


NOTES:

- CONCRETE SHALL BE STRUCTURAL CONCRETE HAVING A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
- REINFORCEMENT SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI (GRADE 60).
- LAP SPLICES SHALL BE A MINIMUM OF 24 BAR DIAMETERS IN LENGTH UNLESS OTHERWISE NOTED.
- ALL REINFORCING HOOPS AND BARS SHALL HAVE A MINIMUM 1½" CLEARANCE TO OUTSIDE SURFACES, INCLUDING TO THE INSIDE FACE AT OPENING.
- OMIT BARS 6" OR LESS IN LENGTH. PROVIDE 6" TO 14" BARS WITH A 90° 4" HOOK, EACH END. HOOK SHALL BEND UPWARD TOWARD TOP OF SLAB.
- LOWER HOOP AROUND OPENING SHALL BE TIED TO TOP OF BOTTOM MAT REINFORCEMENT. UPPER HOOP SHALL BE LOCATED 1½" CLEAR OF TOP SURFACE OF SLAB.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.	Manufacturing Standards for Precast Concrete Products		Appendix A
	Top Slab "B" for Precast Maintenance Hole		
	 Bureau of Environmental Services CITY OF PORTLAND, OREGON _____ Chief Engineer	Calc. Book No. 001 Effective Date 01-01-09	Standard Drawing No. <div style="font-size: 24pt; font-weight: bold; text-align: center;">P-141</div>