



LITE-DECK[®]

Concrete Roofs/Floors/Walls



100%
RECYCLED EPS

Technical Evaluation Manual
November, 2008



Lite-Deck Top Hats are now manufactured with 100% Recycled EPS

Lite-Form continues to establish new ways to conserve energy while saving the environment. Technological innovations in EPS manufacturing techniques allow for production of 100% recycled eps. This 100% recycled eps is used to produce high-efficiency Lite-Deck Top Hats while maintaining structural integrity. Lite-Form continues to focus on efficiencies for transportation and applications at the jobsite while striving to produce products that are also good for the environment! Learn more about "Lite-Green" innovative concrete building systems at www.liteform.com.

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- Post-Tensioning Cables
- Manual CD (Tests and Drawings)
- Lite-Deck DVD
- Lite-Deck Tilt DVD

FORWARD and INTRODUCTION

The Technical Evaluation data contained herein is provided for general information only. It is not to be construed as engineering advice on a particular project and does not replace the engineering judgment, interpretation or conclusions of the Engineer Of Record on a particular project.

Tests and Reports

The tests provided herein were conducted by independent firms and facilities and are warranted to have been done in full compliance with the codes referenced for each test. Further related statements have been secured from information published by the firms, organizations or associations which are referenced herein.

Local Building Codes

The Lite-Deck concrete forming system is sold throughout several building code jurisdictions. Construction codes may be subject to various interpretations and periodic changes. Lite-Form Technologies does not warrant that the information contained herein complies with any specific local code or building regulation. The engineer, designer or installer must insure that all applications of Lite-Deck forms are in compliance with the appropriate local codes and regulations in the jurisdiction and for which the specific applications are being used.

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Description of Lite-Deck System

Description of the Lite-Deck System

Lite-Deck Floor/Roof System – Stay-in-Place EPS formwork for Concrete Construction

General: The Lite-Deck System consists of interlocking rigid polystyrene foam plastic panels with inserted steel stiffeners, and is a permanent formwork for reinforced concrete joists and slab. The system is an ICF (Insulated Concrete Form) panel for floors and roofs to be used in residential and commercial applications.

1.1 Materials:

Base Sections: This profile consists of a wire-cut expanded polystyrene (EPS) foam-plastic panel with provision for load-bearing, concrete structural joists. The sides of the panels have an interlocking configuration. Cut-outs for the metal C-channel stiffeners are made on the bottom face of the base sections. The stiffener cut-outs are spaced 12 inches on center. The panels can be either 24 inches or 48 inches wide by lengths as needed.

See Detail Drawings in Section 3

The foam billets used to fabricate the base sections are molded from modified, expandable polystyrene beads that comply with Type 8 EPS classification in accordance with the latest ASTM C578 requirements. The foam plastic has a nominal density of 1.25 lbs. pcf and has a maximum flame-spread rating of 25 and maximum smoke-density rating of 450 when tested in accordance with ASTM E84 in a thickness of 4 inches.

Top Hats: This EPS profile is molded with 100% recycled EPS. During installation, it is attached to the top of the base sections in order to increase the depth of the load-bearing concrete joist. The top hats come in thicknesses of 2, 4 and 6-inches by 4 foot lengths. The foam plastic has a nominal density of 1.25 lbs. pcf. EPS has a maximum flame-spread rating of 25 and a maximum smoke-density rating of 450 when tested in accordance with ASTM E84 in a thickness of 4 inches. See Detail Drawings Section 3; LD 2.3

Steel C-channel: The channels are formed from 18 gauge (0.0516") Type G90, galvanized steel in compliance with ASTM A653, Chemically Treated, Dry or lightly oiled. The nominal dimensions of the channels are 1 1/2" flange by 3 1/2" web with 3/8" thick return lip. The channels are inserted into the channel cutouts on the bottom face of the base sections. To maintain the base sections in place, 3 inch self-tapping screws with plastic insulation washers are fastened through the top face of the base section and into the stiffener.

