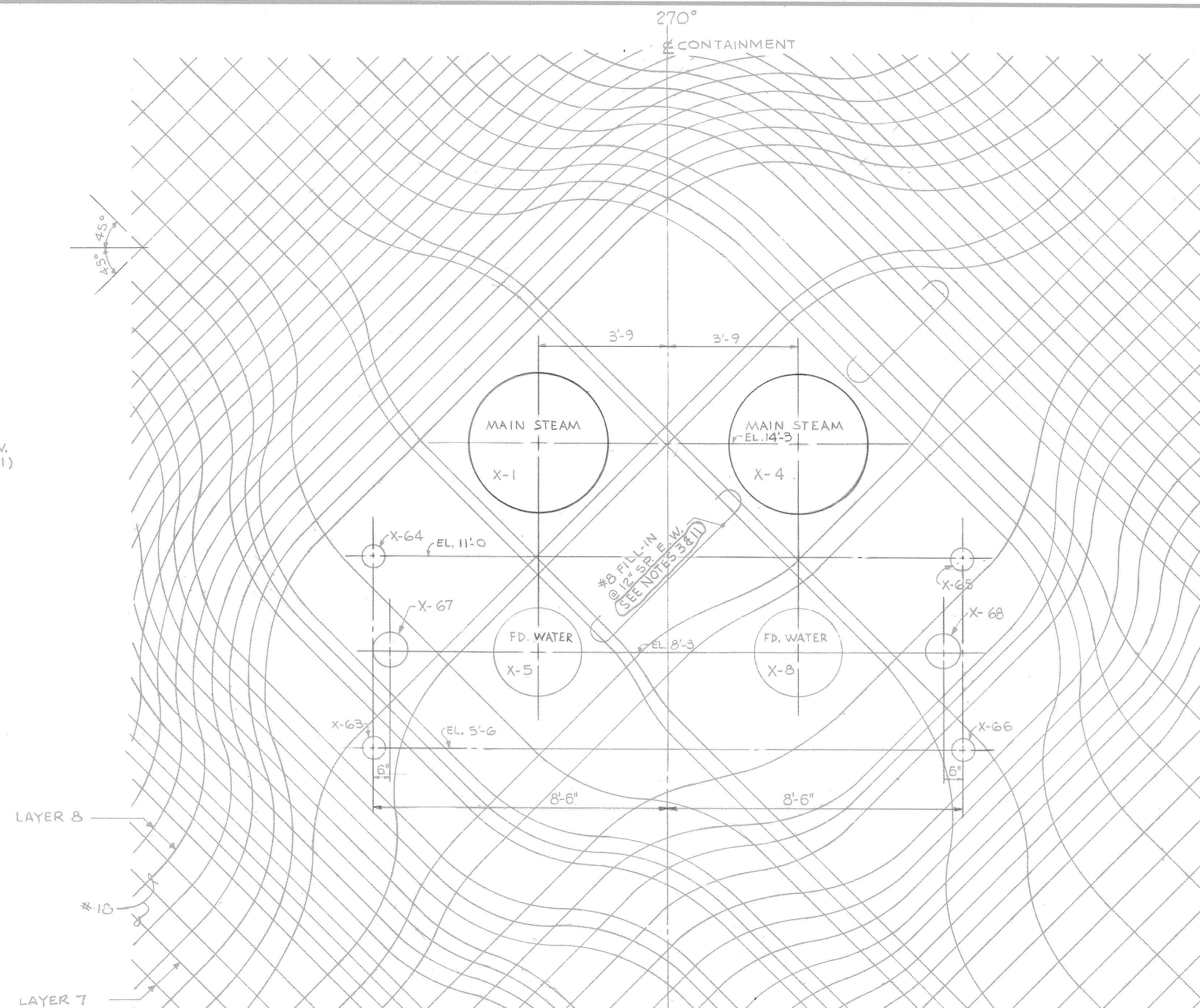


HOOP & MERIDIONAL REINFORCING AT PENETRATIONS  
SCALE 1/2"=1'-0"

