

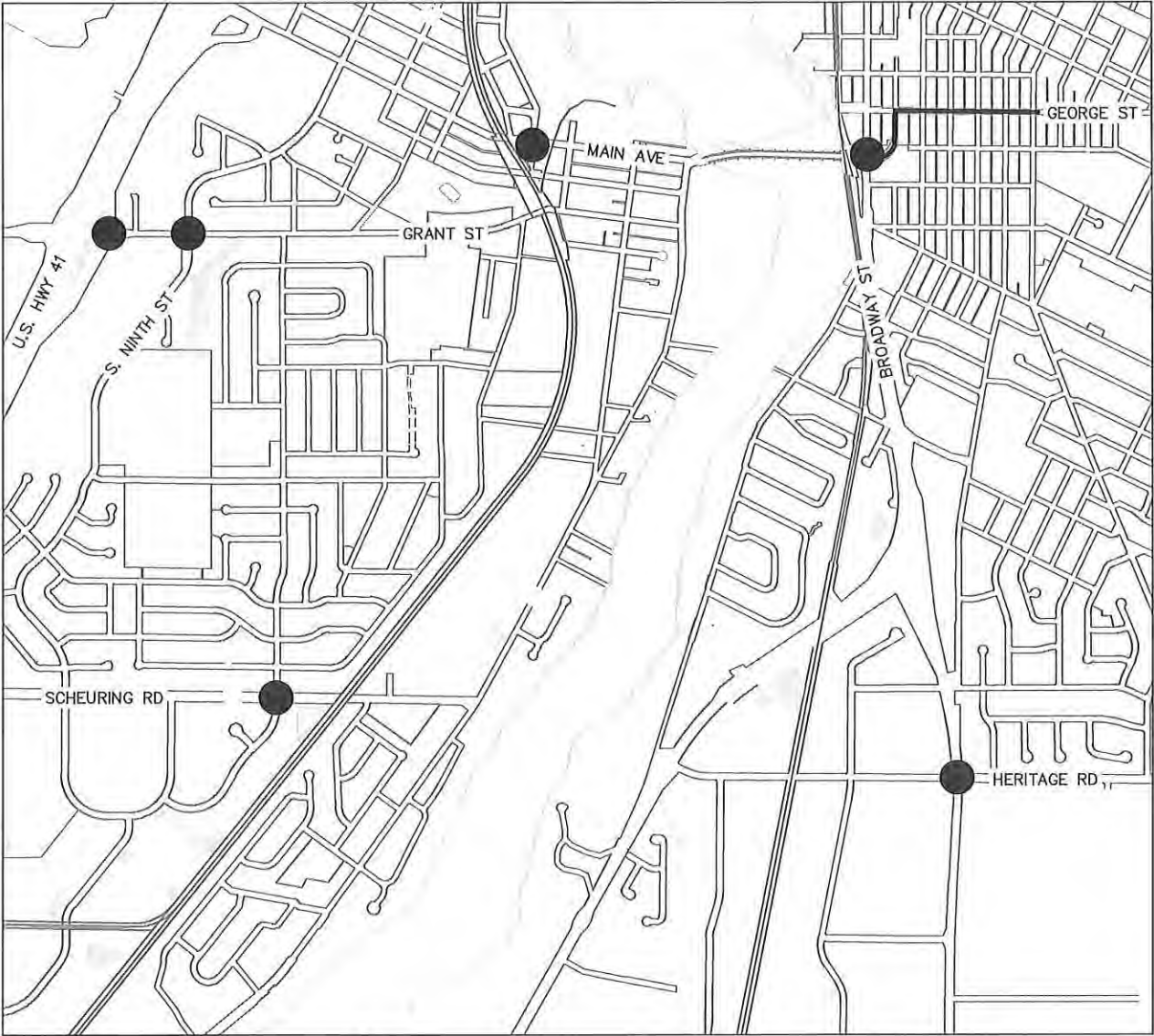
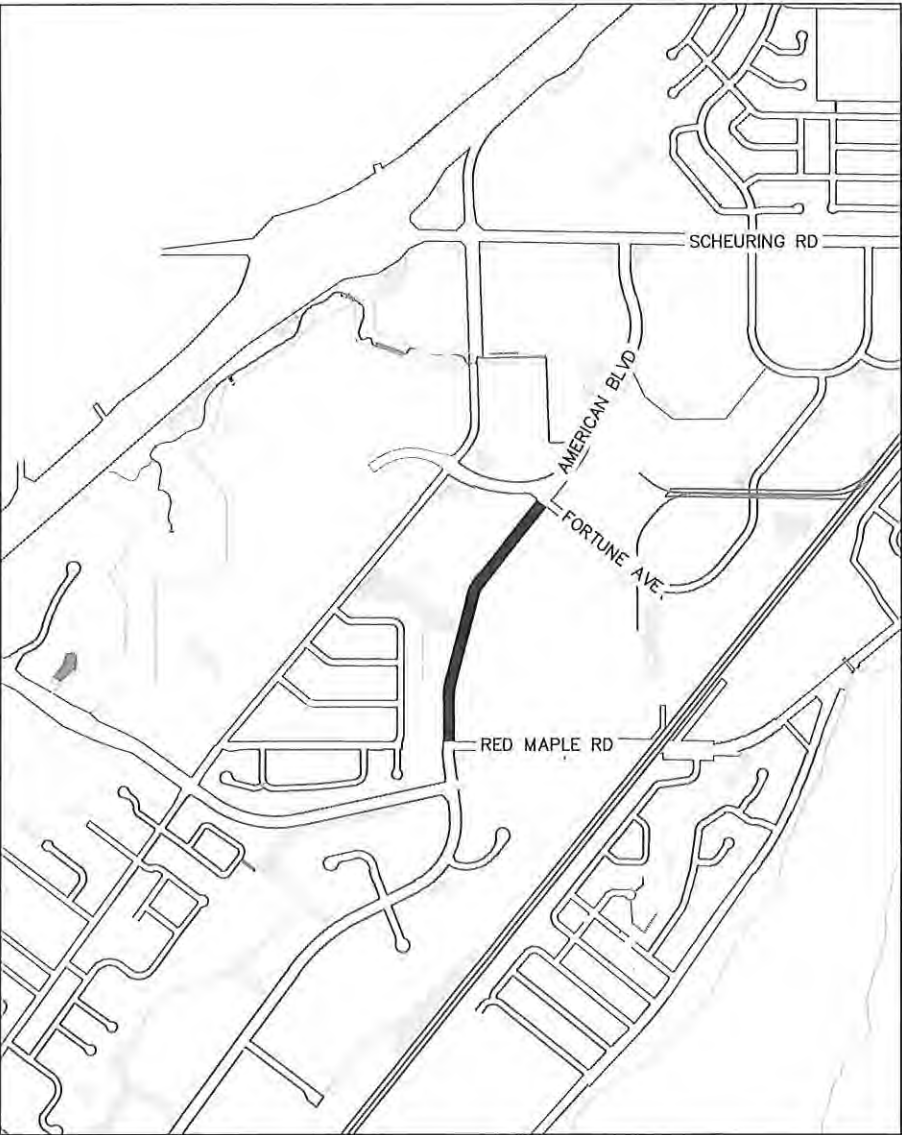
PROJECT# 23-06

CONCRETE STREET REPAIRS

CITY OF DE PERE



ENGINEER DIVISION
925 S. SIXTH ST
DE PERE, WI 54115



SITE LOCATION MAP
N.T.S.



SHEET NO.	DESCRIPTION
G001	TITLE SHEET
G002	STANDARD ABBREVIATION & SYMBOLS
C101 - C103	AMERICAN BOULEVARD PLAN SHEETS
C104 - C110	COLORED CONCRETE SEALING
C401	TRAFFIC CONTROL PLANS
C402 - C403	ROUNDBOUT PAVEMENT MARKING PLAN
C501 - C502	CONSTRUCTION DETAILS
C503 - C506	PAVEMENT MARKING DETAILS
C507 - C509	TRAFFIC CONTROL DETAILS

CITY OF DE PERE
BOARD OF PUBLIC WORKS

1/20/2023 DATE CITY-ENGINEER *E. P. Rakers*
1/24/23 DATE CITY ADMINISTRATOR *M. D. H.*
1/20/23 DATE MAYOR *Jan J. Byrd*

STAMPS:



LIST OF STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC	N	NORTH
AGGR	AGGREGATE	NB	NORTHBOUND
AH	AHEAD	NC	NORMAL CROWN
ASPH	ASPHALT	NE	NORTHEAST
B/B	BACK TO BACK	NO	NUMBER
BARR	BARRICADE	NTS	NOT TO SCALE
BC	BACK OF CURB	NW	NORTHWEST
BK	BACK	O	OIL
BL	BASELINE	O&C	OIL AND CHIP
BLDG	BUILDING	OBLIT	OBLITERATE
BM	BENCHMARK	OD	OUTSIDE DIAMETER
BOW	BACK OF SIDEWALK	PC	POINT OF CURVATURE
BSMT	BASEMENT	PCC	POINT OF COMPOUND CURVE
C	CUT	PCC	PORTLAND CEMENT CONCRETE
C&G	CURB AND GUTTER	PED	PEDESTAL
C/C	CENTER TO CENTER	PLE	PERMANENT LIMITED EASEMENT
CABC	CRUSHED AGGREGATE BASE COURSE	PVMT	PAVEMENT
CB	CATCH BASIN	PE	PRIVATE ENTRANCE
CE	CONSTRUCTION ENTRANCE	PI	POINT OF INTERSECTION
CI	CAST IRON PIPE	PJF	PRE-FORMED JOINT FILLER
CL	CENTERLINE	PL	PROPERTY LINE
CMP	CORRUGATED METAL PIPE	POC	POINT OF CURVE
CNTY	COUNTY	POT	POINT ON TANGENT
CO	CLEANOUT	PP	POLYETHYLENE
CONC	CONCRETE	PRC	POINT OF REVERSE CURVATURE
CONSTR	CONSTRUCTION	PROJ	PROJECT
CONSTR JT	CONSTRUCTION JOINT	PROP	PROPOSED
CORP	CORPORATION	PSI	POUND PER SQUARE INCH
CP	CONTROL POINT	PT	POINT OF TANGENCY
CTH	COUNTY TRUNK HIGHWAY	PVC	POLYVINYL CHLORIDE
CTRL JT	CONTROL JOINT	R	RANGE OR RADIUS
CTV	CABLE TV	RCP	REINFORCED CONCRETE PIPE
CY	CUBIC YARD	REBAR	REINFORCEMENT BAR
D	DEPTH	REL	RELOCATE
DIA	DIAMETER	REM	REMAINING
DI	DUCTILE IRON PIPE	REQD	REQUIRED
DISCH	DISCHARGE	RL	REFERENCE LINE
DW	DRIVEWAY	ROW	RIGHT OF WAY
E	EAST (SEE ELEC BELOW)	RP	REFERENCE POINT
EA	EACH	RR	RAILROAD
EB	EASTBOUND	RT	RIGHT
EBS	EXCAVATION BELOW SUBGRADE	RW	RETAINING WALL
ECS	EXTERNAL CHIMNEY SEAL	S	SOUTH
EL	ELEVATION	SALV	SALVAGE
ELEC	ELECTRIC (E WHEN USED IN LINE STYLE)	SAN	SANITARY
EMB	EMBANKMENT	SB	SOUTHBOUND
ENTR	ENTRANCE	SDWK	SIDEWALK
EP	EDGE OF PAVEMENT	SE	SOUTHEAST
EW	ENDWALL	SF	SQUARE FEET
EXC	EXCAVATION	SHLDR	SHOULDER
EXIST	EXISTING	SY	SQUARE YARD
F	FILL	SS	STORM SEWER
F/F	FACE TO FACE	SSD	STOPPING SIGHT DISTANCE
FDN	FOUNDATION	ST	STREET
FE	FIELD ENTRANCE	STA	STATION
FERT	FERTILIZER	STD	STANDARD
FIN GR	FINISHED GRADE	STH	STATE HIGHWAY TRUNK
FL	FLOWLINE	STM	STORM
FO	FIBER OPTIC	STP	SEWAGE TREATMENT PLANT
FOW	FRONT OF SIDEWALK	STRUCT	STRUCTURE OR STRUCTURAL
FT	FOOT	SW	SOUTHWEST
FTG	FOOTING	TAN	TANGENT
G	GAS	T	TOWN (T WHEN USED FOR TELEPHONE LINE)
GV	GAS VALVE	TEL	TELEPHONE
GW	GUY WIRE	TEMP	TEMPORARY
HDPE	HIGH DENSITY POLYETHYLENE	TLE	TEMPORARY LIMITED EASEMENT
HR	HANDICAP RAMP	TOC	TOP OF CURB
HSE	HOUSE	TOW	TOP OF WATER
HT	HEIGHT	TRANS	TRANSITION
HYD	HYDRANT	TYP	TYPICAL
I	INTERSECTION ANGLE	UG	UNDERGROUND
ICS	INTERNAL CHIMNEY SEAL	USH	US HIGHWAY
ID	INSIDE DIAMETER	VC	VERTICAL CURVE
IN	INCH	VERT	VERTICAL
INL	INLET	VOL	VOLUME
INTERS	INTERSECTION	VPC	VERTICAL POINT OF CURVATURE
INV	INVERT	VPI	VERTICAL POINT OF INTERSECTION
IP	IRON PIPE OR PIN	VPRC	VERTICAL POINT OF REVERSE CURVE
JCT	JUNCTION	VPT	VERTICAL POINT OF TANGENCY
L	LENGTH (OF CURVE)	W	WEST
LC	LONG CHORD OF CURVE	WB	WESTBOUND
LP	LIGHTPOLE	WM	WATERMAIN
LS	LIFT STATION OR LUMP SUM	WSO	WATER SHUTOFF VALVE
LT	LEFT	WTP	WATER TREATMENT PLANT
MAINT	MAINTENANCE	WV	WATER VALVE
MATL	MATERIAL	WWTP	WASTE WATER TREATMENT PLANT
MB	MAILBOX	YD	YARD
MH	MANHOLE		
MP	MARKER POST		

MAPPING & TOPOGRAPHY SYMBOLOGY

DESCRIPTION	SYMBOL	
	EXISTING	PROPOSED
BENCHMARK		
BUSH		
CATCH BASIN/INLET		
CABLE TV BOX		
CONTROL POINT		
ELECTRICAL BOX		
EROSION CONTROL - INLET		
FIELD INLET		
GAS VALVE		
HEDGE		
HYDRANT		
IRON PIPE		
LIGHTPOLE		
MAILBOX		
MANHOLE ELECTRIC		
MANHOLE SANITARY		
MANHOLE STORM		
MONITORING WELL		
POWER POLE		
LIGHT POLE		
SIGN		
SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE		
SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE		
SOIL BORING		
STUMP		
TELEPHONE MANHOLE		
TELEPHONE PEDESTAL		
TREE		
WELL		
WATER SERVICE VALVE		
BUTTERFLY WATER VALVE		
WATER VALVE		

GENERAL CONSTRUCTION NOTES:

1. ALL ELEVATIONS ARE REFERENCED TO NAVD 88.
2. THE WORK UNDER THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE CITY OF DE PERE, CURRENT CONSTRUCTION SPECIFICATIONS AND THESE SPECIAL PROVISIONS AND PLANS, AND THE LATEST ADDITION OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARDS SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION SPECIFICATIONS, LATEST EDITION, WHERE REFERENCED IN THE CITY SPECIFICATIONS.
3. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION AND SHALL CONFIRM TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES CONSTRUCTION SITE EROSION CONTROL AND TECHNICAL STANDARDS.
4. EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EXACT LOCATIONS AND ELEVATIONS OF ALL UTILITIES. WHETHER SHOWN OR NOT, FROM THE OWNERS OF THE RESPECTIVE UTILITIES. ALL UTILITIES OWNERS SHALL BE NOTIFIED BY THE CONTRACTOR 72 HOURS PRIOR TO EXCAVATION.

