

## **DISCLAIMER**

By using the LOGIX Design Manual, in part or in whole, the user accepts the following terms and conditions.

The LOGIX Design Manual shall be used for the sole purpose of estimating, design or construction of LOGIX Insulated Concrete Forms used in residential, commercial or industrial structures.

The information represented herein is to be used as a reference guide only. The user shall check to ensure the information provided in this manual, including updates and amendments, meets local building codes and construction practices by consulting local building officials, construction and design professionals, including any additional requirements.

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# 6.1 – U.S. ENGINEERING ANALYSIS REPORT

## INTRODUCTION

LOGIX walls are intended to be used both above and below grade, and can carry large vertical as well as lateral loads. They are particularly effective for residential, commercial and industrial buildings; providing excellent insulation as well as thermal mass and structural strength. They can be easily adapted to accommodate concrete floors and other “non-standard” building systems.

Construction must be in conformance with the LOGIX Design Manual, including assembly of formwork, bracing, accurate rebar positioning, concrete mix design & placement, and details for interconnection with the other building components.

## STRUCTURAL DESIGN AND PERFORMANCE

The LOGIX Building System can be used for an infinite variety of building situations with proper engineering. This report, with its load tables and diagrams, is intended to assist with the structural design of buildings using the LOGIX system for the basement only, or continuing to two stories above-grade and/or roof. Where unusual conditions are encountered, it is recommended that the user consult a designer who can evaluate the loadings to the various components and who can appreciate the limitations of “prescriptive” design under unusual conditions. Connection details have generally been excluded from this report because of the great variety of floor and roof systems that can be used with the Logix wall system. The designer should refer to the Logix Design Manual and the literature for the various proprietary products that are available for connections, which are an important part of the total design.

## REINFORCEMENT TABLES

Above- and below-grade walls and lintel reinforcement tables are provided in this report. The tables were developed using the applicable sections of Chapter 16 of the International Building Code 2012, Sections 404 and 611 of the International Residential Code 2012, and ACI 318 Building Code Requirements for Structural Concrete.

Table 1 makes use of plain concrete foundation walls adapted from the IRC 2012, Table 404.1.2(8), for LOGIX used below-grade. For walls that fall outside the scope of Table 1, Tables 2A, 2B, 2C and 2D are provided, which cover wall reinforcement for larger walls and larger loading conditions.

Tables 3A and 3B provides reinforcement tables for LOGIX walls used above-grade.

## HELIX TSMR TABLES - ALTERNATIVE TO REBAR REINFORCEMENT TABLES

Where applicable, Helix TSMR (Twisted Steel Micro Rebar) Tables 2A-H to 2D-H, and Tables 3.1A-H to 3.6A-H, and 3.1B-H to 3.6B-H, may be used in lieu of the reinforcement requirements in Tables 2A to 2D, and Tables 3A and 3B. Helix is steel fibre reinforcement that can significantly reduce the amount of horizontal and vertical reinforcement in above- and below-grade concrete walls, with exception of lintel and shear wall reinforcement. (For lintel and shear wall reinforcement see Tables 4A to 4E, 5A to 5E and 6A, 6B)

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## LIMITATIONS

The limitations of Reinforcement Tables 2A to 2D, and Tabs 3A and 3B, also apply to Helix alternative reinforcement Tables 3.1A-H to 3.6A-H, and 3.1B-H to 3.6B-H.

Building limitations used to develop above- and below-grade tables include:

