

As Built Plans

JOB # 1

FHWA REGION	STATE	PROJECT	SHEET NO.
8	N.D.	F-FG-1-806 (015)069	1

DESIGN DATA

Hwy. #1806 Est. 30th Max, Hr.

Traffic	Average Daily	
Current Traffic (1987)	9750 Pass. 450 Trucks	10,200 Total 1020
Traffic Forecast (2007)	14,400 Pass. 600 Trucks	15,000 Total 1500
Design Speed	35 MPH	
Traffic Classification	"M"	
Minimum Sight Distance (Stopping)	250'	
Bridge	Cooper E-80 & Diesel Impact	

NORTH DAKOTA
STATE HIGHWAY DEPARTMENT

MORTON COUNTY
F-FG-1-806(015)069

GRADING, SURFACING, SEWERS, STRUCTURAL,
LIGHTING, SIGNALS, & INCIDENTALS.

GOVERNING SPECIFICATIONS

Standard Specifications adopted by the North Dakota State Highway Department, November 1986. Standard Drawings currently in effect, and other Contract Provisions submitted herein.

Main Street

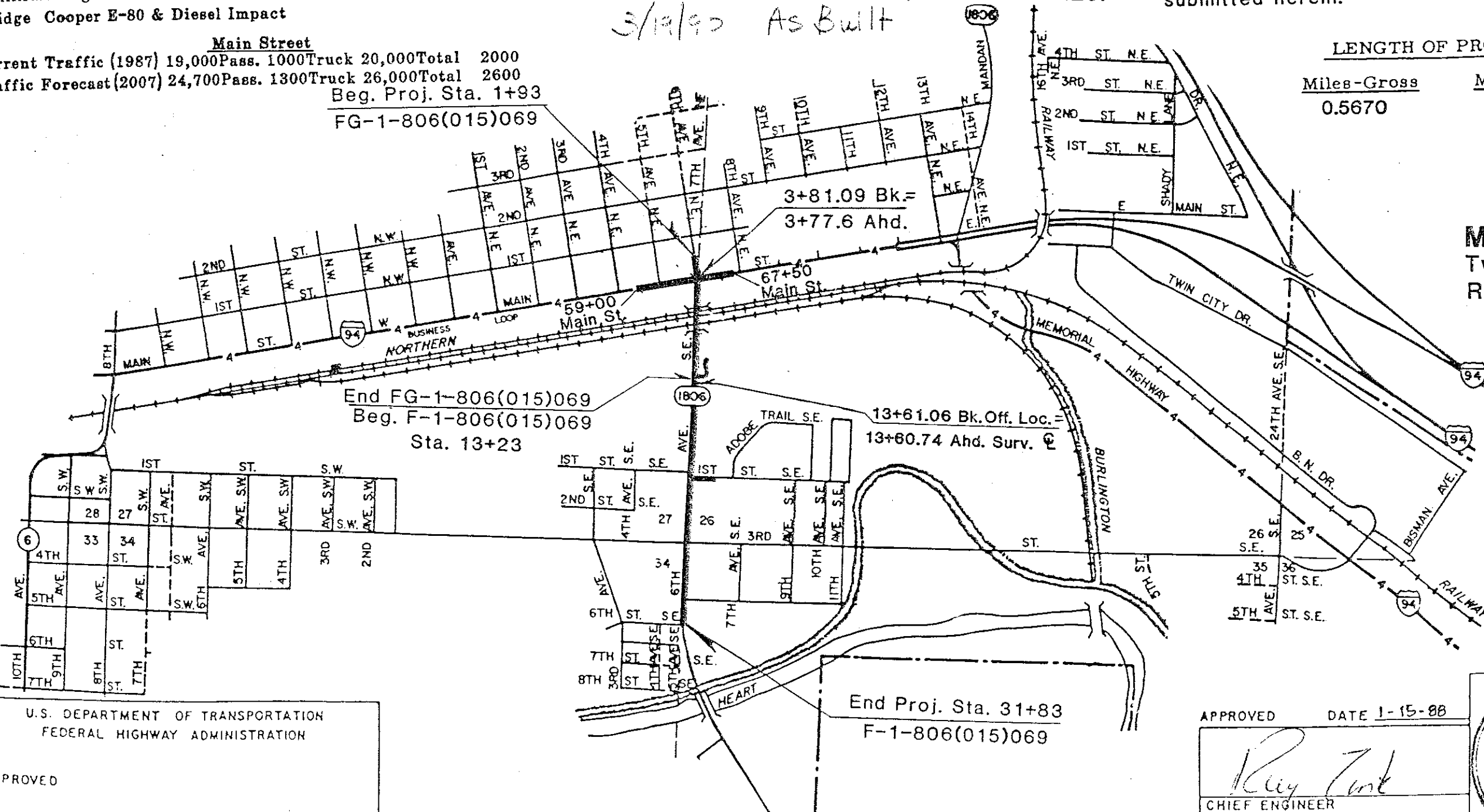
Current Traffic (1987)	19,000 Pass. 1000 Truck	20,000 Total 2000
Traffic Forecast (2007)	24,700 Pass. 1300 Truck	26,000 Total 2600

Beg. Proj. Sta. 1+93
FG-1-806(015)069

LENGTH OF PROJECT

Miles-Gross	Miles-Net
0.5670	0.5670

MANDAN
Twp. 139 N.
Rge. 81 W.



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR _____ DATE _____

APPROVED DATE 1-15-88

Ray Zink

CHIEF ENGINEER
NORTH DAKOTA
STATE HIGHWAY DEPARTMENT



INSTALL PLASTIC PVM'T MKG. FILM LINE

4" White Lane Lines, 10'Line,30'Skip	10 Sq. Ft.
8" Chan. Line	57 Sq. Ft.
8" Yellow Lines 45° @ 5' CTRS.	80 Sq. Ft.
TOTAL	147 Sq. Ft.

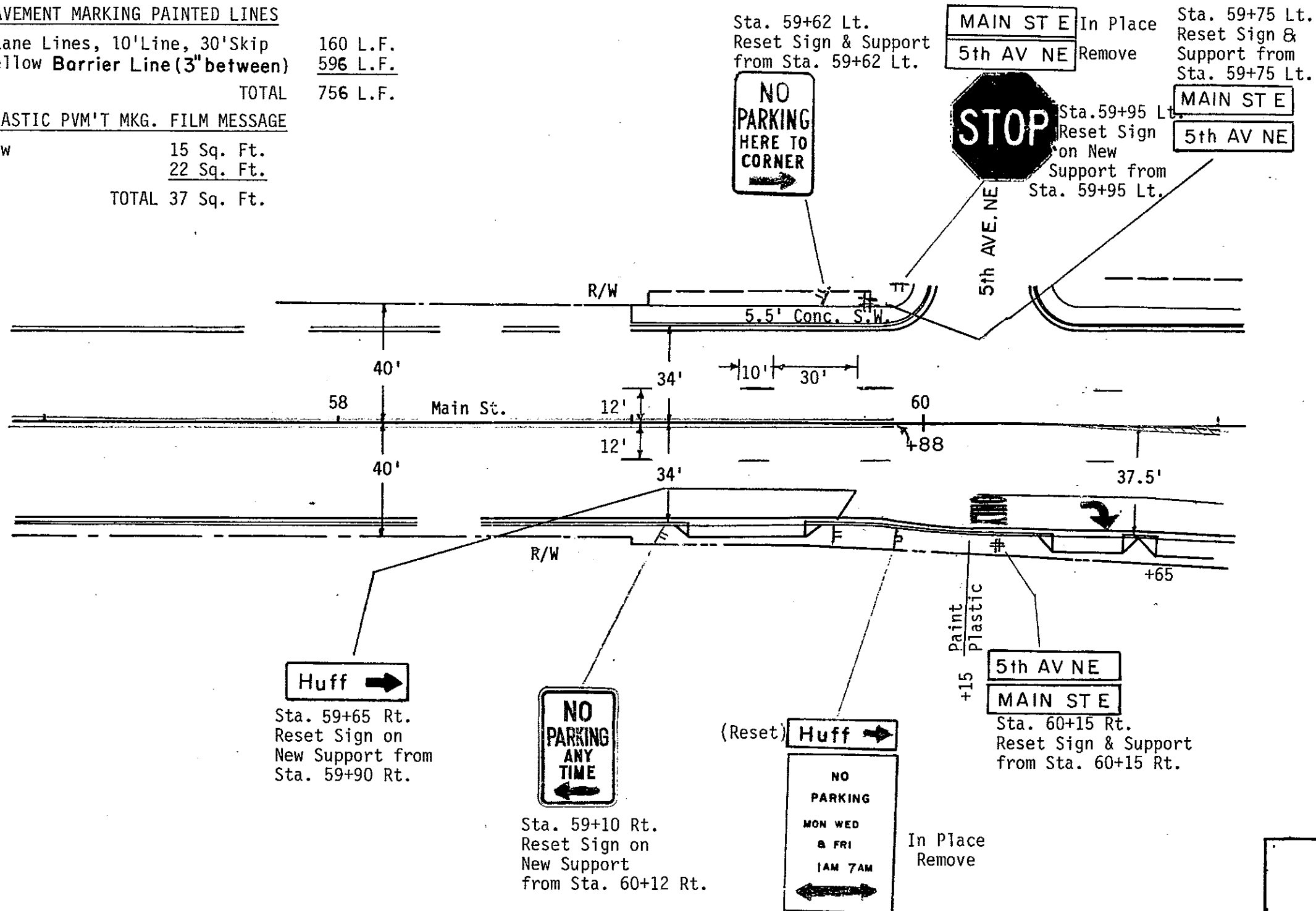
INSTALL PAVEMENT MARKING PAINTED LINES

4" White Lane Lines, 10'Line, 30'Skip	160 L.F.
DBL. 4" Yellow Barrier Line(3"between)	596 L.F.
TOTAL	756 L.F.

