

MINNESOTA DEPARTMENT OF TRANSPORTATION  
BIG STONE COUNTY

MINN. PROJ. NO. \_\_\_\_\_

GOVERNING SPECIFICATIONS

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

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES, STANDARD PLATES AND TYPICAL SECTIONS
3	TRAFFIC CONTROL

THIS PLAN CONTAINS 3 SHEETS

UTILITY NOTICE

The subsurface utility information in this plan is utility level D. This  
quality level was determined according to the guidelines of CI/ASCE  
38-22, entitled "Standard Guidelines for Investigating and  
Documenting Existing Utilities".

LOCAL AGENCY SIGNATURES:

I hereby certify that this plan 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.  
License number: 60399

*Jordan Roggenbuck* Date: 4/9/2025  
Approved: County Engineer Jorden Roggenbuck, P.E.

STATE AID APPROVALS:

*Nathan M.R. Gannon* Date: 4/14/25  
District State Aid Engineer: Reviewed for Compliance  
with State-Aid and/or Federal Aid Rules/Policy

*Nathan M.R. Gannon* Date: 4/14/25  
State Aid Engineer: Approved for State-Aid and/or  
Federal Aid Funding.

CONSTRUCTION PLAN FOR BITUMINOUS MILL, BITUMINOUS OVERLAY, AND AGGREGATE SHOULDERING  
LOCATED ON CSAH 6 BETWEEN 1570' E OF TH 75 AND 400' W of CR 71  
(Geographic Description)  
FROM A POINT AT OR NEAR 1150' E. OF NW CORNER OF SECTION 22, T123N, R46W TO A POINT AT OR NEAR 400' W. OF THE NE CORNER OF SECTION 19, T123 N, R 45 W  
(Legal Description)