Building perimeter = 80 ft max x 40 ft max

Roof clear span = 40 ft max

Floor clear span = 32 ft max

Number of stories above grade = 2 max

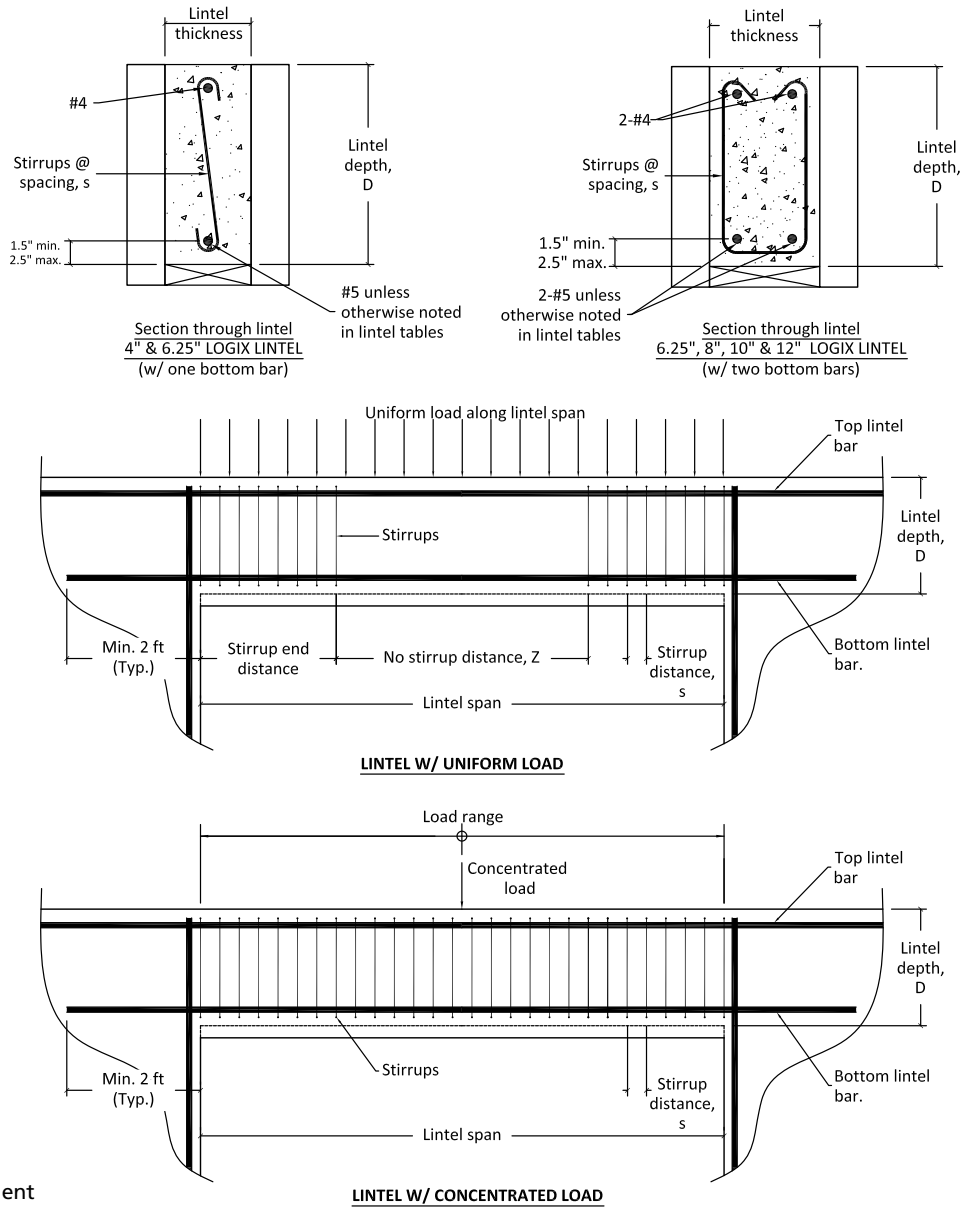
Number of stories below grade = 1

Tables 4A to 4E and Tables 5A to 5E provide lintel tables for factored uniform and concentrated loading conditions, respectively.

More specific design assumptions and limitations are located with the corresponding reinforcement tables.

E  
N  
G  
I  
N  
E  
E  
R  
I  
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G

## LINTEL REINFORCEMENT TABLES



**Fig 4**  
Lintel reinforcement

The lintel tables cover a wide range of uniform and concentrated load conditions, and span lengths. The depth of the lintels range from 8 inch to 30 inches. Uniform and concentrated loading are considered to be concentric and centered on the lintel. Uniform loads act along the entire lintel span, such as from roof trusses at 2 ft spacing. Concentrated load lintel tables consider only a single concentrated load acting anywhere along the lintel span. In addition, the lintel tables do not consider uniform and concentrated loads to act simultaneously on the lintel.

