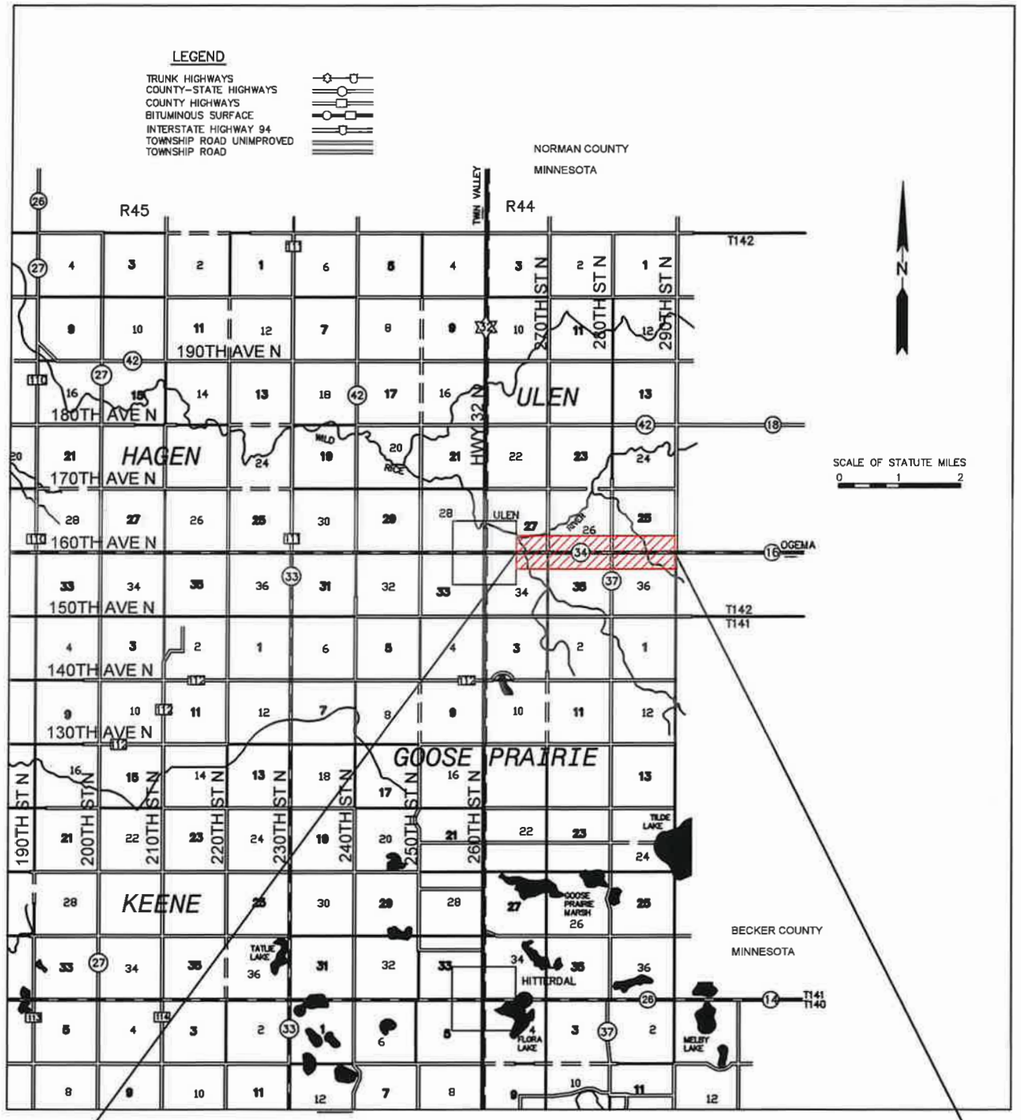
CLAY COUNTY MINNESOTA



DESIGN DESIGNATION

FROM THE EAST LIMITS OF ULEN MN. EAST TO THE EAST COUNTY LINE.

ROADWAY NAME:		= CSAH 34
PRESENT ADT (YEAR):	2025	= 866
PROJECTED ADT (YEAR):	2045	= 1,160
FUNCTIONAL CLASSIFICATION:		= RURAL MAJOR COLLECTOR
PROJECTED HCADT (YEAR)	2045	= LESS THAN 120
ESALS (20 YEAR)		= 286,000
STRUCTURAL DESIGN STRENGTH (TONS):		= 10
SOIL FACTOR:		= 100%
R-VALUE:		= 14
NO. OF TRAFFIC LANES:		= 2
SHOULDER WIDTH - RURAL (FEET):		= 7'
REGULATORY POSTED SPEED (MPH)		= 55 MPH
BASED ON STOPPING SIGHT DISTANCE		
HEIGHT OF EYE (FEET):		= 3.5'
HEIGHT OF OBJECT (FEET):		= 2'

GOVERNING SPECIFICATIONS

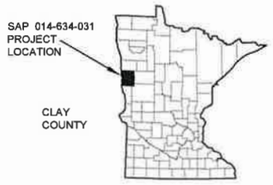
THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

TRAFFIC CONTROL

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO LATEST MMUTCD, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

PLAN SYMBOLS

- POWER POLE
- POWER POLE & GUY WIRE
- UTILITY PEDESTAL
- —T-BUR— BURIED TELEPHONE CABLE
- — OHP — OVERHEAD POWER
- 170+00 CENTERLINE
- EXISTING R/W
- PROPOSED R/W
- TREE
- PINE
- BUSH
- CULVERT
- FENCE



UTILITY INFORMATION

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED, "STANDARD GUIDELINES FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES."

MINNESOTA DEPARTMENT OF TRANSPORTATION
CLAY COUNTY
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR: BITUMINOUS MILL & OVERLAY

COUNTY STATE AID HIGHWAY 34

FROM A POINT 1,402.00' EAST OF THE SOUTHWEST CORNER OF SECTION 27, T-142-N, R-44-W.

TO A POINT 94.00' EAST OF THE SOUTHEAST CORNER OF SECTION 25, T-142-N, R-44-W.

THE PROJECT LOCATION IS ON CSAH 34 FROM THE EAST LIMITS OF ULEN THENCE EAST APPROXIMATELY 2.769 MILES TO THE EAST COUNTY LINE.