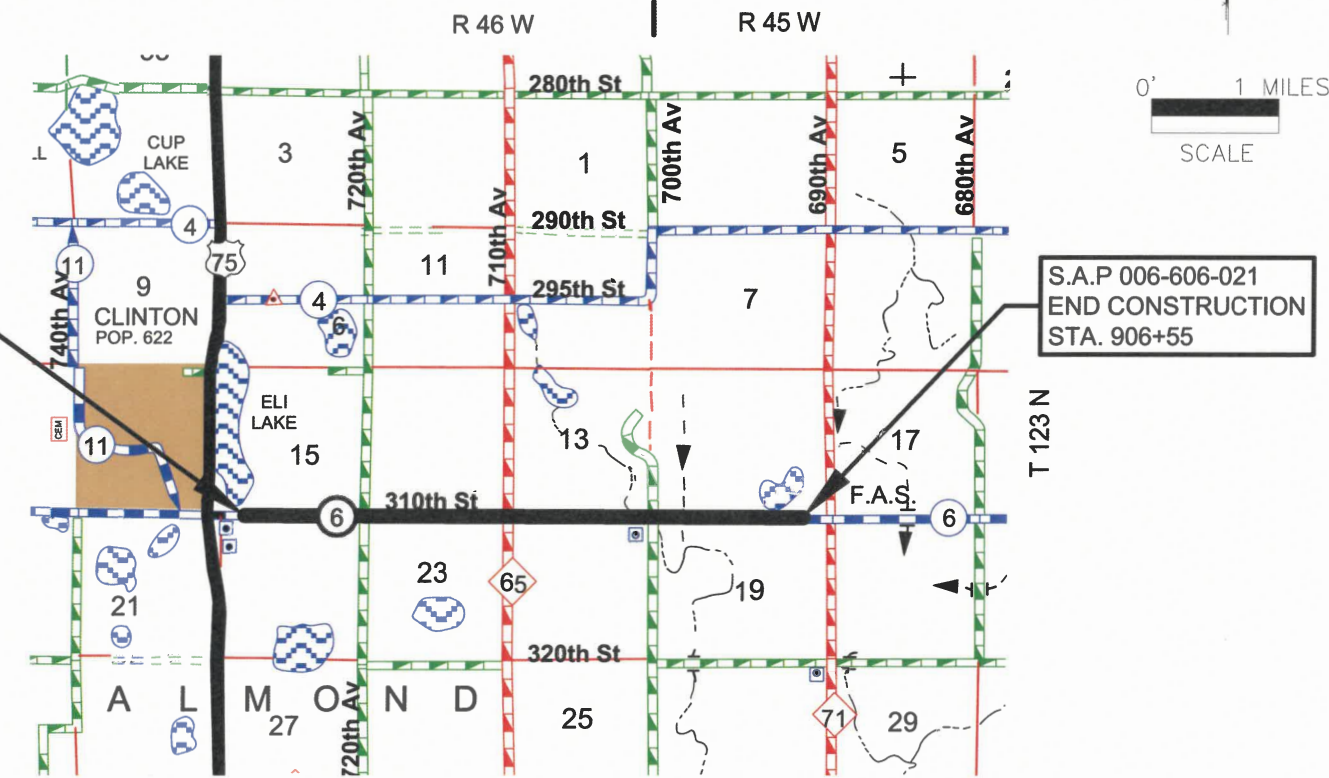
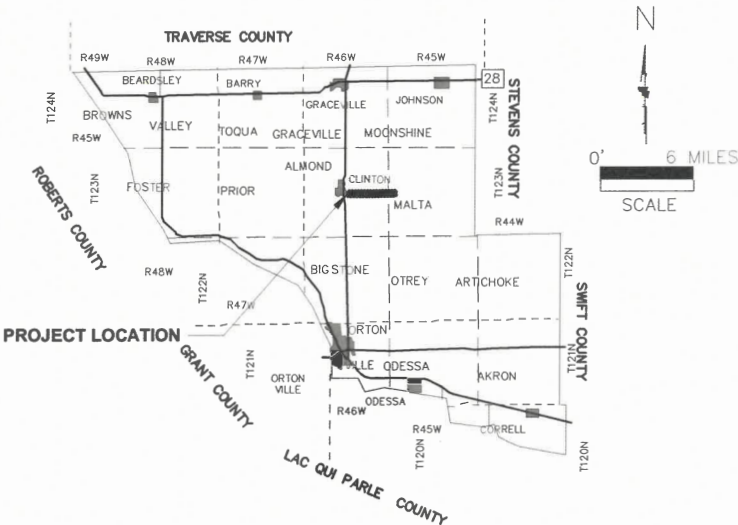
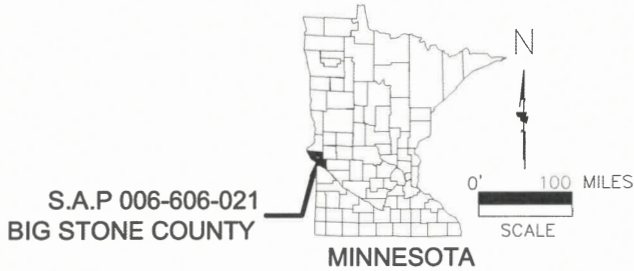
GROSS LENGTH	20880.00	FEET	3.955	MILES
BRIDGES-LENGTH	0.00	FEET	0.000	MILES
EXCEPTIONS-LENGTH	0.00	FEET	0.000	MILES
NET LENGTH	20880.00	FEET	3.955	MILES

STATE AID PROJ. NO. 006-606-021

DESIGN DESIGNATION CSAH 6

STOPPING SIGHT DISTANCE BASED ON:

HEIGHT OF EYE: 3.5'  
HEIGHT OF OBJECT: 2.0'  
SOIL FACTOR: 130%  
ADT (CURRENT YEAR): 380 (2025)  
ADT (FUTURE YEAR): 418 (2045)  
PROJECTION FACTOR: 1.2  
HCADT: <150  
R-VALUE : 12  
ESAL: 126,000  
DESIGN TON: 10  
NO. OF TRAFFIC LANES: 2  
LANE WIDTH: 12'  
SHOULDER WIDTH: 4'  
POSTED SPEED: 55 MPH  
ROAD CLASSIFICATION: MAJOR COLLECTOR



ROAD HISTORY

1963-GRADING, AGG. BASE & BIT. (006-606-001)  
1989-SEAL COAT (006-606-007)  
2003-BIT. OVERLAY (006-606-015)  
2005-SEAL COAT (006-606-017)

