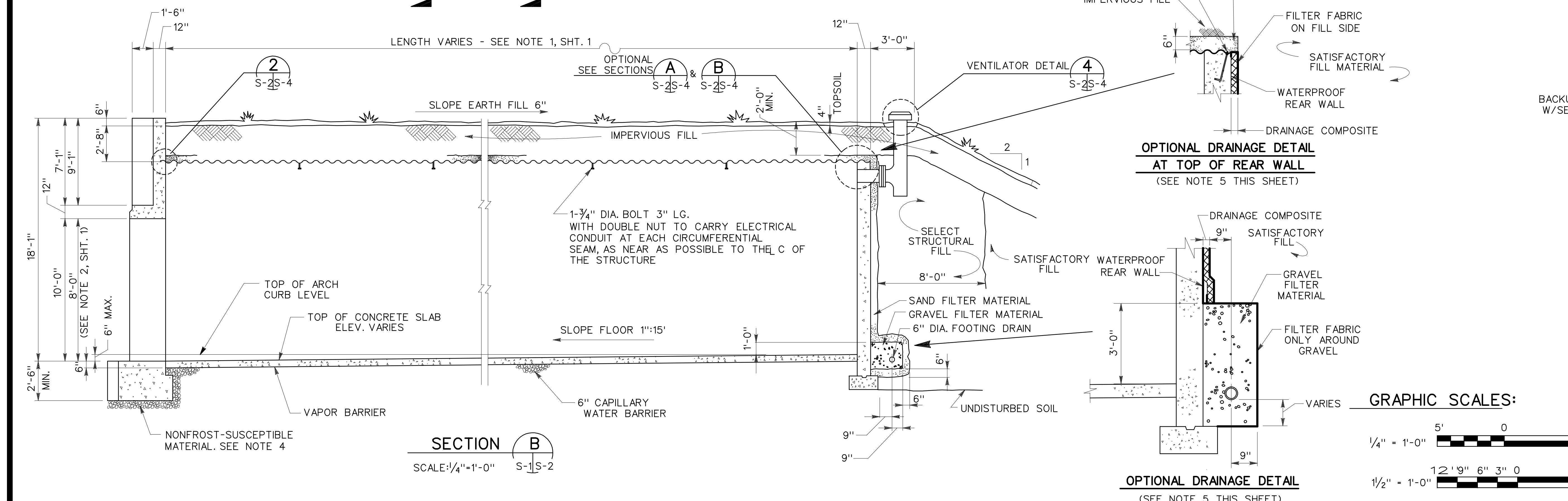
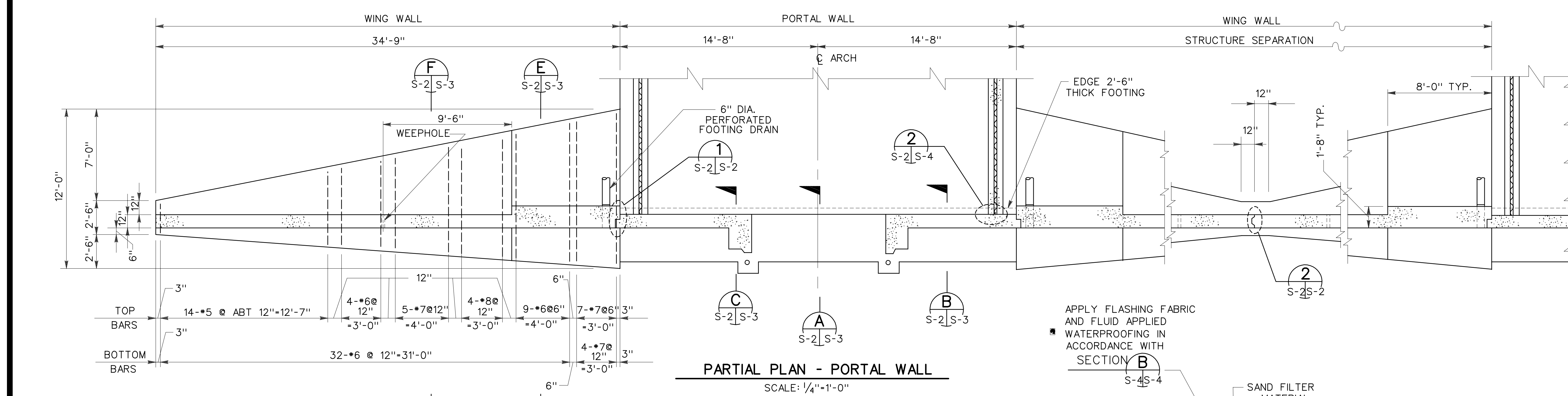
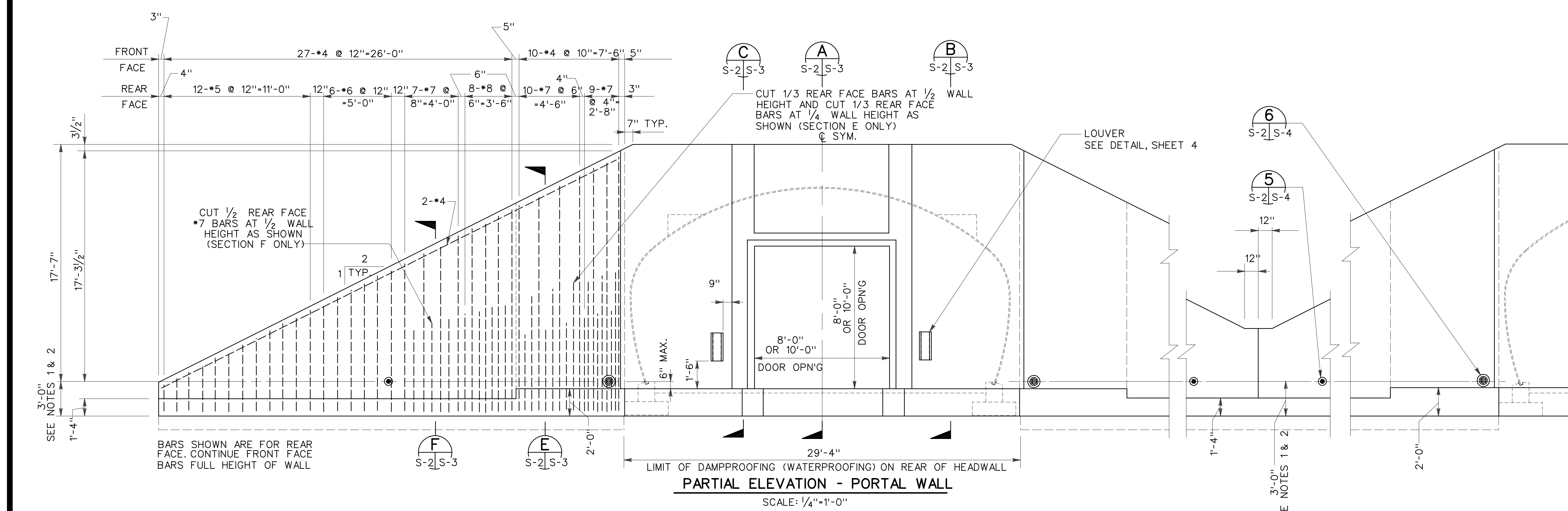


US Army Corps of Engineers
Huntsville Division

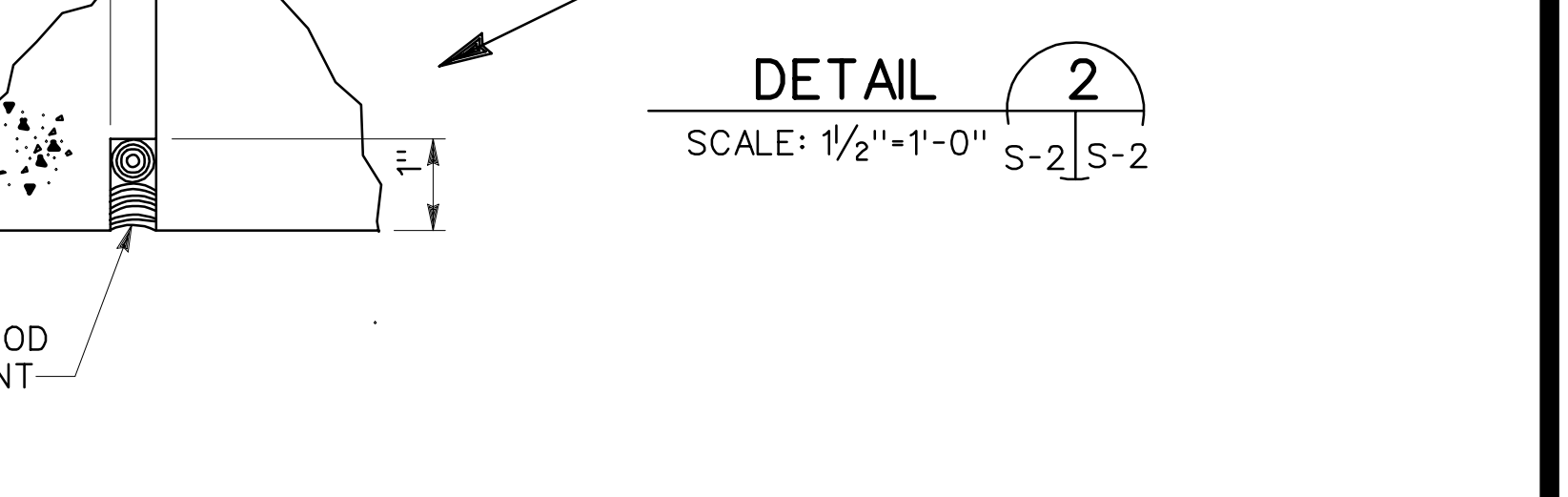
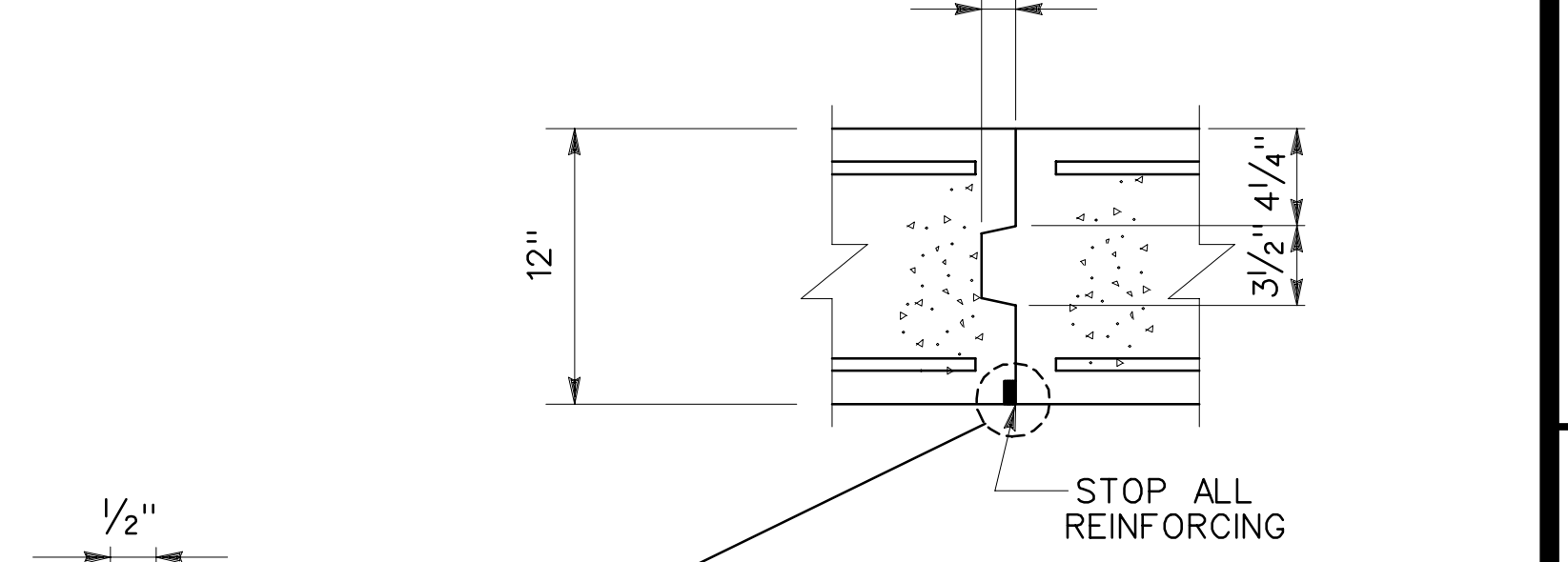
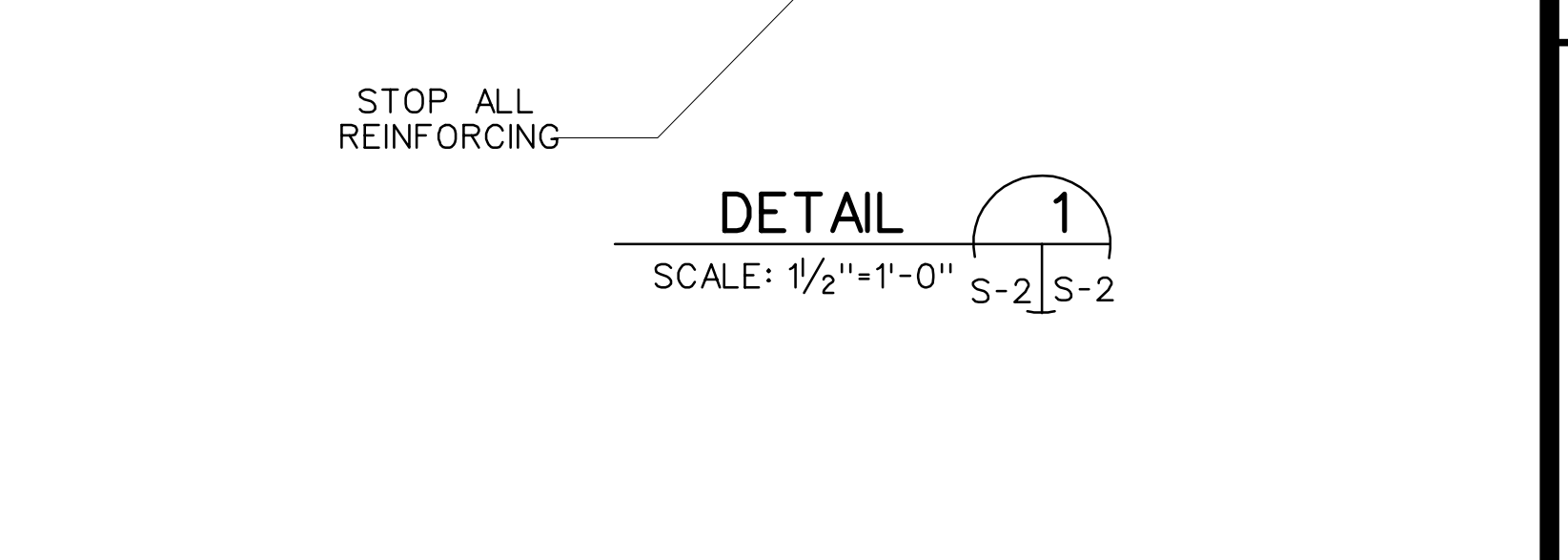
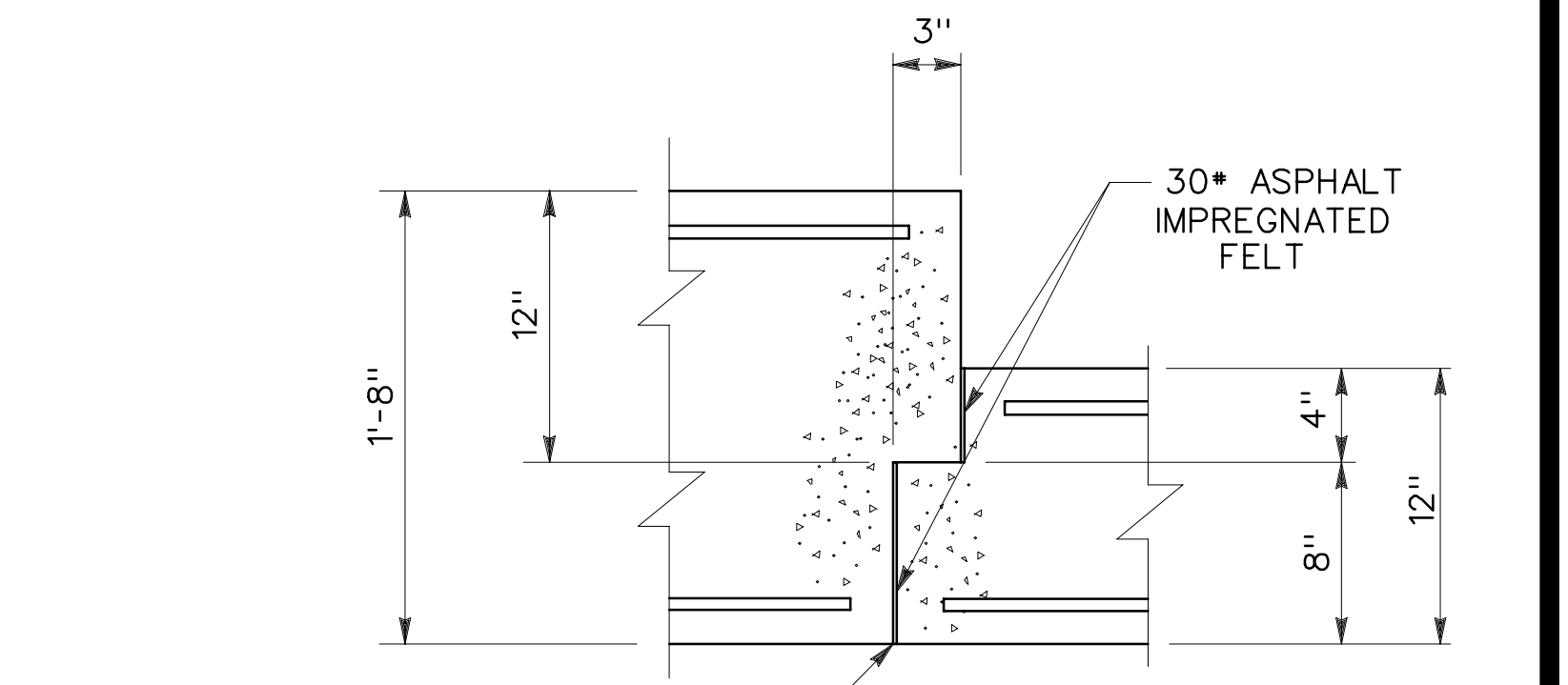
MAGAZINE, STEEL OVAL-ARCH, EARTH COVERED

