

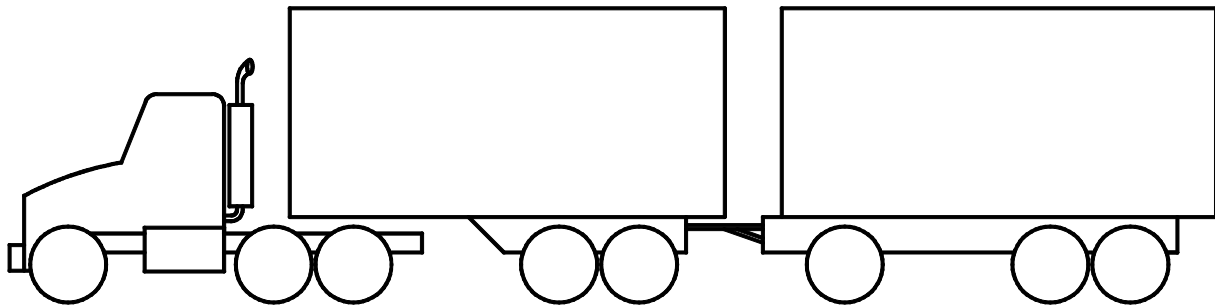
BRIDGE ANALYSIS GUIDE

2005 Edition

with

2009 Interim Update

Part 2



**MICHIGAN DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND TECHNOLOGY SUPPORT AREA**

Engineering Manual Preamble

This manual provides guidance to administrative, engineering, and technical staff. Engineering practice requires that professionals use a combination of technical skills and judgment in decision making. Engineering judgment is necessary to allow decisions to account for unique site-specific conditions and considerations to provide high quality products, within budget, and to protect the public health, safety, and welfare. This manual provides the general operational guidelines; however, it is understood that adaptation, adjustments, and deviations are sometimes necessary. Innovation is a key foundational element to advance the state of engineering practice and develop more effective and efficient engineering solutions and materials. As such, it is essential that our engineering manuals provide a vehicle to promote, pilot, or implement technologies or practices that provide efficiencies and quality products, while maintaining the safety, health, and welfare of the public. It is expected when making significant or impactful deviations from the technical information from these guidance materials, that reasonable consultations with experts, technical committees, and/or policy setting bodies occur prior to actions within the timeframes allowed. It is also expected that these consultations will eliminate any potential conflicts of interest, perceived or otherwise. MDOT Leadership is committed to a culture of innovation to optimize engineering solutions.

The National Society of Professional Engineers Code of Ethics for Engineering is founded on six fundamental canons. Those canons are provided below.

Engineers, in the fulfillment of their professional duties, shall:

1. Hold paramount the safety, health, and welfare of the public.
2. Perform Services only in areas of their competence.
3. Issue public statement only in an objective and truthful manner.
4. Act for each employer or client as faithful agents or trustees.
5. Avoid deceptive acts.
6. Conduct themselves honorably, reasonably, ethically and lawfully so as to enhance the honor, reputation, and usefulness of the profession.

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Chapter 10

LOAD RATING AIDS

September 28, 2001

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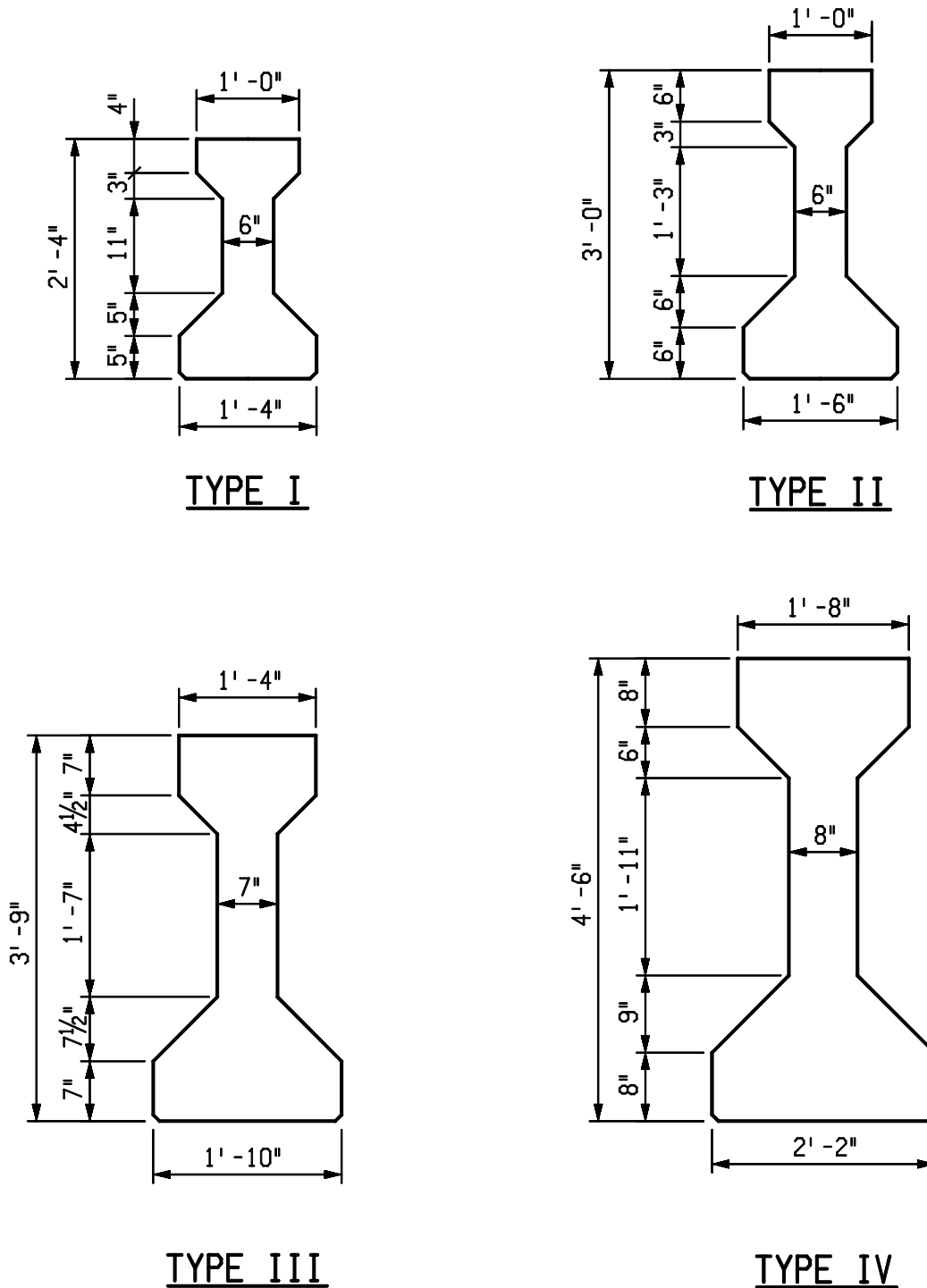
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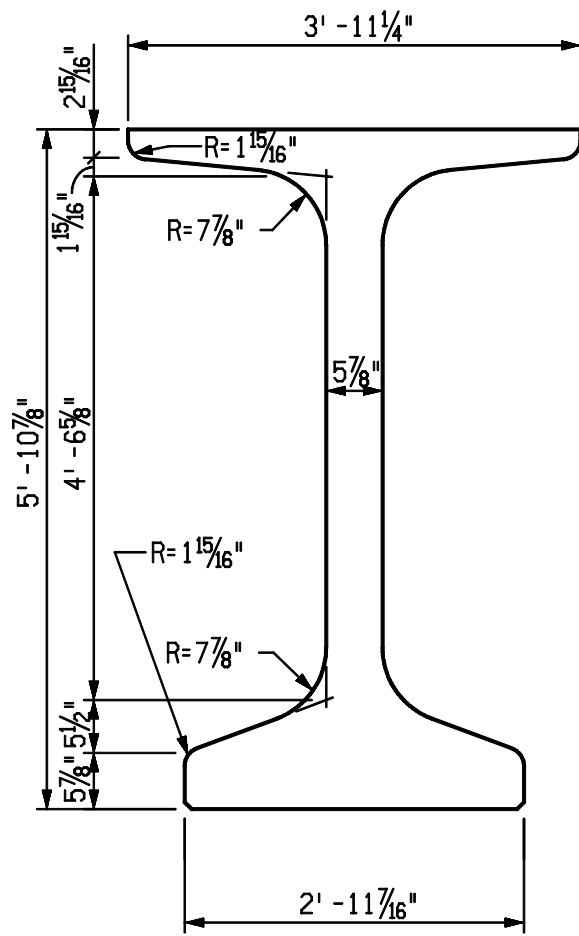
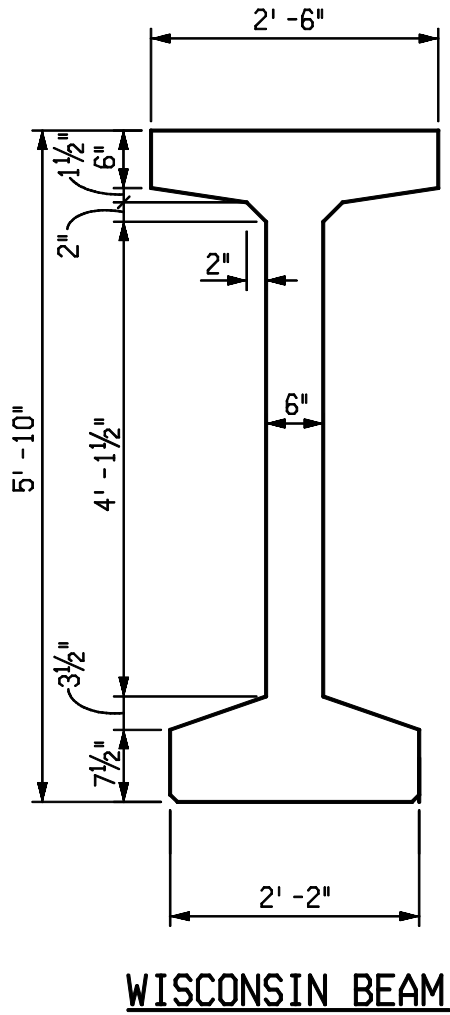
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Note: Beam dimensions shown are typical for modern beams, see existing plans for actual dimensions.

FIGURE 10.1
Standard Dimensions for Prestressed Beams

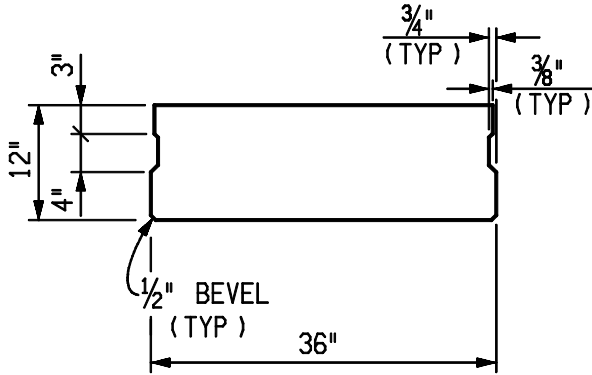
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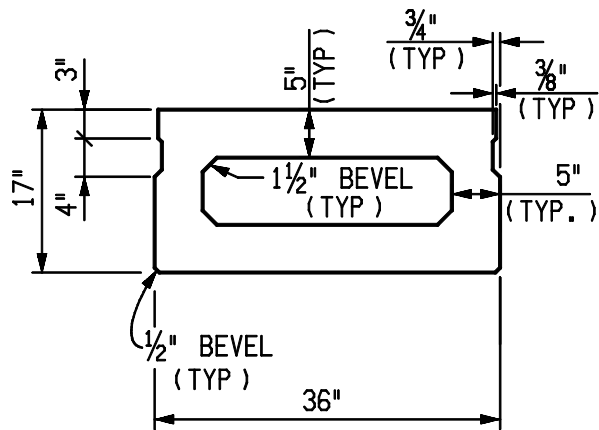
Note: Beam dimensions shown are typical for modern beams, see existing plans for actual dimensions.

FIGURE 10.1 (Continued)
Standard Dimensions for Prestressed Beams

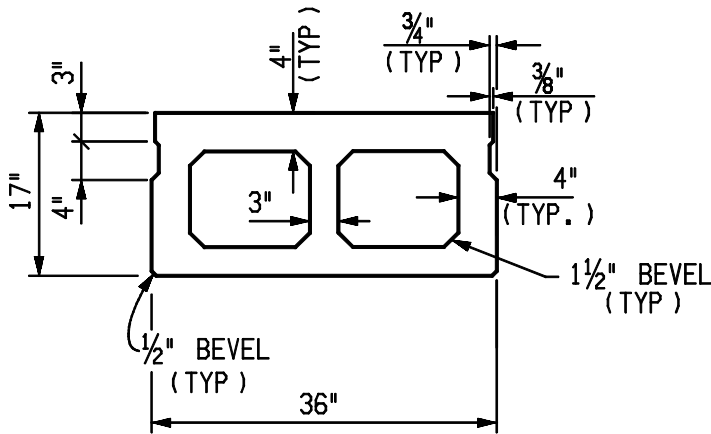
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12" BOX BEAM



17" BOX BEAM

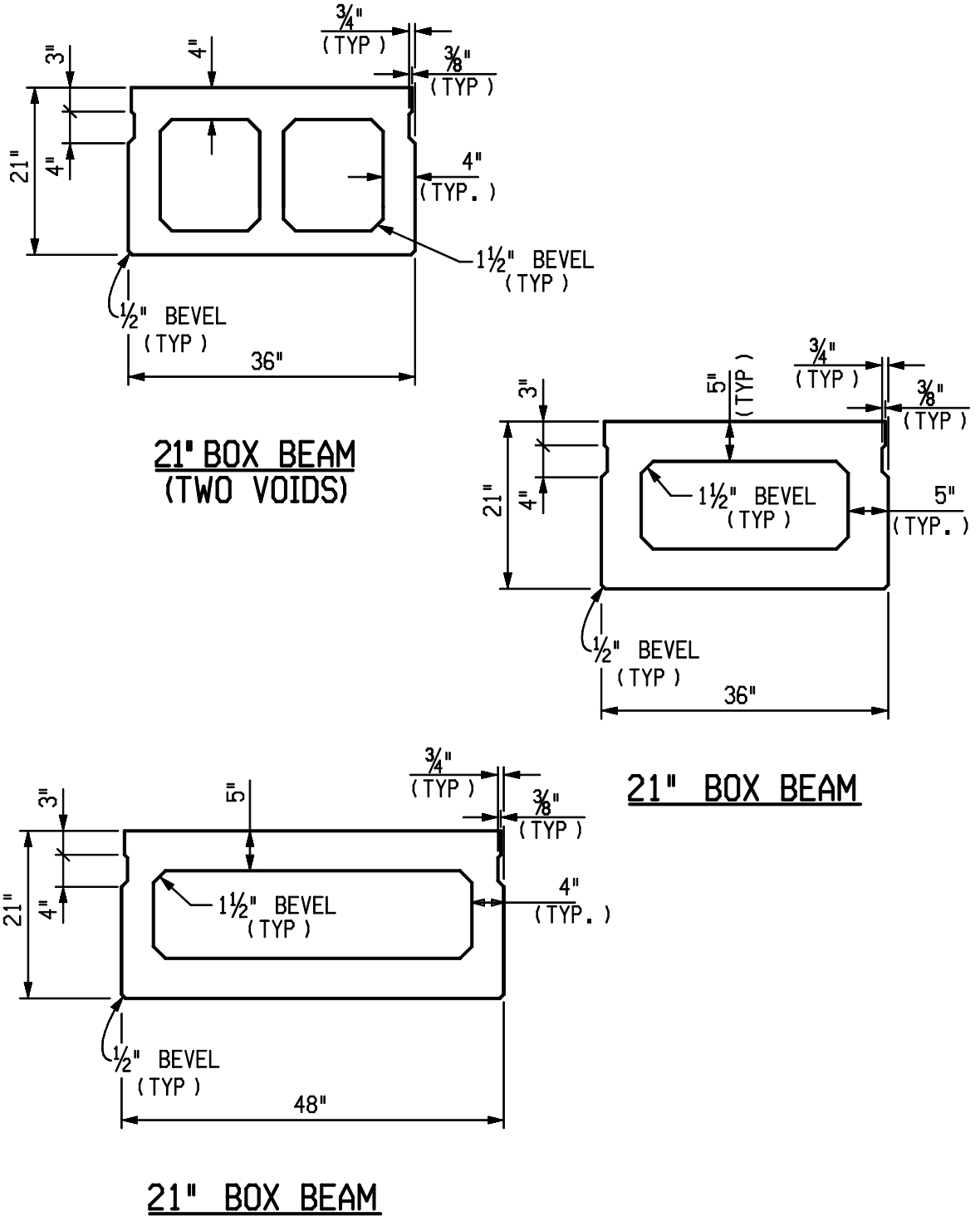


**17" BOX BEAM
(TWO VOIDS)**

Note: Beam dimensions shown are typical for modern beams, see existing plans for actual dimensions.

**FIGURE 10.1 (Continued)
Standard Dimensions for Prestressed Beams**

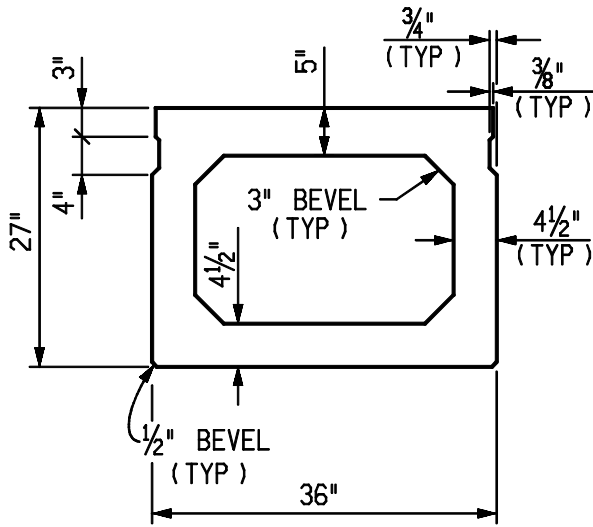
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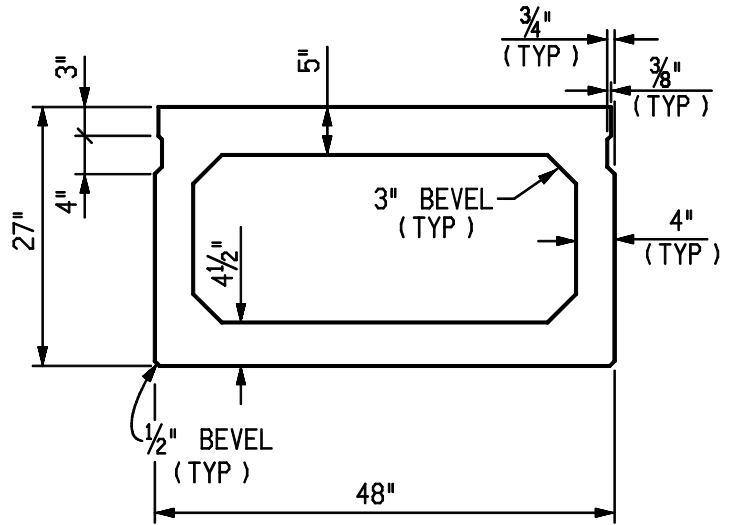
Note: Beam dimensions shown are typical for modern beams, see existing plans for actual dimensions.

**FIGURE 10.1 (Continued)
Standard Dimensions for Prestressed Beams**

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27" BOX BEAM

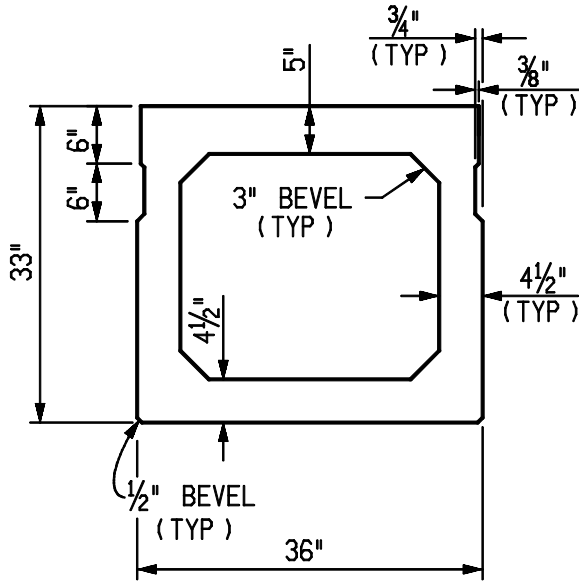


27" BOX BEAM

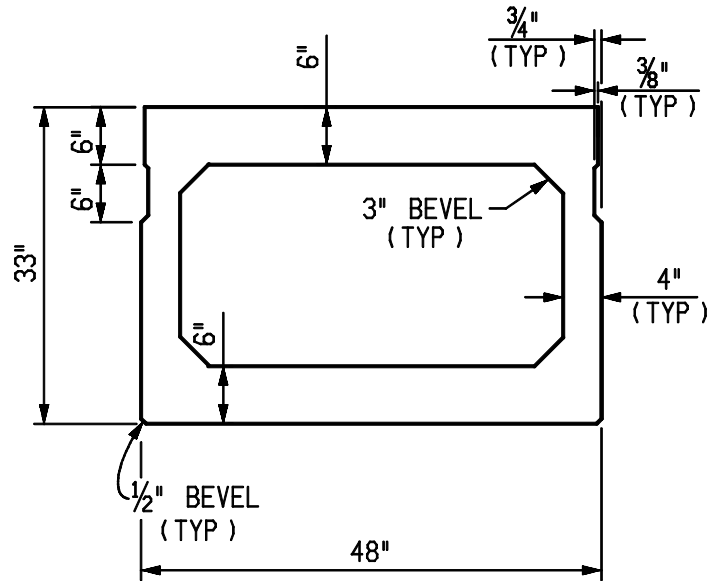
Note: Beam dimensions shown are typical for modern beams, see existing plans for actual dimensions.

**FIGURE 10.1 (Continued)
Standard Dimensions for Prestressed Beams**

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33" BOX BEAM

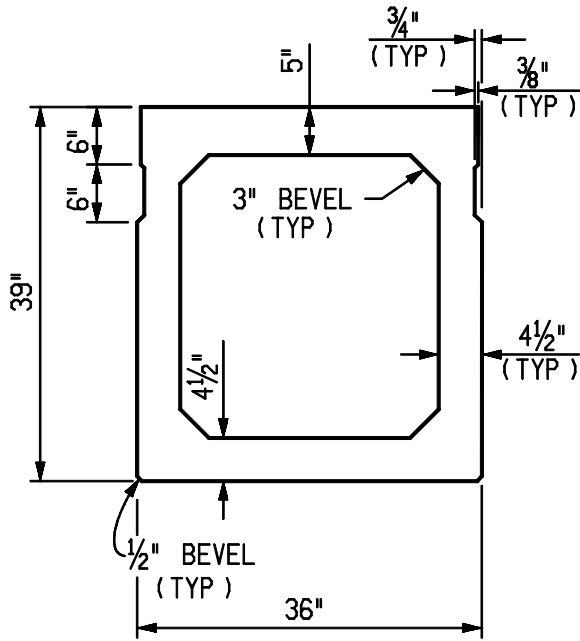


33" BOX BEAM

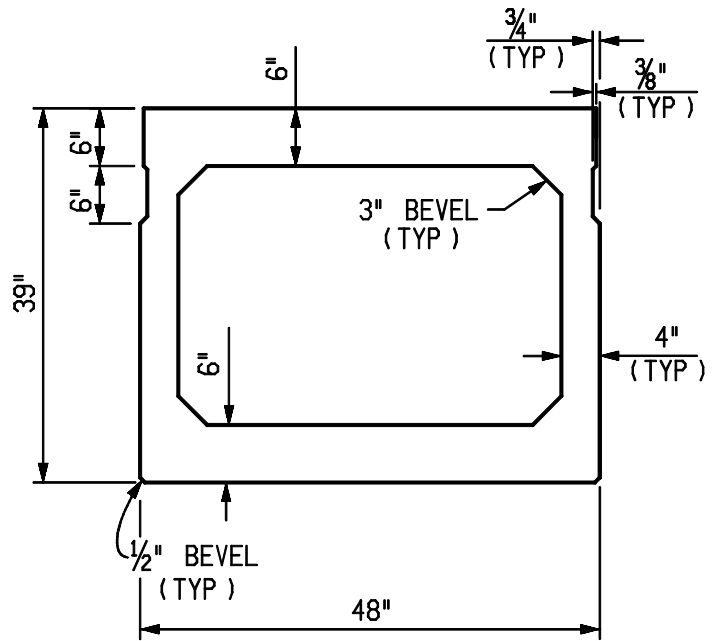
Note: Beam dimensions shown are typical for modern beams, see existing plans for actual dimensions.

**FIGURE 10.1 (Continued)
Standard Dimensions for Prestressed Beams**

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39" BOX BEAM

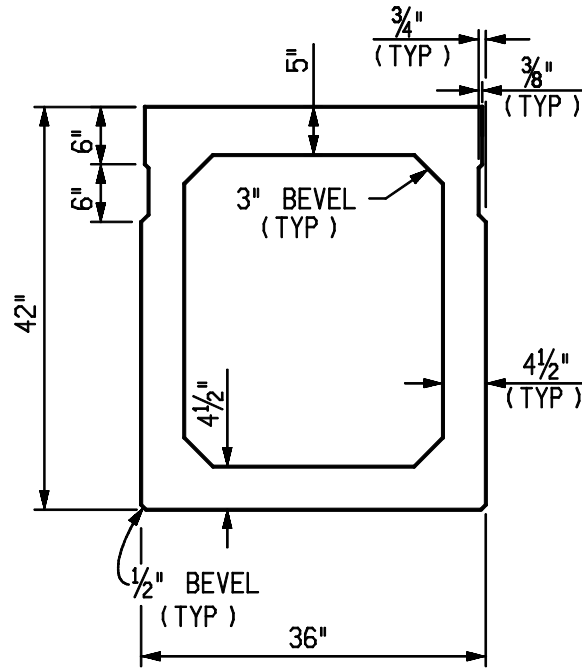


39" BOX BEAM

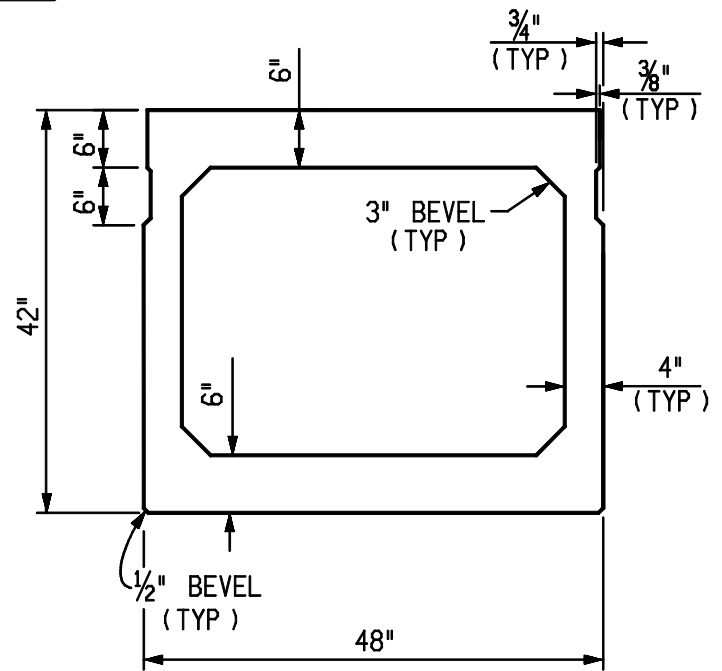
Note: Beam dimensions shown are typical for modern beams, see existing plans for actual dimensions.

FIGURE 10.1 (Continued)
Standard Dimensions for Prestressed Beams

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42" BOX BEAM

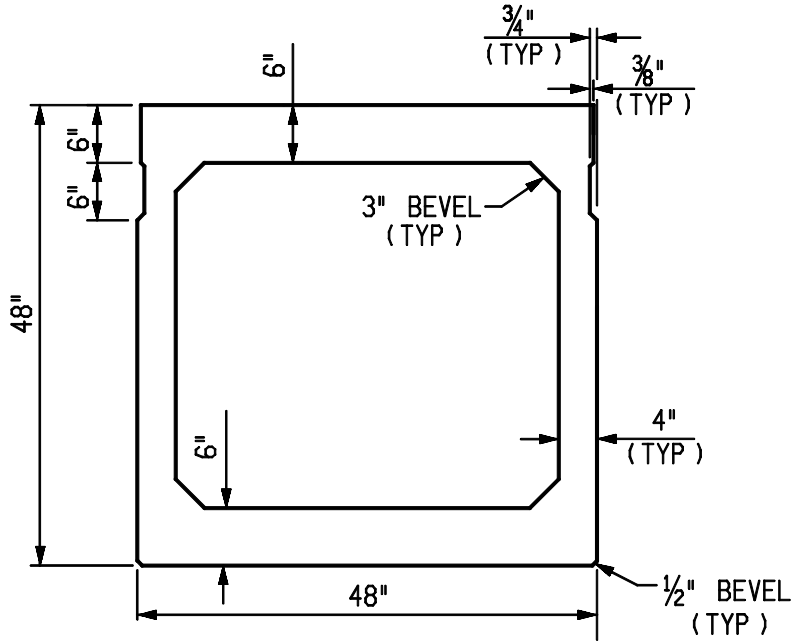


42" BOX BEAM

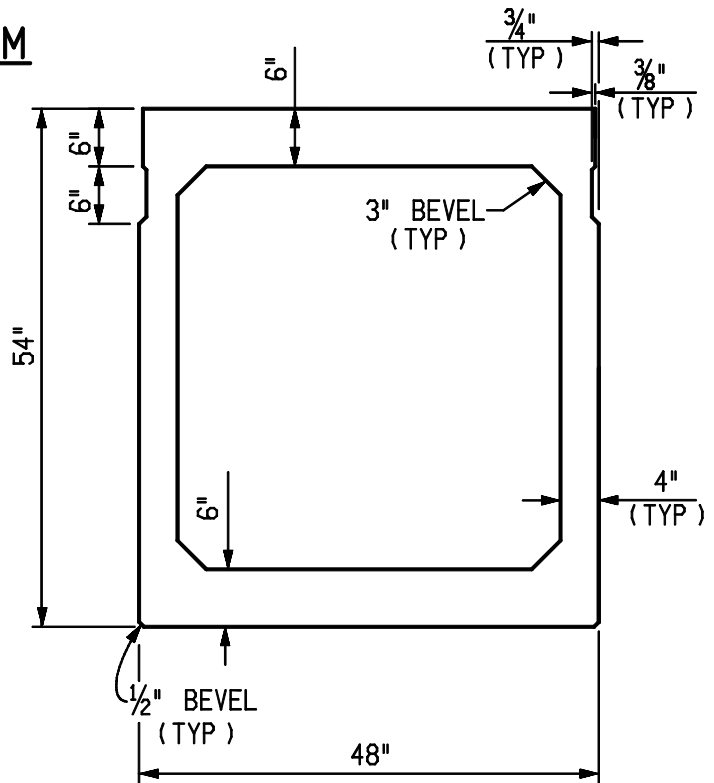
Note: Beam dimensions shown are typical for modern beams, see existing plans for actual dimensions.

FIGURE 10.1 (Continued)
Standard Dimensions for Prestressed Beams

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48" BOX BEAM

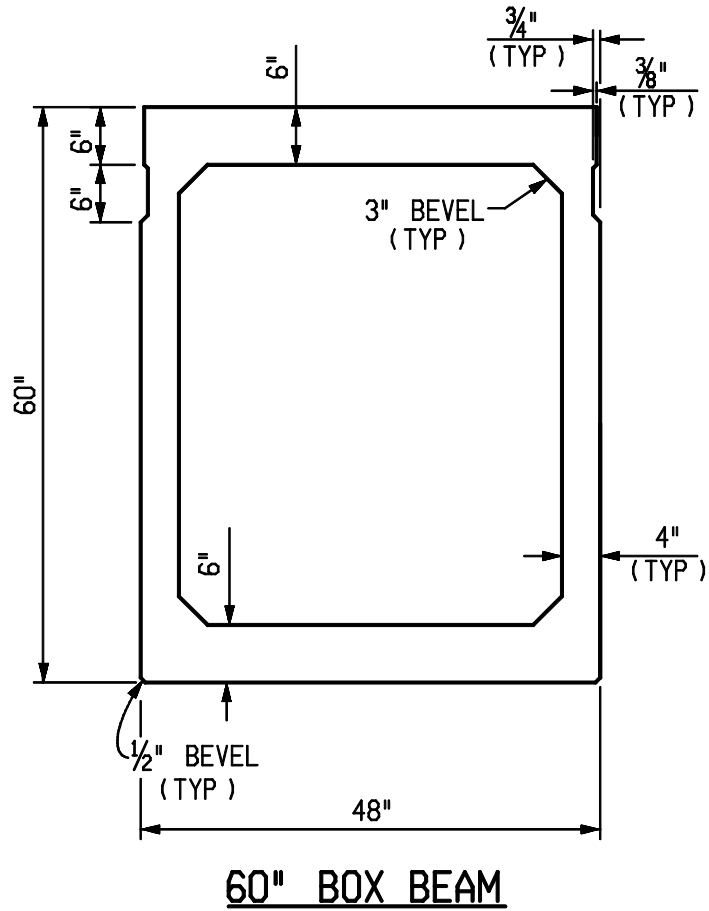


54" BOX BEAM

Note: Beam dimensions shown are typical for modern beams, see existing plans for actual dimensions.

FIGURE 10.1 (Continued)
Standard Dimensions for Prestressed Beams

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Note: Beam dimensions shown are typical for modern beams, see existing plans for actual dimensions.

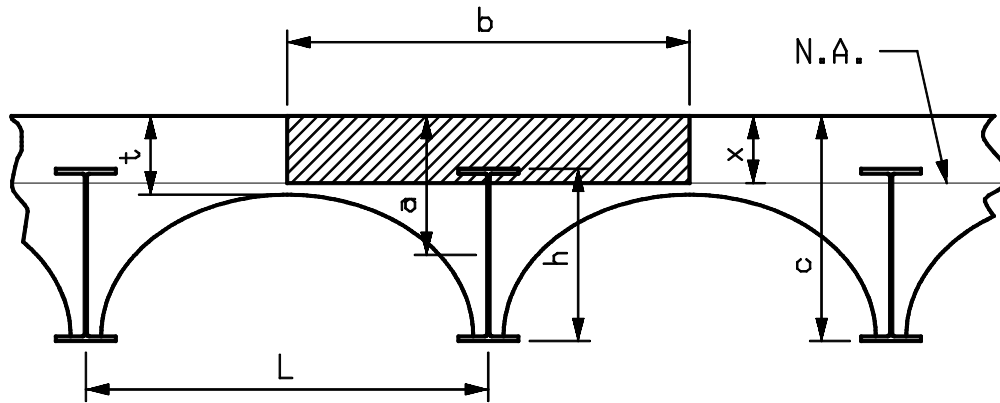
FIGURE 10.1 (Continued)
Standard Dimensions for Prestressed Beams

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Beam Type / Depth	Weight (plf)	Area (in ²)	Y _t (in)	Y _b (in)	S _t (in ³)	S _b (in ³)	I (in ⁴)	
I	288	276	15.41	12.59	1475	1805	22,800	
II	384	369	20.17	15.83	2530	3220	51,000	
III	583	560	24.73	20.27	5070	6190	125,000	
IV	822	789	29.27	24.73	8910	10,550	261,000	
Wisc.	806	773	35.36	34.64	14,422	14,721	509,946	
71"	910	874	37.63	33.24	16,598	18,795	624,652	
36" Wide	12" Box	442	424	6.04	5.96	848	860	5120
	17" Box	445	427	8.58	8.42	1610	1640	13,800
	17" Box (2 Voids)	378	363	8.27	8.73	1515	1435	12,530
	21" Box	486	467	10.6	10.4	2320	2360	24,600
	21" Box (2 Voids)	424	407	10.21	10.79	2150	2030	21,950
	27" Box	530	509	13.43	13.57	3520	3480	47,300
	33" Box	581	558	16.45	16.55	4820	4790	79,300
	39" Box	638	613	19.45	19.55	6240	6210	121,400
	42" Box	666	640	20.95	21.05	6990	6960	146,500
48" Wide	21" Box	686	659	10.58	10.42	3260	3311	34,500
	27" Box	736	707	13.59	13.41	4967	5033	67,500
	33" Box	786	755	16.66	16.34	6795	6928	113,200
	39" Box	836	803	19.64	19.36	8783	8910	172,500
	42" Box	861	827	21.15	20.85	9834	9976	208,000
	48" Box	906	870	24.25	23.75	11,835	12,084	287,000
	54" Box	968	930	27.30	26.70	14,286	14,607	390,000
	60" Box	1005	965	30.30	29.70	16,700	17,037	506,000

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The theory and equations contained in this figure are based on the Allowable Stress Design (ASD) method and should only be used when the deck concrete is in sound condition. If the deck concrete is not known to be in sound condition, the superstructure shall be analyzed as non-composite and shall follow the Load Factor Design (LFD) method, which is not shown in Figure 10.2.



Let:

A_s = Area of steel beam.

I_s = Moment of inertia of steel beam.

I_c = Moment of inertia of steel beam and concrete acting compositely.

$n = E_s/E_c$, n shall not exceed 12.

M_{dl} = Bending moment per beam caused by weight of concrete slab and steel beams (service loads).

$b = L$, b shall not exceed $8t$.

$S_s = I_c/[n(c-x)]$, Section Modulus based on steel.

$S_c = I_c/x$, Section Modulus based on concrete.

$M_c = S_c f_c$, Resisting moment based on concrete

$M_s = S_s(f_s - f'_s)$, Resisting moment based on steel

f_s = Allowable stress of steel beam

f_c = Allowable stress of concrete

$f'_s = M_{dl}h/(2I_s)$

$$x = \frac{nA_s}{b} \left(-1 + \sqrt{1 + \frac{2ab}{nA_s}} \right)$$

**FIGURE 10.2
Jack Arch Analysis Theory and Equations**

If $x > t$, then recompute x as follows:

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$$x = \frac{2naA_s + bt^2}{2(nA_s + bt)}$$

For $x < t$: $I_c = bx^3/3 + nI_s + nA_s(a-x)^2$

For $x > t$: $I_c = bt^3/12 + bt(x-t/2)^2 + nI_s + nA_s(a-x)^2$

The resisting moment available to resist live load and impact (and dead loads applied to the composite section) shall be taken as the lessor of M_s or M_c . The weight of the steel beam and deck concrete is assumed to have been supported by the beam alone.

