

## 16\_22 Measurements for B-77 Anchors

### Question:

The guardrail anchor unit for B-77 is measuring 19.75' instead of 18.75' that is stated in the Roadway Design Manual". Is this a mistake?

### Answer:

This question has been asked many times in the past and we have always complied with the dimensions set forth in the Roadway Standard Drawings Manual. However, as we develop further the Roadway Automatic Quantities and Computation Procedure, Geopak Quantity Manager, and Transport, there will be a need to modify these anchor unit cells. In addition, for ease of computation of anchor unit deductions in the Roadway guardrail summary sheet, and in compliance with the Roadway Design Manual divisibility guideline of 12.5' (3.81 m) and 6.25' (half of 12.5') for guardrail pay items, the following anchor unit cells have been modified.

Roadway Design Manual, Part 1, Chpt. 3-2F

ROADWAY DESIGN MANUAL

PART 1

DETERMINING TOTAL GUARDRAIL LENGTH

3-2F

The total length guardrail needed at an installation is obtained by adding the length of need to the guardrail length which is needed throughout the limits of the hazard, and then deducting the applicable anchors' unit length. Anchor unit deductions, to be used in calculations, are listed below. The total length of guardrail should be rounded so it is divisible by 12.5 ft.

#### ANCHOR DEDUCTIONS

| <u>ANCHOR</u> | <u>DEDUCTIONS</u> |
|---------------|-------------------|
| GRAU-350      | 50.0'             |
| M-350         | 37.5'             |
| CAT-1         | 6.25'             |
| AT-1          | 6.25'             |
| *Type III     | 18.75'            |
| *B-77         | 18.75'            |
| *B-83         | 25.0'             |

\*Measured from the end of the bridge or approach slab rail.

| <b>Anchor Cell</b> | <b>Current Length</b><br>(Roadway Standard Drawings) | <b>Modified Length</b><br>(Roadway Design Manual) |
|--------------------|--|---|
| M-350*             | 40' - 11 1/6"  | 37.5'   |
| CAT-1              | 9' - 2 4/5"  | 6.25'   |
| AT-1*              | 9' - 2 4/5"  | 6.25'   |
| TYPE III*          | 18' - 1 3/4"   | 18.75'  |
| B-77*              | 19' - 9" (19.75')                                    | 18.75'  |
| B-83*              | 24' - 4 3/4"   | 25.0'   |

\*Both Approach and Trailing End Cells

Note that this does not affect existing already placed anchor cells. In this case, the Roadway Design Manual will take precedence over the Roadway Standard Drawings Manual.