

**2000psi**



***L2 Lintel Engineering***

**PS8 • 16ga.**

***February 2019 - 2000 psi grout***

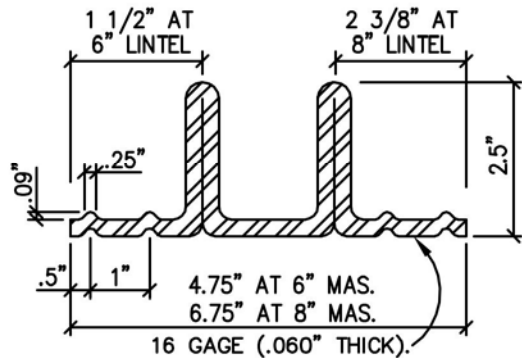
# POWERS STEEL LINTEL NOTES

1. PRODUCT NAME POWERS STEEL COMPOSITE LINTELS (PATENT NO. 4757656; SBCCI PST & ESI # 93-132)  
 PREFORMED POWERS STEEL LINTEL SHALL BE GALVANIZED COIL STEEL AS MANUFACTURED BY POWERS STEEL AND WIRE PRODUCTS, INC. STEEL GRADE SHALL BE ASTM A1011/A1011M-07 Fy=55 ksi. MINIMUM. STEEL SHALL BE CLEAN AND FREE OF ANY MATERIAL THAT MIGHT INHIBIT BOND.
2. SHORE LINTELS AS REQUIRED TO COMPENSATE FOR DEAD LOAD DEFLECTION ON NON-CURED MASONRY.
3. LINTELS TO BE USED WITH BRICK OR CONCRETE MASONRY UNITS HAVING A MINIMUM  $f'_m$  AS SHOWN.
4. STEEL SURFACES IN CONTACT WITH GROUT AND/OR MORTAR SHALL BE UNPAINTED AND FREE OF MATERIAL THAT MIGHT INHIBIT BOND.
5. BEARING EACH END SHALL BE 3" PLUS OR MINUS 1". BEARING SHALL BE ON A MINIMUM 8" DEEP GROUDED CELL.
6.  $f'_m$ : 1900 psi. MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N. USE OPEN END MASONRY UNITS AND HALF HIGH WEB AT LINTELS TO ALLOW SOLID GROUTING AND BLOCK PLACEMENT ON LINTEL.
7. GROUT: 2,000 psi SLUMP RANGE: 8" TO 11". GROUT SHALL COMPLY WITH ASTM C476-83 AND BE EITHER COARSE OR FINE GROUT. GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACING BEFORE LOSS OF PLASTICITY IN A MANNER TO FILL THE GROUT SPACE. GROUT POURS GREATER THAN 12 INCHES SHALL BE RECONSOLIDATED BY MECHANICAL VIBRATION TO MINIMIZE VOIDS DUE TO WATER LOSS. GROUT POURS 12 INCHES OR LESS IN HEIGHT SHALL BE MECHANICALLY VIBRATED, OR PUDDLED WITH RE-BAR OR OTHER SUITABLE MEANS.
8. MORTAR: TYPE "S" OR TYPE "M" 1800 psi.
9. TOP REINFORCING, OR TOP OF WALL REINFORCING, IS REQUIRED BY CODES TO PROVIDE A CONTINUOUS TIE AROUND A STRUCTURE AND TO PROVIDE FOR UPLIFT RESISTANCE AT LINTELS. TOP REINFORCING IS NOT REQUIRED AND IS NOT PART OF THE POWERS STEEL LINTELS. SIZING OF THE TOP REINFORCING IS THE RESPONSIBILITY OF THE BUILDING ARCHITECT OR ENGINEER.
10. ATTACHMENTS TO TOP OF WALL PER ARCHITECTURAL AND/OR ENGINEERING DRAWINGS.
11. MASONRY WALL MAY OCCUR ABOVE COMPOSITE LINTEL HEIGHT.
12. INSTALLATION: POWERS LINTELS ARE TO BE INSTALLED IN ACCORDANCE WITH STANDARD CONSTRUCTION PRACTICES, SET TO PROPER LINE AND LEVEL, PLUMB AND TRUE, AND IN CORRECT RELATION TO OTHER WORK.

