


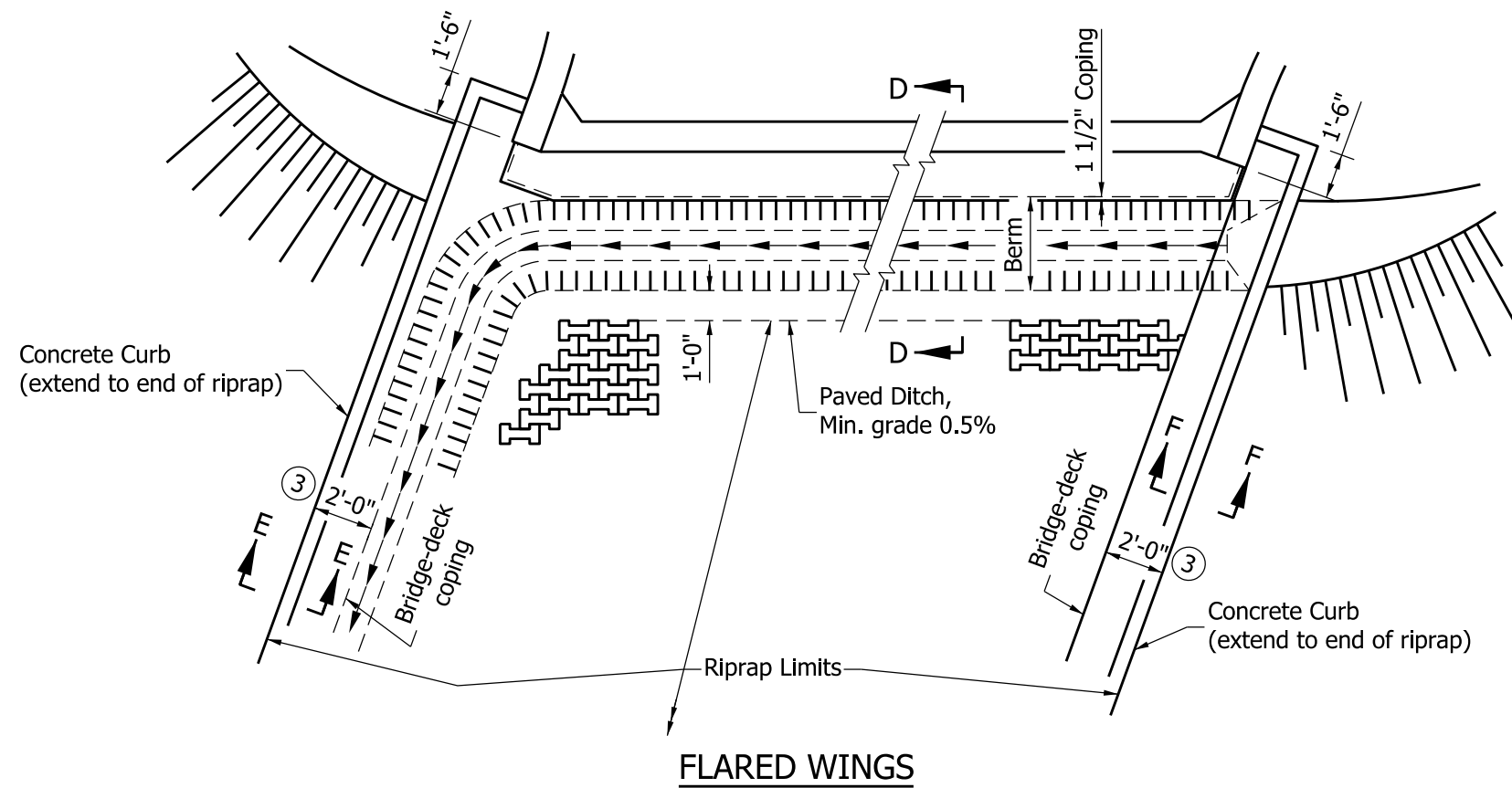
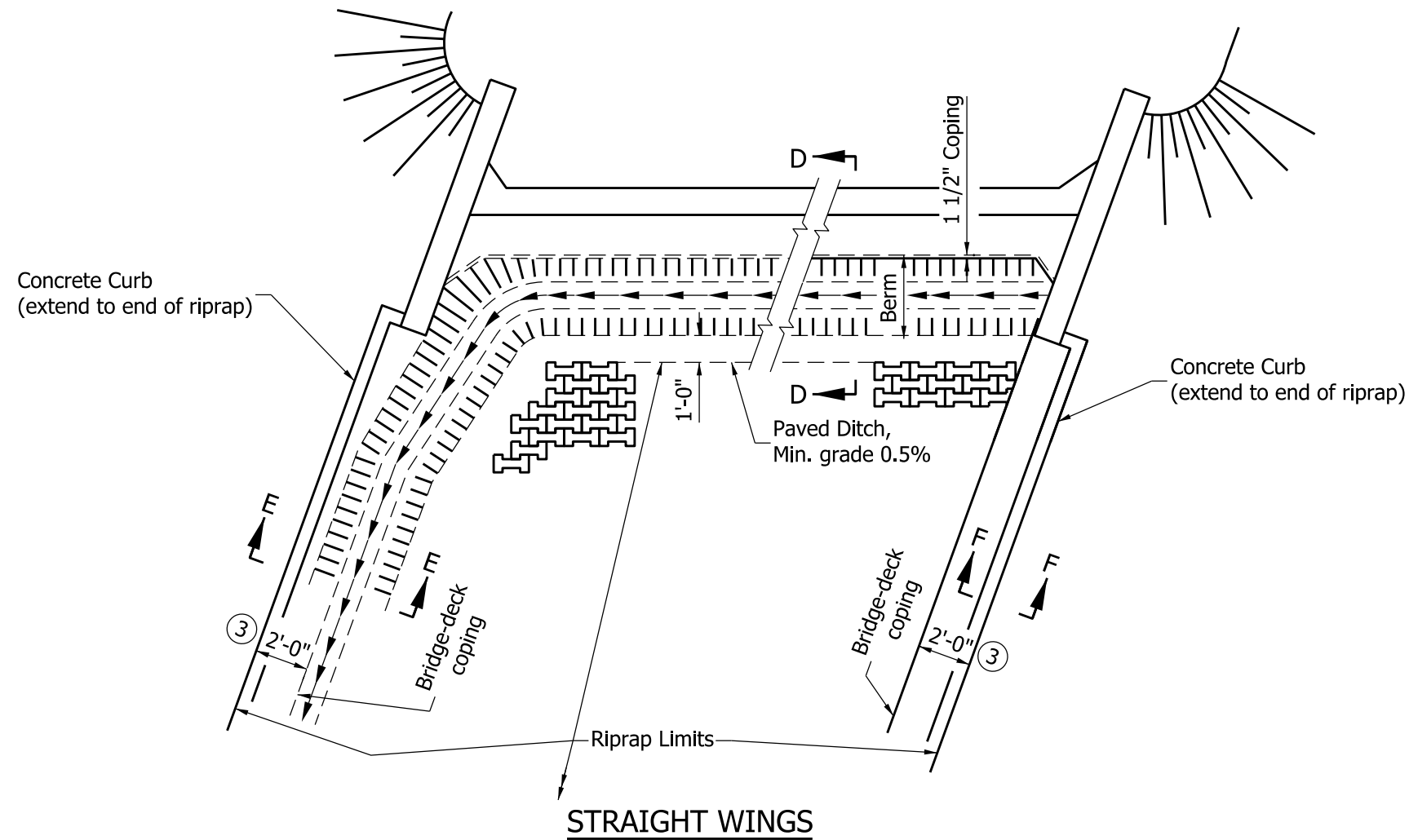
STRAIGHT WINGS