The following notes are common to both uniform and concentrated load lintel tables:

1. 28 day concrete compressive strength = 3 ksi. Steel yield strength = 40 ksi.
2. Stirrups are D9.5 wire or #3 bars, bent as shown, and conforming to ACI 318.
3. Shaded areas of the lintel tables require reinforcement, except for length Z.
4. Dimension D is to the concrete surface, not counting bucks or top plate.
5. Bottom steel must extend a min. 2 ft beyond opening, and no splices are permitted.
6. Deflection is limited to L/360, not considering long term effects. Long term deflection could be twice the short term depending on the nature of the load.
7. Seismic and wind loads are not considered.
8. Shear planes are not interrupted by embedded joists.
9. Top of lintel is assumed to be laterally restrained.

These tables should only be used if the above conditions are met. For other conditions, consult a structural engineer.

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**TABLE 5A - LOGIX 4" LINTEL REINFORCEMENT WITH CONCENTRATED LOAD**

Based on 40 ksi reinforcing steel. Lintels tables for 60 ksi reinforcing steel are available for download at [www.logixicf.com](http://www.logixicf.com).

Where not shown otherwise, bottom steel is 1-#5

NOTE: LOGIX recommends builders, owners and/or designers using these tables confirm that on-site building conditions are w/in the scope of the tables being used.

Opening ft	s=3", D=8"																
	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4									1 - #6	1 - #6	1 - #6	1 - #6					
5								1 - #6	1 - #6								
6						1 - #6	1 - #6										
7					1 - #6	1 - #6											
8					1 - #6												
9				1 - #6													
10			1 - #6														
12		1 - #6															
14																	
16																	
18																	
20																	

Opening ft	s=4", D=10"																
	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4													1 - #6	1 - #6	1 - #6		
5												1 - #6	1 - #6	1 - #6			
6									1 - #6	1 - #6							
7									1 - #6	1 - #6							
8									1 - #6	1 - #6							
9						1 - #6	1 - #6										
10					1 - #6	1 - #6											
12				1 - #6													
14			1 - #6														
16																	
18																	
20	1 - #6																

Opening ft	s=5", D=12"																
	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
12					1 - #6	1 - #6											
14				1 - #6	1 - #6												
16			1 - #6														
18																	
20	1 - #6																

Opening ft	s=7", D=16"																
	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	1 - #6
6																1 - #6	1 - #6
7																1 - #6	1 - #6
8																1 - #6	1 - #6
9																	
10																	
12																	
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**TABLE 5A - LOGIX 4" LINTEL REINFORCEMENT WITH CONCENTRATED LOAD Cont'd**  
 Based on 40 ksi reinforcing steel. Lintels tables for 60 ksi reinforcing steel are available for download at [www.logixicf.com](http://www.logixicf.com).

s=9", D=20"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	
6																	
7																1 - #6	1 - #6
8															1 - #6	1 - #6	1 - #6
9														1 - #6	1 - #6	1 - #6	-
10												1 - #6	1 - #6	1 - #6	1 - #6	-	-
12										1 - #6	1 - #6	1 - #6	1 - #6	-	-	-	-
14								1 - #6	1 - #6	1 - #6	1 - #6	-	-	-	-	-	-
16								1 - #6	1 - #6	1 - #6	-	-	-	-	-	-	-
18								1 - #6	1 - #6	-	-	-	-	-	-	-	-
20						1 - #6	1 - #6	-	-	-	-	-	-	-	-	-	-

s=11", D=24"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	
6																	
7																	
8																	1 - #6
9																1 - #6	1 - #6
10															1 - #6	1 - #6	1 - #6
12												1 - #6	1 - #6	1 - #6	1 - #6	-	-
14										1 - #6	1 - #6	1 - #6	1 - #6	-	-	-	-
16									1 - #6	1 - #6	1 - #6	1 - #6	-	-	-	-	-
18								1 - #6	1 - #6	1 - #6	-	-	-	-	-	-	-
20							1 - #6	1 - #6	1 - #6	-	-	-	-	-	-	-	-

s=14", D=30"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	1 - #6
12															1 - #6	1 - #6	1 - #6
14													1 - #6	1 - #6	1 - #6	-	-
16											1 - #6	1 - #6	1 - #6	1 - #6	-	-	-
18									1 - #6	1 - #6	1 - #6	1 - #6	-	-	-	-	-
20								1 - #6	1 - #6	1 - #6	1 - #6	-	-	-	-	-	-

