

JOB #7

DESIGN DATA

Traffic	Average Daily		Est. 30th Max, Hr.
Current Traffic (1984)	2700 Pass.	300 Trucks	3000 Total 300
Traffic Forecast (2004)	5450 Pass.	450 Trucks	5900 Total 590
Design Speed	30 MPH		Sta. 263 to 266 20 MPH
Traffic Classification "M"			
Minimum Sight Distance (Stopping)	250'		

As Built
2-11-88

**NORTH DAKOTA
STATE HIGHWAY DEPARTMENT**

**MORTON COUNTY
M-1-806(12)071**

**GRADE, SURFING, STORM SEWER
& INCIDENTALS**

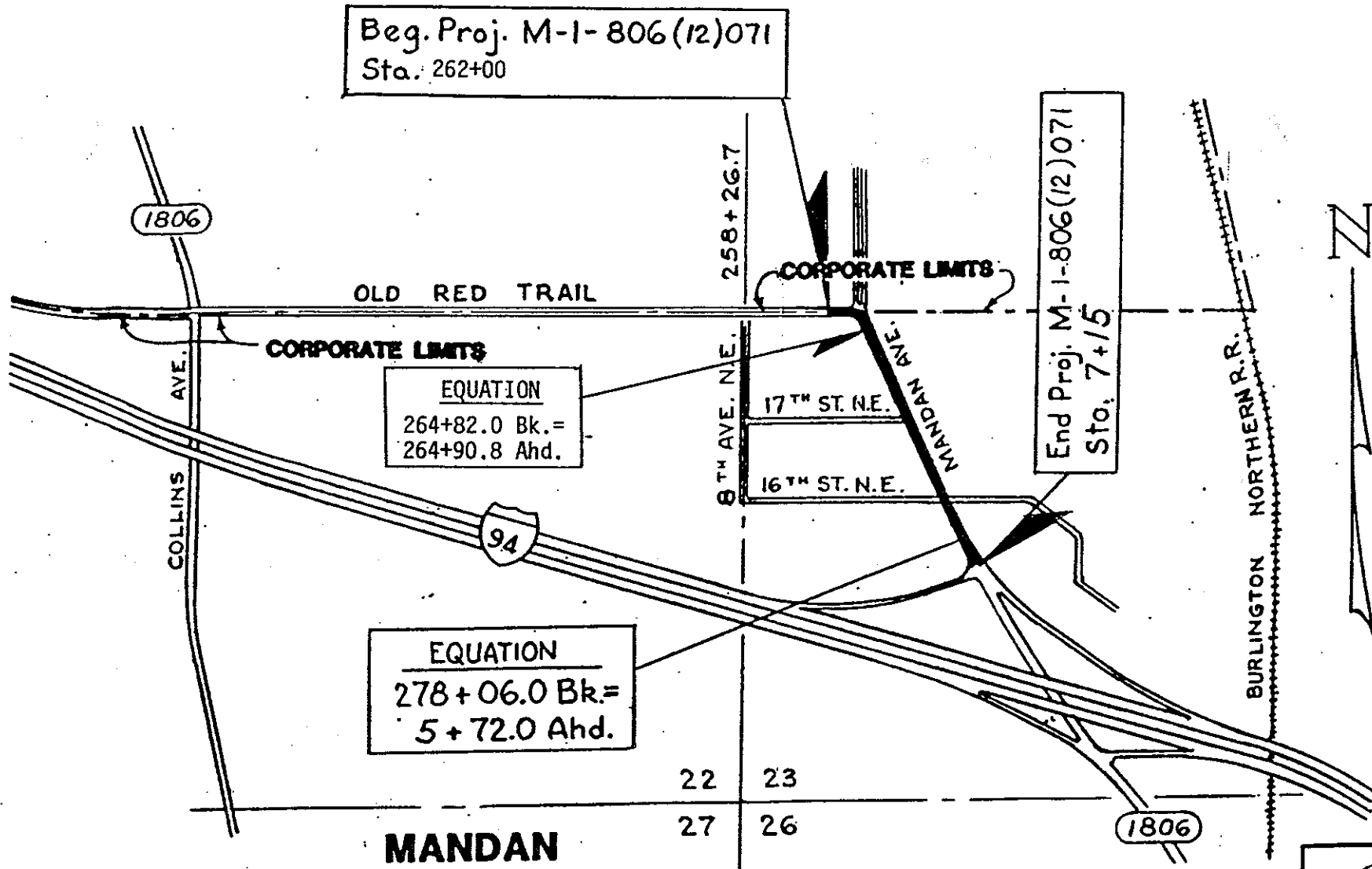
FHWA REGION	STATE	PROJECT	SHEET NO.
8	N.D.	M-1-806(12)071	1

GOVERNING SPECIFICATIONS:

Standard Specifications adopted by the North Dakota State Highway Department, October, 1976 and approved by the Federal Highway Administration on December 17, 1976 and Supplemental Specifications thereto adopted July 1, 1983 and approved by the Federal Highway Administration and other Contract Provisions submitted herewith.

