	14 5/8	21 7/8	12 3/4	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	8 1/8			18.0

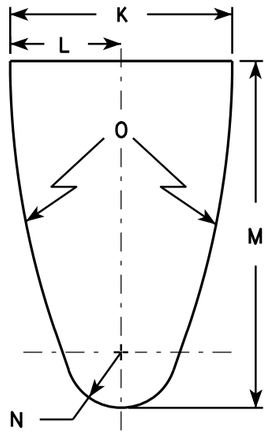
STANDARD SIGN
R3-8B & R3-8C

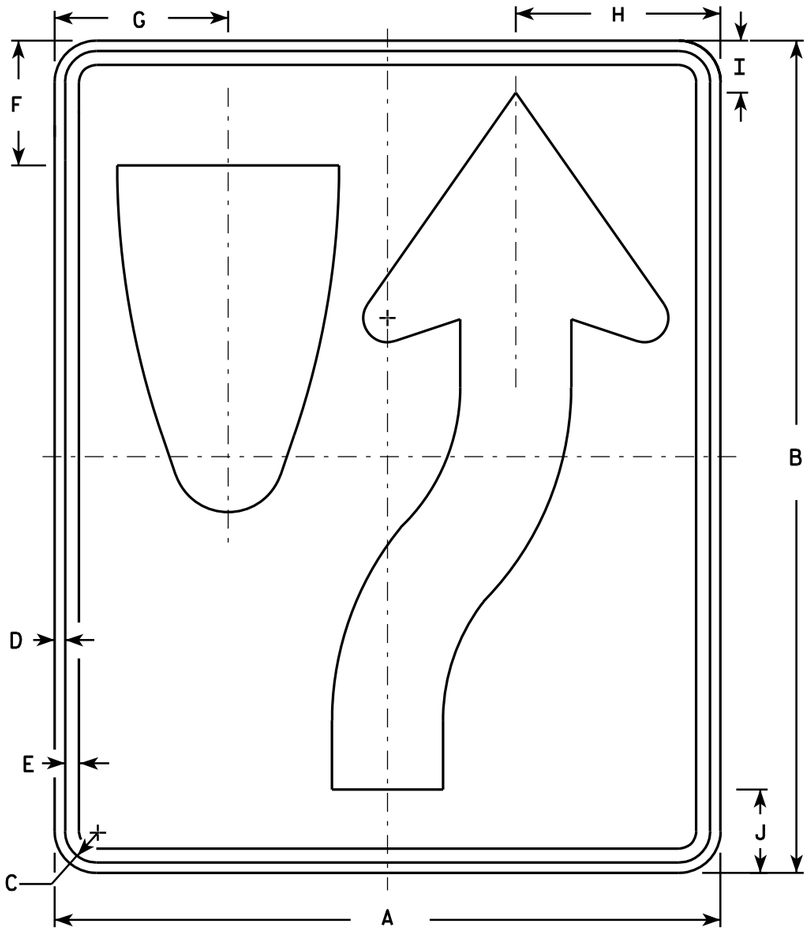
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 164	E

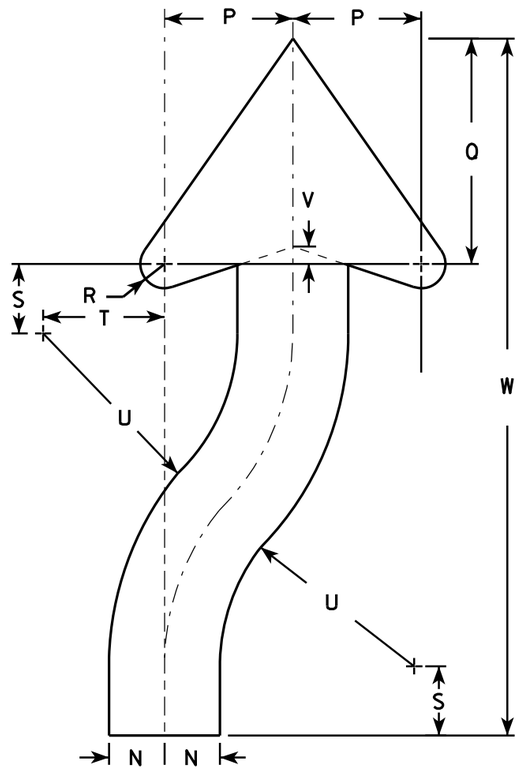




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

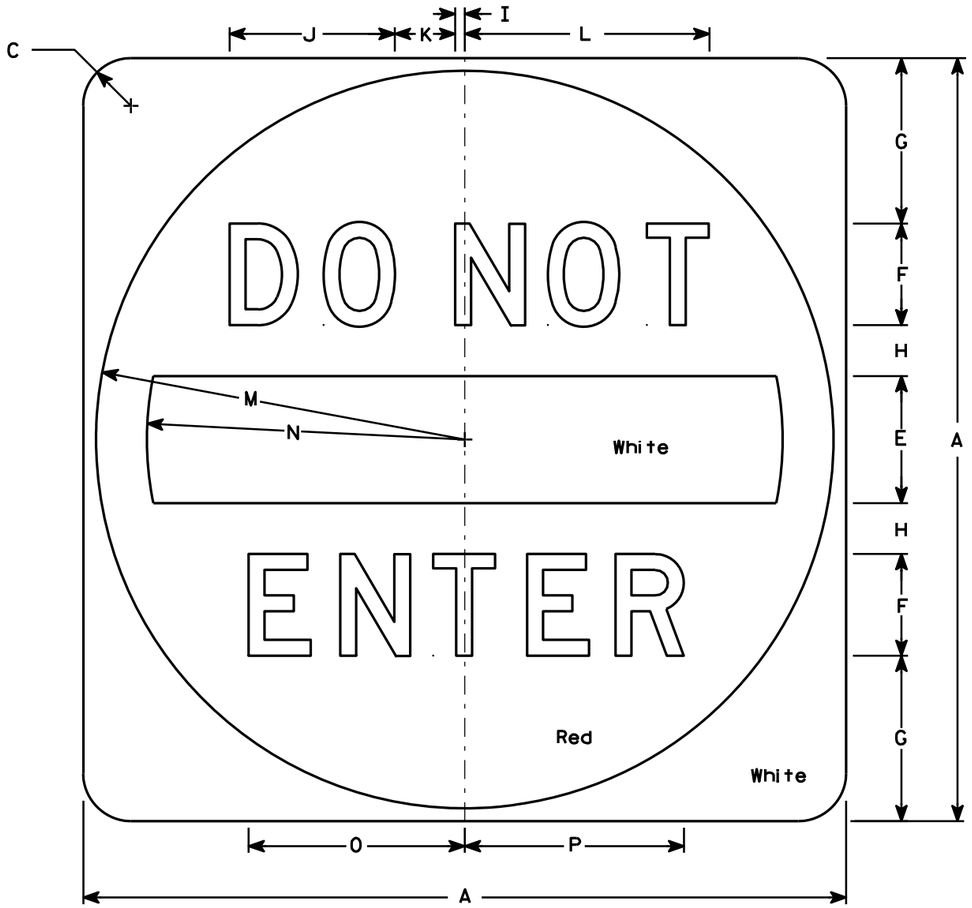
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 165	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