SAP 014-634-031

GROSS LENGTH	14,620.00	FEET	2.769	MILES
BRIDGE EXCEPTION LENGTH	0.00	FEET	0.000	MILES
RAILROAD EXCEPTION LENGTH	0.00	FEET	0.000	MILES
TOTAL EXCEPTION LENGTH	0.00	FEET	0.000	MILES
NET LENGTH	14,620.00	FEET	2.769	MILES

INDEX

THIS PLAN CONTAINS 8 SHEETS

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITHIN THE CONSTRUCTION OF THIS PROJECT.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Justin P Sorum — LIC. NO. 58043 — DATE 2/3/25
JUSTIN SORUM, CLAY COUNTY ENGINEER

Nathan M.R. Gamm — DATE 2/4/25
DISTRICT STATE AID ENGINEER
REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

Nathan M.R. Gamm — DATE 2/4/25
STATE AID ENGINEER
APPROVED FOR STATE AID FUNDING

SCHEDULE OF ESTIMATED QUANTITIES

	SPEC. NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES (PARTICIPATING, CSAH REGULAR)	NOTES
1	2021.501	MOBILIZATION	LUMP SUM	1	
2	2211.507	AGGREGATE BASE (LV) CLASS 5	CU YD	130	① THIS ITEM INCLUDES ROAD INTERSECTIONS, APPROACHES AND ENTRANCES AS NEEDED, MNDOT SPEC. 1903 DOES NOT APPLY.
3	2232.504	MILL BITUMINOUS SURFACE (2")	SQ YD	67,406	②③ STA. 10+00 TO STA. 156+20, THIS INCLUDES ALL ROAD, BUSINESS, HOME AND FIELD ENTRANCES. (SEE ROAD AND ENTRANCE DETAILS).
4	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (3;B)	TON	12,071	④⑤⑥ APPLICATION RATE OF 115 LBS./SQ.YD./1", THIS INCLUDES ROAD INTERSECTIONS, APPROACHES AND ENTRANCES.
5	2563.601	TRAFFIC CONTROL	LUMP SUM	1	⑦ THIS ITEM INCLUDES BOTH THE CONTRACTORS SIGNING AND THE PILOT CAR.
6	2563.601	TEMPORARY RAISED PAVEMENT MARKERS	LUMP SUM	1	⑧ THIS ITEM PROVIDES FOR THE CONTRACTOR SUPPLYING AND PLACING THE TRPM'S ON THE FINAL LIFT.
7	2580.501	INTERIM PAVEMENT MARKING	LUMP SUM	1	⑨ THIS ITEM PROVIDES FOR INTERIM PAVEMENT MARKING FOR ALL LIFTS EXCLUDING THE FINAL LIFT.
8	2582.503	4" SOLID LINE MULTI COMP	LIN FT	3,200	THIS ITEM PROVIDES FOR YELLOW NO PASSING ZONES.
9	2582.503	6" SOLID LINE MULTI COMP	LIN FT	28,868	THIS ITEM PROVIDES FOR A WHITE SHOULDER STRIPE IN EACH DIRECTION.
10	2582.503	4" BROKEN LINE MULTI COMP	LIN FT	2,900	MARKING SHALL BE A 50' CYCLE, YELLOW 10' STRIPE WITH A 40' SKIP.
11					
12					

GENERAL CONSTRUCTION NOTES

1. NO MATERIAL SHALL BE ALLOWED ON THE PROJECT WITHOUT FIRST SUPPLYING THE MATERIALS CERTIFICATION FORM, THIS INCLUDES ALL CHANGE ORDERS.
2. AFTER MILLING OPERATIONS A SMALL WEDGE SHALL BE PLACED AT THE BEGINNING & END OF EACH PHASE AND AT THE END OF EACH DAYS PAVING.
3. ALL MATERIAL SALVAGED DURING MILLING OPERATIONS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
4. BITUMINOUS MATERIAL FOR TACK COAT (2357) SHALL BE APPLIED AND SHALL BE INCIDENTAL TO BITUMINOUS CONSTRUCTION. THIS SHALL BE APPLIED AT AN UNDILUTED RATE OF 0.06 GAL/SQ. YD. OVER A NEW SURFACE, 0.08 GAL/SQ. YD. OVER A MILLED SURFACE, AND 0.09 GAL/SQ. YD. OVER A OLD SURFACE. THIS SHALL BE CSS-1, CSS-1H OR CQS-1H, AND BE IN ACCORDANCE WITH SPECIFICATION 2357.
5. ROAD SLOPE SHALL BE 0.02' PER FT., CROWN CORRECTION QUANTITIES ARE INCLUDED IN THE TOTAL.
6. CONSTRUCTION TWINE SHALL BE USED ON ALL PAVING LIFTS TO ENSURE THE CENTERLINE OF THE ROAD MATCHES THE OFFSETS ON THE CONSTRUCTION LATH. (CONSULT THE ENGINEER IN THE FIELD FOR MILLING AND PAVING CENTERLINES).
7. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT ADDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE MOST RECENT ADDITION OF THE TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS (FIELD MANUAL). THE EXACT LOCATIONS OF THE TRAFFIC CONTROL DEVICES WILL BE DETERMINED BY THE CONTRACTOR, SUBJECT TO THE APPROVAL OF THE ENGINEER. TRAFFIC CONTROL DEVICES WILL BE MAINTAINED BY THE CONTRACTOR DAILY. ALL CONSTRUCTION AND DETOUR SIGNING SHALL BE REMOVED WITHIN ONE WEEK OF FINAL STRIPPING OR BE SUBJECT TO LIQUIDATED DAMAGES IN THE AMOUNT OF $500.00 PER CALENDAR DAY.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BOTH SUPPLYING AND THE PLACEMENT OF THE TEMPORARY RAISED PAVEMENT MARKERS (TRPM'S) ON THE FINAL LIFT. THE TRPM'S SHALL COMPLY WITH THE MINNESOTA DEPARTMENT OF TRANSPORTATION REQUIREMENTS. THE TRPM'S SHALL REMAIN IN PLACE UNTIL FINAL STRIPING AND BE REMOVED BY THE CONTRACTOR. THIS SHALL BE PAID AS LUMP SUM. SEE SHEET 8 FOR TRPM INTERIM PAVEMENT MARKING DETAILS. ONLY CENTERLINE TRPM'S ARE REQUIRED AT A 50' CYCLE, (40' SKIP X 10').
9. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL INTERIM PAVEMENT MARKING WITHOUT EXCEPTION AND SHALL BE PAID AS LUMP SUM. INTERIM PAVEMENT MARKING SHALL BE IN PLACE AT THE END OF EACH DAY'S PAVING.