LENGTH OF PROJECT

Project	Miles-Gross	Miles-Net
M-1-806(12)071	0.329	0.329



As Built Plans

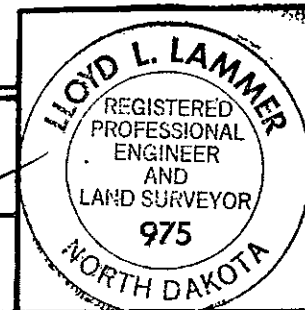
MANDAN

Twp. 138 N.
Rge. 81 W.

Asst.

APPROVED DATE 8/31/84

[Signature]
CHIEF ENGINEER
NORTH DAKOTA
STATE HIGHWAY DEPARTMENT



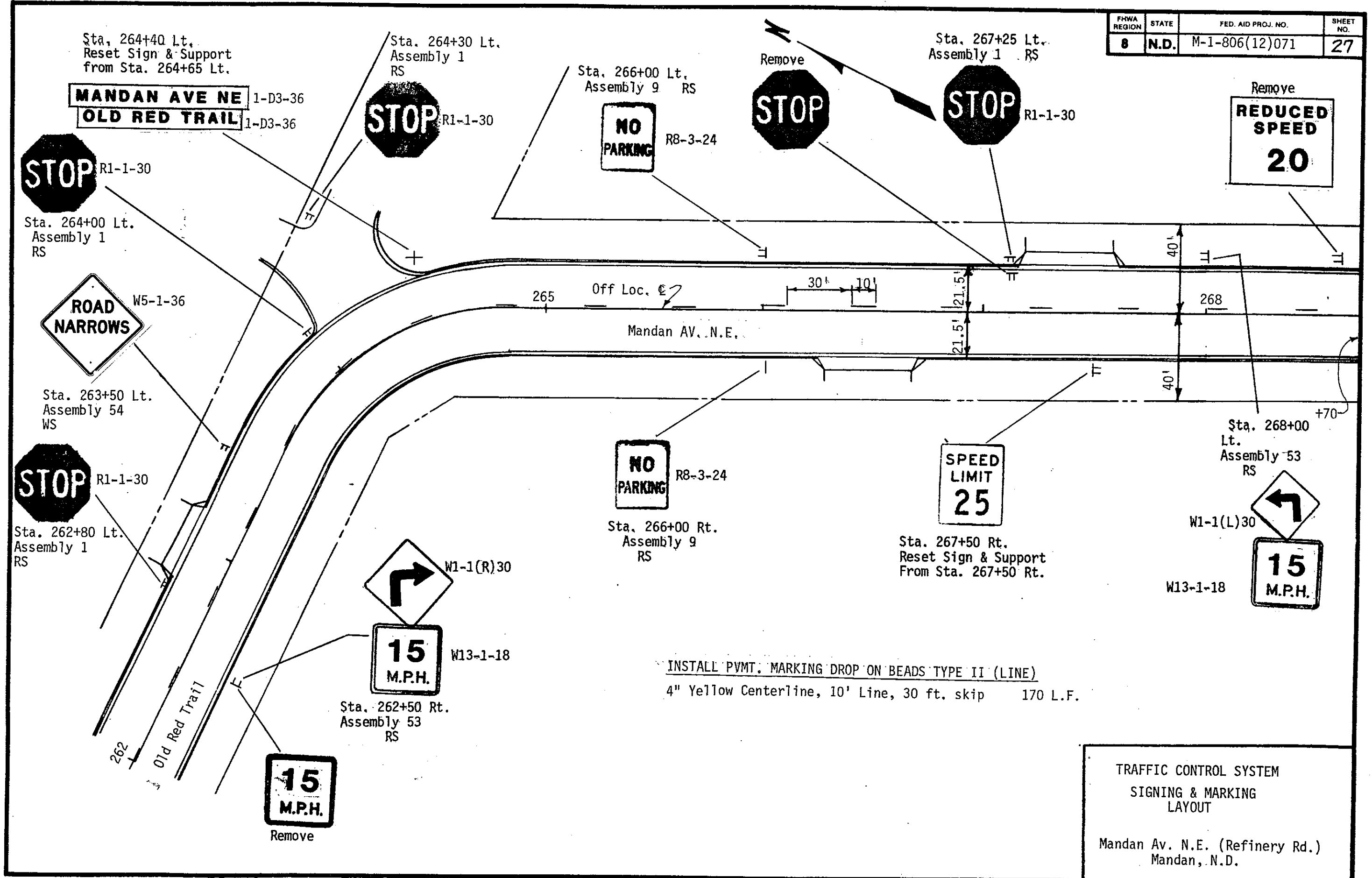
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ENGINEER

DATE

FHWA REGION	STATE	FED. AID PROJ. NO.	SHEET NO.
8	N.D.	M-1-806(12)071	27



INSTALL PVMT. MARKING DROP ON BEADS TYPE II (LINE)
 4" Yellow Centerline, 10' Line, 30 ft. skip 170 L.F.

