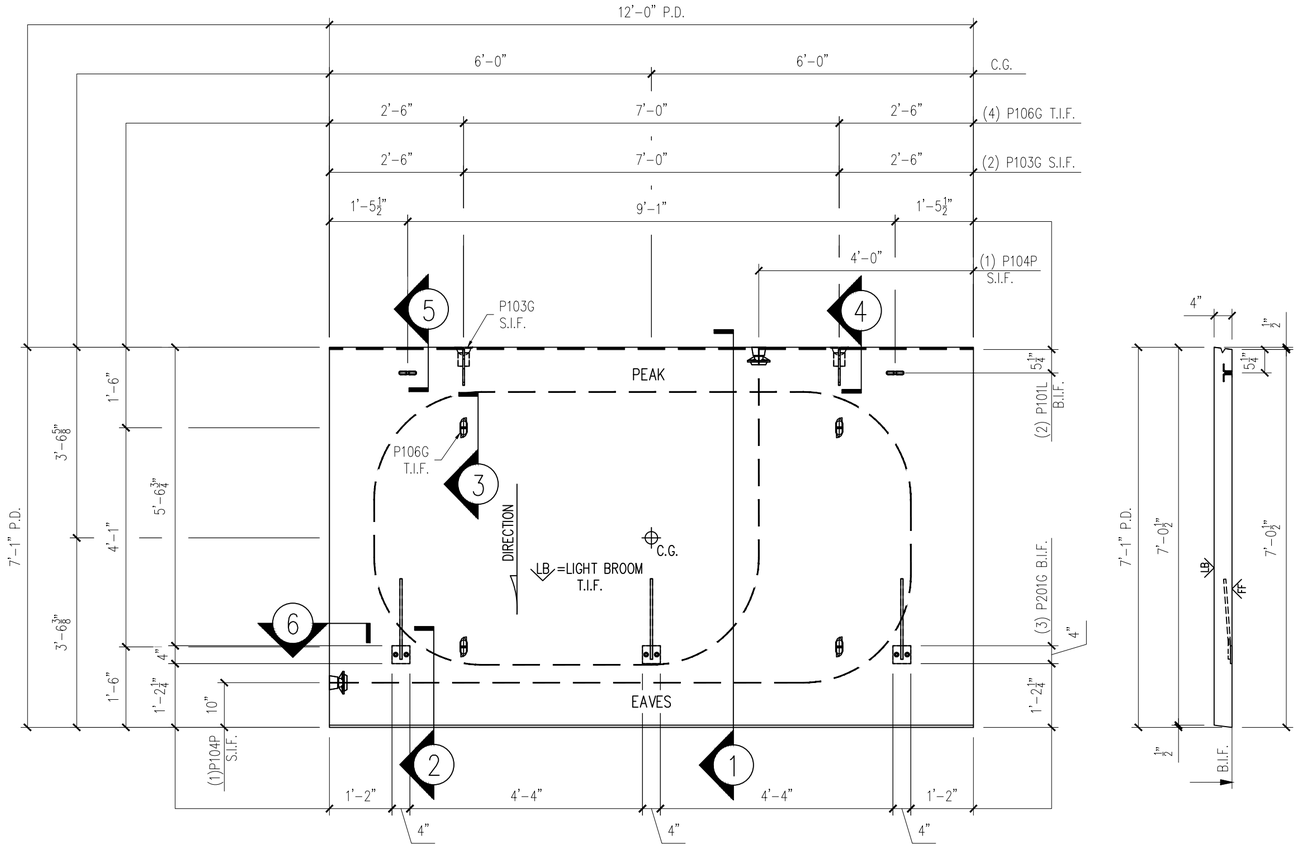
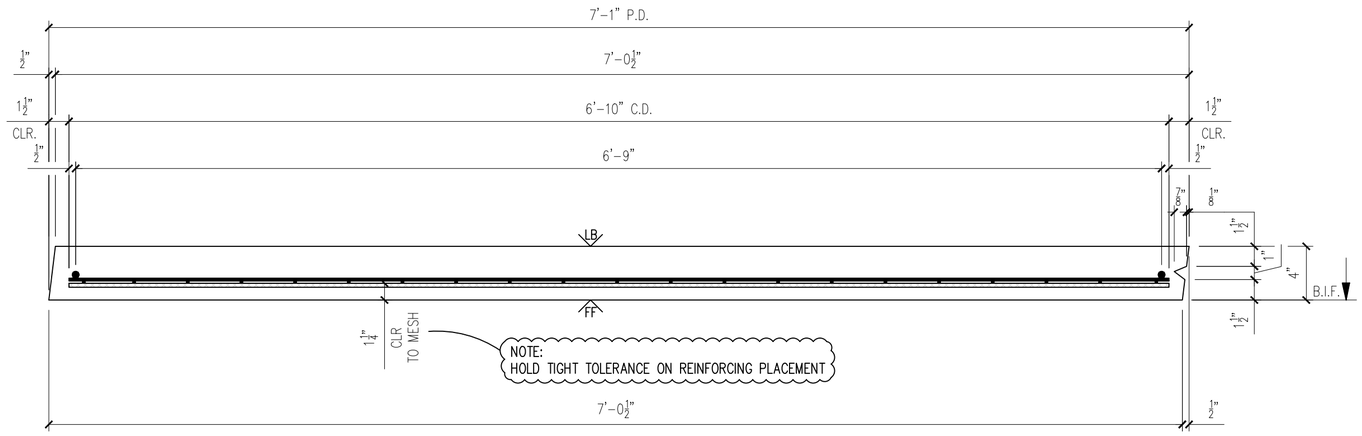
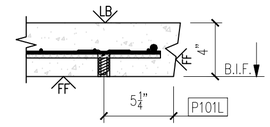
25-3470
CCHS Precast Buildings
ID - CTS
Roof - RP-01A
Weight - 4,220
1 Required