MAPPING & TOPOGRAPHY SYMBOLOGY

DESCRIPTION	SYMBOL	
	PLAN	
EXISTING SANITARY SEWER LINE	(SIZE AND MATERIAL) San	
PROPOSED SANITARY SEWER LINE	100'-8" PVC SAN San	
EXISTING STORM SEWER LINE	(SIZE AND MATERIAL) ST	
PROPOSED STORM SEWER LINE	100'-8" PVC STM ST	
EXISTING WATER MAIN LINE	(SIZE AND MATERIAL) W	
PROPOSED WATER MAIN LINE	100'-8" PVC WM (TEE-BEND) W	
EXISTING ELECTRICAL LINE	E	
EXISTING GAS MAIN LINE	G	
EXISTING TELEPHONE LINE	T	
EXISTING CABLE TV LINE	TV	
EXISTING SANITARY LATERAL	San	
EXISTING WATER SERVICE	W	
RIGHT OF WAY	ROW	
PROPERTY LINE	PL	
EASEMENT	ESM	
SILT FENCE EROSION CONTROL		
EXISTING FIBER OPTIC	FO	
EXISTING MAJOR CONTOUR	615	
EXISTING MINOR CONTOUR	612	
PROPOSED MAJOR CONTOUR	615	
PROPOSED MINOR CONTOUR	612	

PROFILE

EXISTING SANITARY SEWER LINE	(SIZE AND MATERIAL)
PROPOSED SANITARY SEWER LINE	100'-8" PVC SAN @ 0.40%
EXISTING STORM SEWER LINE	(SIZE AND MATERIAL)
PROPOSED STORM SEWER LINE	100'-8" PVC STM @ 1.0%
EXISTING WATER MAIN LINE	(SIZE AND MATERIAL)
PROPOSED WATER MAIN LINE	PROPOSE 8" PVC WM

PATCH SYMBOLS

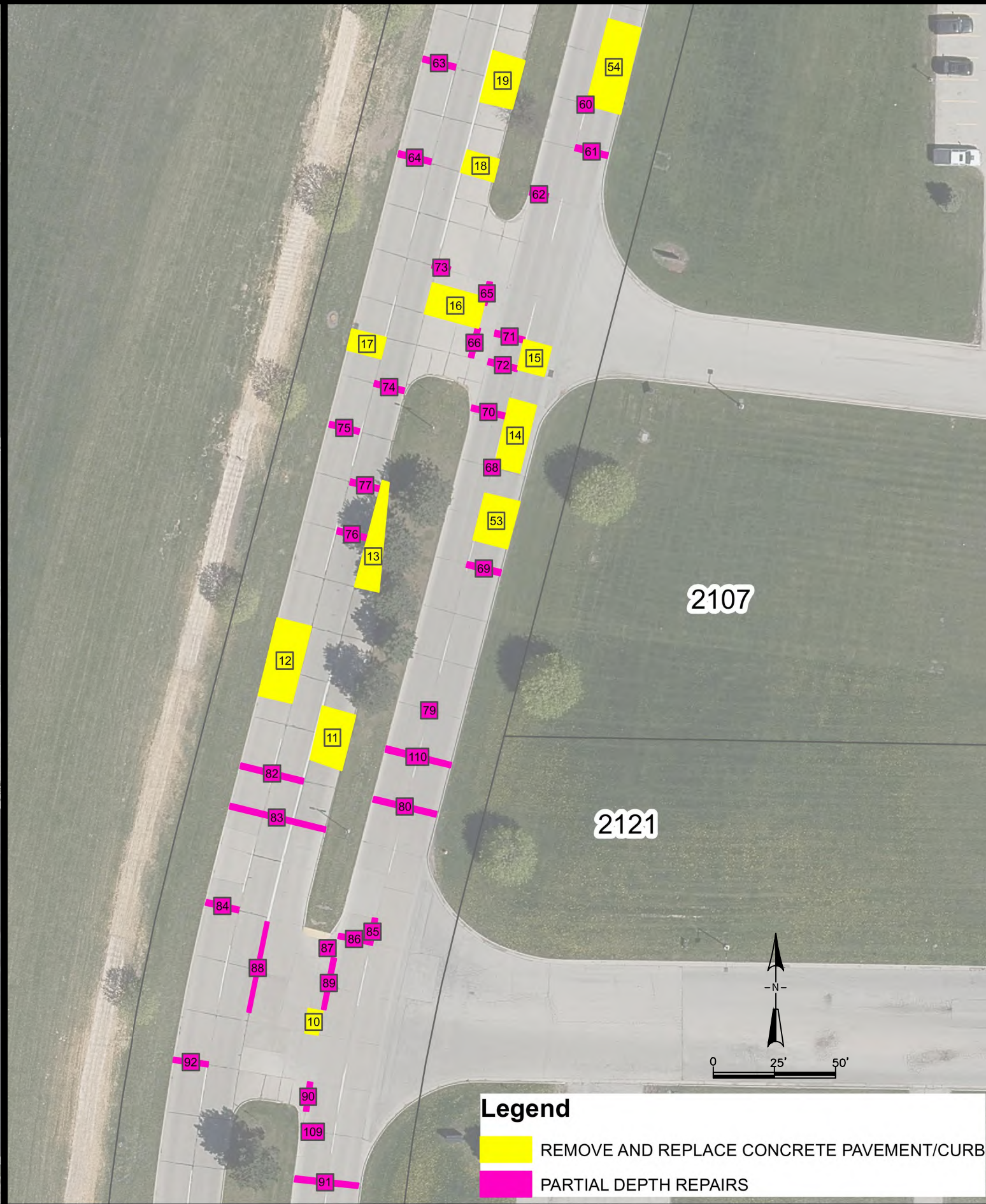
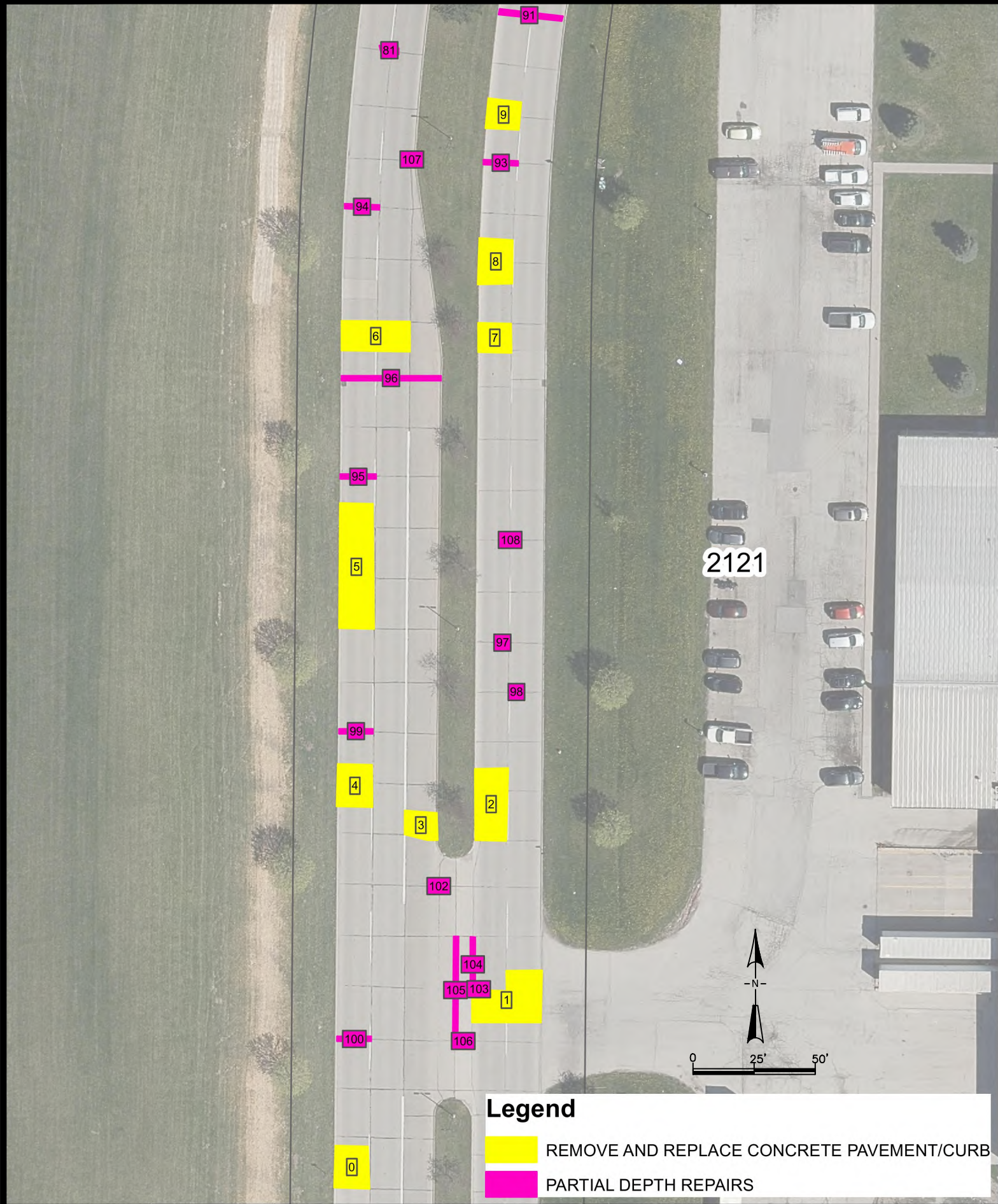
ASPHALTIC CONCRETE PAVEMENT		CRUSHED AGGREGATE BASE COURSE	
PORTLAND CEMENT CONCRETE			

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4060 FAX 920-339-4071

STANDARD ABBREVIATIONS
AND SYMBOLS

NAME: CONCRETE STREET REPAIRS	BY	DATE	REVISIONS / ISSUES				PAGE NO. G002
PROJECT # 23-06	SURVEYED		NO.	DATE	BY	REMARKS	
	DRAWN	KAD					
	DESIGNED						
	CHECKED						



CITY OF DE PERE

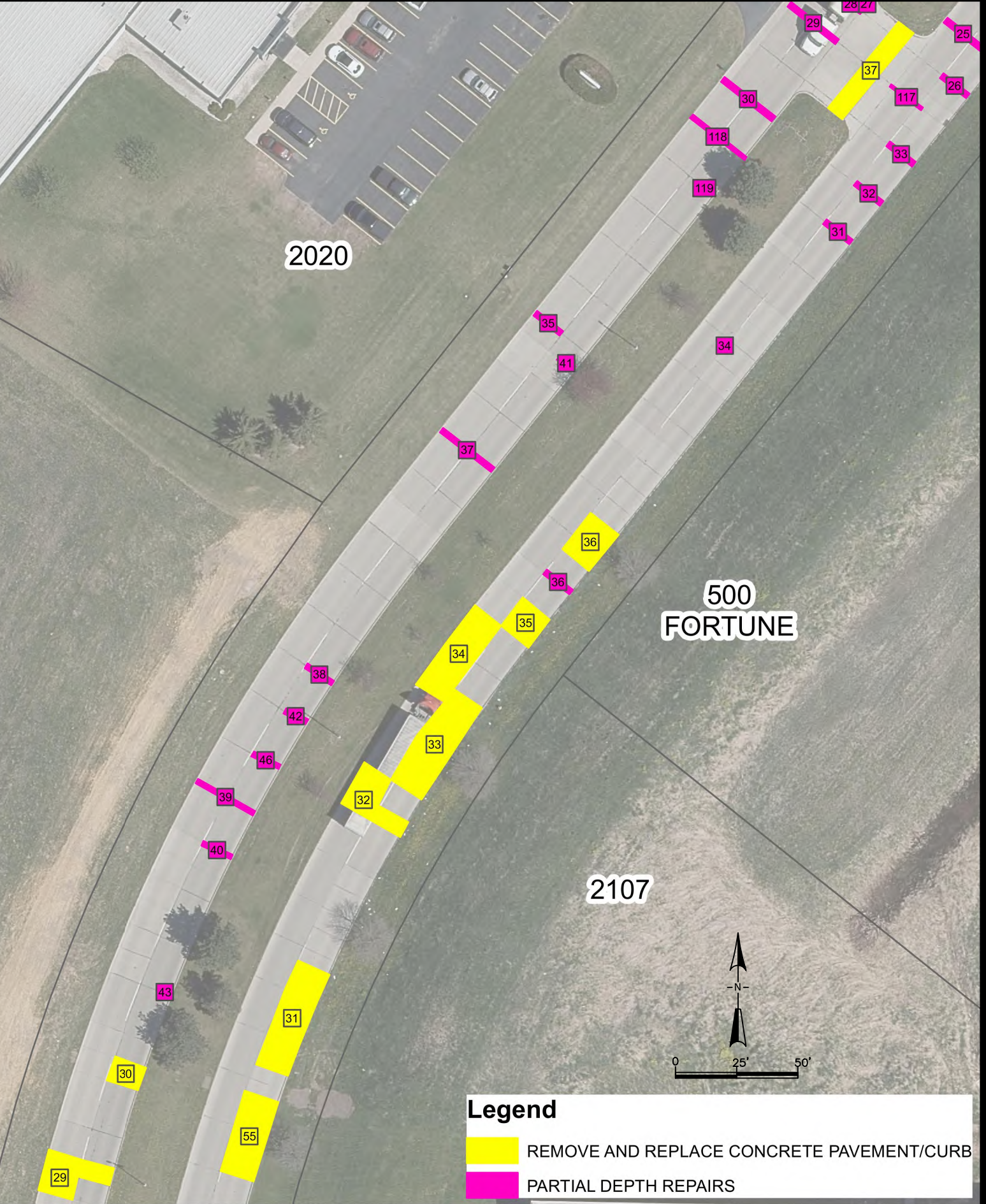
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

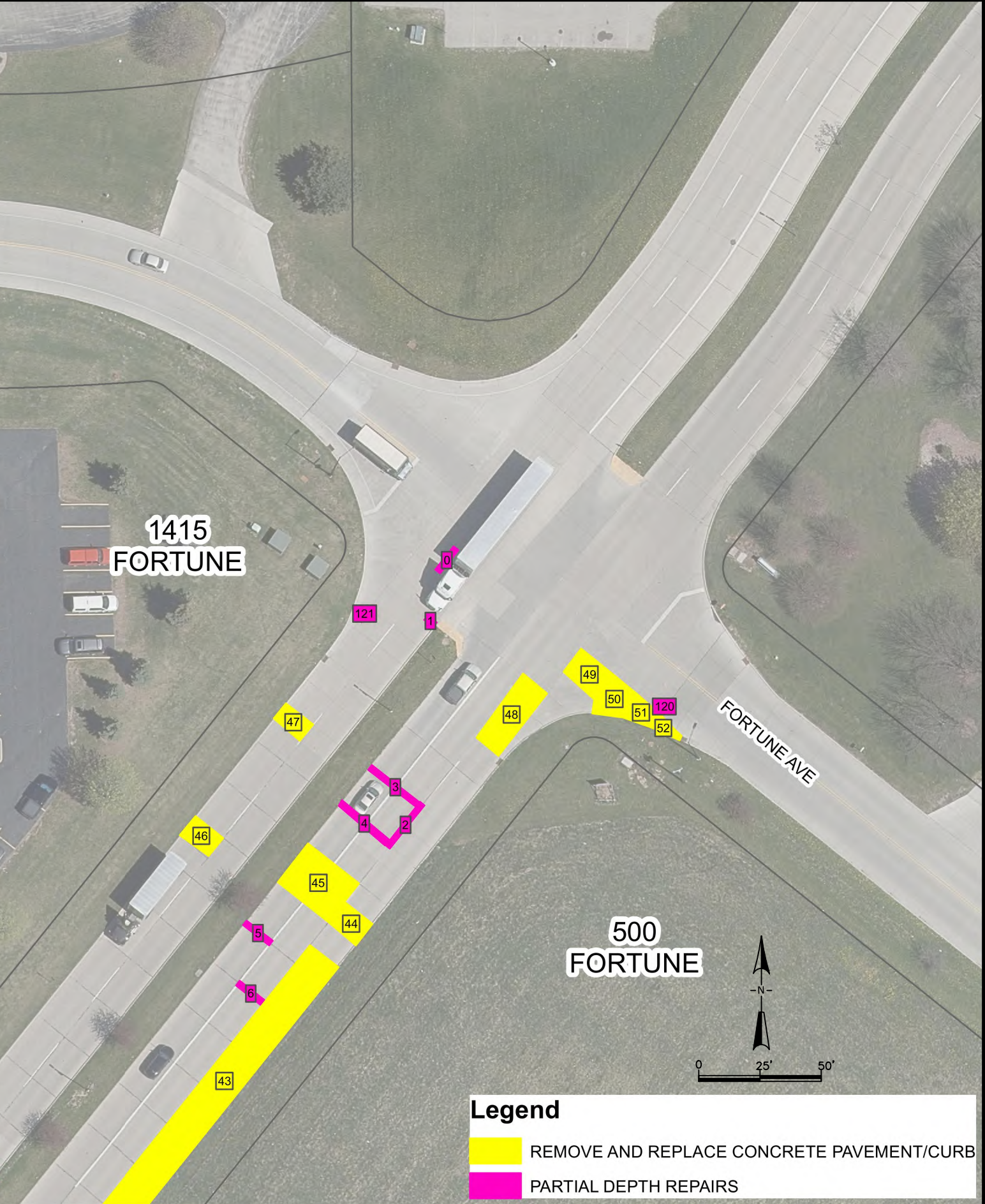
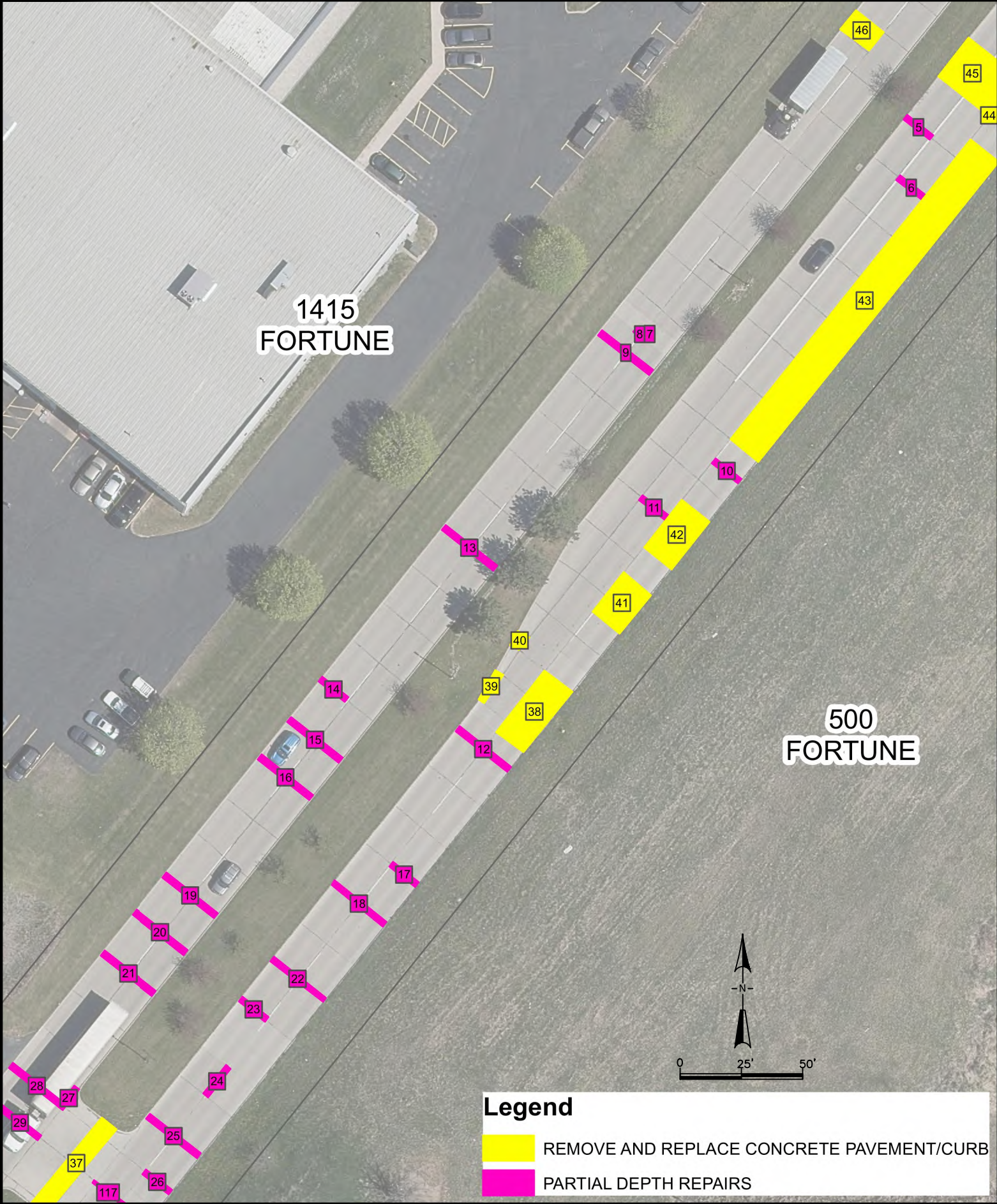
**AMERICAN BOULEVARD
RED MAPLE RD TO 1000' N/O RED MAPLE RD**