INSTALL PLASTIC PVM'T MKG. FILM MESSAGE

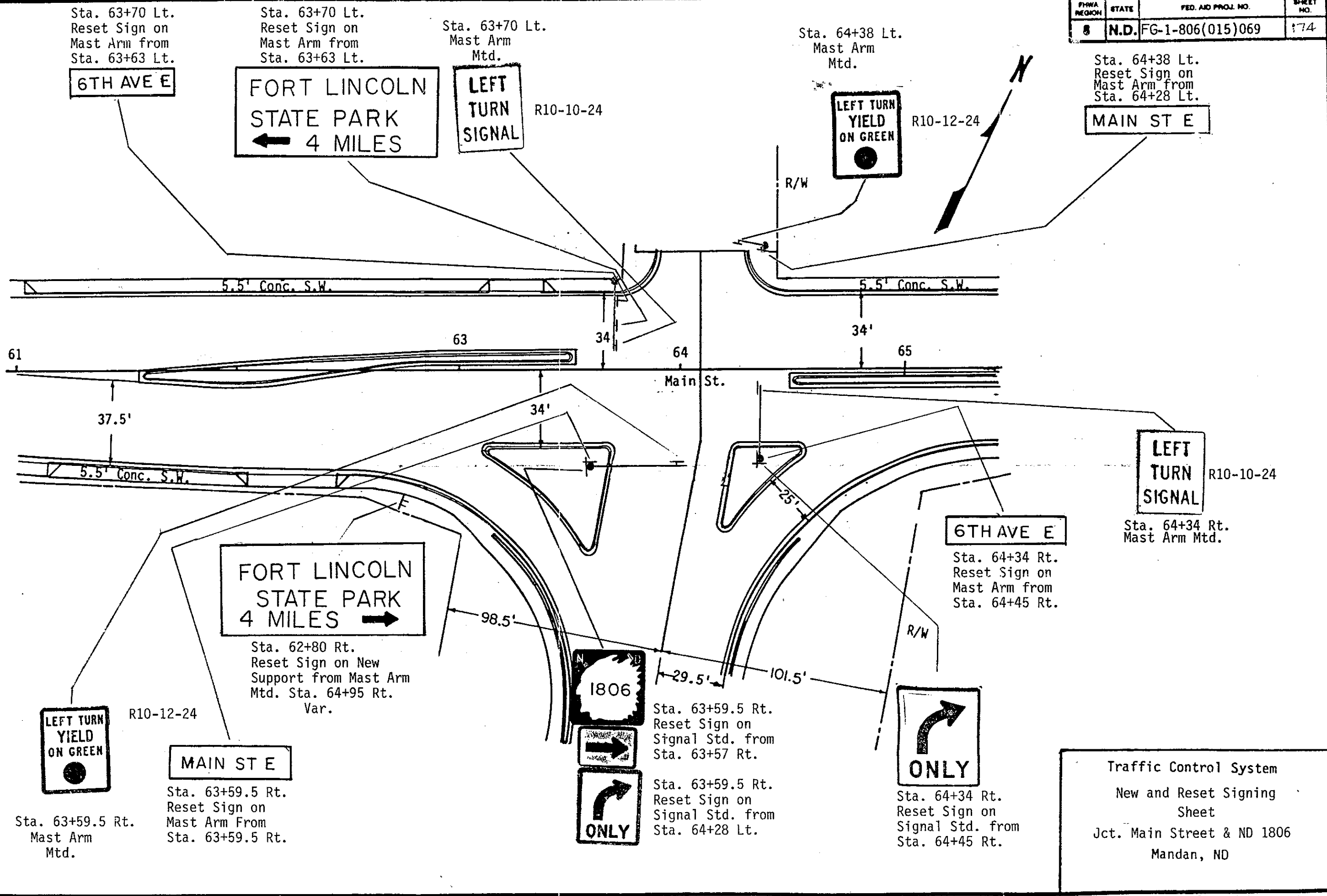
Right Arrow	15 Sq. Ft.
Only	22 Sq. Ft.
TOTAL	37 Sq. Ft.

FHWA REGION	STATE	FED. AID PROJ. NO.	SHEET NO.
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Traffic Control System
 Signing & Pvm't Marking
 Layout
 Sta. 57+00 to 61+00
 Main Ave.
 ND 1806 Hwy.
 Mandan, ND

FHWA REGION	STATE	FED. AID PROJ. NO.	SHEET NO.
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Traffic Control System
 New and Reset Signing
 Sheet
 Jct. Main Street & ND 1806
 Mandan, ND

INSTALL PLASTIC PVM'T. MKG. FILM MESSAGE

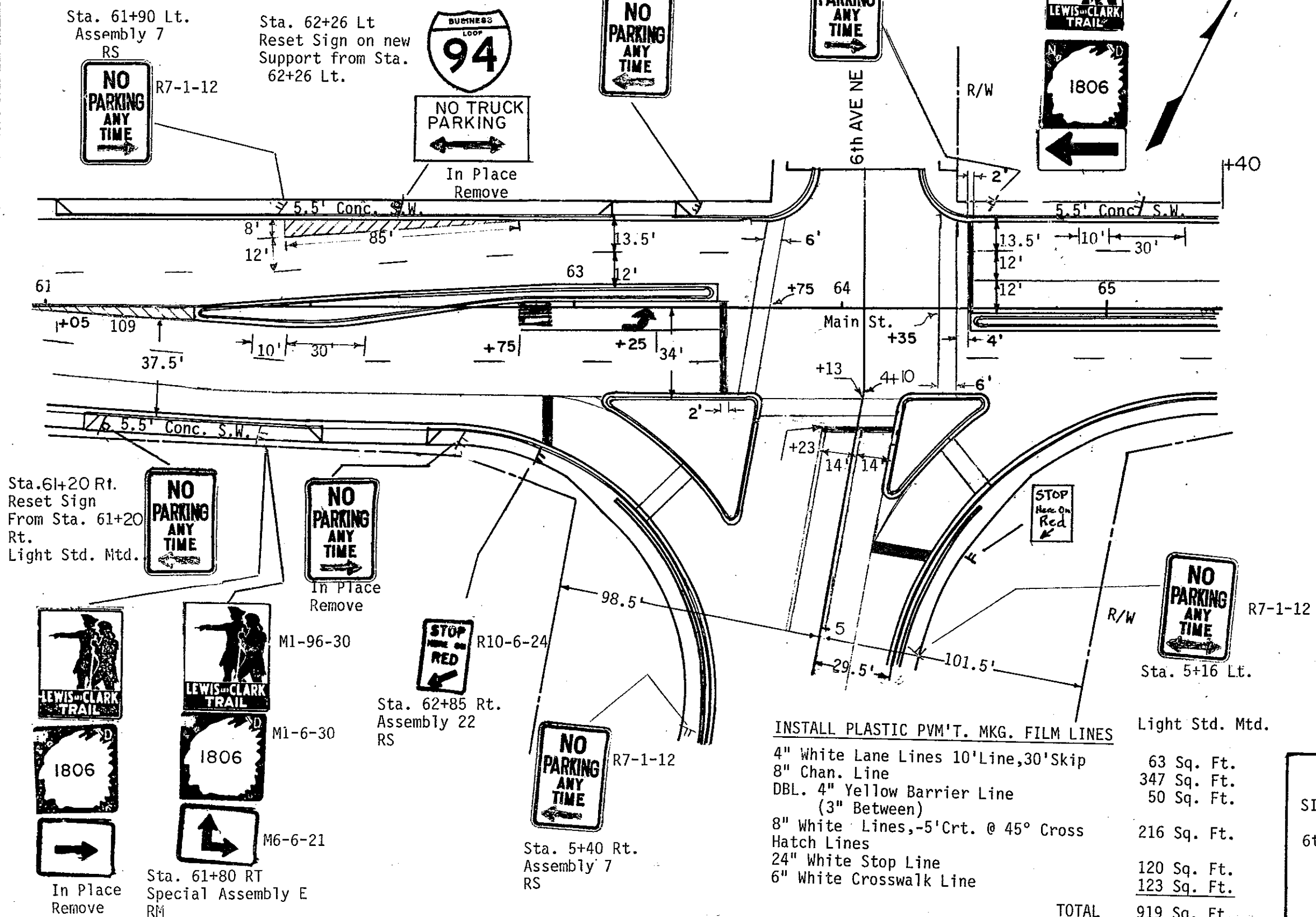
LEFT ARROW ONLY 15 Sq. Ft.
 22 Sq. Ft.
 TOTAL 37 Sq. Ft.