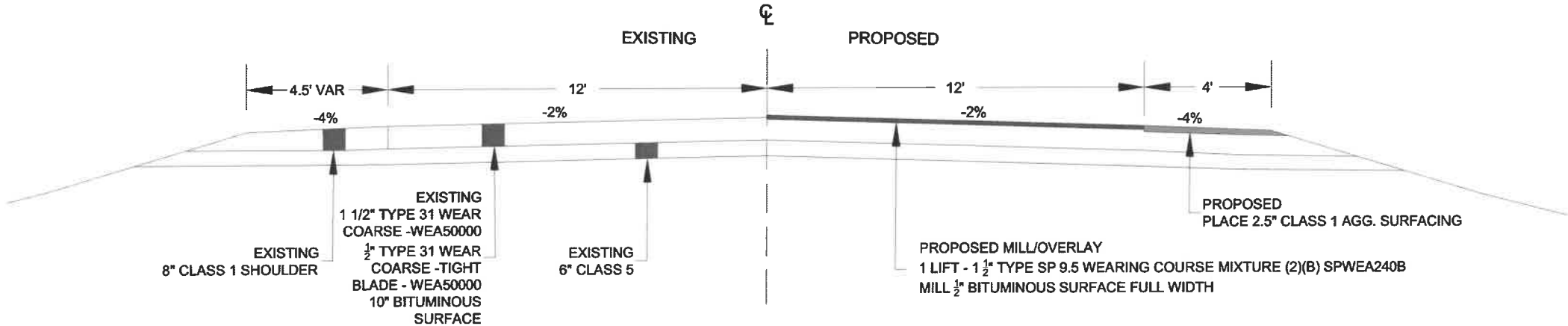
COUNTY SYSTEM: BIG STONE COUNTY  
HORIZONTAL DATUM: NAD-83-96 ADJUSTMENT  
VERTICAL DATUM: NAVD-88

ITEM NO.	MNDOT NO.	ESTIMATED QUANTITIES	UNIT	TOTAL ESTIMATED QUANTITY
		SAP 006-606-021 ITEM DESCRIPTION		
1	2021.501	MOBILIZATION	LS	1
2	2051.501	MAINT. & RESTORATION OF HAUL ROADS	LS	1
3	2118.509	AGGREGATE SURFACING CLASS 1	TON	3047
4	2232.504	MILL BITUMINOUS SURFACE (1/2")	SY	56660
5	2360.509	TYPE SP 9.5 WEAR COURSE MIX (2,B)	TON	5066
6	2563.601	TRAFFIC CONTROL	LS	1
7	2580.501	INTERIM PAVEMENT MARKING	LS	1
8	2582.503	4" SOLID LINE PAINT	LF	5322
9	2582.503	6" SOLID LINE PAINT	LF	41310
10	2582.503	4" BROKEN LINE PAINT	LF	4164

BASIS OF ESTIMATED QUANTITIES

- AGGREGATE SURFACING CLASS 1 (135 LBS / CU FT). AGGREGATE SHALL BE PLACED WITH A SHOULDERING MACHINE APPROVED BY THE ENGINEER. INCLUDES QUANTITIES FOR 17 FIELD ENTRANCES, 11 DRIVEWAYS, AND 6 INTERSECTIONS.
- MILL BITUMINOUS SURFACE FULL WIDTH AT 1/2" DEPTH. INCLUDES QUANTITIES FOR 3' BUMP OUT AT 17 FIELD ENTRANCES, 11 DRIVEWAYS AND 6 INTERSECTING ROADS. MILLINGS BECOME PROPERTY OF CONTRACTOR, AND MAY BE USED IN BITUMINOUS MIXTURE. MILL BITUMINOUS SURFACE JOINT AT BEGINING AND END OF PROJECT 1.5 " AND TAPER TO 0.5" AS DIRECTED BY THE ENGINEER.
- TYPE SP 9.5 WEARING COURSE MIXTURE (2)(B) (110 LBS/IN\*SQ.YD.) CSS-1H OR CQS-1H FOR TACK COAT SHALL BE INCLUDED IN BID PRICE FOR 2360.509 AND APPLIED IN ACCORDANCE WITH SPEC. 2357.
- SIGNING SHALL BE INSTALLED AND APPROVED BY THE ENGINEER AT LEAST 24 HOURS BEFORE ANY WORK IS STARTED.
- INTERIM PAVEMENT MARKING (4' LONG WITH 50' INTERVALS) PLACE AFTER BITUMINOUS MILLING. FINAL LIIFT SHALL BE TEMPORARY RAISED PAVEMENT MARKERS. SHALL BE INCLUDED IN BID PRICE FOR 2580.501. REMOVAL OF TEMPORARY RAISED PAVEMENT MARKERS SHALL BE INCLUDED IN THE BID PRICE FOR 2580.501.
- YELLOW - LATEX
- WHITE - LATEX
- YELLOW- LATEX (10' STRIPE WITH 40' SKIP)