**FIGURE 10.2 (Continued)
Jack Arch Analysis Theory and Equations**

SPAN	TRUCK # 1 Wt = 33.4 kips		TRUCK # 2 Wt = 41.4 kips		TRUCK # 3 Wt = 54.4 kips		TRUCK # 4 Wt = 67.4 kips		TRUCK # 5 Wt = 78 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
5	21.6	0.647	19.3	0.465	18.5	0.34	19.3	0.286	15.6	0.2
6	27	0.808	22.5	0.543	23.1	0.425	22.5	0.333	19.5	0.25
7	30.9	0.924	27	0.651	26.4	0.485	27	0.4	22.3	0.286
8	36	1.08	31.7	0.765	31.7	0.583	32.5	0.482	29.3	0.375
9	40	1.2	37.9	0.916	42.3	0.777	42.3	0.627	34.7	0.444
10	45	1.35	44.2	1.07	51	0.938	52	0.772	41.6	0.533
11	49.1	1.47	50.5	1.22	61.8	1.14	61.8	0.916	48.5	0.621
12	54	1.62	56.9	1.37	70.7	1.3	71.5	1.06	58.5	0.75
13	58.2	1.74	63.3	1.53	81.3	1.49	81.3	1.21	68	0.872
14	63	1.89	69.6	1.68	90.3	1.66	93.8	1.39	78	1
15	67.2	2.01	76.1	1.84	101	1.85	107	1.58	87.5	1.12
16	73.3	2.19	82.5	1.99	110	2.02	119	1.77	97.5	1.25
17	80.8	2.42	88.9	2.15	120	2.21	132	1.96	109	1.39
18	89	2.66	96.8	2.34	129	2.38	145	2.15	121	1.56
19	96.6	2.89	107	2.59	140	2.57	158	2.35	134	1.72
20	105	3.14	117	2.83	149	2.74	171	2.54	147	1.88
21	113	3.37	128	3.09	159	2.93	184	2.73	160	2.05
22	121	3.62	138	3.33	169	3.1	197	2.92	173	2.21
23	129	3.85	148	3.58	179	3.29	210	3.11	185	2.38
24	137	4.1	158	3.82	192	3.52	223	3.3	198	2.54
25	145	4.34	169	4.08	205	3.77	236	3.5	211	2.71
26	153	4.59	179	4.32	218	4.01	252	3.74	224	2.87
27	161	4.83	189	4.57	232	4.26	269	3.99	237	3.04
28	170	5.08	199	4.82	245	4.5	286	4.24	250	3.2
29	178	5.32	210	5.07	258	4.75	303	4.49	263	3.37

TABLE 10.1
Michigan Legal 1-Unit Truck Normal Loading - Simple Span Moments

10-T1-1

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 41.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 78 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
30	186	5.57	220	5.31	272	5	319	4.74	276	3.53
31	194	5.81	230	5.57	285	5.24	336	4.99	290	3.72
32	202	6.06	241	5.81	299	5.49	353	5.24	306	3.92
33	210	6.3	251	6.06	312	5.74	370	5.49	322	4.13
34	219	6.55	261	6.31	326	5.98	387	5.74	338	4.33
35	227	6.79	272	6.56	339	6.23	403	5.99	355	4.55
36	235	7.04	282	6.81	352	6.48	420	6.24	373	4.78
37	243	7.29	292	7.06	366	6.73	437	6.49	391	5.02
38	252	7.54	302	7.31	379	6.97	454	6.74	411	5.27
39	260	7.78	313	7.56	393	7.22	471	6.98	430	5.51
40	268	8.03	323	7.8	406	7.47	488	7.23	450	5.77
41	276	8.28	334	8.06	420	7.72	504	7.48	469	6.01
42	285	8.53	344	8.3	434	7.97	521	7.73	488	6.26
43	293	8.77	354	8.56	447	8.22	538	7.98	507	6.5
44	301	9.02	364	8.8	461	8.47	555	8.23	527	6.76
45	310	9.27	375	9.05	474	8.72	572	8.48	546	7
46	318	9.52	385	9.3	488	8.97	589	8.73	566	7.25
47	326	9.76	396	9.55	501	9.22	605	8.98	585	7.5
48	334	10	406	9.8	515	9.47	622	9.23	605	7.75
49	343	10.3	416	10.1	529	9.72	639	9.48	623	7.99
50	351	10.5	426	10.3	542	9.97	656	9.73	643	8.25
51	359	10.8	437	10.6	556	10.2	673	9.98	662	8.49
52	368	11	447	10.8	570	10.5	690	10.2	682	8.74
53	376	11.3	457	11.1	583	10.7	706	10.5	701	8.99
54	384	11.5	468	11.3	597	11	723	10.7	721	9.24

TABLE 10.1 (Continued)
Michigan Legal 1-Unit Truck Normal Loading - Simple Span Moments

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 41.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 78 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
55	392	11.8	478	11.5	610	11.2	740	11	740	9.48
56	401	12	488	11.8	624	11.5	757	11.2	760	9.74
57	409	12.2	499	12	637	11.7	774	11.5	779	9.98
58	417	12.5	509	12.3	651	12	791	11.7	798	10.2
59	426	12.7	519	12.5	665	12.2	807	12	817	10.5
60	434	13	530	12.8	678	12.5	824	12.2	837	10.7
61	442	13.2	540	13	692	12.7	841	12.5	856	11
62	451	13.5	550	13.3	706	13	858	12.7	876	11.2
63	459	13.7	561	13.5	719	13.2	875	13	895	11.5
64	467	14	571	13.8	733	13.5	892	13.2	915	11.7
65	476	14.2	581	14	746	13.7	909	13.5	934	12
66	484	14.5	592	14.3	760	14	925	13.7	954	12.2
67	492	14.7	602	14.5	773	14.2	942	14	973	12.5
68	501	15	612	14.8	787	14.5	959	14.2	993	12.7
69	509	15.2	623	15	801	14.7	976	14.5	1010	13
70	517	15.5	633	15.3	814	15	993	14.7	1030	13.2
71	525	15.7	644	15.5	828	15.2	1010	15	1050	13.5
72	534	16	654	15.8	842	15.5	1030	15.2	1070	13.7
73	542	16.2	664	16	855	15.7	1040	15.5	1090	14
74	551	16.5	674	16.3	869	16	1060	15.7	1110	14.2
75	559	16.7	685	16.5	882	16.2	1080	16	1130	14.5
76	567	17	695	16.8	896	16.5	1090	16.2	1150	14.7
77	575	17.2	706	17	909	16.7	1110	16.5	1170	15
78	584	17.5	716	17.3	923	17	1130	16.7	1190	15.2
79	592	17.7	726	17.5	937	17.2	1140	17	1210	15.5

TABLE 10.1 (Continued)
Michigan Legal 1-Unit Truck Normal Loading - Simple Span Moments

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 41.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 78 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
80	600	18	737	17.8	950	17.5	1160	17.2	1230	15.7
81	609	18.2	747	18	964	17.7	1180	17.5	1250	16
82	617	18.5	757	18.3	978	18	1190	17.7	1260	16.2
83	625	18.7	768	18.5	991	18.2	1210	18	1280	16.5
84	634	19	778	18.8	1000	18.5	1230	18.2	1300	16.7
85	642	19.2	788	19	1020	18.7	1250	18.5	1320	17
86	650	19.5	799	19.3	1030	19	1260	18.7	1340	17.2
87	659	19.7	809	19.5	1050	19.2	1280	19	1360	17.5
88	667	20	819	19.8	1060	19.5	1300	19.2	1380	17.7
89	675	20.2	830	20	1070	19.7	1310	19.5	1400	18
90	684	20.5	840	20.3	1090	20	1330	19.7	1420	18.2
91	692	20.7	850	20.5	1100	20.2	1350	20	1440	18.5
92	700	21	861	20.8	1110	20.5	1360	20.2	1460	18.7
93	709	21.2	871	21	1130	20.7	1380	20.5	1480	19
94	717	21.5	881	21.3	1140	21	1400	20.7	1500	19.2
95	725	21.7	892	21.5	1150	21.2	1410	21	1520	19.5
96	734	22	902	21.8	1170	21.5	1430	21.2	1540	19.7
97	742	22.2	912	22	1180	21.7	1450	21.5	1560	20
98	750	22.5	923	22.3	1200	22	1460	21.7	1580	20.2
99	759	22.7	933	22.5	1210	22.2	1480	22	1600	20.5
100	767	23	943	22.8	1220	22.5	1500	22.2	1620	20.7
101	775	23.2	954	23	1240	22.7	1510	22.5	1630	21
102	784	23.5	964	23.3	1250	23	1530	22.7	1650	21.2
103	792	23.7	975	23.5	1260	23.2	1550	23	1670	21.5
104	800	24	985	23.8	1280	23.5	1570	23.2	1690	21.7

TABLE 10.1 (Continued)
Michigan Legal 1-Unit Truck Normal Loading - Simple Span Moments

SPAN	TRUCK # 1 Wt = 33.4 kips		TRUCK # 2 Wt = 41.4 kips		TRUCK # 3 Wt = 54.4 kips		TRUCK # 4 Wt = 67.4 kips		TRUCK # 5 Wt = 78 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
105	809	24.2	995	24	1290	23.7	1580	23.5	1710	22
106	817	24.5	1010	24.3	1300	24	1600	23.7	1730	22.2
107	825	24.7	1020	24.5	1320	24.2	1620	24	1750	22.5
108	834	25	1030	24.8	1330	24.5	1630	24.2	1770	22.7
109	842	25.2	1040	25	1340	24.7	1650	24.5	1790	23
110	851	25.5	1050	25.3	1360	25	1670	24.7	1810	23.2
111	859	25.7	1060	25.5	1370	25.2	1680	25	1830	23.5
112	867	26	1070	25.8	1390	25.5	1700	25.2	1850	23.7
113	875	26.2	1080	26	1400	25.7	1720	25.5	1870	23.9
114	884	26.5	1090	26.3	1410	26	1730	25.7	1890	24.2
115	892	26.7	1100	26.5	1430	26.2	1750	26	1910	24.4
116	901	27	1110	26.8	1440	26.5	1770	26.2	1930	24.7
117	909	27.2	1120	27	1450	26.7	1780	26.5	1950	24.9
118	917	27.5	1130	27.3	1470	27	1800	26.7	1970	25.2
119	926	27.7	1140	27.5	1480	27.2	1820	27	1980	25.4
120	934	28	1150	27.8	1490	27.5	1840	27.2	2000	25.7
121	942	28.2	1160	28	1510	27.7	1850	27.5	2020	25.9
122	951	28.5	1170	28.3	1520	28	1870	27.7	2040	26.2
123	959	28.7	1180	28.5	1540	28.2	1890	28	2060	26.4
124	967	29	1190	28.8	1550	28.5	1900	28.2	2080	26.7
125	976	29.2	1200	29	1560	28.7	1920	28.5	2100	26.9
126	984	29.5	1210	29.3	1580	29	1940	28.7	2120	27.2
127	992	29.7	1220	29.5	1590	29.2	1950	29	2140	27.4
128	1000	30	1230	29.8	1600	29.5	1970	29.2	2160	27.7
129	1010	30.2	1240	30	1620	29.7	1990	29.5	2180	27.9

TABLE 10.1 (Continued)
Michigan Legal 1-Unit Truck Normal Loading - Simple Span Moments

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 41.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 78 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
130	1020	30.5	1250	30.3	1630	30	2000	29.7	2200	28.2
131	1030	30.7	1260	30.5	1640	30.2	2020	30	2220	28.4
132	1030	31	1270	30.8	1660	30.5	2040	30.2	2240	28.7
133	1040	31.2	1280	31	1670	30.7	2050	30.5	2260	28.9
134	1050	31.5	1300	31.3	1680	31	2070	30.7	2280	29.2
135	1060	31.7	1310	31.5	1700	31.2	2090	31	2300	29.4
136	1070	32	1320	31.8	1710	31.5	2100	31.2	2320	29.7
137	1080	32.2	1330	32	1730	31.7	2120	31.5	2340	29.9
138	1080	32.5	1340	32.3	1740	32	2140	31.7	2360	30.2
139	1090	32.7	1350	32.5	1750	32.2	2160	32	2370	30.4
140	1100	33	1360	32.8	1770	32.5	2170	32.2	2390	30.7
141	1110	33.2	1370	33	1780	32.7	2190	32.5	2410	30.9
142	1120	33.5	1380	33.3	1790	33	2210	32.7	2430	31.2
143	1130	33.7	1390	33.5	1810	33.2	2220	33	2450	31.4
144	1130	34	1400	33.8	1820	33.5	2240	33.2	2470	31.7
145	1140	34.2	1410	34	1830	33.7	2260	33.5	2490	31.9
146	1150	34.5	1420	34.3	1850	34	2270	33.7	2510	32.2
147	1160	34.7	1430	34.5	1860	34.2	2290	34	2530	32.4
148	1170	35	1440	34.8	1880	34.5	2310	34.2	2550	32.7
149	1180	35.2	1450	35	1890	34.7	2320	34.5	2570	32.9
150	1180	35.5	1460	35.3	1900	35	2340	34.7	2590	33.2
155	1230	36.7	1510	36.5	1970	36.2	2420	36	2690	34.4
160	1270	38	1560	37.8	2040	37.5	2510	37.2	2780	35.7
165	1310	39.2	1620	39	2110	38.7	2590	38.5	2880	36.9
170	1350	40.5	1670	40.3	2170	40	2680	39.7	2980	38.2

TABLE 10.1 (Continued)
Michigan Legal 1-Unit Truck Normal Loading - Simple Span Moments

SPAN	TRUCK # 1 Wt = 33.4 kips		TRUCK # 2 Wt = 41.4 kips		TRUCK # 3 Wt = 54.4 kips		TRUCK # 4 Wt = 67.4 kips		TRUCK # 5 Wt = 78 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
175	1390	41.7	1720	41.5	2240	41.2	2760	41	3080	39.4
180	1430	42.9	1770	42.8	2310	42.5	2850	42.2	3170	40.7
185	1480	44.2	1820	44	2380	43.7	2930	43.5	3270	41.9
190	1520	45.4	1870	45.3	2450	45	3010	44.7	3370	43.2
195	1560	46.7	1930	46.5	2510	46.2	3100	46	3470	44.4
200	1600	47.9	1980	47.8	2580	47.5	3180	47.2	3560	45.7
205	1640	49.2	2030	49	2650	48.7	3270	48.5	3660	46.9
210	1680	50.4	2080	50.3	2720	50	3350	49.7	3760	48.2
215	1730	51.7	2130	51.5	2790	51.2	3440	51	3860	49.4
220	1770	52.9	2190	52.8	2850	52.5	3520	52.2	3950	50.7
225	1810	54.2	2240	54	2920	53.7	3600	53.5	4050	51.9
230	1850	55.4	2290	55.3	2990	55	3690	54.7	4150	53.2
235	1890	56.7	2340	56.5	3060	56.2	3770	56	4250	54.4
240	1940	57.9	2390	57.8	3130	57.5	3860	57.2	4340	55.7
245	1980	59.2	2440	59	3190	58.7	3940	58.5	4440	56.9
250	2020	60.4	2500	60.3	3260	60	4030	59.7	4540	58.2
255	2060	61.7	2550	61.5	3330	61.2	4110	61	4640	59.4
260	2100	62.9	2600	62.8	3400	62.5	4190	62.2	4730	60.7
265	2140	64.2	2650	64	3470	63.7	4280	63.5	4830	61.9
270	2190	65.4	2700	65.3	3530	65	4360	64.7	4930	63.2
275	2230	66.7	2750	66.5	3600	66.2	4450	66	5030	64.4
280	2270	67.9	2810	67.8	3670	67.5	4530	67.2	5120	65.7
285	2310	69.2	2860	69	3740	68.7	4620	68.5	5220	66.9
290	2350	70.4	2910	70.3	3810	70	4700	69.7	5320	68.2
295	2390	71.7	2960	71.5	3870	71.2	4780	71	5420	69.4
300	2440	72.9	3010	72.8	3940	72.5	4870	72.2	5510	70.7

TABLE 10.1 (Continued)
Michigan Legal 1-Unit Truck Normal Loading - Simple Span Moments

10-T2-1

SPAN	TRUCK # 6 Wt = 95.4 kips		TRUCK # 7 Wt = 113.4 kips		TRUCK # 8 Wt = 85.4 kips		TRUCK # 9 Wt = 51.4 kips		TRUCK # 10 Wt = 59.4 kips		TRUCK # 11 Wt = 77.4 kips		TRUCK # 12 Wt = 111.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
5	21.6	0.226	21.6	0.191	22.5	0.264	21.6	0.42	22.5	0.379	21.6	0.279	22.5	0.202
6	27	0.283	27	0.238	26.3	0.307	27	0.525	26.3	0.442	27	0.349	26.3	0.236
7	30.9	0.324	30.9	0.272	31.5	0.369	30.9	0.6	31.5	0.53	30.9	0.399	31.5	0.283
8	36	0.377	36	0.318	35.4	0.415	36	0.7	35.4	0.597	36	0.465	35.4	0.318
9	40	0.419	40	0.353	40.5	0.474	40	0.778	40.5	0.682	40	0.517	42.3	0.379
10	45	0.472	45	0.397	44.6	0.522	45	0.876	44.6	0.75	45	0.581	52	0.467
11	50.5	0.53	50.5	0.446	50.5	0.592	49.1	0.955	50.5	0.851	50.5	0.653	61.8	0.554
12	56.9	0.596	56.9	0.502	56.9	0.666	54	1.05	56.9	0.958	56.9	0.735	71.5	0.642
13	63.3	0.663	63.3	0.558	63.3	0.741	58.2	1.13	63.3	1.06	63.3	0.817	81.3	0.729
14	69.6	0.73	69.6	0.614	69.6	0.816	63	1.23	69.6	1.17	69.6	0.9	93.8	0.842
15	76.1	0.797	76.1	0.671	76.1	0.891	67.2	1.31	76.1	1.28	76.1	0.983	107	0.957
16	82.5	0.865	82.5	0.727	82.5	0.966	74.3	1.44	82.5	1.39	82.5	1.07	119	1.07
17	88.9	0.932	88.9	0.784	88.9	1.04	82.6	1.61	88.9	1.5	88.9	1.15	132	1.19
18	98.3	1.03	98.3	0.867	98.5	1.15	91	1.77	98.5	1.66	98.3	1.27	145	1.3
19	109	1.15	109	0.963	109	1.28	99.5	1.94	109	1.84	109	1.41	158	1.42
20	120	1.26	120	1.06	120	1.41	108	2.1	120	2.02	120	1.55	171	1.53
21	131	1.37	131	1.15	131	1.53	119	2.32	131	2.2	131	1.69	184	1.65
22	142	1.48	142	1.25	142	1.66	132	2.58	142	2.39	142	1.83	197	1.77
23	153	1.6	153	1.35	152	1.78	145	2.82	152	2.57	153	1.97	210	1.88
24	163	1.71	163	1.44	163	1.91	158	3.08	163	2.75	163	2.11	223	2
25	175	1.83	175	1.54	174	2.04	171	3.33	174	2.93	174	2.25	236	2.12
26	189	1.98	189	1.67	187	2.19	184	3.58	185	3.12	187	2.41	254	2.28
27	202	2.12	202	1.78	202	2.36	197	3.83	196	3.3	202	2.61	271	2.43
28	216	2.27	216	1.91	217	2.54	210	4.08	210	3.53	216	2.8	289	2.59
29	231	2.43	231	2.04	231	2.71	222	4.33	224	3.78	231	2.99	306	2.74

TABLE 10.2
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

10-T2-2

SPAN	TRUCK # 6 Wt = 95.4 kips		TRUCK # 7 Wt = 113.4 kips		TRUCK # 8 Wt = 85.4 kips		TRUCK # 9 Wt = 51.4 kips		TRUCK # 10 Wt = 59.4 kips		TRUCK # 11 Wt = 77.4 kips		TRUCK # 12 Wt = 111.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
30	246	2.58	246	2.17	246	2.88	235	4.58	239	4.02	246	3.18	324	2.91
31	261	2.74	261	2.3	263	3.08	248	4.83	254	4.27	261	3.37	341	3.06
32	277	2.9	277	2.44	280	3.28	261	5.08	269	4.52	277	3.58	359	3.22
33	292	3.06	292	2.58	298	3.49	274	5.33	283	4.77	292	3.77	379	3.4
34	308	3.23	308	2.72	315	3.69	287	5.58	298	5.02	308	3.98	400	3.59
35	323	3.39	323	2.85	333	3.9	299	5.83	313	5.27	323	4.17	422	3.78
36	341	3.57	341	3.01	350	4.1	312	6.08	328	5.52	340	4.39	443	3.97
37	361	3.78	361	3.18	368	4.31	325	6.33	343	5.77	359	4.64	464	4.17
38	381	3.99	381	3.36	385	4.51	338	6.58	357	6.02	378	4.89	485	4.36
39	401	4.2	401	3.53	403	4.72	351	6.83	372	6.27	398	5.14	507	4.55
40	420	4.41	420	3.71	420	4.92	364	7.08	387	6.51	417	5.38	528	4.74
41	440	4.62	440	3.88	438	5.13	377	7.33	402	6.76	436	5.64	550	4.93
42	460	4.82	460	4.06	459	5.37	389	7.58	417	7.01	455	5.88	571	5.12
43	480	5.03	480	4.24	480	5.63	402	7.83	431	7.26	475	6.13	593	5.32
44	502	5.26	502	4.42	501	5.87	415	8.08	446	7.51	494	6.38	618	5.54
45	526	5.51	526	4.64	523	6.12	428	8.33	461	7.76	513	6.63	642	5.76
46	549	5.76	549	4.85	544	6.37	441	8.58	476	8.01	532	6.88	667	5.98
47	573	6.01	573	5.06	565	6.62	454	8.83	491	8.26	552	7.13	691	6.21
48	597	6.26	597	5.27	586	6.86	467	9.08	505	8.51	571	7.37	719	6.45
49	621	6.51	621	5.48	608	7.12	479	9.33	520	8.76	590	7.63	747	6.7
50	645	6.76	646	5.7	629	7.36	492	9.58	535	9.01	609	7.87	774	6.95
51	669	7.01	670	5.91	650	7.61	505	9.83	550	9.26	629	8.12	802	7.2
52	692	7.26	695	6.13	671	7.86	518	10.1	565	9.51	648	8.37	830	7.45
53	716	7.51	719	6.34	693	8.11	531	10.3	580	9.76	667	8.62	857	7.69
54	740	7.76	745	6.57	713	8.35	544	10.6	594	10	686	8.87	885	7.94

TABLE 10.2 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

10-T2-3

SPAN	TRUCK # 6 Wt = 95.4 kips		TRUCK # 7 Wt = 113.4 kips		TRUCK # 8 Wt = 85.4 kips		TRUCK # 9 Wt = 51.4 kips		TRUCK # 10 Wt = 59.4 kips		TRUCK # 11 Wt = 77.4 kips		TRUCK # 12 Wt = 111.4 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
55	764	8.01	773	6.82	735	8.61	556	10.8	609	10.3	706	9.12	913	8.19
56	788	8.26	801	7.06	756	8.85	569	11.1	624	10.5	725	9.37	940	8.44
57	812	8.51	830	7.32	778	9.1	582	11.3	639	10.8	744	9.62	968	8.69
58	836	8.76	858	7.56	799	9.35	595	11.6	654	11	764	9.86	996	8.94
59	860	9.01	886	7.81	820	9.6	608	11.8	668	11.3	783	10.1	1020	9.19
60	883	9.26	914	8.06	841	9.85	621	12.1	683	11.5	802	10.4	1050	9.43
61	907	9.51	943	8.31	863	10.1	634	12.3	698	11.8	822	10.6	1080	9.68
62	931	9.76	971	8.56	884	10.3	646	12.6	713	12	841	10.9	1110	9.93
63	955	10	999	8.81	905	10.6	659	12.8	728	12.3	860	11.1	1130	10.2
64	979	10.3	1030	9.06	926	10.8	672	13.1	743	12.5	879	11.4	1160	10.4
65	1000	10.5	1060	9.31	948	11.1	685	13.3	757	12.8	899	11.6	1190	10.7
66	1030	10.8	1080	9.56	969	11.3	698	13.6	772	13	918	11.9	1220	10.9
67	1050	11	1110	9.81	990	11.6	711	13.8	787	13.3	937	12.1	1240	11.2
68	1070	11.3	1140	10.1	1010	11.8	724	14.1	802	13.5	957	12.4	1270	11.4
69	1100	11.5	1170	10.3	1030	12.1	736	14.3	817	13.8	976	12.6	1300	11.7
70	1120	11.8	1200	10.6	1050	12.3	749	14.6	832	14	995	12.9	1330	11.9
71	1150	12	1230	10.8	1080	12.6	762	14.8	846	14.3	1010	13.1	1360	12.2
72	1170	12.3	1250	11.1	1100	12.8	775	15.1	861	14.5	1030	13.4	1380	12.4
73	1190	12.5	1280	11.3	1120	13.1	788	15.3	876	14.7	1050	13.6	1410	12.7
74	1220	12.8	1310	11.6	1140	13.3	801	15.6	891	15	1070	13.9	1440	12.9
75	1240	13	1340	11.8	1160	13.6	813	15.8	906	15.2	1090	14.1	1470	13.2
76	1260	13.3	1370	12.1	1180	13.8	826	16.1	921	15.5	1110	14.4	1490	13.4
77	1290	13.5	1400	12.3	1200	14.1	839	16.3	935	15.7	1130	14.6	1520	13.7
78	1310	13.8	1420	12.6	1220	14.3	852	16.6	950	16	1150	14.9	1550	13.9
79	1340	14	1450	12.8	1250	14.6	865	16.8	965	16.2	1170	15.1	1580	14.2

TABLE 10.2 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

10-T2-4

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10		TRUCK # 11		TRUCK # 12	
	Wt = 95.4 kips		Wt = 113.4 kips		Wt = 85.4 kips		Wt = 51.4 kips		Wt = 59.4 kips		Wt = 77.4 kips		Wt = 111.4 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
80	1360	14.3	1480	13.1	1270	14.8	878	17.1	980	16.5	1190	15.4	1610	14.4
81	1380	14.5	1510	13.3	1290	15.1	891	17.3	995	16.7	1210	15.6	1630	14.7
82	1410	14.8	1540	13.6	1310	15.3	903	17.6	1010	17	1230	15.9	1660	14.9
83	1430	15	1570	13.8	1330	15.6	916	17.8	1020	17.2	1250	16.1	1690	15.2
84	1460	15.3	1590	14.1	1350	15.8	929	18.1	1040	17.5	1270	16.4	1720	15.4
85	1480	15.5	1620	14.3	1370	16.1	942	18.3	1050	17.7	1290	16.6	1740	15.7
86	1500	15.8	1650	14.5	1390	16.3	955	18.6	1070	18	1300	16.9	1770	15.9
87	1530	16	1680	14.8	1420	16.6	968	18.8	1080	18.2	1320	17.1	1800	16.2
88	1550	16.3	1710	15	1440	16.8	981	19.1	1100	18.5	1340	17.4	1830	16.4
89	1570	16.5	1740	15.3	1460	17.1	993	19.3	1110	18.7	1360	17.6	1860	16.7
90	1600	16.8	1760	15.5	1480	17.3	1010	19.6	1130	19	1380	17.8	1880	16.9
91	1620	17	1790	15.8	1500	17.6	1020	19.8	1140	19.2	1400	18.1	1910	17.2
92	1650	17.3	1820	16	1520	17.8	1030	20.1	1160	19.5	1420	18.3	1940	17.4
93	1670	17.5	1850	16.3	1540	18.1	1040	20.3	1170	19.7	1440	18.6	1970	17.7
94	1690	17.8	1880	16.5	1570	18.3	1060	20.6	1190	20	1460	18.8	1990	17.9
95	1720	18	1900	16.8	1590	18.6	1070	20.8	1200	20.2	1480	19.1	2020	18.2
96	1740	18.3	1930	17	1610	18.8	1080	21.1	1220	20.5	1500	19.3	2050	18.4
97	1770	18.5	1960	17.3	1630	19.1	1100	21.3	1230	20.7	1520	19.6	2080	18.7
98	1790	18.8	1990	17.5	1650	19.3	1110	21.6	1250	21	1540	19.8	2110	18.9
99	1810	19	2020	17.8	1670	19.6	1120	21.8	1260	21.2	1560	20.1	2130	19.2
100	1840	19.3	2050	18	1690	19.8	1130	22.1	1280	21.5	1570	20.3	2160	19.4
101	1860	19.5	2070	18.3	1710	20.1	1150	22.3	1290	21.7	1590	20.6	2190	19.7
102	1880	19.8	2100	18.5	1740	20.3	1160	22.6	1310	22	1610	20.8	2220	19.9
103	1910	20	2130	18.8	1760	20.6	1170	22.8	1320	22.2	1630	21.1	2240	20.2
104	1930	20.3	2160	19	1780	20.8	1190	23.1	1340	22.5	1650	21.3	2270	20.4

TABLE 10.2 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

10-T2-5

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10		TRUCK # 11		TRUCK # 12	
	Wt = 95.4 kips		Wt = 113.4 kips		Wt = 85.4 kips		Wt = 51.4 kips		Wt = 59.4 kips		Wt = 77.4 kips		Wt = 111.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
105	1960	20.5	2190	19.3	1800	21.1	1200	23.3	1350	22.7	1670	21.6	2300	20.6
106	1980	20.8	2220	19.5	1820	21.3	1210	23.6	1370	23	1690	21.8	2330	20.9
107	2000	21	2240	19.8	1840	21.6	1220	23.8	1380	23.2	1710	22.1	2360	21.1
108	2030	21.3	2270	20	1860	21.8	1240	24.1	1400	23.5	1730	22.3	2380	21.4
109	2050	21.5	2300	20.3	1890	22.1	1250	24.3	1410	23.7	1750	22.6	2410	21.6
110	2080	21.8	2330	20.5	1910	22.3	1260	24.6	1430	24	1770	22.8	2440	21.9
111	2100	22	2360	20.8	1930	22.6	1280	24.8	1440	24.2	1790	23.1	2470	22.1
112	2120	22.3	2390	21	1950	22.8	1290	25.1	1450	24.5	1810	23.3	2500	22.4
113	2150	22.5	2410	21.3	1970	23.1	1300	25.3	1470	24.7	1830	23.6	2520	22.6
114	2170	22.8	2440	21.5	1990	23.3	1310	25.6	1480	25	1850	23.8	2550	22.9
115	2190	23	2470	21.8	2010	23.6	1330	25.8	1500	25.2	1860	24.1	2580	23.1
116	2220	23.3	2500	22	2030	23.8	1340	26.1	1510	25.5	1880	24.3	2610	23.4
117	2240	23.5	2530	22.3	2060	24.1	1350	26.3	1530	25.7	1900	24.6	2630	23.6
118	2270	23.8	2560	22.5	2080	24.3	1370	26.6	1540	26	1920	24.8	2660	23.9
119	2290	24	2580	22.8	2100	24.6	1380	26.8	1560	26.2	1940	25.1	2690	24.1
120	2310	24.3	2610	23	2120	24.8	1390	27.1	1570	26.5	1960	25.3	2720	24.4
121	2340	24.5	2640	23.3	2140	25.1	1400	27.3	1590	26.7	1980	25.6	2750	24.6
122	2360	24.8	2670	23.5	2160	25.3	1420	27.6	1600	27	2000	25.8	2770	24.9
123	2390	25	2700	23.8	2180	25.6	1430	27.8	1620	27.2	2020	26.1	2800	25.1
124	2410	25.3	2730	24	2200	25.8	1440	28.1	1630	27.5	2040	26.3	2830	25.4
125	2430	25.5	2750	24.3	2230	26.1	1460	28.3	1650	27.7	2060	26.6	2860	25.6
126	2460	25.8	2780	24.5	2250	26.3	1470	28.6	1660	28	2080	26.8	2880	25.9
127	2480	26	2810	24.8	2270	26.6	1480	28.8	1680	28.2	2100	27.1	2910	26.1
128	2500	26.3	2840	25	2290	26.8	1490	29.1	1690	28.5	2120	27.3	2940	26.4
129	2530	26.5	2870	25.3	2310	27.1	1510	29.3	1710	28.7	2140	27.6	2970	26.6

TABLE 10.2 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

10-T2-6

SPAN	TRUCK # 6 Wt = 95.4 kips		TRUCK # 7 Wt = 113.4 kips		TRUCK # 8 Wt = 85.4 kips		TRUCK # 9 Wt = 51.4 kips		TRUCK # 10 Wt = 59.4 kips		TRUCK # 11 Wt = 77.4 kips		TRUCK # 12 Wt = 111.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
130	2550	26.8	2900	25.5	2330	27.3	1520	29.6	1720	29	2150	27.8	3000	26.9
131	2580	27	2920	25.8	2350	27.6	1530	29.8	1740	29.2	2170	28.1	3020	27.1
132	2600	27.3	2950	26	2380	27.8	1550	30.1	1750	29.5	2190	28.3	3050	27.4
133	2620	27.5	2980	26.3	2400	28.1	1560	30.3	1770	29.7	2210	28.6	3080	27.6
134	2650	27.8	3010	26.5	2420	28.3	1570	30.6	1780	30	2230	28.8	3110	27.9
135	2670	28	3040	26.8	2440	28.6	1580	30.8	1800	30.2	2250	29.1	3140	28.1
136	2700	28.3	3070	27	2460	28.8	1600	31.1	1810	30.5	2270	29.3	3160	28.4
137	2720	28.5	3090	27.3	2480	29.1	1610	31.3	1830	30.7	2290	29.6	3190	28.6
138	2740	28.8	3120	27.5	2500	29.3	1620	31.6	1840	31	2310	29.8	3220	28.9
139	2770	29	3150	27.8	2520	29.6	1640	31.8	1860	31.2	2330	30.1	3250	29.1
140	2790	29.3	3180	28	2550	29.8	1650	32.1	1870	31.5	2350	30.3	3270	29.4
141	2810	29.5	3210	28.3	2570	30.1	1660	32.3	1890	31.7	2370	30.6	3300	29.6
142	2840	29.8	3240	28.5	2590	30.3	1670	32.6	1900	32	2390	30.8	3330	29.9
143	2860	30	3260	28.8	2610	30.6	1690	32.8	1920	32.2	2410	31.1	3360	30.1
144	2890	30.3	3290	29	2630	30.8	1700	33.1	1930	32.5	2430	31.3	3390	30.4
145	2910	30.5	3320	29.3	2650	31.1	1710	33.3	1940	32.7	2450	31.6	3410	30.6
146	2930	30.8	3350	29.5	2670	31.3	1730	33.6	1960	33	2460	31.8	3440	30.9
147	2960	31	3380	29.8	2700	31.6	1740	33.8	1970	33.2	2480	32.1	3470	31.1
148	2980	31.3	3410	30	2720	31.8	1750	34.1	1990	33.5	2500	32.3	3500	31.4
149	3010	31.5	3430	30.3	2740	32.1	1760	34.3	2000	33.7	2520	32.6	3530	31.6
150	3030	31.8	3460	30.5	2760	32.3	1780	34.6	2020	34	2540	32.8	3550	31.9
155	3150	33	3600	31.8	2870	33.6	1840	35.8	2090	35.2	2640	34.1	3690	33.1
160	3270	34.3	3750	33	2970	34.8	1910	37.1	2170	36.5	2740	35.3	3830	34.4
165	3390	35.5	3890	34.3	3080	36.1	1970	38.3	2240	37.7	2830	36.6	3970	35.6
170	3510	36.8	4030	35.5	3190	37.3	2030	39.6	2320	39	2930	37.8	4110	36.9

TABLE 10.2 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

10-T2-7

SPAN	TRUCK # 6 Wt = 95.4 kips		TRUCK # 7 Wt = 113.4 kips		TRUCK # 8 Wt = 85.4 kips		TRUCK # 9 Wt = 51.4 kips		TRUCK # 10 Wt = 59.4 kips		TRUCK # 11 Wt = 77.4 kips		TRUCK # 12 Wt = 111.4 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
175	3630	38	4170	36.8	3290	38.6	2100	40.8	2390	40.2	3030	39.1	4250	38.1
180	3740	39.3	4310	38	3400	39.8	2160	42.1	2460	41.5	3120	40.3	4390	39.4
185	3860	40.5	4460	39.3	3510	41.1	2230	43.3	2540	42.7	3220	41.6	4530	40.6
190	3980	41.8	4600	40.5	3610	42.3	2290	44.6	2610	44	3320	42.8	4670	41.9
195	4100	43	4740	41.8	3720	43.6	2360	45.8	2690	45.2	3410	44.1	4810	43.1
200	4220	44.3	4880	43	3830	44.8	2420	47.1	2760	46.5	3510	45.3	4950	44.4
205	4340	45.5	5020	44.3	3930	46.1	2480	48.3	2840	47.7	3610	46.6	5080	45.6
210	4460	46.8	5160	45.5	4040	47.3	2550	49.6	2910	49	3700	47.8	5220	46.9
215	4580	48	5310	46.8	4150	48.6	2610	50.8	2980	50.2	3800	49.1	5360	48.1
220	4700	49.3	5450	48	4250	49.8	2680	52.1	3060	51.5	3900	50.3	5500	49.4
225	4820	50.5	5590	49.3	4360	51.1	2740	53.3	3130	52.7	3990	51.6	5640	50.6
230	4940	51.8	5730	50.5	4470	52.3	2810	54.6	3210	54	4090	52.8	5780	51.9
235	5060	53	5870	51.8	4570	53.6	2870	55.8	3280	55.2	4190	54.1	5920	53.1
240	5180	54.3	6010	53	4680	54.8	2930	57.1	3360	56.5	4280	55.3	6060	54.4
245	5300	55.5	6160	54.3	4790	56.1	3000	58.3	3430	57.7	4380	56.6	6200	55.6
250	5410	56.8	6300	55.5	4890	57.3	3060	59.6	3500	59	4480	57.8	6340	56.9
255	5530	58	6440	56.8	5000	58.6	3130	60.8	3580	60.2	4570	59.1	6480	58.1
260	5650	59.3	6580	58	5110	59.8	3190	62.1	3650	61.5	4670	60.3	6620	59.4
265	5770	60.5	6720	59.3	5210	61.1	3250	63.3	3730	62.7	4770	61.6	6760	60.6
270	5890	61.8	6860	60.5	5320	62.3	3320	64.6	3800	64	4860	62.8	6900	61.9
275	6010	63	7010	61.8	5430	63.6	3380	65.8	3870	65.2	4960	64.1	7030	63.1
280	6130	64.3	7150	63	5530	64.8	3450	67.1	3950	66.5	5060	65.3	7170	64.4
285	6250	65.5	7290	64.3	5640	66.1	3510	68.3	4020	67.7	5150	66.6	7310	65.6
290	6370	66.8	7430	65.5	5750	67.3	3580	69.6	4100	69	5250	67.8	7450	66.9
295	6490	68	7570	66.8	5850	68.6	3640	70.8	4170	70.2	5350	69.1	7590	68.1
300	6610	69.3	7710	68	5960	69.8	3700	72.1	4250	71.5	5440	70.3	7730	69.4

TABLE 10.2 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

SPAN	TRUCK # 13 Wt = 119.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 137.4 kips		TRUCK # 16 Wt = 132.4 kips		TRUCK # 17 Wt = 145.4 kips		TRUCK # 18 Wt = 148 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
5	19.3	0.161	19.3	0.145	18.5	0.135	19.3	0.145	18.5	0.127	22.5	0.152
6	22.5	0.188	22.5	0.17	23.1	0.168	22.5	0.17	23.1	0.159	26.3	0.177
7	27	0.226	27	0.204	26.4	0.192	27	0.204	26.4	0.182	31.5	0.213
8	32.5	0.272	32.5	0.246	31.7	0.231	32.5	0.246	32.5	0.224	35.4	0.239
9	42.3	0.354	42.3	0.319	42.3	0.308	42.3	0.319	42.3	0.291	42.3	0.286
10	52	0.436	52	0.393	51	0.371	52	0.393	52	0.358	52	0.351
11	61.8	0.517	61.8	0.466	61.8	0.449	61.8	0.466	61.8	0.425	61.8	0.417
12	71.5	0.599	71.5	0.54	70.7	0.515	71.5	0.54	71.5	0.492	71.5	0.483
13	81.3	0.681	81.3	0.614	81.3	0.591	81.3	0.614	81.3	0.559	81.3	0.549
14	93.8	0.786	93.8	0.708	92.4	0.672	93.8	0.708	93.8	0.645	93.8	0.634
15	107	0.893	107	0.805	104	0.757	107	0.81	107	0.738	107	0.725
16	119	1	124	0.933	116	0.846	124	0.933	124	0.849	124	0.835
17	132	1.11	139	1.05	130	0.943	140	1.06	140	0.961	140	0.944
18	145	1.22	156	1.18	143	1.04	156	1.18	156	1.07	156	1.05
19	158	1.32	171	1.29	158	1.15	172	1.3	172	1.18	172	1.16
20	171	1.43	189	1.42	172	1.25	189	1.42	189	1.3	189	1.27
21	184	1.54	204	1.54	186	1.36	208	1.57	208	1.43	208	1.4
22	197	1.65	221	1.67	200	1.46	227	1.71	228	1.56	228	1.54
23	210	1.76	237	1.79	215	1.56	250	1.89	250	1.72	250	1.69
24	223	1.86	254	1.91	229	1.66	272	2.05	273	1.88	273	1.84
25	236	1.97	269	2.03	243	1.77	296	2.23	296	2.03	296	2
26	252	2.11	286	2.16	257	1.87	318	2.4	319	2.19	319	2.15
27	269	2.25	302	2.28	272	1.98	341	2.58	341	2.35	341	2.31
28	286	2.39	319	2.41	289	2.1	363	2.74	367	2.52	367	2.48
29	303	2.53	334	2.52	307	2.23	387	2.92	393	2.7	393	2.65

TABLE 10.2 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

10-T2-8

SPAN	TRUCK # 13 Wt = 119.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 137.4 kips		TRUCK # 16 Wt = 132.4 kips		TRUCK # 17 Wt = 145.4 kips		TRUCK # 18 Wt = 148 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
30	319	2.67	351	2.65	325	2.36	409	3.09	419	2.88	419	2.83
31	336	2.82	368	2.78	343	2.5	432	3.26	445	3.06	445	3
32	355	2.98	388	2.93	361	2.63	454	3.43	470	3.24	470	3.18
33	375	3.14	408	3.08	379	2.76	478	3.61	496	3.41	496	3.35
34	394	3.3	430	3.25	397	2.89	500	3.78	522	3.59	522	3.53
35	418	3.5	453	3.42	415	3.02	523	3.95	548	3.77	548	3.7
36	441	3.69	476	3.59	433	3.15	545	4.12	574	3.95	574	3.88
37	465	3.89	501	3.78	453	3.3	569	4.3	600	4.13	600	4.05
38	488	4.08	526	3.97	476	3.46	592	4.47	626	4.31	626	4.23
39	511	4.28	552	4.17	500	3.64	618	4.67	652	4.48	652	4.41
40	534	4.48	578	4.36	525	3.82	644	4.87	679	4.67	678	4.58
41	558	4.67	605	4.57	549	4	674	5.09	709	4.87	704	4.76
42	581	4.87	635	4.79	574	4.18	703	5.31	738	5.07	731	4.94
43	605	5.06	664	5.01	598	4.35	732	5.53	767	5.28	761	5.14
44	628	5.26	693	5.23	623	4.53	761	5.75	796	5.48	790	5.34
45	651	5.45	722	5.45	647	4.71	791	5.97	828	5.7	819	5.54
46	675	5.65	751	5.67	672	4.89	820	6.19	860	5.91	848	5.73
47	698	5.85	780	5.89	697	5.07	849	6.41	893	6.14	878	5.93
48	721	6.04	810	6.11	721	5.25	878	6.63	925	6.36	909	6.15
49	747	6.26	839	6.33	746	5.43	908	6.86	958	6.59	942	6.37
50	774	6.48	868	6.56	770	5.61	937	7.07	990	6.81	974	6.58
51	800	6.7	897	6.77	795	5.79	966	7.3	1020	7.03	1010	6.8
52	827	6.93	926	7	820	5.97	995	7.52	1050	7.25	1040	7.02
53	857	7.18	955	7.22	845	6.15	1020	7.74	1090	7.48	1070	7.24
54	887	7.43	988	7.46	872	6.35	1050	7.96	1120	7.7	1100	7.46

TABLE 10.2 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

SPAN	TRUCK # 13		TRUCK # 14		TRUCK # 15		TRUCK # 16		TRUCK # 17		TRUCK # 18	
	Wt = 119.4 kips		Wt = 132.4 kips		Wt = 137.4 kips		Wt = 132.4 kips		Wt = 145.4 kips		Wt = 148 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
55	917	7.68	1020	7.71	900	6.55	1090	8.2	1150	7.92	1140	7.68
56	946	7.93	1050	7.96	930	6.77	1120	8.45	1180	8.14	1170	7.9
57	976	8.18	1090	8.21	961	7	1150	8.7	1220	8.37	1200	8.12
58	1010	8.43	1120	8.46	993	7.23	1180	8.95	1250	8.61	1230	8.33
59	1040	8.68	1150	8.71	1030	7.47	1220	9.2	1290	8.86	1270	8.56
60	1070	8.92	1190	8.96	1060	7.72	1250	9.45	1320	9.11	1300	8.77
61	1100	9.17	1220	9.21	1090	7.97	1280	9.69	1360	9.36	1330	8.99
62	1130	9.42	1250	9.46	1130	8.21	1320	9.94	1400	9.61	1360	9.21
63	1160	9.67	1290	9.71	1160	8.46	1350	10.2	1430	9.86	1400	9.43
64	1180	9.92	1320	9.96	1200	8.71	1380	10.4	1470	10.1	1430	9.67
65	1210	10.2	1350	10.2	1230	8.96	1420	10.7	1510	10.4	1470	9.92
66	1240	10.4	1380	10.5	1260	9.2	1450	10.9	1540	10.6	1500	10.2
67	1270	10.7	1420	10.7	1300	9.45	1480	11.2	1580	10.9	1540	10.4
68	1300	10.9	1450	11	1330	9.7	1510	11.4	1620	11.1	1580	10.7
69	1330	11.2	1480	11.2	1370	9.95	1550	11.7	1650	11.4	1620	10.9
70	1360	11.4	1520	11.5	1400	10.2	1580	11.9	1690	11.6	1650	11.2
71	1390	11.7	1550	11.7	1440	10.5	1610	12.2	1720	11.9	1690	11.4
72	1420	11.9	1580	11.9	1470	10.7	1650	12.4	1760	12.1	1730	11.7
73	1450	12.2	1620	12.2	1500	10.9	1680	12.7	1800	12.4	1760	11.9
74	1480	12.4	1650	12.4	1540	11.2	1710	12.9	1830	12.6	1800	12.2
75	1510	12.7	1680	12.7	1570	11.4	1740	13.2	1870	12.9	1840	12.4
76	1540	12.9	1710	12.9	1610	11.7	1780	13.4	1910	13.1	1870	12.7
77	1570	13.2	1750	13.2	1640	11.9	1810	13.7	1940	13.4	1910	12.9
78	1600	13.4	1780	13.4	1680	12.2	1840	13.9	1980	13.6	1950	13.2
79	1630	13.7	1810	13.7	1710	12.4	1880	14.2	2010	13.9	1980	13.4

TABLE 10.2 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

10-T2-10

SPAN	TRUCK # 13 Wt = 119.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 137.4 kips		TRUCK # 16 Wt = 132.4 kips		TRUCK # 17 Wt = 145.4 kips		TRUCK # 18 Wt = 148 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
80	1660	13.9	1850	13.9	1740	12.7	1910	14.4	2050	14.1	2020	13.7
81	1690	14.2	1880	14.2	1780	12.9	1940	14.7	2090	14.4	2060	13.9
82	1720	14.4	1910	14.4	1810	13.2	1980	14.9	2120	14.6	2100	14.2
83	1750	14.7	1950	14.7	1850	13.4	2010	15.2	2160	14.9	2130	14.4
84	1780	14.9	1980	14.9	1880	13.7	2040	15.4	2200	15.1	2170	14.7
85	1810	15.2	2010	15.2	1920	13.9	2070	15.7	2230	15.4	2210	14.9
86	1840	15.4	2040	15.4	1950	14.2	2110	15.9	2270	15.6	2240	15.2
87	1870	15.7	2080	15.7	1980	14.4	2140	16.2	2310	15.9	2280	15.4
88	1900	15.9	2110	15.9	2020	14.7	2170	16.4	2340	16.1	2320	15.7
89	1930	16.2	2140	16.2	2050	14.9	2210	16.7	2380	16.4	2350	15.9
90	1960	16.4	2180	16.4	2090	15.2	2240	16.9	2410	16.6	2390	16.2
91	1990	16.7	2210	16.7	2120	15.4	2270	17.2	2450	16.9	2430	16.4
92	2020	16.9	2240	16.9	2160	15.7	2310	17.4	2490	17.1	2460	16.7
93	2050	17.2	2280	17.2	2190	15.9	2340	17.7	2520	17.4	2500	16.9
94	2080	17.4	2310	17.4	2220	16.2	2370	17.9	2560	17.6	2540	17.2
95	2110	17.7	2340	17.7	2260	16.4	2410	18.2	2600	17.9	2580	17.4
96	2140	17.9	2380	17.9	2290	16.7	2440	18.4	2630	18.1	2610	17.7
97	2170	18.2	2410	18.2	2330	16.9	2470	18.7	2670	18.4	2650	17.9
98	2200	18.4	2440	18.4	2360	17.2	2500	18.9	2700	18.6	2690	18.1
99	2230	18.7	2470	18.7	2400	17.4	2540	19.2	2740	18.9	2720	18.4
100	2260	18.9	2510	18.9	2430	17.7	2570	19.4	2780	19.1	2760	18.6
101	2290	19.2	2540	19.2	2460	17.9	2600	19.7	2810	19.4	2800	18.9
102	2320	19.4	2570	19.4	2500	18.2	2640	19.9	2850	19.6	2830	19.1
103	2350	19.7	2610	19.7	2530	18.4	2670	20.2	2890	19.9	2870	19.4
104	2380	19.9	2640	19.9	2570	18.7	2700	20.4	2920	20.1	2910	19.6