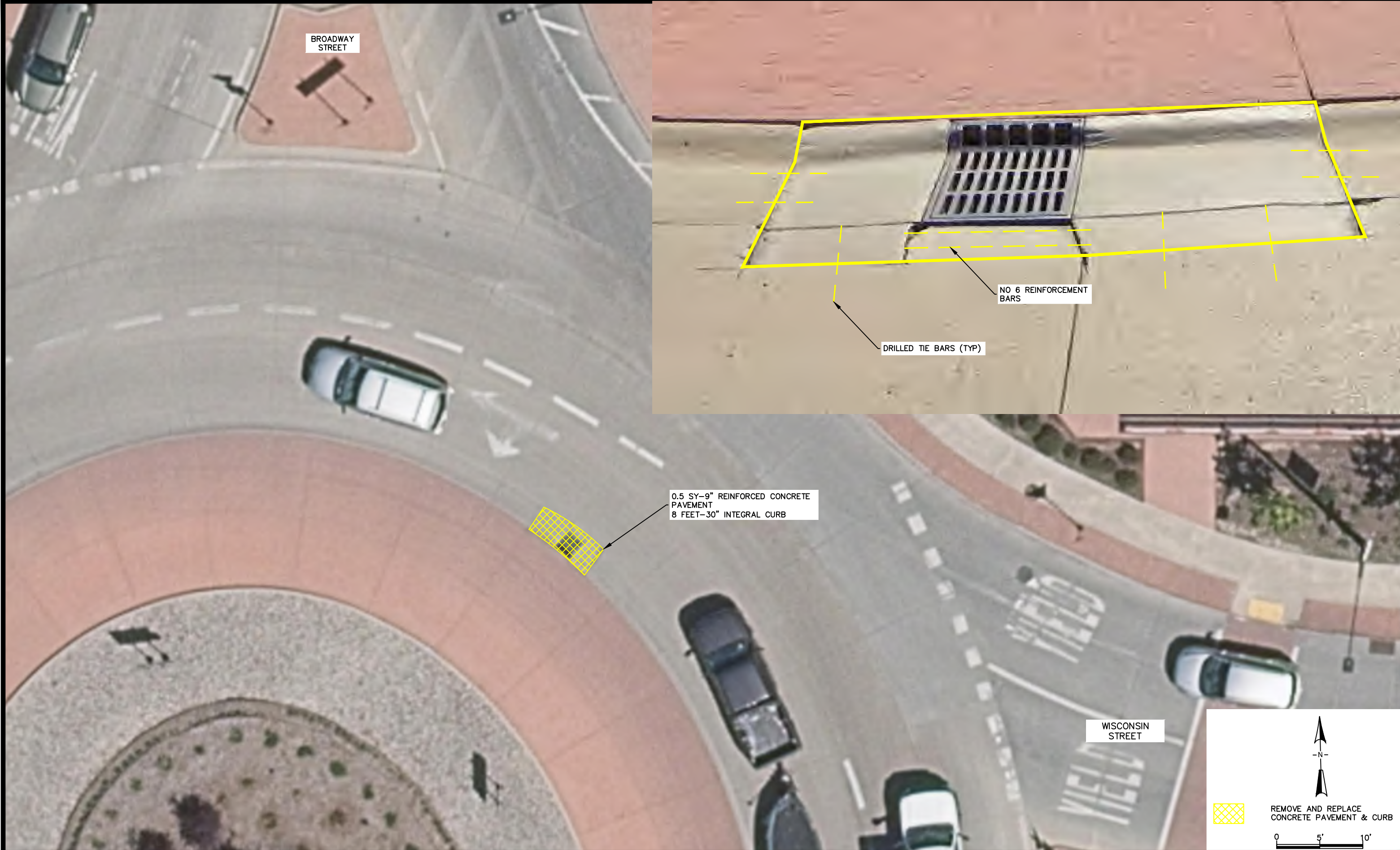
NAME:
CONCRETE STREET REPAIRS
PROJECT # 23-06

SURVEYED	BY KAD	DATE 01-2023
DRAWN		
DESIGNED		
CHECKED	EPR/CKK	01-2023

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS







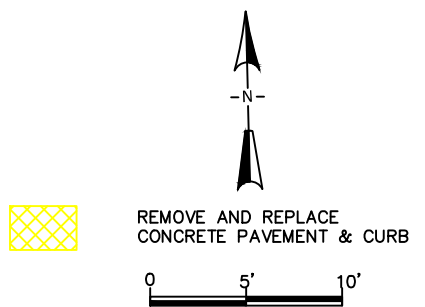
BROADWAY STREET

NO 6 REINFORCEMENT BARS

DRILLED TIE BARS (TYP)

0.5 SY-9" REINFORCED CONCRETE PAVEMENT
8 FEET-30" INTEGRAL CURB

WISCONSIN STREET



REMOVE AND REPLACE
CONCRETE PAVEMENT & CURB

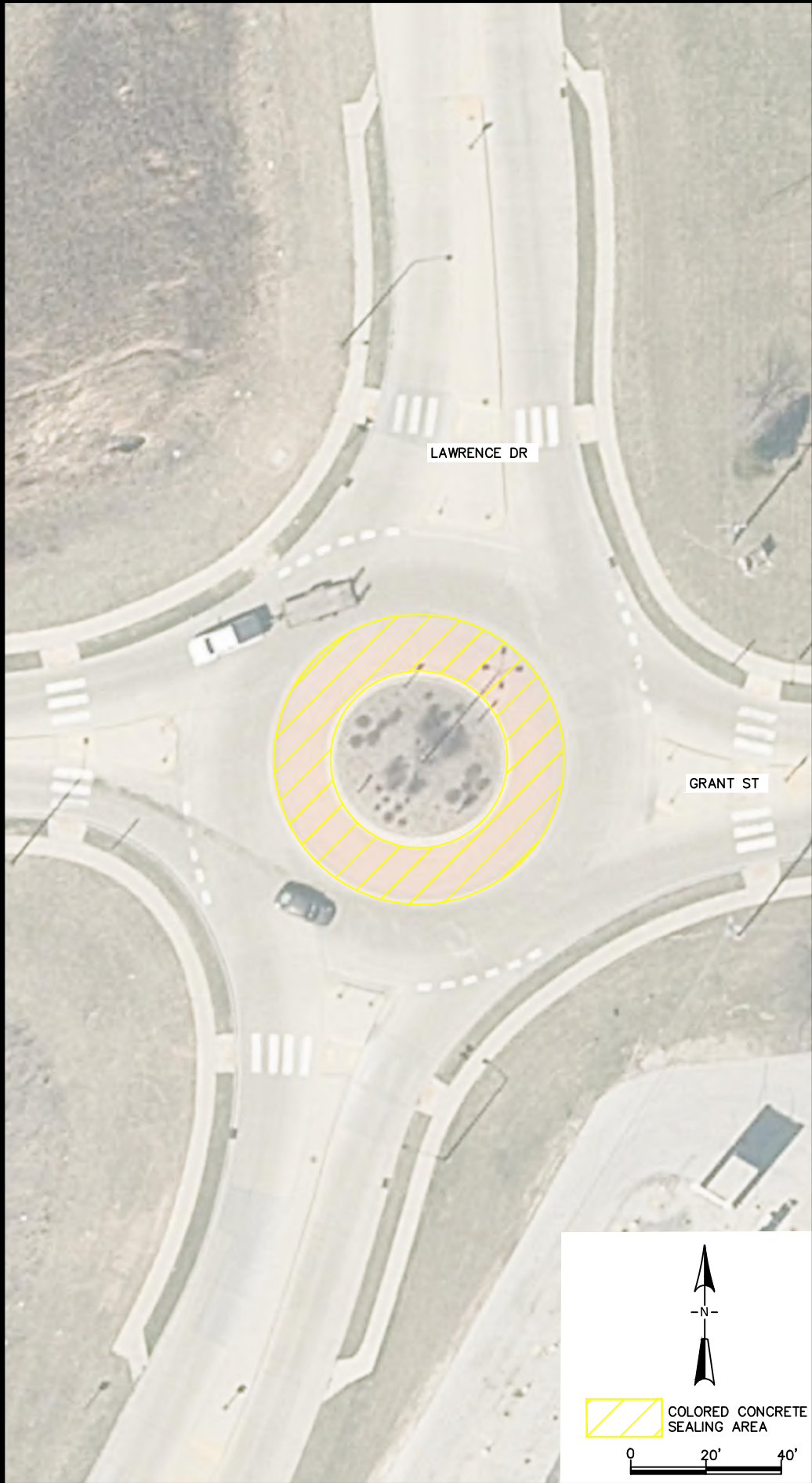


CITY OF DE PERE

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OFFICE 920-339-4061 FAX 920-339-4071

**CITY WIDE SPOT REPAIRS
BROADWAY ST & WISCONSIN ST
ROUNDAABOUT**

NAME: CONCRETE STREET REPAIRS	BY	DATE	REVISIONS / ISSUES			
PROJECT #			NO.	DATE	BY	REMARKS
23-06						
	SURVEYED					
	DRAWN	KAD	01-2023			
	DESIGNED					
	CHECKED	EPR/CLK	01-2023			



CITY OF DE PERE

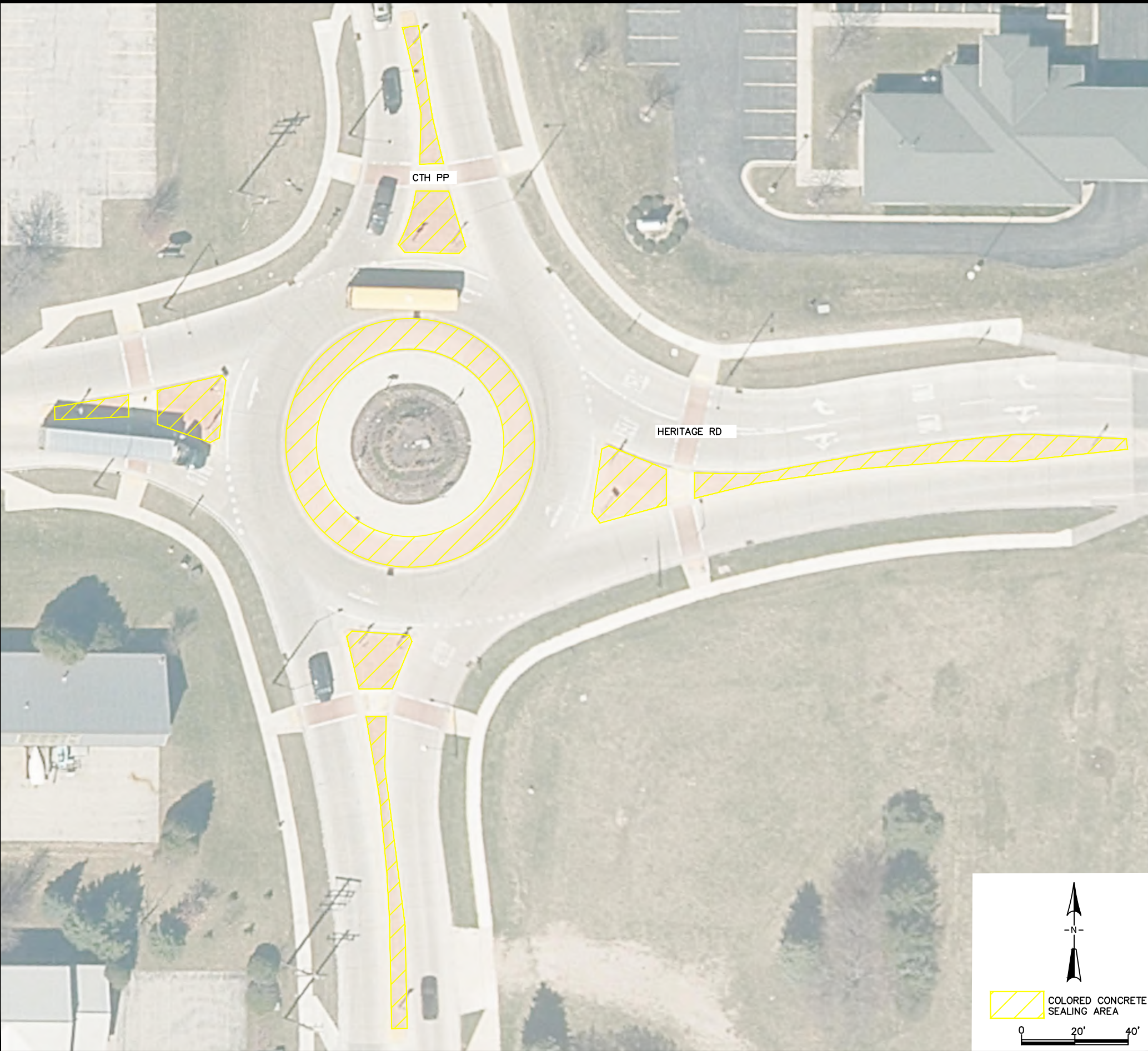
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

**GRANT STREET & MAIN AVENUE
COLORED CONCRETE SEALING**

NAME:
CONCRETE STREET REPAIRS
PROJECT # 23-06

	BY	DATE
SURVEYED	KAD	01-2023
DRAWN		
DESIGNED		
CHECKED	EPR/CKK	01-2023

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

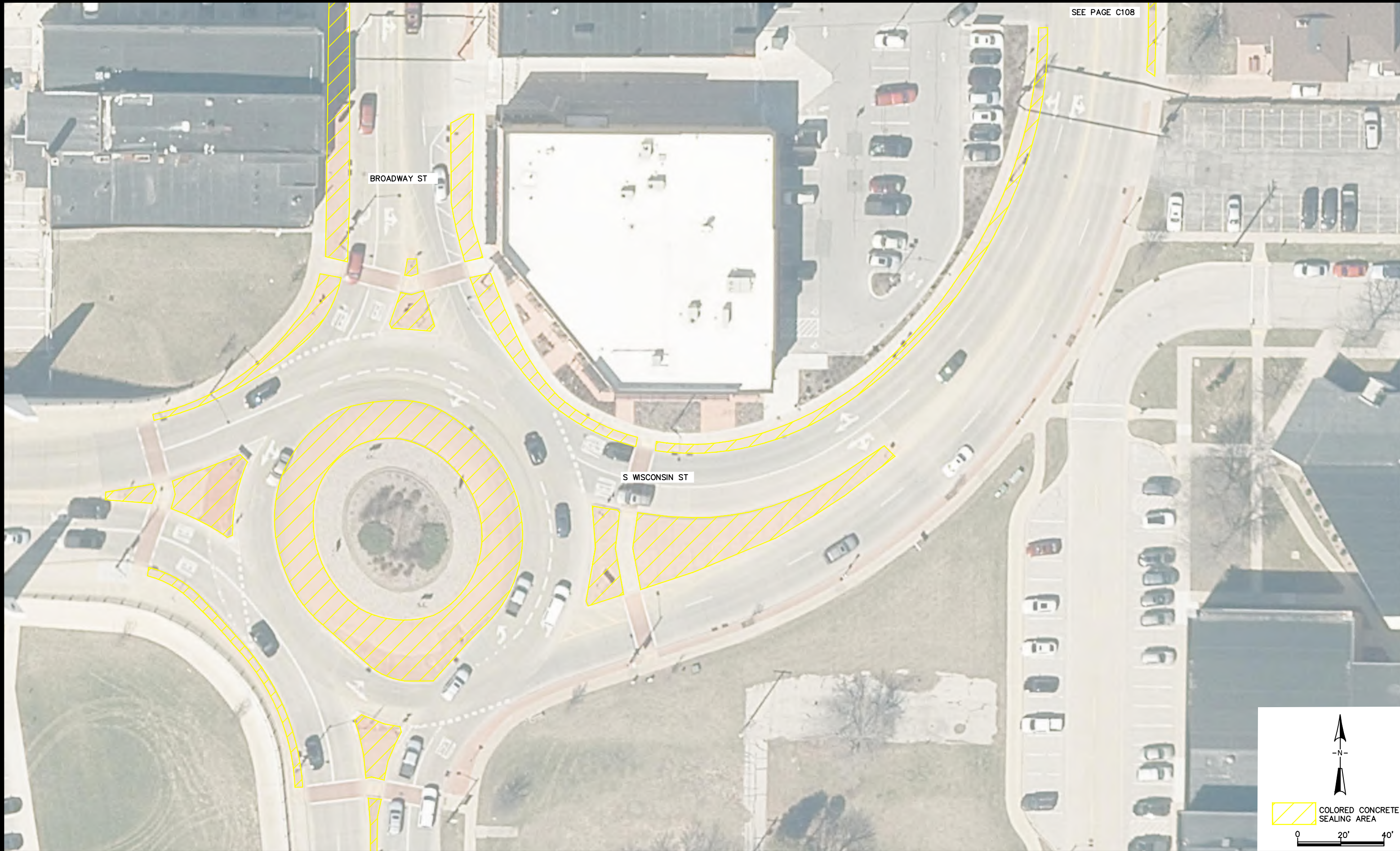
**SCHEURING ROAD & HERITAGE ROAD
COLORED CONCRETE SEALING**

NAME:
CONCRETE STREET REPAIRS

PROJECT #
23-06

BY	DATE
KAD	01-2023
EPR/CKK	01-2023

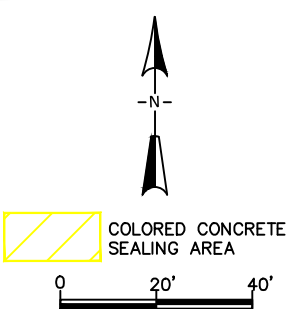
REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS



SEE PAGE C108

BROADWAY ST

S WISCONSIN ST



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

**WISCONSIN STREET & GEORGE ST
COLORED CONCRETE SEALING**

NAME:
CONCRETE STREET REPAIRS

PROJECT #
23-06

BY	DATE
KAD	01-2023
EPR/CKK	01-2023

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE
NO.
C107



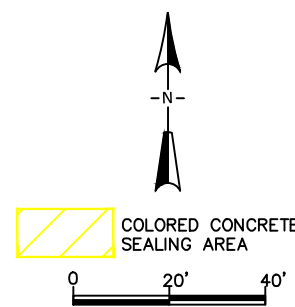
GEORGE ST

GEORGE ST

S WISCONSIN ST

S MICHIGAN ST

NOTE:
CONCRETE PLANTERS WILL NOT BE MOVED
TO SEAL COLORED CONCRETE.
SPRAY AROUND BASE OF EACH PLANTER.