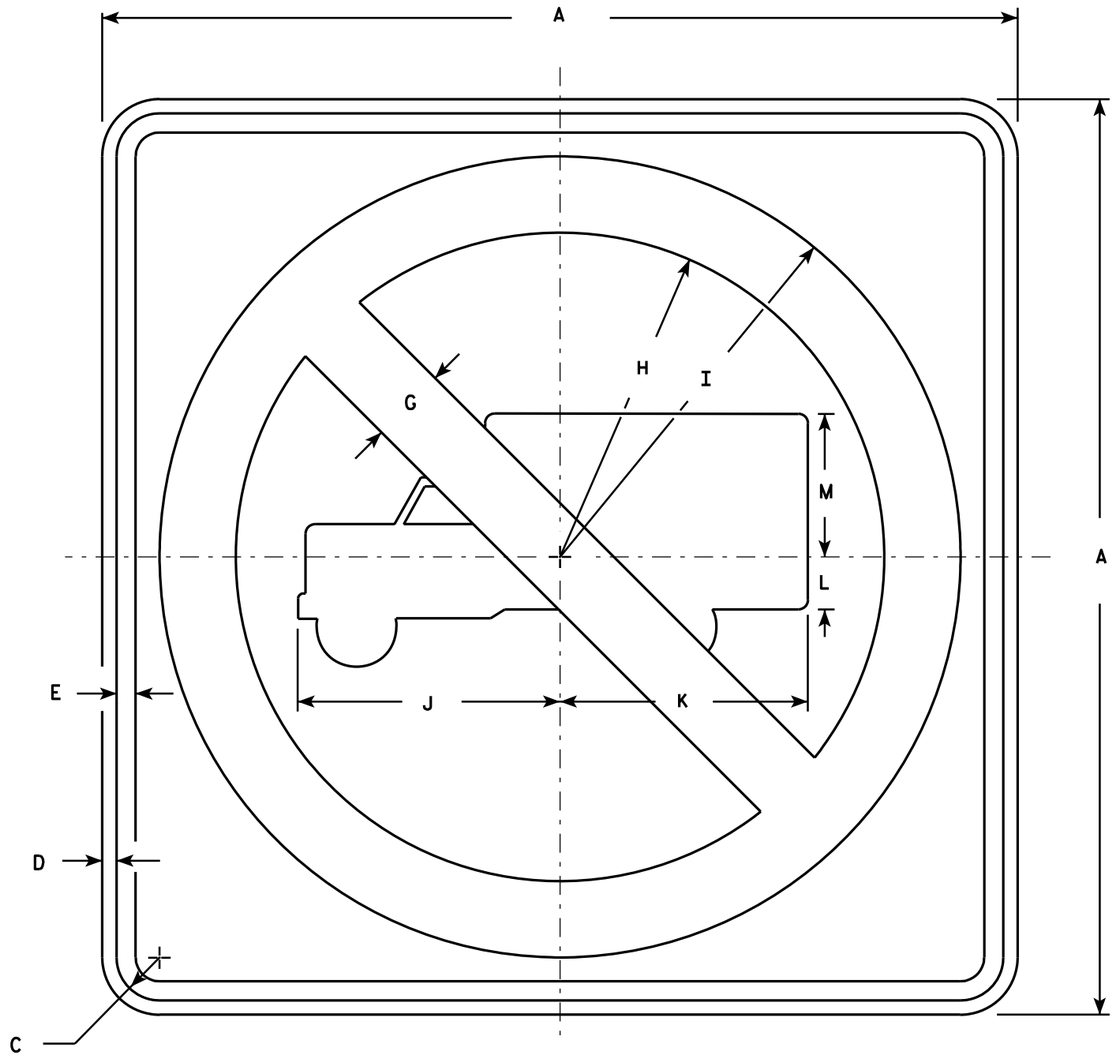
STANDARD SIGN
R5-1

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: 166 | E



R5-2

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
2M	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
3	30		1 3/8	1/2	5/8		2 1/2	10 5/8	13 1/8	8 1/2	8 1/8	1 5/8	4 3/4														6.25
4	36		1 5/8	5/8	3/4		3	12 3/4	15 3/4	10 1/4	9 3/4	2	5 3/4														9.0
5	48		2 1/4	3/4	1		4	17	21	13 5/8	13	2 5/8	7 5/8														16.0

STANDARD SIGN
R5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 167	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

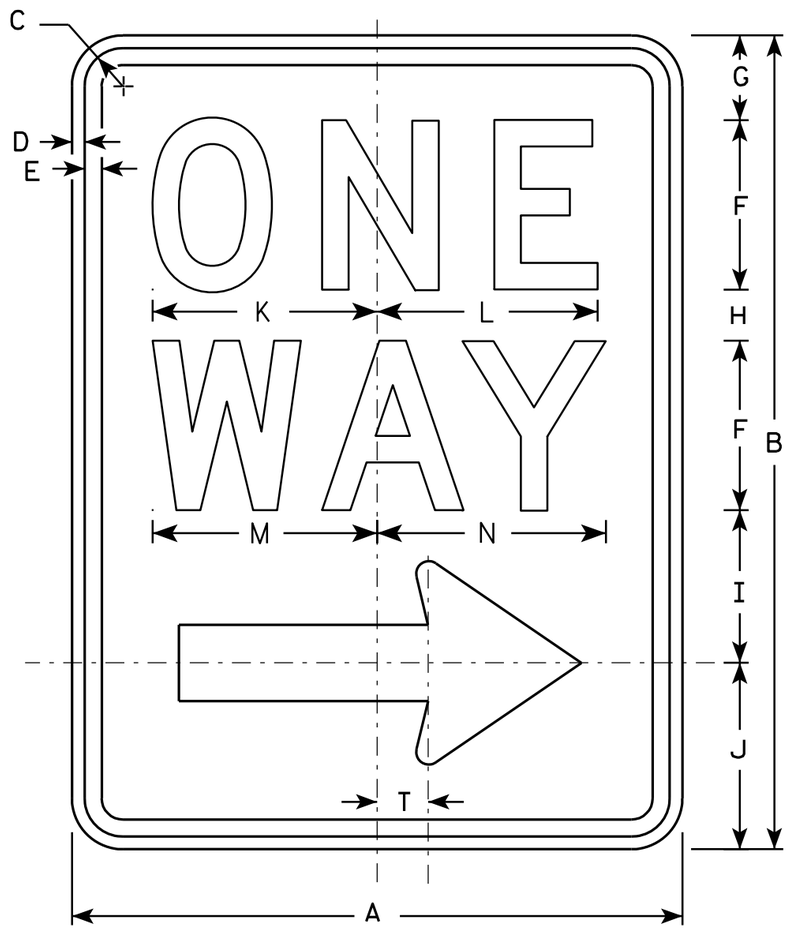
STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

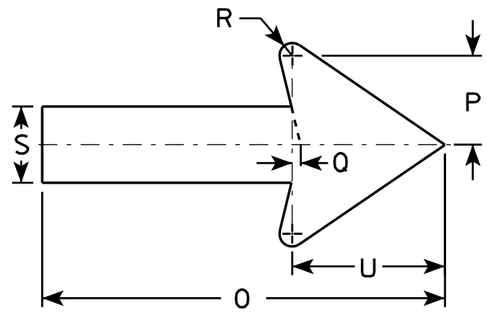
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 168 | E



R6-2R

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	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																										

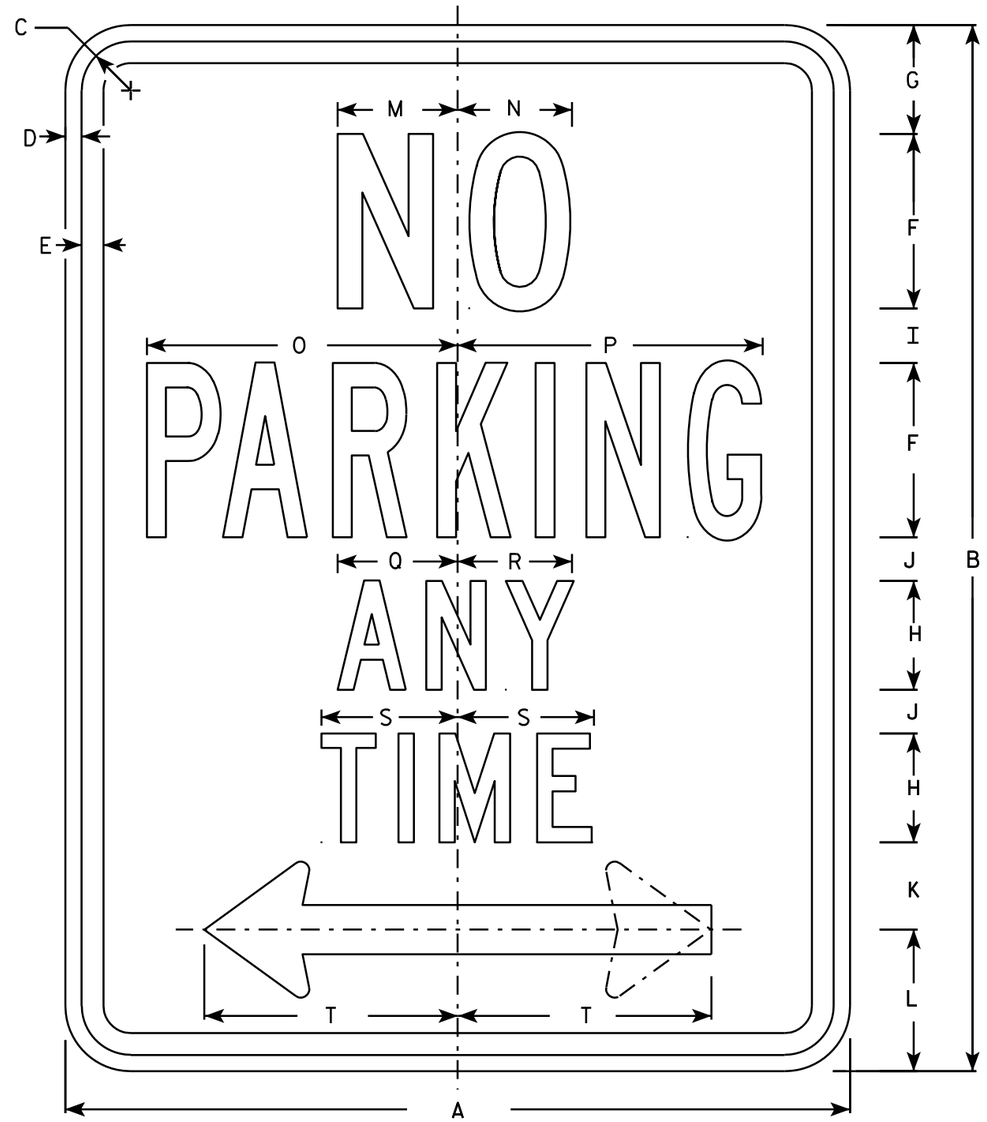
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

