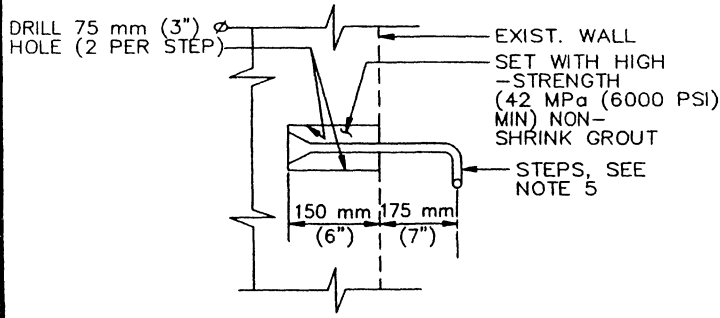
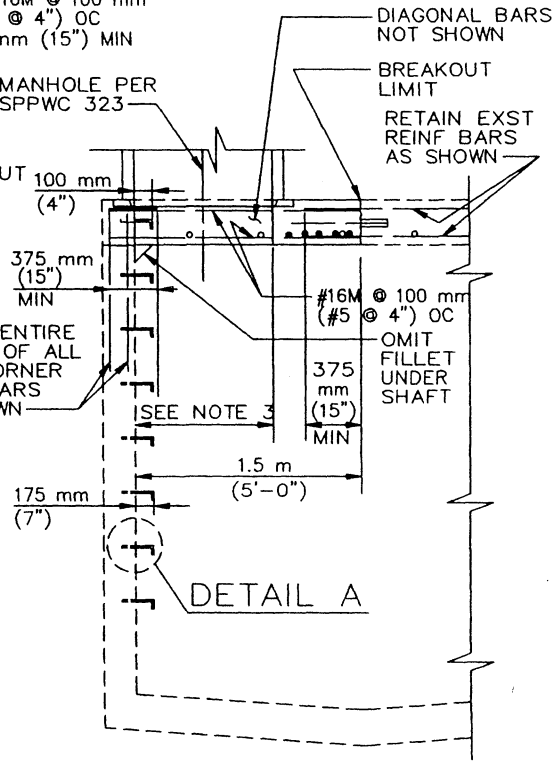


MANHOLE DETAIL

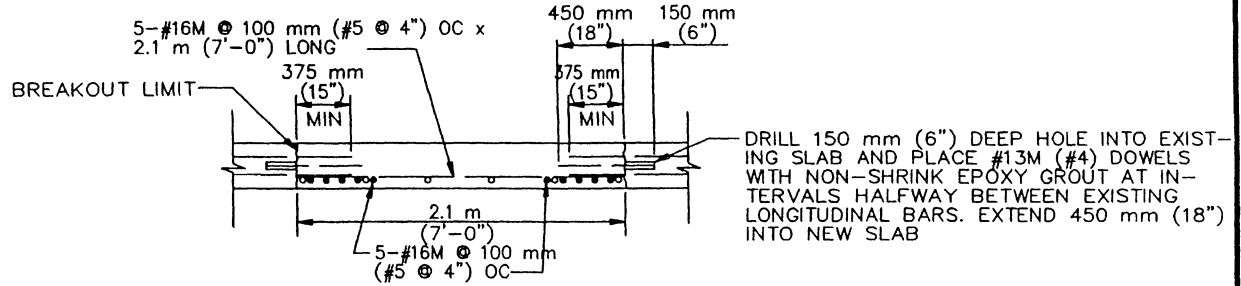


DETAIL "A"

PLACEMENT OF STEEL STEP IN EXISTING RCB



SECTION A-A



SECTION B-B

- LEGEND**
- EXISTING REINFORCING BARS
  - ADDED REINFORCING BARS

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION		
PROMULGATED BY THE PUBLIC WORKS STANDARDS INC. GREENBOOK COMMITTEE 1992 REV. 1996	<h2 style="margin: 0;">MANHOLE FOR EXISTING RCB</h2> <p style="margin: 0; font-size: small;">USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION</p>	STANDARD PLAN METRIC <h1 style="margin: 0;">327-1</h1> <p style="margin: 0; font-size: small;">SHEET 1 OF 3</p>

