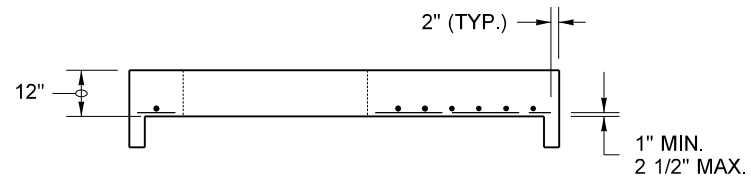
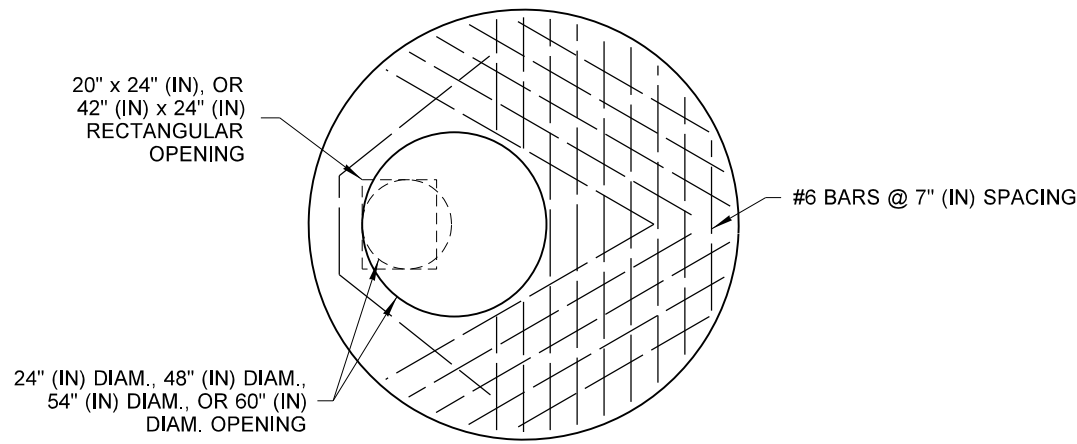
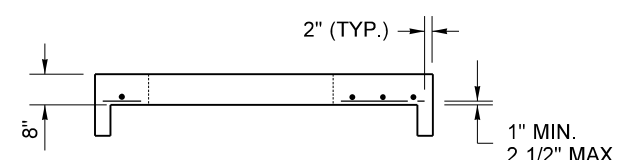
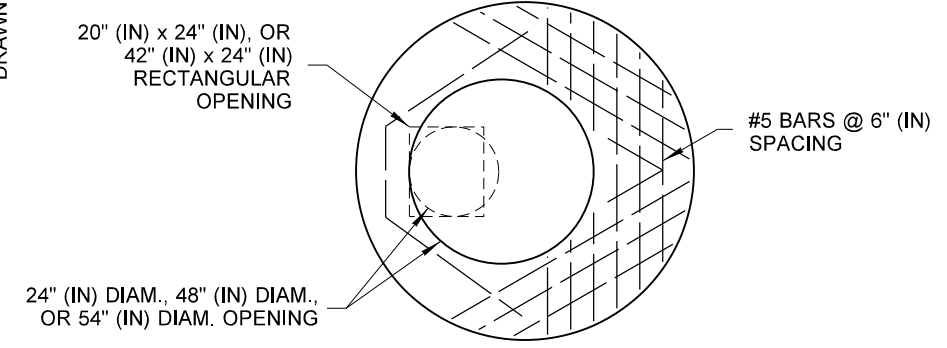


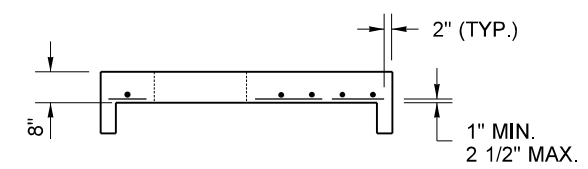
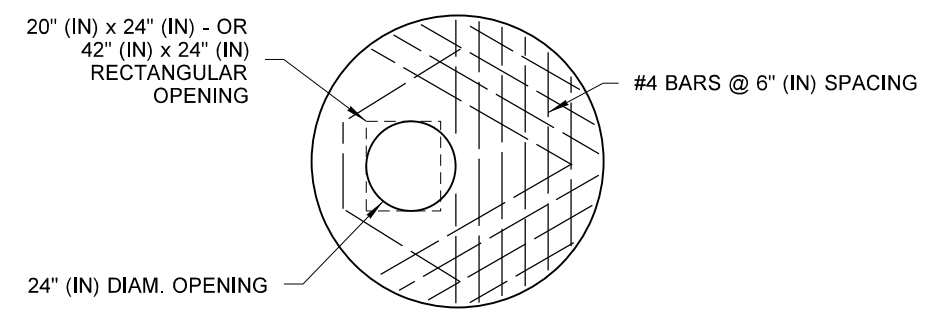
DRAWN BY: FERN LIDDELL