Sta. 63+45 Lt
 Reset Sign &
 Support from
 Sta. 62+80 Lt

Sta. 64+40 Lt.
 Reset Sign &
 Support from
 Sta. 64+40 Lt.

Sta. 65+10 Lt.
 Reset Sign & Support
 from Sta. 65+10 Lt.

FHWA REGION	STATE	FED. AID PROJ. NO.	SHEET NO.
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Sta. 61+20 Rt.
 Reset Sign
 From Sta. 61+20
 Rt.
 Light Std. Mtd.

NO PARKING ANY TIME
 In Place Remove

NO PARKING ANY TIME
 In Place Remove

STOP Here On Red

LEWIS-CLARK TRAIL
 M1-96-30

LEWIS-CLARK TRAIL
 M1-6-30

1806
 M1-6-30

1806
 M1-6-30

→
 M6-6-21

In Place Remove
 Sta. 61+80 RT
 Special Assembly 7
 RM

INSTALL PLASTIC PVM'T. MKG. FILM LINES

4" White Lane Lines 10' Line, 30' Skip	63 Sq. Ft.
8" Chan. Line	347 Sq. Ft.
DBL. 4" Yellow Barrier Line (3" Between)	50 Sq. Ft.
8" White Lines, -5' Crt. @ 45° Cross Hatch Lines	216 Sq. Ft.
24" White Stop Line	120 Sq. Ft.
6" White Crosswalk Line	123 Sq. Ft.
TOTAL	919 Sq. Ft.

Traffic Control System
 SIGNING & PVM'T MARKING
 LAYOUT
 6th Avenue NE & Main St.
 ND 1806 Hwy.
 Mandan, ND

INSTALL PAVEMENT MARKING PAINTED LINES

DBL. 4" Yellow Barrier Line 780 LF
 (3" Between)
 8" White Lines -5' crt. @ 45° cross 815 LF
 4" White Lane Lines, 10' Line, 30' Skip 100 LF
 TOTAL 1695 LF

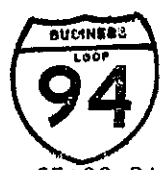
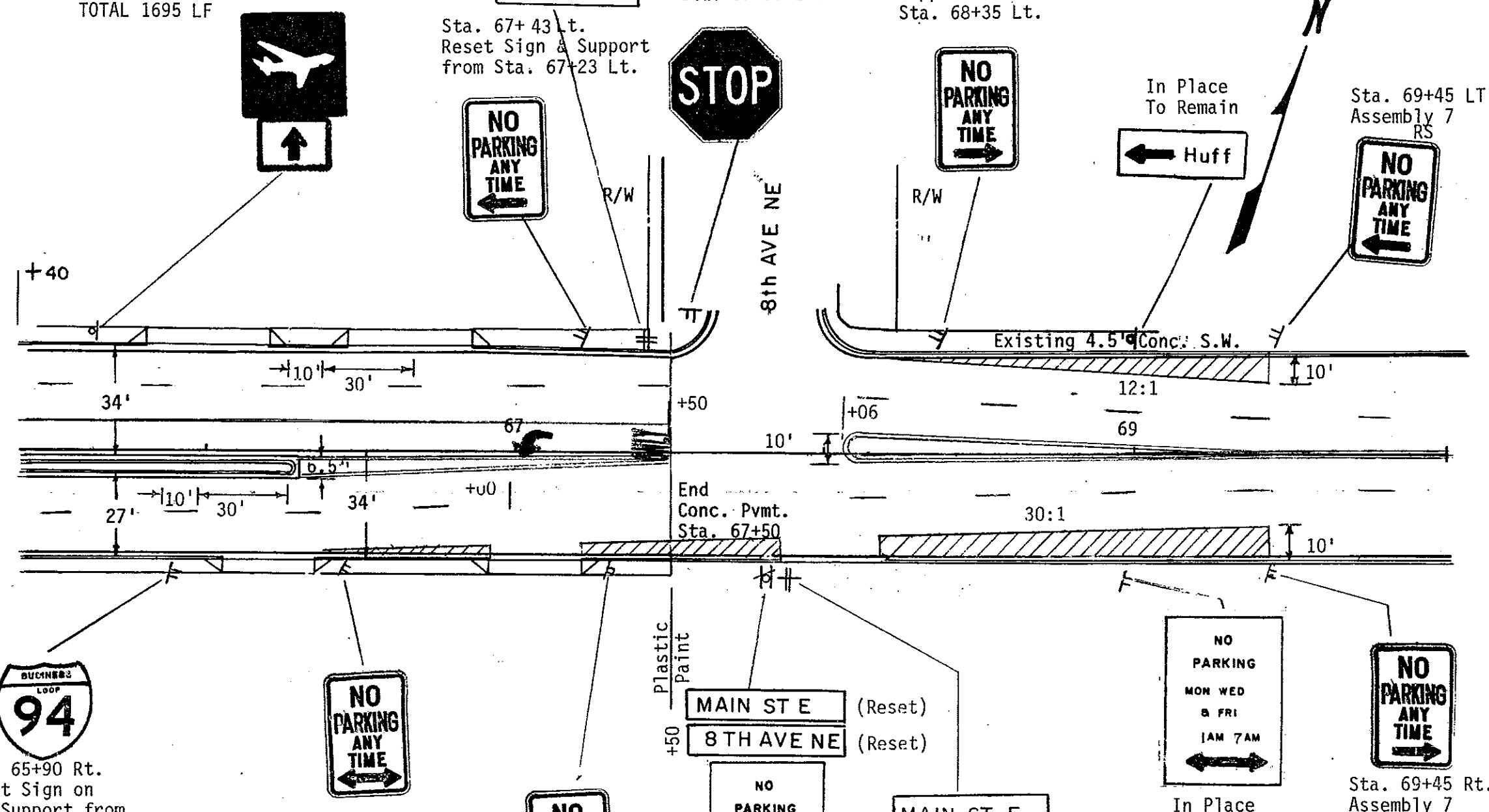
Sta. 65+74 Lt.
 Reset Sign from
 Sta. 66+67 Lt.
 Light Std. Mtd.

Sta. 67+50 Lt.
 Reset Sign on
 New Support from
 Sta. 67+58 Lt.
MAIN ST E
8th AVE NE

Sta. 67+58 Lt.
 Reset Sign on new
 Support from
 Sta. 67+58 Lt.

Sta. 68+15 Lt.
 Reset Sign &
 Support from
 Sta. 68+35 Lt.

FHWA REGION	STATE	FED. AID PROJ. NO.	SHEET NO.
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Sta. 65+90 Rt.
 Reset Sign on
 New Support from
 Sta. 65+90 Rt.

INSTALL PLASTIC PVM'T MARKING FILM MESSAGE

Left Arrow 15 Sq. Ft.
 Only 22 Sq. Ft.
 Total 37 Sq. Ft.

INSTALL PLASTIC PVM'T. MARKINGS FILM LINE

4" White Lane Lines, 10' Line, 30' Skip 39.6 375 Sq. Ft.
 DbL. 4" Yellow Barrier Line (3" Between) 154.4 480 Sq. Ft.
 8" Channel Line - 138.6 SF TOTAL 855 Sq. Ft.

Sta. 66+45 Rt.
 Assembly 7
 RS

Sta. 67+29 Rt.
 Light Std. Mtd

Sta. 67+75 Rt.
 Reset Sign on
 New Support from
 Sta. 67+43 Rt.