DRAWING INDEX				
SHT. REF. NO.	DESIGN FILE NO.	REVISIONS		
		REV. NO.	AM/CO	
G-1	65855	0		DRAWING INDEX
S-1	65856	1		PLAN AND SECTIONS
S-2	65857	0		PORTAL WALL PLAN, ELEV. & DETAILS
S-3	65858	1		PORTAL AND REAR WALL PLAN, ELEVATION AND SECTIONS
S-4	65859	1		MISCELLANEOUS DETAILS
S-5	65860	0		10'-0" BLAST DOOR
S-6	65861	0		8'-0" BLAST DOOR
S-7	65862	0		BLAST DOOR DETAILS
E-1	65863	1		ELECTRICAL PLAN AND SECTIONS
E-2	65864	1		ELECTRICAL DETAILS

Approved by: Dept. of Defense Explosives Safety Board DAVID K. WALLACE CAPTAIN, USN Date: 28 DEC 92					
Prepared by:					
Principal, A/E Firm: _____ Date: _____		US ARMY ENGINEER DIVISION, HUNTSVILLE CORPS OF ENGINEERS HUNTSVILLE, ALABAMA			
Constructibility Review		MAGAZINE, STEEL OVAL-ARCH, EARTH COVERED			
Chief, Construction Div. _____ Date: _____		DRAWING INDEX			
Reviewed by:		Dwn. by: RDP Ckd. by: AF			
Chief, CS Division _____ Date: _____		Reviewed by: _____ Date: 30 OCT 92		Sheet reference number: 65858	
Reviewed by:		Approved by: _____ Date: _____		Design file no.: 65858	
Chief, ME Division _____ Date: _____		Drawing code: STD 421-80-03		Rev. _____	
Reviewed by:		G-1		Sheet 1 of 10	
Director of Engineering _____ Date: _____					



- NOTES:**
- IF, AS A RESULT OF THE FOUNDATION INVESTIGATION OR LOCAL FROST CONDITIONS, IT IS DETERMINED THAT ANY OR ALL WALL FOOTINGS MUST BE LOWERED, THE APPROPRIATE WALL AND FOOTING DESIGNS MUST BE CHECKED AND ADJUSTED AS REQUIRED TO SUIT THESE CONDITIONS.
 - FOOTINGS ARE SIZED FOR A SOIL BEARING VALUE OF 3,000 P.S.F.; FOOTINGS MUST BE REDESIGNED IF THE SOIL'S INVESTIGATION DOES NOT CONFIRM THIS MINIMUM BEARING CAPACITY.
 - ALTERNATE MATERIALS AND/OR SYSTEMS MAY BE SUBMITTED FOR ACCEPTANCE AS A SUBSTITUTE FOR POURED-IN-PLACE WING WALLS, PROVIDED THEY ARE SHOWN TO BE STRUCTURALLY ADEQUATE AND COST EFFECTIVE.
 - IN FROST AREAS PROVIDE NONFROST-SUSCEPTIBLE MATERIAL UNDER HEADWALL FOOTING, TO FULL DEPTH OF FROST PENETRATION, OR LOWER BOTTOM OF FOOTING TO FROST PENETRATION DEPTH.
 - AS AN OPTION, THE SAND AND GRAVEL FILTER DRAINAGE COMPOSITES SYSTEM FOR THE REAR AND WING WALLS MAY BE REPLACED BY ANY OF A NUMBER OF DRAINAGE COMPOSITE SYSTEMS THAT USE A FILTER FABRIC BONDED TO A DRAINAGE MAT. THIS OPTION DOES NOT APPLY TO THE ARCH. IN ALL APPLICATIONS, THE DRAINAGE COMPOSITE IS PLACED SO THAT THE MORE PERMEABLE DRAINAGE MATERIAL IS NEXT TO THE STRUCTURE AND THE LESS PERMEABLE FILTER MATERIAL IS NEXT TO THE EARTH FILL. CARE MUST BE TAKEN DURING CONCRETE WORK TO CHAMFER SHARP CORNERS WHICH WOULD BE LIKELY TO DAMAGE THE DRAINAGE COMPOSITE.



Symbol	Description	Date	Approved

U.S. ARMY ENGINEER DIVISION,
HUNTSVILLE,
CORPS OF ENGINEERS
HUNTSVILLE, ALABAMA

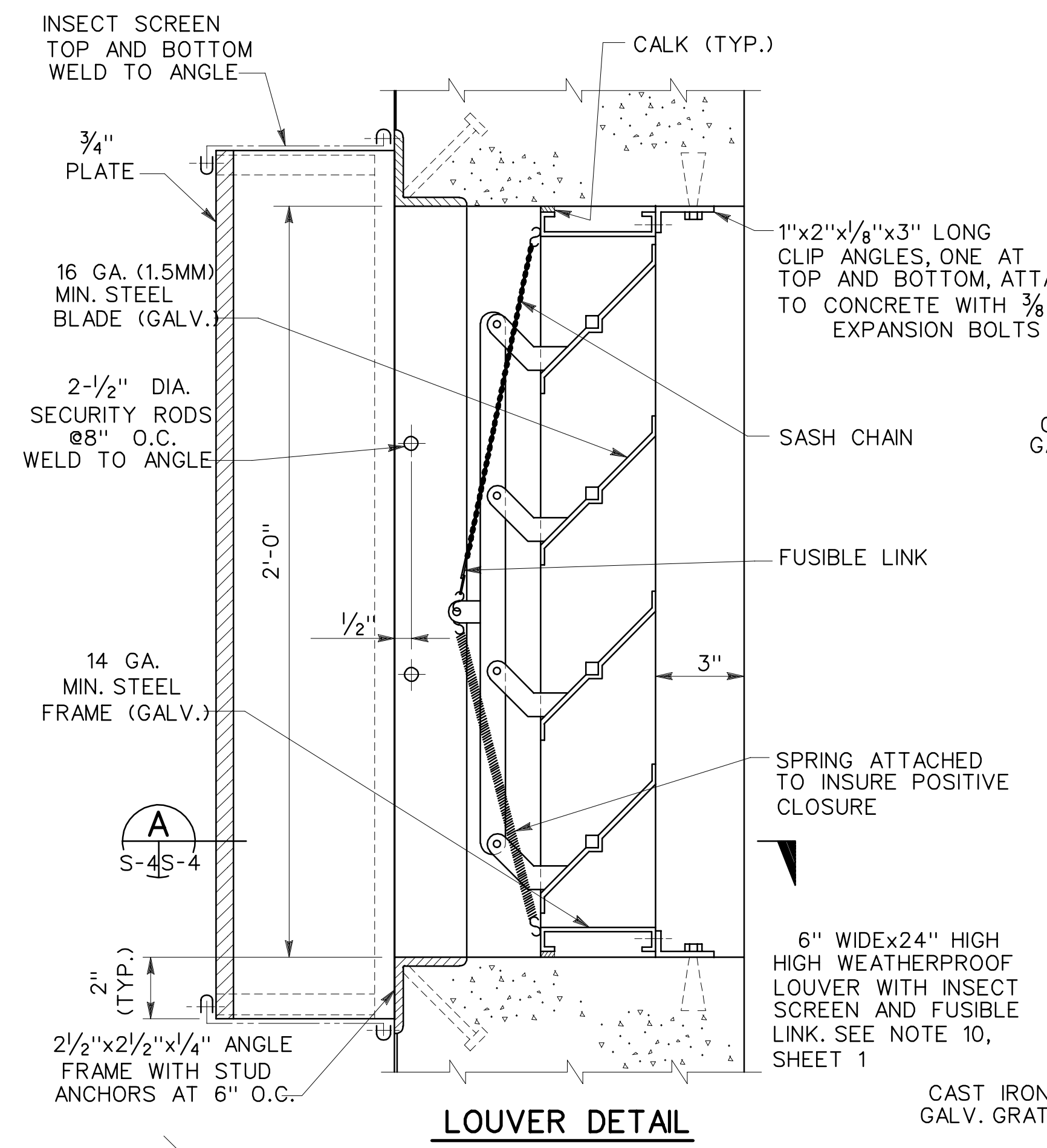
Site adapt A/E :