See Lite-Deck Detail Drawing Section 3; LD 2.1

1.2 Floor/Roof Formwork Installation

Base Sections are installed over temporary shoring. Top hats are then installed on top of base sections as required by code or design. Reinforcing steel is then installed in the joist and in the top slab. Concrete is then placed on the Lite-Deck formwork. Once the concrete reaches the required strength, the temporary shoring is removed from under the Lite-Deck form. See Installation Manual in Section 4; Marketing Materials

1.3 Structural Engineering

Structural engineering for all projects using Lite-Deck formwork shall have the concrete joist engineered for the clear span and loads to be placed on the completed concrete joist. The design shall be in compliance with applicable building code. If the building code does not address concrete joists, the latest edition of (American Concrete Institute) ACI 318 shall be used to design the joist. Any variance from applicable building code or ACI code must be certified in advance by a Structural Engineer who is licensed for the jobsite location and specifications.

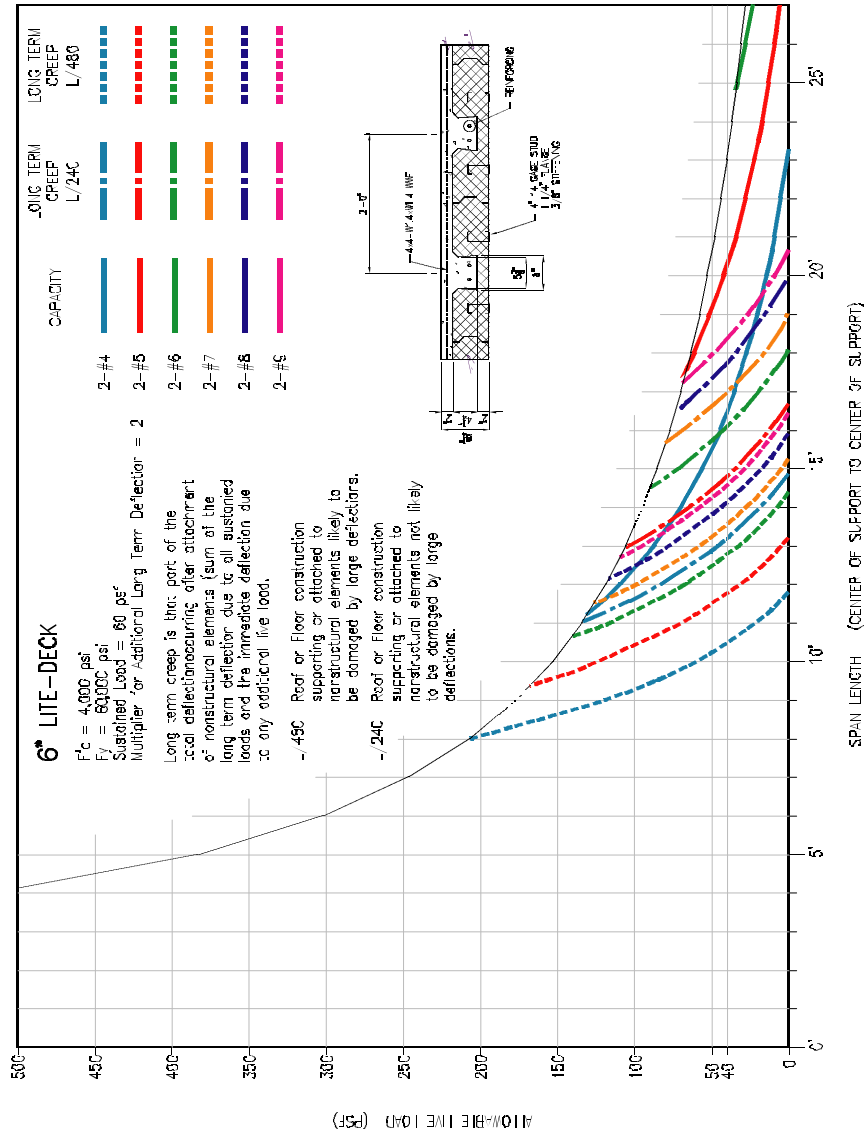
See Section 3; Detail Drawings

1.4 Span Tables (Autocad and PDF Files of these drawings are located on the enclosed CD)

Lite-Deck span tables should not be used without first securing competent advice with respect to its suitability for any given application. **The use of the information disclosed in this diagram is subject to approval by the local building code authority.** Although the information in this document is believed to be accurate, Lite-Form Technologies, nor any of their employees or representatives makes any warranty, guarantee or representation, expressed for the direct or indirect damages arising from such use.