ROOF FORM VIEW
SCALE: ½" = 1'-0"





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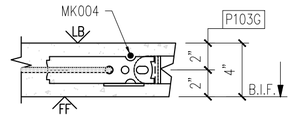

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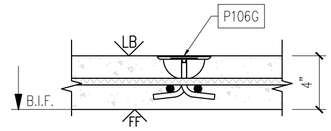

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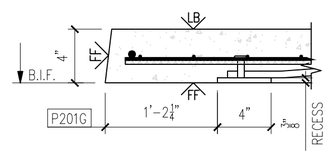


2

MESSAGE CENTER

1. REFER TO DETAILS FOR REINFORCEMENT/CABLE PLACEMENT

2. SHOP TICKET SHOWS EXTERIOR FINISH CAST FACE UP

CHECKED BY: DATE:

APPROVED BY: DATE:

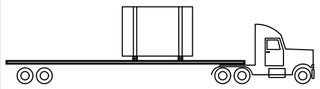
1

BILL OF MATERIALS

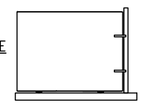
MARK #	DESCRIPTION	QTY.
P201G	PL 4"X4"X⅜"W/(2) ⅜"ø X 1½" H.A.S. W/ 1'-4" BENT REBAR (GALV.)	3
P103G	2 TON TECH ERECTION ANCHOR (GALV.)	2
P104P	U-5 POST TENSION ANCHOR (PLAIN) WITH PLASTIC POCKET	2
P106G	2 TON PLATE ANCHOR (GALV.)	4
P101L	¾"ø X 1¾" F-63 FLARED THIN SLAB COIL INSERT (ELECTROPLATED)	2

HANDLING INSTRUCTIONS

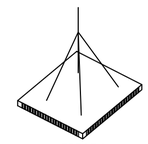
STRIPPING-TILT TABLE



SHIPPING



YARD STORAGE



ERECTION

CONCRETE INSTRUCTIONS

CONCRETE RELEASE @: 2,500 P.S.I.
CONCRETE @ 28 DAYS: 5,000 P.S.I.
POST-TENSION @ 3,500 P.S.I.

CONCRETE MIXES

CONCRETE - GRAY	VOLUME = 1.04 C.Y.
CONCRETE - MIX 1	VOLUME = - C.Y.
CONCRETE - MIX 2	VOLUME = - C.Y.
SOFT SOUND	VOLUME = - C.Y.
TOTALS	VOLUME = 1.04 C.Y.