FLARED WINGS

NOTES:


1. See Standard Drawing E 616-SWCO-03 for Sections A-A, B-B, and C-C.
2. When paved sloewall abuts or surrounds columns, piers or other structures, use 1/2" bituminous expansion joint material between sloewall and structure.
3. If sloewall is specified, 1'-0" hand-laid riprap or precast concrete riprap type A may be used.
- ④ This dimension shall be increased to 5'-0" where no curb is used on the bridge.

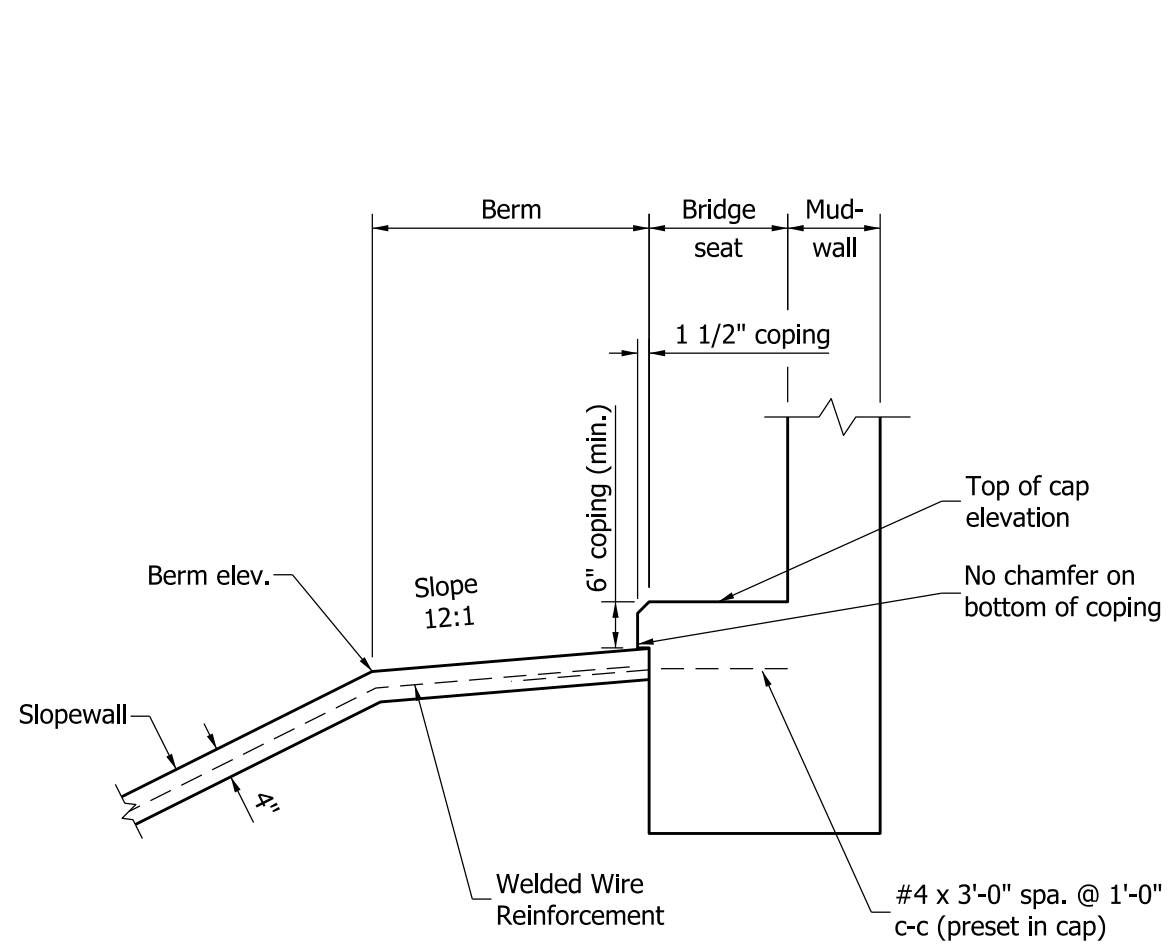
INDIANA DEPARTMENT OF TRANSPORTATION											
CONCRETE SLOEWALL DETAILS											
SEPTEMBER 2011											
STANDARD DRAWING NO.	E 616-SWCO-01										
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px 5px;"><i>/s/ Richard L. VanCleave</i></td> <td style="text-align: right; padding: 2px 5px;">9/01/11</td> </tr> <tr> <td style="padding: 2px 5px;">DESIGN STANDARDS ENGINEER</td> <td style="text-align: right; padding: 2px 5px;">DATE</td> </tr> <tr> <td colspan="2" style="padding: 5px 0 2px 5px;"> </td> </tr> <tr> <td style="padding: 2px 5px;"><i>/s/ Mark A. Miller</i></td> <td style="text-align: right; padding: 2px 5px;">9/01/01</td> </tr> <tr> <td style="padding: 2px 5px;">CHIEF HIGHWAY ENGINEER</td> <td style="text-align: right; padding: 2px 5px;">DATE</td> </tr> </table>	<i>/s/ Richard L. VanCleave</i>	9/01/11	DESIGN STANDARDS ENGINEER	DATE			<i>/s/ Mark A. Miller</i>	9/01/01	CHIEF HIGHWAY ENGINEER	DATE
<i>/s/ Richard L. VanCleave</i>	9/01/11										
DESIGN STANDARDS ENGINEER	DATE										
<i>/s/ Mark A. Miller</i>	9/01/01										
CHIEF HIGHWAY ENGINEER	DATE										
DESIGN STANDARDS ENGINEER											



