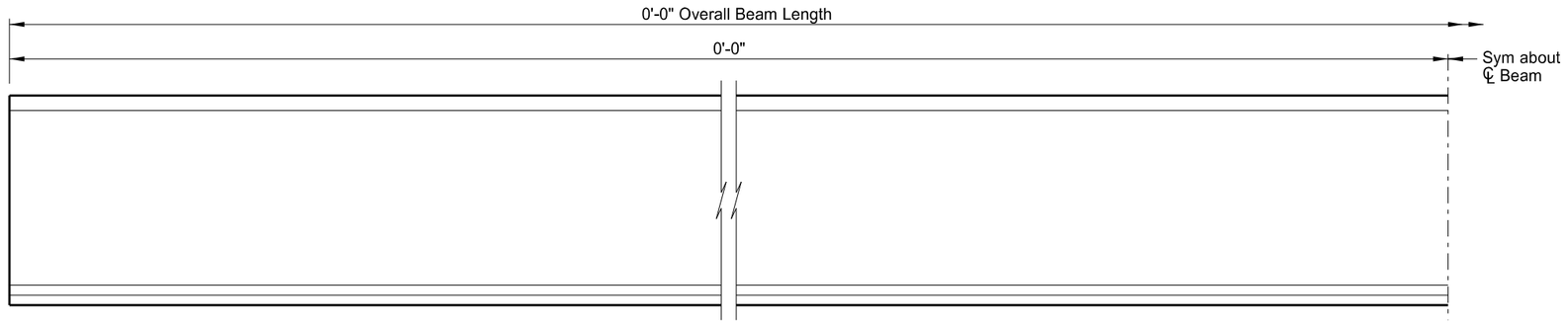
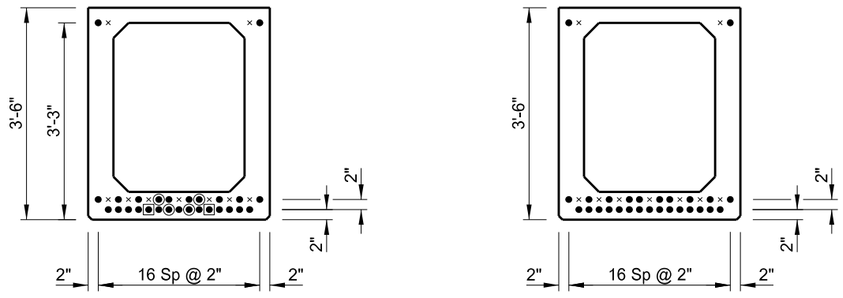
23 U.S.C. § 407 Documents
NDDOT Reserves All Objections

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	PROJECT NUMBER	SEC	PAGE



BEAM ELEVATION



END VIEW SECTION @ ℄

PRESTRESSING STRAND LAYOUT

KEY:

× Vacant Strand Location
● Filled Strand Location (Bonded)
◉ Filled Strand Location (Debonded 4'-0" Each End)
▣ Filled Strand Location (Debonded 8'-0" Each End)

[ ] or [ ] Indicates Locations of Draped Strands

BEAM SECTION DATA		
Beam Weight = 709.3 lbs/ft + 3367 lbs		
Beam Length	0	ft
Total Beam Weight	1.7	tons
Cross Sectional Area at End	1512	in^2
Cross Sectional Area at Midspan	659	in^2
C.G. from Bottom of Beam at Midspan	19.38	in
Midspan Moment of Inertia (I)	142,223	in^4
Midspan Section Modulus (Sb)	7,339	in^3
MINIMUM CONCRETE COMPRESSIVE STRENGTH		
Detensioning Strength (f'ci)	7.0	ksi
Acceptance Strength (f'c)	7.0	ksi
PRESTRESSING STRAND DATA		
0.6" Diameter Grade 270 Prestressing Strands		
Initial Prestress = 0.75 * fpu		

	Number	Y Distance (inches)	
		Midspan	End
Straight Strands	28	3.86	3.86
Draped Strands	8	5.00	57.00
Total Strands	36	4.11	15.67

PRESTRESS LOSSES		
Elastic Shortening Loss	0.00	ksi
Long Term Losses	0.00	ksi
Total Losses	0.00	ksi
PRESTRESS FORCES		
Initial Prestress Force	1,581.9	kips
Final Prestress Force after Losses	1,581.9	kips
ESTIMATED CAMBER		
Midspan Camber at Strand Release	0.00	inches

This drawing is preliminary and not for construction or implementation purposes.

PRELIMINARY

LOCATION

PRE-TENSIONED 42" x 36"
PRESTRESSED SPREAD BOX BEAM

DRAWING NO. BN-page