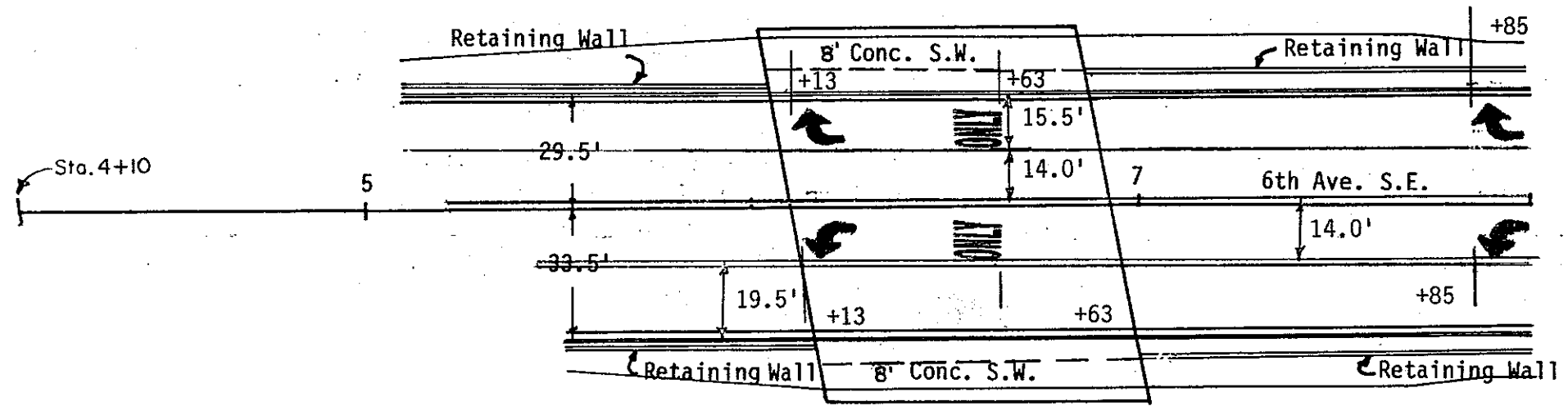
Sta. 69+45 Rt.
 Assembly 7
 RS

Traffic Control System
 SIGNING & PVM'T MARKING
 LAYOUT
 8th Avenue NE & Main St
 ND 1806 Hwy.
 Mandan, ND

INSTALL PLASTIC PVM'T. MKG. FILM LINES

8" White Chan. Line 400 Sq. Ft.
 DBL. 4" Yellow Barrier Line 200 Sq. Ft.
 (3" Between) TOTAL 600 Sq. Ft.

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INSTALL PLASTIC PVM'T. MKG. FILM MESSAGES

Right Arrow (2) 30 Sq. Ft.
 Left Arrow (2) 30 Sq. Ft.
 ONLY (2) 44 Sq. Ft.
 TOTAL 104 Sq. Ft.

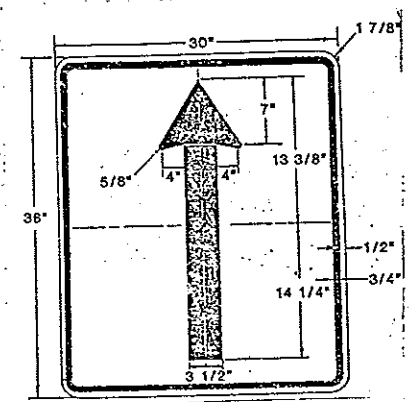
Traffic Control System
 Signing & Pvm't. Marking
 Layout

ND 1806 Hwy.
 Mandan, ND

⑥ REVISED 6-12-89

INSTALL PLASTIC PVM'T. MKG. FILM LINES

8" White Chan. Line	400 Sq. Ft.
DBL. 4" Yellow Barrier Line (3" Between)	200 Sq. Ft.
TOTAL	600 Sq. Ft.



⑥ Sign No. 1
Area = 7.5 SF
Sta. 6+92 Lt.

⑥ STA. 6+89 LT.
BRIDGE RAIL MOUNTED
SEE DETAIL "A"

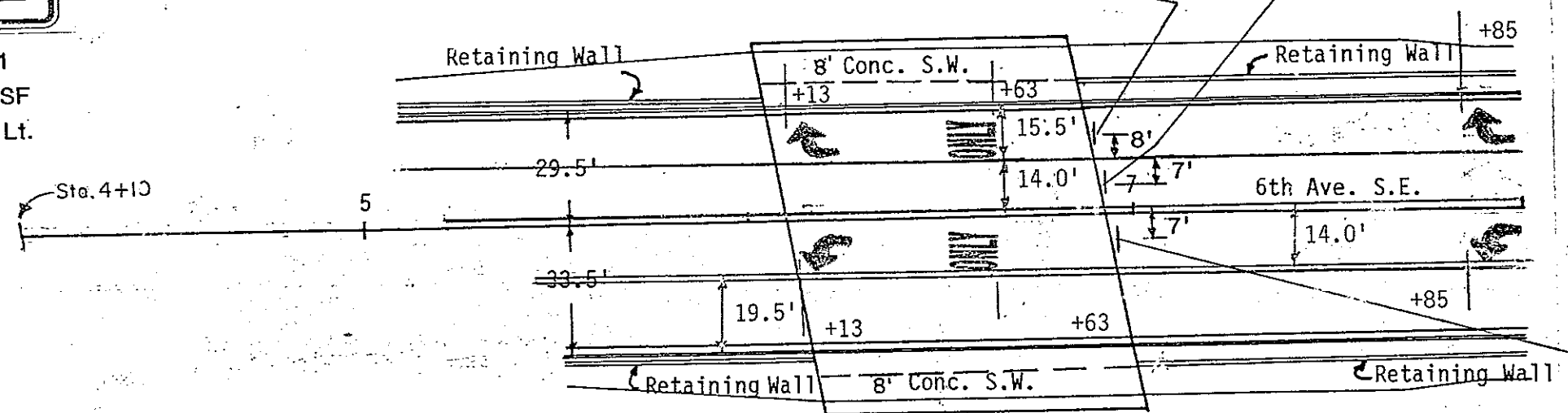


R3-5(R)-30

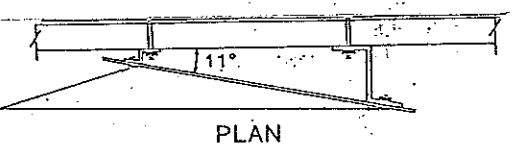
⑥ STA. 6+92 LT.
BRIDGE RAIL MOUNTED
SEE DETAIL "A"



Sign No. 1



1 1/4" x 3/8" 0 HEX HEAD BOLT,
HEX NUT, LOCK WASHER, METAL
WASHER, AND NYLON WASHER.



PLAN

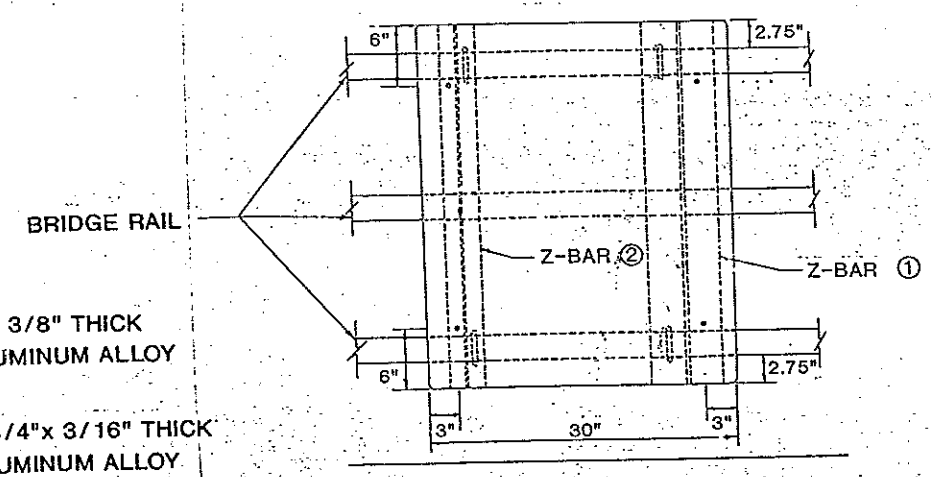
NOTE: Z-BARS SHALL BE
FIELD BENT TO FIT.

INSTALL PLASTIC PVM'T. MKG. FILM MESSAGES

Right Arrow	(2)	30 Sq. Ft.
Left Arrow	(2)	30 Sq. Ft.
ONLY	(2)	44 Sq. Ft.
TOTAL		104 Sq. Ft.

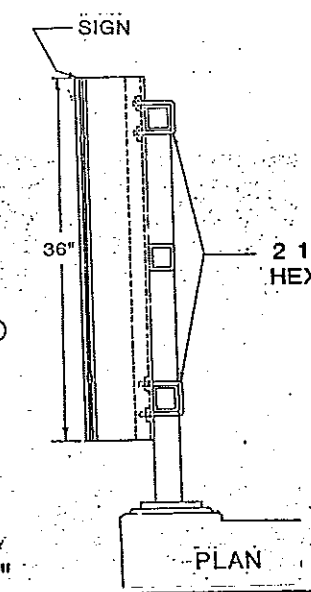
① Z-BAR - USE 6"x 3/8" THICK
5.42 LBS./FT. ALUMINUM ALLOY

② Z-BAR - USE 1 3/4"x 3/16" THICK
1.08 LBS./FT. ALUMINUM ALLOY



ELEVATION

⑥ DETAIL "A"



PLAN



R3-5(L)-30

⑥ STA. 6+95 RT.
BRIDGE RAIL MOUNTED
SEE DETAIL "A"

Traffic Control System
Signing & Pvm't. Marking
Layout

ND 1806 Hwy.
Mandan, ND

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INSTALL PLASTIC PWM'T. MARKING FILM LINE

150 L.F. 8" Chan. Line
 720 L.F. DBL. 4" Yellow Barrier Line
 53 Sq. Ft. TOTAL 79 Sq. Ft.
 (3" Between)

Reset Sign on
 Sta. 10+00 Lt.
 New Support from
 Sta. 10+15 Lt.