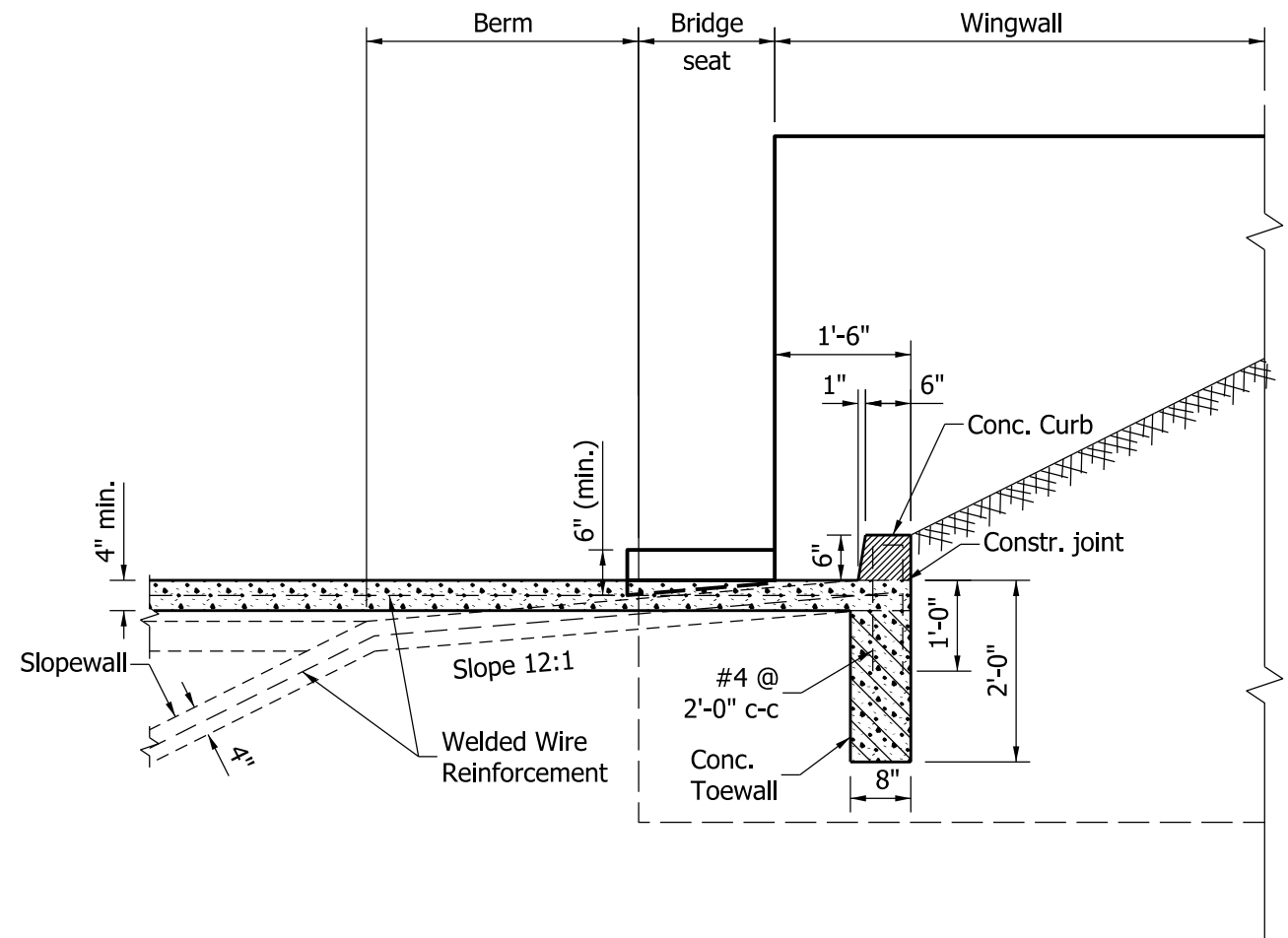
NOTES:

1. These configurations to be used with precast or hand-laid riprap.
2. See Standard Drawing E 616-SWRR-01 for Sections D-D, E-E, and F-F.
- ③ This dimension shall be increased to 5'-0" where no curb is used on the bridge.

