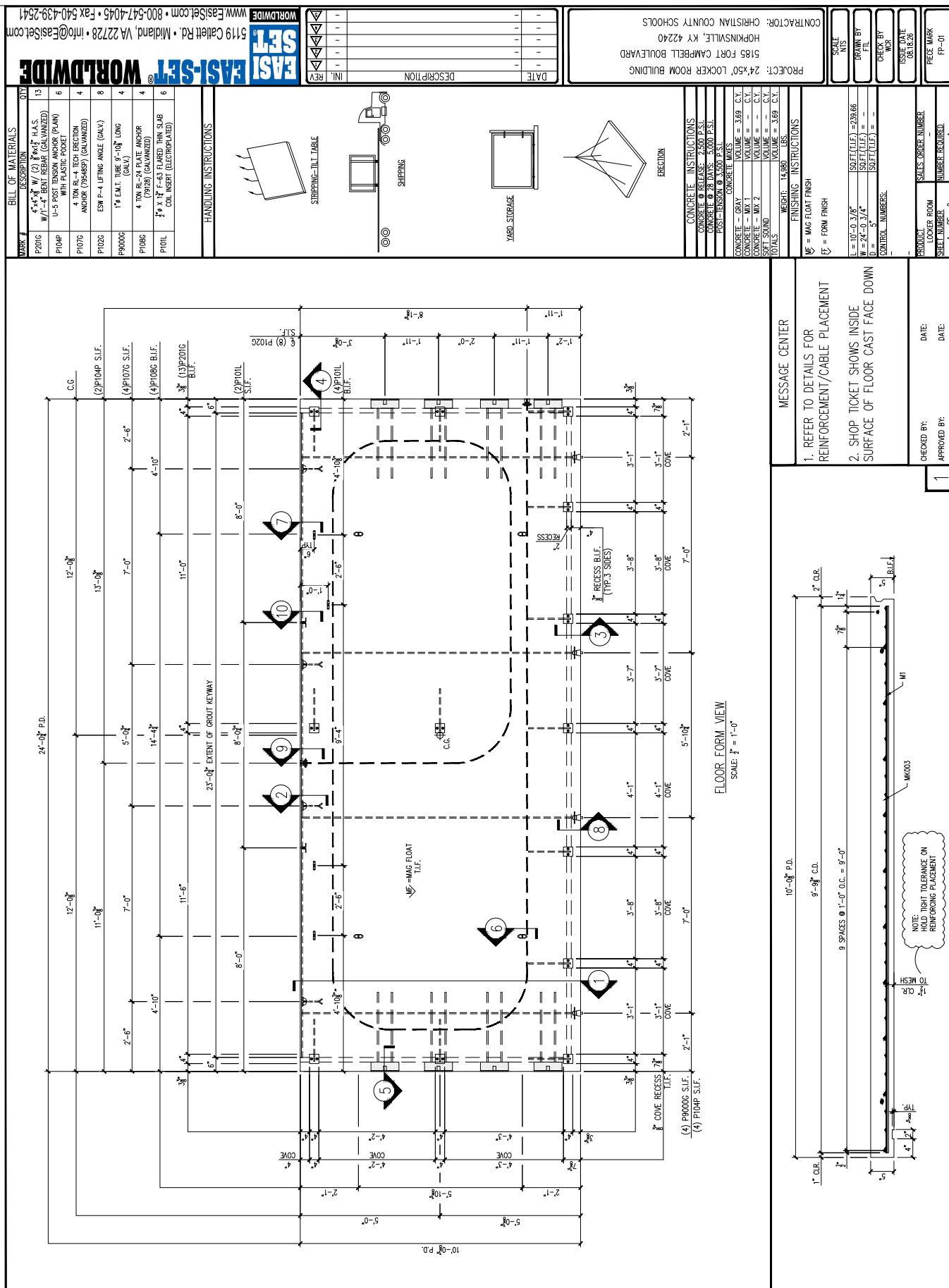




FLOOR - EASI-SET BUILDING - FP-01 - 120" x 288"



[illegible]

Job Name: 25-3470P8 CCHS Precast Building
Job Location: 5185 Fort Campbell BLVD
Contractor: Christian County Board of Education C/O A&K Construction

Plant: Beaver Dam

Tech: J. Coppage

9/10/2026 9:57:17 AM

PC: E. Bradley



Structure ID: FP-01 - Floor Panel 1

P1 CVBS

FLOOR - EASI-SET BUILDING - FP-01 - 120" x 288"



5119 Catlett Road • P.O. Box 400 • Midland, VA • www.EasiSet.com
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PT Check for FP-01 (PCI MNL - 116)

Material Data

(7) Wire lo-lax Strand - ASTM A416

Φ_{ps} 0.500 in,

A= 0.153 in²

E= 28500000 psi

f_{pu} 270 ksi

Strand Length 861 in

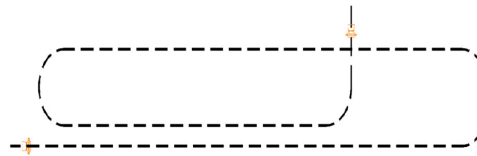
Assume (Info supplied by strand manufacturer)

k= 0.0007 Wobble Friction Coeff.

μ = 0.05 Curvature friction coeff. (Initial tension of 3,000 lbs)

Strand is to be stressed 70% of ultimate

= 28917 lbs



Cable Configuration

Adjustments to tensioning

1) Dead end anchor wedge seating loss

~ Expected to be 1/8 in

2) Live end anchor wedge seating loss

~ Expected to be 1/8 in, recommend over pull 1/8"

3) Elastic Shortening

Neglect for this pnl

4) Friction Loss

Additional force to overcome frictional forces between strand and sheathing

Tensioning Computations

Basic Elongation = $\frac{\text{(Force required beyond initial tension) (Length of strand between anchorages)}}{\text{(Area of strand) (Modulus of Elasticity)}}$

= 5.12 in

Adjustments

a) Dead end anchor wedge seating: Add 1/8" to elong. No force adjustment req'd

Add 1/8 in

b) Live end seating: over pull by 1/8"

1/8 in

Force adjustment $t = 633$ lbs lbs $\alpha = \text{curvature} = \pi(2.5) = 7.85$ radians

c) Friction losses $\frac{PD}{PS} = e^{-(kL + \mu\alpha)}$

= 0.642

Avg. strand force = 0.821 17.89% Loss

Recommend sequential jacking at both ends of the tendon be used to reduce the overstressing the strand at the live end

Friction loss at mid-point of tendon

$\frac{PD}{PS} = e^{\frac{-(kL + \mu\alpha)}{2}}$

= 0.801

Avg. strand force over

half of tendon = 0.901 9.93% Loss

Total force and elongation at live end must be increased to compensate for friction losses

Elong. Adjustment = 0.508 in

Force Adjustment = 2872 lbs

Total Force Required = 32422 lbs OK

Elongation Summary:

Gross Theoretical Elongation			
Basic Elongation	5.12 in		
Dead End Seating Loss	0.125 in		
Live End Seating Loss	0.125 in		
Friction Losses	0.508 in		
Total Elongation	5.88 in		
Rounded	5 14/16 in		
Tolerance limits	-7.0%	5.46 in	5 7/16 in
	+7.0%	6.29 in	6 5/16 in