RS
 Sta. 11+00 Lt.
 Assembly 7
 NO PARKING ANY TIME
 R7-1-12

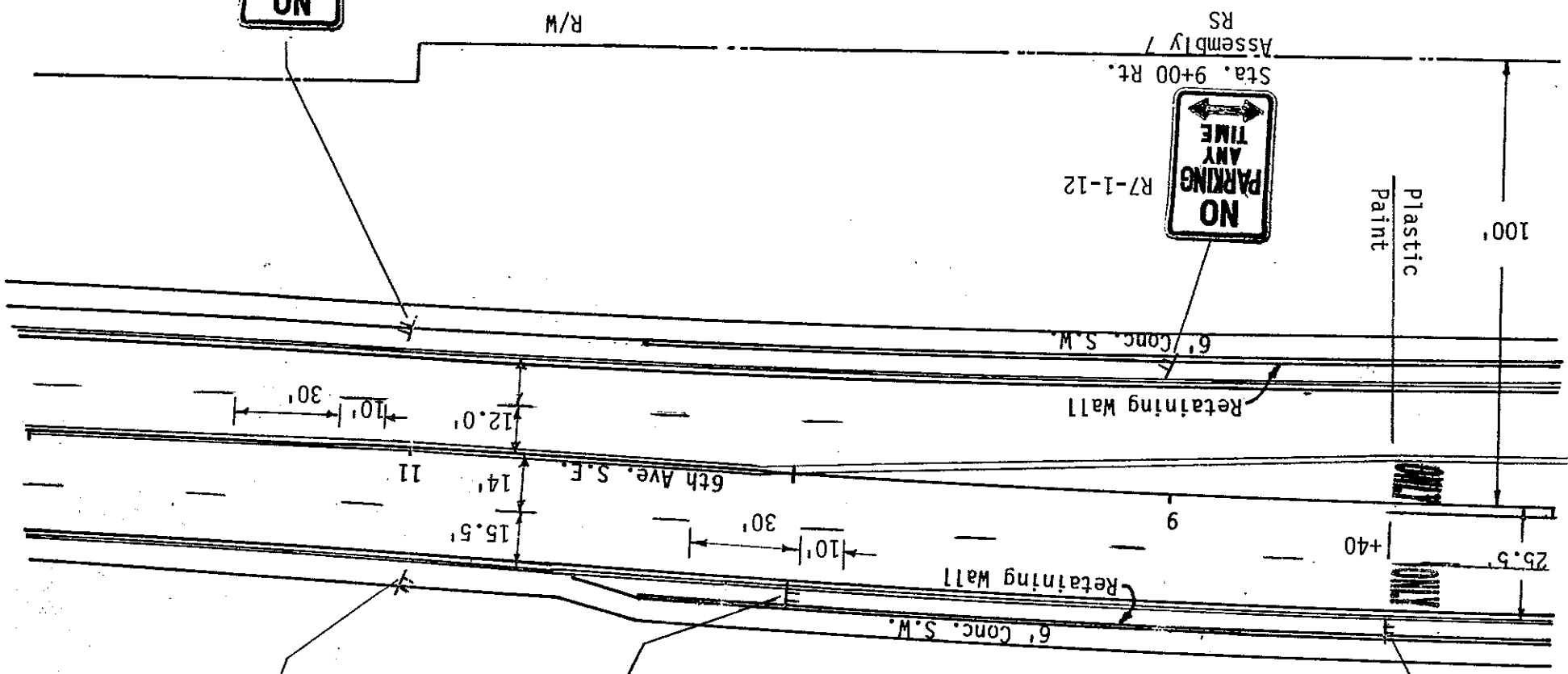
INSTALL PWM'T MARKING PAINTED LINES
 4" White Lane Lines, 10' Line, 30' Skid
 DBL. 4" Yellow Barrier Line (3" between)

150 L.F.
 720 L.F.
 TOTAL 870 L.F.

RS
 Sta. 8+40 Lt.
 Assembly 15



RS
 R3-7(R)-30



INSTALL PLASTIC PWM'T. MKG. FILM MESSAGE
 ONLY (2) 44 Sq. Ft.
 TOTAL 44 Sq. Ft.

RS
 Sta. 9+00 Rt.
 Assembly 7



RS
 R7-1-12

RS
 Sta. 11+00 Rt.
 Assembly 7
 NO PARKING ANY TIME
 R7-1-12

Traffic Control System
 Signing & Pvm't. Marking
 Layout
 ND 1806 Hwy.
 Mandan, ND

Sta. 12+60 Lt.
Reset Sign on New Support from Sta. 12+60 Lt.

6TH AVE SE (Reset)

S. FRONTIER TR (Reset)

Sta. 12+25 Lt.
Assembly 7
RS



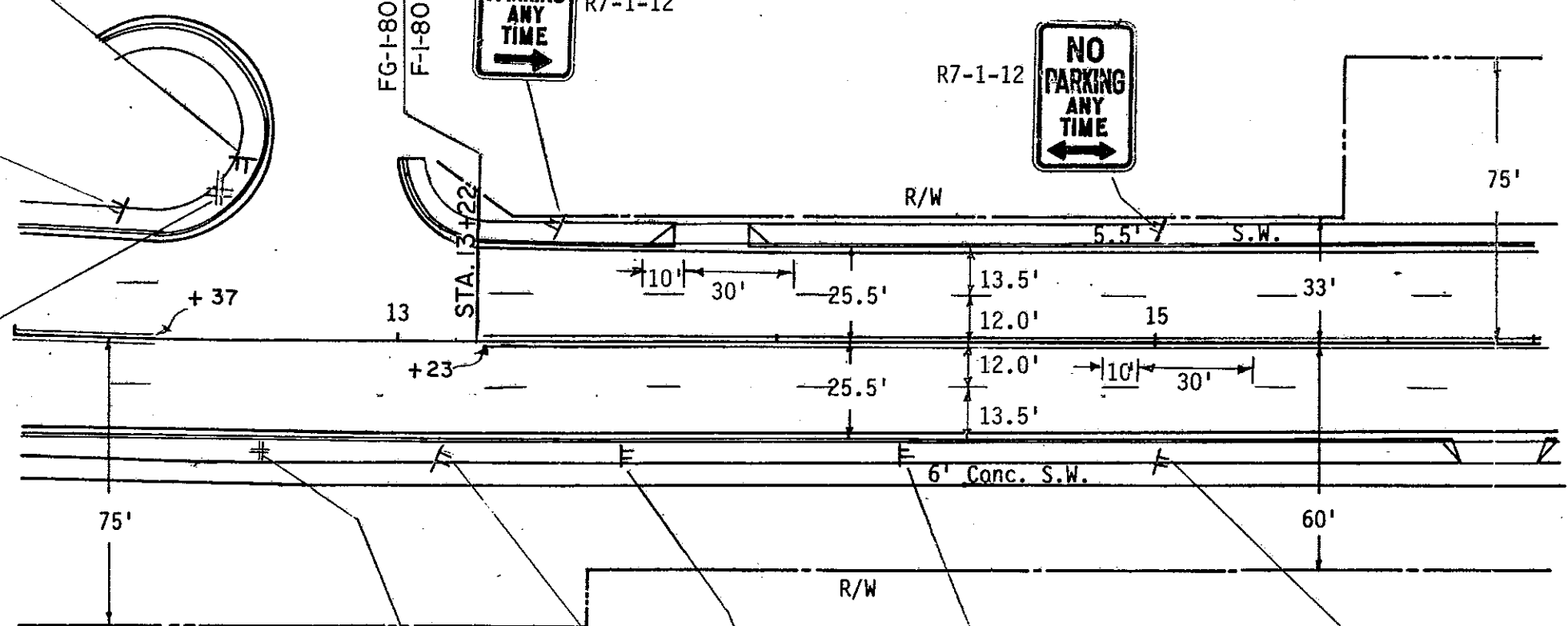
Sta. 13+40 Lt.
Assembly 7
RS



Install Pavement Markings Painted Lines

4" White Lane Lines, 10' Line, 30' Skip 160 LF.
DBL. 4" Yellow Barrier Line (3" Between) 530 LF

Sta. 15+01 Lt. Light Std. Mtd. TOTAL 790 LF



6TH AVE SE
S FRONTIER TR

Sta. 12+50 Lt.
Reset Sign on New Support from Sta. 12+50 Lt.

D3-36(1)
D3-36(2)

6TH ST SE
S. FRONTIER TR

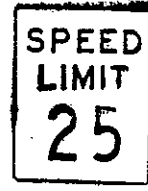
Sta. 12+61 Rt.
Light Std. Mtd.
Assembly 441
SNS



Sta. 13+15 Rt.
Assembly 7
RS



Sta. 13+60 Rt.
Reset Sign & Support from Sta. 13+40 Rt.



