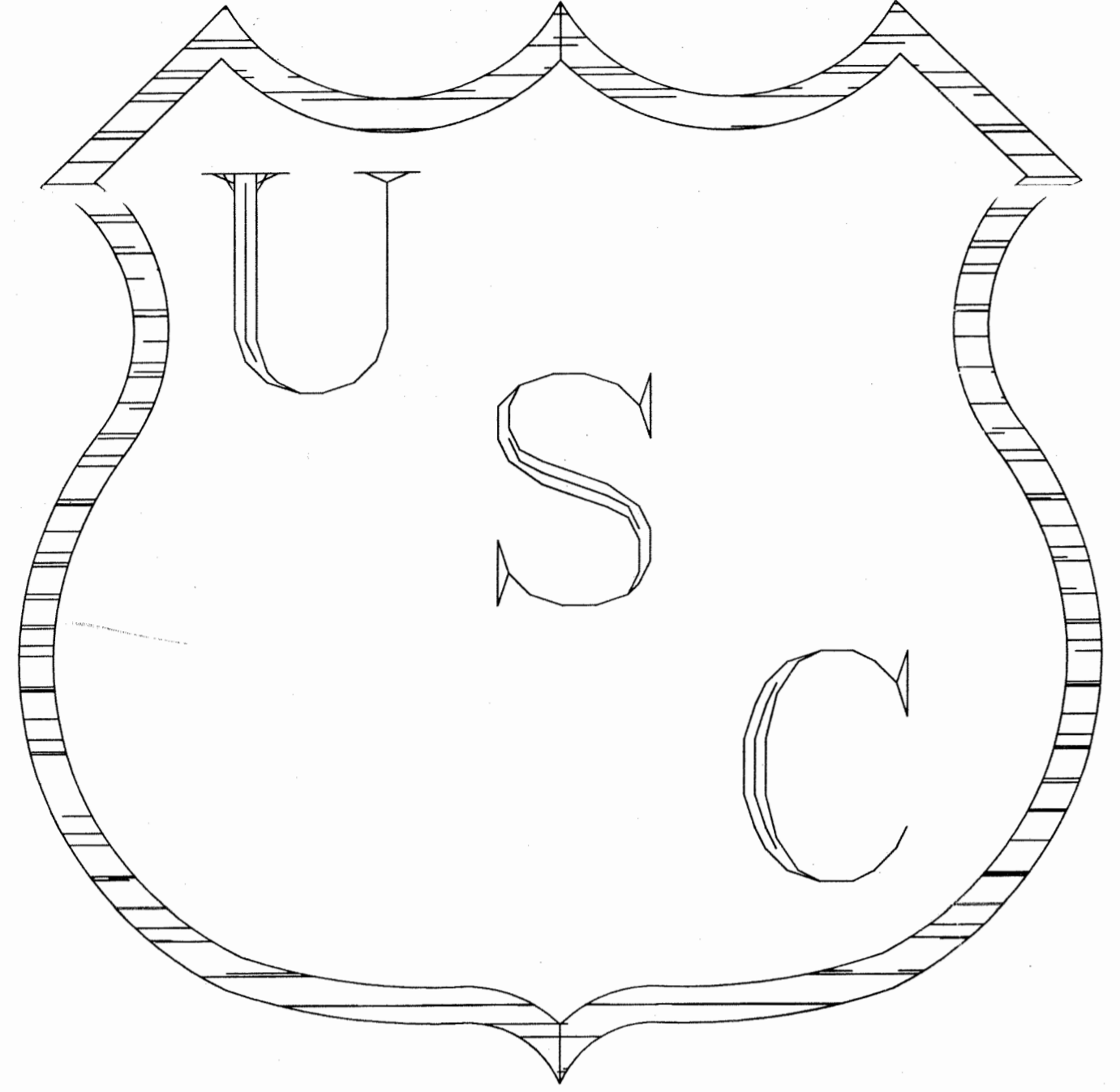


VST EN MRI



UNIVERSAL SHIELDING CORP.

20w. JEFRYN BOULEVARD
DEER PARK, N.Y. 11729

PHONE {631} 667-7900 FAX {631} 667-7912
E-MAIL: USC4SHIELD@AOL.COM

CUSTOMER:

PROJECT:

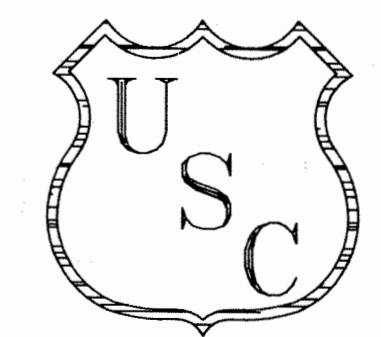
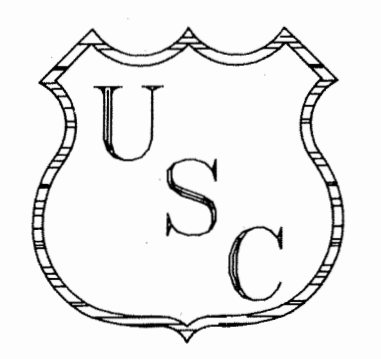
TRISTAN ASSOCIATES

MRI DEPARTMENT-
TRISTAN ASSOCIATES

PHILIPS INTERA 1.5T

USC:- 12843N

IMPORTANT! MUST HAVE!
PLEASE SPECIFY THE ISO-CENTER OF THE
MAGNET AND/OR CRYOGEN PIPE ALSO SPECIFY
THE INTERIOR FINISH, MAGNET ENTRY &
AIR VENTS OR FABRICATION OF ROOM WILL
BE DELAYED



GENERAL NOTES

- ALL OUTSIDE DIMENSIONS {OD} ARE TO THE EXTERIOR WALLS AND/OR CEILING OF THE RF ENCLOSURE.
- PARENT ROOM FLOOR MUST BE FLAT AND LEVEL WITHIN 1/4" EVERY 10'-0" {NON-ACCUMULATIVE} NOT BY UNIVERSAL SHIELDING CORP.
- A SLAB DEPRESSION OF 1 13/16" IS REQUIRED TO ACHIEVE A SILL LEVEL WITH ADJACENT ROOM OR HALLWAY FLOOR FINISH. NOT BY UNIVERSAL SHIELDING CORP.
- PARENT ROOM FLOOR MUST BE FREE OF ANY OBSTRUCTIONS!
- TO INSURE AGAINST GROUNDING, A 2" MINIMUM CLEARANCE IS REQUIRED BETWEEN RF ENCLOSURE AND BUILDING CONSTRUCTIONS.
- LOCATION OF ISO CENTER SHALL NOT BE DETERMINED BY UNIVERSAL SHIELDING CORP.
- FINAL FABRICATION CANNOT BE COMPLETED UNTIL DRAWINGS ARE APPROVED!
- THE RF ENCLOSURE CEILING SYSTEM IS TYPICALLY SUPPORTED BY PARENT ROOM OVERHEAD CONSTRUCTION WITH THE USE OF DIELECTRICALLY ISOLATED, ADJUSTABLE HANGERS. THE RF CEILING LOADS ARE APPROXIMATELY 5.5 LBS PER SQ. FT EXCLUSIVE OF INTERIOR SUSPENDED CEILINGS, LIGHTING AND DUCTWORK. IT IS THE RESPONSIBILITY OF THE OWNER TO INSURE THAT THE OVERHEAD CONSTRUCTION WILL ADEQUATELY SUPPORT THE RF ENCLOSURE CEILING.
- THE CUSTOMER OR CONTRACTOR MUST PROVIDE A CLEAN, DRY STAGING AREA FOR LAYOUT AND STORAGE OF RF ROOM COMPONENTS AS CLOSE AS POSSIBLE TO THE RF ENCLOSURE INSTALLATION SITE.
- UNIVERSAL SHIELDING CORP. INSTALLATION CREWS SHALL REQUIRE A MINIMUM OF TWO {2} SERVICE CONNECTIONS FOR DROP CORDS. {117VAC, 20 AMP}.
- THE CONTRACTOR/OWNER TO PROVIDE REFUSE CONTAINERS FOR THE DISPOSAL OF EXPENDABLE MATERIALS FROM THE RF ENCLOSURE INSTALLATION SITE. THE CONTRACTOR/OWNER SHALL BE RESPONSIBLE FOR THE REMOVAL OF THE REFUSE CONTAINERS.
- AT THE COMPLETION OF THE BASIC ENCLOSURE, THE UNIVERSAL SHIELDING CORP. INSTALLATION SUPERVISOR WILL PERFORM AN ISOLATION TEST TO DEMONSTRATE THAT THE RF ENCLOSURE IS ISOLATED FROM GROUND BY A MINIMUM OF 10,000 OHMS. DURING THE INSTALLATION OF THE VARIOUS SYSTEMS INTO THE RF ENCLOSURE, AN INDIVIDUAL SHOULD BE DESIGNATED TO CHECK THE ISOLATION OF THE RF ENCLOSURE DURING THE DAY. UNIVERSAL SHIELDING CORP. RECOMMENDS THIS TEST TO BE PERFORMED APPROXIMATELY FOUR {4} TIMES DAILY. IF A GROUND IS DETECTED, IT CAN BE FOUND BY REVIEWING THE ADDITIONAL SYSTEMS THAT WERE INSTALLED INTO THE RF ENCLOSURE AFTER THE LAST SUCCESSFUL TEST.
- DO NOT PENETRATE RF PANELS MORE THAN 5/8" WHEN ATTACHING INTERIOR FINISHES. THESE SCREWS SHOULD BE ZINC PLATED AND BE SHEET METAL TYPE. INTERIOR FINISH SCREWS SHOULD NOT PENETRATE OR ATTACH TO THE RF FRAMING SYSTEM. DO NOT PENETRATE BOTH STEEL SKINS OF RF PANEL UNDER ANY CIRCUMSTANCES WITHOUT THE APPROVAL OF UNIVERSAL SHIELDING CORP!

FIRE RATING

THE NATIONAL FIRE PROTECTION ASSOCIATION LIFE SAFETY CODE 101, SECTION 6-2, "INTERIOR FINISHES", HAS A CLASSIFICATION OF MATERIALS WITH RESPECT TO FLAME SPREAD AND SMOKE DEVELOPED.

THE CLASSIFICATIONS ARE AS FOLLOWS:

CLASS A INTERIOR FINISH: FLAME SPREAD 0-25; SMOKE DEVELOPED 0-450

CLASS B INTERIOR FINISH: FLAME SPREAD 26-75; SMOKE DEVELOPED 0-450

CLASS C INTERIOR FINISH: FLAME SPREAD 76-200; SMOKE DEVELOPED 0-450

INTERIOR FINISH MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH NFPA 255, "METHOD OF TEST OF SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS" {ASTM E84}.

OUR PANELS TESTED JANUARY 12 1987, RECEIVED A FLAME SPREAD OF 0, IT WOULD FALL INTO THE CLASS A INTERIOR FINISH CATEGORY IN ACCORDANCE WITH NFPA 101, SECTION 6-2.

RF PANELS

RF PANELS SHALL CONSIST OF 26 GA. GALVANIZED STEEL BONDED TO A WOOD CORE TYP FLOOR WALLS & CEILING UNLESS NOTED OTHERWISE

ACCESSORY SCHEDULE

RFI/EMI SHIELDED DOOR

DOOR#	
QUANTITY	1
SIZE	48" x 84"
TYPE	RCM-154FS
SWING	LHI
FINISH	UNSTAINED RED OAK
SILL TYPE	FLUSH
LOCK	T.B.D.

RFI/EMI WINDOW

QTY	SIZE {HEIGHT x WIDTH} {CLEAR VIEW}
1	3'-0" x 4'-0"
2	3'-11 1/4" X 2'-1/16"
-	3'-11 1/4" X 1'-7 3/8"

INTERIOR EYEBOLTS

UNIVERSAL SHIELDING CORP. WILL SUPPLY EYEBOLTS {1/4"-20 X 3/4" INNER DIAMETER} ON A GRID OF 4'-0" X 4'-0". FOR ENTIRE RF ENCLOSURE CEILING TO SUSPEND ACOUSTICAL CEILING.

FILTER BOX

- USC TO INSTALL MAGNET VENDOR SUPPLIED FILTER BOX AT THE TIME OF MAGNET INSTALLATION.
- RF ENCLOSURE WILL BE TESTED PRIOR TO AND AFTER FILTER BOX AND MAGNET INSTALLATION. TESTING BY UNIVERSAL SHIELDING CORP.

RFI/EMI ELECTRICAL FILTERS

QTY	PART #	RATING	USE
	T.B.D.		
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

NOTE: INSTALLATION BY UNIVERSAL SHIELDING CORP. WIRING BY OTHERS.

SEE FILTER DETAILS FOR SPECIFICATIONS.

PIPE PENETRATIONS

QTY	TYPE	SIZE	USE
2	SPRKLER	1"	-
2	SPRKLER	1 1/4"	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

NOTE: EXTERNAL DIELECTRIC CONNECTIONS ARE NOT PROVIDED OR INSTALLED BY UNIVERSAL SHIELDING CORP.

GROUNDING

UNIVERSAL SHIELDING CORP. TO PROVIDE AND INSTALL ONE {1} 3/8"-16 DIAMETER GROUND STUD AS CLOSE AS POSSIBLE TO THE PENETRATION PANEL.

MAGNET ENTRY

UNIVERSAL SHIELDING CORP. TO PROVIDE A REMOVABLE WALL SECTION FOR MAGNET ENTRY.

WAVEGUIDE AIRVENTS

QTY	TYPE	SIZE	COLLARS
3	SUPPLY	7 x 13	BOTH SIDES
2	RETURN	4 x 24	BOTH SIDES
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

CRYOGEN PIPE PENETRATION

QTY	SIZE
1	8" CRYOGIN PIPE
-	-

PENETRATION PANEL

- USC TO INSTALL MAGNET VENDOR SUPPLIED PENETRATION PANEL AT TIME OF MAGNET INSTALLATION.
- RF ENCLOSURE WILL BE TESTED PRIOR TO AND AFTER PENETRATION PANEL AND MAGNET INSTALLATION. TESTING BY UNIVERSAL SHIELDING CORP.

VINYL TILE

ONE {1} LAYER OF 1/8" THK TILE BONDED TO TOP OF RF FLOOR PANEL TO ACHIEVE A LEVEL FLOOR SURFACE FOR FLOOR FINISHES.

RF. ENCLOSURE UNDERLAYMENT

ONE {1} THK 1/8" THK HARDBOARD SHIMMING LAYER AND ONE {1} 1/8" THK HARDBOARD LEVELING LAYER OVER ONE {1} LAYER OF 6 MIL. THK POLYVINYL MOISTURE BARRIER.

OPERATION & MAINTENANCE

1. OPERATING PROCEDURES:

UPON COMPLETION OF THE INSTALLATION OF THE RF SHIELDED ENCLOSURE, TO GAIN ENTRANCE AND EXIT FROM THE ENCLOSURE, ONE ROTATES THE DOOR HANDLE IN A CLOCKWISE OR COUNTERCLOCKWISE DIRECTION RESPECTIVELY. THE DOOR MUST BE IN THE FULLY CLOSED AND LATCHED POSITION TO MAINTAIN SHIELDING INTEGRITY.

