

## **CITY OF YORBA LINDA PUBLIC WORKS DEPARTMENT STORM DRAIN NOTES**

1. ALL CONCRETE IN REINFORCED CONCRETE STRUCTURES MUST BE 3250 P.P.S.I. IN 28 DAYS, TYPE V PORTLAND CEMENT CONCRETE, CLASS A.
2. ALL PIPE LENGTHS ARE HORIZONTAL PROJECTIONS, UNLESS OTHERWISE SHOWN.
3. FOR TRENCH EXCAVATIONS, SHORING SHALL BE PROVIDED TO SATISFY STATE OF CALIFORNIA SAFETY REQUIREMENTS.
4. PIPE CONSTRUCTION IN FILL AREA MUST BE COORDINATED WITH THE GRADING TO INSURE THAT WHEN THE FILL OPERATION HAS BEEN COMPLETED AT GRADE A MINIMUM OF ONE FOOT ABOVE THE TOP OF PIPE OR TO FIVE FEET (MAXIMUM) ABOVE THE PROPOSED SUBGRADE OF THE PIPE, THE STORM DRAIN TRENCH SHALL BE EXCAVATED AND THE PIPE INSTALLED.
5. ALL WORK MUST BE IN CONFORMANCE WITH THE ORANGE COUNTY PUBLIC WORKS DEPARTMENT (OCPWD) STANDARD SPECIFICATIONS WHICH MAY BE OBTAINED FROM THE CITY AND SHALL BE KEPT ON THE JOB SITE AT ALL TIMES.
6. THE CONTRACTOR MUST NOTIFY THE CITY OF YORBA LINDA INSPECTOR AT LEAST (2) WORKING DAYS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.
7. ALL FILLS MUST BE COMPACTED TO 90% RELATIVE COMPACTION AS DETERMINED BY THE CALIFORNIA TEST METHOD NO. 216-, 1978 "FIVE LAYER METHOD". ALL BACKFILL MATERIAL MUST BE FREE OF ORGANIC MATTER.
8. ALL SURVEYING REQUIRED FOR VERTICAL AND HORIZONTAL ALIGNMENT MUST BE PROVIDED BY THE CONTRACTOR OR DEVELOPER AND SUFFICIENT REFERENCE STAKING MUST BE IN ACCORDANCE WITH THE REQUEST OF THE CITY OF YORBA LINDA INSPECTOR.
9. ALL REINFORCED CONCRETE PIPE MUST BE BEDDED IN ACCORDANCE WITH PIPE BEDDING DETAIL PER OCPWD STD. PLAN 1319.
10. PRIOR TO THE PLACEMENT OF STORM DRAIN IMPROVEMENTS, THE DEVELOPER'S GEOTECHNICAL ENGINEER SHALL CERTIFY IN WRITING TO THE CITY ENGINEER THAT THE STORM DRAINS' SUBGRADE IS OF ADEQUATE STRENGTH TO SUPPORT THE STRUCTURES AND ANY ANTICIPATED LOADS.
11. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE DEVELOPER'S CONTRACTOR SHALL OBTAIN A PERMIT FROM THE STATE DIVISION OF INDUSTRIAL SAFETY. A COPY OF THE PERMIT SHALL BE KEPT ON THE JOB SITE AT ALL TIMES.
12. WHENEVER APPLICABLE, THE DEVELOPER SHALL OBTAIN A PERMIT FROM ALL APPLICABLE STATE DEPARTMENTS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
13. ALL STEEL THAT IS TO BE CONTINUOUS SHALL BE LAPPED A MINIMUM OF 45 BAR DIAMETERS FOR NO. 8 BARS OR SMALLER AND A MINIMUM OF 60 BAR DIAMETERS FOR NO. 9, 10, AND 11 BARS EXCEPT WHEN SPECIFIED ON THE PLAN.
14. ALL MATERIALS TESTING FOR THE DRAINAGE FACILITIES SHALL BE PROVIDED BY THE CONTRACTOR OR DEVELOPER IN ACCORDANCE WITH THE NUMBER, LOCATION AND FREQUENCY REQUESTED BY THE CITY ENGINEER.
15. CHAMFER ALL EXPOSED EDGES OF CONCRETE  $\frac{3}{4}$ " MIN.
16. THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT FOR ALL WORK WITHIN THE CITY RIGHT OF WAY. LENGTH OF MANHOLE STRUCTURES MAY BE INCREASED TO MEET PIPE ENDS AT OPTION OF CONTRACTOR AS LONG AS REINFORCING STEEL IS CONTINUED AS REQUIRED. ANY CHANGE IN SPUR LOCATION MUST BE ACCEPTED BY THE ENGINEER.
17. FLOOR OF MANHOLE STRUCTURE SHALL BE STEEL TROWELED TO SPRING LINE.
18. BODY OF MANHOLE STRUCTURE, INCLUDING SPUR, MUST BE POURED IN ONE CONTINUOUS OPERATION, EXCEPT THAT CONSTRUCTION JOINT AT THE SPRING LINE WITH A LONGITUDINAL KEYWAY IS PERMITTED.
19. ALL REINFORCING BARS MUST BE SECURELY HELD IN PLACE IN THE FORMS. TWO WAYS MATS OF STEEL MUST BE WIRED TOGETHER BOTH WAYS AT ALTERNATE INTERSECTIONS.
20. STORM DRAIN BACKFILL FOR ALL FACILITIES WITHIN STREET RIGHT-OF-WAY IS TO BE PLACED AND COMPACTED UNDER CITY OF YORBA LINDA INSPECTION AND MEET OR EXCEED OCPWD MINIMUM STANDARD.
21. ALL PIPE TO BE BANDED AND GROUTED.
22. AREA DRAIN PIPE SHALL BE:
  - A. ACRYLONITRILE BUTADIENE STYRENE (A.B.S.) SOLID WALL PIPE CONFORMING TO A.S.T.M. D 2751, SDR35. OR
  - B. POLYVINYL CHLORIDE PLASTIC (P.V.C.) PIPE CONFORMING TO A.S.T.M. D 3034, SDR 35. OR
  - C. APPROVED EQUAL.
23. R.C.P. SHALL COMPLY WITH ALL A.S.T.M. APPLICABLE STANDARDS.