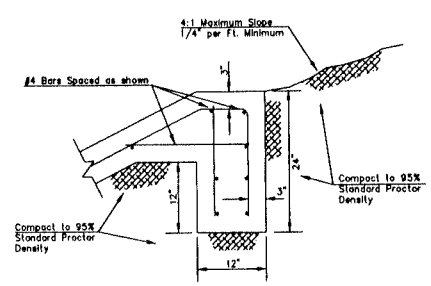


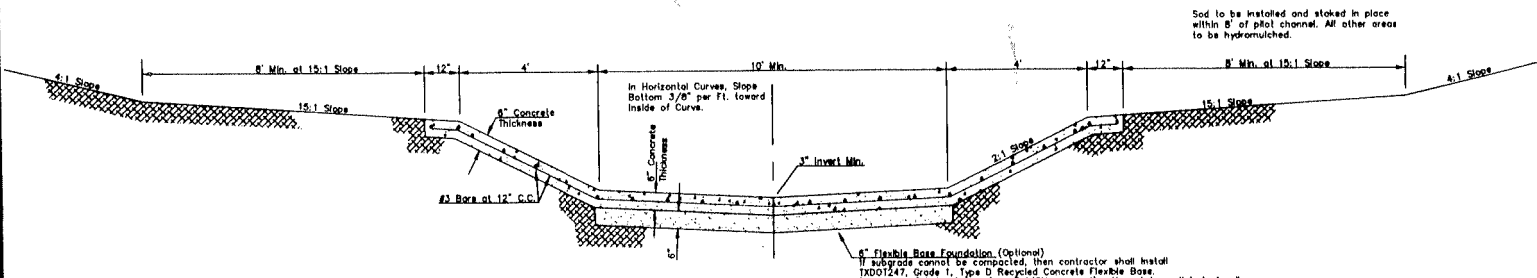
CONCRETE LINED CHANNEL

All Concrete Lined Channel Sections must be designed by a Structural Engineer. A Soil Report and Structural Design Calculations must be submitted with Proposed Design.

Note:
Must have positive drainage into channel.
Once channel is poured, the areas adjacent to channel must be immediately backfilled. This backfilling must occur before next section of channel is poured.



DETAIL "A"

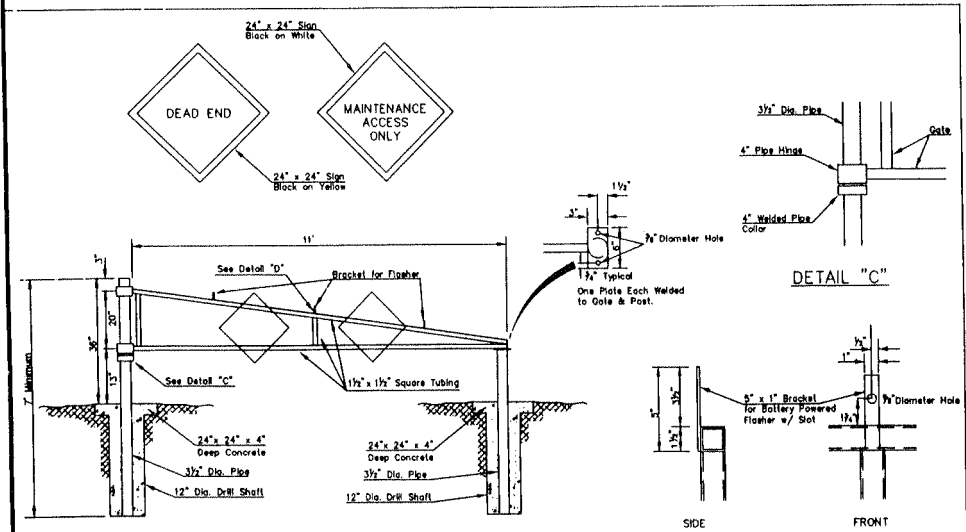


PILOT CHANNEL

Sod to be installed and staked in place within 8' of pilot channel. All other areas to be hydromulched.