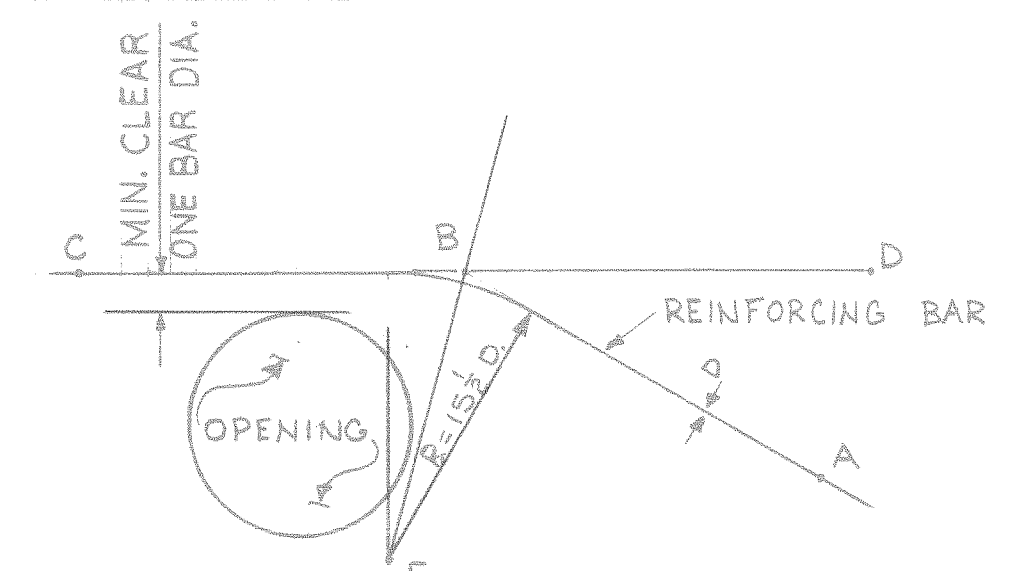
(REINF. PATTERN SIMILAR @ 90° PENETRATIONS)



DIAGONAL REINFORCING AT PENETRATIONS  
SCALE 1/2"=1'-0"

(REINF. PATTERN SIMILAR @ 90° PENETRATIONS)

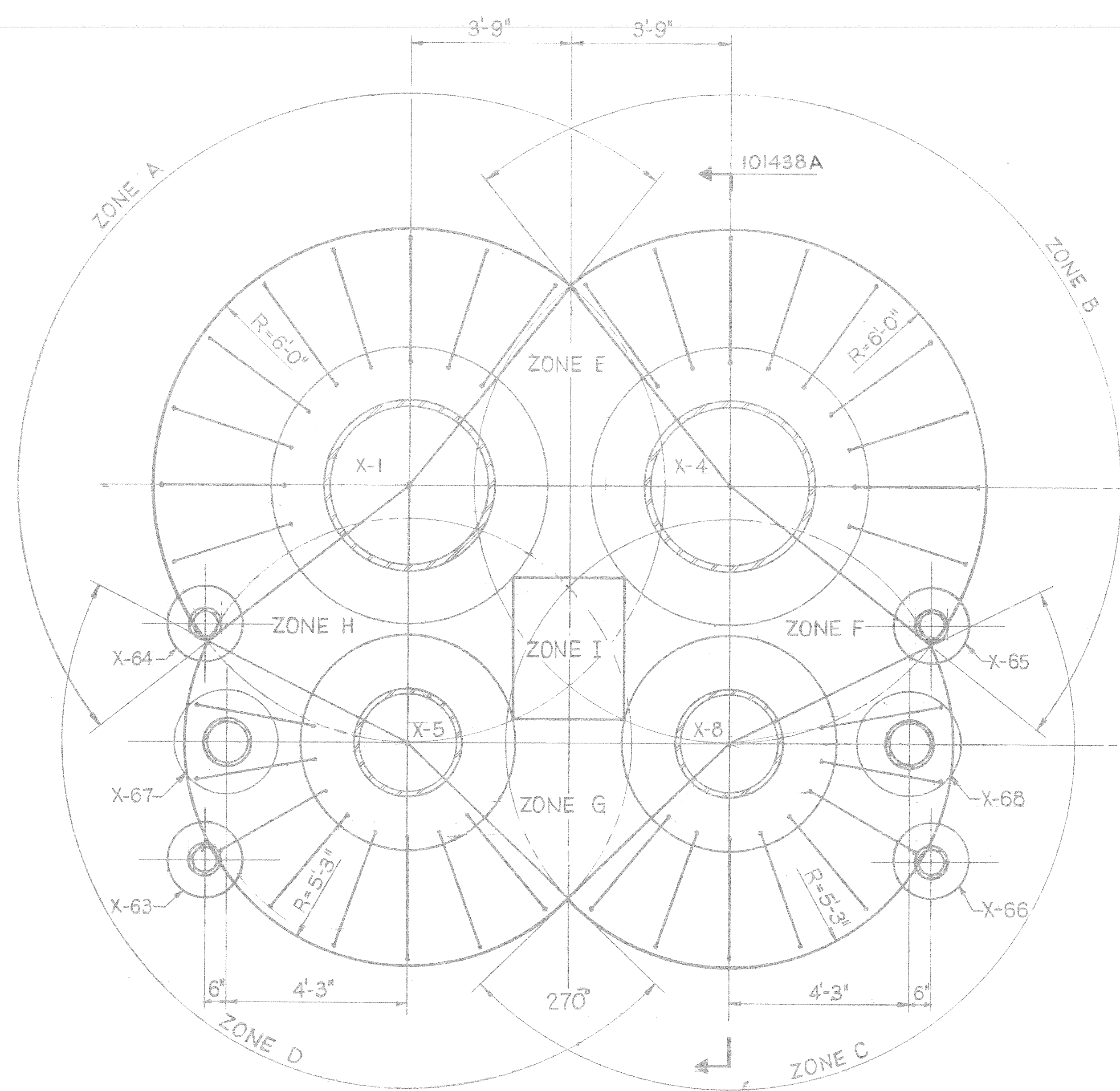
CRITERIA FOR BAR BENDING AT PENETRATIONS  
OTHER THAN EQUIP. HATCH & PERSONNEL AIR LOCK