WEIGHT: 4,220 LBS.

FINISHING INSTRUCTIONS

LB = LIGHT BROOM FINISH

FF = FORM FINISH

L = 12'-0"	SQ.FT.(T.I.F.) = 84.37
W = 7'-1"	SQ.FT.(T.I.F.) = -
D = 4"	SQ.FT.(T.I.F.) = -

CONTROL NUMBERS:
-
-

PRODUCT	SALES ORDER NUMBER
BUILDING	101208C
SHEET NUMBER	NUMBER REQUIRED
1 OF 2	2

EASI-SET® WORLDWIDE
5119 Catlett Rd. • Midland, VA 22728 • info@EasiSet.com
www.EasiSet.com • 800-547-4045 • Fax 540-439-2541

REV	INI.	DESCRIPTION	DATE
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-

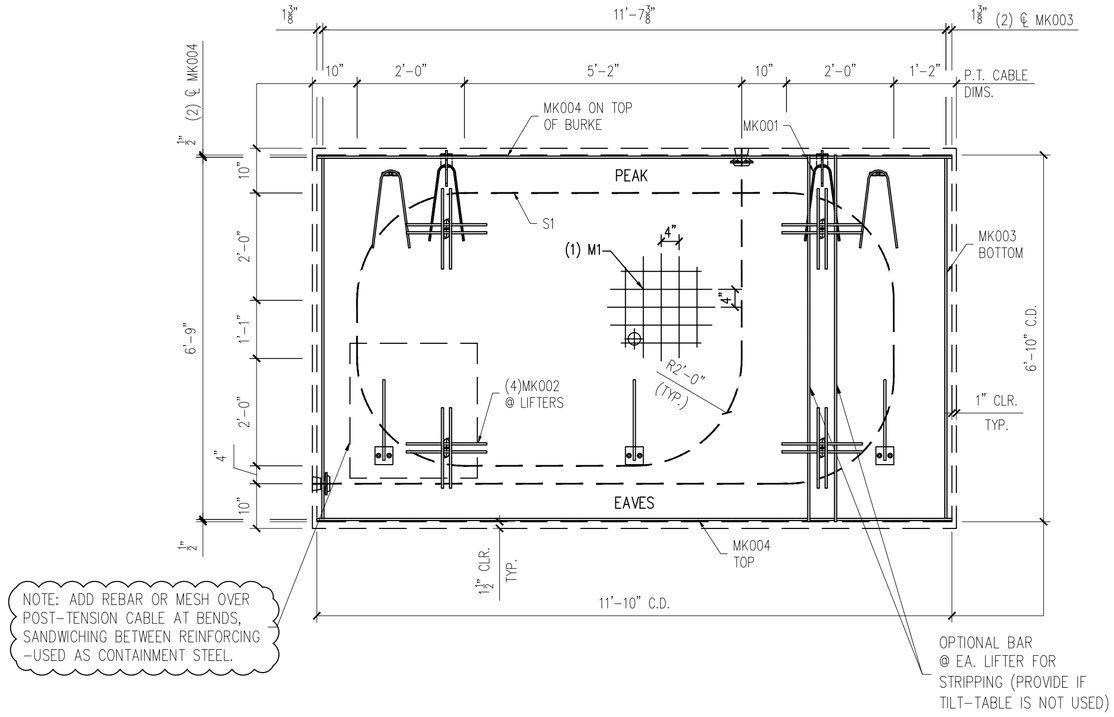
PROJECT: 10'X12'X8' GATE HOUSE BUILDING
5185 FORT CAMPBELL BOULEVARD
HOPKINSVILLE, KY 42240
CONTRACTOR: CHRISTIAN COUNTY SCHOOLS