TYPICAL SECTION  
BITUMINOUS MILL, OVERLAY AND AGGREGATE SHOULDERING  
10 TON DESIGN  
GRAVEL EQUIVALENT 26.9"  
STA. 697+75 TO STA. 906+55



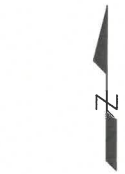
THE FOLLOWING STANDARD PLATES, AS APPROVED BY THE FHWA SHALL APPLY	
8000K	TEMPORARY CHANNELIZERS
9000E	APPROACHES AND ENTRANCES

ESTIMATED QUANTITIES, STANDARD PLATES AND TYPICAL SECTION

CERTIFIED BY		LIC. NO. 60399	4/9	125
STATE AID PROJ. NO.	S.A.P. 006-606-021	SHEET	2	OF 3

TRAFFIC CONTROL NOTES:

1. ALL TRAFFIC CONTROL SIGNING AND DEVICES SHALL CONFORM TO MOST RECENT EDITION OF THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". (INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS)
2. CONSTRUCTION ZONE SIGNING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE NUMBER AND LOCATION OF THESE SIGNS WILL BE DETERMINED BY THE CONTRACTOR'S OPERATIONS.
3. CONSTRUCTION SIGNS AND BARRICADES THAT ARE PERIODICALLY REQUIRED TO BE MOVED DUE TO CONSTRUCTION OPERATIONS, SHALL BE PLACED AT LOCATIONS WHERE THEY GIVE SUFFICIENT WARNING TO MOTORISTS AND PEDESTRIANS OF THE CONDITIONS AHEAD AND SHALL BE RELOCATED AS NEEDED TO KEEP SIGNING CURRENT AT REQUIRED LOCATIONS.
4. THE CONTRACTOR SHALL PROTECT AND RESTRICT ALL PEDESTRIANS FROM WORK AREAS.
5. THE EXACT LOCATION OF ALL TRAFFIC CONTROL DEVICES SHALL BE DETERMINED AT THE SITE.
6. ALL SIGNS SHALL BE MOUNTED ON FIXED SUPPORTS UNLESS APPROVED BY THE ENGINEER EXCEPT TYPE I, II, & III BARRICADES. SIGNS WHICH ARE WIDER THAN 36 INCHES OR LARGER THAN 10 SQUARE FEET IN AREA SHALL BE MOUNTED ON TWO POSTS.
7. ALL WARNING SIGNS SHALL BE 48"X48" UNLESS APPROVED BY THE ENGINEER.
8. ALL FIRST WARNING SIGNS SHALL HAVE A TYPE A FLASHER IN ALL LOCATIONS.
9. SIGNING SHALL BE INSTALLED AND APPROVED BY THE ENGINEER 24 HOURS BEFORE ANY WORK IS STARTED.