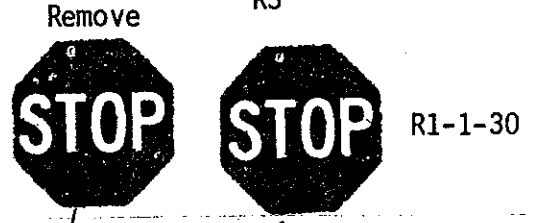
TRAFFIC CONTROL SYSTEM
 SIGNING & MARKING
 LAYOUT
 Mandan Av. N.E. (Refinery Rd.)
 Mandan, N.D.

FHWA REGION	STATE	FED. AID PROJ. NO.	SHEET NO.
8	N.D.	M-1-806(12)071	28

Sta. 269+00 Lt.
Assembly 9
RS



Sta. 269+30' Lt.
Assembly 1
RS



Sta. 271+15 Lt.
Reset Sign & Support from
Sta. 271+15 Lt.



Sta. 272+00 Lt.
Assembly 9 RS



270

Off Loc. & 7

30' 10'

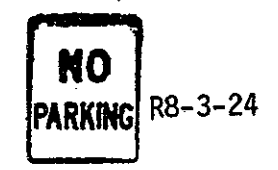
21.5' 21.5'

40' 40'

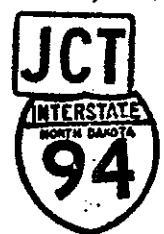
274

MANDAN AV.

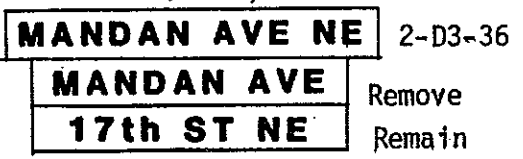
17th St. N.E.



Sta. 269+00 Rt.
Assembly 9
RS



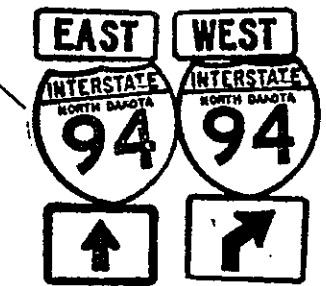
Sta. 270+45 Rt.
Assembly No. 391
Remove Support & Reset
Sign Panels from
Sta. 270+45-18' Rt.



Sta. 270+65 Rt.
Reset Sign Panels
& Support



In Place
To Remain



Sta. 273+38 Rt.
Assembly No. 387
Remove Support & Reset
Sign Panels from
Sta. 273+38-19' Rt.

INSTALL PVM/T MARKING DROP-ON BEADS TYPE II (Line)
4" Yellow Center Line, 10" Line, 30 ft. skip 120 L.F.

TRAFFIC CONTROL SYSTEM
SIGNING & MARKING
LAYOUT
MANDAN AV. N.E. (Refinery Rd.)
Mandan, N.D.

FHWA REGION	STATE	FED. AID PROJ. NO.	SHEET NO.
8	N.D.	M-1-806(12)071	29

Sta. 275+75 Lt.
Reset Sign & Support from
Sta. 275+75 Lt.

Sta. 276+30 Lt.
Reset Sign & Support
from Sta. 276+30 Lt.

Sta. 277+00 Lt.
Assembly No. 212

Sta. 278+00 Lt.
Assembly No. 9
RS

MANDAN AVE NE
16th ST NE



MANDAN UNION CEMETERY
←

MANDAN UNION CEMETERY
→

MANDAN UNION CEMETERY
←

MANDAN UNION CEMETERY
→

SPEED LIMIT
25

Sta. 275+00 Lt.
Assembly No. 9
RS

NO PARKING

R8-3-24

SIGN NO. 1

Remove
STATE MTCE ENDS



NO PARKING

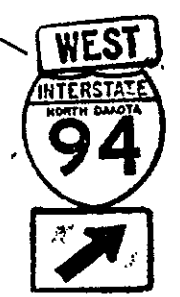
R8-3-24

Sta. 274+00 Rt.
Assembly No. 9
RS

← BISMARCK 5
DICKINSON 92 →

Sta. 276+30 Rt.
Reset Sign & Support
From Sta. 276+30 Rt.

Sta. 278+06.9 Bk. =
5+72.0 AHD.



Sta. 6+00 Rt.
Assembly No. 379
Remove Support & Reset
Sign Panels from
Sta. 277+97-21' Rt.



In Place
To Remain

INSTALL PVM-T MARKING DROP ON BEADS TYPE II (Line)
4" Yellow Center Line, 10" Line, 30" Skip 120 L.F.

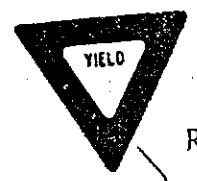
MANDAN AVE NE 2-D3-36
MANDAN AVE Remove
16th ST NE Remain

Sta. 275+18

TRAFFIC CONTROL SYSTEM
SIGNING & MARKING
LAYOUT
MANDAN AV. N.E. (Refinery Rd.)
MANDAN, N.D.

