

1. All work shall be done in accordance with the Standard Specifications for Public Works Construction, the "GREENBOOK", the most current edition and all supplements thereto, adopted by the Southern California Chapter of the American Public Works Association and the Special Provisions (Technical Specifications) thereto adopted by the City.
2. Over Excavation. Bottom of trenches shall be firm, unyielding, and acceptable to the City Engineer. When trench bottoms are unacceptable. Contractor shall over excavate and install 12" of 2" crushed rock.
3. Bedding: Crushed rock bedding shall be installed in two lifts minimum. Bedding for perforated pipes shall be wrapped in filter fabric. Bedding shall be compacted to the same percentage as backfill.
- 4 Backfill: Backfill shall be crushed aggregate base (CAB) or crushed miscellaneous base (CMB). Backfill 5'-0" below finished grade and lower shall be compacted to 90% relative compaction. Backfill less than 5'-0" below finished grade shall be compacted to 95% relative compaction. JETTING IS NOT ALLOWED. Backfill in landscape areas may be native material, free from trash, debris, and other objectionable substances compacted to 90% relative compaction regardless of depth. Contractor shall provide compaction testing of backfill material by a City approved lab. Certified test results shall be provided to the City Engineer prior to resurfacing.
- 5 CDF: Controlled density fill (CDF), also known as controlled low strength material (CLSM), meeting the specification herein may be used in lieu of backfill or bedding except that CDF shall not be used for bedding below any pipe or around perforated pipes. Contractor shall anchor pipes, place CDF in lifts, and take any measures necessary to prevent pipe flotation and eliminate voids.
 - 28 day compressive strength: 50psi to 150psi
 - 3/8" max aggregate. Min 60% of aggregate passing 3/8" sieve.
 - ASTM C-150 type II cement, 30lbs to 40lbs per cubic yard.
 - Fly ash meeting ASTM C-618 for class F pozzolans, 300lbs per cubic yard max.
 - Air entraining agent meeting ASTM C-260 yielding 7% entrained air min.
- 6 Resurfacing: Provide resurfacing per standard drawings. Drawing 100, 102, and 104 contain requirements for most concrete replacement. Drawing 122A, 122B and 122C contain requirements for most AC replacement.
- 7 Pipes shall not be stacked or located within 4" horizontally of each other.
- 8 PVC for storm drainage or sanitary sewer shall be SDR 26. Conduit for electrical systems shall be UL listed. Conduit for potable water shall be NSF approved. Ductile iron pipe shall be installed with loose polyethylene encasement in accordance with AWWA C 105.
- 9 All plastic pipe, conduit, or sleeves shall be Schedule 40 or SDR 26 minimum and shall be UL listed if for electrical systems or NSF approved for potable water or sanitary systems. A bare #8 stranded tracing conductor and pull rope shall be installed in all non-electrical or empty plastic pipes or conduits, terminate w/36" coil in a splice box, Christy F1 or equal. A #8 Tracing conductor Type THHN in conduit or Type UF taped 5' O.C. on the exterior of all water or sanitary pipelines is required.
- 10 In accordance with Government code Section 4216.4 (a): When an excavation is within the approximate location of subsurface installation, the excavator shall determine the exact location of subsurface installations by excavating with hand tools within the area of the subsurface installations before using any power operated or power driven excavating of boring equipment.

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CITY OF SAN LEANDRO * STANDARD PLANS

NO.	REVISIONS	DATE	BY			APPROVED							
▲	Updated all notes	5/31/12	NT	TRENCH BACKFILL NOTES		 Kenneth Joseph, City Engineer R.C.E. No.34870 Expires 9/30/13							
DRAWN	NT/AMS	CHECKED	KJ/KRC	DATE	May 2012	SCALE	NONE	SHEET	2 OF 2	DWG. NO.	120B	CASE.	3101