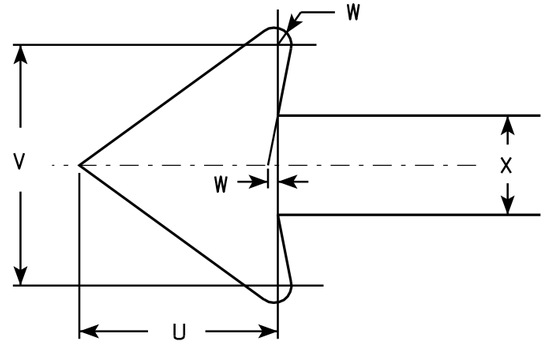
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 169	E



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

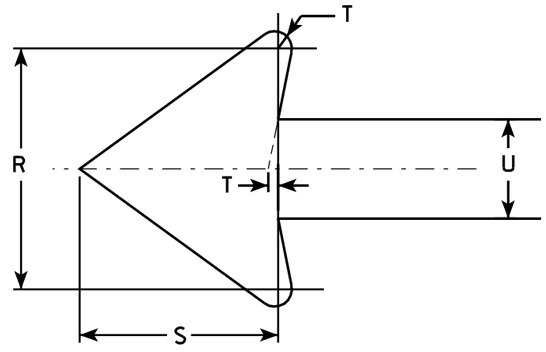
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 170	E



R7-5

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Green
3. Message Series - See Note 7
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals as required & adjust spacing to achieve proper balance.
6. R7-5D (double arrow)
   R7-5L (left arrow)
   R7-5R (right arrow)
7. Lines 1, 2 & 3 are series C Copy
   Line 4 Series B Copy.



* - See Note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	2	2	2 1/4	1 1/4	4	2 1/2	2 1/8	2	2 7/8	4 5/8	4 1/2	3 7/8	1 3/4	1 1/2	1/8	3/4						1.5
2S	18	24	1 1/8	3/8	1/2	3	3	2 5/8	1 1/4	5 5/8	3 1/4	3 1/8	3 1/8	4 1/4	6 7/8	6 3/4	5 7/8	2 5/8	2 1/4	1/4	1 1/8						3.0
2M	24	30	1 1/8	3/8	1/2	4	3	3	2	6	3 1/2	4 1/4	4 1/8	5 3/4	9 1/8	9 1/8	7 3/4	3 1/2	3	1/4	1 1/2						5.0
3	24	30	1 1/8	3/8	1/2	4	3	3	2	6	3 1/2	4 1/4	4 1/8	5 3/4	9 1/8	9 1/8	7 3/4	3 1/2	3	1/4	1 1/2						5.0
4																											
5																											

STANDARD SIGN
R7-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/31/2011 PLATE NO. R7-5.8

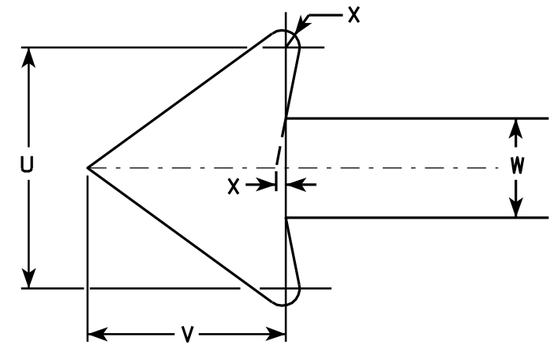
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 171	E



R7-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R7-7D (double arrow)
   R7-7R (right arrow)
   R7-7L (left arrow)
6. Lines 1, 3 and 4 are Series C.
   Line 2 is Series B.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	2	1 7/8	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2	2 3/4	2 5/8	3 7/8	1 3/4	1 1/2	3/4	1/8			1.50
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 1/2	3 3/8	3 3/8	5 7/8	2 5/8	2 1/4	1 1/8	1/4			3.00
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3	4 1/8	4	7 3/4	3 1/2	3	1 1/2	1/4			5.00
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3	4 1/8	4	7 3/4	3 1/2	3	1 1/2	1/4			5.00
4																											
5																											

STANDARD SIGN
R7-7

WISCONSIN DEPT OF TRANSPORTATION

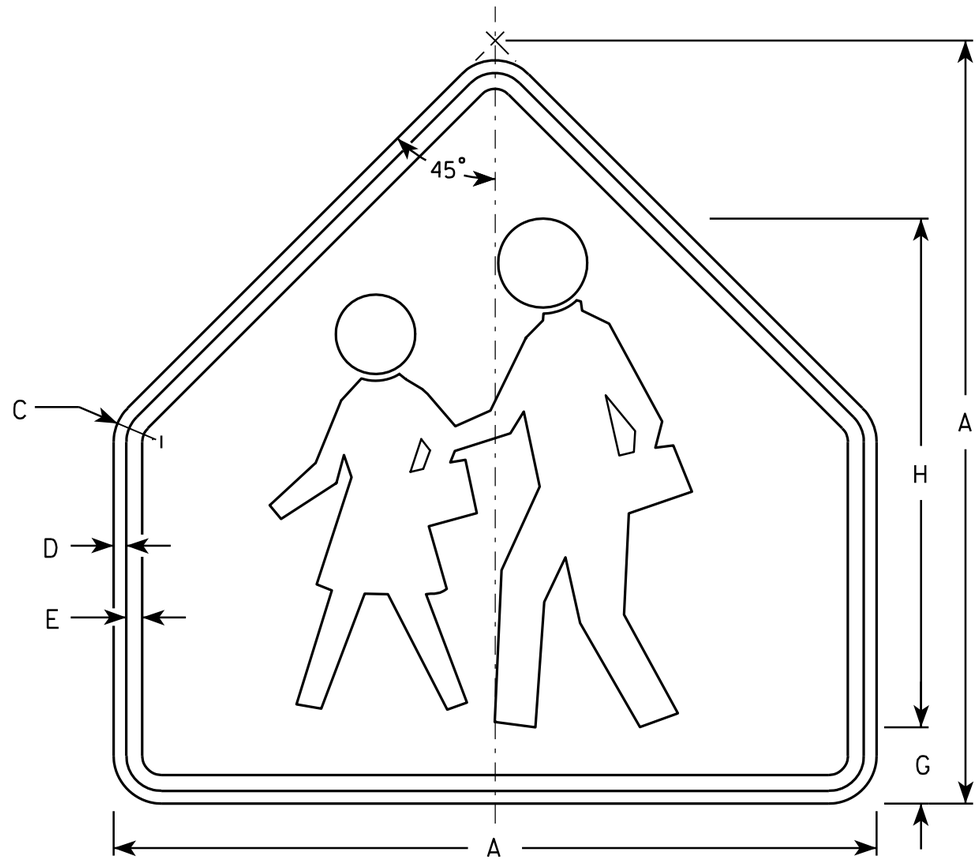
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-7.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 172 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R77.DGN PLOT DATE : 31-MAR-2011 10:59 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000
WISDOT/CADDS SHEET 42



