WKE

Feb 08, 2022

PROJECT ID: 2722-07-71, 3700-00-70

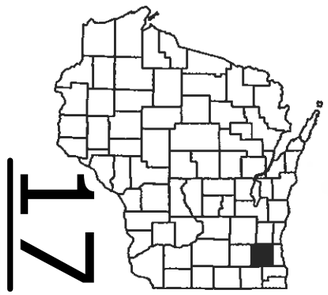
WITH: N/A

COUNTY: WAUKESHA

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 = 532



N

DESIGN DESIGNATION

A.A.D.T.	2022	=	32,500
A.A.D.T.	2042	=	35,900
D.H.V.		=	3625
D.D.		=	59/41
T.		=	3.0
DESIGN SPEED		=	40
ESALS		=	2,800,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2722-07-71	WISC 2022168	1
3700-00-70		

MOORLAND ROAD

I 94 TO W BLUEMOUND ROAD

CTH O

WAUKESHA

STATE PROJECT NUMBER: 2722-07-71

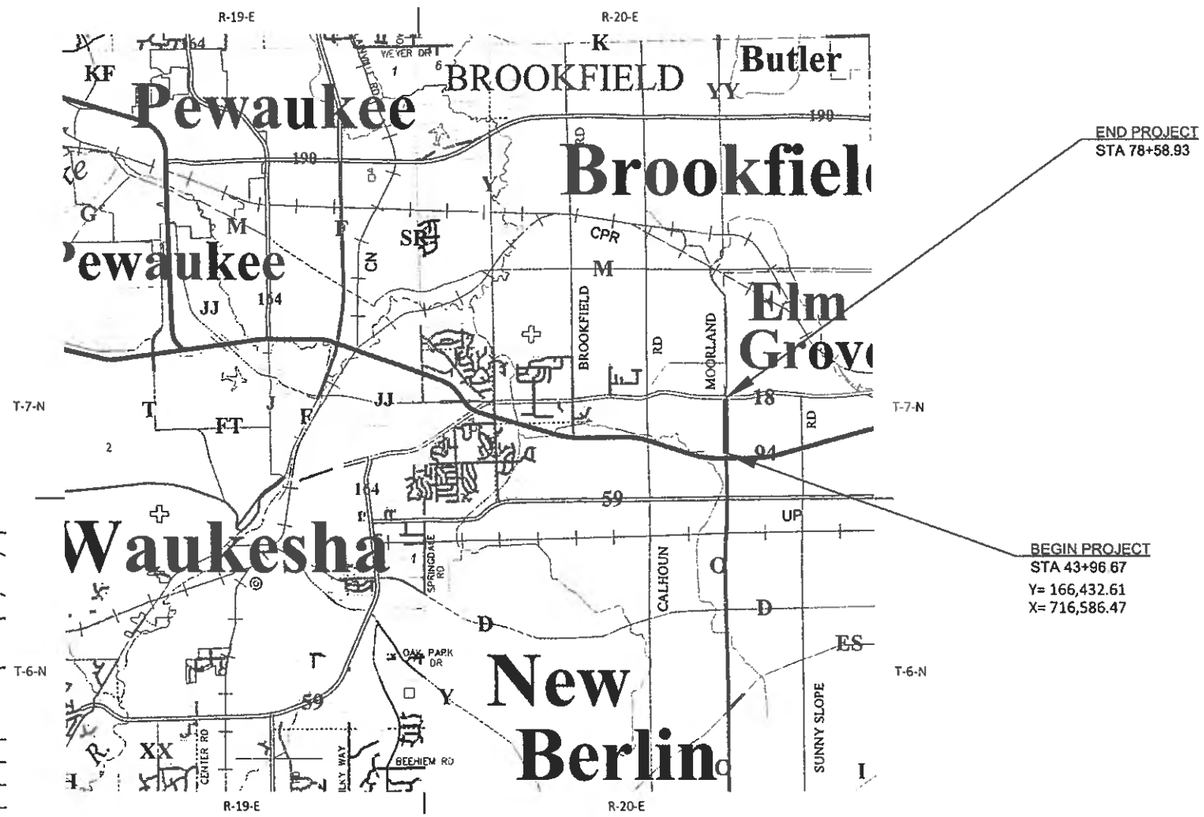
CTH O SIGNALS & FIBER REHAB

USH 18 TO IH 94 WB RAMPS

CONST/SIGNAL & FIBER REHAB

WAUKESHA

STATE PROJECT NUMBER: 3700-00-70



LAYOUT

SCALE 0 2MI

TOTAL NET LENGTH OF CENTERLINE = 0.656MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, WAUKESHA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 NAVD88 (2012)

ACCEPTED FOR

COUNTY of WAUKESHA

11-15-21 (Date) — DIRECTOR OF PUBLIC WORKS

11/15/21 (Date) — ENGINEERING SERVICES MANAGER

ORIGINAL PLANS PREPARED BY

GRAEF 275 W. WISCONSIN AVENUE, SUITE 300 MILWAUKEE, WI 53203

WISCONSIN MARY E. PETTIT 33101 WATERFORD, WI PROFESSIONAL ENGINEER

11/13/21 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	GRAEF
Designer	GRAEF
Project Manager	KATHY KRAMER
Regional Examiner	JEFF BOHEN
Regional Supervisor	

APPROVED FOR THE DEPARTMENT DATE 11-15-21 — Kathleen Kramer — Digitally signed by Kathleen Kramer Date: 2021.11.15 18:46:28 -06'00' (Signature)

E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\010101_TI.DWG

PLOT DATE : 11/11/2021 1:51 PM

PLOT BY : MCGILLICUDDY, BEN

PLOT NAME :

GENERAL NOTES

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

ALL RADIUS DIMENSIONS FOR CURB & GUTTER ARE GIVEN TO THE FLANGE.
ALL ELEVATIONS ALONG CURB & GUTTER ARE GIVEN TO THE FLANGE.
OFFSETS NOTED ARE TO THE FLANGE OR EDGE OF LANE IF NO CURB, UNLESS OTHERWISE NOTED.

CONTRACTOR SHALL CONTACT PROJECT ENGINEER AND SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION (SEWRPC) AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLIC SURVEY MONUMENTS.
CONTACT ROB MERRY AT (262) 953-4289 FOR MONUMENT RELOCATION PROCEDURES.
CONTRACTOR SHALL ALSO CONTACT THOMAS LIPSKY AT WISDOT SOUTHEAST REGION AT (262) 548-6737.

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

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

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

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

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

CONTRACTOR SHALL VERIFY ELEVATIONS OF EXISTING STORM SEWER WHEN CONNECTIONS ARE REQUIRED

STANDARD ABBREVIATIONS

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

WAUKESHA COUNTY

PROJECT MANAGER
MR. EDWARD HINRICHS
515 W. MORELAND BLVD.
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(262) 548-7745
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MARYBETH.PETTIT@GRAEF-USA.COM

DEPT. OF NATURAL RESOURCES

WISCONSIN DEPT. OF NATURAL RESOURCES
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CRAIG.WEBSTER@WISCONSIN.GOV

MILWAUKEE COUNTY TRANSIT SYSTEM (MCTS)

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MILWAUKEE, WI 53205

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LEAD COORDINATOR OF STREET SUPERVISION (ROUTES)
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MFLYNN@MCTS.ORG

ANDY TILLMAN
TRANSIT PLANNER (STOPS/SHELTERS)
(414) 343-1728
ATILLMAN@MCTS.ORG

DAVID LOCHER
TRANSPORTATION SPECIALIST (DETOUR/SPECIAL EVENTS)
(414) 343-1727
DLOCHER@MCTS.ORG

SEWRPC

SOUTHEASTERN REGIONAL PLANNING COMMISSION
MR. ROB MERRY
W239 N1812 ROCKWOOD DRIVE
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WAUKESHA, WI 53187-4289
PHONE: (262) 953-4289
CELL: (920) 912-1036
RMERRY@SEWPC.ORG

UTILITIES

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JB5175@ATT.COM

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EVERSTREAM
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SGARCIA@EVERSTREAM.NET

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LUMEN
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MR. JOSEPH TEW
CITY OF BROOKFIELD - WATER, SANITARY, & SEWER
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BROOKFIELD, WI 53005
(262) 787-3540
TEW@CI.BROOKFIELD.WI.US

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4125 N 124TH STREET, SUITE D
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OFFICE: (262) 649-5386
CELL: (920) 602-6591
DGORE@MI-TECH.US

SPECTRUM
CONSTRUCTION FIELD CONTACT:
BEAU ABUYA
1320 N MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI, 53212
(414) 758-9241

MR. MATTHEW SCHULTE
TDS TELECOMMUNICATIONS
16924 W VICTOR ROAD
NEW BERLIN, WI 53151
OFFICE: (262) 754-3063
CELL: (262) 309-1108
MATT.SCHULTE@TDSTELECOM.COM

MR. RJ CICATELLO
VERIZON
15725 WEST RYERSON ROAD
NEW BERLIN, WI 53151
(262) 782-9836
RANDY.CICATELLO@VERIZON.COM

VERIZON CONSTRUCTION CONTACT:
MIKE HOFFMANN
TELCOM CONSTRUCTION, LLC
2921 S 5TH CT
MILWAUKEE, WI 53207
OFFICE: (320)286-8375
CELL: (262)599-1966
MIKE.HOFFMANN@
TELCOMCONSTRUCTION.COM

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WE ENERGIES - ELECTRIC
S18 W33800 HWY 18
DELAFIELD, WI 53018
(262) 968-5768
STEVE.KING@WE-ENERGIES.COM
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WEST ALLIS, WI 53214
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GREEN BAY, WI 54302-3526
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DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

2

2

N

I-94

BROOKFIELD SQUARE DRIVE

BROOKFIELD SQUARE MALL

BLUEMOUND ROAD (US 18)

PI: 36+50.58

I-94 RAMP

PI: 63+34.95

BEGIN PROJECT
STA 43+96.67

END PROJECT
STA 78+58.93

I-94 RAMP

I-94

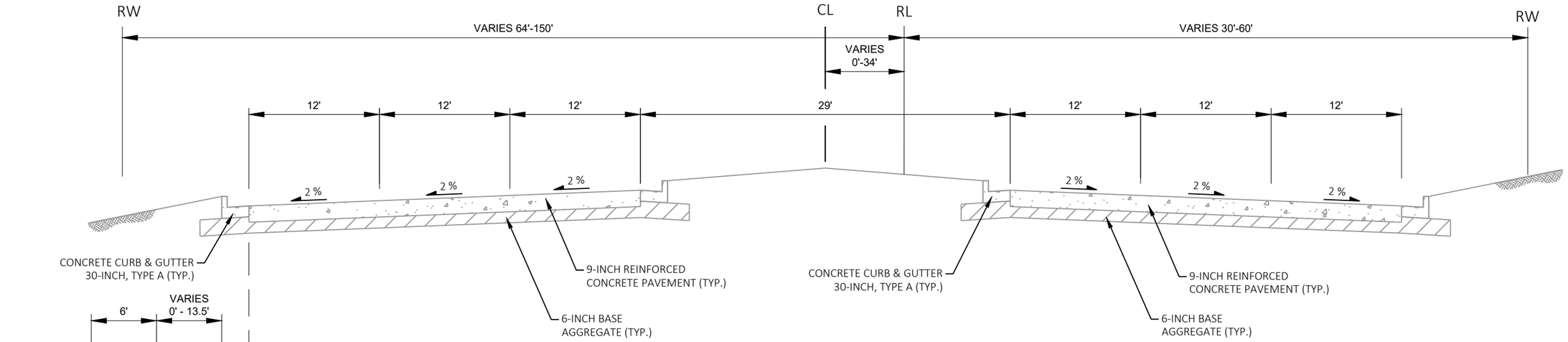
WESTMOOR COUNTRY CLUB

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\020201_PO.DWG
LAYOUT NAME - 020201_po

PLOT DATE : 10/1/2021 11:50 AM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:300 FT

WISDOT/CADDS SHEET 42

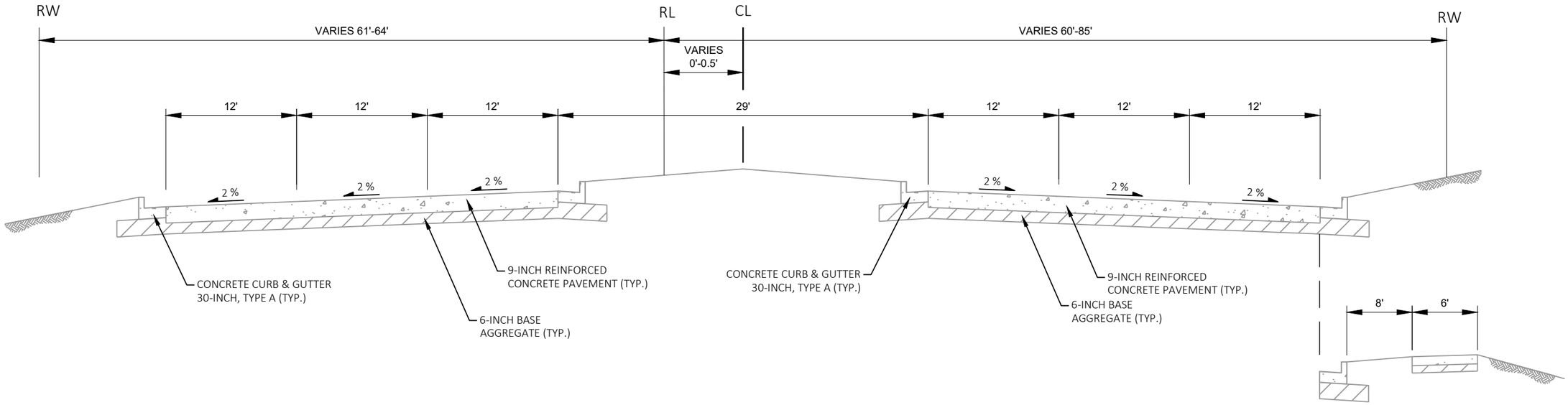


SIDEWALK

STA. 45+13.24 TO STA. 53+00

TYPICAL EXISTING SECTION
MOORLAND ROAD (CTH O)

STA. 43+96 TO STA. 58+00



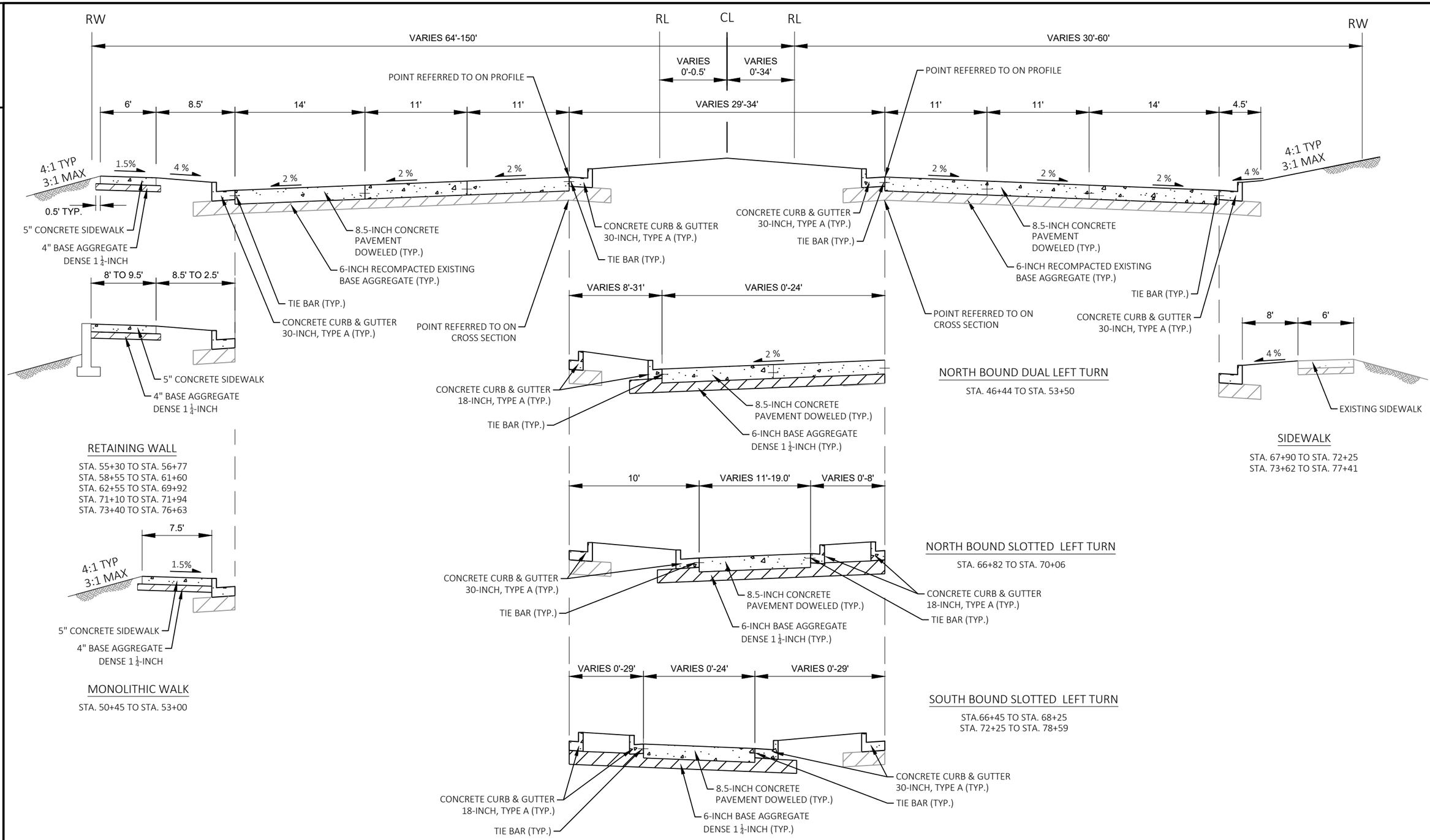
TYPICAL EXISTING SECTION
MOORLAND ROAD (CTH O)

STA. 58+00 TO STA. 78+59

SIDEWALK

STA. 67+90 TO STA. 73+62
STA. 77+41 TO STA. 78+59

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 4	E



RETAINING WALL

STA. 55+30 TO STA. 56+77
STA. 58+55 TO STA. 61+60
STA. 62+55 TO STA. 69+92
STA. 71+10 TO STA. 71+94
STA. 73+40 TO STA. 76+63

MONOLITHIC WALK

STA. 50+45 TO STA. 53+00

NORTH BOUND DUAL LEFT TURN

STA. 46+44 TO STA. 53+50

SIDEWALK

STA. 67+90 TO STA. 72+25
STA. 73+62 TO STA. 77+41

NORTH BOUND SLOTTED LEFT TURN

STA. 66+82 TO STA. 70+06

SOUTH BOUND SLOTTED LEFT TURN

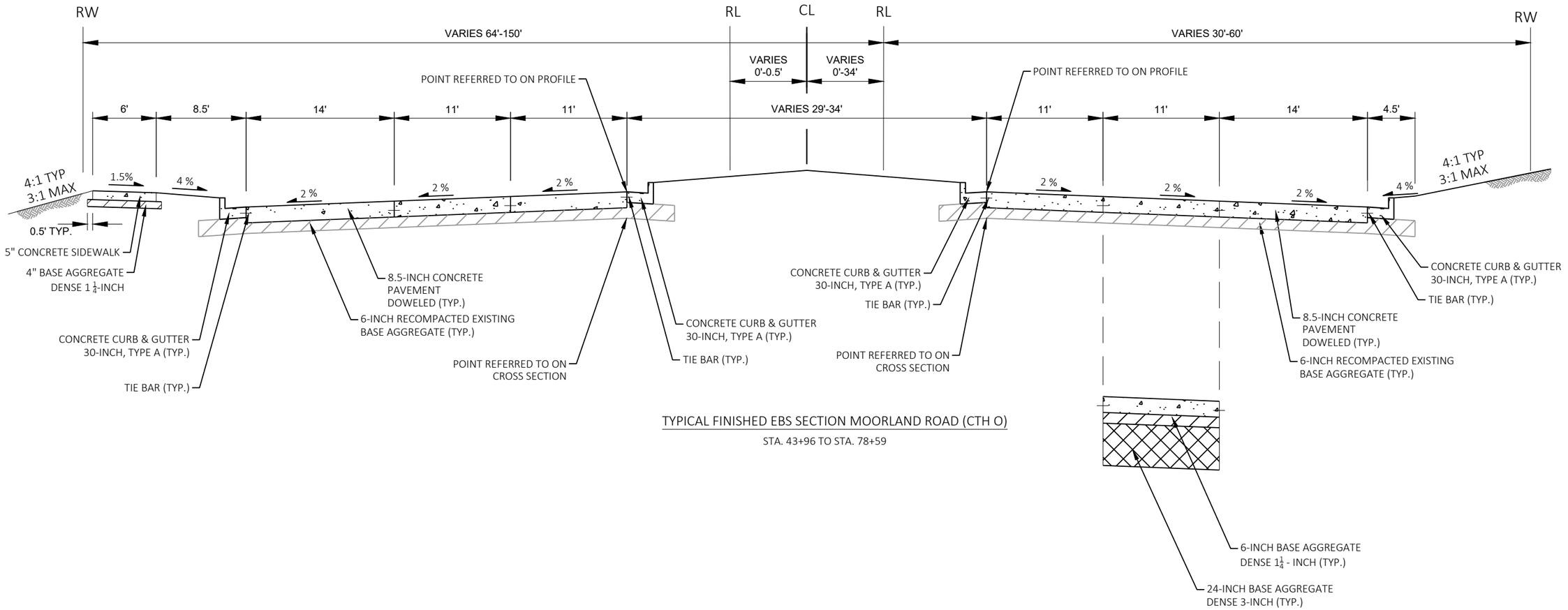
STA.66+45 TO STA. 68+25
STA. 72+25 TO STA. 78+59

TYPICAL FINISHED SECTION MOORLAND ROAD (CTH O)

STA. 43+96 TO STA. 78+59

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 03
PLOT DATE : 11/28/2021 8:15 PM
PLOT BY : MCGILLICUDDY, BEN
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



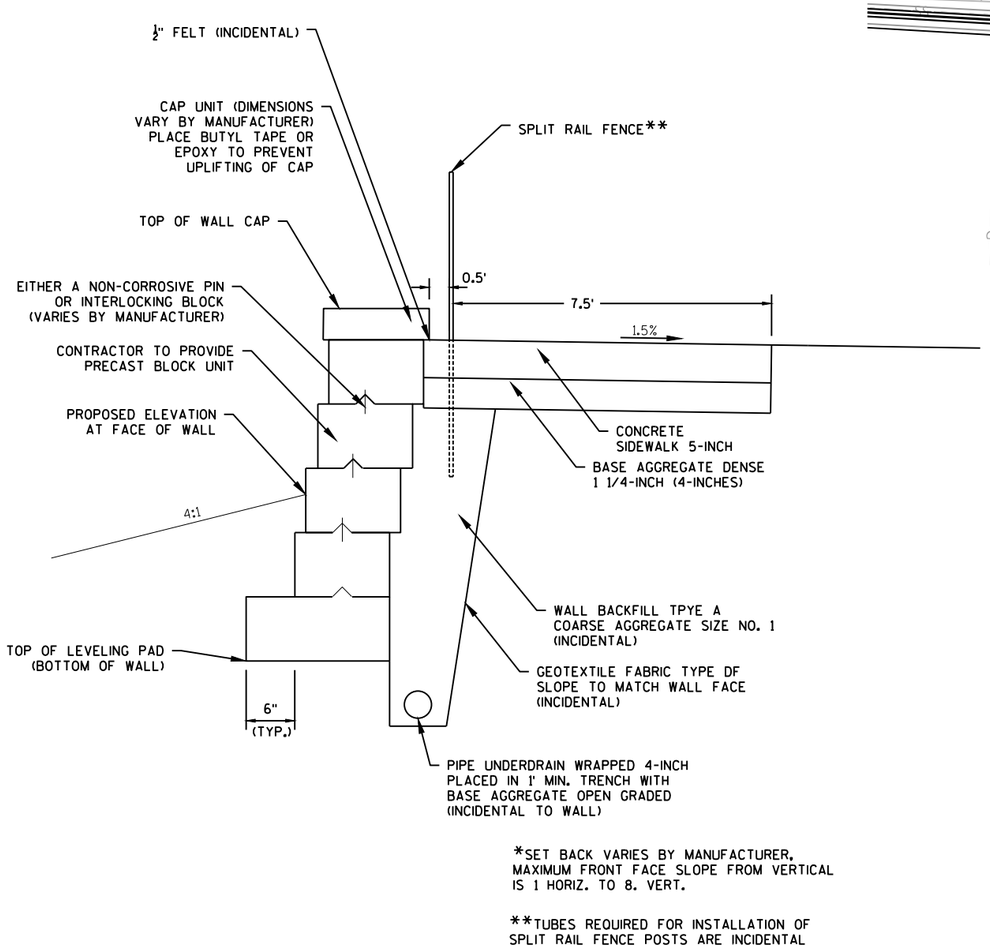
TYPICAL FINISHED EBS SECTION MOORLAND ROAD (CTH O)

STA. 43+96 TO STA. 78+59

Anticipated Areas of Overexcavation

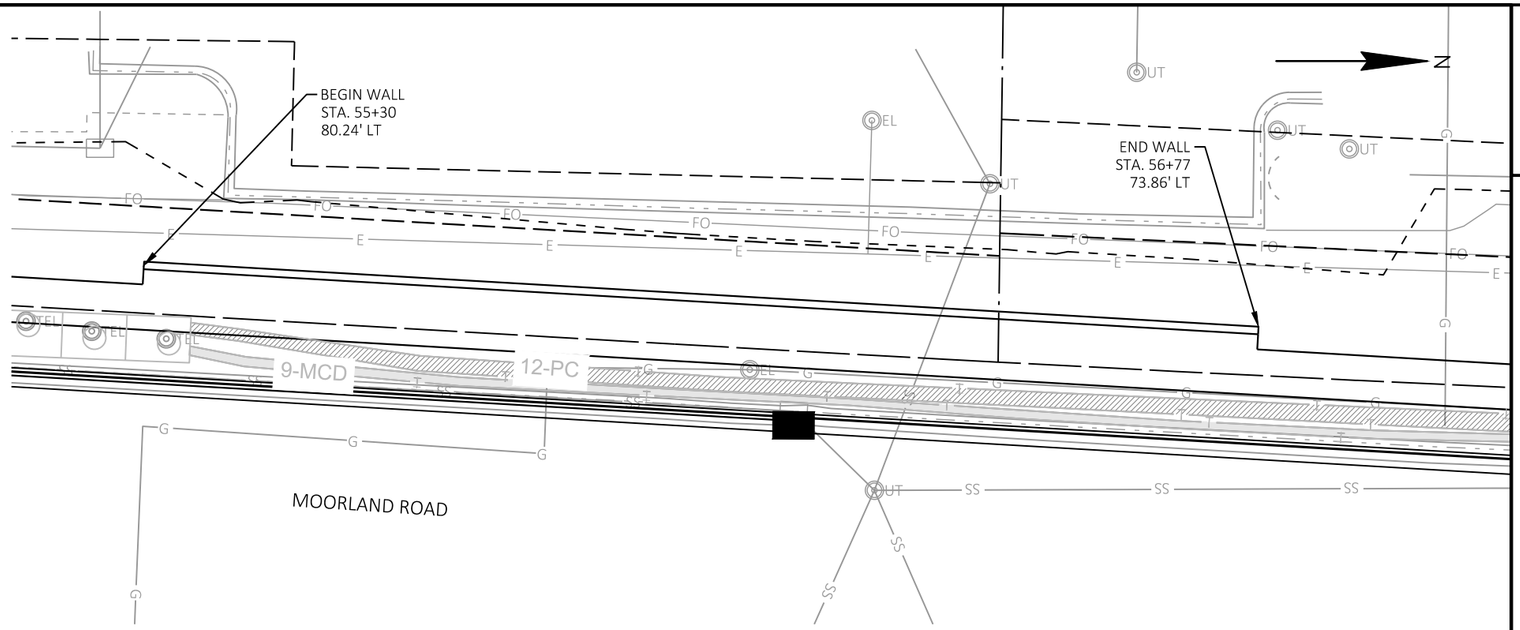
STA Range	Location	EBS Volume (CY)	Geogrid Area (SY)
STA. 43+96 to 48+25	SB	960	1440
STA 43+96 to 50+45	NB	3090	4640
STA. 72+25 to 78+59	SB	2060	3090
STA. 72+25 to 78+59	NB	2830	4250
Undistributed	--	675	2680
Total		9615	16100

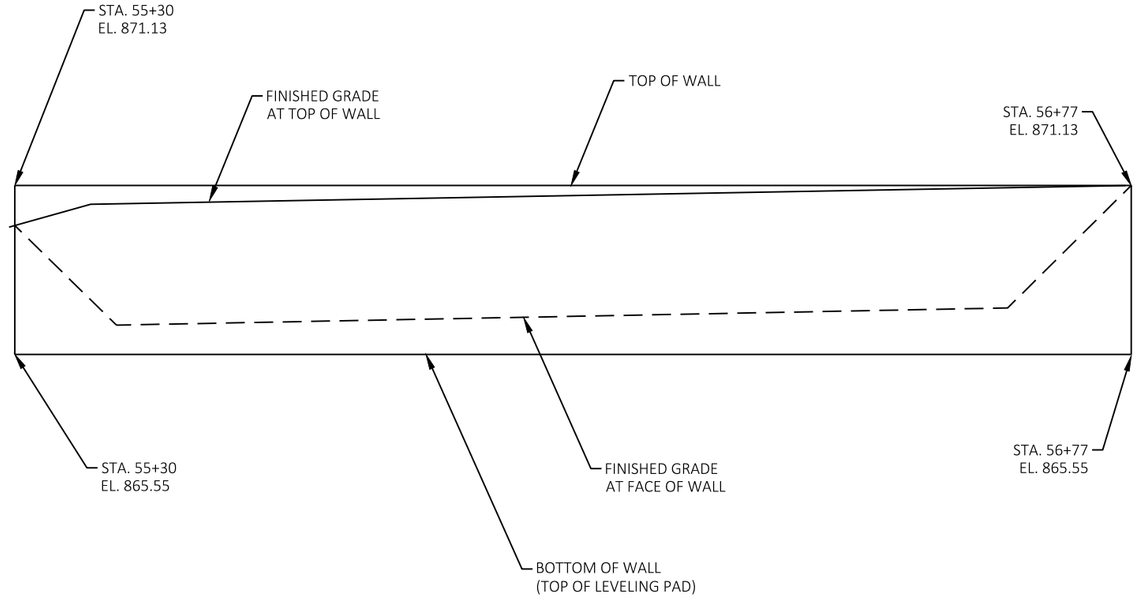
SOIL PARAMETERS					
Soil		Undrained		Drained	
	Unit Weight (pcf)	Friction Angle (degrees)	Cohesion (psf)	Friction Angle (degrees)	Cohesion (psf)
Wall Backfill	120	30	0	30	0
Retained/ Foundation Soil	125	0	1000	50	26



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

**TUBES REQUIRED FOR INSTALLATION OF SPLIT RAIL FENCE POSTS ARE INCIDENTAL

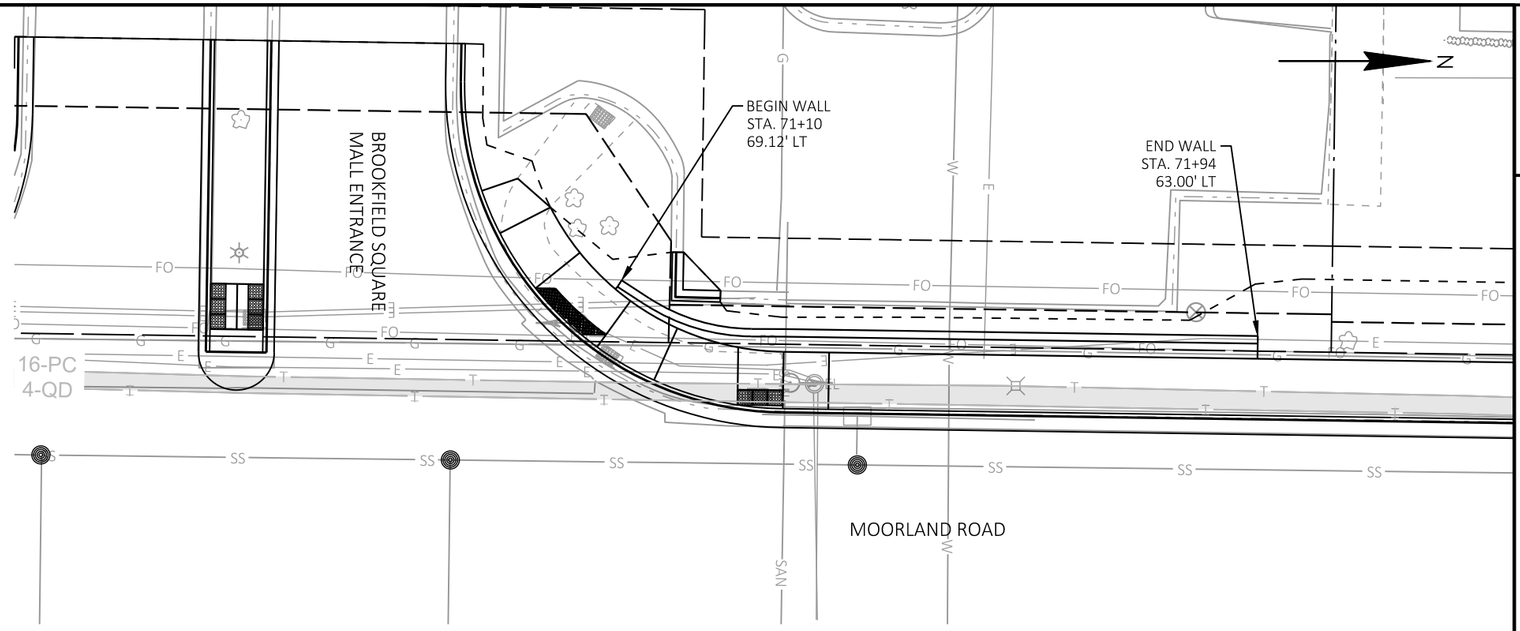


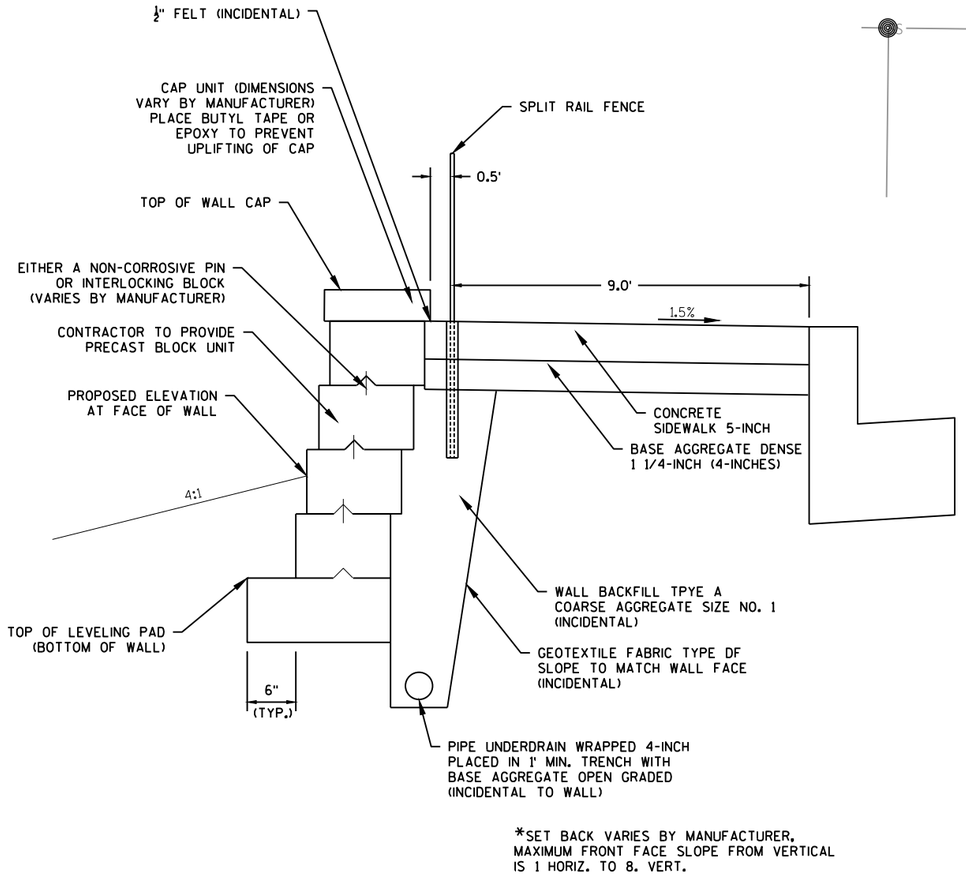


TYPICAL RETAINING WALL SECTION

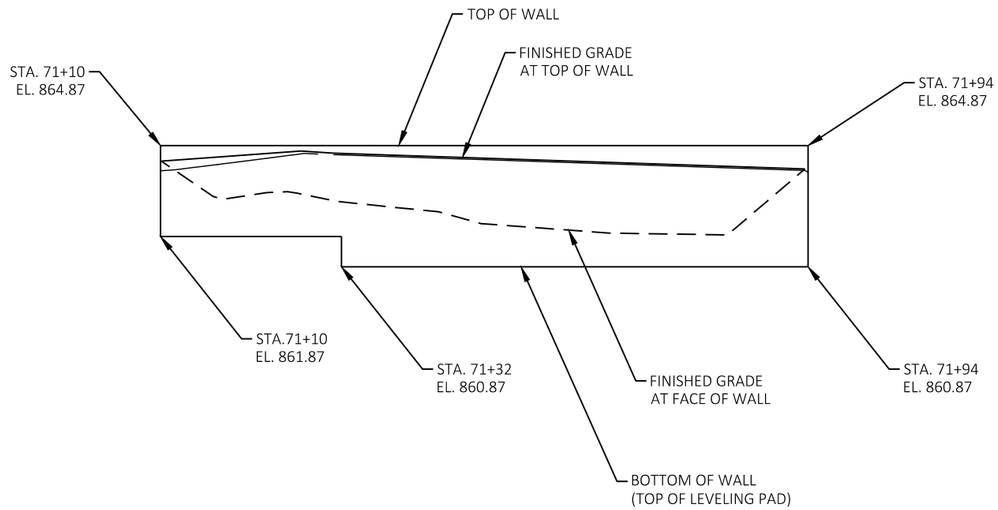
MODULAR BLOCK WALL
N.T.S.

SOIL PARAMETERS					
Soil		Undrained		Drained	
	Unit Weight (pcf)	Friction Angle (degrees)	Cohesion (psf)	Friction Angle (degrees)	Cohesion (psf)
Wall Backfill	120	30	0	30	0
Retained/ Foundation Soil	125	0	1000	50	26





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



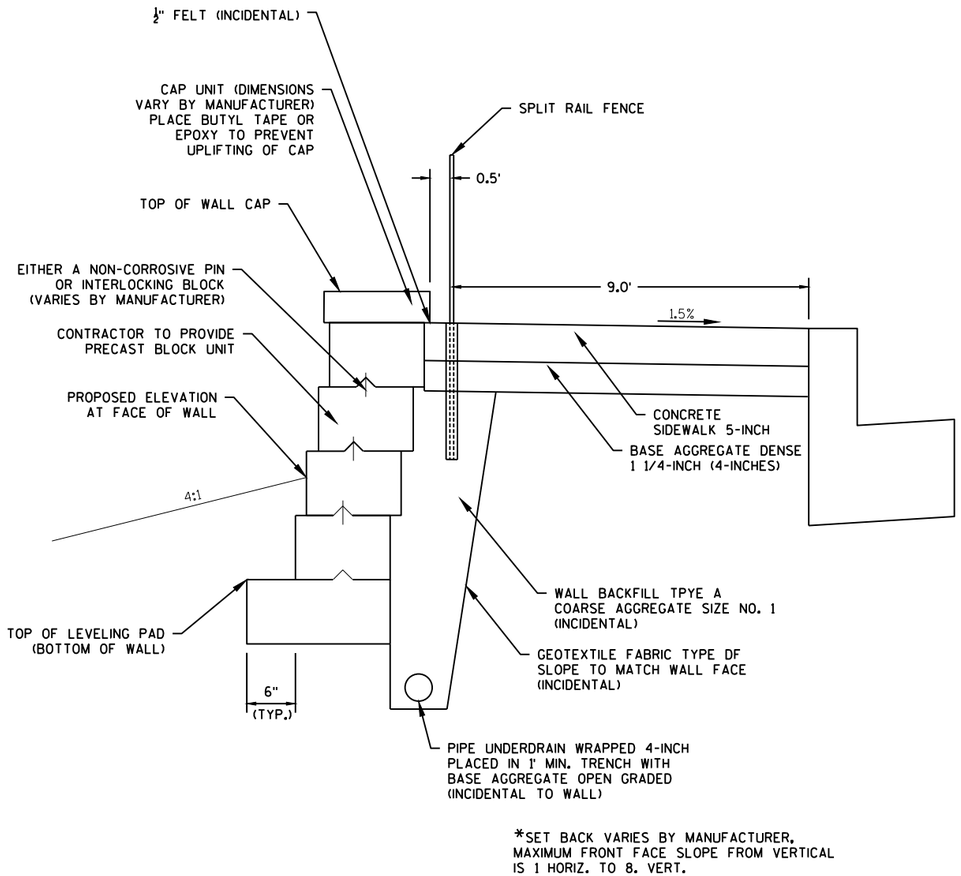
TYPICAL RETAINING WALL SECTION

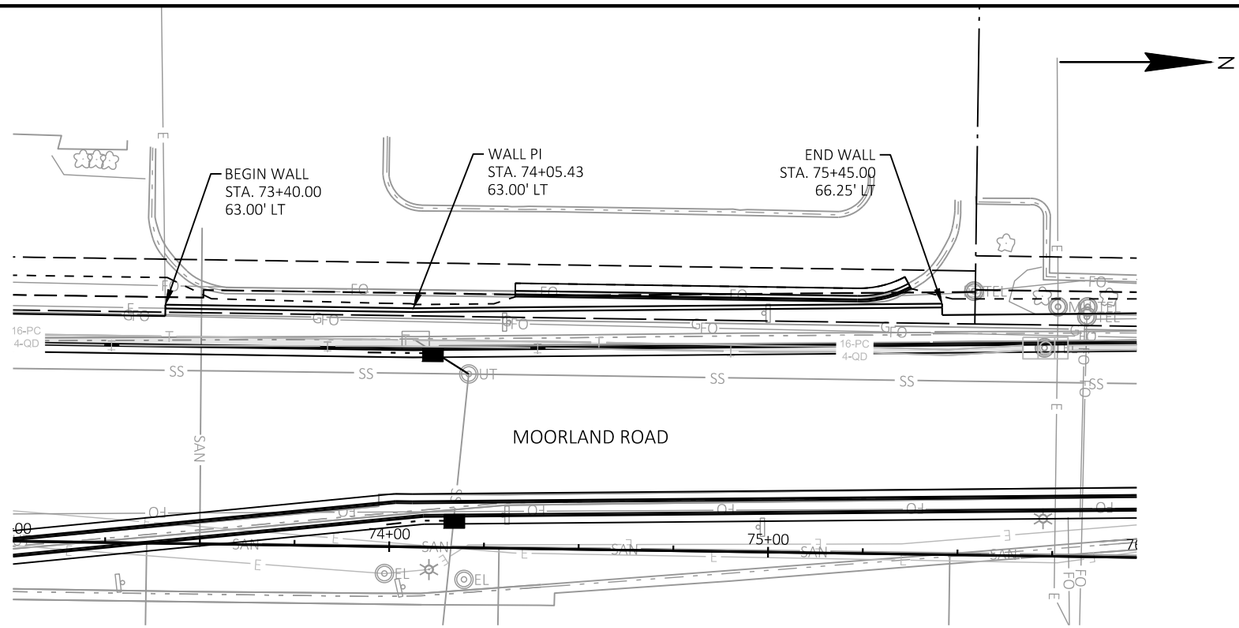
MODULAR BLOCK WALL
N.T.S.

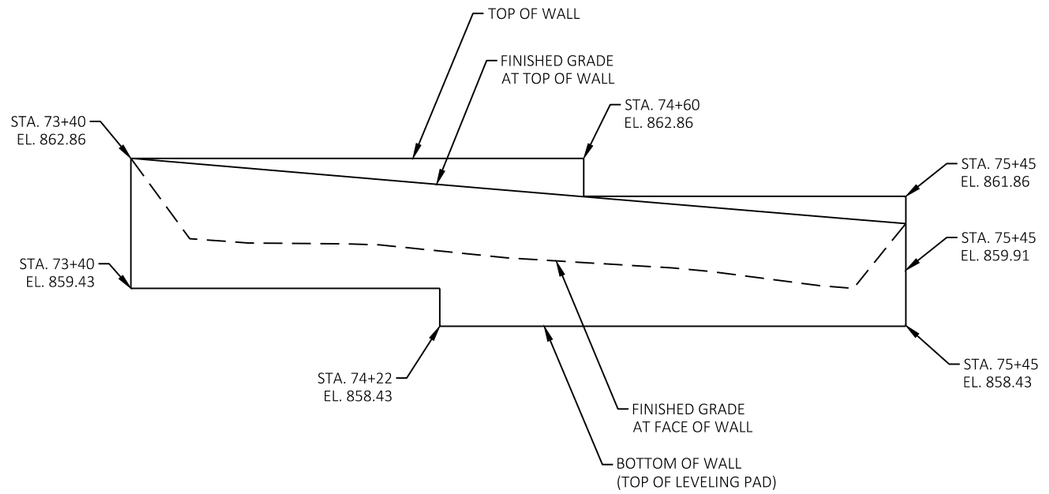
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET 8	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\021001_CD.DWG
LAYOUT NAME - 021002_cd
PLOT DATE : 11/28/2021 8:01 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

SOIL PARAMETERS					
Soil		Undrained		Drained	
	Unit Weight (pcf)	Friction Angle (degrees)	Cohesion (psf)	Friction Angle (degrees)	Cohesion (psf)
Wall Backfill	120	30	0	30	0
Retained/ Foundation Soil	125	0	1000	50	26



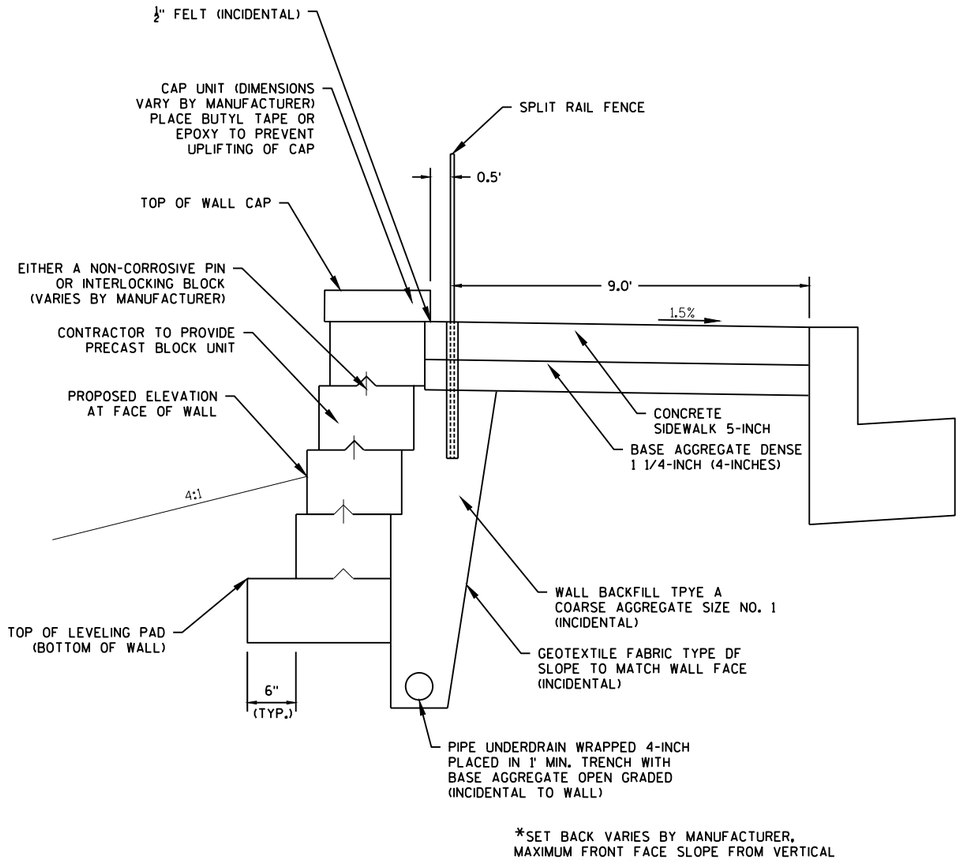


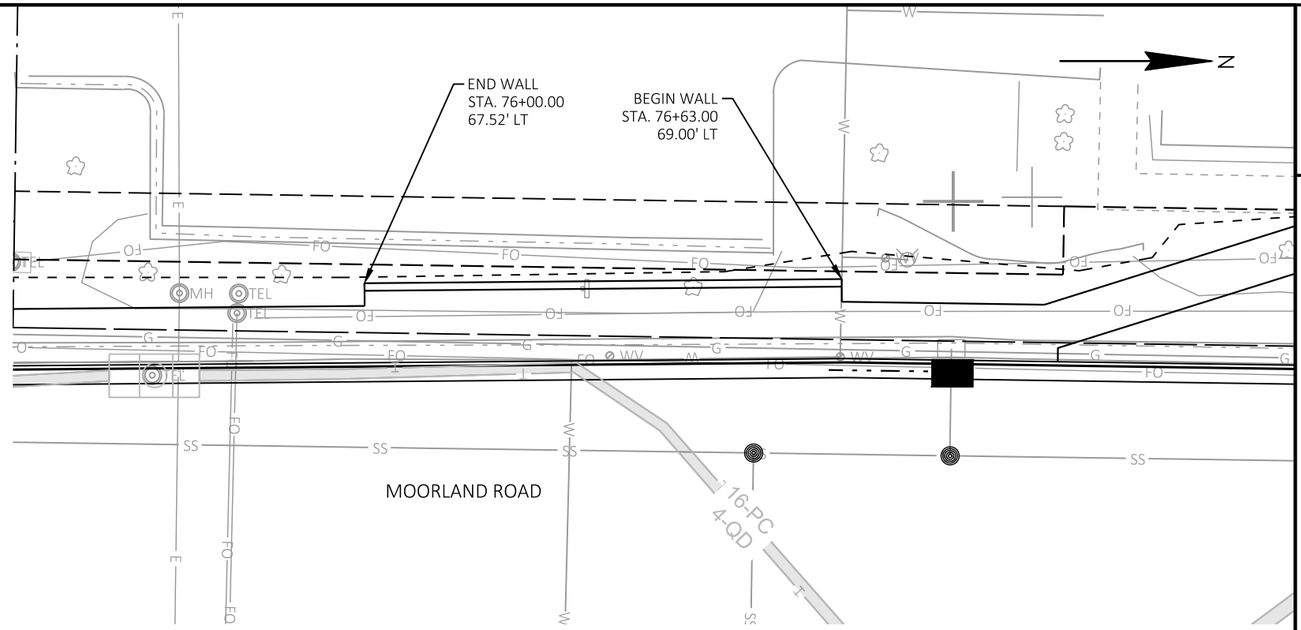


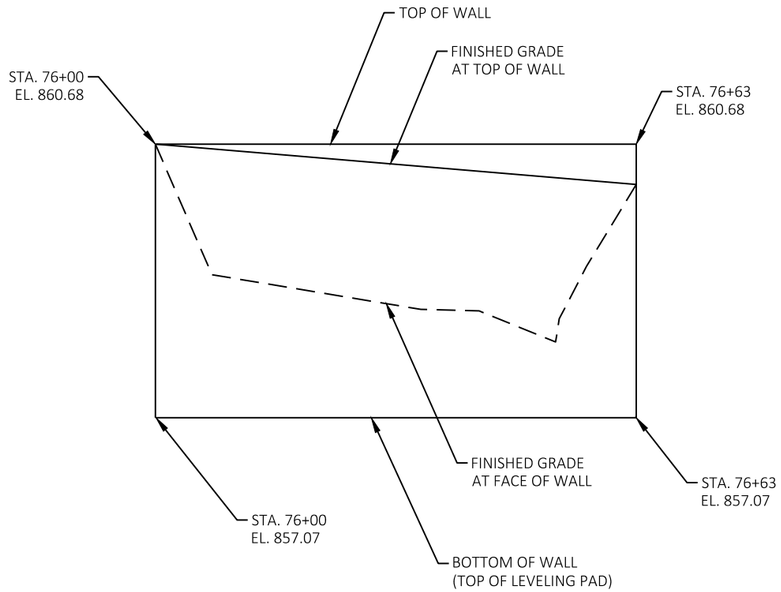
TYPICAL RETAINING WALL SECTION

MODULAR BLOCK WALL
N.T.S.

SOIL PARAMETERS					
Soil		Undrained		Drained	
	Unit Weight (pcf)	Friction Angle (degrees)	Cohesion (psf)	Friction Angle (degrees)	Cohesion (psf)
Wall Backfill	120	30	0	30	0
Retained/ Foundation Soil	125	0	1000	50	26



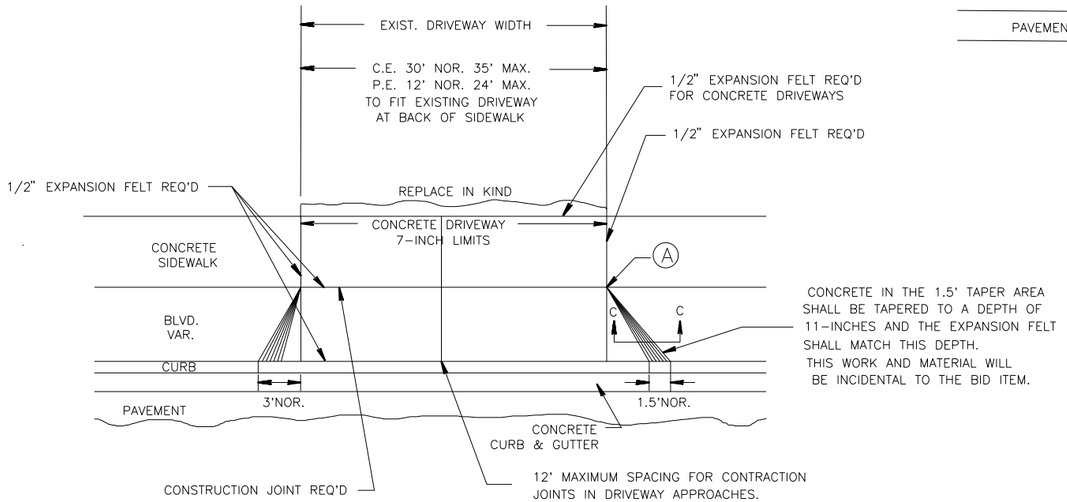




TYPICAL RETAINING WALL SECTION

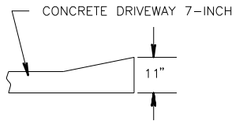
MODULAR BLOCK WALL
N.T.S.

2

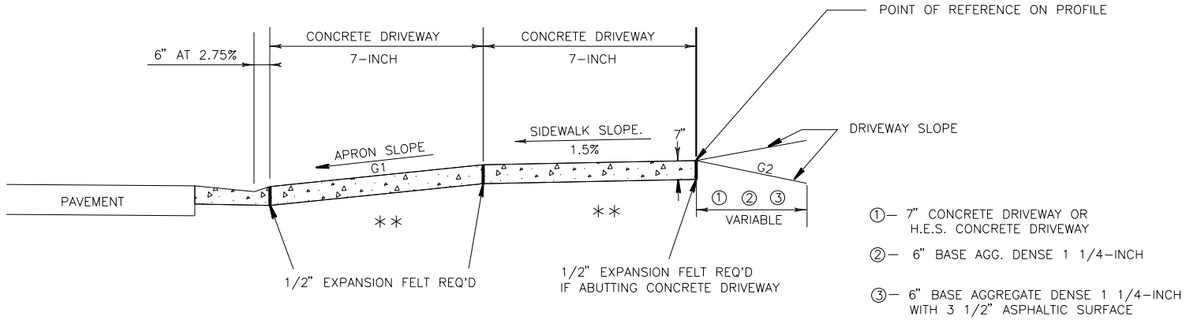


PLAN VIEW

Ⓐ ALIGN TAPER WITH FRONT OF SIDEWALK



SECTION C-C



TYPICAL SIDEWALK SECTION

① — 7" CONCRETE DRIVEWAY OR H.E.S. CONCRETE DRIVEWAY

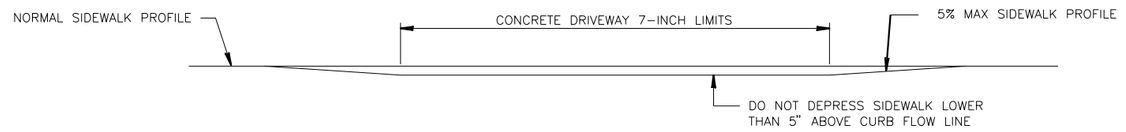
② — 6" BASE AGG. DENSE 1 1/4-INCH

③ — 6" BASE AGGREGATE DENSE 1 1/4-INCH WITH 3 1/2" ASPHALTIC SURFACE

** = 6" BASE AGGREGATE DENSE 1 1/4-INCH REQ'D UNDER CONCRETE DRWY

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

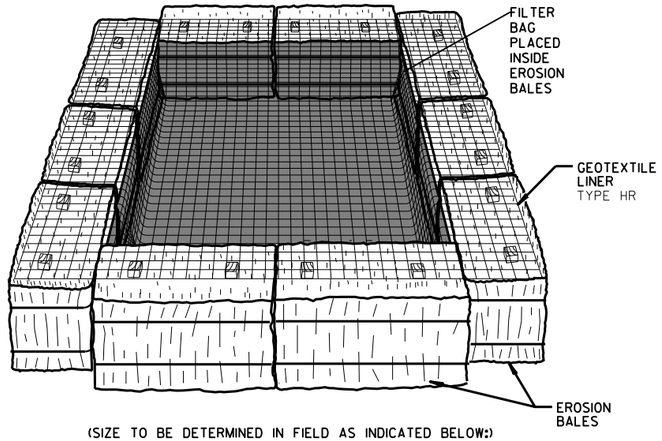
DEPRESS SIDEWALK PROFILE IF DRIVEWAY APPROACH EXCEEDS MAX SLOPE OF 10%



DEPRESSED SIDEWALK PROFILE DETAIL

DRIVEWAY ENTRANCE DETAIL WITH SIDEWALK, CURB & GUTTER WITH TERRACE

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET 11	E



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

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

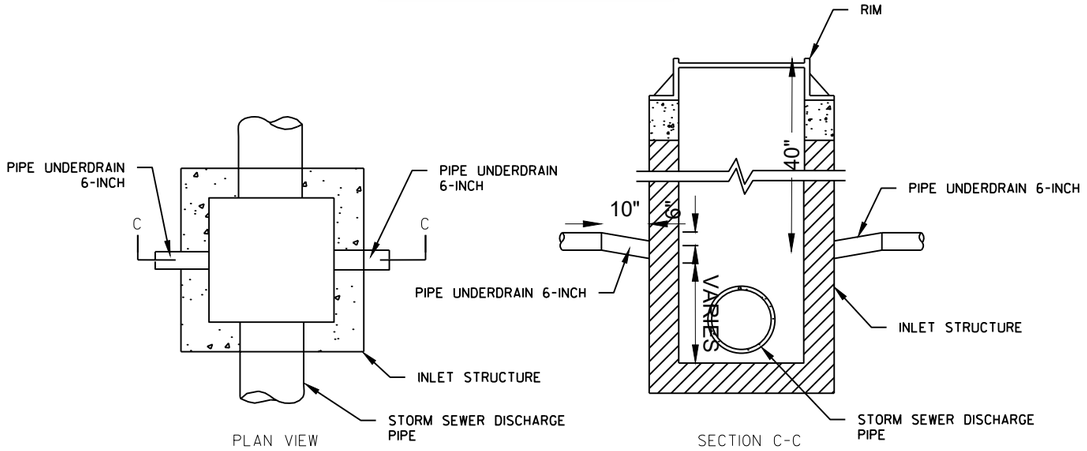
EXAMPLE:
CONTRACTOR INDICATES PUMP CAPABLE OF 50 GPM
HEIGHT OF BALES = 1.5 FT.

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

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

USE A 20 FT. X 27 FT. BASIN

TEMPORARY SETTLING BASIN



UNDERDRAIN OUTFALL AT INLET

NOTES:

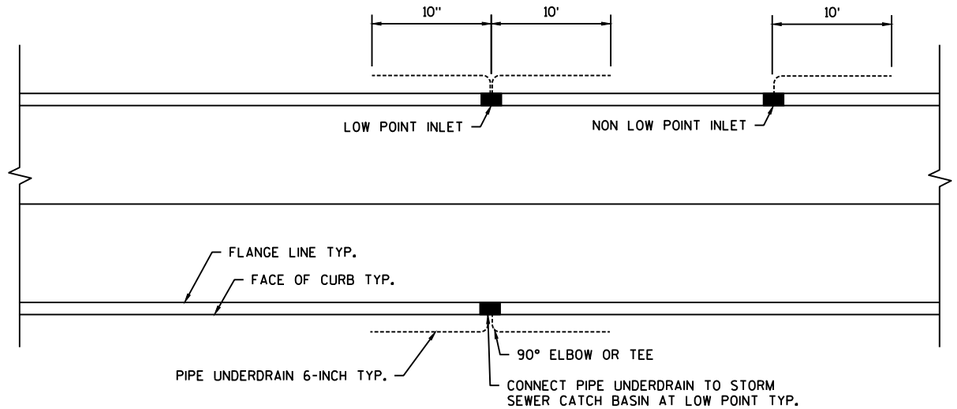
1. CONNECTIONS TO INLETS OR MANHOLES IN MEDIAN SHALL USE PIPE UNDERDRAIN, 6-INCH

2. PROVIDE TWO 6" DIA. OPENINGS FOR UNDERDRAIN PIPE A MINIMUM OF 40" BELOW THE RIM ELEVATION.

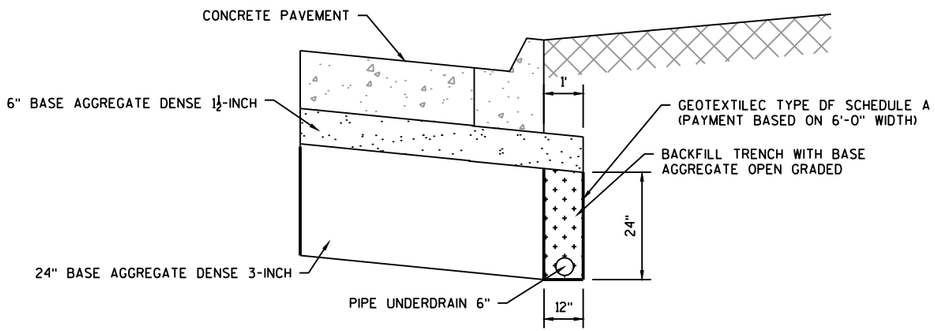
3. SEE MISCELLANEOUS QUANTITIES FOR PIPE UNDERDRAIN LOCATIONS.

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

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



PLAN



UNDERDRAIN TRENCH DETAIL

10' EACH SIDE OF INLET AT LOW POINTS IN EBS AREAS.
10' ON HIGH SIDE OF INLET AT ALL OTHER INLETS IN EBS AREAS
CONNECT PIPE UNDERDRAIN TO INLETS
SEE EDGEDRAIN OUTLET AND OUTFALL MARKERS

PIPE UNDERDRAIN CONNECTION TO EXISTING STRUCTURE INCIDENTAL TO PIPE UNDERDRAIN ITEM

2

N

50+49.83, -93.50' LT
864.20

50+55.83, -93.50' LT
863.99

50+64.67, -93.50' LT
863.95

50+43.83, -93.50' LT
864.15

50+41.42, -93.50' LT
864.12

50+66.90, -93.50' LT
864.04

50+40.12, -87.50' LT
864.03

50+62.93, -87.54' LT
863.92

50+58.95, -87.54' LT
863.85

50+40.12, -86.00' LT
863.98

50+55.83, -87.50' LT
863.90

50+49.79, -87.50' LT
864.16

50+43.83, -86.00' LT
864.09

50+49.83, -86.00' LT
864.14

50+43.83, -83.50' LT
863.62

50+49.87, -83.50' LT
863.72

50+43.79, -87.54' LT
864.11

51+18.43, -92.49' LT
864.85

51+16.21, -92.59' LT
864.93

51+20.46, -86.39' LT
864.87

51+20.42, -82.39' LT
864.87

51+23.20, -92.03' LT
864.94

51+34.20, -91.75' LT
865.36

51+40.19, -91.47' LT
865.74

51+46.18, -91.19' LT
865.83

51+45.83, -83.70' LT
865.71

51+23.93, -86.23' LT
864.79

51+39.91, -85.50' LT
865.63

51+27.92, -86.04' LT
864.85

51+39.84, -83.98' LT
865.61

51+33.85, -84.26' LT
865.51

51+39.72, -81.48' LT
865.19

51+33.92, -85.77' LT
865.27

51+33.73, -81.76' LT
865.09

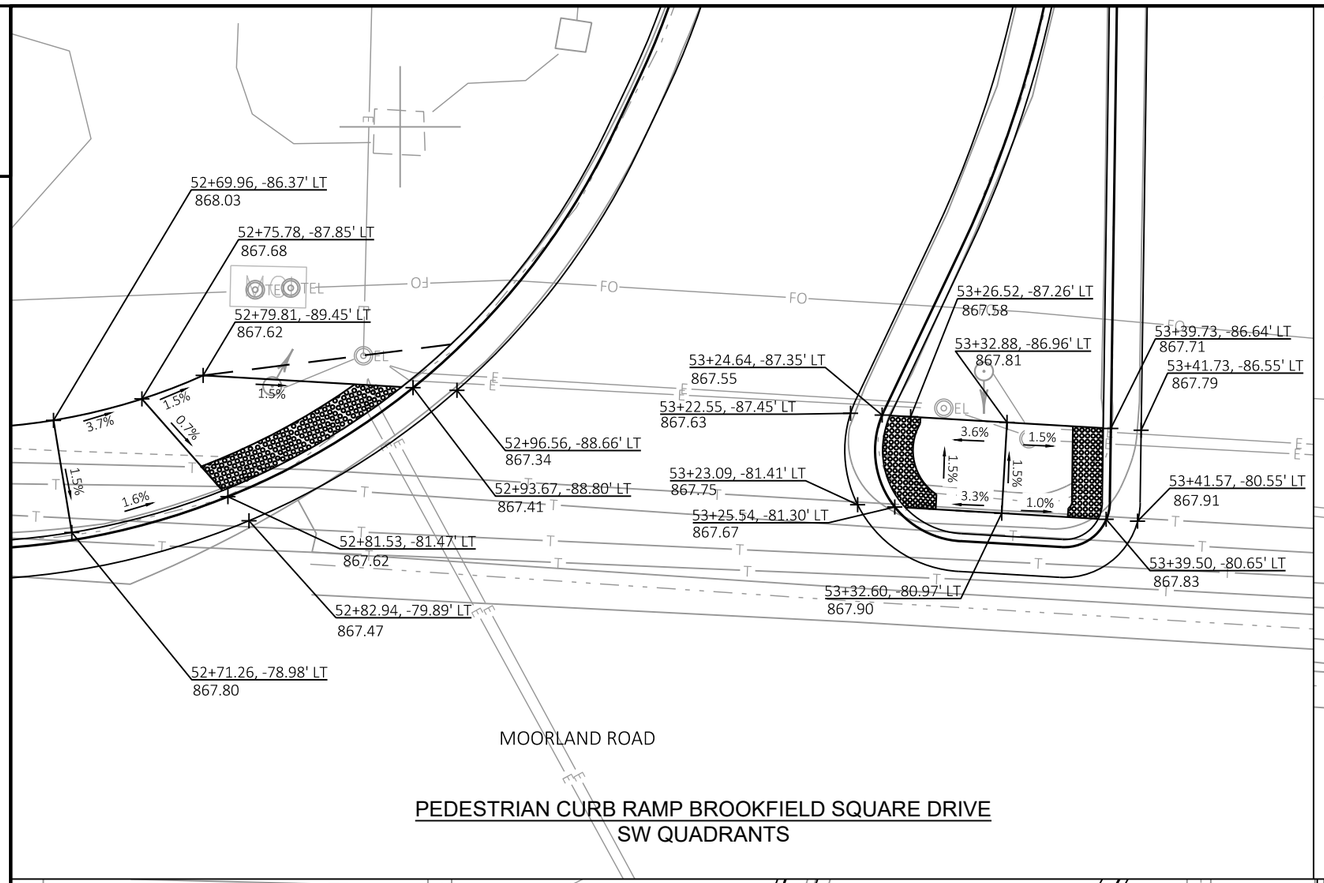
0.8% 3.5% 0.5% 0.8% 4.3% 0.9% 7.0% 6.0% 1.5%

0.7% 0.7% 1.5% 1.5% 1.5% 1.5% 1.5% 1.5% 1.5%

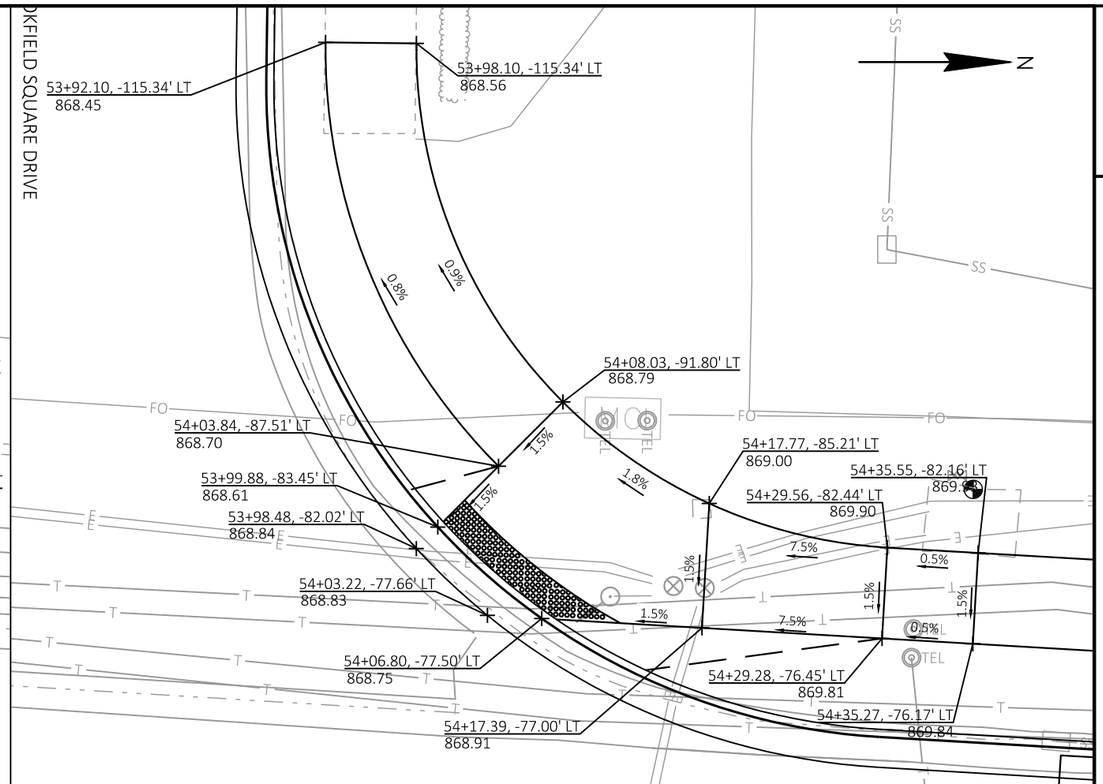
PEDESTRIAN CURB RAMP BROOKFIELD SQUARE MALL SOUTH ENTRANCE
SW AND NW QUADRANTS

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CURB RAMP DETAILS	SHEET 13	E

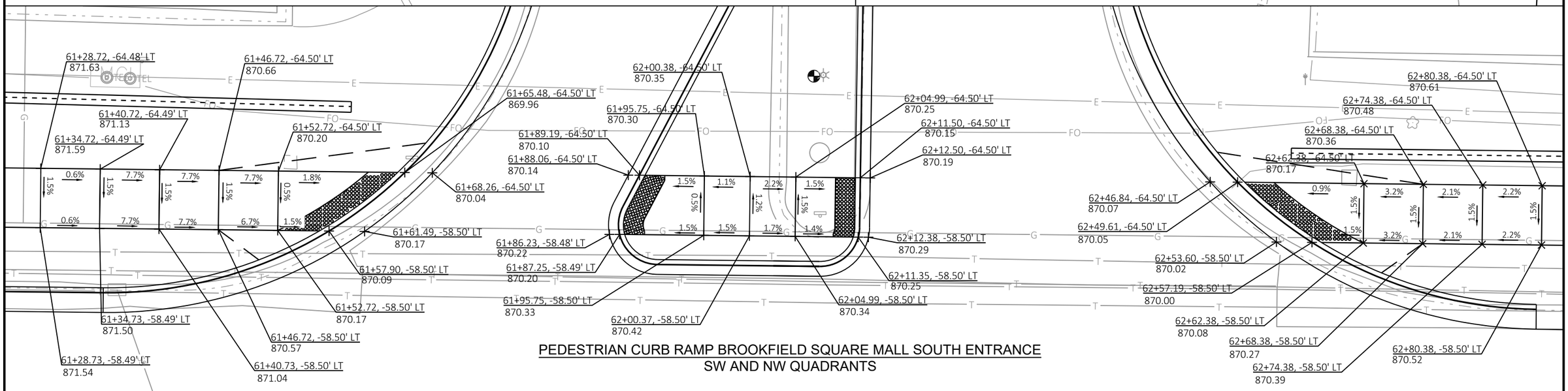
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LAYOUT NAME - 021000_cd
PLOT DATE : 11/28/2021 8:07 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42



PEDESTRIAN CURB RAMP BROOKFIELD SQUARE DRIVE
SW QUADRANTS

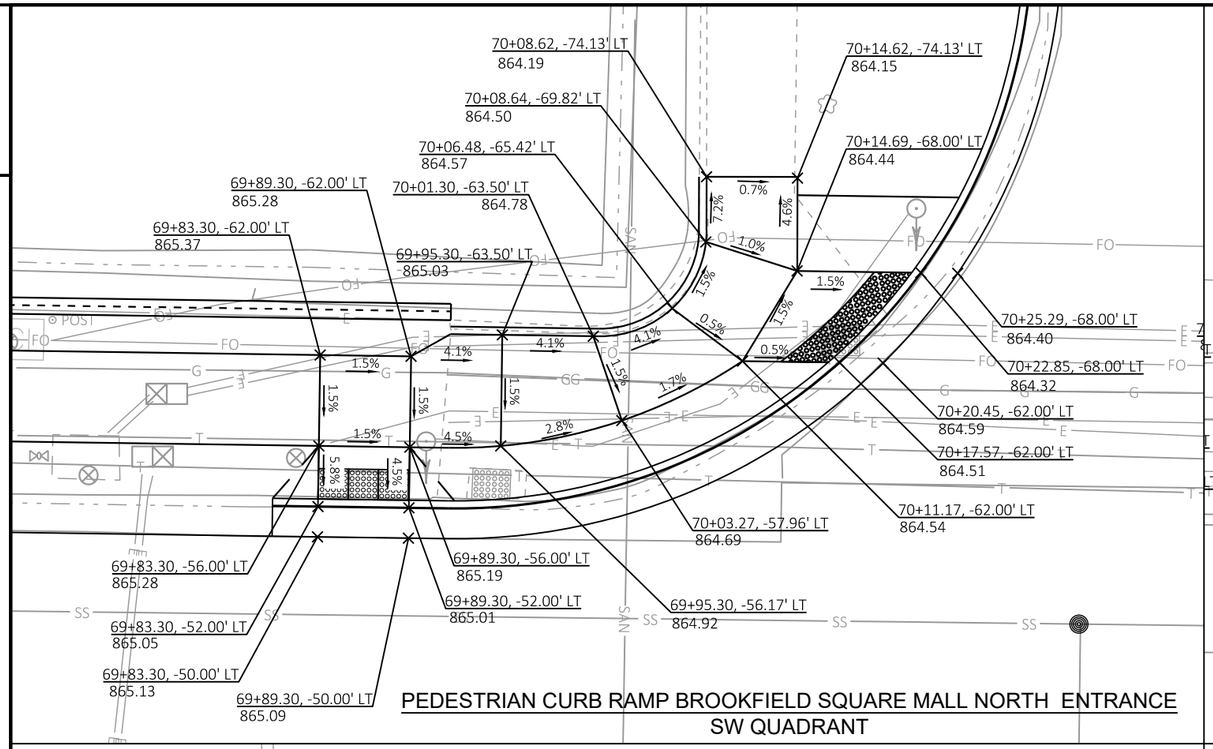


PEDESTRIAN CURB RAMP BROOKFIELD SQUARE DRIVE
NW QUADRANTS

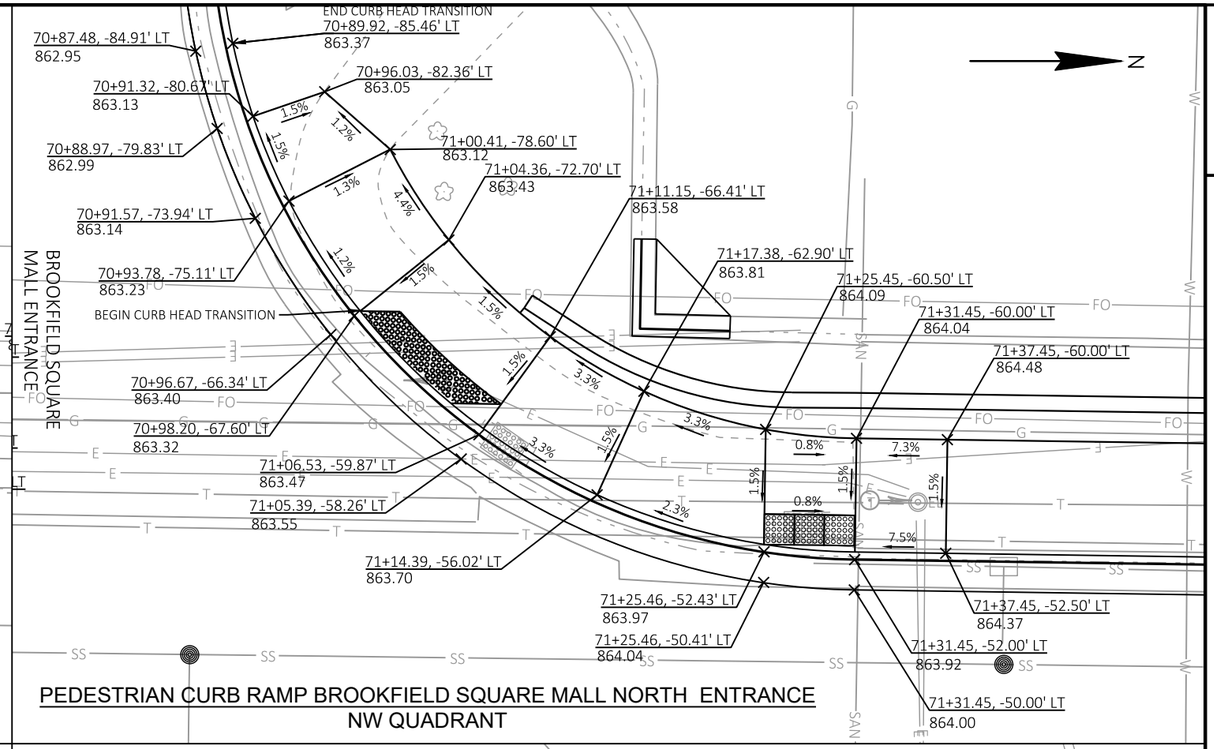


PEDESTRIAN CURB RAMP BROOKFIELD SQUARE MALL SOUTH ENTRANCE
SW AND NW QUADRANTS

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CURB RAMP DETAILS	SHEET 14	E

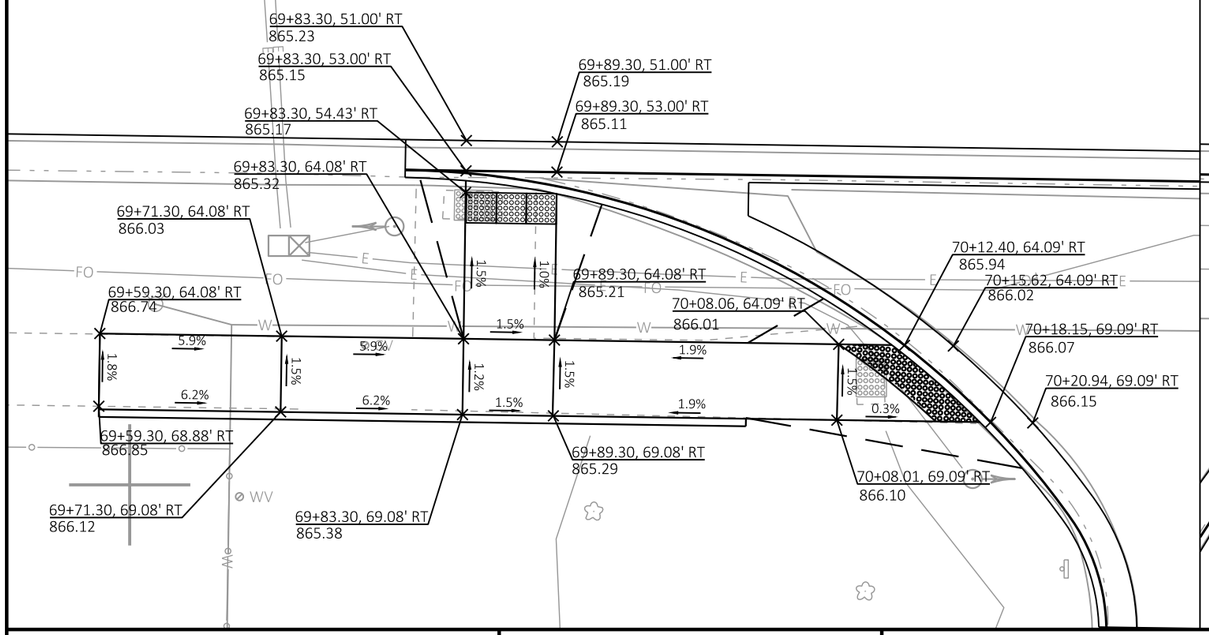


PEDESTRIAN CURB RAMP BROOKFIELD SQUARE MALL NORTH ENTRANCE
SW QUADRANT

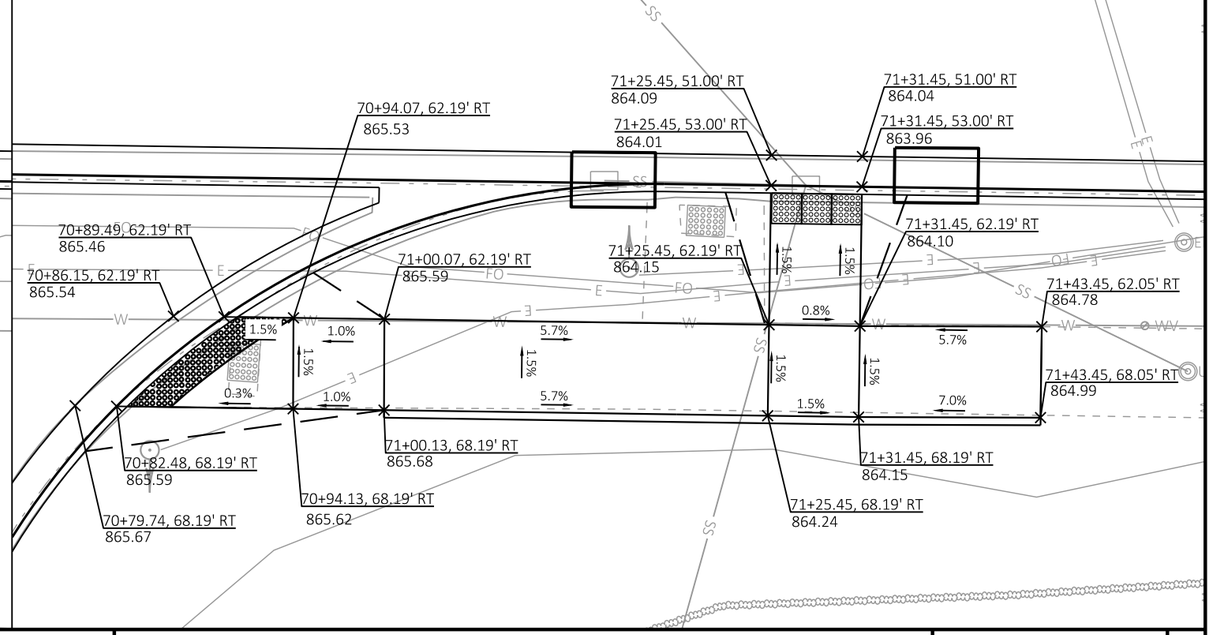


PEDESTRIAN CURB RAMP BROOKFIELD SQUARE MALL NORTH ENTRANCE
NW QUADRANT

PEDESTRIAN CURB RAMP BROOKFIELD SQUARE MALL NORTH ENTRANCE
SE QUADRANT



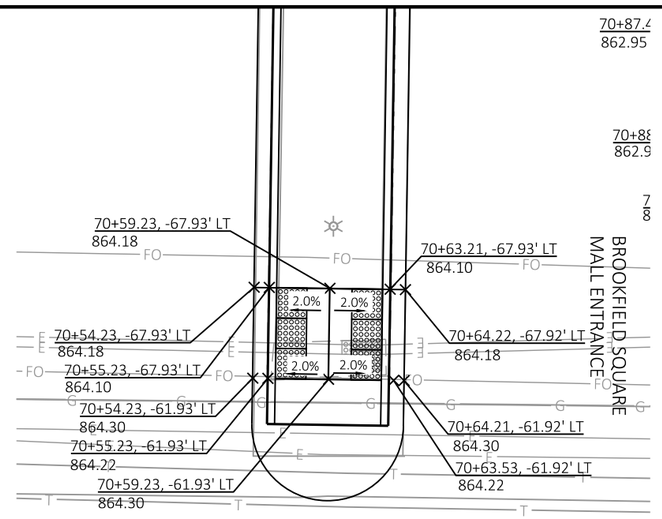
PEDESTRIAN CURB RAMP BROOKFIELD SQUARE MALL NORTH ENTRANCE
NE QUADRANT



PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CURB RAMP DETAILS	SHEET 15	E

2

N



PEDESTRIAN CURB RAMP BROOKFIELD SQUARE MALL NORTH ENTRANCE
MEDIAN

PEDESTRIAN CURB RAMP BROOKFIELD SQUARE MALL NORTH ENTRANCE
SOUTH LEG MEDIAN

PEDESTRIAN CURB RAMP BROOKFIELD SQUARE MALL NORTH ENTRANCE
NORTH LEG MEDIAN

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CURB RAMP DETAILS	SHEET 16	E

2

2

MATCHLINE STA. 52+00

N

I-94 WB ENTRANCE RAMP

I-94 WB EXIT RAMP

MOORLAND ROAD (CTH O)

REMOVE SURFACE DRAIN

REMOVE CITY OF BROOKFIELD SIGN

EX. R/W

37+00 38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CONCRETE SIDEWALK
- X CLEARING AND GRUBBING INDIVIDUAL TREE
- REMOVING CURB & GUTER
- REMOVING CURB & GUTTER
- SAWING CONCRETE
- SAWING ASPHALT

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	REMOVAL PLANS	SHEET 17	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\021200_RM.DWG
LAYOUT NAME - 021201_rm

PLOT DATE : 10/1/2021 1:10 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

BROOKFIELD SQUARE DRIVE

BROOKFIELD SQUARE

MALL ENTRANCE

MATCHLINE STA. 67+00

MATCHLINE STA. 52+00

N

EX. R/W

EX. R/W

53+00 54+00 55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00

63+34.95

MOORLAND ROAD (CTH O)

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CONCRETE SIDEWALK
- X CLEARING AND GRUBBING INDIVIDUAL TREE
- REMOVING CURB & GUTER
- REMOVING CURB & GUTTER
- SAWING CONCRETE
- SAWING ASPHALT

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	REMOVAL PLANS	SHEET 18	E

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LAYOUT NAME - 021202_rm

PLOT DATE : 10/1/2021 1:10 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

BROOKFIELD SQUARE
MALL ENTRANCE

MOORLAND ROAD (CTH O)

BLUEMOUND ROAD (US 18)

MATCHLINE STA. 67+00

68+00 69+00 70+00 71+00 72+00 73+00 74+00 75+00 76+00 77+00 78+00 79+00 80+00 81+00 82+00

EX. R/W

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CONCRETE SIDEWALK
- X — CLEARING AND GRUBBING INDIVIDUAL TREE
- REMOVING CURB & GUTER
- REMOVING CURB & GUTTER
- SAWING CONCRETE
- SAWING ASPHALT

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	REMOVAL PLANS	SHEET 19	E

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LAYOUT NAME - 021203_rm

PLOT DATE : 10/1/2021 1:10 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

MOORLAND ROAD (CTH O)

I-94 WB EXIT RAMP

BORE 28B BORE 28A

BORE 27

BORE 2

BORE 1

38+00 39+00 40+00 41+00 42+00 43+00

MATCHLINE STA. 43+25

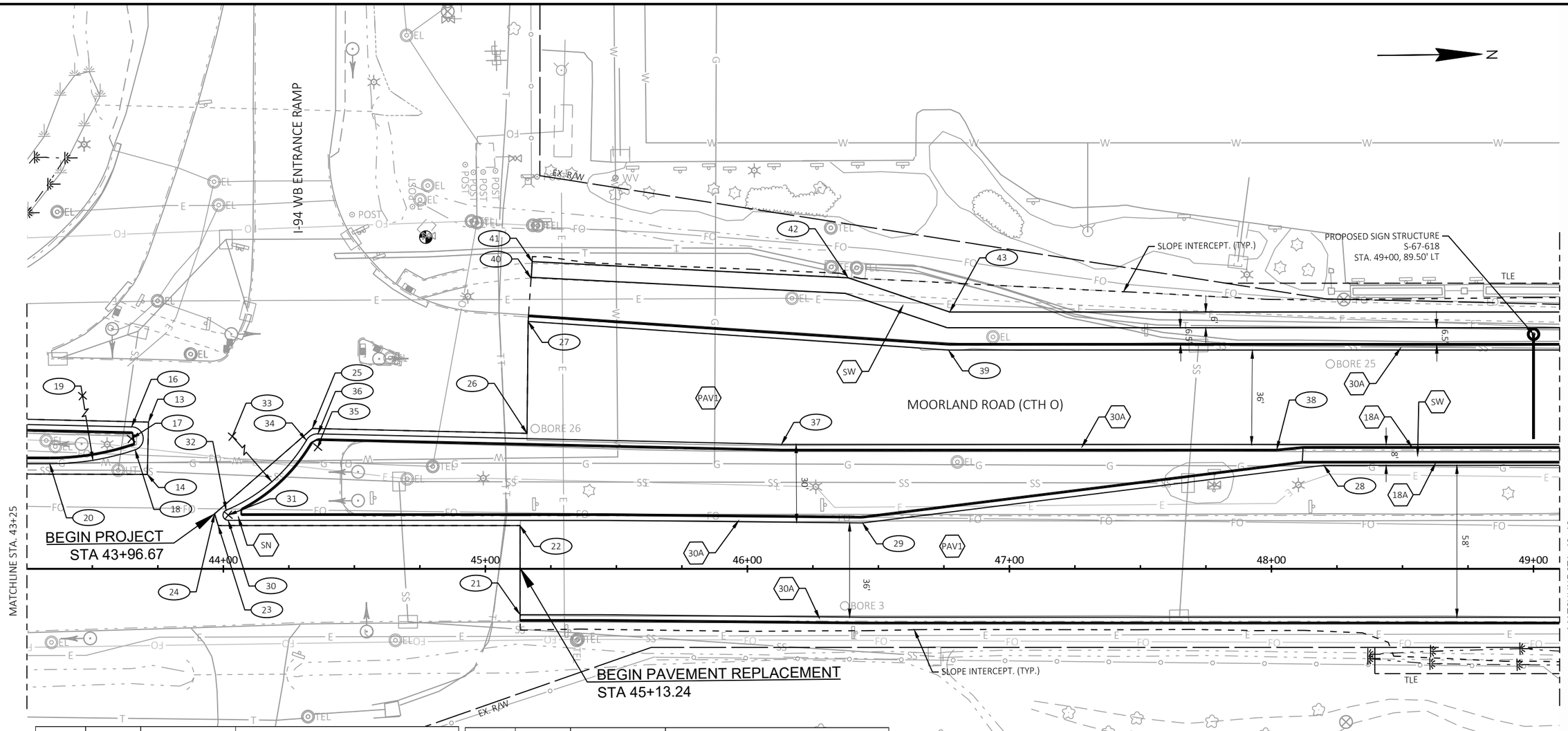
LEGEND

PAV1	8.5" CONCRETE PAVEMENT
SW	CONCRETE SIDEWALK 5-INCH
30A	CONCRETE CURB & GUTTER 30-INCH, TYPE A
18A	CONCRETE CURB & GUTTER 18-INCH, TYPE A
SN	CONCRETE MEDIAN SLOPED NOSE
DWY	CONCRETE DRIVEWAY 7-INCH
AS	3½ - INCH ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

POINT NUMBER	STATION	OFFSET		DESCRIPTION
1	38+92.34	18.39'	LT	BEGIN C&G, MATCH EXISTING
2	38+92.56	16.40'	LT	SAWCUT, MATCH EXISTING
3	40+95.66	40.60'	LT	END TAPER
4	40+77.81	36.64'	LT	SAWCUT, MATCH EXISTING
5	41+99.70	59.89'	LT	SAWCUT, MATCH EXISTING
6	41+99.65	57.84'	LT	BEGIN C&G, MATCH EXISTING

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 20	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021200_pd
PLOT DATE : 10/1/2021 1:12 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42



POINT NUMBER	STATION	OFFSET		DESCRIPTION
13	43+71.45	56.00'	LT	SAWCUT, MATCH EXISTING
14	43+71.00	36.00'	LT	SAWCUT, MATCH EXISTING
15	--	--	--	NOT USED
16	43+65.01	54.15'	LT	BEGIN 4.5' RADIUS
17	43+64.90	49.65'	LT	4.5' RADIUS
18	43+66.33	45.38'	LT	END 4.5' RADIUS, BEGIN 102' RADIUS
19	43+33.95	142.11'	LT	102' RADIUS
20	43+33.74	40.11'	LT	END 102' RADIUS
21	45+13.24	17.50'	RT	SAWCUT, MATCH EXISTING
22	45+13.24	16.50'	LT	SAWCUT, MATCH EXISTING
23	43+98.05	16.50'	LT	SAWCUT, MATCH EXISTING
24	43+69.67	20.99'	LT	SAWCUT, MATCH EXISTING
25	44+33.97	53.55'	LT	SAWCUT, MATCH EXISTING
26	45+15.90	51.70'	LT	SAWCUT, MATCH EXISTING
27	45+16.32	94.38'	LT	SAWCUT, MATCH EXISTING, BEGIN TAPER

POINT NUMBER	STATION	OFFSET		DESCRIPTION
28	48+20.01	39.41'	LT	BEGIN TAPER, CURB & GUTTER TRANSITION
29	46+43.95	17.50'	LT	END TAPER
30	44+01.89	18.50'	LT	BEGIN 2' RADIUS
31	44+01.89	20.50'	LT	2' RADIUS
32	44+01.11	22.34'	LT	END 2' RADIUS, BEGIN 65' RADIUS
33	43+75.80	82.21'	LT	65' RADIUS
34	44+31.70	49.05'	LT	END 65' RADIUS, BEGIN 5' RADIUS
35	44+36.00	46.50'	LT	5' RADIUS
36	44+36.12	51.50'	LT	END 5' RADIUS
37	46+13.01	47.50'	LT	CURB & GUTTER PI
38	48+02.01	45.50'	LT	CURB & GUTTER TRANSITION
39	46+76.74	83.50'	LT	END TAPER
40	45+17.44	110.84'	LT	SAWCUT, MATCH EXISTING
41	45+17.86	117.22'	LT	SAWCUT, MATCH EXISTING
42	46+38.80	110.95'	LT	BEGIN SIDEWALK TAPER
43	46+77.23	98.00'	LT	END SIDEWALK TAPER

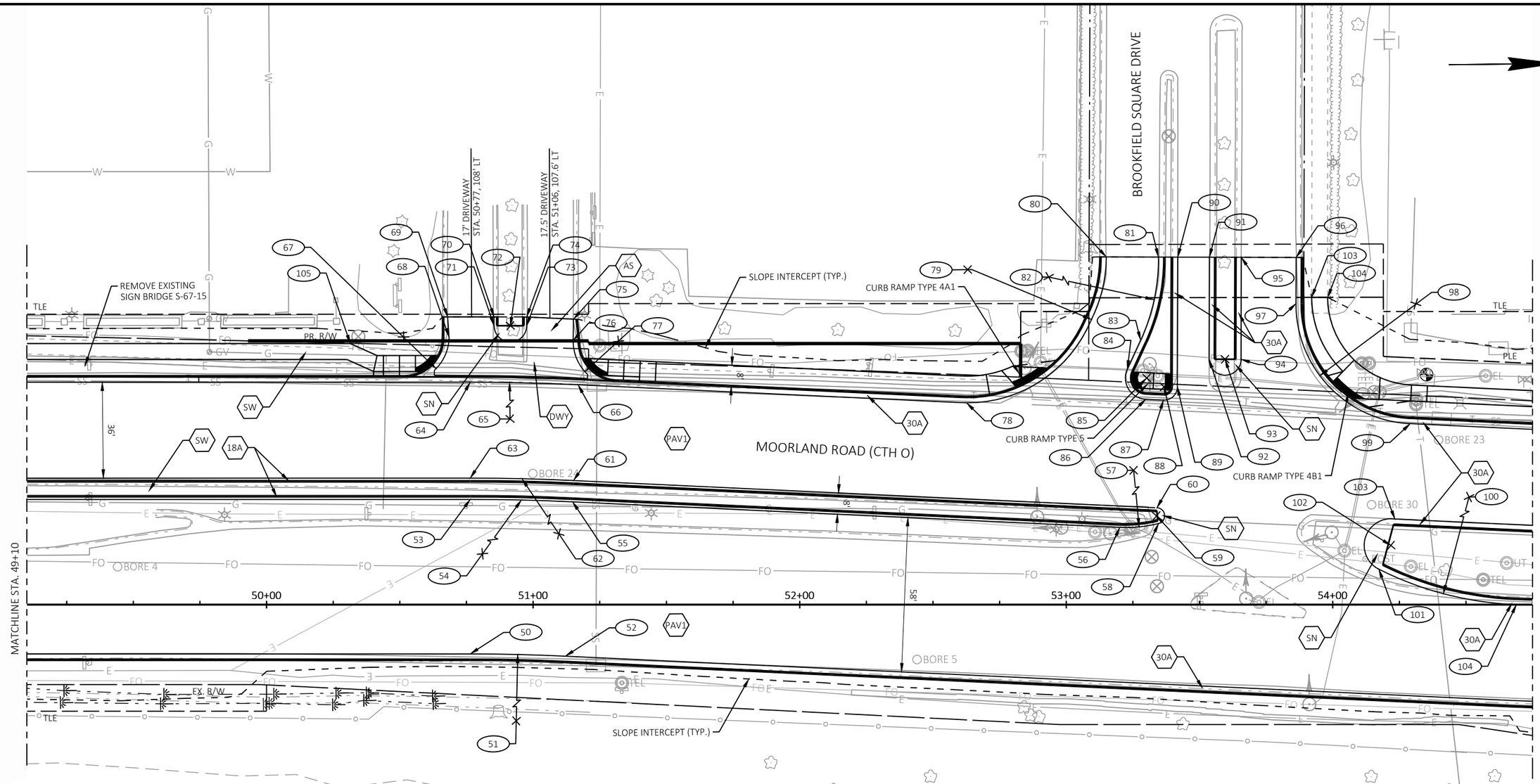
LEGEND

- PAV1 — 8.5" CONCRETE PAVEMENT
- SW — CONCRETE SIDEWALK 5-INCH
- 30A — CONCRETE CURB & GUTTER 30-INCH, TYPE A
- 18A — CONCRETE CURB & GUTTER 18-INCH, TYPE A
- SN — CONCRETE MEDIAN SLOPED NOSE
- DWY — CONCRETE DRIVEWAY 7-INCH
- AS — 3 ½ - INCH ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 21	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021201_pd
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WISDOT/CADDS SHEET 42

2



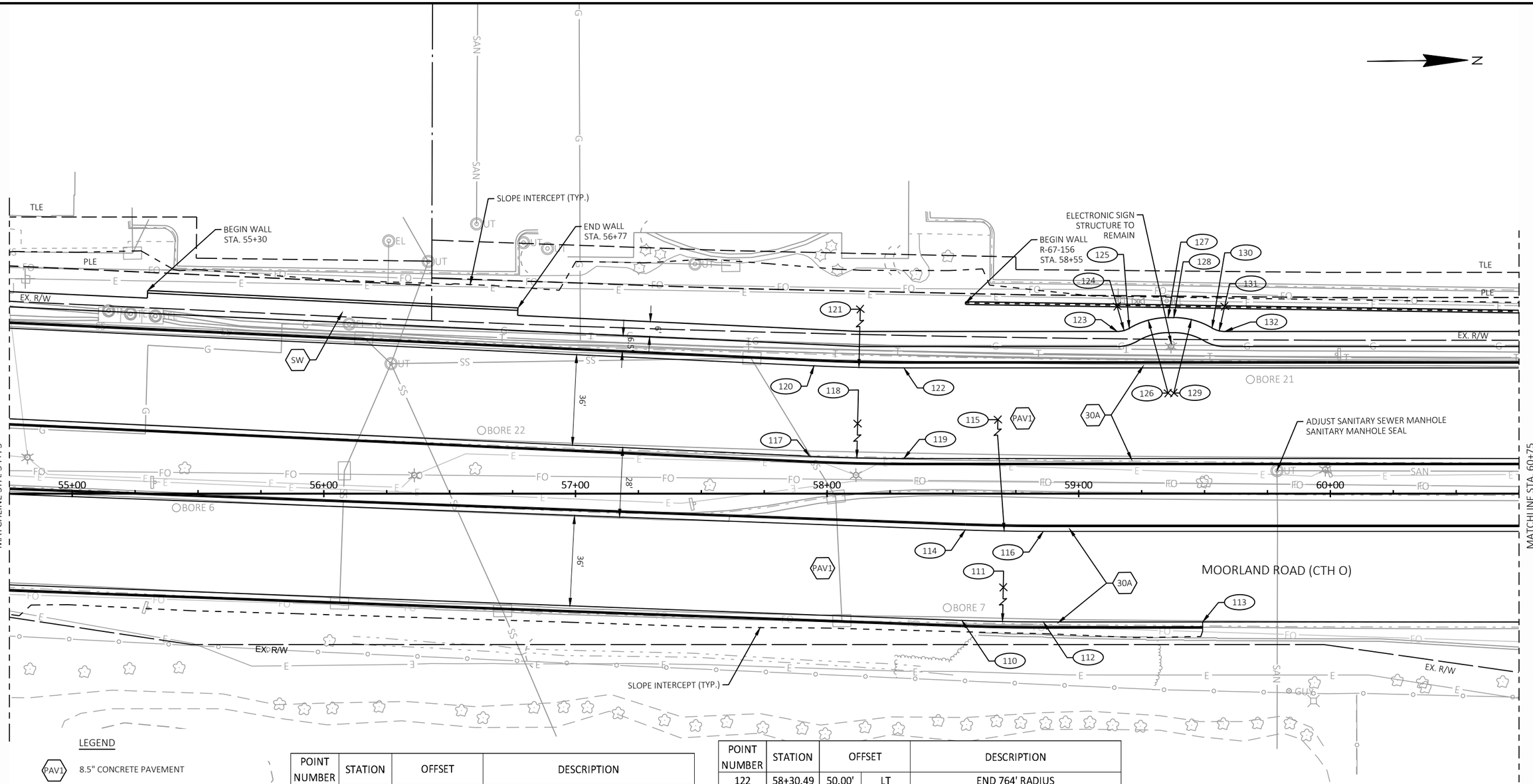
LEGEND

PAV1	8.5" CONCRETE PAVEMENT
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30A	CONCRETE CURB & GUTTER 30-INCH, TYPE A
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DWY	CONCRETE DRIVEWAY 7-INCH
AS	3 ½ - INCH ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 22	E

POINT NUMBER	STATION	OFFSET		DESCRIPTION
50	50+76.38	18.50'	RT	BEGIN 764' RADIUS
51	50+76.37	782.50'	RT	764' RADIUS
52	51+12.08	19.34'	RT	END 764' RADIUS
53	50+76.37	39.50'	LT	BEGIN 822' RADIUS
54	50+76.37	782.50'	RT	822' RADIUS
55	51+14.79	38.60'	LT	END 822' RADIUS
56	53+20.11	29.00'	LT	BEGIN 50' RADIUS
57	53+22.45	78.94'	LT	50' RADIUS
58	53+34.62	30.45'	LT	END 50' RADIUS, BEGIN 3' RADIUS
59	53+33.89	33.36'	LT	3' RADIUS
60	53+34.03	36.35'	LT	END 3' RADIUS
61	51+15.17	46.59'	LT	BEGIN 830' RADIUS
62	50+76.37	782.50'	RT	830' RADIUS
63	50+76.37	47.50'	LT	END 830' RADIUS
64	50+76.37	83.50'	LT	BEGIN 866' RADIUS
65	50+76.37	782.50'	RT	866' RADIUS
66	51+16.85	82.55'	LT	END 866' RADIUS
67	50+51.40	100.50'	LT	17' RADIUS
68	50+68.40	100.50'	LT	END 17' RADIUS
69	50+67.90	108.00'	LT	END C&G, MATCH EXISTING
70	50+85.34	108.00'	LT	BEGIN C&G, MATCH EXISTING
71	50+85.34	104.70'	LT	BEGIN 6' RADIUS
72	50+91.43	104.69'	LT	6' RADIUS
73	50+97.55	104.65'	LT	END 6' RADIUS
74	50+97.55	107.98'	LT	END C&G, MATCH EXISTING
75	51+15.13	107.13'	LT	BEGIN C&G, MATCH EXISTING
76	51+15.01	99.16'	LT	BEGIN 17' RADIUS
77	51+32.01	98.86'	LT	17' RADIUS
78	52+62.65	75.73'	LT	BEGIN 50' RADIUS
79	52+63.04	125.76'	LT	50' RADIUS
80	53+15.00	130.53'	LT	END C&G, MATCH EXISTING
81	53+34.60	130.48'	LT	BEGIN 73' RADIUS, MATCH EXISTING
82	52+61.59	129.78'	LT	73' RADIUS
83	53+27.91	99.27'	LT	END 73' RADIUS
84	53+22.93	88.43'	LT	BEGIN 8' RADIUS
85	53+30.20	85.09'	LT	8' RADIUS
86	53+29.82	77.09'	LT	END 8' RADIUS
87	53+36.49	76.78'	LT	BEGIN 5' RADIUS
88	53+36.72	81.78'	LT	5' RADIUS
89	53+41.72	81.76'	LT	END 5' RADIUS
90	53+41.86	130.46'	LT	END C&G, MATCH EXISTING
91	53+53.71	130.42'	LT	BEGIN C&G, MATCH EXISTING
92	53+53.60	92.12'	LT	BEGIN 6' RADIUS
93	53+59.60	92.11'	LT	6' RADIUS
94	53+65.60	92.10'	LT	END 6' RADIUS
95	53+65.71	130.39'	LT	END C&G, MATCH EXISTING
96	53+86.27	130.33'	LT	BEGIN C&G, MATCH EXISTING
97	53+86.22	113.02'	LT	BEGIN 45' RADIUS
98	54+31.22	112.89'	LT	45' RADIUS
99	54+29.11	67.94'	LT	END 45' RADIUS
100	54+73.57	124.92'	LT	125' RADIUS
101	54+17.30	13.31'	LT	END 125' RADIUS, BEGIN 10' RADIUS
102	54+21.80	22.24'	LT	10' RADIUS
103	54+23.33	32.12'	LT	END 10' RADIUS
104	54+68.90	0.00'	LT	BEGIN 125' RADIUS
105	50+31.40	98.00'	LT	SIDEWALK TRANSITION POINT

2



LEGEND

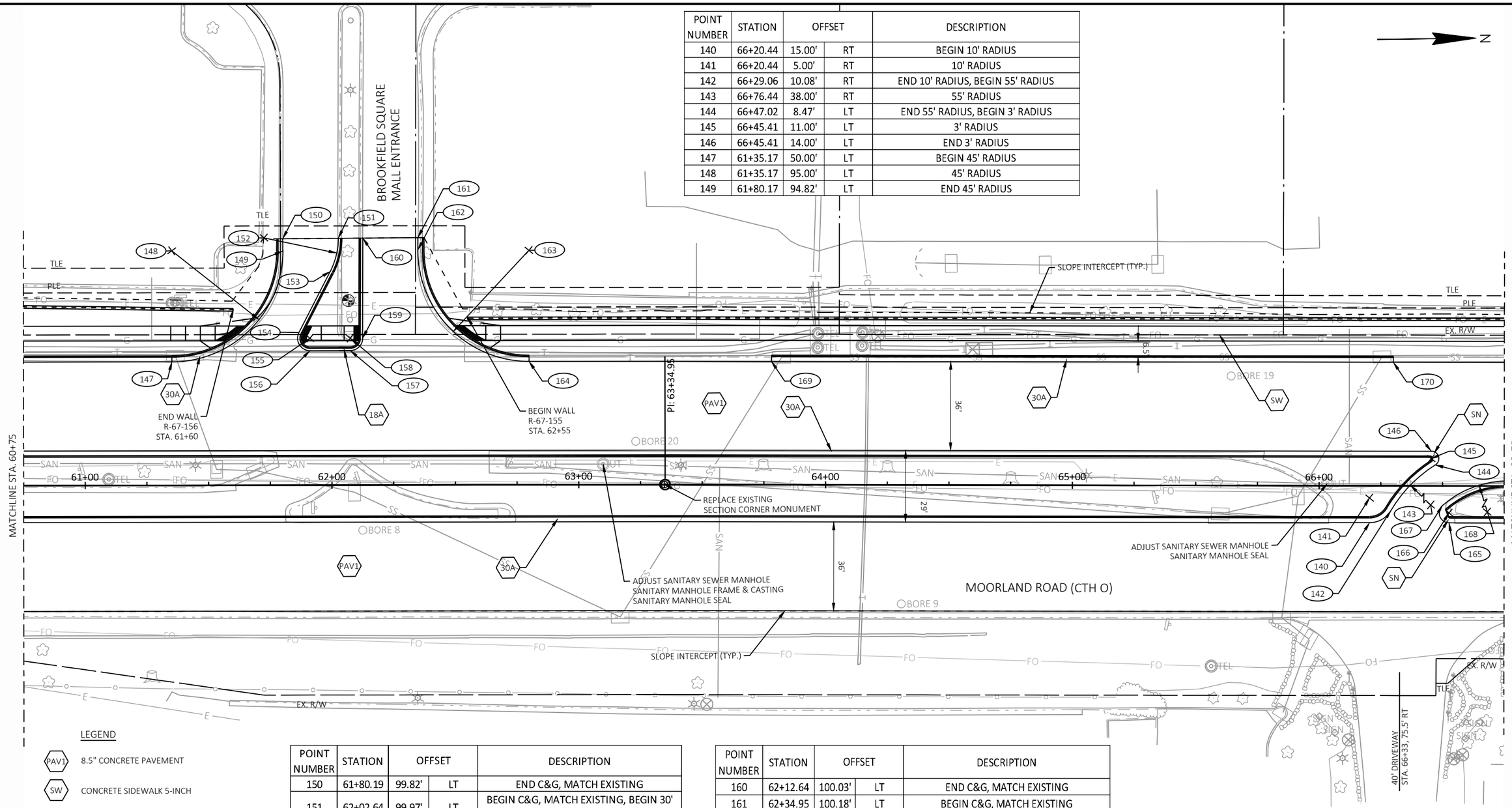
PAV1	8.5" CONCRETE PAVEMENT
SW	CONCRETE SIDEWALK 5-INCH
30A	CONCRETE CURB & GUTTER 30-INCH, TYPE A
18A	CONCRETE CURB & GUTTER 18-INCH, TYPE A
SN	CONCRETE MEDIAN SLOPED NOSE
DWY	CONCRETE DRIVEWAY 7-INCH
AS	3½ - INCH ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

POINT NUMBER	STATION	OFFSET		DESCRIPTION
110	58+53.54	50.40'	RT	BEGIN 866' RADIUS
111	58+85.89	815.00'	LT	866' RADIUS
112	58+85.89	51.00'	RT	END 866' RADIUS
113	59+50.00	51.00'	RT	END C&G, MATCH EXISITING
114	58+54.89	14.42'	RT	BEGIN 830' RADIUS
115	58+85.89	815.00'	LT	830' RADIUS
116	58+85.89	15.00'	RT	END 830' RADIUS
117	57+93.11	14.87'	LT	BEGIN 800' RADIUS
118	58+30.49	814.00'	LT	800' RADIUS
119	58+30.49	14.00'	LT	END 800' RADIUS
120	57+94.79	50.84'	LT	BEGIN 764' RADIUS
121	58+30.49	814.00'	LT	764' RADIUS

POINT NUMBER	STATION	OFFSET		DESCRIPTION
122	58+30.49	50.00'	LT	END 764' RADIUS
123	59+15.26	64.50'	LT	BEGIN 10' SIDEWALK RADIUS
124	59+15.26	74.50'	LT	10' SIDEWALK RADIUS
125	59+20.06	65.73'	LT	END 10' SIDEWALK RADIUS, BEGIN 30' SIDEWALK RADIUS
126	59+35.50	40.00'	LT	30' SIDEWALK RADIUS
127	59+35.50	70.00'	LT	END 30' SIDEWALK RADIUS
128	59+37.77	70.00'	LT	BEGIN 30' SIDEWALK RADIUS
129	59+37.77	40.00'	LT	30' SIDEWALK RADIUS
130	59+52.95	65.88'	LT	END 30' SIDEWALK RADIUS, BEGIN 10' SIDEWALK RADIUS
131	59+58.01	74.50'	LT	10' SIDEWALK RADIUS
132	59+58.01	64.50'	LT	END 10' SIDEWALK RADIUS

2

POINT NUMBER	STATION	OFFSET		DESCRIPTION
140	66+20.44	15.00'	RT	BEGIN 10' RADIUS
141	66+20.44	5.00'	RT	10' RADIUS
142	66+29.06	10.08'	RT	END 10' RADIUS, BEGIN 55' RADIUS
143	66+76.44	38.00'	RT	55' RADIUS
144	66+47.02	8.47'	LT	END 55' RADIUS, BEGIN 3' RADIUS
145	66+45.41	11.00'	LT	3' RADIUS
146	66+45.41	14.00'	LT	END 3' RADIUS
147	61+35.17	50.00'	LT	BEGIN 45' RADIUS
148	61+35.17	95.00'	LT	45' RADIUS
149	61+80.17	94.82'	LT	END 45' RADIUS



LEGEND

PAV1	8.5" CONCRETE PAVEMENT
SW	CONCRETE SIDEWALK 5-INCH
30A	CONCRETE CURB & GUTTER 30-INCH, TYPE A
18A	CONCRETE CURB & GUTTER 18-INCH, TYPE A
SN	CONCRETE MEDIAN SLOPED NOSE
DWY	CONCRETE DRIVEWAY 7-INCH
AS	3½ - INCH ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

POINT NUMBER	STATION	OFFSET		DESCRIPTION
150	61+80.19	99.82'	LT	END C&G, MATCH EXISTING
151	62+02.64	99.97'	LT	BEGIN C&G, MATCH EXISTING, BEGIN 30' RADIUS
152	61+72.62	100.18'	LT	30' RADIUS
153	61+99.34	86.53'	LT	END 30' RADIUS
154	61+86.67	61.78'	LT	BEGIN 5' RADIUS
155	61+91.13	59.50'	LT	5' RADIUS
156	61.91.13	54.50'	LT	END 5' RADIUS
157	62+07.48	54.50'	LT	BEGIN 5' RADIUS
158	62+07.48	59.50'	LT	5' RADIUS
159	62+12.48	59.48'	LT	END 5' RADIUS

POINT NUMBER	STATION	OFFSET		DESCRIPTION
160	62+12.64	100.03'	LT	END C&G, MATCH EXISTING
161	62+34.95	100.18'	LT	BEGIN C&G, MATCH EXISTING
162	62+34.93	95.18'	LT	BEGIN 45' RADIUS
163	62+79.92	95.00'	LT	45' RADIUS
164	62+79.93	50.00'	LT	END 45'RADIUS, END C&G, MATCH EXISTING
165	66+52.63	15.00'	RT	BEGIN 4' RADIUS
166	66+52.63	11.00'	RT	4' RADIUS
167	66+49.99	8.00'	RT	END 4' RADIUS, BEGIN 40' RADIUS
168	66+76.44	38.00'	RT	40' RADIUS
169	63+78.00	50.00'	LT	MATCH EXISTING, BEGIN C&G
170	66+30.00	50.00'	LT	MATCH EXISTING, END C&G

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 25	E

2

LEGEND

- PAV1 — 8.5" CONCRETE PAVEMENT
- SW — CONCRETE SIDEWALK 5-INCH
- 30A — CONCRETE CURB & GUTTER 30-INCH, TYPE A
- 18A — CONCRETE CURB & GUTTER 18-INCH, TYPE A
- SN — CONCRETE MEDIAN SLOPED NOSE
- DWY — CONCRETE DRIVEWAY 7-INCH
- AS — 3 ½ - INCH ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

N

BROOKFIELD SQUARE MALL ENTRANCE

MOORLAND ROAD (CTH O)

MATCHLINE STA. 66+75

MATCHLINE STA. 72+75

END WALL R-67-155 STA. 69+92

SLOPE INTERCEPT (TYP.)

CURB RAMP TYPE 5

CURB RAMP TYPE 4A1

BEGIN WALL STA. 71+10

END WALL STA. 71+94

ADJUST SANITARY SEWER MANHOLE
SANITARY MANHOLE SEAL

SLOPE INTERCEPT (TYP.)

CURB RAMP TYPE 7B

CURB RAMP TYPE 7B

ADJUST WATER VALVE BOX

26' DRIVEWAY STA. 71+88.75 5' RT

EX. R/W

67+00 68+00 69+00 70+00 71+00 72+00

BORE 10 BORE 18 BORE 11 BORE 17

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 26	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021205_pd

PLOT DATE : 10/1/2021 1:13 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

POINT NUMBER	STATION	OFFSET		DESCRIPTION
179	66+76.44	2.00	LT	END 40' RADIUS
180	69+79.29	51.00'	RT	BEGIN C&G, BEGIN 57' RADIUS
181	71+18.37	51.00'	RT	END 52' RADIUS
182	69+79.29	108.00'	RT	57' RADIUS
183	70+25.00	73.95'	RT	END 57' RADIUS, BEGIN 15' RADIUS
184	70+12.85	83.00'	RT	15' RADIUS
185	70+27.99	82.50'	RT	END 15' RADIUS, END C&G, MATCH EXISTING
186	70+70.59	82.50'	RT	BEGIN C&G, BEGIN 52' RADIUS, MATCH EXISTING
187	71+18.37	103.00'	RT	52' RADIUS
188	70+02.23	15.00'	RT	BEGIN 4' RADIUS
189	70+02.23	11.00'	RT	4' RADIUS
190	70+02.23	7.00'	RT	END 4' RADIUS
191	68+43.30	7.00'	RT	BEGIN 4' RADIUS
192	68+43.30	11.00'	RT	4' RADIUS
193	68+43.30	15.00'	RT	END 4' RADIUS
194	66+82.55	15.00'	RT	BEGIN C&G TAPER
195	68+34.55	4.00'	LT	END C&G TAPER
196	70+02.23	4.00'	LT	BEGIN 5' RADIUS
197	70+02.23	9.00'	LT	5' RADIUS
198	70+02.24	14.00'	LT	END 5' RADIUS
199	68+25.87	14.00'	LT	BEGIN C&G TAPER
200	67+29.87	2.00'	LT	END C&G TAPER
201	72+18.45	15.20'	RT	END C&G TAPER
202	71+15.44	15.00'	RT	BEGIN 5' RADIUS
203	71+15.45	10.00'	RT	5' RADIUS
204	71+15.45	5.00'	RT	END 5' RADIUS
205	72+31.09	5.00'	RT	BEGIN C&G TAPER
206	72+21.20	6.00'	LT	BEGIN 4' RADIUS
207	72+21.20	10.00'	LT	4' RADIUS
208	72+21.20	14.00'	LT	END 4' RADIUS
209	71+15.45	15.00'	LT	BEGIN 4' RADIUS
210	71+15.45	10.00'	LT	4' RADIUS
211	71+15.45	6.00'	LT	END 4' RADIUS
212	68+89.44	64.50'	LT	BEGIN SIDEWALK TAPER
213	68+99.44	62.00'	LT	END SIDEWALK TAPER
214	69+91.88	50.00'	LT	BEGIN 40' RADIUS
215	69+91.88	90.00'	LT	40' RADIUS
216	70+31.88	89.96'	LT	END 40' RADIUS
217	70+31.89	100.11'	LT	END C&G, MATCH EXISTING
218	70+54.25	100.08'	LT	BEGIN C&G, MATCH EXISTING
219	70+54.21	58.92'	LT	BEGIN 5' RADIUS
220	70+59.21	58.92'	LT	5' RADIUS
221	70+64.22	58.92'	LT	END 5' RADIUS
222	70+64.25	100.07'	LT	END C&G, MATCH EXISTING
223	70+86.34	100.05'	LT	BEGIN C&G, MATCH EXISTING
224	70+86.34	95.05'	LT	BEGIN 45' RADIUS
225	71+31.34	95.00'	LT	45' RADIUS
226	71+31.34	50.00'	LT	END 45' RADIUS
227	69+80.30	50.00'	LT	BEGIN C&G, MATCH EXISTING
228	72+43.48	51.00'	RT	CURB & GUTTER PI

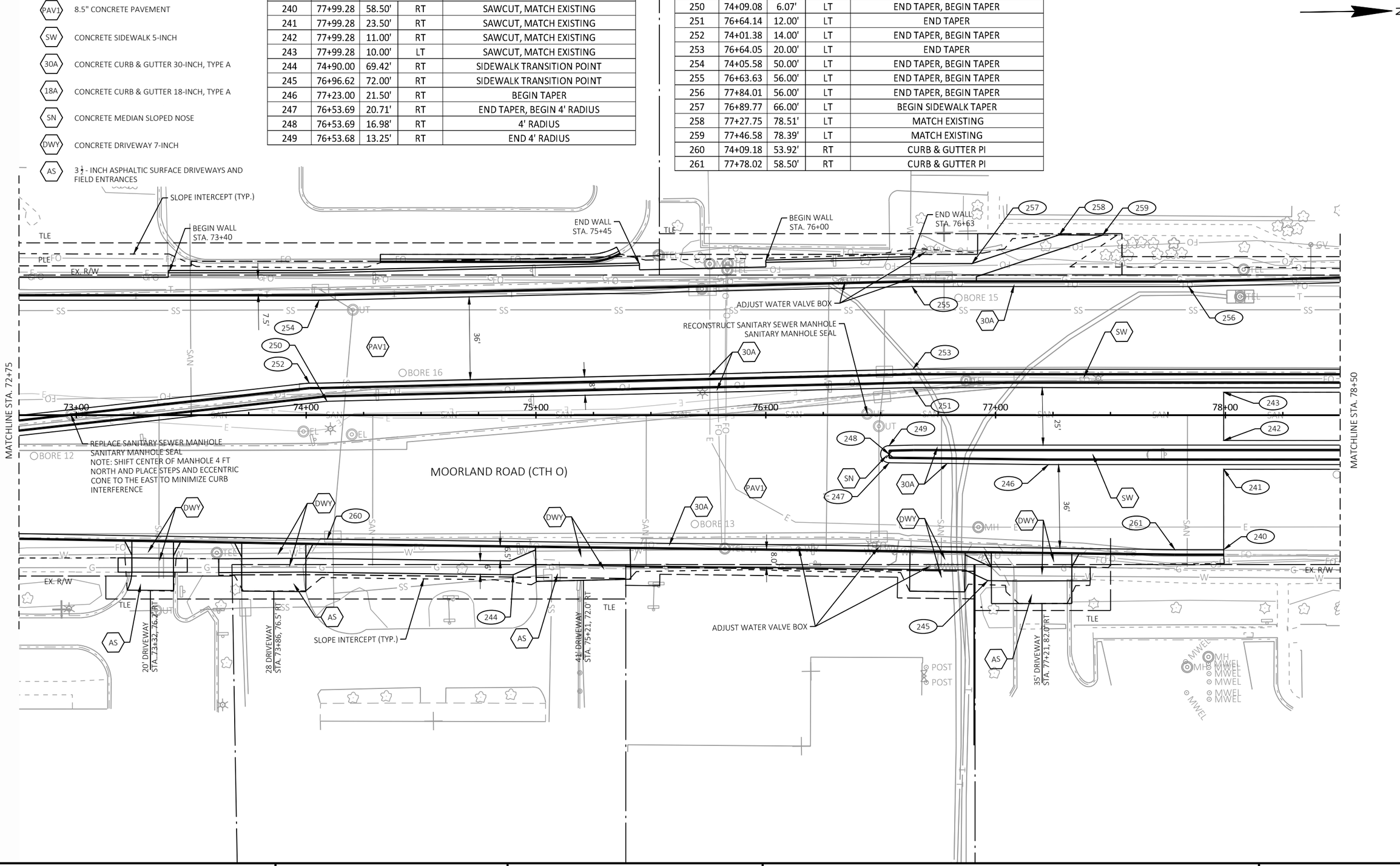
2

LEGEND

- PAV1 — 8.5" CONCRETE PAVEMENT
- SW — CONCRETE SIDEWALK 5-INCH
- 30A — CONCRETE CURB & GUTTER 30-INCH, TYPE A
- 18A — CONCRETE CURB & GUTTER 18-INCH, TYPE A
- SN — CONCRETE MEDIAN SLOPED NOSE
- DWY — CONCRETE DRIVEWAY 7-INCH
- AS — 3 1/2 - INCH ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

POINT NUMBER	STATION	OFFSET		DESCRIPTION
240	77+99.28	58.50'	RT	SAWCUT, MATCH EXISTING
241	77+99.28	23.50'	RT	SAWCUT, MATCH EXISTING
242	77+99.28	11.00'	RT	SAWCUT, MATCH EXISTING
243	77+99.28	10.00'	LT	SAWCUT, MATCH EXISTING
244	74+90.00	69.42'	RT	SIDEWALK TRANSITION POINT
245	76+96.62	72.00'	RT	SIDEWALK TRANSITION POINT
246	77+23.00	21.50'	RT	BEGIN TAPER
247	76+53.69	20.71'	RT	END TAPER, BEGIN 4' RADIUS
248	76+53.69	16.98'	RT	4' RADIUS
249	76+53.68	13.25'	RT	END 4' RADIUS

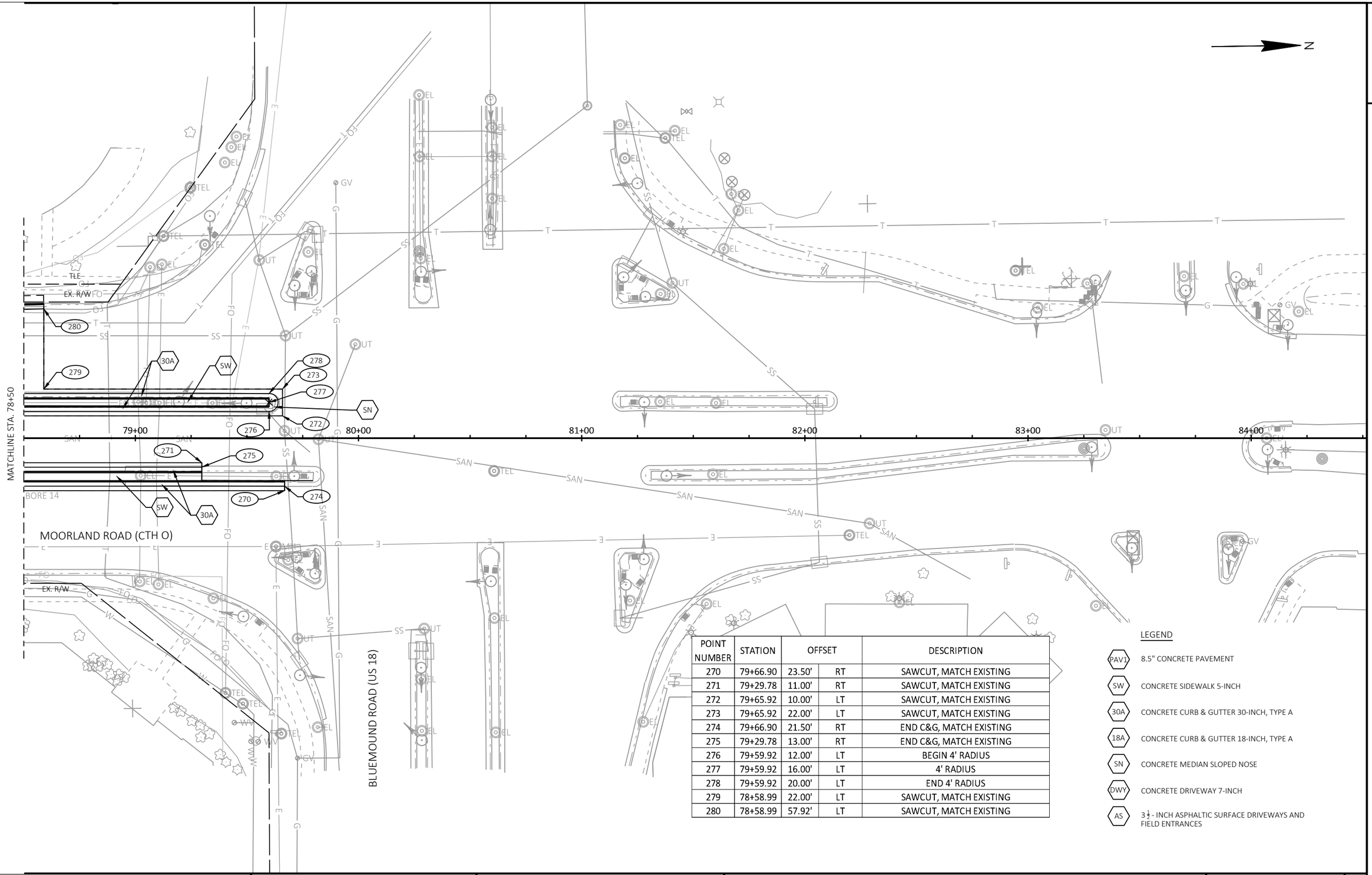
POINT NUMBER	STATION	OFFSET		DESCRIPTION
250	74+09.08	6.07'	LT	END TAPER, BEGIN TAPER
251	76+64.14	12.00'	LT	END TAPER
252	74+01.38	14.00'	LT	END TAPER, BEGIN TAPER
253	76+64.05	20.00'	LT	END TAPER
254	74+05.58	50.00'	LT	END TAPER, BEGIN TAPER
255	76+63.63	56.00'	LT	END TAPER, BEGIN TAPER
256	77+84.01	56.00'	LT	END TAPER, BEGIN TAPER
257	76+89.77	66.00'	LT	BEGIN SIDEWALK TAPER
258	77+27.75	78.51'	LT	MATCH EXISTING
259	77+46.58	78.39'	LT	MATCH EXISTING
260	74+09.18	53.92'	RT	CURB & GUTTER PI
261	77+78.02	58.50'	RT	CURB & GUTTER PI



PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 28	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021206_pd
PLOT DATE : 10/1/2021 1:13 PM
PLOT BY : MCGILLICUDDY, BEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

2



POINT NUMBER	STATION	OFFSET		DESCRIPTION
270	79+66.90	23.50'	RT	SAWCUT, MATCH EXISTING
271	79+29.78	11.00'	RT	SAWCUT, MATCH EXISTING
272	79+65.92	10.00'	LT	SAWCUT, MATCH EXISTING
273	79+65.92	22.00'	LT	SAWCUT, MATCH EXISTING
274	79+66.90	21.50'	RT	END C&G, MATCH EXISTING
275	79+29.78	13.00'	RT	END C&G, MATCH EXISTING
276	79+59.92	12.00'	LT	BEGIN 4' RADIUS
277	79+59.92	16.00'	LT	4' RADIUS
278	79+59.92	20.00'	LT	END 4' RADIUS
279	78+58.99	22.00'	LT	SAWCUT, MATCH EXISTING
280	78+58.99	57.92'	LT	SAWCUT, MATCH EXISTING

LEGEND

- PAV1 — 8.5" CONCRETE PAVEMENT
- SW — CONCRETE SIDEWALK 5-INCH
- 30A — CONCRETE CURB & GUTTER 30-INCH, TYPE A
- 18A — CONCRETE CURB & GUTTER 18-INCH, TYPE A
- SN — CONCRETE MEDIAN SLOPED NOSE
- DWY — CONCRETE DRIVEWAY 7-INCH
- AS — 3 ½ - INCH ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

2

LEGEND

XXX.XX PROPOSED PAVEMENT GRADE
(XXX.XX) EXISTING PAVEMENT GRADE
CONCRETE PAVEMENT HES

N

MOORLAND ROAD (CTH O)

(843.88) (844.00) (844.31) (844.63) (844.96) (845.28) (845.64) (846.00) (846.39) (846.70) (846.82) (847.21) (847.27) (847.67) (847.72) (848.08) (848.14) (848.53) (848.59) (849.02) (849.08) (849.11) (849.56) (849.60) (849.64) (850.09) (850.11) (850.21) (850.64) (850.72) (850.80) (851.17)

MATCHLINE STA. 43+25

38+00 39+00 40+00 41+00 42+00 43+00

MOORLAND ROAD (CTH O)

I-94 WB EXIT RAMP

2

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	JOINT DETAILS	SHEET 30	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\021401_JD.DWG
LAYOUT NAME - 021200_pd

PLOT DATE : 10/1/2021 1:15 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

2

LEGEND

XXX.XX PROPOSED PAVEMENT GRADE
(XXX.XX) EXISTING PAVEMENT GRADE
CONCRETE PAVEMENT HES

N

I-94 WB ENTRANCE RAMP

MOORLAND ROAD (CTH O)

10 LF PIPE UNDERDRAIN 6-INCH
CONNECT TO EXISTING STRUCTURE

10 LF PIPE UNDERDRAIN 6-INCH

10 LF PIPE UNDERDRAIN 6-INCH

10 LF PIPE UNDERDRAIN 6-INCH

MATCHLINE STA. 43+25

MATCHLINE STA. 49+00

44+00 45+00 46+00 47+00 48+00 49

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	JOINT DETAILS	SHEET 31	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\021401_JD.DWG
LAYOUT NAME - 021201_pd

PLOT DATE : 10/1/2021 1:15 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

XXX.XX PROPOSED PAVEMENT GRADE

(XXX.XX) EXISTING PAVEMENT GRADE

CONCRETE PAVEMENT HES

N

BROOKFIELD SQUARE DRIVE

MOORLAND ROAD (CTH O)

MATCHLINE STA. 49+00

MATCHLINE STA. 54+75

10 LF PIPE UNDERDRAIN 6-INCH

10 LF PIPE UNDERDRAIN 6-INCH
CONNECT TO EXISTING STRUCTURE

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	JOINT DETAILS	SHEET 32	E

2

LEGEND

XXX.XX PROPOSED PAVEMENT GRADE
(XXX.XX) EXISTING PAVEMENT GRADE
CONCRETE PAVEMENT HES

N

MATCHLINE STA. 54+75

55+00 56+00 57+00 58+00 59+00 60+00

MOORLAND ROAD (CTH O)

MATCHLINE STA. 60+75

EX. R/W

14' 11' 11' 27' 11' 11' 14'

2

2

LEGEND

XXX.XX PROPOSED PAVEMENT GRADE

(XXX.XX) EXISTING PAVEMENT GRADE

CONCRETE PAVEMENT HES

N

BROOKFIELD SQUARE MALL ENTRANCE

MATCHLINE STA. 60+75

MATCHLINE STA. 66+75

MOORLAND ROAD (CTH O)

61+00 62+00 63+00 64+00 65+00 66+00

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	JOINT DETAILS	SHEET 34	E

2

LEGEND

XXX.XX PROPOSED PAVEMENT GRADE
(XXX.XX) EXISTING PAVEMENT GRADE
CONCRETE PAVEMENT HES

BROOKFIELD SQUARE
MALL ENTRANCE

MOORLAND ROAD (CTH O)

MATCHLINE STA. 66+75

MATCHLINE STA. 72+75

67+00 68+00 69+00 70+00 71+00 72+00

EX. R/W

(863.20) (863.12) (863.15) (862.88) 862.90

22' 22'

863.65 863.73 863.72 864.42 864.37 864.37 863.46

867.79 867.62 867.45 867.28 867.11 866.94 866.78 866.61 866.30 866.13 865.97 865.80

867.36

867.20 867.04 866.87 866.70 866.53 866.36 866.19 866.03 865.86 865.69 865.52 865.35 865.18 865.07 864.85 864.68 864.48 864.27 864.03 863.85 863.64 863.43 863.22 863.01 862.80

867.48 867.32 867.15 866.98 866.81 866.64 866.47 866.31 866.14 865.97 865.80 865.63 865.46 865.30 865.13 864.96 864.76 864.55 864.34 864.13 863.92 863.71 863.50 863.29 863.08

867.70 867.54 867.37 867.20 867.03 866.86 866.69 866.53 866.36 866.19 866.02 865.85 865.68 865.52 865.35 865.18 864.98 864.77 864.56 864.35 864.14 863.93 863.72 863.51 863.30

867.92 867.76 867.59 867.42 867.25 867.08 866.91 866.75 866.58 866.41 866.24 866.07 865.90 865.74 865.57 865.40 865.20 864.99 864.78 864.57 864.36 864.15 863.88

868.07 867.98 867.90 867.52 867.35 867.23 867.12 867.02 866.87 866.65 866.44 866.24 866.04 865.84 865.64 865.93 865.75 865.58 865.37 865.15 864.94 864.84 864.41 864.19 864.20 863.98 863.99 863.77 863.83 863.57 863.52 863.80

868.19 867.93 867.66 867.40 867.13 866.87 866.66 866.46 866.26 866.06 865.86 865.71 865.86 865.60 865.34 865.09 865.71 865.45 864.07 863.73

868.43 868.23 868.03 867.83 867.63 867.43 867.23 867.03 866.82 866.62 866.42 866.22 866.02 865.82 865.62 865.42 865.22 865.01 864.81 864.61 864.41 864.21 864.01 863.81 863.61 863.46

868.21 868.01 867.81 867.61 867.41 867.21 867.01 866.81 866.60 866.40 866.20 866.00 865.80 865.60 865.40 865.20 865.00 864.79 864.59 864.39 864.19 863.99 863.79 863.59 863.39

867.99 867.79 867.59 867.39 867.19 866.99 866.79 866.59 866.38 866.18 865.98 865.78 865.58 865.38 865.18 864.98 864.78 864.57 864.37 864.17 863.97 863.77 863.57 863.37 863.16

867.71 867.51 867.31 867.11 866.91 866.71 866.51 866.31 866.10 865.90 865.70 865.50 865.30 865.10 864.90 864.70 864.50 864.29 864.09 863.89 863.69 863.49 863.29 863.09 862.89

12' 6 6.5 14' 11' 11' 10' 11.5' 8 8 11' 11' 14' 11' 11' 14' 11' 11' 14'

864.11 863.89

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	JOINT DETAILS	SHEET 35	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\021401_JD.DWG
LAYOUT NAME - 021205_pd

PLOT DATE : 10/1/2021 1:16 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

XXX.XX PROPOSED PAVEMENT GRADE

(XXX.XX) EXISTING PAVEMENT GRADE

CONCRETE PAVEMENT HES

N

MATCHLINE STA. 72+75

MATCHLINE STA. 78+50

MOORLAND ROAD (CTH O)

EX. R/W

10 LF PIPE UNDERDRAIN 6-INCH

10 LF PIPE UNDERDRAIN 6-INCH

10 LF PIPE UNDERDRAIN 6-INCH

10 LF PIPE UNDERDRAIN 6-INCH

10 LF PIPE UNDERDRAIN 6-INCH

10 LF PIPE UNDERDRAIN 6-INCH CONNECT TO EXISTING STRUCTURE

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	JOINT DETAILS	SHEET 36	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\021401_JD.DWG
LAYOUT NAME - 021206_pd

PLOT DATE : 10/1/2021 1:16 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

XXX.XX PROPOSED PAVEMENT GRADE

(XXX.XX) EXISTING PAVEMENT GRADE

CONCRETE PAVEMENT HES

N

MATCHLINE STA. 78+50

79+00

80+00

81+00

82+00

83+00

84+00

(858.01)
858.06
(858.33)
858.35
858.53
(858.52)
858.70
(858.63)
858.47
858.18
857.81
857.32
858.48
858.21
857.89
857.55
857.20

858.88
858.65
858.32
(857.81)
858.86
858.58
858.24
857.88
857.53
(857.30)

2

N

WETLANDS BOUNDARY (TYP.)

BORE 27

BORE 28B BORE 28A

BORE 2

BORE 1

38+00 39+00 40+00 41+00 42+00 43+00

MATCHLINE STA. 43+25

LEGEND

- SOD
- MULCH
- SLOPE INTERCEPT
- INLET PROTECTION
- X — INLET PROTECTION TYPE
- SURFACE WATER FLOW
- SILT FENCE
- CULVERT PIPE CHECK

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	EROSION CONTROL PLANS	SHEET 38	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_ec

PLOT DATE : 11/28/2021 8:13 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

I-94 WB ENTRANCE RAMP

WETLANDS BOUNDARY (TYP.)

EX. R/W

SLOPE INTERCEPT. (TYP.)

PLE

BORE 25

MOORLAND ROAD (CTH O)

BORE 26

MATCHLINE STA. 43+25

44+00

45+00

46+00

47+00

48+00

49+00

MATCHLINE STA. 49+10

BORE 3

SLOPE INTERCEPT. (TYP.)

TLE

EX. R/W

LEGEND

- SOD
- MULCH
- SLOPE INTERCEPT
- INLET PROTECTION
- (X) INLET PROTECTION TYPE
- SURFACE WATER FLOW
- SILT FENCE
- CULVERT PIPE CHECK

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	EROSION CONTROL PLANS	SHEET 39	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022002_ec

PLOT DATE : 11/28/2021 8:13 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

BROOKFIELD SQUARE DRIVE

N

SLOPE INTERCEPT (TYP.)

TLE

MOORLAND ROAD (CTH O)

BORE 4

BORE 5

BORE 23

BORE 24

BORE 38

MATCHLINE STA. 49+10

MATCHLINE STA. 54+75

50+00

51+00

52+00

53+00

54+00

EX. R/W

WETLANDS BOUNDARY (TYP.)

SLOPE INTERCEPT (TYP.)

LEGEND

- SOD
- MULCH
- SLOPE INTERCEPT
- INLET PROTECTION
- (X) INLET PROTECTION TYPE
- SURFACE WATER FLOW
- SILT FENCE
- CULVERT PIPE CHECK

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	EROSION CONTROL PLANS	SHEET 40	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022003_ec

PLOT DATE : 11/28/2021 8:13 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

MATCHLINE STA. 54+75

MATCHLINE STA. 60+75

TLE

EX. R/W

SLOPE INTERCEPT (TYP.)

BORE 6

BORE 22

BORE 21

BORE 7

55+00

56+00

57+00

59+00

60+00

MOORLAND ROAD (CTH O)

Ex. R/W

SLOPE INTERCEPT (TYP.)

LEGEND

- SOD
- MULCH
- SLOPE INTERCEPT
- INLET PROTECTION
- (X) INLET PROTECTION TYPE
- SURFACE WATER FLOW
- SILT FENCE
- CULVERT PIPE CHECK

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	EROSION CONTROL PLANS	SHEET 41	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022004_ec
PLOT DATE : 11/28/2021 8:13 PM
PLOT BY : MCGILLICUDDY, BEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N

BROOKFIELD SQUARE
MALL ENTRANCE

TLE
PLE
EX. R/W
SLOPE INTERCEPT (TYP.)
MATCHLINE STA. 60+75
MATCHLINE STA. 66+75
PI: 63+34.95
BORE 8
BORE 9
BORE 19
BORE 20
61+00
62+00
63+00
64+00
65+00
66+00
MOORLAND ROAD (CTH O)
FO
SS
SAN
TEL
E
G
A
B
C
X

LEGEND

- SOD
- MULCH
- SLOPE INTERCEPT
- INLET PROTECTION
- X — INLET PROTECTION TYPE
- SURFACE WATER FLOW
- SILT FENCE
- CULVERT PIPE CHECK

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	EROSION CONTROL PLANS	SHEET 42	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022005_ec
PLOT DATE : 11/28/2021 8:13 PM
PLOT BY : MCGILLICUDDY, BEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N

BROOKFIELD SQUARE MALL ENTRANCE

MOORLAND ROAD (CTH O)

MATCHLINE STA. 66+75

MATCHLINE STA. 72+75

67+00 68+00 69+00 70+00 71+00 72+00

BORE 10 BORE 11 BORE 17 BORE 18 BORE 29

SLOPE INTERCEPT (TYP.)

TLE PLE EX. R/W

LEGEND

- SOD
- MULCH
- SLOPE INTERCEPT
- INLET PROTECTION
- (X) INLET PROTECTION TYPE
- SURFACE WATER FLOW
- SILT FENCE
- CULVERT PIPE CHECK

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	EROSION CONTROL PLANS	SHEET 43	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022006_ec
PLOT DATE : 11/28/2021 8:13 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N

MOORLAND ROAD (CTH O)

MATCHLINE STA. 72+75

MATCHLINE STA. 78+50

73+00 74+00 75+00 76+00 77+00 78+00

SLOPE INTERCEPT (TYP.)

TLE

EX. R/W

BORE 12 BORE 13 BORE 15 BORE 16

A C

LEGEND

- SOD
- MULCH
- SLOPE INTERCEPT
- INLET PROTECTION
- (X) INLET PROTECTION TYPE
- SURFACE WATER FLOW
- SILT FENCE
- CULVERT PIPE CHECK

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	EROSION CONTROL PLANS	SHEET 44	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022007_ec
PLOT DATE : 11/28/2021 8:13 PM
PLOT BY : MCGILLICUDDY, BEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N

MATCHLINE STA. 78+50

79+00 80+00 81+00 82+00 83+00 84+00

PLE

EX. R/W

BORE 14

LEGEND

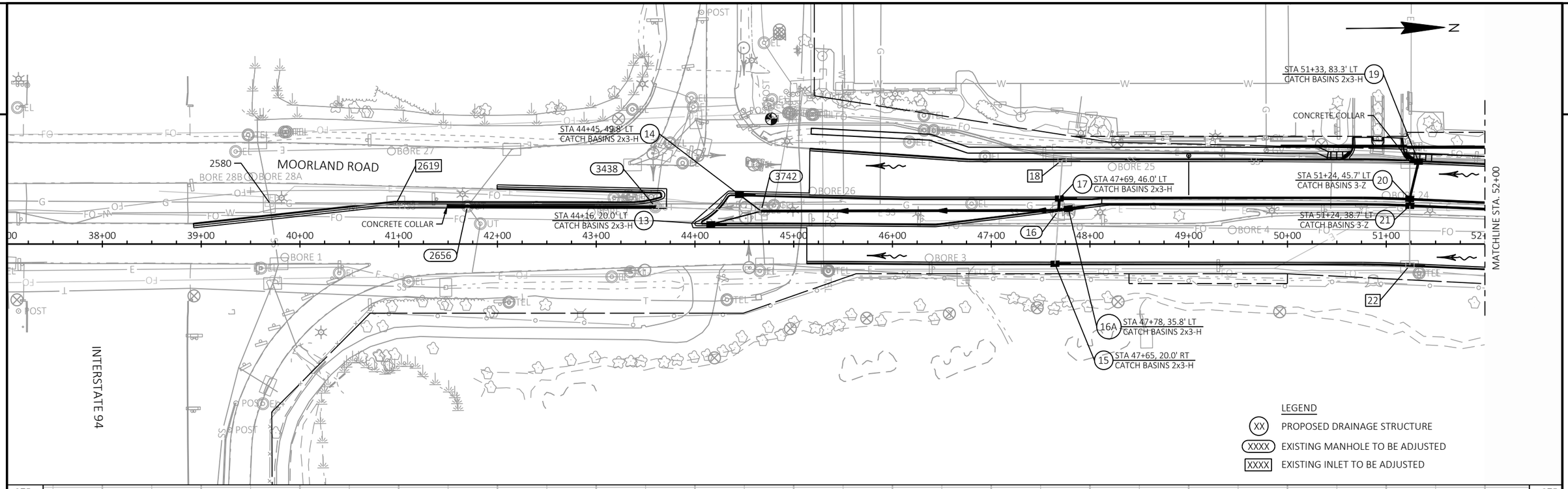
- SOD
- MULCH
- SLOPE INTERCEPT
- INLET PROTECTION
- (X) INLET PROTECTION TYPE
- SURFACE WATER FLOW
- SILT FENCE
- CULVERT PIPE CHECK

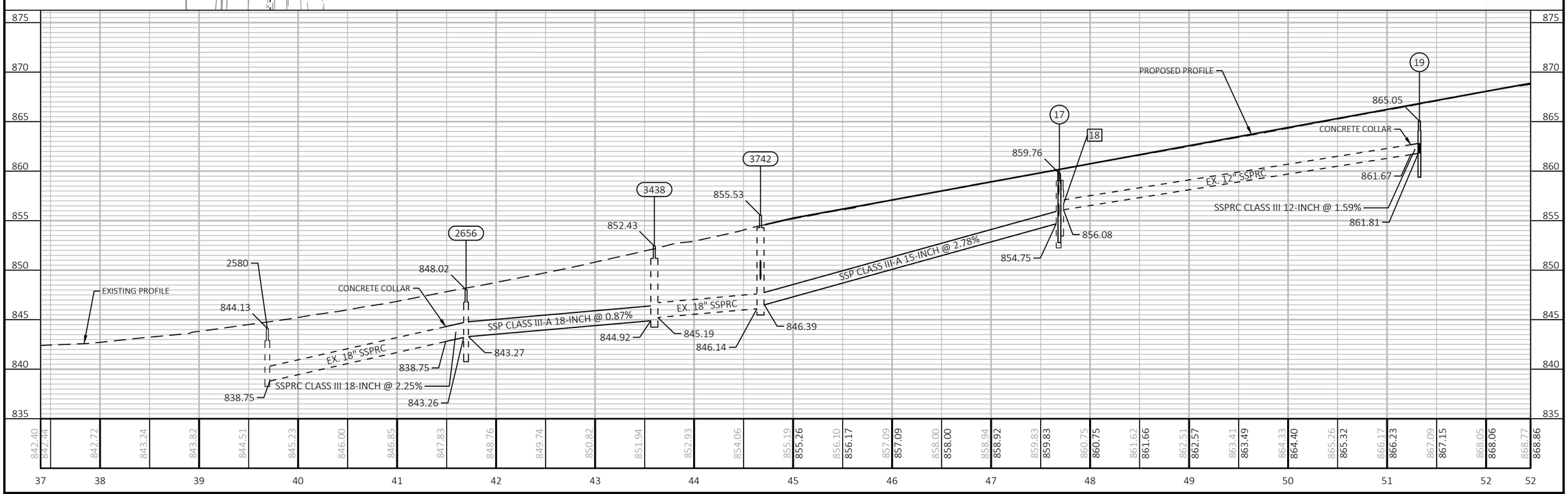
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	EROSION CONTROL PLANS	SHEET 45	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022008_ec

PLOT DATE : 11/28/2021 8:14 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : ##########

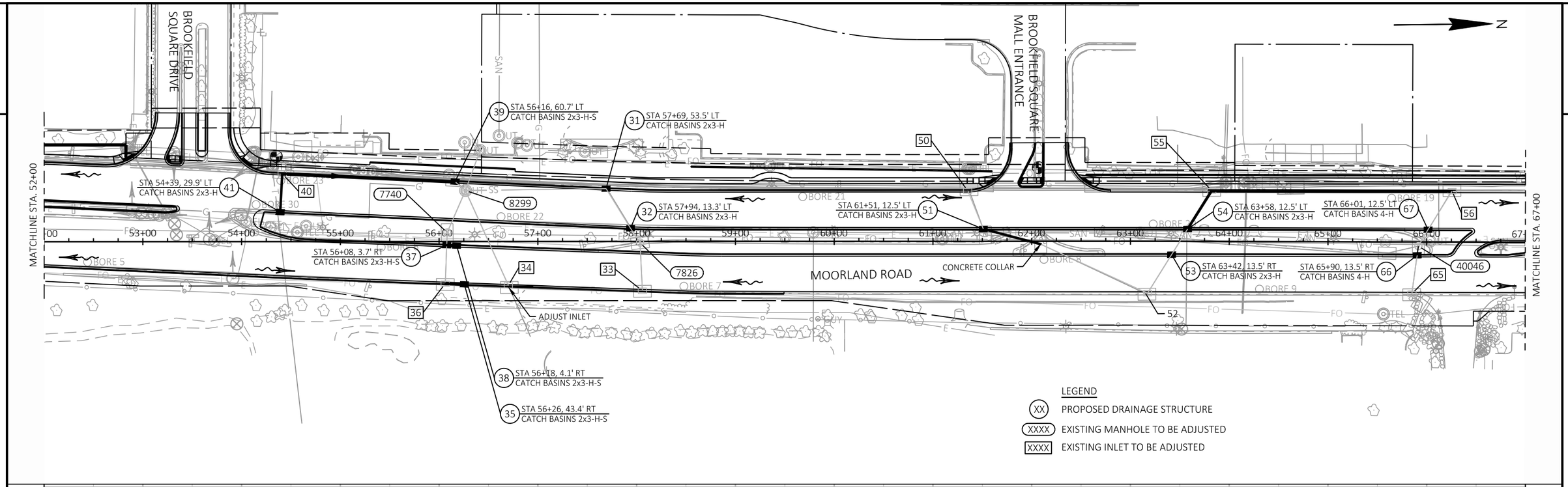
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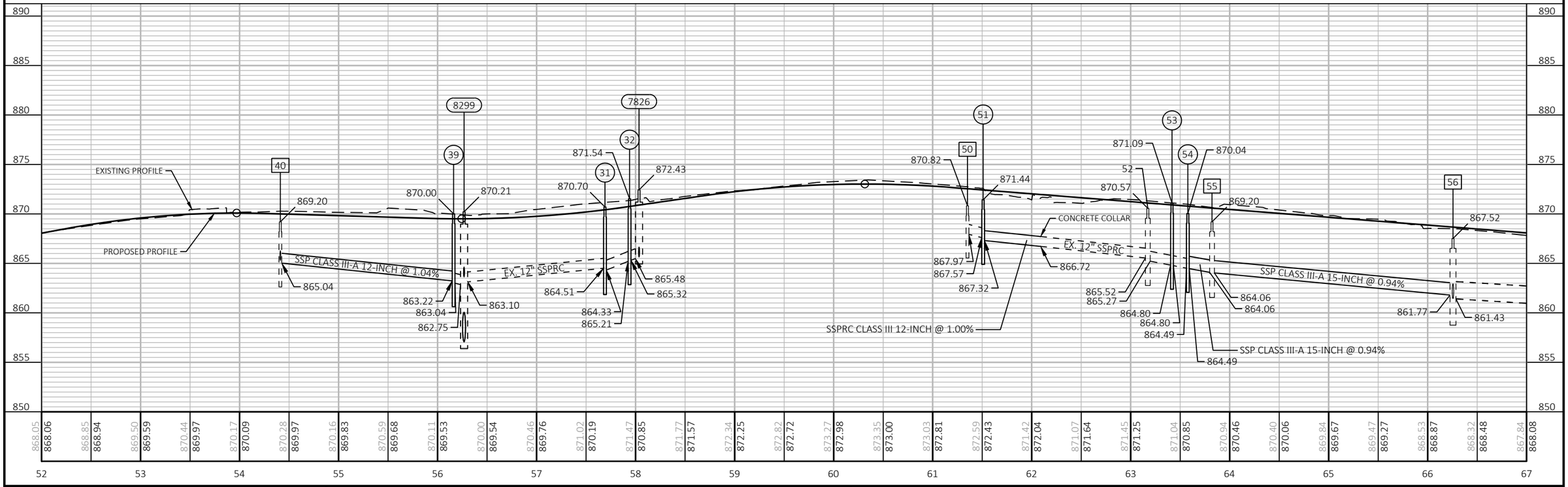




PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	STORM SEWER	SHEET 46	E

2

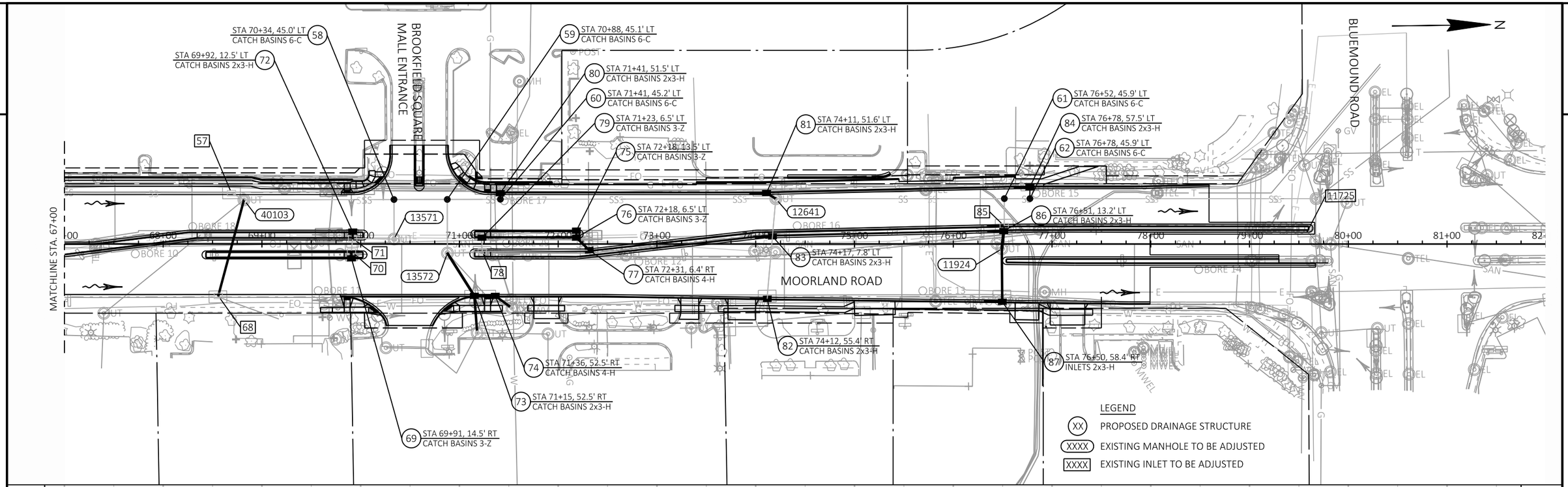


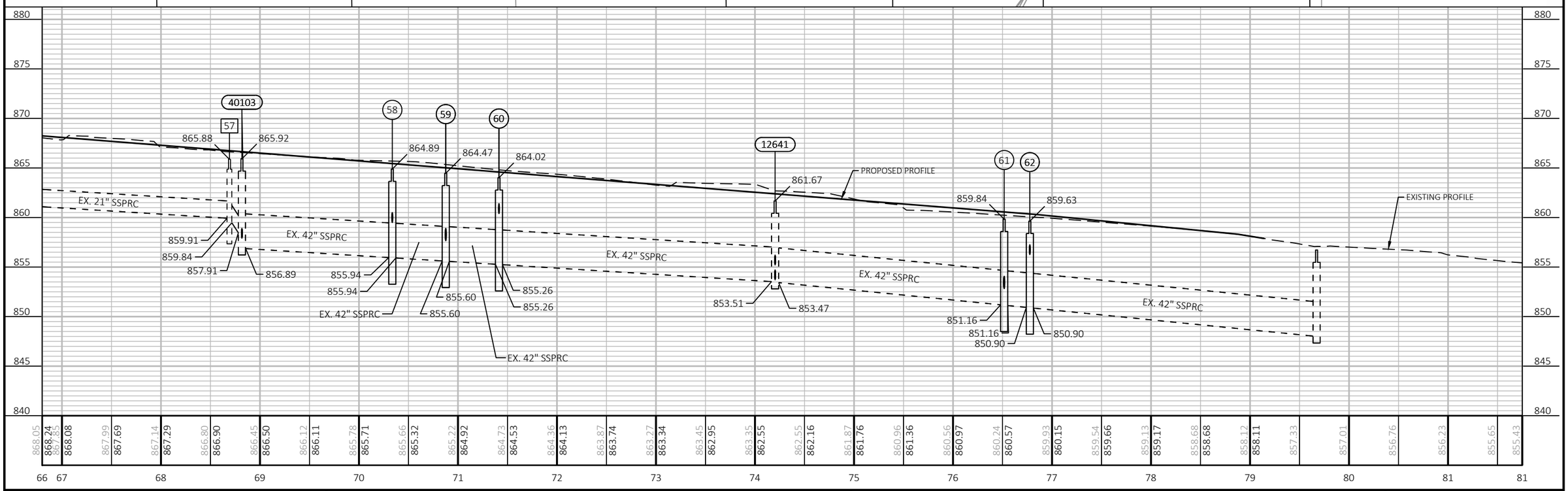


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	STORM SEWER	SHEET 47	E

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LAYOUT NAME - 022502_ss
PLOT DATE : 10/1/2021 1:22 PM
PLOT BY : MCGILLICUDDY, BEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 41

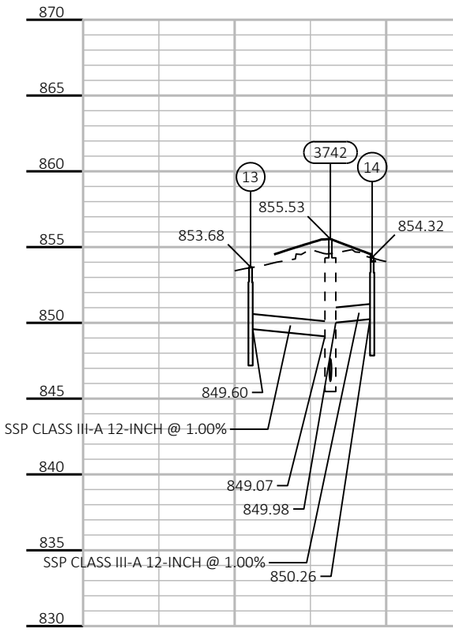
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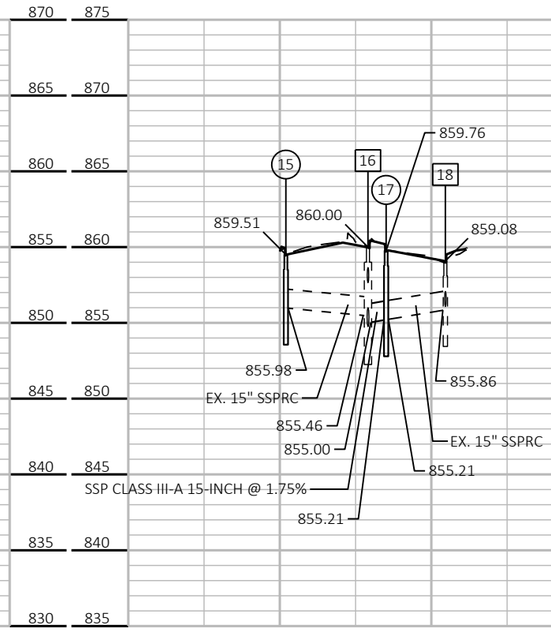


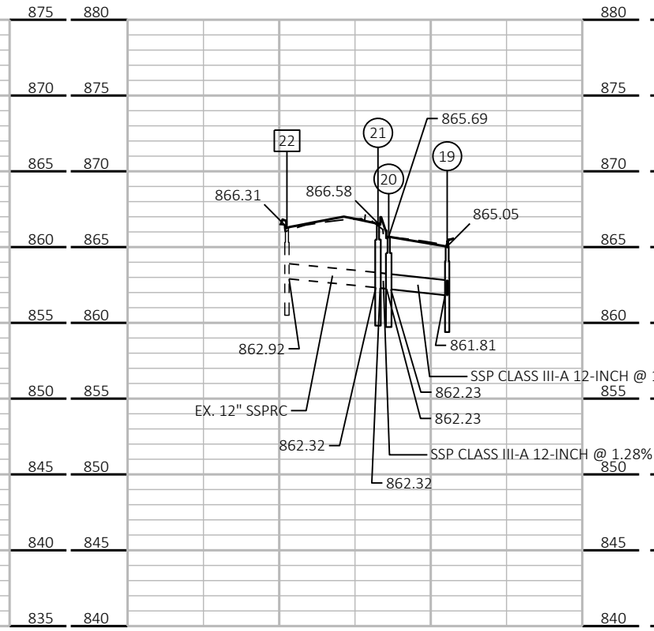


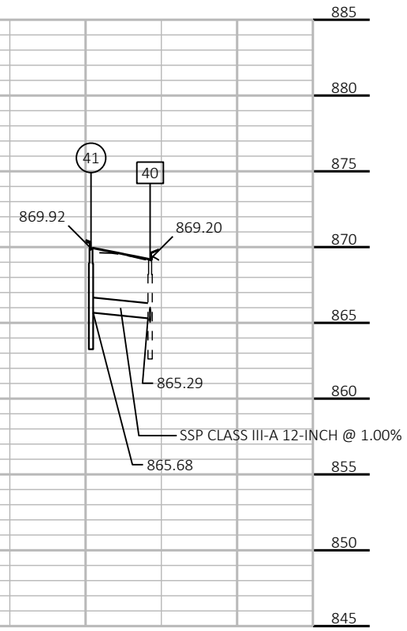
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	STORM SEWER	SHEET 48	E

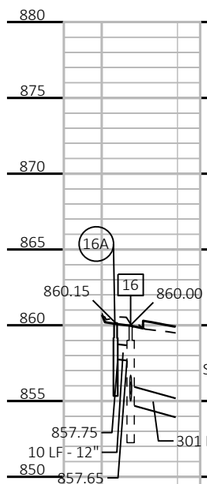
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LAYOUT NAME - 022503_ss
PLOT DATE : 10/1/2021 1:23 PM
PLOT BY : MCGILLICUDDY, BEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 41

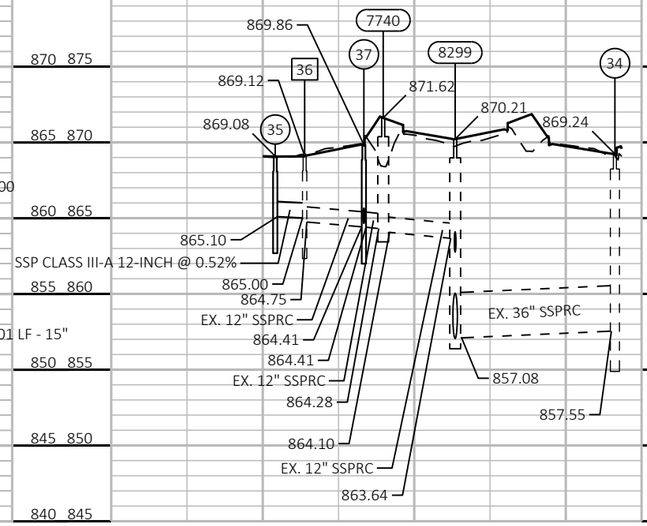


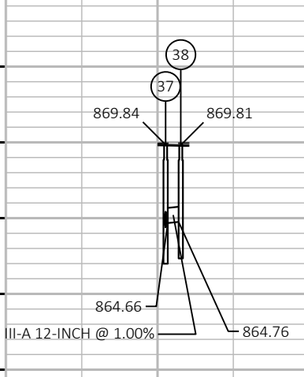


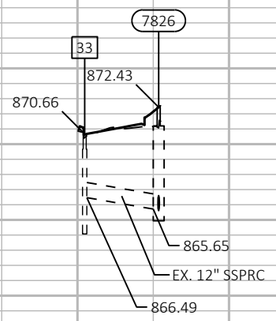


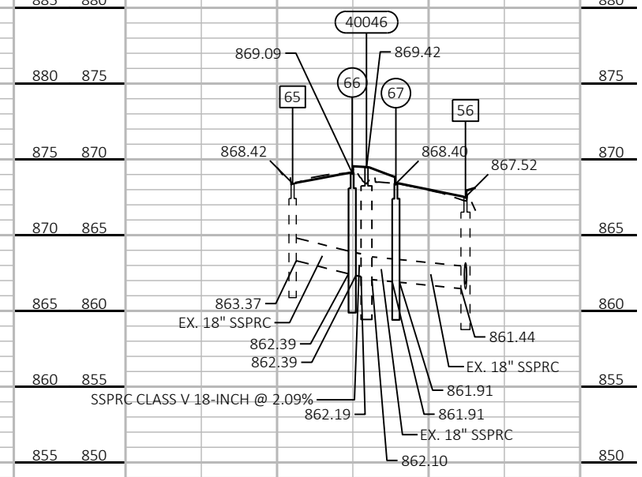






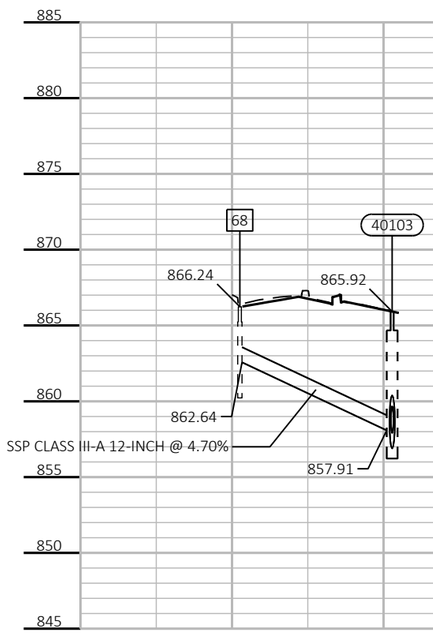


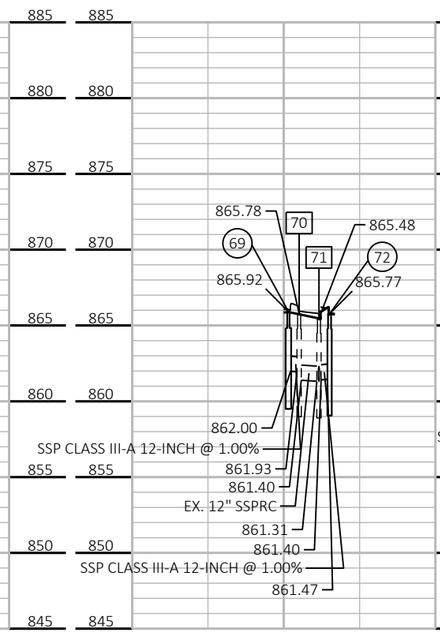


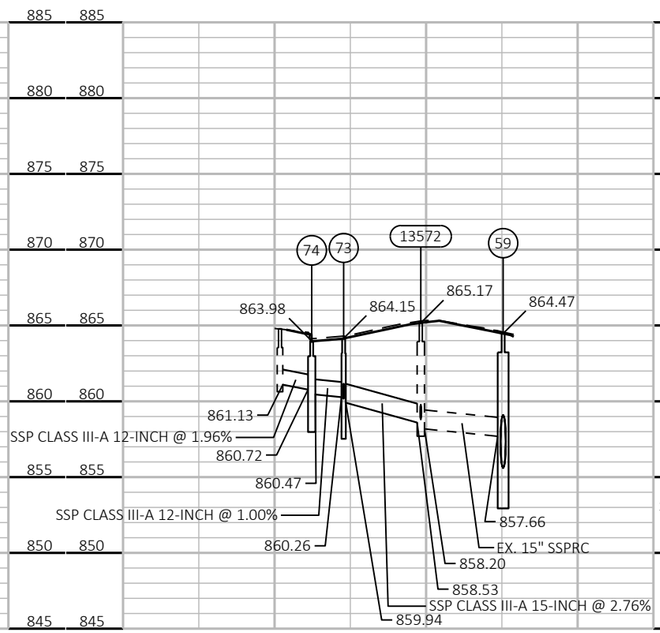


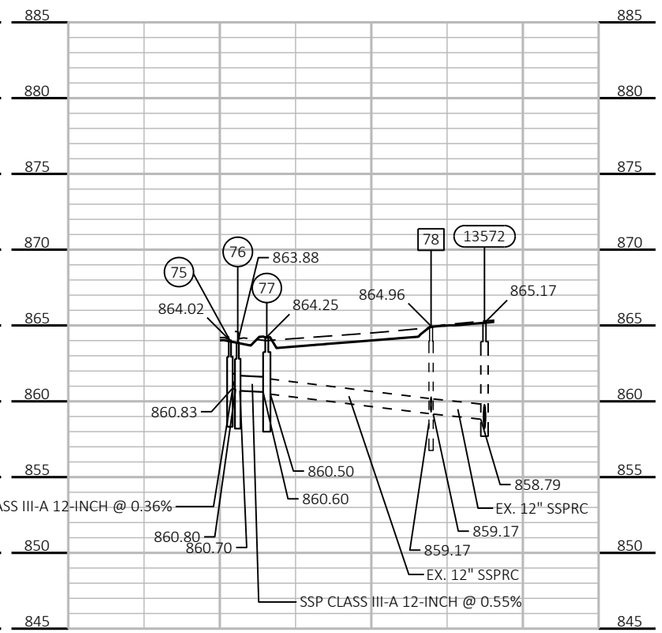
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	STORM SEWER PLAN	SHEET 49	E

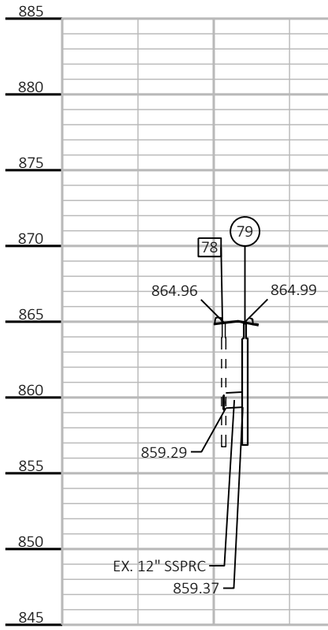
FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\022501_SS.DWG
LAYOUT NAME - 022504_ss
PLOT DATE : 10/1/2021 1:23 PM
PLOT BY : MCGILLICUDDY, BEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

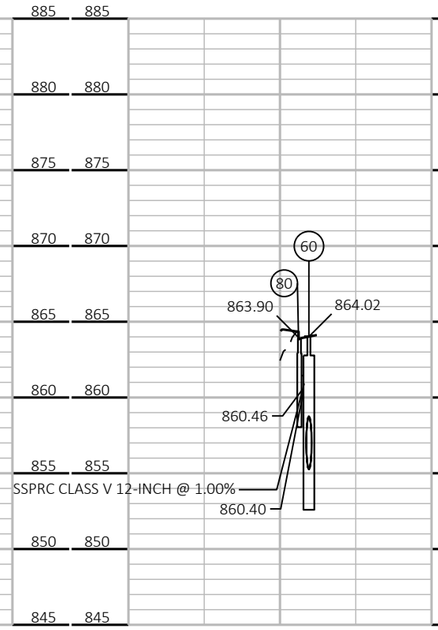


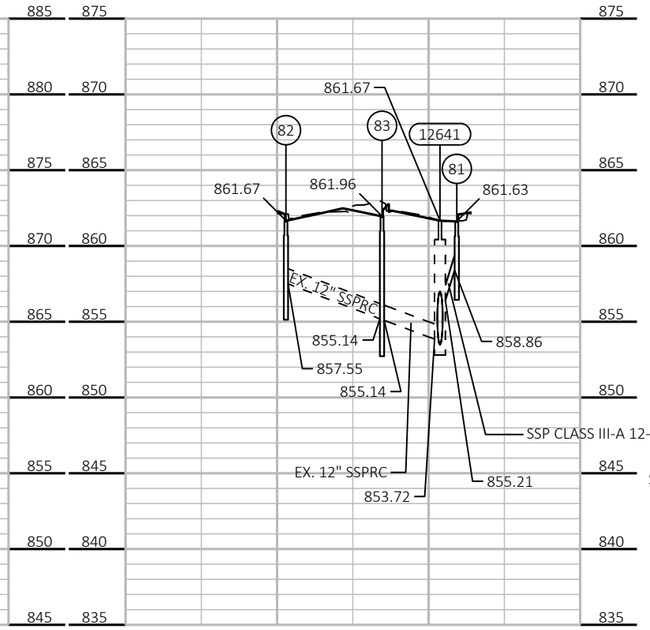


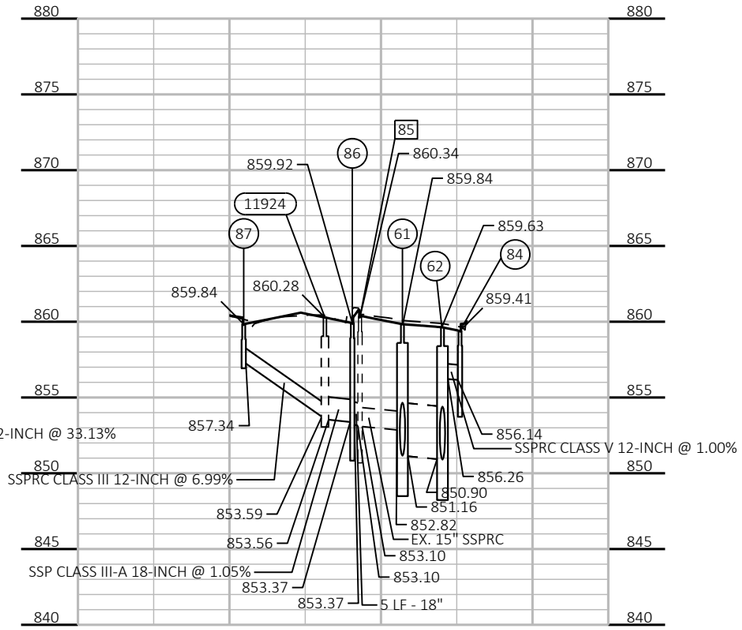












PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	STORM SEWER PLAN	SHEET 50	E

2

STORM SEWER STRUCTURES

STRUCTURE	STATION	OFFSET*	LOCATION	611.0612 INLET COVERS TYPE C EACH	611.0624 INLET COVERS TYPE H EACH	611.0639 INLET COVERS TYPE H-S EACH	611.0666 INLET COVERS TYPE Z EACH	611.1003 CATCH BASINS 3-FT DIAMETER EACH	611.1004 CATCH BASINS 4-FT DIAMETER EACH	611.1006 CATCH BASINS 6-FT DIAMETER EACH	611.1230 CATCH BASINS 2X3-FT EACH	611.3230 INLETS 2X3-FT EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	RIM** ELEVATION	INVERT*** ELEVATION	DEPTH**** FT
13	44+16.02	20.00' LT	CTH O	--	1	--	--	--	--	--	1	--	1	853.68	847.60	6.08
14	44+45.00	49.80' LT	CTH O	--	1	--	--	--	--	--	1	--	1	854.32	848.26	6.06
15	47+64.58	20.00' RT	CTH O	--	1	--	--	--	--	--	1	--	1	859.51	853.98	5.53
16	47+68.13	33.53' LT	CTH O	--	1	--	--	--	--	--	--	--	--	860.01	853.00	7.01
16A	47+78.20	35.80' LT	CTH O	--	1	--	--	--	--	--	1	--	1	860.15	855.75	4.40
17	47+68.98	46.01' LT	CTH O	--	1	--	--	--	--	--	1	--	1	859.76	853.21	6.55
19	51+32.65	83.32' LT	CTH O	--	1	--	--	--	--	--	1	--	1	865.05	859.81	5.24
20	51+23.77	45.69' LT	CTH O	--	--	--	1	1	--	--	--	--	1	865.69	860.23	5.46
21	51+23.90	38.68' LT	CTH O	--	--	--	1	1	--	--	--	--	1	866.58	860.32	6.26
32	57+93.84	13.34' LT	CTH O	--	1	--	--	--	--	--	1	--	1	871.54	863.27	8.27
31	57+69.08	53.54' LT	CTH O	--	1	--	--	--	--	--	1	--	1	870.70	862.27	8.43
39	56+16.12	60.70' LT	CTH O	--	--	1	--	--	--	--	1	--	1	870.00	861.04	8.96
41	54+39.03	29.94' LT	CTH O	--	1	--	--	--	--	--	1	--	1	869.92	863.68	6.24
37	56+07.66	3.66' RT	CTH O	--	--	1	--	--	--	--	1	--	1	869.84	862.41	7.43
38	56+17.65	4.05' RT	CTH O	--	--	1	--	--	--	--	1	--	1	869.82	862.76	7.06
35	56+25.50	43.24' RT	CTH O	--	--	1	--	--	--	--	1	--	1	869.09	863.10	5.99
51	61+51.01	12.53' LT	CTH O	--	1	--	--	--	--	--	1	--	1	871.44	865.32	6.12
53	63+41.73	13.48' RT	CTH O	--	1	--	--	--	--	--	1	--	1	871.09	862.80	8.29
54	63+57.80	12.50' LT	CTH O	--	1	--	--	--	--	--	1	--	1	870.04	862.49	7.55
66	65+90.36	13.50' RT	CTH O	--	1	--	--	--	1	--	--	--	1	869.10	860.39	8.71
67	66+01.34	12.50' LT	CTH O	--	1	--	--	--	1	--	--	--	1	868.40	859.91	8.49

CONTINUED ON NEXT PAGE

REMARKS

* STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE

**RIM ELEVATIONS GIVEN TO FLANGE OF CASTING

*** FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE

**** DEPTH = RIM ELEV - LOWEST INVERT ELEVATION (ADD 2 FT FOR CATCH BASIN SUMP)

CONTINUED FROM PREVIOUS PAGE

STORM SEWER STRUCTURES

STRUCTURE	STATION	OFFSET*	LOCATION	611.0612 INLET COVERS TYPE C EACH	611.0624 INLET COVERS TYPE H EACH	611.0639 INLET COVERS TYPE H-S EACH	611.0666 INLET COVERS TYPE Z EACH	611.1003 CATCH BASINS 3-FT DIAMETER EACH	611.1004 CATCH BASINS 4-FT DIAMETER EACH	611.1006 CATCH BASINS 6-FT DIAMETER EACH	611.123 CATCH BASINS 2X3-FT EACH	611.3230 INLETS 2X3-FT EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	RIM** ELEVATION	INVERT*** ELEVATION	DEPTH**** FT
58	70+33.62	44.97' LT	CTH O	1	--	--	--	--	--	1	--	--	1	864.89	855.94	8.95
69	69+90.51	13.50' RT	CTH O	--	--	--	1	1	--	--	--	--	1	865.92	859.35	6.57
72	69+91.84	12.50' LT	CTH O	--	1	--	--	--	--	--	1	--	1	865.77	861.27	4.50
59	70+87.65	45.10' LT	CTH O	1	--	--	--	--	--	1	--	--	1	864.47	855.60	8.87
73	71+15.08	52.50' RT	CTH O	--	1	--	--	--	--	--	1	--	1	864.15	857.94	6.21
74	71+36.25	52.50' RT	CTH O	--	1	--	--	--	1	--	--	--	1	863.98	858.47	5.51
79	71+22.81	7.50' LT	CTH O	--	--	--	1	1	--	--	--	--	1	864.99	857.37	7.62
80	71+41.25	51.50' LT	CTH O	--	1	--	--	--	--	--	1	--	1	863.90	858.46	5.44
60	71+41.37	45.22' LT	CTH O	1	--	--	--	--	--	1	--	--	1	864.02	855.26	8.76
75	72+18.37	12.50' LT	CTH O	--	--	--	1	1	--	--	--	--	1	864.02	858.83	5.19
76	72+18.42	7.50' LT	CTH O	--	--	--	1	1	--	--	--	--	1	863.88	858.70	5.18
77	72+31.43	6.35' RT	CTH O	--	1	--	--	--	1	--	--	--	1	863.49	858.50	4.99
81	74+10.93	51.63' LT	CTH O	--	1	--	--	--	--	--	1	--	1	861.63	856.86	4.77
83	74+16.96	7.75' LT	CTH O	--	1	--	--	--	--	--	1	--	1	861.96	853.14	8.82
82	74+11.66	55.45' RT	CTH O	--	1	--	--	--	--	--	1	--	1	861.67	855.55	6.12
61	76+51.66	45.88' LT	CTH O	1	--	--	--	--	--	1	--	--	1	859.84	851.16	8.68
86	76+51.13	13.20' LT	CTH O	--	1	--	--	--	--	--	1	--	1	859.92	851.25	8.67
87	76+49.65	58.43' RT	CTH O	--	1	--	--	--	--	--	--	1	1	859.84	857.34	2.50
62	76+77.59	45.88' LT	CTH O	1	--	--	--	--	--	1	--	--	1	859.63	850.90	8.73
7826	58+03.45	1.16' RT	CTH O	1	--	--	--	--	--	--	--	--	--	872.43	--	--
84	76+77.59	57.50' LT	CTH O	--	1	--	--	--	--	--	1	--	1	859.41	854.14	5.27
			TOTALS	6	26	4	6	6	4	5	24	1	40			

NOTE:
INSTALL CONCRETE LID ON STRUCTURE 7826

REMARKS
* STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE
**RIM ELEVATIONS GIVEN TO FLANGE OF CASTING
*** FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE
**** DEPTH = RIM ELEV - LOWEST INVERT ELEVATION (ADD 2 FT FOR CATCH BASIN SUMP)

2

STORM SEWER STRUCTURES

STRUCTURE	STATION	OFFSET*	LOCATION	611.0420 RECONSTRUCTING MANHOLES EACH	611.0430 RECONSTRUCTING INLETS EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH	RIM** ELEVATION
2619	40+97.13	42.48' LT	CTH O	--	--	--	1	846.59
2656	41+69.66	38.21' LT	CTH O	1	--	--	--	848.02
3438	43+59.89	37.59' LT	CTH O	--	--	1	--	852.43
3742	44+67.06	33.28' LT	CTH O	1	--	--	--	855.53
18	47+71.77	85.00' LT	CTH O	--	--	--	1	859.08
22	51+24.01	21.39' RT	CTH O	--	--	--	--	866.32
40	54+41.16	68.87' LT	CTH O	--	1	--	--	869.20
8299	56+26.69	51.68' LT	CTH O	--	--	1	--	870.21
7740	56+08.15	9.08' LT	CTH O	1	--	--	--	871.62
36	56+06.12	43.17' RT	CTH O	--	1	--	--	869.12
34	56+70.12	44.36' RT	CTH O	--	--	--	1	869.24
33	58+05.78	49.89' RT	CTH O	--	--	--	1	870.66
7826	58+03.45	1.16' RT	CTH O	--	1	--	--	872.43
50	61+35.17	51.50' LT	CTH O	--	--	--	1	870.82
55	63+82.17	51.50' LT	CTH O	--	--	--	1	869.20
56	66+25.56	51.50' LT	CTH O	--	--	--	1	867.52
65	65+85.11	52.50' RT	CTH O	--	--	--	1	868.42
40046	65+91.51	4.20' RT	CTH O	--	--	1	--	869.49
68	68+55.78	52.50' RT	CTH O	--	--	--	1	866.24
40103	68+81.76	44.63' LT	CTH O	--	--	1	--	865.92
57	68+69.16	51.50' LT	CTH O	--	--	--	1	865.88
13571	70+33.81	5.00' LT	CTH O	--	--	1	-	865.69
71	69+91.83	6.00' LT	CTH O	--	1	--	--	865.48
70	69+90.21	8.50' RT	CTH O	--	1	--	--	865.78
13572	70+87.77	9.27' RT	CTH O	--	--	1	--	865.18
78	71+23.02	7.50' RT	CTH O	--	--	--	1	864.96
12641	74+20.32	45.86' LT	CTH O	--	--	1	--	861.67
85	76+51.60	18.21' LT	CTH O	--	--	--	1	860.35
11924	76+49.22	4.80' RT	CTH O	--	--	1	--	860.28
11725	79+57.59	13.00' lt	CTH O	--	--	--	1	857.07
			TOTALS	3	5	8	12	

REMARKS

* STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE

**RIM ELEVATIONS GIVEN TO FLANGE OF CASTING

2

STORM SEWER PIPES

FROM	-	TO	LOCATION	608.3012 STORM SEWER PIPE CLASS III-A 12-INCH LF	608.3015 STORM SEWER PIPE CLASS III-A 15-INCH LF	608.3018 STORM SEWER PIPE CLASS III-A 18-INCH LF	608.3036 STORM SEWER PIPE CLASS III-A 36-INCH LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0342 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 42-INCH LF	INLET* ELEVATION	DISCHARGE* ELEVATION	SLOPE FT/FT	REMARKS
56	-	57	CTH O	--	--	--	--	--	--	--	--	--	--	Existing Pipe
55	-	56	CTH O	--	244	--	--	--	--	--	864.06	861.77	0.0094	
54	-	55	CTH O	--	46	--	--	--	--	--	864.49	864.06	0.0093	
53	-	54	CTH O	4	--	--	--	--	--	--	864.80	864.49	0.0775	
52	-	53	CTH O	8	--	--	--	--	--	--	--	864.80	--	
51	-	52	CTH O	--	--	--	--	60	--	--	867.32	--	--	Connect to Existing Pipe, Concrete Collar Required
50	-	51	CTH O	4	--	--	--	--	--	--	--	867.57	--	
62	-	EX. MH	CTH O	--	--	--	--	--	--	4	850.90	--	--	Existing Pipe
60	-	12641	CTH O	--	--	--	--	--	--	4	855.26	--	--	Existing Pipe
57	-	40103	CTH O	--	--	--	--	--	--	--	--	--	--	Existing Pipe
65	-	66	CTH O	--	--	4	--	--	--	--	--	862.39	--	Existing Pipe
66	-	40046	CTH O	--	--	9	--	--	--	--	862.39	862.19	0.0222	
67	-	56	CTH O	--	--	4	--	--	--	--	861.91	--	--	Existing Pipe
40046	-	67	CTH O	--	--	4	--	--	--	--	--	861.91	--	Existing Pipe
68	-	40103	CTH O	101	--	--	--	--	--	--	862.64	857.91	0.0468	
40103	-	58	CTH O	--	--	--	--	--	--	4	--	855.94	--	Existing Pipe
13571	-	58	CTH O	4	--	--	--	--	--	--	--	859.50	--	Existing Pipe
71	-	13571	CTH O	--	--	--	--	--	--	--	--	--	--	Existing Pipe
70	-	71	CTH O	--	--	--	--	--	--	--	--	--	--	Existing Pipe
69	-	70	CTH O	7	--	--	--	--	--	--	862.00	861.93	0.0100	requires new connection to existing manhole
72	-	71	CTH O	7	--	--	--	--	--	--	861.47	861.40	0.0100	requires new connection to existing manhole
58	-	59	CTH O	--	--	--	--	--	--	8	855.94	855.60	0.0425	Existing Pipe
13572	-	59	CTH O	--	4	--	--	--	--	--	--	857.66	-	Existing Pipe
78	-	13572	CTH O	--	--	--	--	--	--	--	--	--	--	Existing Pipe
79	-	78	CTH O	4	--	--	--	--	--	--	859.37	--	--	Existing Pipe

CONTINUED ON NEXT PAGE

* PIPE INVERTS ONLY GIVEN FOR PIPES GOING INTO OR DISCHARGING FROM A NEW STRUCTURE

NOTE:
CONTRACTOR SHALL VERIFY EXISTING STORM SEWER ELEVATION AND LOCATION WHEN CONNECTION IS REQUIRED

2

STORM SEWER PIPES

FROM	-	TO	LOCATION	608.3012 STORM SEWER PIPE CLASS III-A 12-INCH LF	608.3015 STORM SEWER PIPE CLASS III-A 15-INCH LF	608.3018 STORM SEWER PIPE CLASS III-A 18-INCH LF	608.3036 STORM SEWER PIPE CLASS III-A 36-INCH LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	608.0342 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 42-INCH LF	INLET* ELEVATION	DISCHARGE* ELEVATION	SLOPE FT/FT	REMARKS
73	-	13572	CTH O	--	51	--	--	--	--	--	859.94	858.53	0.0276	
74	-	73	CTH O	21	--	--	--	--	--	--	860.47	860.26	0.0100	
77	-	78	CTH O	4	--	--	--	--	--	--	860.50	--	--	Existing Pipe
76	-	77	CTH O	19	--	--	--	--	--	--	860.70	860.60	0.0053	
75	-	76	CTH O	5	--	--	--	--	--	--	860.83	860.80	0.0060	
59	-	60	CTH O	--	--	--	--	--	--	8	855.60	855.26	--	Existing Pipe
80	-	60	CTH O	6	--	--	--	--	--	--	860.46	860.40	0.0100	
81	-	12641	CTH O	11	--	--	--	--	--	--	858.86	855.21	0.3318	
83	-	12641	CTH O	4	--	--	--	--	--	--	855.14	--	--	Existing Pipe
82	-	83	CTH O	8	--	--	--	--	--	--	857.55	855.14	0.3012	Existing Pipe
61	-	62	CTH O	--	--	--	--	--	--	8	851.16	850.90	--	Existing Pipe
84	-	62	CTH O	12	--	--	--	--	--	--	856.26	856.14	0.0100	
12641	-	61	CTH O	--	--	--	--	--	--	4	--	851.16	--	Existing Pipe
85	-	61	CTH O	--	8	--	--	--	--	--	--	852.82	--	Existing Pipe
86	-	85	CTH O	--	--	5	--	--	--	--	853.25	853.10	0.0300	
11924	-	86	CTH O	--	--	18	--	--	--	--	853.56	853.37	0.0106	
87	-	11924	CTH O	--	--	--	--	54	--	--	857.34	853.59	0.0694	
EX. MH	-	73	CTH O	38	--	--	--	--	--	--	860.54	860.16	0.0100	
EX. MH	-	74	CTH O	21	--	--	--	--	--	--	861.13	860.72	0.0195	
13	-	3742	CTH O	53	--	--	--	--	--	--	849.60	849.07	0.0100	requires new connection to existing manhole
14	-	3742	CTH O	28	--	--	--	--	--	--	850.26	849.98	0.0100	requires new connection to existing manhole
16	-	3742	CTH O	--	301	--	--	--	--	--	854.25	846.39	0.0261	
16A	-	16	CTH O	10	--	--	--	--	--	--	857.75	857.65	0.0100	requires new connection to existing manhole
17	-	16	CTH O	--	13	--	--	--	--	--	855.21	855.00	0.0162	
18	-	17	CTH O	--	8	--	--	--	--	--	--	855.21	--	Existing Pipe
19	-	18	CTH O	--	--	--	--	16	--	--	861.81	--	0.0159	Connect to Existing Pipe, Concrete Collar Required

CONTINUED ON NEXT PAGE

* PIPE INVERTS ONLY GIVEN FOR PIPES GOING INTO OR DISCHARGING FROM A NEW STRUCTURE

NOTE:
CONTRACTOR SHALL VERIFY EXISTING STORM SEWER ELEVATION AND LOCATION WHEN CONNECTION IS REQUIRED

CONTINUED FROM PREVIOUS PAGE

STORM SEWER PIPES

FROM	-	TO	LOCATION	608.3012 STORM SEWER PIPE CLASS III-A 12-INCH LF	608.3015 STORM SEWER PIPE CLASS III-A 15-INCH LF	608.3018 STORM SEWER PIPE CLASS III-A 18-INCH LF	608.3036 STORM SEWER PIPE CLASS III-A 36-INCH LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	608.0342 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 42-INCH LF	INLET* ELEVATION	DISCHARGE* ELEVATION	SLOPE FT/FT	REMARKS
20	-	19	CTH O	39	--	--	--	--	--	--	862.23	861.81	0.0108	
21	-	20	CTH O	7	--	--	--	--	--	--	862.32	862.23	0.0129	
22	-	21	CTH O	4	--	--	--	--	--	--	--	862.32	--	Existing Pipe
3742	-	3438	CTH O	--	--	--	--	--	--	--	--	--	--	Existing Pipe. No structure work
15	-	16	CTH O	--	8	--	--	--	--	--	855.98	--	--	Existing Pipe
39	-	8229	CTH O	8	--	--	--	--	--	--	863.04	--	--	Existing Pipe
40	-	39	CTH O	175	--	--	--	--	--	--	865.04	863.22	0.0104	
41	-	40	CTH O	39	--	--	--	--	--	--	865.68	865.29	0.0100	requires new connection to existing manhole
31	-	8299	CTH O	4	--	--	--	--	--	--	864.52	--	--	Existing Pipe
32	-	31	CTH O	8	--	--	--	--	--	--	865.27	864.27	0.1250	Existing Pipe
7826	-	32	CTH O	4	--	--	--	--	--	--	--	865.27	--	Existing Pipe
33	-	7826	CTH O	--	--	--	--	--	--	--	--	--	--	Existing Pipe
7740	-	8299	CTH O	--	--	--	--	--	--	--	--	--	--	Existing Pipe
37	-	7740	CTH O	4	--	--	--	--	--	--	864.41	--	--	Existing Pipe
36	-	37	CTH O	8	--	--	--	--	--	--	--	864.41	--	Existing Pipe
35	-	36	CTH O	19	--	--	--	--	--	--	865.10	865.00	0.0053	requires new connection to existing manhole
38	-	37	CTH O	10	--	--	--	--	--	--	864.76	864.66	0.0100	
34	-	8299	CTH O	--	--	--	8	--	--	--	--	--	--	Existing Pipe
2656	-	Ex. Pipe	CTH O	--	--	--	--	--	20	--	843.26	--	--	Connect to Existing Pipe, Concrete Collar Required
3438	-	2656	CTH O	--	--	190	--	--	--	--	844.92	843.27	0.0087	
			TOTALS	708	683	234	8	130	20	40				

* PIPE INVERTS ONLY GIVEN FOR PIPES GOING INTO OR DISCHARGING FROM A NEW STRUCTURE

NOTE:
CONTRACTOR SHALL VERIFY EXISTING STORM SEWER ELEVATION AND LOCATION WHEN CONNECTION IS REQUIRED

2

LIGHTING REMOVAL LEGEND

EXISTING LIGHT FIXTURE WITH TWIN ARMS AND TWIN LUMINAIRES, AND CONCRETE BASE TO BE REMOVED.

EXISTING LIGHT FIXTURE WITH TWIN ARMS AND TWIN LUMINAIRES TO REMAIN.

EXISTING LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL ON CONCRETE CONTROL CABINET BASE TO BE RELOCATED.

EXISTING CONDUIT AND CONDUCTORS TO REMAIN.

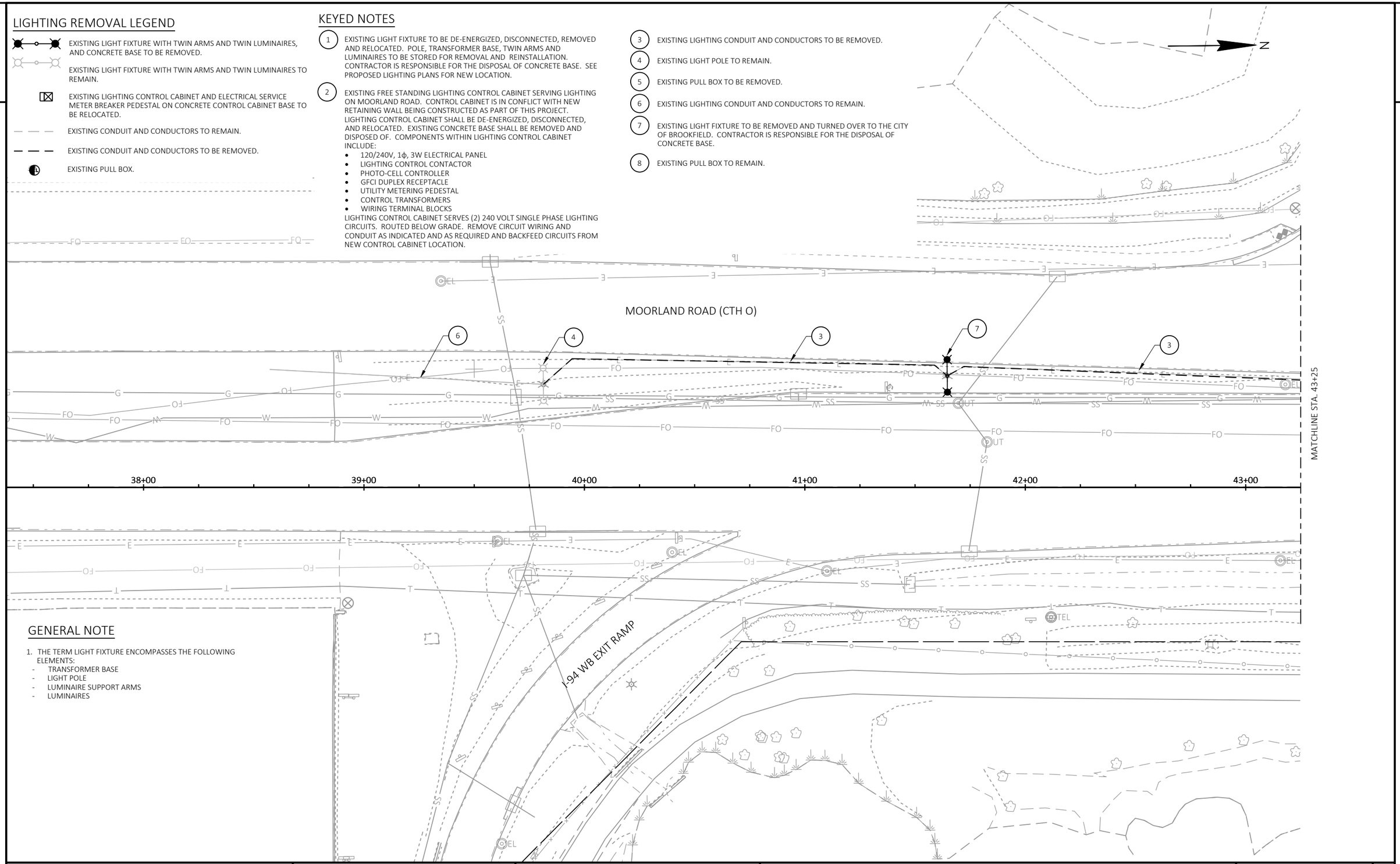
EXISTING CONDUIT AND CONDUCTORS TO BE REMOVED.

EXISTING PULL BOX.

KEYED NOTES

1. EXISTING LIGHT FIXTURE TO BE DE-ENERGIZED, DISCONNECTED, REMOVED AND RELOCATED. POLE, TRANSFORMER BASE, TWIN ARMS AND LUMINAIRES TO BE STORED FOR REMOVAL AND REINSTALLATION. CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF CONCRETE BASE. SEE PROPOSED LIGHTING PLANS FOR NEW LOCATION.
2. EXISTING FREE STANDING LIGHTING CONTROL CABINET SERVING LIGHTING ON MOORLAND ROAD. CONTROL CABINET IS IN CONFLICT WITH NEW RETAINING WALL BEING CONSTRUCTED AS PART OF THIS PROJECT. LIGHTING CONTROL CABINET SHALL BE DE-ENERGIZED, DISCONNECTED, AND RELOCATED. EXISTING CONCRETE BASE SHALL BE REMOVED AND DISPOSED OF. COMPONENTS WITHIN LIGHTING CONTROL CABINET INCLUDE:
   - 120/240V, 1ϕ, 3W ELECTRICAL PANEL
   - LIGHTING CONTROL CONTACTOR
   - PHOTO-CELL CONTROLLER
   - GFCI DUPLEX RECEPTACLE
   - UTILITY METERING PEDESTAL
   - CONTROL TRANSFORMERS
   - WIRING TERMINAL BLOCKS

   LIGHTING CONTROL CABINET SERVES (2) 240 VOLT SINGLE PHASE LIGHTING CIRCUITS. ROUTED BELOW GRADE. REMOVE CIRCUIT WIRING AND CONDUIT AS INDICATED AND AS REQUIRED AND BACKFEED CIRCUITS FROM NEW CONTROL CABINET LOCATION.
3. EXISTING LIGHTING CONDUIT AND CONDUCTORS TO BE REMOVED.
4. EXISTING LIGHT POLE TO REMAIN.
5. EXISTING PULL BOX TO BE REMOVED.
6. EXISTING LIGHTING CONDUIT AND CONDUCTORS TO REMAIN.
7. EXISTING LIGHT FIXTURE TO BE REMOVED AND TURNED OVER TO THE CITY OF BROOKFIELD. CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF CONCRETE BASE.
8. EXISTING PULL BOX TO REMAIN.



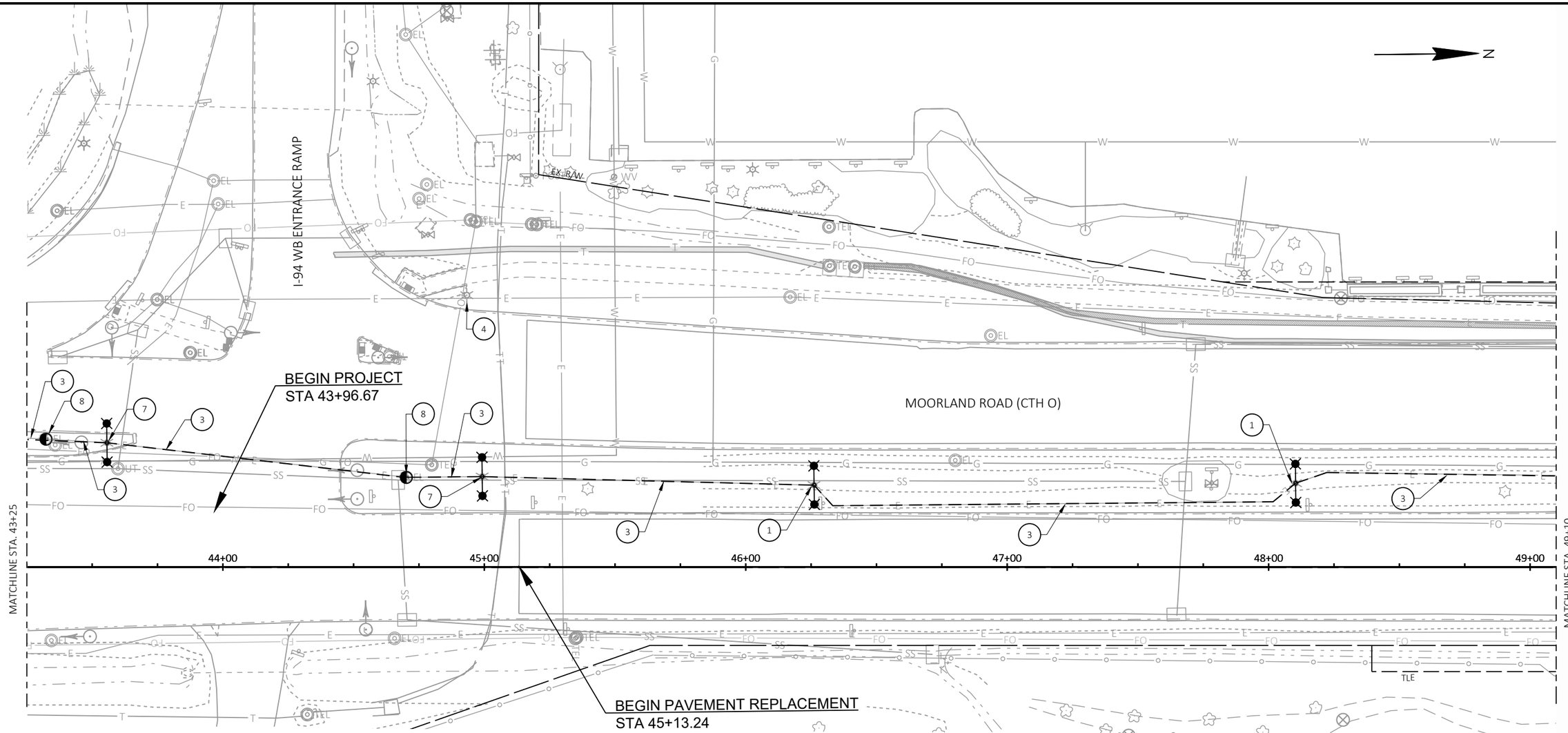
GENERAL NOTE

1. THE TERM LIGHT FIXTURE ENCOMPASSES THE FOLLOWING ELEMENTS:
   - TRANSFORMER BASE
   - LIGHT POLE
   - LUMINAIRE SUPPORT ARMS
   - LUMINAIRES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	LIGHTING REMOVAL PLAN	SHEET 57	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\023501_LP.DWG
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PLOT DATE : 10/1/2021 4:32 PM
PLOT BY : MCGILLICUDDY, BEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2



LIGHTING REMOVAL LEGEND

- EXISTING LIGHT FIXTURE WITH TWIN ARMS AND TWIN LUMINAIRES, AND CONCRETE BASE TO BE REMOVED.
- EXISTING LIGHT FIXTURE WITH TWIN ARMS AND TWIN LUMINAIRES TO REMAIN.
- EXISTING LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL ON CONCRETE CONTROL CABINET BASE TO BE RELOCATED.
- EXISTING CONDUIT AND CONDUCTORS TO REMAIN.
- EXISTING CONDUIT AND CONDUCTORS TO BE REMOVED.
- EXISTING PULL BOX.

KEYED NOTES

(1) EXISTING LIGHT FIXTURE TO BE DE-ENERGIZED, DISCONNECTED, REMOVED AND RELOCATED. POLE, TRANSFORMER BASE, TWIN ARMS AND LUMINAIRES TO BE STORED FOR REMOVAL AND REINSTALLATION. CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF CONCRETE BASE. SEE PROPOSED LIGHTING PLANS FOR NEW LOCATION.

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- LIGHTING CONTROL CONTACTOR
- PHOTO-CELL CONTROLLER
- GFCI DUPLEX RECEPTACLE
- UTILITY METERING PEDESTAL
- CONTROL TRANSFORMERS
- WIRING TERMINAL BLOCKS

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(4) EXISTING LIGHT POLE TO REMAIN.

(5) EXISTING PULL BOX TO BE REMOVED.

(6) EXISTING LIGHTING CONDUIT AND CONDUCTORS TO REMAIN.

(7) EXISTING LIGHT FIXTURE TO BE REMOVED AND TURNED OVER TO THE CITY OF BROOKFIELD. CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF CONCRETE BASE.

(8) EXISTING PULL BOX TO REMAIN.

GENERAL NOTE

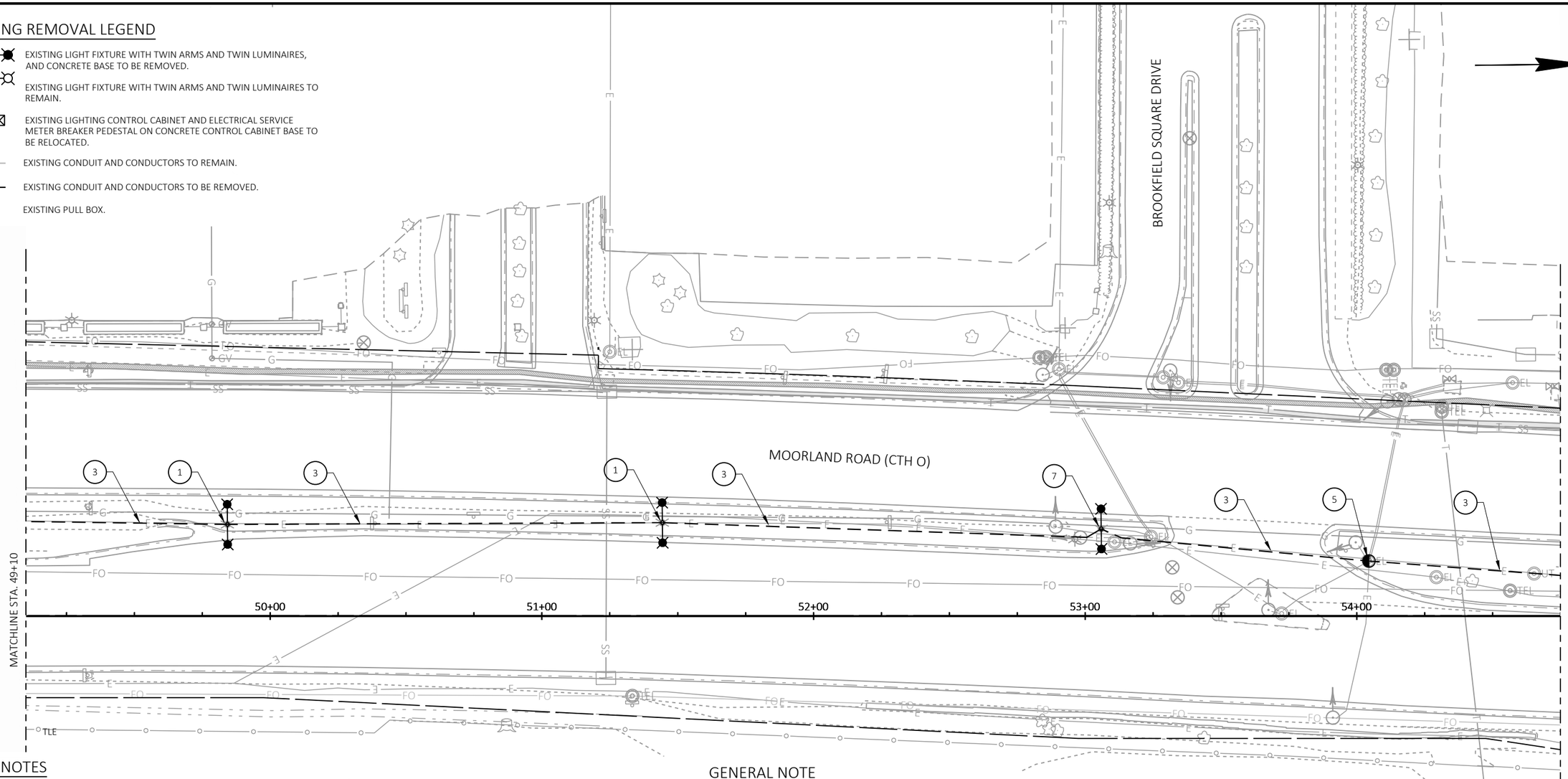
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   - TRANSFORMER BASE
   - LIGHT POLE
   - LUMINAIRE SUPPORT ARMS
   - LUMINAIRES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	LIGHTING REMOVAL PLAN	SHEET 58	E

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PLOT BY : MCGILLICUDDY, BEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

LIGHTING REMOVAL LEGEND

- EXISTING LIGHT FIXTURE WITH TWIN ARMS AND TWIN LUMINAIRES, AND CONCRETE BASE TO BE REMOVED.
- EXISTING LIGHT FIXTURE WITH TWIN ARMS AND TWIN LUMINAIRES TO REMAIN.
- EXISTING LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL ON CONCRETE CONTROL CABINET BASE TO BE RELOCATED.
- EXISTING CONDUIT AND CONDUCTORS TO REMAIN.
- EXISTING CONDUIT AND CONDUCTORS TO BE REMOVED.
- EXISTING PULL BOX.



KEYED NOTES

1. EXISTING LIGHT FIXTURE TO BE DE-ENERGIZED, DISCONNECTED, REMOVED AND RELOCATED. POLE, TRANSFORMER BASE, TWIN ARMS AND LUMINAIRES TO BE STORED FOR REMOVAL AND REINSTALLATION. CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF CONCRETE BASE. SEE PROPOSED LIGHTING PLANS FOR NEW LOCATION.
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   - CONTROL TRANSFORMERS
   - WIRING TERMINAL BLOCKS

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8. EXISTING PULL BOX TO REMAIN.

GENERAL NOTE

1. THE TERM LIGHT FIXTURE ENCOMPASSES THE FOLLOWING ELEMENTS:
   - TRANSFORMER BASE
   - LIGHT POLE
   - LUMINAIRE SUPPORT ARMS
   - LUMINAIRES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	LIGHTING REMOVAL PLAN	SHEET 59	E

2

LIGHTING REMOVAL LEGEND

EXISTING LIGHT FIXTURE WITH TWIN ARMS AND TWIN LUMINAIRES, AND CONCRETE BASE TO BE REMOVED.

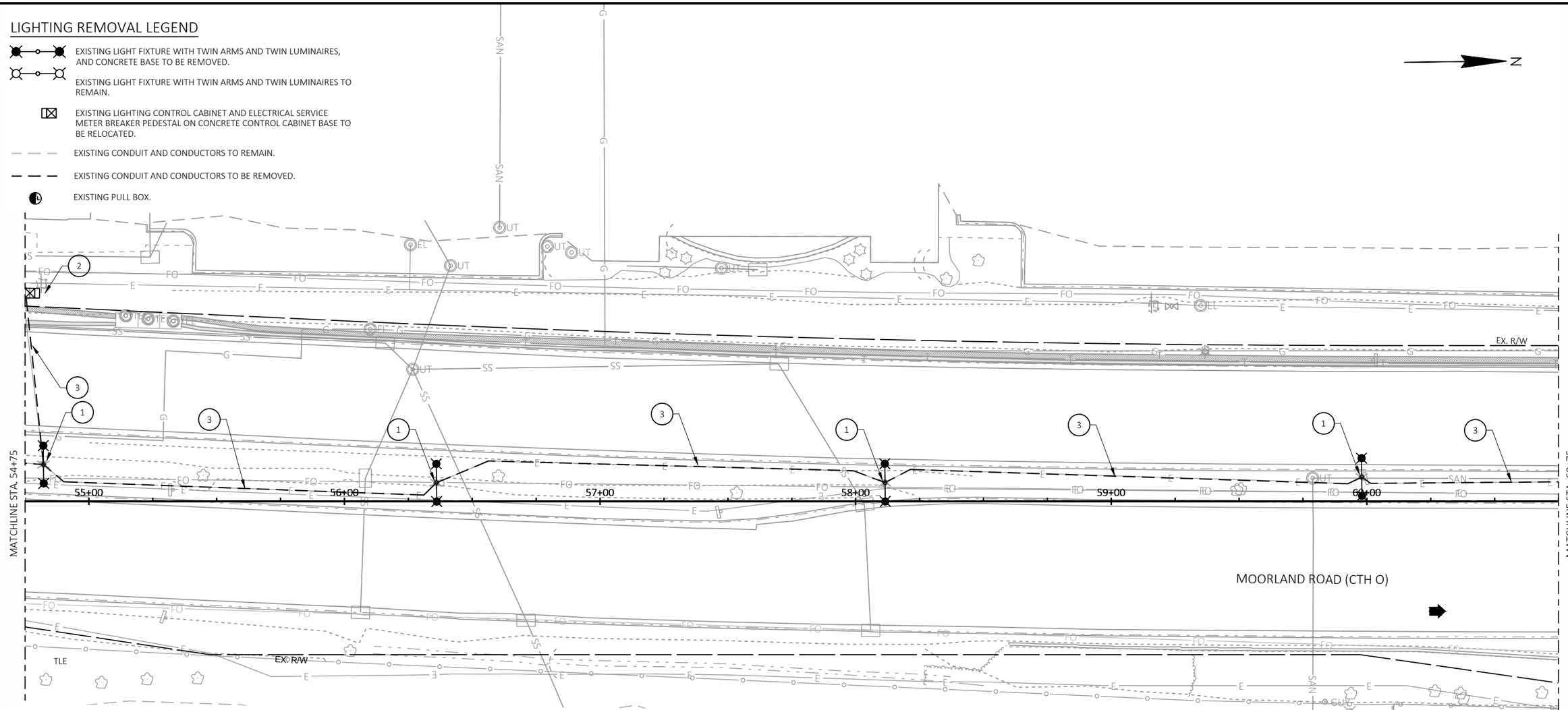
EXISTING LIGHT FIXTURE WITH TWIN ARMS AND TWIN LUMINAIRES TO REMAIN.

EXISTING LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL ON CONCRETE CONTROL CABINET BASE TO BE RELOCATED.

EXISTING CONDUIT AND CONDUCTORS TO REMAIN.

EXISTING CONDUIT AND CONDUCTORS TO BE REMOVED.

EXISTING PULL BOX.



KEYED NOTES

1. EXISTING LIGHT FIXTURE TO BE DE-ENERGIZED, DISCONNECTED, REMOVED AND RELOCATED. POLE, TRANSFORMER BASE, TWIN ARMS AND LUMINAIRES TO BE STORED FOR REMOVAL AND REINSTALLATION. CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF CONCRETE BASE. SEE PROPOSED LIGHTING PLANS FOR NEW LOCATION.

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GENERAL NOTE

1. THE TERM LIGHT FIXTURE ENCOMPASSES THE FOLLOWING ELEMENTS:
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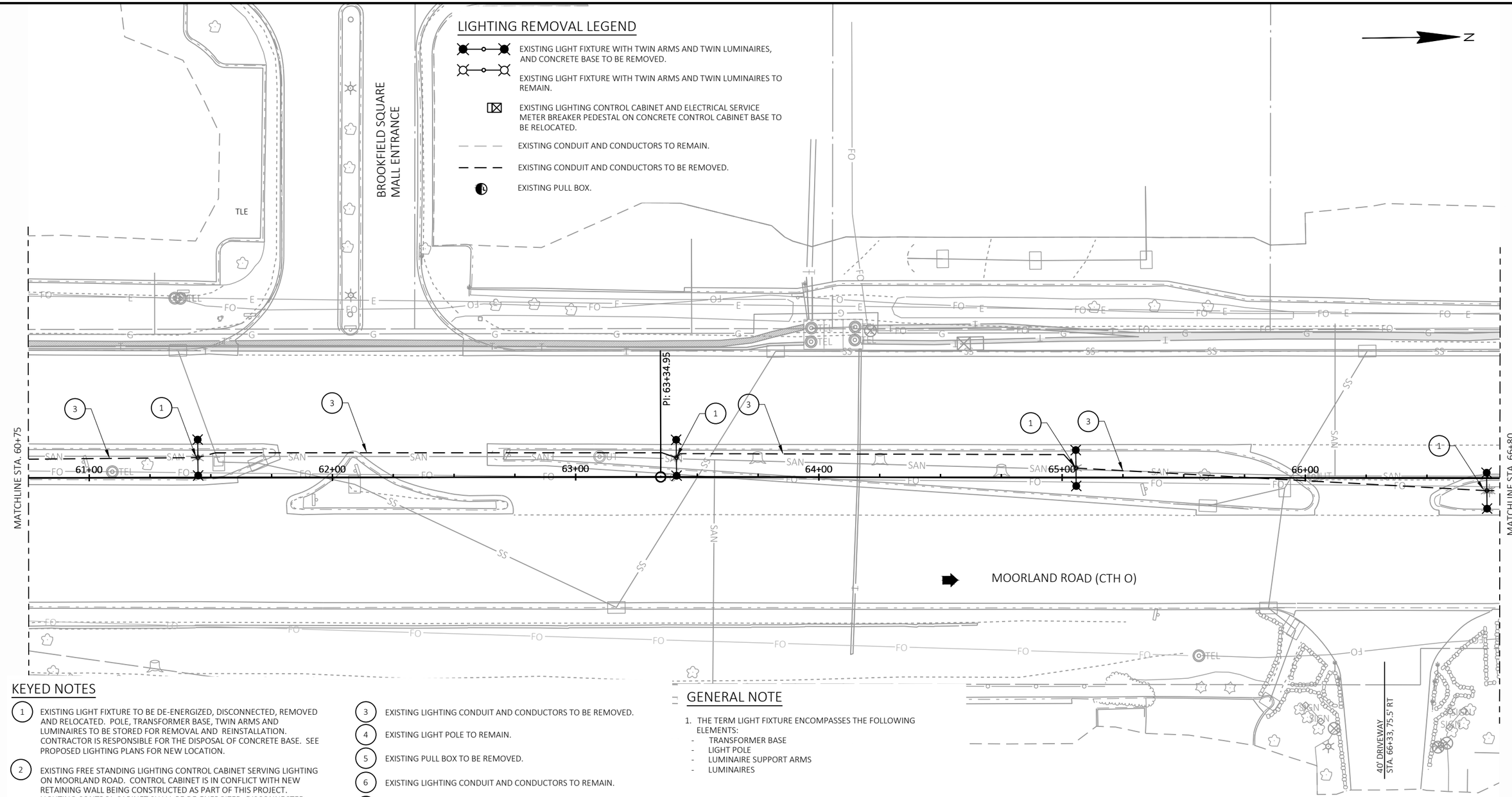
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	LIGHTING REMOVAL PLAN	SHEET 60	E

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PLOT DATE : 10/1/2021 1:25 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

LIGHTING REMOVAL LEGEND

- EXISTING LIGHT FIXTURE WITH TWIN ARMS AND TWIN LUMINAIRES, AND CONCRETE BASE TO BE REMOVED.
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- EXISTING CONDUIT AND CONDUCTORS TO BE REMOVED.
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KEYED NOTES

1. EXISTING LIGHT FIXTURE TO BE DE-ENERGIZED, DISCONNECTED, REMOVED AND RELOCATED. POLE, TRANSFORMER BASE, TWIN ARMS AND LUMINAIRES TO BE STORED FOR REMOVAL AND REINSTALLATION. CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF CONCRETE BASE. SEE PROPOSED LIGHTING PLANS FOR NEW LOCATION.
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GENERAL NOTE

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   - LUMINAIRES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	LIGHTING REMOVAL PLAN	SHEET 61	E

2

LIGHTING REMOVAL LEGEND

EXISTING LIGHT FIXTURE WITH TWIN ARMS AND TWIN LUMINAIRES, AND CONCRETE BASE TO BE REMOVED.

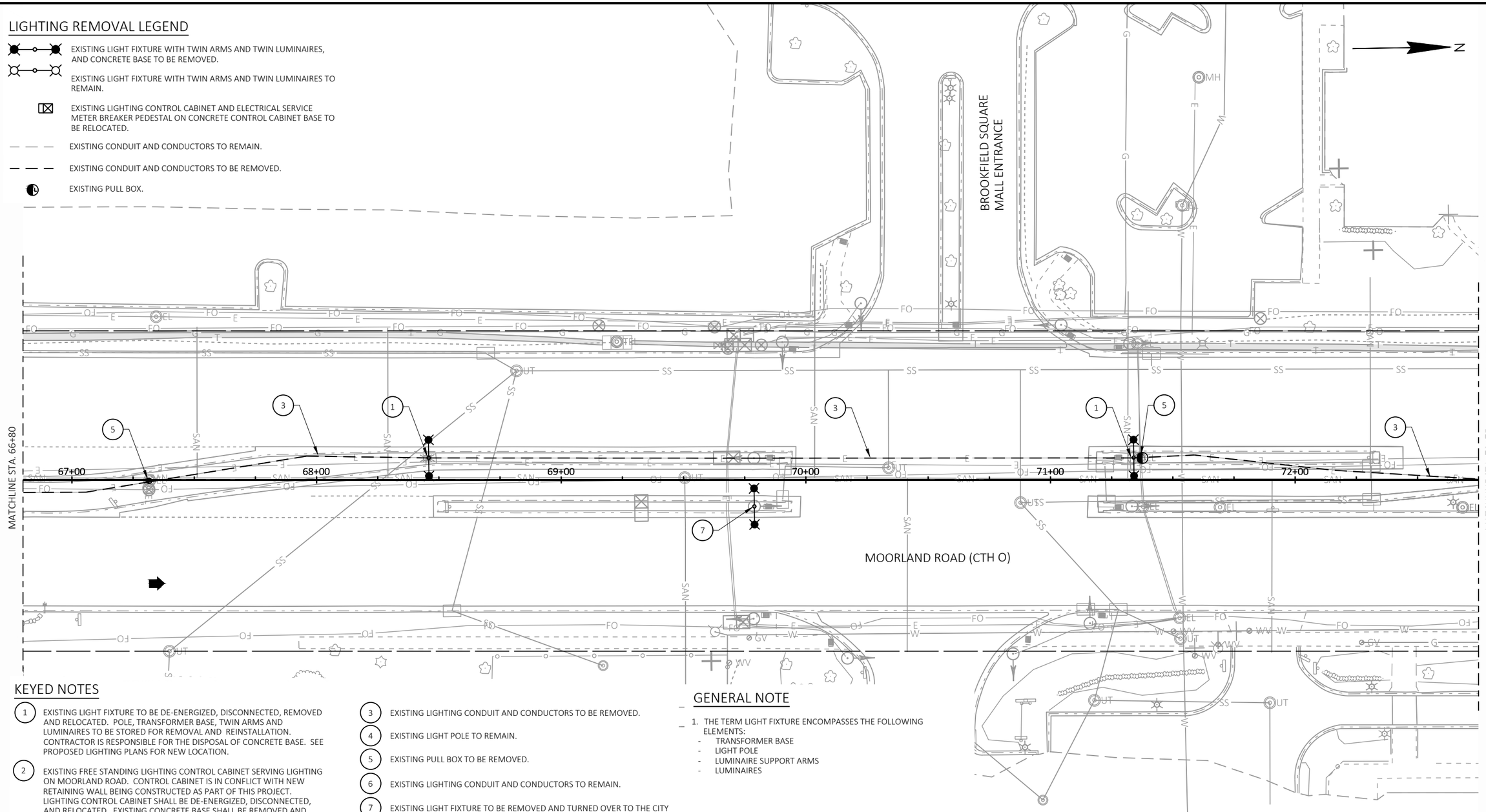
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EXISTING CONDUIT AND CONDUCTORS TO BE REMOVED.

EXISTING PULL BOX.



KEYED NOTES

1. EXISTING LIGHT FIXTURE TO BE DE-ENERGIZED, DISCONNECTED, REMOVED AND RELOCATED. POLE, TRANSFORMER BASE, TWIN ARMS AND LUMINAIRES TO BE STORED FOR REMOVAL AND REINSTALLATION. CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF CONCRETE BASE. SEE PROPOSED LIGHTING PLANS FOR NEW LOCATION.

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GENERAL NOTE

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   - TRANSFORMER BASE
   - LIGHT POLE
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   - LUMINAIRES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	LIGHTING REMOVAL PLAN	SHEET 62	E

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WISDOT/CADDS SHEET 42

LIGHTING REMOVAL LEGEND

- EXISTING LIGHT FIXTURE WITH TWIN ARMS AND TWIN LUMINAIRES, AND CONCRETE BASE TO BE REMOVED.
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- EXISTING CONDUIT AND CONDUCTORS TO BE REMOVED.
- EXISTING PULL BOX.

KEYED NOTES

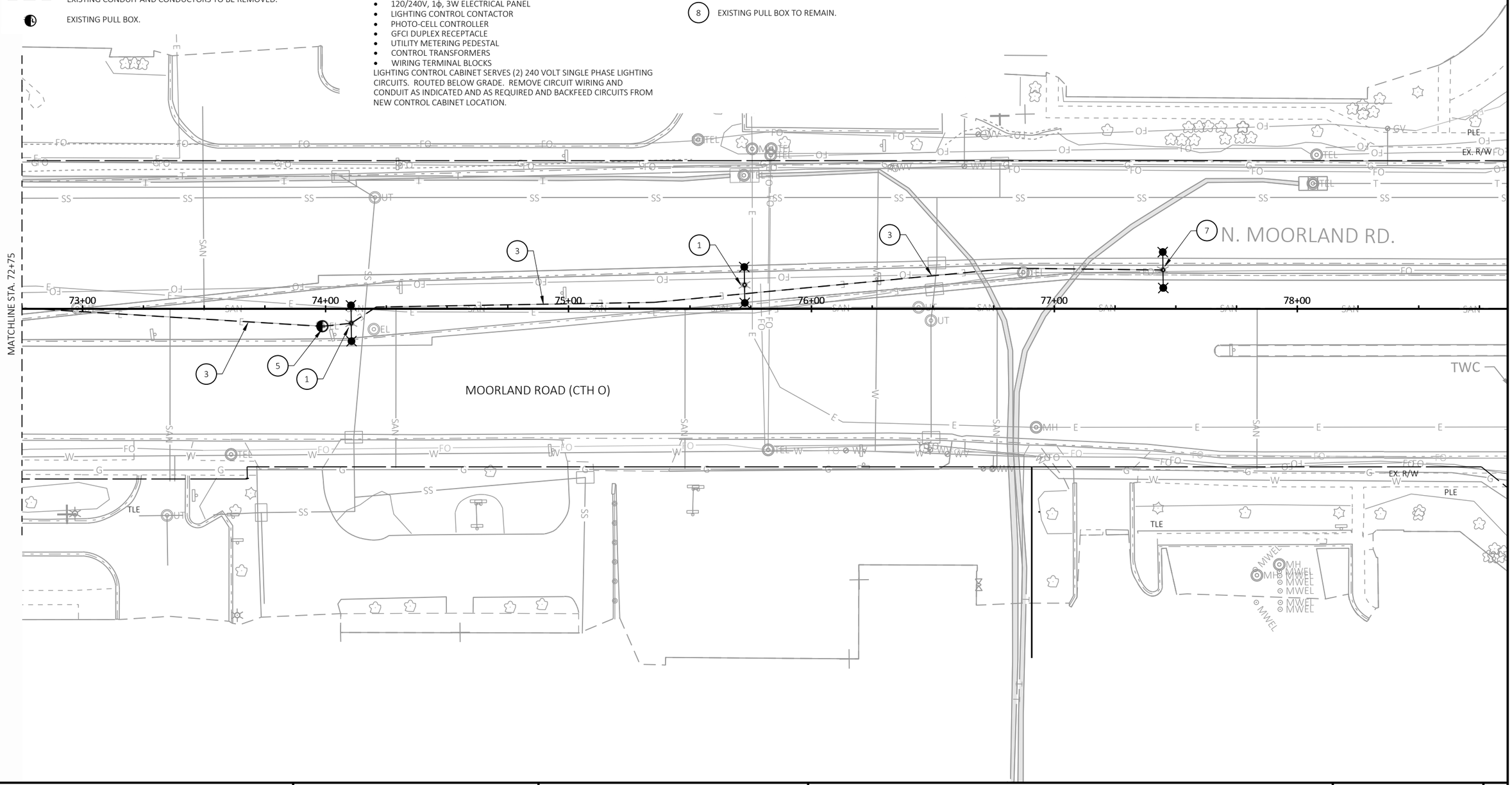
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GENERAL NOTE

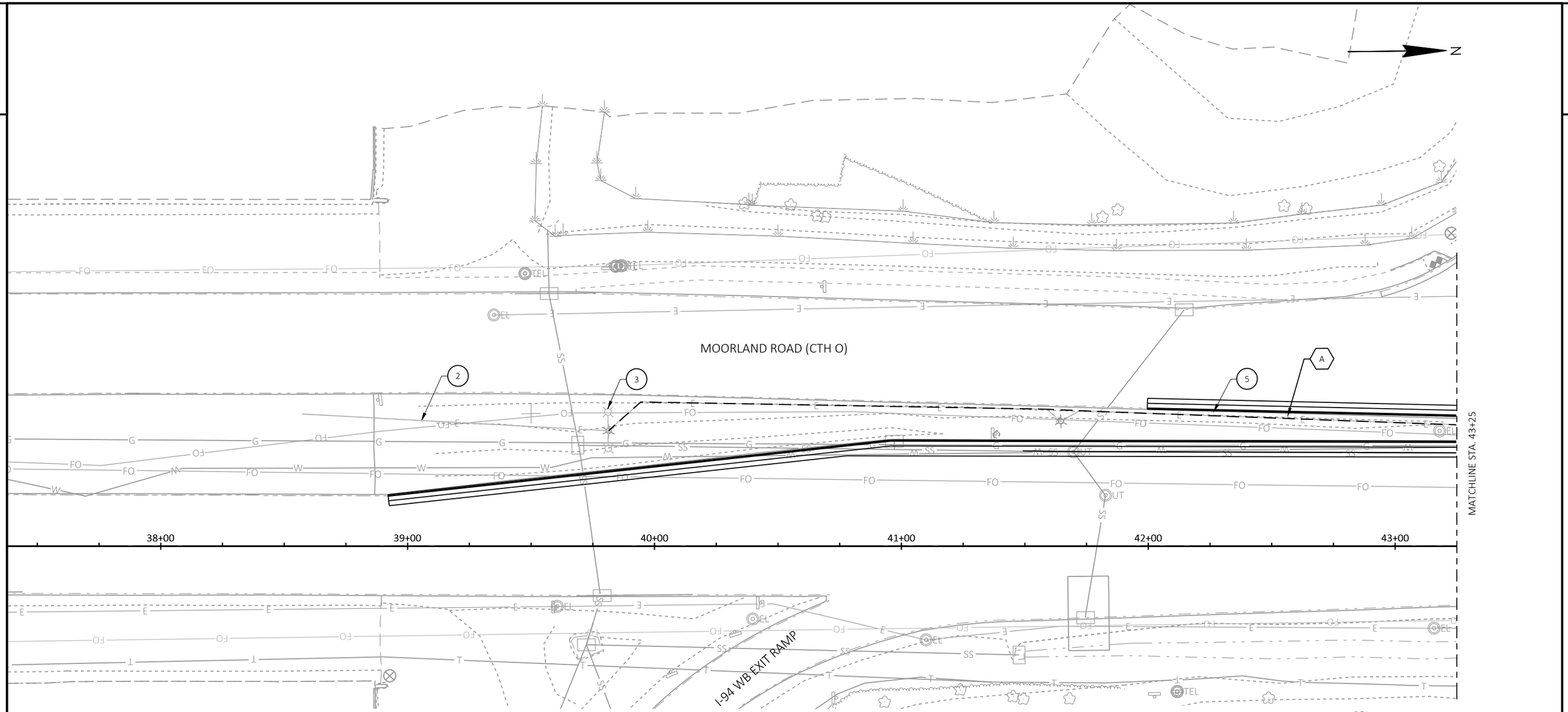
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   - LUMINAIRE SUPPORT ARMS
   - LUMINAIRES

N



PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	LIGHTING REMOVAL PLAN	SHEET 63	E

2



LIGHTING LEGEND

STA 865+55.00, 22.0' LT
X-1-X

- LOCATION (TO CENTER OF POLE)
- LIGHTING CIRCUIT(S) - EXISTING
- POLE NUMBER
- EXISTING CONTROL CABINET DESIGNATION
- EXISTING RELOCATED LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES.
- EXISTING LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES TO REMAIN.
- EXISTING RELOCATED LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL.
- EXISTING CONDUIT AND CONDUCTORS TO REMAIN.
- NEW CONDUIT AND CONDUCTORS (SEE CABLE AND CONDUIT LEGEND).
- PULL BOX, 24" X 36"
- INTERSECTION LIGHT MOUNTED TO SIGNAL POLE - FOR INFORMATION ONLY

KEYED NOTE

1. ROUTE CONDUCTORS THROUGH EXISTING PULLBOX.
2. EXISTING CONDUIT AND CONDUCTORS TO REMAIN.
3. EXISTING LIGHT POLE TO REMAIN.
4. EXISTING LIGHTING CONTROL CABINET RELOCATED. INSTALL ON NEW CONCRETE BASE. SEE NOTE 2 ON LIGHTING REMOVAL PLANS PER ADDITIONAL INFORMATION.
5. PROVIDE NEW CONDUCTORS FOR THIS WIRING RUN. CONDUCTOR MAY RE-USE EXISTING CONDUIT WHERE POSSIBLE AND PRACTICAL.
6. RELOCATED LIGHT FIXTURE. INSTALL NEW CONCRETE BASE.
7. EXISTING LIGHT FIXTURE TO REMAIN. EXISTING CIRCUIT CONDUCTORS FROM THE SOUTH SHALL BE DE-ENERGIZED, DISCONNECTED, AND REMOVED. FIXTURE SHALL BE RE-FED FROM A CIRCUIT TO THE NORTH. RE-FEEDING FIXTURE IS NOT IN THIS SCOPE.

CABLE AND CONDUIT LEGEND

- A — 4 #4 AWG AND 1 #8 GROUND IN 2" RIGID NONMETALLIC CONDUIT
- B — 8 #4 AWG AND 1 #8 GROUND IN 2" RIGID NONMETALLIC CONDUIT

GENERAL NOTE

1. THE TERM LIGHT FIXTURE ENCOMPASSES THE FOLLOWING ELEMENTS:
   - TRANSFORMER BASE
   - LIGHT POLE
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   - LUMINAIRES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PROPOSED LIGHTING PLAN	SHEET 64	E

2

N

I-94 WB ENTRANCE RAMP

EX. R/W

EXISTING WISDOT LIGHT TO REMAIN.

LIGHTING AT THIS INTERSECTION IS WIRED WITH AND MOUNTED ONTO THE PROPOSED TRAFFIC SIGNAL. SEE SIGNAL PLAN.

BEGIN PROJECT
STA 43+96.67

MOORLAND ROAD (CTH O)

STA. 43+32.00, 49.0' LT
EXISTING PB1

STA. 44+70.00, 34.0' LT
EXISTING PB2

STA. 46+26.00, 29.0' LT
M1-1-1

STA. 46+26.00, 29.0' LT
M1-1-3

STA. 48+10.50, 42.5' LT
M1-2-1

STA. 48+10.50, 42.5' LT
M1-2-1

44+00 45+00 46+00 47+00 48+00 49+00

MATCHLINE STA. 43+25

MATCHLINE STA. 49+10

TLE

BEGIN PAVEMENT REPLACEMENT
STA 45+13.24

LIGHTING LEGEND

STA 865+55.00, 22.0' LT
X-1-X

- LOCATION (TO CENTER OF POLE)
- LIGHTING CIRCUIT(S) - EXISTING
- POLE NUMBER
- EXISTING CONTROL CABINET DESIGNATION

EXISTING RELOCATED LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES.

EXISTING LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES TO REMAIN.

EXISTING RELOCATED LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL.

EXISTING CONDUIT AND CONDUCTORS TO REMAIN.

NEW CONDUIT AND CONDUCTORS (SEE CABLE AND CONDUIT LEGEND).

PULL BOX, 24" X 36"

INTERSECTION LIGHT MOUNTED TO SIGNAL POLE - FOR INFORMATION ONLY

KEYED NOTE

1. ROUTE CONDUCTORS THROUGH EXISTING PULLBOX.
2. EXISTING CONDUIT AND CONDUCTORS TO REMAIN.
3. EXISTING LIGHT POLE TO REMAIN.
4. EXISTING LIGHTING CONTROL CABINET RELOCATED. INSTALL ON NEW CONCRETE BASE. SEE NOTE 2 ON LIGHTING REMOVAL PLANS PER ADDITIONAL INFORMATION.
5. PROVIDE NEW CONDUCTORS FOR THIS WIRING RUN. CONDUCTOR MAY RE-USE EXISTING CONDUIT WHERE POSSIBLE AND PRACTICAL.
6. RELOCATED LIGHT FIXTURE. INSTALL NEW CONCRETE BASE.
7. EXISTING LIGHT FIXTURE TO REMAIN. EXISTING CIRCUIT CONDUCTORS FROM THE SOUTH SHALL BE DE-ENERGIZED, DISCONNECTED, AND REMOVED. FIXTURE SHALL BE RE-FED FROM A CIRCUIT TO THE NORTH. RE-FEEDING FIXTURE IS NOT IN THIS SCOPE.

CABLE AND CONDUIT LEGEND

- A: 4 #4 AWG AND 1 #8 GROUND IN 2" RIGID NONMETALLIC CONDUIT
- B: 8 #4 AWG AND 1 #8 GROUND IN 2" RIGID NONMETALLIC CONDUIT

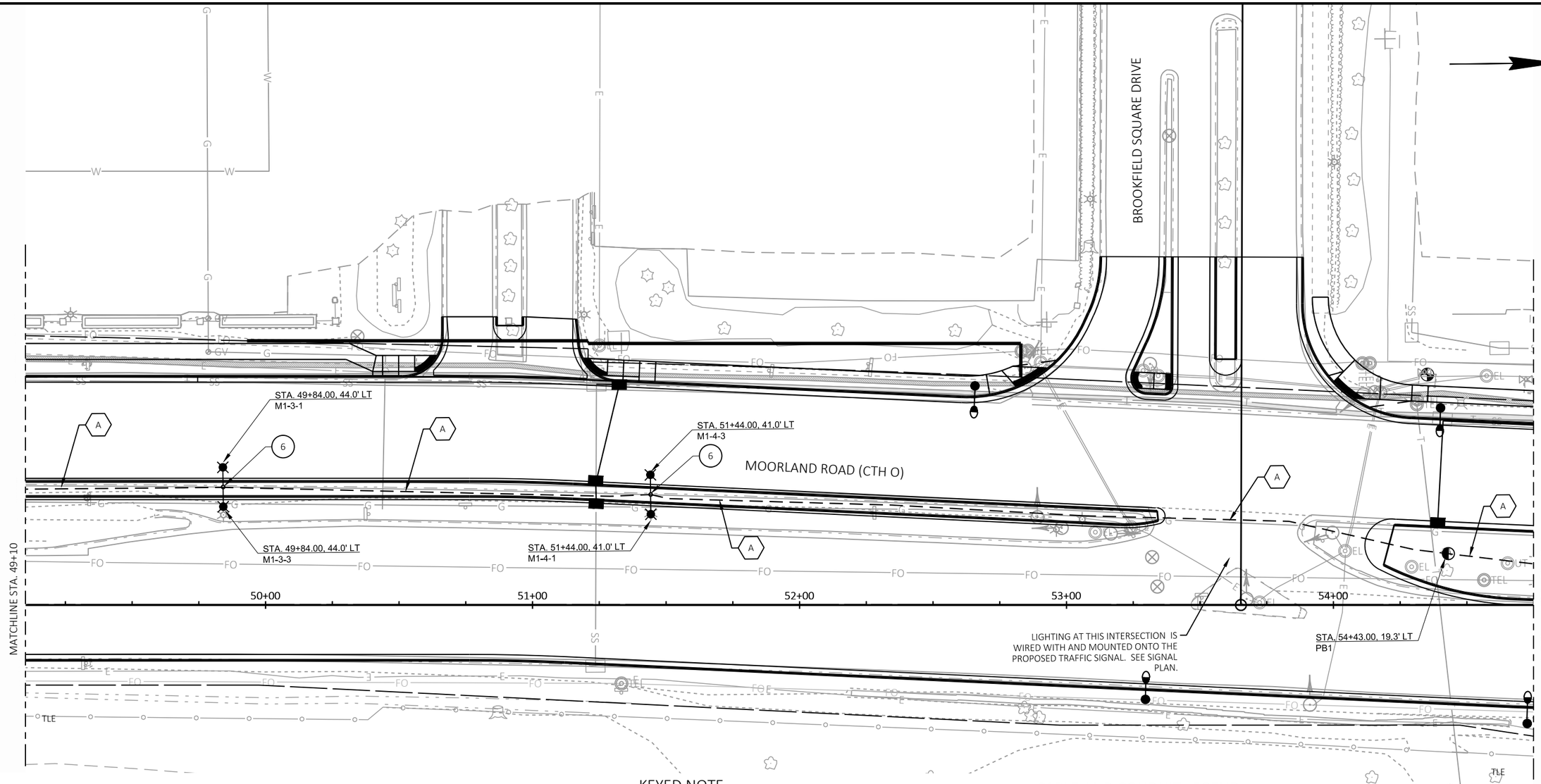
GENERAL NOTE

1. THE TERM LIGHT FIXTURE ENCOMPASSES THE FOLLOWING ELEMENTS:
   - TRANSFORMER BASE
   - LIGHT POLE
   - LUMINAIRE SUPPORT ARMS
   - LUMINAIRES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PROPOSED LIGHTING PLAN	SHEET 65	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\023502_LP.DWG
LAYOUT NAME - 023509_lp
PLOT DATE : 10/1/2021 1:27 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2



LIGHTING LEGEND

STA 865+55.00, 22.0' LT
X-1-X

- LOCATION (TO CENTER OF POLE)
- LIGHTING CIRCUIT(S) - EXISTING
- POLE NUMBER
- EXISTING CONTROL CABINET DESIGNATION

EXISTING RELOCATED LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES.

EXISTING LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES TO REMAIN.

EXISTING RELOCATED LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL.

EXISTING CONDUIT AND CONDUCTORS TO REMAIN.

NEW CONDUIT AND CONDUCTORS (SEE CABLE AND CONDUIT LEGEND).

PULL BOX, 24" X 36"

INTERSECTION LIGHT MOUNTED TO SIGNAL POLE - FOR INFORMATION ONLY

KEYED NOTE

1. ROUTE CONDUCTORS THROUGH EXISTING PULLBOX.
2. EXISTING CONDUIT AND CONDUCTORS TO REMAIN.
3. EXISTING LIGHT POLE TO REMAIN.
4. EXISTING LIGHTING CONTROL CABINET RELOCATED. INSTALL ON NEW CONCRETE BASE. SEE NOTE 2 ON LIGHTING REMOVAL PLANS PER ADDITIONAL INFORMATION.
5. PROVIDE NEW CONDUCTORS FOR THIS WIRING RUN. CONDUCTOR MAY RE-USE EXISTING CONDUIT WHERE POSSIBLE AND PRACTICAL.
6. RELOCATED LIGHT FIXTURE. INSTALL NEW CONCRETE BASE.
7. EXISTING LIGHT FIXTURE TO REMAIN. EXISTING CIRCUIT CONDUCTORS FROM THE SOUTH SHALL BE DE-ENERGIZED, DISCONNECTED, AND REMOVED. FIXTURE SHALL BE RE-FED FROM A CIRCUIT TO THE NORTH. RE-FEEDING FIXTURE IS NOT IN THIS SCOPE.

CABLE AND CONDUIT LEGEND

- A — 4 #4 AWG AND 1 #8 GROUND IN 2" RIGID NONMETALLIC CONDUIT
- B — 8 #4 AWG AND 1 #8 GROUND IN 2" RIGID NONMETALLIC CONDUIT

GENERAL NOTE

1. THE TERM LIGHT FIXTURE ENCOMPASSES THE FOLLOWING ELEMENTS:
   - TRANSFORMER BASE
   - LIGHT POLE
   - LUMINAIRE SUPPORT ARMS
   - LUMINAIRES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PROPOSED LIGHTING PLAN	SHEET 66	E

2

N

BEGIN WALL
STA. 55+40

END WALL
STA. 56+77

BEGIN WALL
R-67-156
STA. 58+55

EX. R/W

STA. 54+82.00, 14.5' LT
M1-5-3

STA. 54+82.00, 14.5' LT
M1-5-1

STA. 56+36.00, 08.2' LT
M1-6-5

STA. 58+16.00, 01.0' LT
M1-7-7

STA. 59+97.90, 00.3' RT
M1-8-5

MATCHLINE STA. 54+75

55+00

56+00

57+00

58+00

59+00

60+00

MATCHLINE STA. 60+75

STA. 54+89.00, 06.3' LT
PB2

STA. 54+90.00, 48.0' RT
LLC-M 1- RELOCATED

STA. 56+36.00, 08.2' LT
M1-6-7

STA. 58+16.00, 01.0' LT
M1-7-5

STA. 59+97.90, 00.3' RT
M1-8-7

MOORLAND ROAD (CTH O)

TLE

EX. R/W

LIGHTING LEGEND

STA 865+55.00, 22.0' LT
X-1-X

- LOCATION (TO CENTER OF POLE)
- LIGHTING CIRCUIT(S) - EXISTING
- POLE NUMBER
- EXISTING CONTROL CABINET DESIGNATION

EXISTING RELOCATED LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES.

EXISTING LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES TO REMAIN.

EXISTING RELOCATED LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL.