TABLE 10.2 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

10-T2-11

SPAN	TRUCK # 13 Wt = 119.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 137.4 kips		TRUCK # 16 Wt = 132.4 kips		TRUCK # 17 Wt = 145.4 kips		TRUCK # 18 Wt = 148 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
105	2410	20.2	2670	20.2	2600	18.9	2740	20.7	2960	20.4	2940	19.9
106	2440	20.4	2710	20.4	2640	19.2	2770	20.9	3000	20.6	2980	20.1
107	2470	20.7	2740	20.7	2670	19.4	2800	21.2	3030	20.9	3020	20.4
108	2500	20.9	2770	20.9	2700	19.7	2830	21.4	3070	21.1	3060	20.6
109	2530	21.2	2800	21.2	2740	19.9	2870	21.7	3100	21.4	3090	20.9
110	2560	21.4	2840	21.4	2770	20.2	2900	21.9	3140	21.6	3130	21.1
111	2590	21.7	2870	21.7	2810	20.4	2930	22.2	3180	21.9	3170	21.4
112	2620	21.9	2900	21.9	2840	20.7	2970	22.4	3210	22.1	3200	21.6
113	2650	22.2	2940	22.2	2880	20.9	3000	22.7	3250	22.4	3240	21.9
114	2680	22.4	2970	22.4	2910	21.2	3030	22.9	3290	22.6	3280	22.1
115	2710	22.7	3000	22.7	2950	21.4	3070	23.2	3320	22.8	3310	22.4
116	2740	22.9	3040	22.9	2980	21.7	3100	23.4	3360	23.1	3350	22.6
117	2770	23.2	3070	23.2	3010	21.9	3130	23.7	3400	23.3	3390	22.9
118	2800	23.4	3100	23.4	3050	22.2	3170	23.9	3430	23.6	3430	23.1
119	2830	23.7	3140	23.7	3080	22.4	3200	24.2	3470	23.8	3460	23.4
120	2850	23.9	3170	23.9	3120	22.7	3230	24.4	3500	24.1	3500	23.6
121	2880	24.2	3200	24.2	3150	22.9	3260	24.7	3540	24.3	3540	23.9
122	2910	24.4	3230	24.4	3190	23.2	3300	24.9	3580	24.6	3570	24.1
123	2940	24.7	3270	24.7	3220	23.4	3330	25.2	3610	24.8	3610	24.4
124	2970	24.9	3300	24.9	3250	23.7	3360	25.4	3650	25.1	3650	24.6
125	3000	25.2	3330	25.2	3290	23.9	3400	25.7	3690	25.3	3680	24.9
126	3030	25.4	3370	25.4	3320	24.2	3430	25.9	3720	25.6	3720	25.1
127	3060	25.7	3400	25.7	3360	24.4	3460	26.2	3760	25.8	3760	25.4
128	3090	25.9	3430	25.9	3390	24.7	3500	26.4	3790	26.1	3800	25.6
129	3120	26.2	3470	26.2	3430	24.9	3530	26.7	3830	26.3	3830	25.9

TABLE 10.2 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

SPAN	TRUCK # 13 Wt = 119.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 137.4 kips		TRUCK # 16 Wt = 132.4 kips		TRUCK # 17 Wt = 145.4 kips		TRUCK # 18 Wt = 148 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
130	3150	26.4	3500	26.4	3460	25.2	3560	26.9	3870	26.6	3870	26.1
131	3180	26.7	3530	26.7	3490	25.4	3590	27.2	3900	26.8	3910	26.4
132	3210	26.9	3570	26.9	3530	25.7	3630	27.4	3940	27.1	3940	26.6
133	3240	27.2	3600	27.2	3560	25.9	3660	27.7	3980	27.3	3980	26.9
134	3270	27.4	3630	27.4	3600	26.2	3690	27.9	4010	27.6	4020	27.1
135	3300	27.7	3660	27.7	3630	26.4	3730	28.2	4050	27.8	4050	27.4
136	3330	27.9	3700	27.9	3670	26.7	3760	28.4	4090	28.1	4090	27.6
137	3360	28.2	3730	28.2	3700	26.9	3790	28.7	4120	28.3	4130	27.9
138	3390	28.4	3760	28.4	3730	27.2	3830	28.9	4160	28.6	4160	28.1
139	3420	28.7	3800	28.7	3770	27.4	3860	29.2	4190	28.8	4200	28.4
140	3450	28.9	3830	28.9	3800	27.7	3890	29.4	4230	29.1	4240	28.6
141	3480	29.2	3860	29.2	3840	27.9	3930	29.6	4270	29.3	4280	28.9
142	3510	29.4	3900	29.4	3870	28.2	3960	29.9	4300	29.6	4310	29.1
143	3540	29.7	3930	29.7	3910	28.4	3990	30.1	4340	29.8	4350	29.4
144	3570	29.9	3960	29.9	3940	28.7	4020	30.4	4380	30.1	4390	29.6
145	3600	30.2	4000	30.2	3970	28.9	4060	30.6	4410	30.3	4420	29.9
146	3630	30.4	4030	30.4	4010	29.2	4090	30.9	4450	30.6	4460	30.1
147	3660	30.7	4060	30.7	4040	29.4	4120	31.1	4490	30.8	4500	30.4
148	3690	30.9	4090	30.9	4080	29.7	4160	31.4	4520	31.1	4530	30.6
149	3720	31.2	4130	31.2	4110	29.9	4190	31.6	4560	31.3	4570	30.9
150	3750	31.4	4160	31.4	4150	30.2	4220	31.9	4590	31.6	4610	31.1
155	3900	32.7	4330	32.7	4320	31.4	4390	33.1	4780	32.8	4790	32.4
160	4050	33.9	4490	33.9	4490	32.7	4550	34.4	4960	34.1	4980	33.6
165	4200	35.2	4660	35.2	4660	33.9	4720	35.6	5140	35.3	5160	34.9
170	4350	36.4	4820	36.4	4830	35.2	4890	36.9	5320	36.6	5350	36.1

TABLE 10.2 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

10-T2-13

SPAN	TRUCK # 13 Wt = 119.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 137.4 kips		TRUCK # 16 Wt = 132.4 kips		TRUCK # 17 Wt = 145.4 kips		TRUCK # 18 Wt = 148 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
	175	4500	37.7	4990	37.7	5000	36.4	5050	38.1	5500	37.8	5530
180	4650	38.9	5150	38.9	5180	37.7	5220	39.4	5680	39.1	5720	38.6
185	4790	40.2	5320	40.2	5350	38.9	5380	40.6	5870	40.3	5900	39.9
190	4940	41.4	5480	41.4	5520	40.2	5550	41.9	6050	41.6	6090	41.1
195	5090	42.7	5650	42.7	5690	41.4	5710	43.1	6230	42.8	6270	42.4
200	5240	43.9	5820	43.9	5860	42.7	5880	44.4	6410	44.1	6460	43.6
205	5390	45.2	5980	45.2	6030	43.9	6040	45.6	6590	45.3	6640	44.9
210	5540	46.4	6150	46.4	6210	45.2	6210	46.9	6770	46.6	6830	46.1
215	5690	47.7	6310	47.7	6380	46.4	6370	48.1	6960	47.8	7010	47.4
220	5840	48.9	6480	48.9	6550	47.7	6540	49.4	7140	49.1	7200	48.6
225	5990	50.2	6640	50.2	6720	48.9	6710	50.6	7320	50.3	7380	49.9
230	6140	51.4	6810	51.4	6890	50.2	6870	51.9	7500	51.6	7570	51.1
235	6290	52.7	6970	52.7	7070	51.4	7040	53.1	7680	52.8	7750	52.4
240	6440	53.9	7140	53.9	7240	52.7	7200	54.4	7870	54.1	7940	53.6
245	6590	55.2	7300	55.2	7410	53.9	7370	55.6	8050	55.3	8120	54.9
250	6730	56.4	7470	56.4	7580	55.2	7530	56.9	8230	56.6	8310	56.1
255	6880	57.7	7640	57.7	7750	56.4	7700	58.1	8410	57.8	8490	57.4
260	7030	58.9	7800	58.9	7920	57.7	7860	59.4	8590	59.1	8680	58.6
265	7180	60.2	7970	60.2	8100	58.9	8030	60.6	8770	60.3	8860	59.9
270	7330	61.4	8130	61.4	8270	60.2	8200	61.9	8960	61.6	9050	61.1
275	7480	62.7	8300	62.7	8440	61.4	8360	63.1	9140	62.8	9230	62.4
280	7630	63.9	8460	63.9	8610	62.7	8530	64.4	9320	64.1	9420	63.6
285	7780	65.2	8630	65.2	8780	63.9	8690	65.6	9500	65.3	9600	64.9
290	7930	66.4	8790	66.4	8950	65.2	8860	66.9	9680	66.6	9790	66.1
295	8080	67.7	8960	67.7	9130	66.4	9020	68.1	9860	67.8	9970	67.4
300	8230	68.9	9120	68.9	9300	67.7	9190	69.4	10000	69.1	10200	68.6

TABLE 10.2 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Moments

10-T2-14

SPAN	TRUCK # 19 Wt = 111.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 145.4 kips		TRUCK # 22 Wt = 155.4 kips		TRUCK # 23 Wt = 148 kips		TRUCK # 24 Wt = 116 kips		TRUCK # 25 Wt = 158 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
5	22.5	0.202	21.6	0.247	18.5	0.127	22.5	0.145	21.6	0.146	21.6	0.186	21.6	0.137
6	26.3	0.236	27	0.309	23.1	0.159	26.3	0.169	27	0.182	27	0.233	27	0.171
7	31.5	0.283	30.9	0.353	26.4	0.182	31.5	0.203	30.9	0.209	30.9	0.266	30.9	0.195
8	35.4	0.318	36	0.412	32.5	0.224	35.4	0.228	36	0.243	36	0.31	36	0.228
9	40.5	0.364	40	0.458	42.3	0.291	42.3	0.272	42.3	0.286	40	0.345	42.3	0.267
10	44.6	0.4	45	0.515	52	0.358	52	0.335	52	0.351	45	0.388	52	0.329
11	50.5	0.454	49.1	0.562	61.8	0.425	61.8	0.397	61.8	0.417	49.1	0.423	61.8	0.391
12	56.9	0.511	54	0.618	71.5	0.492	71.5	0.46	71.5	0.483	54.2	0.467	71.5	0.453
13	63.3	0.568	58.2	0.665	81.3	0.559	81.3	0.523	81.3	0.549	60	0.517	81.3	0.514
14	69.6	0.625	63	0.721	91	0.626	93.8	0.604	91	0.615	66.9	0.576	93.8	0.594
15	76.1	0.683	67.2	0.769	101	0.693	107	0.686	101	0.681	72.8	0.628	107	0.675
16	82.5	0.74	74.3	0.85	111	0.76	119	0.769	111	0.747	79.6	0.686	119	0.756
17	88.9	0.798	82.6	0.945	120	0.827	132	0.851	124	0.836	85.6	0.738	132	0.837
18	98.5	0.884	91	1.04	130	0.894	145	0.934	137	0.922	94.7	0.816	145	0.919
19	109	0.979	99.5	1.14	140	0.961	158	1.02	153	1.03	105	0.909	159	1.01
20	120	1.08	108	1.24	150	1.03	171	1.1	169	1.14	116	1	175	1.11
21	131	1.17	121	1.38	159	1.1	184	1.18	185	1.25	127	1.1	192	1.21
22	142	1.27	135	1.54	169	1.16	197	1.27	202	1.36	138	1.19	208	1.32
23	152	1.37	148	1.69	179	1.23	210	1.35	218	1.47	149	1.28	224	1.42
24	163	1.47	162	1.85	191	1.31	223	1.43	234	1.58	162	1.4	242	1.53
25	174	1.56	175	2	203	1.4	236	1.52	250	1.69	175	1.51	261	1.65
26	186	1.67	189	2.16	218	1.5	254	1.63	267	1.8	189	1.63	280	1.77
27	200	1.79	202	2.31	234	1.61	271	1.74	283	1.91	202	1.74	300	1.9
28	215	1.93	216	2.47	250	1.72	289	1.86	302	2.04	216	1.86	319	2.02
29	232	2.08	229	2.62	266	1.83	306	1.97	324	2.19	229	1.97	339	2.14

10-T3-1

TABLE 10.3
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Moments

10-T3-2

SPAN	TRUCK # 19 Wt = 111.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 145.4 kips		TRUCK # 22 Wt = 155.4 kips		TRUCK # 23 Wt = 148 kips		TRUCK # 24 Wt = 116 kips		TRUCK # 25 Wt = 158 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
30	250	2.24	243	2.78	282	1.94	324	2.08	348	2.35	243	2.1	358	2.26
31	267	2.4	256	2.93	298	2.05	341	2.19	370	2.5	258	2.22	377	2.39
32	285	2.56	270	3.09	316	2.17	359	2.31	394	2.66	274	2.36	397	2.51
33	302	2.71	283	3.24	336	2.31	378	2.43	419	2.83	289	2.49	416	2.63
34	320	2.87	299	3.42	358	2.46	398	2.56	445	3.01	305	2.63	435	2.76
35	337	3.03	316	3.62	380	2.61	420	2.7	471	3.18	320	2.76	458	2.9
36	355	3.19	334	3.82	403	2.77	443	2.85	497	3.36	337	2.91	481	3.04
37	372	3.34	352	4.02	425	2.92	468	3.01	523	3.53	357	3.08	504	3.19
38	390	3.5	369	4.23	449	3.08	491	3.16	549	3.71	377	3.25	526	3.33
39	407	3.66	390	4.46	471	3.24	516	3.32	575	3.88	397	3.42	549	3.48
40	425	3.82	411	4.71	494	3.4	539	3.47	601	4.06	417	3.59	574	3.63
41	445	3.99	433	4.96	516	3.55	564	3.63	626	4.23	437	3.77	599	3.79
42	466	4.19	455	5.21	540	3.71	587	3.78	653	4.41	459	3.96	626	3.96
43	490	4.4	477	5.46	562	3.86	612	3.94	678	4.58	481	4.15	651	4.12
44	514	4.62	499	5.71	585	4.02	635	4.09	705	4.76	504	4.34	678	4.29
45	538	4.83	521	5.96	607	4.18	660	4.25	732	4.94	526	4.53	708	4.48
46	562	5.05	543	6.21	631	4.34	683	4.4	761	5.14	549	4.73	739	4.67
47	586	5.26	564	6.46	653	4.49	712	4.58	790	5.34	571	4.92	769	4.87
48	610	5.47	586	6.71	676	4.65	740	4.76	820	5.54	594	5.12	800	5.06
49	634	5.69	608	6.96	702	4.83	769	4.95	849	5.74	618	5.33	830	5.25
50	658	5.9	630	7.21	728	5.01	797	5.13	880	5.94	643	5.54	861	5.45
51	682	6.13	652	7.46	755	5.19	826	5.31	912	6.16	667	5.75	891	5.64
52	711	6.38	674	7.71	783	5.39	854	5.5	944	6.38	692	5.96	922	5.83
53	738	6.63	695	7.96	812	5.59	883	5.68	977	6.6	716	6.17	952	6.02
54	766	6.88	717	8.21	844	5.81	911	5.86	1010	6.82	742	6.4	983	6.22

TABLE 10.3 (Continued)
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Moments

10-T3-3

SPAN	TRUCK # 19 Wt = 111.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 145.4 kips		TRUCK # 22 Wt = 155.4 kips		TRUCK # 23 Wt = 148 kips		TRUCK # 24 Wt = 116 kips		TRUCK # 25 Wt = 158 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
55	794	7.13	739	8.46	876	6.02	942	6.06	1040	7.04	771	6.65	1010	6.41
56	822	7.38	761	8.71	909	6.25	974	6.27	1070	7.25	800	6.9	1040	6.6
57	849	7.63	783	8.96	940	6.47	1010	6.47	1110	7.47	829	7.15	1070	6.8
58	878	7.88	805	9.21	973	6.69	1040	6.68	1140	7.69	858	7.4	1110	7.02
59	905	8.13	827	9.46	1000	6.91	1070	6.89	1170	7.91	887	7.65	1140	7.24
60	933	8.38	848	9.71	1040	7.14	1100	7.1	1200	8.13	916	7.9	1180	7.46
61	961	8.63	870	9.96	1070	7.38	1140	7.31	1240	8.37	945	8.15	1210	7.68
62	989	8.88	892	10.2	1110	7.63	1170	7.52	1280	8.62	974	8.39	1250	7.9
63	1020	9.13	914	10.5	1150	7.88	1200	7.72	1310	8.87	1000	8.64	1280	8.13
64	1040	9.38	936	10.7	1180	8.13	1230	7.93	1350	9.12	1030	8.89	1320	8.34
65	1070	9.62	958	11	1220	8.38	1270	8.16	1390	9.37	1060	9.14	1350	8.57
66	1100	9.88	980	11.2	1250	8.63	1300	8.39	1420	9.62	1090	9.39	1390	8.82
67	1130	10.1	1000	11.5	1290	8.88	1340	8.63	1460	9.87	1120	9.64	1430	9.07
68	1160	10.4	1020	11.7	1330	9.13	1380	8.88	1500	10.1	1150	9.89	1470	9.32
69	1180	10.6	1050	12	1360	9.38	1420	9.13	1530	10.4	1180	10.1	1510	9.57
70	1210	10.9	1070	12.2	1400	9.63	1460	9.38	1570	10.6	1210	10.4	1550	9.82
71	1240	11.1	1090	12.5	1440	9.88	1500	9.63	1610	10.9	1230	10.6	1590	10.1
72	1270	11.4	1110	12.7	1470	10.1	1530	9.88	1650	11.1	1260	10.9	1630	10.3
73	1290	11.6	1130	13	1510	10.4	1570	10.1	1680	11.4	1290	11.1	1670	10.6
74	1320	11.9	1150	13.2	1550	10.6	1610	10.4	1720	11.6	1320	11.4	1710	10.8
75	1350	12.1	1180	13.5	1580	10.9	1650	10.6	1760	11.9	1350	11.6	1750	11.1
76	1380	12.4	1200	13.7	1620	11.1	1690	10.9	1790	12.1	1380	11.9	1790	11.3
77	1410	12.6	1220	14	1650	11.4	1730	11.1	1830	12.4	1410	12.1	1830	11.6
78	1430	12.9	1240	14.2	1690	11.6	1770	11.4	1870	12.6	1440	12.4	1870	11.8
79	1460	13.1	1260	14.5	1730	11.9	1810	11.6	1900	12.9	1470	12.6	1910	12.1

TABLE 10.3 (Continued)
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Moments

SPAN	TRUCK # 19 Wt = 111.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 145.4 kips		TRUCK # 22 Wt = 155.4 kips		TRUCK # 23 Wt = 148 kips		TRUCK # 24 Wt = 116 kips		TRUCK # 25 Wt = 158 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
80	1490	13.4	1290	14.7	1760	12.1	1850	11.9	1940	13.1	1500	12.9	1950	12.3
81	1520	13.6	1310	15	1800	12.4	1880	12.1	1980	13.4	1520	13.1	1990	12.6
82	1550	13.9	1330	15.2	1840	12.6	1920	12.4	2020	13.6	1550	13.4	2030	12.8
83	1570	14.1	1350	15.5	1870	12.9	1960	12.6	2050	13.9	1580	13.6	2060	13.1
84	1600	14.4	1370	15.7	1910	13.1	2000	12.9	2090	14.1	1610	13.9	2100	13.3
85	1630	14.6	1390	16	1940	13.4	2040	13.1	2130	14.4	1640	14.1	2140	13.6
86	1660	14.9	1420	16.2	1980	13.6	2080	13.4	2160	14.6	1670	14.4	2180	13.8
87	1680	15.1	1440	16.5	2020	13.9	2120	13.6	2200	14.9	1700	14.6	2220	14.1
88	1710	15.4	1460	16.7	2050	14.1	2160	13.9	2240	15.1	1730	14.9	2260	14.3
89	1740	15.6	1480	17	2090	14.4	2200	14.1	2270	15.4	1760	15.1	2300	14.6
90	1770	15.9	1500	17.2	2130	14.6	2230	14.4	2310	15.6	1780	15.4	2340	14.8
91	1800	16.1	1530	17.5	2160	14.9	2270	14.6	2350	15.9	1810	15.6	2380	15.1
92	1820	16.4	1550	17.7	2200	15.1	2310	14.9	2390	16.1	1840	15.9	2420	15.3
93	1850	16.6	1570	18	2240	15.4	2350	15.1	2420	16.4	1870	16.1	2460	15.6
94	1880	16.9	1590	18.2	2270	15.6	2390	15.4	2460	16.6	1900	16.4	2500	15.8
95	1910	17.1	1610	18.5	2310	15.9	2430	15.6	2500	16.9	1930	16.6	2540	16.1
96	1940	17.4	1640	18.7	2340	16.1	2470	15.9	2530	17.1	1960	16.9	2580	16.3
97	1960	17.6	1660	19	2380	16.4	2510	16.1	2570	17.4	1990	17.1	2620	16.6
98	1990	17.9	1680	19.2	2420	16.6	2540	16.4	2610	17.6	2020	17.4	2660	16.8
99	2020	18.1	1700	19.5	2450	16.9	2580	16.6	2640	17.9	2050	17.6	2700	17.1
100	2050	18.4	1720	19.7	2490	17.1	2620	16.9	2680	18.1	2070	17.9	2740	17.3
101	2070	18.6	1740	20	2530	17.4	2660	17.1	2720	18.4	2100	18.1	2780	17.6
102	2100	18.9	1770	20.2	2560	17.6	2700	17.4	2760	18.6	2130	18.4	2820	17.8
103	2130	19.1	1790	20.5	2600	17.9	2740	17.6	2790	18.9	2160	18.6	2850	18.1
104	2160	19.4	1810	20.7	2640	18.1	2780	17.9	2830	19.1	2190	18.9	2890	18.3

TABLE 10.3 (Continued)
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Moments

10-T3-4

10-T3-5

SPAN	TRUCK # 19 Wt = 111.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 145.4 kips		TRUCK # 22 Wt = 155.4 kips		TRUCK # 23 Wt = 148 kips		TRUCK # 24 Wt = 116 kips		TRUCK # 25 Wt = 158 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
105	2190	19.6	1830	21	2670	18.4	2820	18.1	2870	19.4	2220	19.1	2930	18.6
106	2210	19.9	1850	21.2	2710	18.6	2850	18.4	2900	19.6	2250	19.4	2970	18.8
107	2240	20.1	1880	21.5	2740	18.9	2890	18.6	2940	19.9	2280	19.6	3010	19.1
108	2270	20.4	1900	21.7	2780	19.1	2930	18.9	2980	20.1	2310	19.9	3050	19.3
109	2300	20.6	1920	22	2820	19.4	2970	19.1	3010	20.4	2340	20.1	3090	19.6
110	2330	20.9	1940	22.2	2850	19.6	3010	19.4	3050	20.6	2360	20.4	3130	19.8
111	2350	21.1	1960	22.5	2890	19.9	3050	19.6	3090	20.9	2390	20.6	3170	20.1
112	2380	21.4	1980	22.7	2930	20.1	3090	19.9	3130	21.1	2420	20.9	3210	20.3
113	2410	21.6	2010	23	2960	20.4	3130	20.1	3160	21.4	2450	21.1	3250	20.6
114	2440	21.9	2030	23.2	3000	20.6	3170	20.4	3200	21.6	2480	21.4	3290	20.8
115	2460	22.1	2050	23.5	3040	20.9	3200	20.6	3240	21.9	2510	21.6	3330	21.1
116	2490	22.4	2070	23.7	3070	21.1	3240	20.9	3270	22.1	2540	21.9	3370	21.3
117	2520	22.6	2090	24	3110	21.4	3280	21.1	3310	22.4	2570	22.1	3410	21.6
118	2550	22.9	2120	24.2	3140	21.6	3320	21.4	3350	22.6	2600	22.4	3450	21.8
119	2580	23.1	2140	24.5	3180	21.9	3360	21.6	3380	22.9	2630	22.6	3490	22.1
120	2600	23.4	2160	24.7	3220	22.1	3400	21.9	3420	23.1	2650	22.9	3530	22.3
121	2630	23.6	2180	25	3250	22.4	3440	22.1	3460	23.4	2680	23.1	3570	22.6
122	2660	23.9	2200	25.2	3290	22.6	3480	22.4	3500	23.6	2710	23.4	3610	22.8
123	2690	24.1	2220	25.5	3330	22.9	3510	22.6	3530	23.9	2740	23.6	3640	23.1
124	2720	24.4	2250	25.7	3360	23.1	3550	22.9	3570	24.1	2770	23.9	3680	23.3
125	2740	24.6	2270	26	3400	23.4	3590	23.1	3610	24.4	2800	24.1	3720	23.6
126	2770	24.9	2290	26.2	3430	23.6	3630	23.4	3640	24.6	2830	24.4	3760	23.8
127	2800	25.1	2310	26.5	3470	23.9	3670	23.6	3680	24.9	2860	24.6	3800	24.1
128	2830	25.4	2330	26.7	3510	24.1	3710	23.9	3720	25.1	2890	24.9	3840	24.3
129	2850	25.6	2360	27	3540	24.4	3750	24.1	3750	25.4	2920	25.1	3880	24.6

TABLE 10.3 (Continued)
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Moments

10-T3-6

SPAN	TRUCK # 19		TRUCK # 20		TRUCK # 21		TRUCK # 22		TRUCK # 23		TRUCK # 24		TRUCK # 25	
	Wt = 111.4 kips		Wt = 87.4 kips		Wt = 145.4 kips		Wt = 155.4 kips		Wt = 148 kips		Wt = 116 kips		Wt = 158 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
130	2880	25.9	2380	27.2	3580	24.6	3790	24.4	3790	25.6	2940	25.4	3920	24.8
131	2910	26.1	2400	27.5	3620	24.9	3830	24.6	3830	25.9	2970	25.6	3960	25.1
132	2940	26.4	2420	27.7	3650	25.1	3860	24.9	3870	26.1	3000	25.9	4000	25.3
133	2970	26.6	2440	28	3690	25.4	3900	25.1	3900	26.4	3030	26.1	4040	25.6
134	2990	26.9	2470	28.2	3730	25.6	3940	25.4	3940	26.6	3060	26.4	4080	25.8
135	3020	27.1	2490	28.5	3760	25.9	3980	25.6	3980	26.9	3090	26.6	4120	26.1
136	3050	27.4	2510	28.7	3800	26.1	4020	25.9	4010	27.1	3120	26.9	4160	26.3
137	3080	27.6	2530	29	3830	26.4	4060	26.1	4050	27.4	3150	27.1	4200	26.6
138	3110	27.9	2550	29.2	3870	26.6	4100	26.4	4090	27.6	3180	27.4	4240	26.8
139	3130	28.1	2570	29.5	3910	26.9	4140	26.6	4120	27.9	3210	27.6	4280	27.1
140	3160	28.4	2600	29.7	3940	27.1	4170	26.9	4160	28.1	3230	27.9	4320	27.3
141	3190	28.6	2620	30	3980	27.4	4210	27.1	4200	28.4	3260	28.1	4360	27.6
142	3220	28.9	2640	30.2	4020	27.6	4250	27.4	4240	28.6	3290	28.4	4400	27.8
143	3240	29.1	2660	30.5	4050	27.9	4290	27.6	4270	28.9	3320	28.6	4430	28.1
144	3270	29.4	2680	30.7	4090	28.1	4330	27.9	4310	29.1	3350	28.9	4470	28.3
145	3300	29.6	2710	31	4130	28.4	4370	28.1	4350	29.4	3380	29.1	4510	28.6
146	3330	29.9	2730	31.2	4160	28.6	4410	28.4	4380	29.6	3410	29.4	4550	28.8
147	3360	30.1	2750	31.5	4200	28.9	4450	28.6	4420	29.9	3440	29.6	4590	29.1
148	3380	30.4	2770	31.7	4230	29.1	4490	28.9	4460	30.1	3470	29.9	4630	29.3
149	3410	30.6	2790	32	4270	29.4	4520	29.1	4490	30.4	3500	30.1	4670	29.6
150	3440	30.9	2810	32.2	4310	29.6	4560	29.4	4530	30.6	3520	30.4	4710	29.8
155	3580	32.1	2920	33.5	4490	30.9	4760	30.6	4720	31.9	3670	31.6	4910	31.1
160	3720	33.4	3030	34.7	4670	32.1	4950	31.9	4900	33.1	3810	32.9	5110	32.3
165	3860	34.6	3140	36	4850	33.4	5150	33.1	5090	34.4	3960	34.1	5300	33.6
170	4000	35.9	3250	37.2	5030	34.6	5340	34.4	5270	35.6	4100	35.4	5500	34.8

TABLE 10.3 (Continued)
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Moments

10-T3-7

SPAN	TRUCK # 19 Wt = 111.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 145.4 kips		TRUCK # 22 Wt = 155.4 kips		TRUCK # 23 Wt = 148 kips		TRUCK # 24 Wt = 116 kips		TRUCK # 25 Wt = 158 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
175	4140	37.1	3360	38.5	5220	35.9	5530	35.6	5460	36.9	4250	36.6	5700	36.1
180	4270	38.4	3470	39.7	5400	37.1	5730	36.9	5640	38.1	4390	37.9	5900	37.3
185	4410	39.6	3580	41	5580	38.4	5920	38.1	5830	39.4	4540	39.1	6090	38.6
190	4550	40.9	3690	42.2	5760	39.6	6120	39.4	6010	40.6	4680	40.4	6290	39.8
195	4690	42.1	3800	43.5	5940	40.9	6310	40.6	6200	41.9	4830	41.6	6490	41.1
200	4830	43.4	3910	44.7	6120	42.1	6510	41.9	6380	43.1	4970	42.9	6690	42.3
205	4970	44.6	4020	46	6310	43.4	6700	43.1	6570	44.4	5120	44.1	6880	43.6
210	5110	45.9	4130	47.2	6490	44.6	6890	44.4	6750	45.6	5260	45.4	7080	44.8
215	5250	47.1	4240	48.5	6670	45.9	7090	45.6	6940	46.9	5410	46.6	7280	46.1
220	5390	48.4	4340	49.7	6850	47.1	7280	46.9	7120	48.1	5550	47.9	7480	47.3
225	5530	49.6	4450	51	7030	48.4	7480	48.1	7310	49.4	5700	49.1	7670	48.6
230	5670	50.9	4560	52.2	7220	49.6	7670	49.4	7490	50.6	5840	50.4	7870	49.8
235	5810	52.1	4670	53.5	7400	50.9	7860	50.6	7680	51.9	5990	51.6	8070	51.1
240	5950	53.4	4780	54.7	7580	52.1	8060	51.9	7860	53.1	6130	52.9	8270	52.3
245	6090	54.6	4890	56	7760	53.4	8250	53.1	8050	54.4	6280	54.1	8460	53.6
250	6220	55.9	5000	57.2	7940	54.6	8450	54.4	8230	55.6	6420	55.4	8660	54.8
255	6360	57.1	5110	58.5	8120	55.9	8640	55.6	8420	56.9	6570	56.6	8860	56.1
260	6500	58.4	5220	59.7	8310	57.1	8840	56.9	8600	58.1	6710	57.9	9060	57.3
265	6640	59.6	5330	61	8490	58.4	9030	58.1	8790	59.4	6860	59.1	9250	58.6
270	6780	60.9	5440	62.2	8670	59.6	9220	59.4	8970	60.6	7000	60.4	9450	59.8
275	6920	62.1	5550	63.5	8850	60.9	9420	60.6	9160	61.9	7150	61.6	9650	61.1
280	7060	63.4	5660	64.7	9030	62.1	9610	61.9	9340	63.1	7290	62.9	9850	62.3
285	7200	64.6	5760	66	9210	63.4	9810	63.1	9530	64.4	7440	64.1	10000	63.6
290	7340	65.9	5870	67.2	9400	64.6	10000	64.4	9710	65.6	7580	65.4	10200	64.8
295	7480	67.1	5980	68.5	9580	65.9	10200	65.6	9900	66.9	7730	66.6	10400	66.1
300	7620	68.4	6090	69.7	9760	67.1	10400	66.9	10100	68.1	7870	67.9	10600	67.3

TABLE 10.3 (Continued)
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Moments

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 47.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 84 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
5	21.6	0.647	20	0.422	18.5	0.34	19.3	0.286	19.2	0.229
6	27	0.808	24	0.506	23.1	0.425	22.5	0.333	24	0.286
7	30.9	0.924	31.4	0.663	26.4	0.485	27	0.4	27.4	0.327
8	36	1.08	39	0.823	31.7	0.583	32.5	0.482	36	0.429
9	40	1.2	46.7	0.985	42.3	0.777	42.3	0.627	42.7	0.508
10	45	1.35	54.4	1.15	51	0.938	52	0.772	51.2	0.61
11	49.1	1.47	62.2	1.31	61.8	1.14	61.8	0.916	58.2	0.693
12	54	1.62	70	1.48	70.7	1.3	71.5	1.06	66.7	0.794
13	58.2	1.74	77.8	1.64	81.3	1.49	81.3	1.21	73.8	0.879
14	63	1.89	85.7	1.81	90.3	1.66	93.8	1.39	82.3	0.98
15	67.2	2.01	93.6	1.97	101	1.85	107	1.58	89.6	1.07
16	73.3	2.19	102	2.14	110	2.02	119	1.77	98	1.17
17	80.8	2.42	109	2.31	120	2.21	132	1.96	109	1.29
18	89	2.66	118	2.48	129	2.38	145	2.15	121	1.44
19	96.6	2.89	130	2.74	140	2.57	158	2.35	134	1.6
20	105	3.14	141	2.98	149	2.74	171	2.54	147	1.75
21	113	3.37	153	3.23	159	2.93	184	2.73	160	1.9
22	121	3.62	165	3.48	169	3.1	197	2.92	173	2.05
23	129	3.85	177	3.73	179	3.29	210	3.11	185	2.21
24	137	4.1	188	3.97	192	3.52	223	3.3	198	2.36
25	145	4.34	200	4.23	205	3.77	236	3.5	211	2.51
26	153	4.59	212	4.47	218	4.01	252	3.74	224	2.67
27	161	4.83	224	4.72	232	4.26	269	3.99	237	2.82
28	170	5.08	236	4.97	245	4.5	286	4.24	250	2.97
29	178	5.32	248	5.22	258	4.75	303	4.49	263	3.13

TABLE 10.4
Michigan Legal 1-Unit Truck Designated Loading - Simple Span Moments

10-T4-1

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 47.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 84 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
30	186	5.57	259	5.47	272	5	319	4.74	276	3.28
31	194	5.81	271	5.72	285	5.24	336	4.99	291	3.47
32	202	6.06	283	5.97	299	5.49	353	5.24	308	3.67
33	210	6.3	295	6.22	312	5.74	370	5.49	325	3.87
34	219	6.55	306	6.47	326	5.98	387	5.74	342	4.07
35	227	6.79	318	6.72	339	6.23	403	5.99	361	4.29
36	235	7.04	330	6.96	352	6.48	420	6.24	381	4.53
37	243	7.29	342	7.22	366	6.73	437	6.49	402	4.78
38	252	7.54	354	7.46	379	6.97	454	6.74	422	5.02
39	260	7.78	366	7.72	393	7.22	471	6.98	443	5.27
40	268	8.03	377	7.96	406	7.47	488	7.23	463	5.52
41	276	8.28	389	8.22	420	7.72	504	7.48	484	5.77
42	285	8.53	401	8.46	434	7.97	521	7.73	505	6.01
43	293	8.77	413	8.71	447	8.22	538	7.98	526	6.27
44	301	9.02	425	8.96	461	8.47	555	8.23	547	6.51
45	310	9.27	437	9.21	474	8.72	572	8.48	568	6.77
46	318	9.52	448	9.46	488	8.97	589	8.73	589	7.01
47	326	9.76	460	9.71	501	9.22	605	8.98	610	7.27
48	334	10	472	9.96	515	9.47	622	9.23	631	7.51
49	343	10.3	484	10.2	529	9.72	639	9.48	652	7.77
50	351	10.5	496	10.5	542	9.97	656	9.73	673	8.01
51	359	10.8	508	10.7	556	10.2	673	9.98	694	8.27
52	368	11	519	11	570	10.5	690	10.2	715	8.51
53	376	11.3	531	11.2	583	10.7	706	10.5	736	8.77
54	384	11.5	543	11.5	597	11	723	10.7	757	9.01

TABLE 10.4 (Continued)
Michigan Legal 1-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 1 Wt = 33.4 kips		TRUCK # 2 Wt = 47.4 kips		TRUCK # 3 Wt = 54.4 kips		TRUCK # 4 Wt = 67.4 kips		TRUCK # 5 Wt = 84 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
	55	392	11.8	555	11.7	610	11.2	740	11	778
56	401	12	567	12	624	11.5	757	11.2	799	9.51
57	409	12.2	579	12.2	637	11.7	774	11.5	820	9.77
58	417	12.5	591	12.5	651	12	791	11.7	841	10
59	426	12.7	602	12.7	665	12.2	807	12	862	10.3
60	434	13	614	13	678	12.5	824	12.2	883	10.5
61	442	13.2	626	13.2	692	12.7	841	12.5	904	10.8
62	451	13.5	638	13.5	706	13	858	12.7	925	11
63	459	13.7	650	13.7	719	13.2	875	13	946	11.3
64	467	14	662	14	733	13.5	892	13.2	967	11.5
65	476	14.2	673	14.2	746	13.7	909	13.5	988	11.8
66	484	14.5	685	14.5	760	14	925	13.7	1010	12
67	492	14.7	697	14.7	773	14.2	942	14	1030	12.3
68	501	15	709	15	787	14.5	959	14.2	1050	12.5
69	509	15.2	721	15.2	801	14.7	976	14.5	1070	12.8
70	517	15.5	733	15.5	814	15	993	14.7	1090	13
71	525	15.7	745	15.7	828	15.2	1010	15	1110	13.3
72	534	16	756	16	842	15.5	1030	15.2	1140	13.5
73	542	16.2	768	16.2	855	15.7	1040	15.5	1160	13.8
74	551	16.5	780	16.5	869	16	1060	15.7	1180	14
75	559	16.7	792	16.7	882	16.2	1080	16	1200	14.3
76	567	17	804	17	896	16.5	1090	16.2	1220	14.5
77	575	17.2	816	17.2	909	16.7	1110	16.5	1240	14.8
78	584	17.5	827	17.5	923	17	1130	16.7	1260	15
79	592	17.7	839	17.7	937	17.2	1140	17	1280	15.3

TABLE 10.4 (Continued)
Michigan Legal 1-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 47.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 84 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
80	600	18	851	18	950	17.5	1160	17.2	1300	15.5
81	609	18.2	863	18.2	964	17.7	1180	17.5	1320	15.8
82	617	18.5	875	18.5	978	18	1190	17.7	1350	16
83	625	18.7	887	18.7	991	18.2	1210	18	1370	16.3
84	634	19	898	19	1000	18.5	1230	18.2	1390	16.5
85	642	19.2	910	19.2	1020	18.7	1250	18.5	1410	16.8
86	650	19.5	922	19.5	1030	19	1260	18.7	1430	17
87	659	19.7	934	19.7	1050	19.2	1280	19	1450	17.3
88	667	20	946	20	1060	19.5	1300	19.2	1470	17.5
89	675	20.2	958	20.2	1070	19.7	1310	19.5	1490	17.8
90	684	20.5	970	20.5	1090	20	1330	19.7	1510	18
91	692	20.7	981	20.7	1100	20.2	1350	20	1530	18.3
92	700	21	993	21	1110	20.5	1360	20.2	1560	18.5
93	709	21.2	1010	21.2	1130	20.7	1380	20.5	1580	18.8
94	717	21.5	1020	21.5	1140	21	1400	20.7	1600	19
95	725	21.7	1030	21.7	1150	21.2	1410	21	1620	19.3
96	734	22	1040	22	1170	21.5	1430	21.2	1640	19.5
97	742	22.2	1050	22.2	1180	21.7	1450	21.5	1660	19.8
98	750	22.5	1060	22.5	1200	22	1460	21.7	1680	20
99	759	22.7	1080	22.7	1210	22.2	1480	22	1700	20.3
100	767	23	1090	23	1220	22.5	1500	22.2	1720	20.5
101	775	23.2	1100	23.2	1240	22.7	1510	22.5	1740	20.8
102	784	23.5	1110	23.5	1250	23	1530	22.7	1770	21
103	792	23.7	1120	23.7	1260	23.2	1550	23	1790	21.3
104	800	24	1140	24	1280	23.5	1570	23.2	1810	21.5

TABLE 10.4 (Continued)
Michigan Legal 1-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 47.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 84 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
105	809	24.2	1150	24.2	1290	23.7	1580	23.5	1830	21.8
106	817	24.5	1160	24.5	1300	24	1600	23.7	1850	22
107	825	24.7	1170	24.7	1320	24.2	1620	24	1870	22.3
108	834	25	1180	25	1330	24.5	1630	24.2	1890	22.5
109	842	25.2	1190	25.2	1340	24.7	1650	24.5	1910	22.8
110	851	25.5	1210	25.5	1360	25	1670	24.7	1930	23
111	859	25.7	1220	25.7	1370	25.2	1680	25	1950	23.3
112	867	26	1230	26	1390	25.5	1700	25.2	1980	23.5
113	875	26.2	1240	26.2	1400	25.7	1720	25.5	2000	23.8
114	884	26.5	1250	26.5	1410	26	1730	25.7	2020	24
115	892	26.7	1270	26.7	1430	26.2	1750	26	2040	24.3
116	901	27	1280	27	1440	26.5	1770	26.2	2060	24.5
117	909	27.2	1290	27.2	1450	26.7	1780	26.5	2080	24.8
118	917	27.5	1300	27.5	1470	27	1800	26.7	2100	25
119	926	27.7	1310	27.7	1480	27.2	1820	27	2120	25.3
120	934	28	1320	28	1490	27.5	1840	27.2	2140	25.5
121	942	28.2	1340	28.2	1510	27.7	1850	27.5	2160	25.8
122	951	28.5	1350	28.5	1520	28	1870	27.7	2190	26
123	959	28.7	1360	28.7	1540	28.2	1890	28	2210	26.3
124	967	29	1370	29	1550	28.5	1900	28.2	2230	26.5
125	976	29.2	1380	29.2	1560	28.7	1920	28.5	2250	26.8
126	984	29.5	1400	29.5	1580	29	1940	28.7	2270	27
127	992	29.7	1410	29.7	1590	29.2	1950	29	2290	27.3
128	1000	30	1420	30	1600	29.5	1970	29.2	2310	27.5
129	1010	30.2	1430	30.2	1620	29.7	1990	29.5	2330	27.8

TABLE 10.4 (Continued)
Michigan Legal 1-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 47.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 84 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
130	1020	30.5	1440	30.5	1630	30	2000	29.7	2350	28
131	1030	30.7	1460	30.7	1640	30.2	2020	30	2370	28.3
132	1030	31	1470	31	1660	30.5	2040	30.2	2400	28.5
133	1040	31.2	1480	31.2	1670	30.7	2050	30.5	2420	28.8
134	1050	31.5	1490	31.5	1680	31	2070	30.7	2440	29
135	1060	31.7	1500	31.7	1700	31.2	2090	31	2460	29.3
136	1070	32	1510	32	1710	31.5	2100	31.2	2480	29.5
137	1080	32.2	1530	32.2	1730	31.7	2120	31.5	2500	29.8
138	1080	32.5	1540	32.5	1740	32	2140	31.7	2520	30
139	1090	32.7	1550	32.7	1750	32.2	2160	32	2540	30.3
140	1100	33	1560	33	1770	32.5	2170	32.2	2560	30.5
141	1110	33.2	1570	33.2	1780	32.7	2190	32.5	2580	30.8
142	1120	33.5	1590	33.5	1790	33	2210	32.7	2610	31
143	1130	33.7	1600	33.7	1810	33.2	2220	33	2630	31.3
144	1130	34	1610	34	1820	33.5	2240	33.2	2650	31.5
145	1140	34.2	1620	34.2	1830	33.7	2260	33.5	2670	31.8
146	1150	34.5	1630	34.5	1850	34	2270	33.7	2690	32
147	1160	34.7	1640	34.7	1860	34.2	2290	34	2710	32.3
148	1170	35	1660	35	1880	34.5	2310	34.2	2730	32.5
149	1180	35.2	1670	35.2	1890	34.7	2320	34.5	2750	32.8
150	1180	35.5	1680	35.5	1900	35	2340	34.7	2770	33
155	1230	36.7	1740	36.7	1970	36.2	2420	36	2880	34.3
160	1270	38	1800	38	2040	37.5	2510	37.2	2980	35.5
165	1310	39.2	1860	39.2	2110	38.7	2590	38.5	3090	36.8
170	1350	40.5	1920	40.5	2170	40	2680	39.7	3190	38