FHWA REGION	STATE	FED. AID PROJ. NO.	SHEET NO.
8	N.D.	M-1-806(12)071	30

Sta. 7+86-53' Lt.
 Assembly No. 4
 RS



R1-2-60



Remove



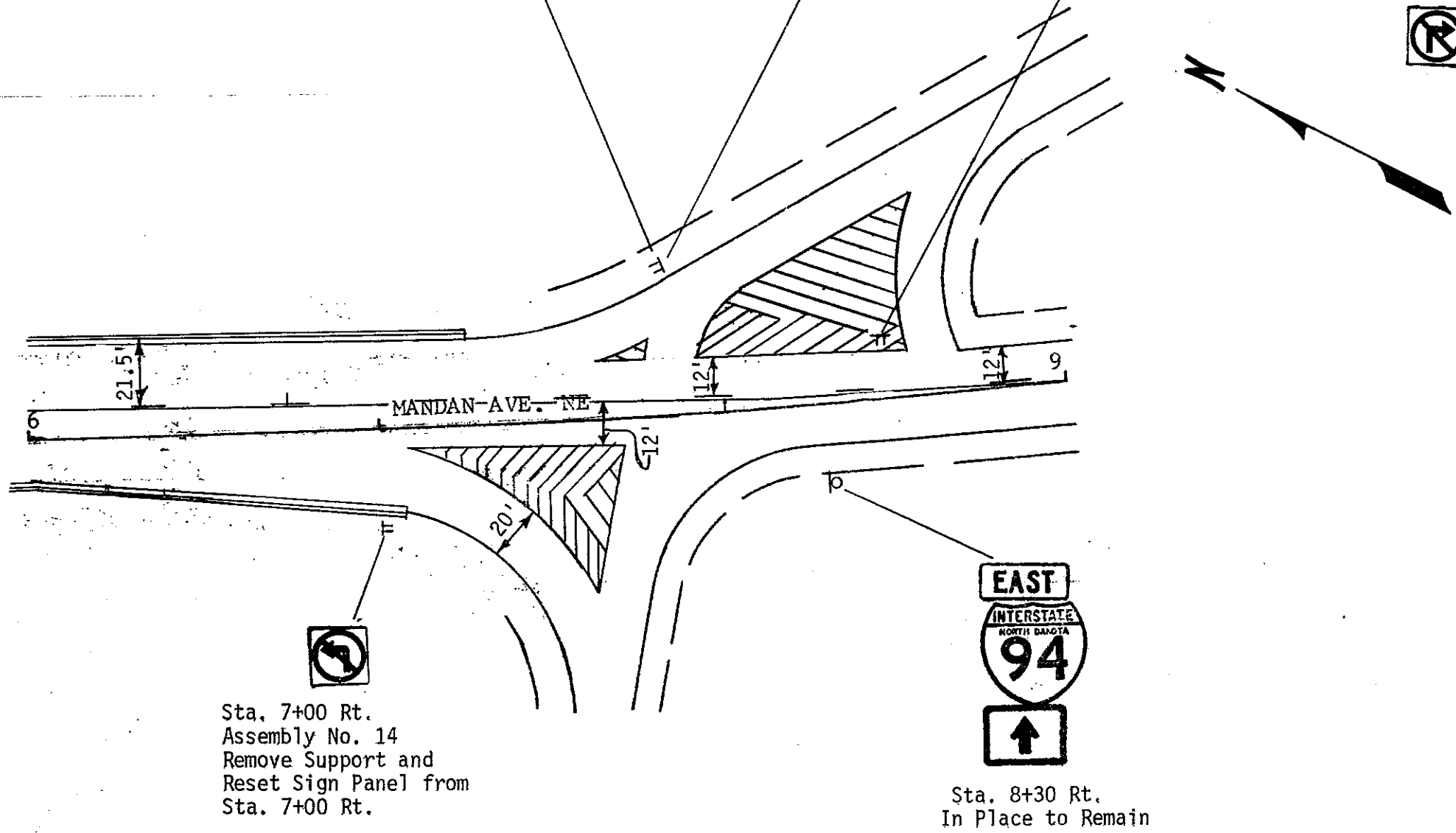
In Place To Remain

INSTALL PVM'T. MARKING DROP ON BEADS TYPE II LINE

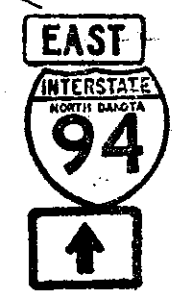
4" Yellow Center Line, 10' Line, 30' Skip
 8" White Lines-5' Ctrs. @ 45°, cross hatch lines