SEE PAGE C109

SEE PAGE C107



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

**WISCONSIN STREET & GEORGE ST
COLORED CONCRETE SEALING**

NAME:
CONCRETE STREET REPAIRS

PROJECT # 23-06

BY	DATE
KAD	01-2023
EPR/CKK	01-2023

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

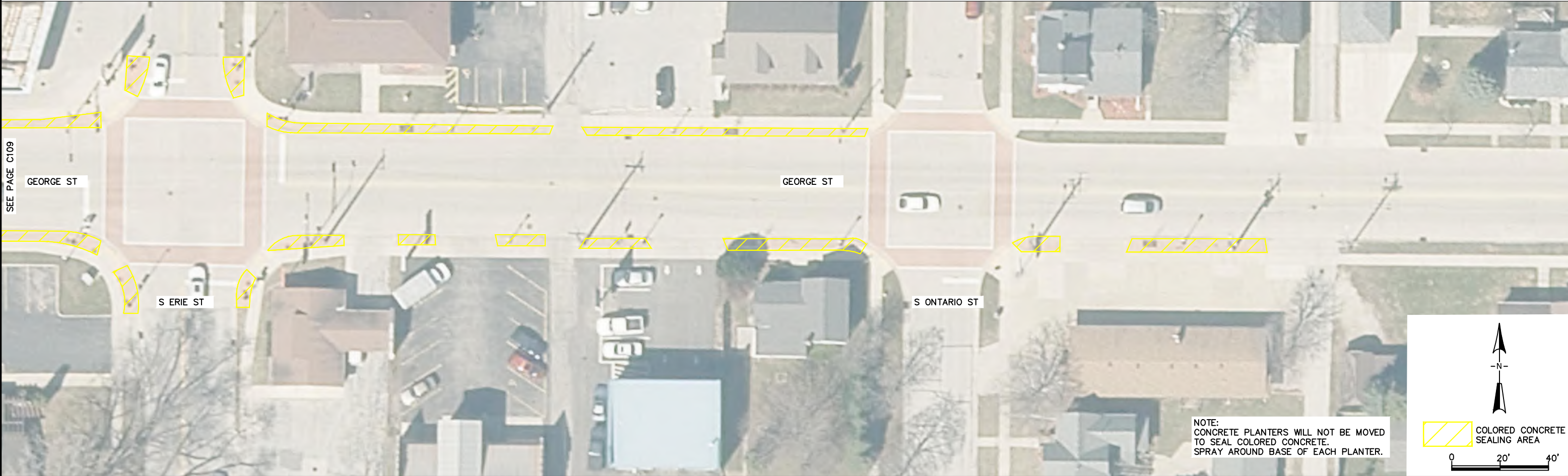
PAGE NO.
C108

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	CITY OF DE PERE ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115 OFFICE 920-339-4061 FAX 920-339-4071	GEORGE ST COLORED CONCRETE SEALING	NAME: CONCRETE STREET REPAIRS		BY	DATE	REVISIONS / ISSUES			PAGE NO. C109	
			PROJECT #	23-06							

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CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

GEORGE ST
COLORED CONCRETE SEALING

NAME:
CONCRETE STREET REPAIRS

PROJECT #
23-06

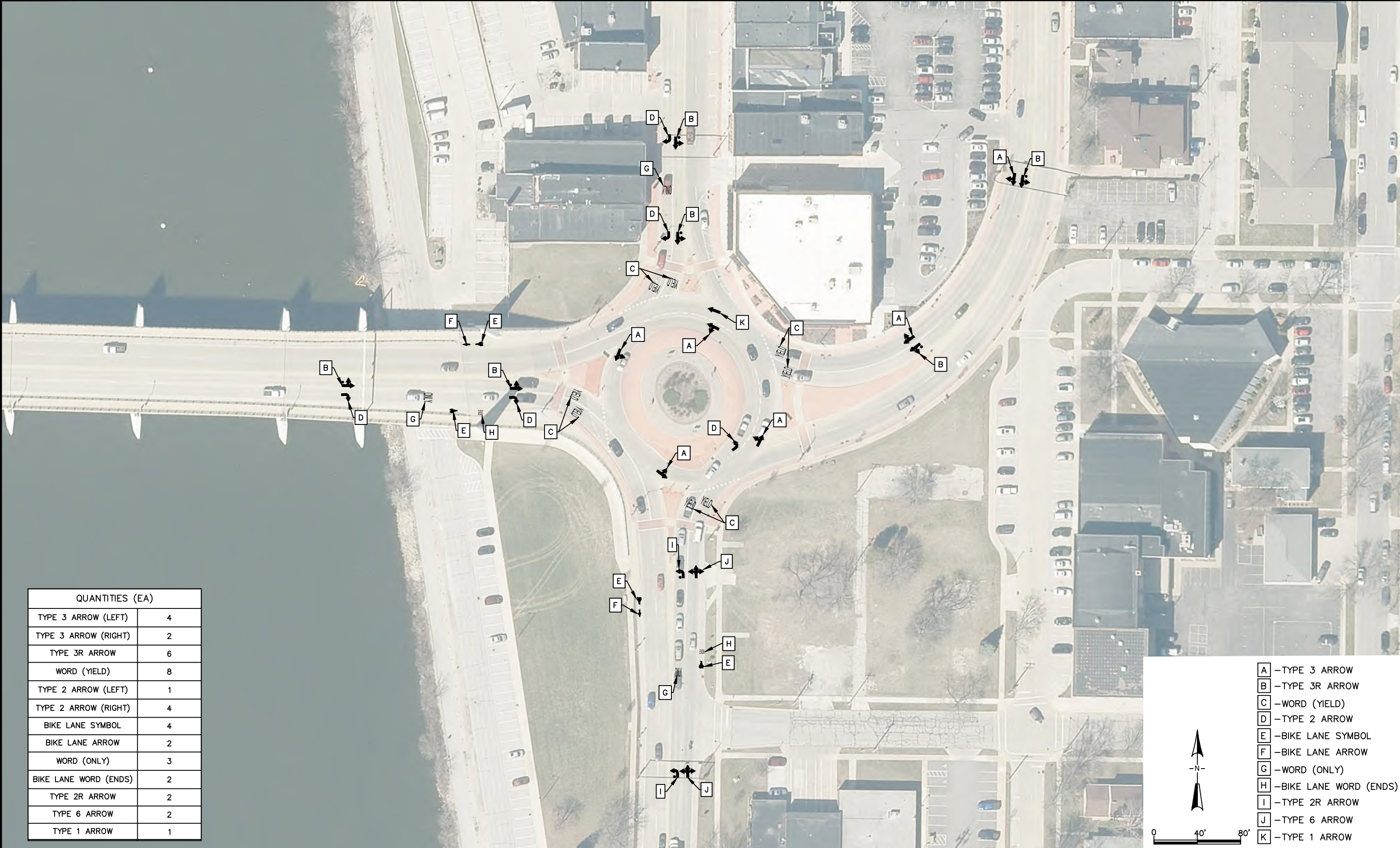
	BY	DATE
SURVEYED	KAD	01-2023
DRAWN		
DESIGNED		
CHECKED	EPR/CKK	01-2023

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

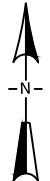
PAGE
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C110



NOTES:
1. MAINTAIN TWO WAY TRAFFIC AND ACCESS TO EACH PROPERTY AND CROSS ROAD.
2. FOLLOW MUTCD STANDARDS FOR SIGN SPACING AND LANE DELINIATION.

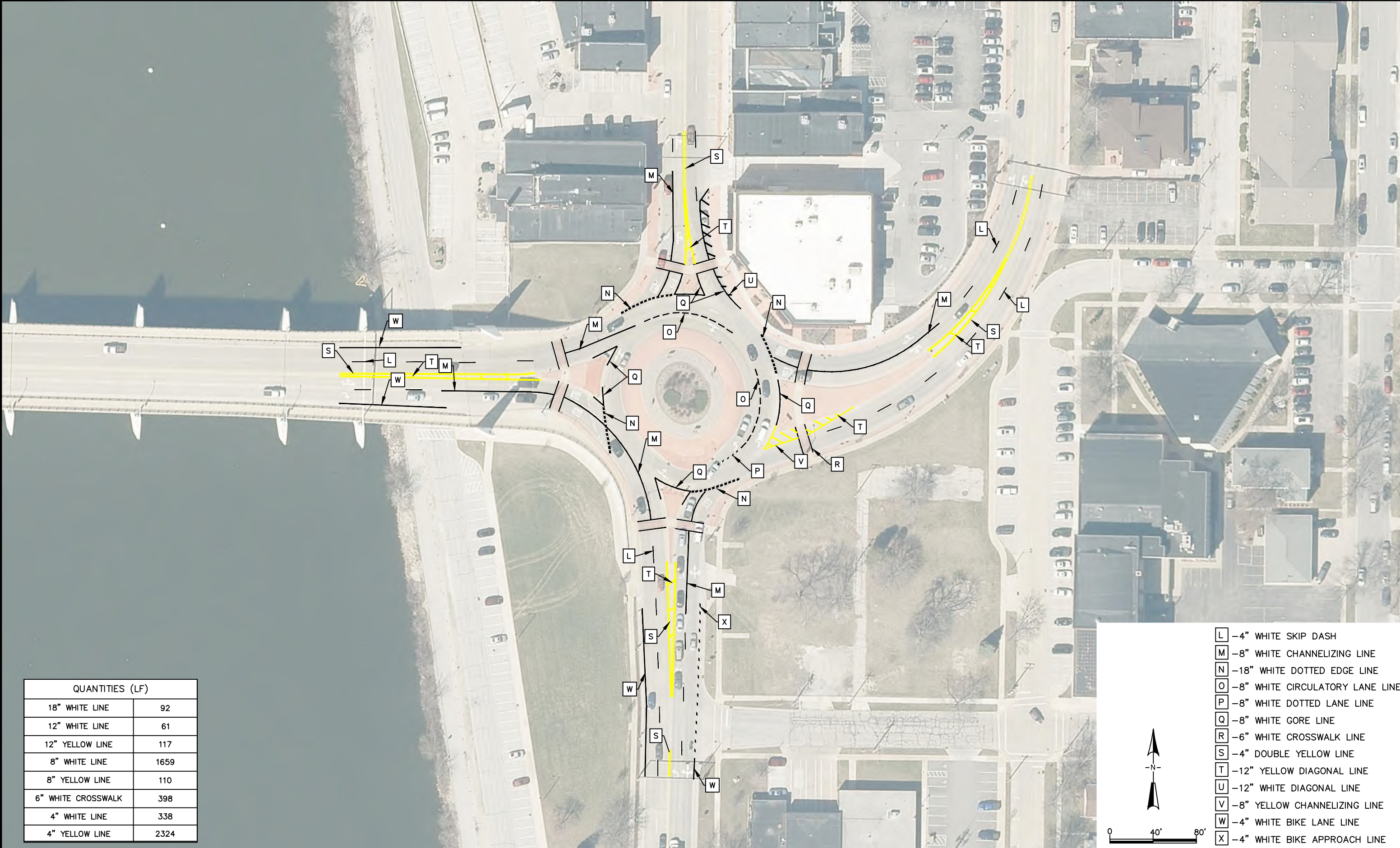


QUANTITIES (EA)	
TYPE 3 ARROW (LEFT)	4
TYPE 3 ARROW (RIGHT)	2
TYPE 3R ARROW	6
WORD (YIELD)	8
TYPE 2 ARROW (LEFT)	1
TYPE 2 ARROW (RIGHT)	4
BIKE LANE SYMBOL	4
BIKE LANE ARROW	2
WORD (ONLY)	3
BIKE LANE WORD (ENDS)	2
TYPE 2R ARROW	2
TYPE 6 ARROW	2
TYPE 1 ARROW	1


0 40' 80'

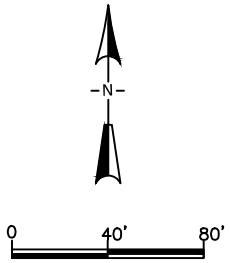
A	-TYPE 3 ARROW
B	-TYPE 3R ARROW
C	-WORD (YIELD)
D	-TYPE 2 ARROW
E	-BIKE LANE SYMBOL
F	-BIKE LANE ARROW
G	-WORD (ONLY)
H	-BIKE LANE WORD (ENDS)
I	-TYPE 2R ARROW
J	-TYPE 6 ARROW
K	-TYPE 1 ARROW

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QUANTITIES (LF)	
18" WHITE LINE	92
12" WHITE LINE	61
12" YELLOW LINE	117
8" WHITE LINE	1659
8" YELLOW LINE	110
6" WHITE CROSSWALK	398
4" WHITE LINE	338
4" YELLOW LINE	2324

- L - 4" WHITE SKIP DASH
- M - 8" WHITE CHANNELIZING LINE
- N - 18" WHITE DOTTED EDGE LINE
- O - 8" WHITE CIRCULATORY LANE LINE
- P - 8" WHITE DOTTED LANE LINE
- Q - 8" WHITE GORE LINE
- R - 6" WHITE CROSSWALK LINE
- S - 4" DOUBLE YELLOW LINE
- T - 12" YELLOW DIAGONAL LINE
- U - 12" WHITE DIAGONAL LINE
- V - 8" YELLOW CHANNELIZING LINE
- W - 4" WHITE BIKE LANE LINE
- X - 4" WHITE BIKE APPROACH LINE



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

**S. BROADWAY & S. WISCONSIN
ROUNDAABOUT
PAVEMENT MARKING LINES**

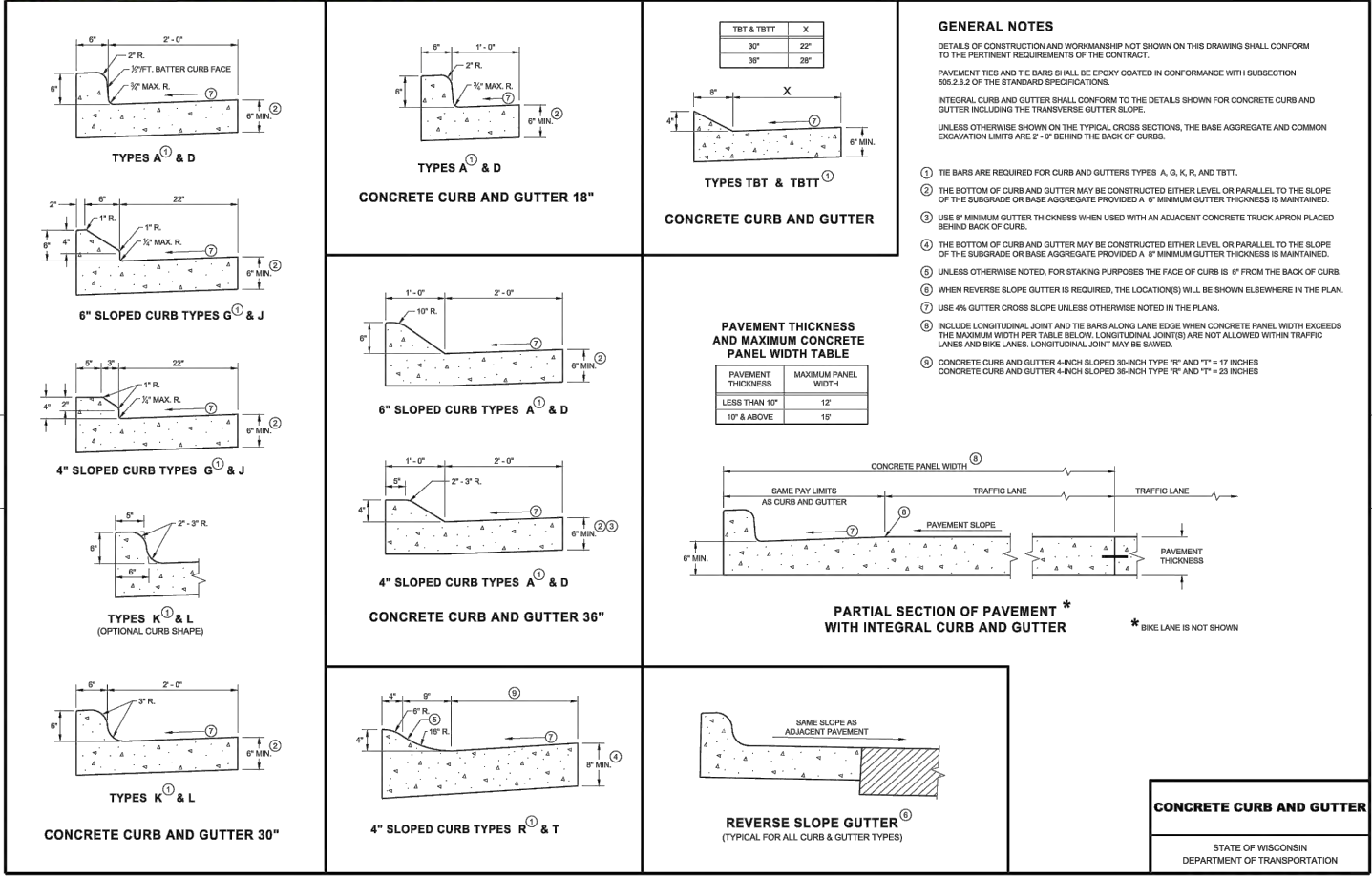
NAME:
CONCRETE STREET REPAIRS
PROJECT # 23-06