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																											

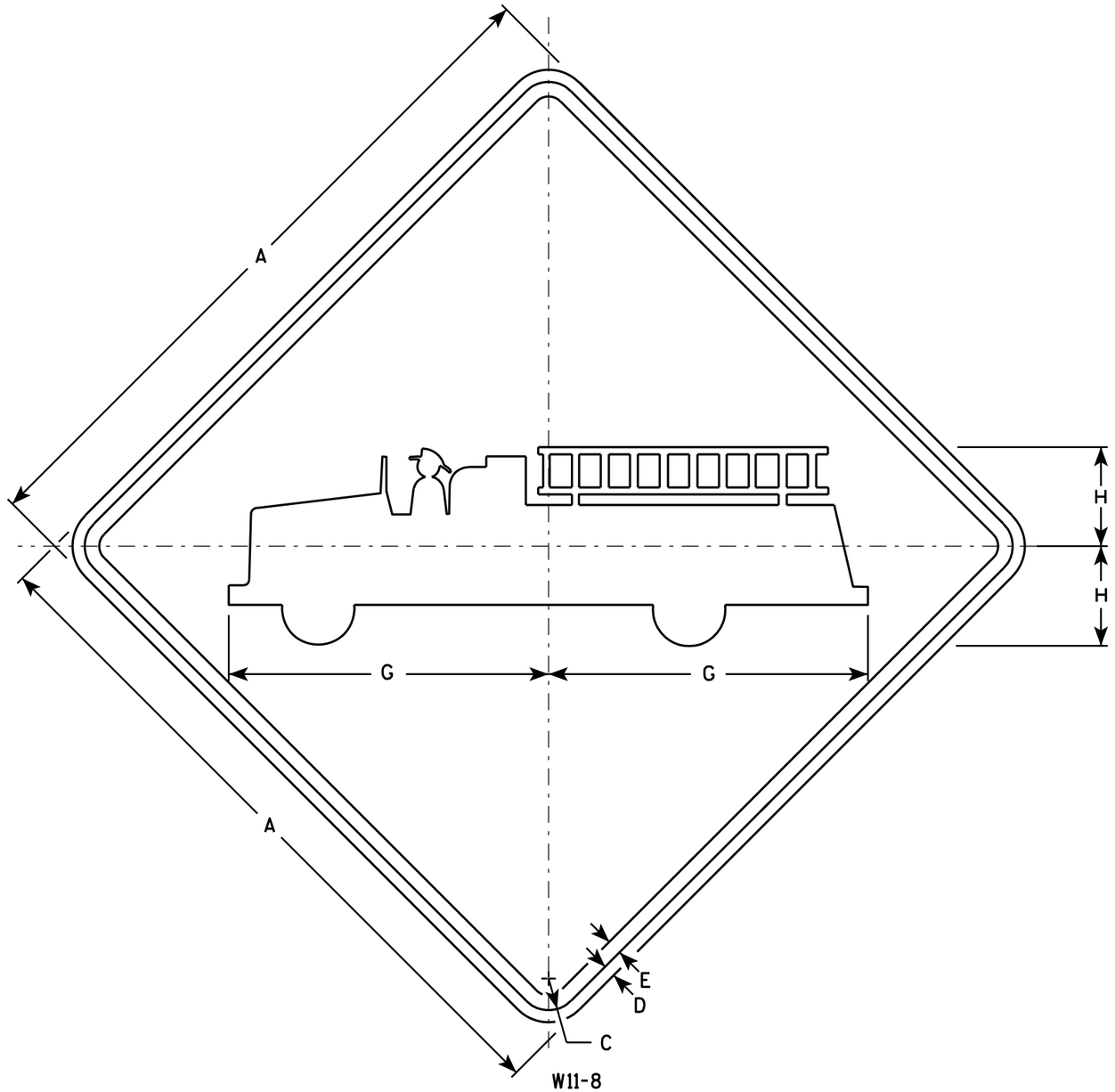
STANDARD SIGN
S1-1

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: 173	E



W11-8

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		11	3 3/8																			4.0
2S	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
2M	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
3	36		1 5/8	5/8	3/4		16 1/2	5 1/4																			9.0
4	48		2 1/4	3/4	1		22	7																			16.0
5																											

STANDARD SIGN
W11-8

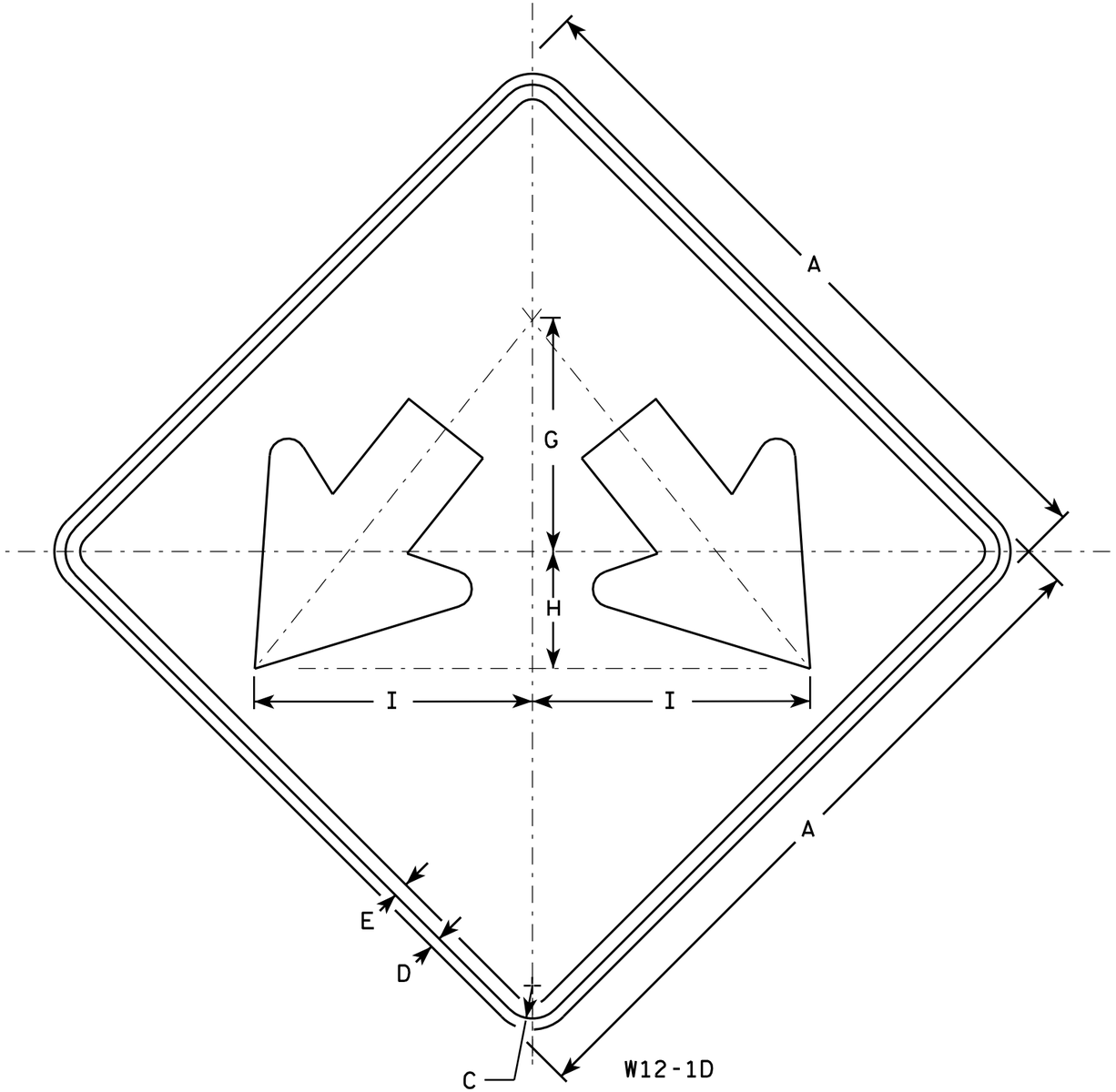
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W11-8.6