NOTES

1. THIS STRUCTURE MAY BE USED WHEN THE DEPTH OF COVER IS NO GREATER THAN THE DESIGN COVER OF EXISTING RCB. IF THIS DEPTH IS EXCEEDED, OR PROPOSED MANHOLE SHAFT EXCEEDS 900 mm (36") IN DIAMETER A DETAILED PLAN WITH CALCULATIONS PREPARED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA SHOWING THE PROPOSED MANHOLE SHALL BE SUBMITTED TO THE AGENCY FOR APPROVAL.
2. STRUCTURAL NOTES.
  - A. DIMENSIONS FROM FACE OF CONCRETE TO REINFORCING STEEL ARE TO CENTER OF BAR UNLESS OTHERWISE SHOWN.
  - B. CONCRETE DIMENSIONS SHALL BE MEASURED HORIZONTALLY OR VERTICALLY ON THE PROFILE, AND PARALLEL TO OR AT RIGHT ANGLES (OR RADially) TO CENTER LINE OF CONDUIT ON THE PLAN EXCEPT AS OTHERWISE SHOWN.
  - C. ALL BAR BENDS AND HOOKS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE'S "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE. LATEST EDITION.
  - D. PLACING OF REINFORCEMENT SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE'S "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE". LATEST EDITION.
  - E. TRANSVERSE REINFORCING STEEL SHALL TERMINATE 40 mm (1 1/2") FROM THE CONCRETE SURFACES UNLESS OTHERWISE SHOWN.
  - F. NO SPLICES IN TRANSVERSE STEEL REINFORCEMENT SHALL BE PERMITTED OTHER THAN SHOWN ON THE PLANS.
  - G. ALL STRUCTURAL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE WITH A 28 DAY COMPRESSIVE STRENGTH OF 28 MPa (4000 PSI).
  - H. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A 615M, GRADE 300 (ASTM A 615, GRADE 40).
3. WHERE REINFORCEMENT IS REQUIRED TO EXTEND THROUGH THE NEW JOINT, CONCRETE SHALL BE REMOVED IN THE FOLLOWING SEQUENCE:
  - A. A SAW CUT SHALL BE MADE 40 mm (1 1/2") DEEP AT THE REMOVAL LIMITS. CARE SHALL BE EXERCISED IN SAWING AT THE REMOVAL LIMITS SO AS NOT TO CUT THE REINFORCING STEEL WHICH SHALL BE RETAINED AND EXTENDED INTO THE NEW CONSTRUCTION AS INDICATED ON THE PLANS.
  - B. USING HAND-HELD EQUIPMENT THE CONCRETE SHALL BE CAREFULLY REMOVED FOR THE FULL DEPTH OF THE WALL OR SLAB AND FOR A MINIMUM DISTANCE FROM THE SAW CUT EQUAL TO THE LONGEST EXTENSION OF THE EXISTING BARS TO BE EXTENDED INTO THE NEW CONSTRUCTION. THIS EXTENSION SHALL BE 30 BAR DIAMETERS UNLESS OTHERWISE SHOWN.
  - C. EXISTING REINFORCEMENT SHALL BE CUT TO THE REQUIRED BAR EXTENSION.
  - D. THE REMAINING CONCRETE MAY BE REMOVED BY ANY SUITABLE METHOD, UPON APPROVAL OF THE ENGINEER, WHO SHALL BE THE SOLE JUDGE OF THE USE OF ANY CONCRETE REMOVAL EQUIPMENT. EXPLOSIVES, WRECKING BALL OR OTHER SIMILAR DEVICES WHICH ARE LIKELY TO DAMAGE THE CONCRETE TO BE LEFT IN PLACE SHALL NOT BE USED.
  - E. INTERNAL SUPPORT OF THE EXISTING RCB SHALL BE PROVIDED DURING THE REMOVAL AND RECONSTRUCTION OF THE TOP SLAB. A DETAILED PLAN WITH CALCULATIONS PREPARED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA SHOWING THE TEMPORARY SUPPORT SYSTEM SHALL BE SUBMITTED AND APPROVED BY THE AGENCY PRIOR TO THE START OF REMOVAL WORK.

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

**MANHOLE FOR EXISTING RCB**

STANDARD PLAN  
METRIC

**327-1**

SHEET 2 OF 3

4. WHEN THE MANHOLE OPENING IS 610 mm (24"), THE BREAKOUT LIMIT DIMENSIONS MAY BE REDUCED FROM 1.5 m x 2.1 m (5'-0" x 7'-0") TO 1.2 m x 1.8 m (4'-0" x 6'-0").
5. STEPS SHALL CONFORM TO SPPWC 635. UNLESS OTHERWISE SHOWN STEPS SHALL BE SPACED 350 mm (14") TO 375 mm (15") OC. THE LOWEST STEP SHALL NOT BE MORE THAN 600 mm (24") ABOVE THE INVERT.
6. THE FOLLOWING SPPWC ARE INCORPORATED HEREIN:

323	MANHOLE – CONCRETE BOX STORM DRAIN
630	610 mm (24") MANHOLE FRAME AND COVER
635	STEEL STEP

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

**MANHOLE FOR EXISTING RCB**

STANDARD PLAN  
METRIC

**327-1**

SHEET 3 OF 3