BY KAD
DATE 01-2023
EPR/CKK
DATE 01-2023

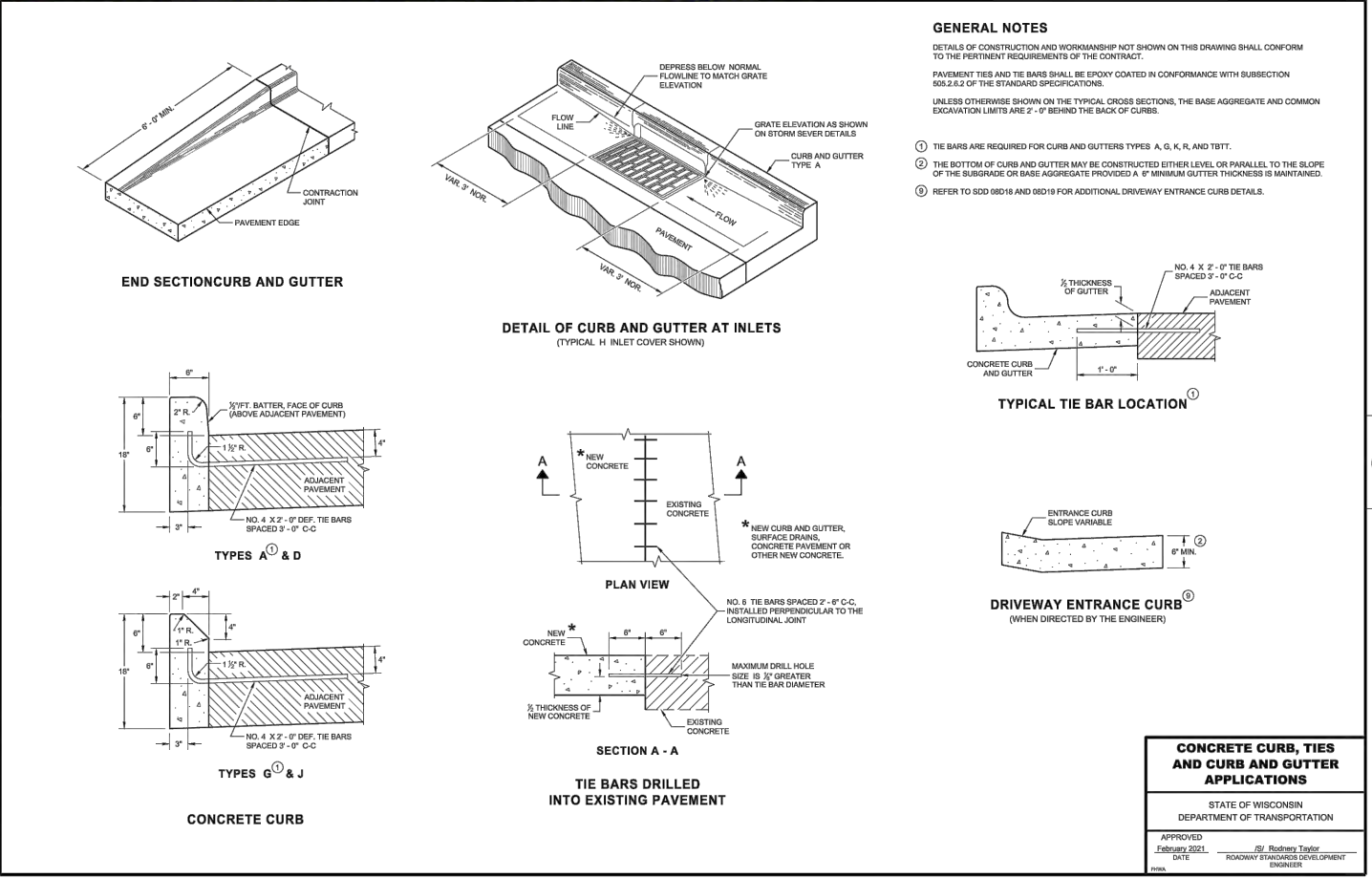
REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS



SDD 08D01-a Concrete Curb and Gutter



SDD 08D01-b Concrete Gutter, Ties, and Curb and Gutter Applications



SDD 08D01 - 22a

SDD 08D01 - 22b

SDD 08D01 - 22b



NAME:		BY		DATE		REVISIONS / ISSUES	
CONCRETE STREET REPAIRS		KAD		01-2023		NO. DATE BY REMARKS	
PROJECT #		23-06		DESIGNED			
		EPR/CKK		01-2023			

located and positioned correctly. A pavement marking layout detail showing the exact locations is required on all multi-lane roundabouts. Consider wheel tracking when developing the pavement marking layout detail. Proper pavement marking within the circulatory roadway will help prevent left turns from the outer lane and thus reduce exit crashes. Complex lane configurations should be reviewed by an experienced roundabout designer and the Regional Traffic Engineer.

35.2.1 Approach Markings

- 1. Centerline marking on the approach to the splitter island may require a minimum of 500-foot segment no passing barrier line as shown in [SDD 15C18](#) "Median Island Marking". Refer to [Attachment 35.1](#) item O.
- 2. Lane lines on the approach shall match the width of the line extended. The markings are at the typical spacing of 12.5-ft segment, 37.5-ft gap, unless an even segment of 12-ft segment, 12-ft gap is needed. Start when flare widens to 9.5 feet for each lane. Refer to items T and X in [Attachment 35.1](#).
- 3. The line shall be solid for a length of 50 feet in advance of the Point of Curve (P.C.) or as far as possible in advance of the P.C. to allow minimum marked lane widths of 9.5 feet, whichever is shorter. Refer to items B and I and its various marking width applications in [Attachment 35.1](#).
- 4. When an approach lane is a turn only lane, the channelizing line is 8-inches wide and solid. A R3-8 series Lane Control sign shall be placed for this type of approach. Refer to [FDM 11-26-35.1.1](#). The line shall be solid for a length of 50 feet in advance of the P.C., or as far as possible in advance of the P.C. to allow minimum marked lane widths of 9.5 feet, whichever is shorter. Refer to item B and its various marking width applications in [Attachment 35.1](#).
- 5. When the left approach lane is a dropped lane/exclusive turn lane, the approach dotted marking shall be 8-inches wide with 3-ft segment, 9-ft gap. Consult with the Regional Traffic Engineer on the start of this marking. Refer to item D in [Attachment 35.1](#).
- 6. The painted median splitter island marking on the approach shall be double yellow with 12-inch yellow diagonal marking. Do not place diagonal marking if the island is less than 6-ft wide. When the island nose width is greater than 6 feet, the diagonals shall be spaced every 25-ft if the median gore is longer than 50-ft; spaced every 10-ft if the median gore length is 50-ft or less. Refer to items J and K in [Attachment 35.1](#).
- 7. Lane separation markings (truck gores) shall be outlined by 8-inch white lines. Refer to item U in Attachment 35.1. When the separation is greater than 6-ft, 12-inch white chevrons shall be placed and spaced every 25-ft if the truck gore length is longer than 50-ft; spaced every 10-ft if the truck gore length is 50-ft or less. Do not install chevrons when the truck gore is 6 feet wide or less. The point of the chevron shall 'point' upstream. Refer to item U for chevron application in [Attachment 35.1](#).
- 8. The edge line marking on the circle end of the splitter island will be white. Refer to [Attachment 35.1](#) which shows the breakpoint from 8-inch white to 4-Inch yellow markings 5 feet in advance of the curb/splitter island P.C (items M and N of the [Special Case](#) in [Attachment 35.1](#)). Refer to [TEOpS 3-10-1](#) and consult the Regional Traffic Engineer for further placement guidance of the yellow edge line upstream of the roundabout.
- 9. When two or more lanes approach a roundabout, lane use arrows shall be marked in each lane to denote proper lane usage. Full complement of signing shall be installed as shown in Figure 35.1, Regulatory Signs. Refer to item V in [Attachment 35.1](#). Lane use arrows should not be used on single-lane approaches. Left turn arrows with the oval (Type 2R or Type 3R) shall only be placed in the left most lane. Refer to [SDD 15C7-d](#) for typical detail of a dot with left pavement marking arrow. The fish-hook arrow shall not be used.

In addition to approach lane lines, appropriate lane arrows encourage balanced lane use, which improves capacity and safety. Left turn arrows are important on multi-lane approaches, since traffic otherwise has a bias towards the right-most lane. Place arrows to show the movements for each lane, and to indicate permitted dual right or left turns. Place the arrows at or just before the point where the channelizing or lane line begins or when the road widens to allow minimum lane widths of 9.5 feet. This is intended as a visual cue to the motorist to select an appropriate lane for entering the roundabout. Contact the Regional Traffic Engineer for guidance for multiple sets of arrows.
- 10. Crosswalk markings should be placed such that vehicles approaching the roundabout are not likely to stop on the crosswalk. A distance of 20 to 25 feet per stored vehicle back from the yield point is typically appropriate. Refer to [Attachment 35.1](#) as well as crosswalk policy in [TEOpS 3-2-3](#) or selection guidance of appropriate crosswalk markings.
- 11. The word, "YIELD" placed prior to the dotted edge line extension shall only be used when crashes are caused by motorists failing to yield. Refer to item X in [Attachment 35.1](#) and [SDD 15C7-b](#), Yield Markings.

- 12. Dotted Edge Line Extensions shall be 18-inch-wide dotted white at 2-ft segment, 2-ft gap. Place markings to avoid conflict between the entering vehicle and internal roundabout traffic, this is the point where entering traffic must yield. Refer to item A in [Attachment 35.1](#).

Approach and entry pavement markings consist of lane line, channelization marking, dotted edge line extension marking (yield line) and symbol markings. Refer to [TEOpS 3-10-1](#) for approved pavement marking materials and their locations at a roundabout. Consult with the Regional Traffic Engineer before determining final pavement marking materials.

35.2.2 Circulatory Roadway Marking

- 13. Lane lines within the roundabout shall be 4-inch or 8-inch width, with a 6-ft segment, 3-ft gap marking cycle. These lines shall be the same width as the lines they extend. Lane lines in the circle can have a spiral effect and together with proper lane assignment guide motorists through the roundabout to the appropriate exit eliminating the need to change lanes. Refer to item C in [Attachment 35.1](#) along with guidance in selecting either the 4-inch or 8-inch width. For longevity, place the markings to avoid wheel paths of the intersecting traffic.
- 14. When used, dotted line markings shall be the same width as the lane lines and 1-ft segment, 3-ft gap marking cycle. Refer to item E in [Attachment 35.1](#).
- 15. When two lanes are allowed to proceed around the circle, Lane use arrows shall be marked in each lane within the roundabout halfway between the splitter island to denote proper lane usage. Arrows placed within the circulatory roadway shall not include the oval. Refer to item Q in [Attachment 35.1](#).

35.2.3 Exit Marking

- 16. Avoid chevron makings at the exit point adjacent to the splitter island and at the exit or on the approach. This former special case application has been discovered to provide limited benefits in speed control and directional guidance versus curb and gutter.
- 17. Do not paint the noses of the splitter island yellow (where the splitter island meets the circulatory roadway, unless there is a documented crash problem). Yellow nose paint is intended to separate opposing directions of traffic such as the approach nose.

35.2.4 Bicycle Marking

- 18. When required, bike lane markings should be placed as per Figure 35.6.

Bike lane marking within the circulatory roadway is not permitted on any roundabouts. Refer to Figure 35.6 for Bike Lane markings on roundabout approaches.

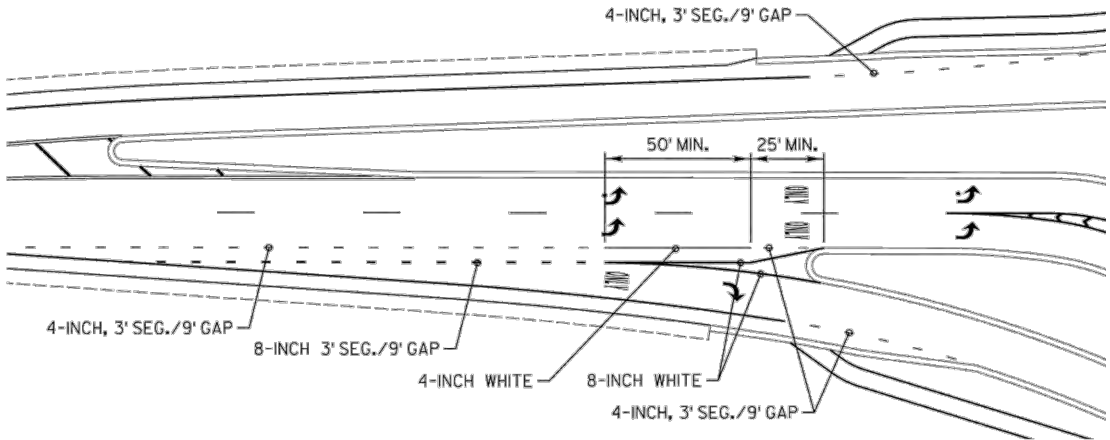


Figure 35.6 Bike Lane Roundabout Marking

35.2.5 Compact Roundabouts

A 4-inch yellow edge line shall be placed around the central island of a compact roundabout with a traversable central island. Place gore markings and edge lines based on TEOpS 3-2-1 speed and illumination policy for edge lines. White edge lines shall not be placed around the circulatory roadway. Refer to [Attachment 35.3](#) for example markings for a compact roundabout.

35.2.6 Maintenance of Pavement Marking

For roundabouts on the STH System with county highway approaches or local road approaches, it is



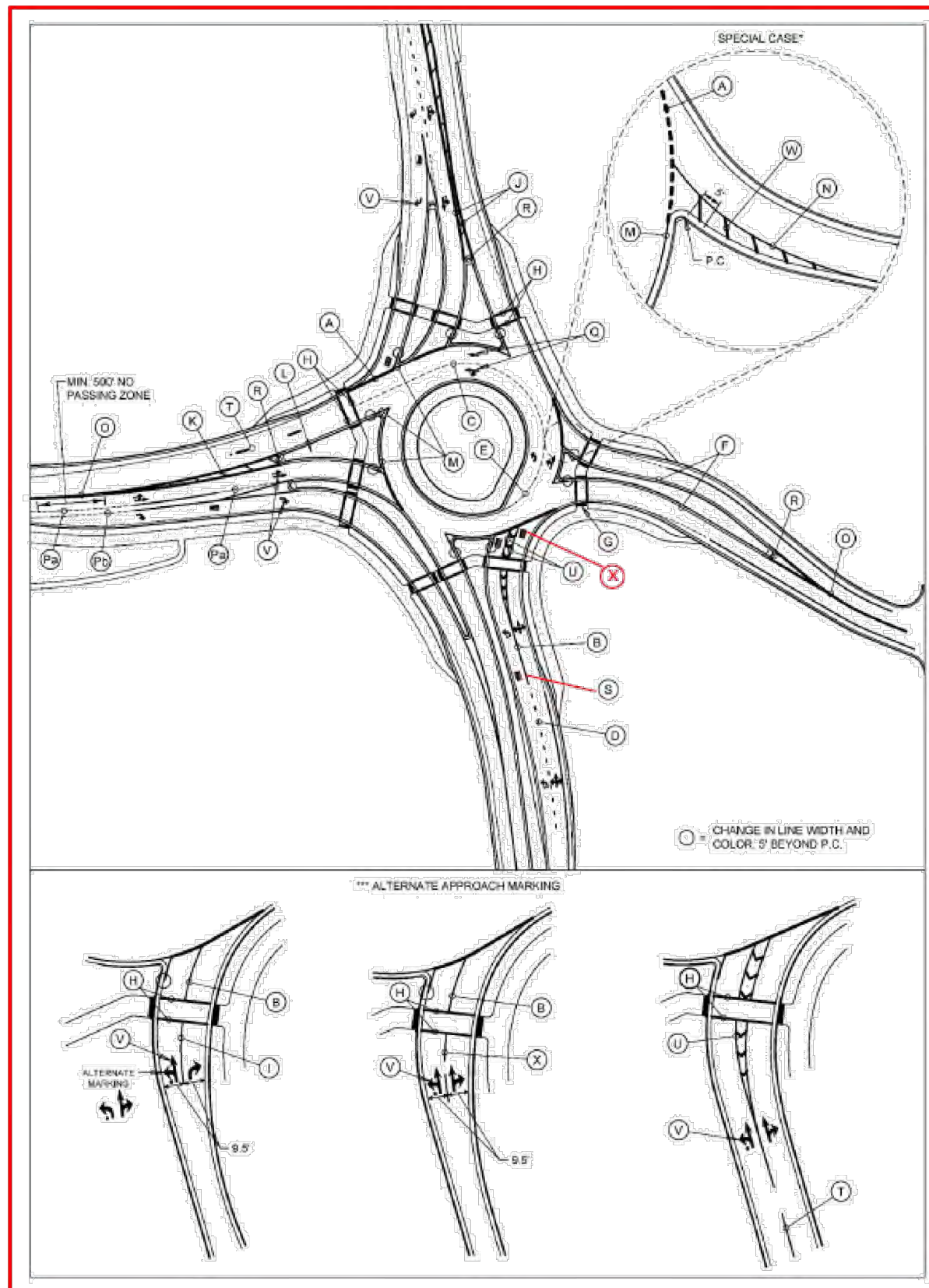
CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

PAVEMENT MARKING DETAILS

NAME:	CONCRETE STREET REPAIRS	BY	DATE	REVISIONS / ISSUES				PAGE NO.
				NO.	DATE	BY	REMARKS	
PROJECT #	23-06	SURVEYED						C503
		DRAWN	KAD	01-2023				
		DESIGNED						
		CHECKED	EPR/CHK	01-2023				

X:\ENG\Projects\City Projects\2023\Project 23-06 Concrete Street Repair\1200- CAD\CONSTRUCTION AND TRAFFIC CONTROL DETAILS.dwg



Refer to following pages for Pavement Marking Key.

