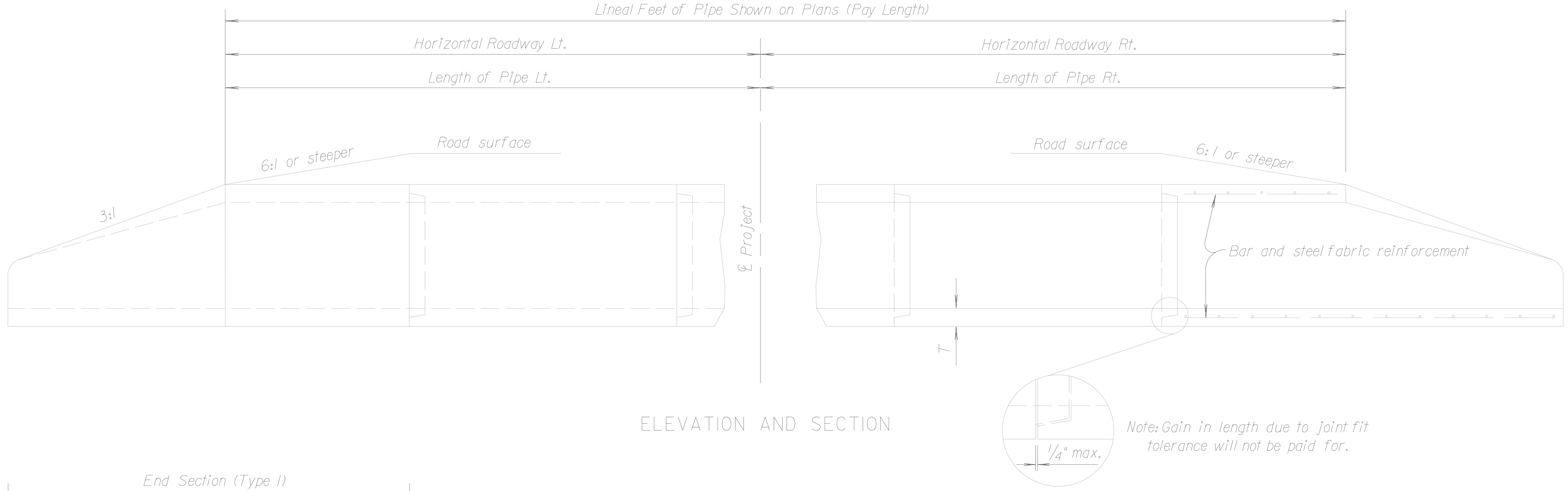
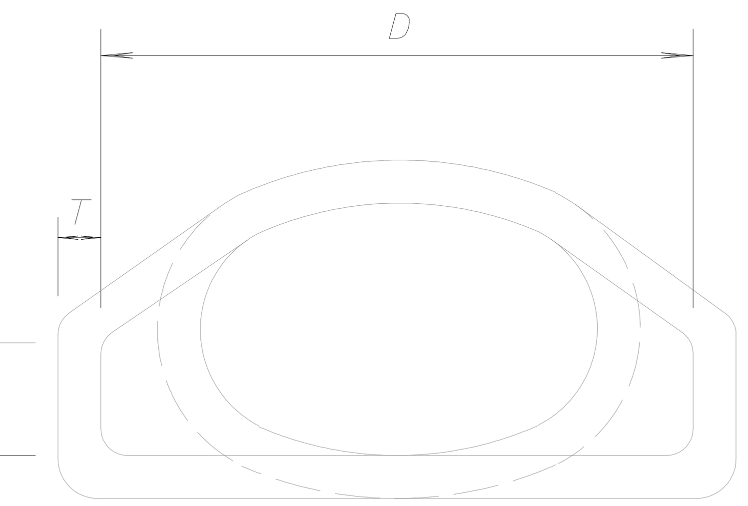
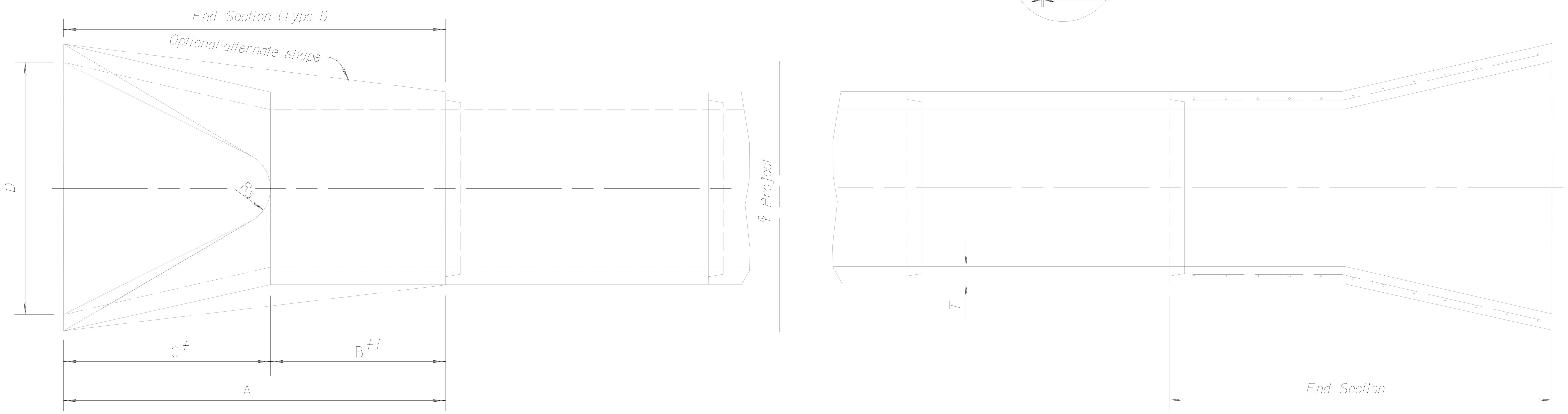