Sta. 14+30 Rt.
Reset Sign & Support from Sta. 13+70 Rt.

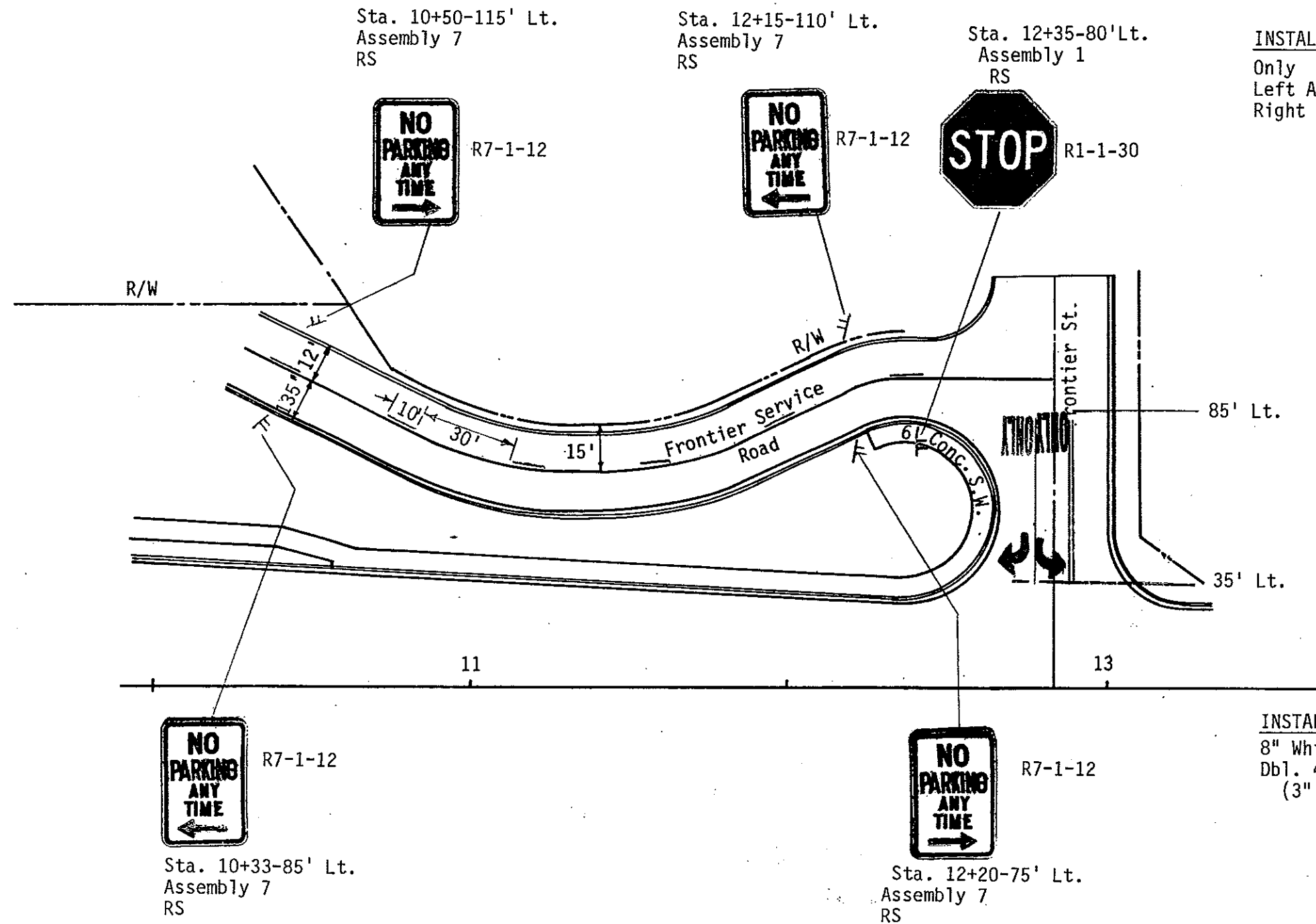


Sta. 15+00 Rt.
Assembly 7
RS

Traffic Control System
Signing & Pvm't Marking Layout
ND 1806 Hwy.
Mandan, ND

Install Pavement Marking Painted Lines

4" Yellow Lane Lines, 10' Line, 30' Skip 60 L.F.
TOTAL 60 L.F.



INSTALL PAVEMENT MKG. PAINTED MESSAGE

Only	(2)	44 Sq. Ft.
Left Arrow	(1)	15 Sq. Ft.
Right Arrow	(1)	15 Sq. Ft.
		Total 74 Sq. Ft.

INSTALL PAVEMENT MKG. PAINTED LINE

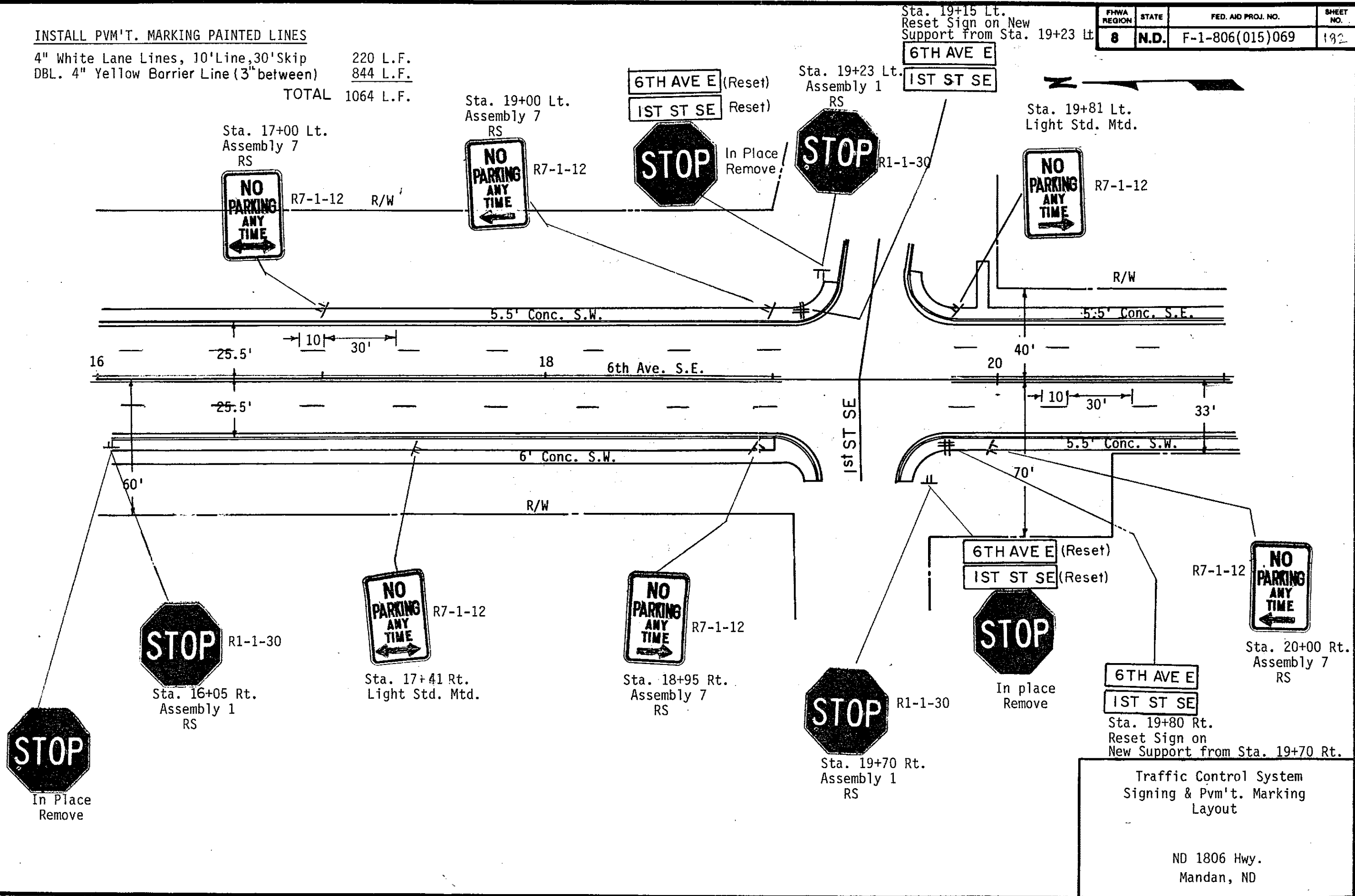
8" White Chan. Line	50 L.F.
Db'l. 4" Yellow Lines (3" Between)	100 L.F.
Total	150 L.F.