STANDARD PLATES

THE FOLLOWING STANDARD PLATES APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
8000K	TEMPORARY CHANNELIZERS

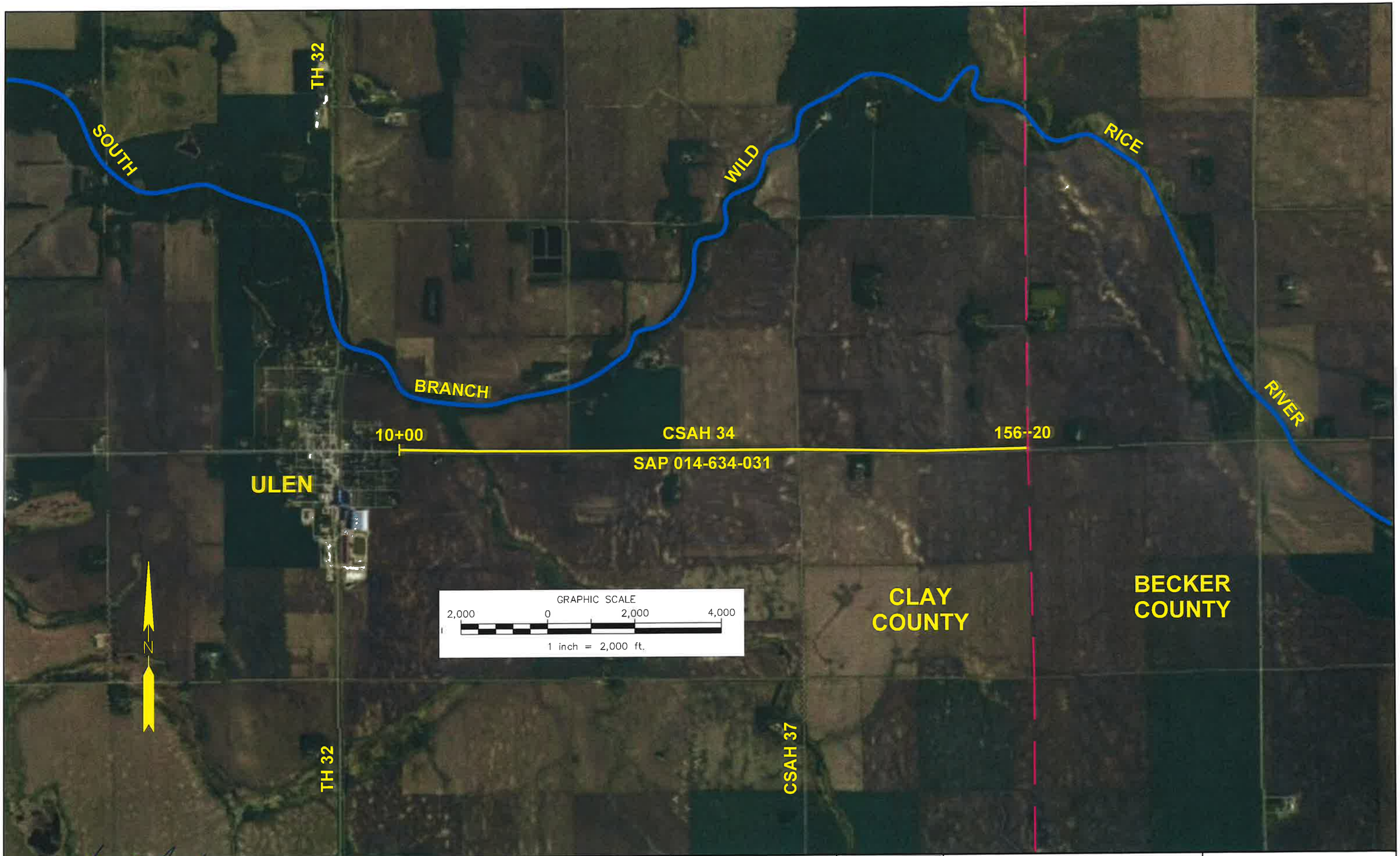
CERTIFIED BY Justin P. Sorum
JUSTIN SORUM – CLAY COUNTY ENGINEER
LIC. NO. 58043 DATE 2/3/25