August 16, 2022

Attachment 35.1

Page 1

KEY:

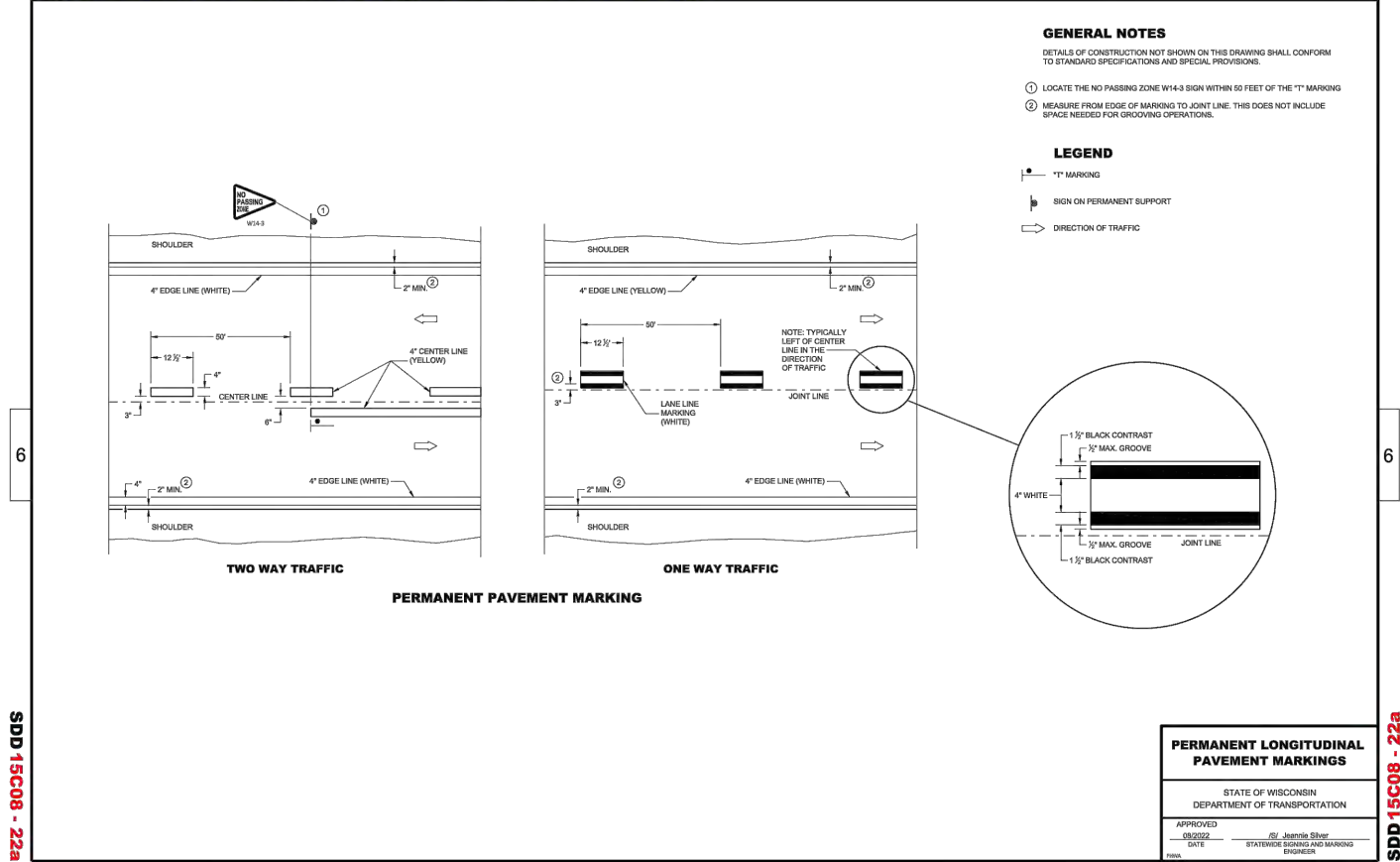
- A. Dotted Edge Line Extension, 18-Inch White, (2-ft segment, 2-ft gap)
- B. Approach Channelizing Line, 4-Inch White (standard); 8-Inch White may be selected to optimize operations. Contact the Region Traffic Engineer for final marking selection.
- C. Circulatory Lane Line, 4-Inch White (standard); 8 Inch White may be selected to optimize operations. Contact the Region Traffic Engineer for final marking selection, (6-ft segment, 3-ft gap).
- D. Approach Lane Line, 4-Inch White: 3-ft segment, 9-ft gap for advanced warning of an exclusive turn lane. Begin marking where flare widens to 12 feet for each lane or a minimum of 150 feet before the solid line if no flare is present.
- E. Dotted Lane Line, 4-Inch White (standard)**, (1-ft segment, 3-ft gap); 8-Inch White** (1-ft segment, 3-ft gap) may be selected to optimize operations. Contact the Region Traffic Engineer for final marking selection.
- F. Splitter Island Left Edge Line, 4-Inch Yellow.
- G. Truncated Domes, aligned to ramp direction, not crosswalk direction.
- H. Crosswalk, refer to crosswalk selection guidance under [TEOpS 3-2-3](#) for selecting the appropriate crosswalk type.
 - I. Begin solid approach channelizing line where flare widens to 9.5-ft or 50-ft in advance of approach PC, whichever is shorter. This may be extended for certain exclusive lane configurations.
- J. Double Yellow 4-Inch
- K. Median Diagonal Marking, 12-Inch Yellow (apply within entire median gore area if distance at island nose is greater than 6-ft wide),
 - a. 25-ft C-C spacing, if median gore length greater than 50-Ft long.
 - b. 10-ft C-C spacing if median gore length less than 50-ft long.
- L. Splitter Island
- M. Gore Line, 8-Inch White to 5-ft beyond PC of nose
- N. * Left Edge Line, 4-Inch Yellow
- O. Center line Yellow Marking 4-Inch Double, or 4-Inch 500-ft segment and 12.5 segment, 37.5-Ft.
- P.
 - P_a. Bike Lane Marking, 4-Inch; 3-ft segment, 9-ft gap.
 - P_b. Bike Lane Marking, 8-Inch; 3-ft segment, 9-ft gap.
- Q. Circulatory Lane Use Arrows, White: No ovals shall be used on any arrows.
- R. Island Nose, Yellow
- S. Word, White
- T. Lane line, 4-Inch White, (12.5-ft segment, 37.5-ft gap)
- U. Truck Gore Separation, 8-Inch White. When the separation is greater than 6-ft, 12-inch white chevrons shall be placed every 25-ft if the gore length is longer than 50-ft and spaced every 10-ft if the gore length is 50-ft or less.
- V. Approach Lane: Use Arrows, White. Arrows with the oval shall only be used on the left-most turn lane.
- W. * Diagonals, 12-Inch Yellow, 10-Ft spacing. Place only if distance between curb flange and edgeline is greater than 3 feet.
- X. "Yield" only use if crashes occur because of motorist failing to yield.
- Y. Approach Lane Line, 4-Inch White; 12-ft segment, 12-ft gap, even segment gap ratio for symmetrical lane assignment. Begin marking where flare widens to 9.5 feet for each lane.

August 16, 2022

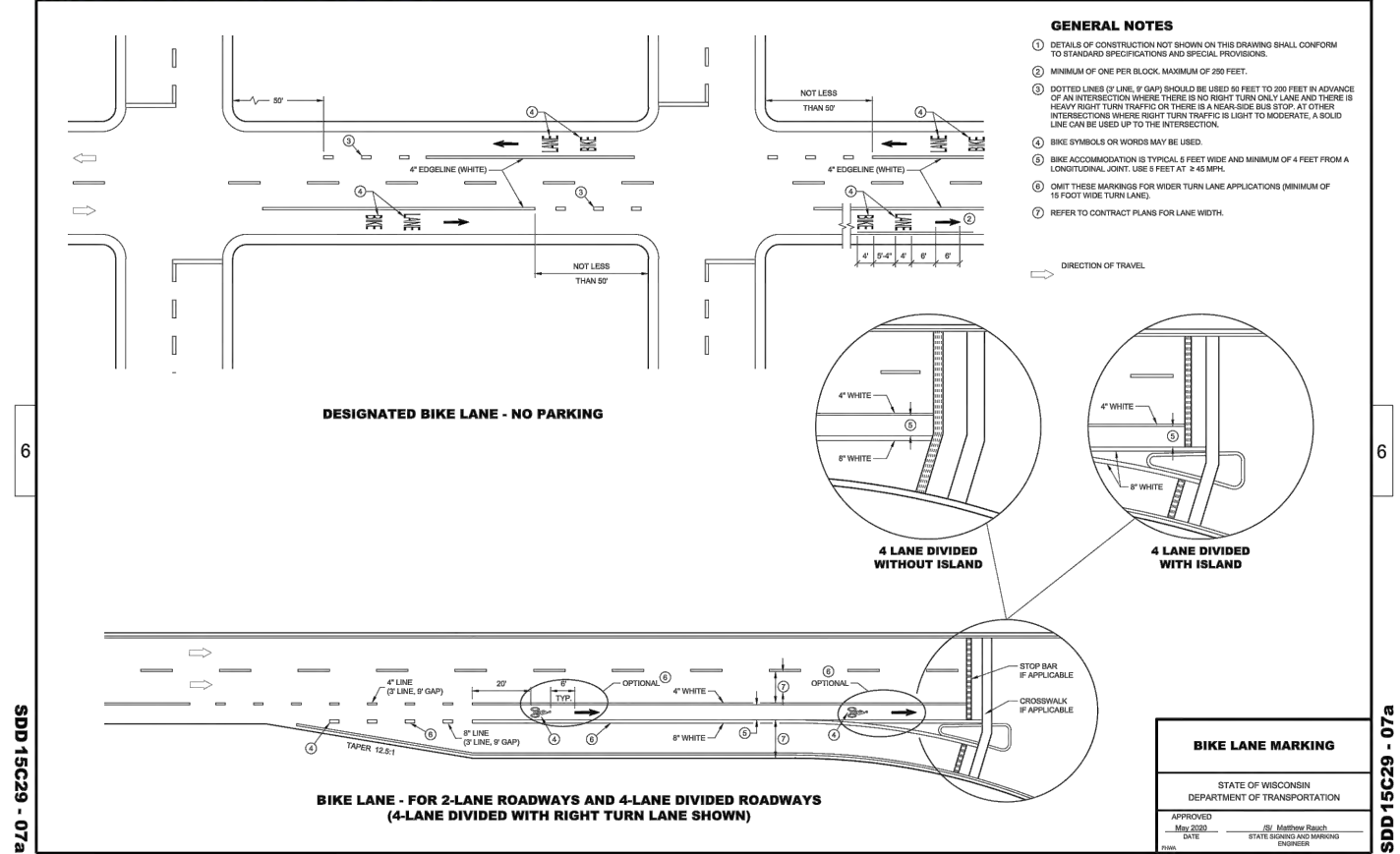
Attachment 35.1

Page 2

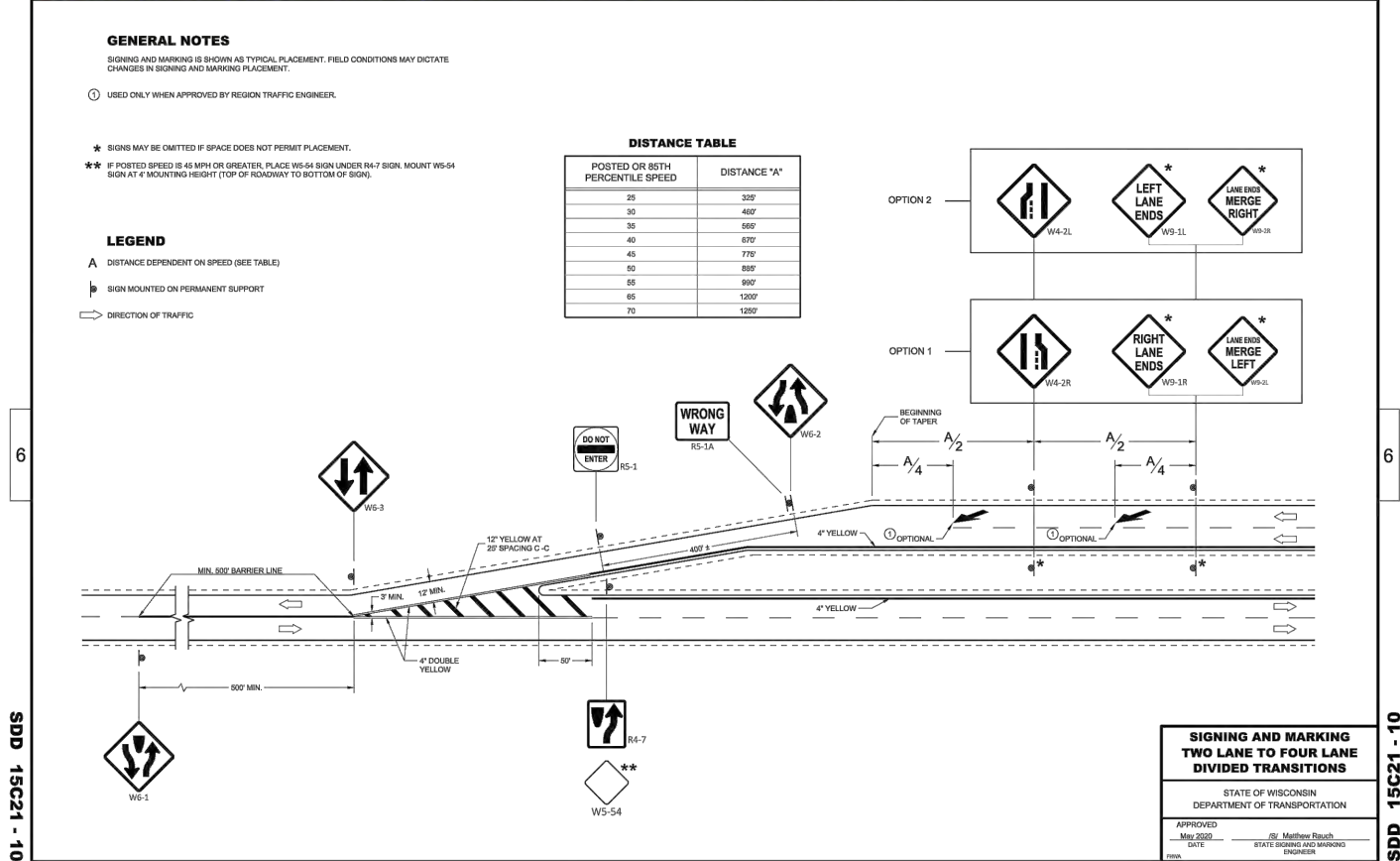
SDD 15C08-a Permanent Longitudinal Pavement Markings