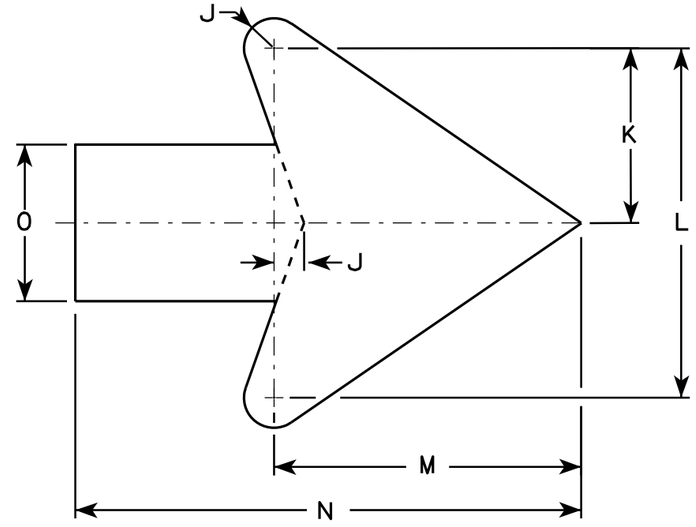
PROJECT NO:

SHEET NO: 174 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 - 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 3/15/11 PLATE NO. W12-1D.14

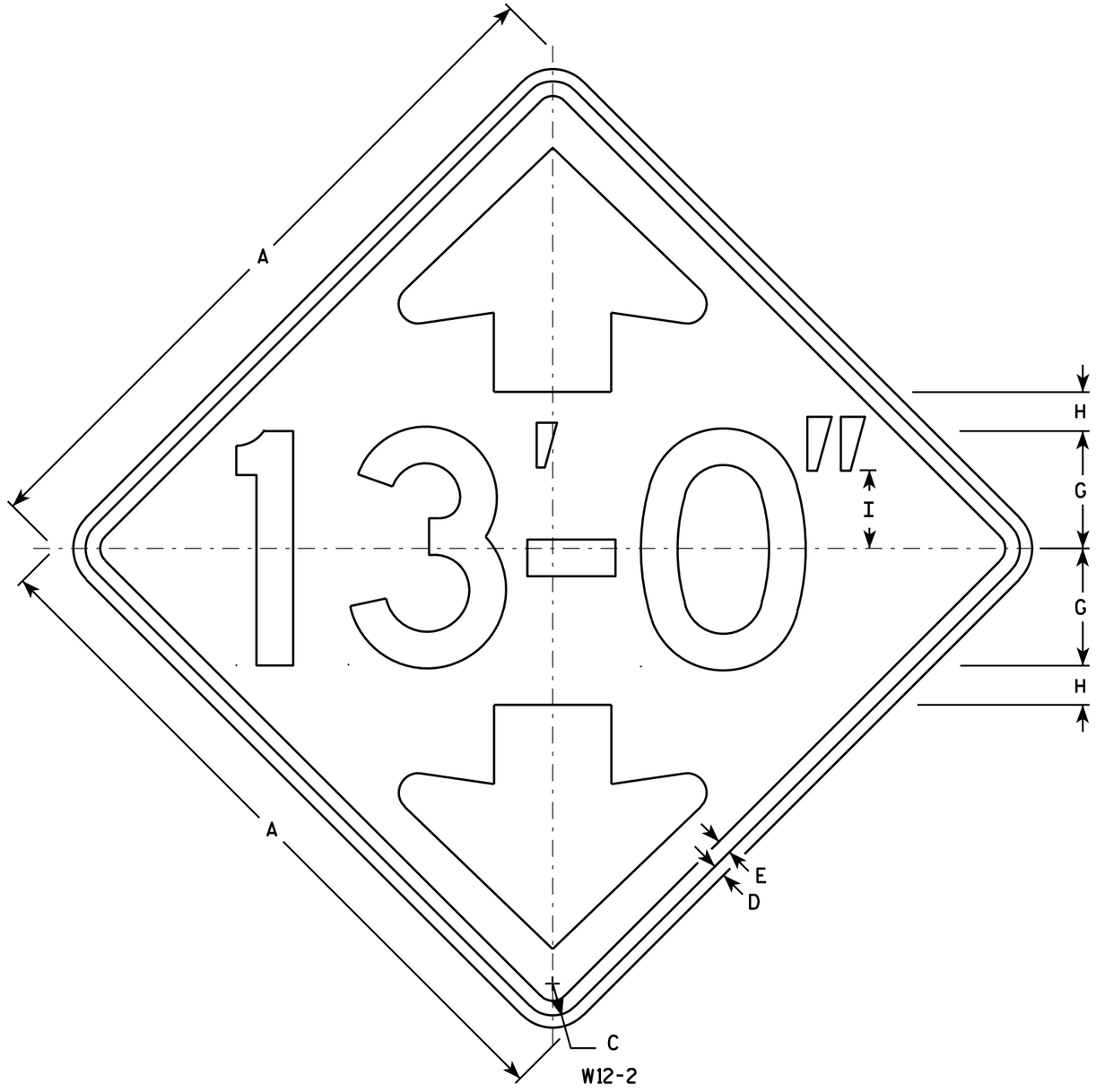
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 175	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W121D.DGN PLOT DATE : 16-MAR-2011 14:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.717577:1.000000

WISDOT/CADDS SHEET 42

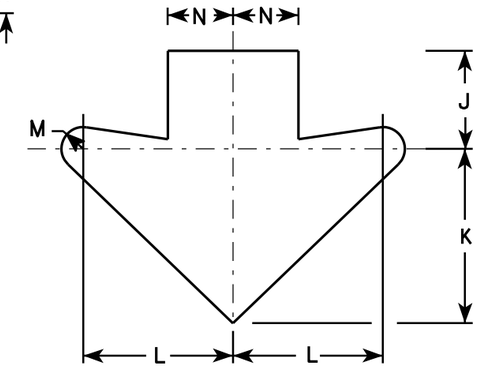
7

7

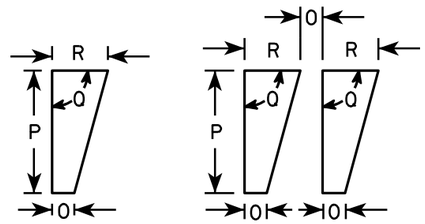


NOTES

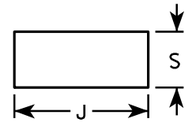
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing of numerals, hyphen, foot & inch marks to achieve proper balance.



Arrow Detail



Foot Mark & Inch Mark Detail



Hyphen 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	30		1 3/8	1/2	5/8		5	1 5/8	3 3/8	3 3/4	6 5/8	5 3/4	3/4	2 1/2	1/2	2 1/4	90°	1	1 5/8								6.25
2S	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
2M	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
3	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
4	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
5	48		2 1/4	3/4	1		8	2 5/8	5 1/2	5 7/8	10 5/8	9 1/4	1 3/8	4	5/8	3 5/8	90°	1 5/8	2 1/2								16.00

