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**PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION**

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**DEVELOPMENT ENGINEERING  
DESIGN BULLETIN**

**CATEGORY: 3 Improvement Plans, Storm Drain**  
**TITLE: 3.4.5 Modified Concrete Cradles for Plastic Pipes**

**DATE: June 1, 2008**

The Chico Municipal Code (C.M.C.) requires two feet of cover over storm drain under paved areas. Where two feet of cover can not be provided the C.M.C. requires the use of the Type 4 concrete cradle depicted in Standard Plan S-12. The Type 4 cradle dates to a time prior to the development of modern plastic pipes and is not a suitable solution. City staff has developed a modified cradle for use with plastic pipe.

City Standard S-12M, in Title 18R of the C.M.C. illustrates the detail to use where two feet of cover can not be provided over plastic pipe. Caution shall be taken when applying this standard. A minimum 6" backfill will still be required between the top of pipe and bottom of street base. In addition, the specification does not provide protection to pipe prior to paving, during normal construction activities. The cradle must be installed the full length between structures and requires final approval by the Building and Development Services Director.

**For all minimum cover situations (less than 2-feet), reinforced concrete pipe shall be the best solution.**