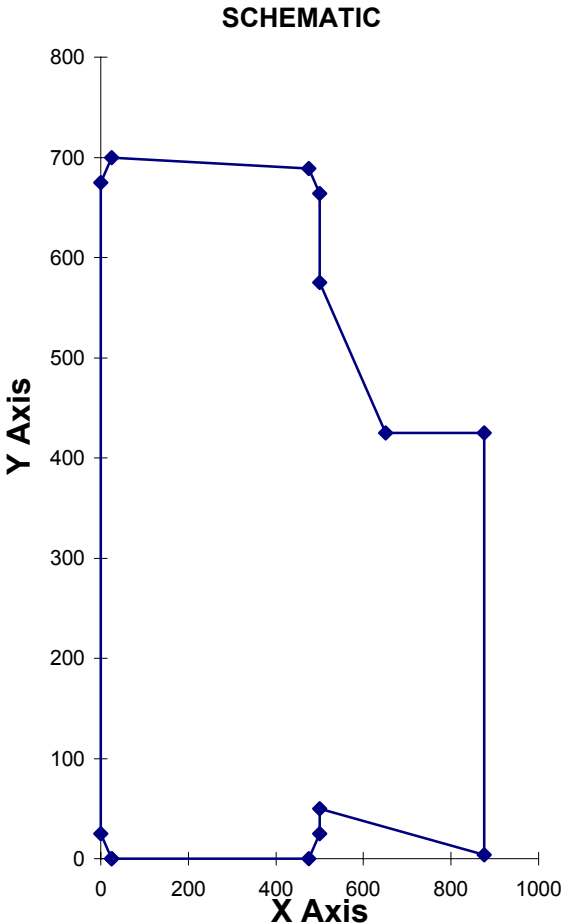


SECTION PROPERTIES :

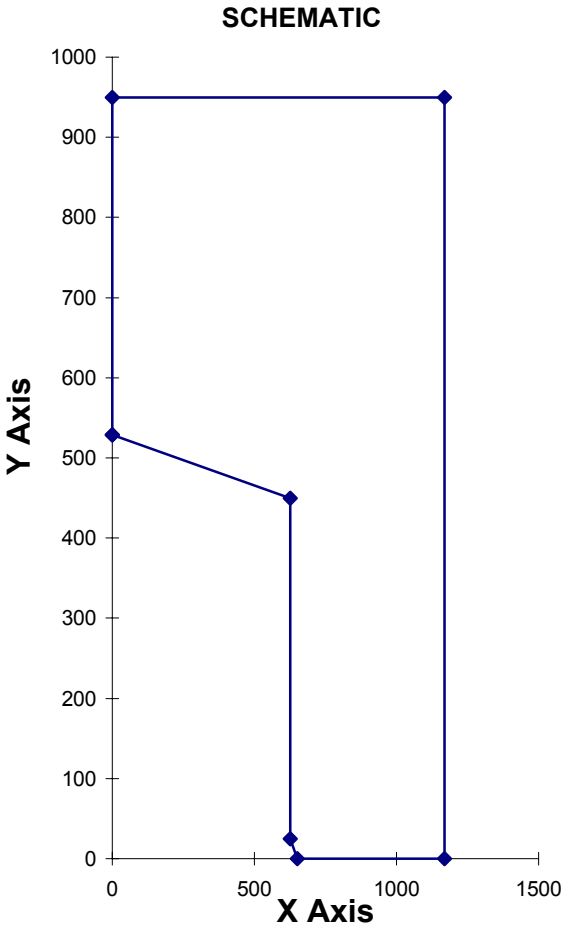
Member A ~ Parapet Plinth + cantilever

[illegible]

CROSS SECTIONAL AREA =	506500
CENTROID X =	386.15
CENTROID Y =	314.30
SECOND MOMENT OF AREA Ixx =	1.7649E+10
SECOND MOMENT OF AREA Iyy =	2.9587E+10

SECTION PROPERTIES :

Member B ~ Cantilever + edge of deck

[illegible]

CROSS SECTIONAL AREA =	804300
CENTROID X =	691.14
CENTROID Y =	562.56
SECOND MOMENT OF AREA Ixx =	5.4955E+10
SECOND MOMENT OF AREA Iyy =	8.3330E+10

$$\text{Torsional Inertia} = J = K_1 b^3 b_{\max}$$

Section : **RC Deck Example**

$$k_1 = 1/3 [1 - 0.63 (b/b_{\max}) (1 - b^4 / 12b_{\max}^4)]$$

Longitudinal Members

Member A ~ Parapet Beam:

		$\underline{b_{\max}}$	\underline{b}	<u>Proportion</u>	\underline{J}
b_1	500	700	500		
b_2	700				
		$k_1 =$	0.187		
		$J =$	1.633E+10	1	1.633E+10
b_1	375	$\underline{b_{\max}}$	\underline{b}		
b_2	397	397	375		
		$k_1 =$	0.148		
		$J =$	3.101E+09	0.5	1.551E+09
Total J =					<u><u>1.788E+10</u></u> mm ⁴

Member B ~ Cantilever + Edge of Deck:

		$\underline{b_{\max}}$	\underline{b}		\underline{J}
b_1	625	625	461		
b_2	461				
		$k_1 =$	0.182		
		$J =$	1.116E+10	0.5	5.580E+09
b_1	544	$\underline{b_{\max}}$	\underline{b}		
b_2	950	950	544		
		$k_1 =$	0.214		
		$J =$	3.275E+10	0.5	1.638E+10
Total J =					<u><u>2.196E+10</u></u> mm ⁴

Member C ~ Deck:

		$\underline{b_{\max}}$	\underline{b}		\underline{J}
b_1	912.5	950	912.5		
b_2	950				
		$k_1 =$	0.146		
		$J =$	1.053E+11	0.5	<u><u>5.267E+10</u></u> mm ⁴

Transverse Members

Cantilever:

		$\underline{b_{\max}}$	\underline{b}		\underline{J}
b_1	1900	1900	437		
b_2	437				
		$k_1 =$	0.285		
		$J =$	4.520E+10	0.5	<u><u>2.260E+10</u></u> mm ⁴

Deck:

		$\underline{b_{\max}}$	\underline{b}		\underline{J}
b_1	1900	1900	950		
b_2	950				
		$k_1 =$	0.229		
		$J =$	3.728E+11	0.5	<u><u>1.864E+11</u></u> mm ⁴