13. STRUCTURAL ENGINEER FOR THESE LINTELS IS:

**CARUSO TURLEY SCOTT INC.**  
 1215 W. Rio Salado Parkway Suite #200  
 Tempe, Arizona 85281  
 Direct Phone No. (480) 774-1776  
 Fax (480) 774-1701  
 Paul G. Scott P.E.  
 Pscott@ctsaz.com

IF AN INSPECTOR, CONTRACTOR, SUBCONTRACTOR, OR PLANS EXAMINER HAS ANY TECHNICAL QUESTIONS PLEASE CALL CARUSO, TURLEY SCOTT INC.



14. LINES SHOWN INDICATE THE #4 REINFORCING BAR CODE REQUIRED MINIMUM REINFORCING AROUND WALL OPENINGS. ENGINEER, ARCHITECT, OR DESIGNER TO VERIFY ACTUAL REINFORCING REQUIRED.

15. SPECIAL STRUCTURAL (SSI) INSPECTION IS REQUIRED FOR GROUT PLACEMENT OF THESE LINTELS. UNLESS THE JURISDICTION DOES NOT REQUIRE THE SSI BECAUSE THE JURISDICTION IS PERFORMING THE NECESSARY INSPECTION.



**POWERS STEEL COMPOSITE LINTELS**

NO SCALE

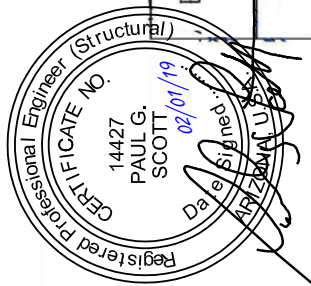
FILE: Powers Lintels CTS  
 PAGE: PDS1 9-16-15  
 CTS JOB NO. 15-421

# POWERS STEEL COMPOSITE LINTELS $\pm$ PS6 LINTELS

LINTEL LOAD TABLE (IN POUNDS PER LINEAL FOOT)  
 DEAD LOAD PLUS LIVE LOAD

SPECIAL STRUCTURAL (SSI) INSPECTION IS REQUIRED FOR GROUT PLACEMENT  
 OF THESE LINTELS. UNLESS THE JURISDICTION DOES NOT REQUIRE THE SSI  
 BECAUSE THE JURISDICTION IS PERFORMING THE NECESSARY INSPECTION.

SPAN	PS6-8"	PS6-12"	PS6-16"	PS6-20"	PS6-24"	PS6-32"	PS6-40"	PS6-48"	SPAN
2'-0"	3545	5507	7468	9430	11391	15314	19237	23160	2'-0"
2'-8"	2655	4125	5594	7064	8533	11471	14410	17348	2'-8"
3'-4"	2129	3308	4485	5664	6841	9198	11554	13910	3'-4"
4'-0"	1773	2754	3734	4715	5696	7657	9619	11580	4'-0"
4'-8"	1518	2358	3198	4039	4878	6558	8239	9919	4'-8"
5'-4"	1330	2066	2802	3538	4274	5746	7218	8690	5'-4"
6'-0"	1182	1836	2489	3143	3797	5105	6412	7720	6'-0"
6'-8"	1063	1651	2239	2828	3416	4592	5768	6945	6'-8"