2. MAINTENANCE PROCEDURES:

- THE FOLLOWING MAINTENANCE PROCEDURES SHOULD BE FOLLOWED.
- CLEAN THE BRASS KNIFE EDGE ON THE DOOR ONCE WEEKLY WITH A SOFT CLOTH AND ALCOHOL.
- SPRAY DC-26 LUBRICANT ON THE BERYLLIUM COPPER FINGERS LOCATED ON THE DOOR ONCE WEEKLY.
- IF THE DOOR SHOULD REQUIRE ADJUSTMENT, THE HINGES ARE ADJUSTABLE FOR HORIZONTAL AND VERTICAL ALIGNMENT.
- HONEYCOMB AIR WAVEGUIDE DUCTS SHOULD BE CLEANED YEARLY WITH A SMALL BRUSH IF AIR FLOW BECOMES RESTRICTED.
- IF LIQUIDS ARE SPILLED IN A SHIELDED ENCLOSURE AND BECOME LODGED BETWEEN THE FRAMING MEMBERS AND PANELS IT WILL CAUSE A DEGRADATION OF THE ENCLOSURE SHIELDED PROPERTIES. IT IS IMPERATIVE THAT THE FOLLOWING ITEMS BE FOLLOWED.
 - NO FOOD OR LIQUIDS {SODA, COFFEE, ETC.} BE CONSUMED WITHIN THE ENCLOSURE.
 - NO WET CLOTHES OR SHOES BE WORN IN THE ENCLOSURE.
 - NO BURNING OR WELDING SHOULD BE PERFORMED WITHIN THE ENCLOSURE.
 - CLEAN ANY OIL OR FLUID FROM PIPES TO BE USED BEFORE IT ENTERS THE ENCLOSURE.
- IF A COMPUTER FLOOR IS INSTALLED IN THE ENCLOSURE, THE TILE SURFACE CANNOT BE CLEANED WITH ANY LIQUID THAT WOULD SPILL ONTO THE ENCLOSURE FLOOR.
- DO NOT ALLOW ANY UNAUTHORIZED PENETRATIONS OF THE RF ENCLOSURE TO OCCUR.
- IF THE PARENT ROOM CEILING IS QUESTIONABLE, PRECAUTIONS SHOULD BE TAKEN TO PROTECT THE RF ENCLOSURE CEILING. ALL FRAMING JOINTS SHOULD BE TAPED.

3. TROUBLESHOOTING PROCEDURES:

IF ATTENUATION LOSS OCCURS, THE FOLLOWING ITEMS SHOULD BE OBSERVED.

- NO UNAUTHORIZED PENETRATION{S} WAS MADE, I.E., UNFILTERED WIRE OR PIPING.
- CHECK THAT ALL DOOR FINGERSTOCK IS IN PLACE AND NOT DEFORMED.
- CHECK THAT NO SCREWS WERE LOOSENEED OR REMOVED.

4. ALLOWABLE LOADS:

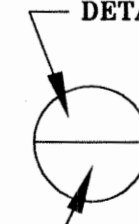
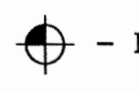
- THE ALLOWABLE LOADS ON TOP OF THE RF ENCLOSURE CAN BE 50 LBS. PER SQ. FT. AND THE WEIGHT MOUNTED ON SHELVES OR WALLS IS 85 LBS.

5. SPARE PARTS:

THE FOLLOWING SPARE PARTS ARE RECOMMENDED.

- BERYLLIUM COPPER FINGERSTOCK - PART NO. USC-97-583
- DOOR LUBRICANT {ONE CAN} - PART NO. RCM-LB-100

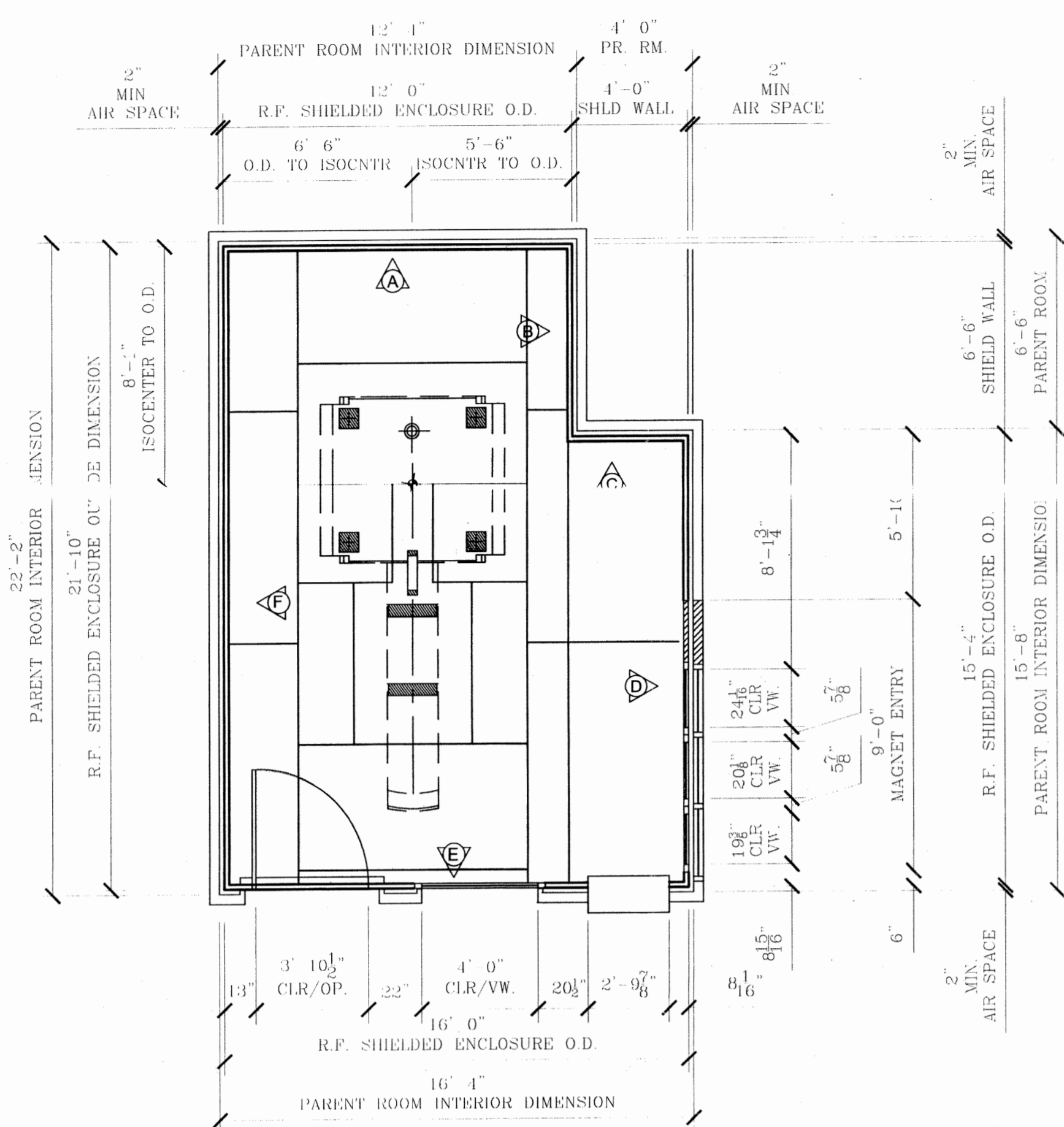
LEGEND

- OD - OUTSIDE DIMENSION
 ID - INSIDE DIMENSION
 OA - OVERALL
 HT - HEIGHT
 CL - CENTERLINE
 V.I.F. - VERIFY IN FIELD
 P.R. - PARENT ROOM
- DETAIL NUMBER

 REFER TO SHEET
- B/O - BY OTHERS
 T.B.D. - TO BE DETERMINED
 CLR VW. - CLEAR VIEW
 CLR OP. - CLEAR OPENING
 - MAGNET ISOCENTER

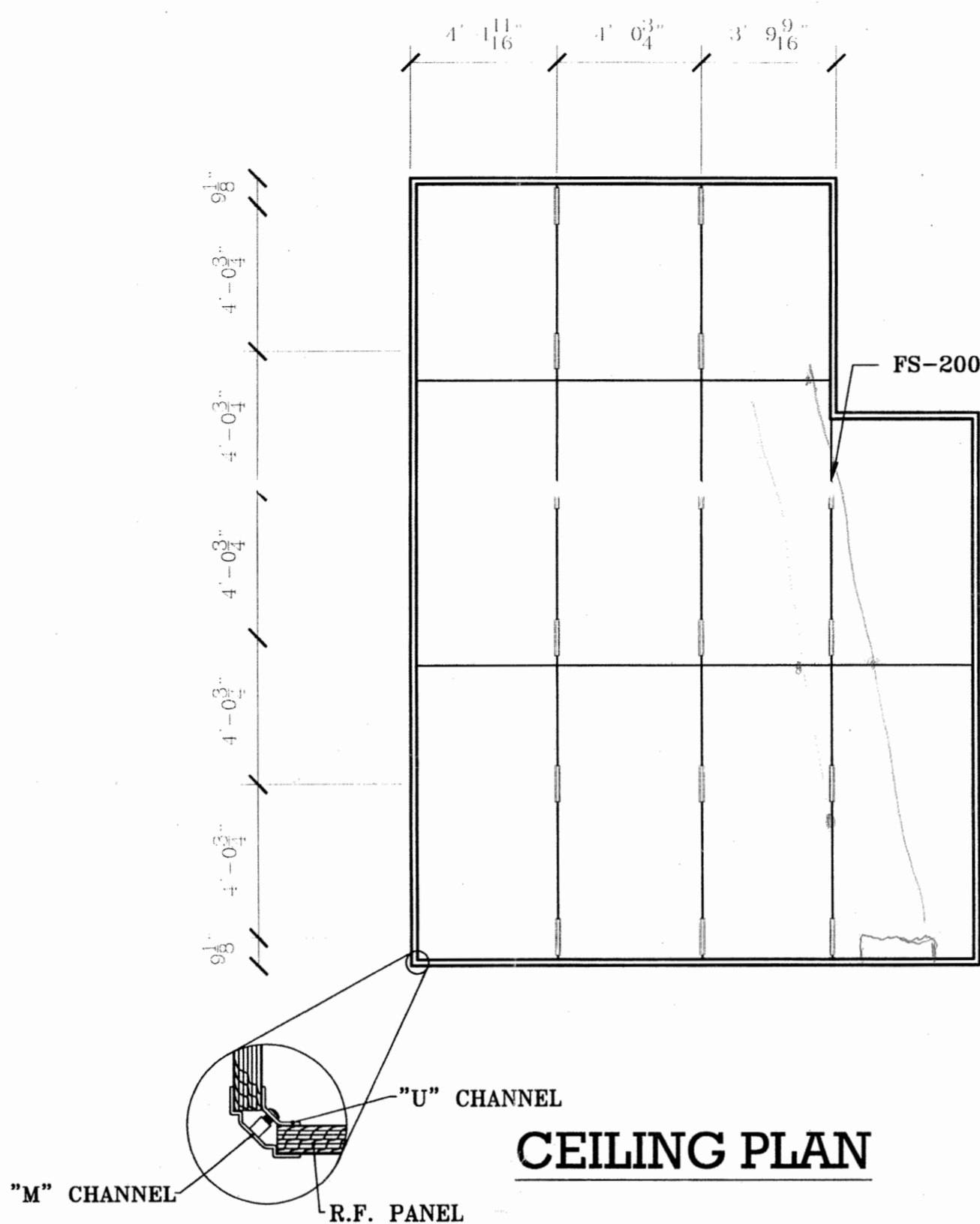
SHEET 2 OF 6

MATERIAL: -	FINISH: -	HEAT TREAT: -
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SCALE: N.T.S.	DRAWN: JERRY DATE: 11-12-04	SIZE: -
REVISED: 11-3-04	CHECKED: - DATE: -	DRAWING NUMBER: USC-12843
	APPROVED: - DATE: -	ISSUE: -

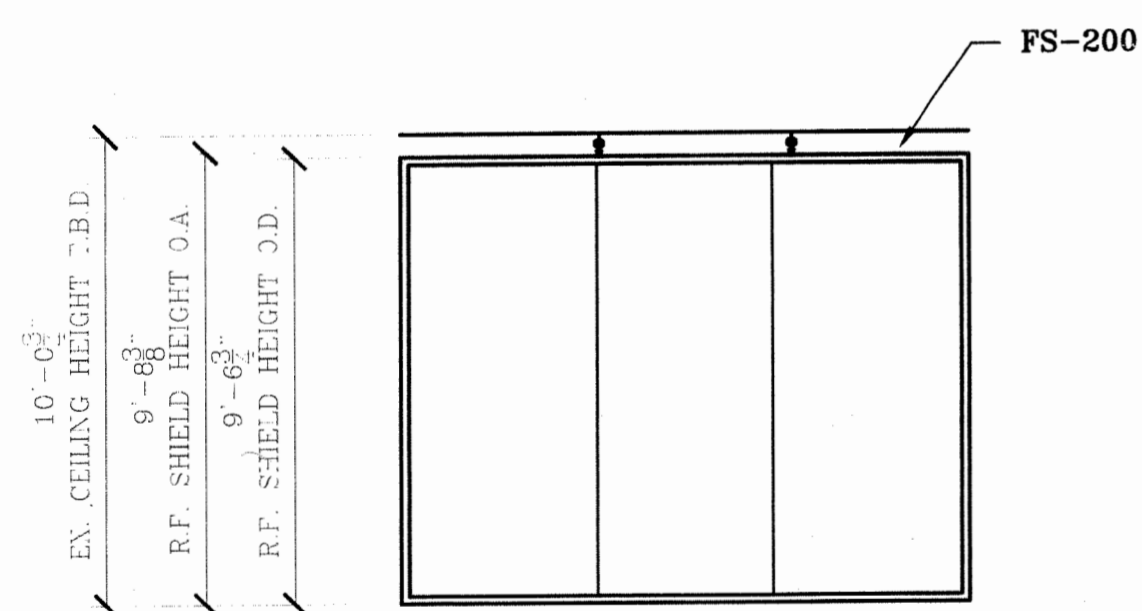
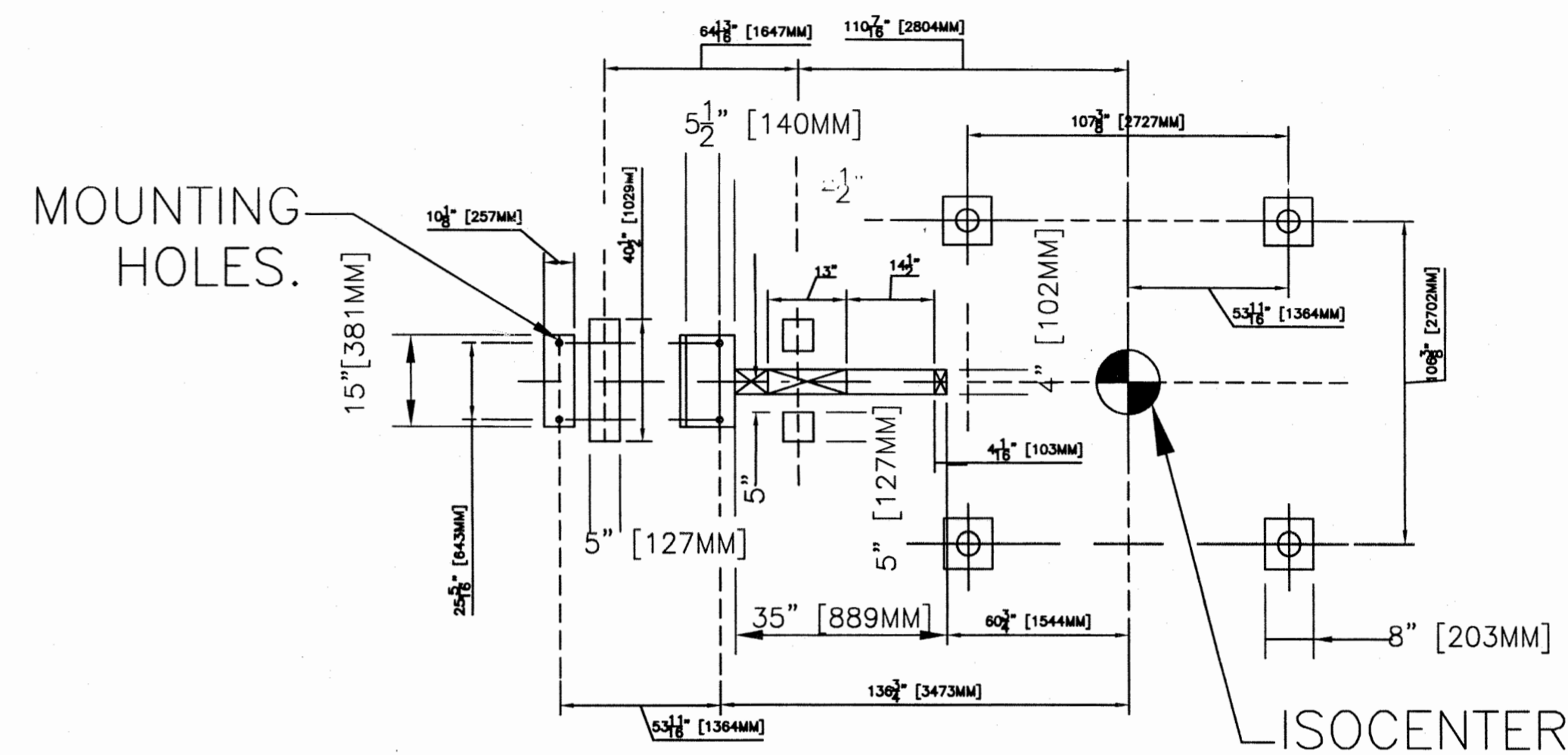
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVAL
-	PRELIMINARY DRAWING	-	-
A	PARENT ROOM DIMENSION CHANGE WINDOW RELOCATED REVISED CEILING HEIGHT	12-8-04	-