EXISTING CONDUIT AND CONDUCTORS TO REMAIN.

NEW CONDUIT AND CONDUCTORS (SEE CABLE AND CONDUIT LEGEND).

PULL BOX, 24" X 36"

INTERSECTION LIGHT MOUNTED TO SIGNAL POLE - FOR INFORMATION ONLY

KEYED NOTE

1. ROUTE CONDUCTORS THROUGH EXISTING PULLBOX.
2. EXISTING CONDUIT AND CONDUCTORS TO REMAIN.
3. EXISTING LIGHT POLE TO REMAIN.
4. EXISTING LIGHTING CONTROL CABINET RELOCATED. INSTALL ON NEW CONCRETE BASE. SEE NOTE 2 ON LIGHTING REMOVAL PLANS PER ADDITIONAL INFORMATION.
5. PROVIDE NEW CONDUCTORS FOR THIS WIRING RUN. CONDUCTOR MAY RE-USE EXISTING CONDUIT WHERE POSSIBLE AND PRACTICAL.
6. RELOCATED LIGHT FIXTURE. INSTALL NEW CONCRETE BASE.
7. EXISTING LIGHT FIXTURE TO REMAIN. EXISTING CIRCUIT CONDUCTORS FROM THE SOUTH SHALL BE DE-ENERGIZED, DISCONNECTED, AND REMOVED. FIXTURE SHALL BE RE-FED FROM A CIRCUIT TO THE NORTH. RE-FEEDING FIXTURE IS NOT IN THIS SCOPE.

CABLE AND CONDUIT LEGEND

- A: 4 #4 AWG AND 1 #8 GROUND IN 2" RIGID NONMETALLIC CONDUIT
- B: 8 #4 AWG AND 1 #8 GROUND IN 2" RIGID NONMETALLIC CONDUIT

GENERAL NOTE

1. THE TERM LIGHT FIXTURE ENCOMPASSES THE FOLLOWING ELEMENTS:
   - TRANSFORMER BASE
   - LIGHT POLE
   - LUMINAIRE SUPPORT ARMS
   - LUMINAIRES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PROPOSED LIGHTING PLAN	SHEET 67	E

2

N

BROOKFIELD SQUARE
MALL ENTRANCE

TLE

END WALL
R-67-156
STA. 61+60

BEGIN WALL
R-67-155
STA. 62+55

PI: 63+34.95

MATCHLINE STA. 60+75

MATCHLINE STA. 66+80

STA. 61+44.60, 00.3' RT
M1-9-7

STA. 63+41.30, 00.3' RT
M1-10-5

STA. 65+05.70, 00.3' RT
M1-11-7

STA. 66+74.00, 06.8' RT
M1-12-5

61+00 62+00 63+00 64+00 65+00 66+00

STA. 61+44.60, 00.3' RT
M1-9-5

STA. 63+41.30, 00.3' RT
M1-10-7

STA. 65+05.70, 00.3' RT
M1-11-5

STA. 66+74.00, 06.8' RT
M1-12-7

MOORLAND ROAD (CTH O)

LIGHTING LEGEND

STA 865+55.00, 22.0' LT
X-1-X

- LOCATION (TO CENTER OF POLE)
- LIGHTING CIRCUIT(S) - EXISTING
- POLE NUMBER
- EXISTING CONTROL CABINET DESIGNATION

EXISTING RELOCATED LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES.

EXISTING LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES TO REMAIN.

EXISTING RELOCATED LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL.

EXISTING CONDUIT AND CONDUCTORS TO REMAIN.

NEW CONDUIT AND CONDUCTORS (SEE CABLE AND CONDUIT LEGEND).

PULL BOX, 24" X 36"

INTERSECTION LIGHT MOUNTED TO SIGNAL POLE - FOR INFORMATION ONLY

KEYED NOTE

1. ROUTE CONDUCTORS THROUGH EXISTING PULLBOX.
2. EXISTING CONDUIT AND CONDUCTORS TO REMAIN.
3. EXISTING LIGHT POLE TO REMAIN.
4. EXISTING LIGHTING CONTROL CABINET RELOCATED. INSTALL ON NEW CONCRETE BASE. SEE NOTE 2 ON LIGHTING REMOVAL PLANS PER ADDITIONAL INFORMATION.
5. PROVIDE NEW CONDUCTORS FOR THIS WIRING RUN. CONDUCTOR MAY RE-USE EXISTING CONDUIT WHERE POSSIBLE AND PRACTICAL.
6. RELOCATED LIGHT FIXTURE. INSTALL NEW CONCRETE BASE.
7. EXISTING LIGHT FIXTURE TO REMAIN. EXISTING CIRCUIT CONDUCTORS FROM THE SOUTH SHALL BE DE-ENERGIZED, DISCONNECTED, AND REMOVED. FIXTURE SHALL BE RE-FED FROM A CIRCUIT TO THE NORTH. RE-FEEDING FIXTURE IS NOT IN THIS SCOPE.

CABLE AND CONDUIT LEGEND

- A — 4 #4 AWG AND 1 #8 GROUND IN 2" RIGID NONMETALLIC CONDUIT
- B — 8 #4 AWG AND 1 #8 GROUND IN 2" RIGID NONMETALLIC CONDUIT

GENERAL NOTE

1. THE TERM LIGHT FIXTURE ENCOMPASSES THE FOLLOWING ELEMENTS:
   - TRANSFORMER BASE
   - LIGHT POLE
   - LUMINAIRE SUPPORT ARMS
   - LUMINAIRES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PROPOSED LIGHTING PLAN	SHEET 68	E

2

LIGHTING LEGEND

STA 865+55.00, 22.0' LT
X-1-X

- LOCATION (TO CENTER OF POLE)
- LIGHTING CIRCUIT(S) - EXISTING
- POLE NUMBER
- EXISTING CONTROL CABINET DESIGNATION

EXISTING RELOCATED LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES.

EXISTING LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES TO REMAIN.

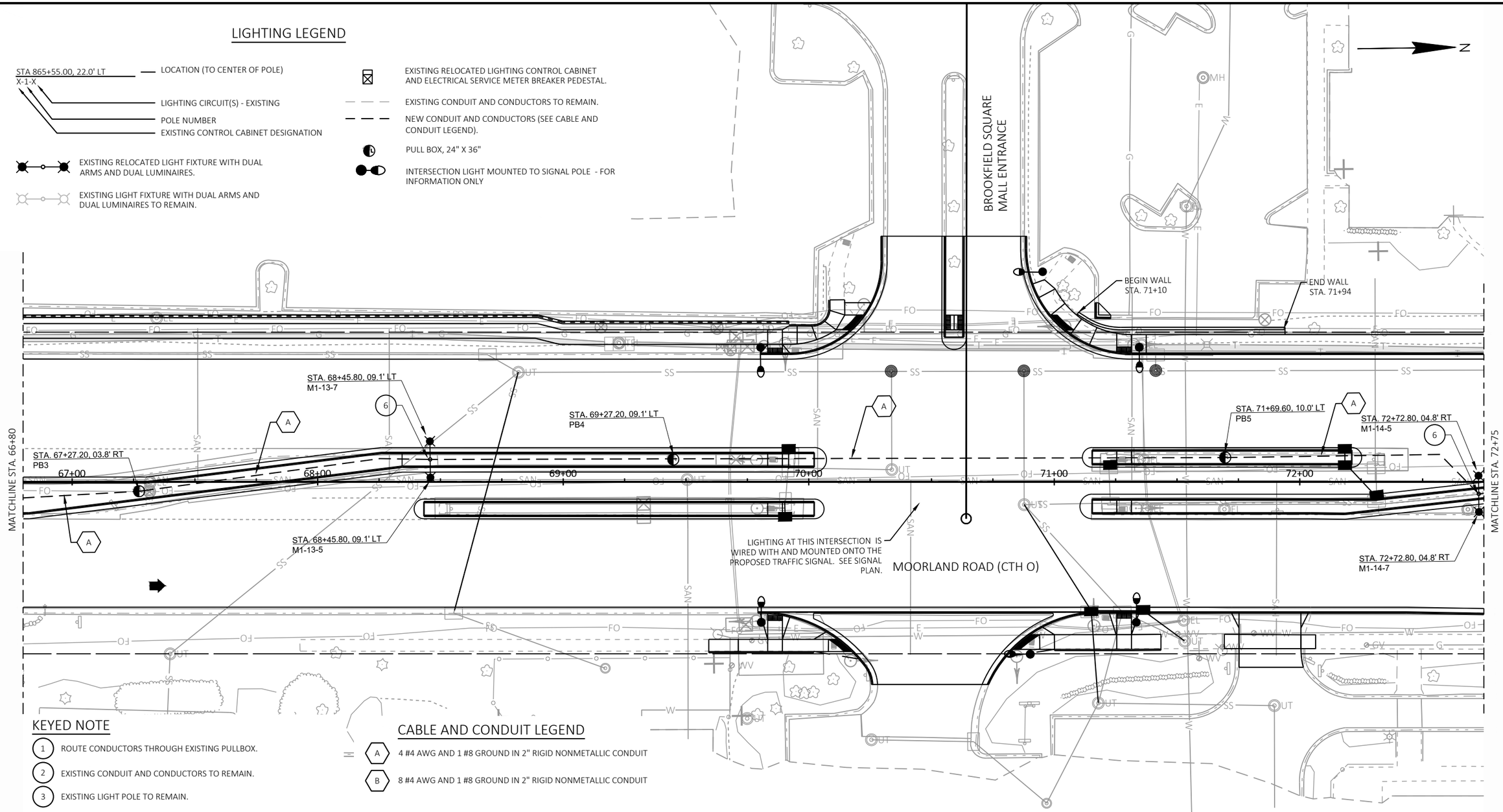
EXISTING RELOCATED LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL.

EXISTING CONDUIT AND CONDUCTORS TO REMAIN.

NEW CONDUIT AND CONDUCTORS (SEE CABLE AND CONDUIT LEGEND).

PULL BOX, 24" X 36"

INTERSECTION LIGHT MOUNTED TO SIGNAL POLE - FOR INFORMATION ONLY



KEYED NOTE

1. ROUTE CONDUCTORS THROUGH EXISTING PULLBOX.
2. EXISTING CONDUIT AND CONDUCTORS TO REMAIN.
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CABLE AND CONDUIT LEGEND

- A — 4 #4 AWG AND 1 #8 GROUND IN 2" RIGID NONMETALLIC CONDUIT
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GENERAL NOTE

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   - TRANSFORMER BASE
   - LIGHT POLE
   - LUMINAIRE SUPPORT ARMS
   - LUMINAIRES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PROPOSED LIGHTING PLAN	SHEET 69	E

LIGHTING LEGEND

STA 865+55.00, 22.0' LT
X-1-X

- LOCATION (TO CENTER OF POLE)
- LIGHTING CIRCUIT(S) - EXISTING
- POLE NUMBER
- EXISTING CONTROL CABINET DESIGNATION

EXISTING RELOCATED LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES.

EXISTING LIGHT FIXTURE WITH DUAL ARMS AND DUAL LUMINAIRES TO REMAIN.

EXISTING RELOCATED LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL.

EXISTING CONDUIT AND CONDUCTORS TO REMAIN.

NEW CONDUIT AND CONDUCTORS (SEE CABLE AND CONDUIT LEGEND).

PULL BOX, 24" X 36"

INTERSECTION LIGHT MOUNTED TO SIGNAL POLE - FOR INFORMATION ONLY

KEYED NOTE

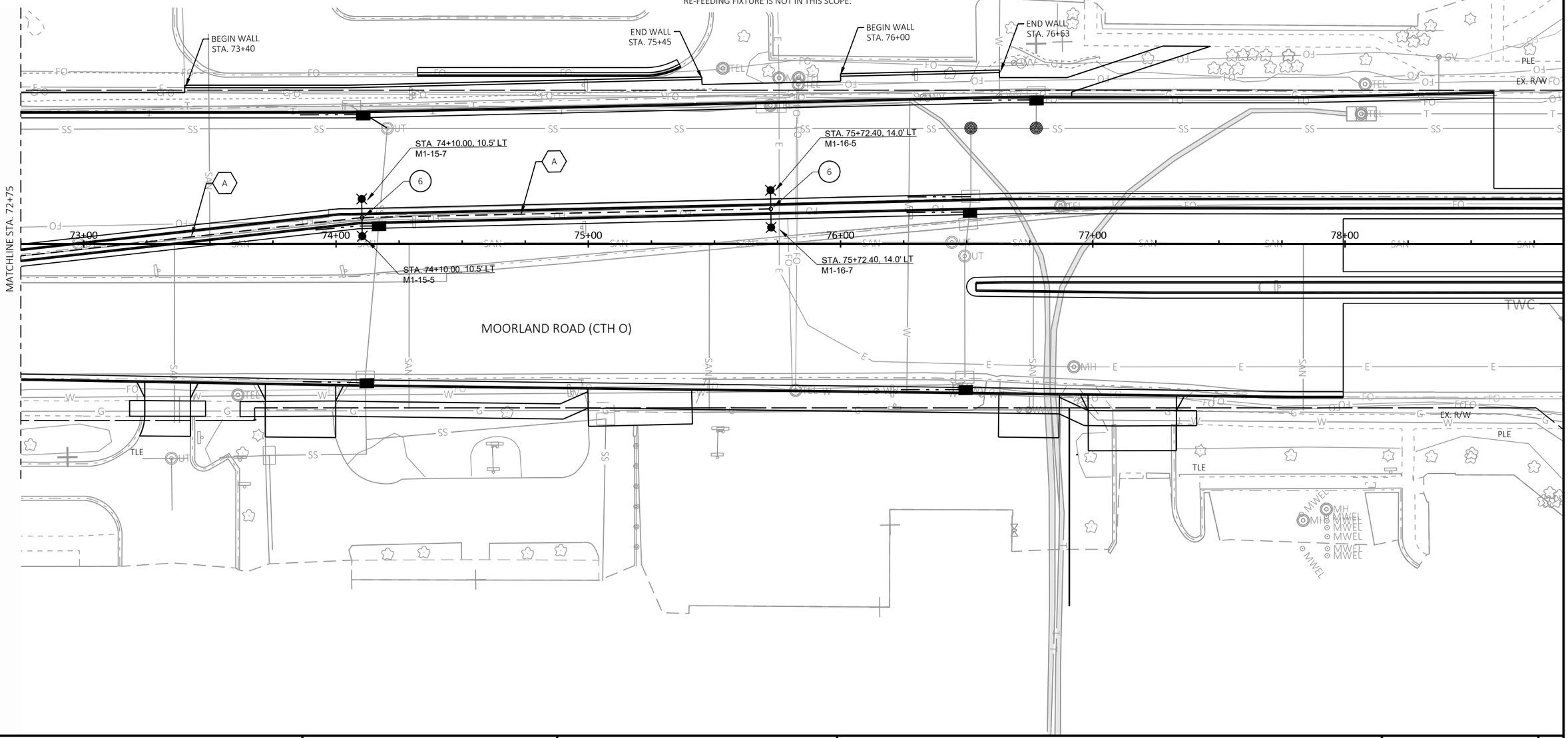
1. ROUTE CONDUCTORS THROUGH EXISTING PULLBOX.
2. EXISTING CONDUIT AND CONDUCTORS TO REMAIN.
3. EXISTING LIGHT POLE TO REMAIN.
4. EXISTING LIGHTING CONTROL CABINET RELOCATED. INSTALL ON NEW CONCRETE BASE. SEE NOTE 2 ON LIGHTING REMOVAL PLANS PER ADDITIONAL INFORMATION.
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CABLE AND CONDUIT LEGEND

- A — 4 #4 AWG AND 1 #8 GROUND IN 2" RIGID NONMETALLIC CONDUIT
- B — 8 #4 AWG AND 1 #8 GROUND IN 2" RIGID NONMETALLIC CONDUIT

GENERAL NOTE

1. THE TERM LIGHT FIXTURE ENCOMPASSES THE FOLLOWING ELEMENTS:
   - TRANSFORMER BASE
   - LIGHT POLE
   - LUMINAIRE SUPPORT ARMS
   - LUMINAIRES



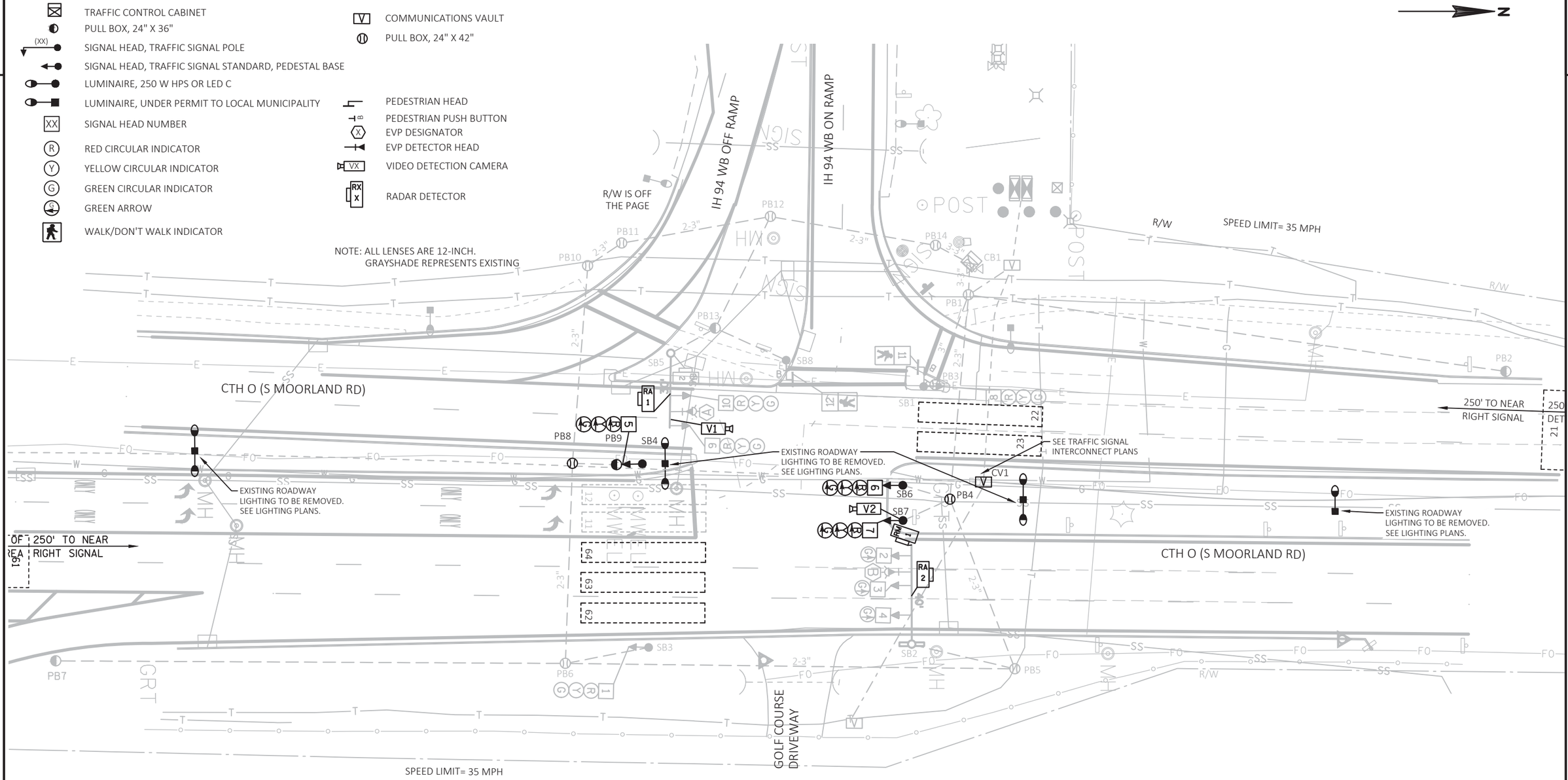
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PROPOSED LIGHTING PLAN	SHEET 70	E

2

LEGEND

- TRAFFIC CONTROL CABINET
- PULL BOX, 24" X 36"
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- LUMINAIRE, 250 W HPS OR LED C
- LUMINAIRE, UNDER PERMIT TO LOCAL MUNICIPALITY
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- GREEN ARROW
- WALK/DON'T WALK INDICATOR
- V COMMUNICATIONS VAULT
- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD
- PB PEDESTRIAN PUSH BUTTON
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- VX VIDEO DETECTION CAMERA
- RX X RADAR DETECTOR

NOTE: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. THE LOCATIONS OF THE EXISTING UTILITIES ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. EXISTING CONDUIT RUNS TO REMAIN IN PLACE. CONTRACTOR TO REMOVE CONDUCTORS REMAINING IN CONDUIT.
3. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.
4. STORE EXCESS TRAFFIC SIGNAL CABLE DURING CONSTRUCTION. SEE SPECIAL PROVISIONS FOR MORE INFORMATION.

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
IH 94 WB ON RAMP &
CTH O (S MOORLAND RD)
CITY OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO. S67-0643

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: raSmith
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 2722-07-71 & 3700-00-70	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 71	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\S67-0643-I94WB-SR.DWG
LAYOUT NAME - S67-0643-I94WB-SR - S67-0643_R7_PG1
PLOT DATE : 11/22/2021 2:20 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

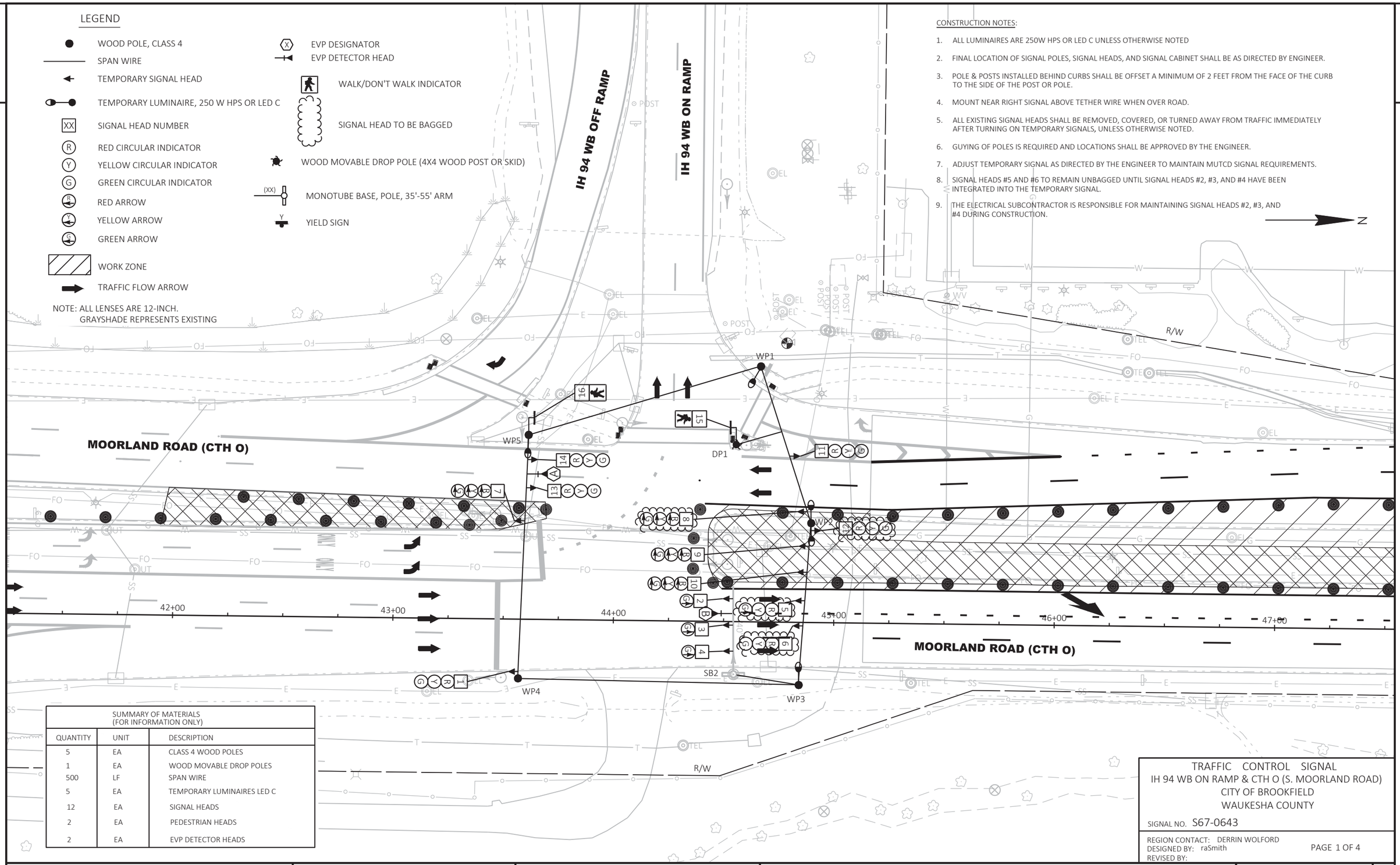
LEGEND

- WOOD POLE, CLASS 4
- SPAN WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY LUMINAIRE, 250 W HPS OR LED C
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WORK ZONE
- TRAFFIC FLOW ARROW
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- WALK/DON'T WALK INDICATOR
- SIGNAL HEAD TO BE BAGGED
- WOOD MOVABLE DROP POLE (4X4 WOOD POST OR SKID)
- MONOTUBE BASE, POLE, 35'-55' ARM
- YIELD SIGN

NOTE: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

1. ALL LUMINAIRES ARE 250W HPS OR LED C UNLESS OTHERWISE NOTED
2. FINAL LOCATION OF SIGNAL POLES, SIGNAL HEADS, AND SIGNAL CABINET SHALL BE AS DIRECTED BY ENGINEER.
3. POLE & POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF THE CURB TO THE SIDE OF THE POST OR POLE.
4. MOUNT NEAR RIGHT SIGNAL ABOVE TETHER WIRE WHEN OVER ROAD.
5. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS, UNLESS OTHERWISE NOTED.
6. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
7. ADJUST TEMPORARY SIGNAL AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
8. SIGNAL HEADS #5 AND #6 TO REMAIN UNBAGGED UNTIL SIGNAL HEADS #2, #3, AND #4 HAVE BEEN INTEGRATED INTO THE TEMPORARY SIGNAL.
9. THE ELECTRICAL SUBCONTRACTOR IS RESPONSIBLE FOR MAINTAINING SIGNAL HEADS #2, #3, AND #4 DURING CONSTRUCTION.



SUMMARY OF MATERIALS
(FOR INFORMATION ONLY)

QUANTITY	UNIT	DESCRIPTION
5	EA	CLASS 4 WOOD POLES
1	EA	WOOD MOVABLE DROP POLES
500	LF	SPAN WIRE
5	EA	TEMPORARY LUMINAIRES LED C
12	EA	SIGNAL HEADS
2	EA	PEDESTRIAN HEADS
2	EA	EVP DETECTOR HEADS

TRAFFIC CONTROL SIGNAL
IH 94 WB ON RAMP & CTH O (S. MOORLAND ROAD)
CITY OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO. S67-0643

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: raSmith
REVISED BY:

PAGE 1 OF 4

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL - STAGE 1/3/5	SHEET 72	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024101-ST1.DWG
LAYOUT NAME - Plan 1 IN 40 FT-I94WBramps
PLOT DATE : 11/22/2021 4:31 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- WOOD POLE, CLASS 4
- SPAN WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY LUMINAIRE, 250 W HPS OR LED C
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WORK ZONE
- TRAFFIC FLOW ARROW

NOTE: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING

- EVP DESIGNATOR
- EVP DETECTOR HEAD
- WALK/DON'T WALK INDICATOR
- SIGNAL HEAD TO BE BAGGED
- WOOD MOVABLE DROP POLE (4X4 WOOD POST OR SKID)
- MONOTUBE BASE, POLE, 35'-55' ARM
- YIELD SIGN

IH 94 WB OFF RAMP

IH 94 WB ON RAMP

MOORLAND ROAD (CTH O)

MOORLAND ROAD (CTH O)

WP1 WP2 WP3 WP4 WP5 DP1 SB2

42+00 43+00 44+00 45+00 46+00 47+00

R/W

R/W

N

TRAFFIC CONTROL SIGNAL
IH 94 WB ON RAMP & CTH O (S. MOORLAND ROAD)
CITY OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO. S67-0643

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: raSmith
REVISED BY:

PAGE 2 OF 4

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL - STAGE 2	SHEET 73	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024102-ST2.DWG
LAYOUT NAME - Plan 1 IN 40 FT-I94WBramps

PLOT DATE : 11/22/2021 1:19 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- WOOD POLE, CLASS 4
- SPAN WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY LUMINAIRE, 250 W HPS OR LED C
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WORK ZONE
- TRAFFIC FLOW ARROW

- EVP DESIGNATOR
- EVP DETECTOR HEAD
- WALK/DON'T WALK INDICATOR
- SIGNAL HEAD TO BE BAGGED
- WOOD MOVABLE DROP POLE (4X4 WOOD POST OR SKID)
- MONOTUBE BASE, POLE, 35'-55' ARM
- YIELD SIGN

NOTE: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING

IH 94 WB OFF RAMP

IH 94 WB ON RAMP

MOORLAND ROAD (CTH O)

MOORLAND ROAD (CTH O)

WP1 WP2 WP3 WP4 WP5 DP1 SB2

42+00 44+00 45+00 46+00 47+00

R/W

N

TRAFFIC CONTROL SIGNAL
IH 94 WB ON RAMP & CTH O (S. MOORLAND ROAD)
CITY OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO. S67-0643

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: raSmith
REVISED BY:

PAGE 3 OF 4

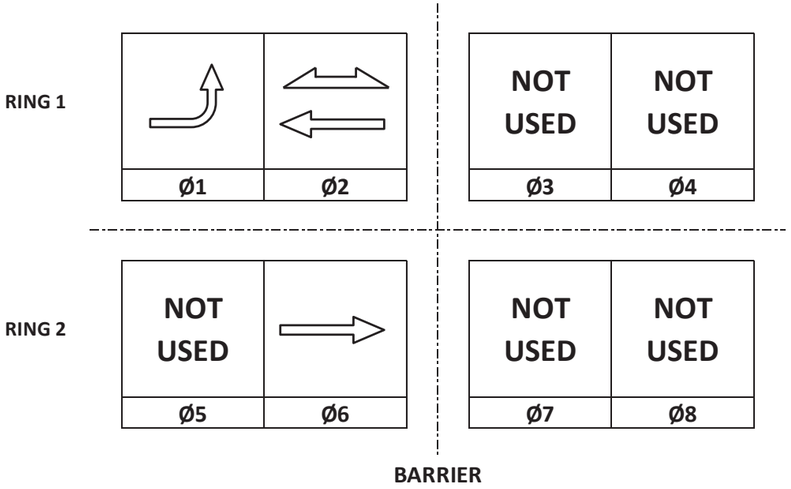
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL - STAGE 4	SHEET 74	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024104-ST4.DWG
LAYOUT NAME - Plan 1 IN 40 FT-I94WBramps

PLOT DATE : 11/22/2021 1:26 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

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



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B
MOVEMENT	← →	→
PHASE	2+6	6+1

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

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

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

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

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

GENERAL NOTES:

1. OMIT ANY PHASES DURING STAGES WHERE VEHICULAR AND PEDESTRIAN MOVEMENTS ARE RESTRICTED.

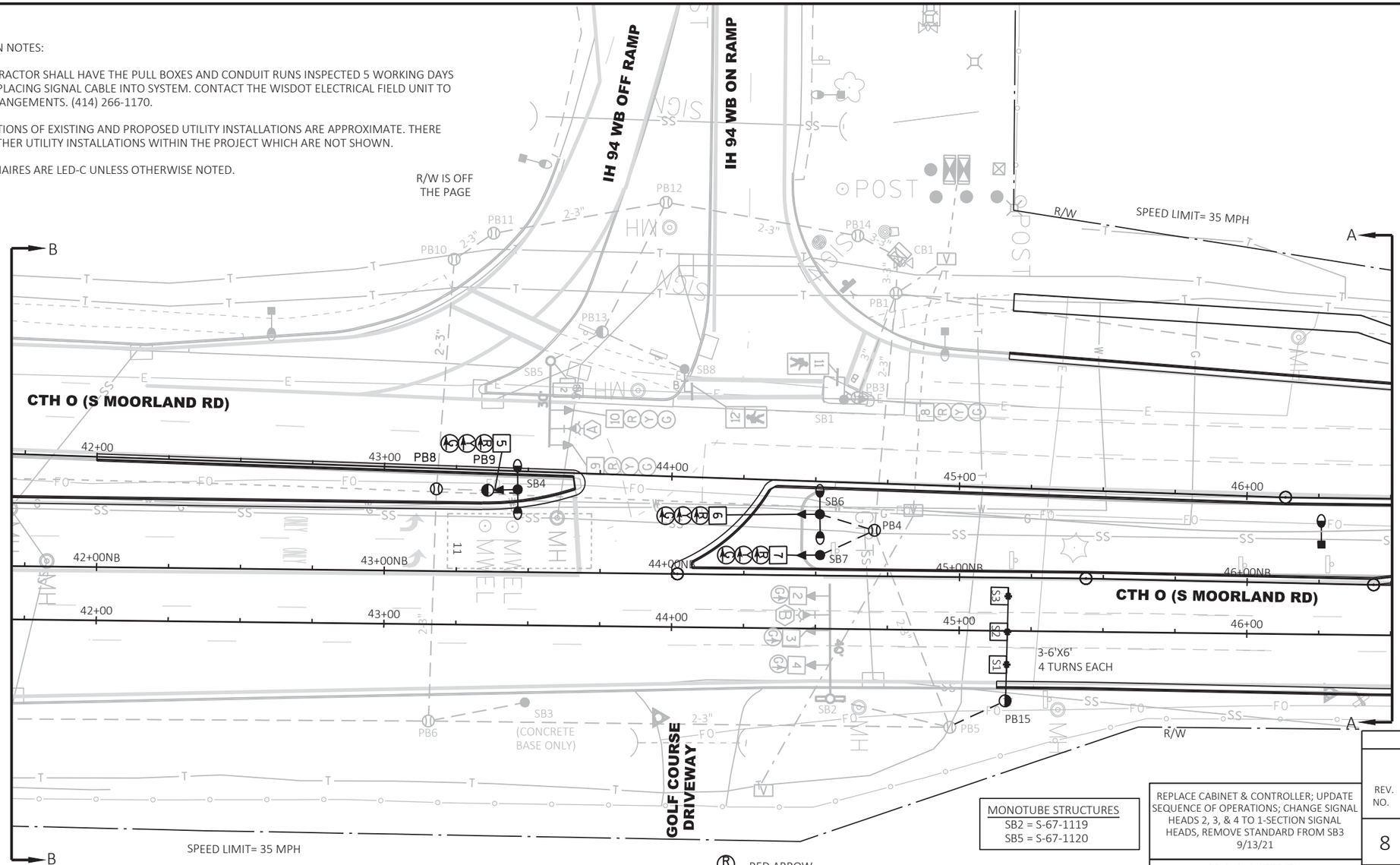
2. PERMANENT SIGNAL MAINTENANCE BECOMES THE CONTRACTOR RESPONSIBILITY DURING CONSTRUCTION.

IH 94 WB ON RAMP & CTH O (S. MOORLAND ROAD)
CITY OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO: S67-0643 CABINET TYPE: TEMP
CONTROLLER TYPE: ECONOLITE
DATE: 11/1/21 PAGE NO. 4 OF 4

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 WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.



LEGEND

- CONTROL CABINET
- 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
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE, UNDER PERMIT TO LOCAL MUNICIPALITY
- RADAR DETECTION AREA
- RADAR DETECTOR
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- COMMUNICATIONS VAULT
- YIELD SIGN

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

MONOTUBE STRUCTURES
SB2 = S-67-1119
SB5 = S-67-1120

REVISION				
REV. NO.	REPLACE SB4, SB6, SB7, PB4, PB8 & PB9 TO ACCOMMODATE PROJECT STAGING; REMOVE RA1, RA2, RM1, V1 & V2; INSTALL LOOPS 21, 22, 23, S1, S2, S3 AND PB15.			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
	DATE	BY	DATE	BY
8	10-15-21	JJW	10-18-21	JRJ
	REPLACE CABINET & CONTROLLER; UPDATE SEQUENCE OF OPERATIONS; CHANGE SIGNAL HEADS 2, 3, & 4 TO 1-SECTION SIGNAL HEADS, REMOVE STANDARD FROM SB3 9/13/21			
	ADD RADAR DETECTION 4/4/17			
	CHANGE CONTROLLER TO ECONOLITE 2/17			
	ADD EVP CONFIRMATION LIGHTS 10/29/14			
	UPDATED DETECTION AND CABINET; ADDED INSYNC ADAPTIVE CONTROL 4/8/13			
	RECONSTRUCT SIGNALS 1/15/10			
	ADDED PED. HEADS & PUSH BUTTONS 11/18/99			
	INITIAL INSTALL 1997			

TRAFFIC CONTROL SIGNAL
IH 94 WB ON RAMP &
CTH O (S MOORLAND RD)
CITY OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO. S67-0643
CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 4/18/97 — GARY P. KNERR, REGION TRAFFIC ENGINEER

APPROVED
DATE 4/23/97 — WILLIAM C. GILDING, STATE TRAFFIC ENGINEER

REGION CONTACT: D. WOLFORD
DESIGNED BY:
REVISED BY: raSmith

PAGE 1 OF 3

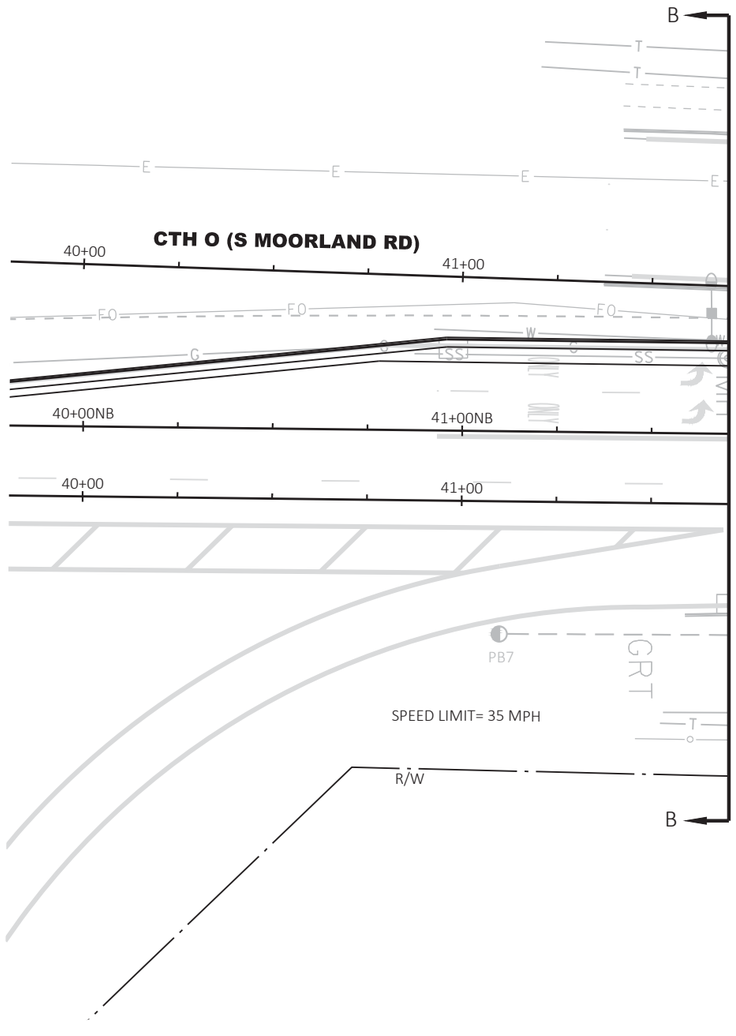
10-15-21

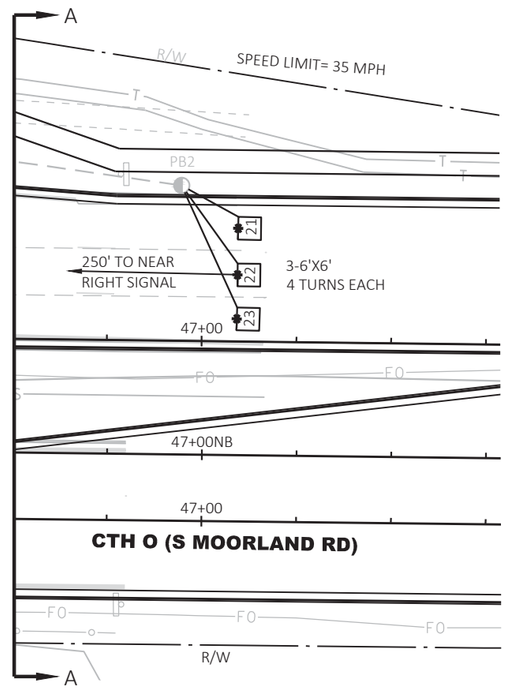
PROJECT NO: 2722-07-71 & 3700-00-70	HWY: CTH O (N.MOORLAND ROAD)	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 76	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\S67-0643_R7.DWG
LAYOUT NAME - S67-0643_R7_PG1
PLOT DATE : 11/22/2021 10:46 AM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N





TRAFFIC CONTROL SIGNAL
IH 94 WB ON RAMP &
CTH O (S MOORLAND RD)
CITY OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO. S67-0643

REGION CONTACT: D. WOLFORD
DESIGNED BY:
REVISED BY: raSmith

PAGE 2 OF 3

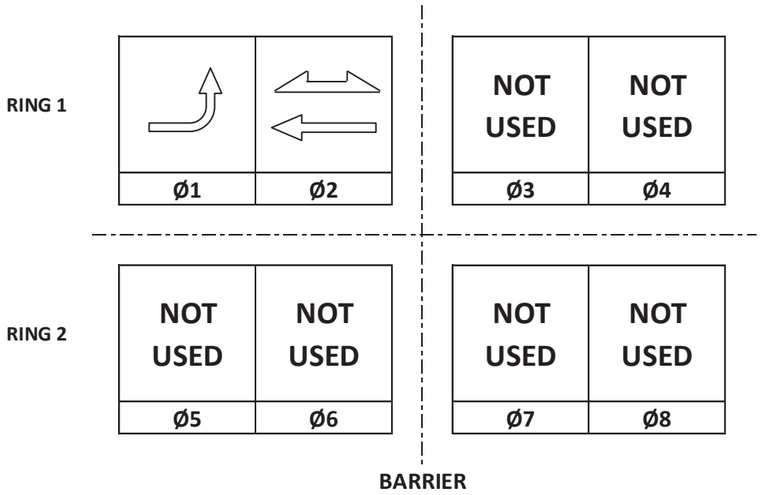
PROJECT NO: 2722-07-71 & 3700-00-70	HWY: CTH O (N.MOORLAND ROAD)	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 77	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\S67-0643_R7.DWG
LAYOUT NAME - S67-0643_R7_PG2

PLOT DATE : 11/22/2021 10:46 AM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	5,6,7	R ←
Ø2	8,9,10	R
Ø3		
Ø4		
Ø5		
Ø6		
Ø7		
Ø8		
Ø2P	11,12	
Ø4P		
Ø6P		
Ø8P		
	2,3,4	-
OLE		
OLF		
OLG		
OLH		



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B
MOVEMENT	←	↗
PHASE	2	1

AFTER PREEMPTION SEQUENCE 2 OR 1, CONTROLLER SHALL RETURN TO PHASE 2.

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

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	X
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS- 67-0053

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	21	23	S1	S3				
CALLED PHASE	2	2						
CALL OPTION	X	X						
DELAY TIME								
EXTENTION OPTION	X	X						
EXTEND TIME								
USE ADDED INITIAL	X	X						
CROSS SWITCH PHASE								

17	19	21	23	25	27	29	31	DETECTOR INPUT
11								PLAN LOOP DETECTOR*(S)
1								CALLED PHASE
X								CALL OPTION
								DELAY TIME
X								EXTENTION OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	22		S2					
CALLED PHASE	2							
CALL OPTION	X							
DELAY TIME								
EXTENTION OPTION	X							
EXTEND TIME								
USE ADDED INITIAL	X							
CROSS SWITCH PHASE								

18	20	22	24	26	28	30	32	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTENTION OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

GENERAL NOTES:

1. SIGNAL HEADS 2, 3, AND 4 ARE HARDWIRED TO STAY ON AT ALL TIMES EVEN DURING FLASH OPERATION.

IH 94 WB ON RAMP & CTH O (S MOORLAND ROAD)
CITY OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO:	S67-0643	CABINET TYPE: TS2-S	
		CONTROLLER TYPE: ECONOLITE	
DATE:	11/21	PAGE NUMBER: 3 OF 3	

LEGEND

- TRAFFIC CONTROL CABINET
- PULL BOX, 24" X 36"
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- LUMINAIRE, 250 W HPS OR LED C
- LUMINAIRE, UNDER PERMIT TO LOCAL MUNICIPALITY
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR
- PEDESTRIAN HEAD
- PEDESTRIAN PUSH BUTTON

CONSTRUCTION NOTES:

1. THE LOCATIONS OF THE EXISTING UTILITIES ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP WIRE AND LOOP DETECTOR LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
3. EXISTING CONDUIT RUNS TO REMAIN IN PLACE. CONTRACTOR TO REMOVE CONDUCTORS REMAINING IN CONDUIT.
4. ALL SALVAGED EQUIPMENT SHALL BE STORED IN A SECURE LOCATION AS DIRECTED BY THE ENGINEER. COORDINATE WITH WAUKESHA COUNTY DPW - ENGINEERING SERVICES. CONTACT KAREN BRAUN AT (262) 548-7740. SEE SPECIAL PROVISIONS FOR MORE INFORMATION.
5. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.

BROOKFIELD SQUARE DRIVE

MOORLAND ROAD (CTH O)

MOORLAND ROAD (CTH O)

PB1 PB2 PB3 PB4 PB5 PB6 PB7 PB8 PB9 PB10

SB1 SB2 SB3 SB4 SB5 SB6 SB7 SB8 SB9 SB10

CB1

V1 V2 V3

ABANDON

SEE LIGHTING REMOVAL PLAN

TLE PLE R/W

51+00 52+00 53+00 54+00 55+00 56+00

N

- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- EVP CONFIRMATION LIGHT
- RADIO INTERCONNECT ANTENNA
- VX VIDEO DETECTION CAMERA
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT W/ 12" PULL BOX

NOTE: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
CTH O (S. MOORLAND ROAD) &
BROOKFIELD SQUARE DRIVE
CITY OF BROOKFIELD
WAUKESHA COUNTY

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: raSmith
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 79	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024101-SR.DWG
LAYOUT NAME - Plan 1 IN 40 FT-BrkfdSqDr

PLOT DATE : 11/18/2021 5:08 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WOOD POLE, CLASS 4
- SPAN WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY LUMINAIRE, 250 W HPS OR LED C
- XX — SIGNAL HEAD NUMBER
- R — RED CIRCULAR INDICATOR
- Y — YELLOW CIRCULAR INDICATOR
- G — GREEN CIRCULAR INDICATOR
- Y — YELLOW ARROW
- G A / S — GREEN ARROW
- WALK/DON'T WALK INDICATOR
- VX — VIDEO DETECTION CAMERA
- WOOD MOVABLE DROP POLE (4X4 WOOD POST OR SKID)
- X — EVP DESIGNATOR
- EVP DETECTOR HEAD
- PEDESTRIAN SIGNAL HEADS
- SIGNAL HEAD TO BE BAGGED
- WORK ZONE
- TRAFFIC FLOW ARROW

NOTE: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

1. ALL LUMINAIRES ARE 250W HPS OR LED C UNLESS OTHERWISE NOTED
2. FINAL LOCATION OF SIGNAL POLES, SIGNAL HEADS, AND SIGNAL CABINET SHALL BE AS DIRECTED BY ENGINEER.
3. POLE & POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF THE CURB TO THE SIDE OF THE POST OR POLE.
4. MOUNT NEAR RIGHT SIGNAL ABOVE TETHER WIRE WHEN OVER ROAD.
5. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
6. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
7. ADJUST TEMPORARY SIGNAL AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
8. SIGNAL HEADS #8 AND #9 MAY BE LOWERED BELOW THE TETHER WIRE AS LONG AS THEY ARE NOT ABOVE AN ACTIVE TRAVEL LANE.

BROOKFIELD SQUARE DRIVE

MOORLAND ROAD (CTH O)

MOORLAND ROAD (CTH O)

TLE

PLE

WP1 WP2 WP3 WP4 WP5

DP1

V1 V2

R/W

51+00 52+00 53+00 54+00 55+00 56+00

N

SUMMARY OF MATERIALS
(FOR INFORMATION ONLY)

QUANTITY	UNIT	DESCRIPTION
5	EA	CLASS 4 WOOD POLES
1	EA	WOOD MOVABLE DROP POLES
700	LF	SPAN WIRE
3	EA	TEMPORARY LUMINAIRES 250 W HPS OR LED C
10	EA	SIGNAL HEADS
2	EA	PEDESTRIAN HEADS
1	EA	EVP DETECTOR HEADS
1	LS	NON-INTRUSIVE DETECTION SYSTEM

TRAFFIC CONTROL SIGNAL
CTH O (S. MOORLAND ROAD) &
BROOKFIELD SQUARE DRIVE
CITY OF BROOKFIELD
WAUKESHA COUNTY

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: raSmith
REVISED BY:

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL - STAGE 1/3/5	SHEET 80	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024101-ST1.DWG
LAYOUT NAME - Plan 1 IN 40 FT-BrkfdSqDr
PLOT DATE : 11/22/2021 3:56 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- WOOD POLE, CLASS 4
- SPAN WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY LUMINAIRE, 250 W HPS OR LED C
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR
- VIDEO DETECTION CAMERA
- WOOD MOVABLE DROP POLE (4X4 WOOD POST OR SKID)
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- PEDESTRIAN SIGNAL HEADS
- SIGNAL HEAD TO BE BAGGED
- WORK ZONE
- TRAFFIC FLOW ARROW

NOTE: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING

BROOKFIELD SQUARE DRIVE

MOORLAND ROAD (CTH O)

MOORLAND ROAD (CTH O)

TLE

PLE

WP1

WP2

WP3

WP4

WP5

DP1

R/W

51+00

52+00

54+00

N

TRAFFIC CONTROL SIGNAL
CTH O (S. MOORLAND ROAD) &
BROOKFIELD SQUARE DRIVE
CITY OF BROOKFIELD
WAUKESHA COUNTY

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: raSmith
REVISED BY:

PAGE 2 OF 4

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL - STAGE 2	SHEET 81	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024102-ST2.DWG
LAYOUT NAME - Plan 1 IN 40 FT-BrkfdSqDr

PLOT DATE : 11/22/2021 1:16 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- WOOD POLE, CLASS 4
- SPAN WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY LUMINAIRE, 250 W HPS OR LED C
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- Y YELLOW ARROW
- G A S GREEN ARROW
- WALK/DON'T WALK INDICATOR
- VX VIDEO DETECTION CAMERA
- WOOD MOVABLE DROP POLE (4X4 WOOD POST OR SKID)
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- PEDESTRIAN SIGNAL HEADS
- SIGNAL HEAD TO BE BAGGED
- WORK ZONE
- TRAFFIC FLOW ARROW

NOTE: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING

BROOKFIELD SQUARE DRIVE

MOORLAND ROAD (CTH O)

MOORLAND ROAD (CTH O)

WP1 WP2 WP3 WP4 WP5 DP1 V1 V2

TLE PLE R/W

51+00 52+00 53+00 54+00 55+00 56+00

TRAFFIC CONTROL SIGNAL
CTH O (S. MOORLAND ROAD) &
BROOKFIELD SQUARE DRIVE
CITY OF BROOKFIELD
WAUKESHA COUNTY

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: raSmith
REVISED BY:

PAGE 3 OF 4

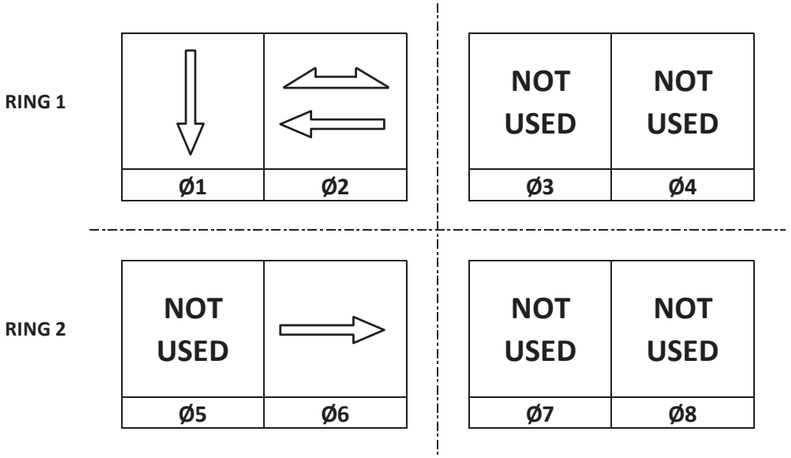
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL - STAGE 4A & 4B	SHEET 82	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024104-ST4.DWG
LAYOUT NAME - Plan 1 IN 40 FT-BrkfdSqDr

PLOT DATE : 11/22/2021 1:23 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	7,8,9,10	R
Ø2	4,5,6	R
Ø3		
Ø4		
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8		
Ø2P	11,12	
Ø4P		
Ø6P		
Ø8P		
OLA		
OLB		
OLC		
OLD		





CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

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

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

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

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

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

GENERAL NOTES:

1. OMIT ANY PHASES DURING STAGES WHERE VEHICULAR AND PEDESTRIAN MOVEMENTS ARE RESTRICTED.

CTH O (S. MOORLAND ROAD) & BROOKFIELD SQUARE DRIVE
CITY OF BROOKFIELD
WAUKESHA COUNTY

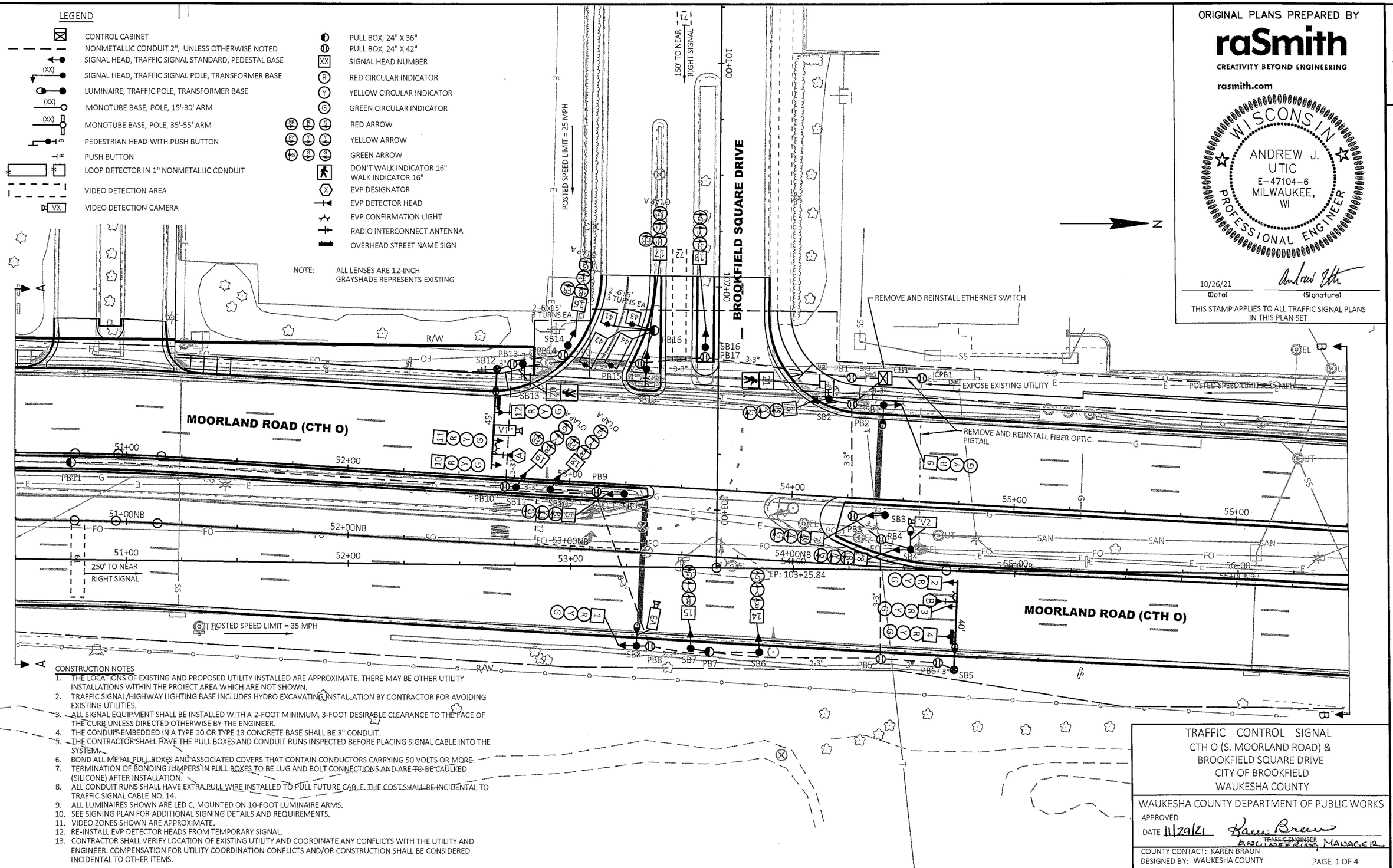
SIGNAL NO: CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP
DATE: 11/1/21 PAGE NO. 4 OF 4

2

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- DON'T WALK INDICATOR 16" / WALK INDICATOR 16"
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- EVP CONFIRMATION LIGHT
- RADIO INTERCONNECT ANTENNA
- OVERHEAD STREET NAME SIGN

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLED ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. TRAFFIC SIGNAL/HIGHWAY LIGHTING BASE INCLUDES HYDRO EXCAVATING INSTALLATION BY CONTRACTOR FOR AVOIDING EXISTING UTILITIES.
3. ALL SIGNAL EQUIPMENT SHALL BE INSTALLED WITH A 2-FOOT MINIMUM, 3-FOOT DESIRABLE CLEARANCE TO THE FACE OF THE CURB UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
4. THE CONDUIT EMBEDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3" CONDUIT.
5. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED BEFORE PLACING SIGNAL CABLE INTO THE SYSTEM.
6. BOND ALL METAL PULL BOXES AND ASSOCIATED COVERS THAT CONTAIN CONDUCTORS CARRYING 50 VOLTS OR MORE.
7. TERMINATION OF BONDING JUMPERS IN PULL BOXES TO BE LUG AND BOLT CONNECTIONS AND ARE TO BE CAULKED (SILICONE) AFTER INSTALLATION.
8. ALL CONDUIT RUNS SHALL HAVE EXTRA PULL WIRE INSTALLED TO PULL FUTURE CABLE. THE COST SHALL BE INCIDENTAL TO TRAFFIC SIGNAL CABLE NO. 14.
9. ALL LUMINAIRES SHOWN ARE LED C, MOUNTED ON 10-FOOT LUMINAIRE ARMS.
10. SEE SIGNING PLAN FOR ADDITIONAL SIGNING DETAILS AND REQUIREMENTS.
11. VIDEO ZONES SHOWN ARE APPROXIMATE.
12. RE-INSTALL EVP DETECTOR HEADS FROM TEMPORARY SIGNAL.
13. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITY AND COORDINATE ANY CONFLICTS WITH THE UTILITY AND ENGINEER. COMPENSATION FOR UTILITY COORDINATION CONFLICTS AND/OR CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS.

ORIGINAL PLANS PREPARED BY

raSmith

CREATIVITY BEYOND ENGINEERING

rasmith.com

WISCONSIN
ANDREW J. UTIC
E-47104-6
MILWAUKEE, WI
PROFESSIONAL ENGINEER

10/26/21 (Date)

(Signature)

THIS STAMP APPLIES TO ALL TRAFFIC SIGNAL PLANS IN THIS PLAN SET

TRAFFIC CONTROL SIGNAL
CTH O (S. MOORLAND ROAD) &
BROOKFIELD SQUARE DRIVE
CITY OF BROOKFIELD
WAUKESHA COUNTY

WAUKESHA COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED

DATE 11/29/21 Karen Braun TRAFFIC ENGINEER

ENGINEERING MANAGER

COUNTY CONTACT: KAREN BRAUN

DESIGNED BY: WAUKESHA COUNTY

REVISED BY:

PAGE 1 OF 4

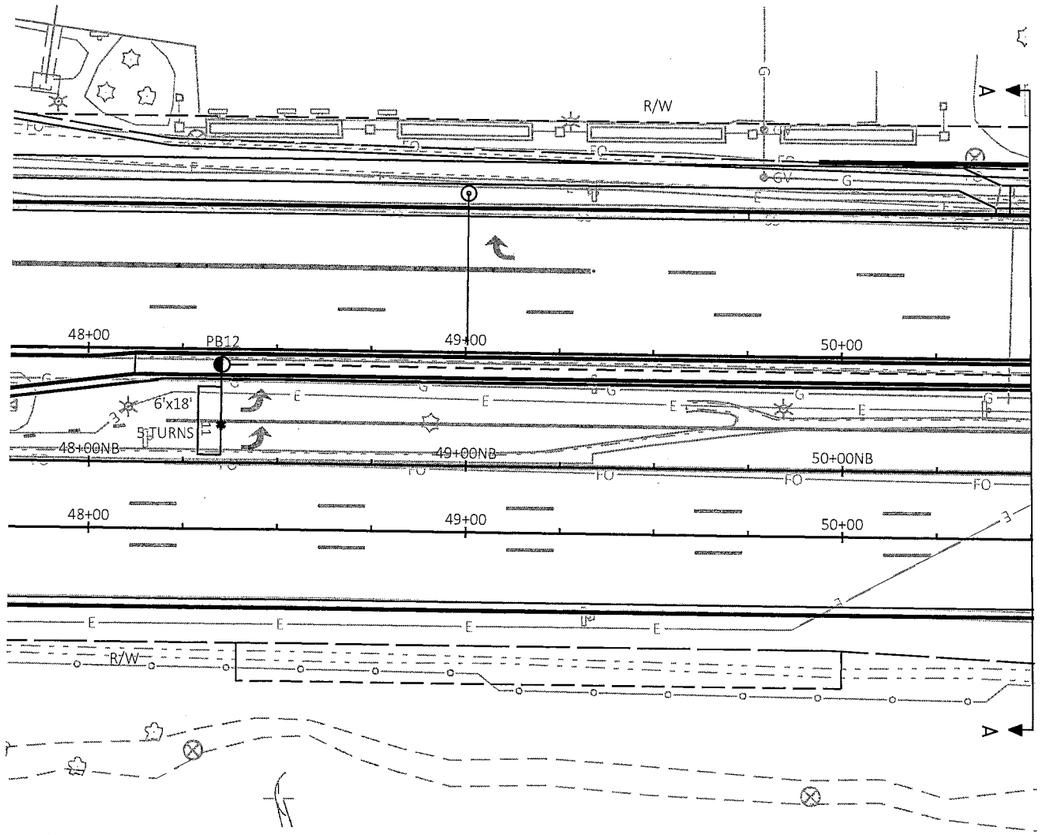
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 84	E

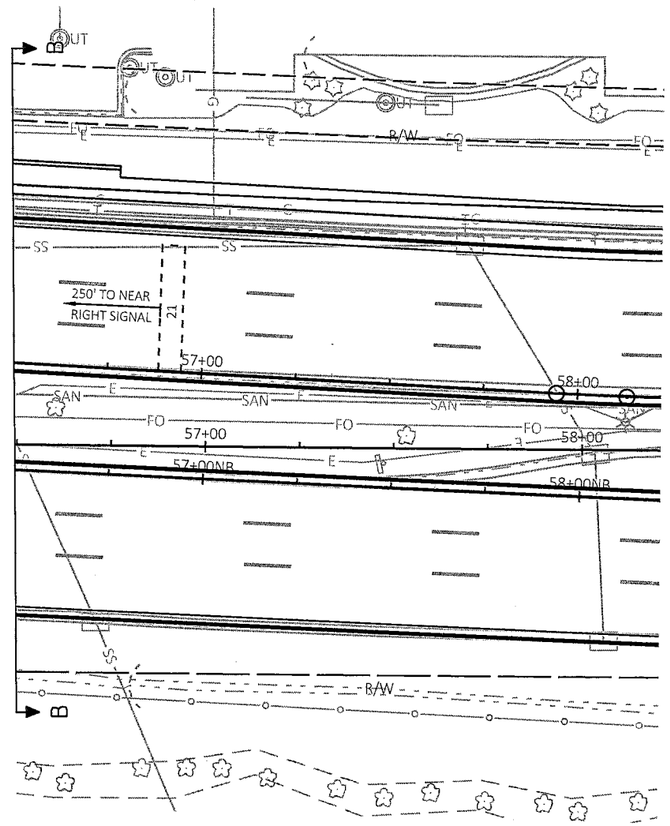
FILE NAME : T:\1184800\CIVIL3D\2720701\SHEETSPLAN\024201-SP.DWG
LAYOUT NAME - Plan 1 IN 40 FT - Brkfld Sq

PLOT DATE : 11/22/2021 3:53 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2





N

TRAFFIC CONTROL SIGNAL
CTH O (S. MOORLAND ROAD) &
BROOKFIELD SQUARE DRIVE
CITY OF BROOKFIELD
WAUKESHA COUNTY

WAUKESHA COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED
DATE 11/29/21 Karen Braun
TRAFFIC ENGINEER
ENGINEERING MANAGER

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: WAUKESHA COUNTY
REVISED BY:

PAGE 2 OF 4

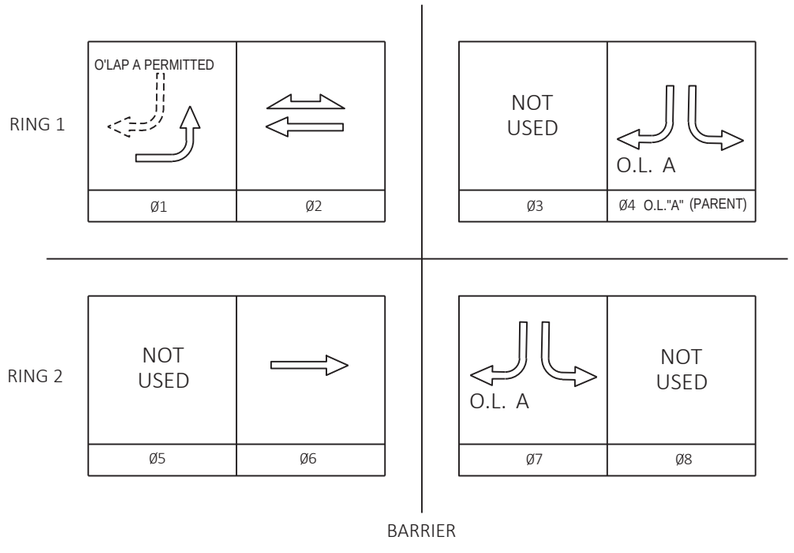
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024201-SP.DWG
LAYOUT NAME - Plan 1 IN 40 FT - Brkfld Sq (2)

PLOT DATE : 11/22/2021 3:52 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	5,6,7,8	R
Ø2	9,10,11,12	R
O.L."A"	16,17,18,19	R
Ø6	1,2,3,4	R
Ø7	13,14,15	R
Ø2 PED	20,21,22,23	



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTION	A	B
MOVEMENT	⇐	⇑⇒
PHASE	2	6+1

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

TYPE OF INTERCONNECT	
NONE	
TBC	
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	X
RADIO	X

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

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

* WAUKESHA COUNTY OWNS AND OPERATES THE LIGHTING UNITS ON THE SIGNAL MAST ARM ASSEMBLIES.

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

DETECTOR LOGIC

(INDUCTANCE LOOP SENSORS)

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR #(S)	11	41	43					
PHASE CALLED	1	4	4					
PHASE EXTENDED	1	4	4					
DISCONNECT TIME								
CALLING DELAY	-	X	-					
EXTENSION STRETCH	-	X	-					
LOOP FUNCTION								

(VIDEO SENSORS)

DETECTOR INPUT	19	17	23	21	27	25	31	29
DETECTOR #(S)	12	21	61	71				
PHASE CALLED	1	2	6	7				
PHASE EXTENDED	1	2	6	7				
DISCONNECT TIME								
CALLING DELAY	-	X	X	-				
EXTENSION STRETCH	-	X	X	-				
LOOP FUNCTION								

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR #(S)		42	44					
PHASE CALLED		4	4					
PHASE EXTENDED		4	4					
DISCONNECT TIME								
CALLING DELAY		-	-					
EXTENSION STRETCH		-	-					
LOOP FUNCTION								

DETECTOR INPUT	20	18	24	22	28	26	32	30
DETECTOR #(S)				72				
PHASE CALLED				7				
PHASE EXTENDED				7				
DISCONNECT TIME								
CALLING DELAY				-				
EXTENSION STRETCH				-				
LOOP FUNCTION								

GENERAL NOTES:
1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHAL BE SKIPPED

TRAFFIC CONTROL SIGNAL
CTH O (S. MOORLAND ROAD) &
BROOKFIELD SQUARE DRIVE
CITY OF BROOKFIELD
WAUESHA COUNTY

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: WAUKESHA COUNTY
REVISED BY:

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	SEQUENCE OF OPERATIONS	SHEET 86	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024301-PH.DWG
LAYOUT NAME - SignalPhasing-BkfldSqDr
PLOT DATE : 11/22/2021 1:30 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:1 FT
WISDOT/CADDS SHEET 42

PROJECT ID:	2722-07-01
INTERSECTION:	CTH O & BROOKFIELD SQ DR

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

DATE	11/1/21

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR										PED BUTTON
			PHASE	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING RED>	D/WALK	WALK	
SB1	12	9	2	RED	ORG	GRN							
SB2	12	6	1				RED/BLK	ORG/BLK	GRN/BLK				
		21	2								BLK	BLU	
		BUTTON	2										WHT/BLK
SB3	12	7	1				RED/BLK	ORG/BLK	GRN/BLK				
SB4	12	8	1				RED/BLK	ORG/BLK	GRN/BLK				
SB5	12	2	6	RED	ORG	GRN							
		3	6	RED	ORG	GRN							
		4	6	RED	ORG	GRN							
SB6	12	14	7				RED/BLK	ORG/BLK	GRN/BLK				
SB7	12	15	7				RED/BLK	ORG/BLK	GRN/BLK				
SB8	12	1	6	RED	ORG	GRN							
SB9	12	5	1				RED/BLK	ORG/BLK	GRN/BLK				
SB10	12	18	O.L. A				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB11	12	19	O.L. A				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB12	12	10	2	RED	ORG	GRN							
		11	2	RED	ORG	GRN							
		12	2	RED	ORG	GRN							
SB13	7	20	2								BLK	BLU	
		BUTTON	2										WHT/BLK
SB14	12	16	O.L. A				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB15	12	17	O.L. A				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		BUTTON	2										WHT/BLK
SB16	12	13	7				RED/BLK	ORG/BLK	GRN/BLK				

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP

FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	SB15
SB15	SB16
SB16	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP

FROM	TO
PB1	CB1
PB2	SB2
PB3	SB3
PB4	SB4
PB5	SB5
PB6	SB5
PB7	SB7
PB8	SB8
PB9	SB9
PB10	SB11
PB13	SB13
PB14	SB14
PB15	SB15
PB17	SB16

LIGHTING UF #10 W/GROUND

FROM	TO
CB1	SB1
SB1	SB5
CB1	SB12
SB12	SB8

VIDEO DETECTION CABLE

FROM	TO
CB1	V1 (SB12)
CB1	V2 (SB4)

EMERGENCY VEHICLE PREEMPTION

FROM	TO
CB1	HEAD A (SB12)
CB1	HEAD B (SB5)

*Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications.
*Ensure the grounded conductor in the feeder cable and the pole cables are both 18” longer than the ungrounded conductors.
*At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.
*Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.

TRAFFIC CONTROL SIGNAL
CTH O (N. MOORLAND RD) &
BROOKFIELD SQUARE DRIVE
CITY OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO:

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: WAUKESHA COUNTY
REVISED BY:

2

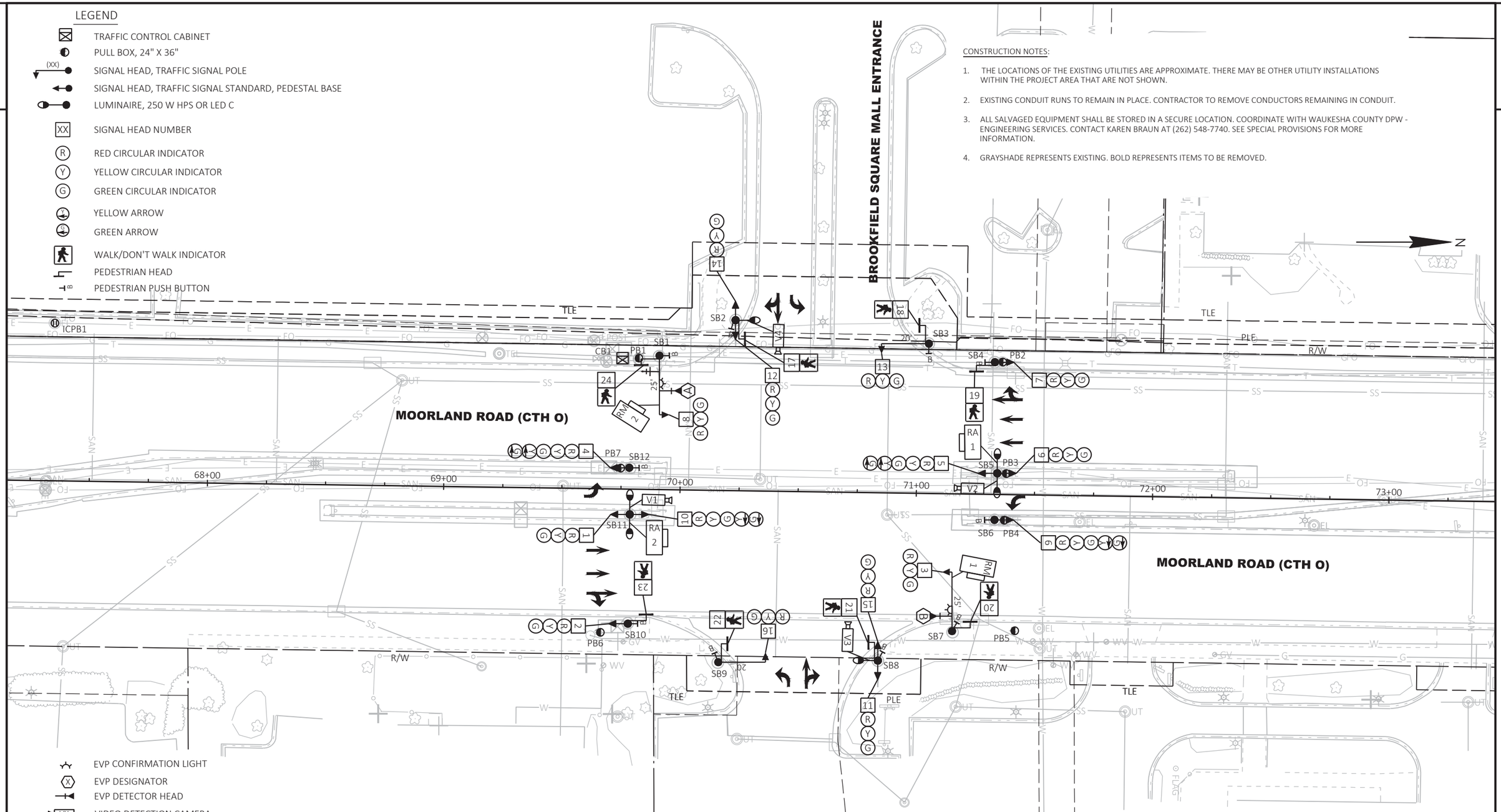
2

LEGEND

- TRAFFIC CONTROL CABINET
- PULL BOX, 24" X 36"
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- LUMINAIRE, 250 W HPS OR LED C
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR
- PEDESTRIAN HEAD
- B PEDESTRIAN PUSH BUTTON

CONSTRUCTION NOTES:

1. THE LOCATIONS OF THE EXISTING UTILITIES ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. EXISTING CONDUIT RUNS TO REMAIN IN PLACE. CONTRACTOR TO REMOVE CONDUCTORS REMAINING IN CONDUIT.
3. ALL SALVAGED EQUIPMENT SHALL BE STORED IN A SECURE LOCATION. COORDINATE WITH WAUKESHA COUNTY DPW - ENGINEERING SERVICES. CONTACT KAREN BRAUN AT (262) 548-7740. SEE SPECIAL PROVISIONS FOR MORE INFORMATION.
4. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.



- EVP CONFIRMATION LIGHT
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- VX VIDEO DETECTION CAMERA
- RA X RADAR DETECTOR
- RADIO INTERCONNECT ANTENNA

NOTE: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
CTH O (S. MOORLAND ROAD) & BROOKFIELD SQUARE MALL ENTRANCE / MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: raSmith
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 88	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024101-SR.DWG
LAYOUT NAME - Plan 1 IN 40 FT-MallMcD

PLOT DATE : 11/18/2021 5:11 PM
PLOT BY : UTIC, ANDY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WOOD POLE, CLASS 4
- SPAN WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY LUMINAIRE, 250 W HPS OR LED C
- XX — SIGNAL HEAD NUMBER
- R — RED CIRCULAR INDICATOR
- Y — YELLOW CIRCULAR INDICATOR
- G — GREEN CIRCULAR INDICATOR
- RED ARROW
- GREEN ARROW
- YELLOW ARROW
- WALK/DON'T WALK INDICATOR
- SIGNAL HEAD TO BE BAGGED
- WORK ZONE
- TRAFFIC FLOW ARROW

- WOOD MOVABLE DROP POLE (4X4 WOOD POST OR SKID)
- PUSH BUTTON
- X — EVP DESIGNATOR
- EVP DETECTOR HEAD
- PEDESTRIAN SIGNAL HEADS
- VX — VIDEO DETECTION CAMERA

NOTE: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING

ALTERNATE CROSSWALK CLOSURE SO THAT THERE IS ONE OPEN CROSSWALK ACROSS CTH O AT BROOKFIELD SQUARE NORTH ENTRANCE AT ALL TIMES SEE CONSTRUCTION DETAIL. BAG PEDESTRIAN HEADS ASSOCIATED WITH EACH CROSSWALK CLOSURE.

BROOKFIELD SQUARE MALL ENTRANCE

MOORLAND ROAD (CTH O)

68+00 69+00 70+00 71+00 72+00 73+00

WP1 WP2 WP3 WP4 V1 V3 V4 DP1 DP2

TLE PLE R/W

ALTERNATE CROSSWALK CLOSURE SO THAT THERE IS ONE OPEN CROSSWALK ACROSS CTH O AT BROOKFIELD SQUARE NORTH ENTRANCE AT ALL TIMES SEE CONSTRUCTION DETAIL. BAG PEDESTRIAN HEADS ASSOCIATED WITH EACH CROSSWALK CLOSURE.

CONSTRUCTION NOTES:

1. ALL LUMINAIRES ARE 250W HPS OR LED C UNLESS OTHERWISE NOTED
2. FINAL LOCATION OF SIGNAL POLES, SIGNAL HEADS, AND SIGNAL CABINET SHALL BE AS DIRECTED BY ENGINEER.
3. POLE & POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF THE CURB TO THE SIDE OF THE POST OR POLE.
4. MOUNT NEAR RIGHT SIGNAL ABOVE TETHER WIRE WHEN OVER ROAD.
5. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
6. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
7. ADJUST TEMPORARY SIGNAL AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.

N

SUMMARY OF MATERIALS (FOR INFORMATION ONLY)

QUANTITY	UNIT	DESCRIPTION
4	EA	CLASS 4 WOOD POLES
2	EA	WOOD MOVABLE DROP POLES
500	LF	SPAN WIRE
4	EA	TEMPORARY LUMINAIRES 250 W HPS OR LED C
20	EA	SIGNAL HEADS
8	EA	PEDESTRIAN HEADS
2	EA	EVP DETECTOR HEADS
1	LS	NON-INTRUSIVE DETECTION SYSTEM

TRAFFIC CONTROL SIGNAL
CTH O (S. MOORLAND ROAD) & BROOKFIELD SQUARE MALL ENTRANCE / MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: raSmith
REVISED BY:

PAGE 1 OF 4

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL - STAGE 1 /3/5	SHEET 89	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024101-ST1.DWG
LAYOUT NAME - Plan 1 IN 40 FT-MallMcD

PLOT DATE : 11/22/2021 3:57 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WOOD POLE, CLASS 4
- SPAN WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY LUMINAIRE, 250 W HPS OR LED C
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- RED ARROW
- GREEN ARROW
- YELLOW ARROW
- WALK/DON'T WALK INDICATOR
- SIGNAL HEAD TO BE BAGGED
- WORK ZONE
- TRAFFIC FLOW ARROW

NOTE: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING

- WOOD MOVABLE DROP POLE (4X4 WOOD POST OR SKID)
- PUSH BUTTON
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- PEDESTRIAN SIGNAL HEADS
- VX VIDEO DETECTION CAMERA

ALTERNATE CROSSWALK CLOSURE SO THAT THERE IS ONE OPEN CROSSWALK ACROSS CTH O AT BROOKFIELD SQUARE NORTH ENTRANCE AT ALL TIMES SEE STAGE 2 PEDESTRIAN STAGING DETAILS. BAG PEDESTRIAN HEADS ASSOCIATED WITH EACH CROSSWALK CLOSURE

ALTERNATE CROSSWALK CLOSURE SO THAT THERE IS ONE OPEN CROSSWALK ACROSS CTH O AT BROOKFIELD SQUARE NORTH ENTRANCE AT ALL TIMES SEE STAGE 2 PEDESTRIAN STAGING DETAILS. BAG PEDESTRIAN HEADS ASSOCIATED WITH EACH CROSSWALK CLOSURE.

BROOKFIELD SQUARE MALL ENTRANCE

MOORLAND ROAD (CTH O)

MOORLAND ROAD (CTH O)

WP1 WP2 WP3 WP4 DP1 DP2 V1 V3 V4

TLE PLE R/W

TRAFFIC CONTROL SIGNAL
CTH O (S. MOORLAND ROAD) & BROOKFIELD SQUARE MALL ENTRANCE / MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: raSmith
REVISED BY:

PAGE 2 OF 4

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL - STAGE 2	SHEET 90	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024102-ST2.DWG
LAYOUT NAME - Plan 1 IN 40 FT-MallMcD

PLOT DATE : 11/22/2021 1:15 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

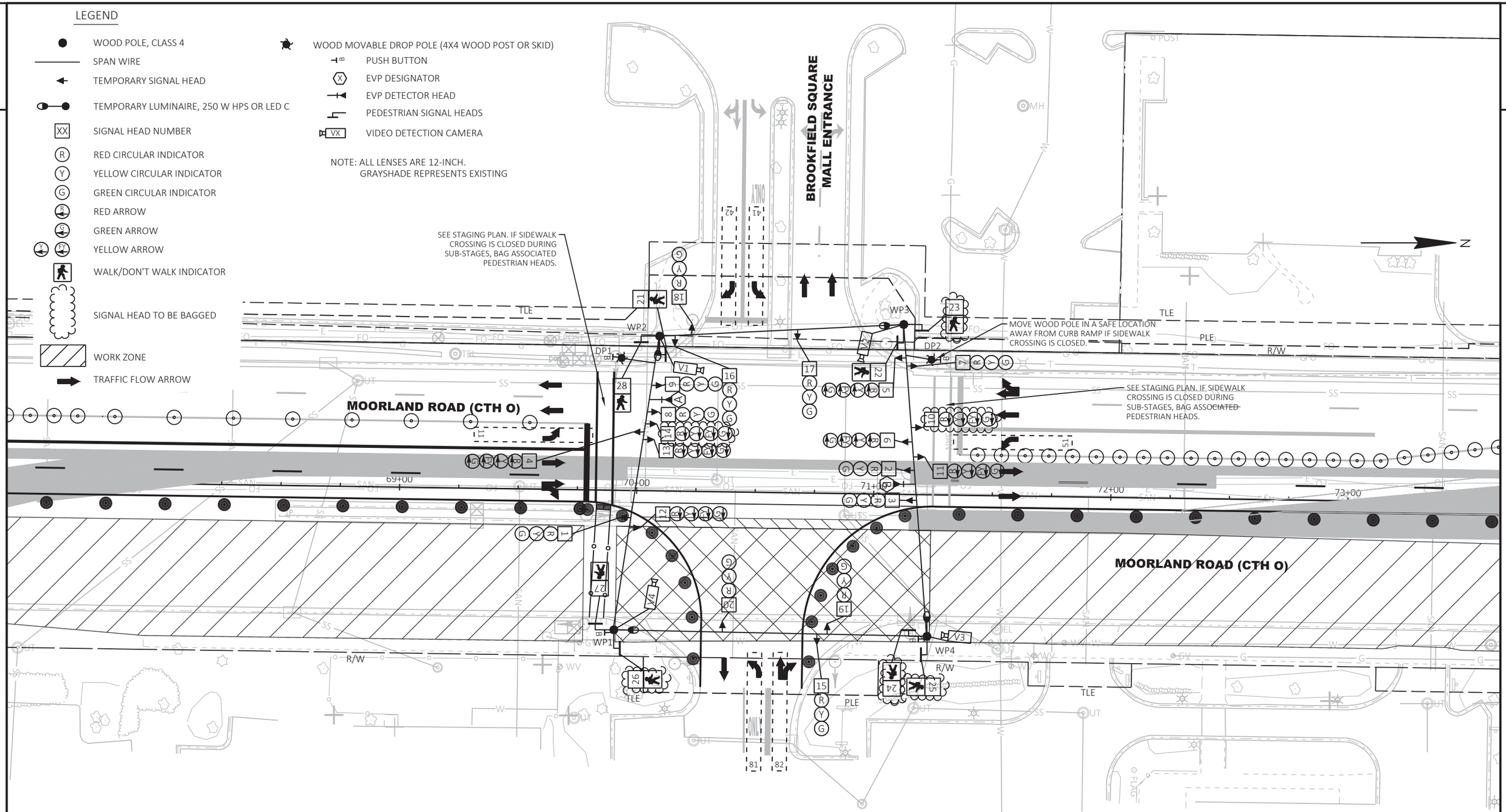
WISDOT/CADDS SHEET 42

2

LEGEND

- WOOD POLE, CLASS 4
- SPAN WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY LUMINAIRE, 250 W HPS OR LED C
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- RED ARROW
- GREEN ARROW
- YELLOW ARROW
- WALK/DON'T WALK INDICATOR
- SIGNAL HEAD TO BE BAGGED
- WORK ZONE
- TRAFFIC FLOW ARROW
- WOOD MOVABLE DROP POLE (4X4 WOOD POST OR SKID)
- PUSH BUTTON
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- PEDESTRIAN SIGNAL HEADS
- VX VIDEO DETECTION CAMERA

NOTE: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
CTH O (S. MOORLAND ROAD) & BROOKFIELD SQUARE MALL ENTRANCE / MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: raSmith
REVISED BY:

PAGE 3 OF 4

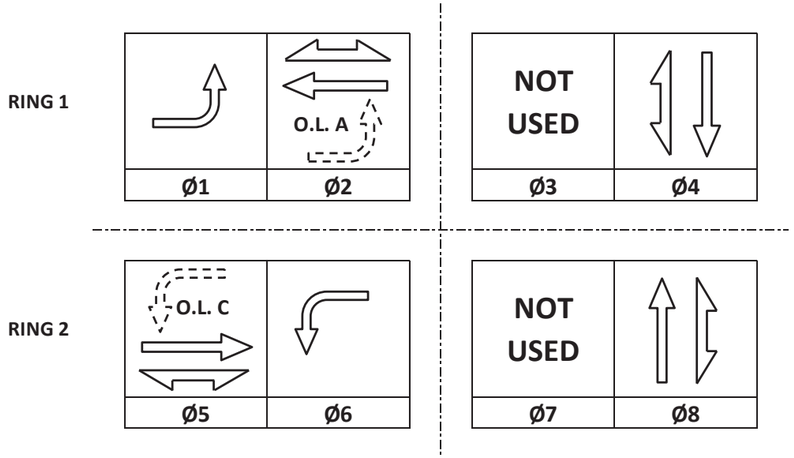
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL - STAGE 4A - 4C	SHEET 91	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024104-ST4.DWG
LAYOUT NAME - Plan 1 IN 40 FT-MallMcD

PLOT DATE : 11/22/2021 1:22 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	4,5,6	R
Ø2	7,8,9	R
Ø3		
Ø4	18,19,20	R
Ø5	1,2,3	-
Ø6	10,11,12,13,14	R
Ø7		
Ø8	15,16,17	R
Ø2P	21,22	
Ø4P	27,28	
Ø5P	25,26	
Ø8P	23,24	
OLA	4,5,6	R
OLB		
OLC	15,16,17	R
OLD		



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B
MOVEMENT		
PHASE	2+6	5+1

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

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

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

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

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

GENERAL NOTES:

1. OMIT ANY PHASES DURING STAGES WHERE VEHICULAR AND PEDESTRIAN MOVEMENTS ARE RESTRICTED.

2. PHASES 1 AND 6 ARE IN CONFLICT DURING STAGES 1, 3, AND 5. PHASES 1 AND 6 ARE NOT ALLOWED TO RUN CURRENTLY DURING THESE STAGES. OMIT O.L. A AND O.L. C

CTH O (S. MOORLAND ROAD) & BROOKFIELD SQUARE
MALL ENTRANCE/MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO: CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP
DATE: 11/1/21 PAGE NO. 4 OF 4

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TEMPORARY SEQUENCE OF OPERATIONS – ALL STAGES	SHEET NO: 92	E

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

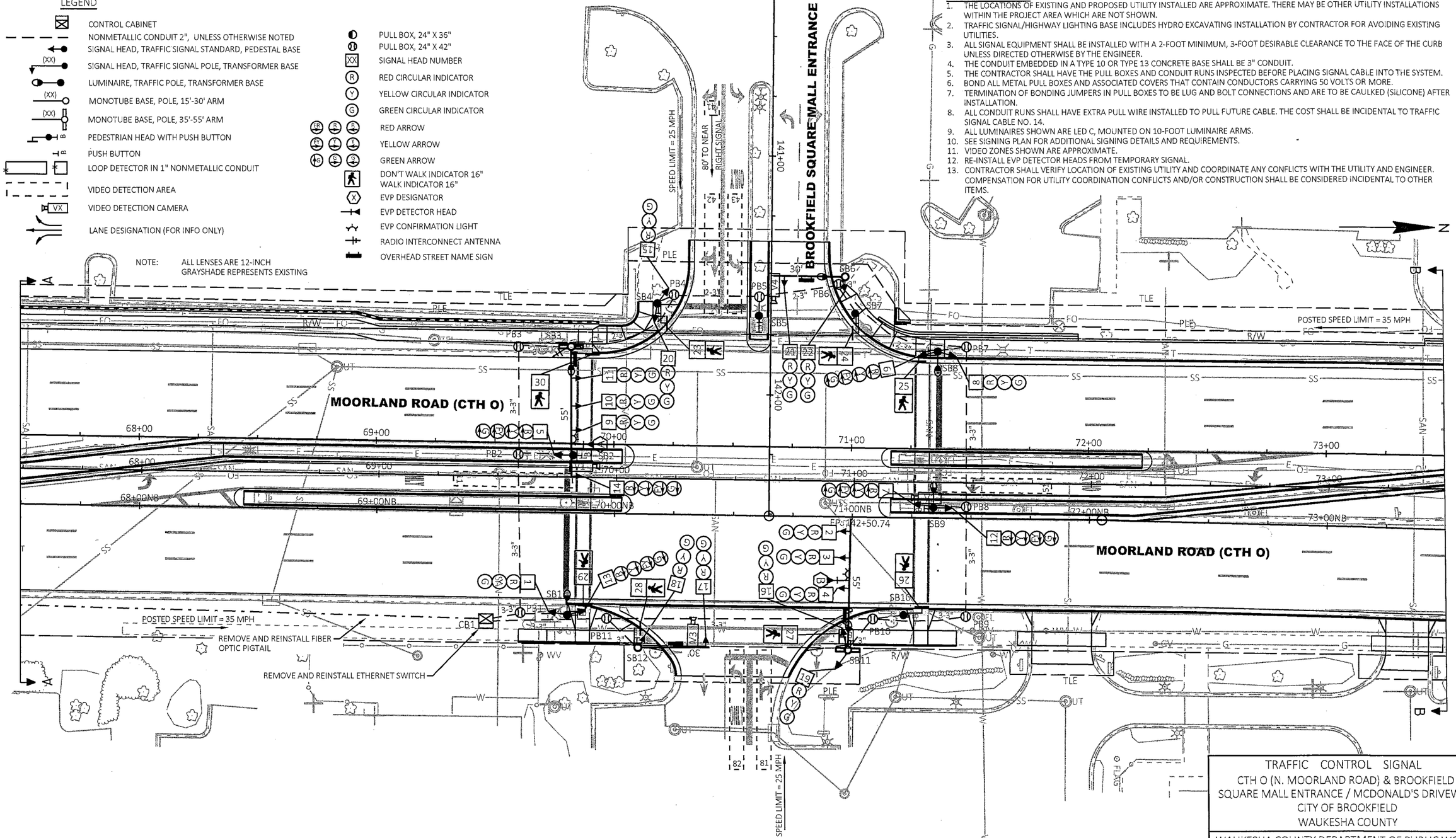
LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- LANE DESIGNATION (FOR INFO ONLY)
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- RA RED ARROW
- YA YELLOW ARROW
- GA GREEN ARROW
- DON'T WALK INDICATOR 16"
  WALK INDICATOR 16"
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- EVP CONFIRMATION LIGHT
- RADIO INTERCONNECT ANTENNA
- OVERHEAD STREET NAME SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLED ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. TRAFFIC SIGNAL/HIGHWAY LIGHTING BASE INCLUDES HYDRO EXCAVATING INSTALLATION BY CONTRACTOR FOR AVOIDING EXISTING UTILITIES.
3. ALL SIGNAL EQUIPMENT SHALL BE INSTALLED WITH A 2-FOOT MINIMUM, 3-FOOT DESIRABLE CLEARANCE TO THE FACE OF THE CURB UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
4. THE CONDUIT EMBEDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3" CONDUIT.
5. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED BEFORE PLACING SIGNAL CABLE INTO THE SYSTEM.
6. BOND ALL METAL PULL BOXES AND ASSOCIATED COVERS THAT CONTAIN CONDUCTORS CARRYING 50 VOLTS OR MORE.
7. TERMINATION OF BONDING JUMPERS IN PULL BOXES TO BE LUG AND BOLT CONNECTIONS AND ARE TO BE CAULKED (SILICONE) AFTER INSTALLATION.
8. ALL CONDUIT RUNS SHALL HAVE EXTRA PULL WIRE INSTALLED TO PULL FUTURE CABLE. THE COST SHALL BE INCIDENTAL TO TRAFFIC SIGNAL CABLE NO. 14.
9. ALL LUMINAIRES SHOWN ARE LED C, MOUNTED ON 10-FOOT LUMINAIRE ARMS.
10. SEE SIGNING PLAN FOR ADDITIONAL SIGNING DETAILS AND REQUIREMENTS.
11. VIDEO ZONES SHOWN ARE APPROXIMATE.
12. RE-INSTALL EVP DETECTOR HEADS FROM TEMPORARY SIGNAL.
13. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITY AND COORDINATE ANY CONFLICTS WITH THE UTILITY AND ENGINEER. COMPENSATION FOR UTILITY COORDINATION CONFLICTS AND/OR CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS.



TRAFFIC CONTROL SIGNAL
CTH O (N. MOORLAND ROAD) & BROOKFIELD SQUARE MALL ENTRANCE / MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

WAUKESHA COUNTY DEPARTMENT OF PUBLIC WORKS
APPROVED
DATE 11/29/21 Karen Braun
TRAFFIC ENGINEER
ENGINEERING MANAGER

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: WAUKESHA COUNTY
REVISED BY:

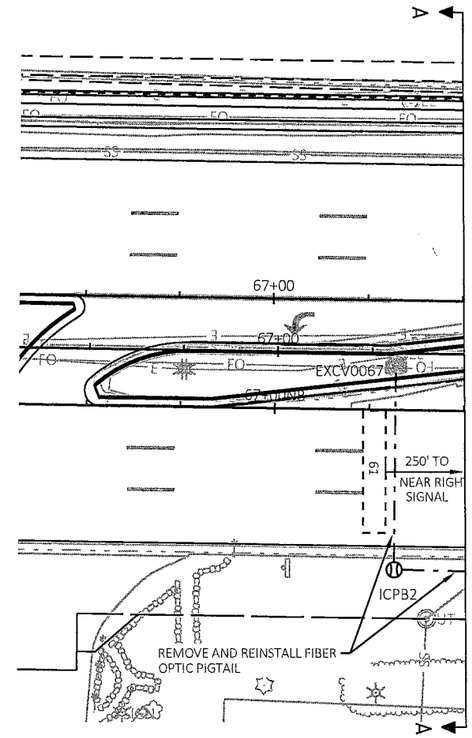
PAGE 1 OF 4

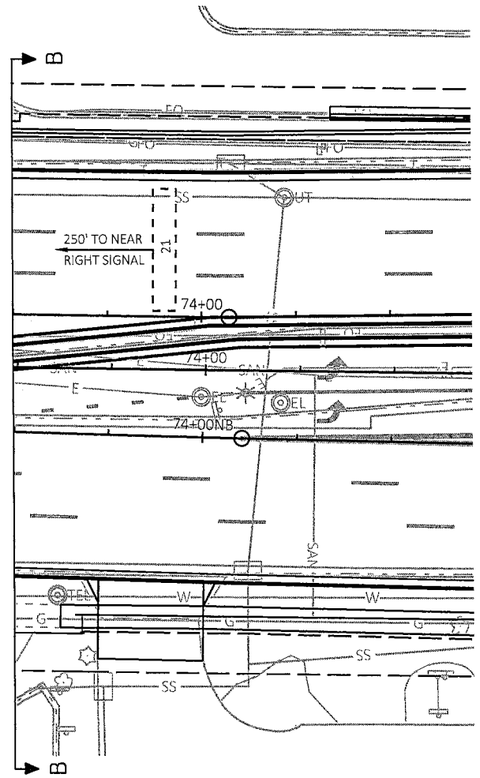
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024201-SP.DWG
LAYOUT NAME - Plan 1 IN 40 FT - McDonalds
PLOT DATE : 11/22/2021 3:54 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

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TRAFFIC CONTROL SIGNAL
CTH O (N. MOORLAND ROAD) & BROOKFIELD
SQUARE MALL ENTRANCE / MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

WAUKESHA COUNTY DEPARTMENT OF PUBLIC WORKS
APPROVED
DATE 11/29/24 Karen Braun
TRAFFIC ENGINEER
ENGINEERING MANAGER

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: WAUKESHA COUNTY
REVISED BY:

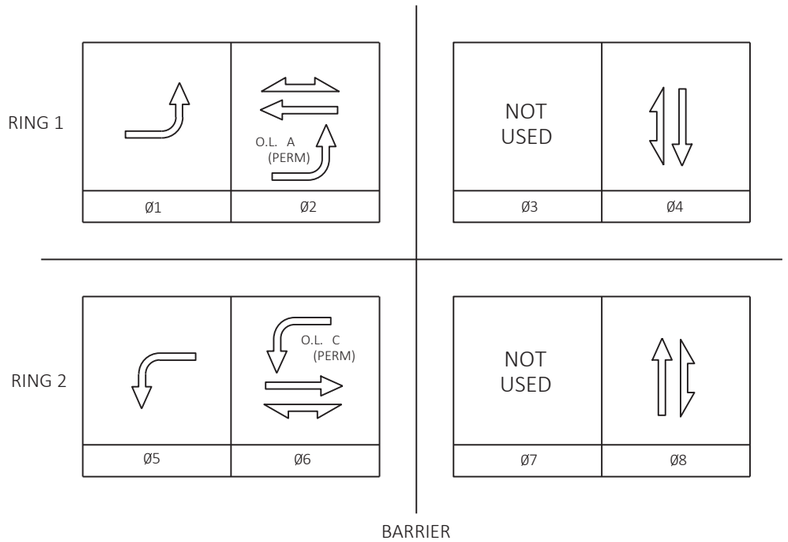
PAGE 2 OF 4

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024201-SP.DWG
LAYOUT NAME - Plan 1 IN 40 FT - McDonalds (2)
PLOT DATE : 11/22/2021 3:54 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

	HEAD NUMBERS	FLASH
Ø1	5,6,7	R
Ø2	8,9,10,11	R
Ø4	15,16,17,18	R
Ø5	12,13,14	R
Ø6	1,2,3,4	R
Ø8	19,20,21,22	R
Ø2 PED	23,24	
Ø4 PED	29,30	
Ø6 PED	27,28	
Ø8 PED	25,26	



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTION	A	B
MOVEMENT		
PHASE	2 + 5	6+1

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

TYPE OF INTERCONNECT	
NONE	
TBC	
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	X
RADIO	X

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

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

* WAUKESHA COUNTY OWNS AND OPERATES THE LIGHTING UNITS ON THE SIGNAL MAST ARM ASSEMBLIES.

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

DETECTOR LOGIC

(VIDEO SENSORS)

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR #(S)	11	41	43	61	82			
PHASE CALLED	1	4	4	6	8			
PHASE EXTENDED	1	4	4	6	8			
DISCONNECT TIME								
CALLING DELAY	-	X	-	X	-			
EXTENSION STRETCH		X		X				
LOOP FUNCTION								

19	17	23	21	27	25	31	29	
								DETECTOR INPUT
								DETECTOR #(S)
								PHASE CALLED
								PHASE EXTENDED
								DISCONNECT TIME
								CALLING DELAY
								EXTENSION STRETCH
								LOOP FUNCTION

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR #(S)	21	42	51	81				
PHASE CALLED	2	4	5	8				
PHASE EXTENDED	2	4	5	8				
DISCONNECT TIME								
CALLING DELAY	X	-	-	X				
EXTENSION STRETCH	X	-	-	X				
LOOP FUNCTION								

20	18	24	22	28	26	32	30	
								DETECTOR INPUT
								DETECTOR #(S)
								PHASE CALLED
								PHASE EXTENDED
								DISCONNECT TIME
								CALLING DELAY
			-					EXTENSION STRETCH
								LOOP FUNCTION

GENERAL NOTES:
1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHAL BE SKIPPED

TRAFFIC CONTROL SIGNAL
CTH O (N. MOORLAND ROAD) & BROOKFIELD
SQUARE MALL ENTRANCE / MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUESHA COUNTY

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: WAUKESHA COUNTY
REVISED BY:

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	SEQUENCE OF OPERATIONS	SHEET 95	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\024301-PH-2.DWG
LAYOUT NAME - SignalPhasing-MCD-MallEntrance
PLOT DATE : 11/22/2021 1:31 PM
PLOT BY : UTIC, ANDY
PLOT NAME :
PLOT SCALE : 1 IN:1 FT
WISDOT/CADDS SHEET 42

PROJECT ID:	2722-07-01
INTERSECTION:	CTH O & BROOKFIELD SQUARE MALL ENTRANCE/MCDONALDS DRIVEWAY

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

DATE	11/1/21

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR										PED BUTTON
			PHASE	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK	
SB1	12	1	6	RED	ORG	GRN							
		13	5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		29	4								BLK	BLU	
		BUTTON	4										WHT/BLK
SB2	12	5	1				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		BUTTON	4										WHT/BLK
SB3	15	9	2	RED	ORG	GRN							
		10	2	RED	ORG	GRN							
		11	2	RED	ORG	GRN							
		14	5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		30	4								BLK	BLU	
		BUTTON	4										WHT/BLK
SB4	12	15	4	RED	ORG	GRN							
		20	8	RED/BLK	ORG/BLK	GRN/BLK							
		23	2								BLK	BLU	
		BUTTON	2										WHT/BLK
SB5	7	BUTTON	2										WHT/BLK
SB6	12	21	8	RED	ORG	GRN							
		22	8	RED	ORG	GRN							
SB7	12	24	2								BLK	BLU	
		BUTTON	2										WHT/BLK
SB8	12	6	1				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		8	2	RED	ORG	GRN							
		25	8								BLK	BLU	
		BUTTON	8										WHT/BLK
SB9	12	7	1				RED	ORG	GRN	BLU/BLK			
		12	5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		BUTTON	8										WHT/BLK
SB10	7	26	8								BLK	BLU	
		BUTTON	8										WHT/BLK
SB11	19	2	6	RED	ORG	GRN							
		3	6	RED	ORG	GRN							
		4	6	RED	ORG	GRN							
		16	4	RED/BLK	ORG/BLK	GRN/BLK							
		19	8	RED/WHT	BLU/WHT	GRN/WHT							
		27	6								BLK	BLU	
		BUTTON	6										WHT/BLK
SB12	12	17	4	RED	ORG	GRN							
		18	4	RED	ORG	GRN							
		28	6								BLK	BLU	
		BUTTON	6										WHT/BLK

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP

FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP

FROM	TO
PB1	SB1
PB2	SB2
PB3	SB3
PB4	SB4
PB5	SB5
PB6	SB6
PB7	SB8
PB8	SB9
PB9	SB10
PB10	SB10
PB11	SB12

LIGHTING UF #10 W/GROUND

FROM	TO
CB1	SB1
SB1	SB3
CB1	SB11
SB11	SB9
SB9	SB8
SB8	SB6

VIDEO DETECTION CABLE

FROM	TO
CB1	V1 (SB3)
CB1	V2 (SB9)
CB1	V3 (SB12)
CB1	V4 (SB6)

EMERGENCY VEHICLE PREEMPTION

FROM	TO
CB1	HEAD A (SB3)
CB1	HEAD B (SB11)

*Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications.
*Ensure the grounded conductor in the feeder cable and the pole cables are both 18” longer than the ungrounded conductors.
*At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.
*Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.

TRAFFIC CONTROL SIGNAL
CTH O (N. MOORLAND RD) & BROOKFIELD SQUARE MALL ENTRANCE / MCDONALD’S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO:

COUNTY CONTACT: KAREN BRAUN
DESIGNED BY: WAUKESHA COUNTY
REVISED BY:

PAGE 4 OF 4

2

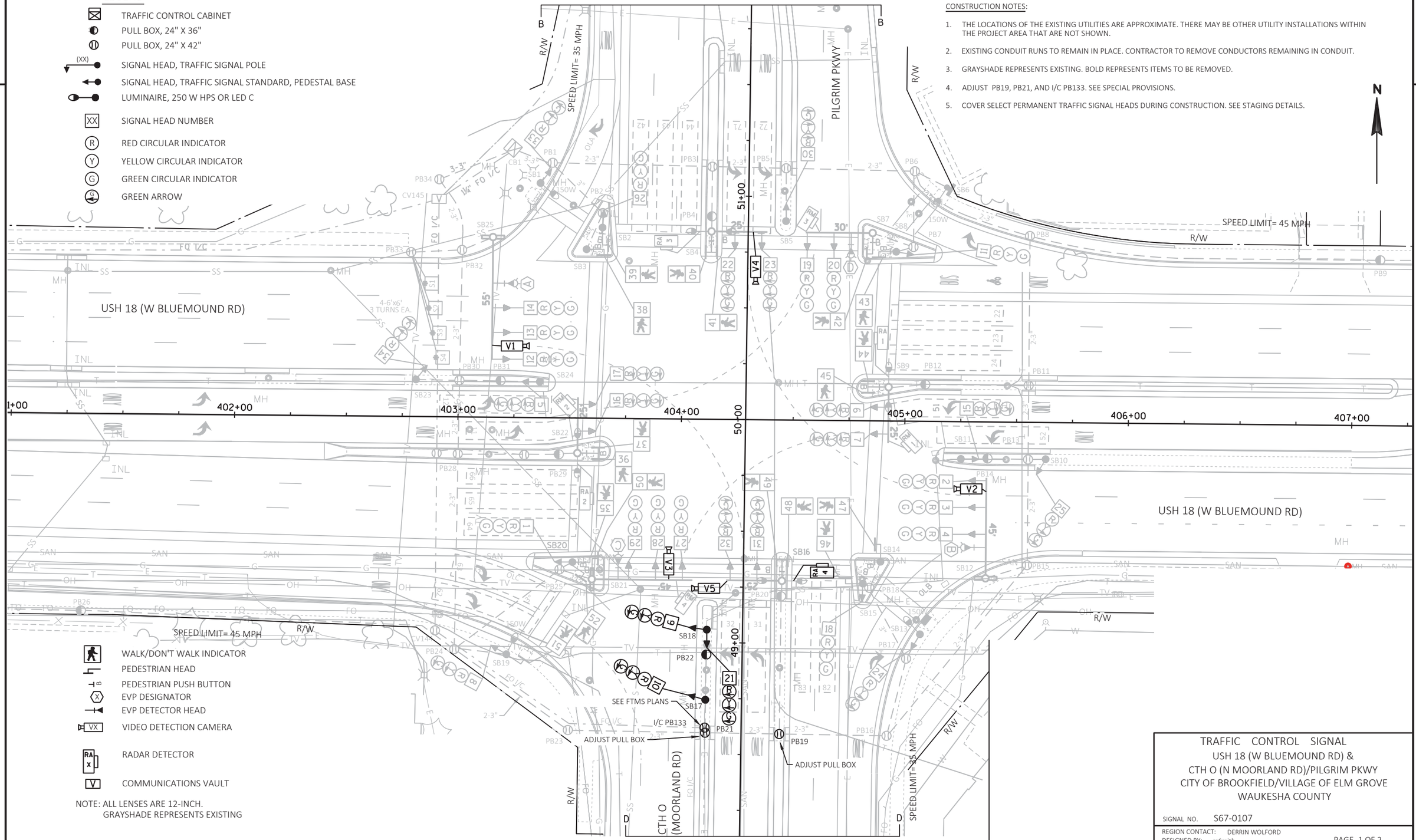
LEGEND

- TRAFFIC CONTROL CABINET
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- LUMINAIRE, 250 W HPS OR LED C
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (G) GREEN ARROW
- WALK/DON'T WALK INDICATOR
- PEDESTRIAN HEAD
- PEDESTRIAN PUSH BUTTON
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- VX VIDEO DETECTION CAMERA
- RA X RADAR DETECTOR
- V COMMUNICATIONS VAULT

NOTE: ALL LENSES ARE 12-INCH.
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

1. THE LOCATIONS OF THE EXISTING UTILITIES ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. EXISTING CONDUIT RUNS TO REMAIN IN PLACE. CONTRACTOR TO REMOVE CONDUCTORS REMAINING IN CONDUIT.
3. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.
4. ADJUST PB19, PB21, AND I/C PB133. SEE SPECIAL PROVISIONS.
5. COVER SELECT PERMANENT TRAFFIC SIGNAL HEADS DURING CONSTRUCTION. SEE STAGING DETAILS.



TRAFFIC CONTROL SIGNAL
USH 18 (W BLUEMOUND RD) &
CTH O (N MOORLAND RD)/PILGRIM PKWY
CITY OF BROOKFIELD/VILLAGE OF ELM GROVE
WAUKESHA COUNTY

SIGNAL NO. S67-0107

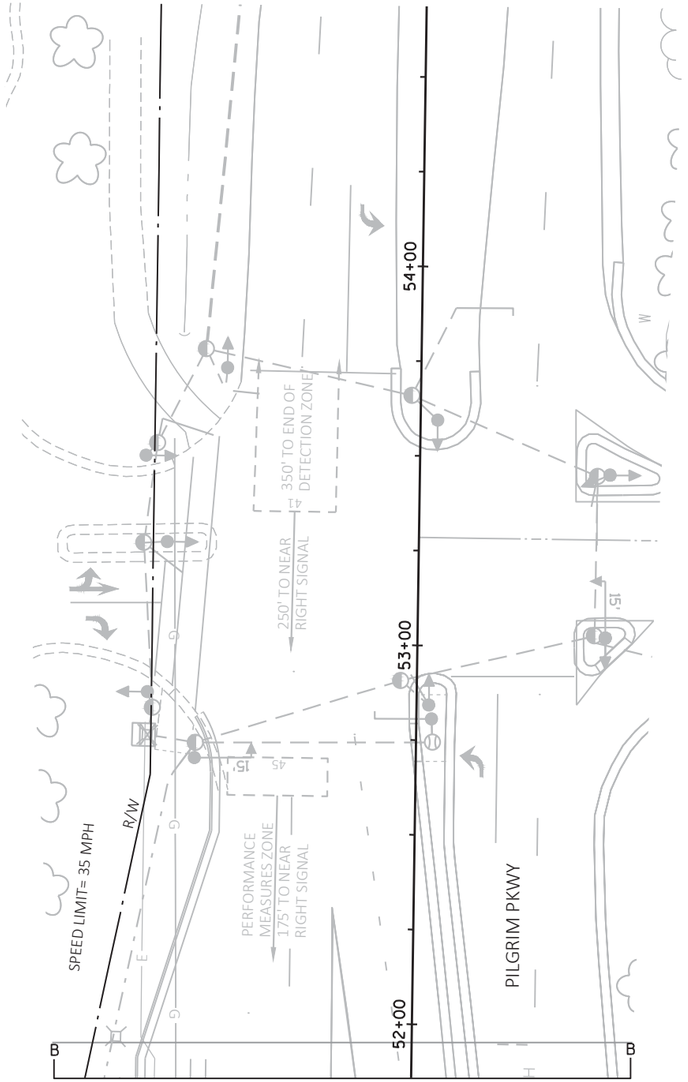
REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: raSmith
REVISED BY:

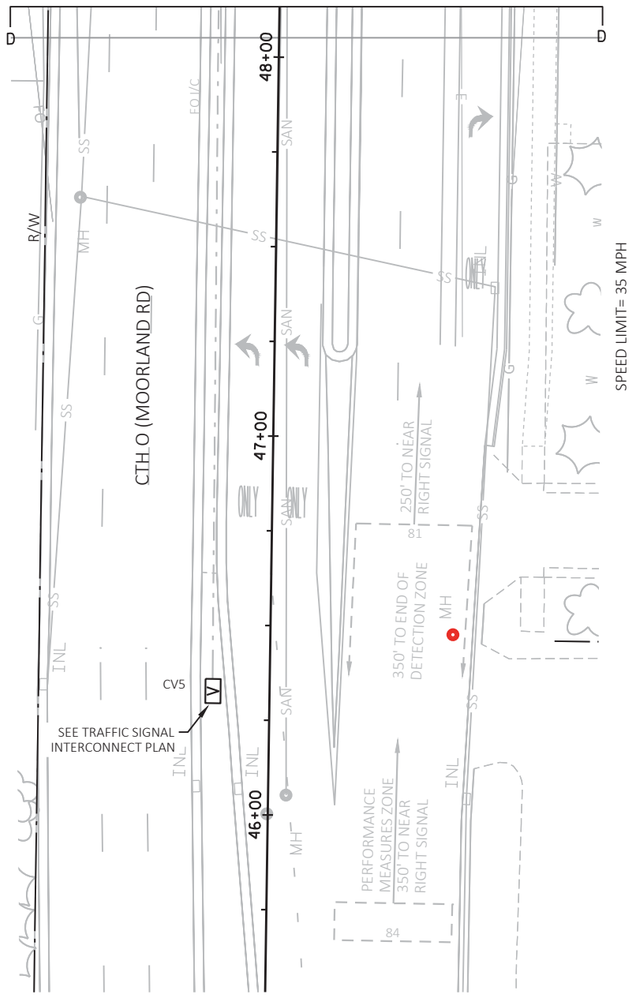
PAGE 1 OF 2

PROJECT NO: 2722-07-71 & 3700-00-70	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 97	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\S67-0643-BLUEMOUND-SR.DWG
LAYOUT NAME - S67-0643-BLUEMOUND-SR - 024001_SP

PLOT DATE : 11/22/2021 1:58 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : **********





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2

TRAFFIC CONTROL SIGNAL
USH 18 (W BLUEMOUND RD) &
CTH O (N MOORLAND RD)/PILGRIM PKWY
CITY OF BROOKFIELD/VILLAGE OF ELM GROVE
WAUKESHA COUNTY

SIGNAL NO. S67-0107

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY: raSmith
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 2722-07-71 & 3700-00-70	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 98	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\S67-0643-BLUEMOUND-SR.DWG
LAYOUT NAME - S67-0643-BLUEMOUND-SR - 024003_SP

PLOT DATE : 11/22/2021 2:00 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : **********

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- YIELD SIGN
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- RADAR DETECTION AREA
- RADAR DETECTOR
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- COMMUNICATIONS VAULT

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

N

USH 18 (W BLUEMOUND RD)

PILGRIM PKWY

CTH O (MOORLAND RD)

SPEED LIMIT= 35 MPH

SPEED LIMIT= 45 MPH

50' TO RADAR DETECTION UNIT

220' TO NEAR RIGHT SIGNAL

CONSTRUCTION NOTES:

1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
3. ADJUST PB19, PB21, AND I/C PB133. SEE SPECIAL PROVISIONS.

MONOTUBE STRUCTURES
- SB4 = S-67-1256
- SB7 = S-67-1257
- SB9 = S-67-1258
- SB12 = S-67-1259
- SB16 = S-67-1260
- SB21 = S-67-1261
- SB22 = S-67-1262
- SB25 = S-67-1263

REVISION				
REV. NO.	REPLACE SB17, SB18, & PB22 AND ADJUST PB19, PB21, AND I/C PB133 TO ACCOMMODATE PROJECT STAGING; REMOVE RA4, V1, V2, V3, V4, & V5; INSTALL LOOPS 81, 82, S1, S2, S3, PB35, AND PB36; UPDATE RADAR DETECTION			
	APPROVAL RECOMMENDED		APPROVED	
8	REGION		CENTRAL OFFICE	
	DATE	BY	DATE	BY
	10-15-21	JTW	10-18-21	JRJ

ADD RADAR DETECTION; REPLACE CONTROLLER 10/9/15
ADD EVP CONFIRMATION LIGHTS 11/07/14
UPDATE DETECTION AND CABINET; ADD INSYNC ADAPTIVE CONTROL 2/25/14
REHAB SIGNAL; ADD MONOTUBES ALL APPROACHES 2/15/12
NEW CABINET, CONTROLLER & CONCRETE BASE; NEW CONDUIT AROUND PERIMETER; SIGNALIZE EB RT. REPLACE 6 SIGNAL BASES, INSTALL 20' POLES, ADD 6 SIGNAL HEADS 8/1/07
ADDED NB & SB RT OVERLAPS; CHANGE CABINET & CONTROLLER 8/04
ADDED EPV FOR ALL APPROACHES 10/95

TRAFFIC CONTROL SIGNAL
USH 18 (W BLUEMOUND RD) &
CTH O (N MOORLAND RD)/PILGRIM PKWY
CITY OF BROOKFIELD/VILLAGE OF ELM GROVE
WAUKESHA COUNTY

SIGNAL NO. S67-0107
CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 6/6/90 — EDWARD J. FRIEDE, REGION TRAFFIC ENGINEER

APPROVED
DATE 1/20/89 — H.O. PRICE, STATE TRAFFIC ENGINEER

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY:
REVISED BY: raSmith

PAGE 1 OF 4

rsv 10-15-21

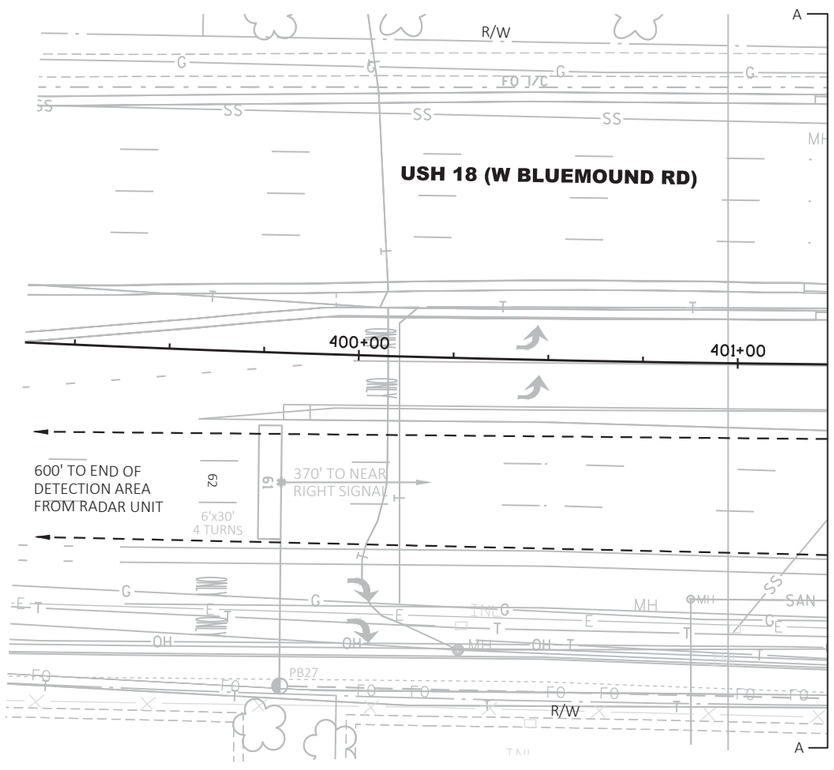
PROJECT NO: 2722-07-71 & 3700-00-70	HWY: CTH O (N.MOORLAND ROAD)	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 99	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\S67-0107_I.DWG
LAYOUT NAME - 024001_SP
PLOT DATE : 11/22/2021 10:17 AM
PLOT BY : UTIC, ANDY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

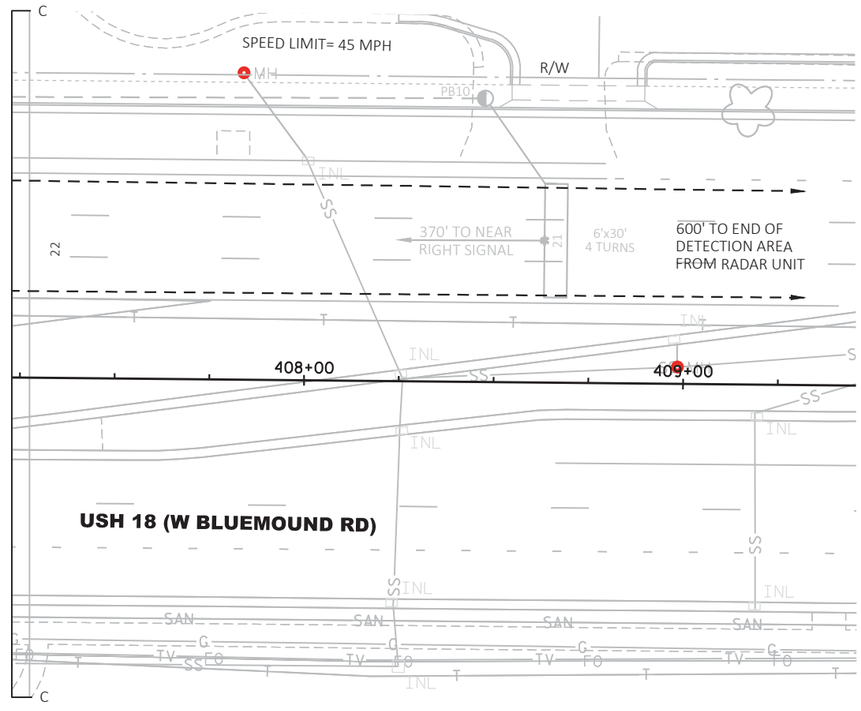
WISDOT/CADDS SHEET 42

2

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SPEED LIMIT= 45 MPH



TRAFFIC CONTROL SIGNAL
USH 18 (W BLUEMOUND RD) &
CTH O (N MOORLAND RD)/PILGRIM PKWY
CITY OF BROOKFIELD/VILLAGE OF ELM GROVE
WAUKESHA COUNTY

SIGNAL NO. S67-0107

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY:
REVISED BY: raSmith

PAGE 2 OF 4

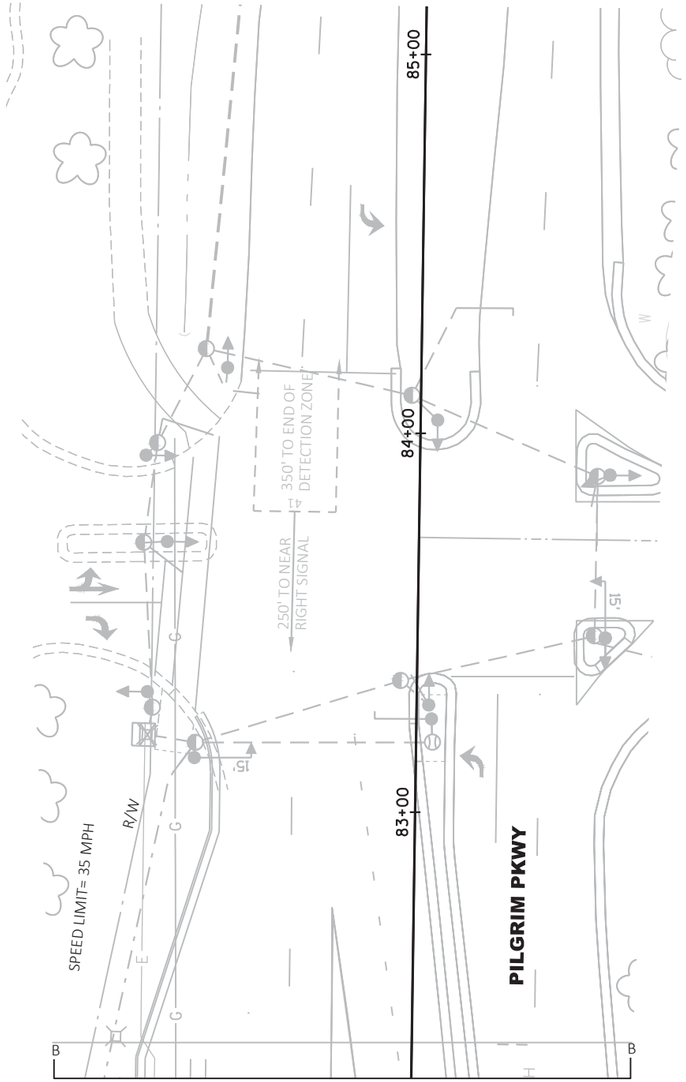
PROJECT NO: 2722-07-71 & 3700-00-70	HWY: CTH O (N.MOORLAND ROAD)	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 100	E

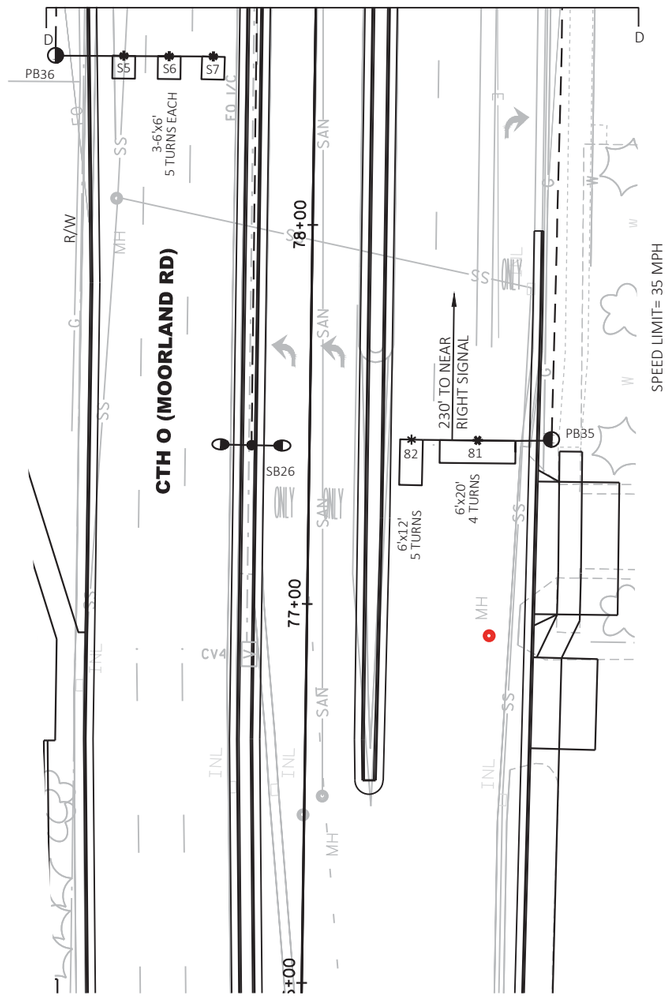
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LAYOUT NAME - 024002_SP

PLOT DATE : 11/22/2021 10:18 AM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : **********

2

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TRAFFIC CONTROL SIGNAL
USH 18 (W BLUEMOUND RD) &
CTH O (N MOORLAND RD)/PILGRIM PKWY
CITY OF BROOKFIELD/VILLAGE OF ELM GROVE
WAUKESHA COUNTY

SIGNAL NO. S67-0107

REGION CONTACT: DERRIN WOLFORD
DESIGNED BY:
REVISED BY: raSmith

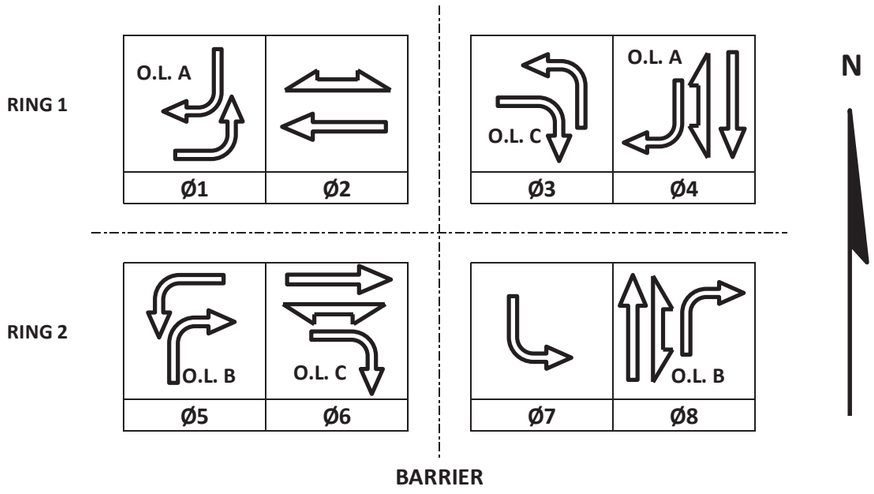
PAGE 3 OF 4

PROJECT NO: 2722-07-71 & 3700-00-70	HWY: CTH O (N.MOORLAND ROAD)	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 101	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\S67-0107_I.DWG
LAYOUT NAME - 024003_SP

PLOT DATE : 11/22/2021 10:20 AM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : **********

	HEAD NUMBERS	FLASH
Ø1	5,6,7	R ←
Ø2	11,12,13,14	R
Ø3	21,22,23	R ←
Ø4	26,27,28,29	R
Ø5	15,16,17	R ←
Ø6	1,2,3,4	R
Ø7	30,31,32	R ←
Ø8	18,19,20	R
Ø2P	39,40,41,42	
Ø4P	35,36,37,38,51,52	
Ø6P	47,48,49,50	
Ø8P	43,44,45,46	
OLA	33,34	R
OLB	24,25	R
OLC	8,9,10	R



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT	←	O.L. C	O.L. A	O.L. B
PHASE	2+5	6+1	4+7	8+3

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.
AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

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

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	X
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS- 67-0053

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	21	81	S1	S3	S5	S7		
CALLED PHASE	2	8						
CALL OPTION	X							
DELAY TIME								
EXTENTION OPTION	X	X						
EXTEND TIME		X						
USE ADDED INITIAL	X							
CROSS SWITCH PHASE								

17	19	21	23	25	27	29	31
11	42	71					
1	4	7					
X	X	X					
X	X	X					

49	51	53	55	57	59	61	63	DETECTOR INPUT
22	41	63						PLAN LOOP DETECTOR*(S)
2	4	6						CALLED PHASE
X		X						CALL OPTION
								DELAY TIME
X	X	X						EXTENTION OPTION
	X							EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	61	82	S2	S4	S6			
CALLED PHASE	6	8						
CALL OPTION	X							
DELAY TIME								
EXTENTION OPTION	X	X						
EXTEND TIME		X						
USE ADDED INITIAL								
CROSS SWITCH PHASE								

18	20	22	24	26	28	30	32
31	51	83					
3	5	8					
X	X	X					
X	X	X					

50	52	54	56	58	60	62	64	DETECTOR INPUT
23	62							PLAN LOOP DETECTOR*(S)
2	6							CALLED PHASE
X	X							CALL OPTION
								DELAY TIME
X	X							EXTENTION OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

USH 18 (W BLUEMOUND RD) &
CTH O (N MOORLAND RD)/PILGRIM PKWY
CITY OF BROOKFIELD/VILLAGE OF ELM GROVE
WAUKESHA COUNTY

SIGNAL NO:	S67-0107	CABINET TYPE:	TS2-S
		CONTROLLER TYPE:	ECONOLITE
DATE:	11/21	PAGE NUMBER:	4 OF 4

2

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EX-HUB-67-0010
DISCONNECT EXISTING 72-COUNT FOC TO NORTH ON MOORLAND RD. FROM EXISTING F.O. TERMINATION PANEL

REMOVE EXISTING 72-COUNT FOC
(DO NOT DISTURB 36-COUNT FOC)

EXCV0046

1-4" MULTICELL CONDUIT

MOORLAND RD.

MOORLAND ROAD

MOORLAND ROAD

MOORLAND ROAD

MATCHLINE 48+50

G67-16

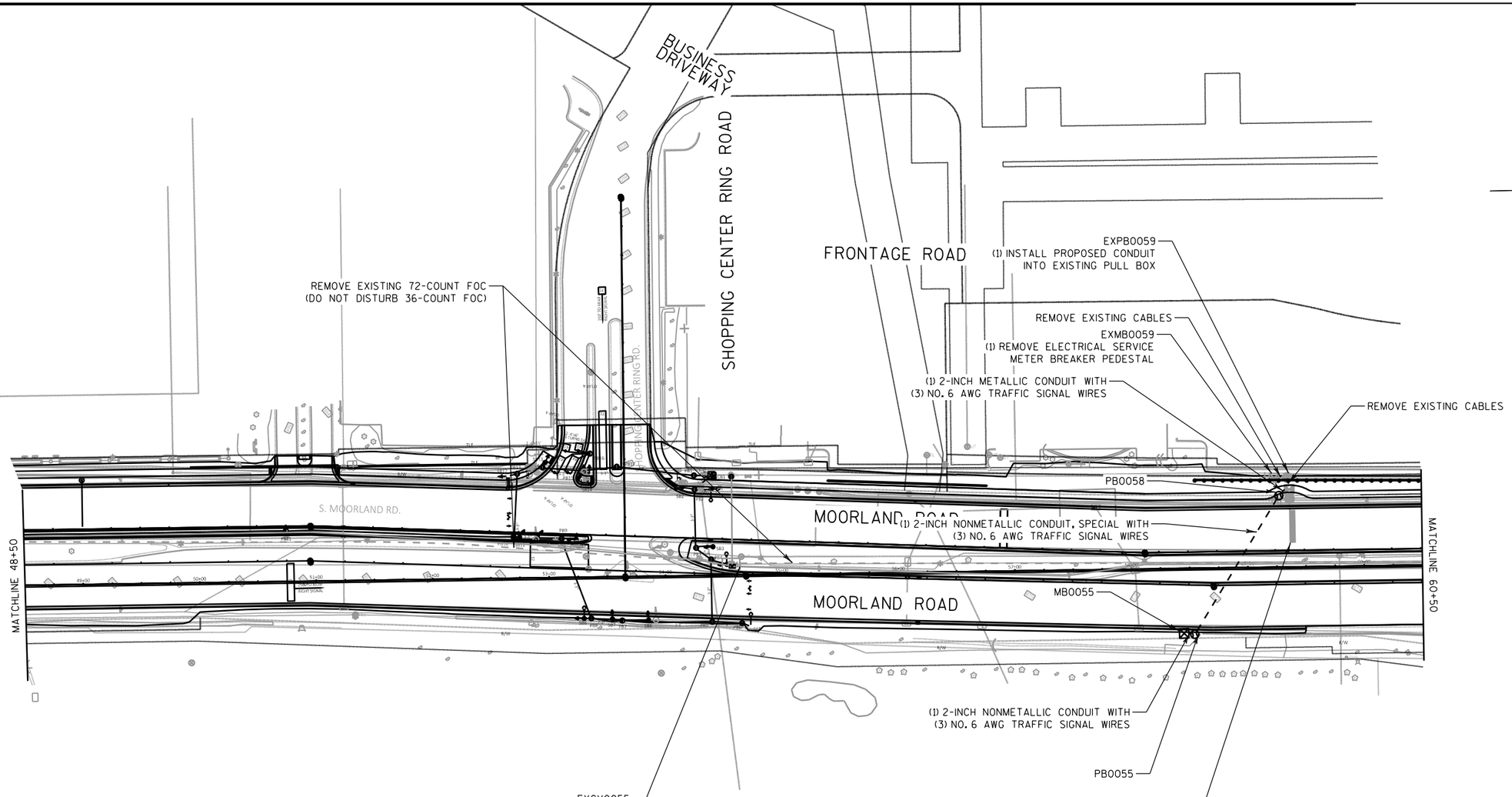
(2) MD CABLES

(2) MD CABLES

EXCV0045
PERFORM ALL WORK WITHOUT DISTURBING EXISTING CABLES IN VAULT PRIOR TO ANY ASSOCIATED GRADING OR PAVEMENT CONSTRUCTION WORK THAT MAY JEOPARDIZE THE EXISTING VAULT.
INITIAL STAGE:
(1) TEMPORARY COMMUNICATIONS VAULT ADJUSTMENT
FINAL STAGE:
(1) FINAL COMMUNICATIONS VAULT ADJUSTMENT

PROJECT NO: 3700-00-70	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	FTMS DESIGN SHEETS	SHEET 103	E

2


BUSINESS DRIVEWAY
SHOPPING CENTER RING ROAD
FRONTAGE ROAD
N
EXPB0059
(1) INSTALL PROPOSED CONDUIT INTO EXISTING PULL BOX
REMOVE EXISTING 72-COUNT FOC (DO NOT DISTURB 36-COUNT FOC)
REMOVE EXISTING CABLES
EXMB0059
(1) REMOVE ELECTRICAL SERVICE METER BREAKER PEDESTAL
(1) 2-INCH METALLIC CONDUIT WITH (3) NO. 6 AWG TRAFFIC SIGNAL WIRES
REMOVE EXISTING CABLES
PB0058
S. MOORLAND RD.
MOORLAND ROAD
(1) 2-INCH NONMETALLIC CONDUIT, SPECIAL WITH (3) NO. 6 AWG TRAFFIC SIGNAL WIRES
MATCHLINE 48+50
MATCHLINE 60+50
MB0055
MOORLAND ROAD
(1) 2-INCH NONMETALLIC CONDUIT WITH (3) NO. 6 AWG TRAFFIC SIGNAL WIRES
PB0055
EX-DMS-67-0119
EXCV0055
PERFORM ALL WORK WITHOUT DISTURBING EXISTING CABLES IN VAULT PRIOR TO ANY ASSOCIATED GRADING OR PAVEMENT CONSTRUCTION WORK THAT MAY JEOPARDIZE THE EXISTING VAULT.
INITIAL STAGE:
(1) TEMPORARY COMMUNICATIONS VAULT ADJUSTMENT
FINAL STAGE:
(1) FINAL COMMUNICATIONS VAULT ADJUSTMENT

2

EXCV0067
PERFORM ALL WORK WITHOUT DISTURBING EXISTING CABLES IN VAULT
PRIOR TO ANY ASSOCIATED GRADING OR PAVEMENT CONSTRUCTION WORK
THAT MAY JEOPARDIZE THE EXISTING VAULT.
INITIAL STAGE:
- CUT EXISTING 12-COUNT FOC FROM EXISTING F.O. SPLICE
(1) TEMPORARY COMMUNICATIONS VAULT ADJUSTMENT
FINAL STAGE:
(1) FINAL COMMUNICATIONS VAULT ADJUSTMENT
(40) F.O. SPLICES
(SEE TRAFFIC SIGNAL INTERCONNECT PLAN FOR ADDITIONAL DETAILS)

N

INITIAL STAGE
- REMOVE EXISTING CABLES
FINAL STAGE
- IN EXISTING CONDUIT
INSTALL (1) 36-COUNT FOC (S-F)

FRONTAGE ROAD

BUSINESS DRIVEWAY

REMOVE EXISTING 72-COUNT FOC
(DO NOT DISTURB 36-COUNT FOC)

MOORLAND ROAD

MOORLAND ROAD

MATCHLINE 60+50

MATCHLINE 71+00

EXCV0061
PERFORM ALL WORK WITHOUT DISTURBING EXISTING CABLES IN VAULT
PRIOR TO ANY ASSOCIATED GRADING OR PAVEMENT CONSTRUCTION WORK
THAT MAY JEOPARDIZE THE EXISTING VAULT.
INITIAL STAGE:
(1) TEMPORARY COMMUNICATIONS VAULT ADJUSTMENT
FINAL STAGE:
(1) FINAL COMMUNICATIONS VAULT ADJUSTMENT

(3) 2-INCH HDPE DUCTS
(1) WITH (1) SALVAGED 36-COUNT FOC AND
(1) SALVAGED 72-COUNT FOC

PROJECT NO: 3700-00-70	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	FTMS DESIGN SHEETS	SHEET 105	E

FILE NAME : \\milw00\ingrproj\77532\base\waukesha_co\27220701_ftms_moorland_94_bm.dgn PLOT DATE : 9/23/2021 PLOT BY : PKutz PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

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EXPB0081
INITIAL STAGE
- REMOVE EXISTING CABLES
FINAL STAGE
- IN EXISTING CONDUIT
INSTALL (1) 36-COUNT FOC (S-F)

PB0079
INSTALL NEW 24X42-INCH PULL BOX
INTERCEPTING MAINTAINED CONDUIT TO
WEST AND TO SOUTH

INITIAL STAGE
- REMOVE EXISTING CABLES
FINAL STAGE
- IN EXISTING CONDUIT
INSTALL (1) 36-COUNT FOC (S-F)

INITIAL STAGE
- REMOVE EXISTING CABLES
FINAL STAGE
- IN EXISTING CONDUIT
INSTALL (1) 36-COUNT FOC (S-F)

EXCV0077
AND ADJACENT CONDUIT
INITIAL STAGE:
- EXPOSE A LENGTH OF CONDUIT SUFFICIENT TO ALLOW FOR THE EXISTING COMMUNICATIONS VAULT AND CONDUIT LOCATION TO BE ADJUSTED TO FIT IN ULTIMATE MEDIAN.
(1) TEMPORARY COMMUNICATIONS VAULT ADJUSTMENT
FINAL STAGE:
(1) FINAL COMMUNICATIONS VAULT ADJUSTMENT

EXPB0083

EXCV0079
INITIAL STAGE
DISCONNECT EXISTING DROP CABLE TO TRAFFIC SIGNALS CABINET FROM 36-COUNT FOC IN EXISTING SPLICE ENCLOSURE
FINAL STAGE
SPLICE NEW 36-COUNT FOC TO EXISTING 36-COUNT FOC AND TO DROP CABLE IN EXISTING SPLICE ENCLOSURE
(40) F.O. SPLICES

EXPB0082

INITIAL STAGE
- REMOVE EXISTING CABLES
FINAL STAGE
- IN EXISTING CONDUIT
INSTALL (1) 36-COUNT FOC (S-F)

EXPB0080

EXPB0079
(1) REMOVE EXISTING PULL BOX

INITIAL STAGE
- REMOVE EXISTING CABLES
FINAL STAGE
- IN EXISTING CONDUIT
INSTALL (1) 36-COUNT FOC (S-F)

MATCHLINE 71+00

MOORLAND ROAD

MOORLAND ROAD

PILGRIM PKWY.

PILGRIM ROAD

PILGRIM ROAD

W. BLUEMOUND RD.

WATERTOWN PLANK RD.

WATERTOWN PLANK ROAD

PROJECT NO: 3700-00-70	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	FTMS DESIGN SHEETS	SHEET 106	E

2

2

LEGEND

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

N

WEST INTERSTATE 94

ESTR

ONLY

ESTR

FO

38+00 39+00 40+00 41+00 42+00 43+00

MATCHLINE STA. 43+25

PAVEMENT MARKING LEGEND

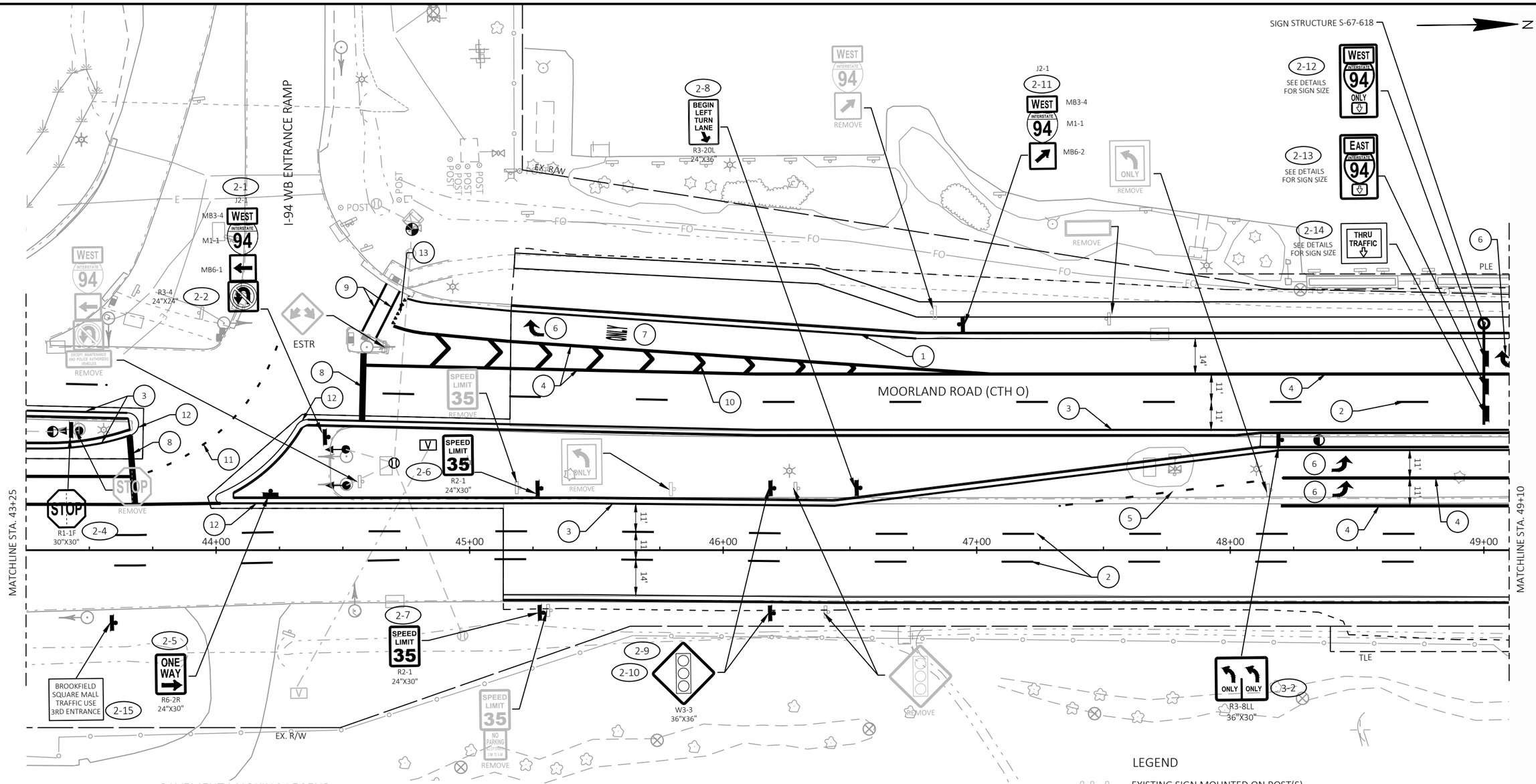
1. MARKING LINE EPOXY 4-INCH, WHITE
2. MARKING LINE EPOXY 4-INCH, WHITE (12.5' LINE, 37.5' SKIP)
3. MARKING LINE EPOXY 4-INCH, YELLOW
4. MARKING LINE EPOXY 8-INCH, WHITE
5. MARKING LINE EPOXY 8-INCH, WHITE (3' LINE, 9' SKIP)
6. MARKING ARROW EPOXY, TYPE 2, WHITE
7. MARKING WORD EPOXY, WHITE
8. MARKING STOP LINE EPOXY 18-INCH, WHITE
9. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
10. MARKING DIAGONAL EPOXY 12-INCH
11. MARKING LINE EPOXY 8-INCH, WHITE (2' LINE, 6' SKIP)
12. MARKING ISLAND NOSE EPOXY
13. MARKING YIELD LINE EPOXY 18-INCH, WHITE
14. MARKING ARROW EPOXY, TYPE 3, WHITE
15. MARKING LINE EPOXY 4-INCH, YELLOW (3' LINE, 9' SKIP)

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PAVEMENT MARKING AND SIGNING PLANS	SHEET 107	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024500_pm

PLOT DATE : 10/1/2021 1:30 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42



PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH, WHITE
2. MARKING LINE EPOXY 4-INCH, WHITE (12.5' LINE, 37.5' SKIP)
3. MARKING LINE EPOXY 4-INCH, YELLOW
4. MARKING LINE EPOXY 8-INCH, WHITE
5. MARKING LINE EPOXY 8-INCH, WHITE (3' LINE, 9' SKIP)
6. MARKING ARROW EPOXY, TYPE 2, WHITE
7. MARKING WORD EPOXY, WHITE
8. MARKING STOP LINE EPOXY 18-INCH, WHITE
9. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
10. MARKING DIAGONAL EPOXY 12-INCH
11. MARKING LINE EPOXY 8-INCH, WHITE (2' LINE, 6' SKIP)
12. MARKING ISLAND NOSE EPOXY
13. MARKING YIELD LINE EPOXY 18-INCH, WHITE
14. MARKING ARROW EPOXY, TYPE 3, WHITE
15. MARKING LINE EPOXY 4-INCH, YELLOW (3' LINE, 9' SKIP)

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON POLE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POLE OR SIGN BRIDGE
- ESTR — EXISTING SIGN TO REMAIN
- SIGN STRUCTURE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER

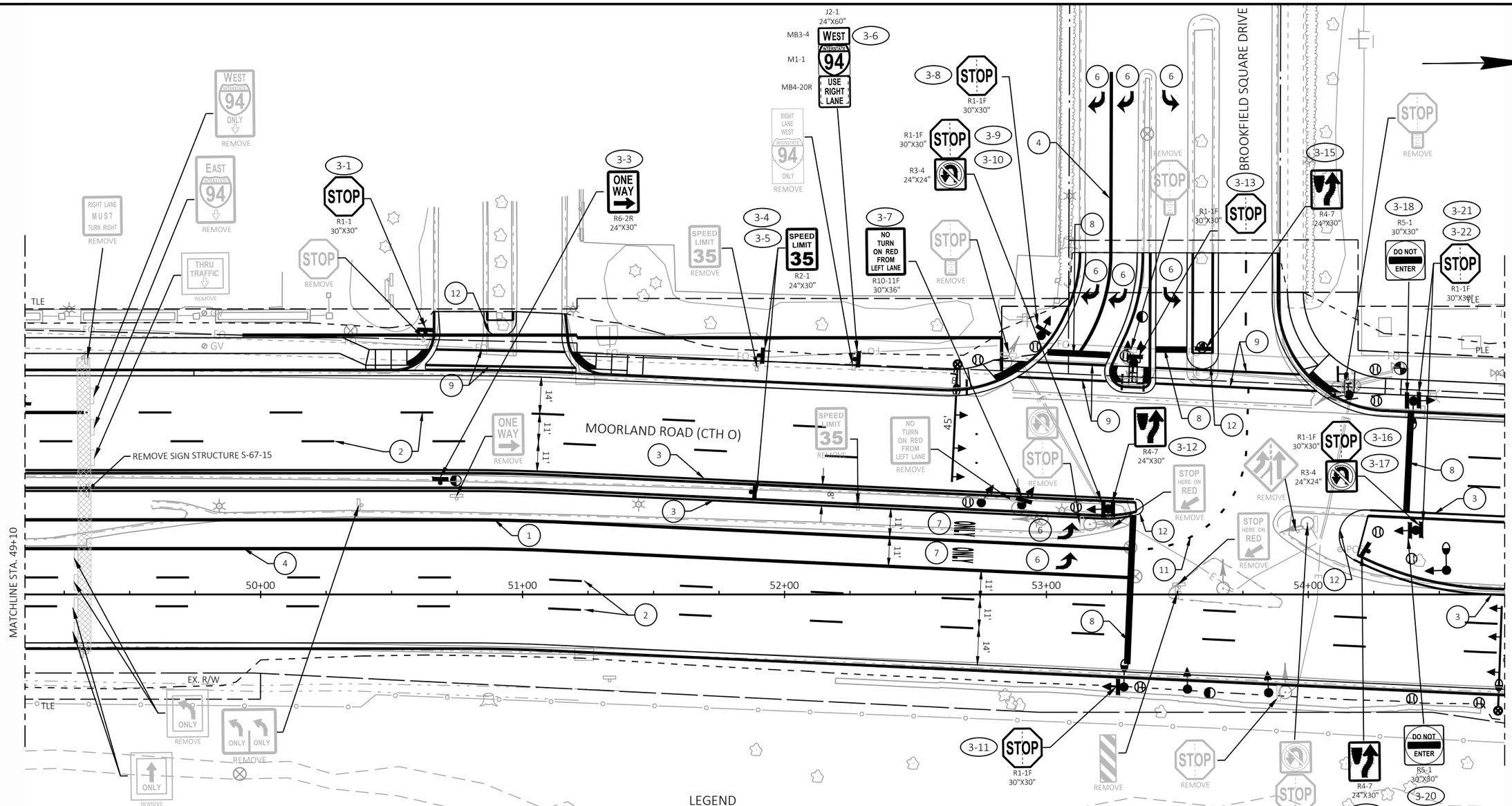
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PAVEMENT MARKING AND SIGNING PLANS	SHEET 108	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm

PLOT DATE : 10/1/2021 1:30 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH, WHITE
2. MARKING LINE EPOXY 4-INCH, WHITE (12.5' LINE, 37.5' SKIP)
3. MARKING LINE EPOXY 4-INCH, YELLOW
4. MARKING LINE EPOXY 8-INCH, WHITE
5. MARKING LINE EPOXY 8-INCH, WHITE (3' LINE, 9' SKIP)
6. MARKING ARROW EPOXY, TYPE 2, WHITE
7. MARKING WORD EPOXY, WHITE
8. MARKING STOP LINE EPOXY 18-INCH, WHITE
9. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
10. MARKING DIAGONAL EPOXY 12-INCH
11. MARKING LINE EPOXY 8-INCH, WHITE (2' LINE, 6' SKIP)
12. MARKING ISLAND NOSE EPOXY
13. MARKING YIELD LINE EPOXY 18-INCH, WHITE
14. MARKING ARROW EPOXY, TYPE 3, WHITE
15. MARKING LINE EPOXY 4-INCH, YELLOW (3' LINE, 9' SKIP)

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON POLE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POLE OR SIGN BRIDGE
- ESTR — EXISTING SIGN TO REMAIN
- SIGN STRUCTURE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PAVEMENT MARKING AND SIGNING PLANS	SHEET 109	E

2

N

EXISTING ELECTRONIC SIGN STRUCTURE TO REMAIN

REMOVE

4-5
4-6
W3-3
36"X36"

TLE
PLE
EX. R/W
FO

4-1
4-2
WRONG WAY
R5-1A
36"X24"

14'
11'
11'

2
3

MATCHLINE STA. 54+75

55+00
56+00
57+00
58+00
59+00
60+00

MATCHLINE STA. 60+75

4-3
4-4
SPEED LIMIT 35
R2-1
24"X30"

SPEED LIMIT 35
REMOVE

11'
11'
14'

MOORLAND ROAD (CTH O)

Ex. R/W

LEFT TURN LANE
REMOVE

PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH, WHITE
2. MARKING LINE EPOXY 4-INCH, WHITE (12.5' LINE, 37.5' SKIP)
3. MARKING LINE EPOXY 4-INCH, YELLOW
4. MARKING LINE EPOXY 8-INCH, WHITE
5. MARKING LINE EPOXY 8-INCH, WHITE (3' LINE, 9' SKIP)
6. MARKING ARROW EPOXY, TYPE 2, WHITE
7. MARKING WORD EPOXY, WHITE
8. MARKING STOP LINE EPOXY 18-INCH, WHITE
9. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
10. MARKING DIAGONAL EPOXY 12-INCH
11. MARKING LINE EPOXY 8-INCH, WHITE (2' LINE, 6' SKIP)
12. MARKING ISLAND NOSE EPOXY
13. MARKING YIELD LINE EPOXY 18-INCH, WHITE
14. MARKING ARROW EPOXY, TYPE 3, WHITE
15. MARKING LINE EPOXY 4-INCH, YELLOW (3' LINE, 9' SKIP)

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON POLE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POLE OR SIGN BRIDGE
- ESTR — EXISTING SIGN TO REMAIN
- SIGN STRUCTURE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PAVEMENT MARKING AND SIGNING PLANS	SHEET 110	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024503_pm
PLOT DATE : 10/1/2021 1:31 PM
PLOT BY : MCGILLICUDDY, BEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

*USE BLUE BACKGROUND WITH WHITE LETTERS

REMOVE EXISTING PAVEMENT MARKING

BROOKFIELD SQUARE MALL ENTRANCE

MOORLAND ROAD (CTH O)

MATCHLINE STA. 60+75

MATCHLINE STA. 66+75

61+00 62+00 63+00 64+00 65+00 66+00

14' 11' 11'

11' 11' 14'

EX. R/W

TLE

PLE

FO

5-1 5-2 J2-2 MB3-2 MB3-4 M1-1 M1-1 R3-54C* R3-54R* EAST WEST INTERSTATE INTERSTATE 94 94 USE CENTER LANE USE RIGHT LANE

5-3 STOP R1-1 30"X30"

STOP REMOVE

5-4 ONE WAY R6-2R 24"X30"

5-5 STOP R1-1 30"X30"

ONE WAY R6-2R 24"X30" 5-6

ONE WAY STOP REMOVE

REMOVE

WRONG WAY R5-1A 36"X24" 5-7 5-8

R3-2 24"X24" 5-11

SPEED LIMIT 35 REMOVE

DO NOT ENTER R5-1 30"X30" 5-12 5-13

WRONG WAY R5-1A 36"X24" 5-9 5-10

ONE WAY R6-2R 24"X30" 5-14

PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH, WHITE
2. MARKING LINE EPOXY 4-INCH, WHITE (12.5' LINE, 37.5' SKIP)
3. MARKING LINE EPOXY 4-INCH, YELLOW
4. MARKING LINE EPOXY 8-INCH, WHITE
5. MARKING LINE EPOXY 8-INCH, WHITE (3' LINE, 9' SKIP)
6. MARKING ARROW EPOXY, TYPE 2, WHITE
7. MARKING WORD EPOXY, WHITE
8. MARKING STOP LINE EPOXY 18-INCH, WHITE
9. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
10. MARKING DIAGONAL EPOXY 12-INCH
11. MARKING LINE EPOXY 8-INCH, WHITE (2' LINE, 6' SKIP)
12. MARKING ISLAND NOSE EPOXY
13. MARKING YIELD LINE EPOXY 18-INCH, WHITE
14. MARKING ARROW EPOXY, TYPE 3, WHITE
15. MARKING LINE EPOXY 4-INCH, YELLOW (3' LINE, 9' SKIP)

LEGEND

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

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PAVEMENT MARKING AND SIGNING PLANS	SHEET 111	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024504_pm
PLOT DATE : 10/1/2021 1:31 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

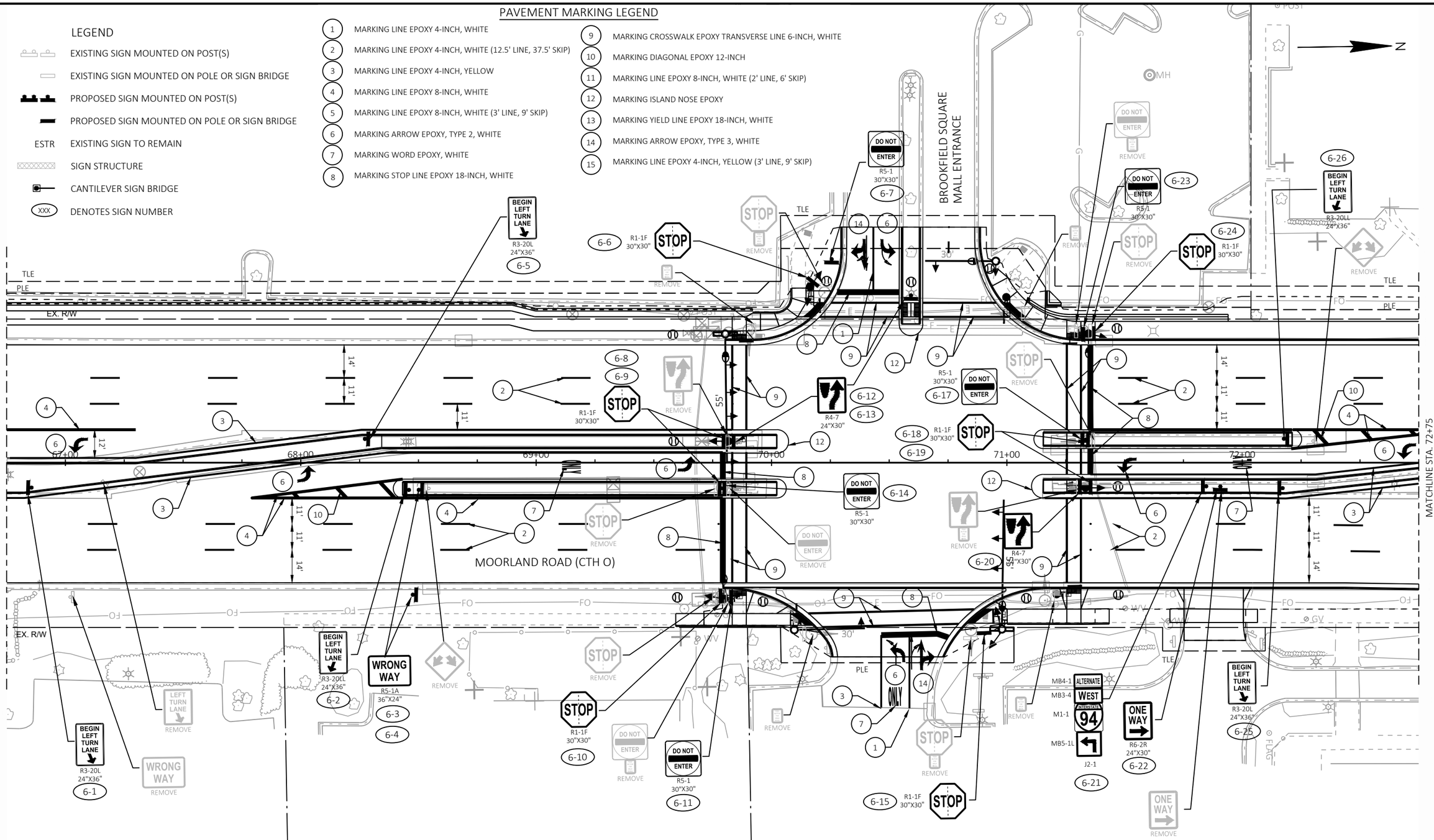
2

PAVEMENT MARKING LEGEND

LEGEND

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

1. MARKING LINE EPOXY 4-INCH, WHITE
2. MARKING LINE EPOXY 4-INCH, WHITE (12.5' LINE, 37.5' SKIP)
3. MARKING LINE EPOXY 4-INCH, YELLOW
4. MARKING LINE EPOXY 8-INCH, WHITE
5. MARKING LINE EPOXY 8-INCH, WHITE (3' LINE, 9' SKIP)
6. MARKING ARROW EPOXY, TYPE 2, WHITE
7. MARKING WORD EPOXY, WHITE
8. MARKING STOP LINE EPOXY 18-INCH, WHITE
9. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
10. MARKING DIAGONAL EPOXY 12-INCH
11. MARKING LINE EPOXY 8-INCH, WHITE (2' LINE, 6' SKIP)
12. MARKING ISLAND NOSE EPOXY
13. MARKING YIELD LINE EPOXY 18-INCH, WHITE
14. MARKING ARROW EPOXY, TYPE 3, WHITE
15. MARKING LINE EPOXY 4-INCH, YELLOW (3' LINE, 9' SKIP)



PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PAVEMENT MARKING AND SIGNING PLANS	SHEET 112	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024505_pm

PLOT DATE : 10/1/2021 1:31 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON POLE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POLE OR SIGN BRIDGE
- ESTR — EXISTING SIGN TO REMAIN
- SIGN STRUCTURE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER

PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH, WHITE
2. MARKING LINE EPOXY 4-INCH, WHITE (12.5' LINE, 37.5' SKIP)
3. MARKING LINE EPOXY 4-INCH, YELLOW
4. MARKING LINE EPOXY 8-INCH, WHITE
5. MARKING LINE EPOXY 8-INCH, WHITE (3' LINE, 9' SKIP)
6. MARKING ARROW EPOXY, TYPE 2, WHITE
7. MARKING WORD EPOXY, WHITE
8. MARKING STOP LINE EPOXY 18-INCH, WHITE
9. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
10. MARKING DIAGONAL EPOXY 12-INCH
11. MARKING LINE EPOXY 8-INCH, WHITE (2' LINE, 6' SKIP)
12. MARKING ISLAND NOSE EPOXY
13. MARKING YIELD LINE EPOXY 18-INCH, WHITE
14. MARKING ARROW EPOXY, TYPE 3, WHITE
15. MARKING LINE EPOXY 4-INCH, YELLOW (3' LINE, 9' SKIP)

N

MATCHLINE STA. 72+75

MATCHLINE STA. 78+50

MOORLAND ROAD (CTH O)

73+00 74+00 75+00 76+00 77+00 78+00

7-18 J2-1 — ALTERNATE WEST INTERSTATE 94 — MB4-1, MB3-4, M1-1, MB6-1

7-19 — ONLY ONLY — R3-8LL 36"X30"

7-5 — WRONG WAY — R5-1A 36"X24"

7-4 — LEFT TURN LANE — R3-5L 24"X30"

WRONG WAY — REMOVE

7-7 / 7-8 — SPEED LIMIT 35 — R2-1 24"X30"

7-12 24"X12" / 7-13 M1-5A 24"X24" — BEGIN COUNTY O

7-14 / 7-15

ALTERNATE WEST INTERSTATE 94 ONLY ONLY — REMOVE

LEFT TURN LANE — REMOVE

SPEED LIMIT 35 — REMOVE

BEGIN COUNTY O — REMOVE

14' 11' 11' 12' 12' 11' 11' 14'

TLE PLE EX. R/W FO OHL MH WV SV MWEL POST

7-10 M4-6 24"X12" / 7-11 M1-5A 24"X24" — END COUNTY O — REMOVE

BEGIN LEFT TURN LANE — R3-20LL 24"X36" — 7-12

RIGHT LANE MUST TURN RIGHT — R3-7R 30"X30" — 7-2

M3-4 M3-2 — WEST EAST — 18 18 — M1-4 M1-4 M5-1L M5-1R — J2-2 — 7-6

WEST EAST 18 18 — REMOVE

BEGIN LEFT TURN LANE — REMOVE

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PAVEMENT MARKING AND SIGNING PLANS	SHEET 113	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024506_pm

PLOT DATE : 10/1/2021 1:31 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON POLE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POLE OR SIGN BRIDGE
- ESTR — EXISTING SIGN TO REMAIN
- SIGN STRUCTURE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER

N

MATCHLINE STA. 78+50

75+00 80+00 81+00 82+00 83+00 84+00

REMOVE, SALVAGE, AND REPLACE

REMOVE, SALVAGE, AND REPLACE

ESTR

ESTR

PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH, WHITE
2. MARKING LINE EPOXY 4-INCH, WHITE (12.5' LINE, 37.5' SKIP)
3. MARKING LINE EPOXY 4-INCH, YELLOW
4. MARKING LINE EPOXY 8-INCH, WHITE
5. MARKING LINE EPOXY 8-INCH, WHITE (3' LINE, 9' SKIP)
6. MARKING ARROW EPOXY, TYPE 2, WHITE
7. MARKING WORD EPOXY, WHITE
8. MARKING STOP LINE EPOXY 18-INCH, WHITE
9. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
10. MARKING DIAGONAL EPOXY 12-INCH
11. MARKING LINE EPOXY 8-INCH, WHITE (2' LINE, 6' SKIP)
12. MARKING ISLAND NOSE EPOXY
13. MARKING YIELD LINE EPOXY 18-INCH, WHITE
14. MARKING ARROW EPOXY, TYPE 3, WHITE
15. MARKING LINE EPOXY 4-INCH, YELLOW (3' LINE, 9' SKIP)

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PAVEMENT MARKING AND SIGNING PLANS	SHEET 114	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024507_pm

PLOT DATE : 10/1/2021 1:31 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : ##########

GENERAL NOTES FOR CONSTRUCTION STAGING AND TRAFFIC CONTROL:

1. TRAFFIC CONTROL DRUMS IN TAPERS SHALL BE EQUIPPED WITH WARNING LIGHTS, TYPE "C", ONE WAY LIGHTS, UNLESS OTHERWISE SHOWN.
2. SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION AND SPACING MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO MEET FIELD CONDITIONS.
3. SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED. THE COVERING OF TYPE II SIGNS IS INCLUDED UNDER THE BID ITEM TRAFFIC CONTROL COVERING SIGNS TYPE II. IN LIEU OF COVERING TYPE II SIGNS, THE CONTRACTOR MAY ELECT TO REMOVE AND REINSTALL THEM. THE COVERING OF ALL OR A PART OF A TYPE I SIGN MESSAGE SHALL BE PAID FOR UNDER THE BID ITEM TRAFFIC CONTROL COVERING SIGNS TYPE I.
4. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
5. ALL TRAFFIC CONTROL SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED IN THE PLANS.
6. A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OF LEAVE "WORK/CLOSED" AREAS IF WARRANTED BY CONDITIONS AND/OR AS DIRECTED BY THE ENGINEER. FLAGGING SHALL BE INCIDENTAL TO THE BID ITEM "TRAFFIC CONTROL."
7. CONTRACTOR SHALL INSTALL PERMANENT SIGNS AND PERMANENT PAVEMENT MARKING WHEN APPROPRIATE DURING CONSTRUCTION STAGING AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
8. ADEQUATE TURNING PROVISIONS SHALL BE MAINTAINED FOR ALL VEHICLES, INCLUDING TRUCKS.
9. ALL EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED.
10. EXISTING PAVEMENT MARKINGS TO BE REMOVED THAT WILL NOT BE REPLACED IN THE SAME LOCATION AFTER CONSTRUCTION SHALL BE REMOVED USING WATER BLASTING. DO NOT GRIND EXISTING PAVEMENT MARKINGS THAT WILL NOT BE REPLACED AFTER CONSTRUCTION.
11. BARRICADE STRIPES SHALL POINT DOWNWARD IN THE DIRECTION OF TRAFFIC FLOW.
12. THE CONTRACTOR SHALL ENSURE ADEQUATE DRAINAGE AND AVOID ANY PONDING OR STANDING WATER DURING THE STAGED CONSTRUCTION.
13. TEMPORARY MARKINGS SHALL BE TEMPORARY TAPE WHEN PLACED ON NEW OR EXISTING PAVEMENT SURFACES THAT ARE TO REMAIN IN PLACE FOLLOWING CONSTRUCTION. PAINT MAY BE USED ON EXISTING PAVEMENT OR BINDER HMA LAYERS THAT ARE TO BE REMOVED OR OVERLAID IN SUBSEQUENT STAGES.
14. TACK COAT FOR ASPHALT SURFACE TEMPORARY IS BASED ON A SINGLE LIFT OF ASPHALT PAVEMENT.

DISTANCE FROM EDGE OF TRAVELED WAY	DROP OFF AND HAZARD PROTECTION REQUIREMENTS
0 TO 8 FEET	DELINEATE VERTICAL DROP OFFS 2 INCHES OR GREATER OR SLOPES STEEPER THAN 3:1 WITH DRUMS OR BARRICADES BY END OF WORK DAY. ELIMINATE VERTICAL DROP OFFS 2 INCHES OR GREATER OR SLOPES STEEPER THAN 3:1 WITHIN 72 HOURS OR BEFORE WEEKEND OR HOLIDAY WEEKEND. DO NOT STORE MATERIALS, CONSTRUCTION EQUIPMENT, AND OTHER CONSTRUCTION HAZARDS WITHIN 8 FEET OF TRAVELED WAY
8 TO 15 FEET	DELINEATE VERTICAL DROP OFFS 4 INCHES OR GREATER OR SLOPES STEEPER THAN 3:1 WITH DRUMS, BARRICADES, OR BARRIER BY END OF WORK DAY.

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES
- TRAFFIC FLOW ARROW
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- TRAFFIC CONTROL ARROW BOARD
- TRAFFIC CONTROL FLEXIBLE TUBULAR MAKER POST AND BASE
- POST MOUNTED TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGN MOUNTED ON TEMPORARY SUPPORT
- TRAFFIC CONTROL BARRICADE TYPE III WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN
- ESTR — EXISTING SIGN TO REMAIN
- PCMS — TRAFFIC CONTROL SIGNS PCMS
- PAVEMENT MARKING INSTALLED THIS STAGE
- PAVEMENT MARKING INSTALLED IN PREVIOUS STAGE
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY 16"X16" FLAGS (INCIDENTAL TO TRAFFIC CONTROL SIGNS)

TEMPORARY PAVEMENT MARKING LEGEND

- P — PERMANENT PAVEMENT MARKINGS (SEE PAVEMENT MARKING PLAN)
- TW4 — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- TWL — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) (12.5' LINE, 37.5' GAP)
- TWS — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) (3' SKIP, 9' GAP)
- TWD — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) (2' LINE, 6' GAP)
- TY4 — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- TYS — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW) (2' SKIP, 6' GAP)
- TW8 — TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- TSB — TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- TA — TEMPORARY MARKING ARROW REMOVABLE TAPE (WHITE)

TRAFFIC CONTROL PLANS PREPARED BY:

raSmith
CREATIVITY BEYOND ENGINEERING

WISCONSIN
JAMES W. BLACKWOOD
E-41460
PEWAUKEE, WI
PROFESSIONAL ENGINEER

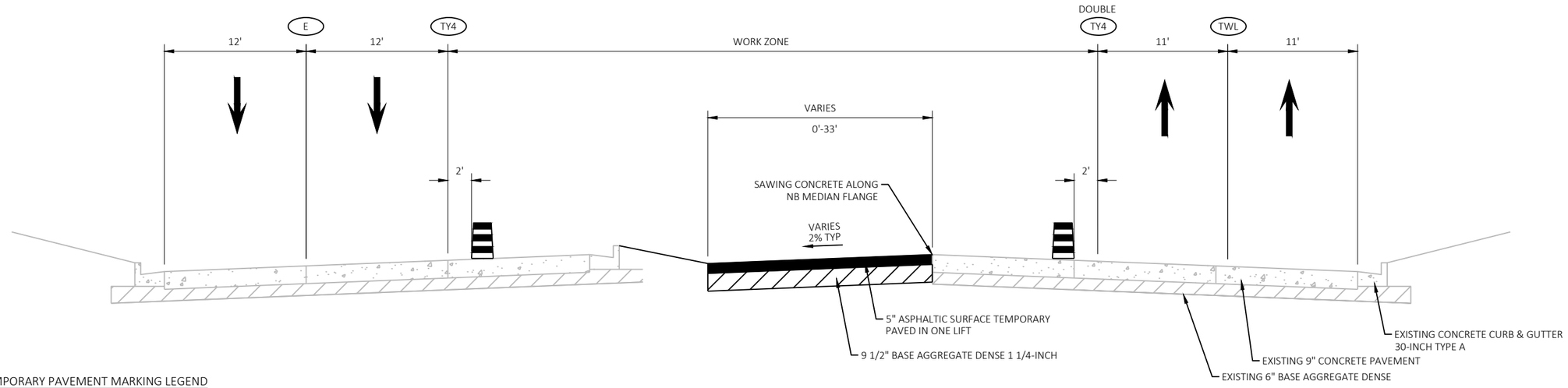
DATE: 10/25/21 (Professional Engineer Signature)

2

SHEET 1 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL NOTES	SHEET 115	E

2



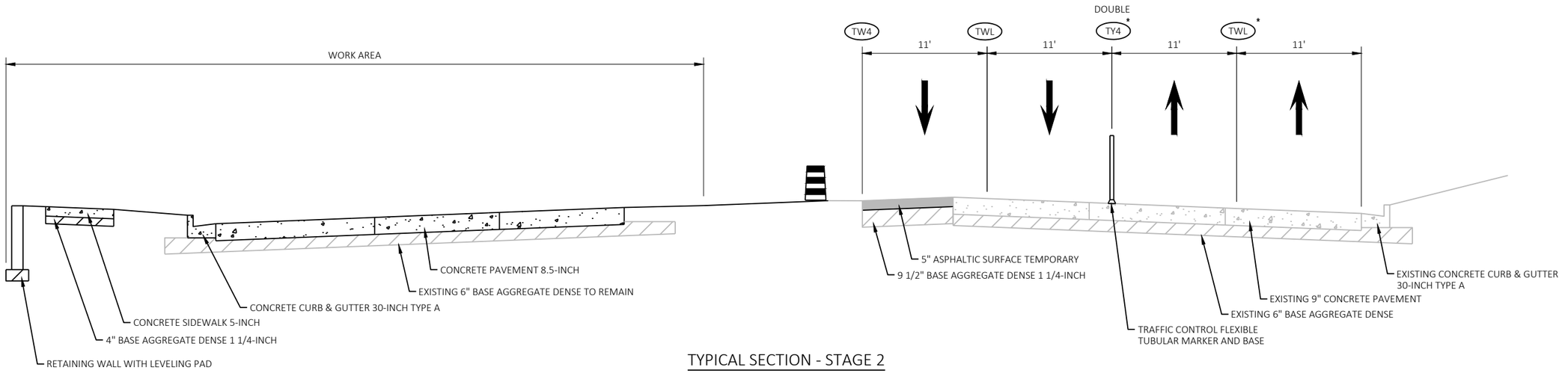
TYPICAL SECTION - STAGE 1

MOORLAND ROAD (CTH O)

TEMPORARY PAVEMENT MARKING LEGEND

E	EXISTING PAVEMENT MARKING TO REMAIN
TW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
TWL	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) (12.5' LINE, 37.5' GAP)
TY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
*	MARKING PLACED IN PREVIOUS STAGE

2

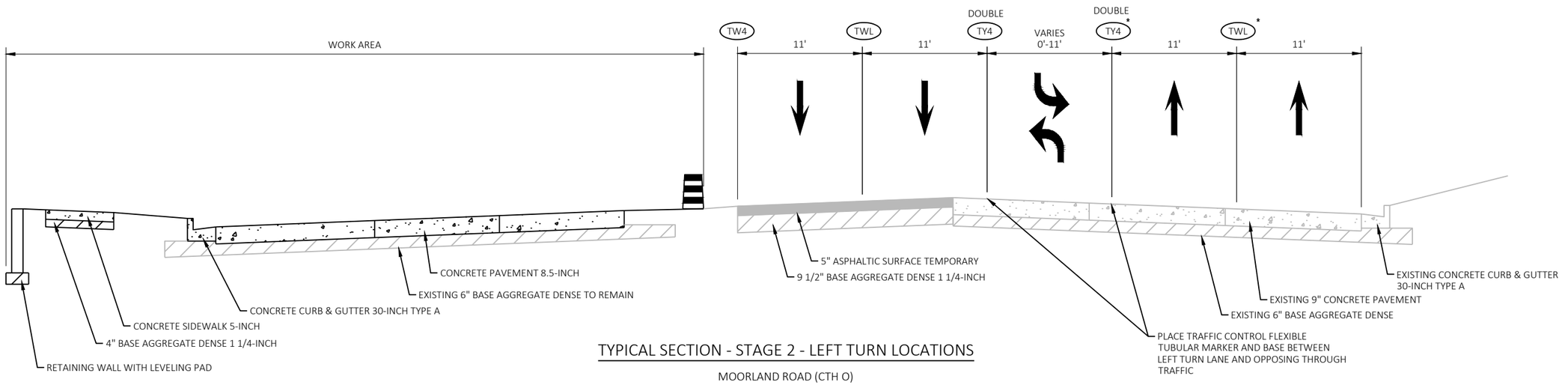


TYPICAL SECTION - STAGE 2

MOORLAND ROAD (CTH O)

TEMPORARY PAVEMENT MARKING LEGEND

E	EXISTING PAVEMENT MARKING TO REMAIN
TW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
TWL	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) (12.5' LINE, 37.5' GAP)
TY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
*	MARKING PLACED IN PREVIOUS STAGE



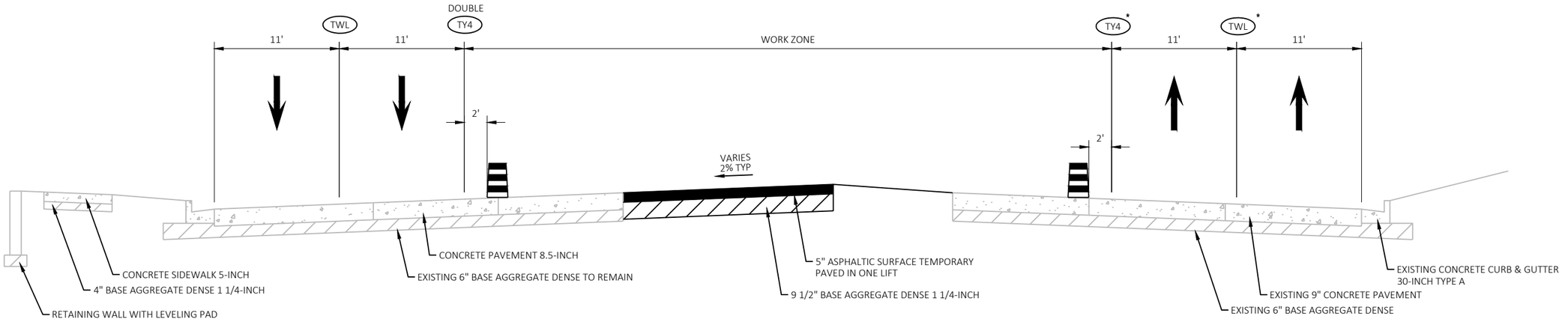
TYPICAL SECTION - STAGE 2 - LEFT TURN LOCATIONS

MOORLAND ROAD (CTH O)

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL TYPICAL SECTIONS	SHEET 117	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025001-TC TYP.DWG
LAYOUT NAME - 02
PLOT DATE : 9/24/2021 3:23 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



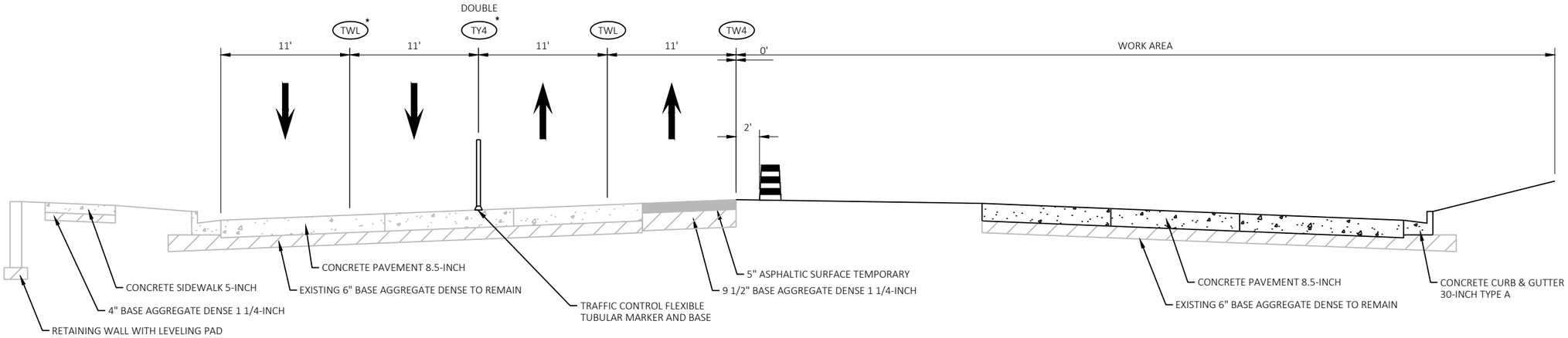
TYPICAL SECTION - STAGE 3

MOORLAND ROAD (CTH O)

TEMPORARY PAVEMENT MARKING LEGEND

E	EXISTING PAVEMENT MARKING TO REMAIN
TW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
TWL	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) (12.5' LINE, 37.5' GAP)
TY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
*	MARKING PLACED IN PREVIOUS STAGE

2

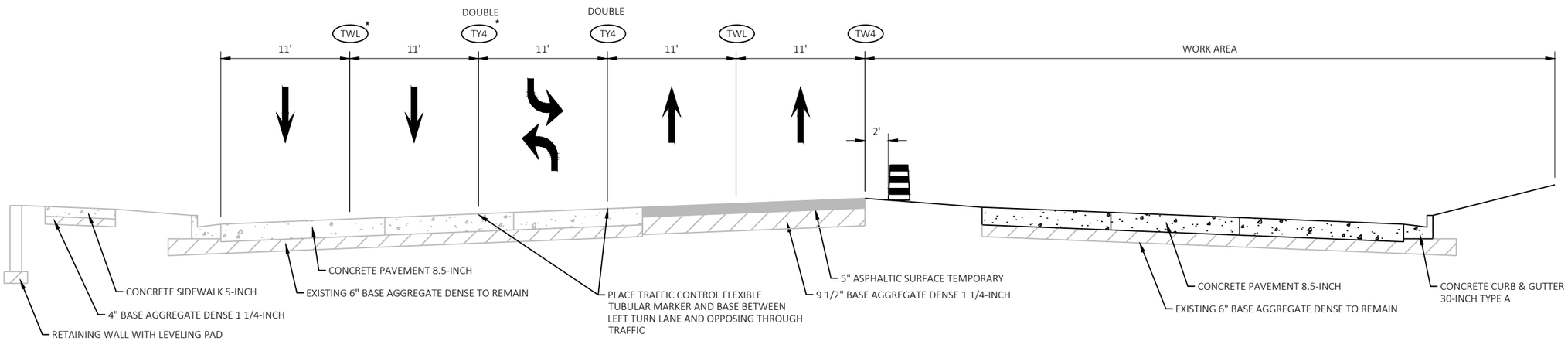


TYPICAL SECTION - STAGE 4 - LEFT TURN LOCATIONS

MOORLAND ROAD (CTH O)

TEMPORARY PAVEMENT MARKING LEGEND

E	EXISTING PAVEMENT MARKING TO REMAIN
TW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
TWL	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) (12.5' LINE, 37.5' GAP)
TY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
*	MARKING PLACED IN PREVIOUS STAGE



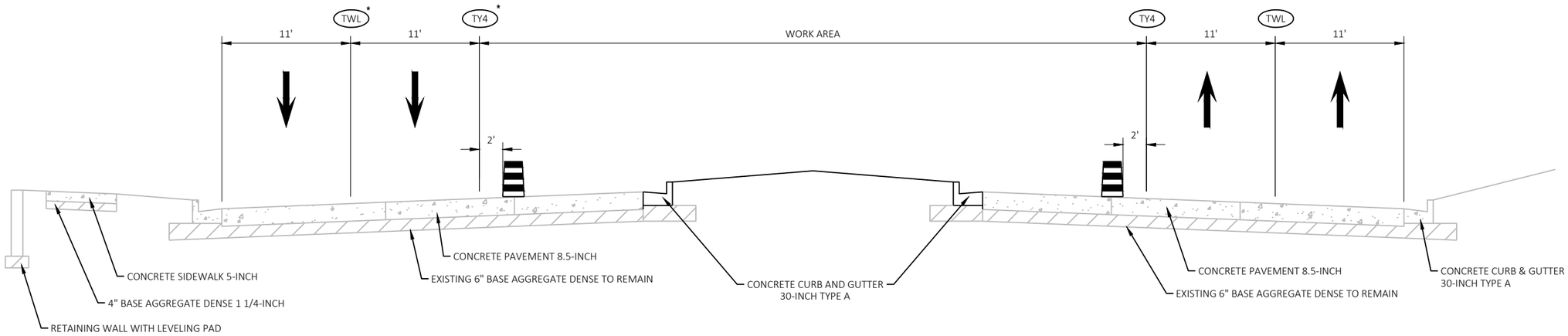
TYPICAL SECTION - STAGE 4 - LEFT TURN LOCATIONS

MOORLAND ROAD (CTH O)

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL TYPICAL SECTIONS	SHEET 119	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025001-TC TYP.DWG
LAYOUT NAME - 04
PLOT DATE : 9/24/2021 3:23 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



TYPICAL SECTION - STAGE 5

MOORLAND ROAD (CTH O)

TEMPORARY PAVEMENT MARKING LEGEND

E	EXISTING PAVEMENT MARKING TO REMAIN
TW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
TWL	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) (12.5' LINE, 37.5' GAP)
TY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
*	MARKING PLACED IN PREVIOUS STAGE

NOTES:
1. GAP CONSTRUCTION THROUGH INTERSECTION WHEN INTERSECTION IS OPEN TO TRAFFIC.
2. TRAFFIC SHALL BE ON A PAVED SURFACE AT ALL TIMES UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3. ONLY ONE INTERSECTION SHALL BE CLOSED AT A TIME.

SIDEROAD/MAJOR DRIVEWAY

LANE CLOSED
R11-2L
48"X30"

61+00

WO1-6
48"X24"

MOORLAND ROAD (CTH O)

REDUCE SPACING OF FLEXIBLE TUBULAR MARKERS TO 5 FEET FROM 100 FT PRIOR TO INTERSECTION TO 100 FT AFTER INTERSECTION

63+00

PI: 63+34.95

LANE CLOSED
R11-2L
48"X30"

TYPICAL MINOR SIDEROAD INTERSECTION WHILE OPEN TO TRAFFIC

SHEET 7 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL DETAILS	SHEET 121	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025002-TC DETAIL.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2021 3:23 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

NOTES:
1. ONLY ONE INTERSECTION SHALL BE CLOSED AT A TIME.

ROAD CLOSED
R11-2
48"X30"

SIDEROAD/
MAJOR DRIVEWAY

NOTE:
SEE TRAFFIC CONTROL PLANS FOR ADDITIONAL SIDE ROAD CLOSURE DETAILS.

61+00

62+00

122+00

63+00

PI: 63+34.95

ROAD CLOSED
R11-2
48"X30"

R3-1
24"X24"

LANE CLOSED
R11-2L
48"X30"

MOORLAND ROAD (CTH O)

REDUCE SPACING OF FLEXIBLE TUBULAR MARKERS TO 5 FEET FROM 100 FT PRIOR TO INTERSECTION TO 100 FT AFTER INTERSECTION

TYPICAL MINOR SIDEROAD INTERSECTION WHILE CLOSED TO TRAFFIC

SHEET 8 OF 82

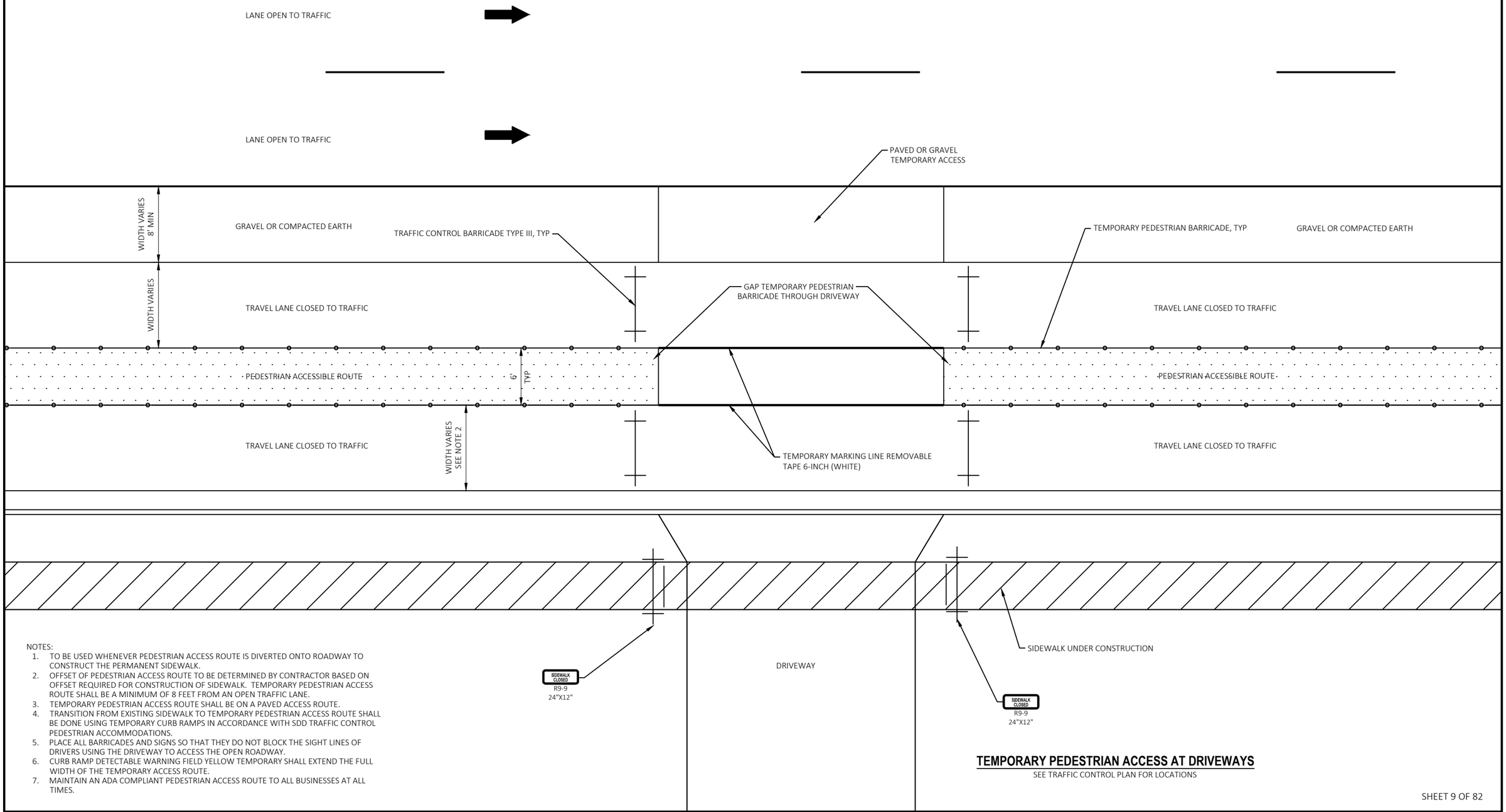
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL DETAILS	SHEET 122	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025003-TC DETAIL.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2021 3:23 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2



NOTES:

1. TO BE USED WHENEVER PEDESTRIAN ACCESS ROUTE IS DIVERTED ONTO ROADWAY TO CONSTRUCT THE PERMANENT SIDEWALK.
2. OFFSET OF PEDESTRIAN ACCESS ROUTE TO BE DETERMINED BY CONTRACTOR BASED ON OFFSET REQUIRED FOR CONSTRUCTION OF SIDEWALK. TEMPORARY PEDESTRIAN ACCESS ROUTE SHALL BE A MINIMUM OF 8 FEET FROM AN OPEN TRAFFIC LANE.
3. TEMPORARY PEDESTRIAN ACCESS ROUTE SHALL BE ON A PAVED ACCESS ROUTE.
4. TRANSITION FROM EXISTING SIDEWALK TO TEMPORARY PEDESTRIAN ACCESS ROUTE SHALL BE DONE USING TEMPORARY CURB RAMPS IN ACCORDANCE WITH SDD TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS.
5. PLACE ALL BARRICADES AND SIGNS SO THAT THEY DO NOT BLOCK THE SIGHT LINES OF DRIVERS USING THE DRIVEWAY TO ACCESS THE OPEN ROADWAY.
6. CURB RAMP DETECTABLE WARNING FIELD YELLOW TEMPORARY SHALL EXTEND THE FULL WIDTH OF THE TEMPORARY ACCESS ROUTE.
7. MAINTAIN AN ADA COMPLIANT PEDESTRIAN ACCESS ROUTE TO ALL BUSINESSES AT ALL TIMES.

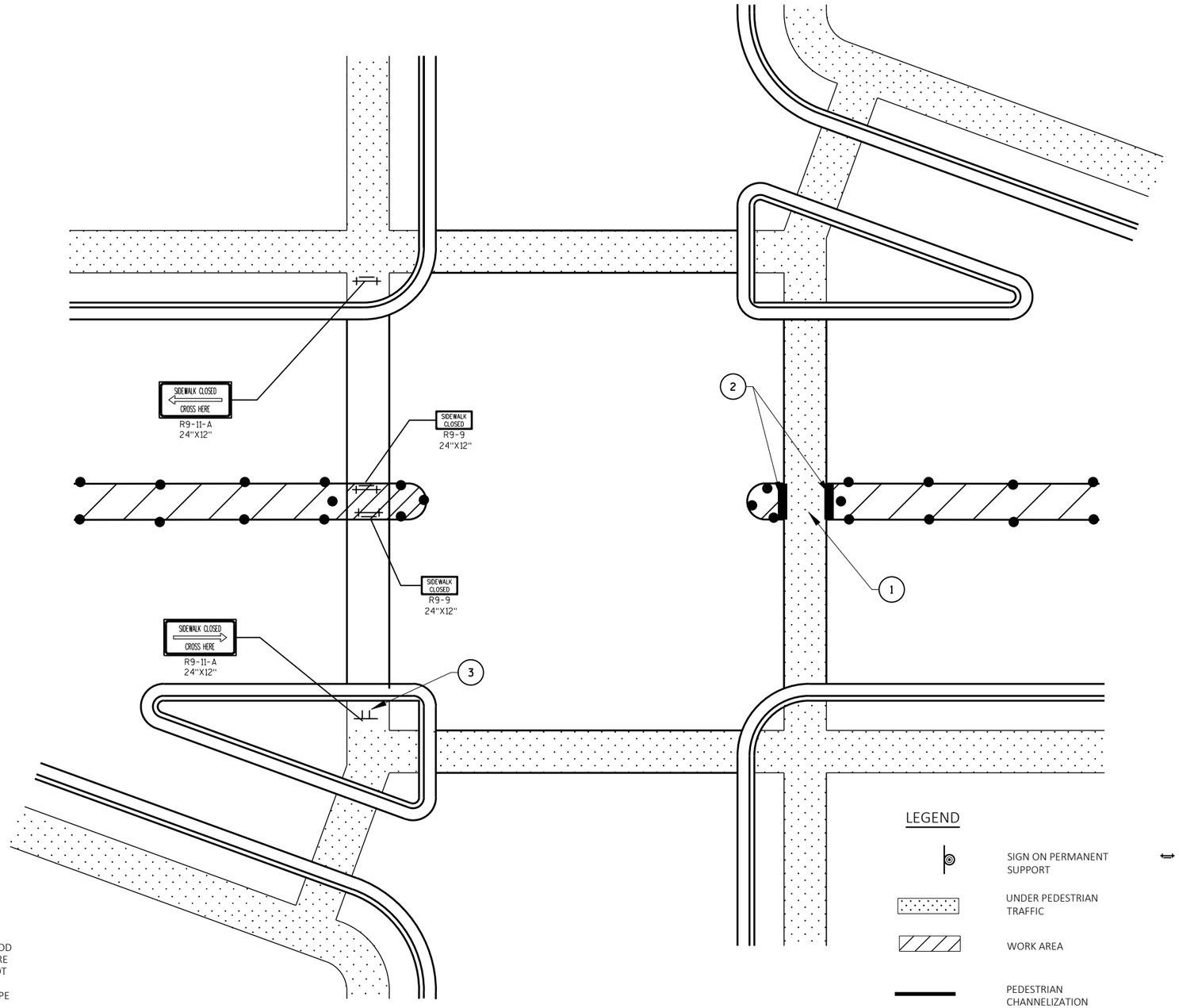
TEMPORARY PEDESTRIAN ACCESS AT DRIVEWAYS

SEE TRAFFIC CONTROL PLAN FOR LOCATIONS

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL DETAILS	SHEET 123	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025004-TC DETAIL.DWG
LAYOUT NAME - 01
PLOT DATE : 9/24/2021 3:23 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



1. PROVIDE ACCESSIBLE FACILITY THROUGH WORK ZONE USING EXISTING PAVEMENT, PROPOSED SIDEWALK, OR TEMPORARY PEDESTRIAN SURFACE.
2. TEMPORARY PEDESTRIAN BARRICADES ARE REQUIRED WHEN CONSTRUCTION ACTIVITIES OR DROP OFFS OCCUR WITHIN 4 FEET OF THE EDGE OF THE PEDESTRIAN ACCESS ROUTE. SEE SDD TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION FOR MORE DETAILS. CONCRETE BARRIER TEMPORARY PRECAST SHALL NOT BE USED.
3. USE TYPE III BARRICADES FOR SIGNS WHEN POSSIBLE. USE TYPE II BARRICADES WHEN TYPE III BARRICADE WOULD CREATE A SIGHT DISTANCE HAZARD FOR DRIVERS.

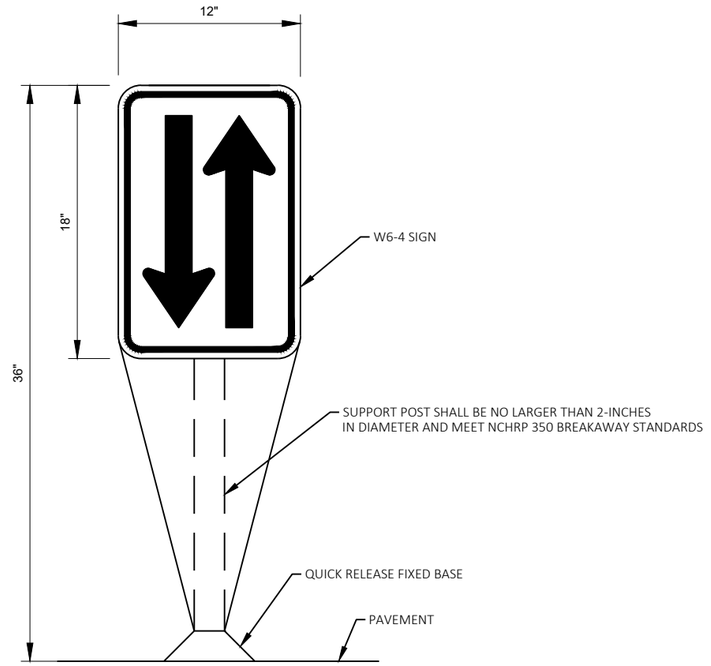
LEGEND

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

MEDIAN SIDEWALK CLOSURE DETAIL

FOR USE ON ALL DIVIDED HIGHWAY CROSSINGS

2



W6-4 SIGN MOUNTED ON PAVEMENT

TO BE USED AT INTERSECTIONS WHERE TRAFFIC IS
SEPARATED BY FLEXIBLE TUBULAR MARKERS

TO BE PAID FOR AS TRAFFIC CONTROL SIGNS

SEE TRAFFIC CONTROL PLANS FOR LOCATIONS

NOTES:
1. TRAFFIC CONTROL SIGN, POST AND BASE SHALL MEET NCHRP 350 BREAKAWAY STANDARDS.
2. SIGN AND POST SHALL BE MOUNTED TO THE PAVEMENT WITH A QUICK RELEASE FIXED BASE.

2

TRAFFIC CONTROL NOTES - STAGE 1

CONSTRUCTION:
- TEMPORARY TRAFFIC SIGNALS (PRIOR TO OTHER STAGE 1 WORK)
- CTH O TEMPORARY PAVEMENT AND CROSSOVERS

TRAFFIC:
- CTH O - 2 THROUGH LANES IN EACH DIRECTION
- IH 94 WB TO CTH O NB FREE FLOW RAMP TO REMAIN OPEN

PEDESTRIANS:
- SIDEWALKS AND CROSSWALKS PARALLEL TO CTH O OPEN AT ALL TIMES
- ALTERNATE CLOSURE OF CROSSWALKS ACROSS CTH O AT EACH INTERSECTION SO THAT ONE CROSSWALK IS OPEN AT ALL TIMES

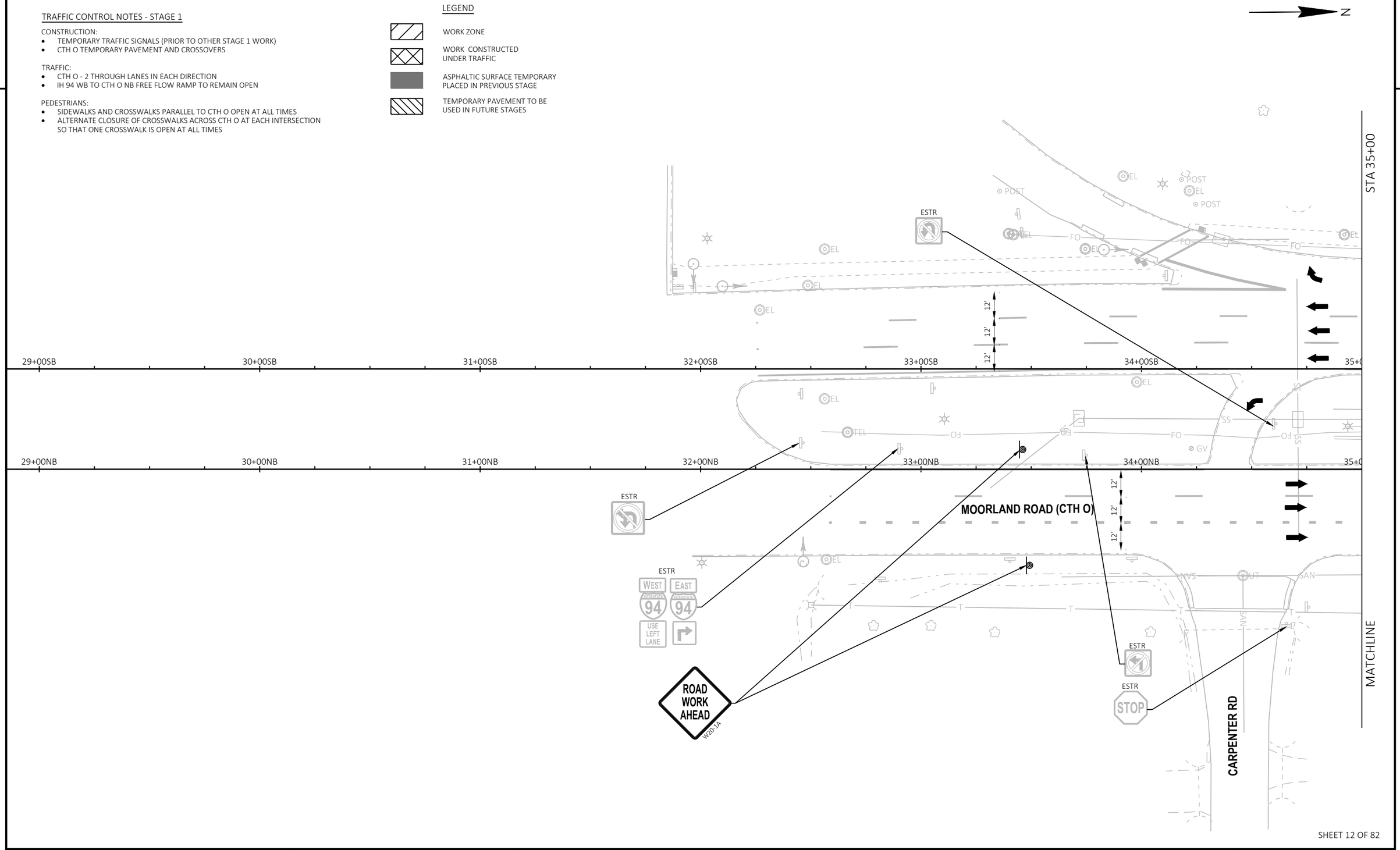
LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES



SHEET 12 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 1	SHEET 126	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025101-TC-S1.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2021 3:24 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

NOTE: ALL SIGNS NOT SHOWN TO REMAIN

N

STA 35+00

STA 41+00

END ROAD WORK
G20-2A
48"X24"

ESTR

ESTR

ESTR
EAST
INTERSTATE
94
ONLY

ON MAST ARM

ESTR
RIGHT LANE
MUST
TURN RIGHT

MOORLAND ROAD (CTH O)

12'
12'
12'

36+00SB
37+00SB
38+00SB
39+00SB
40+00SB

36+00NB
37+00NB
38+00NB
40+00NB

BEGIN LEFT TURN LANE
R3-20L
24"X36"

25'

ESTR

ESTR
WEST
INTERSTATE
94

IH 94

ESTR

SPEED LIMIT
25
R2-1
24"X30"

ESTR

ESTR
RIGHT TURN
NO STOP

INTERSTATE 94 RAMP

SPEED LIMIT
25
W3-5

SPEED LIMIT
25
W3-5

ROAD WORK AHEAD
W20-1A

MATCHLINE

MATCHLINE

SHEET 13 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 1	SHEET 127	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025101-TC-S1.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2021 3:24 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

STA 41+00

STA 47+00

MATCHLINE

MATCHLINE

INTERSTATE 94 RAMP

MOORLAND ROAD (CTH O)

CONSTRUCT TEMPORARY WIDENING DURING OVERNIGHT HOURS USING SINGLE LANE CLOSURE OF INSIDE SOUTHBOUND THROUGH LANE AND INSIDE NORTHBOUND LEFT TURN LANE

CONSTRUCT TEMPORARY WIDENING WITHIN 4 FEET OF AN OPEN TRAFFIC LANE USING OVERNIGHT SINGLE LANE CLOSURE OF INSIDE LANE OF NORTHBOUND AND SOUTHBOUND CTH O

COVER PLATE TEMPORARY

ESTR

R4-7 24"X30"

END ROAD WORK G20-2A 48"X24"

N

500'

12'

12'

12'

25'

25'

42+00SB

43+00SB

44+00SB

45+00SB

46+00SB

+98NB 39' LT

+94NB 22' LT

+41NB 35' LT

+16NB 20' LT

+16NB 31' LT

+28NB 33' LT

+16NB 55' LT

+48NB 19' LT

+02NB 59' LT

42+00NB

43+00NB

44+00NB

45+00NB

46+00NB

TWL

TW8

TWS

TY4

TA

TY4 DOUBLE

TWS

TWL

11'

11'

11'

R3-4 24"X24"

MB3-4 24"X12"

M1-1 24"X24"

MB6-1 21"X21"

SPEED LIMIT 25 R2-1 24"X30"

WO1-6 48" X 24"

TYPE III BARRICADE

LEFT LANE CLOSED AHEAD W20-5SA

ON MAST ARM

ONLY

ONLY

SHEET 14 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 1	SHEET 128 E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025101-TC-S1.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2021 3:25 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

STA 47+00

STA 53+00

INSTALL CATCH BASIN AND PIPE TO EXISTING FIELD INLET
CONNECT TO EXISTING FIELD INLET WITH CONCRETE COLLAR
DO NOT INSTALL TYPE H CASTING
COVER PLATE TEMPORARY

MB3-2 24"X12"
EAST INTERSTATE 94 USE RIGHT LANE
M1-1 24"X24"
MB4-20R 24"X24"

MB3-4 24"X12"
WEST INTERSTATE 94 USE RIGHT LANE
M1-1 24"X24"
MB4-20R 24"X24"

ONE WAY
R6-2R 24"X30"

LANE CLOSED
R11-2L 48"X30"

SPEED LIMIT 25
R2-1 24"X30"

REMOVE SIGN

TWS
TWL
TY4
TA
TY4 DOUBLE

12'
12'
25'
11'
11'
11'

48+00SB
49+00SB
50+00SB
51+00SB
52+00SB
53+00

+14NB 19' LT
+30NB 21' LT
90'R
+64NB 30' LT
+76NB 4' RT

48+00NB
49+00NB
50+00NB
51+00NB
52+00NB

MOORLAND ROAD (CTH O)

COVER PLATE TEMPORARY

W04-2L

R3-2 24"X24"

LANE CLOSED
R11-2L 48"X30"

245' MERGE TAPER

MATCHLINE

MATCHLINE

CONSTRUCT TEMPORARY WIDENING WITHIN 4 FEET OF AN OPEN TRAFFIC LANE USING OVERNIGHT SINGLE LANE CLOSURE OF INSIDE LANE OF NORTHBOUND AND SOUTHBOUND CTH O

SHEET 15 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 1	SHEET 129	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025101-TC-S1.DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2021 3:25 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

MATCHLINE

STA 101+50

STA 53+00

STA 59+00

BROOKFIELD SQUARE DRIVE

+69 45' RT

TW4

102+00

103+00

ONE WAY R6-1R 36"X12"

R3-2 24"X24"

R3-2 24"X24"

TSB

ONE WAY R6-2R 24"X30"

ONLY R3-8AF 36"X30"

WD3-3

SPEED LIMIT 25 R2-1 24"X30"

+00NB 30' LT 45'R

+28NB 20' LT

+15NB 19' LT

25'

TY4

12'

12'

+32NB 7' LT

54+00SB

55+00SB

56+00SB

57+00SB

58+00SB

59+0

54+00NB

55+00NB

56+00NB

57+00NB

58+00NB

59+0

+21NB 13' RT

11'

11'

MOORLAND ROAD (CTH O)

TWL

TY4 DOUBLE

25'

+95NB 8' LT

ROAD CLOSED R11-2 48"X30"

245'

MERGE TAPER

COVER PLATE TEMPORARY

LANE CLOSED R11-2L 48"X30"

SPEED LIMIT 25 R2-1 24"X30"

R3-2 24"X24"

R3-2 24"X24"

MATCHLINE

MATCHLINE

SHEET 16 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 1	SHEET 130	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025101-TC-S1.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2021 3:25 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

STA 59+00

ESTR

EAST 94 INTERSTATE — WEST 94 INTERSTATE

MB4-20R 24"X24" — USE RIGHT LANE | USE RIGHT LANE

ROAD WORK AHEAD W20-1A

LANE CLOSED R11-2L 48"X30"

R6-1R 36"X12" ONE WAY

R3-2 24"X24"

ROAD CLOSED R11-2 48"X30"

INLET TO REMAIN

BROOKFIELD SQUARE MALL ENTRANCE

25'

121+00

122+00

WO1-6 48"X24"

END ROAD WORK G20-2A 48"X24"

NO LEFT TURNS ALLOWED FROM BROOKFIELD SQUARE ENTRANCE TO NORTHBOUND CTH O

LANE CLOSED R11-2L 48"X30"

ONE WAY R6-2R 24"X30"

STA65+00

12'

12'

25'

TY4

+74NB 29' LT

60+00SB — 61+00SB — 62+00SB — 63+00SB — 64+00SB — 65+0

60+00NB — 61+00NB — 62+00NB — 63+00NB — 64+00NB — 65+0

11'

11'

25'

+56NB 13' LT

+31NB 10' LT

MOORLAND ROAD (CTH O)

DOUBLE TY4 — TWL

REMOVE INLET CONCRETE COLLAR

R3-2 24"X24"

ROAD CLOSED R11-2 48"X30"

LANE CLOSED R11-2L 48"X30"

ONLY | ONLY R3-8LAF 54"X30"

MATCHLINE

MATCHLINE

N

2

SHEET 17 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 1	SHEET 131	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025101-TC-S1.DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2021 3:25 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

STA 65+00

STA 71+00

MATCHLINE

MATCHLINE

N

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1A

BROOKFIELD SQUARE MALL ENTRANCE

141+00

142+00

BEGIN LEFT TURN LANE
R3-20LL
24"X36"

ROAD CLOSED
R11-2
48"X30"

R3-2
24"X24"

LANE CLOSED
R11-2L
48"X30"

SPEED LIMIT 25
R2-1
24"X30"

WO1-6
48"X24"

R4-7
24"X30"

+86NB
41' LT

REMOVE INLET

TEMPORARY PEDESTRIAN BARRICADE

+95NB
18' LT

+18NB
18' LT

+42NB
18' LT

12'

12'

TY4

25'

66+00SB

67+00SB

68+00SB

69+00SB

70+00SB

71+00

66+00NB

67+00NB

68+00NB

69+00NB

70+00NB

71+00

TEMPORARY PEDESTRIAN SURFACE ASPHALT

11'

11'

11'

25'

+14NB
15' RT

+56NB
0' RT

+02NB
15' RT

RECONSTRUCT INLET
REMOVE CASTING AND LOWER
BELOW TEMPORARY PAVEMENT
COVER PLATE TEMPORARY

88' TURN BAY TAPER

MOORLAND ROAD (CTH O)

TWL

TW8

TY4 DOUBLE

SALVAGE INLET CASTING
COVER PLATE TEMPORARY

R3-4
24"X24"

INSTALL CURB RAMP DETECTABLE WARNING
FIELD YELLOW IN TEMPORARY PAVEMENT
FOR USE IN STAGE 2

TSB

R3-4
24"X24"

ONE WAY
R6-1R
36"X12"

R3-2
24"X24"

ESTR

WRONG WAY

STOP
R1-1
30"X30"

LANE CLOSED
R11-2L
48"X30"

ALTERNATE CLOSURE OF CROSSWALKS ACROSS CTH O
SO ONE IS OPEN AT ALL TIMES . SEE CONSTRUCTION DETAIL

CONSTRUCT TEMPORARY WIDENING WITHIN 4 FEET OF AN
OPEN TRAFFIC LANE USING OVERNIGHT SINGLE LANE CLOSURE
OF NORTHBOUND CTH O LEFT TURN LANE

ROAD CLOSED
R11-2
48"X30"

ONE WAY
R6-2R
24"X30"

SHEET 18 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 1	SHEET 132	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025101-TC-S1.DWG
LAYOUT NAME - 07

PLOT DATE : 9/24/2021 3:25 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

STA 71+00

STA 77+00

MATCHLINE

MATCHLINE

MOORLAND ROAD (CTH O)

REMOVE CASTING COVER PLATE TEMPORARY

R3-4 24"X24"

CONSTRUCT TEMPORARY WIDENING WITHIN 4 FEET OF AN OPEN TRAFFIC LANE USING OVERNIGHT SINGLE LANE CLOSURE OF SOUTHBOUND CTH O LEFT TURN LANE

INSTALL CURB RAMP DETECTABLE WARNING FIELD YELLOW IN TEMPORARY PAVEMENT FOR USE IN STAGE 2

LANE CLOSED

R11-2L 48"X30"

BEGIN LEFT TURN LANE

R3-20L 24"X36"

SPEED LIMIT 25

R2-1 24"X30"

ONE WAY

R6-2R 24"X30"

LANE CLOSED

R11-2L 48"X30"

ESTR COUNTY O

REMOVE CASTING COVER PLATE TEMPORARY

R3-4 24"X24"

+32NB 29'LT

12'

12'

11'

88' TURN BAY TAPER

TW8

TY4

+29NB 20'LT

+22NB

8:1 TAPER

+10NB 44'LT

25'

+28NB 23'LT

SALVAGE CASTING COVER PLATE TEMPORARY

72+00SB

73+00SB

74+00SB

75+00SB

76+00SB

+65NB 29'LT

RECONSTRUCTING INLET

INLET COVER TYPE S

72+00NB

73+00NB

74+00NB

75+00NB

76+00NB

8:1 TAPER

25'

+70NB 13'RT

TWS

TY4

+71NB 11'RT

+29NB 21'RT

+82NB 8'RT

11'

11'

ONE WAY

R6-2R 24"X30"

TWL

TEMPORARY PEDESTRIAN BARRICADE

TY4 DOUBLE

ONE WAY

R6-2R 24"X30"

BEGIN LEFT TURN LANE

R3-20L 24"X36"

ALTERNATE WEST INTERSTATE 94

MB4-1 24"X12"

MB3-4 24"X12"

M1-1 24"X24"

MB5-1L 21"X21"

ESTR WEST 18 EAST 18

ESTR END COUNTY O

+27NB 15'RT

SALVAGE CASTING COVER PLATE TEMPORARY

WO1-6 48" X 24"

LANE CLOSED

R11-2L 48"X30"

WO12-1D 24"X24"

R4-7 24"X30"

TYPE III BARRICADE

CONSTRUCT TEMPORARY WIDENING WITHIN 4 FEET OF AN OPEN TRAFFIC LANE USING OVERNIGHT SINGLE LANE CLOSURE OF INSIDE LEFT TURN LANE

SHEET 19 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 1	SHEET 133	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025101-TC-S1.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2021 3:25 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

PLACE SIGN 500FT WEST OF STOP BAR

SOUTH / COUNTY O — M3-3 24"X12" / M1-5A 24"X24"

ROAD WORK AHEAD — W20-1A

WO1-6 48" X 24"

TYPE III BARRICADE

TO BE INSTALLED ONCE EB RIGHT TURN SIGNALS ARE REMOVED IN CTH O MEDIAN

CLOSE OUTSIDE EB RIGHT TURN LANE AS SHOWN IN STAGE 2 ONCE EB RIGHT TURN SIGNALS ARE REMOVED IN CTH O MEDIAN.

YIELD — R1-2 36"X31"

END ROAD WORK — G20-2A 48"X24"

ALTERNATE WEST / ALTERNATE 94 — MB4-1 24"X12", M1-1 24"X24", MB3-4 24"X12", MB5-1L 21"X21"

ONLY ONLY — R3-8LL 36"X30"

CONSTRUCT TEMPORARY WIDENING WITHIN 4 FEET OF AN OPEN TRAFFIC LANE USING OVERNIGHT SINGLE LANE CLOSURE OF INSIDE LEFT TURN LANE ON NORTHBOUND CTH O

STA 77+00

STA 83+00

MATCHLINE

MATCHLINE

BLUEMOUND ROAD (USH 18)

BLUEMOUND ROAD (USH 18)

MOORLAND ROAD (CTH O)

PILGRIM PKWY (CTH YY)

LANE CLOSED — R11-2L 48"X30"

ESTR EAST WEST 18 18

ESTR EAST 18

ESTR

TY4 25' 12' 12'

TW8 25' 12' 12'

TWD 95'R

TWC 12' 12'

TW8 11' 11'

TW4 11' 11'

TWS

+08NB 34' LT

+46NB 33' LT

+48NB 42' LT

+08NB 36' LT

+46NB 66' LT

+38NB 54' LT

90'R

+73NB 46' LT

+71NB

+73NB 0' RT

+74NB 11' RT

+74NB 22' RT

+37NB 11' RT

+91NB 65' LT

+81NB 54' LT

78+00SB 79+00SB 80+00SB 81+00SB 82+00SB

80+00NB 81+00NB 82+00NB

500'

ONE WAY — R6-2R 24"X30"

R3-4 24"X24"

RECONSTRUCTING INLET
INLET COVER TYPE S

CONSTRUCT TEMPORARY WIDENING WITHIN 4 FEET OF ANOPEN TRAFFIC LANE USING OVERNIGHT SINGLE LANE CLOSURE OF INSIDE LANE OF NORTHBOUND CTH O AND OUTSIDE LEFT TURN LANE

R4-7 24"X30"

END ROAD WORK — G20-2A 48"X24"

SOUTH / COUNTY O — M3-3 24"X12" / M1-5A 24"X24"

ROAD WORK AHEAD — W20-1A

PLACE SIGN 500FT EAST OF STOP BAR

WO1-6 48" X 24"

TYPE III BARRICADE

SHEET 20 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 1	SHEET 134	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025101-TC-S1.DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2021 3:25 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

STA 83+00

WO12-1D
24"X24"

ESTR

TWC

ESTR

ESTR

WO1-4BR

225'

SPEED LIMIT 25
R2-1
24"X30"

275'

SPEED LIMIT 25
W03-5

200'

ROAD WORK AHEAD
W20-1A

TWS

TYS

TW8

+36NB
49' LT

84+00SB

85+00SB

86+00SB

87+00SB

88+00SB

89+00SB

84+00NB

85+00NB

86+00NB

87+00NB

88+00NB

89+00NB

PILGRIM PKWY (CTH YY)

WATERTOWN PLANK RD

ONLY

ESTR

YIELD

ESTR

STOP

ESTR

END ROAD WORK
G20-2A
48"X24"

ESTR

SPEED LIMIT 30

NO PARKING ANY TIME

MATCHLINE

SHEET 21 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 1	SHEET 135	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025101-TC-S1.DWG
LAYOUT NAME - 10

PLOT DATE : 9/24/2021 3:25 PM

PLOT BY : BLACKWOOD, JIM

PLOT NAME :

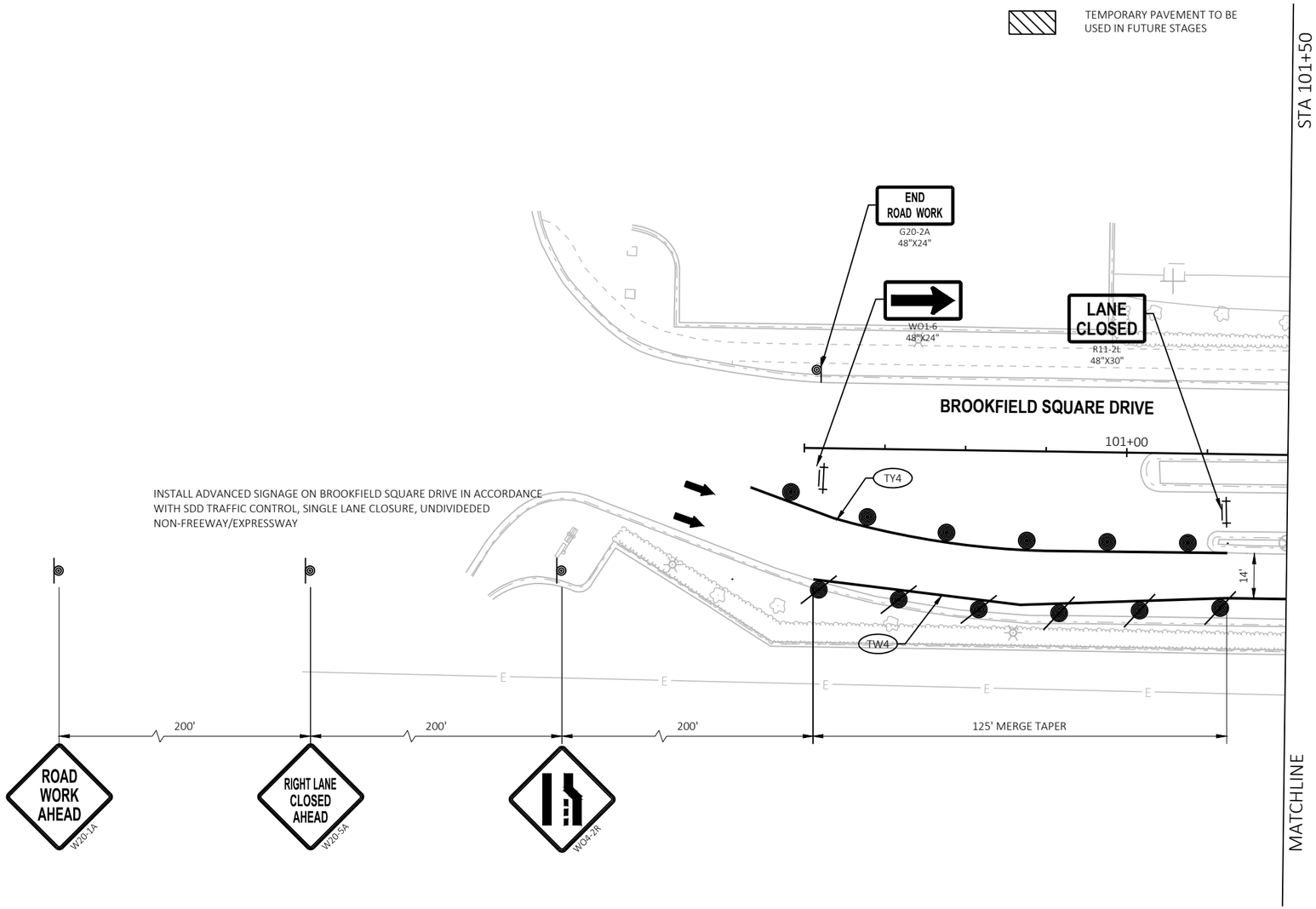
PLOT SCALE : 1 IN:40 FT

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N



INSTALL ADVANCED SIGNAGE ON BROOKFIELD SQUARE DRIVE IN ACCORDANCE WITH SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, UNDIVIDEDED NON-FREEWAY/EXPRESSWAY

TRAFFIC CONTROL NOTES - STAGE 2

CONSTRUCTION:
- SB CTH O THROUGH LANES
- ALTERNATE CLOSURE OF INTERSECTIONS, GAP INTERSECTIONS OPEN TO TRAFFIC

TRAFFIC:
- CTH O - 2 THROUGH LANES IN EACH DIRECTION
- IH 94 WB TO CTH O NB FREE FLOW RAMP TO REMAIN OPEN

PEDESTRIANS:
- NB CTH O SIDEWALKS AND CROSSWALKS PARALLEL TO CTH O OPEN AT ALL TIMES
- CONSTRUCT SB CTH O SIDEWALK BY DIVERTING PEDESTRIANS INTO CLOSED SB CTH O LANE WITH APPROPRIATE PEDESTRIAN TRAFFIC CONTROL DEVICES.
- ALTERNATE CLOSURE OF CROSSWALKS ACROSS CTH O AT EACH INTERSECTION SO THAT ONE CROSSWALK IS OPEN AT ALL TIMES

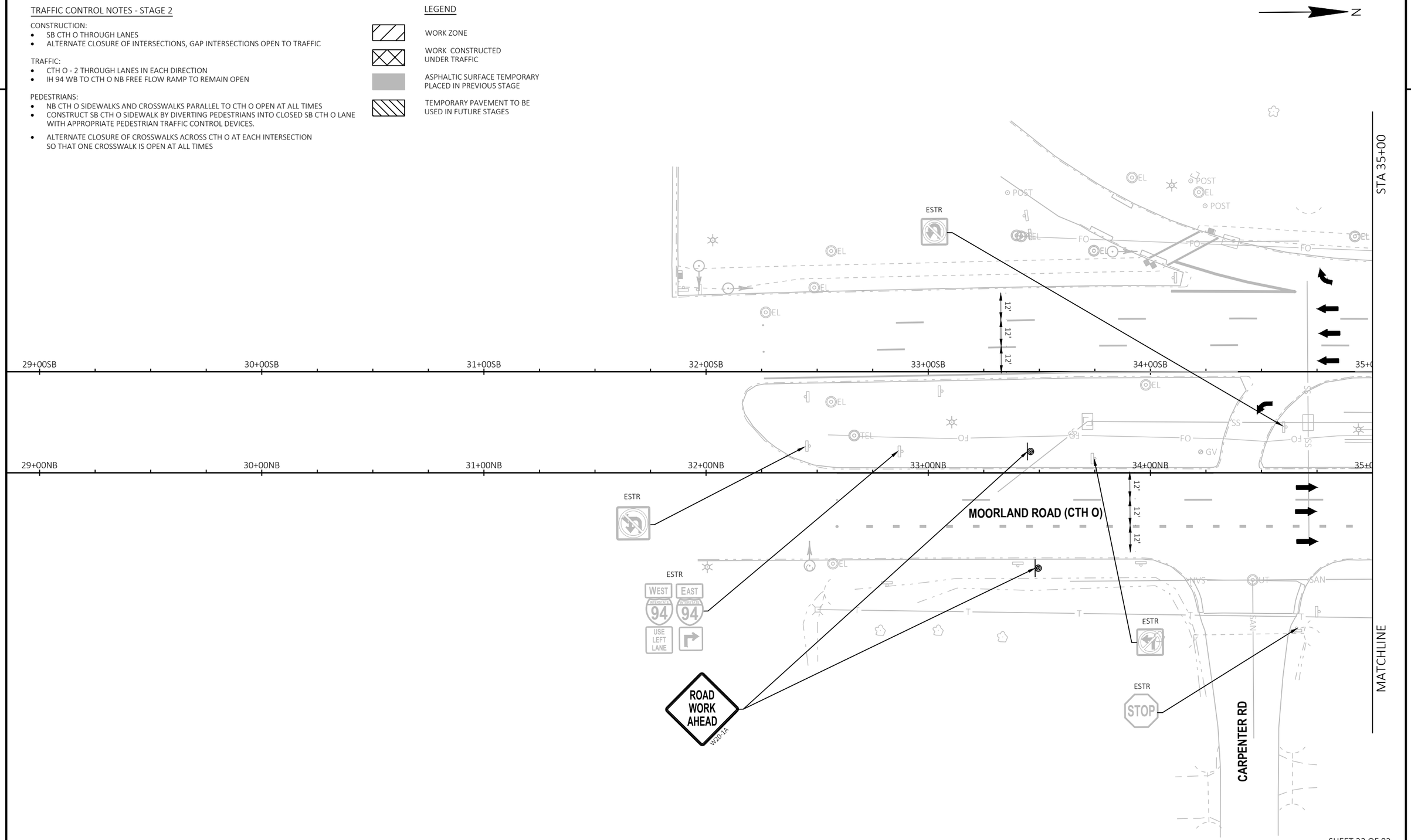
LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES



SHEET 23 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 2	SHEET 137	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102-TC-S2.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2021 3:27 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

NOTE: ALL SIGNS NOT SHOWN TO REMAIN

N

STA 35+00

STA 41+00

END ROAD WORK
G20-2A
48"X24"

ESTR

ESTR

ESTR

EAST INTERSTATE 94

MOORLAND ROAD (CTH O)

12'
12'
12'

36+00SB
37+00SB
38+00SB
39+00SB
40+00SB

36+00NB
37+00NB
38+00NB
39+00NB
40+00NB

12'
12'

MATCHLINE

MATCHLINE

ESTR
RIGHT LANE MUST TURN RIGHT

ESTR
EAST INTERSTATE 94 ONLY

ON MAST ARM

ESTR

SPEED LIMIT 25
W03-5

ESTR
WEST INTERSTATE 94

IH 94

ESTR

ESTR
RIGHT TURN NO STOP

SPEED LIMIT 25
R2-1
24"X30"

ESTR

INTERSTATE 94 RAMP

SPEED LIMIT 25
W03-5

ROAD WORK AHEAD
W20-1A

SHEET 24 OF 82

2

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 2	SHEET 138	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102-TC-S2.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2021 3:27 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

STA 41+00

STA 47+00

ESTR

INTERSTATE 94 RAMP

MB3-2 24"X12"
MB3-4 24"X12"
M1-1 24"X24"
M1-1 24"X24"
MB6-1 21"X21"
MB6-1 21"X21"
EAST
WEST
INTERSTATE 94

STAGE SIDEWALK CONSTRUCTION BY DIVERTING PEDESTRIANS INTO A CLOSED LANE OF SOUTHBOUND CTH O DURING STAGE 2
SEE STAGE 2 PEDESTRIAN TRAFFIC CONTROL PLANS

622'R
600'R
611'R
90'R
60'R
622'R
600'R

+95NB 64' LT
+03NB 51' LT
+80NB 55' LT
+86NB 43' LT
+01NB 29' LT
+87NB 37' LT
+39NB 81' LT
+93NB 21' LT
+98NB 39' LT
+59NB 3' LT
+48NB 3' RT

TW4
TY4
TYS
TWS
TSB
TWL
TY4 DOUBLE

12'
25'
11'

42+00SB
43+00SB
44+00SB
45+00SB
46+00SB
42+00NB
43+00NB
44+00NB
46+00NB

MOORLAND ROAD (CTH O)

STOP HERE ON RED
R10-6R 24"X36"

LEFT LANE CLOSED AHEAD
W20-5SA

R4-7 24"X30"
R3-4 24"X24"
R4-7 24"X30"
R3-4 24"X24"
R3-4 24"X24"

SPEED LIMIT 25
R2-1 24"X30"

ESTR
WEST INTERSTATE 94
ESTR
ONLY
ONLY
ON MAST ARM

ESTR

MATCHLINE

MATCHLINE

SHEET 25 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 2	SHEET 139	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102-TC-S2.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2021 3:27 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

INSTALL NEW CATCH BASIN WITHOUT CASTING COVER PLATE TEMPORARY CONNECT EXIST STORM SEWER TO EAST TO NEW INLET USING CONCRETE COLLAR

STAGE SIDEWALK CONSTRUCTION BY DIVERTING PEDESTRIANS INTO A CLOSED LANE OF SOUTHBOUND CTH O DURING STAGE 2 SEE STAGE 2 PEDESTRIAN TRAFFIC CONTROL PLAN

INSTALL NEW INLET WITHOUT CASTING COVER PLATE TEMPORARY CONNECT EXIST STORM SEWER TO EAST TO NEW INLET USING CONCRETE COLLAR

WO1-6 48" X 24"

TYPE III BARRICADE

N

STA 47+00

STA 53+00

WO1-4BR

TW4

LANE CLOSED R11-2L 48"X30"

MB3-2 24"X12" M1-1 24"X24" MB4-20R 24"X24"

EAST INTERSTATE 94 USE RIGHT LANE

WEST INTERSTATE 94 USE RIGHT LANE

MB3-4 24"X12" M1-1 24"X24" MB4-20R 24"X24"

ROAD CLOSED R11-2 48"X30"

SPEED LIMIT 25 R2-1 24"X30"

LANE CLOSED R11-2L 48"X30"

48+00SB 49+00SB 50+00SB 51+00SB 52+00SB

75'R

+60NB 28' LT

90'R

+14NB 19' LT

+30NB 21' LT

25' 25' 11' 11' 11' 11' 11'

48+00NB 49+00NB 50+00NB 51+00NB 52+00NB

+76NB 4' RT

DOUBLE TY4

TWL

MOORLAND ROAD (CTH O)

LANE CLOSED R11-2L 48"X30"

REDUCE SPACING OF FLEXIBLE TUBULAR MARKERS TO 5FT FROM 100 FT PRIOR TO INTERSECTION TO 100 FT AFTER INTERSECTION

R3-2 24"X24"

W0A-2L

MATCHLINE

MATCHLINE

SHEET 26 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 2	SHEET 140	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102-TC-S2.DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2021 3:27 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

MATCHLINE

STA 101+50

STA 53+00

STA 59+00

BROOKFIELD SQUARE DRIVE

CONSTRUCT INTERSECTION CLOSED TO TRAFFIC USING 21 CALENDAR DAY CLOUSRE.
ALTERNATE CLOSURES OF INTERSECTIONS SO THAT
BROOKFIELD SQUARE NORTH ENTRANCE INTERSECTION AND
BROOKFIELD SQUARE DRIVE SOUTH ENTRANCE
ARE OPEN WHEN BROOKFIELD SQUARE DRIVE INTERSECTION
IS CLOSED.

REDUCE SPACING OF FLEXIBLE TUBULAR MARKERS
TO 5 FEET FROM 100 FT PRIOR TO INTERSECTION
TO 100 FEET AFTER THE INTERSECTION

INSTALL CATCH BASIN WITHOUT
COVER
COVER PLATE TEMPORARY

INSTALL CATCH BASIN WITH NO CASTING
COVER PLATE TEMPORARY

5" ASPHALTIC SURFACE TEMPORARY TRANSITION BETWEEN NEW
PAVEMENT AND EXISTING PAVEMENT. NO NEW BASE COURSE. UTILIZE
EXISTING BASE COURSE.

+04NB
83' LT

+84NB
66' LT
45'R

+28NB
20' LT

+22NB
0' LT

+07NB
8' LT

+22NB
3' RT

R6-1R
36"X12"

R3-2
24"X24"

R6-2R
24"X30"

R2-1
24"X30"

R11-2L
48"X30"

R3-8AF
36"X30"

TY4
DOUBLE

WO3-3

WO1-4BR

WO1-6
48" X 24"

TYPE III BARRICADE

TW4

TWL

LANE CLOSED

ONE WAY

SPEED LIMIT 25

MOORLAND ROAD (CTH O)

215' SHIFTING TAPER

25'

11'

102+00

103+00

53+00SB

54+00SB

55+00SB

56+00SB

57+00SB

58+00SB

54+00NB

55+00NB

56+00NB

57+00NB

58+00NB

LEGEND

WORK ZONE

WORK CONSTRUCTED
UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY
PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE
USED IN FUTURE STAGES

N

SHEET 27 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 2	SHEET 141	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102-TC-S2.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2021 3:28 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

STA 59+00

STA65+00

ROAD WORK AHEAD
W20-1A

BROOKFIELD SQUARE MALL ENTRANCE

WO1-6
48"X24"

END ROAD WORK
G20-2A
48"X24"

N

NO LEFT TURNS ALLOWED FROM BROOKFIELD SQUARE ENTRANCE TO NORTHBOUND CTH O

MB3-2 24"X12" | EAST INTERSTATE 94 | WEST INTERSTATE 94 | MB3-4 24"X12"
M1-1 24"X24" | M1-1 24"X24"
MB4-20R 24"X24" | USE RIGHT LANE | USE RIGHT LANE | MB4-20R 24"X24"

R6-1R 36"X12" ONE WAY R3-2 24"X24"

+81NB 50' LT

INSTALL CATCH BASIN WITHOUT CASTING COVER PLATE TEMPORARY

LANE CLOSED
R11-2L
48"X30"

SPEED LIMIT 25
R2-1
24"X30"

TW4

75'R

121+00

122+00

25'

R6-1R 36"X12" ONE WAY R3-2 24"X24"

LANE CLOSED
R11-2L
48"X30"

CONSTRUCT INTERSECTION CLOSED TO TRAFFIC USING 21 CALENDAR DAY CLOSURE. ALTERNATE CLOSURES OF INTERSECTIONS SO THAT BOTH BROOKFIELD SQUARE DRIVE AND BROOKFIELD SQUARE NORTH ENTRANCE ARE OPEN WHEN BROOKFIELD SQUARE SOUTH ENTRANCE IS CLOSED.

INSTALL CATCH BASIN WITHOUT CASTING COVER PLATE TEMPORARY

+35NB 56' LT

45'R

+79NB 8' LT

LANE CLOSED
R11-2L
48"X30"

+72NB 15' RT

TW4

60+00SB | 61+00SB | 62+00SB | 63+00SB | 64+00SB | 65+00SB

60+00NB | 61+00NB | 62+00NB | 63+00NB | 64+00NB | 65+00NB

25'

11'

TY4 DOUBLE

MOORLAND ROAD (CTH O)

TWL

+37NB 8' LT

230' SHIFTING TAPER

WO1-6
48" X 24"

TYPE III BARRICADE

R3-2
24"X24"

ONE WAY
R6-2R
24"X30"

ONLY | ONLY
R3-8LAF
54"X30"

REDUCE FLEXIBLE TUBULAR MARKER SPACING TO 5' INTERVAL FROM 100 FT PRIOR TO INTERSECTION TO 100 FT AFTER INTERSECTION

5" ASPHALTIC SURFACE TEMPORARY TRANSITION BETWEEN NEW PAVEMENT AND EXISTING PAVEMENT. NO NEW BASE COURSE. UTILIZE EXISTING BASE COURSE.

MATCHLINE

MATCHLINE

SHEET 28 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 2	SHEET 142	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102-TC-S2.DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2021 3:28 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-3A

CONSTRUCT INTERSECTION PARTIALLY CLOSED TO TRAFFIC USING A 21 CALENDAR DAY CLOSURE.
MAINTAIN ONE WB LANE INTO BROOKFIELD SQUARE AT ALL TIMES EXCEPT
FOR A SINGLE 5 CALENDAR DAY FULL CLOSURE TO CONSTRUCT WB LANES.
EB TRAFFIC TO BE FULLY CLOSED FOR A MAXIMUM OF 21 CALENDAR DAYS.
ALTERNATE CLOSURES OF INTERSECTIONS SO THAT BOTH BROOKFIELD SQUARE DRIVE AND BROOKFIELD SQUARE
SOUTH ENTRANCE ARE OPEN WHEN BROOKFIELD SQUARE NORTH ENTRANCE IS CLOSED.

WO1-6
48" X 24"

TYPE III BARRICADE

INSTALL CATCH BASIN WITH NO CASTING
COVER PLATE TEMPORARY

ALTERNATE CROSSWALK CLOSURE SO THAT
THERE IS ONE OPEN CROSSWALK ACROSS CTH O AT
BROOKFIELD SQUARE NORTH ENTRANCE AT ALL TIMES
SEE STAGE 2 PEDESTRIAN DETAIL

BROOKFIELD SQUARE MALL ENTRANCE

STA 65+00

STA 71+00

R3-2
24"X24"

ONE WAY
R6-2R
24"X30"

TW4

TWL

WO1-4BL
32"X32"

SPEED LIMIT 25
R2-1
24"X30"

+33NB
58' LT

141+00

147+00

ONLY

66+00SB

67+00SB

68+00SB

69+00SB

70+00SB

66+00NB

67+00NB

68+00NB

69+00NB

70+00NB

+93NB
19' LT

40'R

+87NB
63' LT

45'R

25'

25'

11'

11'

11'

11'

+02NB
4' RT

TY4 DOUBLE

TW4

MOORLAND ROAD (CTH O)

MATCHLINE

MATCHLINE

230' SHIFTING TAPER

BEGIN LEFT TURN LANE
R3-20L
24"X36"

ONE WAY
R6-1R
36"X12"

R3-2
24"X24"

STOP
R1-1
30"X30"

ESTR
WRONG WAY

REDUCE FLEXIBLE TUBULAR MARKER SPACING TO 5 FT
FROM 100 FT PRIOR TO DRIVEWAY TO 100 FT AFTER DRIVEWAY

INSTALL CATCH BASIN WITHOUT CASTING
COVER PLATE TEMPORARY

TEMPORARILY CONNECT EXISTING
PIPE TO PROPOSED PIPE
(INCIDENTAL TO CONSTRUCTION)

STOP HERE ON RED
R10-6
24"X36"

W6-4
12"X18"
MOUNT ON QUICK
RELEASE FIXED BASE

5" ASPHALTIC SURFACE TEMPORARY TRANSITION BETWEEN NEW
PAVEMENT AND EXISTING PAVEMENT. NO NEW BASE COURSE. UTILIZE
EXISTING BASE COURSE.

SHEET 29 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 2	SHEET 143	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102-TC-S2.DWG
LAYOUT NAME - 07

PLOT DATE : 9/24/2021 3:28 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

CONSTRUCT INTERSECTION PARTIALLY CLOSED TO TRAFFIC USING A 21 CALENDAR DAY CLOSURE.
MAINTAIN ONE WB LANE INTO BROOKFIELD SQUARE AT ALL TIMES EXCEPT
FOR A SINGLE 5 CALENDAR DAY FULL CLOSURE TO CONSTRUCT WB LANES.
EB TRAFFIC TO BE FULLY CLOSED FOR A MAXIMUM OF 21 CALENDAR DAYS.
ALTERNATE CLOSURES OF INTERSECTIONS SO THAT BOTH BROOKFIELD SQUARE DRIVE AND BROOKFIELD SQUARE
SOUTH ENTRANCE ARE OPEN WHEN BROOKFIELD SQUARE NORTH ENTRANCE IS CLOSED.

INSTALL CATCH BASIN WITHOUT CASTING
COVER PLATE TEMPORARY

REDUCE FLEXIBLE TUBULAR MARKER SPACING
TO 5 FT FROM NORTH MALL ENTRANCE TO STA 78+50

ALTERNATE CROSSWALK CLOSURE SO THAT
THERE IS ONE OPEN CROSSWALK ACROSS CTH O AT
BROOKFIELD SQUARE NORTH ENTRANCE AT ALL TIMES
SEE STAGE 2 PEDESTRIAN STAGING DETAILS.