7'-4"	967	1503	2038	2573	3108	4178	5249	6319	7'-4"
8'-0"	886	1377	1867	2358	2848	3829	4809	5790	8'-0"
8'-8"	818	1270	1723	2175	2628	3533	4438	5343	8'-8"
9'-4"	760	1180	1601	2021	2442	3283	4124	4956	9'-4"
10'-0"	709	1101	1494	1866	2278	3063	3847	4632	10'-0"
10'-8"	664	1032	1400	1768	2135	2870	3606	4341	10'-8"
11'-4"	626	972	1318	1665	2011	2703	3396	4088	11'-4"
12'-0"	591	918	1245	1572	1899	2552	3206	3860	12'-0"
12'-8"	560	869	1179	1489	1798	2417	3037	3656	12'-8"
13'-4"	532	826	1120	1415	1709	2298	2886	3475	13'-4"
14'-0"	493	787	1067	1347	1627	2188	2748	3309	14'-0"
14'-8"	449	751	1018	1286	1553	2088	2623	3157	14'-8"
15'-4"	412	702	974	1230	1486	1998	2510	3022	15'-4"
16'-0"	378	644	934	1179	1424	1914	2405	2895	16'-0"
16'-8"	348	593	887	1131	1367	1837	2308	2779	16'-8"
17'-4"	322	549	821	1075	1315	1767	2220	2673	17'-4"
18'-0"	299	509	761	997	1248	1702	2137	2573	18'-0"
18'-8"	277	473	707	927	1160	1619	2032	2481	18'-8"
19'-4"	259	441	660	864	1082	1510	1895	2359	19'-4"
20'-0"	242	412	616	807	1011	1410	1771	2204	20'-0"
20'-8"	226	386	577	756	947	1320	1658	2063	20'-8"
21'-4"	213	362	542	710	889	1240	1557	1938	21'-4"
22'-0"	200	341	509	667	836	1166	1463	1821	22'-0"
22'-8"		321	480	628	787	1098	1378	1715	22'-8"
23'-4"		303	453	593	743	1037	1301	1620	23'-4"
24'-0"		286	428	561	702	979	1230	1531	24'-0"
24'-8"		271	405	531	664	927	1164	1449	24'-8"
25'-4"		257	384	503	630	879	1104	1374	25'-4"
26'-0"		244	365	478	598	835	1048	1304	26'-0"
26'-8"		232	347	454	569	793	996	1239	26'-8"
27'-4"		221	330	432	541	755	948	1180	27'-4"
28'-0"		210	314	412	516	720	903	1124	28'-0"
28'-8"		201	300	393	492	686	862	1073	28'-8"
29'-4"			287	375	470	656	823	1025	29'-4"
30'-0"			274	359	449	627	787	980	30'-0"