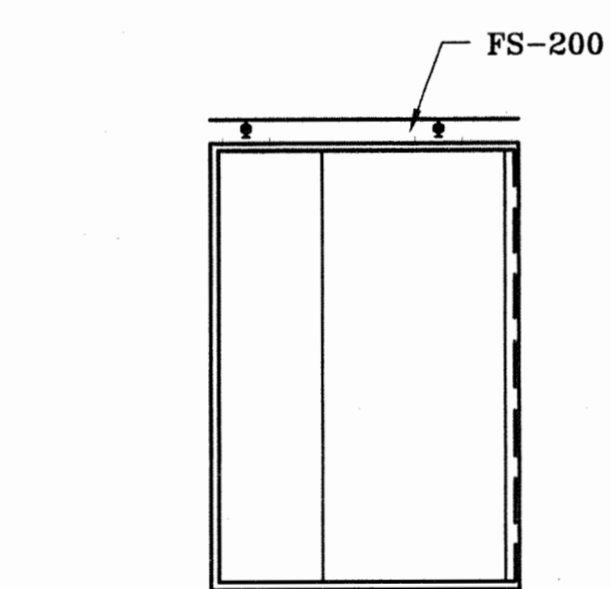
FLOOR PLAN



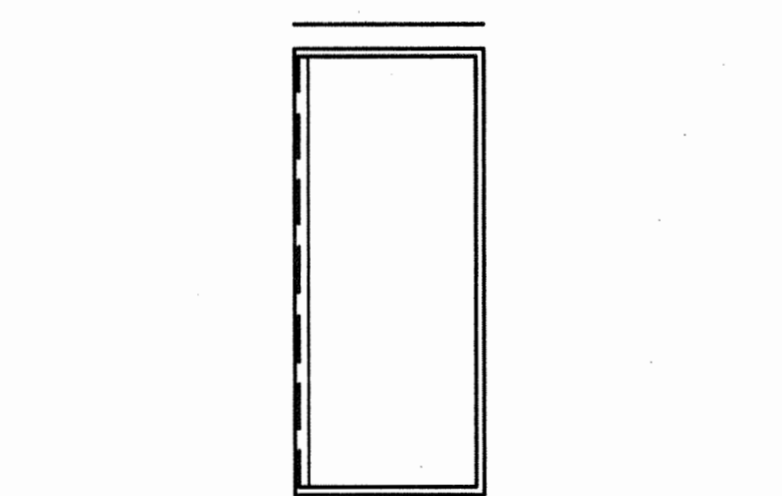
CEILING PLAN



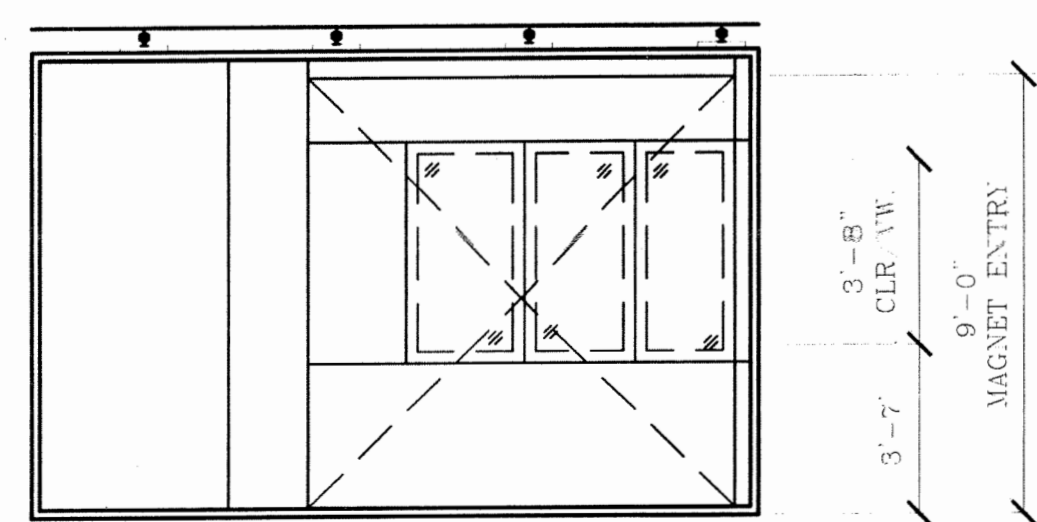
INSIDE ELEVATION "A"



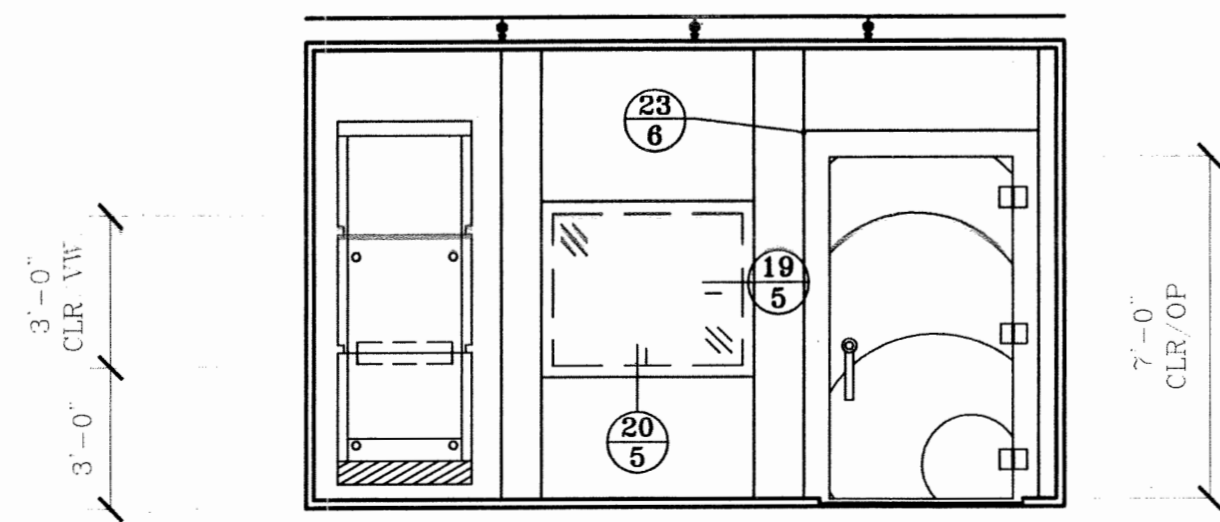
INSIDE ELEVATION "B"



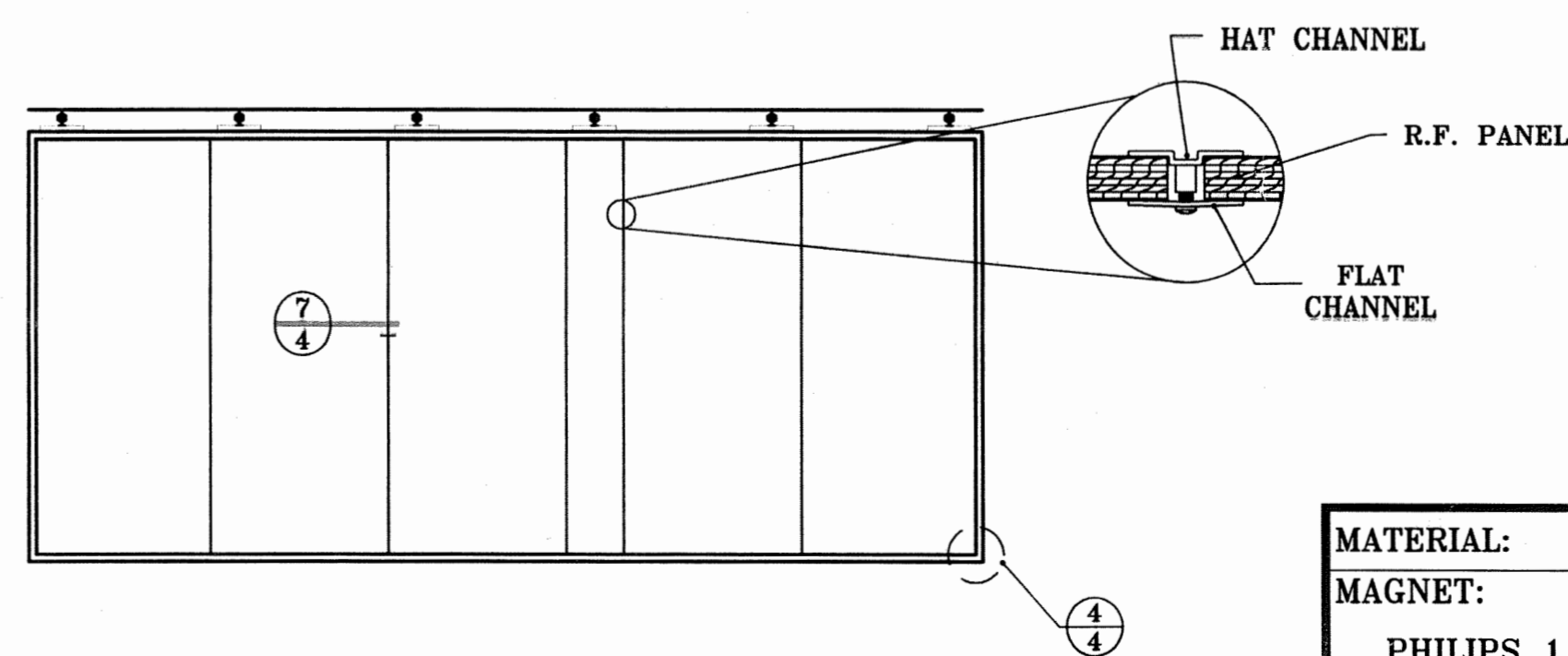
INSIDE ELEVATION "C"



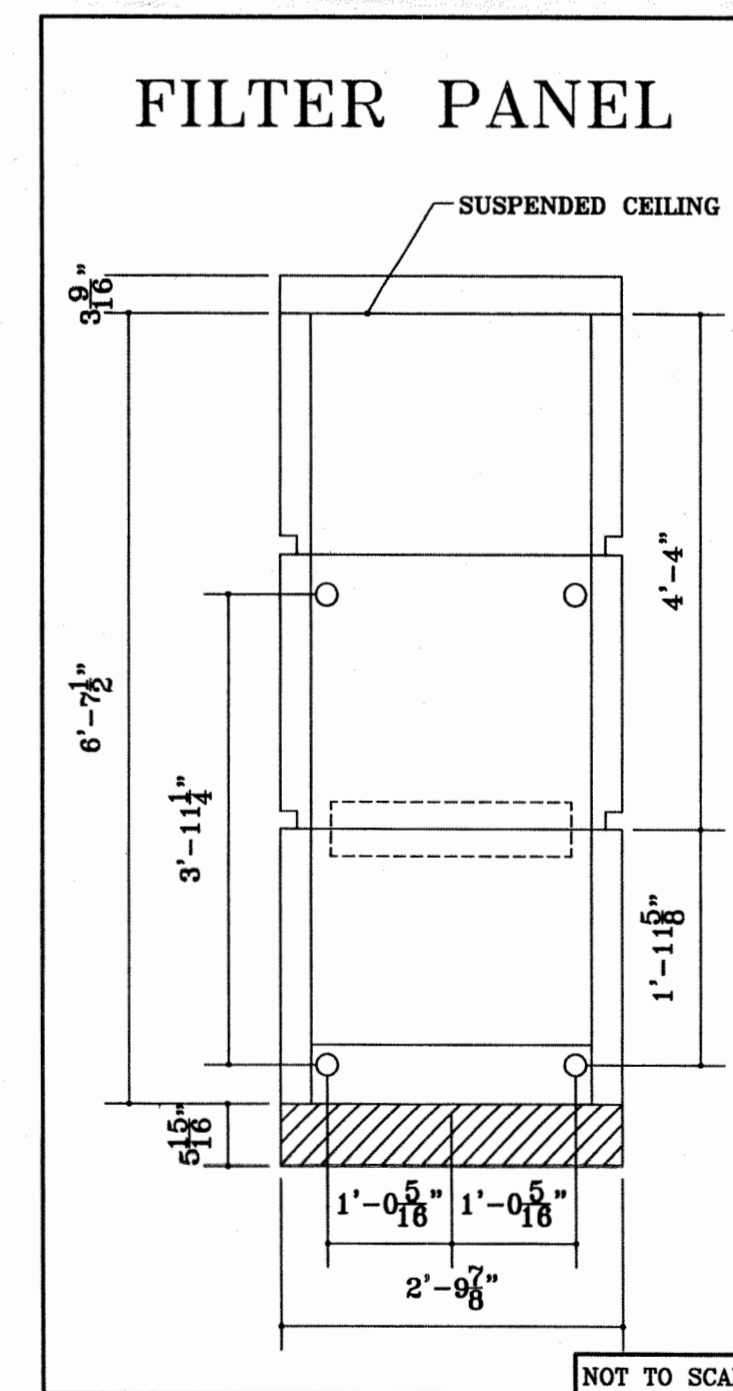
INSIDE ELEVATIONS "D"



INSIDE ELEVATION "E"