TABLE 10.4 (Continued)
Michigan Legal 1-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 1 Wt = 33.4 kips		TRUCK # 2 Wt = 47.4 kips		TRUCK # 3 Wt = 54.4 kips		TRUCK # 4 Wt = 67.4 kips		TRUCK # 5 Wt = 84 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
175	1390	41.7	1980	41.7	2240	41.2	2760	41	3300	39.3
180	1430	42.9	2040	43	2310	42.5	2850	42.2	3400	40.5
185	1480	44.2	2100	44.2	2380	43.7	2930	43.5	3510	41.8
190	1520	45.4	2150	45.5	2450	45	3010	44.7	3610	43
195	1560	46.7	2210	46.7	2510	46.2	3100	46	3720	44.3
200	1600	47.9	2270	48	2580	47.5	3180	47.2	3820	45.5
205	1640	49.2	2330	49.2	2650	48.7	3270	48.5	3930	46.8
210	1680	50.4	2390	50.5	2720	50	3350	49.7	4030	48
215	1730	51.7	2450	51.7	2790	51.2	3440	51	4140	49.3
220	1770	52.9	2510	53	2850	52.5	3520	52.2	4240	50.5
225	1810	54.2	2570	54.2	2920	53.7	3600	53.5	4350	51.8
230	1850	55.4	2630	55.5	2990	55	3690	54.7	4450	53
235	1890	56.7	2690	56.7	3060	56.2	3770	56	4560	54.3
240	1940	57.9	2750	57.9	3130	57.5	3860	57.2	4660	55.5
245	1980	59.2	2810	59.2	3190	58.7	3940	58.5	4770	56.8
250	2020	60.4	2870	60.4	3260	60	4030	59.7	4870	58
255	2060	61.7	2920	61.7	3330	61.2	4110	61	4980	59.3
260	2100	62.9	2980	62.9	3400	62.5	4190	62.2	5080	60.5
265	2140	64.2	3040	64.2	3470	63.7	4280	63.5	5190	61.8
270	2190	65.4	3100	65.4	3530	65	4360	64.7	5290	63
275	2230	66.7	3160	66.7	3600	66.2	4450	66	5400	64.3
280	2270	67.9	3220	67.9	3670	67.5	4530	67.2	5500	65.5
285	2310	69.2	3280	69.2	3740	68.7	4620	68.5	5610	66.8
290	2350	70.4	3340	70.4	3810	70	4700	69.7	5710	68
295	2390	71.7	3400	71.7	3870	71.2	4780	71	5820	69.3
300	2440	72.9	3460	72.9	3940	72.5	4870	72.2	5920	70.5

TABLE 10.4 (Continued)
Michigan Legal 1-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10	
	Wt = 101.4 kips		Wt = 119.4 kips		Wt = 91.4 kips		Wt = 51.4 kips		Wt = 65.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
5	21.6	0.213	21.6	0.181	22.5	0.246	21.6	0.42	22.5	0.344
6	27	0.266	27	0.226	26.3	0.287	27	0.525	26.3	0.401
7	31.4	0.31	31.4	0.263	31.5	0.345	30.9	0.6	31.5	0.482
8	39	0.385	39	0.327	39	0.427	36	0.7	39	0.596
9	46.7	0.46	46.7	0.391	46.7	0.511	40	0.778	46.7	0.714
10	54.4	0.537	54.4	0.456	54.4	0.595	45	0.876	54.4	0.832
11	62.2	0.613	62.2	0.521	62.2	0.68	49.1	0.955	62.2	0.951
12	70	0.69	70	0.586	70	0.766	54	1.05	70	1.07
13	77.8	0.768	77.8	0.652	77.8	0.852	58.2	1.13	77.8	1.19
14	85.7	0.845	85.7	0.718	85.7	0.938	63	1.23	85.7	1.31
15	93.6	0.923	93.6	0.784	93.6	1.02	67.2	1.31	93.6	1.43
16	102	1	102	0.85	102	1.11	74.3	1.44	102	1.55
17	109	1.08	109	0.916	109	1.2	82.6	1.61	109	1.67
18	119	1.17	119	0.998	119	1.3	91	1.77	119	1.81
19	131	1.29	131	1.1	131	1.44	99.5	1.94	131	2.01
20	144	1.42	144	1.2	143	1.57	108	2.1	143	2.19
21	156	1.54	156	1.3	156	1.71	119	2.32	156	2.39
22	169	1.66	169	1.41	168	1.84	132	2.58	168	2.57
23	181	1.78	181	1.51	181	1.98	145	2.82	181	2.77
24	193	1.91	193	1.62	193	2.11	158	3.08	193	2.95
25	205	2.03	205	1.72	206	2.25	171	3.33	206	3.15
26	221	2.18	221	1.85	221	2.42	184	3.58	218	3.33
27	237	2.34	237	1.99	237	2.59	197	3.83	231	3.53
28	253	2.5	253	2.12	254	2.77	210	4.08	243	3.71
29	270	2.66	270	2.26	270	2.95	222	4.33	255	3.91

TABLE 10.5
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10	
	Wt = 101.4 kips		Wt = 119.4 kips		Wt = 91.4 kips		Wt = 51.4 kips		Wt = 65.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
30	286	2.82	286	2.39	286	3.13	235	4.58	268	4.09
31	302	2.98	302	2.53	302	3.31	248	4.83	280	4.29
32	319	3.14	319	2.67	319	3.49	261	5.08	293	4.48
33	335	3.3	335	2.81	335	3.66	274	5.33	309	4.72
34	351	3.46	351	2.94	351	3.85	287	5.58	324	4.96
35	368	3.63	368	3.08	368	4.02	299	5.83	341	5.21
36	388	3.82	388	3.25	385	4.21	312	6.08	356	5.45
37	409	4.03	409	3.42	405	4.43	325	6.33	373	5.7
38	429	4.23	429	3.59	424	4.64	338	6.58	388	5.94
39	450	4.44	450	3.77	444	4.86	351	6.83	404	6.18
40	471	4.64	471	3.94	464	5.08	364	7.08	420	6.42
41	492	4.85	492	4.12	487	5.33	377	7.33	436	6.67
42	512	5.05	512	4.29	510	5.57	389	7.58	452	6.91
43	533	5.26	533	4.47	532	5.82	402	7.83	468	7.16
44	554	5.46	554	4.64	555	6.07	415	8.08	484	7.4
45	575	5.67	575	4.81	577	6.31	428	8.33	501	7.65
46	595	5.87	595	4.98	600	6.56	441	8.58	516	7.9
47	616	6.08	616	5.16	622	6.81	454	8.83	533	8.15
48	638	6.29	638	5.34	645	7.06	467	9.08	549	8.39
49	663	6.54	663	5.55	668	7.3	479	9.33	565	8.64
50	689	6.79	689	5.77	690	7.55	492	9.58	581	8.88
51	714	7.04	714	5.98	713	7.8	505	9.83	597	9.13
52	739	7.29	739	6.19	736	8.05	518	10.1	613	9.38
53	764	7.54	764	6.4	758	8.3	531	10.3	630	9.63
54	790	7.79	792	6.63	781	8.55	544	10.6	645	9.87

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10	
	Wt = 101.4 kips		Wt = 119.4 kips		Wt = 91.4 kips		Wt = 51.4 kips		Wt = 65.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
55	815	8.04	821	6.88	804	8.79	556	10.8	662	10.1
56	841	8.29	851	7.13	826	9.04	569	11.1	678	10.4
57	866	8.54	881	7.38	849	9.29	582	11.3	694	10.6
58	891	8.79	911	7.63	872	9.54	595	11.6	710	10.9
59	916	9.04	941	7.88	894	9.79	608	11.8	727	11.1
60	942	9.29	970	8.13	917	10	621	12.1	743	11.4
61	967	9.54	1000	8.38	940	10.3	634	12.3	759	11.6
62	993	9.79	1030	8.63	963	10.5	646	12.6	775	11.9
63	1020	10	1060	8.88	985	10.8	659	12.8	791	12.1
64	1040	10.3	1090	9.13	1010	11	672	13.1	808	12.3
65	1070	10.5	1120	9.38	1030	11.3	685	13.3	824	12.6
66	1090	10.8	1150	9.63	1050	11.5	698	13.6	840	12.8
67	1120	11	1180	9.87	1080	11.8	711	13.8	856	13.1
68	1140	11.3	1210	10.1	1100	12	724	14.1	873	13.3
69	1170	11.5	1240	10.4	1120	12.3	736	14.3	889	13.6
70	1200	11.8	1270	10.6	1140	12.5	749	14.6	905	13.8
71	1220	12	1300	10.9	1170	12.8	762	14.8	922	14.1
72	1250	12.3	1330	11.1	1190	13	775	15.1	938	14.3
73	1270	12.5	1360	11.4	1210	13.3	788	15.3	954	14.6
74	1300	12.8	1390	11.6	1240	13.5	801	15.6	971	14.8
75	1320	13	1420	11.9	1260	13.8	813	15.8	987	15.1
76	1350	13.3	1450	12.1	1280	14	826	16.1	1000	15.3
77	1370	13.5	1480	12.4	1300	14.3	839	16.3	1020	15.6
78	1400	13.8	1510	12.6	1330	14.5	852	16.6	1040	15.8
79	1420	14	1540	12.9	1350	14.8	865	16.8	1050	16.1

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10	
	Wt = 101.4 kips		Wt = 119.4 kips		Wt = 91.4 kips		Wt = 51.4 kips		Wt = 65.4 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
80	1450	14.3	1570	13.1	1370	15	878	17.1	1070	16.3
81	1470	14.5	1600	13.4	1390	15.3	891	17.3	1080	16.6
82	1500	14.8	1630	13.6	1420	15.5	903	17.6	1100	16.8
83	1520	15	1660	13.9	1440	15.8	916	17.8	1120	17.1
84	1550	15.3	1690	14.1	1460	16	929	18.1	1130	17.3
85	1580	15.5	1720	14.4	1490	16.3	942	18.3	1150	17.6
86	1600	15.8	1750	14.6	1510	16.5	955	18.6	1170	17.8
87	1630	16	1780	14.9	1530	16.8	968	18.8	1180	18.1
88	1650	16.3	1810	15.1	1550	17	981	19.1	1200	18.3
89	1680	16.5	1840	15.4	1580	17.3	993	19.3	1220	18.6
90	1700	16.8	1860	15.6	1600	17.5	1010	19.6	1230	18.8
91	1730	17	1890	15.9	1620	17.8	1020	19.8	1250	19.1
92	1750	17.3	1920	16.1	1650	18	1030	20.1	1260	19.3
93	1780	17.5	1950	16.4	1670	18.3	1040	20.3	1280	19.6
94	1800	17.8	1980	16.6	1690	18.5	1060	20.6	1300	19.8
95	1830	18	2010	16.9	1710	18.8	1070	20.8	1310	20.1
96	1850	18.3	2040	17.1	1740	19	1080	21.1	1330	20.3
97	1880	18.5	2070	17.4	1760	19.3	1100	21.3	1350	20.6
98	1900	18.8	2100	17.6	1780	19.5	1110	21.6	1360	20.8
99	1930	19	2130	17.9	1810	19.7	1120	21.8	1380	21.1
100	1960	19.3	2160	18.1	1830	20	1130	22.1	1400	21.3
101	1980	19.5	2190	18.4	1850	20.2	1150	22.3	1410	21.6
102	2010	19.8	2220	18.6	1870	20.5	1160	22.6	1430	21.8
103	2030	20	2250	18.9	1900	20.7	1170	22.8	1440	22.1
104	2060	20.3	2280	19.1	1920	21	1190	23.1	1460	22.3

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10	
	Wt = 101.4 kips		Wt = 119.4 kips		Wt = 91.4 kips		Wt = 51.4 kips		Wt = 65.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
105	2080	20.5	2310	19.4	1940	21.2	1200	23.3	1480	22.6
106	2110	20.8	2340	19.6	1960	21.5	1210	23.6	1490	22.8
107	2130	21	2370	19.9	1990	21.7	1220	23.8	1510	23.1
108	2160	21.3	2400	20.1	2010	22	1240	24.1	1530	23.3
109	2180	21.5	2430	20.4	2030	22.2	1250	24.3	1540	23.6
110	2210	21.8	2460	20.6	2060	22.5	1260	24.6	1560	23.8
111	2230	22	2490	20.9	2080	22.7	1280	24.8	1570	24.1
112	2260	22.3	2520	21.1	2100	23	1290	25.1	1590	24.3
113	2280	22.5	2550	21.4	2120	23.2	1300	25.3	1610	24.6
114	2310	22.8	2580	21.6	2150	23.5	1310	25.6	1620	24.8
115	2340	23	2610	21.9	2170	23.7	1330	25.8	1640	25.1
116	2360	23.3	2640	22.1	2190	24	1340	26.1	1660	25.3
117	2390	23.5	2670	22.4	2220	24.2	1350	26.3	1670	25.6
118	2410	23.8	2700	22.6	2240	24.5	1370	26.6	1690	25.8
119	2440	24	2730	22.9	2260	24.7	1380	26.8	1710	26.1
120	2460	24.3	2760	23.1	2280	25	1390	27.1	1720	26.3
121	2490	24.5	2790	23.4	2310	25.2	1400	27.3	1740	26.6
122	2510	24.8	2820	23.6	2330	25.5	1420	27.6	1750	26.8
123	2540	25	2850	23.9	2350	25.7	1430	27.8	1770	27.1
124	2560	25.3	2880	24.1	2380	26	1440	28.1	1790	27.3
125	2590	25.5	2910	24.4	2400	26.2	1460	28.3	1800	27.6
126	2610	25.8	2940	24.6	2420	26.5	1470	28.6	1820	27.8
127	2640	26	2970	24.9	2440	26.7	1480	28.8	1840	28.1
128	2660	26.3	3000	25.1	2470	27	1490	29.1	1850	28.3
129	2690	26.5	3030	25.4	2490	27.2	1510	29.3	1870	28.6

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10	
	Wt = 101.4 kips		Wt = 119.4 kips		Wt = 91.4 kips		Wt = 51.4 kips		Wt = 65.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
130	2720	26.8	3060	25.6	2510	27.5	1520	29.6	1890	28.8
131	2740	27	3090	25.9	2540	27.7	1530	29.8	1900	29.1
132	2770	27.3	3120	26.1	2560	28	1550	30.1	1920	29.3
133	2790	27.5	3150	26.4	2580	28.2	1560	30.3	1930	29.6
134	2820	27.8	3180	26.6	2600	28.5	1570	30.6	1950	29.8
135	2840	28	3210	26.9	2630	28.7	1580	30.8	1970	30.1
136	2870	28.3	3240	27.1	2650	29	1600	31.1	1980	30.3
137	2890	28.5	3270	27.4	2670	29.2	1610	31.3	2000	30.6
138	2920	28.8	3300	27.6	2690	29.5	1620	31.6	2020	30.8
139	2940	29	3330	27.9	2720	29.7	1640	31.8	2030	31.1
140	2970	29.3	3360	28.1	2740	30	1650	32.1	2050	31.3
141	2990	29.5	3390	28.4	2760	30.2	1660	32.3	2070	31.6
142	3020	29.8	3420	28.6	2790	30.5	1670	32.6	2080	31.8
143	3040	30	3450	28.9	2810	30.7	1690	32.8	2100	32.1
144	3070	30.3	3480	29.1	2830	31	1700	33.1	2110	32.3
145	3100	30.5	3510	29.4	2850	31.2	1710	33.3	2130	32.6
146	3120	30.8	3540	29.6	2880	31.5	1730	33.6	2150	32.8
147	3150	31	3570	29.9	2900	31.7	1740	33.8	2160	33.1
148	3170	31.3	3600	30.1	2920	32	1750	34.1	2180	33.3
149	3200	31.5	3630	30.4	2950	32.2	1760	34.3	2200	33.6
150	3220	31.8	3660	30.6	2970	32.5	1780	34.6	2210	33.8
155	3350	33	3800	31.9	3080	33.7	1840	35.8	2290	35.1
160	3480	34.3	3950	33.1	3200	35	1910	37.1	2380	36.3
165	3600	35.5	4100	34.4	3310	36.2	1970	38.3	2460	37.6
170	3730	36.8	4250	35.6	3430	37.5	2030	39.6	2540	38.8

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 6 Wt = 101.4 kips		TRUCK # 7 Wt = 119.4 kips		TRUCK # 8 Wt = 91.4 kips		TRUCK # 9 Wt = 51.4 kips		TRUCK # 10 Wt = 65.4 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
175	3860	38	4400	36.9	3540	38.7	2100	40.8	2620	40.1
180	3980	39.3	4550	38.1	3650	40	2160	42.1	2700	41.3
185	4110	40.5	4700	39.4	3770	41.2	2230	43.3	2780	42.6
190	4240	41.8	4850	40.6	3880	42.5	2290	44.6	2870	43.8
195	4360	43	5000	41.9	4000	43.7	2360	45.8	2950	45.1
200	4490	44.3	5150	43.1	4110	45	2420	47.1	3030	46.3
205	4620	45.5	5300	44.4	4220	46.2	2480	48.3	3110	47.6
210	4740	46.8	5450	45.6	4340	47.5	2550	49.6	3190	48.8
215	4870	48	5600	46.9	4450	48.7	2610	50.8	3270	50.1
220	5000	49.3	5740	48.1	4570	50	2680	52.1	3360	51.3
225	5120	50.5	5890	49.4	4680	51.2	2740	53.3	3440	52.6
230	5250	51.8	6040	50.6	4800	52.5	2810	54.6	3520	53.8
235	5380	53	6190	51.9	4910	53.7	2870	55.8	3600	55.1
240	5500	54.3	6340	53.1	5020	55	2930	57.1	3680	56.3
245	5630	55.5	6490	54.4	5140	56.2	3000	58.3	3770	57.6
250	5760	56.8	6640	55.6	5250	57.5	3060	59.6	3850	58.8
255	5880	58	6790	56.9	5370	58.7	3130	60.8	3930	60.1
260	6010	59.3	6940	58.1	5480	60	3190	62.1	4010	61.3
265	6140	60.5	7090	59.4	5600	61.2	3250	63.3	4090	62.6
270	6260	61.8	7240	60.6	5710	62.5	3320	64.6	4170	63.8
275	6390	63	7390	61.9	5820	63.7	3380	65.8	4260	65.1
280	6520	64.3	7540	63.1	5940	65	3450	67.1	4340	66.3
285	6640	65.5	7680	64.4	6050	66.2	3510	68.3	4420	67.6
290	6770	66.8	7830	65.6	6170	67.5	3580	69.6	4500	68.8
295	6900	68	7980	66.9	6280	68.7	3640	70.8	4580	70.1
300	7020	69.3	8130	68.1	6390	70	3700	72.1	4660	71.3

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 11 Wt = 83.4 kips		TRUCK # 12 Wt = 117.4 kips		TRUCK # 13 Wt = 125.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 143.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
5	21.6	0.259	22.5	0.192	20	0.16	19.3	0.145	20	0.14
6	27	0.324	26.3	0.224	24	0.191	22.5	0.17	24	0.167
7	31.4	0.377	31.5	0.268	31.4	0.251	27	0.204	31.4	0.219
8	39	0.468	39	0.332	39	0.311	32.5	0.246	39	0.272
9	46.7	0.56	46.7	0.398	46.7	0.372	42.3	0.319	46.7	0.325
10	54.4	0.652	54.4	0.463	54.4	0.434	52	0.393	54.4	0.379
11	62.2	0.746	62.2	0.53	62.2	0.496	61.8	0.466	62.2	0.434
12	70	0.839	71.5	0.609	71.5	0.57	71.5	0.54	70.7	0.493
13	77.8	0.933	81.3	0.692	81.3	0.648	81.3	0.614	81.3	0.567
14	85.7	1.03	93.8	0.799	93.8	0.748	93.8	0.708	92.4	0.644
15	93.6	1.12	107	0.908	107	0.85	107	0.805	104	0.725
16	102	1.22	119	1.02	119	0.953	124	0.933	116	0.811
17	109	1.31	132	1.13	132	1.06	139	1.05	130	0.903
18	119	1.43	145	1.24	145	1.16	156	1.18	143	0.999
19	131	1.57	158	1.35	158	1.26	171	1.29	158	1.1
20	144	1.72	171	1.46	171	1.36	189	1.42	172	1.2
21	156	1.87	184	1.57	184	1.47	204	1.54	186	1.3
22	169	2.02	197	1.68	197	1.57	221	1.67	200	1.4
23	181	2.16	210	1.79	210	1.67	237	1.79	215	1.5
24	193	2.32	223	1.9	223	1.78	254	1.91	229	1.6
25	205	2.46	236	2.01	236	1.88	269	2.03	243	1.7
26	221	2.65	254	2.16	252	2.01	286	2.16	257	1.79
27	237	2.84	271	2.31	269	2.14	302	2.28	272	1.9
28	253	3.04	289	2.46	286	2.28	319	2.41	289	2.01
29	270	3.24	306	2.6	303	2.41	334	2.52	307	2.14

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 11 Wt = 83.4 kips		TRUCK # 12 Wt = 117.4 kips		TRUCK # 13 Wt = 125.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 143.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
30	286	3.43	324	2.76	319	2.55	351	2.65	325	2.27
31	302	3.63	341	2.9	336	2.68	368	2.78	343	2.39
32	319	3.82	359	3.05	355	2.83	388	2.93	361	2.52
33	335	4.02	379	3.23	375	2.99	408	3.08	379	2.64
34	351	4.21	400	3.41	394	3.14	430	3.25	397	2.77
35	368	4.41	422	3.59	418	3.33	453	3.42	415	2.9
36	388	4.65	443	3.77	441	3.52	476	3.59	435	3.03
37	409	4.9	464	3.95	465	3.7	501	3.78	457	3.19
38	429	5.15	485	4.13	488	3.89	526	3.97	483	3.37
39	450	5.4	507	4.32	511	4.08	552	4.17	509	3.55
40	471	5.64	528	4.5	534	4.26	578	4.36	535	3.73
41	492	5.9	550	4.68	558	4.45	605	4.57	561	3.91
42	512	6.14	571	4.86	581	4.63	635	4.79	587	4.1
43	533	6.39	594	5.06	605	4.82	664	5.01	613	4.28
44	554	6.64	620	5.28	628	5.01	693	5.23	639	4.46
45	575	6.89	645	5.49	651	5.19	722	5.45	665	4.64
46	595	7.14	670	5.71	675	5.38	751	5.67	692	4.82
47	616	7.39	699	5.95	698	5.57	780	5.89	718	5
48	637	7.64	728	6.2	722	5.76	810	6.11	744	5.19
49	658	7.89	757	6.45	749	5.98	839	6.33	770	5.37
50	678	8.13	786	6.69	777	6.2	868	6.56	797	5.56
51	699	8.39	815	6.94	808	6.44	897	6.77	829	5.78
52	720	8.63	844	7.19	839	6.69	926	7	861	6
53	741	8.88	874	7.44	871	6.94	955	7.22	893	6.23
54	762	9.13	903	7.69	902	7.19	988	7.46	925	6.45

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 11 Wt = 83.4 kips		TRUCK # 12 Wt = 117.4 kips		TRUCK # 13 Wt = 125.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 143.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
55	783	9.38	932	7.94	933	7.44	1020	7.71	957	6.68
56	803	9.63	961	8.19	964	7.69	1050	7.96	989	6.89
57	824	9.88	991	8.44	995	7.94	1090	8.21	1020	7.12
58	845	10.1	1020	8.69	1030	8.19	1120	8.46	1050	7.34
59	866	10.4	1050	8.94	1060	8.44	1150	8.71	1090	7.57
60	886	10.6	1080	9.19	1090	8.69	1190	8.96	1120	7.8
61	907	10.9	1110	9.44	1120	8.93	1220	9.21	1150	8.05
62	928	11.1	1140	9.69	1150	9.18	1250	9.46	1190	8.3
63	949	11.4	1170	9.94	1180	9.43	1290	9.71	1230	8.55
64	970	11.6	1200	10.2	1210	9.68	1320	9.96	1260	8.8
65	991	11.9	1230	10.4	1250	9.93	1350	10.2	1300	9.05
66	1010	12.1	1250	10.7	1280	10.2	1380	10.5	1330	9.29
67	1030	12.4	1280	10.9	1310	10.4	1420	10.7	1370	9.54
68	1050	12.6	1310	11.2	1340	10.7	1450	11	1400	9.79
69	1070	12.9	1340	11.4	1370	10.9	1480	11.2	1440	10
70	1090	13.1	1370	11.7	1400	11.2	1520	11.5	1480	10.3
71	1120	13.4	1400	11.9	1430	11.4	1550	11.7	1510	10.5
72	1140	13.6	1430	12.2	1460	11.7	1580	11.9	1550	10.8
73	1160	13.9	1460	12.4	1500	11.9	1620	12.2	1580	11
74	1180	14.1	1490	12.7	1530	12.2	1650	12.4	1620	11.3
75	1200	14.4	1520	12.9	1560	12.4	1680	12.7	1650	11.5
76	1220	14.6	1550	13.2	1590	12.7	1710	12.9	1690	11.8
77	1240	14.9	1580	13.4	1620	12.9	1750	13.2	1730	12
78	1260	15.1	1610	13.7	1650	13.2	1780	13.4	1760	12.3
79	1280	15.4	1640	13.9	1680	13.4	1810	13.7	1800	12.5

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 11 Wt = 83.4 kips		TRUCK # 12 Wt = 117.4 kips		TRUCK # 13 Wt = 125.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 143.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
80	1300	15.6	1670	14.2	1710	13.7	1850	13.9	1830	12.8
81	1320	15.9	1690	14.4	1750	13.9	1880	14.2	1870	13
82	1340	16.1	1720	14.7	1780	14.2	1910	14.4	1900	13.3
83	1370	16.4	1750	14.9	1810	14.4	1950	14.7	1940	13.5
84	1390	16.6	1780	15.2	1840	14.7	1980	14.9	1980	13.8
85	1410	16.9	1810	15.4	1870	14.9	2010	15.2	2010	14
86	1430	17.1	1840	15.7	1900	15.2	2040	15.4	2050	14.3
87	1450	17.4	1870	15.9	1930	15.4	2080	15.7	2080	14.5
88	1470	17.6	1900	16.2	1960	15.7	2110	15.9	2120	14.8
89	1490	17.9	1930	16.4	2000	15.9	2140	16.2	2160	15
90	1510	18.1	1960	16.7	2030	16.2	2180	16.4	2190	15.3
91	1530	18.4	1990	16.9	2060	16.4	2210	16.7	2230	15.5
92	1550	18.6	2020	17.2	2090	16.7	2240	16.9	2260	15.8
93	1570	18.9	2050	17.4	2120	16.9	2280	17.2	2300	16
94	1590	19.1	2080	17.7	2150	17.2	2310	17.4	2330	16.3
95	1620	19.4	2110	17.9	2180	17.4	2340	17.7	2370	16.5
96	1640	19.6	2130	18.2	2220	17.7	2380	17.9	2410	16.8
97	1660	19.9	2160	18.4	2250	17.9	2410	18.2	2440	17
98	1680	20.1	2190	18.7	2280	18.2	2440	18.4	2480	17.3
99	1700	20.4	2220	18.9	2310	18.4	2470	18.7	2510	17.5
100	1720	20.6	2250	19.2	2340	18.7	2510	18.9	2550	17.8
101	1740	20.9	2280	19.4	2370	18.9	2540	19.2	2580	18
102	1760	21.1	2310	19.7	2400	19.2	2570	19.4	2620	18.3
103	1780	21.4	2340	19.9	2430	19.4	2610	19.7	2660	18.5
104	1800	21.6	2370	20.2	2470	19.7	2640	19.9	2690	18.8

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 11 Wt = 83.4 kips		TRUCK # 12 Wt = 117.4 kips		TRUCK # 13 Wt = 125.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 143.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
105	1820	21.9	2400	20.4	2500	19.9	2670	20.2	2730	19
106	1840	22.1	2430	20.7	2530	20.2	2710	20.4	2760	19.3
107	1870	22.4	2460	20.9	2560	20.4	2740	20.7	2800	19.5
108	1890	22.6	2490	21.2	2590	20.7	2770	20.9	2840	19.8
109	1910	22.9	2520	21.4	2620	20.9	2800	21.2	2870	20
110	1930	23.1	2550	21.7	2650	21.2	2840	21.4	2910	20.3
111	1950	23.4	2580	21.9	2680	21.4	2870	21.7	2940	20.5
112	1970	23.6	2600	22.2	2720	21.7	2900	21.9	2980	20.8
113	1990	23.9	2630	22.4	2750	21.9	2940	22.2	3010	21
114	2010	24.1	2660	22.7	2780	22.2	2970	22.4	3050	21.3
115	2030	24.4	2690	22.9	2810	22.4	3000	22.7	3090	21.5
116	2050	24.6	2720	23.2	2840	22.7	3040	22.9	3120	21.8
117	2070	24.9	2750	23.4	2870	22.9	3070	23.2	3160	22
118	2090	25.1	2780	23.7	2900	23.2	3100	23.4	3190	22.3
119	2120	25.4	2810	23.9	2940	23.4	3140	23.7	3230	22.5
120	2140	25.6	2840	24.2	2970	23.7	3170	23.9	3270	22.8
121	2160	25.9	2870	24.4	3000	23.9	3200	24.2	3300	23
122	2180	26.1	2900	24.7	3030	24.2	3230	24.4	3340	23.3
123	2200	26.4	2930	24.9	3060	24.4	3270	24.7	3370	23.5
124	2220	26.6	2960	25.2	3090	24.7	3300	24.9	3410	23.8
125	2240	26.9	2990	25.4	3120	24.9	3330	25.2	3440	24
126	2260	27.1	3020	25.7	3150	25.2	3370	25.4	3480	24.3
127	2280	27.4	3040	25.9	3190	25.4	3400	25.7	3520	24.5
128	2300	27.6	3070	26.2	3220	25.7	3430	25.9	3550	24.8
129	2320	27.9	3100	26.4	3250	25.9	3470	26.2	3590	25

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 11 Wt = 83.4 kips		TRUCK # 12 Wt = 117.4 kips		TRUCK # 13 Wt = 125.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 143.4 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
130	2340	28.1	3130	26.7	3280	26.2	3500	26.4	3620	25.3
131	2370	28.4	3160	26.9	3310	26.4	3530	26.7	3660	25.5
132	2390	28.6	3190	27.2	3340	26.7	3570	26.9	3690	25.8
133	2410	28.9	3220	27.4	3370	26.9	3600	27.2	3730	26
134	2430	29.1	3250	27.7	3410	27.2	3630	27.4	3770	26.3
135	2450	29.4	3280	27.9	3440	27.4	3660	27.7	3800	26.5
136	2470	29.6	3310	28.2	3470	27.7	3700	27.9	3840	26.8
137	2490	29.9	3340	28.4	3500	27.9	3730	28.2	3870	27
138	2510	30.1	3370	28.7	3530	28.2	3760	28.4	3910	27.3
139	2530	30.4	3400	28.9	3560	28.4	3800	28.7	3950	27.5
140	2550	30.6	3430	29.2	3590	28.7	3830	28.9	3980	27.8
141	2570	30.9	3460	29.4	3620	28.9	3860	29.2	4020	28
142	2590	31.1	3480	29.7	3660	29.2	3900	29.4	4050	28.3
143	2620	31.4	3510	29.9	3690	29.4	3930	29.7	4090	28.5
144	2640	31.6	3540	30.2	3720	29.7	3960	29.9	4120	28.8
145	2660	31.9	3570	30.4	3750	29.9	4000	30.2	4160	29
146	2680	32.1	3600	30.7	3780	30.2	4030	30.4	4200	29.3
147	2700	32.4	3630	30.9	3810	30.4	4060	30.7	4230	29.5
148	2720	32.6	3660	31.2	3840	30.7	4090	30.9	4270	29.8
149	2740	32.9	3690	31.4	3880	30.9	4130	31.2	4300	30
150	2760	33.1	3720	31.7	3910	31.2	4160	31.4	4340	30.3
155	2870	34.4	3870	32.9	4060	32.4	4330	32.7	4520	31.5
160	2970	35.6	4010	34.2	4220	33.7	4490	33.9	4700	32.8
165	3070	36.9	4160	35.4	4380	34.9	4660	35.2	4880	34
170	3180	38.1	4310	36.7	4530	36.2	4820	36.4	5060	35.3

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 11 Wt = 83.4 kips		TRUCK # 12 Wt = 117.4 kips		TRUCK # 13 Wt = 125.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 143.4 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
175	3280	39.4	4450	37.9	4690	37.4	4990	37.7	5240	36.5
180	3390	40.6	4600	39.2	4850	38.7	5150	38.9	5410	37.8
185	3490	41.9	4750	40.4	5000	39.9	5320	40.2	5590	39
190	3600	43.1	4890	41.7	5160	41.1	5480	41.4	5770	40.3
195	3700	44.4	5040	42.9	5320	42.4	5650	42.7	5950	41.5
200	3800	45.6	5190	44.2	5470	43.6	5820	43.9	6130	42.8
205	3910	46.9	5330	45.4	5630	44.9	5980	45.2	6310	44
210	4010	48.1	5480	46.7	5790	46.1	6150	46.4	6490	45.3
215	4120	49.4	5630	47.9	5940	47.4	6310	47.7	6670	46.5
220	4220	50.6	5770	49.2	6100	48.6	6480	48.9	6850	47.8
225	4320	51.9	5920	50.4	6260	49.9	6640	50.2	7030	49
230	4430	53.1	6070	51.7	6410	51.1	6810	51.4	7210	50.3
235	4530	54.4	6210	52.9	6570	52.4	6970	52.7	7390	51.5
240	4640	55.6	6360	54.2	6730	53.6	7140	53.9	7560	52.8
245	4740	56.9	6510	55.4	6880	54.9	7300	55.2	7740	54
250	4850	58.1	6650	56.7	7040	56.1	7470	56.4	7920	55.3
255	4950	59.4	6800	57.9	7200	57.4	7640	57.7	8100	56.5
260	5050	60.6	6950	59.2	7350	58.6	7800	58.9	8280	57.8
265	5160	61.9	7090	60.4	7510	59.9	7970	60.2	8460	59
270	5260	63.1	7240	61.7	7670	61.1	8130	61.4	8640	60.3
275	5370	64.4	7390	62.9	7820	62.4	8300	62.7	8820	61.5
280	5470	65.6	7530	64.2	7980	63.6	8460	63.9	9000	62.8
285	5580	66.9	7680	65.4	8140	64.9	8630	65.2	9180	64
290	5680	68.1	7830	66.7	8290	66.1	8790	66.4	9360	65.3
295	5780	69.4	7970	67.9	8450	67.4	8960	67.7	9540	66.5
300	5890	70.6	8120	69.2	8610	68.6	9120	68.9	9720	67.8

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 16		TRUCK # 17		TRUCK # 18		TRUCK # 27		TRUCK # 28	
	Wt = 138.4 kips		Wt = 151.4 kips		Wt = 154 kips		Wt = 72 kips		Wt = 80 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
5	20	0.145	20	0.132	22.5	0.146	18.6	0.258	19.2	0.24
6	24	0.173	24	0.159	26.3	0.171	23.3	0.323	24	0.3
7	31.4	0.227	31.4	0.208	31.5	0.205	26.6	0.369	27.4	0.343
8	39	0.282	39	0.258	35.4	0.23	34.9	0.484	32	0.4
9	46.7	0.337	46.7	0.308	43.6	0.283	41.3	0.574	37.3	0.467
10	54.4	0.393	54.4	0.359	52	0.338	49.6	0.689	44.8	0.56
11	62.2	0.449	62.2	0.411	61.8	0.401	56.4	0.783	50.9	0.636
12	71.5	0.517	71.5	0.472	71.5	0.464	64.6	0.897	58.3	0.729
13	81.3	0.587	81.3	0.537	81.3	0.528	71.5	0.994	64.6	0.808
14	93.8	0.678	93.8	0.62	93.8	0.609	79.7	1.11	72	0.9
15	107	0.775	107	0.708	107	0.696	86.8	1.21	78.4	0.98
16	124	0.892	124	0.816	124	0.802	94.9	1.32	85.8	1.07
17	140	1.01	140	0.923	140	0.908	102	1.42	92.2	1.15
18	156	1.13	156	1.03	156	1.01	110	1.53	99.6	1.24
19	172	1.24	172	1.14	172	1.12	117	1.63	106	1.33
20	189	1.36	189	1.25	189	1.22	126	1.74	113	1.42
21	208	1.5	208	1.37	208	1.35	133	1.85	120	1.5
22	227	1.64	228	1.5	228	1.48	141	1.96	127	1.59
23	250	1.81	250	1.65	250	1.63	150	2.09	134	1.67
24	272	1.97	273	1.8	273	1.77	160	2.23	141	1.76
25	296	2.14	296	1.95	296	1.92	171	2.37	148	1.85
26	318	2.3	319	2.1	319	2.07	181	2.51	155	1.94
27	341	2.47	341	2.25	341	2.22	191	2.66	162	2.02
28	363	2.62	367	2.42	367	2.38	201	2.8	169	2.11
29	387	2.79	393	2.59	393	2.55	212	2.94	176	2.2

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 16		TRUCK # 17		TRUCK # 18		TRUCK # 27		TRUCK # 28	
	Wt = 138.4 kips		Wt = 151.4 kips		Wt = 154 kips		Wt = 72 kips		Wt = 80 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
30	409	2.95	419	2.76	419	2.72	222	3.08	183	2.29
31	432	3.12	445	2.94	445	2.89	232	3.22	192	2.4
32	454	3.28	470	3.11	470	3.05	242	3.36	203	2.54
33	478	3.45	496	3.28	496	3.22	253	3.51	214	2.67
34	500	3.61	522	3.45	522	3.39	263	3.65	225	2.81
35	523	3.78	548	3.62	548	3.56	273	3.79	235	2.94
36	545	3.94	574	3.79	574	3.73	283	3.93	246	3.08
37	569	4.11	600	3.96	600	3.9	294	4.08	257	3.21
38	593	4.29	626	4.14	626	4.07	304	4.22	268	3.35
39	622	4.49	652	4.31	652	4.23	314	4.36	279	3.48
40	653	4.72	680	4.49	678	4.4	324	4.5	290	3.62
41	683	4.94	711	4.7	704	4.57	335	4.65	300	3.76
42	715	5.16	740	4.89	733	4.76	345	4.79	311	3.89
43	745	5.38	771	5.09	763	4.95	355	4.93	322	4.03
44	776	5.61	802	5.3	793	5.15	365	5.07	333	4.16
45	806	5.82	837	5.53	823	5.34	376	5.22	344	4.3
46	838	6.05	870	5.75	853	5.54	386	5.36	355	4.44
47	868	6.27	905	5.97	885	5.74	396	5.5	366	4.57
48	899	6.49	938	6.2	919	5.97	406	5.64	377	4.71
49	929	6.71	973	6.42	953	6.19	424	5.89	388	4.84
50	960	6.94	1010	6.64	987	6.41	442	6.13	398	4.98
51	990	7.16	1040	6.87	1020	6.63	459	6.38	412	5.15
52	1020	7.38	1070	7.09	1050	6.85	477	6.62	429	5.36
53	1050	7.6	1110	7.32	1090	7.07	494	6.87	446	5.57
54	1090	7.84	1140	7.54	1120	7.29	512	7.11	463	5.78

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 16		TRUCK # 17		TRUCK # 18		TRUCK # 27		TRUCK # 28	
	Wt = 138.4 kips		Wt = 151.4 kips		Wt = 154 kips		Wt = 72 kips		Wt = 80 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
55	1120	8.09	1180	7.77	1160	7.51	530	7.36	480	5.99
56	1150	8.34	1210	8.01	1190	7.73	547	7.6	497	6.21
57	1190	8.59	1250	8.26	1220	7.95	565	7.85	514	6.42
58	1220	8.84	1290	8.51	1260	8.17	583	8.09	530	6.63
59	1260	9.09	1330	8.76	1290	8.39	601	8.34	548	6.84
60	1290	9.34	1360	9.01	1330	8.61	618	8.59	564	7.06
61	1330	9.59	1400	9.25	1360	8.83	636	8.83	582	7.27
62	1360	9.84	1440	9.51	1400	9.06	654	9.08	598	7.48
63	1400	10.1	1480	9.75	1430	9.31	672	9.33	615	7.69
64	1430	10.3	1510	10	1470	9.56	689	9.57	632	7.91
65	1470	10.6	1550	10.3	1510	9.81	707	9.82	649	8.12
66	1500	10.8	1590	10.5	1550	10.1	725	10.1	666	8.33
67	1530	11.1	1630	10.8	1590	10.3	743	10.3	684	8.55
68	1570	11.3	1670	11	1630	10.6	760	10.6	704	8.81
69	1600	11.6	1700	11.3	1660	10.8	778	10.8	724	9.05
70	1640	11.8	1740	11.5	1700	11.1	796	11.1	744	9.3
71	1670	12.1	1780	11.7	1740	11.3	814	11.3	764	9.55
72	1710	12.3	1820	12	1780	11.6	832	11.5	784	9.8
73	1740	12.6	1850	12.2	1820	11.8	849	11.8	804	10
74	1780	12.8	1890	12.5	1860	12.1	867	12	824	10.3
75	1810	13.1	1930	12.7	1890	12.3	885	12.3	844	10.5
76	1850	13.3	1970	13	1930	12.6	903	12.5	864	10.8
77	1880	13.6	2010	13.2	1970	12.8	921	12.8	884	11
78	1920	13.8	2040	13.5	2010	13	939	13	904	11.3
79	1950	14.1	2080	13.7	2050	13.3	956	13.3	924	11.5

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 16		TRUCK # 17		TRUCK # 18		TRUCK # 27		TRUCK # 28	
	Wt = 138.4 kips		Wt = 151.4 kips		Wt = 154 kips		Wt = 72 kips		Wt = 80 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
80	1980	14.3	2120	14	2090	13.5	974	13.5	944	11.8
81	2020	14.6	2160	14.2	2130	13.8	992	13.8	964	12
82	2050	14.8	2200	14.5	2160	14	1010	14	984	12.3
83	2090	15.1	2230	14.7	2200	14.3	1030	14.3	1000	12.5
84	2120	15.3	2270	15	2240	14.5	1050	14.5	1020	12.8
85	2160	15.6	2310	15.2	2280	14.8	1060	14.8	1040	13
86	2190	15.8	2350	15.5	2320	15	1080	15	1060	13.3
87	2230	16.1	2380	15.7	2360	15.3	1100	15.3	1080	13.5
88	2260	16.3	2420	16	2390	15.5	1120	15.5	1100	13.8
89	2300	16.6	2460	16.2	2430	15.8	1140	15.8	1120	14
90	2330	16.8	2500	16.5	2470	16	1150	16	1140	14.3
91	2360	17.1	2530	16.7	2510	16.3	1170	16.3	1160	14.5
92	2400	17.3	2570	17	2550	16.5	1190	16.5	1180	14.8
93	2430	17.6	2610	17.2	2590	16.8	1210	16.8	1200	15
94	2470	17.8	2650	17.5	2620	17	1220	17	1220	15.3
95	2500	18.1	2690	17.7	2660	17.3	1240	17.3	1240	15.5
96	2540	18.3	2720	18	2700	17.5	1260	17.5	1260	15.8
97	2570	18.6	2760	18.2	2740	17.8	1280	17.8	1280	16
98	2610	18.8	2800	18.5	2780	18	1300	18	1300	16.3
99	2640	19.1	2840	18.7	2820	18.3	1310	18.2	1320	16.5
100	2680	19.3	2880	19	2850	18.5	1330	18.5	1340	16.8
101	2710	19.6	2910	19.2	2890	18.8	1350	18.7	1360	17
102	2750	19.8	2950	19.5	2930	19	1370	19	1380	17.3
103	2780	20.1	2990	19.7	2970	19.3	1390	19.2	1400	17.5
104	2810	20.3	3030	20	3010	19.5	1400	19.5	1420	17.8