- 1) THE BISECT LINE OF THE OPENING SHALL NOT INTERSECT THE ADJACENT OPENING. WHERE THIS CAN NOT BE FOLLOWED THE BARS SHALL BE PROVIDED.
- 2) ANGLE DBA SHALL BE (15°) FOR LOCATIONS LIMITED BY BEND RADIUS OR SPACING REQUIREMENT. ANGLE DBA MAY BE INCREASED TO A MAXIMUM OF 30°.
- 3) FOR #14 & #18 BARS BEND RADIUS SHALL BE A MINIMUM OF 15 BAR DIAM. FROM INSIDE OF BAR.
- 4) MINIMUM SPACING FOR #18 BARS SHALL BE 5" C/C.
- 5) MINIMUM CLEARANCE BETWEEN REINFORCING AND OPENING SHALL BE ONE BAR DIAMETER.
- 6) ALL PRIMARY RE-BARS (LAYERS 1 TO 8) SHALL BE BENT AROUND PENETRATIONS AND BE CONTINUOUS OR COLDWELD SPLICED.
- 7) DEVIATION FROM THE ABOVE CRITERIA SHALL BE APPROVED BY U.E.C. ENGINEER.

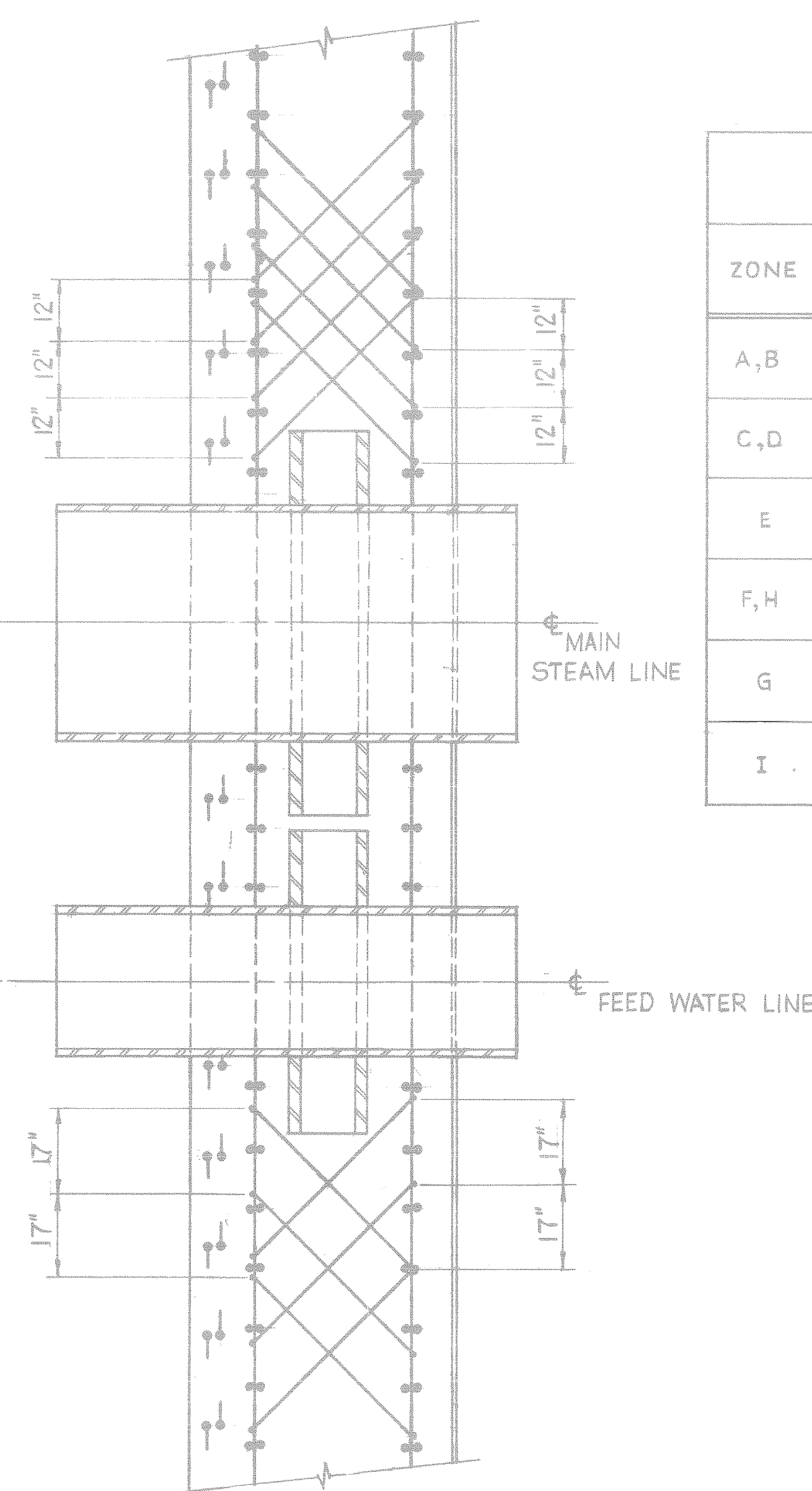
#### NOTES:

1. FOR REFERENCE DWGS. SEE DWG. NO. 9763-F-101435.
2. DETAILS OF RE-BARS AROUND PENETRATIONS TO BE DEVELOPED BY THE RE-BAR DETAILER AS PER CRITERIA SHOWN ON THIS DWG.
3. #8 @ 12" FILL-IN BARS ARE REQUIRED ON EACH LAYER (1 TO 8) OF RE-BARS AT PENETRATIONS X1 TO X8, HVAC 1, HVAC 2, X-38, X-71 & X-72.
4. FOR STIRRUP DETAIL SEE DWG. NO. 9763-F-101435.
5. ~~DELETED~~
6. ~~DELETED~~
7. MAX. CIRCUMFERENTIAL SPACING OF STIRRUPS SHOULD BE 17" AT MIDDLE SECTION OF WALL.
8. #6, #8, #10 OR LARGER SIZE OF STIRRUPS CAN BE USED TO MEET AREA REQUIREMENT FOR A PARTICULAR ZONE. #10 OR HIGHER SIZE STIRRUPS SHALL HAVE PLATES AT BOTH ENDS. SEE DWG. 9763-F-101441 FOR PLATE SIZE.
9. FOR GENERAL NOTES SEE DWG. 9763-F-101435.
10. STIRRUPS ARE TO BE RADIAL WITH RESPECT TO THE CENTER OF PENETRATION.
11. ADDITIONAL #8 FILL-IN BARS MAY BE ADDED AS REQUIRED. MINIMUM SPACING SHALL BE 6" C/C.



STIRRUP ARRANGEMENT AT 270° PENETRATIONS  
SCALE: 1/2"=1'-0"

(SIMILAR AT 90° PENETRATIONS)



SECTION 101438A  
SCALE 1/2"=1'-0"

TABLE OF INCLINED SHEAR REINFORCING AT 90°/270° M.S. & F.W. PENETRATIONS		
ZONE	TOTAL AREA OF REINF. REQ'D. IN EACH ZONE	REMARKS
A, B	42.24 IN. <sup>2</sup> (21.12 IN. <sup>2</sup> IN EACH DIRECTION)	STIRRUPS TO BE UNIFORMLY DISTRIBUTED IN 4 LAYERS AS SHOWN IN SECTION
C, D	26.40 IN. <sup>2</sup> (13.20 IN. <sup>2</sup> IN EACH DIRECTION)	STIRRUPS TO BE UNIFORMLY DISTRIBUTED IN 3 LAYERS AS SHOWN IN SECTION
E	18.88 IN. <sup>2</sup> (9.44 IN. <sup>2</sup> IN EACH DIRECTION)	STIRRUPS TO BE UNIFORMLY DISTRIBUTED IN AS MANY LAYERS AS POSSIBLE
F, H	13.14 IN. <sup>2</sup> (9.57 IN. <sup>2</sup> IN EACH DIRECTION)	
G	8.40 IN. <sup>2</sup> (4.20 IN. <sup>2</sup> IN EACH DIRECTION)	
I	21.14 IN. <sup>2</sup> (10.57 IN. <sup>2</sup> IN EACH DIRECTION)	

N-STAMP ITEM  
HOQAQ

CONTAINMENT  
CONCRETE  
REINFORCING AT PENETRATIONS  
PUBLIC SERVICE CO. OF NEW HAMPSHIRE  
SEABROOK STATION  
United engineers & constructors inc.  
UNITS 1 AND 2 9763-F-101438