LEGEND

N

WORK ZONE

WORK CONSTRUCTED
UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY
PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE
USED IN FUTURE STAGES

STA 71+00

STA 77+00

STOP HERE ON RED
R10-6
24"X36"

ONE WAY
R6-2R
24"X30"

ONE WAY
R6-2R
24"X30"

ONLY ONLY
R3-8LAF
54"X30"

LANE CLOSED
R11-2L
48"X30"

ONE WAY
R6-2R
24"X30"

R3-2
24"X24"

SPEED LIMIT 25
R2-1
24"X30"

ONE WAY
R6-2R
24"X30"

R3-2
24"X24"

72+00SB

73+00SB

74+00SB

75+00SB

76+00SB

77+0

25'

+32NB
18' LT

TWL

TW4

11'

72+00NB

73+00NB

74+00NB

75+00NB

76+00NB

77+0

+48NB
2' RT

+48NB
13' RT

+14NB
1' RT

+14NB
12' RT

+29NB
1' LT

+82NB
8' RT

+29NB
6' RT

TSB

TW4

MOORLAND ROAD (CTH O)

66' TURN BAY TAPER

TY4
DOUBLE

TIGHTEN TUBULAR MARKER SPACING
TO 5 FT ACROSS DRIVEWAYS

TW8

TW8

TW8

ESTR
WEST 18 EAST 18

R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

ESTR
END
COUNTY O
POST
POST

R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

MATCHLINE

MATCHLINE

W6-4
12"X18"
MOUNT ON QUICK
RELEASE FIXED BASE

R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

ONLY ONLY ONLY ONLY
R3-8LAAR
72"X30"

STOP
R1-1
30"X30"

R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

ALTERNATE
WEST
MB4-1
24"X12"
MB3-4
24"X12"

INTERSTATE
94
M1-1
24"X24"

MB5-1L
21"X21"

STOP
R1-1
30"X30"

R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

SHEET 30 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 2	SHEET 144	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102-TC-S2.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2021 3:28 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

STA 77+00

STA 83+00

MATCHLINE

MATCHLINE

ONE WAY
R6-2R
24"X30"

R3-2
24"X24"

COUNTY O
M1-5A
24"X24"

WO1-6
48" X 24"
TYPE III BARRICADE

M3-3
24"X12"
SOUTH
COUNTY O
M1-5A
24"X24"
ROAD WORK AHEAD
W20-2A

YIELD
R1-2
36"X31"

TW8

TW4

60'R

+53NB
92' LT

+05NB
51' LT

+60NB
26' LT

+08NB
36' LT

+10NB
21' LT

+25NB
15' LT

TWL

TY4 DOUBLE

1500'R

TWS

TYS

TWD

MOUNT ON QUICK RELEASE FIXED BASE
W6-4
12"X18"

STOP HERE ON RED
R10-6
24"X36"

END ROAD WORK
G20-2A
48"X24"

BLUEMOUND ROAD (USH 18)

500'

ESTR
EAST
18

ESTR
EAST WEST
18 18

LANE CLOSED
R11-2L
48"X30"

WO12-1D
24"X24"

25'

+80NB
65' LT

PILGRIM PKWY (CTH YY)

MOORLAND ROAD (CTH O)

REDUCE FLEXIBLE TUBULAR MARKER SPACING
TO 5 FT FROM NORTH MALL ENTRANCE TO STA 78+50

R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

WO12-1D
24"X24"

ESTR
EAST
18

WEST
18
M3-4
24"X12"
M1-4
24"X24"
M6-1
21"X21"

END ROAD WORK
G20-2A
48"X24"

17
NO TRUCKS

FIXED MESSAGE SIGN
MOUNT TO OVERHEAD SIGN SUPPORT
JUST TO LEFT OF SIGN

ESTR
Moorland Road SOUTH
ONLY
ON SIGN SUPPORT

ESTR
Moorland Road SOUTH
ONLY
ON SIGN SUPPORT

SOUTH
COUNTY O
M3-3
24"X12"
M1-5A
24"X24"
ROAD WORK AHEAD
W20-1A

PLACE SIGN 500FT EAST OF STOP BAR

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 31 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 2	SHEET 145	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102-TC-S2.DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2021 3:28 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

STA 83+00

TWC

ESTR

ESTR

ESTR

SPEED LIMIT 25
R2-1
24"X30"

275'

SPEED LIMIT 25
W03-5

200'

ROAD WORK AHEAD
W20-1A

0SB 84+00SB 85+00SB 86+00SB 87+00SB 88+00SB 89+00SB

0NB 84+00NB 85+00NB 86+00NB 87+00NB 88+00NB 89+00NB

PILGRIM PKWY (CTH YY)

WATERTOWN PLANK RD

ONLY

ESTR

YIELD

ESTR

STOP

ESTR

END ROAD WORK
G20-2A
48"X24"

ESTR

SPEED LIMIT 30
NO PARKING ANY TIME

MATCHLINE

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 32 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 2	SHEET 146	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102-TC-S2.DWG
LAYOUT NAME - 10

PLOT DATE : 9/24/2021 3:28 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

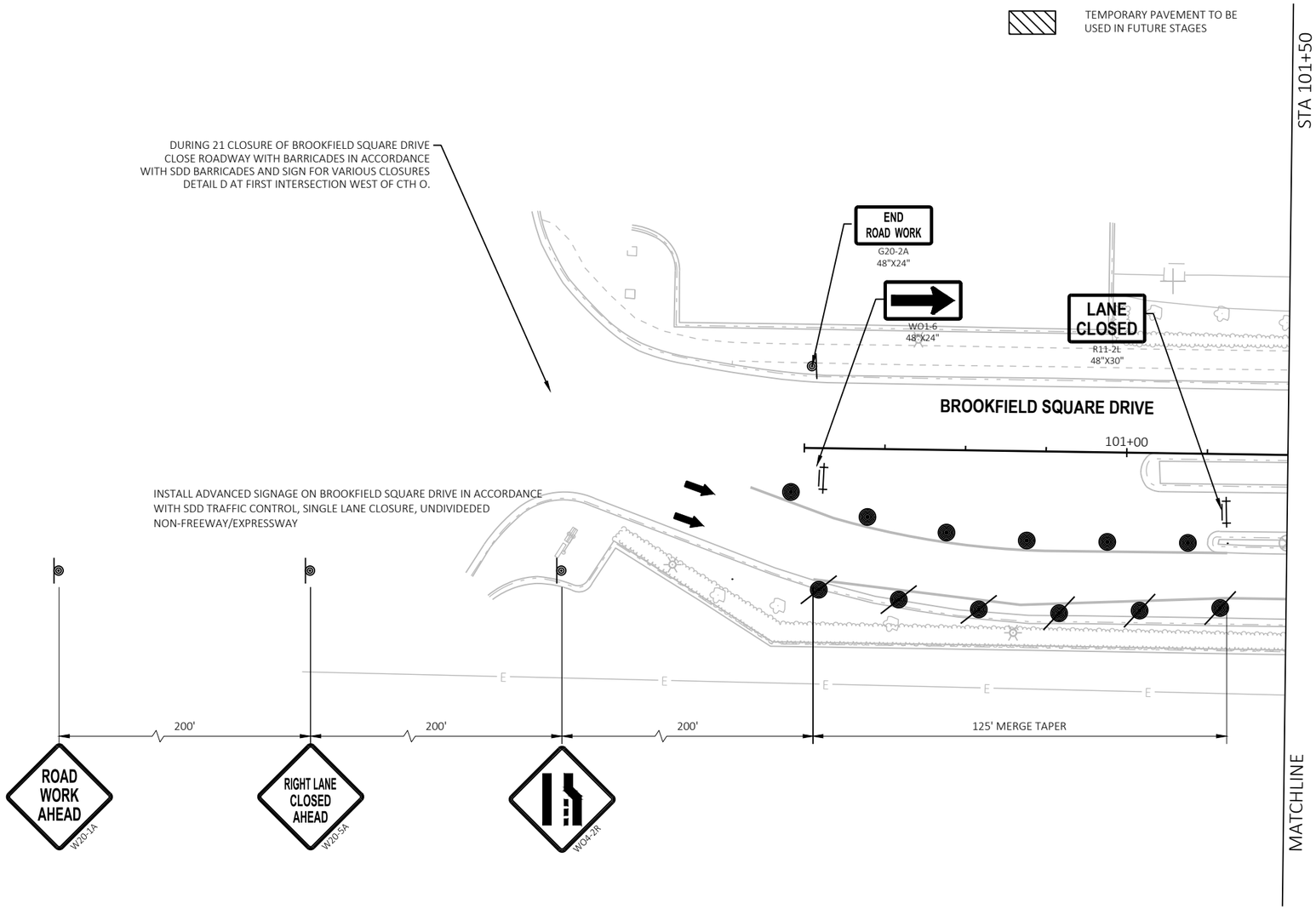
2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

DURING 21 CLOSURE OF BROOKFIELD SQUARE DRIVE CLOSE ROADWAY WITH BARRICADES IN ACCORDANCE WITH SDD BARRICADES AND SIGN FOR VARIOUS CLOSURES DETAIL D AT FIRST INTERSECTION WEST OF CTH O.



PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 2	SHEET 147	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102-TC-S2.DWG
LAYOUT NAME - 11
PLOT DATE : 9/24/2021 3:28 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

NOTES:
1. SEE STAGE 2 TRAFFIC CONTROL PLANS FOR ROADWAY TRAFFIC CONTROL DETAILS.
2. STAGE 2A PEDESTRIAN WORK TO BE COMPLETED DURING FULL CLOSURE OF BROOKFIELD SQUARE DRIVE.

N

INTERSTATE 94 RAMP

PEDESTRIANS TO USE EXISTING SIDEWALK IN STAGE 2A

STA 49+00

44+00SB 45+00SB 46+00SB 47+00SB 48+00SB

44+00NB 45+00NB 46+00NB 47+00NB 48+00NB

MATCHLINE

SHEET 34 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 2A PEDESTRIAN	SHEET 148	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102A-TC-S2A PED1.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2021 3:29 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

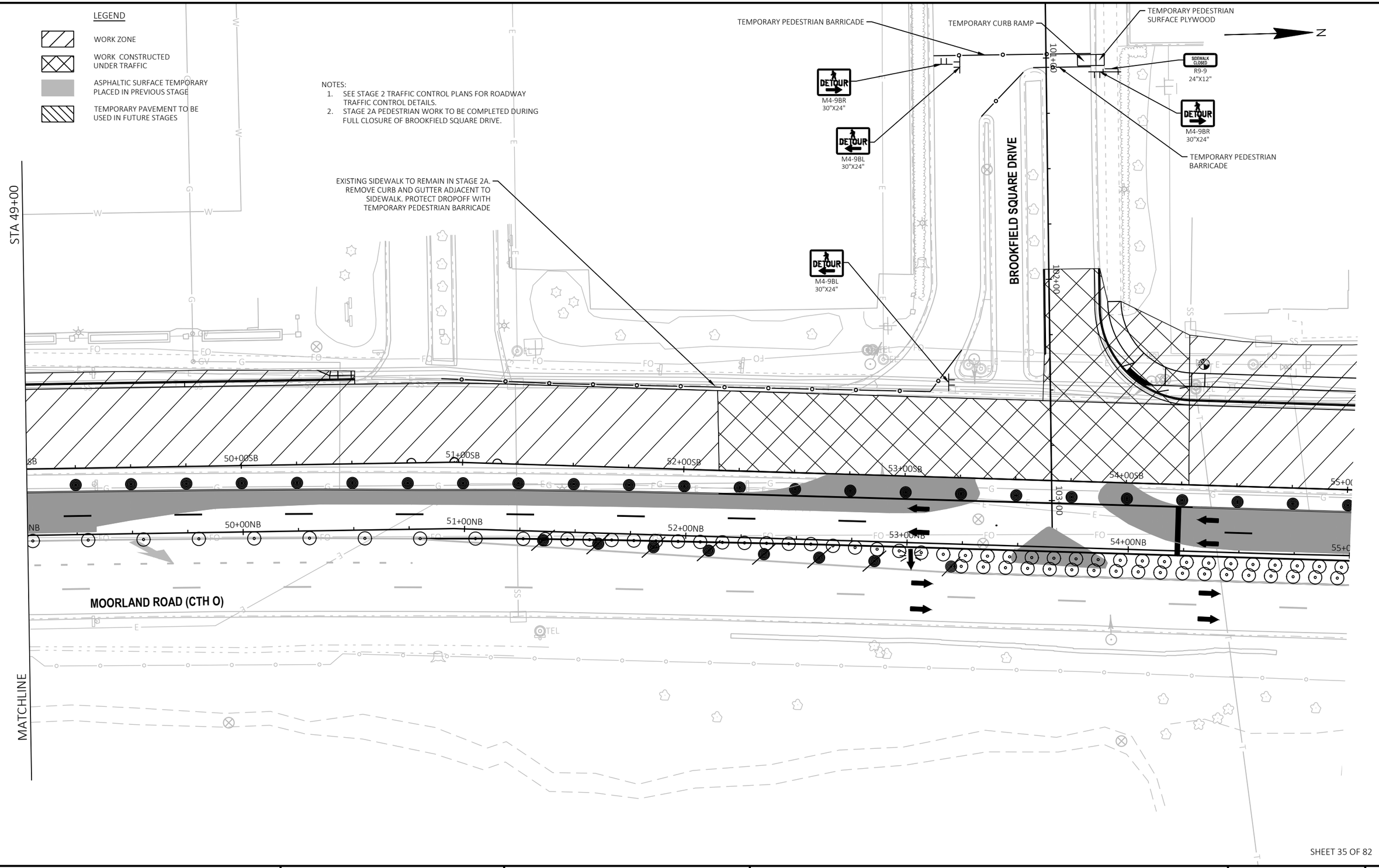
WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

NOTES:
1. SEE STAGE 2 TRAFFIC CONTROL PLANS FOR ROADWAY TRAFFIC CONTROL DETAILS.
2. STAGE 2A PEDESTRIAN WORK TO BE COMPLETED DURING FULL CLOSURE OF BROOKFIELD SQUARE DRIVE.



SHEET 35 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 2A PEDESTRIAN	SHEET 149	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102A-TC-S2A PED1.DWG
LAYOUT NAME - 04
PLOT DATE : 9/24/2021 3:29 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

2

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

BROOKFIELD SQUARE MALL ENTRANCE

ONLY

SIDEWALK CLOSED
R9-9
24"X12"

SIDEWALK CLOSED
R9-9
24"X12"

SIDEWALK CLOSED CROSS HERE
R9-11A
24"X12"

68+00SB

69+00SB

70+00SB

71+00SB

72+00SB

73+00SB

68+00NB

69+00NB

70+00NB

71+00NB

72+00NB

73+00NB

CURB RAMP DETECTABLE WARNING FIELD YELLOW INSTALLED IN STAGE 1

MOORLAND ROAD (CTH O)

SIDEWALK CLOSED CROSS HERE
R9-11A
24"X12"

ONLY

CURB RAMP DETECTABLE WARNING FIELD YELLOW INSTALLED IN STAGE 1

SHEET 36 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 2A PEDESTRIAN	SHEET 150	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102A-TC-S2A PED1.DWG
LAYOUT NAME - 07

PLOT DATE : 9/24/2021 3:29 PM

PLOT BY : BLACKWOOD, JIM

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

NOTE:
STAGE 2B MAY BEGIN BEFORE BROOKFIELD SQUARE DRIVE IS OPEN TO VEHICLE TRAFFIC

N

INTERSTATE 94 RAMP

DETOUR
M4-9BL
30"X24"

SIDEWALK CLOSED
R9-9
24"X12"

DETOUR
M4-9BR
30"X24"

TEMPORARY PEDESTRIAN BARRICADE

6'

44+00SB

44+00NB

45+00SB

46+00SB

47+00SB

48+00SB

49+00

STA 49+00

MATCHLINE

2

SHEET 37 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 2B PEDESTRIAN	SHEET 151	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102B-TC-S2B PED.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2021 3:29 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

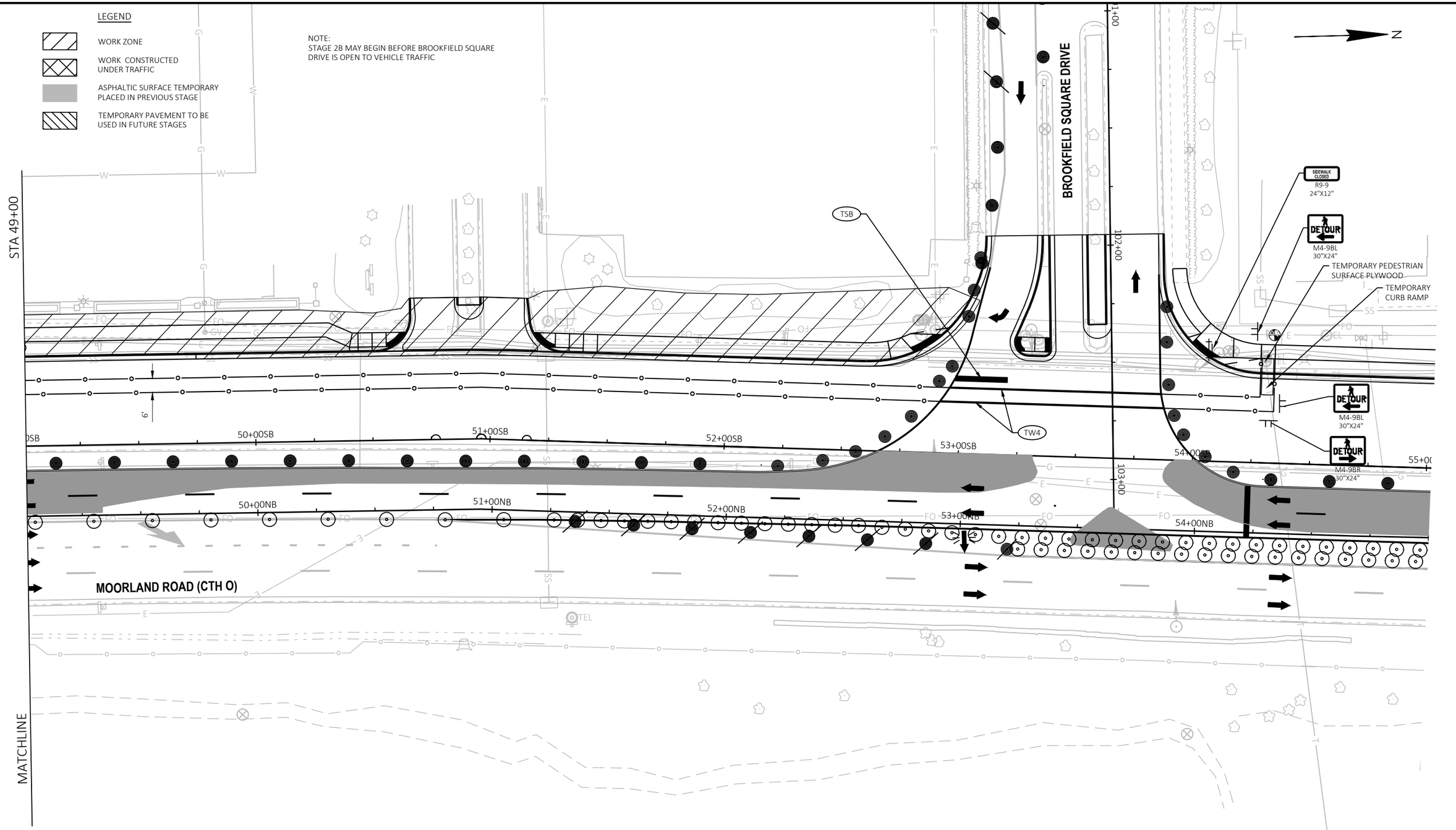
WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

NOTE:
STAGE 2B MAY BEGIN BEFORE BROOKFIELD SQUARE DRIVE IS OPEN TO VEHICLE TRAFFIC



SHEET 38 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 2B PEDESTRIAN	SHEET 152	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102B-TC-S2B PED.DWG
LAYOUT NAME - 04
PLOT DATE : 9/24/2021 3:29 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

BROOKFIELD SQUARE MALL ENTRANCE

ONLY

DETOUR
M4-9BL
30"X24"

DETOUR
M4-9BR
30"X24"

SIDEWALK CLOSED
R9-9
24"X12"

SIDEWALK CLOSED
R9-9
24"X12"

DETOUR
M4-9BL
30"X24"

68+00SB

69+00SB

70+00SB

71+00SB

72+00SB

73+00SB

68+00NB

00NB

71+00NB

MOORLAND ROAD (CTH O)

ONLY

SHEET 39 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 2B PEDESTRIAN	SHEET 153	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025102B-TC-S2B PED.DWG
LAYOUT NAME - 07

PLOT DATE : 9/24/2021 3:29 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

TRAFFIC CONTROL NOTES - STAGE 3

CONSTRUCTION:
- REMOVE STAGE 2 CROSSOVERS
- CONSTRUCT STAGE 4 CROSSOVERS
- CONSTRUCT STAGE 4 TEMPORARY WIDENING
- CONSTRUCT SB CTH O LEFT TURN LANES
- CONSTRUCT WEST HALF OF INTERSECTION PAVEMENT IN MEDIAN

TRAFFIC:
- CTH O - 2 THROUGH LANES IN EACH DIRECTION
- IH 94 WB TO CTH O NB FREE FLOW RAMP TO REMAIN OPEN

PEDESTRIANS:
- ALL SIDEWALKS PARALLEL TO CTH O OPEN AT ALL TIMES
- ALTERNATE CLOSURE OF CROSSWALKS ACROSS CTH O AT EACH INTERSECTION SO THAT ONE CROSSWALK IS OPEN AT ALL TIMES

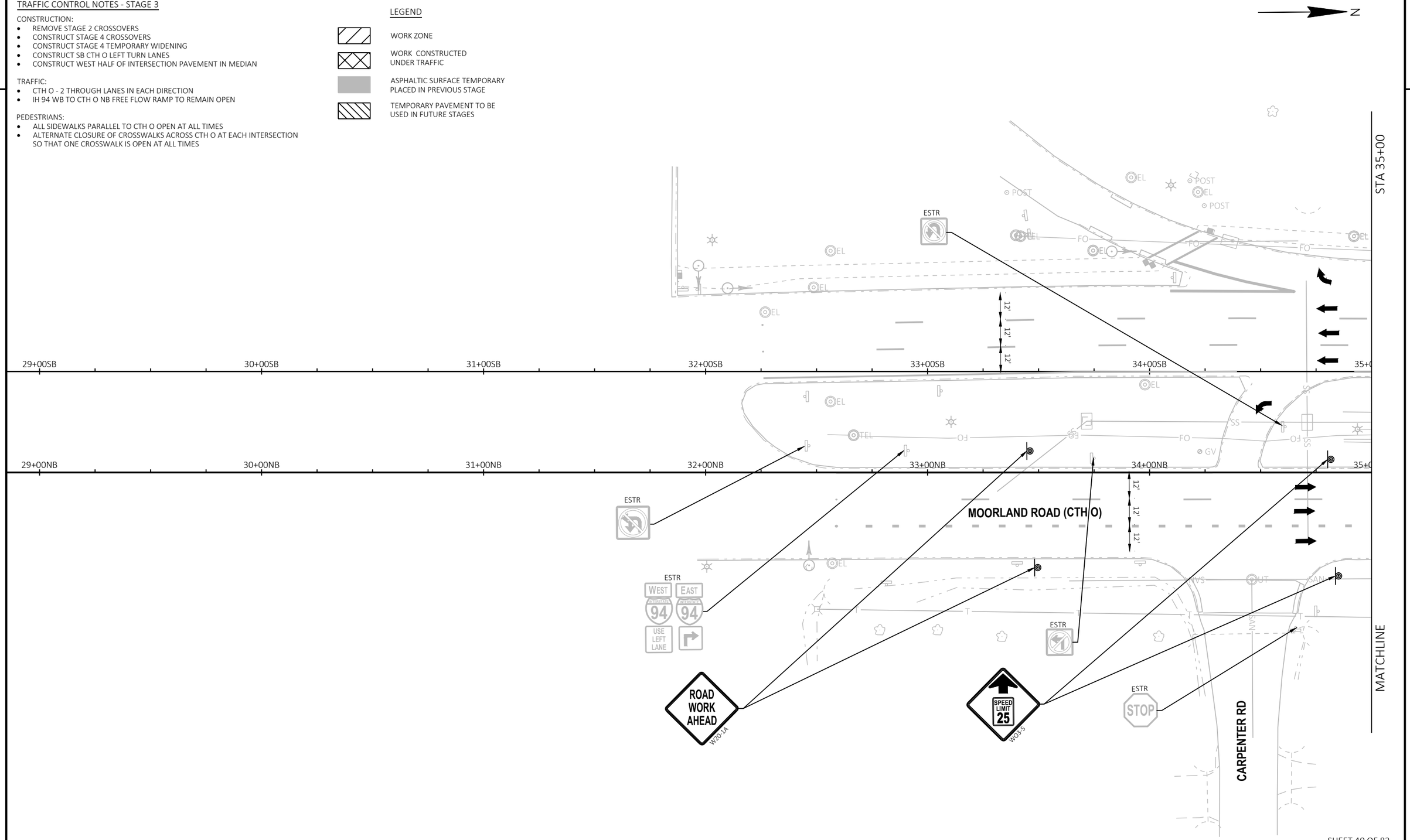
LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES



SHEET 40 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 3	SHEET 154	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025103-TC-S3.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2021 3:30 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

NOTE: ALL SIGNS NOT SHOWN TO REMAIN

N

CONSTRUCT TEMPORARY WIDENING DURING OVERNIGHT HOURS
USING SINGLE LANE CLOSURE OF INSIDE SOUTHBOUND THROUGH LANE
AND INSIDE NORTHBOUND LEFT TURN LANE

STA 35+00

STA 41+00

MOORLAND ROAD (CTH O)

36+00SB 37+00SB 38+00SB 39+00SB 40+00SB

36+00NB 37+00NB 38+00NB 40+00NB

12' 12' 12' 12' 12'

25' 25'

END ROAD WORK
G20-2A
48"X24"

BEGIN LEFT TURN LANE
R3-20L
24"X36"

ESTR

ESTR EAST INTERSTATE 94 ONLY
ON MAST ARM

ESTR RIGHT LANE MUST TURN RIGHT

ESTR WEST INTERSTATE 94

ESTR EAST INTERSTATE 94

SPEED LIMIT 25
R2-1
24"X30"

IH 94

REMOVE AND SALVAGE EXISTING INLET COVER
INSTALL INLET COVER TYPE S
USE ADJUSTMENT RINGS WITH 2X2-FT OPENING

INTERSTATE 94 RAMP

RIGHT TURN NO STOP

SPEED LIMIT 25
W3-5

ROAD WORK AHEAD
W20-1A

MATCHLINE

MATCHLINE

SHEET 41 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 3	SHEET 155	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025103-TC-S3.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2021 3:30 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

STA 41+00

STA 47+00

CONSTRUCT TEMPORARY WIDENING DURING OVERNIGHT HOURS USING SINGLE LANE CLOSURE OF INSIDE SOUTHBOUND THROUGH LANE AND INSIDE NORTHBOUND LEFT TURN LANE

INTERSTATE 94 RAMP

500'

ESTR

R4-7 24"X30"

R3-4 24"X24"

END ROAD WORK G20-2A 48"X24"

MB3-4 24"X12" WEST INTERSTATE 94 M1-1 24"X24"

MB6-2 21"X21"

256' SHIFTING TAPER

LEFT LANE CLOSED AHEAD W20-5SA

TWL

TY4

TSB

TW8

TWS

TY4 DOUBLE

+25NB 33' LT

+01NB 59' LT

+16NB 31' LT

+16NB 20' LT

+45NB 19' LT

+13NB 30' LT

25'

11'

12'

42+00SB

43+00SB

44+00SB

45+00SB

46+00SB

42+00NB

43+00NB

44+00NB

45+00NB

46+00NB

MOORLAND ROAD (CTH O)

MATCHLINE

MATCHLINE

ESTR

WEST INTERSTATE 94

ESTR

ONLY ONLY

ON MAST ARM

MB3-4 24"X12" WEST INTERSTATE 94 M1-1 24"X24"

MB6-1 21"X21"

R4-7 24"X30"

R3-4 24"X24"

SPEED LIMIT 25 R2-1 24"X30"

ESTR

CONSTRUCT TEMPORARY WIDENING WITHIN 4 FEET OF AN OPEN TRAFFIC LANE DURING OVERNIGHT HOURS USING SINGLE LANE CLOSURE OF INSIDE SOUTHBOUND CTH O THROUGH LANE AND INSIDE NORTHBOUND CTH O THROUGH LANE.

SHEET 42 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 3	SHEET 156	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025103-TC-S3.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2021 3:30 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

CONSTRUCT TEMPORARY WIDENING WITHIN 4 FEET OF AN OPEN TRAFFIC LANE DURING OVERNIGHT HOURS USING SINGLE LANE CLOSURE OF INSIDE SOUTHBOUND CTH O THROUGH LANE AND INSIDE NORTHBOUND CTH O LEFT TURN LANE.

STA 47+00

STA 53+00

256' SHIFTING TAPER

+71NB 44' LT

TWS

TWL

TY4 DOUBLE

11'

11'

25'

+34NB 19' LT

48+00SB

49+00SB

50+00SB

51+00SB

52+00SB

+95NB 44' LT

+67NB 22' LT

48+00NB

49+00NB

50+00NB

51+00NB

52+00NB

+68NB 11' LT

+34NB 11' LT

MOORLAND ROAD (CTH O)

MB3-2 24"X12"

EAST INTERSTATE 94 USE RIGHT LANE

WEST INTERSTATE 94 USE RIGHT LANE

MB3-4 24"X12"

M1-1 24"X24"

M1-1 24"X24"

MB4-20R 24"X24"

MB4-20R 24"X24"

W01-4BL

ONE WAY R6-1R 36"X12"

R3-2 24"X24"

ONE WAY R6-2R 24"X30"

LANE CLOSED R11-2L 48"X30"

SPEED LIMIT 25 R2-1 24"X30"

W04-2L

R3-2 24"X24"

MATCHLINE

MATCHLINE

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 3	SHEET 157	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025103-TC-S3.DWG
LAYOUT NAME - 04
PLOT DATE : 9/24/2021 3:30 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

MATCHLINE

STA 101+50

STA 53+00

STA 59+00

BROOKFIELD SQUARE DRIVE

102+00

ONE WAY
R6-1R
36"X12"

R3-2
24"X24"

ONE WAY
R6-2R
24"X30"

ROAD CLOSED
R11-2
48"X30"

ONLY
R3-8AF
36"X30"

W03-3

SPEED LIMIT 25
R2-1
24"X30"

P

TWL

TY4 DOUBLE

25'

11'

11'

54+00SB

55+00SB

56+00SB

57+00SB

58+00SB

54+00NB

55+00NB

56+00NB

57+00NB

58+00NB

+12NB
19' LT

+32NB
22' LT

+86NB
22' LT

25'

11'

11'

MOORLAND ROAD (CTH O)

LANE CLOSED
R11-2L
48"X30"

SPEED LIMIT 25
R2-1
24"X30"

R3-2
24"X24"

R3-2
24"X24"

MATCHLINE

SHEET 44 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 3	SHEET 158	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025103-TC-S3.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2021 3:30 PM

PLOT BY : BLACKWOOD, JIM

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

STA 59+00

ROAD WORK AHEAD
W20-1A

MB3-2 24"X12" | MB3-4 24"X12"
M1-1 24"X24" | M1-1 24"X24"
EAST | WEST
INTERSTATE 94 | INTERSTATE 94
MB4-20R 24"X24" USE RIGHT LANE | MB4-20R 24"X24" USE RIGHT LANE

LANE CLOSED
R11-2L
48"X30"

ROAD CLOSED
R11-2
48"X30"

R6-1R 36"X12" ONE WAY

R3-2
24"X24"

ONE WAY
R6-2R
24"X30"

BROOKFIELD SQUARE MALL ENTRANCE

25'

121+00

WO1-6
48"X24"

END ROAD WORK
G20-2A
48"X24"

NO LEFT TURNS ALLOWED FROM BROOKFIELD SQUARE ENTRANCE TO NORTHBOUND CTH O

LANE CLOSED
R11-2L
48"X30"

N

TWL
TY4 DOUBLE
11'
11'
25'

122+00

+31NB
20' LT

+96NB
21' LT

+31NB
15' LT

60+00SB | 61+00SB | 62+00SB | 63+00SB | 64+00SB | 65+0

60+00NB | 61+00NB | 62+00NB | 63+00NB | 64+00NB | 65+0

MOORLAND ROAD (CTH O)

R3-2
24"X24"

ROAD CLOSED
R11-2
48"X30"

ONLY | ONLY
R3-8LAF
54"X30"

LANE CLOSED
R11-2L
48"X30"

STA65+00

MATCHLINE

MATCHLINE

2

SHEET 45 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 3	SHEET 159	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025103-TC-S3.DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2021 3:30 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

N

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

STA 65+00

STA 71+00

BEGIN LEFT TURN LANE
R3-20L
24"X36"

ROAD CLOSED
R11-2
48"X30"

R3-2
24"X24"

LANE CLOSED
R11-2L
48"X30"

SPEED LIMIT 25
R2-1
24"X30"

WO1-6
48"X24"

R4-7
24"X30"

G20-2A
48"X24"
END ROAD WORK

ROAD WORK AHEAD
W20-1A

BROOKFIELD SQUARE MALL ENTRANCE

SALVAGE INLET COVER
COVER PLATE TEMPORARY

ALTERNATE CLOSURE OF CROSSWALK THROUGH MEDIAN AT BROOKFIELD SQUARE MALL ENTRANCE. ONE CROSSING TO REMAIN OPEN AT ALL TIMES. SEE CONSTRUCTION DETAIL.

141+00

142+00

TWL

TY4 DOUBLE

25'

11'

11'

+60NB
25' LT

+19NB
18' LT

+27NB
29' LT

+43NB
18' LT

+81NB
25' LT

+91NB
21' LT

+79NB
10' LT

+03NB
6' LT

66+00SB

67+00SB

68+00SB

69+00SB

70+00SB

71+00

66+00NB

67+00NB

68+00NB

69+00NB

70+00NB

R3-4
24"X24"

TW4

MOORLAND ROAD (CTH O)

MATCHLINE

MATCHLINE

ONE WAY
R6-1R
36"X12"

R3-2
24"X24"

STOP
R1-1
30"X30"

ESTR
WRONG WAY

ONE WAY
R6-2R
24"X30"

TEMPORARILY CONNECT EXISTING PIPE TO PROPOSED PIPE (INCIDENTAL TO CONSTRUCTION)

INSTALL CURB RAMP DETECTABLE WARNING FIELD YELLOW INTO TEMPORARY PEDESTRIAN SURFACE AT END OF STAGE FOR USE IN STAGE 4A

INSTALL CATCH BASIN WITHOUT CASTING COVER PLATE TEMPORARY

INSTALL NEW STORM SEWER TO EDGE OF NB LEFT TURN LANE. AREA OUTSIDE TEMPORARY ASPHALT MAY REMAIN AS GRAVEL UNTIL FUTURE STAGE. ALL WORK WITHIN 4 FEET OF OPEN TRAVEL OR TURN LANE TO BE COMPLETED DURING OVERNIGHT HOURS.

STOP HERE ON RED
R10-6
24"X36"

CONSTRUCT TEMPORARY WIDENING WITHIN 4 FEET OF AN OPEN TRAFFIC LANE DURING OVERNIGHT HOURS USING SINGLE LANE CLOSURE OF INSIDE SOUTHBOUND CTH O THROUGH LANE AND INSIDE NORTHBOUND CTH O LEFT TURN LANE.

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 3	SHEET 160	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025103-TC-S3.DWG
LAYOUT NAME - 07
PLOT DATE : 9/24/2021 3:31 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

STA 71+00

STA 77+00

FULL DEPTH PAVEMENT OUTSIDE EXISTING PAVEMENT LIMITS
WEDGE ASPHALT ONTO EXISTING PAVEMENT TO
LIMITS OF TEMPORARY ASPHALT SHOWN

R3-4
24"X24"

R3-4
24"X24"

CONSTRUCT TEMPORARY WIDENING WITHIN 4 FEET OF AN OPEN TRAFFIC LANE
DURING OVERNIGHT HOURS USING SINGLE LANE CLOSURE OF INSIDE NORTHBOUND CTH O
THROUGH LANE AND INSIDE SOUTHBOUND CTH O LEFT TURN LANE.

LANE CLOSED
R11-2L
48"X30"

88' TURN BAY TAPER

BEGIN LEFT TURN LANE
R3-20L
24"X36"

ONLY ONLY
R3-8LAF
54"X30"

SPEED LIMIT 25
R2-1
24"X30"

LANE CLOSED
R11-2L
48"X30"

COUNTY O
M1-5A
24"X24"

TW4

P

TWL

TY4 DOUBLE

TW8

INSTALL CATCH BASIN WITHOUT CASTING
COVER PLATE TEMPORARY

+16NB
29' LT

+11NB
45' LT

+11NB
34' LT

+28NB
20' LT

8:1 TAPER

+99NB
46' LT

25'

+44NB
26' LT

+97NB
28' LT

72+00SB

73+00SB

74+00SB

75+00SB

76+00SB

72+00NB

73+00NB

74+00NB

75+00NB

76+00NB

+16NB
0' RT

+31NB
6' LT

+45NB
20' LT

+73NB
11' LT

+38NB
13' RT

+74NB
11' RT

+20NB
14' LT

+25NB
27' LT

+25NB
25' LT

+46NB
5' RT

MOORLAND ROAD (CTH O)

BEGIN LEFT TURN LANE
R3-20L
24"X36"

INSTALL CATCH BASIN WITHOUT CASTING
COVER PLATE TEMPORARY

MATCHLINE

MATCHLINE

R4-7
24"X30"

WO1-6
48"X24"

R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

ONE WAY
R6-2R
24"X30"

ONLY ONLY ONLY ONLY
R3-8LAAR
72"X30"

ALTERNATE WEST INTERSTATE 94
MB4-1
24"X12"
MB3-4
24"X12"
M1-1
24"X24"
MB5-1L
21"X21"

R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

ONE WAY
R6-2R
24"X30"

ESTR
WEST EAST
18 18

R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

ONE WAY
R6-2R
24"X30"

ONE WAY
R6-2R
24"X30"

WEST EAST
18 18
M3-4
24"X12"
M1-4
24"X24"
M5-1L
21"X21"
M3-2
24"X12"
M1-4
24"X24"
M5-1R
21"X21"

ESTR
END
COUNTY O

POST
POST

ALTERNATE CLOSURE OF CROSSWALK THROUGH MEDIAN
AT BROOKFIELD SQUARE MALL ENTRANCE. ONE CROSSING
TO REMAIN OPEN AT ALL TIMES.
SEE CONSTRUCTION DETAIL

SHEET 47 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 3	SHEET 161	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025103-TC-S3.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2021 3:31 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

PLACE SIGN 500FT WEST OF STOP BAR

SOUTH / COUNTY O — M3-3 24"X12", M1-5A 24"X24"

ROAD WORK AHEAD — W20-1A

WO1-6 48" X 24"

TYPE III BARRICADE

ALTERNATE WEST / ALTERNATE 94 — MB4-1 24"X12", M3-4 24"X12", M1-1 24"X24", MB6-1 21"X21"

ONLY ONLY — R3-8LL 36"X30"

STA 77+00

STA 83+00

MATCHLINE

MATCHLINE

BLUEMOUND ROAD (USH 18)

BLUEMOUND ROAD (USH 18)

MOORLAND ROAD (CTH O)

PILGRIM PKWY (CTH YY)

TWC

END ROAD WORK — G20-2A 48"X24"

LANE CLOSED — R11-2L 48"X30"

ESTR EAST 18 / ESTR WEST 18

500'

TY4 DOUBLE

TWL

TY4

TW8

TWD

TWS

11'

25'

+60NB 55' LT

+36NB 67' LT

100' TAPER

R4-7 24"X30"

105'R

+91NB 65' LT

+81NB 54' LT

+00NB 33' LT

8:1 TAPER

12'

INSTALL SALVAGED INLET COVER

P

78+00SB

79+00SB

80+00SB

81+00SB

82+00SB

78+00NB

79+00NB

80+00NB

81+00NB

82+00NB

+39NB 19' RT

WEST 18 — M3-4 24"X12", M1-4 24"X24", M6-1 21"X21"

ESTR EAST 18

R6-1R 36"X12" ONE WAY — R3-2 24"X24"

WO12-1D 24"X24"

CONSTRUCT TEMPORARY WIDENING WITHIN 4 FEET OF AN OPEN TRAFFIC LANE DURING OVERNIGHT HOURS USING SINGLE LANE CLOSURE OF INSIDE SOUTHBOUND CTH O THROUGH LANE AND INSIDE NORTHBOUND CTH O LEFT TURN LANE.

END ROAD WORK — G20-2A 48"X24"

SOUTH / COUNTY O — M3-3 24"X12", M1-5A 24"X24"

ROAD WORK AHEAD — W20-1A

PLACE SIGN 500FT EAST OF STOP BAR

WO1-6 48" X 24"

TYPE III BARRICADE

SHEET 48 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 3	SHEET 162	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025103-TC-S3.DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2021 3:31 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

STA 83+00

W012-1D
24"X24"

ESTR

TWC

ESTR

ESTR

W01-4BR

225'

SPEED LIMIT 25
R2-1
24"X30"

275'

SPEED LIMIT 25
W03-5

200'

ROAD WORK AHEAD
W20-1A

TW8

TWS

+36NB
49' LT

84+00SB

85+00SB

86+00SB

87+00SB

88+00SB

89+00SB

84+00NB

85+00NB

86+00NB

87+00NB

88+00NB

89+00NB

PILGRIM PKWY (CTH YY)

WATERTOWN PLANK RD

ESTR

ESTR

ESTR

ESTR

END ROAD WORK
G20-2A
48"X24"

ESTR
SPEED LIMIT 30
NO PARKING ANY TIME

MATCHLINE

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 49 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 3	SHEET 163	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025103-TC-S3.DWG
LAYOUT NAME - 10

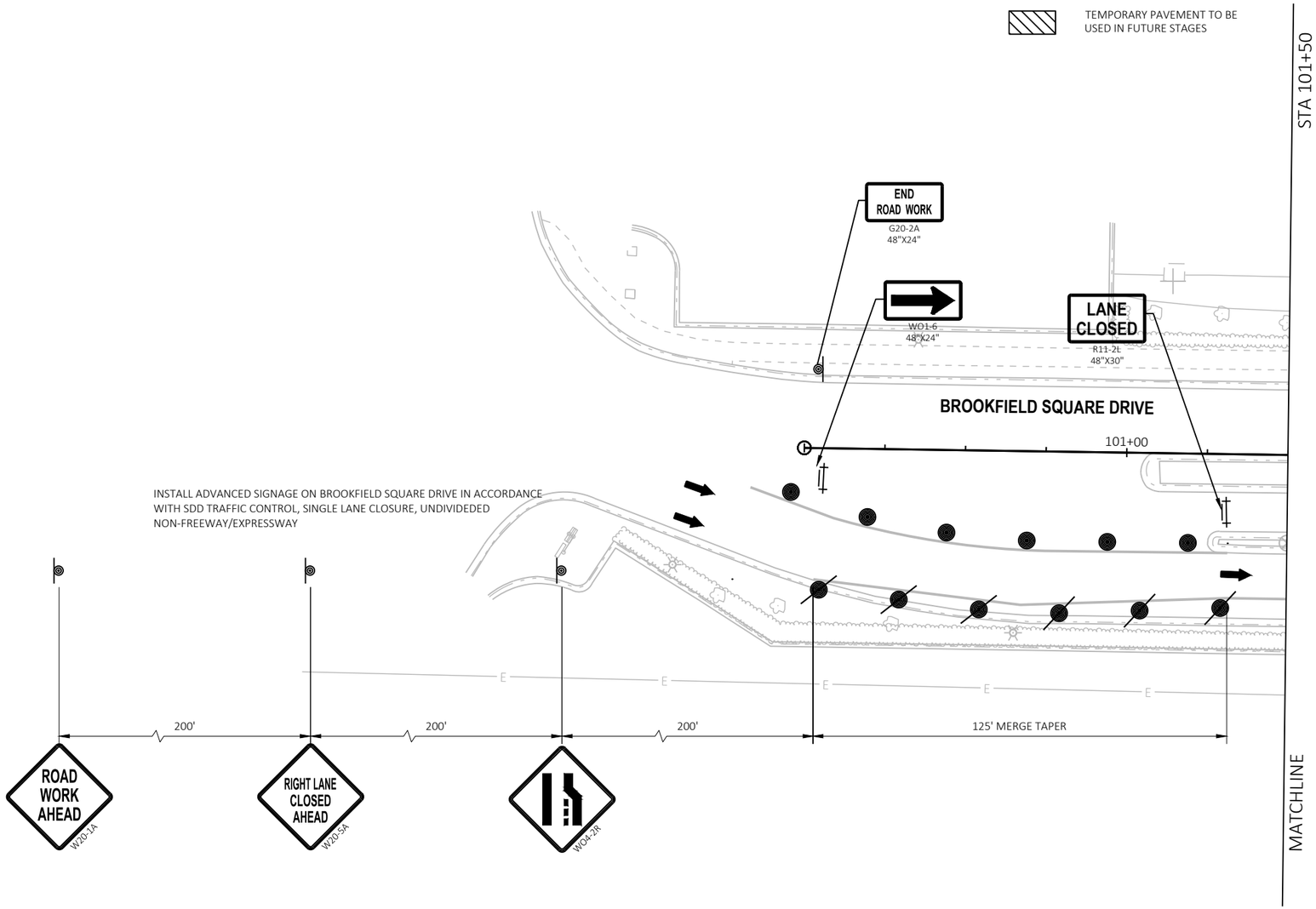
PLOT DATE : 9/24/2021 3:31 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N



PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 3	SHEET 164	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025103-TC-S3.DWG
LAYOUT NAME - 11
PLOT DATE : 9/24/2021 3:31 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

TRAFFIC CONTROL NOTES - STAGE 4

CONSTRUCTION:
- NB CTH O THROUGH LANES

TRAFFIC:
- CTH O - 2 THROUGH LANES IN EACH DIRECTION
- IH 94 WB TO CTH O NB FREE FLOW RAMP TO REMAIN OPEN EXCEPT IN STAGE 4C

PEDESTRIANS:
- SB CTH O SIDEWALKS AND CROSSWALKS PARALLEL TO CTH O OPEN AT ALL TIMES
- CONSTRUCT NB CTH O SIDEWALK BY DIVERTING PEDESTRIANS INTO CLOSED NB CTH O LANE USING APPROPRIATE PEDESTRIAN TRAFFIC CONTROL DEVICES
- ALTERNATE CLOSURE OF CROSSWALKS ACROSS CTH O AT EACH INTERSECTION SO THAT ONE CROSSWALK IS OPEN AT ALL TIMES

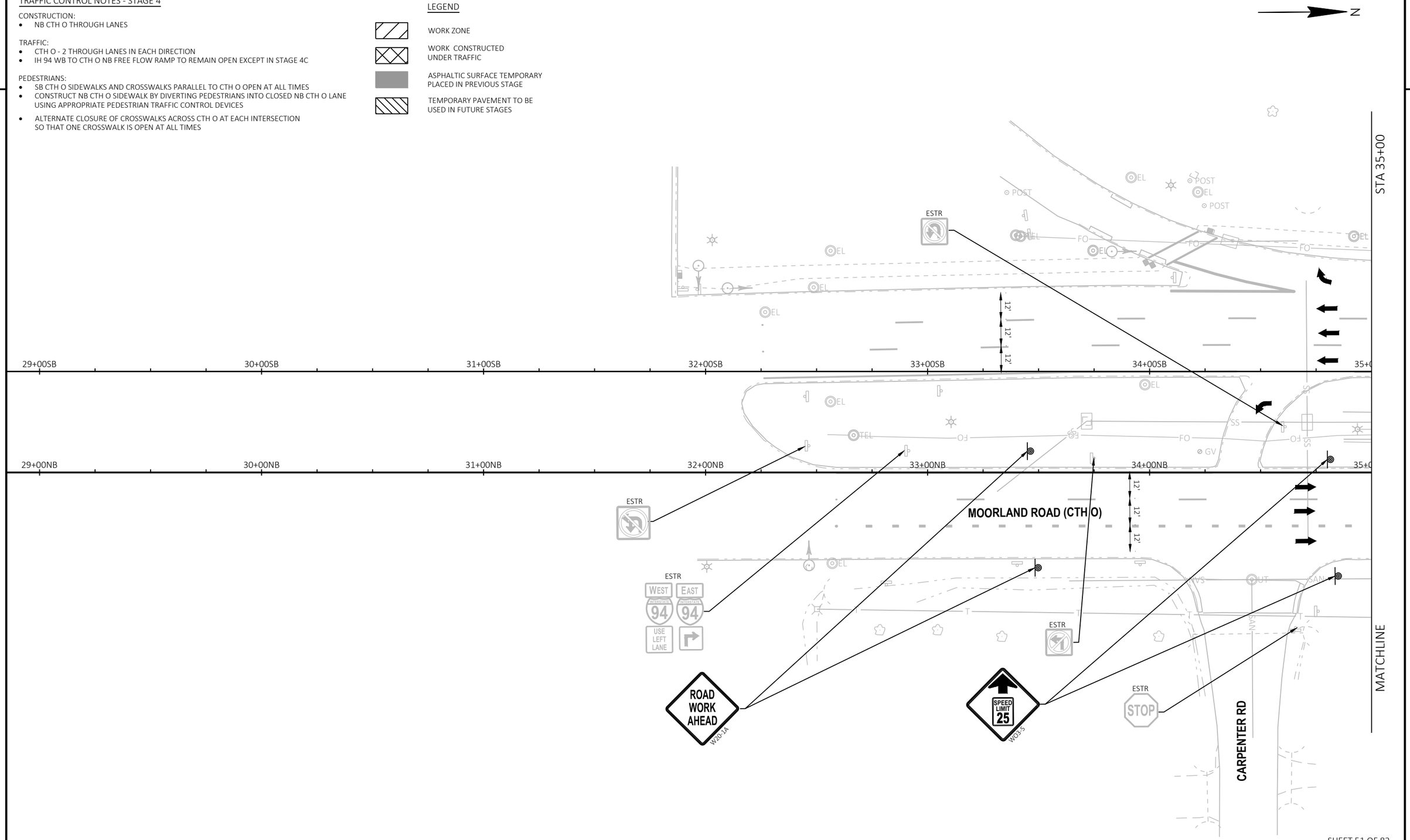
LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES



SHEET 51 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4A-4B-4C	SHEET 165	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2021 3:31 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

NOTE: ALL SIGNS NOT SHOWN TO REMAIN

N

STA 35+00

STA 41+00

END ROAD WORK
G20-2A
48"X24"

ESTR

ESTR

ESTR
EAST
INTERSTATE
94

BEGIN LEFT TURN LANE
R3-20L
24"X36"

MOORLAND ROAD (CTH O)

12'
12'
12'

36+00SB
37+00SB
38+00SB
39+00SB
40+00SB

36+00NB
37+00NB
38+00NB
39+00NB
40+00NB

+92NB
0' LT

+92NB
1' RT

+69NB
13' RT

+69NB
2' RT

+96NB
19' LT

+96NB
9' LT

+69NB
24' RT

+81NB
40' RT

+86NB
56' RT

TWL
TWS
TW4
TW8

11'
11'

MATCHLINE

MATCHLINE

ESTR
RIGHT LANE
MUST
TURN RIGHT

ESTR
EAST
INTERSTATE
94
ONLY

ON MAST ARM

SPEED LIMIT
25
R2-1
24"X30"

ESTR

ESTR
WEST
INTERSTATE
94

IH 94

ESTR

ESTR

ESTR
RIGHT TURN
NO STOP

INTERSTATE 94 RAMP

SPEED LIMIT
25
W3-5

ROAD WORK AHEAD
W20-1A

SHEET 52 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4A-4B	SHEET 166	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2021 3:31 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

STA 41+00

STA 47+00

MATCHLINE

MATCHLINE

INTERSTATE 94 RAMP

MOORLAND ROAD (CTH O)

TAPER TURN LANE WIDTH FROM 10' TO 11'

OVERHEAD SIGN SUPPORT TO REMAIN

END ROAD WORK
G20-2A
48"X24"

ESTR

ESTR WEST INTERSTATE 94

W6-4
12"X18"

MB3-2
24"X12"
M1-1
24"X24"
MB6-1
21"X21"

EAST INTERSTATE 94

WEST INTERSTATE 94

MB3-4
24"X12"
M1-1
24"X24"
MB6-2
21"X21"

+26NB
83' LT

500'

TWD

60' R

42+00SB

43+00SB

44+00SB

45+00SB

46+00SB

47+00

25'

11'

+67NB
34' LT

+70NB
23' LT

+98NB
23' LT

+02NB
22' LT

+03NB
12' LT

+04NB
2' LT

+67NB
12' LT

+68NB
10' RT

+69NB
21' RT

+04NB
9' RT

+05NB
20' RT

+53NB
27' RT

+46NB
44' RT

2458' R

2478' R

2489' R

2500' R

340' R

323' R

1967'R

TY4

TWL

TA

TW8

TW4

TSB

ESTR

ONLY

ONLY

ON MAST ARM

WO1-4BL

WO1-6
48"X24"

WO3-3

SPEED LIMIT 25
R2-1
24"X30"

R4-7
24"X30"

MB3-4
24"X12"
M1-1
24"X24"
MB6-1
21"X21"

WEST INTERSTATE 94

LANE CLOSED
R11-2L
48"X30"

SHEET 53 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4A-4B	SHEET 167	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2021 3:32 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

STA 47+00

STA 53+00

MOORLAND ROAD (CTH O)

MB3-2 24"X12" | MB3-4 24"X12"
M1-1 24"X24" | M1-1 24"X24"
MB4-20R 24"X24" | MB4-20R 24"X24"
EAST 94 INTERSTATE | WEST 94 INTERSTATE
USE RIGHT LANE | USE RIGHT LANE

WO1-4BL

REDUCE FLEXIBLE TUBULAR MARKER SPACING TO 5 FEET FROM STA 49+50 TO STA 55+20

ONE WAY
R6-2R
24"X30"

SPEED LIMIT 25
R2-1
24"X30"

25'
11'
TWL
TWS
TA
TW4
25'

48+00SB
49+00SB
50+00SB
51+00SB
52+00SB
+67NB 22' LT
+03NB 8' LT
+70NB 11' LT
+68NB 11' LT
48+00NB
49+00NB
50+00NB
51+00NB
52+00NB

REMOVE EXCESS ASPHALTIC SURFACE TEMPORARY FOR CONCRETE SLIP FORM PAVING (INCIDENTAL TO ASPHALTIC SURFACE TEMPORARY)

WO4-2R

R3-2
24"X24"

WO1-6
48"X24"

300' MERGE TAPER

MATCHLINE

MATCHLINE

SHEET 54 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4A-4B	SHEET 168	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4.DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2021 3:32 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

MATCHLINE

STA 101+50

STA 53+00

STA 59+00

BROOKFIELD SQUARE DRIVE

102+00

R6-1R
36"X12"
ONE WAY

R3-2
24"X24"

NO LEFT TURNS ALLOWED FROM EASTBOUND BROOKFIELD SQUARE DRIVE TO NORTHBOUND CTH O

REDUCE FLEXIBLE TUBULAR MARKER SPACING TO 5 FEET FROM STA 49+50 TO STA 55+20

R3-8AF
36"X30"
ONLY

W03-3

SPEED LIMIT 25
R2-1
24"X30"

MOORLAND ROAD (CTH O)

11'
11'
11'
11'

25'

25'

TWL

TW4

54+00SB
55+00SB
56+00SB
57+00SB
58+00SB

54+00NB
55+00NB
56+00NB
57+00NB
58+00NB

12NB
18' LT

ONE WAY
R6-2R
24"X30"

R3-2
24"X24"

LANE CLOSED
R11-2L
48"X30"

SPEED LIMIT 25
R2-1
24"X30"

R3-2
24"X24"

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 55 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4A-4B-4C	SHEET 169	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2021 3:32 PM

PLOT BY : BLACKWOOD, JIM

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

2

2

STA 59+00

STA65+00

ROAD WORK AHEAD
W20-1A

BROOKFIELD SQUARE MALL ENTRANCE

WO1-6
48"X24"

END ROAD WORK
G20-2A
48"X24"

N

MB3-2 24"X12"
EAST
WEST
MB3-4 24"X12"
M1-1 24"X24"
INTERSTATE 94
INTERSTATE 94
M1-1 24"X24"
MB4-20R 24"X24"
USE RIGHT LANE
USE RIGHT LANE
MB4-20R 24"X24"

R6-1R 36"X12"
ONE WAY
R3-2 24"X24"

NO LEFT TURNS ALLOWED FROM BROOKFIELD SQUARE ENTRANCE TO NORTHBOUND CTH O

LANE CLOSED
R11-2L 48"X30"

REDUCE FLEXIBLE TUBULAR MARKER SPACING TO 5 FEET FROM STA 60+35 TO STA 63+80

245' SHIFTING TAPER

MOORLAND ROAD (CTH O)

25'
11'
11'
11'
11'
121+00
122+00

TWL
TW4
TY4

60+00SB
61+00SB
62+00SB
63+00SB
64+00SB
60+00NB
61+00NB
62+00NB
63+00NB
64+00NB

+95NB
21' LT

MATCHLINE

MATCHLINE

WO1-4BR

R3-2
24"X24"

ONE WAY
R6-2R
24"X30"

LANE CLOSED
R11-2L
48"X30"

ONLY ONLY
R3-8LAF
54"X30"

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 56 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4A-4B-4C	SHEET 170	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4.DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2021 3:32 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

N

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

STA 65+00

STA 71+00

BEGIN LEFT TURN LANE
R3-20L
24"X36"

66' TURN BAY TAPER

ONE WAY
R6-2R
24"X30"

REDUCE FLEXIBLE TUBULAR MARKER SPACING TO 5 FEET FROM STA 65+00 TO STA 67+75

R3-2
24"X24"

SPEED LIMIT 25
R2-1
24"X30"

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1A

MOUNT ON QUICK RELEASE FIXED BASE
W6-4
12"X18"

BROOKFIELD SQUARE MALL ENTRANCE

MOORLAND ROAD (CTH O)

+39NB 32' LT

+05NB 43' LT

+05NB 32' LT

6:1 TAPER

25'

11'

TW8

TW4

+80NB 43' LT

TSB

+79NB 10' LT

66+00SB

67+00SB

68+00SB

69+00SB

70+00SB

71+00

66+00NB

67+00NB

68+00NB

69+00NB

70+00NB

71+00

141+00

142+00

50'R

55'R

245' SHIFTING TAPER

+38NB 10' LT

MATCHLINE

MATCHLINE

REMOVE EXCESS ASPHALTIC SURFACE TEMPORARY FOR CONCRETE SLIP FORM PAVING (INCIDENTAL TO ASPHALTIC SURFACE TEMPORARY)

R6-1R
36"X12"
ONE WAY

R3-2
24"X24"

STOP
R1-1
30"X30"

REMOVE EXCESS ASPHALTIC SURFACE TEMPORARY FOR CONCRETE SLIP FORM PAVING (INCIDENTAL TO ASPHALTIC SURFACE TEMPORARY)

STAGE PAVING OF DRIVEWAY TO MAINTAIN ACCESS TO WESTMOOR COUNTRY CLUB DRIVEWAY AT ALL TIMES

LANE CLOSED
R11-2L
48"X30"

STOP HERE ON RED
R10-6
24"X36"

R9-11
24"X12"

+29NB 40' RT

+72NB 45' RT

5" ASPHALTIC SURFACE TEMPORARY TRANSITION BETWEEN NEW PAVEMENT AND EXISTING PAVEMENT. NO NEW BASE COURSE. UTILIZE EXISTING BASE COURSE.

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4A	SHEET 171	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4.DWG
LAYOUT NAME - 07
PLOT DATE : 9/24/2021 3:32 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

STA 71+00

STA 77+00

MATCHLINE

MATCHLINE

MOORLAND ROAD (CTH O)

R9-11
24"X12"

MOUNT ON QUICK RELEASE FIXED BASE

W6-4
12"X18"

REMOVE EXCESS ASPHALTIC SURFACE TEMPORARY FOR CONCRETE SLIP FORM PAVING (INCIDENTAL TO ASPHALTIC SURFACE TEMPORARY)

R3-8LAF
54"X30"

R3-8LAF
54"X30"

REDUCE FLEXIBLE TUBULAR MARKER SPACING TO 5 FEET FROM STA 71+37 TO STA 77+05

SPEED LIMIT 25
R2-1
24"X30"

COUNTY O
M1-5A
24"X24"

+99NB
35' LT

+95NB
41' LT

+07NB
13' LT

+27NB
10' LT

TW4

TWL

TW8

TY4

772'R

11'

25'

72+00NB

73+00NB

74+00NB

75+00NB

76+00NB

WO1-6
48"X24"

SIDEWALK CLOSED CROSS HERE
R9-11A
24"X12"

SIDEWALK CLOSED
R9-9
24"X12"

STOP
R1-1
30"X30"

R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

SPEED LIMIT 25
R2-1
24"X30"

ALTERNATE WEST INTERSTATE 94
MB4-1
24"X12"
MB3-4
24"X12"
M1-1
24"X24"
MB5-1L
21"X21"

ALTERNATE CLOSURE OF DRIVEWAYS DURING CONCRETE PAVING

SIDEWALK CLOSED
R9-9
24"X12"

ALTERNATE CLOSURE OF DRIVEWAYS DURING CONCRETE PAVING

STOP
R1-1
30"X30"

R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

WO1-4BR

R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

CONSTRUCT NB LANES OF CTH O BETWEEN NORTH BROOKFIELD SQUARE MALL ENTRANCE AND NORTH PROJECT ENTRANCE DURING FIRST 21 CALENDAR DAYS OF STAGE 4

END
COUNTY O
M4-6
24"X12"
M1-5A
24"X24"
R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

M3-4
24"X12"
WEST
18
M1-4
24"X24"
M5-1L
21"X21"

EAST
18
M3-2
24"X12"
M1-4
24"X24"
M5-1R
21"X21"

SHEET 58 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4A	SHEET 172	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2021 3:32 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

PLACE SIGN 500FT WEST OF STOP BAR

SOUTH COUNTY O M3-3 24"X12" M1-5A 24"X24"

ROAD WORK AHEAD W20-1A

WO1-6 48" X 24"

TYPE III BARRICADE

WEST 18 M3-4 24"X12" M1-4 24"X24" M6-1 21"X21"

STA 77+00

MOORLAND ROAD (CTH O)

100' TAPER

78+00SB 79+00SB 80+00SB 81+00SB 82+00SB

78+00NB 79+00NB 80+00NB 81+00NB 82+00NB

+97NB 55' LT

+49NB 42' LT

+58NB 29' LT

+56NB 19' LT

+54NB 8' LT

+05NB 32' LT

+51NB 33' LT

+97NB 42' LT

+15NB 21' LT

+73NB 7' LT

+00NB 1' RT

+61NB 13' RT

+05NB 38' RT

601'R 600'R 600'R

TW8 TWL TY4 TWS TW4 TWC

11' 11' 11' 11' 25' 25'

ESTR EAST 18

CONSTRUCT DURING NON PEAK HOURS USING A SINGLE LANE CLOSURE OF NB CTH O

CONSTRUCT NB LANES OF CTH O BETWEEN NORTH BROOKFIELD SQUARE MALL ENTRANCE AND NORTH PROJECT ENTRANCE DURING FIRST 21 CALENDAR DAYS OF STAGE 4

DRIVEWAY TO BE CLOSED FOR ENTIRE STAGE

ROAD CLOSED R11-2 48"X30"

END ROAD WORK G20-2A 48"X24"

WO12-1D 24"X24"

BLUEMOUND ROAD (USH 18)

500'

END ROAD WORK G20-2A 48"X24"

N

WO1-6 48"X24"

LANE CLOSED R11-2L 48"X30"

ESTR EAST WEST 18 18

ESTR EAST 18

STA 83+00

PILGRIM PKWY (CTH YY)

BUS ONLY

ESTR

SOUTH COUNTY O M3-3 24"X12" M1-5A 24"X24"

ROAD WORK AHEAD W20-1A

PLACE SIGN 500FT EAST OF STOP BAR

MATCHLINE MATCHLINE

SHEET 59 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4A	SHEET 173	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4.DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2021 3:32 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

STA 83+00

ESTR

TWC

ESTR

ESTR

WO1-4BR

225'

SPEED LIMIT 25

R2-1
24"X30"

275'

SPEED LIMIT 25

WO3-5

200'

ROAD WORK AHEAD

W20-1A

T

EL

G

GV

OUT

OH

SS

0SB 84+00SB 85+00SB 86+00SB 87+00SB 88+00SB 89+00SB

0NB 84+00NB 85+00NB 86+00NB 87+00NB 88+00NB 89+00NB

PILGRIM PKWY (CTH YY)

WATERTOWN PLANK RD

ESTR

YIELD

ESTR

STOP

ESTR

END ROAD WORK

G20-2A
48"X24"

ESTR

SPEED LIMIT 30

NO PARKING ANY TIME

ONLY

MATCHLINE

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 60 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4A-4B-4C	SHEET 174	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4.DWG
LAYOUT NAME - 10

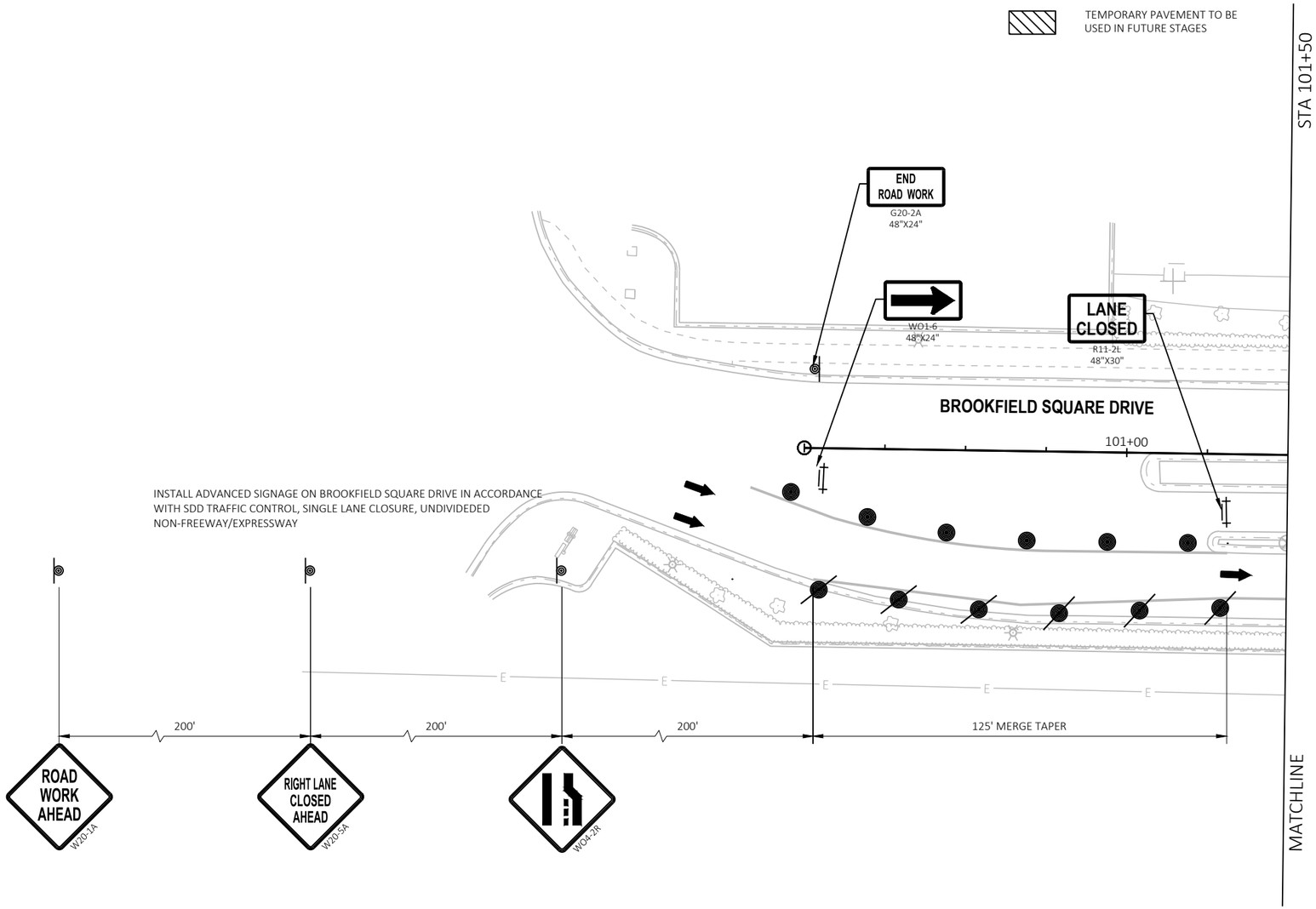
PLOT DATE : 9/24/2021 3:33 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N



SHEET 61 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4A-4B-4C	SHEET 175	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4.DWG
LAYOUT NAME - 11

PLOT DATE : 9/24/2021 3:33 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

STA 65+00

STA 71+00

MATCHLINE

MATCHLINE

BEGIN LEFT TURN LANE
R3-20L
24"X36"

ONE WAY
R6-2R
24"X30"

R3-2
24"X24"

SPEED LIMIT 25
R2-1
24"X30"

REDUCE SPACING OF FLEXIBLE TUBULAR MARKERS TO 5 FT FROM STA 65+00 TO STA 67+75

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1A

R9-11
24"X12"

MOUNT ON QUICK RELEASE FIXED BASE
W6-4
12"X18"

BROOKFIELD SQUARE MALL ENTRANCE

MOORLAND ROAD (CTH O)

66+00SB 67+00SB 68+00SB 69+00SB 70+00SB 71+00

66+00NB 67+00NB 68+00NB 69+00NB 70+00NB 71+00

25'

25'

11' 11' 11' 11' 11'

141+00

142+00

ONLY

ONE WAY
R6-1R
36"X12"

R3-2
24"X24"

STOP
R1-1
30"X30"

REMOVE EXCESS ASPHALTIC SURFACE TEMPORARY FOR CONCRETE SLIP FORM PAVING (INCIDENTAL TO ASPHALTIC SURFACE TEMPORARY)

REMOVE EXCESS ASPHALTIC SURFACE TEMPORARY FOR CONCRETE SLIP FORM PAVING (INCIDENTAL TO ASPHALTIC SURFACE TEMPORARY)

STAGE PAVING OF DRIVEWAY TO MAINTAIN ACCESS TO WESTMOOR COUNTRY CLUB DRIVEWAY AT ALL TIMES

SIDEWALK CLOSED
R9-11A
24"X12"

SIDEWALK CLOSED
R9-9
24"X12"

LANE CLOSED
R11-2L
48"X30"

SIDEWALK TO BE CLOSED FOR ALL OF STAGE 4B AND 4C SINCE THERE ARE NO ACCESS POINTS FROM ADJACENT PARCELS

5" ASPHALTIC SURFACE TEMPORARY TRANSITION BETWEEN NEW PAVEMENT AND EXISTING PAVEMENT. NO NEW BASE COURSE. UTILIZE EXISTING BASE COURSE.

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGING 4B-4C	SHEET 176	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104A-TC-S4B.DWG
LAYOUT NAME - 07
PLOT DATE : 9/24/2021 3:33 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

STA 71+00

STA 77+00

MATCHLINE

MATCHLINE

MOORLAND ROAD (CTH O)

CURB RAMP DETECTABLE WARNING FIELD YELLOW PLACED IN TEMPORARY ASPHALT AT START OF STAGE 4B BEFORE CROSSWALK IS OPEN

REDUCE SPACING OF FLEXIBLE TUBULAR MARKERS TO 5 FT FROM STA 71+37 TO STA 73+11

REDUCE SPACING OF DRUMS TO 5 FT FROM STA 73+11 TO STA 78+00

MOUNT ON QUICK RELEASE FIXED BASE

W6-4 12"X18"

ONE WAY R6-2R 24"X30"

ONE WAY R6-2R 24"X30"

ONLY ONLY R3-8LAF 54"X30"

BEGIN LEFT TURN LANE R3-20L 24"X36"

SPEED LIMIT 25 R2-1 24"X30"

SPEED LIMIT 25 R2-1 24"X30"

ONE WAY R6-2R 24"X30"

COUNTY O M1-5A 24"X24"

11' 11' 11' 11'

+11NB 34' LT

+13NB 12' LT

+25NB 27' LT

+16NB 0' LT

+46NB 6' LT

+41NB 11' RT

+53NB 0' LT

+56NB 36' RT

72+00SB 73+00SB 74+00SB 75+00SB 76+00SB

72+00NB 73+00NB 74+00NB 75+00NB 76+00NB

TY4 TYS TWL TW8 TWS

25' 25'

12' 12'

11'

SIDEWALK CLOSED R9-9 24"X12"

R6-1R 36"X12" ONE WAY R3-2 24"X24"

R3-1 24"X24"

ONLY WHEN DRIVEWAY IS CLOSED

WO1-4BR

TEMPORARY PEDESTRIAN SURFACE PLYWOOD

TEMPORARY PEDESTRIAN CURB RAMP PERPENDICULAR SEE STANDARD DETAIL DRAWING

SEE CONSTRUCTION DETAIL FOR DETAILS OF TEMPORARY PEDESTRIAN CROSSINGS AT DRIVEWAYS

TEMPORARY PEDESTRIAN CURB RAMP PERPENDICULAR SEE STANDARD DETAIL DRAWING

TEMPORARY PEDESTRIAN SURFACE PLYWOOD

750'R

711'R

ROAD CLOSED R11-2 48"X30"

ALTERNATE CLOSURE WITH OTHER MCDONALDS DRIVEWAY

ALTERNATE WEST MB4-1 24"X12" MB3-4 24"X12" ALTERNATE 94 M1-1 24"X24" MB5-1L 21"X21"

STAGE SIDEWALK CONSTRUCTION BY DIVERTING PEDESTRIANS INTO A CLOSED LANE OF SOUTHBOUND CTH O DURING STAGE 2

M3-4 24"X12" M1-4 24"X24" M5-1L 21"X21" WEST 18 M3-2 24"X12" M1-4 24"X24" M5-1R 21"X21" EAST 18

ROAD CLOSED R11-2 48"X30"

ALTERNATE CLOSURE WITH OTHER MCDONALDS DRIVEWAY

BEGIN RIGHT TURN LANE R3-20R 24"X36"

WO12-1D 24"X24"

END COUNTY O M4-6 24"X12" M1-5A 24"X24"

SHEET 63 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGING 4B-4C	SHEET 177	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104A-TC-S4B.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2021 3:33 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

PLACE SIGN 500FT WEST OF STOP BAR

SOUTH / COUNTY O — M3-3 24"X12", M1-5A 24"X24"

ROAD WORK AHEAD — W20-1A

WEST 18 — M3-4 24"X12", M1-4 24"X24", M6-1 21"X21"

REDUCE SPACING OF DRUMS TO 5 FT FROM STA 73+11 TO STA 78+00

WO1-6 48"X24"

ONE WAY — R6-2R 24"X30"

STA 77+00

MOORLAND ROAD (CTH O)

25'

78+00SB | 79+00SB | 80+00SB | 81+00SB | 82+00SB

TWL | TY4 | TW8

12' | 12' | 11' | 11'

78+00NB | 79+00NB | 80+00NB | 81+00NB | 82+00NB

TWS | +73NB 22' RT | TWL | TW8 | TWC | TA | TA

MATCHLINE

R6-1R 36"X12" ONE WAY — R3-2 24"X24"

MWEL | MH | MWEL | MWEL | MWEL | MWEL | MWEL

ESTR EAST 18

50'

BLUEMOUND ROAD (USH 18)

ONLY | ONLY | ONLY | ONLY

END ROAD WORK — G20-2A 48"X24"

N

BLUEMOUND ROAD (USH 18)

50'

LANE CLOSED — R11-2L 48"X30"

ESTR EAST WEST 18 18

ESTR EAST 18

PILGRIM PKWY (CTH YY)

BUS | ONLY

ESTR

SOUTH / COUNTY O — M3-3 24"X12", M1-5A 24"X24"

ROAD WORK AHEAD — W20-1A

PLACE SIGN 500FT EAST OF STOP BAR

WO1-6 48" X 24"

TYPE III BARRICADE

STA 83+00

MATCHLINE

END ROAD WORK — G20-2A 48"X24"

SHEET 64 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGING 4B-4C	SHEET 178	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104A-TC-S4B.DWG
LAYOUT NAME - 09

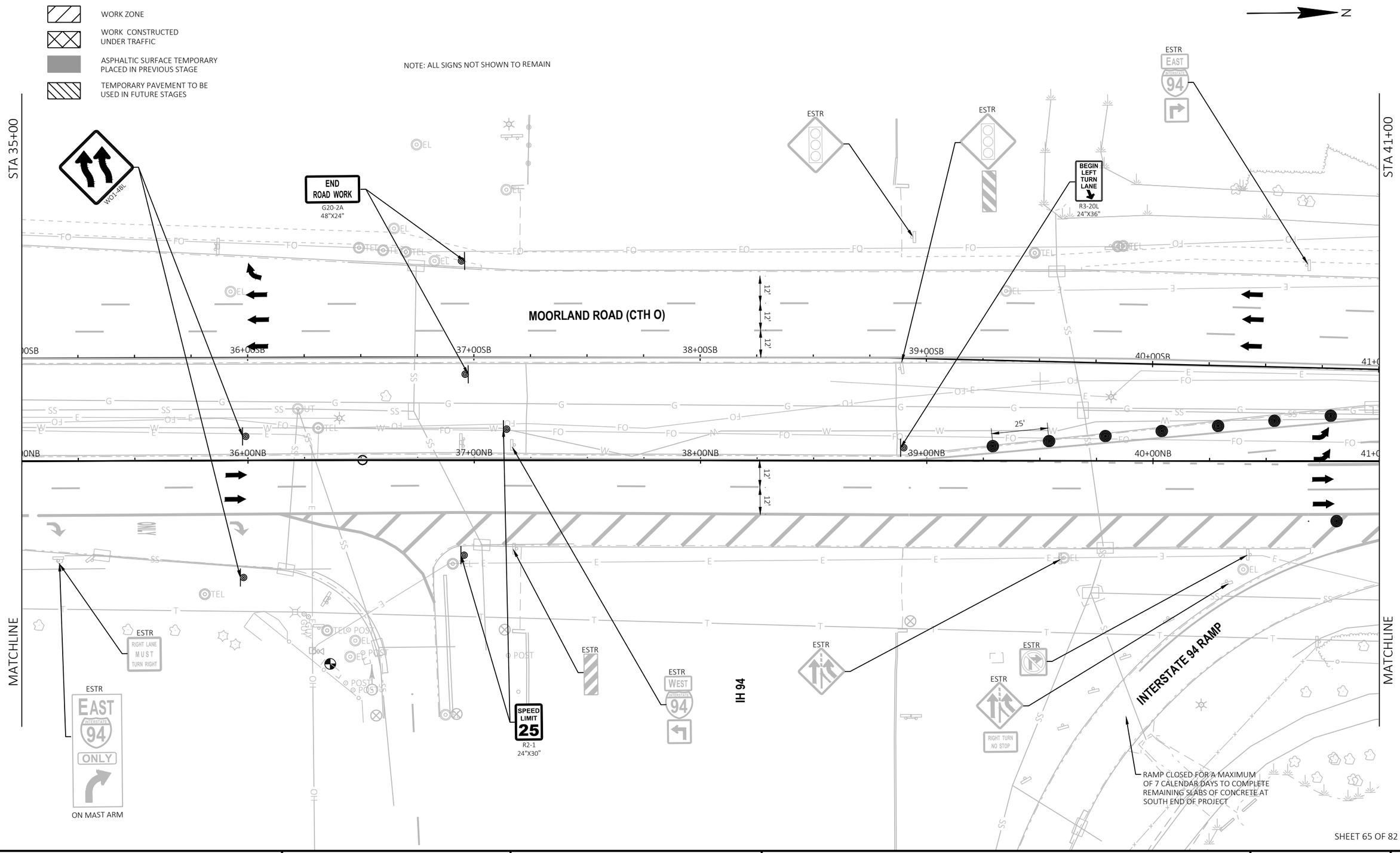
PLOT DATE : 9/24/2021 3:33 PM | PLOT BY : BLACKWOOD, JIM | PLOT NAME : | PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

NOTE: ALL SIGNS NOT SHOWN TO REMAIN



SHEET 65 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4C	SHEET 179	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4C.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2021 3:33 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

STA 41+00

STA 47+00

MATCHLINE

MATCHLINE

INTERSTATE 94 RAMP

MOORLAND ROAD (CTH O)

500'

ESTR

ESTR

ESTR

ESTR

ESTR

END ROAD WORK
G20-2A
48"X24"

MB3-4
24"X12"
M1-1
24"X24"
MB6-2
21"X21"
WEST
INTERSTATE
94

42+00SB

43+00SB

44+00SB

45+00SB

46+00SB

42+00NB

43+00NB

44+00NB

45+00NB

46+00NB

25'

11'

SPEED LIMIT
25
R2-1
24"X30"

R4-7
24"X30"

MB3-4
24"X12"
M1-1
24"X24"
MB6-1
21"X21"
WEST
INTERSTATE
94

W03-3

W01-4BL

ESTR
ONLY
ONLY
ON MAST ARM

LANE CLOSED
R11-2L
48"X30"

CONSTRUCT DURING OVERNIGHT HOURS USING A SINGLE LANE CLOSURE OF THE OUTSIDE LANE OF NB CTH O. CLOSE WB IH 94 TO NB CTH O RAMP FOR A MAXIMUM OF 7 CALENDAR DAYS TO CONSTRUCT REMAINING SLABS.

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4C	SHEET 180	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4C.DWG
LAYOUT NAME - 03
PLOT DATE : 9/24/2021 3:33 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

STA 47+00

STA 53+00

MB3-2 24"X12"
EAST
WEST
MB3-4 24"X12"
M1-1 24"X24"
EISENHOWER 94 EISENHOWER
M1-1 24"X24"
MB4-20R 24"X24"
USE RIGHT LANE
USE RIGHT LANE
MB4-20R 24"X24"

W01-4BL

REDUCE SPACING OF DRUMS TO 5 FT FROM STA 49+50 TO STA 55+20

SPEED LIMIT 25
R2-1 24"X30"

MOORLAND ROAD (CTH O)

11'
11'
11'
11'

25'
25'

48+00SB
49+00SB
50+00SB
51+00SB
52+00SB
+67NB 22' LT
TW4
+72NB 22' LT
48+00NB
49+00NB
50+00NB
51+00NB
52+00NB

R3-2 24"X24"

ONE WAY
R6-2R 24"X30"

MATCHLINE

MATCHLINE

SHEET 67 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 4C	SHEET 181	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025104-TC-S4C.DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2021 3:34 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

TRAFFIC CONTROL NOTES - STAGE 5

CONSTRUCTION:
- REMOVE STAGE 4 CROSSOVERS
- CONSTRUCT CTH O MEDIAN AND REMAINING LEFT TURN LANES
- ALTERNATE CLOSURE OF INTERSECTIONS, GAP INTERSECTIONS OPEN TO TRAFFIC

TRAFFIC:
- CTH O - 2 THROUGH LANES IN EACH DIRECTION
- IH 94 WB TO CTH O NB FREE FLOW RAMP TO REMAIN OPEN
- STAGE 5A MAXIMUM DURATION IS 10 CALENDAR DAYS OR LESS

PEDESTRIANS:
- ALL SIDEWALKS AND CROSSWALKS PARALLEL TO CTH O OPEN AT ALL TIMES
- ALTERNATE CLOSURE OF CROSSWALKS ACROSS CTH O AT EACH INTERSECTION SO THAT ONE CROSSWALK IS OPEN AT ALL TIMES

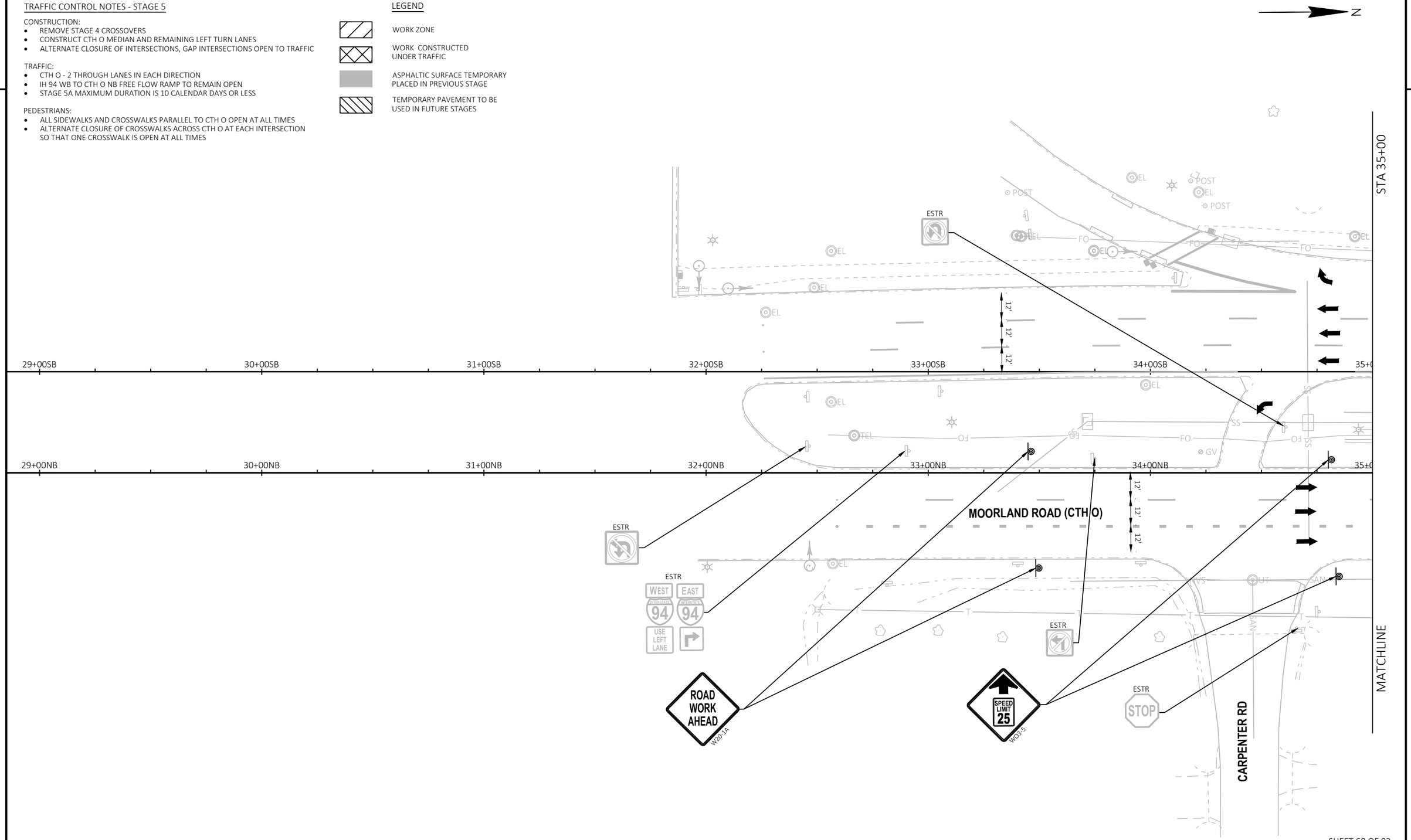
LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES



SHEET 68 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 5A-5B	SHEET 182	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2021 3:34 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

NOTE: ALL SIGNS NOT SHOWN TO REMAIN

REMOVE TYPE S INLET COVER
INSTALL INLET COVER SALVAGED IN STAGE 3

WORK WITHIN 4 FEET OF AN OPEN TRAFFIC LANE TO BE CONSTRUCTED AT NIGHT USING A SINGLE LANE CLOSURE OF INSIDE LANE OF NORTHBOUND AND SOUTHBOUND CTH O

N

STA 35+00

STA 41+00

END ROAD WORK
G20-2A
48"X24"

BEGIN LEFT TURN LANE
R3-20L
24"X36"

ESTR

ESTR

ESTR
EAST
INTERSTATE
94

MOORLAND ROAD (CTH O)

12'
12'
12'

00SB
36+00SB
37+00SB
38+00SB
39+00SB
40+00SB
25'
41+0

SS

00NB
36+00NB
37+00NB
38+00NB
40+00NB
41+0

+92NB
0' RT

+92NB
12' RT

+00NB

+33NB
12' LT

25'

+67NB
24' RT

+67NB
46' RT

P

12'
12'

MATCHLINE

MATCHLINE

ESTR
RIGHT LANE
MUST
TURN RIGHT

ESTR
EAST
INTERSTATE
94
ONLY

ON MAST ARM

SPEED LIMIT
25
R2-1
24"X30"

ESTR

ESTR
WEST
INTERSTATE
94

IH 94

ESTR

ESTR

ESTR

RIGHT TURN
NO STOP

INTERSTATE 94 RAMP

SPEED LIMIT
25
W2-5

ROAD WORK AHEAD
W20-1A

SHEET 69 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 5A-5B	SHEET 183	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2021 3:34 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

STA 41+00

STA 47+00

MATCHLINE

MATCHLINE

INTERSTATE 94 RAMP

MOORLAND ROAD (CTH O)

WORK WITHIN 4 FEET OF AN OPEN TRAFFIC LANE TO BE CONSTRUCTED AT NIGHT USING A SINGLE LANE CLOSURE OF INSIDE LANE OF NORTHBOUND AND SOUTHBOUND CTH O

ESTR

ESTR

ESTR

END ROAD WORK
G20-2A
48"X24"

MB3-4
24"X12"
M1-1
24"X24"
MB6-2
21"X21"

N

500'

12'
12'
12'
12'
11'
2'

25'
25'
25'

11'
11'
11'
11'

42+00SB
43+00SB
44+00SB
45+00SB
46+00SB
47+00

42+00NB
43+00NB
44+00NB
45+00NB
46+00NB

+ 81NB
24" RT

+ 70NB
24" RT

+ 47NB
41" RT

REPLACE STORM SEWER PIPE DURING OVERNIGHT HOURS BY CLOSING NB LEFT TURN LANES

REINSTALL SALVAGED OVERHEAD SIGN SUPPORT

WEST
INTERSTATE
94

MB3-4
24"X12"
M1-1
24"X24"
MB6-1
21"X21"

LEFT LANE CLOSED AHEAD
W20-5SA

MB3-4
24"X12"
M1-1
24"X24"
MB6-1
21"X21"

R4-7
24"X30"

R3-4
24"X24"

SPEED LIMIT 25
R2-1
24"X30"

W03-3

TY4
TA
TWS
TWL

WORK WITHIN 4 FEET OF AN OPEN TRAFFIC LANE TO BE CONSTRUCTED AT NIGHT USING A SINGLE LANE CLOSURE OF INSIDE LANE OF NORTHBOUND AND SOUTHBOUND CTH O

SHEET 70 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 5A-5B	SHEET 184	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2021 3:34 PM

PLOT BY : BLACKWOOD, JIM

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N

STA 47+00

STA 53+00

MB3-2 24"X12"
M1-1 24"X24"
MB4-20R 24"X24"
EAST INTERSTATE 94 USE RIGHT LANE
WEST INTERSTATE 94 USE RIGHT LANE
MB3-4 24"X12"
M1-1 24"X24"
MB4-20R 24"X24"

W01-4BL

ONE WAY
R6-2R 24"X30"

SPEED LIMIT 25
R2-1 24"X30"

LANE CLOSED
R11-2L 48"X30"

MOORLAND ROAD (CTH O)

11'
11'
11'
11'

25'
25'

48+00SB
49+00SB
50+00SB
51+00SB
52+00SB
53+00

48+00NB
49+00NB
50+00NB
51+00NB
52+00NB
53+

TY4
TWS
TWL
TA

+76NB
3' RT

245' MERGE TAPER

MATCHLINE

MATCHLINE

WORK WITHIN 4 FEET OF AN OPEN TRAFFIC LANE TO BE CONSTRUCTED AT NIGHT USING A SINGLE LANE CLOSURE OF INSIDE LANE OF NORTHBOUND AND SOUTHBOUND CTH O

R3-2 24"X24"

W01-2L

SHEET 71 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 5A-5B	SHEET 185	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5.DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2021 3:34 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

MATCHLINE

STA 101+50

STA 53+00

STA 59+00

BROOKFIELD SQUARE DRIVE

102+00

103+00

ONE WAY
R6-1R
36"X12"

R3-2
24"X24"

ONE WAY
R6-2R
24"X30"

ROAD CLOSED
R11-2
48"X30"

ONLY
R3-8AF
36"X30"

MOORLAND ROAD (CTH O)

11'

11'

25'

54+00SB

55+00SB

56+00SB

57+00SB

58+00SB

54+00NB

55+00NB

56+00NB

57+00NB

58+00NB

TY4

TWL

+21NB
14' RT

R3-2
24"X24"

ROAD CLOSED
R11-2
48"X30"

LANE CLOSED
R11-2L
48"X30"

SPEED LIMIT
25
R2-1
24"X30"

MATCHLINE

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 72 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 5A-5B	SHEET 186	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2021 3:34 PM

PLOT BY : BLACKWOOD, JIM

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

ROAD WORK AHEAD
W20-1A

BROOKFIELD SQUARE MALL ENTRANCE

WO1-6
48"X24"

END ROAD WORK
G20-2A
48"X24"

NO LEFT TURNS ALLOWED FROM BROOKFIELD SQUARE ENTRANCE TO NORTHBOUND CTH O

MB3-2 24"X12" EAST MB3-4 24"X12"
M1-1 24"X24" INTERSTATE 94 INTERSTATE 94 M1-1 24"X24"
MB4-20R 24"X24" USE RIGHT LANE USE RIGHT LANE MB4-20R 24"X24"

R6-1R
36"X12"
ONE WAY
R3-2
24"X24"

LANE CLOSED
R11-2L
48"X30"

LANE CLOSED
R11-2L
48"X30"

LANE CLOSED
R11-2L
48"X30"

ONE WAY
R6-2R
24"X30"

STA 59+00

STA65+00

MOORLAND ROAD (CTH O)

121+00

122+00

25'

11'

11'

60+00SB 61+00SB 62+00SB 63+00SB 64+00SB

60+00NB 61+00NB 62+00NB 63+00NB 64+00NB

TY4

TWL

R3-2
24"X24"

LANE CLOSED
R11-2L
48"X30"

ONLY ONLY
R3-8LAF
54"X30"

MATCHLINE

MATCHLINE

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 73 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 5A-5B	SHEET 187	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5.DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2021 3:35 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

STA 65+00

STA 71+00

MATCHLINE

MATCHLINE

ONE WAY
R6-2R
24"X30"

ROAD CLOSED
R11-2
48"X30"

R3-2
24"X24"

LANE CLOSED
R11-2L
48"X30"

SPEED LIMIT 25
R2-1
24"X30"

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1A

ADJUST INLET
INSTALL SALVAGED COVER

R4-7
24"X30"

ALTERNATE CLOSURE OF CROSSWALKS ACROSS
CTH O AT INTERSECTION
SEE CONSTRUCTION DETAIL

WO1-6
48"X24"

BROOKFIELD SQUARE MALL ENTRANCE

MOORLAND ROAD (CTH O)

25'

11'

11'

R3-4
24"X24"

66+00SB

67+00SB

68+00SB

69+00SB

70+00SB

66+00NB

67+00NB

68+00NB

69+00NB

70+00NB

141+00

142+00

8:1 TAPER

+05NB
3' RT

+05NB
14' RT

TY4

TW8

TWL

TW4

P

+17NB
14' RT

BEGIN LEFT TURN LANE
R3-20L
24"X36"

88' TURN BAY TAPER

ESTR
WRONG WAY

STOP
R1-1
30"X30"

WORK WITHIN 4 FEET OF AN OPEN TRAFFIC LANE TO BE CONSTRUCTED AT NIGHT USING A SINGLE LANE CLOSURE OF NORTHBOUND CTH O LEFT TURN LANE

R3-4
24"X24"

CONSTRUCT PAVEMENT THROUGH INTERSECTION
USING A 5 CALENDAR DAY CLOSURE OF MEDIAN
THROUGH INTERSECTION DURING STAGE 5B
SEE STAGE 5B MEDIAN CLOSURE TRAFFIC CONTROL SHEETS

ONLY

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 5A-5B	SHEET 188	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5.DWG
LAYOUT NAME - 07
PLOT DATE : 9/24/2021 3:35 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

N

STA 71+00

STA 77+00

MATCHLINE

MATCHLINE

ALTERNATE CLOSURE OF CROSSWALKS ACROSS CTH O AT INTERSECTION SEE CONSTRUCTION DETAIL

WORK WITHIN 4 FEET OF AN OPEN TRAFFIC LANE TO BE CONSTRUCTED AT NIGHT USING A SINGLE LANE CLOSURE OF SOUTHBOUND CTH O LEFT TURN LANE

STAGE 5A TRAFFIC CONFIGURATION SHALL ONLY BE IN PLACE FOR A MAXIMUM OF 10 CALENDAR DAYS

INSTALL SALVAGED COVER

R3-4
24"X24"

R3-4
24"X24"

LANE CLOSED
R11-2L
48"X30"

ONLY ONLY
R3-8LAF
54"X30"

BEGIN LEFT TURN LANE
R3-20L
24"X36"

SPEED LIMIT 25
R2-1
24"X30"

COUNTY O
M1-5A
24"X24"

MOORLAND ROAD (CTH O)

11'
11'
11'

25'

72+00SB
73+00SB
74+00SB
75+00SB
76+00SB

72+00NB
73+00NB
74+00NB
75+00NB
76+00NB

TW4

TY4

TWL

TA

ONE WAY
R6-2R
24"X30"

R4-7
24"X30"

WO1-6
48"X24"

STOP
R1-1
30"X30"

R3-8EF
60"x48"
USE SIZE 4 SIGN
WITH 2 16"X16" FLAGS

STOP
R1-1
30"X30"

ONE WAY
R6-2R
24"X30"

LANE CLOSED
R11-2L
48"X30"

ONE WAY
R6-2R
24"X30"

EAST
18
M3-2
24"X12"
M1-4
24"X24"
M5-1R
21"X21"

ONE WAY
R6-2R
24"X30"

WO1-4BL

M4-6
24"X12"
M1-5A
24"X24"
END
COUNTY O

ONE WAY
R6-2R
24"X30"

POST
POST

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 75 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING-5A	SHEET 189	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2021 3:35 PM

PLOT BY : BLACKWOOD, JIM

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

PLACE SIGN 500 FT
WEST OF STOP BAR

SOUTH
COUNTY
O
M3-3
24"X12"
M1-5A
24"X24"

ROAD
WORK
AHEAD
W20-1A

WO1-6
48"X24"

STA 77+00

MOORLAND ROAD (CTH O)

25'
11'
11'

78+00SB
79+00SB
80+00SB
81+00SB
82+00SB

78+00NB
79+00NB
80+00NB
81+00NB
82+00NB

TY4
TWL
TWC
TWS
TA

+00NB
15' RT

ONE
WAY
R6-2R
24"X30"

WORK WITHIN 4 FEET OF AN OPEN TRAFFIC LANE TO BE
CONSTRUCTED AT NIGHT USING A SINGLE LANE CLOSURE OF
NORTHBOUND CTH O LEFT TURN LANE

STAGE 5A TRAFFIC CONFIGURATION SHALL ONLY
BE IN PLACE FOR A MAXIMUM OF 10 CALENDAR DAYS

END
ROAD WORK
G20-2A
48"X24"

500'

BLUEMOUND ROAD (USH 18)

END
ROAD WORK
G20-2A
48"X24"

N

ESTR
EAST WEST
18 18

ESTR
EAST
18

LANE
CLOSED
R11-2L
48"X30"

25'

PILGRIM PKWY (CTH YY)

ESTR

WO1-6
48"X24"

STA 83+00

MATCHLINE

MATCHLINE

SOUTH
COUNTY
O
M3-3
24"X12"
M1-5A
24"X24"

ROAD
WORK
AHEAD
W20-1A

PLACE SIGN 500 FT
EAST OF STOP BAR

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 76 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING-5A	SHEET 190	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5.DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2021 3:35 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

STA 83+00

TWC

W01-4BR

225'

SPEED LIMIT 25

R2-1
24"X30"

275'

SPEED LIMIT 25

W03-5

200'

ROAD WORK AHEAD

W20-1A

84+00SB 85+00SB 86+00SB 87+00SB 88+00SB 89+00SB

84+00NB 85+00NB 86+00NB 87+00NB 88+00NB 89+00NB

PILGRIM PKWY (CTH YY)

WATERTOWN PLANK RD

ESTR

YIELD

ESTR

STOP

ESTR

END ROAD WORK

G20-2A
48"X24"

ESTR

SPEED LIMIT 30

NO PARKING

ONLY

MATCHLINE

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 77 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 5A-5B	SHEET 191	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5.DWG
LAYOUT NAME - 10

PLOT DATE : 9/24/2021 3:35 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

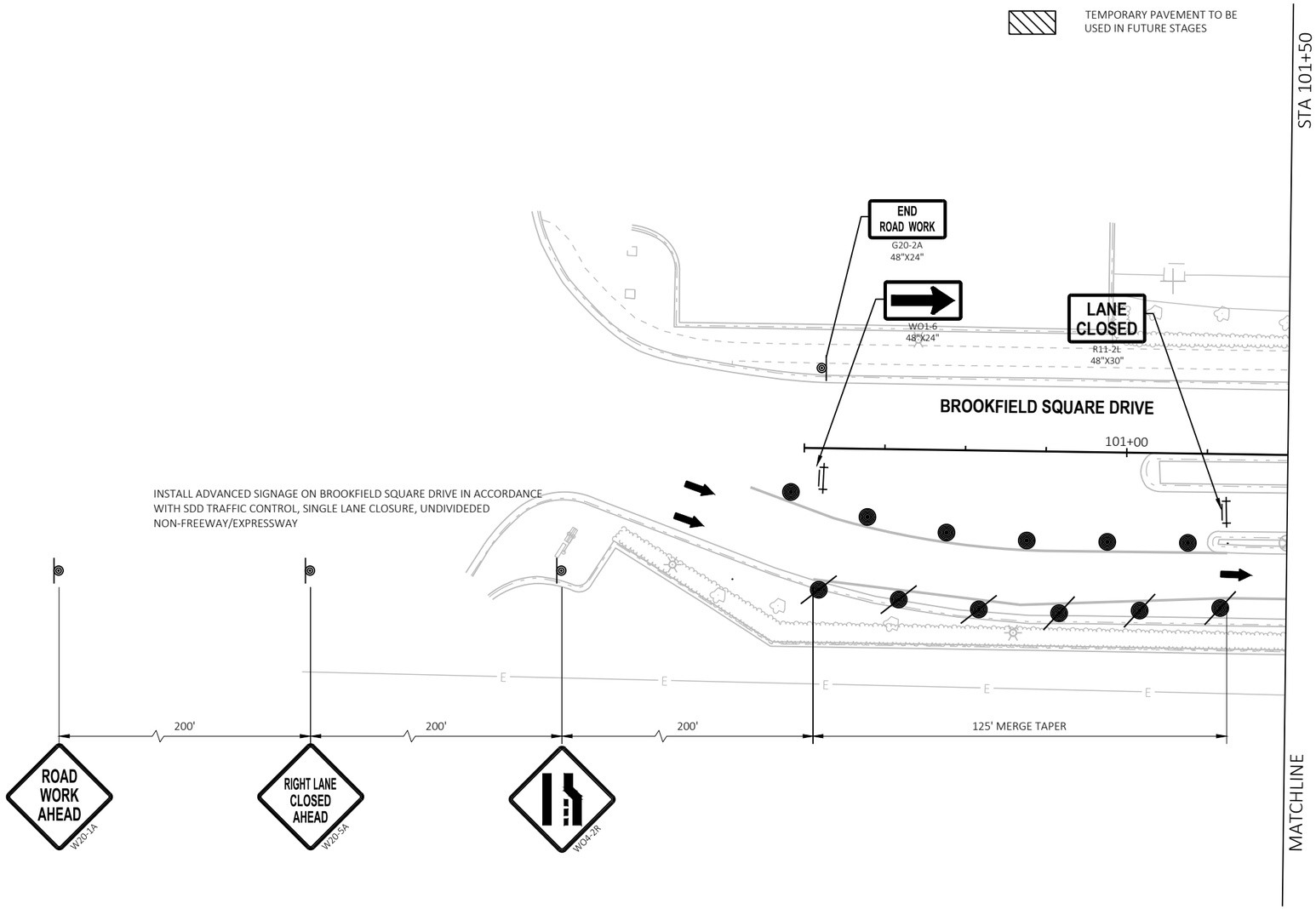
WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

N



SHEET 78 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING - STAGE 5A-5B	SHEET 192	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5.DWG
LAYOUT NAME - 11

PLOT DATE : 9/24/2021 3:35 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

STA 71+00

STA 77+00

MOORLAND ROAD (CTH O)

R3-4
24"X24"

ALTERNATE CLOSURE OF CROSSWALK ACROSS CTH O AT INTERSECTION SEE CONSTRUCTION DETAIL

R3-4
24"X24"

WORK WITHIN 4 FEET OF AN OPEN TRAFFIC LANE TO BE CONSTRUCTED AT NIGHT USING A SINGLE LANE CLOSURE OF SOUTHBOUND CTH O LEFT TURN LANE

LANE CLOSED
R11-2L
48"X30"

ONLY ONLY
R3-8LAF
54"X30"

BEGIN LEFT TURN LANE
R3-20L
24"X36"

SPEED LIMIT 25
R2-1
24"X30"

COUNTY O
M1-5A
24"X24"

11'
11'
11'

25'

72+00SB
73+00SB
74+00SB
75+00SB
76+00SB

72+00NB
73+00NB
74+00NB
75+00NB
76+00NB

12'
12'

R4-7
24"X30"

ALTERNATE WEST INTERSTATE 94
MB4-1 24"X12"
MB3-4 24"X12"
M1-1 24"X24"
MB5-1L 21"X21"

RIGHT LANE MUST TURN RIGHT
R3-7R
30"X30"

BEGIN LEFT TURN LANE
R3-20L
24"X36"

WEST 18
M3-4 24"X12"
M1-4 24"X24"
M5-1L 21"X21"

EAST 18
M3-2 24"X12"
M1-4 24"X24"
M5-1R 21"X21"

M4-6 24"X12"
END COUNTY O
M1-5A 24"X24"

W12-1D
24"X24"

POST
POST

MATCHLINE

MATCHLINE

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 79 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING-STAGE 5B	SHEET 193	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5B.DWG
LAYOUT NAME - 08
PLOT DATE : 9/24/2021 3:36 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

PLACE SIGN 500 FT
WEST OF STOP BAR

SOUTH M3-3 24"X12"
COUNTY O M1-5A 24"X24"
ROAD WORK AHEAD W20-1A

WO1-6 48"X24"

END ROAD WORK G20-2A 48"X24"

N

BLUEMOUND ROAD (USH 18)

500'

ESTR EAST WEST 18 18

ESTR EAST 18

LANE CLOSED R11-2L 48"X30"

STA 77+00

STA 83+00

MOORLAND ROAD (CTH O)

25'

11'

11'

R3-4 24"X24"

R4-7 24"X30"

0SB 78+00SB 79+00SB 80+00SB 81+00SB 82+00SB

0NB 78+00NB 79+00NB 80+00NB 81+00NB 82+00NB 83+0

PILGRIM PKWY (CTH YY)

TWC

ONLY

BUS

MATCHLINE

MATCHLINE

ESTR EAST 18

ESTR

WO1-6 48"X24"

END ROAD WORK G20-2A 48"X24"

BLUEMOUND ROAD (USH 18)

SOUTH M3-3 24"X12"
COUNTY O M1-5A 24"X24"
ROAD WORK AHEAD W20-1A

PLACE SIGN 500 FT
EAST OF STOP BAR

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 80 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	TRAFFIC CONTROL-STAGING-STAGE 5B	SHEET 194	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5B.DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2021 3:36 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

STA 65+00

STA 71+00

MATCHLINE

MATCHLINE

BROOKFIELD SQUARE MALL ENTRANCE

MOORLAND ROAD (CTH O)

ONE WAY
R6-2R
24"X30"

ROAD CLOSED
R11-2
48"X30"

R3-2
24"X24"

LANE CLOSED
R11-2L
48"X30"

SPEED LIMIT 25
R2-1
24"X30"

ALTERNATE CLOSURE OF CROSSWALKS ACROSS CTH O AT INTERSECTION
SEE CONSTRUCTION DETAIL

WO1-6
48"X24"

ONE WAY
R6-2R
24"X30"

ROAD CLOSED
R11-2
48"X30"

LANE CLOSED
R11-2L
48"X30"

WO1-6
48"X24"

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1A

R6-1R
36"X12"
ONE WAY

R3-2
24"X24"

25'

11'

11'

66+00SB

67+00SB

68+00SB

69+00SB

70+00SB

66+00NB

67+00NB

68+00NB

69+00NB

70+00NB

71+00

141+00

142+00

LANE CLOSED
R11-2L
48"X30"

STOP
R1-1
30"X30"

R6-1R
36"X12"
ONE WAY

R3-2
24"X24"

ESTR
WRONG WAY

R3-18
30"X30"

LANE CLOSED
R11-2L
48"X30"

CONSTRUCT PAVEMENT THROUGH INTERSECTION
USING A 5 CALENDAR DAY CLOSURE OF MEDIAN
THROUGH INTERSECTION

WO1-6
48"X24"

ROAD CLOSED
R11-2
48"X30"

ONE WAY
R6-2R
24"X30"

R6-1R
36"X12"
ONE WAY

R3-2
24"X24"

LEGEND

WORK ZONE

WORK CONSTRUCTED UNDER TRAFFIC

ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

NOTES:
1. TOTAL DURATION OF MEDIAN CLOSURE SHALL BE 5 CALENDAR DAYS OR LESS
2. ALL STAGE 5 PAVEMENT MARKINGS APPLIED PRIOR TO MEDIAN CLOSURE. SEE STAGE 5A AND STAGE 5B TRAFFIC CONTROL SHEETS FOR MORE DETAILS.
3. ALL PAVEMENT MARKINGS TO REMAIN FOR 5 DAY CLOSURE

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	STAGE 5B MEDIAN CLOSURE	SHEET 195	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5B MEDIAN.DWG
LAYOUT NAME - 07
PLOT DATE : 9/24/2021 3:36 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

N

STA 71+00

STA 77+00

MATCHLINE

MATCHLINE

LANE CLOSED
R11-2L
48"X30"

LANE CLOSED
R11-2L
48"X30"

LANE CLOSED
R11-2L
48"X30"

ONLY
R3-8AF
36"X30"

R3-18
30"X30"

SPEED LIMIT 25
R2-1
24"X30"

COUNTY O
M1-5A
24"X24"

MOORLAND ROAD (CTH O)

11'
11'

25'

72+00SB
73+00SB
74+00SB
75+00SB
76+00SB

72+00NB
73+00NB
74+00NB
76+00NB

11'
11'
11'

BEGIN LEFT TURN LANE
R3-20L
24"X36"

M3-4
24"X12"
M1-4
24"X24"
M5-1L
21"X21"
WEST
18

EAST
18
M3-2
24"X12"
M1-4
24"X24"
M5-1R
21"X21"

M4-6
24"X12"
M1-5A
24"X24"
END
COUNTY O

W12-1D
24"X24"

POST
POST

ALTERNATE WEST
ALTERNATE 94
MB4-1
24"X12"
MB3-4
24"X12"
M1-1
24"X24"
MB5-1L
21"X21"

RIGHT LANE MUST TURN RIGHT
R3-7R
30"X30"

LEGEND

- WORK ZONE
- WORK CONSTRUCTED UNDER TRAFFIC
- ASPHALTIC SURFACE TEMPORARY PLACED IN PREVIOUS STAGE
- TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES

SHEET 82 OF 82

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	STAGE 5B MEDIAN CLOSURE	SHEET 196	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\025105-TC-S5B MEDIAN.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2021 3:36 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

M

164

WATERTOWN RD

SR

M

NORTH AVE

M

BARKER RD

BROOKFIELD RD

CALHOUN RD

PILGRIM PKWY

WAUKEHSA COUNTY

MILWAUKEE COUNTY

124TH ST

INTERSTATE 41

100

Y

YY

WATERTOWN PLANK RD

INTERSTATE 94

J

JJ

SPRINGDALE RD

BLUEMOUND RD

18

MAYFAIR RD

BLUEMOUND RD

MORELAND BLVD

18

O

INTERSTATE 94

ELM GROVE RD

92ND ST

Y

GREENFIELD AVE

59

GREENFIELD AVE

59

59

164

MOORLAND RD

SUNNYSLOPE RD

WAUKEHSA COUNTY

MILWAUKEE COUNTY

108TH ST

INTERSTATE 41

INTERSTATE 894

NATIONAL AVE

LINCOLN AVE

CALHOUN RD

124TH ST

100

D

D

CLEVELAND AVE

CLEVELAND AVE

O

NATIONAL AVE

NN

FIXED MESSAGE SIGN
HWY O NORTH
ROAD WORK AHEAD
USE ALT ROUTE
1

FIXED MESSAGE SIGN
HWY O SOUTH
ROAD WORK AHEAD
USE ALT ROUTE
7

FIXED MESSAGE SIGN
HWY O SOUTH
ROAD WORK AHEAD
USE ALT ROUTE
9

FIXED MESSAGE SIGN
HWY O NORTH
ROAD WORK AHEAD
USE ALT ROUTE
3

FIXED MESSAGE SIGN
HWY O SOUTH
ROAD WORK AHEAD
USE ALT ROUTE
8

FIXED MESSAGE SIGN
HWY O NORTH
ROAD WORK AHEAD
USE ALT ROUTE
4

PLACE BEHIND OUTSIDE BARRIER
WALL OF WB IH 94 ON POSTS

FIXED MESSAGE SIGN
HWY O NORTH
ROAD WORK AHEAD
USE ALT ROUTE
2

FIXED MESSAGE SIGN
HWY O NORTH
ROAD WORK AHEAD
USE ALT ROUTE
5

FIXED MESSAGE SIGN
HWY O NORTH
ROAD WORK AHEAD
USE ALT ROUTE
6

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	ALTERNATE ROUTE	SHEET 197	E

FILE NAME : T:\1184800\CIVIL3D\27720701\SHEETSPLAN\027001-DT ALT ROUTE.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2021 3:36 PM PLOT BY : BLACKWOOD, JIM PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

DETAIL A

4B
4C
3
4C
4H
4B
4F
3G

BARKER RD
BROOKFIELD RD
CALHOUN RD
PILGRIM PKWY

SR
WATERTOWN RD
Y
JANACEK RD
CORPORATE DR
BLUEMOUND RD
DISCOVERY DR
EXECUTIVE DR
MAIN ST
YY
WATERTOWN PLANK RD
INTERSTATE 94
JJ
18
SPRINGDALE RD
MORELAND BLVD
SEE DETAIL A
3E
3
3A
3
3A
3
3A
3
3A
3
3A
3
3A
3
3
3
3A
3
5
O
CLOSE WB IH 94 TO NB CTH O RAMP
CLOSE OUTSIDE LANE OF WB IH 94 (EXIT ONLY LANE) IN ACCORDANCE WITH SDD "TRAFFIC CONTROL, LANE CLOSURE"
2
2A
PCMS
2A
1
INTERSTATE 94
ELM GROVE RD

LEGEND
- DETOUR ROUTE
- 1 SIGN NUMBER
- PROPOSED SIGN MOUNTED ON POST(S)
- EXISTING SIGN
- COVERING SIGN TYPE I OR TYPE II
- PCMS TRAFFIC CONTROL SIGN PCMS

DETOUR DURATION: 7 CALENDAR DAYS

NOTE: PLACE TRAFFIC CONTROL SIGN PCMS AT LEAST 7 DAYS IN ADVANCE OF RAMP CLOSURE

N

COVER SIGN TYPE II
EXIT 301B

GREENFIELD AVE
59
59
CALHOUN RD
MOORLAND RD
SUNNYSLOPE RD
124TH STREET
O

1 TO NORTH COUNTY O — M4-5 36"X18", M3-1 36"X18", M1-5A 36"X36"
2 TO NORTH COUNTY O — M4-5 36"X18", M3-1 36"X18", M1-5A 36"X36"
3 TO COUNTY O — M4-5 36"X18", M1-5A 36"X36"
4 TO COUNTY O — M4-5 24"X12", M1-5A 24"X24"
5 COUNTY O → — M1-5A 36"X36", MO6-1 21"X21"

DETOUR AHEAD W20-2A

A MO6-1 30"X30"
B MO6-1 21"X21"
C MO5-1R 21"X21"
D MO5-1R 30"X30"
E MO5-2R 30"X30"
F MO5-2R 21"X21"
G MO6-2 30"X30"
H MO6-2 21"X21"

TRAFFIC CONTROL SIGN PCMS MESSAGE

FRAME 1: RAMP TO NB CTY O TO CLOSE

FRAME 2: BEGINS XX/XX/XX

EXIT 301B
O
Moorland Rd
NORTH
EXIT ONLY

18 COVER SIGN TYPE I PAID AS FIXED MESSAGE SIGN
RAMP CLOSED
G20-63 108"X24"

EXIT 301B
O
Moorland Rd
NORTH
1/2 MILE
EXIT ONLY

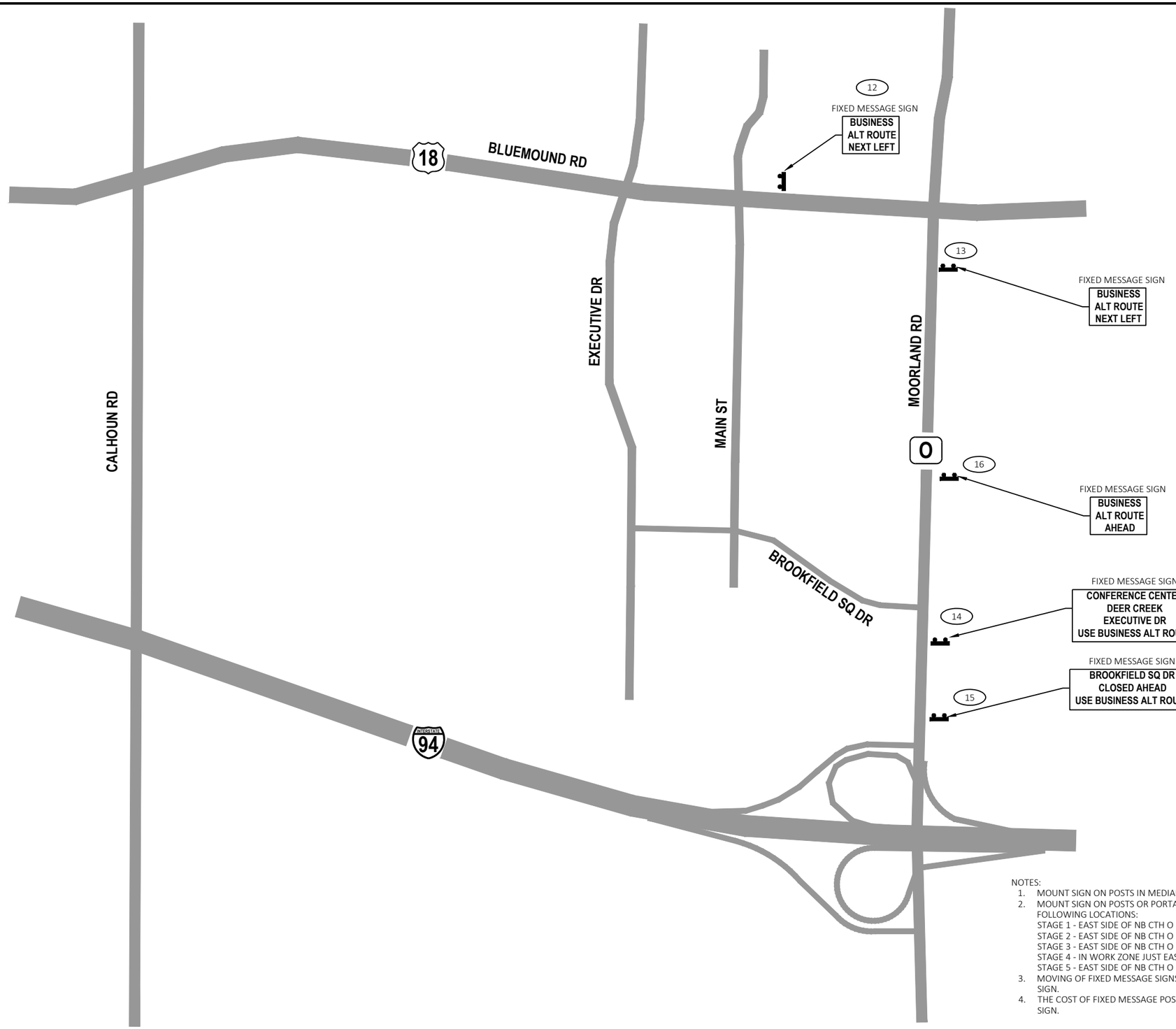
10 COVER SIGN TYPE I PAID AS FIXED MESSAGE SIGN
RAMP CLOSED
G20-63 108"X24"

EXIT 301B
O
Moorland Rd
NORTH
1 MILE
EXIT ONLY

11 COVER SIGN TYPE I PAID AS FIXED MESSAGE SIGN
RAMP CLOSED
G20-63 108"X24"

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	DETOUR PLAN - STAGE 4C	SHEET 198	E

FILE NAME : T:\1184800\CIVIL3D\277207O1\SHEETSPLAN\027002-DT S4C.DWG
LAYOUT NAME - 01
PLOT DATE : 9/24/2021 3:36 PM
PLOT BY : BLACKWOOD, JIM
PLOT NAME :
PLOT SCALE : 1 IN:25 FT



NOTES:

1. MOUNT SIGN ON POSTS IN MEDIAN ALONG USH 18
2. MOUNT SIGN ON POSTS OR PORTABLE SUPPORT ALONG CTH O IN THE FOLLOWING LOCATIONS:
   STAGE 1 - EAST SIDE OF NB CTH O
   STAGE 2 - EAST SIDE OF NB CTH O
   STAGE 3 - EAST SIDE OF NB CTH O
   STAGE 4 - IN WORK ZONE JUST EAST OF NB TEMPORARY LANES
   STAGE 5 - EAST SIDE OF NB CTH O
3. MOVING OF FIXED MESSAGE SIGNS SHALL BE INCIDENTAL TO THE FIXED MESSAGE SIGN.
4. THE COST OF FIXED MESSAGE POSTS SHALL BE INCIDENTAL TO THE FIXED MESSAGE SIGN.

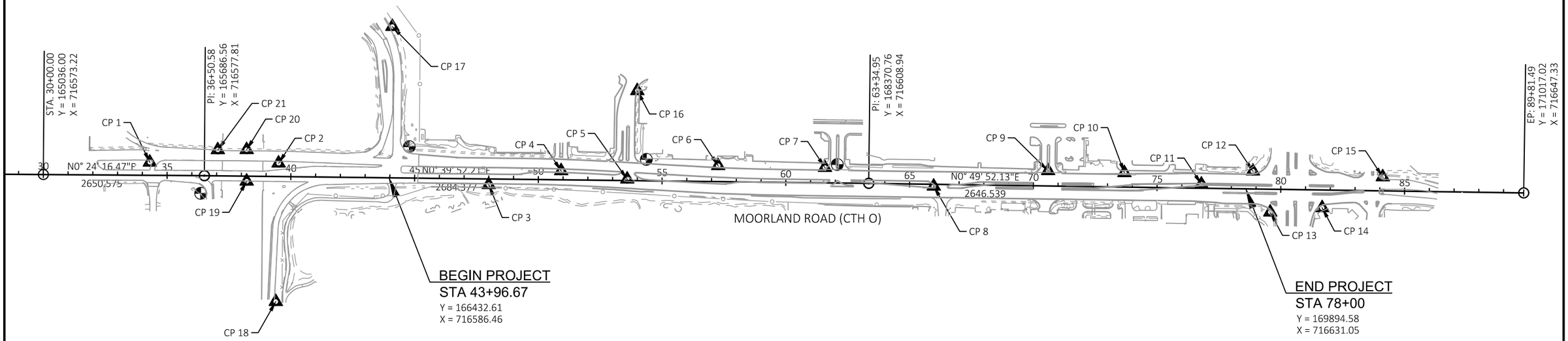
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	BUSINESS ALTERNATE ROUTE	SHEET 199	E

2

N

CONTROL POINTS					
POINT	DESCRIPTION	STATION	OFFSET	Y COORDINATE	X COORDINATE
1	SET 1/2" REBAR W/PINK CAP	34+29.92	52.50' LT	165,466.29	716,523.76
2	SET 1/2" REBAR W/PINK CAP	39+49.97	53.75' LT	165,986.56	716,527.54
3	SET 1/2" REBAR W/PINK CAP	47+99.86	23.28' RT	166,835.50	716,614.41
4	SET 1/2" REBAR W/PINK CAP	50+91.81	36.10' LT	167,128.12	716,558.43
5	SET CUT CROSS CONC ISLAND	53+59.00	5.55' LT	167,394.94	716,592.07
6	SET 1/2" REBAR W/PINK CAP	57+25.81	64.05' LT	167,762.40	716,537.83
7	SET 1/2" REBAR W/PINK CAP	61+57.31	61.62' LT	168,193.84	716,545.27
8	SET 1/2" REBAR W/PINK CAP	65+97.75	7.97' RT	168,633.41	716,620.73
9	SET CUT CROSS IN CONC	70+58.86	61.16' LT	169,095.48	716,558.29
10	SET 1/2" REBAR W/PINK CAP	73+67.19	57.60' LT	169,403.73	716,566.33
11	SET 1/2" REBAR W/PINK CAP	76+79.04	15.90' LT	169,714.93	716,612.55

CONTROL POINTS					
POINT	DESCRIPTION	STATION	OFFSET	Y COORDINATE	X COORDINATE
12	CUT CROSS IN WALK	78+86.18	71.76' LT	169,922.86	716,559.69
13	CUT CROSS IN WALK	79+58.78	92.99' RT	169,993.07	716,725.48
14	SET 1/2" REBAR W/PINK CAP	81+68.31	72.27' RT	170,202.87	716,707.80
15	SET CUT CROSS IN CONC WALK	84+11.19	55.90' LT	170,447.58	716,583.17
16	FND CHLSD "T" IN WALK	53+95.77	363.20' LT	167,435.85	716,234.88
17	SET 1/2" REBAR W/PINK CAP	44+03.16	610.98' LT	166,446.18	715,975.60
18	SET 1/2" REBAR W/PINK CAP	39+44.94	505.64' RT	165,975.05	717,086.83
19	SET CUT CROSS IN WALK	38+21.74	20.64' RT	165,857.48	716,600.44
20	SET CUT CROSS IN WALK	38+20.22	106.64' LT	165,857.44	716,473.15
21	SET CUT CROSS IN WALK	37+03.71	104.74' LT	165,740.91	716,473.70



PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	ALIGNMENT PLAN	SHEET 200	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 027201_ad
PLOT DATE : 10/1/2021 1:31 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:400 FT

2

N

CURVE 3
PI STA = 50+96.26
DELTA = 2°40'43"
D = 6°54'11"
T = 19.41'
L = 38.80'
R = 830.00'
PC STA = 50+76.85
PT STA = 51+15.66

CURVE 4
PI STA = 58+13.04
DELTA = 2°40'43"
D = 7°09'43"
T = 18.70'
L = 37.40'
R = 800.00'
PC STA = 57+94.34
PT STA = 58+31.74

T 07 N
R 20 E
27 26
34 35

X=716608.949
Y=168370.491

SB PGL
NB PGL

30SB 35SB 40SB 45SB 50SB 55SB 60SB 65SB 70SB 75SB 80SB 85SB
30NB 35NB 40NB 45NB 50NB 55NB 60NB 65NB 70NB 75NB 80NB 85NB

MOORLAND ROAD (CTH O)

BEGIN PROJECT
STA 43+96.67

END PROJECT
STA 78+00

PI: 44+01.97
Y = 166438.04
X = 716568.03

N0° 39' 52.21"E
142.063

PI: 45+44.04
Y = 166580.09
X = 716569.67

N1° 14' 14.81"E
100.004

PI: 46+44.04
Y = 166680.07
X = 716571.83

N0° 39' 52.21"E
751.356

PI: 36+50.62
Y = 165686.73
X = 716559.31

PI: 36+50.72
Y = 165687.16
X = 716513.81

N0° 39' 52.21"E
232.616

PI: 38+83.34
Y = 165919.76
X = 716516.51

N1° 57' 33.78"E
730.152

PI: 46+13.49
Y = 166649.48
X = 716541.48

N0° 39' 52.21"E
463.363

PC: 50+76.85
Y = 167112.82
Y = 716546.85

CURVE 3

PT: 51+15.66
Y = 167151.59
X = 716548.21

N3° 20' 35.70"E
678.682

PC: 50+76.46
Y = 167112.47
X = 716576.85

CURVE 1

PT: 51+13.87
Y = 167149.84
X = 716578.16

N3° 20' 35.70"E
355.528

N0° 39' 52.21"E
432.424

PC: 57+94.34
Y = 167829.12
X = 716587.79

CURVE 4

PT: 58+31.74
Y = 167866.50
X = 716589.09

PC: 58+55.65
Y = 167890.56
X = 716617.80

PT: 58+86.66
Y = 167921.56
X = 716618.74

CURVE 2

N2° 48' 20.08"E
386.252

PI: 54+69.39
Y = 167504.77
X = 716598.89

N0° 39' 52.21"E
504.477

PI: 63+36.22
Y = 168370.94
X = 716594.95

N0° 39' 52.21"E
449.036

N0° 49' 52.13"E
1071.069

PI: 63+35.70
Y = 168370.56
X = 716623.94

N0° 49' 52.13"E
869.463

PI: 72+05.16
Y = 169239.93
X = 716636.55

N1° 38' 51.10"E
205.223

PI: 74+07.29
Y = 169441.90
X = 716610.48

PI: 74+10.38
Y = 169445.07
X = 716642.46

N0° 30' 02.98"W
258.118

PI: 76+65.40
Y = 169700.00
X = 716608.23

N1° 29' 05.87"E
313.379

PI: 77+23.76
Y = 169758.35
X = 716650.58

N0° 49' 52.13"E
1317.443

N0° 49' 52.13"E
1258.481

EP: 89+82.85
Y = 171017.31
X = 716627.34

PI: 89+82.24
Y = 171016.69
X = 716668.83

CURVE 1
PI STA = 50+95.17
DELTA = 2°40'43"
D = 7°09'43"
T = 18.70'
L = 37.40'
R = 800.00'
PC STA = 50+76.46
PT STA = 51+13.87

CURVE 2
PI STA = 58+71.16
DELTA = 2°08'28"
D = 6°54'11"
T = 15.51'
L = 31.02'
R = 830.00'
PC STA = 58+55.65
PT STA = 58+86.66

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	ALIGNMENT PLAN - EB AND WB REFERENCE LINES	SHEET 201	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\027202_AD.DWG
LAYOUT NAME - 027201_ad

PLOT DATE : 10/1/2021 1:31 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:400 FT

3

STREET	STATION	TO	STATION	CLEARING 201.0120 ID	GRUBBING 201.0220 ID
CTH 0	36+51	-	52+00	22	22
CTH 0	52+00	-	67+00	87	123
CTH 0	67+00	-	78+59	28	28
		PROJECT TOTAL		137	173

REMOVING CONCRETE PAVEMENT

STREET	STATION	TO	STATION	204.0100 SY
CTH 0	36+51	-	52+00	7,331
CTH 0	52+00	-	67+00	15,223
CTH 0	67+00	-	78+59	13,555
		PROJECT TOTAL		36,109

3

REMOVING CURB & GUTTER

STREET	STATION	TO	STATION	204.0150 LF
CTH 0	36+51	-	52+00	734
CTH 0	52+00	-	67+00	614
CTH 0	67+00	-	78+59	897
		PROJECT TOTAL		2,245

REMOVING CONCRETE SIDEWALK

STREET	STATION	TO	STATION	204.0155 SY
CTH 0	36+51	-	52+00	404
CTH 0	52+00	-	67+00	48
CTH 0	67+00	-	78+59	134
		PROJECT TOTAL		586

REMOVING SURFACE DRAINS

STREET	STATION	OFFSET	204.0190 EACH
CTH 0	49+74	33' LT	1
		PROJECT TOTAL	1

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

REMOVING INLETS

STREET	STATION	OFFSET	204.0210 EACH
CTH O	47+65	17.5' RT	1
CTH O	51+24	83.3' LT	1
CTH O	56+16	60.7' LT	1
CTH O	57+69	53.5' LT	1
CTH O	61+53	6.4' LT	1
CTH O	61+69	6.0' LT	1
CTH O	62+09	2.9' RT	1
CTH O	65+60	11.5' RT	1
CTH O	71+27	52.6' RT	1
CTH O	71+23	5.8' LT	1
CTH O	71+41	51.50' LT	1
CTH O	72+31	8.5' RT	1
CTH O	72+31	6.0' LT	1
CTH O	74+06	54.4' LT	1
CTH O	74+12	53.4' RT	1
CTH O	76+51	8.2' LT	1
CTH O	76+49	53.1' RT	1
CTH O	76+78	60.2' LT	1
	PROJECT TOTAL		18

REMOVING STORM SEWER

STREET	STATION	TO	STATION	204.0245.01 12-INCH LF	204.0245.02 15-INCH LF	204.0245.03 18-INCH LF	204.0245.04 36-INCH LF	204.0245.05 42-INCH LF
CTH O	36+51	-	52+00	135	330	210	--	--
CTH O	52+00	-	67+00	333	244	21	8	--
CTH O	67+00	-	78+59	236	24	23	--	40
		PROJECT TOTAL		704	598	254	8	40

3

REMOVING ANCILLARY STRUCTURES (S-67-15)

STREET	STATION	OFFSET	204.0246 EACH
CTH O	49+32	90' LT 22' RT	1
		PROJECT TOTAL	1

REMOVING SIGN CITY OF BROOKFIELD

CATEGORY	STREET	STATION	OFFSET	204.9060.S.10 EACH
0060	CTH O	47+75	32' LT	1
			PROJECT TOTAL	1

FINISHING ROADWAY

STREET	213.0100 (2722-07-71) EACH
CTH O	1
TOTAL	1

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION (3)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.20	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
DIVISION 1												
CTH O - STAGE 1	42+00/78+50		2,222	0	0	2,222	0	0	2,222	2,222	0	
CTH O - STAGE 2	45+50/78+50		4,018	0	3,321	697	1,497	1,796	-1,099	0	1,099	USE WASTE FROM STAGE 1 FOR BORROW
CTH O - STAGE 3	39+00/78+00		1,483	0	0	1,483	14	17	1,466	1,466	0	
CTH O - STAGE 4	39+00/78+00		3,554	0	3,250	304	56	67	237	237	0	
CTH O - STAGE 5	45+50/78+00		2,868	0	0	2,868	556	667	2,201	2,201	0	
UNDISTRIBUTED	45+50/78+00		0	9,615	0	0	0	0	0	0	0	
DIVISION 1 SUBTOTAL			14,145	9,615	6,571	7,574	2,123	2,548	5,026	6,126	1,099	
GRAND TOTAL			14,145	9,615	6,571	7,574	2,123	2,548	5,026	6,126	1,099	BORROW TAKEN FROM STAGE 1 WASTE
TOTAL COMMON EXC			23,760									

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 BASE AGGREGATE DENSE 3-INCH

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(13) EXPANDED FILL FACTOR = 1.2

(14) 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.

(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

3

BASE AGGREGATE DENSE 1-1/4 INCH*

STREET	STATION TO STATION	STAGE 1 305.0120 TON	STAGE 2 305.0120 TON	STAGE 3 305.0120 TON	STAGE 4 305.0120 TON	STAGE 5 305.0120 TON	TOTAL 305.0120 TON
CTH O	36+51 - 43+25	--	--	--	--	--	--
CTH O	43+25 - 49+10	--	59	--	--	12	71
CTH O	49+10 - 54+75	--	73	--	--	52	125
CTH O	54+75 - 60+75	--	96	--	--	--	96
CTH O	60+75 - 66+75	--	79	--	47	--	126
CTH O	66+75 - 72+75	--	94	--	111	66	271
CTH O	72+75 - 78+50	--	98	--	147	61	306
CTH O	78+50 - 78+59	--	--	--	--	15	15
	UNDISTRIBUTED	--	1,534	--	2,976	10	4,521
	PROJECT TOTAL	0	2,033	0	3,281	216	5,531

*ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

BASE AGGREGATE DENSE 3 INCH

STREET	STATION TO STATION	STAGE 1 305.0130 TON	STAGE 2 305.0130 TON	STAGE 3 305.0130 TON	STAGE 4 305.0130 TON	STAGE 5 305.0130 TON	TOTAL 305.0130 TON
CTH O	UNDISTRIBUTED	--	6,036	--	11,846	--	17,882
	PROJECT TOTAL	0	6,036	0	11,846	0	17,882

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

CONCRETE PAVEMENT 8 1/2-INCH

STREET	STATION	TO	STATION	STAGE 1 415.0085 SY	STAGE 2 415.0085 SY	STAGE 3 415.0085 SY	STAGE 4 415.0085 SY	STAGE 5 415.0085 SY	TOTAL 415.0085 SY
CTH O	36+51	-	43+25	--	--	--	--	133	133
CTH O	43+25	-	49+10	--	1,738	--	1,281	500	3,519
CTH O	49+10	-	54+75	--	1,590	--	2,261	1,326	5,177
CTH O	54+75	-	60+75	--	2,401	--	2,401	--	4,803
CTH O	60+75	-	66+75	--	1,853	--	2,400	84	4,336
CTH O	66+75	-	72+75	--	1,796	--	2,292	766	4,854
CTH O	72+75	-	78+50	--	2,206	--	1,676	1,633	5,516
CTH O	78+50	-	78+59	--	27	--	--	107	134
			PROJECT TOTAL	0	11,612	0	12,311	4,548	28,471

3

Concrete Pavement HES 8 1/2-Inch

STREET	STATION	TO	STATION	415.1085 SY
CTH O	36+51	-	43+25	--
CTH O	43+25	-	49+10	317
CTH O	49+10	-	54+75	1,127
CTH O	54+75	-	60+75	--
CTH O	60+75	-	66+75	889
CTH O	66+75	-	72+75	1,399
CTH O	72+75	-	78+50	423
CTH O	78+50	-	78+59	--
			PROJECT TOTAL	4,155

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

CONCRETE DRIVEWAY 7-INCH

STREET	STATION	TO	STATION	416.0170 SY
CTH 0	36+51	-	43+25	--
CTH 0	43+25	-	49+10	--
CTH 0	49+10	-	54+75	110
CTH 0	54+75	-	60+75	--
CTH 0	60+75	-	66+75	--
CTH 0	66+75	-	72+75	250
CTH 0	72+75	-	78+50	191
CTH 0	78+50	-	78+59	--
			PROJECT TOTAL	551

DRILLED TIE BARS

STREET	STATION	TO	STATION	416.0610 EACH
CTH 0	36+51	-	43+25	227
CTH 0	43+25	-	49+10	146
CTH 0	49+10	-	54+75	--
CTH 0	54+75	-	60+75	42
CTH 0	60+75	-	66+75	200
CTH 0	66+75	-	72+75	102
CTH 0	72+75	-	78+50	61
CTH 0	78+50	-	78+59	168
			PROJECT TOTAL	946

DRILLED DOWEL BARS

STREET	STATION	TO	STATION	416.0620 EACH
CTH 0	36+51	-	43+25	48
CTH 0	43+25	-	49+10	--
CTH 0	49+10	-	54+75	--
CTH 0	54+75	-	60+75	--
CTH 0	60+75	-	66+75	--
CTH 0	66+75	-	72+75	--
CTH 0	72+75	-	78+50	40
CTH 0	78+50	-	78+59	24
			PROJECT TOTAL	112

3

ASPHALTIC SURFACES

STREET	FROM		TO	455.0605 TACK COAT GAL	465.0120 ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES TON
CTH 0	36+51	-	43+25	0	0
CTH 0	43+25	-	49+10	0	0
CTH 0	49+10	-	54+75	0	0
CTH 0	54+75	-	60+75	0	0
CTH 0	60+75	-	66+75	14	28
CTH 0	66+75	-	72+75	2	5
CTH 0	72+75	-	78+50	14	29
CTH 0	78+50	-	78+59	0	0
PROJECT TOTALS				31	62

CONCRETE COLLARS FOR PIPE

STREET	STATION	TO	STATION	520.8000 EACH
CTH 0	36+51	-	52+00	1
CTH 0	52+00	-	67+00	1
CTH 0	67+00	-	78+59	--
			UNDISTRIBUTED	4
			PROJECT TOTAL	6

CONCRETE CURB & GUTTER 18-INCH TYPE A

STREET	STATION	TO	STATION	601.0405 LF
CTH 0	36+51	-	43+25	--
CTH 0	43+25	-	49+10	205
CTH 0	49+10	-	54+75	850
CTH 0	54+75	-	60+75	--
CTH 0	60+75	-	66+75	161
CTH 0	66+75	-	72+75	623
CTH 0	72+75	-	78+50	105
CTH 0	78+50	-	78+59	--
			PROJECT TOTAL	1,944

CONCRETE CURB & GUTTER 30-INCH TYPE A

STREET	STATION	TO	STATION	601.0409 LF
CTH 0	36+51	-	43+25	560
CTH 0	43+25	-	49+10	1,604
CTH 0	49+10	-	54+75	1,502
CTH 0	54+75	-	60+75	2,275
CTH 0	60+75	-	66+75	1,405
CTH 0	66+75	-	72+75	1,689
CTH 0	72+75	-	78+50	2,652
CTH 0	78+50	-	78+59	417
			PROJECT TOTAL	12,104

CONCRETE CURB PEDESTRIAN

STREET	STATION	TO	STATION	601.0600 LF
CTH 0	66+75	-	72+75	111
			PROJECT TOTAL	111

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

CONCRETE SIDEWALK 5-INCH

STREET	STATION	TO	STATION	602.0410 SF
CTH 0	36+51	-	43+25	--
CTH 0	43+25	-	49+10	2,882
CTH 0	49+10	-	54+75	5,068
CTH 0	54+75	-	60+75	3,894
CTH 0	60+75	-	66+75	3,211
CTH 0	66+75	-	72+75	7,327
CTH 0	72+75	-	78+50	8,215
CTH 0	78+50	-	78+59	612
			PROJECT TOTAL	31,209

CURB RAMP DETECTABLE WARNING FIELD YELLOW

STREET	STATION	TO	STATION	602.0505 SF
CTH 0	36+51	-	43+25	--
CTH 0	43+25	-	49+10	--
CTH 0	49+10	-	54+75	--
CTH 0	54+75	-	60+75	--
CTH 0	60+75	-	66+75	--
CTH 0	66+75	-	72+75	72
CTH 0	72+75	-	78+50	--
CTH 0	78+50	-	78+59	--
			PROJECT TOTAL	72

*ADDITIONAL QUANTITY SHOWN ELSEWHERE IN PLAN

CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW

STREET	STATION	TO	STATION	602.0605 SF
CTH 0	36+51	-	43+25	--
CTH 0	43+25	-	49+10	--
CTH 0	49+10	-	54+75	124
CTH 0	54+75	-	60+75	--
CTH 0	60+75	-	66+75	66
CTH 0	66+75	-	72+75	69
CTH 0	72+75	-	78+50	--
CTH 0	78+50	-	78+59	--
			PROJECT TOTAL	259

3

STORM SEWER SUMMARY

ITEM NUMBER	ITEM	TOTAL	
608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	130	LF
608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	20	LF
608.0342	Storm Sewer Pipe Reinforced Concrete Class III 42-Inch	40	LF
608.3012	Storm Sewer Pipe Class III-A 12-Inch	699	LF
608.3015	Storm Sewer Pipe Class III-A 15-Inch	683	LF
608.3018	Storm Sewer Pipe Class III-A 18-Inch	234	LF
608.3036	Storm Sewer Pipe Class III-A 36-Inch	8	LF
611.0612	Inlet Covers Type C	6	EACH
611.0624	Inlet Covers Type H	26	EACH
611.0639	Inlet Covers Type H-S	4	EACH
611.0666	Inlet Covers Type Z	6	EACH
611.1003	Catch Basins 3-FT Diameter	6	EACH
611.1004	Catch Basins 4-FT Diameter	4	EACH
611.1006	Catch Basins 6-FT Diameter	5	EACH
611.1230	Catch Basins 2X3-FT	24	EACH
611.0420	Reconstructing Manholes	3	EACH
611.0430	Reconstructing Inlets	5	EACH
611.3230	Inlets 2X3-FT	1	EACH
611.8110	Adjusting Manhole Covers	8	EACH
611.8115	Adjusting Inlet Covers	12	EACH

PIPE UNDERDRAIN 6-INCH

STREET	STATION	TO	STATION	612.0106 LF
CTH 0	36+51	-	43+25	--
CTH 0	43+25	-	49+10	60
CTH 0	49+10	-	54+75	20
CTH 0	54+75	-	60+75	--
CTH 0	60+75	-	66+75	--
CTH 0	66+75	-	72+75	--
CTH 0	72+75	-	78+50	70
CTH 0	78+50	-	78+59	--
			PROJECT TOTAL	150

CONCRETE MEDIAN SLOPED NOSE

STREET	STATION	TO	STATION	620.0300 SF
CTH 0	36+51	-	43+25	--
CTH 0	43+25	-	49+10	67
CTH 0	49+10	-	54+75	264
CTH 0	54+75	-	60+75	--
CTH 0	60+75	-	66+75	32
CTH 0	66+75	-	72+75	218
CTH 0	72+75	-	78+50	22
CTH 0	78+50	-	78+59	25
			PROJECT TOTAL	628

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

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MAINTENANCE AND REPAIR OF HAUL ROADS

STREET	618.0100 (2722-07-71) EACH
CTH O	1

WATER

STREET	FROM		TO	624.0100 MGAL
CTH O	36+51	-	43+25	--
CTH O	43+25	-	49+10	94
CTH O	49+10	-	54+75	533
CTH O	54+75	-	60+75	1
CTH O	60+75	-	66+75	3
CTH O	66+75	-	72+75	27
CTH O	72+75	-	78+50	157
CTH O	78+50	-	78+59	169
CTH O	UNDISTRIBUTED			246
PROJECT TOTAL				1230

SILT FENCE

STREET	FROM		TO	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
CTH O	36+51	-	43+25	--	--
CTH O	43+25	-	49+10	--	--
CTH O	49+10	-	54+75	188	188
CTH O	54+75	-	60+75	544	544
CTH O	60+75	-	66+75	218	218
CTH O	66+75	-	72+75	492	492
CTH O	72+75	-	78+50	456	456
CTH O	78+50	-	78+59	--	--
PROJECT TOTAL				1898	1898

3

EROSION CONTROL

STREET	FROM		TO	625.0100 TOPSOIL SY	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY	SPV.0180.01 SHREDDED HARDWOOD BARK MULCH SY
CTH O	36+51	-	43+25	490	11	490	0
CTH O	43+25	-	49+10	1,586	36	1,586	0
CTH O	49+10	-	54+75	887	20	887	64
CTH O	54+75	-	60+75	3,299	74	3,299	0
CTH O	60+75	-	66+75	686	15	686	50
CTH O	66+75	-	72+75	688	15	688	0
CTH O	72+75	-	78+50	710	16	710	0
CTH O	78+50	-	78+59	4	0	4	0
CTH O	UNDISTRIBUTED			418	47	2088	6
PROJECT TOTAL				8768	234	10438	120

TEMPORARY SETTLING BASINS

STREET	628.1104 EROSION BALES EACH	645.0120 GEOTEXTILE TYPE HR SY
UNDISTRIBUTED	50	150
PROJECT TOTAL	50	150

EROSION CONTROL MOBILIZATIONS

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
CTH O	15	6
PROJECT TOTAL	15	6

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

INLET PROTECTION

STREET	FROM		TO	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
CTH O	36+51	-	43+25	--	--	6	--
CTH O	43+25	-	49+10	6	1	9	--
CTH O	49+10	-	54+75	6	--	9	--
CTH O	54+75	-	60+75	4	--	8	5
CTH O	60+75	-	66+75	10	1	13	--
CTH O	66+75	-	72+75	14	--	15	--
CTH O	72+75	-	78+50	7	--	9	--
CTH O	78+50	-	78+59	1	--	4	--
UNDISTRIBUTED				12	1	19	2
	PROJECT TOTAL			60	3	92	7

Culvert Ditch Checks

STREET	FROM		TO	628.7555 CULVERT PIPE CHECKS EACH
CTH O	36+51	-	43+25	--
CTH O	43+25	-	49+10	1
CTH O	49+10	-	54+75	--
CTH O	54+75	-	60+75	--
CTH O	60+75	-	66+75	--
CTH O	66+75	-	72+75	--
CTH O	72+75	-	78+50	--
CTH O	78+50	-	78+59	--
UNDISTRIBUTED				
	PROJECT TOTAL			1

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

TYPE II SIGNS

SIGN NO.	LOCATION	STATION		SIGN CODE	MESSAGE	SIZE		637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2220 SIGNS TYPE II REFLECTIVE SH SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	SPV.0060.60 POSTS TUBULAR STEEL 1-3/4 X 1-3/4-INCH - (POLE HEIGHT) 12 ft	SPV.0060.61 14 FT	SPV.0060.62 16 FT	REMARKS
2-1	CTH O	44+45	44' LT	J2-1	J ASSEMBLY	24	57	9.50	--	--	--	--	--	1	
				MB3-4	WEST	24	12	--	--	--	--	--	--	--	INCLUDED IN SIGN 2-1
				M1-1	IH ROUTE MARKER	24	24	--	--	--	--	--	--	--	INCLUDED IN SIGN 2-1
				MB6-1	DIRECTION ARROW	21	21	--	--	--	--	--	--	--	INCLUDED IN SIGN 2-1
2-2	CTH O	44+45	44' LT	R3-4	NO U-TURN	24	24	4.00	--	--	--	--	--	--	ON SAME POST AS SIGN 2-1
2-4	CTH O	43+43	48' LT	R1-1F	STOP (FOLDING)	30	30		5.18	--	--	--	--	--	ON SIGNAL POLE
2-5	CTH O	44+22	23' LT	R6-2R	ONE WAY	24	30	5.00	--	--	--	1	--	--	
2-6	CTH O	45+28	24' LT	R2-1	SPEED LIMIT	24	30	5.00	--	--	--	1	--	--	
2-7	CTH O	45+29	25' RT	R2-1	SPEED LIMIT	24	30	5.00	--	--	--	1	--	--	
2-8	CTH O	46+54	24' LT	R3-20L	BEGIN LEFT TURN LANE	24	36	6.00	--	--	--	1	--	--	
2-9	CTH O	46+20	24' LT	W3-3	TRAFFIC SIGNALS AHEAD SYMBOL	36	36		--	--	9.00	--	--	--	
2-10	CTH O	46+20	25' RT	W3-3	TRAFFIC SIGNALS AHEAD SYMBOL	36	36		--	--	9.00	--	1	--	
2-11	CTH O	46+93	89' LT	J2-1	J ASSEMBLY	24	57	9.50	--	--	--	--	1	--	
				MB3-4	WEST	24	12	--	--	--	--	--	--	--	INCLUDED IN SIGN 2-11
				M1-1	IH ROUTE MARKER	24	24	--	--	--	--	--	--	--	INCLUDED IN SIGN 2-11
				MB6-2	DIRECTION ARROW	21	21	--	--	--	--	--	--	--	INCLUDED IN SIGN 2-11
2-12	CTH O	49+00	90' LT	--	WEST I-94, ONLY, ARROW	36	72	--	--	18.00	--	--	--	--	ON OVERHEAD SIGN STRUCTURE
2-13	CTH O	49+00	90' LT	--	EAST I-94, ARROW	36	66	--	--	16.50	--	--	--	--	ON OVERHEAD SIGN STRUCTURE
2-14	CTH O	49+00	90' LT	--	THRU TRAFFIC, ARROW	48	54		--	18.00	--	--		--	ON OVERHEAD SIGN STRUCTURE
2-15	CTH O	43+60	29' RT	--	BROOKFIELD SQ. MALL TRAFFIC USE 3RD ENTRANCE	48	72	24.00	--	--	--	--	2	--	
3-1	CTH O	50+63	100' LT	R1-1	STOP	30	30	5.18	--	--	--	1	--	--	
3-2	CTH O	50+47	43' LT	R3-8LL	DOUBLE LEFT TURN ONLY SYMBOLS	36	30	7.50	--	--	--	1	--	--	
3-3	CTH O	50+69	43' LT	R6-2R	ONE WAY	24	30	5.00	--		--	1	--	--	
3-4	CTH O	51+90	91' LT	R2-1	SPEED LIMIT	24	30	5.00	--		--	1	--	--	
3-5	CTH O	51+87	39' LT	R2-1	SPEED LIMIT	24	30	5.00	--		--	1	--	--	
3-6	CTH O	52+27	90' LT	J-2-1	J ASSEMBLY	24	60	10.00	--		--	--	1	--	
				MB3-4	WEST	24	12	--	--		--	--	--	--	INCLUDED IN SIGN 3-6
				M1-1	I-94	24	24	--	--		--	--	--	--	INCLUDED IN SIGN 3-6
				MB4-20R	USE RIGHT LANE	24	24	--	--		--	--	--	--	INCLUDED IN SIGN 3-6
3-7	CTH O	52+61	34' LT	R10-11F	NO TURN ON RED FROM LEFT LANE	30	36	7.50	--		--	--	--	--	ON SIGNAL POLE
3-8	CTH O	53+01	108' LT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SIGNAL POLE
3-9	CTH O	53+24	33' LT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SIGNAL POLE
3-10	CTH O	53+24	33' LT	R3-4	NO U-TURN	24	24	6.25	--		--	--	--	--	ON SIGNAL POLE

CONTINUED ON NEXT PAGE

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

CONTINUED FROM PREVIOUS PAGE

								TYPE II SIGNS 637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2220 SIGNS TYPE II REFLECTIVE SH SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	SPV.0060.60 POSTS TUBULAR STEEL 1-3/4 X 1-3/4-INCH - (POLE HEIGHT) 12 ft	SPV.0060.61 14 FT	SPV.0060.62 16 FT	REMARKS
SIGN NO.	LOCATION	STATION		SIGN CODE	MESSAGE	SIZE									
3-11	CTH O	53+30	35' RT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SIGNAL POLE
3-12	CTH O	53+24	33' LT	R4-7	KEEP RIGHT ARROW	24	30	5.00	--		--	--	--	--	ON SIGNAL POLE
3-13	CTH O	53+33	89' LT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SIGNAL POLE
3-15	CTH O	53+60	95' LT	R4-7	KEEP RIGHT ARROW	24	30	5.00	--		--	1	--	--	
3-16	CTH O	54+41	25' LT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SIGNAL POLE
3-17	CTH O	54+41	25' LT	R3-4	NO U-TURN	24	24	4.00	--		--	--	--	--	ON SIGNAL POLE
3-18	CTH O	54+40	74' LT	R5-1	DO NOT ENTER	30	30	6.25	--		--	--	--	--	ON SIGNAL POLE
3-19	CTH O	54+23	16' LT	R4-7	KEEP RIGHT ARROW	24	30	5.00	--		--	1	--	--	
3-20	CTH O	54+41	25' LT	R5-1	DO NOT ENTER	30	30	6.25	--		--	--	--	--	ON SIGNAL POLE
3-21	CTH O	54+40	74' LT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SIGNAL POLE
3-22	CTH O	54+41	25' LT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SIGNAL POLE
4-1	CTH O	55+34	68' LT	R5-1A	WRONG WAY	36	24	6.00	--		--	1	--	--	
4-2	CTH O	55+32	22' LT	R5-1A	WRONG WAY	36	24	6.00	--		--	1	--	--	
4-3	CTH O	55+32	4' LT	R2-1	SPEED LIMIT	24	30	5.00	--		--	1	--	--	
4-4	CTH O	55+26	44' RT	R2-1	SPEED LIMIT	24	30	5.00	--		--	1	--	--	
4-5	CTH O	60+08	55' LT	W3-3	TRAFFIC SIGNALS AHEAD	36	36	--	--		9.00	--	1	--	
4-6	CTH O	60+08	9' LT	W3-3	TRAFFIC SIGNALS AHEAD	36	36	--	--		9.00	--	1	--	
5-1	CTH O	60+99	55' LT	J2-2	J ASSEMBLY	48	60	20.00	--		--	--	1	--	
				MB3-2	EAST	24	12	--	--		--	--	--	--	INCLUDED IN SIGN 5-1
				MB3-4	WEST	24	12	--	--		--	--	--	--	INCLUDED IN SIGN 5-1
				M1-1	IH ROUTE MARKER	24	24	--	--		--	--	--	--	INCLUDED IN SIGN 5-1
				M1-1	IH ROUTE MARKER	24	24	--	--		--	--	--	--	INCLUDED IN SIGN 5-1
				R3-54C	USE CENTER LANE	24	24	--	--		--	--	--	--	BLUE BACKGROUND, WHITE LETTERS
				B3-54R	USE RIGHT LANE	24	24	--	--		--	--	--	--	BLUE BACKGROUND, WHITE LETTERS
5-2	CTH O	61+01	8' LT	J2-2	J ASSEMBLY	48	60	20.00	--		--	--	--	--	
				MB3-2	EAST	24	12	--	--		--	--	--	--	INCLUDED IN SIGN 5-2
				MB3-4	WEST	24	12	--	--		--	--	--	--	INCLUDED IN SIGN 5-2
				M1-1	IH ROUTE MARKER	24	24	--	--		--	--	--	--	INCLUDED IN SIGN 5-2
				M1-1	IH ROUTE MARKER	24	24	--	--		--	--	--	--	INCLUDED IN SIGN 5-2
				R3-54C	USE CENTER LANE	24	24	--	--		--	--	--	--	BLUE BACKGROUND, WHITE LETTERS
				R3-54R	USE RIGHT LANE	24	24	--	--		--	--	--	--	BLUE BACKGROUND, WHITE LETTERS
5-3	CTH O	61+66	69' LT	R1-1	STOP	30	30	5.18	--		--	1	--	--	
5-4	CTH O	61+83	8' LT	R6-2R	ONE WAY	24	30	5.00	--		--	1	--	--	
5-5	CTH O	62+07	69' LT	R1-1	STOP	30	30	6.25	--		--	--	1	--	
5-6	CTH O	62+07	69' LT	R6-2R	ONE WAY	24	30	5.18	--		--	--	--	--	ON SAME POST AS SIGN 5-5

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ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

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SIGN NO.	LOCATION	STATION		SIGN CODE	MESSAGE	SIZE		TYPE II SIGNS 637.2210 SIGNS TYPE II REFLECTIVE H SF	TYPE II SIGNS 637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	TYPE II SIGNS 637.2220 SIGNS TYPE II REFLECTIVE SH SF	TYPE II SIGNS 637.2230 SIGNS TYPE II REFLECTIVE F SF	SPV.0060.60 POSTS TUBULAR STEEL 1-3/4 X 1-3/4-INCH - (POLE HEIGHT) 12 ft	SPV.0060.61 14 FT	SPV.0060.62 16 FT	REMARKS
5-7	CTH O	63+15	54' LT	R5-1A	WRONG WAY	36	24	6.00	--		--	1	--	--	
5-8	CTH O	63+15	10' LT	R5-1A	WRONG WAY	36	24	6.00	--		--	1	--	--	
5-9	CTH O	65+50	54' RT	R5-1A	WRONG WAY	36	24	6.00	--		--	1	--	--	
5-10	CTH O	65+50	10' RT	R5-1A	WRONG WAY	36	24	6.00	--		--	1	--	--	
5-11	CTH O	66+10	1' RT	R3-2	NO LEFT TURN SYMBOL	24	24	4.00	--		--	1	--	--	
5-12	CTH O	66+20	1' RT	R5-1	DO NOT ENTER	30	30	6.25	--		--	1	--	--	
5-13	CTH O	66+30	10' RT	R5-1	DO NOT ENTER	30	30	6.25	--		--	1	--	--	
5-14	CTH O	66+60	10' RT	R6-2R	ONE WAY	24	30	5.00	--		--	1	--	--	
6-1	CTH O	66+86	11' RT	R3-20L	BEGIN LEFT TURN LANE	24	36	6.00	--		--	1	--	--	
6-2	CTH O	68+46	12' RT	R3-20LL	BEGIN LEFT TURN LANE	24	36	6.00	--		--	1	--	--	
6-3	CTH O	68+46	12' RT	R5-1A	WRONG WAY	36	24	6.00	--		--	1	--	--	
6-4	CTH O	68+45	55' RT	R5-1A	WRONG WAY	36	24	6.00	--		--	1	--	--	
6-5	CTH O	68+27	10' LT	R3-20L	BEGIN LEFT TURN LANE	24	36	6.00	--		--	1	--	--	
6-6	CTH O	70+16	75' LT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SIGNAL POLE
6-7	CTH O	70+25	85' LT	R5-1	DO NOT ENTER	30	30	6.25	--		--	1	--	--	
6-8	CTH O	69+82	9' LT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SIGNAL POLE
6-9	CTH O	69+79	11' RT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	1	--	--	
6-10	CTH O	69+81	57' RT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SIGNAL POLE
6-11	CTH O	69+81	57' RT	R5-1	DO NOT ENTER	30	30	6.25	--		--	--	--	--	ON SIGNAL POLE
6-12	CTH O	69+82	9' LT	R4-7	KEEP RIGHT ARROW	24	30	5.00	--		--	--	--	--	ON SIGNAL POLE
6-13	CTH O	70+59	71' LT	R4-7	KEEP RIGHT ARROW	24	30	5.00	--		--	1	--	--	
6-14	CTH O	69+79	11' RT	R5-1	DO NOT ENTER	30	30	6.25	--		--	--	--	--	ON SAME POST AS SIGN 6-9
6-15	CTH O	70+90	70' RT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SIGNAL POLE
6-17	CTH O	71+33	10' LT	R5-1	DO NOT ENTER	30	30	6.25	--		--	1	--	--	
6-18	CTH O	71+33	10' LT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SAME POST AS SIGN 6-17
6-19	CTH O	71+33	11' RT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SIGNAL POLE
6-20	CTH O	71+33	11' RT	R4-7	KEEP RIGHT ARROW	24	30	5.00	--		--	--	--	--	ON SIGNAL POLE
6-21	CTH O	71+91	10' RT	J2-1	J ASSEMBLY	24	69	11.50	--		--	--	1	--	
				MB4-1	ALTERNATE	24	12	--	--		--	--	--	--	INCLUDED IN SIGN 6-21
				MB3-4	WEST	24	12	--	--		--	--	--	--	INCLUDED IN SIGN 6-21
				M1-1	IH ROUTE MARKER	24	24	--	--		--	--	--	--	INCLUDED IN SIGN 6-21
				MB5-1L	ADVANCE TURN ARROW	21	21	--	--		--	--	--	--	INCLUDED IN SIGN 6-21
6-22	CTH O	71+91	10'RT	R6-2R	ONE WAY	24	30	5.00	--		--	1	--	--	
6-23	CTH O	71+35	55' LT	R5-1	DO NOT ENTER	30	30	6.25	--		--	--	--	--	ON SIGNAL POLE
6-24	CTH O	71+35	55' LT	R1-1F	STOP (FOLDING)	30	30	--	5.18		--	--	--	--	ON SIGNAL POLE
6-25	CTH O	72+17	11' RT	R3-20L	BEGIN LEFT TURN LANE	24	36	6.00	--		--	1	--	--	
6-26	CTH O	72+18	10' LT	R3-20LL	BEGIN LEFT TURN LANE	24	36	6.00	--		--	1	--	--	
7-1	CTH O	73+37	64' LT	R5-1A	WRONG WAY	36	24	6.00	--		--	1	--	--	
7-2	CTH O	76+57	71' RT	R3-7R	RIGHT LANE MUST TURN RIGHT	30	30	6.25	--		--	1	--	--	
7-4	CTH O	74+01	10' LT	R3-55L	LEFT TURN LANE	24	30	5.00	--		--	1	--	--	

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ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

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								TYPE II SIGNS 637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2220 SIGNS TYPE II REFLECTIVE SH SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	SPV.0060.60 POSTS TUBULAR STEEL 1-3/4 X 1-3/4-INCH - (POLE HEIGHT) 12 ft	SPV.0060.61 14 FT	SPV.0060.62 16 FT	REMARKS
SIGN NO.	LOCATION	STATION		SIGN CODE	MESSAGE	SIZE									
7-6	CTH O	74+85	61' RT	J2-2	J ASSEMBLY	48	57	19.00	--		--	1	--	--	
				M3-4	WEST	24	12	--	--		--	--	--	--	INCLUDED IN SIGN 7-8
				M3-2	EAST	24	12	--	--		--	--	--	--	INCLUDED IN SIGN 7-8
				M1-4	USH ROUTE MARKER	24	24	--	--		--	--	--	--	INCLUDED IN SIGN 7-8
				M1-4	USH ROUTE MARKER	24	24	--	--		--	--	--	--	INCLUDED IN SIGN 7-8
				M5-1L	ADVANCE LEFT TURN	21	21	--	--		--	--	--	--	INCLUDED IN SIGN 7-8
				M5-1R	ADVANCE RIGHT TURN	21	21	--	--		--	--	--	--	INCLUDED IN SIGN 7-8
7-7	CTH O	75+30	64' LT	R2-1	SPEED LIMIT	24	30	5.00	--		--	1	--	--	
7-8	CTH O	75+30	12' LT	R2-1	SPEED LIMIT	24	30	5.00	--		--	1	--	--	
7-9	CTH O	75+48	69' RT	R3-2	NO LEFT TURN SYMBOL	24	24	4.00	--		--	1	--	--	
7-10	CTH O	76+12	70' RT	M4-6	END	24	12	2.00	--		--	1	--	--	
7-11	CTH O	76+12	70' RT	M1-5A	COUNTY O	24	24	4.00	--		--	--	--	--	ON SAME POST AS SIGN 7-10
7-12	CTH O	76+58	17' RT	R3-20LL	BEGIN LEFT TURN LANE	24	36	6.00	--		--	1	--	--	
7-14	CTH O	77+00	59' LT	R3-9C	BEGIN	24	12	2.00	--		--	1	--	--	
7-15	CTH O	77+00	59' LT	M1-5A	COUNTY O	24	24	4.00	--		--	--	--	--	ON SAME POST AS SIGN 7-12
7-16	CTH O	77+00	15' LT	R3-9C	BEGIN	24	12	2.00	--		--	1	--	--	
7-17	CTH O	77+00	15' LT	M1-5A	COUNTY O	24	24	4.00	--		--	--	--	--	ON SAME POST AS SIGN 7-14
7-18	CTH O	77+45	16' LT	J2-1	J ASSEMBLY	24	69	11.50	--		--	--	--	--	ON LIGHT POLE
				MB4-1	ALTERNATE	24	12	--	--		--	--	--	--	INCLUDED IN SIGN 7-18
				MB3-4	WEST	24	12	--	--		--	--	--	--	INCLUDED IN SIGN 7-18
				M1-1	IH ROUTE MARKER	24	24	--	--		--	--	--	--	INCLUDED IN SIGN 7-18
				MB6-1	DIRECTIONAL ARROWS	21	21	--	--		--	--	--	--	INCLUDED IN SIGN 7-18
7-19	CTH O	77+45	16	R3-8LL	LEFT TURN ONLY ARROWS	36	30	7.50	--		--	--	--	--	ON LIGHT POLE
7-20	CTH O	77+39	62' RT	R3-2	NO LEFT TURN SYMBOL	24	24	4.00	--		--	1	--	--	
						TOTAL		482.04	82.88	52.50	36	49	10	1	

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVING SIGNS

Sheet No.	LOCATION	STATION		MESSAGE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
2	CTH O	43+45	48' LT	STOP (FOLDING)	1	1	
2	CTH O	44+58	27' LT	J ASSEMBLY	1	1	
				WEST	--	--	INCLUDED IN J ASSEMBLY
				IH ROUTE MARKER	--	--	INCLUDED IN J ASSEMBLY
				LEFT DIRECTION ARROW	--	--	INCLUDED IN J ASSEMBLY
2	CTH O	44+58	27' LT	NO U-TURN	1	--	ON SAME POST AS J ASSEMBLY
2	CTH O	44+58	27' LT	EXCEPT MAINTEANCE AND POLICE VEHICLES	1	--	ON SAME POST AS J ASSEMBLY
2	CTH O	45+20	25' LT	SPEED LIMIT	1	1	
2	CTH O	45+32	24' RT	SPEED LIMIT	1	1	
2	CTH O	45+81	24' LT	LEFT TURN ONLY	1	1	
2	CTH O	46+30	24' LT	TRAFFIC SIGNALS AHEAD SYMBOL	1	1	
2	CTH O	46+41	24' RT	TRAFFIC SIGNALS AHEAD SYMBOL	1	1	
2	CTH O	46+82	94' LT	J ASSEMBLY	1	1	
				WEST	--	--	INCLUDED IN J ASSEMBLY
				IH ROUTE MARKER	--	--	INCLUDED IN J ASSEMBLY
				RIGHT ARROW	--	--	INCLUDED IN J ASSEMBLY
2	CTH O	47+51	91' LT	NONE	1	1	
2	CTH O	48+16	24' LT	LEFT TURN ONLY	1	1	
3	CTH O	49+32	LT	RIGHT LANE MUST TURN RIGHT	1	--	ON OVERHEAD SIGN STRUCTURE
3	CTH O	49+32	LT	WEST 94 THIS LANE ONLY	1	--	ON OVERHEAD SIGN STRUCTURE
3	CTH O	49+32	LT	EAST 94 THIS LANE ONLY	1	--	ON OVERHEAD SIGN STRUCTURE
3	CTH O	49+32	RT	THRU TRAFFIC THIS LANE ARROW	1	--	ON OVERHEAD SIGN STRUCTURE
3	CTH O	49+32	RT	LEFT TURN ONLY ARROW	1	--	ON OVERHEAD SIGN STRUCTURE
3	CTH O	49+32	RT	STRAIGHT ONLY ARROW	1	--	ON OVERHEAD SIGN STRUCTURE
3	CTH O	50+39	34' LT	LEFT TURN ONLY ARROWS	1	1	
3	CTH O	50+62	97' LT	STOP	1	1	
3	CTH O	50+75	37' LT	ONE WAY	1	1	
3	CTH O	51+89	88' LT	SPEED LIMIT	1	1	
3	CTH O	52+26	90' LT	RIGHT LANE WEST, I-94 ONLY	1	2	
3	CTH O	52+27	35' LT	SPEED LIMIT	1	1	

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ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVING SIGNS

Sheet No.	LOCATION	STATION		MESSAGE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
3	CTH O	52+89	36' LT	NO TURN ON RED FROM LEFT LANE	1	--	ON SIGNAL POLE
3	CTH O	53+14	27' LT	STOP (FOLDING)	1	--	ON SIGNAL POLE
3	CTH O	53+14	27' LT	NO U-TURN	1	--	ON SIGNAL POLE
3	CTH O	52+86	91' LT	STOP (FOLDING)	1	--	ON SIGNAL POLE
3	CTH O	52+86	91' LT	PUSH BUTTON FOR WALK SIGNAL	1	--	ON SIGNAL POLE
3	CTH O	53+31	92' LT	STOP (FOLDING)	1	--	ON SIGNAL POLE
3	CTH O	53+31	92' LT	PUSH BUTTON FOR WALK SIGNAL	1	--	ON SIGNAL POLE
3	CTH O	53+25	28' LT	STOP HERE ON RED	1	1	
3	CTH O	53+51	1' LT	BEAM GUARD TREATMENT	1	1	
3	CTH O	53+51	3' LT	STOP HERE ON RED	1	1	
3	CTH O	54+13	79' LT	STOP (FOLDING)	1	--	ON SIGNAL POLE
3	CTH O	54+13	79' LT	PUSH BUTTON FOR WALK SIGNAL	1	--	ON SIGNAL POLE
3	CTH O	53+96	24' LT	ENTERING ROADWAY ADDED LANE SYMBOL	1	1	
3	CTH O	54+03	27' LT	STOP (FOLDING)	1	--	ON SIGNAL POLE
3	CTH O	54+03	27' LT	NO U-TURN	1	--	ON SIGNAL POLE
4	CTH O	55+33	5' LT	SPEED LIMIT	1	1	
4	CTH O	55+30	46' RT	SPEED LIMIT	1	1	
4	CTH O	57+47	4' RT	LEFT TURN LANE	1	1	
4	CTH O	60+02	55' LT	TRAFFIC SIGNALS AHEAD	1	1	
4	CTH O	59+99	9' LT	TRAFFIC SIGNALS AHEAD	1	1	
5	CTH O	60+96	56' LT	J ASSEMBLY	1	1	
				EAST	--	--	INCLUDED IN J ASSEMBLY
				WEST	--	--	INCLUDED IN J ASSEMBLY
				IH ROUTE MARKER	--	--	INCLUDED IN J ASSEMBLY
				IH ROUTE MARKER	--	--	INCLUDED IN J ASSEMBLY
				USE CENTER LANE	--	--	INCLUDED IN J ASSEMBLY
				USE RIGHT LANE	--	--	INCLUDED IN J ASSEMBLY
5	CTH O	60+98	6' LT	J ASSEMBLY	1	1	
				EAST	--	--	INCLUDED IN J ASSEMBLY
				WEST	--	--	INCLUDED IN J ASSEMBLY
				IH ROUTE MARKER	--	--	INCLUDED IN J ASSEMBLY
				IH ROUTE MARKER	--	--	INCLUDED IN J ASSEMBLY
				USE CENTER LANE	--	--	INCLUDED IN J ASSEMBLY
				USE RIGHT LANE	--	--	INCLUDED IN J ASSEMBLY

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ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVING SIGNS

Sheet No.	LOCATION	STATION		MESSAGE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
5	CTH O	61+66	66' LT	STOP	1	1	
5	CTH O	61+93	9' RT	NO U-TURN	1	1	
5	CTH O	61+94	9' RT	DOUBLE DIAGONAL ARROWS	1	--	ON SAME POST AS NO U-TURN SIGN
5	CTH O	62+07	61' LT	STOP	1	1	
5	CTH O	62+07	61' LT	ONE WAY	1	--	ON SAME POST AS STOP SIGN
5	CTH O	62+09	3' LT	DIAGONAL ARROW	1	1	
5	CTH O	62+73	9' LT	KEEP RIGHT ARROW	1	1	
5	CTH O	65+34	5' RT	SPEED LIMIT	1	1	
5	CTH O	65+39	56' RT	SPEED LIMIT	1	1	
6	CTH O	67+02	57' RT	WRONG WAY	1	1	
6	CTH O	67+18	9' RT	LEFT TURN LANE	1	1	
6	CTH O	68+54	11' RT	DOUBLE DIAGONAL ARROWS	1	1	
6	CTH O	70+22	75' LT	STOP (FOLDING)	1	--	ON SIGNAL POLE
6	CTH O	70+22	75' LT	PUSH BUTTON FOR WALK SIGNAL	1	--	ON SIGNAL POLE
6	CTH O	69+93	56' LT	PUSH BUTTON FOR WALK SIGNAL	1	--	ON SIGNAL POLE
6	CTH O	69+81	9' LT	KEEP RIGHT ARROW	1	--	ON SIGNAL POLE
6	CTH O	69+81	9' LT	PUSH BUTTON FOR WALK SIGNAL	1	--	ON SIGNAL POLE
6	CTH O	69+79	11' RT	STOP (FOLDING)	1	--	ON SIGNAL POLE
6	CTH O	69+79	11' RT	DO NOT ENTER	1	--	ON SIGNAL POLE
6	CTH O	69+79	57' RT	STOP (FOLDING)	1	--	ON SIGNAL POLE
6	CTH O	69+79	57' RT	DO NOT ENTER	1	--	ON SIGNAL POLE
6	CTH O	69+79	57' RT	PUSH BUTTON FOR WALK SIGNAL	1	--	ON SIGNAL POLE
6	CTH O	70+14	73' RT	PUSH BUTTON FOR WALK SIGNAL	1	--	ON SIGNAL POLE
6	CTH O	70+85	74' RT	STOP (FOLDING)	1	--	ON SIGNAL POLE
6	CTH O	70+85	74' RT	PUSH BUTTON FOR WALK SIGNAL	1	--	ON SIGNAL POLE
6	CTH O	71+07	64' LT	PUSH BUTTON FOR WALK SIGNAL	1	--	ON SIGNAL POLE
6	CTH O	71+32	56' LT	STOP (FOLDING)	1	--	ON SIGNAL POLE
6	CTH O	71+32	56' LT	DO NOT ENTER	1	--	ON SIGNAL POLE
6	CTH O	71+32	56' LT	PUSH BUTTON FOR WALK SIGNAL	1	--	ON SIGNAL POLE
6	CTH O	71+36	9' LT	STOP (FOLDING)	1	--	ON SIGNAL POLE

CONTINUED ON NEXT PAGE

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVING SIGNS

Sheet No.	LOCATION	STATION		MESSAGE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
6	CTH O	71+30	10' RT	KEEP RIGHT ARROW	1	--	ON SIGNAL POLE
6	CTH O	71+30	10' RT	PUSH BUTTON FOR WALK SIGNAL	1	--	ON SIGNAL POLE
6	CTH O	71+20	59' RT	PUSH BUTTON FOR WALK SIGNAL	1	--	ON SIGNAL POLE
6	CTH O	71+91	11' RT	ONE WAY	1	1	
6	CTH O	72+30	9' LT	DOUBLE DIAGONAL ARROWS	1	1	
7	CTH O	73+30	11' RT	J ASSEMBLY	1	1	
				ALTERNATE	--	--	INCLUDED IN J ASSEMBLY
				WEST	--	--	INCLUDED IN J ASSEMBLY
				IH ROUTE MARKER	--	--	INCLUDED IN J ASSEMBLY
				ADVANCE LEFT TURN	--	--	INCLUDED IN J ASSEMBLY
7	CTH O	74+04	11' RT	LEFT TURN LANE	1	1	
7	CTH O	74+30	9' LT	LEFT TURN LANE	1	1	
7	CTH O	74+31	60' LT	WRONG WAY	1	1	
7	CTH O	74+98	63' LT	SPEED LIMIT	1	1	
7	CTH O	74+97	7' LT	SPEED LIMIT	1	1	
7	CTH O	74+94	58' RT	J ASSEMBLY	1	1	
				WEST	--	--	INCLUDED IN J ASSEMBLY
				EAST	--	--	INCLUDED IN J ASSEMBLY
				USH ROUTE MARKER	--	--	INCLUDED IN J ASSEMBLY
				USH ROUTE MARKER	--	--	INCLUDED IN J ASSEMBLY
				ADVANCE LEFT TURN	--	--	INCLUDED IN J ASSEMBLY
				ADVANCE RIGHT TURN	--	--	INCLUDED IN J ASSEMBLY
7	CTH O	76+29	67' LT	BEGIN	1	1	
7	CTH O	76+29	67' LT	CTH ROUTE MARKER	1	--	ON SAME SUPPORT AS BEGIN SIGN
7	CTH O	76+27	12' LT	BEGIN	1	1	
7	CTH O	76+27	12' LT	CTH ROUTE MARKER	1	--	ON SAME SUPPORT AS BEGIN SIGN
7	CTH O	76+22	58' RT	END	1	1	
7	CTH O	76+22	58' RT	CTH ROUTE MARKER	1	--	ON SAME SUPPORT AS END SIGN
7	CTH O	77+74	17' RT	BEGIN LEFT TURN LANE	1	1	ON SIGNAL POLE
7	CTH O	77+44	16' LT	J ASSEMBLY	1	--	INCLCLUDED IN J ASSEMBLY
				ALTERNATE	--	--	INCLCLUDED IN J ASSEMBLY
				WEST	--	--	INCLCLUDED IN J ASSEMBLY
				IH ROUTE MARKER	--	--	INCLCLUDED IN J ASSEMBLY
				LEFT DIRECTIONAL ARROW	--	--	INCLCLUDED IN J ASSEMBLY
7	CTH O	77+44	16' LT	LEFT TURN ONLY ARROWS	1	--	ON SIGNAL POLE
8	CTH O	79+50	16' LT	KEEP RIGHT ARROW	1	--	SALVAGE AND REPLACE
8	CTH O	79+50	16' LT	N U-TURN	1	--	SALVAGE AND REPLACE
				TOTAL	99	51	

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

GEOTEXTILE TYPE DF SCHEDULE TYPE A

STREET	STATION	TO	STATION	645.0111 SY
CTH O	36+51	-	43+25	--
CTH O	43+25	-	49+10	40
CTH O	49+10	-	54+75	13
CTH O	54+75	-	60+75	--
CTH O	60+75	-	66+75	--
CTH O	66+75	-	72+75	--
CTH O	72+75	-	78+50	47
CTH O	78+50	-	78+59	--
			PROJECT TOTAL	100

GEOGRID TYPE SR

STREET	STATION	TO	STATION	645.0220 SY
CTH O	UNDISTRIBUTED			13,412
			PROJECT TOTAL	13,412

3

PAVEMENT MARKING

STREET	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.3020 MARKING LINE EPOXY 8-INCH LF	646.5020 MARKING ARROW EPOXY TYPE 2 EACH	646.5020 MARKING ARROW EPOXY TYPE 3 EACH	646.5120 MARKING WORD EPOXY EACH	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.6220 MARKING YIELD LINE EPOXY 18-INCH EACH	646.7120 MARKING DIAGONAL EPOXY 12-INCH LF	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH LF	646.8220 MARKING ISLAND NOSE EPOXY EACH
CTH O	36+51 - 43+25	559	191	--	--	--	--	--	--	--	--	--
CTH O	43+25 - 49+10	1066	657	1030	4	--	1	54	6	103	42	3
CTH O	49+10 - 54+75	959	488	1001	8	--	2	131	--	--	282	3
CTH O	54+75 - 60+75	1201	600	30	--	--	--	--	--	--	--	--
CTH O	60+75 - 66+75	1147	633	551	2	--	--	31	--	--	143	3
CTH O	66+75 - 72+75	976	478	995	7	2	3	152	--	36	593	3
CTH O	72+75 - 78+50	1152	1046	521	4	--	--	--	--	54	--	1
CTH O	78+50 - 80+80	118	364	103	3	--	3	73	--	--	--	1
	PROJECT TOTAL	11,635		4,231	30		9	441	6	193	1,060	14

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

CONSTRUCTION STAKING ITEMS

ITEM	QUANTITY	UNIT	DESCRIPTION	CATEGORY
650.4000	40	EACH	CONSTRUCTION STAKING STORM SEWER	0010
650.4500	6,992	LF	CONSTRUCTION STAKING SUBGRADE	0010
650.6500	1	LS	CONSTRUCTION STAKING STRUCTURE LAYOUT (R-67-155)	0010
650.6500	1	LS	CONSTRUCTION STAKING STRUCTURE LAYOUT (R-67-156)	0010
650.6500	1	LS	CONSTRUCTION STAKING STRUCTURE LAYOUT (S-67-618)	0010
650.7000	6,992	LF	CONSTRUCTION STAKING CONCRETE PAVEMENT	0010
650.8500	1	LS	CONSTRUCTION STAKING ELECTIRCAL INSTALLATIONS (ID 2722-07-71)	0010
650.9000	11	EACH	CONSTRUCTION STAKING CURB RAMPS	0010
650.9910	1	LS	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (ID 2722-07-71)	0010
650.9920	6,922	LF	CONSTRUCTION STAKING SLOPE STAKES	0010

SECTION CORNER MONUMENTS

STREET	STA	OFFSET	SPV.0060.63 SECTION CORNER MONUMENTS EACH
CTH O	63+35.67	0.53' RT	1
	PROJECT TOTAL		1

3

SAWCUTTING

STREET	STATION	TO	STATION	SAWING ASPHALT 690.0150 LF	SAWING CONCRETE 690.0250 LF
CTH O	36+51	-	52+00	34	1,035
CTH O	52+00	-	67+00	140	798
CTH O	67+00	-	78+59	210	1,061
		UNDISTRIBUTED		96	724
		PROJECT TOTAL		481	3,618

MODULAR BLOCK RETAINING WALLS

STREET	STATION	TO	STATION		SPV.0165.02 WALL MODULAR BLOCK GRAVITY LANDSCAPE SF
CTH O	55+40	-	56+77	LT	820
CTH O	71+10	-	76+94	LT	314
CTH O	73+40	-	75+45	LT	741
CTH O	76+00	-	76+63	LT	227
		PROJECT TOTAL			2,103

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

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

3

LIGHTING REMOVAL

STATION	OFFSET	204.9060.S.08 REMOVING LIGHTING UNITS EACH	204.0195* REMOVING CONCRETE BASES EACH
41+65	LT	1	1
43+56	LT	1	1
45+00	LT	1	1
46+26	LT	0	1
48+10	LT	0	1
49+84	LT	0	1
51+44	LT	0	1
53+06	LT	1	1
54+83	LT	0	1
56+36	LT	0	1
58+12	LT	0	1
59+98	LT	0	1
61+44	LT	0	1
63+41	LT	0	1
65+06	LT	0	1
66+75	RT	0	1
68+46	LT	0	1
69+79	RT	1	1
71+34	LT	0	1
74+11	RT	0	1
75+72	LT	0	1
77+45	LT	1	1
SUBTOTALS		6	22

*ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLANS

PULL BOXES

DESCRIPTION	STATION	OFFSET	653.0135* PULL BOXES STEEL 24X36 EACH
PB1	54+43.00	18.3' LT	1
PB2	54+89.00	06.3' LT	1
PB3	67+27.20	03.8' RT	1
		TOTAL	3

*ADDITIONAL QUANTITY SHOWN ELSEWHERE IN PLAN

PULL BOX REMOVAL

STATION	OFFSET	653.0905 REMOVING PULL BOXES EACH
54+06	LT	1
67+32	RT	1
71+38	RT	1
TOTAL		3

3

LIGHTING CONTROL CABINET

STREET	STATION	LOCATION	204.9060.S.09 REMOVING LIGHTING CONTROL CABINET CONCRETE BASE EACH	654.0230 CONCRETE CONTROL CABINET BASES TYPE L30 EACH	SPV.0060.10 REMOVING, SALVAGING, AND REINSTALLING ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH	SPV.0060.11 REMOVING, SALVAGING, AND REINSTALLING LIGHTING CONTROL CABINET 120/240 30-INCH EACH
S. MOORLAND RD.	54+74	79.0' LT	1	--	--	--
S. MOORLAND RD.	54+90	48.0' RT	--	1	1	1
		TOTAL	1	1	1	1

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

STREET LIGHTING WIRING AND CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG (UNDERGROUND PHASE WIRES) LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG (UNDERGROUND GROUND WIRES) LF	655.0610* ELECTRICAL WIRE LIGHTING 12 AWG (POLE PHASE WIRES) LF	655.0610* ELECTRICAL WIRE LIGHTING 12 AWG (POLE GROUND WIRES) LF
EXISTING FIXTURE	EXISTING PB1	175	700	179	0	0
EXISTING PB1	EXISTING PB2	145	580	149	0	0
EXISTING PB2	M1-1-1,3	164	656	168	0	0
M1-1-1,3	M1-2-1,3	191	764	195	0	0
M1-2-1,3	M1-3-1,3	180	720	184	0	0
M1-3-1,3	M1-4-1,3	166	664	170	0	0
M1-4-1,3	PB1	305	1220	309	0	0
PB1	M1-5-1,3	45	180	49	0	0
M1-5-1,3	PB2	22	88	26	0	0
PB2	LCC-M1	61	488	65	0	0
M1-5-1,3	M1-6-5,7	164	656	168	0	0
M1-6-5,7	M1-7-5,7	189	756	193	0	0
M1-7-5,7	M1-8-5,7	190	760	194	0	0
M1-8-5,7	M1-9-5,7	155	620	159	0	0
M1-9-5,7	M1-10-5,7	205	820	209	0	0
M1-10-5,7	M1-11-5,7	174	696	178	0	0
M-11-5,7	M1-12-5,7	180	720	184	0	0
M1-12-5,7	PB3	59	236	63	0	0
PB3	M1-13-5,7	126	504	130	0	0
M1-13-5,7	PB4	88	352	92	0	0
PB4	PB5	249	996	253	0	0
PB5	M1-14-5,7	116	464	120	0	0
M1-14-5,7	M1-15-5,7	145	580	149	0	0
M1-15-5,7	M1-16-5,7	168	672	172	0	0
A-1 BASE	A-1 LUMINAIRE	0	0	0	176	44
A-2 BASE	A-2 LUMINAIRE	0	0	0	176	44
A-3 BASE	A-3 LUMINAIRE	0	0	0	176	44
A-4 BASE	A-4 LUMINAIRE	0	0	0	176	44
A-5 BASE	A-5 LUMINAIRE	0	0	0	176	44
A-6 BASE	A-6 LUMINAIRE	0	0	0	176	44
A-7 BASE	A-7 LUMINAIRE	0	0	0	176	44
A-8 BASE	A-8 LUMINAIRE	0	0	0	176	44
A-9 BASE	A-9 LUMINAIRE	0	0	0	176	44
A-10 BASE	A-10 LUMINAIRE	0	0	0	176	44
A-11 BASE	A-11 LUMINAIRE	0	0	0	176	44
A-12 BASE	A-12 LUMINAIRE	0	0	0	176	44
A-13 BASE	A-13 LUMINAIRE	0	0	0	176	44
A-14 BASE	A-14 LUMINAIRE	0	0	0	176	44
A-15 BASE	A-15 LUMINAIRE	0	0	0	176	44
A-16 BASE	A-16 LUMINAIRE	0	0	0	176	44
	SUBTOTALS	3,662	14,892	3,758	2,816	704
	TOTAL	3,662	14,892	3,758	3,520	

*ADDITIONAL QUANTITY SHOWN ELSEWHERE IN PLAN

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

LUMINAIRE AND POLE RELOCATION

DESCRIPTION	STATION	OFFSET	654.0105* CONCRETE BASE TYPE 5 EACH	SPV.0060.05 REMOVING, SALVAGING, AND REINSTALLING LIGHT POLES, LUMINAIRES, AND ARMS EACH
M1-1-1,3	46+26.00	31.0' LT	1	1
M1-2-1,3	48+10.50	42.5' LT	1	1
M1-3-1,3	49+84.00	44.0' LT	1	1
M1-4-1,3	51+44.00	41.0' LT	1	1
M1-5-1,3	54+82.00	14.5' LT	1	1
M1-6-5,7	56+36.00	08.2' LT	1	1
M1-7-5,7	58+16.00	01.0' LT	1	1
M1-8-5,7	59+97.00	00.3' RT	1	1
M1-9-5,7	61+44.60	00.3' RT	1	1
M1-10-5,7	63+41.30	00.3' RT	1	1
M1-11-5,7	65+05.70	00.3' RT	1	1
M1-12-5,7	66+74.00	06.8' RT	1	1
M1-13-5,7	68+45.80	09.1' LT	1	1
M1-14-5,7	72+72.80	04.8' LT	1	1
M1-15-5,7	74+10.00	10.5' LT	1	1
M1-16-5,7	75+72.40	14.0' LT	1	1
	TOTAL		16	16

*ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLANS

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

3

TEMPORARY ASPHALT ITEMS

STAGE	465.0125 ASPHALTIC SURFACE TEMPORARY TON	450.4000 HMA COLD WEATHER PAVING TON	** 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
STAGE 1	1,230	300	2,325
STAGE 2	25	---	---
STAGE 3	1,045	---	1,900
STAGE 4A	65	---	95
PROJECT TOTALS	2,365	300	4,320

**ADDITIONAL QUANTITIES FOUND ELSEWHERE

TEMPORARY DRAINAGE

LOCATION	204.9060.S.07 REMOVING INLET COVERS EACH	** 520.8000 CONCRETE COLLARS FOR PIPE EACH	** 611.0430 RECONSTRUCTING INLETS EACH	611.0651 INLET COVERS TYPE S EACH	** 611.8115 ADJUSTING INLET COVERS EACH	611.8120.S COVER PLATES TEMPORARY EACH	611.9710 SALVAGED INLET COVERS EACH
STAGE 1	---	1	3	2	---	12	4
STAGE 2	---	2	---	---	---	9	---
STAGE 3	1	---	---	1	---	4	2
STAGE 4	---	---	---	---	---	---	---
STAGE 5	2	---	---	---	3	---	---
PROJECT TOTAL	3	3	3	3	3	25	6

** ADDITIONAL QUANTITY LOCATED ELSEWHERE - STORM SEWER

NOTE: ITEMS TO BE USED TO MAINTAIN DRAINAGE DURING CONSTRUCTION

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

TRAFFIC CONTROL

STAGE	* DURATION DAYS	643.5000 TRAFFIC CONTROL EACH	643.0300 TRAFFIC CONTROL DRUMS * DRUMS	DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III * BARRICADES	DAYS	643.0500 FLEXIBLE TUBULAR MARKERS POSTS EACH	643.0600 BASES EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A * LIGHTS	DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C * LIGHTS	DAYS	643.0800 TRAFFIC CONTROL ARROW BOARDS * BOARDS	DAYS	643.0900 TRAFFIC CONTROL SIGNS * SIGNS	DAYS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II * CYCLES	EACH	*** 643.1050 TRAFFIC CONTROL SIGNS PCMS * SIGNS	DAYS
STAGE 1	26	---	431	11,206	78	2,028	0	0	156	4,056	18	468	1	26	173	4,498	0	---	5	35
STAGE 2	65	---	272	17,680	41	2,665	484	484	82	5,330	17	1,105	1	65	174	11,310	0	---	5	35
STAGE 2A PEDESTRIAN	14	---	0	0	6	84	0	---	12	168	0	0	0	0	14	196	0	---	0	---
STAGE 2B PEDESTRIAN	14	---	0	0	6	84	0	0	12	168	0	0	0	0	14	196	0	---	0	---
STAGE 3	19	---	396	7,524	66	1,254	0	0	132	2,508	18	342	1	19	209	3,971	0	---	5	35
STAGE 4A	21	---	271	5,691	64	1,344	466	466	128	2,688	18	378	0	0	166	3,486	0	---	5	35
STAGE 4B	30	---	405	12,150	65	1,950	0	0	130	3,900	18	540	0	0	183	5,490	0	---	0	---
STAGE 4C	7	---	264	1,848	61	427	0	0	122	854	158	1,106	0	0	158	1,106	0	---	5	35
STAGE 5A	10	---	405	4,050	36	360	0	0	72	720	19	190	1	10	174	1,740	0	---	5	35
STAGE 5B	22	---	365	8,030	34	748	0	0	68	1,496	19	418	1	22	171	3,762	0	---	5	35
STAGE 4C DETOUR	7	---	0	0	0	0	0	0	0	0	0	0	0	0	96	672	1	1	1	7
PROJECT TOTALS		1	---	68,179	---	10,944	950	950	---	21,888	---	4,547	---	142	---	36,427	---	1	---	252

*FOR INFORMATION ONLY

** PLACE ON NB CTH O, SB CTH YY, IH 94 WB RAMP, WB USH, AND EB USH 18 FOR 7 DAYS PRIOR TO TRAFFIC PATTERN CHANGES

TRAFFIC CONTROL FIXED MESSAGE SIGNS

SIGN NUMBER	SIGN SIZE			643.1000 SF
1	11'-0"	X	4'-6"	50
2	11'-0"	X	4'-6"	50
3	11'-0"	X	4'-6"	50
4	11'-0"	X	4'-6"	50
5	8'-0"	X	3'-0"	24
6	8'-0"	X	3'-0"	24
7	8'-0"	X	3'-0"	24
8	8'-0"	X	3'-0"	24
9	8'-0"	X	3'-0"	24
10	9'-0"	X	2'-0"	18
11	9'-0"	X	2'-0"	18
12	4'-6"	X	3'-0"	14
13	4'-6"	X	3'-0"	14
14	8'-6"	X	4'-0"	34
15	6'-6"	X	4'-0"	26
16	4'-6"	X	3'-0"	14
17	3'-0"	X	2'-0"	6
18	9'-0"	X	2'-0"	18
PROJECT TOTAL				482

TEMPORARY PEDESTRIAN ACCOMMODATIONS

STAGE	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	644.1410 TEMPORARY PEDESTRIAN SURFACE ASPHALT SF	644.1420 TEMPORARY PEDESTRIAN SURFACE PLYWOOD SF	644.1601 TEMPORARY CURB RAMP * EACH	DAYS	644.1810 TEMPORARY PEDESTRIAN BARRICADE LF
STAGE 1	24	130	---	---	---	170
STAGE 2A PEDESTRIAN	---	---	20	1	14	475
STAGE 2B PEDESTRIAN	---	---	30	1	14	1,900
STAGE 3	12	145	---	---	---	120
STAGE 4A	---	---	---	---	---	100
STAGE 4B	---	---	125	2	28	505
STAGE 4C	---	---	---	2	14	---
STAGE 5A	---	---	---	---	---	120
PROJECT TOTALS	36	275	175		70	3,390

* FOR INFORMATION ONLY

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

PAVEMENT MARKING REMOVALS

LOCATION	646.9000 LINE 4-INCH LF	646.9010 LINE WATER BLASTING 4-INCH LF	646.9100 LINE 8-INCH LF	646.9110 MARKING REMOVAL LINE WATER BLASTING 8-INCH LF	646.9200 LINE WIDE LF	646.9210 LINE WATER BLASTING WIDE LF	646.9300 SPECIAL MARKING EACH	646.9310 SPECIAL MARKING WATER BLASTING EACH
STAGE 1	2,260	170	2,020	---	110	30	25	---
STAGE 2	610	410	490	370	---	60	4	4
STAGE 4A	---	990	---	1,100	---	40	---	9
PROJECT TOTALS	2,870	1,570	2,510	1,470	110	130	29	13

TEMPORARY PAVEMENT MARKINGS

STAGE	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH WHITE LF	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH YELLOW LF	649.0250 TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH WHITE LF	649.0850 STOP LINE 18-INCH WHITE LF	649.0550 TEMPORARY MARKING ARROW REMOVABLE TAPE WHITE EACH
STAGE 1	1870	10390	1330	70	2
STAGE 2	6900	3900	1040	130	---
STAGE 3	1500	7960	1140	90	---
STAGE 4A	6880	1630	2280	70	2
STAGE 4B	930	670	1320	---	---
STAGE 4C	630	---	---	---	---
STAGE 5A	1310	3760	420	110	6
STAGE 5B	---	---	---	---	---
PROJECT TOTALS	20,020	28,310	7,530	470	10
	48,330				

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

ADJUST SANITARY SEWER MANHOLE

STREET	STATION	OFFSET	SPV.0060.13 EACH
CTH O	59+79	9.0' LT	1
CTH O	63+11	8.0' LT	1
CTH O	66+04	1.0' LT	1
CTH O	69+45	2.0' LT	1
	PROJECT TOTAL		4

SANITARY MANHOLE SEAL

STREET	STATION	OFFSET	SPV.0060.14 EACH
CTH O	59+79	9.0' LT	1
CTH O	63+11	8.0' LT	1
CTH O	66+04	1.0' LT	1
CTH O	69+45	2.0' LT	1
CTH O	72+98	1.0' LT	1
CTH O	76+44	1.0' LT	1
	PROJECT TOTAL		6

3

SANITARY MANHOLE FRAME AND CASTING

STREET	STATION	OFFSET	SPV.0060.15 EACH
CTH O	63+11	8.0' LT	1
	PROJECT TOTAL		1

RECONSTRUCT SANITARY SEWER MANHOLE

STREET	STATION	OFFSET	SPV.0060.16 EACH
CTH O	76+44	1.0' LT	1
	PROJECT TOTAL		1

REPLACE SANITARY SEWER MANHOLE

STREET	STATION	OFFSET	SPV.0060.18 EACH
CTH O	72+98	1.0' LT	1
	PROJECT TOTAL		1

ADJUST WATER VALVE BOX

STREET	STATION	OFFSET	SPV.0060.17 EACH
CTH O	71+50	61.0' RT	1
CTH O	71+66	67.0' RT	1
CTH O	71+81	61.0' RT	1
CTH O	76+15	58.0' RT	1
CTH O	76+33	58.0' LT	1
CTH O	76+56	60.0' RT	1
CTH O	76+63	59.0' LT	1
CTH O	76+68	72.0' LT	1
CTH O	76+75	65.0' RT	1
	PROJECT TOTAL		9

ALL ITEMS ON THIS PAGE CATEGORY 0060 UNLESS OTHERWISE NOTED

3

CONDUIT ITEMS

LOCATION	PROJECT ID	CATEGORY	FROM	TO	* 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	(INCIDENTAL) INSTALL CONDUIT INTO EXISTING ITEM EACH
MOORLAND RD & IH 94 WB RAMPS	2722-07-71	0500	PB9	SB4	15	--
			PB4	SB6	19	--
			PB4	SB7	21	--
	2722-07-71 TOTAL				55	0
	3700-00-70	1000	PB5	PB15	22	1
	3700-00-70 TOTAL				22	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

REMOVAL QUANTITIES

PROJECT ID	LOCATION	ITEM NO.	* 204.0195 REMOVING CONCRETE BASES EACH	* 653.0905 REMOVING PULL BOXES EACH
2722-07-71	MOORLAND RD & IH 94 WB RAMPS	SB4	1	--
		SB6	1	--
		SB7	1	--
		PB4	--	1
		PB8	--	1
		PB9	--	1
	INTERSECTION TOTAL		3	3

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

3

PULL BOXES

LOCATION	PROJECT ID	CATEGORY	PULL BOX NO.	ALIGNMENT	STATION	OFFSET	* 653.0135 PULL BOXES STEEL 24" x 36" EACH	* 653.0140 PULL BOXES STEEL 24" x 42" EACH	* SPV.0060.03 EXPOSE EXISTING UTILITY EACH
MOORLAND RD & IH 94 WB RAMPS	2722-07-71	0500	PB4	CTH O	44+70	15.9' LT	--	1	1
			PB8	CTH O	43+18	28.5' LT	--	1	1
			PB9	CTH O	43+36	28.3' LT	1	--	1
	2722-07-71 TOTAL						1	2	3
	3700-00-70	1000	PB15	CTH O	45+16	24.3' RT	1	--	--
	3700-00-70 TOTAL						1	0	0

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

REMOVING TRAFFIC SIGNALS IH 94 WB ON RAMP & CTH O (MOORLAND RD)

PROJECT ID	LOCATION	204.9060.S.03 REMOVING TRAFFIC SIGNALS IH 94 WB ON RAMP & CTH O (MOORLAND RD) EACH
2722-07-71	MOORLAND RD & IH 94 WB RAMPS	1
	TOTAL	1

SIGNAL MOUNTING HARDWARE

PROJECT ID	LOCATION	658.5069.03 SIGNAL MOUNTING HARDWARE IH 94 WB ON RAMP & CTH O LS
2722-07-71	MOORLAND RD & IH 94 WB RAMPS	1
	TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS IH 94 WB ON RAMP & CTH O

PROJECT ID	LOCATION	661.0200.03 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS IH 94 WB ON RAMP & CTH O LS
2722-07-71	MOORLAND RD & IH 94 WB RAMPS	1
	TOTAL	1

ALL ITEMS INCLUDED IN PROJECT 2722-07-71 ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (S. MOORLAND ROAD) &
IH 94 WB ON RAMP
CITY OF BROOKFIELD
WAUKESHA COUNTY

TRAFFIC DETECTOR LOOPS

LOCATION	PROJECT ID	CATEGORY	LOOP NO.	HOME RUN PB	ALIGNMENT	** STATION/OFFSET	SIZE (FT)	SDD INSTALLATION REFERENCE	NO. OF TURNS	PAVEMENT TYPE	* 652.0800 CONDUIT LOOP DETECTOR LF	* 655.0700 LOOP DETECTOR LEAD IN CABLE LF	* 655.0800 LOOP DETECTOR WIRE LF
MOORLAND RD & IH 94 WB RAMPS	3700-00-70	1000	21	PB2	CTH O	47+09; 77' LT	6X6	9F15-4B	4	CONCRETE	58	240	142
			22	PB2	CTH O	47+09; 65' LT	6X6	9F15-4B	4	CONCRETE	74	240	158
			23	PB2	CTH O	47+09; 53' LT	6X6	9F15-4B	4	CONCRETE	94	240	178
			S1	PB15	CTH O	45+17; 12' RT	6X6	9F15-4B	4	CONCRETE	42	197	126
			S2	PB15	CTH O	45+17; 0' RT	6X6	9F15-4B	4	CONCRETE	66	197	150
			S3	PB15	CTH O	45+17, 12' LT	6X6	9F15-4B	4	CONCRETE	92	197	176
INTERSECTION TOTAL											200	591	452

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

**LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.

NOTES: FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
S.D.D. 9F15-4B: LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE

PROJECT ID	LOCATION	FROM	TO	* 655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	* 655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	* 655.0320 CABLE TYPE TYPE UF 2-10 AWG GROUNDED LF	* 655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF	* 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	* 674.0300 REMOVE CABLE LF	* 675.0400 REINSTALL CABLE LF
2722-07-71	MOORLAND RD & IH 94 WB RAMPS	CB1	SB4	--	363	363	--	--	363	363
		CB1	SB6	--	150	150	--	--	150	150
		CB1	SB7	--	150	--	--	--	150	150
		SB1	SB6	--	--	--	194	--	--	--
		SB2	SB7	--	--	--	173	--	--	--
		SB3	SB4	--	--	--	191	--	--	--
		SB4	SB5	--	--	--	348	--	--	--
		SB6	SB7	--	--	--	56	--	--	--
		PB4	SB6	--	--	--	35	--	--	--
		PB8	SB4	--	--	--	25	--	--	--
		PB9	SB4	--	--	--	53	--	--	--
		PB15	SB2	--	--	--	89	--	--	--
		SB4	HEAD 5	19	--	--	--	--	--	--
		SB4	LUMINAIRE	--	--	--	--	288	--	--
		SB6	HEAD 6	19	--	--	--	--	--	--
		SB6	LUMINAIRE	--	--	--	--	288	--	--
		SB7	HEAD 7	19	--	--	--	--	--	--
INTERSECTION TOTAL				57	663	513	1164	576	663	663

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

ALL ITEMS INCLUDED IN PROJECT 2722-07-71 ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

**CTH O (S. MOORLAND ROAD) &
IH 94 WB ON RAMP
CITY OF BROOKFIELD
WAUKESHA COUNTY**

PLOT DATE : 11/22/2021 5:28 PM PLOT BY : PLOT NAME : 030201_mq PLOT SCALE : 1.000000:1.000000 WISDOT / CADDS SHEET 42

3

CONCRETE BASES

PROJECT ID	LOCATION	SIGNAL BASE NO.	ALIGNMENT	STATION	OFFSET	* 654.0101 CONCRETE BASES TYPE 1 EACH	* 654.0102 CONCRETE BASES TYPE 2 EACH
2722-07-71	MOORLAND RD & IH 94 WB RAMPS	SB4	CTH O	43+46	28.7' LT	--	1
		SB6	CTH O	44+51	21.3' LT	--	1
		SB7	CTH O	44+51	7.2' LT	1	--
	INTERSECTION TOTAL					1	2

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

TEMPORARY EMERGENCY VEHICLE PREEMPTION (EVP) SYSTEM
IH 94 WB ON RAMP & CTH O

PROJECT ID	CATEGORY	LOCATION	SPV.0060.41 TEMPORARY EMERGENCY VEHICLE PREEMPTION (EVP) SYSTEM IH 94 WB ON RAMP & CTH O EACH
2722-07-71	0060	MOORLAND RD & IH 94 WB RAMPS	1
		TOTAL	1

3

SIGNAL BASES AND POLES

PROJECT ID	LOCATION	SIGNAL BASE NO	* 657.0100 PEDESTAL BASE EACH	* 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	* 657.0310 POLES TYPE 3 EACH	* 657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	* 657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	* 659.1125 LUMINAIRES UTILITY LED C EACH
2722-07-71	MOORLAND RD & IH 94 WB RAMPS	SB4	--	1	1	--	2	2
		SB6	--	1	1	--	2	2
		SB7	1	--	--	1	--	--
	INTERSECTION TOTAL		1	2	2	1	4	4

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

REMOVE & SALVAGE VIDEO DETECTION EQUIPMENT IH 94 WB ON RAMP & CTH O

PROJECT ID	CATEGORY	LOCATION	SPV.0060.43 REMOVE & SALVAGE VIDEO DETECTION EQUIPMENT IH 94 WB ON RAMP & CTH O EACH
3700-00-70	1000	MOORLAND RD & IH 94 WB RAMPS	1
		TOTAL	1

SIGNAL FACES

PROJECT ID	LOCATION	SIG. BASE NO	SIG. HEAD NO	TYPE OF MOUNT	* 658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	++ BACKPLATE 3-SEC EACH	++ LED RED ARROW EACH	++ LED YELLOW ARROW EACH	++ LED GREEN ARROW EACH
2722-07-71	MOORLAND RD & IH 94 WB RAMPS	SB4	5	POST MOUNT VERTICAL	1	1	1	1	1
		SB6	6	POST MOUNT VERTICAL	1	1	1	1	1
		SB7	7	POST MOUNT VERTICAL	1	1	1	1	1
	INTERSECTION TOTAL				3	3	3	3	3

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.
++INCIDENTAL TO 658.0173

REMOVE & SALVAGE RADAR DETECTION EQUIPMENT IH 94 WB ON RAMP & CTH O

PROJECT ID	CATEGORY	LOCATION	SPV.0060.45 REMOVE & SALVAGE RADAR DETECTION EQUIPMENT IH 94 WB ON RAMP & CTH O EACH
3700-00-70	1000	MOORLAND RD & IH 94 WB RAMPS	1
		TOTAL	1

ALL ITEMS INCLUDED IN PROJECT 2722-07-71 ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (S. MOORLAND ROAD) &
IH 94 WB ON RAMP
CITY OF BROOKFIELD
WAUKESHA COUNTY

3

REMOVAL QUANTITIES

LOCATION	ITEM NO.	* 204.0195 REMOVING CONCRETE BASES EACH	* 653.0905 REMOVING PULL BOXES EACH
CTH O (MOORLAND RD) & BROOKFIELD SQ DRIVE	SB1	1	--
	SB2	1	--
	SB3	1	--
	SB4	1	--
	SB5	1	--
	SB6	1	--
	SB7	1	--
	SB8	1	--
	SB9	1	--
	SB10	1	--
	PB1	--	1
	PB2	--	1
	PB3	--	1
	PB4	--	1
	PB5	--	1
	PB6	--	1
	PB7	--	1
	PB8	--	1
	PB9	--	1
	PB10	--	1
	CB1	1	--
INTERSECTION TOTAL		11	10

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

REMOVING TRAFFIC SIGNALS
CTH O & BROOKFIELD SQUARE DR

LOCATION	204.9060.S.01 REMOVING TRAFFIC SIGNALS CTH O & BROOKFIELD SQUARE DR EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE DRIVE	1
TOTAL	1

3

REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE
CTH O & BROOKFIELD SQUARE DR

LOCATION	204.9060.S.05 REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE CTH O & BROOKFIELD SQUARE DR EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE DRIVE	1
TOTAL	1

ELECTRICAL SERVICE METER BREAKER PEDESTAL

LOCATION	656.0200.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL CTH O & BROOKFIELD SQUARE DR LS
CTH O (MOORLAND RD) & BROOKFIELD SQUARE DRIVE	1
TOTAL	1

SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.01 SIGNAL MOUNTING HARDWARE CTH O & BROOKFIELD SQUARE DR LS
CTH O (MOORLAND RD) & BROOKFIELD SQUARE DRIVE	1
TOTAL	1

ALL ITEMS ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (S. MOORLAND ROAD) & BROOKFIELD SQUARE DRIVE CITY OF BROOKFIELD WAUKESHA COUNTY

PLOT DATE : 11/17/2021 2:10 PM PLOT BY : PLOT NAME : 030201_mq PLOT SCALE : 1.000000:1.000000 WISDOT / CADDS SHEET 42

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CONDUIT ITEMS

LOCATION	FROM	TO	* 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	* 652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	* SPV.0060.03 EXPOSE EXISTING UTILITY EACH
CTH O (MOORLAND RD) & BROOKFIELD SQ DRIVE	CB1	PB1	--	42	--
	CB1	PB2	--	54	--
	PB1	PB17	--	198	--
	PB2	SB1	14	--	--
	PB2	SB2	11	--	--
	PB2	PB3	--	150	--
	PB3	SB3	15	--	--
	PB3	PB4	--	51	--
	PB4	SB4	14	--	--
	PB4	PB5	--	162	--
	PB5	PB6	--	26	--
	PB6	SB5	--	8	--
	PB5	PB7	--	156	--
	PB7	SB6	22	--	--
	PB7	SB7	9	--	--
	PB7	PB8	--	52	--
	PB8	SB8	7	--	--
	PB8	PB9	--	219	--
	PB9	SB9	13	--	--
	PB9	SB10	21	--	--
	PB9	PB10	--	126	--
	PB10	SB11	5	--	--
	PB10	PB11	196	--	--
	PB11	PB12	240	--	--
	PB10	PB13	--	165	--
	PB13	SB12	--	8	--
	PB13	SB13	5	--	--
	PB13	PB14	--	72	--
	PB14	SB14	5	--	--
	PB14	PB15	--	102	--
	PB15	SB15	5	--	--
	PB15	PB16	16	--	--
	PB15	PB17	--	87	--
	PB17	SB16	5	--	--
	CB1	ICPB1	15	--	1
INTERSECTION TOTAL			618	1678	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

PULL BOXES

LOCATION	PULL BOX NO.	ALIGNMENT	STATION	OFFSET	* 653.0135 PULL BOXES STEEL 24" x 36" EACH	* 653.0140 PULL BOXES STEEL 24" x 42" EACH
CTH O (MOORLAND RD) & BROOKFIELD SQ DRIVE	PB1	CTH O	54+26	85.9' LT	--	1
	PB2	CTH O	54+26	73.9' LT	--	1
	PB3	CTH O	54+27	23.8' LT	--	1
	PB4	CTH O	54+39	13.6' LT	--	1
	PB5	CTH O	54+40	39.9' RT	--	1
	PB6	CTH O	54+65	40.3' RT	--	1
	PB7	CTH O	53+62	37.7' RT	1	--
	PB8	CTH O	53+36	35.4' RT	--	1
	PB9	CTH O	53+11	33.4' LT	--	1
	PB10	CTH O	52+70	35.3' LT	--	1
	PB11	CTH O	50+75	43.5' LT	1	--
	PB12	CTH O	48+35	43.4' LT	1	--
	PB13	CTH O	52+73	90.2' LT	--	1
	PB14	CTH O	52+96	94.6' LT	--	1
	PB15	CTH O	53+30	91.1' LT	--	1
	PB16	CTH O	53+37	106.0' LT	1	--
	PB17	CTH O	53+60	91.8' LT	--	1
	ICPB1	CTH O	54+57	86' LT	--	1
INTERSECTION TOTAL					4	14

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS CTH O & BROOKFIELD SQUARE DR

LOCATION	661.0200.01 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS CTH O & BROOKFIELD SQUARE DR LS
CTH O (MOORLAND RD) & BROOKFIELD SQUARE DRIVE	1
TOTAL	1

ALL ITEMS ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (S. MOORLAND ROAD) & BROOKFIELD SQUARE DRIVE CITY OF BROOKFIELD WAUKESHA COUNTY

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CONCRETE BASES

LOCATION	SIGNAL BASE NO.	ALIGNMENT	STATION	OFFSET	* 654.0101 CONCRETE BASES TYPE 1 EACH	* 654.0102 CONCRETE BASES TYPE 2 EACH	654.0120 CONCRETE BASES TYPE 10 SPECIAL EACH	* 654.0217 CONCRETE CONTROL CABINET BASE TYPE 9 SPECIAL EACH
CTH O (MOORLAND RD) & BROOKFIELD SQ DRIVE	CB1	CTH O	54+40	85.9' LT	--	--	--	1
	SB1	CTH O	54+40	73.9' LT	--	1	--	--
	SB2	CTH O	54+15	76.3' LT	1	--	--	--
	SB3	CTH O	54+41	24.5' LT	1	--	--	--
	SB4	CTH O	54+53	9.2' LT	--	1	--	--
	SB5	CTH O	54+72	44.4' RT	--	--	1	--
	SB6	CTH O	53+85	37.5' RT	1	--	--	--
	SB7	CTH O	53+54	36.2' RT	1	--	--	--
	SB8	CTH O	53+30	35.4' RT	--	1	--	--
	SB9	CTH O	53+24	32.7' LT	1	--	--	--
	SB10	CTH O	52+91	34.2' LT	1	--	--	--
	SB11	CTH O	52+75	35.0' LT	1	--	--	--
	SB12	CTH O	52+66	87.9' LT	--	--	1	--
	SB13	CTH O	52+78	90.4' LT	1	--	--	--
	SB14	CTH O	52+98	98.9' LT	1	--	--	--
	SB15	CTH O	53+33	88.6' LT	1	--	--	--
	SB16	CTH O	53+60	98.8' LT	1	--	--	--
INTERSECTION TOTAL					11	3	2	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

TRAFFIC SIGNAL CONTROLLER & CABINET
CTH O & BROOKFIELD SQUARE DR

LOCATION	SPV.0060.01 TRAFFIC SIGNAL CONTROLLER & CABINET CTH O & BROOKFIELD SQUARE DR LS
CTH O (MOORLAND RD) & BROOKFIELD SQUARE DRIVE	1
TOTAL	1

TEMPORARY VIDEO DETECTION
CTH O & BROOKFIELD SQUARE DR

CATEGORY	LOCATION	SPV.0060.31 TEMPORARY VIDEO DETECTION CTH O & BROOKFIELD SQUARE DR EACH
0060	CTH O (MOORLAND RD) & BROOKFIELD SQUARE DRIVE	1
	TOTAL	1

ALL ITEMS ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (S. MOORLAND ROAD) & BROOKFIELD SQUARE DRIVE CITY OF BROOKFIELD WAUKESHA COUNTY

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SIGNAL BASES, POLES, AND MAST ARMS

LOCATION	SIGNAL BASE NO	* 657.0100 PEDESTAL BASE EACH	* 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	* 657.0310 POLES TYPE 3 EACH	* 657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	* 657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0352 POLES TYPE 10 SPECIAL EACH	SPV.0060.54 INSTALL COUNTY-FURNISHED EQUIPMENT MONOTUBE ARMS 40-FT EACH	657.0546 MONOTUBE ARMS 45-FT SPECIAL EACH	* 657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	* 657.0810 LUMINAIRE ARMS STEEL 10-FT EACH	* 658.0500 PEDESTRIAN PUSH BUTTONS EACH	* 659.1125 LUMINAIRES UTILITY LED C EACH
CTH O (MOORLAND RD) &	SB1	--	1	1	--	--	--	--	--	--	1	--	--	1
BROOKFIELD SQ DRIVE	SB2	1	--	--	1	--	--	--	--	--	--	--	1	--
	SB3	1	--	--	1	--	--	--	--	--	--	--	--	--
	SB4	--	1	1	--	--	--	--	--	--	1	--	--	--
	SB5	--	--	--	--	--	--	1	1	--	--	1	--	1
	SB6	1	--	--	1	--	--	--	--	--	--	--	--	--
	SB7	1	--	--	1	--	--	--	--	--	--	--	--	--
	SB8	--	1	1	--	--	--	--	--	--	1	--	--	1
	SB9	1	--	--	1	--	--	--	--	--	--	--	--	--
	SB10	1	--	--	--	1	--	--	--	--	--	--	--	--
	SB11	1	--	--	--	1	--	--	--	--	--	--	--	--
	SB12	--	--	--	--	--	--	1	--	1	--	1	--	1
	SB13	1	--	--	--	--	1	--	--	--	--	--	1	--
	SB14	1	--	--	--	1	--	--	--	--	--	--	--	--
	SB15	1	--	--	--	1	--	--	--	--	--	--	1	--
	SB16	1	--	--	1	--	--	--	--	--	--	--	--	--
INTERSECTION TOTAL		11	3	3	6	4	1	2	1	1	3	2	3	4

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

3

TRAFFIC DETECTOR LOOPS

LOCATION	LOOP NO.	HOME RUN PB	ALIGNMENT	** STATION/OFFSET	SIZE (FT)	SDD INSTALLATION REFERENCE	NO. OF TURNS	PAVEMENT TYPE	* 652.0800 CONDUIT LOOP DETECTOR LF	* 655.0700 LOOP DETECTOR LEAD IN CABLE LF	* 655.0800 LOOP DETECTOR WIRE LF
CTH O (MOORLAND RD) &	11	PB12	CTH O	48+35, 28' LT	6X18	9F15-4A	5	CONCRETE	60	659	264
BROOKFIELD SQ DRIVE	41	PB16	CTH O	53+16, 109' LT	6X6	9F15-4B	3	CONCRETE	70	135	130
	42	PB16	CTH O	53+06, 90' LT	6X15	9F15-4B	3	CONCRETE	76	135	172
	43	PB16	CTH O	53+27, 109' LT	6X6	9F15-4A	3	CONCRETE	48	135	108
	44	PB16	CTH O	53+17, 90' LT	6X15	9F15-4A	3	CONCRETE	58	135	154
INTERSECTION TOTAL									312	1199	828

**LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.

NOTES: FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
S.D.D. 9F15-4A: LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
S.D.D. 9F15-4B: LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

ALL ITEMS ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (S. MOORLAND ROAD) & BROOKFIELD SQUARE DRIVE CITY OF BROOKFIELD WAUKESHA COUNTY

PLOT DATE : 11/17/2021 2:10 PM PLOT BY : PLOT NAME : 030201_mq PLOT SCALE : 1.000000:1.000000 WISDOT / CADDS SHEET 42

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE

LOCATION	FROM	TO	* 655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	* 655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	* 655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	* 655.0320 CABLE TYPE TYPE UF 2-10 AWG GROUNDED LF	* 655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF	* 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	*, + 655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	(INCIDENTAL) VIDEO DETECTION CABLE LF	(INCIDENTAL) LOOP DETECTOR LEAD IN CABLE LF
MOORLAND RD & BROOKFIELD SQ DR	CB1	SB1	--	--	47	47	47	--	--	--	--
	CB1	SB2	--	--	43	--	--	--	--	--	--
	CB1	SB3	--	--	112	--	--	--	--	--	--
	CB1	SB4	--	--	141	--	--	--	--	177	--
	CB1	SB5	--	--	244	--	--	--	309	--	--
	CB1	SB6	--	--	315	--	--	--	--	--	--
	CB1	SB7	--	--	300	--	--	--	--	--	--
	CB1	SB8	--	--	341	--	--	--	--	--	--
	CB1	SB9	--	--	383	--	--	--	--	--	--
	CB1	SB10	--	--	389	--	--	--	--	--	--
	CB1	SB11	--	--	316	--	--	--	--	--	--
	CB1	SB12	--	--	250	250	--	--	320	320	--
	CB1	SB13	--	246	--	--	--	--	--	--	--
	CB1	SB14	--	--	212	--	--	--	--	--	--
	CB1	SB15	--	--	157	--	--	--	--	--	--
	CB1	SB16	--	--	117	--	117	--	--	--	--
	SB1	SB2	--	--	--	--	39	--	--	--	--
	SB1	SB5	--	--	--	244	--	--	--	--	--
	SB2	SB3	--	--	--	--	103	--	--	--	--
	SB3	SB4	--	--	--	--	70	--	--	--	--
	SB4	SB5	--	--	--	--	146	--	--	--	--
	SB5	SB6	--	--	--	--	182	--	--	--	--
	SB6	SB7	--	--	--	--	45	--	--	--	--
	SB7	SB8	--	--	--	--	68	--	--	--	--
	SB8	SB9	--	--	--	--	120	--	--	--	--
	SB8	SB12	--	--	--	246	--	--	--	--	--
	SB9	SB10	--	--	--	--	47	--	--	--	--
	SB10	SB11	--	--	--	--	100	--	--	--	--
	SB11	SB12	--	--	--	--	96	--	--	--	--
	SB12	SB13	--	--	--	--	23	--	--	--	--
	SB13	SB14	--	--	--	--	59	--	--	--	--
	SB14	SB15	--	--	--	--	72	--	--	--	--
	SB15	SB16	--	--	--	--	64	--	--	--	--
	PB1	CB1	--	--	--	--	28	--	--	--	--
	PB2	SB2	--	--	--	--	24	--	--	--	--
	PB3	SB3	--	--	--	--	28	--	--	--	--
	PB4	SB4	--	--	--	--	27	--	--	--	--
	PB5	SB5	--	--	--	--	46	--	--	--	--
	PB6	SB5	--	--	--	--	21	--	--	--	--
	PB7	SB7	--	--	--	--	22	--	--	--	--
	PB8	SB8	--	--	--	--	19	--	--	--	--
	PB9	SB9	--	--	--	--	26	--	--	--	--
	PB10	SB11	--	--	--	--	18	--	--	--	--
	PB13	SB13	--	--	--	--	18	--	--	--	--
	PB14	SB14	--	--	--	--	18	--	--	--	--
	PB15	SB15	--	--	--	--	18	--	--	--	--
	PB17	SB16	--	--	--	--	18	--	--	--	--

(CONTINUED ON NEXT PAGE)

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

+EVP DETECTOR CABLE IS MEASURED FROM CB1 TO THE EVP DETECTOR HEAD.

ALL ITEMS ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (S. MOORLAND ROAD) & BROOKFIELD SQUARE DRIVE CITY OF BROOKFIELD WAUKESHA COUNTY

3

3

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE (CONTINUED FROM PREVIOUS PAGE)

LOCATION	FROM	TO	* 655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	* 655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	* 655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	* 655.0320 CABLE TYPE TYPE UF 2-10 AWG GROUNDED LF	* 655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF	* 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	*, + 655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	(INCIDENTAL) VIDEO DETECTION CABLE LF	(INCIDENTAL) LOOP DETECTOR LEAD IN CABLE LF
MOORLAND RD & BROOKFIELD SQ DR	SB1	HEAD 9	19	--	--	--	--	--	--	--	--
	SB1	LUMINAIRE	--	--	--	--	--	117	--	--	--
	SB2	HEAD 6	19	--	--	--	--	--	--	--	--
	SB2	HEAD 21	15	--	--	--	--	--	--	--	--
	SB2	PUSH BUTTON	--	--	--	--	--	--	--	--	6
	SB3	HEAD 7	19	--	--	--	--	--	--	--	--
	SB4	HEAD 8	19	--	--	--	--	--	--	--	--
	SB5	HEAD 2	65	--	--	--	--	--	--	--	--
	SB5	HEAD 3	65	--	---	--	--	--	--	--	--
	SB5	HEAD 4	65	--	--	--	--	--	--	--	--
	SB5	LUMINAIRE	--	--	--	--	--	145	--	--	--
	SB6	HEAD 14	19	--	--	--	--	--	--	--	--
	SB7	HEAD 15	19	--	--	--	--	--	--	--	--
	SB8	HEAD 1	19	--	--	--	--	--	--	--	--
	SB8	LUMINAIRE	--	--	--	--	--	117	--	--	--
	SB9	HEAD 5	19	--	--	--	--	--	--	--	--
	SB10	HEAD 18	--	22	--	--	--	--	--	--	--
	SB11	HEAD 19	--	22	--	--	--	--	--	--	--
	SB12	HEAD 10	70	--	--	--	--	--	--	--	--
	SB12	HEAD 11	70	--	--	--	--	--	--	--	--
	SB12	HEAD 12	70	--	--	--	--	--	--	--	--
	SB12	LUMINAIRE	--	--	--	--	--	145	--	--	--
	SB13	HEAD 20	15	--	--	--	--	--	--	--	--
	SB13	PUSH BUTTON	--	--	--	--	--	--	--	--	6
	SB14	HEAD 16	--	22	--	--	--	--	--	--	--
	SB15	HEAD 17	--	22	--	--	--	--	--	--	--
	SB15	PUSH BUTTON	--	--	--	--	--	--	--	--	6
	SB16	HEAD 13	19	--	--	--	--	--	--	--	--
INTERSECTION TOTAL			606	334	3367	787	1729	524	629	497	18

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

+EVP DETECTOR CABLE IS MEASURED FROM CB1 TO THE EVP DETECTOR HEAD.

ALL ITEMS ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (S. MOORLAND ROAD) & BROOKFIELD SQUARE DRIVE CITY OF BROOKFIELD WAUKESHA COUNTY

SIGNAL FACES

LOCATION	SIG. BASE NO	SIG. HEAD NO	TYPE OF MOUNT	* 658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	* 658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	++ BACKPLATE 3-SEC EACH	++ BACKPLATE 4-SEC EACH	++ LED RED BALL EACH	++ LED YELLOW BALL EACH	++ LED GREEN BALL EACH	++ LED RED ARROW EACH	++ LED YELLOW ARROW EACH	++ LED GREEN ARROW EACH	* 658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	+++ LED MODULES COUNTDOWN TIMER 16" 16-INCH EACH
CTH O (MOORLAND RD) & BROOKFIELD SQ DRIVE	SB1	9	POST MOUNT VERTICAL	1	--	1	--	1	1	1	--	--	--	--	--
	SB2	6	POST MOUNT VERTICAL	1	--	1	--	--	--	--	1	1	1	--	--
	SB2	21	PEDESTRIAN	--	--	--	--	--	--	--	--	--	--	1	1
	SB3	7	POST MOUNT VERTICAL	1	--	1	--	--	--	--	1	1	1	--	--
	SB4	8	POST MOUNT VERTICAL	1	--	1	--	--	--	--	1	1	1	--	--
	SB5	2	MONOTUBE ARM MOUNT VERTICAL	1	--	1	--	1	1	1	--	--	--	--	--
	SB5	3	MONOTUBE ARM MOUNT VERTICAL	1	--	1	--	1	1	1	--	--	--	--	--
	SB5	4	MONOTUBE ARM MOUNT VERTICAL	1	--	1	--	1	1	1	--	--	--	--	--
	SB6	14	POST MOUNT VERTICAL	1	--	1	--	--	--	--	1	1	1	--	--
	SB7	15	POST MOUNT VERTICAL	1	--	1	--	--	--	--	1	1	1	--	--
	SB8	1	POST MOUNT VERTICAL	1	--	1	--	1	1	1	--	--	--	--	--
	SB9	5	POST MOUNT VERTICAL	1	--	1	--	--	--	--	1	1	1	--	--
	SB10	18	POST MOUNT VERTICAL	--	1	--	1	--	--	--	2	1	1	--	--
	SB11	19	POST MOUNT VERTICAL	--	1	--	1	--	--	--	2	1	1	--	--
	SB12	10	MONOTUBE ARM MOUNT VERTICAL	1	--	1	--	1	1	1	--	--	--	--	--
	SB12	11	MONOTUBE ARM MOUNT VERTICAL	1	--	1	--	1	1	1	--	--	--	--	--
	SB12	12	MONOTUBE ARM MOUNT VERTICAL	1	--	1	--	1	1	1	--	--	--	--	--
	SB13	20	PEDESTRIAN	--	--	--	--	--	--	--	--	--	--	1	1
	SB14	16	POST MOUNT VERTICAL	--	1	--	1	--	--	--	2	1	1	--	--
	SB15	17	POST MOUNT VERTICAL	--	1	--	1	--	--	--	2	1	1	--	--
	SB16	13	POST MOUNT VERTICAL	1	--	1	--	--	--	--	1	1	1	--	--
INTERSECTION TOTAL				15	4	15	4	8	8	8	15	11	11	2	2

++INCIDENTAL TO 658.0173 OR 658.0174
+++INCIDENTAL TO 658.0416

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

REINSTALL TEMPORARY EVP EQUIPMENT
CTH O & BROOKFIELD SQUARE DR

CATEGORY	LOCATION	SPV.0060.33 REINSTALL TEMPORARY EVP EQUIPMENT CTH O & BROOKFIELD SQUARE DR EACH
0060	CTH O (MOORLAND RD) & BROOKFIELD SQUARE DRIVE	1
	TOTAL	1

REMOVE & REINSTALL EVP EQUIPMENT
CTH O & BROOKFIELD SQUARE DR

CATEGORY	LOCATION	SPV.0060.35 REMOVE & REINSTALL EVP EQUIPMENT CTH O & BROOKFIELD SQUARE DR EACH
0060	CTH O (MOORLAND RD) & BROOKFIELD SQUARE DRIVE	1
	TOTAL	1

ALL ITEMS ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (S. MOORLAND ROAD) & BROOKFIELD SQUARE DRIVE
CITY OF BROOKFIELD
WAUKESHA COUNTY

3

VIDEO VEHICLE DETECTION SYSTEM
CTH O & BROOKFIELD SQUARE DR

LOCATION	SPV.0060.37 VIDEO VEHICLE DETECTION SYSTEM CTH O & BROOKFIELD SQUARE DR EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE DRIVE	1
TOTAL	1

REMOVE & REINSTALL WIRELESS COMMUNICATION EQUIP
CTH O & BROOKFIELD SQUARE DR

LOCATION	SPV.0060.39 REMOVE & REINSTALL WIRELESS COMMUNICATION EQUIP CTH O & BROOKFIELD SQUARE DR EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE DRIVE	1
TOTAL	1

3

REMOVE, SALVAGE, & REINSTALL FIBER OPTIC TRAFFIC SIGNAL EQUIPMENT
*

LOCATION	SPV.0060.42 REMOVE, SALVAGE, & REINSTALL FIBER OPTIC TRAFFIC SIGNAL EQUIPMENT EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE DRIVE	1
TOTAL	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

ALL ITEMS ARE CATEGORY 0500
UNLESS OTHERWISE NOTED.

**CTH O (S. MOORLAND ROAD) &
BROOKFIELD SQUARE DRIVE
CITY OF BROOKFIELD
WAUKESHA COUNTY**

3

REMOVAL QUANTITIES

LOCATION	ITEM NO.	* 204.0195 REMOVING CONCRETE BASES EACH	* 653.0905 REMOVING PULL BOXES EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTR./MCDONALDS DWY	SB1	1	--
	SB2	1	--
	SB3	1	--
	SB4	1	--
	SB5	1	--
	SB6	1	--
	SB7	1	--
	SB8	1	--
	SB9	1	--
	SB10	1	--
	SB11	1	--
	SB12	1	--
	PB1	--	1
	PB2	--	1
	PB3	--	1
	PB4	--	1
	PB5	--	1
	PB6	--	1
	PB7	--	1
	ICPB1	--	1
	CB1	1	--
INTERSECTION TOTAL		13	8

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

REMOVING TRAFFIC SIGNALS CTH O & BROOKFIELD SQUARE MALL NORTH DRWY

LOCATION	204.9060.S.02 REMOVING TRAFFIC SIGNALS CTH O & BROOKFIELD SQUARE MALL NORTH DRWY EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTRANCE	1
TOTAL	1

3

REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE CTH O & BRKFIELD SQ MALL N DWY

LOCATION	204.9060.S.06 REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE CTH O & BRKFIELD SQ MALL N DWY EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTRANCE	1
TOTAL	1

ELECTRICAL SERVICE METER BREAKER PEDESTAL

LOCATION	656.0200.02 ELECTRICAL SERVICE METER BREAKER PEDESTAL CTH O & BROOKFIELD SQUARE MALL NORTH DWY LS
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTRANCE	1
TOTAL	1

SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.02 SIGNAL MOUNTING HARDWARE CTH O & BROOKFIELD SQUARE MALL NORTH DWY LS
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTRANCE	1
TOTAL	1

ALL ITEMS ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (N. MOORLAND ROAD) & BROOKFIELD SQUARE MALL ENTRANCE / MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

3

CONDUIT ITEMS

LOCATION	FROM	TO	* 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	* 652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	* (INCIDENTAL) INSTALL CONDUIT INTO EXISTING ITEM EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTR./MCDONALDS DWY	CB1	PB1	--	45	--
	PB1	SB1	20	--	--
	PB1	PB2	--	198	--
	PB2	SB2	23	--	--
	PB2	PB3	--	135	--
	PB3	SB3	--	22	--
	PB3	PB4	--	146	--
	PB4	SB4	7	--	--
	PB4	PB5	--	72	--
	PB5	SB5	8	--	--
	PB5	PB6	--	68	--
	PB6	SB6	--	5	--
	PB6	SB7	14	--	--
	PB6	PB7	--	138	--
	PB7	SB8	14	--	--
	PB7	PB8	--	201	--
	PB8	SB9	14	--	--
	PB8	PB9	--	138	--
	PB9	PB10	--	120	--
	PB10	SB10	13	--	--
	PB10	SB11	--	17	--
	PB10	PB11	--	336	--
	PB11	SB12	--	18	--
	PB11	CB1	--	150	--
	EXCV0067	ICPB2	57	--	1
	ICPB2	CB1	207	--	--
INTERSECTION TOTAL			377	1809	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

PULL BOXES

LOCATION	PULL BOX NO.	ALIGNMENT	STATION	OFFSET	* 653.0140 PULL BOXES STEEL 24" x 42" EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTR./MCDONALDS DWY	PB1	CTH O	69+60	57.2' RT	1
	PB2	CTH O	69+58	9.1' LT	1
	PB3	CTH O	69+58	54.6' LT	1
	PB4	CTH O	70+23	77.0' LT	1
	PB5	CTH O	70+59	76.7' LT	1
	PB6	CTH O	70+93	82.3' LT	1
	PB7	CTH O	71+47	57.0' LT	1
	PB8	CTH O	71+47	10.1' RT	1
	PB9	CTH O	71+47	56.1' RT	1
	PB10	CTH O	71+08	57.6' RT	1
	PB11	CTH O	69+96	59.0' RT	1
	ICPB2	CTH O	67+31	61' RT	1
INTERSECTION TOTAL					12

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

3

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS BROOKFIELD SQ MALL N DWY

LOCATION	661.0200.02 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS CTH O & BROOKFIELD SQ MALL N DWY LS
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTRANCE	1
TOTAL	1

TRAFFIC SIGNAL CONTROLLER & CABINET
CTH O & BROOKFIELD SQUARE MALL N DWY

LOCATION	SPV.0060.02 TRAFFIC SIGNAL CONTROLLER & CABINET CTH O & BROOKFIELD SQUARE MALL N DWY LS
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTRANCE	1
TOTAL	1

ALL ITEMS ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (N. MOORLAND ROAD) & BROOKFIELD SQUARE MALL ENTRANCE / MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

3

3

CONCRETE BASES

LOCATION	SIGNAL BASE NO.	ALIGNMENT	STATION	OFFSET	* 654.0101 CONCRETE BASES TYPE 1 EACH	* 654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	* 654.0217 CONCRETE CONTROL CABINET BASE TYPE 9 SPECIAL EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTR./MCDONALDS DWY	CB1	CTH O	69+46	59.9' RT	--	--	--	--	1
	SB1	CTH O	69+80	57.9' RT	--	1	--	--	--
	SB2	CTH O	69+82	9.1' LT	1	--	--	--	--
	SB3	CTH O	69+80	54.7' LT	--	--	--	1	--
	SB4	CTH O	70+16	73.4' LT	1	--	--	--	--
	SB5	CTH O	70+59	68.8' LT	1	--	--	--	--
	SB6	CTH O	70+95	85.6' LT	--	--	1	--	--
	SB7	CTH O	71+00	70.3' LT	1	--	--	--	--
	SB8	CTH O	71+35	54.8' LT	--	1	--	--	--
	SB9	CTH O	71+33	10.7' RT	--	1	--	--	--
	SB10	CTH O	71+21	55.9' RT	1	--	--	--	--
	SB11	CTH O	70+98	70.7' RT	--	--	--	1	--
	SB12	CTH O	70+10	71.0' RT	--	--	1	--	--
INTERSECTION TOTAL					5	3	2	2	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

TEMPORARY VEHICLE DETECTION
CTH O & BROOKFIELD SQUARE MALL NORTH DWY

CATEGORY	LOCATION	SPV.0060.32 TEMPORARY VEHICLE DETECTION CTH O & BROOKFIELD SQUARE MALL NORTH DWY EACH
0060	CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTRANCE	1
	TOTAL	1

REINSTALL TEMPORARY EVP EQUIPMENT
CTH O & BROOKFIELD SQUARE MALL NORTH DWY

CATEGORY	LOCATION	SPV.0060.34 REINSTALL TEMPORARY EVP EQUIPMENT CTH O & BROOKFIELD SQUARE MALL NORTH DWY EACH
0060	CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTRANCE	1
	TOTAL	1

ALL ITEMS ARE CATEGORY 0500
UNLESS OTHERWISE NOTED.

CTH O (N. MOORLAND ROAD) & BROOKFIELD SQUARE MALL ENTRANCE / MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

3

SIGNAL BASES, POLES, AND MAST ARMS

LOCATION	SIGNAL BASE NO	* 657.0100 PEDESTAL BASE EACH	* 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	SPV.0060.50 INSTALL COUNTY-FURNISHED EQUIPMENT TRNSFRMR BASE BREAKAWAY 11 1/2-IN BOLT CIRCLE EACH	* 657.0310 POLES TYPE 3 EACH	SPV.0060.52 INSTALL COUNTY-FURNISHED EQUIPMENT POLES TYPE 3 EACH	657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT EACH	* 657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	SPV.0060.51 INSTALL COUNTY-FURNISHED EQUIPMENT TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	* 657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0345 POLES TYPE 9 EACH	657.0350 POLES TYPE 10 EACH	657.0360 POLES TYPE 13 EACH	SPV.0060.53 INSTALL COUNTY-FURNISHED EQUIPMENT POLES TYPE 13 EACH
CTH O (MOORLAND RD) &	SB1	--	--	1	--	1	--	--	--	--	--	--	--	--
BROOKFIELD SQUARE MALL	SB2	1	--	--	--	--	--	--	1	--	--	--	--	--
ENTR./MCDONALDS DWY	SB3	--	--	--	--	--	--	--	--	--	--	--	--	1
	SB4	1	--	--	--	--	--	1	--	--	--	--	--	--
	SB5	1	--	--	--	--	1	--	--				--	--
	SB6	--	--	--	--	--	--	--	--	--	--	1	--	--
	SB7	1	--	--	--	--	--	--	--	1	--	--	--	--
	SB8	--	1	--	1	--	--	--	--	--	--	--	--	--
	SB9	--	1	--	1	--	--	--	--	--	--	--	--	--
	SB10	1	--	--	--	--	--	--	--	1	--	--	--	--
	SB11	--	--	--	--	--	--	--	--	--	--	--	1	--
	SB12	--	--	--	--	--	--	--	--	--	1	--	--	--
INTERSECTION TOTAL		5	2	1	2	1	1	1	1	2	1	1	1	1

SIGNAL BASES, POLES, AND MAST ARMS (CONT.)

SIGNAL BASE NO	657.0530 MONOTUBE ARMS 30-FT EACH	657.0555 MONOTUBE ARMS 55-FT EACH	* 657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	SPV.0060.55 INSTALL COUNTY-FURNISHED EQUIPMENT LUMINAIRE ARM SIGNAL MEMBER 4-INCH CLAMP 6-FT EACH	* 657.0810 LUMINAIRE ARMS STEEL 10-FT EACH	SPV.0060.56 INSTALL COUNTY-FURNISHED EQUIPMENT LUMINAIRE ARMS STEEL 10-FT EACH	* 658.0500 PEDESTRIAN PUSH BUTTONS EACH	* 659.1125 LUMINAIRES UTILITY LED C EACH	SPV.0060.57 INSTALL COUNTY-FURNISHED EQUIPMENT LUMINAIRES UTILITY LED C EACH
SB1	--	--	--	1	--	--	1	--	1
SB2	--	--	--	--	--	--	1	--	--
SB3	--	1	--	--	--	1	1	--	1
SB4	--	--	--	--	--	--	1	--	--
SB5	--	--	--	--	--	--	1	--	--
SB6	1	--	--	--	1	--	--	1	--
SB7	--	--	--	--	--	--	1	--	--
SB8	--	--	1	--	--	--	1	1	--
SB9	--	--	1	--	--	--	1	1	--
SB10	--	--	--	--	--	--	1	--	--
SB11	--	1	--	--	1	--	1	1	--
SB12	1	--	--	--	--	--	1	--	--
INTERSECTION TOTAL	2	2	2	1	2	1	11	4	2

ALL ITEMS ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

CTH O (N. MOORLAND ROAD) & BROOKFIELD SQUARE MALL ENTRANCE / MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

3

3

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE

LOCATION	FROM	TO	* 655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	* 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	* 655.0280 CABLE TRAFFIC SIGNAL 19-14 AWG LF	* 655.0320 CABLE TYPE TYPE UF 2-10 AWG GROUNDED LF	* 655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF	* 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	*, + 655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	(INCIDENTAL) VIDEO DETECTION CABLE LF	(INCIDENTAL) LOOP DETECTOR LEAD IN CABLE LF
CTH O (MOORLAND RD) & BROOKFIELD	CB1	SB1	--	--	48	--	--	48	48	--	--	--	--
SQUARE MALL ENTR./MCDONALDS DWY	CB1	SB2	--	--	138	--	--	--	--	--	--	--	--
	CB1	SB3	--	--	--	198	--	--	--	--	278	278	--
	CB1	SB4	--	--	274	--	--	--	--	--	--	--	--
	CB1	SB5	--	322	--	--	--	--	--	--	--	--	--
	CB1	SB6	--	--	366	--	--	--	--	--	--	421	--
	CB1	SB7	--	--	376	--	--	--	--	--	--	--	--
	CB1	SB8	--	--	413	--	--	--	--	--	--	--	--
	CB1	SB9	--	--	332	--	--	--	--	--	--	372	--
	CB1	SB10	--	216	--	--	--	--	--	--	--	--	--
	CB1	SB11	--	--	--	--	213	213	--	--	293	--	--
	CB1	SB12	--	--	87	--	--	--	87	--	--	142	--
	SB1	SB2	--	--	--	--	--	--	143	--	--	--	--
	SB1	SB3	--	--	--	--	--	204	--	--	--	--	--
	SB2	SB3	--	--	--	--	--	--	121	--	--	--	--
	SB3	SB4	--	--	--	--	--	--	135	--	--	--	--
	SB4	SB5	--	--	--	--	--	--	79	--	--	--	--
	SB5	SB6	--	--	--	--	--	--	73	--	--	--	--
	SB6	SB7	--	--	--	--	--	--	34	--	--	--	--
	SB6	SB8	--	--	--	--	--	110	--	--	--	--	--
	SB7	SB8	--	--	--	--	--	--	119	--	--	--	--
	SB8	SB9	--	--	--	--	--	125	125	--	--	--	--
	SB9	SB10	--	--	--	--	--	--	157	--	--	--	--
	SB9	SB11	--	--	--	--	--	163	--	--	--	--	--
	SB10	SB11	--	--	--	--	--	--	44	--	--	--	--
	SB11	SB12	--	--	--	--	--	--	185	--	--	--	--
	PB1	SB1	--	--	--	--	--	--	33	--	--	--	--
	PB2	SB2	--	--	--	--	--	--	36	--	--	--	--
	PB3	SB3	--	--	--	--	--	--	35	--	--	--	--
	PB4	SB4	--	--	--	--	--	--	21	--	--	--	--
	PB5	SB5	--	--	--	--	--	--	21	--	--	--	--
	PB6	SB6	--	--	--	--	--	--	18	--	--	--	--
	PB7	SB8	--	--	--	--	--	--	25	--	--	--	--
	PB8	SB9	--	--	--	--	--	--	27	--	--	--	--
	PB9	SB10	--	--	--	--	--	--	66	--	--	--	--
	PB10	SB10	--	--	--	--	--	--	26	--	--	--	--
	PB11	SB12	--	--	--	--	--	--	31	--	--	--	--

(CONTINUED ON NEXT PAGE)

ALL ITEMS ARE CATEGORY 0500
UNLESS OTHERWISE NOTED.

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

+EVP DETECTOR CABLE IS MEASURED FROM CB1 TO THE EVP DETECTOR HEAD.

**CTH O (N. MOORLAND ROAD) &
BROOKFIELD SQUARE MALL ENTRANCE /
MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY**

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE (CONTINUED FROM PREVIOUS PAGE)

LOCATION	FROM	TO	* 655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	* 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	* 655.0280 CABLE TRAFFIC SIGNAL 19-14 AWG LF	* 655.0320 CABLE TYPE TYPE UF 2-10 AWG GROUNDED LF	* 655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF	* 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	*, + 655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	(INCIDENTAL) VIDEO DETECTION CABLE LF	(INCIDENTAL) LOOP DETECTOR LEAD IN CABLE LF
CTH O (MOORLAND RD) & BROOKFIELD	SB1	HEAD 1	21	--	--	--	--	--	--	--	--	--	--
SQUARE MALL ENTR./MCDONALDS DWY	SB1	HEAD 13	--	22	--	--	--	--	--	--	--	--	--
	SB1	HEAD 29	15	--	--	--	--	--	--	--	--	--	--
	SB1	PUSH BUTTON	--	--	--	--	--	--	--	--	--	--	6
	SB1	LUMINAIRE	--	--	--	--	--	--	--	117	--	--	--
	SB2	HEAD 5	--	22	--	--	--	--	--	--	--	--	--
	SB2	PUSH BUTTON	--	--	--	--	--	--	--	--	--	--	6
	SB3	HEAD 9	80	--	--	--	--	--	--	--	--	--	--
	SB3	HEAD 10	80	--	--	--	--	--	--	--	--	--	--
	SB3	HEAD 11	80	--	--	--	--	--	--	--	--	--	--
	SB3	HEAD 14	--	81	--	--	--	--	--	--	--	--	--
	SB3	HEAD 30	15	--	--	--	--	--	--	--	--	--	--
	SB3	PUSH BUTTON	--	--	--	--	--	--	--	--	--	--	6
	SB3	LUMINAIRE	--	--	--	--	--	--	--	145	--	--	--
	SB4	HEAD 15	19	--	--	--	--	--	--	--	--	--	--
	SB4	HEAD 20	19	--	--	--	--	--	--	--	--	--	--
	SB4	HEAD 23	15	--	--	--	--	--	--	--	--	--	--
	SB4	PUSH BUTTON	--	--	--	--	--	--	--	--	--	--	6
	SB5	PUSH BUTTON	--	--	--	--	--	--	--	--	--	--	6
	SB6	HEAD 21	55	--	--	--	--	--	--	--	--	--	--
	SB6	HEAD 22	25	--	--	--	--	--	--	--	--	--	--
	SB6	LUMINAIRE	--	--	--	--	--	--	--	145	--	--	--
	SB7	HEAD 24	15	--	--	--	--	--	--	--	--	--	--
	SB7	PUSH BUTTON	--	--	--	--	--	--	--	--	--	--	6
	SB8	HEAD 6	--	22	--	--	--	--	--	--	--	--	--
	SB8	HEAD 8	21	--	--	--	--	--	--	--	--	--	--
	SB8	HEAD 25	15	--	--	--	--	--	--	--	--	--	--
	SB8	PUSH BUTTON	--	--	--	--	--	--	--	--	--	--	6
	SB8	LUMINAIRE	--	--	--	--	--	--	--	117	--	--	--
	SB9	HEAD 7	--	22	--	--	--	--	--	--	--	--	--
	SB9	HEAD 12	--	22	--	--	--	--	--	--	--	--	--
	SB9	PUSH BUTTON	--	--	--	--	--	--	--	--	--	--	6
	SB9	LUMINAIRE	--	--	--	--	--	--	--	117	--	--	--
	SB10	HEAD 26	15	--	--	--	--	--	--	--	--	--	--
	SB10	PUSH BUTTON	--	--	--	--	--	--	--	--	--	--	6
	SB11	HEAD 2	80	--	--	--	--	--	--	--	--	--	--
	SB11	HEAD 3	80	--	--	--	--	--	--	--	--	--	--
	SB11	HEAD 4	80	--	--	--	--	--	--	--	--	--	--
	SB11	HEAD 16	19	--	--	--	--	--	--	--	--	--	--
	SB11	HEAD 19	19	--	--	--	--	--	--	--	--	--	--
	SB11	HEAD 27	15	--	--	--	--	--	--	--	--	--	--
	SB11	PUSH BUTTON	--	--	--	--	--	--	--	--	--	--	6
	SB11	LUMINAIRE	--	--	--	--	--	--	--	145	--	--	--
	SB12	HEAD 17	55	--	--	--	--	--	--	--	--	--	--
	SB12	HEAD 18	25	--	--	--	--	--	--	--	--	--	--
	SB12	HEAD 28	15	--	--	--	--	--	--	--	--	--	--
	SB12	PUSH BUTTON	--	--	--	--	--	--	--	--	--	--	6
INTERSECTION TOTAL			878	729	2034	198	213	863	1689	786	571	1213	66

+EVP DETECTOR CABLE IS MEASURED FROM CB1 TO THE EVP DETECTOR HEAD.

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

ALL ITEMS ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (N. MOORLAND ROAD) & BROOKFIELD SQUARE MALL ENTRANCE / MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

LOCATION	SIG. BASE NO	SIG. HEAD NO	TYPE OF MOUNT	SIGNAL FACES * 658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	SPV.0060.58 INSTALL COUNTY-FURNISHED TRAFFIC SIGNAL FACE 3S 12-INCH EACH	* 658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	SPV.0060.59 INSTALL COUNTY-FURNISHED TRAFFIC SIGNAL FACE 4S 12-INCH EACH	++ BACKPLATE 3-SEC EACH	++ BACKPLATE 4-SEC EACH	++ LED RED BALL EACH	++ LED YELLOW BALL EACH	++ LED GREEN BALL EACH	++ LED RED ARROW EACH	++ LED YELLOW ARROW EACH	++ LED GREEN ARROW EACH	* 658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	+++ LED MODULES COUNTDOWN TIMER 16" 16-INCH EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTR./MCDONALDS DWY	SB1	1	POST MOUNT VERTICAL	--	1	--	--	1	--	1	1	1	--	--	--	--	--
	SB1	13	POST MOUNT VERTICAL	--	--	--	1	--	1	--	--	--	1	2	1	--	--
	SB1	29	PEDESTRIAN	--	--	--	--	--	--	--	--	--	--	--	--	1	1
	SB2	5	POST MOUNT VERTICAL	--	--	--	1	--	1	--	--	--	1	2	1	--	--
	SB3	9	MONOTUBE ARM MOUNT VERT.	--	1	--	--	1	--	1	1	1	--	--	--	--	--
	SB3	10	MONOTUBE ARM MOUNT VERT.	--	1	--	--	1	--	1	1	1	--	--	--	--	--
	SB3	11	MONOTUBE ARM MOUNT VERT.	--	1	--	--	1	--	1	1	1	--	--	--	--	--
	SB3	14	MONOTUBE ARM MOUNT VERT.	--	--	--	1	--	1	--	--	--	1	2	1	--	--
	SB3	30	PEDESTRIAN	--	--	--	--	--	--	--	--	--	--	--	--	1	1
	SB4	15	POST MOUNT VERTICAL	--	1	--	--	1	--	1	1	1	--	--	--	--	--
	SB4	20	POST MOUNT VERTICAL	--	1	--	--	1	--	1	1	1	--	--	--	--	--
	SB4	23	PEDESTRIAN	--	--	--	--	--	--	--	--	--	--	--	--	1	1
	SB6	21	MONOTUBE ARM MOUNT VERT.	1	--	--	--	1	--	1	1	1	--	--	--	--	--
	SB6	22	MONOTUBE POLE MOUNT VERT.	1	--	--	--	1	--	1	1	1	--	--	--	--	--
	SB7	24	PEDESTRIAN	--	--	--	--	--	--	--	--	--	--	--	--	1	1
	SB8	6	POST MOUNT VERTICAL	1	--	--	--	1	--	1	1	1	--	--	--	--	--
	SB8	8	POST MOUNT VERTICAL	--	--	1	--	--	1	--	--	--	1	2	1	--	--
	SB8	25	PEDESTRIAN	--	--	--	--	--	--	--	--	--	--	--	--	1	1
	SB9	7	POST MOUNT VERTICAL	--	--	1	--	--	1	--	--	--	1	2	1	--	--
	SB9	12	POST MOUNT VERTICAL	--	--	1	--	--	1	--	--	--	1	2	1	--	--
	SB10	26	PEDESTRIAN	--	--	--	--	--	--	--	--	--	--	--	--	1	1
	SB11	2	MONOTUBE ARM MOUNT VERT.	1	--	--	--	1	--	1	1	1	--	--	--	--	--
	SB11	3	MONOTUBE ARM MOUNT VERT.	1	--	--	--	1	--	1	1	1	--	--	--	--	--
	SB11	4	MONOTUBE ARM MOUNT VERT.	1	--	--	--	1	--	1	1	1	--	--	--	--	--
	SB11	16	POST MOUNT VERTICAL	1	--	--	--	1	--	1	1	1	--	--	--	--	--
	SB11	19	POST MOUNT VERTICAL	1	--	--	--	1	--	1	1	1	--	--	--	--	--
	SB11	27	PEDESTRIAN	--	--	--	--	--	--	--	--	--	--	--	--	1	1
	SB12	17	MONOTUBE ARM MOUNT VERT.	1	--	--	--	1	--	1	1	1	--	--	--	--	--
	SB12	18	MONOTUBE POLE MOUNT VERT.	1	--	--	--	1	--	1	1	1	--	--	--	--	--
	SB12	28	PEDESTRIAN	--	--	--	--	--	--	--	--	--	--	--	--	1	1
INTERSECTION TOTAL				10	6	3	3	16	6	16	16	16	6	12	6	8	8

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

++INCIDENTAL TO 658.0173 OR 658.0174
+++INCIDENTAL TO 658.0416

ALL ITEMS ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (N. MOORLAND ROAD) & BROOKFIELD SQUARE MALL ENTRANCE / MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY

PLOT DATE : 11/17/2021 2:29 PM PLOT BY : PLOT NAME : 030201_mq PLOT SCALE : 1.000000:1.000000
WISDOT / CADDS SHEET 42

3

REMOVE & REINSTALL EVP EQUIPMENT
CTH O & BROOKFIELD SQUARE MALL NORTH DWY

CATEGORY	LOCATION	SPV.0060.36 REMOVE & REINSTALL EVP EQUIPMENT CTH O & BROOKFIELD SQUARE MALL NORTH DWY EACH
0060	CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTRANCE	1
	TOTAL	1

VIDEO VEHICLE DETECTION SYSTEM
CTH O & BROOKFIELD SQUARE MALL NORTH DWY

LOCATION	SPV.0060.38 VIDEO VEHICLE DETECTION SYSTEM CTH O & BROOKFIELD SQUARE MALL NORTH DWY EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTRANCE	1
TOTAL	1

3

REMOVE & REINSTALL WIRELESS COMMUNICATION EQUIP
CTH O & BRKFLD SQ N DWY

LOCATION	SPV.0060.40 REMOVE & REINSTALL WIRELESS COMMUNICATION EQUIP CTH O & BRKFLD SQ MALL N DWY EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTRANCE	1
TOTAL	1

REMOVE, SALVAGE, & REINSTALL FIBER OPTIC TRAFFIC SIGNAL EQUIPMENT

LOCATION	* SPV.0060.42 REMOVE, SALVAGE, & REINSTALL FIBER OPTIC TRAFFIC SIGNAL EQUIPMENT EACH
CTH O (MOORLAND RD) & BROOKFIELD SQUARE MALL ENTRANCE	1
TOTAL	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

ALL ITEMS ARE CATEGORY 0500
UNLESS OTHERWISE NOTED.