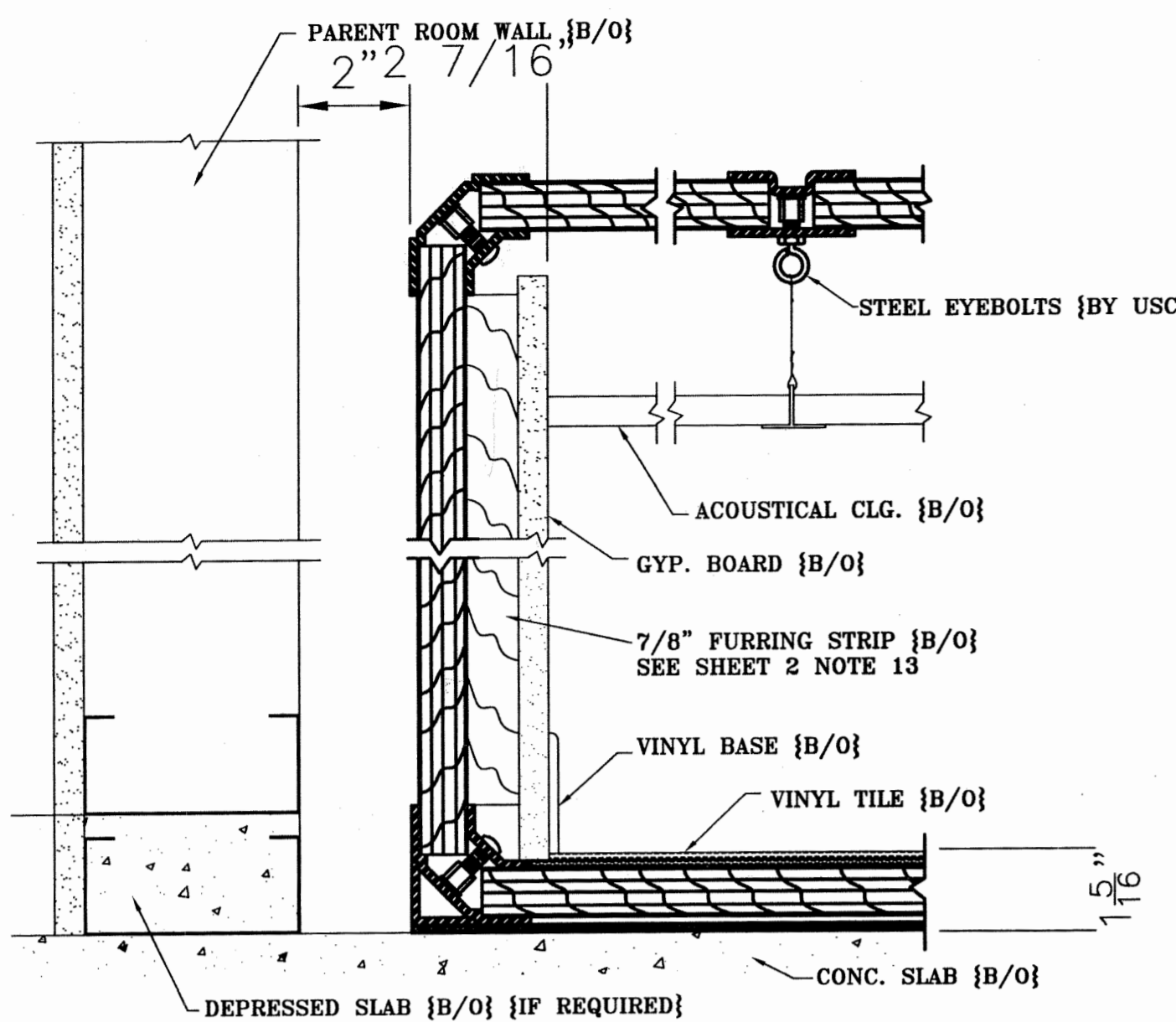
INSIDE ELEVATION "F"



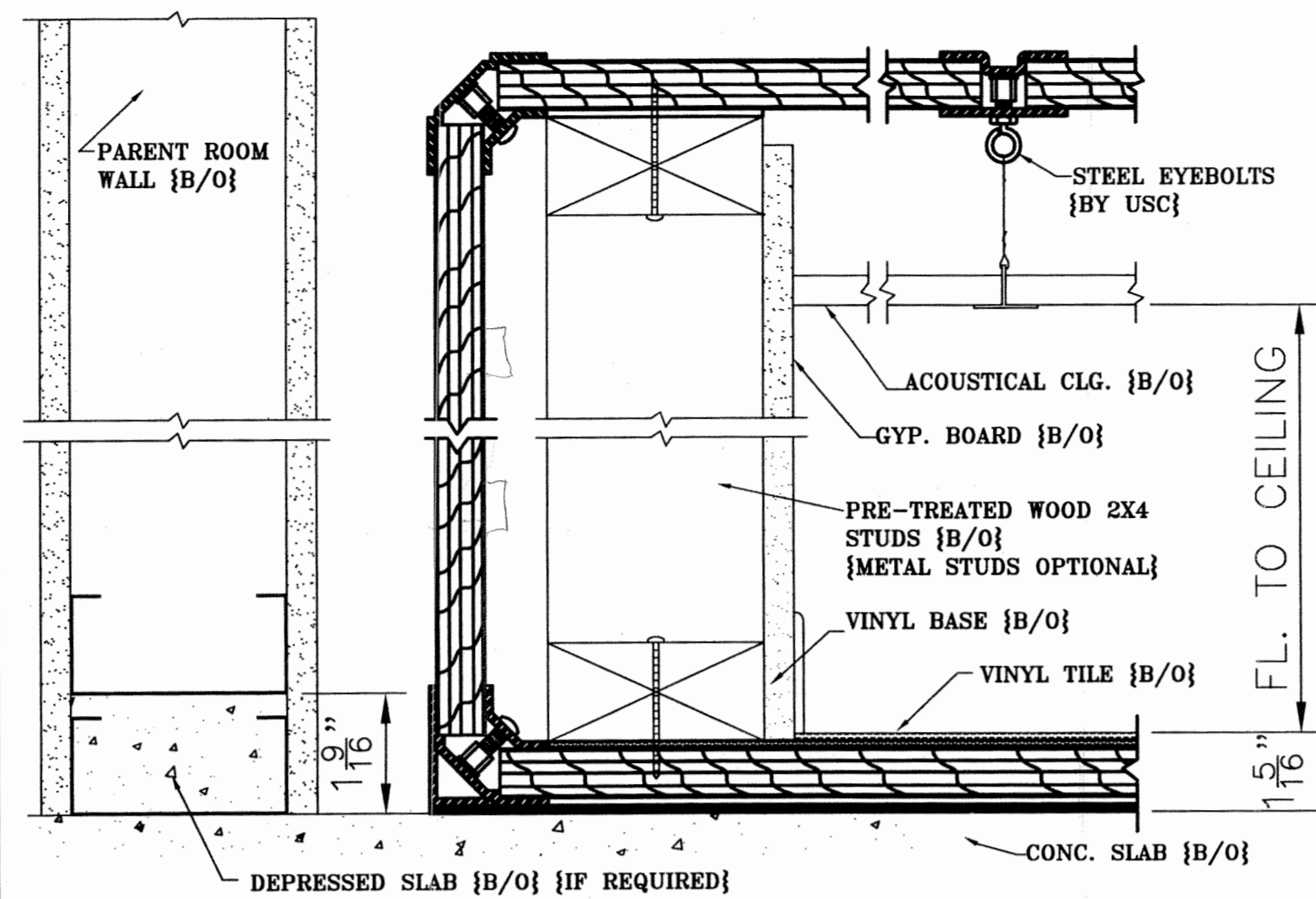
PHILIPS GYROSCAN INTERA 1.5T POWER

SHEET 3 OF 6

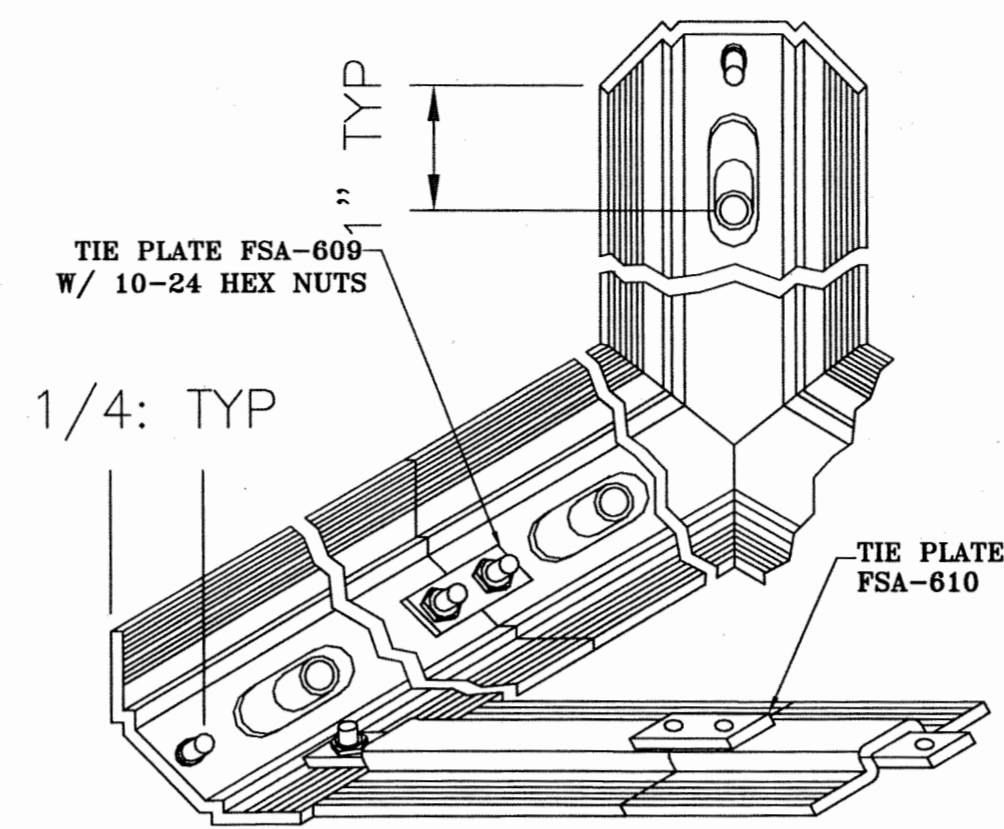
MATERIAL: -	FINISH: -	HEAT TREAT WEIGHT: -
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SCALE: 1/4" = 1'-0"	DRAWN: JERRY	
REVISED: -	CHECKED: -	DATE: -
	APPROVED: -	DATE: -
		D
	USC: 12843	-