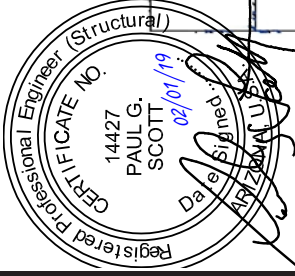


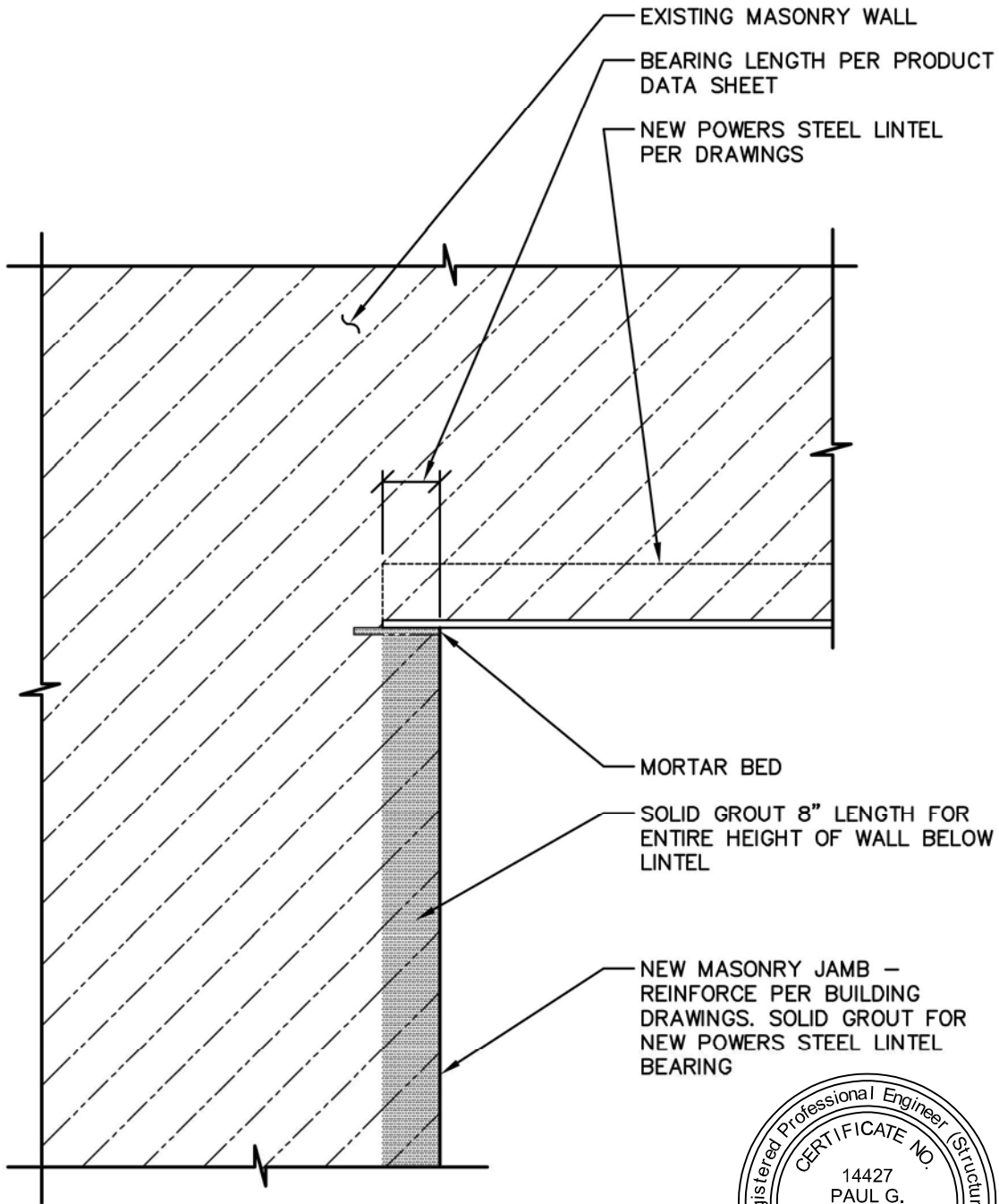
# POWERS STEEL COMPOSITE LINTELS PS8 LINTELS