**CTH O (N. MOORLAND ROAD) &
BROOKFIELD SQUARE MALL ENTRANCE /
MCDONALD'S DRIVEWAY
CITY OF BROOKFIELD
WAUKESHA COUNTY**

3

REMOVAL QUANTITIES

PROJECT ID	LOCATION	ITEM NO.	* 204.0195 REMOVING CONCRETE BASES EACH	* 653.0905 REMOVING PULL BOXES EACH
2722-07-71	MOORLAND RD & BLUEMOUND RD	SB17	1	--
		SB18	1	--
		PB22	--	1
	INTERSECTION TOTAL		2	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

CONDUIT ITEMS

LOCATION	PROJECT ID	CATEGORY	FROM	TO	* 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	* (INCIDENTAL) INSTALL CONDUIT INTO EXISTING ITEM EACH
MOORLAND RD & BLUEMOUND RD	2722-07-71	0500	PB21	SB17	15	1
			PB21	PB22	36	--
			PB21	SB26	160	1
			PB22	SB18	11	--
	2722-07-71 TOTAL				222	2
	3700-00-70	1000	PB16	PB35	160	1
			PB23	PB36	64	1
	3700-00-70 TOTAL				224	2

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

3

REMOVING TRAFFIC SIGNALS USH 18 & CTH O (MOORLAND RD)

PROJECT ID	LOCATION	204.9060.S.04 REMOVING TRAFFIC SIGNALS USH 18 & CTH O (MOORLAND RD) LS
2722-07-71	USH 18 (BLUEMOUND RD) & CTH O (MOORLAND RD)	1
	TOTAL	1

SIGNAL MOUNTING HARDWARE

PROJECT ID	LOCATION	658.5069.04 SIGNAL MOUNTING HARDWARE USH 18 (BLUEMOUND RD) & CTH O LS
2722-07-71	USH 18 (BLUEMOUND RD) & CTH O (MOORLAND RD)	1
	TOTAL	1

PULL BOXES

LOCATION	PROJECT ID	CATEGORY	PULL BOX NO.	ALIGNMENT	STATION	OFFSET	* 653.0135 PULL BOXES STEEL 24" x 36" EACH	* 653.0900 ADJUSTING PULL BOXES EACH
MOORLAND RD & BLUEMOUND RD	2722-07-71	0500	PB19	CTH O	79+03	17.0' RT	--	1
			PB21	CTH O	79+04	16.2' LT	--	1
			PB22	CTH O	79+39	16.0' LT	1	--
	2722-07-71 TOTAL						1	2
	3700-00-70	1000	PB35	CTH O	77+44	64.0' RT	1	--
			PB36	CTH O	78+44	68.5' LT	1	--
	3700-00-70 TOTAL						2	0

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

ALL ITEMS INCLUDED IN PROJECT 2722-07-71 ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (N. MOORLAND ROAD) & USH 18
(W. BLUEMOUND RD / PILGRIM PKWY)
CITY OF BROOKFIELD
WAUKESHA COUNTY

3

TRAFFIC DETECTOR LOOPS

LOCATION	PROJECT ID	CATEGORY	LOOP NO.	HOME RUN PB	ALIGNMENT	** STATION/OFFSET	SIZE (FT)	SDD INSTALLATION REFERENCE	NO. OF TURNS	PAVEMENT TYPE	* 652.0800 CONDUIT LOOP DETECTOR LF	* 655.0700 LOOP DETECTOR LEAD IN CABLE LF	* 655.0800 LOOP DETECTOR WIRE LF
MOORLAND RD & BLUEMOUND RD	3700-00-70	1000	81	PB35	CTH O	77+44, 44' RT	6X20	9F15-4B	4	CONCRETE	72	622	240
			82	PB35	CTH O	77+44, 27' RT	6X12	9F15-4B	5	CONCRETE	104	622	260
			S5	PB36	CTH O	78+44, 50.5' LT	6X6	9F15-4B	5	CONCRETE	54	383	162
			S6	PB36	CTH O	78+44, 38.7' LT	6X6	9F15-4B	5	CONCRETE	76	383	184
			S7	PB36	CTH O	78+44, 26.8' LT	6X6	9F15-4B	5	CONCRETE	100	383	208
INTERSECTION TOTAL											406	2393	1054

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

**LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.

NOTES: FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
S.D.D. 9F15-4B: LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE

PROJECT ID	LOCATION	FROM	TO	* 655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	* 655.0320 CABLE TYPE TYPE UF 2-10 AWG GROUNDED LF	* 655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF	* 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	* (INCIDENTAL) LOOP DETECTOR LEAD IN CABLE LF	* 674.0300 REMOVE CABLE LF	* 674.0400 REINSTALL CABLE LF
2722-07-71	MOORLAND RD & BLUEMOUND RD	CB1	SB17	--	--	--	--	--	506	506
		CB1	SB18	--	--	--	--	--	552	552
		SB16	SB19	--	--	--	--	--	332	--
		SB16	SB26	--	322	322	--	--	--	--
		SB17	SB18	--	--	85	--	--	--	--
		SB17	SB26	--	--	206	--	--	--	--
		SB18	SB19	--	--	259	--	--	--	--
		SB19	SB26	--	376	--	--	--	--	--
		PB21	SB17	--	--	31	--	--	--	--
		PB22	SB18	--	--	21	--	--	--	--
		SB17	HEAD 10	19	--	--	--	--	--	--
		SB18	HEAD 9	19	--	--	--	--	--	--
		SB18	HEAD 21	19	--	--	--	--	--	--
		SB26	LUMINAIRE	--		--	234	236	--	--
	INTERSECTION TOTAL			57	698	924	234	236	1390	1058

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

ALL ITEMS INCLUDED IN PROJECT 2722-07-71 ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (N. MOORLAND ROAD) & USH 18
(W. BLUEMOUND RD / PILGRIM PKWY)
CITY OF BROOKFIELD
WAUKESHA COUNTY

PLOT DATE : 11/22/2021 5:30 PM PLOT BY : PLOT NAME : 030201_mq PLOT SCALE : 1.000000:1.000000
WISDOT / CADDS SHEET 42

3

CONCRETE BASES

PROJECT ID	LOCATION	SIGNAL BASE NO.	ALIGNMENT	STATION	OFFSET	* 654.0101 CONCRETE BASES TYPE 1 EACH	654.0105 CONCRETE BASES TYPE 5 EACH
2722-07-71	MOORLAND RD & BLUEMOUND RD	SB17	CTH O	79+18	16.2' LT	1	--
		SB18	CTH O	79+50	16.0' LT	1	--
		SB26	CTH O	77+42	15.3' LT	--	1
	INTERSECTION TOTAL					2	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

SIGNAL BASES AND POLES

PROJECT ID	LOCATION	SIGNAL BASE NO	* 657.0100 PEDESTAL BASE EACH	* 657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	^ SPV.0060.05 REMOVING, SALVAGING, & REINSTALLING LIGHT POLES, LUMINAIRES, AND ARMS EACH
2722-07-71	MOORLAND RD & BLUEMOUND RD	SB17	1	1	--
		SB18	1	1	--
		SB26	--	--	1
	INTERSECTION TOTAL		2	2	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

^CATEGORY 0010.

3

REMOVE & SALVAGE VIDEO DETECTION EQUIPMENT USH 18 (BLUEMOUND RD) & CTH O

PROJECT ID	CATEGORY	LOCATION	SPV.0060.44 REMOVE & SALVAGE VIDEO DETECTION EQUIPMENT USH 18 (BLUEMOUND RD) & CTH O EACH
3700-00-70	1000	USH 18 (BLUEMOUND RD) & CTH O (MOORLAND RD)	1
		TOTAL	1

REMOVE & SALVAGE RADAR DETECTION EQUIPMENT USH 18 (BLUEMOUND RD) & CTH O

PROJECT ID	CATEGORY	LOCATION	SPV.0060.46 REMOVE & SALVAGE RADAR DETECTION EQUIPMENT USH 18 (BLUEMOUND RD) & CTH O EACH
3700-00-70	1000	USH 18 (BLUEMOUND RD) & CTH O (MOORLAND RD)	1
		TOTAL	1

SIGNAL FACES

PROJECT ID	LOCATION	SIG. BASE NO	SIG. HEAD NO	TYPE OF MOUNT	* 658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	++ BACKPLATE 3-SEC EACH	++ LED RED BALL EACH	++ LED RED ARROW EACH	++ LED YELLOW ARROW EACH	++ LED GREEN ARROW EACH
2722-07-71	MOORLAND RD & BLUEMOUND RD	SB17	10	POST MOUNT VERTICAL	1	1	1	--	1	1
		SB18	9	POST MOUNT VERTICAL	1	1	1	--	1	1
		SB18	21	POST MOUNT VERTICAL	1	1	--	1	1	1
	INTERSECTION TOTAL				3	3	2	1	3	3

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS.

++INCIDENTAL TO 658.0173

ALL ITEMS INCLUDED IN PROJECT 2722-07-71 ARE CATEGORY 0500 UNLESS OTHERWISE NOTED.

CTH O (N. MOORLAND ROAD) & USH 18
(W. BLUEMOUND RD / PILGRIM PKWY)
CITY OF BROOKFIELD
WAUKESHA COUNTY

3

FTMS EACH REMOVALS

CATEGORY	ROADWAY	ITEM ID.	653.0905 REMOVING PULL BOXES EACH	SPV.0060.47 REMOVING ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH
1300	MOORLAND ROAD (CTH O)			
		EXPB0059	1	--
		EXMB0059	--	1
		TOTALS	7	1

FTMS CABLE REMOVALS

CATEGORY	ROADWAY	ITEM ID	674.0300 REMOVE CABLE LF
1300	MOORLAND ROAD (CTH O)		
		EX-HUB-67-0010 - EXCV0046	10
		EXCV0046 - EXCV0045	85
		EXCV0045 - EXCV0055	960
		EXCV0055 - EXCV0061	1100
		EXCV0061 - EXCV0067	610
		EXCV0067 - EXCV0077	940
		EXCV0077 - EXPB0079	210
		EXPB0079 - EXPB0080	60
		EXPB0080 - EXPB0081	60
		EXPB0081 - EXPB0082	75
		EXPB0082 - EXPB0083	15
		EXPB0083 - EXCV0079	110
		EXMB0059 - EXPB0059	10
		EXPB0059 - EX-DMS-67-0119	20
		TOTAL	4,265

FTMS BASES, POLES, CABINETS, AND EQUIPMENT

CATEGORY	ROADWAY	ITEM ID.	LOCATION STATION	LOCATION OFFSET	653.0140 PULL BOXES STEEL 24 X 42 - INCH EACH	678.0300 FIBER OPTIC SPLICE EACH	SPV.0060.48 TEMPORARY COMMUNICATIONS VAULT ADJUSTMENT EACH	SPV.0060.49 FINAL COMMUNICATIONS VAULT ADJUSTMENT EACH
1300	MOORLAND ROAD (CTH O)							
		EXCV0045	--		--	--	1	1
		EXCV0055	--		--	--	1	1
		EXCV0061	--		--	--	1	1
		EXCV0067	--		--	40	1	1
		EXCV0077	--		--	--	1	1
		PB0079	79+11	15' RT	1	--	--	--
		EXCV0079	--		--	40	--	--
		PB0056	58+54	55' RT	1	--	--	--
		PB0058	59+28	60' LT	1	--	--	--
		TOTALS			3	80	5	5

FTMS CONDUIT AND WIRE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	652.0125 CONDUIT RIGID METALLIC 2-INCH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	678.0036 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 36-CT LF
1300	MOORLAND ROAD (CTH O)							
		EXCV0067	--	--	--	--	--	100
		EXCV0067 - EXCV0077	940	--	--	--	--	940
		EXCV0077	--	--	--	--	--	50
		EXCV0077 - PB0079	210	--	--	--	--	210
		EXPB0079 - EXPB0080	60	--	--	--	--	60
		EXPB0080 - EXPB0081	60	--	--	--	--	60
		EXPB0081 - EXPB0082	75	--	--	--	--	75
		EXPB0082 - EXPB0083	15	--	--	--	--	15
		EXPB0083 - EXCV0079	110	--	--	--	--	110
		EXCV0079	--	--	--	--	--	100
		MB0055 - PB0055	10	--	10	--	30	--
		PB0055 - PB0058	150	--	--	150	450	--
		PB0058 - EX-DMS-67-0119	15	15	--	--	45	--
		TOTALS		15	10	150	525	1,720

MISCELLANEOUS ITEMS

CATEGORY	ROADWAY	670.0100 FIELD SYSTEM INTEGRATOR LS	670.0200 ITS DOCUMENTATION LS	678.0500 COMMUNICATION SYSTEM TESTING LS
1300	MOORLAND ROAD (CTH O)			
	PROJECT	1	1	1
	TOTALS	1	1	1

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W LINE
PROPERTY LINE
LOT, TIE, AND OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC) — W (TYPE)
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)
TEMP. LIMITED EASEMENT AREA
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
BUILDING (TO BE REMOVED)
BRIDGE

PARCEL NUMBER (25)
UTILITY NUMBER (100)
SECTION CORNER (18, 13, 24, 23, 16, 15, 9)
NOTATION FOR COMBUSTABLE FLUIDS (CAUTION)
NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES (CAUTION)

R/W MONUMENT
NON-MONUMENTED R/W POINT
FOUND IRON PIN — IP
VALVE (GAS, WATER, ETC.) — (TYPE)
SIGN — SIGN
OFF-PREMISE SIGN (#1-25) — SIGN

ACCESS CONTROLLED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
NATIONAL GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
PARALLEL OFFSETS

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	OUTLOT	OL
ACRES	AC	PAGE	P
AHEAD	AH	POINT OF TANGENCY	PT
ALUMINUM	ALUM	PROPERTY LINE	PL
AND OTHERS	ET AL	RECORDED AS	(100')
BACK	BK	REEL / IMAGE	R/I
BLOCK	BLK	REFERENCE LINE	R/L
CENTERLINE	C/L	PERMANENT LIMITED EASEMENT	PLE
CERTIFIED SURVEY MAP	CSM	POINT OF BEGINNING	POB
CONCRETE	CONC	POINT OF CURVATURE	PC
COUNTY	CO	POINT OF COMPOUND CURVE	PCC
COUNTY TRUNK HIGHWAY	CTH	POINT OF INTERSECTION	PI
DISTANCE	DIST	REMAINING	REM
CORNER	COR	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
DOCUMENT NUMBER	DOC	RIGHT	RT
EASEMENT	EASE	RIGHT OF WAY	R/W
EXISTING	EX	SECTION	SEC
GAS VALVE	GV	SEPTIC VENT	SEPV
GRID NORTH	GN	SQUARE FEET	SF
HIGHWAY EASEMENT	HE	STATE TRUNK HIGHWAY	STH
IDENTIFICATION	ID	STATION	STA
LAND CONTRACT	LC	TELEPHONE PEDESTAL	TP
LEFT	LT	TEMPORARY LIMITED EASEMENT	TLE
MONUMENT	MON	TRANSPORTATION PROJECT PLAT	TPP
NATIONAL GEODETIC SURVEY	NGS	UNITED STATES HIGHWAY	USH
NUMBER	NO	VOLUME	V
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		

CONVENTIONAL UTILITY SYMBOLS

WATER	W
GAS	G
TELEPHONE	T
OVERHEAD TRANSMISSION LINES	OH
ELECTRIC	E
CABLE TELEVISION	TV
FIBER OPTIC	FO
SANITARY SEWER	SAN
STORM SEWER	SS
ELECTRIC TOWER	⊠

	NON-COMPENSABLE	COMPENSABLE
POWER POLE	○	●
TELEPHONE POLE	⊘	⊘
TELEPHONE PEDESTAL	⊠	⊠

CURVE DATA ABBREVIATIONS

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATE SYSTEM COORDINATES (WCCS), WAUKESHA COUNTY, NAD 83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

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

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

NOTES:(CONTINUED)

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT HIGHWAY FACILITIES.

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
2722-07-20	4.01	8

PLAT OF RIGHT OF WAY REQUIRED FOR

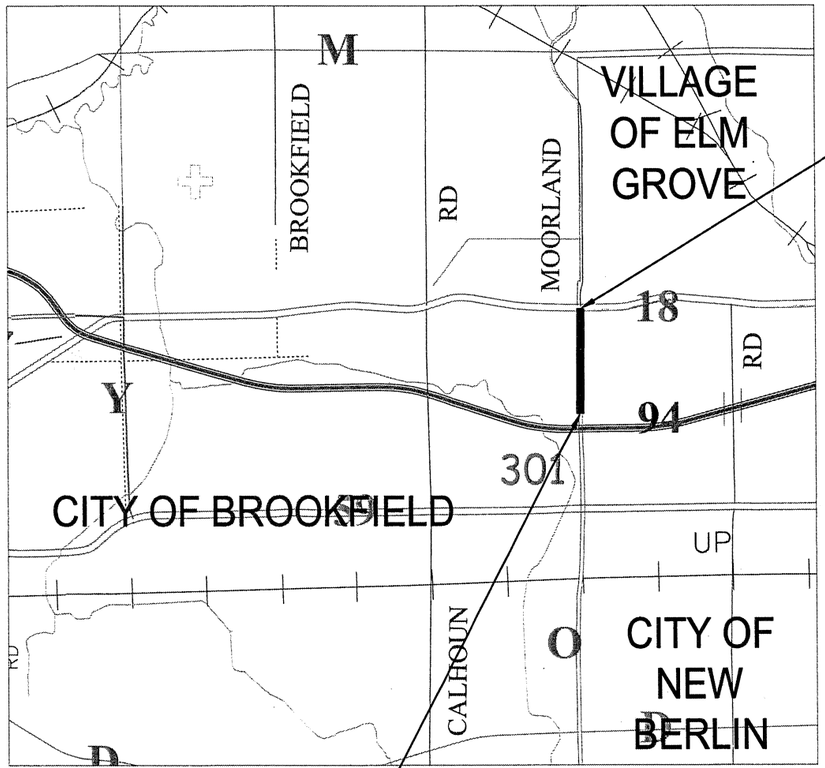
MOORLAND RD. (CTH O)
I-94 TO BLUEMOUND ROAD (USH 18)

CONSTRUCTION ID 2722-07-71 | WAUKESHA COUNTY

N

R20E

T7N



END RELOCATION ORDER
STA. 79+00.00
1081.38' SOUTH OF, AND 15.69' WEST OF THE NW CORNER OF THE SW 1/4 OF SECTION 26, TOWNSHIP 7 NORTH, RANGE 20 EAST
Y= 169,935.64
X= 716,631.65

BEGIN RELOCATION ORDER
STA. 43+96.67
746.09' NORTH OF, AND 8.65' EAST OF THE SW CORNER OF NW 1/4 OF SECTION 35, TOWNSHIP 7 NORTH, RANGE 20 EAST
Y= 166,432.61
X= 716,586.46

LAYOUT
SCALE 0 — 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.664 MI

ORIGINAL PLAT PREPARED BY
GRAEF

WISCONSIN
CARLA J. ROLLINS
S-3207
SHEBOYGAN, WI
LAND SURVEYOR

DATE: 11/13/2020 (Signature)

APPROVED FOR WAUKESHA COUNTY DEPARTMENT OF PUBLIC WORKS

DATE: 11/16/2020 Allison Bussler DIRECTOR

DATE: 11/16/2020 Kaleen Brown ENGINEERING SERVICES MANAGER

REVISION DATE
5/24/2021

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED FOR THE DEPARTMENT
DATE: NA (Signature)

251

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSED ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO WAUKESHA COUNTY.

* DENOTES AREAS COMPUTED

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

PARCEL NO.	SHEET NO.	OWNERS	INTEREST REQ'D.	TOTAL AREA ACRES	EASEMENT ACRES REQUIRED T.L.E.	EASEMENT ACRES REQUIRED P.L.E.	R/W ACRES REQUIRED NEW	R/W ACRES REQUIRED EXISTING	R/W ACRES REQUIRED TOTAL	TOTAL ACRES REM.
1	4.05, 4.06	BVFL I FI BROOKFIELD LLC, A DELAWARE LIMITED LIABILITY COMPANY	FEE, PLE, TLE	11.316	0.121	0.015	0.040	0.000	0.040	11.276
2	4.05, 4.06, 4.07	WESTMOOR COUNTRY CLUB	TLE	148.675	0.039	---	---	---	---	148.675
9	4.07, 4.08	WEST BLUEMOUND ROAD PROPERTIES LLC, A WISCONSIN LIMITED LIABILITY COMPANY	PLE, TLE	2.186	0.054	0.055	---	---	---	2.186
11	4.07	McDONALDS CORPORATION, A DELAWARE CORPORATION	PLE, TLE	1.706	0.023	0.034	---	---	---	1.706
12	4.07	MIEROW 400 MUTUAL LLC, A WISCONSIN LIMITED LIABILITY COMPANY AND 400 NORTH MOORLAND LLC, A WISCONSIN LIMITED LIABILITY COMPANY	PLE, TLE	1.587	0.039	0.020	---	---	---	1.587
13 [1]	4.07, 4.08	410 NORTH MOORLAND, LLC, A WISCONSIN LIMITED LIABILITY COMPANY, AS TO AN UNDIVIDED 1/2 INTEREST AND MIEROW 410 FIRESTONE LLC, A WISCONSIN LIMITED LIABILITY COMPANY, AS TO AN UNDIVIDED 1/2 INTEREST	PLE, TLE	0.703	0.019	0.007	---	---	---	0.703
14 [1]	4.08	BRUENIG INVESTMENTS, LLC, A WISCONSIN LIMITED LIABILITY COMPANY	TLE	1.181	0.027	---	---	---	---	1.181

UTILITY NO.	SHEET	OWNER	INTEREST
100	4.05, 4.06	WE ENERGIES - ELECTRIC	CONVEYANCE OF RIGHTS
102	4.08	AT&T WISCONSIN	CONVEYANCE OF RIGHTS
103	4.07, 4.08	CITY OF BROOKFIELD - WATER	CONVEYANCE OF RIGHTS
105	4.07	CITY OF BROOKFIELD - STORM	CONVEYANCE OF RIGHTS
106	4.06,4.07,4.08	CITY OF BROOKFIELD - OTHER	CONVEYANCE OF RIGHTS
107	4.08	WISCONSIN DEPARTMENT OF TRANSPORTATION	CONVEYANCE OF RIGHTS
200	4.06,4.07	CITY OF BROOKFIELD - GRADING EASEMENT	CONVEYANCE OF RIGHTS
201	4.06,4.07	CITY OF BROOKFIELD - PERPETUAL PEDESTRIAN PATH EASEMENT	CONVEYANCE OF RIGHTS

4

4

REVISION DATE
05/24/2021

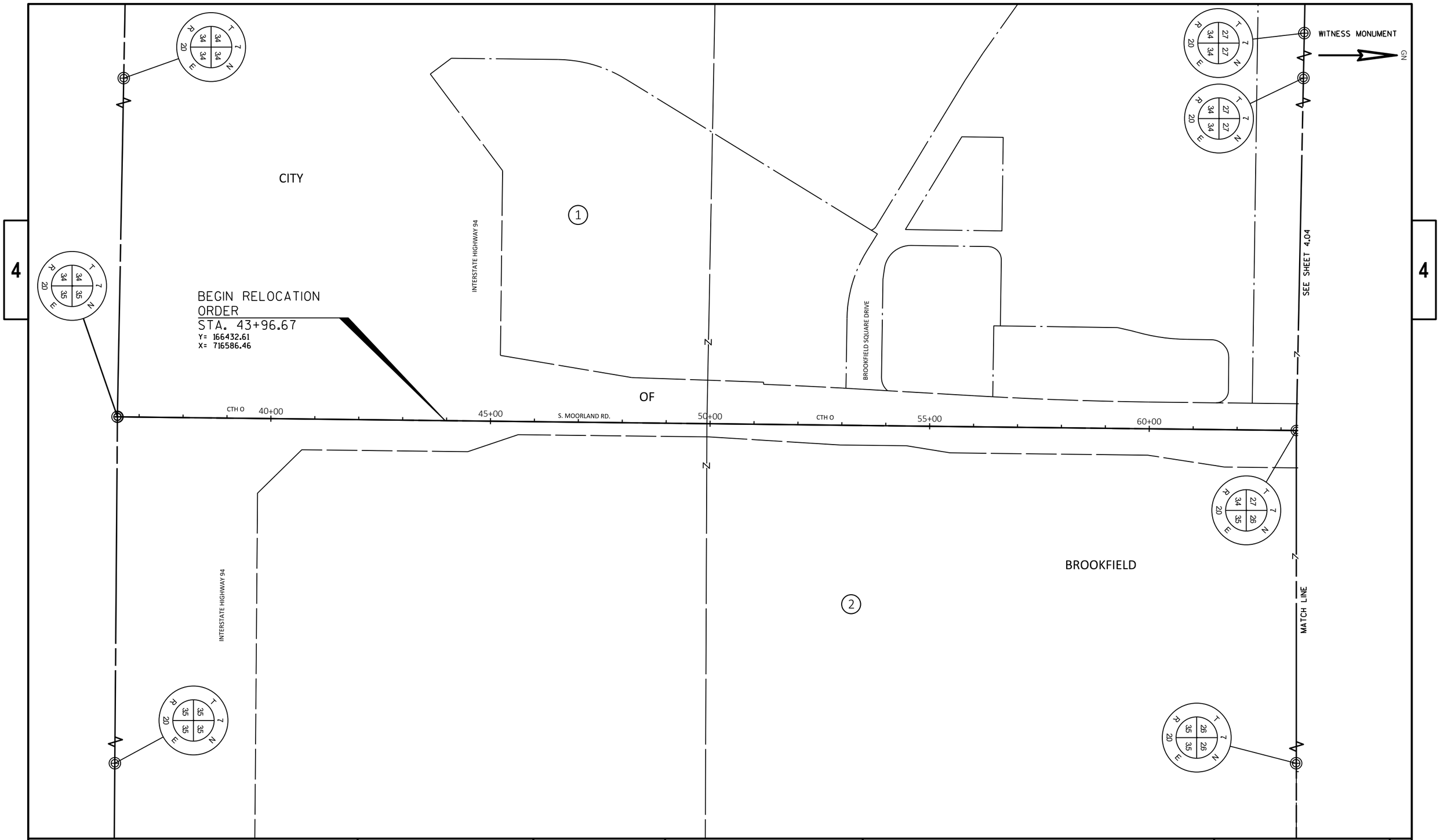
DATE 11/16/2020
GRID FACTOR N/A

SCALE, FEET
0 NTS

HWY: MOORLAND ROAD (CTH O)
COUNTY: WAUKESHA

STATE R/W PROJECT NUMBER 2722-07-20
CONSTRUCTION PROJECT NUMBER 2722-07-71

PLAT SHEET 4.02
PS&E SHEET 252 E



REVISION DATE	DATE 11/13/2020	SCALE, FEET 0 100 200	HWY: MOORLAND ROAD (CTH O)	STATE R/W PROJECT NUMBER 2722-07-20	PLAT SHEET 4. 03
	GRID FACTOR N/A		COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER 2722-07-71	PS&E SHEET 253 E

FILE NAME : 040301_RL.DWG
LAYOUT NAME - RW 1 IN 200 FT (1)

PLOT DATE : 11/13/2020 11:51 AM PLOT BY : ROLLINS, CARLA PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 75

WITNESS MONUMENT

SEE SHEET 4.03

CITY

OF

BROOKFIELD

MATCH LINE

W. BLUEMOUND RD.

N. MOORLAND RD.

CTH O

PILGRIM PARKWAY

65+00

70+00

75+00

80+00

85+00

END RELOCATION ORDER
STA. 79+00.00
Y= 169935.64
X= 716631.65

CITY OF BROOKFIELD
CITY LIMITS BACK OF CURB
PER CERTIFIED SURVEY MAP NO. 10332
DOC. NO. 3448421

VILLAGE OF ELM GROVE

GN

4

4

REVISION DATE	DATE 11/13/2020	SCALE, FEET 0 100 200	HWY: MOORLAND ROAD (CTH O)
	GRID FACTOR N/A		COUNTY: WAUKESHA

STATE R/W PROJECT NUMBER	2722-07-20	PLAT SHEET 4. 04
CONSTRUCTION PROJECT NUMBER	2722-07-71	PS&E SHEET 254 E

FILE NAME : 040301_RL.DWG
LAYOUT NAME - RW 1 IN 200 FT (2)

PLOT DATE : 11/13/2020 11:51 AM PLOT BY : ROLLINS, CARLA PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 75

FOUND CAST IRON PLUG WITH CROSS SET IN PAVEMENT
Y=165736.59
X=713882.13

T 7 N R 20 E 34 34 34 34

CITY

SE-NE

IH-94 RAMP

VARIABLE WIDTH WE ENERGIES ELECTRIC EASEMENT DOCUMENT NO. 2717996

VARIABLE WIDTH WE ENERGIES ELECTRIC EASEMENT DOCUMENT NO. 815080

20' WIDE WATER DISTRIBUTION EASEMENT - CITY OF BROOKFIELD DOCUMENT NO. 1126550

30' WIDE SANITARY SEWER EASEMENT - CITY OF BROOKFIELD DOCUMENT NO. 1126550

Unplatted Lands

(1)

BVFL I F1 BROOKFIELD LLC,
A DELEWARE LIMITED LIABILITY COMPANY
TAX KEY NO. BRC 1141998002
DOCUMENT NO. 4131147

SEE SHEET 4.06

4

FOUND CAST IRON PLUG WITH CROSS SET IN PAVEMENT
Y=165686.56
X=716577.81

T 7 N R 20 E 34 34 35 35

IH-94

BEGIN RELOCATION ORDER
STA. 43+96.67
Y= 166432.61
X= 716586.46

OF

CTH O

+82.56
109.00' LT

RW

L13

L12

L11

SLOPE INTERCEPT (TYP.)

+20.72
103.02' LT

+93.03
99.00' LT

36+00 37+00 38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00

S. MOORLAND RD.

SECTION LINE

N 00°39'52 E 2684.38'

STA. 49+92.76

+39.47
29.99' RT

29.99'

RW

L30

L34

L33

TLE (TYP.)

+39.47
40.00' RT

100

20' WIDE WE ENERGIES ELECTRIC EASEMENT DOCUMENT NO. 2717995

(2)

WESTMOOR COUNTRY CLUB
TAX KEY NO. BRC 1146999
DOCUMENT NO. 1800577

PARCEL 1
CSM #6952

SW-NW

BROOKFIELD

IH-94

N 89°34'05" W 2669.56'

QUARTER SECTION LINE

PL

SIXTEENTH LINE

MATCH LINE

T 7 N R 20 E 35 35 35 35

CONCRETE MONUMENT WITH BRASS CAP
Y=165666.44
X=719247.30

LINE TABLE

L2	S02°00'03"W, 127.77'
L3	N00°39'52"E, 127.75'
L11	S02°00'03'W, 172.36'
L12	S09°34'15"W, 38.63'
L13	N00°39'52"E, 338.23'
L30	N00°39'52"E, 157.98'
L31	N03°31'37"E, 2.50'
L32	S89°13'29"E, 9.88'
L33	S00°39'52"W, 160.46'
L34	S89°20'04"E, 10.01'

REVISION DATE 5/24/2021	DATE 11/16/2020	SCALE, FEET 0 50 100	HWY: CTH O	STATE R/W PROJECT NUMBER 2722-07-20	PLAT SHEET 4. 05
	GRID FACTOR N/A		COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER 2722-07-71	PS&E SHEET 255 E

FILE NAME : 040401_RP REV 3_UTILITIES OFF DWG
LAYOUT NAME - 040405_rp

PLOT DATE : 5/24/2021 2:30 PM PLOT BY : ROLLINS, CARLA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 75

4

4

CITY

OF

BROOKFIELD

CTH O

S. MOORLAND RD.

SEE SHEET 4.05 LINE

SEE SHEET 4.07 LINE

MATCH LINE SIXTEENTH

SECTION MATCH LINE

BROOKFIELD SQUARE DRIVE
PRIVATE ROAD
OFFICIAL APPROVED WAY PER
DOCUMENT 4351224

NE-NE

NW-NW

LOT 1 CSM #11968

LOT 3 CSM #11968

LOT 4 CSM #11968

PARCEL 1 CSM #6952

(1) BVFL I F1 BROOKFIELD LLC,
A DELAWARE LIMITED LIABILITY COMPANY
TAX KEY NO. BRC 1141998002
DOCUMENT NO. 4131147

(2) WESTMOOR COUNTRY CLUB
TAX KEY NO. BRC 1146999
DOCUMENT NO. 1800577

VARIABLE WIDTH MUNICIPAL UTILITY EASEMENT - CITY OF BROOKFIELD DOCUMENT NO. 4421739

30' WIDE PERPETUAL STORM SEWER AND DRAINAGE EASEMENT - CITY OF BROOKFIELD DOCUMENT NO. 4356665

VARIABLE WIDTH PERPETUAL HIGHWAY AND UTILITY EASEMENT CITY OF BROOKFIELD DOCUMENT NOS. 665591 AND 181450
AND
VARIABLE WIDTH TEMPORARY LIMITED EASEMENT (SIDEWALK) - CITY OF BROOKFIELD DOCUMENT NO. 4456027

VARIABLE WIDTH GRADING EASEMENT CITY OF BROOKFIELD DOCUMENT NO. 4529524

VARIABLE WIDTH PERPETUAL PEDESTRIAN PATH EASEMENT CITY OF BROOKFIELD DOCUMENT NO. 4529523

VARIABLE WIDTH PERPETUAL HIGHWAY AND UTILITY EASEMENT CITY OF BROOKFIELD DOCUMENT NOS. 665591 AND 181450

VARIABLE WIDTH PERPETUAL SLOPE EASEMENT TO CITY OF BROOKFIELD DOCUMENT NO. 657975

20' WIDE WE ENERGIES ELECTRIC EASEMENT DOCUMENT NO. 2717995

5' WIDE WE ENERGIES GAS EASEMENT DOCUMENT NO. 672670

FOUND CONCRETE WITNESS MONUMENT WITH BRASS CAP
Y=168426.16
X=713862.10

SECTION CORNER NOT FOUND
Y=168424.81
X=713912.13

FOUND CAST IRON PLUG WITH CROSS SET IN PAVEMENT
Y=168370.76
X=716608.94

FOUND CONCRETE MONUMENT WITH BRASS CAP
Y=168370.71
X=719271.49

N 88°27'05" W 50.05'

2697.36'

N 88°51'07" W

2662.55'

N 88°59'56" W

N 00°39'52 E 2684.38'

SECTION LINE

STA. 49+92.76

STA. 63+34.95

0+00 51+00 52+00 53+00 54+00 55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00

+99.94 30.12' RT

+99.93 40.00' RT

L31 L32

RW TLE (TYP.) SLOPE INTERCEPT (TYP.)

46.51' 60.00' 68.80' 61.00' 85.00' 86.40'

DETAIL "A"
N.T.S.

+20.79 99.00' LT
+20.79 98.00' LT
+20.77 96.02' LT
+20.77 91.09' LT
L2 L3 L4 L5 C2

SEE DETAIL "A"
FEE (TYP.)
PLE
SEE DETAIL "B"

+20.79 109.00' LT
+20.79 113.00' LT
L14 L15 L5 L2 C2

DETAIL "B"
N.T.S.

+08.50 113.00' LT
+82.94 110.00' LT
+82.91 98.00' LT
+82.86 85.40' LT
+08.40 84.23' LT
L15 L16 L8 L17 L6 L9 C1 L10

CURVE TABLE

CURVE C1	CURVE C2
ARC LENGTH = 17.33'	ARC LENGTH = 162.20'
CHORD LENGTH = 17.33'	CHORD LENGTH = 162.19'
CHORD BEARING = S03°16'07"W	CHORD BEARING = S02°40'32"W
RADIUS = 8672.11'	RADIUS = 8672.11'
CENTRAL ANGLE = 00°06'52"	CENTRAL ANGLE = 01°04'18"

LINE TABLE

L1	N89°18'18"W, 4.93'	L14	N89°19'10"W, 4.00'
L2	S02°00'03"W, 127.77'	L15	N00°39'52"E, 187.71'
L3	S00°39'52"W, 127.75'	L16	S89°08'18"E, 3.00'
L4	N89°19'10"W, 1.00'	L17	S89°08'29"E, 12.00'
L5	S00°39'52"W, 162.12'	L30	N00°39'52"E, 157.98'
L6	S89°08'29"E, 12.60'	L31	N03°31'37"E, 2.50'
L7	N89°09'26"W, 24.60'	L32	S89°13'29"E, 9.88'
L8	N00°39'52"E, 25.55'	L33	S00°39'52"W, 160.46'
L9	S89°08'18"E, 25.77'	L35	N09°11'43"E, 90.92'
L10	S03°19'32"W, 8.24'	L36	S00°39'52"W, 89.92'
L11	S02°00'03"W, 172.36'	L37	N89°20'08"W, 13.49'
L13	N00°39'52"E, 338.23'		

REVISION DATE 5/24/2021	DATE 11/16/2020	SCALE, FEET 0 50 100	HWY: CTH O	STATE R/W PROJECT NUMBER 2722-07-20	PLAT SHEET 4. 06
	GRID FACTOR N/A		COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER 2722-07-71	PS&E SHEET 256 E

FILE NAME : 040401_RP REV 3_UTILITIES OFF DWG
LAYOUT NAME - 040406_rp

PLOT DATE : 5/24/2021 2:30 PM PLOT BY : ROLLINS, CARLA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 75

FOUND CONCRETE WITNESS MONUMENT WITH BRASS CAP
Y=168426.16
X=713862.10

N 88°27'05" W 50.05'

SECTION CORNER NOT FOUND
Y=168424.81
X=713912.13

SEE SHEET 4.06

N 88°51'07" W 2697.36' LINE

CITY

SE-SE

OF

SW-SW

LINE TABLE

L18	N89°10'08"W, 9.00'	L49	N00°49'52"E, 43.62'	L59	S01°32'33"W, 130.11'
L24	N89°10'08"W, 9.00'	L50	S89°10'08"E, 10.00'	L60	S00°44'27"W, 41.22'
L38	N00°49'56"E, 16.16'	L51	S00°49'52"W,43.62'	L61	S89°49'24"W, 4.49'
L39	S40°35'23"E, 15.12'	L52	N89°10'08"W, 10.00'	L62	S89°10'08"E, 8.00'
L40	S00°49'52"W, 4.82'	L53	N00°49'52"E, 54.97'	L63	S00°49'52"W, 171.13'
L41	N89°10'04"W, 10.00'	L54	N89°49'24"E, 10.00'		
L42	N00°49'52"E, 99.22'	L55	S00°49'52"W, 55.14'		
L43	S89°10'08"E, 15.00'	L56	N89°10'08"W, 10.00'		
L44	S00°49'52"W, 98.95'	L57	N00°49'52"E, 171.40'		
L45	N89°49'24"E, 15.00'	L58	S89°10'08"E, 1.04'		

Unplatted Lands

VARIABLE WIDTH GRADING EASEMENT CITY OF BROOKFIELD DOCUMENT NO. 4527524

VARIABLE WIDTH PERPETUAL PEDESTRIAN PATH EASEMENT CITY OF BROOKFIELD DOCUMENT NO. 4527525

VARIABLE WIDTH TEMPORARY LIMITED EASEMENT (SIDEWALK) - CITY OF BROOKFIELD DOCUMENT NO. 4456027

30' WIDE WATER DISTRIBUTION EASEMENT - CITY OF BROOKFIELD DOCUMENT NO. 900880

VARIABLE WIDTH GRADING EASEMENT CITY OF BROOKFIELD DOCUMENT NO. 4527524

VARIABLE WIDTH PERPETUAL PEDESTRIAN PATH EASEMENT CITY OF BROOKFIELD DOCUMENT NO. 4527525

12' WIDE WE ENERGIES ELECTRIC EASEMENT DOCUMENT NO. 3445801

VARIABLE WIDTH PERPETUAL HIGHWAY AND UTILITY EASEMENT CITY OF BROOKFIELD DOCUMENT NOS. 665591 AND 181450

VARIABLE WIDTH GRADING EASEMENT CITY OF BROOKFIELD DOCUMENT NO. 4527524

VARIABLE WIDTH PERPETUAL PEDESTRIAN PATH EASEMENT CITY OF BROOKFIELD DOCUMENT NO. 4527525

SEE SHEET 4.08

SLOPE INTERCEPT (TYP.)

CTH O

N. MOORLAND RD.

SECTION LINE

N 00°49'52 E 2646.54'

STA. 63+34.95

64+00 65+00 66+00 67+00 68+00 69+00 70+00 71+00 72+00 73+00 74+00 75+00 76+00

STA. 75+53.70

61.00' RW

85.00' RW

66+47.45 70.00' +63.61 70.00' RT

66+47.45 85.00' +52.27 80.00' RT

+03.79 70.00' RT +04.05 85.00' RT

+03.00 70.00' RT +03.00 85.00' RT

+66.14 70.00' RT +66.14 80.00' RT

+09.76 70.00' RT +09.76 80.00' RT

+12.82 70.00' RT +12.82 80.00' RT

+67.70 65.00' RT +67.77 69.49' RT +08.99 69.42' RT

+67.78 70.00' RT +67.96 80.00' RT

PLE (TYP.) +39.10 65.00' RT +39.10 71.04' RT +39.10 80.00' RT

TLE (TYP.)

FOUND CAST IRON PLUG WITH CROSS SET IN PAVEMENT
Y=168370.76
X=716608.94

2662.55' N 88°59'56" W MATCH LINE SECTION

100 20' WIDE WE ENERGIES ELECTRIC EASEMENT DOCUMENT NO. 2717995

VISION CORNER EASEMENT CSM #6952, DOC. 1800577 APPROX. LOCATION

2 WESTMOOR COUNTRY CLUB TAX KEY NO. BRC 1146999 DOCUMENT NO. 1800577

PARCEL 1 CSM #6952

PARCEL 2 CSM #5625

LOT 1 CSM #10276

11 McDONALDS CORPORATION A DELAWARE CORPORATION TAX KEY NO. BRC 1111996002 DOCUMENT NO. 3420644

15' WIDE WATER DISTRIBUTION EASEMENT DOCUMENT NO. 1501647 (103)

105 20' WIDE STORM SEWER EASEMENT DOCUMENT NO. 922410

12 MIEROW 400 MUTUAL LLC, A WISCONSIN LIMITED LIABILITY COMPANY AND 400 NORTH MOORLAND, LLC, A WISCONSIN LIMITED LIABILITY COMPANY TAX KEY NO. BRC 1111998001 DOCUMENT NO. 2543975

Unplatted Lands

VARIABLE WIDTH EASEMENT FOR VEHICULAR AND PEDESTRIAN INGRESS AND EGRESS-DOC. 3431162

BROOKFIELD

SIXTEENTH LINE

MATCH LINE

FOUND CONCRETE MONUMENT WITH BRASS CAP
Y=168370.71
X=719271.49

4

REVISION DATE 05/24/2021	DATE 11/16/2020	SCALE, FEET 0 50 100	HWY: CTH O	STATE R/W PROJECT NUMBER 2722-07-20	PLAT SHEET 4. 07	
	GRID FACTOR N/A		COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER 2722-07-71	PS&E SHEET 257	E

FILE NAME : 040401_RP REV 3_UTILITIES OFF DWG
LAYOUT NAME - 040407_rp

PLOT DATE : 5/24/2021 2:30 PM PLOT BY : ROLLINS, CARLA PLOT NAME : PLOT SCALE : 1 IN:100 FT

4

4

LOT 1 CSM #10225

LOT 2 CSM #10225

106 VARIABLE WIDTH PERPETUAL MUNICIPAL UTILITY EASEMENT - CITY OF BROOKFIELD DOCUMENT NO. 3521772

106 6' WIDE PERPETUAL MUNICIPAL UTILITY EASEMENT - CITY OF BROOKFIELD DOCUMENT NO. 658137

9 WEST BLUEMOUND ROAD PROPERTIES LLC, A WISCONSIN LIMITED LIABILITY COMPANY TAX KEY NO. BRC 1116995009 DOCUMENT NO. 3583413

107 VARIABLE WIDTH PERMANENT LIMITED EASEMENT WISCONSIN DEPT. OF TRANSPORTATION DOCUMENT NO. 3874332

12' WIDE WE ENERGIES ELECTRIC EASEMENT DOCUMENT NO. 3423915

100

106 VARIABLE WIDTH PEDESTRIAN PATH EASEMENT - CITY OF BROOKFIELD DOCUMENT NO. 3521772

SEE SHEET 4.07

TLE (TYP.)

PLE (TYP.)

PLE (TYP.)

STA. 75+53.70

76+00 77+00 78+00 79+00 80+00 81+00 82+00 83+00 84+00 85+00 86+00 87+00 88+00 89+00

PILGRIM PARKWAY

N 00°49'52 E 2646.54' SECTION LINE

NE-SE

NW-SW

W. BLUEMOUND RD.

CTH O

END RELOCATION ORDER
STA. 79+00.00
Y= 169935.64
X= 716631.65

SEE DETAIL "C"

SEE DETAIL "D"

10' WIDE PERMANENT LIMITED EASEMENT GRANTED TO STATE OF WISCONSIN DEPT. OF TRANSPORTATION DOC. 3869136

107

102 10' WIDE AT&T WISCONSIN EASEMENT DOC. NO. 1639138

103 20' WIDE WATER MAIN EASEMENT-CITY OF BROOKFIELD DOC. 1631877

106 7' WIDE PUBLIC SIDEWALK EASEMENT-CITY OF BROOKFIELD CSM #10332

103 15' WIDE WATER DISTRIBUTION EASEMENT-CITY OF BROOKFIELD CSM #10332

MATCH LINE

Unplatted Lands

13 410 NORTH MOORLAND, LLC, A WISCONSIN LIMITED LIABILITY COMPANY, AS TO AN UNDIVIDED 1/2 INTEREST AND MIEROW 410 FIRESTONE LLC, A WISCONSIN LIMITED LIABILITY COMPANY, AS TO AN UNDIVIDED 1/2 INTEREST TAX KEY NO. BRC 111998 DOCUMENT NO. 2543974

LOT 1 CSM #10332

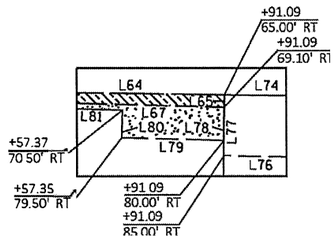
14 BREUNIG INVESTMENTS LLC, A WISCONSIN LIMITED LIABILITY COMPANY TAX KEY NO. BRC 111999001 DOCUMENT NO. 3448721

12.5' PRIVATE SERVICE DRIVE WITH RIGHTS GRANTED TO THE TRAVELING PUBLIC PER WIS. STATUES 235.293 CSM 10332 DOC. 3448721

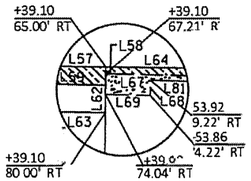
13 410 NORTH MOORLAND, LLC, A WISCONSIN LIMITED LIABILITY COMPANY, AS TO AN UNDIVIDED 1/2 INTEREST AND MIEROW 410 FIRESTONE LLC, A WISCONSIN LIMITED LIABILITY COMPANY, AS TO AN UNDIVIDED 1/2 INTEREST TAX KEY NO. BRC 111998 DOCUMENT NO. 2543974

SIXTEENTH

CITY OF BROOKFIELD
CITY LIMITS BACK OF CURB
PER CERTIFIED SURVEY MAP NO. 10332
DOC. NO. 3448421
VILLAGE OF ELM GROVE



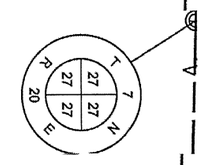
DETAIL "C"
N.T.S.



DETAIL "D"
N.T.S.

LINE TABLE

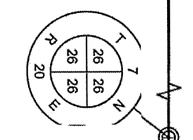
L19	N00°49'52"E, 138.47'	L67	N01°32'33"E, 152.01'
L20	N89°01'49"W, 9.00'	L68	S88°27'27"E, 5.00'
L21	N00°49'52"E, 62.81'	L69	S01°32'33"W, 14.77'
L22	S89°10'12"E, 18.00'	L74	N00°49'52"E, 58.95'
L23	S00°49'52"W, 201.31'	L75	S89°10'08"E, 20.00'
L25	N00°49'52"E, 138.49	L76	S00°49'52"W, 58.96'
L26	S89°10'12"E, 8.00'	L77	N89°10'08"W, 20.01'
L27	N00°49'52"E, 138.55'	L78	S89°10'08"E, 12.00'
L28	S53°19'17"E, 9.87'	L79	S01°32'33"W, 33.83'
L29	S00°49'52"W, 132.77'	L80	N88°27'27"W, 9.00'
L62	N89°10'08"W, 8.00'	L81	S01°32'33"W, 103.45'
L64	N00°49'52"E, 152.00'		
L65	S89°10'08"E, 2.92'		
L66	S01°32'33"W, 152.01'		



FOUND CONCRETE MONUMENTWITH BRASS CAP
Y=171092.35
X=713938.68



FOUND CONCRETE MONUMENT W/BRASS CAP IN SQUARE CAST IRON HANDHOLE
Y=171017.02
X=716647.33



FOUND CONCRETE MONUMENT WITH BRASS CAP
Y=170997.86
X=719301.96

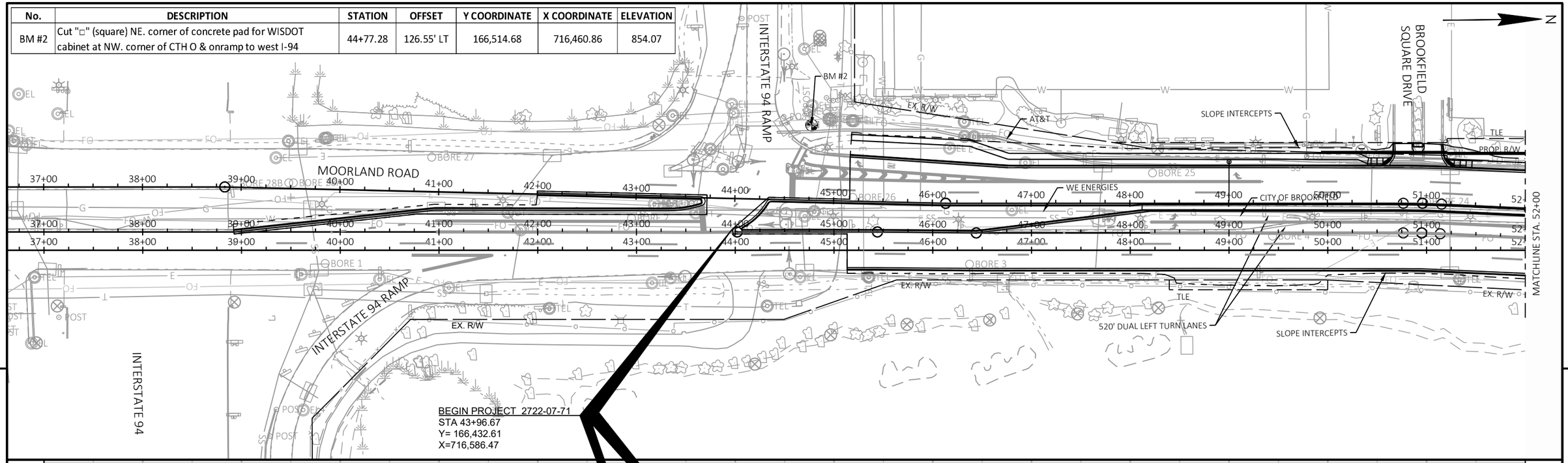
REVISION DATE 05/24/2021	DATE 11/16/2020	SCALE, FEET 0 50 100	HWY: MOORLAND ROAD (CTH O)	STATE R/W PROJECT NUMBER 2722-07-20	PLAT SHEET 4. 08
	GRID FACTOR N/A		COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER 2722-07-71	PS&E SHEET 258 E

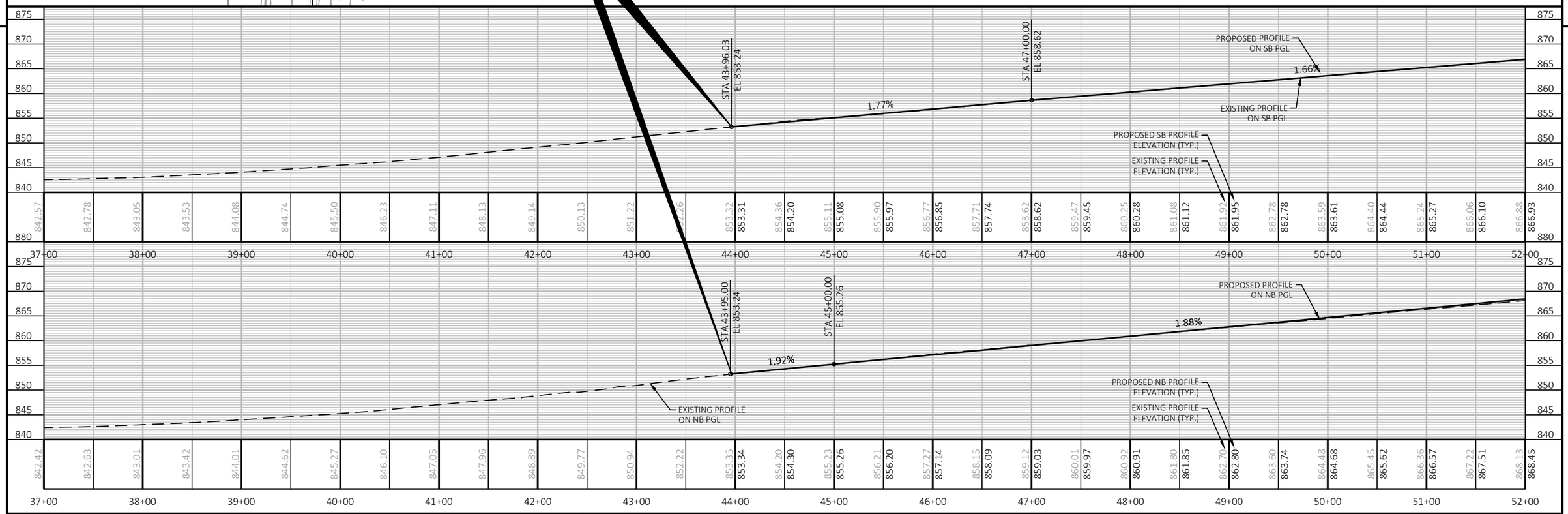
FILE NAME : 040401_RP REV 3_UTILITIES OFF DWG
LAYOUT NAME - 040408_rp

PLOT DATE : 5/24/2021 2:30 PM PLOT BY : ROLLINS, CARLA PLOT NAME : PLOT SCALE : 1 IN:100 FT

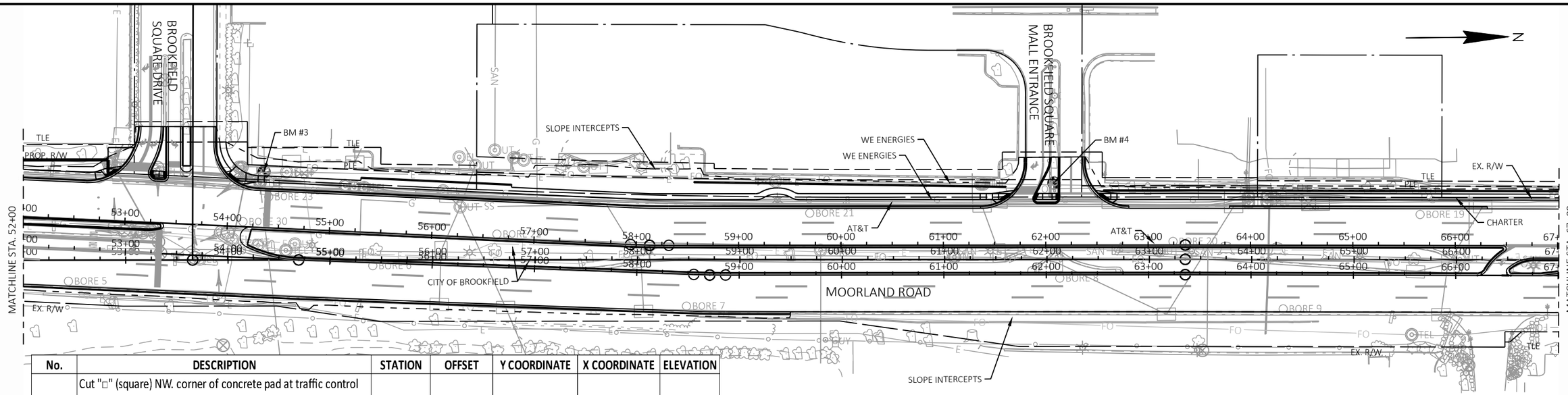
WISDOT/CADDS SHEET 75

No.	DESCRIPTION	STATION	OFFSET	Y COORDINATE	X COORDINATE	ELEVATION
BM #2	Cut "□" (square) NE. corner of concrete pad for WISDOT cabinet at NW. corner of CTH O & onramp to west I-94	44+77.28	126.55' LT	166,514.68	716,460.86	854.07

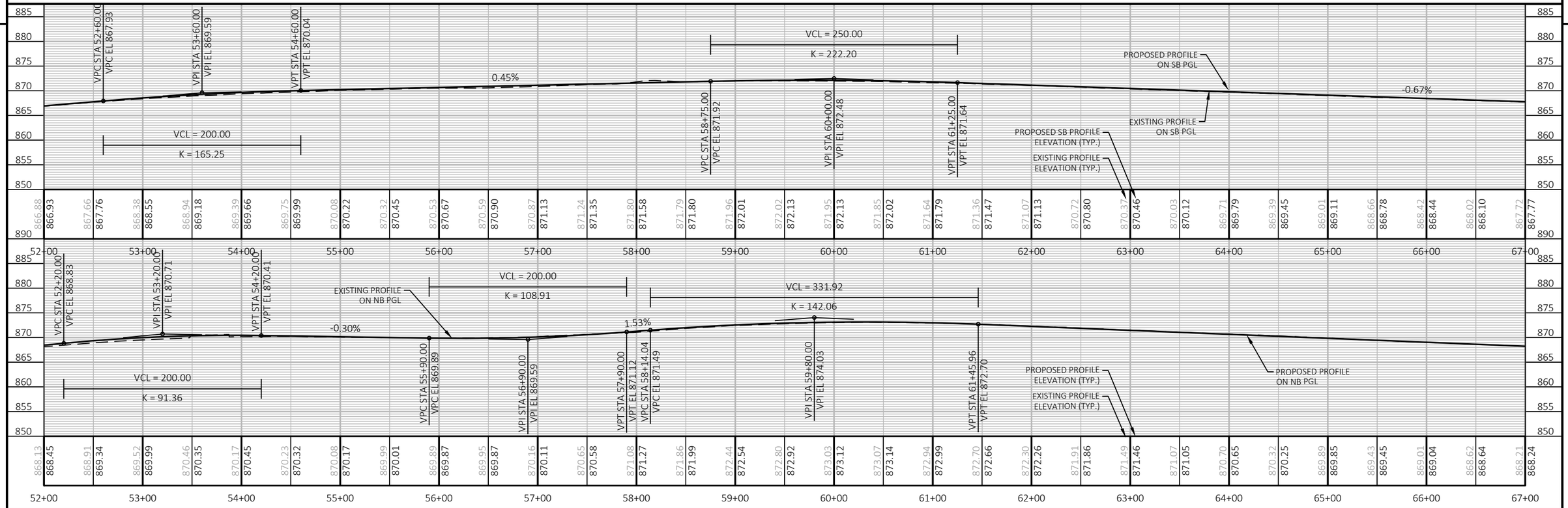




PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PLAN AND PROFILE: MOORLAND ROAD	SHEET 259	E

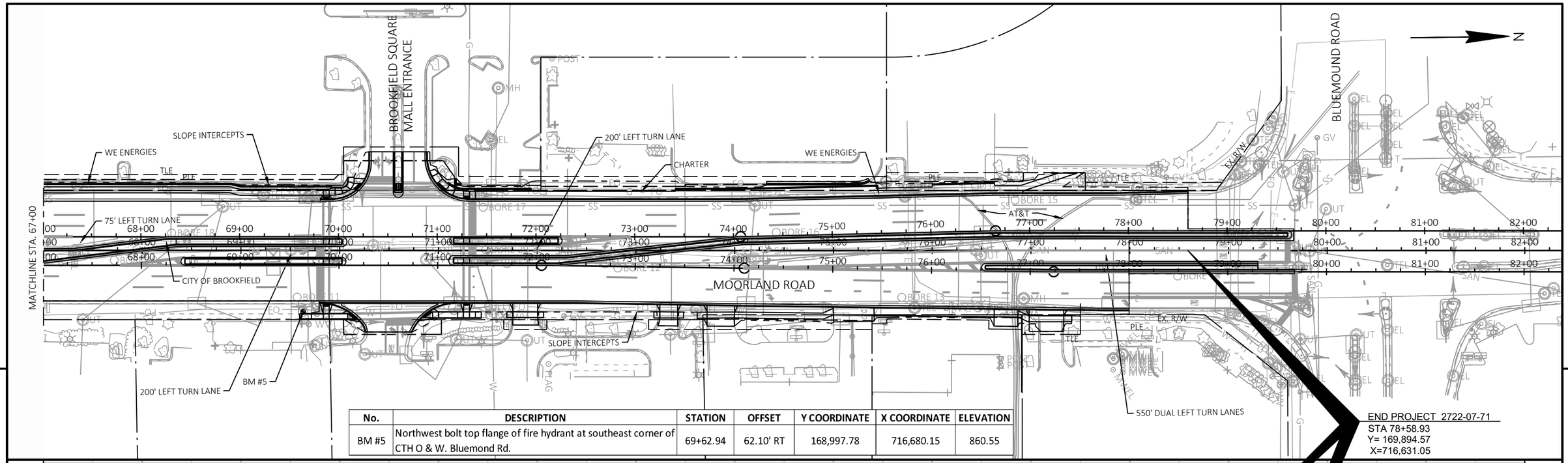


No.	DESCRIPTION	STATION	OFFSET	Y COORDINATE	X COORDINATE	ELEVATION
BM #3	Cut "□" (square) NW. corner of concrete pad at traffic control cabinet at NW. corner of CTH O & S. entrance to Brookfield squate mall.	54+35.17	86.34' LT	167,472.04	716,512.17	868.75
BM #4	Northwest bolt top flange of fire hydrant at southeast corner of CTH O & entrance to building #N. 200 Moorland Rd.	62+06.69	74.71' LT	168,243.37	716,532.75	869.34

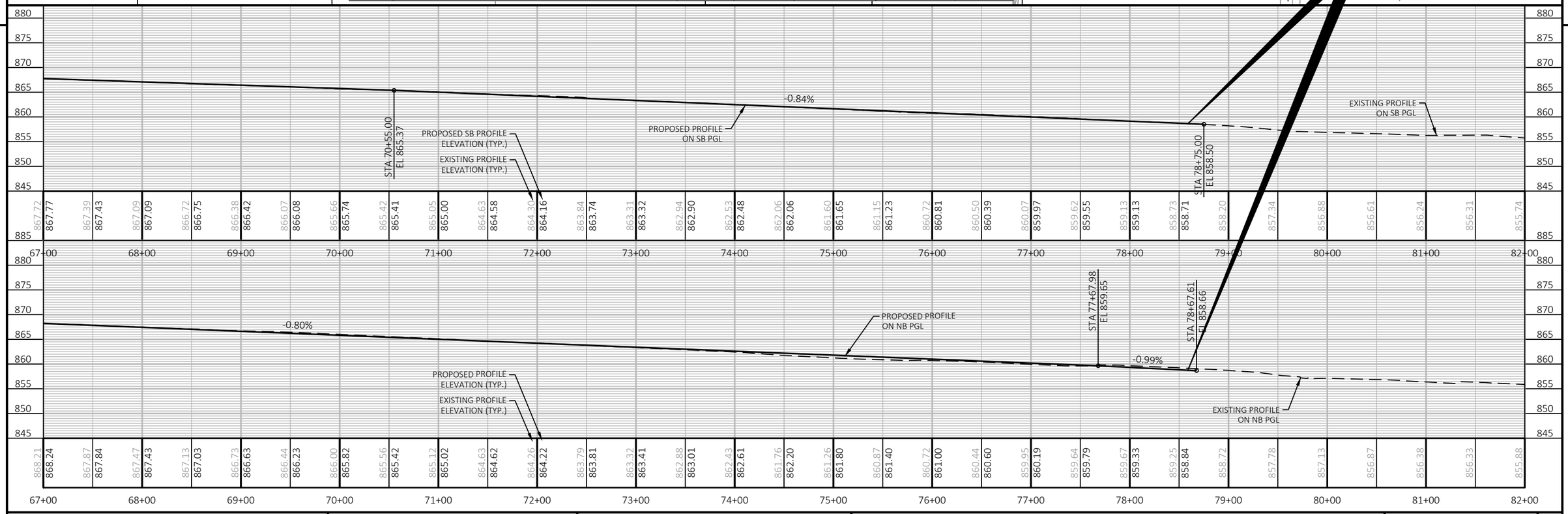


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PLAN AND PROFILE: MOORLAND ROAD	SHEET 260	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050102_pp
PLOT DATE : 10/1/2021 1:36 PM PLOT BY : MCGILLICUDDY, BEN PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



No.	DESCRIPTION	STATION	OFFSET	Y COORDINATE	X COORDINATE	ELEVATION
BM #5	Northwest bolt top flange of fire hydrant at southeast corner of CTH O & W. Bluemond Rd.	69+62.94	62.10' RT	168,997.78	716,680.15	860.55



PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	PLAN AND PROFILE: MOORLAND ROAD	SHEET 261	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050103_pp
PLOT DATE : 10/1/2021 1:36 PM
PLOT BY : MCGILLICUDDY, BEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

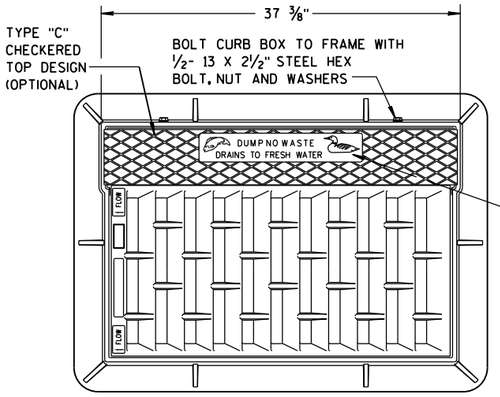
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A08-02	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08A09-02	CATCH BASINS 2X3-FT AND 2.5X3-FT
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D18-02	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08D19-02	DRIVEWAY AND SIDEWALK RAMPS TYPE Z
08D20-01	DRIVEWAYS WITH CURB & GUTTER RETURNS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-10	CONCRETE BASE TYPE 10
09C12-09A	CONCRETE BASE TYPE 13
09C12-09B	CONCRETE BASE TYPE 13
09C14-03	CONCRETE CONTROL CABINET BASE, TYPE L
09C15-01	CONCRETE BASE TYPE 10 SPECIAL
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-15B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-06	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-09A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-09C	TYPE 9 SPECIAL POLE 40' MONOTUBE ARM
09E08-09D	TYPE 9 SPECIAL POLE 45' MONOTUBE ARM
09E08-09E	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-09G	TYPE 10 SPECIAL POLE 40' MONOTUBE ARM
09E08-09H	TYPE 10 SPECIAL POLE 45' MONOTUBE ARM
09E08-09J	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-09K	GENERAL NOTES,HARDWARE DETAILS FOR TYPE 9/10,9/10 SPECIAL,12 & 13 POLES W/MONOTUBE ARMS
09F01-04	DETAILS FOR THE INSTALLATION OF TEMPORARY TRAFFIC SIGNAL LOOP DETECTOR WIRES IN ANY EXISTING PAVEMENT
09F04-05	LOOP DETECTOR INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULLBOX
09F09-05	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09G01-04A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09H09-02	COMMUNICATION VAULT TYPE 1
10A01-03	ELECTRICAL HANDHOLE WIRING
10A18-05A	LUMINAIRE ARMS, SINGLE MEMBER 6-INCH CLAMP
11B02-02	CONCRETE MEDIAN NOSE
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-09	URBAN DOWELED CONCRETE PAVEMENT
13C18-07A	CONCRETE PAVEMENT JOINTING
13C18-07B	CONCRETE PAVEMENT STEEL REINFORCEMENT

6

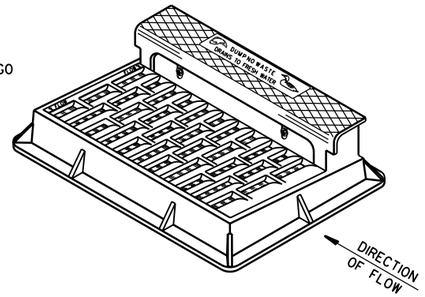
Standard Detail Drawing List

13C18-07C	CONCRETE PAVEMENT JOINT TYPES
13C18-07D	CONCRETE PAVEMENT JOINT TYPES AT UTILITY FIXTURES
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20B	PAVEMENT MARKING (TURN LANES)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C11-09A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-05A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-05B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C18-05C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C20-02	YIELD MARKING
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D12-09A	TRAFFIC CONTROL, LANE CLOSURE
15D15-05A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-05E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D16-04	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D30-06A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-06B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-06C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS

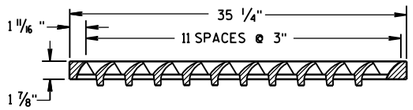
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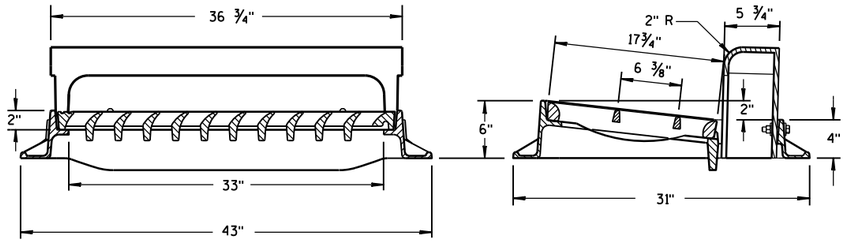


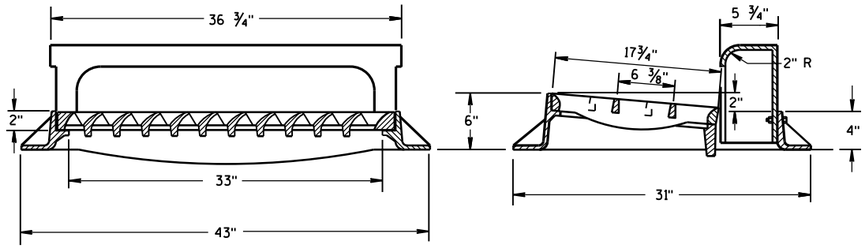
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

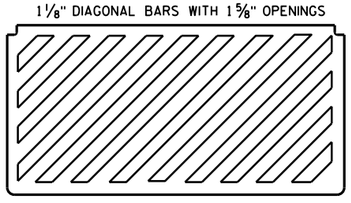






TYPE "H"

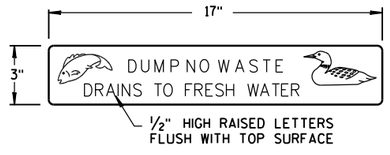
NOTE: EITHER CASTING IS ACCEPTABLE



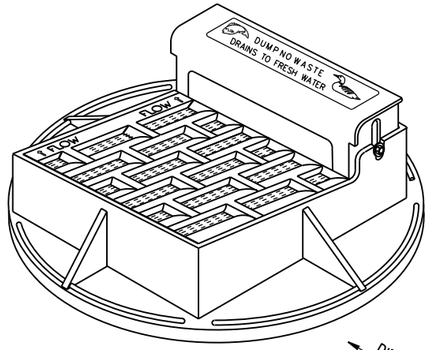
SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

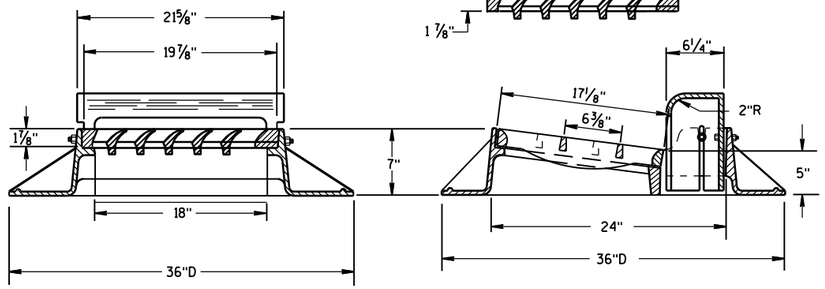


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



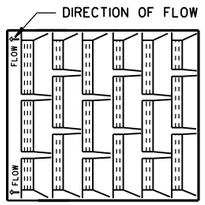
TYPE "A"

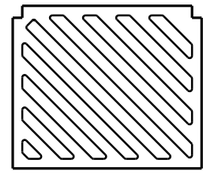
GENERAL NOTES

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

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

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

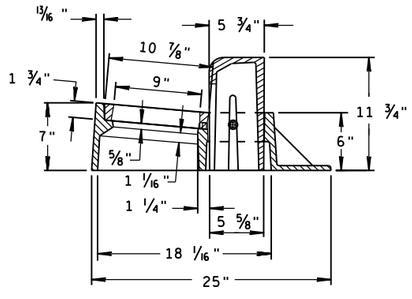


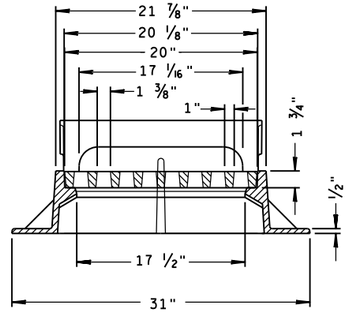


SPECIAL GRATE FOR TYPE "A" COVER

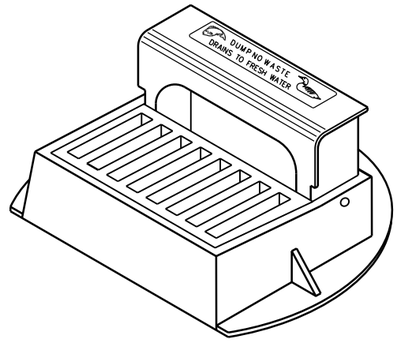
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"

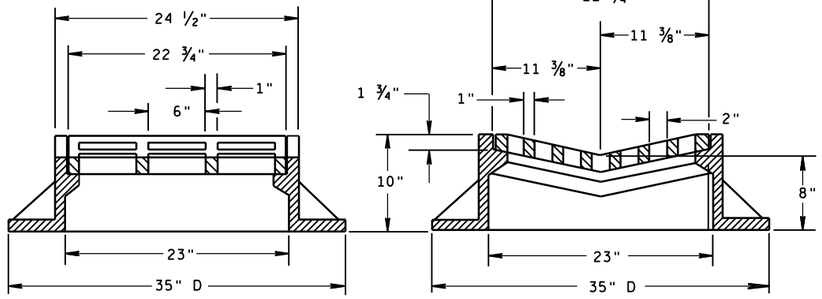


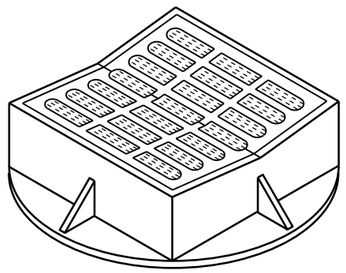
INLET COVERS TYPE A, H, A-S, H-S & Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

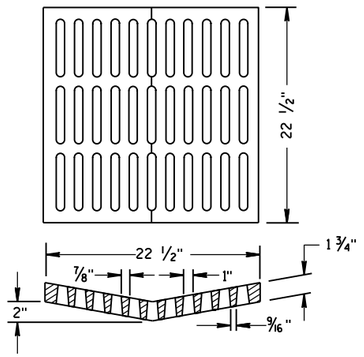
APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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





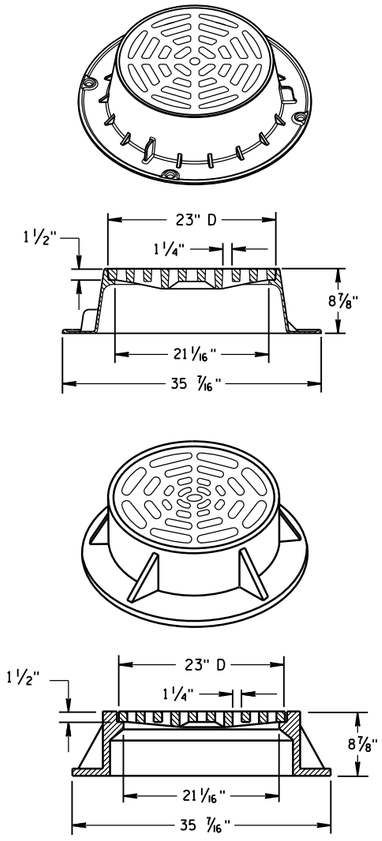
TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.

NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

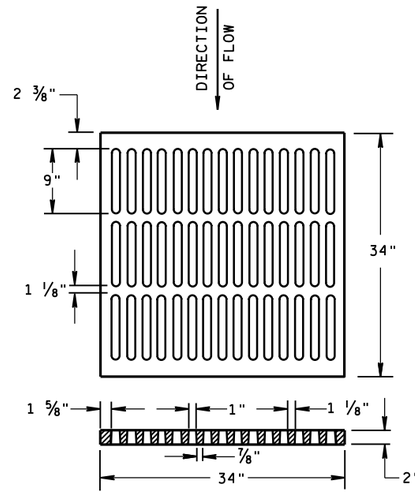
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR 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.

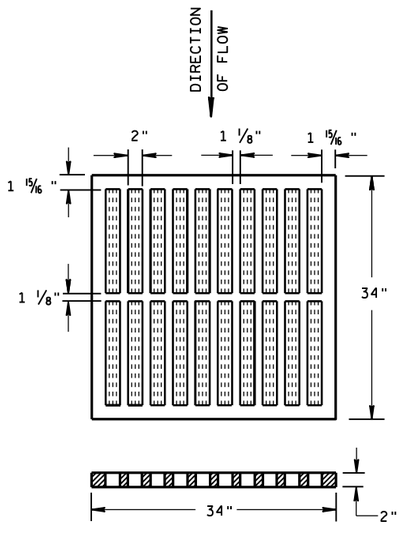
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED

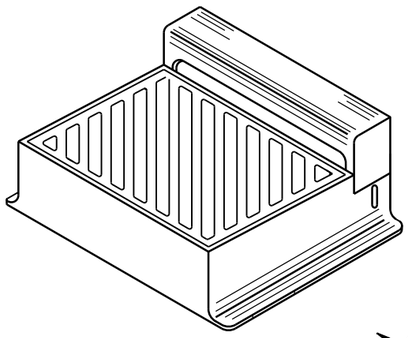
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



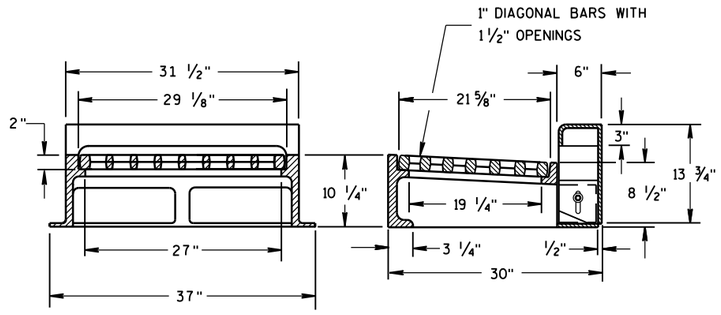
TYPE "MS"

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"

INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/27/2013 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

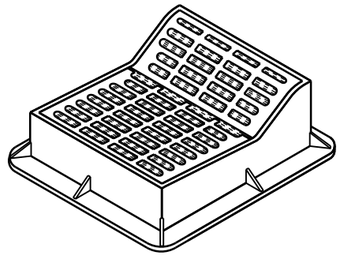
FHWA

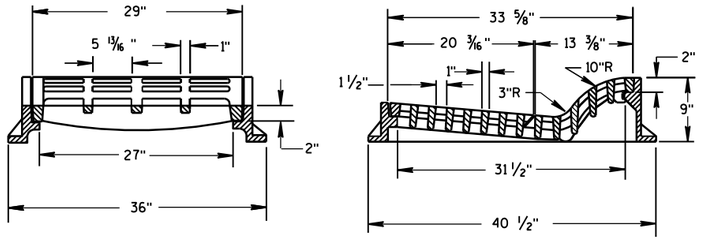
6

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

6

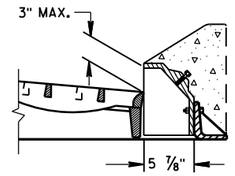
S.D.D. 8 A 5-19b





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

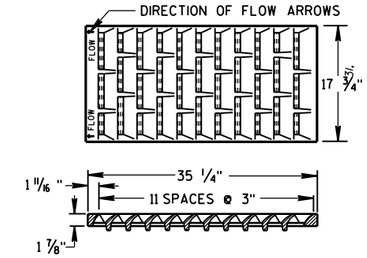
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

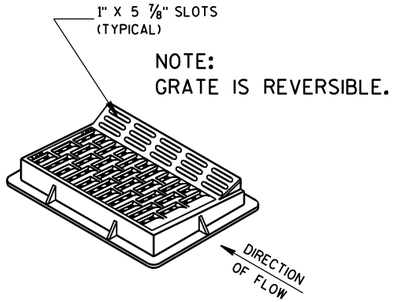
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

GENERAL NOTES

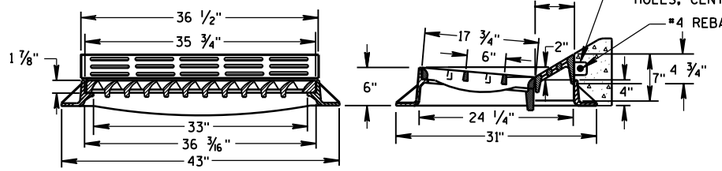
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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





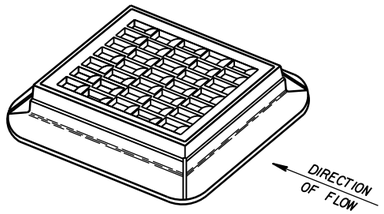
NOTE:
GRATE IS REVERSIBLE.

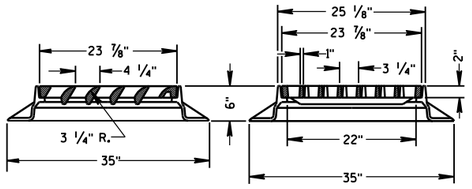


TYPE "HM"

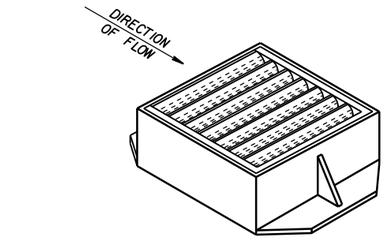
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

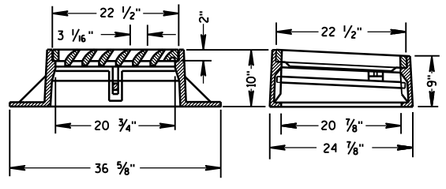
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



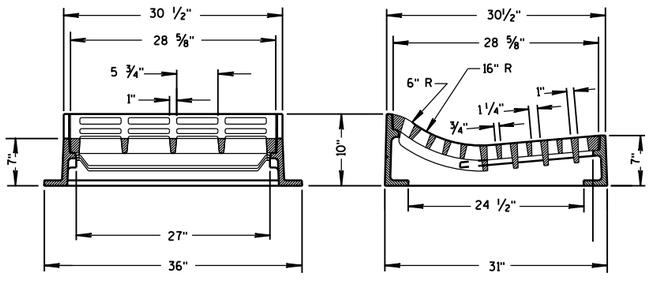


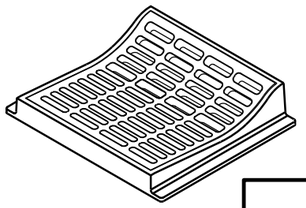
TYPE "S"





TYPE "V"





TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.

INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

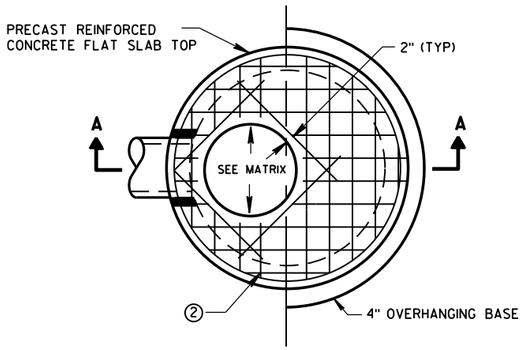
APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

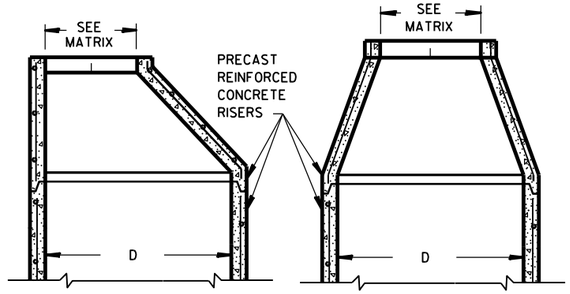
FHWA

6

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

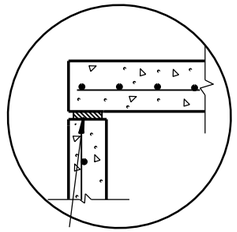


PLAN VIEW CIRCULAR OPENING

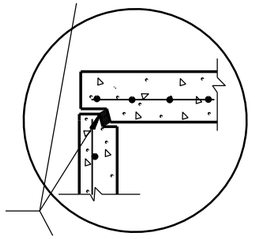


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

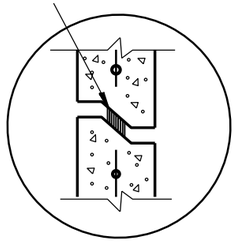
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT

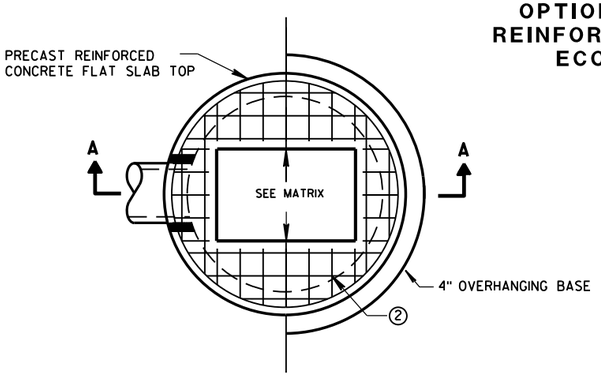


TOP WITH TONGUE AND GROOVE JOINT

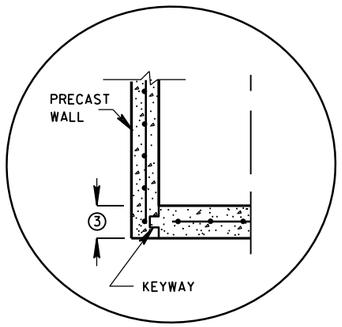


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

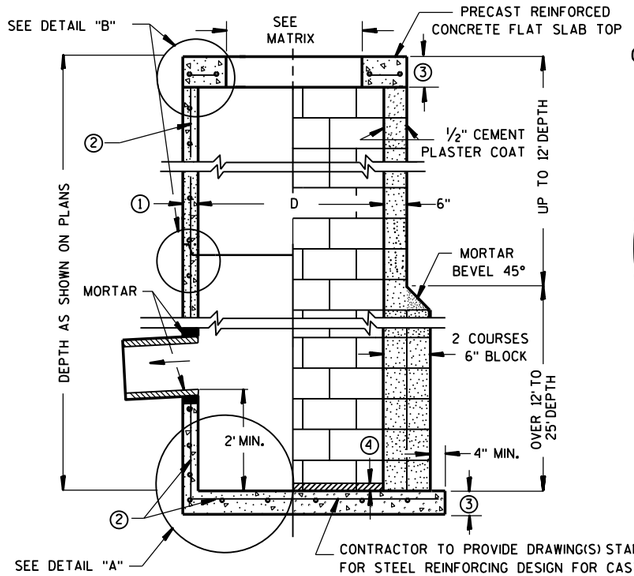


PLAN VIEW RECTANGULAR OPENING



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

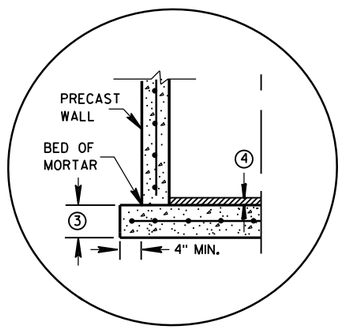
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SECTION A-A

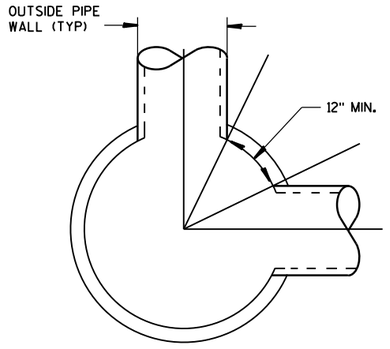
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

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 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

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

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

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

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

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

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

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

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

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

CATCH BASIN COVER OPENING MATRIX

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

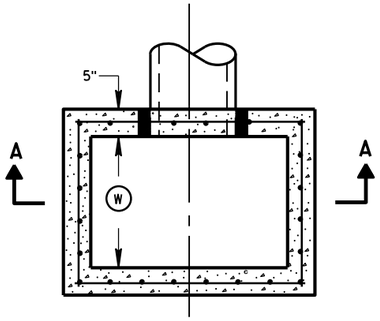
PIPE MATRIX

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

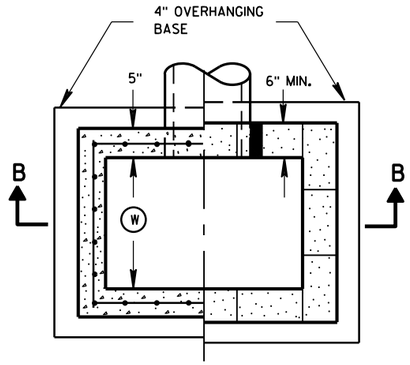
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

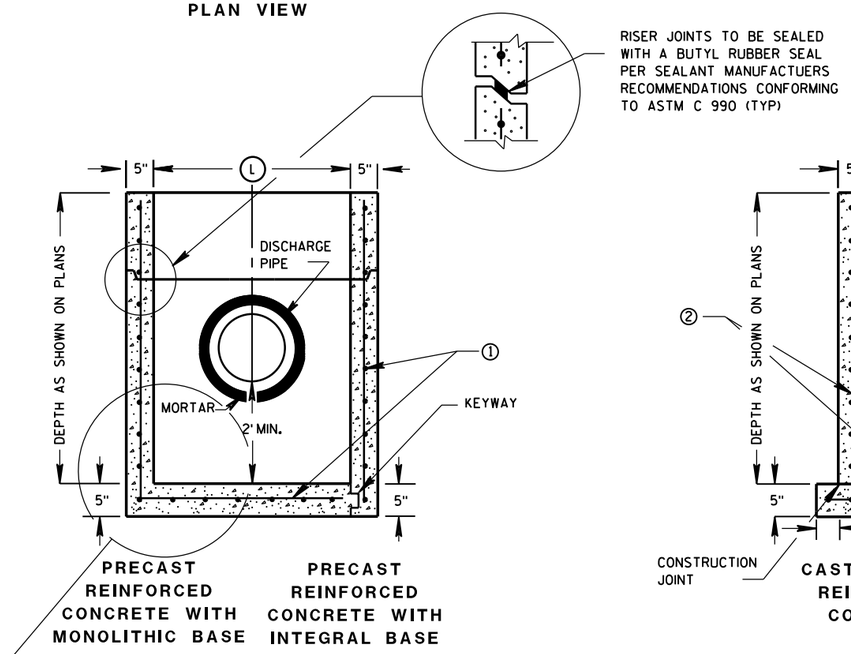
APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA



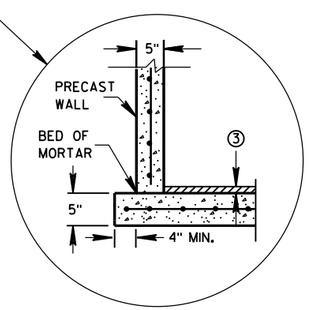
PLAN VIEW



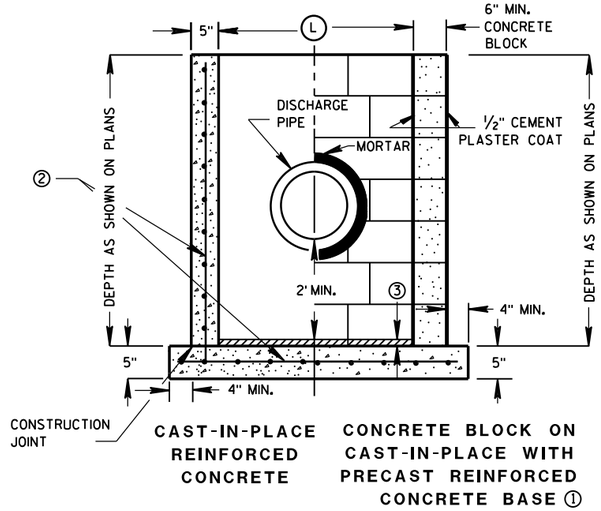
PLAN VIEW



SECTION A-A



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



SECTION B-B

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

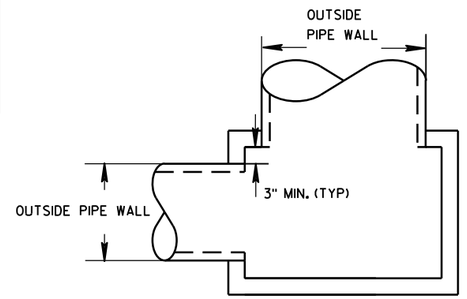
③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

CATCH BASINS 2X3-FT AND 2.5X3-FT

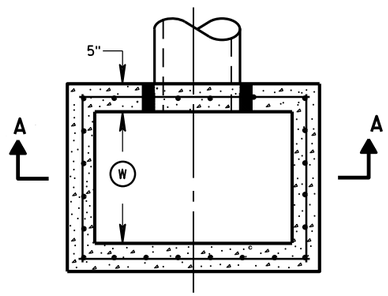
CATCH BASINS 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

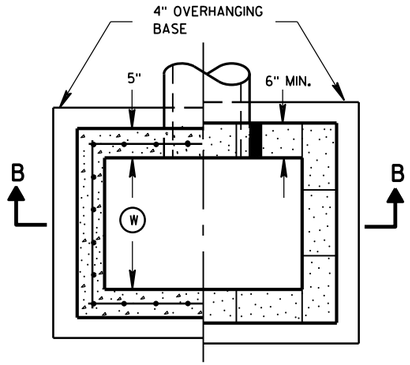
APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

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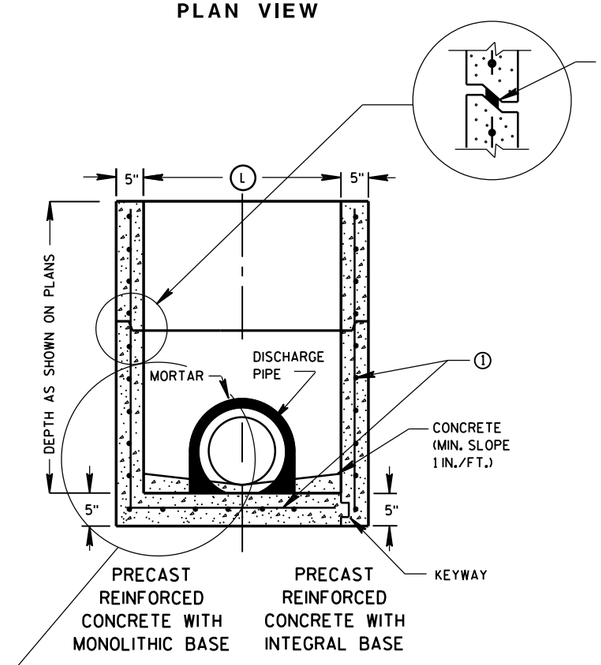
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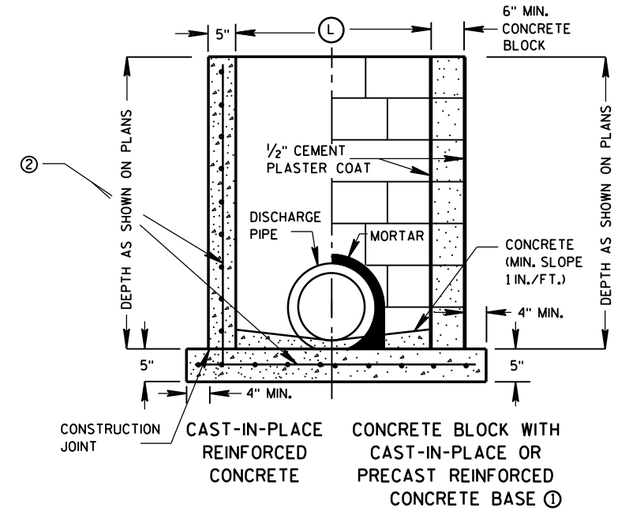
PLAN VIEW



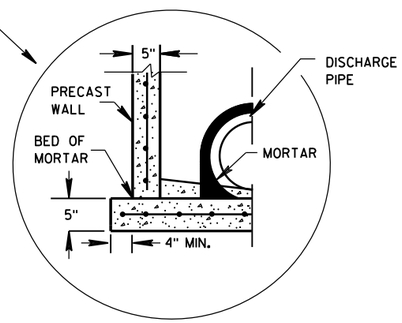
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

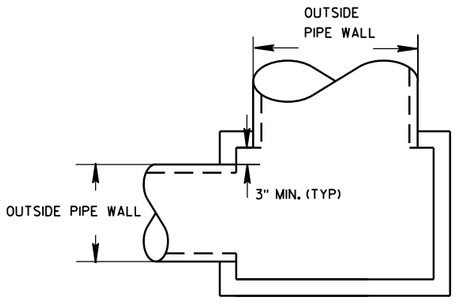
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



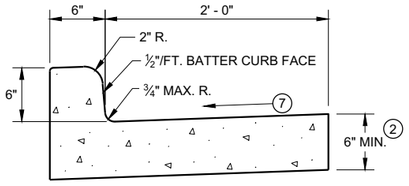
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

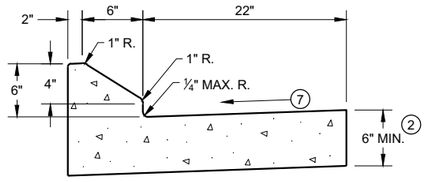
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT
UNIT SUPERVIS
FHWA

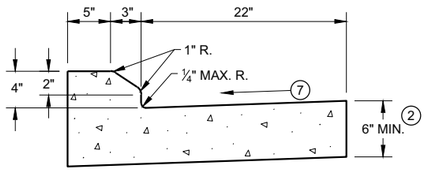
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



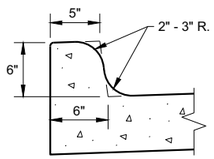
TYPES A[1] & D



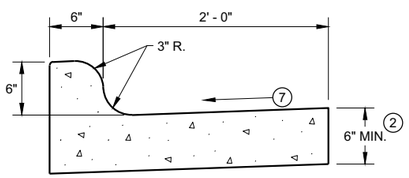
6" SLOPED CURB TYPES G[1] & J



4" SLOPED CURB TYPES G[1] & J

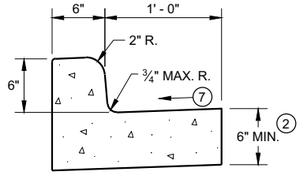


TYPES K[1] & L
(OPTIONAL CURB SHAPE)



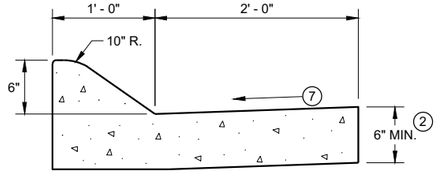
TYPES K[1] & L

CONCRETE CURB AND GUTTER 30"



TYPES A[1] & D

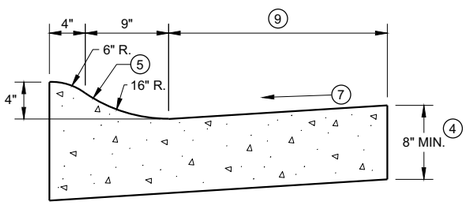
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A[1] & D

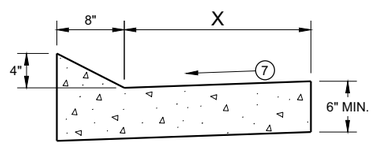
4" SLOPED CURB TYPES A[1] & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R[1] & T

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

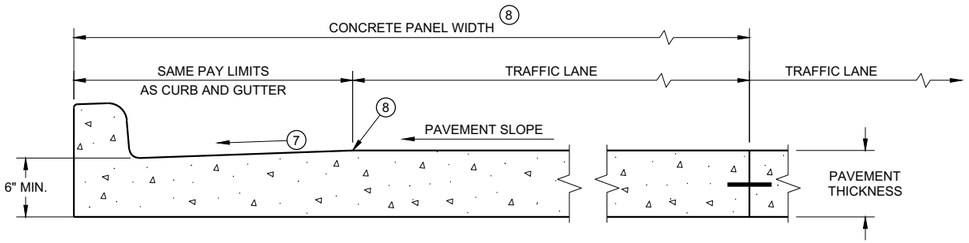


TYPES TBT & TBTT[1]

CONCRETE CURB AND GUTTER

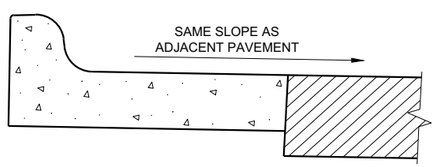
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER[6]
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

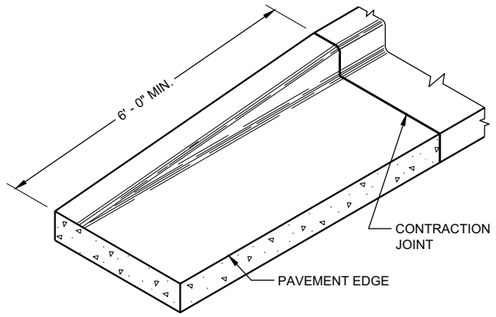
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

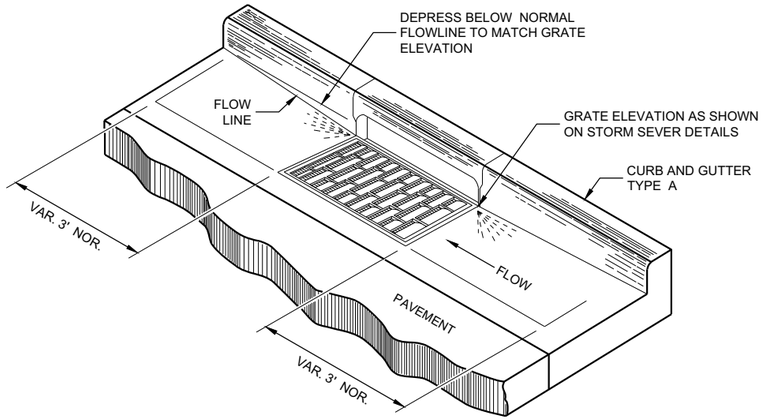
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

1. TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
3. USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
4. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
5. UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
6. WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
7. USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
8. INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
9. CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
   CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

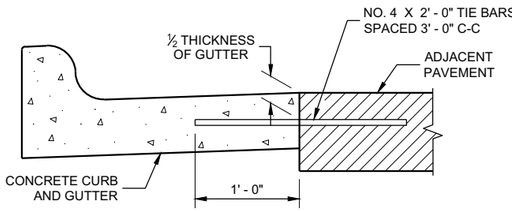
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

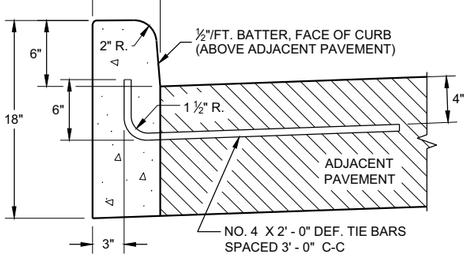
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

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

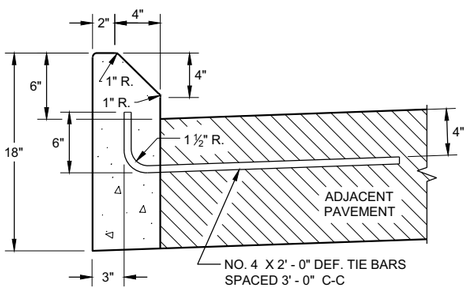
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

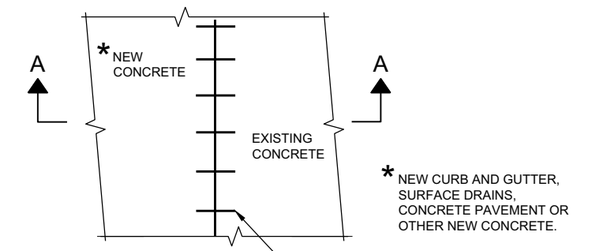


TYPES A (1) & D

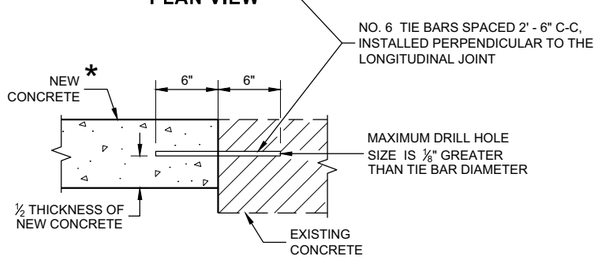


TYPES G (1) & J

CONCRETE CURB

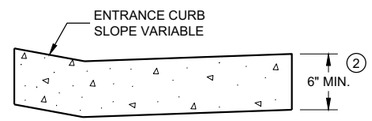


PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

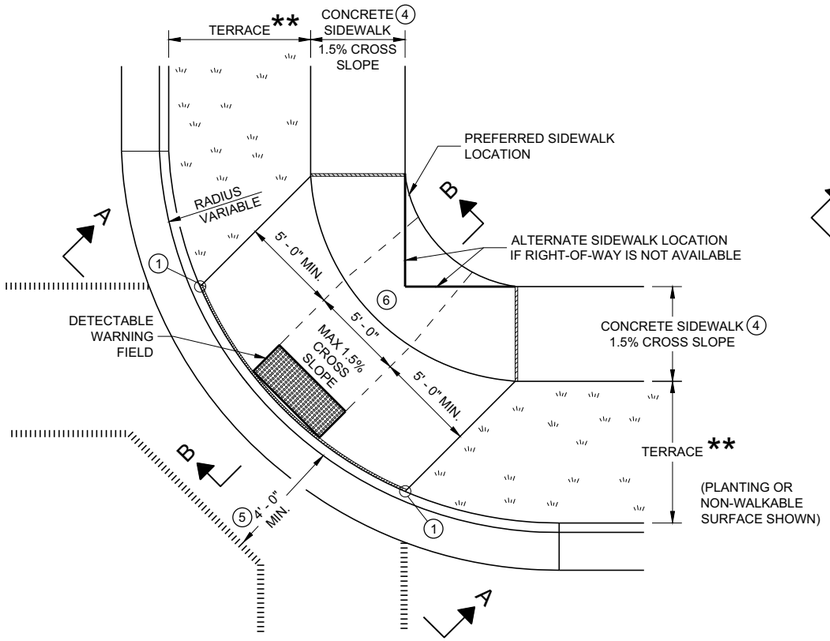
FHWA

6

SDD08D01 - 22b

6

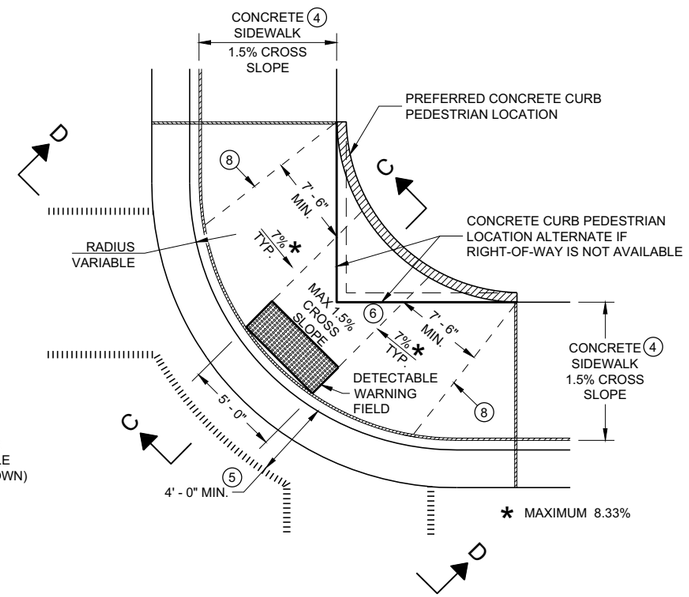
SDD08D01 - 22b



PLAN VIEW

CURB RAMP TYPE 1

(CENTER OF CORNER RADIUS)



PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FILED 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 LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

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

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

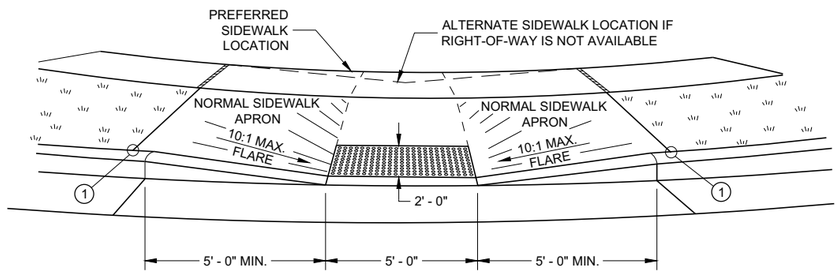
(3) MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

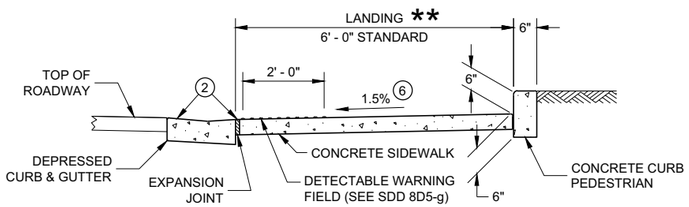
(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

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

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



VIEW A - A FOR TYPE 1

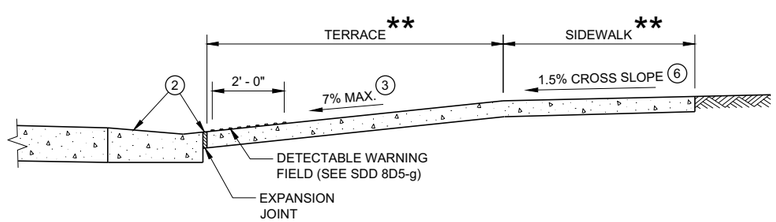


SECTION C - C FOR TYPE 1 - A

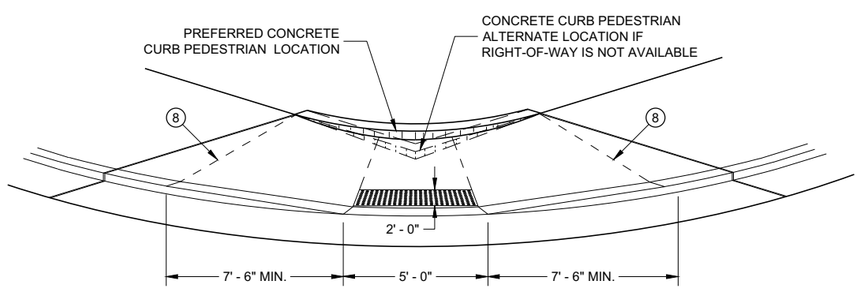
LEGEND

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

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

CURB RAMPS
TYPE 1 AND 1-A

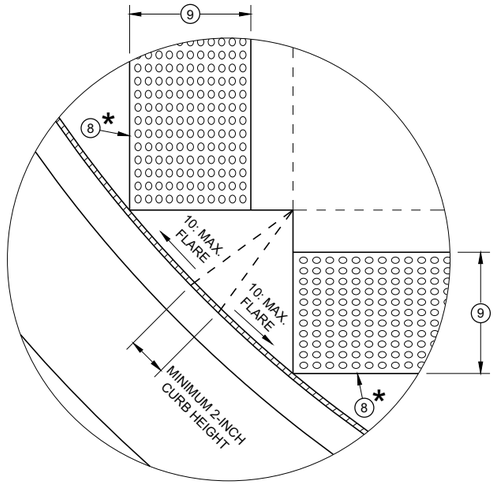
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

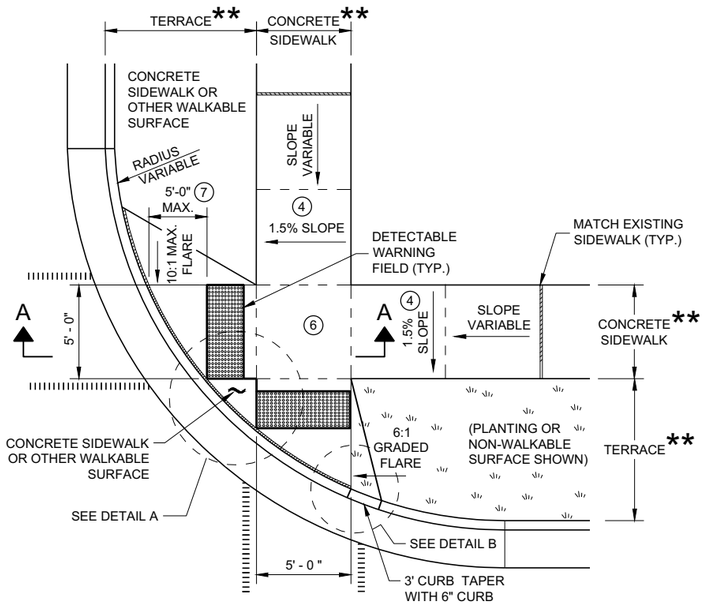
SDD 08D05 - 20a

6

SDD 08D05 - 20a



DETAIL A



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

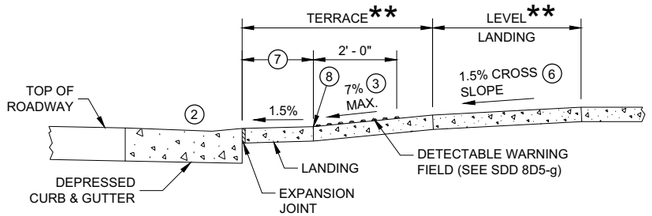
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

(7) WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

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

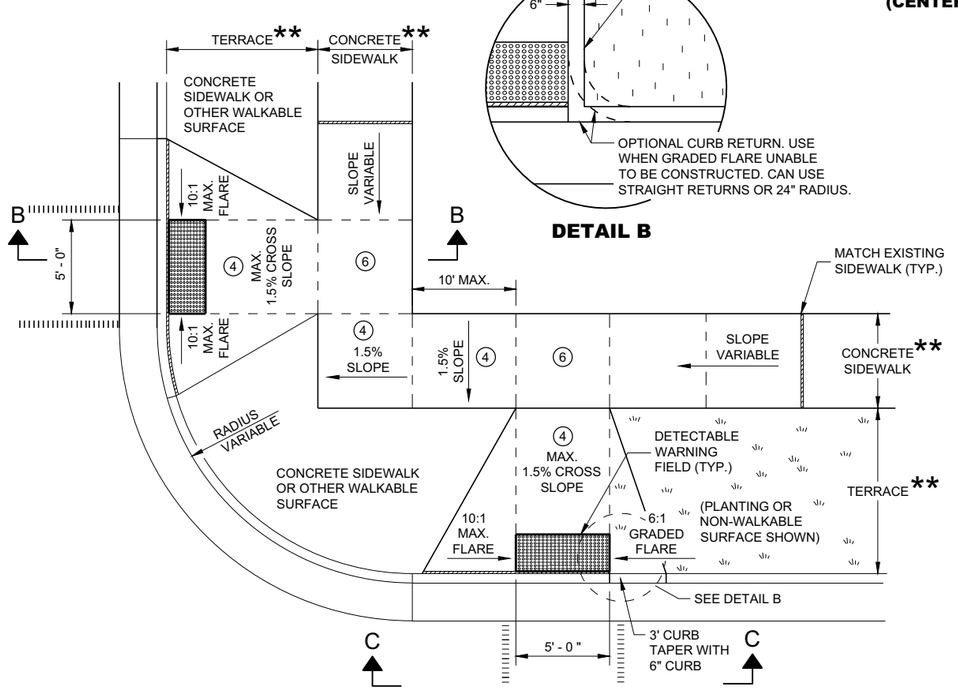
(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



SECTION A - A FOR TYPE 2

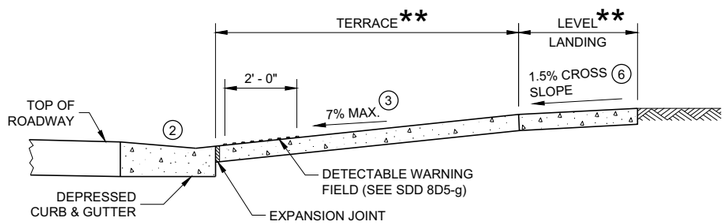
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS



DETAIL B

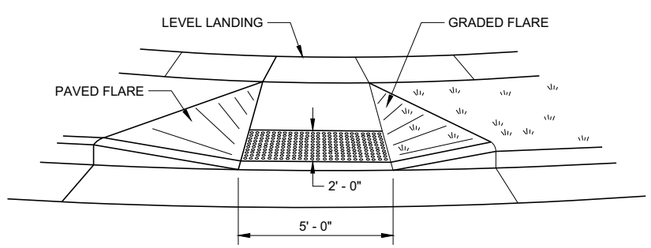
PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)



SECTION B - B FOR TYPE 3

LEGEND

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



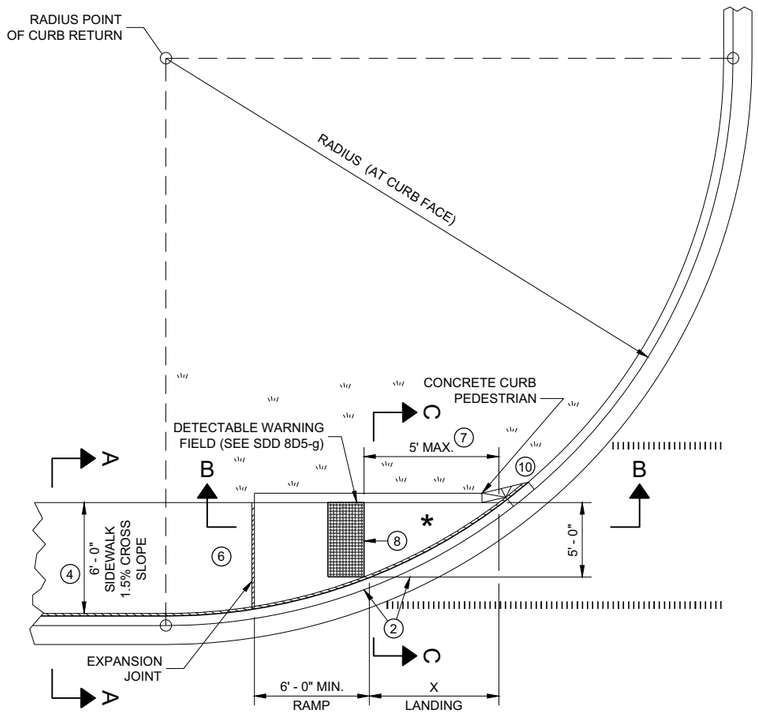
VIEW C - C FOR TYPE 3

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20b

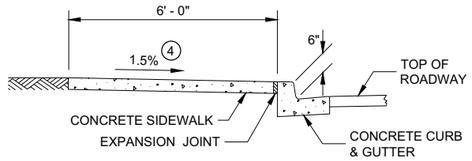


PLAN VIEW

CURB RAMP TYPE 4A

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

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

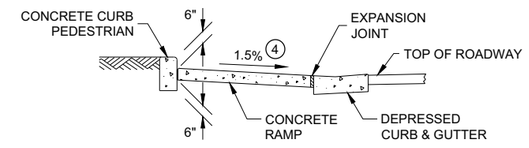
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

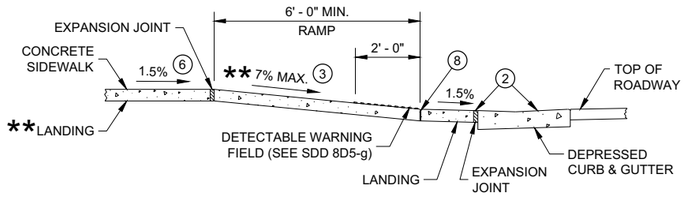
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)



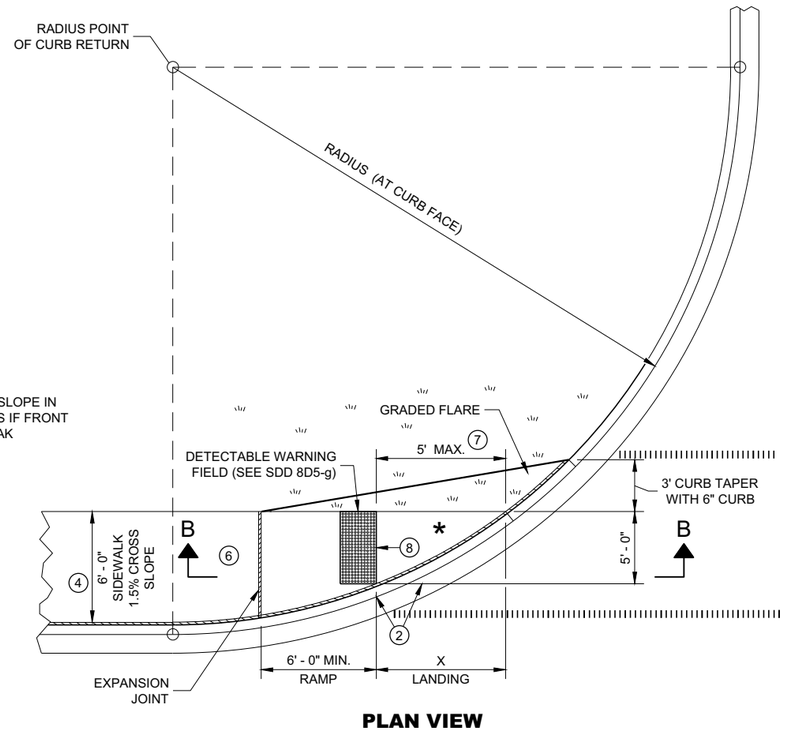
SECTION C - C FOR TYPE 4A



SECTION B - B FOR TYPE 4A AND TYPE 4A1

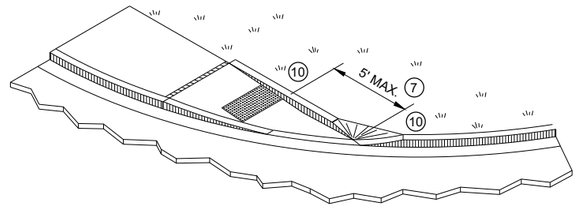
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

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

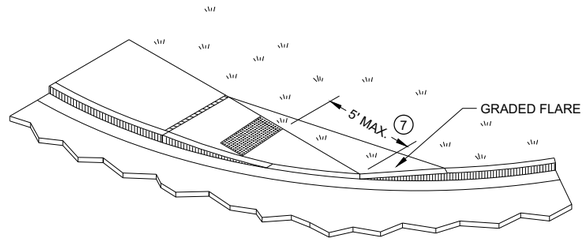


PLAN VIEW

CURB RAMP TYPE 4A1



ISOMETRIC VIEW FOR TYPE 4A



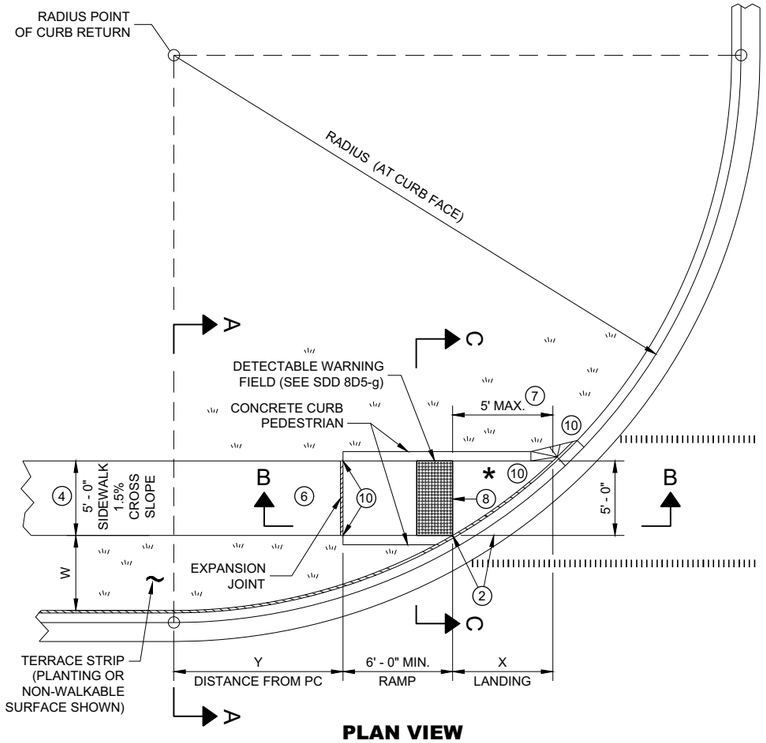
ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20c



PLAN VIEW

CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ¼"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¼"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ¼"
20 FEET	5' - 9 ¾"	3' - 6 ½"	4' - 11 ½"	5' - 1 ¾"	4' - 3 ¼"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ¼"	10' - 9"
30 FEET			6' - 9 ¼"	7' - 11 ¼"	6' - 0 ¼"	9' - 8"	5' - 5"	11' - 1 ¾"	4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ¼"
40 FEET									6' - 1 ¾"	15' - 8 ½"	5' - 8"	17' - 2"	5' - 3"	18' - 5 ¾"	4' - 10 ¾"	19' - 8 ¼"
50 FEET															5' - 10 ¼"	23' - 2"

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

SECTION C - C FOR TYPE 4B

LEGEND

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

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

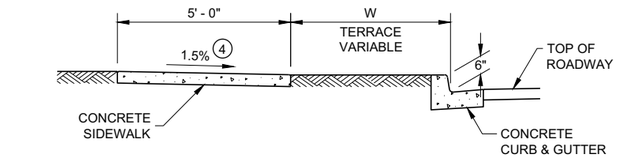
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

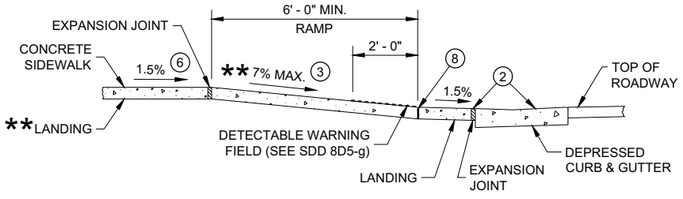
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

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

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



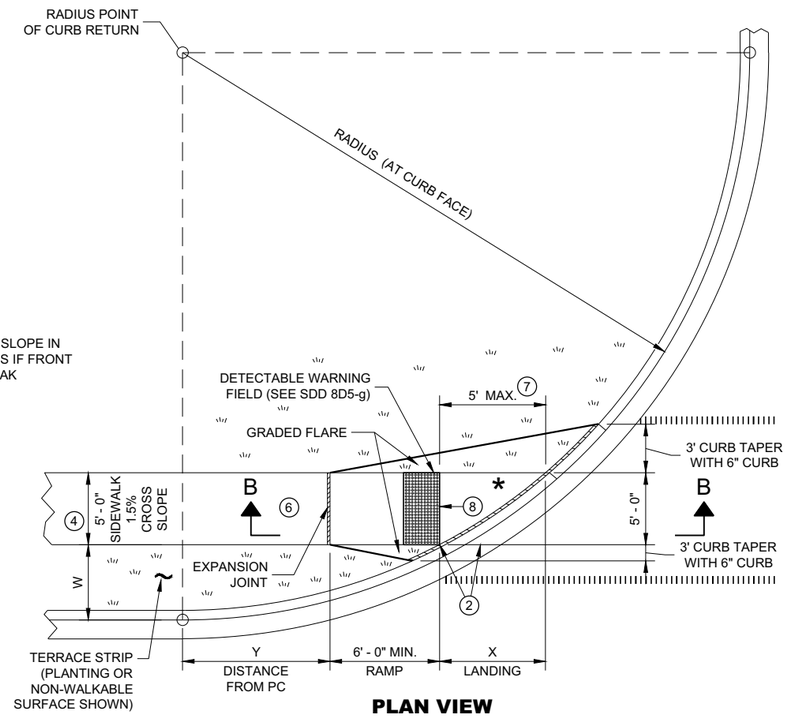
SECTION A - A FOR TYPE 4B



SECTION B - B FOR TYPE 4B AND TYPE 4B1

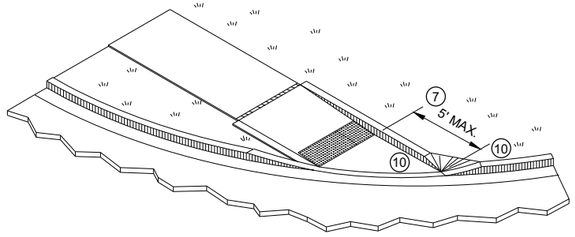
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

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

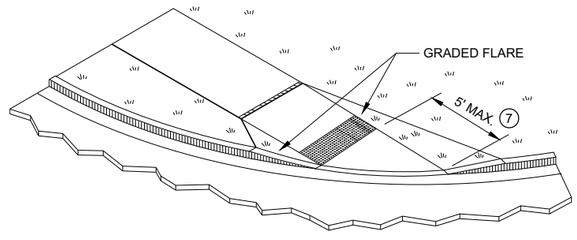


PLAN VIEW

CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



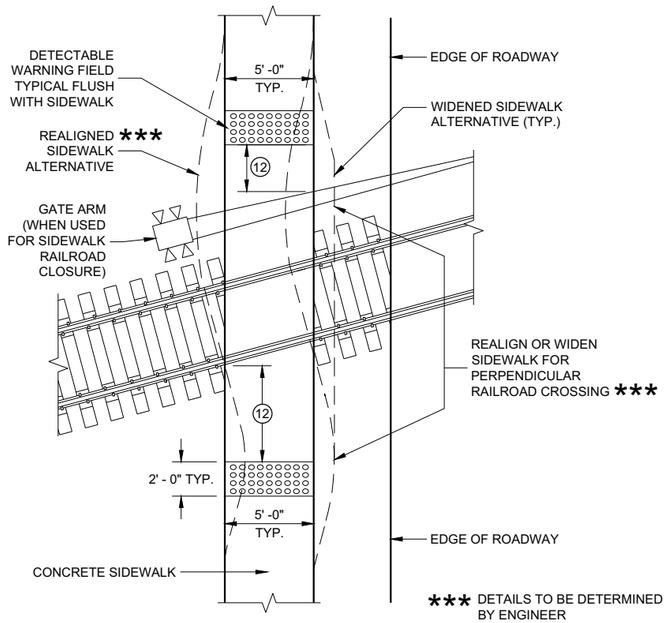
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

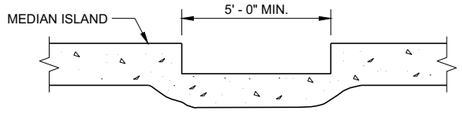
6

SDD 08D05 - 20d

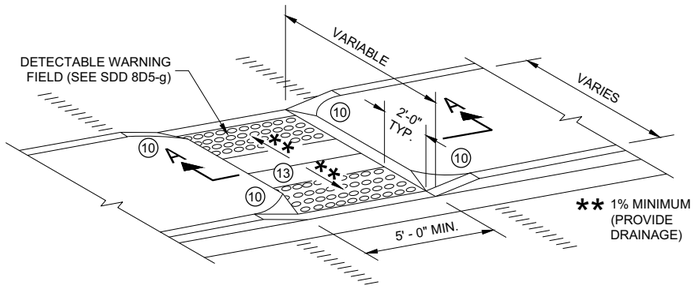


CURB RAMP TYPE 8

DETECTABLE WARNINGS AT RAILROAD CROSSING



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

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

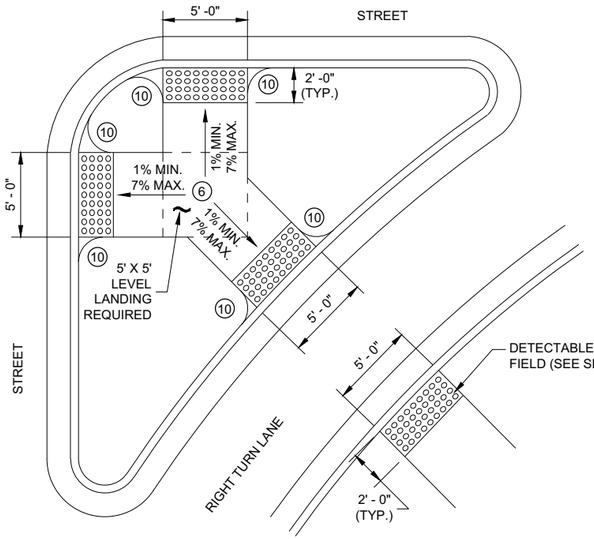
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

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

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

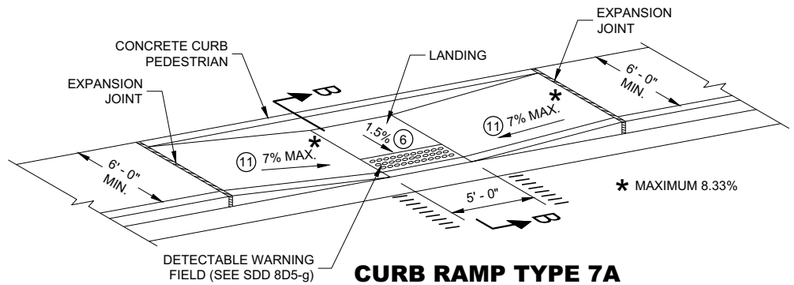
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

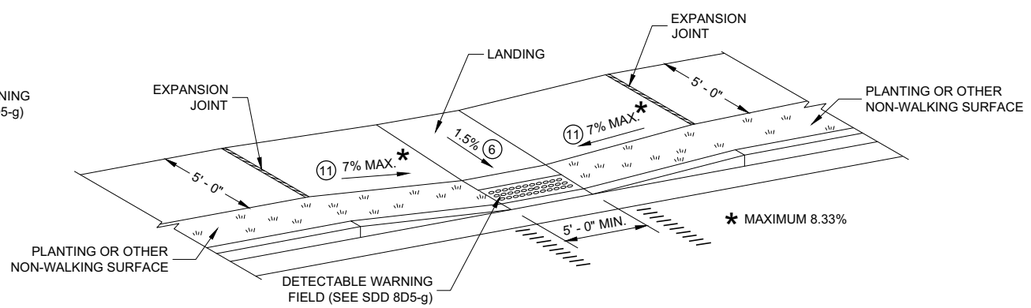
DETECTABLE WARNING AT ISLANDS

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



CURB RAMP TYPE 7A

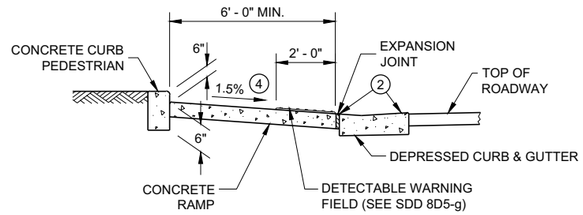
MID BLOCK CROSSING



CURB RAMP TYPE 7B

MID BLOCK CROSSING

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



SECTION B - B FOR TYPE 7A

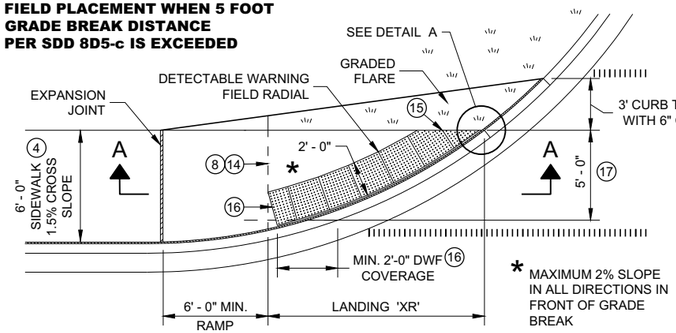
CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 08D05 - 20e

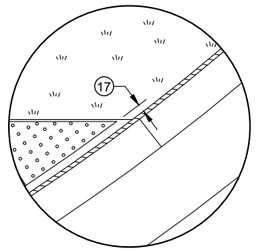
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



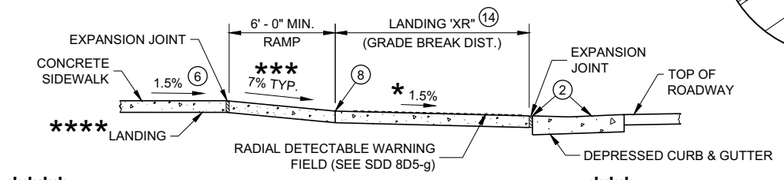
PLAN VIEW

CURB RAMP TYPE 4A1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL A

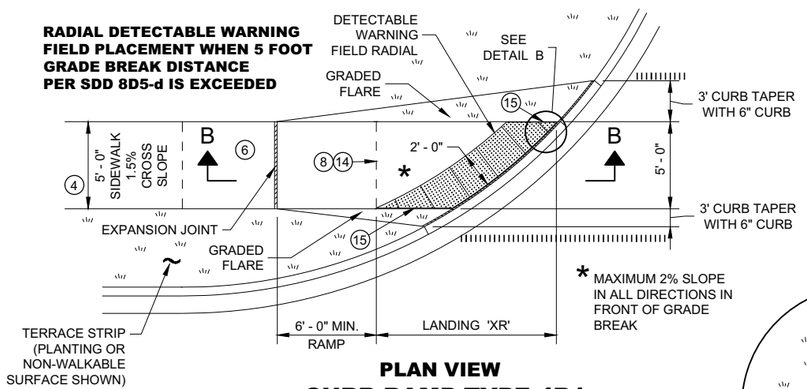


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1

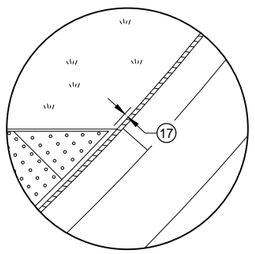
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



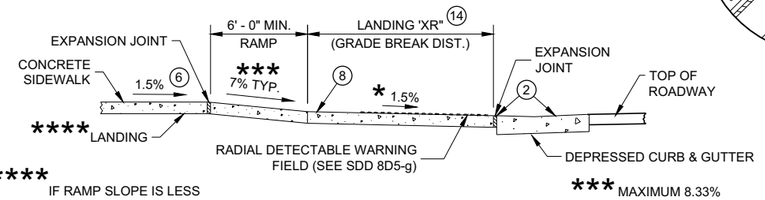
PLAN VIEW

CURB RAMP TYPE 4B1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION B - B FOR TYPE 4B1

LEGEND

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

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

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

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

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

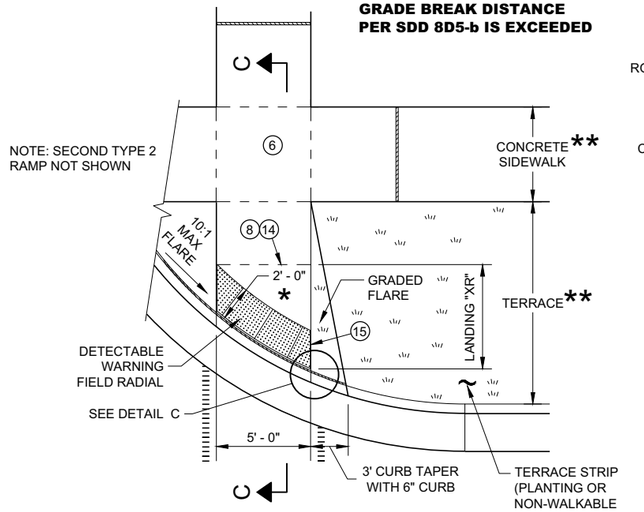
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

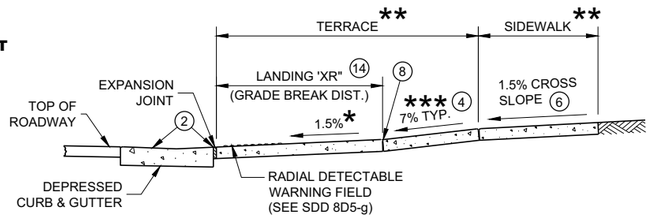


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

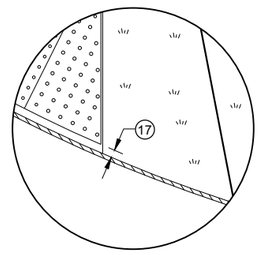


SECTION C - C FOR TYPE 2

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



DETAIL C

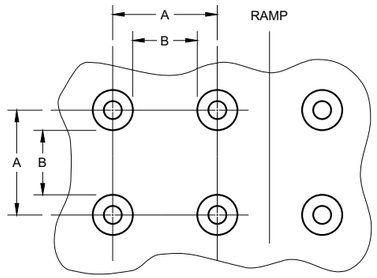
CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

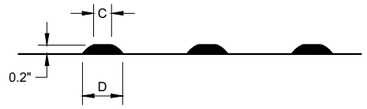
SDD 08D05 - 20f

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

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

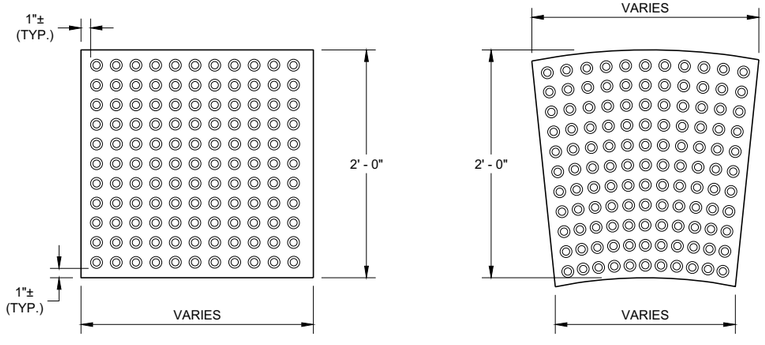


PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

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

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

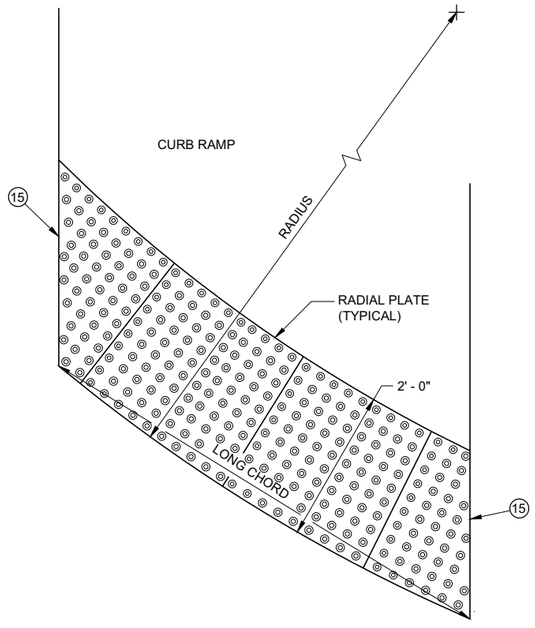
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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

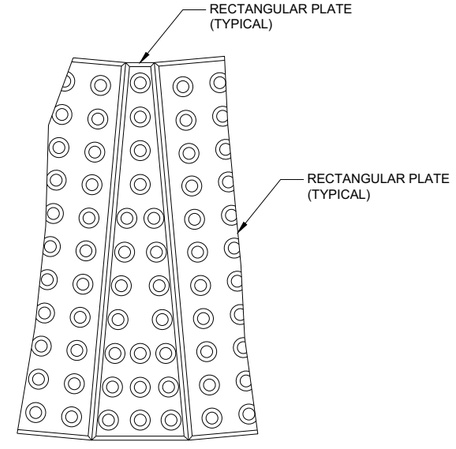
REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

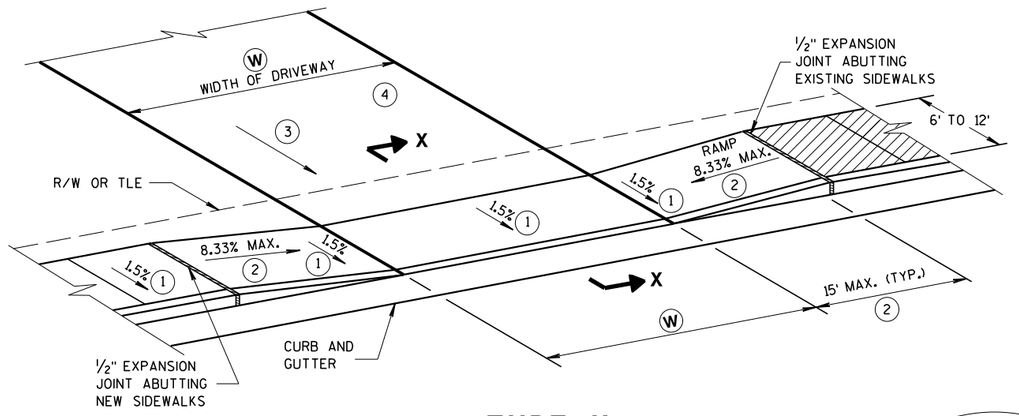
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

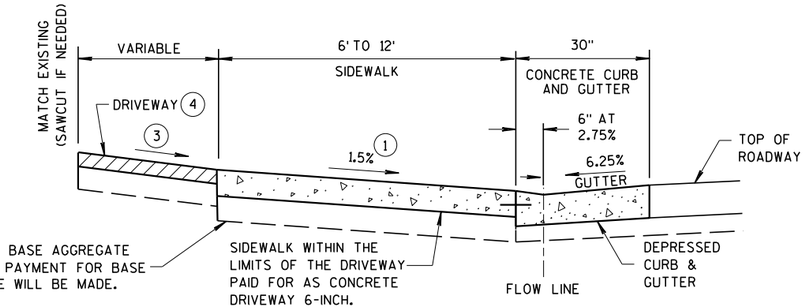
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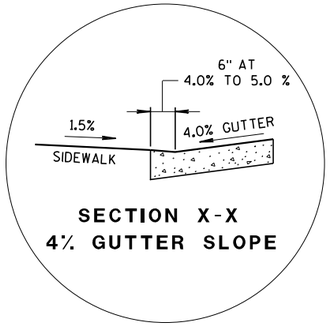
SDD 08D05 - 20g



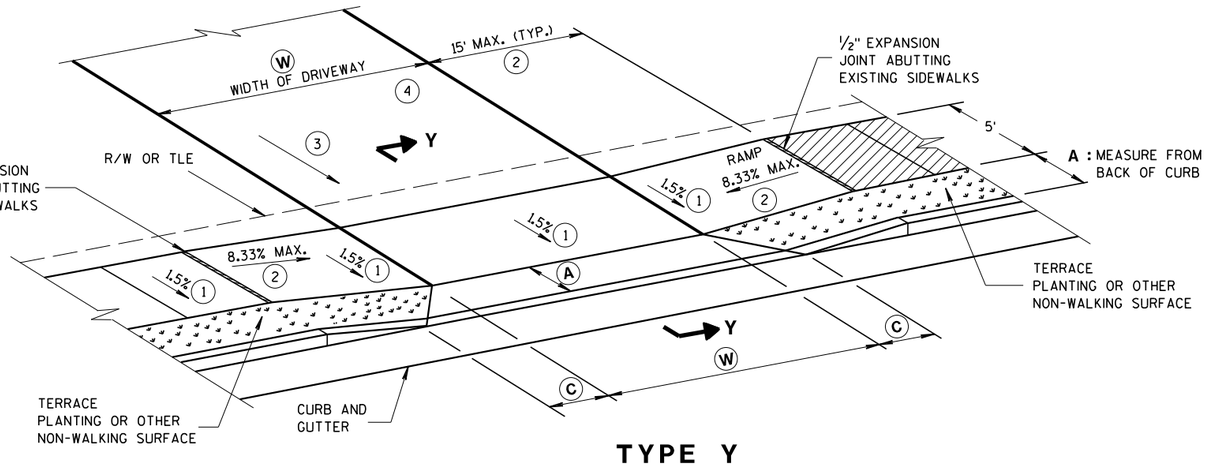
TYPE X
SIDEWALK ABUTS CURB & GUTTER
TERRACE VARIES 0 TO 3 FEET



SECTION X-X



SECTION X-X
4% GUTTER SLOPE



TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET

W: 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)
16' MIN. - 35' MAX. COMMERCIAL (CE)

GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

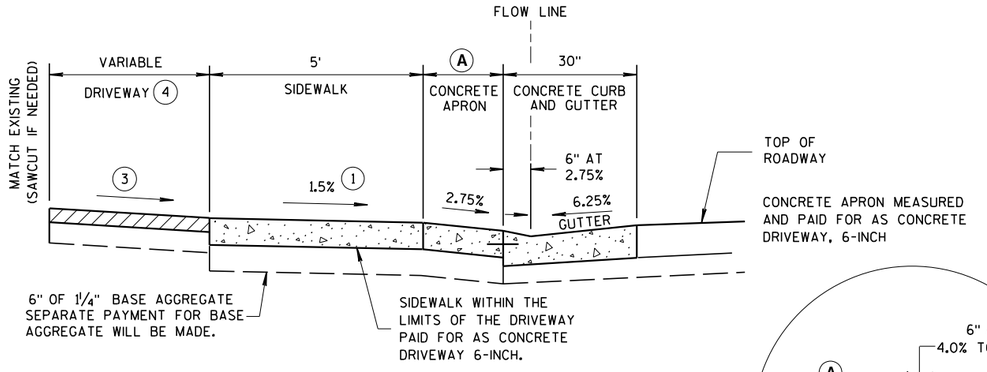
OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

(1) CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

(2) THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(3) DRIVEWAY SLOPES: DESIRABLE MAXIMUM
- 10.5% UP AWAY FROM SIDEWALK (SAG)
- 8.5% DOWN AWAY FROM SIDEWALK (CREST)
- ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

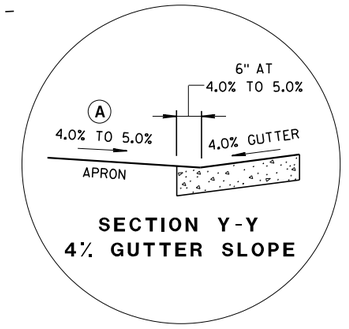
(4) DRIVEWAY TYPES
- 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
- 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
- 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)



NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

SECTION Y-Y

DRIVEWAY DETAIL
WITH CONCRETE CURB & GUTTER
(URBAN AND SUBURBAN)



SECTION Y-Y
4% GUTTER SLOPE

TABLE Y

(A) FEET	(C) FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'

NOT TO SCALE

DRIVEWAY AND SIDEWALK RAMPS
TYPES X & Y

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

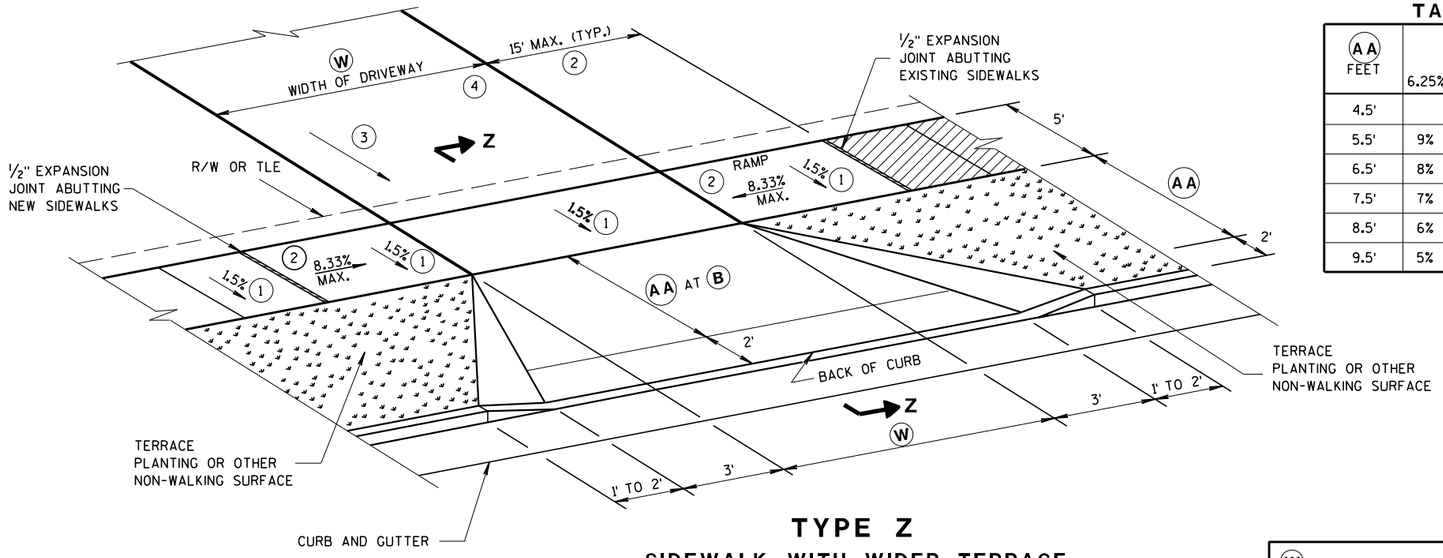
APPROVED
March 2018 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

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S.D.D. 8 D 18-2

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S.D.D. 8 D 18-2



TYPE Z

SIDEWALK WITH WIDER TERRACE

TERRACE VARIES 7 TO 12 FEET

TABLE Z

(AA) FEET	(B) % 6.25% GUTTER	(B) % 4% GUTTER
4.5'	11.5%	9% TO 11.5%
5.5'	9% TO 11.5%	8% TO 11.5%
6.5'	8% TO 11.5%	6% TO 11.5%
7.5'	7% TO 11.5%	6% TO 11.5%
8.5'	6% TO 11.5%	5% TO 11.5%
9.5'	5% TO 11.5%	4% TO 11.5%

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)

16' MIN. - 35' MAX. COMMERCIAL (CE)

GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

(1) CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

(2) THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.

(3) DRIVEWAY SLOPES: DESIRABLE MAXIMUM

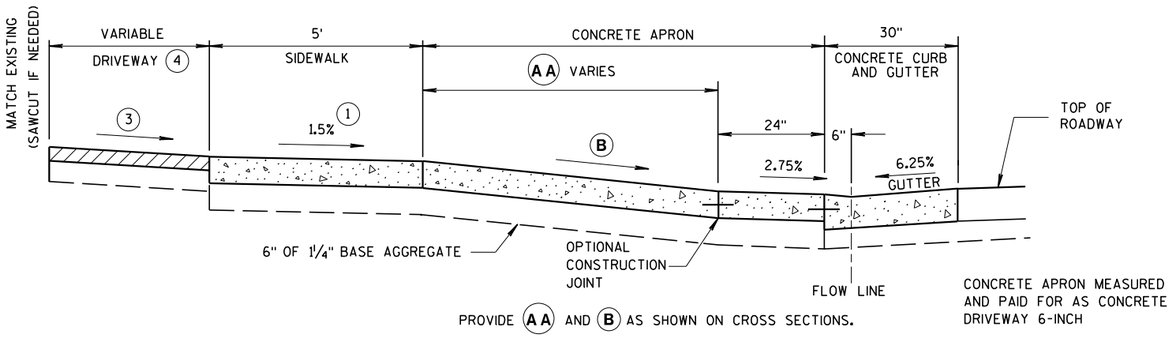
10.5% UP AWAY FROM SIDEWALK (SAG)

8.5% DOWN AWAY FROM SIDEWALK (CREST)

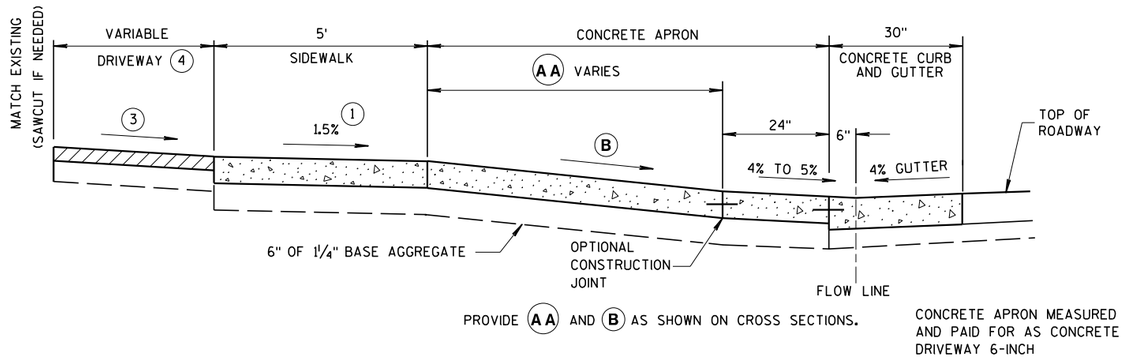
ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

(4) DRIVEWAY TYPES

- 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
- 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
- 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)



6.25% GUTTER SLOPE



4% GUTTER SLOPE

NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS FOR **B** VALUES NOT SHOWN IN TABLE Z.

SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY PAID FOR AS CONCRETE DRIVEWAY 6-INCH.

SEPARATE PAYMENT FOR BASE AGGREGATE WILL BE MADE.

SECTION Z-Z

DRIVEWAY DETAIL WITH CONCRETE CURB & GUTTER

(URBAN AND SUBURBAN)

NOT TO SCALE

DRIVEWAY AND SIDEWALK RAMPS TYPE Z

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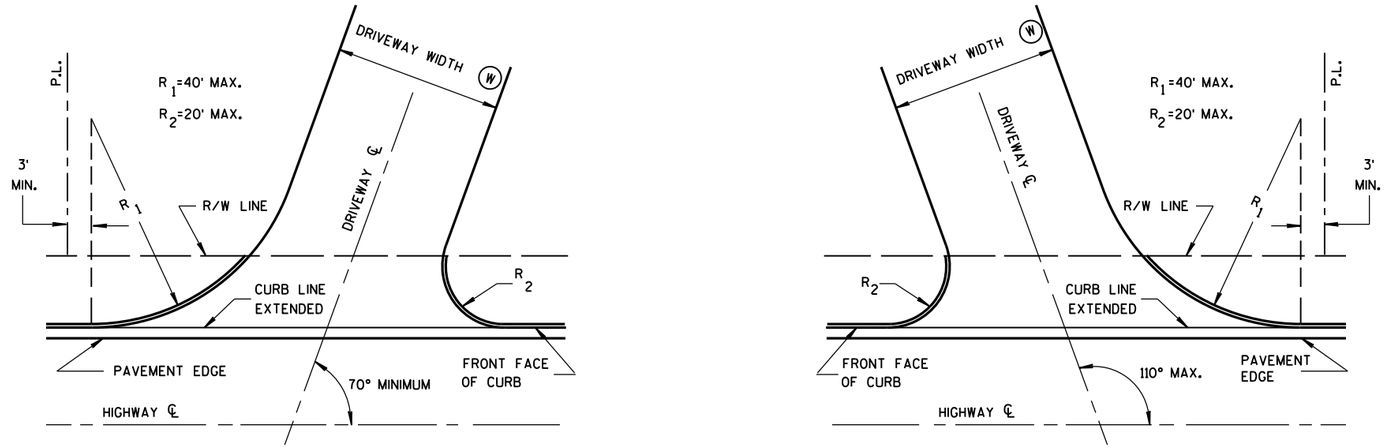
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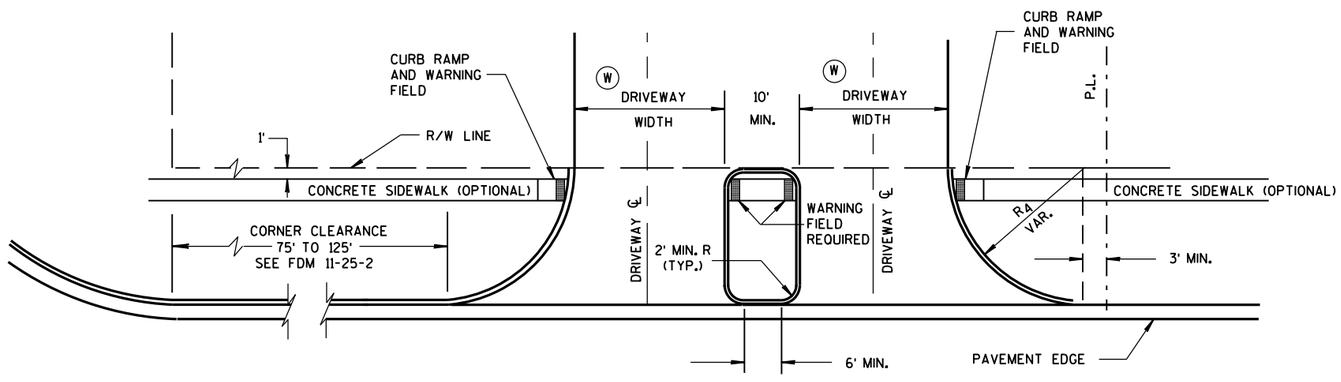
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SKEWED DRIVEWAY DETAILS
(COMMERCIAL AND NON-COMMERCIAL)

SIDEWALK NOT SHOWN



DRIVEWAY LOCATION AND SPACING DETAILS

SIDEWALK SHOWN

NOTES

A MAXIMUM RADIUS OF 10 FEET SHALL BE USED FOR NON-COMMERCIAL PRIVATE ENTRANCES. RADII FOR COMMERCIAL DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER BASED ON TRAFFIC AND DRIVEWAY PERMIT RESTRICTIONS.

THE MINIMUM ANGLE OF INTERSECTION BETWEEN THE DRIVEWAY AND HIGHWAY CENTERLINES SHALL BE 70°.

ALL CURVILINEAR PRIVATE ENTRANCE OUTLINES SHALL BE CONTAINED WITHIN THE HIGHWAY R/W.

NO DRIVEWAY SHALL BE BUILT WITHIN 3 FEET OF THE PROPERTY LINE EXCEPT FOR EXISTING JOINT DRIVEWAY SHARED BY TWO OWNERS.

Ⓦ DRIVEWAY WIDTHS:

COMMERCIAL - 35' MAX., 16' MIN.

RESIDENTIAL AND NON-COMMERCIAL - 24' MAX., 12' MIN.

DRIVEWAYS WITH CURB & GUTTER RETURNS

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/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV
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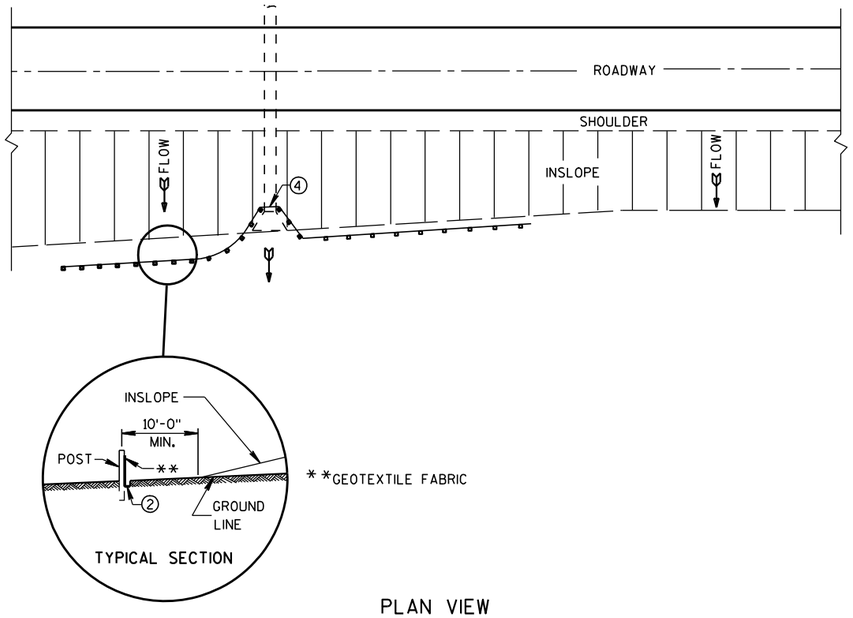
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S.D.D. 8 D 20-1

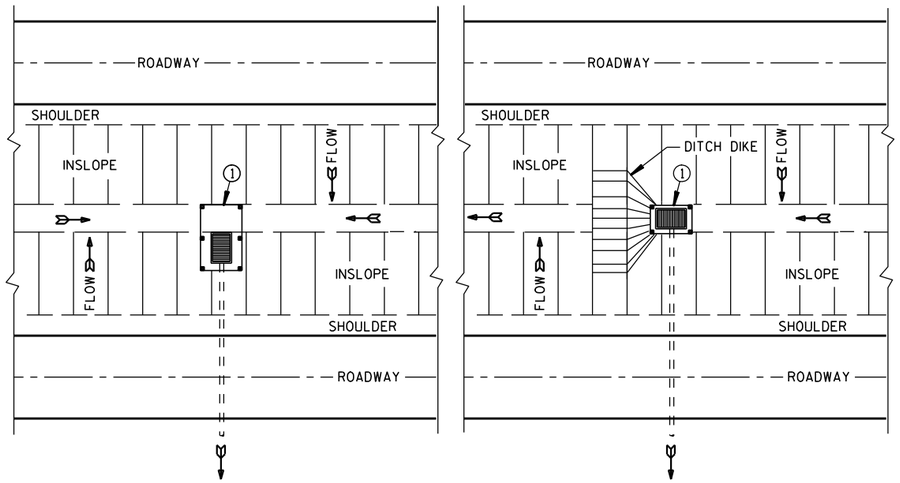
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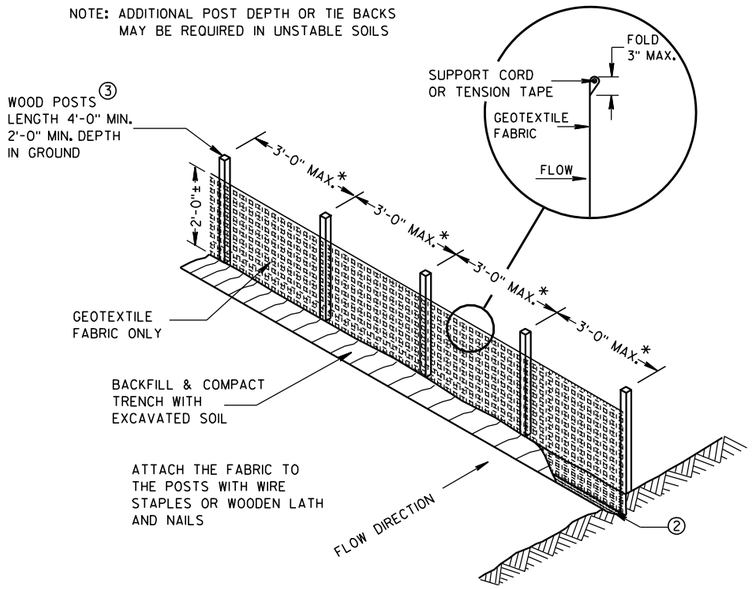
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



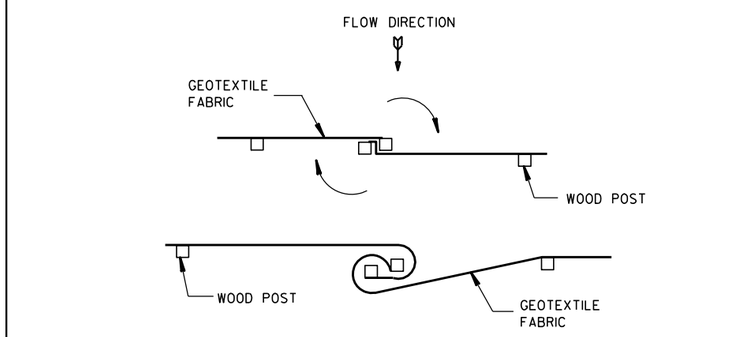
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

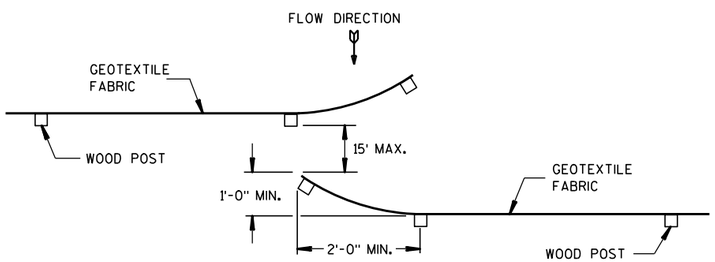


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE



TWIST METHOD



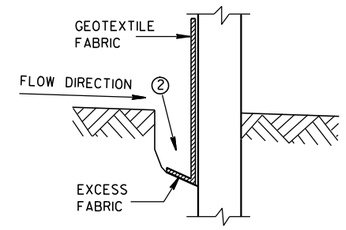
HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5

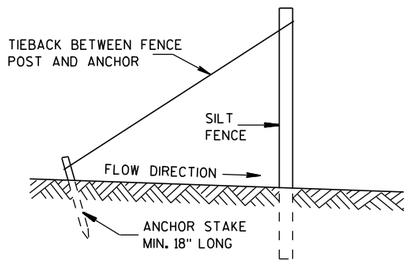
GENERAL NOTES

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 TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

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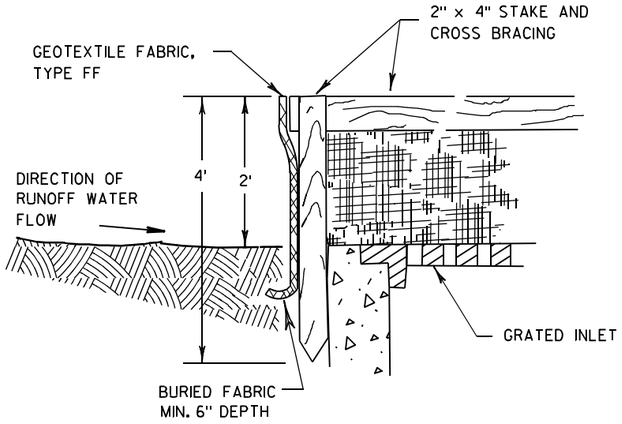
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4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
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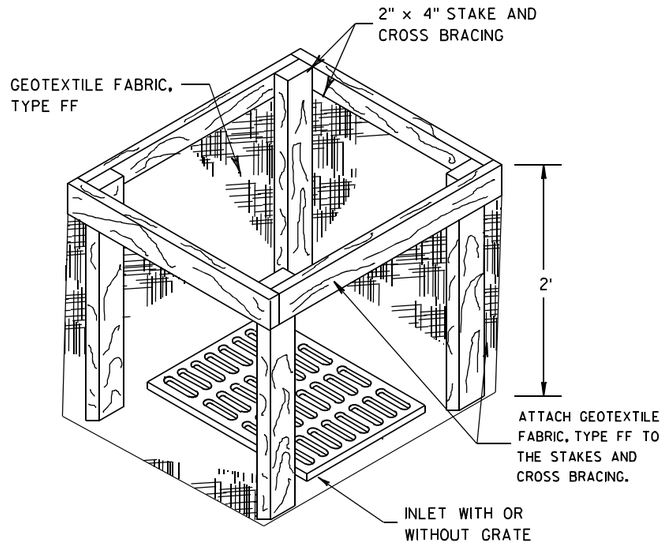
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S.D.D. 8 E 9-6

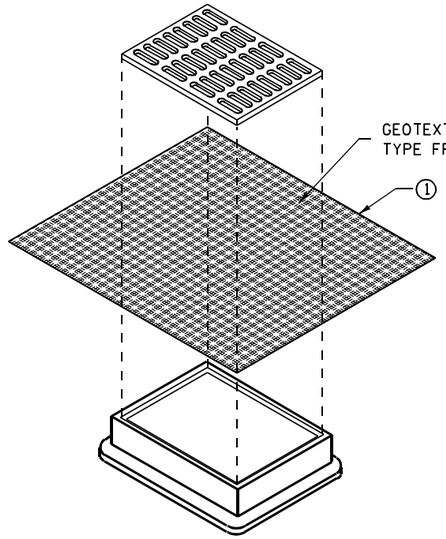
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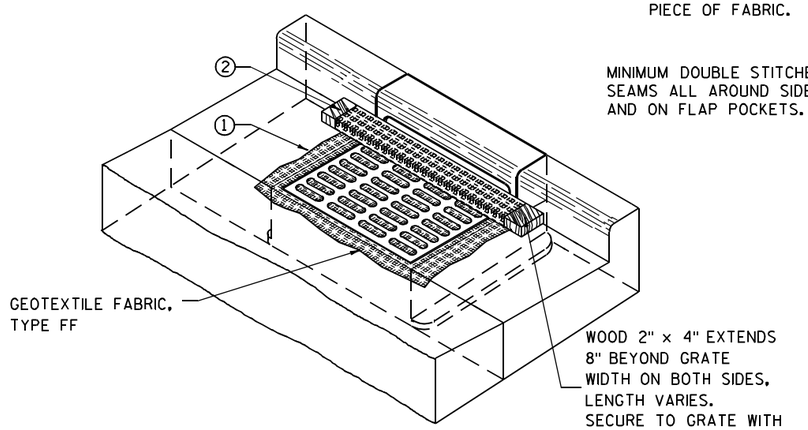


INLET PROTECTION, TYPE A

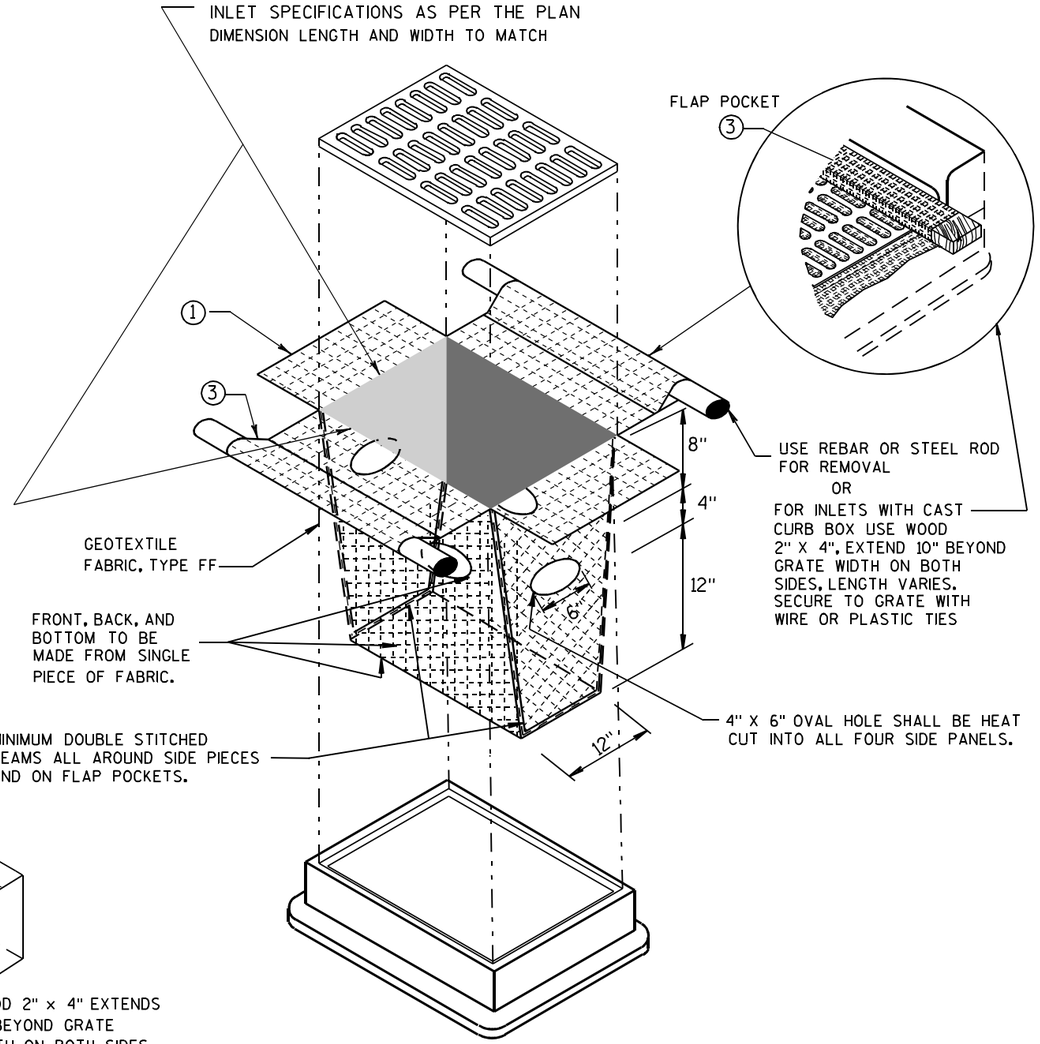


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

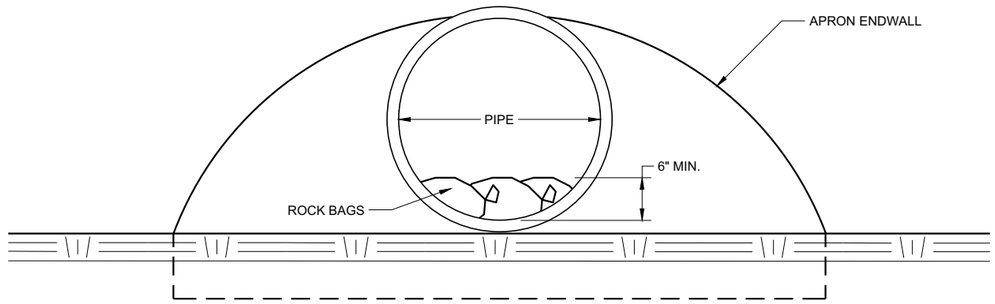
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

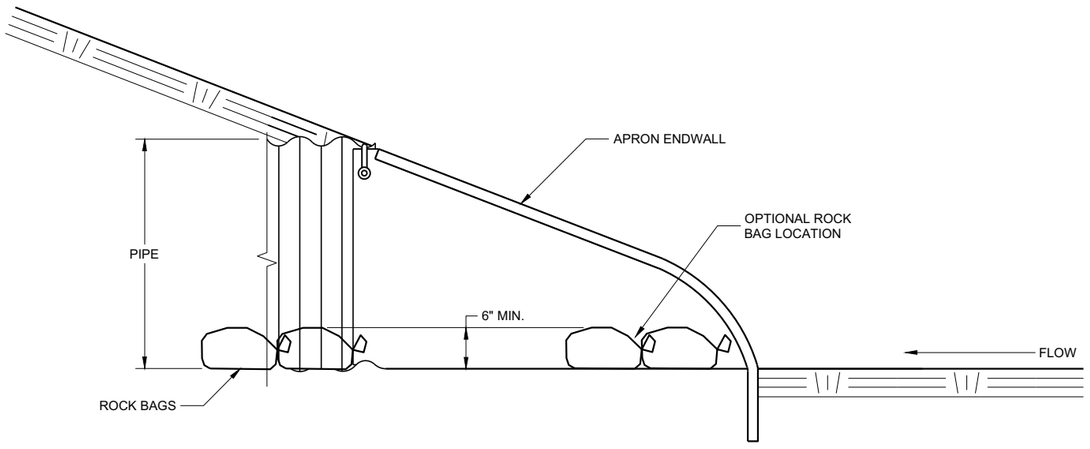
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 10-2



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
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APPROVED
May 2019
DATE

/S/ Daniel Schave
EROSION CONTROL ENGI

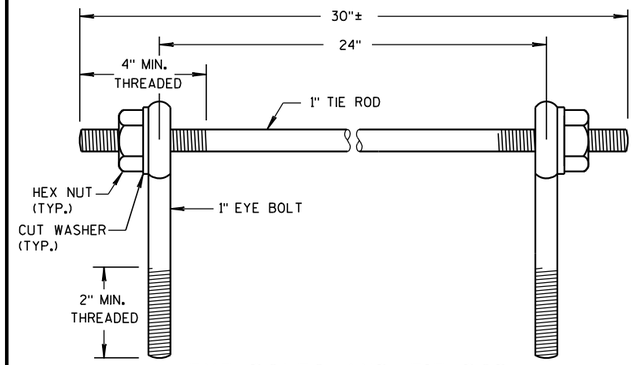
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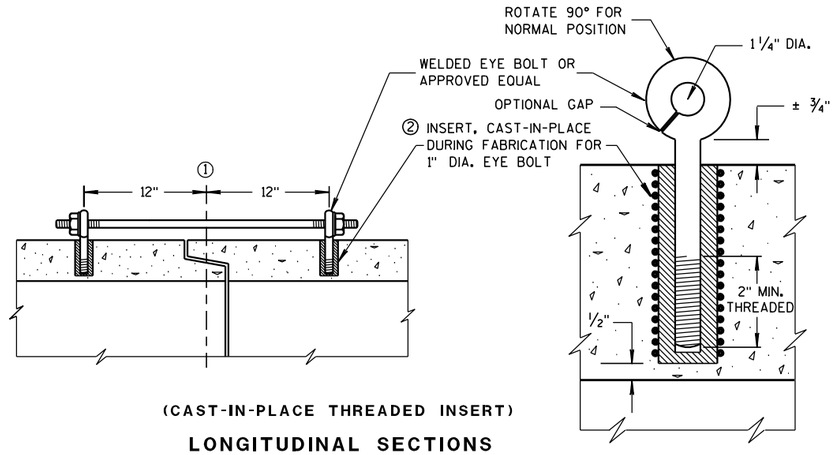
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EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

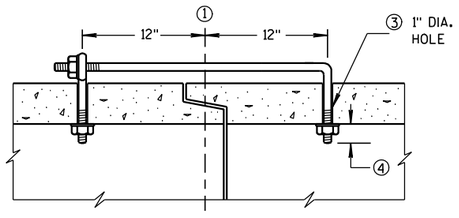
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

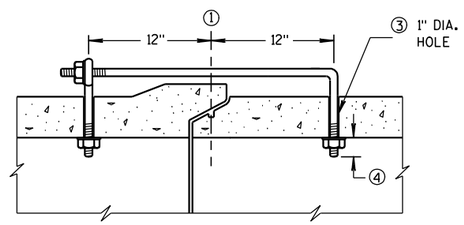
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

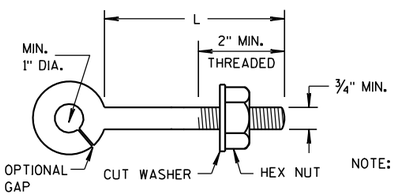


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

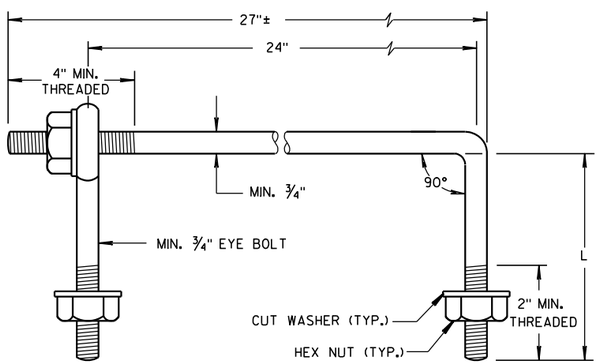
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

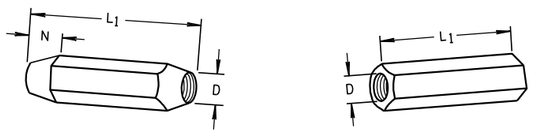
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

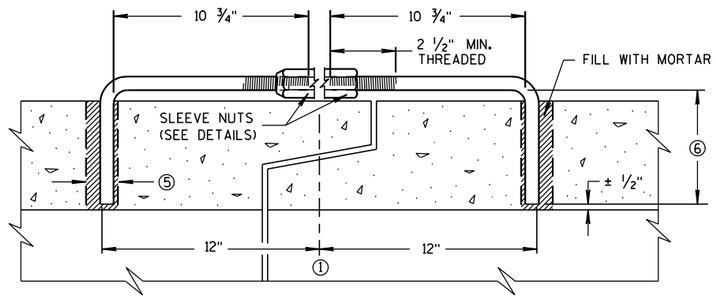
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

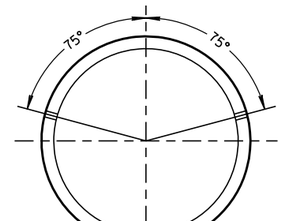
SLEEVE NUTS



LONGITUDINAL SECTION

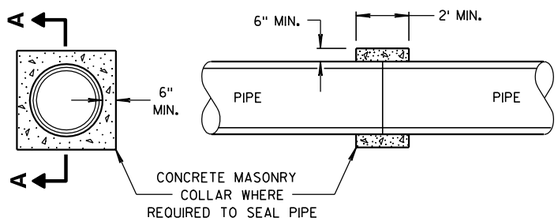
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

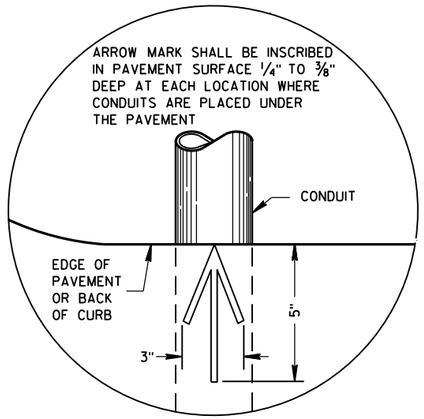
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
285
FHWA

6

S.D.D. 8 F 4-7

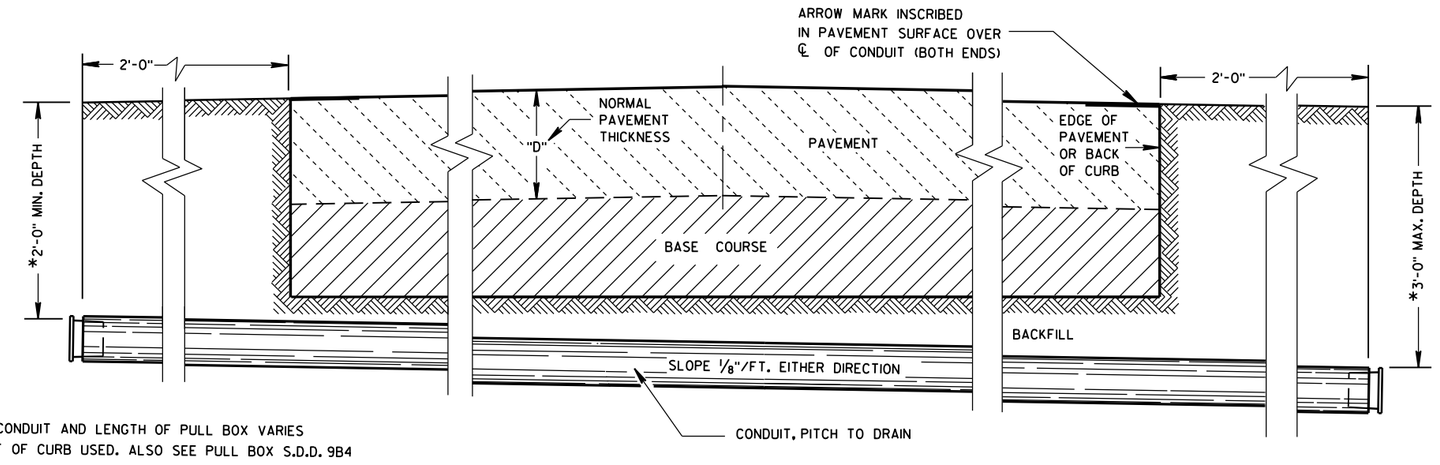
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S.D.D. 8 F 4-7



PLAN VIEW

ARROW MARK



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

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

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

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

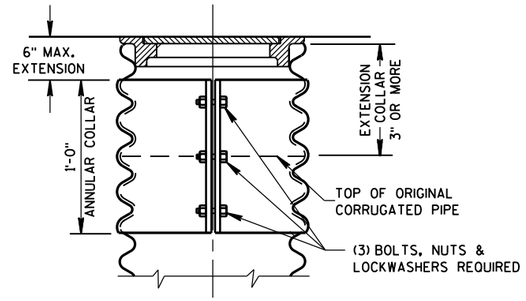
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

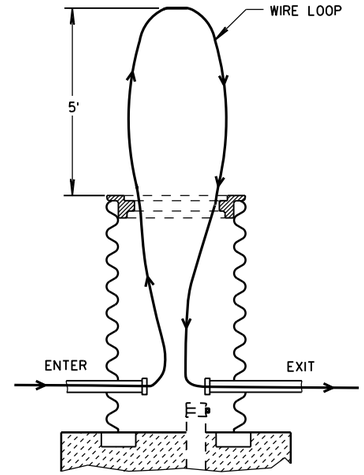
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

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

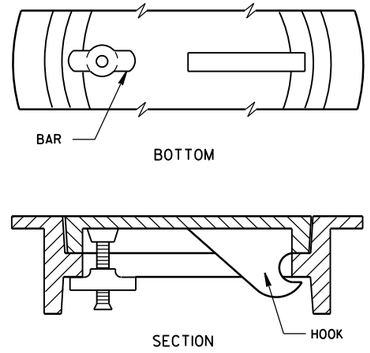
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

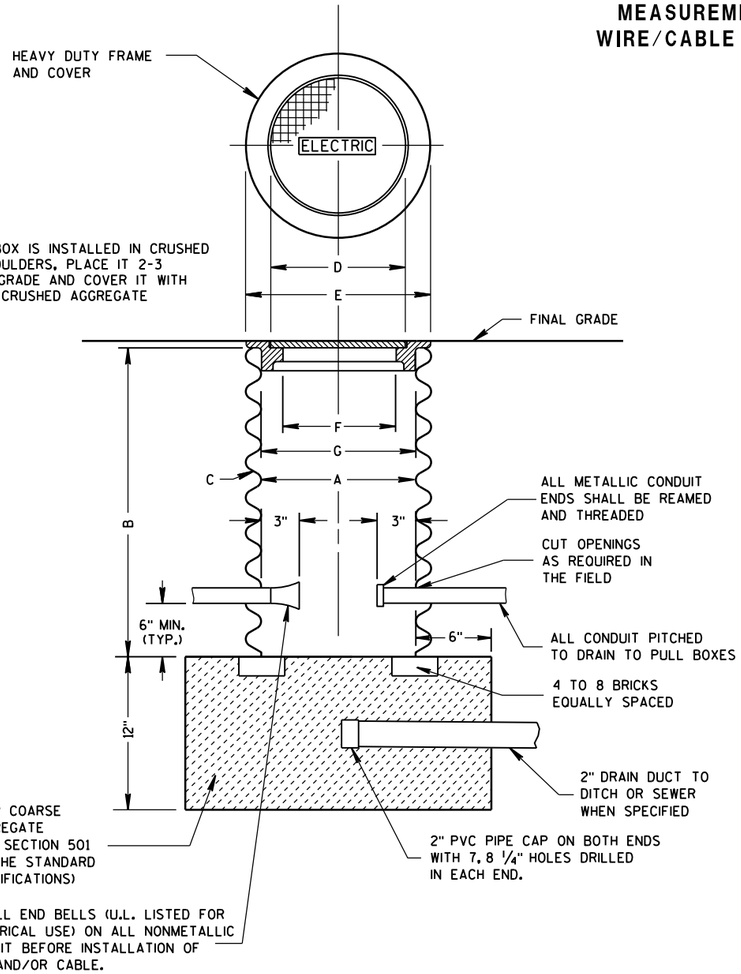


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



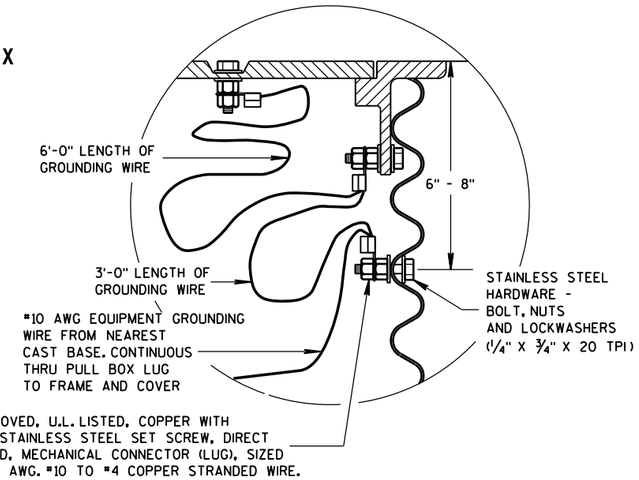
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

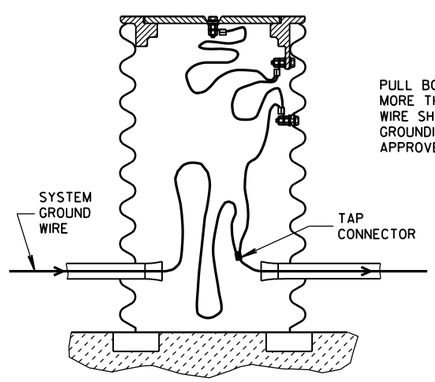


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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

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

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

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

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

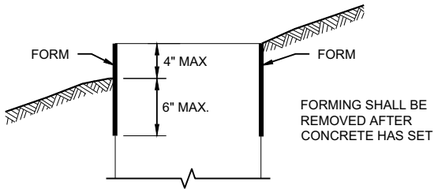
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 9 B 4-11

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

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

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWINGSHALL 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 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 A THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FRO FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X 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 NON-METALLIC 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.

WHEN REQUIRED TO CONNECT NON-METALLIC 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, TYPE 5 AND TYPE 6 BASES.

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

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

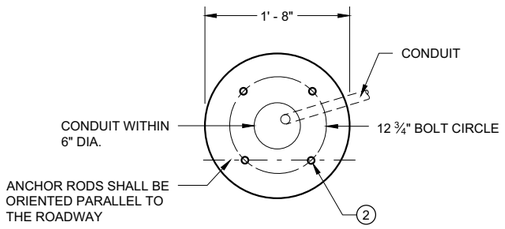
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

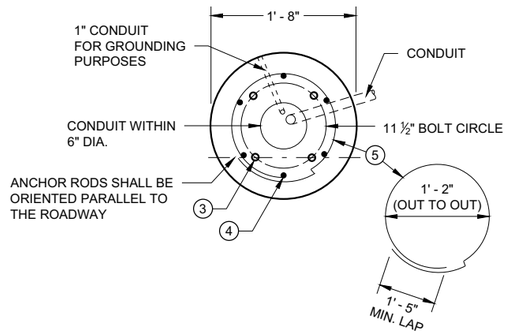
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

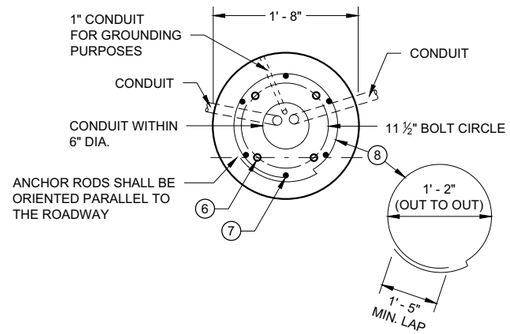
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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 OF 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 STELL REINFORCEMENT @ 1' - 0" C -C.

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

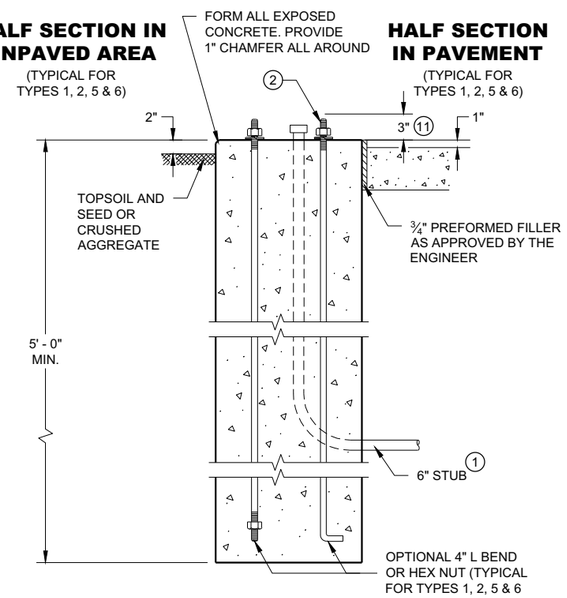
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

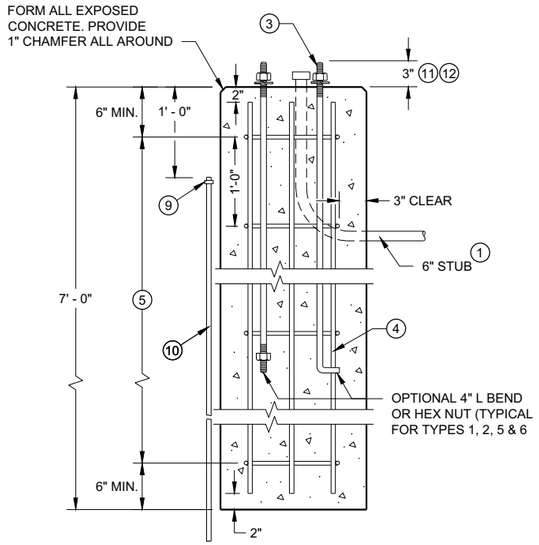
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5 & 6)

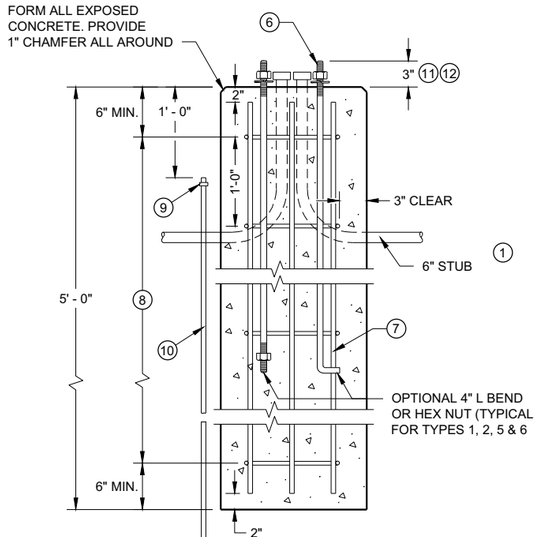
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

CONCRETE BASES
TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 288

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 531.2.2 OF THE STANDARD SPECIFICATIONS.

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

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

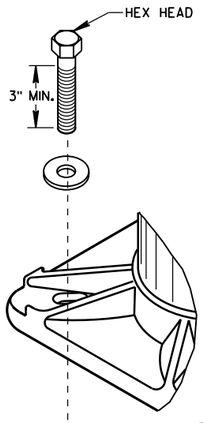
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

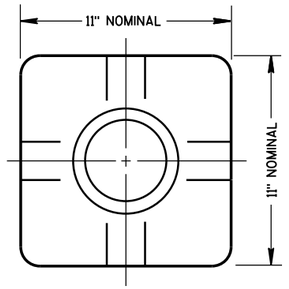
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

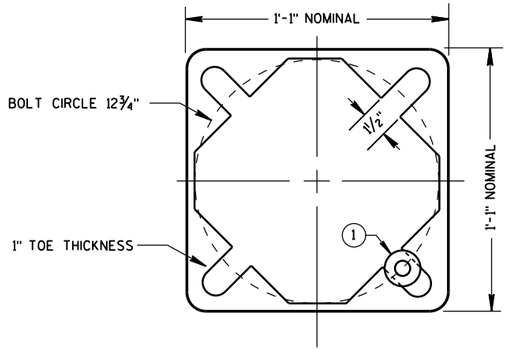
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

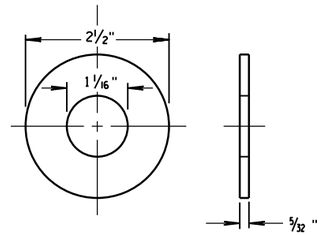




TOP VIEW
(PEDESTAL BASE)

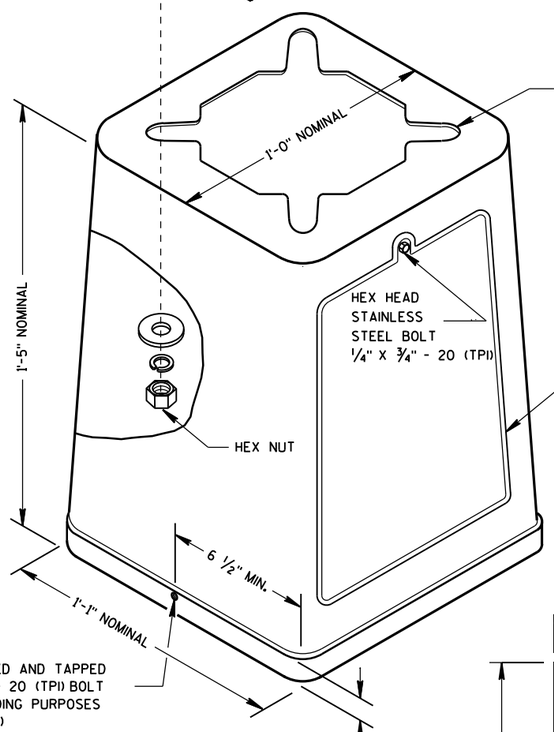


BOTTOM VIEW
(PEDESTAL BASE)

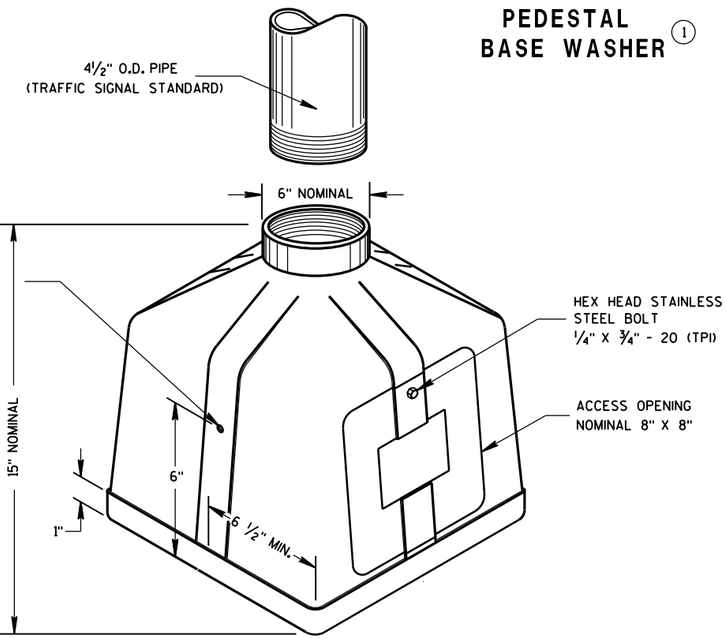


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

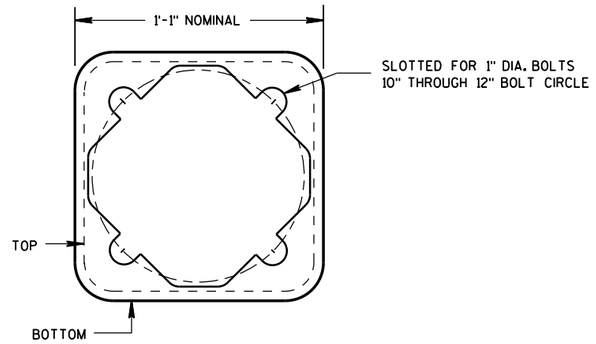


ISOMETRIC VIEW

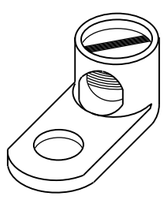


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

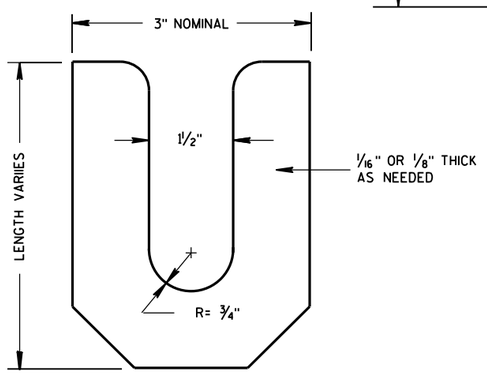


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

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



LEVELING SHIM

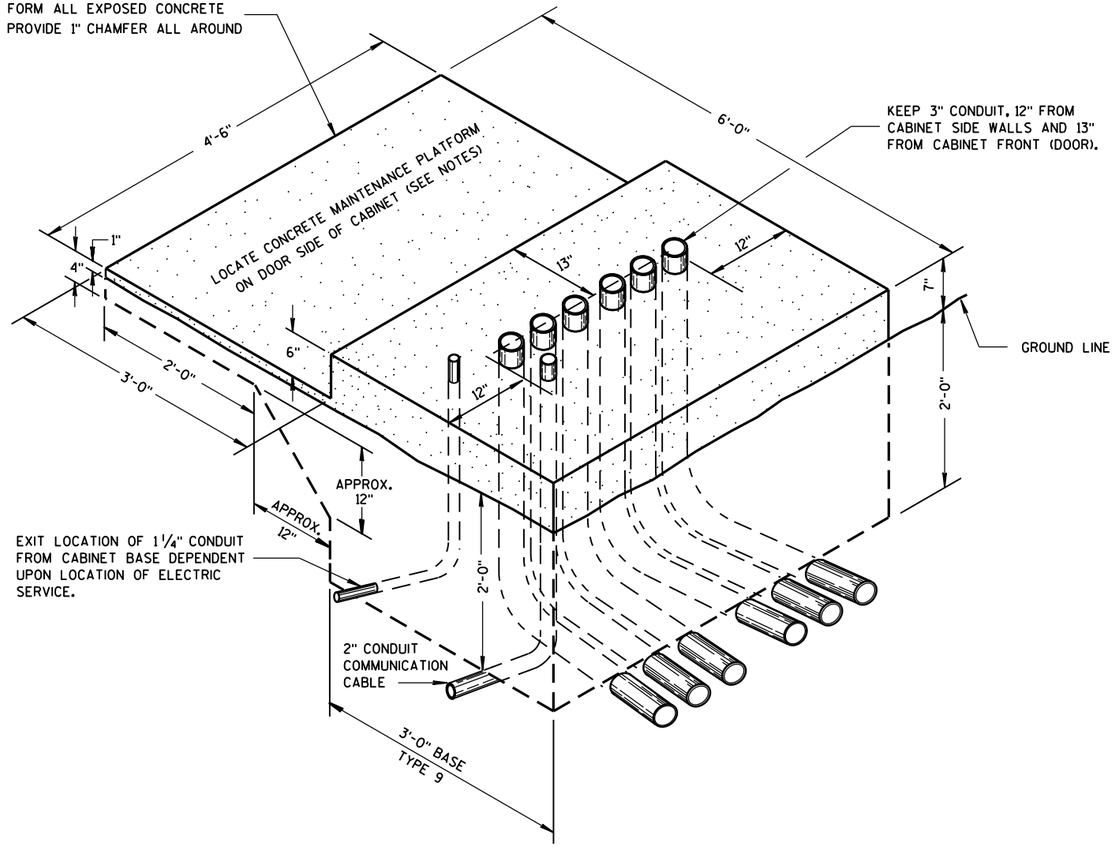
TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

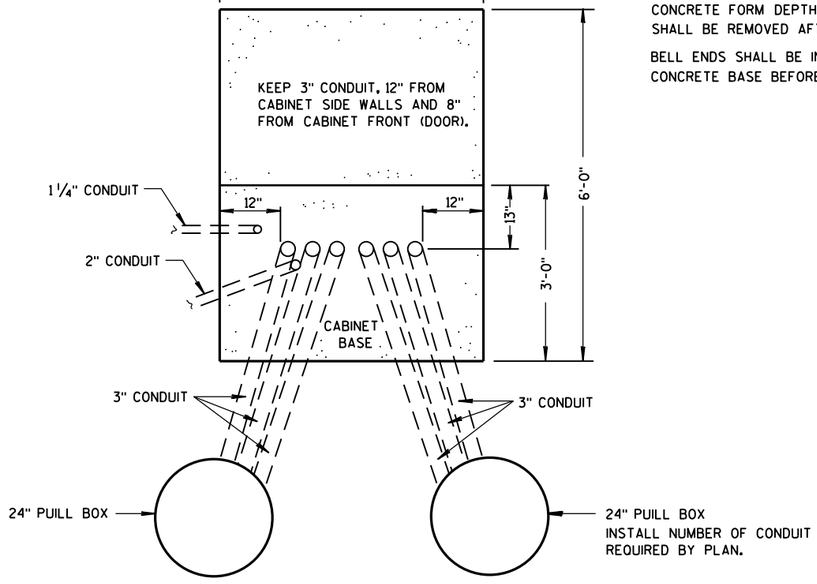
S.D.D. 9 C 3-4



ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

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

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

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

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

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

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

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 290
FHWA

6
S.D.D. 9 C 6-7

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

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

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

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

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

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

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

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

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

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

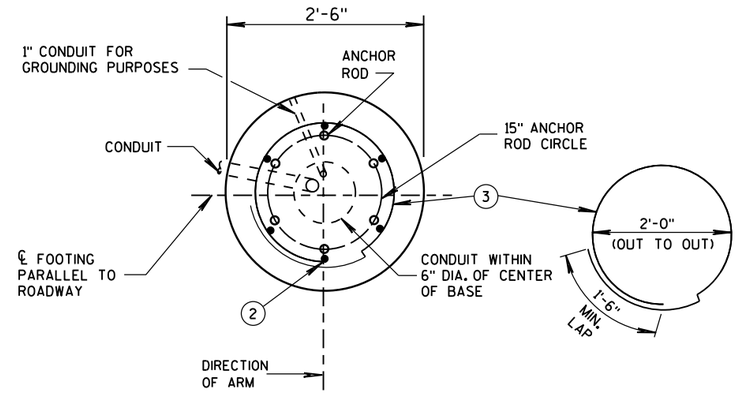
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

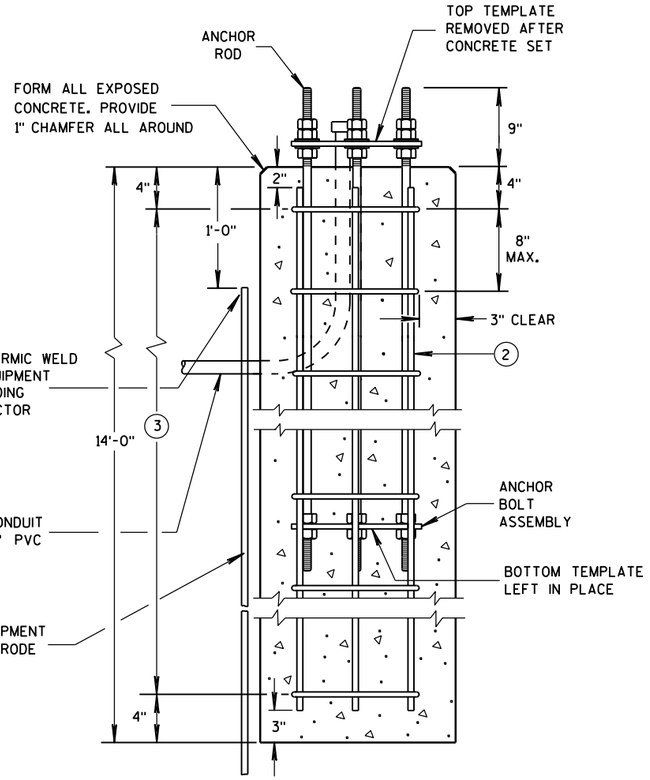
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES. (GREATER THAN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

(2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

(3) (21) NO. 5 X 7'-10" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION)	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.

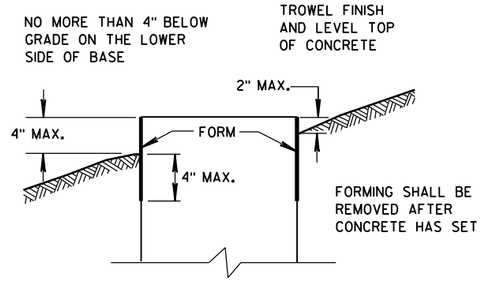




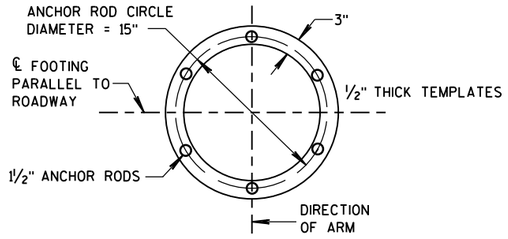
CONCRETE BASE TYPE 10

(FOR TYPE 9 & 10 & OVER HEIGHT (OH) POLES)

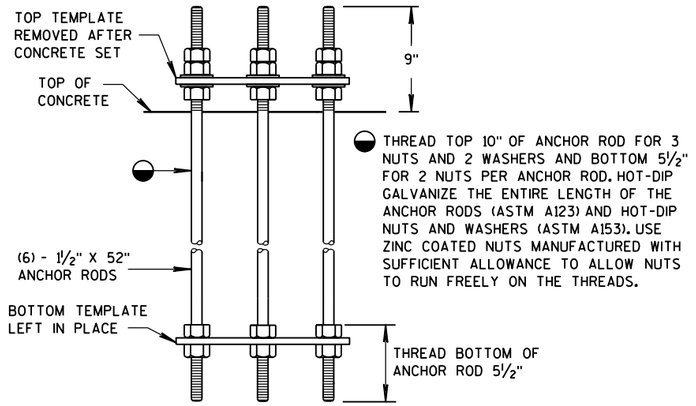
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10 ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	172
LBS. OF VERTICAL BAR STEEL	122

CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

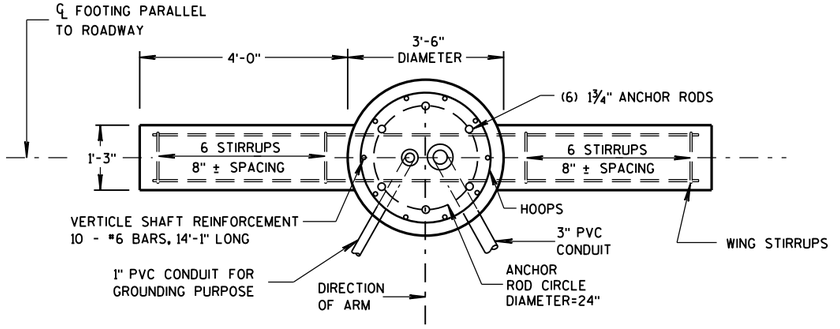
APPROVED
May 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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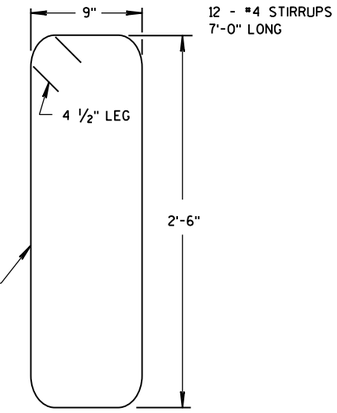
S.D.D. 9 C 11-10

6

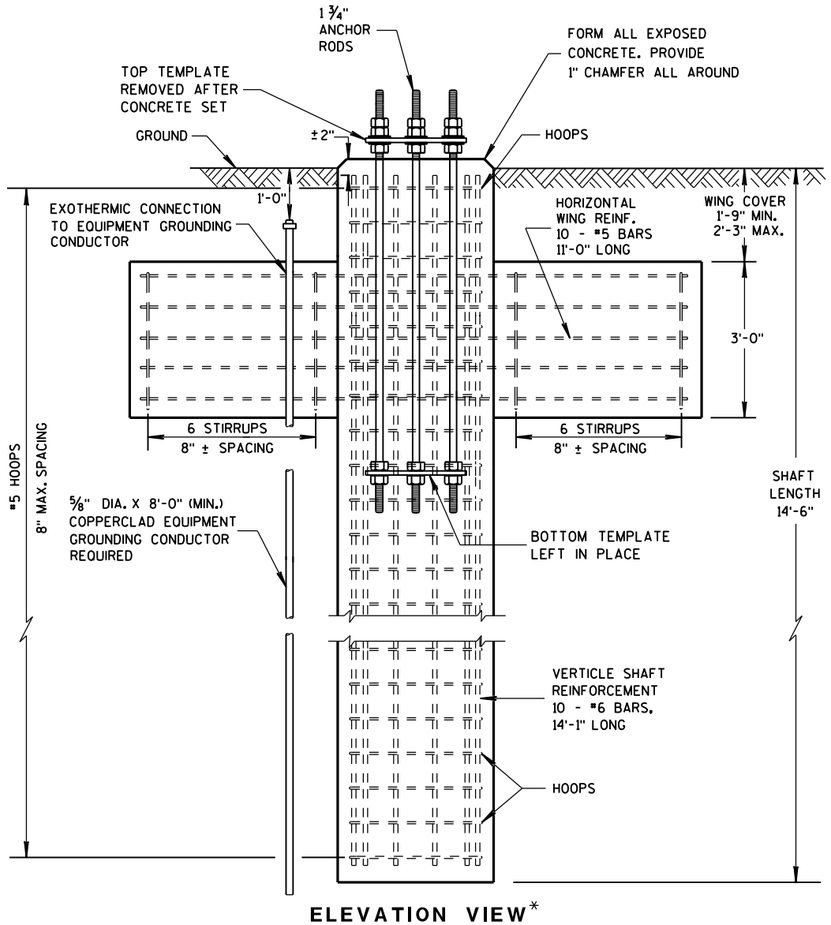
S.D.D. 9 C 11-10



PLAN VIEW

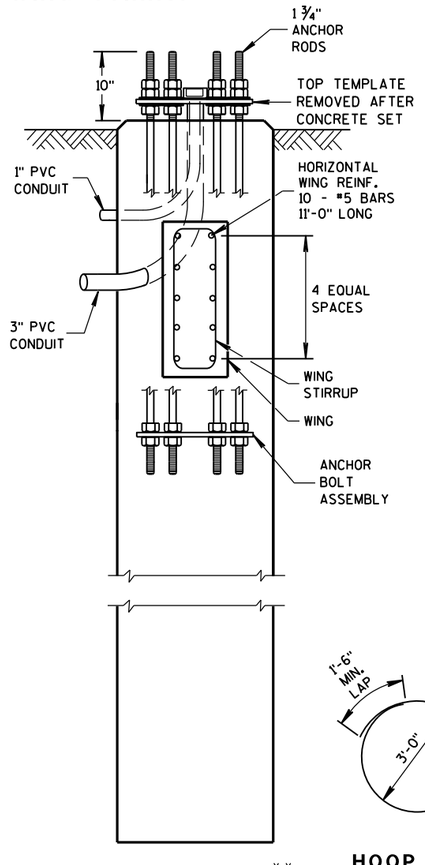


WING STIRRUP



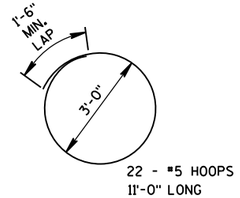
ELEVATION VIEW*

* CONDUITS ARE NOT SHOWN ON THIS VIEW FOR CLARITY



SIDE VIEW**

** HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY



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, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 & OVER HEIGHT (OH) POLES)

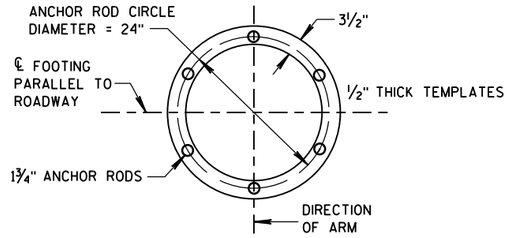
CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 635 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

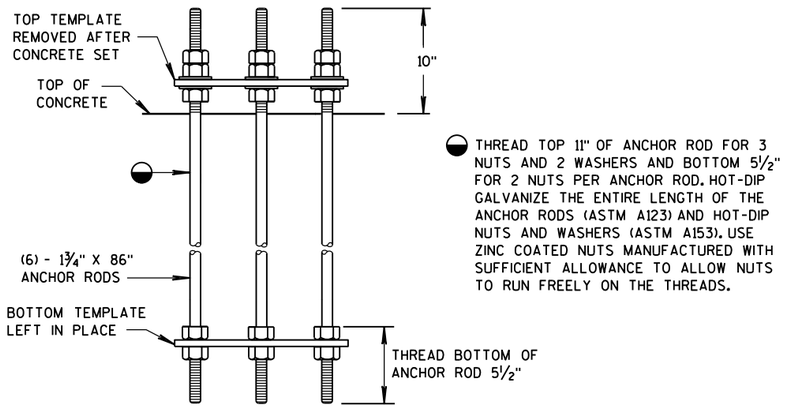
CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 9 C 12-9a

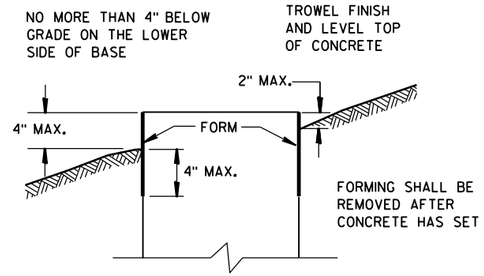


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

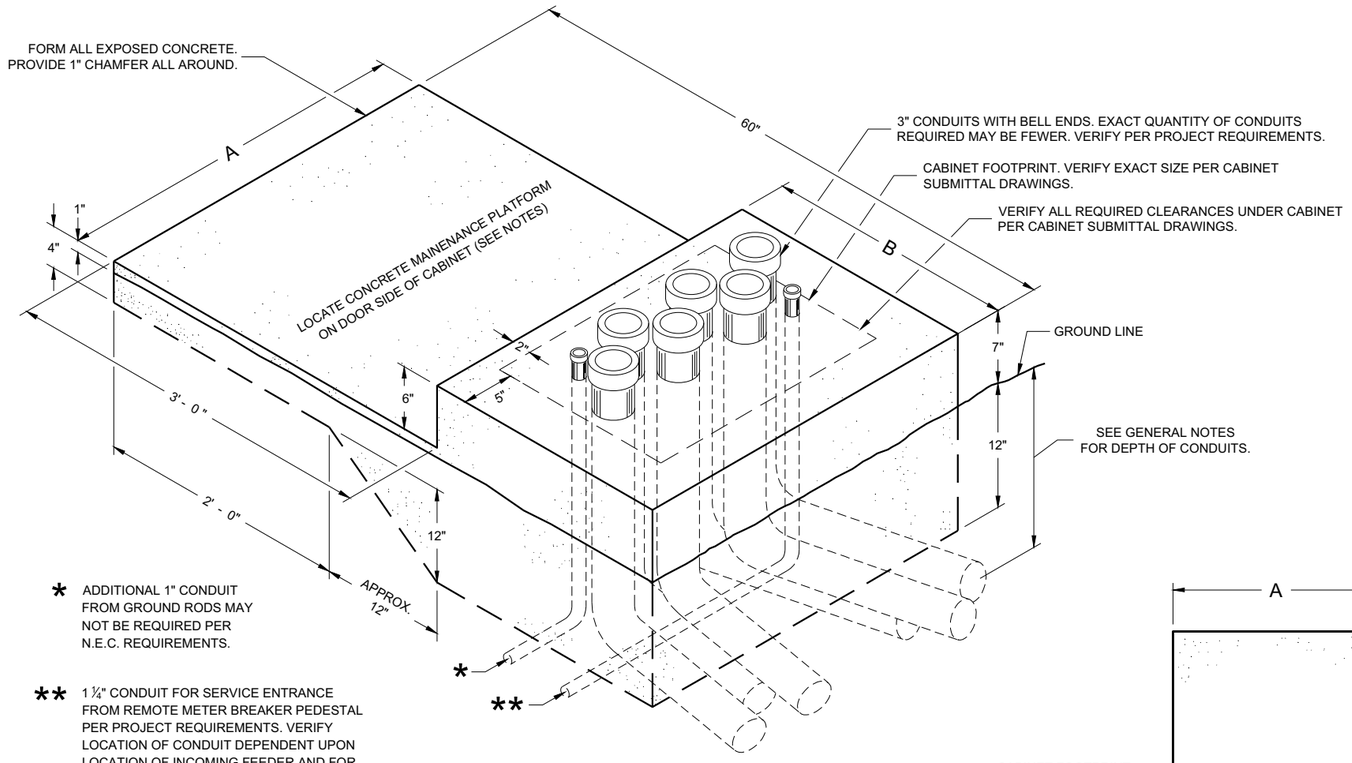
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CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

S.D.D. 9 C 12-9b



* ADDITIONAL 1" CONDUIT FROM GROUND RODS MAY NOT BE REQUIRED PER N.E.C. REQUIREMENTS.

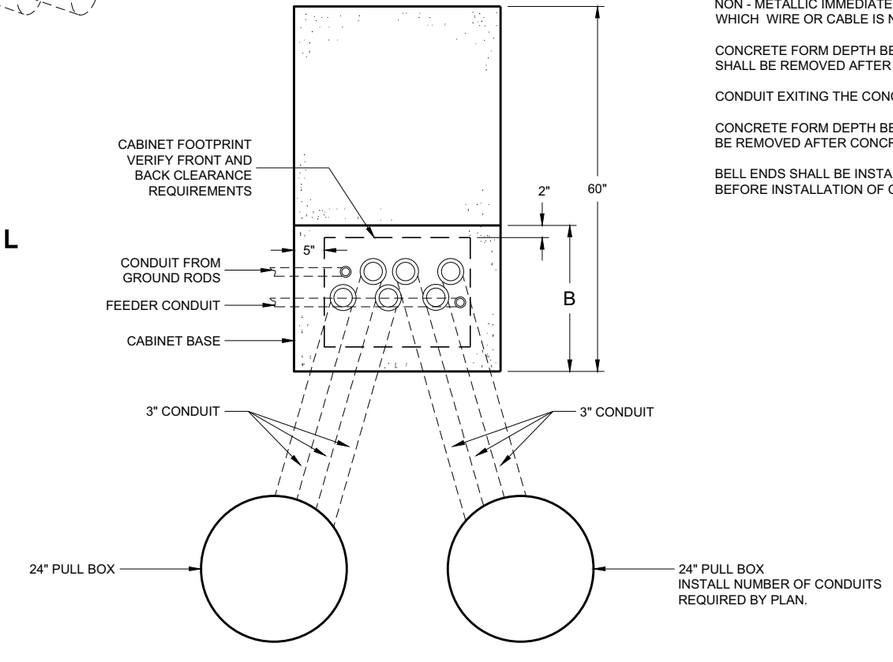
** 1 ¼" CONDUIT FOR SERVICE ENTRANCE FROM REMOTE METER BREAKER PEDESTAL PER PROJECT REQUIREMENTS. VERIFY LOCATION OF CONDUIT DEPENDENT UPON LOCATION OF INCOMING FEEDER AND FOR EASE OF CONNECTION TO LOAD CENTER.

ISOMETRIC VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

(C.Y. CONCRETE = APPROX. 0.4)

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSIONS		MAXIMUM 3" CONDUITS
		A	B	
L24	24"	34"	24"	4
L30	30"	40"	24"	6



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

GENERAL NOTES

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

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NON - METALLIC 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.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS UNLESS DETERMINED BY THE ENGINEER IN THE FIELD.

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

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

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

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES 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 NON - METALLIC 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 NON - METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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

CONDUIT EXITING THE CONCRETE BASE SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

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

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

CONCRETE CONTROL CABINET BASE, TYPE L

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 294

FHWA

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SDD 09C14 - 03

GENERAL NOTES

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

THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING. A STEEL CASING OR CORRUGATED METAL PIPE IS ALLOWED TO REMAIN. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BASE IN LAYERS OF ONE FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR RODS STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

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

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

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

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

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

FORM ALL EXPOSED CONCRETE CORNERS WITH 1" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 ½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NON-METALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC 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 NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

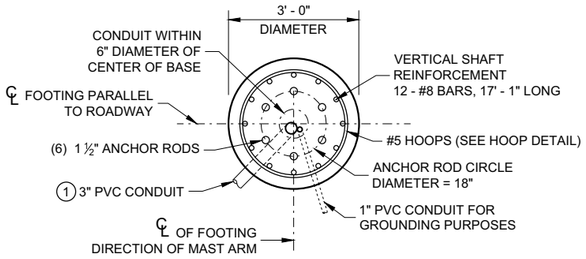
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

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.

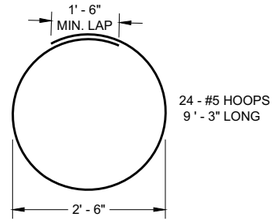
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

(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 OF THE ENGINEER.

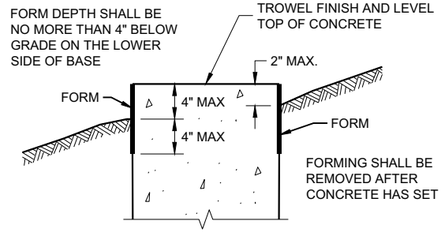
CONCRETE MASONRY.....fc = 3,500 p.s.i
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



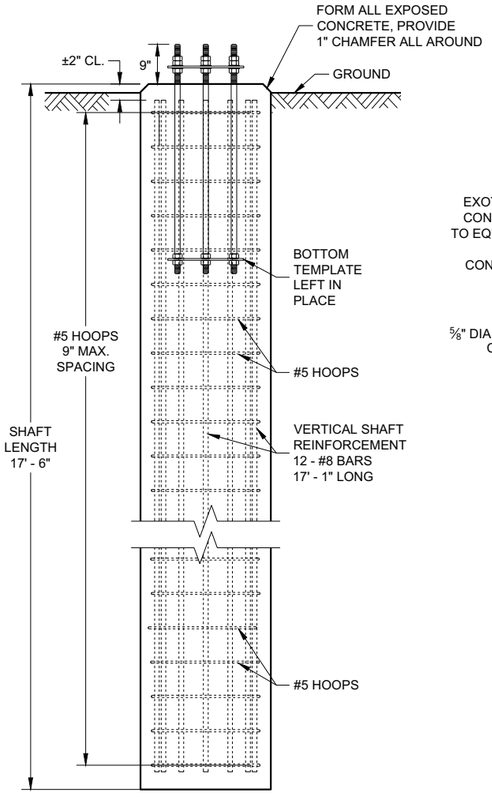
PLAN VIEW



HOOP DETAIL

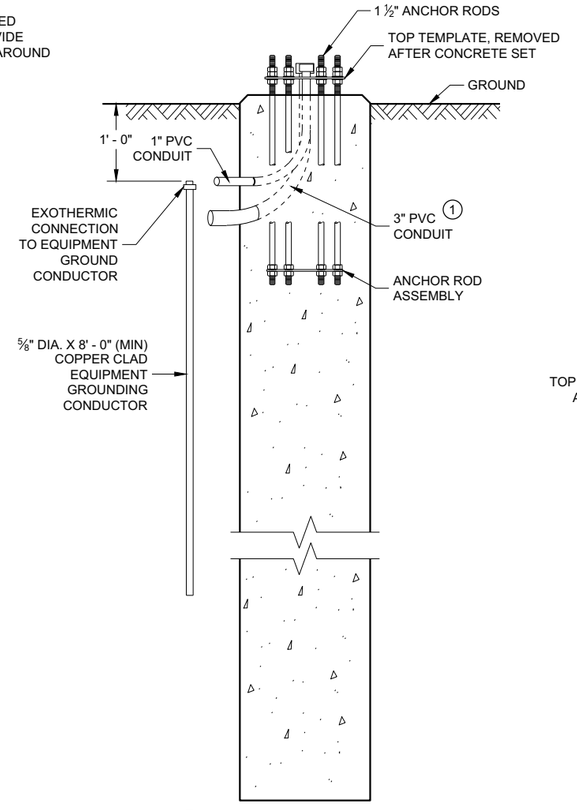


FORMING DETAIL



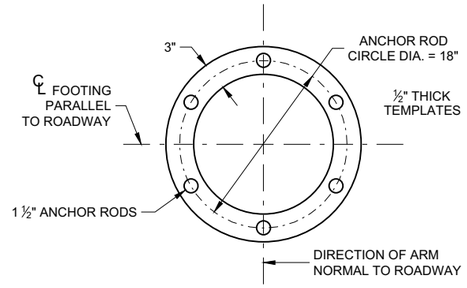
ELEVATION VIEW

(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)

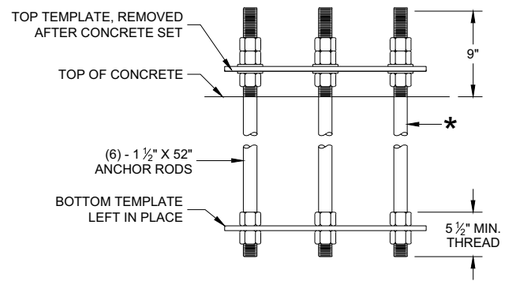


SIDE VIEW

(HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY)



TOP AND BOTTOM TEMPLATE



ANCHOR ROD ASSEMBLY DETAILS

* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 ½" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

CONCRETE BASE, TYPE 10 SPECIAL
(FOR TYPE 9 SPECIAL AND TYPE 10 SPECIAL POLES)

CONCRETE = 4.6 CUBIC YARD
H.S. REINFORCEMENT = 779 LBS.

FOR USE WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

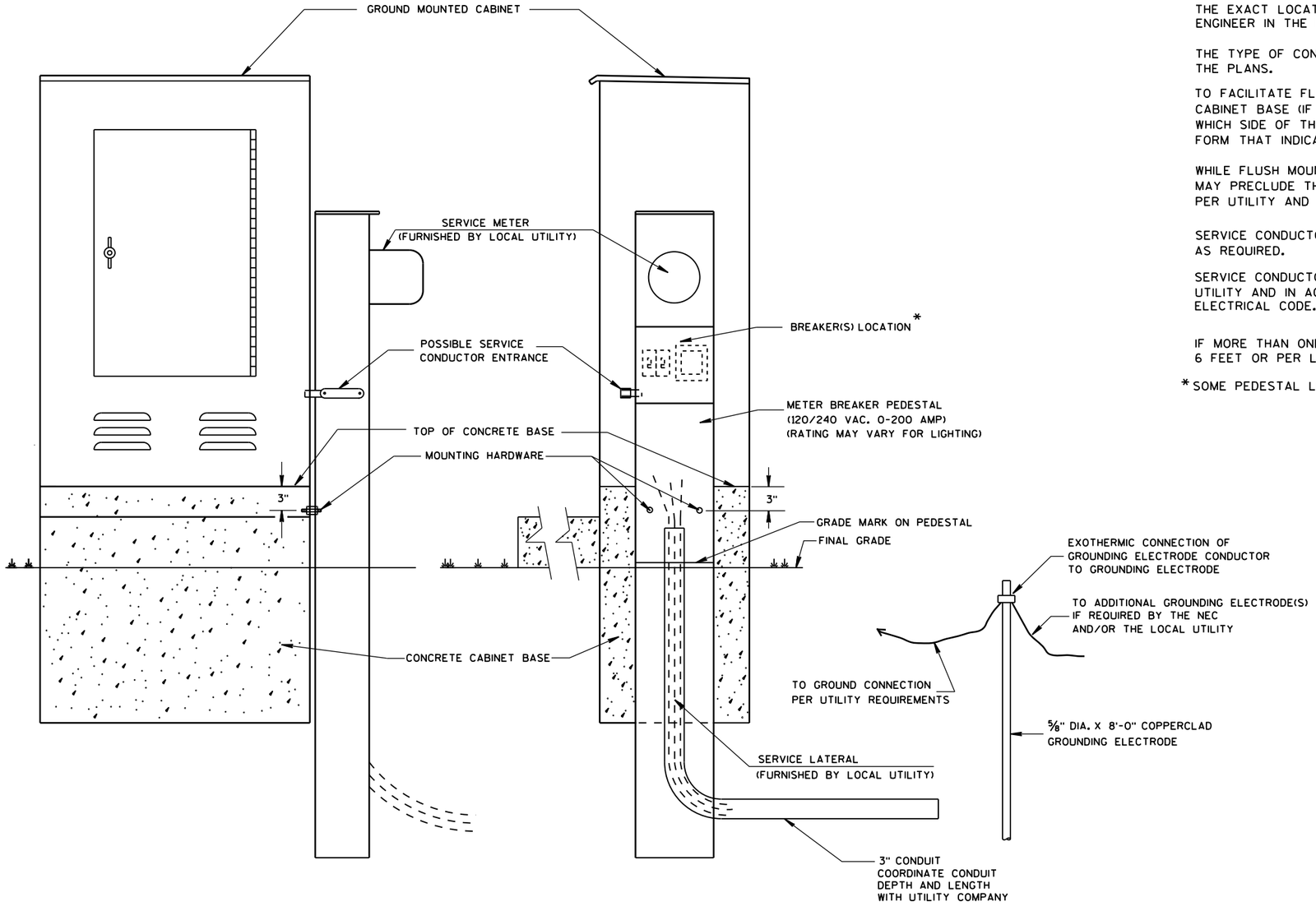
CONCRETE BASE TYPE 10 SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 — DATE
/S/ Alex Crabtree — WIND LOADED STRUCTU PROGRAM LEADER
FHWA

SDD 09C15 - 01

SDD 09C15 - 01



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 1-5

6

S.D.D. 9 D 1-5

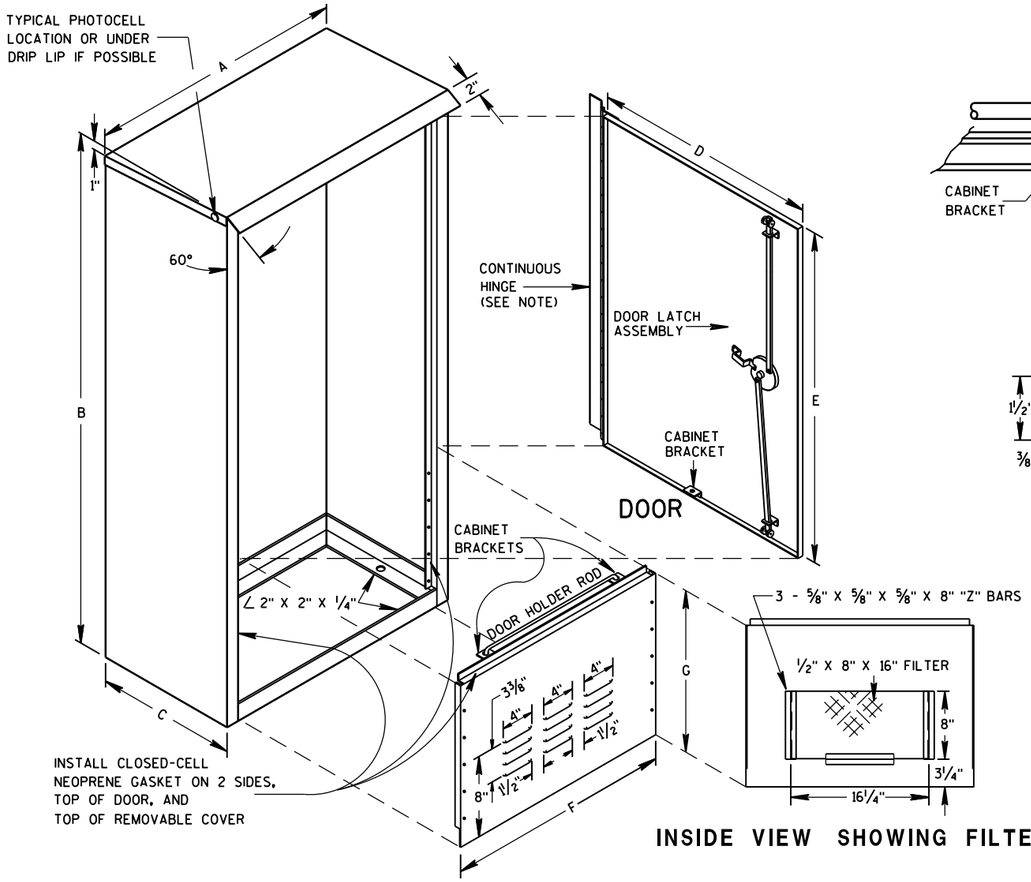
CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

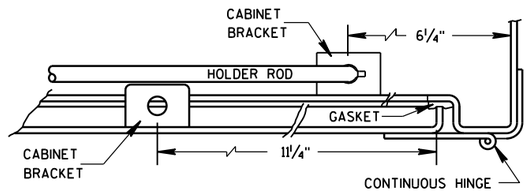
/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

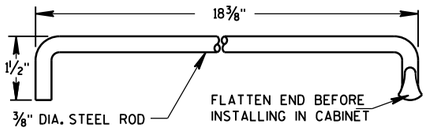


INSIDE VIEW SHOWING FILTER

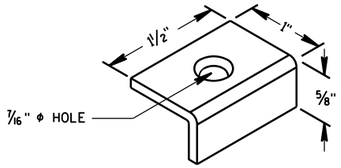
REMOVABLE COVER



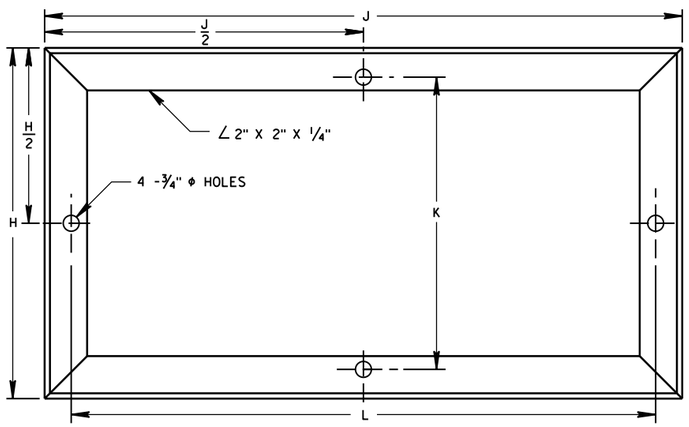
HINGE & DOOR HOLDER



HOLDER ROD



CABINET BRACKET



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2

GENERAL NOTES

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

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

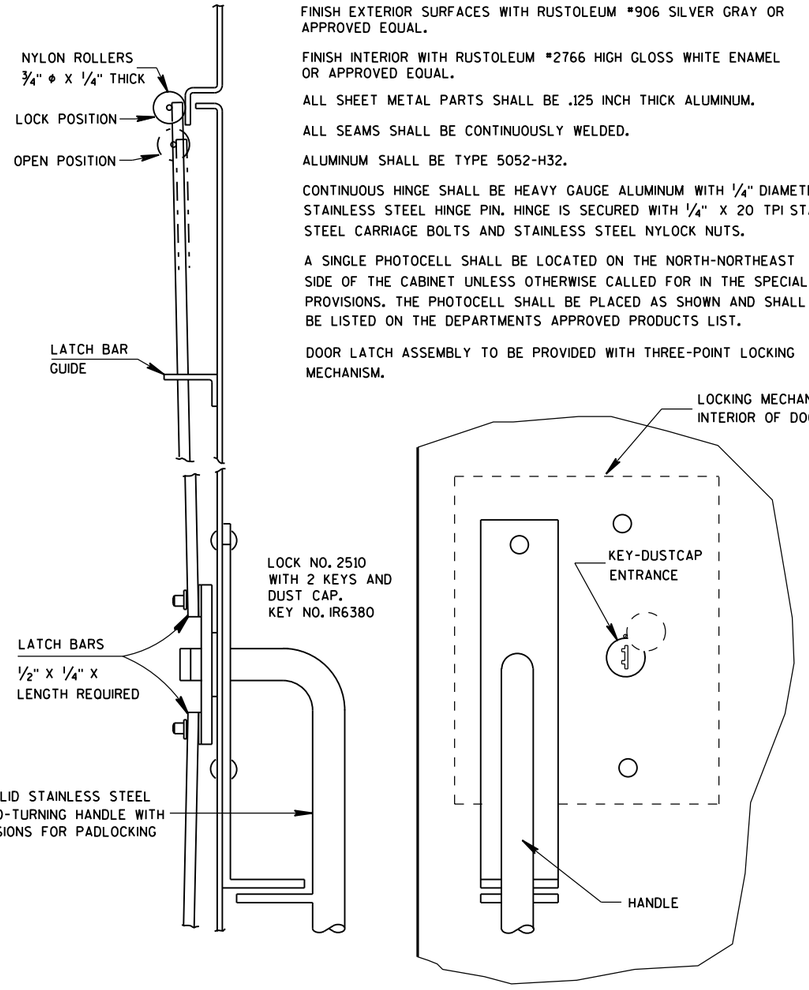
ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

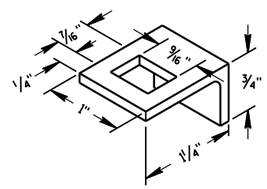
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

SIGNAL CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

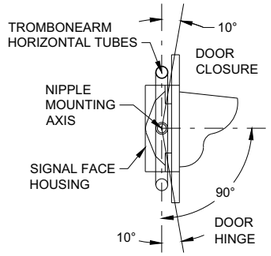
APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL 297
FHWA

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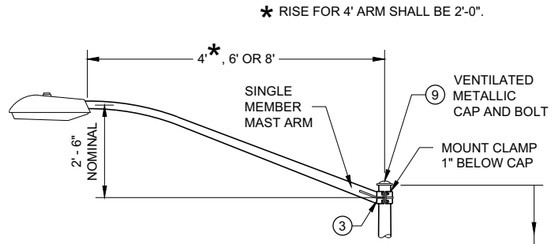
S.D.D. 9 D 2-3

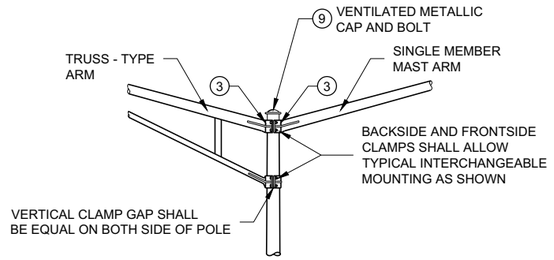
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S.D.D. 9 D 2-3

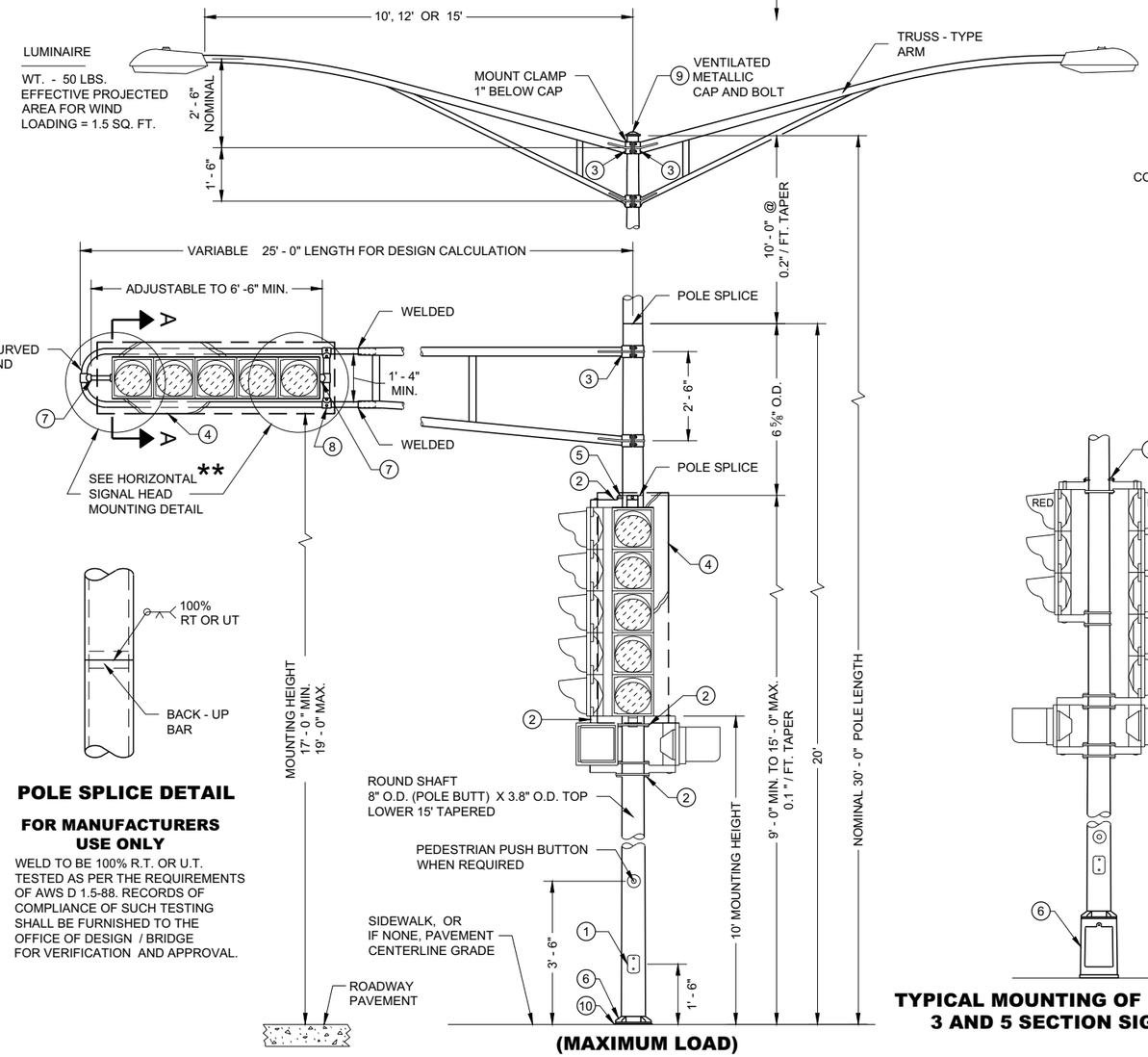


SECTION A-A

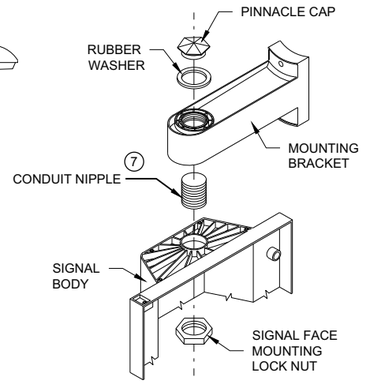




INTERCHANGEABLE MOUNTING DETAIL



(MAXIMUM LOAD)

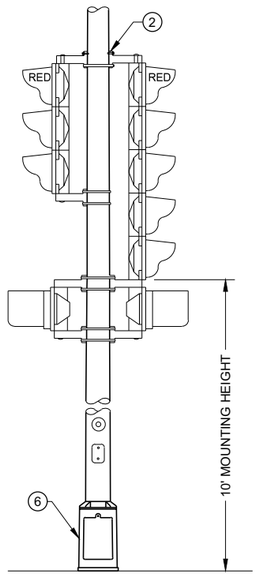


SIGNAL FACE MOUNTING DETAIL
(BANDED)

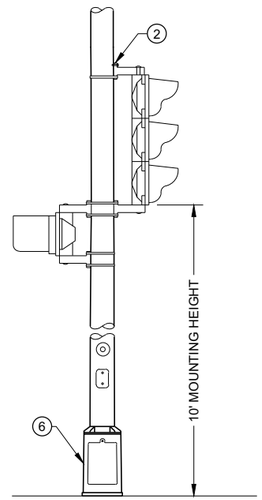
POLE SPLICE DETAIL

FOR MANUFACTURERS USE ONLY

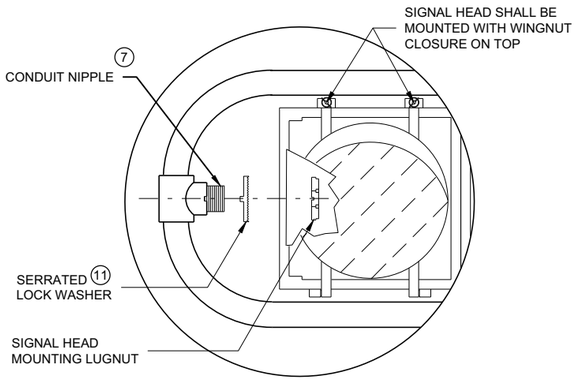
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.