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- Notes:**
- Where not shown otherwise, bottom steel is 1-#5
  - Table is to be read in conjunction w/ **Figure 4**.
  - Where spaces contain "-" the bar is presumed to be less economical and/or practical. Alternatively, consult with a local engineer to determine if a practical bar size is possible based on local load conditions.
  - Blank regions require no stirrups. Shaded regions require stirrups. For stirrup information refer to **Figure 4**.
  - Factored Point Load includes 1.2, and 1.6 for dead and live load, respectively. For example, (1.2\*dead load)+(1.6\*live load)

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**TABLE 5B - LOGIX 6.25" LINTEL REINFORCEMENT WITH CONCENTRATED LOAD**  
 Based on 40 ksi reinforcing steel. Lintels tables for 60 ksi reinforcing steel are available for download at [www.logixcf.com](http://www.logixcf.com).  
 Where not shown otherwise, bottom steel is 1-#5

NOTE: LOGIX recommends builders, owners and/or designers using these tables confirm that on-site building conditions are w/in the scope of the tables being used.

s=3", D=8"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3													1 - #6	1 - #6	1 - #6	2 - #5	2 - #5
4										1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	-	-
5								1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	-	-	-	-
6							1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	-	-	-	-	-
7						1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	-	-	-	-	-	-
8					1 - #6	1 - #6	2 - #5	2 - #5	-	-	-	-	-	-	-	-	-
9				1 - #6	1 - #6	2 - #5	-	-	-	-	-	-	-	-	-	-	-
10				2 - #5	-	-	-	-	-	-	-	-	-	-	-	-	-
12			2 - #5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14		2 - #5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	1 - #6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

s=4", D=10"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3													1 - #6	1 - #6	1 - #6	1 - #6	1 - #6
4													1 - #6	1 - #6	1 - #6	1 - #6	1 - #6
5											1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5
6									1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6
7								1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6
8						1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	-	-
9						1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	-	-	-
10					1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	-	-	-	-	-
12				1 - #6	1 - #6	2 - #5	2 - #6	2 - #6	2 - #6	-	-	-	-	-	-	-	-
14			1 - #6	2 - #5	2 - #6	2 - #6	-	-	-	-	-	-	-	-	-	-	-
16			2 - #6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		2 - #5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	1 - #6	2 - #6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

s=5", D=12"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																1 - #6	1 - #6
5														1 - #6	1 - #6	1 - #6	1 - #6
6											1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5
7										1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6
8								1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6
9								1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6
10							1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	-
12					1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	-	-	-	-
14				1 - #6	1 - #6	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	-	-	-	-	-	-
16			1 - #6	1 - #6	2 - #5	2 - #6	-	-	-	-	-	-	-	-	-	-	-
18			1 - #6	2 - #6	2 - #6	-	-	-	-	-	-	-	-	-	-	-	-
20		1 - #6	2 - #6	2 - #6	-	-	-	-	-	-	-	-	-	-	-	-	-

s=7", D=16"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	1 - #6
6																1 - #6	1 - #6
7														1 - #6	1 - #6	1 - #6	2 - #5
8													1 - #6	1 - #6	1 - #6	2 - #5	2 - #5
9											1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #6
10									1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6
12							1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6
14							1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	-	-
16					1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	-	-	-
18				1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	-	-	-	-	-
20			1 - #6	1 - #6	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	-	-	-	-	-	-	-	-

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**TABLE 5B - LOGIX 6.25" LINTEL REINFORCEMENT WITH CONCENTRATED LOAD Cont'd**

Based on 40 ksi reinforcing steel. Lintels tables for 60 ksi reinforcing steel are available for download at [www.logixicf.com](http://www.logixicf.com).

s=9", D=20"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	
6																	
7																1 - #6	1 - #6
8															1 - #6	1 - #6	1 - #6
9														1 - #6	1 - #6	1 - #6	2 - #5
10													1 - #6	1 - #6	1 - #6	2 - #5	2 - #5
12									1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #6
14								1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6
16							1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	-
18					1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	-	-
20				1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	-	-	-

s=11", D=24"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3-7																	
8																	1 - #6
9															1 - #6	1 - #6	1 - #6
10														1 - #6	1 - #6	1 - #6	1 - #6
12													1 - #6	1 - #6	1 - #6	2 - #5	2 - #5
14									1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #6
16								1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6
18							1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6
20				1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	-	-