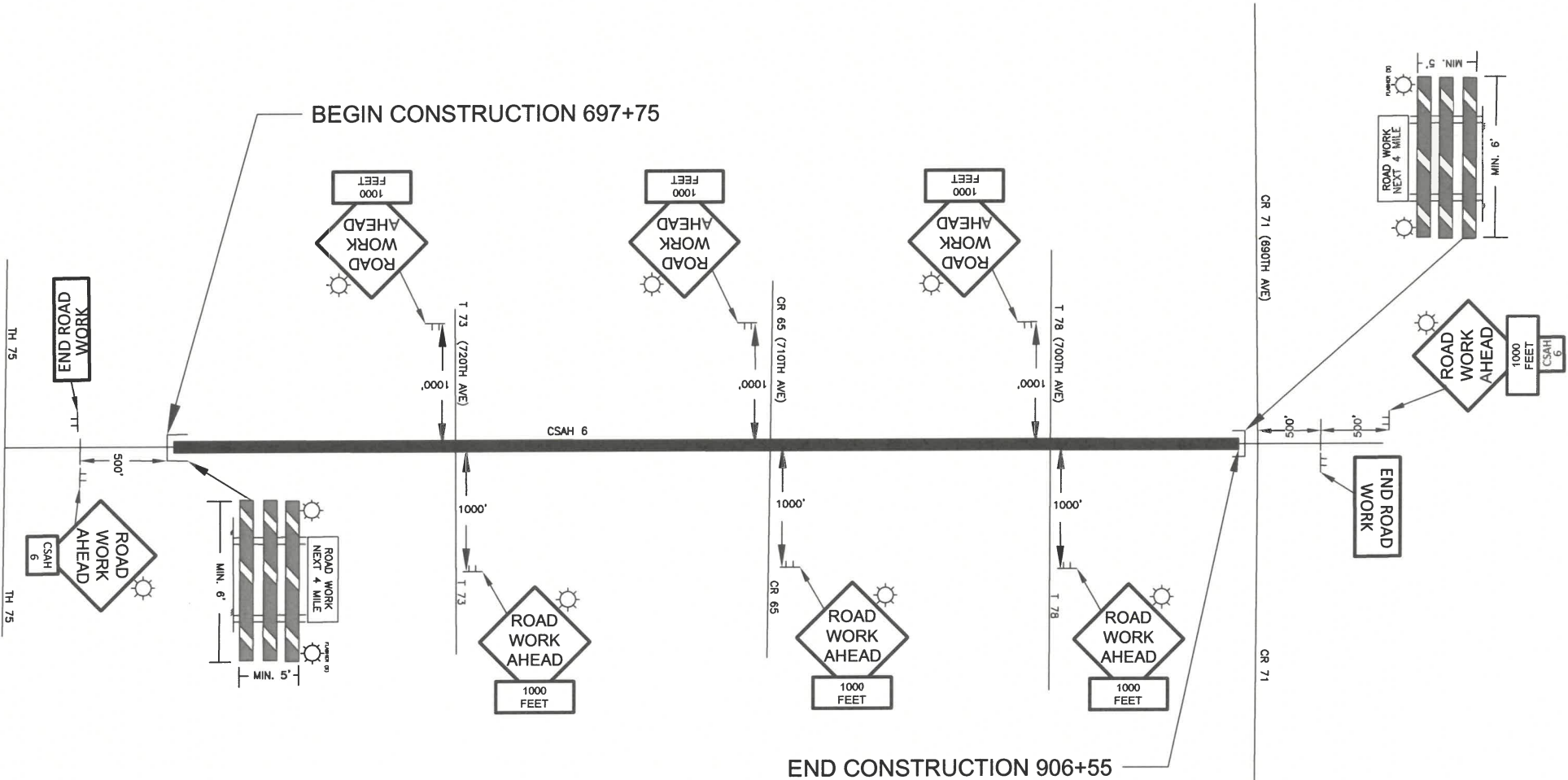


NOT TO SCALE

SIGN LEGEND

⊥ MULTI POST  
□ TYPE III

SIGN LEGEND				
SIGN OR DEVICE	SIGN NO.	COLOR	SIZE	ESTIMATED QUANTITY
	W20-1	BLACK ON ORANGE	48"X48"	8
	W16-2P	BLACK ON ORANGE	24"X18"	7
	G20-1	BLACK ON ORANGE	60"X24"	2
	FLASHER TYPE A	YELLOW	----	12
	TYPE III BARRICADE	ORANGE ON WHITE	8'	2
	G20-2	BLACK ON ORANGE	48"X24"	2
	M1-X4A	BLACK ON ORANGE	18"X18"	2



TRAFFIC CONTROL

CERTIFIED BY John J. [Signature] LIC. NO. 60399 419 125  
STATE AID PROJ. NO. S.A.P. 006-606-021 SHEET 3 OF 3