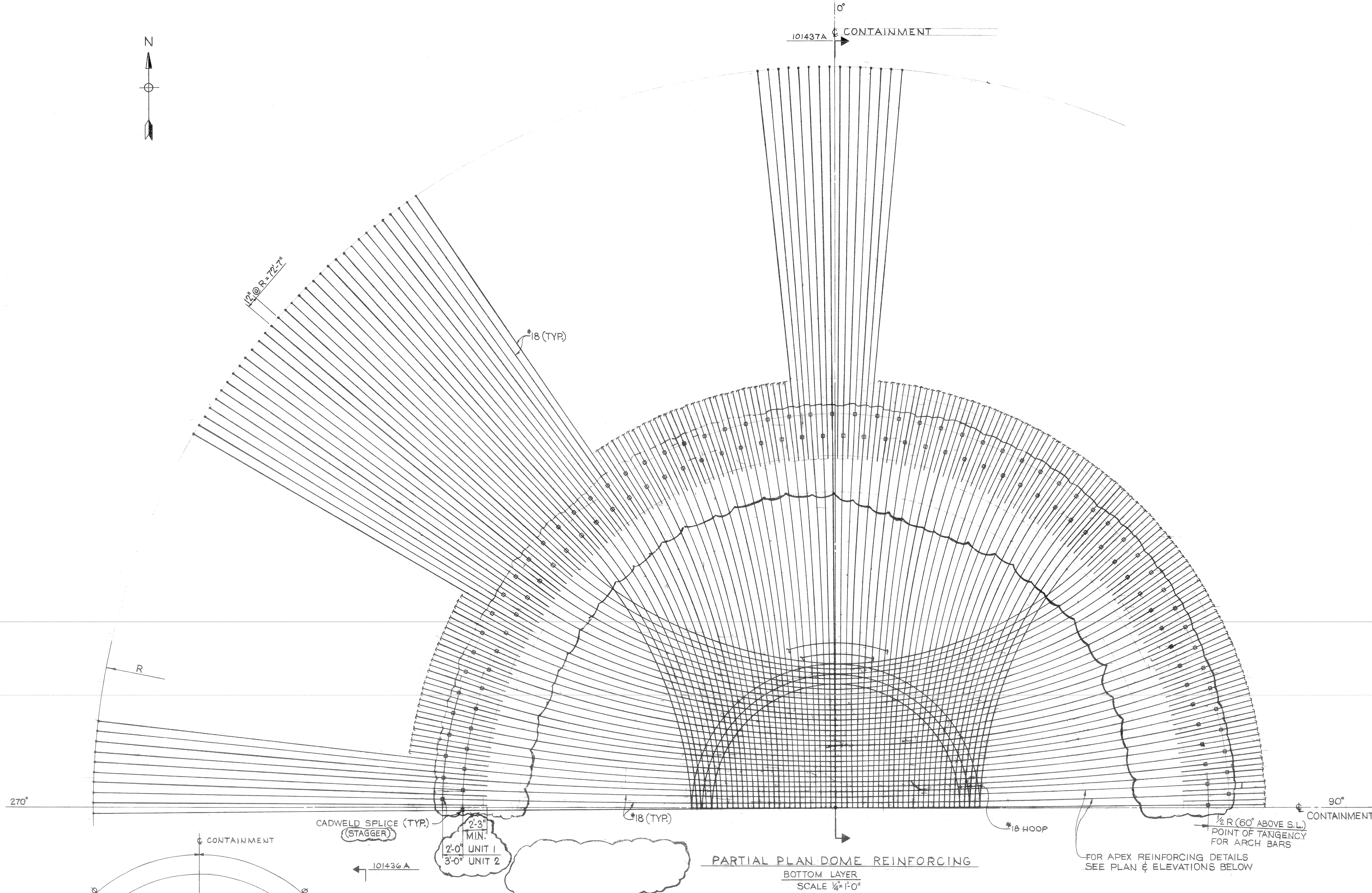
REV.	DATE	DESCRIPTION	DWN. BY	CHK. BY	ENGR.	SUP. ENGR.
4	7-8-81	ADD REF NOTE FOR FILL-IN BARS & NOTCH PER ECA CHART	CTM	W.A.	W.A.	DHR
3	5-26-78	ISSUED FOR CONSTRUCTION. MODIFIED REINF. PATTERNS. ADDED PENETS. PER DCA 04/87/1	W.A.	W.A.	W.A.	DHR
2	7-18-76	FOR FABRICATION	W.A.	W.A.	W.A.	DHR





