


Technical drawing of a roof plan showing a rectangular structure with dimensions and annotations. The drawing includes a top view with dimensions  $B' = 7m\ 70cm$  and  $B'' = 7m\ 70cm$ . It also shows a side view with dimensions  $D = 5m$  and  $D( = 5m$ . The drawing is labeled with '5' and '7cfhV'.

Figure 10.10 illustrates the design of a reinforced concrete beam. The top part shows a cross-section of the beam with dimensions: width  $b = 16$  in., effective depth  $d = 20$  in., and total depth  $h = 24$  in. The bottom part shows a longitudinal section of the beam with a length of 20 ft. The beam is supported by a wall on the left and a column on the right. The longitudinal section shows the beam's profile, including the top and bottom reinforcement bars, and the location of the supports. The beam is labeled with dimensions and material properties:  $b = 16$  in.,  $d = 20$  in.,  $h = 24$  in.,  $f'_c = 4$  ksi,  $f_y = 60$  ksi, and  $E_s = 29,000$  ksi. The beam is also labeled with the design load  $W_u = 1.2$  k/ft and the design moment  $M_u = 100$  ft-k.

Figure 10 illustrates the design of a continuous beam with three spans. The plan view shows the beam with supports and spans labeled B, 7#9, and D. The cross-sections are labeled 7cfhY' 5, 7cfhY' 6, and 7cfhY' 7. The reinforcement is detailed with various symbols and dimensions, including bar counts, diameters, and spacing.

	5uC	DCG	6-H	EI 5BH	7CADF = A9BHC	
			aa		I B-H	HCH5@
					W@	W@
J%						
	..S\$	%	%&*	&	- +	%
	..S\$	&	%&*	&	& +S	( )S
	..S\$	(	%S	&	- )	+ )S
	..S\$	(	%S	&	+ )	+ )S
	..S\$	(	%S	&	+ )	+ )S
J&						
	..S\$	%	%&*	&	(	%S
	..S\$	&	%S	&	(	%S
	..S\$	(	%S	&	(	%S
J'						
	..S\$	%	%S	&	(%)	%
	..S\$	&	%*	&	+ (	%S
	..S\$	(	%&*	&	+ S	( )S
	..S\$	(	%&*	%	+ S	+ S
	..S\$	(	%&*	%	( )	% &
	..S\$	+ %S	&	%&@	&@S	%S
	..S\$	+ %S	&	+ S	+ S	+ S
	..S\$	+ %S	&	+ S	+ S	+ S
	..S\$	%S	%S	&	+ S	%&@S
	..S\$	%S	(	%S	+ S	+ S
J (						
	..S\$	&	%S	%	% (	% (
	..S\$	%	%S	&	(	%&
	..S\$	(	%S	&	+ %	& + +
J)						
	..S\$	%	%&*	&	+ +	%&
	..S\$	&	%*	&	( )S	%S
	..S\$	(	%*	%	+ *	+ *
	..S\$	(	%S	&	( )	% )S
	..S\$	+ %S	%S	%	& -	& -
	..S\$	+ %S	%S	%	+ S	%&@S
	..S\$	+ %S	%S	%	+ S	+ S
	..S\$	(	(	(	%S	(
J *						
	..S\$	&	%S	&	(%)	%
	..S\$	%	%S	&	( %	%
	..S\$	(	%S	&&	(	%& -
J +						
	..S\$	%	%S	&	- )	%& (
	..S\$	(	%&*	&	- )	%S (
	..S\$	(	%S	%S	( )	%S (
J,						
	..S\$	%	%&*	&	' -	% %
	..S\$	&	%&*	&	& (	( - )S
	..S\$	(	%S	&	' -	%&
	..S\$	(	%S	&	' -	%&
	..S\$	(	%S	+ %S	%S	+ +
J -						
	..S\$	%	%S	&	* S	%&S
	..S\$	&	%S	&	&S	(S)
	..S\$	%	%S	%	+ S	%&@S
	..S\$	(	%S	&	&S	(S)
	..S\$	(	%S	)	%S	( )
J %S						
	..S\$	%	%S	&	+ (	+ (
	..S\$	&	%&*	&	(	%
	..S\$	(	%S	%	& +	% &
	..S\$	(	%S	%	& +	% &
	..S\$	(	%S	%	+ S	+ S
J %&						
	..S\$	%	%*	&	- )	%&S
	..S\$	&	%*	%	& S	& S
	..S\$	(	%*	%	+ *	& S
	..S\$	(	%S	&	+ *	%&S
	..S\$	+ %S	%S	&	+ S	+ S
	..S\$	+ %S	%S	&	+ S	+ S
	..S\$	(	(	+ &	+ &	+ &

F9GI AC: 89 5uC				
5uC	6-H	7CADF		D9GC
	aa	a		-Iz
*\$5	)	)		
(\$5	%)	%)		8\$(
(\$5	8%)	8%)		88%
(\$5	%)	%)		%)
DYgc HchU	*\$5 1			-Iz
DYgc HchU	\$5 1			\$( -Iz

DF9: 9=FH1 F5 AI B=7=D5@ 89F BCB5C5=	F10303931010 1074707270 9B: A5H9I G 69@CH= HFCA69HH5		<b>cortes</b> arquitetura e engenharia
70F59F1 20E S(			
GC>9HC LBG(H1F7CB5@		F1U >G@ #P B-G7F4B5UC	8H5: %
89G7F=UeC. DFC>9HC 9GHFIH F5@ J: 5G 8C DB4C 85 7C69FH F5' I' J% C J %%	F5 F5 F5	F9I-GEC XY ACI FUU X5 B-G7F4B5UC	8H5: %
F15 5G8H5 FCG52 GBZ @CH' 69A J=J9F	F5 F5 BCCB5= I' FG		DE 587-5: %