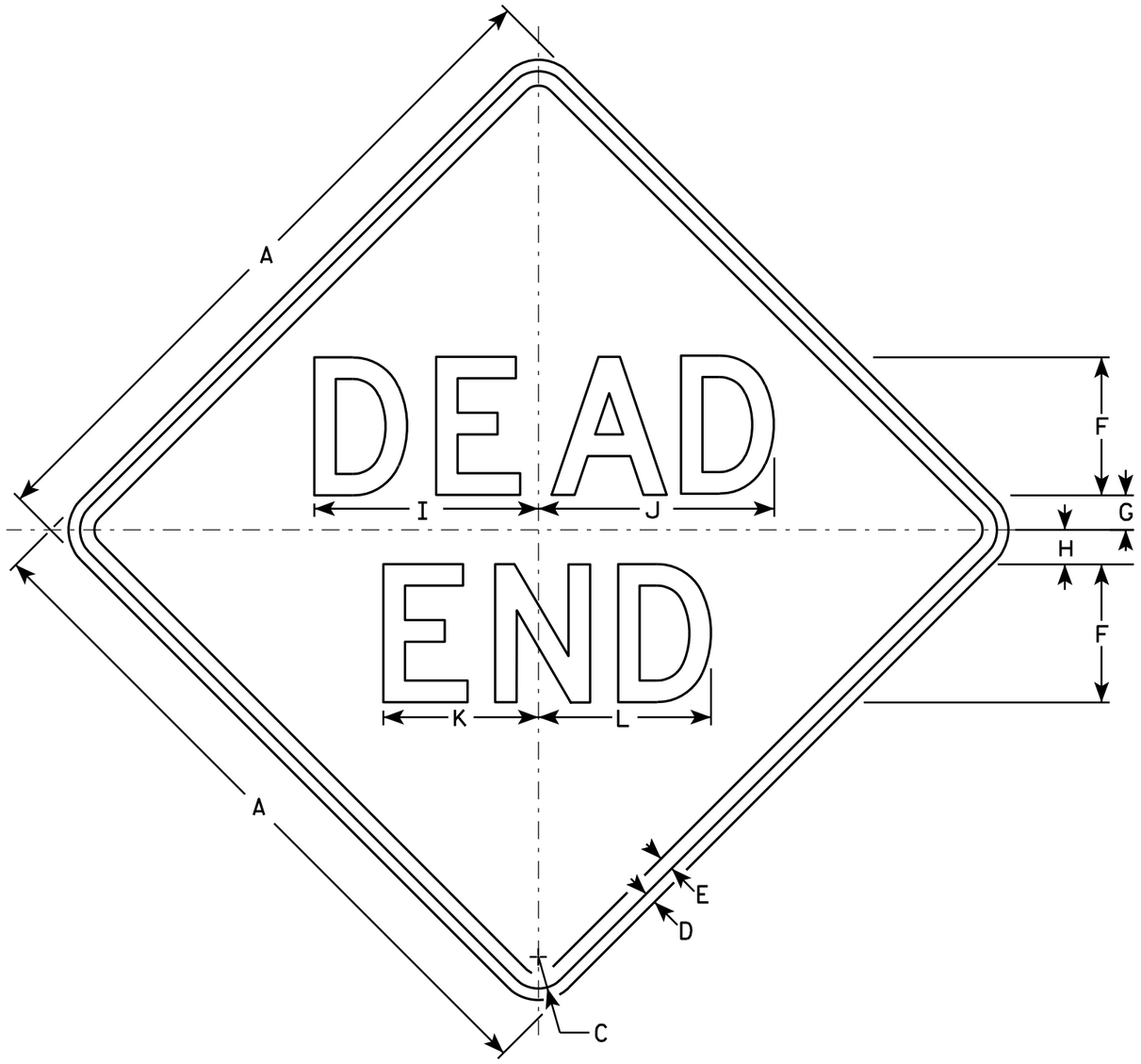
STANDARD SIGN
W12-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-2.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 176	E



W14-1

NOTES

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

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

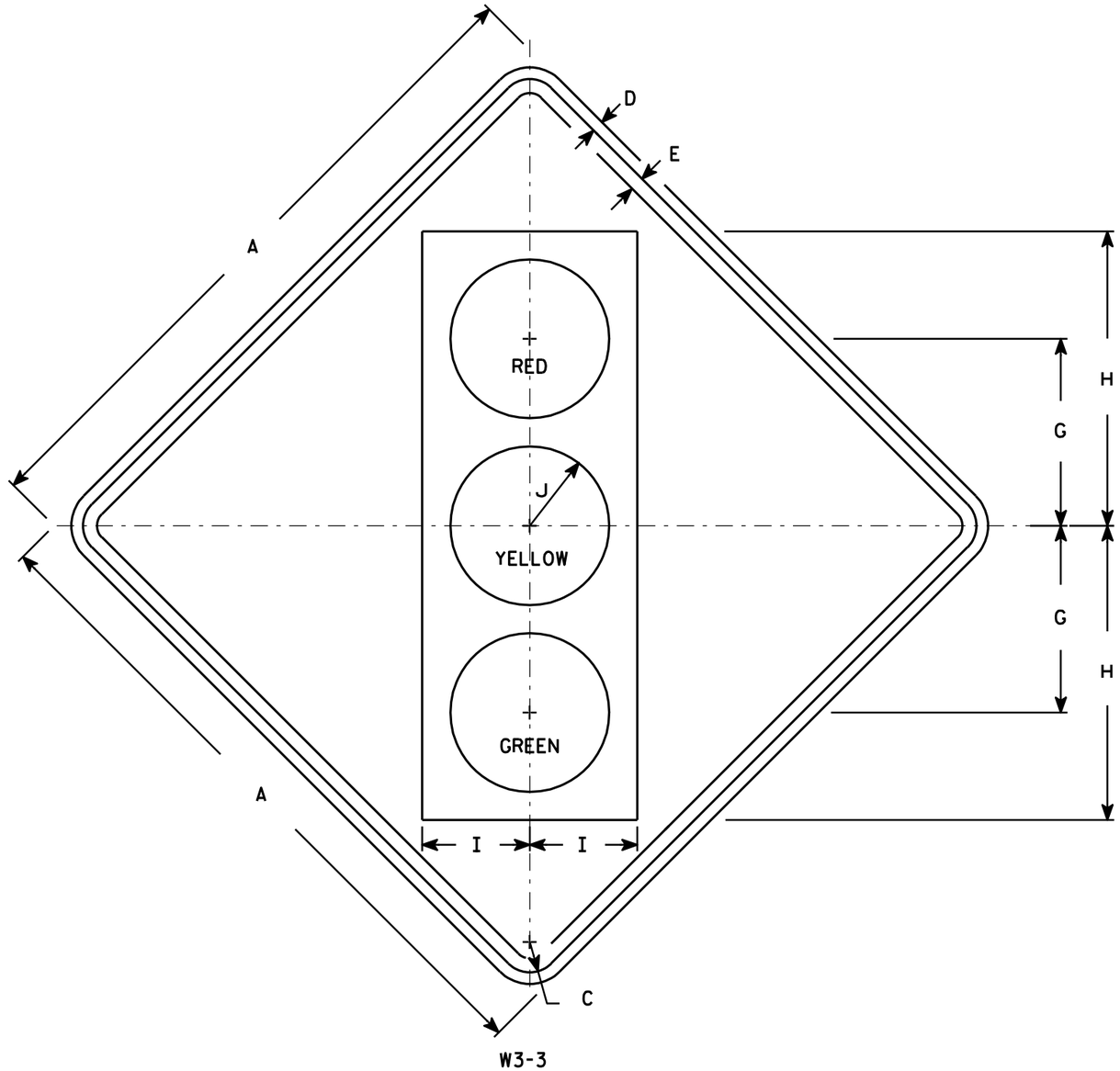
STANDARD SIGN
W14-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W14-1.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 177	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 - 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