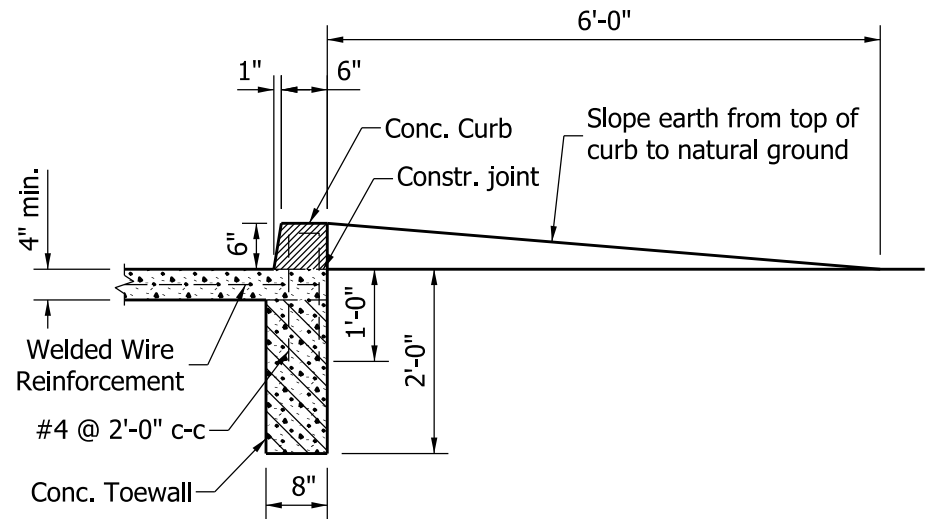
INDIANA DEPARTMENT OF TRANSPORTATION									
DRAINAGE DETAILS AT END BENTS									
SEPTEMBER 2011									
STANDARD DRAWING NO.	E 616-SWCO-02								
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-bottom: 1px solid black; padding: 2px;"><i>/s/ Richard L. VanCleave</i></td> <td style="border-bottom: 1px solid black; padding: 2px;">09/01/11</td> </tr> <tr> <td style="padding: 2px;">DESIGN STANDARDS ENGINEER</td> <td style="padding: 2px;">DATE</td> </tr> <tr> <td style="border-bottom: 1px solid black; padding: 2px;"><i>/s/ Mark A. Miller</i></td> <td style="border-bottom: 1px solid black; padding: 2px;">09/01/11</td> </tr> <tr> <td style="padding: 2px;">CHIEF HIGHWAY ENGINEER</td> <td style="padding: 2px;">DATE</td> </tr> </table>	<i>/s/ Richard L. VanCleave</i>	09/01/11	DESIGN STANDARDS ENGINEER	DATE	<i>/s/ Mark A. Miller</i>	09/01/11	CHIEF HIGHWAY ENGINEER	DATE
<i>/s/ Richard L. VanCleave</i>	09/01/11								
DESIGN STANDARDS ENGINEER	DATE								
<i>/s/ Mark A. Miller</i>	09/01/11								
CHIEF HIGHWAY ENGINEER	DATE								
DESIGN STANDARDS ENGINEER									