ELEVATION AND SECTION

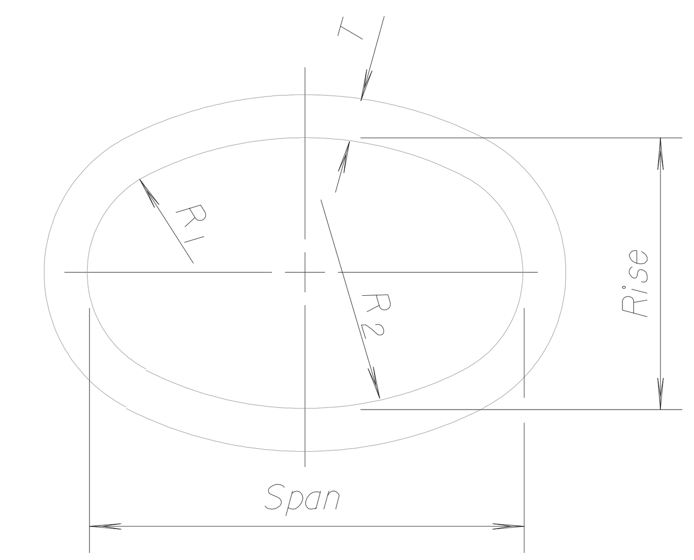
Note: Gain in length due to joint fit tolerance will not be paid for.




FLARED END SECTION ELEVATION




PLAN AND SECTION




END ELEVATION

Note: The culverts listed on this sheet may or may not indicate that the culvert installed will be reinforced concrete, steel, or aluminum.
Design of end section shall conform to standard reinforced concrete horizontal elliptical pipe. Slight variations in the dimensions specified will be allowed.

## END SECTION (TYPE I) NOMINAL DIMENSIONS

| Bid Designation Sq. Ft. | Min. W.W. Area Sq. Ft. | Span | Rise | Overall Length A | Barrel Length B ǂǂ | C ǂ | D | E | $R_1$ | $R_2$ | $R_3$ | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 or 1.5 | 1.8 | 23" | 14" | 6'-0" | 3'-9" | 2'-3" | 3'-0" | 8" | 6" | 20" | 6" | 2 3/4" |
| 2.0,2.5 or 3.0 | 3.3 | 30" | 19" | 6'-0" | 2'-9" | 3'-3" | 4'-0" | 8 1/2" | 8 1/4" | 26 1/4" | 7" | 3 1/4" |
| 4.0 | 4.1 | 34" | 22" | 6'-0" | 2'-2" | 3'-10" | 4'-6" | 9" | 9 1/4" | 29 17/32" | 8" | 3 1/2" |
| 5.0 | 5.1 | 38" | 24" | 6'-0" | 1'-6" | 4'-6" | 5'-0" | 9 1/2" | 10 1/4" | 32 3/4" | 9" | 3 3/4" |
| 6.0 | 6.3 | 42" | 27" | 6'-0" | 1'-3" | 4'-9" | 5'-6" | 10 3/8" | 11 7/16" | 36 3/16" | 10 1/2" | 3 3/4" |
| 7.0 | 7.4 | 45" | 29" | 8'-0" | 3'-0" | 5'-0" | 6'-0" | 11 1/4" | 12 1/4" | 39 1/4" | 12" | 4 1/2" |
| 8.5 | 8.8 | 49" | 32" | 8'-0" | 3'-0" | 5'-0" | 6'-3" | 12" | 13 9/16" | 42 21/32" | 12 1/2" | 4 3/4" |
| 10.0 | 10.2 | 53" | 34" | 8'-0" | 3'-0" | 5'-0" | 6'-6" | 15 3/4" | 14 3/4" | 46" | 13" | 5" |
| 11.0 or 12.5 | 12.9 | 60" | 38" | 8'-0" | 3'-0" | 5'-0" | 7'-0" | 21" | 16 1/2" | 51 3/4" | 14" | 5 1/2" |
| 14.0 or 16.5 | 16.6 | 68" | 43" | 8'-0" | 3'-0" | 5'-0" | 7'-6" | 25 1/2" | 18 21/32" | 58 13/32" | 16" | 6" |

ǂ Paid for as separate item of "End Sections".
ǂǂ Included in pay length of pipe.

## PIPE CULVERT SUMMARY

| Station | Location | Type | Bid Designation Sq. Ft. | Crown Grade Elev. | Flow line | | Horizontal Roadway | | Degree of Rotation | Length of Pipe | | Lin.Ft. of Pipe | End Sects. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | Type I | | Type III | |
| | | | | | LT. | RT. | LT. | RT. | | LT. | RT. | | LT. | RT. | LT. | RT. |

| NO. | DATE | REVISIONS | BY | APP'D |
|---|---|---|---|---|
| 1 | 6-16-95 | Revised table & labeling | R.J.S. | J.O.B. |

KANSAS DEPARTMENT OF TRANSPORTATION

# CONCRETE END SECTION FOR REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE TYPE I

RD663

| | | | |
|---|---|---|---|
| FHWA APPROVAL | 7-31-95 | APP'D JAMES O. BREWER | |
| DESIGNED | DETAILED | QUANTITIES | TRACED BOWSER |
| DESIGN CK. | DETAIL CK. | QUAN.CK. | TRACE CK. SEITZ |

Drawn By : $$USERNAME$$ |Plotted :$$$$$SYTIME$$$$$$
File : $$$$$$$$$$$$DGNSPEC$$$$$$$$$$$$$