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 16		TRUCK # 17		TRUCK # 18		TRUCK # 27		TRUCK # 28	
	Wt = 138.4 kips		Wt = 151.4 kips		Wt = 154 kips		Wt = 72 kips		Wt = 80 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
105	2850	20.6	3060	20.2	3050	19.8	1420	19.7	1440	18
106	2880	20.8	3100	20.5	3090	20	1440	20	1460	18.3
107	2920	21.1	3140	20.7	3120	20.3	1460	20.2	1480	18.5
108	2950	21.3	3180	21	3160	20.5	1480	20.5	1500	18.8
109	2990	21.6	3220	21.2	3200	20.8	1490	20.7	1520	19
110	3020	21.8	3250	21.5	3240	21	1510	21	1540	19.3
111	3060	22.1	3290	21.7	3280	21.3	1530	21.2	1560	19.5
112	3090	22.3	3330	22	3320	21.5	1550	21.5	1580	19.8
113	3130	22.6	3370	22.2	3350	21.8	1560	21.7	1600	20
114	3160	22.8	3410	22.5	3390	22	1580	22	1620	20.3
115	3200	23.1	3440	22.7	3430	22.3	1600	22.2	1640	20.5
116	3230	23.3	3480	23	3470	22.5	1620	22.5	1660	20.8
117	3260	23.6	3520	23.2	3510	22.8	1640	22.7	1680	21
118	3300	23.8	3560	23.5	3550	23	1650	23	1700	21.3
119	3330	24.1	3590	23.7	3590	23.3	1670	23.2	1720	21.5
120	3370	24.3	3630	24	3620	23.5	1690	23.5	1740	21.8
121	3400	24.6	3670	24.2	3660	23.8	1710	23.7	1760	22
122	3440	24.8	3710	24.5	3700	24	1730	24	1780	22.3
123	3470	25.1	3750	24.7	3740	24.3	1740	24.2	1800	22.5
124	3510	25.3	3780	25	3780	24.5	1760	24.5	1820	22.8
125	3540	25.6	3820	25.2	3820	24.8	1780	24.7	1840	23
126	3580	25.8	3860	25.5	3850	25	1800	25	1860	23.3
127	3610	26.1	3900	25.7	3890	25.3	1820	25.2	1880	23.5
128	3640	26.3	3930	26	3930	25.5	1830	25.5	1900	23.8
129	3680	26.6	3970	26.2	3970	25.8	1850	25.7	1920	24

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 16		TRUCK # 17		TRUCK # 18		TRUCK # 27		TRUCK # 28	
	Wt = 138.4 kips		Wt = 151.4 kips		Wt = 154 kips		Wt = 72 kips		Wt = 80 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
130	3710	26.8	4010	26.5	4010	26	1870	26	1940	24.3
131	3750	27.1	4050	26.7	4050	26.3	1890	26.2	1960	24.5
132	3780	27.3	4090	27	4090	26.5	1910	26.5	1980	24.8
133	3820	27.6	4120	27.2	4120	26.8	1920	26.7	2000	25
134	3850	27.8	4160	27.5	4160	27	1940	27	2020	25.3
135	3890	28.1	4200	27.7	4200	27.3	1960	27.2	2040	25.5
136	3920	28.3	4240	28	4240	27.5	1980	27.5	2060	25.8
137	3960	28.6	4270	28.2	4280	27.8	2000	27.7	2080	26
138	3990	28.8	4310	28.5	4320	28	2010	28	2100	26.3
139	4030	29.1	4350	28.7	4350	28.3	2030	28.2	2120	26.5
140	4060	29.3	4390	29	4390	28.5	2050	28.5	2140	26.8
141	4090	29.6	4430	29.2	4430	28.8	2070	28.7	2160	27
142	4130	29.8	4460	29.5	4470	29	2080	29	2180	27.3
143	4160	30.1	4500	29.7	4510	29.3	2100	29.2	2200	27.5
144	4200	30.3	4540	30	4550	29.5	2120	29.5	2220	27.8
145	4230	30.6	4580	30.2	4590	29.8	2140	29.7	2240	28
146	4270	30.8	4620	30.5	4620	30	2160	30	2260	28.3
147	4300	31.1	4650	30.7	4660	30.3	2170	30.2	2280	28.5
148	4340	31.3	4690	31	4700	30.5	2190	30.5	2300	28.8
149	4370	31.6	4730	31.2	4740	30.8	2210	30.7	2320	29
150	4410	31.8	4770	31.5	4780	31	2230	31	2340	29.3
155	4580	33.1	4960	32.7	4970	32.3	2320	32.2	2440	30.5
160	4750	34.3	5150	34	5160	33.5	2410	33.4	2540	31.8
165	4920	35.6	5330	35.2	5360	34.8	2500	34.7	2640	33
170	5100	36.8	5520	36.5	5550	36	2590	35.9	2740	34.3

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 16 Wt = 138.4 kips		TRUCK # 17 Wt = 151.4 kips		TRUCK # 18 Wt = 154 kips		TRUCK # 27 Wt = 72 kips		TRUCK # 28 Wt = 80 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
175	5270	38.1	5710	37.7	5740	37.3	2680	37.2	2840	35.5
180	5440	39.3	5900	39	5930	38.5	2770	38.4	2940	36.8
185	5620	40.6	6090	40.2	6120	39.8	2860	39.7	3040	38
190	5790	41.8	6280	41.5	6320	41	2950	40.9	3140	39.3
195	5960	43.1	6470	42.7	6510	42.3	3040	42.2	3240	40.5
200	6140	44.3	6660	44	6700	43.5	3130	43.4	3340	41.8
205	6310	45.6	6850	45.2	6890	44.8	3220	44.7	3440	43
210	6480	46.8	7040	46.5	7090	46	3310	45.9	3540	44.3
215	6650	48.1	7230	47.7	7280	47.3	3400	47.2	3640	45.5
220	6830	49.3	7420	49	7470	48.5	3490	48.4	3740	46.8
225	7000	50.6	7600	50.2	7660	49.8	3580	49.7	3840	48
230	7170	51.8	7790	51.5	7860	51	3670	50.9	3940	49.3
235	7350	53.1	7980	52.7	8050	52.3	3760	52.2	4040	50.5
240	7520	54.3	8170	54	8240	53.5	3850	53.4	4140	51.8
245	7690	55.6	8360	55.2	8430	54.8	3940	54.7	4240	53
250	7870	56.8	8550	56.5	8630	56	4030	55.9	4340	54.3
255	8040	58.1	8740	57.7	8820	57.3	4120	57.2	4440	55.5
260	8210	59.3	8930	59	9010	58.5	4210	58.4	4540	56.8
265	8380	60.6	9120	60.2	9200	59.8	4300	59.7	4640	58
270	8560	61.8	9310	61.5	9400	61	4390	60.9	4740	59.3
275	8730	63.1	9500	62.7	9590	62.3	4480	62.2	4840	60.5
280	8900	64.3	9690	64	9780	63.5	4570	63.4	4940	61.8
285	9080	65.6	9880	65.2	9970	64.8	4660	64.7	5040	63
290	9250	66.8	10100	66.5	10200	66	4750	65.9	5140	64.3
295	9420	68.1	10300	67.7	10400	67.3	4840	67.2	5240	65.5
300	9600	69.3	10400	69	10600	68.5	4930	68.4	5340	66.8

TABLE 10.5 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Moments

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
5	22.5	0.192	21.6	0.247	20	0.132	22.5	0.139	21.6	0.14	21.6	0.177	21.6	0.132
6	26.3	0.224	27	0.309	24	0.159	26.3	0.163	27	0.175	27	0.221	27	0.165
7	31.5	0.268	30.9	0.353	31.4	0.208	31.5	0.195	30.9	0.2	30.9	0.253	30.9	0.188
8	39	0.332	36	0.412	39	0.258	39	0.242	36	0.234	36	0.295	36	0.22
9	46.7	0.398	40	0.458	46.7	0.308	46.7	0.289	43.6	0.283	42.7	0.35	42.7	0.26
10	54.4	0.463	45	0.515	54.4	0.359	54.4	0.337	52	0.338	51.2	0.42	52	0.317
11	62.2	0.53	49.1	0.562	62.2	0.411	62.2	0.385	61.8	0.401	58.2	0.477	61.8	0.377
12	70	0.596	54	0.618	71.5	0.472	71.5	0.443	71.5	0.464	66.7	0.546	71.5	0.436
13	77.8	0.663	58.2	0.665	81.3	0.537	81.3	0.503	81.3	0.528	73.8	0.605	81.3	0.495
14	85.7	0.73	63	0.721	91	0.601	93.8	0.581	91	0.591	82.3	0.675	93.8	0.572
15	93.6	0.797	67.2	0.769	101	0.666	107	0.661	101	0.654	89.6	0.734	107	0.65
16	102	0.865	74.3	0.85	111	0.73	119	0.74	111	0.718	98	0.803	119	0.728
17	109	0.932	82.6	0.945	120	0.794	132	0.82	124	0.803	105	0.864	132	0.807
18	118	1	91	1.04	130	0.859	145	0.899	137	0.886	115	0.94	145	0.885
19	130	1.1	99.5	1.14	140	0.923	158	0.979	153	0.993	126	1.04	159	0.971
20	141	1.2	108	1.24	150	0.988	171	1.06	169	1.1	139	1.14	175	1.07
21	153	1.31	121	1.38	159	1.05	184	1.14	185	1.2	151	1.24	192	1.17
22	165	1.4	135	1.54	169	1.12	197	1.22	202	1.31	164	1.35	208	1.27
23	177	1.51	148	1.69	179	1.18	210	1.3	218	1.41	176	1.44	224	1.37
24	189	1.61	162	1.85	192	1.27	223	1.38	234	1.52	189	1.55	242	1.47
25	203	1.73	175	2	209	1.38	236	1.46	250	1.63	201	1.65	261	1.59
26	218	1.85	189	2.16	227	1.5	254	1.57	267	1.73	214	1.75	280	1.71
27	231	1.97	202	2.31	244	1.61	271	1.68	283	1.84	226	1.85	300	1.83
28	250	2.13	216	2.47	262	1.73	289	1.79	302	1.96	239	1.96	319	1.95
29	268	2.28	229	2.62	279	1.84	306	1.89	324	2.11	251	2.06	339	2.06

TABLE 10.6
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Moments

10-T6-1

10-T6-2

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
30	287	2.44	243	2.78	297	1.96	324	2.01	348	2.26	264	2.16	358	2.18
31	305	2.6	256	2.93	314	2.08	345	2.14	370	2.4	276	2.26	377	2.3
32	323	2.75	270	3.09	332	2.2	365	2.26	394	2.56	291	2.38	397	2.42
33	341	2.91	283	3.24	350	2.31	386	2.39	419	2.72	308	2.52	416	2.54
34	360	3.07	299	3.42	371	2.45	406	2.52	445	2.89	325	2.66	437	2.66
35	378	3.22	316	3.62	392	2.59	430	2.66	471	3.06	342	2.8	460	2.8
36	397	3.38	334	3.82	414	2.74	455	2.82	497	3.23	358	2.94	484	2.95
37	415	3.53	352	4.02	439	2.9	481	2.98	523	3.39	378	3.1	507	3.09
38	433	3.69	369	4.23	463	3.06	506	3.14	549	3.57	399	3.27	531	3.24
39	452	3.85	390	4.46	487	3.22	532	3.29	575	3.73	421	3.45	556	3.39
40	470	4	411	4.71	511	3.38	557	3.45	601	3.9	442	3.62	584	3.56
41	491	4.18	433	4.96	536	3.54	583	3.61	626	4.07	464	3.8	611	3.72
42	513	4.37	455	5.21	560	3.7	608	3.77	653	4.24	485	3.98	639	3.89
43	536	4.57	477	5.46	584	3.86	634	3.93	678	4.4	507	4.15	666	4.06
44	559	4.76	499	5.71	608	4.02	659	4.08	705	4.58	528	4.33	694	4.23
45	581	4.95	521	5.96	633	4.18	685	4.24	734	4.77	550	4.5	721	4.4
46	604	5.14	543	6.21	657	4.34	710	4.4	764	4.96	571	4.68	751	4.58
47	627	5.34	564	6.46	684	4.52	736	4.56	794	5.16	592	4.86	784	4.78
48	649	5.53	586	6.71	712	4.71	762	4.72	825	5.36	614	5.03	815	4.97
49	672	5.72	608	6.96	740	4.89	792	4.91	859	5.58	635	5.21	848	5.17
50	694	5.91	630	7.21	769	5.08	821	5.08	893	5.8	660	5.41	879	5.36
51	723	6.16	652	7.46	797	5.26	850	5.27	927	6.02	687	5.63	912	5.56
52	753	6.41	674	7.71	825	5.45	879	5.45	961	6.24	712	5.84	943	5.75
53	782	6.66	695	7.96	853	5.63	914	5.66	995	6.46	739	6.05	976	5.95
54	811	6.91	717	8.21	881	5.82	947	5.87	1030	6.68	764	6.26	1010	6.14

TABLE 10.6 (Continued)
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Moments

10-T6-3

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
55	840	7.16	739	8.46	911	6.02	981	6.08	1060	6.9	791	6.49	1040	6.34
56	870	7.41	761	8.71	942	6.22	1010	6.29	1100	7.12	822	6.74	1070	6.53
57	899	7.66	783	8.96	975	6.44	1050	6.5	1130	7.34	852	6.99	1100	6.73
58	929	7.91	805	9.21	1010	6.67	1080	6.71	1170	7.57	883	7.24	1140	6.92
59	958	8.16	827	9.46	1040	6.89	1120	6.92	1200	7.8	913	7.49	1170	7.13
60	987	8.41	848	9.71	1080	7.12	1150	7.13	1240	8.05	944	7.74	1210	7.35
61	1020	8.66	870	9.96	1110	7.35	1180	7.34	1280	8.3	974	7.99	1240	7.57
62	1050	8.91	892	10.2	1150	7.6	1220	7.54	1320	8.55	1000	8.24	1280	7.8
63	1080	9.16	914	10.5	1190	7.85	1250	7.76	1350	8.8	1040	8.49	1320	8.02
64	1100	9.41	936	10.7	1230	8.1	1290	7.96	1390	9.05	1070	8.74	1350	8.26
65	1130	9.66	958	11	1260	8.34	1320	8.18	1430	9.3	1100	8.99	1400	8.51
66	1160	9.91	980	11.2	1300	8.6	1350	8.38	1470	9.55	1130	9.24	1440	8.76
67	1190	10.2	1000	11.5	1340	8.84	1390	8.6	1510	9.8	1160	9.49	1480	9.01
68	1220	10.4	1020	11.7	1380	9.09	1430	8.84	1550	10	1190	9.74	1520	9.26
69	1250	10.7	1050	12	1410	9.34	1470	9.09	1590	10.3	1220	9.99	1560	9.51
70	1280	10.9	1070	12.2	1450	9.59	1510	9.34	1620	10.5	1250	10.2	1600	9.76
71	1310	11.2	1090	12.5	1490	9.84	1550	9.59	1660	10.8	1280	10.5	1640	10
72	1340	11.4	1110	12.7	1530	10.1	1590	9.84	1700	11	1310	10.7	1680	10.3
73	1370	11.7	1130	13	1570	10.3	1630	10.1	1740	11.3	1340	11	1720	10.5
74	1400	11.9	1150	13.2	1600	10.6	1670	10.3	1780	11.5	1370	11.2	1760	10.8
75	1430	12.2	1180	13.5	1640	10.8	1710	10.6	1820	11.8	1400	11.5	1810	11
76	1460	12.4	1200	13.7	1680	11.1	1750	10.8	1850	12	1430	11.7	1850	11.3
77	1490	12.7	1220	14	1720	11.3	1790	11.1	1890	12.3	1460	12	1890	11.5
78	1520	12.9	1240	14.2	1750	11.6	1830	11.3	1930	12.5	1490	12.2	1930	11.8
79	1540	13.2	1260	14.5	1790	11.8	1870	11.6	1970	12.8	1520	12.5	1970	12

TABLE 10.6 (Continued)
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Moments

10-T6-4

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
80	1570	13.4	1290	14.7	1830	12.1	1910	11.8	2010	13	1550	12.7	2010	12.3
81	1600	13.7	1310	15	1870	12.3	1950	12.1	2050	13.3	1580	13	2050	12.5
82	1630	13.9	1330	15.2	1900	12.6	1990	12.3	2090	13.5	1610	13.2	2090	12.8
83	1660	14.2	1350	15.5	1940	12.8	2030	12.6	2120	13.8	1650	13.5	2130	13
84	1690	14.4	1370	15.7	1980	13.1	2070	12.8	2160	14	1680	13.7	2170	13.3
85	1720	14.7	1390	16	2020	13.3	2110	13.1	2200	14.3	1710	14	2220	13.5
86	1750	14.9	1420	16.2	2060	13.6	2150	13.3	2240	14.5	1740	14.2	2260	13.8
87	1780	15.2	1440	16.5	2090	13.8	2190	13.6	2280	14.8	1770	14.5	2300	14
88	1810	15.4	1460	16.7	2130	14.1	2230	13.8	2320	15	1800	14.7	2340	14.3
89	1840	15.7	1480	17	2170	14.3	2270	14.1	2360	15.3	1830	15	2380	14.5
90	1870	15.9	1500	17.2	2210	14.6	2310	14.3	2390	15.5	1860	15.2	2420	14.8
91	1900	16.2	1530	17.5	2250	14.8	2350	14.6	2430	15.8	1890	15.5	2460	15
92	1930	16.4	1550	17.7	2280	15.1	2390	14.8	2470	16	1920	15.7	2500	15.3
93	1960	16.7	1570	18	2320	15.3	2430	15.1	2510	16.3	1950	16	2540	15.5
94	1980	16.9	1590	18.2	2360	15.6	2480	15.3	2550	16.5	1980	16.2	2580	15.8
95	2010	17.2	1610	18.5	2400	15.8	2520	15.6	2590	16.8	2010	16.5	2630	16
96	2040	17.4	1640	18.7	2430	16.1	2560	15.8	2620	17	2040	16.7	2670	16.3
97	2070	17.7	1660	19	2470	16.3	2600	16.1	2660	17.3	2070	17	2710	16.5
98	2100	17.9	1680	19.2	2510	16.6	2640	16.3	2700	17.5	2100	17.2	2750	16.8
99	2130	18.2	1700	19.5	2550	16.8	2680	16.6	2740	17.8	2130	17.5	2790	17
100	2160	18.4	1720	19.7	2590	17.1	2720	16.8	2780	18	2160	17.7	2830	17.3
101	2190	18.7	1740	20	2620	17.3	2760	17.1	2820	18.3	2190	18	2870	17.5
102	2220	18.9	1770	20.2	2660	17.6	2800	17.3	2860	18.5	2220	18.2	2910	17.8
103	2250	19.2	1790	20.5	2700	17.8	2840	17.6	2890	18.8	2260	18.5	2950	18
104	2280	19.4	1810	20.7	2740	18.1	2880	17.8	2930	19	2290	18.7	2990	18.3

TABLE 10.6 (Continued)
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Moments

10-T6-5

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
105	2310	19.7	1830	21	2780	18.3	2920	18.1	2970	19.3	2320	19	3040	18.5
106	2340	19.9	1850	21.2	2810	18.6	2960	18.3	3010	19.5	2350	19.2	3080	18.8
107	2370	20.2	1880	21.5	2850	18.8	3000	18.6	3050	19.8	2380	19.5	3120	19
108	2400	20.4	1900	21.7	2890	19.1	3040	18.8	3090	20	2410	19.7	3160	19.3
109	2420	20.7	1920	22	2930	19.3	3080	19.1	3120	20.3	2440	20	3200	19.5
110	2450	20.9	1940	22.2	2960	19.6	3120	19.3	3160	20.5	2470	20.2	3240	19.8
111	2480	21.2	1960	22.5	3000	19.8	3160	19.6	3200	20.8	2500	20.5	3280	20
112	2510	21.4	1980	22.7	3040	20.1	3200	19.8	3240	21	2530	20.7	3320	20.3
113	2540	21.7	2010	23	3080	20.3	3240	20.1	3280	21.3	2560	21	3360	20.5
114	2570	21.9	2030	23.2	3120	20.6	3280	20.3	3320	21.5	2590	21.2	3400	20.8
115	2600	22.2	2050	23.5	3150	20.8	3320	20.6	3360	21.8	2620	21.5	3450	21
116	2630	22.4	2070	23.7	3190	21.1	3360	20.8	3390	22	2650	21.7	3490	21.3
117	2660	22.7	2090	24	3230	21.3	3400	21.1	3430	22.3	2680	22	3530	21.5
118	2690	22.9	2120	24.2	3270	21.6	3440	21.3	3470	22.5	2710	22.2	3570	21.8
119	2720	23.2	2140	24.5	3310	21.8	3480	21.6	3510	22.8	2740	22.5	3610	22
120	2750	23.4	2160	24.7	3340	22.1	3520	21.8	3550	23	2770	22.7	3650	22.3
121	2780	23.7	2180	25	3380	22.3	3560	22.1	3590	23.3	2800	23	3690	22.5
122	2810	23.9	2200	25.2	3420	22.6	3600	22.3	3620	23.5	2830	23.2	3730	22.8
123	2840	24.2	2220	25.5	3460	22.8	3640	22.6	3660	23.8	2860	23.5	3770	23
124	2870	24.4	2250	25.7	3490	23.1	3690	22.8	3700	24	2900	23.7	3810	23.3
125	2890	24.7	2270	26	3530	23.3	3730	23.1	3740	24.3	2930	24	3860	23.5
126	2920	24.9	2290	26.2	3570	23.6	3770	23.3	3780	24.5	2960	24.2	3900	23.8
127	2950	25.2	2310	26.5	3610	23.8	3810	23.6	3820	24.8	2990	24.5	3940	24
128	2980	25.4	2330	26.7	3650	24.1	3850	23.8	3860	25	3020	24.7	3980	24.3
129	3010	25.7	2360	27	3680	24.3	3890	24.1	3890	25.3	3050	25	4020	24.5

TABLE 10.6 (Continued)
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Moments

10-T6-6

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
130	3040	25.9	2380	27.2	3720	24.6	3930	24.3	3930	25.5	3080	25.2	4060	24.8
131	3070	26.2	2400	27.5	3760	24.8	3970	24.6	3970	25.8	3110	25.5	4100	25
132	3100	26.4	2420	27.7	3800	25.1	4010	24.8	4010	26	3140	25.7	4140	25.3
133	3130	26.7	2440	28	3840	25.3	4050	25.1	4050	26.3	3170	26	4180	25.5
134	3160	26.9	2470	28.2	3870	25.6	4090	25.3	4090	26.5	3200	26.2	4220	25.8
135	3190	27.2	2490	28.5	3910	25.8	4130	25.6	4130	26.8	3230	26.5	4270	26
136	3220	27.4	2510	28.7	3950	26.1	4170	25.8	4160	27	3260	26.7	4310	26.3
137	3250	27.7	2530	29	3990	26.3	4210	26.1	4200	27.3	3290	27	4350	26.5
138	3280	27.9	2550	29.2	4020	26.6	4250	26.3	4240	27.5	3320	27.2	4390	26.8
139	3310	28.2	2570	29.5	4060	26.8	4290	26.6	4280	27.8	3350	27.5	4430	27
140	3330	28.4	2600	29.7	4100	27.1	4330	26.8	4320	28	3380	27.7	4470	27.3
141	3360	28.7	2620	30	4140	27.3	4370	27.1	4360	28.3	3410	28	4510	27.5
142	3390	28.9	2640	30.2	4180	27.6	4410	27.3	4390	28.5	3440	28.2	4550	27.8
143	3420	29.2	2660	30.5	4210	27.8	4450	27.6	4430	28.8	3470	28.5	4590	28
144	3450	29.4	2680	30.7	4250	28.1	4490	27.8	4470	29	3510	28.7	4630	28.3
145	3480	29.7	2710	31	4290	28.3	4530	28.1	4510	29.3	3540	29	4680	28.5
146	3510	29.9	2730	31.2	4330	28.6	4570	28.3	4550	29.5	3570	29.2	4720	28.8
147	3540	30.2	2750	31.5	4370	28.8	4610	28.6	4590	29.8	3600	29.5	4760	29
148	3570	30.4	2770	31.7	4400	29.1	4650	28.8	4630	30	3630	29.7	4800	29.3
149	3600	30.7	2790	32	4440	29.3	4690	29.1	4660	30.3	3660	30	4840	29.5
150	3630	30.9	2810	32.2	4480	29.6	4730	29.3	4700	30.5	3690	30.2	4880	29.8
155	3770	32.2	2920	33.5	4670	30.8	4940	30.6	4900	31.8	3840	31.5	5090	31
160	3920	33.4	3030	34.7	4860	32.1	5140	31.8	5090	33	3990	32.7	5290	32.3
165	4070	34.7	3140	36	5050	33.3	5340	33.1	5280	34.3	4150	34	5500	33.5
170	4210	35.9	3250	37.2	5240	34.6	5540	34.3	5470	35.5	4300	35.2	5700	34.8

TABLE 10.6 (Continued)
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Moments

10-T6-7

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
175	4360	37.2	3360	38.5	5420	35.8	5740	35.6	5670	36.8	4450	36.5	5910	36
180	4510	38.4	3470	39.7	5610	37.1	5940	36.8	5860	38	4600	37.7	6110	37.3
185	4660	39.7	3580	41	5800	38.3	6150	38.1	6050	39.3	4760	39	6320	38.5
190	4800	40.9	3690	42.2	5990	39.6	6350	39.3	6240	40.5	4910	40.2	6520	39.8
195	4950	42.2	3800	43.5	6180	40.8	6550	40.6	6430	41.8	5060	41.5	6730	41
200	5100	43.4	3910	44.7	6370	42.1	6750	41.8	6630	43	5210	42.7	6930	42.3
205	5240	44.7	4020	46	6560	43.3	6950	43.1	6820	44.3	5370	44	7140	43.5
210	5390	45.9	4130	47.2	6750	44.6	7150	44.3	7010	45.5	5520	45.2	7340	44.8
215	5540	47.2	4240	48.5	6940	45.8	7360	45.6	7200	46.8	5670	46.5	7550	46
220	5680	48.4	4340	49.7	7130	47.1	7560	46.8	7400	48	5820	47.7	7750	47.3
225	5830	49.7	4450	51	7320	48.3	7760	48.1	7590	49.3	5980	49	7960	48.5
230	5980	50.9	4560	52.2	7510	49.6	7960	49.3	7780	50.5	6130	50.2	8160	49.8
235	6120	52.2	4670	53.5	7700	50.8	8160	50.6	7970	51.8	6280	51.5	8370	51
240	6270	53.4	4780	54.7	7890	52.1	8370	51.8	8170	53	6430	52.7	8570	52.3
245	6420	54.7	4890	56	8070	53.3	8570	53.1	8360	54.3	6590	54	8780	53.5
250	6560	55.9	5000	57.2	8260	54.6	8770	54.3	8550	55.5	6740	55.2	8980	54.8
255	6710	57.2	5110	58.5	8450	55.8	8970	55.6	8740	56.8	6890	56.5	9190	56
260	6860	58.4	5220	59.7	8640	57.1	9170	56.8	8940	58	7040	57.7	9390	57.3
265	7000	59.7	5330	61	8830	58.3	9370	58.1	9130	59.3	7200	59	9600	58.5
270	7150	60.9	5440	62.2	9020	59.6	9580	59.3	9320	60.5	7350	60.2	9800	59.8
275	7300	62.2	5550	63.5	9210	60.8	9780	60.6	9510	61.8	7500	61.5	10000	61
280	7440	63.4	5660	64.7	9400	62.1	9980	61.8	9710	63	7650	62.7	10200	62.3
285	7590	64.7	5760	66	9590	63.3	10200	63.1	9900	64.3	7810	64	10400	63.5
290	7740	65.9	5870	67.2	9780	64.6	10400	64.3	10100	65.5	7960	65.2	10600	64.8
295	7880	67.2	5980	68.5	9970	65.8	10600	65.6	10300	66.8	8110	66.5	10800	66
300	8030	68.4	6090	69.7	10200	67.1	10800	66.8	10500	68	8260	67.7	11000	67.3

TABLE 10.6 (Continued)
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Moments

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
5	24	0.615	21.3	0.468	20.4	0.408	23.4	0.473	21.3	0.377	23.4	0.349
6	30	0.769	25.5	0.562	25.5	0.51	29.3	0.591	25.5	0.452	29.3	0.436
7	34.3	0.879	33.4	0.736	29.1	0.583	33.4	0.675	33.4	0.592	33.4	0.498
8	40	1.03	41.4	0.913	38.3	0.765	39	0.788	41.4	0.735	39	0.581
9	44.4	1.14	49.6	1.09	45.3	0.907	43.3	0.875	49.6	0.879	43.3	0.646
10	50	1.28	57.8	1.27	54.4	1.09	48.8	0.985	57.8	1.02	48.8	0.727
11	54.5	1.4	66.1	1.46	61.8	1.24	53.2	1.07	66.1	1.17	53.2	0.793
12	60	1.54	74.4	1.64	70.8	1.42	58.5	1.18	74.4	1.32	58.5	0.872
13	64.6	1.66	82.7	1.82	78.5	1.57	63	1.27	82.7	1.47	63	0.939
14	70	1.79	91.1	2.01	87.4	1.75	68.3	1.38	91.1	1.61	68.3	1.02
15	74.7	1.91	99.5	2.19	95.2	1.9	72.8	1.47	99.5	1.76	72.8	1.08
16	82.1	2.11	108	2.38	104	2.08	80.4	1.63	108	1.91	80.4	1.2
17	91.1	2.33	116	2.56	112	2.24	89.5	1.81	116	2.06	89.5	1.33
18	100	2.57	125	2.75	121	2.42	98.6	1.99	125	2.21	98.6	1.47
19	109	2.81	135	2.96	129	2.58	108	2.18	135	2.39	108	1.61
20	119	3.05	146	3.23	138	2.75	117	2.36	146	2.6	117	1.74
21	128	3.28	157	3.46	146	2.91	126	2.55	157	2.79	126	1.88
22	137	3.52	169	3.73	155	3.09	139	2.8	169	3	139	2.07
23	147	3.76	180	3.96	163	3.25	151	3.05	180	3.19	151	2.25
24	156	4.01	192	4.22	171	3.43	163	3.3	192	3.4	163	2.43
25	166	4.25	203	4.46	180	3.59	176	3.55	203	3.59	176	2.62
26	175	4.49	214	4.72	188	3.77	188	3.8	214	3.8	189	2.82
27	185	4.73	225	4.96	196	3.93	200	4.04	225	4	205	3.05
28	194	4.98	237	5.22	205	4.1	213	4.3	237	4.2	219	3.27
29	204	5.22	248	5.46	214	4.27	225	4.54	248	4.4	235	3.5

TABLE 10.7

Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Moments

10-T7-1

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
30	213	5.47	260	5.72	226	4.52	237	4.79	260	4.61	249	3.72
31	223	5.71	271	5.96	238	4.76	250	5.04	271	4.8	265	3.94
32	232	5.96	282	6.22	251	5.01	262	5.29	282	5.01	279	4.16
33	242	6.2	294	6.46	263	5.26	274	5.54	294	5.2	295	4.39
34	251	6.45	305	6.72	275	5.5	287	5.79	307	5.44	309	4.61
35	261	6.69	316	6.96	288	5.75	299	6.04	321	5.69	325	4.84
36	271	6.94	328	7.22	300	6	311	6.29	335	5.93	339	5.06
37	280	7.19	339	7.46	312	6.25	324	6.54	349	6.18	355	5.29
38	290	7.43	351	7.72	325	6.5	336	6.79	362	6.42	369	5.5
39	299	7.68	362	7.96	337	6.74	348	7.04	376	6.67	385	5.73
40	309	7.93	373	8.22	350	6.99	361	7.29	390	6.92	399	5.95
41	319	8.17	384	8.46	362	7.24	373	7.54	404	7.17	415	6.18
42	328	8.42	396	8.72	374	7.49	386	7.79	418	7.41	431	6.42
43	338	8.67	407	8.96	387	7.74	398	8.04	432	7.66	448	6.68
44	348	8.92	419	9.22	399	7.99	410	8.29	446	7.91	464	6.92
45	357	9.16	430	9.46	412	8.23	423	8.54	460	8.16	481	7.17
46	367	9.41	441	9.72	424	8.48	435	8.79	474	8.4	498	7.42
47	377	9.66	452	9.96	437	8.73	447	9.03	488	8.65	515	7.67
48	386	9.91	464	10.2	449	8.98	460	9.29	502	8.9	531	7.92
49	396	10.2	475	10.5	461	9.23	472	9.53	516	9.15	548	8.17
50	406	10.4	487	10.7	474	9.48	484	9.79	530	9.4	565	8.41
51	415	10.7	498	11	486	9.73	497	10	544	9.65	582	8.67
52	425	10.9	509	11.2	499	9.98	509	10.3	558	9.89	598	8.91
53	435	11.1	521	11.5	511	10.2	521	10.5	572	10.1	615	9.17
54	444	11.4	532	11.7	524	10.5	534	10.8	586	10.4	631	9.41

TABLE 10.7 (Continued)

Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Moments

10-T7-2

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
55	454	11.6	543	12	536	10.7	546	11	600	10.6	648	9.66
56	464	11.9	555	12.2	549	11	559	11.3	614	10.9	665	9.91
57	473	12.1	566	12.5	561	11.2	571	11.5	628	11.1	682	10.2
58	483	12.4	577	12.7	573	11.5	583	11.8	642	11.4	698	10.4
59	493	12.6	589	13	586	11.7	596	12	656	11.6	715	10.7
60	503	12.9	600	13.2	598	12	608	12.3	670	11.9	732	10.9
61	512	13.1	611	13.5	611	12.2	620	12.5	684	12.1	749	11.2
62	522	13.4	623	13.7	623	12.5	633	12.8	698	12.4	765	11.4
63	532	13.6	634	14	636	12.7	645	13	712	12.6	782	11.7
64	541	13.9	646	14.2	648	13	657	13.3	726	12.9	799	11.9
65	551	14.1	657	14.5	661	13.2	670	13.5	740	13.1	816	12.2
66	561	14.4	668	14.7	673	13.5	682	13.8	754	13.4	832	12.4
67	570	14.6	679	15	686	13.7	695	14	768	13.6	849	12.7
68	580	14.9	691	15.2	698	14	707	14.3	782	13.9	866	12.9
69	590	15.1	702	15.5	711	14.2	719	14.5	797	14.1	883	13.2
70	600	15.4	714	15.7	723	14.5	732	14.8	811	14.4	899	13.4
71	609	15.6	725	16	736	14.7	744	15	825	14.6	916	13.7
72	619	15.9	736	16.2	748	15	756	15.3	839	14.9	933	13.9
73	629	16.1	748	16.5	760	15.2	769	15.5	853	15.1	950	14.2
74	639	16.4	759	16.7	773	15.5	781	15.8	867	15.4	966	14.4
75	648	16.6	770	17	785	15.7	794	16	881	15.6	983	14.7
76	658	16.9	782	17.2	798	16	806	16.3	895	15.9	1000	14.9
77	668	17.1	793	17.5	810	16.2	818	16.5	909	16.1	1020	15.2
78	677	17.4	804	17.7	823	16.5	831	16.8	923	16.4	1030	15.4
79	687	17.6	816	18	835	16.7	843	17	937	16.6	1050	15.7

TABLE 10.7 (Continued)

Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Moments

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
80	697	17.9	827	18.2	848	17	855	17.3	951	16.9	1070	15.9
81	707	18.1	838	18.5	860	17.2	868	17.5	965	17.1	1080	16.2
82	716	18.4	850	18.7	873	17.5	880	17.8	979	17.4	1100	16.4
83	726	18.6	861	19	885	17.7	892	18	993	17.6	1120	16.7
84	736	18.9	872	19.2	898	18	905	18.3	1010	17.9	1130	16.9
85	745	19.1	884	19.5	910	18.2	917	18.5	1020	18.1	1150	17.1
86	755	19.4	895	19.7	923	18.5	930	18.8	1040	18.4	1170	17.4
87	765	19.6	906	20	935	18.7	942	19	1050	18.6	1180	17.6
88	775	19.9	918	20.2	948	19	954	19.3	1060	18.9	1200	17.9
89	784	20.1	929	20.5	960	19.2	967	19.5	1080	19.1	1220	18.1
90	794	20.4	941	20.7	973	19.5	979	19.8	1090	19.4	1230	18.4
91	804	20.6	952	21	985	19.7	991	20	1110	19.6	1250	18.6
92	814	20.9	963	21.2	998	20	1000	20.3	1120	19.9	1270	18.9
93	823	21.1	975	21.5	1010	20.2	1020	20.5	1130	20.1	1280	19.1
94	833	21.4	986	21.7	1020	20.5	1030	20.8	1150	20.4	1300	19.4
95	843	21.6	997	22	1040	20.7	1040	21	1160	20.6	1320	19.6
96	852	21.9	1010	22.2	1050	21	1050	21.3	1180	20.9	1330	19.9
97	862	22.1	1020	22.5	1060	21.2	1070	21.5	1190	21.1	1350	20.1
98	872	22.4	1030	22.7	1070	21.4	1080	21.8	1200	21.4	1370	20.4
99	882	22.6	1040	23	1080	21.7	1090	22	1220	21.6	1390	20.6
100	891	22.9	1050	23.2	1100	21.9	1100	22.3	1230	21.9	1400	20.9
101	901	23.1	1070	23.5	1110	22.2	1120	22.5	1250	22.1	1420	21.1
102	911	23.4	1080	23.7	1120	22.4	1130	22.8	1260	22.4	1440	21.4
103	921	23.6	1090	24	1130	22.7	1140	23	1270	22.6	1450	21.6
104	930	23.9	1100	24.2	1150	22.9	1150	23.3	1290	22.9	1470	21.9

TABLE 10.7 (Continued)
Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Moments

10-T7-4

10-T7-5

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
105	940	24.1	1110	24.5	1160	23.2	1160	23.5	1300	23.1	1490	22.1
106	950	24.4	1120	24.7	1170	23.4	1180	23.8	1320	23.3	1500	22.4
107	959	24.6	1130	25	1180	23.7	1190	24	1330	23.6	1520	22.6
108	969	24.9	1140	25.2	1200	23.9	1200	24.3	1350	23.8	1540	22.9
109	979	25.1	1160	25.5	1210	24.2	1210	24.5	1360	24.1	1550	23.1
110	989	25.4	1170	25.7	1220	24.4	1230	24.8	1370	24.3	1570	23.4
111	998	25.6	1180	26	1230	24.7	1240	25	1390	24.6	1590	23.6
112	1010	25.9	1190	26.2	1250	24.9	1250	25.3	1400	24.8	1600	23.9
113	1020	26.1	1200	26.5	1260	25.2	1260	25.5	1420	25.1	1620	24.1
114	1030	26.3	1210	26.7	1270	25.4	1280	25.8	1430	25.3	1640	24.4
115	1040	26.6	1220	27	1280	25.7	1290	26	1440	25.6	1650	24.6
116	1050	26.8	1240	27.2	1300	25.9	1300	26.3	1460	25.8	1670	24.9
117	1060	27.1	1250	27.5	1310	26.2	1310	26.5	1470	26.1	1690	25.1
118	1070	27.3	1260	27.7	1320	26.4	1330	26.8	1490	26.3	1700	25.4
119	1080	27.6	1270	28	1330	26.7	1340	27	1500	26.6	1720	25.6
120	1090	27.8	1280	28.2	1350	26.9	1350	27.3	1510	26.8	1740	25.9
121	1100	28.1	1290	28.5	1360	27.2	1360	27.5	1530	27.1	1750	26.1
122	1110	28.3	1300	28.7	1370	27.4	1380	27.8	1540	27.3	1770	26.4
123	1120	28.6	1320	29	1380	27.7	1390	28	1560	27.6	1790	26.6
124	1130	28.8	1330	29.2	1400	27.9	1400	28.3	1570	27.8	1800	26.9
125	1130	29.1	1340	29.5	1410	28.2	1410	28.5	1580	28.1	1820	27.1
126	1140	29.3	1350	29.7	1420	28.4	1420	28.8	1600	28.3	1840	27.4
127	1150	29.6	1360	30	1430	28.7	1440	29	1610	28.6	1850	27.6
128	1160	29.8	1370	30.2	1450	28.9	1450	29.3	1630	28.8	1870	27.9
129	1170	30.1	1380	30.5	1460	29.2	1460	29.5	1640	29.1	1890	28.1

TABLE 10.7 (Continued)
Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Moments

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt	M _{TRUCK}	M/Wt
130	1180	30.3	1390	30.7	1470	29.4	1470	29.8	1650	29.3	1900	28.4
131	1190	30.6	1410	31	1480	29.7	1490	30	1670	29.6	1920	28.6
132	1200	30.8	1420	31.2	1500	29.9	1500	30.3	1680	29.8	1940	28.9
133	1210	31.1	1430	31.5	1510	30.2	1510	30.5	1700	30.1	1960	29.1
134	1220	31.3	1440	31.7	1520	30.4	1520	30.8	1710	30.3	1970	29.4
135	1230	31.6	1450	32	1530	30.7	1540	31	1730	30.6	1990	29.6
136	1240	31.8	1460	32.2	1550	30.9	1550	31.3	1740	30.8	2010	29.9
137	1250	32.1	1470	32.5	1560	31.2	1560	31.5	1750	31.1	2020	30.1
138	1260	32.3	1490	32.7	1570	31.4	1570	31.8	1770	31.3	2040	30.4
139	1270	32.6	1500	33	1580	31.7	1590	32	1780	31.6	2060	30.6
140	1280	32.8	1510	33.2	1600	31.9	1600	32.3	1800	31.8	2070	30.9
141	1290	33.1	1520	33.5	1610	32.2	1610	32.5	1810	32.1	2090	31.1
142	1300	33.3	1530	33.7	1620	32.4	1620	32.8	1820	32.3	2110	31.4
143	1310	33.6	1540	34	1630	32.7	1630	33	1840	32.6	2120	31.6
144	1320	33.8	1550	34.2	1650	32.9	1650	33.3	1850	32.8	2140	31.9
145	1330	34.1	1560	34.5	1660	33.2	1660	33.5	1870	33.1	2160	32.1
146	1340	34.3	1580	34.7	1670	33.4	1670	33.8	1880	33.3	2170	32.4
147	1350	34.6	1590	35	1680	33.7	1680	34	1890	33.6	2190	32.6
148	1360	34.8	1600	35.2	1700	33.9	1700	34.3	1910	33.8	2210	32.9
149	1370	35.1	1610	35.5	1710	34.2	1710	34.5	1920	34.1	2220	33.1
150	1380	35.3	1620	35.7	1720	34.4	1720	34.8	1940	34.3	2240	33.4
155	1430	36.6	1680	37	1780	35.7	1780	36	2010	35.6	2320	34.6
160	1480	37.8	1740	38.2	1850	36.9	1850	37.3	2080	36.8	2410	35.9
165	1520	39.1	1790	39.5	1910	38.2	1910	38.5	2150	38.1	2490	37.1
170	1570	40.3	1850	40.7	1970	39.4	1970	39.8	2220	39.3	2580	38.4

TABLE 10.7 (Continued)
Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Moments

10-T7-6

10-T7-7

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt	M TRUCK	M/Wt
175	1620	41.6	1910	42	2030	40.7	2030	41	2290	40.6	2660	39.6
180	1670	42.8	1960	43.2	2100	41.9	2090	42.3	2360	41.8	2740	40.9
185	1720	44.1	2020	44.5	2160	43.2	2150	43.5	2430	43.1	2830	42.1
190	1770	45.3	2080	45.7	2220	44.4	2220	44.8	2500	44.3	2910	43.4
195	1820	46.6	2130	47	2280	45.7	2280	46	2570	45.6	2990	44.6
200	1870	47.8	2190	48.2	2350	46.9	2340	47.3	2640	46.8	3080	45.9
205	1910	49.1	2250	49.5	2410	48.2	2400	48.5	2710	48.1	3160	47.1
210	1960	50.3	2300	50.7	2470	49.4	2460	49.8	2780	49.3	3250	48.4
215	2010	51.6	2360	52	2530	50.7	2530	51	2850	50.6	3330	49.6
220	2060	52.8	2420	53.2	2600	51.9	2590	52.3	2920	51.8	3410	50.9
225	2110	54.1	2470	54.5	2660	53.2	2650	53.5	2990	53.1	3500	52.1
230	2160	55.3	2530	55.7	2720	54.4	2710	54.8	3060	54.3	3580	53.4
235	2210	56.6	2590	57	2780	55.7	2770	56	3130	55.6	3670	54.6
240	2260	57.8	2640	58.2	2850	56.9	2840	57.3	3200	56.8	3750	55.9
245	2300	59.1	2700	59.5	2910	58.2	2900	58.5	3280	58.1	3830	57.1
250	2350	60.3	2760	60.7	2970	59.4	2960	59.8	3350	59.3	3920	58.4
255	2400	61.6	2810	62	3030	60.7	3020	61	3420	60.6	4000	59.6
260	2450	62.8	2870	63.2	3100	61.9	3080	62.3	3490	61.8	4090	60.9
265	2500	64.1	2930	64.5	3160	63.2	3140	63.5	3560	63.1	4170	62.1
270	2550	65.3	2980	65.7	3220	64.4	3210	64.8	3630	64.3	4250	63.4
275	2600	66.6	3040	67	3280	65.7	3270	66	3700	65.6	4340	64.6
280	2650	67.8	3100	68.2	3350	66.9	3330	67.3	3770	66.8	4420	65.9
285	2690	69.1	3150	69.5	3410	68.2	3390	68.5	3840	68.1	4500	67.1
290	2740	70.3	3210	70.7	3470	69.4	3450	69.8	3910	69.3	4590	68.4
295	2790	71.6	3270	72	3530	70.7	3520	71	3980	70.6	4670	69.6
300	2840	72.8	3320	73.2	3600	71.9	3580	72.3	4050	71.8	4760	70.9

TABLE 10.7 (Continued)
Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Moments

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	MOMENT	SPAN	MOMENT	SPAN	MOMENT	SPAN	MOMENT	SPAN	MOMENT
5	40 (T)	40	346 (T)	75	788 (L)	110	1460 (L)	145	2330 (L)
6	48 (T)	41	356 (T)	76	804 (L)	111	1490 (L)	146	2360 (L)
7	56 (T)	42	366 (T)	77	821 (L)	112	1510 (L)	147	2390 (L)
8	64 (T)	43	376 (T)	78	838 (L)	113	1530 (L)	148	2420 (L)
9	72 (T)	44	386 (T)	79	855 (L)	114	1550 (L)	149	2450 (L)
10	80 (T)	45	396 (T)	80	872 (L)	115	1580 (L)	150	2480 (L)
11	88 (T)	46	406 (T)	81	889 (L)	116	1600 (L)	155	2620 (L)
12	96 (T)	47	416 (T)	82	907 (L)	117	1620 (L)	160	2770 (L)
13	104 (T)	48	426 (T)	83	925 (L)	118	1640 (L)	165	2920 (L)
14	112 (T)	49	436 (T)	84	942 (L)	119	1670 (L)	170	3080 (L)
15	120 (T)	50	446 (T)	85	961 (L)	120	1690 (L)	175	3240 (L)
16	128 (T)	51	456 (T)	86	979 (L)	121	1720 (L)	180	3400 (L)
17	136 (T)	52	466 (T)	87	997 (L)	122	1740 (L)	185	3570 (L)
18	144 (T)	53	475 (T)	88	1020 (L)	123	1760 (L)	190	3740 (L)
19	152 (T)	54	485 (T)	89	1030 (L)	124	1790 (L)	195	3920 (L)
20	160 (T)	55	495 (T)	90	1050 (L)	125	1810 (L)	200	4100 (L)
21	168 (T)	56	505 (T)	91	1070 (L)	126	1840 (L)	205	4280 (L)
22	176 (T)	57	516 (L)	92	1090 (L)	127	1860 (L)	210	4470 (L)
23	184 (T)	58	530 (L)	93	1110 (L)	128	1890 (L)	215	4670 (L)
24	192 (T)	59	544 (L)	94	1130 (L)	129	1910 (L)	220	4860 (L)
25	200 (T)	60	558 (L)	95	1150 (L)	130	1940 (L)	225	5060 (L)
26	208 (T)	61	572 (L)	96	1170 (L)	131	1960 (L)	230	5270 (L)
27	217 (T)	62	587 (L)	97	1190 (L)	132	1990 (L)	235	5480 (L)
28	227 (T)	63	601 (L)	98	1210 (L)	133	2010 (L)	240	5690 (L)
29	237 (T)	64	616 (L)	99	1230 (L)	134	2040 (L)	245	5900 (L)
30	247 (T)	65	631 (L)	100	1250 (L)	135	2070 (L)	250	6130 (L)
31	257 (T)	66	645 (L)	101	1270 (L)	136	2090 (L)	255	6350 (L)
32	266 (T)	67	661 (L)	102	1290 (L)	137	2120 (L)	260	6580 (L)
33	276 (T)	68	676 (L)	103	1310 (L)	138	2140 (L)	265	6810 (L)
34	286 (T)	69	691 (L)	104	1330 (L)	139	2170 (L)	270	7050 (L)
35	296 (T)	70	707 (L)	105	1350 (L)	140	2200 (L)	275	7290 (L)
36	306 (T)	71	723 (L)	106	1380 (L)	141	2220 (L)	280	7530 (L)
37	316 (T)	72	739 (L)	107	1400 (L)	142	2250 (L)	285	7780 (L)
38	326 (T)	73	755 (L)	108	1420 (L)	143	2280 (L)	290	8030 (L)
39	336 (T)	74	771 (L)	109	1440 (L)	144	2310 (L)	295	8290 (L)
								300	8550 (L)

Notes:

(T) Denotes the maximum value is controlled by standard truck loading.