DRAWN BY BJE
CHECKED BY

SAP 014-634-031

CLAY COUNTY

ESTIMATED QUANTITIES



CERTIFIED BY Justin P. Sorum
JUSTIN SORUM – CLAY COUNTY ENGINEER
LIC. NO. 58043 DATE 2/3/25

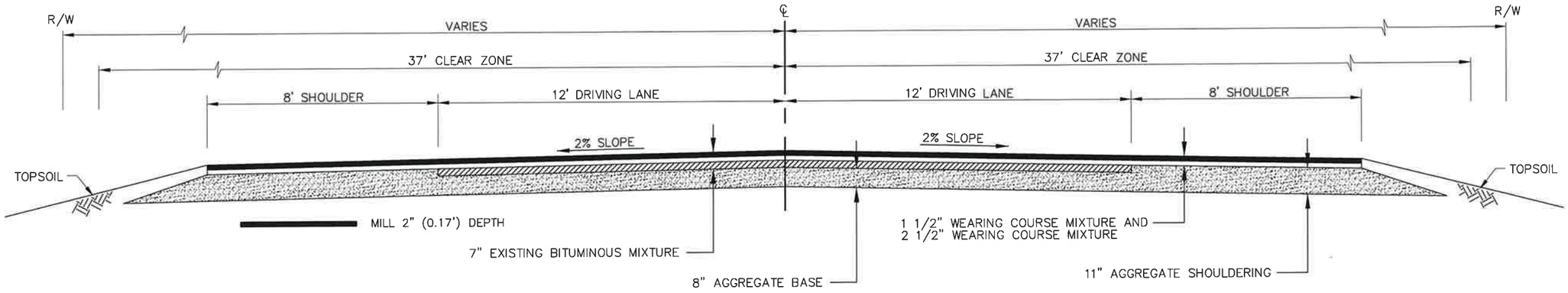
DRAWN BY BJE
CHECKED BY

SAP 014–634–031

CLAY COUNTY

GENERAL SITE PLAN

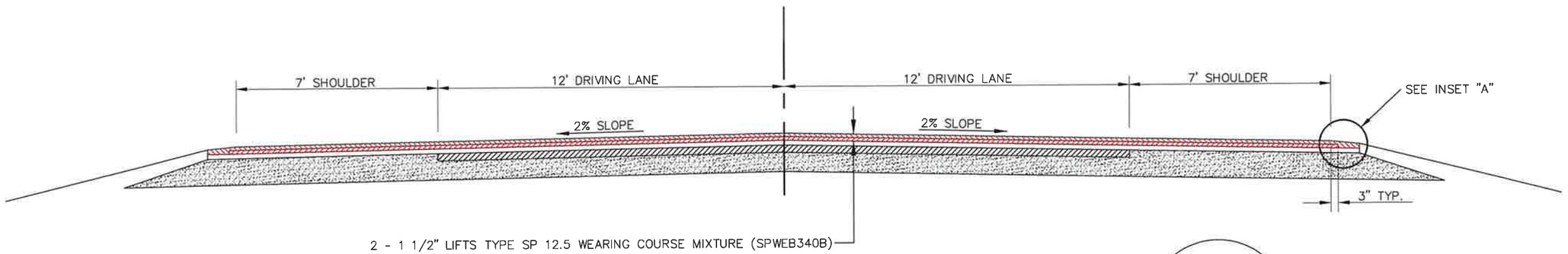
SHEET 3 OF 8 SHEETS



EXISTING TYPICAL SECTION

(SYMMETRICAL) STA. 10+00 TO STA. 156+20

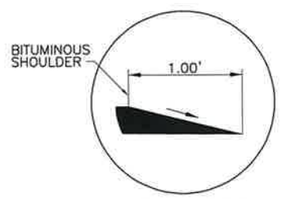
(NO SCALE)



PROPOSED TYPICAL SECTION

(SYMMETRICAL) STA. 10+00 TO STA. 156+20

(NO SCALE)



INSET "A"
BITUMINOUS EDGE

CERTIFIED BY _____ JUSTIN SORUM – CLAY COUNTY ENGINEER LIC. NO. 58043 DATE 2/3/25

DRAWN BY BJE

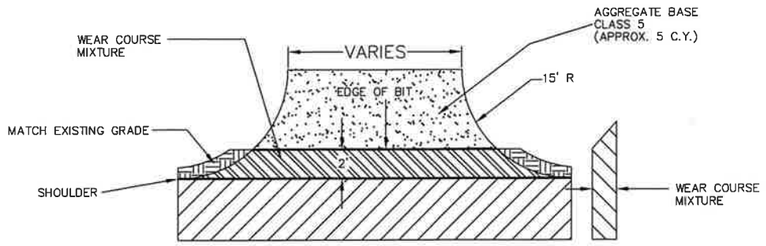
CHECKED BY _____

SAP 014-634-031

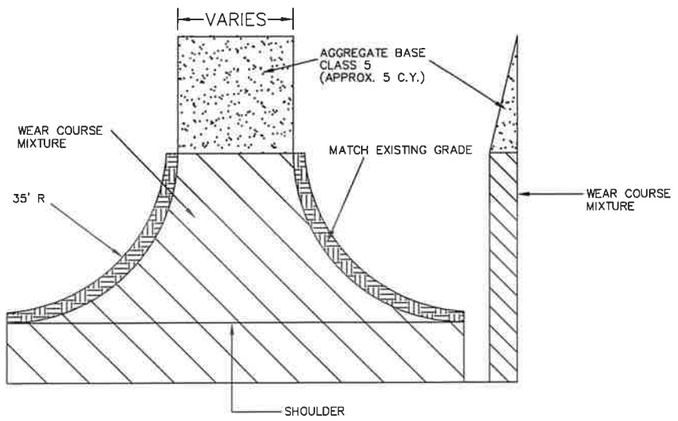
CLAY COUNTY

TYPICAL SECTIONS

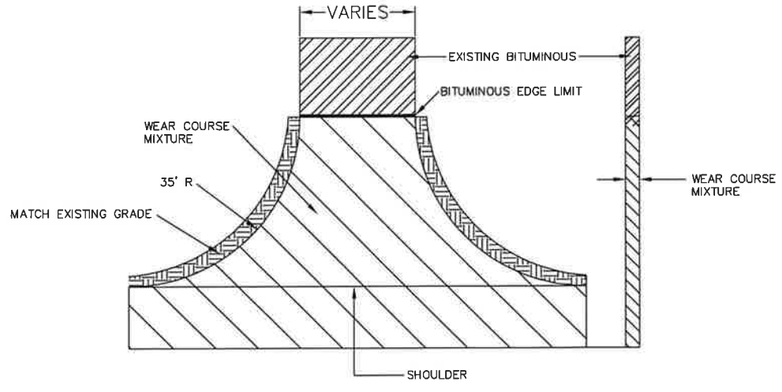
SHEET 4 OF 8 SHEETS



FIELD



GRAVEL ROAD, BUSINESS AND HOME



BITUMINOUS ROAD, BUSINESS, HOME AND FIELD

ENTRANCE LOCATIONS

ROAD, BUSINESS AND HOMES		FIELD	
LOCATION	CLASS 5	LOCATION	CLASS 5
18+47 R – HOME	5 CU YD	11+87 R – FIELD	5 CU YD
22+74 L – HOME	– – –	16+89 L – FIELD	5 CU YD
23+79 L – HOME	– – –	32+32 R – FIELD	5 CU YD
48+26 R – HOME	5 CU YD	32+39 L – FIELD	5 CU YD
48+93 L – 270TH ST. N.	5 CU YD	54+23 L – FIELD	5 CU YD
74+82 R – HOME	5 CU YD	62+09 R – FIELD	5 CU YD
75+25 L – HOME	5 CU YD	95+09 L – FIELD	5 CU YD
101+88 R – CSAH 37	5 CU YD	108+88 L – FIELD	5 CU YD
101+88 L – 280TH ST. N.	5 CU YD	111+76 R – FIELD	5 CU YD
116+62 R – HOME	5 CU YD	116+62 L – FIELD	5 CU YD
155+25 L – 290TH ST. N.	5 CU YD	119+49 R – FIELD	5 CU YD
		126+41 L – FIELD	5 CU YD
		129+47 L – FIELD	5 CU YD
		129+96 R – FIELD	5 CU YD
		142+54 L – FIELD	5 CU YD
		142+69 R – FIELD	5 CU YD
		155+25 R – FIELD	5 CU YD
TOTALS	45 CU YD	TOTALS	85 CU YD