70 L.F.
~~2060~~ L.F.
 4,284

Sta. 9+85 Lt.
 In Place to Remain



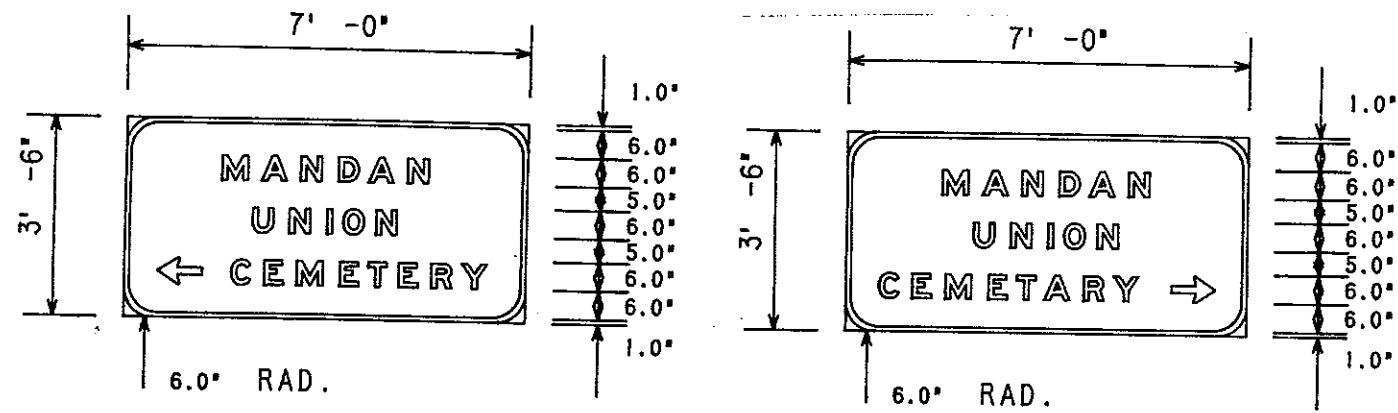
Sta. 7+00 Rt.
 Assembly No. 14
 Remove Support and
 Reset Sign Panel from
 Sta. 7+00 Rt.



Sta. 8+30 Rt.
 In Place to Remain

TRAFFIC CONTROL SYSTEM
 SIGNING,
 PAVEMENT MARKING LAYOUT
 Mandan Ave. NE (Refinery Rd.)
 Mandan, ND

FHWA REGION	STATE	FED. AID PROJ. NO.	SHEET NO.
8	N.D.	M-1-806(12)071	31

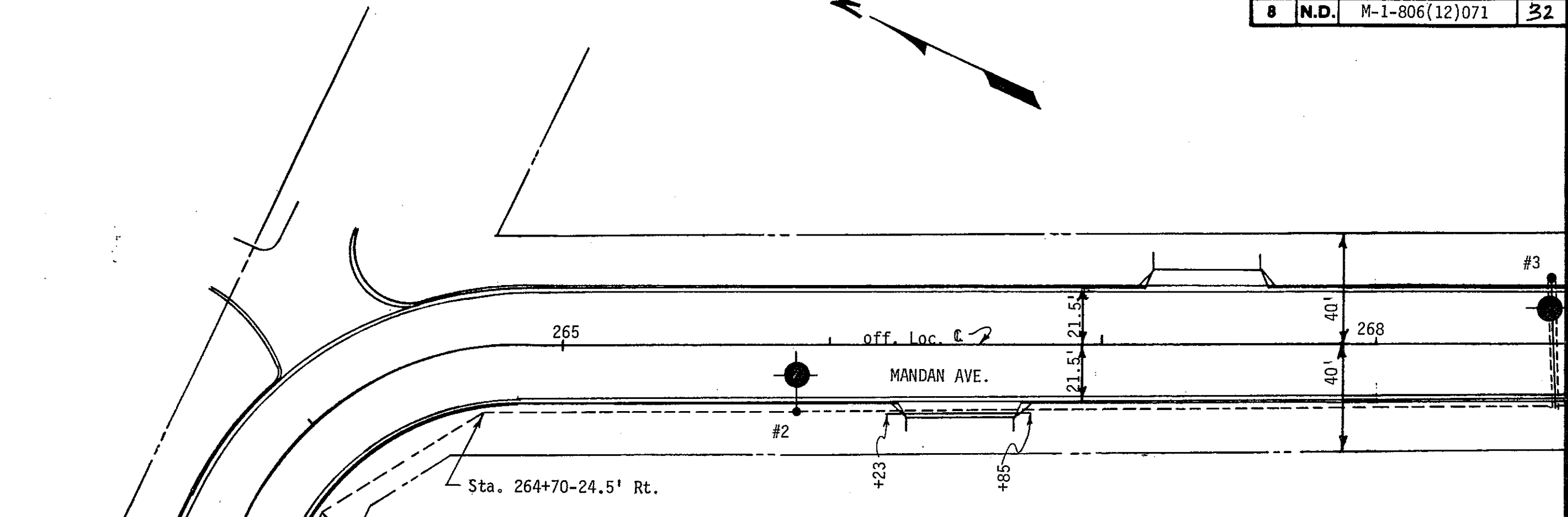


SIGN NO. 1
 Sta. 277+00 Lt.
 Area: 49.00 Sq. Ft.