SCALE NTS
DRAWN BY FTL
CHECK BY WCR
ISSUE DATE 07.01.26

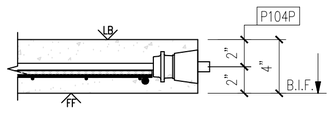
PIECE MARK
RP-01

25-3470
CCHS Precast Buildings
ID - CTS
Roof - RP-01A
Weight - 4,220
1 Required

NOTE:
DIMENSIONS PROVIDED ARE PULLED FROM EDGE OF CAGE TO CENTERLINE OF REBAR AND TO CENTER OF REBAR TO CENTER OF REBAR



ROOF REINFORCING VIEW
SCALE: ½" = 1'-0"



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REINFORCING SCHEDULE

MARK #	DESCRIPTION	QTY.
MK001	#3 X 3'-0"	4
MK002	#4 X 1'-6"	16
MK003	#3 X 6'-10"	2
MK004	#3 X 11'-10"	2
S1	½"ø X 43'-2" LONG P.T. CABLE	1

MESH SCHEDULE

MARK #	DESCRIPTION	QTY.
M1	W4XW4 4"X4" WWF 11'-10" X 6'-10"	1

MESSAGE CENTER

1. REFER TO DETAILS FOR REINFORCEMENT/CABLE PLACEMENT

2. SUPPLEMENTAL STEEL FOR STRIPPING AND HANDLING MAY BE ADDED AS REQUIRED.

CHECKED BY: DATE:

APPROVED BY: DATE:

NOTES:

1. TRIM PLASTIC SHEATH AT BOTH ENDS OF THE PT CABLE TO FIT BETWEEN U-5 ANCHOR PLATES

2. CONSTRUCT REBAR-MESH CAGE ACCORDING TO THE DRAWINGS. SECURE LIFTING APPARATUS TO FORM AND ADD PROPER REINFORCEMENT. PLACE REBAR-MESH CAGE AND HAIRPINS AT INSERTS WITH PROPER CLEARANCES (PER DRAWINGS).

3. PLACE AND SECURE PT CABLE AS INDICATED ON THE DRAWINGS (REINFORCING VIEW)

PRODUCT	SALES ORDER NUMBER
BUILDING	101208C
SHEET NUMBER	NUMBER REQUIRED
2 OF 2	2

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REV	DESCRIPTION	DATE
INI.	-	-
1	-	-
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3	-	-
4	-	-
5	-	-

PROJECT: 10'X12'X8' GATE HOUSE BUILDING
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DRAWN BY FTL
CHECK BY WCR
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PIECE MARK
RP-01

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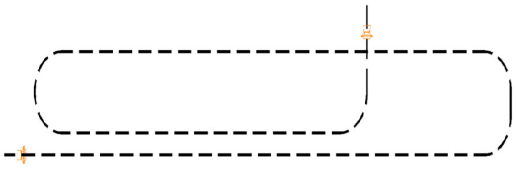
EASI-SET BUILDINGS

PT Check for Gate House Roof RP-01 (PCI MNL - 1

Material Data
(7) Wire lo-lax Strand - ASTM A416

Φps	0.500 in,
A=	0.153 in²
E=	28500000 psi
fpu=	270 ksi
Strand Length	480 in

Assume (Info supplied by strand manufacturer)



Cable Configuration

25-3470
CCHS Precast Buildings
ID - CTS
Roof - RP-01A
Weight - 4,220
1 Required

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

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

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

= 2.85 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 = 1136 lbs lbs α = curvature = π(2.5) 7.85 radians
c) Friction losses $\frac{PD}{PS} = e^{-(kL+\mu\alpha)}$

= 0.657
Avg. strand force = 0.828 17.17% Loss

Recommend sequencial 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

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

= 0.810
Avg. strand force over half of tendon = 0.905 9.48% Loss

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

Elong. Adjustment = 0.271 in
Force Adjustment = 2743 lbs

Total Force Required = 32795 lbs OK

Elongation Summary:

		Gross Theoretical Elongation	
Basic Elongation		2.85 in	
Dead End Seating Loss		0.125 in	
Live End Seating Loss		0.125 in	
Friction Losses		0.271 in	
	Total Elongation	3.37 in	
	Rounded	3 6/16 in	
Tolerance limits	-7.0%	3.14 in	3 2/16 in
	+7.0%	3.61 in	3 10/16 in