GENERAL CONSTRUCTION NOTES

1. FIELD STATIONING MAY NOT MATCH EXACTLY.
2. ALL EXISTING BITUMINOUS HIGHWAY AND ROAD INTERSECTIONS SHALL BE ENTIRELY MILLED AND PAVED.
3. ALL EXISTING BITUMINOUS BUSINESS, HOME AND FIELD ENTRANCES SHALL HAVE TWO MILLING PASSES TAKEN LONGITUDINALLY WITH THE CENTER OF THE ROADWAY. (CONSULT THE ENGINEER IN THE FIELD).
4. ALL APPROACHES, ENTRANCES AND RADII SHALL BE FINISHED TO A MINIMUM 1:4 INSLOPE WITH THE SPECIFIED MATERIAL AS THICKNESS REQUIRES.
5. EXCAVATION NECESSARY FOR APPROACHES SHALL BE INCIDENTAL TO WEARING COURSE MIX.
6. THE CONTRACTOR AND THE ENGINEER IN THE FIELD SHALL CALCULATE AND AGREE ON THE MILLING QUANTITY DAILY.

CERTIFIED BY Justin P. Sorum — JUSTIN SORUM – CLAY COUNTY ENGINEER — LIC. NO. 58043 — DATE 2/3/25

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SAP 014-634-031

CLAY COUNTY

ROAD AND ENTRANCE DETAILS

SHEET 5 OF 8 SHEETS

SIGN OR DEVICE	SIGN NO.	COLOR	SIZE	ESTIMATED QUANTITY
BUMP	W8-1	BLACK ON YELLOW	48"x48"	AS NEEDED
UNEVEN LANES	W8-11	BLACK ON YELLOW	48"x48"	AS NEEDED
LOW SHOULDER	W8-9	BLACK ON YELLOW	48"x48"	AS NEEDED

SIGN OR DEVICE	SIGN NO.	COLOR	SIZE	ESTIMATED QUANTITY
ROAD WORK AHEAD	W20-1	BLACK AND ORANGE	48"x48"	11
500 FEET	W16-2P	BLACK ON YELLOW	30"x24"	5
1,500 FEET	W16-2P	BLACK ON YELLOW	30"x24"	1
1/2 MILE	W16-3P	BLACK ON YELLOW	30"x24"	2
1 MILE	W16-3P	BLACK ON YELLOW	30"x24"	2

SIGN OR DEVICE	SIGN NO.	COLOR	SIZE	ESTIMATED QUANTITY
CLAY 34 COUNTY	M1-X4	BLACK ON WHITE	24"x24"	2
WEST	M3-4	BLACK ON WHITE	24"x12"	1
END ROAD WORK	G20-2	BLACK ON ORANGE	36"x18"	2
ROAD WORK NEXT 2.8 MILES	G20-1	BLACK ON ORANGE	60"x24"	2

GRAPHIC SCALE

2,000 0 2,000 4,000

1 inch = 2,000 ft.

CONTRACTOR SIGNING

ALL TRAFFIC CONTROL DEVICES & SIGNING SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".

LEGEND

TYPE III BARRICADE (SHOWN FACING LEFT) =

SIGN (SHOWN FACING LEFT) =

TYPE "A" FLASHER (SHOWN FACING LEFT) =

CERTIFIED BY Justin P. Sorum JUSTIN SORUM – CLAY COUNTY ENGINEER LIC. NO. 58043 DATE 2/3/25

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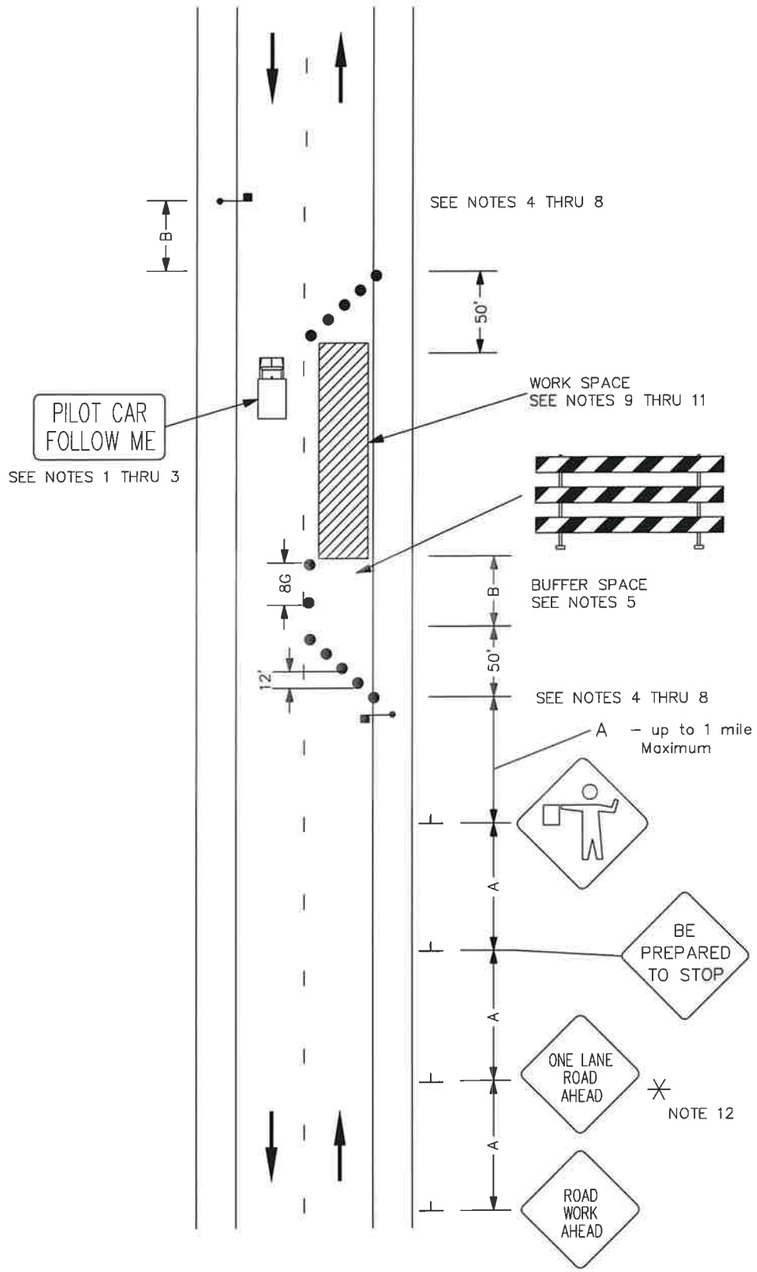
CLAY COUNTY

CONSTRUCTION SIGNING

SHEET 6 OF 8 SHEETS



LANE CLOSURE, PILOT CAR METHOD
ONE–LANE, TWO WAY TRAFFIC

POSTED SPEED LIMIT PRIOR TO WORK STARTING	SPACING OF ADVANCE WARNING SIGNS (A)	SPACING OF CHANNELIZING DEVICES (G)	BUFFER SPACE (B)	DECISION SIGHT DISTANCE
(MPH)	FEET	FEET	FEET	FEET
0 – 30	250	25	200	550
35 – 40	325	25	305	700
45 – 50	600	50	425	900
55	750	50	500	1200
60 – 65	1000	50	650	1400
70 – 75	1200	50	820	1600

NOTE:
NOT ALL INFORMATION IN THIS BOX MAY APPLY TO THIS DETAIL.