TRAFFIC CONTROL SYSTEM

SIGN LAYOUT SHEET

Mandan Ave. N.E. (Refinery Road)
 Mandan, ND



Sta. 263+70-24.5' Rt. INSTALL 2" dia. Rigid Conduit

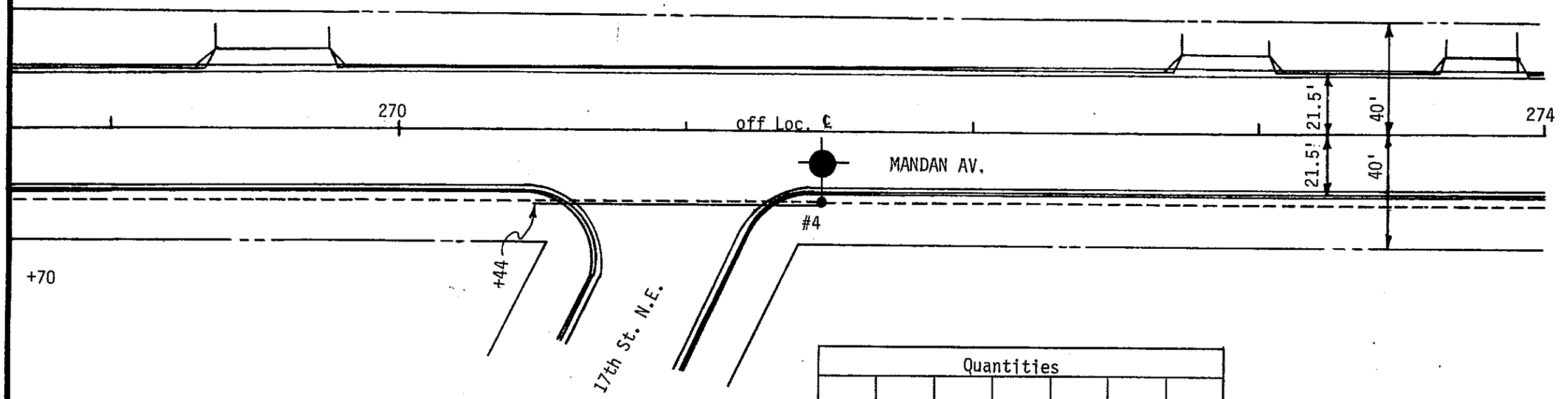
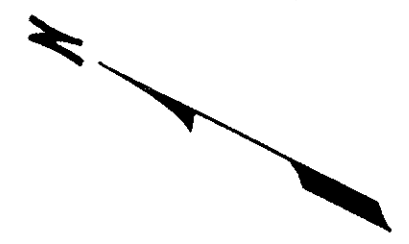
Sta. 266+23-24.5' Rt. to 266+85-24.5' Rt. 52 LF
 Sta. 268+67-22.5' Rt. to 268+67-23.5' 46 LF

NO.	STATION	OFFSET	WATTAGE	CIRCUIT	IES TYPE
1	263+30	24.5' Rt.	250	A-1	M.S. II
2	265+87	24.5' Lt.	250	A-1	M.S. II
3	268+67	24.5' Lt.	250	A-1	M.S. II

Quantities						
Cable Trench - Type I	2" dia. Rigid Conduit	Underground Conductor No. 4 - Type RHW	Underground Conductor No. 6 - Type THW	Lt. Std. 6 ft. M.A. 40 ft. Mt. Ht.	Sodium Vapor Luminaire 250 watt	Concrete Foundation Highway Lighting
LF.	LF	LF	LF	EA	EA	EA
475	108	1336	668	3	3	3

TRAFFIC CONTROL SYSTEM
 LIGHTING SYSTEM LAYOUT
 MANDAN AV. N.E. (Refinery Rd.)
 Mandan N.D.

INSTALL 2" dia. Rigid Conduit
 Sta. 270+AA-24.5' Rt. to 271+66-24.5' Rt. 122 L.F.



NO.	STATION	OFFSET	WATTAGE	CIRCUIT	IES TYPE
4	271+47	4.5' Rt.	250	A-1	M.S. II

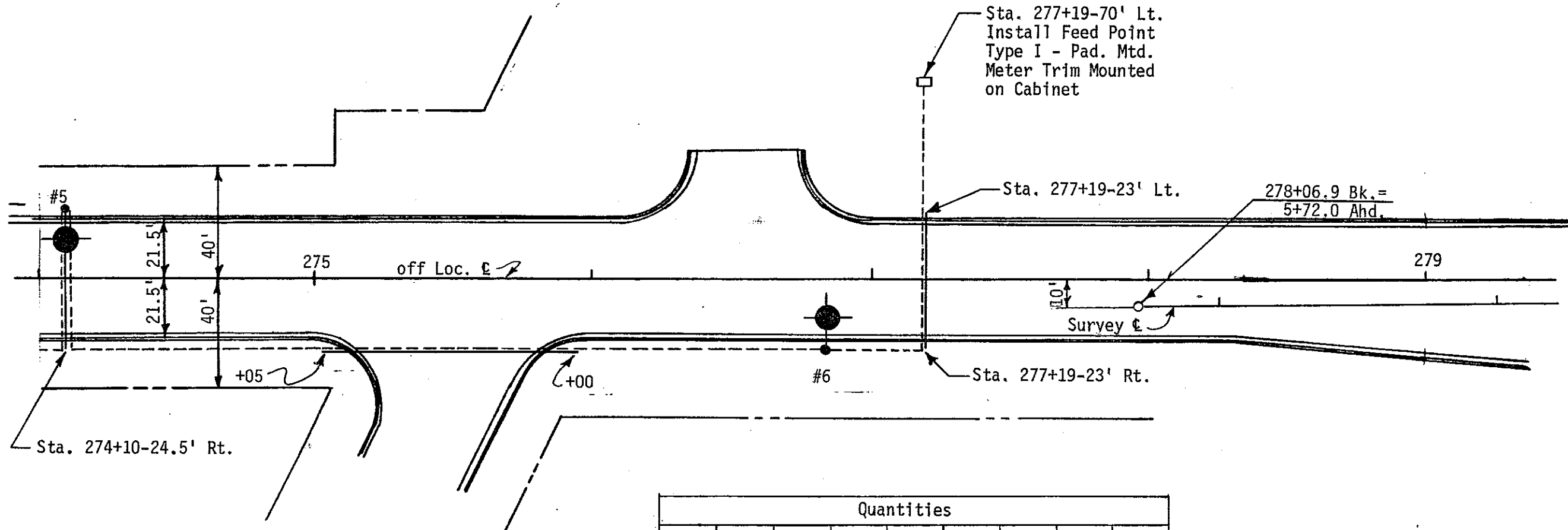
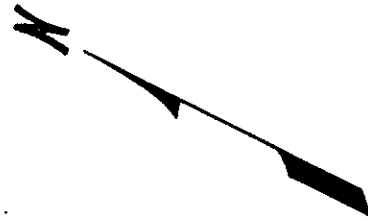
Quantities						
Cable Trench - Type I	Concrete Foundation-Highway Lighting	2" dia. Rigid Conduit	Underground Conductor No. 4 - Type RHW	Underground Conductor No. 6 - Type THW	Lt. Std. 6 ft. Mast Arm 40 ft. Mt. Ht.	Sodium Vapor Luminaire - 250 watt
LF	EA	LF	LF	LF	EA	EA
306	1	122	884	442	1	1