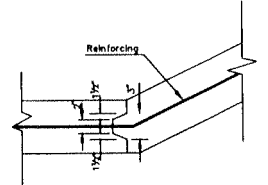
GENERAL NOTES

- All concrete lined and armored channels shall be designed and sealed by a Professional Engineer. Soil borings shall be taken along the proposed channel route to provide the Engineer with a basis of design. A copy of the design calculations and soil report shall be given to the Engineering Division as part of the project file.
- All construction in conformity with City of Mesquite General Specifications.
- Sand shall not be used as a fill or a level up under armored channels or pilot channels. All areas must be compacted to 95% Standard Proctor Density in 1' loose lifts with a moisture range of 0% to plus 6% of optimum moisture. Location of Details shall be determined by City Public Works Construction Inspector.
- Reinforcing shall be #4 bars at 12" C.C. each way, unless otherwise specified. Reinforcing shall conform to ASTM A-615 and be a minimum grade of 80 per ASTM-370. Reinforcing steel bar tops to be 30 bar diameters, and 50% of intersections to be secured with tie wire.
- All bar dimensions are measured outside to outside. Rods measured from center to centerline of bars.
- Construction joints shall be spaced at 20' intervals, floors and walls matching. Sawn dummy joints are permissible (1/4" deep by 1/2" wide). No sealant required. Expansion joints shall be placed with a maximum spacing of 800' C.C.
- Concrete side slopes to be 2:1 or 3:1. Earth side slopes within 8' of concrete pilot channel to be 15:1. All other slopes to be 4:1 or better.
- Concrete shall be 3600 psi, 28-day strength, 6 sack cement per cubic yard minimum and 3' to 5' slump for hand pour.
- All visible surfaces shall have a broom finish. Visible surfaces to be membrane cured for 72 hours minimum. While curing compound is to be applied per manufacturer's recommendations, to all exposed concrete surfaces immediately after completion of paving operations, per ASTM-C-309, Type 2, NCHRP Section 2.2.10(X1).
- Construction joint shown for convenience only - monolithic construction may be used.
- Maintenance access ramps shall be constructed as directed by the City Engineer on all channels. These ramps shall be provided with a gate and signage. Shop drawings for the gate and appurtenances shall be submitted to the City Engineer for review and approval prior to fabrication.
- Once the channel is poured, the areas adjacent to the channel must be immediately backfilled. This backfilling must occur before the next section of channel is poured.
- Cross-sections of the proposed channel shall be plotted at 50' intervals and other critical points. These cross-sections should be carefully examined by the designer to ensure that a positive drainage can be obtained within the easement provided and that no ponding of water will occur behind the channel.

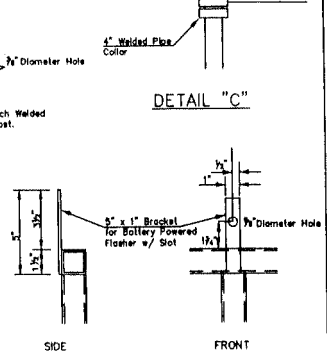


MAINTENANCE RAMP GATE

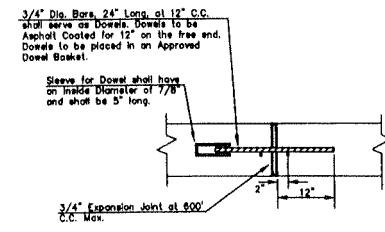
Note: All Structural Members to be Hot Dip Galvanized Pipe.



CONSTRUCTION JOINT



DETAIL "D"



TRANSVERSE EXPANSION JOINT

APPROVED: *M. R. [Signature]* CITY ENGINEER Date: 7-19-04

REVISION HISTORY			ARMORED CHANNEL SHEET 1			
Rev. No.	Date	Description	ENGINEERING DIVISION			
	Dec '92	Original	STANDARD DETAILS			
Δ	July '04	Cement Strength, Rebar Size, Articulated Block Details	City of Mesquite, Texas			
			DATE	INITIALS	SCALE	FILE
			July 2004	TJC	N.T.S.	Chan Sheet 1