D=30"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3-9																	
10																1 - #6	1 - #6
12															1 - #6	1 - #6	1 - #6
14													1 - #6	1 - #6	1 - #6	2 - #5	2 - #5
16									1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5
18								1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6
20							1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6

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**Notes:**

1. Where not shown otherwise, bottom steel is 1-#5
2. Table is to be read in conjunction w/ **Figure 4**.
3. Where spaces contain "-" the bar is presumed to be less economical and/or practical. Alternatively, consult with a local engineer to determine if a practical bar size is possible based on local load conditions.
4. Blank regions require no stirrups. Shaded regions require stirrups. For stirrup information refer to **Figure 4**.
5. Factored Point Load includes 1.2, and 1.6 for dead and live load, respectively. For example, (1.2\*dead load)+(1.6\*live load)



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**TABLE 5C - LOGIX 8" LINTEL REINFORCEMENT WITH CONCENTRATED LOAD**

Based on 40 ksi reinforcing steel. Lintels tables for 60 ksi reinforcing steel are available for download at [www.logixcf.com](http://www.logixcf.com).

Where not shown otherwise, bottom steel is 2-#5

NOTE: LOGIX recommends builders, owners and/or designers using these tables confirm that on-site building conditions are w/in the scope of the tables being used.

s=3", D=8"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																2 - #6	2 - #6
5															2 - #6	2 - #6	-
6												2 - #6	2 - #6	2 - #6	-	-	-
7										2 - #6	2 - #6	2 - #6	2 - #6	-	-	-	-
8									2 - #6	2 - #6	2 - #6	-	-	-	-	-	-
9								2 - #6	2 - #6	2 - #6	-	-	-	-	-	-	-
10						2 - #6	-	-	-	-	-	-	-	-	-	-	-
12				2 - #6	-	-	-	-	-	-	-	-	-	-	-	-	-
14			2 - #6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	2 - #6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

s=4", D=10"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	
6																2 - #6	2 - #6
7															2 - #6	2 - #6	2 - #6
8													2 - #6	2 - #6	2 - #6	2 - #7	2 - #7
9											2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	-
10										2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #7	-
12							2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	-	-	-	-	-
14							2 - #6	2 - #7	2 - #7	2 - #7	-	-	-	-	-	-	-
16				2 - #7	2 - #7	-	-	-	-	-	-	-	-	-	-	-	-
18			2 - #7	2 - #7	-	-	-	-	-	-	-	-	-	-	-	-	-
20		2 - #6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

s=5", D=12"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	
6																	
7																	2 - #6
8																2 - #6	2 - #6
9															2 - #6	2 - #6	2 - #6
10															2 - #6	2 - #6	2 - #7
12										2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7
14									2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #8	2 - #8
16						2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #8	2 - #8	-	-	-	-	-
18					2 - #6	2 - #7	2 - #7	2 - #8	2 - #8	2 - #8	-	-	-	-	-	-	-
20				2 - #6	2 - #7	2 - #8	2 - #8	-	-	-	-	-	-	-	-	-	-

s=7", D=16"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	
6																	
7																	
8																	
9																	2 - #6
10																2 - #6	2 - #6
12															2 - #6	2 - #6	2 - #6
14												2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7
16											2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #8
18									2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #7	2 - #8
20								2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #8	2 - #8	-

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**TABLE 5C - LOGIX 8" LINTEL REINFORCEMENT WITH CONCENTRATED LOAD Cont'd**  
 Based on 40 ksi reinforcing steel. Lintels tables for 60 ksi reinforcing steel are available for download at [www.logixicf.com](http://www.logixicf.com).

s=9", D=20"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3-11																	
12																	2 - #6
14															2 - #6	2 - #6	2 - #6
16												2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7
18											2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7
20									2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #8

D=24"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3-13																	
14																	2 - #6
16															2 - #6	2 - #6	2 - #6
18													2 - #6	2 - #6	2 - #6	2 - #6	2 - #7
20											2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7

D=30"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3-17																	
18																2 - #6	2 - #6
20														2 - #6	2 - #6	2 - #6	2 - #6