NOTES:

1. THE PILOT CAR FOLLOW ME (G20–4) SIGN SHALL BE MOUNTED AT A CONSPICUOUS LOCATION ON THE REAR OF THE PILOT CAR VEHICLE.
2. THE PILOT CAR SHOULD HAVE THE NAME OF THE CONTRACTOR OR CONTRACTING AUTHORITY PROMINENTLY DISPLAYED.
3. PILOT CARS SHOULD LEAD TRAFFIC THROUGH THE WORK ZONE AT A SAFE SPEED. SEE THE FLAGGER HANDBOOK FOR ADDITIONAL GUIDANCE.
4. ADVANCE WARNING SIGNS ARE THE SAME FOR BOTH DIRECTIONS APPROACHING THE WORK AREA.
5. BUFFER SPACE SHOULD BE PROVIDED WHEN APPROACH LANE IS CLOSED.
6. THE APPROACH SIGHT DISTANCE TO THE FLAGGER SHALL BE AT LEAST THE DECISION SIGHT DISTANCE.
7. WORK SHALL BE LIMITED TO DAYLIGHT HOURS.
8. FLAGGERS SHOULD NOT ALLOW ADDITIONAL CARS TO FOLLOW THE PILOT CAR IF THE END OF THE PLATOON HAS TRAVELED FARTHER THAN 300 FT BEYOND THE FLAGGER STATION.
9. ALL LANE TRANSITION AREAS SHALL HAVE CHANNELIZING DEVICES IN TAPERS.
10. CHANNELIZING DEVICES ALONG THE EDGE OF THE WORK SPACE MAY BE OMITTED UNLESS:
    A. TRAFFIC IS TRAVELING NEXT TO THE LONGITUDINAL DROP–OFFS THAT ARE GREATER THAN 4 INCHES, OR
    B. VISIBILITY OF THE OPEN TRAVELED LANE IS RESTRICTED.
11. HAZARDOUS AREAS WITHIN THE WORK SPACE SHOULD HAVE CHANNELIZATION AND BARRIERS, SUCH AS WHEN TRAFFIC IS ADJACENT TO DROP–OFFS GREATER THAN 12 INCHES.
12. THE ONE LANE ROAD AHEAD SIGN MAY BE OMITTED WHEN THE POSTED SPEED LIMIT IS 40 MPH OR LESS.
13. UNEVEN LANES AND LOW SHOULDER SIGNS TO BE USED AS CONDITIONS WARRANT.

✳ – REQUIRED FOR SPEEDS GREATER THAN 45 MPH.

● – CHANNELIZING DEVICE. (CONES OR TUBULAR MARKERS MAY BE USED ONLY FOR DAYTIME OPERATIONS)

NOTES:

ALL TRAFFIC CONTROL DEVICES & SIGNING SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS". THE EXACT LOCATION OF THE TRAFFIC CONTROL DEVICES WILL BE DETERMINED BY THE CONTRACTOR, SUBJECT TO THE APPROVAL OF THE ENGINEER.

ALL TRAFFIC CONTROL DEVICES SHOWN, UNLESS OTHERWISE INDICATED, SHALL BE FURNISHED, INSTALLED, MAINTAINED, REMOVED BY, AND REMAIN THE PROPERTY OF CONTRACTOR.

UNLESS OTHERWISE DIRECTED BY THE ENGINEER, ALL SIGNS SHOWN (EXCEPT BARRICADE MOUNTED SIGNS) SHALL BE FASTENED TO TWO UPRIGHT POSTS EXTENDED FROM TWO DRIVEN GROUND POSTS. ALL SIGNS SHALL CONFORM TO THE HEIGHT REQUIREMENTS OF THE SECOND PARAGRAPH OF SECTION 2A–14 OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL WARNING SIGNS SHALL HAVE BLACK LETTERS ON ORANGE COLORED, DIAMOND GRADE, RETROREFLECTIVE SHEETING. REGULATORY SIGNS SHALL CONFORM IN LETTER SIZE AND COLOR TO THE REQUIREMENTS SPECIFIED IN THE MINNESOTA STANDARD SIGNS MANUAL, INCLUDING THE TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, FIELD MANUAL.

TRAFFIC CONTROL SIGNS MAY BE INSTALLED ON PORTABLE STANDS IN LOCATIONS APPROVED BY THE ENGINEER

CONSTRUCTION ZONE SIGNING IS ALSO THE RESPONSIBILITY OF CONTRACTOR. SIGNS REQUIRED INCLUDE BUT ARE NOT LIMITED TO ROAD CONSTRUCTION AHEAD, DIP, BUMP, FLAG PERSON, NUMBER OF SIGNS AND LOCATION DETERMINED BY CONTRACTOR'S OPERATION. ALL SIGNS SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. INCLUDING THE "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".

ANY EXISTING SIGNS THAT ARE CONFLICTING IN THE CONSTRUCTION ZONE AND ARE NOT REMOVED DUE TO CONSTRUCTION, SHALL BE COVERED (INCIDENTAL). SIGN COVERS SHALL BE CONSTRUCTED OF ALUM. PANELS INSTALLED WITH NYLON WASHERS BETWEEN THE SIGN & THE COVER. THE COVERS SHALL CAUSE NO DAMAGE TO THE SIGN PANEL THEY COVER.

STOP SIGNS REMOVED DURING CONSTRUCTION SHALL BE REPLACED WITH TEMPORARY STOP SIGNS IN LOCATIONS APPROVED BY THE ENGINEER. AT THE COMPLETION OF THE PROJECT, PERMANENT STOP SIGNS SHALL BE RE–INSTALLED IN LOCATIONS APPROVED BY THE ENGINEER.