SPECIAL STRUCTURAL (SSI) INSPECTION IS REQUIRED FOR GROUT PLACEMENT OF THESE LINTELS, UNLESS THE JURISDICTION DOES NOT REQUIRE THE SSI BECAUSE THE JURISDICTION IS PERFORMING THE NECESSARY INSPECTION.

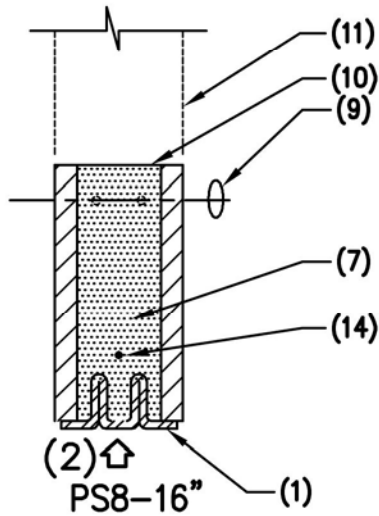
LINTEL LOAD TABLE (IN POUNDS PER LINEAL FOOT)  
DEAD LOAD PLUS LIVE LOAD

SPAN	PS8-8"	PS8-12"	PS8-16"	PS8-20"	PS8-24"	PS8-32"	PS8-40"	PS8-48"	SPAN
2'-0"	4806	7465	10124	12783	15442	20760	26077	31395	2'-0"
2'-8"	3600	5592	7584	9575	11567	15551	19533	23517	2'-8"
3'-4"	2886	4483	6080	7677	9274	12468	15662	18856	3'-4"
4'-0"	2403	3733	5062	6392	7721	10380	13039	15698	4'-0"
4'-8"	2058	3197	4336	5475	6613	8891	11168	13445	4'-8"
5'-4"	1803	2801	3799	4797	5794	7790	9785	11780	5'-4"
6'-0"	1602	2488	3375	4261	5147	6920	8692	10465	6'-0"
6'-8"	1441	2238	3036	3833	4630	6225	7819	9414	6'-8"
7'-4"	1311	2037	2762	3488	4213	5664	7115	8566	7'-4"
8'-0"	1202	1866	2531	3196	3861	5190	6519	7849	8'-0"
8'-8"	1109	1722	2335	2949	3562	4789	6015	7242	8'-8"
9'-4"	978	1600	2170	2740	3310	4450	5590	6730	9'-4"
10'-0"	851	1493	2025	2557	3088	4152	5215	6279	10'-0"
10'-8"	748	1399	1898	2396	2894	3691	4888	5885	10'-8"
11'-4"	663	1318	1787	2256	2726	3665	4603	5542	11'-4"
12'-0"	591	1244	1687	2131	2574	3460	4346	5233	12'-0"
12'-8"	530	1178	1598	2018	2438	3277	4116	4956	12'-8"
13'-4"	479	1120	1519	1918	2317	3115	3913	4710	13'-4"
14'-0"	434	1025	1446	1826	2206	2966	3725	4485	14'-0"
14'-8"	396	934	1340	1743	2105	2830	3555	4280	14'-8"
15'-4"	362	855	1227	1620	1989	2708	3402	4096	15'-4"
16'-0"	333	785	1127	1487	1826	2553	3221	3833	16'-0"
16'-8"	306	723	1038	1370	1682	2351	2967	3531	16'-8"
17'-4"	283	669	960	1268	1557	2176	2745	3268	17'-4"
18'-0"	263	620	890	1175	1443	2017	2545	3029	18'-0"
18'-8"	244	577	827	1092	1341	1875	2365	2815	18'-8"
19'-4"	228	538	772	1019	1251	1749	2207	2626	19'-4"
20'-0"	213	502	721	952	1169	1634	2061	2453	20'-0"
20'-8"		470	675	891	1094	1529	1930	2297	20'-8"
21'-4"		442	634	837	1028	1436	1812	2157	21'-4"
22'-0"		415	596	787	966	1350	1703	2028	22'-0"
22'-8"		391	561	741	910	1271	1604	1910	22'-8"
23'-4"		369	530	699	859	1201	1515	1803	23'-4"
24'-0"		349	501	661	812	1134	1431	1704	24'-0"
24'-8"		330	474	626	768	1074	1355	1612	24'-8"
25'-4"		313	449	593	729	1018	1285	1530	25'-4"
26'-0"		297	427	563	692	967	1220	1452	26'-0"
26'-8"		283	405	535	657	919	1159	1380	26'-8"
27'-4"		269	386	510	626	875	1104	1314	27'-4"
28'-0"		256	368	486	596	833	1052	1252	28'-0"
28'-8"		244	351	463	569	795	1003	1194	28'-8"
29'-4"		234	335	443	543	760	958	1141	29'-4"
30'-0"		223	320	423	519	726	916	1090	30'-0"





**NEW POWERS STEEL LINTEL AT EXISTING MASONRY WALL**  
 NO SCALE



**LINTEL EXAMPLE SECTION**

NOTE: LINTEL HEIGHTS VARY – SEE PLANS AND SCHEDULES.

NOTE:

↑ INDICATES SHORING OF LINTEL AND MASONRY FOR DEAD LOAD DEFLECTION OF NON-CURED MASONRY.