**Notes:**

1. Where not shown otherwise, bottom steel is 2-#5
2. Table is to be read in conjunction w/ **Figure 4**.
3. Where spaces contain "-" the bar is presumed to be less economical and/or practical. Alternatively, consult with a local engineer to determine if a practical bar size is possible based on local load conditions.
4. Blank regions require no stirrups. Shaded regions require stirrups. For stirrup information refer to **Figure 4**.
5. Factored Point Load includes 1.2, and 1.6 for dead and live load, respectively. For example, (1.2\*dead load)+(1.6\*live load)

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**TABLE 5D - LOGIX 10" LINTEL REINFORCEMENT WITH CONCENTRATED LOAD**  
 Based on 40 ksi reinforcing steel. Lintels tables for 60 ksi reinforcing steel are available for download at [www.logixicf.com](http://www.logixicf.com).  
 Where not shown otherwise, bottom steel is 2-#5

NOTE: LOGIX recommends builders, owners and/or designers using these tables confirm that on-site building conditions are w/in the scope of the tables being used.

s=3", D=8"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	2 - #6
5															2 - #6	2 - #6	-
6												2 - #6	2 - #6	2 - #6	2 - #6	-	-
7										2 - #6	2 - #6	2 - #6	2 - #6	-	-	-	-
8									2 - #6	2 - #6	2 - #6	-	-	-	-	-	-
9								2 - #6	2 - #6	-	-	-	-	-	-	-	-
10						2 - #6	-	-	-	-	-	-	-	-	-	-	-
12				2 - #6	-	-	-	-	-	-	-	-	-	-	-	-	-
14			2 - #6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	2 - #6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

s=4", D=10"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	
6																2 - #6	2 - #6
7															2 - #6	2 - #6	2 - #7
8													2 - #6	2 - #6	2 - #6	2 - #7	2 - #7
9											2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #8
10										2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #8	2 - #8
12								2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #8	2 - #8	2 - #8	-	-
14						2 - #6	2 - #7	2 - #7	2 - #8	2 - #8	-	-	-	-	-	-	-
16				2 - #6	2 - #7	2 - #8	2 - #8	-	-	-	-	-	-	-	-	-	-
18			2 - #6	2 - #8	2 - #8	-	-	-	-	-	-	-	-	-	-	-	-
20		2 - #6	2 - #8	2 - #8	-	-	-	-	-	-	-	-	-	-	-	-	-

s=5", D=12"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	
6																	
7																	2 - #6
8															2 - #6	2 - #6	2 - #6
9														2 - #6	2 - #6	2 - #6	2 - #7
10												2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7
12										2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #8
14								2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #8	2 - #8	-
16						2 - #6	2 - #6	2 - #7	2 - #7	2 - #8	2 - #8	-	-	-	-	-	-
18					2 - #6	2 - #7	2 - #7	2 - #8	2 - #8	-	-	-	-	-	-	-	-
20				2 - #6	2 - #7	2 - #8	2 - #8	-	-	-	-	-	-	-	-	-	-

s=7", D=16"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3-8																	
9																	2 - #6
10																2 - #6	2 - #6
12														2 - #6	2 - #6	2 - #6	2 - #6
14											2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7
16										2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #8
18								2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #7	2 - #8	2 - #8
20						2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #7	2 - #8	2 - #8	-	-

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**TABLE 5D - LOGIX 10" LINTEL REINFORCEMENT WITH CONCENTRATED LOAD Cont'd**  
 Based on 40 ksi reinforcing steel. Lintels tables for 60 ksi reinforcing steel are available for download at [www.logixicf.com](http://www.logixicf.com).

D=20"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3-11																	
12																2 - #6	2 - #6
14															2 - #6	2 - #6	2 - #6
16												2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7
18										2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7
20								2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #7	2 - #8

D=24"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3-13																	
14																2 - #6	2 - #6
16															2 - #6	2 - #6	2 - #6
18												2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7
20										2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7

D=30"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3-15																	
16																	2 - #6
18															2 - #6	2 - #6	2 - #6
20														2 - #6	2 - #6	2 - #6	2 - #6

- Notes:**
- Where not shown otherwise, bottom steel is 2-#5
  - Table is to be read in conjunction w/ **Figure 4**.
  - Where spaces contain "-" the bar is presumed to be less economical and/or practical. Alternatively, consult with a local engineer to determine if a practical bar size is possible based on local load conditions.
  - Blank regions require no stirrups. Shaded regions require stirrups. For stirrup information refer to **Figure 4**.
  - Factored Point Load includes 1.2, and 1.6 for dead and live load, respectively. For example, (1.2\*dead load)+(1.6\*live load)