ALL FLASHERS SHOULD BE ON SIDE NEAREST THE ROAD.

SIGN DIMENSIONS ARE IN ENGLISH UNITS

THE SIGNING AND CHANNELIZATION DEVICE TABULATION SHOWN IS FOR INFORMATIONAL PURPOSES. ADDITIONAL SIGNS AND DEVICES SHALL BE PROVIDED, AS REQUIRED WITH NO ADJUSTMENT IN THE UNIT PRICE BID FOR ITEM "TRAFFIC CONTROL", LUMP SUM.

NOTATIONS

1. STANDARD BARRICADES SHALL HAVE (2) FLASHERS EACH.
2. "DIAMOND GRADE" WIDE ANGLE PRISMATIC SHEETING SHALL BE USED ON ALL SIGNING, BARRICADES, CONES, BOARDS, ETC.
3. ALL SIGNING SHALL BE IN PLACE PRIOR TO THE START OF THE PROJECT.
4. PORTABLE ROAD WORK AHEAD (W20–1) SIGNS SHALL BE USED IN THE AREA OF ACTIVE CONSTRUCTION.
5. ALL SIGNS, BARRICADES AND FLASHERS SHALL BE CHECKED AND MAINTAINED DAILY.

CERTIFIED BY Justin R. Sorum
JUSTIN SORUM – CLAY COUNTY ENGINEER
LIC. NO. 58043 DATE 2/3/25

DRAWN BY BJE
CHECKED BY

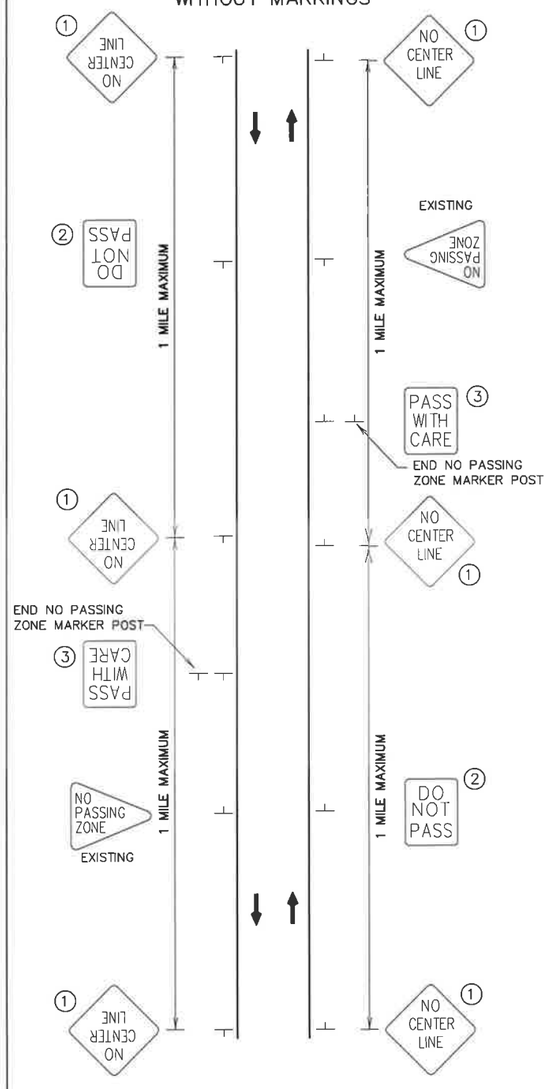
SAP 014–634–031

CLAY COUNTY

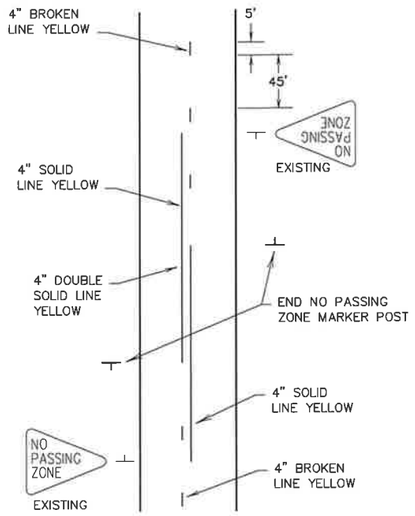
TRAFFIC CONTROL

SHEET 7 OF 8 SHEETS

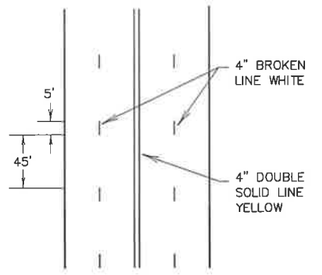
TWO–LANE, TWO–WAY LESS THAN 400 ADT WITHOUT MARKINGS



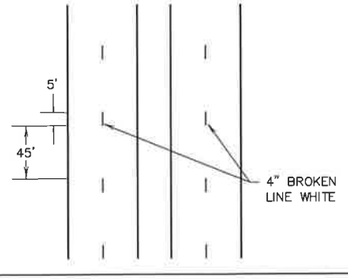
TWO–LANE, TWO–WAY



MULTI–LANE, UNDIVIDED



MULTI–LANE, DIVIDED



GENERAL NOTES:

SEE MnDOT SPEC. 2580 (INTERIM PAVEMENT MARKING).

DO NOT OPEN ANY ROADWAY SEGMENT TO TRAFFIC UNLESS THE FOLLOWING MARKINGS (INTERIM OR PERMANENT) ARE INPLACE: CENTERLINE MARKINGS (INCLUDING NO PASSING ZONES), FLUSH MEDIANS (EXCLUDING CROSSHATCHING), AND LANE LINE (INCLUDING TURN AND AUXILIARY LANE LINES). THIS REQUIREMENT IS WAIVED FOR TANGENT ROAD SEGMENTS LESS THAN 350' IN LENGTH AND CURVED ROAD SEGMENTS WITH DEGREES OF CURVE GREATER THAN 6 DEGREES FOR LESS THAN 50' IN LENGTH.