MAGAZINE, STEEL OVAL-ARCH, EARTH COVERED PORTAL WALL PLAN, ELEVATION AND DETAILS

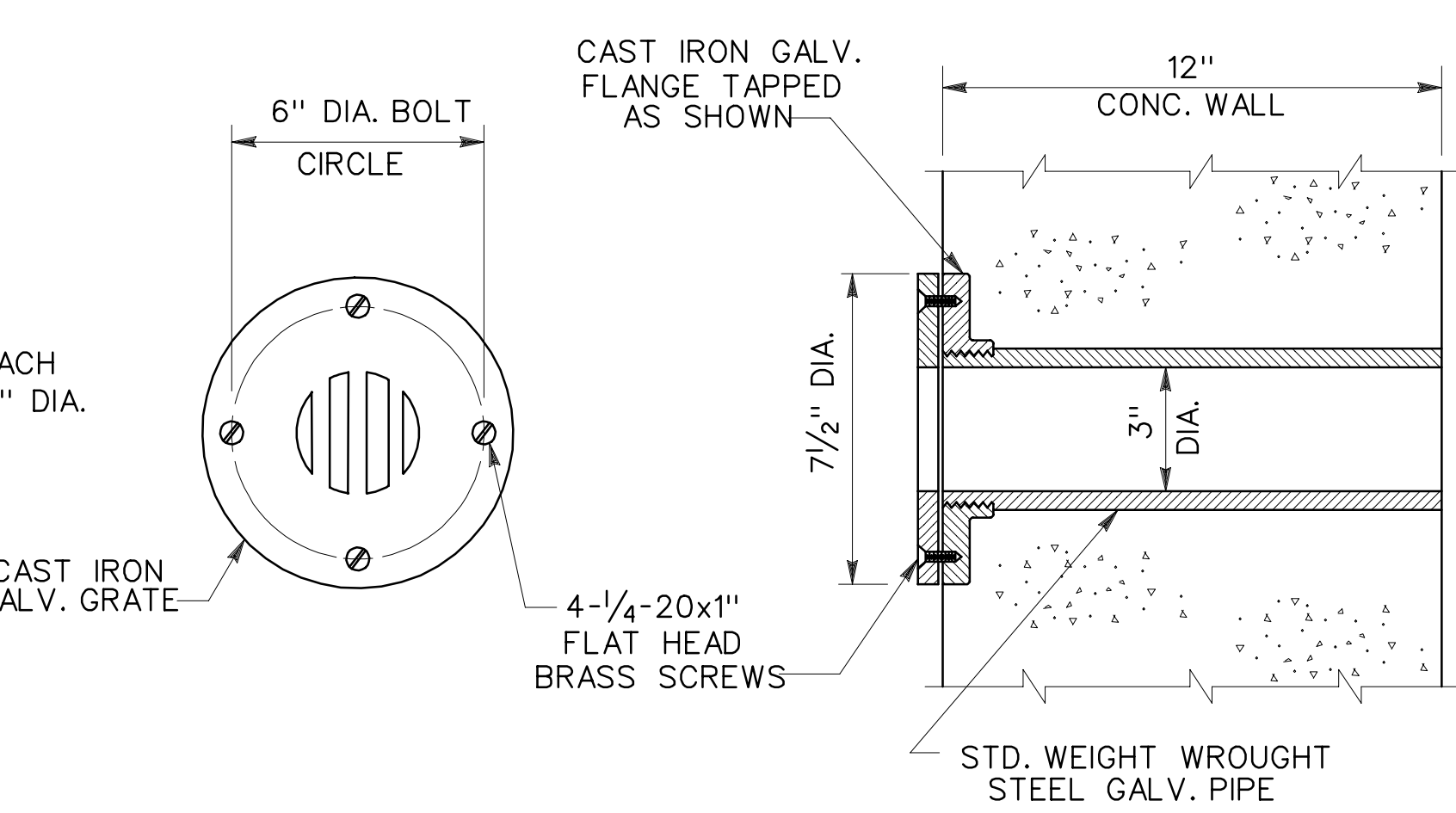
Dwn. by: RDP Ckd. by: AF

Reviewed by: Date: 30 OCT 92 Sheet reference number: 65857

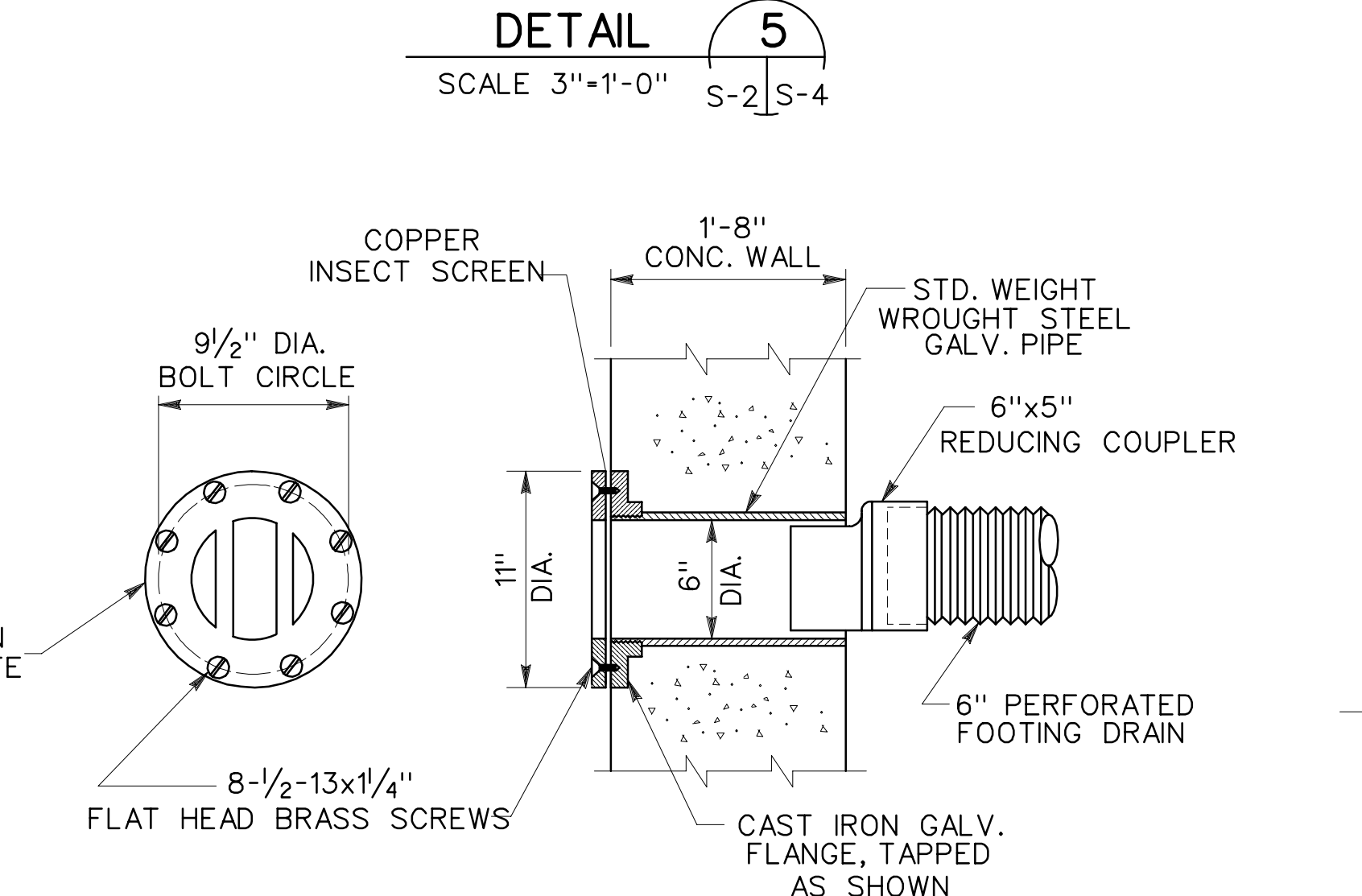
Approved by: Drawing code: STD 421-80-03 **S-2** Sheet 3 of 10



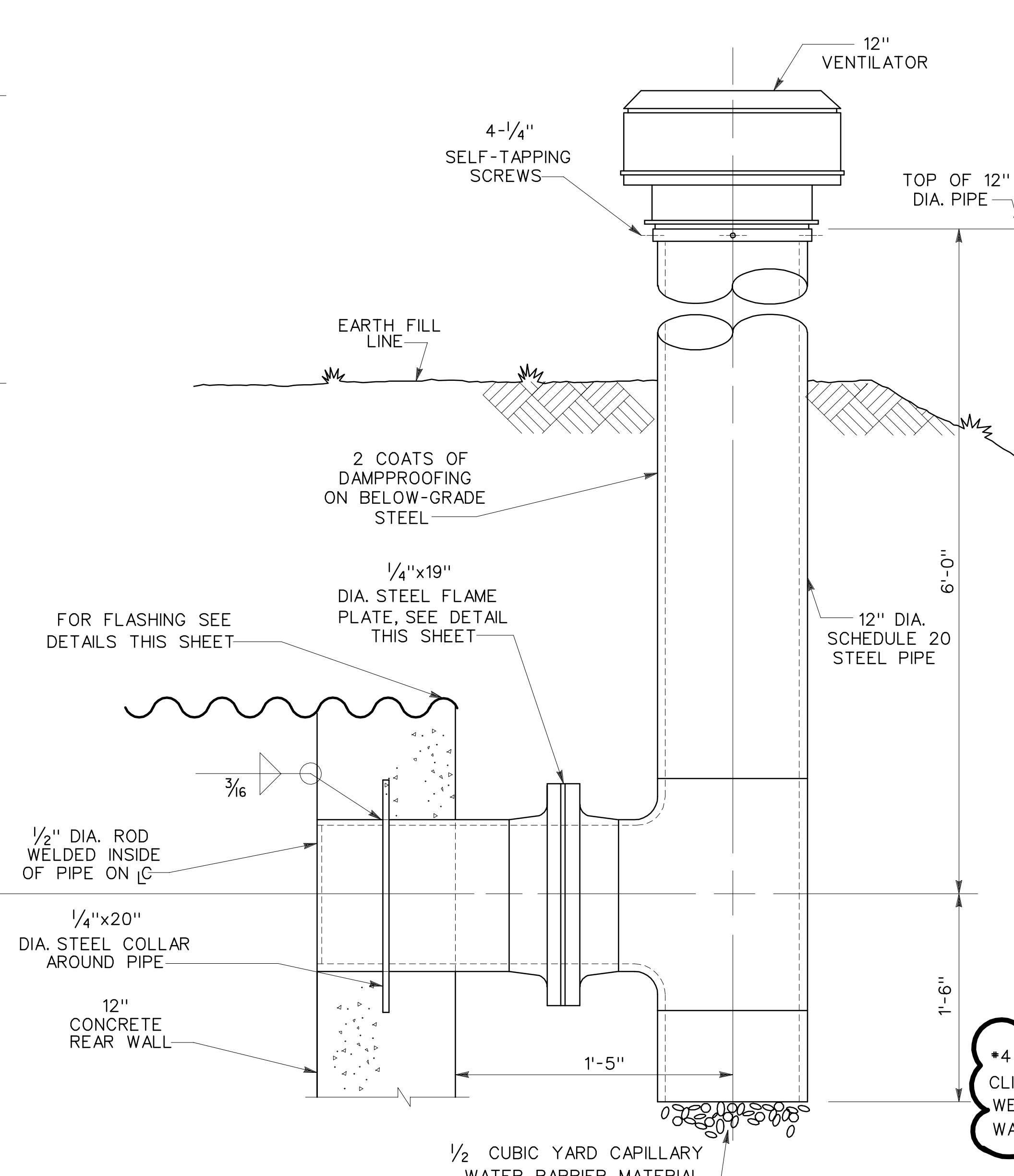
LOUVER DETAIL SCALE 3/4"=1'-0"



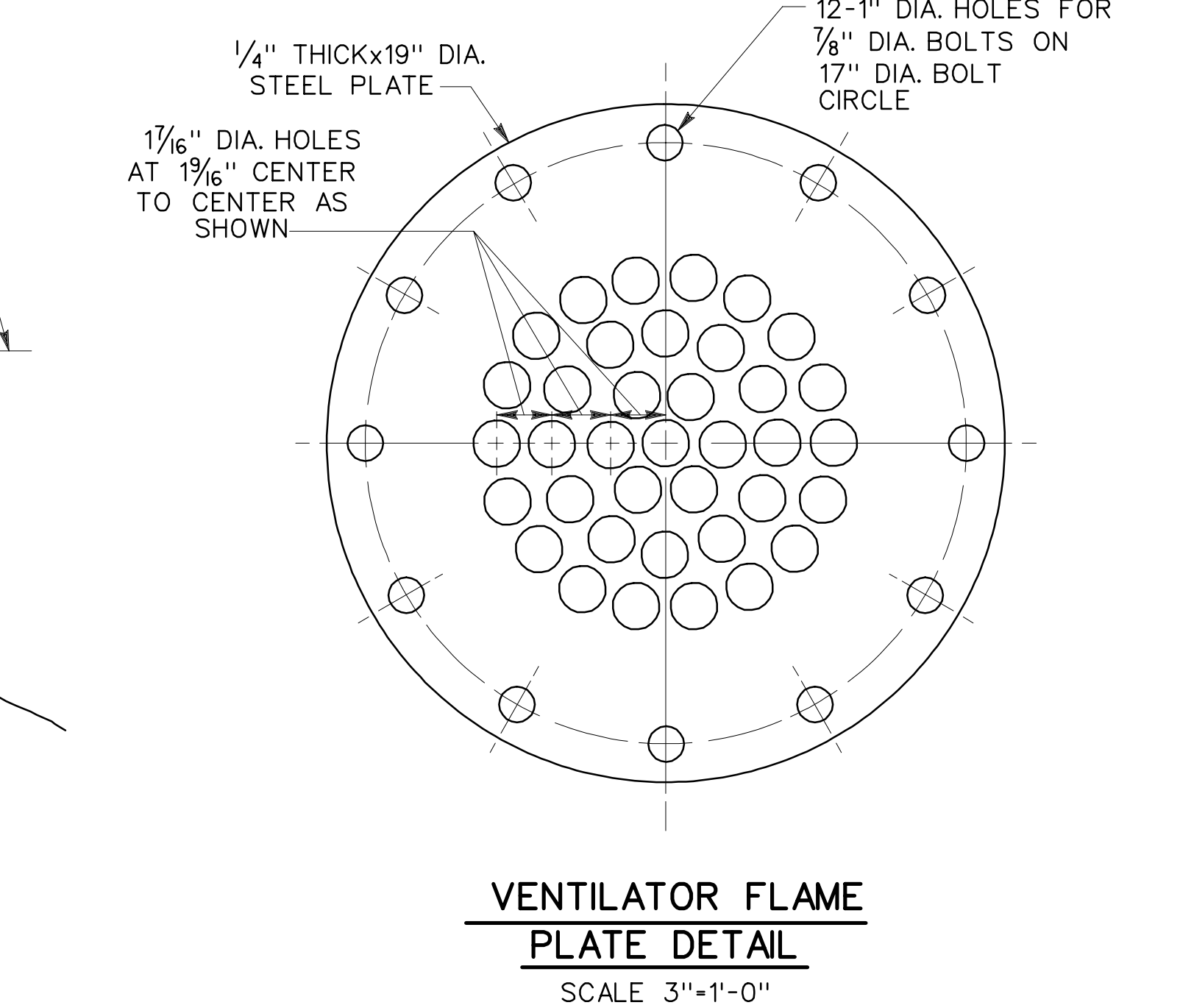
DETAIL 5 SCALE 3/4"=1'-0"



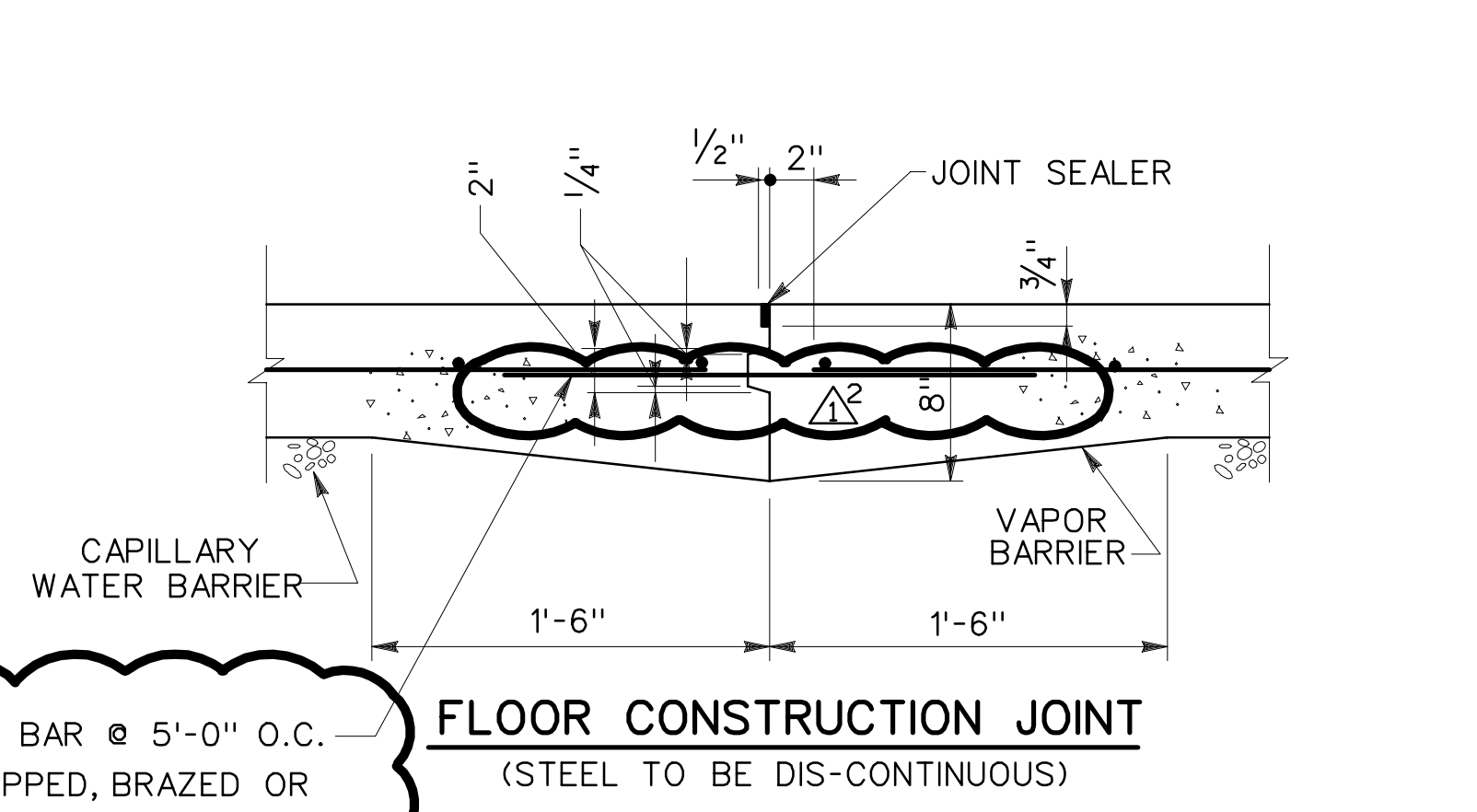
DETAIL 6 SCALE 1/2"=1'-0"



