Index 521-005 Concrete Barrier at Toll Sites

Design Criteria

FDOT Design Manual (FDM); ***FTE General Tolling Requirements;*** ***AASHTO Roadside Design Guide,*** 4th Edition; ***AASHTO Manual for Assessing Safety Hardware (MASH),*** Test Level 4 Criteria; ***AASHTO LRFD Bridge Design Specifications***, 7th Edition.

Design Assumptions and Limitations

For general Concrete Barrier information and additional related guidance, see the ***Standard Plans Instructions (SPI) for Index 521-001***.

Index 521-005 provides requirements for installation of median concrete barrier configurations through toll site facilities, including the locations for pull boxes, toll header curb, gantry supports, and barrier reinforcement. This Index is primarily intended for use on ***Florida's Turnpike Enterprise (FTE)*** toll site facilities with coordinating information found in the ***General Tolling Requirements (GTR)***. This Index may also be used for toll sites in other Districts at the District's discretion.

Based on the location needs and guidance provided in the ***GTR***, the Engineer of Record (EOR) must select a barrier scheme option as provided in ***Index 521-005***. Additionally, the EOR must provide project-specific design information, including the applicable items listed in the Plans Content Requirements below.

Plans Content Requirements

A. General:

In the Roadway Plan views, label Begin and End Stations of the Concrete Barrier types as they correspond to the callout points shown in ***Index 521-001*** & ***521-005*** (e.g., End Median Barrier Sta., Begin Scheme 1 Sta., End Scheme 1 Sta., etc.). In general, follow the detailing guidance provided in the ***SPI for Index 521-001***.

B. Project-Specific Design Information:

Provide details and notes for defining all items required to coordinate with the General Notes in ***Index 521-005***. These items include:

1. Minor Grade Separations: See the ***SPI for Index 521-001***
2. Single-sided Tapers: Detail as described in the General Notes. Extend the barrier length, show this visually in the plan views, and label accordingly.
3. Project-specific Gantries and Supports: A structural EOR must provide the gantry design, including the barrier's project-specific reinforcement and foundation design. For additional design coordination information, see the General Notes and referenced sheet details.
4. Pull Boxes and Conduit: Call out pull boxes and provide conduit placement details where required per the ***FTE***, ***GTR,*** and ***Standard Specifications***.

5. General Toll Site Electronics Equipment: Provide electronics placement details as needed per the requirements of the ***FTE*** and ***GTR***.
6. Toll Header Curb: Call for where required for flexible pavement, per ***Index 521-005, Index 520-001,*** and the ***Standard Specifications***.

C. Summary of Permanent Barrier Wall Table:

Tabulate the individual Pay Items as defined in the ***Basis of Estimates Manual*** and ***Specification 521***. Produce the Summary of Permanent Barrier Wall table. See the CADD Production Support Office website for details.

The location callouts of barrier segments will be listed as Station to Station, but the length of the corresponding segments must be measured along the centerline of the barrier and include the effect of curvature.

The begin and end points for measurement of barrier scheme options are shown in ***Index 521-005***. The length of Variable Section Widths is measured at the centerline of the overall system.

Payment

Item number	Item Description	Unit Measure
521-1-AA	Median Concrete Barrier, Concrete Barrier at Toll Sites (Schemes 1 thru 10)	LF

See the ***BOE*** and ***Specification 521*** for additional information on payment, pay item use and compensation.