(L) Denotes the maximum value is controlled by standard lane loading.

**TABLE 10.8
H20 Truck - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	MOMENT	SPAN	MOMENT	SPAN	MOMENT	SPAN	MOMENT	SPAN	MOMENT	
5	40 (T)	40	450 (T)	75	1080 (T)	110	1700 (T)	145	2330 (L)	
6	48 (T)	41	468 (T)	76	1090 (T)	111	1720 (T)	146	2360 (L)	
7	56 (T)	42	485 (T)	77	1110 (T)	112	1740 (T)	147	2390 (L)	
8	64 (T)	43	503 (T)	78	1130 (T)	113	1760 (T)	148	2420 (L)	
9	72 (T)	44	521 (T)	79	1150 (T)	114	1780 (T)	149	2450 (L)	
10	80 (T)	45	539 (T)	80	1160 (T)	115	1790 (T)	150	2480 (L)	
11	88 (T)	46	556 (T)	81	1180 (T)	116	1810 (T)	155	2620 (L)	
12	96 (T)	47	574 (T)	82	1200 (T)	117	1830 (T)	160	2770 (L)	
13	104 (T)	48	592 (T)	83	1220 (T)	118	1850 (T)	165	2920 (L)	
14	112 (T)	49	610 (T)	84	1240 (T)	119	1870 (T)	170	3080 (L)	
15	120 (T)	50	628 (T)	85	1250 (T)	120	1880 (T)	175	3240 (L)	
16	128 (T)	51	646 (T)	86	1270 (T)	121	1900 (T)	180	3400 (L)	
17	136 (T)	52	664 (T)	87	1290 (T)	122	1920 (T)	185	3570 (L)	
18	144 (T)	53	681 (T)	88	1310 (T)	123	1940 (T)	190	3740 (L)	
19	152 (T)	54	699 (T)	89	1330 (T)	124	1960 (T)	195	3920 (L)	
20	160 (T)	55	717 (T)	90	1340 (T)	125	1970 (T)	200	4100 (L)	
21	168 (T)	56	735 (T)	91	1360 (T)	126	1990 (T)	205	4280 (L)	
22	176 (T)	57	753 (T)	92	1380 (T)	127	2010 (T)	210	4470 (L)	
23	184 (T)	58	771 (T)	93	1400 (T)	128	2030 (T)	215	4670 (L)	
24	193 (T)	59	789 (T)	94	1420 (T)	129	2050 (T)	220	4860 (L)	
25	207 (T)	60	807 (T)	95	1430 (T)	130	2060 (T)	225	5060 (L)	
26	222 (T)	61	824 (T)	96	1450 (T)	131	2080 (T)	230	5270 (L)	
27	237 (T)	62	842 (T)	97	1470 (T)	132	2100 (T)	235	5480 (L)	
28	252 (T)	63	860 (T)	98	1490 (T)	133	2120 (T)	240	5690 (L)	
29	267 (T)	64	878 (T)	99	1510 (T)	134	2130 (T)	245	5900 (L)	
30	282 (T)	65	896 (T)	100	1520 (T)	135	2150 (T)	250	6130 (L)	
31	297 (T)	66	914 (T)	101	1540 (T)	136	2170 (T)	255	6350 (L)	
32	313 (T)	67	932 (T)	102	1560 (T)	137	2190 (T)	260	6580 (L)	
33	328 (T)	68	950 (T)	103	1580 (T)	138	2210 (T)	265	6810 (L)	
34	343 (T)	69	968 (T)	104	1600 (T)	139	2220 (T)	270	7050 (L)	
35	361 (T)	70	986 (T)	105	1610 (T)	140	2240 (T)	275	7290 (L)	
36	379 (T)	71	1000 (T)	106	1630 (T)	141	2260 (T)	280	7530 (L)	
37	397 (T)	72	1020 (T)	107	1650 (T)	142	2280 (T)	285	7780 (L)	
38	414 (T)	73	1040 (T)	108	1670 (T)	143	2300 (T)	290	8030 (L)	
39	432 (T)	74	1060 (T)	109	1690 (T)	144	2310 (T)	295	8290 (L)	
									300	8550 (L)

Notes:

(T) Denotes the maximum value is controlled by standard truck loading.

(L) Denotes the maximum value is controlled by standard lane loading.

**TABLE 10.9
HS20 Truck - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
5	72	72	72	72	72	50.4	57.5	42.5	41.3	36.3
6	90	90	90	90	90	63	69	51	49.5	43.5
7	103	103	103	103	103	72	80.5	59.5	57.8	50.8
8	120	120	120	120	120	94.5	94.9	70.1	68.1	59.8
9	133	133	133	133	133	112	116	85.9	83.4	73.3
10	150	150	150	150	150	134	138	102	99	87
11	164	164	164	164	164	153	160	128	124	109
12	180	180	180	180	180	175	182	151	146	131
13	194	194	194	194	194	194	204	179	173	152
14	210	210	210	210	210	216	227	202	196	174
15	224	224	224	224	224	235	249	230	223	196
16	240	240	240	240	240	257	272	253	246	218
17	254	254	254	254	254	277	294	281	272	241
18	270	270	270	270	270	299	317	305	296	269
19	284	284	284	284	287	318	340	332	322	298
20	300	300	300	300	315	340	362	356	345	326
21	314	314	314	314	343	360	385	383	371	355
22	330	330	330	330	371	382	408	407	395	384
23	344	344	344	344	399	402	431	434	421	412
24	360	360	360	360	428	429	453	458	444	441
25	374	374	374	389	456	460	477	485	470	470
26	390	390	390	415	485	491	506	509	494	499
27	404	404	404	444	513	523	535	536	520	527
28	420	420	420	471	542	554	564	560	545	556
29	434	434	434	501	571	585	592	587	575	585
30	450	450	450	528	600	616	621	611	604	614
31	465	465	465	557	629	648	650	638	634	643
32	480	480	480	585	658	679	684	667	663	672
33	495	495	495	615	687	710	718	697	693	700
34	510	510	510	642	716	741	752	729	723	730
35	525	525	535	672	746	773	786	759	755	764
36	540	540	563	700	775	804	821	791	789	798
37	555	555	590	730	804	835	855	822	823	832
38	570	570	619	758	834	867	889	856	858	866
39	585	585	646	788	863	898	923	893	898	901
40	600	600	675	816	893	929	958	929	937	935
41	615	615	702	846	922	961	992	967	977	973
42	630	630	731	874	951	992	1030	1000	1020	1010
43	645	649	759	904	981	1020	1060	1040	1060	1050
44	660	676	788	933	1010	1050	1090	1080	1090	1090
45	675	704	816	963	1040	1090	1130	1120	1130	1130
46	690	732	845	991	1070	1120	1160	1150	1170	1170
47	705	760	873	1020	1100	1150	1200	1190	1210	1210
48	720	788	903	1050	1130	1180	1230	1230	1250	1250
49	735	816	931	1080	1160	1210	1270	1270	1290	1300

**TABLE 10.10
Standard Permit Vehicles - Class A - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
50	750	844	960	1110	1190	1240	1300	1300	1330	1340
51	765	872	988	1140	1220	1270	1340	1340	1370	1380
52	789	900	1020	1170	1250	1310	1370	1380	1410	1430
53	817	928	1050	1200	1280	1340	1400	1410	1450	1470
54	844	957	1080	1230	1310	1370	1440	1450	1490	1510
55	873	985	1100	1260	1340	1400	1470	1490	1530	1560
56	900	1010	1130	1290	1370	1430	1510	1530	1570	1600
57	928	1040	1160	1320	1400	1460	1540	1560	1610	1650
58	956	1070	1190	1340	1430	1490	1580	1600	1650	1690
59	984	1100	1220	1370	1460	1530	1610	1640	1690	1730
60	1010	1130	1250	1400	1490	1560	1640	1680	1730	1780
61	1040	1160	1280	1430	1510	1590	1680	1710	1770	1820
62	1070	1190	1310	1460	1540	1620	1710	1750	1810	1870
63	1100	1210	1340	1490	1570	1650	1750	1790	1850	1910
64	1130	1240	1370	1520	1600	1680	1780	1830	1890	1950
65	1150	1270	1400	1550	1630	1710	1820	1860	1920	2000
66	1180	1300	1430	1580	1660	1750	1850	1900	1960	2040
67	1210	1330	1450	1610	1690	1780	1890	1940	2000	2080
68	1240	1360	1480	1640	1720	1810	1920	1980	2040	2130
69	1270	1390	1510	1670	1750	1840	1950	2010	2080	2170
70	1300	1420	1540	1700	1780	1870	1990	2050	2120	2220
71	1330	1450	1570	1730	1810	1900	2020	2090	2160	2260
72	1350	1480	1600	1760	1840	1930	2060	2130	2200	2300
73	1380	1500	1630	1790	1870	1970	2090	2160	2240	2350
74	1410	1530	1660	1820	1900	2000	2130	2200	2280	2390
75	1440	1560	1690	1850	1930	2030	2160	2240	2320	2440
76	1470	1590	1720	1880	1960	2060	2200	2270	2360	2480
77	1500	1620	1750	1910	1990	2090	2230	2310	2400	2520
78	1530	1650	1780	1940	2020	2120	2260	2350	2440	2570
79	1560	1680	1810	1970	2050	2160	2300	2390	2480	2610
80	1580	1710	1840	2000	2080	2190	2330	2420	2520	2660
81	1610	1740	1870	2030	2110	2220	2370	2460	2560	2700
82	1640	1770	1900	2060	2140	2250	2400	2500	2600	2740
83	1670	1800	1930	2090	2170	2280	2440	2540	2640	2790
84	1700	1830	1960	2120	2200	2310	2470	2570	2680	2830
85	1730	1860	1980	2150	2230	2340	2510	2610	2720	2880
86	1760	1880	2010	2180	2260	2380	2540	2650	2760	2920
87	1790	1910	2040	2210	2290	2410	2570	2690	2790	2960
88	1820	1940	2070	2240	2320	2440	2610	2720	2830	3010
89	1850	1970	2100	2270	2350	2470	2640	2760	2870	3050
90	1870	2000	2130	2300	2380	2500	2680	2800	2910	3100
91	1900	2030	2160	2330	2410	2530	2710	2840	2950	3140
92	1930	2060	2190	2360	2440	2560	2750	2870	2990	3180
93	1960	2090	2220	2390	2470	2600	2780	2910	3030	3230
94	1990	2120	2250	2420	2500	2630	2820	2950	3070	3270

**TABLE 10.10 (Continued)
Standard Permit Vehicles - Class A - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
95	2020	2150	2280	2450	2530	2660	2850	2990	3110	3320
96	2050	2180	2310	2480	2560	2690	2880	3020	3150	3360
97	2080	2210	2340	2510	2590	2720	2920	3060	3190	3400
98	2110	2240	2370	2530	2620	2750	2950	3100	3230	3450
99	2140	2270	2400	2560	2650	2780	2990	3130	3270	3490
100	2170	2300	2430	2590	2680	2820	3020	3170	3310	3540
101	2200	2330	2460	2620	2710	2850	3060	3210	3350	3580
102	2230	2360	2490	2650	2740	2880	3090	3250	3390	3620
103	2260	2390	2520	2680	2770	2910	3130	3280	3430	3670
104	2280	2420	2550	2710	2800	2940	3160	3320	3470	3710
105	2310	2440	2580	2740	2830	2970	3190	3360	3510	3760
106	2340	2470	2610	2770	2860	3000	3230	3400	3550	3800
107	2370	2500	2640	2800	2890	3040	3260	3430	3590	3850
108	2400	2530	2670	2830	2920	3070	3300	3470	3630	3890
109	2430	2560	2700	2860	2950	3100	3330	3510	3670	3930
110	2460	2590	2730	2890	2980	3130	3370	3550	3700	3980
111	2490	2620	2760	2920	3010	3160	3400	3580	3740	4020
112	2520	2650	2790	2950	3040	3190	3440	3620	3780	4070
113	2550	2680	2820	2980	3070	3230	3470	3660	3820	4110
114	2580	2710	2850	3010	3100	3260	3500	3700	3860	4150
115	2610	2740	2880	3040	3130	3290	3540	3730	3900	4200
116	2640	2770	2910	3070	3160	3320	3570	3770	3940	4240
117	2670	2800	2940	3100	3190	3350	3610	3810	3980	4290
118	2700	2830	2970	3130	3220	3380	3640	3850	4020	4330
119	2730	2860	2990	3160	3250	3410	3680	3880	4060	4370
120	2760	2890	3030	3190	3280	3450	3710	3920	4100	4420
121	2790	2920	3050	3220	3310	3480	3750	3960	4140	4460
122	2820	2950	3080	3250	3340	3510	3780	3990	4180	4510
123	2840	2980	3110	3280	3370	3540	3820	4030	4220	4550
124	2870	3010	3140	3310	3400	3570	3850	4070	4260	4600
125	2900	3040	3170	3340	3430	3600	3880	4110	4300	4640
126	2930	3070	3200	3370	3460	3630	3920	4140	4340	4680
127	2960	3100	3230	3400	3490	3670	3950	4180	4380	4730
128	2990	3130	3260	3430	3520	3700	3990	4220	4420	4770
129	3020	3160	3290	3460	3550	3730	4020	4260	4460	4820
130	3050	3190	3320	3490	3580	3760	4060	4290	4500	4860
131	3080	3220	3350	3520	3610	3790	4090	4330	4540	4900
132	3110	3250	3380	3550	3640	3820	4130	4370	4580	4950
133	3140	3280	3410	3580	3670	3860	4160	4410	4620	4990
134	3170	3300	3440	3610	3700	3890	4190	4440	4650	5040
135	3200	3330	3470	3640	3730	3920	4230	4480	4690	5080
136	3230	3360	3500	3670	3760	3950	4260	4520	4730	5120
137	3260	3390	3530	3700	3790	3980	4300	4560	4770	5170
138	3290	3420	3560	3730	3820	4010	4330	4590	4810	5210
139	3320	3450	3590	3760	3850	4040	4370	4630	4850	5260

**TABLE 10.10 (Continued)
Standard Permit Vehicles - Class A - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
140	3350	3480	3620	3790	3880	4080	4400	4670	4890	5300
141	3380	3510	3650	3820	3910	4110	4440	4710	4930	5350
142	3410	3540	3680	3850	3940	4140	4470	4740	4970	5390
143	3440	3570	3710	3880	3970	4170	4500	4780	5010	5430
144	3470	3600	3740	3910	4000	4200	4540	4820	5050	5480
145	3500	3630	3770	3940	4030	4230	4570	4850	5090	5520
146	3530	3660	3800	3970	4060	4260	4610	4890	5130	5570
147	3560	3690	3830	4000	4090	4300	4640	4930	5170	5610
148	3590	3720	3860	4030	4120	4330	4680	4970	5210	5650
149	3620	3750	3890	4060	4150	4360	4710	5000	5250	5700
150	3640	3780	3920	4090	4180	4390	4750	5040	5290	5740
155	3790	3930	4070	4240	4330	4550	4920	5230	5490	5960
160	3940	4080	4220	4390	4480	4710	5090	5420	5680	6180
165	4090	4230	4370	4540	4630	4860	5260	5600	5880	6410
170	4240	4380	4520	4690	4780	5020	5440	5790	6080	6630
175	4390	4530	4670	4840	4930	5180	5610	5980	6280	6850
180	4540	4680	4820	4990	5080	5340	5780	6160	6480	7070
185	4690	4830	4970	5140	5220	5490	5950	6350	6670	7290
190	4840	4970	5120	5290	5370	5650	6130	6540	6870	7510
195	4980	5120	5270	5440	5520	5810	6300	6720	7070	7730
200	5130	5270	5420	5590	5670	5970	6470	6910	7270	7950
205	5280	5420	5560	5740	5820	6120	6640	7100	7470	8170
210	5430	5570	5710	5890	5970	6280	6820	7290	7660	8390
215	5580	5720	5860	6040	6120	6440	6990	7470	7860	8610
220	5730	5870	6010	6190	6270	6590	7160	7660	8060	8840
225	5880	6020	6160	6340	6420	6750	7330	7850	8260	9060
230	6030	6170	6310	6490	6570	6910	7510	8030	8460	9280
235	6180	6320	6460	6640	6720	7070	7680	8220	8650	9500
240	6330	6470	6610	6790	6870	7220	7850	8410	8850	9720
245	6480	6620	6760	6940	7020	7380	8020	8590	9050	9940
250	6630	6770	6910	7090	7170	7540	8200	8780	9250	10200
255	6780	6920	7060	7240	7320	7700	8370	8970	9450	10400
260	6930	7070	7210	7390	7470	7850	8540	9160	9640	10600
265	7080	7220	7360	7540	7620	8010	8710	9340	9840	10800
270	7220	7370	7510	7690	7770	8170	8890	9530	10000	11000
275	7370	7520	7660	7840	7920	8330	9060	9720	10200	11300
280	7520	7670	7810	7990	8070	8480	9230	9900	10400	11500
285	7670	7820	7960	8140	8220	8640	9400	10100	10600	11700
290	7820	7970	8110	8280	8370	8800	9570	10300	10800	11900
295	7970	8120	8260	8430	8520	8960	9750	10500	11000	12200
300	8120	8270	8410	8580	8670	9110	9920	10700	11200	12400

**TABLE 10.10 (Continued)
Standard Permit Vehicles - Class A - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
5	72	52.8	54	39.6	33.6	35.1	32.3	40.8	37.1	35.3
6	90	66	67.5	49.5	42	41	38.7	51	44.6	42.5
7	103	75.4	77.1	56.6	48	50.1	45.2	58.3	52	49.6
8	120	99	101	74.3	63	61.4	56.4	76.5	63.9	62.8
9	133	117	120	88	74.7	77.2	68.6	90.7	78	76.1
10	150	141	144	116	98	96.2	85.9	109	95.5	96.6
11	164	160	164	138	117	119	105	124	119	118
12	180	183	188	165	140	139	125	142	140	139
13	194	203	208	188	159	161	144	157	163	160
14	210	226	231	215	182	181	163	175	185	182
15	224	246	252	238	202	204	183	190	208	203
16	240	270	276	264	231	230	205	208	230	229
17	254	290	296	287	257	259	230	224	252	256
18	270	313	320	314	286	285	256	242	274	285
19	284	333	341	337	312	315	281	258	297	312
20	300	359	365	363	342	341	307	275	319	341
21	320	385	386	387	368	370	332	291	341	368
22	349	411	409	413	397	397	358	309	363	397
23	376	436	430	436	424	426	383	325	386	424
24	405	462	454	462	453	453	409	343	408	453
25	432	488	475	486	479	482	434	359	431	481
26	462	513	503	512	508	509	463	380	453	509
27	489	539	528	535	535	538	495	399	475	537
28	519	565	555	561	564	565	527	419	497	565
29	546	590	580	585	591	594	560	443	520	593
30	576	616	608	611	620	621	592	468	542	622
31	604	642	633	634	647	651	624	496	564	650
32	634	667	660	663	676	681	658	527	586	678
33	662	693	685	690	703	711	695	560	609	706
34	692	719	713	719	735	741	734	592	631	735
35	720	744	738	746	766	771	772	626	653	762
36	750	770	765	775	798	801	811	657	683	791
37	778	796	791	802	829	831	848	691	711	819
38	808	821	818	831	861	861	888	723	741	847
39	837	847	843	858	892	891	925	760	777	875
40	867	873	870	887	924	922	964	795	814	904
41	896	898	896	914	955	954	1000	832	850	932
42	926	927	923	943	987	984	1040	868	888	960
43	954	973	948	970	1020	1020	1080	905	924	988
44	985	1020	975	999	1050	1050	1120	940	961	1020
45	1010	1060	1000	1030	1080	1080	1160	977	997	1040
46	1040	1110	1030	1050	1110	1110	1200	1010	1030	1070
47	1070	1160	1050	1080	1140	1140	1230	1050	1070	1110
48	1100	1200	1080	1110	1180	1170	1270	1090	1110	1140
49	1130	1250	1110	1140	1210	1200	1310	1120	1140	1180

**TABLE 10.10 (Continued)
Standard Permit Vehicles - Class A - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
50	1160	1300	1130	1170	1240	1230	1350	1160	1180	1210
51	1200	1340	1160	1190	1270	1260	1390	1200	1220	1250
52	1250	1390	1210	1220	1300	1300	1430	1230	1260	1280
53	1290	1440	1260	1250	1330	1330	1470	1270	1300	1320
54	1340	1480	1300	1280	1370	1360	1520	1300	1340	1350
55	1380	1530	1350	1310	1400	1390	1560	1340	1380	1390
56	1430	1580	1400	1330	1430	1420	1600	1380	1420	1430
57	1470	1620	1440	1370	1460	1450	1640	1410	1460	1460
58	1510	1670	1490	1410	1490	1480	1680	1450	1500	1500
59	1560	1720	1540	1450	1520	1510	1730	1490	1540	1530
60	1600	1760	1590	1500	1550	1540	1770	1520	1580	1570
61	1650	1810	1630	1550	1580	1580	1810	1560	1620	1600
62	1690	1860	1680	1600	1620	1610	1850	1600	1660	1640
63	1740	1900	1730	1650	1670	1650	1900	1630	1700	1680
64	1780	1950	1780	1700	1710	1690	1940	1670	1730	1710
65	1830	2000	1820	1760	1760	1740	1980	1710	1770	1750
66	1870	2040	1870	1810	1810	1780	2020	1740	1810	1790
67	1920	2090	1920	1860	1860	1830	2070	1780	1850	1830
68	1960	2140	1970	1910	1910	1880	2110	1820	1890	1860
69	2010	2180	2010	1960	1960	1930	2150	1850	1930	1900
70	2050	2230	2060	2010	2020	1970	2190	1890	1970	1940
71	2100	2280	2110	2060	2070	2030	2240	1930	2010	1980
72	2140	2330	2160	2120	2130	2080	2280	1960	2050	2010
73	2190	2370	2200	2170	2190	2140	2320	2010	2090	2050
74	2230	2420	2250	2220	2250	2200	2360	2060	2130	2090
75	2280	2470	2300	2270	2310	2260	2400	2120	2170	2130
76	2320	2510	2350	2320	2370	2310	2450	2170	2210	2160
77	2370	2560	2400	2380	2420	2370	2490	2220	2250	2200
78	2410	2610	2440	2430	2480	2430	2530	2280	2290	2240
79	2460	2650	2490	2480	2540	2490	2570	2330	2330	2280
80	2500	2700	2540	2530	2600	2550	2620	2380	2370	2310
81	2550	2750	2590	2580	2660	2610	2660	2440	2410	2350
82	2590	2800	2640	2630	2720	2670	2700	2490	2450	2390
83	2630	2840	2680	2690	2780	2730	2740	2540	2490	2430
84	2680	2890	2730	2740	2830	2790	2790	2600	2530	2460
85	2720	2940	2780	2790	2890	2850	2830	2650	2570	2500
86	2770	2990	2830	2840	2950	2910	2870	2710	2610	2540
87	2810	3030	2880	2890	3010	2970	2910	2760	2640	2580
88	2860	3080	2920	2950	3070	3030	2960	2810	2680	2610
89	2900	3130	2970	3000	3130	3090	3000	2870	2720	2650
90	2950	3170	3020	3050	3190	3150	3040	2920	2760	2690
91	2990	3220	3070	3100	3240	3210	3080	2970	2800	2730
92	3040	3270	3120	3150	3300	3270	3130	3040	2840	2780
93	3080	3320	3160	3210	3360	3330	3180	3110	2880	2840
94	3130	3360	3210	3260	3420	3390	3230	3180	2920	2900

**TABLE 10.10 (Continued)
Standard Permit Vehicles - Class A - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
95	3170	3410	3260	3310	3480	3450	3290	3240	2960	2970
96	3220	3460	3310	3360	3540	3510	3350	3320	3000	3030
97	3260	3510	3360	3420	3600	3570	3410	3380	3040	3100
98	3310	3550	3410	3470	3660	3630	3470	3450	3080	3160
99	3350	3600	3450	3520	3710	3690	3530	3520	3120	3220
100	3400	3650	3500	3570	3770	3750	3590	3590	3160	3290
101	3440	3690	3550	3620	3830	3810	3660	3660	3200	3350
102	3490	3740	3600	3680	3890	3870	3730	3730	3250	3420
103	3530	3790	3650	3730	3950	3930	3800	3800	3300	3480
104	3580	3840	3690	3780	4010	3990	3860	3870	3350	3550
105	3620	3880	3740	3830	4070	4050	3930	3940	3410	3610
106	3670	3930	3790	3890	4130	4110	4000	4010	3460	3680
107	3710	3980	3840	3940	4190	4170	4070	4080	3510	3740
108	3760	4030	3890	3990	4240	4230	4130	4150	3570	3810
109	3800	4070	3940	4040	4300	4290	4200	4220	3630	3870
110	3850	4120	3980	4100	4360	4350	4270	4290	3690	3940
111	3890	4170	4030	4150	4420	4420	4340	4360	3750	4000
112	3940	4220	4080	4200	4480	4480	4400	4430	3820	4060
113	3980	4260	4130	4250	4540	4540	4470	4500	3880	4130
114	4030	4310	4180	4300	4600	4600	4540	4570	3950	4190
115	4070	4360	4230	4360	4660	4660	4610	4640	4020	4260
116	4120	4410	4270	4410	4720	4720	4670	4710	4090	4320
117	4160	4450	4320	4460	4780	4780	4740	4780	4160	4390
118	4210	4500	4370	4510	4830	4840	4810	4850	4230	4450
119	4250	4550	4420	4570	4890	4900	4880	4920	4290	4520
120	4300	4600	4470	4620	4950	4960	4940	4990	4360	4580
121	4340	4640	4520	4670	5010	5020	5010	5060	4430	4650
122	4390	4690	4560	4720	5070	5080	5080	5130	4500	4710
123	4430	4740	4610	4780	5130	5140	5150	5200	4570	4780
124	4480	4790	4660	4830	5190	5200	5210	5270	4640	4840
125	4520	4830	4710	4880	5250	5260	5280	5340	4700	4910
126	4570	4880	4760	4930	5310	5320	5350	5410	4770	4970
127	4610	4930	4810	4990	5370	5380	5420	5480	4840	5040
128	4660	4980	4860	5040	5430	5440	5480	5550	4910	5100
129	4700	5020	4900	5090	5480	5500	5550	5620	4980	5170
130	4750	5070	4950	5140	5540	5560	5620	5700	5050	5230
131	4790	5120	5000	5200	5600	5620	5690	5760	5110	5300
132	4840	5170	5050	5250	5660	5680	5760	5840	5180	5370
133	4880	5210	5100	5300	5720	5750	5820	5910	5250	5430
134	4930	5260	5150	5350	5780	5810	5890	5980	5320	5500
135	4970	5310	5190	5410	5840	5870	5960	6050	5390	5560
136	5020	5360	5240	5460	5900	5930	6030	6120	5460	5630
137	5060	5400	5290	5510	5960	5990	6090	6190	5530	5690
138	5110	5450	5340	5560	6020	6050	6160	6260	5590	5760
139	5150	5500	5390	5620	6080	6110	6230	6330	5660	5820

**TABLE 10.10 (Continued)
Standard Permit Vehicles - Class A - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
140	5200	5550	5440	5670	6140	6170	6300	6400	5730	5890
141	5240	5590	5490	5720	6190	6230	6370	6470	5800	5950
142	5290	5640	5530	5770	6250	6290	6430	6540	5870	6020
143	5330	5690	5580	5830	6310	6350	6500	6610	5940	6080
144	5380	5740	5630	5880	6370	6410	6570	6680	6000	6150
145	5420	5780	5680	5930	6430	6470	6640	6750	6070	6210
146	5470	5830	5730	5980	6490	6530	6700	6820	6140	6280
147	5510	5880	5780	6040	6550	6590	6770	6890	6210	6340
148	5560	5930	5820	6090	6610	6650	6840	6960	6280	6410
149	5600	5970	5870	6140	6670	6720	6910	7030	6350	6470
150	5650	6020	5920	6190	6730	6780	6970	7100	6420	6540
155	5870	6260	6160	6460	7020	7080	7310	7450	6760	6870
160	6100	6500	6410	6720	7320	7380	7650	7810	7100	7190
165	6320	6730	6650	6980	7620	7690	7990	8160	7450	7520
170	6540	6970	6890	7240	7910	7990	8330	8510	7790	7850
175	6770	7210	7140	7510	8210	8290	8670	8860	8130	8180
180	6990	7450	7380	7770	8510	8600	9010	9210	8480	8500
185	7220	7680	7620	8030	8800	8900	9350	9570	8830	8830
190	7440	7920	7860	8300	9100	9210	9690	9920	9170	9160
195	7670	8160	8110	8560	9400	9510	10000	10300	9520	9490
200	7890	8400	8350	8820	9690	9810	10400	10600	9860	9820
205	8120	8640	8590	9090	9990	10100	10700	11000	10200	10100
210	8340	8870	8840	9350	10300	10400	11000	11300	10600	10500
215	8570	9110	9080	9610	10600	10700	11400	11700	10900	10800
220	8790	9350	9320	9880	10900	11000	11700	12000	11200	11100
225	9020	9590	9570	10100	11200	11300	12100	12400	11600	11500
230	9240	9830	9810	10400	11500	11600	12400	12700	11900	11800
235	9470	10100	10100	10700	11800	11900	12700	13100	12300	12100
240	9690	10300	10300	10900	12100	12300	13100	13500	12600	12500
245	9920	10500	10500	11200	12400	12600	13400	13800	13000	12800
250	10100	10800	10800	11500	12700	12900	13800	14200	13300	13100
255	10400	11000	11000	11700	13000	13200	14100	14500	13700	13400
260	10600	11300	11300	12000	13300	13500	14500	14900	14000	13800
265	10800	11500	11500	12200	13600	13800	14800	15200	14400	14100
270	11000	11700	11800	12500	13800	14100	15100	15600	14700	14400
275	11300	12000	12000	12800	14100	14400	15500	15900	15100	14800
280	11500	12200	12200	13000	14400	14700	15800	16300	15400	15100
285	11700	12400	12500	13300	14700	15000	16200	16600	15700	15400
290	11900	12700	12700	13600	15000	15300	16500	17000	16100	15800
295	12200	12900	13000	13800	15300	15600	16800	17300	16400	16100
300	12400	13200	13200	14100	15600	15900	17200	17700	16800	16400

**TABLE 10.10 (Continued)
Standard Permit Vehicles - Class A - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
5	72	72	70.8	64.8	62.4	43.2	47.5	36.3	33.8	30
6	90	90	88.5	81	78	54	57	43.5	40.5	36
7	103	103	101	92.6	89.1	61.7	66.5	50.8	47.3	42
8	120	120	118	108	104	81	78.4	59.8	55.7	49.5
9	133	133	131	120	116	96	96.1	73.3	68.3	60.7
10	150	150	148	135	130	115	114	87	81	72
11	164	164	161	147	142	131	132	109	101	90
12	180	180	177	162	156	150	150	129	120	108
13	194	194	191	174	168	166	169	152	142	126
14	210	210	207	189	182	185	187	172	161	144
15	224	224	220	202	194	202	206	196	182	162
16	240	240	236	216	208	221	224	216	201	180
17	254	254	250	229	220	237	243	239	223	199
18	270	270	266	243	234	256	262	260	242	223
19	284	284	279	256	249	273	281	283	263	246
20	300	300	295	270	273	292	299	303	282	270
21	314	314	309	283	297	309	318	326	304	294
22	330	330	325	297	321	327	337	347	323	317
23	344	344	339	310	346	344	356	370	344	341
24	360	360	354	324	371	368	374	391	364	365
25	374	374	368	350	395	395	394	413	385	389
26	390	390	384	374	420	421	418	434	404	413
27	404	404	398	400	445	448	442	457	425	436
28	420	420	413	424	470	474	466	478	446	460
29	434	434	427	451	495	502	489	500	470	484
30	450	450	443	475	520	528	513	521	495	508
31	465	465	457	502	545	555	537	544	519	532
32	480	480	472	527	570	582	565	569	543	556
33	495	495	486	553	596	609	593	595	567	580
34	510	510	502	578	621	635	622	622	591	604
35	525	525	526	605	646	662	649	648	617	632
36	540	540	554	630	672	689	678	675	646	661
37	555	555	580	657	697	716	706	701	673	689
38	570	570	609	682	723	743	735	730	702	717
39	585	585	635	709	748	770	763	762	735	745
40	600	600	664	734	774	797	791	793	767	773
41	615	615	691	761	799	824	819	824	799	805
42	630	630	719	787	825	850	848	856	831	837
43	645	649	746	814	850	877	876	888	864	870
44	660	676	775	839	876	904	905	920	896	902
45	675	704	802	866	901	931	933	952	928	934
46	690	732	831	892	927	958	961	984	960	966
47	705	760	859	919	953	985	989	1020	993	1000
48	720	788	887	945	978	1010	1020	1050	1020	1040
49	735	816	915	972	1000	1040	1050	1080	1060	1070

**TABLE 10.11
Standard Permit Vehicles - Class B - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
50	750	844	944	998	1030	1070	1070	1110	1090	1110
51	765	872	972	1020	1060	1090	1100	1140	1120	1140
52	789	900	1000	1050	1080	1120	1130	1170	1150	1180
53	817	928	1030	1080	1110	1150	1160	1210	1190	1220
54	844	957	1060	1100	1130	1170	1190	1240	1220	1250
55	873	985	1090	1130	1160	1200	1220	1270	1250	1290
56	900	1010	1110	1160	1180	1230	1250	1300	1280	1330
57	928	1040	1140	1180	1210	1250	1270	1330	1320	1360
58	956	1070	1170	1210	1240	1280	1300	1370	1350	1400
59	984	1100	1200	1240	1260	1310	1330	1400	1380	1430
60	1010	1130	1230	1260	1290	1340	1360	1430	1410	1470
61	1040	1160	1260	1290	1310	1360	1390	1460	1450	1510
62	1070	1190	1290	1320	1340	1390	1420	1490	1480	1540
63	1100	1210	1310	1340	1360	1420	1440	1530	1510	1580
64	1130	1240	1340	1370	1390	1440	1470	1560	1540	1620
65	1150	1270	1370	1400	1420	1470	1500	1590	1570	1650
66	1180	1300	1400	1420	1440	1500	1530	1620	1610	1690
67	1210	1330	1430	1450	1470	1520	1560	1650	1640	1720
68	1240	1360	1460	1480	1490	1550	1590	1690	1670	1760
69	1270	1390	1490	1500	1520	1580	1610	1720	1700	1800
70	1300	1420	1520	1530	1550	1600	1640	1750	1740	1830
71	1330	1450	1550	1560	1570	1630	1670	1780	1770	1870
72	1350	1480	1570	1580	1600	1660	1700	1810	1800	1910
73	1380	1500	1600	1610	1620	1690	1730	1840	1830	1940
74	1410	1530	1630	1640	1650	1710	1760	1880	1870	1980
75	1440	1560	1660	1660	1670	1740	1790	1910	1900	2020
76	1470	1590	1690	1690	1700	1770	1810	1940	1930	2050
77	1500	1620	1720	1720	1730	1790	1840	1970	1960	2090
78	1530	1650	1750	1740	1750	1820	1870	2000	2000	2130
79	1560	1680	1780	1770	1780	1850	1900	2040	2030	2160
80	1580	1710	1810	1800	1800	1870	1930	2070	2060	2200
81	1610	1740	1840	1830	1830	1900	1960	2100	2090	2230
82	1640	1770	1860	1850	1860	1930	1980	2130	2120	2270
83	1670	1800	1890	1880	1880	1960	2010	2160	2160	2310
84	1700	1830	1920	1910	1910	1980	2040	2200	2190	2340
85	1730	1860	1950	1930	1930	2010	2070	2230	2220	2380
86	1760	1880	1980	1960	1960	2040	2100	2260	2250	2420
87	1790	1910	2010	1990	1980	2060	2130	2290	2290	2450
88	1820	1940	2040	2010	2010	2090	2160	2320	2320	2490
89	1850	1970	2070	2040	2040	2120	2180	2350	2350	2530
90	1870	2000	2100	2070	2060	2140	2210	2390	2380	2560
91	1900	2030	2130	2090	2090	2170	2240	2420	2420	2600
92	1930	2060	2160	2120	2110	2200	2270	2450	2450	2640
93	1960	2090	2180	2150	2140	2230	2300	2480	2480	2670
94	1990	2120	2210	2170	2170	2250	2330	2510	2510	2710

**TABLE 10.11 (Continued)
Standard Permit Vehicles - Class B - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
95	2020	2150	2240	2200	2190	2280	2350	2550	2550	2740
96	2050	2180	2270	2230	2220	2310	2380	2580	2580	2780
97	2080	2210	2300	2250	2240	2330	2410	2610	2610	2820
98	2110	2240	2330	2280	2270	2360	2440	2640	2640	2850
99	2140	2270	2360	2310	2300	2390	2470	2670	2680	2890
100	2170	2300	2390	2330	2320	2410	2500	2710	2710	2930
101	2200	2330	2420	2360	2350	2440	2530	2740	2740	2960
102	2230	2360	2450	2390	2370	2470	2550	2770	2770	3000
103	2260	2390	2480	2420	2400	2490	2580	2800	2800	3040
104	2280	2420	2510	2440	2430	2520	2610	2830	2840	3070
105	2310	2440	2540	2470	2450	2550	2640	2870	2870	3110
106	2340	2470	2560	2500	2480	2580	2670	2900	2900	3150
107	2370	2500	2590	2520	2500	2600	2700	2930	2930	3180
108	2400	2530	2620	2550	2530	2630	2720	2960	2970	3220
109	2430	2560	2650	2580	2560	2660	2750	2990	3000	3260
110	2460	2590	2680	2600	2580	2680	2780	3020	3030	3290
111	2490	2620	2710	2630	2610	2710	2810	3060	3060	3330
112	2520	2650	2740	2660	2630	2740	2840	3090	3100	3360
113	2550	2680	2770	2680	2660	2760	2870	3120	3130	3400
114	2580	2710	2800	2710	2680	2790	2900	3150	3160	3440
115	2610	2740	2830	2740	2710	2820	2920	3180	3190	3470
116	2640	2770	2860	2770	2740	2850	2950	3220	3230	3510
117	2670	2800	2890	2790	2760	2870	2980	3250	3260	3550
118	2700	2830	2920	2820	2790	2900	3010	3280	3290	3580
119	2730	2860	2950	2850	2810	2930	3040	3310	3320	3620
120	2760	2890	2970	2870	2840	2950	3070	3340	3360	3660
121	2790	2920	3000	2900	2870	2980	3090	3380	3390	3690
122	2820	2950	3030	2930	2890	3010	3120	3410	3420	3730
123	2840	2980	3060	2950	2920	3030	3150	3440	3450	3770
124	2870	3010	3090	2980	2940	3060	3180	3470	3480	3800
125	2900	3040	3120	3010	2970	3090	3210	3500	3520	3840
126	2930	3070	3150	3030	3000	3120	3240	3530	3550	3880
127	2960	3100	3180	3060	3020	3140	3270	3570	3580	3910
128	2990	3130	3210	3090	3050	3170	3290	3600	3610	3950
129	3020	3160	3240	3120	3070	3200	3320	3630	3650	3990
130	3050	3190	3270	3140	3100	3220	3350	3660	3680	4020
131	3080	3220	3300	3170	3130	3250	3380	3690	3710	4060
132	3110	3250	3330	3200	3150	3280	3410	3730	3740	4100
133	3140	3280	3360	3220	3180	3300	3440	3760	3780	4130
134	3170	3300	3390	3250	3200	3330	3460	3790	3810	4170
135	3200	3330	3410	3280	3230	3360	3490	3820	3840	4200
136	3230	3360	3440	3300	3260	3390	3520	3850	3870	4240
137	3260	3390	3470	3330	3280	3410	3550	3890	3910	4280
138	3290	3420	3500	3360	3310	3440	3580	3920	3940	4310
139	3320	3450	3530	3380	3330	3470	3610	3950	3970	4350

