

GENERAL NOTES

01. All dimensions to be read, not to be measured.
 02. All structural drawings should be read in conjunction with architectural drawings.
 03. Minimum clear distance between the bars shall be one inch or diameter of bar, whichever is greater
 04. One inch diameter spacer bar shall be used between two rows of steel bars in beams.
 05. Lap splice for column shall be provided in the center of column as per details given in the drawing.
 06. Lap splice for beam shall be provided at approximately 1/4 of the span length of beam as per details given in the drawing.
 07. Ties/Stirrups in Beams, Columns and Lintels shall be provided with 135° hooks and with an extension of 6db or 3 in., whichever is greater as given in the drawing.
 08. Mortar thickness in brick masonry wall shall be 3/8"
 09. All brick work shall be laid in English bond.
 10. Toothing in brick masonry shall be provided at all vertical connections between concrete and brick masonry wall.
 11. Foundation was designed using different bearing capacities (Refer to Dwg: S-04).
- Note:* This design is applicable for normal load conditions and assume adequate bearing conditions. It stands invalid for soil with bearing capacity less than 0.5 tsf, water logged areas etc.

DESIGN DATA

1. Minimum 28 days cylinder crushing strength of Reinforced concrete used in all members is 3000 psi.
2. Steel reinforcement is Grade-40 (with minimum Yield strength of 40 ksi.) deformed round bars conforming to ASTM A-615.
3. Compressive strength of first class solid fired clay bricks is 1,500 psi with actual dimensions of 8-5/8 in ± 1/8 in by 4-1/8 in ± 1/8 in by 2-5/8 in ± 1/8 in .

MINIMUM CLEAR COVER

S.No	LOCATION	MINIMUM COVER
1.	FOOTING	3"
2.	COLUMN	1-1/2"
3.	SLAB	3/4"
4.	BEAM	1-1/2"

DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)

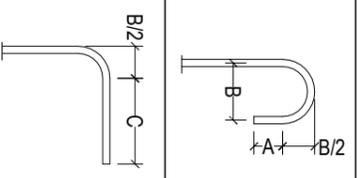
BAR DIA	DEVELOPMENT LENGTH (INCHES)	
	fc' = 3,000 psi	fy = 40,000 psi
3/8"	STRAIGHT BARS	18
	WITH STANDARD HOOK	6
1/2"	STRAIGHT BARS	24
1/2"	WITH STANDARD HOOK	6
5/8"	STRAIGHT BARS	30
5/8"	WITH STANDARD HOOK	8
3/4"	STRAIGHT BARS	36
3/4"	WITH STANDARD HOOK	9

SPLICE LENGTH (ACI 21.3.2.4, Class B Splice)

BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES)	
	fc' = 3,000 psi	fy = 40,000 psi
3/8"	SLAB	16
	BEAM / COLUMN	23
1/2"	SLAB	21
1/2"	BEAM / COLUMN	30
5/8"	SLAB	26
5/8"	BEAM / COLUMN	38
3/4"	SLAB	-
3/4"	BEAM / COLUMN	45

STANDARD HOOKS (ACI 7.1)

BAR DIA	A(in.)	B(in.)	C(in.)	HOOK TYPE
3/8"	2.5	2.5	4.5	180° HOOK
1/2"	2.5	3.0	6.0	180° HOOK
5/8"	2.5	4.0	7.5	180° HOOK
3/4"	3.0	4.5	9	90° HOOK



<p>PROJECT : Provision of Technical Assistance/ Continuous Audit for Construction of Missing Schools Facilities in Khyber Pukhtunkhwa 2014-15</p>	<p>CLIENT : ADAM SMITH INTERNATIONAL</p>	<p>BLOCK : ZONE-4</p>	<p>SENIOR DESIGN ENGINEER :</p>	<p>PROJECT CO-ORDINATOR</p>	<p>ENGINEER :</p>
<p>LOCATION / DISTRICT : PESHAWAR</p>	<p>DRAWING : GENERAL NOTES</p>	<p>DESIGN ENGINEER :</p>	<p>ENGINEER :</p>	<p>DRAWN BY : Ejaz Saleem</p>	<p>CHECKED BY :</p>
		<p>DATE : July-2016</p>	<p>DWG NO. : S-01</p>	<p>Serial NO. :</p>	<p>REMARKS :</p>

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