

MINNESOTA DEPARTMENT OF TRANSPORTATION LYON COUNTY

CONSTRUCTION PLAN FOR: BITUMINOUS OVERLAY AND AGGREGATE SHOULDERS.

COUNTY STATE AID HIGHWAY NO. 6

BETWEEN: C.S.A.H. 9 AND REDWOOD COUNTY LINE

FROM: N.E. COR. SEC. 19 T111N-R40W

TO: N.E. COR. SEC. 24 T111N-R40W

STATE AID PROJECT 042-606-011

GROSS LENGTH 26,384.32 FEET 4.997 MILES

BRIDGE LENGTH 0.00 FEET 0.000 MILES

EXCEPTIONS LENGTH 0.00 FEET 0.000 MILES

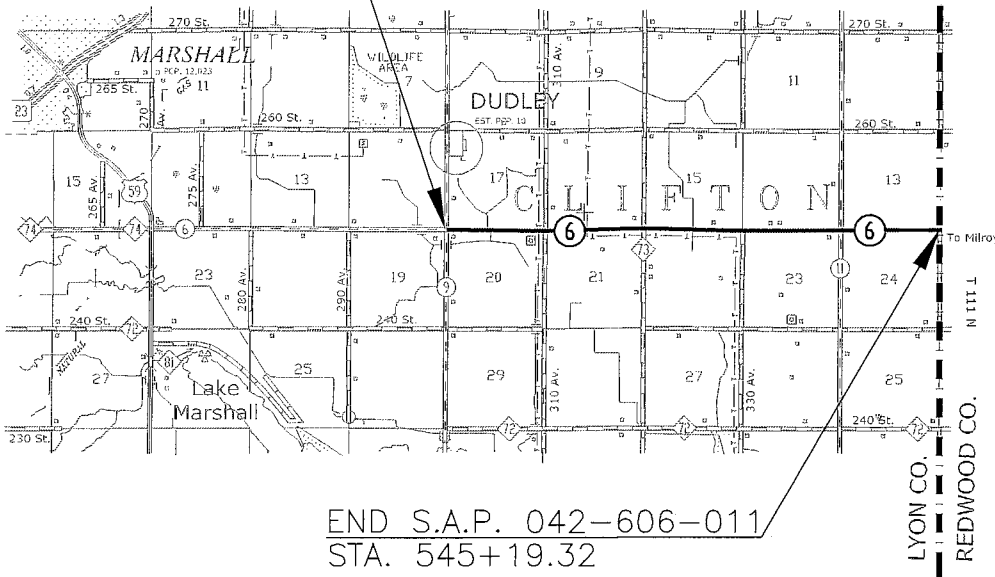
NET LENGTH 26,384.32 FEET 4.997 MILES

SHEET NO. 1	TITLE SHEET
SHEET NO. 2	ESTIMATED QUANTITY SHEET
SHEET NO. 3	TYPICAL SECTIONS SHEET
SHEET NO. 4	TRAFFIC CONTROL PLAN SHEET

THIS PLAN CONTAINS 4 SHEETS

BEG. S.A.P. 042-606-011
STA. 281+35.00

END S.A.P. 042-606-011
STA. 545+19.32



FUNCTIONAL CLASSIFICATION:

MAJOR COLLECTOR

DESIGN SPEED 55 MPH

ADT: 1,430 (2017)

PROJ ADT 1,540 (2037)

NO. OF TRAFFIC LANES: 2

NO. OF PARKING LANES: 0

S.F. 130 %

R VALUE = 10

TON DESIGN: 10 TON

ESALS (20 YR) = 341,000

SHOULDER WIDTH: 7.50'

STOPPING SITE DISTANCE BASED ON:

3.5' HEIGHT OF EYE

2.0' HEIGHT OF OBJECT

GRADED: SAP 042-606-008 (1996)

SURFACED: SAP 042-606-008 (1997)

GOVERNING SPECIFICATIONS

THE 2016 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

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

Signature: *Aaron VanMoer* Typed Name: Aaron VanMoer
Design Engineer

Date: 2/15/17 License No.: 50428

Aaron VanMoer Date: 2/15/17
Approved, County Engineer

David J. Burrows Date: 2/16/17
District State Aid Engineer:
Reviewed for Compliance with State Aid Rules/Policy

