

3'-0" | 16" min. flare

6'-0"

U @ 12 max. w/ #4 tie on each duct.

Ducts

PLAN

4 dust ties

Single or
Common *
Brq R's —

- Cable shall not vary more than 2° from a perpendicular to the R.

Start flares
to Brg R's

* Edge distance of Brq R's shall be $1\frac{1}{2}$ " min.

0.1 L min.

Low point of cable path (C.G.)

BEARING PLATE PRESTRESSING PATH

Unless otherwise noted, the prestressing force shall be distributed with an approximately equal amount in each girder and shall be placed symmetrically about the C of the structure. In slabs, the prestressing force shall be uniformly distributed across the slab.

No more than 1/2 of the prestressing force in any girder may be applied before an equal force is applied in the adjacent girders. At no time during the stressing operations will more than 1/6 of the total prestressing force be applied eccentrically about the centerline of the structure.

Girder stem may be flared near anchorage to provide minimum clearances. Flare may be on one side of girder only.

Place duct ties, as shown for flare of girder stem, at each location where ducts change horizontal direction.

Bar reinforcement interfering with the prestressing tendon alignment shall be adjusted, as approved by the Engineer.

The contractor shall submit working drawings to the Engineer for approval. -The working drawings shall include any additions or rearrangement of reinforcing steel from that shown on the plans. Sufficient points shall be shown on the working drawings to place ducts accurately.




2 1/2" min. & 4" max. cl. to stirrup (except 1" min. cl. near anchorage).
1 1/2" cl. at exterior face only.

DUCTS 3" Q.D. & LESS

DUCTS OVER 3" O.D.
to 4 1/2" O.D.

DUCTS OVER 4 1/2" O.D.

CLEARANCE REQUIREMENTS FOR DUCTS

1. Duct patterns shown are for a 12" wide girder stem. For other widths the minimum clearances must be maintained.
2. Girder stirrups should be bent to fit the duct size used, or  or  stirrups may be used. A #5 minimum reinforcing bar must be placed inside of each stirrup hook or 90° bend.
3. For additional details see 
4. Approval of the Engineer is required for deviations.

The image contains two technical drawings of reinforcement details for a girder at an abutment, labeled 'SKEW OVER 20°' and 'SKEW 20° & UNDER'.

Left Diagram (SKEW OVER 20°):

- Girder (G):** The main horizontal structural member.
- Abutment (A):** The vertical structure at the end of the girder.
- Reinforcement:**
 - #6 E @ 6, min. 2:** Vertical reinforcement bars in the girder.
 - Grillage #4 @ 4 both ways:** A grid of reinforcement bars at the base of the abutment.
 - Recess:** A rectangular cutout in the abutment.
 - #4 tot. 4:** Reinforcement bars around the recess.
 - 1'-0" min. embedment measured from backface of diaphragm:** A dimension indicating the length of the reinforcement bars extending into the abutment.
 - #4 @ 12:** Reinforcement bars along the backface line.
- Labels:** 'G Girder', 'Abut. reinf. continuous thru anchorage', 'A But.', '1'-0" min. embedment measured from backface of diaphragm.', '#6 E @ 6, min. 2', 'Grillage #4 @ 4 both ways', 'Recess', '#4 tot. 4', '#4 @ 12', 'Backface line'.

Right Diagram (SKEW 20° & UNDER):

- Girder (G):** The main horizontal structural member.
- Abutment (A):** The vertical structure at the end of the girder.
- Reinforcement:**
 - Grillage #4 @ 4 both ways:** A grid of reinforcement bars at the base of the abutment.
 - Recess:** A rectangular cutout in the abutment.
 - #4 tot. 4:** Reinforcement bars around the recess.
 - #4 @ 12:** Reinforcement bars along the backface line.
 - Backface line:** A line indicating the back of the abutment.
- Labels:** 'G Girder', 'A But.', 'Grillage #4 @ 4 both ways', 'Recess', '#4 tot. 4', '#4 @ 12', 'Backface line'.

ANCHORAGE BLOCKS AT DIAPHRAGM TYPE ABUTMENTS

The image contains two sets of technical drawings for girder connections. The left set shows two views of an exterior sloping girder connection, with labels for 'Girders' and 'EXT. SLOPING GIRDER'. The right set shows two views of an exterior sloping girder connection with reinforcement, including labels for 'Girders', '1'-0" min. embedment into diaphragm', '#6', '1/2" expansion jt filler', and 'EXT. SLOPING GIRDER (Reinf Typical)'. A note on the right explains that the paving notch may be reduced to 9" min. to accommodate anchor plates, and when reduced, 2" thick expanded polystyrene should be placed between the bearing seat, abutment diaphragm, and approach slab, with 1/2" expansion joint filler at the top of the blockout.

EXT. SLOPING GIRDER

VERTICAL GIRDER

EXT. SLOPING GIRDER
(Reinf Typical)

1'-0" min. embedment into diaphragm
#6

Girders

1/2" expansion jt filler

Paving notch may be reduced to 9" min. to accommodate anchor plates.

When paving notch is reduced and approach slab is thicker than 9", place 2" thick expanded polystyrene between bearing seat, abutment diaphragm and approach slab. Place 1/2" expansion joint filler at top of blockout with top of filler flush with paving notch.

1'-0" min. embedment into diaphragm.
#6 @ each step

ANCHORAGE BLOCK ILLUSTRATIONS (ISOMETRIC VIEW)

Contractor to submit working drawings to the Engineer for approval.

DR3 15719