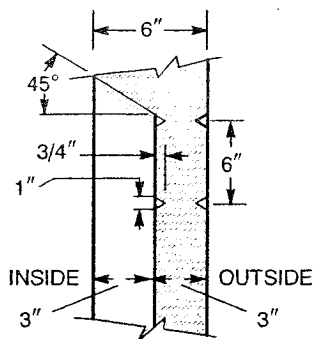
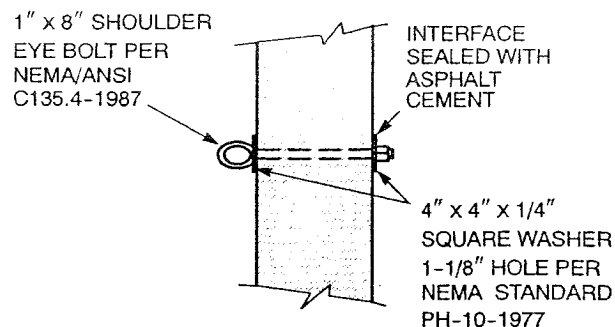


JOINT DETAIL



WINDOW KNOCKOUT DETAIL



PULLING EYEBOLT DETAIL

### Notes

1. Manhole shall be designed for the following loads:
  - a. The roof shall be designed for AASHTO HS20-1996 direct wheel load.
  - b. The walls shall be designed for the summation of the following:
    - 1) Soil pressure of not less than an equivalent fluid pressure of 33 pcf.
    - 2) Hydrostatic pressure of 5 feet measured from the base of the manhole.
    - 3) A surcharge of 2.5 feet of soil weighing 120 pcf.
  - c. The floor shall be designed to resist the hydrostatic pressure resulting from the 5-foot head called for in 1.b.2) above.
2. Concrete and concrete design shall be in accordance with ACI 318-1999.
3. Concrete shall have a minimum and maximum 28-day strength of 4000 and 5000 psi respectively.
4. Steel reinforcing bars shall conform to ASTM A615-1992 Grade 40 or 60. Welded wire mesh shall conform to ASTM A185-1997 or A497-1999.
5. Pulling eyebolts, with a minimum 8000-pound pulling strength, shall be installed adjacent to window knockouts at eight places.
6. Zinc alloy inserts 1/2 inch - 13 x 1-1/2 inch shall be installed at 40 places.
7. Openings and knockouts shall be clear of reinforcement.
8. Construction joint shall be sealed with asphalt cement or equivalent.
9. Manufacturer's identification and month/year when manufactured shall be legibly marked in/on concrete in the side of the 38-inch opening.

ORIGINAL	<b>MANHOLE - PRECAST REINFORCED CONCRETE</b>			
8/23/73				
APPROVED	<b>5'-0" x 10'-0" x 7'-0" INSIDE</b>			
11/1/01				
<i>B. V. V.</i>	NORTHEAST UTILITIES	MATERIAL SPECIFICATION	SPC M-024	10