David J. Burrows Date: 2/16/17
Approved for State Aid Funding - for State Aid Engineer

NOTE	ITEM NO.	ITEM	UNIT	MUN.	RURAL	TOTAL ESTIMATED QUANTITY
	2021.501	MOBILIZATION	LUMP SUM		1.00	1.00
	2051.501	MAINT. & REST. OF HAUL ROADS	LUMP SUM		1.00	1.00
	2221.501	SHOULDER BASE AGGREGATE CLASS 5 MOD	TON		7,200.00	7,200.00
1	2232.501	MILL BITUMINOUS SURFACE (1.5")	SQ YD		90.00	90.00
2	2360.501	TYPE SP12.5 WEARING COURSE MIX (3,B)	TON		8,960.00	8,960.00
	2563.601	TRAFFIC CONTROL	LUMP SUM		1.00	1.00
	2582.502	24" STOP LINE PAINT	LIN FT		28.00	28.00
3	2582.502	4" SOLID LINE PAINT	LIN FT		5,280.00	5,280.00

CONSTRUCTION NOTES

1. MILL 8' X 24' AT TWO APPROACHES FROM CSAH 11 AND 8' X 25' AT BEGINNING AND END OF PROJECT.
2. 30° SAFETY EDGE SHALL BE INCLUDED. BITUMINOUS SAFETY EDGE SHALL EXTEND AT A 30' ANGLE FROM THE TOP OF THE WEAR COURSE. TACK COAT SHALL BE INCLUDED WITH TOTAL BID PRICE.
3. YELLOW CENTER LINE PAINT. 10' PAINT AND 40' SKIP.

