# B740 - CONCRETE BARRIER
# (As specified in OPSS 740 November 2025)

## 740.1 GENERAL

The work under these items consists of construction of concrete barrier. For precast concrete barrier the work under the item includes fabrication, delivery and installation.

Permanent concrete median barrier (CMB - Types M, C, and TW) and permanent concrete roadside barrier (CRB) are either slip-formed or cast in place by conventional wooden or steel formwork, or precast.

The contractor has the option to construct either cast-in-place (formed or slipformed), or precast, unless otherwise specified by the designer.

Asymmetric concrete barrier shall be used when required to accommodate a grade differential (of up to 600 mm) between opposing traffic lanes.

Designers should refer to the Roadside Design Manual (RDM) in the selection of the applicable type of CMB or CRB systems to be used on a project.

## 740.2 REFERENCES

- Ministry of Transportation Publications - Roadside Design Manual
- CDED B313, Hot Mix Asphalt
- CDED B314, Untreated Subbase, Base, Surface, Shoulder, Selected Subgrade and Stockpiling

## 740.3 TENDER ITEMS

| Item Code | Title | Col Type | U.O.M. | PQP |
|---|---|---|---|---|
| 0740-0010 | 825 mm Concrete Barrier | Variation | m | Y |
| 0740-0015 | Tall Wall Concrete Barrier | Variation | m | Y |
| 0740-0012 | Asymmetric 825 mm Concrete Barrier | Variation | m | Y |
| 0740-0018 | Asymmetric Tall Wall Concrete Barrier | Variation | m | Y |

## 740.4 SPECIFICATIONS

The requirements for concrete barrier are contained in OPSS 740.

## 740.5 SPECIAL PROVISIONS - None

## 740.6 STANDARD DRAWINGS

Applicable standard drawings are contained in the 900 series of the Ontario Provincial Standards Drawings (OPSD) or Ministry of Transportation Ontario Drawing (MTOD).

## 740.7 DESIGN

For installation in a median configuration, ensure that CMB is embedded a minimum of 75 mm into pavement at least 3 m wide on both sides of the barrier system.

For installation in a roadside configuration, ensure that the CRB is embedded on the backside by widening the embankment a minimum of 0.6 m between the backside of the barrier and the breakpoint of the slope.

Refer to the Roadside Design Manual for additional information.

## 740.8 COMPUTATION

These are Plan Quantity Payment items.

Quantities are computed in metres. Measurements are scaled or measured along the centreline of each installation. Where two concrete barriers are constructed back-to-back, e.g. Type 'M-2' or ‘TW-2’, they are measured as a single installation.

## 740.9 DOCUMENTATION

### 740.9.1 Contract Drawings

CMB and CRB are depicted on the contract drawing with the OPSD or MTOD number and barrier type shown adjacent to the symbol.

When asymmetric concrete barriers are required, the designer shall show the pavement elevations on both sides of the concrete barrier at the following intervals on the contract drawings:

a) At all break points in the vertical alignment of the barrier or the shoulders.

b) At the normal cross section interval throughout the tangent section.

c) At 10 metre intervals within the transition from tangent to full superelevation.

d) At the normal cross section interval throughout the superelevated section.

Granular fill between back-to-back concrete barriers shall be documented according to CDED B314. Where pavement is required between back-to-back concrete barriers, it should be documented according to CDED B313.

### 740.9.2 Quantity Sheets

Barrier lengths are computed and entered on the “Quantities - Miscellaneous 1" sheet without deduction for lighting pole or overhead sign footings.

Each type of CMB or CRB, back-to-back installations, transition treatment, or end treatments shall be identified in separate columns by specifying the appropriate OPSD or MTOD or typical section reference at the top of each column. The station-to-station limits and lengths for each type of installation shall be specified. The column subtotals are combined into the tender quantity for each respective tender item.

Granular fill between back-to-back concrete barriers shall be documented according to CDED B314. Where pavement is required between back-to-back concrete barriers, it should be documented according to CDED B313.

### 740.9.3 Documentation Accuracy

Station and quantity entries are recorded to the nearest whole metre.

Offsets when required are recorded to 0.1 of a metre.

Spot checking required.

### 740.9.4 Non-Standard Special Provisions

When there is a requirement to specify whether the concrete barrier is cast-in-place or precast, a non-standard special provision should be included in the Contract Documents.