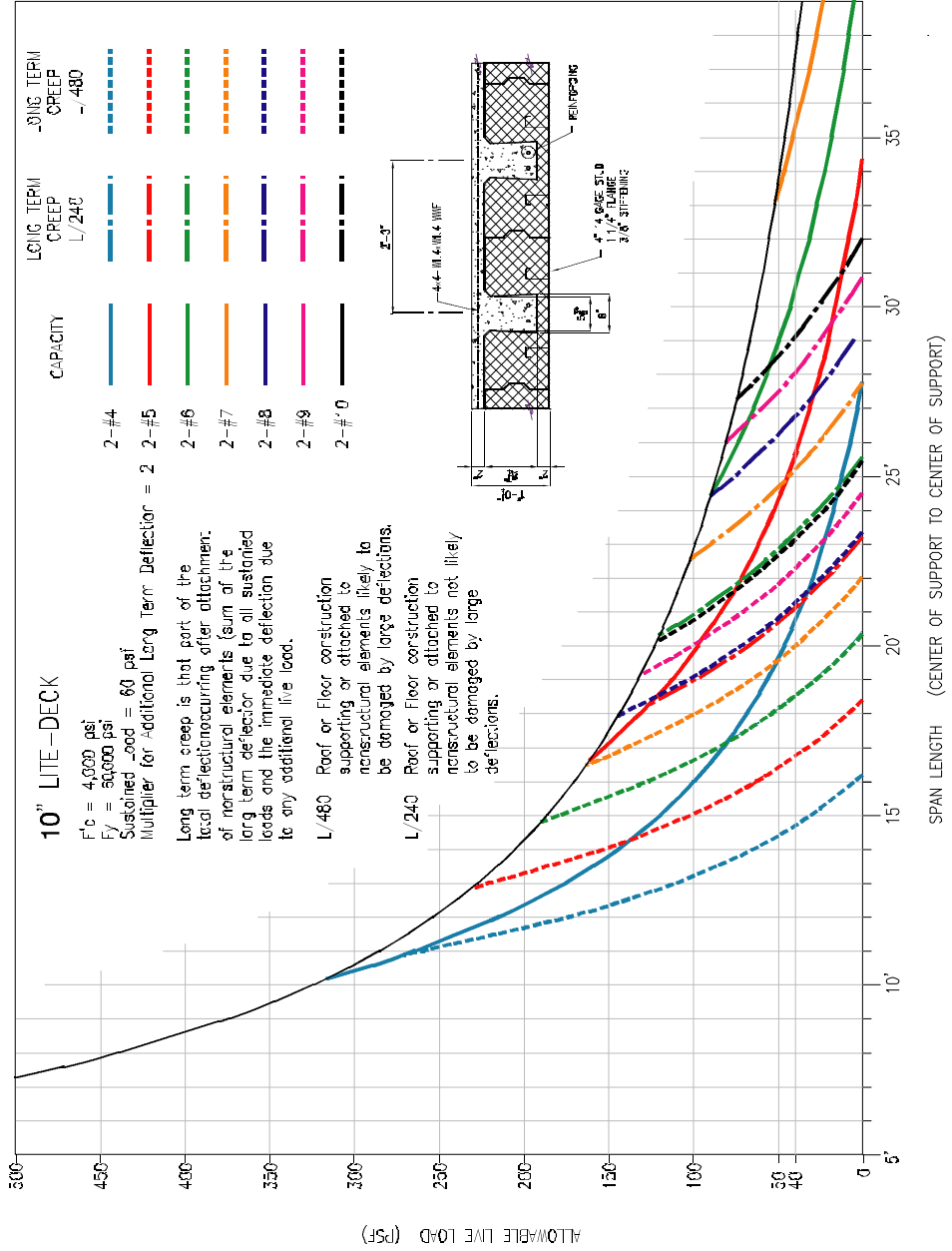
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LITE DECK® Insulated Concrete Floor/Roof