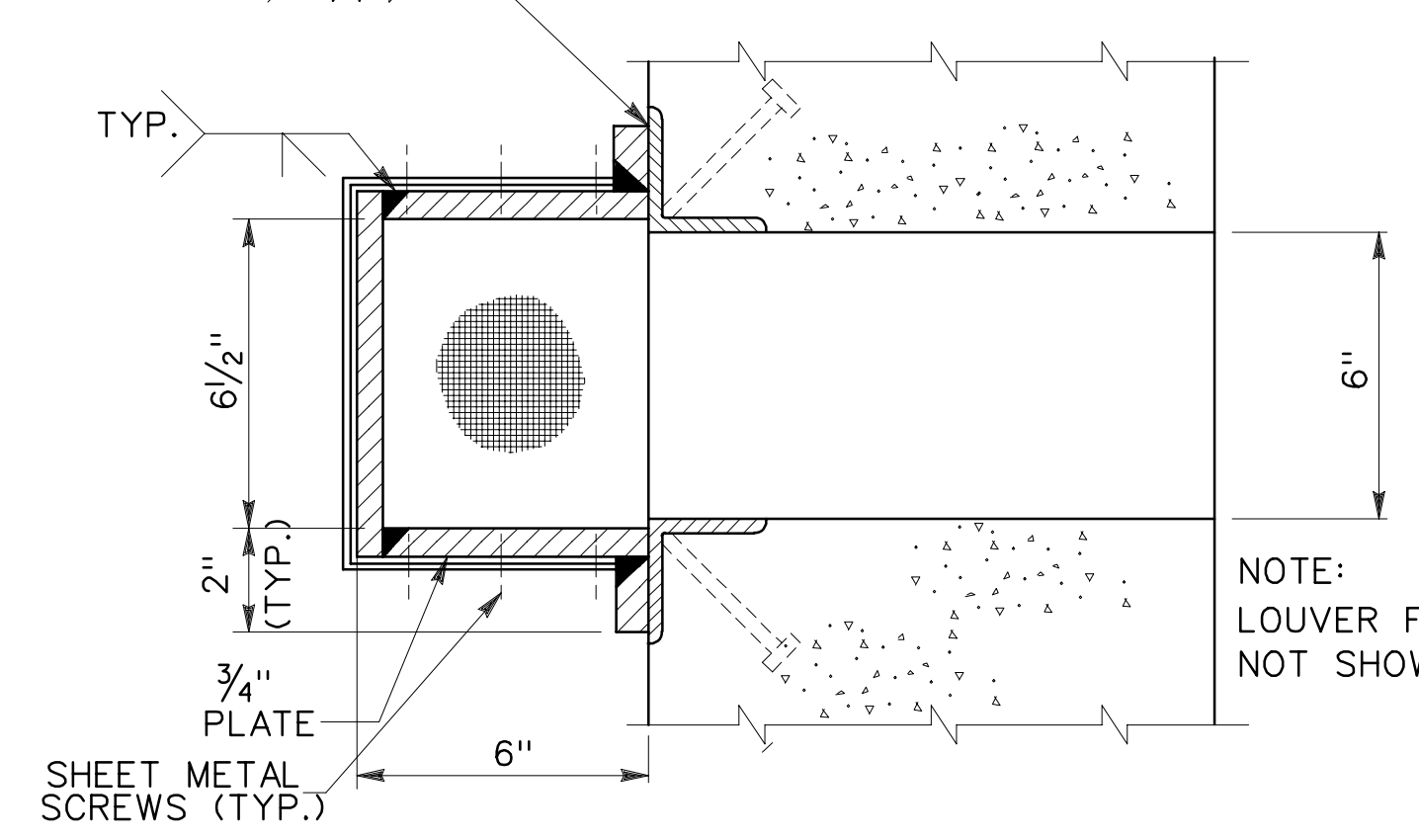
VENTILATOR DETAIL 4 SCALE 1/2"=1'-0"



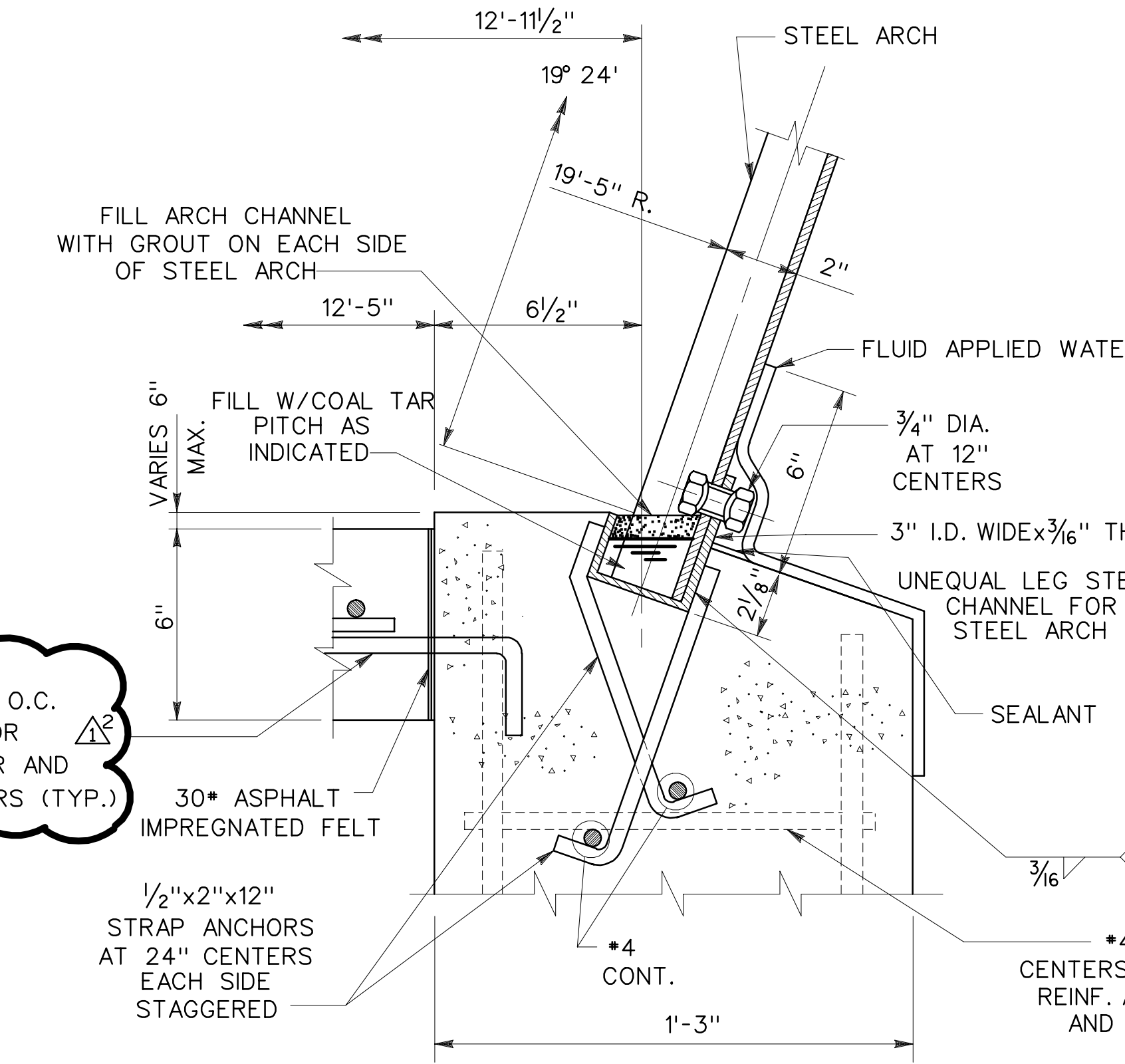
VENTILATOR FLAME PLATE DETAIL SCALE 3/4"=1'-0"



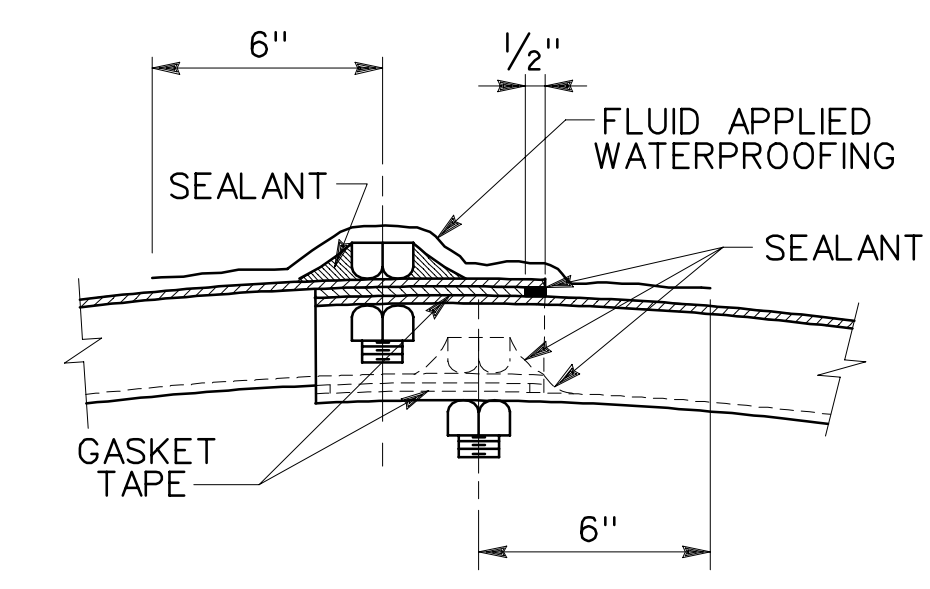
SECTION P SCALE 1/2"=1'-0"



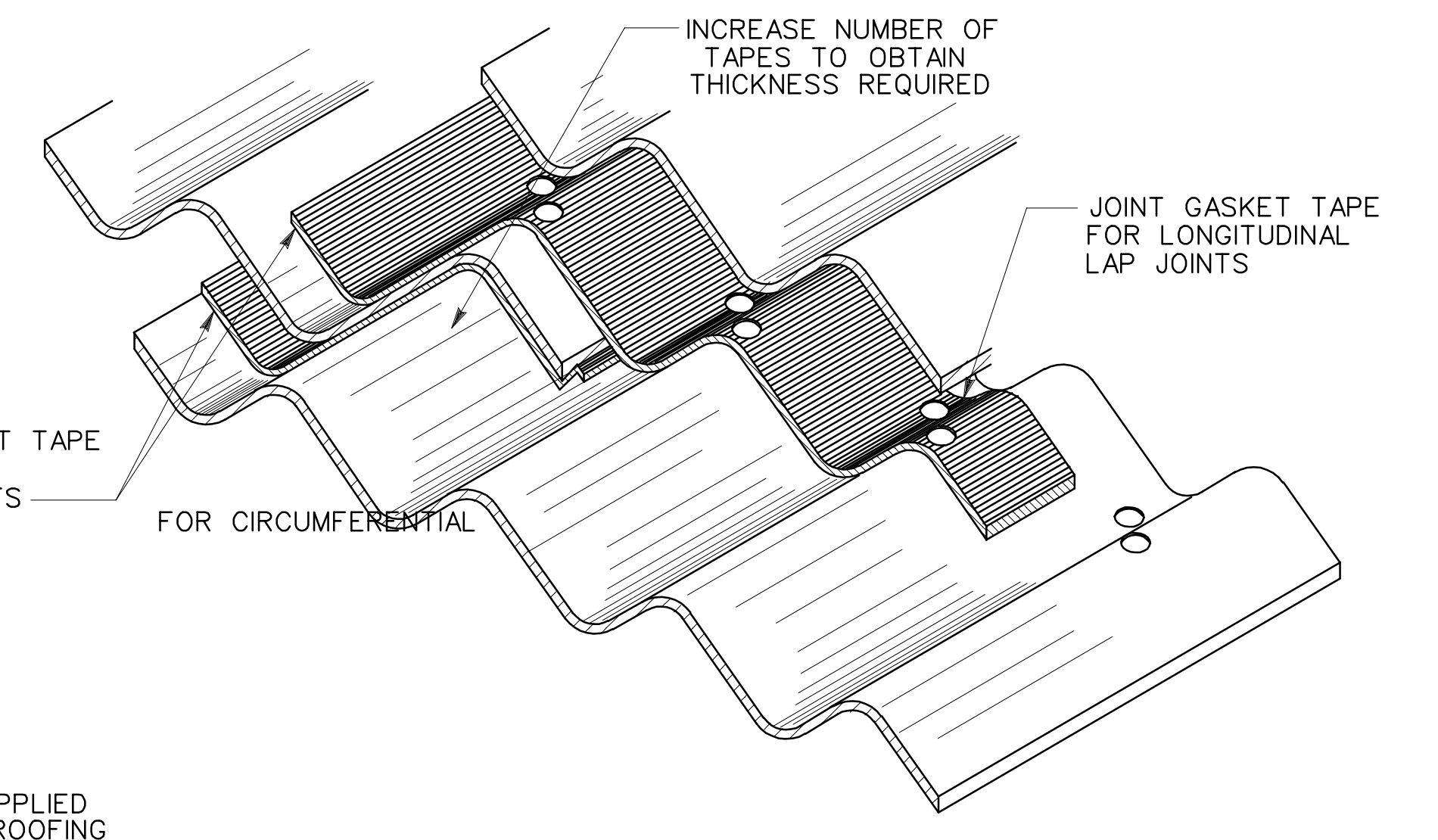
SECTION A SCALE 3/4"=1'-0"



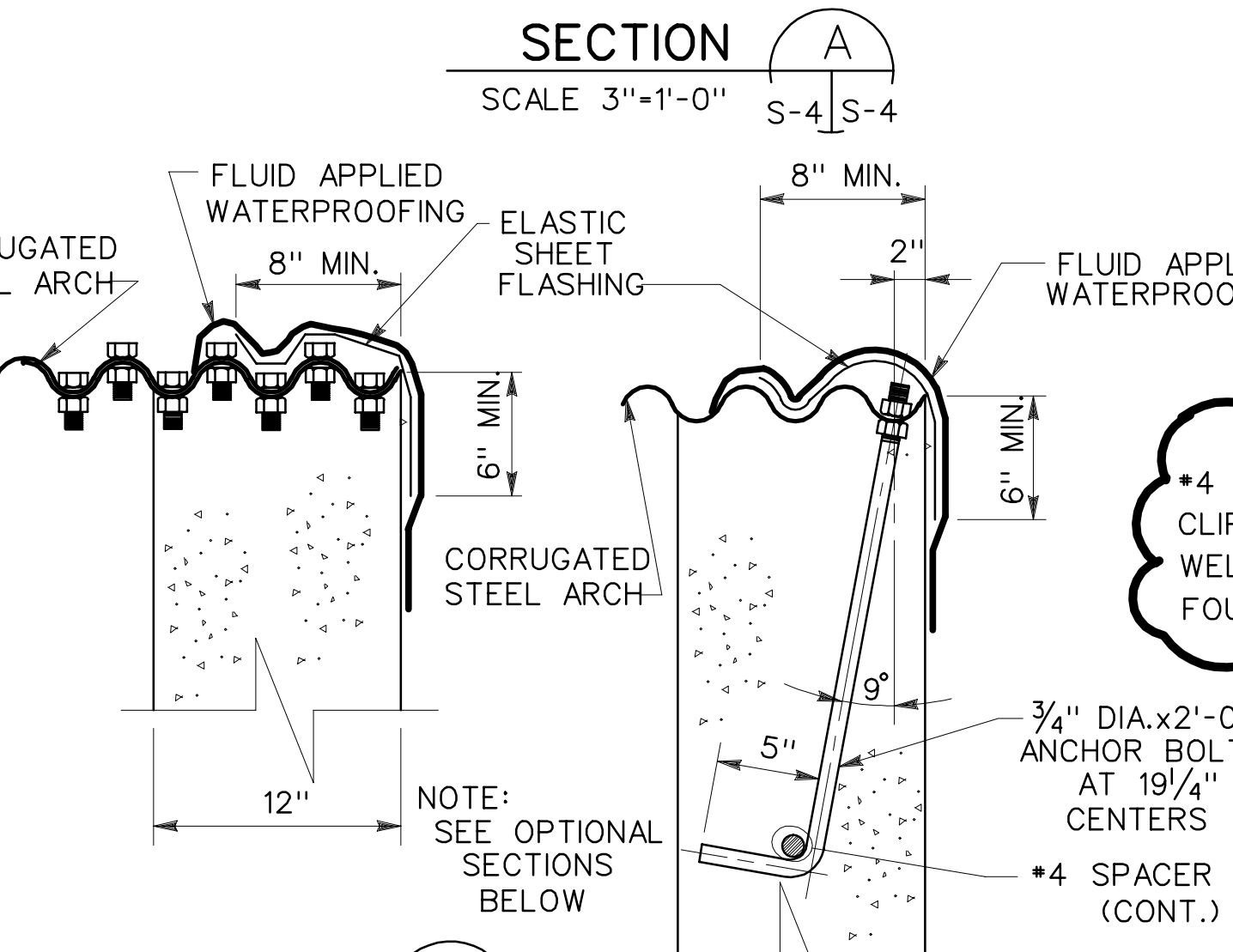
DETAIL 1 SCALE 3/4"=1'-0"