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



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



HORIZONTAL SIGNAL HEAD ** MOUNTING DETAIL

** SIGNAL HEAD ATTACHMENT ALSO APPLIES TO MOUNTING AT CROSS BAR

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

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

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

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

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

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.

(3) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" 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 ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED. UNDER MAX LOADING, TYPE 3 POLE SHALL BE MOUNTED DIRECTLY TO ITS CONCRETE BASE.

(7) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACES AND BRACKET ENDS.

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

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

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

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

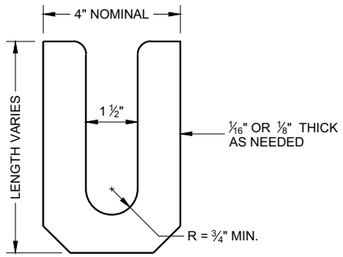
TYPE 3 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS TYPE 3 (HEAVY DUTY)

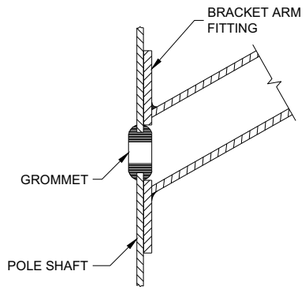
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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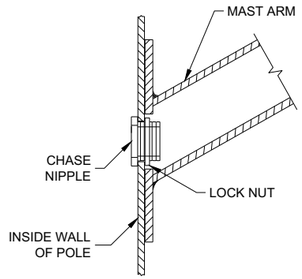
SDD 09E01 - 15b



LEVELING SHIM (1)
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.

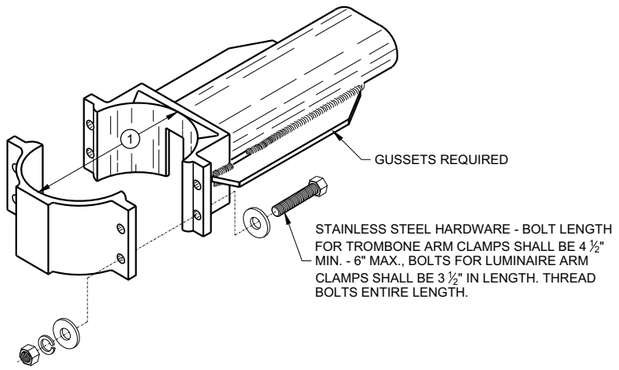
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

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

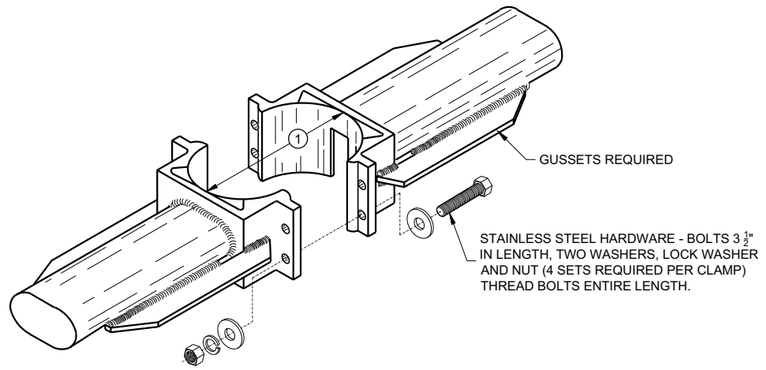
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

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

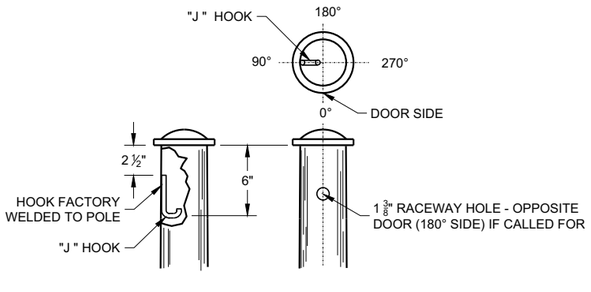
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



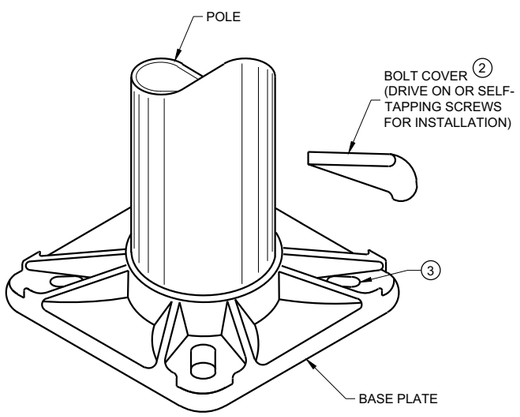
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



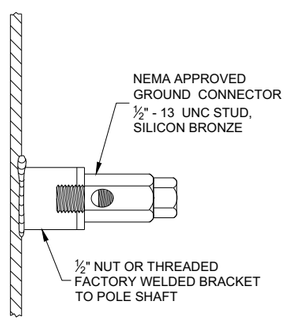
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

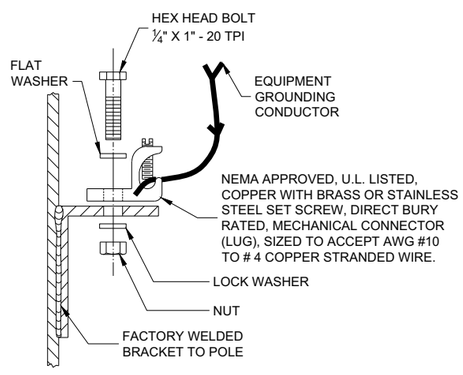


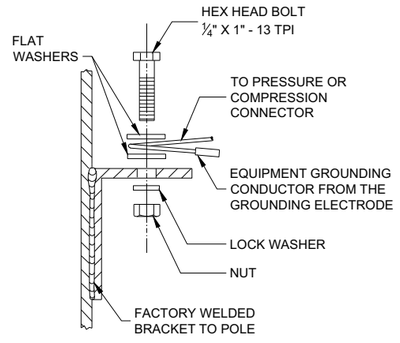
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 299

FHWA

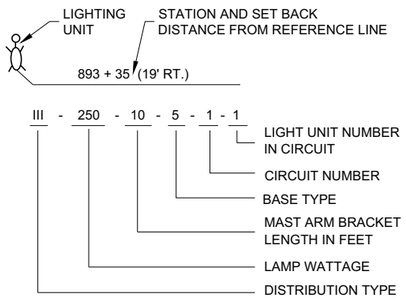
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GENERAL NOTES

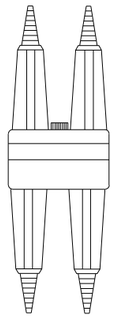
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

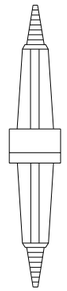
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



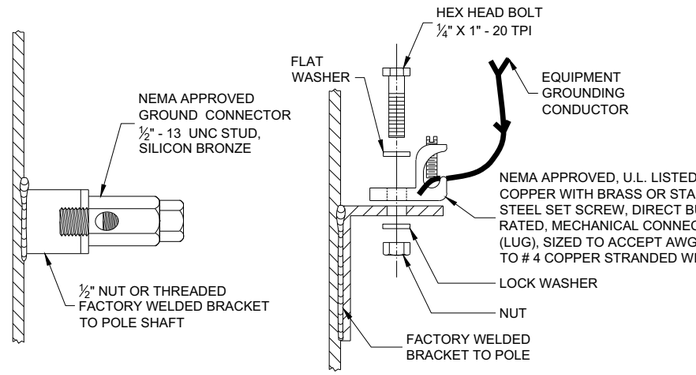
LIGHTING UNIT CODE
(TYPICAL)



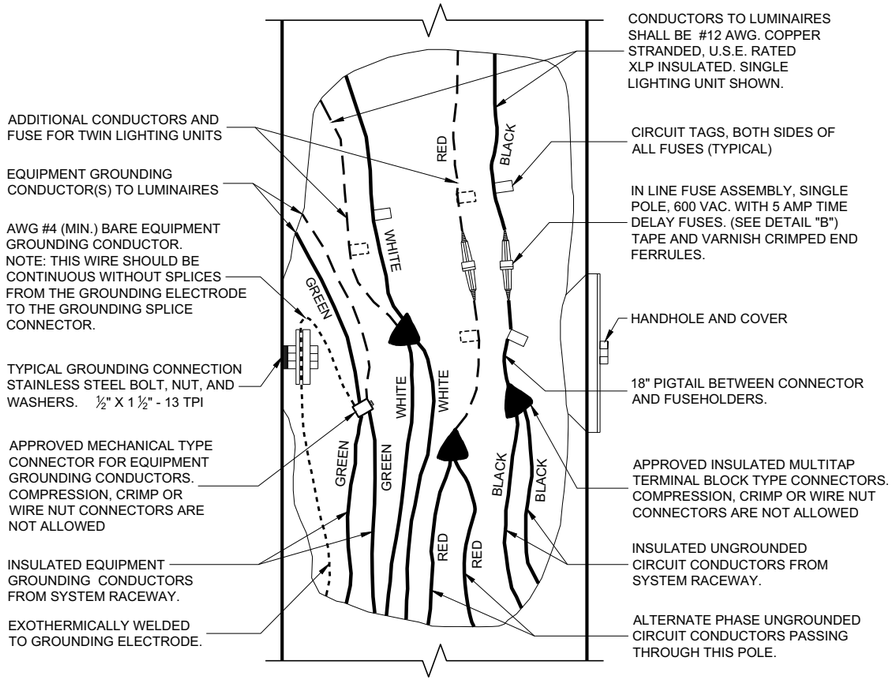
DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



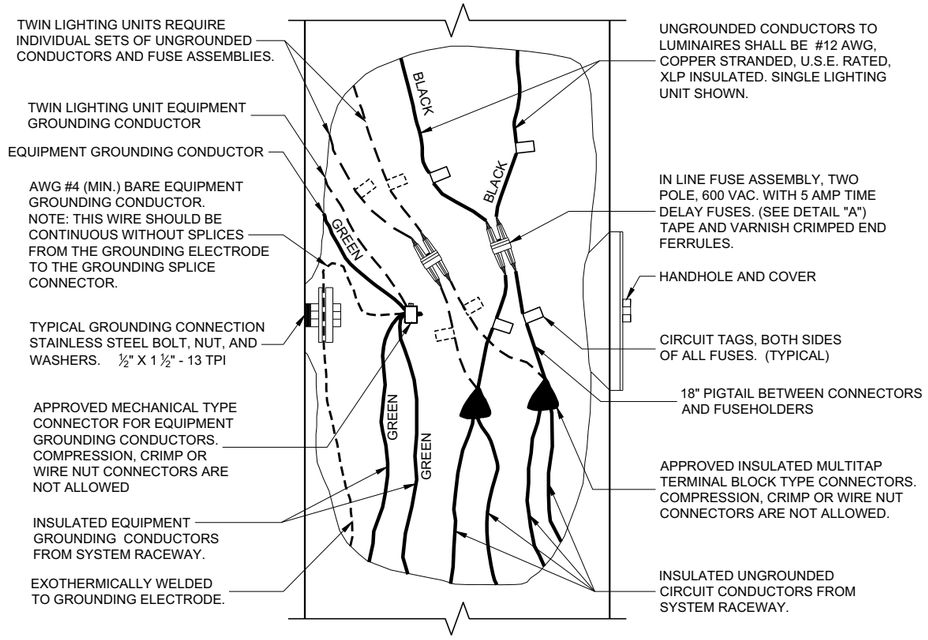
DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH GROUNDING CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR

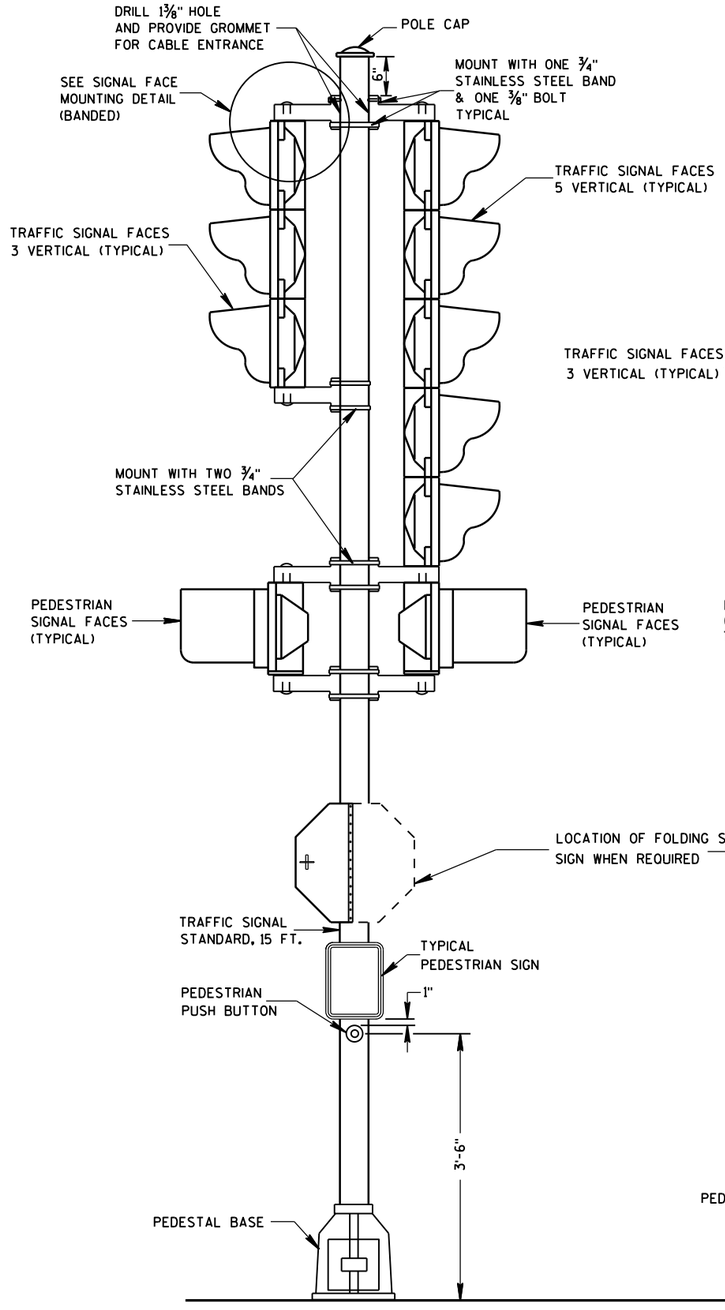


2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

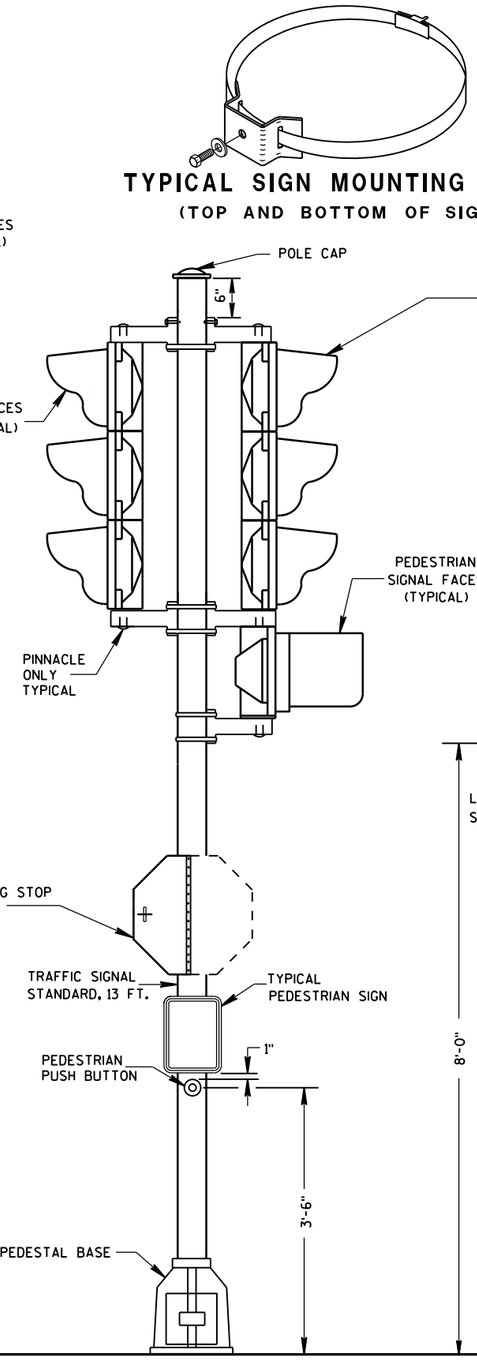
NON - FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 300
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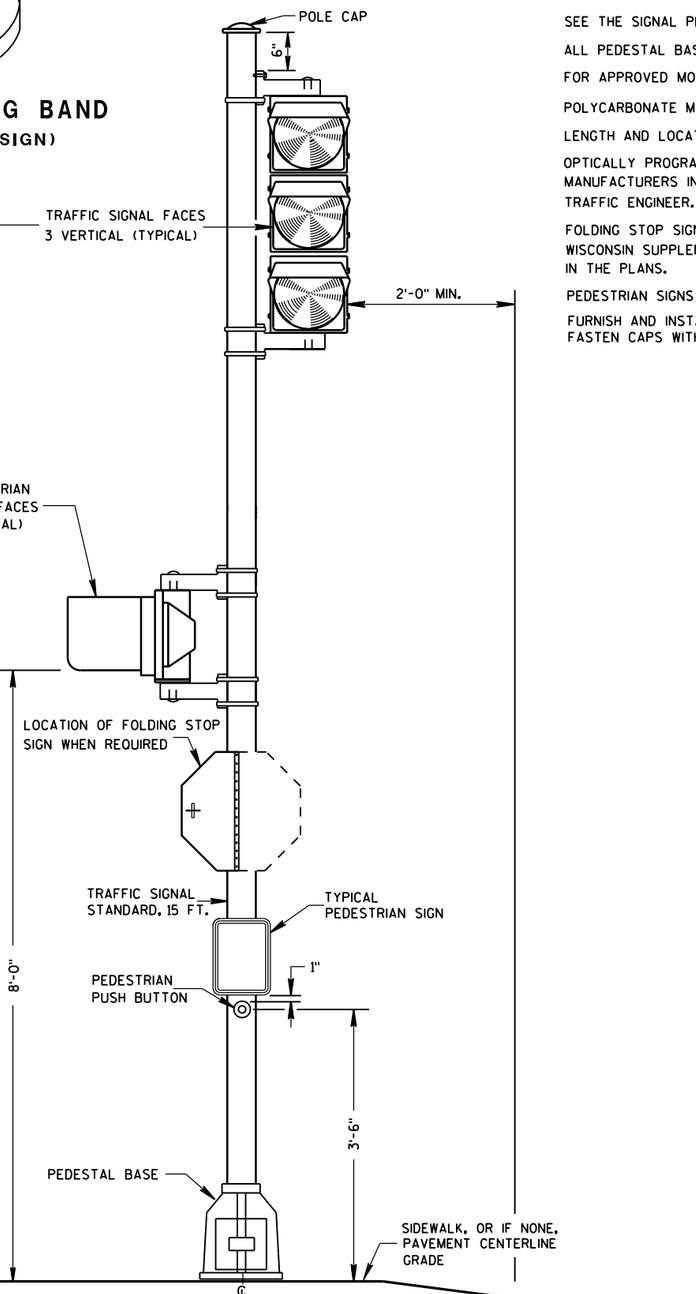


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



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

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

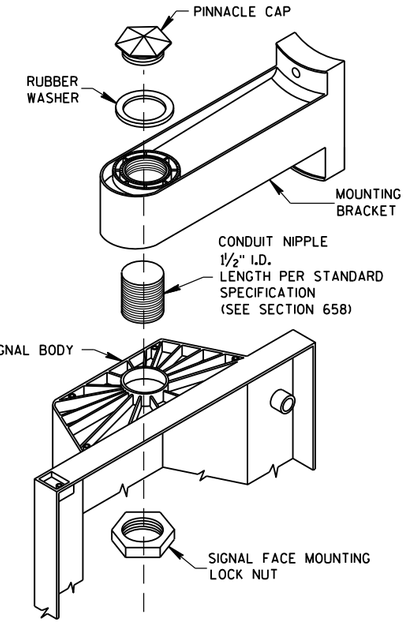
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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

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

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



SIGNAL FACE MOUNTING DETAIL
(BANDED)

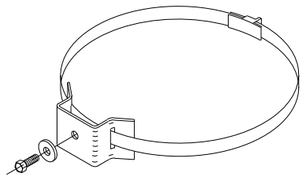
TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
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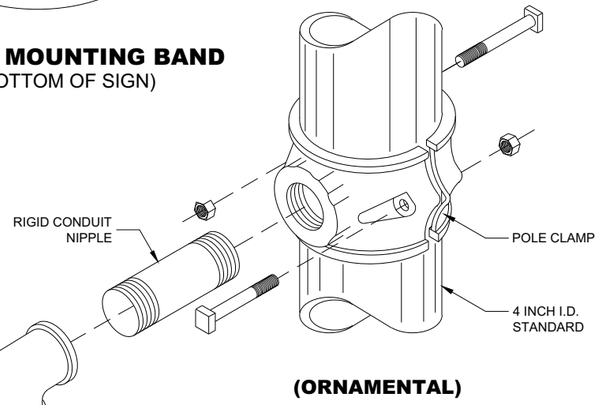
APPROVED
2/28/2013 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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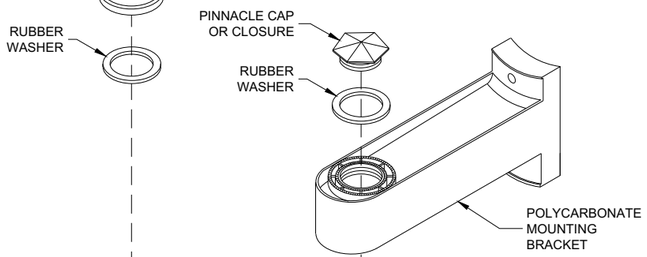
S.D.D. 9 E 6-5



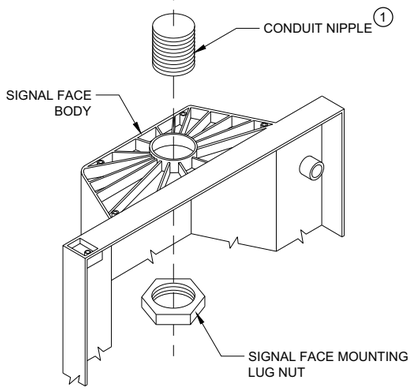
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



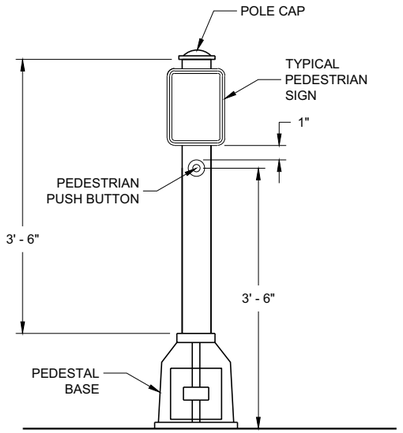
(ORNAMENTAL)



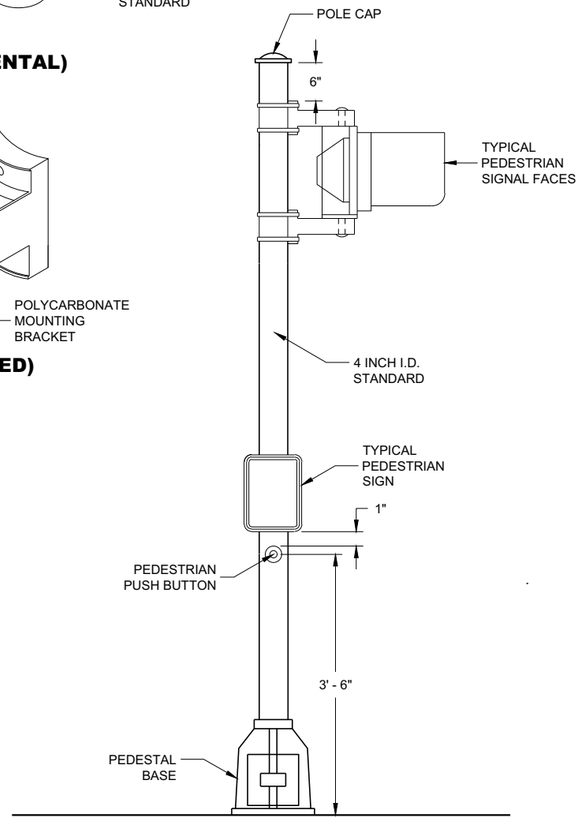
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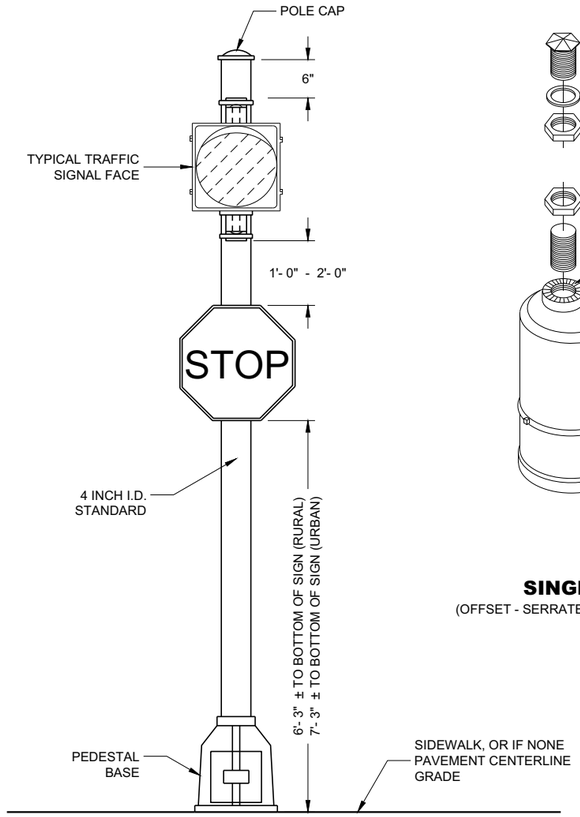
SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING



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



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

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, UNLESS APPROVED BY THE ENGINEER IN THE FIELD.

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.

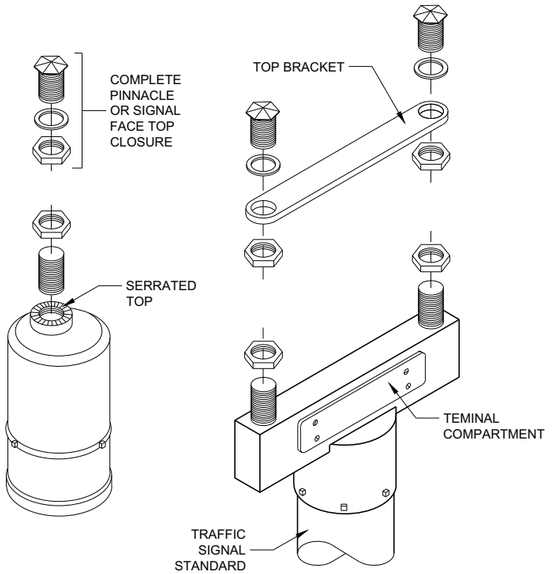
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE REGION 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.

(1) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACESAND BRACKET ENDS.



SINGLE
(OFFSET - SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

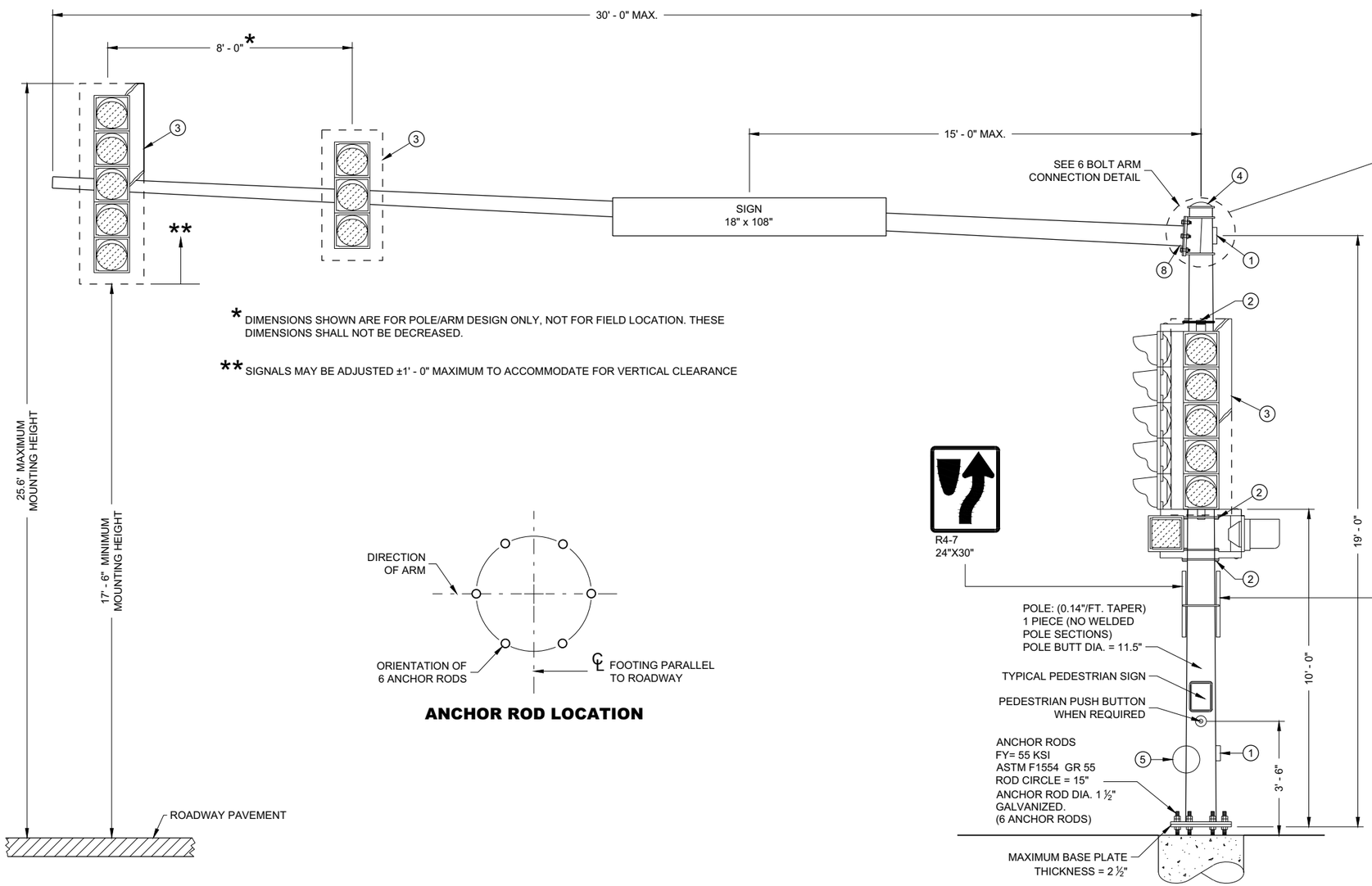
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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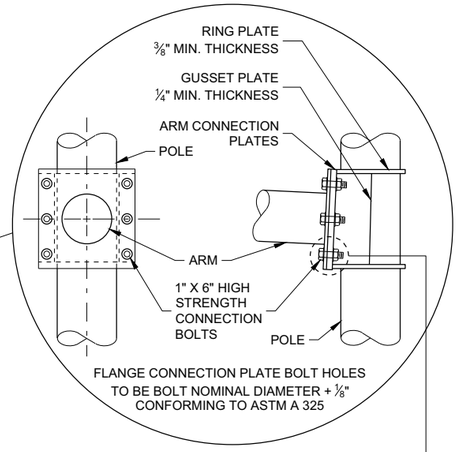
SDD 09E07 - 06



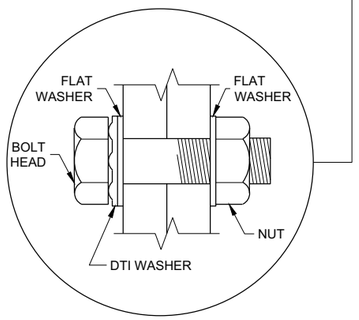
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

ANCHOR ROD LOCATION



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 9 POLE
15' - 30' MONOTUBE ARM
(MAXIMUM LOAD)

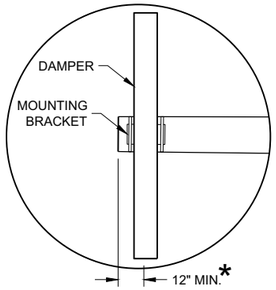
TYPE 9 POLE **15' - 30' MONOTUBE ARM**	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGI
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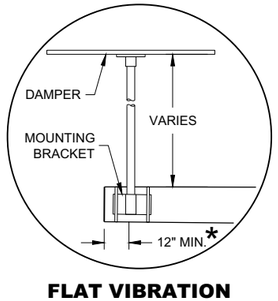
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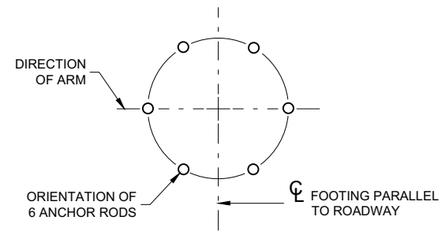


DUMBBELL VIBRATION DAMPER

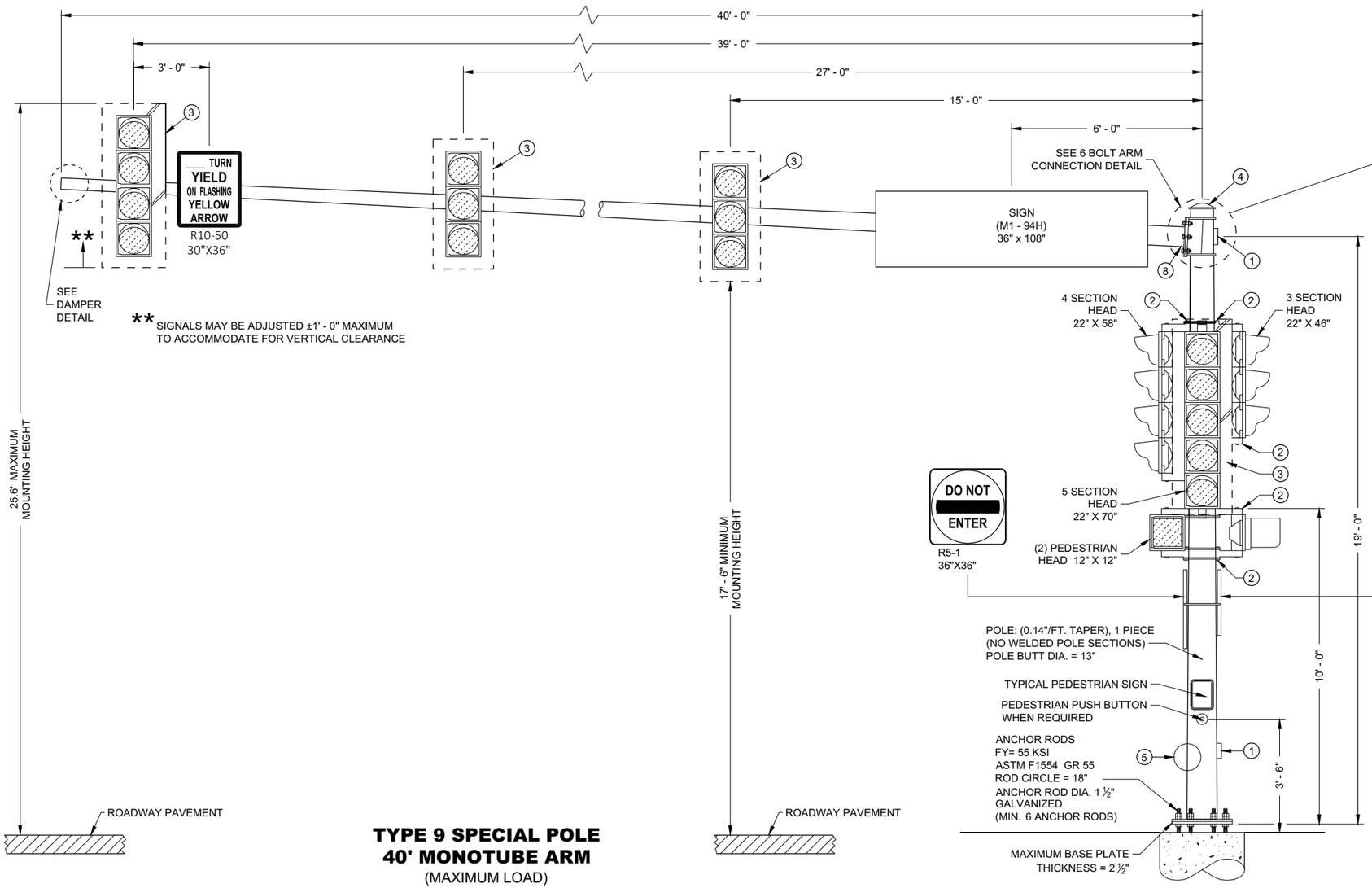


FLAT VIBRATION DAMPER

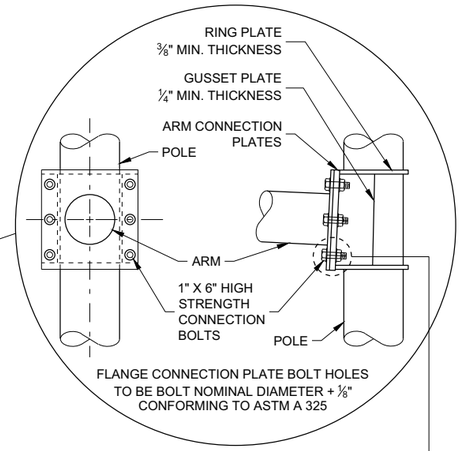
* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



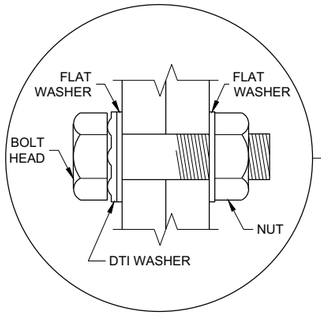
ANCHOR ROD LOCATION



TYPE 9 SPECIAL POLE 40' MONOTUBE ARM
(MAXIMUM LOAD)



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 9 SPECIAL POLE 40' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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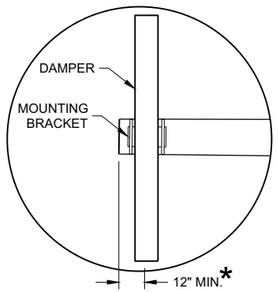
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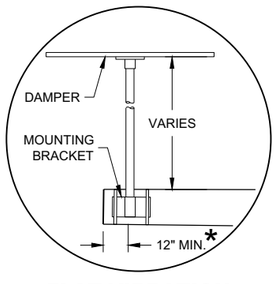
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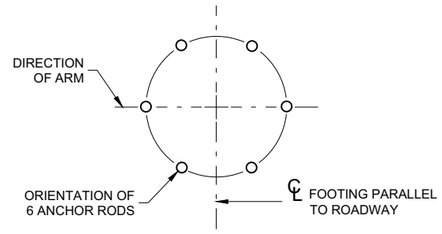


DUMBBELL VIBRATION DAMPER

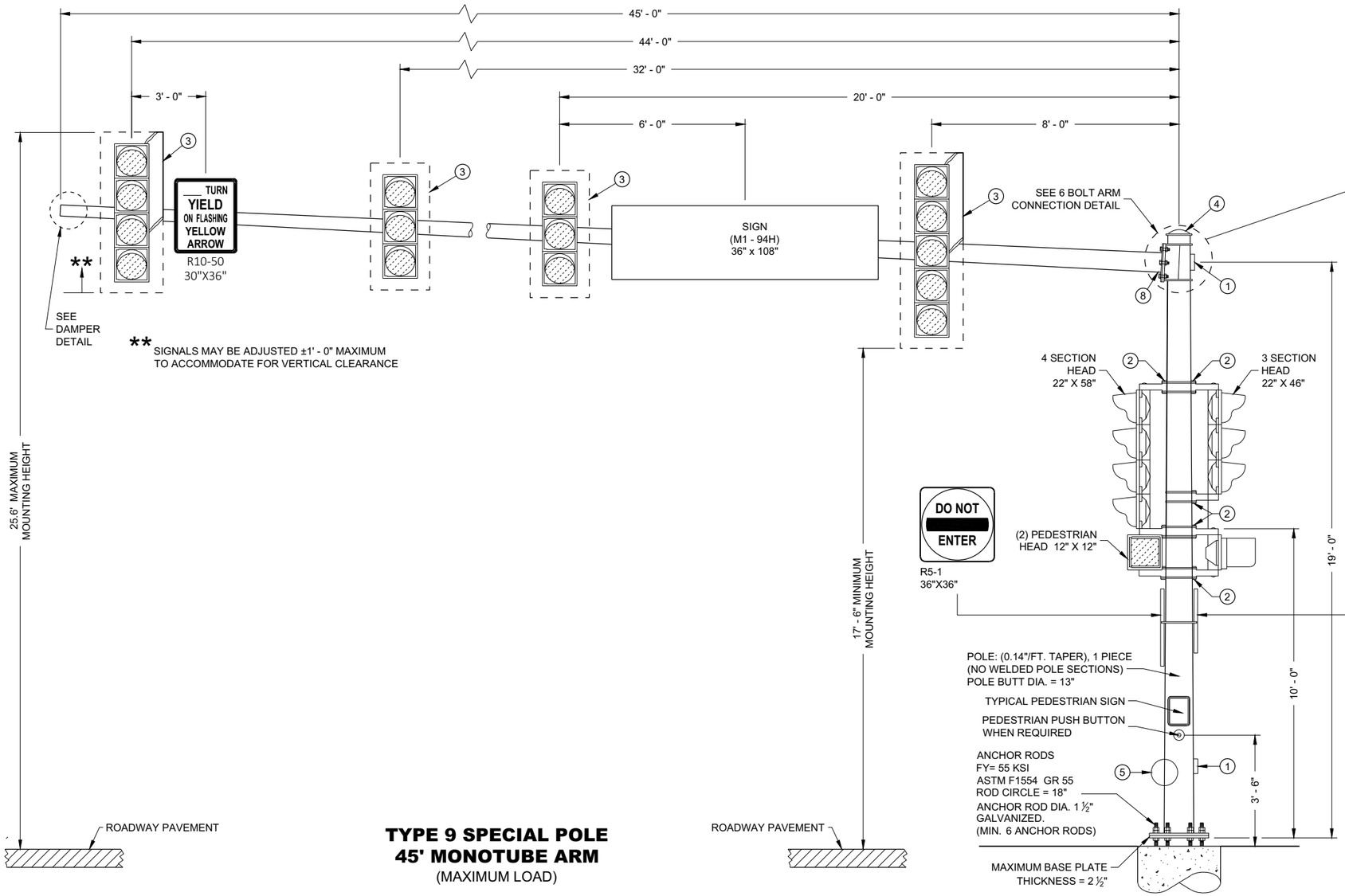


FLAT VIBRATION DAMPER

* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.

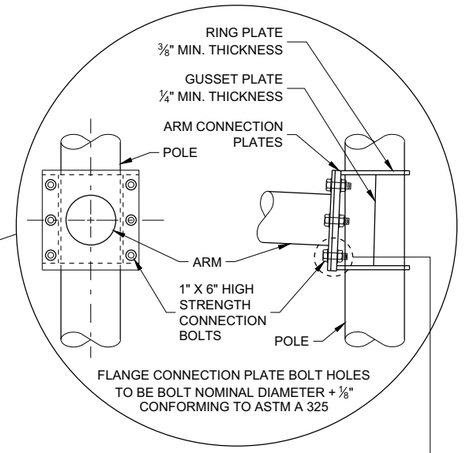


ANCHOR ROD LOCATION

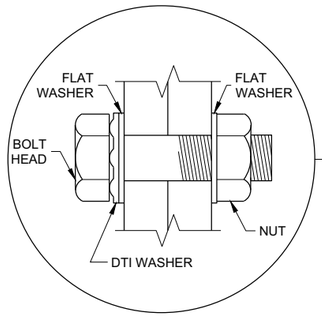


** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

TYPE 9 SPECIAL POLE 45' MONOTUBE ARM
(MAXIMUM LOAD)



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 9 SPECIAL POLE 45' MONOTUBE ARM

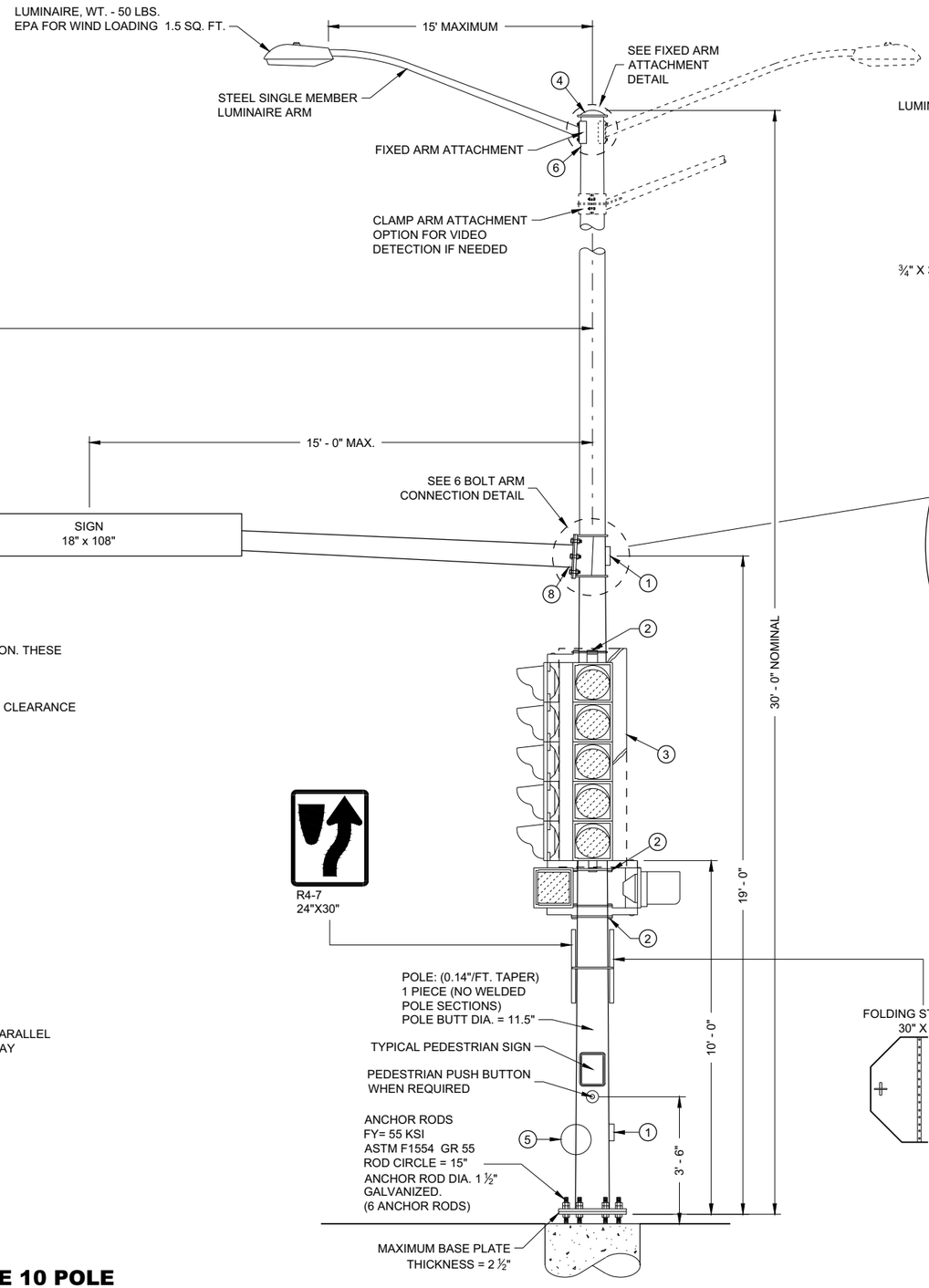
STATE OF WISCONSIN
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STATE ELECTRICAL ENGI 305

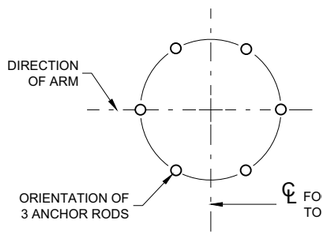
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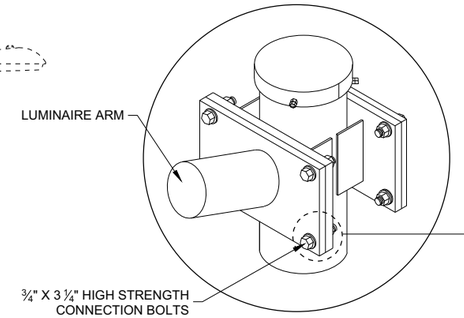


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

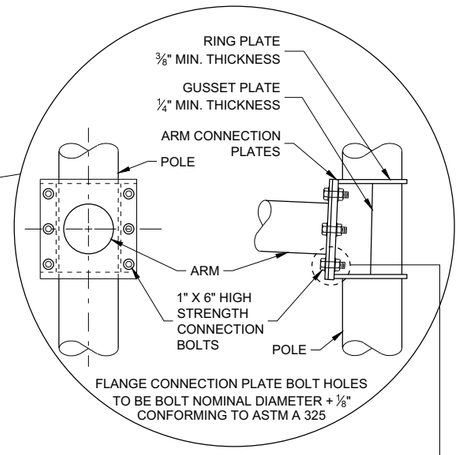
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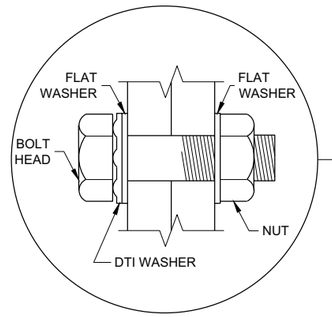
ANCHOR ROD LOCATION



FIXED ARM ATTACHMENT DETAIL



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 10 POLE
15' - 30' MONOTUBE ARM
(MAXIMUM LOAD)

TYPE 10 POLE
15' - 30' MONOTUBE ARM

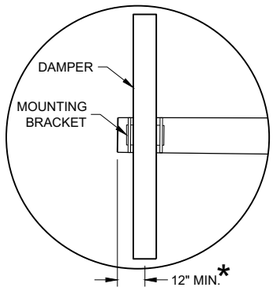
STATE OF WISCONSIN
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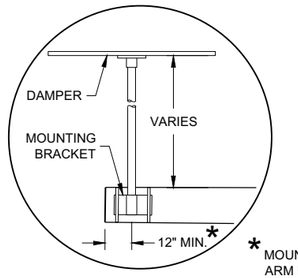
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 306

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SDD 09E08 - 09e

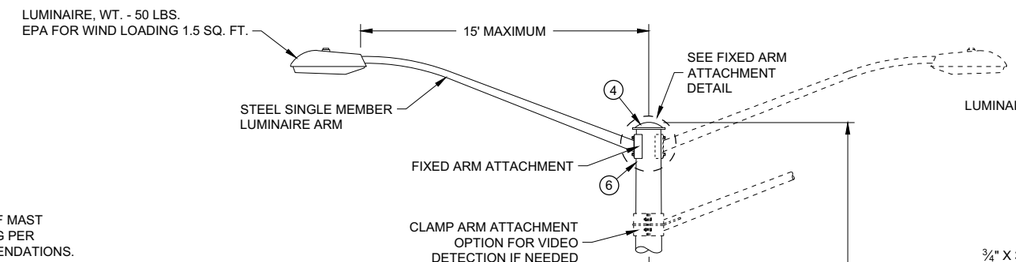


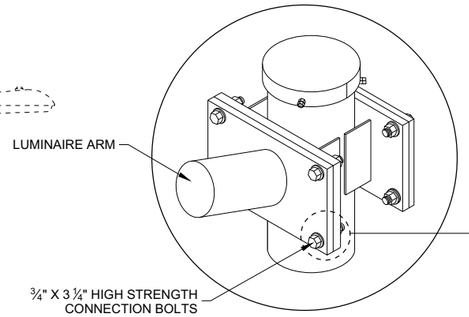
DUMBBELL VIBRATION DAMPER



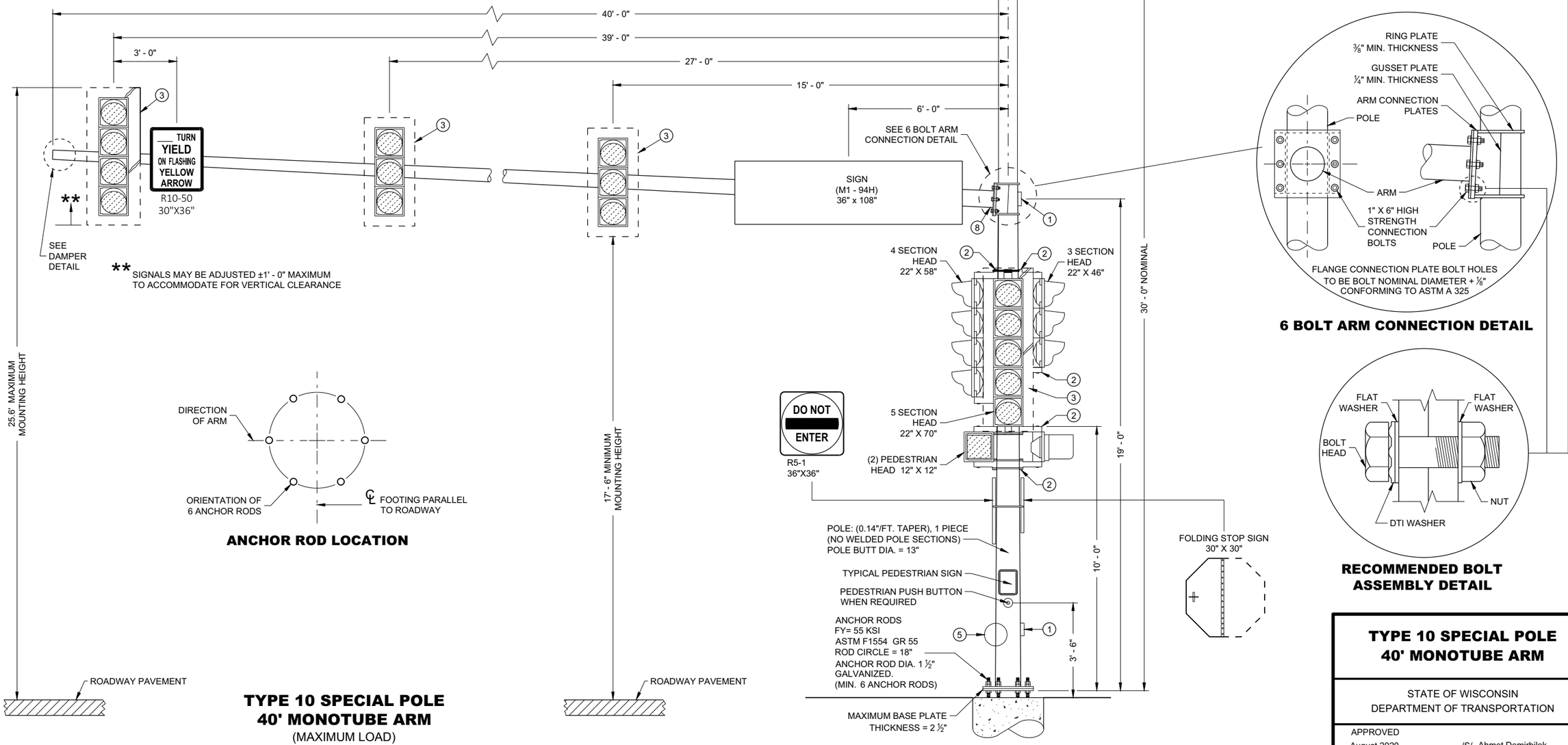
FLAT VIBRATION DAMPER

* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.





FIXED ARM ATTACHMENT DETAIL



** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

ANCHOR ROD LOCATION

TYPE 10 SPECIAL POLE
40' MONOTUBE ARM
(MAXIMUM LOAD)

6 BOLT ARM CONNECTION DETAIL

RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 10 SPECIAL POLE
40' MONOTUBE ARM

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DEPARTMENT OF TRANSPORTATION

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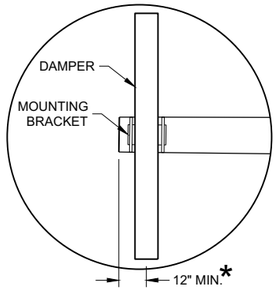
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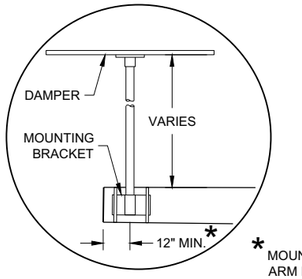
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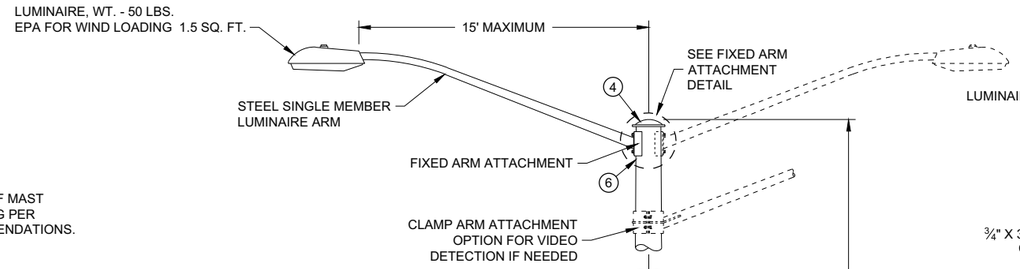


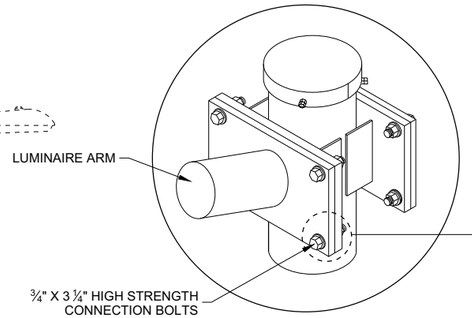
DUMBBELL VIBRATION DAMPER



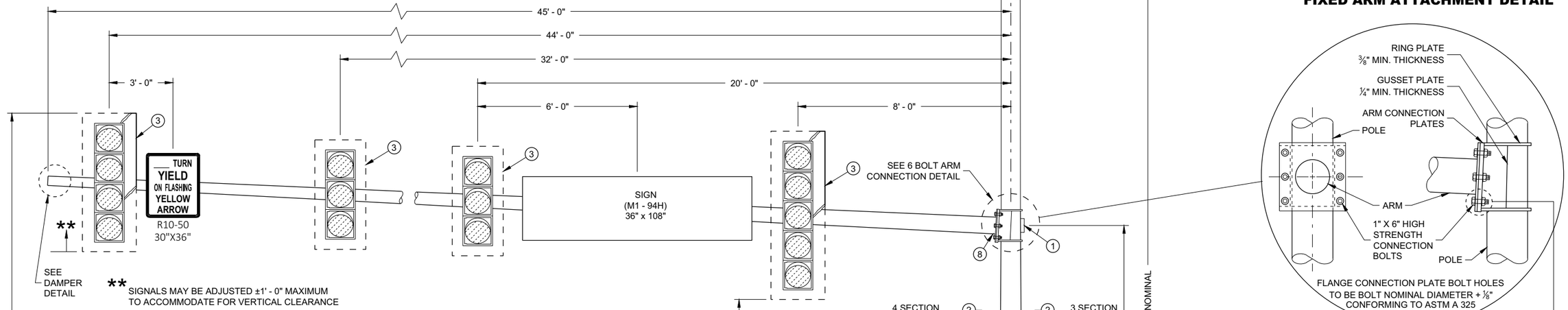
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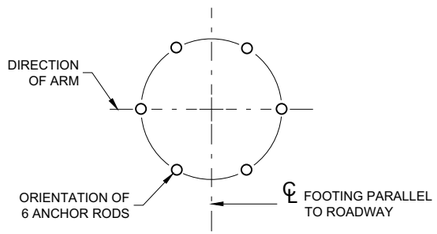
* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.





FIXED ARM ATTACHMENT DETAIL

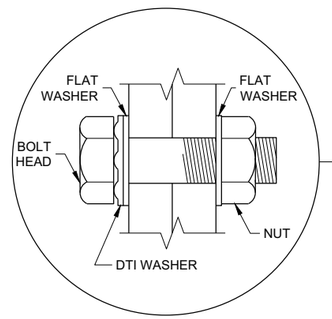




ANCHOR ROD LOCATION

TYPE 10 SPECIAL POLE
45' MONOTUBE ARM
(MAXIMUM LOAD)

6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 10 SPECIAL POLE
45' MONTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

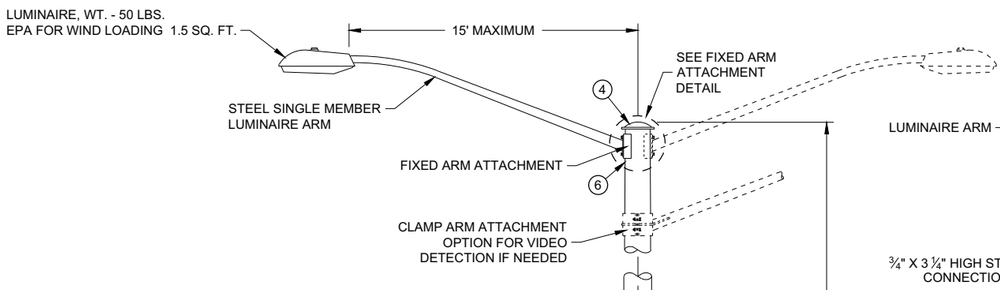
APPROVED
August 2020
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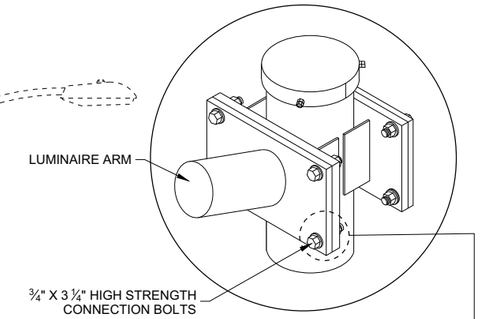
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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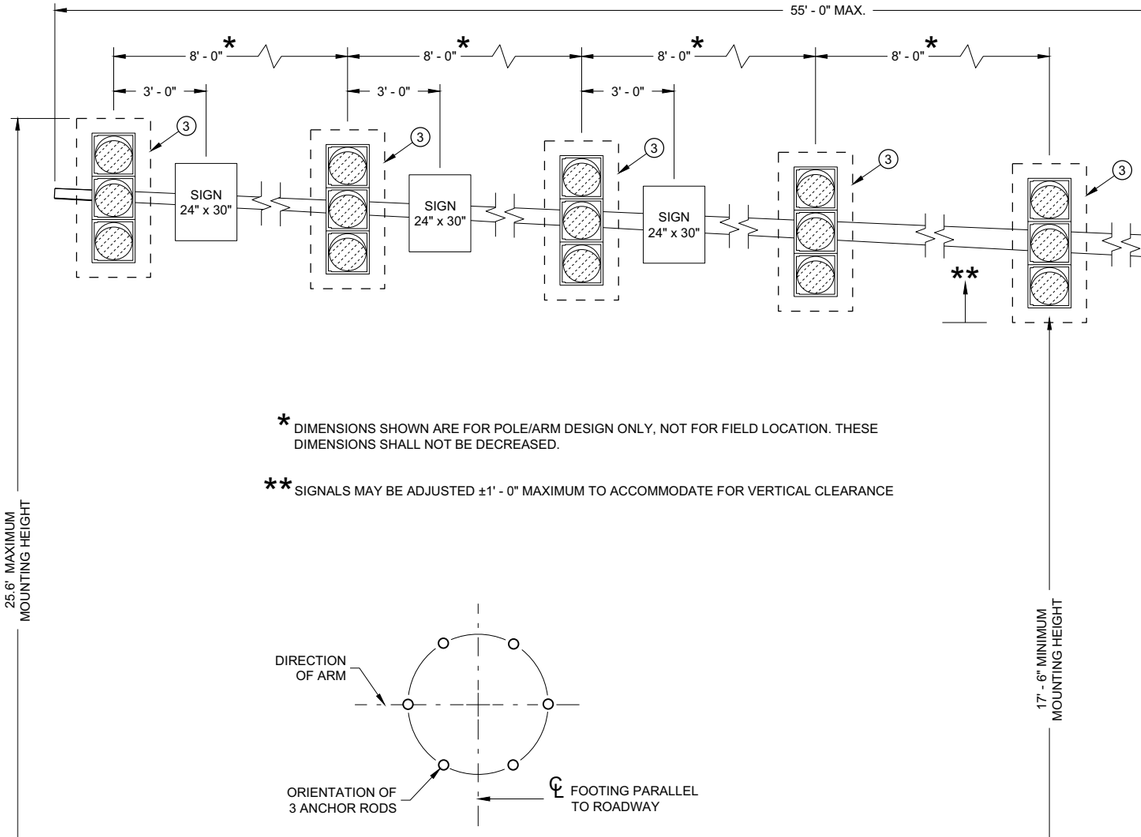
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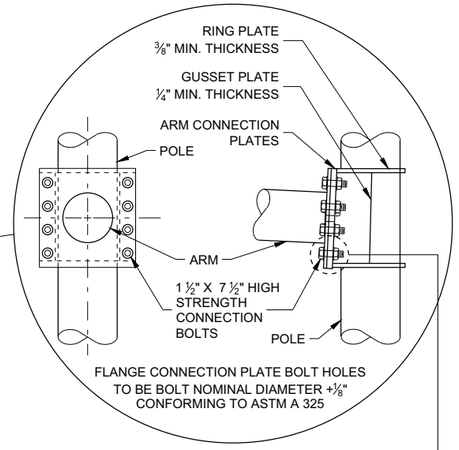
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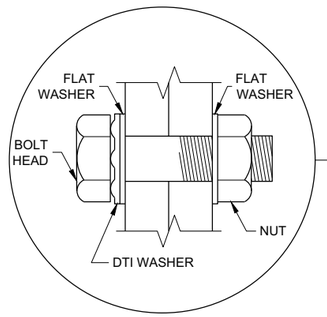


FIXED ARM ATTACHMENT DETAIL





8 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

* 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 ACCOMMODATE FOR VERTICAL CLEARANCE

ANCHOR ROD LOCATION

TYPE 13 POLE
35' - 55' MONOTUBE ARM
(MAXIMUM LOAD)

TYPE 13 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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GENERAL NOTES

DETAILS OF CONSTRUCTION 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 9 SPECIAL AND 10 SPECIAL ARE FOR ARM LENGTHS 35 FOOT, 40 FOOT, AND 45 FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35 FOOT TO 55 FOOT.

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

RING STIFFENED BUILT UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

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

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING INTERIM REVISIONS)" AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR THE LIGHTING STRUCTURES 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 TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 SPECIAL AND TYPE 10 SPECIAL STRUCTURES. IN LIEU OF DESIGNING FOR GALLOPING, A VIBRATION DAMPER MITIGATION DEVICE IS REQUIRED TO BE SUPPLIED AND INSTALLED AT THE END OF THE MAST ARM.

CATEGORY II FATIGUE FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE12 AND TYPE 13 STRUCTURES.

115 MPH (700 YEAR MRI BASIC WIND SPEED).

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" STAINLESS STEEL 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 A S DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEAD 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 HAND HOLE 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 SPECIFICATION SECTION 658).

(3) SECURELY MOUNT BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND 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 HAND HOLD, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

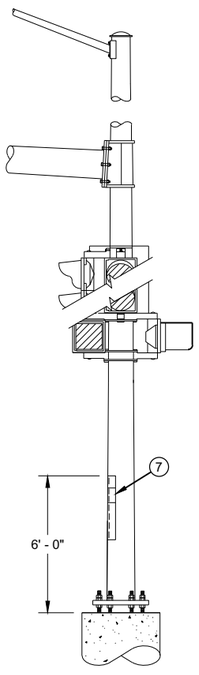
(6) FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

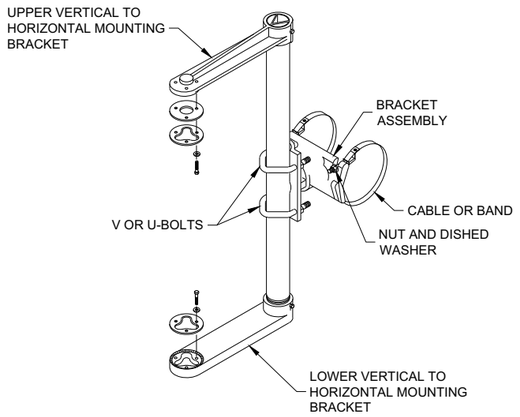
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

MOUNTING HEIGHT SHALL BE 6' - 0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

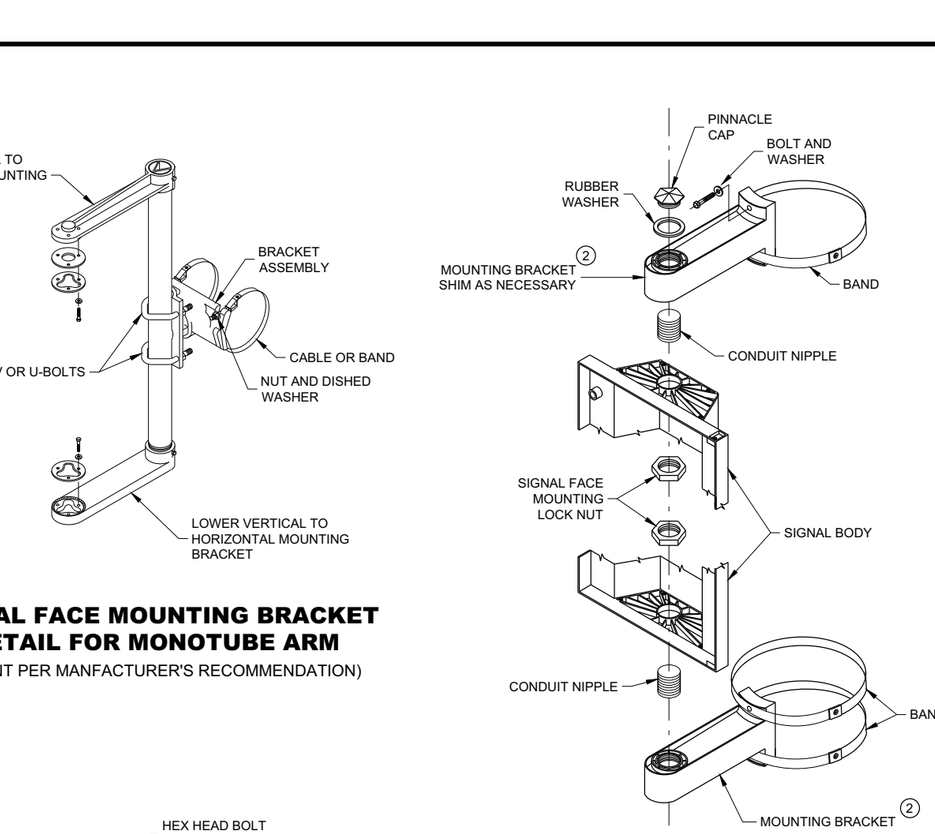


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT

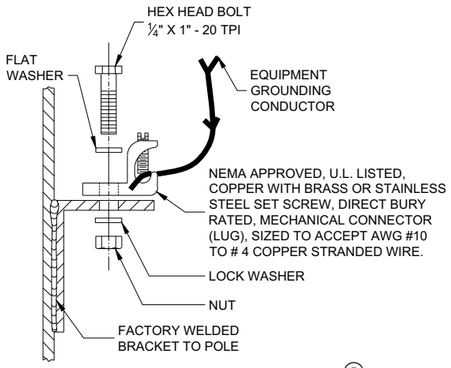


SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANFACTURER'S RECOMMENDATION)

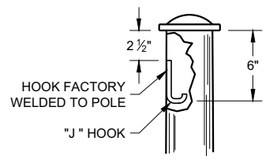


SIGNAL FACE VERTICAL MOUNTING DETAIL



TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



TYPICAL "J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE FOR TYPES 9,10, 9/10 SPECIAL, 12 AND 13 POLES WITH MONOTUBE ARMS

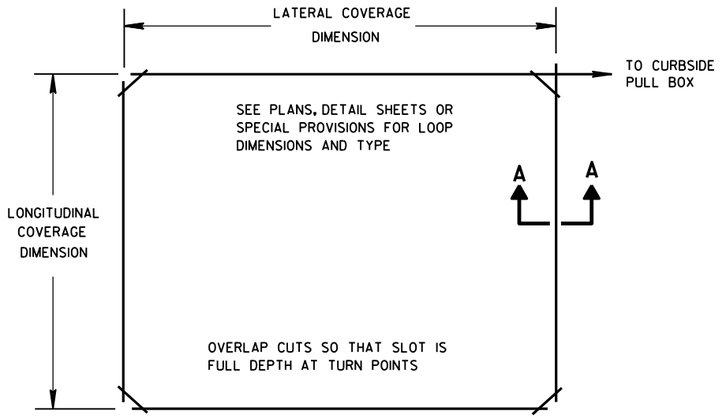
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER

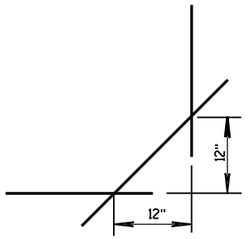
FHWA

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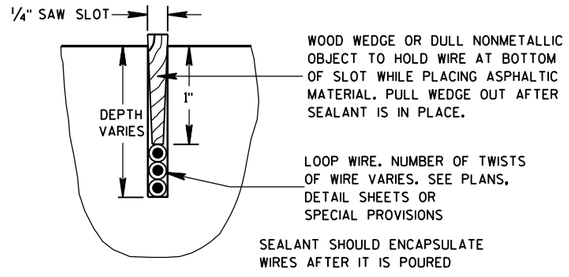
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LOOP WIRE SLOT CONSTRUCTION

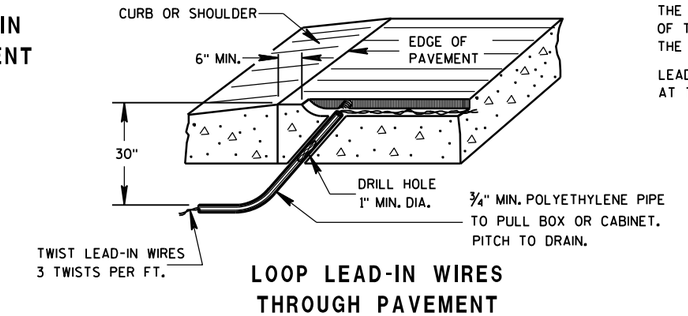


EXPANDED VIEW
SAW CUT CORNERS



SECTION A-A

LOOP AND LEAD-IN
WIRES IN PAVEMENT



LOOP LEAD-IN WIRES
THROUGH PAVEMENT

GENERAL NOTES

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

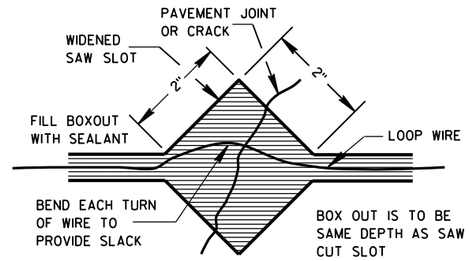
THE SLOTS IN THE PAVEMENT SHALL BE CUT TO DIMENSION WITH A SAW. THE SLOTS SHALL BE CLEANED FREE OF DIRT, DUST, MOISTURE AND DEBRIS PRIOR TO INSTALLATION OF THE WIRE.

AFTER PLACING THE WIRE IN THE SLOT, FILL THE SLOT WITH AN ASPHALTIC MATERIAL IN ACCORDANCE WITH THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D6690".

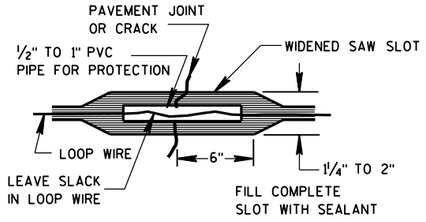
IN THE EVENT ASPHALTIC MATERIAL IS UNAVAILABLE, A FLEXIBLE TYPE EPOXY MAY BE USED AS A LOOP SLOT FILLER. THE LOOP SLOT SHALL BE CLEAN AND DRY BEFORE EPOXY IS INSTALLED. EPOXY USE SHALL BE APPROVED BY THE DISTRICT TRAFFIC ENGINEER AND THE FURNISHED EPOXY SHALL BE INSTALLED ONLY AFTER WRITTEN APPROVAL BY THE BY THE PROJECT ENGINEER.

THE TWO SINGLE CONDUCTOR LOOP WIRES SHALL BE TWISTED TOGETHER AT A RATE OF THREE TWISTS PER FOOT FROM THE PAVEMENT EDGE TO THE SPLICE CONNECTION WITH THE LOOP LEAD-IN CABLE.

LEAD-IN CABLES AND LOOP LEAD-IN WIRES SHALL BOTH BE CUT TO 6 FEET IN LENGTH AT THE SPLICING PULL BOX.

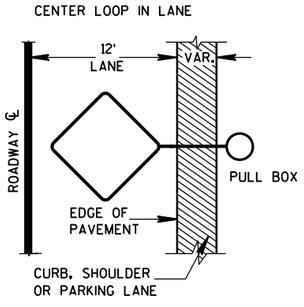


PLAN VIEW

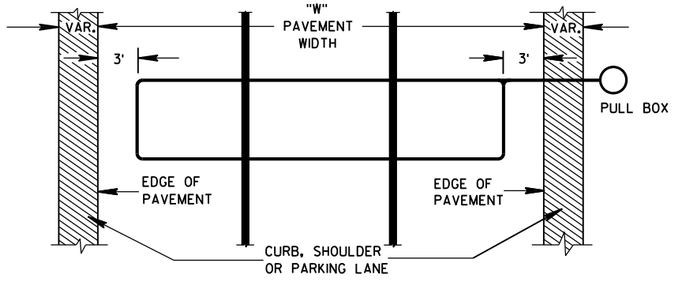


FRONT VIEW

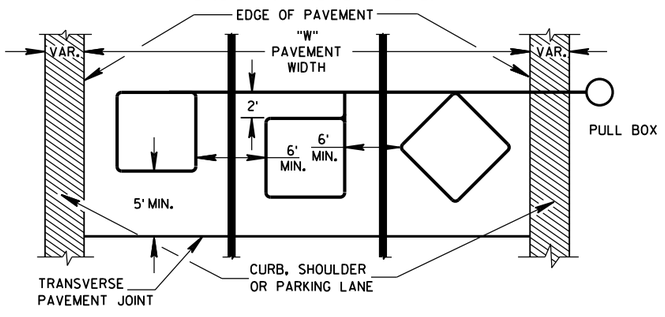
LOOP WIRE INSTALLATION ACROSS
PAVEMENT JOINT OR CRACK



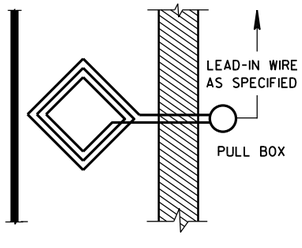
LOOP WIRE SLOT PLAN



LOOP WIRE SLOT PLAN

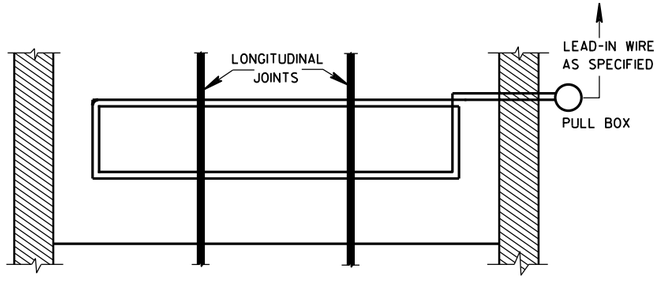


LOOP WIRE SLOT PLAN



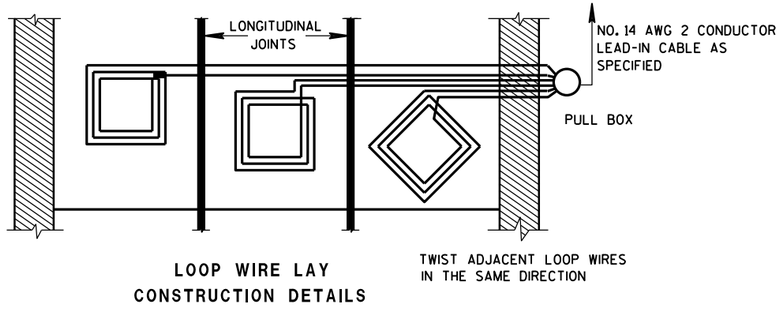
LOOP WIRE LAY
CONSTRUCTION DETAILS

SINGLE LANE LOOP DETECTION



LOOP WIRE LAY
CONSTRUCTION DETAILS

MULTIPLE LANE MASS LOOP DETECTION



LOOP WIRE LAY
CONSTRUCTION DETAILS

MULTIPLE LANE DETECTION BY
INDIVIDUAL LANES, TYPICAL TYPE LOOPS

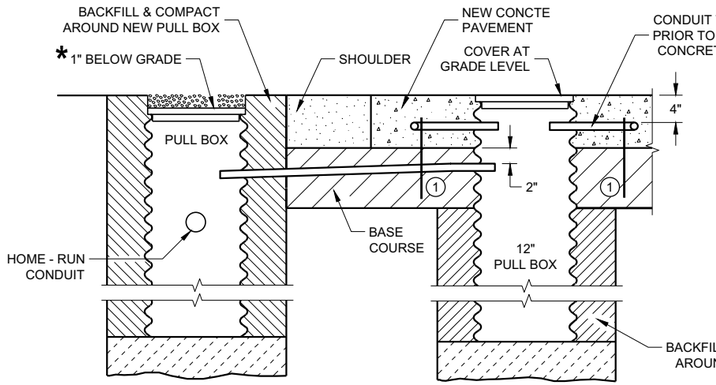
DETAILS FOR THE INSTALLATION OF TEMPORARY TRAFFIC SIGNAL LOOP DETECTOR WIRES IN ANY EXISTING PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

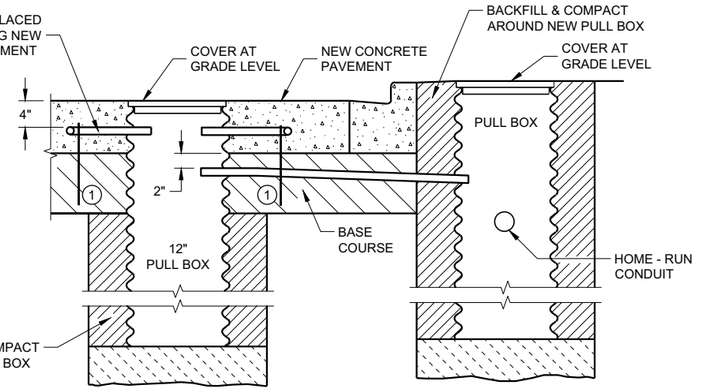
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S.D.D. 9 F 1-4



SECTION A - A
NO CURB AND GUTTER

LOOP DETECTOR INSTALLATION DETAIL



SECTION B - B
CURB AND GUTTER

LOOP DETECTOR INSTALLATION DETAIL

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

GENERAL NOTES

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

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

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

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

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

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

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

ANY PVC LEADOUT CONDUIT CONTAINING MORE THAN ONE TWISTED PAIR OF LOOP LEAD WIRE SHALL BE 2".

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

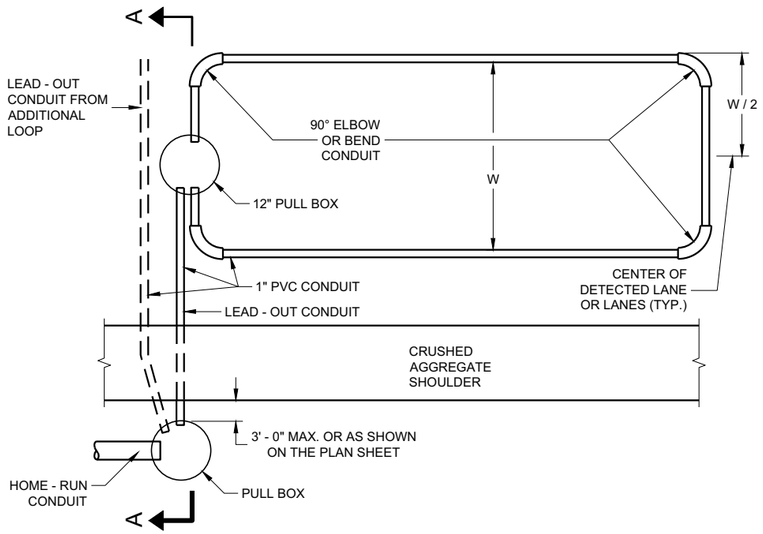
SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

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

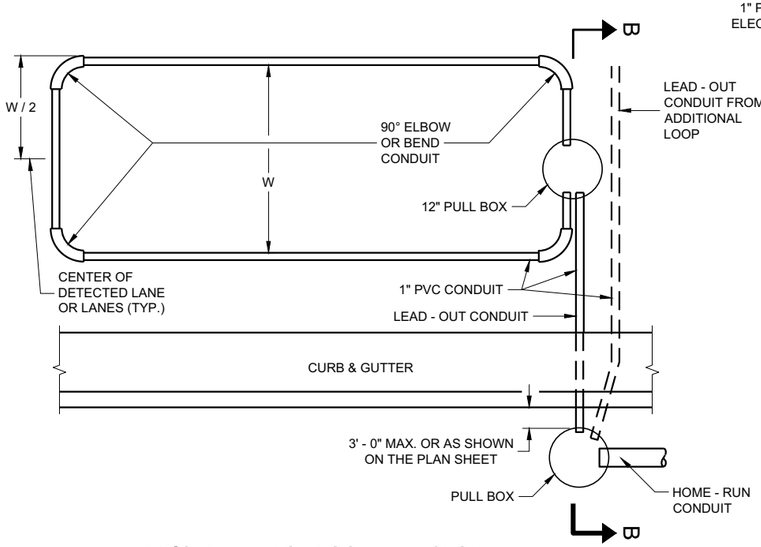
PROTECTION OF THE PULL BOX IN THE BASE COURSE, AND THE RELATED CONDUITS SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW CONCRETE PAVEMENT IS POURED.

12" PULL BOXES IN PAVEMENT SHALL BE CORRUGATED STEEL ONLY.

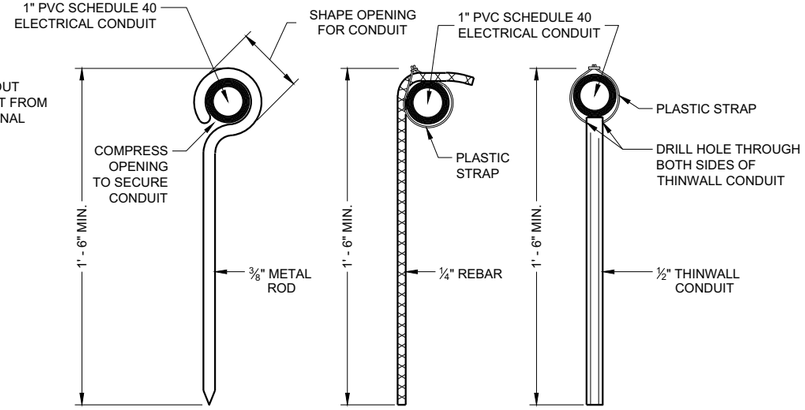
(1) HOLD DOWN PINS TO HOLD CONDUIT DURING POUR.



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX



TYPICAL DETAILS FOR HOLD DOWN PINS (1)

LOOP DETECTOR INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULLBOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

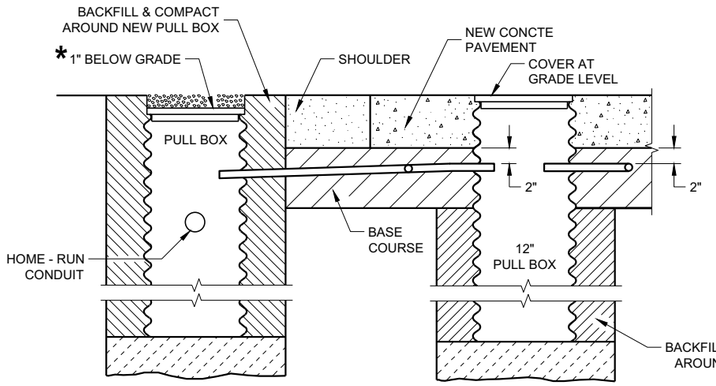
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

SDD 09F04 - 05

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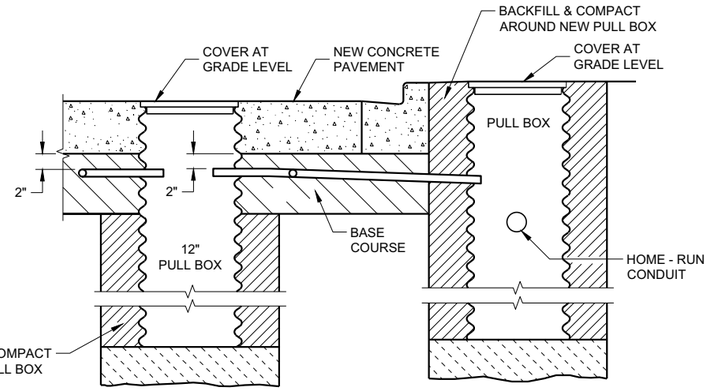
SDD 09F04 - 05



SECTION A - A
NO CURB AND GUTTER

LOOP DETECTOR INSTALLATION DETAIL

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



SECTION B - B
CURB AND GUTTER

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

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

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

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

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

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

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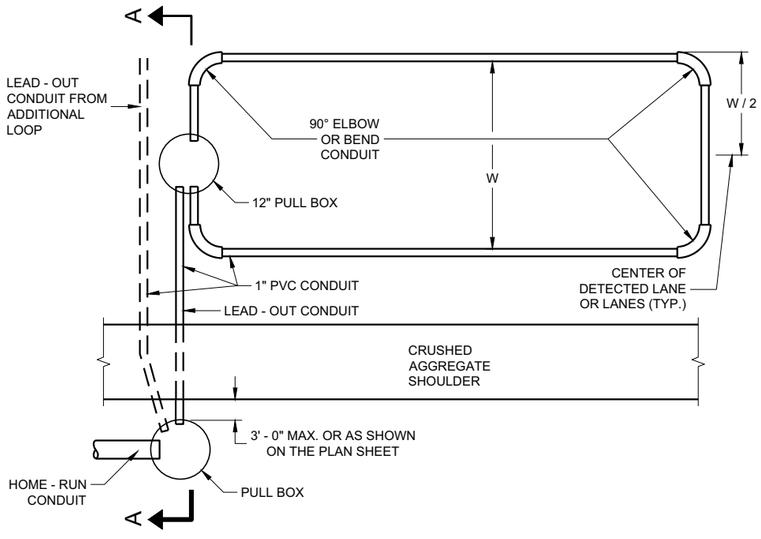
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SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

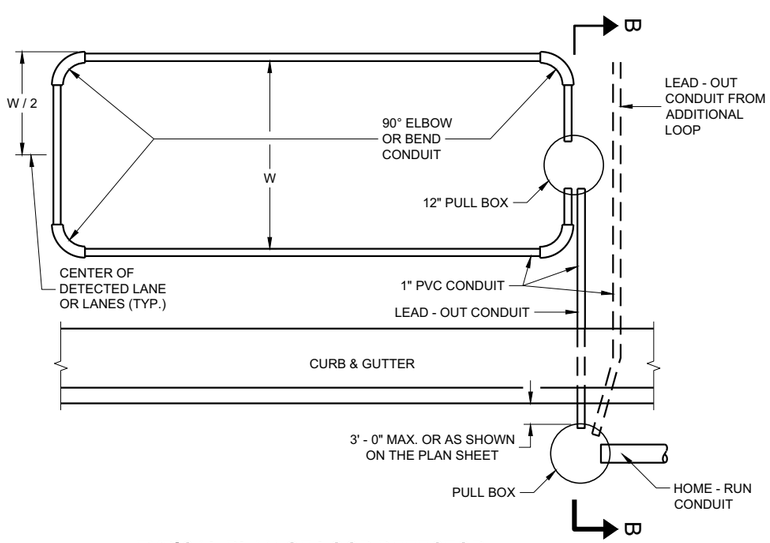
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, INTO THE PULL BOX IN THE PAVEMENT, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT, CONDULET, PULL BOX SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW CONCRETE PAVEMENT IS POURED.

12" PULL BOXES IN PAVEMENT SHALL BE CORRUGATED STEEL ONLY.



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX

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

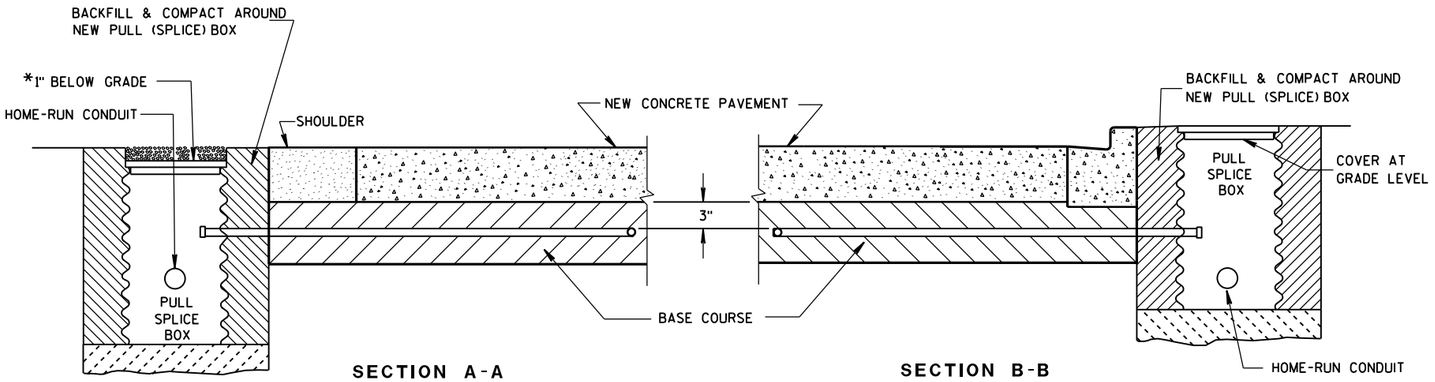
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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SDD 09F09 - 05



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

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

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

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

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

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

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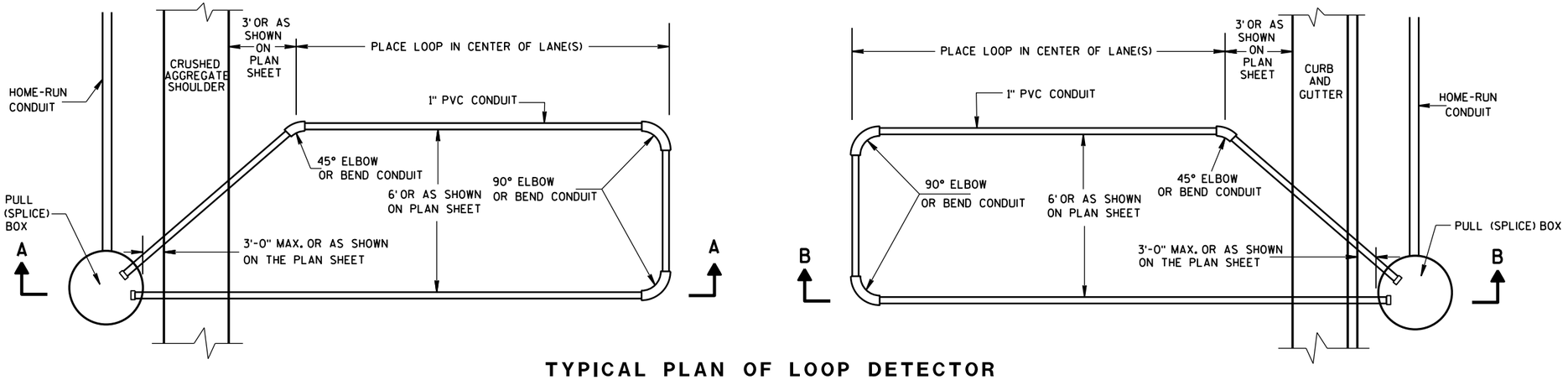
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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

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

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

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



TYPICAL PLAN OF LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

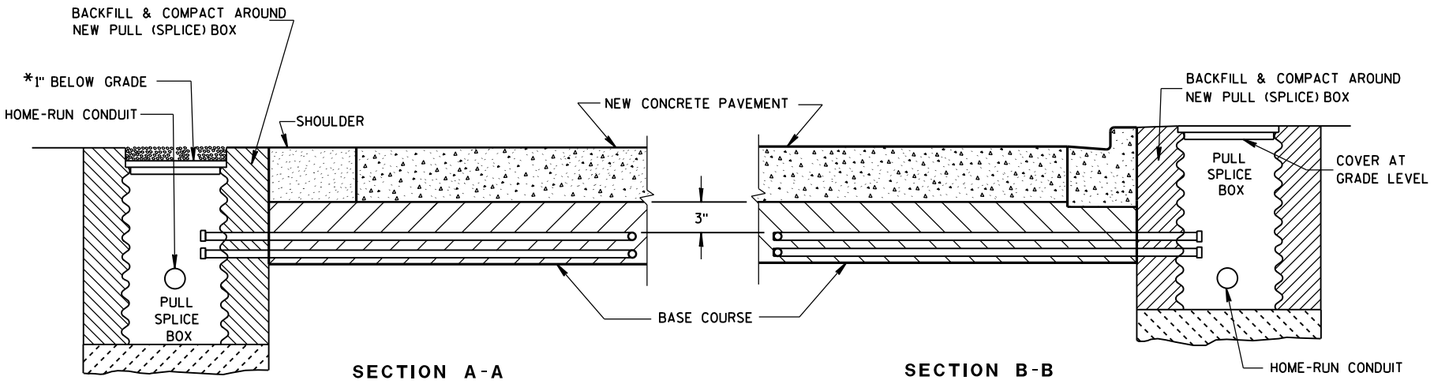
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 F 15-4a

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S.D.D. 9 F 15-4a



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

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

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

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

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

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

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

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

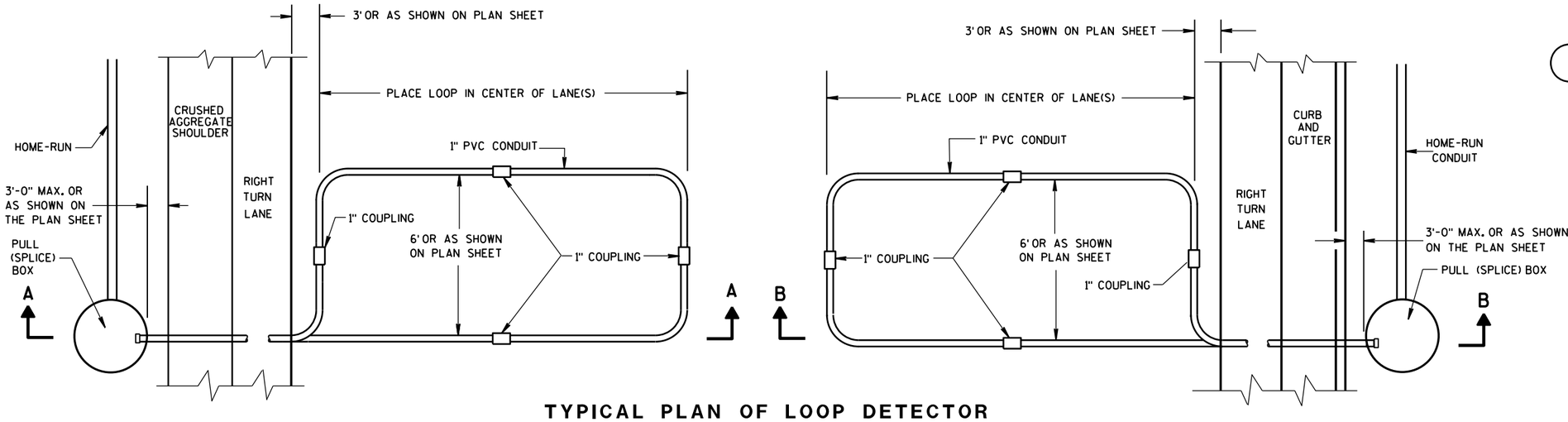
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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

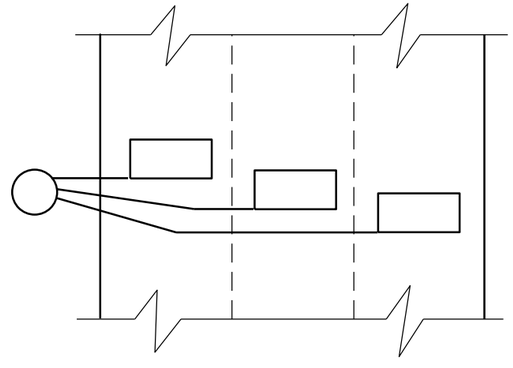
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

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

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



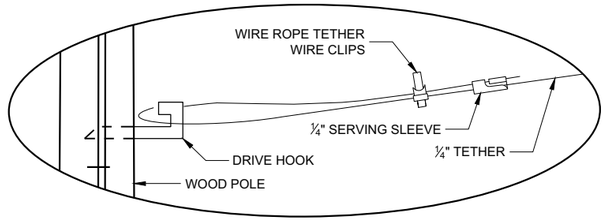
TYPICAL PLAN OF LOOP DETECTOR WITH 24" PULL (SPLICE) BOX



MULTI-LANE INSTALLATION

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

MINIMUM POLE LENGTHS	POLE BURIAL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

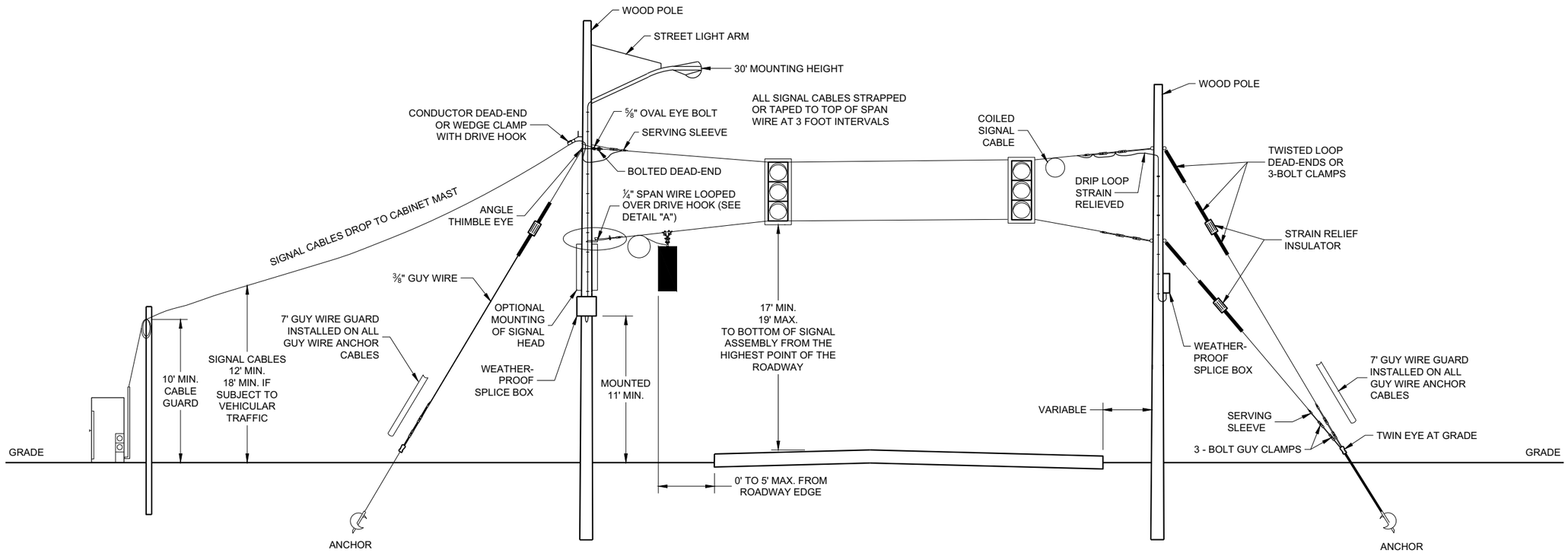


DETAIL "A"

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 ASSEMBLY 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

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI 316

FHWA

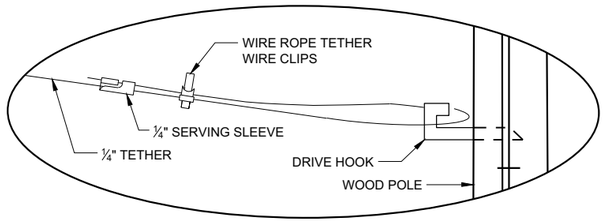
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SDD09G01 - 04a

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'



DETAIL "A"

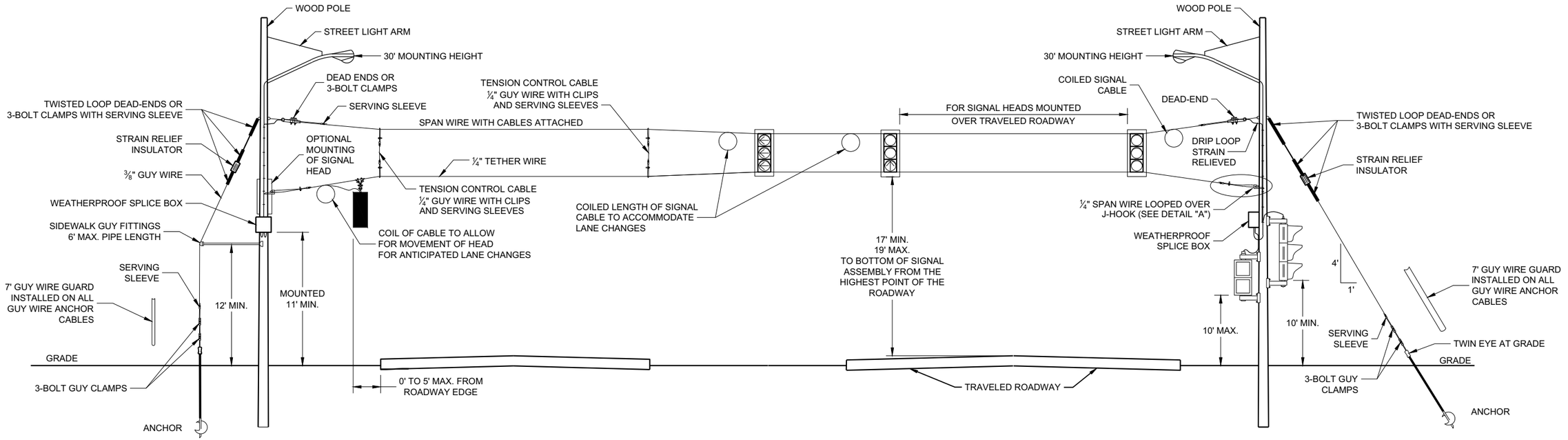
GENERAL NOTES

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   - E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.

3. SPAN WIRE:
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SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

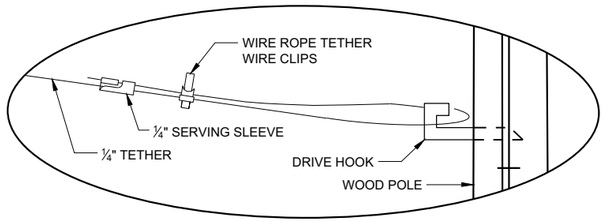
APPROVED
June 2015
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

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SDD09G01 - 04b

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

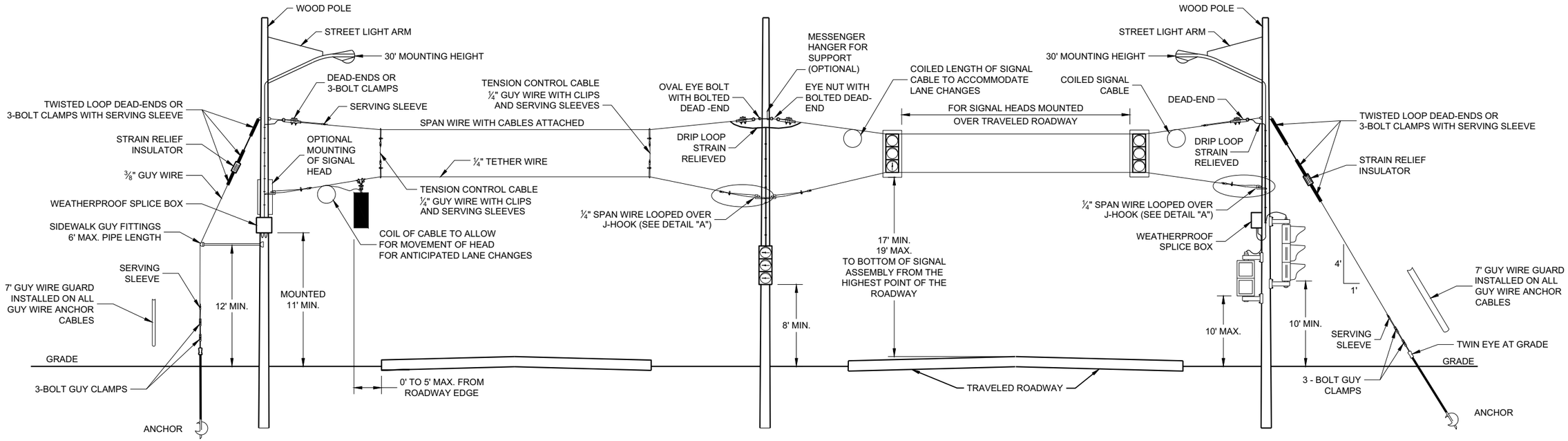


DETAIL "A"

GENERAL NOTES

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SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

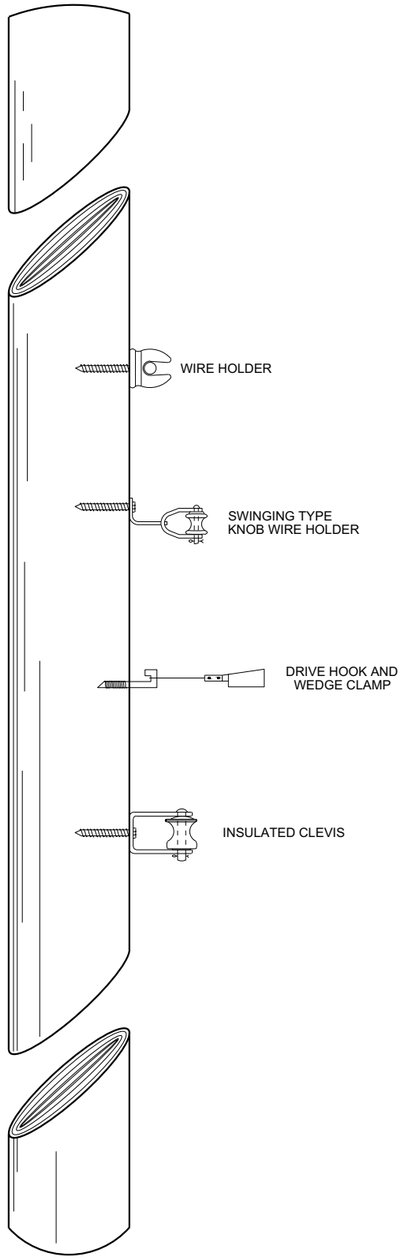
SPAN WIRE TEMPORARY TRAFFIC SIGNAL

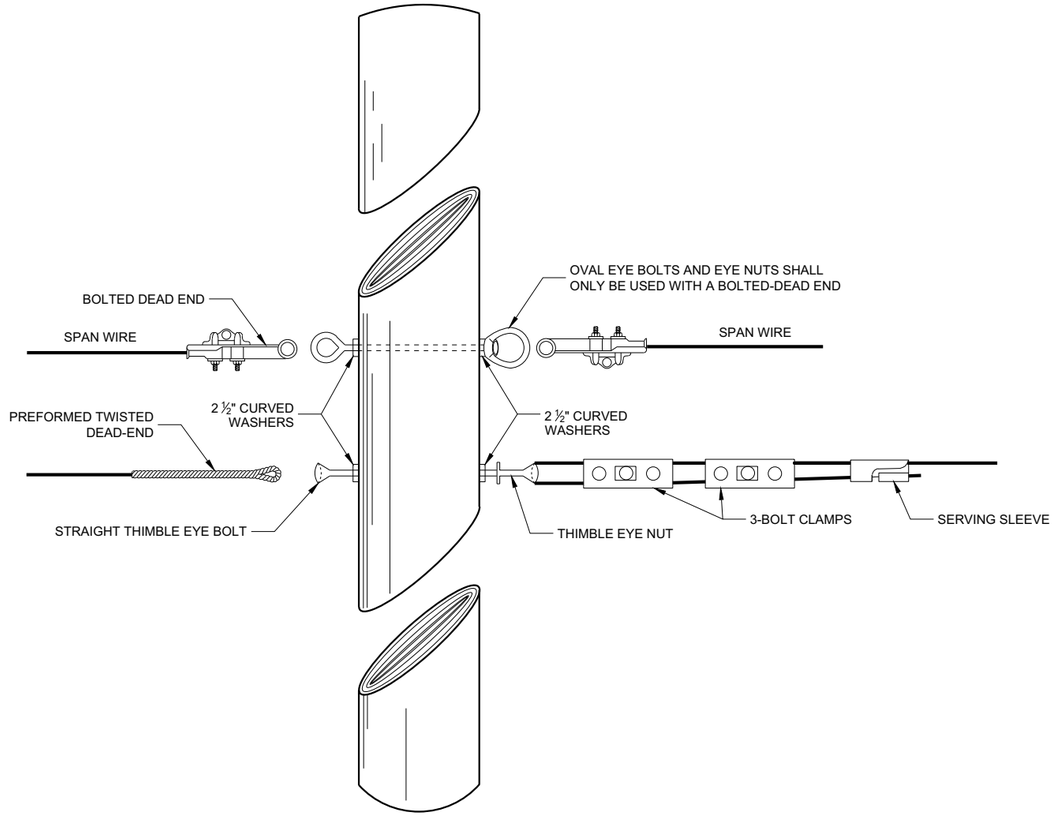
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

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SDD 09G01 - 4d

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

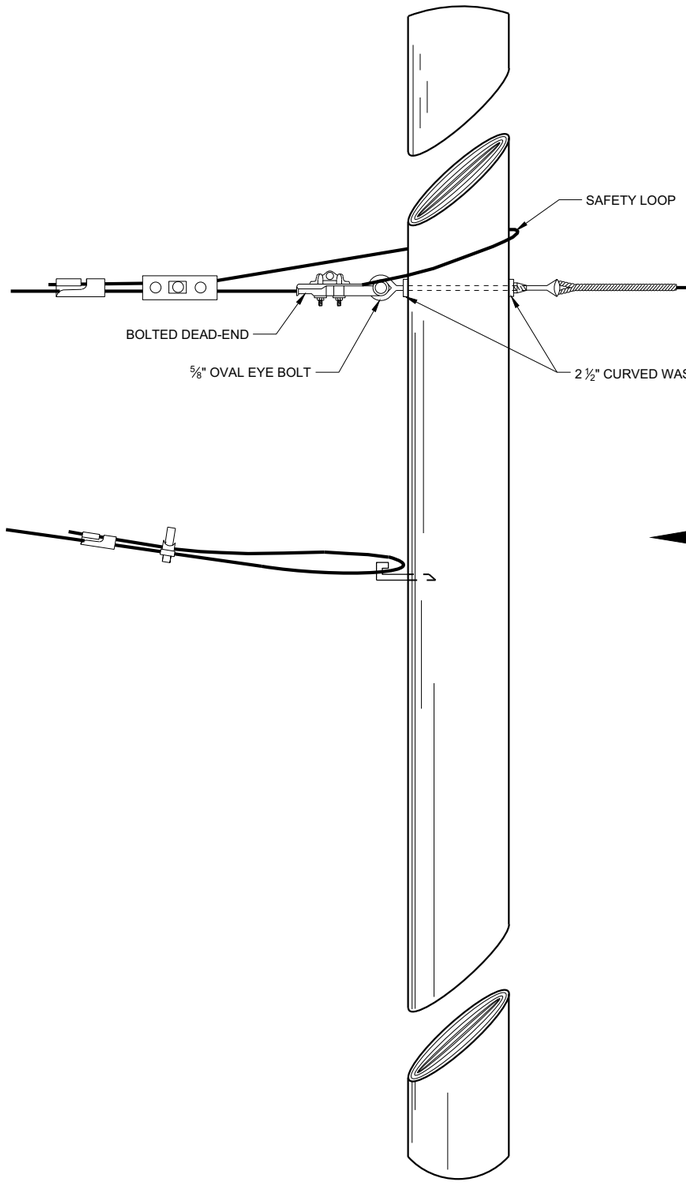
June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

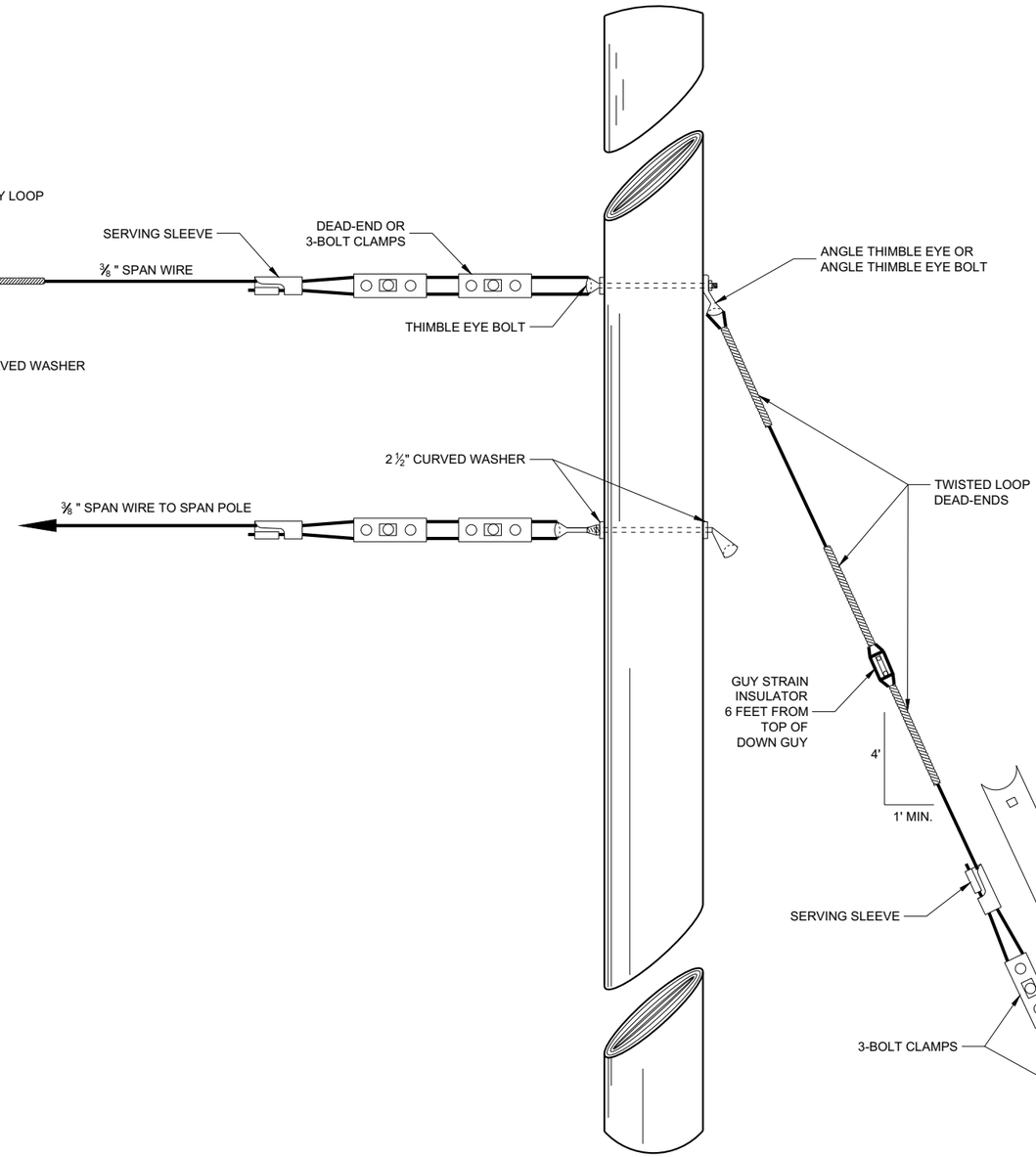
FHWA

GENERAL NOTES

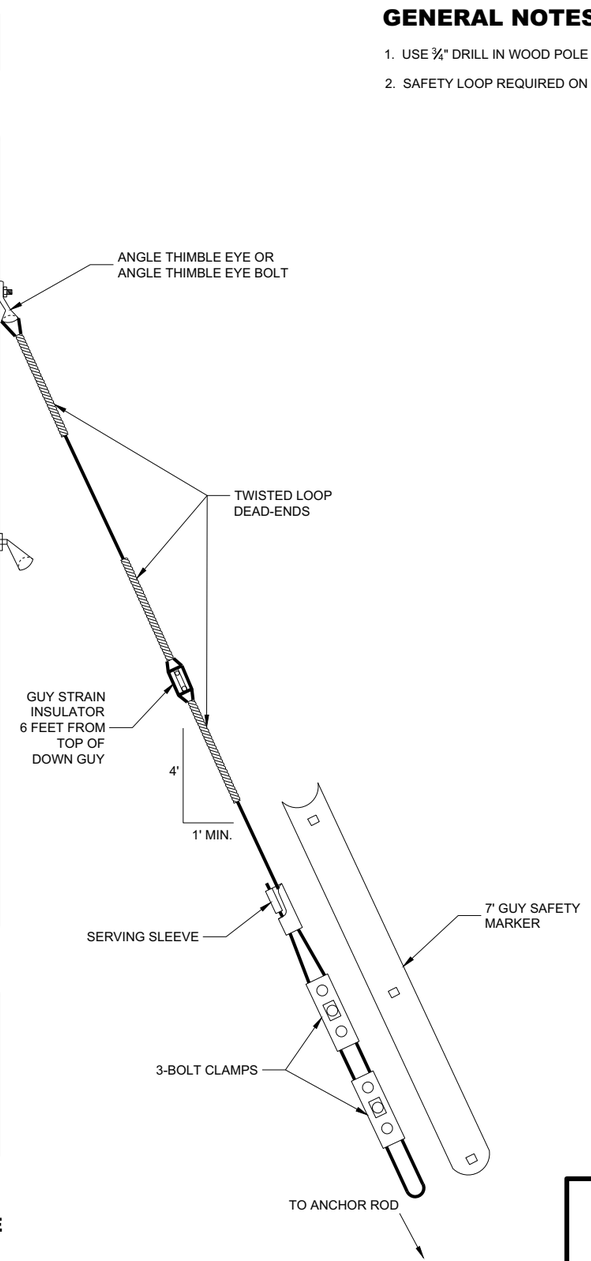
1. USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.
2. SAFETY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE



GUY POLE



TYPICAL DEAD-ENDINGS OR GUYING

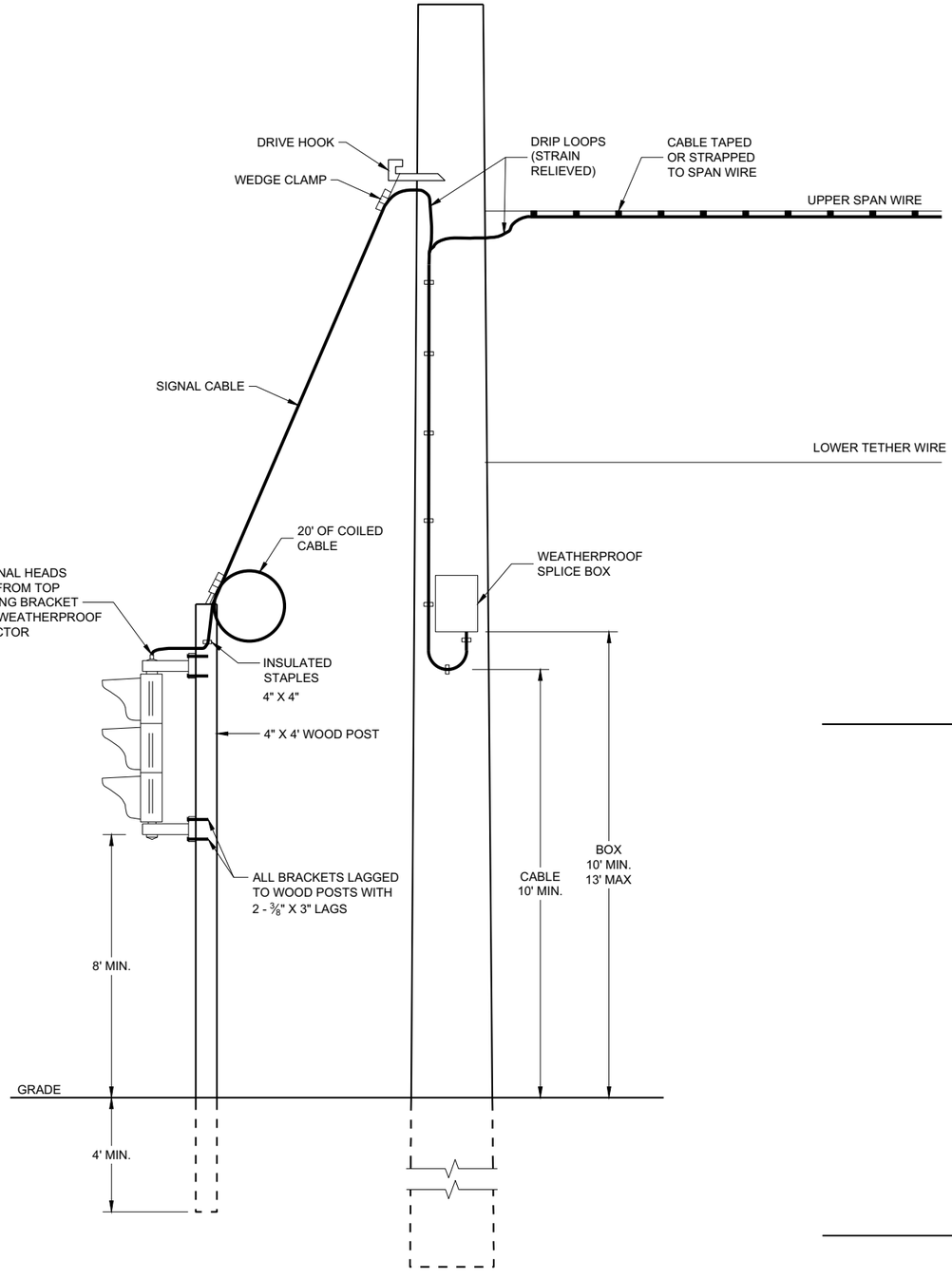
SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

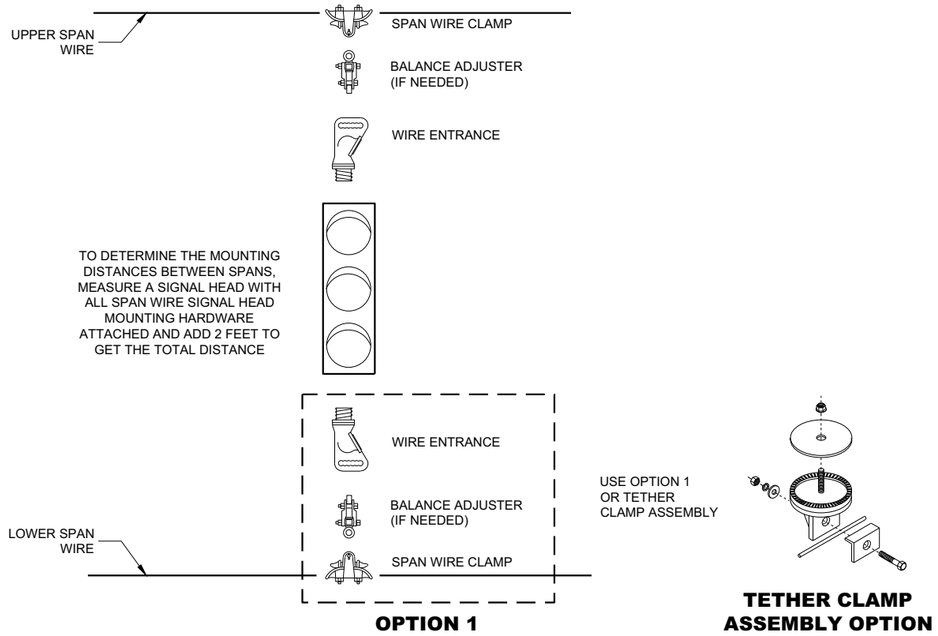
APPROVED
June 2015 — DATE
/S/ Ahmet Demerbilek — ROADWAY STANDARDS DEVE ENGINEER
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TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL

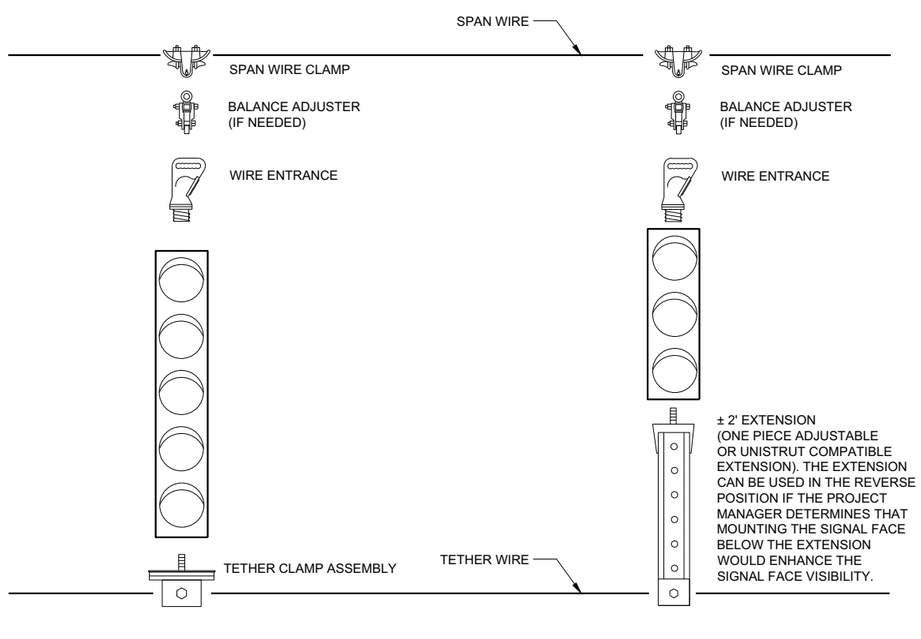


OPTION 1

USE OPTION 1 OR TETHER CLAMP ASSEMBLY

TETHER CLAMP ASSEMBLY OPTION

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

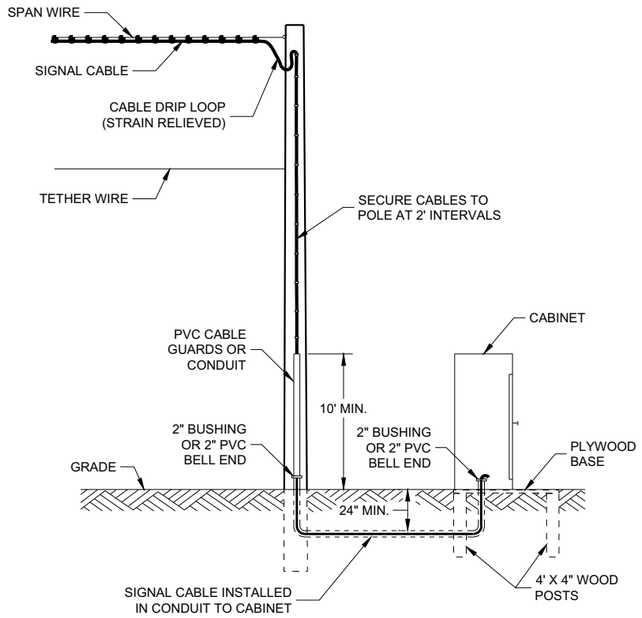
APPROVED
June 2015
DATE

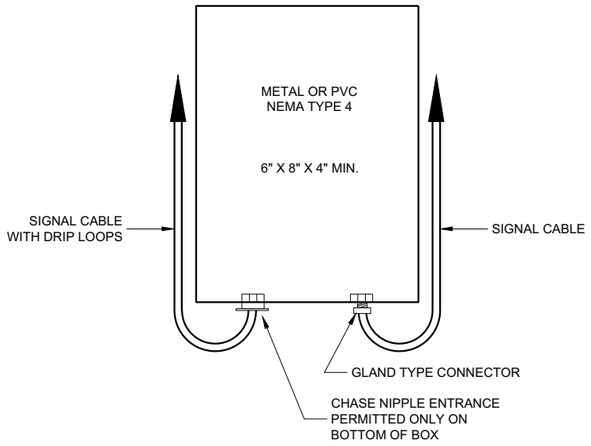
/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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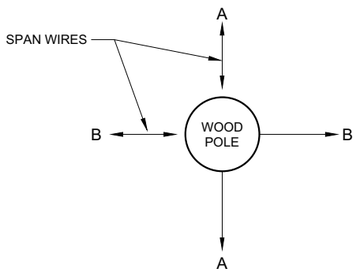
SDD 09G01 - 4f





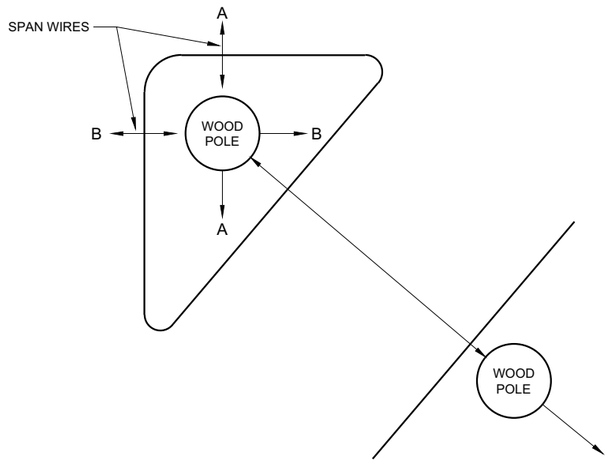
SPLICE BOX

TYPICAL SKID TYPE TEMPORARY

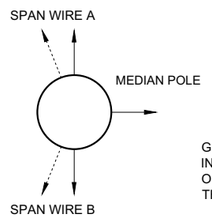


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

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

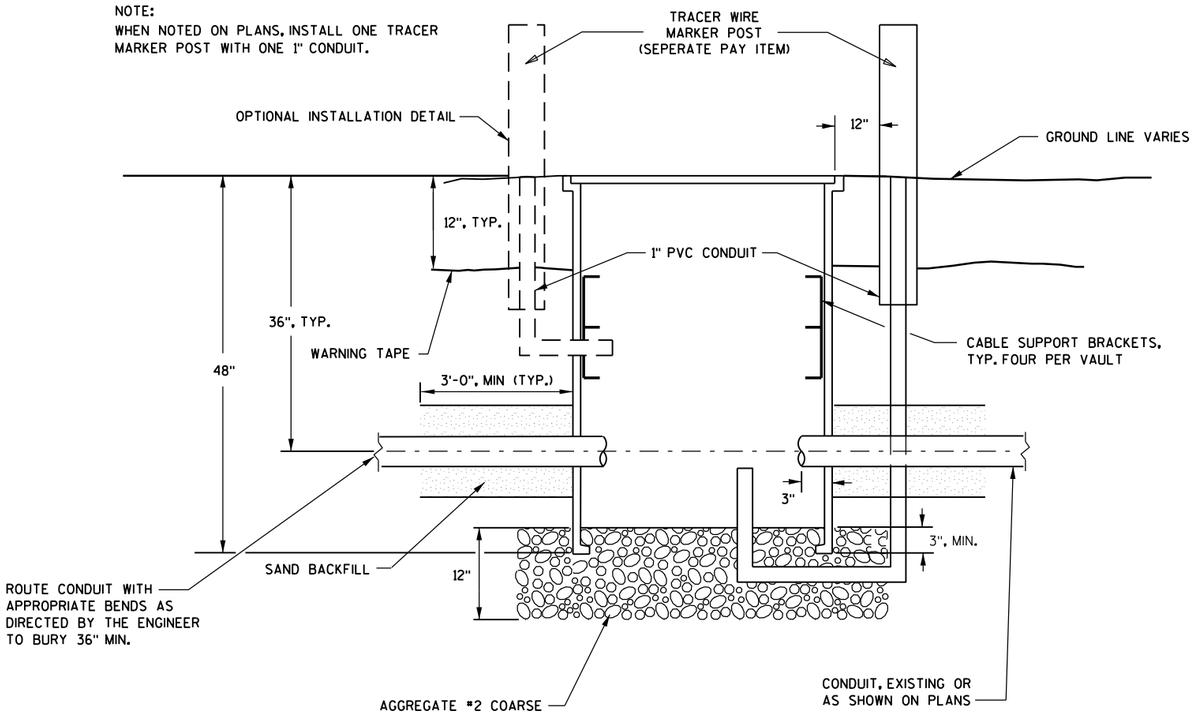
June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

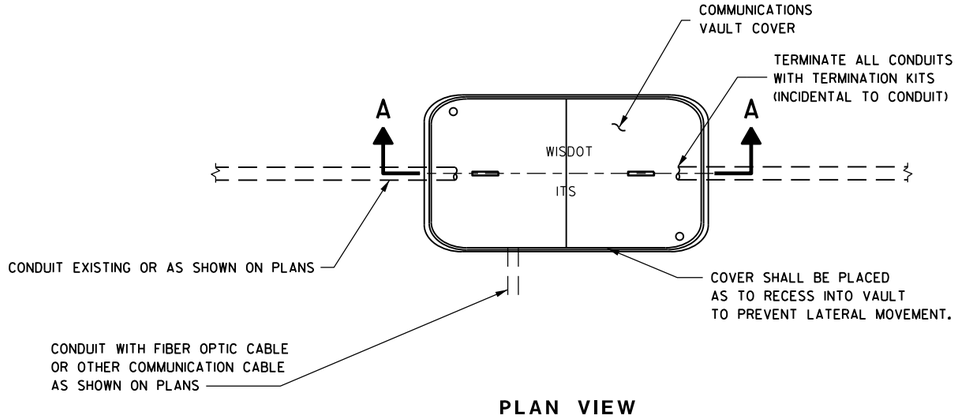
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SECTION A-A



PLAN VIEW

COMMUNICATIONS VAULT TYPE 1

GENERAL NOTES

PROVIDE VAULT WITH OPEN BASE.

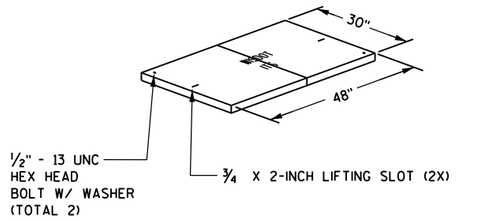
COVER SHALL HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

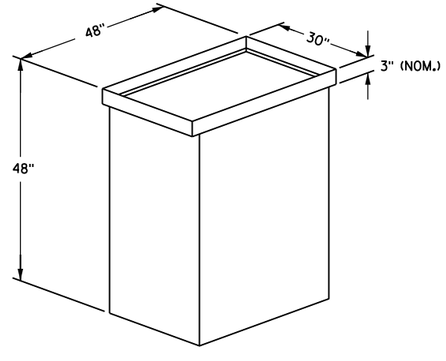
ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

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

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

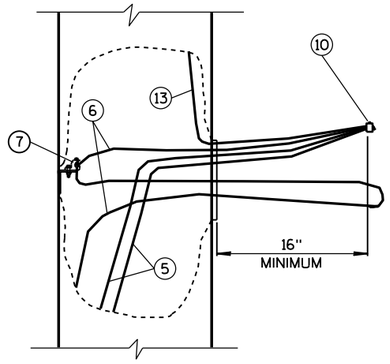
FIBER TRACER MARKER POSTS SHALL BE CONSTRUCTED WITH HIGH-IMPACT PLASTIC MATERIAL WHICH IS FADE RESISTANT AND UV STABLE. ALL HARDWARE SHALL BE STAINLESS STEEL AND CONTAIN A MINIMUM OF FIVE STANDARD TERMINALS.



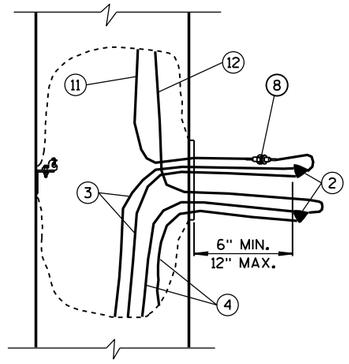


ISOMETRIC VIEW

COMMUNICATION VAULT TYPE 1
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED May, 2017 (DATE) /S/Ahmet Demirbilek STATE ELECTRICAL FHWA

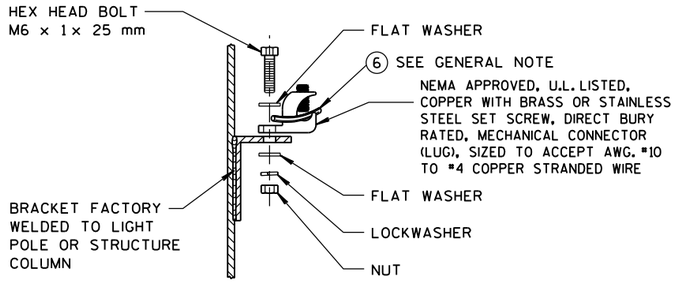


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



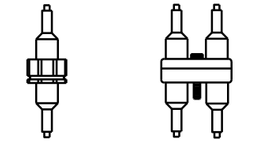
HANDHOLE GROUNDING LUG

(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.

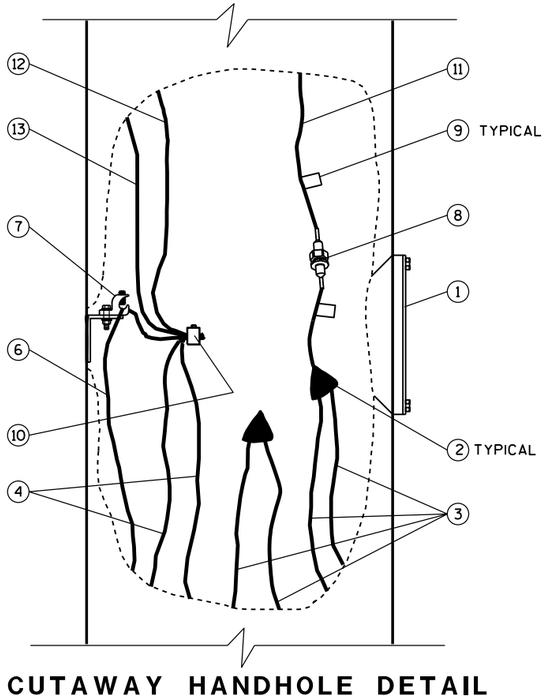
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

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.

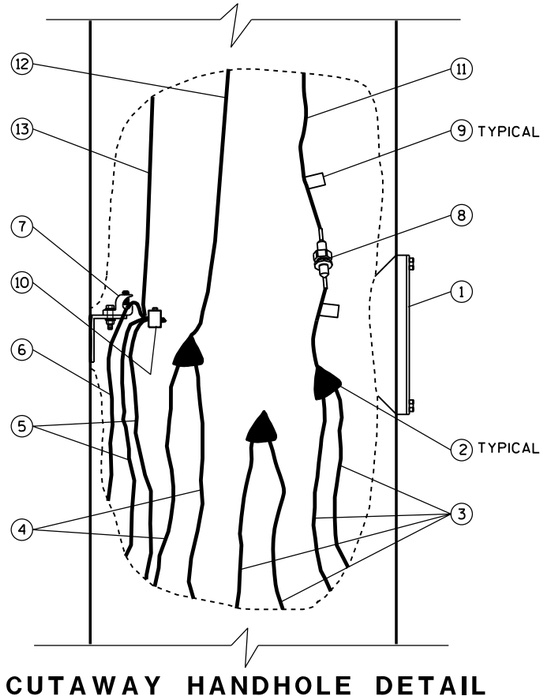
IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



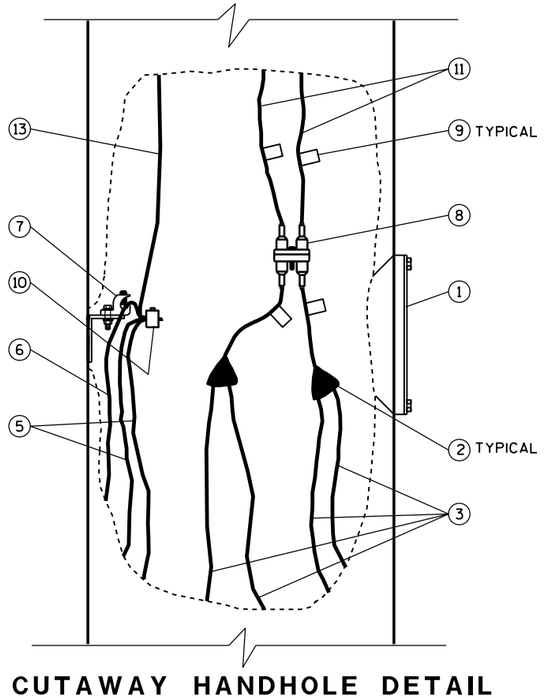
CUTAWAY HANDHOLE DETAIL

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

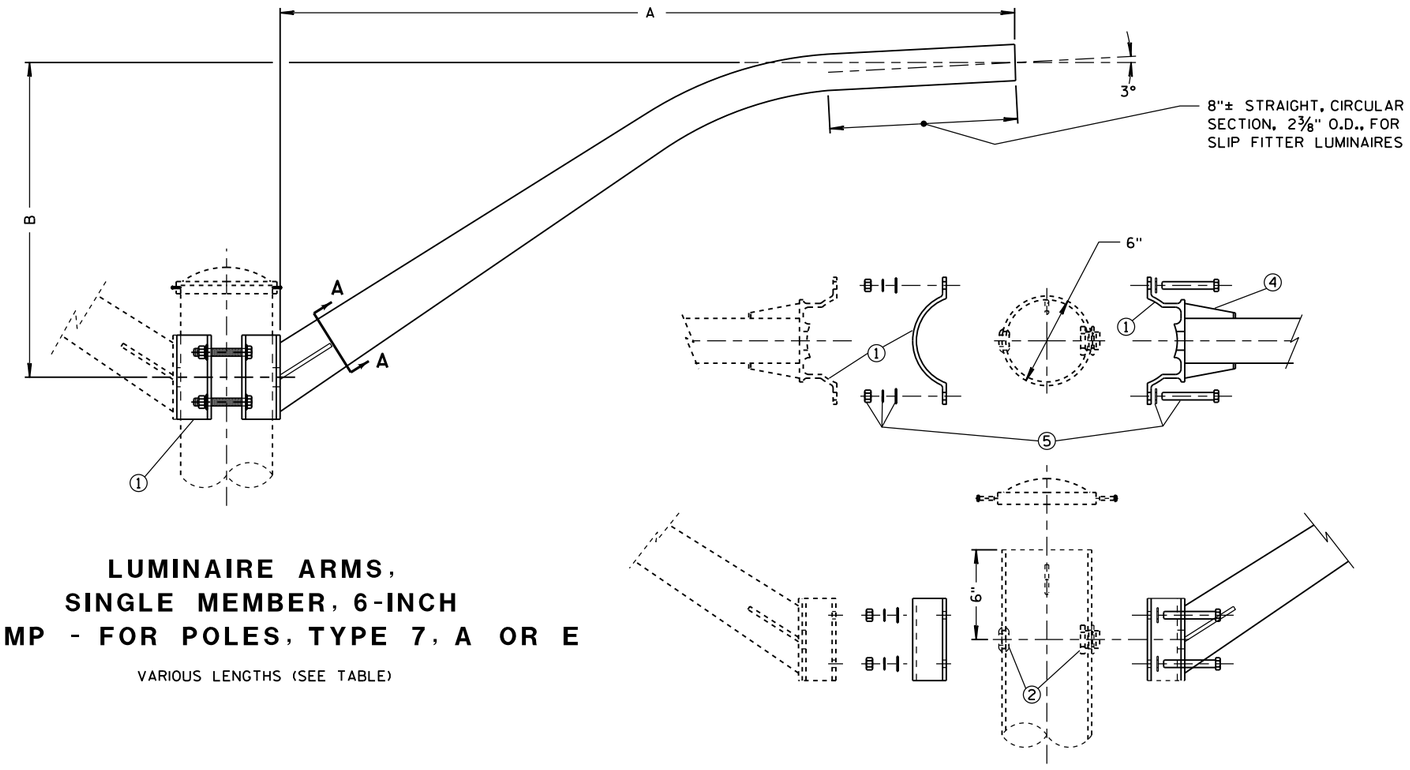
ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 10 A 1-3



LUMINAIRE ARMS, SINGLE MEMBER, 6-INCH CLAMP - FOR POLES, TYPE 7, A OR E

VARIOUS LENGTHS (SEE TABLE)

CLAMP ASSEMBLY

SINGLE MEMBER CLAMP SHOWN

TYPE	DIM. A NOMINAL ARM LENGTH (FT)	DIM. B APPROX. RISE (FT)
SINGLE MEMBER	4.0	2.0
SINGLE MEMBER	8.0	3.0
SINGLE MEMBER	10.0	3.0
SINGLE MEMBER	15.0	3.0

GENERAL NOTES

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

ARMS AND CLAMP EXTRUSIONS SHALL BE CONSTRUCTED OF NATURAL FINISH 6063-T6 ALUMINUM.

HEAT TREATMENT OF WELDS IN STRUCTURAL AREAS IS REQUIRED.

ALL THREADED FASTENER COMPONENTS SHALL BE STAINLESS STEEL. NUTS SHALL BE HEX NUTS. BOLTS SHALL BE HEX HEAD. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.

LUMINAIRE LOADING FOR DESIGN CALCULATION SHALL BE 50 LBS. IN WEIGHT AND 1.5 SQ. FT. FOR E.P.A..

① CLAMPS SHALL BE EXTRUDED ALUMINUM.

② RACE WAY: 1 3/8" FIELD DRILLED HOLE WITH 1" CHASE NIPPLE AND NUT (OR NEOPRENE GROMMET) PER EACH REQUIRED LUMINAIRE ARM. PROVIDE 1 1/2" HOLE IN CLAMP EXTRUSION TO CONTINUE RACEWAY.

③ STIFFENER

④ GUSSETS REQUIRED.

⑤ CLAMP BOLT ASSEMBLY (BOLT - 1/2"-13 UNC, 2 EACH - FLAT WASHER, LOCK WASHER, NUT) - 4 EACH PER CLAMP.

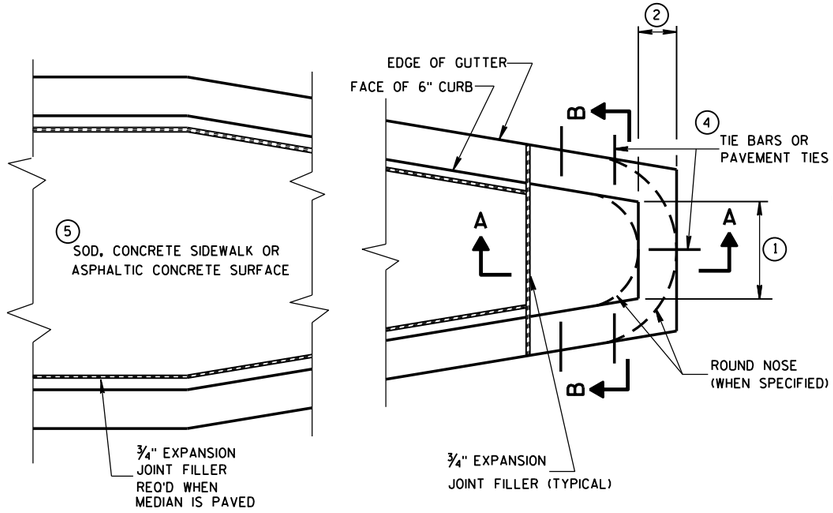
LUMINAIRE ARMS, SINGLE MEMBER 6-INCH CLAMP

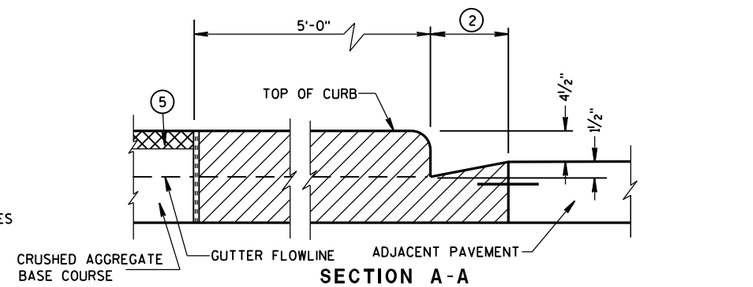
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

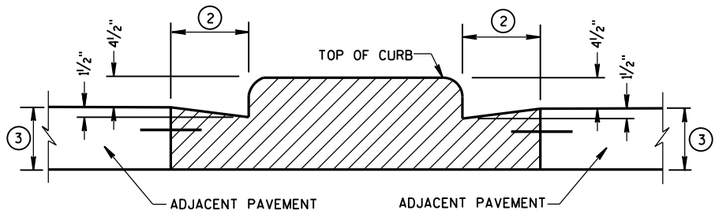
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Sept. 2014 — DATE
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S.D.D. 10 A 18-5a







CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

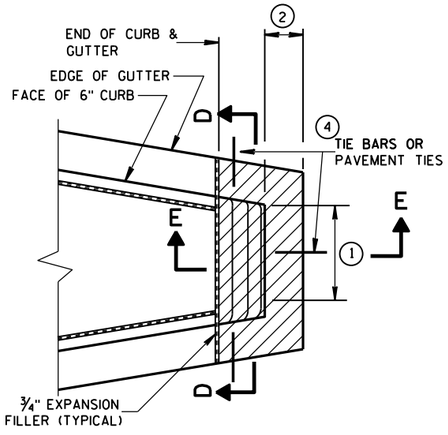
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

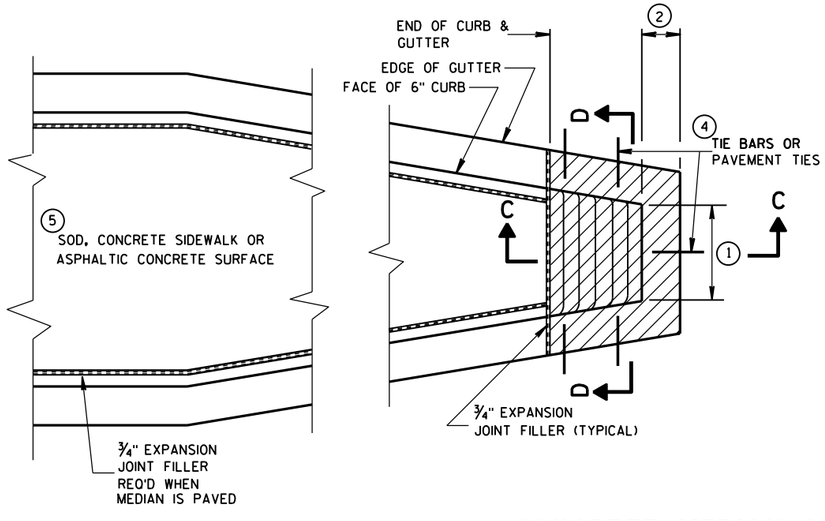
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

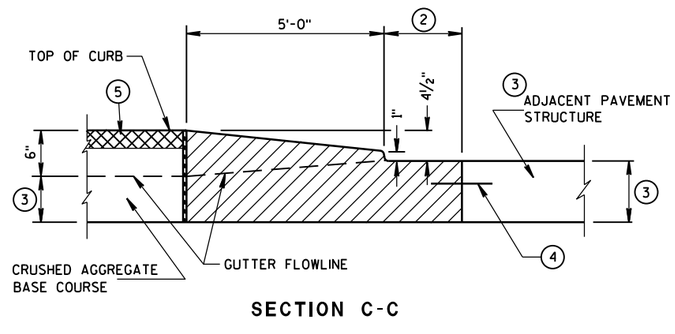
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

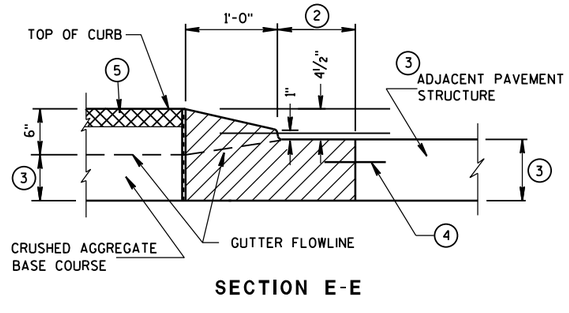
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

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



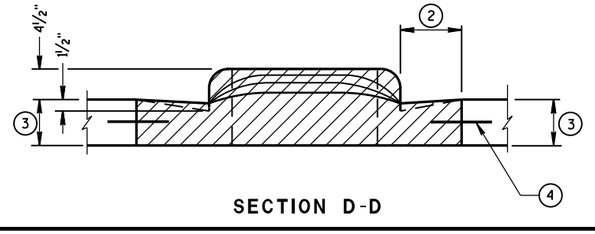






CONCRETE MEDIAN SLOPED NOSE TYPE 2

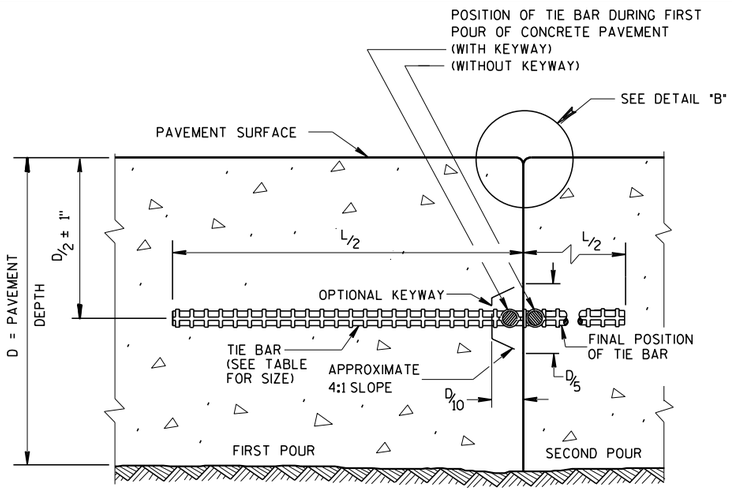
CONCRETE MEDIAN SLOPED NOSE TYPE 1



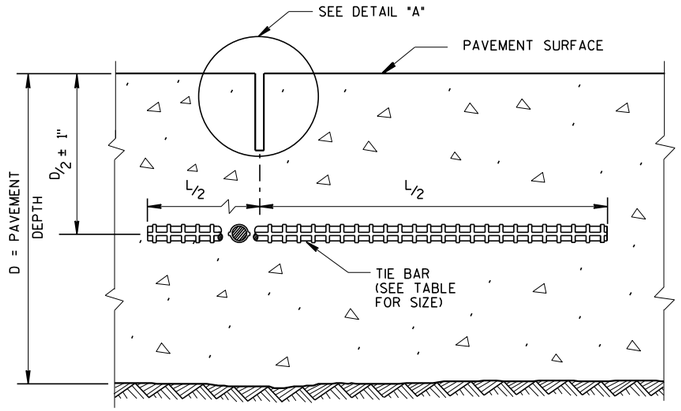
CONCRETE MEDIAN NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE FHWA	/S/ Jerry H. Zogg ROADWAY STANDARDS D ENGINEER

6

S.D.D. 11 B 2-2



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

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

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

DETAIL "C"

TIE BAR TABLE

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

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

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

PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

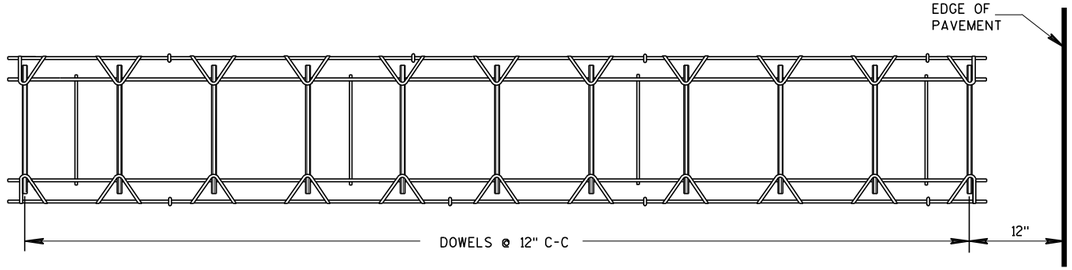
APPROVED
March 2018
DATE
/S/ Peter Kemp PE
PAVEMENT SUPE
FHWA

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S.D.D. 13 C 1-19

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S.D.D. 13 C 1-19

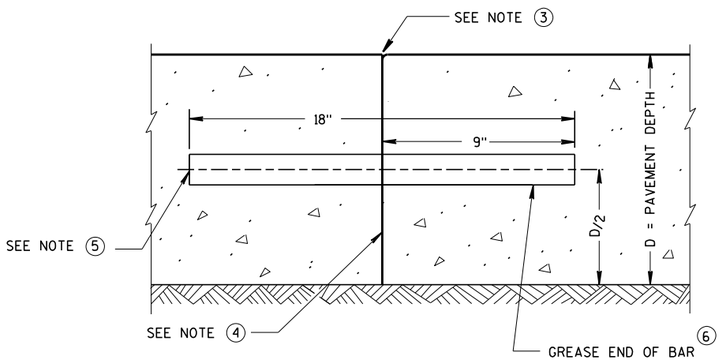


PLAN VIEW

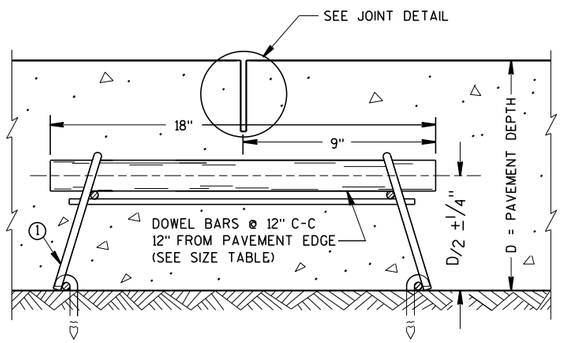


SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



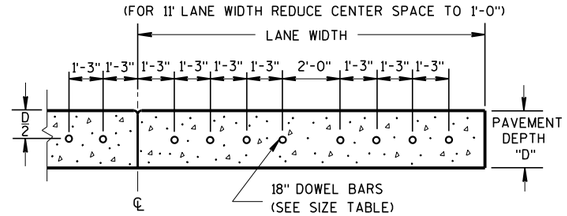
TRANSVERSE CONSTRUCTION JOINT



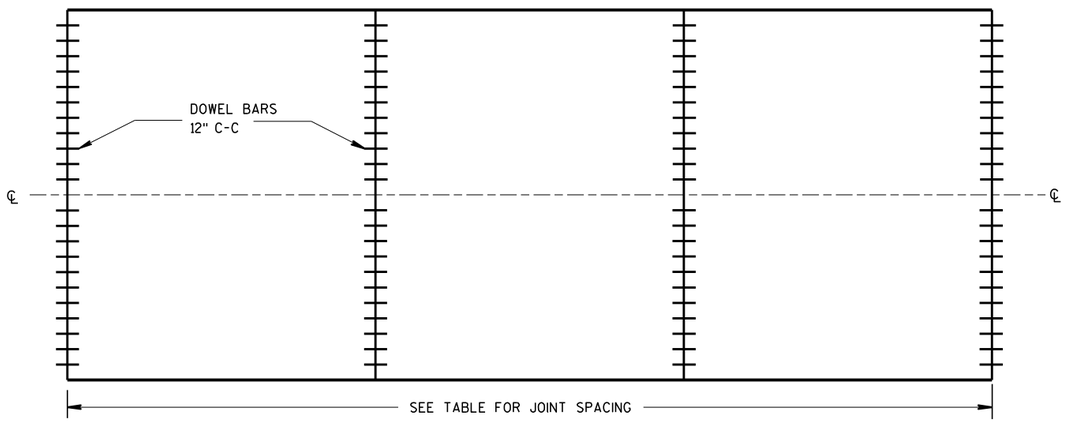
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

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

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

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

CONSTRUCTION JOINTS

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

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

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

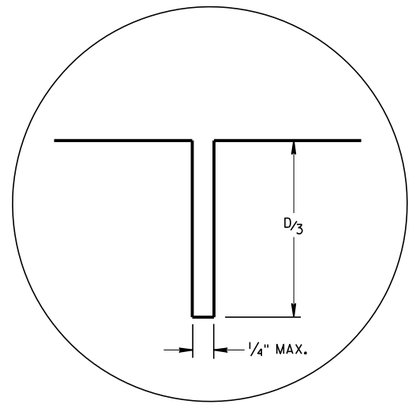
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

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

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

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

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



JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

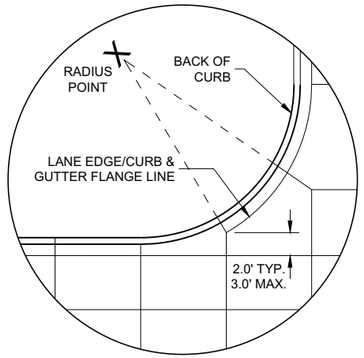
APPROVED
March 2018 — DATE
/S/ Peter Kemp P.E. — PAVEMENT SUP
328
FHWA

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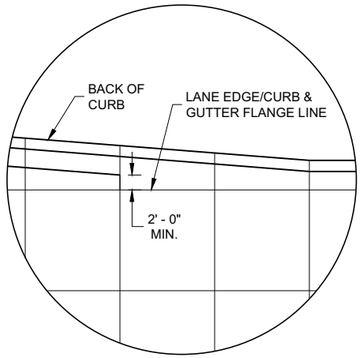
S.D.D. 13 C 13-9

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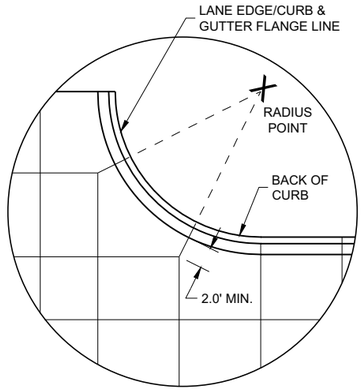
S.D.D. 13 C 13-9



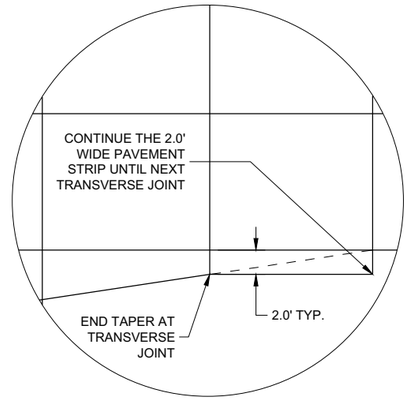
DETAIL "A"



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.

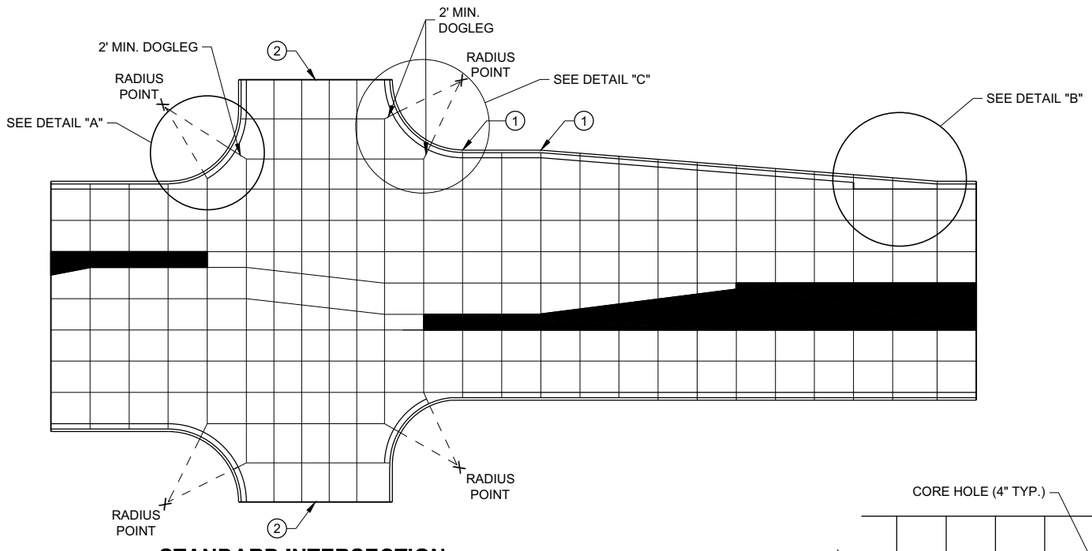
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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.

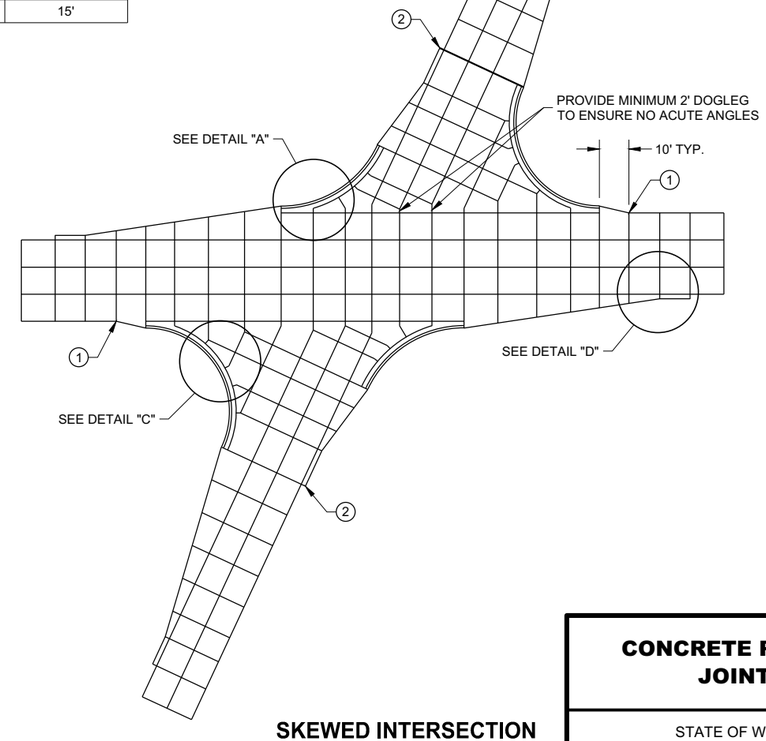
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITHEDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM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



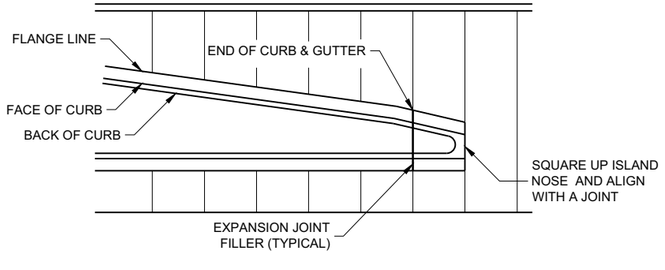
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

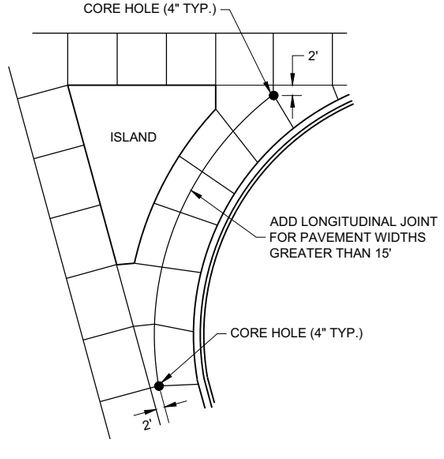
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C18 - 07a

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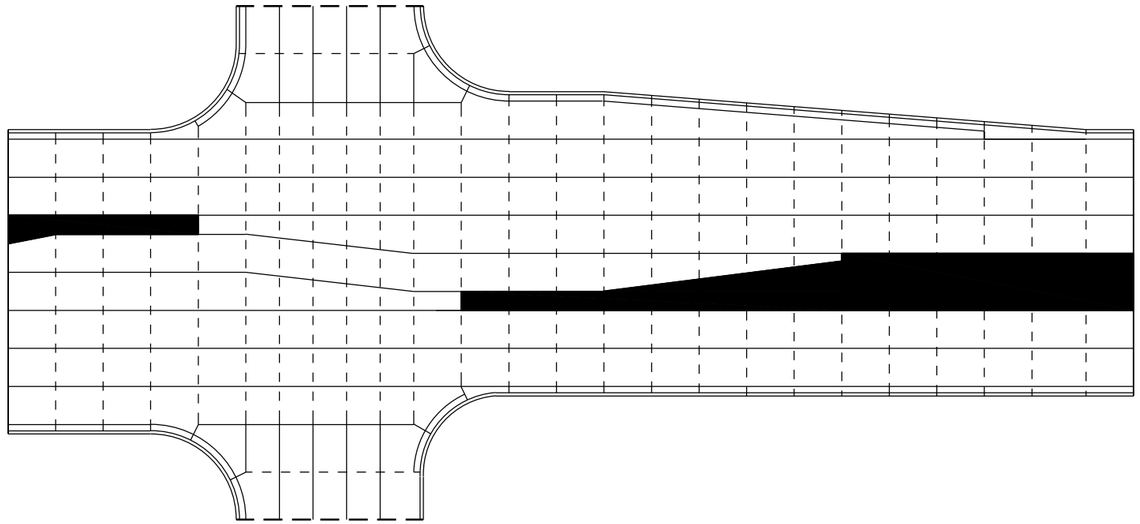
SDD 13C18 - 07a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

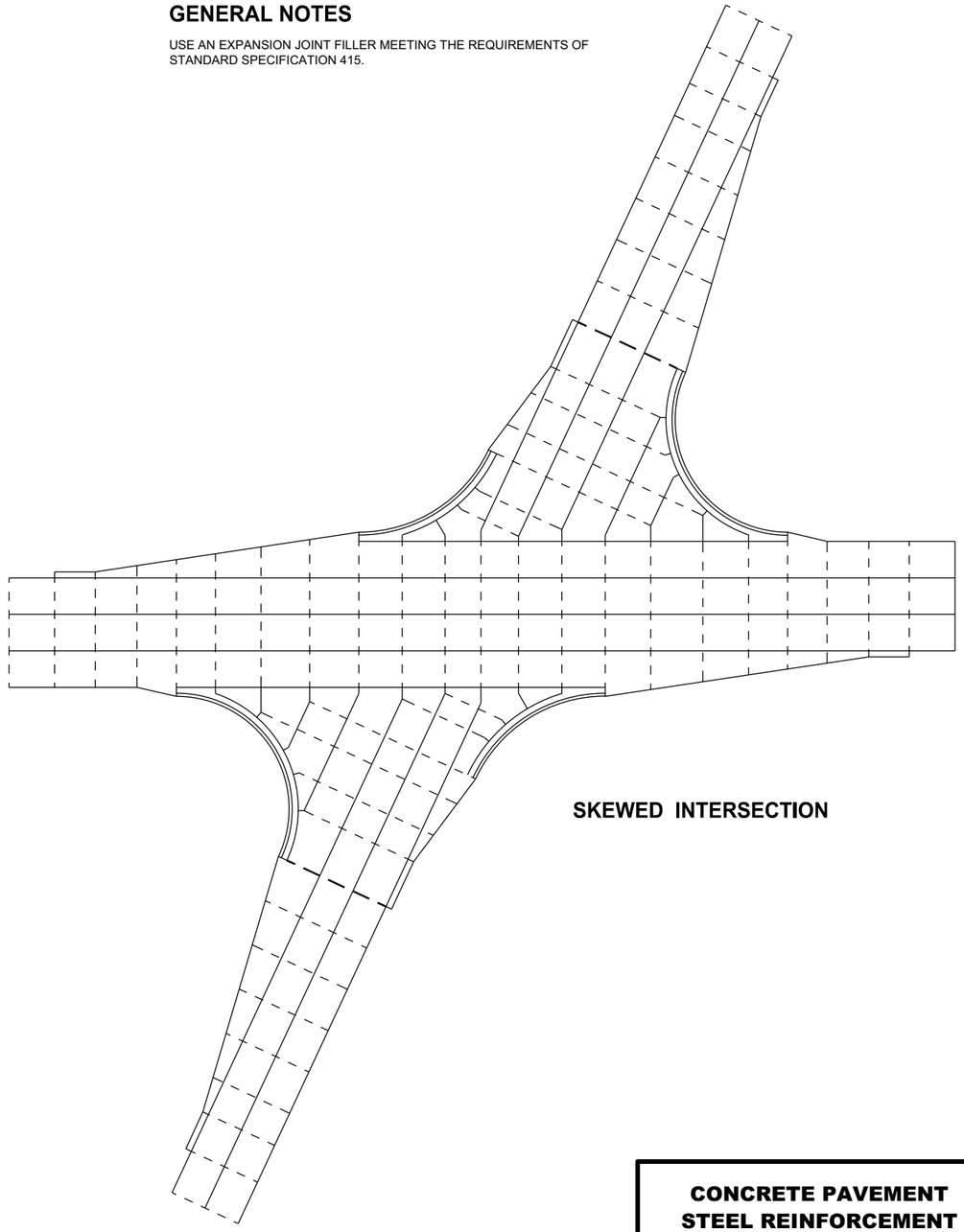
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

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



SKEWED INTERSECTION

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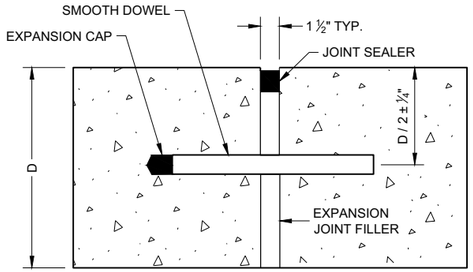
SDD 13C18 - 07b

CONCRETE PAVEMENT STEEL REINFORCEMENT

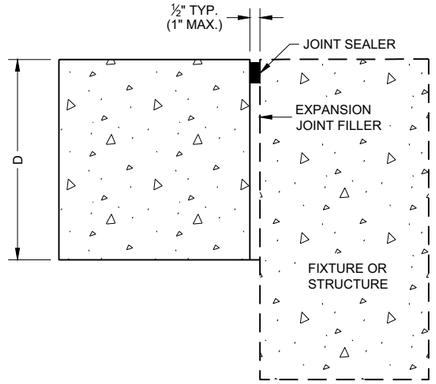
STATE OF WISCONSIN
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SDD 13C18 - 07b



DOWELED TRANSVERSE (1)



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

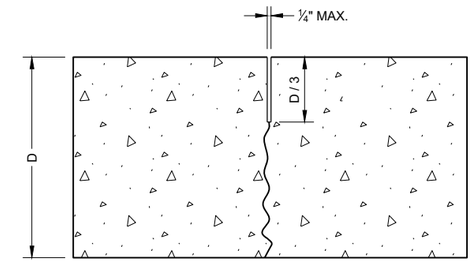
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

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

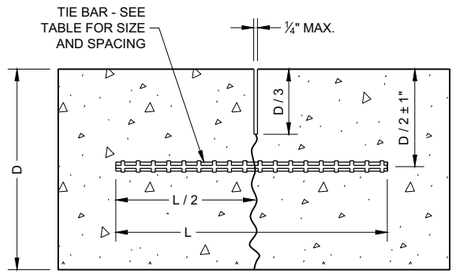
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

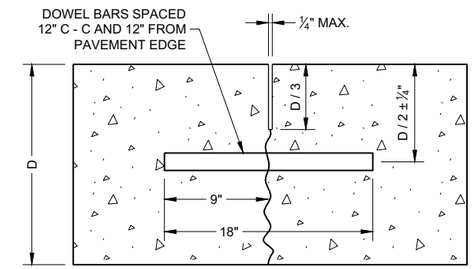
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A ¼" RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



UNDOWELED TRANSVERSE

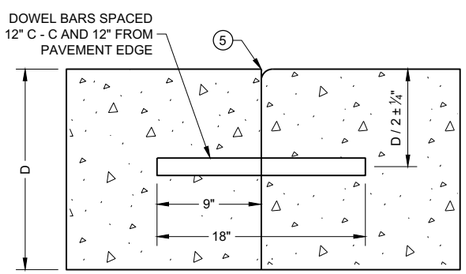


TIED LONGITUDINAL

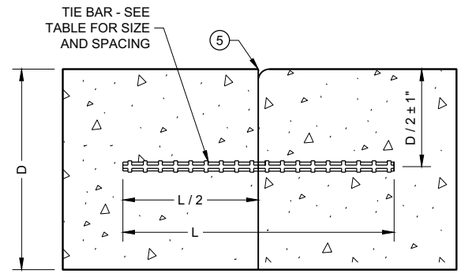


DOWELED TRANSVERSE

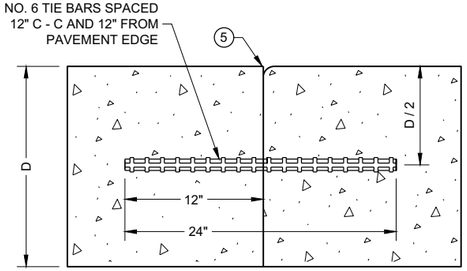
CONTRACTION JOINTS (2)



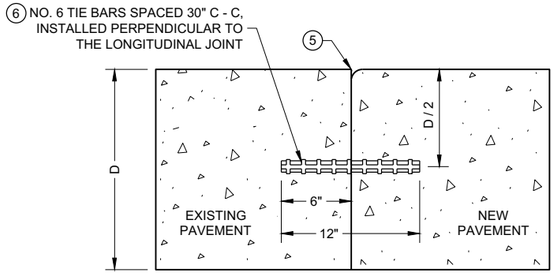
DOWELED TRANSVERSE (3)



TIED LONGITUDINAL



TIED TRANSVERSE (3)
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

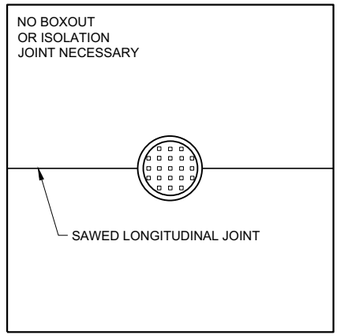
CONSTRUCTION JOINTS (4)

CONCRETE PAVEMENT JOINT TYPES

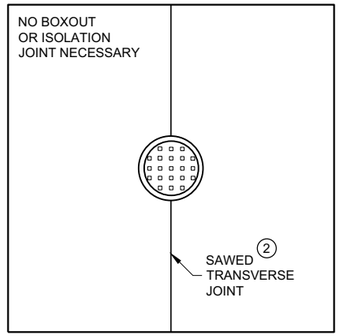
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

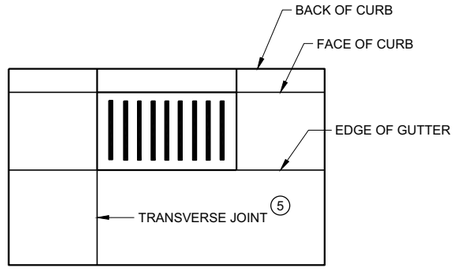
SDD 13C18 - 07c
SDD 13C18 - 07c



MANHOLE WITH LONGITUDINAL JOINT



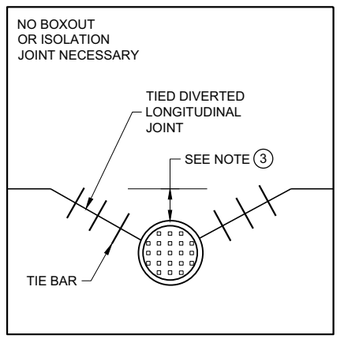
MANHOLE WITH TRANSVERSE JOINT



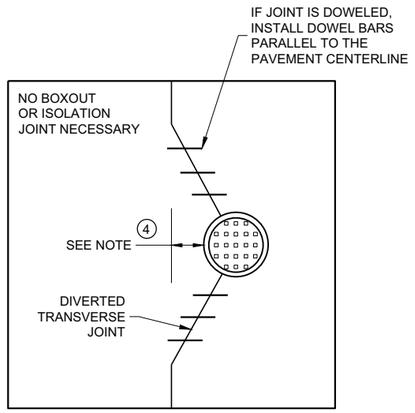
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

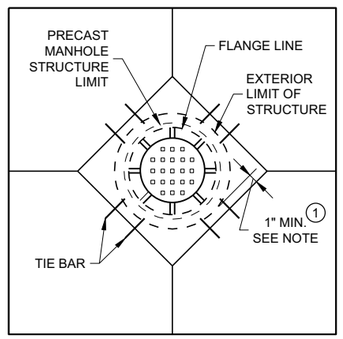
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
4. IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
5. ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT



DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

6

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

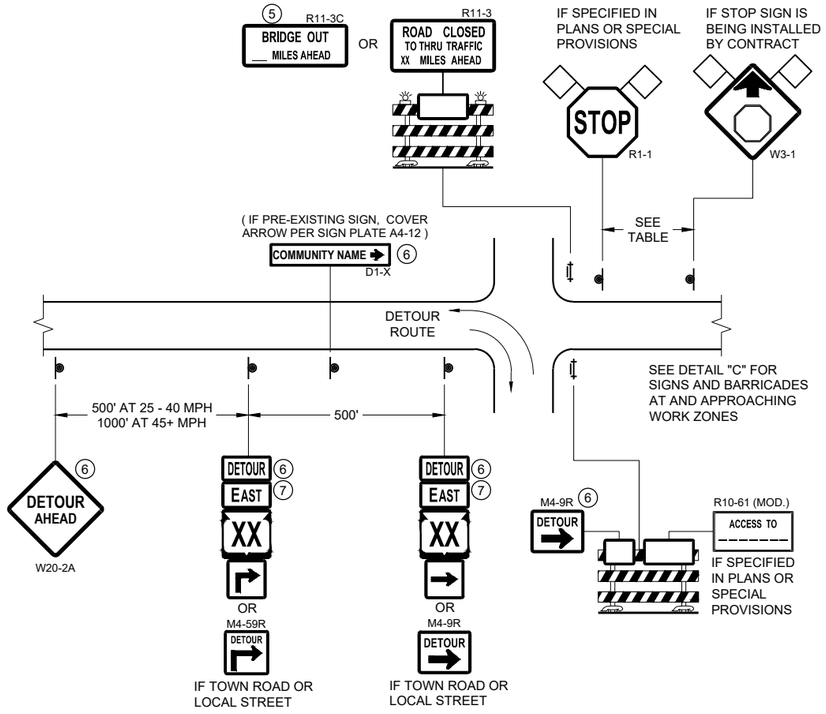
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

FHWA

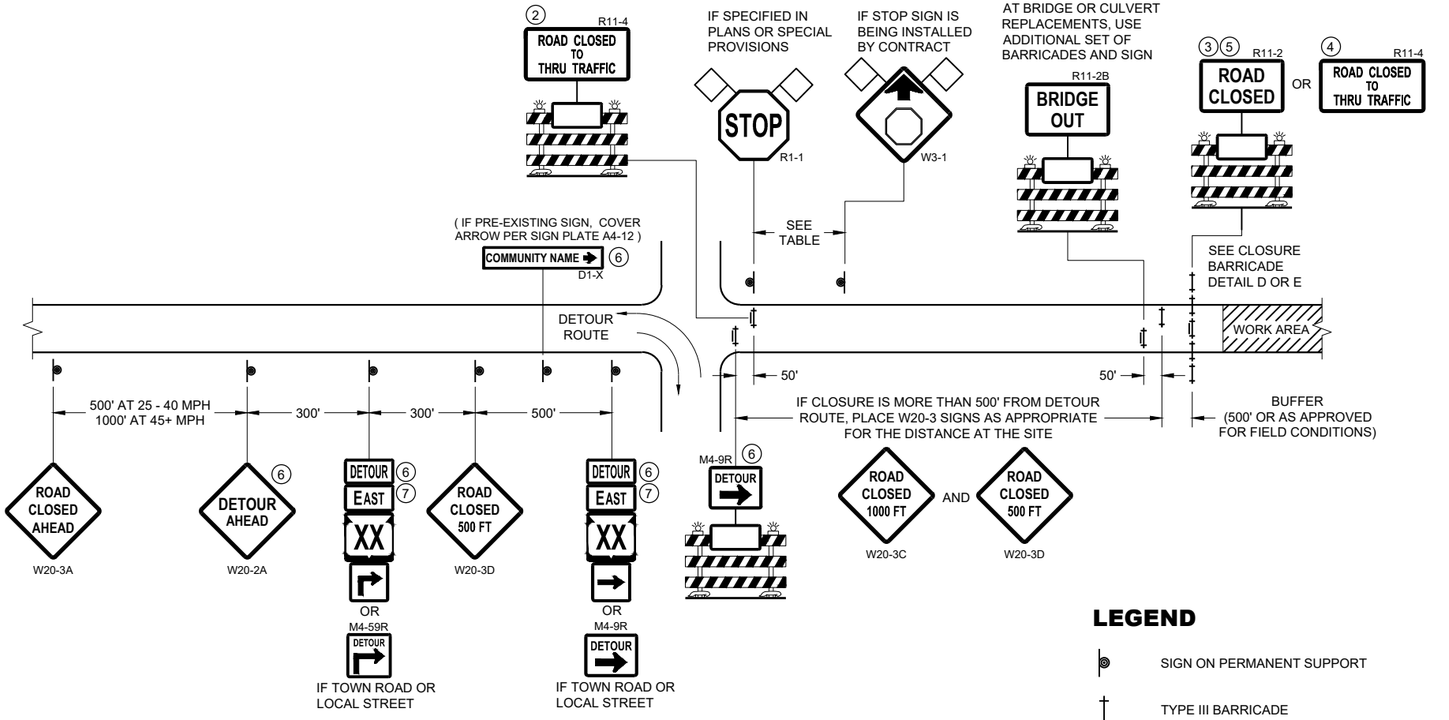
SDD13C18 - 07d

SDD13C18 - 07d



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



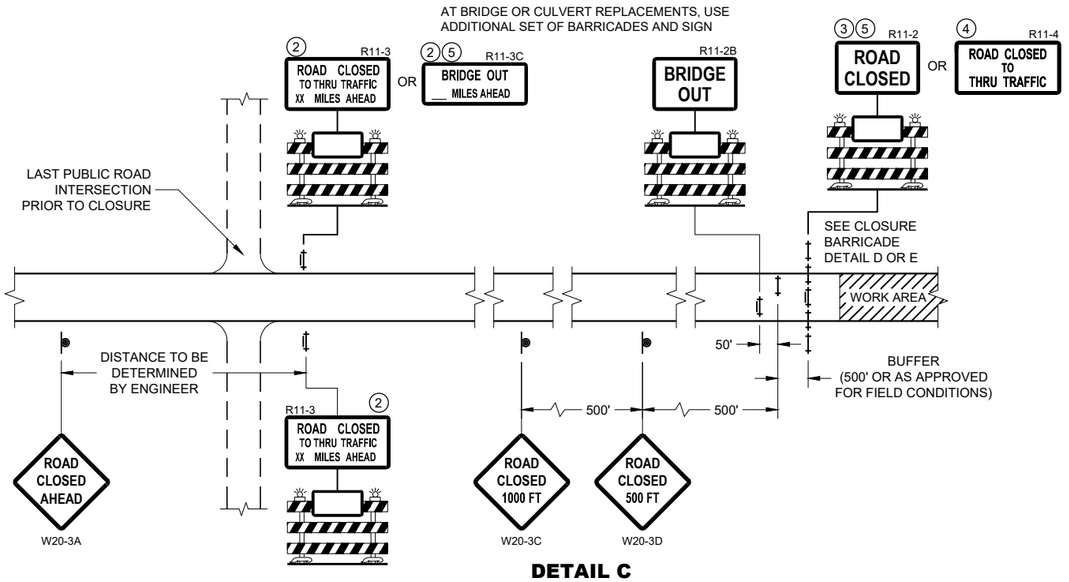
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

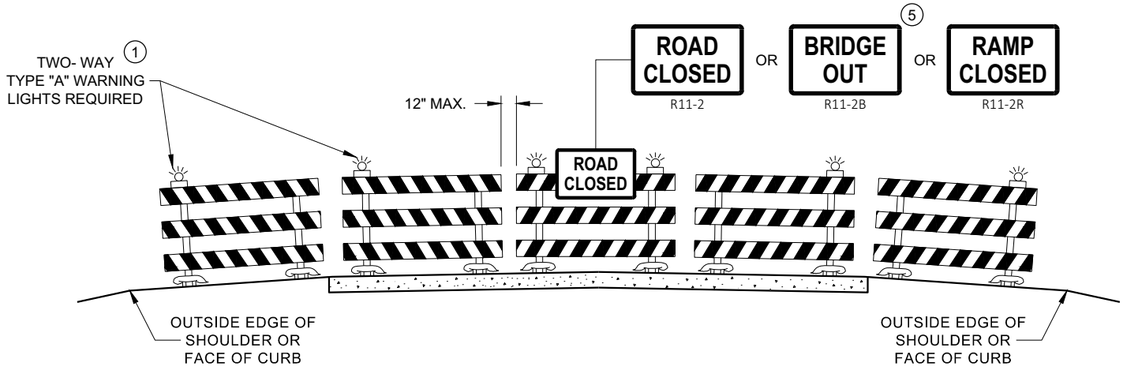
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

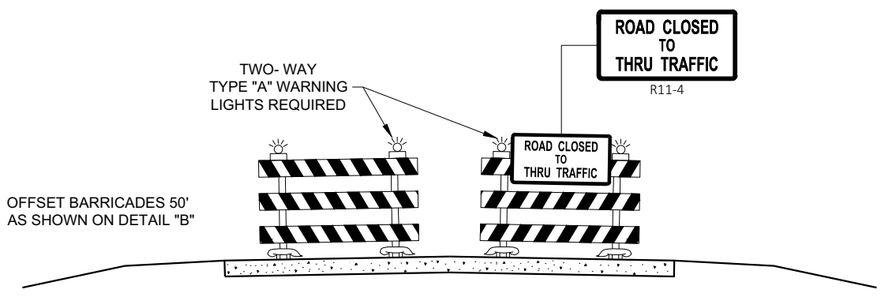
6

SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- 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 AN 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 ROAD 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 VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C02 - 08b

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

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

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

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

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

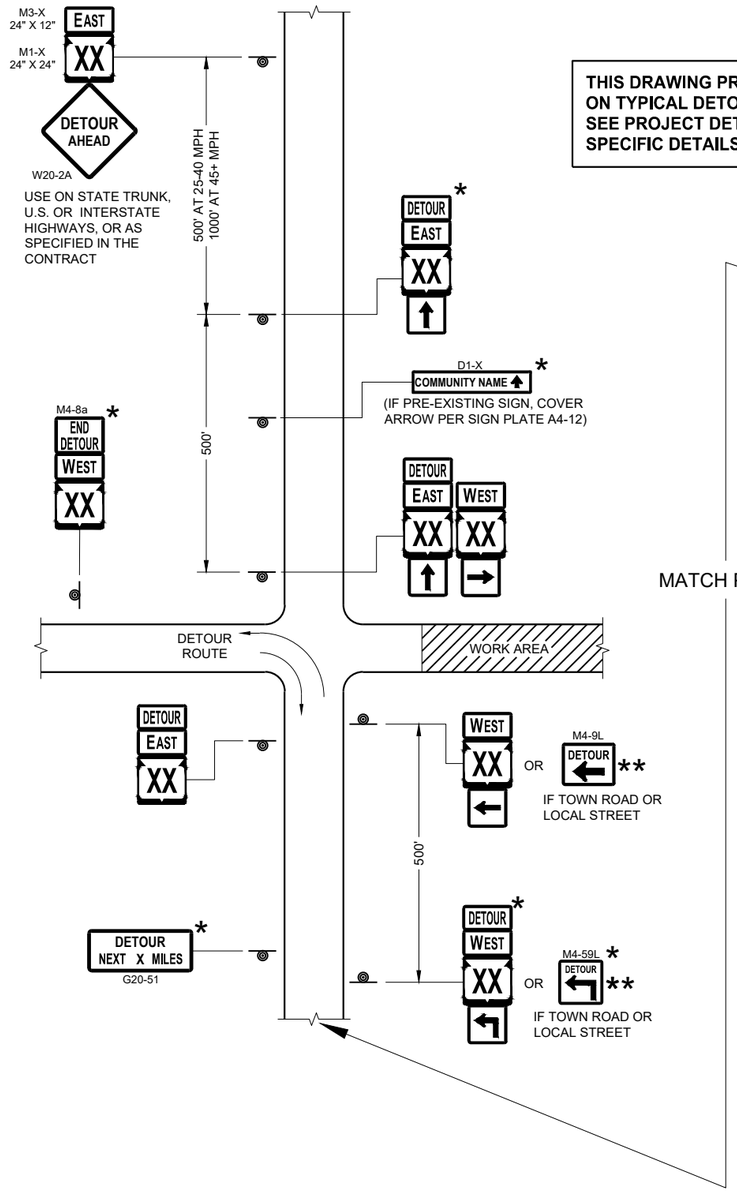
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

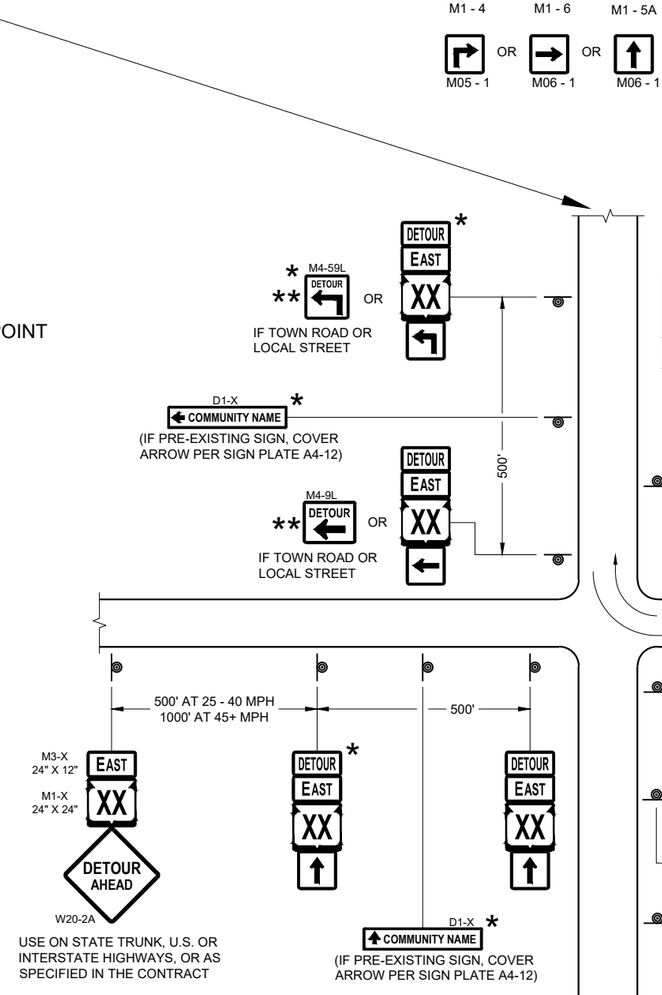
SIGN SIZES SHALL BE AS FOLLOWS:

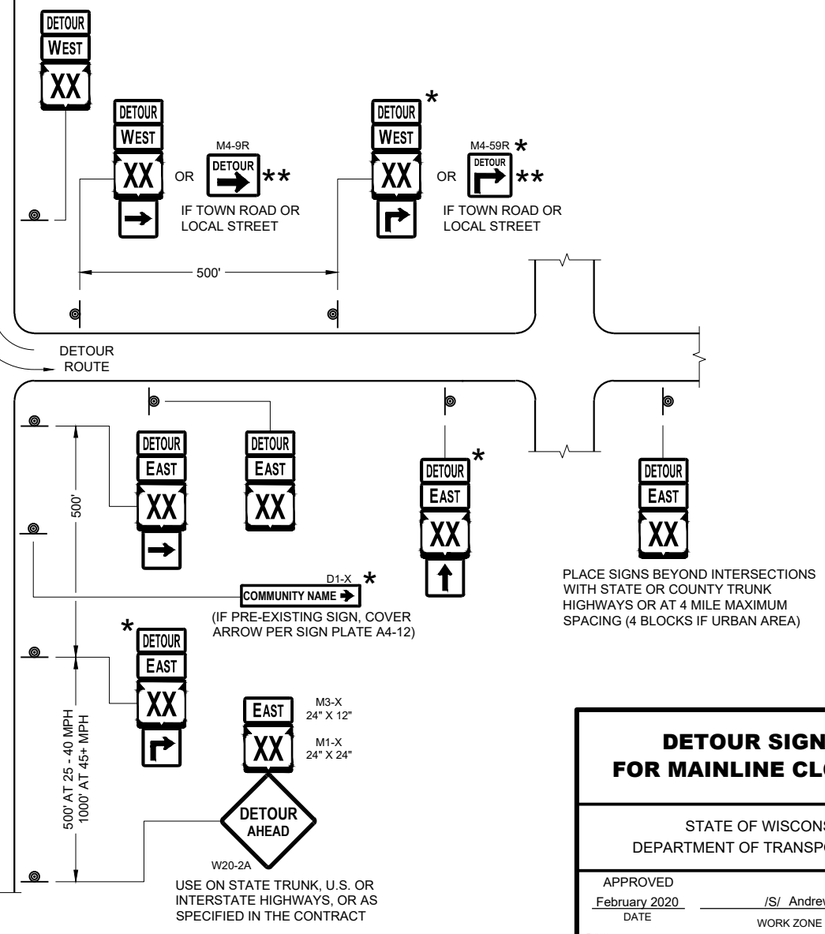
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A 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.







SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

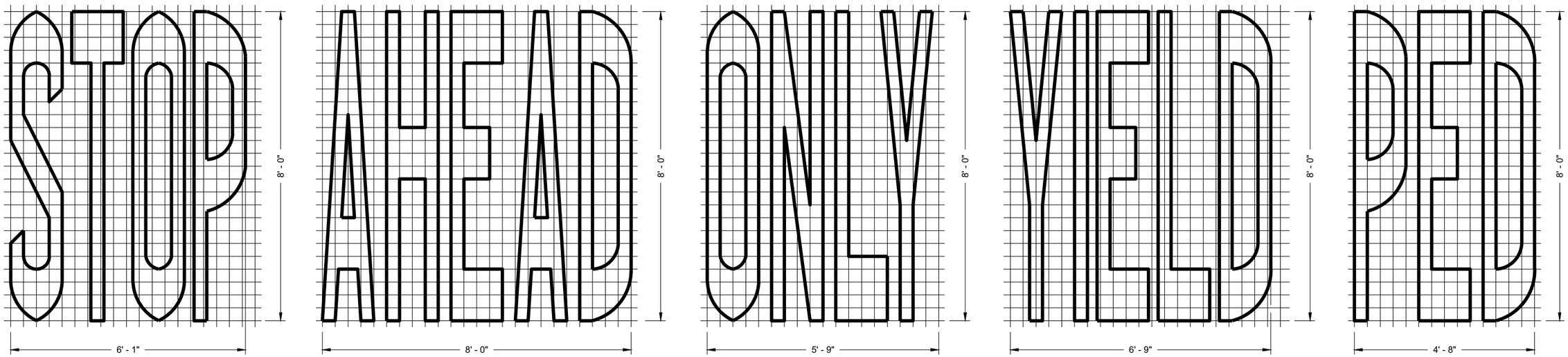
/S/ Andrew Heidtke
WORK ZONE ENGINEER

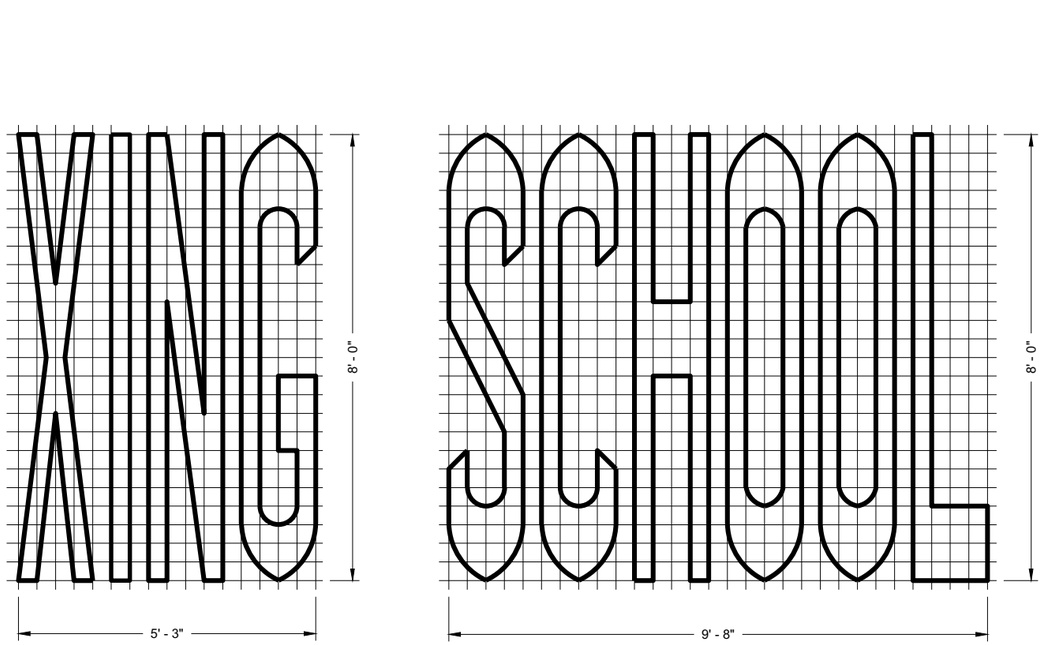
FHWA

SDD 15C02 - 08c

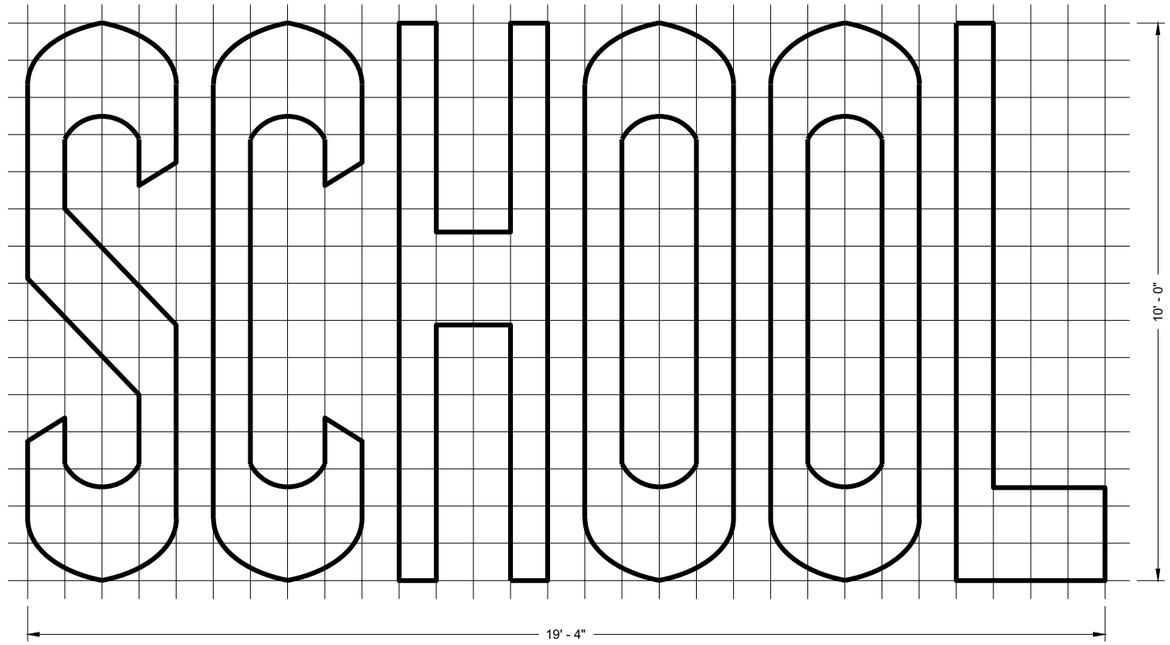
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SDD 15C02 - 08c





SINGLE LANE



TWO - LANE

GENERAL NOTES

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

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

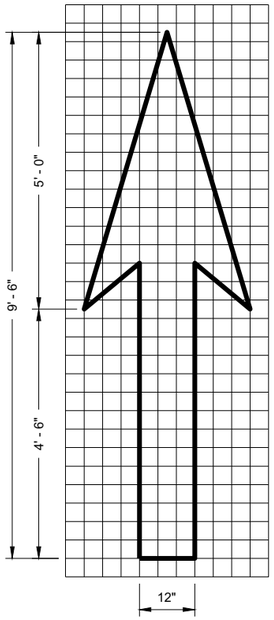
FHWA

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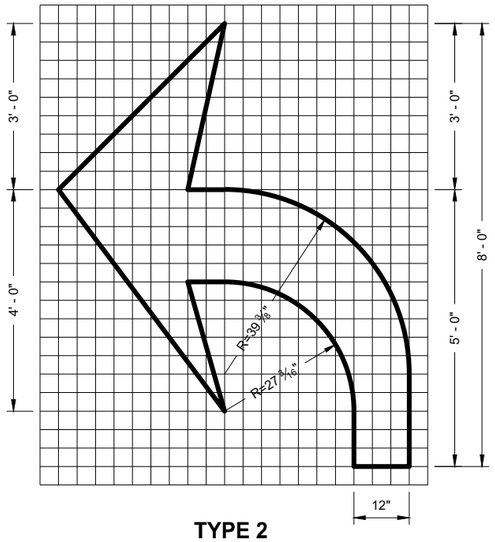
SDD 15C07 - 15b

GENERAL NOTES

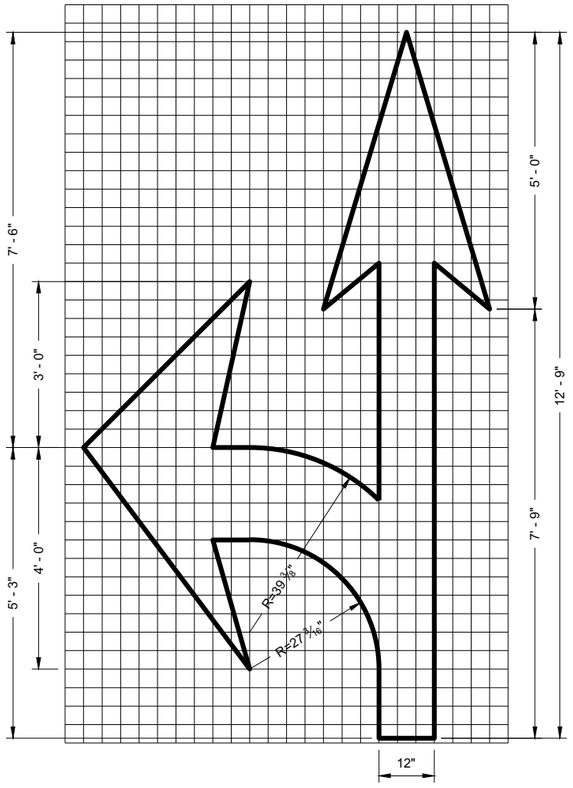
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



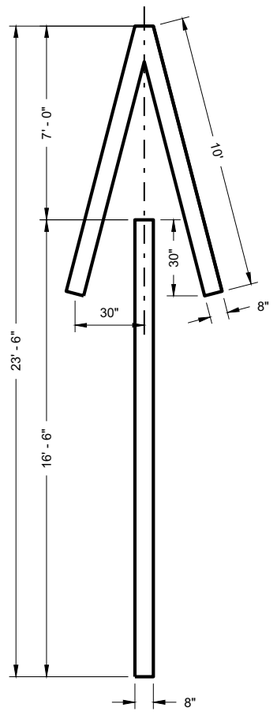
TYPE 1



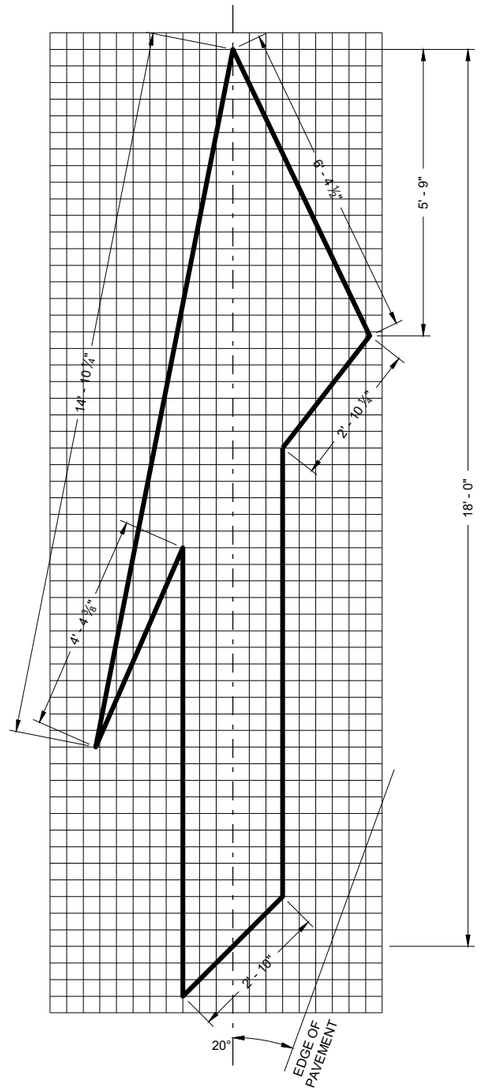
TYPE 2



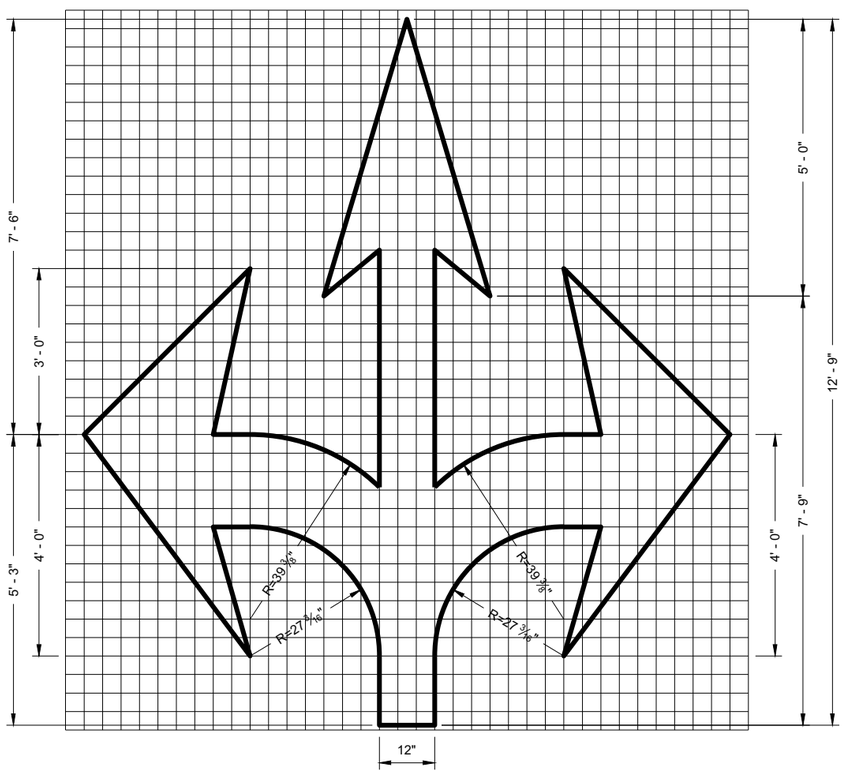
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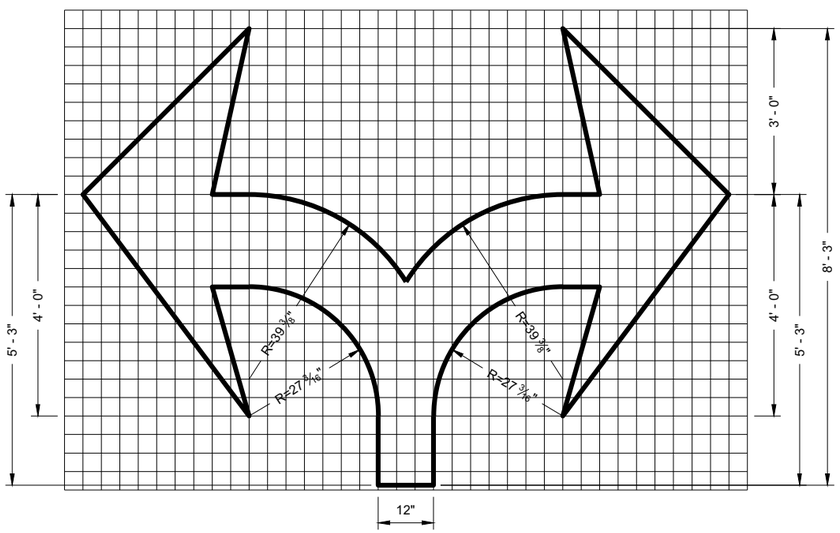
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER

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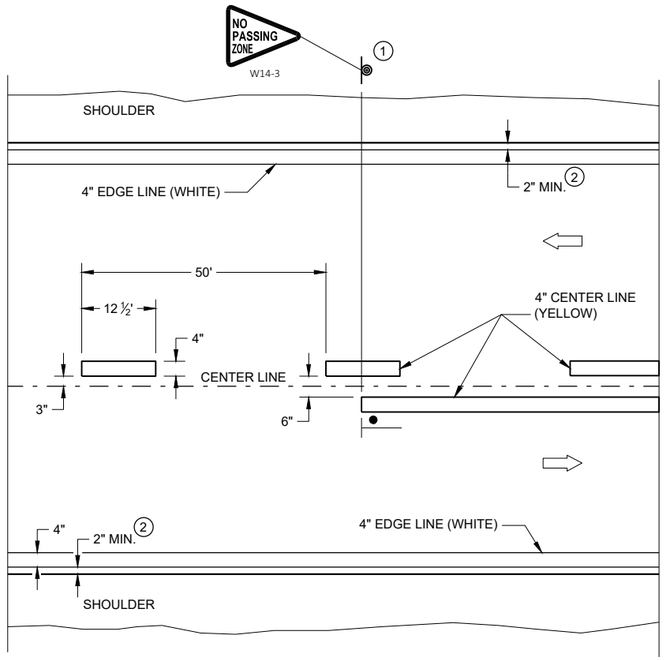
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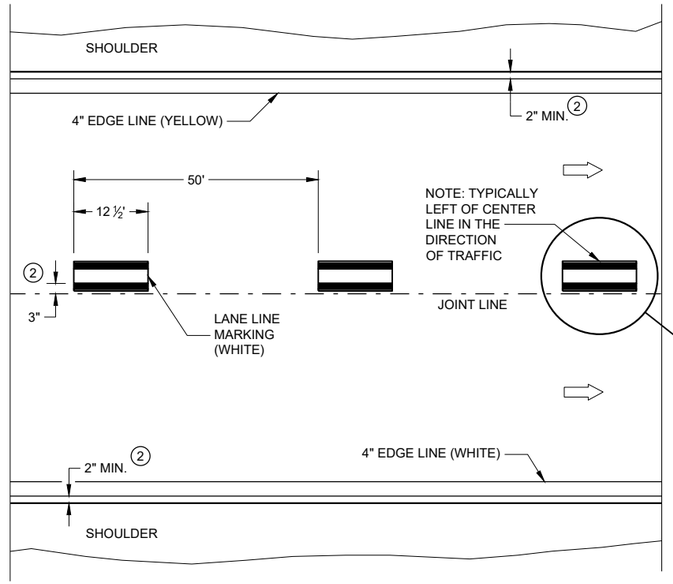
SDD 15C07 - 15c

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SDD 15C07 - 15c

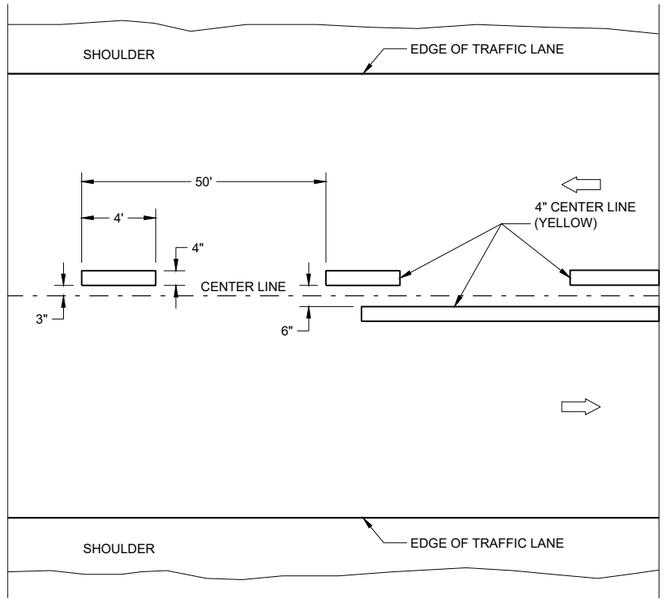


TWO WAY TRAFFIC

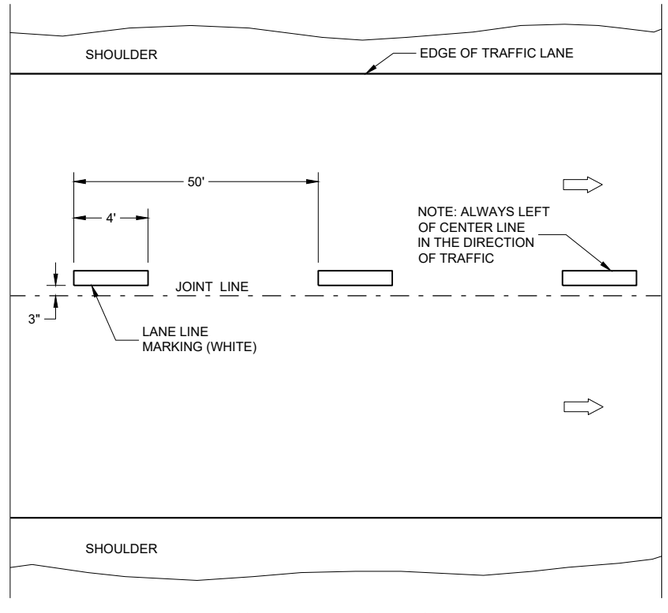


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

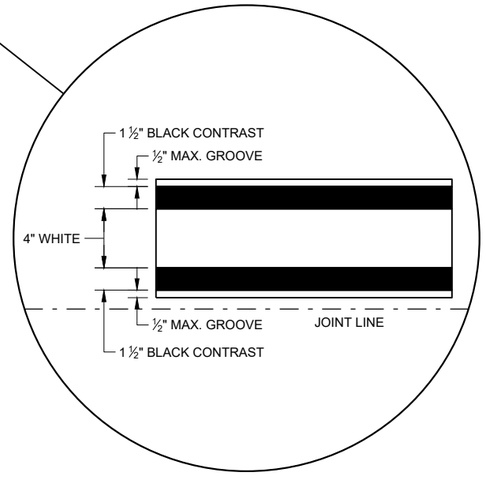
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Matthew Rauch — STATEWIDE SIGNING AND M ENGINEER

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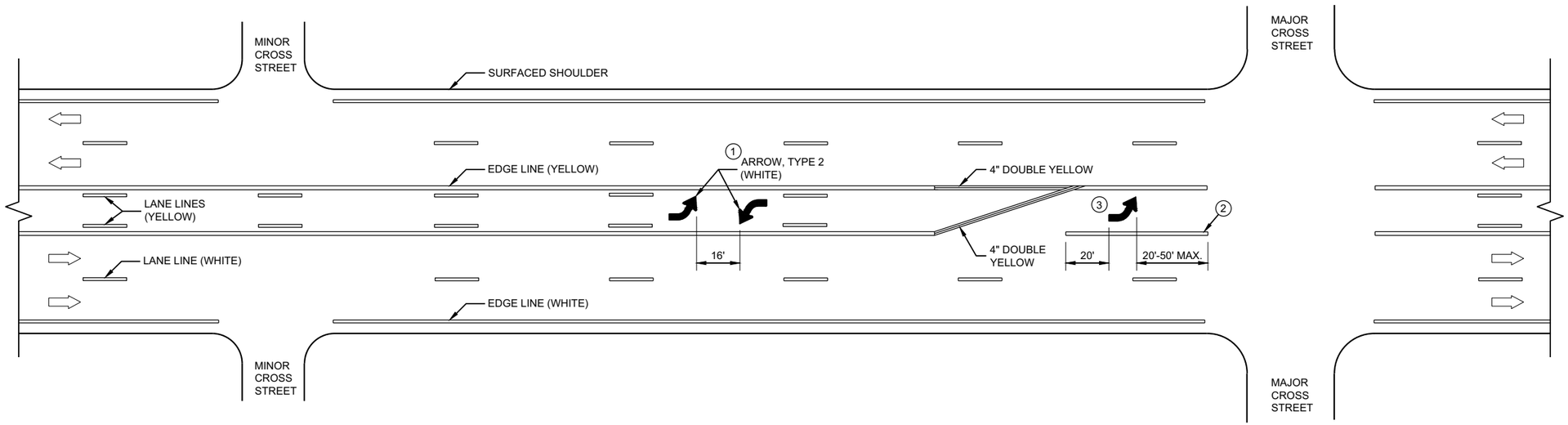
SDD 15C08 - 20a

6

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 8" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (TURN LANES)

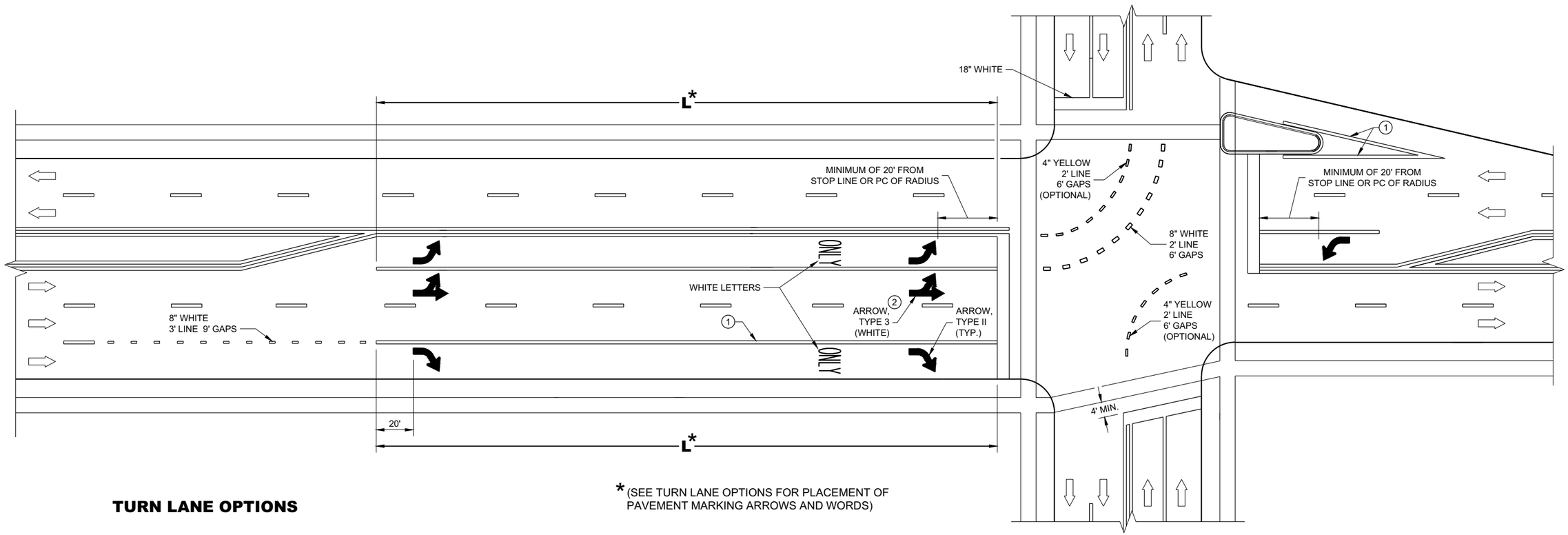
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C08 - 20b

6

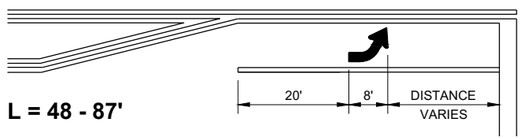
SDD 15C08 - 20b



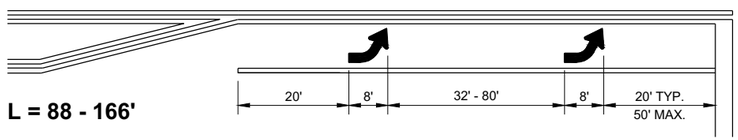
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

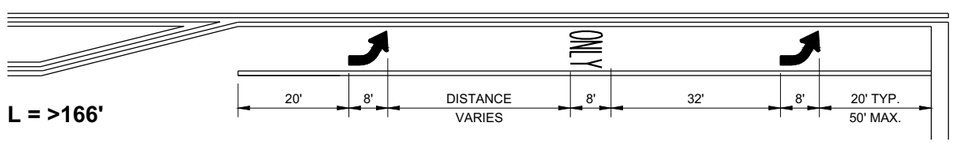
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

1. 8" WHITE
2. QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

DIRECTION OF TRAFFIC

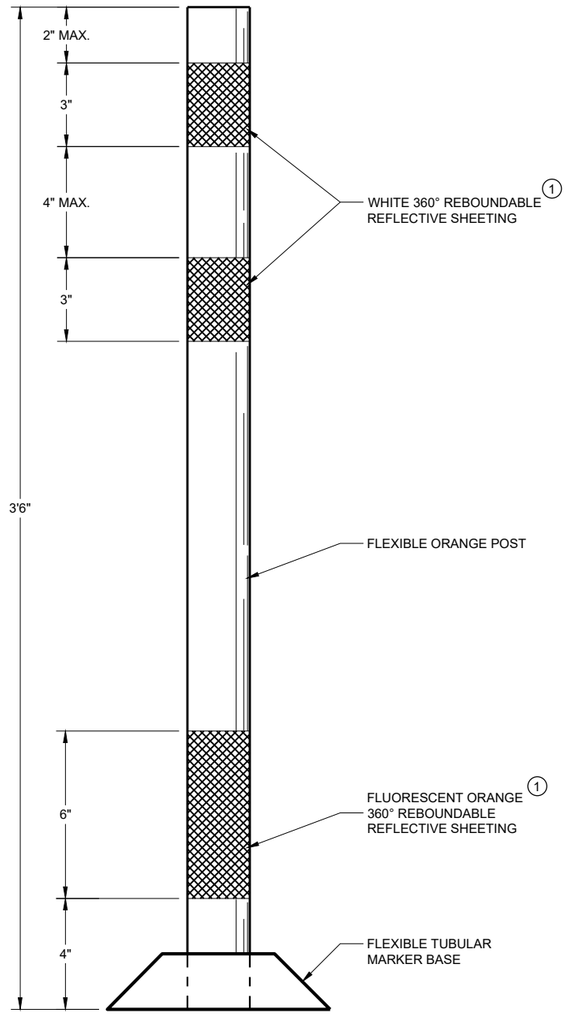
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C08 - 20c



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

6

SDD 15C11 - 09a

CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

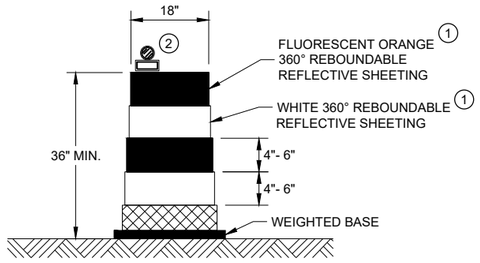
APPROVED
May 2021 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

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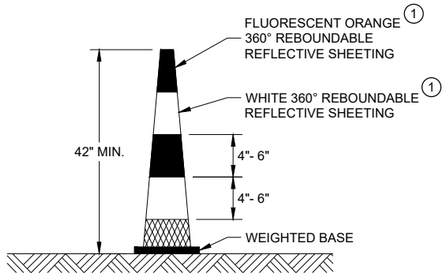
SDD 15C11 - 09a

GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

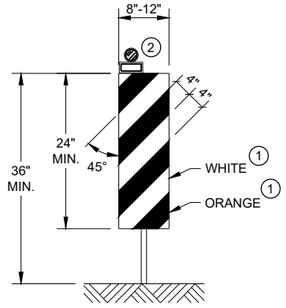


DRUM



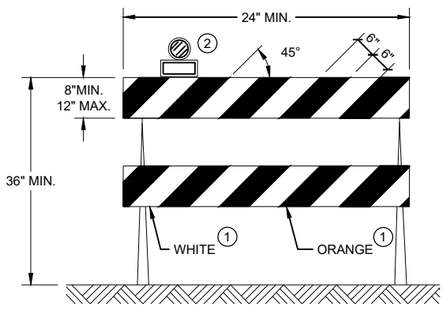
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



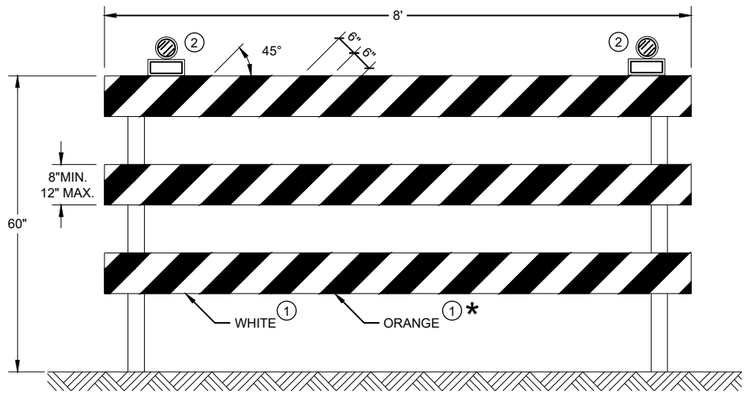
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C11 - 09b

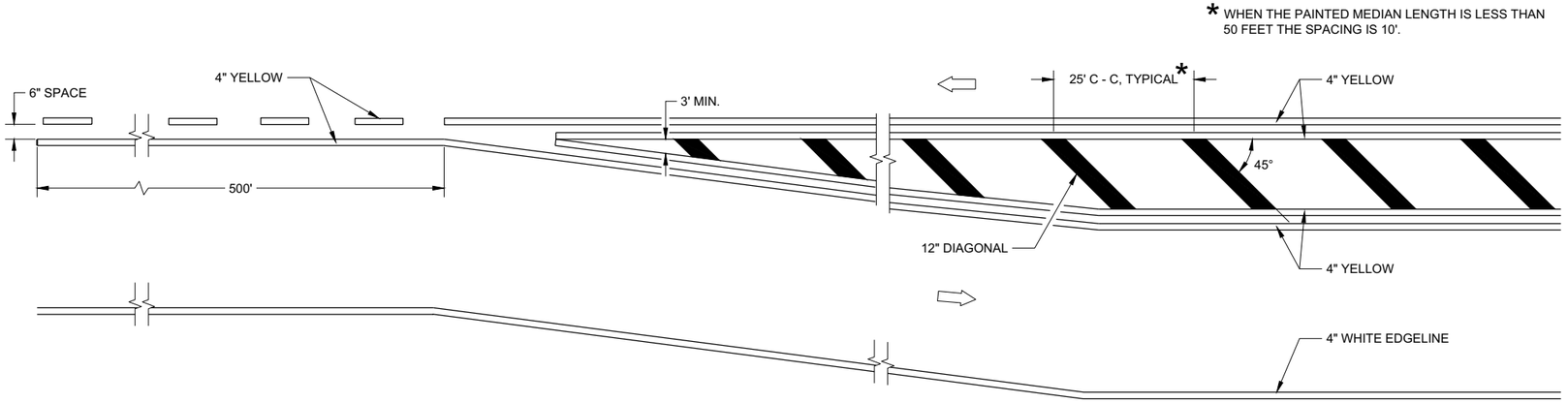
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SDD 15C11 - 09b

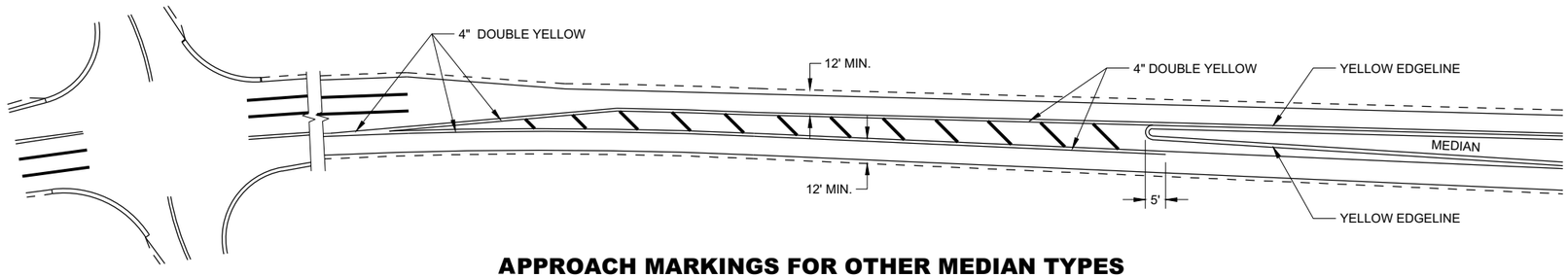
GENERAL NOTES

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

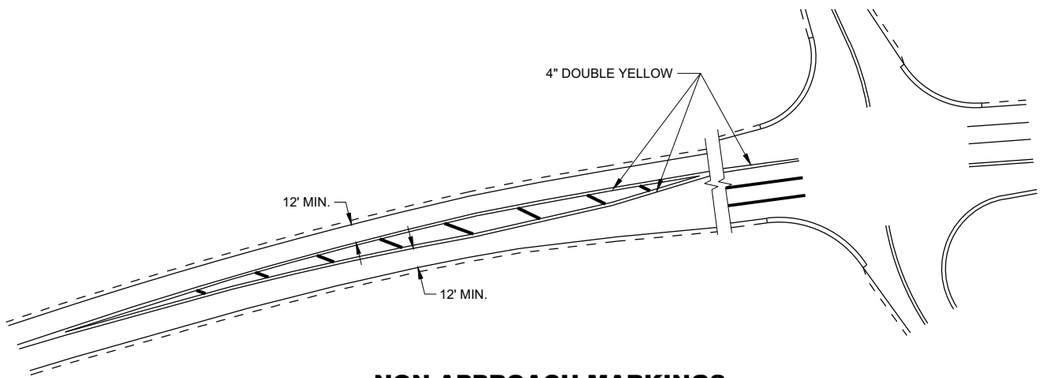
⇨ DIRECTION OF TRAVEL



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

MEDIAN ISLAND PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

February 2021
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAF ENGINEER

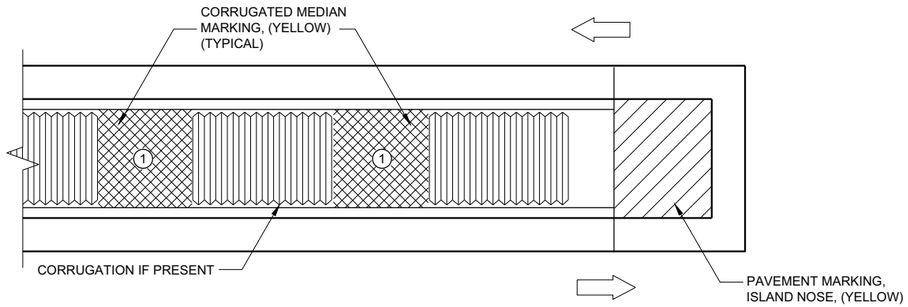
FHWA

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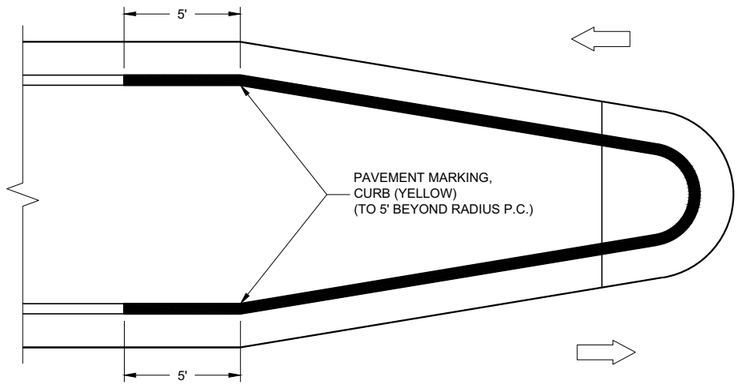
SDD 15C18 - 05a

6

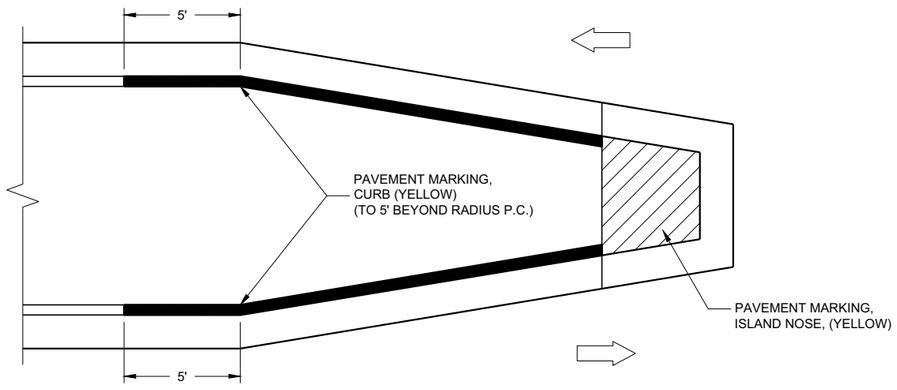
SDD 15C18 - 05a



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE

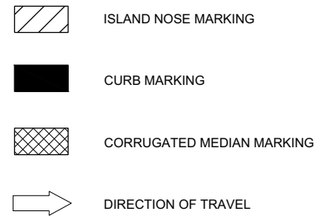


MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

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 ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



PAVEMENT MARKINGS, MEDIAN ISLAND NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

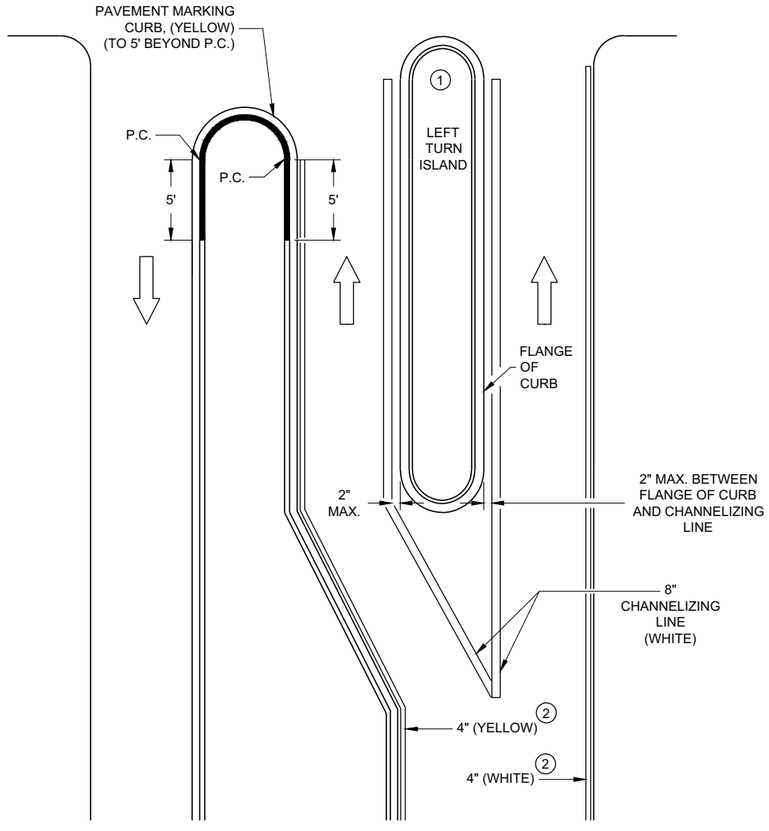
/S/ Matthew R. Rauch
STATE SIGNING AND MAR ENGINEER

FHWA

6

SDD 15C18 - 05b
SDD15C18 - 05b

REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED



LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

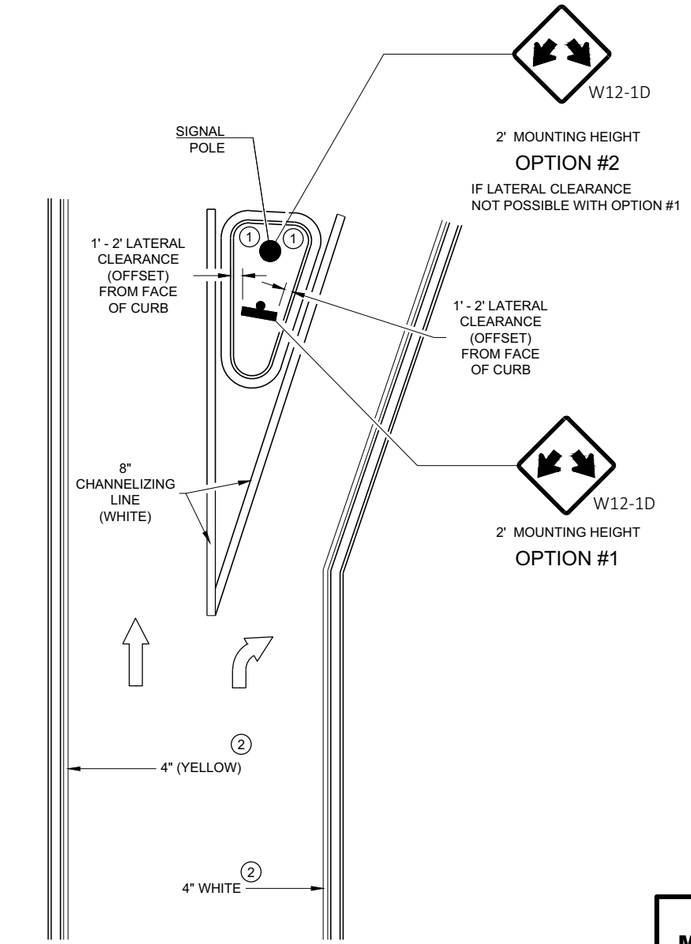
APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

(1) MARK CURB NOSES YELLOW.

(2) MARK ACCORDING TO TABLE.