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System 6+2

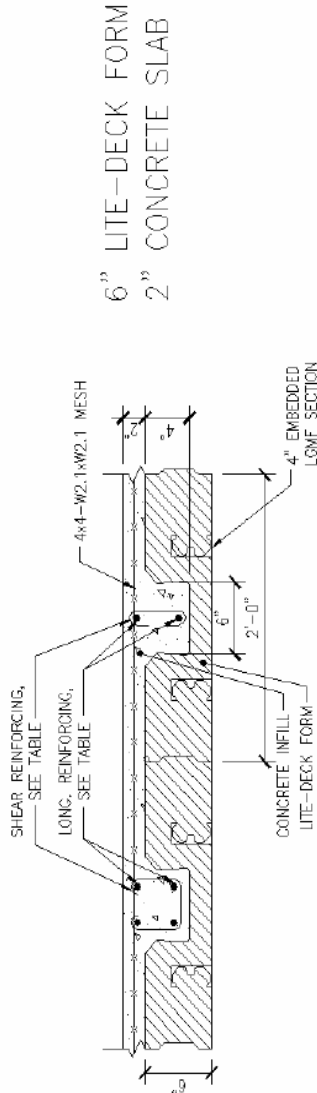
Tabulated spans between 8' and 17'

Material Parameters

Concrete Strength = 3000 psi

Reinforcement Strength = 60 ksi

Normal Weight Concrete = 145 lbs/ft³



Span Condition	Superimposed		Minimum Reinforcing Steel Required For Given Span													
	Live Load (PSF)	Dead Load	2' to 8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.
1 & 2 Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6
3+ Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5
1 & 2 Span	80	15	1 - #4	1 - #5	1 - #5	1 - #6	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	-
3+ Span	80	15	1 - #4	1 - #4	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	-
1 & 2 Span	100	15	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	-
3+ Span	100	15	1 - #4	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	-

Design Table Notes:

- Design tables are for cost estimating purposes only. Final beam reinforcing to be designed by a licensed design professional in responsible charge.
- For 1 span condition, longitudinal reinforcing steel only required in bottom of beam.
- For 2 and 3+ span conditions, longitudinal reinforcing required in both top and bottom of beam.
- Shaded cells in table reflect need for shear reinforcing in beam. Shear reinforcing to be designed by a licensed design professional in responsible charge.
- For 2 and 3+ span conditions, center long. reinforcing in bottom of beam at midspan and in top beam at support.
- Provide 3/4" minimum concrete cover to all reinforcing steel for interior exposure. Refer to the latest ACI318 for minimum clearance for other exposures.
- Multiple span reinforcing is valid for same length spans only.

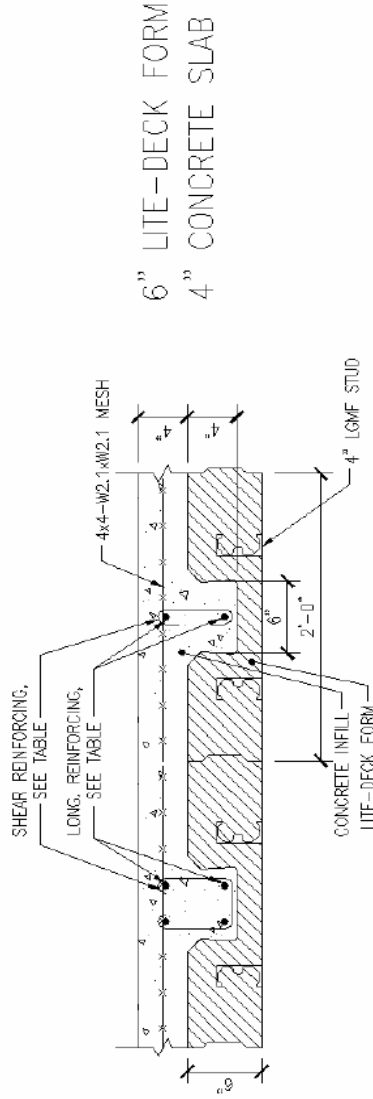


Material Parameters

Concrete Strength = 3000 psi
 Reinforcement Strength = 60 ksi
 Normal Weight Concrete = 145 lbs/ft³

System 6+4

Tabulated spans between 8' and 21'



Minimum Reinforcing Steel Required For Given Span

Span Condition	Superimposed		Minimum Reinforcing Steel Required For Given Span																		
	Live Load (PSF)	Dead Load	2' to 8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	18'	19'	20'	21'					
1 & 2 Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6				
3+ Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6			
1 & 2 Span	80	15	1 - #4	1 - #4	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7		
3+ Span	80	15	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #7		
1 & 2 Span	100	15	1 - #4	1 - #4	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7		
3+ Span	100	15	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #7		

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- Multiple span reinforcing is valid for same length spans only.