BASIS FOR ESTIMATED QUANTITIES

WEARING COURSE MIXTURE

BITUMINOUS MATERIAL FOR MIXTURE (MAXIMUM DENSITY)
110LBS./SQ.YD./INCH OF DEPTH

TACK COAT

BITUMINOUS MATERIAL FOR TACK COAT .05 GALS. PER SQ.YD.
TACK COAT INCIDENTAL TO BITUMINOUS PAVING

AGGREGATE SHOULDERS

1.89 TONS./C.Y. AND 20 TONS PER FIELD APPROACH

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

STANDARD PLATES

PLATE NO.	DESCRIPTION
8000 J	CHANNELIZERS
9000 E	APPROACHES AND ENTRANCES

CERTIFIED BY: _____

LICENSED PROFESSIONAL ENGINEER

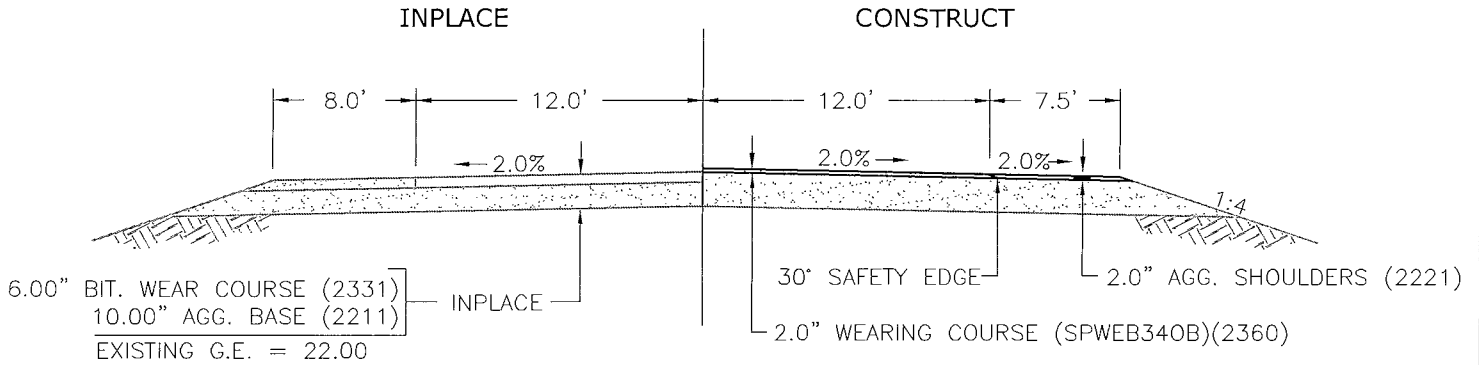
LIC. NO. 50428

STATE AID PROJECT 042-606-011 SHEET 2 OF 4 SHEETS

TYPICAL SECTION

STA. 281+35.00 TO STA. 545+19.32

NOT TO SCALE



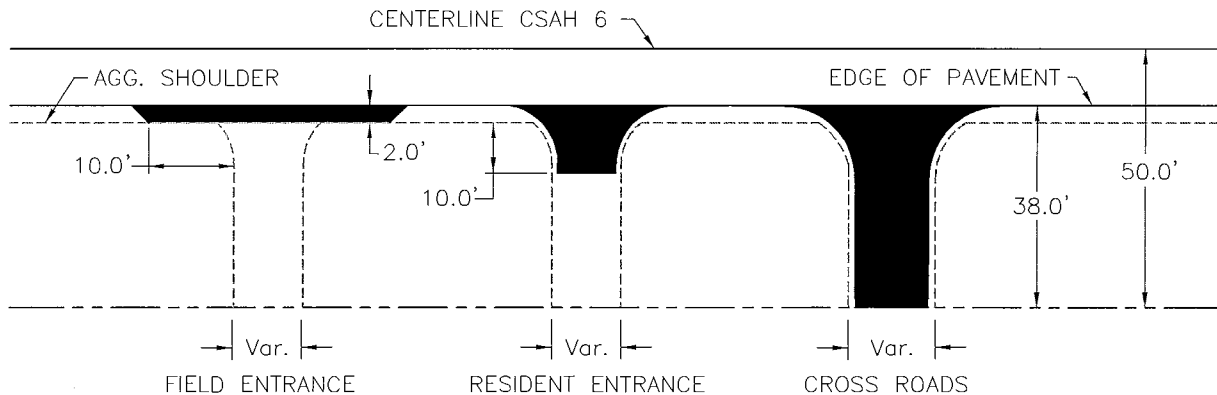
GRANULAR EQUIVALENT
 10 TON
 R VALUE: 10
 G.E. REQUIRED: 26.50
 G.E. ON PLANS: 26.50

SECTION NOTES:

- 30" BITUMINOUS SAFETY EDGE SHALL BE INCLUDED WITH THE TOTAL BID PRICE FOR BITUMINOUS WEARING COURSE (2360).

TYPICAL AUXILIARY APPROACH PAVING

STANDARD PLATE 9000E SHALL APPLY. FIELD ADJUST AS DIRECTED BY THE ENGINEER.



ENTRANCE TYPE	#	EST. TONS
FIELD ENTRANCE	29	145
RESIDENT ENTRANCE	15	375
CROSS ROAD	8	280
		800










CERTIFIED BY:

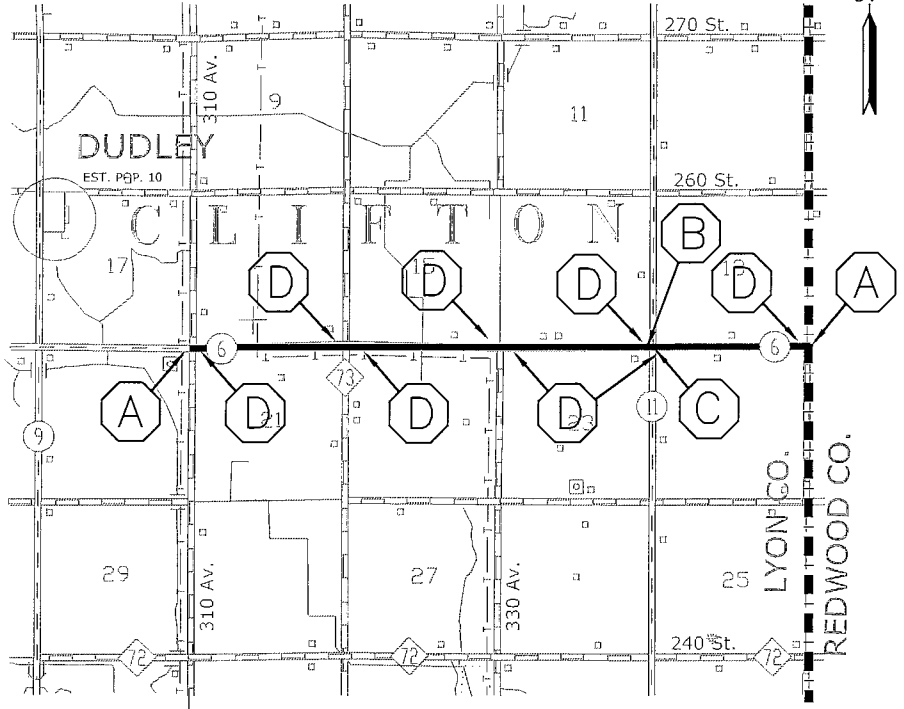
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LICENSED PROFESSIONAL ENGINEER