Traffic Control System
 Signing & Pvm't Marking Layout
 Frontier Service Road & ND 1806 Hwy.
 Mandan, ND

INSTALL PVM'T. MARKING PAINTED LINES

4" White Lane Lines, 10' Line, 30' Skip 220 L.F.
 DBL. 4" Yellow Barrier Line (3" between) 844 L.F.
 TOTAL 1064 L.F.

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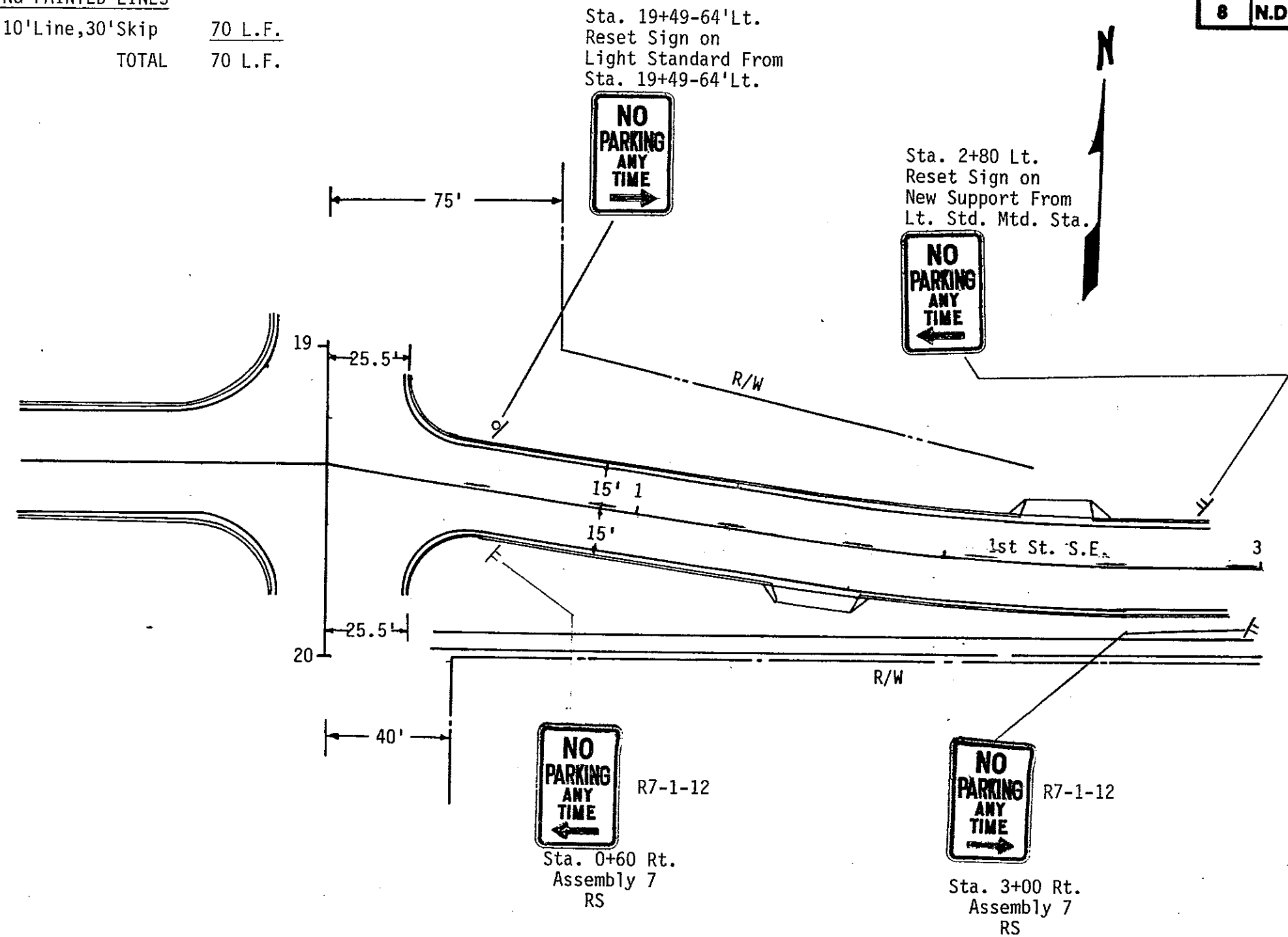
Traffic Control System
 Signing & Pvm't. Marking
 Layout

ND 1806 Hwy.
 Mandan, ND

INSTALL PAVEMENT MARKING PAINTED LINES

4" Yellow Lane Lines, 10'Line,30'Skip 70 L.F.
 TOTAL 70 L.F.

FHWA REGION	STATE	FED. AID PROJ. NO.	SHEET NO.
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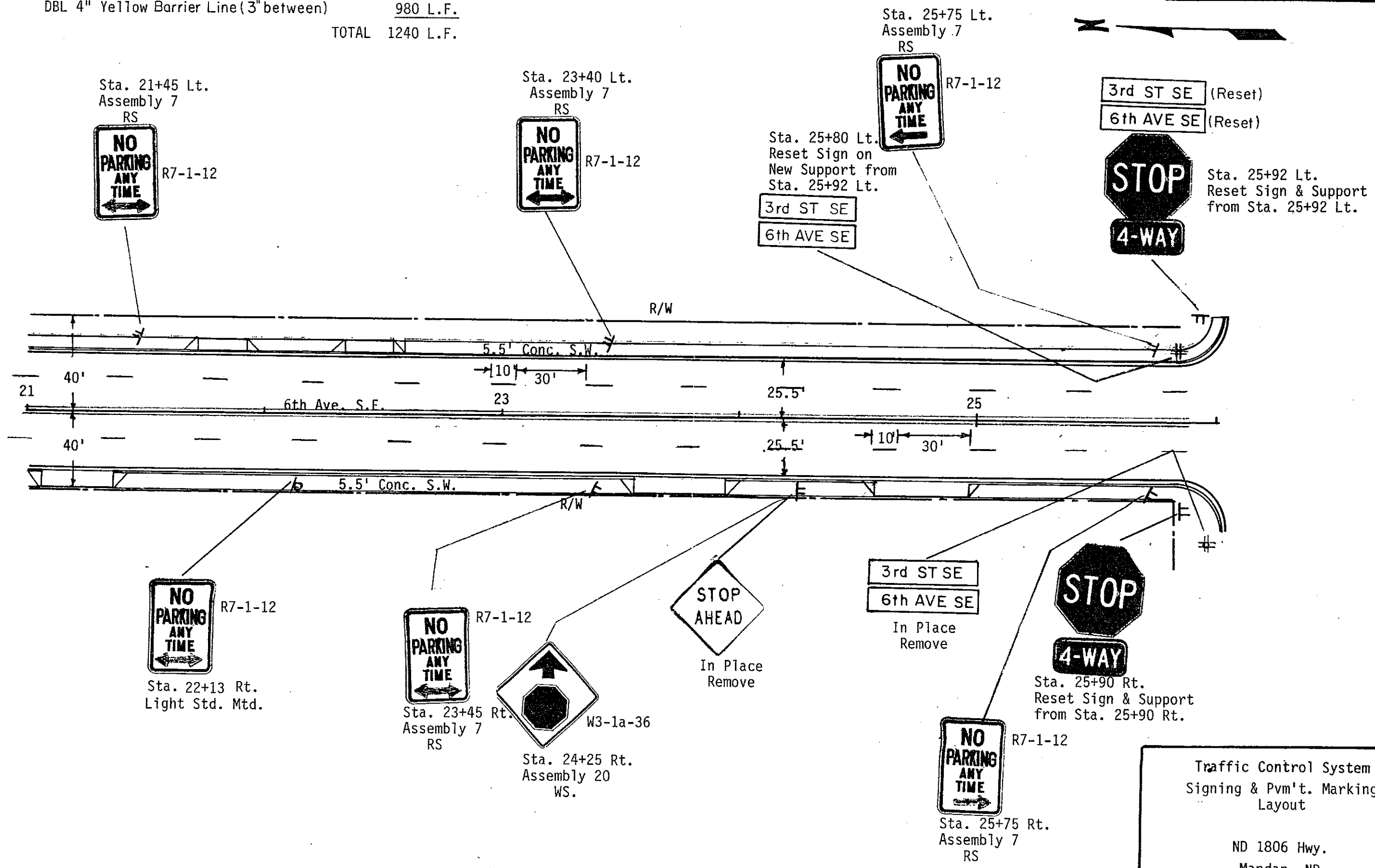
Traffic Control System
 Signing & Pvm't Marking
 Layout