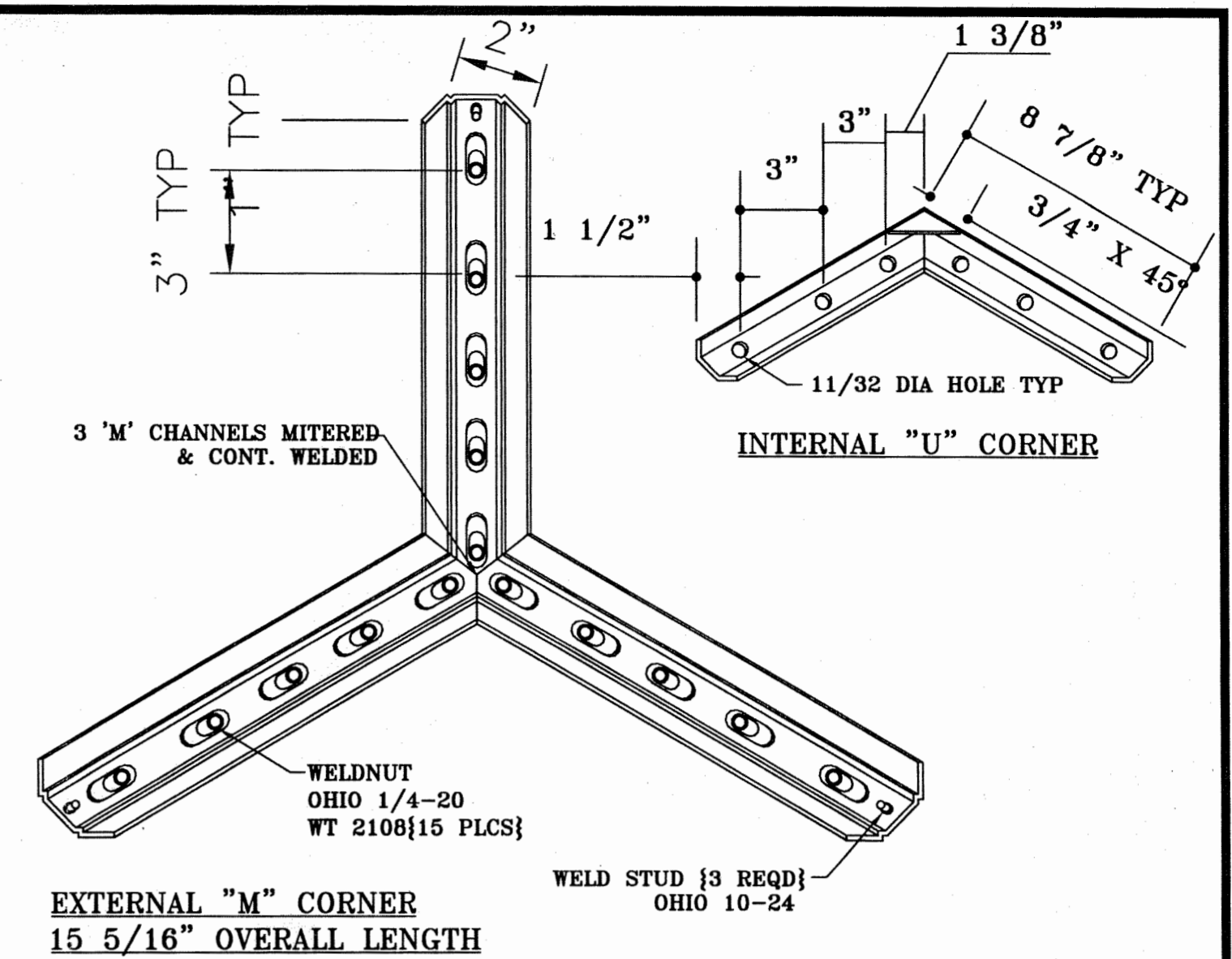
① RF ENCL. SECTION W/ 7/8" FURRING



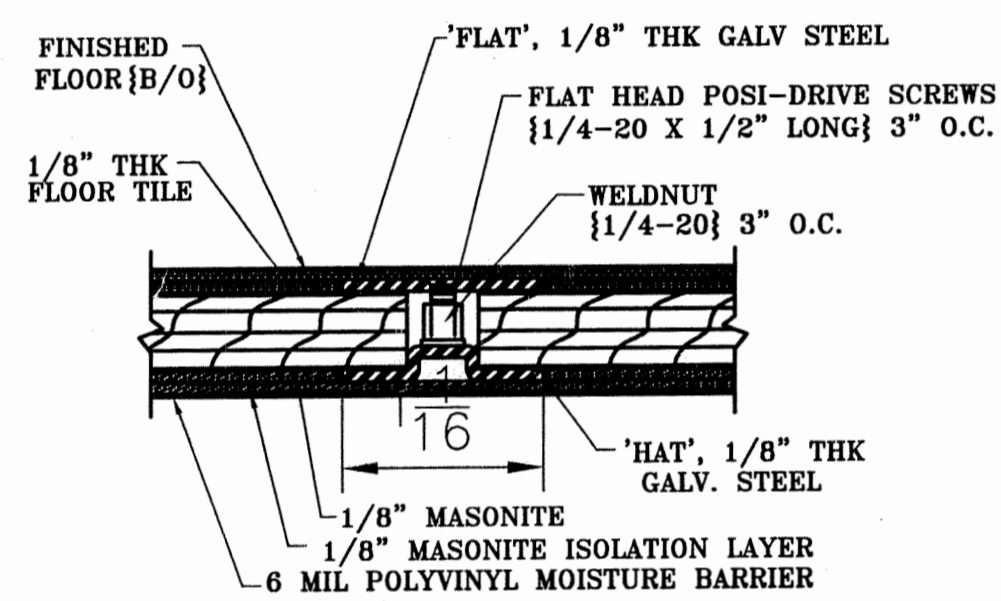
② RF ENCL. SECTION W/ 2X4 STUDS



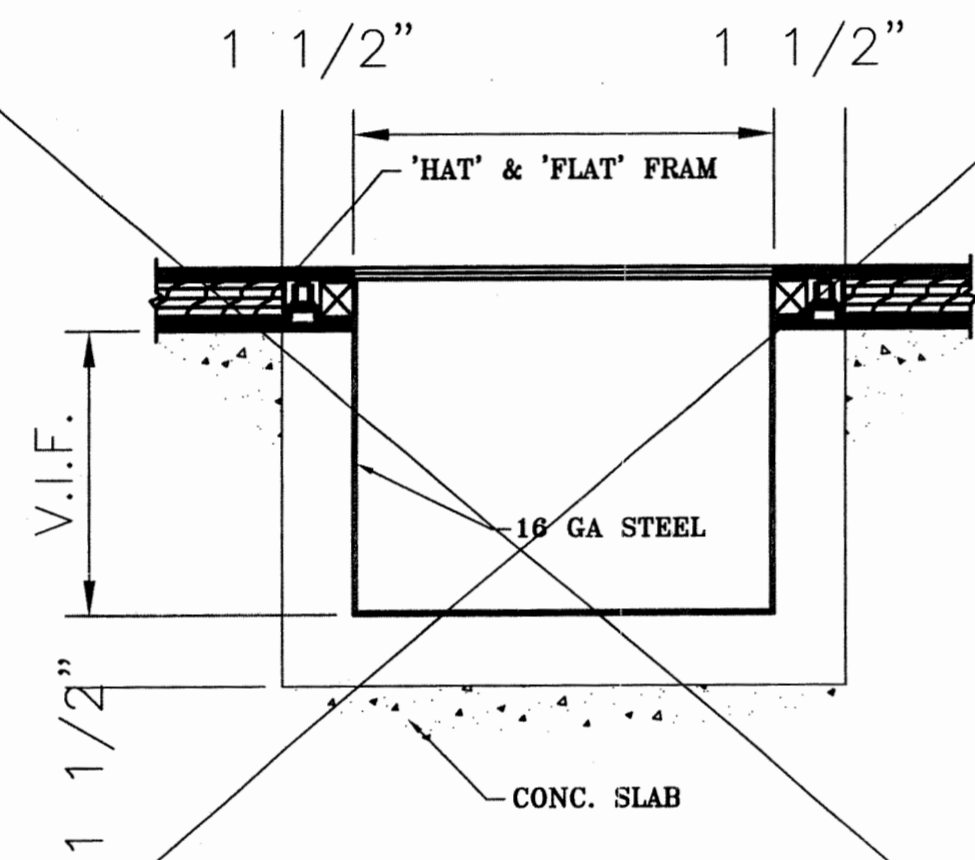
③ METHODS OF ATTACHMENT



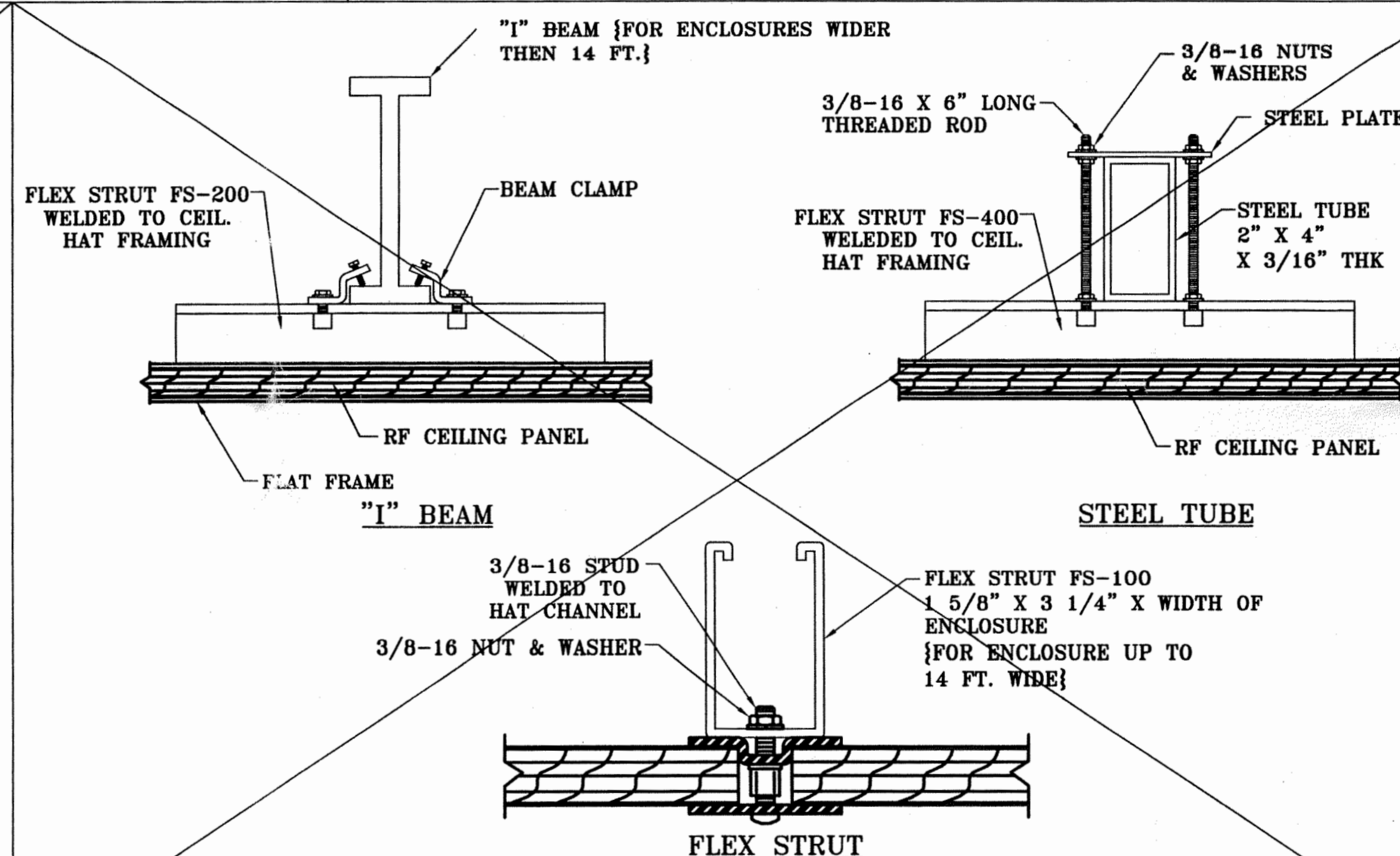
④ INTERNAL 'U' CORNERS and EXTERNAL 'M' CORNER