DIRECTION OF TRAVEL



RIGHT TURN ISLAND

MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

February 2021 — DATE

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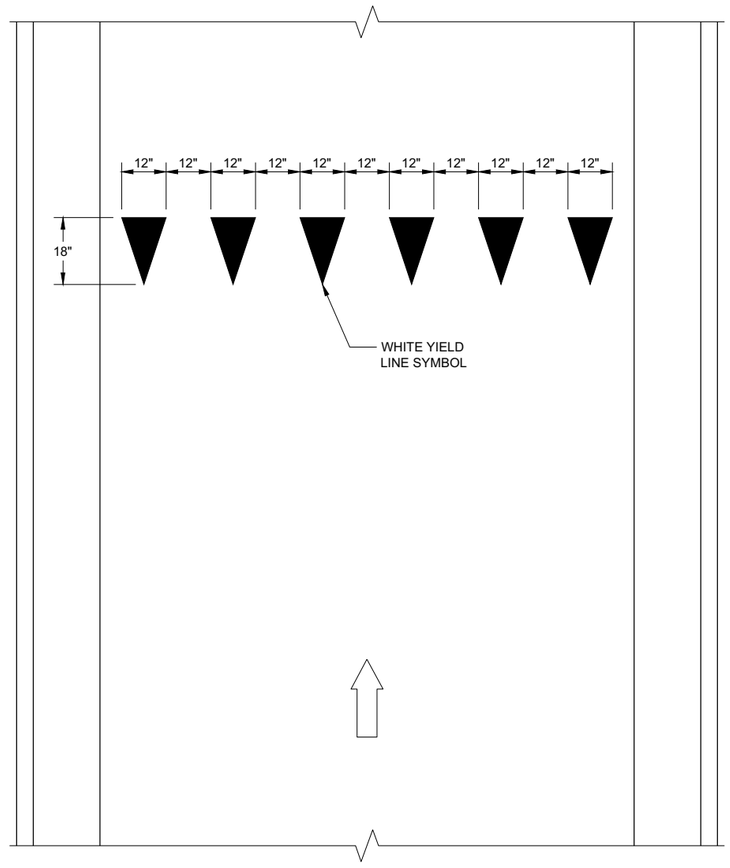
FHWA

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SDD 15C18 - 05c

6

SDD 15C18 - 05c

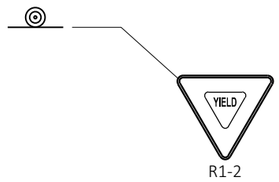


YIELD LINE

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAVEL



R1-2

YIELD MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-81-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR ENGINEER

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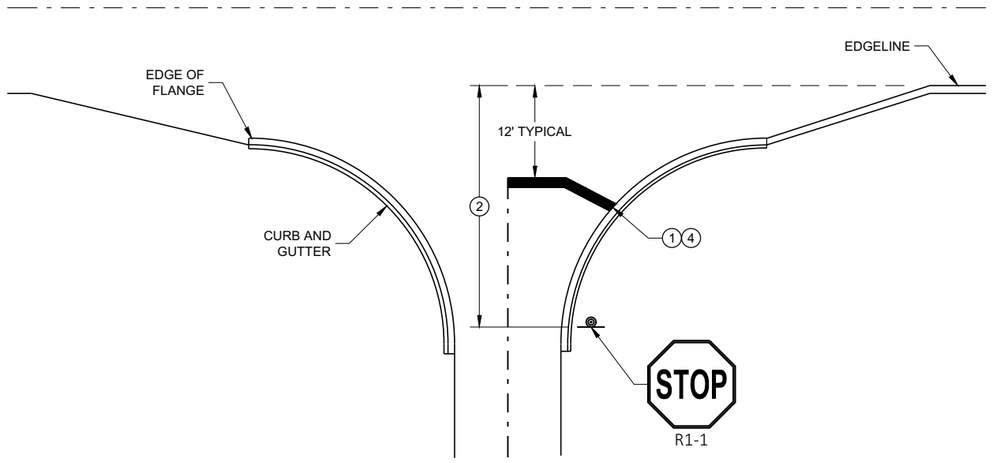
SDD 15C20 - 02

SDD 15C20 - 02

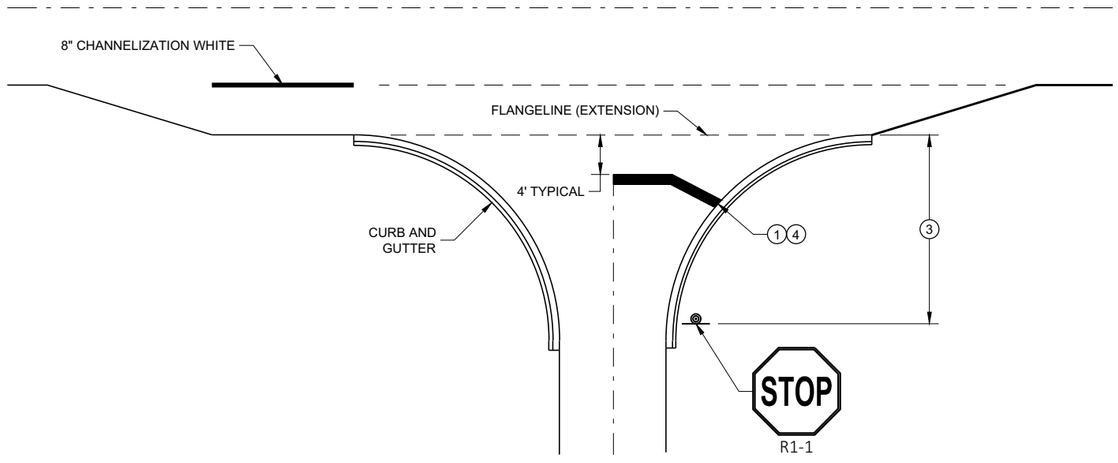
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

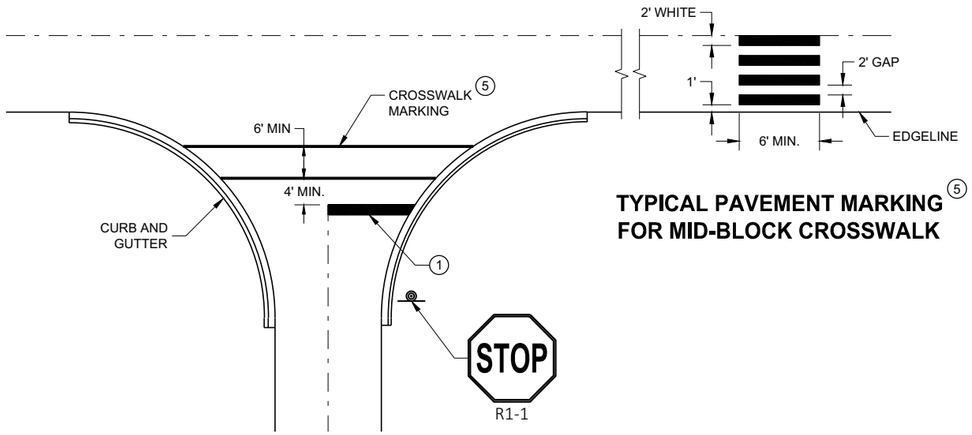
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

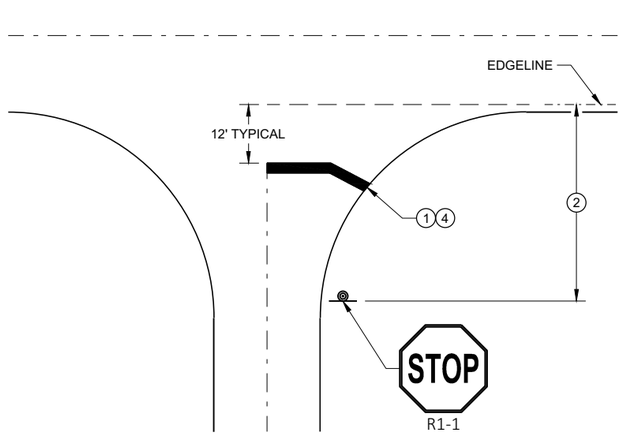


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING 5 FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARKING ENGINEER

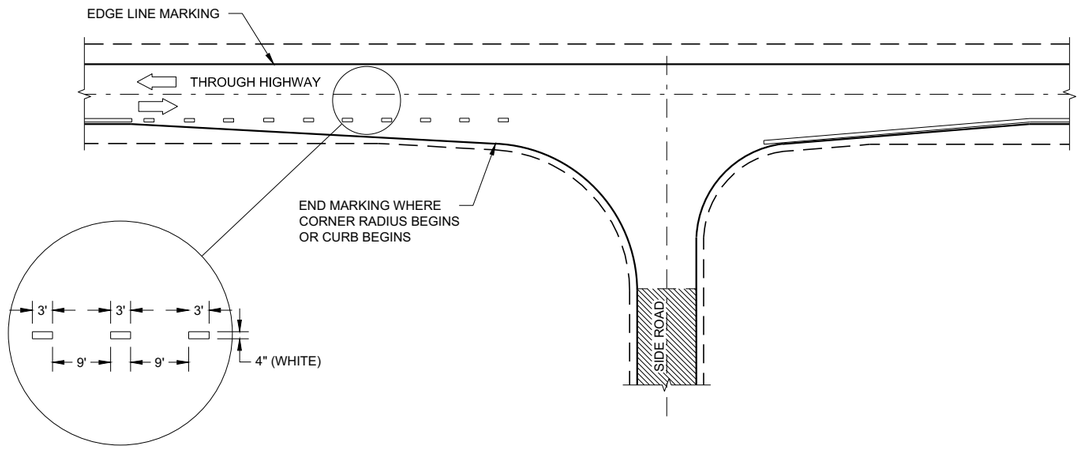
FHWA

6

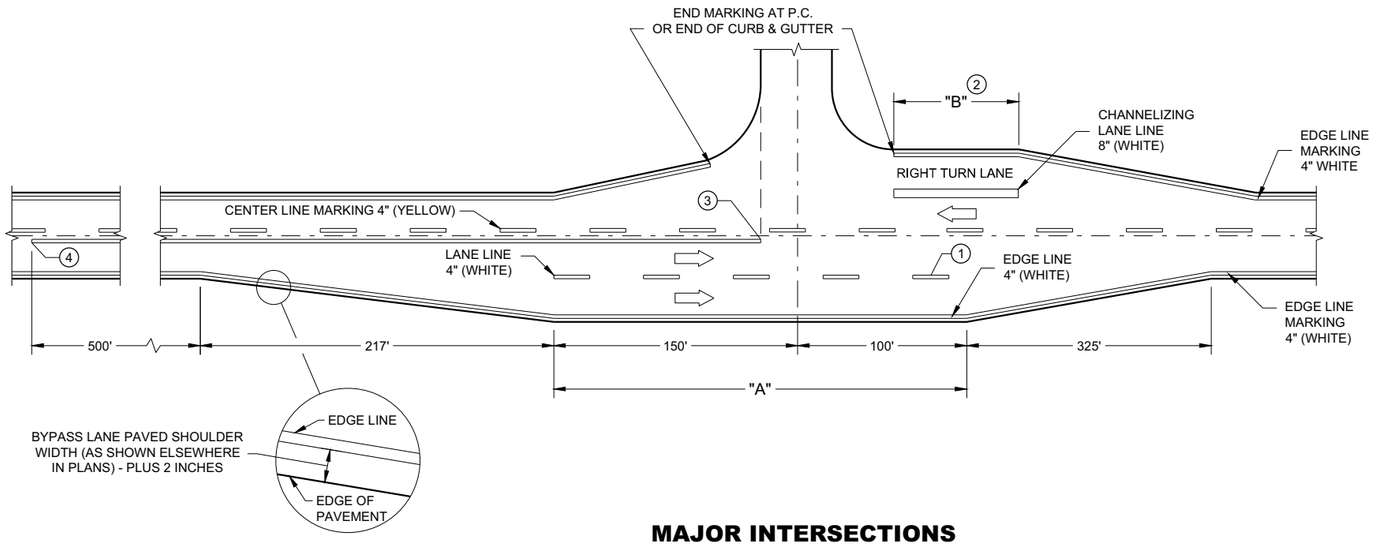
SDD 15C33 - 04

6

SDD 15C33 - 04



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

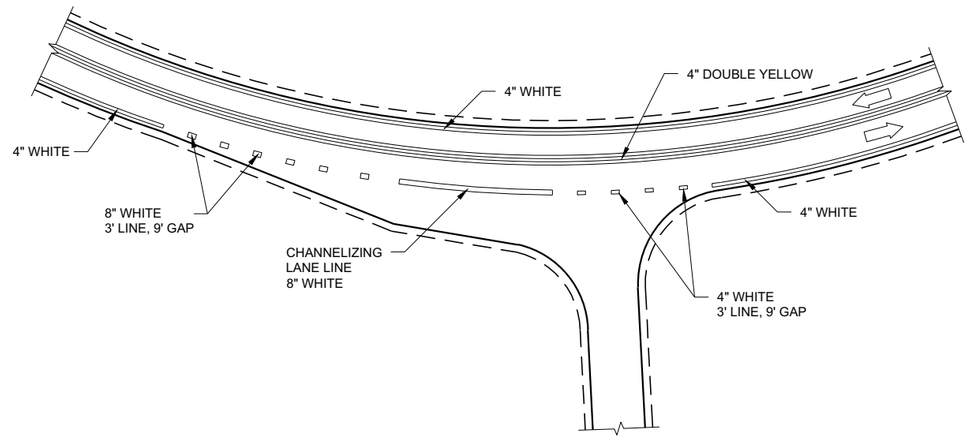
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

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

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C35 - 04a

6

SDD 15C35 - 04a

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 TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

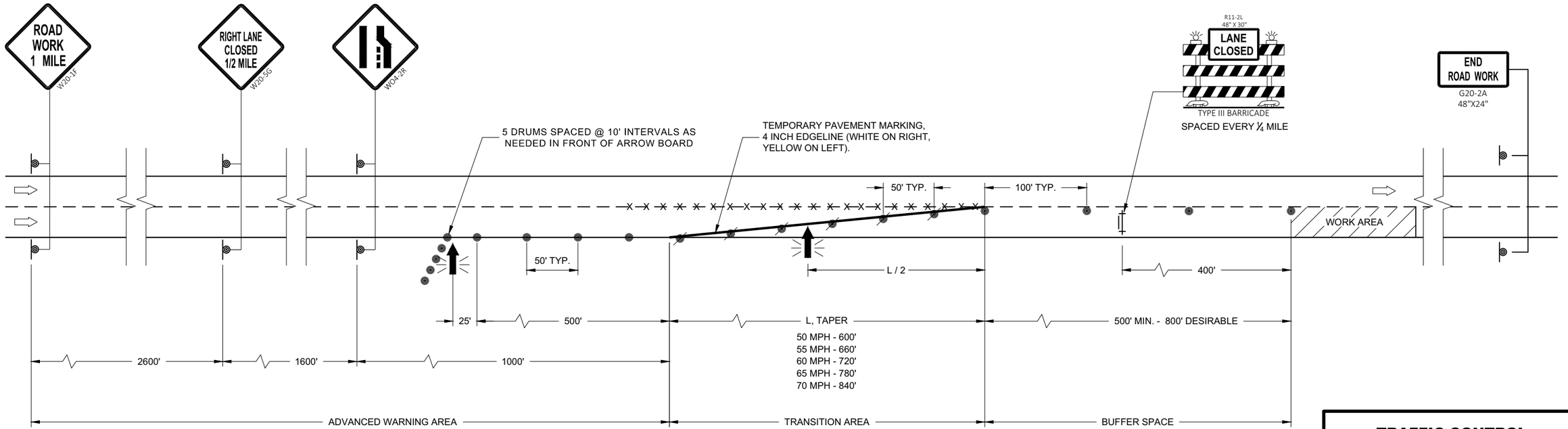
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

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



TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D12 - 09a

6

SDD 15D12 - 09a

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

TYPE III BARRICADE WITH ATTACHED SIGN

DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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

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

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

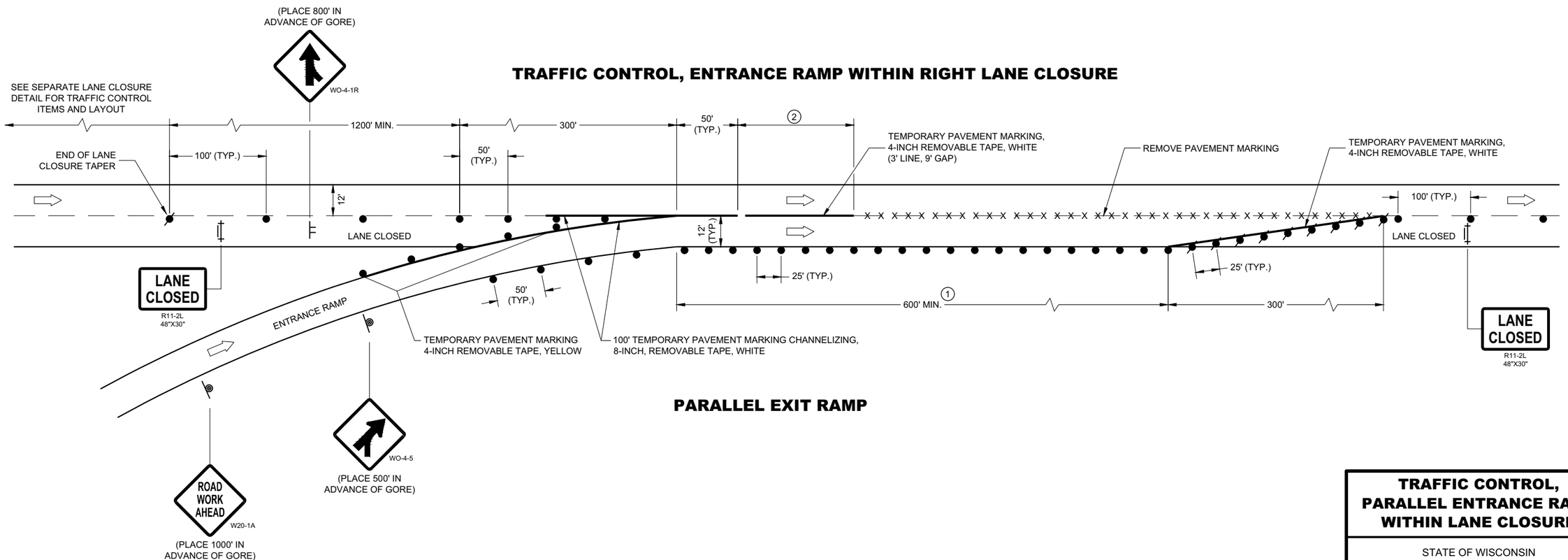
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

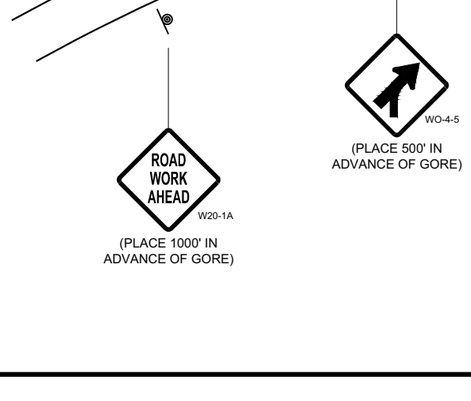
(1) EXTEND THE LENGTH OF THE MERGE ARE IF THE ENTERING (DESIGN) SPEED IS LESS THAN 50MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.

(2) END TEMPORARY MARKING AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE



PARALLEL EXIT RAMP



TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15D15 - 05a

SDD 15D15 - 05a

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

TYPE III BARRICADE WITH ATTACHED SIGN

DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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

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

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

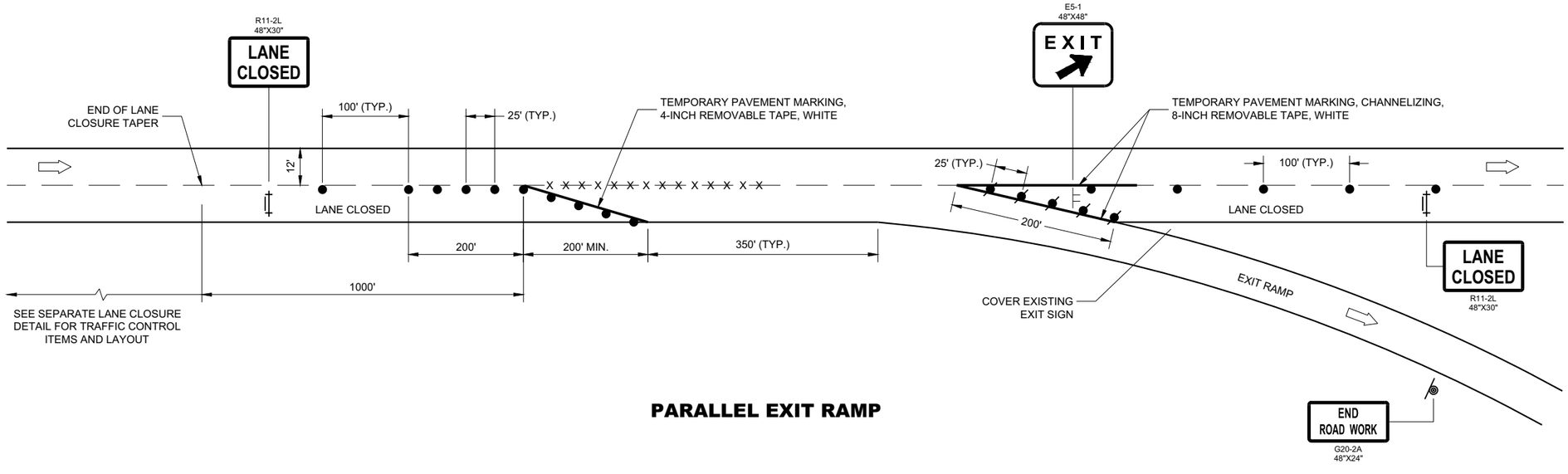
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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

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

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



PARALLEL EXIT RAMP

TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D15 - 05e

6

SDD15D15 - 05e

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

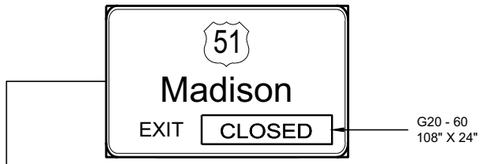
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

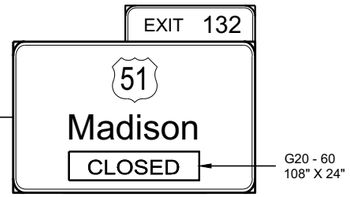
WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

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

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



OR

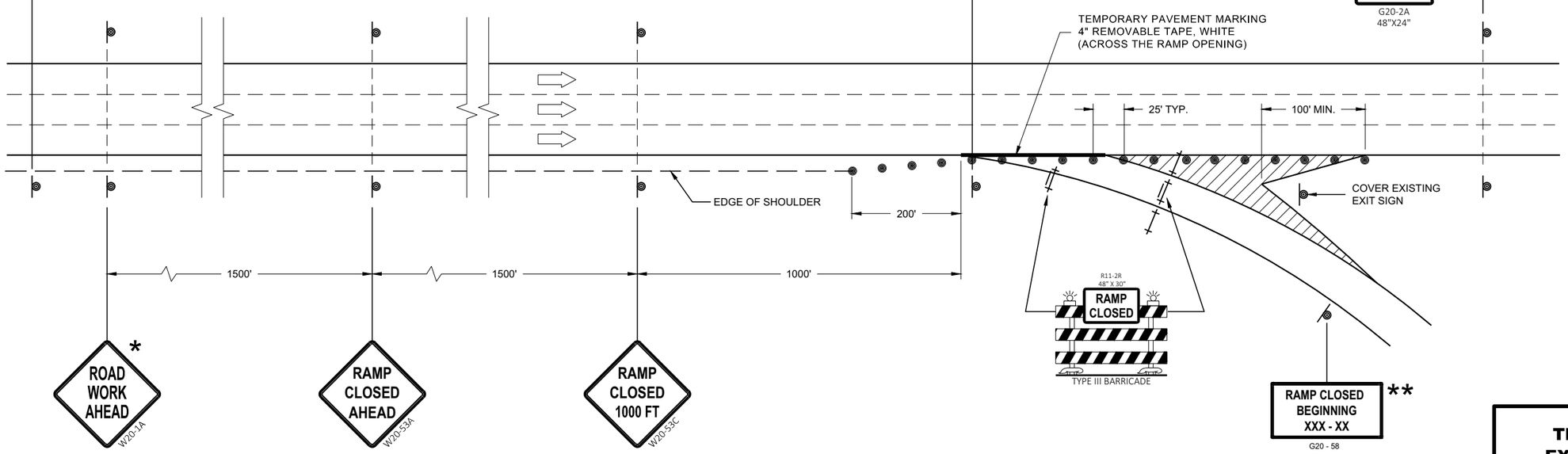


PLACE SIGN G20 - 60 OVER MILEAGE ON EXISTING E1 - 1A SIGN



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

G20 - 61
120 ' X 30"



OR

PCMS MESSAGING

FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

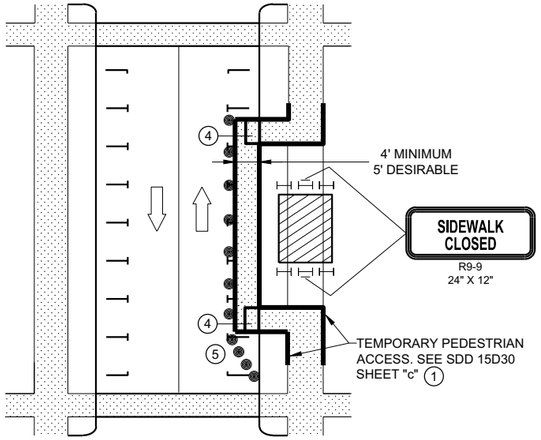
/S/ Andrew Heidtke
ROADWAY STANDARDS DEVE ENGINEER

FHWA

SDD 15D16 - 04

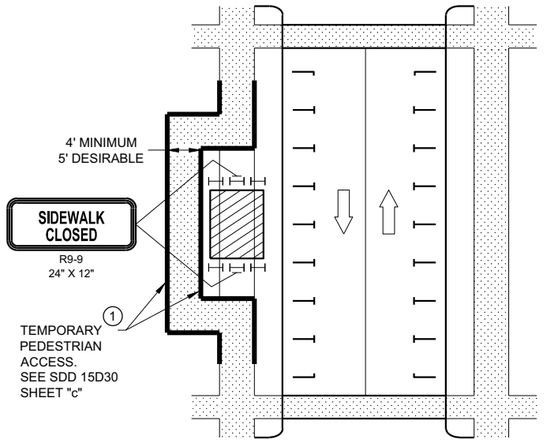
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NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

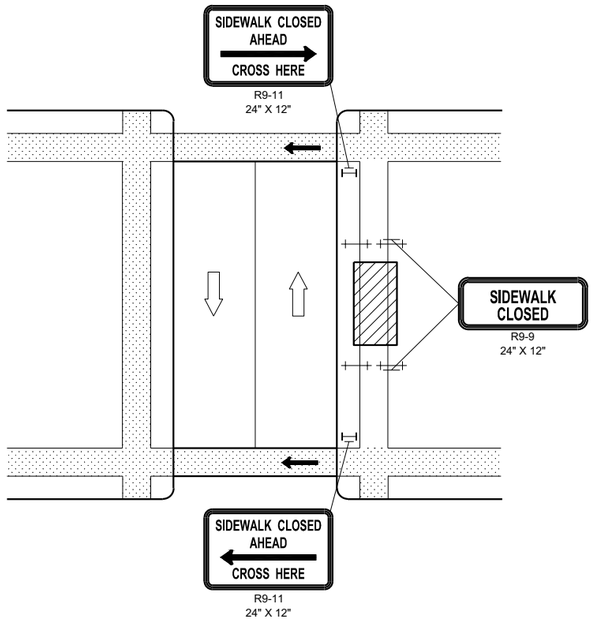


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

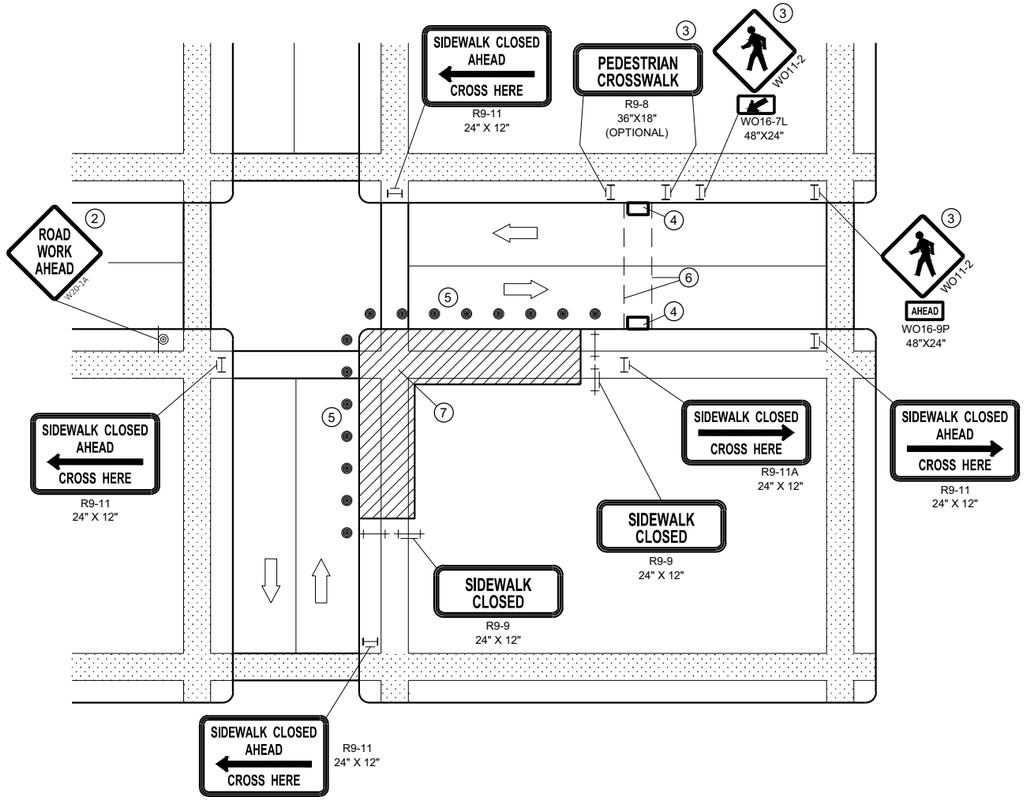
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

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

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

"WO" SIGN IS THE SAME AS "W" SIGN, EXCEPT THE BACKGROUND IS ORANGE.

FOR NIGHTIME CLOSURE, USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

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

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

1. IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE
2. "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.
3. IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND WO11-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
4. TEMPORARY CURB RAMPS. SEE SDD 15D30 SHEET "b'.
5. DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
6. TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
7. LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

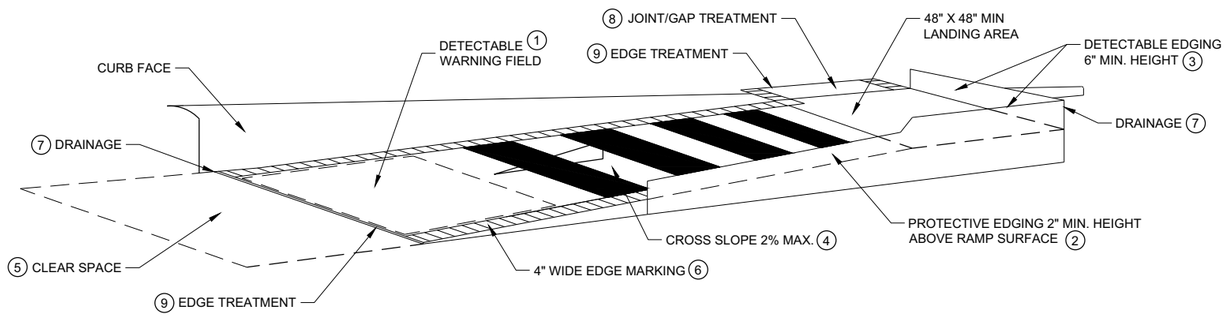
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN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

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

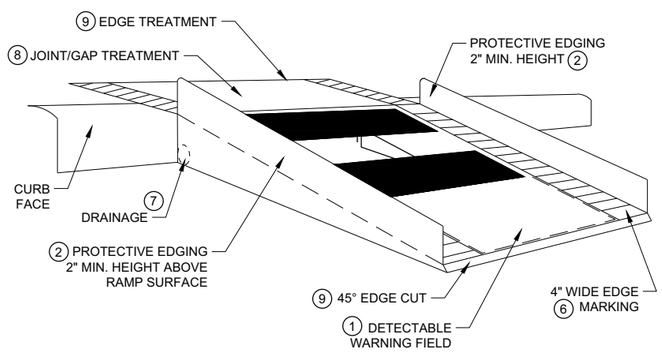
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

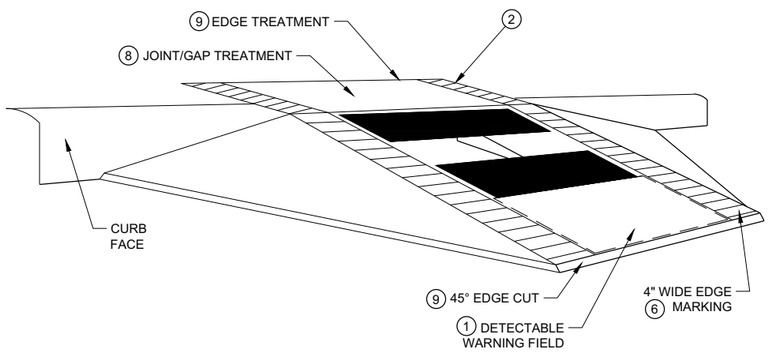
SDD15D30 - 06a



TEMPORARY CURB RAMP PARALLEL TO CURB



WITH PROTECTIVE EDGE



WITH SIDE APRON

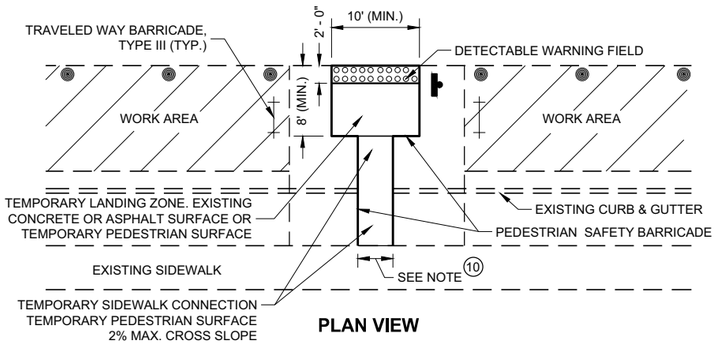
TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

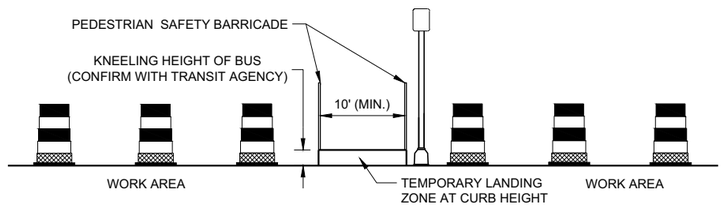
NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

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

1. CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 08D05, SHEET "e".
2. PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
3. DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.
5. CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
6. THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.
7. DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
8. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.
9. CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES SHALL BE VERTICAL UP TO ¼" HIGH AND BEVELED AT 1:2 BETWEEN ¼" AND ½".
10. 5" WIDE MIN. WITH PEDESTRIAN SAFETY BARRICADE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY BARRICADE.



PLAN VIEW



PROFILE VIEW

TEMPORARY BUS STOP PAD

LEGEND

- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- WORK AREA

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

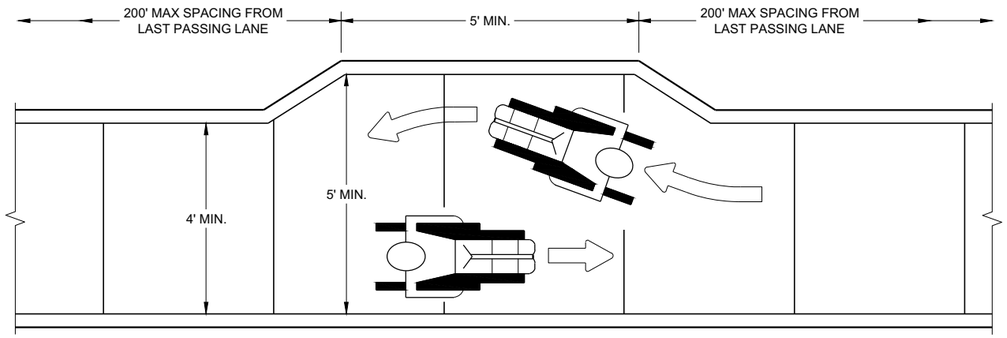
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

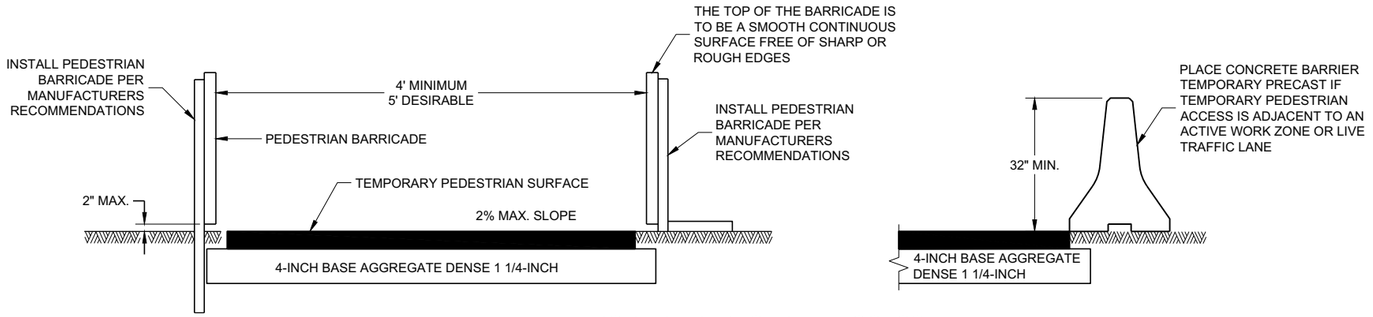
SDD 15D30 - 06b

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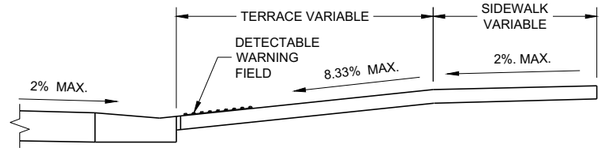
SDD 15D30 - 06b



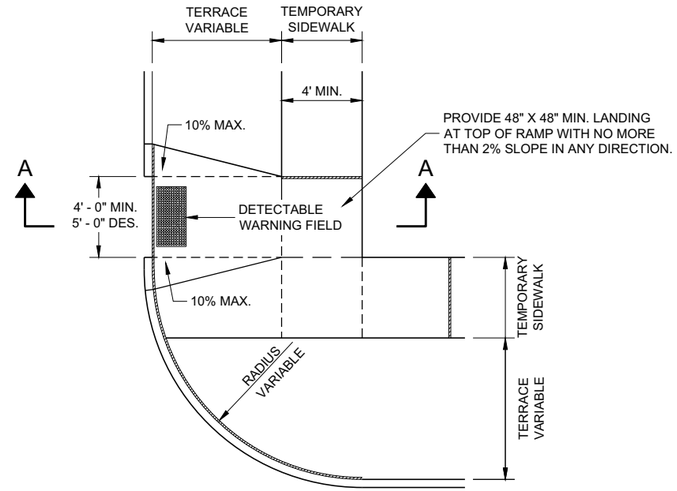
NARROW SIDEWALK PASSING DETAIL



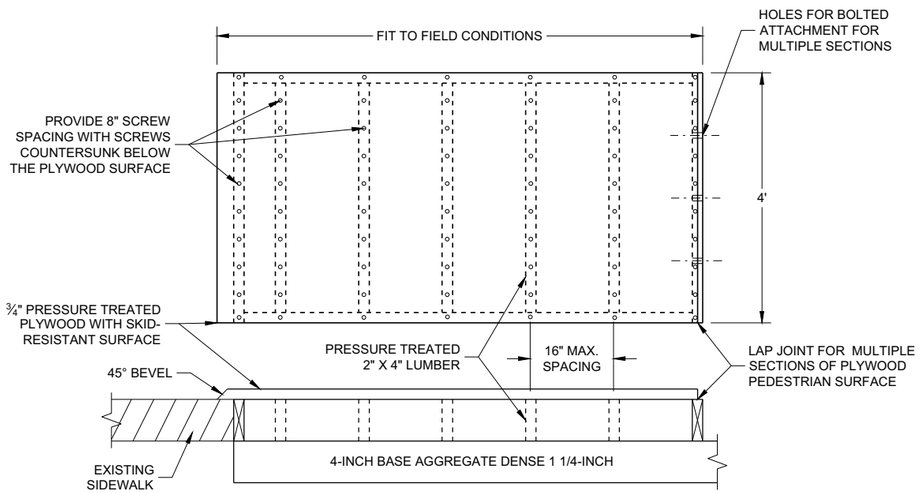
TEMPORARY PEDESTRIAN ACCESS



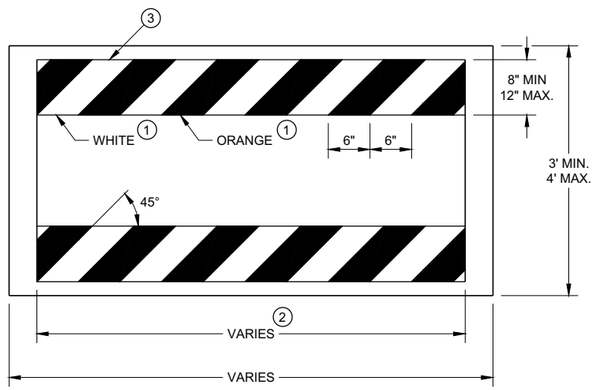
SECTION A - A



PLAN VIEW
TEMPORARY TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)



TEMPORARY PEDESTRIAN SURFACE PLYWOOD



TEMPORARY PEDESTRIAN BARRICADE *

GENERAL NOTES

BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
3. PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

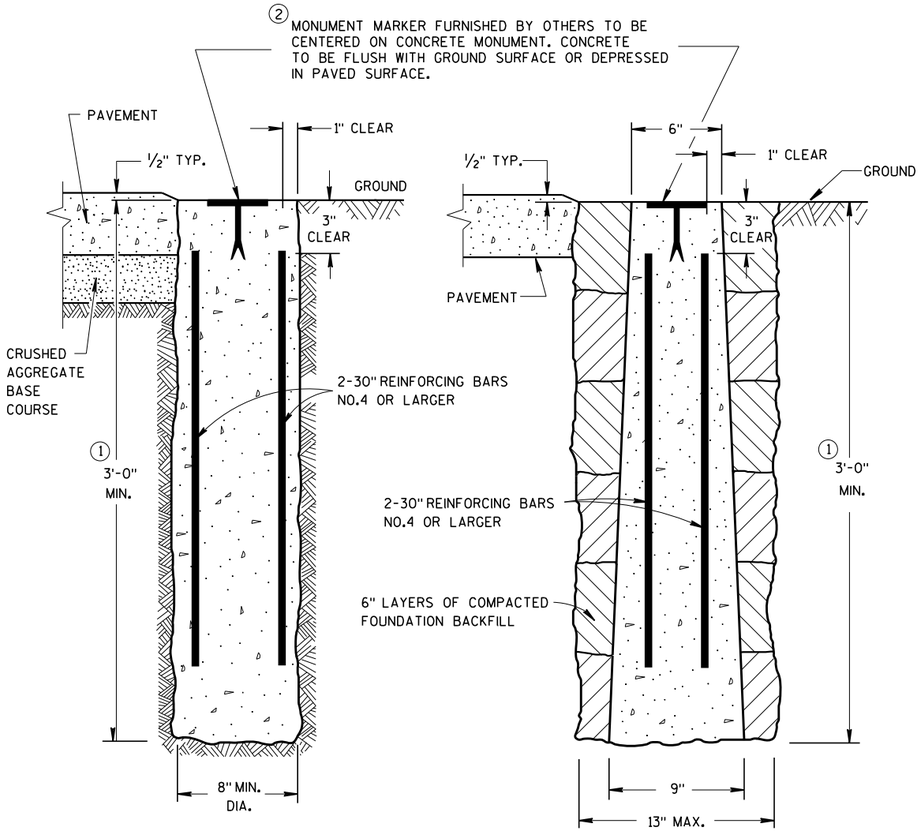
APPROVED
November 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE 355

FHWA

6

SDD 15D30 - 06c

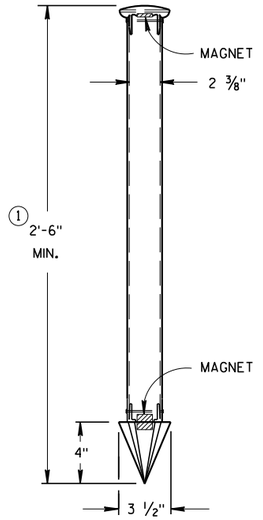


CAST-IN-PLACE

PRECAST

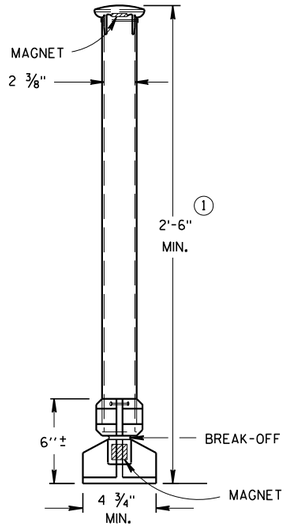
CONCRETE MONUMENTS

TYPE A



TYPE C

DRIVE-IN MONUMENT



TYPE D
NON-DRIVEN
BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)

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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

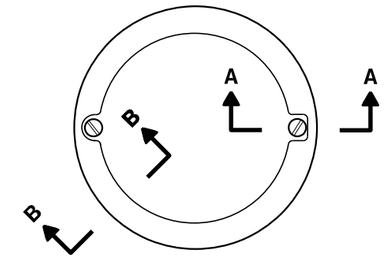
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

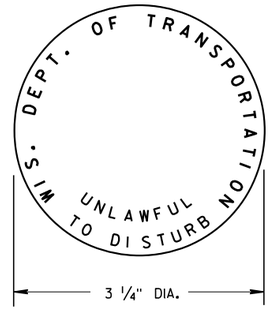
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.

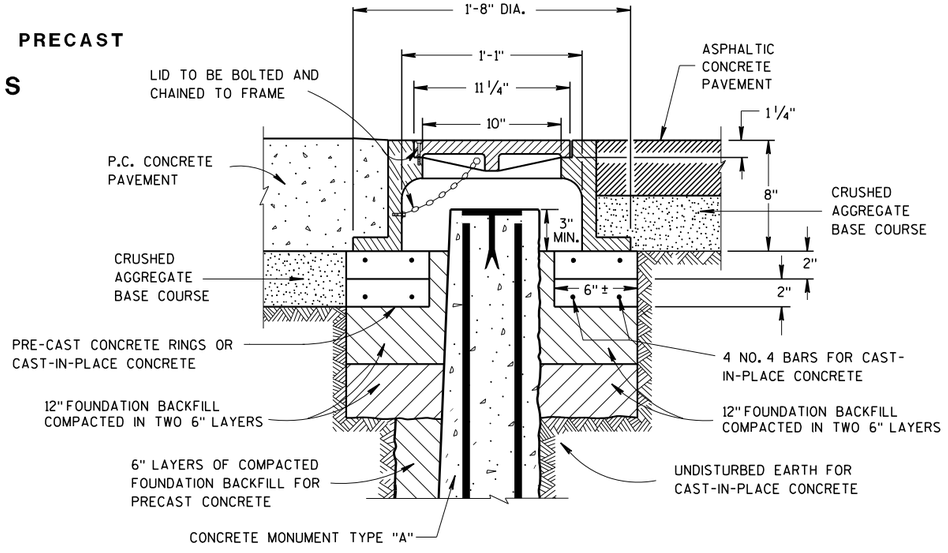


TOP VIEW



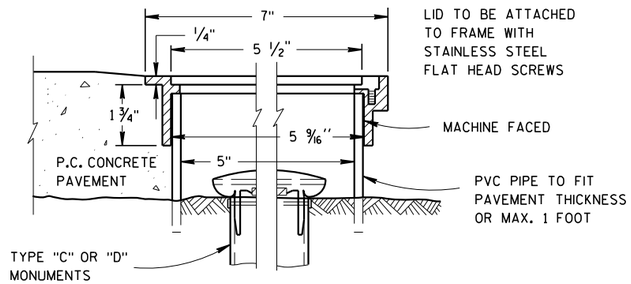
② WIS DOT MONUMENT MARKER LOGO

FOR TYPES "A", "C", & "D"



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT 95 LBS)



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

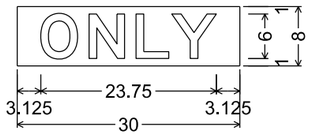
LANDMARK REFERENCE MONUMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Raymond A. Kumagai — CHIEF SURVEYING AND MAPPING ENGINEER
FHWA

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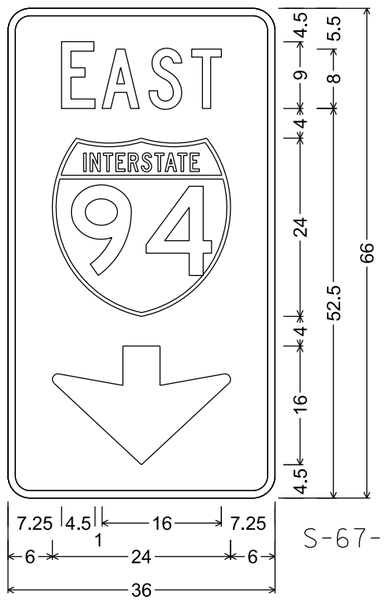
S.D.D. 16 A 1-7



No border, Black on, Fluorescent yellow;
"ONLY" Black, E

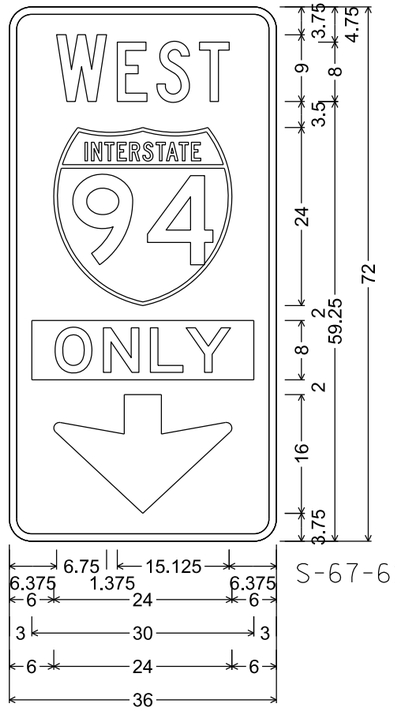
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green except as noted
   Message - White except as noted
3. Message Series - C except as noted
4. ONLY plaque is on Type F Yellow Reflective sheeting with Black Non-Reflective message



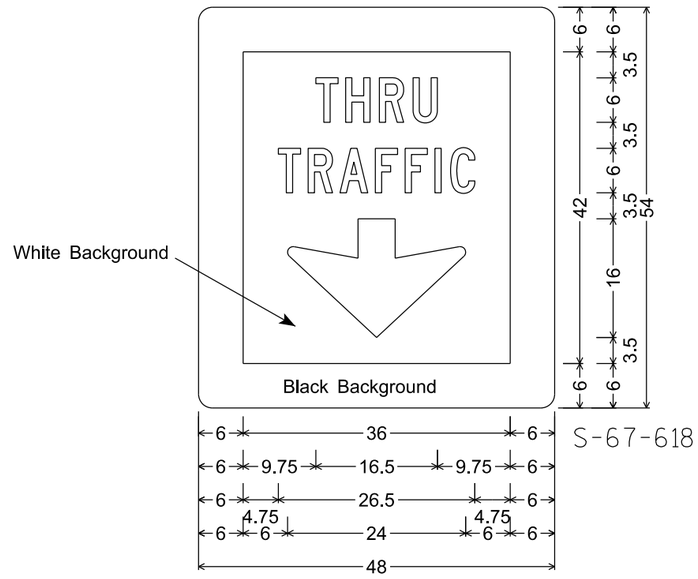
S-67-618

D16-1; 3.000" Radius, 1.000" Border



S-67-618

D16-1; 3.000" Radius, 1.000" Border



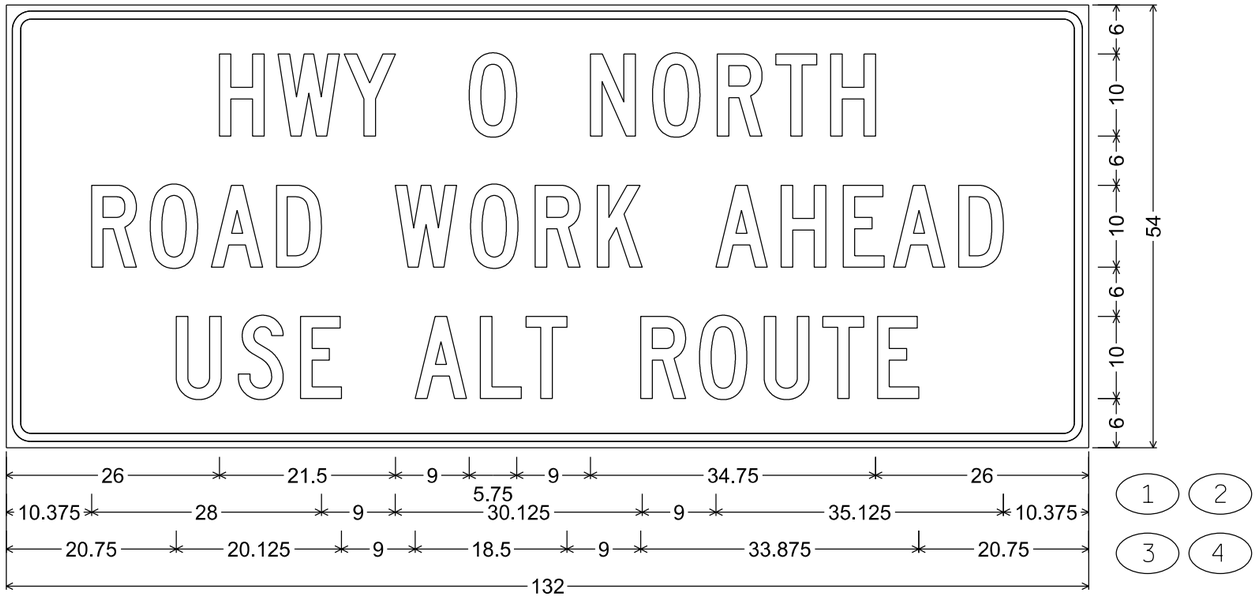
S-67-618

1.875" Radius, No border, Black; Rectangle White;

7

7

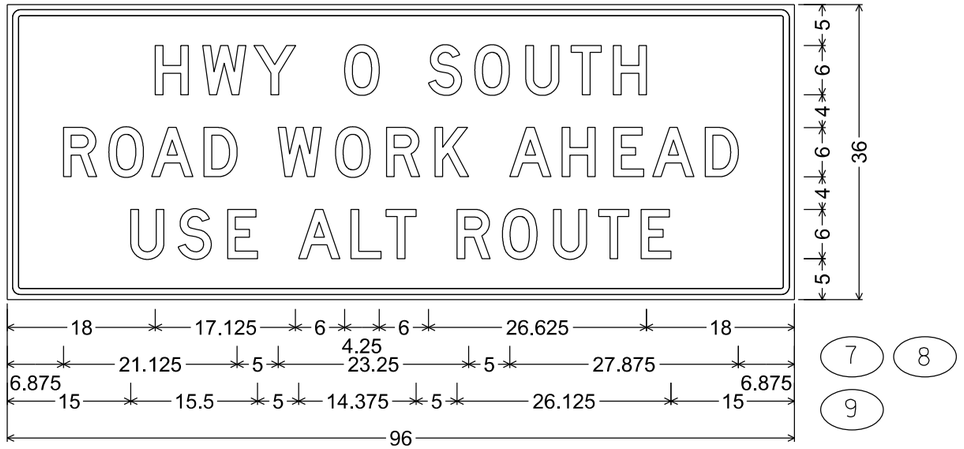
PROJECT NO: 2722-07-71	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET NO: 357	E



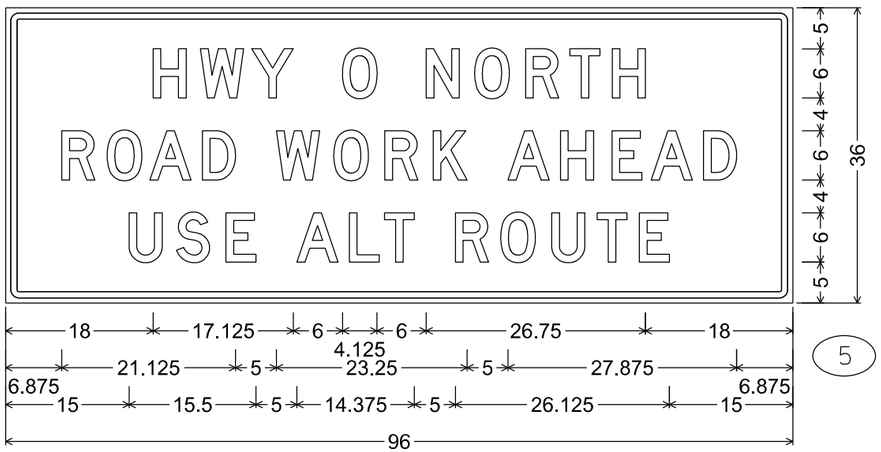
3.000" Radius, 1.000" Border, 0.750" Indent
"HWY", C; "O", C; "NORTH", C; "ROAD", C; "WORK", C; "AHEAD", C; "USE", C; "ALT", C; "ROUTE", C;

NOTES

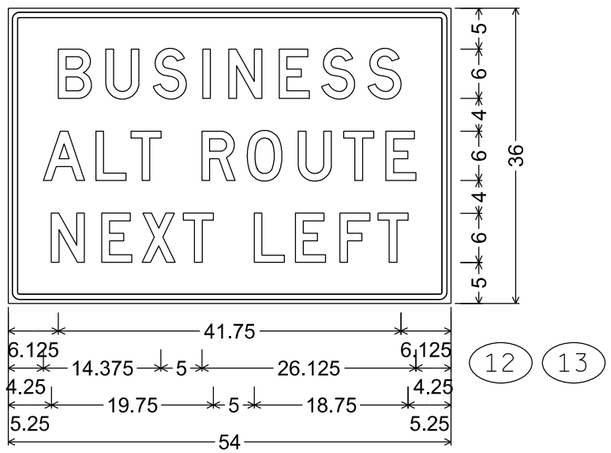
1. Fixed Message Signs are Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D except as noted



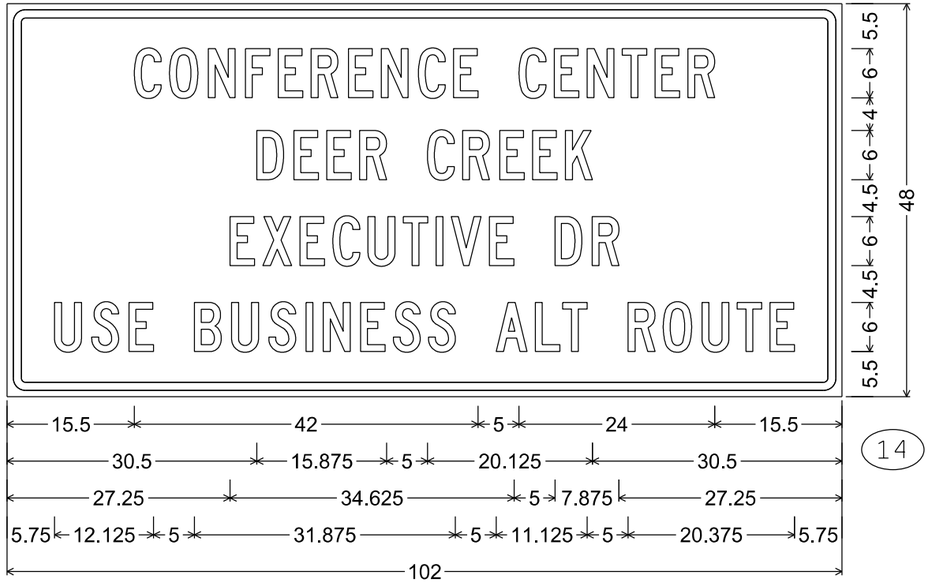
1.625" Radius, 0.750" Border, 0.625" Indent



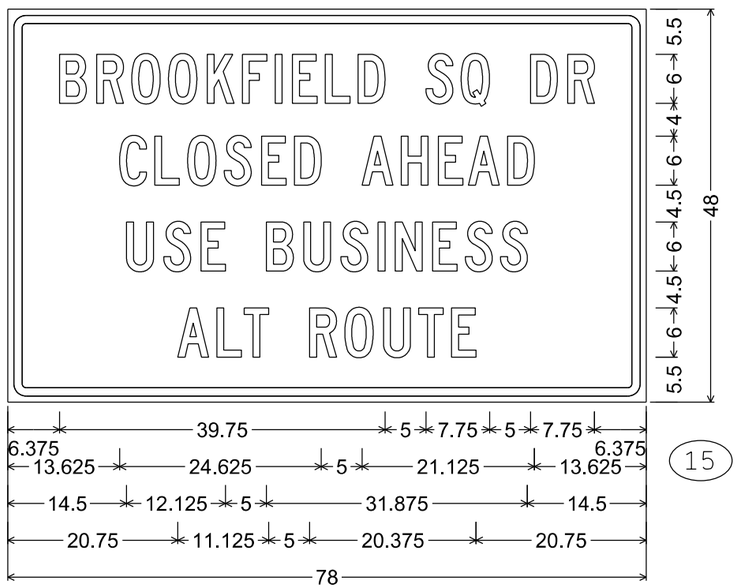
1.625" Radius, 0.750" Border, 0.625" Indent



1.375" Radius, 0.625" Border, 0.500" Indent



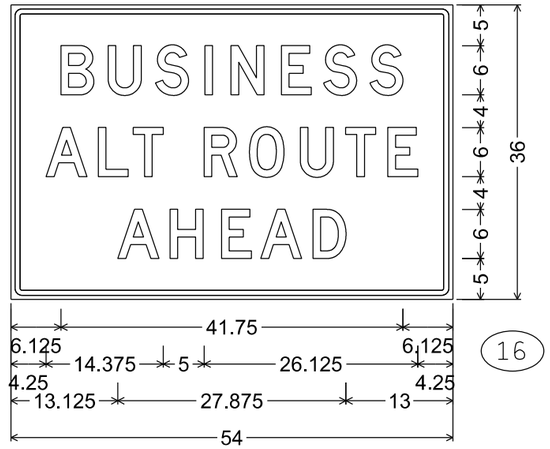
2.250" Radius, 1.000" Border, 0.750" Indent
"CONFERENCE", C; "CENTER", C; "DEER", C; "CREEK", C;
"EXECUTIVE", C; "DR", C; "USE", C; "BUSINESS", C; "ALT", C;
"ROUTE", C;



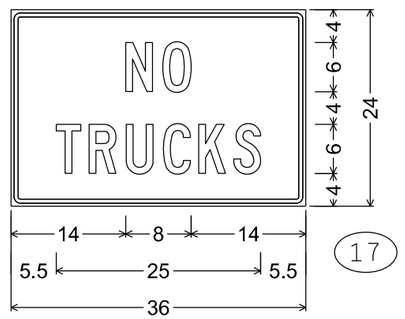
2.250" Radius, 1.000" Border, 0.750" Indent
"BROOKFIELD", C; "SQ", C; "DR", C; "CLOSED", C;
"AHEAD", C; "USE", C; "BUSINESS", C; "ALT", C;
"ROUTE", C;

NOTES

1. Fixed Message Signs are Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D except as noted



1.375" Radius, 0.625" Border, 0.500" Indent

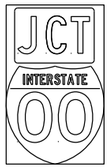


1.125" Radius, 0.500" Border, 0.375" Indent
"NO", C; "TRUCKS", C;

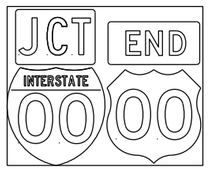
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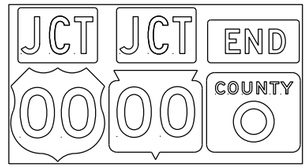
TYPICAL ASSEMBLIES



J1-1



J1-2



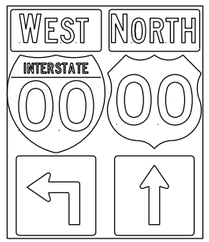
J1-3



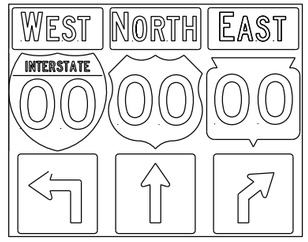
JR1-1



J2-1



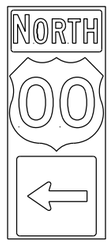
J2-2



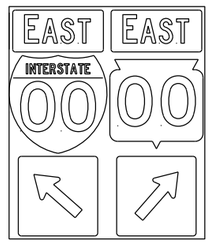
J2-3



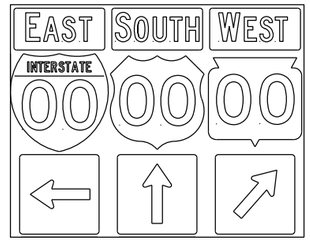
JV
(Typical Vertical J-Assembly
See Note 10 and 11)



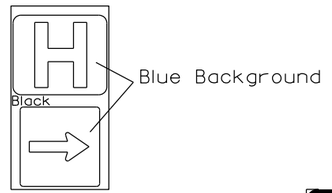
J3-1



J3-2



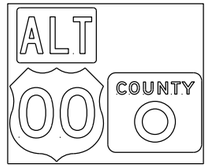
J3-3



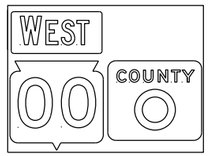
JH-1



J4-1



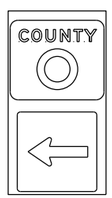
J4-2



J4-2



J12-1



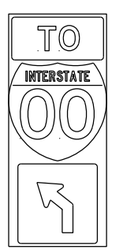
J13-1



J32-1



J33-1



J22-1



J23-1



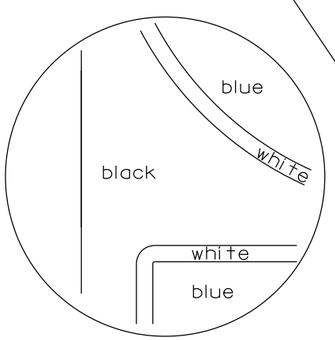
JR13-1

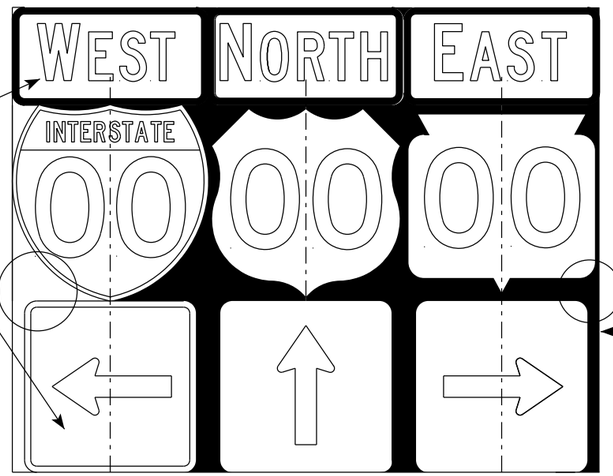


JR23-1



JR99-1





NOTES

1. Signs are Type II - Type H Reflective
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/21 PLATE NO. A2-1S.9

PROJECT NO:

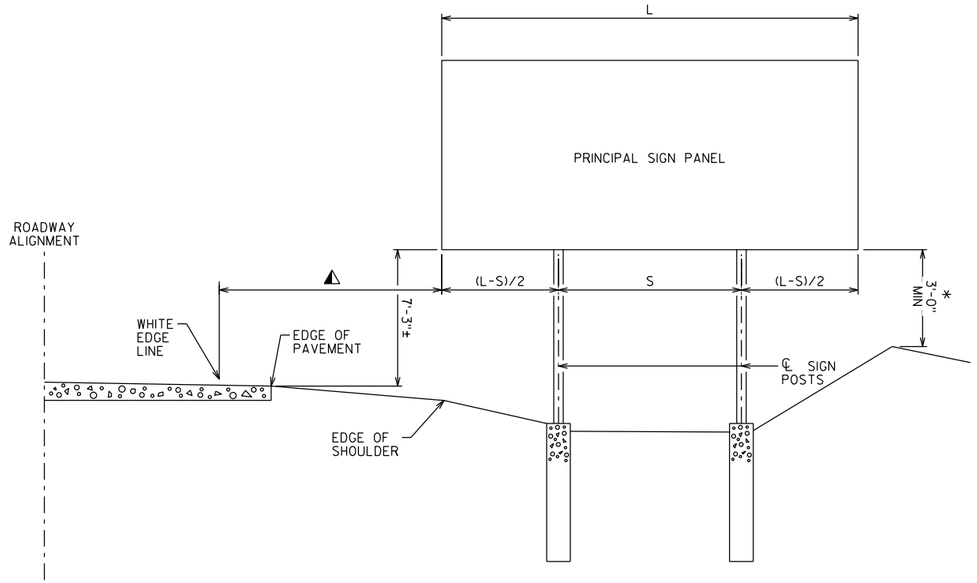
SHEET NO: 360 E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate_A21S.dgn PLOT DATE : 18-MAR 2021 1:37 PLOT BY : mscj9h PLOT NAME :

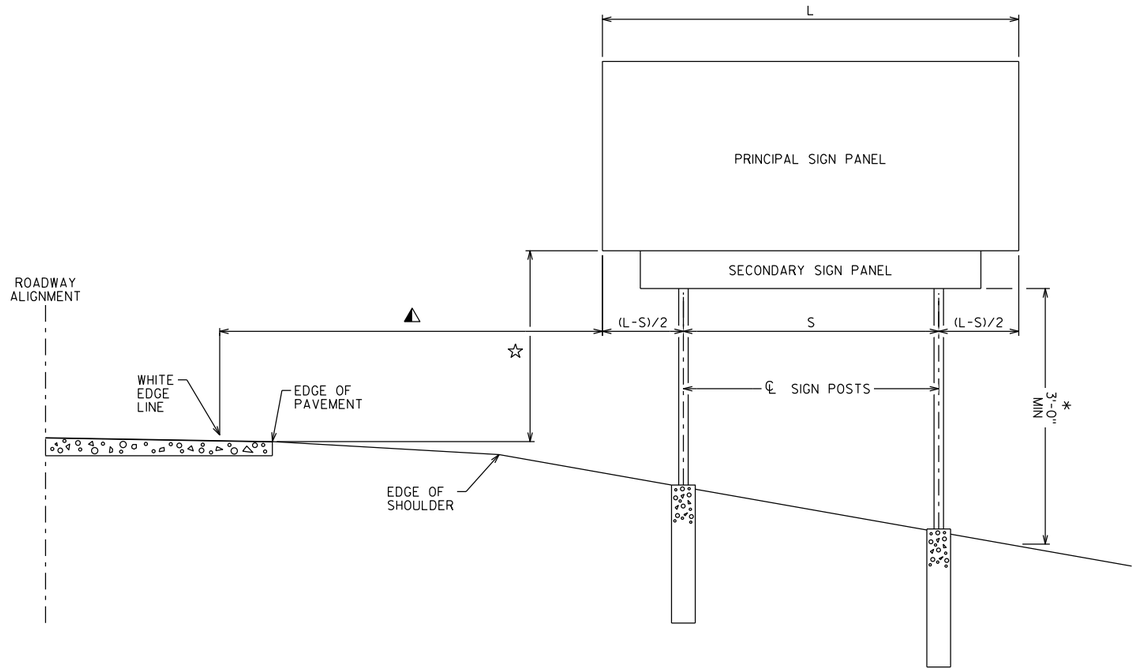
WISDOT/CADDS SHEET 42

7

7



INSTALLATION WITHOUT SECONDARY SIGN



INSTALLATION WITH SECONDARY SIGN

TYPE 1 SIGN INSTALLATION NOTES:

FOR A 2-POST INSTALLATION, "S" EQUALS 3L/5, BUT SHALL NOT BE LESS THAN 6'-0".

FOR A 3-POST INSTALLATION, "S" EQUALS 5L/7, BUT SHALL NOT BE LESS THAN 12'-0". THE SPACING BETWEEN ANY TWO POSTS SHALL NOT BE LESS THAN 6'-0".

◭ UNLESS NOTED IN THE PLANS, THE SIGN OFFSET DISTANCE SHALL BE A MINIMUM OF 17'-6" FROM THE WHITE EDGE LINE, DESIRABLE 30'-0".

THE ± TOLERANCE SHOWN ON THIS SHEETS IS 3".

THE VERTICAL SIGN HEIGHT CLEARANCES SHOWN ON THIS SHEET ARE MEASURED FROM THE BOTTOM OF THE SIGN PANEL TO THE NEAR EDGE OF PAVEMENT.

☆ THE VERTICAL CLEARANCE SHALL BE 8'-3"± WHEN THE SECONDARY SIGN HEIGHT IS 3'-0" OR LESS. FOR SECONDARY SIGN HEIGHTS LARGER THAN 3'-0", THE VERTICAL CLEARANCE TO THE BOTTOM OF THE SECONDARY SIGN PANEL SHALL BE 5'-3"±.

* THE VERTICAL SIGN GROUND CLEARANCE ON RIGHT END OF SIGN SHALL BE A MINIMUM OF 3'-0"±.

POST LENGTHS SHOWN IN THE MISCELLANEOUS QUANTITIES ARE ESTIMATED LENGTHS. THE CONTRACTOR SHALL VERIFY POST LENGTHS AT THE TIME OF FINAL GRADING.

REFER TO THE TRAFFIC ENGINEERING OPERATIONS AND SAFETY MANUAL FOR FURTHER GUIDANCE ON MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

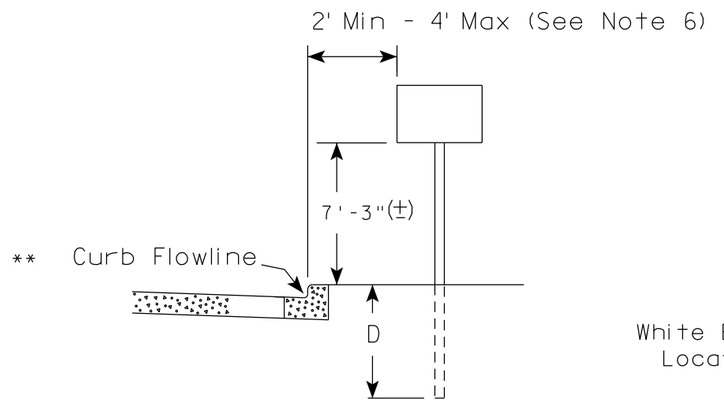
DRAWN BY | PLANS CK'D.

TYPICAL TYPE I SIGN INSTALLATION

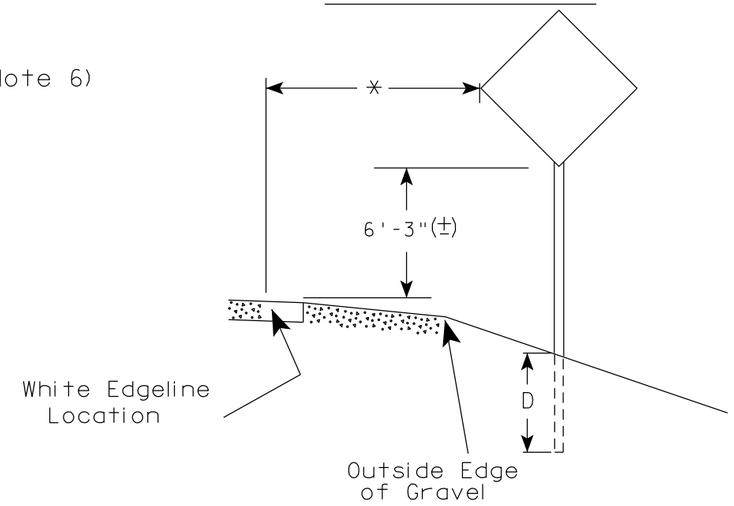
SHEET A4-1.10

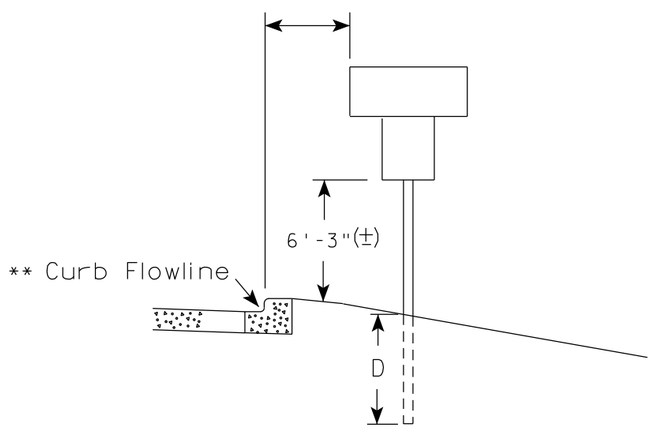
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 361 | E

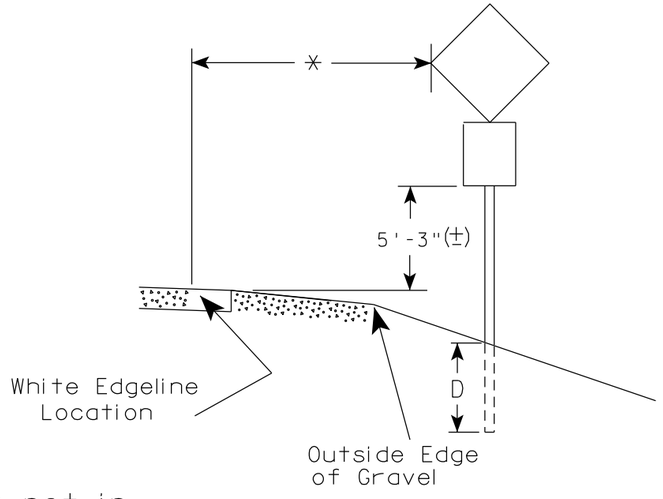
URBAN AREA



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.

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
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 signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

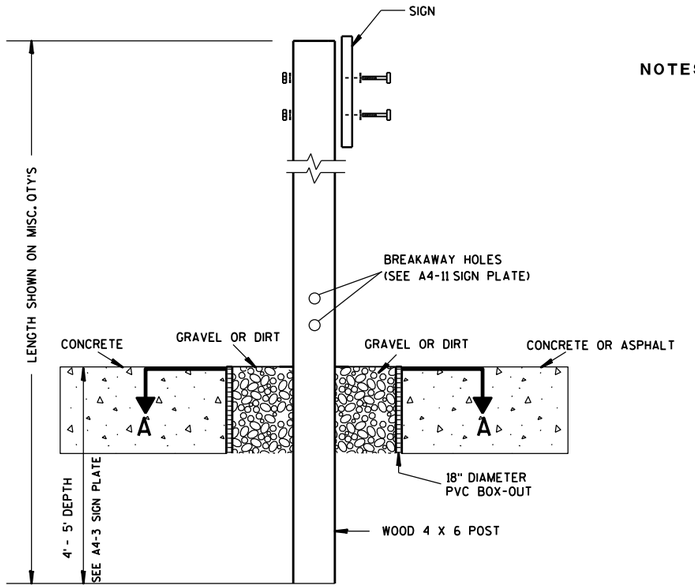
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

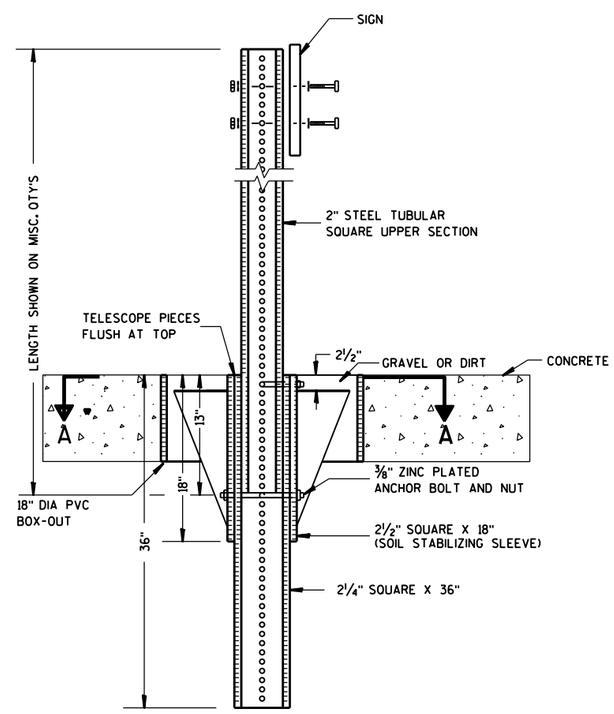
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 362	E



ELEVATION VIEW

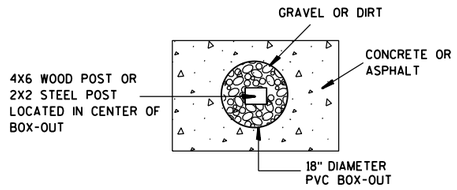
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

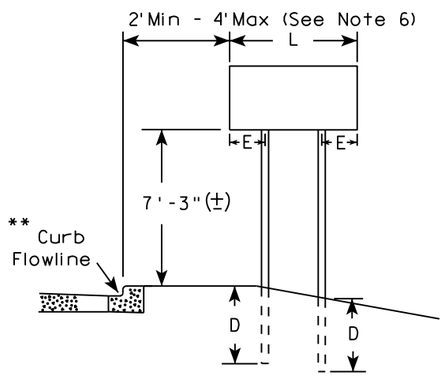
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

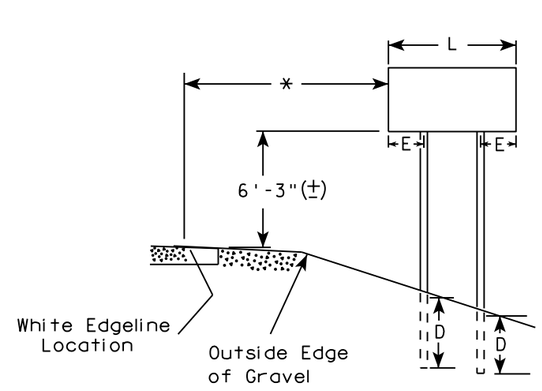
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

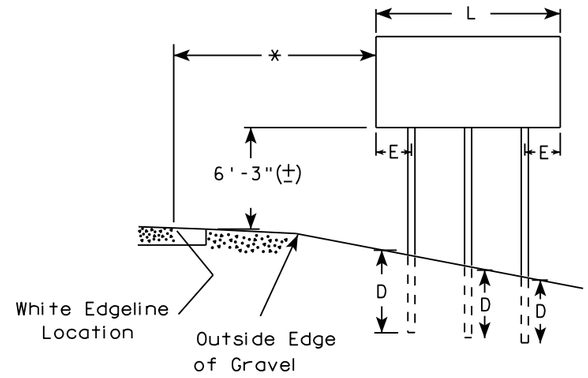
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

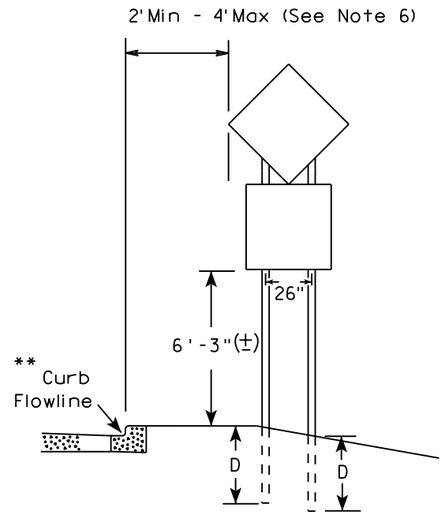
URBAN AREA



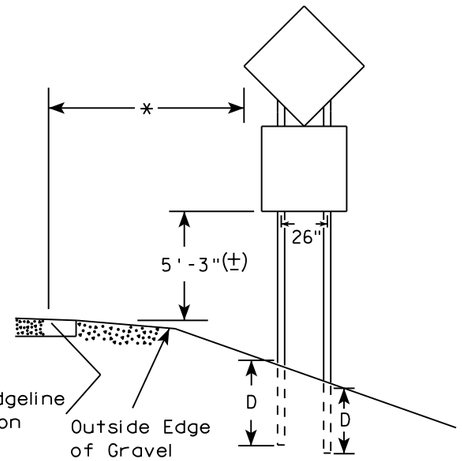
RURAL AREA (See Note 3)







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 108"	L/5

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

GENERAL NOTES

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

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

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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

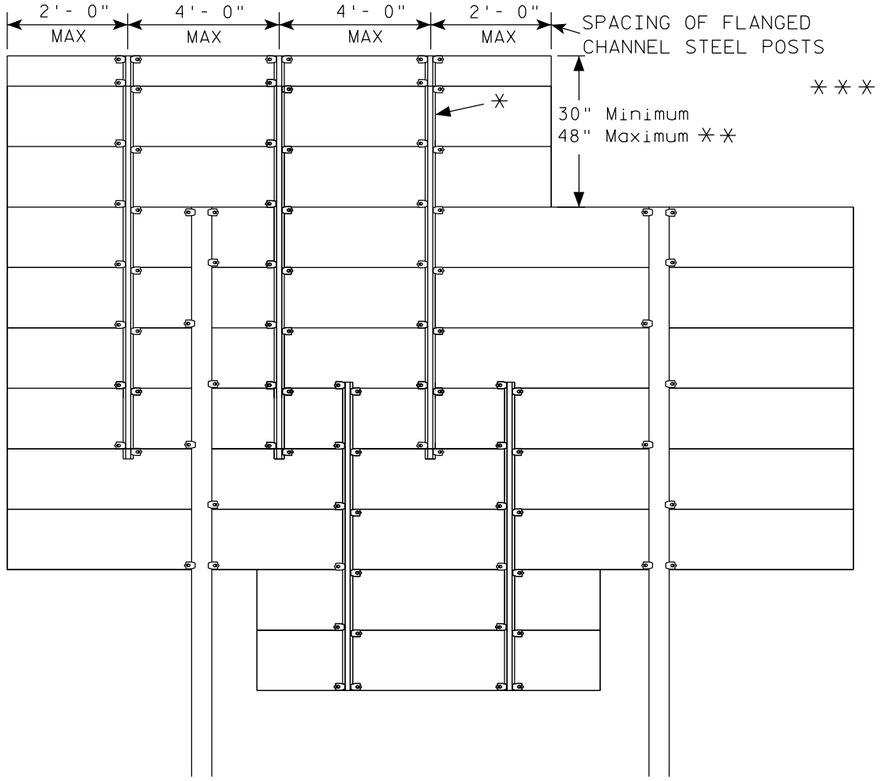
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 364	E

GROUND MOUNTED SIGN



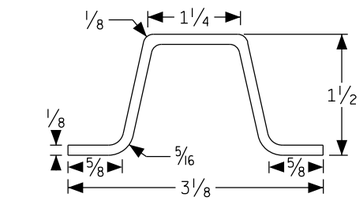
✳=2.00 lb/ft AND 4.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

✳✳=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

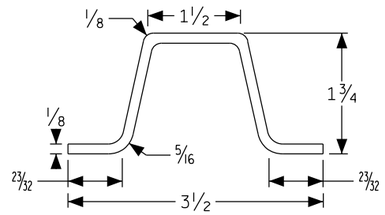
✳✳✳ THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 15 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 15 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAILS

NOT TO SCALE

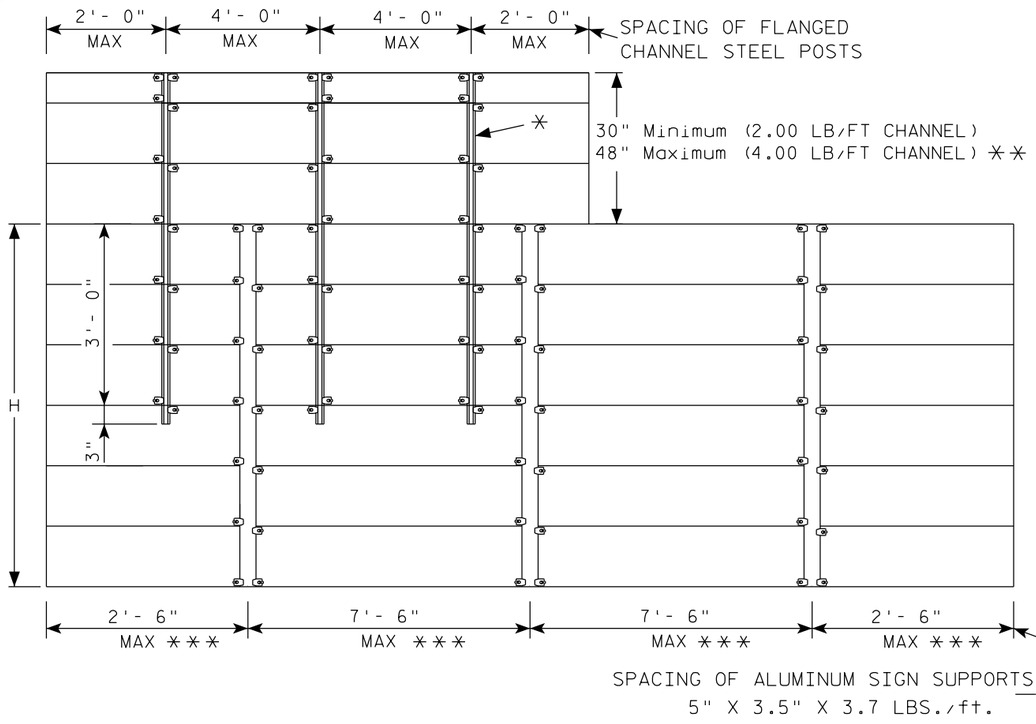


2.00 LB/FT CHANNEL



4.00 LB/FT CHANNEL

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

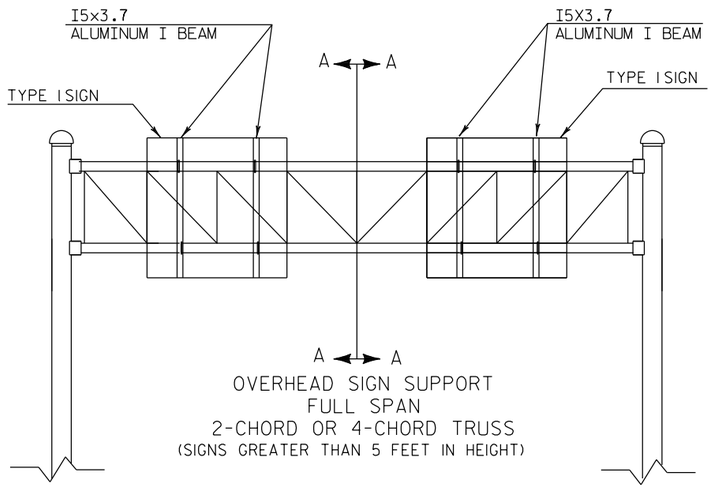
   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

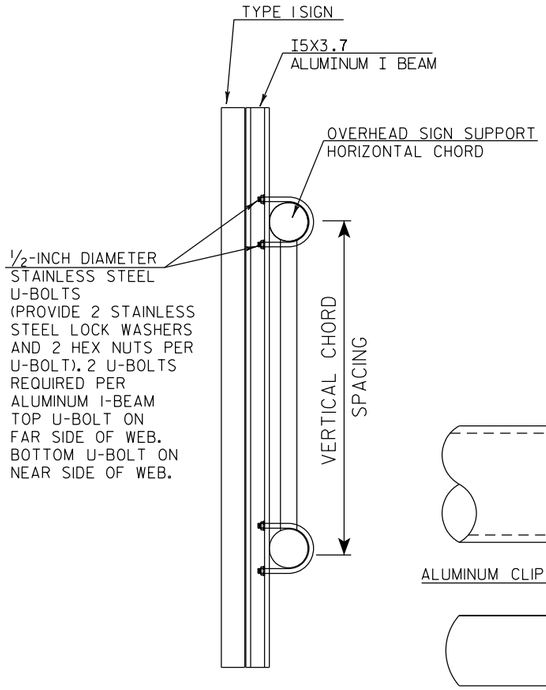
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

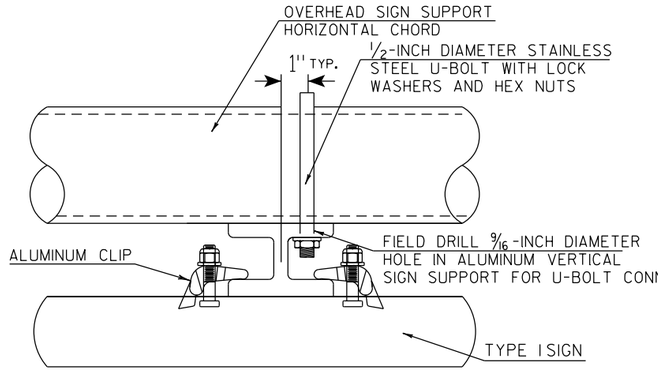
DATE 1/07/20 PLATE NO. A4-6.12



OVERHEAD SIGN SUPPORT
FULL SPAN
2-CHORD OR 4-CHORD TRUSS
(SIGNS GREATER THAN 5 FEET IN HEIGHT)



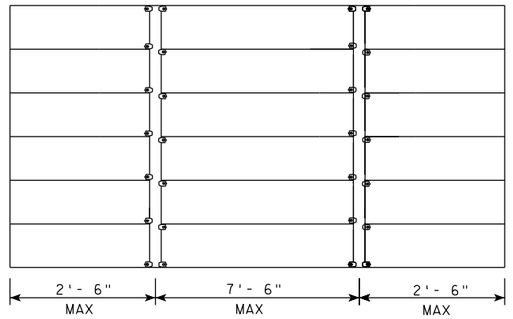
CUT SECTION A-A



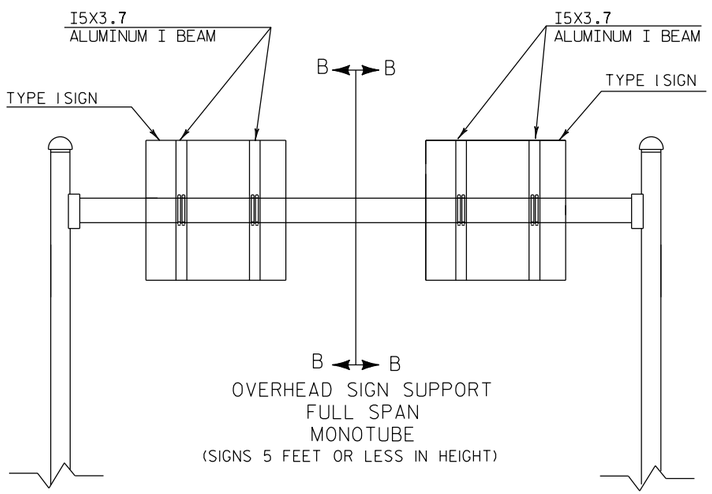
TYPICAL SIGN CONNECTION FOR
2-CHORD OR 4-CHORD TRUSS
PLAN VIEW

GENERAL NOTES

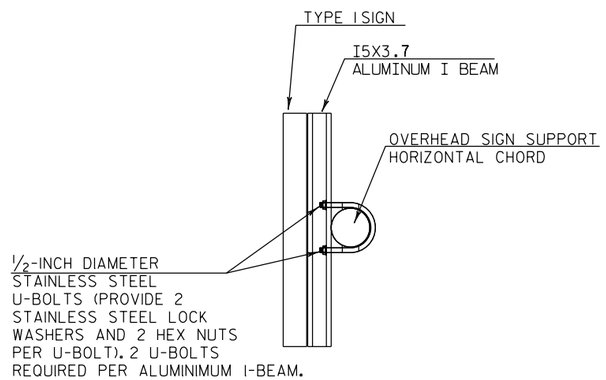
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.
9. SLOTTED HOLES IN I-BEAMS ARE NOT ALLOWED



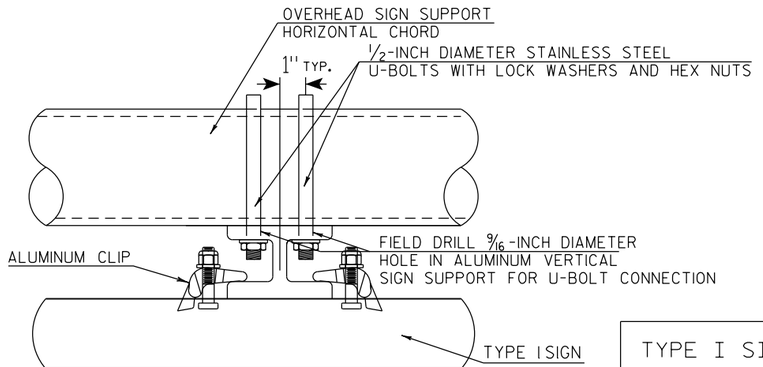
SPACING OF I5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
MONOTUBE
(SIGNS 5 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
MONOTUBE
PLAN VIEW

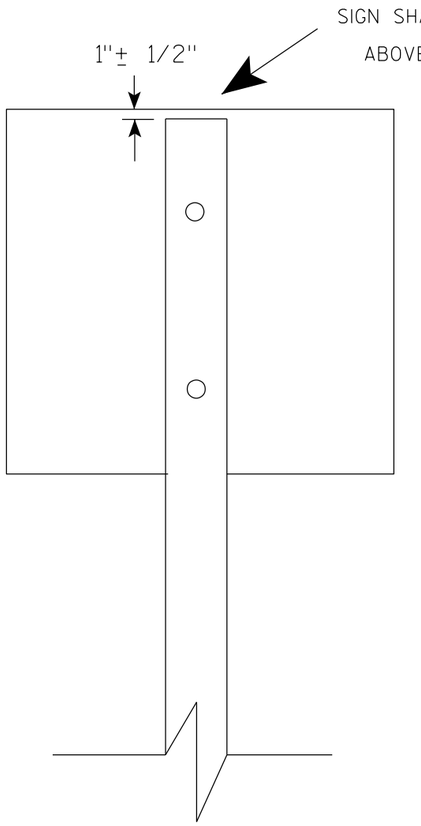
TYPE I SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

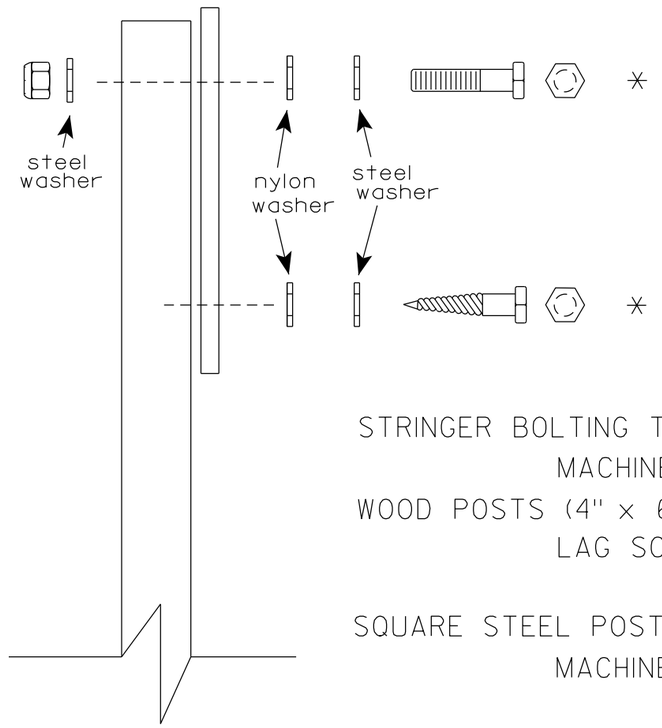
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
State Traffic Engineer

DATE 1/07/20 PLATE NO. A4-7A.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 366	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.

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

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

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

SHEET NO: 367 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 01-APRIL-2020 PLOT BY : dotc4c

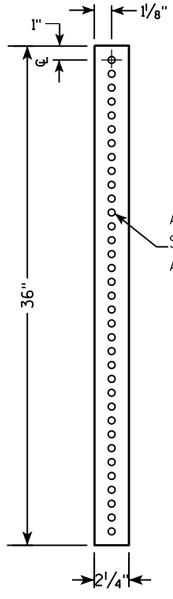
WISDOT/CADDS SHEET 42

7

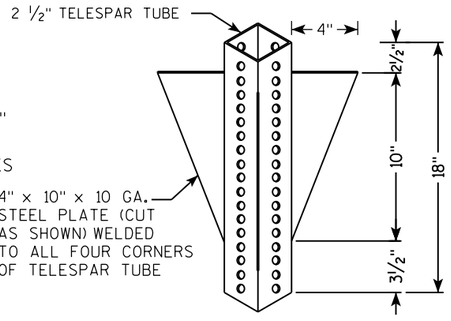
7

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

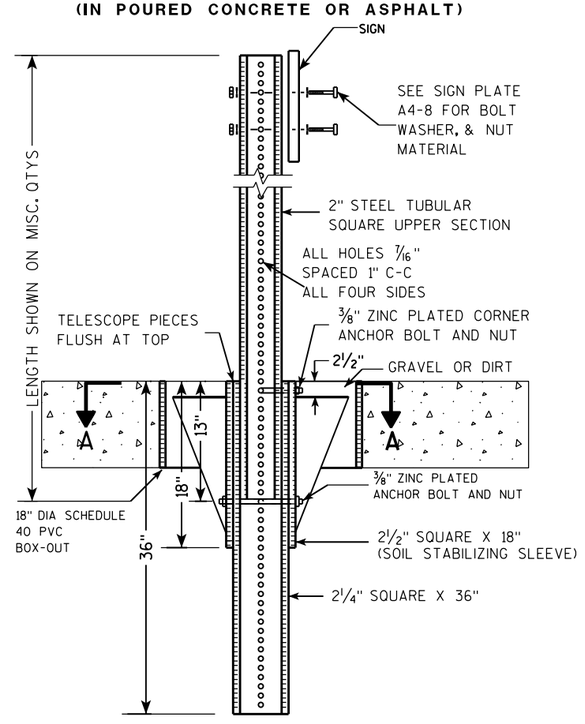
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



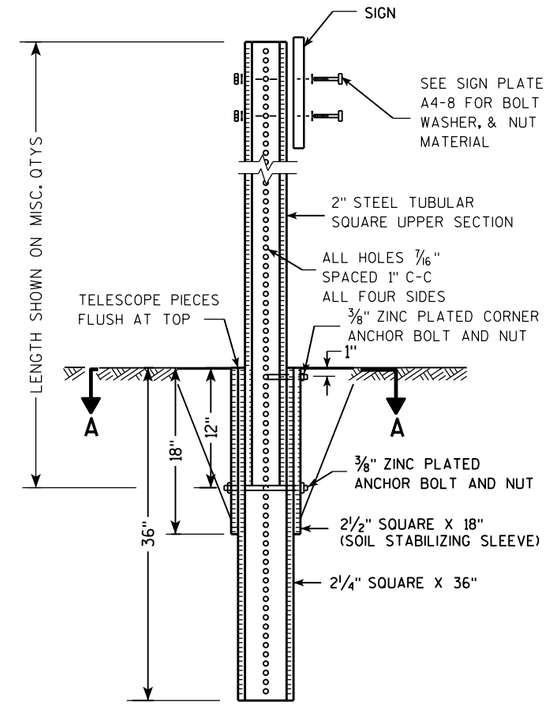
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

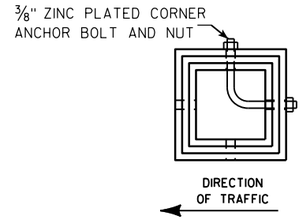


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





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).

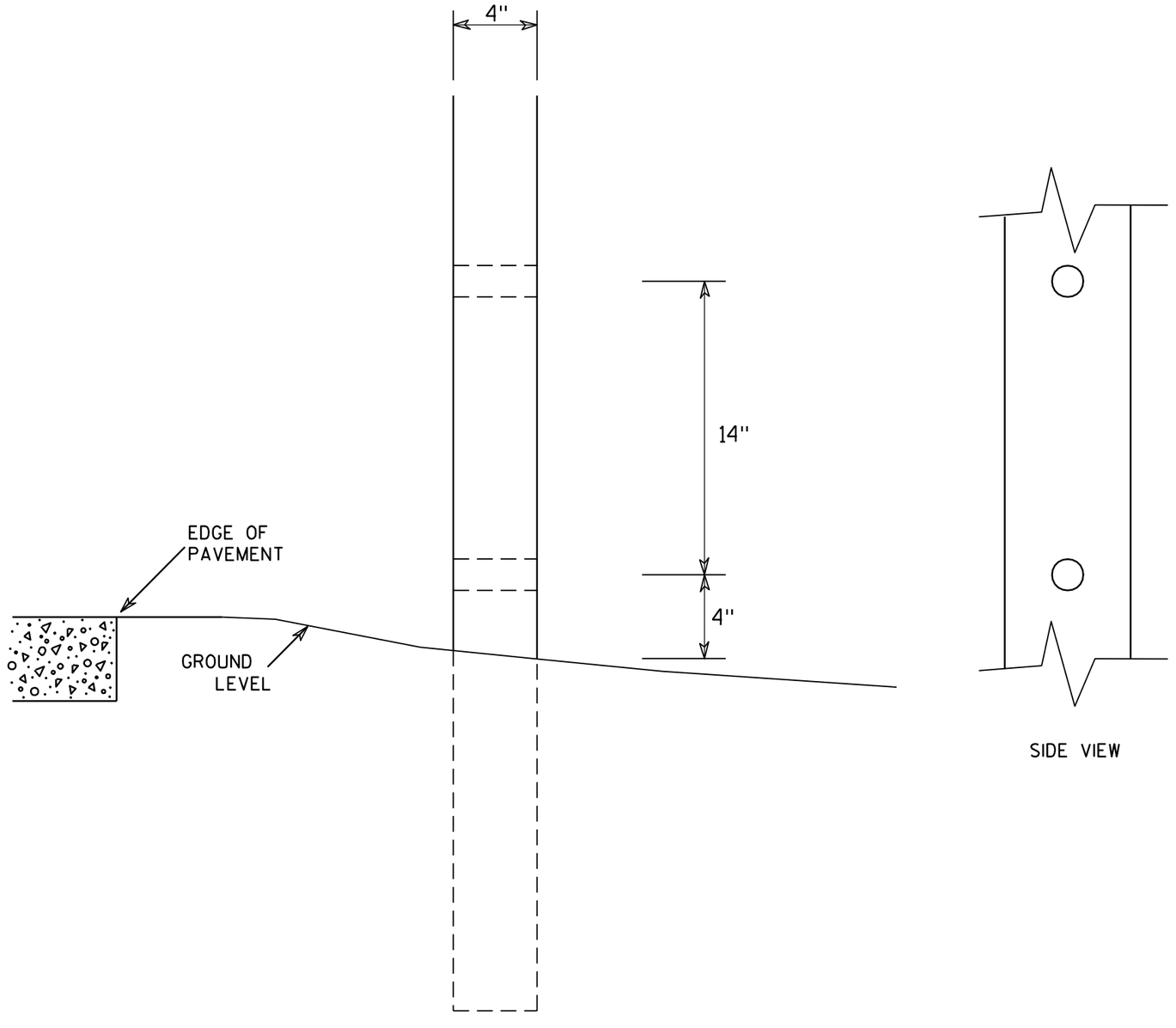
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 368 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	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

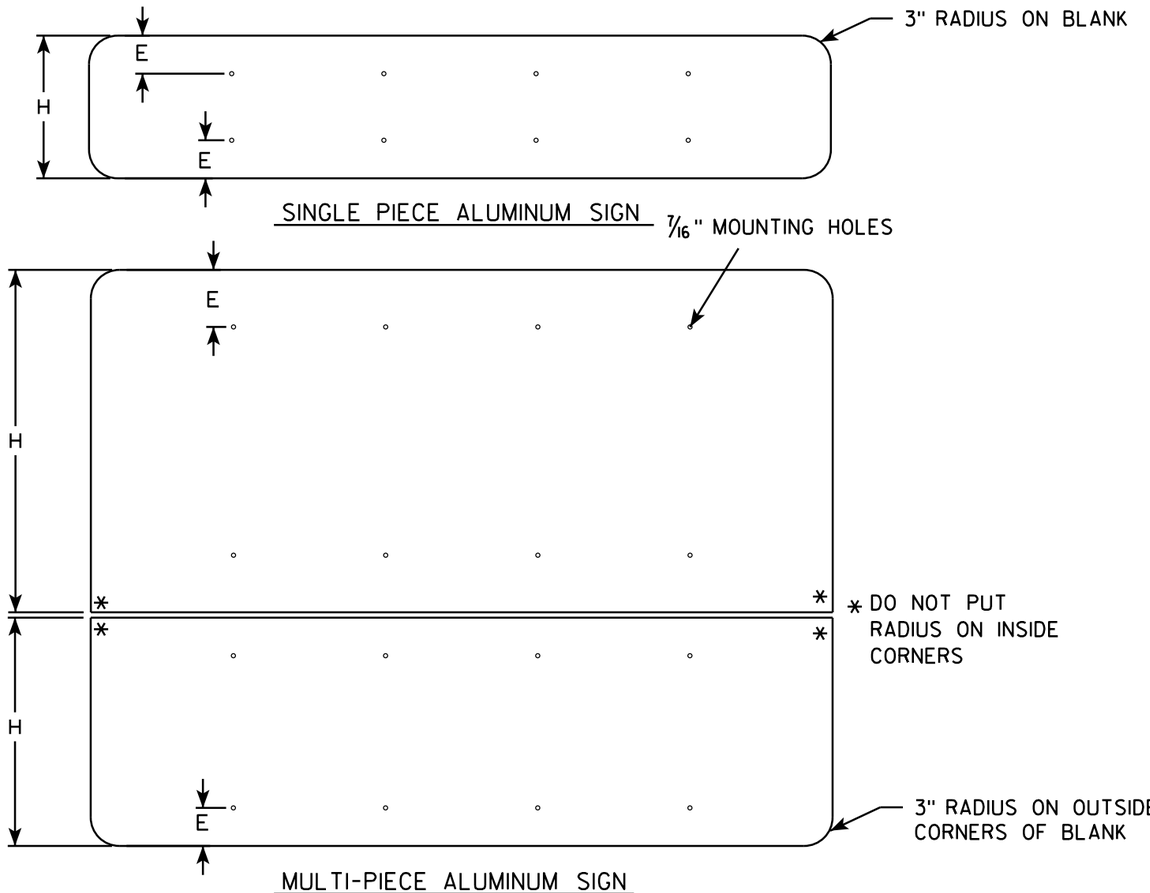
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

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

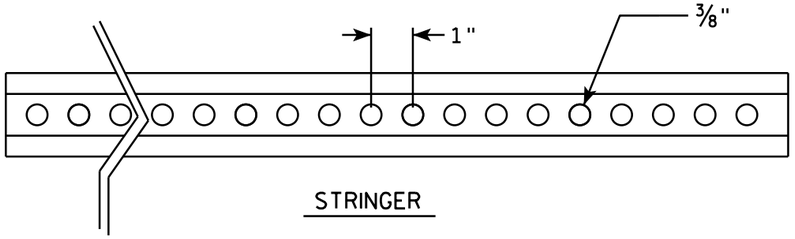
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 369	E



GENERAL NOTES

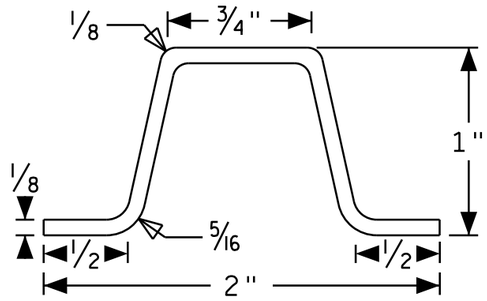
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER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

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

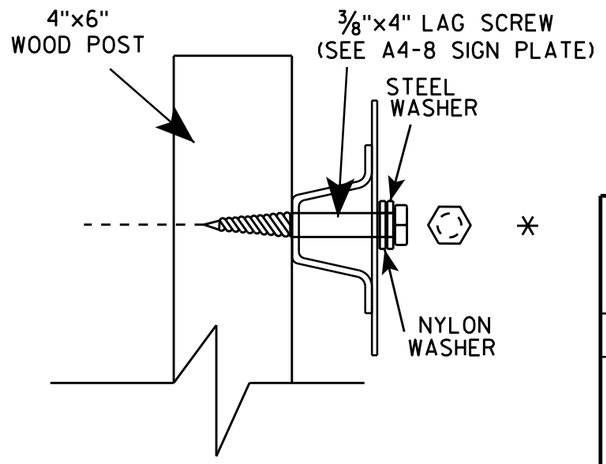


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

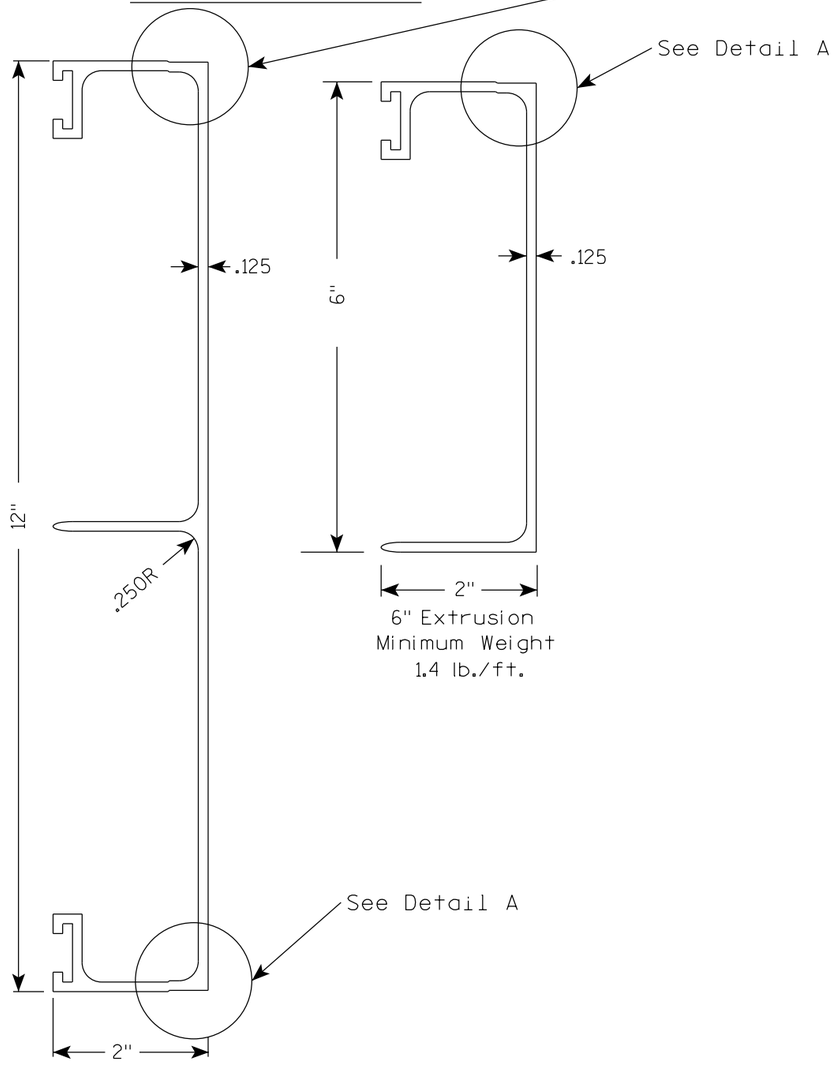
for State Traffic Engineer

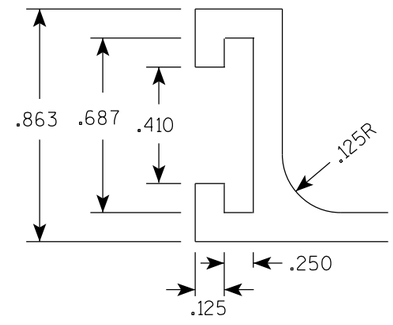
DATE 4/26/16 PLATE NO A4-18.1

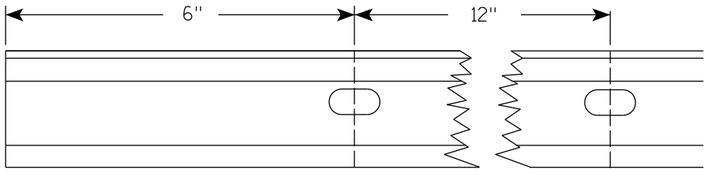
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

Extruded Shape







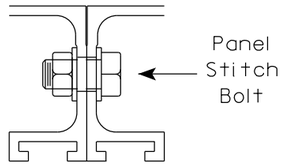
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

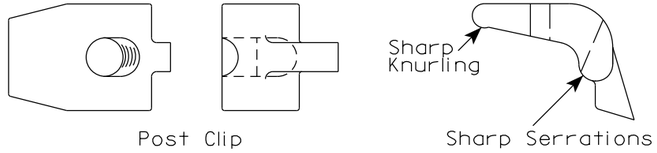
The hardware includes:

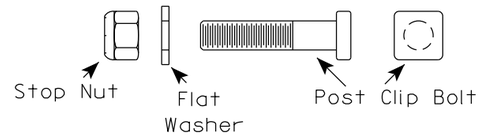
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

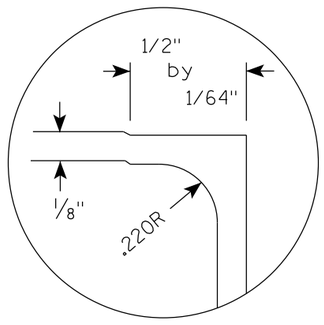
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.



DETAIL A (EDGE WRAP JOINT)

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/07/20 PLATE NO. A5-2.10

PROJECT NO:

SHEET NO: 371 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A52.DGN PLOT DATE : 7-Jan-2020 PLOT BY : dotc4c

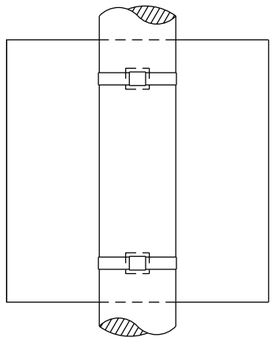
WISDOT/CADDS SHEET 42

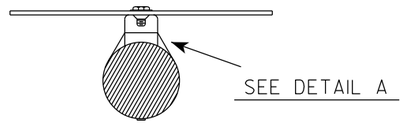
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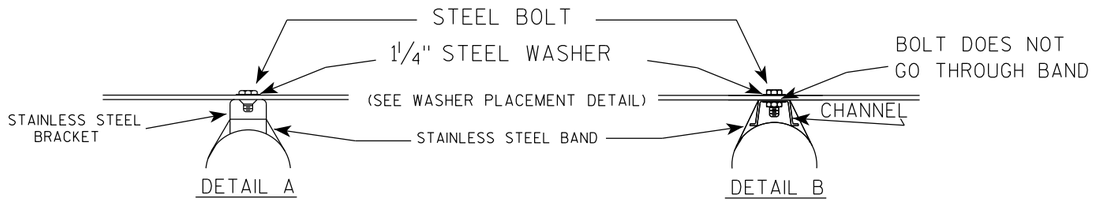
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BANDING

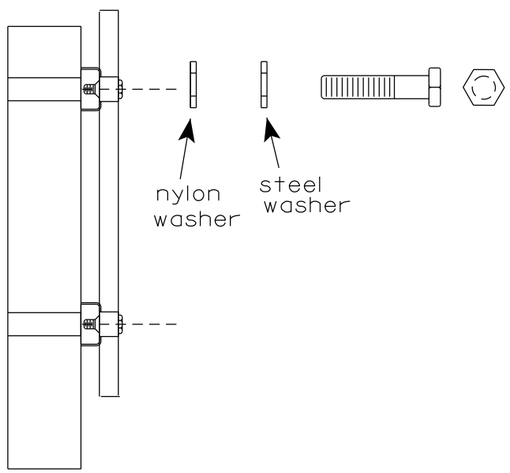
SINGLE SIGN







WASHER PLACEMENT

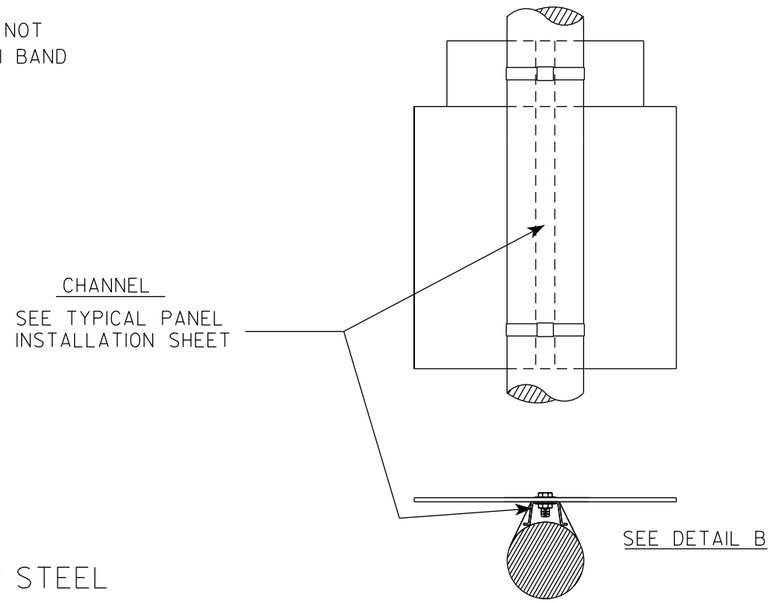


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

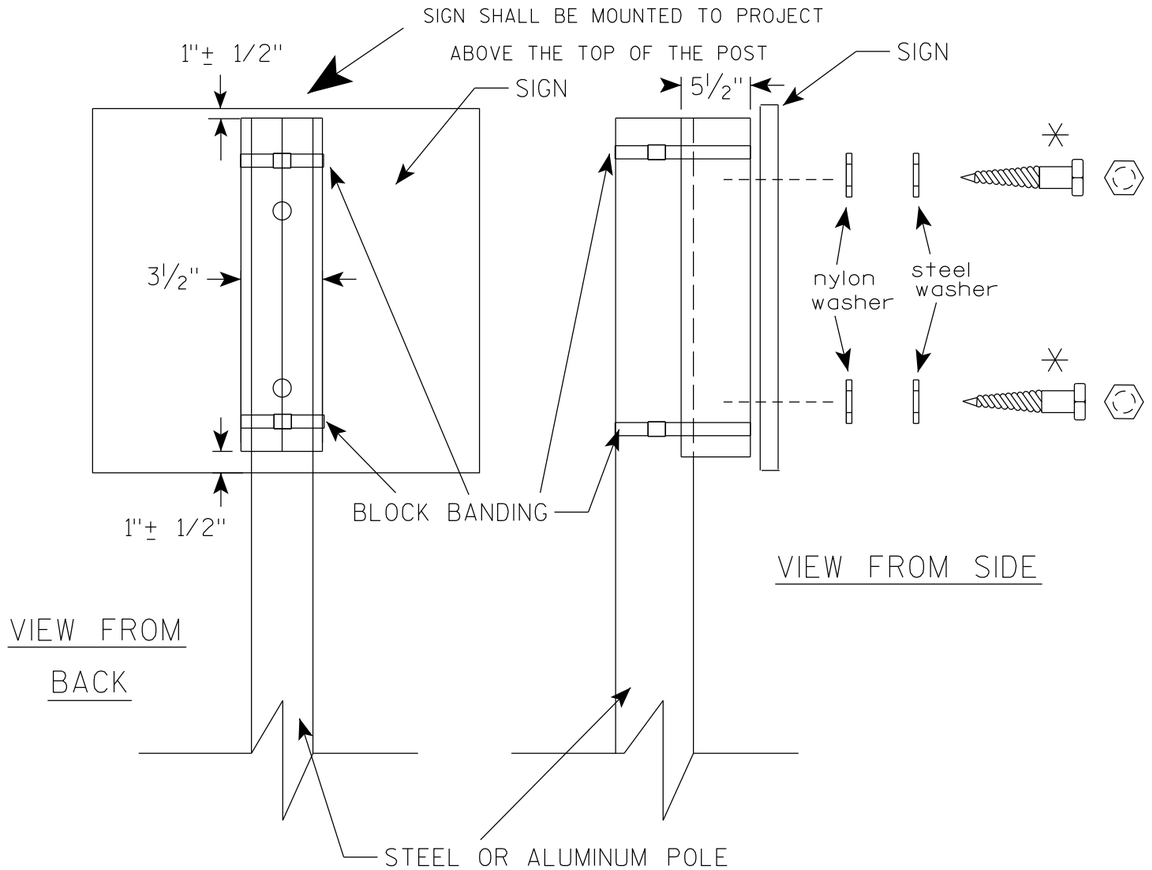
DATE 6/10/19 PLATE NO. A5-9.4

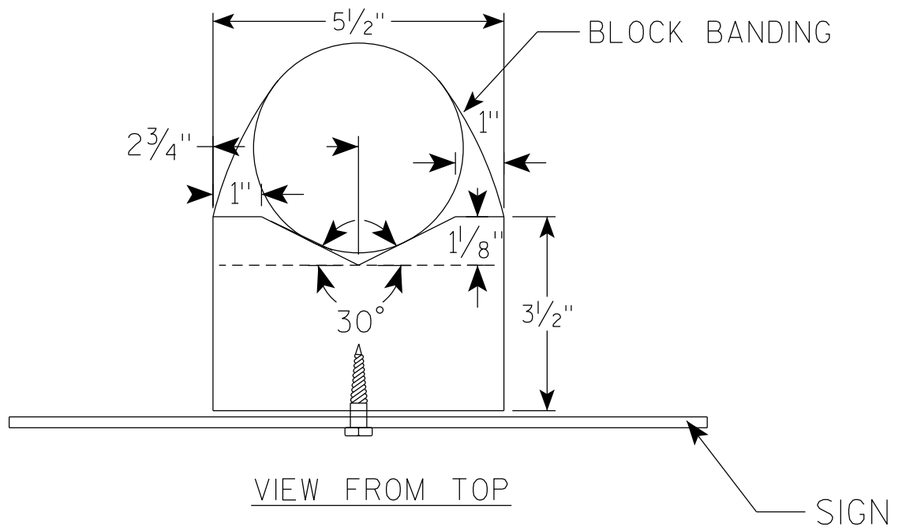
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 372	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

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GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

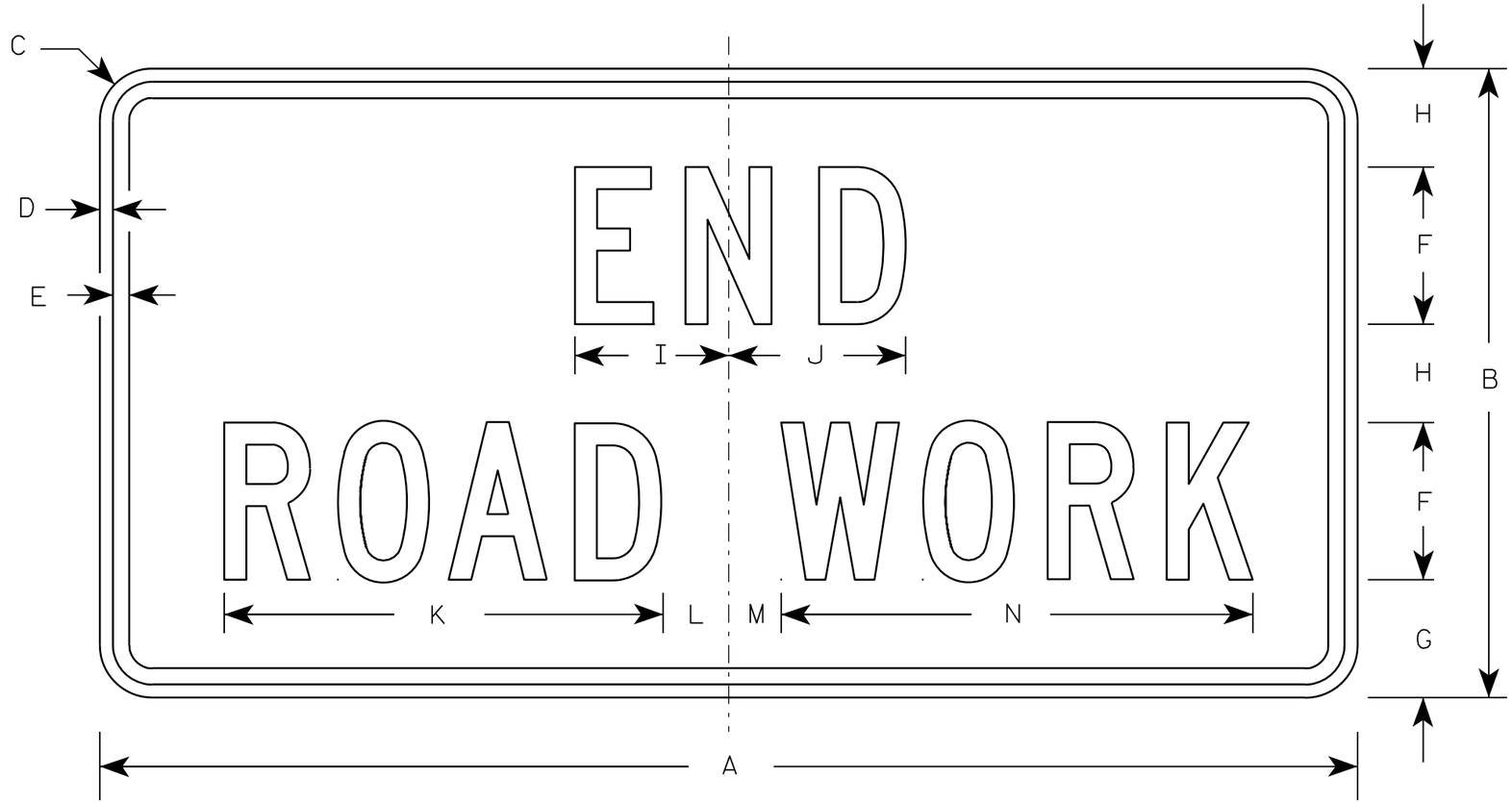
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO: | SHEET NO: 373 | E



G20-2A

NOTES

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

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

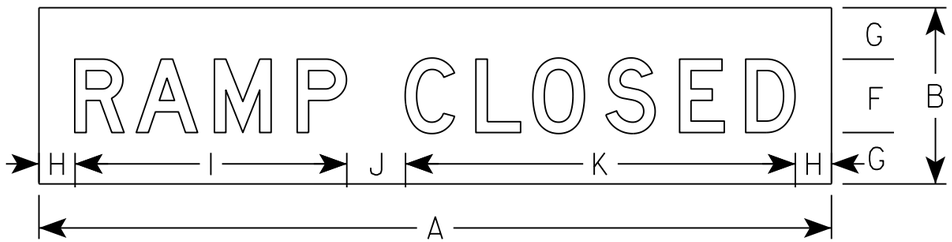
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 374	E

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Material shall be .040 aluminmum



G20-63

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																											
3	72	12				6	3	6	22 1/8	6	31 7/8																6.0
4	108	24				10	7	4 7/8	37	8	53 1/8																18.0
5																											

STANDARD SIGN
G20-63

WISCONSIN DEPT OF TRANSPORTATION

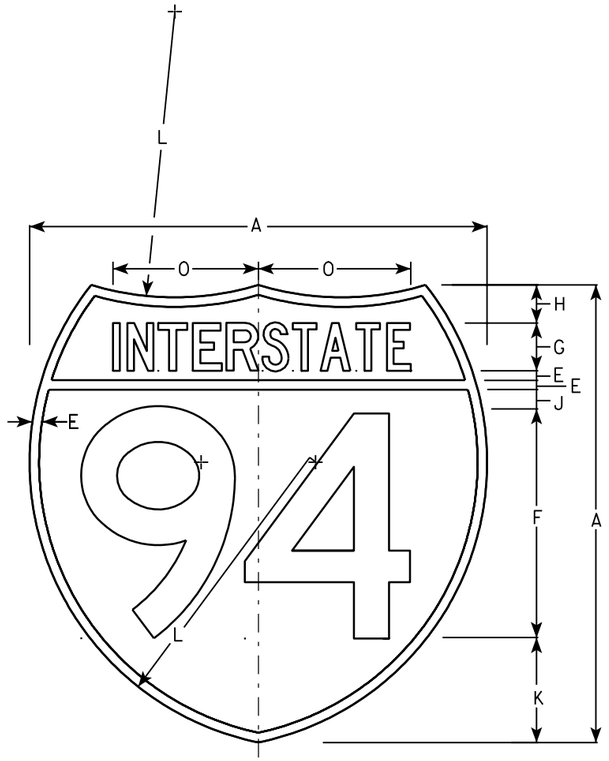
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 11/8/17 PLATE NO. G20-63.1

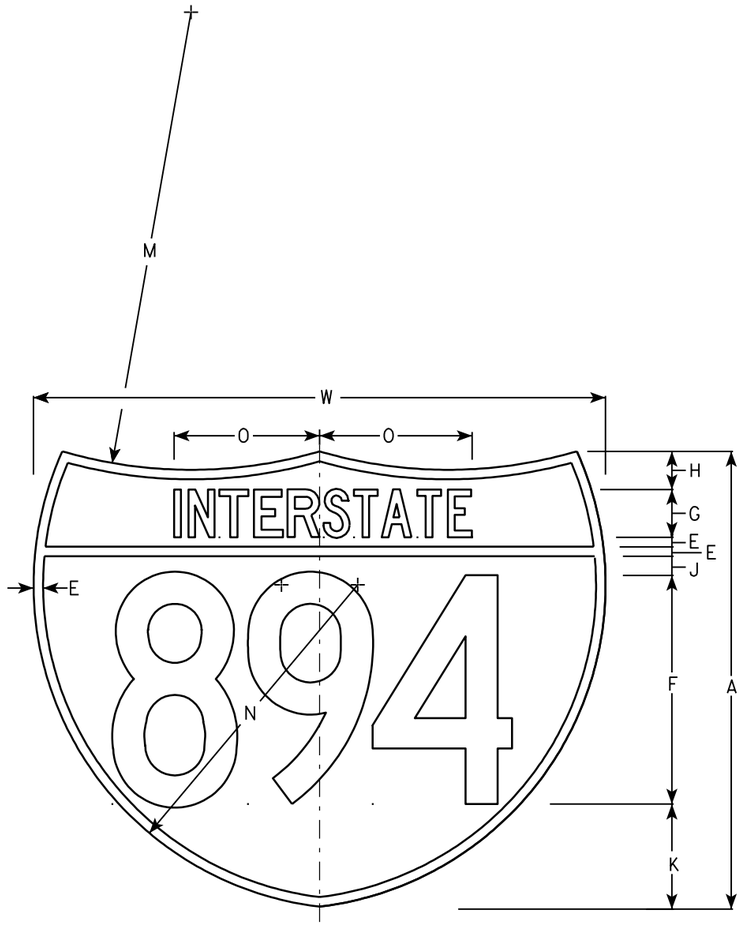
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 375 E

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

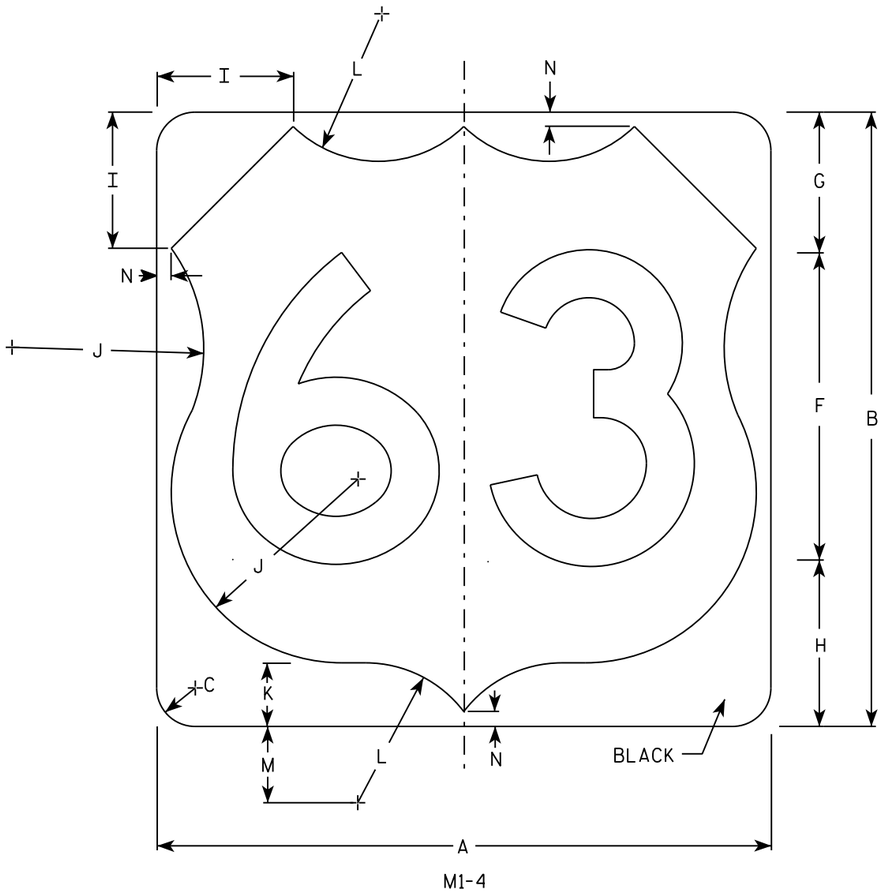
APPROVED Matthew R Rauch
for State Traffic Engineer

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

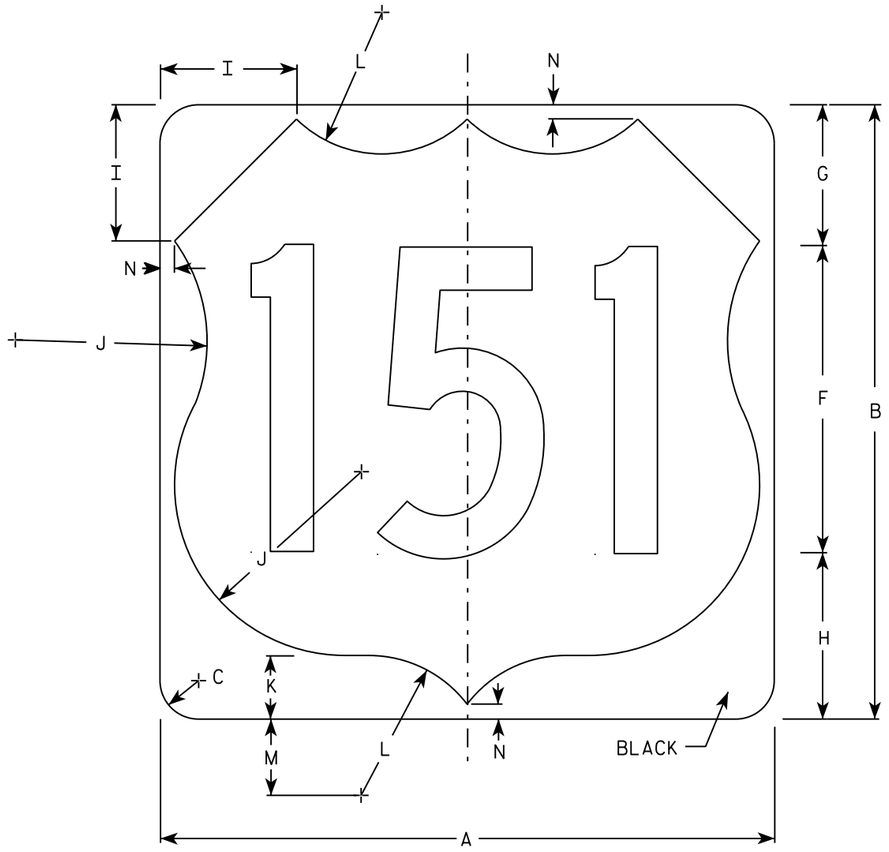
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 376	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs 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.



M1-4



M1-4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area Sq. ft.
1																											
2	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
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
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
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

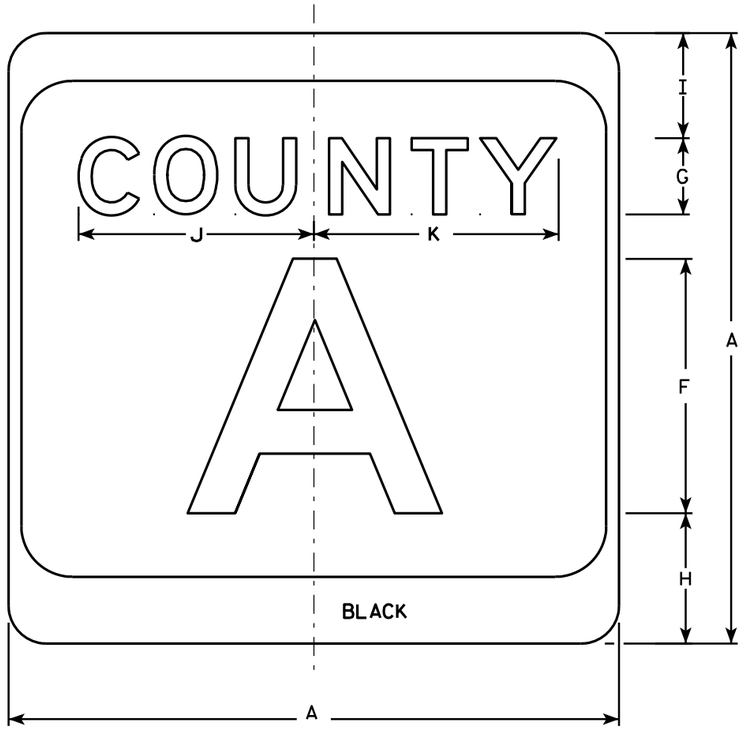
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

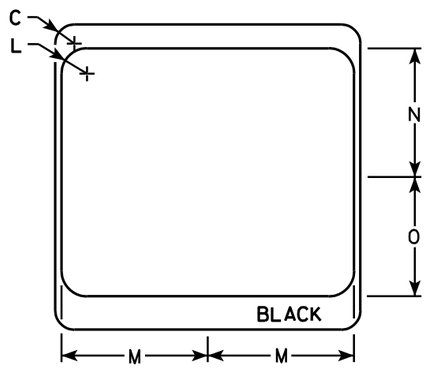
APPROVED Matthew R Rauch
for State Traffic Engineer

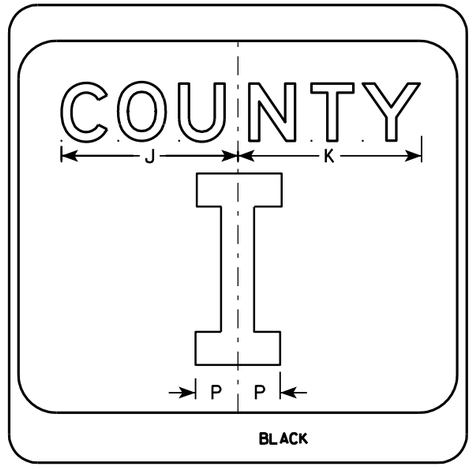
DATE 3/16/18 PLATE NO. M1-4.10

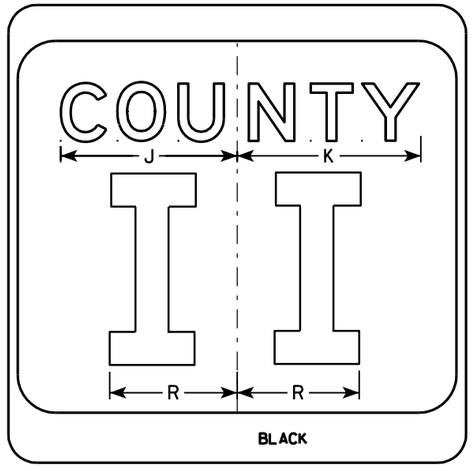
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 377 | E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   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. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - 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		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

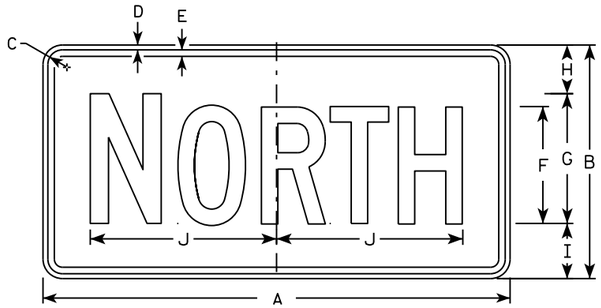
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

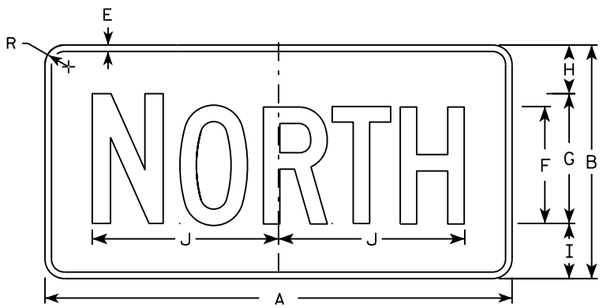
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 378	E



M3-1
MM3-1
MP3-1



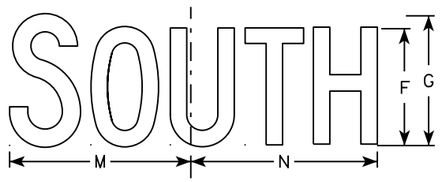
MB3-1
MK3-1
MN3-1



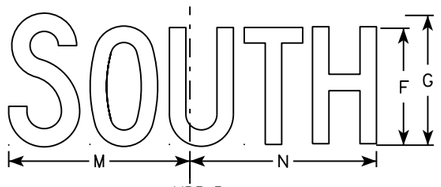
M3-2
MM3-2
MP3-2



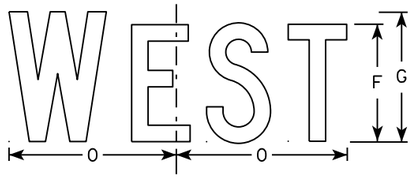
MB3-2
MK3-2
MN3-2



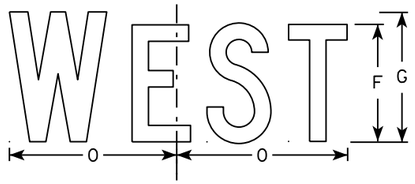
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

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

STANDARD SIGNS
M3-1 thur M3-4
SERIES

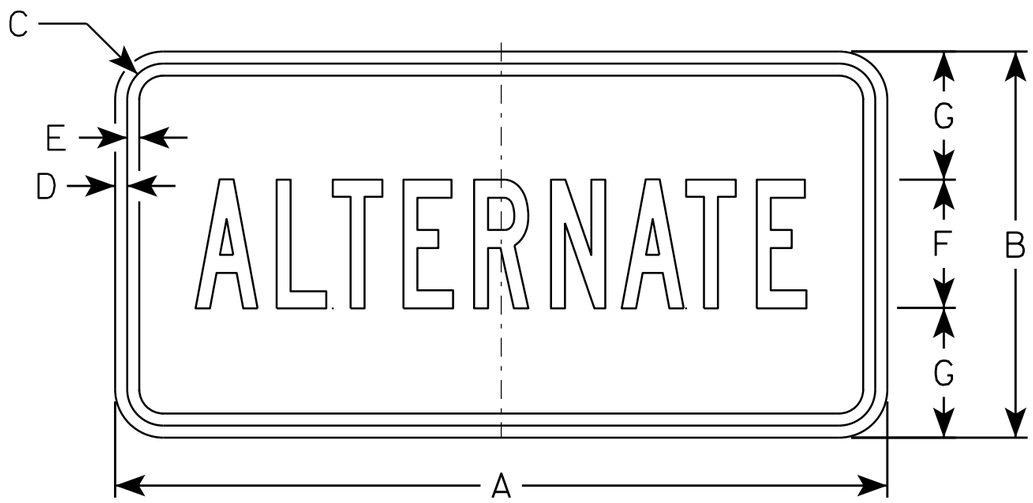
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

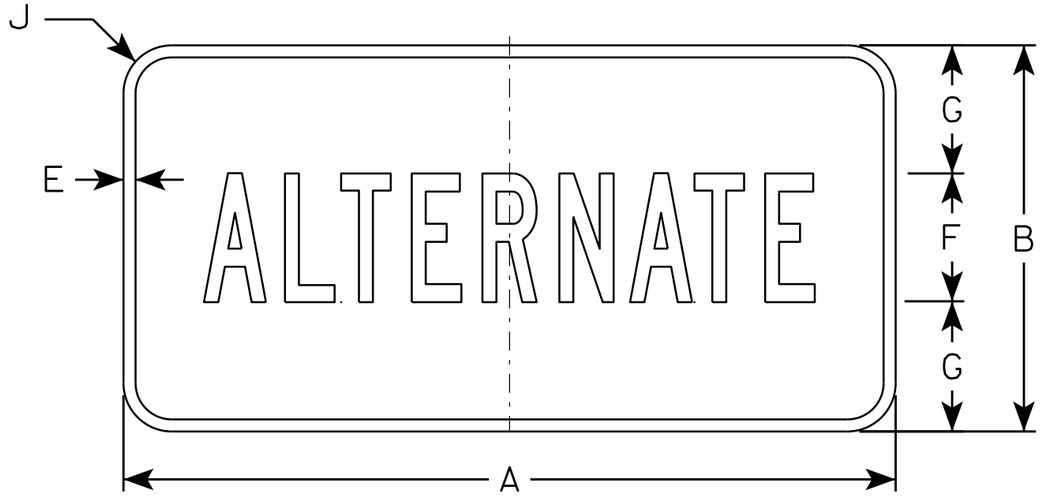
DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-1
M04-1



MB4-1

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See Note 5
   Message - See note 5
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.
5. M4-1 Background - White
   Message - Black

   MB4-1 Background - Blue
   Message - White

   M04-1 Background - Orange - Type F
   Message - 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																											
2	24	12	1 1/8	3/8	3/8	4	4	9 3/4	9 1/2	1 1/2																	2.00
3	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
4	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
5	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5

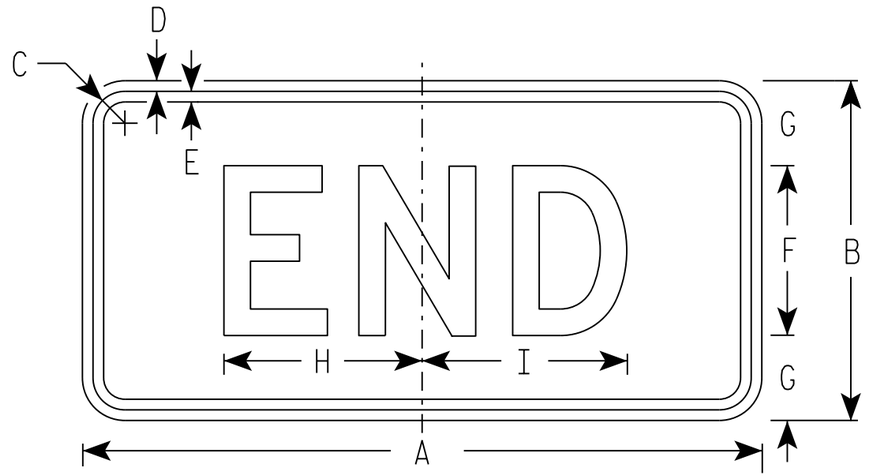
STANDARD SIGN
M4-1

WISCONSIN DEPT OF TRANSPORTATION

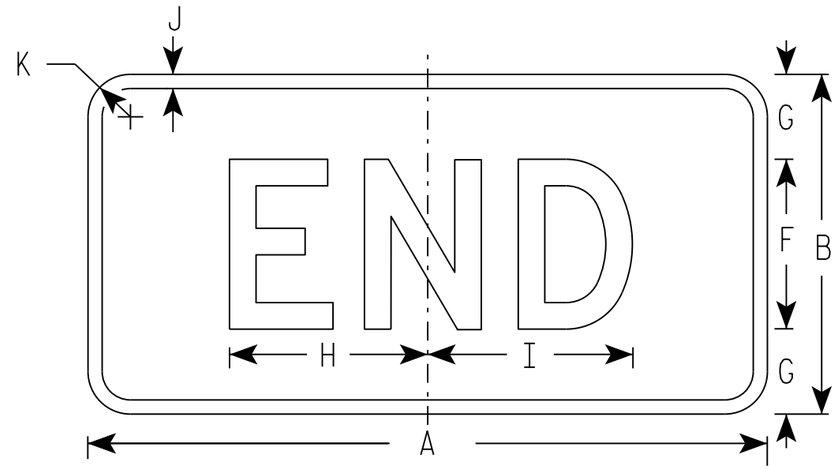
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/14 PLATE 380 '14-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



M4-6
MM4-6
MP4-6



MB4-6
MK4-6
MN4-6
MR4-6

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - 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. M4-6 Background - White
   Message - Black

   MB4-6 Background - Blue
   Message - White

   MK4-6 Background - Green
   Message - White

   MM4-6 Background - White
   Message - Green

   MN4-6 Background - Brown
   Message - White

   MP4-6 Background - White
   Message - Blue

   MR4-6 Background - Brown
   Message - Yellow

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	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-6

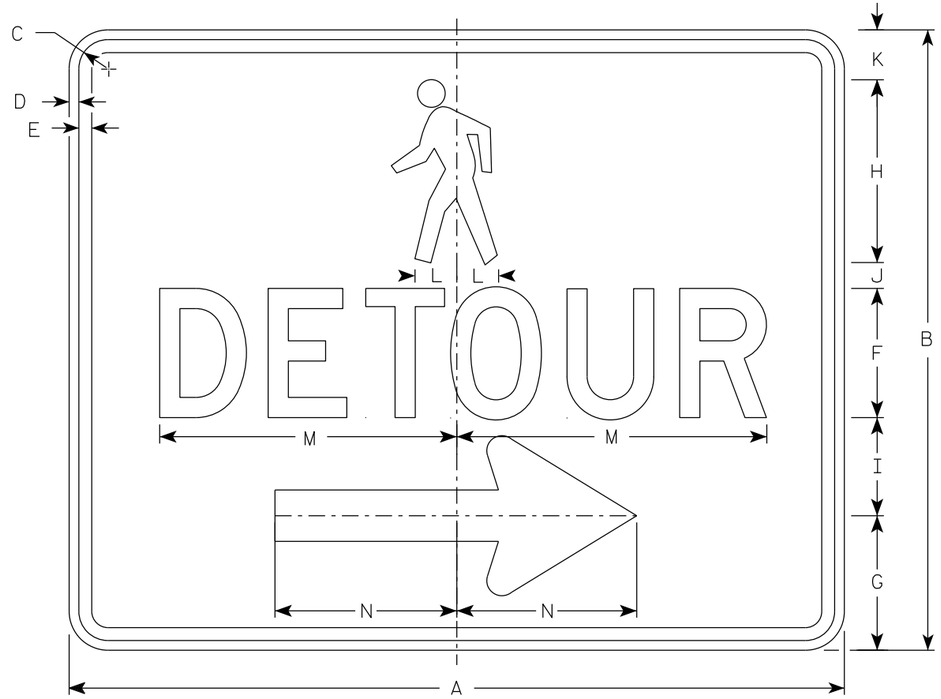
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 381 '14-7.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

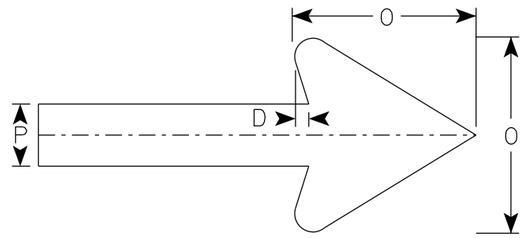
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M46.DGN PLOT DATE : 01-DEC-2015 17:55 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000



M4-9BR

NOTES

1. Sign is Type II-Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9BL is the same as M4-9BR except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.00
3																											
4																											
5																											

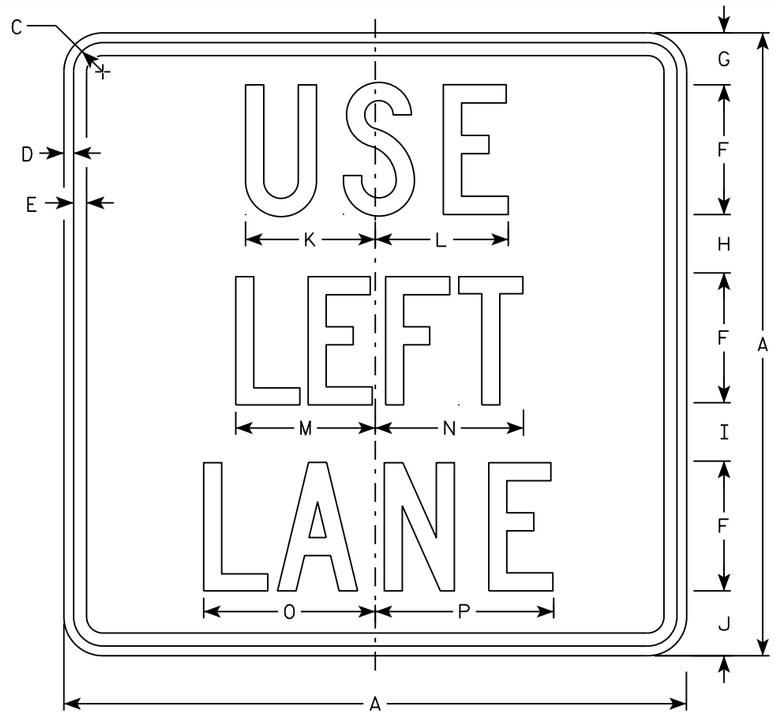
STANDARD SIGN
M4-9B L&R

WISCONSIN DEPT OF TRANSPORTATION

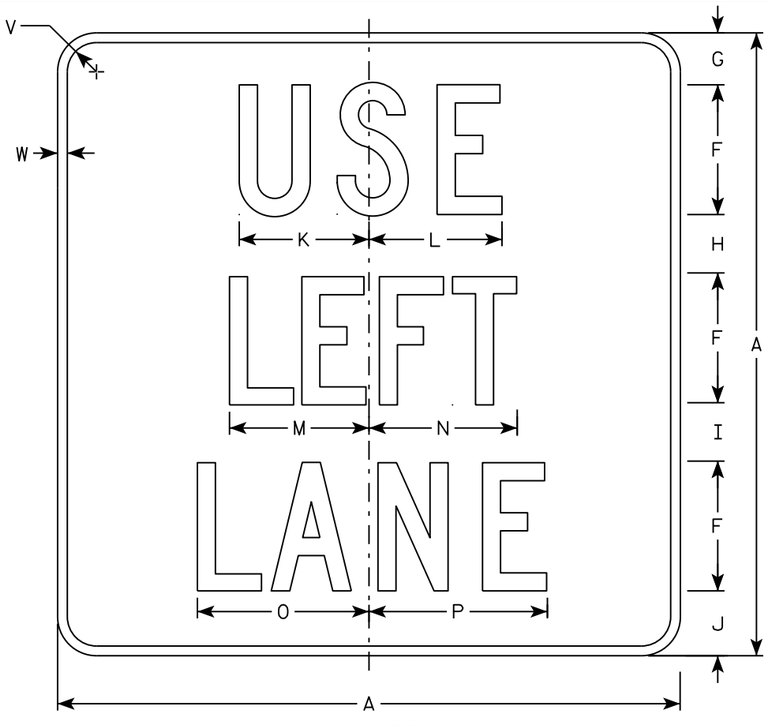
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 7/1/19 PLATE NO. M4-9B.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 382 | E



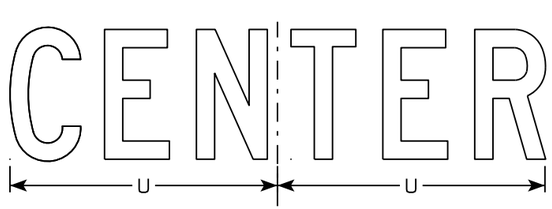
M4-20L



MB4-20L

M4-20L
MM4-20L
M04-20L
MP4-20L

MB4-20L
MK4-20L
MN4-20L
MR4-20L



M4-20C
MB4-20C
MK4-20C
MM4-20C
MN4-20C
M04-20C
MP4-20C
MR4-20C



M4-20R
MB4-20R
MK4-20R
MM4-20R
MN4-20R
M04-20R
MP4-20R
MR4-20R

NOTES

1. Sign is Type II - Type H except as Shown
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. M4-20 Background - White
   Message - Black
   MB4-20 Background - Blue
   Message - White
   MK4-20 Background - Green
   Message - White
   MM4-20 Background - White
   Message - Green
   MN4-20 Background - Brown
   Message - White
   M04-20 Background - Orange - Type F Reflective
   Message - Black
   MP4-20 Background - White
   Message - Blue
   MR4-20 Background - Brown
   Message - Yellow

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		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	5 3/8	5 3/4	6 5/8	6 7/8			7	7 5/8	10 1/4	1 1/2	1/2				4.0
3	36		1 5/8	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8	1 7/8	1/2				9.0
4																											
5																											

STANDARD SIGN
M4-20

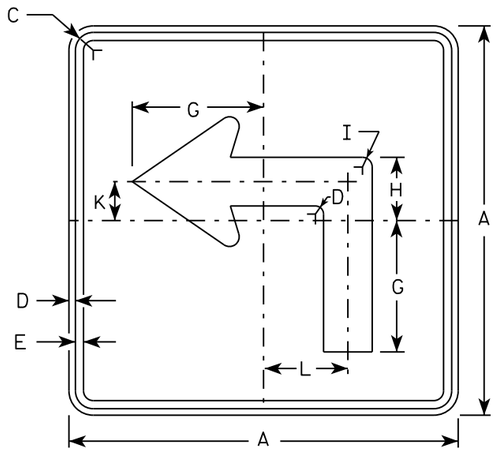
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

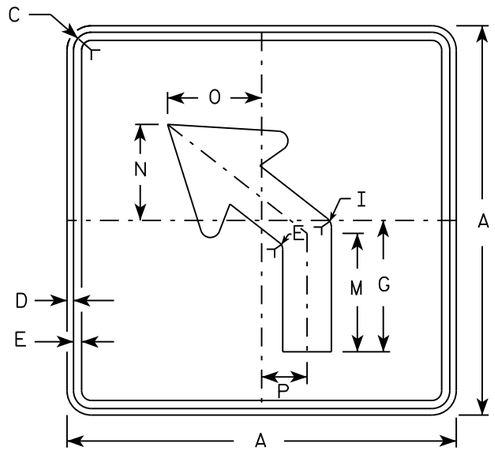
DATE 10/15/15 PLATE NO M4-20.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

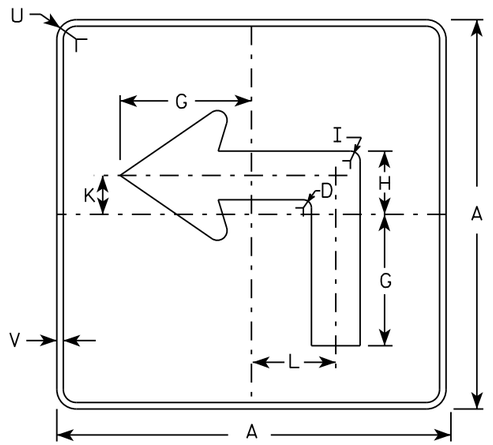
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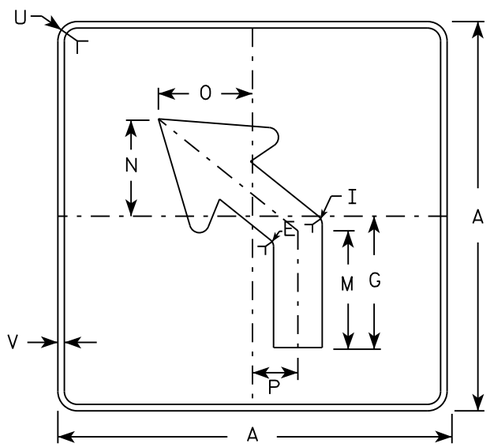
M5-1L
MM5-1L
MO5-1L
MP5-1L



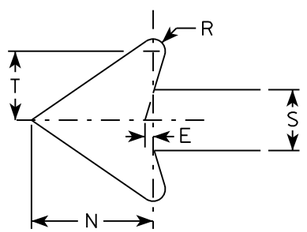
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

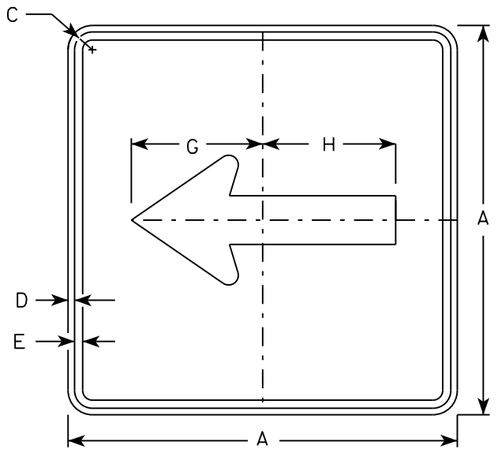
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

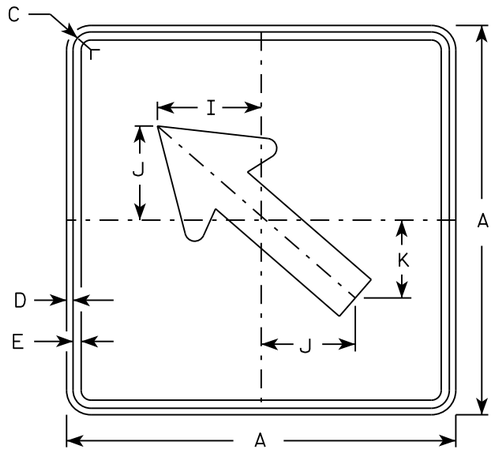
DATE 10/15/15 PLATE NO. M5-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



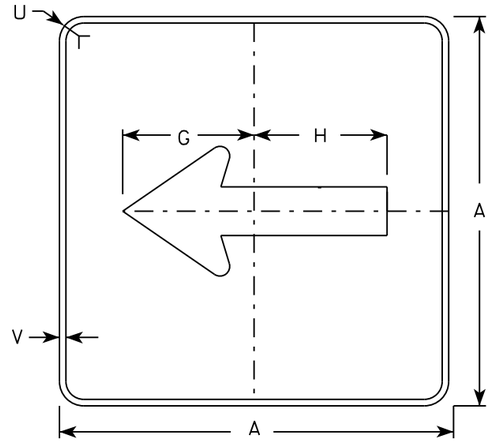
M6-1
MM6-1
MO6-1
MP6-1



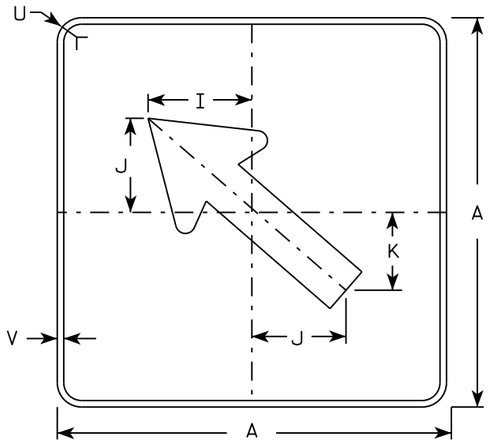
M6-2
MM6-2
MO6-2
MP6-2

NOTES

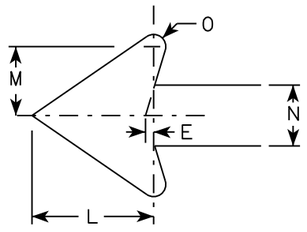
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



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



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



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

STANDARD SIGN
M6-1 & M6-2
SERIES

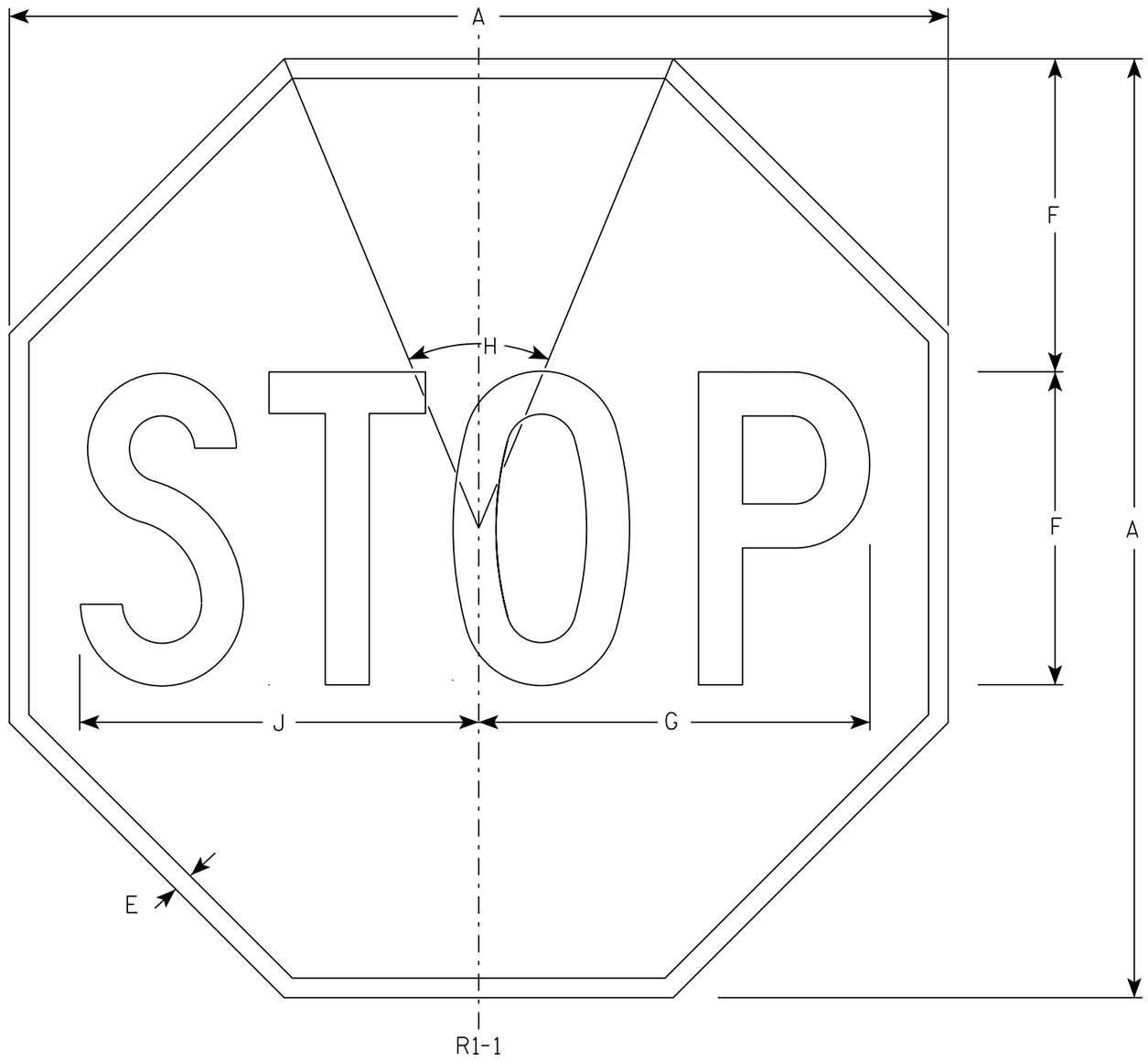
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLAT 385 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



NOTES

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

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

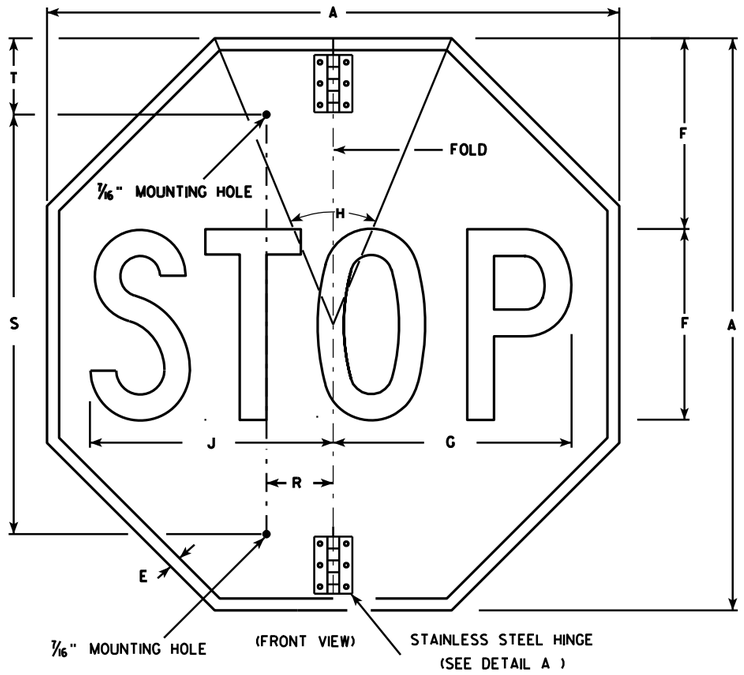
STANDARD SIGN
R1-1

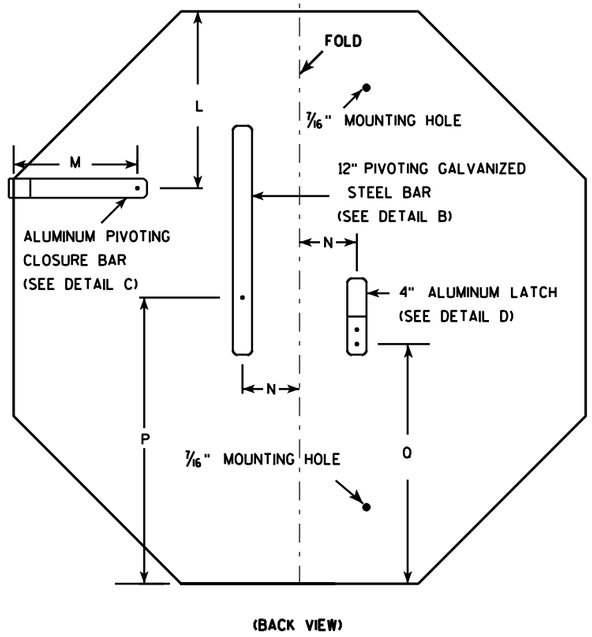
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

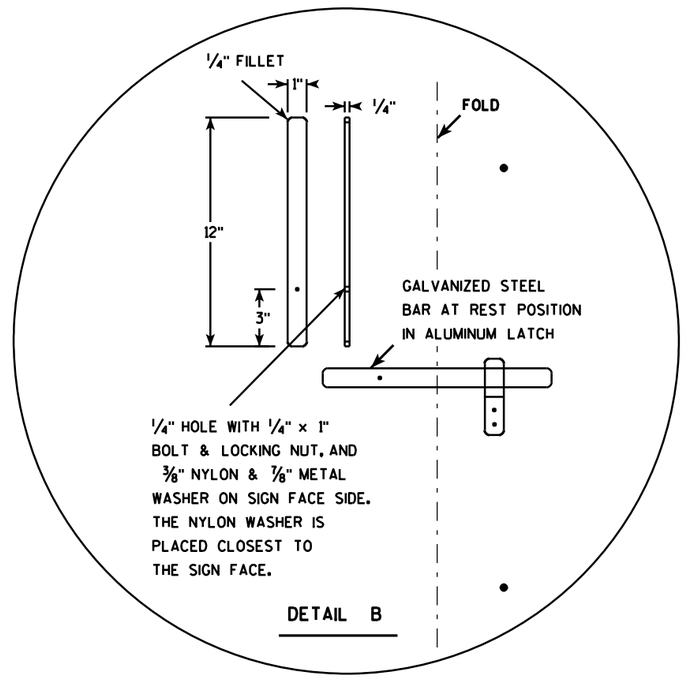
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 386	E

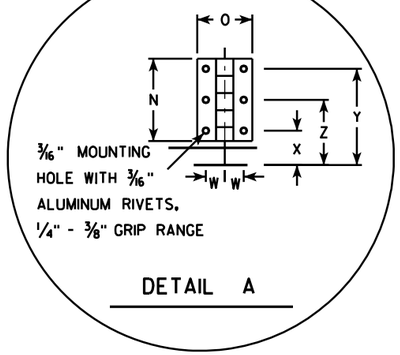


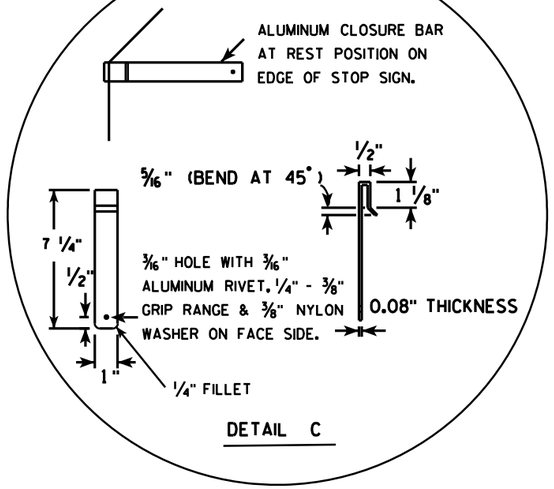


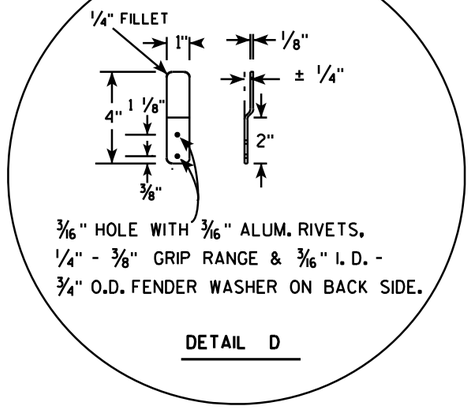
NOTES

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









SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

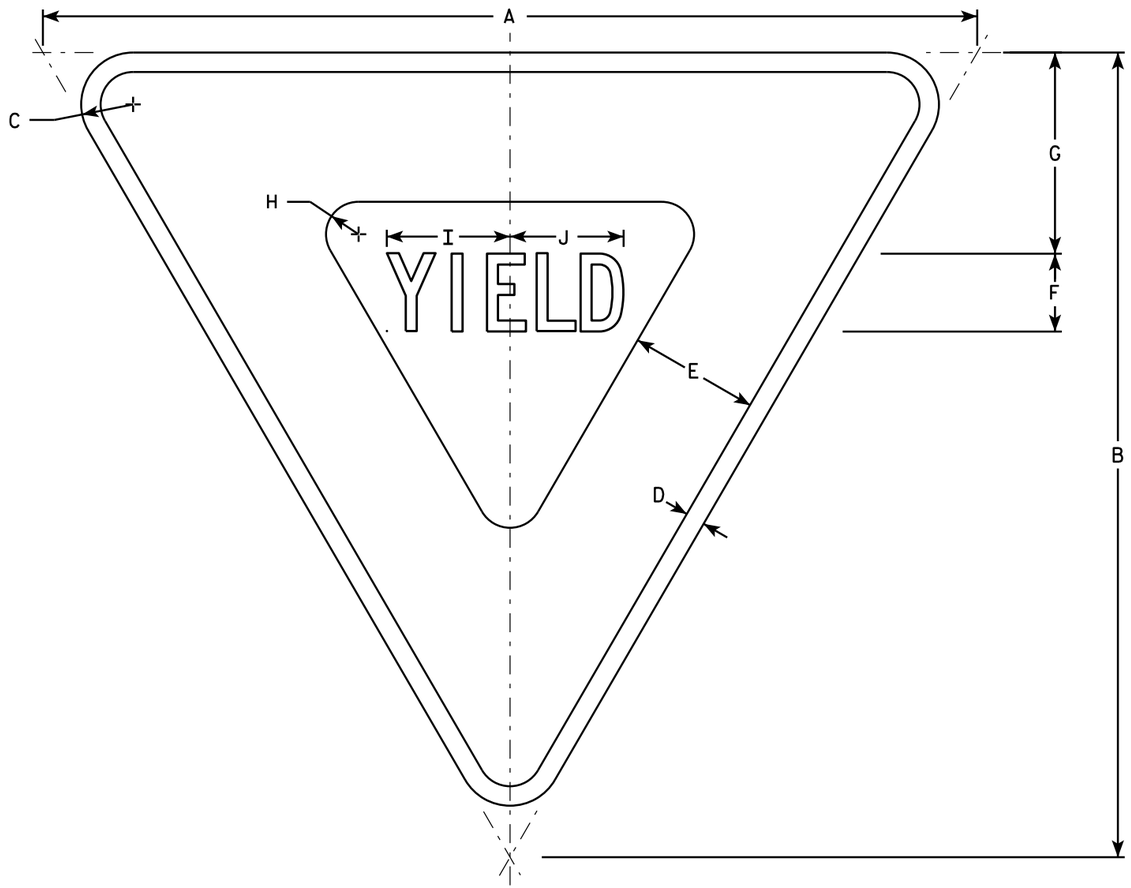
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 387	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																											
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

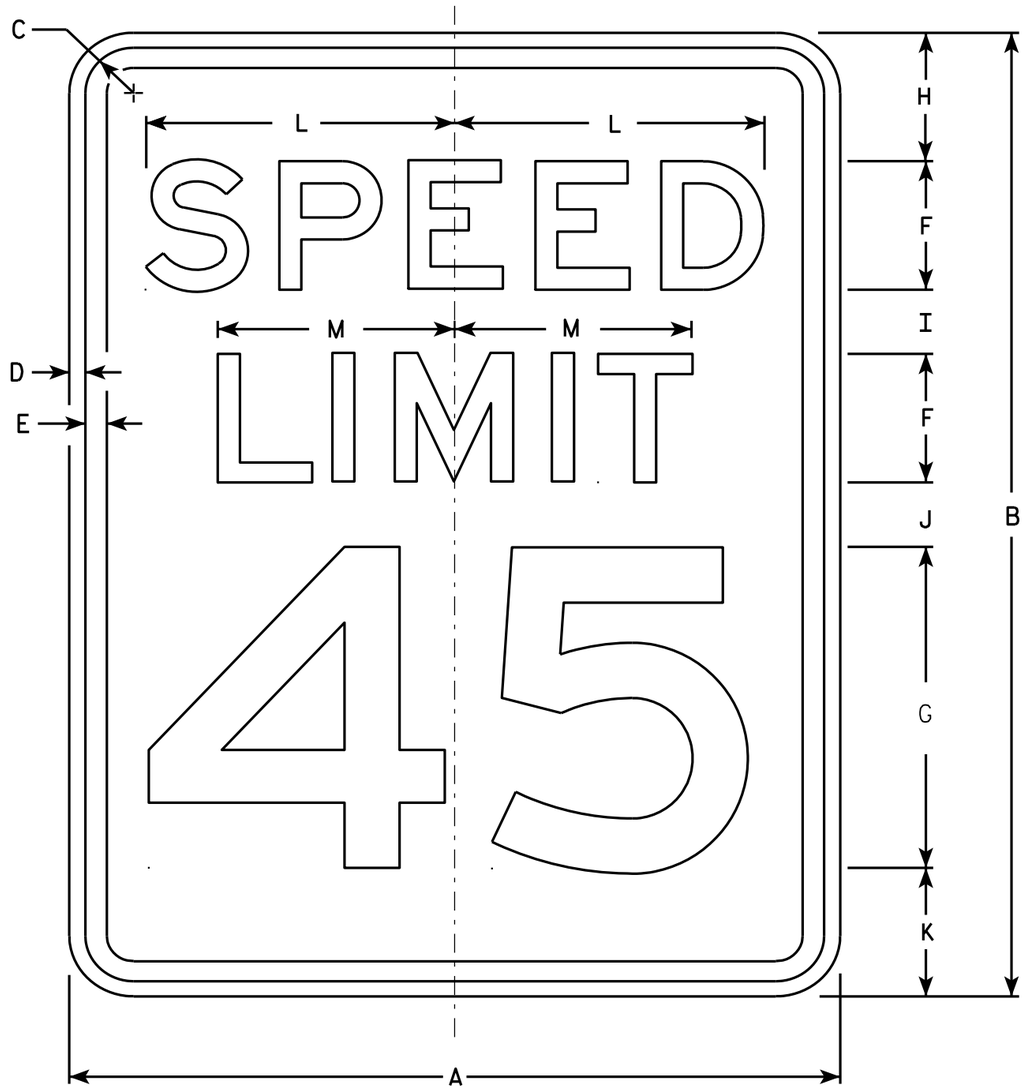
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE P1-2.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000



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

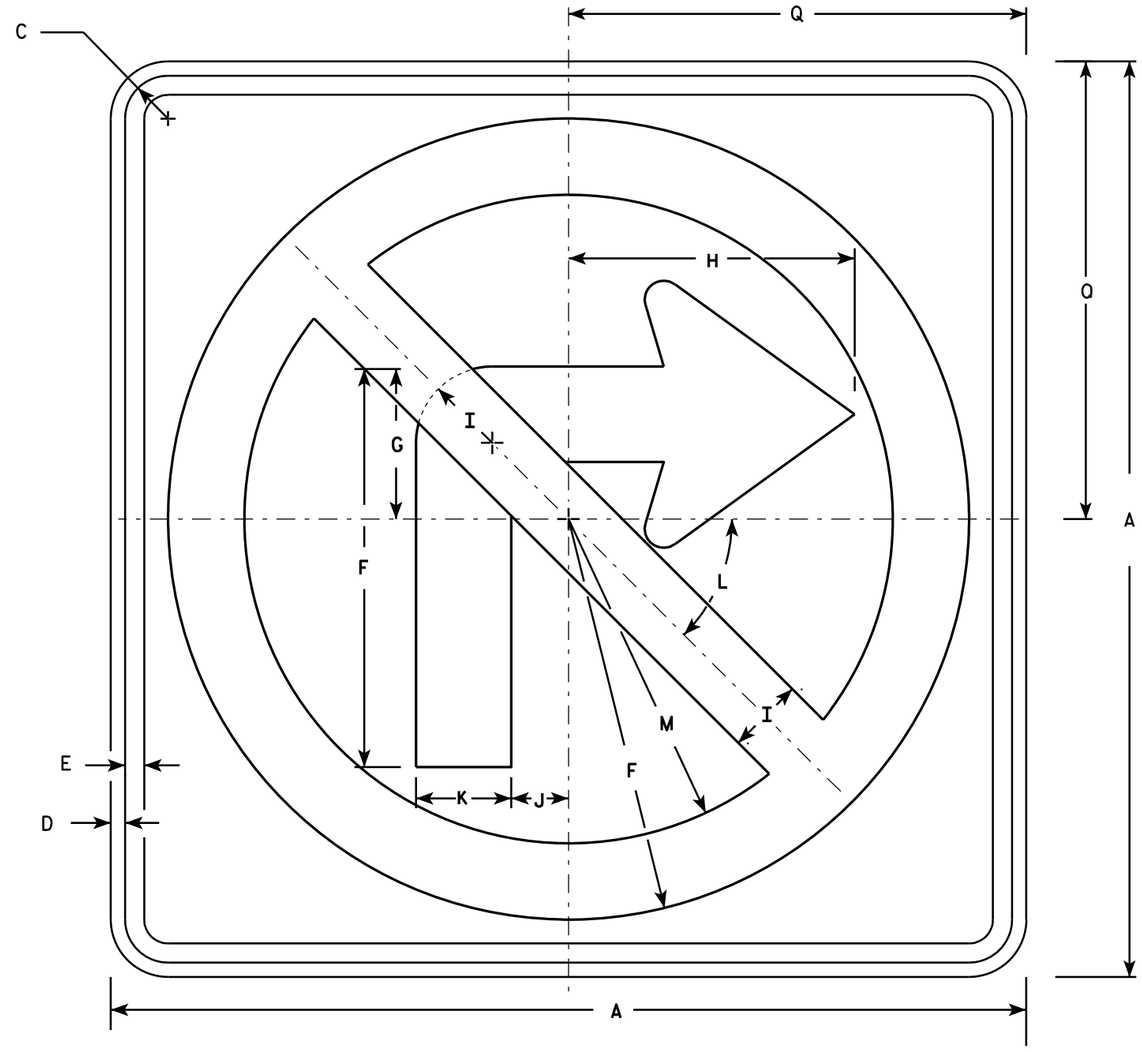
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

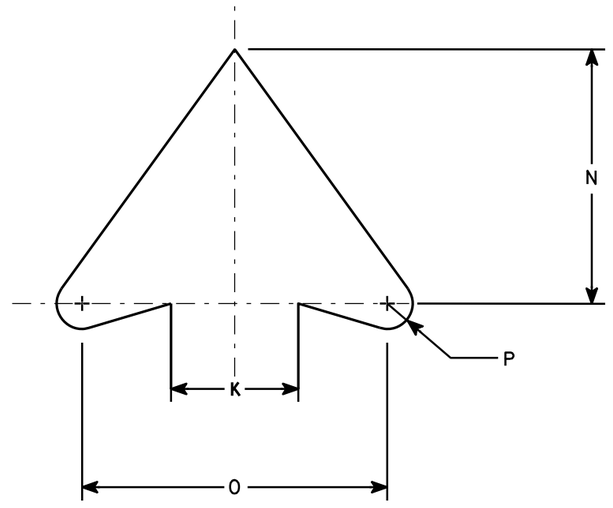
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 389 | E



R3-1

NOTES

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



ARROW DETAIL

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

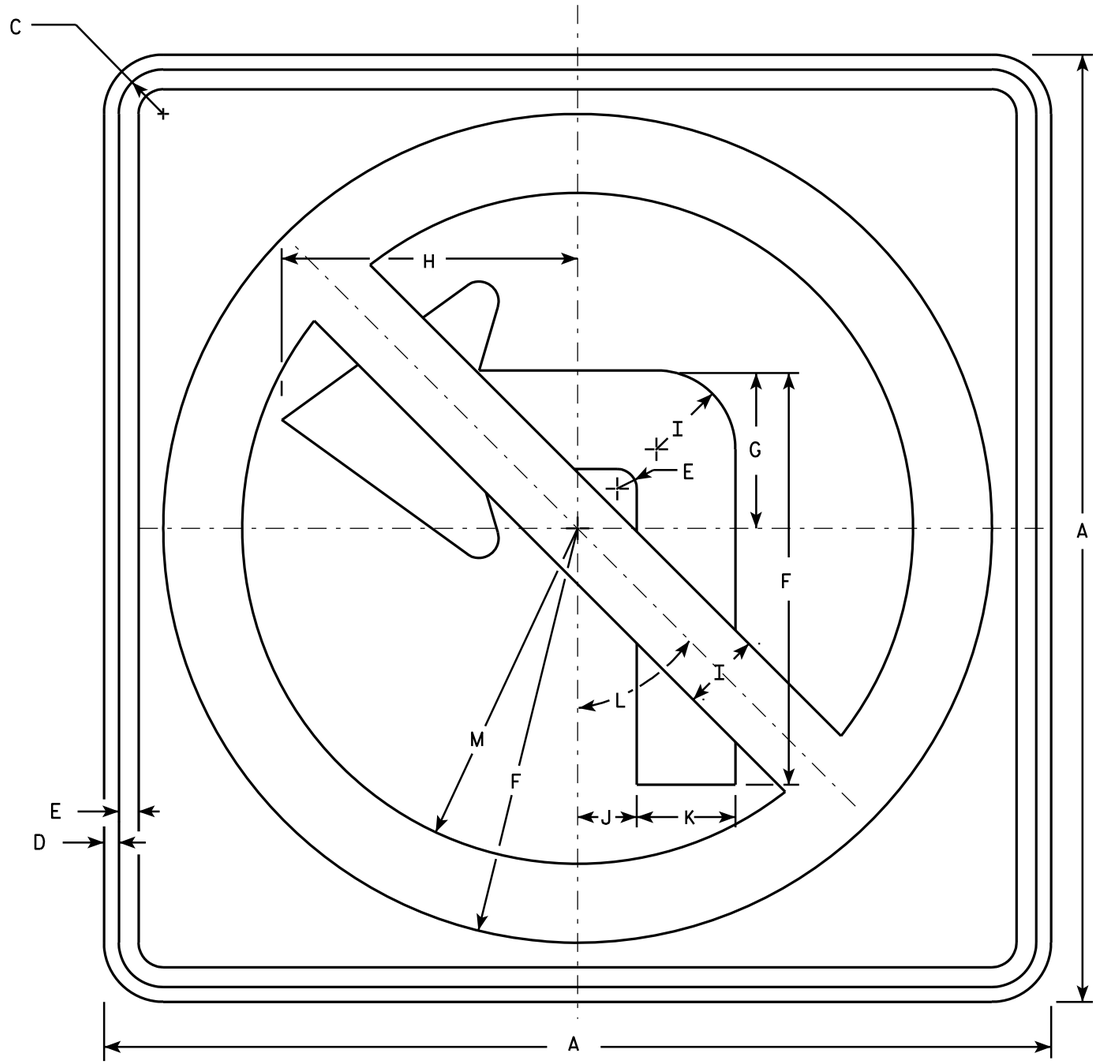
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

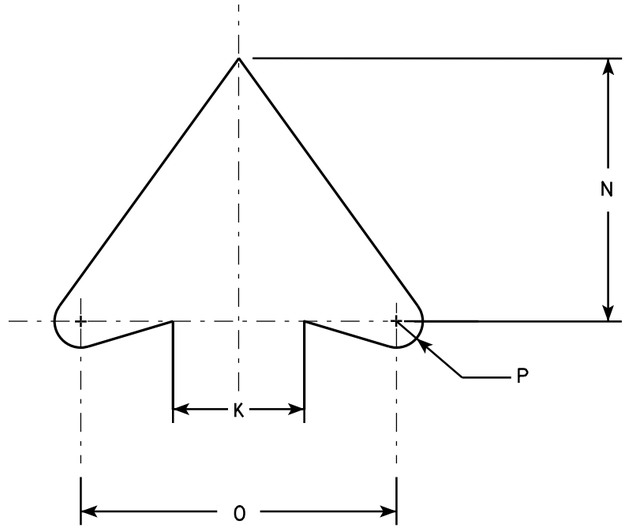
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 390	E



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

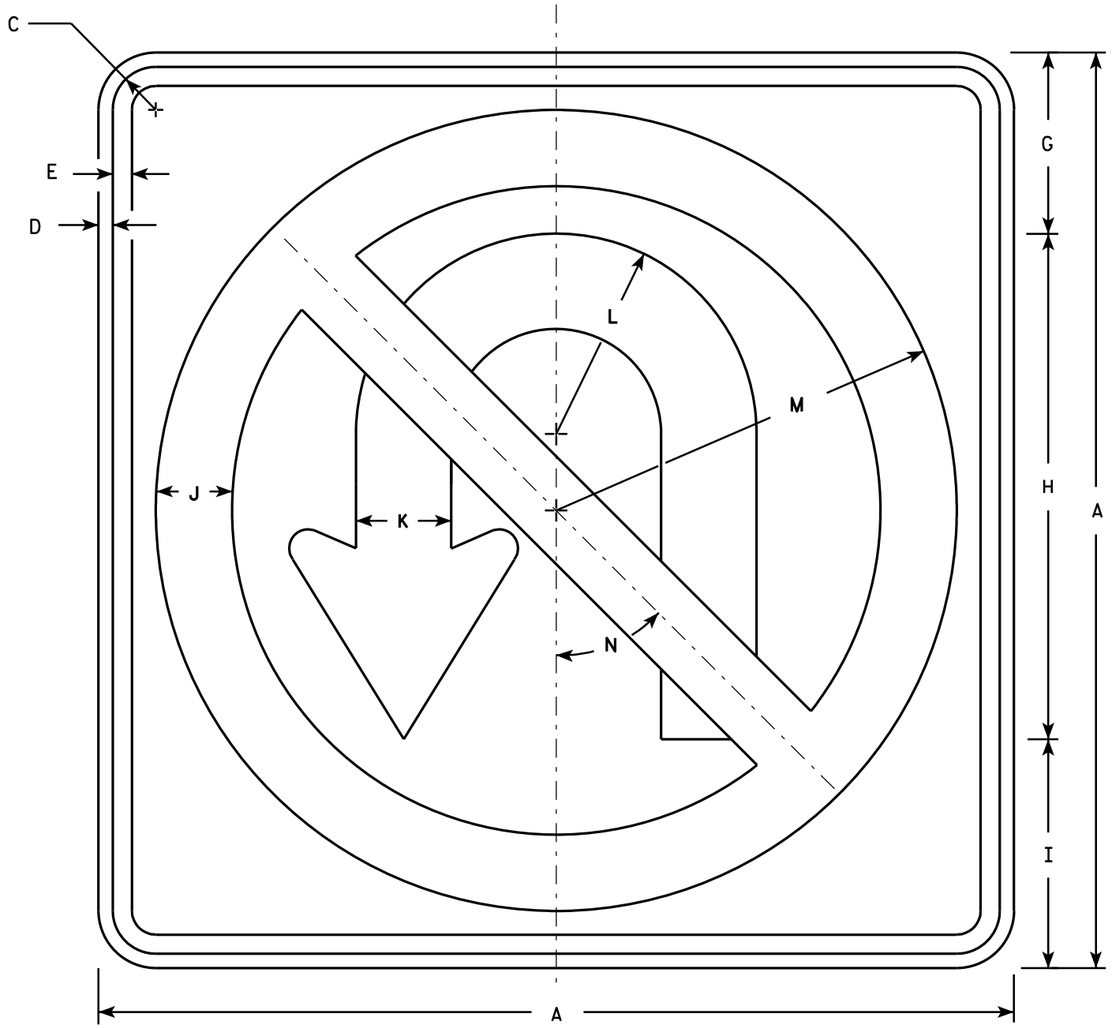
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

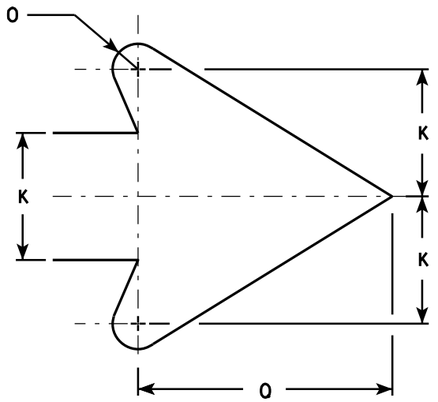
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 391	E



R3-4

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		4 3/4	13 1/4	6	2	2 1/2	5 1/4	10 1/2	45°	1/2		5										4.0
2M	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
3	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
4	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
5	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0

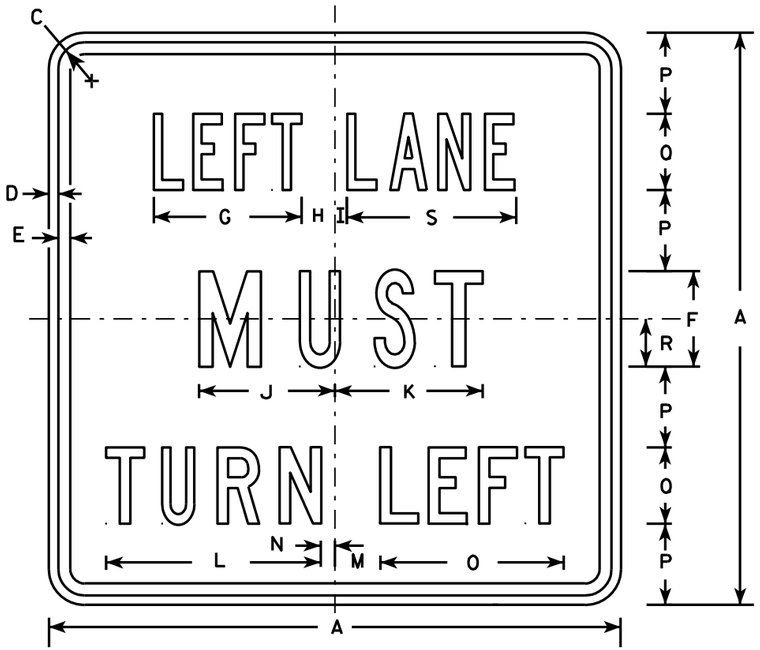
STANDARD SIGN
R3-4

WISCONSIN DEPT OF TRANSPORTATION

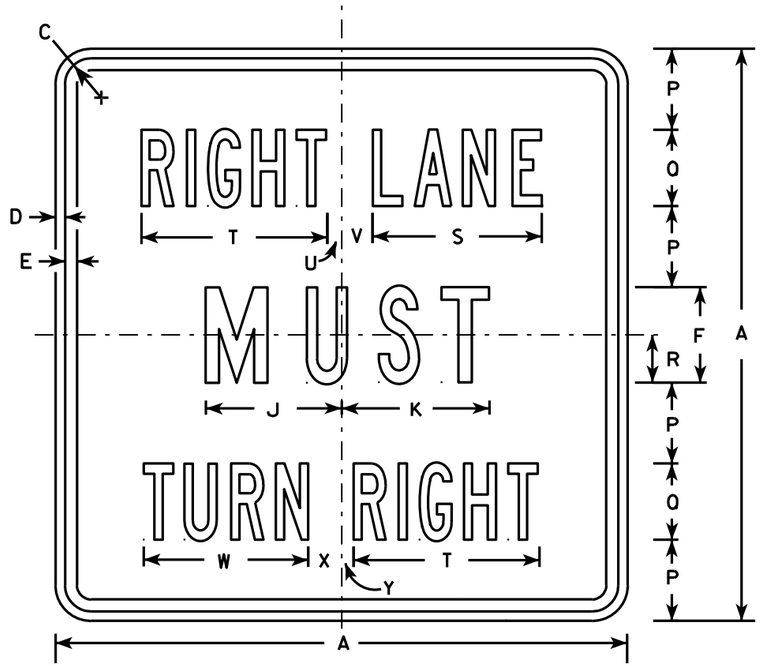
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-4.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 392	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																											

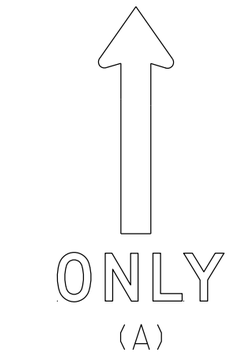
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

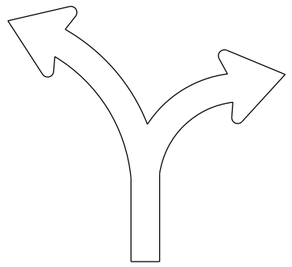
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 393 | E

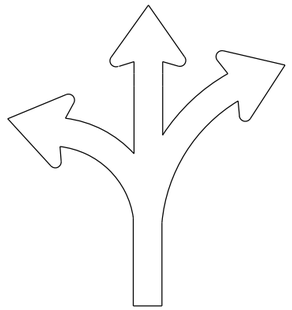


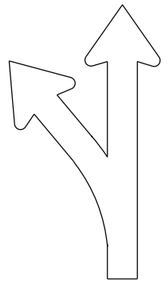
(A)

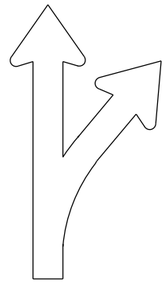


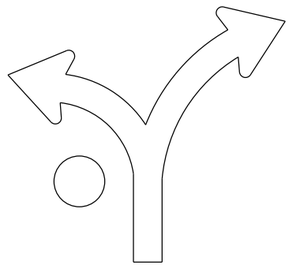
(B)

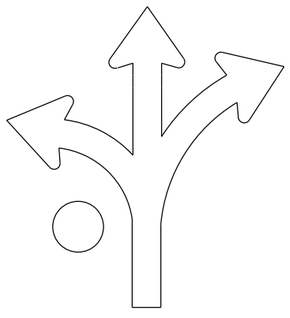

(C)

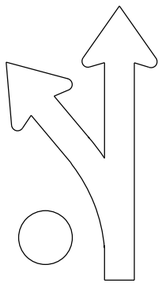

(D)


(E)


(F)

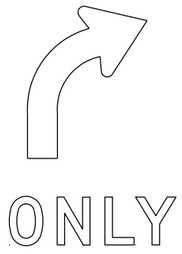

(G)


(H)

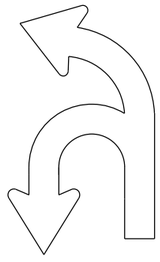

(I)



(L)



(R)


(U)

NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
   Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1	Letter =	3.75 sq ft for Size 2
		6.0 sq ft for Size 3
		10.0 sq ft for Size 4 or 5
2	Letters =	7.5 sq ft for Size 2
		12.0 sq ft for Size 3
		20.0 sq ft for Size 4 or 5
3	Letters =	11.25 sq ft for Size 2
		18.0 sq ft for Size 3
		30.0 sq ft for Size 4 or 5
4	Letters =	15.0 sq ft for Size 2
		24.0 sq ft for Size 3
		40.0 sq ft for Size 4 or 5
5	Letters =	18.75 sq ft for Size 2
		30.0 sq ft for Size 3
		50.0 sq ft for Size 4 or 5
6	Letters =	22.5 sq ft for Size 2
		36.0 sq ft for Size 3
		60.0 sq ft for Size 4 or 5

6. When letters C,D,G,H are used on the Left or Right end of the sign the Sq. Ft. changes.
   Add the amounts when these letters are used:
   1.25 sq ft for Size 2
   1.5 sq ft for Size 3
   2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

7

7

PROJECT NO:

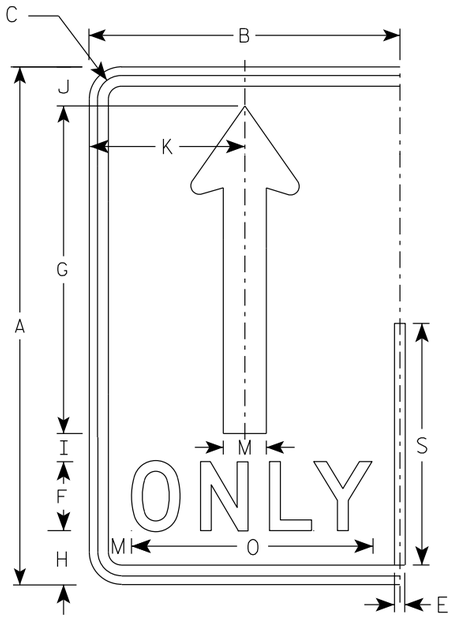
SHEET NO: 394 E

FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn PLOT DATE : 21-MAY 2019 4:37 PLOT BY : mscj9h PLOT NAME :

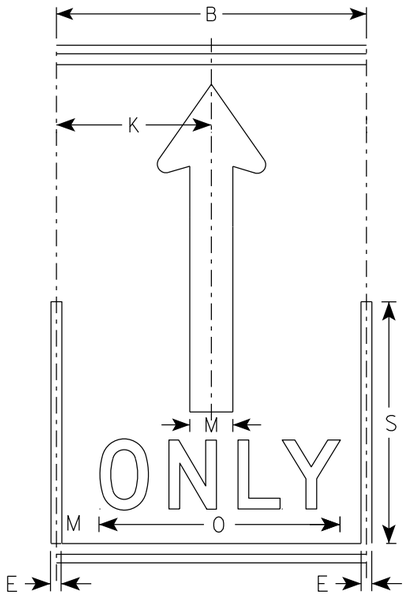
WISDOT/CADDS SHEET 42

NOTES

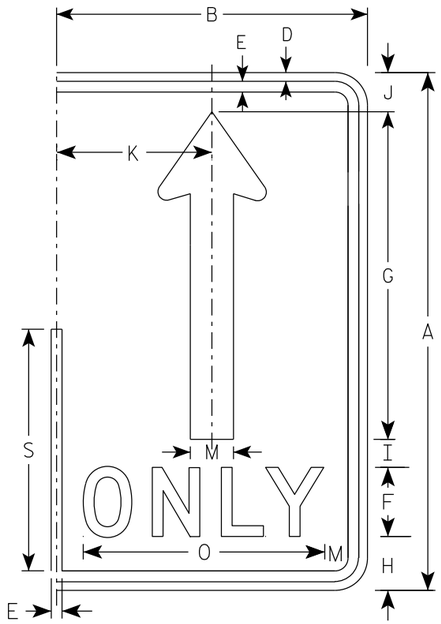
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



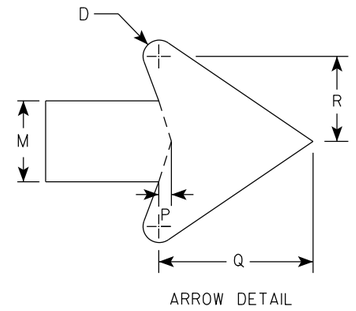
(A)



(A)



(A)



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	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8	5	22 3/4	3 3/4	1 3/4	2 3/4	12		3		17 5/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

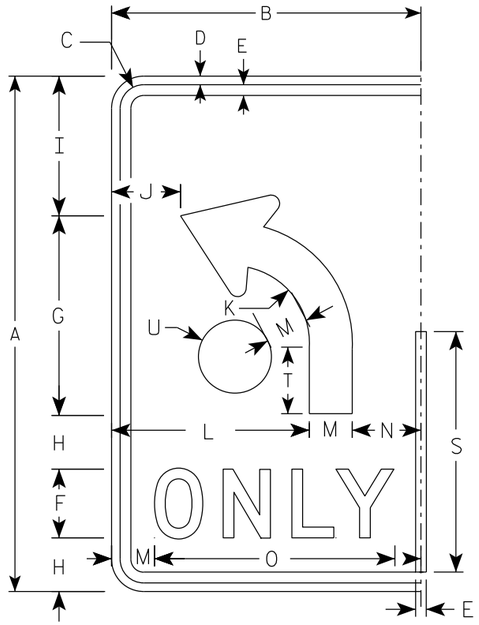
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

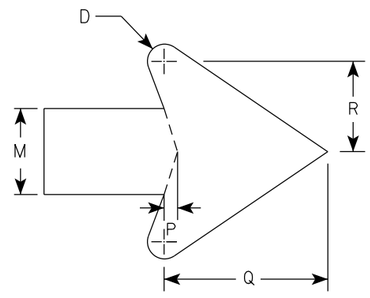
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 395 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
   Message Series - D



(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																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8	2 1/2						6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

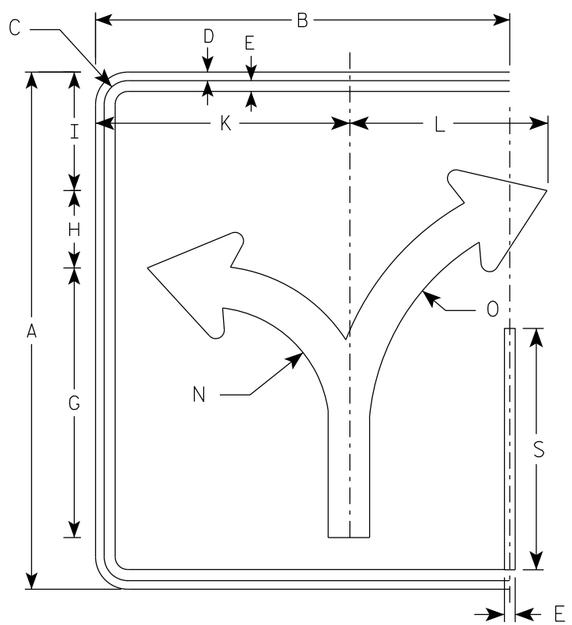
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

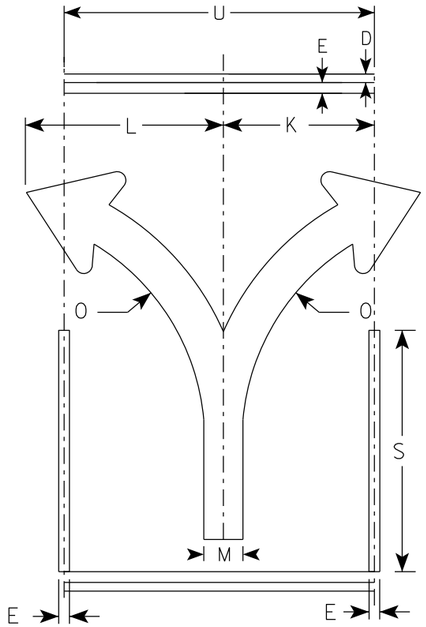
SHEET NO: 396 E

NOTES

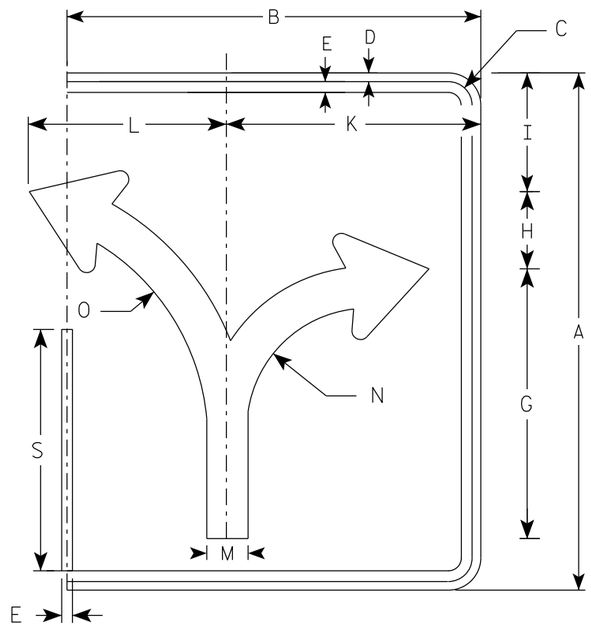
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



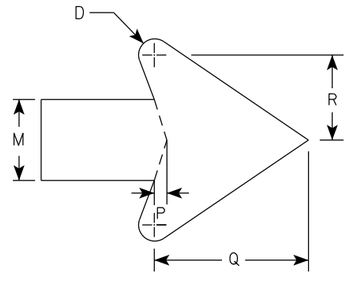
(C)



(C)



(C)



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	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

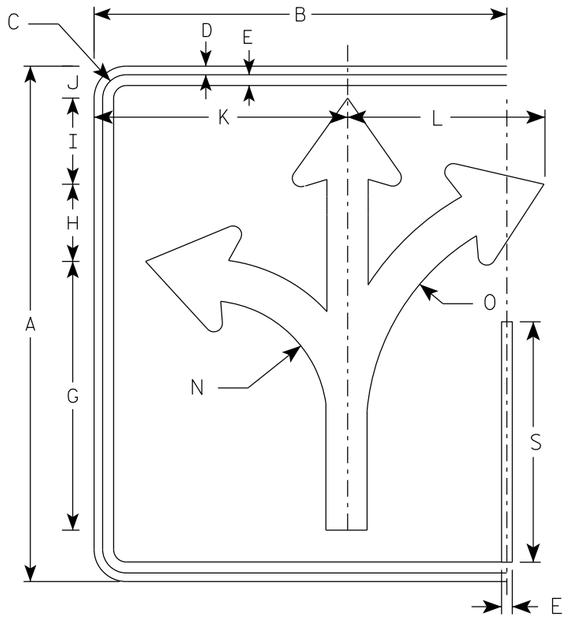
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

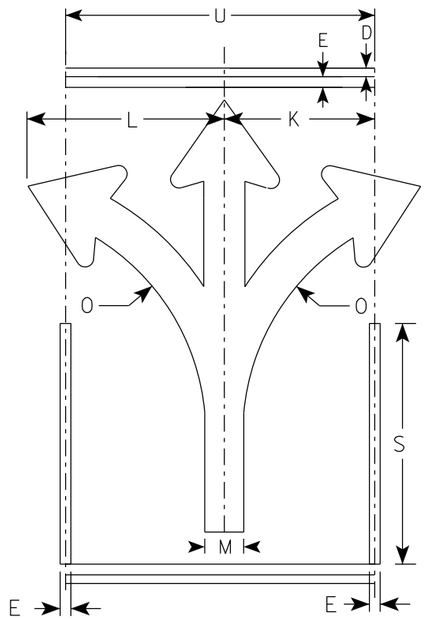
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 397 | E

NOTES

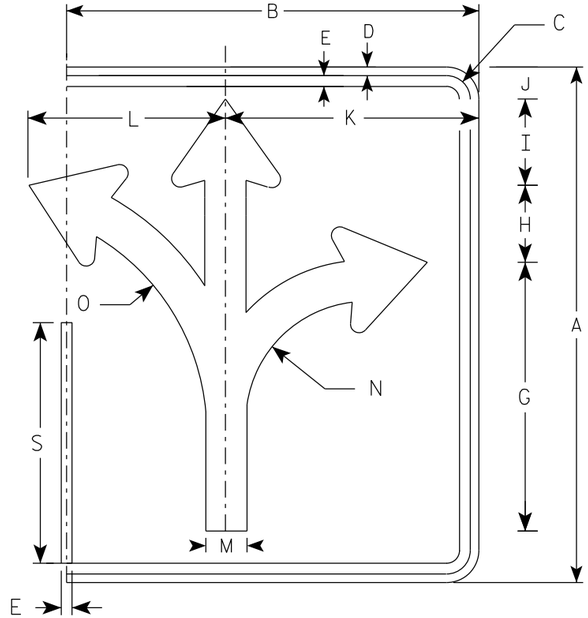
1. Sign is Type II - Type H Reflective
2. Color:
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   Message - Black
3. Message Series - None



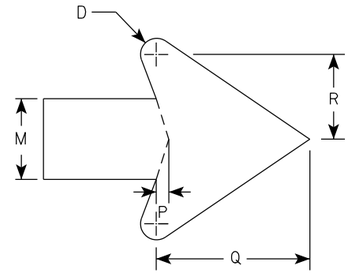
(D)



(D)



(D)



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	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	2 1/4	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (D) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

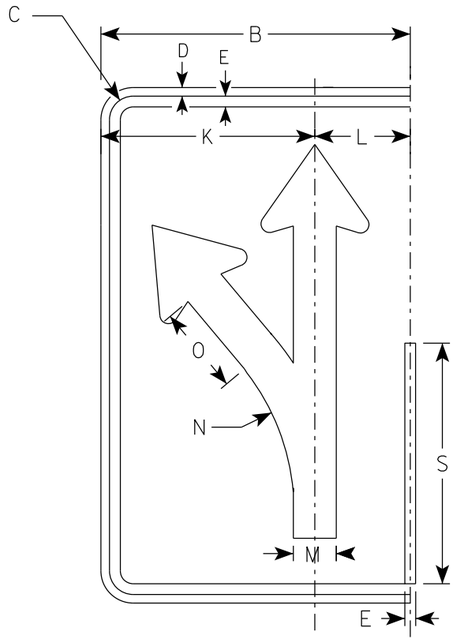
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 398 | E

7

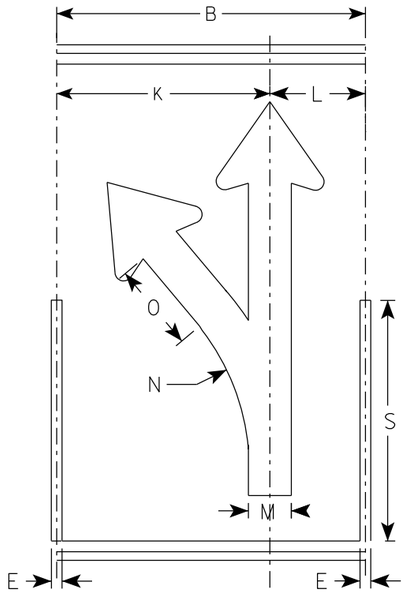
7

NOTES

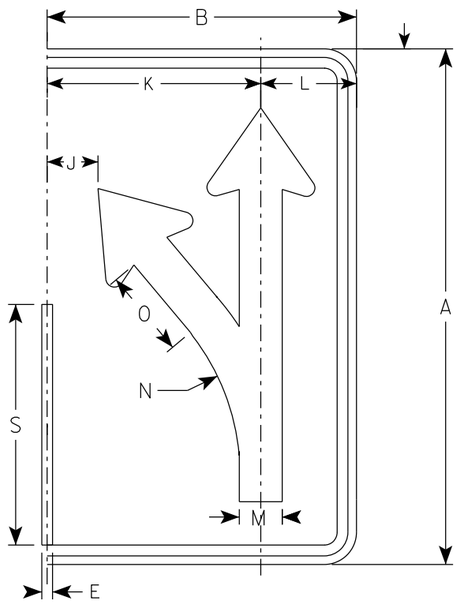
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



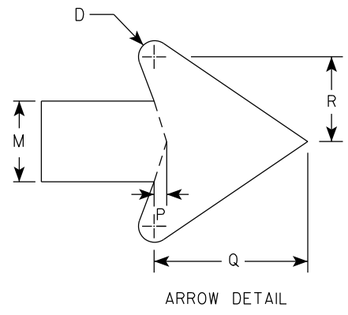
(E)



(E)



(E)



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	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

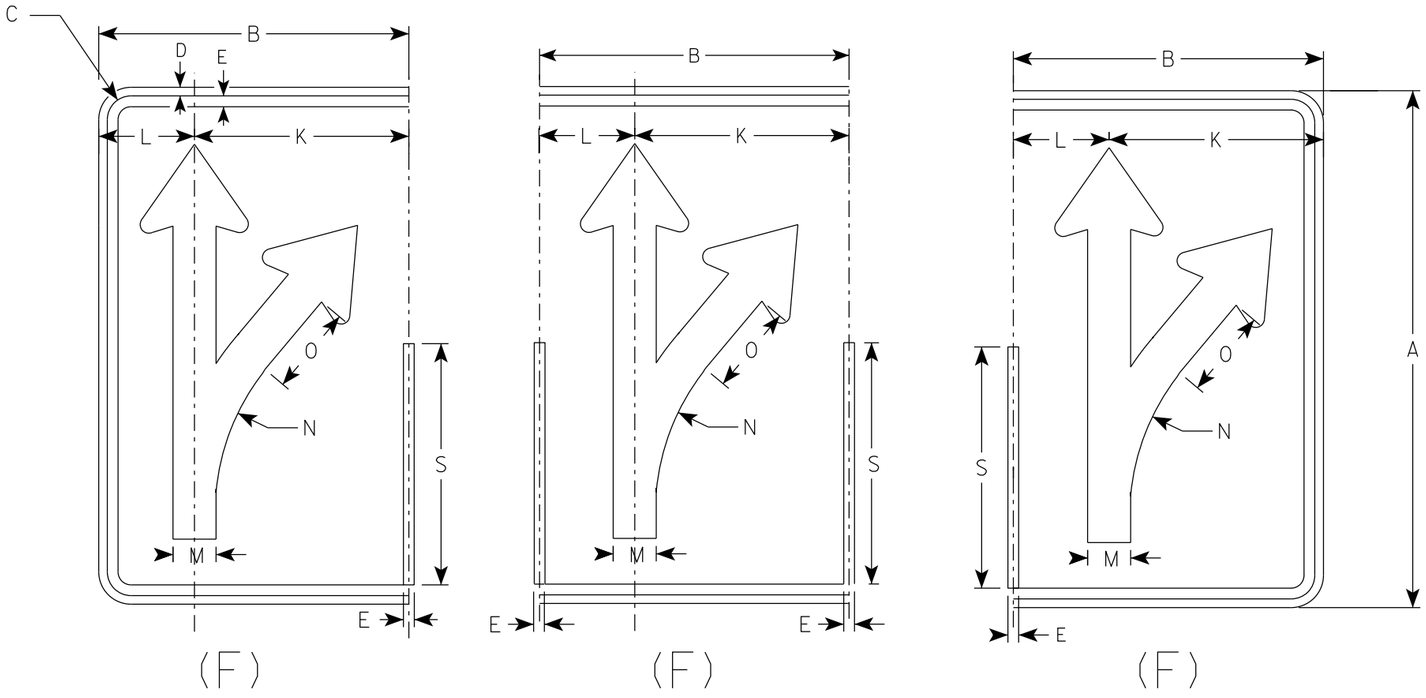
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

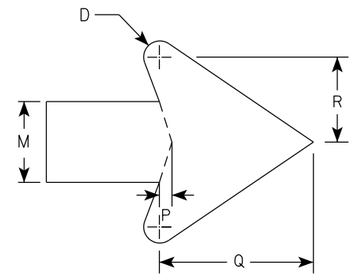
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 399 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(F) (F) (F)



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	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

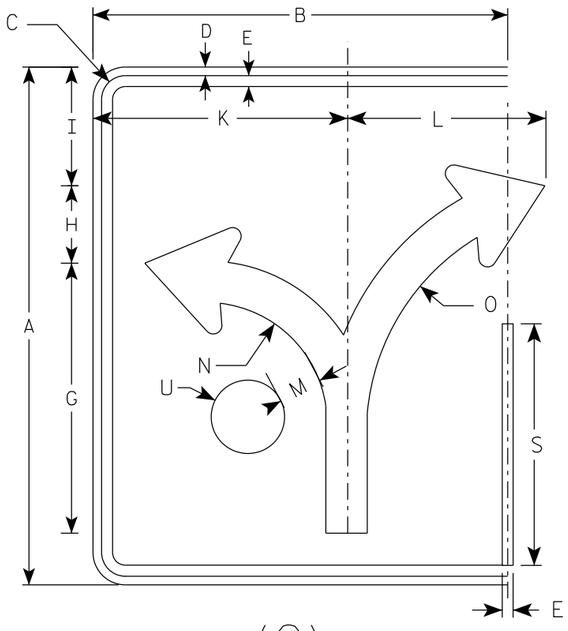
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

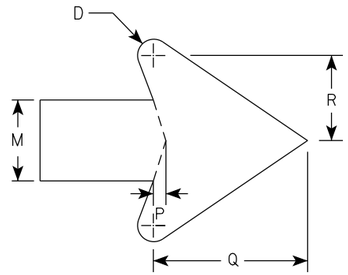
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 400 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(G)



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	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

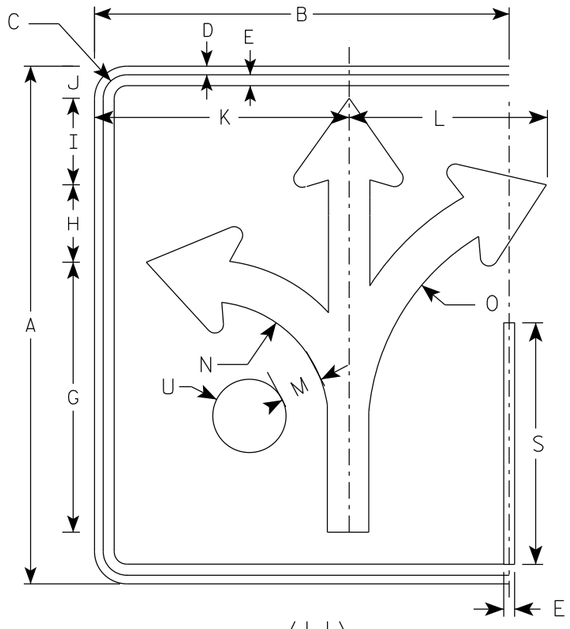
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 401 | E

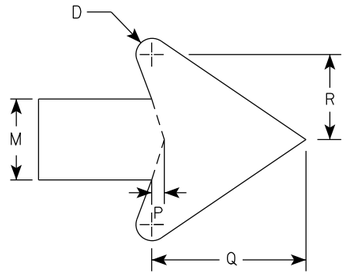
FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn PLOT DATE : 21-MAY 2019 4:38 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(H)



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	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	3 1/8	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

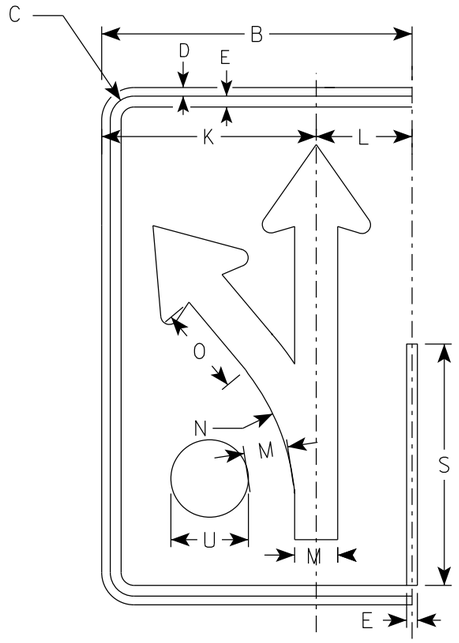
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

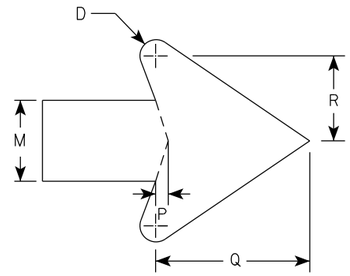
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 402	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(I)



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	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4		2 1/2						6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0

STANDARD SIGN
R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

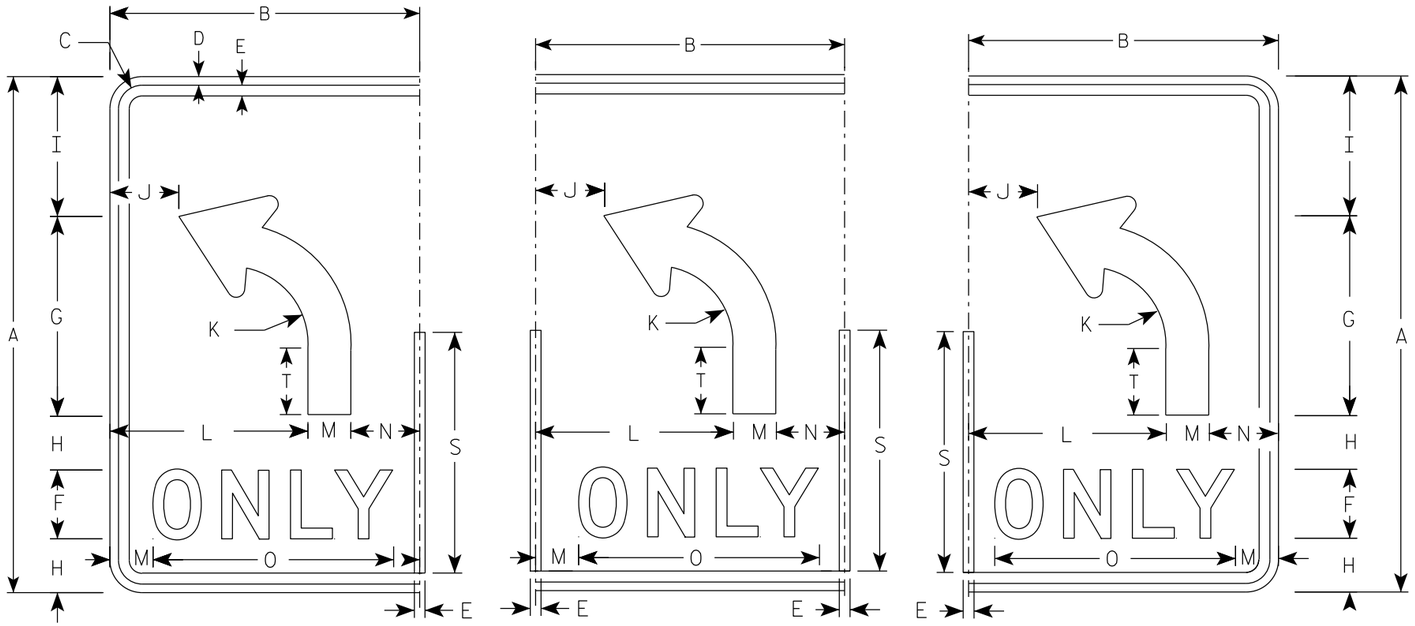
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

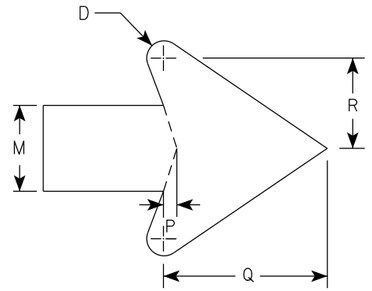
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 403 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



(L) (L) (L)



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	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4		5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

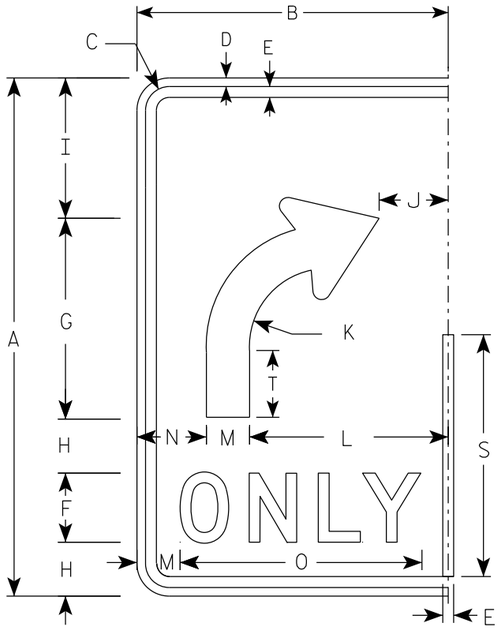
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

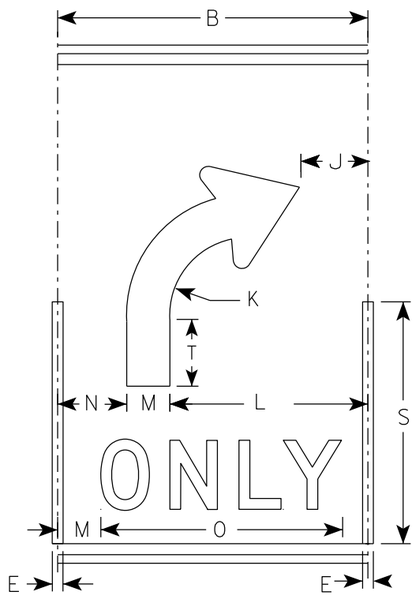
SHEET NO: 404 E

NOTES

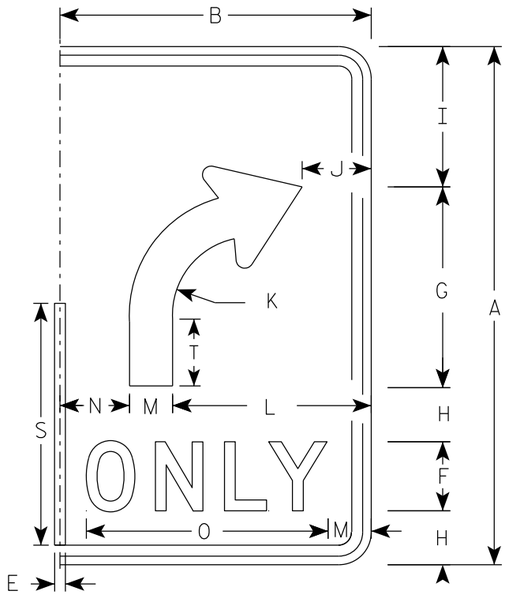
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



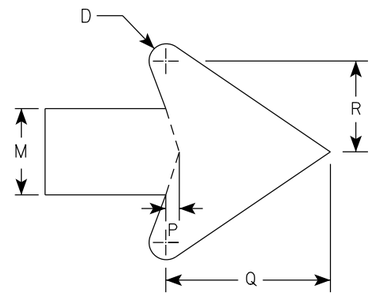
(R)



(R)



(R)



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	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (R) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

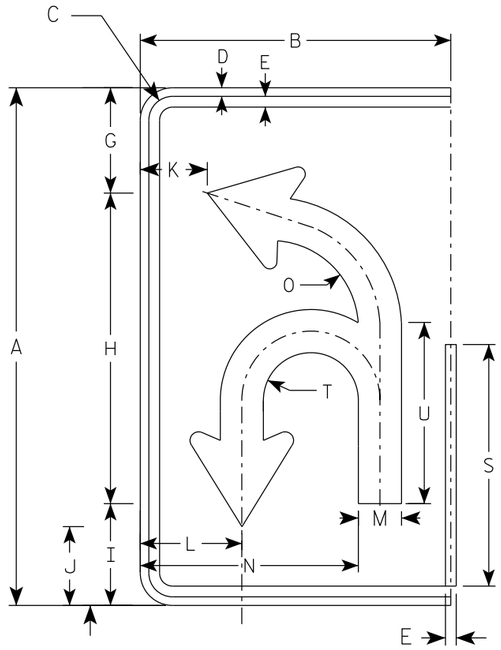
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

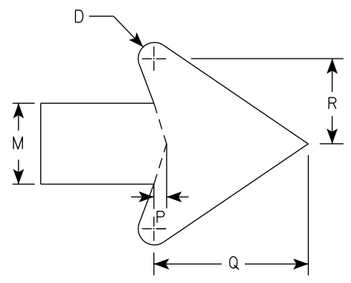
SHEET NO: 405 **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(U)



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	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
2M	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	21 5/8	7 1/8	5 1/2	5 7/8	8 1/4	3	16 3/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4	3 1/4	12 5/8						6.0
4	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0
5	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0

STANDARD SIGN
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

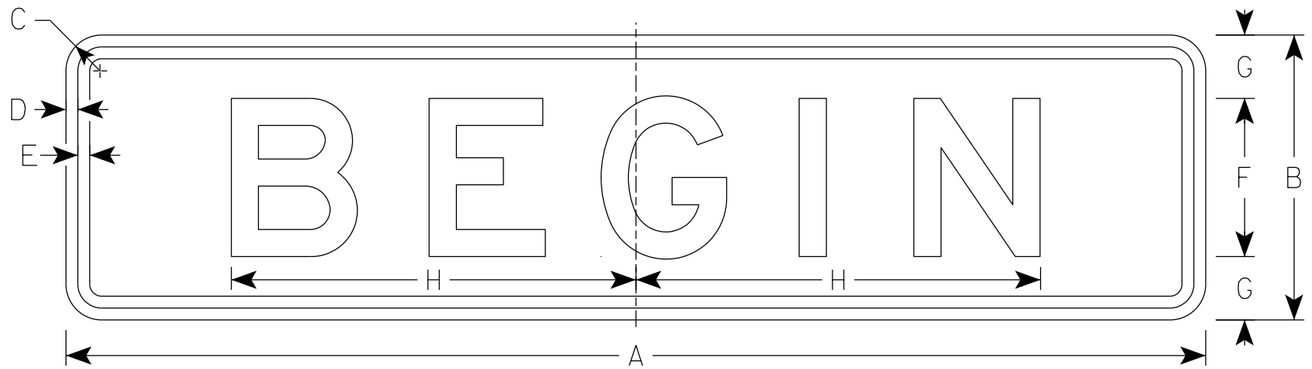
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

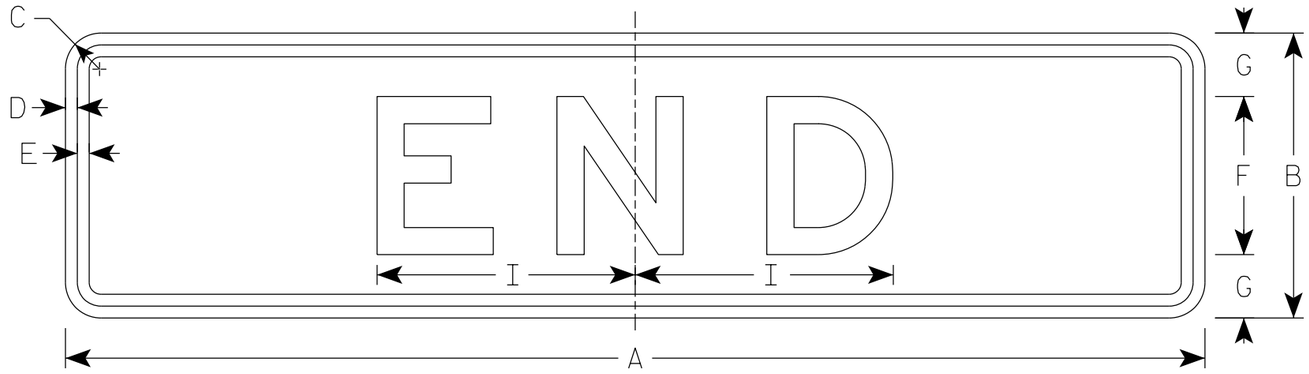
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 406 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - E



R3-9C



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																		2.25
4																											
5																											

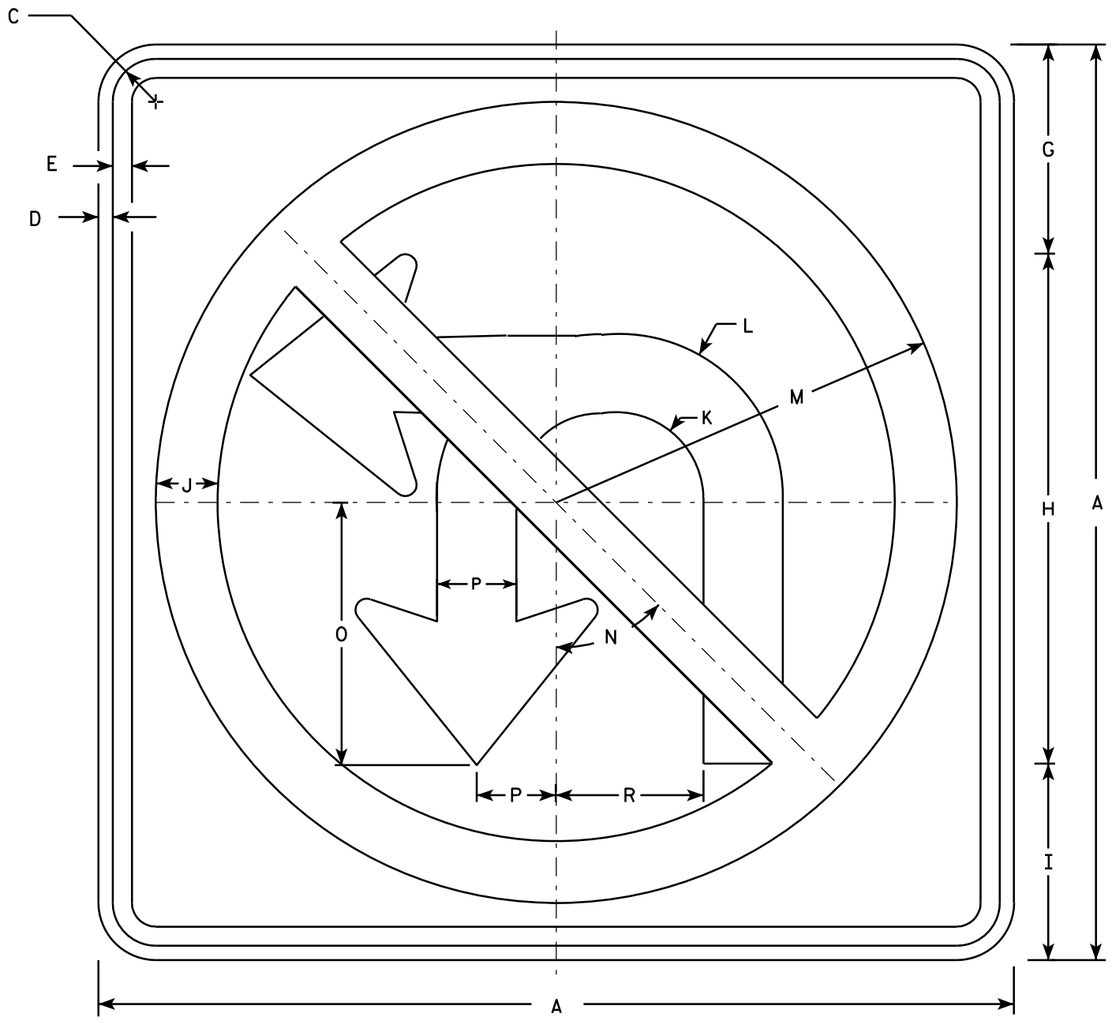
STANDARD SIGN
R3-9C & R3-9D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2021 PLATE NO. R3-9C.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 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

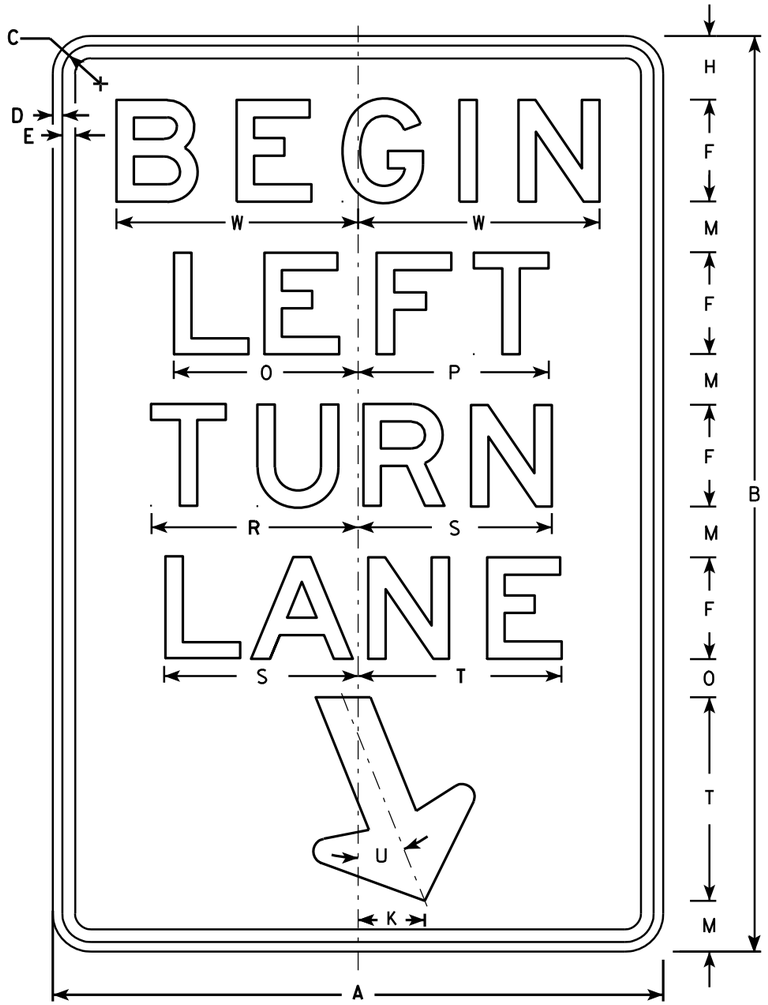
STANDARD SIGN
R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

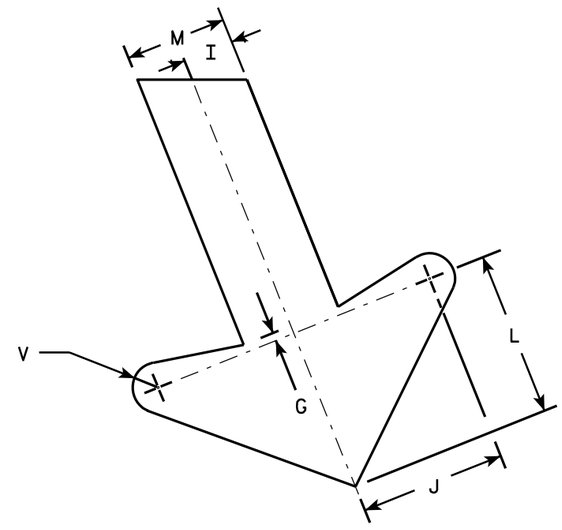
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 408	E



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																											

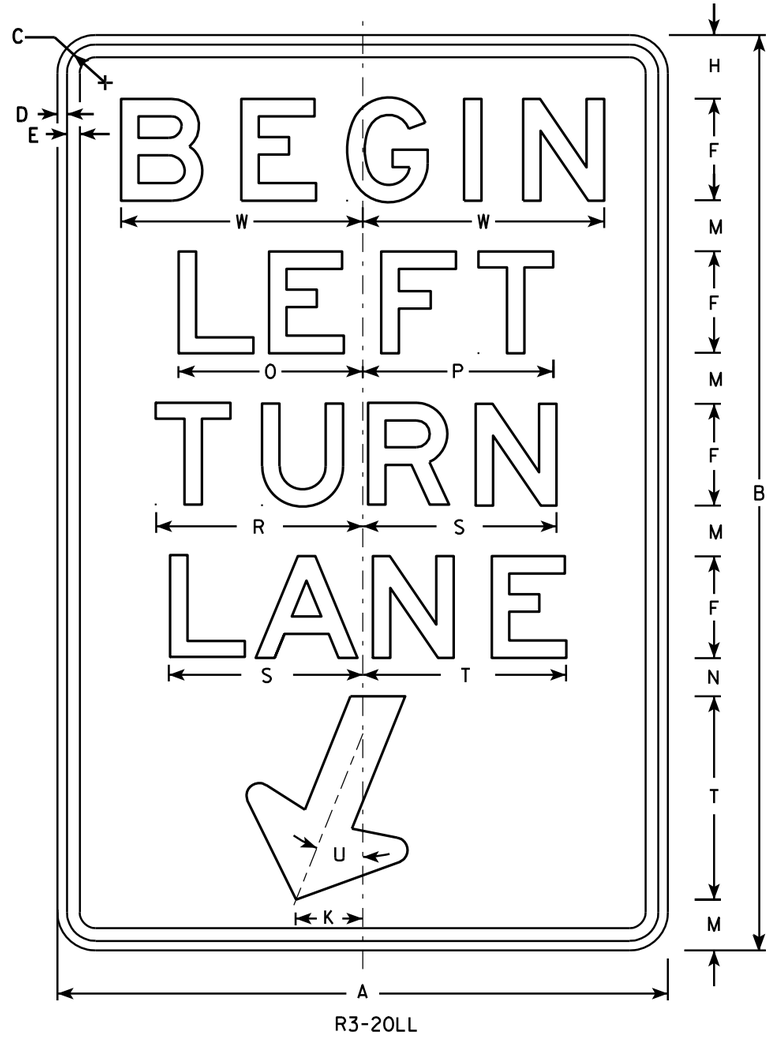
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

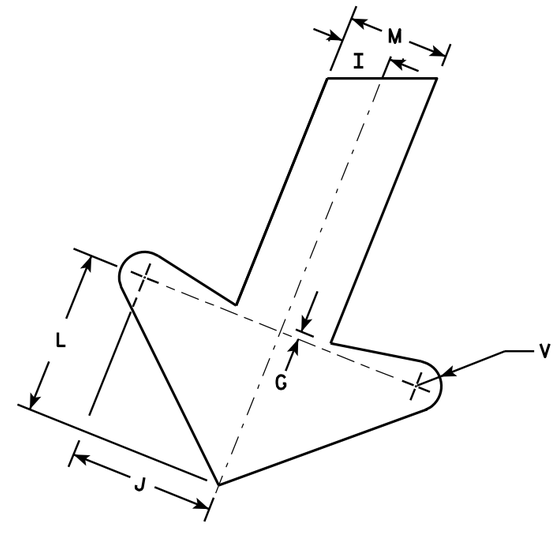
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 409 | E



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

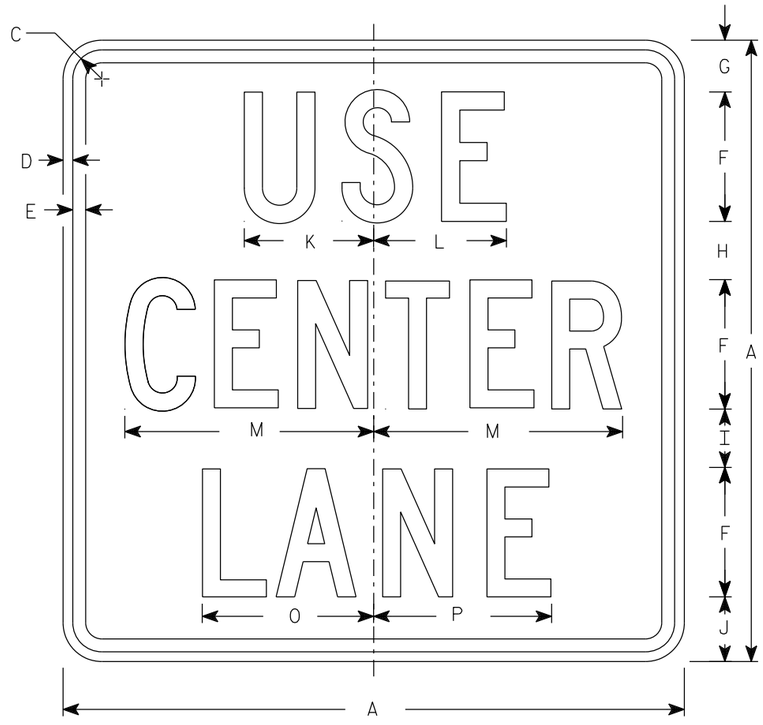
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20LL.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 410	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