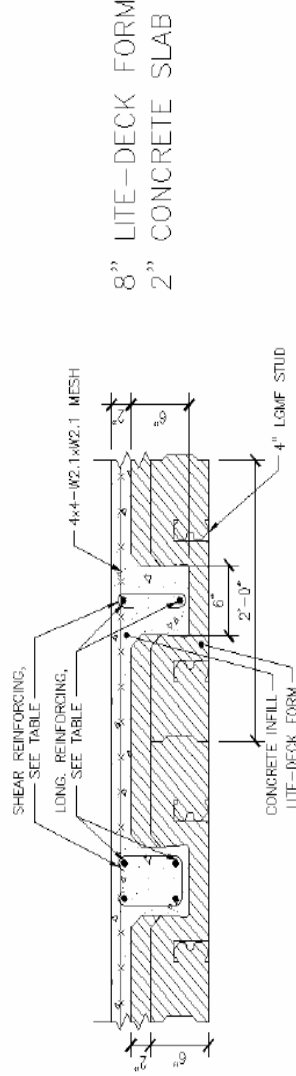


System 8+2

Tabulated spans between 8' and 19'

Material Parameters

Concrete Strength = 3000 psi
 Reinforcement Strength = 60 ksi
 Normal Weight Concrete = 145 lbs/ft³



		Minimum Reinforcing Steel Required For Given Span															
Span Condition	Superimposed		2' to 8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	18'	19'			
	Live Load (PSF)	Dead Load	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.			
1 & 2 Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5			
3+ Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6			
1 & 2 Span	80	15	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #6	2 - #6	-			
3+ Span	80	15	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #6			
1 & 2 Span	100	15	1 - #4	1 - #4	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #6	2 - #6	-	-			
3+ Span	100	15	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #6	2 - #6			

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- Multiple span reinforcing is valid for same length spans only.



System 8+4

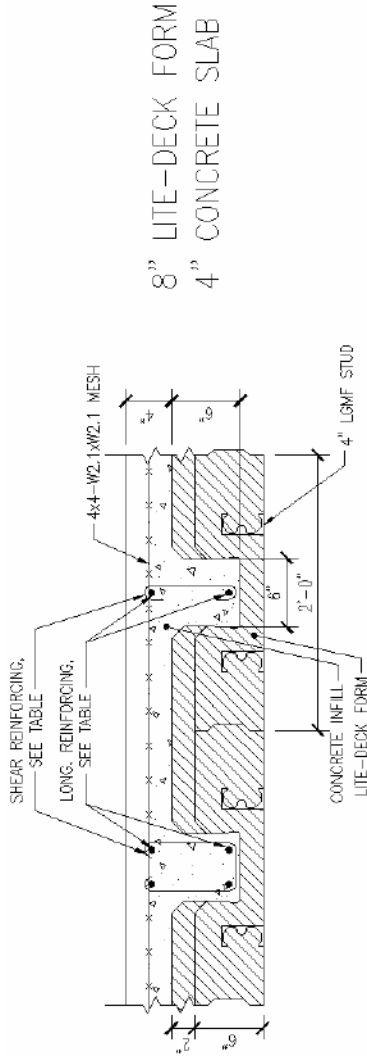
Tabulated spans between 8' and 23'

Material Parameters

Concrete Strength = 3000 psi

Reinforcement Strength = 60 ksi

Normal Weight Concrete = 145 lbs/ft³



Minimum Reinforcing Steel Required For Given Span

Span Condition	Superimposed		2' to 8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	18'	19'	20'	21'	22'	23'	
	Live Load (PSF)	Dead Load	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	
1 & 2 Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6
3+ Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5
1 & 2 Span	80	15	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7
3+ Span	80	15	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6
1 & 2 Span	100	15	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #7	2 - #7	2 - #7	-
3+ Span	100	15	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	2 - #7