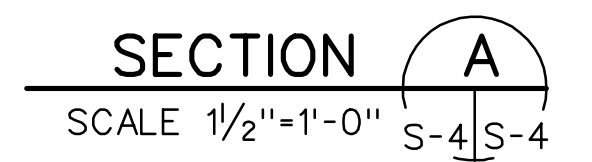
TYPICAL SPLICE DETAIL NO SCALE



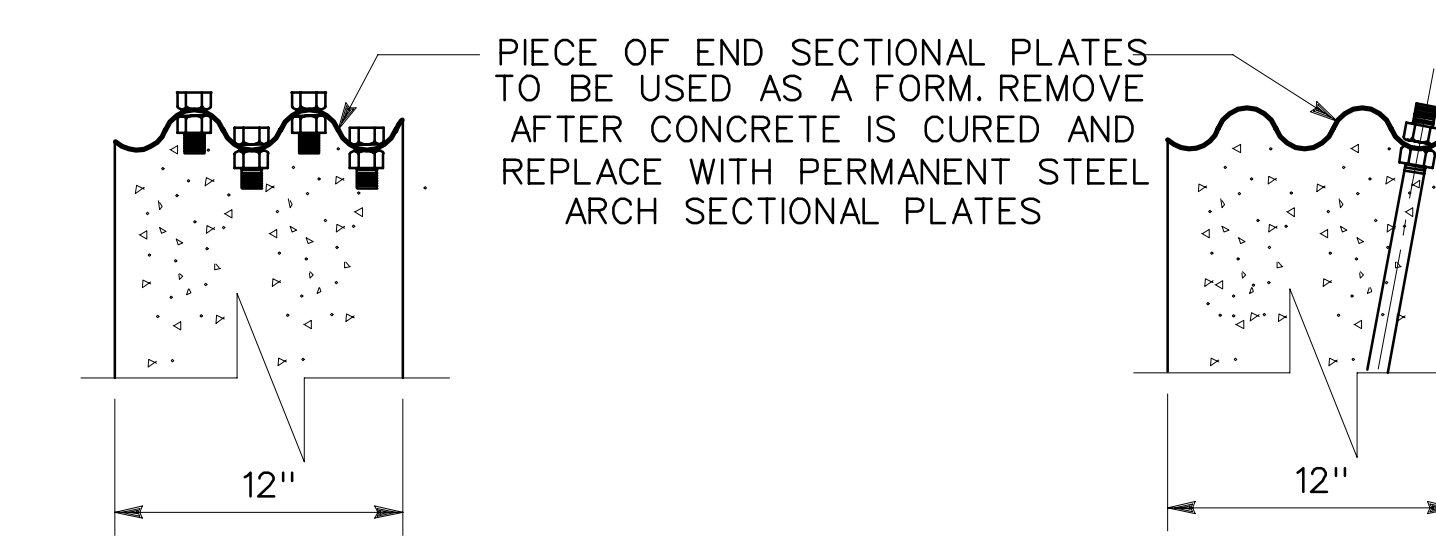
JOINT TAPE INTALLATION DETAIL NO SCALE



SECTION B SCALE 1/2"=1'-0"



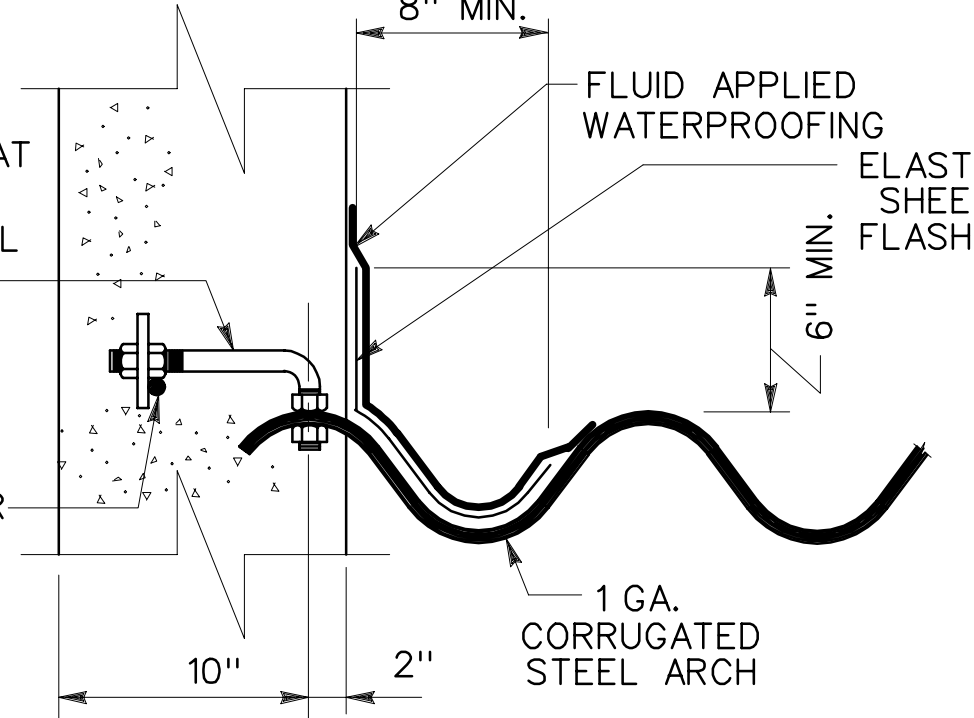
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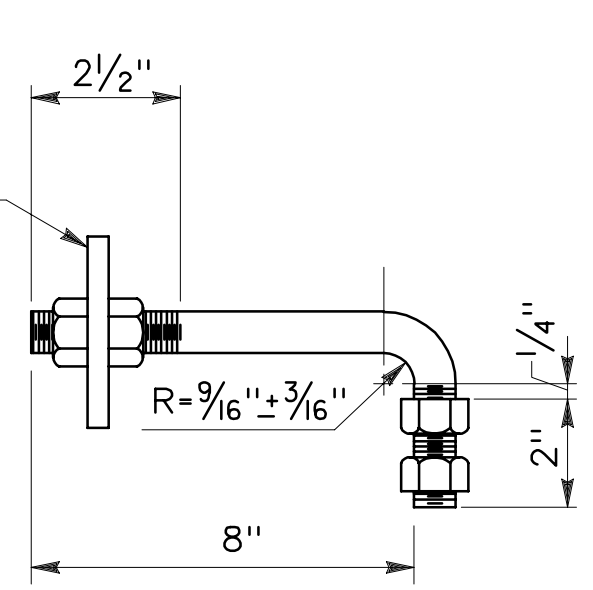
OPTIONAL SECTION B SCALE 1/2"=1'-0"



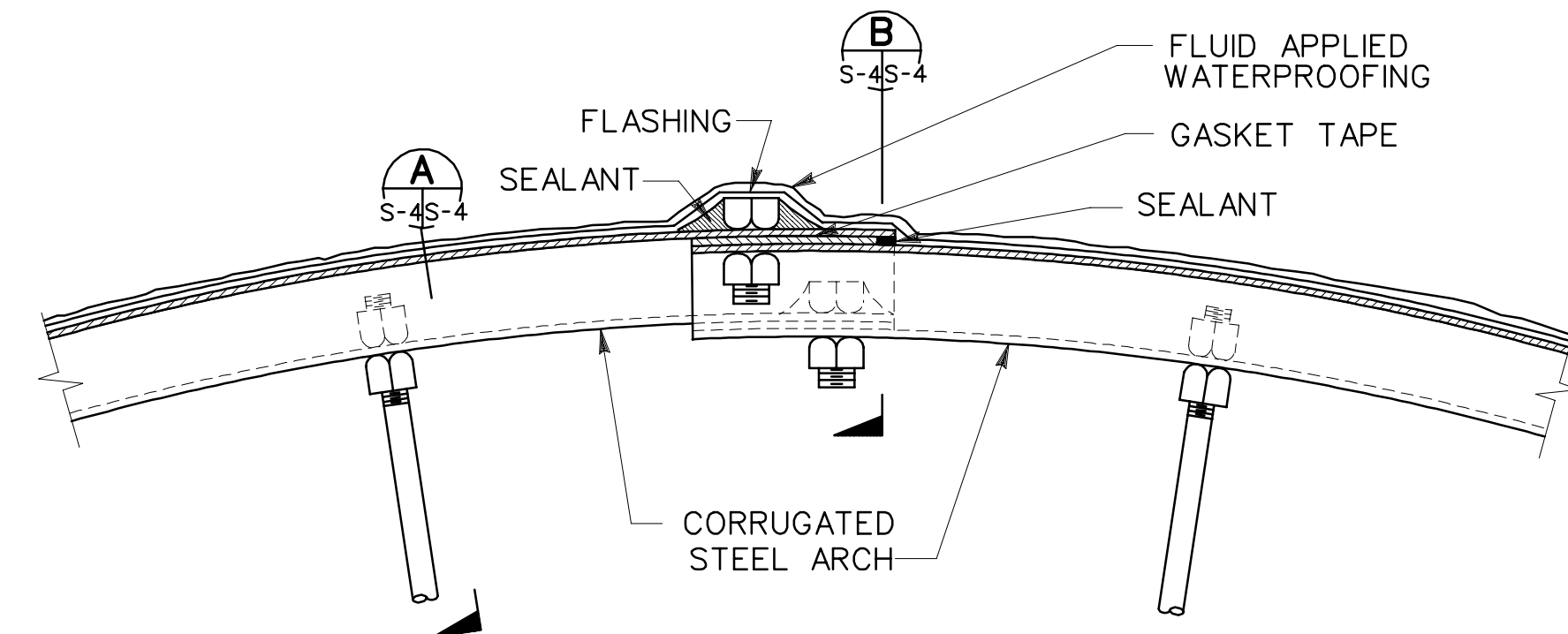
OPTIONAL SECTION A SCALE 1/2"=1'-0"



DETAIL 2 SCALE 1/2"=1'-0"

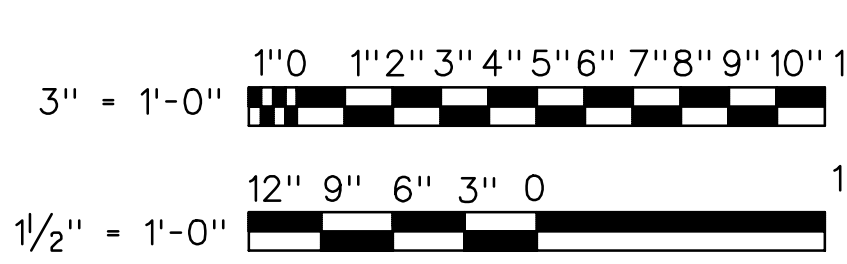


BOLT DETAIL SCALE 3/4"=1'-0"



DETAIL 3 NO SCALE

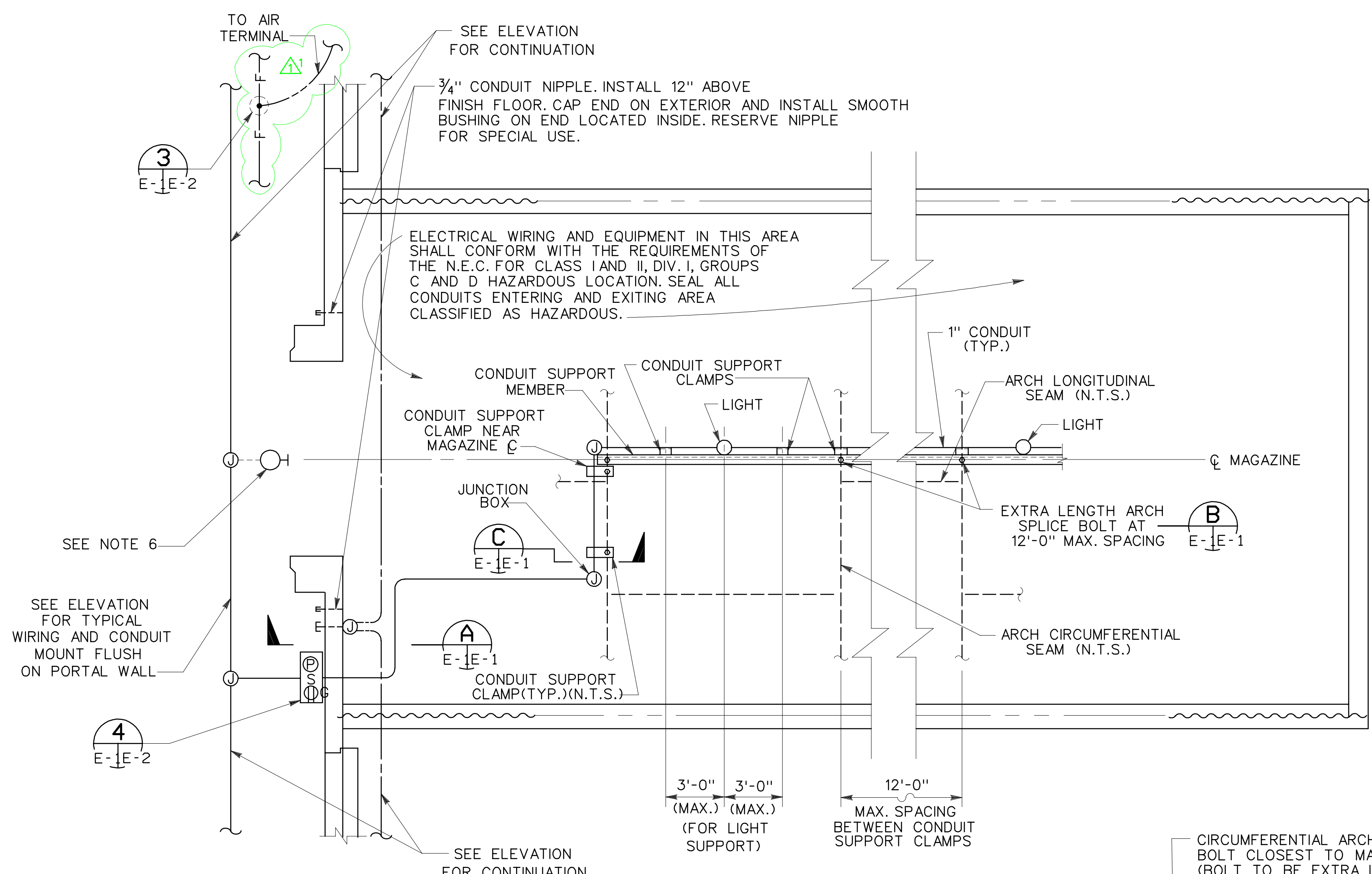
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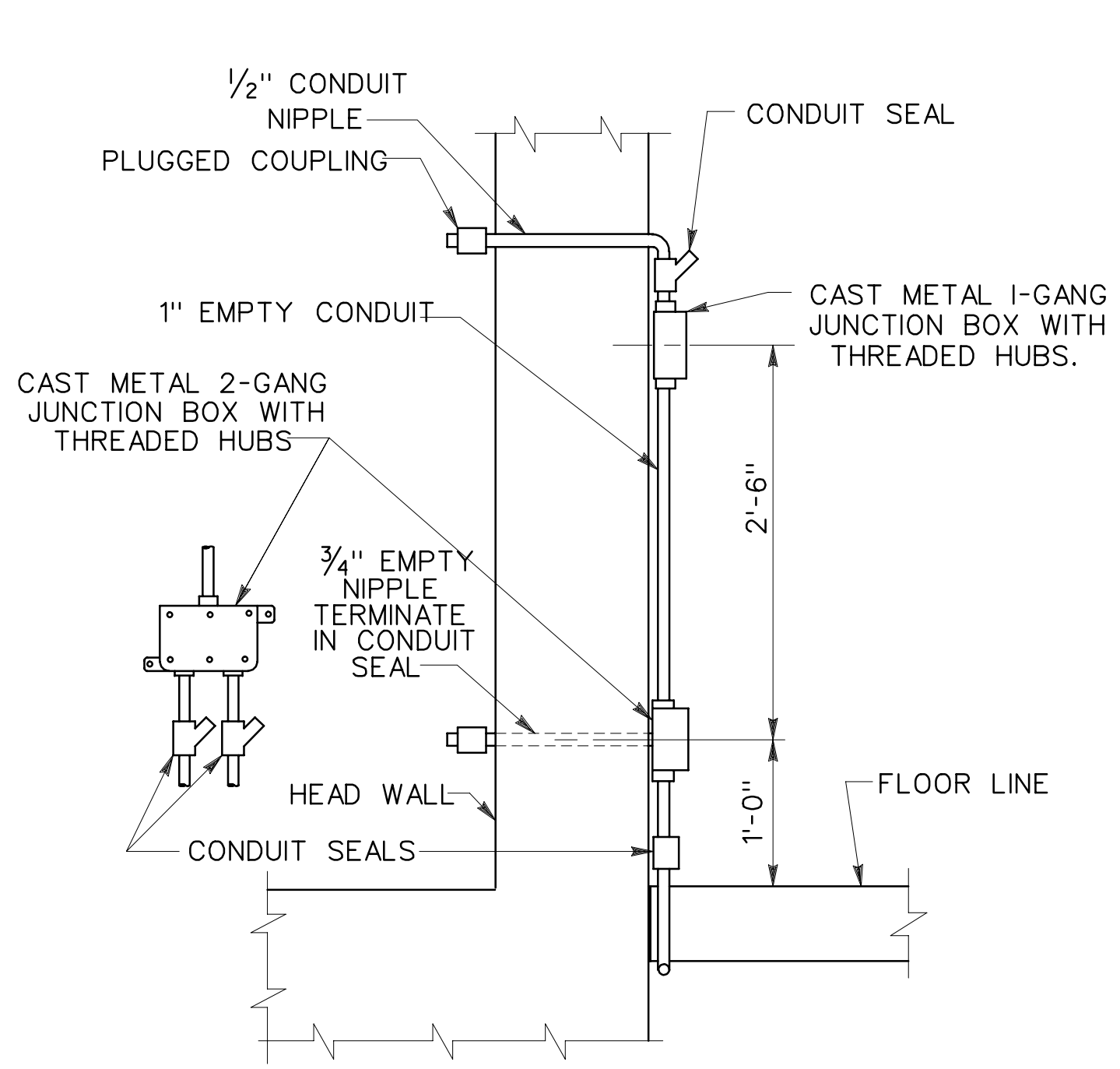
Symbol	Description	Revisions	Date	Approved
Δ	GENERAL REVISION FOR LIGHTNING PROTECTION		11JUN88	WAW

