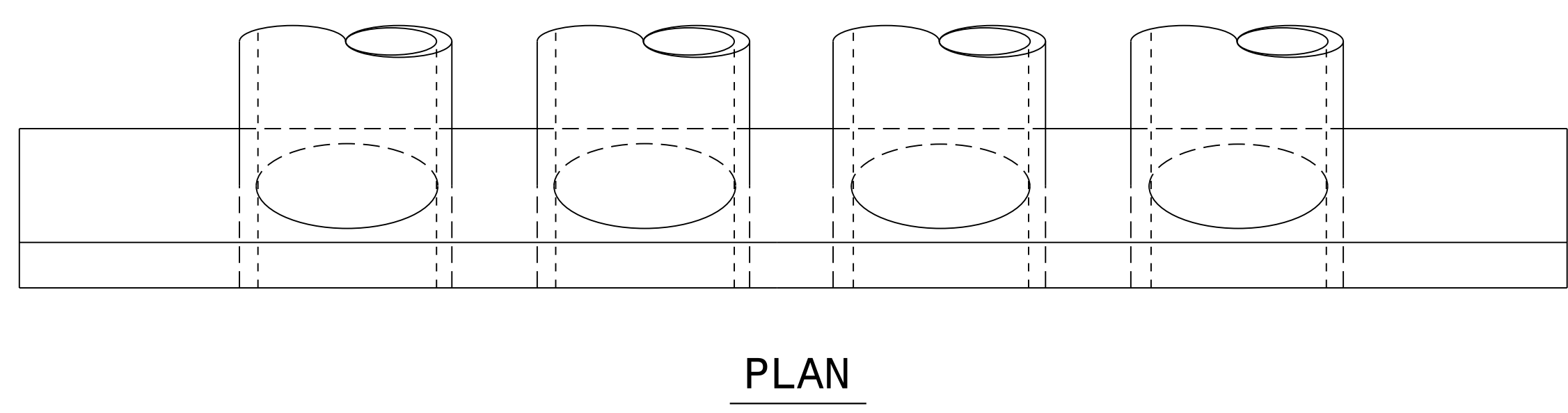


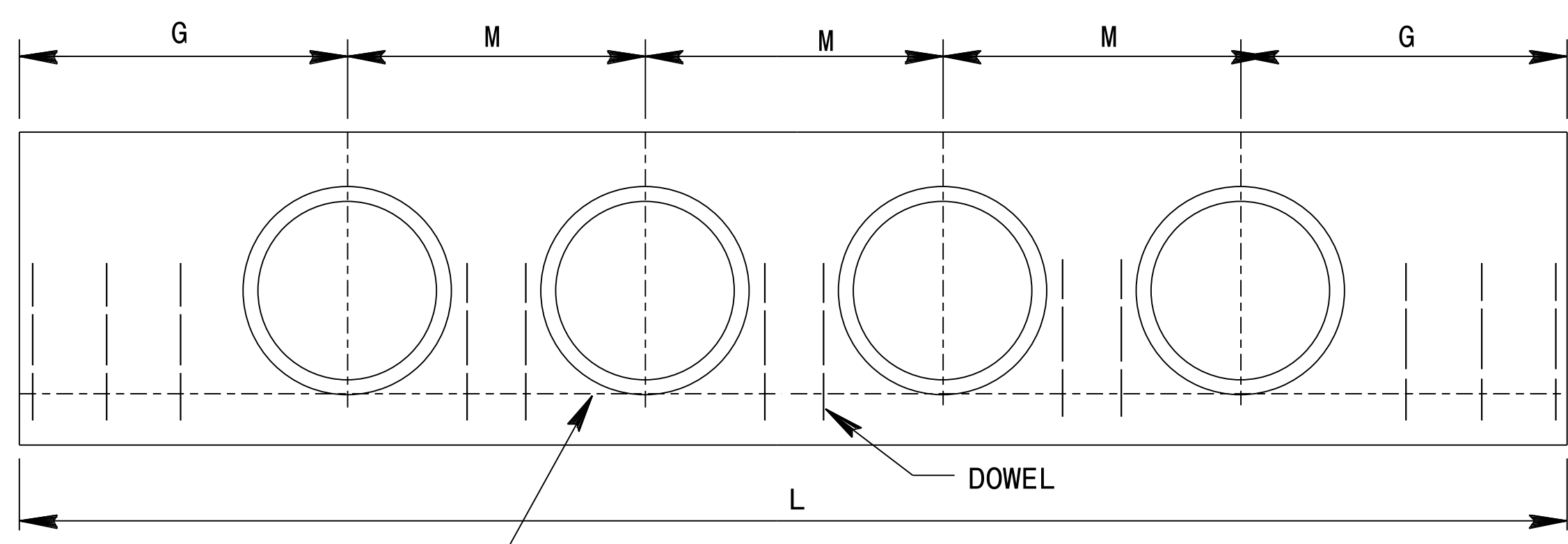
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
**CONCRETE ENDWALL FOR TRIPLE AND
 QUADRUPLE PIPE CULVERTS**
 15" THRU 48" PIPE - 90° SKEW