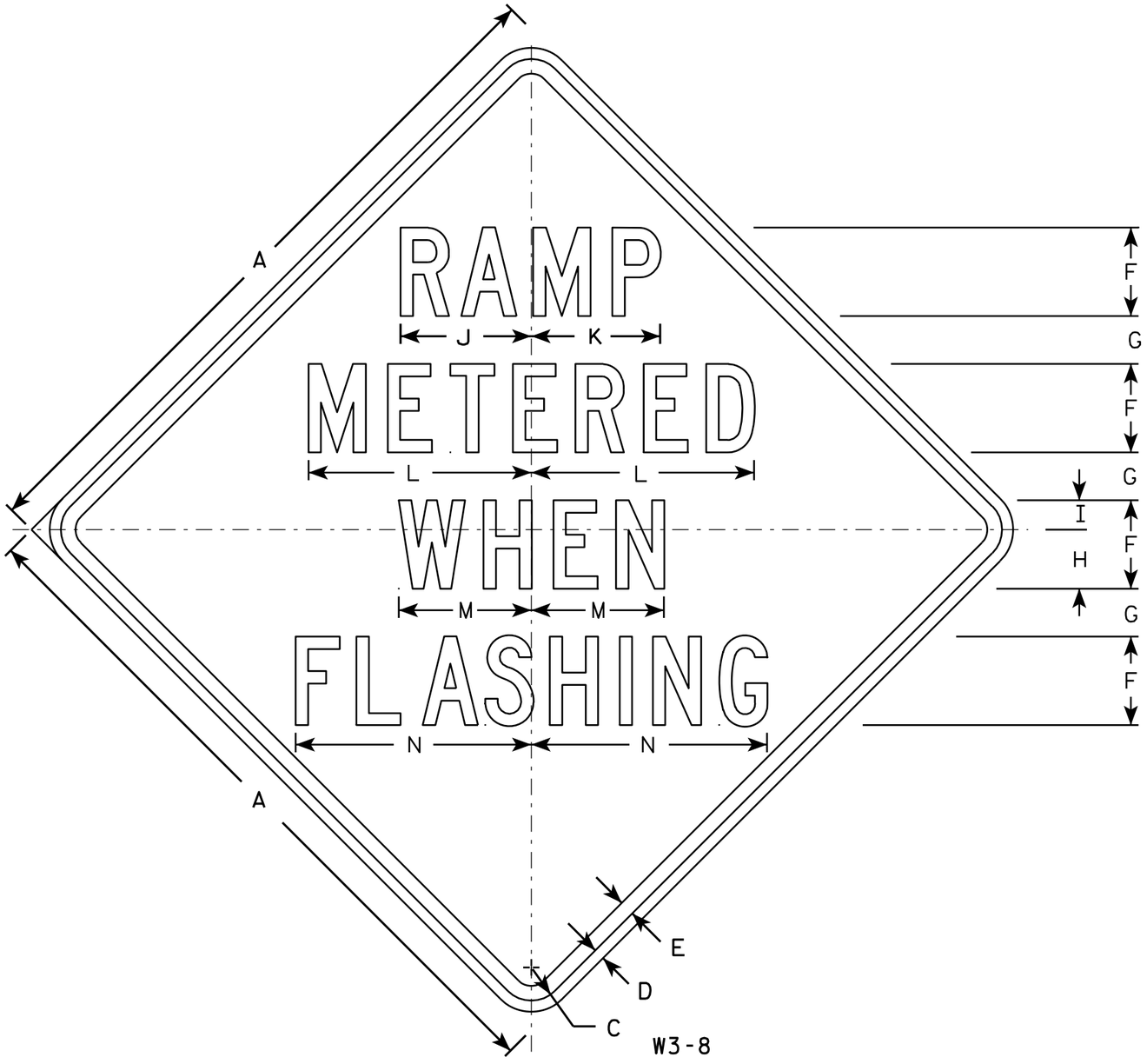
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 178 | 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 H 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

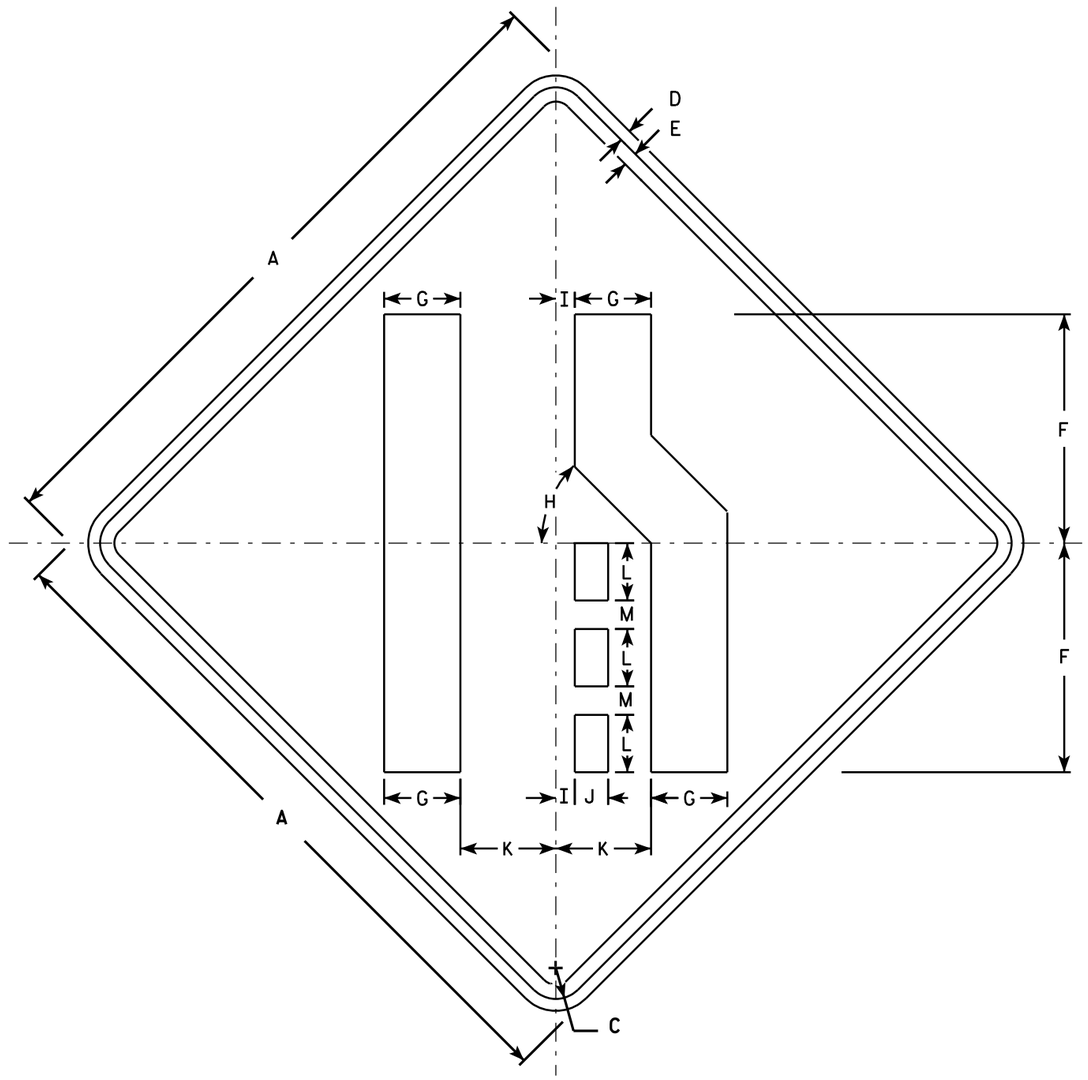
STANDARD SIGN
W3-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 06/01/10 PLATE NO. W3-8.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 179 | E



W4-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - 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. W4-2L is the same as W4-2R 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	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
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
W4-2

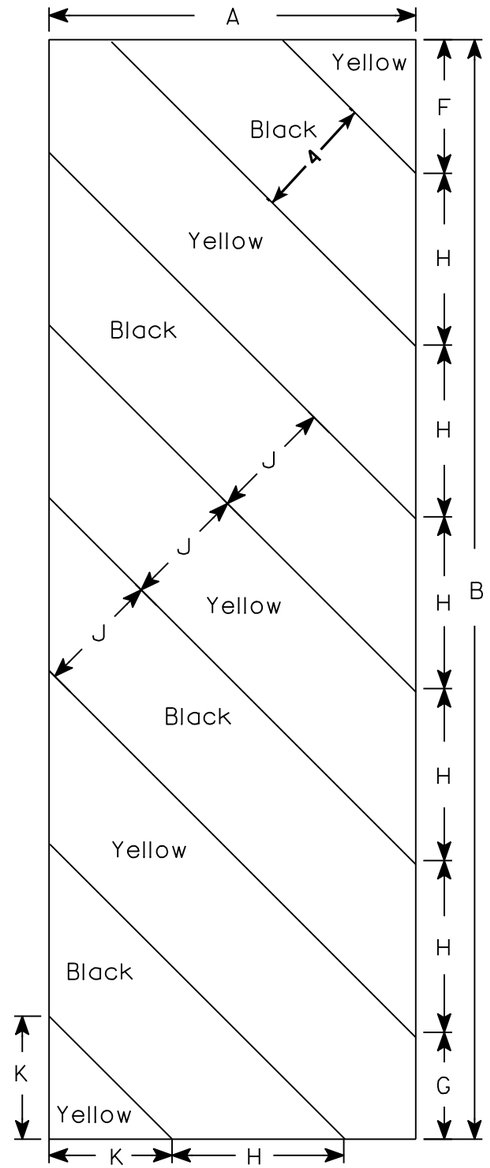
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