SECTION A-A

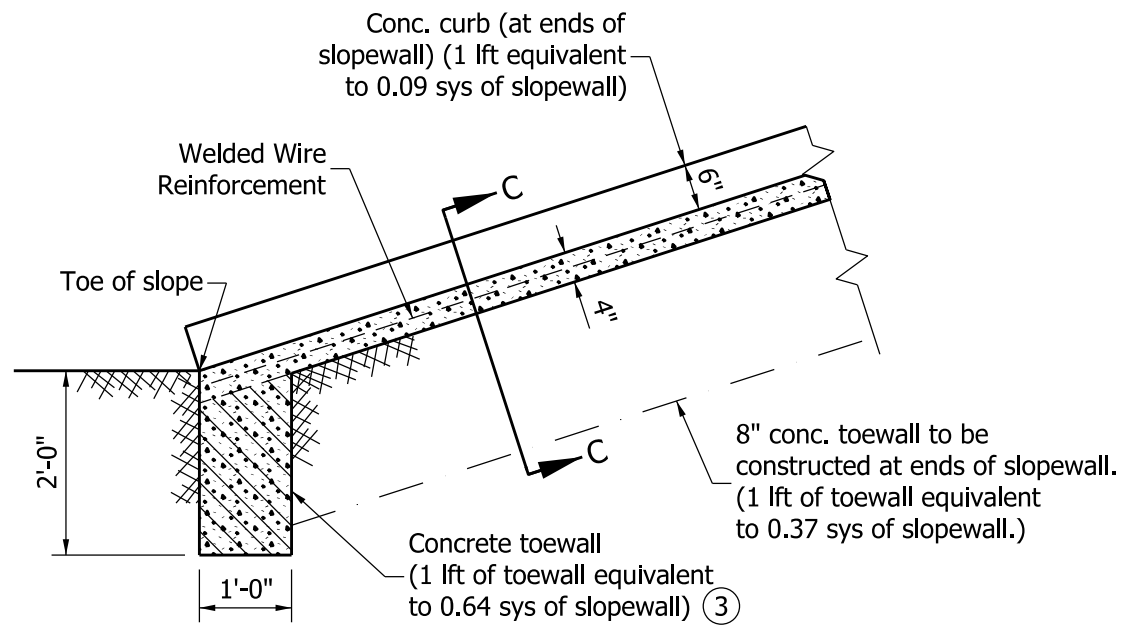


SECTION B-B

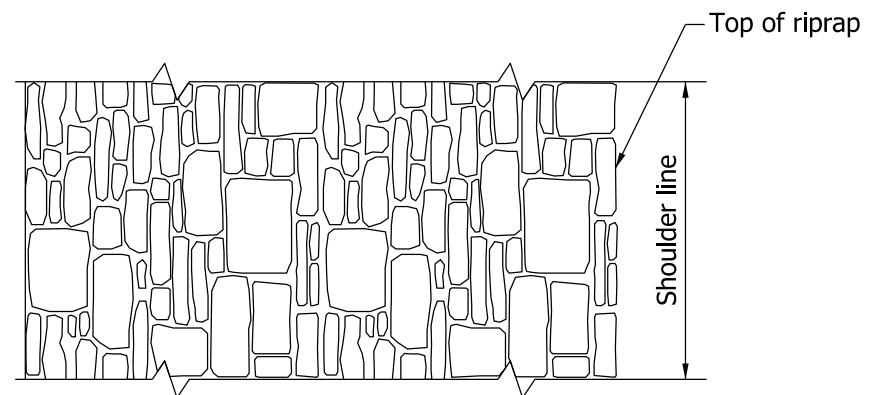


SECTION C-C

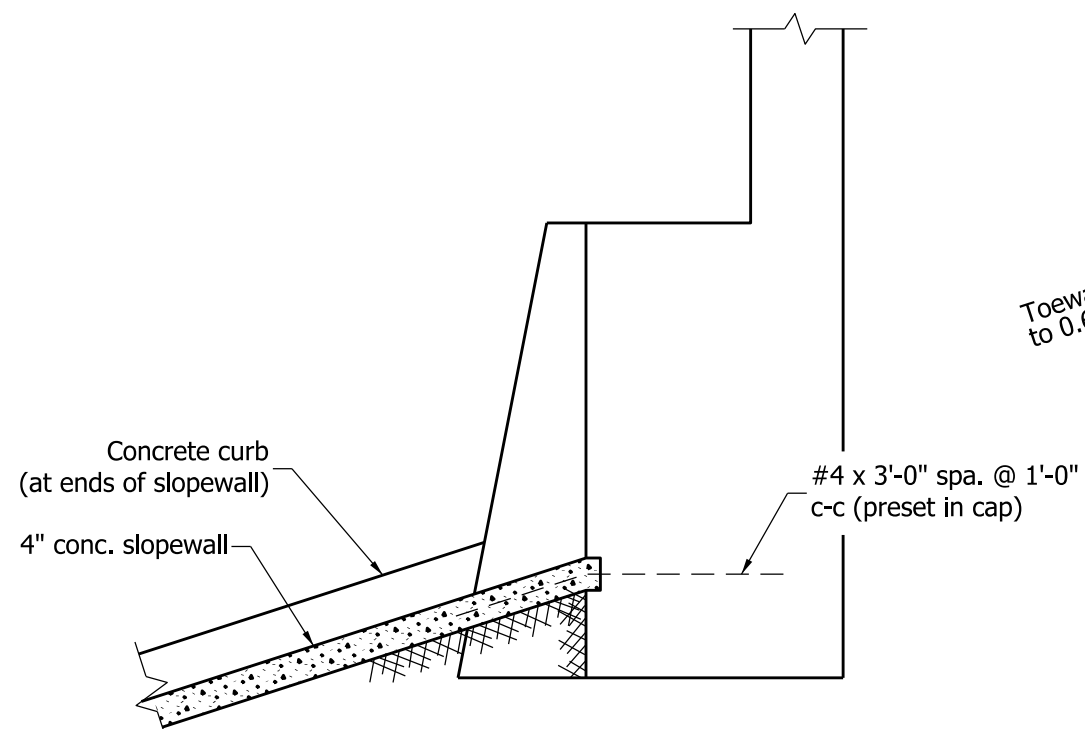
INDIANA DEPARTMENT OF TRANSPORTATION	
CONCRETE SLOPEWALL DETAILS	
SEPTEMBER 2011	
STANDARD DRAWING NO.	E 616-SWCO-03
	/s/ <i>Richard L. VanCleave</i> 09/01/11
	DESIGN STANDARDS ENGINEER DATE
DESIGN STANDARDS ENGINEER	/s/ <i>Mark A. Miller</i> 09/01/11
	CHIEF HIGHWAY ENGINEER DATE



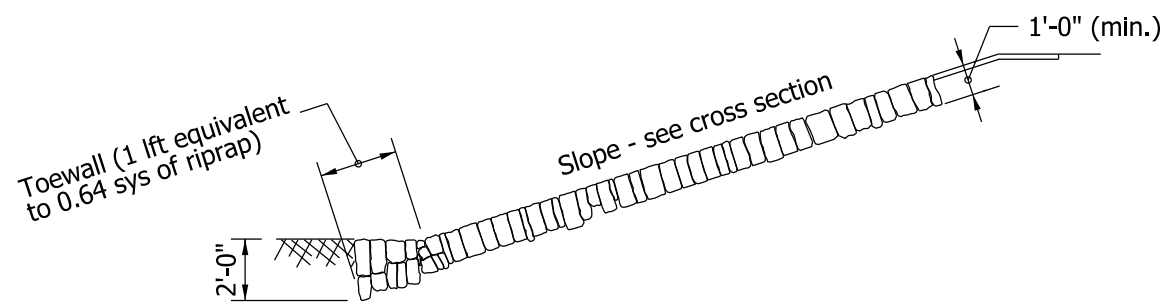
SECTION THROUGH CONCRETE SLOPEWALL



PLAN



TYPICAL SECTION THROUGH SLOPEWALL AT STRUCTURES WITHOUT BERMS



SECTION THROUGH HAND-LAID RIPRAP

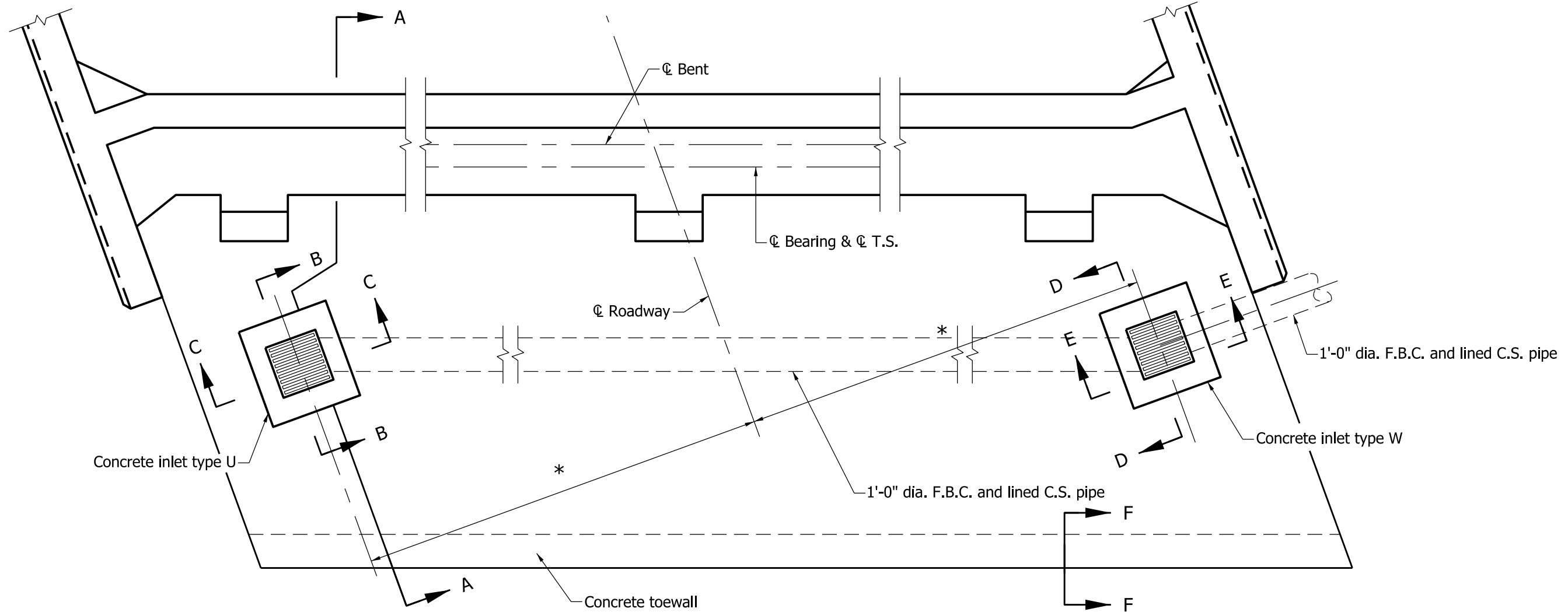
NOTES:

1. See Section F-F on Standard Drawing E 616-SWCO-03 for Section C-C.
2. Where hand-laid riprap is used under a structure, a drainage configuration similar to that shown for precast concrete riprap shall be used. See Standard Drawing E 616-SWRR-02 for such configuration.
- ③ Toewall is not required adjacent to a pier or bent.