TRAFFIC CONTROL SYSTEM
 LIGHTING SYSTEM LAYOUT
 Mandan Av. N.E. (Refinery Rd.)
 Mandan, N.D.

INSTALL 2" dia. Rigid Conduit

Sta. 275+05-24.5' Rt. to 276+00-24.5' Rt. 95 LF
 Sta. 277+23' Lt. to 277+19-23' Rt. 46 LF
 Sta. 274+10-23.5' Lt. to 274+10-22.5' Rt. 46 LF

FHWA REGION	STATE	FED. AID PROJ. NO.	SHEET NO.
8	N.D.	M-1-806(12)071	34



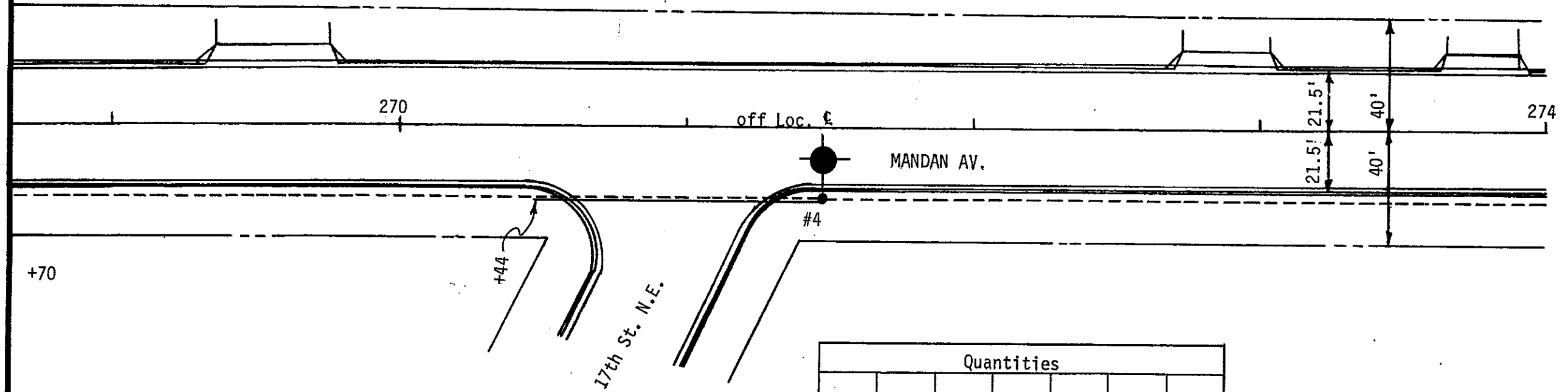
Quantities								
Cable Trench - Type I	2" dia. Rigid Conduit	Concrete Foundations - Highway Lighting	Underground Conductor No. 4 - Type RHW	Underground Conductor No. 6 - Type THW	Concrete Foundation - Feed Point - Type B	Feed Point Type I Pad Mtd.	Lt. Std. 6 ft. Mast Arm 40 ft. Mt. Ht.	Sodium Vapor Luminaire- 250 watt
LF	LF	EA	LF	LF	EA	EA	EA	EA
269	187	2	1092	546	1	1	2	2

NO.	STATION	OFFSET	WATTAGE	CIRCUIT	IES TYPE
5	-274+10	24.5' Lt.	250	A-1	M.S. II
6	276+85	24.5' Rt.	250	A-1	M.S. II

TRAFFIC CONTROL SYSTEM
 Lighting System Layout
 MANDAN AVE. N.E. (Refinery Rd.)
 Mandan, N.D.