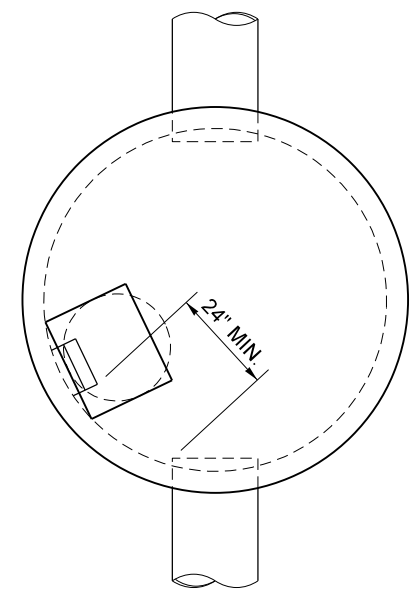
**84" (IN) or 96" (IN) FLAT SLAB TOP**



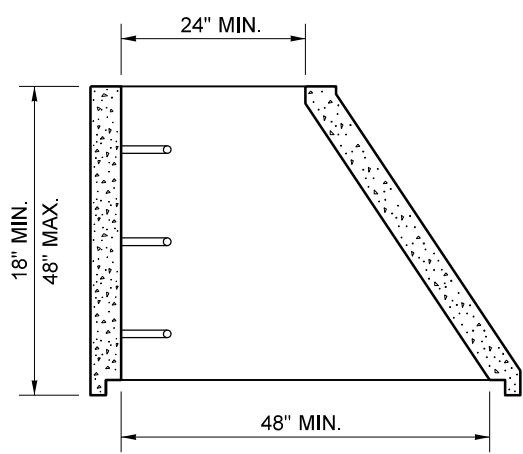
**72" (IN) FLAT SLAB TOP**



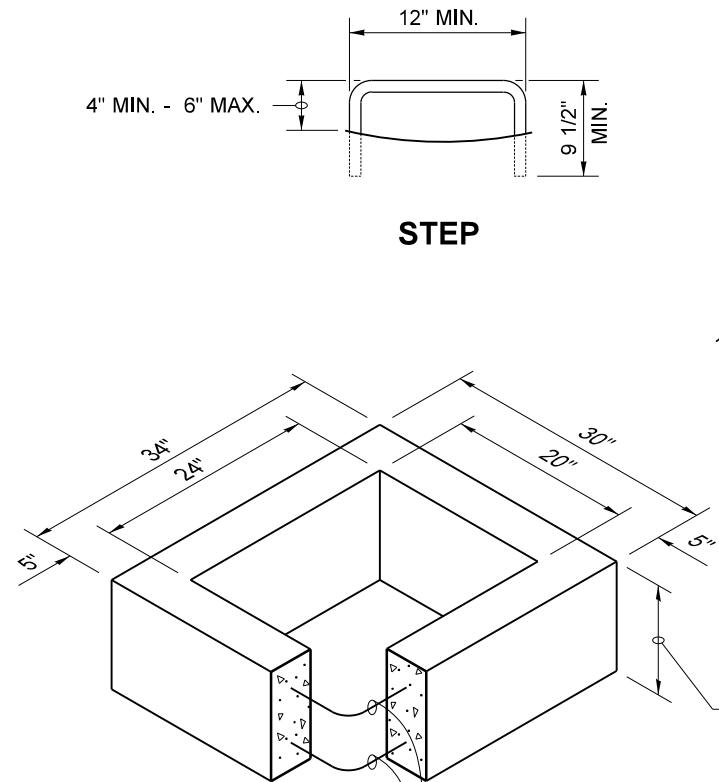
**48" (IN), 54", or 60" (IN) FLAT SLAB TOP**



**TYPICAL ORIENTATION FOR ACCESS AND STEPS**



**ECCENTRIC CONE SECTION**



**STEP**

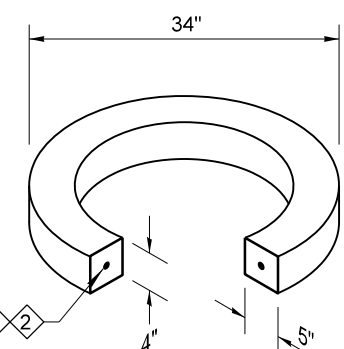
**PREFABRICATED LADDER**

**NOTE**  
1. Ladder rungs for manholes and catch basins shall meet the requirements of **AASHTO M 199**.

ONE #3 BAR HOOP FOR 2", 4", OR 6" (IN)  
TWO #3 BAR HOOPS FOR 12" (IN)  
FOUR #3 BAR HOOPS FOR 24" (IN)

**RECTANGULAR ADJUSTMENT SECTION**

- 1 As an acceptable alternative to rebar, wire mesh having a minimum area of 0.12 square inches per foot may be used for adjustment sections.
- 2 As an acceptable alternative to conventional steel reinforcement, manufacturers shall use Synthetic Structural Fibers meeting the requirements of **Standard Specification Section 9-05.50(10)**.



ONE #3 BAR HOOP FOR 2", 4", OR 6" (IN)  
TWO #3 BAR HOOPS FOR 12" (IN)

**CIRCULAR ADJUSTMENT SECTION**

For rectangular and circular adjustment sections, approved alternate material compositions are acceptable in lieu of precast concrete designs



**MISCELLANEOUS DETAILS FOR DRAINAGE STRUCTURES STANDARD PLAN B-30.90-02**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

STATE DESIGN ENGINEER  
Washington State Department of Transportation