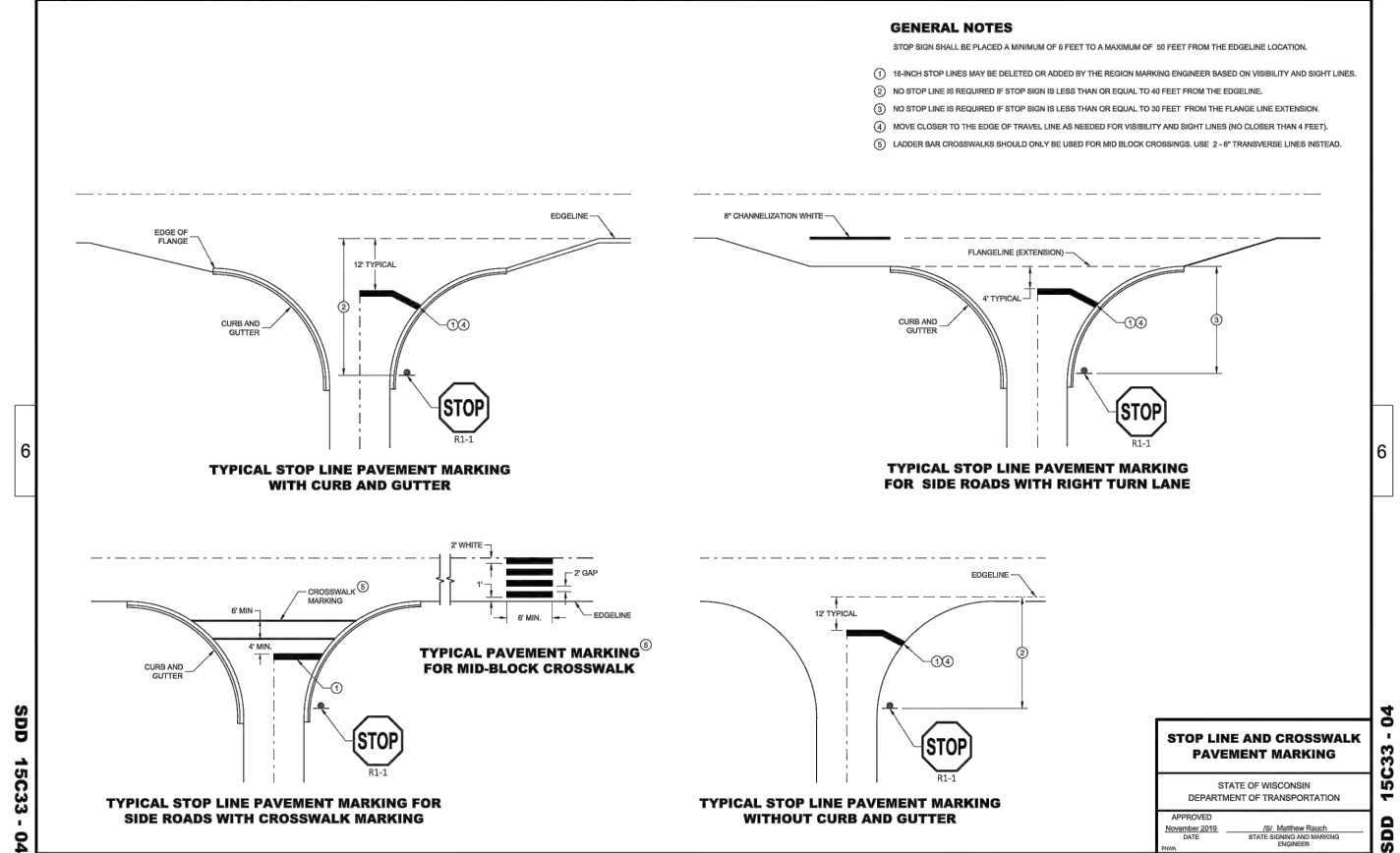
SDD 15C29-a Bike Lane Marking



SDD 15C21 Signing and Marking for Two Lane to Four Lane Divided Transitions



SDD 15C33 Stop Line and Crosswalk Pavement Marking



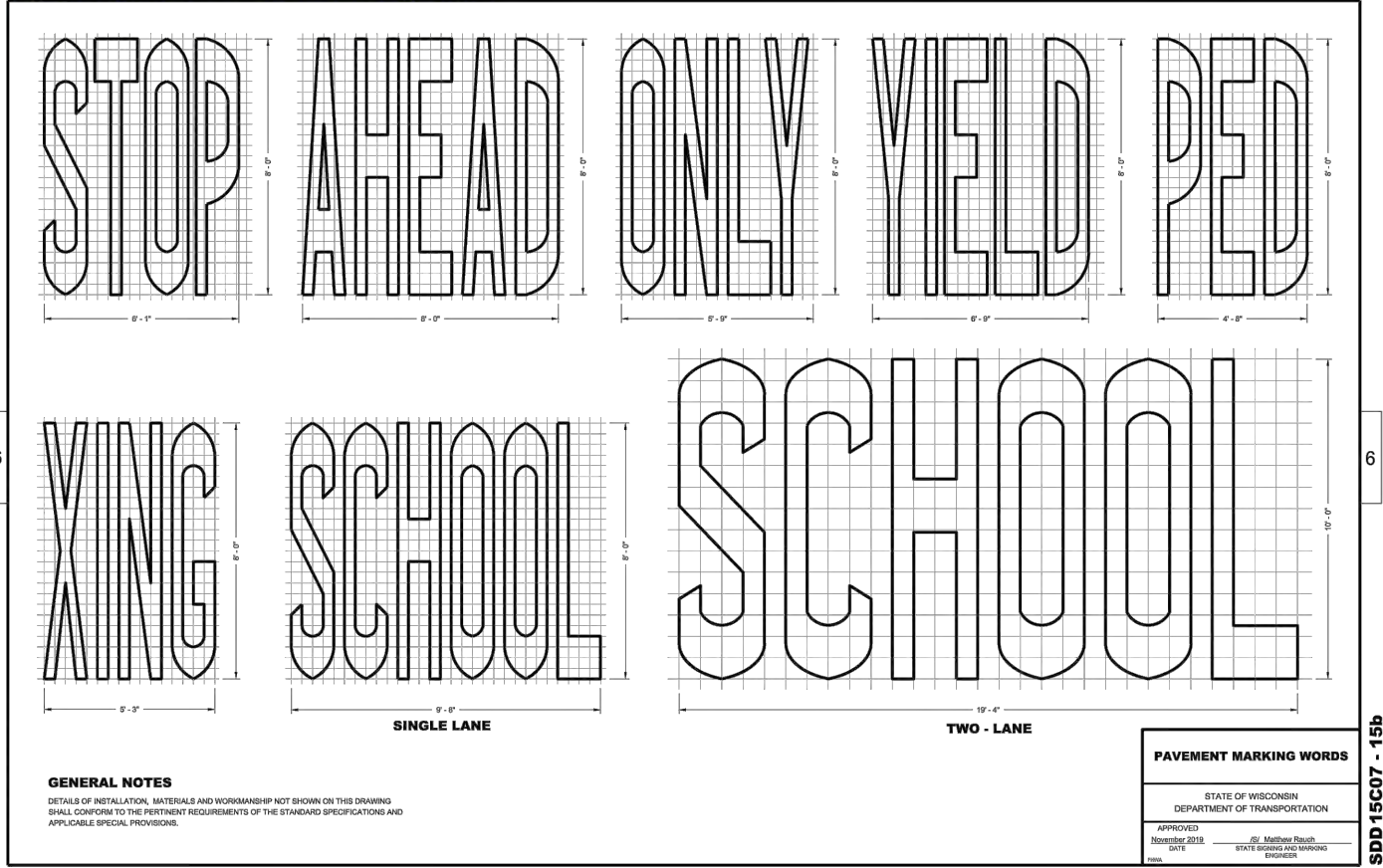
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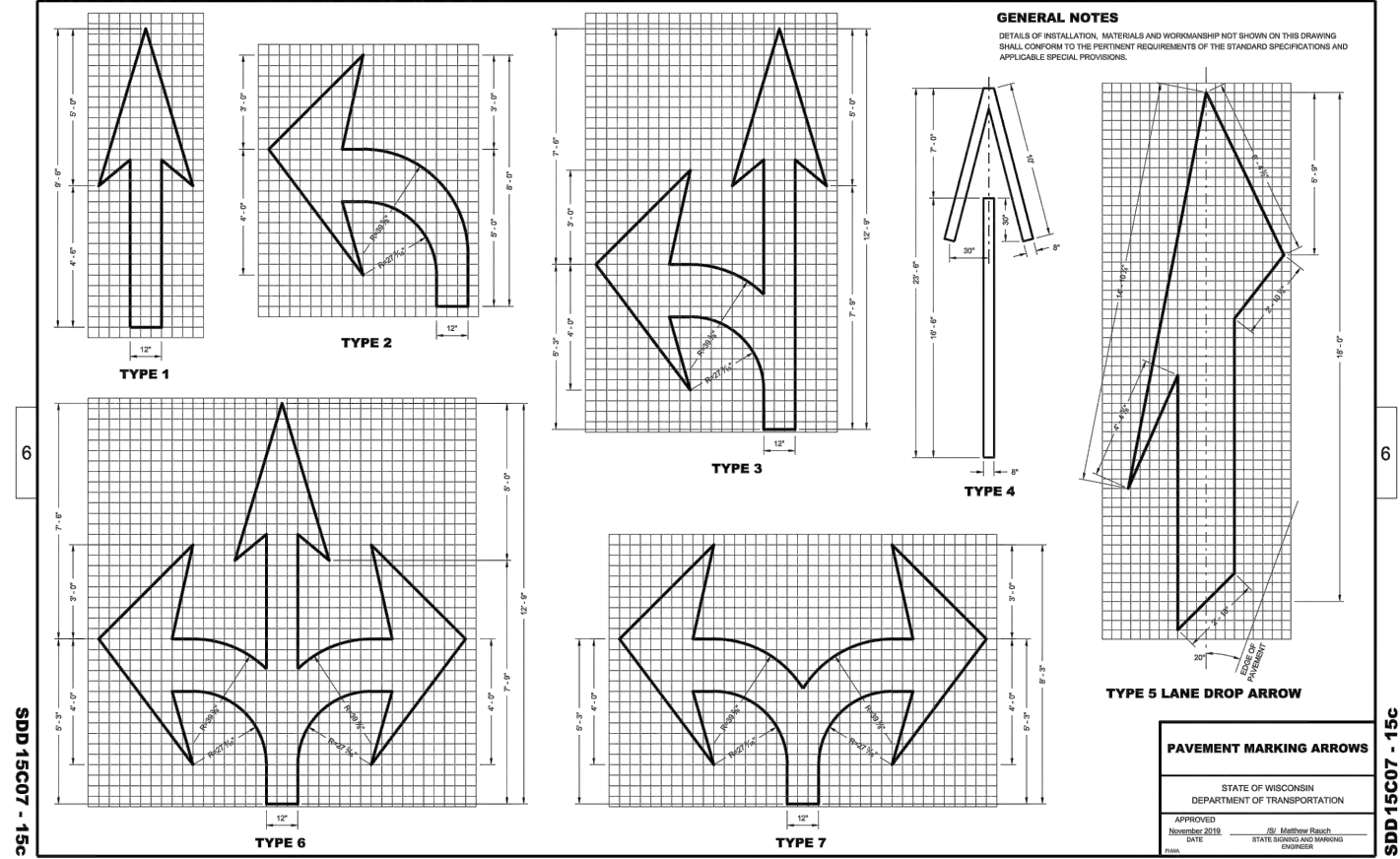
PAVEMENT MARKING DETAILS

NAME:	CONCRETE STREET REPAIRS	BY:	DATE:	REVISIONS / ISSUES				PAGE NO.
				NO.	DATE	BY	REMARKS	
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		DESIGNED	01-2023					
		CHECKED	EPR/CKK					

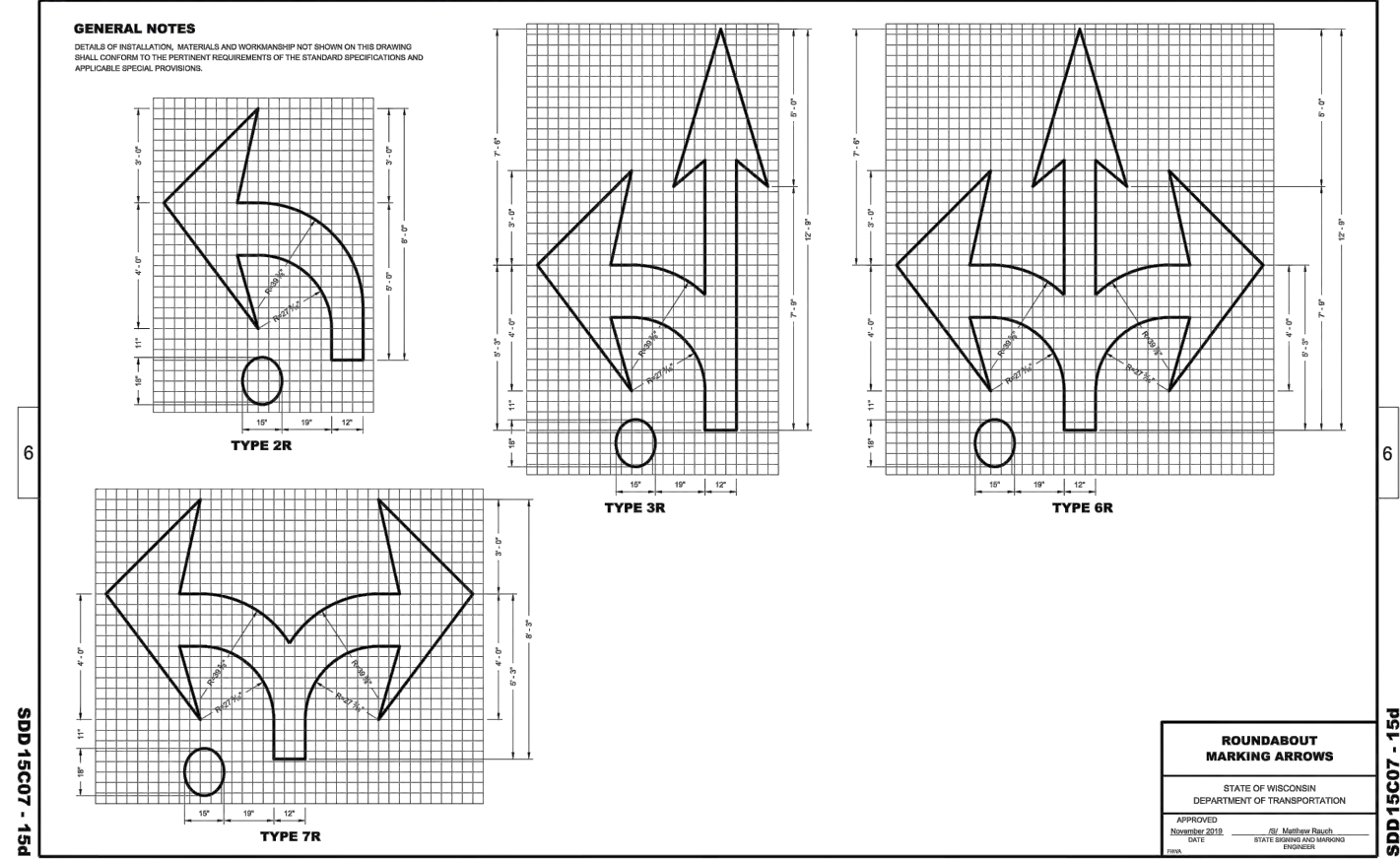
SDD 15C07-b Pavement Marking Words



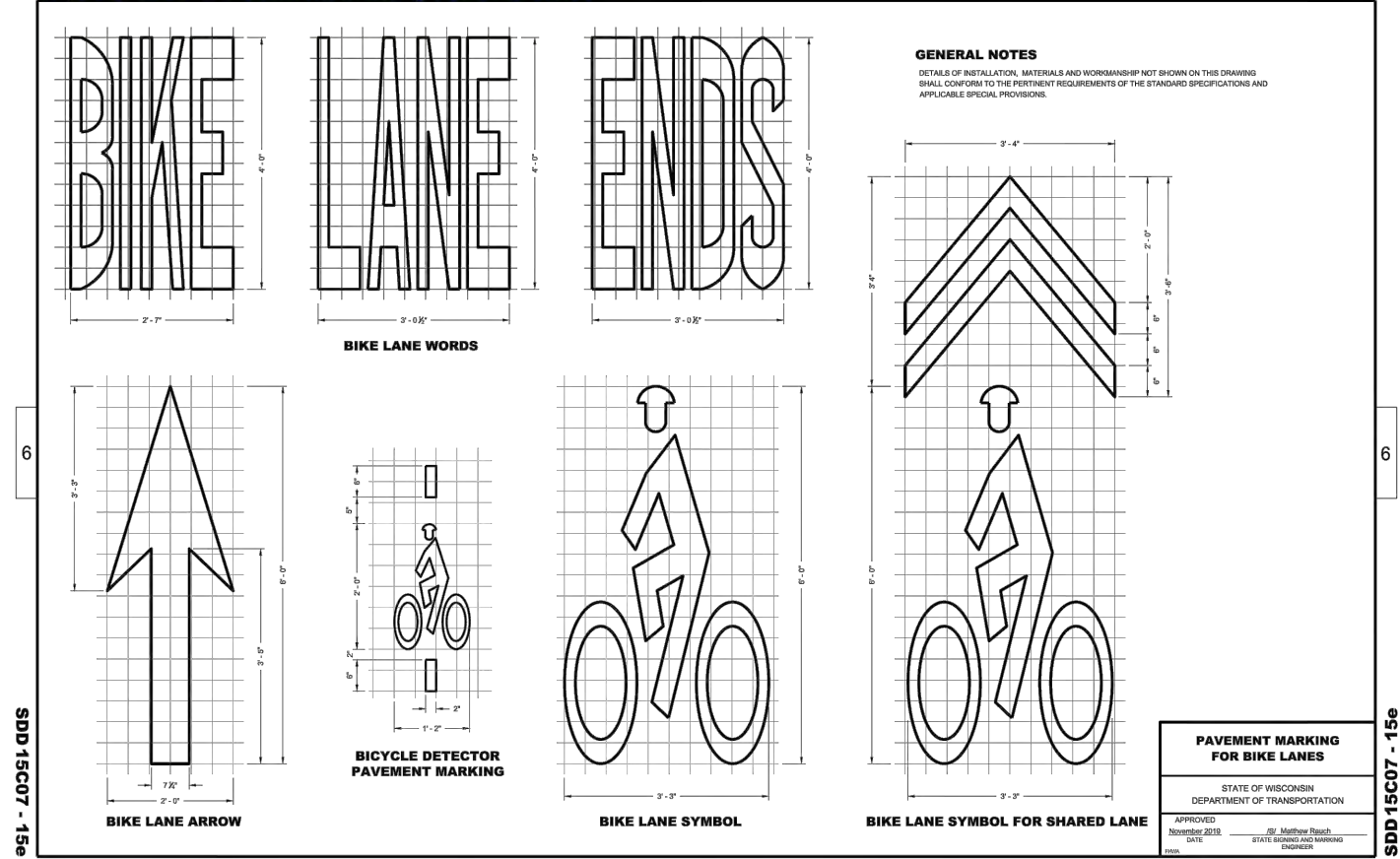
SDD 15C7-c Pavement Marking Arrows



SDD 15C7-d Roundabout Marking Arrows



SDD 15C7-e Pavement Marking For Bike Lanes



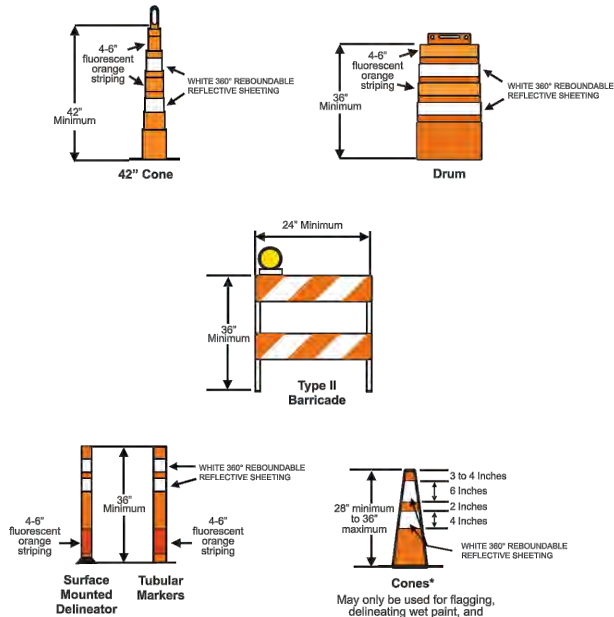
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OFFICE 920-339-4061 FAX 920-339-4071

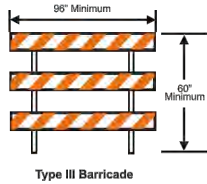
PAVEMENT MARKING DETAILS

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		SURVEYED		NO.	DATE	BY	REMARKS	
PROJECT # 23-06		DRAWN KAD	01-2023					
		DESIGNED						
		CHECKED EPR/CHK	01-2023					C506

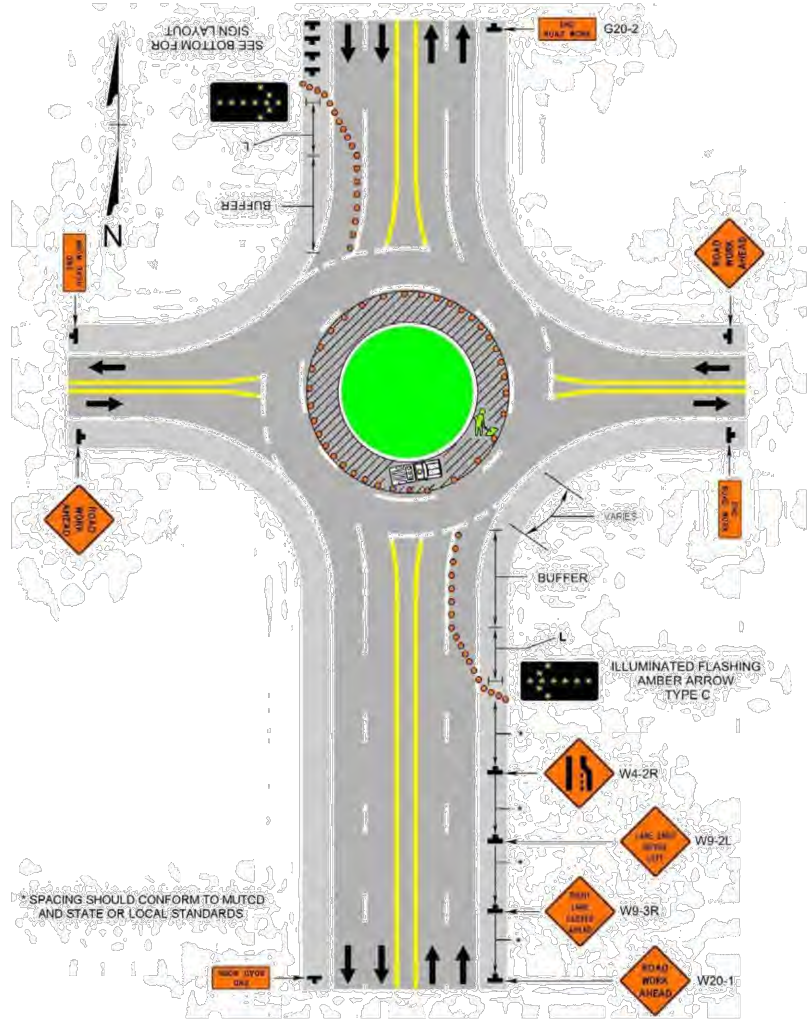
CHANNELIZING DEVICES



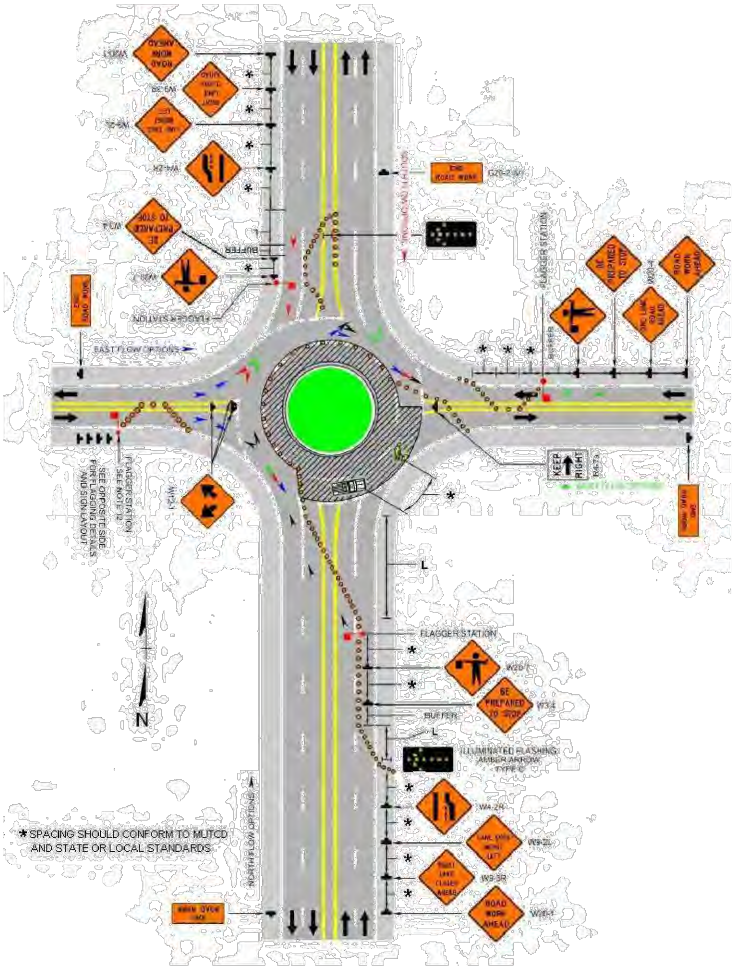
- TYPE 3 BARRICADES**
- Orange diagonals shall slope down toward the traffic side.
 - Signs mounted on Type III barricades should not cover more than half of the top two rails or 33 percent of the total area of the three rails.
 - Type A Flashing Warning Lights may be used - place on both side of barricade. Required for nighttime work or if device remaining overnight.