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# 6.1 – U.S. ENGINEERING ANALYSIS REPORT

**TABLE 5E - LOGIX 12" LINTEL REINFORCEMENT WITH CONCENTRATED LOAD**

Based on 40 ksi reinforcing steel. Lintels tables for 60 ksi reinforcing steel are available for download at [www.logixcf.com](http://www.logixcf.com).  
Where not shown otherwise, bottom steel is 2-#5

NOTE: LOGIX recommends builders, owners and/or designers using these tables confirm that on-site building conditions are w/in the scope of the tables being used.

s=3", D=8"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	2 - #6
5															2 - #6	2 - #6	2 - #6
6												2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7
7											2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	-
8									2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	-	-
9								2 - #6	2 - #7	2 - #7	-	-	-	-	-	-	-
10							2 - #6	2 - #7	2 - #7	-	-	-	-	-	-	-	-
12					2 - #6	2 - #7	-	-	-	-	-	-	-	-	-	-	-
14				2 - #7	-	-	-	-	-	-	-	-	-	-	-	-	-
16		2 - #7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	2 - #6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

s=4", D=10"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	
6																2 - #6	2 - #6
7															2 - #6	2 - #6	2 - #7
8												2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7
9											2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7
10										2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #8	2 - #8
12							2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #8	2 - #8	-
14						2 - #6	2 - #6	2 - #7	2 - #7	2 - #8	2 - #8	-	-	-	-	-	-
16				2 - #6	2 - #7	2 - #8	2 - #8	-	-	-	-	-	-	-	-	-	-
18			2 - #6	2 - #8	2 - #8	-	-	-	-	-	-	-	-	-	-	-	-
20		2 - #6	2 - #8	-	-	-	-	-	-	-	-	-	-	-	-	-	-

s=5", D=12"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3																	
4																	
5																	
6																	
7																	2 - #6
8																2 - #6	2 - #6
9															2 - #6	2 - #6	2 - #7
10												2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7
12										2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #8
14								2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #7	2 - #8	2 - #8	-
16						2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #7	2 - #7	2 - #8	2 - #8	-
18					2 - #6	2 - #6	2 - #7	2 - #8	2 - #8	-	-	-	-	-	-	-	-
20				2 - #6	2 - #7	2 - #8	2 - #8	-	-	-	-	-	-	-	-	-	-

D=16"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3-8																	
9																	2 - #6
10																2 - #6	2 - #6
12														2 - #6	2 - #6	2 - #6	2 - #7
14											2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7
16									2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #8
18								2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #7	2 - #8	2 - #8
20					2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #7	2 - #7	2 - #7	2 - #8	2 - #8	-

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**TABLE 5E - LOGIX 12" LINTEL REINFORCEMENT WITH CONCENTRATED LOAD Cont'd**  
 Based on 40 ksi reinforcing steel. Lintels tables for 60 ksi reinforcing steel are available for download at [www.logixicf.com](http://www.logixicf.com).

D=20"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3-11																	
12																2 - #6	2 - #6
14														2 - #6	2 - #6	2 - #6	2 - #6
16											2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7
18									2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7
20								2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	2 - #7	2 - #8

D=24"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3-13																	
14																2 - #6	2 - #6
16														2 - #6	2 - #6	2 - #6	2 - #6
18											2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7
20									2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7

D=30"																	
Opening ft	Factored Point Load, lb																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	8000	9000	10000
3-15																	
16																2 - #6	2 - #6
18														2 - #6	2 - #6	2 - #6	2 - #6
20												2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7

- Notes:**
- Where not shown otherwise, bottom steel is 2-#5
  - Table is to be read in conjunction w/ **Figure 4**.
  - Where spaces contain "-" the bar is presumed to be less economical and/or practical. Alternatively, consult with a local engineer to determine if a practical bar size is possible based on local load conditions.
  - Blank regions require no stirrups. Shaded regions require stirrups. For stirrup information refer to **Figure 4**.
  - Factored Point Load includes 1.2, and 1.6 for dead and live load, respectively. For example,  $(1.2 \times \text{dead load}) + (1.6 \times \text{live load})$

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