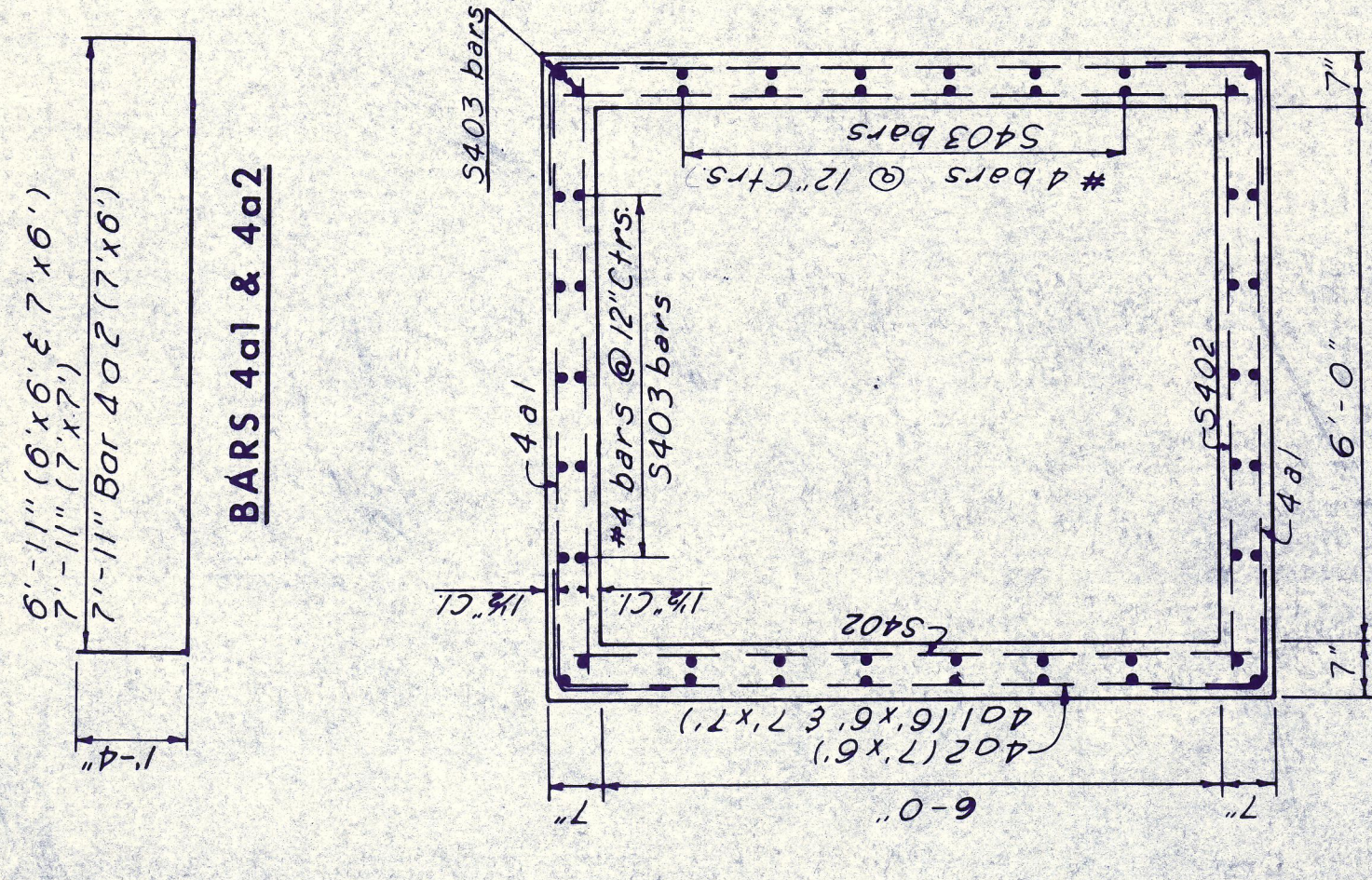


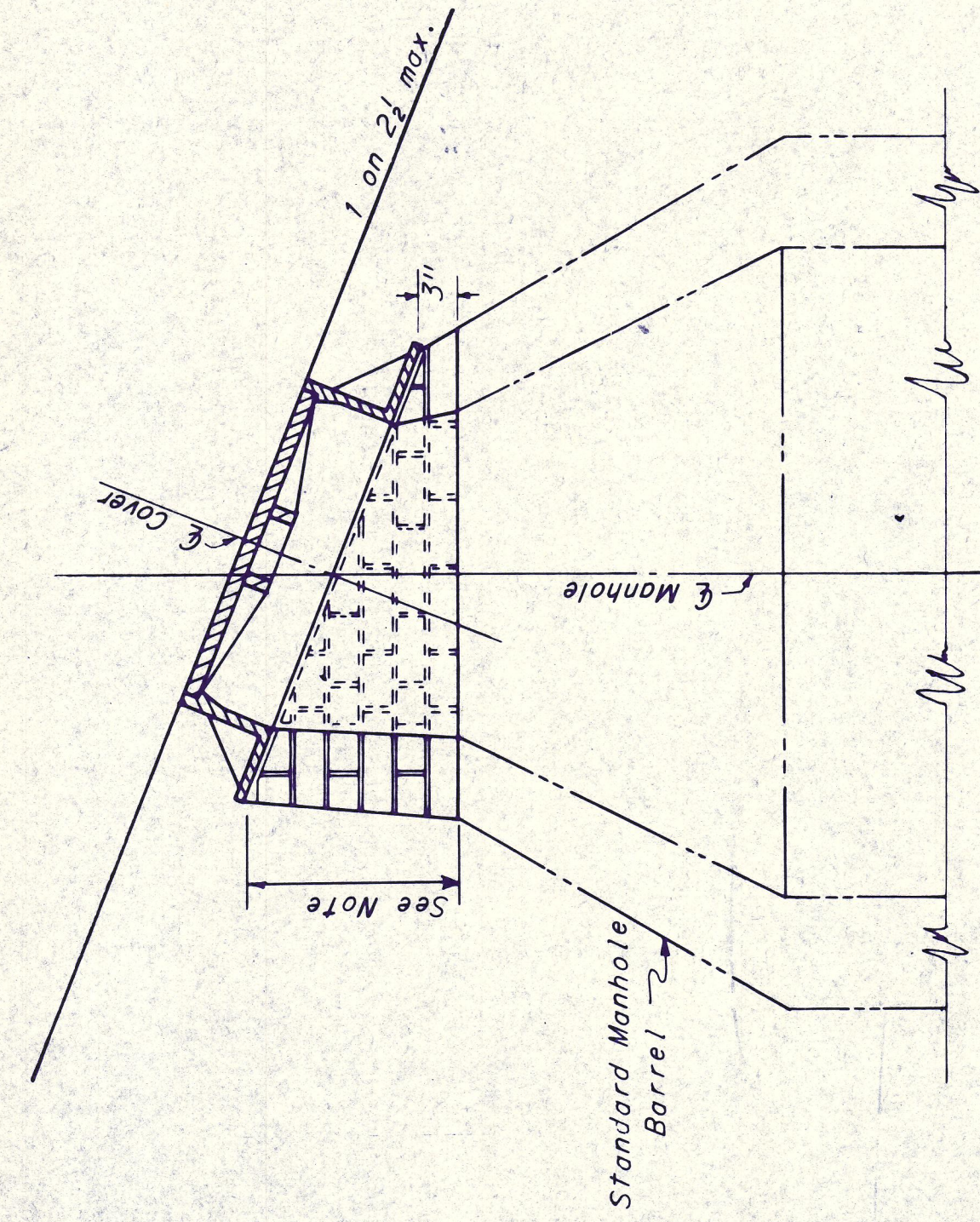
TOP SLAB PLAN

BOTTOM SLAB PLAN



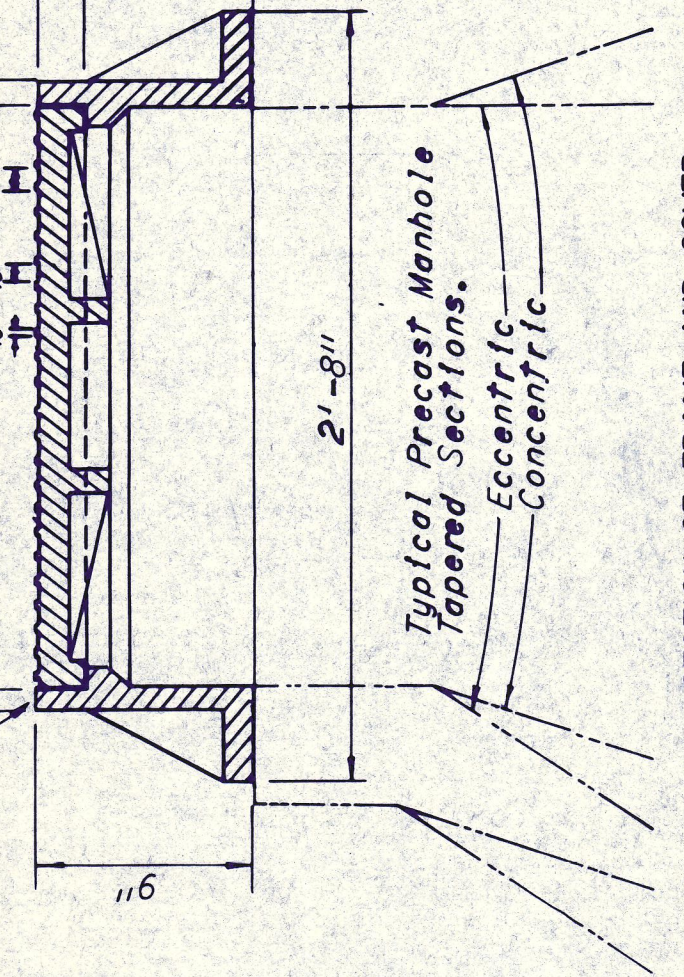
ELEVATION

HORIZONTAL SECTION THROUGH MANHOLE



MANHOLE MODIFICATION FOR EARTH SLOPES

PLAN

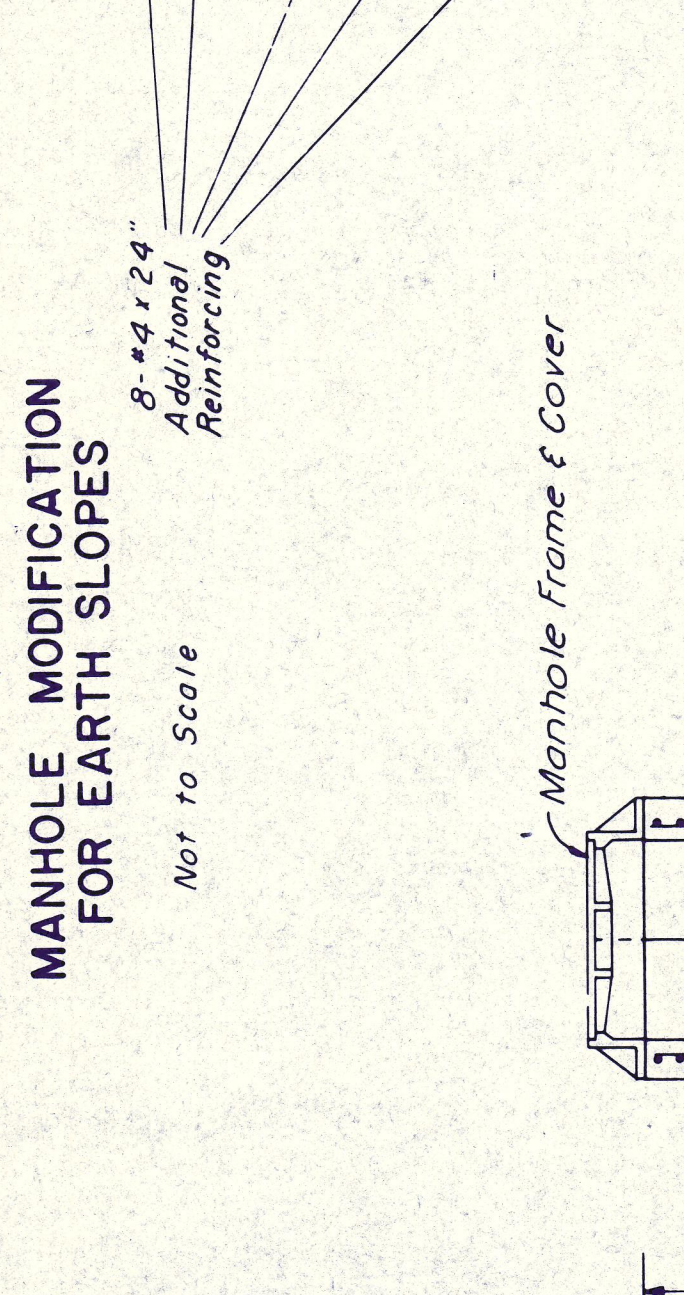


SECTION OF FRAME AND COVER

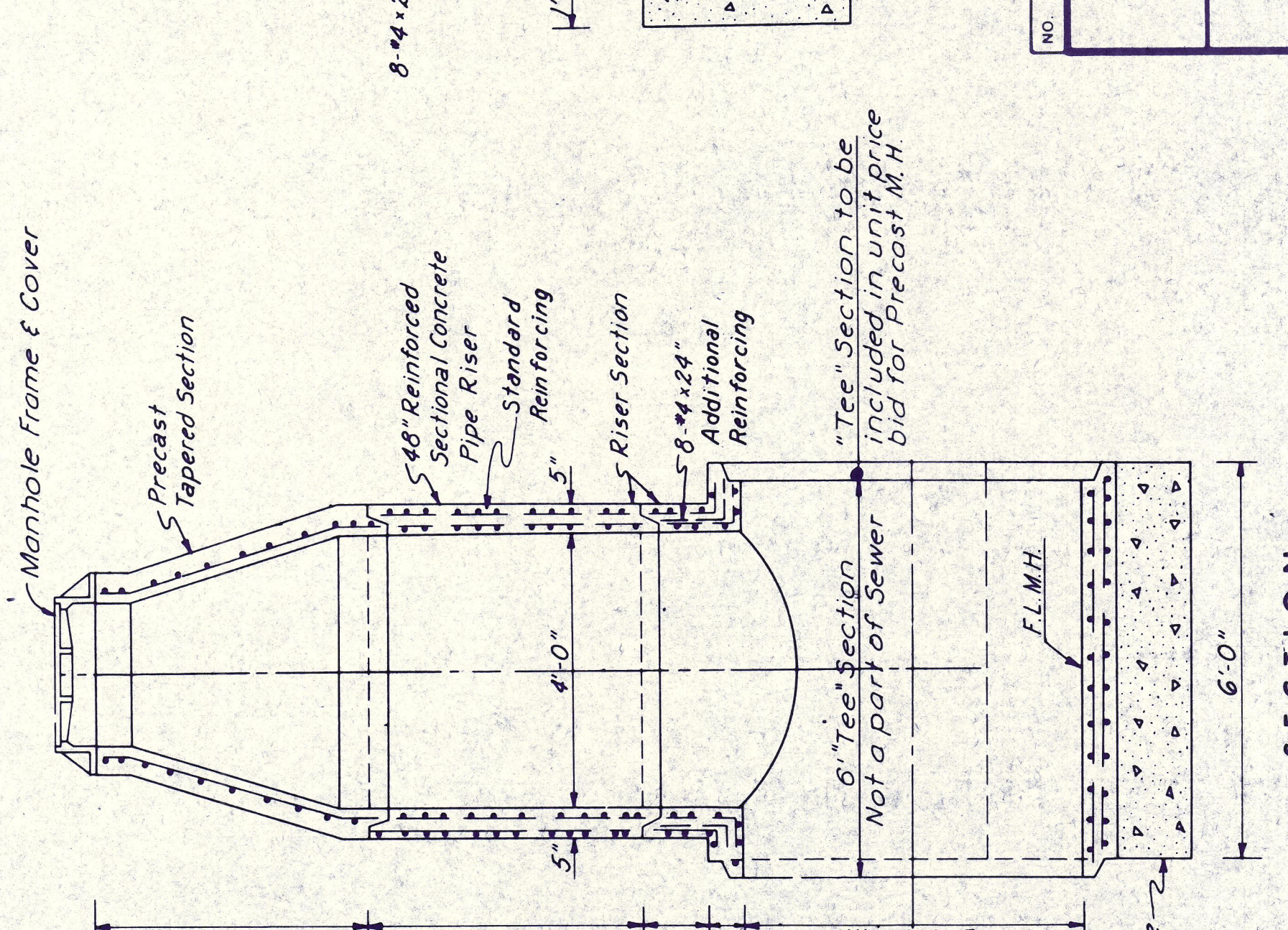
MANHOLE FRAME AND COVER

Note: For exact location of manhole cover with respect to roadway and median, see Standard Drawing No. 8.