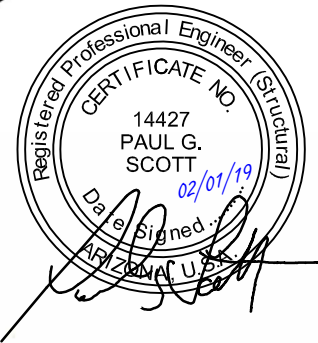
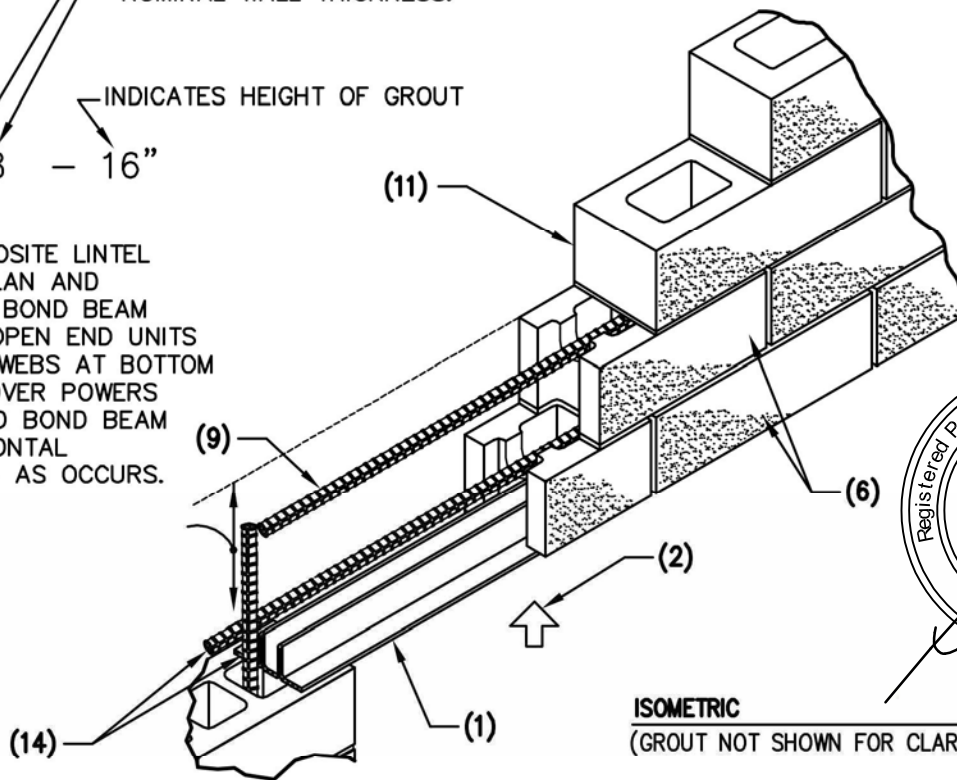
**POWERS STEEL PRODUCTS LINTELS**

POWERS STEEL (LINTEL DESIGNATION)  
NOMINAL WALL THICKNESS.

INDICATES HEIGHT OF GROUT

PS8 - 16"

HEIGHT OF COMPOSITE LINTEL VARIES – SEE PLAN AND SCHEDULES. USE BOND BEAM BLOCK AND/OR OPEN END UNITS WITH HALF HIGH WEBS AT BOTTOM COURSE TO GO OVER POWERS STEEL LINTEL AND BOND BEAM BLOCK AT HORIZONTAL REINFORCING BAR AS OCCURS.