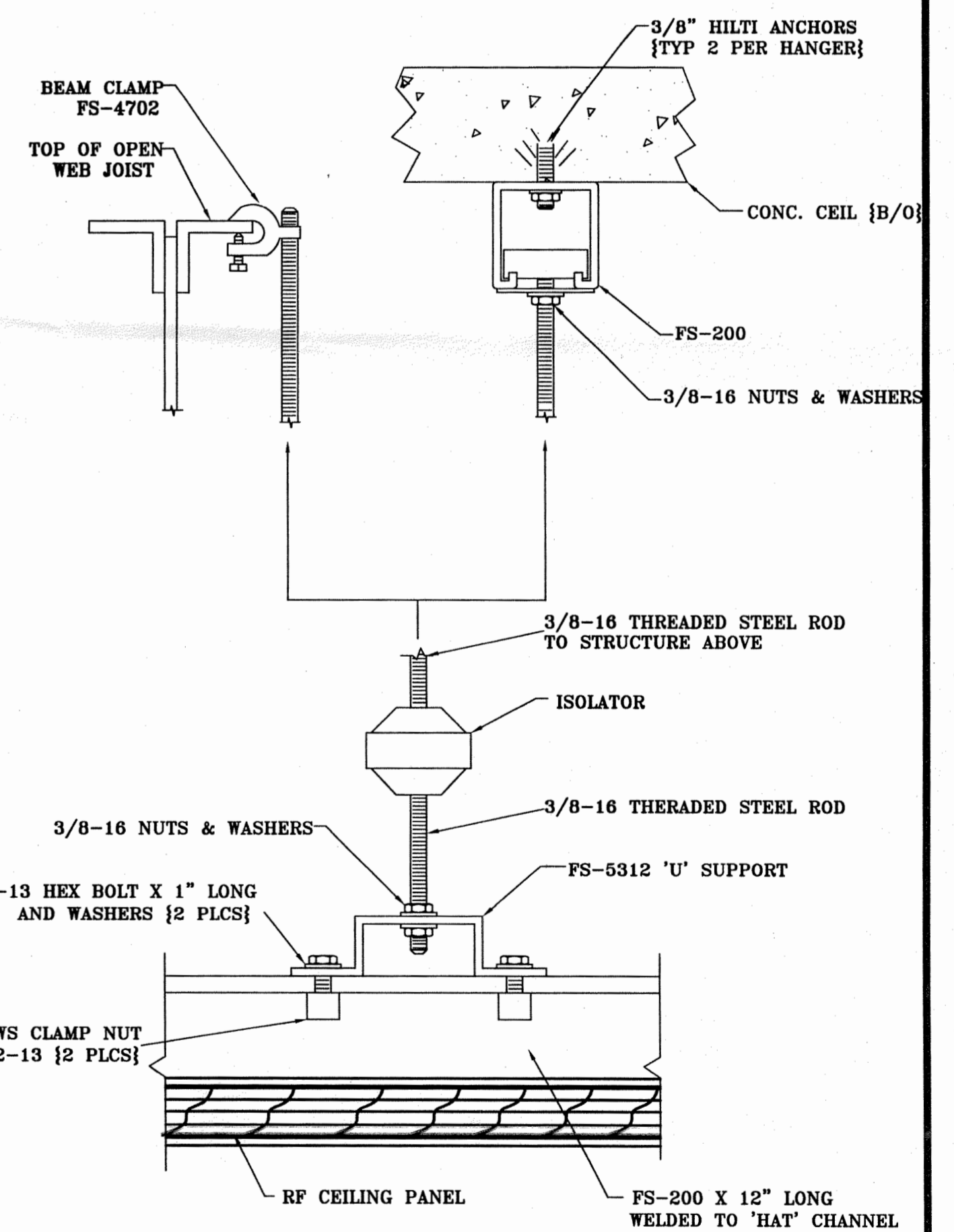
⑤ INTERMEDIATE JOINTS @ FLOOR



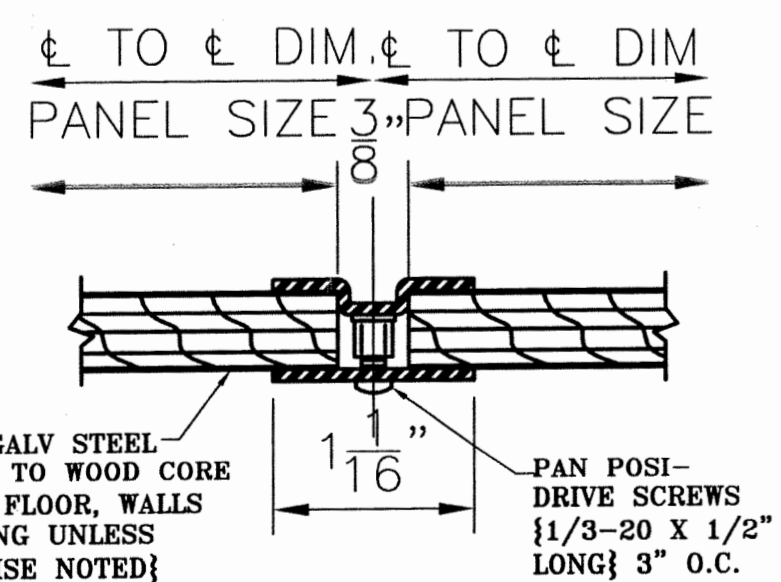
⑥ RF SHIELDED FLOOR PAN DETAIL



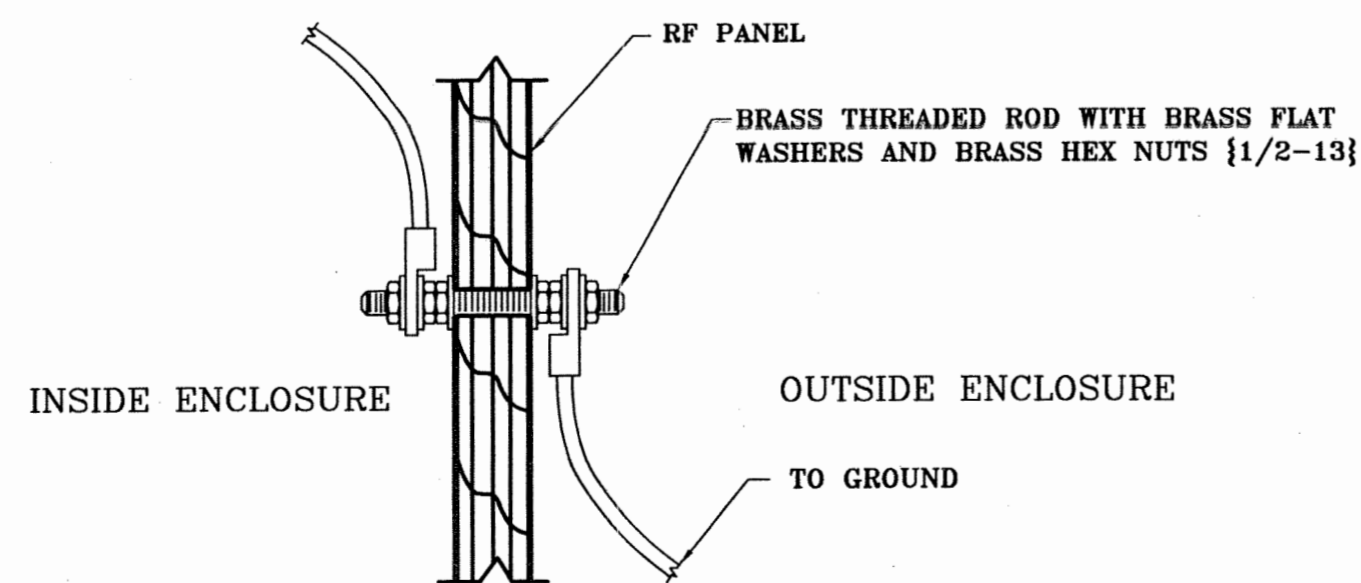
⑦ TYP. FREESTANDING ASSEMBLIS



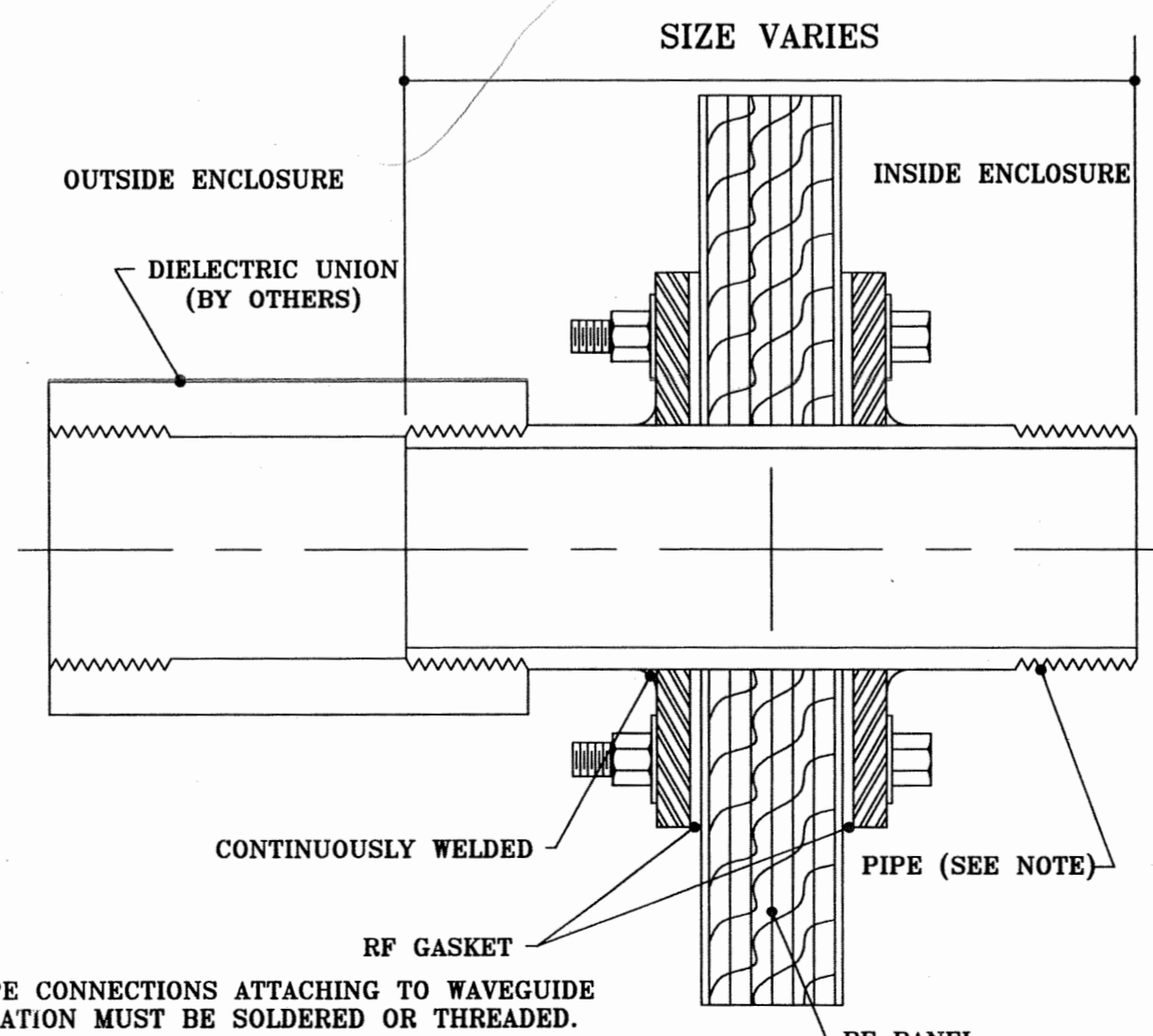
⑧ ISOLATED CEILING HANGER ASSEMBLY



⑨ INTERMEDIATE JOINTS @ WALLS & CEILING



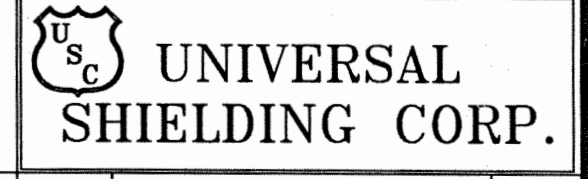
⑩ GROUND STUD



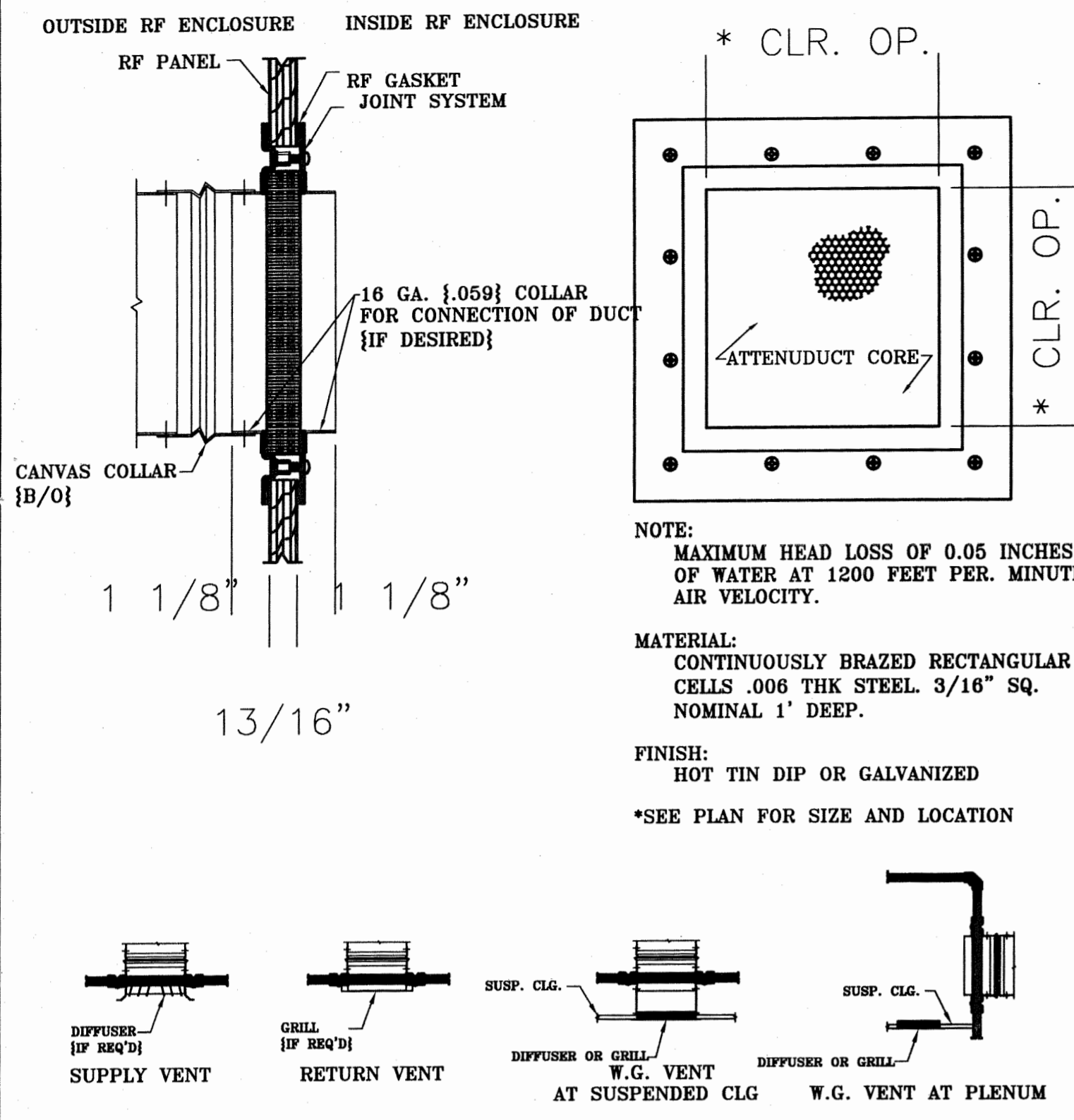
⑪ INSULATED PIPE PENETRATION

SHEET 4 OF 6

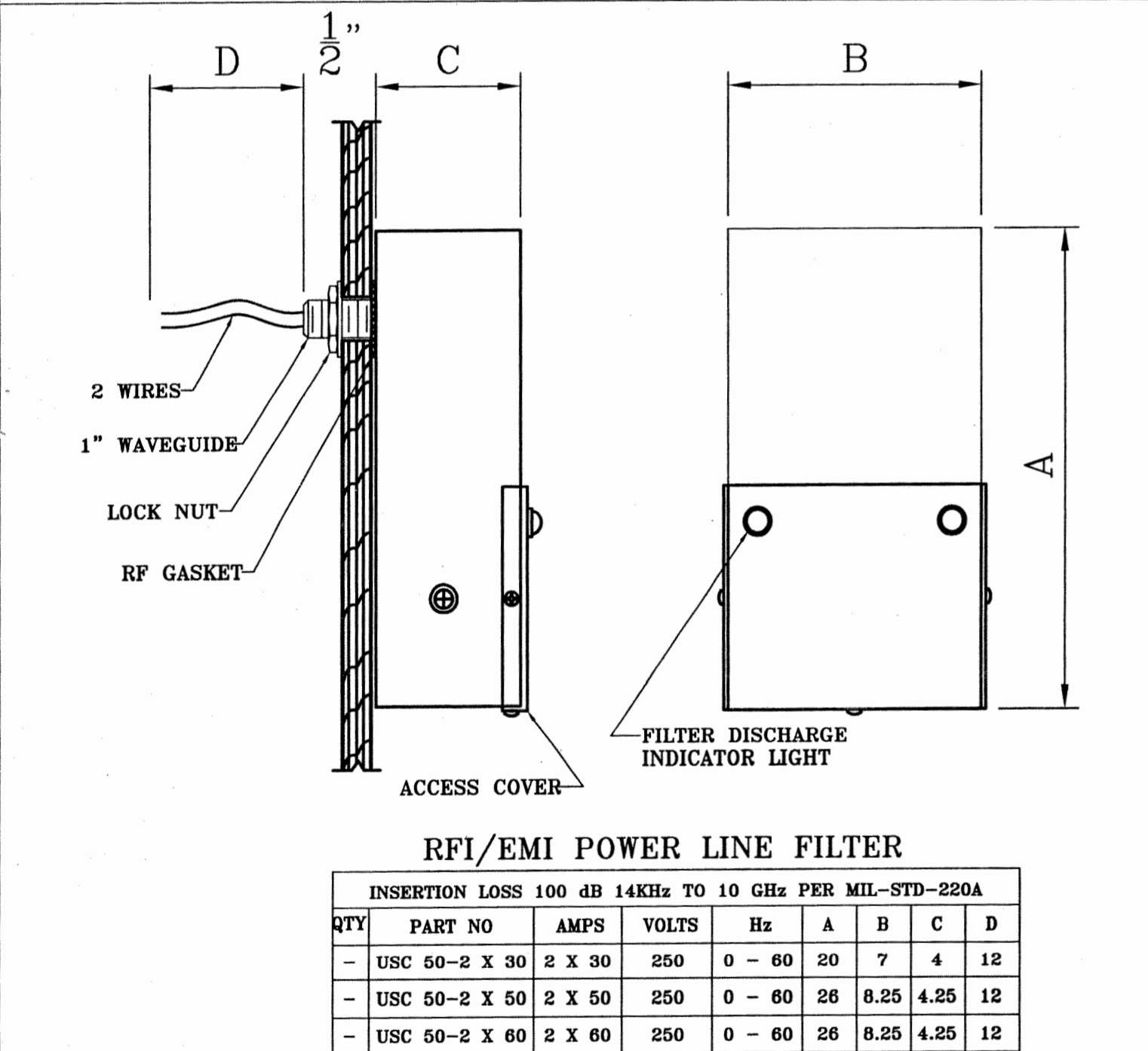
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MAGNET: PHILIPS INTERA 1.5T	TITILE: TISTAN ASSOCIATES	WEIGHT: -
SCALE: N.T.S.	DRAWN: JERRY DATE: 11-12-04	SIZE: -
REVISED: -	CHECKED: - DATE: -	DRAWING NUMBER: -
	APPROVED: - DATE: -	ISSUE: -



UNIVERSAL SHIELDING CORP.
USC-12843



12 RF AIRVENT



15 POWER FILTERS

ELECTRICAL: CURRENT RATING: THE FILTERS SHALL BE CAPABLE OF WITHSTANDING 140% OF RATED CURRENT FOR 15 MINUTES WITHOUT ANY DETERIORATION.

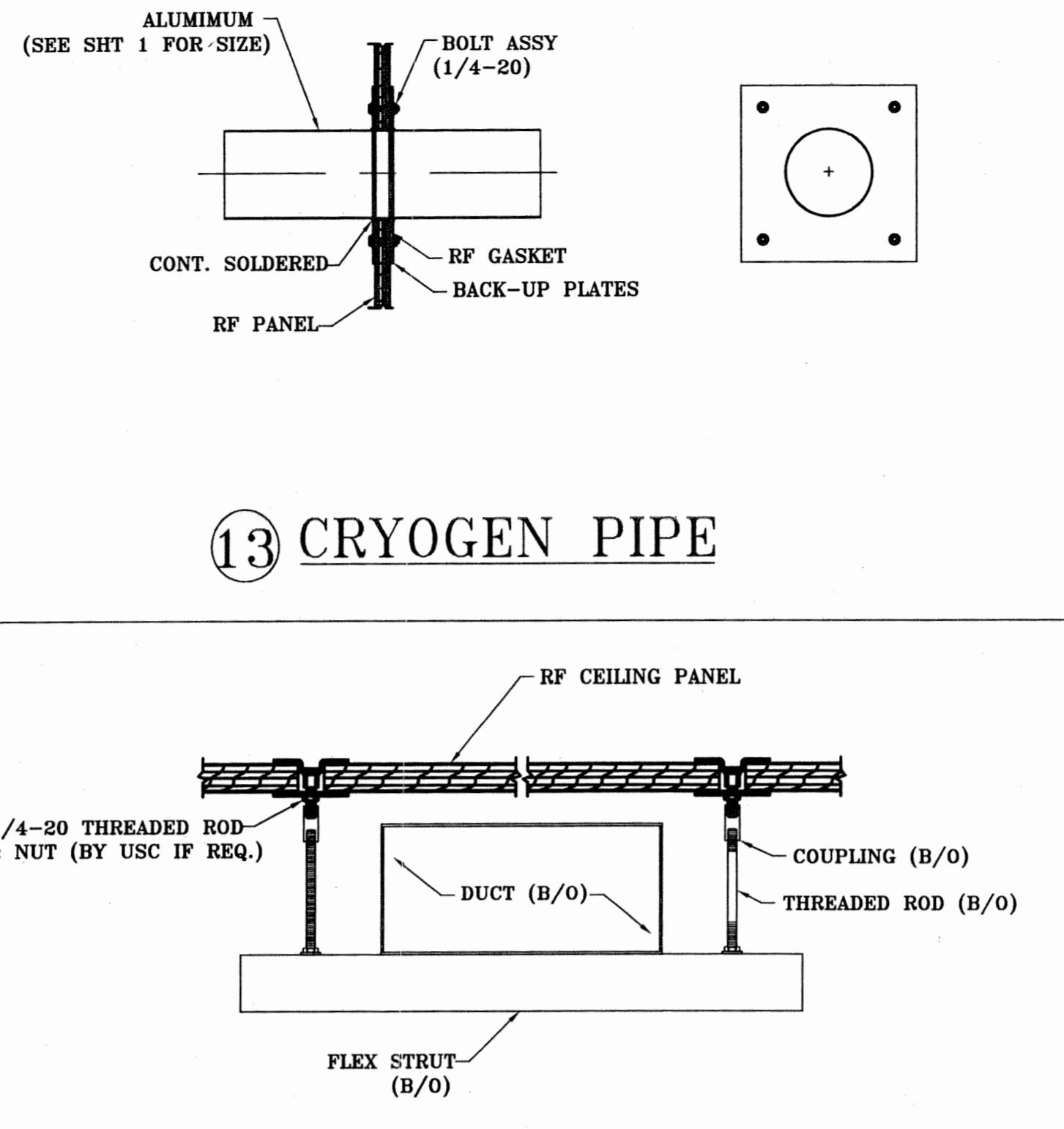
Mechanical: CASE: THE FILTER CASE SHALL BE MADE OF COLD ROLLED STEEL ENCLOSED IN RF SHIELDED COMPARTMENTS. COVER ON THE INPUT COMPARTMENT SHALL BE SCREW DOWN TYPE. INTERNAL COMPONENTS SHALL BE MOUNTED AND FIXED TO PREVENT DAMAGE WHEN SUBJECTED TO SHOCK AND VIBRATION TESTS.

