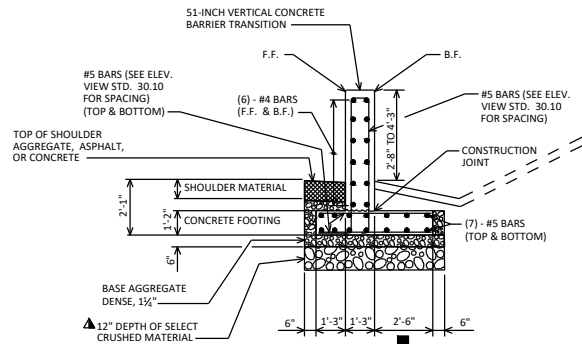


**SECTION A-A**  
BETWEEN COLUMNS

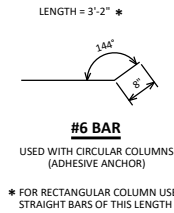


**SECTION B-B**  
TRANSITION REGION

▲ 12" SELECT CRUSHED MATERIAL MAY BE ELIMINATED IF IT IS DETERMINED BY THE ENGINEER THAT THE EXISTING MATERIAL IS COMPACTED, GRANULAR MATERIAL

■ FOR COLUMNS WITH "DIA." OR "L" GREATER THAN 3'-0", INCREASE THIS VALUE SO THAT B.F. OF FOOTING EXTENDS 9" BEYOND B.F. OF COLUMN.

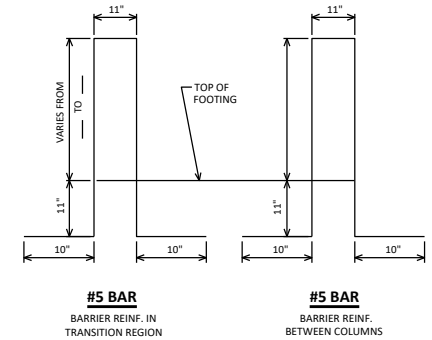
F.F. = FRONT FACE  
B.F. = BACK FACE



**#6 BAR**

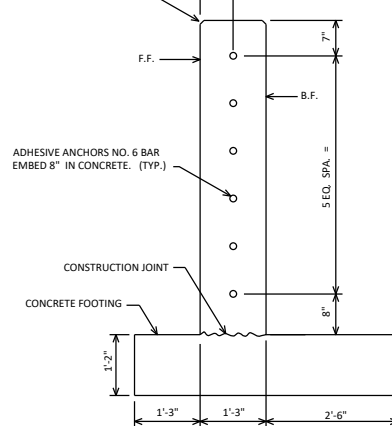
USED WITH CIRCULAR COLUMNS (ADHESIVE ANCHOR)

\* FOR RECTANGULAR COLUMN USE STRAIGHT BARS OF THIS LENGTH



**BAR BENDING DIAGRAMS**  
BAR DIMENSIONS ARE OUT TO OUT OF BAR

PROVIDE 3/4-INCH BEVEL OR 1-INCH RADIUS ON CONCRETE BARRIER EDGES, TOP AND ENDS. (TYP.)



**ADHESIVE ANCHOR LAYOUT**

**DESIGNER NOTES**

THE DETAILS SHOWN ON STANDARDS 13.10 AND 13.11 ARE FOR VEHICLE PROTECTION AND ARE USED WITH EXISTING STRUCTURES.

CONSIDER PROVIDING AN ADDITIONAL TRANSITION SECTION ADJACENT TO THE OTHER EXTERIOR PIER COLUMN FOR THE FOLLOWING CONDITIONS:

- TWO-LANE ROAD IS ADJACENT TO BARRIER AND THERE IS A CONCERN FOR TRAFFIC CROSS-OVER.
- FUTURE TRAFFIC CONTROL NEEDS MAY CAUSE THE DIRECTION OF TRAFFIC ADJACENT TO BARRIER TO BE REVERSED.
- HAZARDS MAY EXIST IN THIS REGION THAT REQUIRE SHIELDING.

CONTACT THE REGIONAL OFFICE FOR VERIFICATION OF ANY OF THESE CONDITIONS.

THESE DETAILS MEET CRITERIA FOR TEST LEVELS TL-3/TL-4.

FOR VEHICLE PROTECTION, SEE FDM 11-35-1 TO DETERMINE WHEN BEAM GUARD OR CONCRETE BARRIER SHOULD BE PLACED BETWEEN THE TRAFFIC AND THE PIER, OR WHEN AN INTEGRAL BARRIER SHOULD BE USED.

**51-INCH VERTICAL CONCRETE BARRIER AND TRANSITION**

SEE STANDARD 13.10 FOR ADDITIONAL DETAILS

**INTEGRAL BARRIER DETAILS**



APPROVED: *Laura Shadewald*

DATE:  
1-21