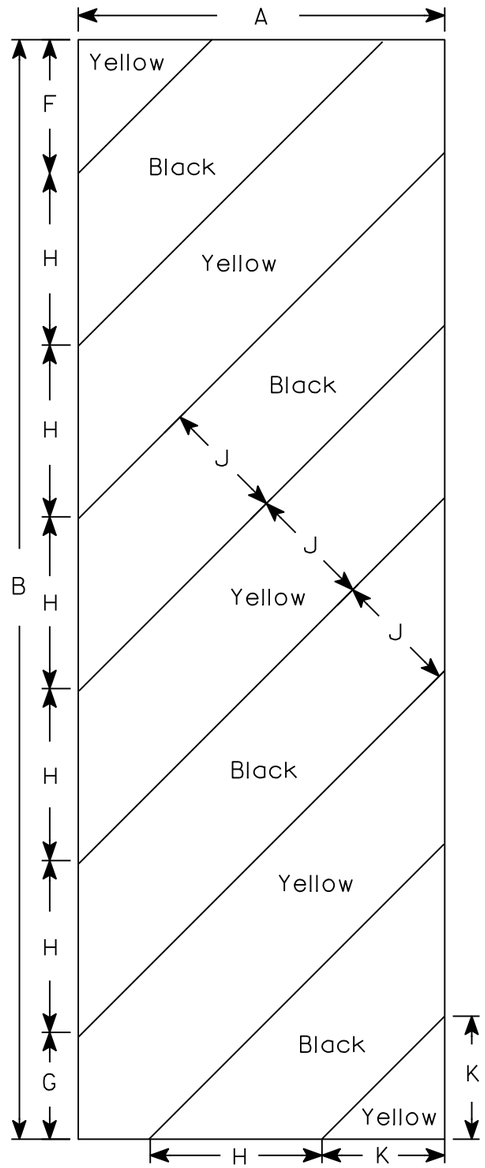
DATE 2/29/2012 PLATE NO. W4-2.13

PROJECT NO:

SHEET NO: 180 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

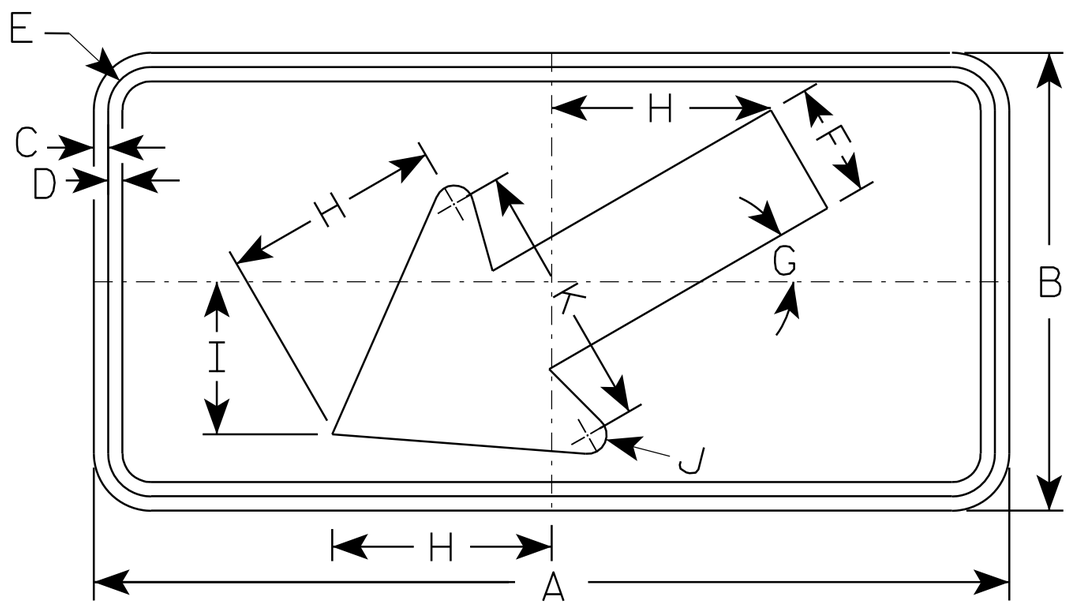
W5-52L & W5-52R

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: 181	E



WF16-7L

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. WF16-7R are the same as WF-16-7L 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
WF16-7

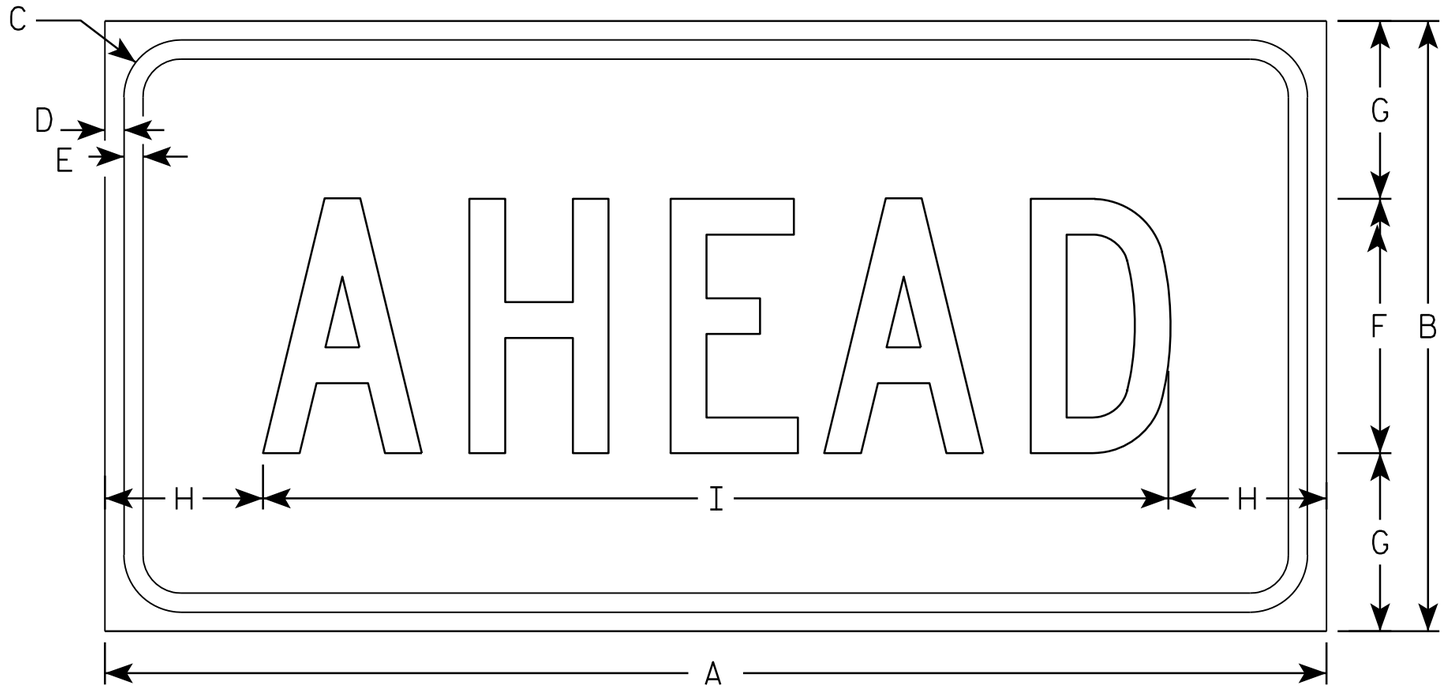
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/21/10 PLATE NO. WF16-7.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 182 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\WF167.DGN PLOT DATE : 21-DEC-2010 15:39 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 3.972696:1.000000



WF16-9P

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-Green
   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	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2S	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
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
WF16-9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/29/2012 PLATE NO. WF16-9P.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 183 | E

Wisconsin Department of Transportation

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