10°  
101437A CONTAINMENT

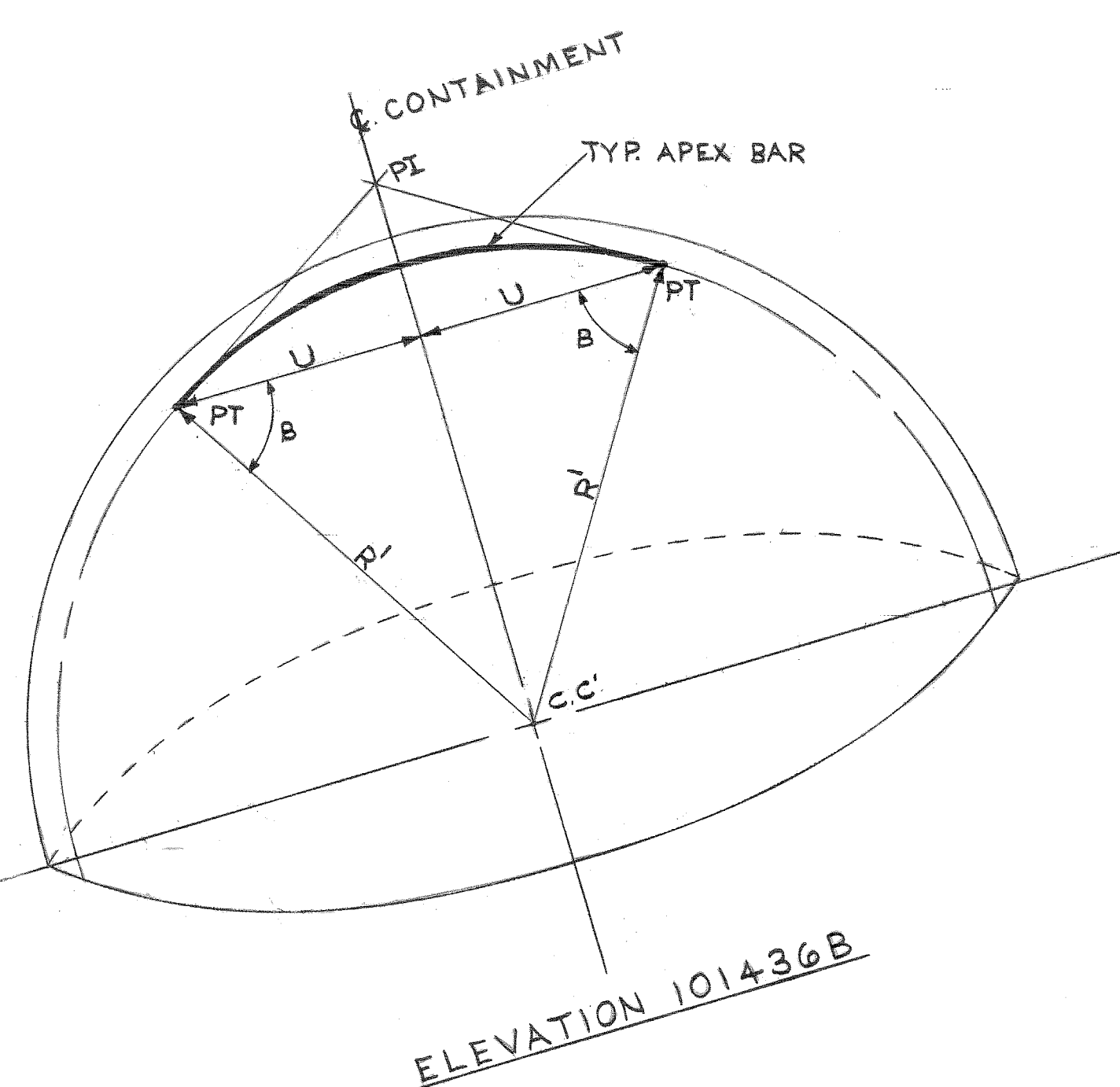
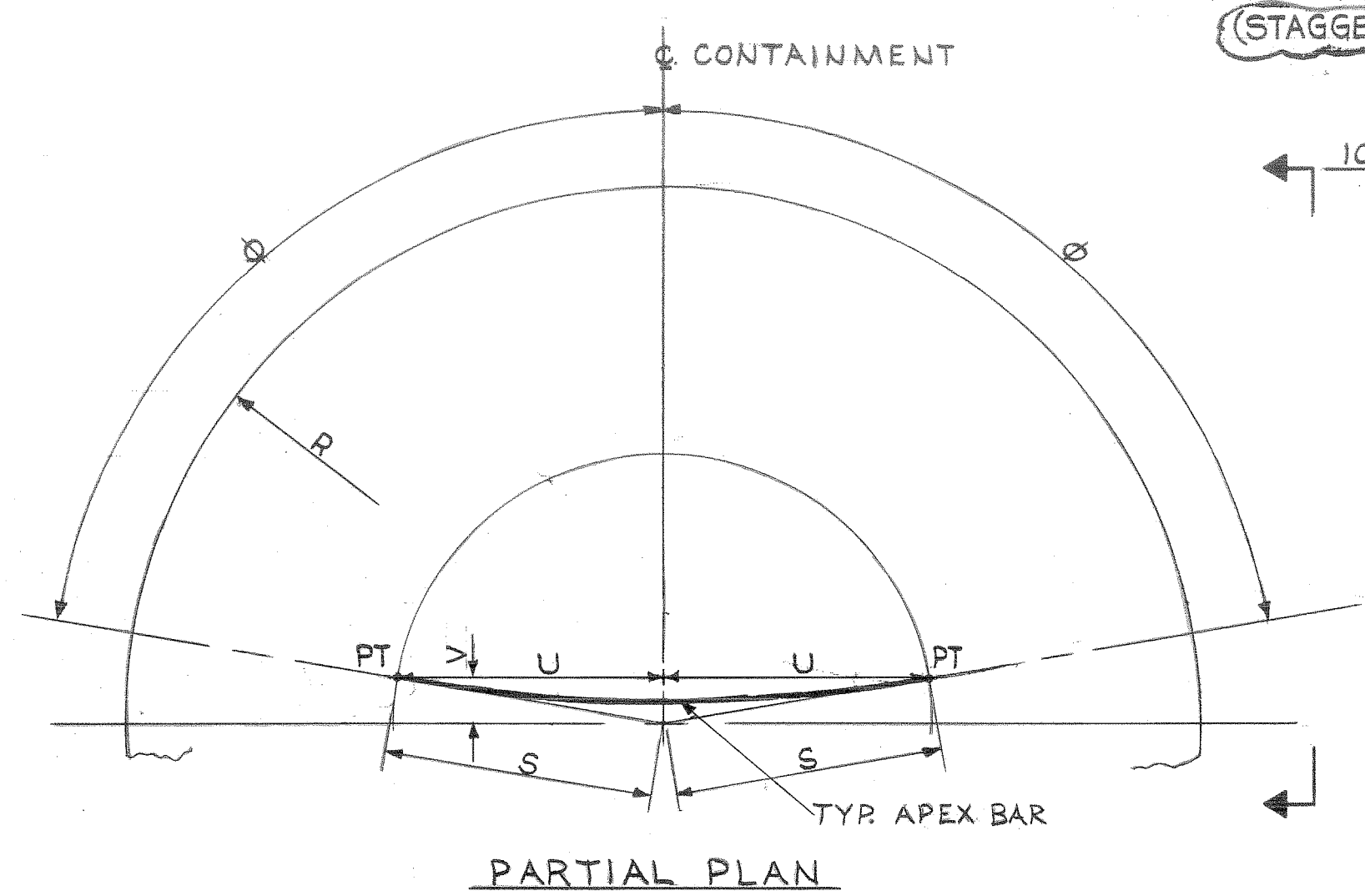
- NOTES**
1. FOR GENERAL NOTES SEE DWG. NO. 9763-F-101435.
  2. LAYER 2 MERIDIONAL BARS MAY BE OUT OF PLANE DUE TO OVERLAPPING APEX BARS.