Note: Manhole rings and covers shall be similar to the type shown and shall have a minimum total combined weight of 300 pounds. Stock types will be acceptable subject to approval by subject engineer. All shall conform to Article 471.2 of the Standard Specifications.



PLAN



SECTION

END VIEW

SPECIAL CONCRETE MANHOLE - QUANTITIES		STEEL - POUNDS	
CONCRETE - CU. YDS.	STEEL - POUNDS	CONCRETE - CU. YDS.	STEEL - POUNDS
6' x 6'	71 x 71	6' x 6'	71 x 71
Top Slab	1.20	1.57	172.7
Bottom Slab	1.28	1.65	177.5
Per Foot of Wall Height	0.57	0.66	74.6
			85.2

SPECIAL CONCRETE MANHOLE - SUMMARY OF QUANTITIES		BILL OF REINFORCING STEEL	
SIZE	MARK	LENGTH	MARK
#4	S401	6'-10"	#4 S401B
#4	S402	6'-10"	#4 S402A
#4	S403	10"	#4 S403B
#5	S501	6'-10"	#5 S501A
#5	S503	3'-8"	#5 S503B
#5	S503C	3'-8"	#5 S503C
BENT BARS		BENT BARS	
#4	4a1	9'-5"	#4 4a1
#4	4a2	10'-5"	#4 4a2

*Indicates bars @ opening in Top Slab