STATE AID PROJECT 042-606-011 SHEET 3 OF 4 SHEETS

TEMPORARY TRAFFIC CONTROL PLAN

TEMPORARY TRAFFIC CONTROL SIGNS			
INSERT	SIGN	QUANTITY	NOTES
(A) (B) (C)	 G20-1 NEXT 5.0 MILES	2	INSTALL ON TYPE 3 BARRICADE BLACK ON ORANGE 48"x24"
	NEXT 3.0 MILES	1	
	NEXT 1.0 MILES	1	
(D)	 W8-12	8	INSTALL 1/MILE MINIMUM BLACK ON ORANGE 48"x48"
	 W8-9	AS NEEDED	INSTALL 1/MILE MINIMUM BLACK ON ORANGE 48"x48"
	 W8-11	AS NEEDED	INSTALL 1/MILE MINIMUM BLACK ON ORANGE 48"x48"
	 W8-1A	AS NEEDED	BLACK ON ORANGE 48"x48"
	 W8-1A	AS NEEDED	BLACK ON ORANGE 48"x48"
	 W20-1	AS NEEDED	BLACK ON ORANGE 48"x48"
	 R4-1	0	INSTALL AT NO PASSING ZONE BLACK ON WHITE 24"x30"
	 R4-2	0	INSTALL AT NO PASSING ZONE BLACK ON WHITE 24"x30"



SIGN SPECIFIC NOTES:

- R4-1 AND R4-2 SIGNS TO BE INSTALLED AT ENDS OF SOLID YELLOW LINES. R4-1 SIGNS TO BE INSTALLED OPPOSITE INPLACE NO PASSING ZONE SIGNS. R4-2 SIGNS TO BE INSTALLED AT THE TERMINATION OF SOLID YELLOW LINE. SIGNS SHALL BE INSTALLED PRIOR TO REMOVING CENTERLINE MARKINGS AND SHALL REMAIN INPLACE UNTIL FINAL STRIPING IS RESTORED.

GENERAL TEMPORARY TRAFFIC CONTROL NOTES:

- TRAFFIC CONTROL SHALL MEET THE REQUIREMENTS OF THE CURRENT EDITION OF THE MnMUTCD, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
- ALL NECESSARY TRAFFIC CONTROL DEVICES ON THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR THE IMMEDIATE REPAIR OR REPLACEMENT OF ALL TRAFFIC CONTROL DEVICES THAT BECOME DAMAGED, MOVED, OR DESTROYED.
- ALL INPLACE REGULATORY AND WARNING SIGNS TO REMAIN INPLACE THROUGHOUT CONSTRUCTION.
- THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND REMOVE ALL TRAFFIC CONTROL DEVICES REQUIRED TO PROVIDE SAFE MOVEMENT OF LOCAL VEHICULAR TRAFFIC THROUGHOUT THE PROJECT. THE ENGINEER WILL HAVE THE RIGHT TO MODIFY THE REQUIREMENTS OF TRAFFIC CONTROL AS DEEMED NECESSARY DUE TO FIELD CONDITIONS. THE STREET SHALL REMAIN OPEN TO LOCAL TRAFFIC AT ALL TIMES.

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 LICENSED PROFESSIONAL ENGINEER