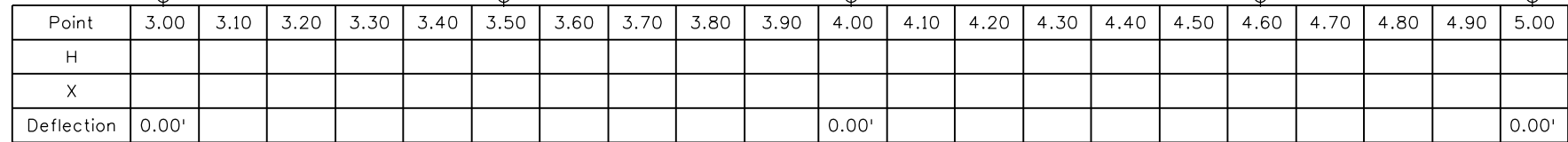
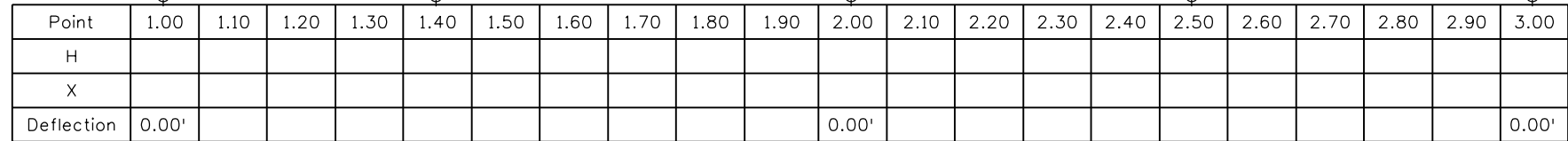


INITIALS	DESIGN	DATE	DETAIL	DATE	QUANTITY	DATE
By						
Checked By						



B-618-1
(use with B-618-2 and B-618-3; also add
B-618-7 when horizontal curve is present)

1. Reinforcing that interferes with the prestressing tendon alignment shall be adjusted as approved by the Engineer.
2. Where dead end anchorage and tendons are accessible, the anchorage system and length of projecting prestressing steel shall permit jacking with the same jacking equipment that was used on the live end.
3. Deviations from the duct pattern, duct size, and strand size assumed in the design must be approved by the Engineer. Duct patterns 1 and 2 are the only acceptable patterns.
4. The deflection shown is positive downward. It includes the instantaneous effects of dead load and prestressing, and a factor of three (3) multiplier to account for long term creep. Formed web elevations must be adjusted upward for an indicated positive deflection.
5. Use stress relieved or low-relaxation strands meeting the requirements of ASTM A416 grade 270.

Tendons may be jacked from both ends, either simultaneously or sequentially, or $\frac{1}{2}$ the tendons may be jacked from each end. If $\frac{1}{2}$ the tendons are jacked from each end, the jacking force shall be increased ----Kip. If jacking force or steel area is greater than assumed in the design, prestressing quantities shall not be adjusted.


At the Contractor's option, the prestressing force may vary $\pm 5\%$ from the theoretical force per web, provided the total P(Jack) force is obtained and is distributed symmetrically about the centerline of the typical section. P(Jack) is the sum of the peak forces reached during jacking in each tendon.

Design is based on $k=0.0002$ and $\mu=0.25$. P(Jack) at the jacking ends includes friction, anchor set of $0.375''$ at the jacking end, elastic shortening, and provisions for an additional 32 KSI long term loss in stress.

P(Jack) = ---- Kip Tot at jacking ends
 As* Min = ---- Sq In
 fs' = 270 KSI
 f'c = 4500 psi at 28 days field compressive strength
 f'ci = 3500 psi at stressing

⊕ Designates critical points for P(Jack). The Contractor shall submit elongation and jacking calculations based on $KL + \mu a$ (including anchor set if any) and initial stress (initial stress ratio times jacking stress before long-term losses) at the points labeled "⊕" and tabulated here.

CRITICAL POINT Φ	KL + $\mu\alpha$	INITIAL STRESS RATIO
1.0	0.	0.
1.4	0.	0.
2.0	0.	0.
2.5	0.	0.
3.0	0.	0.
3.5	0.	0.
4.0	0.	0.
4.6	0.	0.
5.0	0.	0.

All seals for this set of drawings are applied to the cover page(s)	Print Date: \$DATE\$	<div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px;"></div> </div>	Sheet Revisions			<div style="text-align: center;">  <p>Colorado Department of Transportation</p> <p>2829 West Howard Place, 3rd Floor Denver, CO 80204 Phone: 303-512-4079 FAX: 303-757-9197</p> <p>Staff Bridge Branch</p> </div>	As Constructed		<div style="text-align: center;"> CAST-IN-PLACE POST-TENSIONED BOX-GIRDER DETAILS </div>			Project No./Code	
	File Name: Sheet_B-618-1.dgn		Date:	Comments	Init.		No Revisions:					Project Number	
	Horiz. Scale: None Vert. Scale: As Noted						Revised:	Designer: XXXXXXXX	Structure Numbers	X-XX-XX	Code		
	Unit Information Unit Leader Initials						Void:	Detailer: XXXXXXXX		X-XX-XX	Sheet Number		
								Sheet Subset: BRIDGE	Subset Sheets: BXX of XXX				