SPECIAL CONCRETE MANHOLE NOTES:

- 6' x 6' Manhole shown. Details for 7' x 7' & 7' x 6' Manholes similar except for overall dimensions.
- Wall height = 10' - 8"
- Letters A & B on steel calloffs denote 8'-2" and 7'-2" respectively.
- Steps for Manholes shall be placed at intervals of 16 inches, to Boss and Hays Foundry, Inc., Standard Manhole Step Pattern No. 30, or equal.
- Cut and bend steel to clear pipes.
- Diagonal steel is to be added around large pipe openings as follows:
 48" Pipe - 4 # 6 x 8'-4" = 50.1 Lbs.
 54" Pipe - 4 # 6 x 9'-0" = 54.1 Lbs.
 60" Pipe - 4 # 6 x 9'-8" = 58.1 Lbs.

All Precast Manholes shall conform to ASTM Standard C409-50.

NO.	REVISION	BY	DATE

TEXAS TURNPIKE AUTHORITY
 DALLAS NORTH TOLLWAY

MANHOLE DETAILS

HNTB
 HOWARD NEEDLES TAMMEN & BERENSON
 DRAWN: P.M.Z. DATE: 3-14-83 DESIGNED: DATE: SCALE: 1/8"=1'-0"
 CHECKED: S.M.V. DATE: 3-23-83

SECTION VII
 STANDARD DRAWING NO. 9

CONTRACT NO. DNT-115