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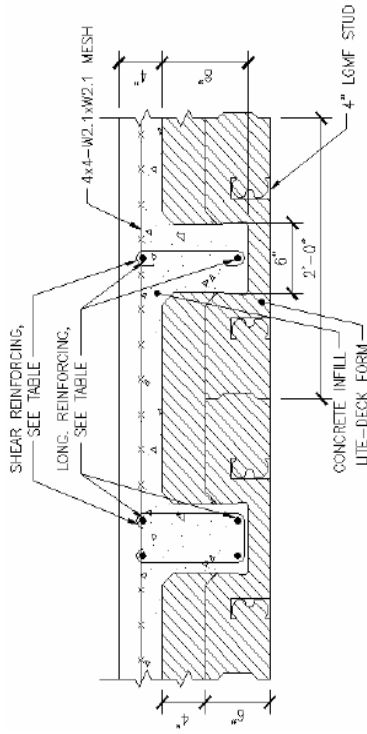


System 10+4

Tabulated spans between 9' and 25'

Material Parameters

Concrete Strength = 3000 psi
 Reinforcement Strength = 60 ksi
 Normal Weight Concrete = 145 lbs/ft³



10" LITE-DECK FORM
 4" CONCRETE SLAB

Span Condition	Superimposed Live Load (PSF)	Dead Load	Minimum Reinforcing Steel Required For Given Span																					
			2' to 9'	10'	11'	12'	13'	14'	15'	16'	17'	18'	19'	20'	21'	22'	23'	24'	25'					
			Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.	Long. Reinf.				
1 & 2 Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4			
3+ Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4			
1 & 2 Span	80	15	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4			
3+ Span	80	15	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4			
1 & 2 Span	100	15	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4			
3+ Span	100	15	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4			

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- Multiple span reinforcing is valid for same length spans only.

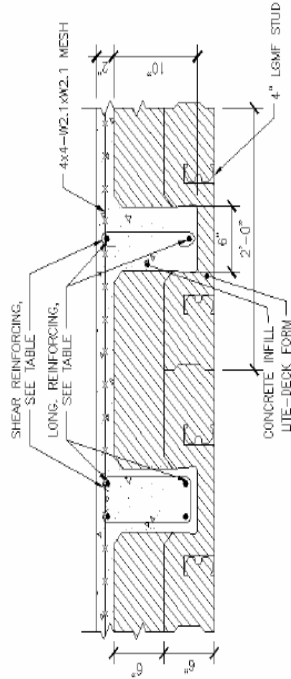


Material Parameters

Concrete Strength = 3000 psi
 Reinforcement Strength = 60 ksi
 Normal Weight Concrete = 145 lbs/ft³

System 12+2

Tabulated spans between 10' and 26'



12" LITE-DECK FORM
2" CONCRETE SLAB

Span Condition	Superimposed		Minimum Reinforcing Steel Required For Given Span																	
	Live Load (PSF)	Dead Load	2' to 8'	11'	12'	13'	14'	15'	16'	17'	18'	19'	20'	21'	22'	23'	24'	25'	26'	
1 & 2 Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	2 - #6
3+ Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #5	1 - #5	1 - #5	1 - #5	1 - #5	1 - #6
1 & 2 Span	80	15	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5
3+ Span	80	15	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6
1 & 2 Span	100	15	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6
3+ Span	100	15	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6

Design Table Notes:

- Design tables are for cost estimating purposes only. Final beam reinforcing to be designed by a licensed design professional in responsible charge.
- For 1 span condition, longitudinal reinforcing steel only required in bottom of beam.
- For 2 and 3+ span conditions, longitudinal reinforcing required in both top and bottom of beam.
- Shaded cells in table reflect need for shear reinforcing in beam. Shear reinforcing to be designed by a licensed design professional in responsible charge.
- For 2 and 3+ span conditions, center long. reinforcing in bottom of beam at midspan and in top beam at support.
- Provide 3/4" minimum concrete cover to all reinforcing steel for interior exposure. Refer to the latest ACI318 for minimum clearance for other exposures.
- Multiple span reinforcing is valid for same length spans only.