PLACE INTERIM BROKEN LINE PAVEMENT MARKINGS AT THE SAME CYCLE LENGTH AS FINAL PAVEMENT MARKINGS WITH A MINIMUM LENGTH OF 5 FEET; IF FINAL PAVEMENT MARKING PLAN IS NOT PROVIDED, THE CYCLE LENGTH SHALL BE 50'. PLACE INTERIM DOTTED LINE PAVEMENT MARKINGS AT THE SAME CYCLE LENGTH AND LINE LENGTH AS SHOWN IN THE PLAN; IF FINAL PAVEMENT MARKING PLAN IS NOT PROVIDED, THE CYCLE LENGTH SHALL BE 15' WITH A LINE LENGTH OF 3'.

FOR NO PASSING ZONE LOCATIONS, REFER TO THE SIGNING OR PAVEMENT MARKING PLAN; IF NEITHER IS PROVIDED, FOLLOW INPLACE NO PASSING ZONES.

WHEN PERMANENT PAVEMENT MARKINGS ARE TO BE MULTI–COMPONENT LIQUID AND PAINT IS USED FOR THE INTERIM MARKINGS, PLACE A 10 MIL THICK LAYER OF PAINT. REMOVAL OF THE 10 MIL LAYER OF PAINT IS NOT REQUIRED PRIOR TO PLACING THE MULTI–COMPONENT LIQUID. IF THE LAYER OF PAINT IS GREATER THAN 10 MIL, REMOVE THE PAINT PRIOR TO PLACING THE MULTI–COMPONENT LIQUID.

PLACE INTERIM MARKINGS ON THE FINAL PERMANENT PAVEMENT SURFACE SUCH THAT THEY WILL BE FULLY COVERED BY THE PERMANENT PAVEMENT MARKINGS.

INTERIM PAVEMENT MARKINGS SHOULD NOT BE LEFT INPLACE FOR MORE THAN 14 CALENDAR DAYS UNLESS THEY MEET THE REQUIREMENTS OF PERMANENT OR TEMPORARY MARKINGS.

USING SIGNING IN LIEU OF INTERIM PAVEMENT MARKINGS ON TWO–LANE, TWO–WAY ROADWAYS

ON ROADS WITH AN AVERAGE DAILY TRAFFIC (ADT) OF LESS THAN 400 VEHICLES, THE SIGNS AS SHOWN MAY BE USED IN LIEU OF PAVEMENT MARKINGS FOR UP TO 14 CALENDAR DAYS OR AS DIRECTED BY THE ENGINEER.

(1) PLACE A "NO CENTER LINE" SIGN (W8–12, BLACK ON ORANGE) FOR EACH DIRECTION OF TRAVEL. PLACE ADDITIONAL SIGNS AT MAJOR INTERSECTIONS OR ONE MILE INCREMENTS, WHICHEVER IS LESS.

(2) IF NOT ALREADY INPLACE, PLACE A "DO NOT PASS" SIGN (R4–1) OPPOSITE OF EACH INPLACE "NO PASSING ZONE" SIGN (W14–3).

(3) PLACE A "PASS WITH CARE" SIGN (R4–2) AT THE END OF EACH NO PASSING ZONE, ADJACENT TO THE END OF NO PASSING ZONE MARKER POST.

USING TEMPORARY RAISED PAVEMENT MARKERS (TRPMS) AS INTERIM PAVEMENT MARKING

WHEN USING TRPMS AS INTERIM PAVEMENT MARKINGS, FOLLOW THE REQUIREMENTS BELOW UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

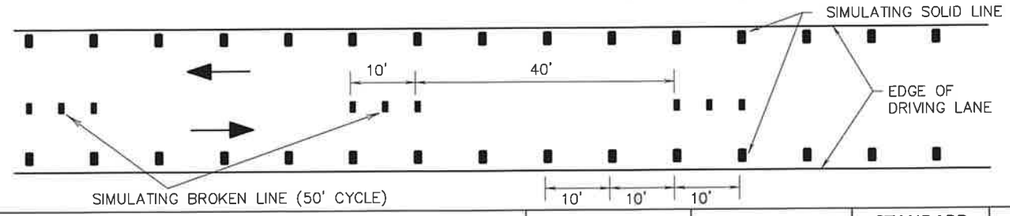
USE DOUBLE–SIDED TRPMS ON TWO–LANE, TWO–WAY ROADS.

BROKEN LINE: USE 3 TRPMS PER 10' BROKEN LINE, 5' SPACING WITH A 40' GAP.

SOLID LINE: USE CONTINUOUS TRPMS; 10' SPACING FOR TANGENTS AND CURVES UNDER 6 DEGREES; 5' SPACING FOR CURVES ≥6 DEGREES, GRADES >5 PERCENT, OR CONCRETE PAVEMENTS.

DOUBLE SOLID LINE: USE TWO CONTINUOUS TRPMS 4" APART, 10' SPACING ON TANGENTS AND CURVES UNDER 6 DEGREES; 5' SPACING FOR CURVES ≥6 DEGREES, GRADES >5 PERCENT, OR CONCRETE PAVEMENTS.

SIMULATING A SOLID LINE AND A BROKEN LINE (50' CYCLE) WITH TRPMS



LEAD EXPERT OFFICE	BRIAN SORENSON STATE TRAFFIC ENGINEER OFFICE OF TRAFFIC ENGINEERING	INTERIM PAVEMENT MARKINGS AND SIGNING	APPROVED: 10-10-2019 REVISED:	Peter A Harff PETER A. HARFF STATE DESIGN ENGINEER	STANDARD PLAN 5-297.801	1 OF 1

NOTE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR BOTH SUPPLYING AND THE PLACEMENT OF THE TEMPORARY RAISED PAVEMENT MARKERS (TRPM'S) ON THE FINAL LIFT. THE TRPM'S SHALL COMPLY WITH THE MINNESOTA DEPARTMENT OF TRANSPORTATION REQUIREMENTS. THE TRPM'S SHALL REMAIN IN PLACE UNTIL FINAL STRIPING AND BE REMOVED BY THE CONTRACTOR. THIS SHALL BE PAID AS LUMP SUM. ATTACHED ARE MNDOT'S REQUIREMENTS FOR TRPM'S. ONLY CENTERLINE TRPM'S ARE REQUIRED AT A 50' CYCLE, (40' SKIP X 10').

CERTIFIED BY Justin P. Sorum – JUSTIN SORUM – CLAY COUNTY ENGINEER	LIC. NO. 58043	DATE 2/3/25	DRAWN BY BJE CHECKED BY	SAP 014–634–031	CLAY COUNTY	MNDOT STANDARD PLAN TEMPORARY RAISED PAVEMENT MARKERS	SHEET 8 OF 8 SHEETS