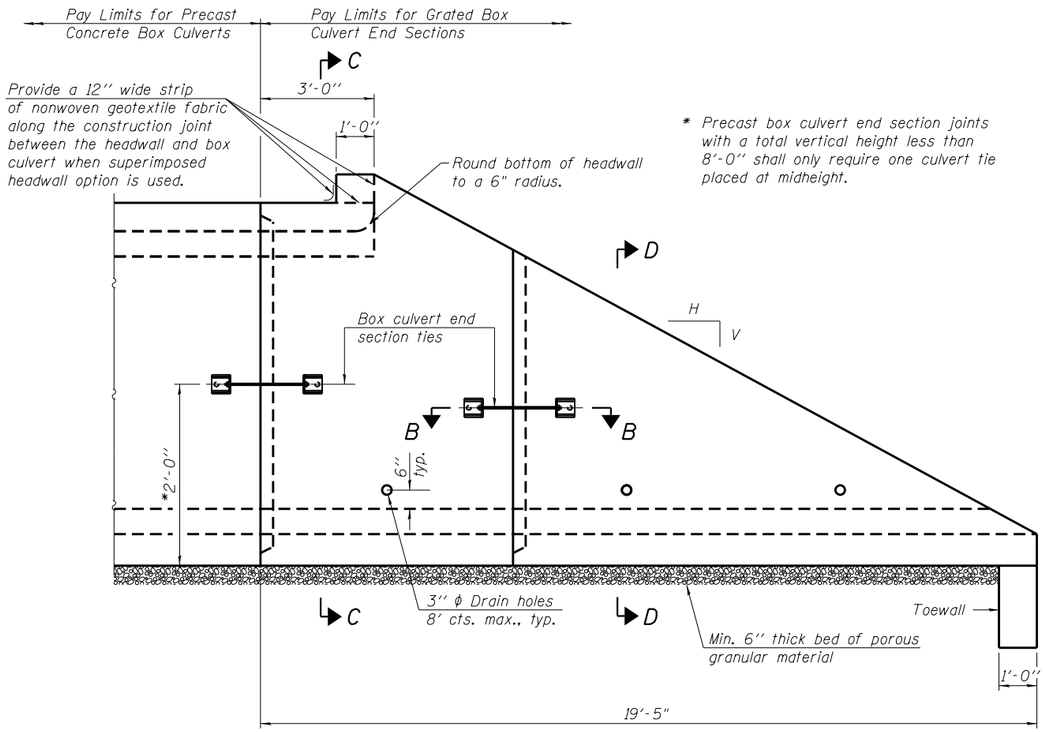
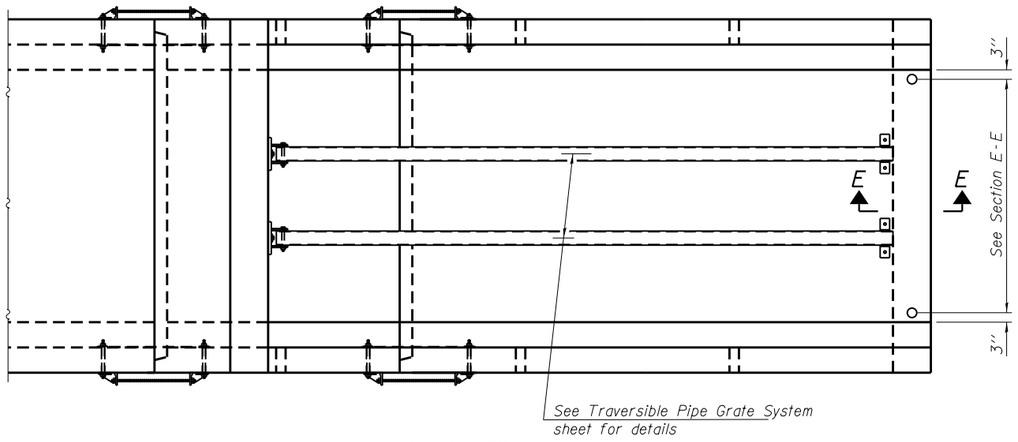
PRECAST END SECTION DETAILS
IL RTE 84
F.A.P. RTE 570 SECTION 101T
JO DAVIESS COUNTY
RT. STA. 1484 + 99
UPSTREAM END
STR. NO. 043–1101