INDIANA DEPARTMENT OF TRANSPORTATION	
CONCRETE AND RIPRAP SLOPEWALL DETAILS	
SEPTEMBER 2011	
STANDARD DRAWING NO.	E 616-SWCO-04
	/s/ <i>Richard L. VanCleave</i> 09/01/11 DESIGN STANDARDS ENGINEER DATE
	/s/ <i>Mark A. Miller</i> 09/01/11 CHIEF HIGHWAY ENGINEER DATE
DESIGN STANDARDS ENGINEER	

NOTES:

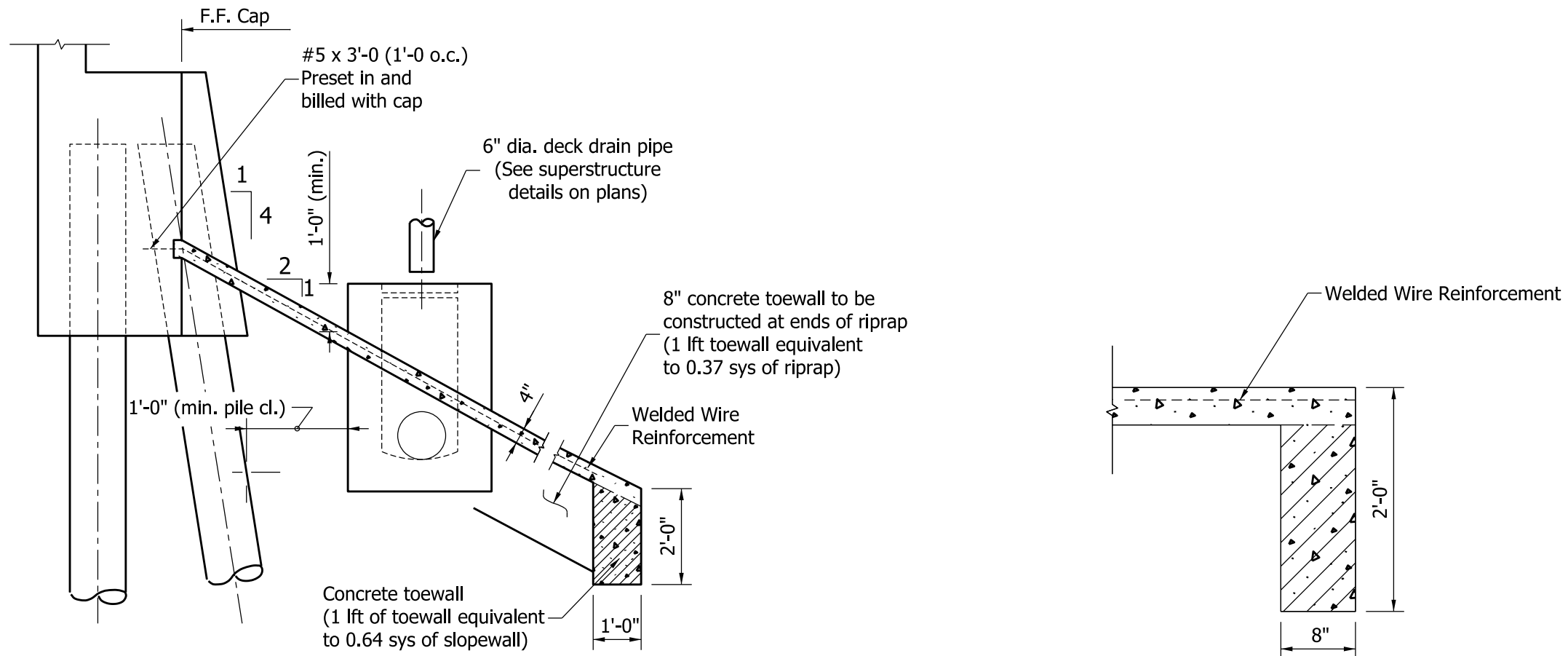
1. See Standard Drawing E 616-SWCO-06 for Sections A-A, B-B, C-C, D-D, and E-E.
2. See General Plan for stations and locations of inlets and pipe.



PLAN
(to be used on structures without berms)