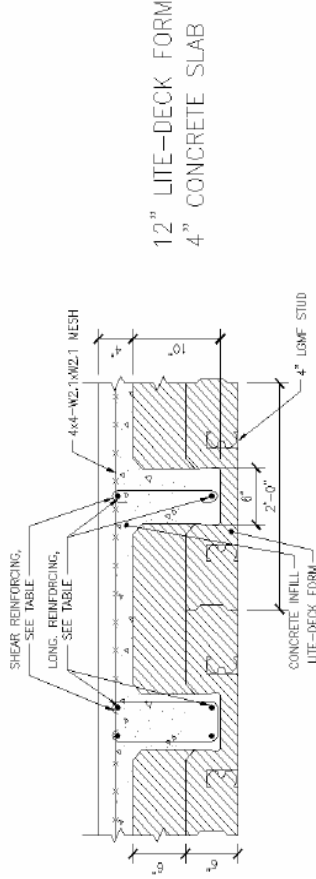


Material Parameters

Concrete Strength = 3000 psi
 Reinforcement Strength = 60 ksi
 Normal Weight Concrete = 145 lbs/ft³

System 12+4

Tabulated spans between 11' and 30'



Minimum Reinforcing Steel Required For Given Span

Span Condition	Superimposed Live Load (PSF)	Dead Load	Minimum Reinforcing Steel Required For Given Span																						
			2' to 11'	12'	13'	14'	15'	16'	17'	18'	19'	20'	21'	22'	23'	24'	25'	26'	27'	28'	29'	30'			
1 & 2 Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	
3+ Span	40	10	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6
1 & 2 Span	80	15	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6
3+ Span	80	15	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6
1 & 2 Span	100	15	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6	2 - #6
3+ Span	100	15	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #4	1 - #5	1 - #5	1 - #5	1 - #5	1 - #5	1 - #5	1 - #6	1 - #6	1 - #6	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #5	2 - #6

Design Table Notes:

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- For 2 and 3+ span conditions, center long. reinforcing in bottom of beam at midspan and in top beam at support.
- Provide 3/4" minimum concrete cover to all reinforcing steel for interior exposure. Refer to the latest ACI318 for minimum clearance for other exposures.
- Multiple span reinforcing is valid for same length spans only.

1.5 Reinforcing of Concrete

Placement and specifications of all reinforcing steel shall be designed in compliance with the latest editions of ACI 318 and CRSI (Concrete Reinforcing Steel Institute) standards. Any variance from ACI or CRSI standards must be certified in advance by a Structural Engineer who is licensed for the jobsite location and specifications.

1.6 Concrete Placement

Placement of concrete shall be in compliance with latest edition of ACI-614 Code (Handling) and ACI-301 and 306 Codes for cold and hot weather concrete placement. Any variance from ACI standards must be certified in advance by a Structural Engineer who is licensed for the jobsite location and specifications.

1.7 Temporary Shoring (Complete Test Results are available on the attached Lite-Deck CD)

All Lite-Deck formwork shoring shall be designed in compliance with the latest edition of ACI347R “Guide to Formwork for Concrete” (design chapter) using Load Table 1 as minimum requirements. Loads in Table 1 have a 2 to 1 safety factor included. Distance between support beams under Lite-Deck steel stiffener shall be determined by capacity of vertical shores and spacing between vertical shores. The maximum spacing between vertical shores shall be based on ASTM E72-05 Transverse Load Test, submitted as part of this Technical Evaluation.

See Transverse Load Test: RADCO Test Report No. RAD-3860

1.8 Concentrated Loads (Complete Test Results are available on the attached Lite-Deck CD)

Maximum loads applied by foot traffic (from construction crews) to the Lite-Deck formwork shall be based on ASTM E661-03 Concentrated load Test, submitted as part of this Technical Evaluation. As required by ASTM standard, concentrated loads were placed on the “most vulnerable” portion of the Lite-Deck form.

See Concentrated Load Test

RADCO Test Report No. RAD-3861

1.9 Maximum Ceiling Load / Steel Stud Load Capacity

(Complete Test Results are available on the attached Lite-Deck CD)

The maximum ceiling load attached to steel C-channels inserted into the base sections shall be based on Steel Channel Withdrawal Test, submitted as part of this Technical Evaluation.