Typical Application 3
Multi-Lane Roundabouts: Inside Lane Closure
(Source: Virginia DOT (1). Work Area Protection Manual, 2011 Edition, Figure TTC-32.0)

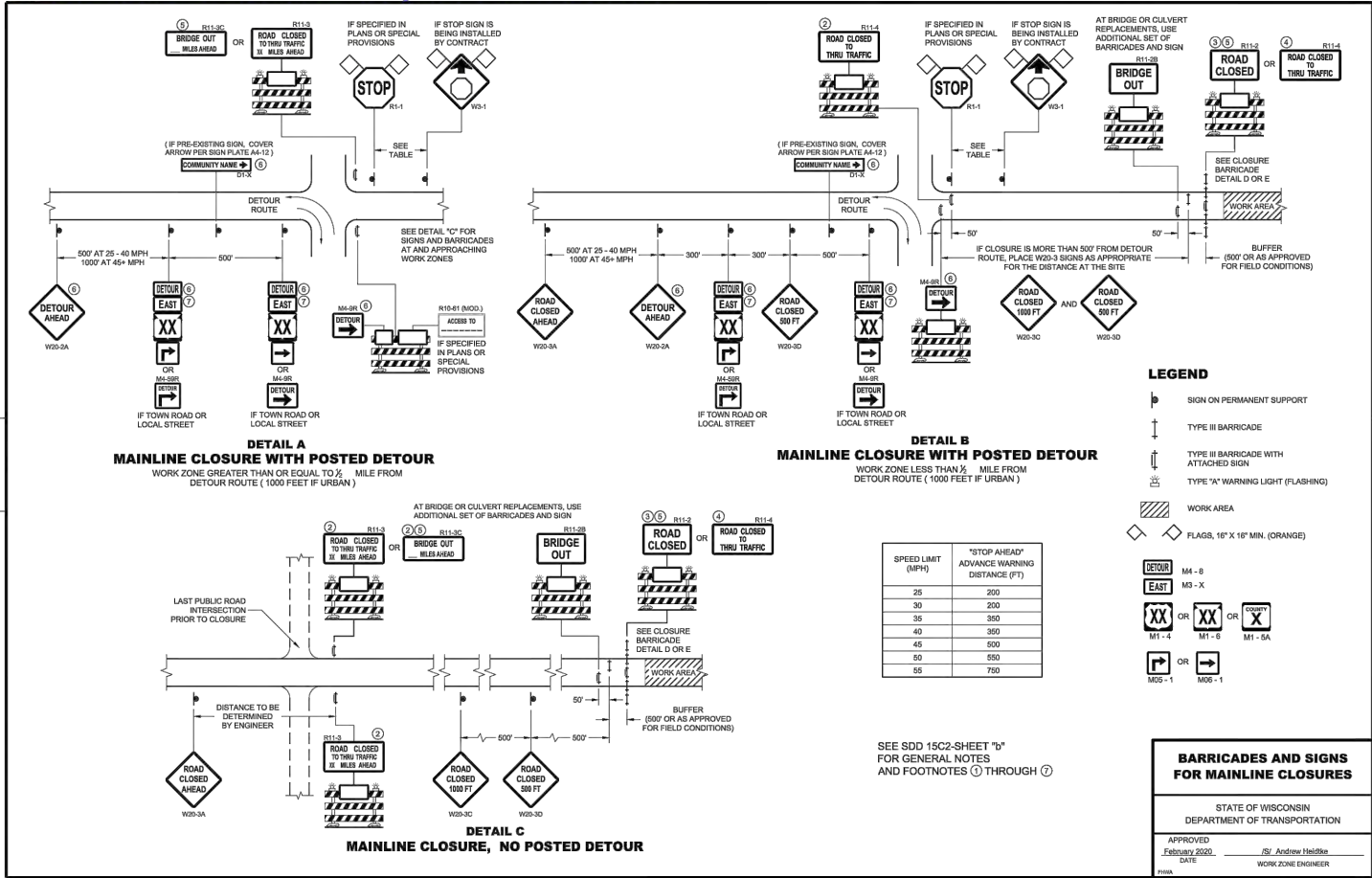


Typical Application 4
Multi-Lane Roundabouts: Outside Lane Closure
(Source: Virginia DOT (1). Work Area Protection Manual, 2011 Edition, Figure TTC-33.0)

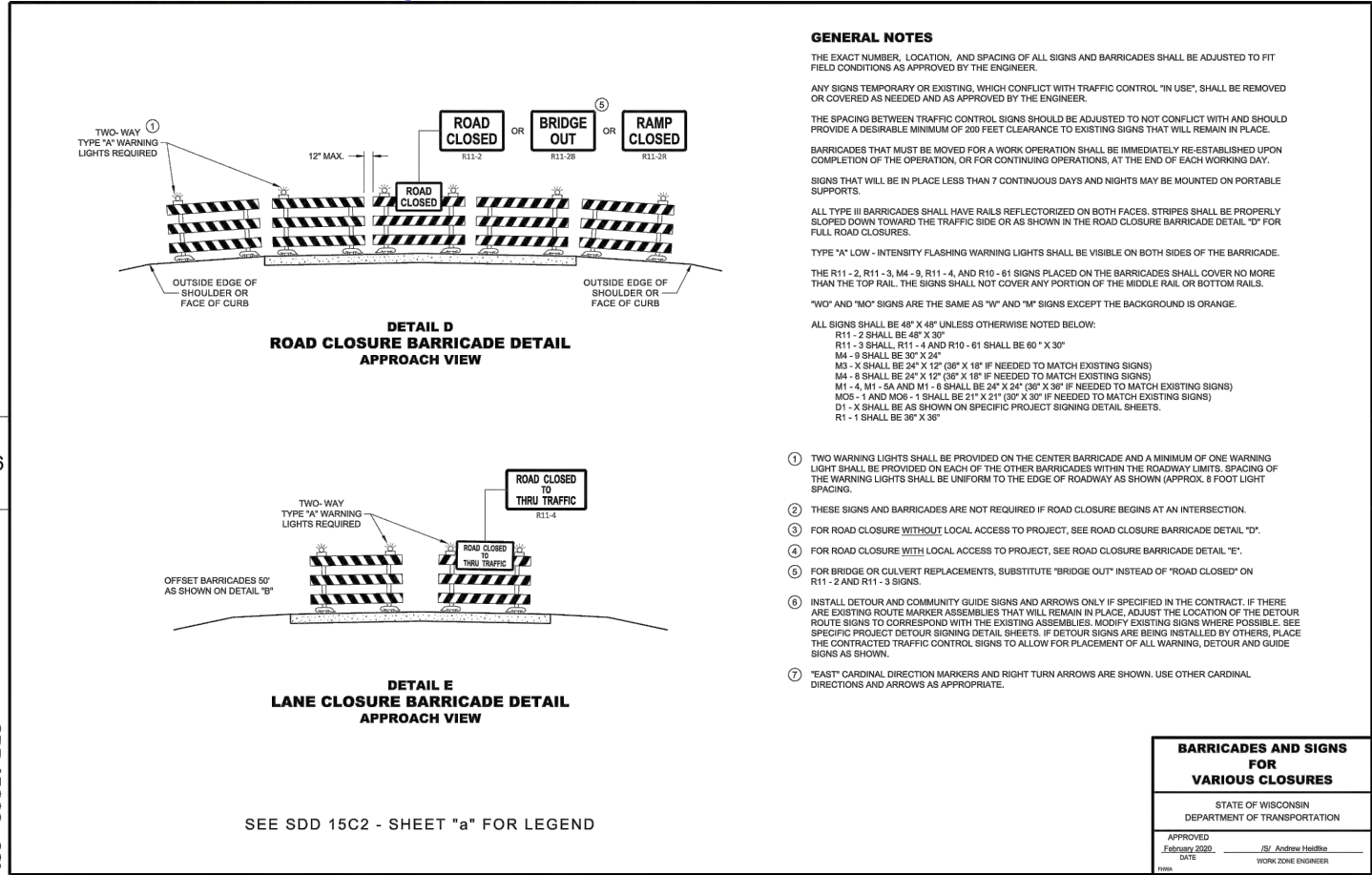


NAME: CONCRETE STREET REPAIRS	BY	DATE	REVISIONS / ISSUES				PAGE NO.
			NO.	DATE	BY	REMARKS	
PROJECT # 23-06	SURVEYED						C507
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	DESIGNED						
	CHECKED	EPR/CKK	01-2023				

SDD 15C02-a Barricades and Signs for Mainline Closures



SDD 15C02-b Barricades and Sign for Various Closures



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TRAFFIC CONTROL DETAILS

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PROJECT #
23-06

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DRAWN	KAD
DESIGNED	
CHECKED	EPR/CHK

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

SDD 15D12-a Traffic Control, Lane Closure

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.

"W" 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 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 AND PLACE TEMPORARY PAVEMENT MARKING LINE 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.

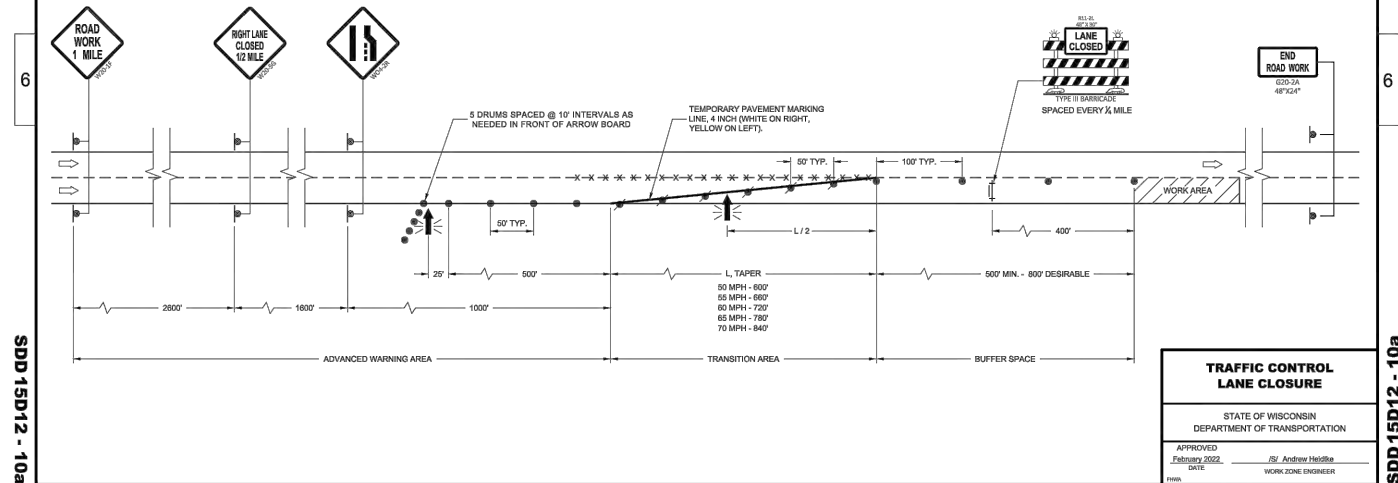
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS

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 500 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 II BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



SDD 15D20-c Traffic Control, Single Left Lane Closure, Undivided Non-Freeway/Expressway

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE II BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"W" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWN" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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 TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

WSD-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE END OF THE TAPER.

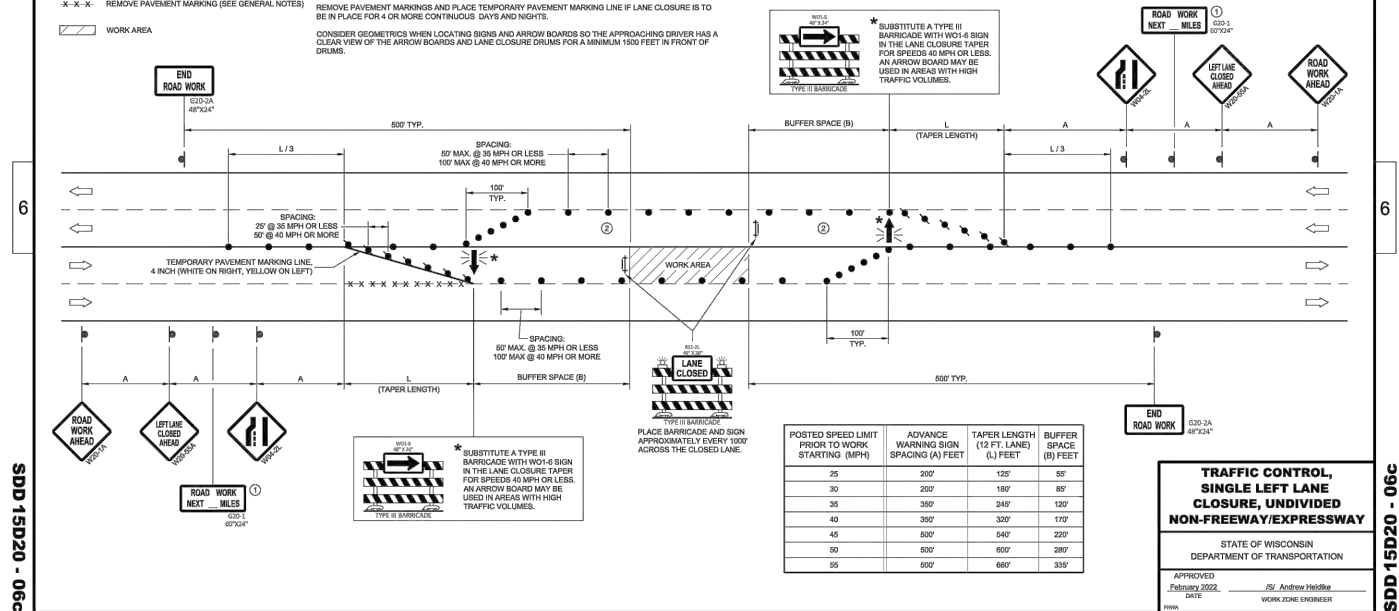
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

1 OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

2 LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.



SDD 15D28 Traffic Control, Work on Shoulder or Parking Lane, Undivided Roadway

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"W" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

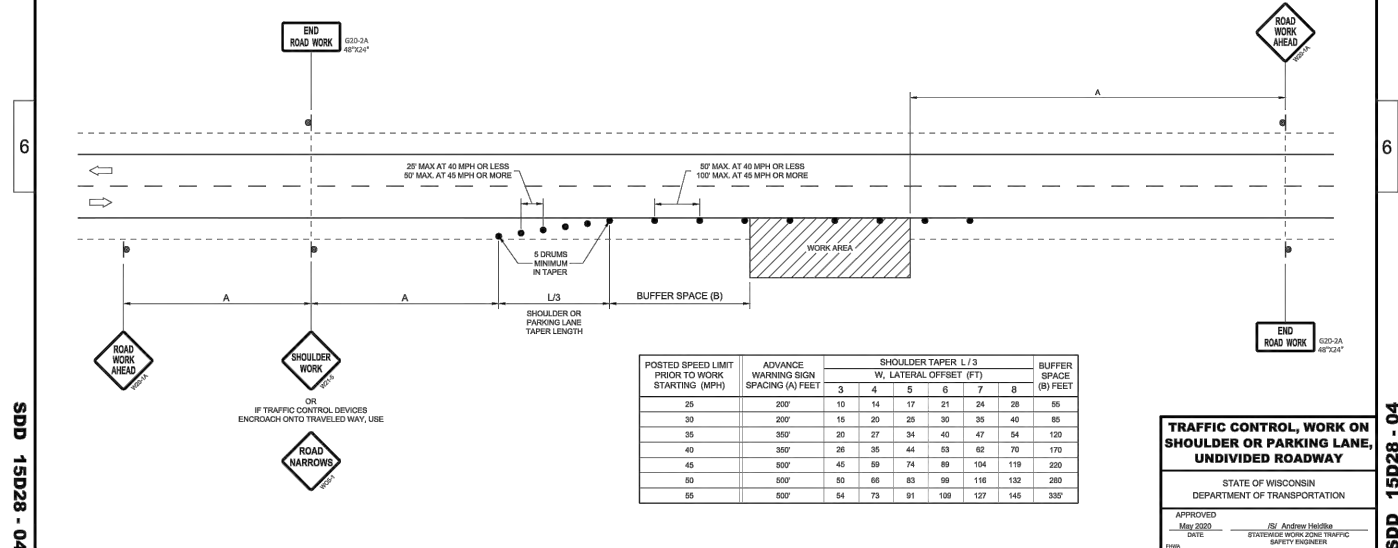
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS APPROVED BY THE ENGINEER.

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

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

WSD-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



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PAGE NO.

C509