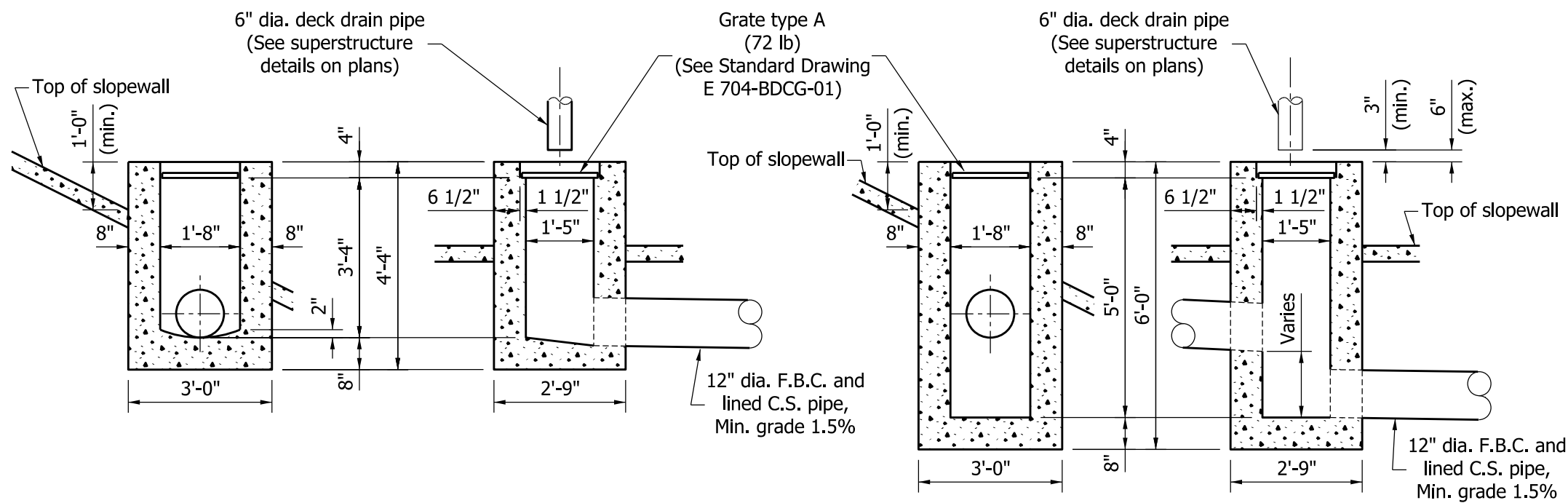
* Dimension varies according to roadway width and type of drain used

INDIANA DEPARTMENT OF TRANSPORTATION	
SLOPEWALL AND DRAINAGE DETAILS	
SEPTEMBER 2011	
STANDARD DRAWING NO.	E 616-SWCO-05
	/s/ <i>Richard L. VanCleave</i> 09/01/11
	DESIGN STANDARDS ENGINEER DATE
	/s/ <i>Mark A. Miller</i> 09/01/11
DESIGN STANDARDS ENGINEER	CHIEF HIGHWAY ENGINEER DATE



