

Supplemental Installation Instructions for Bolt Down Applications



1. Typical materials required for bolt down installation of PRO-RING are shown but refer to engineer specifications for detailed information and requirements.



3. Once all of the holes have been drilled, use a marking paint or chalk to place a reference point for re-assembly.



5. Be sure to remove all of the concrete dust and debris from the anchoring holes using compressed air.



2. With the required amount of rings and frame in place, use the masonry drill bit and hammer drill to drill through the PRO-RING into the top of the manhole cone or flat top.



4. If necessary, finish drilling the holes in the top of the manhole cone or flat top to the required depth for either drop in anchors or concrete anchoring adhesive.



6. If using drop in internally threaded anchors, place the anchors in each of the previously drilled holes.



7. Lock in the drop in internal threaded anchors using the drop in anchor setting tool and a hammer.



9. When using concrete anchoring adhesive, place the appropriate amount into the hole just prior to placing the Grade Ring on to the manhole cone or flat top.



11. Place adhesive on the top of the Finish or Angle Ring and then install the manhole frame making sure to align with the previously applied marks so the holes line up.



8. Overfill the two grooves in the underside of the Grade Ring with M-1 Adhesive. Be sure to place some extra adhesive around each of the drilled holes.



10. Flip the ring with the adhesive side down onto the manhole making sure to align with the previously applied marks to ensure the holes will line up.



12. If using concrete anchoring adhesive, place the threaded rod into each of the previously drill holes and let the adhesive cure prior to installing the washers and nuts.





13. If using the internally threaded drop in anchors, position and start threading the rod into the anchor until finger tight.



15. Place a large flat washer or fender washer, lock washer and nut onto each of the threaded rods.



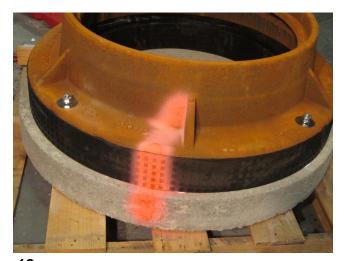
17. Using a reciprocating saw, hack saw or cutoff wheel, cut off any excess threaded rod and discard.



14. Using a double nut, tighten the threaded rod into the internally threaded drop in anchor until tight.



16. Tighten the nuts on each of the threaded rods.



18. Once the excess threaded rod has been removed, the installation is complete. Backfilling and/or paving may proceed immediately.