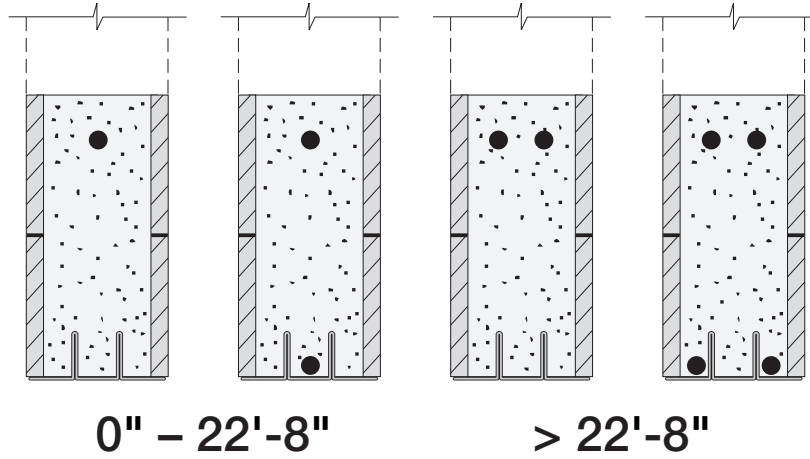


**POWERS STEEL COMPOSITE LINTELS DETAILS**

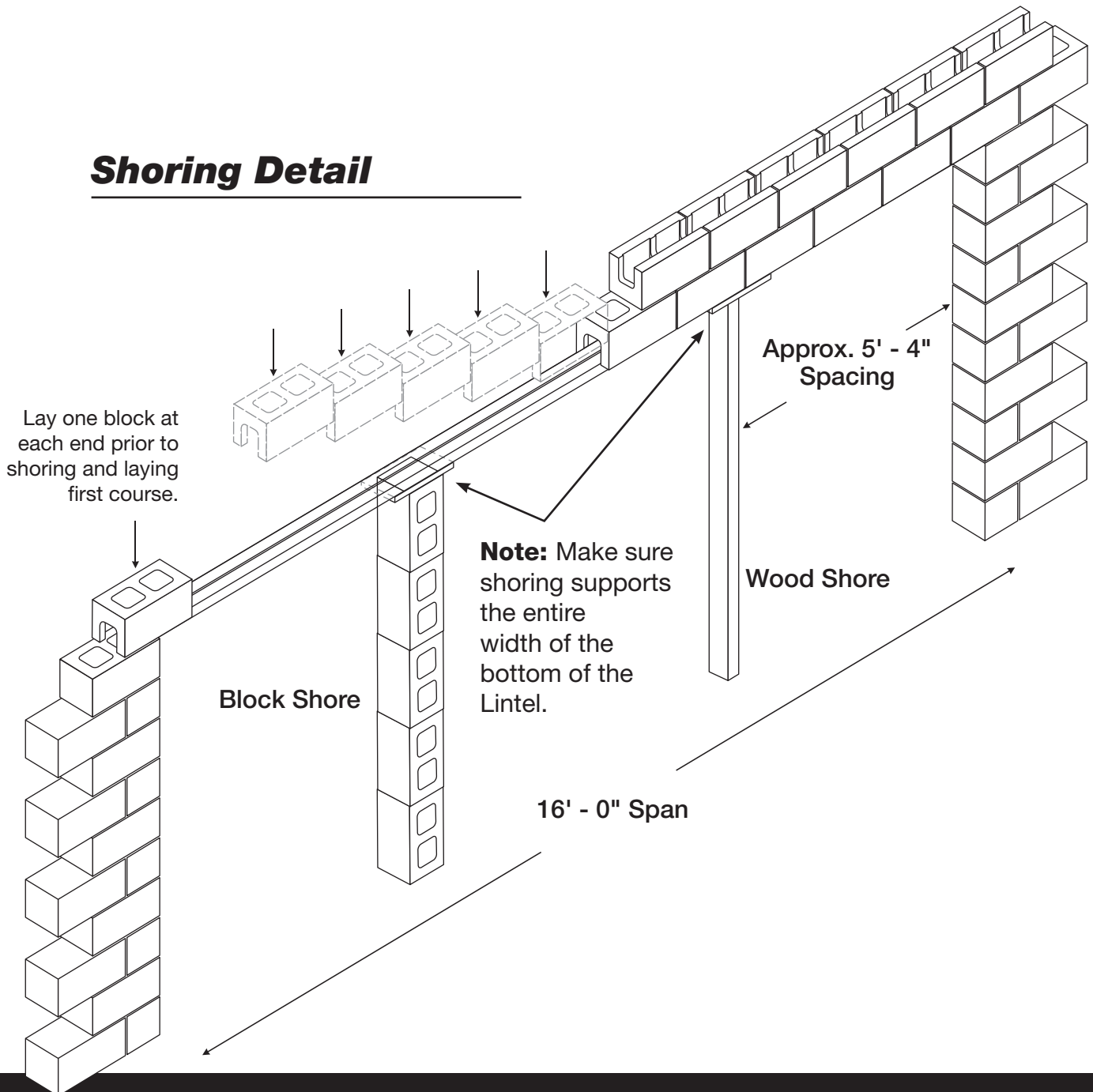
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FILE: Powers Lintels CTS  
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CTS JOB NO. 15-421