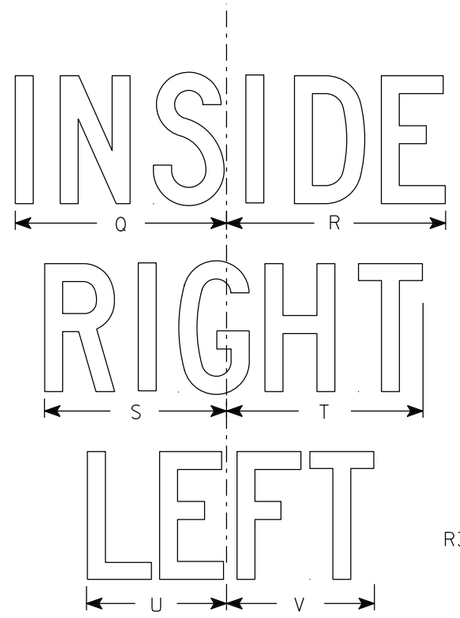
WISDOT/CADDS SHEET 42



R3-54C

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R3-54I

R3-54R

R3-54L

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	2	2 1/4	2 1/4	2 1/2	5	5 1/8	9 5/8		6 5/8	6 7/8	8 1/8	8 1/2	7	7 5/8	5 3/8	5 3/4					4.0
2M	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	9 5/8		6 5/8	6 7/8	8 1/8	8 1/2	7	7 5/8	5 3/8	5 3/4					4.0
3	36		1 5/8	5/8	3/4	7	4	3 1/2	3 1/2	4 1/2	7 1/2	7 3/4	14 3/8		9 7/8	10 1/4	12 1/8	12 3/4	10 3/8	11 3/8	8	8 5/8					9.0
4																											
5																											

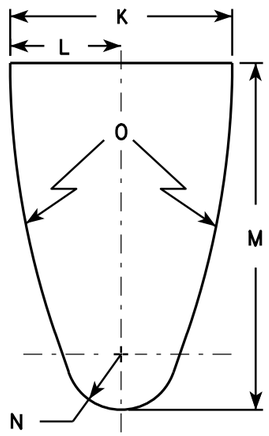
STANDARD SIGN
R3-54C, I ,L & R

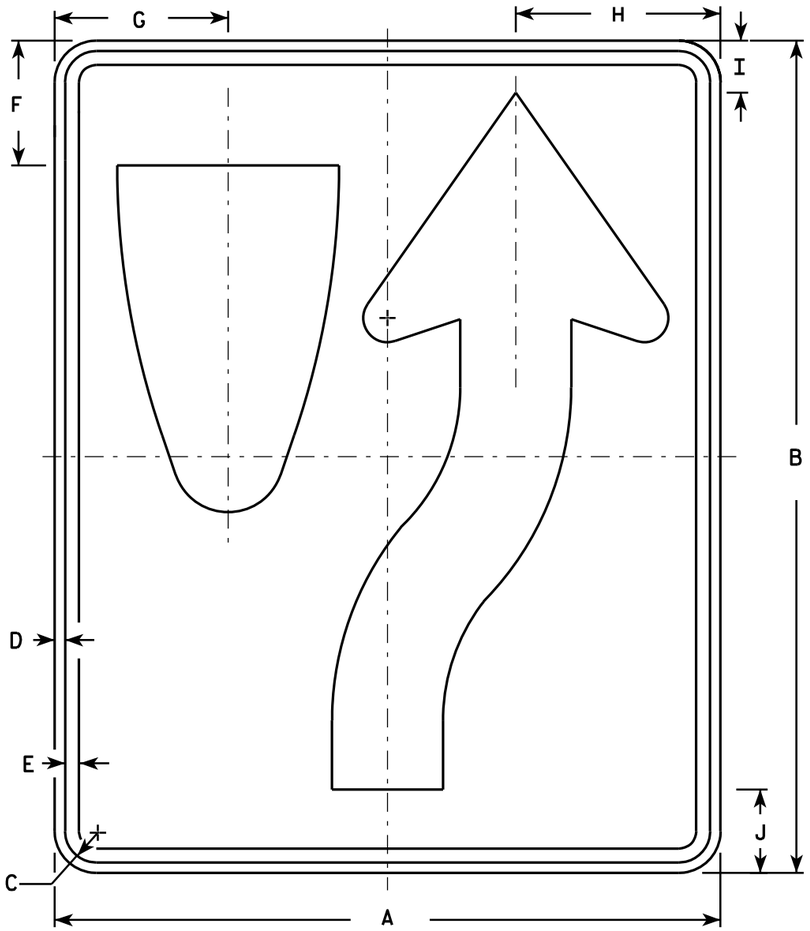
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/21 PLATE NO. R3-54.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 411 | E

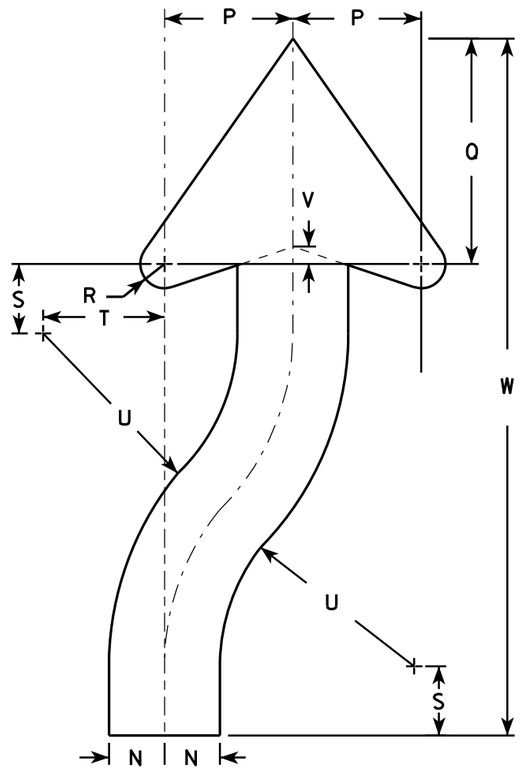




R4-7

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

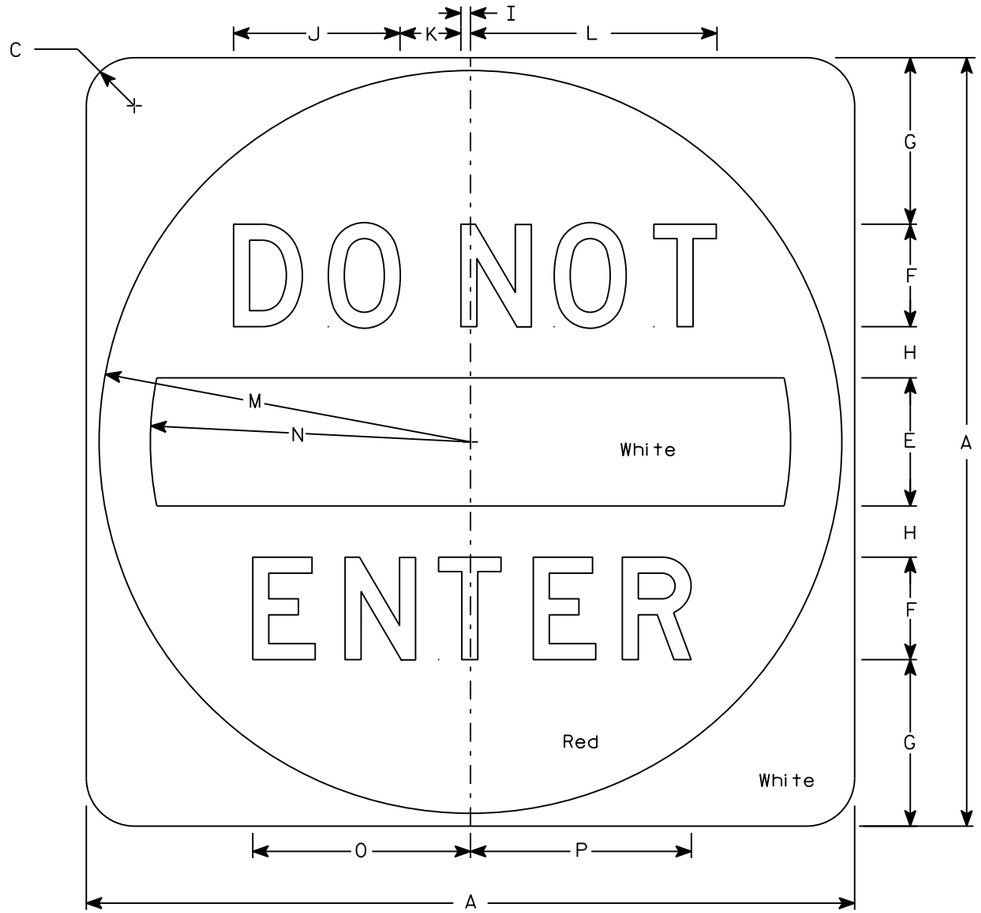
STANDARD SIGN
R4-7 & R4-8

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: 412	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
3. Message 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	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											6.25
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

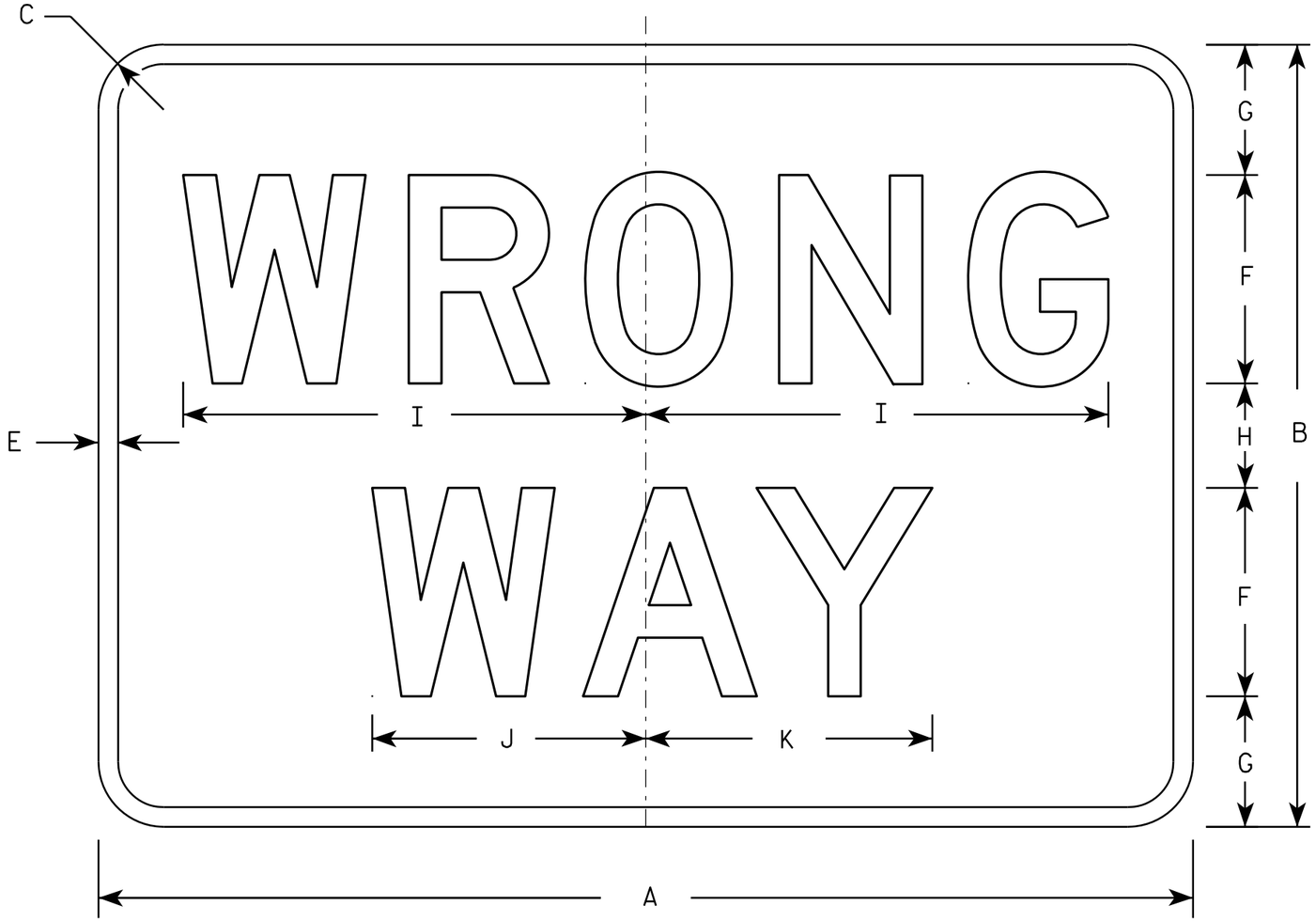
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 413 | E



R5-1A

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 - 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	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

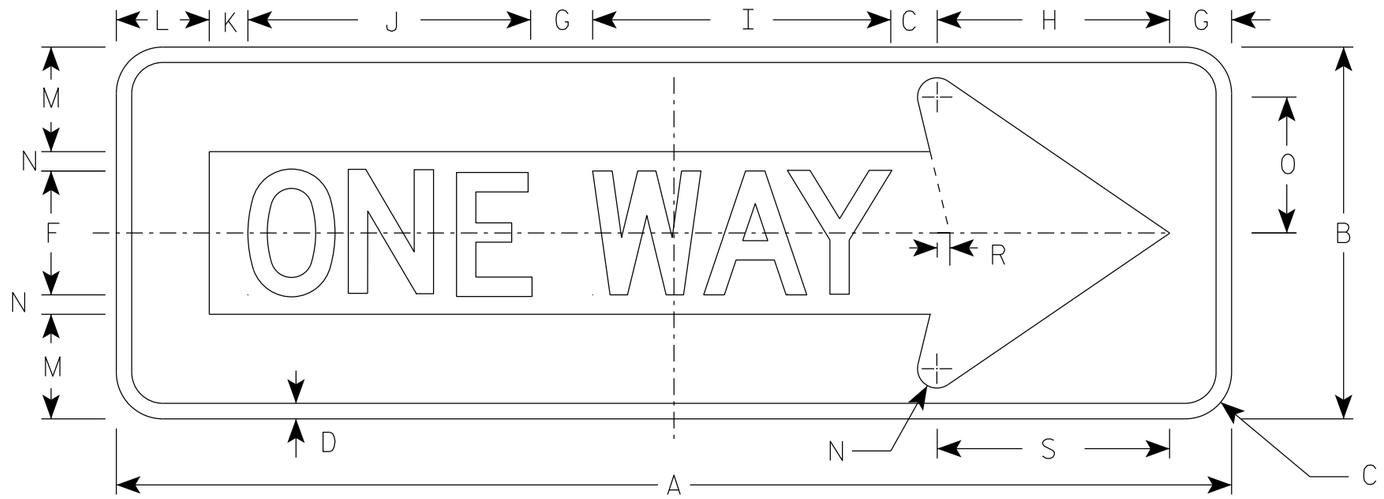
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

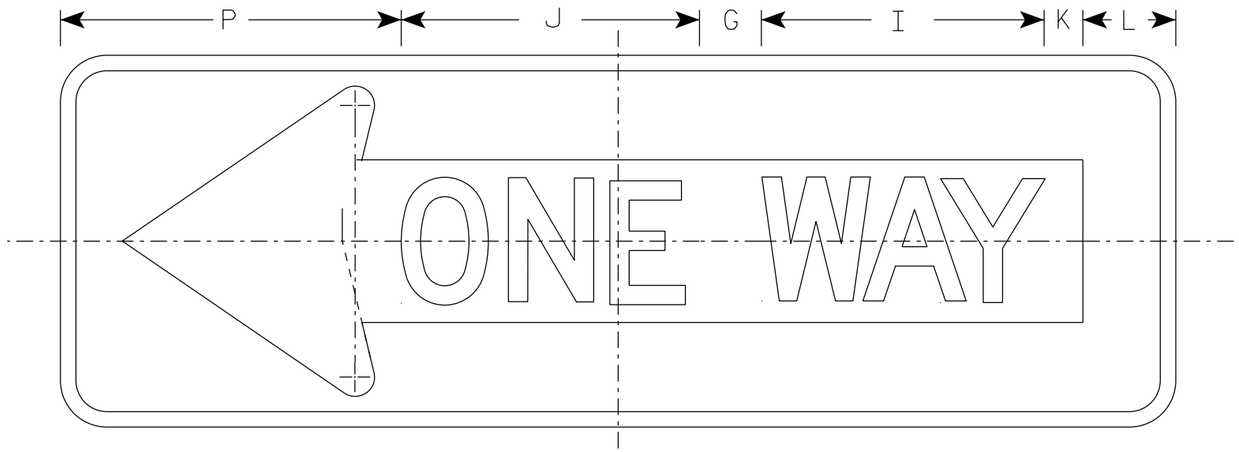
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 414 | E



R6-1R

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - BLACK
   Message - BLACK LEGEND & WHITE ARROW & BORDER
3. Message Series - D



R6-1L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	12	1 1/2	1/2		4	2	7 1/2	9 5/8	9 1/8	1 1/4	3	3 3/8	5/8	4 3/8	11		3/8	7 1/2								3.0
2M	54	18	2 1/4	3/4		6	3	11 1/4	13 5/8	14 1/2	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
3	54	18	2 1/4	3/4		6	3	11 1/4	13 5/8	14 1/2	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
4	54	18	2 1/4	3/4		6	3	11 1/4	13 5/8	14 1/2	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
5																											

STANDARD SIGN
R6-1 L & R

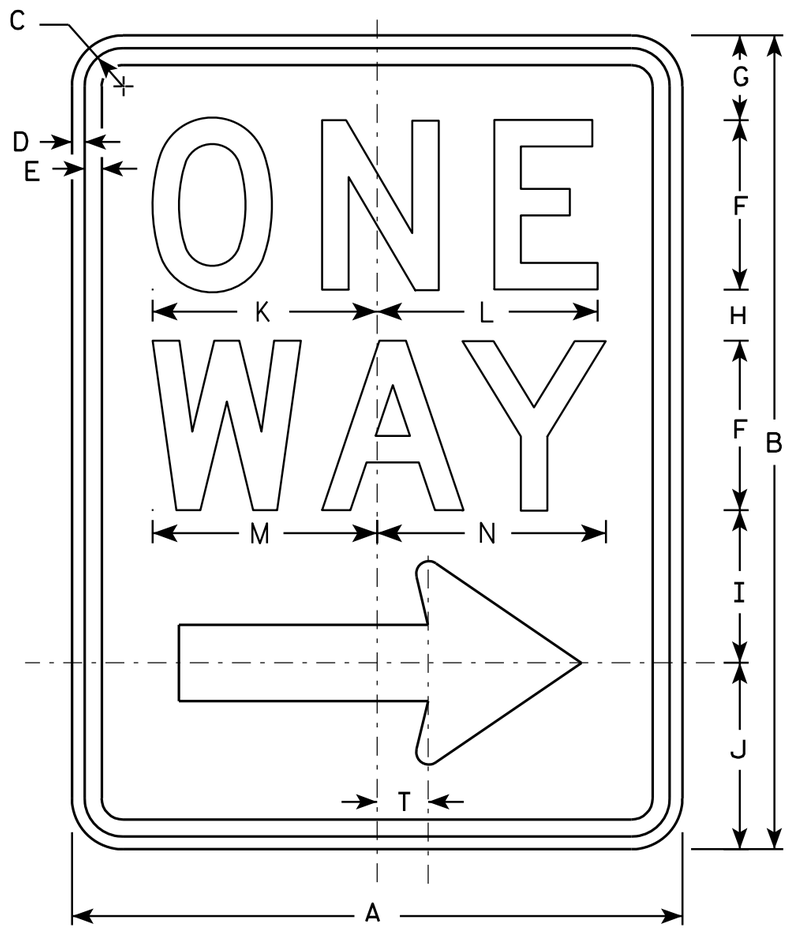
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 07/11/18 PLATE NO. R6-1.3

PROJECT NO:

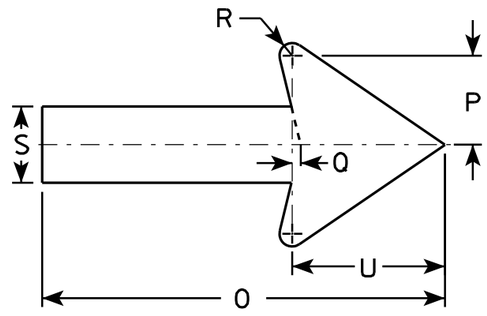
SHEET NO: 415 E



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																										

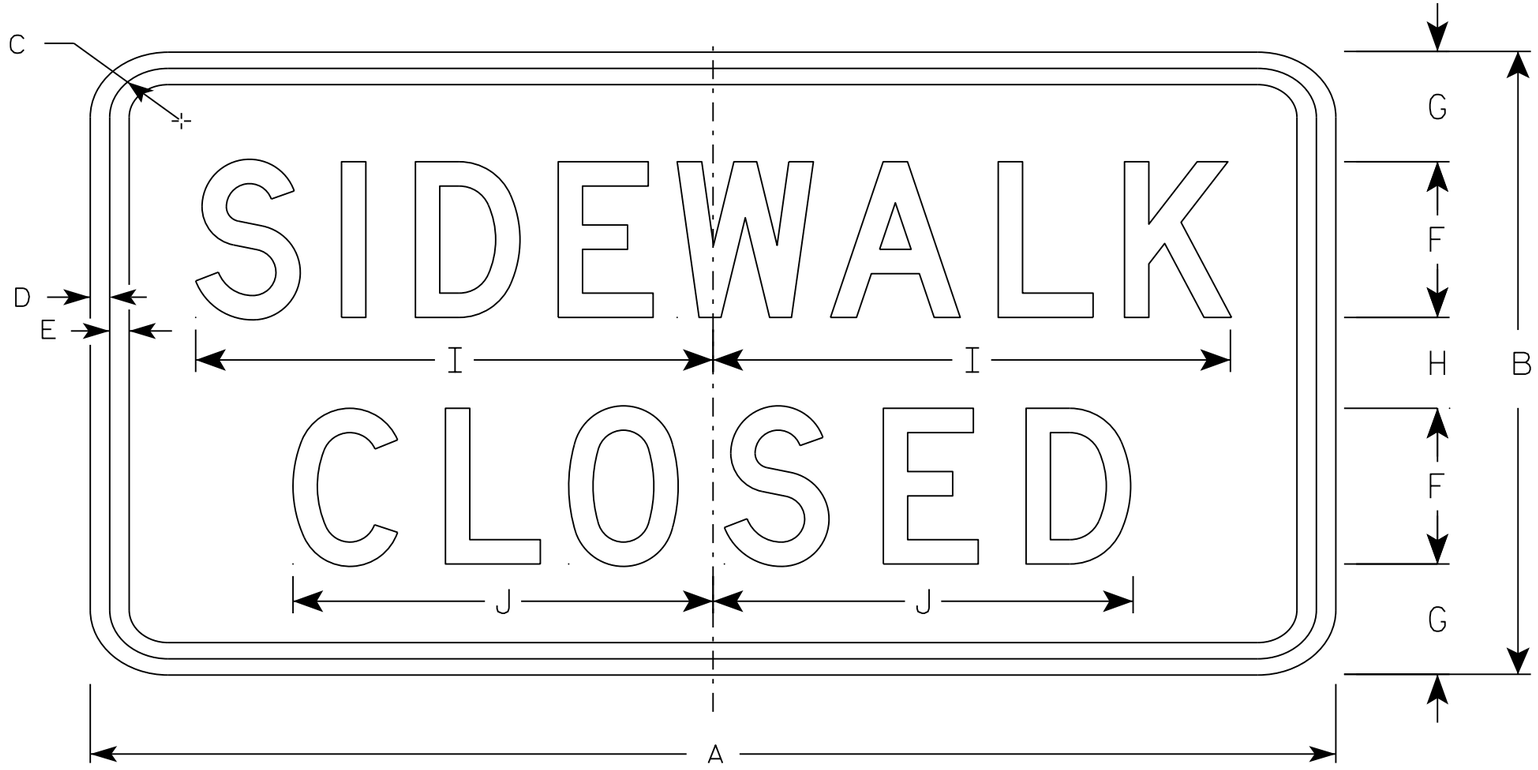
STANDARD SIGN
R6-2 R&L

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: 416	E



R9-9

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

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

STANDARD SIGN
R9-9

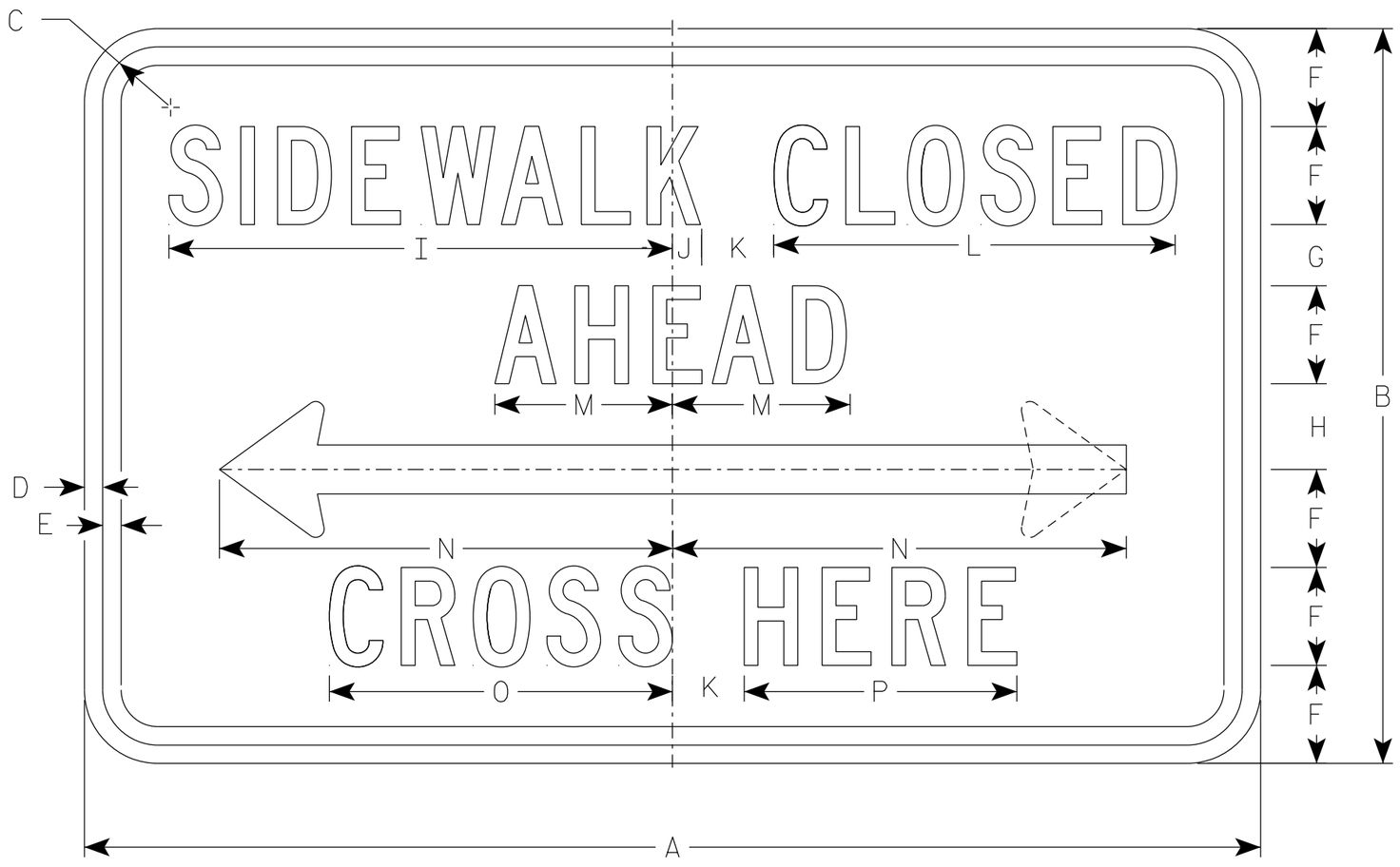
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

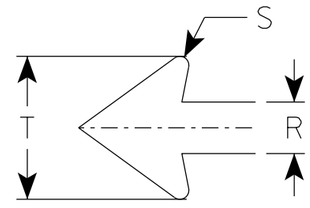
DATE 8/11/16 PLATE 417 R9-9.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R99.DGN PLOT DATE : 11-AUG-2016 11:33 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 2.918761:1.000000



R9-11



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C except Size 1 is Series D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.
6. R9-11 D (double arrow)
   R9-11 L (left arrow)
   R9-11 R (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																											
2S	24	12	1 1/8	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
2M	24	12	1 1/8	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
3	30	15	1 1/8	3/8	1/2	2	1 1/2	1 1/2	13	3/4	2	10 1/4	4 5/8	12 3/8	8 7/8	6 7/8		1 1/4	1/4	3 5/8							3.125
4																											
5																											

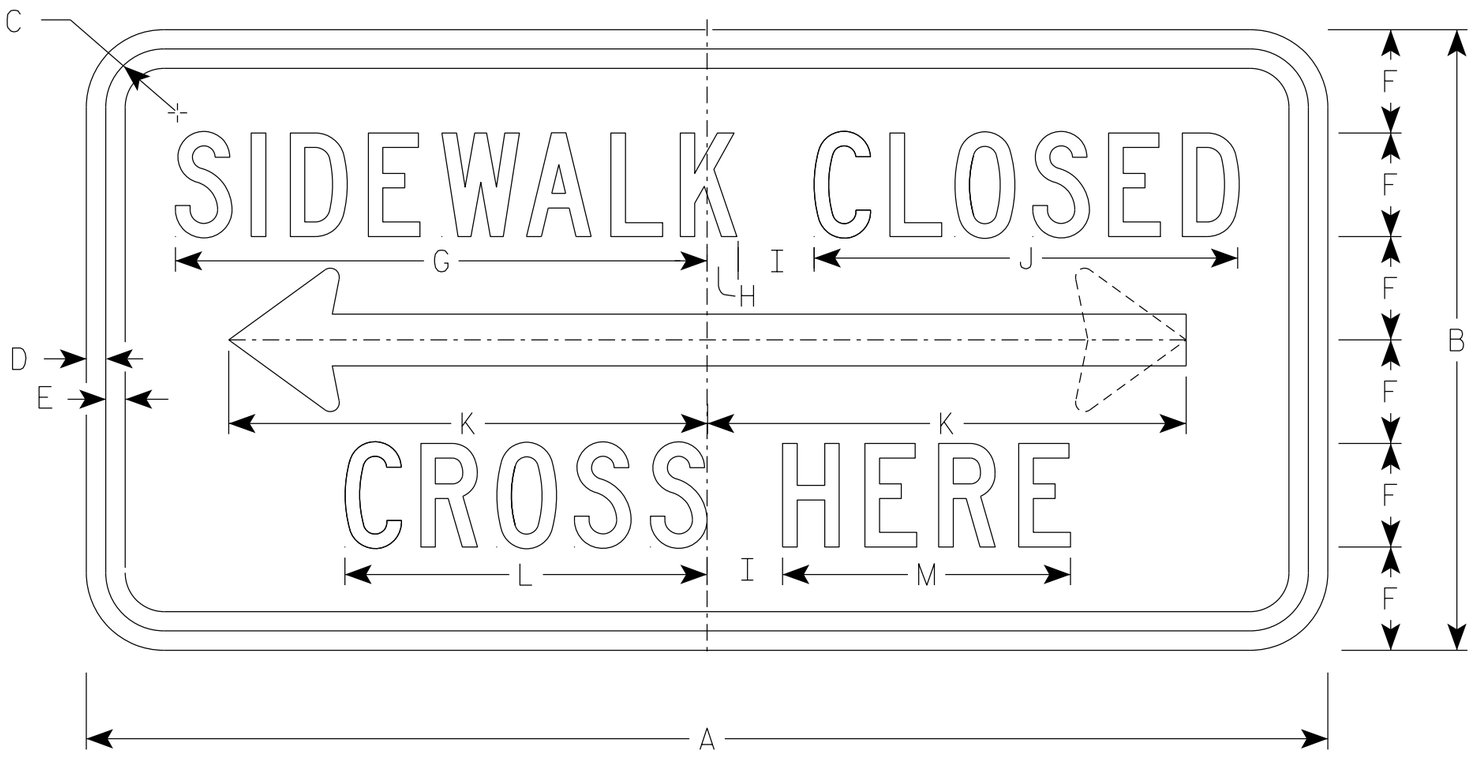
STANDARD SIGN
R9-11

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 3/30/2021 PLATE NO. R9-11.4

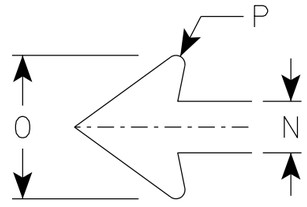
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 418 | E



R9-11A

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Use Size 2 for Sidewalks. Use Size 3 for paths and Trails.
6. R9-11AD (double arrow)
   R9-11AL (left arrow)
   R9-11AR (right arrow)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	2	10 1/4	5/8	1 1/2	8 1/4	9 1/4	7	5 5/8	1	2 3/4	1/8											2.0
2M	24	12	1 1/8	3/8	3/8	2	10 1/4	5/8	1 1/2	8 1/4	9 1/4	7	5 5/8	1	2 3/4	1/8											2.0
3	30	15	1 1/8	3/8	1/2	2 1/2	12 3/4	1/2	2	10 1/4	12 3/8	8 5/8	6 3/4	1 1/4	3 5/8	1/4											3.125
4																											
5																											

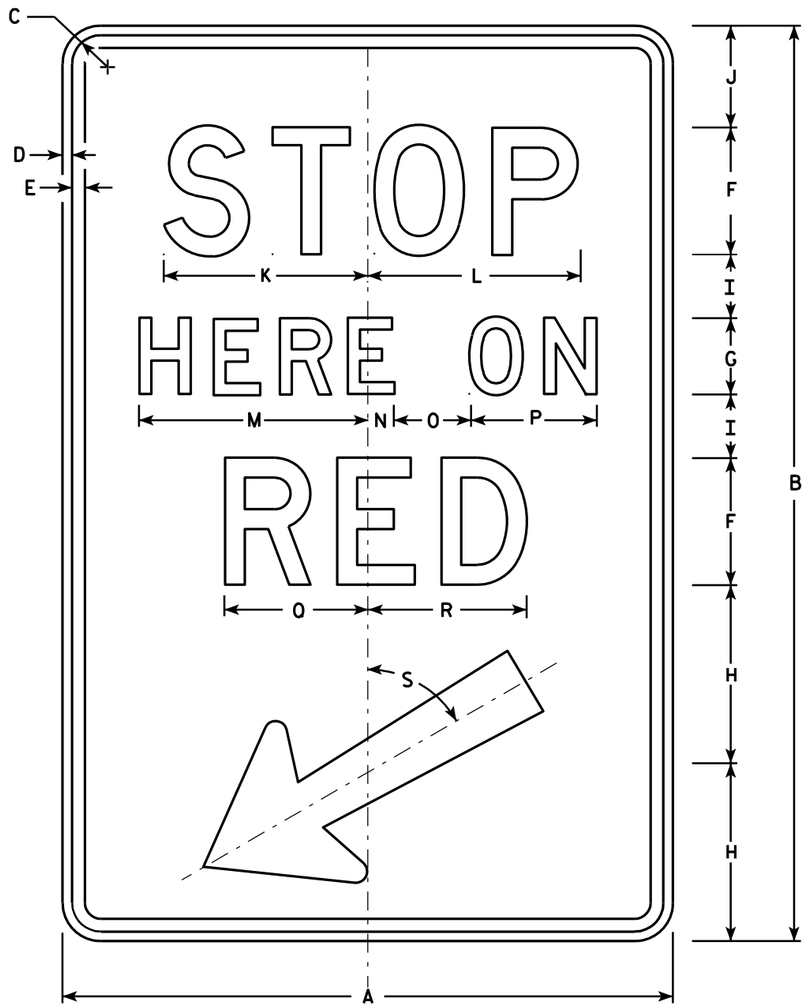
STANDARD SIGN
R9-11A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2021 PLATE NO. R9-11A.5

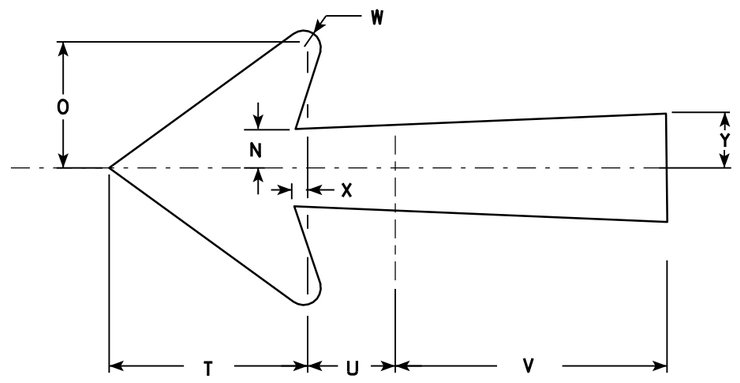
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 419 | E



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																											

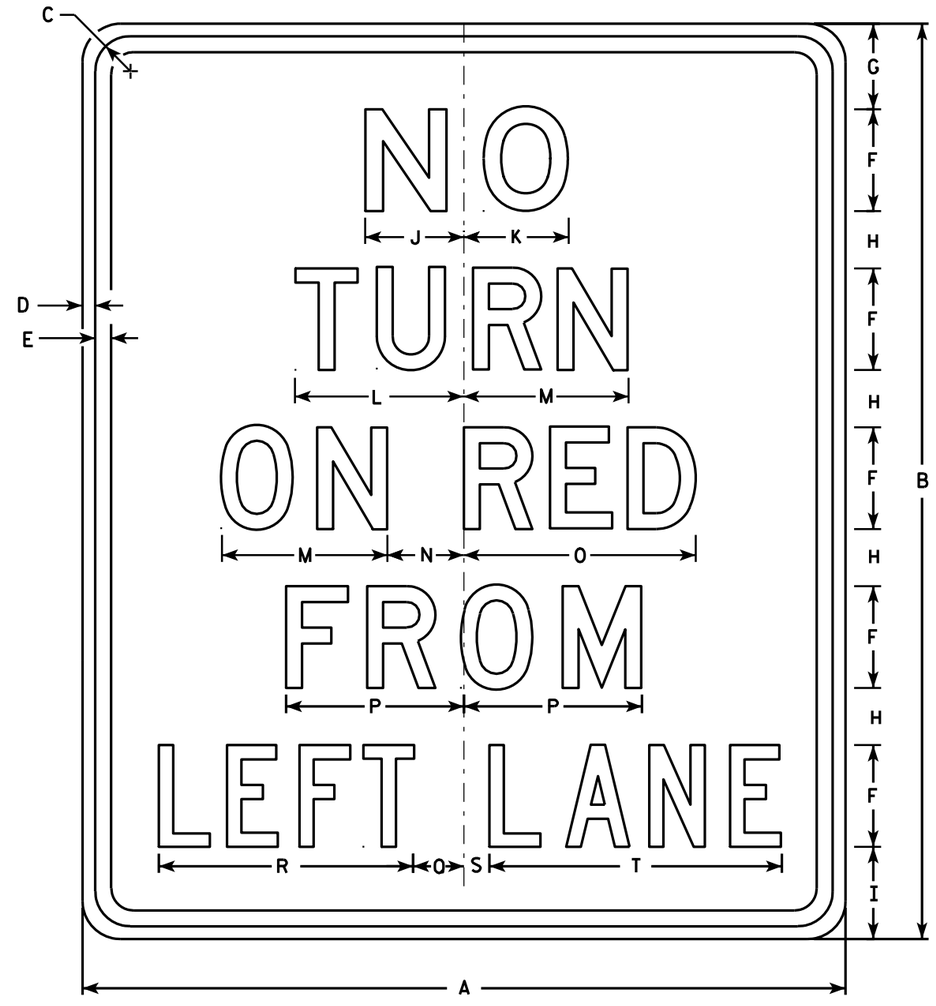
STANDARD SIGN
R10-6

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: 420	E



R10-11F

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, 3 and 4 are Series D.
   Line 5 is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	4	3 3/8	2 1/4	3 5/8	3 7/8	4 1/8	6 5/8	6 1/2	3	9 1/8	7	2	10	1	11 1/2							7.5
2M	30	36	1 3/8	1/2	5/8	4	3 3/8	2 1/4	3 5/8	3 7/8	4 1/8	6 5/8	6 1/2	3	9 1/8	7	2	10	1	11 1/2							7.5
3																											
4																											
5																											

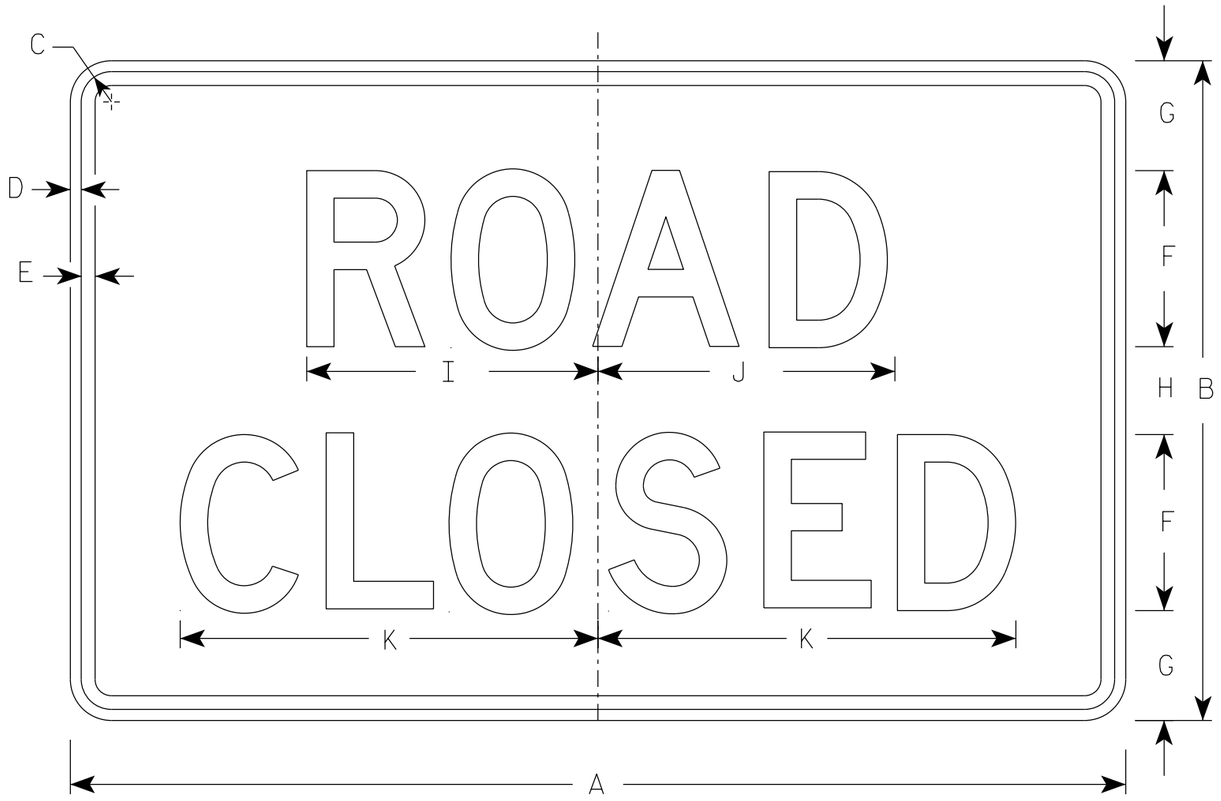
STANDARD SIGN
R10-11F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-11F.3

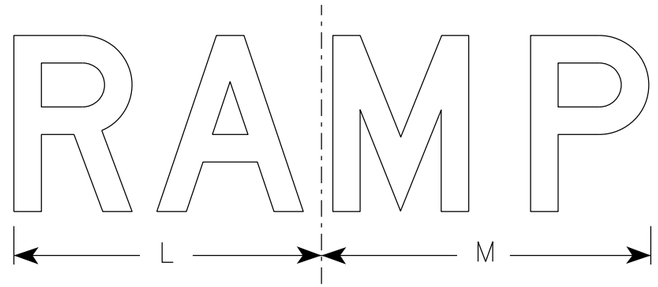
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 421	E



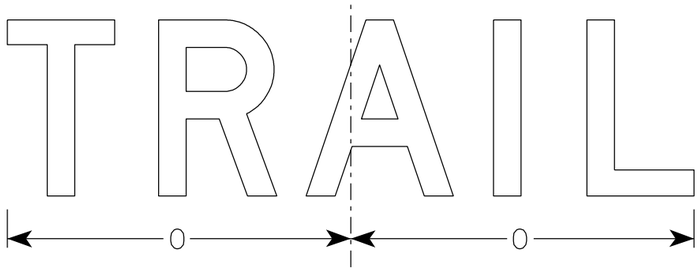
R11-2

NOTES

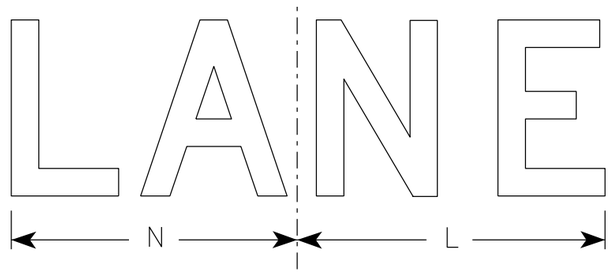
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2T



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

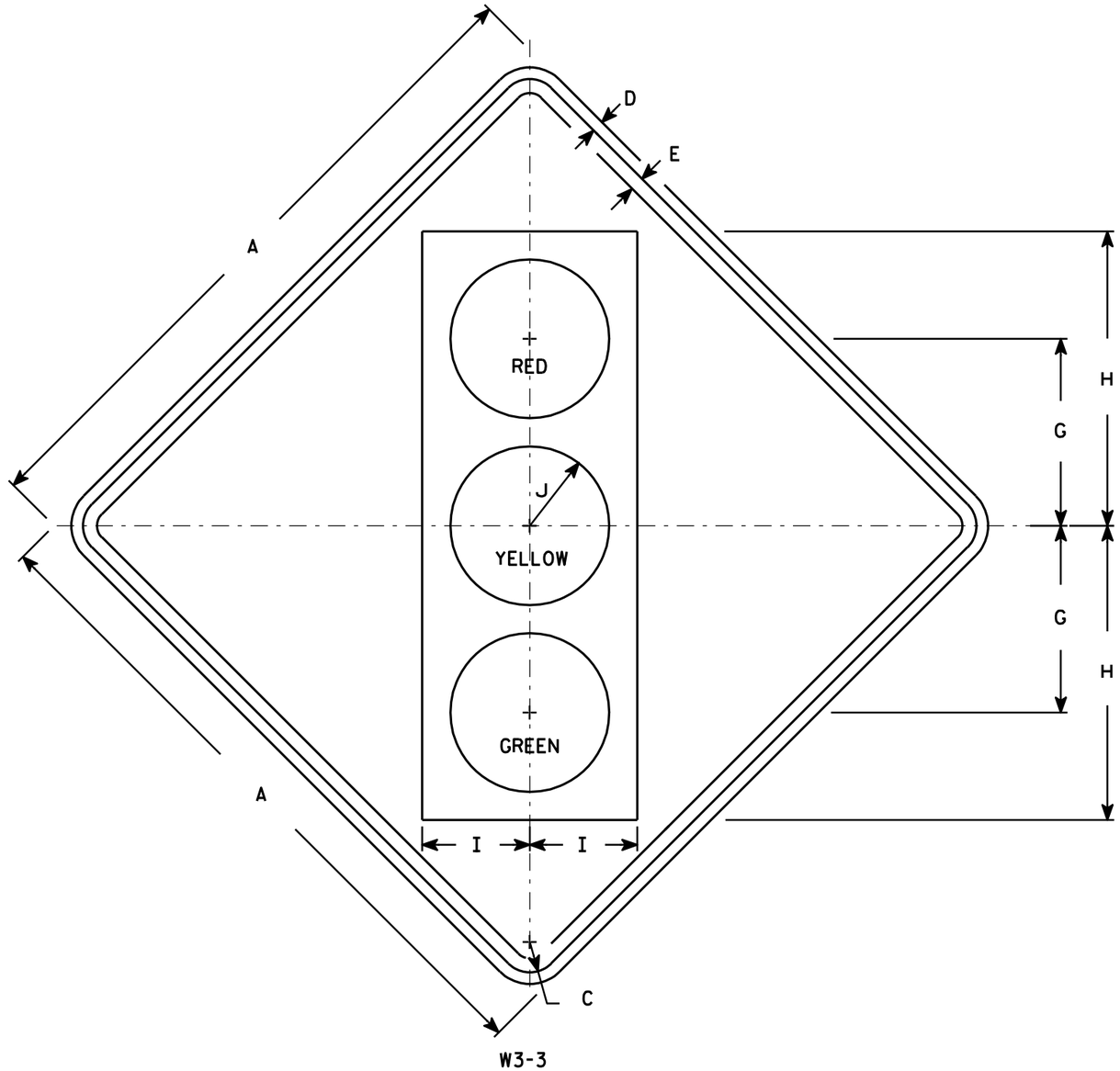
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 422 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

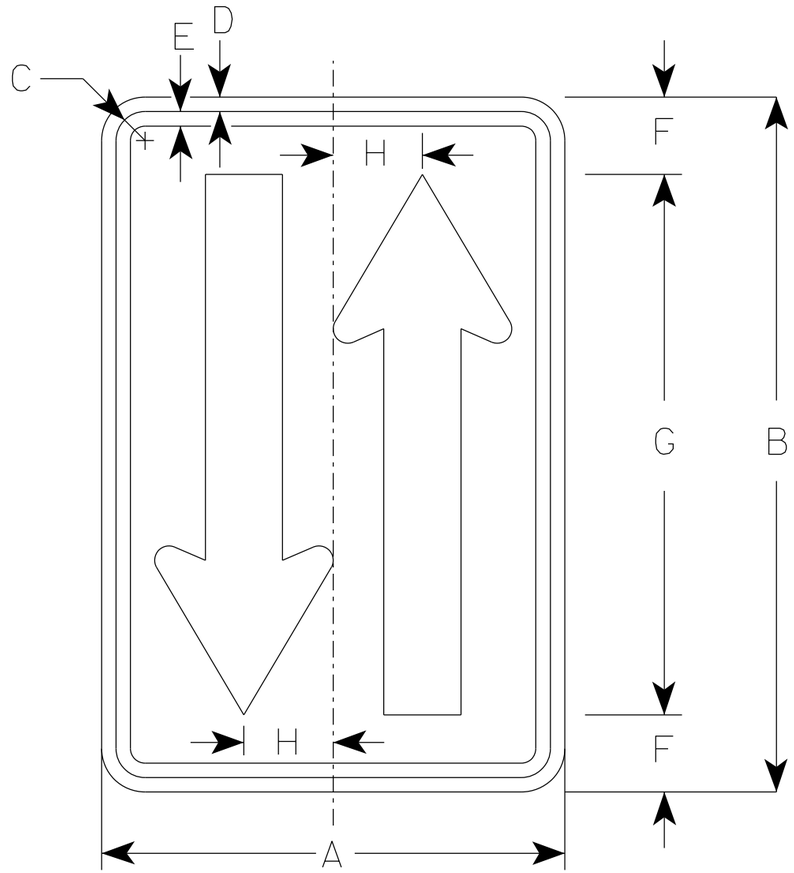
STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

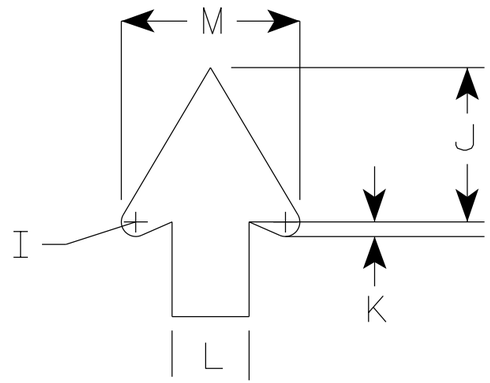
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 423 | E



W6-4

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	18	1 1/8	3/8	3/8	2	14	2 1/4	3/8	4	1/8	2	4 5/8														1.5
2M	12	18	1 1/8	3/8	3/8	2	14	2 1/4	3/8	4	1/8	2	4 5/8														1.5
3																											
4																											
5																											

STANDARD SIGN
W6-4

WISCONSIN DEPT OF TRANSPORTATION

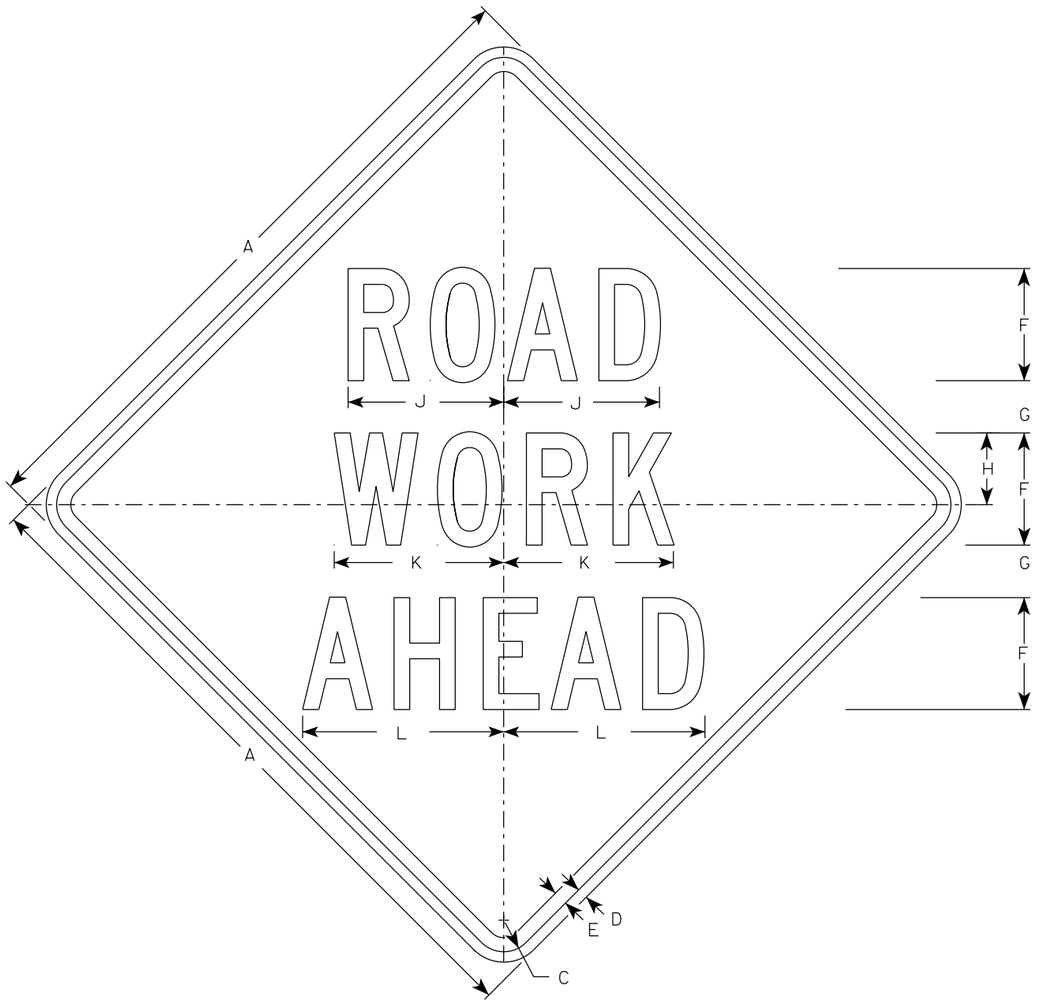
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2021 PLATE NO. W6-4.1

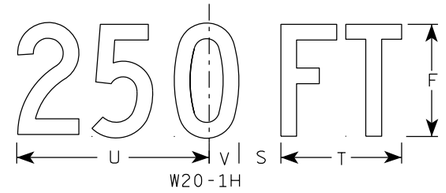
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

NOTES

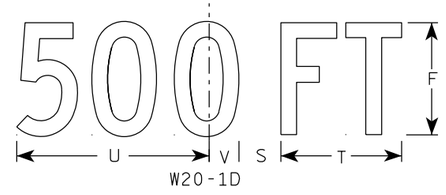
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A



W20-1H



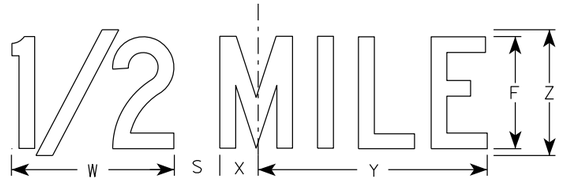
W20-1D



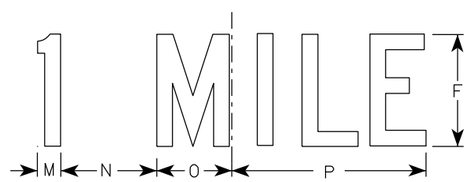
W20-1C



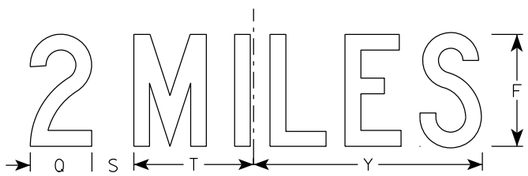
W20-1B



W20-1G



W20-1F



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/25/2020 PLATE NO. W20-1.11

PROJECT NO:

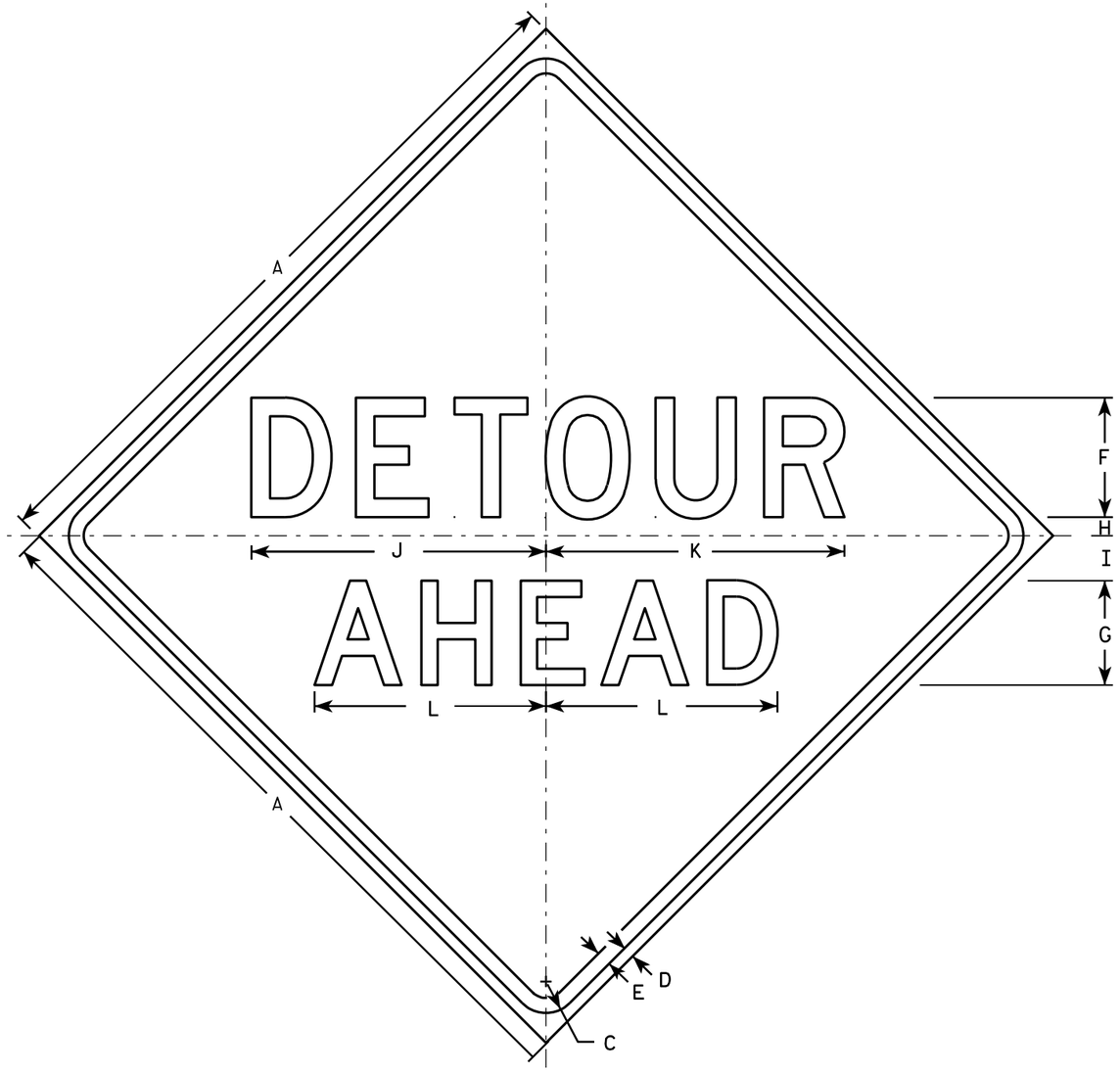
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

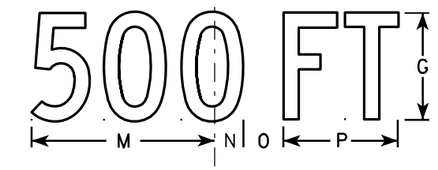
WISDOT/CADDS SHEET 42

7

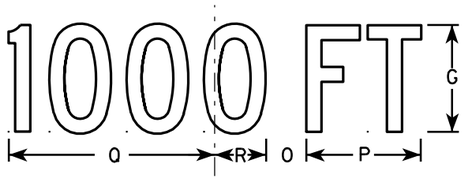
7



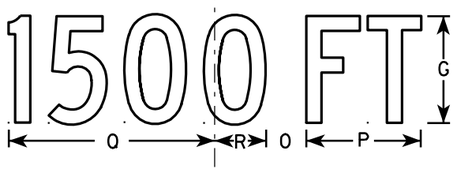
W20-2A



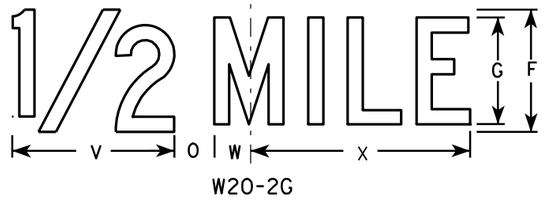
W20-2D



W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

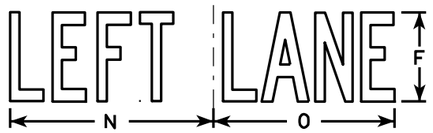
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

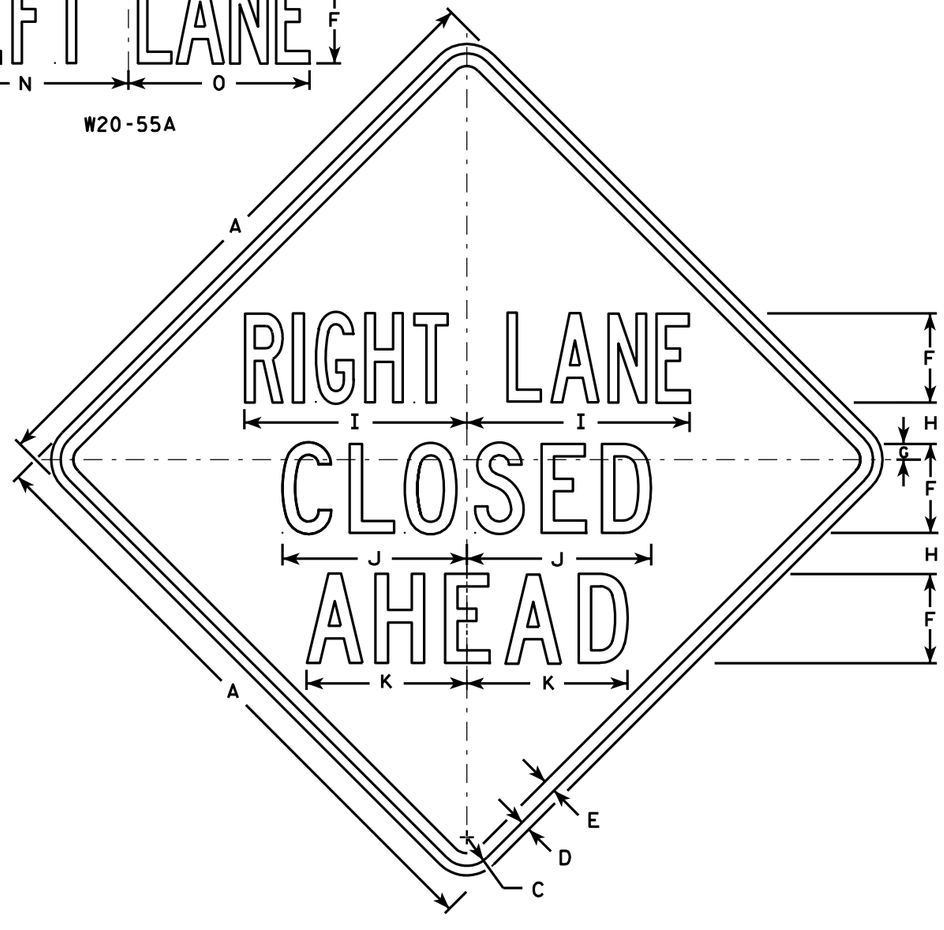
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 426	E



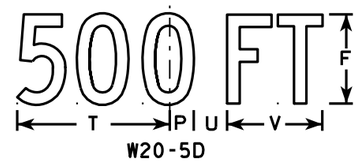
W20-56A



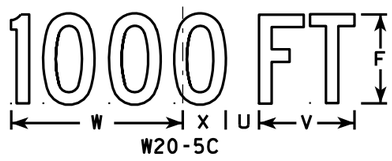
W20-55A



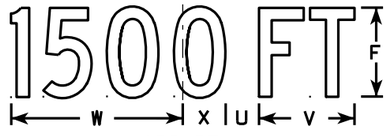
W20-5A



W20-5D



W20-5C



W20-5B



W20-5G



W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

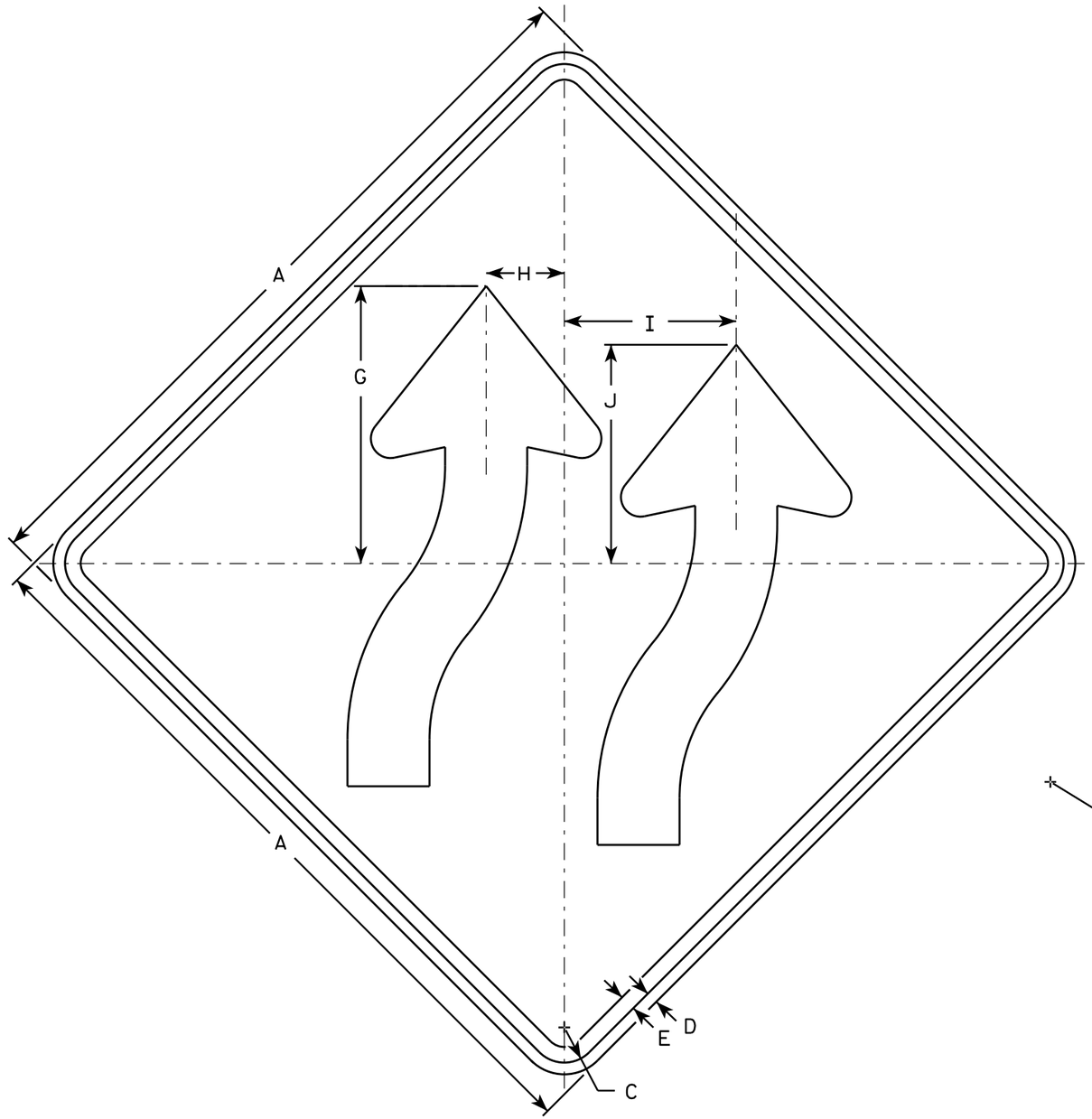
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

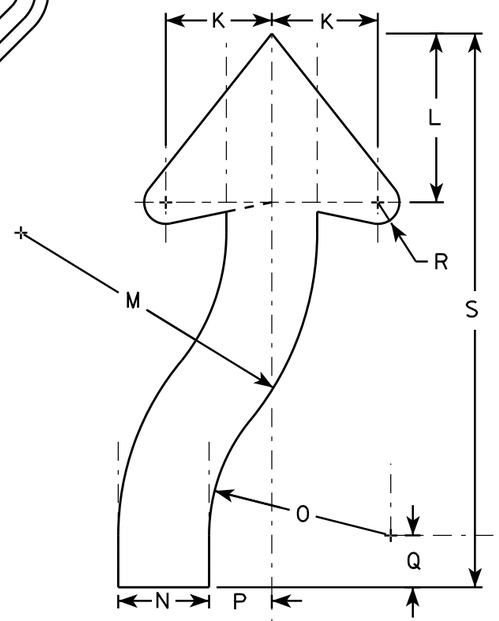
DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 427	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



W01-4bR



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4bL is the same as W014-bR exept arrows are reversed along the vertical centerline

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

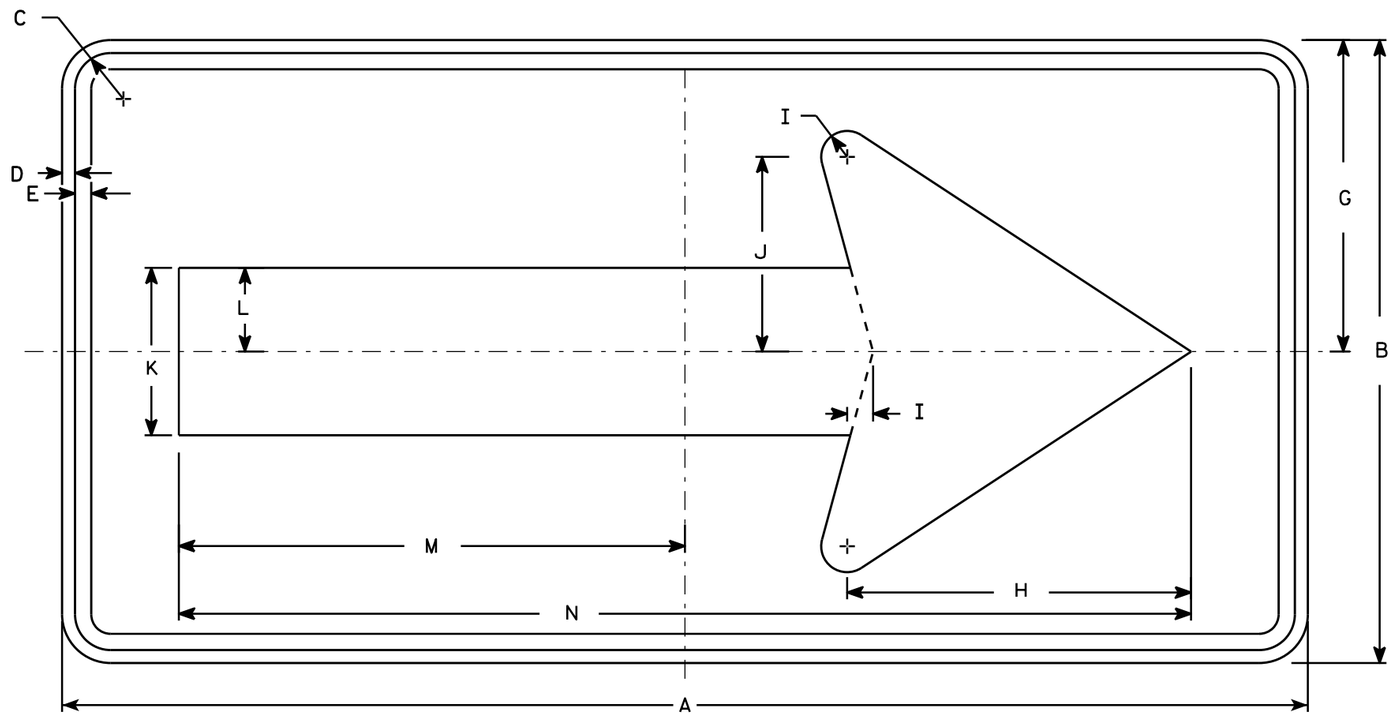
STANDARD SIGN
W01-4b

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4b.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W01-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

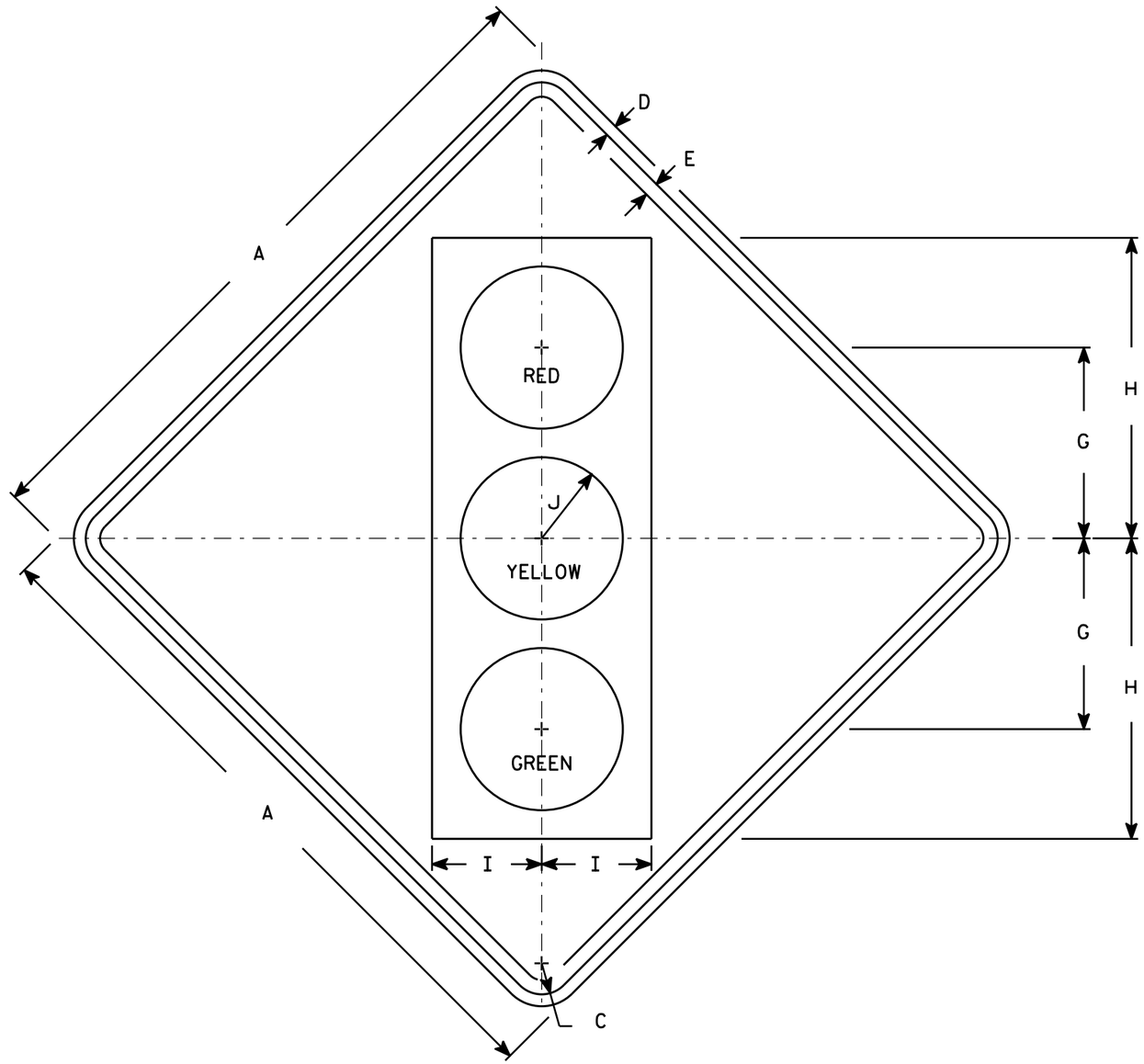
STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W03-3

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - 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	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2S	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
2M	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
3	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
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

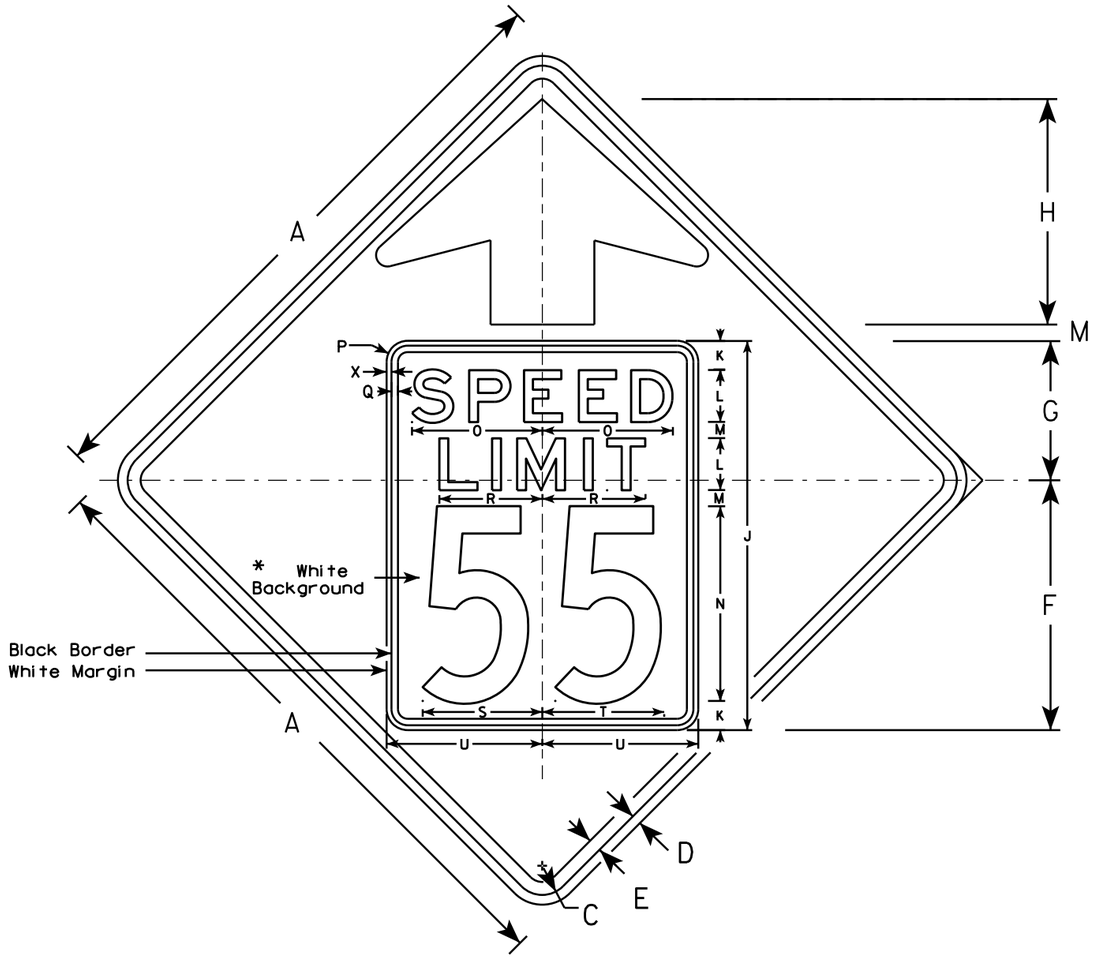
STANDARD SIGN
W03-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLAT 430 W03-3.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

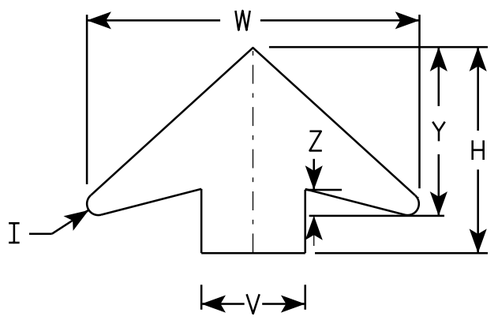


W03-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: *
   Background - ORANGE*
   Message - BLACK
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White 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	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2S	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
2M	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
3	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W03-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

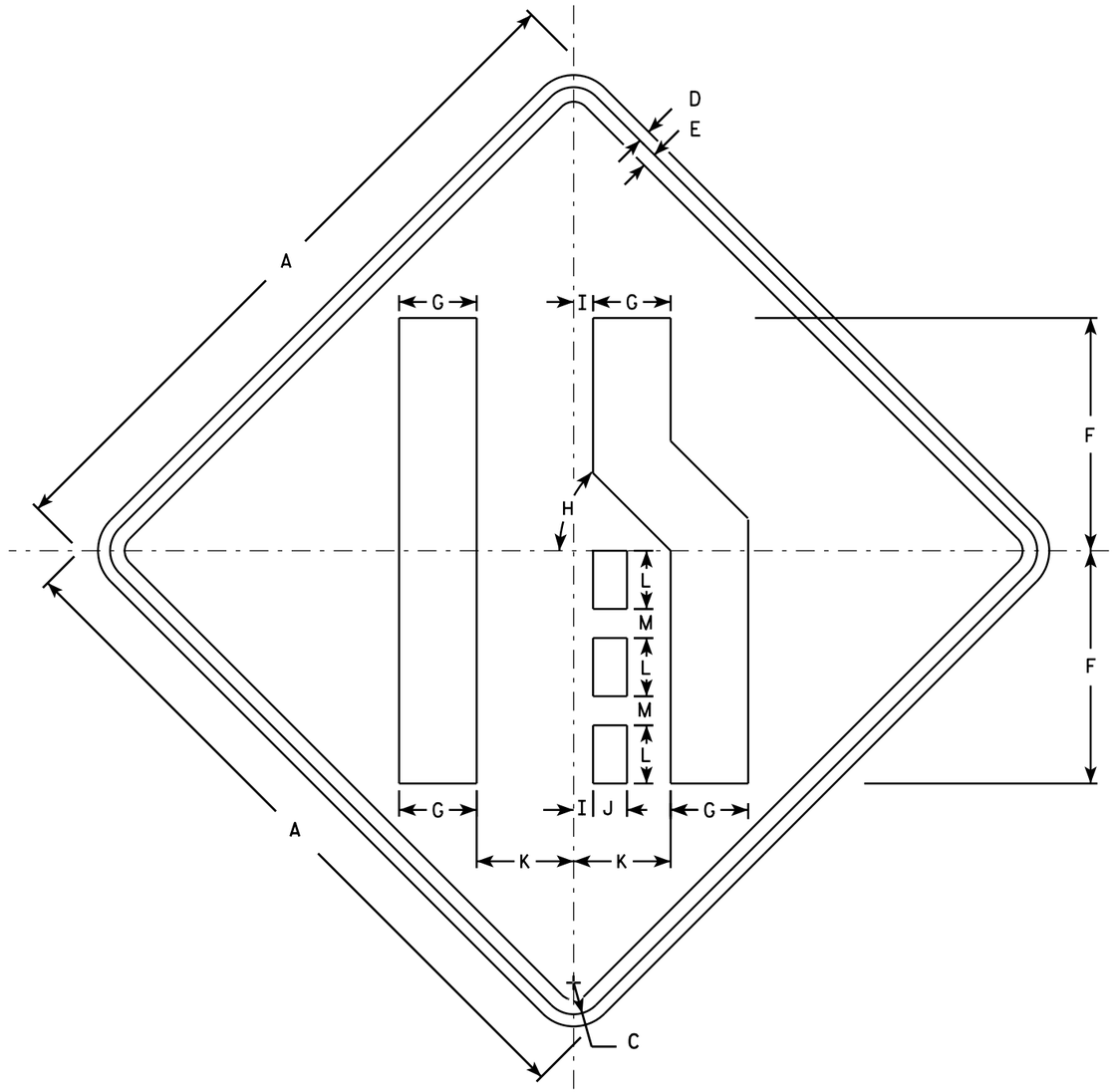
DATE 11/20/13 PLATE W03-5.1

PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W035.DGN PLOT DATE : 20-NOV-2013 11:32 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7 7



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W04-2

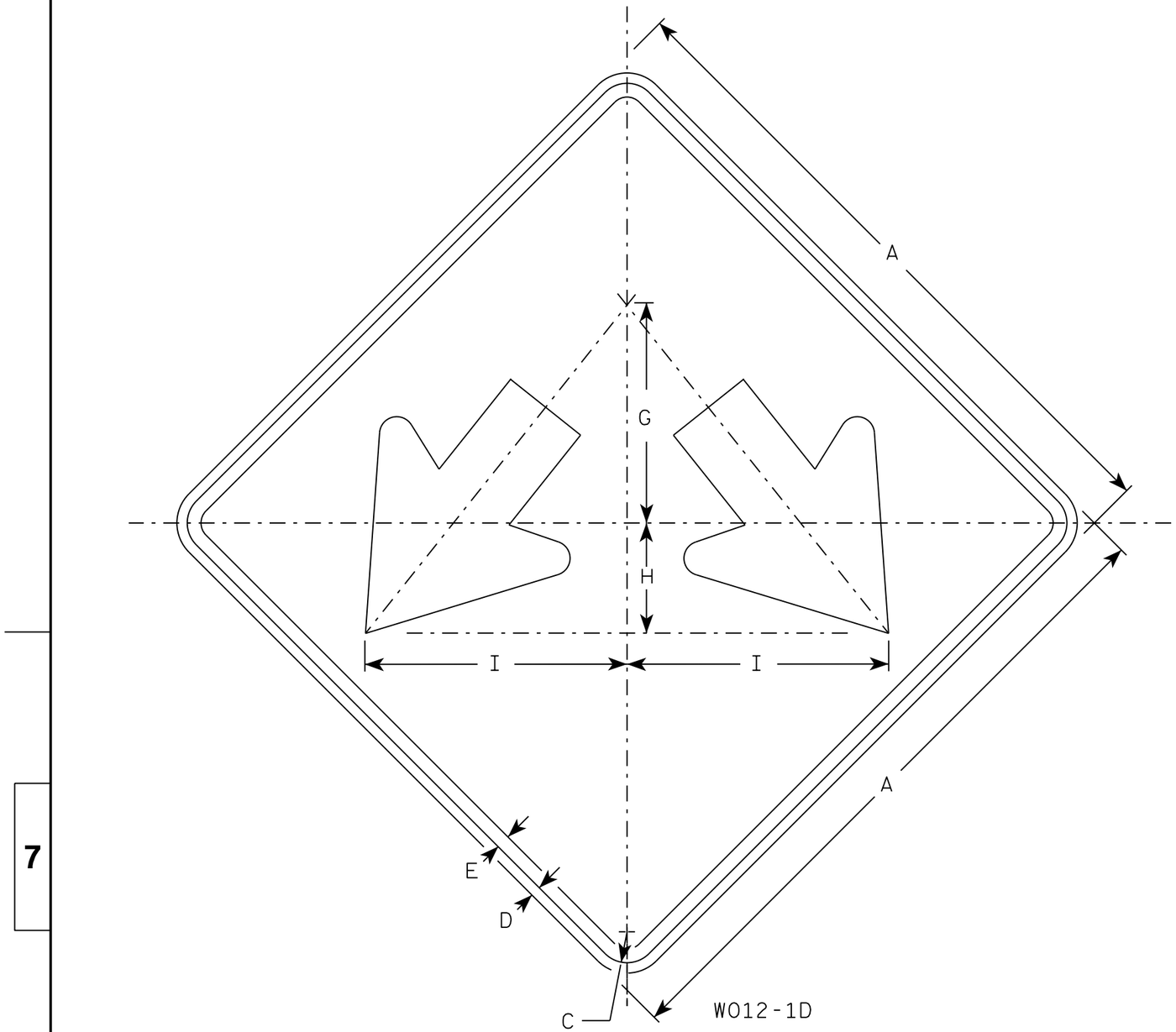
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 432 W04-2.1

PROJECT NO:

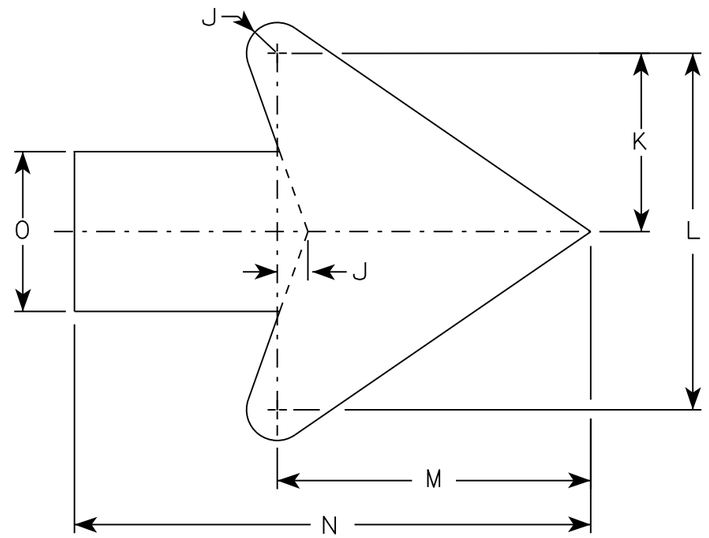
SHEET NO: E



W012-1D

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	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
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	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

STANDARD SIGN
W012-1D

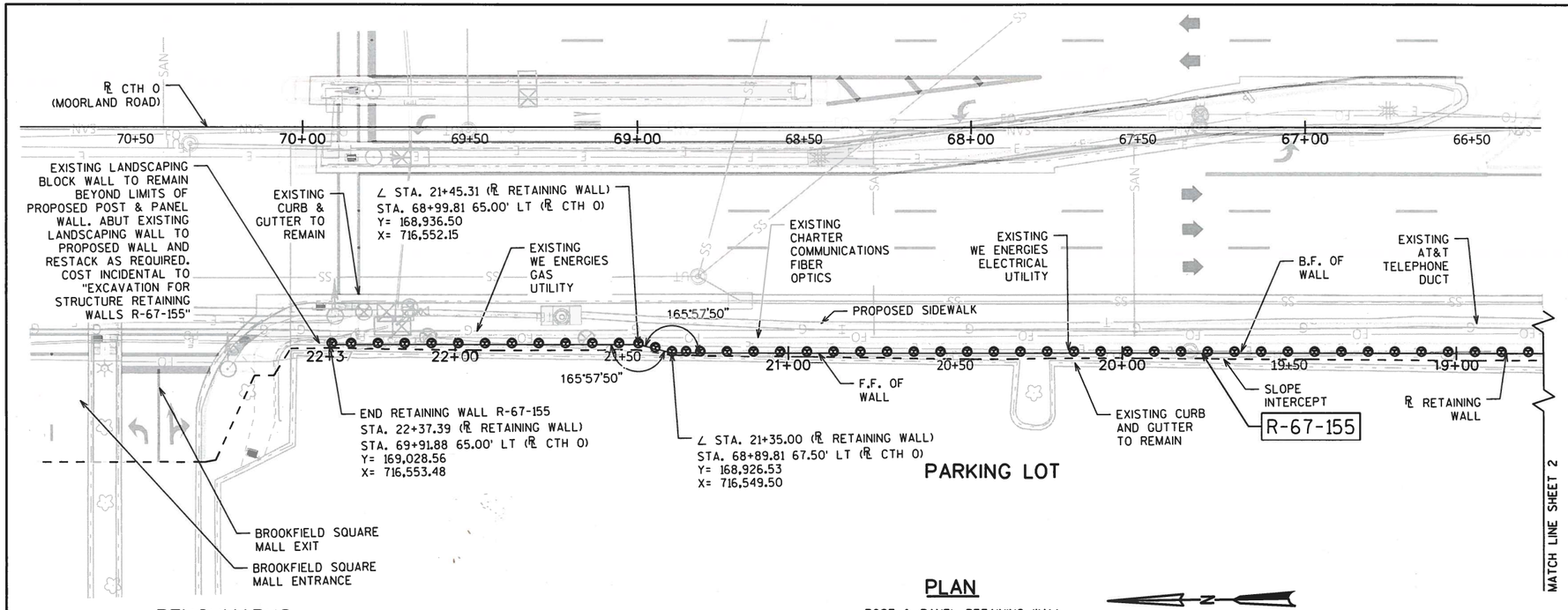
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/28/16 PLATE NO W012-1D.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CADfiles\Projects\tr_stdplate\W0121D.DGN PLOT DATE : 11-AUG-2016 11:28 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.621375:1.000000

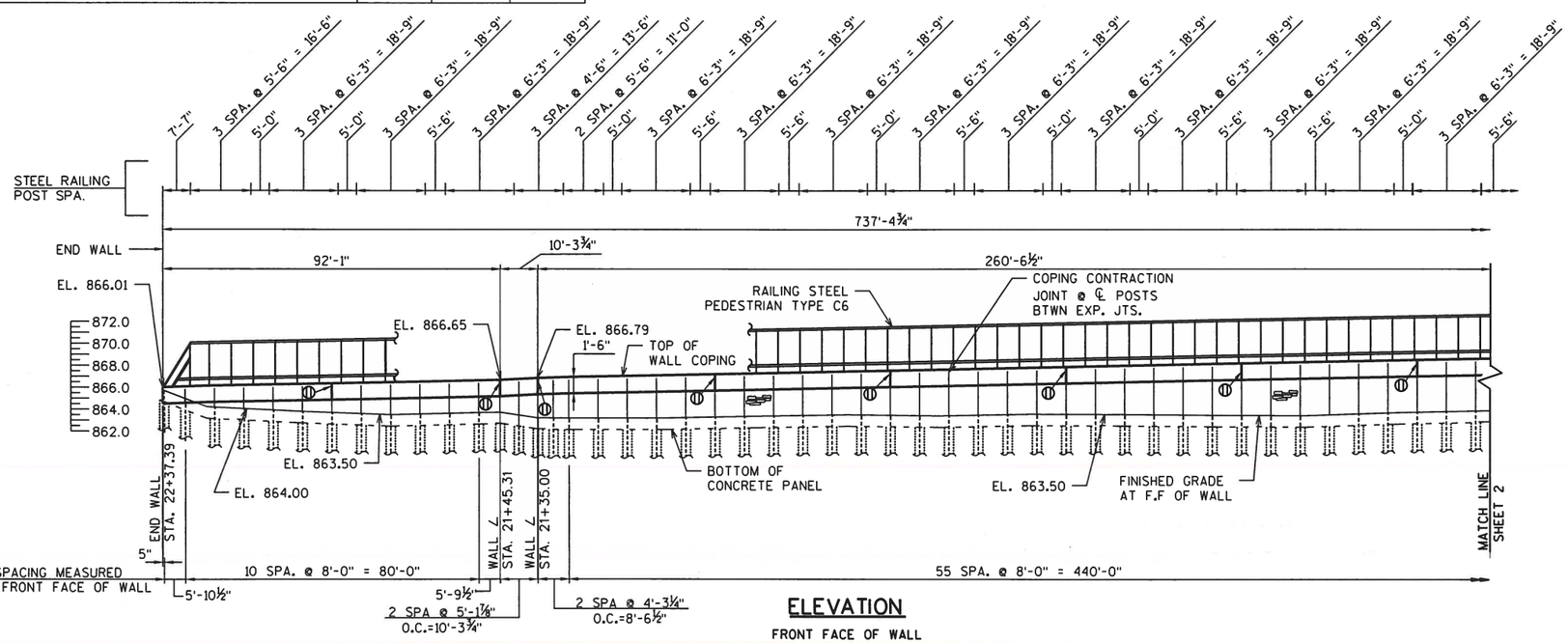


PLAN

POST & PANEL RETAINING WALL

BENCHMARKS

No.	DESCRIPTION	STATION	OFFSET	ELEVATION
BM #4	Northwest bolt top flange of fire hydrant at southeast corner of CTH O & entrance to building #N. 200 Moorland Rd.	62+06.69	74.71' LT	869.34
BM #5	Northwest bolt top flange of fire hydrant at southeast corner of CTH O & W. Bluemond Rd.	69+62.94	62.10' RT	860.55



ELEVATION

FRONT FACE OF WALL
(LOOKING EAST)
DIMENSIONS AND STATIONS GIVEN ALONG FRONT FACE OF WALL

STATE PROJECT NUMBER
2722-07-71

DESIGN DATA

LIVE LOAD:
RETAINING WALL IS DESIGNED FOR A LIVE LOAD SURCHARGE OF 100 PSF.

MATERIAL PROPERTIES
CONCRETE MASONRY,
PRECAST WALL PANELS _____ f'c = 4,000 PSI
CONCRETE MASONRY, ALL OTHER _____ f'c = 3,500 PSI
STRUCTURAL STEEL POSTS
(ASTM A709 GRADE 50) _____ fy = 50,000 PSI
HIGH STRENGTH BAR STEEL
REINFORCEMENT GRADE 60 _____ fy = 60,000 PSI

WISCONSIN
KEVIN G. WOOD
E-32070
MILWAUKEE, WI
PROFESSIONAL ENGINEER
8-31-2021

LEGEND

F.F. FRONT FACE
B.F. BACK FACE
∠ ANGLE POINT
⓪ WALL COPING EXPANSION JOINT

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION (1 OF 2)
2. GENERAL PLAN & ELEVATION (2 OF 2)
3. GENERAL NOTES & QUANTITIES
4. WALL DATA (1 OF 2)
5. WALL DATA (2 OF 2)
6. CROSS SECTION & AESTHETICS
7. RAILING STEEL PEDESTRIAN TYPE C6
8. SUBSURFACE EXPLORATION

BUREAU OF STRUCTURES CONTACT:
AARON BONK (608) 261-0261
CONSULTANT CONTACT
KEVIN WOOD (414) 259-1500

NO.	DATE	REVISION	BY

GRÄEF
275 W. Wisconsin Avenue, Suite 300
Milwaukee, WI 53203
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

ACCEPTED _____ SDR 11/12/21
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-67-155

CTH O (MOORLAND ROAD) BETWEEN USH 18 & I-94

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
WAUKESHA	BROOKFIELD

DESIGN SPEC. AASHTO 8TH EDITION

DESIGNED BY	WAR	DESIGN CK'D.	KGW	DRAWN BY.	JSS	PLANS CK'D.	KGW

GENERAL PLAN & ELEVATION (1 OF 2)

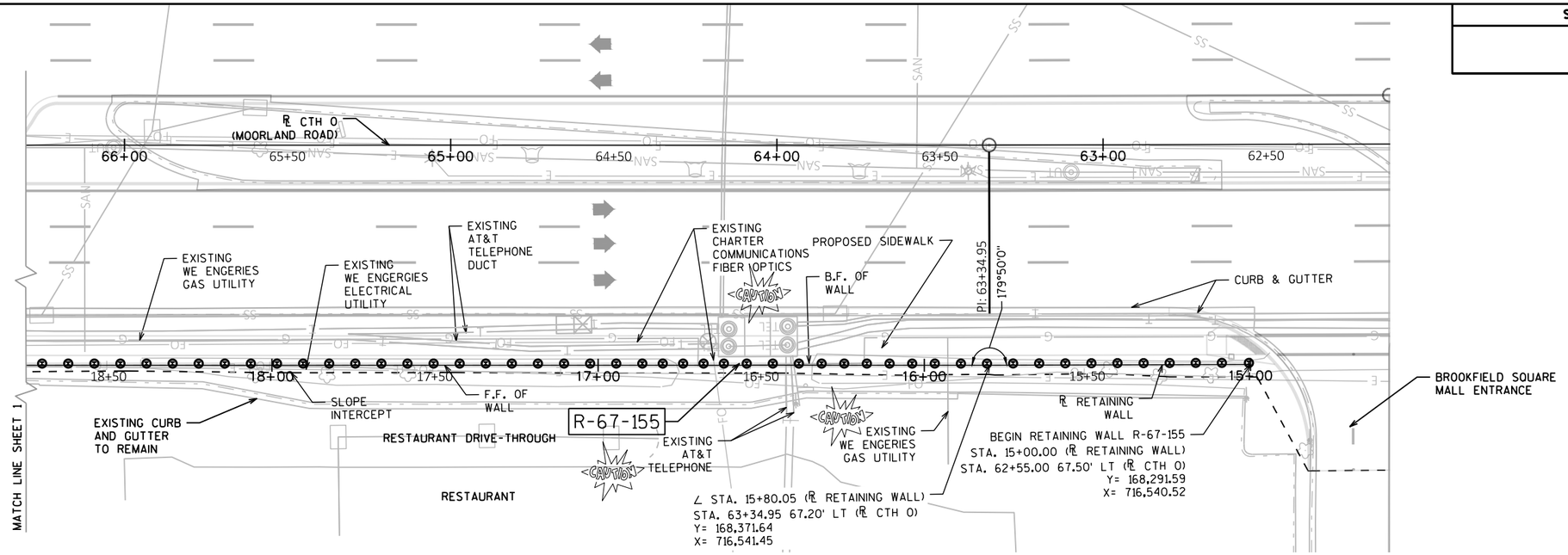
SHEET 1 OF 8

434

I.D. 2722-07-71 DATE: AUGUST 2021

SCALE = 1" = 40'

STATE PROJECT NUMBER
2722-07-71

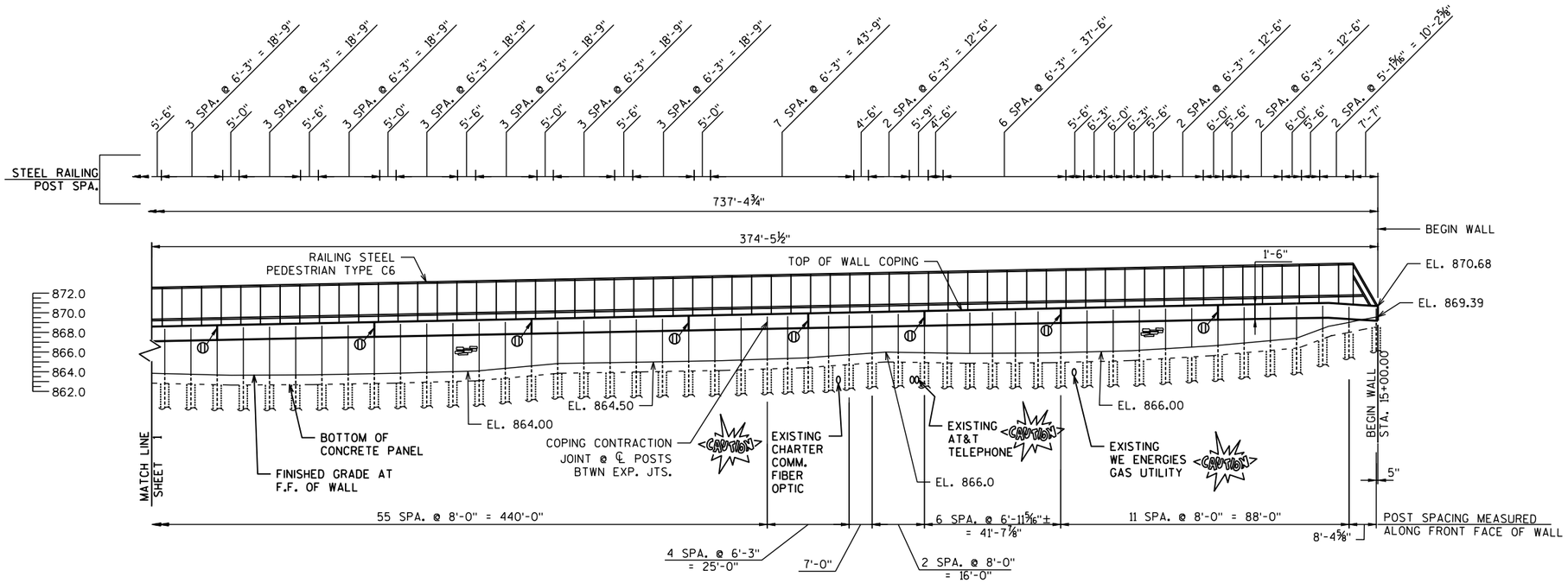


PLAN

POST AND PANEL RETAINING WALL

LEGEND

F.F. FRONT FACE
B.F. BACK FACE
Ⓓ WALL COPING EXPANSION JOINT



ELEVATION

FRONT FACE OF WALL
(LOOKING EAST)
DIMENSIONS AND STATIONS GIVEN ALONG FRONT FACE OF WALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-67-155

DRAWN BY JSS | PLANS CK'D. KGW

GENERAL PLAN & ELEVATION (2 OF 2)

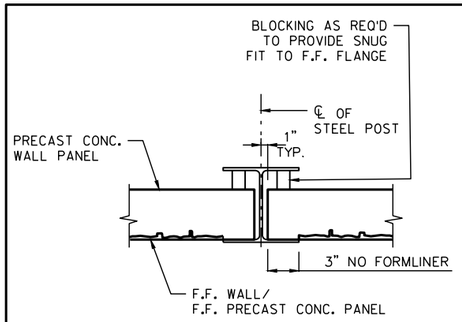
SHEET 2 OF 8

435

I.D.

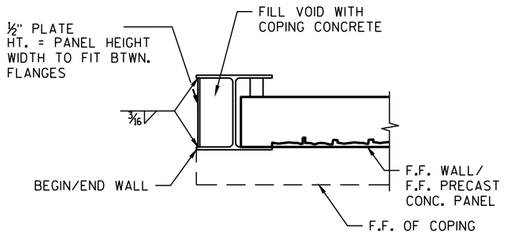
DATE:

SCALE = 1" = 40'

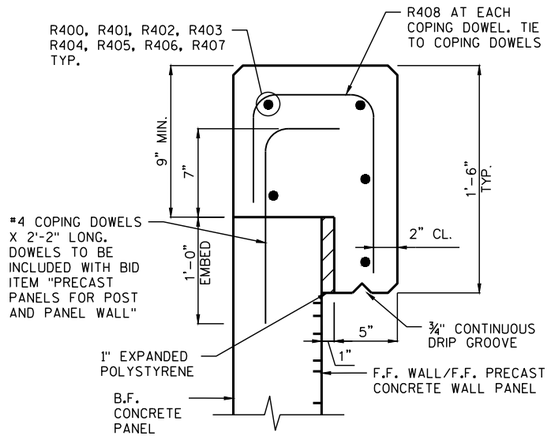


PANEL DETAIL AT POST

WALL COPING NOT SHOWN FOR CLARITY

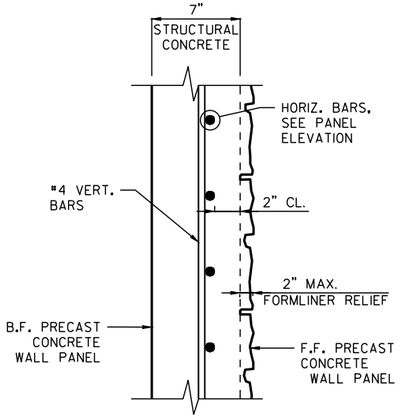


POST DETAIL AT BEGIN/END OF WALL



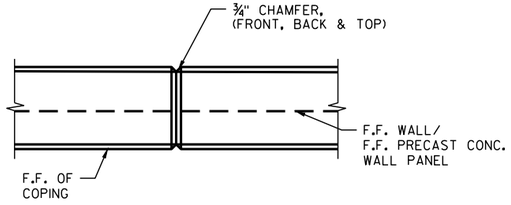
CAST-IN-PLACE CONCRETE COPING

ALL BAR STEEL REINFORCEMENT SHALL BE EPOXY COATED



TYPICAL SECTION THRU PANEL

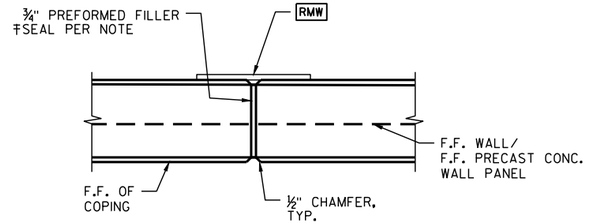
ALL BAR STEEL REINFORCEMENT SHALL BE EPOXY COATED



COPING CONTRACTION JOINT - PLAN VIEW

DO NOT RUN BAR STEEL REINFORCEMENT THRU JOINTS

MAXIMUM SPACING OF JOINT = 8'-9⅜"
CENTER JOINTS AT ℄ POST
PLACE JOINTS VERTICAL. COPING CONTRACTION JOINTS SHALL BE LOCATED ABOVE ALL POSTS EXCEPT:
1.) ABOVE POSTS REQUIRING A COPING EXPANSION JOINT.
2.) ABOVE POST NUMBER 1 AND 97.



COPING EXPANSION JOINT - PLAN VIEW

DO NOT RUN BAR STEEL REINFORCEMENT THRU JOINTS

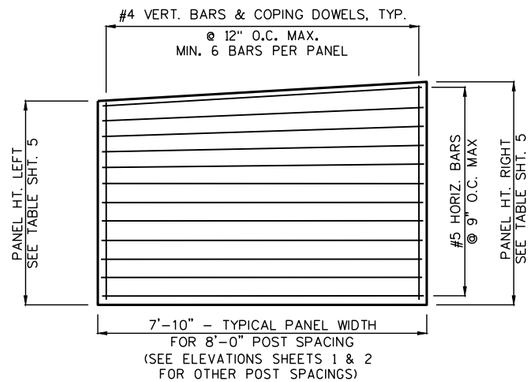
MAXIMUM SPACING OF JOINT = 48'-9⅝"
CENTER FILLER AND JOINT AT ℄ POST
PLACE JOINTS VERTICAL

ŦSEAL ALL EXPOSED HORZ. & VERT. SURFACES OF FILLER WITH NON-STAINING, NON-BITUMINOUS GRAY JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE)

RMW 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS.

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNITS	TOTAL
206.3000	EXCAVATION FOR STRUCTURES RETAINING WALLS R-67-155	LS	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	612
502.0110.S	CONCRETE MASONRY SOLDIER PILE FOOTINGS	CY	231
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	35
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	3,750
506.0605	STRUCTURAL STEEL HS	LB	92,250
513.8031	RAILING STEEL PEDESTRIAN TYPE C6	LF	737
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	4
517.0600	PAINTING EPOXY SYSTEM R-67-155	LS	1
517.1010.S	CONCRETE STAINING R-67-155	SF	2,593
517.1050.S	ARCHITECTURAL SURFACE TREATMENT R-67-155	SF	2,421
542.1000.S	PRECAST PANELS FOR SOLDIER PILE WALLS	SF	3,491
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	758
636.0050.S	FOUNDATION DRILLING 30-INCH DIAMETER	LF	1,270
	NON BID ITEMS		
	NAME PLATE	EACH	1
	EXPANDED POLYSTYRENE	SIZE	1"
	PREFORMED JOINT FILLER	SIZE	3/4"



TYPICAL PANEL ELEVATION

(LOOKING AT FRONT FACE)
ALL BAR STEEL REINFORCEMENT SHALL BE EPOXY COATED

STATE PROJECT NUMBER
2722-07-71

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES. ALL STATION AND ELEVATIONS ARE IN FEET.

ALL WALL STATIONING IS GIVEN AT FRONT FACE OF WALL R-67-155.

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS NOTED OTHERWISE. ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

EXCAVATION IN FRONT OF THE WALL MAY NOT BEGIN UNTIL THE CONCRETE IN THE STEEL POST FOOTING HAS REACHED DESIGN STRENGTH.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES R-67-155" SHALL BE THE EXISTING GROUNDLINE. COMMON EXCAVATION IN FRONT OF RETAINING WALL MAY NOT BEGIN UNTIL WALL PANELS ARE IN PLACE.

AT THE BACKFACE OF RETAINING WALLS, EXCAVATED VOLUME NOT OCCUPIED BY STRUCTURE SHALL BE BACKFILLED WITH "BACKFILL TYPE A" OR CONTROLLED LOW STRENGTH MATERIAL (CLSM)/FLOWABLE BACKFILL.

CONTROLLED LOW STRENGTH MATERIAL (CLSM)/FLOWABLE BACKFILL IS INCLUDED IN THE BID ITEM FOR "EXCAVATION FOR STRUCTURES RETAINING WALLS R-67-155". SEE SPECIAL PROVISIONS FOR REQUIREMENTS.

THE QUANTITY OF CONCRETE MASONRY FOR THE CAST-IN-PLACE COPING IS PAID FOR UNDER THE ITEM "CONCRETE MASONRY RETAINING WALLS".

UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

THE PLAN QUANTITY FOR THE BID ITEM "PRECAST PANELS FOR POST AND PANEL WALLS" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE WALL TO A CONSTANT DEPTH OF 1'-6" BELOW THE FINISHED GRADE.

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF JOINT FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP & HOLD ⅛" BELOW THE SURFACE OF CONCRETE).

STRUCTURAL STEEL POSTS SHALL BE AMS STD. COLOR NO. 36173 (GRAY).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-67-155

DRAWN BY WAR | PLANS CKD. KGW

GENERAL NOTES & QUANITIES

SHEET 3 OF 8

436

SCALE = ###

8

8

STATE PROJECT NUMBER

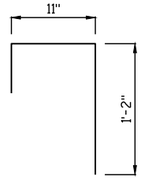
2722-07-71

POST DATA

POST NUMBER	C/L POST @ R/L CTH O STA.	OFFSET TO POST F.F FROM R/L CTH O OF WALL	POST WALL STA.	POST SECTION	POST LENGTH (FT)	TOP OF POST EL.	BOTTOM OF POST EL.	TOP OF FOOTING EL.	FOOTING HEIGHT (FT)	TOP OF COPING EL.
1	62+55.42	67.50 LT	15+00.42	W12X53	12.00	869.68	857.68	867.83	12.00	870.43
2	62+63.80	67.50 LT	15+08.80	W12X53	12.00	869.79	857.79	867.50	12.00	870.54
3	62+71.80	67.50 LT	15+16.80	W12X53	12.00	870.04	858.04	866.80	12.00	870.79
4	62+79.80	67.50 LT	15+24.80	W12X53	12.00	870.20	858.20	865.88	12.00	870.95
5	62+87.80	67.50 LT	15+32.80	W12X53	12.00	870.15	858.15	865.51	12.00	870.90
6	62+95.80	67.50 LT	15+40.80	W12X53	13.00	870.09	857.09	865.32	13.00	870.84
7	63+03.80	67.50 LT	15+48.80	W12X53	14.00	870.03	856.03	865.16	14.00	870.78
8	63+11.80	67.50 LT	15+56.80	W12X53	14.00	869.98	855.98	865.00	14.00	870.73
9	63+19.80	67.50 LT	15+64.80	W12X53	14.00	869.92	855.92	864.83	14.00	870.67
10	63+27.80	67.50 LT	15+72.80	W12X53	14.00	869.87	855.87	864.67	14.00	870.62
11	63+35.60	67.50 LT	15+80.80	W12X53	14.00	869.81	855.81	864.52	14.00	870.56
12	63+43.60	67.50 LT	15+88.80	W12X53	14.00	869.76	855.76	864.46	14.00	870.51
13	63+51.60	67.50 LT	15+96.80	W12X53	14.00	869.71	855.71	864.43	14.00	870.46
14	63+58.55	67.50 LT	16+03.74	W12X53	14.00	869.66	855.66	864.41	14.00	870.41
15	63+65.49	67.50 LT	16+10.69	W12X53	14.00	869.61	855.61	864.40	14.00	870.36
16	63+72.43	67.50 LT	16+17.63	W12X53	13.00	869.57	856.57	864.38	13.00	870.32
17	63+79.37	67.50 LT	16+24.57	W12X53	13.00	869.52	856.52	864.36	13.00	870.27
18	63+86.32	67.50 LT	16+31.51	W12X53	13.00	869.47	856.47	864.35	13.00	870.22
19	63+93.26	67.50 LT	16+38.45	W12X53	13.00	869.43	856.43	864.33	13.00	870.18
20	64+01.26	67.50 LT	16+46.81	W12X53	13.00	869.37	856.37	864.50	13.00	870.12
21	64+09.26	67.50 LT	16+54.45	W12X53	13.00	869.32	856.32	864.50	13.00	870.07
22	64+16.26	67.50 LT	16+61.46	W12X53	13.00	869.27	856.27	864.42	13.00	870.02
23	64+22.51	67.50 LT	16+67.71	W12X53	13.00	869.23	856.23	864.06	13.00	869.98
24	64+28.76	67.50 LT	16+73.96	W12X53	13.00	869.19	856.19	863.90	13.00	869.94
25	64+35.01	67.50 LT	16+80.21	W12X53	13.00	869.15	856.15	863.81	13.00	869.90
26	64+41.26	67.50 LT	16+86.46	W12X53	13.00	869.10	856.10	863.73	13.00	869.85
27	64+49.26	67.50 LT	16+94.46	W12X53	13.00	869.05	856.05	863.67	13.00	869.80
28	64+57.26	67.50 LT	17+02.46	W12X53	13.00	869.00	856.00	863.61	13.00	869.75
29	64+65.26	67.50 LT	17+10.46	W12X53	12.00	868.94	856.94	863.55	12.00	869.69
30	64+73.26	67.50 LT	17+18.46	W12X53	12.00	868.89	856.89	863.49	12.00	869.64
31	64+81.26	67.50 LT	17+26.46	W12X53	12.00	868.83	856.83	863.46	12.00	869.58
32	64+89.26	67.50 LT	17+34.46	W12X53	12.00	868.78	856.78	863.32	12.00	869.53
33	64+97.26	67.50 LT	17+42.46	W12X53	11.00	868.73	857.73	863.15	11.00	869.48
34	65+05.26	67.50 LT	17+50.46	W12X53	11.00	868.67	857.67	862.97	11.00	869.42
35	65+13.26	67.50 LT	17+58.45	W12X53	11.00	868.62	857.62	862.80	11.00	869.37
36	65+21.26	67.50 LT	17+66.45	W12X53	11.00	868.56	857.56	862.62	11.00	869.31
37	65+29.26	67.50 LT	17+74.45	W12X53	11.00	868.51	857.51	862.57	11.00	869.26
38	65+37.26	67.50 LT	17+82.45	W12X53	11.00	868.46	857.46	862.52	11.00	869.21
39	65+45.26	67.50 LT	17+90.45	W12X53	11.00	868.40	857.40	862.38	11.00	869.15
40	65+53.26	67.50 LT	17+98.45	W12X53	12.00	868.35	856.35	862.35	12.00	869.10
41	65+61.26	67.50 LT	18+06.45	W12X53	13.00	868.29	855.29	862.31	13.00	869.04
42	65+69.26	67.50 LT	18+14.45	W12X53	14.00	868.24	854.24	862.28	14.00	868.99
43	65+77.26	67.50 LT	18+22.45	W12X53	15.00	868.19	853.19	862.25	15.00	868.94
44	65+85.26	67.50 LT	18+30.45	W12X53	16.00	868.13	852.13	862.21	16.00	868.88
45	65+93.26	67.50 LT	18+38.45	W12X53	16.00	868.08	852.08	862.23	16.00	868.83
46	66+01.26	67.50 LT	18+46.45	W12X53	16.00	868.03	852.03	862.05	16.00	868.78
47	66+09.26	67.50 LT	18+54.45	W12X53	16.00	867.97	851.97	862.15	16.00	868.72
48	66+17.26	67.50 LT	18+62.45	W12X53	16.00	867.92	851.92	862.17	16.00	868.67
49	66+25.26	67.50 LT	18+70.45	W12X53	16.00	867.86	851.86	862.27	16.00	868.61
50	66+33.26	67.50 LT	18+78.46	W12X53	16.00	867.81	851.81	862.40	16.00	868.56
51	66+41.26	67.50 LT	18+86.46	W12X53	16.00	867.76	851.76	862.31	16.00	868.51
52	66+49.26	67.50 LT	18+94.46	W12X53	16.00	867.70	851.70	862.22	16.00	868.45
53	66+57.26	67.50 LT	19+02.46	W12X53	15.00	867.65	852.65	862.13	15.00	868.40
54	66+65.26	67.50 LT	19+10.46	W12X53	15.00	867.59	852.59	862.04	15.00	868.34
55	66+73.26	67.50 LT	19+18.46	W12X53	15.00	867.54	852.54	861.96	15.00	868.29
56	66+81.26	67.50 LT	19+26.46	W12X53	14.00	867.49	853.49	861.87	14.00	868.24
57	66+89.26	67.50 LT	19+34.46	W12X53	14.00	867.43	853.43	861.88	14.00	868.18
58	66+97.26	67.50 LT	19+42.46	W12X53	14.00	867.38	853.38	861.89	14.00	868.13
59	67+05.26	67.50 LT	19+50.46	W12X53	13.00	867.32	854.32	861.91	13.00	868.07
60	67+13.26	67.50 LT	19+58.46	W12X53	13.00	867.27	854.27	861.94	13.00	868.02
61	67+21.26	67.50 LT	19+66.46	W12X53	13.00	867.22	854.22	861.96	13.00	867.97
62	67+29.26	67.50 LT	19+74.45	W12X53	13.00	867.16	854.16	861.99	13.00	867.91
63	67+37.26	67.50 LT	19+82.45	W12X53	13.00	867.11	854.11	861.98	13.00	867.86
64	67+45.26	67.50 LT	19+90.45	W12X53	13.00	867.06	854.06	862.02	13.00	867.81
65	67+53.26	67.50 LT	19+98.45	W12X53	13.00	867.00	854.00	862.02	13.00	867.75
66	67+61.26	67.50 LT	20+06.45	W12X53	13.00	866.95	853.95	862.02	13.00	867.70
67	67+69.26	67.50 LT	20+14.45	W12X53	13.00	866.89	853.89	862.02	13.00	867.64
68	67+77.26	67.50 LT	20+22.45	W12X53	13.00	866.84	853.84	862.00	13.00	867.59
69	67+85.26	67.50 LT	20+30.45	W12X53	13.00	866.79	853.79	862.03	13.00	867.54
70	67+93.26	67.50 LT	20+38.45	W12X53	13.00	866.73	853.73	862.00	13.00	867.48
71	68+01.26	67.50 LT	20+46.46	W12X53	13.00	866.68	853.68	861.97	13.00	867.43
72	68+09.26	67.50 LT	20+54.46	W12X53	13.00	866.62	853.62	861.93	13.00	867.37
73	68+17.26	67.50 LT	20+62.46	W12X53	13.00	866.57	853.57	861.89	13.00	867.32
74	68+25.26	67.50 LT	20+70.46	W12X53	13.00	866.52	853.52	861.86	13.00	867.27
75	68+33.26	67.50 LT	20+78.46	W12X53	13.00	866.46	853.46	861.80	13.00	867.21
76	68+41.26	67.50 LT	20+86.46	W12X53	13.00	866.41	853.41	861.74	13.00	867.16
77	68+49.26	67.50 LT	20+94.46	W12X53	13.00	866.35	853.35	861.68	13.00	867.10
78	68+57.26	67.50 LT	21+02.46	W12X53	13.00	866.30	853.30	861.67	13.00	867.05
79	68+65.26	67.50 LT	21+10.46	W12X53	13.00	866.25	853.25	861.67	13.00	867.00
80	68+73.26	67.50 LT	21+18.46	W12X53	13.00	866.19	853.19	861.66	13.00	866.94
81	68+81.26	67.50 LT	21+26.46	W12X53	13.00	866.14	853.14	861.67	13.00	866.89
82	68+85.53	67.50 LT	21+30.73	W12X53	13.00	866.11	853.11	861.69	13.00	866.86
83	68+89.81	67.50 LT	21+35.00	W12X53	12.00	866.03	854.03	861.66	12.00	866.78
84	68+94.86	66.24 LT	21+40.21	W12X53	12.00	865.95	853.95	861.96	12.00	866.70
85	68+99.81	65.00 LT	21+45.31	W12X53	12.00	865.90	853.90	862.16	12.00	866.65
86	69+05.59	65.00 LT	21+51.09	W12X53	12.00	865.84	853.84	862.14	12.00	866.59
87	69+13.59	65.00 LT	21+59.09	W12X53	12.00	865.78	853.78	862.08	12.00	866.53
88	69+21.59	65.00 LT	21+67.09	W12X53	12.00	865.73	853.73	862.13	12.00	866.48
89	69+29.59	65.00 LT	21+75.09	W12X53	12.00	865.68	853.68	861.92	12.00	866.43
90	69+37.59	65.00 LT	21+83.09	W12X53	12.00	865.62	853.62	862.09	12.00	866.37
91	69+45.59	65.00 LT	21+91.09	W12X53	12.00	865.57	853.57	862.25	12.00	866.32
92	69+53.59	65.00 LT	21+99.09	W12X53	12.00	865.51	853.51	862.27	12.00	866.26
93	69+61.59	65.00 LT	22+07.09	W12X53	12.00	865.46	853.46	862.29	12.00	866.21
94	69+69.59	65.00 LT	22+15.09	W12X53	12.00	865.41	853.41	861.95	12.00	866.16
95	69+77.59	65.00 LT	22+23.09	W12X53	12.00	865.35	853.35	861.96	12.00	866.10
96	69+85.59	65.00 LT	22+31.09	W12X53	12.00	865.30	853.30	864.27	12.00	866.05
97	69+91.46	65.00 LT	22+36.97	W12X53	12.00	865.26	853.26	864.21	12.00	866.01

BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
R400	X	5	8'-5"			COPING HORIZ. PANEL 1
R401	X	390	7'-8"			COPING HORIZ. PANELS 2-12, 19-20, 26-80 & 86-95
R402	X	30	6'-7"			COPING HORIZ. PANELS 13-18
R403	X	5	6'-8"			COPING HORIZ. PANEL 21
R404	X	25	5'-11"			COPING HORIZ. PANELS 22-25 & PANEL 96
R405	X	10	3'-11"			COPING HORIZ. PANELS 81-82
R406	X	10	4'-9"			COPING HORIZ. PANELS 83-84
R407	X	5	5'-5"			COPING HORIZ. PANEL 85
R408	X	833	2'-6"		X	COPING VERTICAL



R408

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-67-155

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WALL DATA (1 OF 2)

SHEET 4 OF 8

437

SCALE = ###

STATE PROJECT NUMBER
2722-07-71

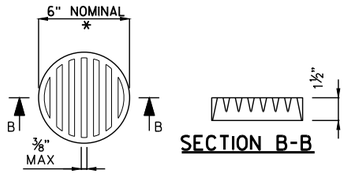
PANEL DATA

PANEL NUMBER	BOTTOM PANEL EL.	PANEL TOP EL. RT.	PANEL TOP EL. LT.
1	867.83	869.68	869.79
2	867.50	869.79	870.04
3	866.80	870.04	870.20
4	865.88	870.20	870.15
5	865.51	870.15	870.09
6	865.32	870.09	870.03
7	865.16	870.03	869.98
8	865.00	869.98	869.92
9	864.83	869.92	869.87
10	864.67	869.87	869.81
11	864.52	869.81	869.76
12	864.46	869.76	869.71
13	864.43	869.71	869.66
14	864.41	869.66	869.61
15	864.40	869.61	869.57
16	864.38	869.57	869.52
17	864.36	869.52	869.47
18	864.35	869.47	869.43
19	864.50	869.43	869.37
20	864.50	869.37	869.32
21	864.50	869.32	869.27
22	864.42	869.27	869.23
23	864.06	869.23	869.19
24	863.90	869.19	869.15
25	863.81	869.15	869.10
26	863.73	869.10	869.05
27	863.67	869.05	869.00
28	863.61	869.00	868.94
29	863.55	868.94	868.89
30	863.49	868.89	868.83
31	863.46	868.83	868.78
32	863.32	868.78	868.73
33	863.15	868.73	868.67
34	862.97	868.67	868.62
35	862.80	868.62	868.56
36	862.62	868.56	868.51
37	862.57	868.51	868.46
38	862.52	868.46	868.40
39	862.38	868.40	868.35
40	862.35	868.35	868.29
41	862.31	868.29	868.24
42	862.28	868.24	868.19
43	862.25	868.19	868.13
44	862.23	868.13	868.08
45	862.23	868.08	868.03
46	862.15	868.03	867.97
47	862.17	867.97	867.92
48	862.27	867.92	867.86

PANEL NUMBER	BOTTOM PANEL EL.	PANEL TOP EL. RT.	PANEL TOP EL. LT.
49	862.4	867.86	867.81
50	862.4	867.81	867.76
51	862.31	867.76	867.7
52	862.22	867.7	867.65
53	862.13	867.65	867.59
54	862.04	867.59	867.54
55	861.96	867.54	867.49
56	861.88	867.49	867.43
57	861.89	867.43	867.38
58	861.91	867.38	867.32
59	861.94	867.32	867.27
60	861.96	867.27	867.22
61	861.99	867.22	867.16
62	861.99	867.16	867.11
63	862.02	867.11	867.06
64	862.02	867.06	867
65	862.02	867	866.95
66	862.02	866.95	866.89
67	862.02	866.89	866.84
68	862.03	866.84	866.79
69	862.03	866.79	866.73
70	862	866.73	866.68
71	861.97	866.68	866.62
72	861.93	866.62	866.57
73	861.89	866.57	866.52
74	861.86	866.52	866.46
75	861.8	866.46	866.41
76	861.74	866.41	866.35
77	861.68	866.35	866.3
78	861.67	866.3	866.25
79	861.67	866.25	866.19
80	861.67	866.19	866.14
81	861.69	866.14	866.11
82	861.69	866.11	866.03
83	861.96	866.03	865.95
84	862.16	865.95	865.895
85	862.16	865.895	865.84
86	862.14	865.84	865.78
87	862.13	865.78	865.73
88	862.13	865.73	865.68
89	862.09	865.68	865.62
90	862.25	865.62	865.57
91	862.27	865.57	865.51
92	862.29	865.51	865.46
93	862.29	865.46	865.41
94	861.96	865.41	865.35
95	864.27	865.35	865.3
96	864.27	865.3	865.26

WALL GEOMETRY

WALL STA.	R/L CTH O STA.	R/L CTH O OFFSET TO F.F OF WALL	TOP OF WALL COPING ELEVATION	FINISHED GRADE ELEVATION @ F.F. WALL	EXISTING GRADE ELEVATION @ F.F. WALL
15+00.00	62+55.00	67.50' LT	870.68	869.39	869.39
15+25.00	62+80.00	67.50' LT	870.95	867.39	867.39
15+50.00	63+05.00	67.50' LT	870.77	866.64	866.64
15+75.00	63+30.00	67.50' LT	870.61	866.13	866.13
15+80.05	63+34.85	67.50' LT	870.57	866.03	866.03
16+00.00	63+54.80	67.50' LT	870.44	865.92	865.92
16+25.00	63+79.80	67.50' LT	870.27	865.86	865.86
16+50.00	64+04.80	67.50' LT	870.10	866.00	866.00
16+75.00	64+29.80	67.50' LT	869.93	865.40	865.40
17+00.00	64+54.80	67.50' LT	869.76	865.13	865.13
17+25.00	64+79.80	67.50' LT	869.60	864.97	864.97
17+50.00	65+04.80	67.50' LT	869.43	864.49	864.49
17+75.00	65+29.80	67.50' LT	869.26	864.07	864.07
18+00.00	65+54.80	67.50' LT	869.09	863.84	863.84
18+25.00	65+79.80	67.50' LT	868.92	863.69	863.69
18+50.00	66+04.80	67.50' LT	868.75	863.64	863.64
18+75.00	66+29.80	67.50' LT	868.59	863.85	863.85
19+00.00	66+54.80	67.50' LT	868.42	863.67	863.67
19+25.00	66+79.80	67.50' LT	868.25	863.39	863.39
19+50.00	67+04.80	67.50' LT	868.08	863.41	863.41
19+75.00	67+29.80	67.50' LT	867.91	863.49	863.49
20+00.00	67+54.80	67.50' LT	867.74	863.52	863.52
20+25.00	67+79.80	67.50' LT	867.57	863.36	863.36
20+50.00	68+04.80	67.50' LT	867.41	863.46	863.46
20+75.00	68+29.80	67.50' LT	867.24	863.34	863.34
21+00.00	68+54.80	67.50' LT	867.07	863.17	863.17
21+25.00	68+79.80	67.50' LT	866.90	863.15	863.15
21+35.00	68+89.81	67.50' LT	866.79	863.16	863.16
21+50.00	69+04.50	65.00' LT	866.60	863.65	863.65
21+75.00	69+29.50	65.00' LT	866.43	863.48	863.48
22+00.00	69+54.50	65.00' LT	866.26	863.77	863.77
22+25.00	69+79.50	65.00' LT	866.09	864.12	864.12
22+37.39	69+91.88	65.00' LT	866.01	865.71	865.71



RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-67-155

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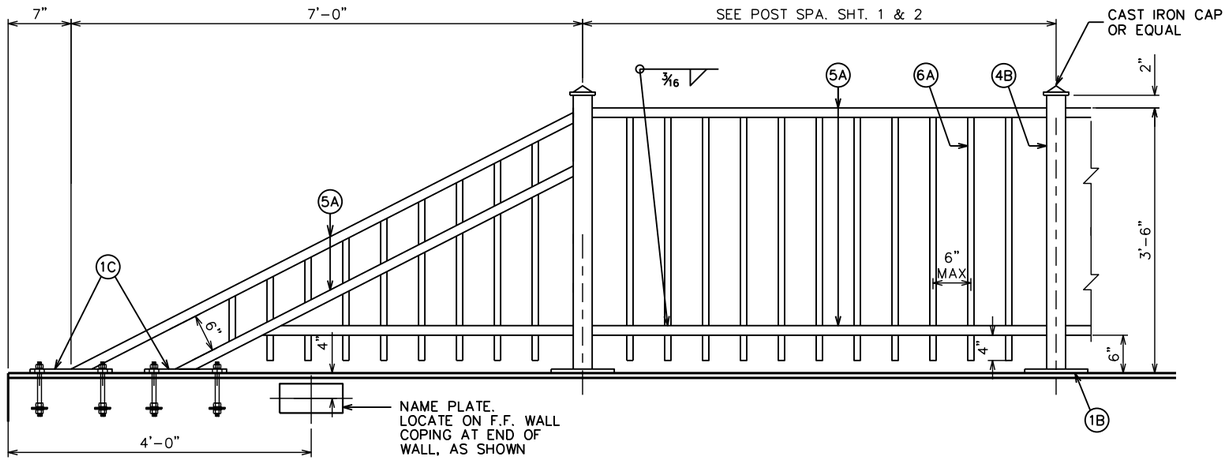
WALL DATA
(2 OF 2)

SHEET 5 OF 8

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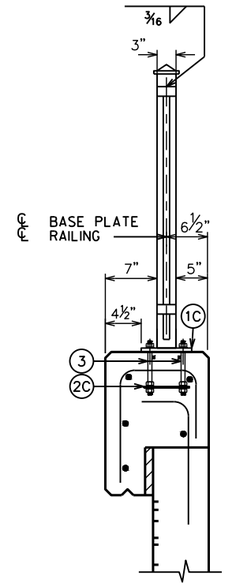
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STATE PROJECT NUMBER
2722-07-71



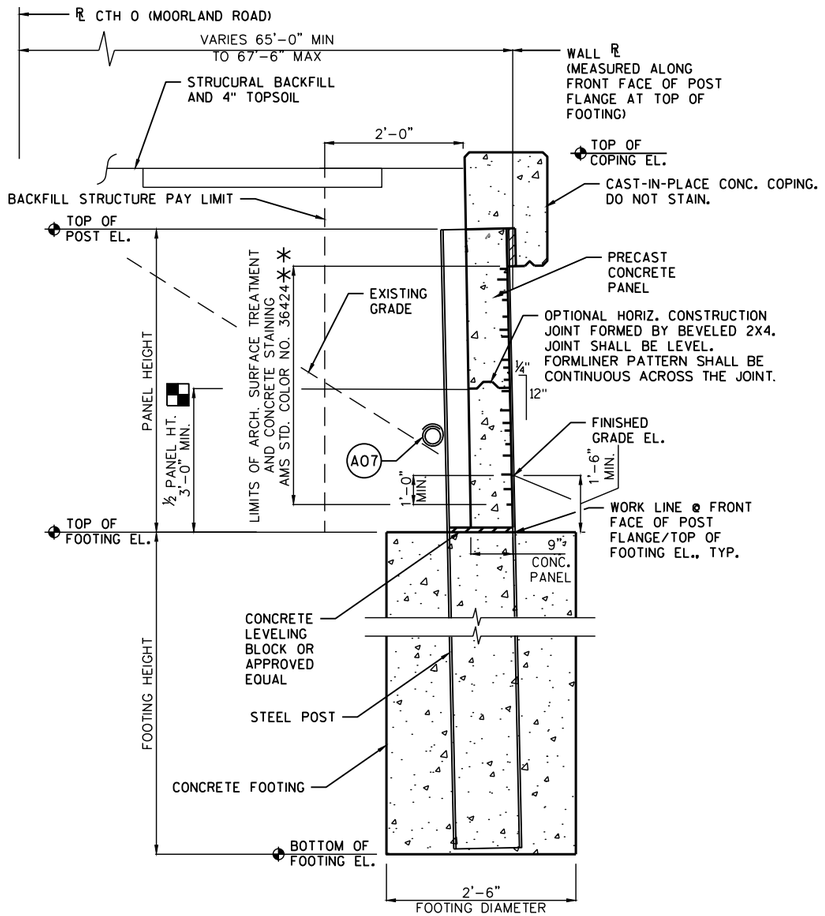
ELEVATION OF RAILING

SEE "RAILING STEEL PEDESTRIAN TYPE C6" SHEET FOR MATERIAL LEGEND

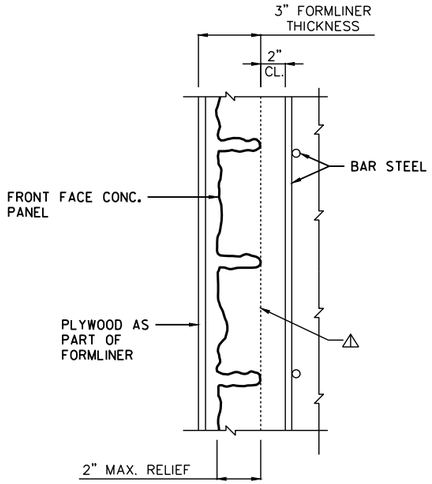


END VIEW

SEE "RAILING STEEL PEDESTRIAN TYPE C6" SHEET FOR MATERIAL LEGEND



SECTION THRU WALL



SECTION THRU FORMLINER

⚠ STRUCTURAL CONCRETE CAN ONLY BE ASSUMED TO THIS LINE. PROVIDE ADDITIONAL STRUCTURAL SIZE AS NECESSARY TO MAINTAIN MINIMUM FULL STRUCTURAL CONCRETE DIMENSIONS AS INDICATED ON THE STANDARDS.

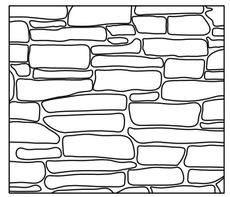
NOTES:

FORMLINER COURSING ON WALL SHALL BE LEVEL

THE FORMLINER COURSING SHALL BE VERTICALLY ALIGNED

THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS WALL CONSTRUCTION JOINTS

STAINING SHALL BE APPLIED TO THE FORMLINER STONES ONLY. STAINING SHALL NOT BE APPLIED TO AREA BETWEEN STONES



FORMLINER DETAILS

ACCEPTABLE FORMLINERS
CUSTOM ROCK: "1208K DRYSTACK [KEYED]
CUSTOM ROCK: "1125B AUTUMN LEAVES DRYSTACK [KEYED]
BUTTERFIELD COLOR: COUNTRY LEDGE FORMLINER
US FORMLINER: 2/164 BRABANT
US FORMLINER: 2/160 VIA APPIA

RELIEF = 2" MAX.

LEGEND

- ■ PANEL HEIGHTS OF 6'-0" OR GREATER MAY BE FABRICATED FULL PANEL HEIGHT OR HALF PANEL HEIGHT. PANELS SHALL BE CLEARLY LABELED FOR CORRECT LOCATION AND ORIENTATION.
- (A07) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE "WALL DATA (2 OF 2)" SHEET FOR RODENT SHIELD DETAIL.
- ** STAIN COLOR TO BE FIELD VERIFIED AND ADJUSTED, IF NEEDED, PRIOR TO ORDERING PRODUCT. VERIFICATION INCLUDES COORDINATION WITH THE CITY OF BROOKFIELD.

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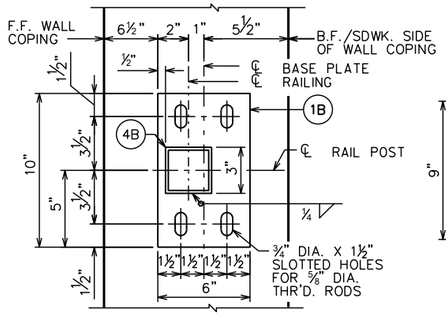
CROSS SECTION & AESTHETICS

SHEET 6 OF 8

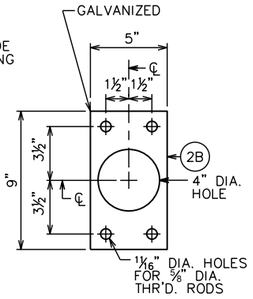
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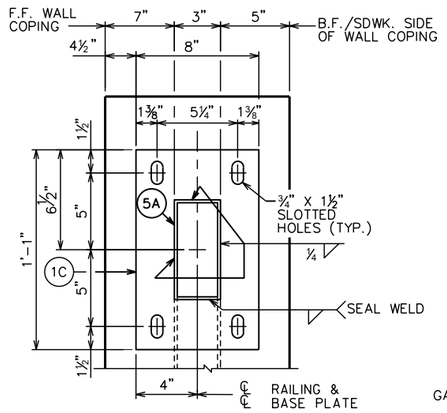
STATE PROJECT NUMBER
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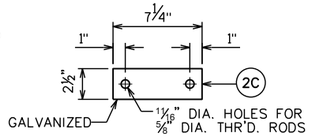
TYPICAL RAIL POST BASE PLATE



ANCHOR PLATE



END RAIL BASE PLATE

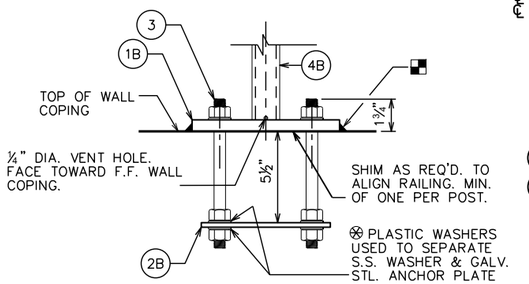


END RAIL ANCHOR PLATE

2 REQ'D. PER END RAIL BASE PLATE

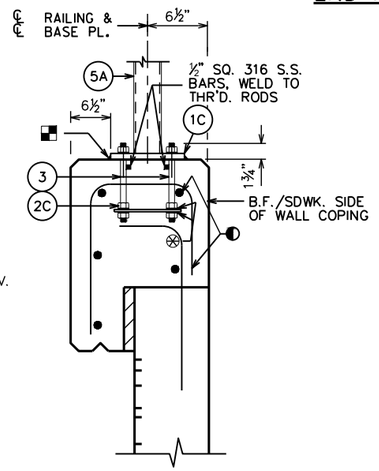
LEGEND

- (1B) PLATE ⅝" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES.
- (1C) PLATE ⅝" X 8" X 1'-1" WITH ¾" X 1½" SLOTTED HOLES.
- (2B) ¼" X 5" X 9" ANCHOR PLATE WITH 1⁹⁄₁₆" DIA. HOLES FOR THR'D. RODS NO. 3.
- (2C) ¼" X 2½" X 7¼" ANCHOR PLATE WITH 1⁹⁄₁₆" DIA. HOLES FOR THR'D. RODS NO. 3.
- (3) ⅝" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.
- (4B) STRUCTURAL TUBING 3" X 3" X 3⁄16". PLACE VERTICAL. WELD TO NO. 1 & 5.
- (5A) STRUCTURAL TUBING 3" X 1½" X 3⁄16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & WALL ANGLE POINTS.
- (6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM 3⁄16" PLATES. PROVIDE "SLIDING FIT".
- (10A) RECTANGULAR SLEEVE FABRICATED FROM 3⁄16" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ WALL ANGLE POINTS.)



ANCHORAGE FOR RAIL POSTS

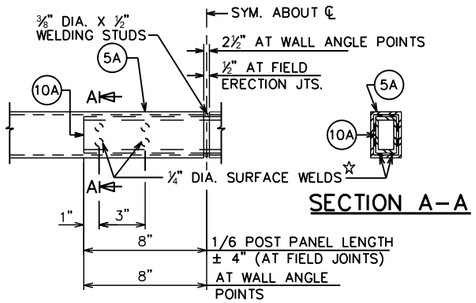
NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.



ANCHORAGE FOR END RAIL

NOTE: ANCHOR PLATES NOT REQ'D. WHEN ADHESIVE ANCHORS ARE USED.

◐ WHEN ADHESIVE ANCHORS ARE USED, FIELD BEND AND/OR DISPLACE TO AVOID HITTING LONGITUDINAL BAR WHEN DRILLING FOR ADHESIVE ANCHORS.



SECTION A–A

FIELD ERECTION JOINT DETAIL

☆ MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C6", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

◪ CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

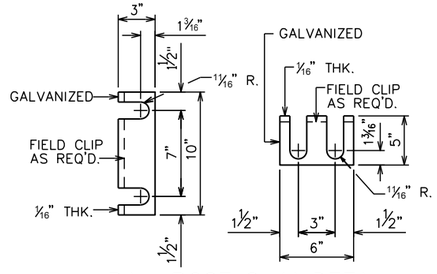
ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

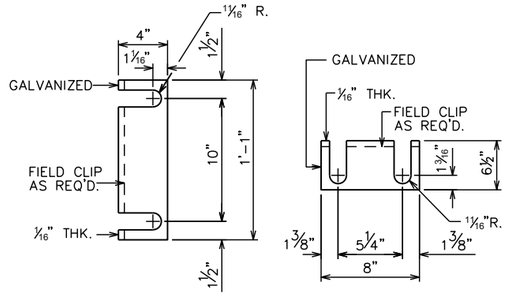
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



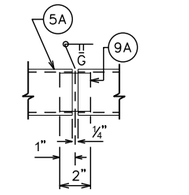
RAIL POST SHIM DETAIL

(2 SETS PER POST)



END RAIL SHIM DETAIL

(2 SETS PER POST)



SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-67-155

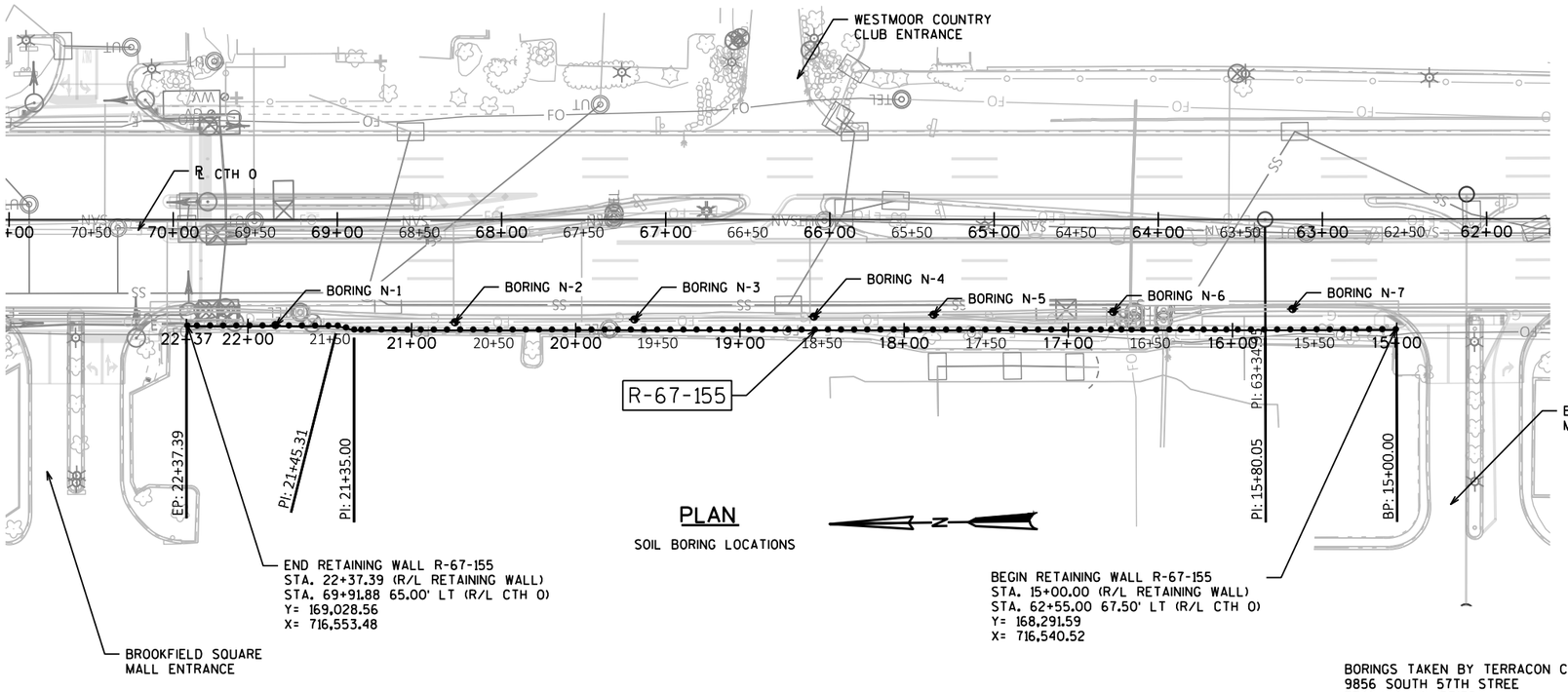
DRAWN BY WAR | PLANS CK'D. KGW

RAILING STEEL PEDESTRIAN TYPE C6

SHEET 7 OF 8

440

SCALE = ###



PLAN

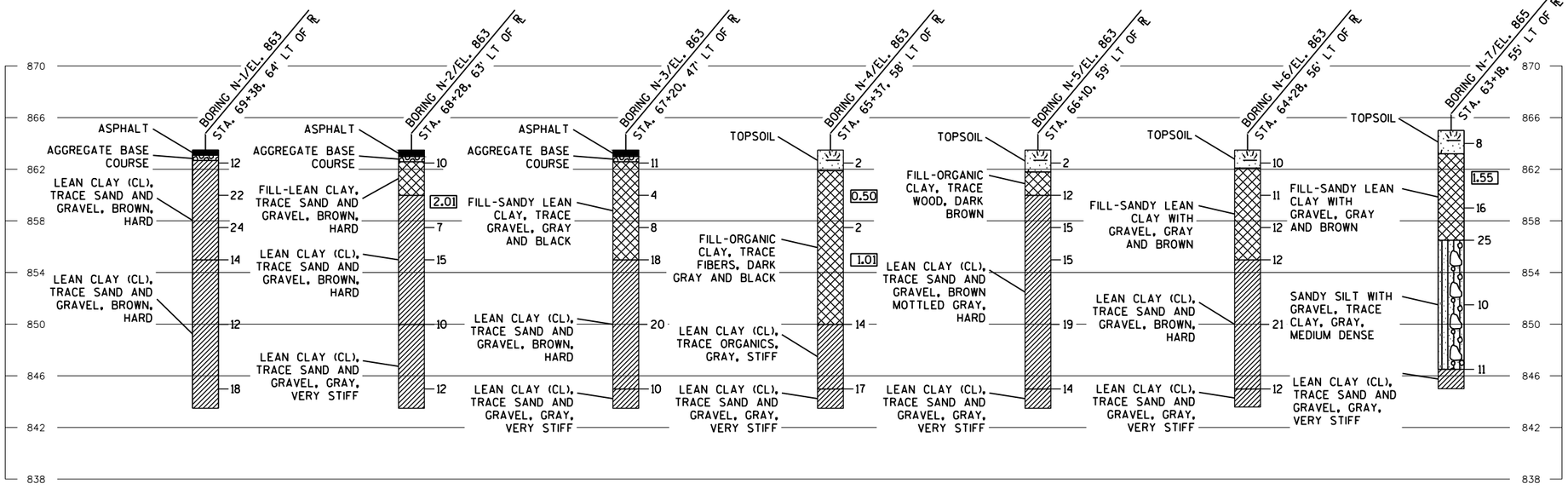
SOIL BORING LOCATIONS

END RETAINING WALL R-67-155
STA. 22+37.39 (R/L RETAINING WALL)
STA. 69+91.88 65.00' LT (R/L CTH O)
Y= 169,028.56
X= 716,553.48

BEGIN RETAINING WALL R-67-155
STA. 15+00.00 (R/L RETAINING WALL)
STA. 62+55.00 67.50' LT (R/L CTH O)
Y= 168,291.59
X= 716,540.52

BORINGS TAKEN BY TERRACON CONSULTANTS, INC.
9856 SOUTH 57TH STREE
FRANKLIN, WI 53132
(414) 423 0255

BORING N-1 TAKEN 10/07/20
BORING N-2 TAKEN 10/08/20
BORING N-3 TAKEN 10/08/20
BORING N-4 TAKEN 10/08/20
BORING N-5 TAKEN 10/08/20
BORING N-6 TAKEN 10/08/20
BORING N-7 TAKEN 10/08/20



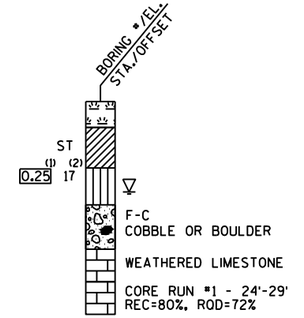
STATE PROJECT NUMBER

2722-07-71

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

ground water elevation

- at time of drilling
- end of drilling
- after drilling

ABBREVIATIONS

F-Fine M-Medium C-Coarse st-shelby tube

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-67-155

DRAWN BY MDN | PLANS CK'D. KGW

SUBSURFACE EXPLORATION

SHEET 8 OF 8

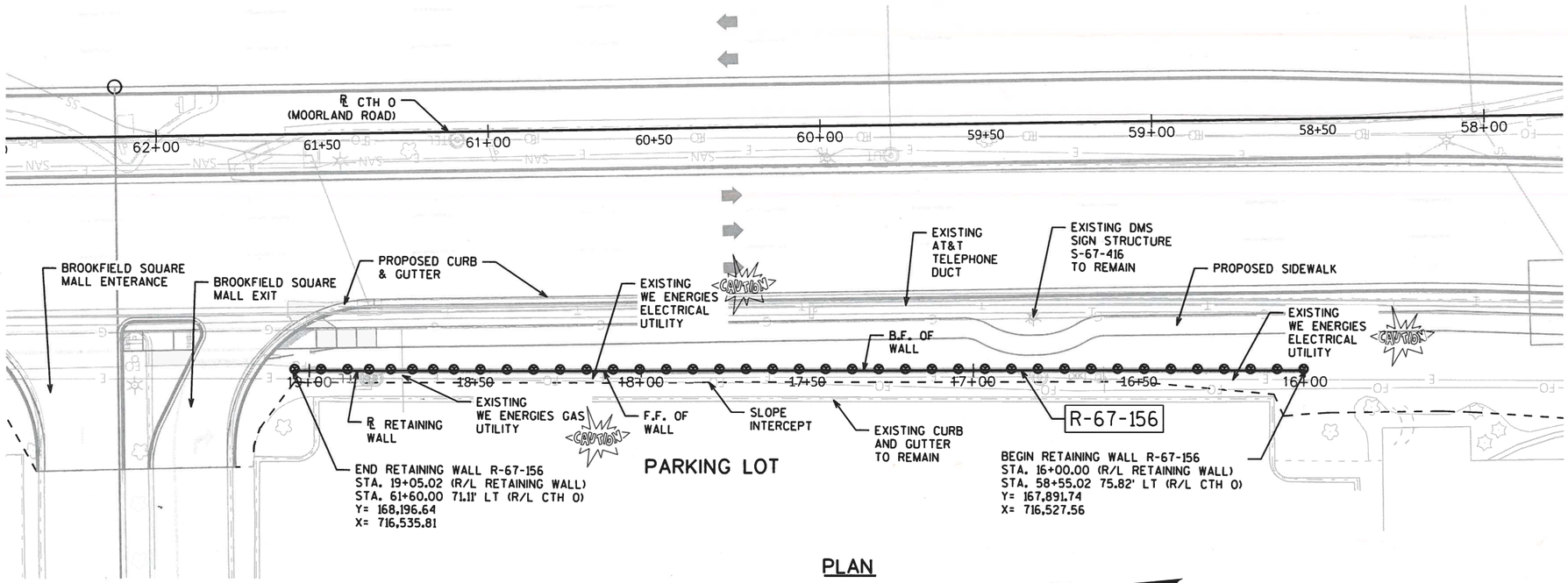
441

I.D. DATE:

SCALE = 1" = 40'

8

8

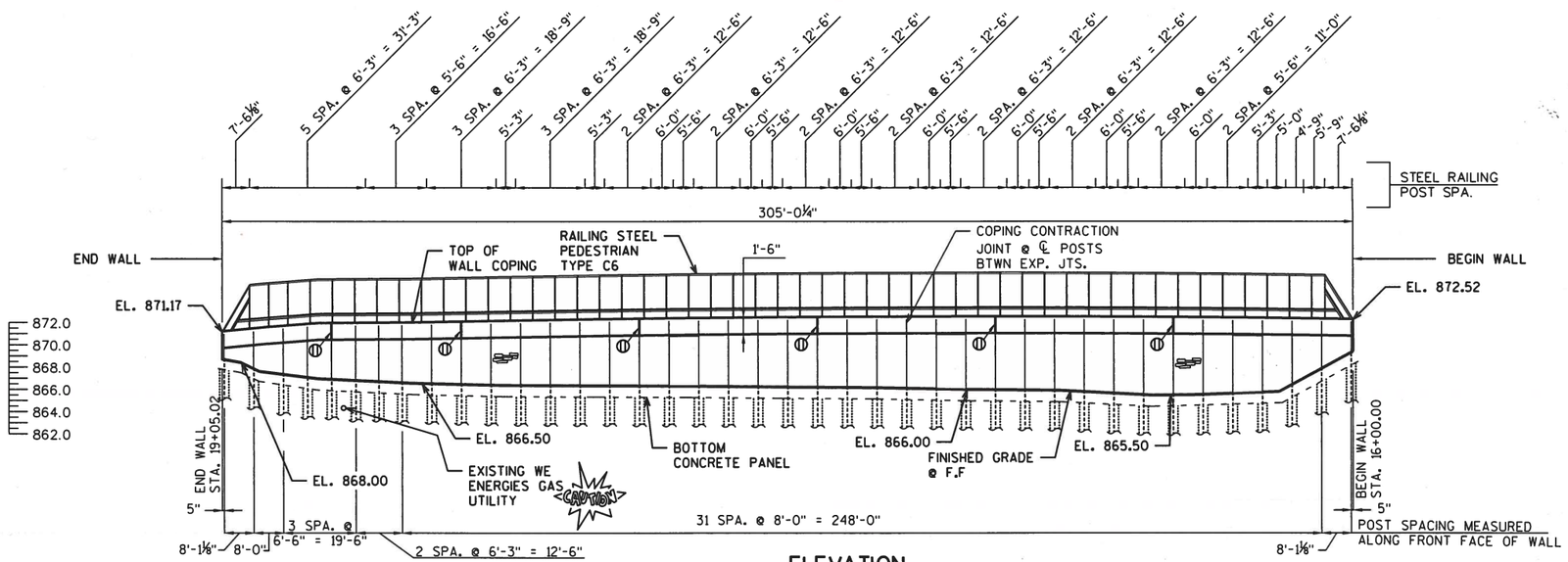


PLAN

POST AND PANEL RETAINING WALL

BENCHMARKS

No.	DESCRIPTION	STATION	OFFSET	ELEVATION
BM #3	Cut "□" (square) NW. corner of concrete pad at traffic control cabinet at NW. corner of CTH O & S. entrance to Brookfield squate mall.	54+35.17	86.34' LT	868.75
BM #4	Northwest bolt top flange of fire hydrant at southeast corner of CTH O & entrance to building #N. 200 Moorland Rd.	62+06.69	74.71' LT	869.34



ELEVATION

FRONT FACE OF WALL

(LOOKING EAST)

DIMENSIONS AND STATIONS GIVEN ALONG FRONT FACE OF WALL

STATE PROJECT NUMBER

2722-07-71

DESIGN DATA

LIVE LOAD:
RETAINING WALL IS DESIGNED FOR A LIVE LOAD SURCHARGE OF 100 PSF.

MATERIAL PROPERTIES
CONCRETE MASONRY,
PRECAST WALL PANELS _____ f'c = 4,000 PSI
CONCRETE MASONRY, ALL OTHER _____ f'c = 3,500 PSI
STRUCTURAL STEEL POSTS
(ASTM A709 GRADE 50) _____ fy = 50,000 PSI
HIGH STRENGTH BAR STEEL
REINFORCEMENT GRADE 60 _____ fy = 60,000 PSI

WISCONSIN
KEVIN G. WOOD
E-32070
MILWAUKEE, WI
PROFESSIONAL ENGINEER
8-31-2021

LEGEND

F.F. FRONT FACE
B.F. BACK FACE
⓪ WALL COPING EXPANSION JOINT

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GENERAL NOTES & QUANTITIES
3. WALL DATA
4. CROSS SECTION & AESTHETICS
5. RAILING STEEL PEDESTRIAN TYPE C6
6. SUBSURFACE EXPLORATION

BUREAU OF STRUCTURES CONTACT:
AARON BONK (608) 261-0261
CONSULTANT CONTACT
KEVIN WOOD (414) 259-1500

NO.	DATE	REVISION	BY

GRÄEF
275 W. Wisconsin Avenue, Suite 300
Milwaukee, WI 53203
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

ACCEPTED SDR 11/11/21
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-67-156

CTH O (MOORLAND ROAD) BETWEEN USH 18 & I-94

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
WAUKESHA	BROOKFIELD

DESIGN SPEC. AASHTO 8TH EDITION

DESIGNED BY	WAR	DESIGN CK'D.	KGW	DRAWN BY.	WAR	PLANS CK'D.	KGW

GENERAL PLAN & ELEVATION

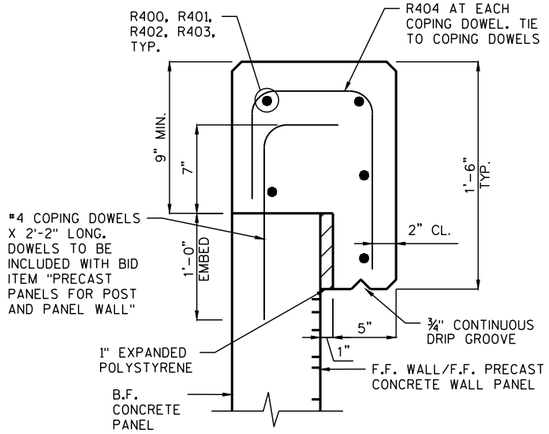
SHEET 1 OF 6

442

I.D. 2722-07-71 DATE: AUGUST 2021

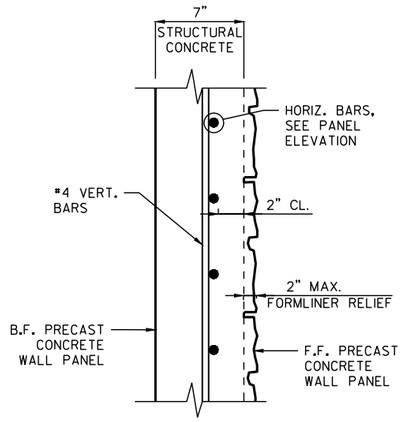
SCALE = 1" = 40'

STATE PROJECT NUMBER
2722-07-71



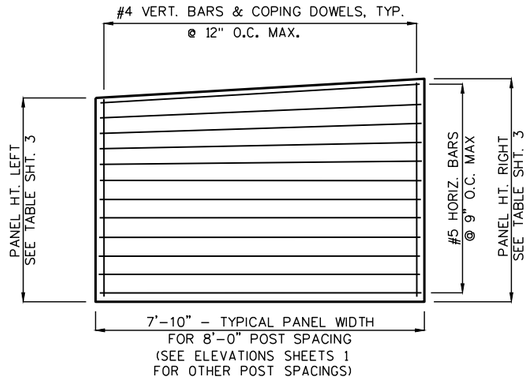
CAST-IN-PLACE CONCRETE COPING

ALL BAR STEEL REINFORCEMENT SHALL BE EPOXY COATED



TYPICAL SECTION THRU PANEL

ALL BAR STEEL REINFORCEMENT SHALL BE EPOXY COATED



TYPICAL PANEL ELEVATION

(LOOKING AT FRONT FACE)
ALL BAR STEEL REINFORCEMENT SHALL BE EPOXY COATED

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES. ALL STATION AND ELEVATIONS ARE IN FEET.

ALL WALL STATIONING IS GIVEN AT FRONT FACE OF WALL R-67-156.

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS NOTED OTHERWISE. ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

EXCAVATION IN FRONT OF THE WALL MAY NOT BEGIN UNTIL THE CONCRETE IN THE STEEL POST FOOTING HAS REACHED DESIGN STRENGTH.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES R-67-156" SHALL BE THE EXISTING GROUNDLINE. COMMON EXCAVATION IN FRONT OF RETAINING WALL MAY NOT BEGIN UNTIL WALL PANELS ARE IN PLACE.

AT THE BACKFACE OF RETAINING WALLS, EXCAVATED VOLUME NOT OCCUPIED BY STRUCTURE SHALL BE BACKFILLED WITH "BACKFILL TYPE A" OR CONTROLLED LOW STRENGTH MATERIAL (CLSM)/FLOWABLE BACKFILL.

CONTROLLED LOW STRENGTH MATERIAL (CLSM)/FLOWABLE BACKFILL IS INCLUDED IN THE BID ITEM FOR "EXCAVATION FOR STRUCTURES RETAINING WALLS R-67-156". SEE SPECIAL PROVISIONS FOR REQUIREMENTS.

THE QUANTITY OF CONCRETE MASONRY FOR THE CAST-IN-PLACE COPING IS PAID FOR UNDER THE ITEM "CONCRETE MASONRY RETAINING WALLS".

UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

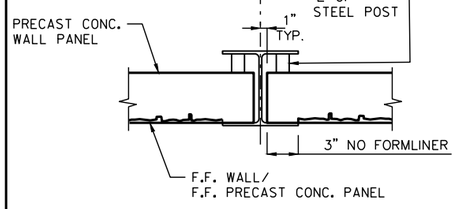
THE PLAN QUANTITY FOR THE BID ITEM "PRECAST PANELS FOR POST AND PANEL WALLS" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE WALL TO A CONSTANT DEPTH OF 1'-6" BELOW THE FINISHED GRADE.

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF JOINT FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP & HOLD ⅛" BELOW THE SURFACE OF CONCRETE).

STRUCTURAL STEEL POSTS SHALL BE AMS STD. COLOR NO. 36173 (GRAY).

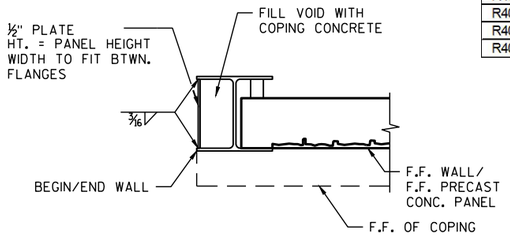
BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
R400	X	10	8'-2"			COPING HORIZ. PANELS 1 & 39
R401	X	160	7'-8"			COPING HORIZ. PANELS 2-32 & PANEL 38
R402	X	10	5'-11"			COPING HORIZ. PANELS 33-34
R403	X	15	6'-2"			COPING HORIZ. PANELS 35-37
R404	X	341	2'-6"		X	COPING VERTICAL

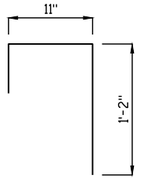


PANEL DETAIL AT POST

WALL COPING NOT SHOWN FOR CLARITY



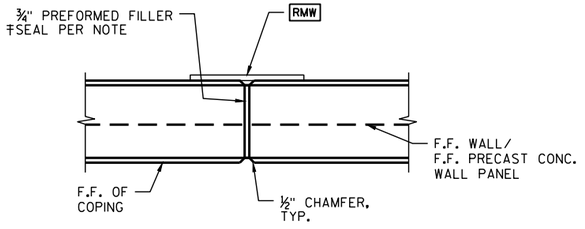
POST DETAIL AT BEGIN/END OF WALL



R404

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNITS	TOTAL
206.3000	EXCAVATION FOR STRUCTURES RETAINING WALLS R-67-156	LS	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	346
502.0110.S	CONCRETE MASONRY SOLDIER PILE FOOTINGS	CY	99
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	15
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,540
506.0605	STRUCTURAL STEEL HS	LB	43,230
513.8031	RAILING STEEL PEDESTRIAN TYPE C6	LF	304
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	1
517.0600	PAINTING EPOXY SYSTEM R-67-156	LS	1
517.1010.S	CONCRETE STAINING R-67-156	SF	1,683
517.1050.S	ARCHITECTURAL SURFACE TREATMENT R-67-156	SF	1,573
542.1000.S	PRECAST PANELS FOR SOLDIER PILE WALLS	SF	2,055
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	326
636.0050.S	FOUNDATION DRILLING 30-INCH DIAMETER	LF	540
	NON BID ITEMS		
	NAME PLATE	EACH	1
	EXPANDED POLYSTYRENE	SIZE	1"
	PREFORMED JOINT FILLER	SIZE	3/4"



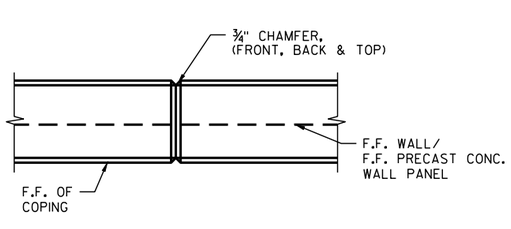
COPING EXPANSION JOINT - PLAN VIEW

DO NOT RUN BAR STEEL REINFORCEMENT THRU JOINTS

MAXIMUM SPACING OF JOINT = 48'-6⅛"
CENTER FILLER AND JOINT AT ℄ POST
PLACE JOINTS VERTICAL

∓SEAL ALL EXPOSED HORZ. & VERT. SURFACES OF FILLER WITH NON-STAINING, NON-BITUMINOUS GRAY JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE)

RMW 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS.



COPING CONTRACTION JOINT - PLAN VIEW

DO NOT RUN BAR STEEL REINFORCEMENT THRU JOINTS

MAXIMUM SPACING OF JOINT = 8'-6⅛"
CENTER JOINTS AT ℄ POST
PLACE JOINTS VERTICAL. COPING CONTRACTION JOINTS SHALL BE LOCATED ABOVE ALL POSTS EXCEPT:
1.) ABOVE POSTS REQUIRING A COPING EXPANSION JOINT.
2.) ABOVE POST NUMBER 1 AND 40.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-67-156

DRAWN BY WAR | PLANS CK'D. KGW

GENERAL NOTES & QUANITIES

SHEET 2 OF 6

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SCALE = ###

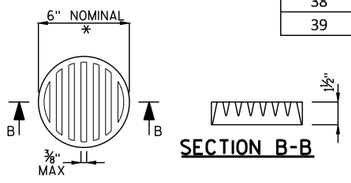
STATE PROJECT NUMBER
2722-07-71

POST DATA

POST NUMBER	C/L POST @ R/L CTH O STA.	OFFSET TO POST F.F FROM R/L CTH O OF WALL	POST WALL STA.	POST SECTION	POST LENGTH (FT)	TOP OF POST EL.	BOTTOM OF POST EL.	TOP OF FOOTING EL.	FOOTING HEIGHT (FT)	TOP OF COPING EL.
1	58+55.44	75.82 LT	16+00.42	W12X53	17.67	871.78	854.11	868.11	14.00	872.53
2	58+63.53	75.69 LT	16+08.51	W12X53	21.19	871.81	850.62	864.62	14.00	872.56
3	58+71.53	75.57 LT	16+16.51	W12X53	21.75	871.84	850.09	864.09	14.00	872.59
4	58+79.53	75.44 LT	16+24.51	W12X53	21.78	871.87	850.09	864.09	14.00	872.62
5	58+87.52	75.32 LT	16+32.51	W12X53	21.82	871.90	850.08	864.08	14.00	872.65
6	58+95.52	75.20 LT	16+40.51	W12X53	21.85	871.92	850.07	864.07	14.00	872.67
7	59+03.52	75.07 LT	16+48.51	W12X53	21.92	871.94	850.02	864.02	14.00	872.69
8	59+11.52	74.95 LT	16+56.51	W12X53	22.04	871.96	849.92	863.92	14.00	872.71
9	59+19.52	74.82 LT	16+64.51	W12X53	21.96	871.97	850.01	864.01	14.00	872.72
10	59+27.52	74.70 LT	16+72.51	W12X53	21.78	871.98	850.20	864.20	14.00	872.73
11	59+35.52	74.58 LT	16+80.51	W12X53	21.59	872.00	850.41	864.41	14.00	872.75
12	59+43.52	74.45 LT	16+88.51	W12X53	21.58	872.01	850.43	864.43	14.00	872.76
13	59+51.52	74.33 LT	16+96.51	W12X53	21.59	872.00	850.41	864.41	14.00	872.75
14	59+59.52	74.21 LT	17+04.51	W12X53	21.56	872.02	850.46	864.46	14.00	872.77
15	59+67.51	74.08 LT	17+12.51	W12X53	21.49	872.01	850.52	864.52	14.00	872.76
16	59+75.51	73.96 LT	17+20.51	W12X53	21.43	872.01	850.58	864.58	14.00	872.76
17	59+83.51	73.84 LT	17+28.51	W12X53	21.36	872.00	850.64	864.64	14.00	872.75
18	59+91.51	73.71 LT	17+36.51	W12X53	21.32	871.99	850.67	864.67	14.00	872.74
19	59+99.51	73.59 LT	17+44.51	W12X53	21.31	871.98	850.67	864.67	14.00	872.73
20	60+07.51	73.46 LT	17+52.51	W12X53	21.26	871.96	850.70	864.70	14.00	872.71
21	60+15.51	73.34 LT	17+60.51	W12X53	21.22	871.94	850.72	864.72	14.00	872.69
22	60+23.51	73.22 LT	17+68.51	W12X53	21.18	871.93	850.75	864.75	14.00	872.68
23	60+31.51	73.09 LT	17+76.51	W12X53	21.13	871.90	850.77	864.77	14.00	872.65
24	60+39.51	72.97 LT	17+84.51	W12X53	21.07	871.87	850.80	864.80	14.00	872.62
25	60+47.50	72.85 LT	17+92.51	W12X53	21.03	871.84	850.81	864.81	14.00	872.59
26	60+55.50	72.72 LT	18+00.51	W12X53	20.98	871.81	850.83	864.83	14.00	872.56
27	60+63.50	72.60 LT	18+08.51	W12X53	20.93	871.77	850.84	864.84	14.00	872.52
28	60+71.50	72.47 LT	18+16.51	W12X53	20.89	871.74	850.85	864.85	14.00	872.49
29	60+79.50	72.35 LT	18+24.51	W12X53	20.83	871.69	850.86	864.86	14.00	872.44
30	60+87.50	72.23 LT	18+32.51	W12X53	19.78	871.65	851.87	864.87	13.00	872.40
31	60+95.50	72.10 LT	18+40.51	W12X53	19.67	871.60	851.93	864.93	13.00	872.35
32	61+03.50	71.98 LT	18+48.51	W12X53	19.56	871.55	851.99	864.99	13.00	872.30
33	61+11.50	71.86 LT	18+56.51	W12X53	19.45	871.50	852.05	865.05	13.00	872.25
34	61+17.75	71.76 LT	18+62.76	W12X53	19.37	871.46	852.09	865.09	13.00	872.21
35	61+24.00	71.70 LT	18+69.01	W12X53	19.27	871.41	852.14	865.14	13.00	872.16
36	61+30.50	71.56 LT	18+75.51	W12X53	19.12	871.37	852.25	865.25	13.00	872.12
37	61+36.99	71.46 LT	18+82.01	W12X53	18.93	871.25	852.32	865.32	13.00	872.00
38	61+43.49	71.36 LT	18+88.51	W12X53	15.18	870.94	855.76	865.76	10.00	871.69
39	61+51.49	71.24 LT	18+96.51	W12X53	14.49	870.65	856.16	866.16	10.00	871.40
40	61+59.58	71.11 LT	19+04.60	W12X53	13.26	870.46	857.20	867.20	10.00	871.21

PANEL DATA

PANEL NUMBER	BOTTOM PANEL EL.	PANEL TOP EL. LT.	PANEL TOP EL. RT.
1	868.11	871.78	871.81
2	864.62	871.81	871.84
3	864.09	871.84	871.87
4	864.09	871.87	871.90
5	864.08	871.90	871.92
6	864.07	871.92	871.94
7	864.02	871.94	871.96
8	864.01	871.96	871.97
9	864.20	871.97	871.98
10	864.41	871.98	872.00
11	864.43	872.00	872.01
12	864.43	872.01	872.00
13	864.46	872.00	872.02
14	864.52	872.02	872.01
15	864.58	872.01	872.01
16	864.64	872.01	872.00
17	864.67	872.00	871.99
18	864.67	871.99	871.98
19	864.70	871.98	871.96
20	864.72	871.96	871.94
21	864.75	871.94	871.93
22	864.77	871.93	871.90
23	864.80	871.90	871.87
24	864.81	871.87	871.84
25	864.83	871.84	871.81
26	864.84	871.81	871.77
27	864.85	871.77	871.74
28	864.86	871.74	871.69
29	864.87	871.69	871.65
30	864.93	871.65	871.60
31	864.99	871.60	871.55
32	865.05	871.55	871.50
33	865.09	871.50	871.46
34	865.14	871.46	871.41
35	865.25	871.41	871.37
36	865.32	871.37	871.25
37	865.76	871.25	870.94
38	866.16	870.94	870.65
39	867.20	870.65	870.46



SECTION B-B

RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-67-156

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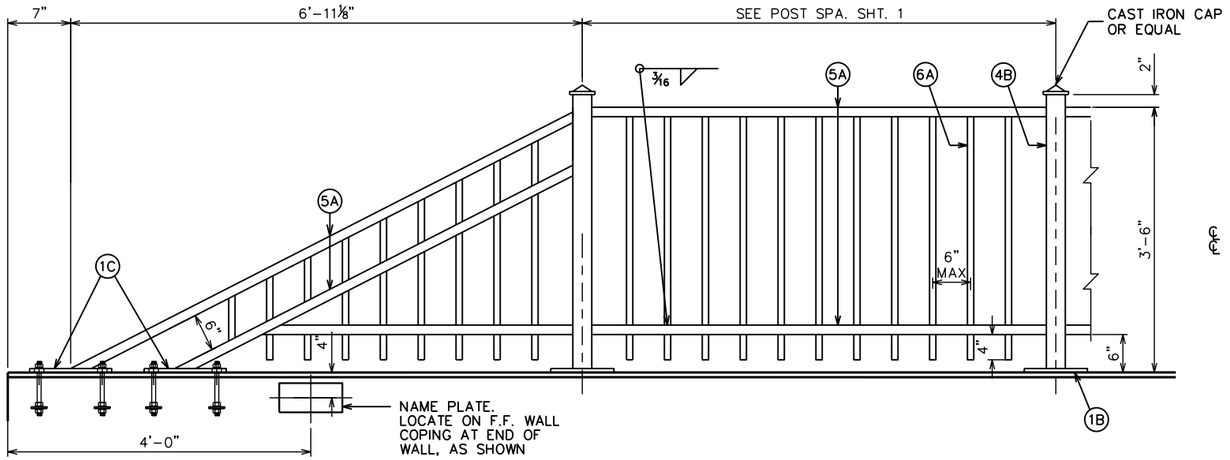
WALL DATA

SHEET 3 OF 6

444

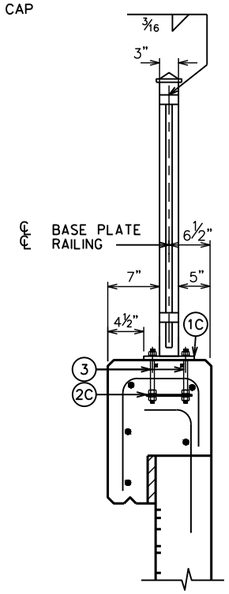
SCALE = ###

STATE PROJECT NUMBER
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ELEVATION OF RAILING

SEE "RAILING STEEL PEDESTRIAN TYPE C6" SHEET FOR MATERIAL LEGEND

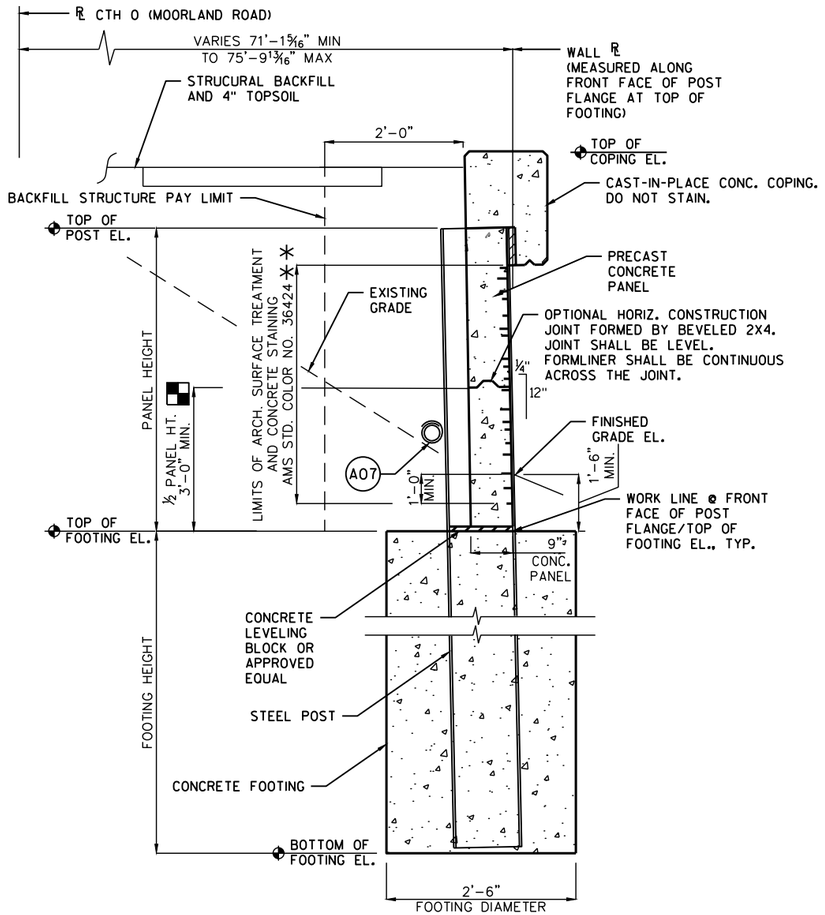


END VIEW

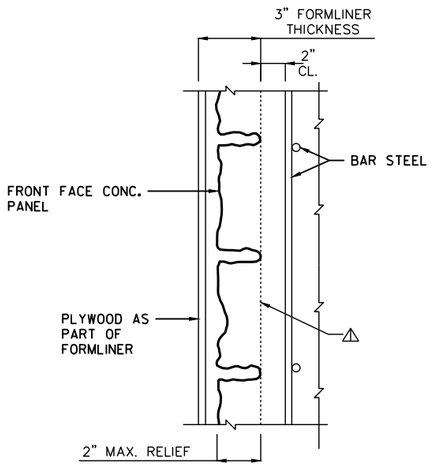
SEE "RAILING STEEL PEDESTRIAN TYPE C6" SHEET FOR MATERIAL LEGEND

WALL GEOMETRY TABLE

WALL STA.	R/L CTH O STA.	R/L CTH O OFFSET TO F.F. OF WALL	TOP OF WALL COPING ELEVATION	FINISHED GRADE ELEVATION @ F.F. WALL	EXISTING GRADE ELEVATION @ F.F. WALL
16+00.00	58+55.02	75.82 LT	872.52	869.65	865.61
16+25.00	58+64.57	75.44 LT	872.62	865.58	865.58
16+50.00	58+89.57	75.05 LT	872.70	865.51	865.51
16+75.00	59+14.57	74.66 LT	872.74	865.76	865.76
17+00.00	59+39.57	74.28 LT	872.76	865.93	865.93
17+25.00	59+64.57	73.89 LT	872.75	866.11	866.11
17+50.00	59+89.57	73.5 LT	872.72	866.19	866.19
17+75.00	60+14.57	73.12 LT	872.65	866.27	866.27
18+00.00	60+39.57	72.73 LT	872.56	866.33	866.33
18+25.00	60+64.57	72.34 LT	872.44	866.36	866.36
18+50.00	60+89.57	71.96 LT	872.29	866.50	866.50
18+75.00	61+14.57	71.57 LT	872.12	866.75	866.75
19+00.00	61+39.57	71.18 LT	871.31	868.03	868.03
19+05.02	61+53.81	71.11 LT	871.17	868.75	868.75



SECTION THRU WALL



SECTION THRU FORMLINER

⚠ STRUCTURAL CONCRETE CAN ONLY BE ASSUMED TO THIS LINE. PROVIDE ADDITIONAL STRUCTURAL SIZE AS NECESSARY TO MAINTAIN MINIMUM FULL STRUCTURAL CONCRETE DIMENSIONS AS INDICATED ON THE STANDARDS.

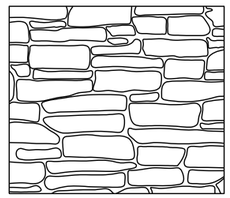
NOTES:

FORMLINER COURSING ON WALL SHALL BE LEVEL

THE FORMLINER COURSING SHALL BE VERTICALLY ALIGNED

THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS WALL CONSTRUCTION JOINTS

STAINING SHALL BE APPLIED TO THE FORMLINER STONES ONLY. STAINING SHALL NOT BE APPLIED TO AREA BETWEEN STONES



FORMLINER DETAILS

ACCEPTABLE FORMLINERS
CUSTOM ROCK: "1208K DRYSTACK [KEYED]
CUSTOM ROCK: "1125B AUTUMN LEAVES DRYSTACK [KEYED]
BUTTERFIELD COLOR: COUNTRY LEDGE FORMLINER
US FORMLINER: 2/164 BRABANT
US FORMLINER: 2/160 VIA APPIA

RELIEF = 2" MAX.

LEGEND

- ■ PANEL HEIGHTS OF 6'-0" OR GREATER MAY BE FABRICATED FULL PANEL HEIGHT OR HALF PANEL HEIGHT. PANELS SHALL BE CLEARLY LABELED FOR CORRECT LOCATION AND ORIENTATION.
- (A07) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE "WALL DATA" SHEET FOR RODENT SHIELD DETAIL.
- ** STAIN COLOR TO BE FIELD VERIFIED AND ADJUSTED, IF NEEDED, PRIOR TO ORDERING PRODUCT. VERIFICATION INCLUDES COORDINATION WITH THE CITY OF BROOKFIELD.

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STRUCTURE R-67-156

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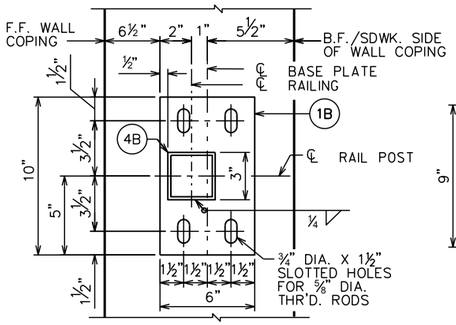
CROSS SECTION & AESTHETICS

SHEET 4 OF 6

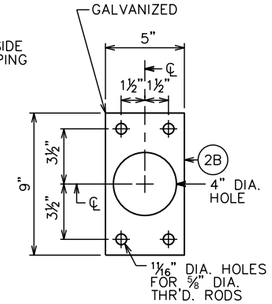
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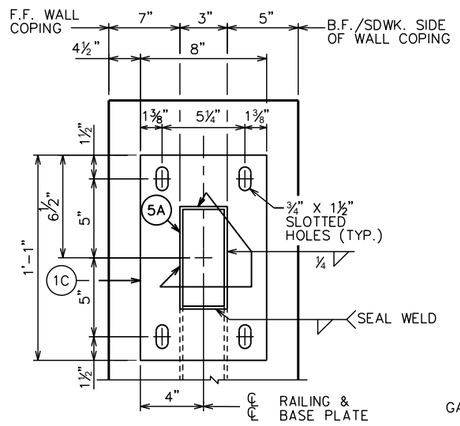
STATE PROJECT NUMBER
2722-07-71



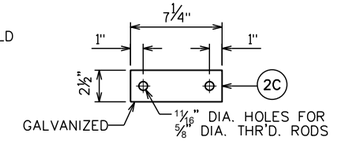
TYPICAL RAIL POST BASE PLATE



ANCHOR PLATE



END RAIL BASE PLATE

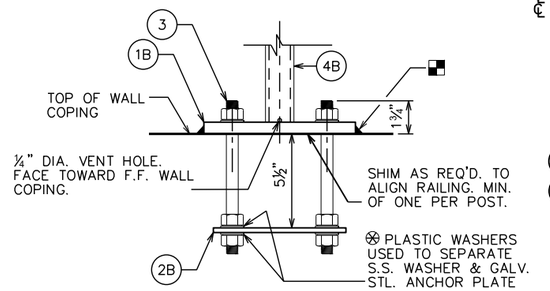


END RAIL ANCHOR PLATE

2 REQ'D. PER END RAIL BASE PLATE

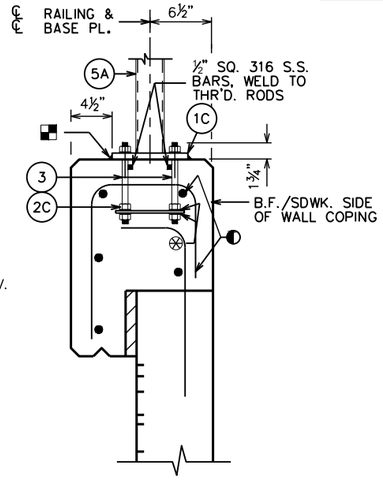
LEGEND

- (1B) PLATE ⅝" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES.
- (1C) PLATE ⅝" X 8" X 1'-1" WITH ¾" X 1½" SLOTTED HOLES.
- (2B) ¼" X 5" X 9" ANCHOR PLATE WITH 1⁹⁄₁₆" DIA. HOLES FOR THR'D. RODS NO. 3.
- (2C) ¼" X 2½" X 7¼" ANCHOR PLATE WITH 1⁹⁄₁₆" DIA. HOLES FOR THR'D. RODS NO. 3.
- (3) ⅝" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.
- (4B) STRUCTURAL TUBING 3" X 3" X 3⁄16". PLACE VERTICAL. WELD TO NO. 1 & 5.
- (5A) STRUCTURAL TUBING 3" X 1½" X 3⁄16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & WALL ANGLE POINTS.
- (6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM 3⁄16" PLATES. PROVIDE "SLIDING FIT".
- (10A) RECTANGULAR SLEEVE FABRICATED FROM 3⁄16" PLATES. (1'-4" @ FIELD ERECTION JTS.)



ANCHORAGE FOR RAIL POSTS

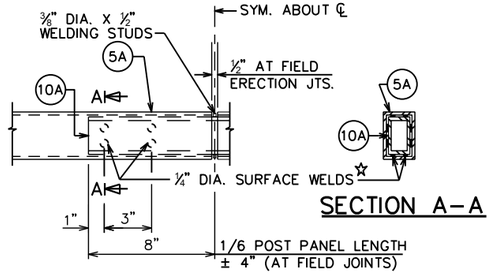
NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.



ANCHORAGE FOR END RAIL

NOTE: ANCHOR PLATES NOT REQ'D. WHEN ADHESIVE ANCHORS ARE USED.

◐ WHEN ADHESIVE ANCHORS ARE USED, FIELD BEND AND/OR DISPLACE TO AVOID HITTING LONGITUDINAL BAR WHEN DRILLING FOR ADHESIVE ANCHORS.



SECTION A-A

FIELD ERECTION JOINT DETAIL

☆ MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C6", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

◪ CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

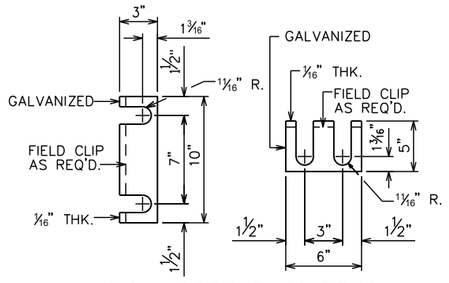
ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

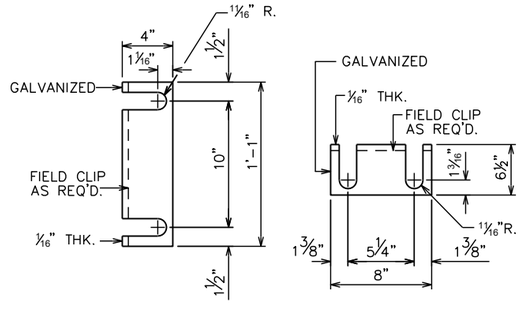
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



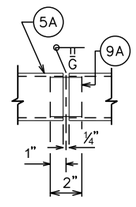
RAIL POST SHIM DETAIL

(2 SETS PER POST)



END RAIL SHIM DETAIL

(2 SETS PER POST)



SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-67-156

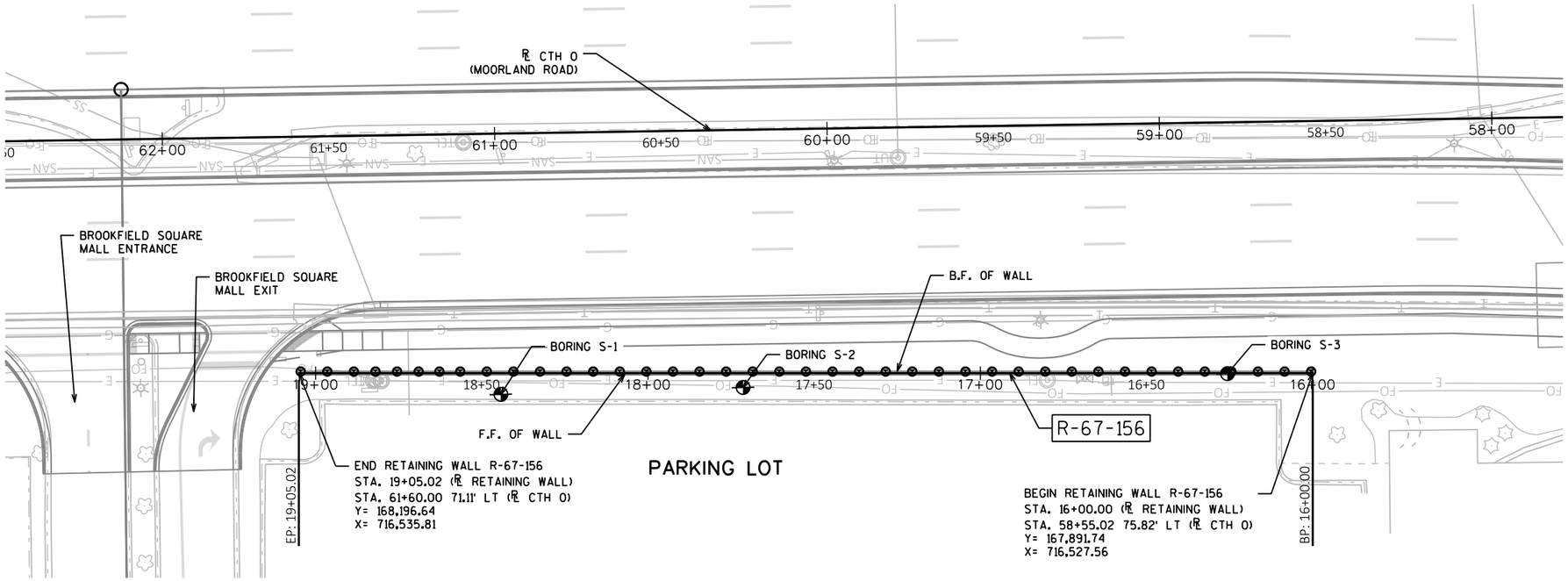
DRAWN BY WAR | PLANS CK'D. KGW

RAILING STEEL PEDESTRIAN TYPE C6

SHEET 5 OF 6

446

SCALE = ###

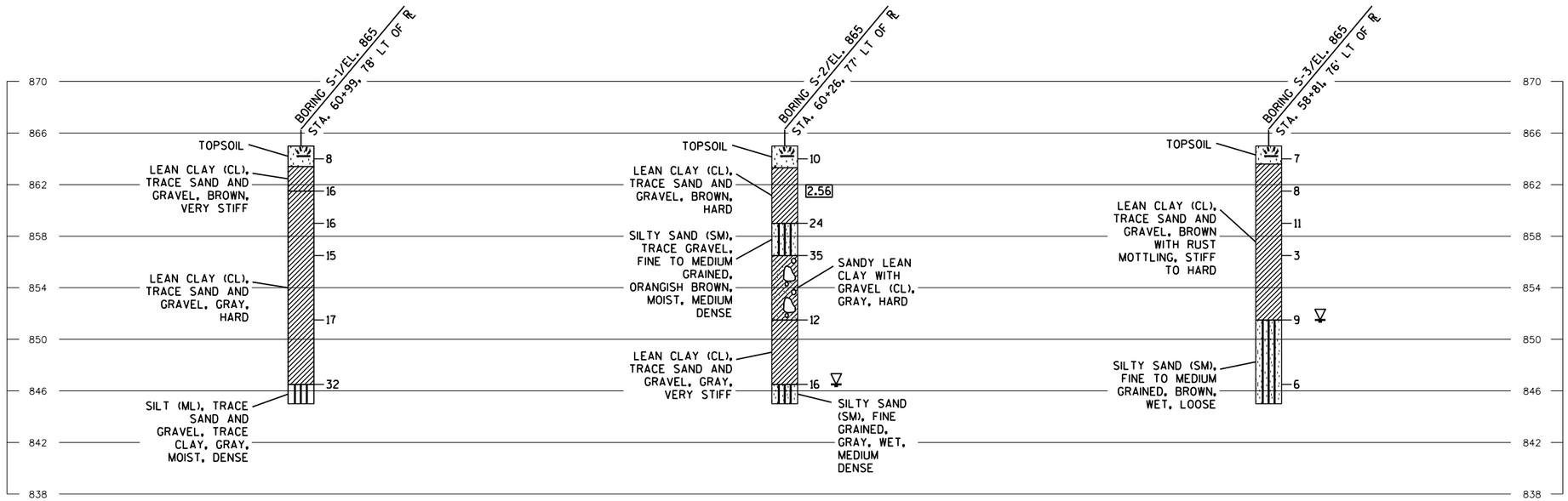


PLAN

SOIL BORING LOCATIONS

BORINGS TAKEN BY TERRACON CONSULTANTS, INC.
9856 SOUTH 57TH STREE
FRANKLIN, WI 53132
(414) 423 0255

BORING S-1 TAKEN 10/06/20
BORING S-2 TAKEN 10/06/20
BORING S-3 TAKEN 10/06/20



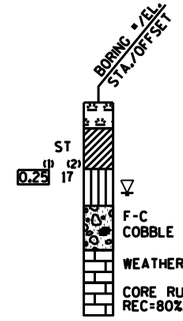
STATE PROJECT NUMBER

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MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

ground water elevation

- at time of drilling
- end of drilling
- after drilling

ABBREVIATIONS

F-Fine M-Medium C-Coarse st-shelby tube

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-67-156

DRAWN BY MDN | PLANS CK'D. KGW

SUBSURFACE EXPLORATION

SHEET 6 OF 6

447

I.D. DATE:

SCALE = 1" = 40'

STATE PROJECT NUMBER

2722-07-71

DESIGN DATA

CONTRACTOR DESIGNED OVERHEAD SIGN STRUCTURES SHALL BE DESIGNED ACCORDING TO THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 1ST EDITION AND INTERIM SPECIFICATIONS, AND THE WISDOT BRIDGE MANUAL.

STANDARD FOUNDATIONS DESIGNED ACCORDING TO THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION.

DEAD LOAD: WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD: 3 PSF TO ONE FACE OF SIGN & SURFACE OF MEMBERS.
WIND PRESSURE: 115 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS. (700 YEAR MEAN RECURRENCE INTERVAL)

WIND COMPONENTS	NORMAL	TRANSVERSE
LOAD CASE 1:	1.00	0.00
LOAD CASE 2:	0.00	1.00
LOAD CASE 3:	0.75	0.75

LOAD COMBINATIONS

STRENGTH I:	1.25 DC + 1.6 LL
EXTREME I (MAX DC):	1.1 DC + 1.0 W + 1.0 ICE
EXTREME I (MIN DC):	0.9 DC + 1.0 W
SERVICE I:	1.0 DC + 1.0 W
FATUGUE I:	1.0 NWG (NATURAL WIND GUST VIBRATION)
	1.0 GVW (GALLOPING CANTILEVER ONLY)

MATERIAL PROPERTIES

CONCRETE MASONRY ..... f'c = 3,500 psi

HIGH STRENGTH STEEL
REINFORCEMENT, GRADE 60 ..... fy = 60,000psi

HIGH STRENGH BOLTS - A325 ..... fy = 92,000 psi

ANCHOR RODS - ASTM F1554 GRADE 55 ..... fy = 55,000 psi

HEAVY HEX NUTS FOR ANCHOR RODS ASTM A563A

WASHERS FOR ANCHOR RODS - ASTM F436

FOUNDATION DATA

SIGN STRUCTURE FOUNDATIONS ARE SUPPORTED ON DRILLED SHAFTS THAT HAVE BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 24° (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 750 PSF (COHESIVE SOILS) AND A UNIT WEIGHT OF 125 PCF. THE GROUND WATER TABLE IS ASSUMED TO BE AT A DEPTH OF 10'-0" BELOW THE GROUND SURFACE. ACTUAL WATER LEVEL AT SITE MAY VARY. THE REGION GEOTECHNICAL ENGINEER SHALL VISUALLY INSPECT THE SUBSURFACE SOILS DURING DRILLING OF THE SHAFT HOLE TO CONFIRM THESE PROPERTIES PRIOR TO PLACEMENT OF THE DRILLED SHAFT CONCRETE.

GENERAL NOTES

DRAWING SHALL NOTE BE SCALED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WAUKESHA COUNTY ZONE, NAD 83 (2011), US SURVEY FEET. ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 NAVD 88 (2012).

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE ID PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE TRUSS BID ITEM FOR EACH APPLICABLE SIGN STRUCTURE IN THE PLAN SET. LOCATE THE ID PLAQUE ON THE FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY.
FABRICATE AND INSTALL THE ID PLAQUE IN ACCORDANCE WITH S.D.D.12 A 4-3.

UNLESS DETAILED OTHERWISE IN THE PLANS, ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF A TRUSS UNIT CAN BE GALVANIZED IN ONE PIECE.

WELD TEST AS PER AWS D1.1

SEE SIGN PLATE NO. A4-6, A4-7A & A4-7B OF THE SIGN PLATE MANUAL FOR INSTRUCTIONS ON CENTERING SIGNS VERTICALLY ON THE TRUSS.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT THE TIME OF ERECTION. BLANKS SHALL BE ¼ THE LENGTH OF THE CANTILEVER SPAN, 2'-0" DEEPER THAN THE C/L TO C/L OF CHORDS, AND SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED ON THE PLANS.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS PRIOR TO FABRICATION OF THE STRUCTURE. CONTRACTOR SHALL SHOWN SIGNS ON THE SHOP DRAWINGS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRILLING OR EXCAVATING AND MAINTAINING A STABLE AND OPEN HOLE FOR SUBSEQUENT INSTALLATION OF CONCRETE MASONRY FOR THE DRILLED SHAFTS. PARTIAL OR FULL DEPTH TEMPORARY CASING MAY BE REQUIRED TO MAINTAIN THE STABILITY OF THE EXCAVATED HOLE FOR THE SIGN SUPPORT PRIOR TO FILLING THE HOLE WITH CONCRETE. PERMANENT CASING MADE FROM STEEL OR CORRUGATED METAL PIPE MAY BE USED IN LIEU OF TEMPORARY CASING. TEMPORARY/PERMANENT CASING, IF USED, SHALL BE INCIDENTAL TO THE BID ITEM "DRILLING SHAFT 48-INCH".

STRUCTURE DATA

SIGN STR.	ACTUAL SIGN AREA	ACTUAL SIGN DEPTH	STANDARD TYPE
S-67-618	52.5 SF	6'-0" MAX	TCIII

TRAFFIC VOLUME

A.A.D.T. (2022) = 32,500
R.D.S = 40 MPH

LIST OF DRAWINGS

1. GENERAL NOTES & DESIGN DATA
2. GENERAL LAYOUT S-67-618

LIST OF OSS STANDARD DESIGN DRAWINGS

3. I. MONOTUBE & 2-CHORD TRUSS DETAILS 1
4. II. MONOTUBE & 2-CHORD TRUSS DETAILS 2
5. IV. MONOTUBE & 2-CHORD RUSS FOUNDATION DETAILS

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	S-67-618
531.2048	DRILLING SHAFT 48-INCH	LF	23
531.5330	FOUNDATION SINGLE-SHAFT TYPE TC-III S-67-618	EA	1
532.5330	TRUSS CANTILEVER 2-CHORD TYPE III S-67-618	EA	1

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
AARON BONK (608) 261-0261

CONSULTANT:
KEVIN WOOD (414) 259-1500

THESE ARE STANDARD DESIGN PLANS, DEVELOPED AND MAINTAINED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION. THE DESIGNER CERTIFIES THAT THE DESIGN AND PLAN DETAILS CHOSEN ARE CONSISTENT WITH THE GUIDANCE PROVIDED IN THE CURRENT WISCONSIN BRIDGE MANUAL CHAPTER 39.

WISCONSIN
KEVIN G. WOOD
E-32070
MILWAUKEE, WI
PROFESSIONAL ENGINEER
October 5, 2021

NO.	DATE	REVISION	BY

GRAEF
275 W. WISCONSIN AVENUE
SUITE 300
MILWAUKEE, WI 53203

ACCEPTED SDR 11/12/21
CHIEF STRUCTURES DESIGN ENGINEER DATE

2-CHORD TRUSS PLANS

LOCATION

COUNTY: WAUKESHA
~~TOWN/~~CITY~~/VILLAGE~~: BROOKFIELD

DESIGN SPEC.: AASHTO LRFDLTS-1 W/INTERIMS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
WAR	KGW	JSS	KGW

GENERAL NOTES & DESIGN DATA

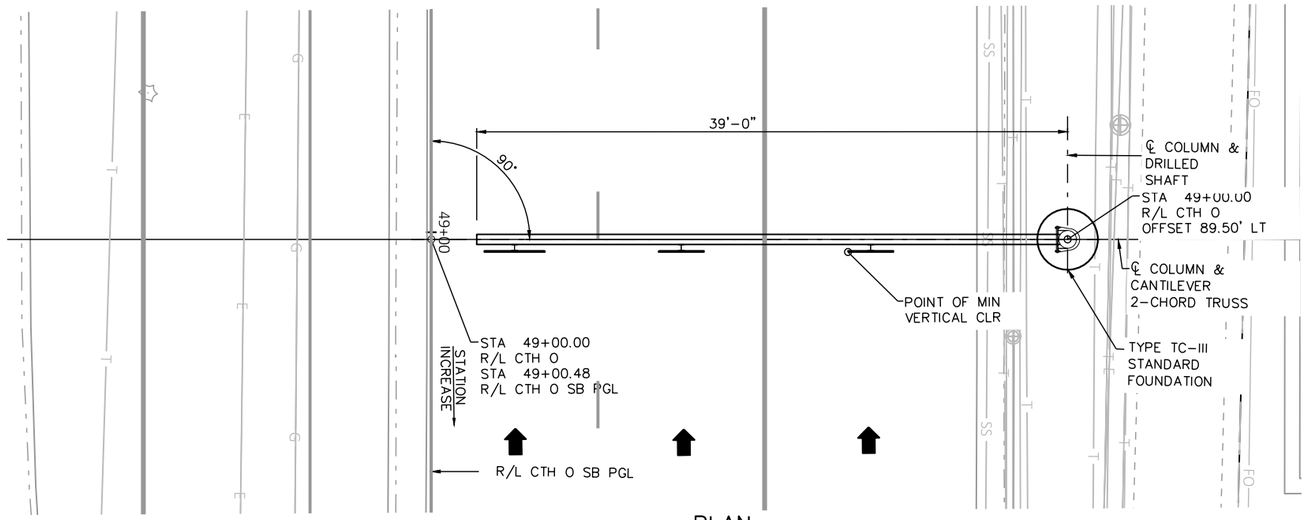
SHEET 1 OF 2

448

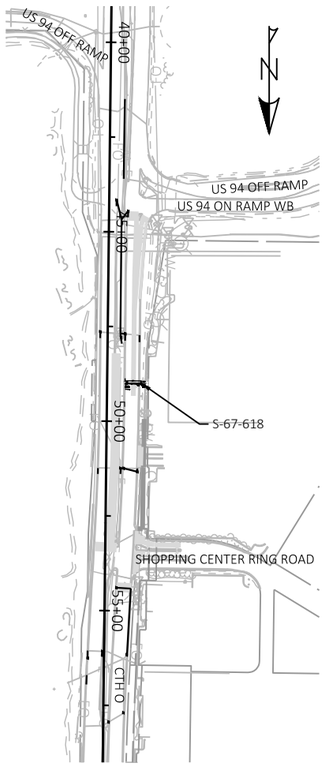
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STATE PROJECT NUMBER

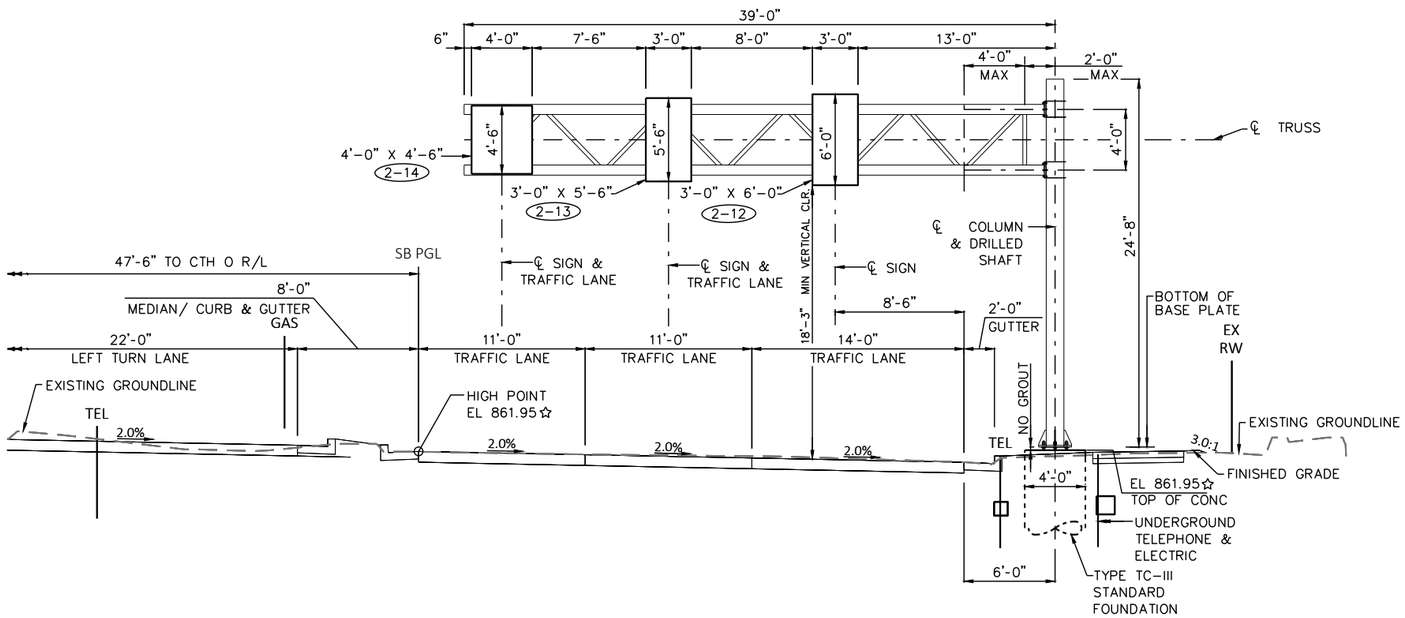
2722-07-71



PLAN



LOCATION MAP



ELEVATION
(LOOKING SOUTH)

MOORLAND ROAD SOUTHBOUND APPROACHING IH 94
STATION 49+00

NOTE

POINT OF MIN VERTICAL CLEARANCE
STA 49+00.00, 73.50' (LEFT) R/L CTH O
EL 861.43

LEGEND

☆ ELEVATIONS GIVEN ALONG ℄ CANTILEVER 2-CHORD TRUSS

(XXX) SIGN NUMBERS (PERMANENT SIGNING PLAN)

NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-618

DRAWN BY JSS | PLANS CK'D. KGW

GENERAL LAYOUT
S-67-618

SHEET 2 OF 2

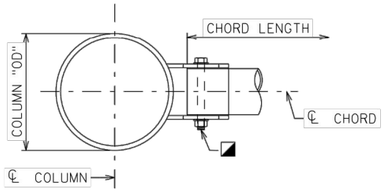
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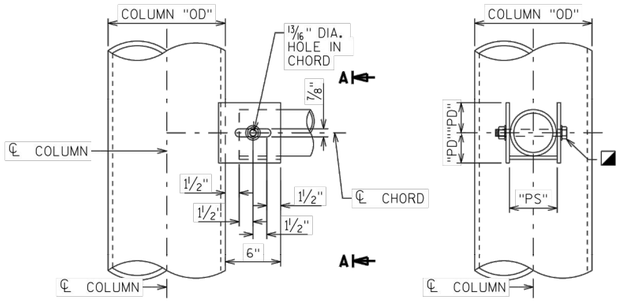
STATE PROJECT NUMBER

1360-15-STD

LIST OF DRAWINGS



PLAN



ELEVATION SECTION A-A

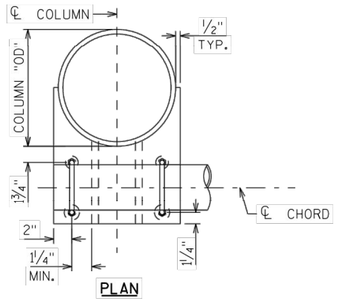
FULL SPAN SADDLE CONNECTION

PREFERRED

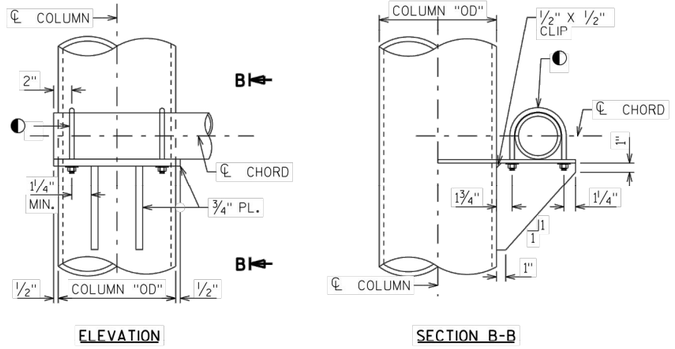
¾" GALVANIZED A325 OR A449 HEAVY HEX BOLT, NUT, WASHER

"PD" = (CHORD "OD")/2 + ¾"

"PS" = CHORD "OD" + 3/16"



PLAN

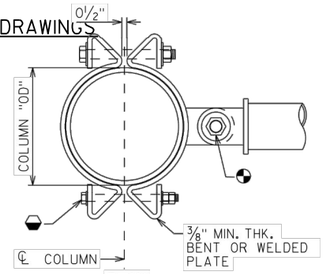


ELEVATION SECTION B-B

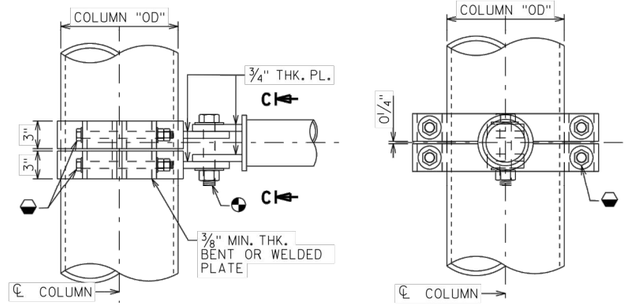
FULL SPAN STIFFENED BEARING CONNECTION

ALTERNATE 1

◐ (2) - ½" MIN. GALVANIZED U-BOLT, NUT, WASHER AND LOCK WASHER



PLAN



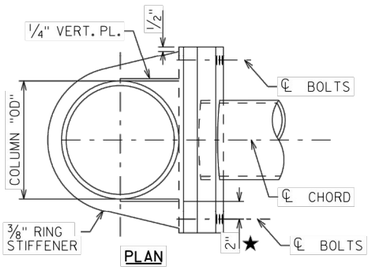
ELEVATION SECTION C-C

FULL SPAN CLAMP CONNECTION

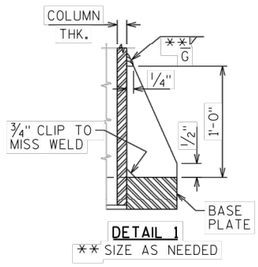
ALTERNATE 2 - TAPERED COLUMNS ONLY

1¼" GALVANIZED A325 HEAVY HEX BOLT, NUT AND WASHER

1" GALVANIZED A449 HEAVY HEX BOLT, NUT AND WASHER

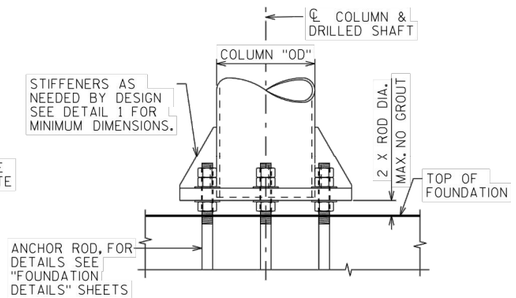


PLAN



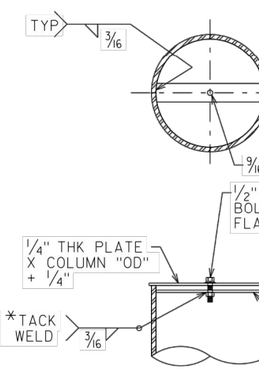
DETAIL 1

** SIZE AS NEEDED



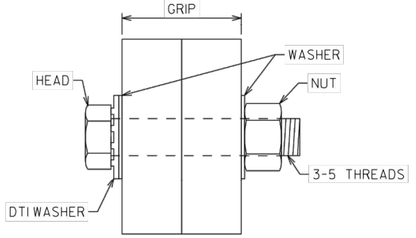
BASE PLATE & COLUMN DETAIL

LOOKING AT FRONT FACE OF STRUCTURE

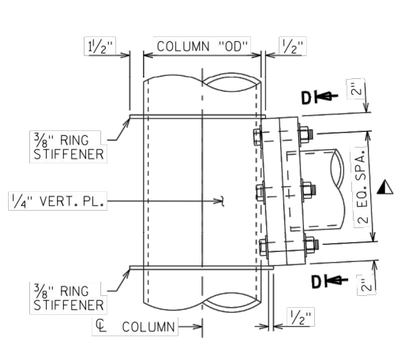


COLUMN/CHORD CAP DETAIL

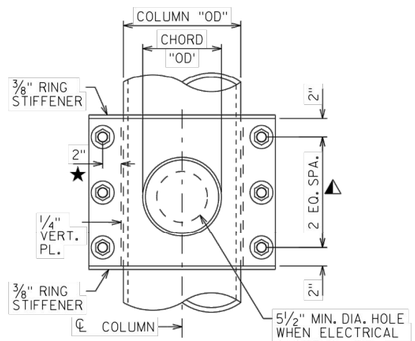
*PLACE TACK EVERY OTHER FLAT TO SECURE NUT OR USE ½" THICK AND TAP PLATE HOLE FOR BOLT THREADS



RECOMMENDED BOLT DETAIL WITH DTI



ELEVATION

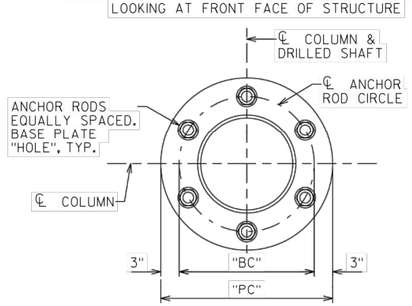


SECTION D-D

CANTILEVER POST TO CHORD CONNECTION

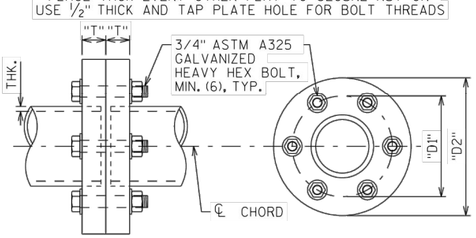
◭ MIN. CONNECTION = (6) - 1" GALVANIZED A325 BOLTS, NUT, WASHER AND DTI

★ MEASURED FROM EXT. FACE OF VERT. PLATE



BASE PLATE

PLAN



CHORD SPLICE DETAIL

"D1" = CHORD "OD" + 3"

"D2" = CHORD "OD" + 6"

"T" = BY DESIGN

NOTES:

MINIMUM VALUES SHOWN

ALL CONNETIONS ARE TO BE DESIGNED FOR ACTUAL STRUCTURE LOADS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: JULY 2020

DRAWN BY BOS | PLANS CK'D. BOS

MONOTUBE & 2-CHORD TRUSS DETAILS 1

SHEET 1 OF IV

450

8

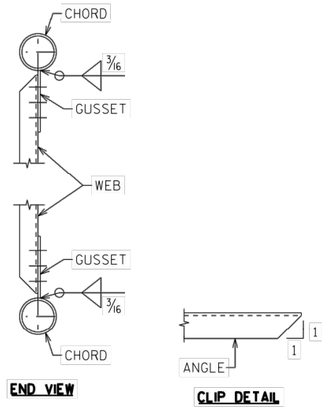
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1IN = 10FT

SCALE = 1.00

STATE PROJECT NUMBER

STANDARD

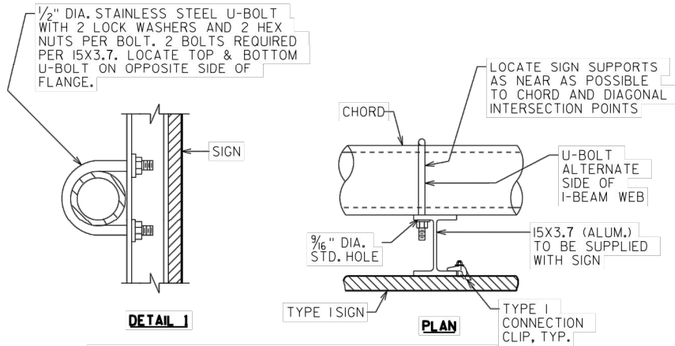


END VIEW

CLIP DETAIL

TRUSS CONNECTION DETAILS

BOLTED CONNECTIONS SHOWN, NUMBER OF BOLTS BY DESIGN
WELDED CONNECTIONS SIMILAR

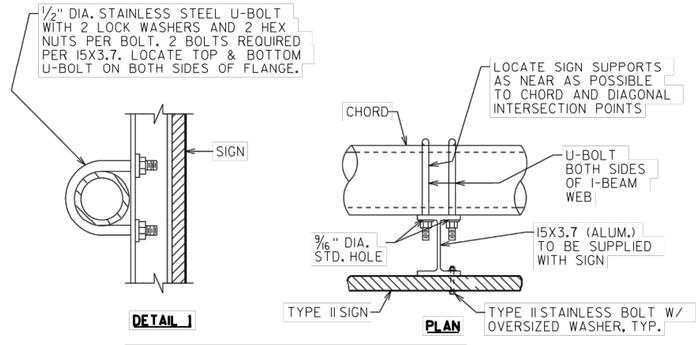


DETAIL 1

PLAN

2-CHORD TRUSS SIGN CONNECTION

SEE SIGN PLATE MANUAL A4-7A FOR DETAILS

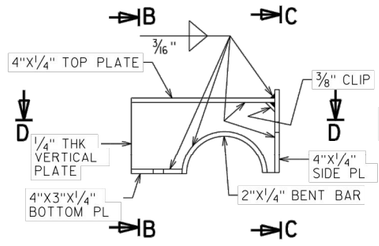


DETAIL 1

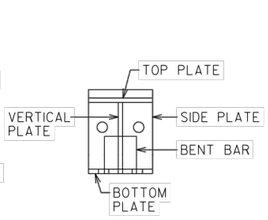
PLAN

MONOTUBE SIGN CONNECTION

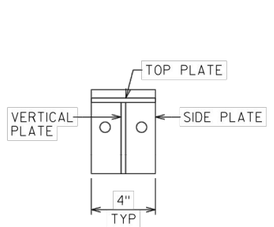
SEE SIGN PLATE MANUAL A4-7B FOR DETAILS



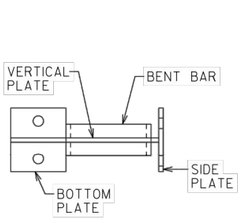
ELEVATION



SECTION B-B



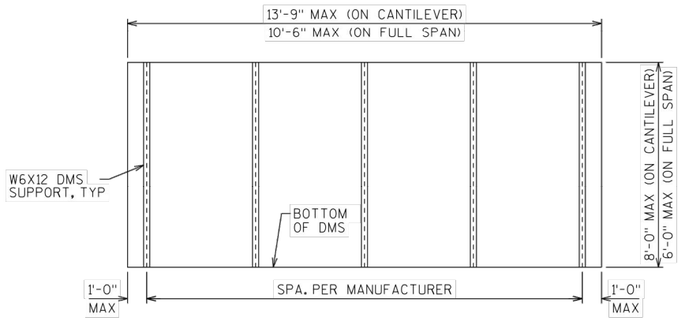
SECTION C-C



SECTION D-D

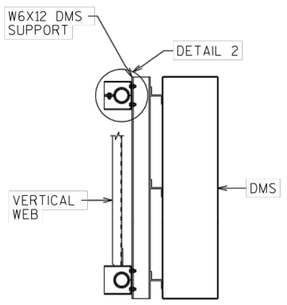
DMS WELDED PLATE CONNECTION DETAILS

TOP PLATE CLAMP SHOWN
BOTTOM PLATE CLAMP SIMILIAR



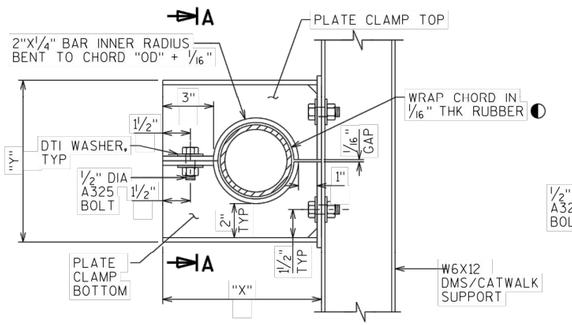
DMS MOUNTING POST SPACING DETAIL

POST SPACING MAY BE ADJUSTED AS REQUIRED IF CONFLICT WITH TRUSS IS ENCOUNTERED.



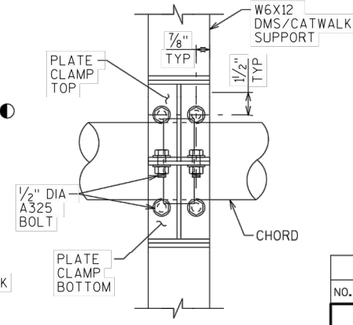
SECTION THRU TRUSS

FOR DMS CONNECTION



CHORD OUTER DIA	"X"	"Y"
"OD"	"OD"+4 13/16"	"OD"+5 1/16"

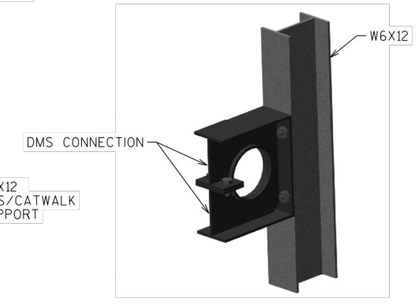
DETAIL 2



SECTION A-A

TYPICAL DMS CONNECTION

◐ NEOPRENE, GRADE 45±5, OTHERWISE MEETING THE REQUIREMENTS OF STD SPEC 506.2.6.1



3-D VIEW DMS CONNECTION

CHORD NOT SHOWN FOR CLARITY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: JULY 2020

DRAWN BY BOS | PLANS CK'D. BOS

MONOTUBE & 2-CHORD TRUSS DETAILS 2

SHEET II OF IV

451

SCALE = 2.00

8

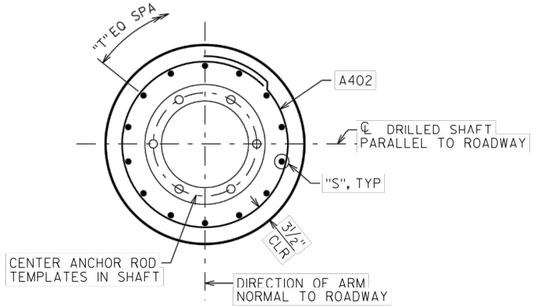
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STATE PROJECT NUMBER

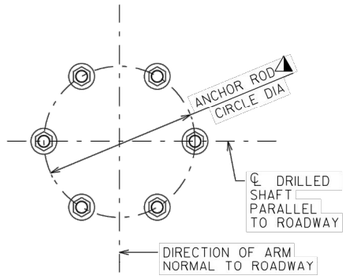
STANDARD

FOUNDATION & REINFORCING DATA

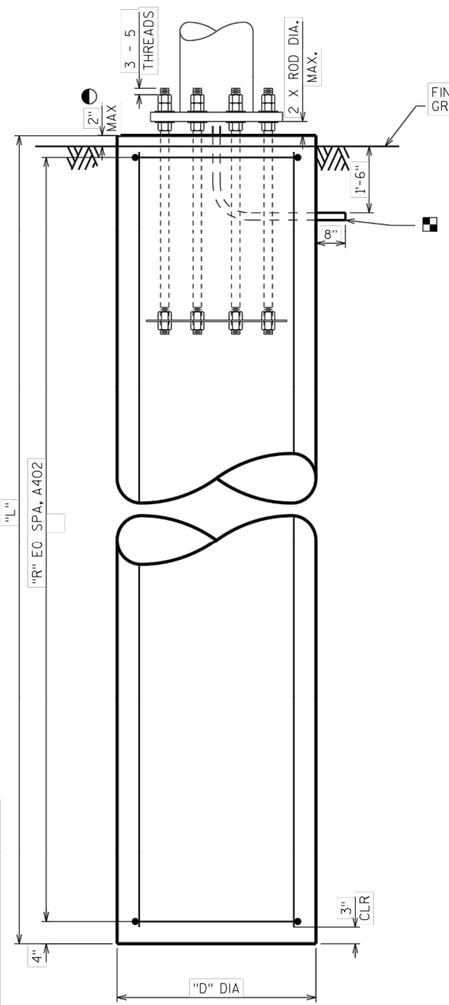
STANDARD FOUNDATION TYPE	SHAFT VARIABLES					
	"D"	"L"	"R"	"S"	"T"	"BC" MAX
MFI	2'-0"	12'-0"	12	A801	6	12"
MFII	2'-6"	13'-0"	13	A801	10	17"
MCI/MCII/TFI	2'-6"	17'-0"	17	A801	10	17"
TCI	3'-0"	18'-0"	18	A801	14	22"
TFII	3'-0"	20'-0"	20	A801	14	22"
MCIII/TCII/TFIII	3'-6"	18'-0"	18	A901	14	28"
MCIV/TFIV	3'-6"	23'-0"	23	A901	14	28"
TCIII	4'-0"	23'-0"	23	A1001	14	34"
TCIV	4'-0"	28'-0"	28	A1001	14	34"



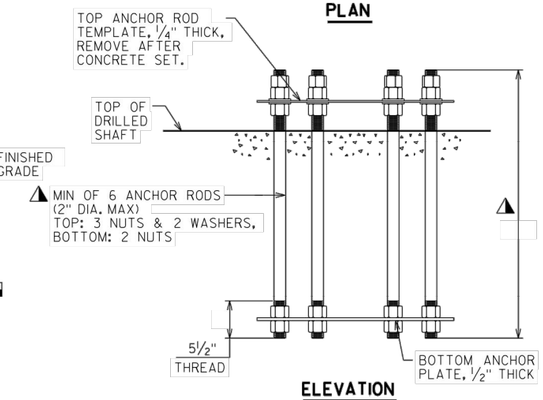
PLAN



PLAN



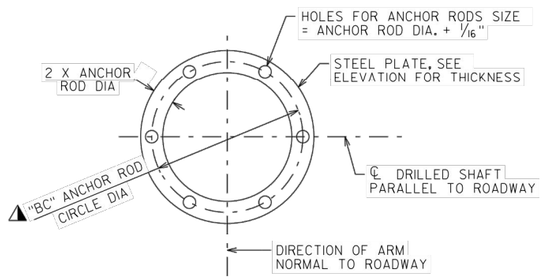
ELEVATION



ELEVATION

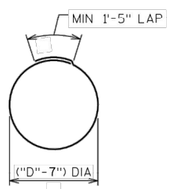
ANCHOR ROD ASSEMBLY DETAILS

⚠ ANCHOR ROD NUMBER, DIAMETER, LENGTH & ORIENTATION AS SHOWN ON FABRICATION DRAWING.



ANCHOR PLATE/TOP TEMPLATE

PLAN



A402

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BILL OF BARS - STANDARD FOUNDATIONS

STANDARD FOUNDATION MFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		6	11'-7"			DRILLED SHAFT - VERTICAL
A402		13	5'-10"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		10	12'-7"			DRILLED SHAFT - VERTICAL
A402		14	7'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCI/MCII/TFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		10	16'-7"			DRILLED SHAFT - VERTICAL
A402		18	7'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		14	17'-7"			DRILLED SHAFT - VERTICAL
A402		19	9'-0"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		14	19'-7"			DRILLED SHAFT - VERTICAL
A402		21	9'-0"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCIII/TCII/TFIII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		14	17'-7"			DRILLED SHAFT - VERTICAL
A402		19	10'-6"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCIV/TFIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		14	22'-7"			DRILLED SHAFT - VERTICAL
A402		24	10'-6"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCIII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	22'-7"			DRILLED SHAFT - VERTICAL
A402		24	12'-2"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	27'-7"			DRILLED SHAFT - VERTICAL
A402		29	12'-2"	X		DRILLED SHAFT - HORIZONTAL

ESTIMATED QUANTITIES - FOUNDATIONS

STANDARD FOUNDATION TYPE	CONCRETE MASONRY (CY)	STEEL REINFORCEMENT HS (LBS)	FOUNDATION DRILLING (LF)				
			24" DIA.	30" DIA.	36" DIA.	42" DIA.	48" DIA.
MFI	2	240	12				
MFII	3	410		13			
MCI/MCII/TFI	4	540		17			
TCI	5	780			18		
TFII	6	860			20		
MCIII/TCII/TFIII	7	970				18	
MCIV/TFIV	9	1,250				23	
TCIII	11	1,560					23
TCIV	13	1,900					28

✳✳ QUANTITIES ARE FOR INFORMATION ONLY AND ARE BASED ON STANDARD STRUCTURE DIMENSIONS

NOTES

CENTER ANCHOR ROD ASSEMBLY ON DRILLED SHAFT AND MAKE SURE IT IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE FOOTING AS DETAILED. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURED IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHOR RODS.

◐ FOR OVERHEAD SIGN STRUCTURES THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE SHAFT SHALL BE POURED FLUSH WITH THE FINISHED GRADE.