FINISH: ALL FILTER CASES SHALL BE MADE CORROSION RESISTANT WITH SUITABLE PLATING.

CONSTRUCTION: INPUT AND OUTPUT TERMINALS SHALL BE COMPLETELY ENCLOSED IN RF SHIELDED COMPARTMENTS. COVER ON THE INPUT COMPARTMENT SHALL BE SCREW DOWN TYPE. INTERNAL COMPONENTS SHALL BE MOUNTED AND FIXED TO PREVENT DAMAGE WHEN SUBJECTED TO SHOCK AND VIBRATION TESTS.

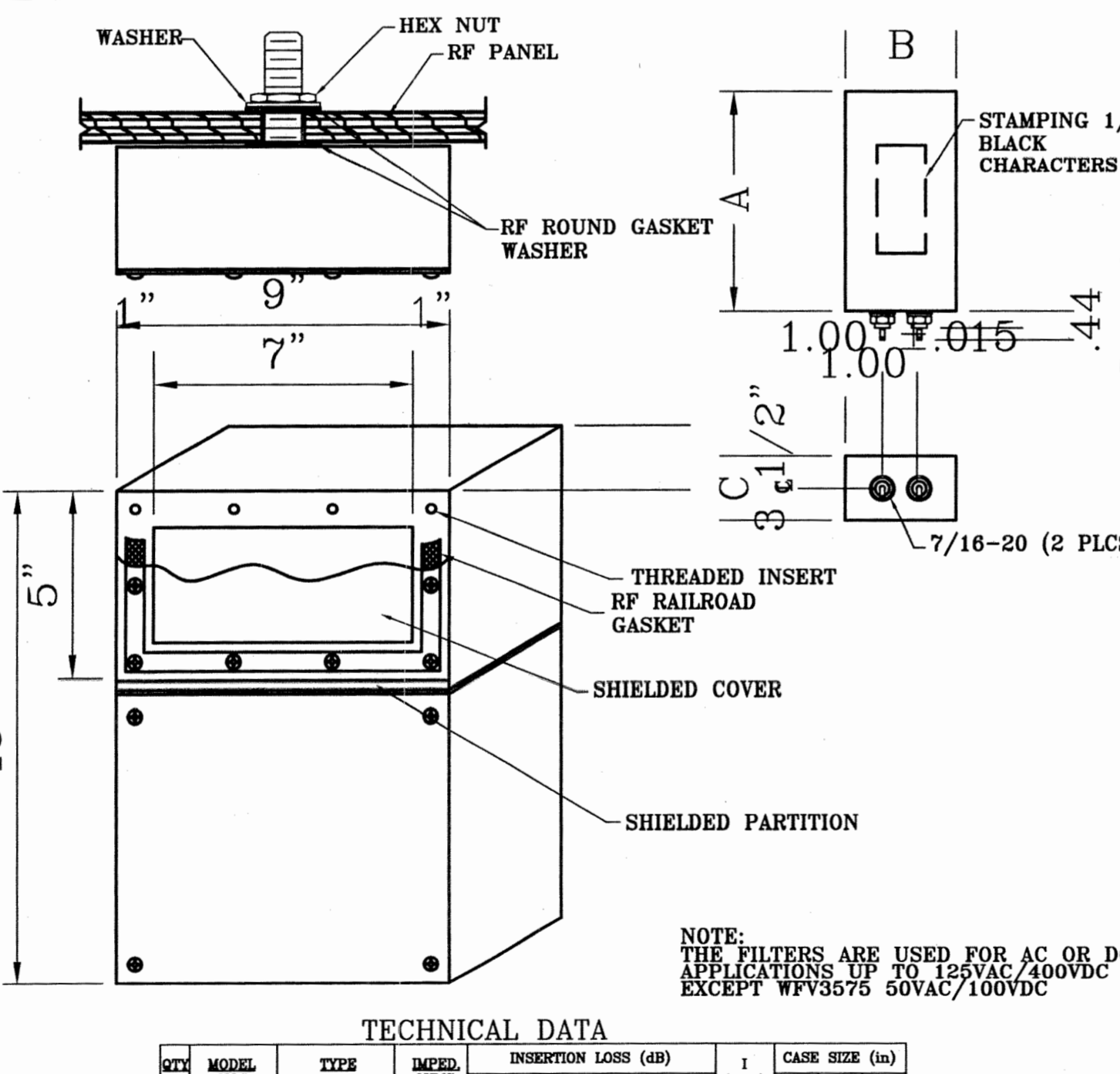
TERMINALS: THE TERMINALS SHALL BE MADE OF HIGH TEMPERATURE CERAMIC.

VOLTAGE: THE FILTERS SHALL BE CAPABLE OF OPERATING CONTINUOUSLY AT FULL RATED VOLTAGE AND OF WITHSTANDING INITIAL TEST OF TWICE THE RATED VOLTAGE FOR ONE MINUTE.