SECTION A-A
TYPICAL ELEVATION THRU SLOPEWALL

SECTION F-F



SECTION B-B
DETAIL OF CONCRETE INLET TYPE U

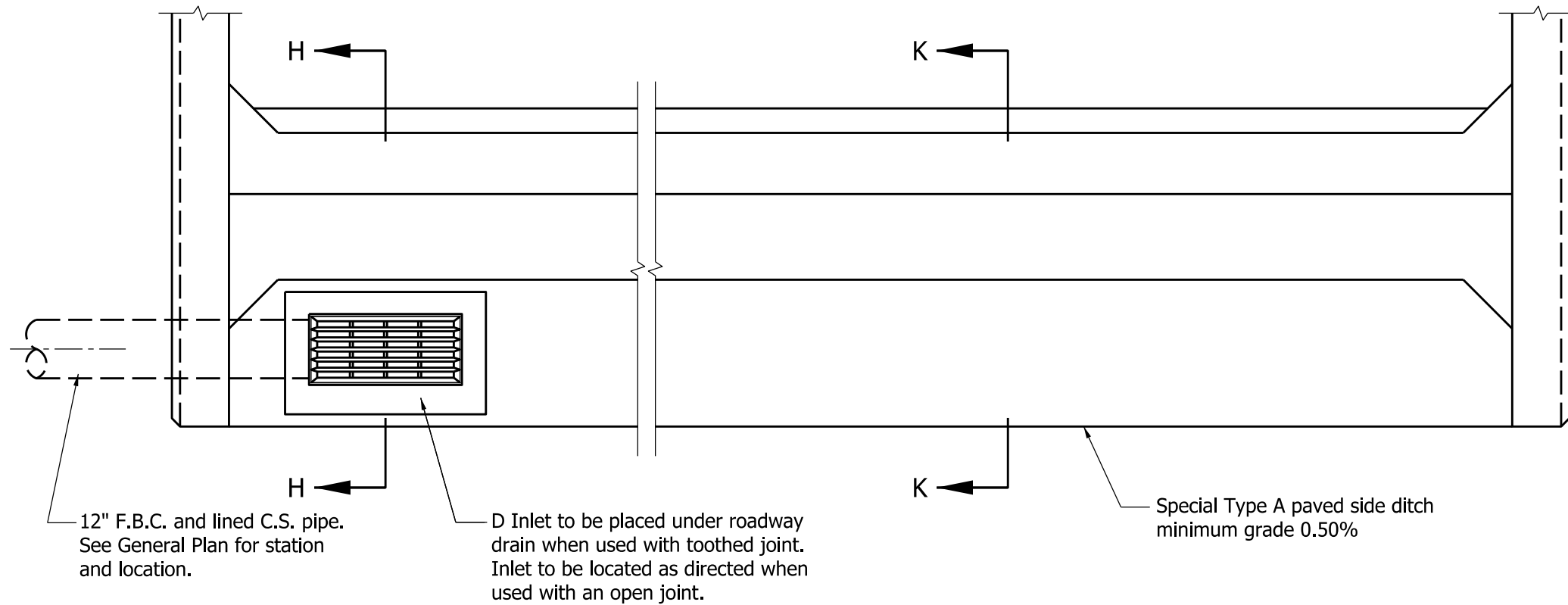
SECTION C-C

SECTION D-D

SECTION E-E

DETAIL OF CONCRETE INLET TYPE W

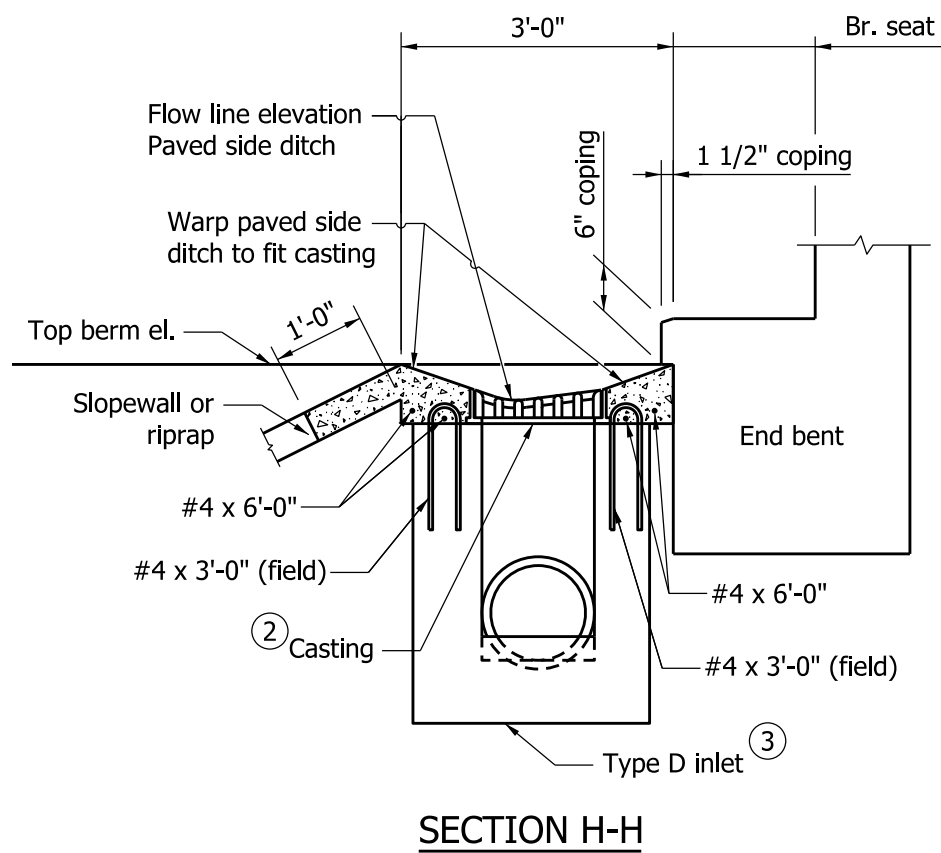
INDIANA DEPARTMENT OF TRANSPORTATION	
SLOPEWALL AND DRAINAGE DETAILS	
SEPTEMBER 2011	
STANDARD DRAWING NO.	E 616-SWCO-06
	/s/ <i>Richard L. VanCleave</i> 09/01/11
	DESIGN STANDARDS ENGINEER DATE
	/s/ <i>Mark A. Miller</i> 09/01/11
	CHIEF HIGHWAY ENGINEER DATE
DESIGN STANDARDS ENGINEER	



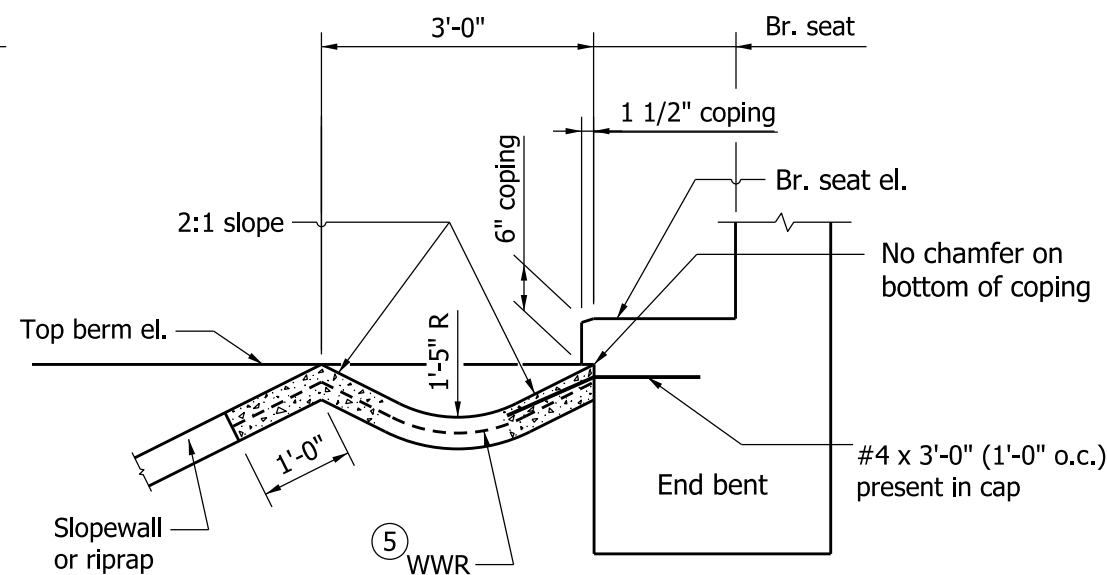
PLAN
(to be used on structures with berms)

NOTES:

1. Precast concrete riprap may be used as an alternate to concrete slopewall only on a structure having a berm adjacent to a cap.
- ② For appropriate casting, see Standard Drawing E 720-CDSC-01.
- ③ For additional details of type D inlet, see Standard Drawing E 720-INST-03.
4. WWR shall be placed within the middle third of slopewall thickness and shall extend through all construction joints.
- ⑤ WWR 6" x 6", W2.9 x W2.9 at 42 lb/100 sq. ft., or equivalent.



SECTION H-H



SECTION K-K

INDIANA DEPARTMENT OF TRANSPORTATION									
SLOPEWALL AND DRAINAGE DETAILS									
SEPTEMBER 2011									
STANDARD DRAWING NO.	E 616-SWCO-07								
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%; border-bottom: 1px solid black;">/s/ <i>Richard L. VanCleave</i></td> <td style="width: 20%; border-bottom: 1px solid black;">09/01/11</td> </tr> <tr> <td style="font-size: small;">DESIGN STANDARDS ENGINEER</td> <td style="font-size: small;">DATE</td> </tr> <tr> <td style="border-bottom: 1px solid black;">/s/ <i>Mark A. Miller</i></td> <td style="border-bottom: 1px solid black;">09/01/11</td> </tr> <tr> <td style="font-size: small;">CHIEF HIGHWAY ENGINEER</td> <td style="font-size: small;">DATE</td> </tr> </table>	/s/ <i>Richard L. VanCleave</i>	09/01/11	DESIGN STANDARDS ENGINEER	DATE	/s/ <i>Mark A. Miller</i>	09/01/11	CHIEF HIGHWAY ENGINEER	DATE
/s/ <i>Richard L. VanCleave</i>	09/01/11								
DESIGN STANDARDS ENGINEER	DATE								
/s/ <i>Mark A. Miller</i>	09/01/11								
CHIEF HIGHWAY ENGINEER	DATE								
DESIGN STANDARDS ENGINEER									