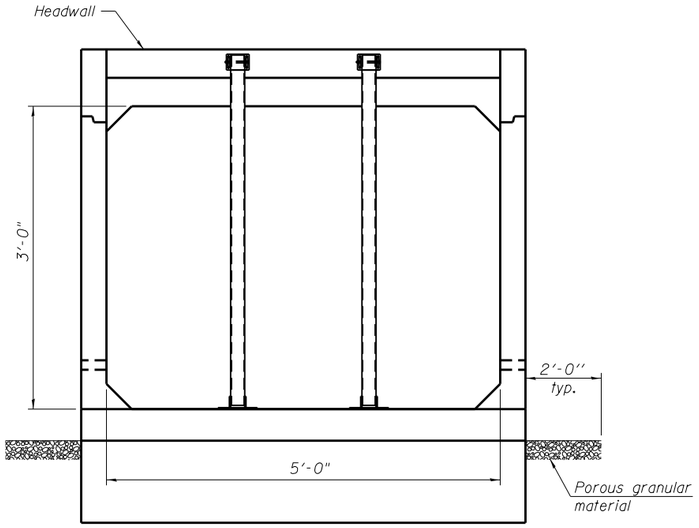


* Precast box culvert end section joints with a total vertical height less than 8'-0" shall only require one culvert tie placed at midheight.

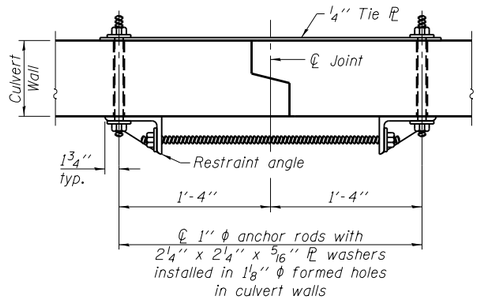
SIDE ELEVATION



PLAN VIEW



END VIEW



SECTION B-B
(Showing culvert tie details)

GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. End sections will be paid for at the contract unit price per each for Precast Box Culvert End Sections 5'x3'.

Typical box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements of AASHTO C1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

The section joint shown in Side Elevation is for example only. Length of precast box sections required to construct Box Culvert End Sections shall be determined by the Contractor.

See roadway plans for embankment slope (V:H).

1" ϕ anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. $2\frac{1}{4}$" x $2\frac{1}{4}$" x $\frac{5}{16}$" plate washers shall be provided under each nut required for the anchor rods. All anchor rods in a culvert tie assembly shall be snug tightened by a few impacts of an impact wrench or the full force of a worker using an ordinary spud wrench. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

Alternate culvert ties similar in strength and stiffness to the plan details may be provided by the Contractor. Alternate culvert ties shall be subject to approval of the Engineer.

The headwall may be cast monolithically with the box section or a superimposed headwall may be cast directly onto the box sections. Anchor rods shall conform to the requirements of Article 1006.09 of the Standard Specifications and the anchor rods and associated hardware for securing the superimposed headwall to the box section shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. Class SI concrete may be used for construction of superimposed headwall.

In lieu of using ferrule loop inserts, the Contractor may attach the superimposed headwall to the box section by epoxy grouting reinforcement bars according to the requirements of Section 584 of the Standard Specifications. The chemical adhesive system shall be capable of achieving the minimum proof load stated with drilled hole depths that do not exceed 2/3 of the thickness of the slab of the box section.

All costs associated with furnishing and installing or constructing the geotextile fabric, toewall, headwall, and culvert ties will not be measured for payment but shall be included in the contract unit price for Box Culvert End Sections, Culvert No. 2.

Reinforcement bars designated (E) shall be epoxy coated.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60.

Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.

Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01. The minimum weight of the fabric shall be 6 oz. / sq. yd..

2-16-11

USER NAME = dossdd	DESIGNED SB	REVISED -	
WES JOB # = 2120015	DRAWN BEH	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED DB	REVISED -	
PLOT DATE = Tue Jan 22 11:03:40 2013	DATE 1/08/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST END SECTION DETAILS RT. STA. 1484 + 99 UPSTREAM END
STRUCTURE NO. 043–1101

SHEET 6 OF 8 SHEETS STA. 1484+99

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
570	101T	JO DAVIESS	64	35
		CONTRACT NO. 64F75		
	ILLINOIS FED. AID PROJECT			