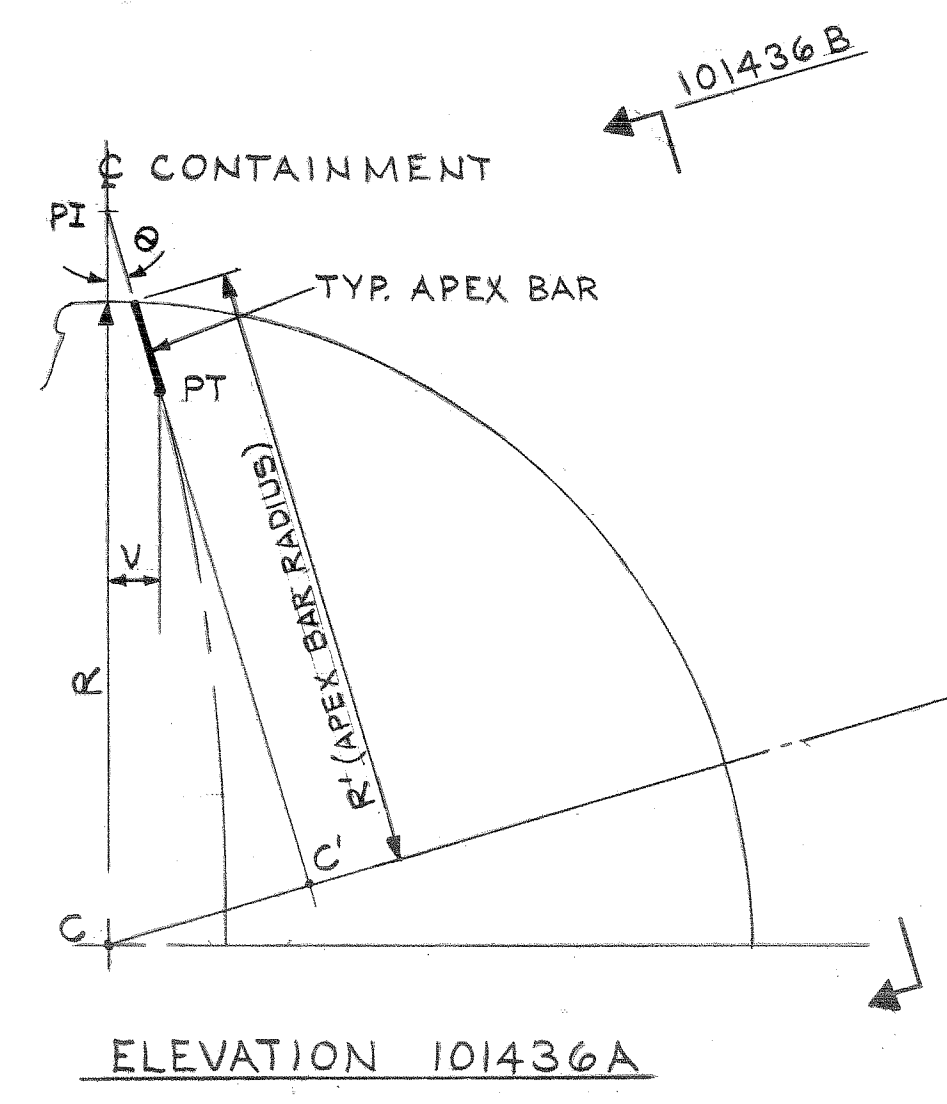
**PARTIAL PLAN DOME REINFORCING**  
BOTTOM LAYER  
SCALE 1/4"=1'-0"