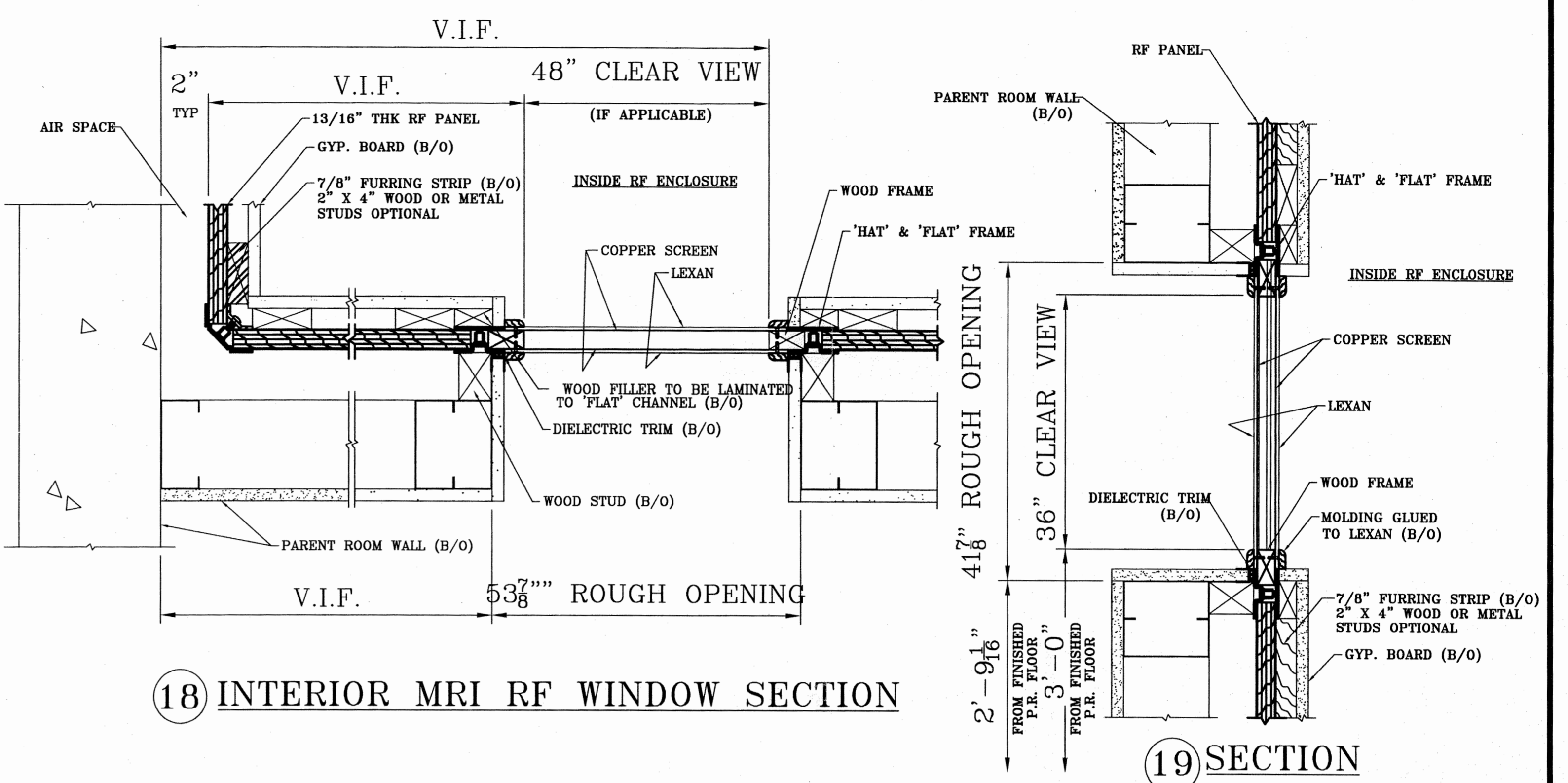


13 CRYOGEN PIPE

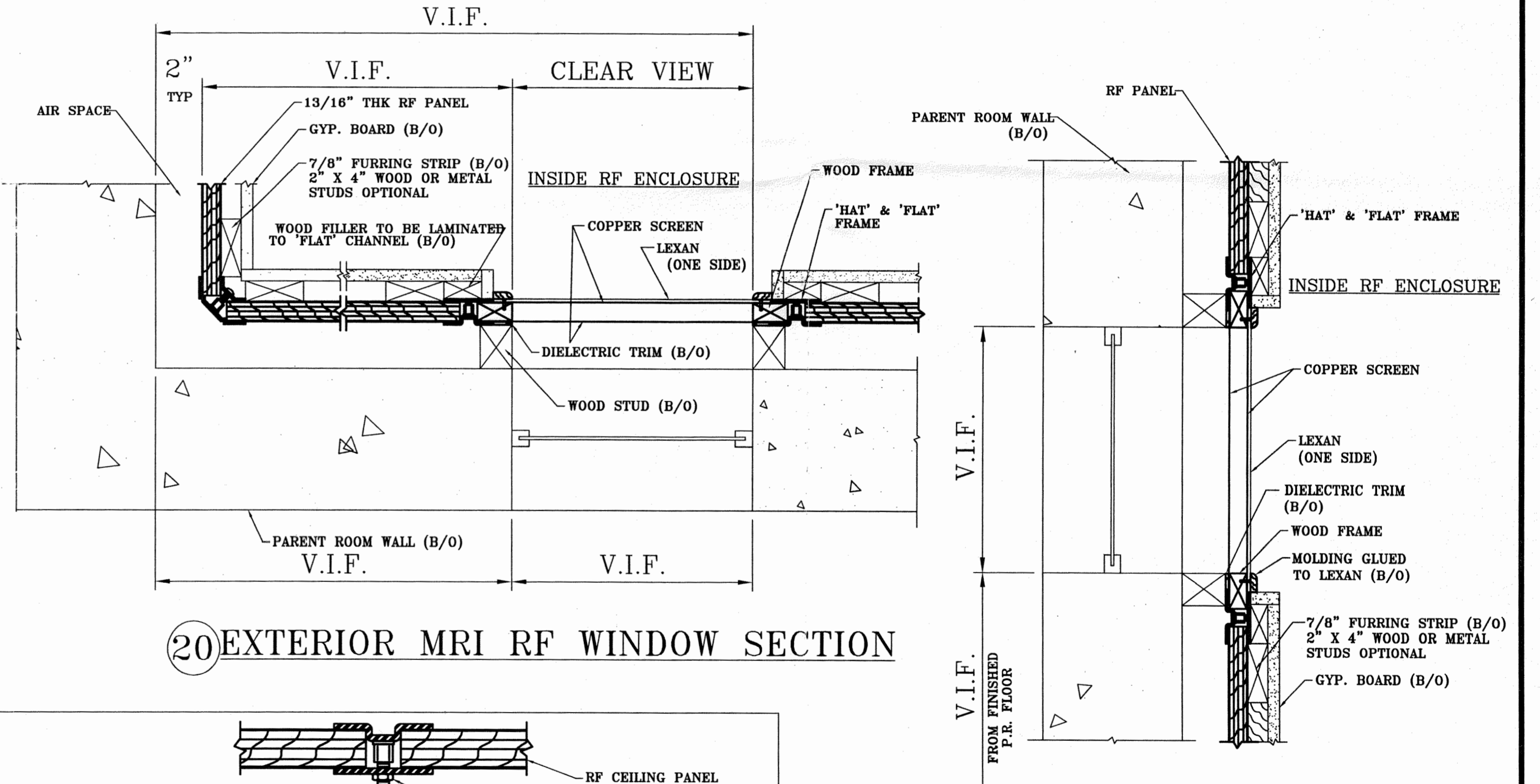
14 DUCTWORK SUPPORT



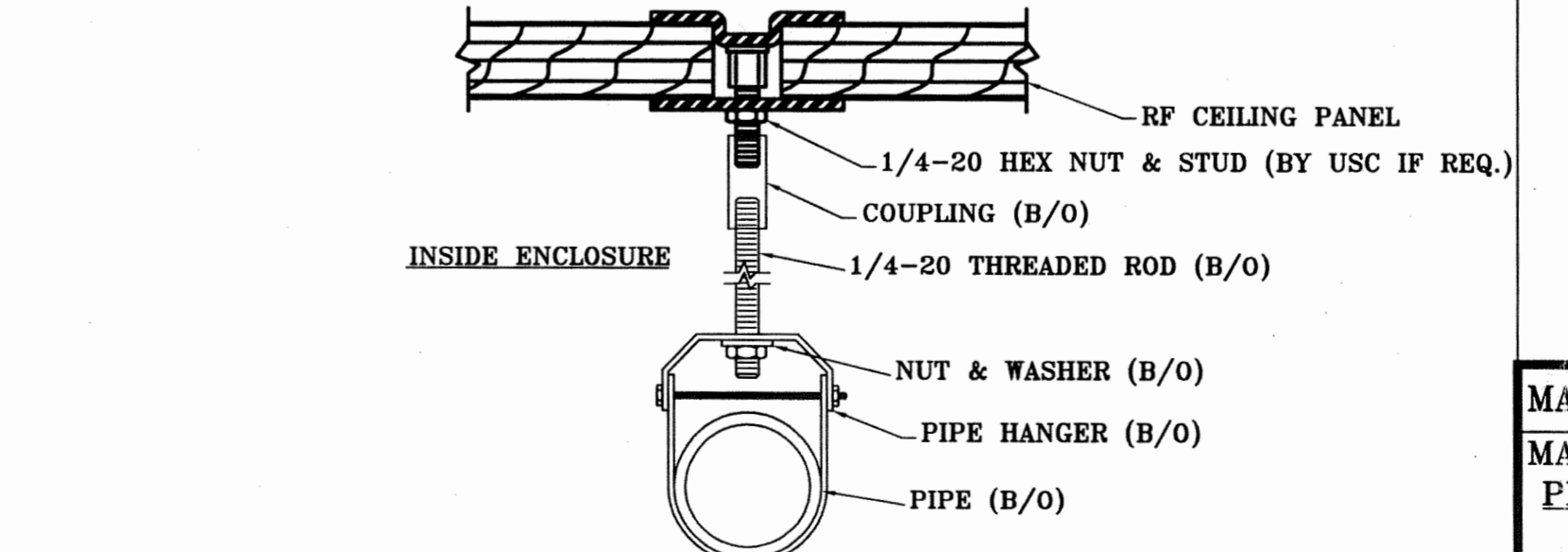
16 SIGNAL/DATA/CONTROL LINE FILTERS



18 INTERIOR MRI RF WINDOW SECTION



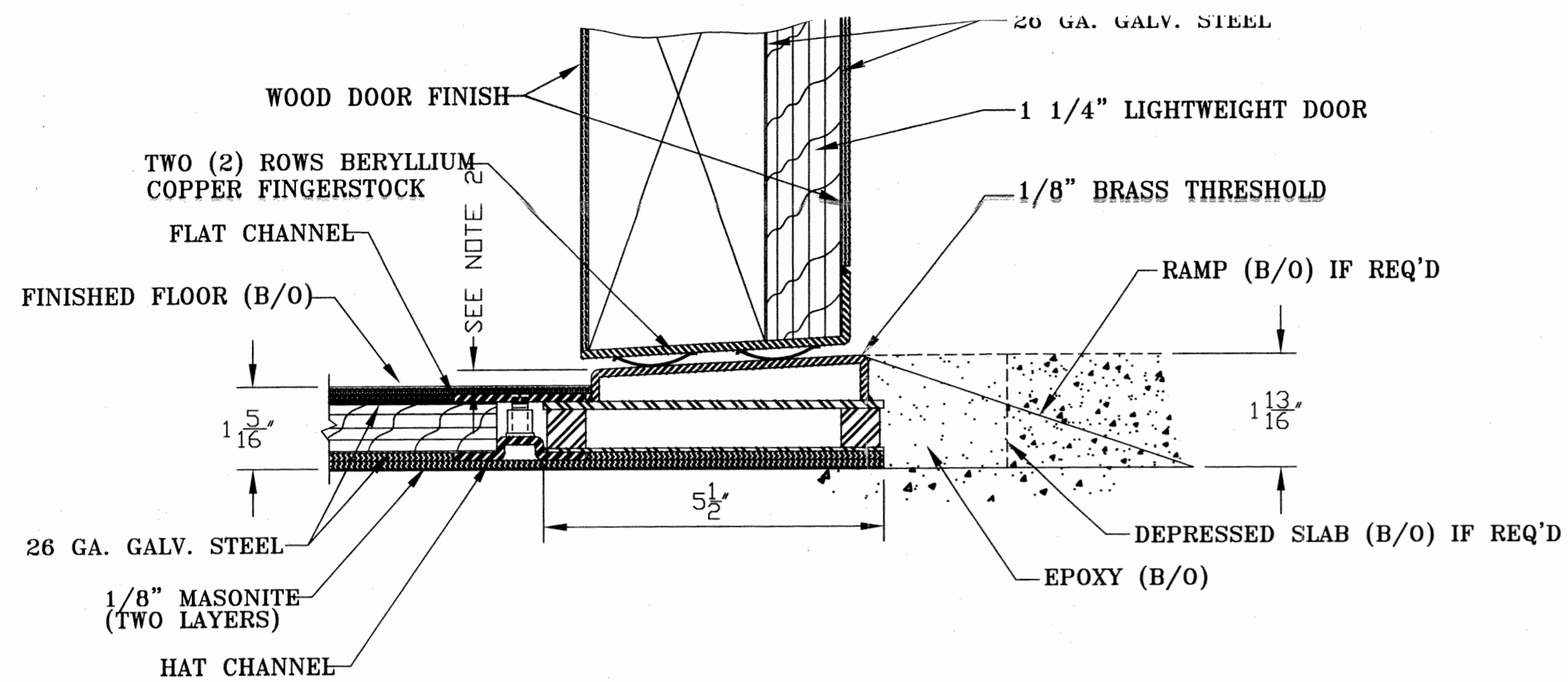
20 EXTERIOR MRI RF WINDOW SECTION



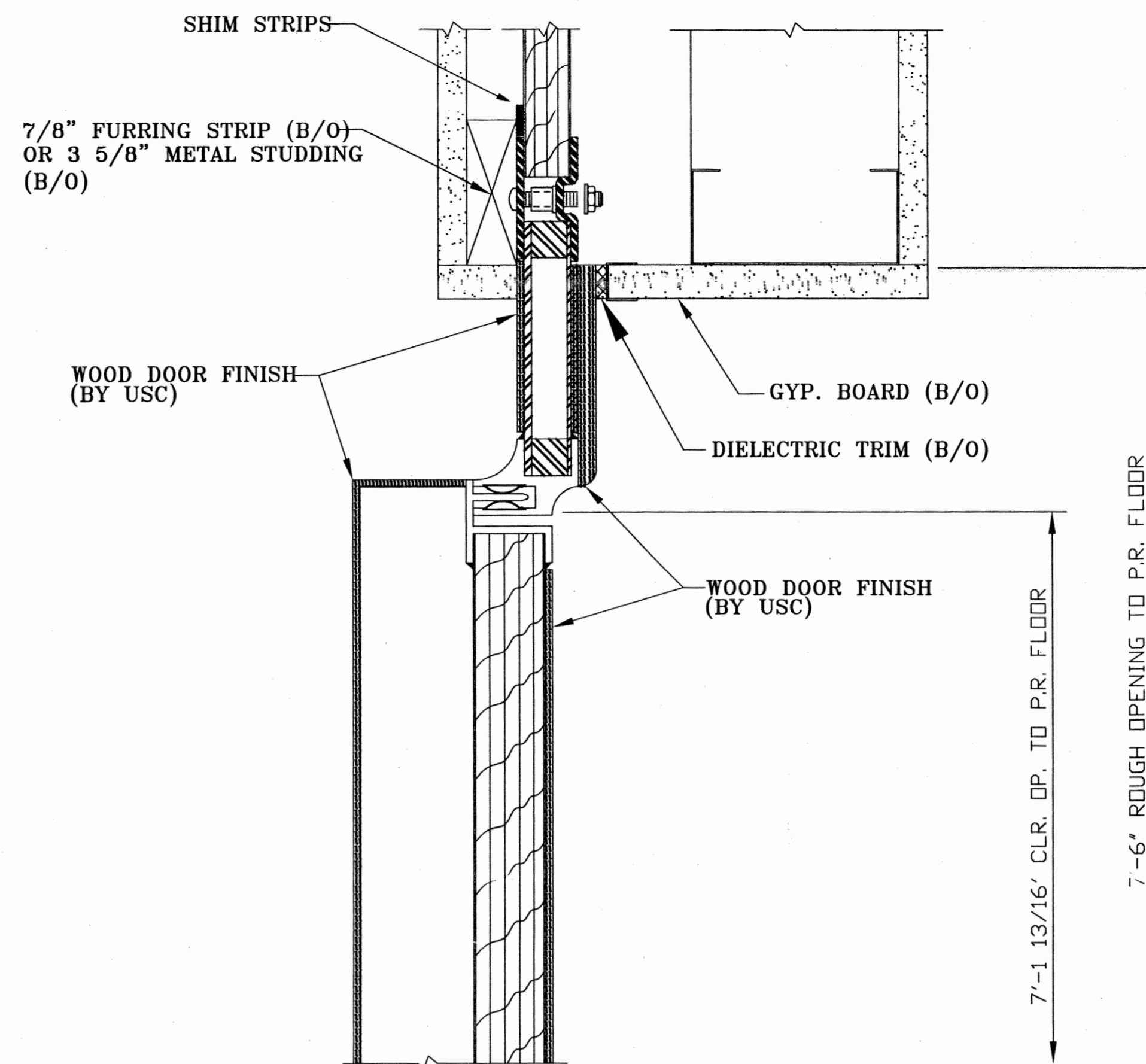
17 SPRINKLER PIPE SUPPORT

SHEET 5 OF 6

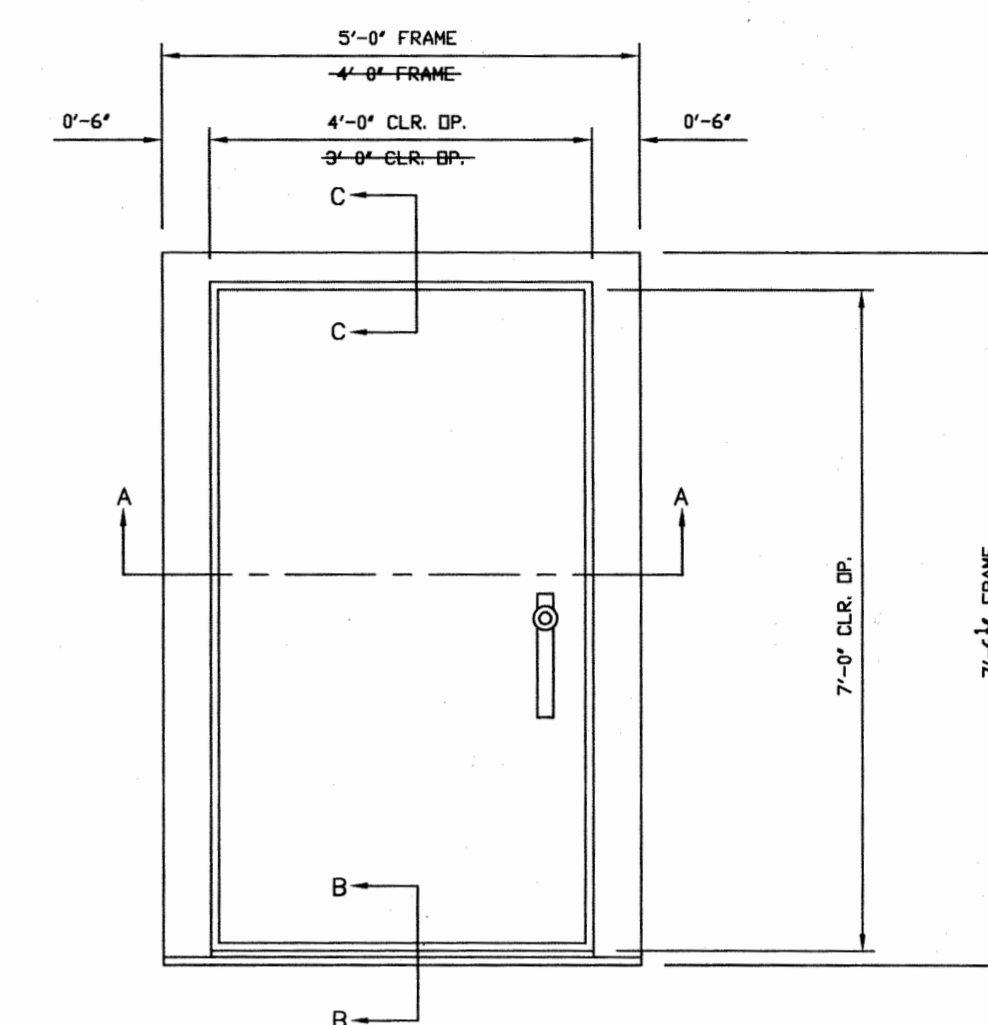
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MAGNET: PHILIPS INTERA 1.5T	TITLE: TRISTAN ASSOCIATES	UNIVERSAL SHIELDING CORP.
SCALE: N.T.S.	DRAWN: JERRY DATE: 11-12-04	SIZE: DRAWING NUMBER: ISSUE:
REVISED:	CHECKED: DATE:	APPROVED: DATE:
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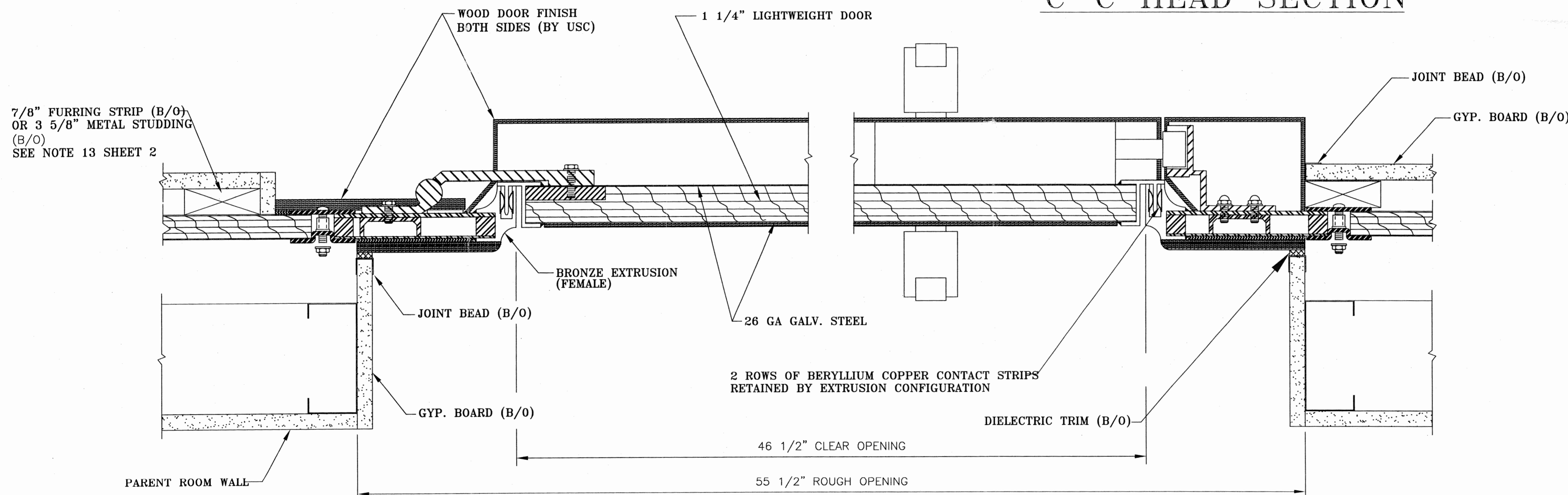
B-B SILL SECTION



C-C HEAD SECTION



DOOR ELEVATION



A-A DOOR SECTION

- NOTES:**
1. INNER DOOR SWING ONLY
 2. 1/4" IS REQUIRED BETWEEN THE TOP OF THE FINISHED FLOOR TO THE TOP OF THE SILL
 3. SEE SHEET 2 FOR SIZE AND SWING
 4. DOOR EXTRUSION IS FACTORY MITERED, WELDED AND SOLDERED CONTINUOUSLY INSIDE AND OUTSIDE
 5. RF DOOR IS PROVIDED WITH A MULTIPLE POINT LATCHING MECHANISM
 6. RF DOOR IS DESIGNED FOR A FINISHED FLOOR 1/8" THICK, IF ADDITIONAL THICKNESS IS REQUIRED, PLEASE NOTE

22 DOOR SECTIONS AND DETAILS

SHEET 6 OF 6

MATERIAL: -	FINISH: -	HEAT TREAT WEIGHT: -
MAGNET: PHILIPS INTERA 1.5T	TITLE: TRISTAN ASSOCIATES	UNIVERSAL SHIELDING CORP.
SCALE: N.T.S.	DRAWN: JERRY DATE: 11-12-04	SIZE: DRAWING NUMBER: ISSUE:
REVISED: -	CHECKED: - DATE: -	APPROVED: - DATE: -
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