1st Street S. East
 Mandan, ND

INSTALL PVM'T. MARKING PAINTED LINES

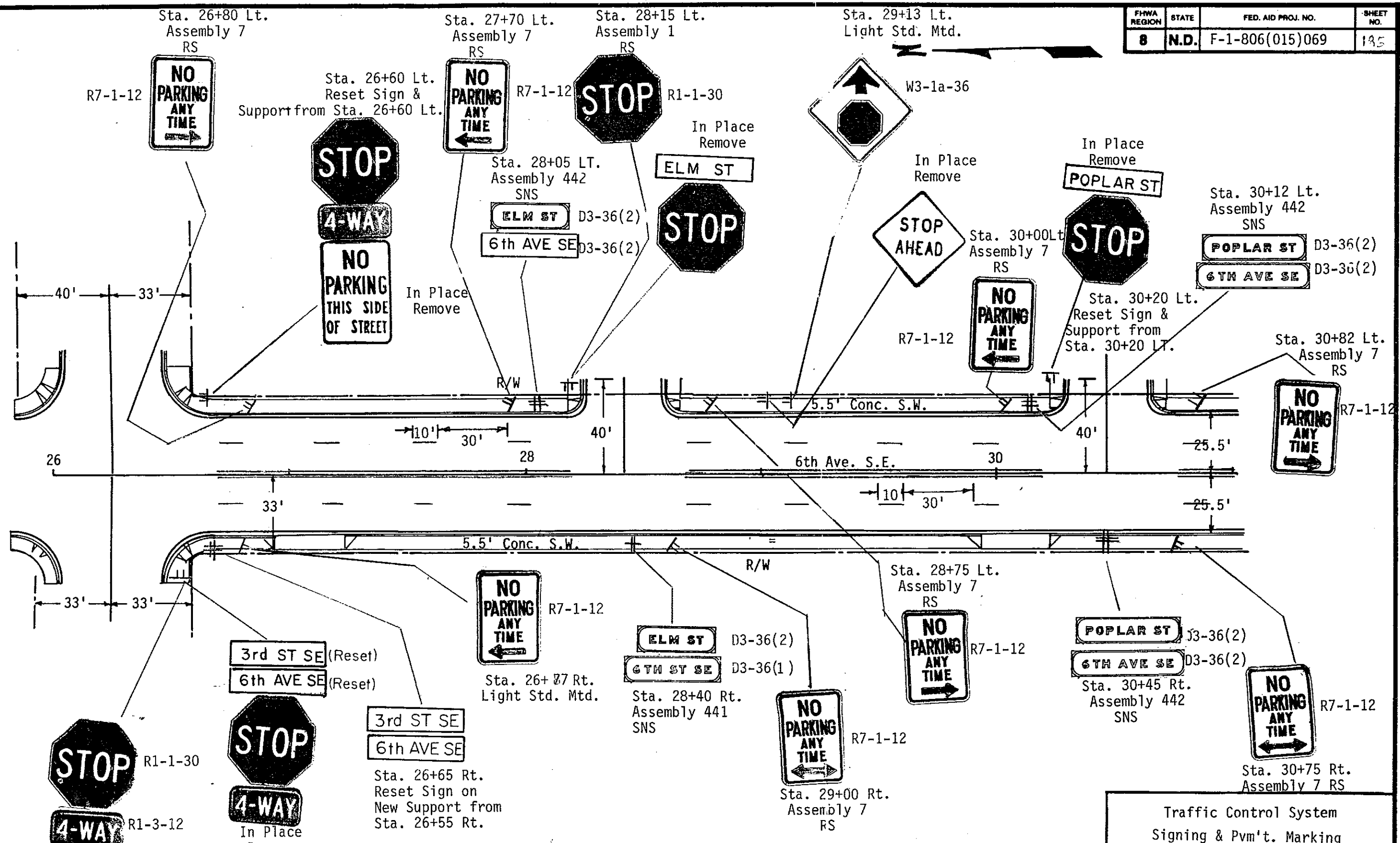
4" White Lane Lines, 10' Line, 30' Skip 260 L.F.
 DBL 4" Yellow Barrier Line (3" between) 980 L.F.
 TOTAL 1240 L.F.

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Traffic Control System
 Signing & Pvm't. Marking
 Layout

ND 1806 Hwy.
 Mandan, ND



INSTALL PVM'T. MARKING-PAINTED LINES

4" White Lane Lines, 10 Line, 30' Skip	180 L.F.
DBL. 4" Yellow Barrier Line (3" between)	650 L.F.
TOTAL	830 L.F.

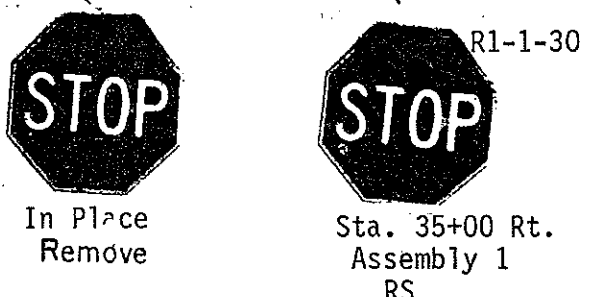
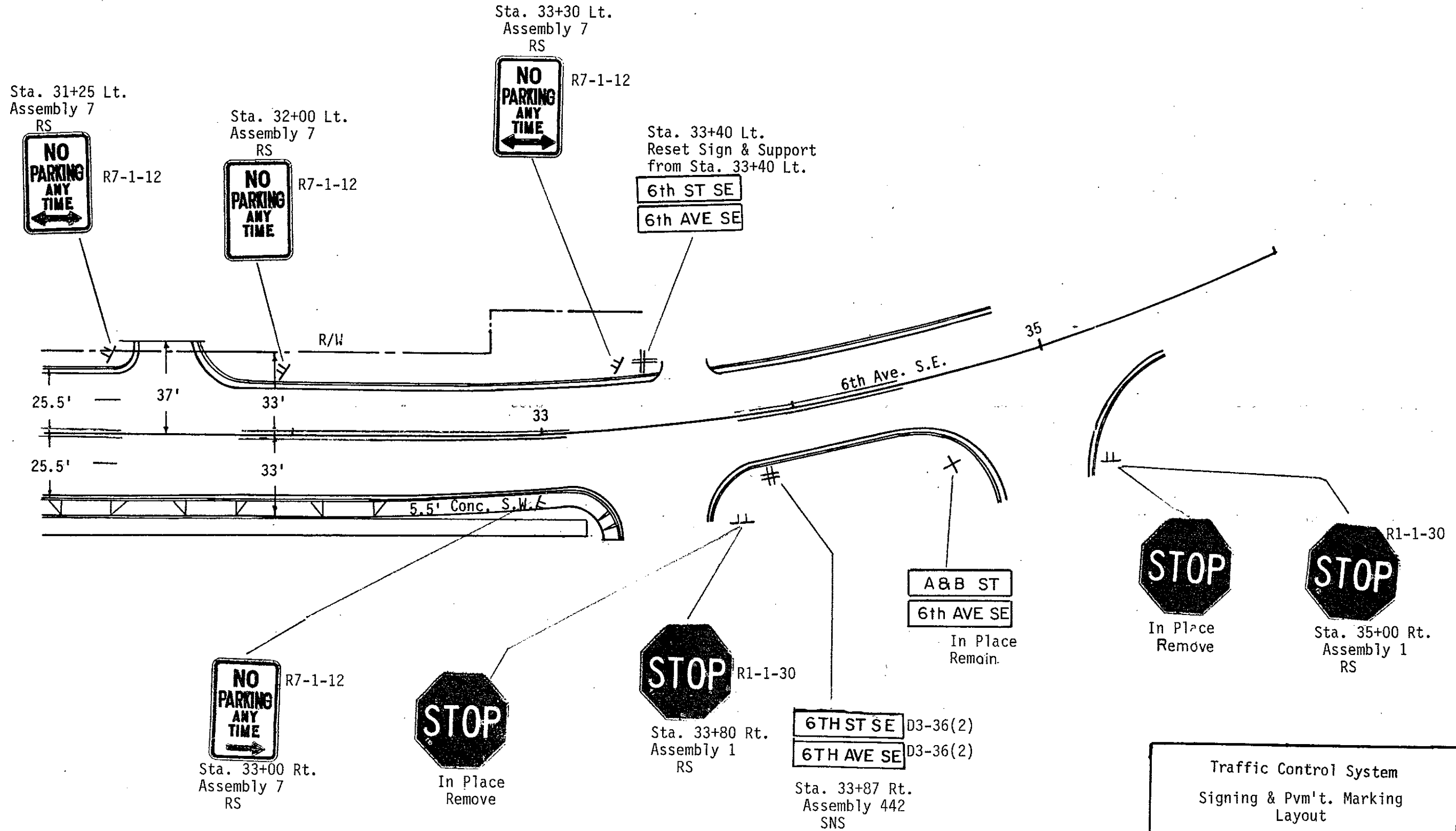
Traffic Control System
 Signing & Pvm't. Marking
 Layout

ND 1806 Hwy.
 Mandan, ND

INSTALL PVM'T. MARKING PAINTED LINES

4" White Lane Lines, 10' Line, 30' Skip 20 L.F.
 DBL 4" Yellow Barrier Line (3" between) 450 L.F.
 TOTAL 470 L.F.

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Traffic Control System
 Signing & Pvm't. Marking
 Layout
 ND 1806 Hwy.
 Mandan, ND