INSTALL 2" dia. Rigid Conduit

Sta. 270+AA-24.5' Rt. to 271+66-24.5' Rt. 122 L.F.



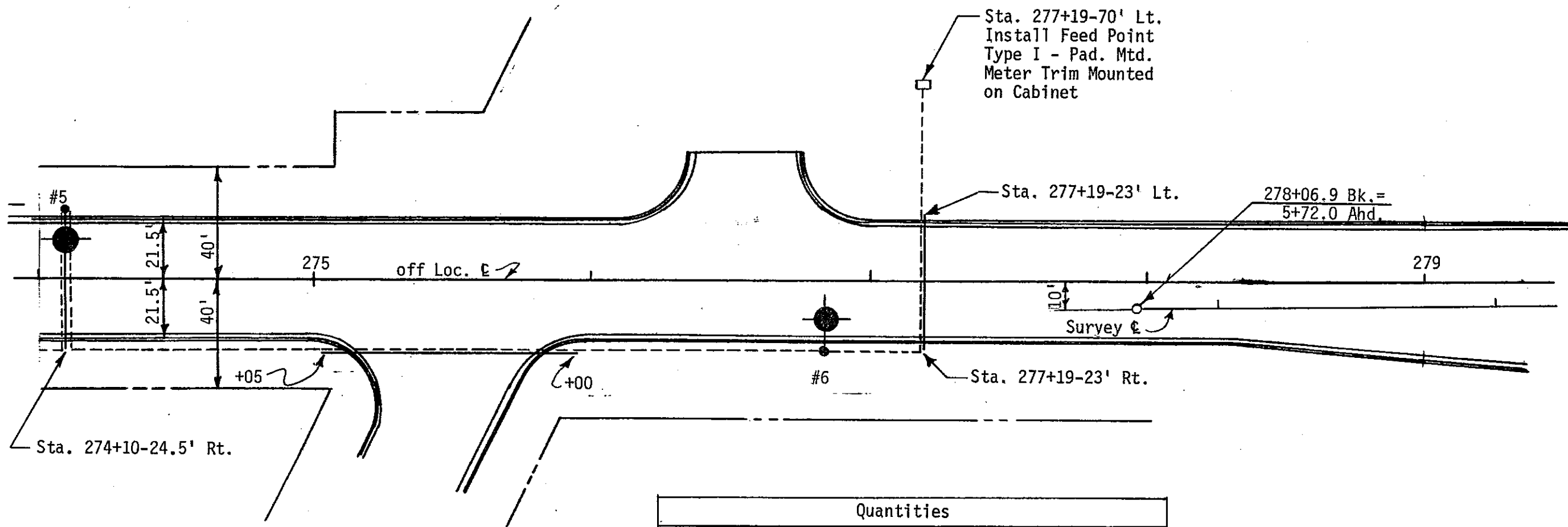
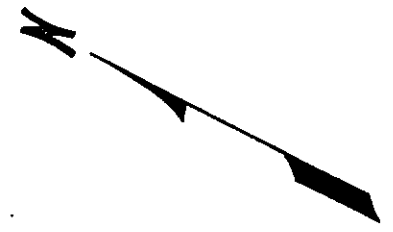
NO.	STATION	OFFSET	WATTAGE	CIRCUIT	IES TYPE
4	271+47	4.5' Rt.	250	A-1	M.S. II

Quantities						
Cable Trench - Type I	Concrete Foundation-Highway Lighting	2" dia. Rigid Conduit	Underground Conductor No. 4 - Type RHW	Underground Conductor No. 6 - Type THW	Lt. Std. 6 ft. Mast Arm 40 ft. Mt. Ht.	Sodium Vapor Luminaire - 250 watt
LF	EA	LF	LF	LF	EA	EA
306	1	122	884	442	1	1

TRAFFIC CONTROL SYSTEM
 LIGHTING SYSTEM LAYOUT
 Mandan Av. N.E. (Refinery Rd.)
 Mandan, N.D.

INSTALL 2" dia. Rigid Conduit

Sta. 275+05-24.5' Rt. to 276+00-24.5' Rt. 95 LF
 Sta. 277+23' Lt. to 277+19-23' Rt. 46 LF
 Sta. 274+10-23.5' Lt. to 274+10-22.5' Rt. 46 LF



NO.	STATION	OFFSET	WATTAGE	CIRCUIT	IES TYPE
5	-274+10	24.5' Lt.	250	A-1	M.S. II
6	276+85	24.5' Rt.	250	A-1	M.S. II

Quantities								
Cable Trench - Type I	2" dia. Rigid Conduit	Concrete Foundations - Highway Lighting	Underground Conductor No. 4 - Type RHW	Underground Conductor No. 6 - Type THW	Concrete Foundation - Feed Point - Type B	Feed Point Type I Pad Mtd.	Lt. Std. 6 ft. Mast Arm 40 ft. Mt. Ht.	Sodium Vapor Luminaire- 250 watt
LF	LF	EA	LF	LF	EA	EA	EA	EA
269	187	2	1092	546	1	1	2	2

TRAFFIC CONTROL SYSTEM
 Lighting System Layout
 MANDAN AVE. N.E. (Refinery Rd.)
 Mandan, N.D.