◪ 2" DIA NONMETALLIC CONDUITS, INSTALL ONLY WITH DMS. EXTEND CONDUITS AS SHOWN AND CAP OR SEAL EACH END WITH A SUITABLE REMOVABLE PLUG. PLACE CONDUITS UNDER COLUMN ADJACENT TO THE DMS. CONDUITS INCIDENTAL TO THE FOUNDATION BID ITEMS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: JULY 2020

DRAWN BY BOS | PLANS CK'D. BOS

MONOTUBE & 2-CHORD TRUSS FOUNDATIONS

SHEET IV OF IV

452

SCALE = 1.67

8

8

Division 1 - CTH O

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
								1.00	1.20	
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
42+00	0.00	24.85	0.00	0.00	0	0	0	0	0	0
42+50	50.00	22.90	0.00	0.00	44	0	0	44	0	44
43+00	50.00	20.85	0.00	0.00	41	0	0	85	0	85
43+50	50.00	20.85	0.00	0.00	39	0	0	124	0	124
4369.00	19.00	20.85	0.00	0.00	15	0	0	139	0	139
44+43	0.00	32.60	0.00	0.00	0	0	0	139	0	139
45+00	57.00	32.60	0.00	0.00	69	0	0	208	0	208
45+50	50.00	32.28	0.00	0.00	60	0	0	268	0	268
46+00	50.00	33.31	0.00	0.00	61	0	0	329	0	329
46+50	50.00	32.94	0.00	0.00	61	0	0	390	0	390
47+00	50.00	32.82	0.00	0.00	61	0	0	451	0	451
47+50	50.00	28.03	0.00	0.29	56	0	0	507	0	507
48+00	50.00	28.96	0.00	0.16	53	0	0	560	0	560
48+50	50.00	28.15	0.00	0.16	53	0	0	613	0	613
49+00	50.00	27.97	0.00	0.06	52	0	0	665	0	665
49+50	50.00	15.12	0.00	0.00	40	0	0	705	0	705
50+00	50.00	10.83	0.00	0.00	24	0	0	729	0	729
50+50	50.00	9.15	0.00	0.00	19	0	0	748	0	748
51+00	50.00	8.62	0.00	0.00	16	0	0	764	0	764
51+50	50.00	9.15	0.00	0.00	16	0	0	780	0	780
52+00	50.00	9.00	0.00	0.04	17	0	0	797	0	797
52+50	50.00	14.74	0.00	0.00	22	0	0	819	0	819
53+00	50.00	23.66	0.00	0.00	36	0	0	855	0	855
53+50	50.00	16.53	0.00	0.00	37	0	0	892	0	892
54+00	50.00	26.21	0.00	0.00	40	0	0	932	0	932
54+50	50.00	23.29	0.00	0.00	46	0	0	978	0	978
55+00	50.00	21.19	0.00	0.00	41	0	0	1,019	0	1,019
55+50	50.00	19.44	0.00	0.00	38	0	0	1,057	0	1,057
56+00	50.00	11.00	0.00	0.01	28	0	0	1,085	0	1,085
56+50	50.00	13.20	0.00	0.00	22	0	0	1,107	0	1,107
57+00	50.00	13.58	0.00	0.00	25	0	0	1,132	0	1,132
57+50	50.00	11.05	0.00	0.00	23	0	0	1,155	0	1,155
58+00	50.00	0.38	0.00	0.00	11	0	0	1,166	0	1,166

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Division 1 - CTH O

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
								1.00	1.20	
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
62+00	400.00	25.21	0.00	0.00	190	0	0	1,356	0	1,356
62+50	50.00	11.07	0.00	0.00	34	0	0	1,390	0	1,390
64+50	200.00	18.93	0.00	0.00	111	0	0	1,501	0	1,501
65+00	50.00	22.95	0.00	0.00	39	0	0	1,540	0	1,540
65+50	50.00	29.71	0.00	0.00	49	0	0	1,589	0	1,589
66+00	50.00	19.01	0.00	0.00	45	0	0	1,634	0	1,634
66+75	75.00	25.19	0.00	0.00	61	0	0	1,695	0	1,695
67+00.01	25.01	27.67	0.00	0.00	24	0	0	1,719	0	1,719
67+50	49.99	18.00	0.00	0.00	42	0	0	1,761	0	1,761
68+00.01	50.01	7.24	0.00	0.00	23	0	0	1,784	0	1,784
69+00.01	100.00	12.18	0.00	0.00	36	0	0	1,820	0	1,820
69+50	49.99	12.36	0.00	0.00	23	0	0	1,843	0	1,843
69+98	48.00	10.20	0.00	0.00	20	0	0	1,863	0	1,863
71+16	0.00	12.63	0.00	0.00	0	0	0	1,863	0	1,863
71+50	34.00	12.63	0.00	0.00	16	0	0	1,879	0	1,879
72+00	50.00	12.58	0.00	0.00	23	0	0	1,902	0	1,902
72+50	50.00	4.51	0.00	0.00	16	0	0	1,918	0	1,918
7300.00	50.00	4.31	0.00	0.00	8	0	0	1,926	0	1,926
73+50	50.00	30.22	0.00	0.00	32	0	0	1,958	0	1,958
74+00.01	50.01	34.43	0.00	0.00	60	0	0	2,018	0	2,018
74+50.01	50.00	27.42	0.00	0.00	57	0	0	2,075	0	2,075
75+00.01	50.00	19.82	0.00	0.00	44	0	0	2,119	0	2,119
75+50.01	50.00	11.03	0.00	0.00	29	0	0	2,148	0	2,148
76+00.01	50.00	5.82	0.00	0.00	16	0	0	2,164	0	2,164
76+50.01	50.00	1.06	0.00	0.00	6	0	0	2,170	0	2,170
77+75.01	125.00	9.55	0.00	0.00	25	0	0	2,195	0	2,195
78+00.01	25.00	9.51	0.00	0.00	9	0	0	2,204	0	2,204
78+50	49.99	9.64	0.00	0.00	18	0	0	2,222	0	2,222

Division 1 - CTH O

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.20	NOTE 8
45+50	0.00	51.35	33.75	0.00	0	0	0	0	0	0
46+00	50.00	43.20	31.50	0.32	88	60	0	88	0	28
46+50	50.00	37.31	28.50	0.54	75	56	1	163	1	46
47+00	50.00	35.47	27.00	0.44	67	51	1	230	2	61
47+50	50.00	32.24	27.00	0.85	63	50	1	293	4	72
48+00	50.00	35.06	27.00	0.76	62	50	1	355	5	83
48+50	50.00	32.53	27.00	1.04	63	50	2	418	7	94
49+00	50.00	31.69	27.00	1.25	59	50	2	477	10	100
49+50	50.00	32.46	27.00	1.23	59	50	2	536	12	107
50+00	50.00	31.89	27.00	0.99	60	50	2	596	14	115
50+50	50.00	32.80	27.00	0.00	60	50	1	656	16	123
51+00	50.00	45.73	27.00	0.00	73	50	0	729	16	146
51+50	50.00	33.51	27.00	4.18	73	50	4	802	20	165
52+00	50.00	33.29	27.00	1.12	62	50	5	864	26	171
52+50	50.00	31.22	27.00	1.77	60	50	3	924	30	177
53+00	50.00	35.01	27.00	1.13	61	50	3	985	34	184
53+50	50.00	59.87	27.00	0.00	88	50	1	1,073	35	221
54+00	50.00	31.32	27.00	3.54	84	50	3	1,157	38	252
54+50	50.00	22.73	27.00	39.00	50	50	39	1,207	85	205
55+00	50.00	23.94	27.00	43.79	43	50	77	1,250	178	105
55+50	50.00	33.40	27.00	17.10	53	50	56	1,303	245	41
56+00	50.00	29.36	27.00	19.61	58	50	34	1,361	286	8
56+50	50.00	16.71	27.00	19.69	43	50	36	1,404	329	-42
57+00	50.00	12.46	27.00	63.29	27	50	77	1,431	421	-157
57+50	50.00	23.36	27.00	58.73	33	50	113	1,464	557	-310
58+00	50.00	28.23	27.00	47.91	48	50	99	1,512	676	-431
58+50	50.00	48.83	27.00	13.72	71	50	57	1,583	744	-478
59+00	50.00	27.73	27.00	44.09	71	50	54	1,654	809	-522
59+50	50.00	26.71	27.00	39.08	50	50	77	1,704	901	-614
60+00	50.00	23.35	27.00	38.43	46	50	72	1,750	988	-705
60+50	50.00	23.56	27.00	35.11	43	50	68	1,793	1,069	-793
61+00	50.00	23.96	27.00	29.74	44	50	60	1,837	1,141	-871
61+50	50.00	29.08	27.00	11.24	49	50	38	1,886	1,187	-918
62+00	50.00	46.08	27.00	0.43	70	50	11	1,956	1,200	-911

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Division 1 - CTH O

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.20	NOTE 8
62+50	50.00	33.07	27.00	19.22	73	50	18	2,029	1,222	-910
63+00	50.00	26.24	27.00	10.91	55	50	28	2,084	1,255	-938
63+50	50.00	25.95	27.00	13.08	48	50	22	2,132	1,282	-967
64+00	50.00	26.13	27.00	14.02	48	50	25	2,180	1,312	-999
64+50	50.00	27.49	27.00	14.45	50	50	26	2,230	1,343	-1,030
65+00	50.00	26.88	27.00	15.86	50	50	28	2,280	1,376	-1,063
65+50	50.00	25.02	27.00	18.41	48	50	32	2,328	1,415	-1,104
66+00	50.00	24.35	27.00	20.21	46	50	36	2,374	1,458	-1,151
66+50	50.00	23.53	27.00	20.34	44	50	38	2,418	1,504	-1,203
67+00	50.00	25.96	27.00	18.92	46	50	36	2,464	1,547	-1,250
67+50	50.00	27.42	27.00	16.21	49	50	33	2,513	1,586	-1,290
68+00	50.00	27.81	27.00	14.29	51	50	28	2,564	1,620	-1,323
68+50	50.00	26.66	27.00	14.31	50	50	26	2,614	1,651	-1,354
69+00	50.00	29.38	27.00	5.76	52	50	19	2,666	1,674	-1,375
69+50	50.00	30.32	27.00	4.14	55	50	9	2,721	1,685	-1,381
70+00	50.00	32.81	27.00	0.18	58	50	4	2,779	1,690	-1,378
70+50	50.00	63.92	27.00	0.00	90	50	0	2,869	1,690	-1,338
71+00	50.00	47.97	27.00	6.55	104	50	6	2,973	1,697	-1,291
71+50	50.00	38.97	27.00	1.99	81	50	8	3,054	1,706	-1,269
72+00	50.00	36.52	27.00	11.33	70	50	12	3,124	1,721	-1,264
72+50	50.00	39.26	27.00	10.33	70	50	20	3,194	1,745	-1,268
73+00	50.00	39.95	27.00	7.96	73	50	17	3,267	1,765	-1,265
73+50	50.00	48.06	27.00	0.85	81	50	8	3,348	1,775	-1,244
74+00	50.00	42.19	27.00	0.68	84	50	1	3,432	1,776	-1,211
74+50	50.00	40.25	27.00	0.71	76	50	1	3,508	1,777	-1,186
75+00	50.00	38.47	27.00	0.76	73	50	1	3,581	1,778	-1,164
75+50	50.00	30.06	27.00	3.28	63	50	4	3,644	1,783	-1,156
76+00	50.00	36.46	27.00	0.78	62	50	4	3,706	1,788	-1,149
76+50	50.00	47.75	27.00	0.61	78	50	1	3,784	1,789	-1,122
77+00	50.00	33.30	27.00	0.81	75	50	1	3,859	1,790	-1,098
77+50	50.00	33.00	27.00	0.76	61	50	1	3,920	1,792	-1,089
78+00	50.00	24.59	28.50	1.28	53	51	2	3,973	1,794	-1,089
78+50	50.00	23.98	28.50	0.77	45	53	2	4,018	1,796	-1,099

Division 1 - CTH O

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.20	NOTE 8
39+00	0.00	0.00	0.00	0.00	0	0	0	0	0	0
39+50	50.00	0.00	0.00	0.00	0	0	0	0	0	0
40+00	50.00	0.00	0.00	0.00	0	0	0	0	0	0
40+50	50.00	0.00	0.00	0.00	0	0	0	0	0	0
41+00	50.00	0.00	0.00	0.00	0	0	0	0	0	0
41+50	50.00	0.00	0.00	0.00	0	0	0	0	0	0
42+00	50.00	0.00	0.00	0.00	0	0	0	0	0	0
42+50	50.00	0.00	0.00	0.00	0	0	0	0	0	0
43+00	50.00	0.00	0.00	0.00	0	0	0	0	0	0
43+50	50.00	0.00	0.00	0.00	0	0	0	0	0	0
44+50	100.00	0.00	0.00	0.00	0	0	0	0	0	0
45+00	50.00	0.00	0.00	0.00	0	0	0	0	0	0
45+50	0.00	14.48	0.00	0.00	0	0	0	0	0	0
46+00	50.00	13.55	0.00	0.00	26	0	0	26	0	26
46+50	50.00	14.69	0.00	0.00	26	0	0	52	0	52
47+00	50.00	16.79	0.00	0.00	29	0	0	81	0	81
47+50	50.00	16.27	0.00	0.00	31	0	0	112	0	112
48+00	50.00	15.58	0.00	0.00	29	0	0	141	0	141
48+50	50.00	15.59	0.00	0.00	29	0	0	170	0	170
49+00	50.00	16.25	0.00	0.00	29	0	0	199	0	199
49+50	50.00	26.63	0.00	0.00	40	0	0	239	0	239
50+00	50.00	29.16	0.00	0.00	52	0	0	291	0	291
50+50	50.00	29.49	0.00	0.00	54	0	0	345	0	345
51+00	50.00	28.16	0.00	0.00	53	0	0	398	0	398
51+50	50.00	24.26	0.00	0.00	49	0	0	447	0	447
52+00	50.00	19.13	0.00	0.00	40	0	0	487	0	487
52+50	50.00	14.47	0.00	0.00	31	0	0	518	0	518
53+00	50.00	11.25	0.00	0.00	24	0	0	542	0	542
53+50	50.00	10.04	0.00	0.00	20	0	0	562	0	562
54+00	50.00	10.11	0.00	0.00	19	0	0	581	0	581
54+50	50.00	9.28	0.00	0.00	18	0	0	599	0	599
55+00	50.00	7.93	0.00	0.00	16	0	0	615	0	615
55+50	50.00	7.92	0.00	0.00	15	0	0	630	0	630
56+00	50.00	7.93	0.00	0.00	15	0	0	645	0	645
56+50	50.00	7.94	0.00	0.00	15	0	0	660	0	660

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Division 1 - CTH O

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
								1.00	1.20	
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
57+00	50.00	7.28	0.00	0.00	14	0	0	674	0	674
57+50	50.00	4.98	0.00	0.00	11	0	0	685	0	685
58+00	50.00	1.86	0.00	0.26	6	0	0	691	0	691
58+50	50.00	0.64	0.00	1.06	2	0	1	693	1	692
59+00	50.00	0.34	0.00	2.03	1	0	3	694	5	689
59+50	50.00	0.20	0.00	2.30	1	0	4	695	10	685
60+00	50.00	0.16	0.00	1.69	0	0	4	695	14	681
60+50	50.00	0.20	0.00	0.17	0	0	2	695	17	678
61+00	50.00	2.53	0.00	0.00	3	0	0	698	17	681
61+50	50.00	6.06	0.00	0.00	8	0	0	706	17	689
62+00	50.00	9.57	0.00	0.00	14	0	0	720	17	703
62+50	50.00	10.06	0.00	0.00	18	0	0	738	17	721
63+00	50.00	10.54	0.00	0.00	19	0	0	757	17	740
63+50	50.00	13.68	0.00	0.00	22	0	0	779	17	762
64+00	50.00	17.73	0.00	0.00	29	0	0	808	17	791
64+50	50.00	13.11	0.00	0.00	29	0	0	837	17	820
65+00	50.00	13.59	0.00	0.00	25	0	0	862	17	845
65+50	50.00	13.95	0.00	0.00	26	0	0	888	17	871
66+00	50.00	13.47	0.00	0.00	25	0	0	913	17	896
67+00	100.00	6.22	0.00	0.00	36	0	0	949	17	932
67+50	50.00	7.31	0.00	0.00	13	0	0	962	17	945
68+00	50.00	11.24	0.00	0.00	17	0	0	979	17	962
68+50	50.00	13.05	0.00	0.00	22	0	0	1,001	17	984
69+00	50.00	13.25	0.00	0.00	24	0	0	1,025	17	1,008
69+50	50.00	13.22	0.00	0.00	25	0	0	1,050	17	1,033
70+00	50.00	10.98	0.00	0.00	22	0	0	1,072	17	1,055
71+50	150.00	13.24	0.00	0.00	67	0	0	1,139	17	1,122
72+00	50.00	13.90	0.00	0.00	25	0	0	1,164	17	1,147
72+50	50.00	8.95	0.00	0.00	21	0	0	1,185	17	1,168
73+00	50.00	4.89	0.00	0.00	13	0	0	1,198	17	1,181
73+50	50.00	4.73	0.00	0.00	9	0	0	1,207	17	1,190
74+00	50.00	14.62	0.00	0.00	18	0	0	1,225	17	1,208
74+50	50.00	16.45	0.00	0.00	29	0	0	1,254	17	1,237
75+00	50.00	18.37	0.00	0.00	32	0	0	1,286	17	1,269
75+50	50.00	26.62	0.00	0.00	42	0	0	1,328	17	1,311
76+00	50.00	21.87	0.00	0.00	45	0	0	1,373	17	1,356
76+50	50.00	21.11	0.00	0.00	40	0	0	1,413	17	1,396
77+00	50.00	15.17	0.00	0.00	34	0	0	1,447	17	1,430
77+50	50.00	11.53	0.00	0.00	25	0	0	1,472	17	1,455
78+00	50.00	0.00	0.00	0.00	11	0	0	1,483	17	1,466

Division 1 - CTH O

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.20	NOTE 8
45+50	0.00	33.39	27.00	0.00	0	0	0	0	0	0
46+00	50.00	37.74	27.00	0.00	66	50	0	66	0	16
46+50	50.00	37.88	27.00	0.00	70	50	0	136	0	36
47+00	50.00	37.72	27.00	0.00	70	50	0	206	0	56
47+50	50.00	35.80	27.00	0.08	68	50	0	274	0	74
48+00	50.00	34.28	27.00	0.16	65	50	0	339	0	89
48+50	50.00	31.00	27.00	1.95	60	50	2	399	2	97
49+00	50.00	27.90	27.00	10.03	55	50	11	454	16	88
49+50	50.00	26.70	27.00	6.45	51	50	15	505	34	71
50+00	50.00	23.62	27.00	0.54	47	50	6	552	41	61
50+50	50.00	20.79	27.00	0.21	41	50	1	593	42	51
51+00	50.00	17.54	27.00	0.24	35	50	0	628	42	36
51+50	50.00	14.40	27.00	0.12	30	50	0	658	42	16
52+00	50.00	12.25	27.00	0.72	25	50	1	683	43	-10
52+50	50.00	20.05	27.00	1.93	30	50	2	713	46	-33
53+00	50.00	21.88	27.00	0.04	39	50	2	752	48	-46
53+50	50.00	17.24	27.00	0.00	36	50	0	788	48	-60
54+00	50.00	20.99	27.00	0.00	35	50	0	823	48	-75
54+50	50.00	29.07	27.00	0.00	46	50	0	869	48	-79
55+00	50.00	30.58	27.00	0.00	55	50	0	924	48	-74
55+50	50.00	32.48	27.00	0.00	58	50	0	982	48	-66
56+00	50.00	33.91	27.00	0.03	61	50	0	1,043	48	-55
56+50	50.00	32.92	27.00	1.44	62	50	1	1,105	49	-44
57+00	50.00	28.42	27.00	1.40	57	50	3	1,162	53	-41
57+50	50.00	28.89	27.00	0.93	53	50	2	1,215	55	-40
58+00	50.00	23.70	27.00	0.41	49	50	1	1,264	56	-42
58+50	50.00	24.44	27.00	0.04	45	50	0	1,309	56	-47
59+00	50.00	26.85	27.00	0.00	47	50	0	1,356	56	-50
59+50	50.00	25.39	27.00	0.00	48	50	0	1,404	56	-52
60+00	50.00	28.10	27.00	0.00	50	50	0	1,454	56	-52
60+50	50.00	31.35	27.00	0.00	55	50	0	1,509	56	-47
61+00	50.00	28.76	27.00	0.00	56	50	0	1,565	56	-41
61+50	50.00	29.80	27.00	0.00	54	50	0	1,619	56	-37
62+00	50.00	31.86	27.00	0.00	57	50	0	1,676	56	-30
62+50	50.00	31.00	27.00	0.00	58	50	0	1,734	56	-22
63+00	50.00	30.43	27.00	0.00	57	50	0	1,791	56	-15

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Division 1 - CTH O

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.20	NOTE 8
63+50	50.00	30.66	27.00	0.00	57	50	0	1,848	56	-8
64+00	50.00	31.29	27.00	0.00	57	50	0	1,905	56	-1
64+50	50.00	32.36	27.00	0.00	59	50	0	1,964	56	8
65+00	50.00	33.15	27.00	0.00	61	50	0	2,025	56	19
65+50	50.00	31.53	27.00	0.00	60	50	0	2,085	56	29
66+00	50.00	29.33	27.00	0.00	56	50	0	2,141	56	35
66+50	50.00	29.05	27.00	0.00	54	50	0	2,195	56	39
67+00	50.00	27.71	27.00	0.00	53	50	0	2,248	56	42
67+50	50.00	28.85	27.00	0.00	52	50	0	2,300	56	44
68+00	50.00	30.59	27.00	0.00	55	50	0	2,355	56	49
68+50	50.00	32.61	27.00	0.00	59	50	0	2,414	56	58
69+00	50.00	32.85	27.00	0.00	61	50	0	2,475	56	69
69+50	50.00	35.69	27.00	0.00	63	50	0	2,538	56	82
70+00	50.00	37.43	27.00	0.11	68	50	0	2,606	56	100
70+50	50.00	65.33	27.00	0.00	95	50	0	2,701	56	145
71+00	50.00	32.80	27.00	0.22	91	50	0	2,792	56	186
71+50	50.00	34.57	27.00	0.00	62	50	0	2,854	56	198
72+00	50.00	56.64	27.00	0.00	84	50	0	2,938	56	232
72+50	50.00	37.19	27.00	0.00	87	50	0	3,025	56	269
73+00	50.00	35.70	27.00	0.00	67	50	0	3,092	56	286
73+50	50.00	35.71	27.00	0.00	66	50	0	3,158	56	302
74+00	50.00	37.86	27.00	0.51	68	50	0	3,226	56	320
74+50	50.00	30.00	27.00	0.20	63	50	1	3,289	58	331
75+00	50.00	21.23	27.00	2.31	47	50	2	3,336	60	326
75+50	50.00	20.73	27.00	1.06	39	50	3	3,375	64	311
76+00	50.00	31.01	27.00	0.04	48	50	1	3,423	65	308
76+50	50.00	25.47	27.00	0.77	52	50	1	3,475	66	309
77+00	50.00	29.76	27.00	0.44	51	50	1	3,526	67	309
77+50	50.00	0.00	27.00	0.00	28	50	0	3,554	67	287
78+00	50.00	0.00	27.00	0.00	0	50	0	3,554	67	237

Division 1 - CTH O

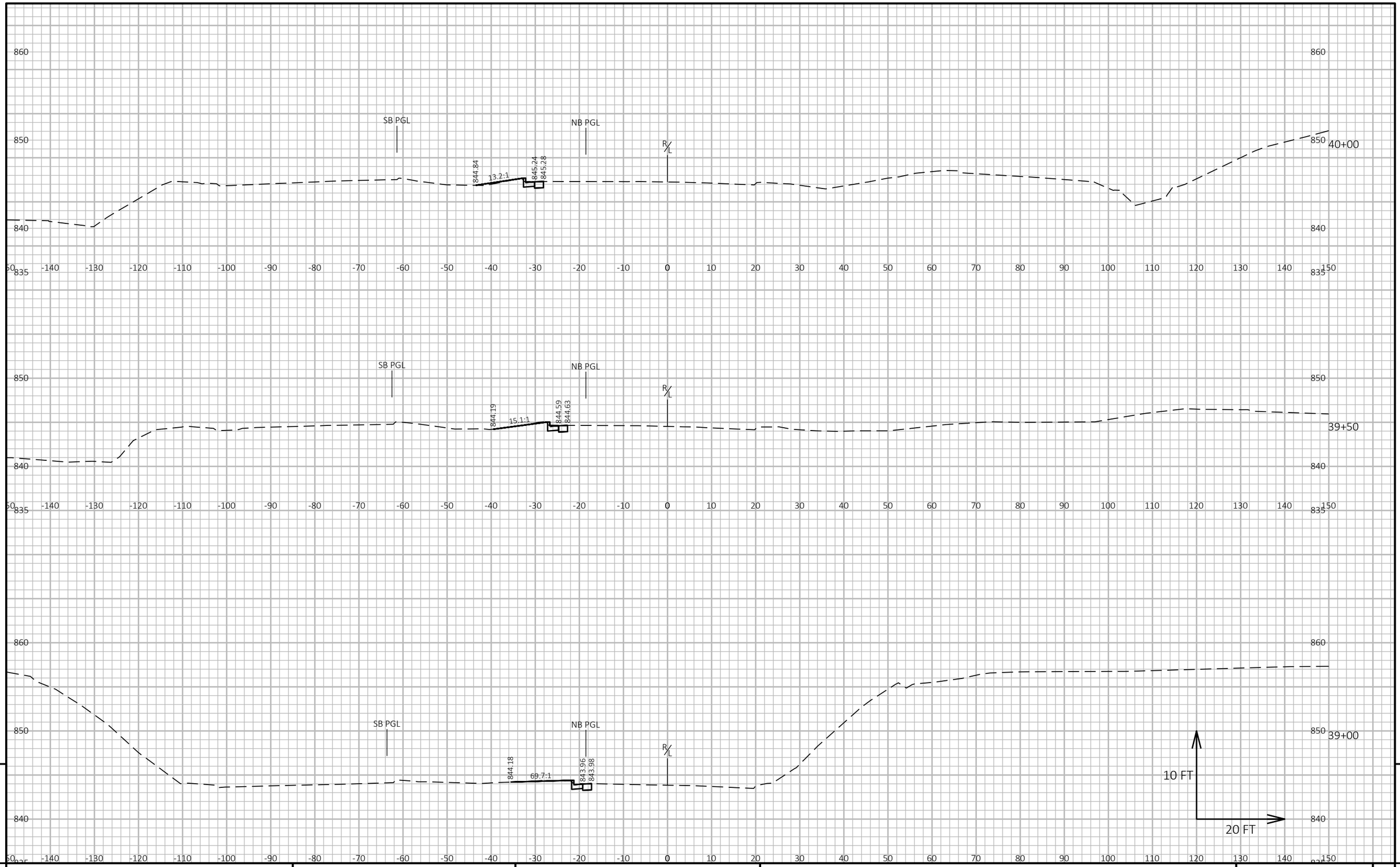
STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.20	NOTE 8
39+00	0.00	0.20	0.00	0.00	0	0	0	0	0	0
40+00	100.00	0.20	0.00	0.00	1	0	0	1	0	1
41+00	100.00	0.20	0.00	0.00	1	0	0	2	0	2
42+00	100.00	0.20	0.00	0.00	1	0	0	3	0	3
43+00	100.00	0.20	0.00	0.00	1	0	0	4	0	4
44+50	0.00	28.00	0.00	27.60	0	0	0	4	0	4
45+00	0.00	28.00	0.00	27.60	0	0	0	4	0	4
45+50	100.00	4.87	0.00	11.00	61	0	71	65	85	-20
46+00	50.00	7.04	0.00	11.00	11	0	20	76	109	-33
46+50	50.00	11.26	0.00	11.00	17	0	20	93	133	-40
47+00	50.00	18.43	0.00	3.50	27	0	13	120	149	-29
47+50	50.00	26.97	0.00	3.00	42	0	6	162	156	6
48+00	50.00	36.39	0.00	1.50	59	0	4	221	161	60
48+50	50.00	39.74	0.00	1.50	70	0	3	291	164	127
49+00	50.00	38.36	0.00	1.50	72	0	3	363	168	195
49+50	50.00	29.58	0.00	1.50	63	0	3	426	172	254
50+00	50.00	27.34	0.00	1.50	53	0	3	479	175	304
50+50	50.00	26.77	0.00	1.50	50	0	3	529	179	350
51+00	50.00	27.47	0.00	1.50	50	0	3	579	182	397
51+50	50.00	29.91	0.00	1.50	53	0	3	632	186	446
52+00	50.00	21.99	0.00	1.50	48	0	3	680	190	490
52+50	50.00	20.60	0.00	1.50	39	0	3	719	193	526
53+00	50.00	15.03	0.00	0.00	33	0	1	752	194	558
53+50	50.00	15.12	0.00	0.00	28	0	0	780	194	586
54+00	50.00	14.52	0.00	1.50	27	0	1	807	196	611
54+50	50.00	28.92	0.00	0.00	40	0	1	847	197	650
55+00	50.00	21.51	0.00	0.00	47	0	0	894	197	697
55+50	50.00	17.91	0.00	20.00	37	0	19	931	220	711
56+00	50.00	16.63	0.00	20.00	32	0	37	963	264	699
56+50	50.00	15.93	0.00	20.00	30	0	37	993	308	685
57+00	50.00	13.98	0.00	20.00	28	0	37	1,021	353	668
57+50	50.00	12.08	0.00	20.00	24	0	37	1,045	397	648
58+00	50.00	6.24	0.00	20.00	17	0	37	1,062	442	620
58+50	50.00	2.80	0.00	20.00	8	0	37	1,070	486	584
59+00	50.00	2.78	0.00	20.00	5	0	37	1,075	530	545

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Division 1 - CTH O

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
59+50	50.00	2.80	0.00	20.00	5	0	37	1,080	575	505
60+00	50.00	3.68	0.00	27.00	6	0	44	1,086	628	458
60+50	50.00	6.50	0.00	3.72	9	0	28	1,095	661	434
61+00	50.00	12.75	0.00	0.91	18	0	4	1,113	666	447
61+50	50.00	24.83	0.00	0.00	35	0	1	1,148	667	481
62+00	50.00	35.75	0.00	0.00	56	0	0	1,204	667	537
62+50	50.00	35.03	0.00	0.00	66	0	0	1,270	667	603
63+00	50.00	32.36	0.00	0.00	62	0	0	1,332	667	665
63+50	50.00	28.85	0.00	0.00	57	0	0	1,389	667	722
64+00	50.00	26.13	0.00	0.00	51	0	0	1,440	667	773
64+50	50.00	24.47	0.00	0.00	47	0	0	1,487	667	820
65+00	50.00	23.58	0.00	0.00	44	0	0	1,531	667	864
65+50	50.00	20.81	0.00	0.00	41	0	0	1,572	667	905
66+00	50.00	22.87	0.00	0.00	40	0	0	1,612	667	945
66+50	50.00	38.77	0.00	0.00	57	0	0	1,669	667	1,002
67+00	50.00	39.06	0.00	0.00	72	0	0	1,741	667	1,074
67+50	50.00	33.72	0.00	0.00	67	0	0	1,808	667	1,141
68+00	50.00	28.63	0.00	0.00	58	0	0	1,866	667	1,199
68+50	50.00	24.97	0.00	0.00	50	0	0	1,916	667	1,249
69+00	50.00	26.05	0.00	0.00	47	0	0	1,963	667	1,296
69+50	50.00	27.63	0.00	0.00	50	0	0	2,013	667	1,346
70+00	50.00	25.77	0.00	0.00	49	0	0	2,062	667	1,395
70+50	50.00	20.59	0.00	0.00	43	0	0	2,105	667	1,438
71+00	50.00	20.82	0.00	0.00	38	0	0	2,143	667	1,476
71+50	50.00	32.50	0.00	0.00	49	0	0	2,192	667	1,525
72+00	50.00	33.22	0.00	0.00	61	0	0	2,253	667	1,586
72+50	50.00	30.56	0.00	0.00	59	0	0	2,312	667	1,645
73+00	50.00	27.06	0.00	0.00	53	0	0	2,365	667	1,698
73+50	50.00	32.24	0.00	0.00	55	0	0	2,420	667	1,753
74+00	50.00	32.51	0.00	0.00	60	0	0	2,480	667	1,813
74+50	50.00	26.55	0.00	0.00	55	0	0	2,535	667	1,868
75+00	50.00	24.91	0.00	0.00	48	0	0	2,583	667	1,916
75+50	50.00	28.16	0.00	0.00	49	0	0	2,632	667	1,965
76+00	50.00	29.65	0.00	0.00	54	0	0	2,686	667	2,019
76+50	50.00	31.31	0.00	0.00	56	0	0	2,742	667	2,075
77+00	50.00	32.98	0.00	0.00	60	0	0	2,802	667	2,135
77+50	50.00	38.56	0.00	0.00	66	0	0	2,868	667	2,201
78+00	50.00	2.61	0.00	0.72	38	0	1	2,906	668	2,238



9

9

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 463	E

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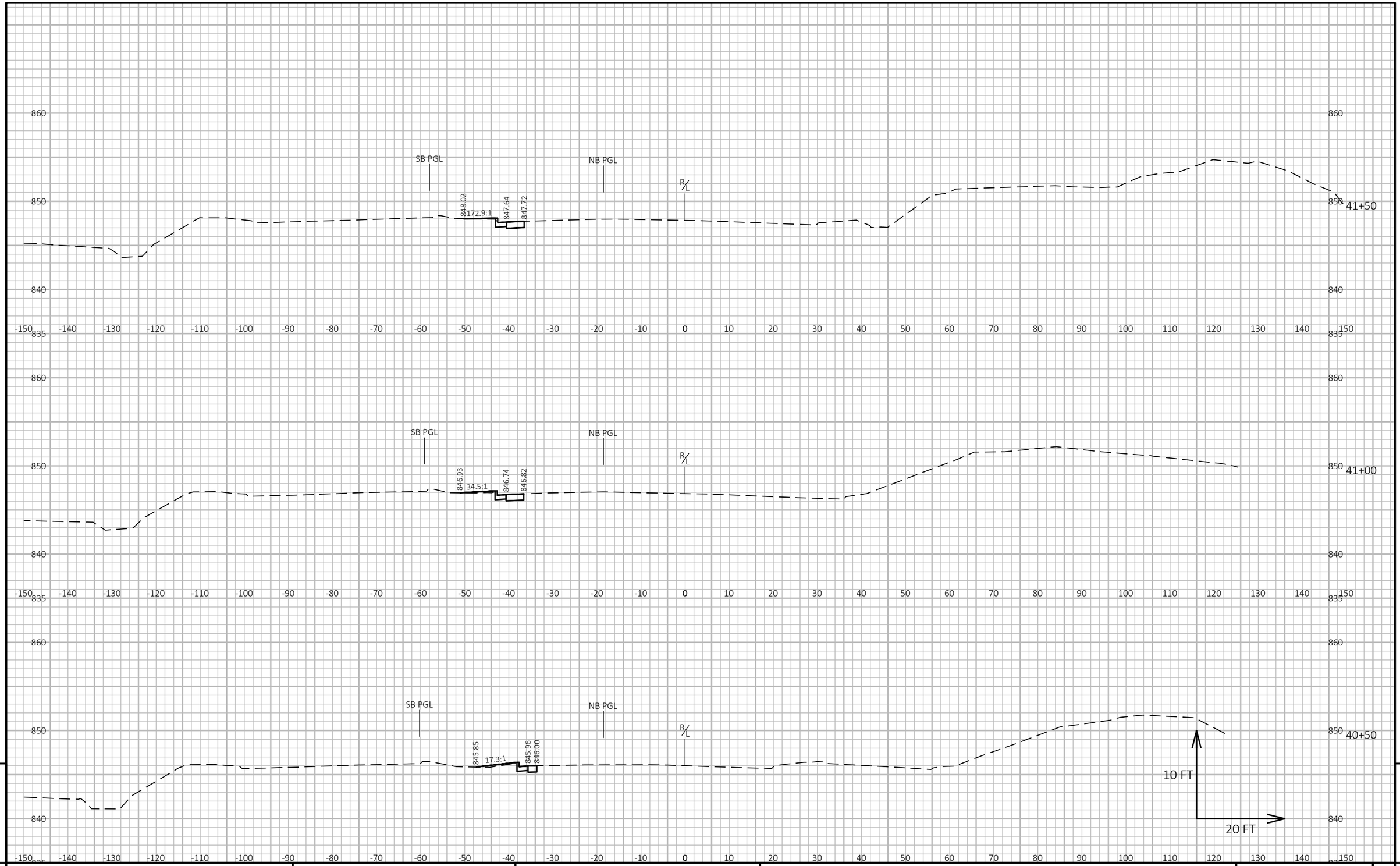
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PLOT BY : DABROWSKI, MATTHEW

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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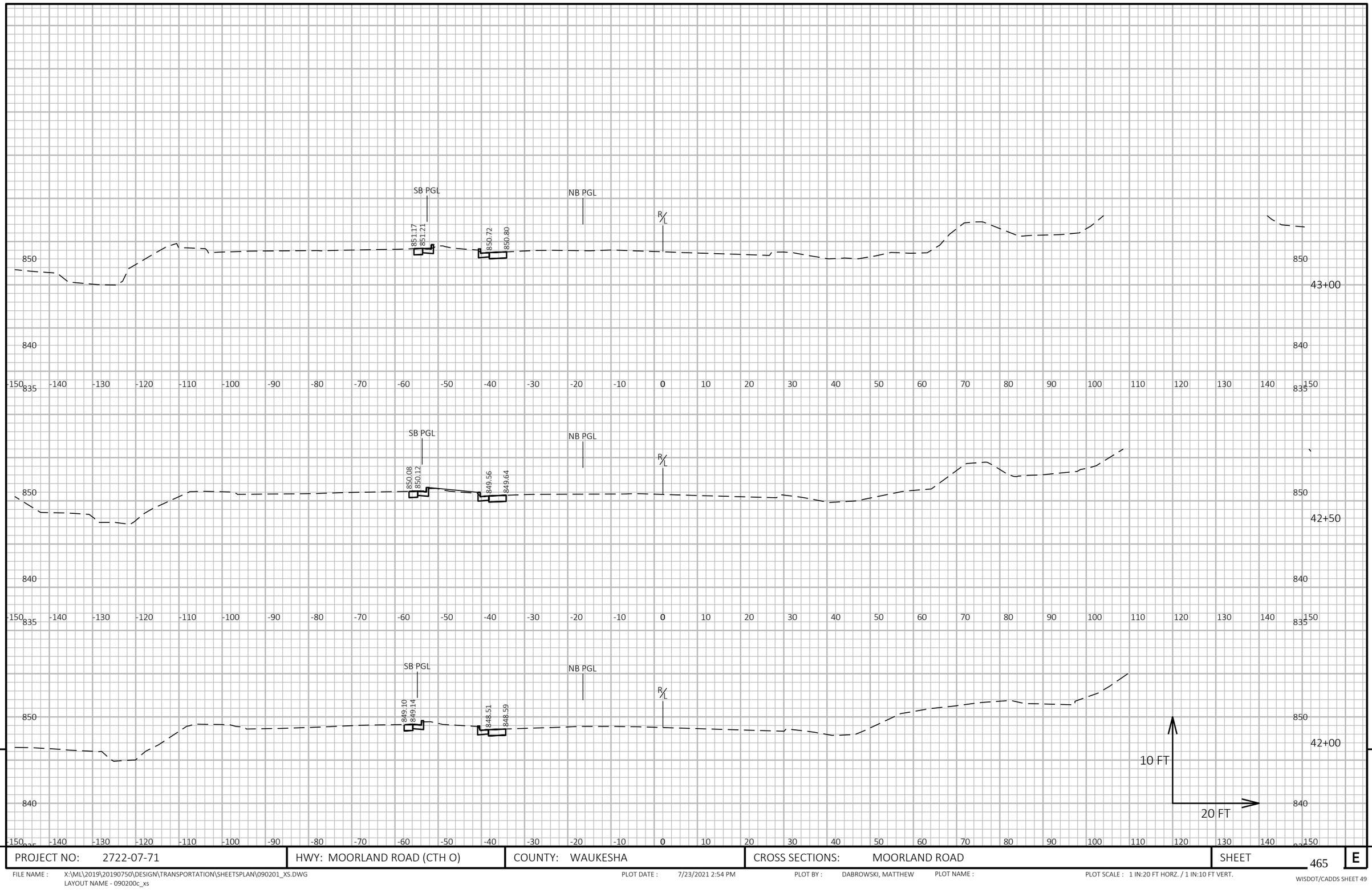
9

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 464	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090200b_xs

PLOT DATE : 7/23/2021 2:54 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

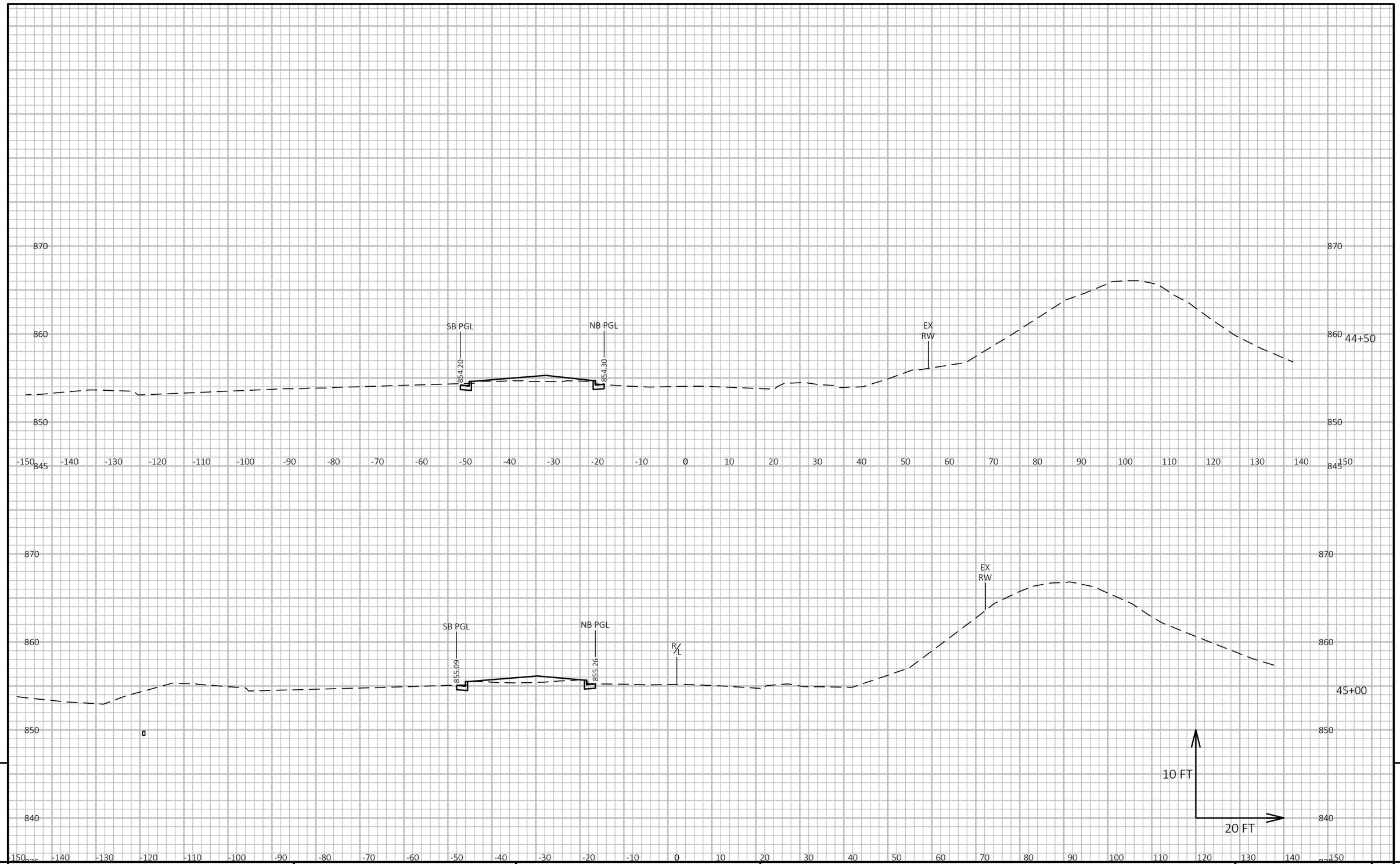
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 465	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090200c_xs

PLOT DATE : 7/23/2021 2:54 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 466	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090200d_xs

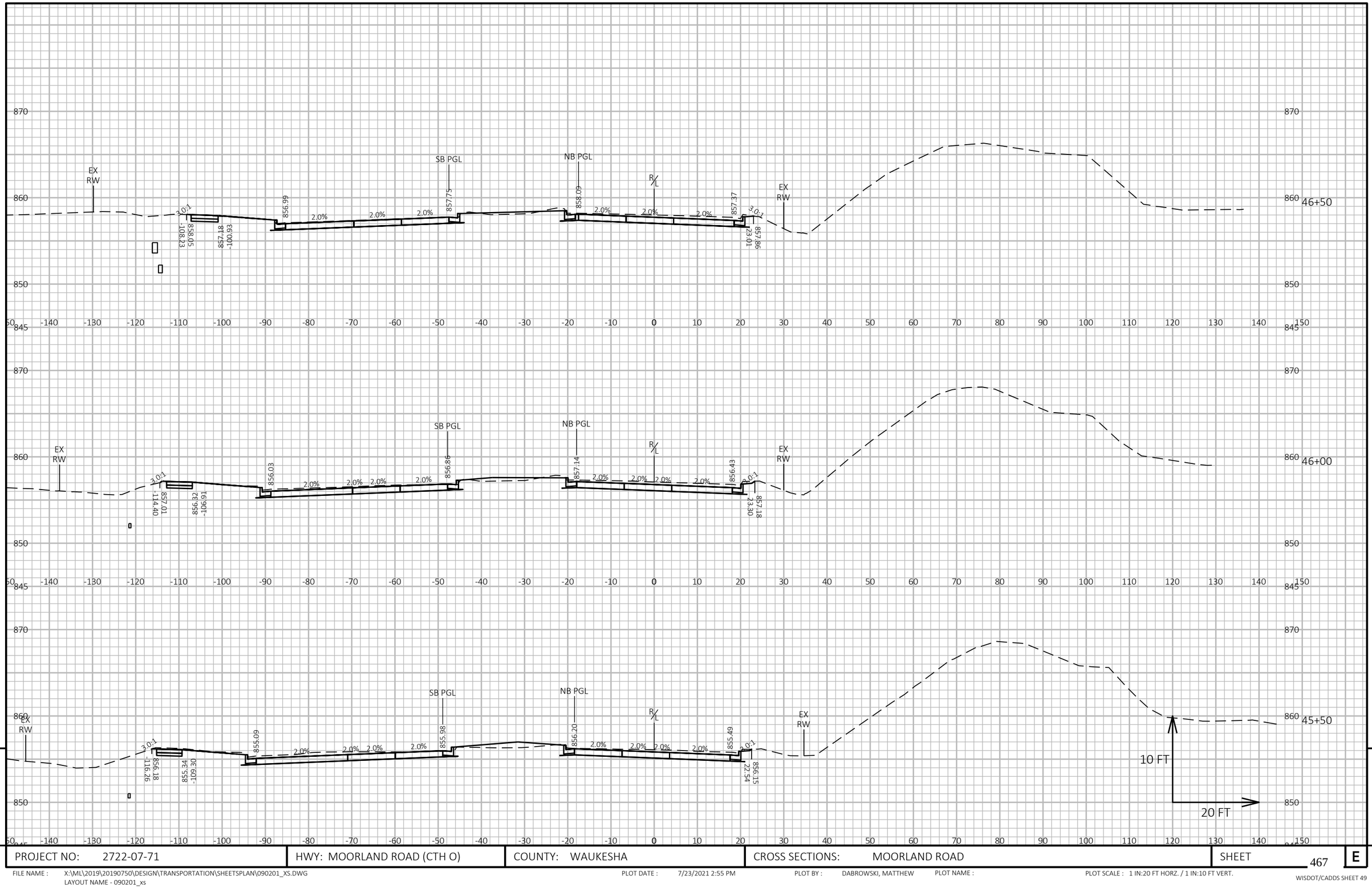
PLOT DATE : 7/23/2021 2:54 PM

PLOT BY : DABROWSKI, MATTHEW

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 467	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_xs

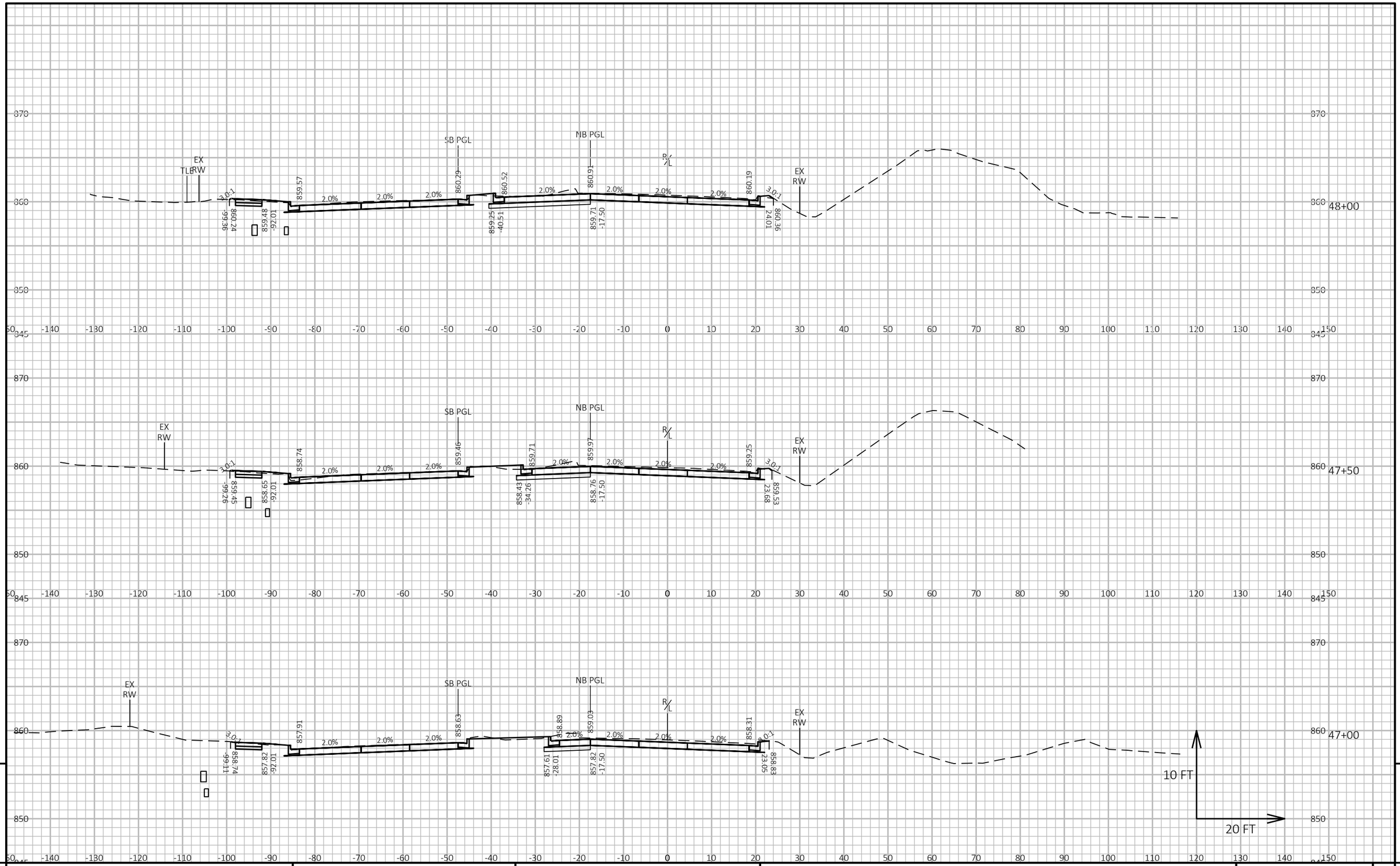
PLOT DATE : 7/23/2021 2:55 PM

PLOT BY : DABROWSKI, MATTHEW

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 468	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090202_xs

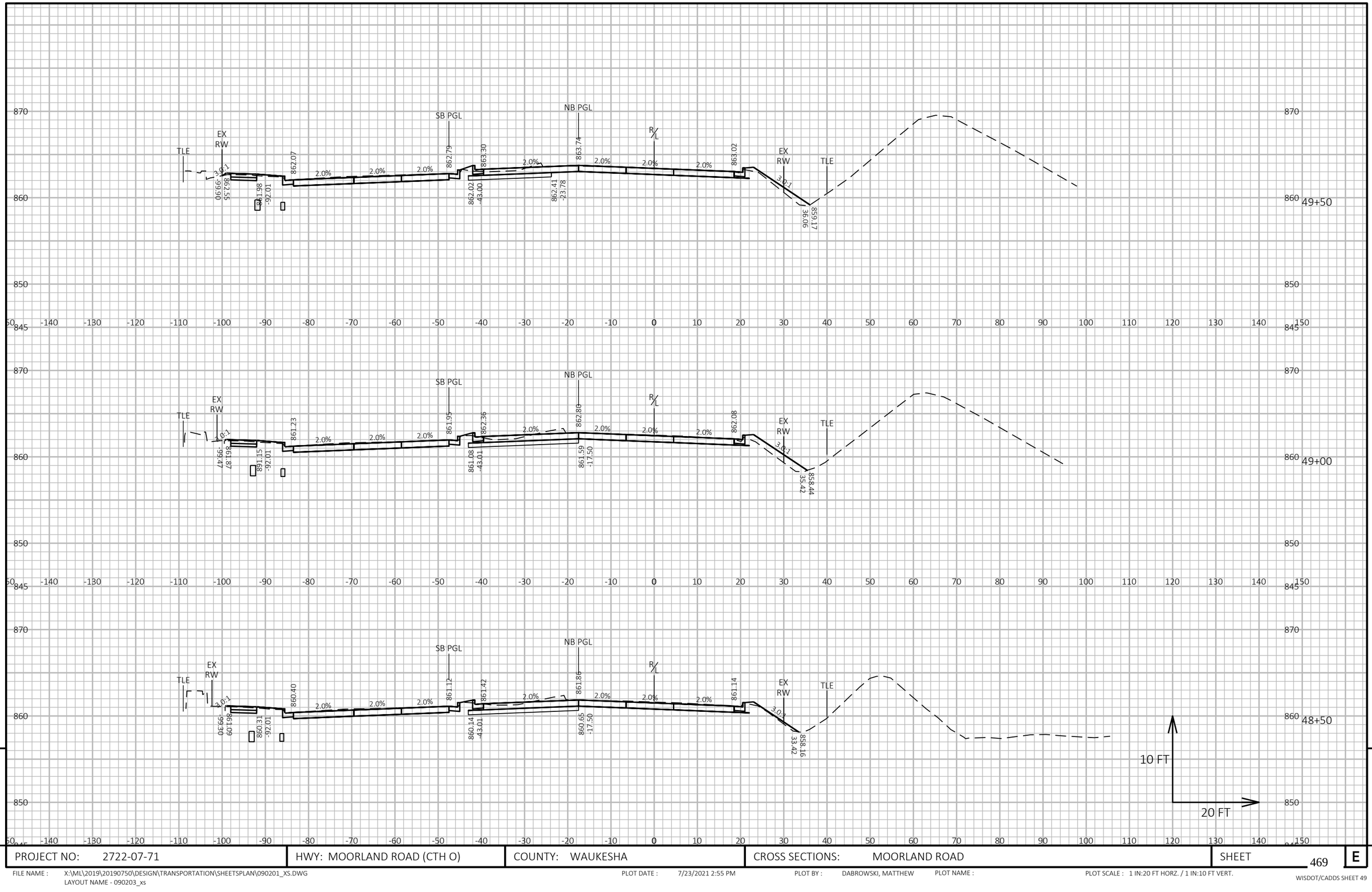
PLOT DATE : 7/23/2021 2:55 PM

PLOT BY : DABROWSKI, MATTHEW

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

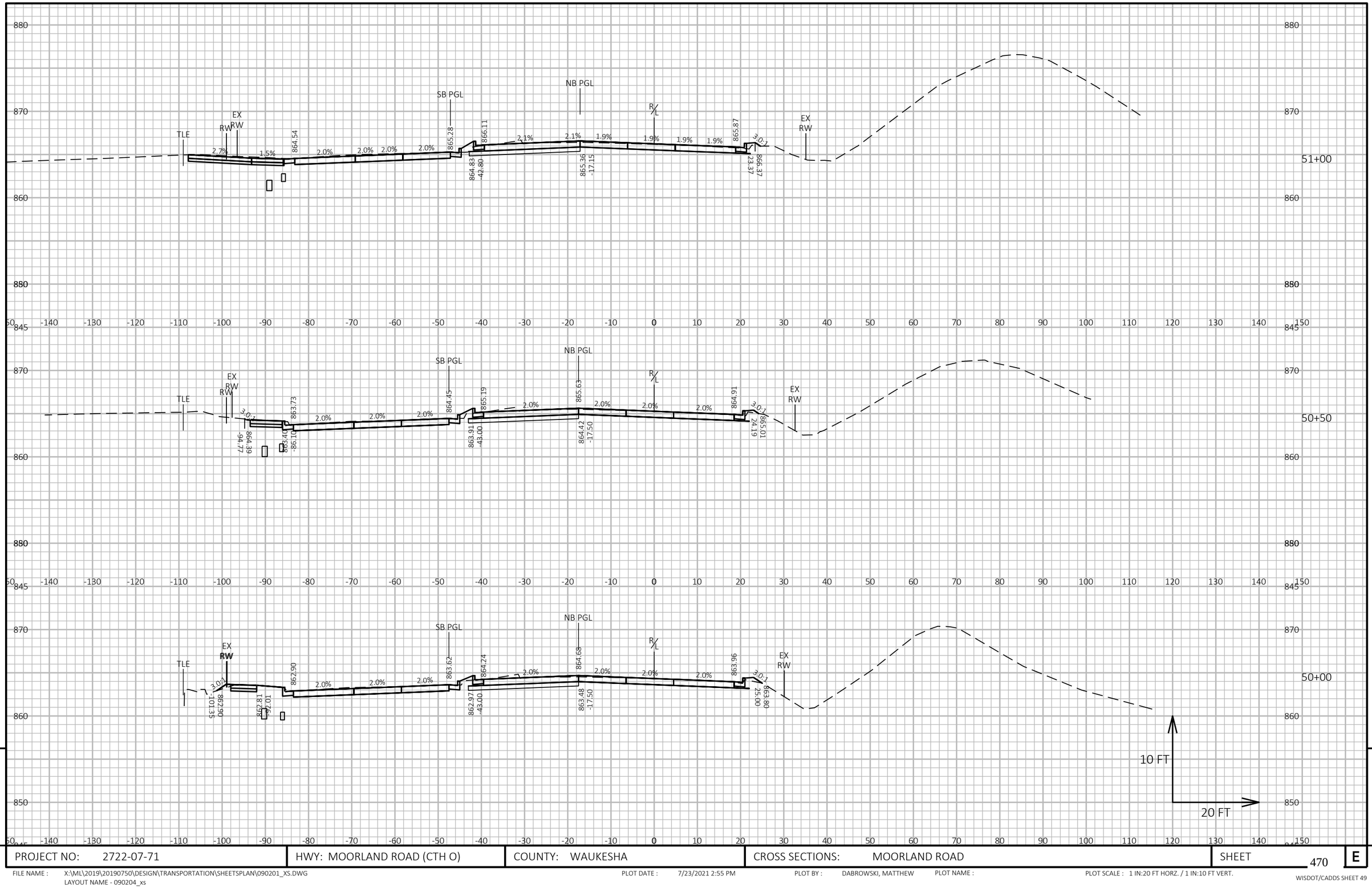


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 469 E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090203_xs

PLOT DATE : 7/23/2021 2:55 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

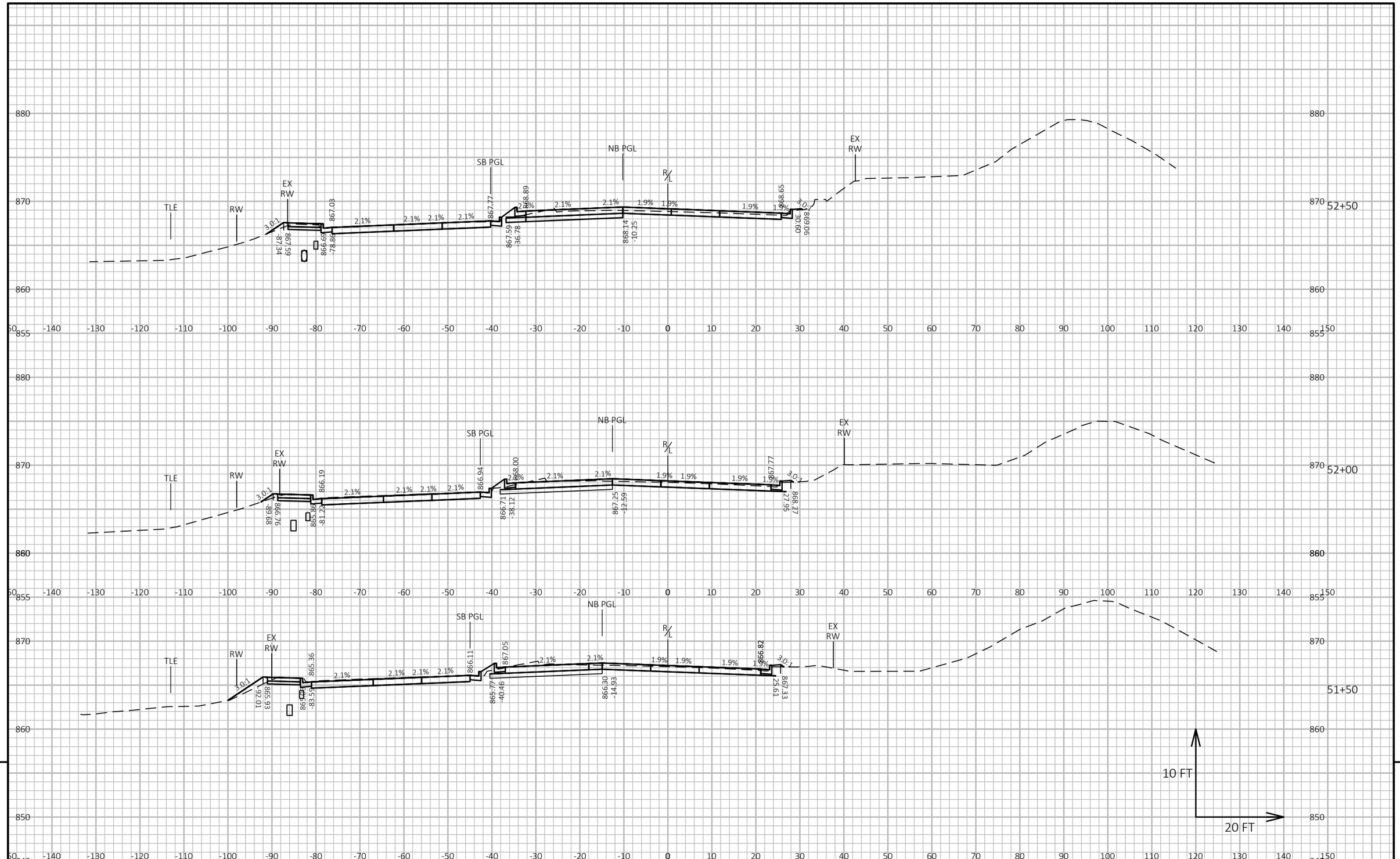


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 470 E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090204_xs

PLOT DATE : 7/23/2021 2:55 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 471	E

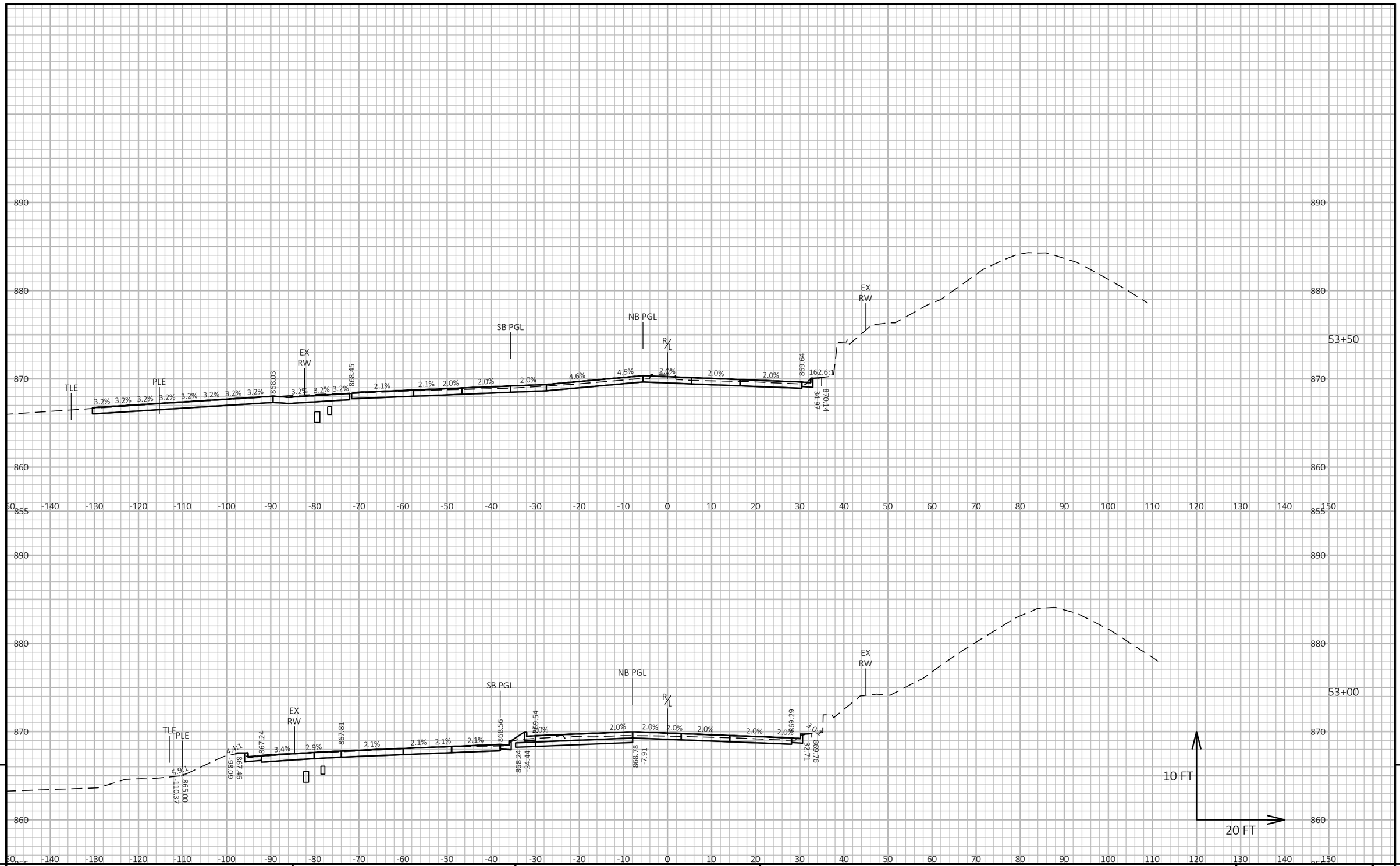
FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090205_xs

PLOT DATE : 7/23/2021 2:55 PM

PLOT BY : DABROWSKI, MATTHEW

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

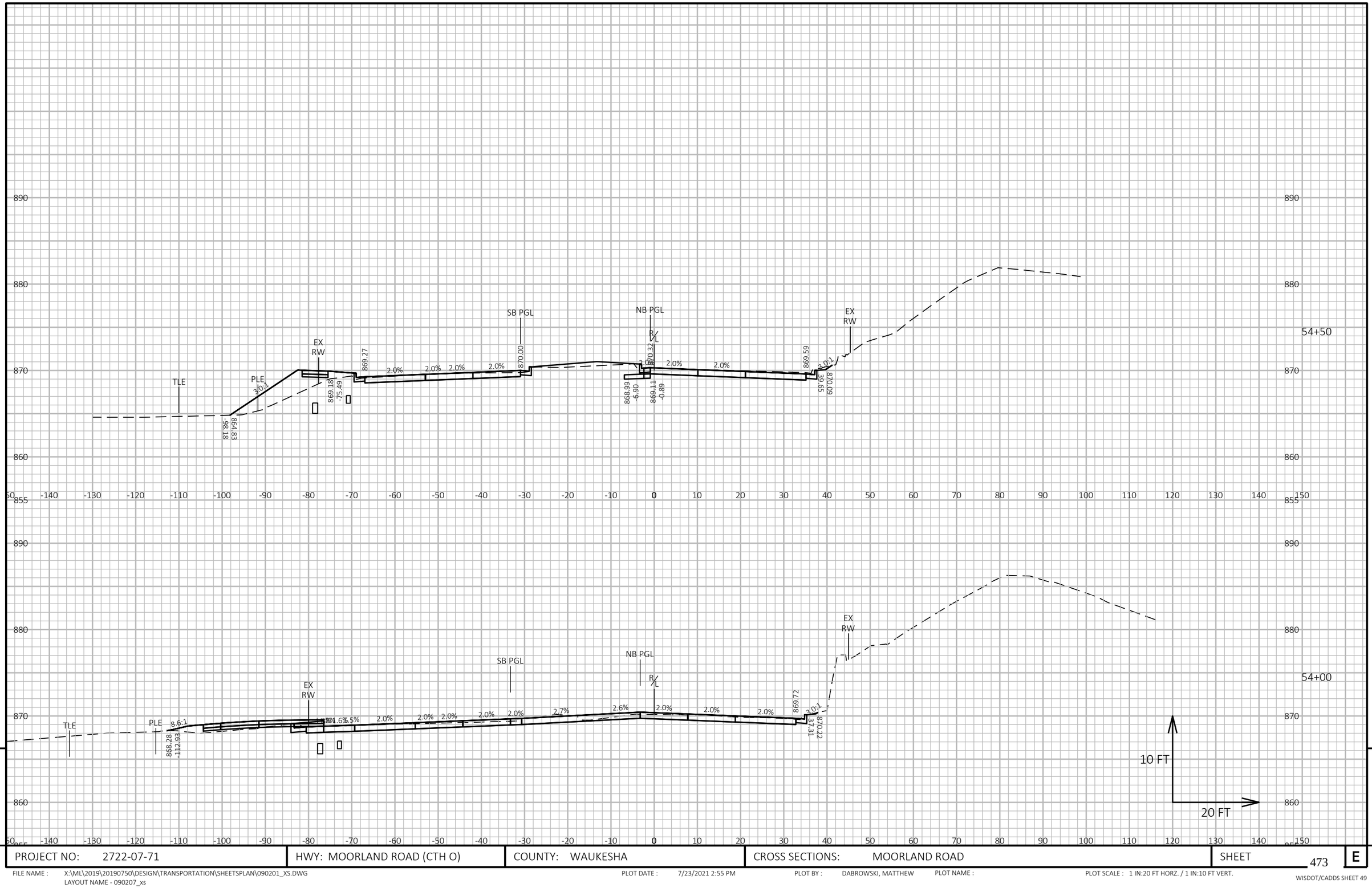


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 472	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090206_xs

PLOT DATE : 7/23/2021 2:55 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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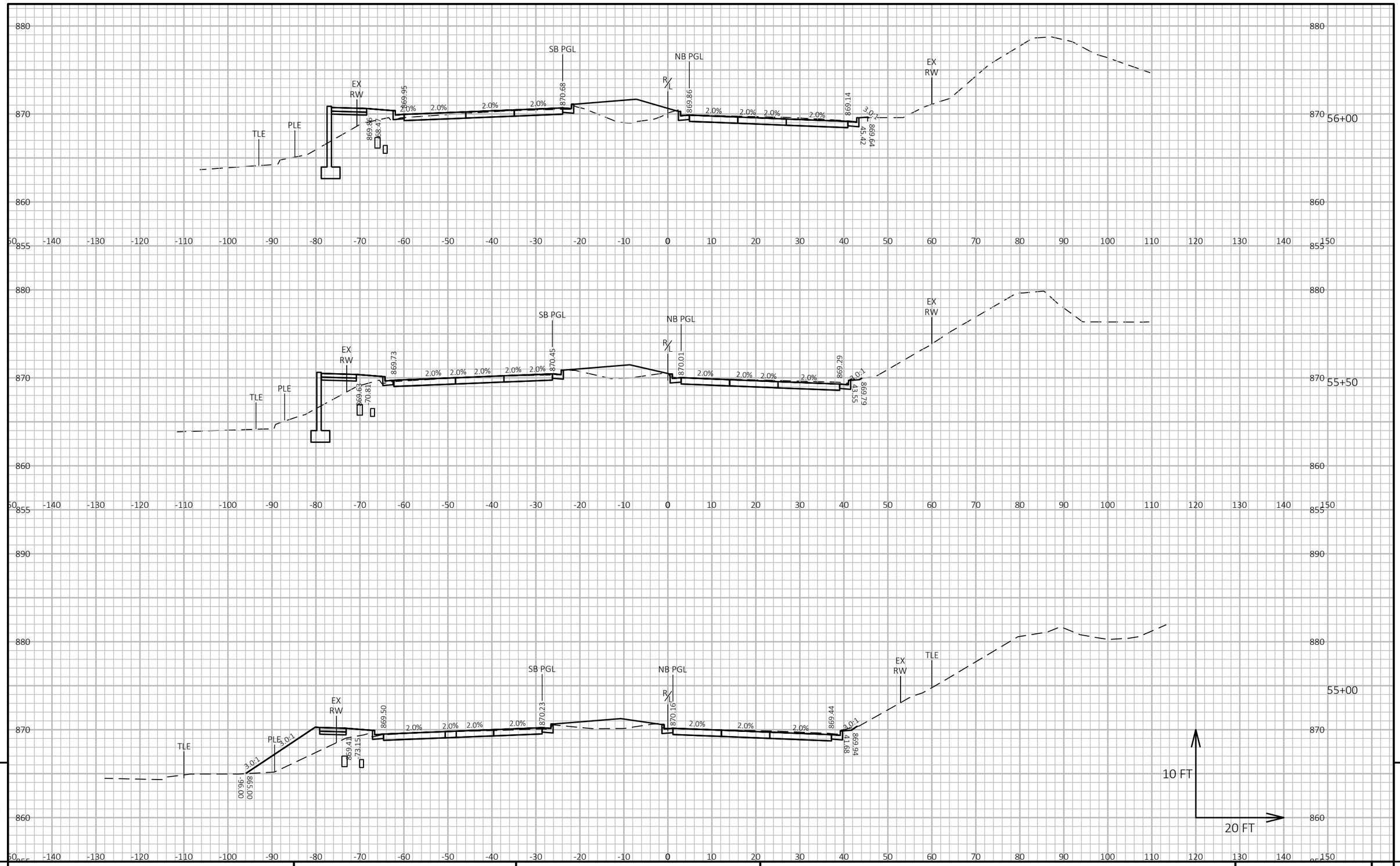
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 473	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090207_xs

PLOT DATE : 7/23/2021 2:55 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

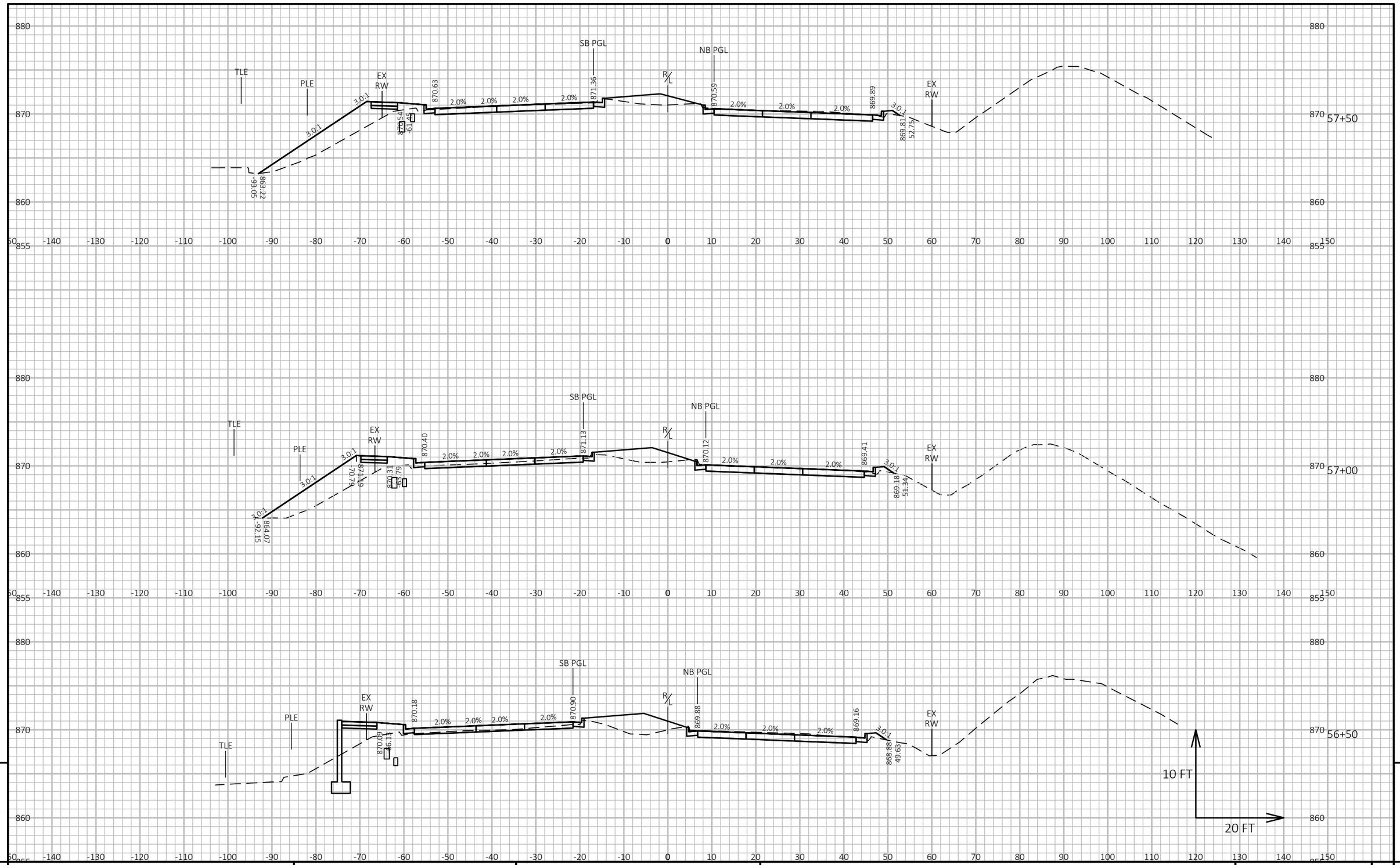


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 474	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090208_xs

PLOT DATE : 7/23/2021 2:55 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



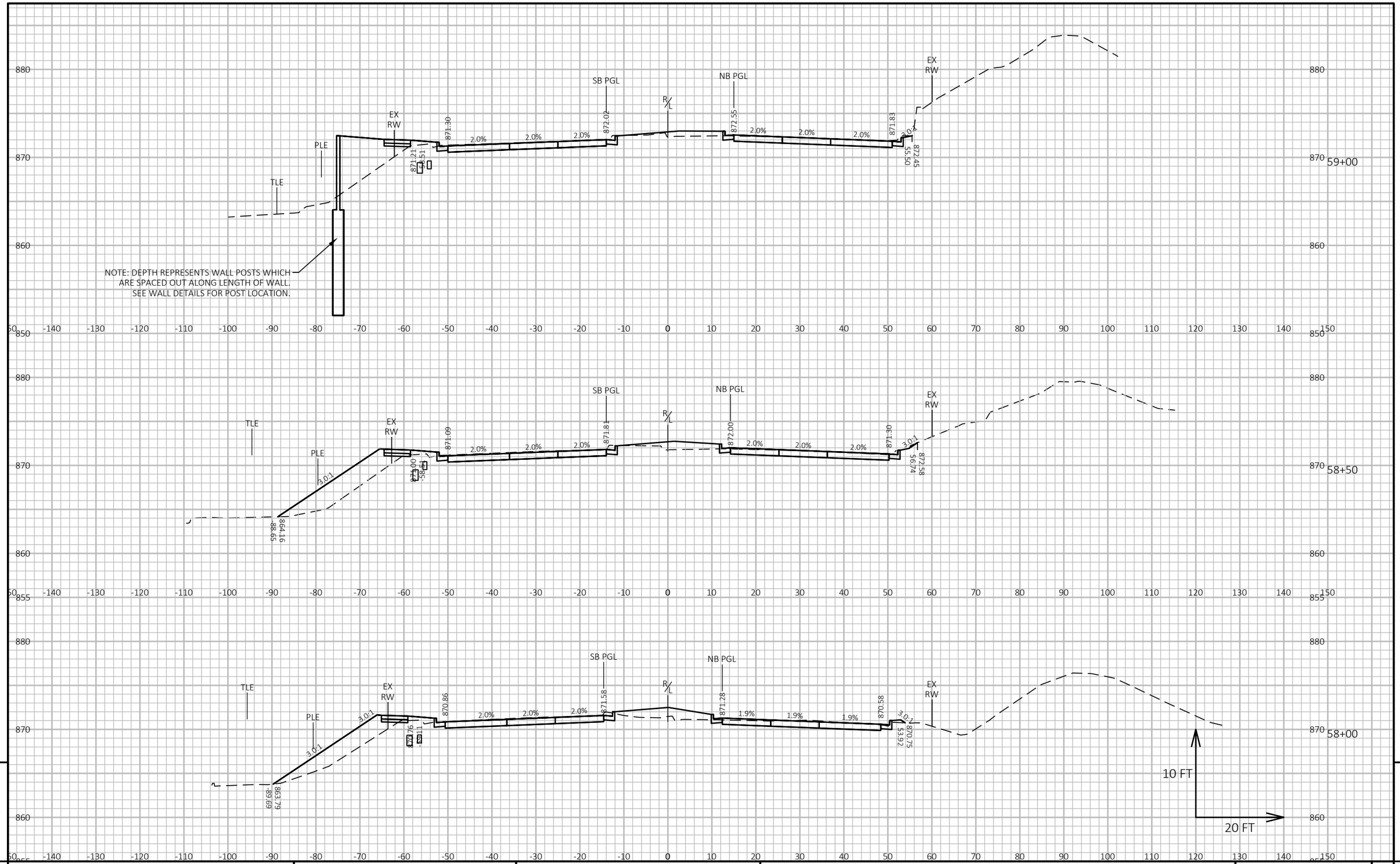
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 475	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090209_xs

PLOT DATE : 7/23/2021 2:55 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

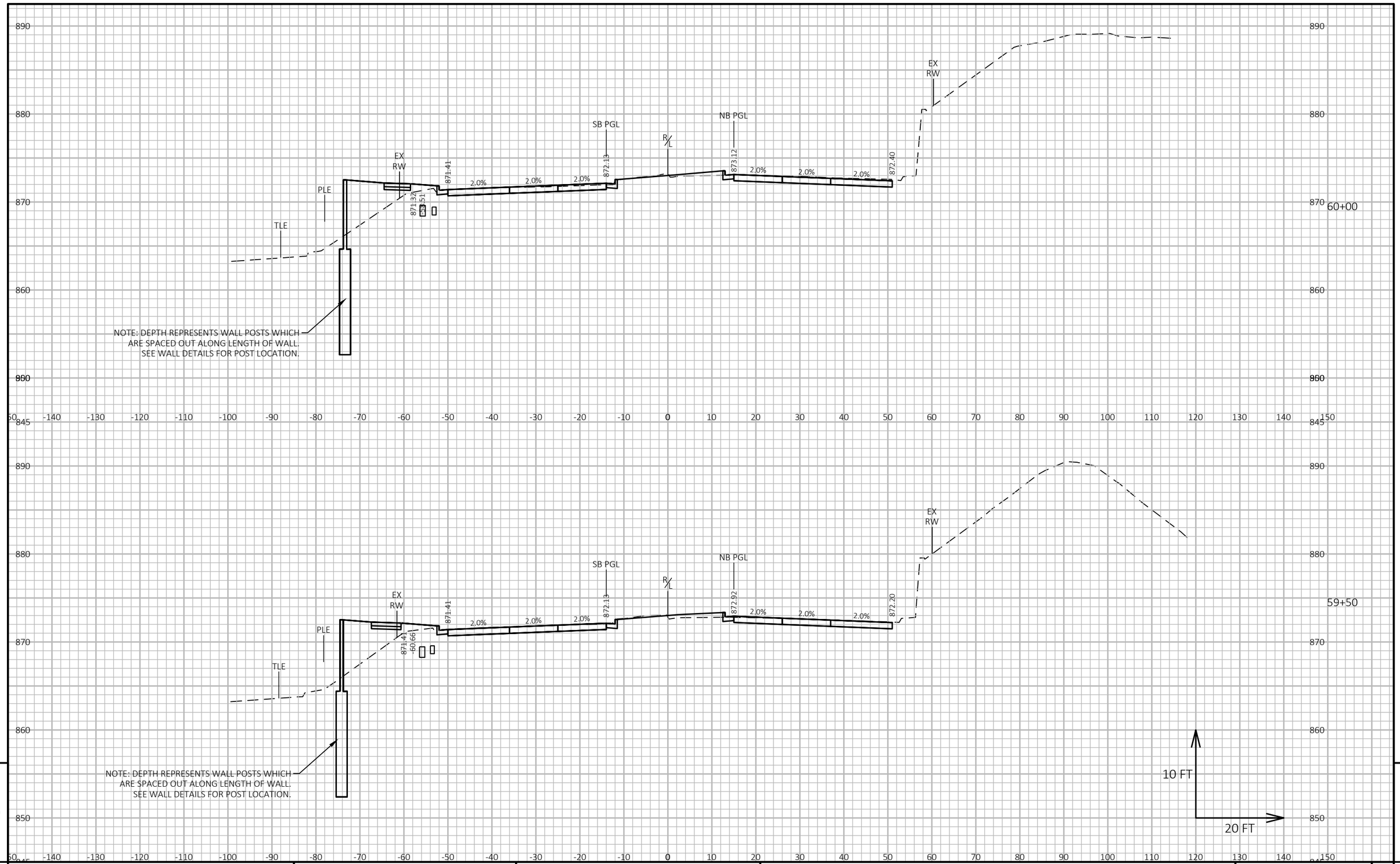


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 476 E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090210_xs

PLOT DATE : 7/23/2021 2:55 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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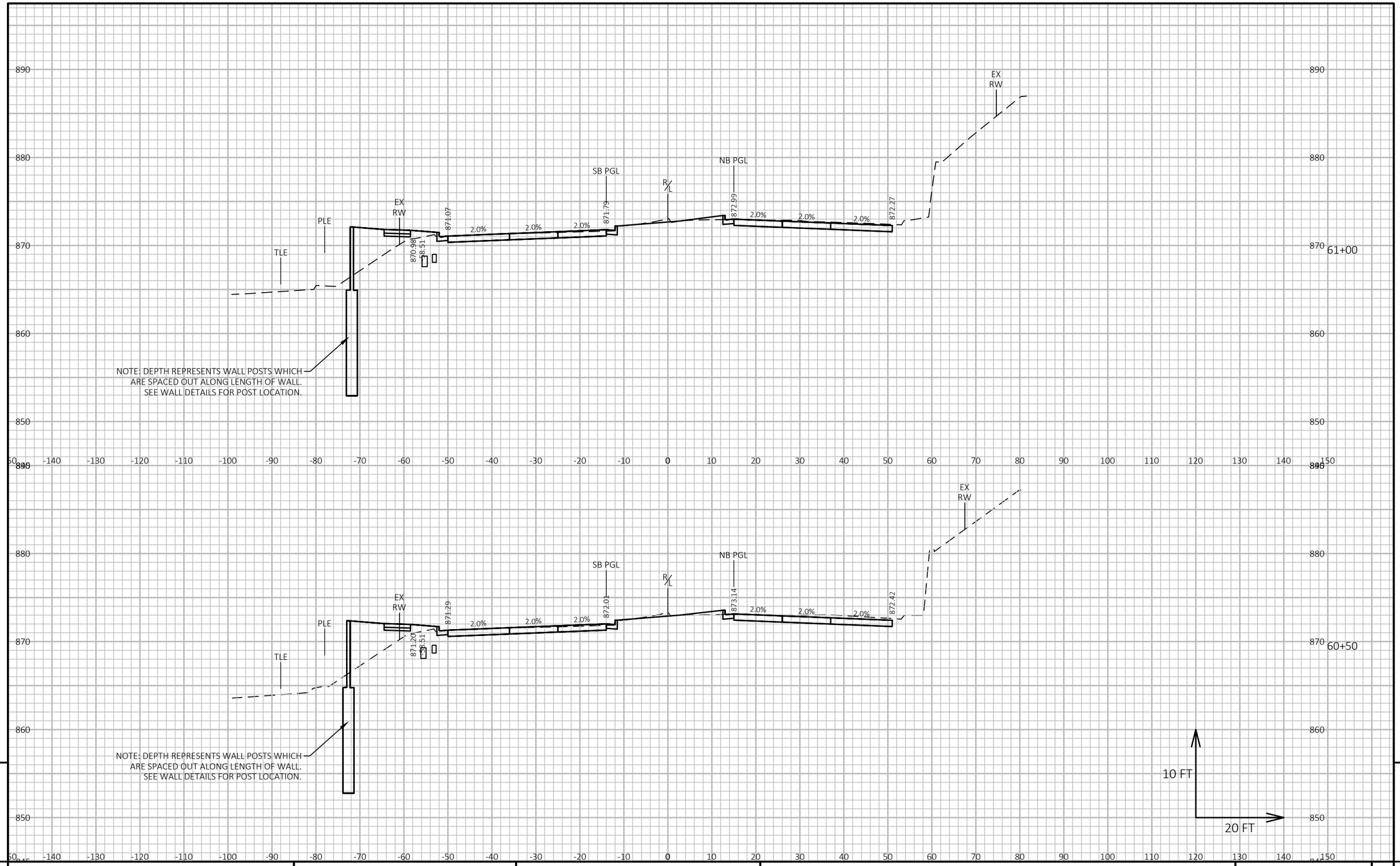
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 477	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090211_xs

PLOT DATE : 7/23/2021 2:55 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 478	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090212_xs

PLOT DATE : 7/23/2021 2:56 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

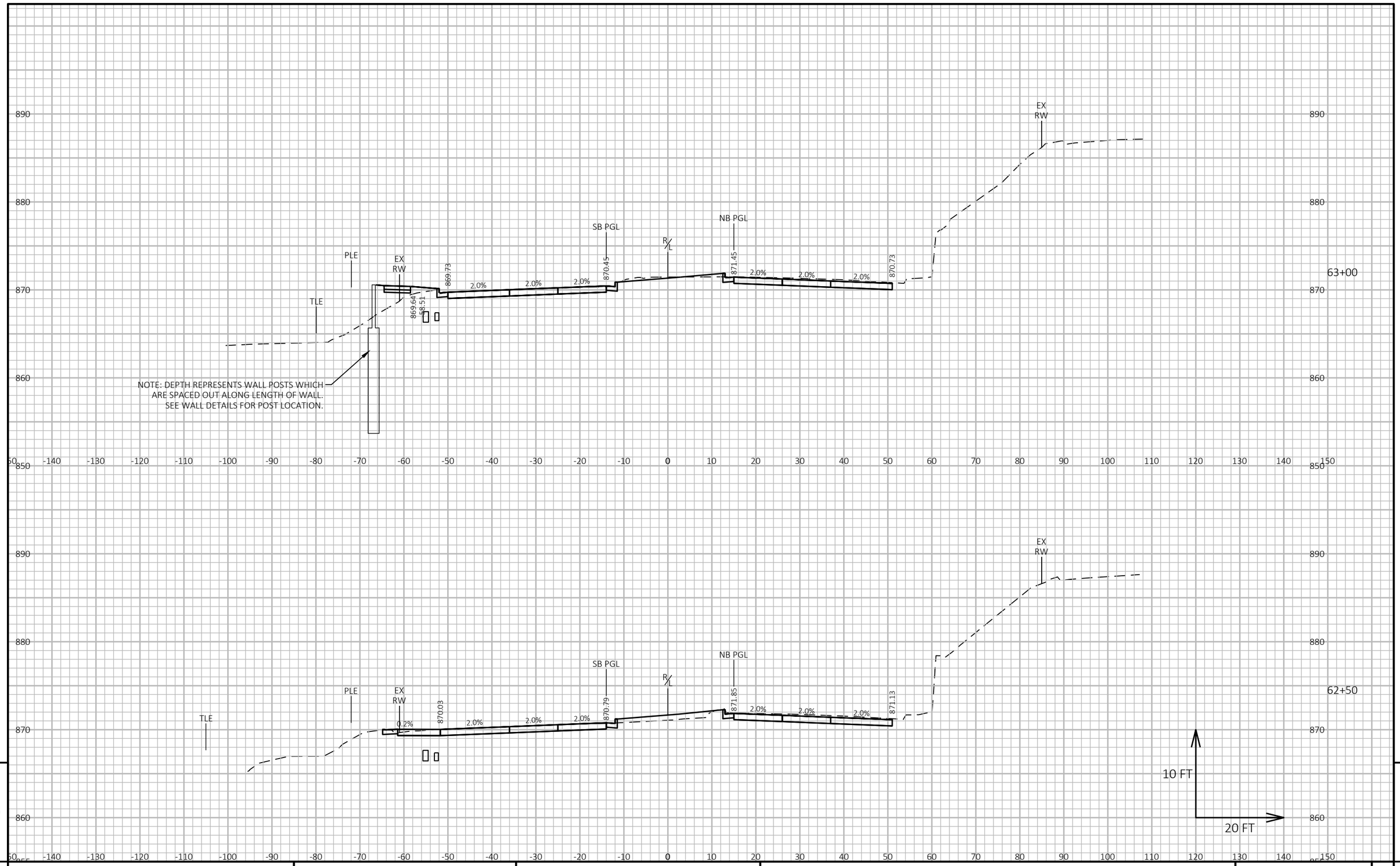


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 479	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090213_xs

PLOT DATE : 7/23/2021 2:56 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 480	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090214_xs

PLOT DATE : 7/23/2021 2:56 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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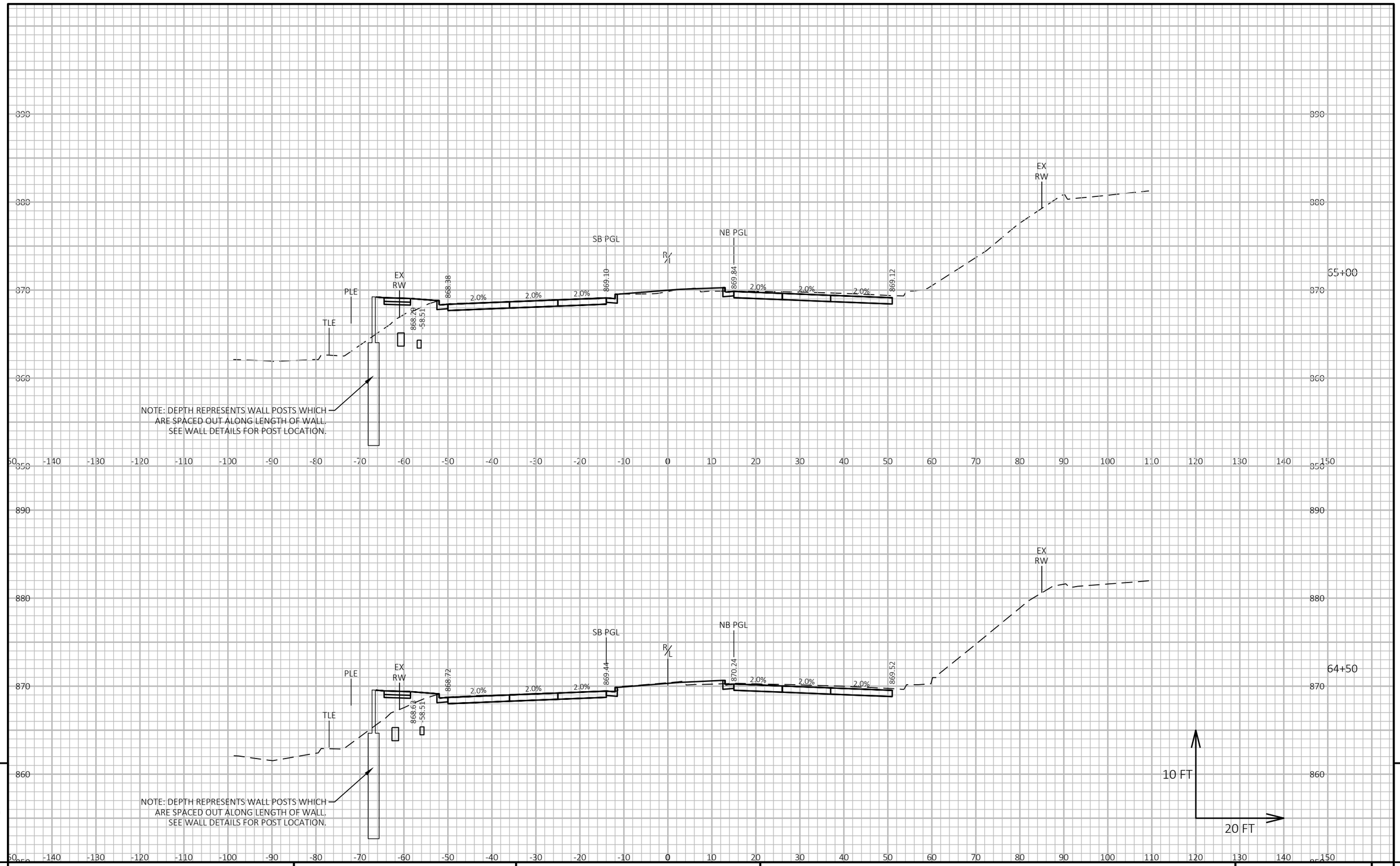
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 481	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090215_xs

PLOT DATE : 7/23/2021 2:56 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

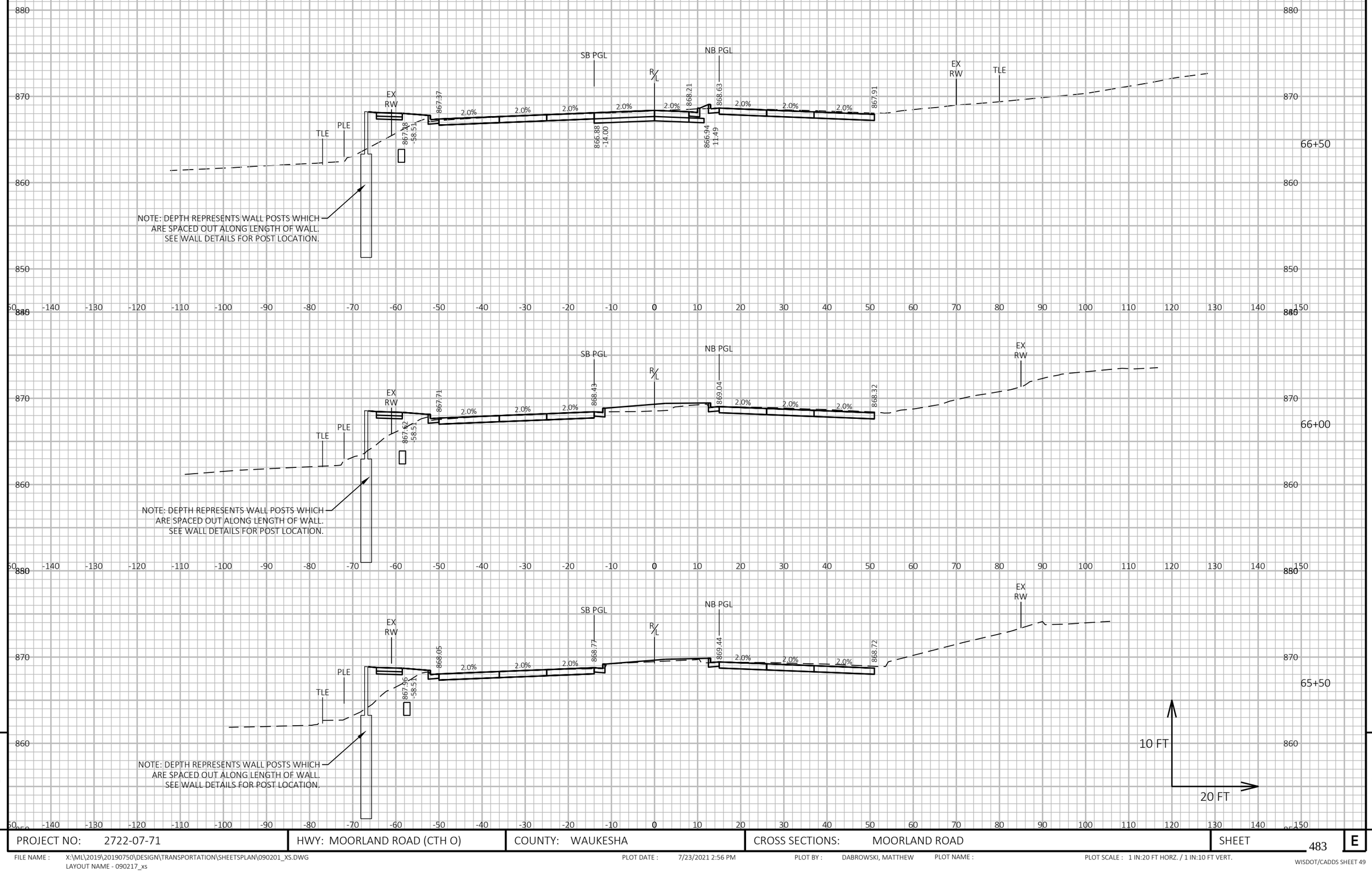
PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 482	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090216_xs

PLOT DATE : 7/23/2021 2:56 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



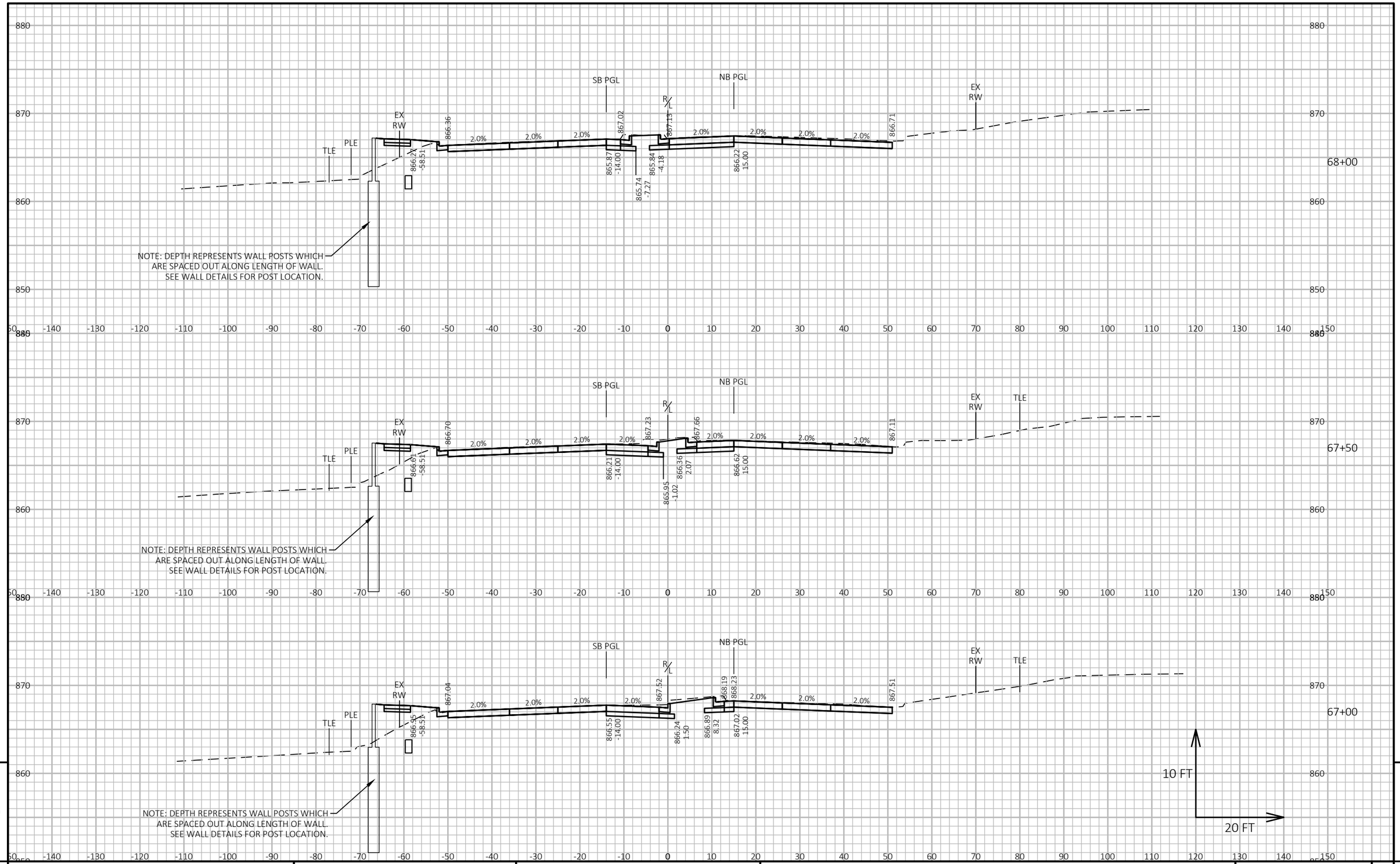
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 483	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090217_xs

PLOT DATE : 7/23/2021 2:56 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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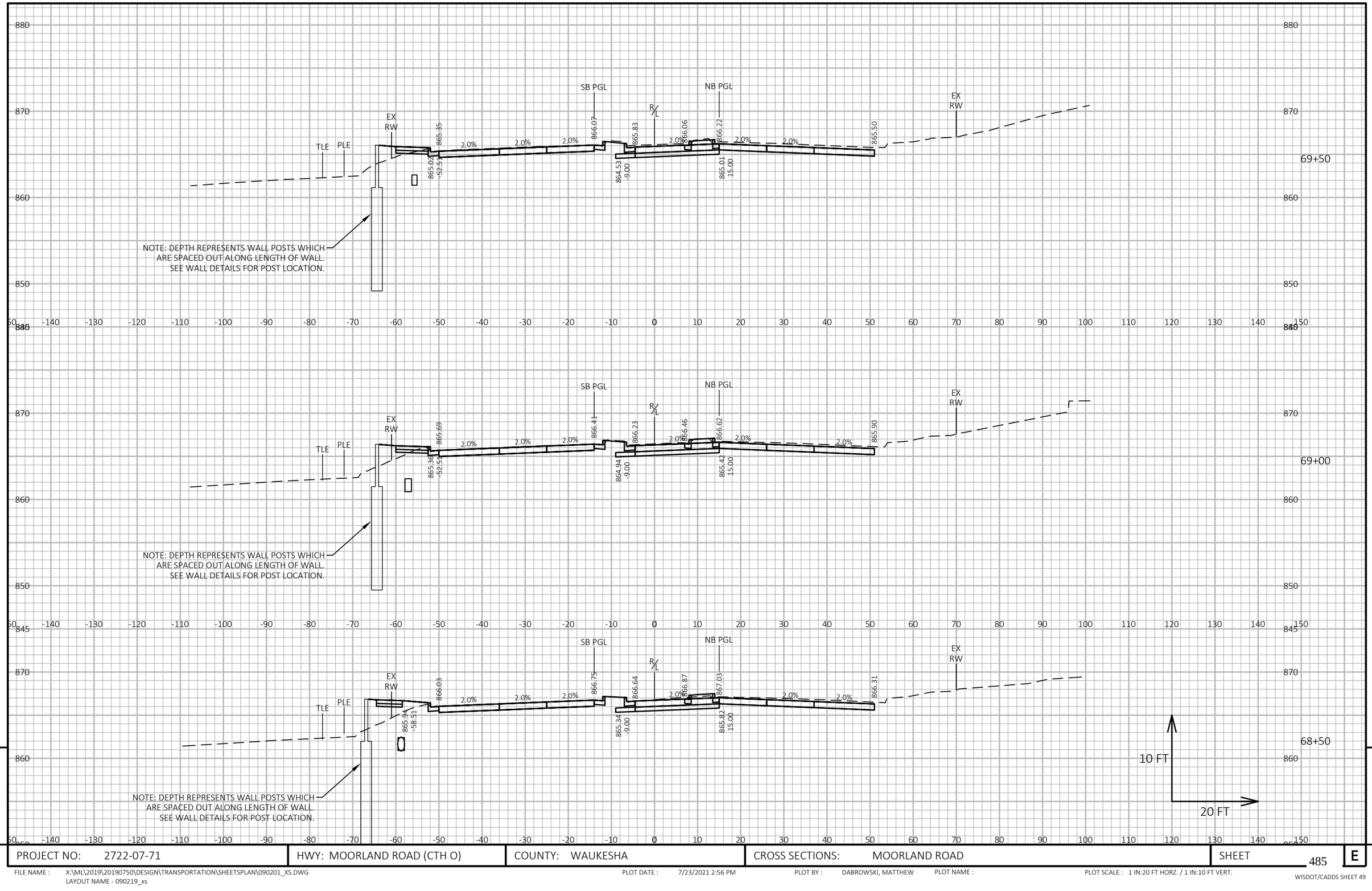
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 484	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090218_xs

PLOT DATE : 7/23/2021 2:56 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

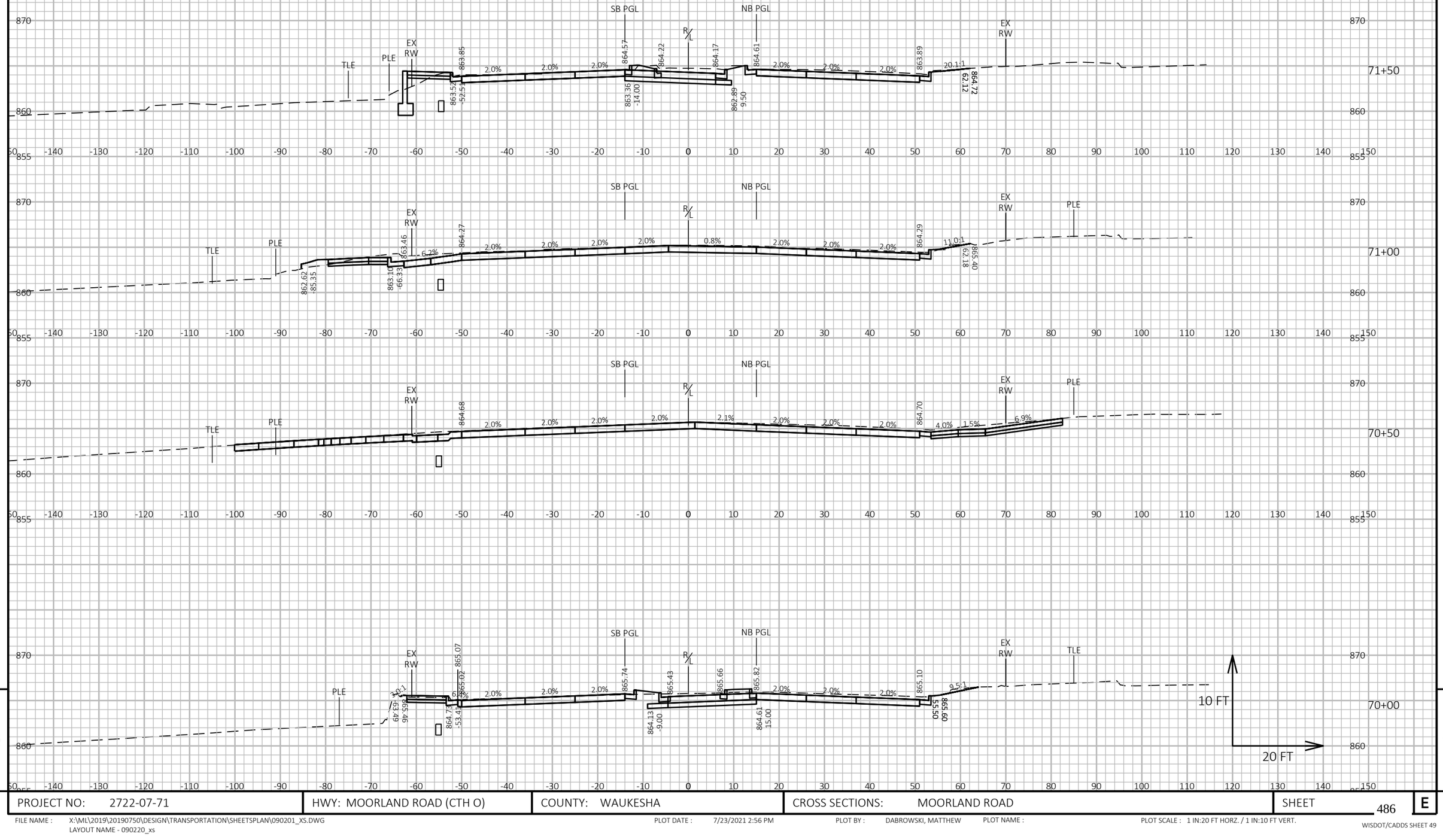
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 485	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090219_xs

PLOT DATE : 7/23/2021 2:56 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

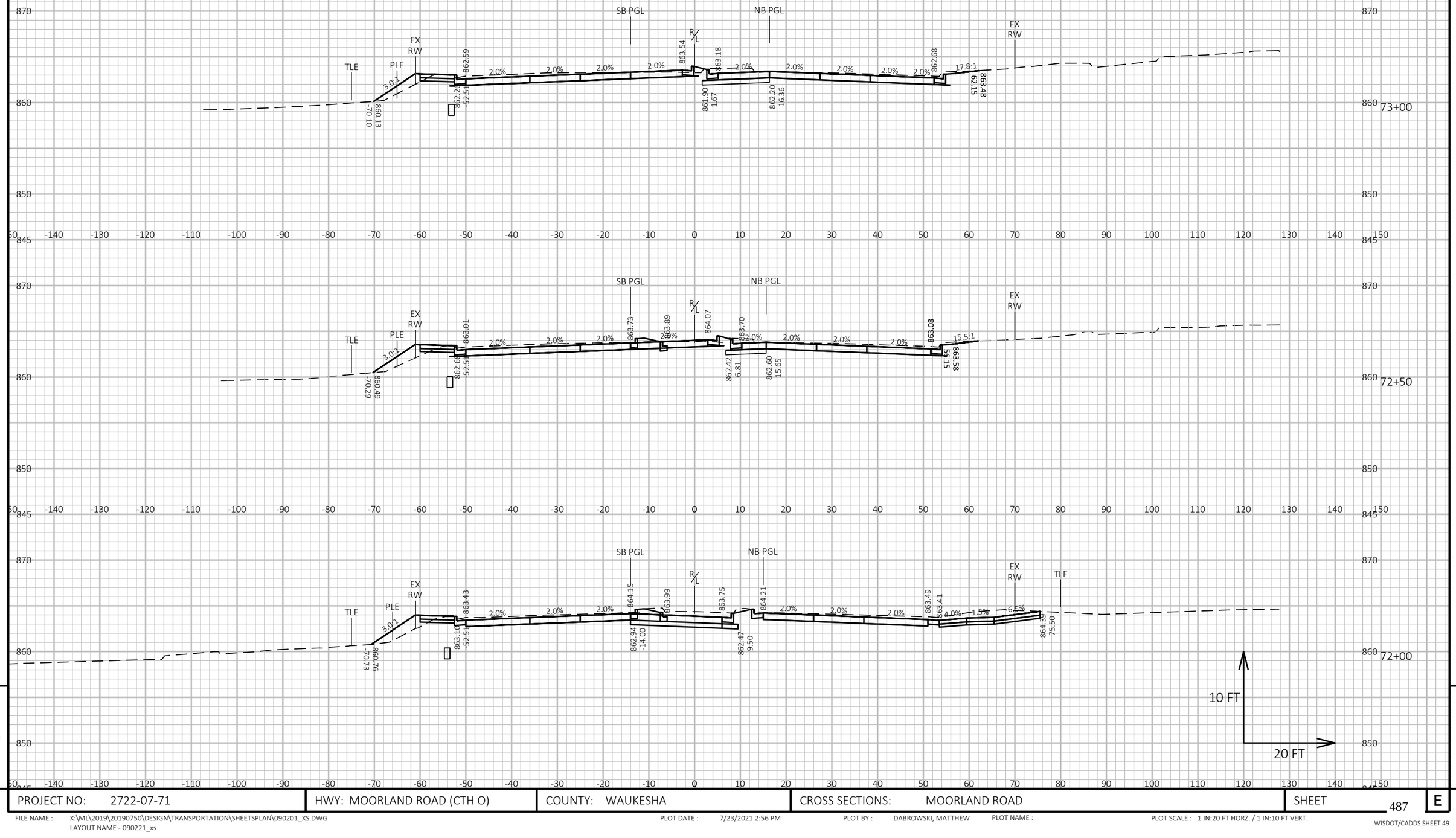


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 486 E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090220_xs

PLOT DATE : 7/23/2021 2:56 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

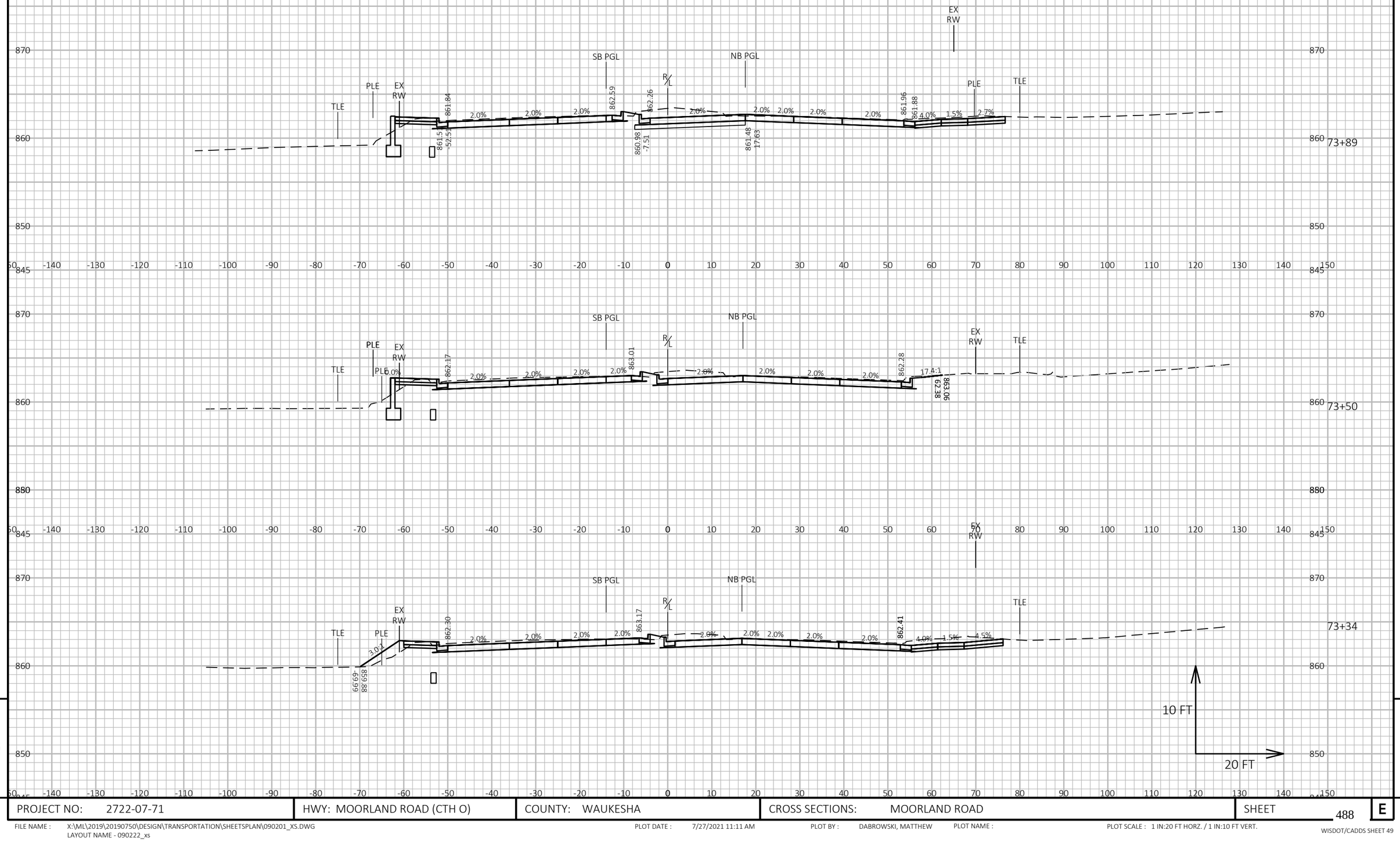


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 487	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090221_xs

PLOT DATE : 7/23/2021 2:56 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



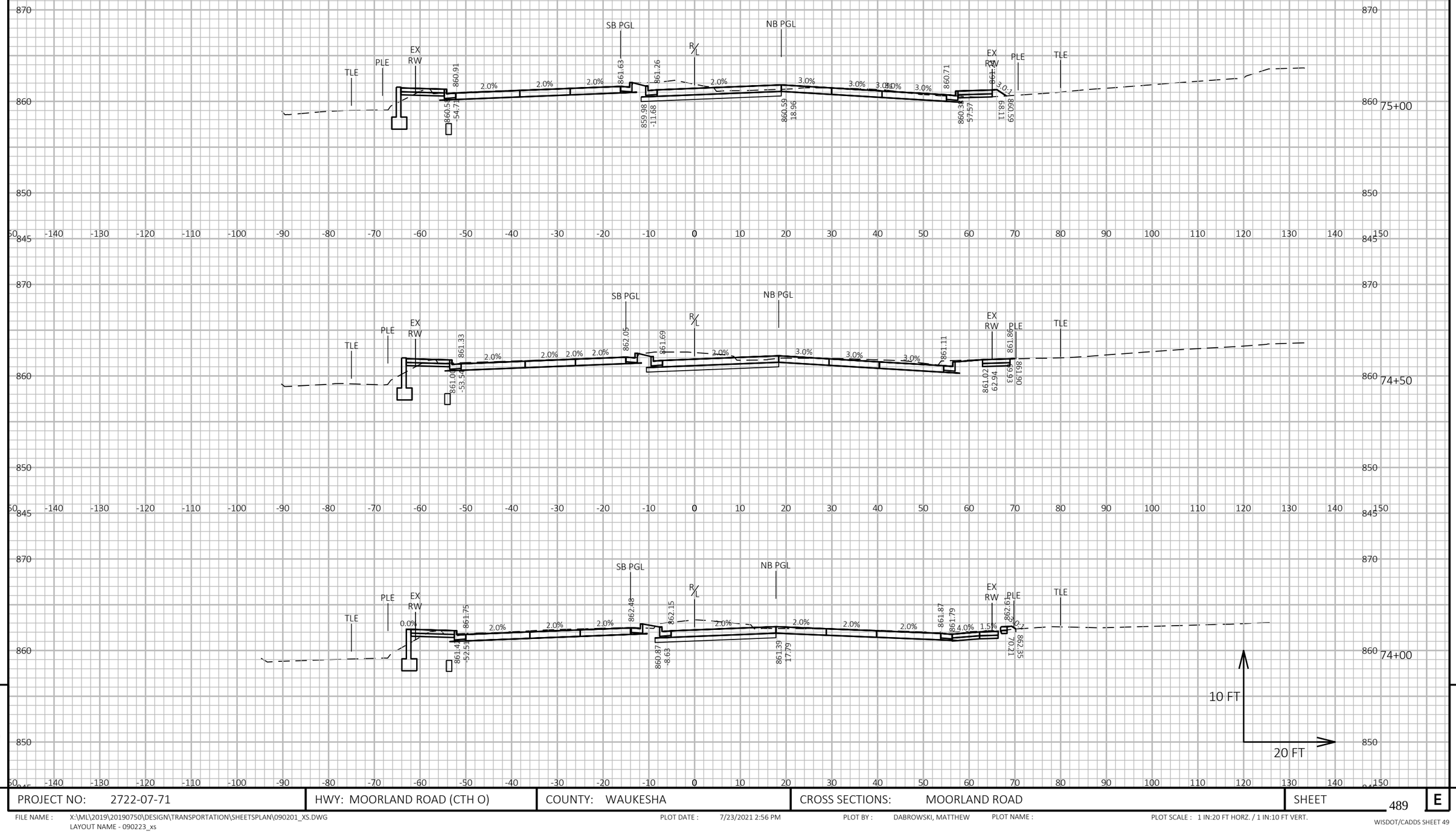
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 488	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090222_xs

PLOT DATE : 7/27/2021 11:11 AM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 489	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090223_xs

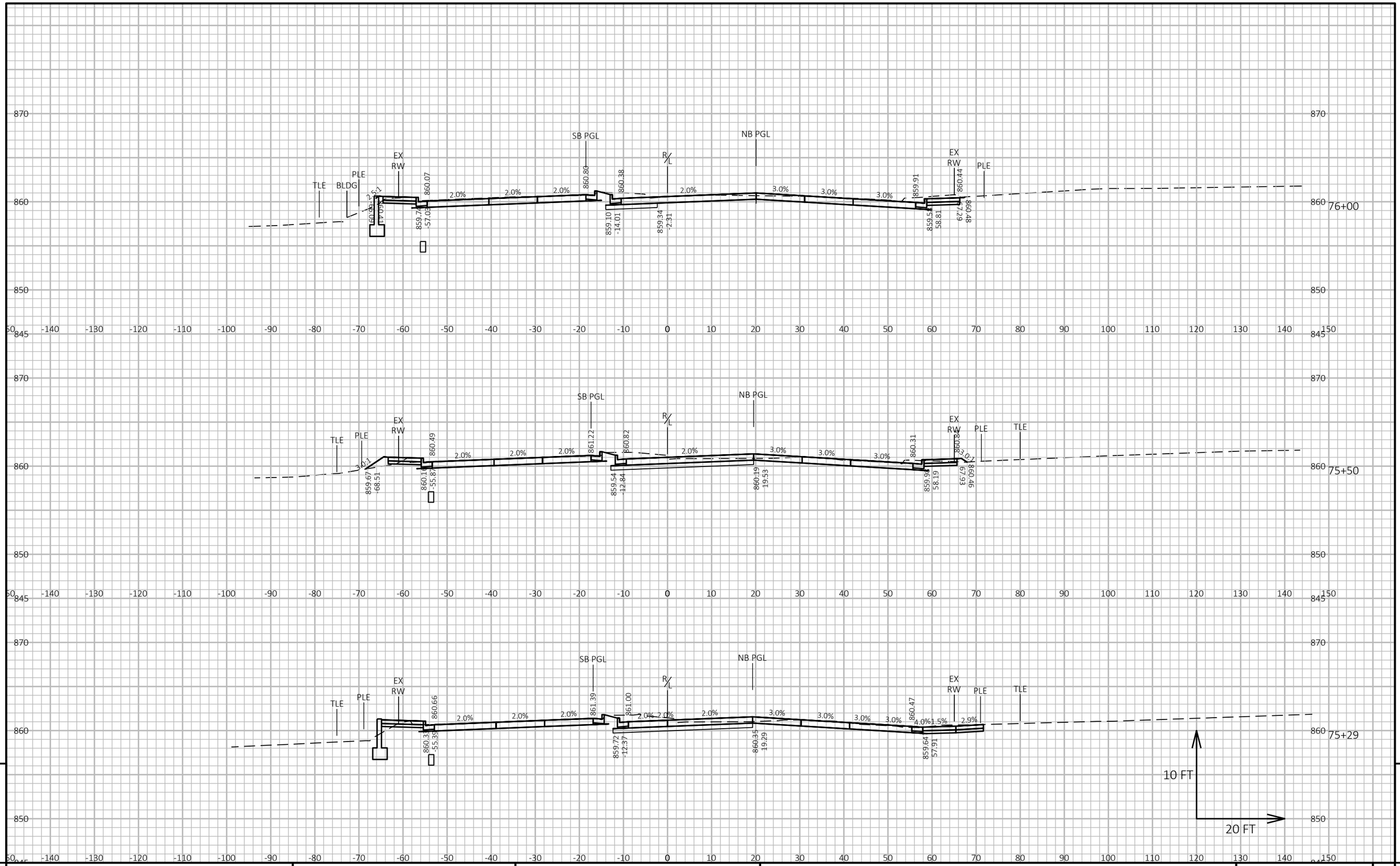
PLOT DATE : 7/23/2021 2:56 PM

PLOT BY : DABROWSKI, MATTHEW

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

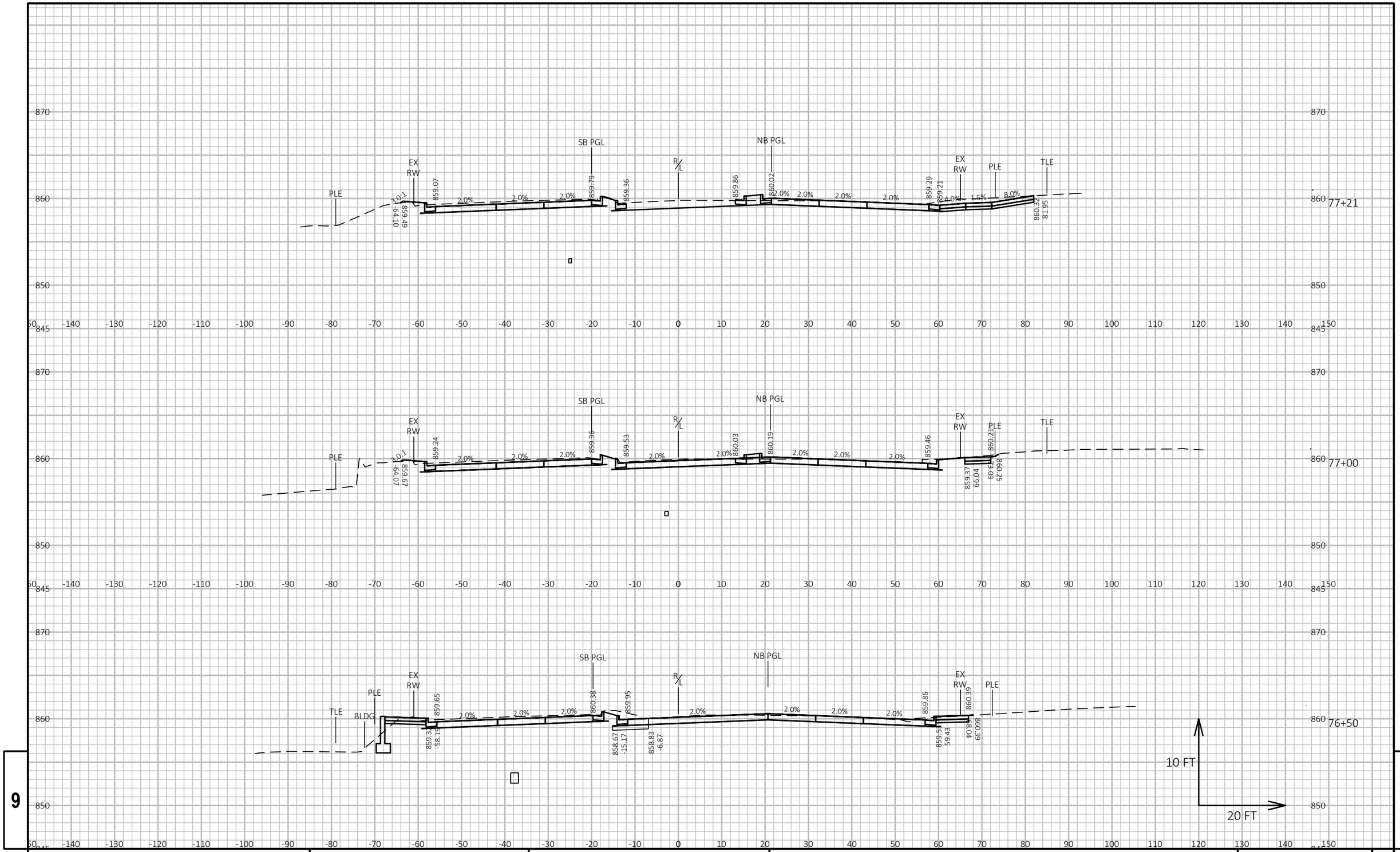


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 490 E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090224_xs

PLOT DATE : 7/23/2021 2:57 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

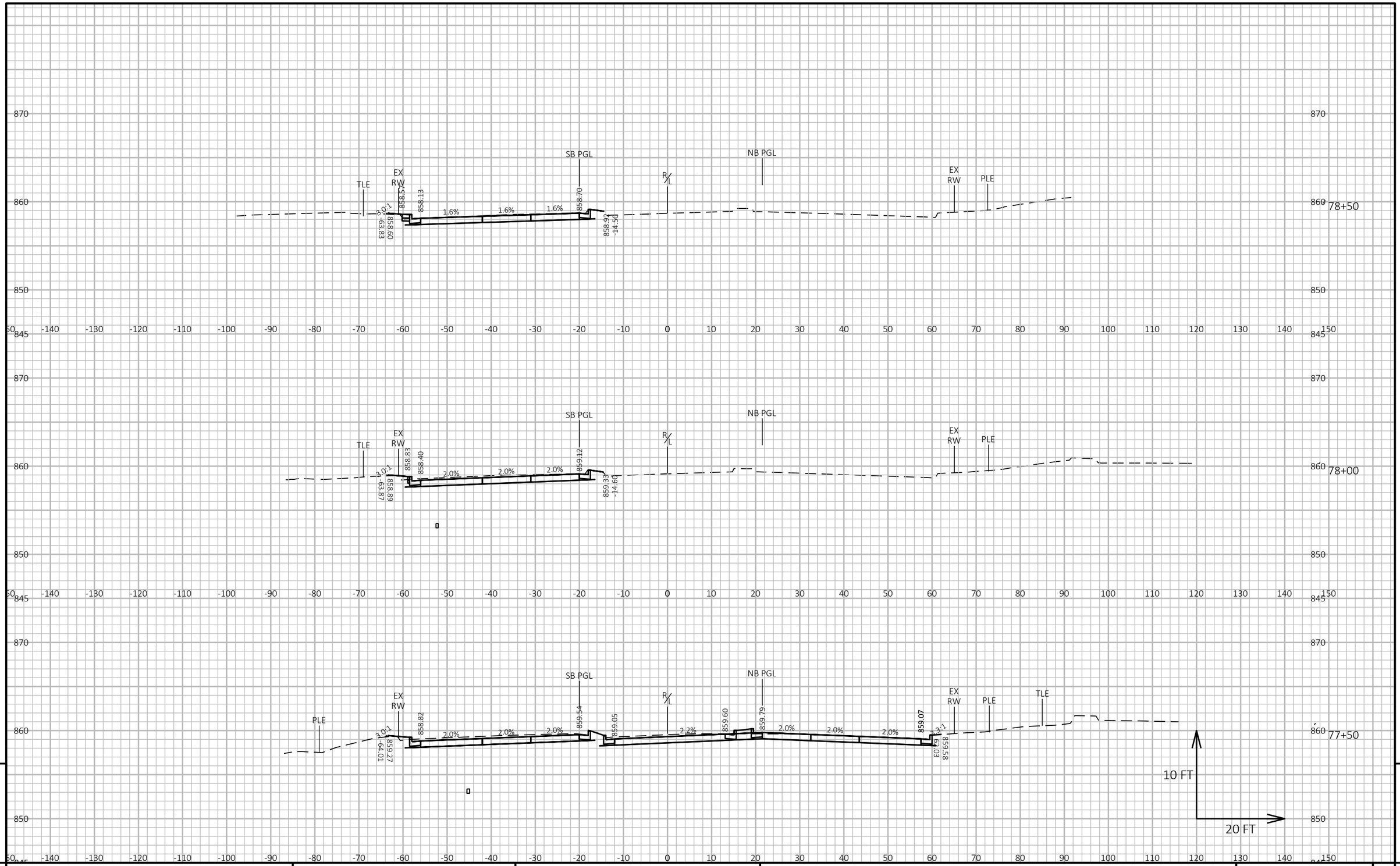


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 491 E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090225_xs

PLOT DATE : 7/23/2021 2:57 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

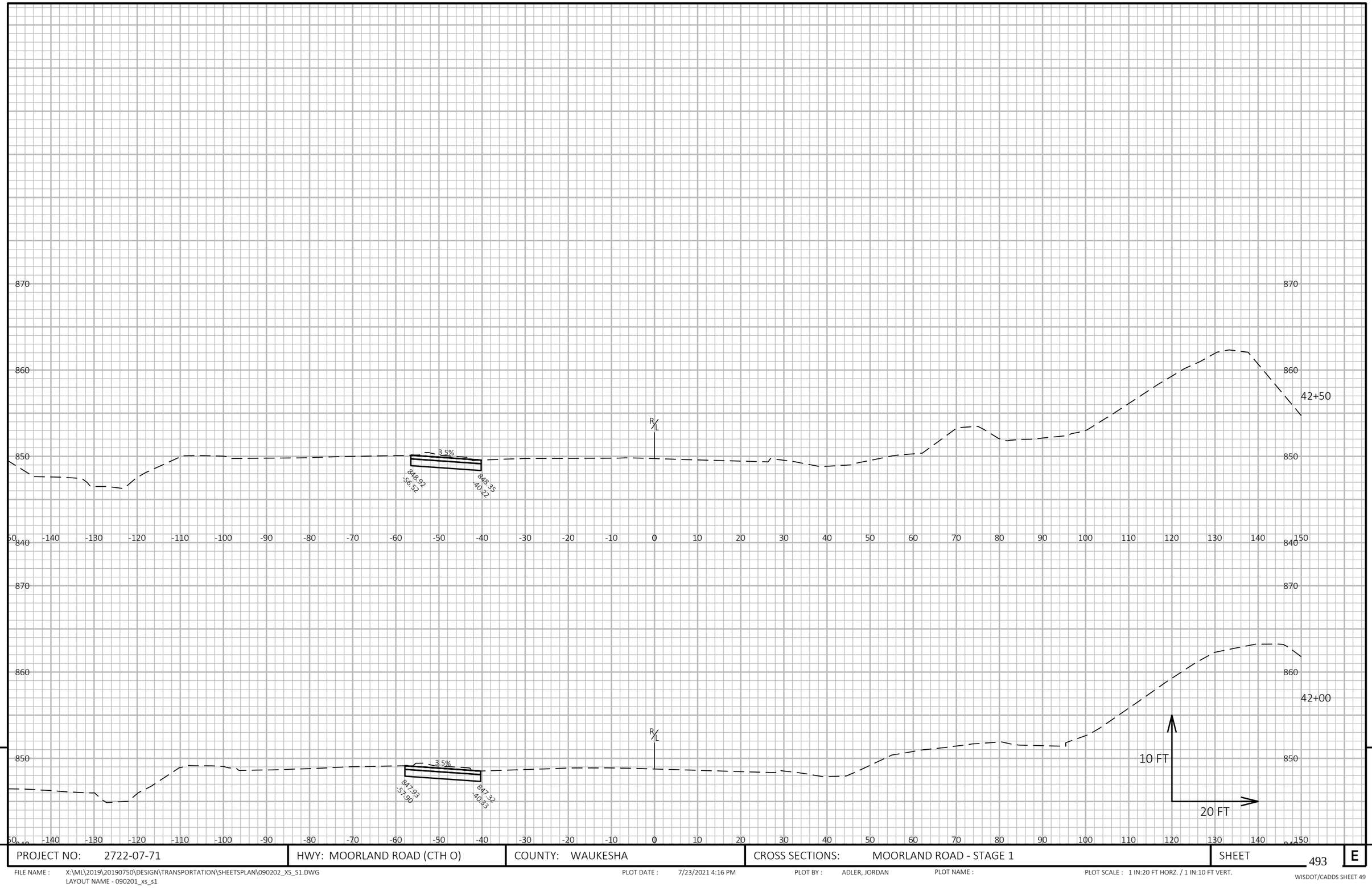


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD	SHEET 492	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090226_xs

PLOT DATE : 7/23/2021 2:57 PM PLOT BY : DABROWSKI, MATTHEW PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

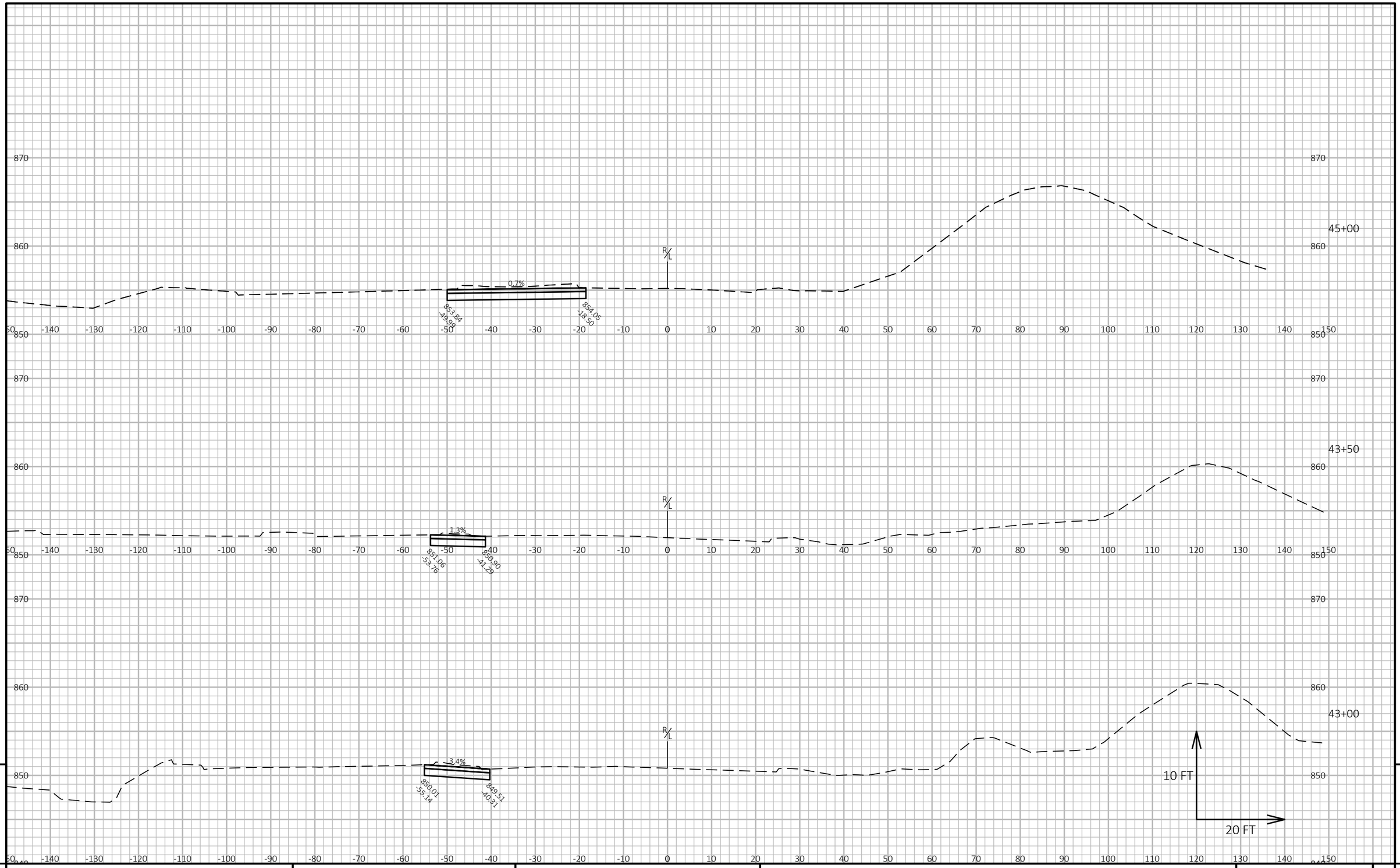
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 493	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090201_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

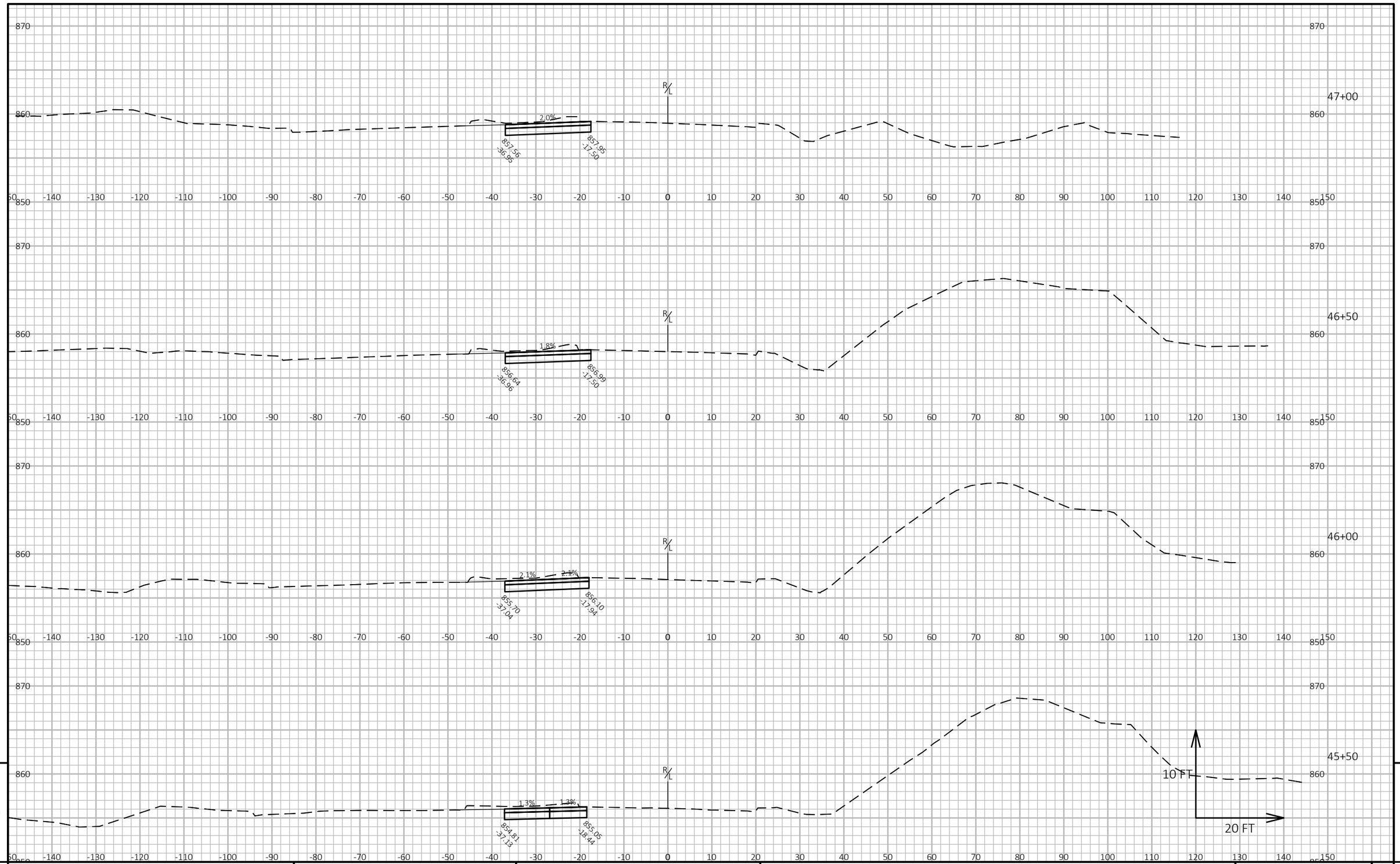
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 494	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090202_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

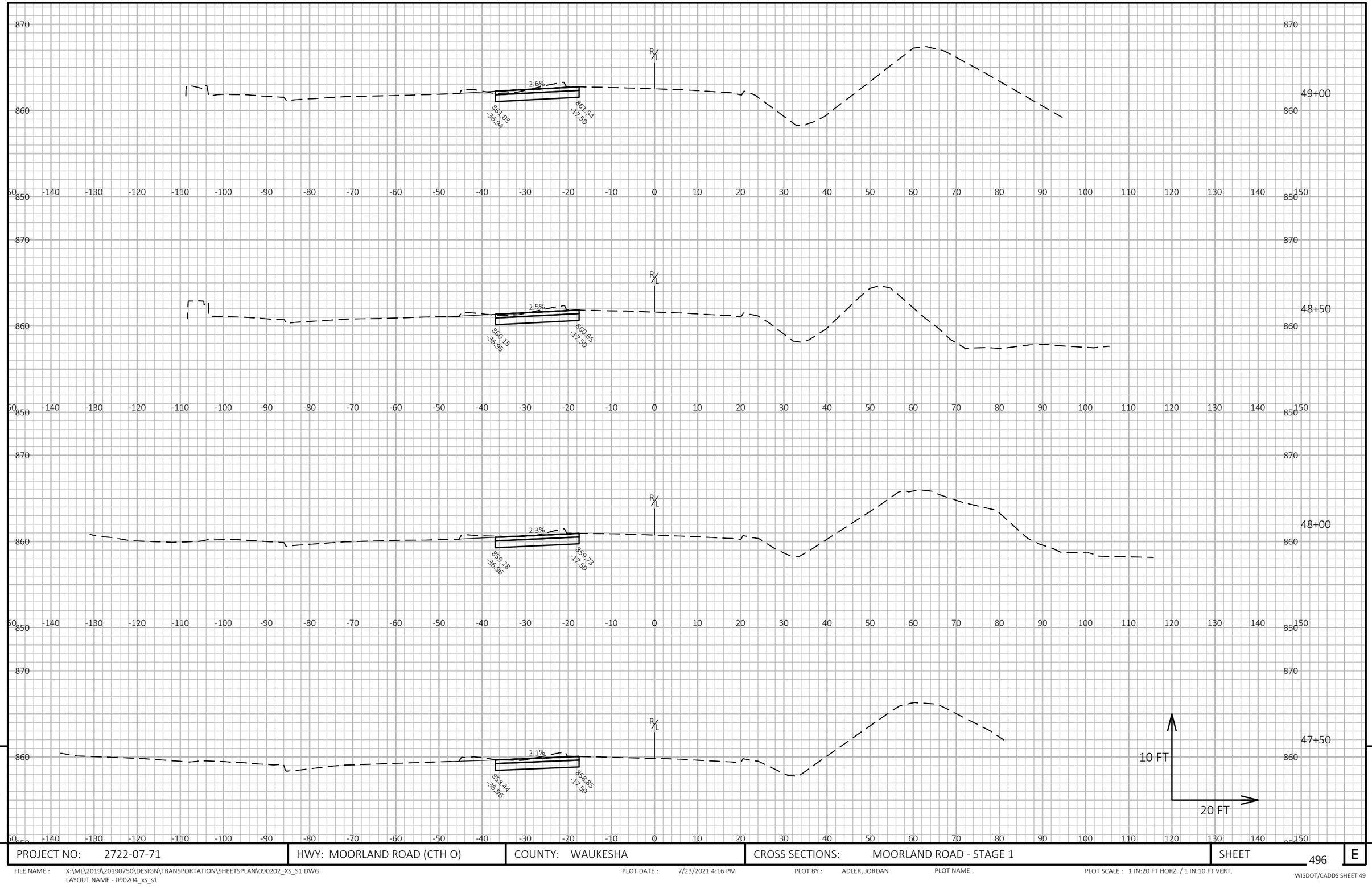
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 495	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090203_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

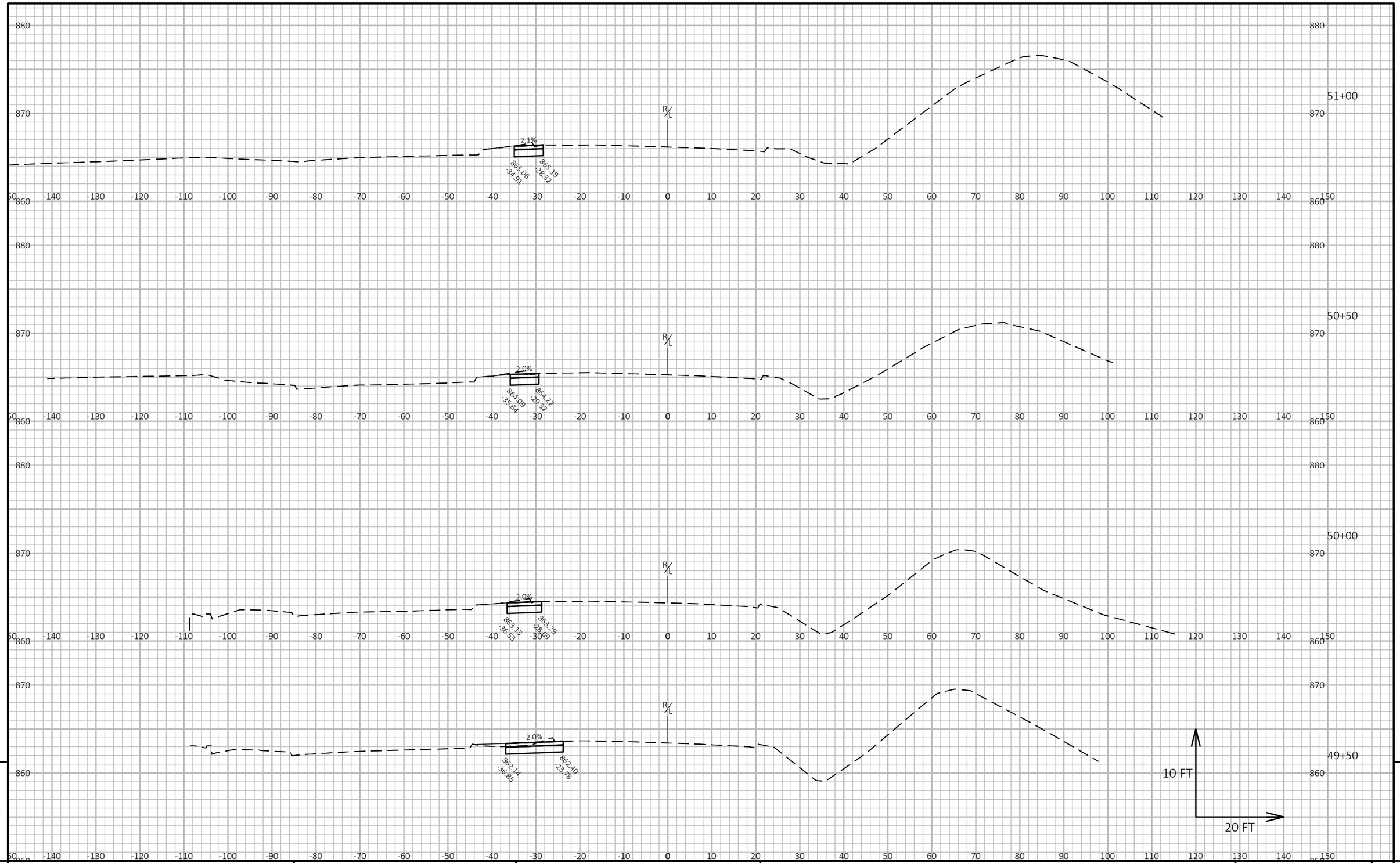


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 496	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090204_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

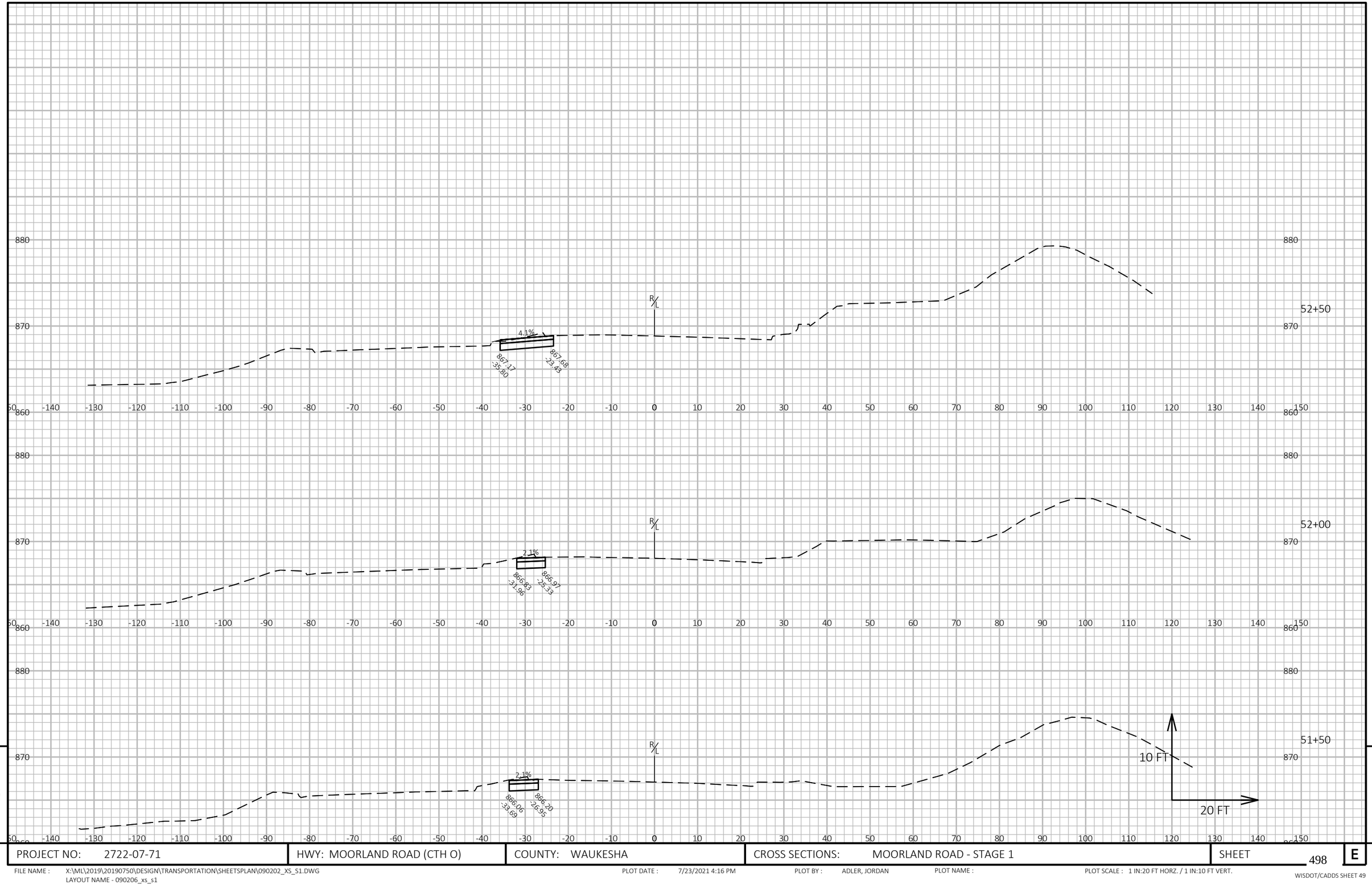


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 497	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090205_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 498	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090206_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

53+50

890
880
870
860

R/L

1.0% -0.6% 0.2%

868.72
-5.66

868.66
3.97

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

53+00

890
880
870
860

R/L

6.4%

867.18
-37.95

868.23
-21.47

10 FT

20 FT

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

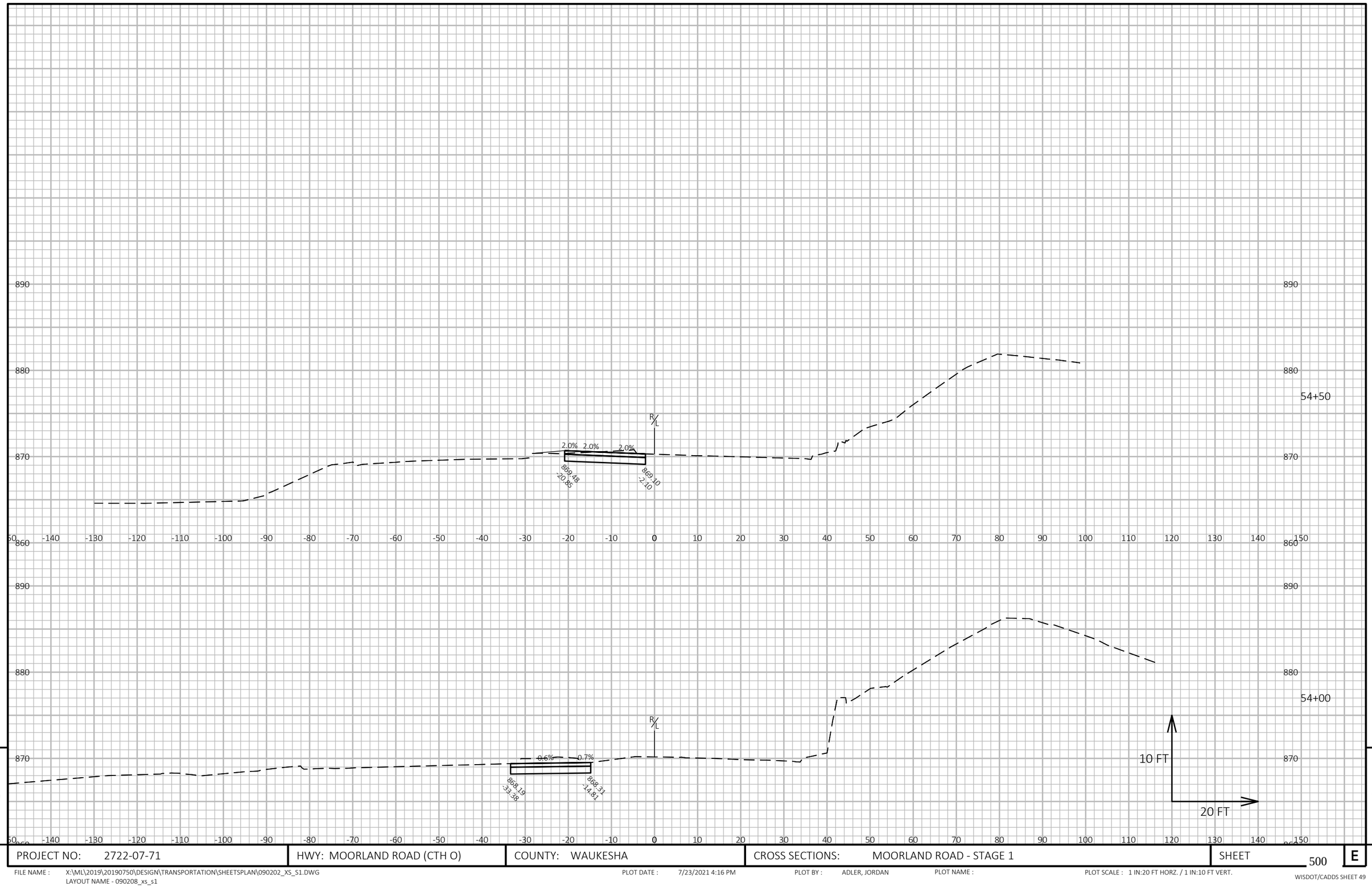
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 499	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090207_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

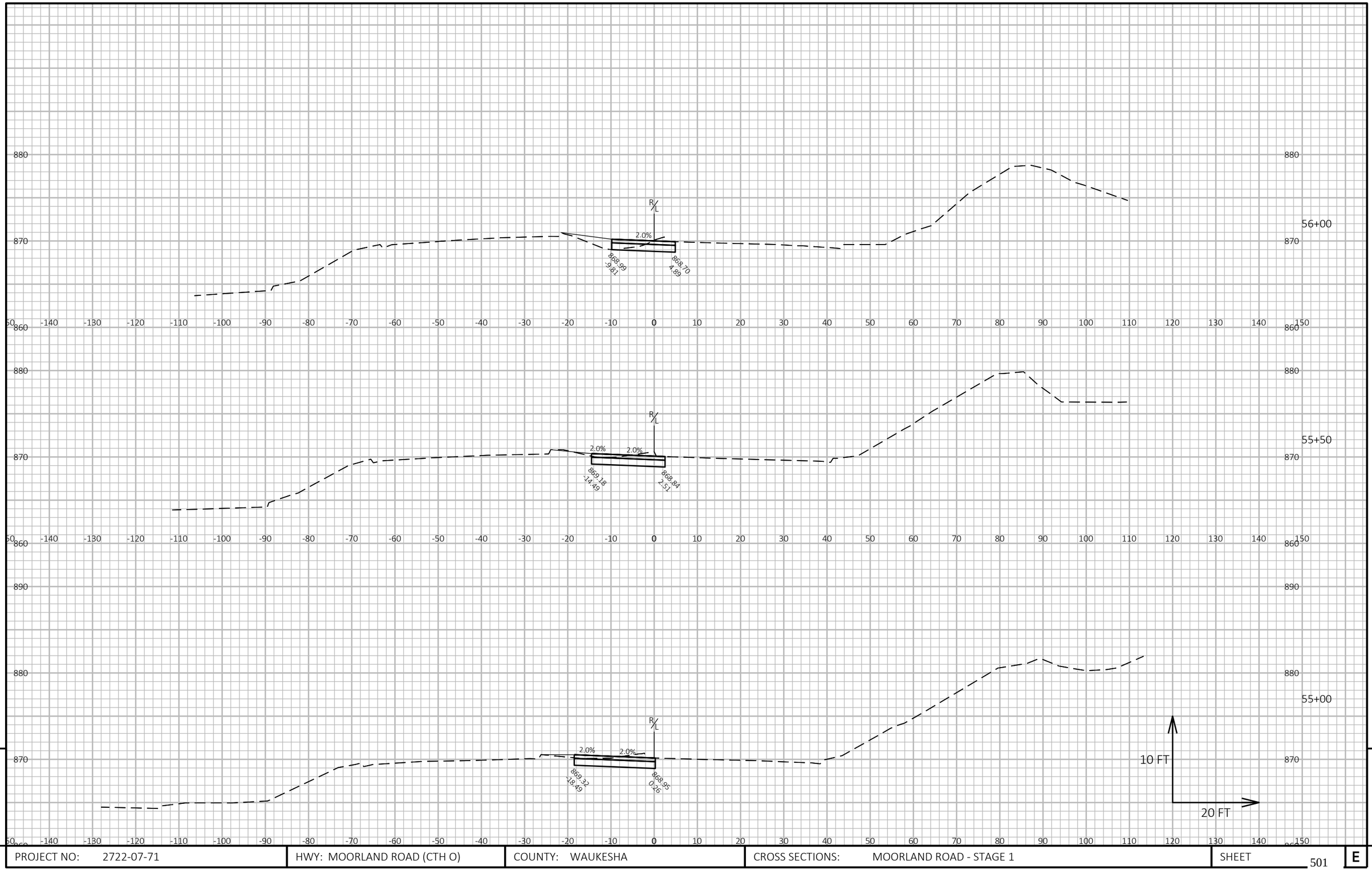


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 500	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090208_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

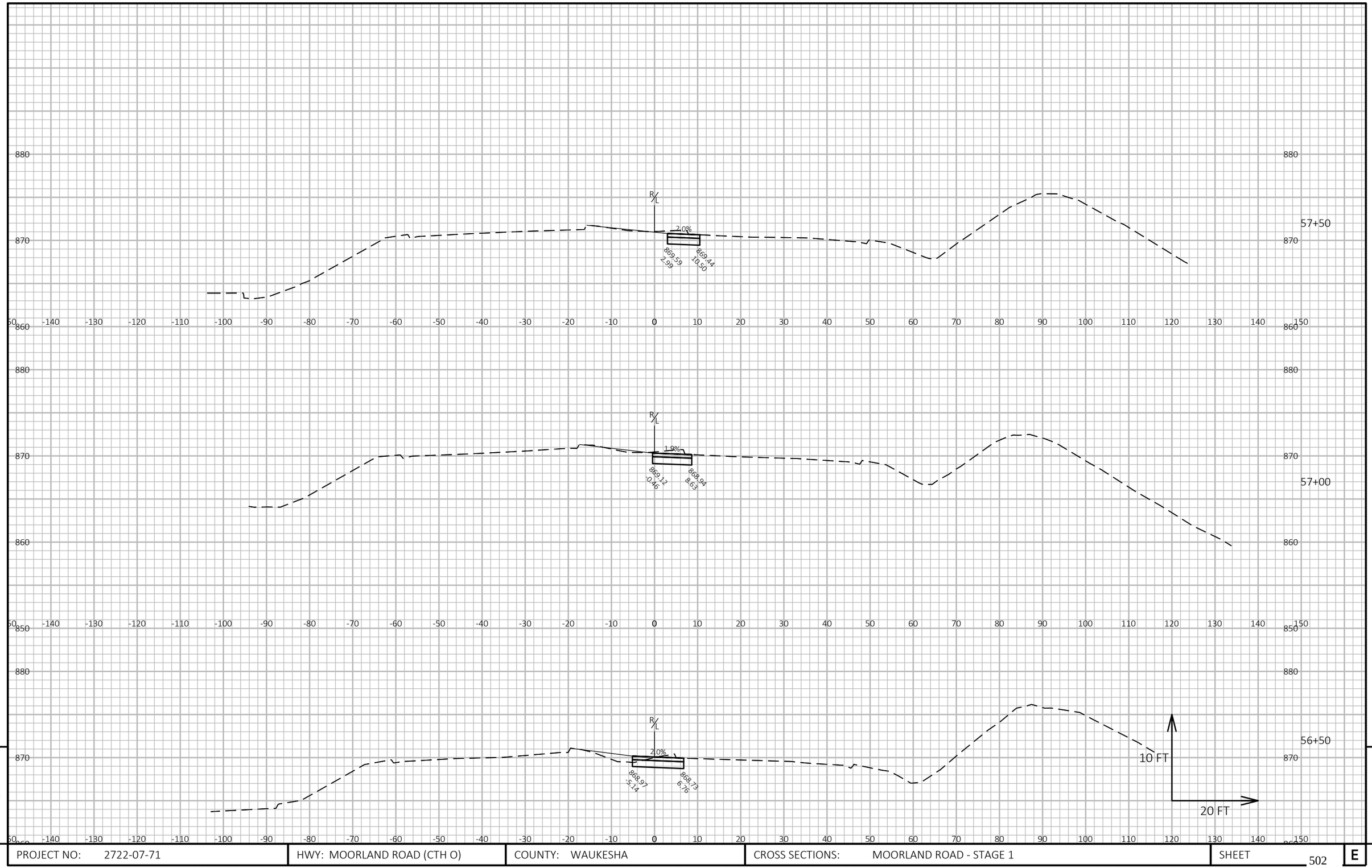
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 501	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090209_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

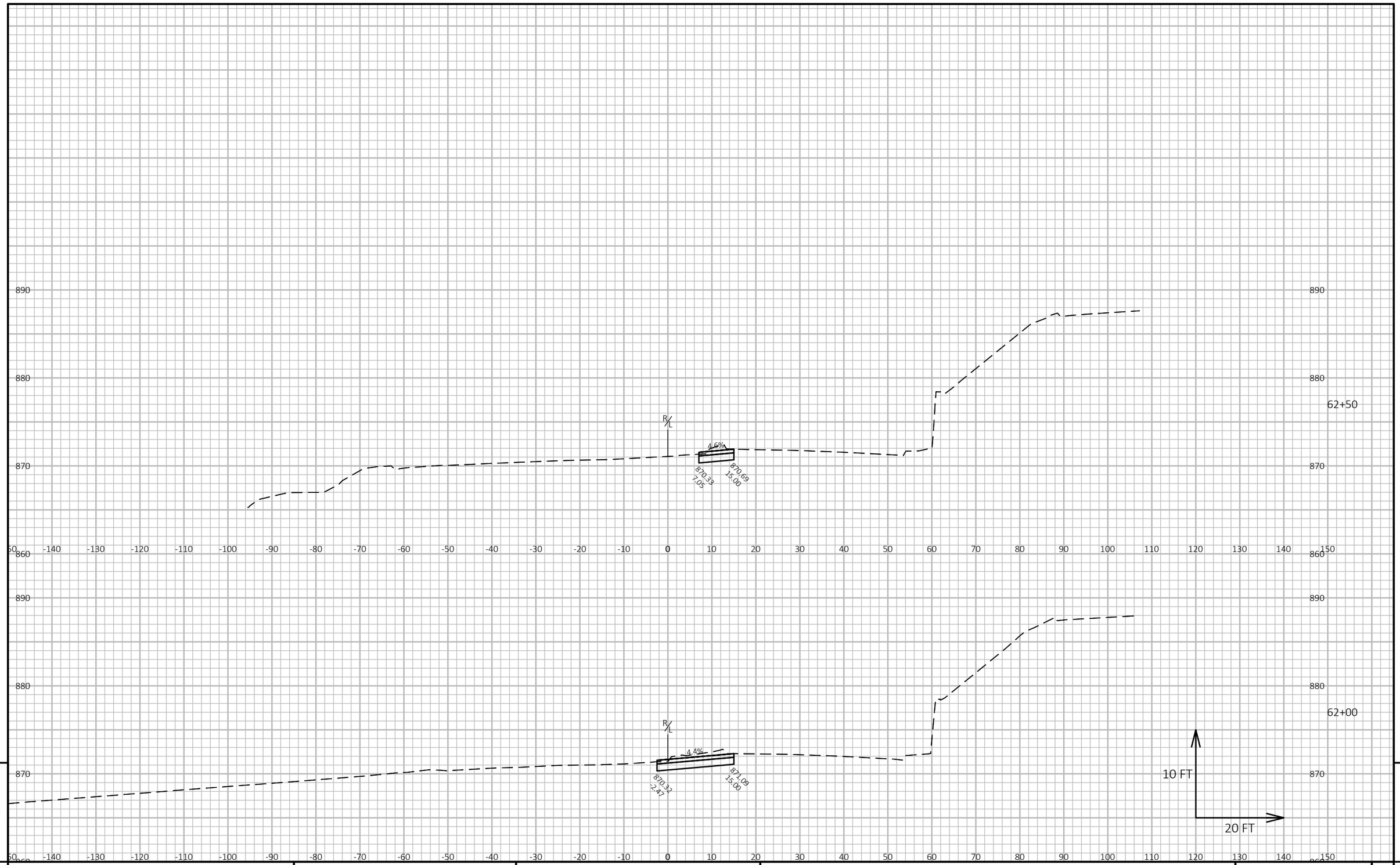


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 502 E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090210_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

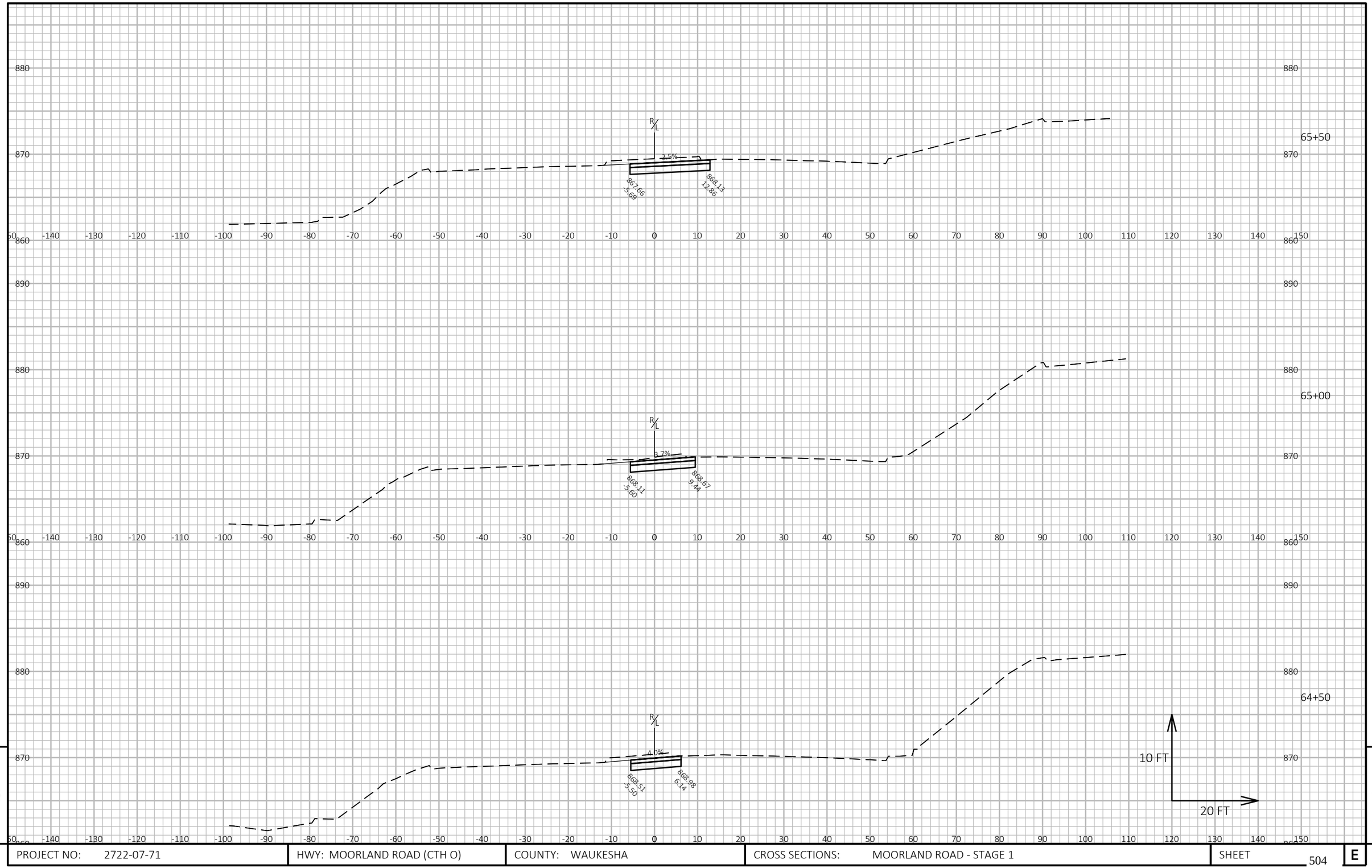
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 503	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090211_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

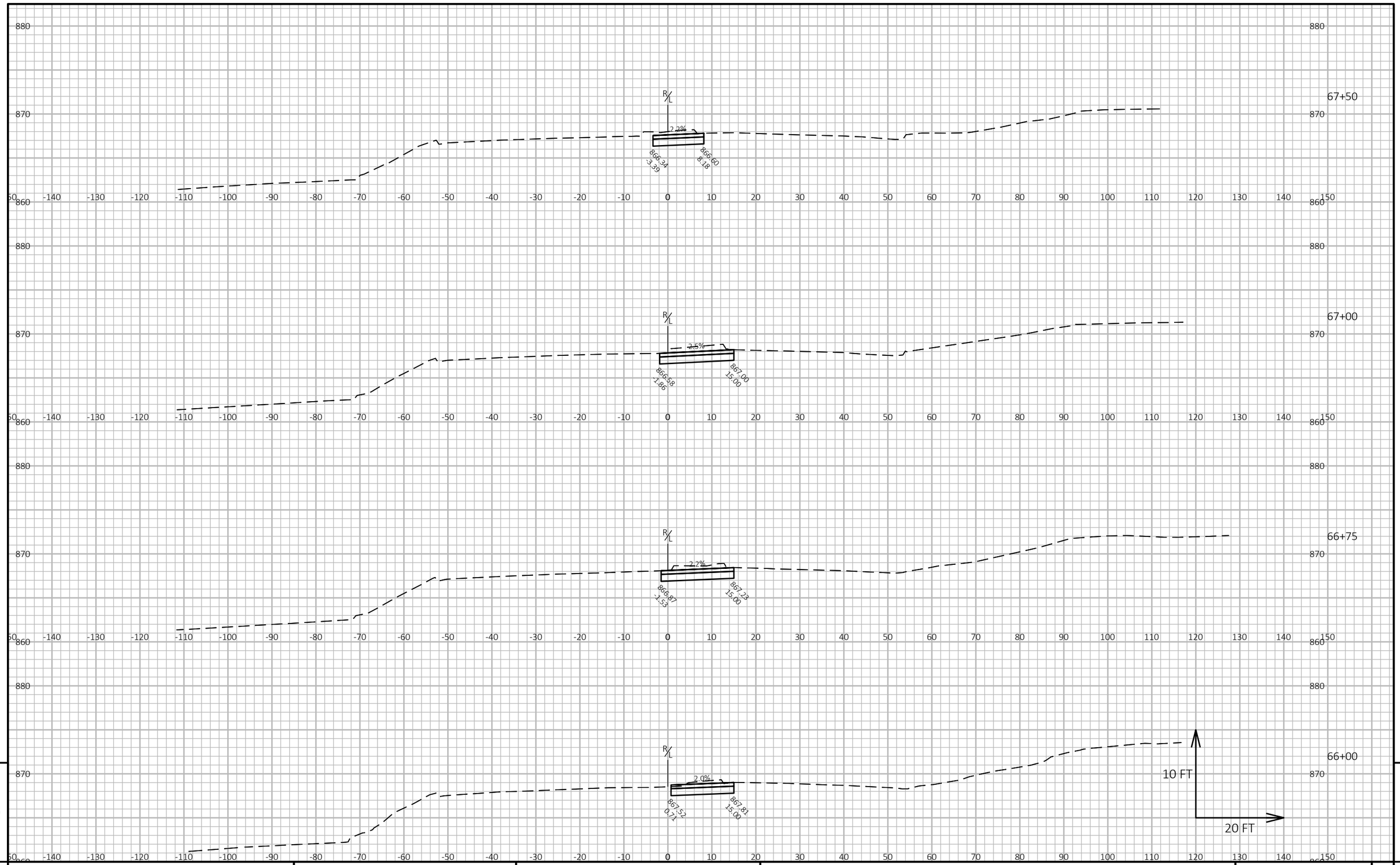


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 504	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090212_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

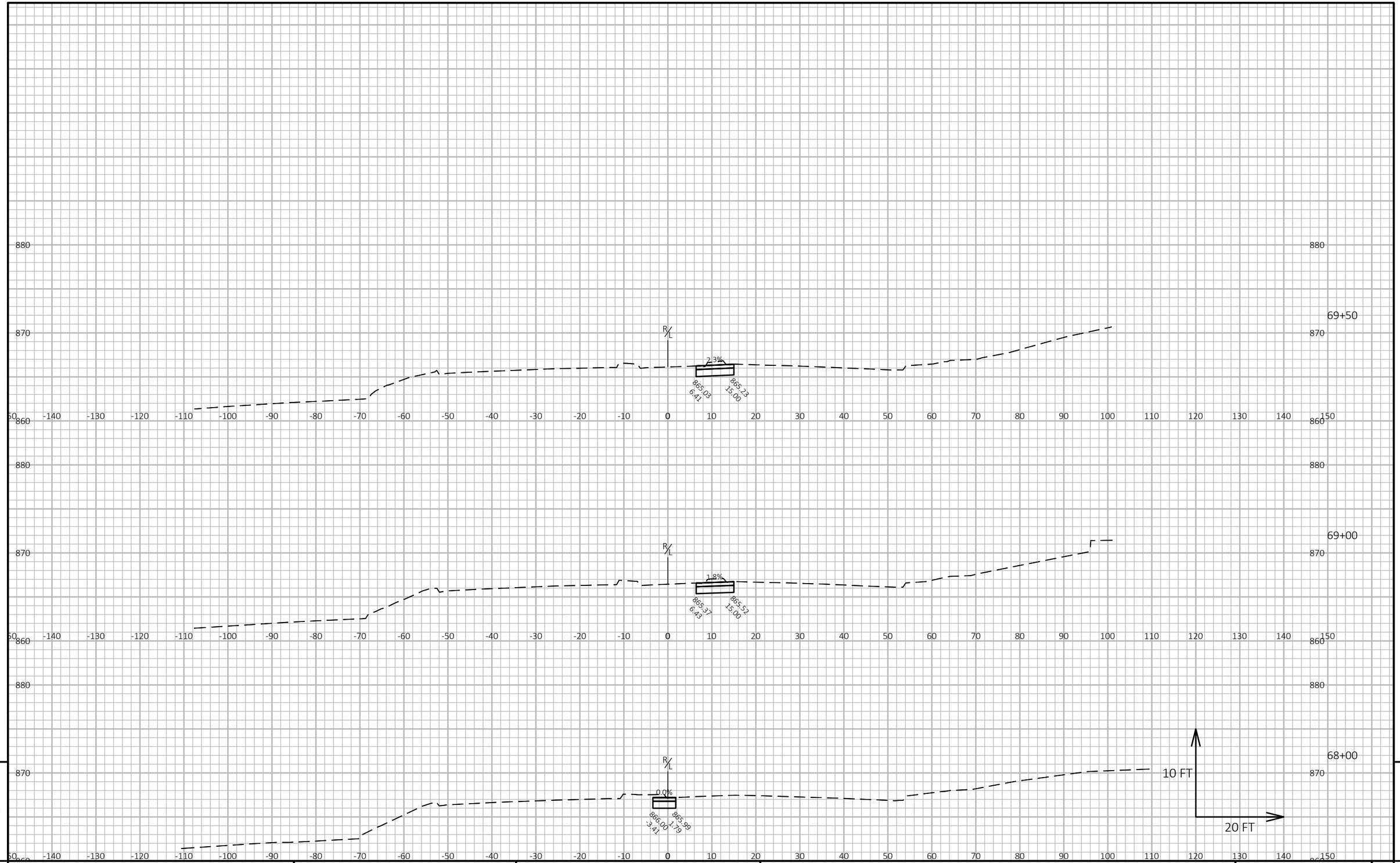
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 505	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090213_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

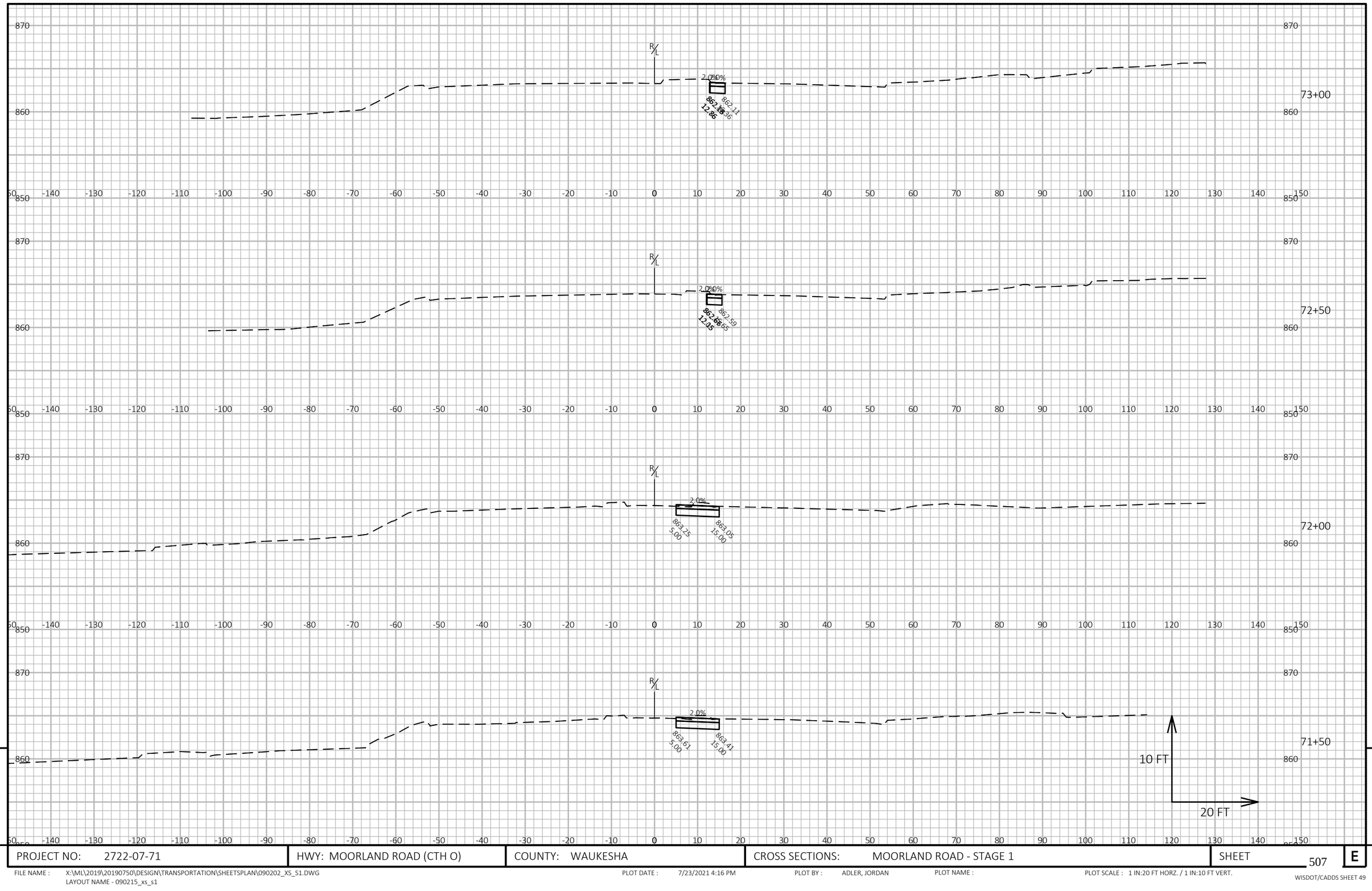
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 506	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090214_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

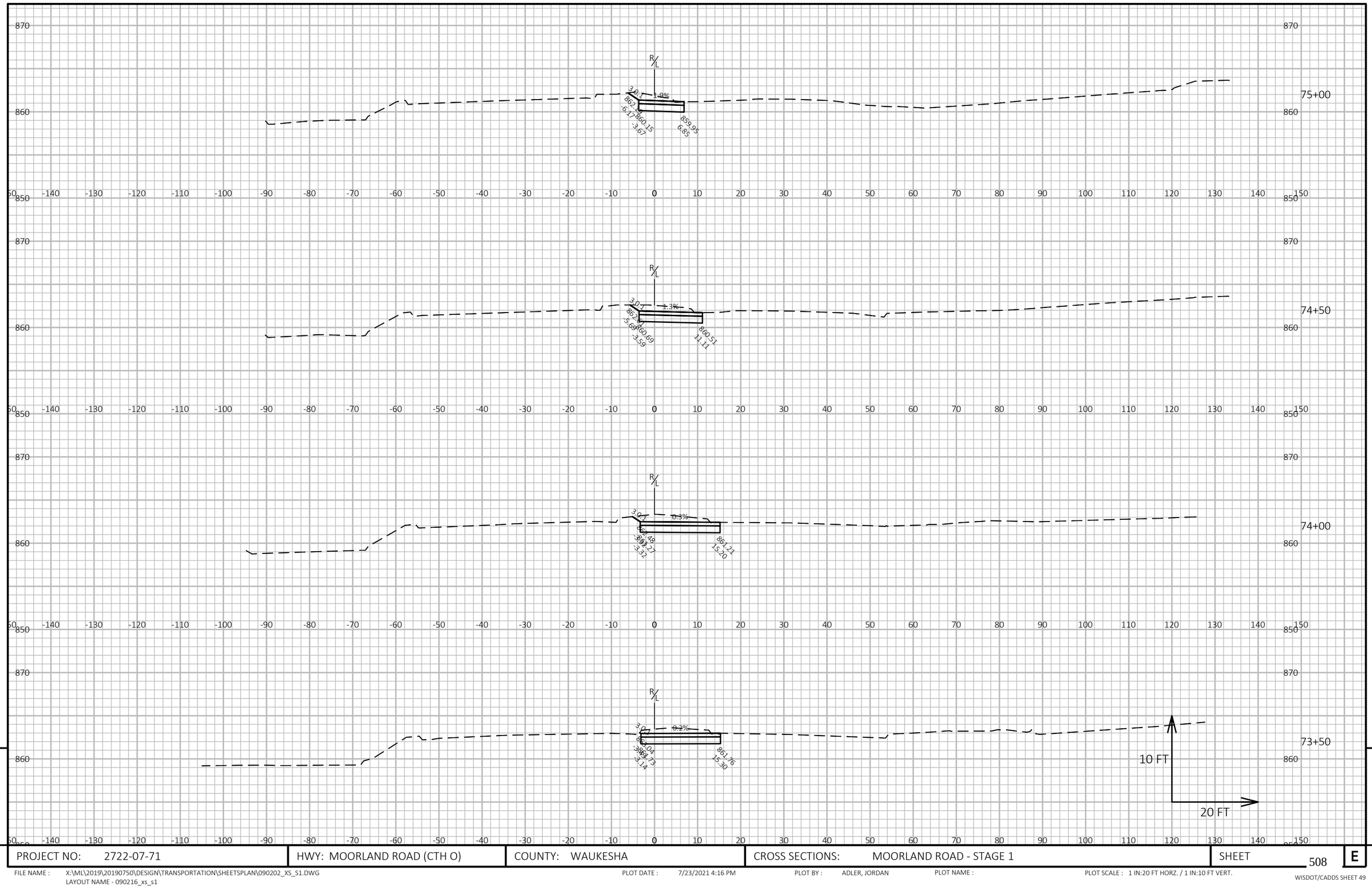


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 507	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090215_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

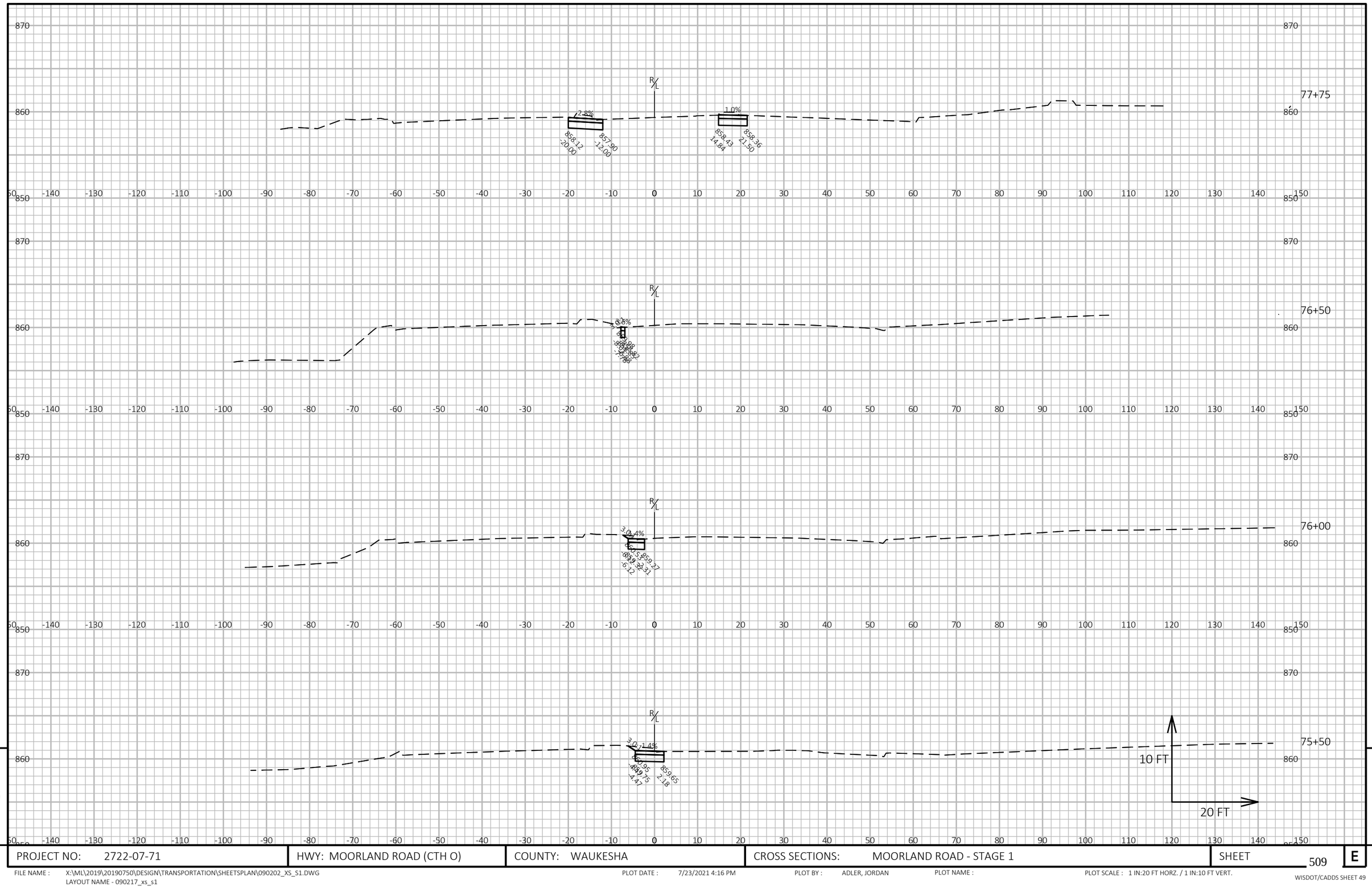
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 508	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090216_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

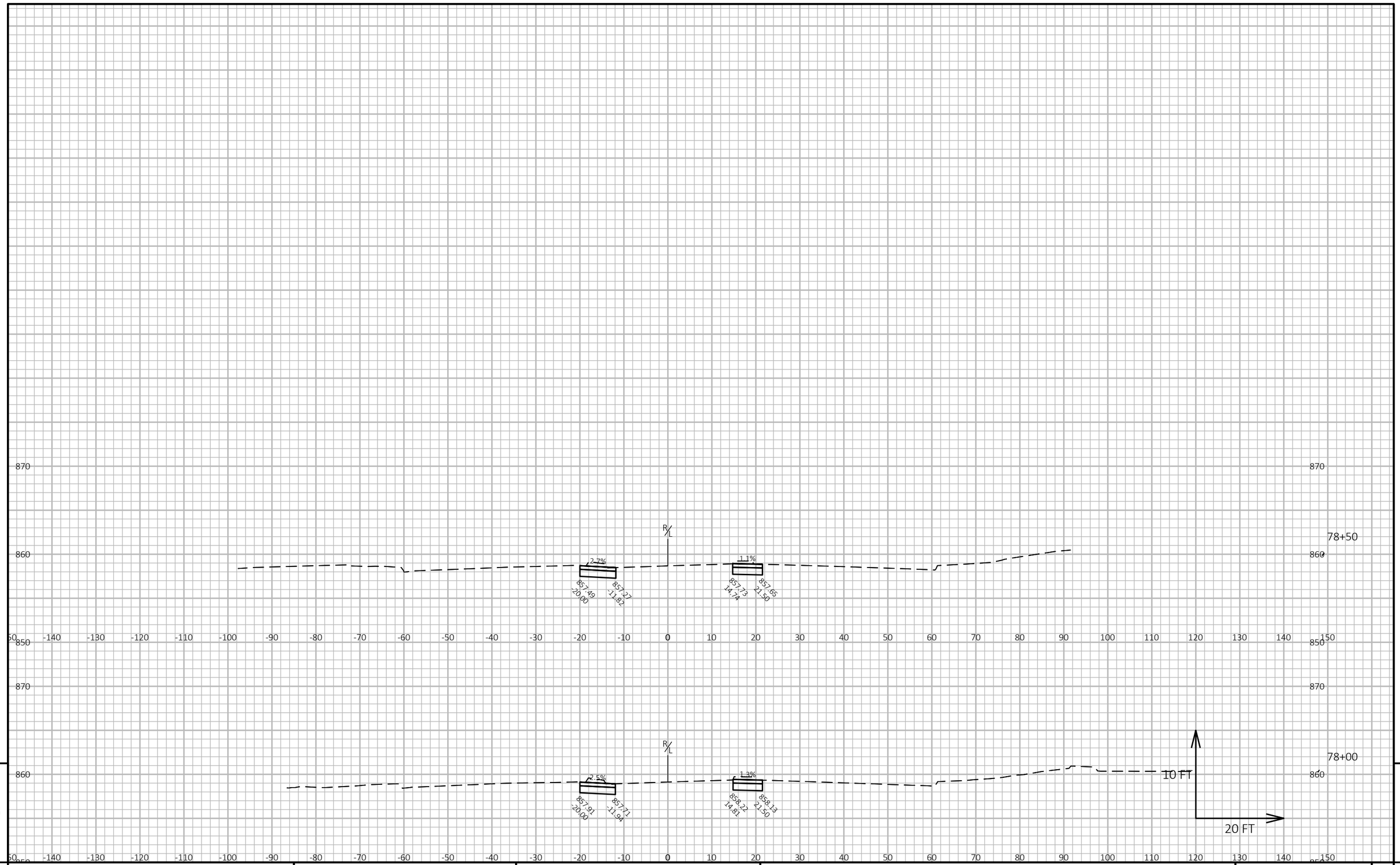
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 509	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090217_xs_s1

PLOT DATE : 7/23/2021 4:16 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

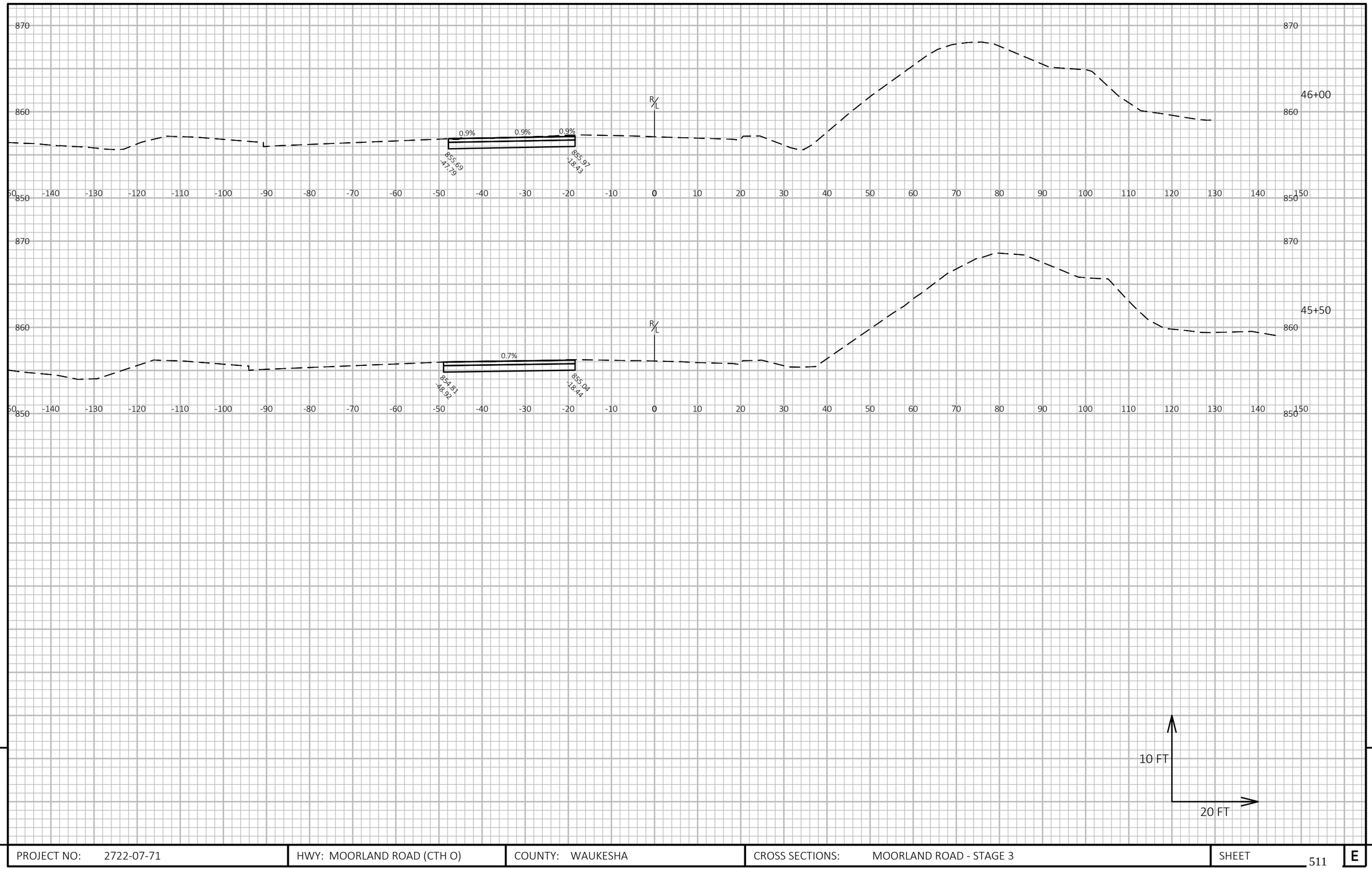
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 1	SHEET 510	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S1.DWG
LAYOUT NAME - 090218_xs_s1

PLOT DATE : 7/23/2021 4:17 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

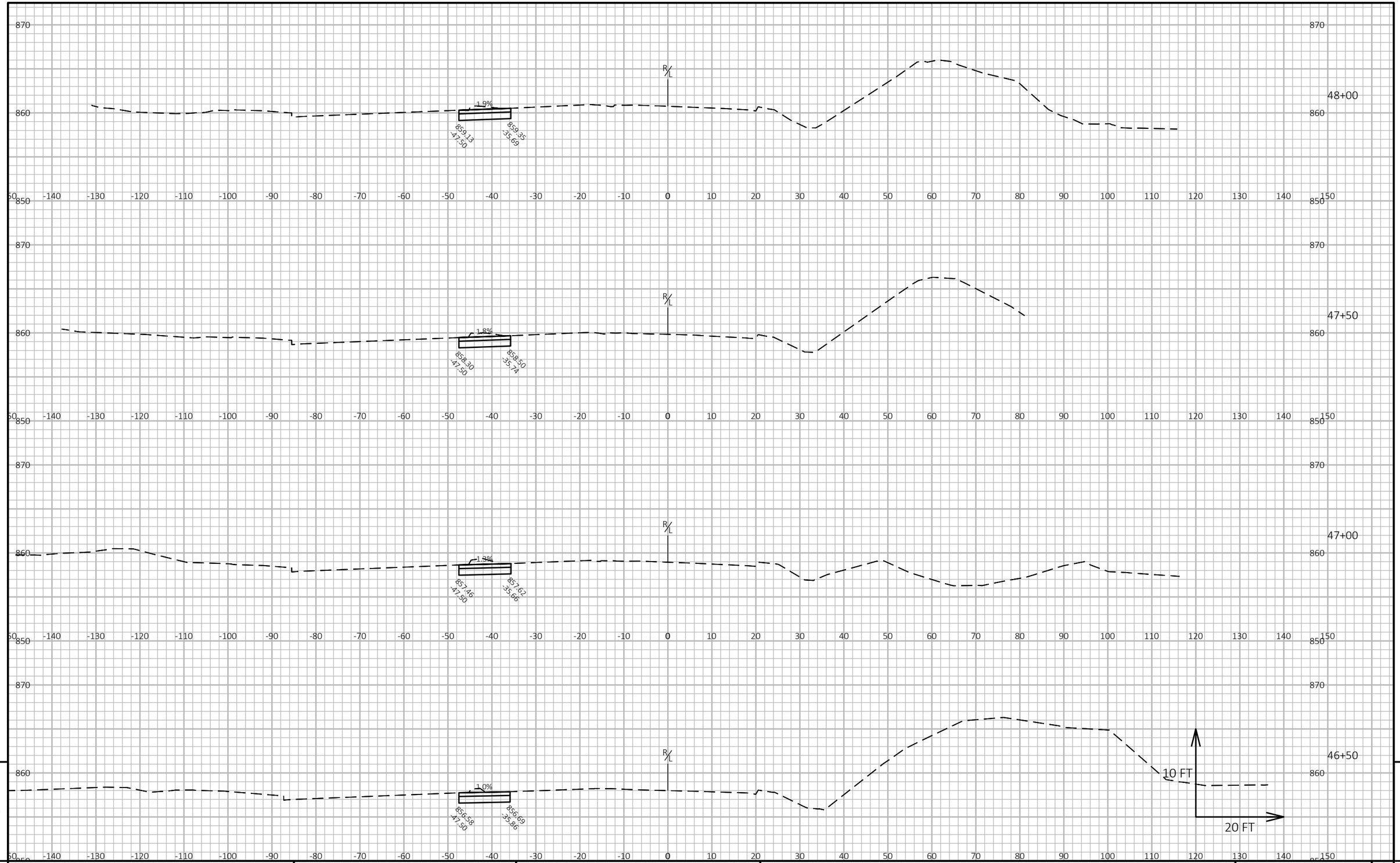
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 511	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090204_xs_s3

PLOT DATE : 7/23/2021 12:34 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



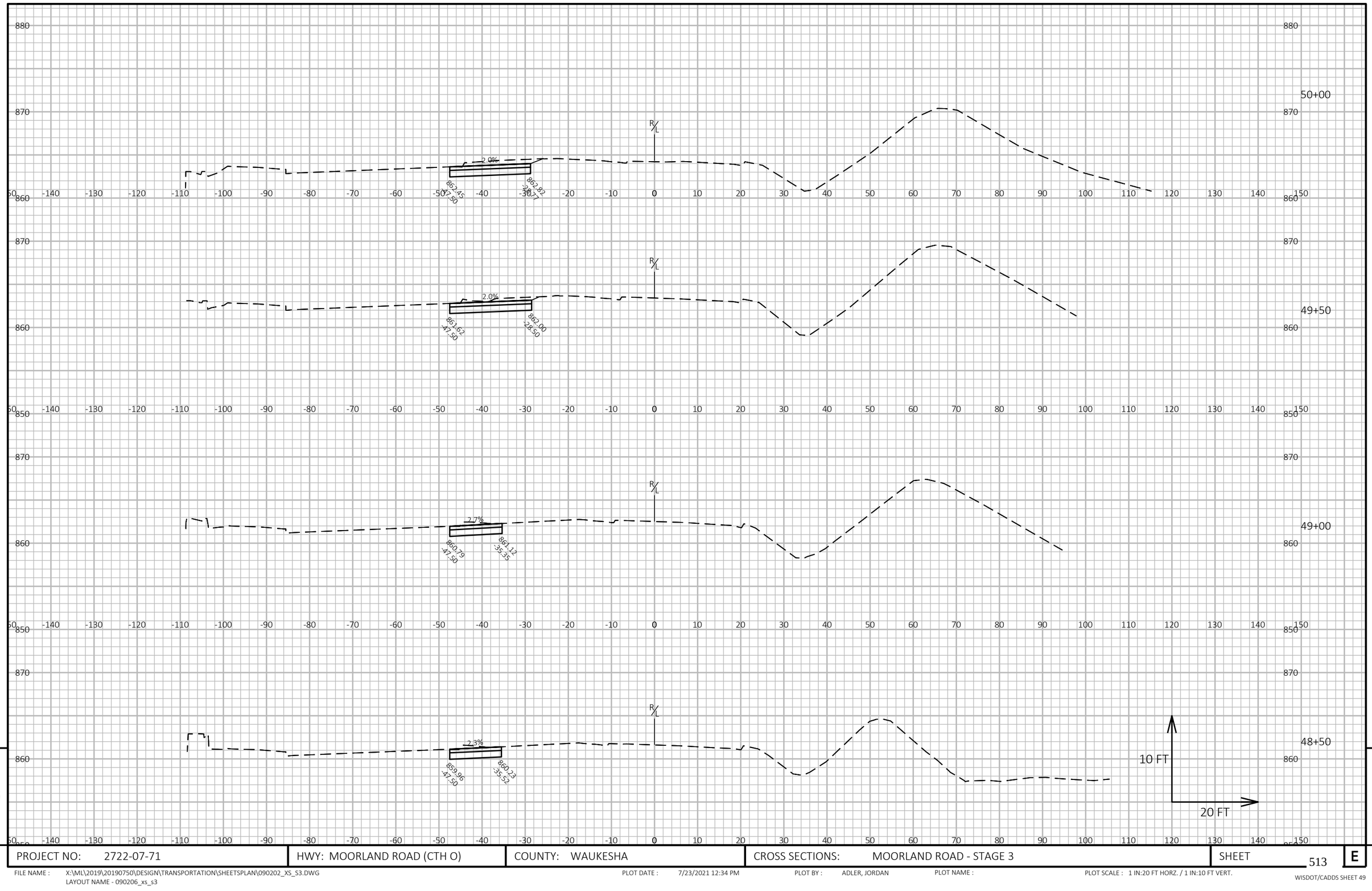
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9

PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 512	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090205_xs_s3

PLOT DATE : 7/23/2021 12:34 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

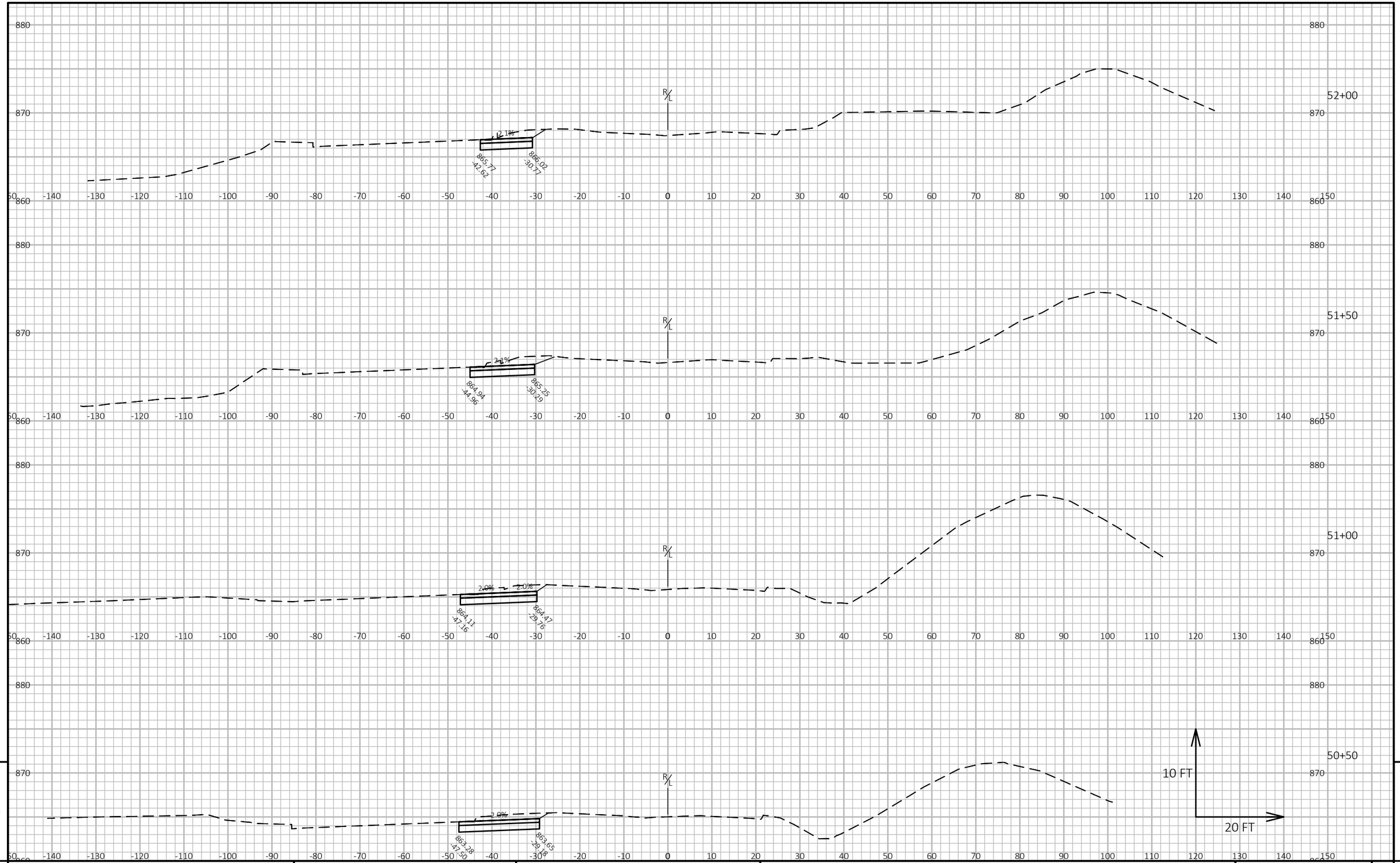
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 513	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090206_xs_s3

PLOT DATE : 7/23/2021 12:34 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

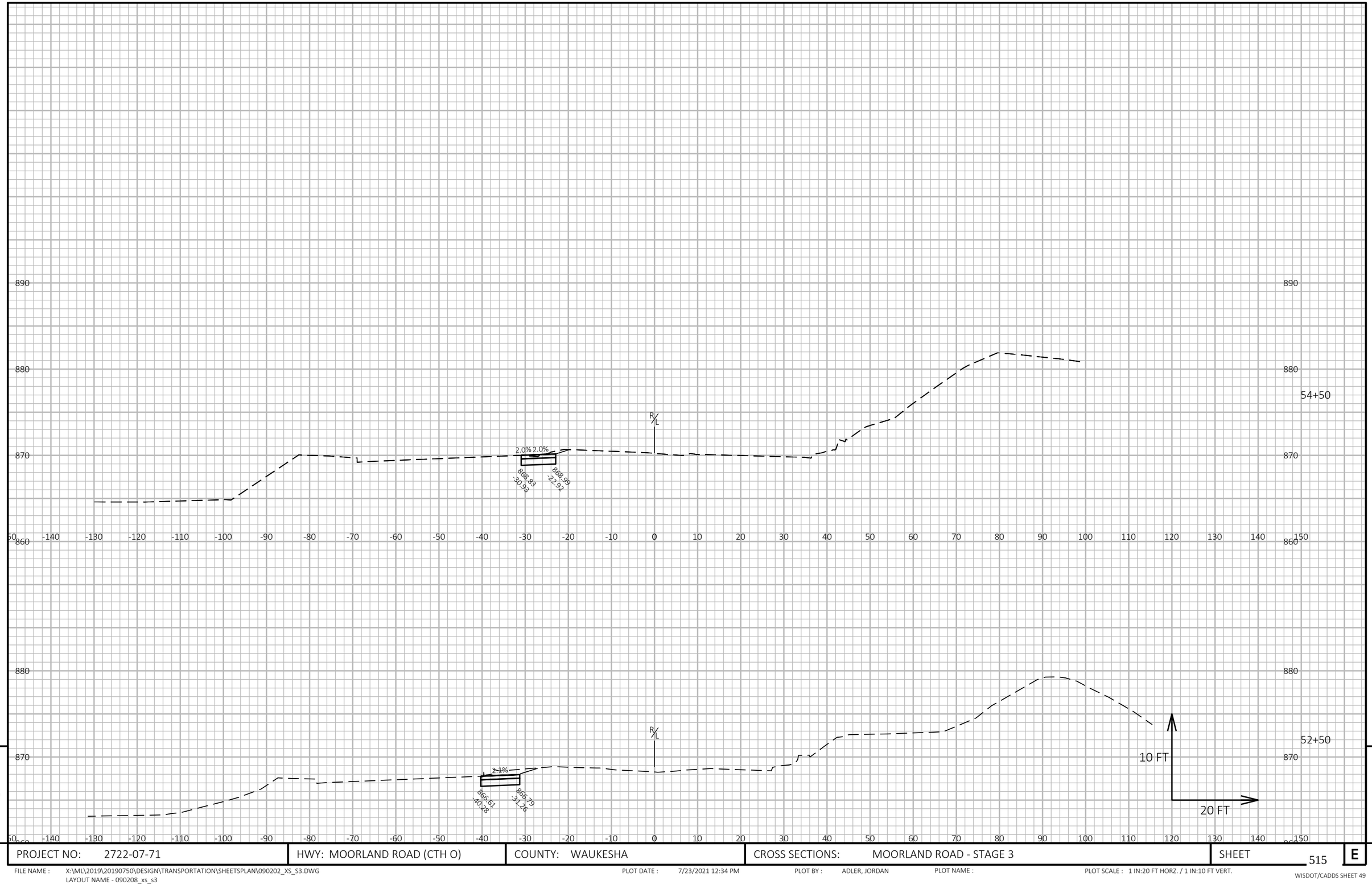
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 514	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090207_xs_s3

PLOT DATE : 7/23/2021 12:34 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 515	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090208_xs_s3

PLOT DATE : 7/23/2021 12:34 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

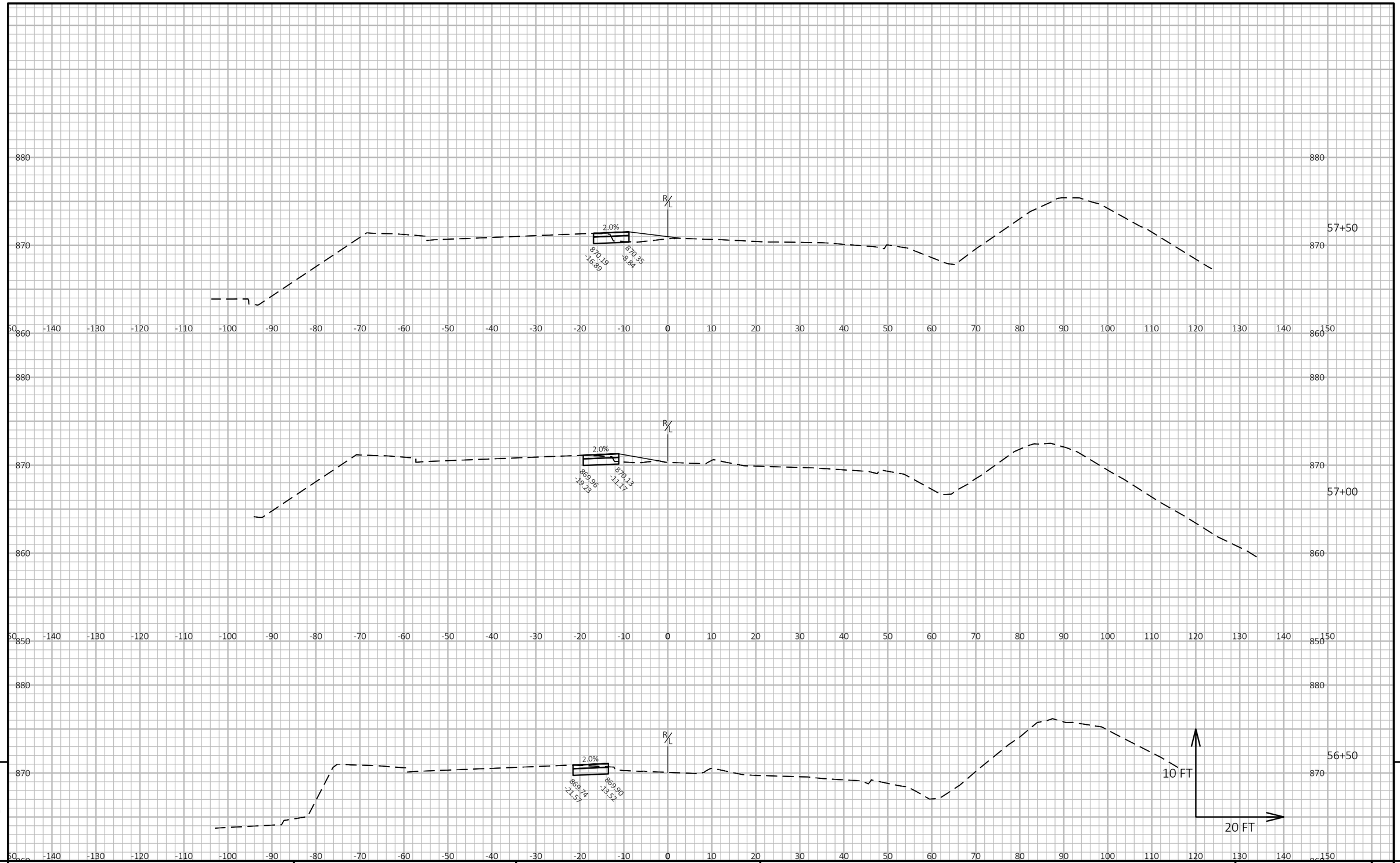
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 516	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090210_xs_s3

PLOT DATE : 7/23/2021 12:34 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

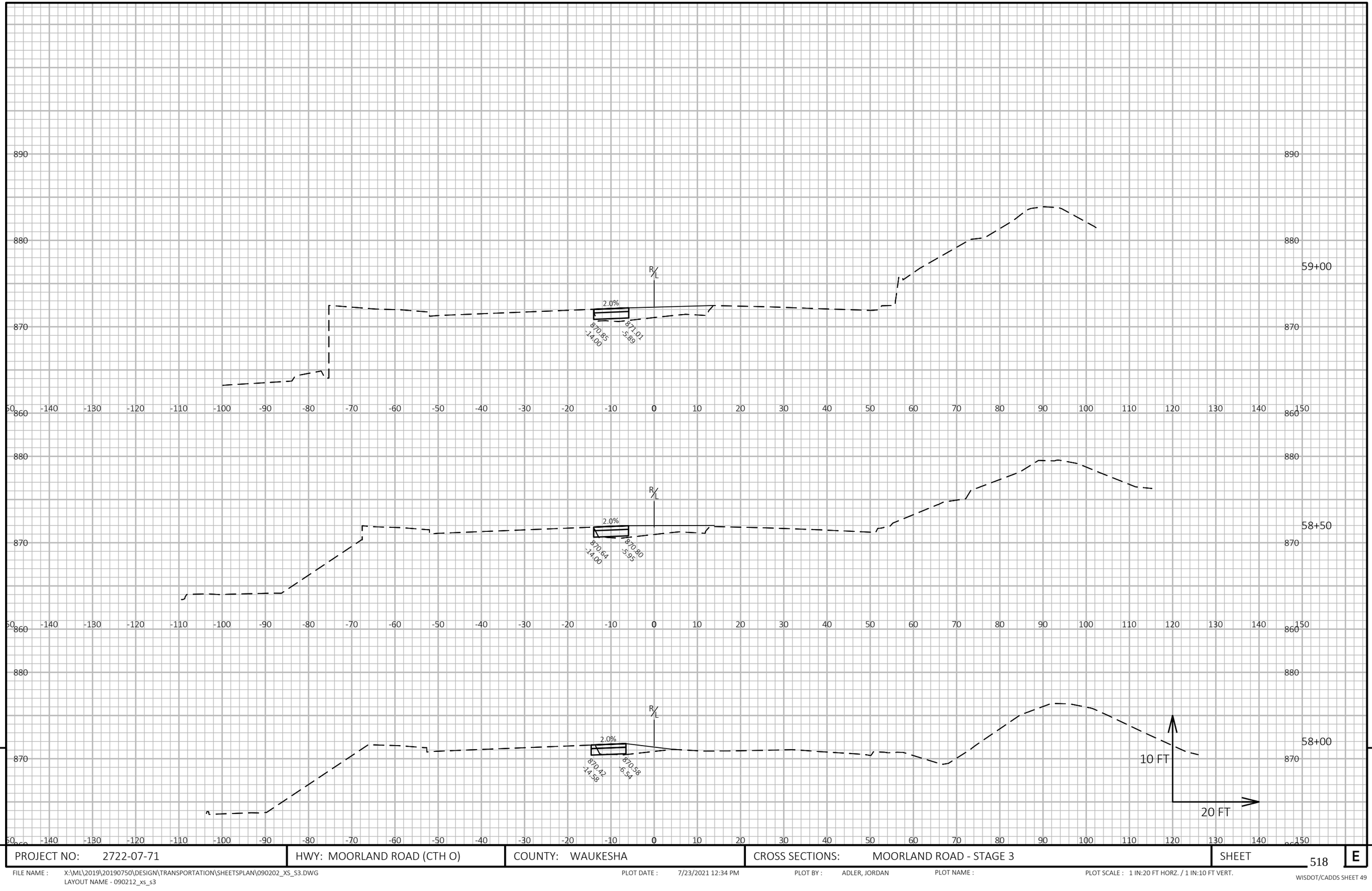


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 517	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090211_xs_s3

PLOT DATE : 7/23/2021 12:34 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

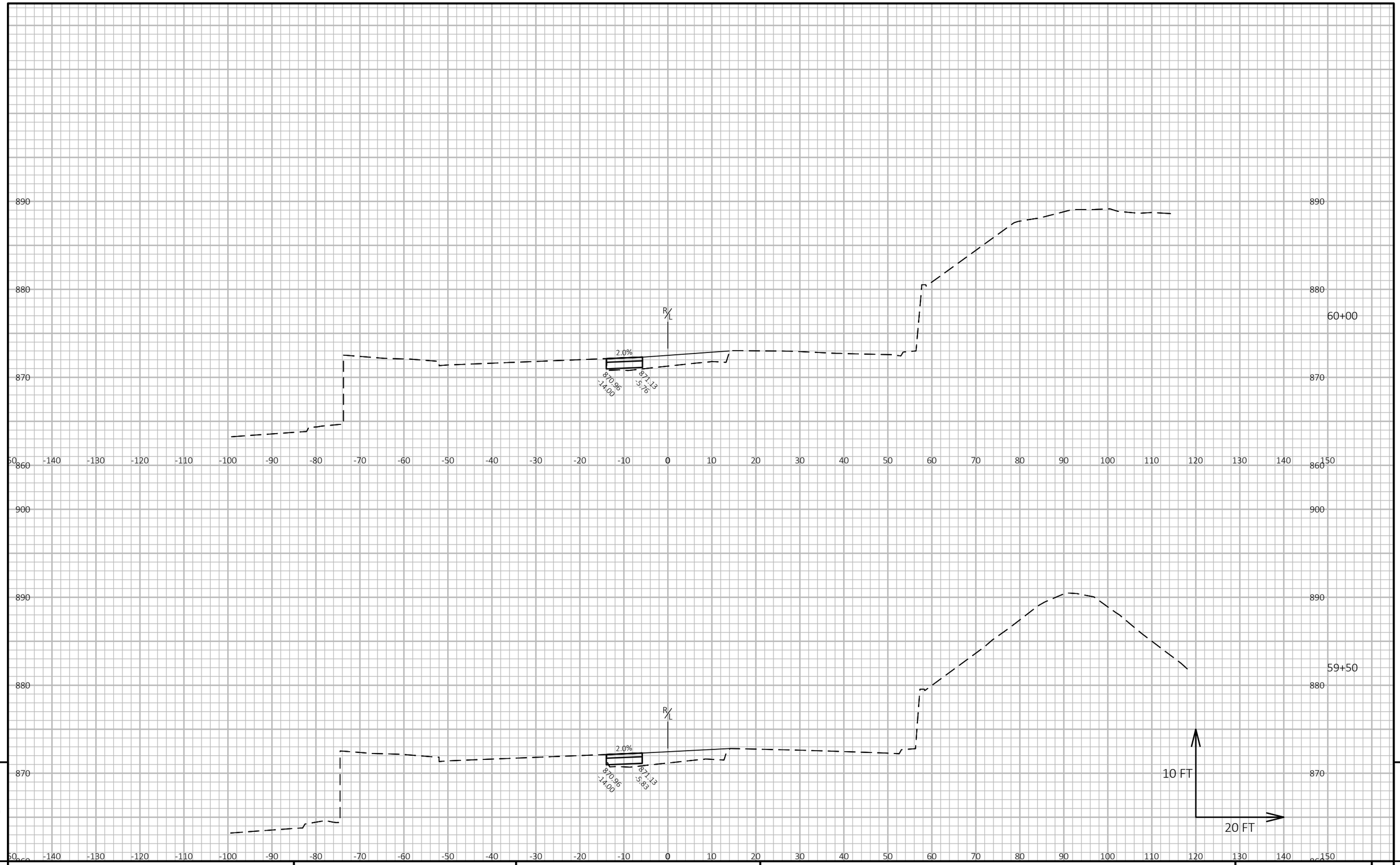


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 518	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090212_xs_s3

PLOT DATE : 7/23/2021 12:34 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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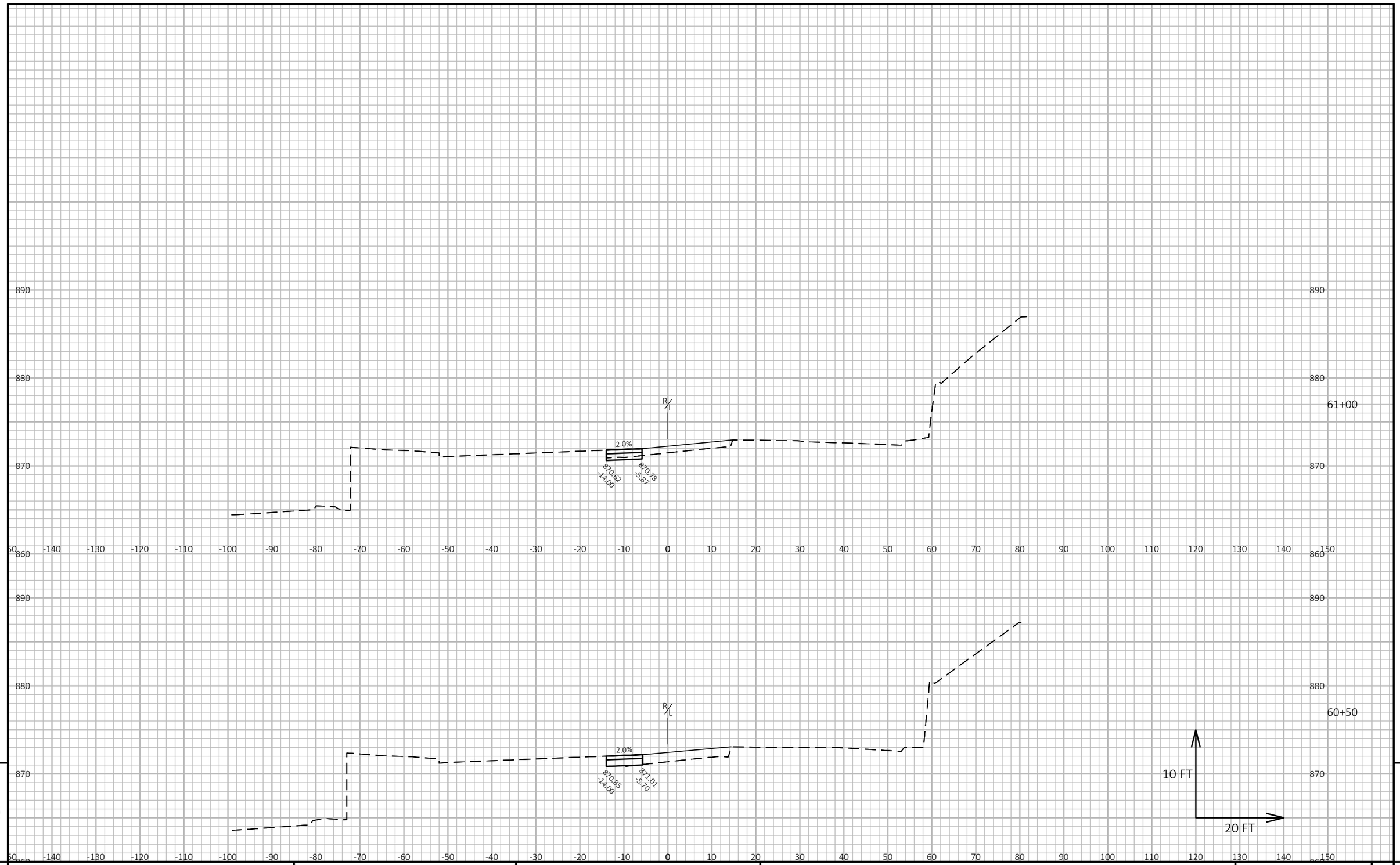
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 519	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090213_xs_s3

PLOT DATE : 7/23/2021 12:34 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

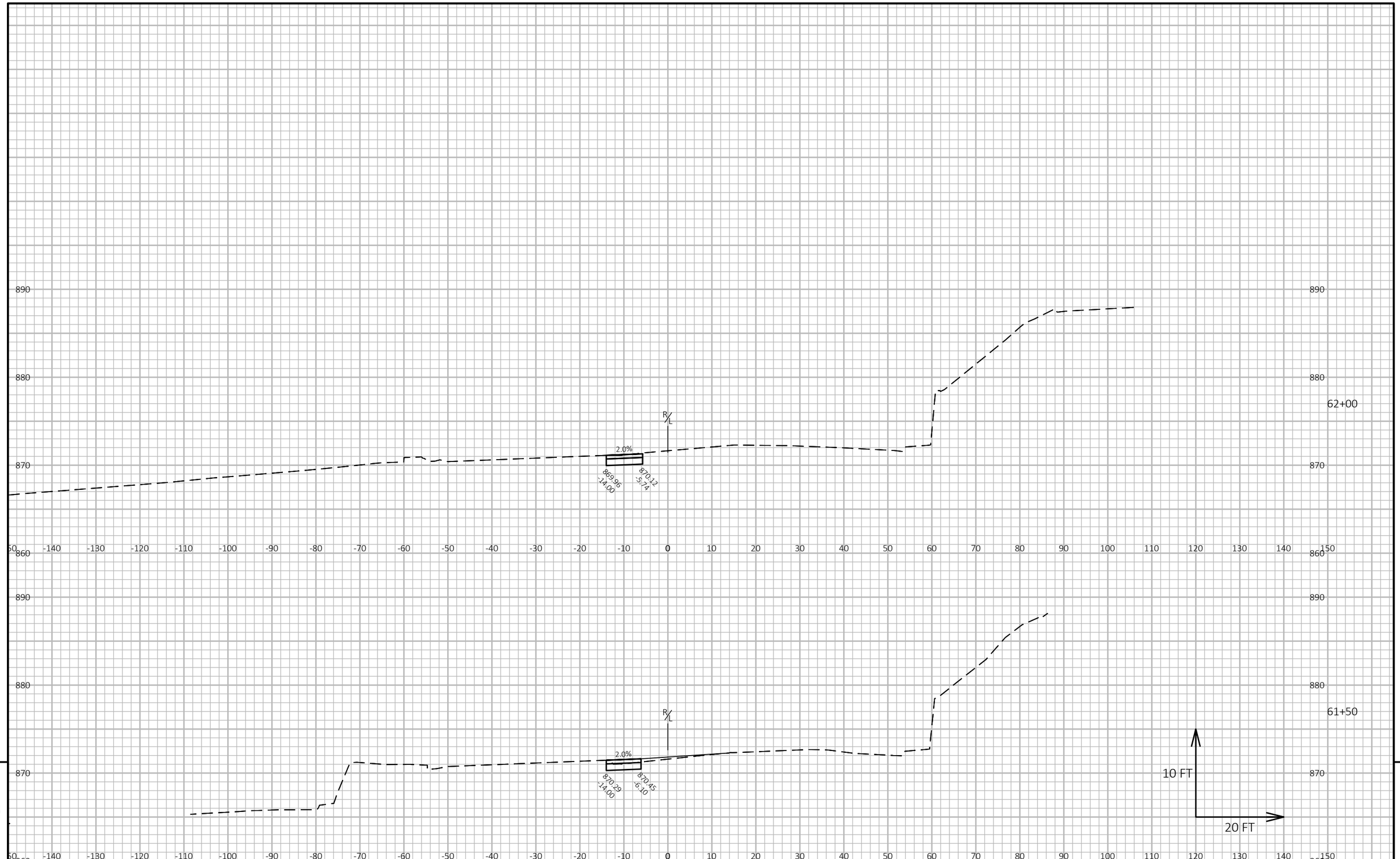


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 520	E

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LAYOUT NAME - 090214_xs_s3

PLOT DATE : 7/23/2021 12:34 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 521	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090215_xs_s3

PLOT DATE : 7/23/2021 12:34 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 522	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090216_xs_s3

PLOT DATE : 7/23/2021 12:34 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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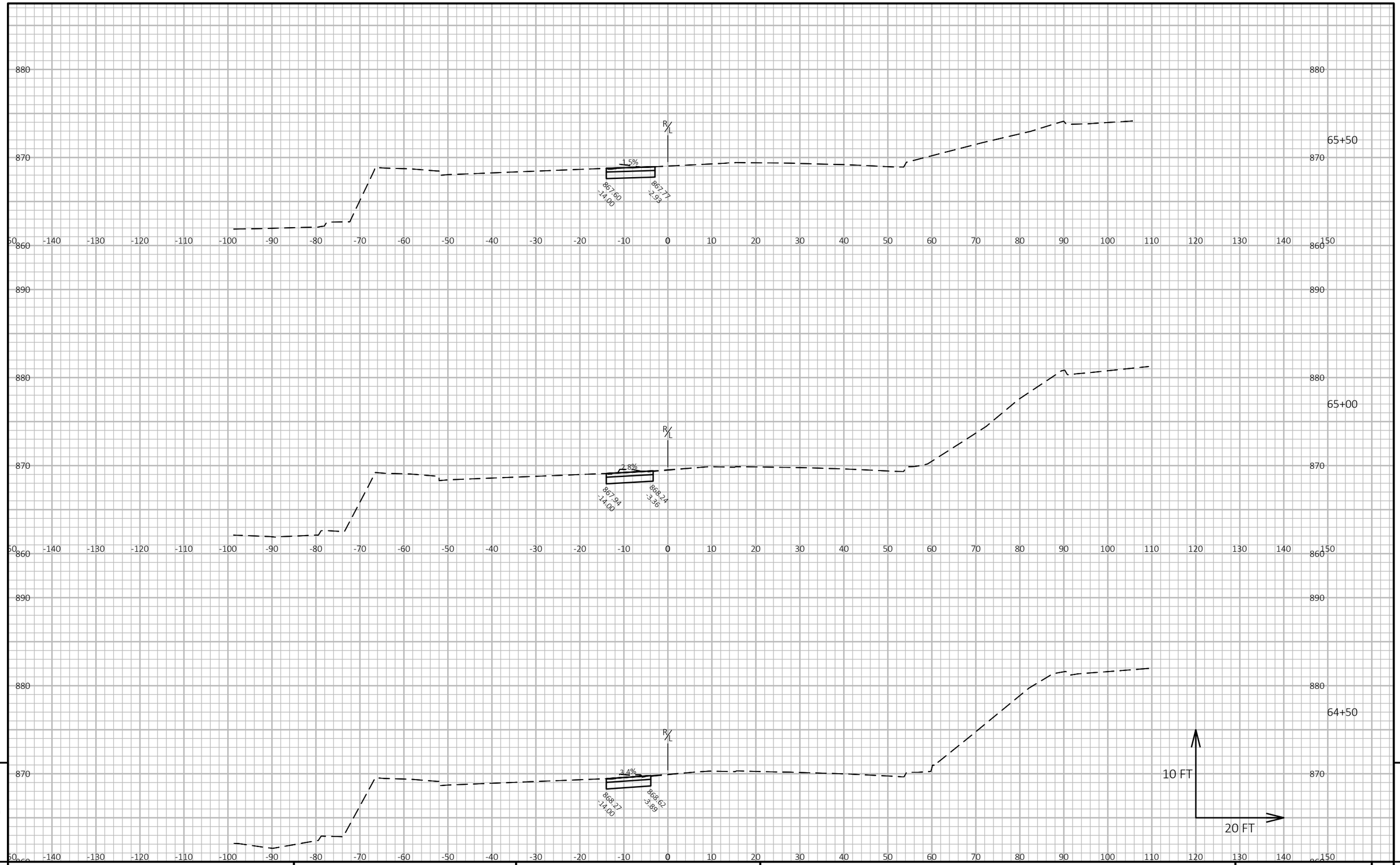
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 523	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090217_xs_s3

PLOT DATE : 7/23/2021 12:34 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

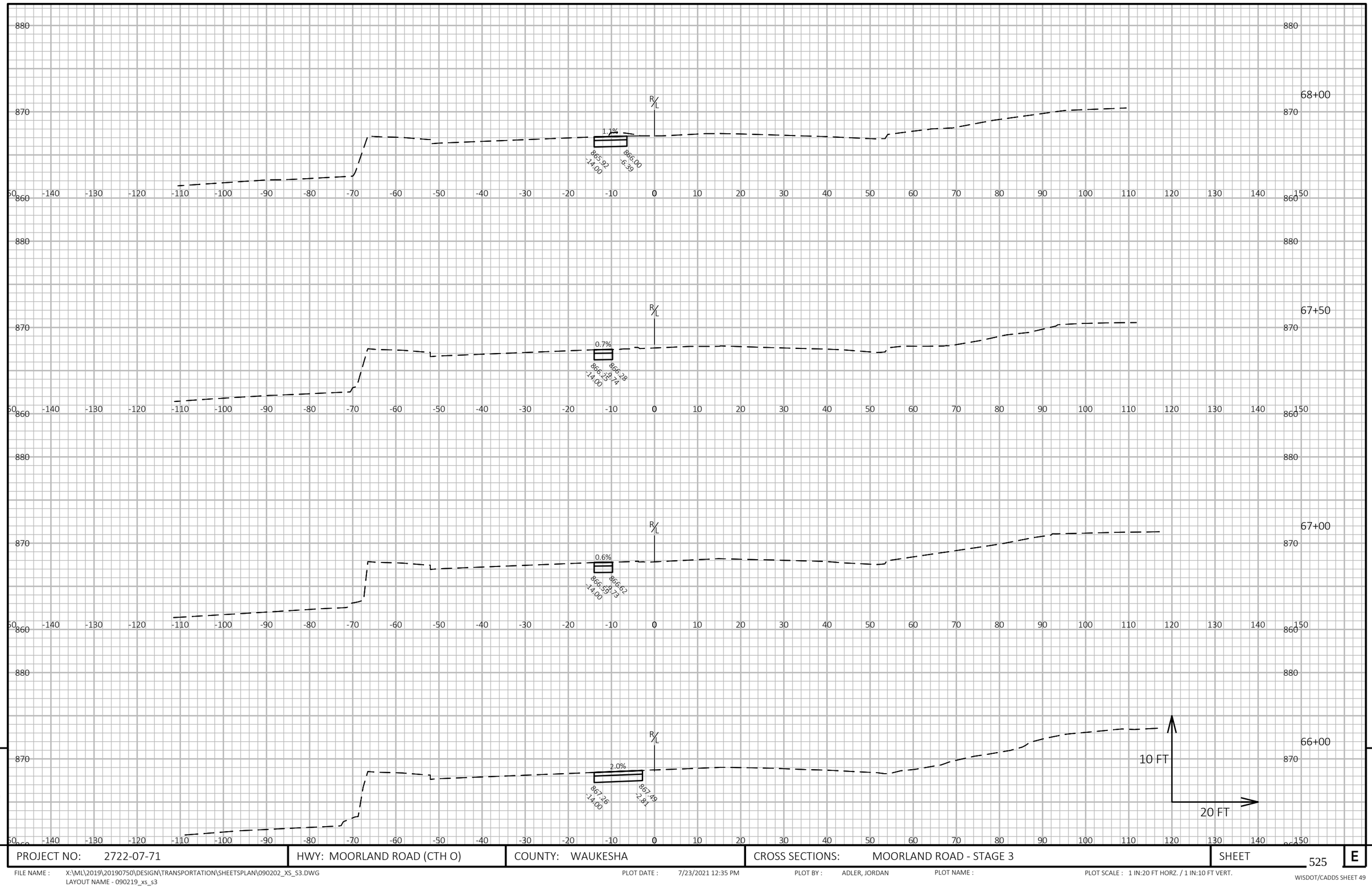


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 524	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090218_xs_s3

PLOT DATE : 7/23/2021 12:35 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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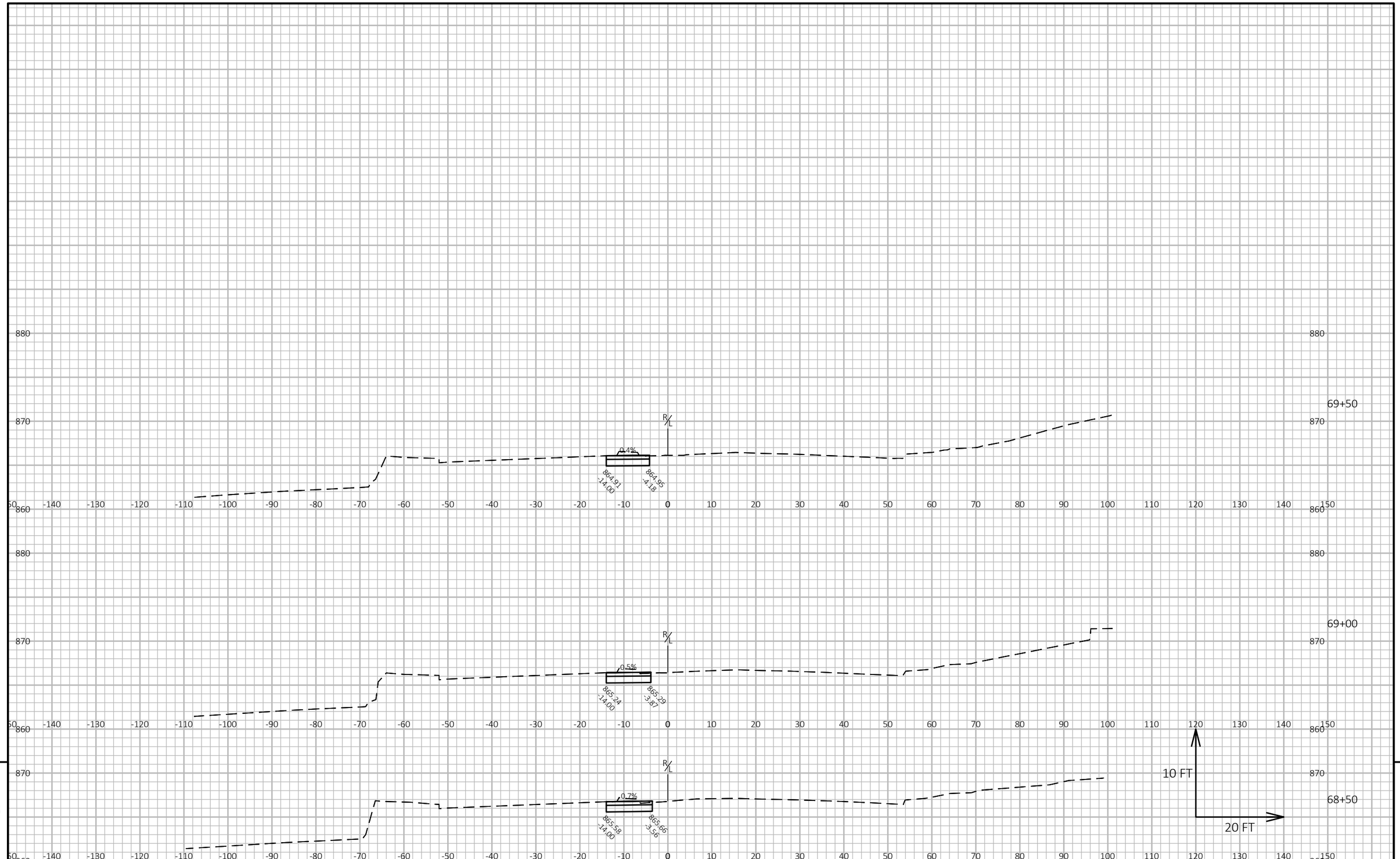
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 525	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090219_xs_s3

PLOT DATE : 7/23/2021 12:35 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

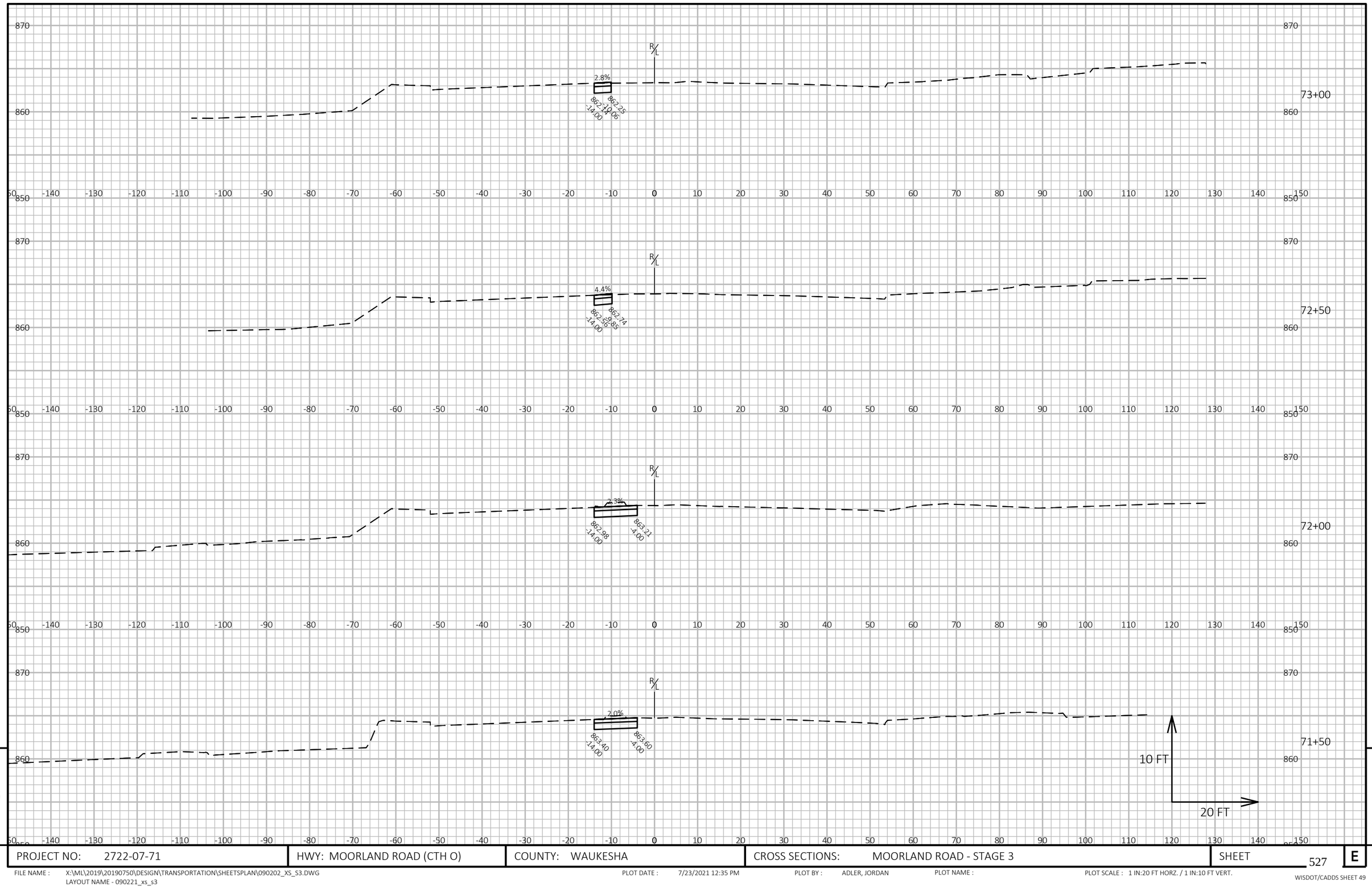
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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 526	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090220_xs_s3

PLOT DATE : 7/23/2021 12:35 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

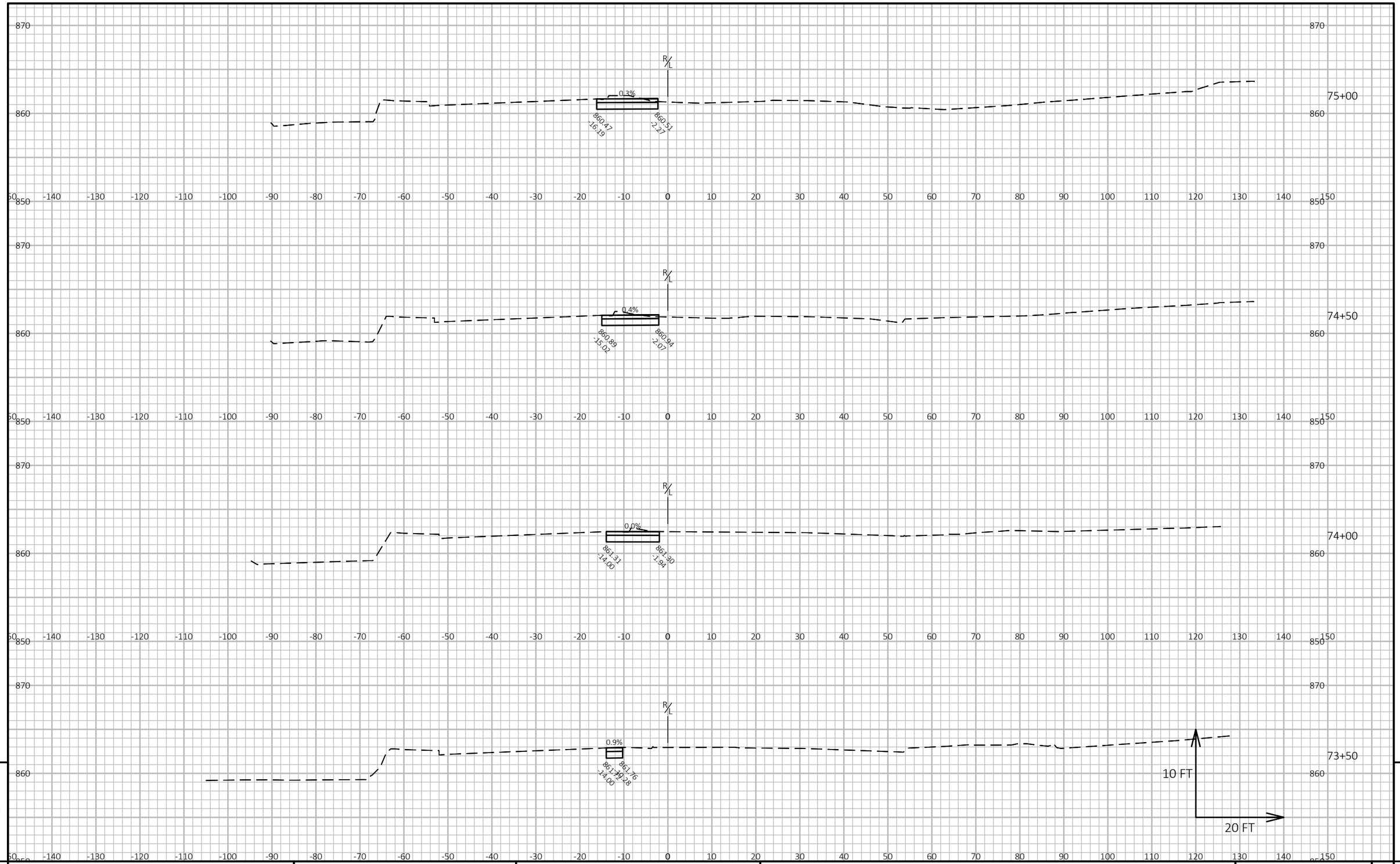


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 527	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090221_xs_s3

PLOT DATE : 7/23/2021 12:35 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

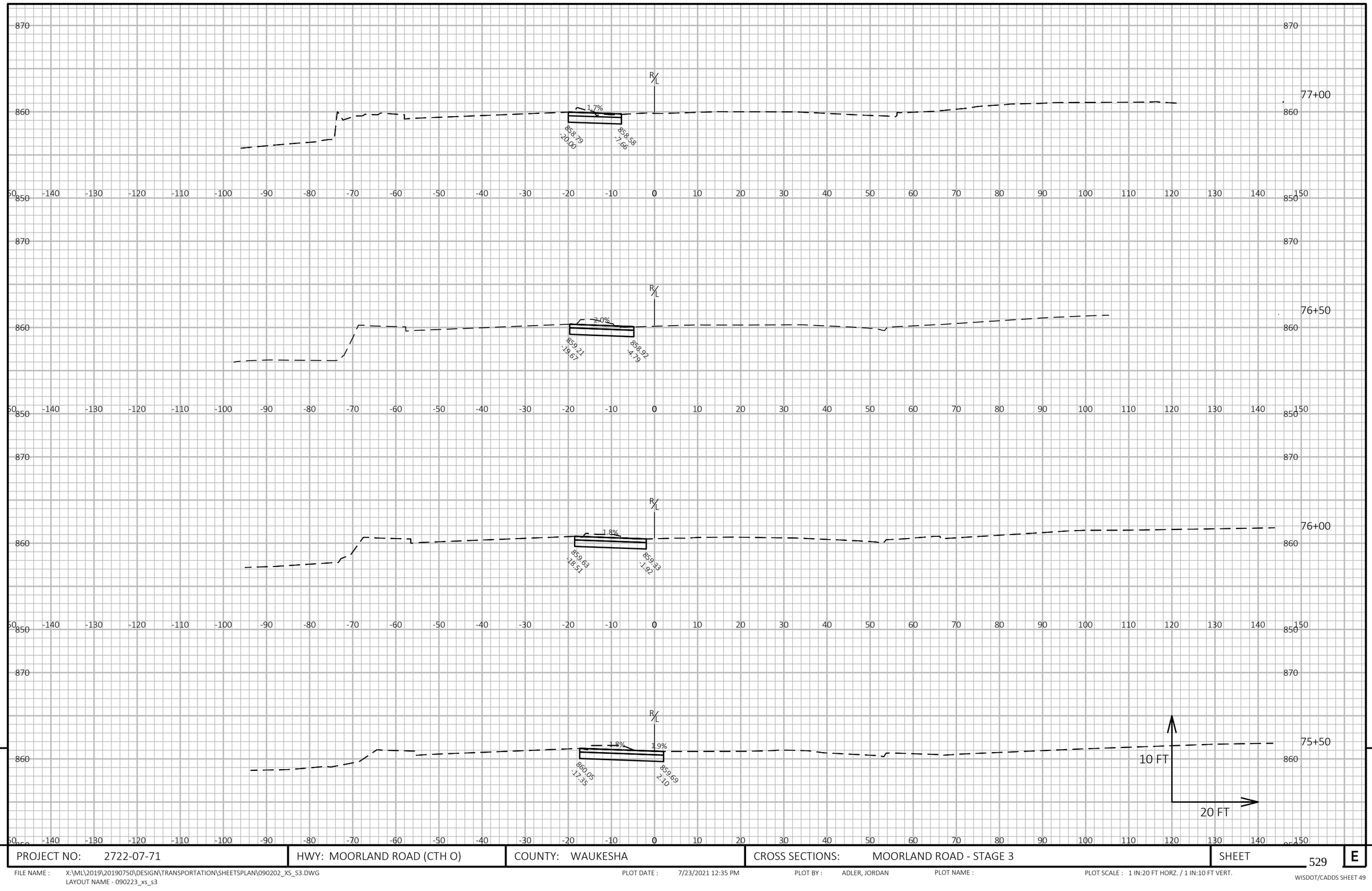


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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 528	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090222_xs_s3
PLOT DATE : 7/23/2021 12:35 PM
PLOT BY : ADLER, JORDAN
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49

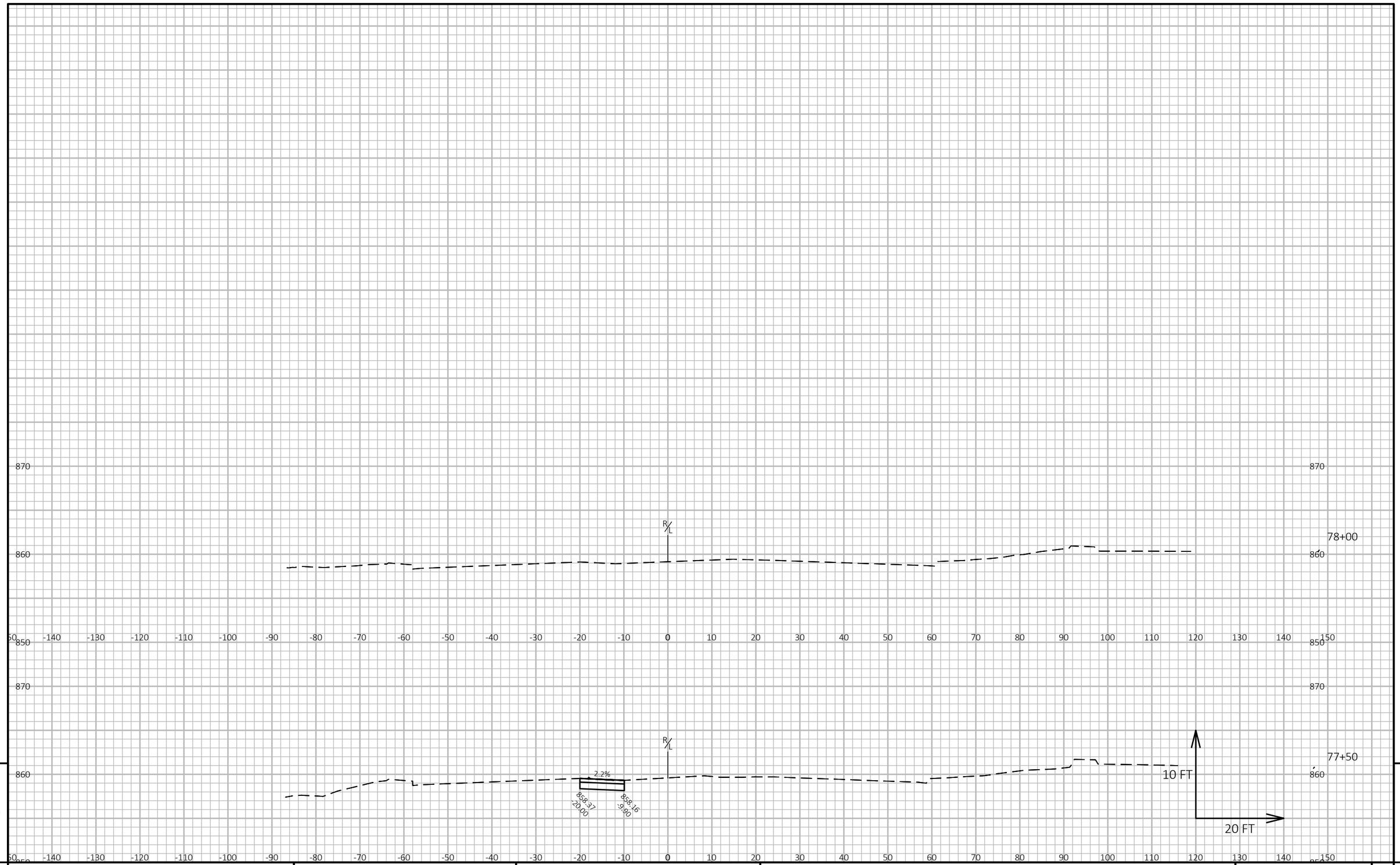


PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 529	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090223_xs_s3

PLOT DATE : 7/23/2021 12:35 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2722-07-71	HWY: MOORLAND ROAD (CTH O)	COUNTY: WAUKESHA	CROSS SECTIONS: MOORLAND ROAD - STAGE 3	SHEET 530	E

FILE NAME : X:\ML\2019\20190750\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS_S3.DWG
LAYOUT NAME - 090224_xs_s3

PLOT DATE : 7/23/2021 12:35 PM PLOT BY : ADLER, JORDAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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