U.S. ARMY ENGINEER DIVISION, HUNTSVILLE, ALABAMA
CORPS OF ENGINEERS, HUNTSVILLE, ALABAMA

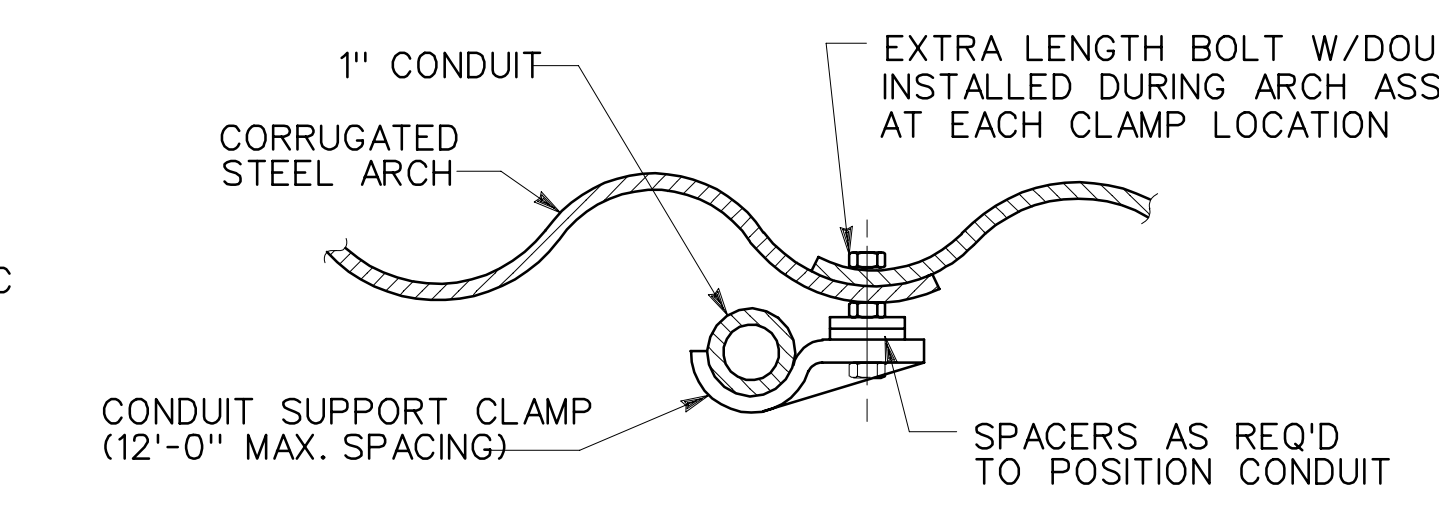
Site adapt A/E :	U.S. Army Corps of Engineers	MAGAZINE, STEEL OVAL-ARCH, EARTH COVERED MISCELLANEOUS DETAILS	
Dwn. by: RDP	Ckd. by: AF	Date: 30 OCT 92	Design file no.: 65859
Reviewed by:	Date:	Sheet reference number:	Rev.
Approved by:	Drawing code: STD 421-80-03	S-4	Sheet 5 of 10



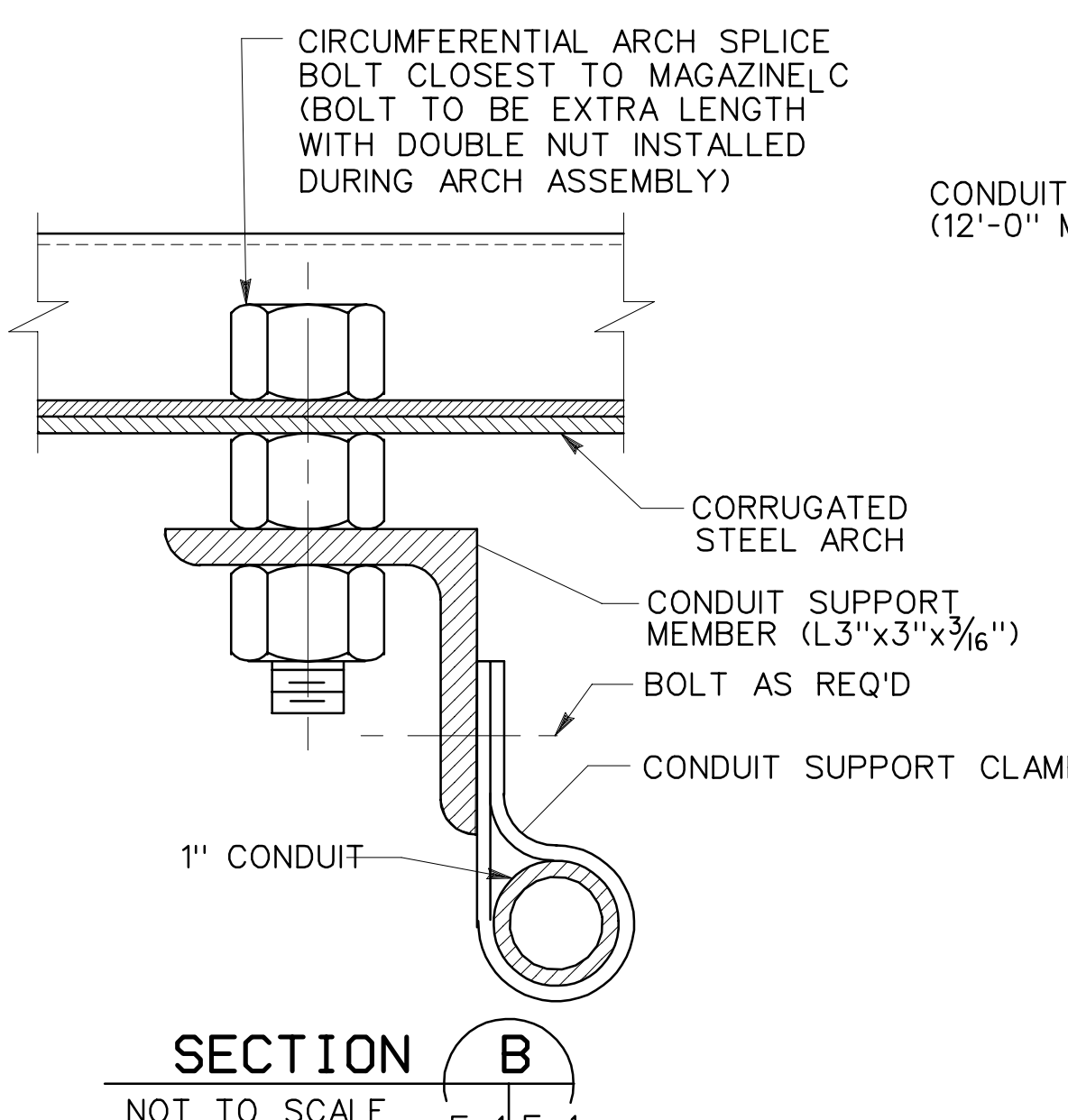
PLAN SCALE: 1/4" = 1'-0"



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



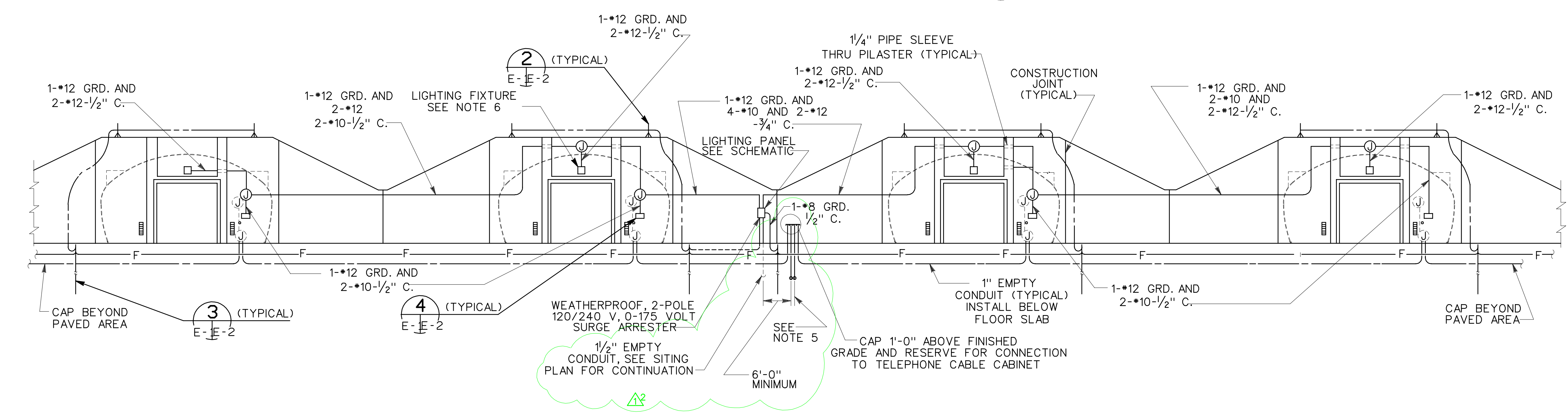
SECTION B NOT TO SCALE E-1/E-2



SECTION C NOT TO SCALE E-1/E-2

- LEGEND (FOR SHEETS E-1 AND E-2)**
- WALL MOUNTED EXTERIOR LIGHTING FIXTURE. SEE NOTE 6.
 - CEILING MOUNTED LIGHTING FIXTURE. SEE DETAIL E-1/E-2
 - ⊞ 3-GANG OUTLET BOX WITH SINGLE GANG COVER FOR PILOT LAMP, SINGLE POLE SWITCH AND DUPLEX CONVENIENCE OUTLET WITH GROUND FAULT INTERRUPTER ALL SUITABLE FOR USE OUTDOORS.
 - ⊞ JUNCTION BOX, CAST METAL WITH THREADED WALLS OR HUBS.
 - CONDUIT RUN CONCEALED BELOW GRADE OR FLOOR SLAB. NOTE: ANY CONDUIT RUN NOT OTHERWISE INDICATED SHALL BE 1/2" AND CONTAIN THREE NO. 12 AWG WIRES. A GREATER NUMBER OF WIRES ARE SHOWN WITH CROSS LINES AS FOLLOWS: GROUND CONDUCTOR
 - THE LONG CROSS LINE INDICATES THE IDENTIFIED GROUNDED NEUTRAL CONDUCTOR AND THE SHORT CROSS LINES INDICATES THE PHASE CONDUCTORS. UNLESS OTHERWISE INDICATED, ALL CONDUCTORS ARE NO. 12 AWG
 - CONDUIT RUN INSTALLED EXPOSED ON WALLS OR CEILING. WIRING SHALL BE SAME AS IN NOTE FOR CONCEALED CONDUIT RUN.
 - AUXILIARY EMPTY CONDUIT RUN CONCEALED BELOW GRADE OR FLOOR SLAB SIZED AS INDICATED.
 - ⊞ CONDUIT TERMINATED WITH A PLUGGED COUPLING.
 - ⊞ VALVE TYPE SECONDARY SURGE ARRESTER (L.A.)
 - ⊞ LIGHTNING AIR TERMINAL. EXTEND 4'-0" ABOVE PROTECTED OBJECT.
 - GROUND ROD
 - FACILITY COUNTERPOISE SYSTEM, NO. 1/0 AWG. BARE COPPER WIRE. RUN 2'-6" BELOW GRADE.
 - DOWN CONDUCTOR FROM AIR TERMINAL, NO. 2 AWG. BARE COPPER WIRE.
 - ⊞ (2'-6" (76.2)) UNLESS OTHERWISE INDICATED, THE PARENTHETIC METRIC DIMENSIONS SHOWN ARE IN CENTIMETERS AND ARE MINIMUM ACCEPTABLE.

- NOTES: (FOR SHEETS E-1 AND E-2)**
1. HOLES SHALL NOT BE MADE IN CONCRETE ARCH ROOFING FOR INSTALLATION OF ELECTRICAL WORK.
 2. THE CONDUIT SYSTEM ON THE FRONT OF STRUCTURE IS TO HAVE SUPPORTS SPACED NOT MORE THAN 8'-0". SUPPORTS ON EACH SIDE OF CONSTRUCTION JOINTS SHALL NOT EXCEED 5'-0".
 3. RUNNING THREAD COUPLING CONNECTIONS ARE NOT PERMITTED FOR THE RIGID CONDUIT SYSTEMS.
 4. FOR THE 120/240 VOLT, SINGLE PHASE, 3-WIRE SERVICE, INSTALL A 1/2" EMPTY CONDUIT 2'-0" BELOW FINISHED GRADE AND TERMINATE WITH A PLUGGED COUPLING NOT LESS THAN 5'-0" BEYOND PAVED AREA.
 5. FOR THE INSTALLATION BY OTHERS OF A TELEPHONE TYPE CABLE, INSTALL 2 1/2" CONDUITS WITH PULL WIRE, 2'-0" BELOW FINISHED GRADE AND TERMINATE WITH A PLUGGED COUPLING NOT LESS THAN 5'-0" BEYOND PAVED AREA.
 6. THE LIGHTING FIXTURE SHOULD BE HIGH PRESSURE SODIUM TYPE. ALL EXTERIOR LIGHTS SHALL BE CONNECTED ON THE SAME CIRCUIT TO FACILITATE CONTROL AT THE PANELBOARD. HOWEVER, NOT MORE THAN EIGHT FIXTURES SHALL BE CONNECTED TO ANY ONE 20 AMP CIRCUIT.
 7. THE NUMBER OF INTERIOR LIGHTING FIXTURES VARIES, DEPENDING ON INTERNAL LENGTH OF MAGAZINE, AS FOLLOWS:
- | LENGTH OF MAGAZINE | NO. OF FIXTURES |
|--------------------|-----------------|
| 20'-24' | 4 |
| 25'-36' | 4 |
| 37'-48' | 4 |
| 49'-60' | 6 |
| 61'-89' | 8 |
8. INSTALL AN INTERMEDIATE AIR TERMINAL ANCHORED TO STRUCTURE ROOF OVER STRUCTURE WHERE INTERIOR LENGTH OF MAGAZINE EXCEEDS 48 FEET (SEE SHEET 10 OF 10).