**TABLE 10.11 (Continued)
Standard Permit Vehicles - Class B - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
140	3350	3480	3560	3410	3360	3490	3640	3980	4000	4390
141	3380	3510	3590	3440	3390	3520	3660	4010	4040	4420
142	3410	3540	3620	3470	3410	3550	3690	4050	4070	4460
143	3440	3570	3650	3490	3440	3570	3720	4080	4100	4500
144	3470	3600	3680	3520	3460	3600	3750	4110	4130	4530
145	3500	3630	3710	3550	3490	3630	3780	4140	4160	4570
146	3530	3660	3740	3570	3520	3660	3810	4170	4200	4610
147	3560	3690	3770	3600	3540	3680	3840	4200	4230	4640
148	3590	3720	3800	3630	3570	3710	3860	4240	4260	4680
149	3620	3750	3830	3650	3590	3740	3890	4270	4290	4720
150	3640	3780	3850	3680	3620	3760	3920	4300	4330	4750
155	3790	3930	4000	3820	3750	3900	4060	4460	4490	4940
160	3940	4080	4150	3950	3880	4030	4210	4620	4650	5120
165	4090	4230	4300	4090	4010	4170	4350	4780	4810	5300
170	4240	4380	4440	4220	4140	4300	4490	4940	4970	5480
175	4390	4530	4590	4350	4270	4440	4630	5100	5140	5670
180	4540	4680	4740	4490	4400	4570	4780	5260	5300	5850
185	4690	4830	4880	4620	4530	4710	4920	5420	5460	6030
190	4840	4970	5030	4760	4660	4840	5060	5580	5620	6220
195	4980	5120	5180	4890	4790	4980	5200	5740	5780	6400
200	5130	5270	5320	5030	4920	5110	5350	5900	5950	6580
205	5280	5420	5470	5160	5050	5250	5490	6050	6110	6760
210	5430	5570	5620	5300	5180	5380	5630	6210	6270	6950
215	5580	5720	5770	5430	5310	5520	5770	6370	6430	7130
220	5730	5870	5910	5570	5440	5650	5920	6530	6590	7310
225	5880	6020	6060	5700	5570	5790	6060	6690	6760	7500
230	6030	6170	6210	5840	5700	5920	6200	6850	6920	7680
235	6180	6320	6350	5970	5830	6060	6340	7010	7080	7860
240	6330	6470	6500	6110	5960	6190	6480	7170	7240	8040
245	6480	6620	6650	6240	6090	6330	6630	7330	7400	8230
250	6630	6770	6800	6380	6220	6460	6770	7490	7570	8410
255	6780	6920	6940	6510	6350	6600	6910	7650	7730	8590
260	6930	7070	7090	6650	6480	6730	7050	7810	7890	8780
265	7080	7220	7240	6780	6610	6870	7200	7970	8050	8960
270	7220	7370	7390	6920	6740	7000	7340	8130	8210	9140
275	7370	7520	7530	7050	6870	7140	7480	8290	8380	9330
280	7520	7670	7680	7190	7000	7270	7620	8450	8540	9510
285	7670	7820	7830	7320	7130	7410	7770	8610	8700	9690
290	7820	7970	7980	7460	7260	7540	7910	8770	8860	9870
295	7970	8120	8120	7590	7390	7680	8050	8930	9020	10100
300	8120	8270	8270	7730	7520	7810	8190	9090	9190	10200

**TABLE 10.11 (Continued)
Standard Permit Vehicles - Class B - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
5	63.6	44.4	46.8	33.6	28.8	29.3	27.5	34.8	31.4	30.2
6	79.5	55.5	58.5	42	36	34.1	33	43.5	37.7	36.3
7	90.9	63.4	66.9	48	41.1	41.8	38.5	49.7	43.9	42.4
8	106	83.3	87.8	63	54	51.2	48.1	65.3	54	53.7
9	118	98.7	104	74.7	64	64.4	58.5	77.3	65.9	65
10	133	118	125	98	84	80.1	73.3	92.8	80.7	82.6
11	145	135	142	117	100	99.5	89.7	105	100	101
12	159	154	163	140	120	116	106	121	119	119
13	171	171	180	159	137	135	123	134	138	137
14	186	190	201	182	156	151	139	149	156	155
15	198	207	218	202	173	170	156	162	176	173
16	212	227	239	224	198	192	175	178	194	196
17	224	244	257	244	220	216	196	191	213	219
18	239	263	277	266	245	238	218	206	232	244
19	251	280	296	286	268	262	239	220	251	267
20	265	302	316	308	293	284	261	235	269	291
21	283	324	334	328	315	309	283	249	289	315
22	308	345	355	350	340	331	305	264	307	339
23	332	367	373	370	363	355	327	277	326	363
24	358	389	393	392	388	377	349	292	345	387
25	382	410	412	412	411	402	370	306	364	411
26	408	432	436	434	436	424	394	324	382	435
27	432	453	457	454	459	448	422	340	402	459
28	458	475	481	476	483	471	449	358	420	484
29	482	496	503	496	506	495	477	378	439	507
30	509	518	527	518	531	517	504	399	458	532
31	533	539	549	538	554	542	532	423	477	555
32	560	561	572	563	579	567	561	450	495	580
33	585	583	594	586	602	592	593	478	514	604
34	611	604	618	610	630	617	626	505	533	628
35	636	626	640	633	656	642	658	534	552	652
36	663	648	663	658	684	667	692	561	577	676
37	688	669	685	681	710	692	723	589	601	700
38	714	691	709	705	738	717	757	617	626	725
39	739	712	731	728	764	743	789	648	656	748
40	766	734	754	753	792	768	822	678	688	773
41	791	755	776	776	818	795	854	710	718	797
42	818	780	800	800	846	820	888	740	750	821
43	843	818	822	823	872	847	920	772	781	845
44	870	857	845	848	900	872	954	802	812	869
45	895	895	867	871	926	898	986	833	843	893
46	922	935	891	895	954	924	1020	864	875	918
47	947	973	913	918	980	950	1050	896	905	947
48	974	1010	936	943	1010	976	1080	926	937	978
49	999	1050	958	966	1030	1000	1120	958	967	1010

**TABLE 10.11 (Continued)
Standard Permit Vehicles - Class B - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
50	1030	1090	982	990	1060	1030	1150	988	999	1040
51	1060	1130	1010	1010	1090	1050	1180	1020	1030	1070
52	1100	1170	1050	1040	1120	1080	1220	1050	1070	1100
53	1140	1210	1090	1060	1140	1110	1260	1080	1100	1130
54	1180	1250	1130	1090	1170	1130	1290	1110	1130	1160
55	1220	1290	1170	1110	1200	1160	1330	1140	1170	1190
56	1260	1320	1210	1130	1220	1180	1360	1180	1200	1220
57	1300	1360	1250	1160	1250	1210	1400	1210	1230	1250
58	1340	1400	1290	1190	1280	1230	1440	1240	1270	1280
59	1380	1440	1330	1230	1300	1260	1470	1270	1300	1310
60	1420	1480	1370	1270	1330	1290	1510	1300	1330	1340
61	1460	1520	1420	1320	1360	1310	1540	1330	1370	1370
62	1500	1560	1460	1360	1390	1340	1580	1360	1400	1400
63	1540	1600	1500	1400	1430	1380	1620	1390	1430	1430
64	1580	1640	1540	1450	1470	1410	1650	1420	1470	1460
65	1610	1680	1580	1490	1510	1450	1690	1460	1500	1500
66	1650	1720	1620	1530	1550	1480	1730	1490	1530	1530
67	1690	1760	1660	1580	1590	1520	1760	1520	1570	1560
68	1730	1800	1700	1620	1640	1560	1800	1550	1600	1590
69	1770	1840	1750	1660	1680	1600	1830	1580	1630	1620
70	1810	1880	1790	1710	1730	1650	1870	1610	1670	1660
71	1850	1920	1830	1750	1780	1690	1910	1640	1700	1690
72	1890	1960	1870	1800	1830	1730	1940	1670	1730	1720
73	1930	1990	1910	1840	1880	1780	1980	1710	1770	1750
74	1970	2030	1950	1880	1930	1830	2010	1760	1800	1790
75	2010	2070	1990	1930	1980	1880	2050	1800	1830	1820
76	2050	2110	2040	1970	2030	1930	2090	1850	1870	1850
77	2090	2150	2080	2020	2080	1980	2120	1900	1900	1880
78	2130	2190	2120	2060	2130	2030	2160	1940	1930	1910
79	2170	2230	2160	2100	2180	2080	2200	1990	1970	1950
80	2210	2270	2200	2150	2230	2130	2230	2030	2000	1980
81	2250	2310	2240	2190	2280	2180	2270	2080	2030	2010
82	2290	2350	2280	2240	2330	2230	2300	2120	2070	2040
83	2330	2390	2330	2280	2380	2280	2340	2170	2100	2070
84	2370	2430	2370	2320	2430	2330	2380	2220	2130	2110
85	2410	2470	2410	2370	2480	2380	2410	2260	2170	2140
86	2450	2510	2450	2410	2530	2430	2450	2310	2200	2170
87	2490	2550	2490	2460	2580	2480	2480	2350	2230	2200
88	2530	2590	2530	2500	2630	2530	2520	2400	2270	2240
89	2570	2630	2580	2540	2680	2580	2560	2450	2300	2270
90	2610	2670	2620	2590	2730	2630	2590	2490	2340	2300
91	2640	2710	2660	2630	2780	2680	2630	2540	2370	2330
92	2680	2750	2700	2680	2830	2730	2660	2590	2400	2380
93	2720	2790	2740	2720	2880	2780	2710	2650	2440	2430
94	2760	2830	2780	2770	2930	2830	2760	2710	2470	2480

**TABLE 10.11 (Continued)
Standard Permit Vehicles - Class B - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
95	2800	2870	2830	2810	2980	2880	2800	2770	2500	2540
96	2840	2910	2870	2850	3030	2930	2850	2830	2540	2590
97	2880	2950	2910	2900	3080	2980	2900	2890	2570	2650
98	2920	2990	2950	2940	3130	3030	2960	2950	2600	2700
99	2960	3030	2990	2990	3180	3080	3010	3010	2640	2760
100	3000	3070	3030	3030	3230	3130	3070	3070	2670	2810
101	3040	3110	3080	3080	3280	3180	3120	3120	2710	2870
102	3080	3150	3120	3120	3340	3230	3180	3180	2750	2920
103	3120	3190	3160	3160	3390	3280	3240	3240	2790	2980
104	3160	3230	3200	3210	3440	3330	3290	3300	2830	3030
105	3200	3270	3240	3250	3490	3380	3350	3360	2880	3090
106	3240	3310	3290	3300	3540	3430	3410	3420	2920	3140
107	3280	3350	3330	3340	3590	3480	3470	3480	2970	3200
108	3320	3390	3370	3390	3640	3530	3520	3540	3020	3250
109	3360	3430	3410	3430	3690	3580	3580	3600	3070	3310
110	3400	3470	3450	3470	3740	3630	3640	3660	3120	3370
111	3440	3510	3500	3520	3790	3680	3700	3720	3170	3420
112	3480	3550	3540	3560	3840	3730	3750	3780	3230	3480
113	3520	3590	3580	3610	3890	3780	3810	3840	3280	3530
114	3560	3630	3620	3650	3940	3830	3870	3900	3340	3590
115	3600	3660	3660	3700	3990	3880	3930	3960	3400	3640
116	3640	3700	3700	3740	4040	3930	3990	4020	3460	3700
117	3680	3740	3750	3790	4090	3980	4040	4080	3510	3750
118	3720	3780	3790	3830	4140	4030	4100	4140	3570	3810
119	3760	3820	3830	3870	4190	4080	4160	4200	3630	3860
120	3800	3860	3870	3920	4250	4130	4220	4260	3690	3920
121	3840	3900	3910	3960	4300	4180	4270	4320	3740	3980
122	3880	3940	3960	4010	4350	4230	4330	4380	3800	4030
123	3910	3980	4000	4050	4400	4280	4390	4440	3860	4090
124	3950	4020	4040	4100	4450	4330	4450	4500	3920	4140
125	3990	4060	4080	4140	4500	4380	4500	4560	3980	4200
126	4030	4100	4120	4190	4550	4430	4560	4620	4030	4250
127	4070	4140	4170	4230	4600	4490	4620	4680	4090	4310
128	4110	4180	4210	4270	4650	4540	4680	4740	4150	4370
129	4150	4220	4250	4320	4700	4590	4740	4800	4210	4420
130	4190	4260	4290	4360	4750	4640	4790	4860	4260	4480
131	4230	4300	4330	4410	4800	4690	4850	4920	4320	4530
132	4270	4340	4380	4450	4850	4740	4910	4980	4380	4590
133	4310	4380	4420	4500	4900	4790	4970	5040	4440	4640
134	4350	4420	4460	4540	4950	4840	5020	5100	4500	4700
135	4390	4460	4500	4590	5010	4890	5080	5160	4550	4760
136	4430	4500	4540	4630	5060	4940	5140	5220	4610	4810
137	4470	4540	4590	4680	5110	4990	5200	5280	4670	4870
138	4510	4580	4630	4720	5160	5040	5250	5340	4730	4920
139	4550	4620	4670	4760	5210	5090	5310	5400	4790	4980

**TABLE 10.11 (Continued)
Standard Permit Vehicles - Class B - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
140	4590	4660	4710	4810	5260	5140	5370	5460	4840	5030
141	4630	4700	4750	4850	5310	5190	5430	5520	4900	5090
142	4670	4740	4800	4900	5360	5240	5490	5580	4960	5150
143	4710	4780	4840	4940	5410	5290	5540	5640	5020	5200
144	4750	4820	4880	4990	5460	5340	5600	5700	5070	5260
145	4790	4860	4920	5030	5510	5390	5660	5760	5130	5310
146	4830	4900	4960	5080	5560	5440	5720	5820	5190	5370
147	4870	4940	5010	5120	5610	5500	5770	5880	5250	5420
148	4910	4980	5050	5170	5660	5550	5830	5940	5310	5480
149	4950	5020	5090	5210	5720	5600	5890	6000	5360	5540
150	4990	5060	5130	5250	5770	5650	5950	6060	5420	5590
155	5190	5260	5340	5480	6020	5900	6240	6360	5710	5870
160	5380	5460	5550	5700	6270	6150	6530	6660	6000	6150
165	5580	5660	5760	5920	6530	6410	6820	6960	6290	6430
170	5780	5860	5970	6150	6780	6660	7100	7260	6580	6710
175	5980	6060	6180	6370	7040	6910	7390	7560	6870	6990
180	6180	6260	6390	6590	7290	7170	7680	7860	7170	7270
185	6380	6460	6610	6820	7540	7420	7970	8160	7460	7550
190	6580	6660	6820	7040	7800	7670	8260	8460	7750	7830
195	6770	6860	7030	7260	8050	7930	8550	8760	8040	8120
200	6970	7060	7240	7490	8310	8180	8840	9060	8340	8400
205	7170	7260	7450	7710	8560	8430	9130	9360	8630	8680
210	7370	7460	7660	7930	8820	8690	9420	9670	8920	8960
215	7570	7660	7870	8160	9070	8940	9710	9970	9210	9240
220	7770	7860	8080	8380	9320	9190	10000	10300	9500	9520
225	7970	8060	8290	8600	9580	9450	10300	10600	9800	9810
230	8170	8260	8500	8830	9830	9700	10600	10900	10100	10100
235	8360	8460	8710	9050	10100	9960	10900	11200	10400	10400
240	8560	8660	8920	9270	10300	10200	11200	11500	10700	10700
245	8760	8860	9130	9500	10600	10500	11500	11800	11000	10900
250	8960	9060	9350	9720	10900	10700	11700	12100	11300	11200
255	9160	9260	9560	9950	11100	11000	12000	12400	11500	11500
260	9360	9460	9770	10200	11400	11200	12300	12700	11800	11800
265	9560	9660	9980	10400	11600	11500	12600	13000	12100	12100
270	9750	9860	10200	10600	11900	11700	12900	13300	12400	12300
275	9950	10100	10400	10800	12100	12000	13200	13600	12700	12600
280	10200	10300	10600	11100	12400	12200	13500	13900	13000	12900
285	10400	10500	10800	11300	12600	12500	13800	14200	13300	13200
290	10500	10700	11000	11500	12900	12700	14100	14500	13600	13500
295	10700	10900	11200	11700	13100	13000	14400	14800	13900	13800
300	10900	11100	11500	12000	13400	13300	14600	15100	14200	14000

**TABLE 10.11 (Continued)
Standard Permit Vehicles - Class B - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
5	72	72	68.4	58.8	52.8	36	38.8	30	27.5	25
6	90	90	85.5	73.5	66	45	46.5	36	33	30
7	103	103	97.7	84	75.4	51.4	54.3	42	38.5	35
8	120	120	114	98	88	67.5	63.9	49.5	45.4	41.3
9	133	133	127	109	97.8	80	78.4	60.7	55.6	50.6
10	150	150	143	123	110	96	93	72	66	60
11	164	164	155	134	120	109	108	90	82.5	75
12	180	180	171	147	132	125	123	107	97.6	90
13	194	194	184	158	142	138	138	126	116	105
14	210	210	200	172	154	154	153	143	131	120
15	224	224	213	183	164	168	168	162	149	135
16	240	240	228	196	176	184	183	179	164	150
17	254	254	241	208	186	198	198	198	182	166
18	270	270	257	221	198	213	214	215	197	186
19	284	284	270	232	211	227	229	234	215	205
20	300	300	285	245	231	243	244	251	230	225
21	314	314	299	257	251	257	259	270	248	245
22	330	330	314	270	272	273	275	287	263	265
23	344	344	327	281	293	287	290	306	281	284
24	360	360	342	294	314	306	305	323	296	304
25	374	374	356	318	334	329	322	342	314	324
26	390	390	371	339	355	351	341	359	329	344
27	404	404	384	363	376	373	360	378	347	364
28	420	420	399	385	398	395	380	395	364	384
29	434	434	413	409	419	418	399	414	383	403
30	450	450	428	431	440	440	419	431	403	423
31	465	465	441	455	461	463	438	450	423	443
32	480	480	456	478	483	485	461	471	442	463
33	495	495	470	502	504	507	484	492	462	483
34	510	510	485	525	525	529	507	515	482	504
35	525	525	508	549	547	552	530	536	503	527
36	540	540	535	572	568	574	553	559	526	551
37	555	555	561	596	590	597	576	580	549	574
38	570	570	588	619	611	619	599	604	572	598
39	585	585	614	643	633	642	622	631	599	621
40	600	600	641	666	655	664	645	656	625	645
41	615	615	667	691	676	686	668	682	651	671
42	630	630	695	714	698	709	692	709	677	698
43	645	649	721	738	719	731	715	735	704	725
44	660	676	749	762	741	753	738	761	730	751
45	675	704	775	786	763	776	761	788	756	779
46	690	732	803	810	784	798	784	814	783	805
47	705	760	830	834	806	821	807	840	809	834
48	720	788	857	858	828	843	830	867	835	864
49	735	816	884	882	849	866	853	893	862	894

**TABLE 10.12
Standard Permit Vehicles - Class C - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
50	750	844	912	906	871	888	877	920	888	924
51	765	872	939	930	893	911	900	946	914	954
52	789	900	967	954	915	933	923	972	941	984
53	817	928	994	978	936	955	946	999	967	1010
54	844	957	1020	1000	958	978	969	1030	993	1040
55	873	985	1050	1030	980	1000	992	1050	1020	1070
56	900	1010	1080	1050	1000	1020	1020	1080	1050	1110
57	928	1040	1100	1070	1020	1050	1040	1100	1070	1130
58	956	1070	1130	1100	1050	1070	1060	1130	1100	1170
59	984	1100	1160	1120	1070	1090	1090	1160	1130	1200
60	1010	1130	1190	1150	1090	1110	1110	1180	1150	1230
61	1040	1160	1210	1170	1110	1140	1130	1210	1180	1260
62	1070	1190	1240	1190	1130	1160	1150	1240	1200	1290
63	1100	1210	1270	1220	1150	1180	1180	1260	1230	1320
64	1130	1240	1300	1240	1180	1200	1200	1290	1260	1350
65	1150	1270	1330	1270	1200	1220	1220	1320	1280	1380
66	1180	1300	1350	1290	1220	1250	1250	1340	1310	1410
67	1210	1330	1380	1320	1240	1270	1270	1370	1340	1440
68	1240	1360	1410	1340	1260	1290	1290	1390	1360	1470
69	1270	1390	1440	1360	1290	1310	1320	1420	1390	1500
70	1300	1420	1470	1390	1310	1340	1340	1450	1410	1530
71	1330	1450	1490	1410	1330	1360	1360	1470	1440	1560
72	1350	1480	1520	1440	1350	1380	1390	1500	1470	1590
73	1380	1500	1550	1460	1370	1400	1410	1530	1490	1620
74	1410	1530	1580	1490	1390	1430	1430	1550	1520	1650
75	1440	1560	1610	1510	1420	1450	1460	1580	1550	1680
76	1470	1590	1630	1530	1440	1470	1480	1610	1570	1710
77	1500	1620	1660	1560	1460	1490	1500	1630	1600	1740
78	1530	1650	1690	1580	1480	1520	1530	1660	1630	1770
79	1560	1680	1720	1610	1500	1540	1550	1680	1650	1800
80	1580	1710	1750	1630	1530	1560	1570	1710	1680	1830
81	1610	1740	1770	1660	1550	1580	1600	1740	1710	1860
82	1640	1770	1800	1680	1570	1610	1620	1760	1730	1890
83	1670	1800	1830	1700	1590	1630	1640	1790	1760	1920
84	1700	1830	1860	1730	1610	1650	1670	1820	1780	1950
85	1730	1860	1890	1750	1640	1670	1690	1840	1810	1980
86	1760	1880	1910	1780	1660	1700	1710	1870	1840	2010
87	1790	1910	1940	1800	1680	1720	1730	1900	1860	2040
88	1820	1940	1970	1830	1700	1740	1760	1920	1890	2070
89	1850	1970	2000	1850	1720	1760	1780	1950	1920	2100
90	1870	2000	2030	1880	1750	1790	1800	1980	1940	2140
91	1900	2030	2050	1900	1770	1810	1830	2000	1970	2170
92	1930	2060	2080	1920	1790	1830	1850	2030	2000	2200
93	1960	2090	2110	1950	1810	1850	1870	2050	2020	2230
94	1990	2120	2140	1970	1830	1880	1900	2080	2050	2260

**TABLE 10.12 (Continued)
Standard Permit Vehicles - Class C - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
95	2020	2150	2170	2000	1850	1900	1920	2110	2070	2290
96	2050	2180	2200	2020	1880	1920	1940	2130	2100	2320
97	2080	2210	2220	2050	1900	1940	1970	2160	2130	2350
98	2110	2240	2250	2070	1920	1970	1990	2190	2150	2380
99	2140	2270	2280	2090	1940	1990	2010	2210	2180	2410
100	2170	2300	2310	2120	1960	2010	2040	2240	2210	2440
101	2200	2330	2340	2140	1990	2030	2060	2270	2230	2470
102	2230	2360	2360	2170	2010	2060	2080	2290	2260	2500
103	2260	2390	2390	2190	2030	2080	2110	2320	2290	2530
104	2280	2420	2420	2220	2050	2100	2130	2340	2310	2560
105	2310	2440	2450	2240	2070	2120	2150	2370	2340	2590
106	2340	2470	2480	2270	2100	2150	2180	2400	2360	2620
107	2370	2500	2510	2290	2120	2170	2200	2420	2390	2650
108	2400	2530	2530	2310	2140	2190	2220	2450	2420	2680
109	2430	2560	2560	2340	2160	2210	2250	2480	2440	2710
110	2460	2590	2590	2360	2180	2240	2270	2500	2470	2740
111	2490	2620	2620	2390	2210	2260	2290	2530	2500	2770
112	2520	2650	2650	2410	2230	2280	2320	2560	2520	2800
113	2550	2680	2680	2440	2250	2300	2340	2580	2550	2830
114	2580	2710	2700	2460	2270	2330	2360	2610	2580	2860
115	2610	2740	2730	2480	2290	2350	2390	2640	2600	2900
116	2640	2770	2760	2510	2320	2370	2410	2660	2630	2930
117	2670	2800	2790	2530	2340	2390	2430	2690	2650	2960
118	2700	2830	2820	2560	2360	2420	2450	2710	2680	2990
119	2730	2860	2850	2580	2380	2440	2480	2740	2710	3020
120	2760	2890	2870	2610	2400	2460	2500	2770	2730	3050
121	2790	2920	2900	2630	2430	2480	2520	2790	2760	3080
122	2820	2950	2930	2660	2450	2510	2550	2820	2790	3110
123	2840	2980	2960	2680	2470	2530	2570	2850	2810	3140
124	2870	3010	2990	2700	2490	2550	2590	2870	2840	3170
125	2900	3040	3020	2730	2510	2570	2620	2900	2870	3200
126	2930	3070	3040	2750	2540	2600	2640	2930	2890	3230
127	2960	3100	3070	2780	2560	2620	2660	2950	2920	3260
128	2990	3130	3100	2800	2580	2640	2690	2980	2940	3290
129	3020	3160	3130	2830	2600	2660	2710	3000	2970	3320
130	3050	3190	3160	2850	2620	2690	2730	3030	3000	3350
131	3080	3220	3190	2880	2650	2710	2760	3060	3020	3380
132	3110	3250	3210	2900	2670	2730	2780	3080	3050	3410
133	3140	3280	3240	2920	2690	2750	2800	3110	3080	3440
134	3170	3300	3270	2950	2710	2780	2830	3140	3100	3470
135	3200	3330	3300	2970	2730	2800	2850	3160	3130	3500
136	3230	3360	3330	3000	2750	2820	2870	3190	3160	3530
137	3260	3390	3360	3020	2780	2840	2900	3220	3180	3560
138	3290	3420	3380	3050	2800	2870	2920	3240	3210	3600
139	3320	3450	3410	3070	2820	2890	2940	3270	3240	3630

**TABLE 10.12 (Continued)
Standard Permit Vehicles - Class C - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
140	3350	3480	3440	3100	2840	2910	2970	3290	3260	3660
141	3380	3510	3470	3120	2860	2930	2990	3320	3290	3690
142	3410	3540	3500	3140	2890	2960	3010	3350	3310	3720
143	3440	3570	3530	3170	2910	2980	3040	3370	3340	3750
144	3470	3600	3550	3190	2930	3000	3060	3400	3370	3780
145	3500	3630	3580	3220	2950	3020	3080	3430	3390	3810
146	3530	3660	3610	3240	2970	3050	3110	3450	3420	3840
147	3560	3690	3640	3270	3000	3070	3130	3480	3450	3870
148	3590	3720	3670	3290	3020	3090	3150	3510	3470	3900
149	3620	3750	3700	3320	3040	3110	3180	3530	3500	3930
150	3640	3780	3720	3340	3060	3140	3200	3560	3530	3960
155	3790	3930	3870	3460	3170	3250	3310	3690	3660	4110
160	3940	4080	4010	3580	3280	3360	3430	3820	3790	4270
165	4090	4230	4150	3710	3390	3470	3550	3950	3920	4420
170	4240	4380	4290	3830	3500	3590	3660	4090	4050	4570
175	4390	4530	4430	3950	3610	3700	3780	4220	4190	4720
180	4540	4680	4580	4070	3720	3810	3900	4350	4320	4870
185	4690	4830	4720	4200	3830	3920	4010	4480	4450	5030
190	4840	4970	4860	4320	3940	4040	4130	4610	4580	5180
195	4980	5120	5000	4440	4050	4150	4240	4750	4710	5330
200	5130	5270	5140	4560	4160	4260	4360	4880	4850	5480
205	5280	5420	5290	4690	4270	4370	4480	5010	4980	5640
210	5430	5570	5430	4810	4380	4490	4590	5140	5110	5790
215	5580	5720	5570	4930	4490	4600	4710	5270	5240	5940
220	5730	5870	5710	5050	4600	4710	4830	5410	5370	6090
225	5880	6020	5860	5170	4710	4820	4940	5540	5510	6250
230	6030	6170	6000	5300	4820	4940	5060	5670	5640	6400
235	6180	6320	6140	5420	4930	5050	5170	5800	5770	6550
240	6330	6470	6280	5540	5040	5160	5290	5930	5900	6700
245	6480	6620	6420	5660	5150	5270	5410	6070	6030	6860
250	6630	6770	6570	5790	5260	5390	5520	6200	6170	7010
255	6780	6920	6710	5910	5370	5500	5640	6330	6300	7160
260	6930	7070	6850	6030	5480	5610	5760	6460	6430	7310
265	7080	7220	6990	6150	5590	5720	5870	6590	6560	7470
270	7220	7370	7140	6280	5700	5840	5990	6730	6690	7620
275	7370	7520	7280	6400	5810	5950	6100	6860	6830	7770
280	7520	7670	7420	6520	5920	6060	6220	6990	6960	7920
285	7670	7820	7560	6640	6030	6170	6340	7120	7090	8080
290	7820	7970	7700	6770	6140	6290	6450	7250	7220	8230
295	7970	8120	7850	6890	6250	6400	6570	7390	7350	8380
300	8120	8270	7990	7010	6360	6510	6690	7520	7480	8530

**TABLE 10.12 (Continued)
Standard Permit Vehicles - Class C - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
5	55.2	37.2	40.8	28.8	24	24.9	21.6	28.8	26.9	25.6
6	69	46.5	51	36	30	29	26	36	32.3	30.8
7	78.9	53.1	58.3	41.1	34.3	35.5	30.3	41.1	37.6	35.9
8	92	69.8	76.5	54	45	43.5	37.8	54	46.3	45.5
9	102	82.7	90.7	64	53.3	54.7	46	64	56.5	55.1
10	115	99.2	109	84	70	68.1	57.6	76.8	69.2	70
11	125	113	124	100	83.6	84.5	70.5	87.3	85.8	85.3
12	138	129	142	120	100	98.2	83.6	100	102	101
13	149	143	157	137	114	114	96.5	111	118	116
14	161	159	175	156	130	128	110	123	134	132
15	172	174	190	173	144	145	122	134	150	147
16	184	190	208	192	165	163	137	147	166	166
17	195	204	224	209	184	184	154	158	183	186
18	207	220	242	228	204	202	171	171	198	206
19	218	235	258	245	223	223	188	182	215	226
20	230	253	275	264	244	242	206	194	231	247
21	245	271	291	281	263	262	223	206	247	267
22	268	289	309	300	284	281	240	218	263	287
23	288	307	325	317	303	302	257	230	279	307
24	311	326	343	336	323	321	274	242	295	328
25	331	343	359	353	342	341	291	253	312	348
26	354	362	380	372	363	360	310	268	328	369
27	375	380	399	389	382	381	332	281	344	389
28	398	398	419	408	403	400	353	296	360	410
29	419	416	438	425	422	420	375	313	376	430
30	442	434	459	444	443	440	397	330	392	450
31	463	452	478	461	462	461	418	350	408	471
32	486	470	499	482	483	482	441	372	424	491
33	507	488	518	502	502	503	466	396	441	511
34	530	506	538	523	525	525	492	418	457	532
35	552	524	558	543	547	546	517	442	473	552
36	575	543	578	564	570	567	544	464	494	573
37	597	561	597	584	592	588	569	488	515	593
38	620	579	618	604	615	610	595	510	536	614
39	642	597	637	624	637	631	620	536	562	634
40	665	615	657	645	660	653	647	561	589	655
41	687	633	677	665	682	675	672	587	615	675
42	710	653	697	686	705	697	698	613	643	696
43	732	685	716	706	727	720	723	639	669	716
44	755	718	737	726	750	741	750	664	696	737
45	777	750	756	746	772	764	775	690	722	757
46	800	783	776	767	795	785	801	715	749	777
47	822	815	796	787	817	808	827	741	775	802
48	845	848	816	808	840	829	853	767	802	828
49	867	880	835	828	862	852	878	792	829	853

**TABLE 10.12 (Continued)
Standard Permit Vehicles - Class C - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
50	891	913	856	849	885	873	905	818	856	879
51	921	946	878	869	907	896	931	844	884	905
52	955	979	914	889	930	917	959	869	912	930
53	989	1010	949	909	952	940	988	895	941	956
54	1020	1040	985	930	975	961	1020	921	970	982
55	1060	1080	1020	950	997	984	1040	947	998	1010
56	1090	1110	1060	971	1020	1010	1070	972	1030	1030
57	1130	1140	1090	996	1040	1030	1100	998	1060	1060
58	1160	1180	1130	1020	1070	1050	1130	1020	1080	1080
59	1200	1210	1160	1050	1090	1070	1160	1050	1110	1110
60	1230	1240	1200	1090	1110	1090	1190	1080	1140	1130
61	1260	1270	1230	1130	1130	1120	1210	1100	1170	1160
62	1300	1310	1270	1160	1160	1140	1240	1130	1200	1190
63	1330	1340	1310	1200	1190	1170	1270	1150	1230	1210
64	1370	1370	1340	1240	1220	1200	1300	1180	1260	1240
65	1400	1410	1380	1280	1260	1230	1330	1200	1280	1270
66	1440	1440	1410	1310	1290	1260	1360	1230	1310	1300
67	1470	1470	1450	1350	1330	1300	1390	1260	1340	1320
68	1500	1510	1490	1390	1360	1330	1410	1280	1370	1350
69	1540	1540	1520	1430	1400	1360	1440	1310	1400	1380
70	1570	1570	1560	1460	1440	1400	1470	1330	1430	1400
71	1610	1610	1590	1500	1480	1440	1500	1360	1460	1430
72	1640	1640	1630	1540	1520	1470	1530	1390	1480	1460
73	1680	1670	1670	1580	1560	1510	1560	1420	1510	1490
74	1710	1700	1700	1610	1610	1550	1580	1460	1540	1510
75	1740	1740	1740	1650	1650	1600	1610	1490	1570	1540
76	1780	1770	1770	1690	1690	1640	1640	1530	1600	1570
77	1810	1800	1810	1730	1730	1680	1670	1570	1630	1590
78	1850	1840	1850	1770	1770	1720	1700	1610	1660	1620
79	1880	1870	1880	1800	1810	1770	1730	1640	1690	1650
80	1920	1900	1920	1840	1860	1810	1750	1680	1710	1680
81	1950	1940	1950	1880	1900	1850	1780	1720	1740	1700
82	1990	1970	1990	1920	1940	1890	1810	1760	1770	1730
83	2020	2000	2030	1950	1980	1940	1840	1800	1800	1760
84	2050	2040	2060	1990	2020	1980	1870	1830	1830	1790
85	2090	2070	2100	2030	2070	2020	1900	1870	1860	1810
86	2120	2100	2140	2070	2110	2060	1930	1910	1890	1840
87	2160	2140	2170	2110	2150	2100	1950	1950	1910	1870
88	2190	2170	2210	2140	2190	2150	1980	1990	1940	1890
89	2230	2200	2250	2180	2230	2190	2010	2020	1970	1920
90	2260	2240	2280	2220	2280	2230	2040	2060	2000	1950
91	2300	2270	2320	2260	2320	2270	2070	2100	2030	1980
92	2330	2300	2350	2290	2360	2320	2100	2140	2060	2020
93	2360	2340	2390	2330	2400	2360	2130	2190	2090	2060
94	2400	2370	2430	2370	2440	2400	2170	2240	2120	2100

**TABLE 10.12 (Continued)
Standard Permit Vehicles - Class C - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
95	2430	2400	2460	2410	2490	2440	2200	2290	2140	2150
96	2470	2440	2500	2450	2530	2490	2240	2340	2170	2200
97	2500	2470	2540	2480	2570	2530	2280	2390	2200	2240
98	2540	2500	2570	2520	2610	2570	2320	2440	2230	2290
99	2570	2540	2610	2560	2650	2620	2370	2490	2260	2340
100	2610	2570	2650	2600	2700	2660	2410	2540	2290	2380
101	2640	2600	2680	2640	2740	2700	2460	2590	2320	2430
102	2670	2640	2720	2670	2780	2740	2500	2640	2350	2480
103	2710	2670	2750	2710	2820	2790	2550	2680	2390	2520
104	2740	2700	2790	2750	2860	2830	2590	2730	2430	2570
105	2780	2740	2830	2790	2910	2870	2640	2780	2470	2620
106	2810	2770	2860	2830	2950	2910	2680	2830	2500	2660
107	2850	2800	2900	2860	2990	2960	2730	2880	2540	2710
108	2880	2840	2940	2900	3030	3000	2770	2930	2580	2760
109	2920	2870	2970	2940	3070	3040	2820	2980	2630	2800
110	2950	2900	3010	2980	3120	3080	2860	3030	2670	2850
111	2980	2940	3050	3020	3160	3130	2910	3080	2710	2900
112	3020	2970	3080	3050	3200	3170	2950	3130	2760	2940
113	3050	3000	3120	3090	3240	3210	3000	3180	2810	2990
114	3090	3040	3160	3130	3280	3260	3040	3230	2860	3040
115	3120	3070	3190	3170	3330	3300	3090	3280	2910	3090
116	3160	3100	3230	3210	3370	3340	3130	3330	2960	3130
117	3190	3140	3270	3240	3410	3380	3180	3380	3010	3180
118	3230	3170	3300	3280	3450	3430	3220	3430	3060	3230
119	3260	3200	3340	3320	3500	3470	3270	3470	3110	3270
120	3290	3240	3380	3360	3540	3510	3320	3520	3160	3320
121	3330	3270	3410	3400	3580	3560	3360	3570	3210	3370
122	3360	3300	3450	3440	3620	3600	3410	3620	3260	3410
123	3400	3340	3490	3470	3660	3640	3450	3670	3310	3460
124	3430	3370	3520	3510	3710	3680	3500	3720	3360	3510
125	3470	3400	3560	3550	3750	3730	3540	3770	3410	3560
126	3500	3440	3600	3590	3790	3770	3590	3820	3450	3600
127	3540	3470	3630	3630	3830	3810	3630	3870	3500	3650
128	3570	3510	3670	3660	3880	3860	3680	3920	3550	3700
129	3600	3540	3710	3700	3920	3900	3720	3970	3600	3740
130	3640	3570	3740	3740	3960	3940	3770	4020	3650	3790
131	3670	3610	3780	3780	4000	3980	3810	4070	3700	3840
132	3710	3640	3810	3820	4040	4030	3860	4120	3750	3890
133	3740	3670	3850	3850	4090	4070	3910	4170	3800	3930
134	3780	3710	3890	3890	4130	4110	3950	4220	3850	3980
135	3810	3740	3920	3930	4170	4160	4000	4270	3900	4030
136	3850	3770	3960	3970	4210	4200	4040	4320	3950	4080
137	3880	3810	4000	4010	4260	4240	4090	4370	4000	4120
138	3910	3840	4030	4050	4300	4280	4130	4420	4050	4170
139	3950	3870	4070	4080	4340	4330	4180	4470	4100	4220

**TABLE 10.12 (Continued)
Standard Permit Vehicles - Class C - Simple Span Moments**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
140	3980	3910	4110	4120	4380	4370	4220	4520	4150	4260
141	4020	3940	4140	4160	4420	4410	4270	4570	4200	4310
142	4050	3970	4180	4200	4470	4460	4310	4620	4250	4360
143	4090	4010	4220	4240	4510	4500	4360	4660	4300	4410
144	4120	4040	4250	4270	4550	4540	4400	4710	4350	4450
145	4160	4070	4290	4310	4590	4580	4450	4760	4400	4500
146	4190	4110	4330	4350	4640	4630	4500	4810	4450	4550
147	4220	4140	4360	4390	4680	4670	4540	4860	4500	4600
148	4260	4170	4400	4430	4720	4710	4590	4910	4550	4640
149	4290	4210	4440	4470	4760	4760	4630	4960	4600	4690
150	4330	4240	4470	4500	4810	4800	4680	5010	4640	4740
155	4500	4410	4660	4700	5020	5010	4900	5260	4890	4970
160	4670	4580	4840	4890	5230	5230	5130	5510	5140	5210
165	4850	4740	5020	5080	5440	5440	5360	5760	5390	5450
170	5020	4910	5210	5270	5650	5660	5590	6010	5640	5690
175	5190	5080	5390	5460	5860	5880	5810	6260	5890	5920
180	5360	5250	5580	5650	6080	6090	6040	6500	6140	6160
185	5530	5410	5760	5840	6290	6310	6270	6750	6390	6400
190	5710	5580	5940	6030	6500	6520	6500	7000	6640	6640
195	5880	5750	6130	6230	6710	6740	6730	7250	6890	6880
200	6050	5920	6310	6420	6920	6950	6950	7500	7140	7110
205	6220	6080	6490	6610	7130	7170	7180	7750	7390	7350
210	6400	6250	6680	6800	7350	7380	7410	8000	7640	7590
215	6570	6420	6860	6990	7560	7600	7640	8250	7890	7830
220	6740	6590	7040	7180	7770	7810	7860	8500	8140	8070
225	6910	6760	7230	7370	7980	8030	8090	8750	8390	8310
230	7090	6920	7410	7570	8190	8250	8320	9000	8640	8540
235	7260	7090	7600	7760	8410	8460	8550	9240	8890	8780
240	7430	7260	7780	7950	8620	8680	8780	9490	9140	9020
245	7600	7430	7960	8140	8830	8890	9010	9740	9390	9260
250	7780	7590	8150	8330	9040	9110	9230	9990	9640	9500
255	7950	7760	8330	8520	9260	9330	9460	10200	9890	9740
260	8120	7930	8520	8720	9470	9540	9690	10500	10100	9980
265	8290	8100	8700	8910	9680	9760	9920	10700	10400	10200
270	8470	8260	8880	9100	9890	9970	10100	11000	10600	10500
275	8640	8430	9070	9290	10100	10200	10400	11200	10900	10700
280	8810	8600	9250	9480	10300	10400	10600	11500	11100	10900
285	8980	8770	9430	9670	10500	10600	10800	11700	11400	11200
290	9160	8940	9620	9870	10700	10800	11100	12000	11600	11400
295	9330	9100	9800	10100	11000	11100	11300	12200	11900	11600
300	9500	9270	9990	10300	11200	11300	11500	12500	12100	11900