See Ceiling Load Test (Channel Withdrawal)

RADCO Test Report No. RAD-3862

1.10 Fire Resistance Rating (Complete Test Results are available on the attached Lite-Deck CD)

Lite-Deck formwork has a 1.5 hour fire resistance rating based on the test results which were made in compliance with ASTM E 119-00. See Fire Resistance Rating Test (ASTM E 119-00) SwRI – Test Project No. 01.11579.01.001

1.11 Fire Performance Evaluation with Drywall

(Complete Test Results are available on the attached Lite-Deck CD)

Foam plastic insulation used in the Lite-Deck formwork system has an average thickness which is in excess of 4 inches. Foam plastic insulation covered with 1/2 inch drywall is in compliance with UBC Standard 26-3, based on Fire Performance Test, submitted as part of this Technical Evaluation.

See Fire Performance Test (UBC 26-3)

SwRI – Test Project No. 01.10934.01.418a

1.12 Fire Performance Evaluation without Drywall

(Complete Test Results are available on the attached Lite-Deck CD)

Foam Plastic insulation used in the Lite-Deck formwork system has an average thickness which is in excess of 4 inches. Foam plastic insulation without 1/2 inch drywall covering is in compliance with UBC Standard 26-3, based on Fire Performance Test, submitted as part of this Technical Evaluation. See Fire Performance Test (UBC 26-3) SwRI – Test Project No. 01.10934.01.418b

1.13 STC -Sound Transmission Class (Full Test located on enclosed CD)

A concrete floor's ability to reduce the transmission of outside, ambient sound is rated by a Sound Transmission Class number. The higher the number, the better the barrier to ambient sound pollution.

Lite-Deck Floor with 3-inch Concrete Cover and 14-inch load-bearing Concrete Joist
STC by Test – 57

STC by Calculation – 54 – With 1/2" Drywall attached direct to Lite-Deck stiffeners

STC by Calculation – 67 – With 1/2" Drywall attached with Resilient Clips

Lite-Deck Floor with 3-inch Concrete Cover, 14-inch load-bearing Concrete Joist, 1/2 " Carpet w/Pad

STC by Test – 48

STC by Calculation – 52 – With 1/2" Drywall attached direct to Lite-Deck stiffeners

STC by Calculation – 56 – With 1/2" Drywall attached with Resilient Clips

1.14 IIC – R-Value (Full Test located on enclosed CD)

The insulating value of Lite-Deck forms is achieved by its' use of EPS (Expanded Polystyrene) Insulation.

By test (C177 or C518), the insulating value of the EPS used in Lite-Deck Base Sections is R-4.40 (@ 25-degrees f) per inch of thickness*.

Based on the above-referenced tests, the calculated, nominal insulating value of Lite-Deck Base Sections is R-26.4.

1.15 IIC – Impact Insulation Class (Full Test located on enclosed CD)

A concrete floor's ability to reduce the transmission of sound is rated by an Impact Insulation Class number. This rating quantifies the transmission of "impact sounds" such as foot traffic. The higher the number, the better the barrier to impact sounds.

Lite-Deck Floor with 3-inch Concrete Cover and 14-inch load-bearing Concrete Joist

IIC by Test – 44

IIC by Calculation – 48 – With 1/2" Drywall attached direct to Lite-Deck stiffeners

IIC by Calculation – 61 – With 1/2" Drywall attached with Resilient Clips

Lite-Deck Floor with 3-inch Concrete Cover, 14-inch load-bearing Concrete Joist, 1/2 " Carpet w/Pad

IIC by Test – 82

IIC by Calculation – 86 – With 1/2" Drywall attached direct to Lite-Deck stiffeners

IIC by Calculation – 90 – With 1/2" Drywall attached with Resilient Clips

1.16 Patents

© 2008 – Lite-Form Technologies – Lite-Deck is a registered Trademark of Lite-Form Technologies, South Sioux City Nebraska U.S. – Patent Numbers 6272749 and 681750B1. Other Patents applied for or Pending.

1.17 Lite-Deck Imprints

These imprints are printed on all Lite-Deck products that leave the South Sioux City, NE. manufacturing facility.

BASE SECTION IMPRINT



TOP HAT IMPRINT



CAUTION IMPRINT

CAUTION! Use in accordance with
ACI 347R, ACI 318, 614 301, 306
and CRSI Standards
Lite-Form Technologies - Ph: 800-551-3313
Patent No. 6272749 & 681750B1
Other Patents Applied For or Pending





Detail Drawings



Marketing Materials



Technical Evaluation Manual
November, 2008