ELEVATION NOT TO SCALE



Symbol	Description	Date	Approved
⊞	GENERAL REVISION/LIGHTNING PROTECTION	11JUN98	WLS

U.S. ARMY ENGINEER DIVISION, HUNTSVILLE, ALABAMA

Site adapt A/E :

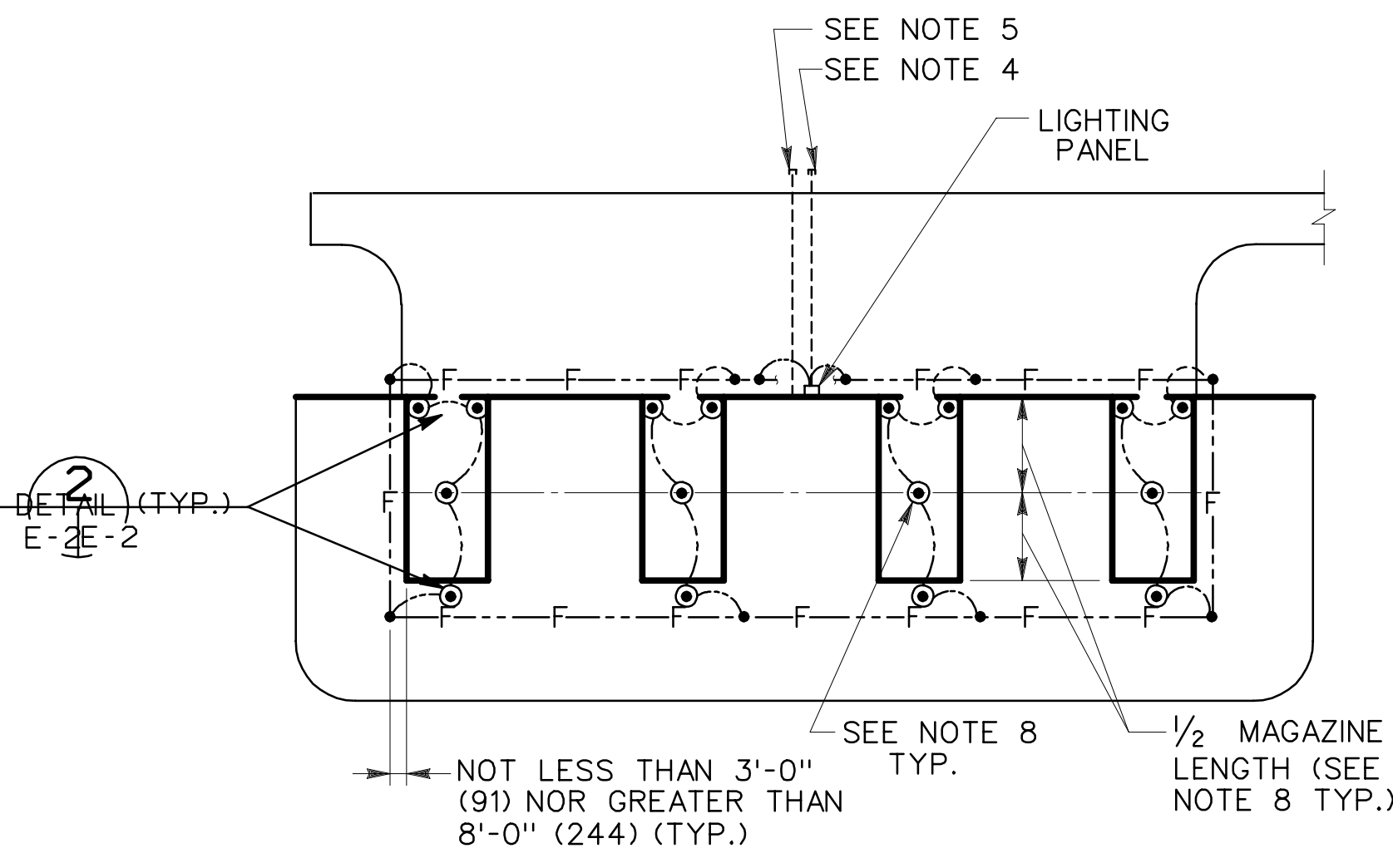
MAGAZINE, STEEL OVAL-ARCH, EARTH COVERED

ELECTRICAL PLAN AND SECTIONS

Dwn. by: RDP Ckd. by: FH

Reviewed by: Date: 30 OCT 92 Sheet reference number: Design file no.: 65863 Rev.

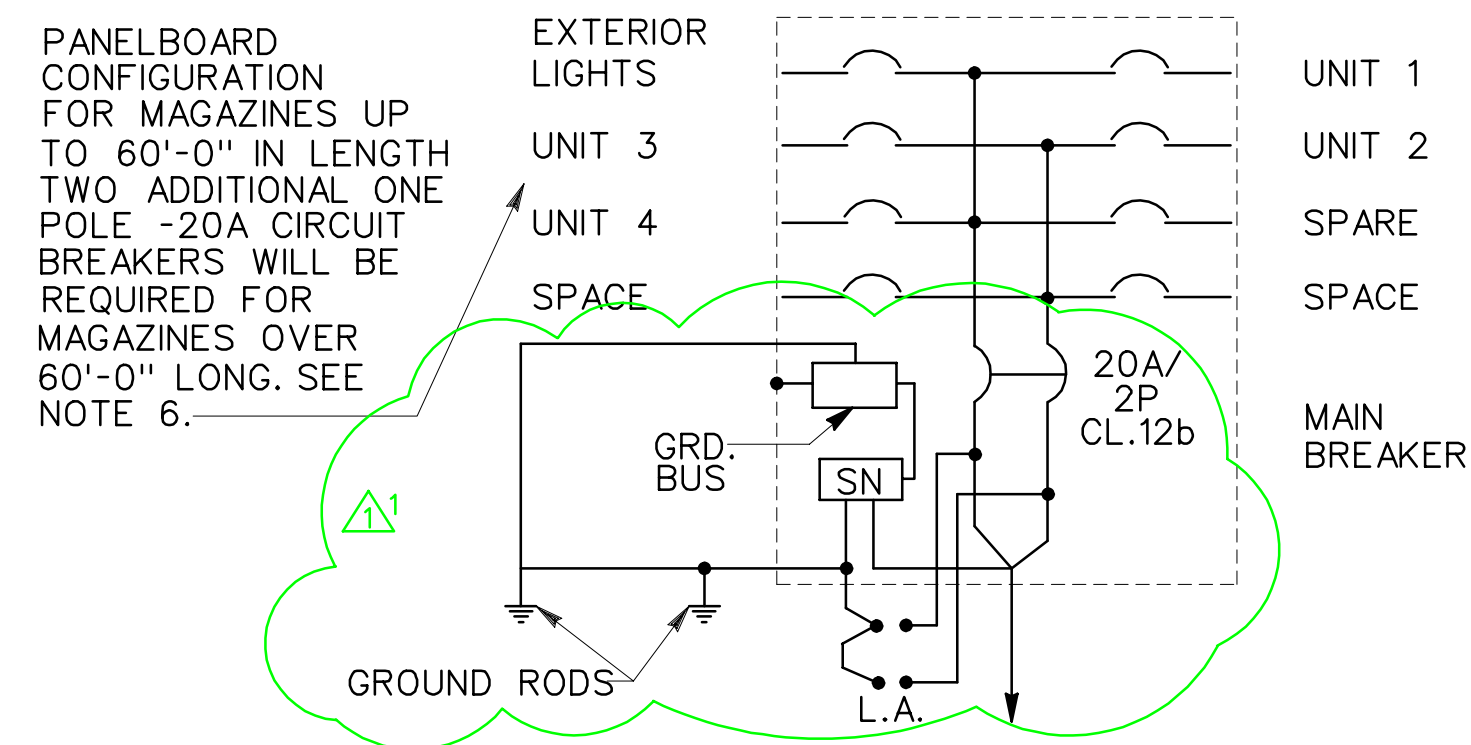
Approved by: Drawing code: STD 421-80-03 **E-1** Sheet 9 of 10



SITING PLAN
NOT TO SCALE

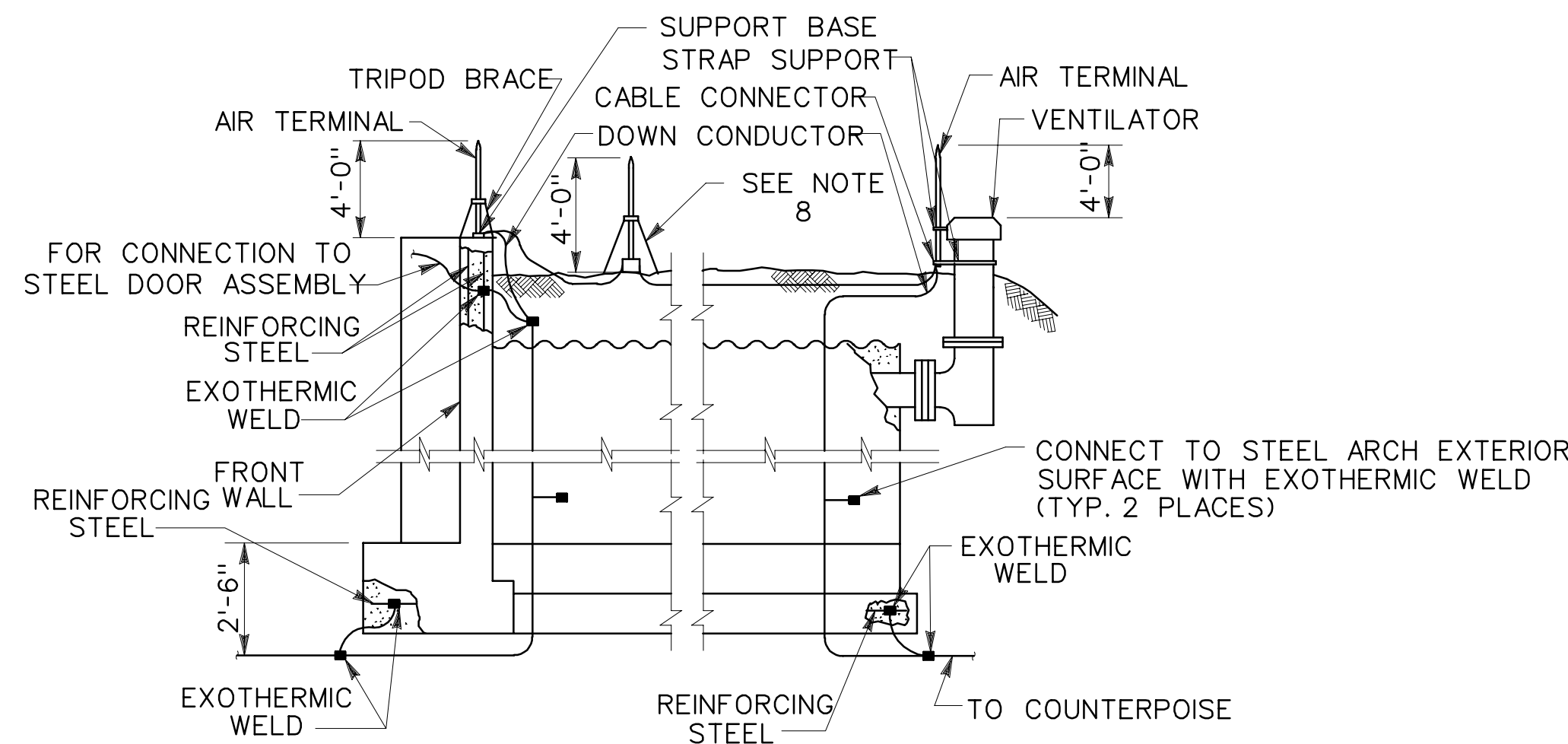
CONNECTED LOAD PER UNIT			
LIGHTING (WATTS)		RECEPTACLES (WATTS)	TOTAL (WATTS)
EXTERIOR	INTERIOR	(1) (2)	(1) (2)
250	806	200	1256

- ① ASSUMING A 60 FT. MAGAZINE
- ② MAX. LOAD - 4 BAYS - 90 FT. MAGAZINE : 5.06 KVA

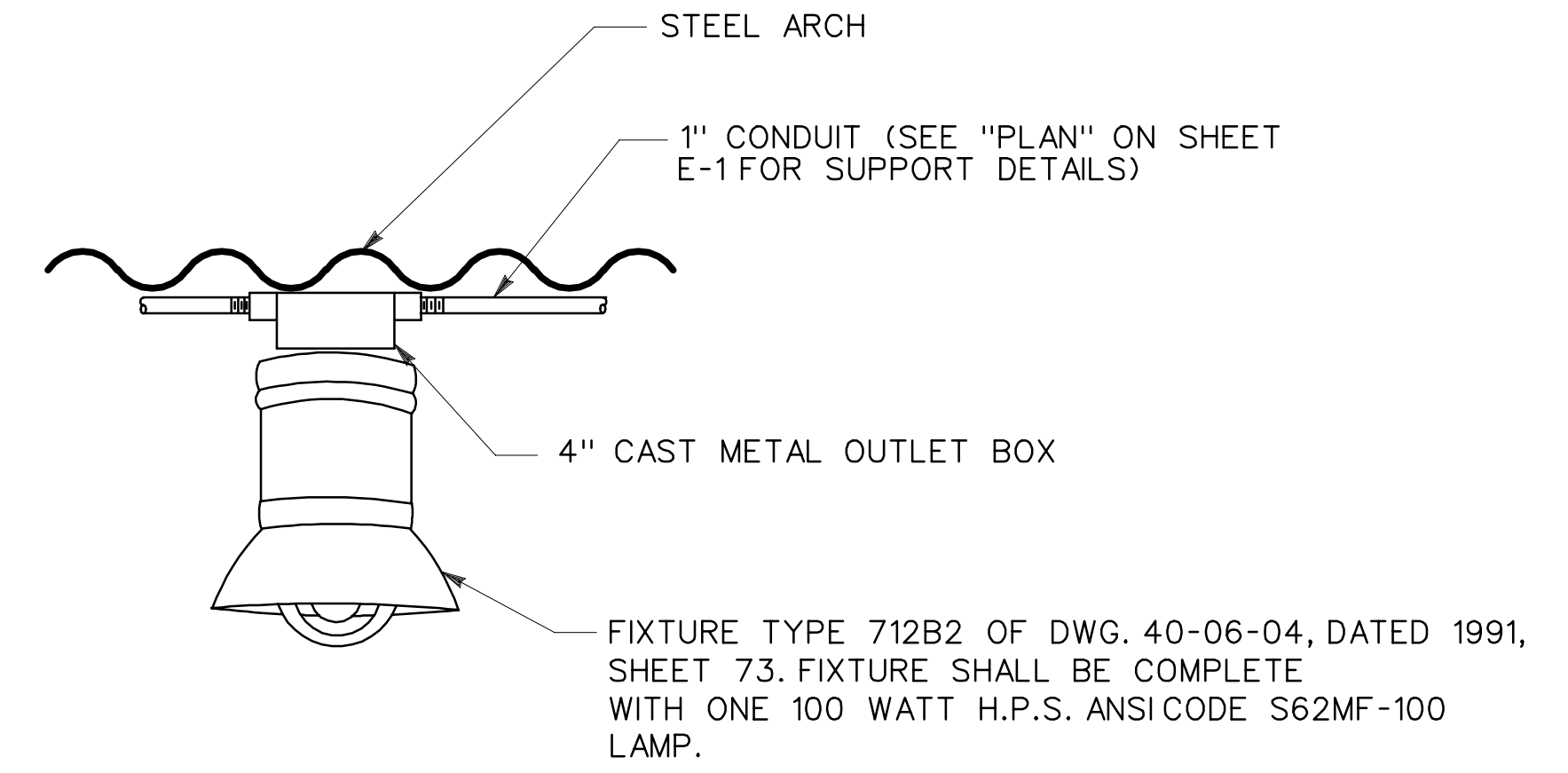


120/240V.-1 PHASE-3W. WITH GROUND BUS, SURFACE MOUNTED IN WEATHERPROOF ENCLOSURE WITH 100 A. MAINS. ALL C/B'S RATED 20A-1P-CL. 12b EXCEPT AS NOTED OTHERWISE. SOLID NEUTRAL BUS SHALL BE CONNECTED TO THE GROUND BUS ONLY IN THE PANELBOARD. BOND PANELBOARD ENCLOSURE TO GROUND BUS.