FOR APEX REINFORCING DETAILS  
SEE PLAN & ELEVATIONS BELOW

- REFERENCE DRAWINGS**
1. 9763-F-101437 - CONTAINMENT CONCRETE DOME REINFORCING SHT. 2.
  2. 9763-F-101491 - CONTAINMENT CONCRETE DOME REINFORCING SHT. 3.



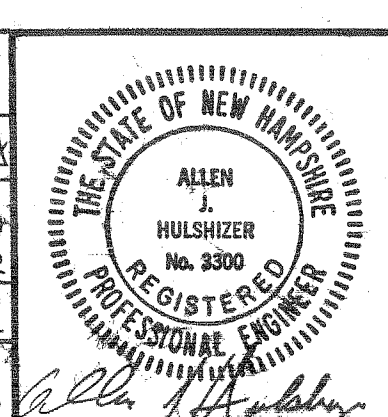
**NOTE**  
ALL APEX BARS ARE SINGLE PLANE BEND BARS ALONG THE SURFACE OF DOME WITH A DEFINITE RADIUS CALCULATED ON THE BASIS OF GEOMETRICAL RELATIONS TO ACHIEVE PROPER TANGENCY WITH MERIDIONAL BARS.



**N-STAMP ITEM**  
**HQAE**

**CONTAINMENT CONCRETE DOME REINFORCING - SHEET 1**  
**PUBLIC SERVICE CO. OF NEW HAMPSHIRE**  
SEABROOK STATION  
**united engineers** a constructors inc.  
**UNITS 1 AND 2** **9763-F-101436**

REV.	DATE	DESCRIPTION	CHK. BY	DATE	DISCIPLINE	CHK. BY	DATE
3	1-11-80	REV'D. CADWELD SPLICES ON PLAN	EH		STRUCT.		
2	10-10-79	ISSUED FOR CONSTRUCTION AND	EH		MECH.		
1	2-12-79	ISSUED FOR DETAILING & FABRICATION	EH		NUCLEAR		
0	7-16-78	FOR FABRICATION	EH				



DISCIPLINE	CHK. BY	DATE	DISCIPLINE	CHK. BY	DATE
STRUCT.	RD	12-88	INST. & CONTR.	N.A.	
MECH.	N.A.		ELECT.	N.A.	
NUCLEAR	N.A.		MECH. SVCS.	N.A.	







SECURITY-RELATED INFORMATION WITHHELD UNDER 5 USC SECTION 552(b)  
(4) AND 5 USC SECTION 552(b)(7)(F)





SECURITY-RELATED INFORMATION WITHHELD UNDER 5 USC SECTION 552(b)  
(4) AND 5 USC SECTION 552(b)(7)(F)



SECURITY-RELATED INFORMATION WITHHELD UNDER 5 USC SECTION 552(b)  
(4) AND 5 USC SECTION 552(b)(7)(F)

SECURITY-RELATED INFORMATION WITHHELD UNDER 5  
USC SECTION 552(b)(4) AND 5 USC SECTION 552(b)(7)(F)

SECURITY-RELATED INFORMATION WITHHELD UNDER 5 USC SECTION 552(b)  
(4) AND 5 USC SECTION 552(b)(7)(F)