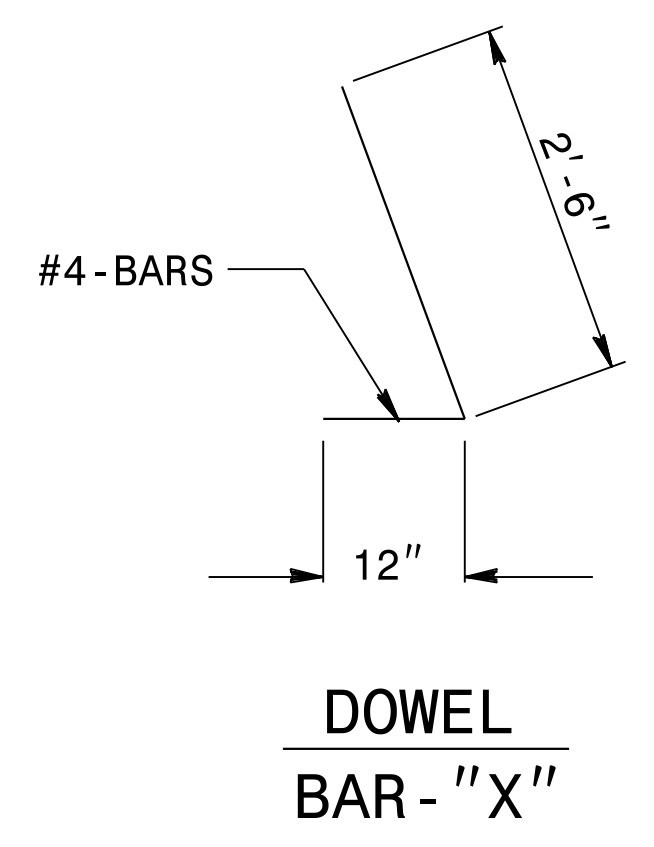
SHEET 1 OF 3
838D01



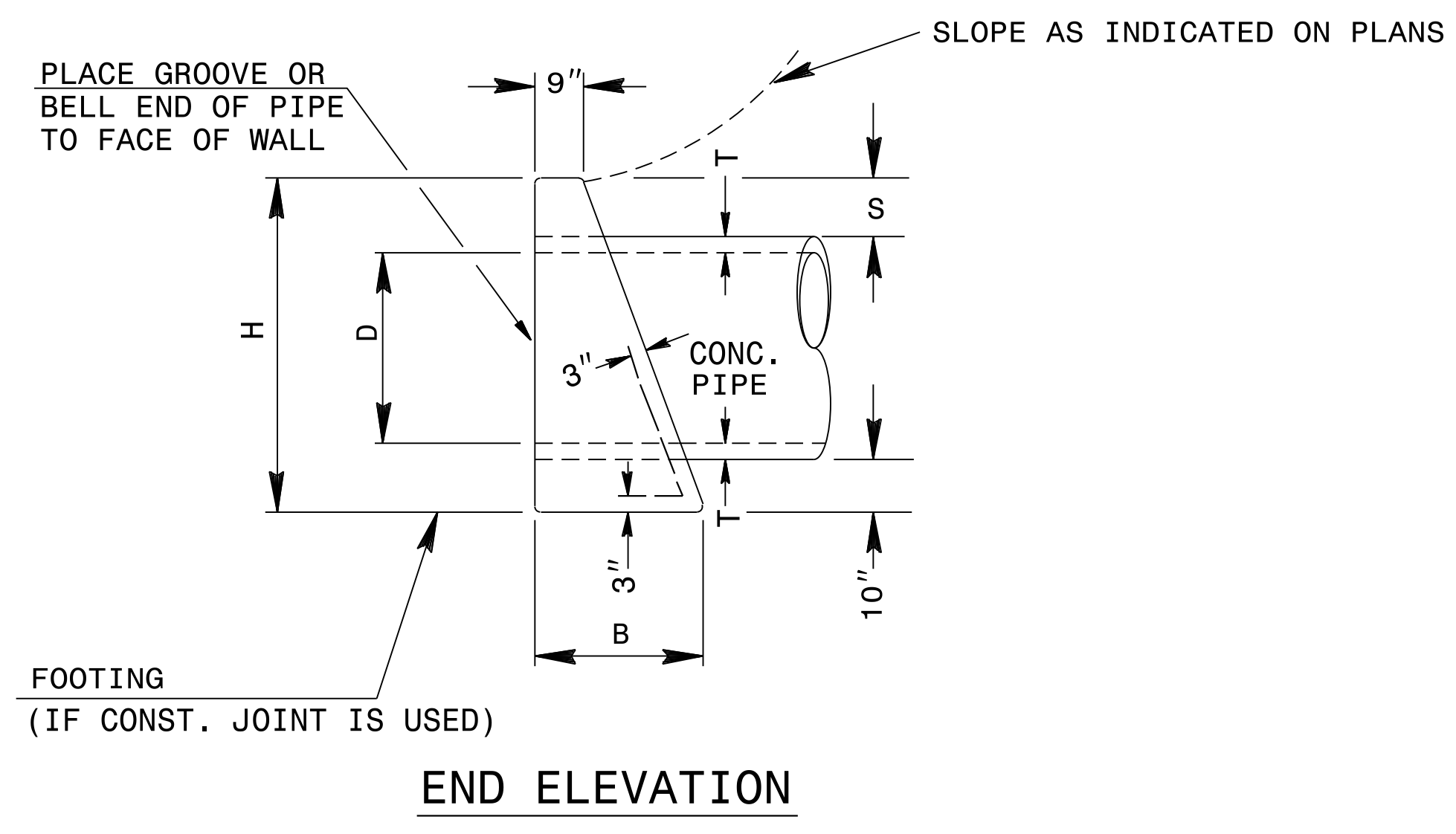
PLAN



ELEVATION



**DOWEL
BAR - "X"**



END ELEVATION

DIMENSIONS AND CONCRETE QUANTITIES										
USING CONCRETE PIPE										
D	COMMON DIMENSIONS					TRIPLE PIPE		QUADRUPLE PIPE		
	H	B	G	T	S	L	YD ³	L	YD ³	M
15"	3'-3"	1'-8"	2'-9"	2 1/4"	9 1/2"	9'-10"	1.3	12'-0"	1.6	2'-2"
18"	3'-7"	1'-10"	3'-2"	2 1/2"	10"	11'-6"	1.6	14'-1"	1.9	2'-7"
24"	4'-2"	2'-1"	4'-0"	3"	10"	14'-10"	2.5	18'-3"	3.0	3'-5"
30"	5'-0"	2'-6"	4'-7"	4 1/4"	11 1/2"	17'-8"	3.9	21'-11"	4.7	4'-3"
36"	5'-8"	2'-8"	5'-6"	4 3/4"	12 1/2"	21'-0"	5.6	26'-0"	6.7	5'-0"
42"	6'-2"	3'-1"	6'-4"	5 1/4"	11 1/2"	24'-4"	7.5	30'-2"	9.0	5'-10"
48"	6'-9"	3'-5"	7'-2"	5 3/4"	11 1/2"	27'-8"	10.0	34'-4"	12.0	6'-8"

* NOTE: SEE ROADWAY STANDARD DRAWING 838.01 SHEET 3 OF 3 FOR GENERAL NOTES

DOWELS IN ENDWALL WITH REINFORCED CONCRETE PIPE																		
LOC.	PIPE DIA.	TRIPLE PIPE						QUADRUPLE PIPE										
		15"	18"	24"	30"	36"	42"	15"	18"	24"	30"	36"	42"	48"				
	BARS	"X"	"X"	"X"	"X"	"X"	"X"	Y*	"X"	Y*	"X"	"X"	"X"	"X"	"X"	Y*	"X"	Y*
G	QTY.	2	2	3	3	4	4		5		2	2	3	3	4	4	5	
M(s)	QTY.	2	2	4	4	4	4	2	6	2	3	3	6	6	6	2	9	2
G	QTY.	2	2	3	3	4	4		5		2	2	3	3	4	4	5	
TOTAL LBS.		14	14	23	23	28	100		119		17	17	28	28	33	122	147	

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 15" THRU 48" PIPE - 90° SKEW

SHEET 1 OF 3
838D01

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

**CONTRACT STANDARDS
 AND DEVELOPMENT UNIT**
 Office 919-707-6950 FAX 919-250-4119

SEE PLATE FOR TITLE



Documented by:
 Ronald Elton Davenport
 5/18/2022

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