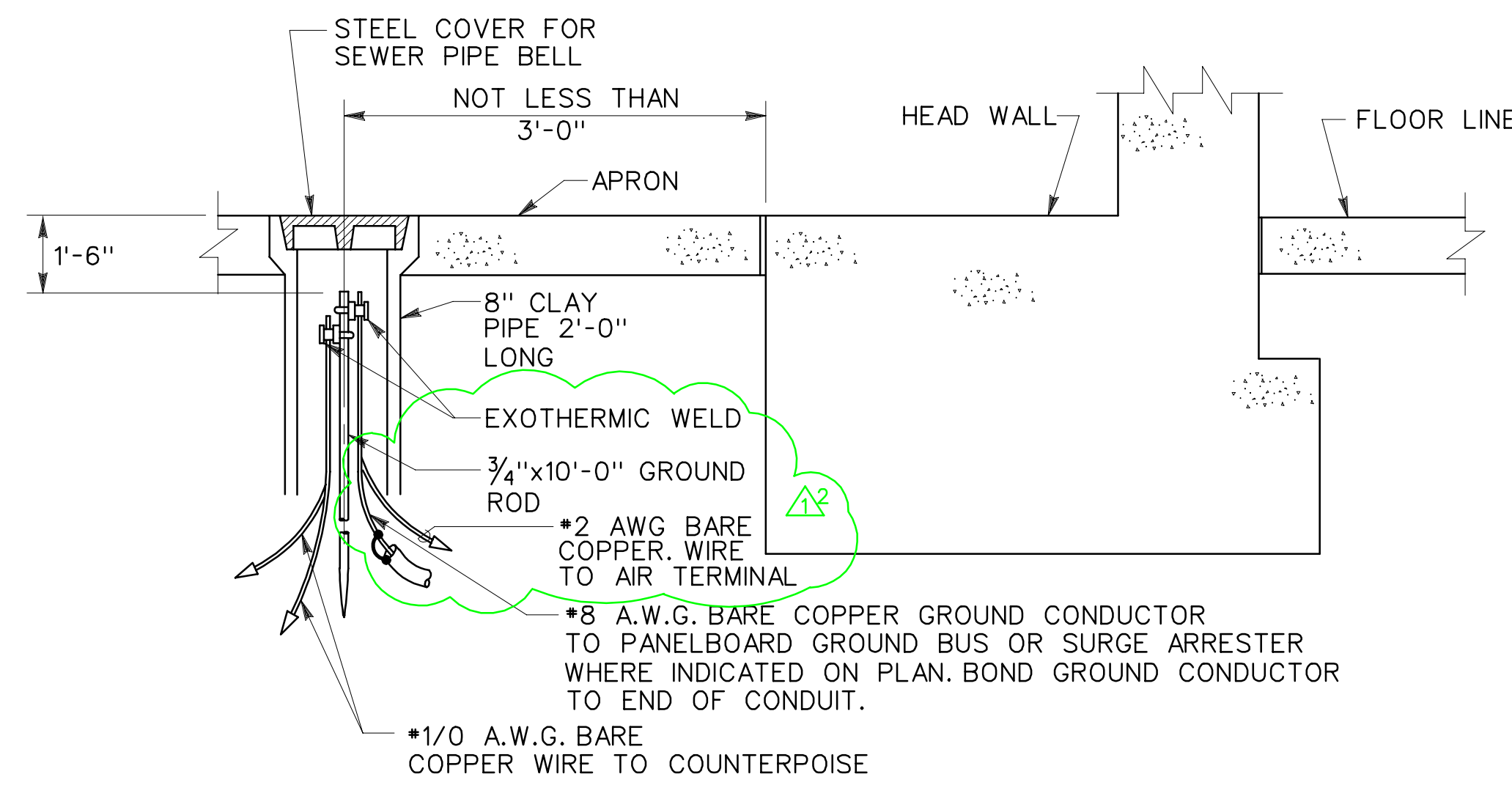
LIGHTING PANELBOARD SCHEMATIC



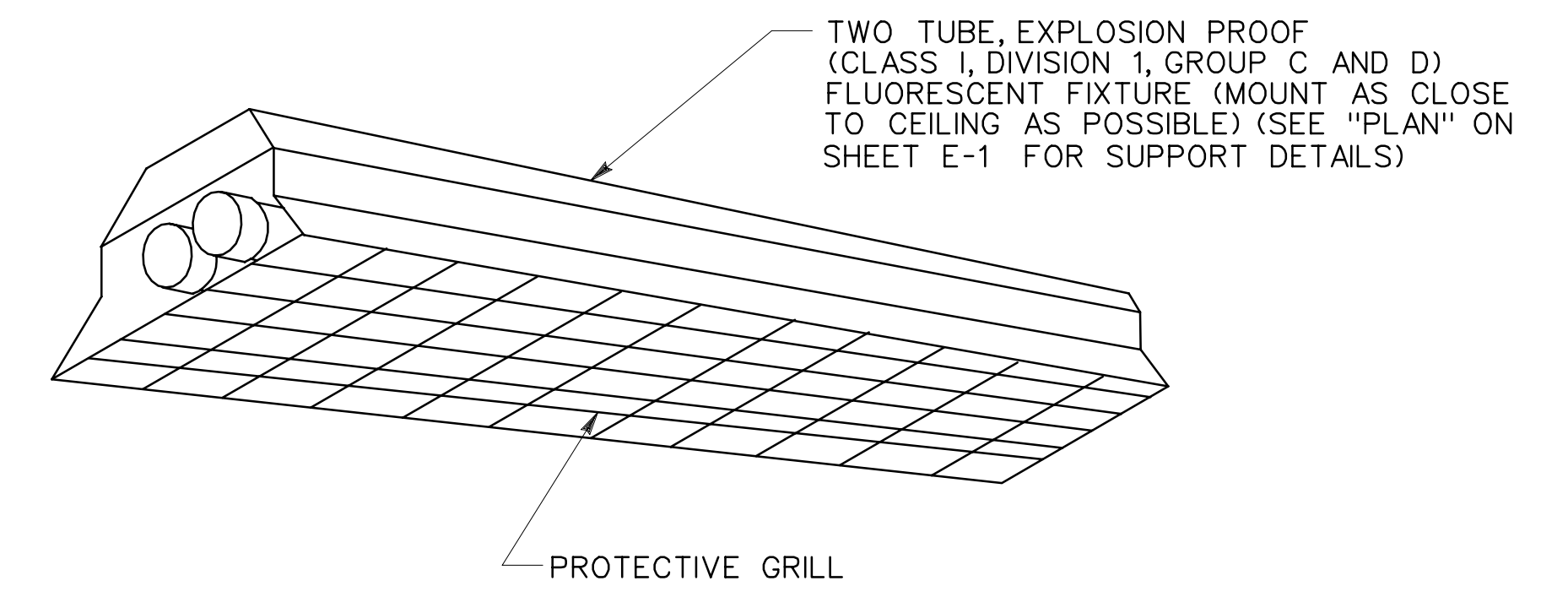
DETAIL 2
NOT TO SCALE E-1/E-2 E-2



DETAIL 1
NOT TO SCALE E-1/E-2

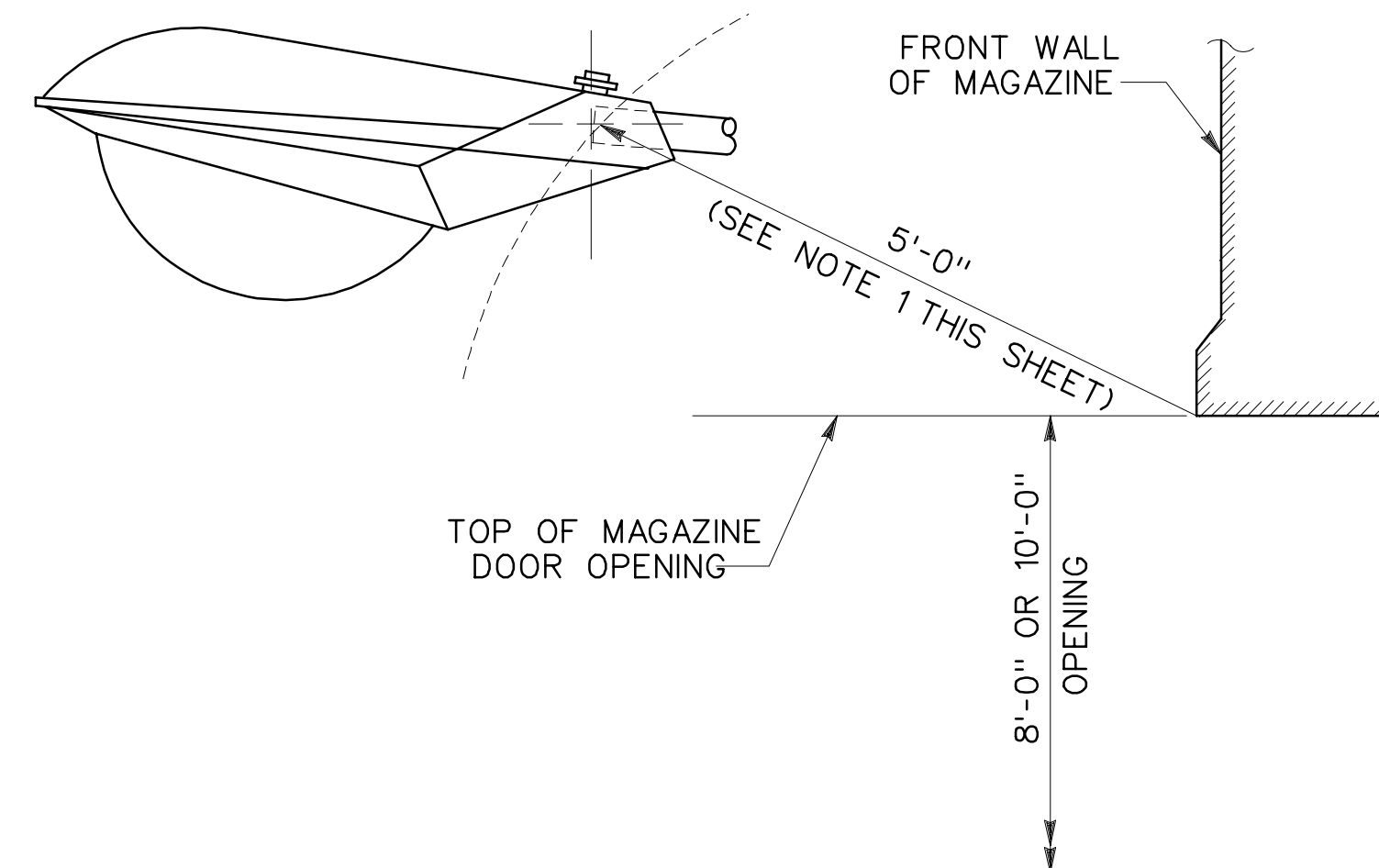


DETAIL 3
NOT TO SCALE E-1/E-2



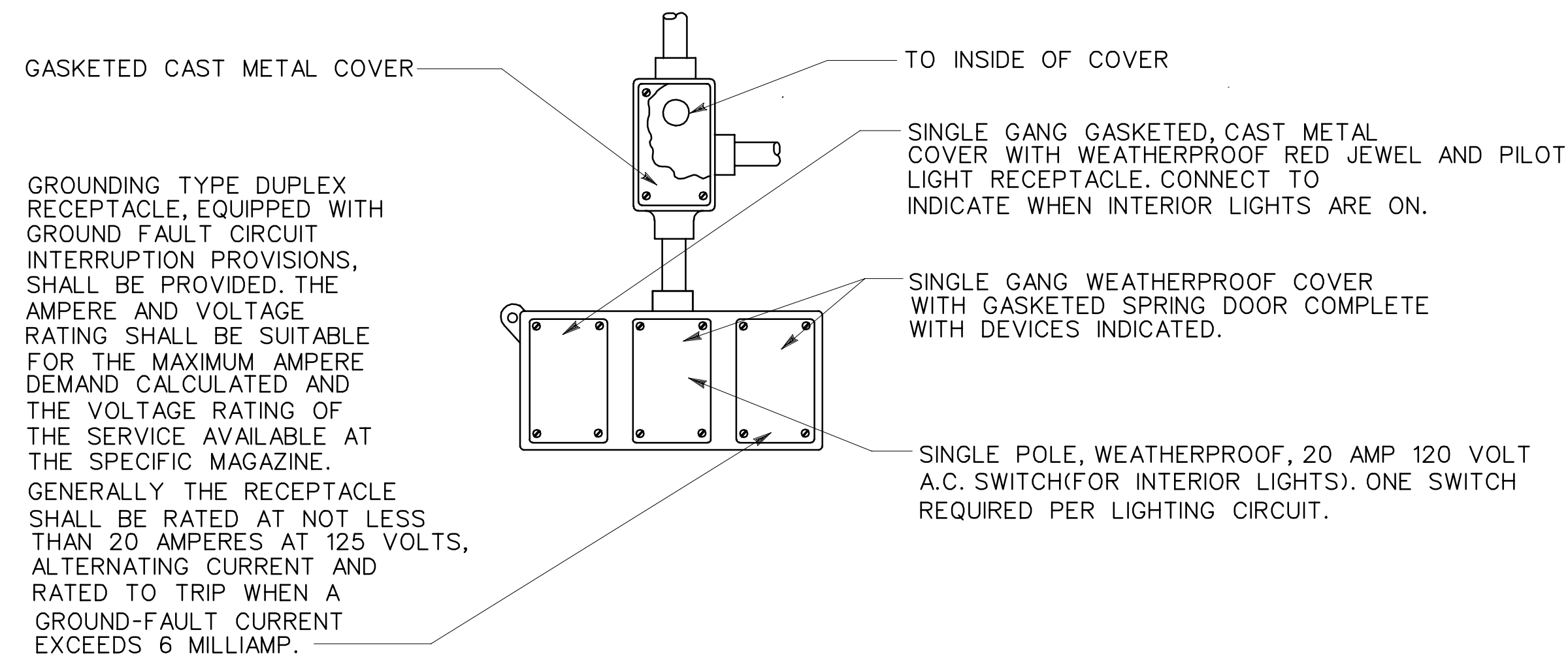
DETAIL - OPTIONAL LIGHTING

MAY BE USED IN PLACE OF H.P.S. FIXTURE INSIDE OF MAGAZINE



FIXTURE TYPE 402-C-3, 125 WATT HIGH PRESSURE SODIUM

NOT TO SCALE
U.S. ARMY CORPS OF ENGINEERS
STD. DWG. NO. 40-06-04 SHEET 52,
DATED 1991



DETAIL 4
NOT TO SCALE E-1/E-2

NOTE:

- 1. THE TYPE 402 LIGHT FIXTURE SHALL BE LOCATED ON THE C OF THE MAGAZINE AND OUTSIDE OF A 5'-0" RADIUS FROM THE FRONT TOP EDGE OF THE MAGAZINE DOOR OPENING. THE DOOR TRACK HOOD SHOULD NOT BLOCK DIRECT LIGHTING ON THE LOWER TWO-THIRDS OF THE DOOR.

Symbol	Description	Date	Approved
AE	GENERAL REVISION/LIGHTNING PROTECTION	11JUN98	WLS

U.S. ARMY ENGINEER DIVISION, HUNTSVILLE CORPS OF ENGINEERS HUNTSVILLE, ALABAMA	
Site adapt A/E :	
MAGAZINE, STEEL OVAL-ARCH, EARTH COVERED ELECTRICAL DETAILS	
Dwn. by: RDP	Ckd. by: FH
Reviewed by :	Date : 30 OCT 92
Approved by :	Drawing code : STD 421-80-03
Sheet reference number :	Design file no.: 65864
E-2	
Sheet 10 of 10	