# L2 Steel Lintel Cross Sections



## Shoring Detail

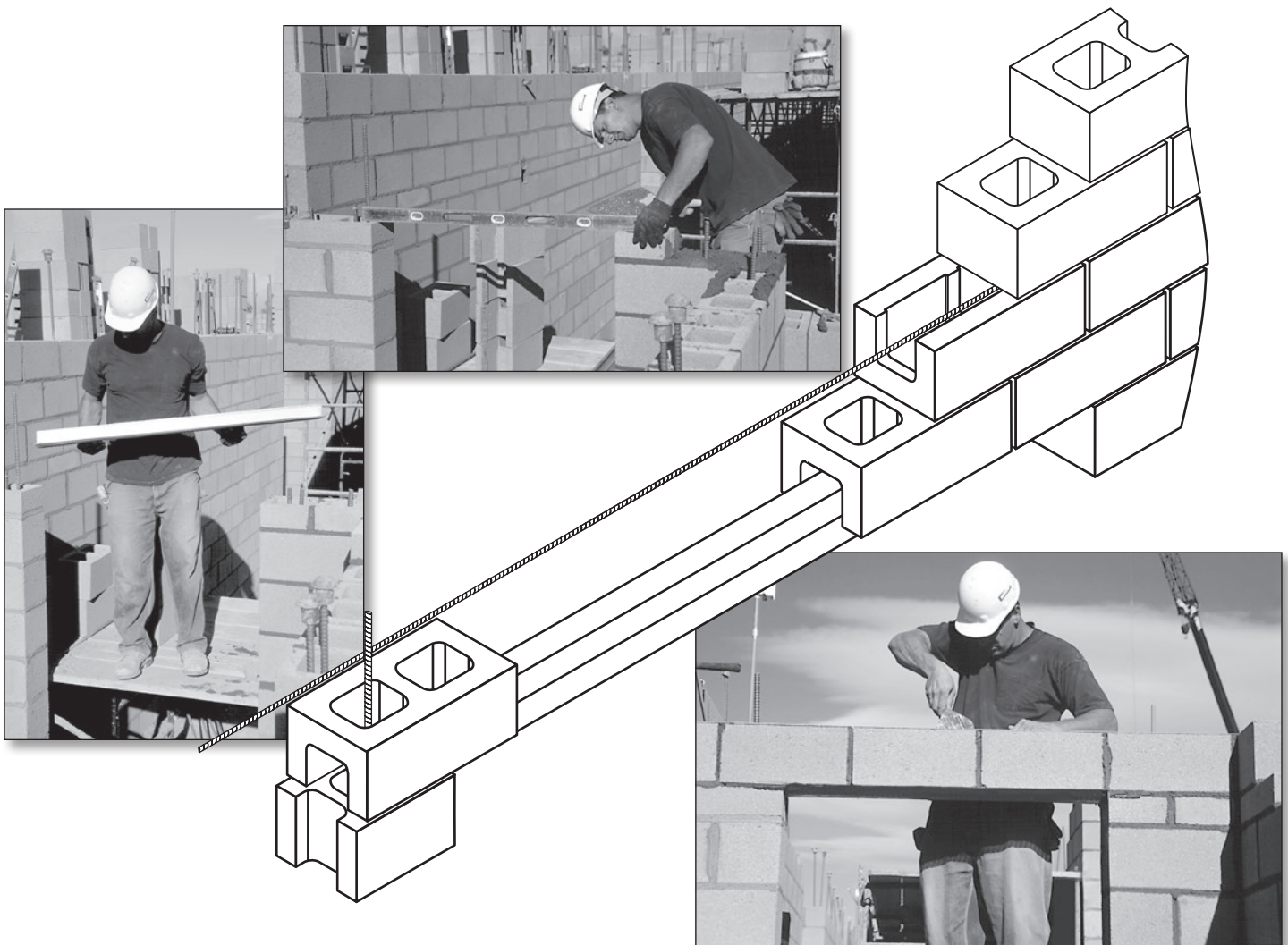




## ***L2 Steel Lintel Installation Instructions***

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1. Lay wall to required height and opening.
2. Set Lintel on block with 3"  $\pm$  1/2" of bearing.
3. Place Lintel on block level and square. Lay bond beam block upside down on Lintel at each end.
4. Shore Lintel as required to compensate for dead load deflection on non cured Masonry and grout. Shore lintel prior to laying block and grouting.
5. It is recommended to shore lintel in the middle of spans greater than 8'-0" and less than 15'-0". On spans greater than 16'-0" use 2 shores spaced equal distance apart at approximately 5'-4" spacing. On spans greater than 16'-0" place shoring at 6'-0" centers. Make sure shoring is square to Lintel and secure. Make sure shoring supports the entire width of the bottom of the Lintel.
6. Proceed to lay first lay first and second courses of block for 16" deep lintels and so on for lintels with greater depths.
7. Rod grout adequately to ensure consolidation of grout (no air pockets)
8. Place top #5 rebar grade 40 Set 1.5" from top of all Lintel designs and in some cases in the bottom of the Lintel as shown on Load Tables. (see detail next page)





**POWERS**



**STEEL & WIRE**

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