Acoustical Masonry
BY SOUND SEAL
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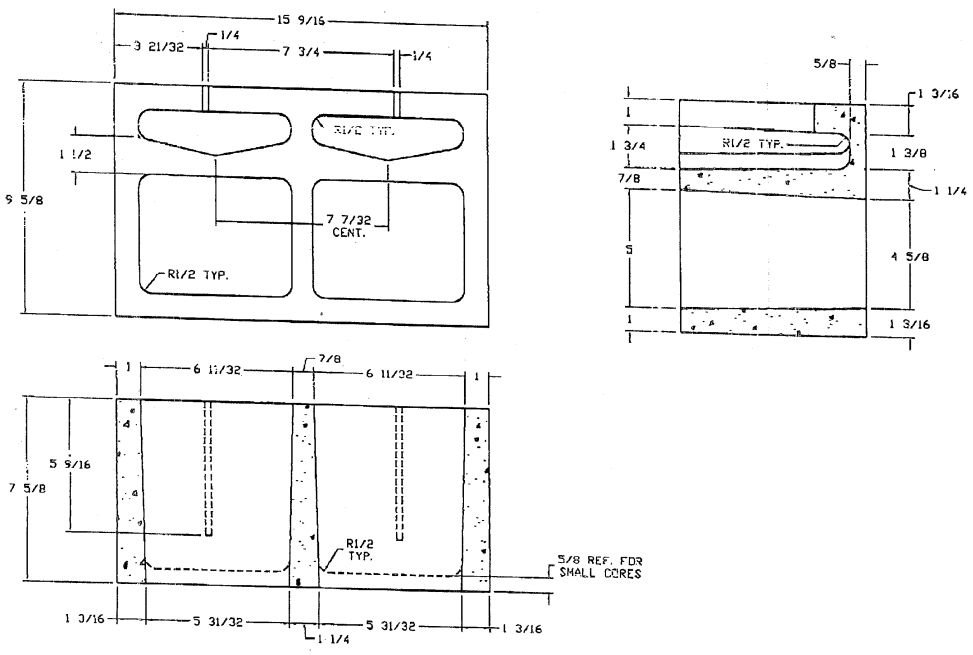
10" A-1/RF Masonry Units

Structural Section Properties

Grouted Cores	*Mortar Bedding*	*A (in^2/ft.)*	*I_x (in^4/ft.)*	*$S_{acoustic}$ (in^3/ft)*	*$S_{opp.\ face}$ (in^3/ft)*	*r_x (inches)*	*y (inches)*
None	Faceshell	33.80	494	104.1	87.6	3.48	5.23
None	Full	46.22	552	105.1	107.2	3.20	4.76
8" o.c.	Full	93.80	614	117.6	157.0	2.50	4.12
16" o.c.	Faceshell	66.26	613	109.6	131.2	2.91	4.38
24" o.c.	Faceshell	55.98	581	107.0	119.7	3.05	4.54
32" o.c.	Faceshell	52.02	569	106.2	114.9	3.11	4.62
40" o.c.	Faceshell	49.64	561	105.7	111.8	3.15	4.68
48" o.c.	Faceshell	45.71	554	105.0	106.5	3.25	4.78

Notes:

1. A = minimum net cross-sectional area.
2. I_x = moment of inertia based on average net cross-sectional area.
3. $S_{acoustic}$ = section modulus with respect to acoustic face based on minimum net cross sectional area.
4. $S_{opp.\ face}$ = section modulus with respect to non-acoustic face (opposite face) based on minimum net cross sectional area.
5. r_x = radius of gyration based on average net cross sectional area.
6. y = Distance to centroid of cross-section from non-acoustic face of masonry based on minimum net cross-section.
7. Use of minimum versus average net cross section is based on the requirements of ACI 530-08/ASCE 5-08/TMS 402-08, *Building Code Requirements for Masonry Structures*, §1.9.