**TABLE 10.12 (Continued)
Standard Permit Vehicles - Class C - Simple Span Moments**

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 41.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 78 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
5	18	0.539	16.9	0.408	16.9	0.311	16.9	0.251	15.6	0.2
6	18	0.539	18.4	0.445	18.4	0.339	18.4	0.273	17.3	0.222
7	18	0.539	19.5	0.471	19.5	0.359	19.5	0.289	18.6	0.238
8	18	0.539	20.3	0.491	21.9	0.403	21.9	0.326	19.5	0.25
9	18	0.539	20.9	0.506	23.8	0.438	23.8	0.354	20.2	0.259
10	19.5	0.585	21.5	0.518	25.4	0.466	25.4	0.376	22.1	0.283
11	20.8	0.623	21.9	0.528	26.6	0.489	27.2	0.403	23.6	0.303
12	21.9	0.654	22.2	0.536	27.6	0.508	29.3	0.434	24.9	0.319
13	22.7	0.681	23.1	0.558	28.5	0.524	31	0.46	26	0.333
14	23.5	0.704	24.4	0.589	29.3	0.538	32.5	0.482	27.9	0.357
15	24.2	0.723	25.5	0.617	29.9	0.55	33.8	0.502	29.5	0.378
16	24.7	0.741	26.5	0.641	30.5	0.56	34.9	0.518	30.9	0.396
17	25.2	0.756	27.4	0.662	31.9	0.586	35.9	0.533	32.1	0.412
18	25.7	0.77	28.2	0.681	33.1	0.609	36.8	0.547	33.2	0.426
19	26.1	0.782	28.9	0.697	34.2	0.63	37.6	0.558	34.2	0.439
20	26.5	0.793	29.5	0.713	35.3	0.648	38.7	0.575	35.1	0.45
21	26.8	0.802	30.1	0.726	36.2	0.665	40.1	0.595	35.9	0.46
22	27.1	0.811	30.6	0.739	37	0.68	41.3	0.613	36.6	0.47
23	27.4	0.82	31.1	0.75	37.8	0.694	42.5	0.63	37.3	0.478
24	27.6	0.827	31.5	0.761	38.4	0.707	43.5	0.646	37.9	0.486
25	27.9	0.834	31.9	0.77	39.1	0.719	44.5	0.66	39	0.5
26	28.1	0.84	32.2	0.779	39.7	0.729	45.4	0.673	40	0.513
27	28.3	0.846	32.6	0.787	40.2	0.739	46.2	0.685	40.9	0.525
28	28.5	0.852	32.9	0.795	40.7	0.749	46.9	0.696	41.8	0.536
29	28.6	0.857	33.2	0.802	41.2	0.757	47.6	0.707	43	0.552

TABLE 10.13

Michigan Legal 1-Unit Truck Normal Loading - Simple Span Reactions

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 41.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 78 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
30	28.8	0.862	33.5	0.808	41.6	0.765	48.3	0.717	44.2	0.567
31	28.9	0.866	33.7	0.815	42	0.773	48.9	0.726	45.3	0.581
32	29.1	0.87	34	0.82	42.4	0.78	49.5	0.734	46.3	0.594
33	29.2	0.874	34.2	0.826	42.8	0.787	50	0.742	47.3	0.606
34	29.3	0.878	34.4	0.831	43.1	0.793	50.5	0.75	48.2	0.618
35	29.4	0.881	34.6	0.836	43.5	0.799	51	0.757	49	0.629
36	29.6	0.885	34.8	0.84	43.8	0.805	51.5	0.764	49.8	0.639
37	29.7	0.888	35	0.845	44.1	0.81	51.9	0.77	50.6	0.649
38	29.8	0.891	35.1	0.849	44.3	0.815	52.3	0.776	51.3	0.658
39	29.8	0.894	35.3	0.853	44.6	0.82	52.7	0.782	52	0.667
40	29.9	0.896	35.5	0.856	44.8	0.824	53.1	0.787	52.7	0.675
41	30	0.899	35.6	0.86	45.1	0.828	53.4	0.793	53.3	0.683
42	30.1	0.901	35.7	0.863	45.3	0.832	53.8	0.798	53.9	0.691
43	30.2	0.904	35.9	0.866	45.5	0.836	54.1	0.802	54.4	0.698
44	30.3	0.906	36	0.869	45.7	0.84	54.4	0.807	55	0.705
45	30.3	0.908	36.1	0.872	45.9	0.844	54.7	0.811	55.5	0.711
46	30.4	0.91	36.2	0.875	46.1	0.847	54.9	0.815	56	0.717
47	30.5	0.912	36.3	0.878	46.3	0.85	55.2	0.819	56.4	0.723
48	30.5	0.914	36.4	0.88	46.4	0.853	55.5	0.823	56.9	0.729
49	30.6	0.915	36.5	0.883	46.6	0.856	55.7	0.826	57.3	0.735
50	30.6	0.917	36.6	0.885	46.7	0.859	55.9	0.83	57.7	0.74
51	30.7	0.919	36.7	0.887	46.9	0.862	56.2	0.833	58.1	0.745
52	30.7	0.92	36.8	0.889	47	0.865	56.4	0.836	58.5	0.75
53	30.8	0.922	36.9	0.892	47.2	0.867	56.6	0.84	58.9	0.755
54	30.8	0.923	37	0.894	47.3	0.87	56.8	0.843	59.2	0.759

TABLE 10.13 (Continued)
Michigan Legal 1-Unit Truck Normal Loading - Simple Span Reactions

SPAN	TRUCK # 1 Wt = 33.4 kips		TRUCK # 2 Wt = 41.4 kips		TRUCK # 3 Wt = 54.4 kips		TRUCK # 4 Wt = 67.4 kips		TRUCK # 5 Wt = 78 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
55	30.9	0.925	37.1	0.896	47.4	0.872	57	0.845	59.6	0.764
56	30.9	0.926	37.2	0.897	47.6	0.874	57.2	0.848	59.9	0.768
57	31	0.927	37.2	0.899	47.7	0.877	57.3	0.851	60.2	0.772
58	31	0.929	37.3	0.901	47.8	0.879	57.5	0.853	60.5	0.776
59	31.1	0.93	37.4	0.903	47.9	0.881	57.7	0.856	60.8	0.78
60	31.1	0.931	37.4	0.904	48	0.883	57.8	0.858	61.1	0.783
61	31.1	0.932	37.5	0.906	48.1	0.885	58	0.861	61.4	0.787
62	31.2	0.933	37.6	0.907	48.2	0.887	58.2	0.863	61.6	0.79
63	31.2	0.934	37.6	0.909	48.3	0.888	58.3	0.865	61.9	0.794
64	31.2	0.935	37.7	0.91	48.4	0.89	58.4	0.867	62.2	0.797
65	31.3	0.936	37.7	0.912	48.5	0.892	58.6	0.869	62.4	0.8
66	31.3	0.937	37.8	0.913	48.6	0.893	58.7	0.871	62.6	0.803
67	31.3	0.938	37.8	0.914	48.7	0.895	58.8	0.873	62.9	0.806
68	31.4	0.939	37.9	0.916	48.8	0.897	59	0.875	63.1	0.809
69	31.4	0.94	38	0.917	48.9	0.898	59.1	0.877	63.3	0.812
70	31.4	0.941	38	0.918	48.9	0.899	59.2	0.879	63.5	0.814
71	31.4	0.942	38	0.919	49	0.901	59.3	0.88	63.7	0.817
72	31.5	0.942	38.1	0.92	49.1	0.902	59.4	0.882	63.9	0.819
73	31.5	0.943	38.1	0.921	49.2	0.904	59.5	0.884	64.1	0.822
74	31.5	0.944	38.2	0.922	49.2	0.905	59.7	0.885	64.3	0.824
75	31.6	0.945	38.2	0.923	49.3	0.906	59.8	0.887	64.5	0.827
76	31.6	0.945	38.3	0.924	49.4	0.907	59.9	0.888	64.7	0.829
77	31.6	0.946	38.3	0.925	49.4	0.909	60	0.89	64.8	0.831
78	31.6	0.947	38.3	0.926	49.5	0.91	60.1	0.891	65	0.833
79	31.6	0.948	38.4	0.927	49.6	0.911	60.1	0.892	65.2	0.835

TABLE 10.13 (Continued)
Michigan Legal 1-Unit Truck Normal Loading - Simple Span Reactions

SPAN	TRUCK # 1 Wt = 33.4 kips		TRUCK # 2 Wt = 41.4 kips		TRUCK # 3 Wt = 54.4 kips		TRUCK # 4 Wt = 67.4 kips		TRUCK # 5 Wt = 78 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
	80	31.7	0.948	38.4	0.928	49.6	0.912	60.2	0.894	65.3
81	31.7	0.949	38.5	0.929	49.7	0.913	60.3	0.895	65.5	0.84
82	31.7	0.949	38.5	0.93	49.7	0.914	60.4	0.896	65.6	0.842
83	31.7	0.95	38.5	0.931	49.8	0.915	60.5	0.898	65.8	0.843
84	31.8	0.951	38.6	0.932	49.8	0.916	60.6	0.899	65.9	0.845
85	31.8	0.951	38.6	0.932	49.9	0.917	60.7	0.9	66.1	0.847
86	31.8	0.952	38.6	0.933	49.9	0.918	60.7	0.901	66.2	0.849
87	31.8	0.952	38.7	0.934	50	0.919	60.8	0.902	66.3	0.851
88	31.8	0.953	38.7	0.935	50	0.92	60.9	0.903	66.5	0.852
89	31.8	0.953	38.7	0.935	50.1	0.921	61	0.904	66.6	0.854
90	31.9	0.954	38.8	0.936	50.1	0.922	61	0.906	66.7	0.856
91	31.9	0.954	38.8	0.937	50.2	0.923	61.1	0.907	66.9	0.857
92	31.9	0.955	38.8	0.938	50.2	0.924	61.2	0.908	67	0.859
93	31.9	0.955	38.8	0.938	50.3	0.924	61.2	0.909	67.1	0.86
94	31.9	0.956	38.9	0.939	50.3	0.925	61.3	0.91	67.2	0.862
95	31.9	0.956	38.9	0.94	50.4	0.926	61.4	0.911	67.3	0.863
96	32	0.957	38.9	0.94	50.4	0.927	61.4	0.911	67.4	0.865
97	32	0.957	38.9	0.941	50.5	0.927	61.5	0.912	67.5	0.866
98	32	0.958	39	0.941	50.5	0.928	61.6	0.913	67.7	0.867
99	32	0.958	39	0.942	50.5	0.929	61.6	0.914	67.8	0.869
100	32	0.959	39	0.943	50.6	0.93	61.7	0.915	67.9	0.87
101	32	0.959	39	0.943	50.6	0.93	61.7	0.916	68	0.871
102	32	0.959	39.1	0.944	50.6	0.931	61.8	0.917	68.1	0.873
103	32.1	0.96	39.1	0.944	50.7	0.932	61.8	0.917	68.2	0.874
104	32.1	0.96	39.1	0.945	50.7	0.932	61.9	0.918	68.3	0.875

TABLE 10.13 (Continued)
Michigan Legal 1-Unit Truck Normal Loading - Simple Span Reactions

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 41.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 78 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
105	32.1	0.961	39.1	0.945	50.8	0.933	61.9	0.919	68.3	0.876
106	32.1	0.961	39.2	0.946	50.8	0.934	62	0.92	68.4	0.877
107	32.1	0.961	39.2	0.946	50.8	0.934	62	0.921	68.5	0.879
108	32.1	0.962	39.2	0.947	50.9	0.935	62.1	0.921	68.6	0.88
109	32.1	0.962	39.2	0.947	50.9	0.935	62.1	0.922	68.7	0.881
110	32.1	0.962	39.2	0.948	50.9	0.936	62.2	0.923	68.8	0.882
111	32.2	0.963	39.3	0.948	51	0.937	62.2	0.923	68.9	0.883
112	32.2	0.963	39.3	0.949	51	0.937	62.3	0.924	68.9	0.884
113	32.2	0.963	39.3	0.949	51	0.938	62.3	0.925	69	0.885
114	32.2	0.964	39.3	0.95	51	0.938	62.4	0.925	69.1	0.886
115	32.2	0.964	39.3	0.95	51.1	0.939	62.4	0.926	69.2	0.887
116	32.2	0.964	39.3	0.95	51.1	0.939	62.5	0.927	69.3	0.888
117	32.2	0.965	39.4	0.951	51.1	0.94	62.5	0.927	69.3	0.889
118	32.2	0.965	39.4	0.951	51.2	0.94	62.5	0.928	69.4	0.89
119	32.2	0.965	39.4	0.952	51.2	0.941	62.6	0.929	69.5	0.891
120	32.2	0.965	39.4	0.952	51.2	0.941	62.6	0.929	69.6	0.892
121	32.3	0.966	39.4	0.953	51.2	0.942	62.7	0.93	69.6	0.893
122	32.3	0.966	39.4	0.953	51.3	0.942	62.7	0.93	69.7	0.893
123	32.3	0.966	39.5	0.953	51.3	0.943	62.7	0.931	69.8	0.894
124	32.3	0.967	39.5	0.954	51.3	0.943	62.8	0.931	69.8	0.895
125	32.3	0.967	39.5	0.954	51.3	0.944	62.8	0.932	69.9	0.896
126	32.3	0.967	39.5	0.954	51.4	0.944	62.9	0.933	70	0.897
127	32.3	0.967	39.5	0.955	51.4	0.945	62.9	0.933	70	0.898
128	32.3	0.968	39.5	0.955	51.4	0.945	62.9	0.934	70.1	0.898
129	32.3	0.968	39.6	0.955	51.4	0.945	63	0.934	70.1	0.899

TABLE 10.13 (Continued)
Michigan Legal 1-Unit Truck Normal Loading - Simple Span Reactions

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 41.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 78 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
130	32.3	0.968	39.6	0.956	51.5	0.946	63	0.935	70.2	0.9
131	32.3	0.968	39.6	0.956	51.5	0.946	63	0.935	70.3	0.901
132	32.4	0.969	39.6	0.956	51.5	0.947	63.1	0.936	70.3	0.902
133	32.4	0.969	39.6	0.957	51.5	0.947	63.1	0.936	70.4	0.902
134	32.4	0.969	39.6	0.957	51.5	0.948	63.1	0.937	70.4	0.903
135	32.4	0.969	39.6	0.957	51.6	0.948	63.2	0.937	70.5	0.904
136	32.4	0.97	39.7	0.958	51.6	0.948	63.2	0.938	70.5	0.904
137	32.4	0.97	39.7	0.958	51.6	0.949	63.2	0.938	70.6	0.905
138	32.4	0.97	39.7	0.958	51.6	0.949	63.2	0.938	70.7	0.906
139	32.4	0.97	39.7	0.959	51.6	0.949	63.3	0.939	70.7	0.907
140	32.4	0.97	39.7	0.959	51.7	0.95	63.3	0.939	70.8	0.907
141	32.4	0.971	39.7	0.959	51.7	0.95	63.3	0.94	70.8	0.908
142	32.4	0.971	39.7	0.96	51.7	0.95	63.4	0.94	70.9	0.909
143	32.4	0.971	39.7	0.96	51.7	0.951	63.4	0.941	70.9	0.909
144	32.4	0.971	39.7	0.96	51.7	0.951	63.4	0.941	71	0.91
145	32.4	0.971	39.8	0.96	51.8	0.952	63.4	0.941	71	0.91
146	32.5	0.972	39.8	0.961	51.8	0.952	63.5	0.942	71.1	0.911
147	32.5	0.972	39.8	0.961	51.8	0.952	63.5	0.942	71.1	0.912
148	32.5	0.972	39.8	0.961	51.8	0.952	63.5	0.943	71.1	0.912
149	32.5	0.972	39.8	0.961	51.8	0.953	63.6	0.943	71.2	0.913
150	32.5	0.972	39.8	0.962	51.8	0.953	63.6	0.943	71.2	0.913
155	32.5	0.973	39.9	0.963	51.9	0.955	63.7	0.945	71.5	0.916
160	32.5	0.974	39.9	0.964	52	0.956	63.8	0.947	71.7	0.919
165	32.6	0.975	40	0.965	52.1	0.957	63.9	0.948	71.9	0.921
170	32.6	0.976	40	0.966	52.1	0.959	64	0.95	72	0.924

TABLE 10.13 (Continued)
Michigan Legal 1-Unit Truck Normal Loading - Simple Span Reactions

SPAN	TRUCK # 1 Wt = 33.4 kips		TRUCK # 2 Wt = 41.4 kips		TRUCK # 3 Wt = 54.4 kips		TRUCK # 4 Wt = 67.4 kips		TRUCK # 5 Wt = 78 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
175	32.6	0.976	40	0.967	52.2	0.96	64.1	0.951	72.2	0.926
180	32.6	0.977	40.1	0.968	52.3	0.961	64.2	0.953	72.4	0.928
185	32.7	0.978	40.1	0.969	52.3	0.962	64.3	0.954	72.5	0.93
190	32.7	0.978	40.1	0.97	52.4	0.963	64.4	0.955	72.7	0.932
195	32.7	0.979	40.2	0.971	52.4	0.964	64.5	0.956	72.8	0.933
200	32.7	0.979	40.2	0.971	52.5	0.965	64.5	0.958	72.9	0.935
205	32.7	0.98	40.2	0.972	52.5	0.966	64.6	0.959	73.1	0.937
210	32.7	0.98	40.3	0.973	52.6	0.967	64.7	0.96	73.2	0.938
215	32.8	0.981	40.3	0.973	52.6	0.967	64.7	0.96	73.3	0.94
220	32.8	0.981	40.3	0.974	52.7	0.968	64.8	0.961	73.4	0.941
225	32.8	0.982	40.3	0.974	52.7	0.969	64.9	0.962	73.5	0.942
230	32.8	0.982	40.4	0.975	52.7	0.969	64.9	0.963	73.6	0.944
235	32.8	0.982	40.4	0.976	52.8	0.97	65	0.964	73.7	0.945
240	32.8	0.983	40.4	0.976	52.8	0.971	65	0.965	73.8	0.946
245	32.8	0.983	40.4	0.977	52.8	0.971	65.1	0.965	73.9	0.947
250	32.8	0.983	40.4	0.977	52.9	0.972	65.1	0.966	73.9	0.948
255	32.9	0.984	40.5	0.978	52.9	0.972	65.2	0.967	74	0.949
260	32.9	0.984	40.5	0.978	52.9	0.973	65.2	0.967	74.1	0.95
265	32.9	0.984	40.5	0.978	53	0.973	65.2	0.968	74.2	0.951
270	32.9	0.985	40.5	0.979	53	0.974	65.3	0.969	74.2	0.952
275	32.9	0.985	40.5	0.979	53	0.974	65.3	0.969	74.3	0.953
280	32.9	0.985	40.6	0.98	53	0.975	65.4	0.97	74.4	0.954
285	32.9	0.985	40.6	0.98	53.1	0.975	65.4	0.97	74.4	0.954
290	32.9	0.986	40.6	0.98	53.1	0.976	65.4	0.971	74.5	0.955
295	32.9	0.986	40.6	0.981	53.1	0.976	65.5	0.971	74.6	0.956
300	32.9	0.986	40.6	0.981	53.1	0.977	65.5	0.972	74.6	0.957

TABLE 10.13 (Continued)
Michigan Legal 1-Unit Truck Normal Loading - Simple Span Reactions

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SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10		TRUCK # 11		TRUCK # 12	
	Wt = 95.4 kips		Wt = 113.4 kips		Wt = 85.4 kips		Wt = 51.4 kips		Wt = 59.4 kips		Wt = 77.4 kips		Wt = 111.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
5	18	0.189	18	0.159	16.9	0.198	18	0.35	16.9	0.285	18	0.233	16.9	0.152
6	18.4	0.193	18.4	0.162	18.4	0.216	18	0.35	18.4	0.31	18.4	0.238	18.4	0.165
7	19.5	0.204	19.5	0.172	19.5	0.228	18	0.35	19.5	0.328	19.5	0.252	19.5	0.175
8	20.3	0.213	20.3	0.179	20.3	0.238	18	0.35	20.3	0.342	20.3	0.262	21.9	0.197
9	20.9	0.22	20.9	0.185	20.9	0.245	18	0.35	20.9	0.353	20.9	0.271	23.8	0.214
10	21.5	0.225	21.5	0.189	21.5	0.251	19.8	0.385	21.5	0.361	21.5	0.277	25.4	0.228
11	21.9	0.229	21.9	0.193	21.9	0.256	21.3	0.414	21.9	0.368	21.9	0.283	27.2	0.244
12	22.5	0.236	22.5	0.198	22.2	0.26	22.5	0.438	22.2	0.374	22.5	0.291	29.3	0.263
13	23.5	0.247	23.5	0.208	23.2	0.272	23.5	0.458	23.2	0.39	23.5	0.304	31	0.278
14	24.4	0.256	24.4	0.215	24.7	0.289	24.4	0.475	24.7	0.416	24.4	0.316	32.5	0.292
15	25.5	0.268	25.5	0.225	26	0.304	25.2	0.49	26	0.437	25.5	0.33	33.8	0.303
16	26.5	0.278	26.5	0.234	27.1	0.317	25.9	0.503	27.1	0.456	26.5	0.343	34.9	0.314
17	27.6	0.289	27.6	0.243	28.1	0.329	26.5	0.515	28.1	0.473	27.6	0.356	35.9	0.323
18	28.5	0.299	28.5	0.251	29	0.339	27	0.525	29	0.488	28.5	0.368	36.8	0.331
19	29.3	0.307	29.3	0.258	29.8	0.349	28.3	0.55	29.8	0.501	29.3	0.378	37.6	0.338
20	30	0.315	30	0.265	30.5	0.357	29.4	0.573	30.5	0.513	30	0.388	38.8	0.348
21	30.9	0.324	30.9	0.272	31.1	0.364	30.5	0.593	31.1	0.524	30.7	0.397	40.3	0.362
22	31.9	0.335	31.9	0.281	32	0.375	31.4	0.612	32.1	0.54	31.6	0.409	41.6	0.374
23	32.9	0.345	32.9	0.29	33.1	0.387	32.3	0.629	33.2	0.56	32.9	0.424	42.9	0.385
24	34	0.356	34	0.3	34.1	0.399	33.1	0.644	34.3	0.578	34	0.439	44	0.395
25	35	0.367	35	0.309	35	0.41	33.8	0.658	35.3	0.595	35	0.452	45	0.404
26	36	0.378	36	0.318	36.3	0.426	34.5	0.671	36.3	0.611	36	0.465	46	0.413
27	37	0.388	37	0.326	37.6	0.44	35.1	0.684	37.1	0.625	37	0.478	46.9	0.421
28	37.9	0.397	37.9	0.334	38.8	0.454	35.7	0.695	37.9	0.638	37.9	0.489	47.7	0.428
29	38.7	0.406	38.7	0.341	39.8	0.466	36.3	0.705	38.7	0.651	38.7	0.5	48.7	0.437

TABLE 10.14
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

10-T14-2

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10		TRUCK # 11		TRUCK # 12	
	Wt = 95.4 kips		Wt = 113.4 kips		Wt = 85.4 kips		Wt = 51.4 kips		Wt = 59.4 kips		Wt = 77.4 kips		Wt = 111.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
30	39.5	0.414	39.6	0.349	40.8	0.478	36.8	0.715	39.3	0.662	39.5	0.51	49.9	0.448
31	40.5	0.424	40.6	0.358	41.8	0.489	37.2	0.724	40	0.673	40.5	0.523	50.9	0.457
32	41.6	0.436	41.6	0.367	42.7	0.5	37.7	0.733	40.6	0.684	41.6	0.538	51.9	0.466
33	42.7	0.448	42.7	0.377	43.5	0.509	38.1	0.741	41.2	0.693	42.7	0.552	53.3	0.478
34	43.7	0.458	43.7	0.386	44.3	0.518	38.5	0.749	41.7	0.702	43.7	0.565	54.5	0.489
35	44.8	0.469	44.8	0.395	45.4	0.532	38.9	0.756	42.2	0.711	44.7	0.577	55.7	0.5
36	45.7	0.479	45.7	0.403	46.6	0.545	39.2	0.763	42.7	0.719	45.6	0.589	56.8	0.51
37	46.7	0.489	46.7	0.412	47.6	0.557	39.5	0.769	43.1	0.726	46.4	0.6	57.9	0.52
38	47.5	0.498	47.5	0.419	48.6	0.569	39.8	0.775	43.6	0.734	47.3	0.611	58.9	0.529
39	48.4	0.507	48.4	0.427	49.5	0.58	40.1	0.781	44	0.74	48	0.621	59.8	0.537
40	49.4	0.517	49.4	0.435	50.4	0.591	40.4	0.786	44.4	0.747	48.8	0.63	60.7	0.545
41	50.5	0.529	50.5	0.445	51.3	0.601	40.7	0.792	44.7	0.753	49.5	0.639	61.6	0.553
42	51.5	0.54	51.5	0.455	52.1	0.61	40.9	0.797	45.1	0.759	50.1	0.648	62.4	0.56
43	52.6	0.551	52.6	0.464	52.9	0.619	41.2	0.801	45.4	0.765	50.8	0.656	63.2	0.567
44	53.5	0.561	53.6	0.473	53.6	0.628	41.4	0.806	45.7	0.77	51.4	0.664	63.9	0.574
45	54.5	0.571	54.6	0.481	54.3	0.636	41.6	0.81	46	0.775	52	0.671	64.7	0.58
46	55.4	0.58	55.5	0.49	55	0.644	41.9	0.814	46.3	0.78	52.5	0.678	65.3	0.587
47	56.2	0.589	56.4	0.498	55.6	0.652	42.1	0.818	46.6	0.785	53	0.685	66	0.592
48	57	0.598	57.3	0.505	56.3	0.659	42.3	0.822	46.9	0.789	53.5	0.692	66.6	0.598
49	57.8	0.606	58.3	0.514	56.9	0.666	42.4	0.826	47.1	0.793	54	0.698	67.2	0.603
50	58.6	0.614	59.4	0.524	57.4	0.673	42.6	0.829	47.4	0.797	54.5	0.704	67.8	0.609
51	59.3	0.621	60.5	0.533	58	0.679	42.8	0.833	47.6	0.801	54.9	0.71	68.3	0.614
52	60	0.629	61.5	0.542	58.5	0.685	43	0.836	47.8	0.805	55.4	0.716	68.9	0.618
53	60.6	0.636	62.4	0.551	59	0.691	43.1	0.839	48	0.809	55.8	0.721	69.4	0.623
54	61.3	0.643	63.4	0.559	59.5	0.697	43.3	0.842	48.3	0.812	56.2	0.726	69.9	0.627

TABLE 10.14 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

10-T14-3

SPAN	TRUCK # 6 Wt = 95.4 kips		TRUCK # 7 Wt = 113.4 kips		TRUCK # 8 Wt = 85.4 kips		TRUCK # 9 Wt = 51.4 kips		TRUCK # 10 Wt = 59.4 kips		TRUCK # 11 Wt = 77.4 kips		TRUCK # 12 Wt = 111.4 kips	
	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt
	55	61.9	0.649	64.3	0.567	60	0.702	43.4	0.845	48.5	0.816	56.6	0.731	70.4
56	62.5	0.655	65.2	0.575	60.4	0.708	43.6	0.847	48.7	0.819	57	0.736	70.8	0.636
57	63.1	0.661	66	0.582	60.9	0.713	43.7	0.85	48.8	0.822	57.3	0.74	71.5	0.642
58	63.6	0.667	66.8	0.589	61.3	0.718	43.8	0.853	49	0.825	57.7	0.745	72.2	0.648
59	64.2	0.673	67.6	0.596	61.7	0.722	44	0.855	49.2	0.828	58	0.749	72.8	0.654
60	64.7	0.678	68.4	0.603	62.1	0.727	44.1	0.858	49.4	0.831	58.3	0.753	73.5	0.66
61	65.2	0.684	69.1	0.61	62.5	0.732	44.2	0.86	49.5	0.834	58.6	0.757	74.1	0.665
62	65.7	0.689	69.8	0.616	62.8	0.736	44.3	0.862	49.7	0.837	58.9	0.761	74.7	0.671
63	66.2	0.694	70.5	0.622	63.2	0.74	44.4	0.864	49.9	0.839	59.2	0.765	75.3	0.676
64	66.6	0.698	71.2	0.628	63.5	0.744	44.5	0.867	50	0.842	59.5	0.769	75.9	0.681
65	67.1	0.703	71.9	0.634	63.9	0.748	44.6	0.869	50.1	0.844	59.8	0.772	76.4	0.686
66	67.5	0.708	72.5	0.639	64.2	0.752	44.7	0.871	50.3	0.847	60	0.776	76.9	0.691
67	67.9	0.712	73.1	0.645	64.5	0.756	44.8	0.873	50.4	0.849	60.3	0.779	77.5	0.695
68	68.3	0.716	73.7	0.65	64.8	0.759	44.9	0.874	50.6	0.851	60.6	0.782	78	0.7
69	68.7	0.72	74.3	0.655	65.1	0.763	45	0.876	50.7	0.853	60.8	0.786	78.4	0.704
70	69.1	0.724	74.8	0.66	65.4	0.766	45.1	0.878	50.8	0.855	61	0.789	78.9	0.708
71	69.5	0.728	75.4	0.665	65.7	0.769	45.2	0.88	50.9	0.857	61.3	0.792	79.4	0.712
72	69.8	0.732	75.9	0.669	66	0.773	45.3	0.881	51	0.859	61.5	0.795	79.8	0.716
73	70.2	0.736	76.4	0.674	66.2	0.776	45.4	0.883	51.2	0.861	61.7	0.797	80.2	0.72
74	70.5	0.739	76.9	0.678	66.5	0.779	45.5	0.885	51.3	0.863	61.9	0.8	80.7	0.724
75	70.8	0.743	77.4	0.683	66.8	0.782	45.5	0.886	51.4	0.865	62.1	0.803	81.1	0.728
76	71.2	0.746	77.9	0.687	67	0.785	45.6	0.888	51.5	0.867	62.3	0.805	81.5	0.731
77	71.5	0.749	78.3	0.691	67.2	0.787	45.7	0.889	51.6	0.869	62.5	0.808	81.9	0.735
78	71.8	0.753	78.8	0.695	67.5	0.79	45.8	0.891	51.7	0.87	62.7	0.81	82.2	0.738
79	72.1	0.756	79.2	0.699	67.7	0.793	45.8	0.892	51.8	0.872	62.9	0.813	82.6	0.742

TABLE 10.14 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

10-T14-4

SPAN	TRUCK # 6 Wt = 95.4 kips		TRUCK # 7 Wt = 113.4 kips		TRUCK # 8 Wt = 85.4 kips		TRUCK # 9 Wt = 51.4 kips		TRUCK # 10 Wt = 59.4 kips		TRUCK # 11 Wt = 77.4 kips		TRUCK # 12 Wt = 111.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
80	72.4	0.759	79.6	0.702	67.9	0.795	45.9	0.893	51.9	0.873	63.1	0.815	83	0.745
81	72.7	0.762	80.1	0.706	68.1	0.798	46	0.895	52	0.875	63.3	0.817	83.3	0.748
82	72.9	0.765	80.5	0.71	68.3	0.8	46	0.896	52.1	0.877	63.4	0.82	83.7	0.751
83	73.2	0.767	80.9	0.713	68.5	0.803	46.1	0.897	52.2	0.878	63.6	0.822	84	0.754
84	73.5	0.77	81.3	0.717	68.8	0.805	46.2	0.898	52.2	0.879	63.8	0.824	84.3	0.757
85	73.7	0.773	81.6	0.72	68.9	0.807	46.2	0.9	52.3	0.881	63.9	0.826	84.6	0.76
86	74	0.776	82	0.723	69.1	0.81	46.3	0.901	52.4	0.882	64.1	0.828	85	0.763
87	74.2	0.778	82.4	0.726	69.3	0.812	46.4	0.902	52.5	0.884	64.2	0.83	85.3	0.765
88	74.5	0.781	82.7	0.729	69.5	0.814	46.4	0.903	52.6	0.885	64.4	0.832	85.6	0.768
89	74.7	0.783	83.1	0.732	69.7	0.816	46.5	0.904	52.6	0.886	64.5	0.834	85.8	0.771
90	74.9	0.786	83.4	0.735	69.9	0.818	46.5	0.905	52.7	0.888	64.7	0.836	86.1	0.773
91	75.2	0.788	83.7	0.738	70	0.82	46.6	0.906	52.8	0.889	64.8	0.837	86.4	0.776
92	75.4	0.79	84	0.741	70.2	0.822	46.6	0.907	52.9	0.89	65	0.839	86.7	0.778
93	75.6	0.792	84.4	0.744	70.4	0.824	46.7	0.908	52.9	0.891	65.1	0.841	86.9	0.781
94	75.8	0.795	84.7	0.747	70.5	0.826	46.7	0.909	53	0.892	65.2	0.843	87.2	0.783
95	76	0.797	85	0.749	70.7	0.828	46.8	0.91	53.1	0.893	65.3	0.844	87.5	0.785
96	76.2	0.799	85.3	0.752	70.8	0.829	46.8	0.911	53.1	0.895	65.5	0.846	87.7	0.787
97	76.4	0.801	85.6	0.755	71	0.831	46.9	0.912	53.2	0.896	65.6	0.848	88	0.79
98	76.6	0.803	85.8	0.757	71.1	0.833	46.9	0.913	53.3	0.897	65.7	0.849	88.2	0.792
99	76.8	0.805	86.1	0.76	71.3	0.835	47	0.914	53.3	0.898	65.8	0.851	88.4	0.794
100	77	0.807	86.4	0.762	71.4	0.836	47	0.915	53.4	0.899	65.9	0.852	88.7	0.796
101	77.2	0.809	86.7	0.764	71.6	0.838	47.1	0.915	53.4	0.9	66.1	0.854	88.9	0.798
102	77.3	0.811	86.9	0.767	71.7	0.839	47.1	0.916	53.5	0.901	66.2	0.855	89.1	0.8
103	77.5	0.813	87.2	0.769	71.8	0.841	47.1	0.917	53.6	0.902	66.3	0.856	89.3	0.802
104	77.7	0.814	87.4	0.771	72	0.843	47.2	0.918	53.6	0.903	66.4	0.858	89.5	0.804

TABLE 10.14 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

10-T14-5

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10		TRUCK # 11		TRUCK # 12	
	Wt = 95.4 kips		Wt = 113.4 kips		Wt = 85.4 kips		Wt = 51.4 kips		Wt = 59.4 kips		Wt = 77.4 kips		Wt = 111.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
105	77.9	0.816	87.7	0.773	72.1	0.844	47.2	0.919	53.7	0.904	66.5	0.859	89.7	0.806
106	78	0.818	87.9	0.775	72.2	0.846	47.3	0.919	53.7	0.905	66.6	0.86	89.9	0.807
107	78.2	0.82	88.2	0.777	72.3	0.847	47.3	0.92	53.8	0.905	66.7	0.862	90.1	0.809
108	78.3	0.821	88.4	0.78	72.5	0.848	47.3	0.921	53.8	0.906	66.8	0.863	90.3	0.811
109	78.5	0.823	88.6	0.782	72.6	0.85	47.4	0.922	53.9	0.907	66.9	0.864	90.5	0.813
110	78.7	0.825	88.9	0.784	72.7	0.851	47.4	0.922	53.9	0.908	67	0.866	90.7	0.814
111	78.8	0.826	89.1	0.786	72.8	0.853	47.4	0.923	54	0.909	67.1	0.867	90.9	0.816
112	79	0.828	89.3	0.787	72.9	0.854	47.5	0.924	54	0.91	67.2	0.868	91.1	0.818
113	79.1	0.829	89.5	0.789	73	0.855	47.5	0.924	54.1	0.91	67.3	0.869	91.3	0.819
114	79.2	0.831	89.7	0.791	73.1	0.856	47.5	0.925	54.1	0.911	67.4	0.87	91.4	0.821
115	79.4	0.832	89.9	0.793	73.2	0.858	47.6	0.926	54.2	0.912	67.4	0.871	91.6	0.823
116	79.5	0.834	90.1	0.795	73.3	0.859	47.6	0.926	54.2	0.913	67.5	0.872	91.8	0.824
117	79.7	0.835	90.3	0.797	73.4	0.86	47.6	0.927	54.3	0.913	67.6	0.874	92	0.826
118	79.8	0.836	90.5	0.798	73.5	0.861	47.7	0.928	54.3	0.914	67.7	0.875	92.1	0.827
119	79.9	0.838	90.7	0.8	73.6	0.862	47.7	0.928	54.3	0.915	67.8	0.876	92.3	0.828
120	80.1	0.839	90.9	0.802	73.7	0.864	47.7	0.929	54.4	0.916	67.9	0.877	92.4	0.83
121	80.2	0.84	91.1	0.803	73.8	0.865	47.8	0.929	54.4	0.916	67.9	0.878	92.6	0.831
122	80.3	0.842	91.3	0.805	73.9	0.866	47.8	0.93	54.5	0.917	68	0.879	92.8	0.833
123	80.4	0.843	91.4	0.806	74	0.867	47.8	0.931	54.5	0.918	68.1	0.88	92.9	0.834
124	80.5	0.844	91.6	0.808	74.1	0.868	47.9	0.931	54.5	0.918	68.2	0.881	93.1	0.835
125	80.7	0.846	91.8	0.81	74.2	0.869	47.9	0.932	54.6	0.919	68.2	0.882	93.2	0.837
126	80.8	0.847	92	0.811	74.3	0.87	47.9	0.932	54.6	0.92	68.3	0.883	93.3	0.838
127	80.9	0.848	92.1	0.813	74.4	0.871	47.9	0.933	54.7	0.92	68.4	0.884	93.5	0.839
128	81	0.849	92.3	0.814	74.5	0.872	48	0.933	54.7	0.921	68.5	0.884	93.6	0.841
129	81.1	0.85	92.5	0.815	74.6	0.873	48	0.934	54.7	0.922	68.5	0.885	93.8	0.842

TABLE 10.14 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10		TRUCK # 11		TRUCK # 12	
	Wt = 95.4 kips		Wt = 113.4 kips		Wt = 85.4 kips		Wt = 51.4 kips		Wt = 59.4 kips		Wt = 77.4 kips		Wt = 111.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
130	81.2	0.852	92.6	0.817	74.6	0.874	48	0.934	54.8	0.922	68.6	0.886	93.9	0.843
131	81.3	0.853	92.8	0.818	74.7	0.875	48	0.935	54.8	0.923	68.7	0.887	94	0.844
132	81.4	0.854	92.9	0.82	74.8	0.876	48.1	0.935	54.8	0.923	68.7	0.888	94.2	0.845
133	81.6	0.855	93.1	0.821	74.9	0.877	48.1	0.936	54.9	0.924	68.8	0.889	94.3	0.847
134	81.7	0.856	93.2	0.822	75	0.878	48.1	0.936	54.9	0.924	68.9	0.89	94.4	0.848
135	81.8	0.857	93.4	0.824	75	0.879	48.1	0.937	54.9	0.925	68.9	0.89	94.6	0.849
136	81.9	0.858	93.5	0.825	75.1	0.88	48.2	0.937	55	0.926	69	0.891	94.7	0.85
137	82	0.859	93.7	0.826	75.2	0.881	48.2	0.938	55	0.926	69	0.892	94.8	0.851
138	82.1	0.86	93.8	0.827	75.3	0.881	48.2	0.938	55	0.927	69.1	0.893	94.9	0.852
139	82.1	0.861	94	0.829	75.3	0.882	48.2	0.939	55.1	0.927	69.2	0.894	95	0.853
140	82.2	0.862	94.1	0.83	75.4	0.883	48.3	0.939	55.1	0.928	69.2	0.894	95.2	0.854
141	82.3	0.863	94.2	0.831	75.5	0.884	48.3	0.939	55.1	0.928	69.3	0.895	95.3	0.855
142	82.4	0.864	94.4	0.832	75.6	0.885	48.3	0.94	55.2	0.929	69.3	0.896	95.4	0.856
143	82.5	0.865	94.5	0.834	75.6	0.886	48.3	0.94	55.2	0.929	69.4	0.897	95.5	0.857
144	82.6	0.866	94.6	0.835	75.7	0.886	48.4	0.941	55.2	0.93	69.4	0.897	95.6	0.858
145	82.7	0.867	94.8	0.836	75.8	0.887	48.4	0.941	55.3	0.93	69.5	0.898	95.7	0.859
146	82.8	0.868	94.9	0.837	75.8	0.888	48.4	0.942	55.3	0.931	69.6	0.899	95.8	0.86
147	82.9	0.869	95	0.838	75.9	0.889	48.4	0.942	55.3	0.931	69.6	0.899	95.9	0.861
148	83	0.87	95.2	0.839	76	0.889	48.4	0.942	55.3	0.932	69.7	0.9	96	0.862
149	83	0.87	95.3	0.84	76	0.89	48.5	0.943	55.4	0.932	69.7	0.901	96.1	0.863
150	83.1	0.871	95.4	0.841	76.1	0.891	48.5	0.943	55.4	0.933	69.8	0.901	96.2	0.864
155	83.5	0.875	96	0.846	76.4	0.894	48.6	0.945	55.5	0.935	70	0.905	96.7	0.868
160	83.9	0.879	96.5	0.851	76.7	0.898	48.7	0.947	55.6	0.937	70.2	0.908	97.2	0.872
165	84.2	0.883	97	0.856	76.9	0.901	48.7	0.948	55.8	0.939	70.5	0.91	97.6	0.876
170	84.6	0.886	97.5	0.86	77.2	0.904	48.8	0.95	55.9	0.94	70.7	0.913	98	0.88

TABLE 10.14 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

10-T14-6

10-T14-7

SPAN	TRUCK # 6 Wt = 95.4 kips		TRUCK # 7 Wt = 113.4 kips		TRUCK # 8 Wt = 85.4 kips		TRUCK # 9 Wt = 51.4 kips		TRUCK # 10 Wt = 59.4 kips		TRUCK # 11 Wt = 77.4 kips		TRUCK # 12 Wt = 111.4 kips	
	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt
	175	84.9	0.89	98	0.864	77.4	0.906	48.9	0.951	56	0.942	70.9	0.916	98.4
180	85.2	0.893	98.4	0.868	77.6	0.909	49	0.953	56.1	0.944	71	0.918	98.8	0.887
185	85.4	0.896	98.8	0.871	77.8	0.912	49	0.954	56.1	0.945	71.2	0.92	99.1	0.89
190	85.7	0.898	99.2	0.875	78	0.914	49.1	0.955	56.2	0.947	71.4	0.922	99.4	0.893
195	86	0.901	99.6	0.878	78.2	0.916	49.1	0.956	56.3	0.948	71.5	0.924	99.7	0.895
200	86.2	0.904	99.9	0.881	78.4	0.918	49.2	0.957	56.4	0.949	71.7	0.926	100	0.898
205	86.4	0.906	100	0.884	78.6	0.92	49.3	0.958	56.5	0.951	71.8	0.928	100	0.9
210	86.6	0.908	101	0.887	78.7	0.922	49.3	0.959	56.5	0.952	71.9	0.93	101	0.903
215	86.8	0.91	101	0.889	78.9	0.924	49.4	0.96	56.6	0.953	72.1	0.931	101	0.905
220	87	0.912	101	0.892	79	0.926	49.4	0.961	56.7	0.954	72.2	0.933	101	0.907
225	87.2	0.914	101	0.894	79.2	0.927	49.4	0.962	56.7	0.955	72.3	0.934	101	0.909
230	87.4	0.916	102	0.897	79.3	0.929	49.5	0.963	56.8	0.956	72.4	0.936	102	0.911
235	87.6	0.918	102	0.899	79.4	0.93	49.5	0.964	56.8	0.957	72.5	0.937	102	0.913
240	87.7	0.92	102	0.901	79.6	0.932	49.6	0.964	56.9	0.958	72.6	0.938	102	0.915
245	87.9	0.921	102	0.903	79.7	0.933	49.6	0.965	56.9	0.959	72.7	0.94	102	0.917
250	88	0.923	103	0.905	79.8	0.935	49.6	0.966	57	0.96	72.8	0.941	102	0.918
255	88.2	0.924	103	0.907	79.9	0.936	49.7	0.967	57	0.96	72.9	0.942	102	0.92
260	88.3	0.926	103	0.908	80	0.937	49.7	0.967	57.1	0.961	73	0.943	103	0.922
265	88.4	0.927	103	0.91	80.1	0.938	49.7	0.968	57.1	0.962	73.1	0.944	103	0.923
270	88.6	0.929	103	0.912	80.2	0.939	49.8	0.968	57.2	0.963	73.2	0.945	103	0.924
275	88.7	0.93	104	0.913	80.3	0.94	49.8	0.969	57.2	0.963	73.2	0.946	103	0.926
280	88.8	0.931	104	0.915	80.4	0.942	49.8	0.97	57.3	0.964	73.3	0.947	103	0.927
285	88.9	0.932	104	0.916	80.5	0.943	49.9	0.97	57.3	0.965	73.4	0.948	103	0.928
290	89	0.933	104	0.918	80.6	0.944	49.9	0.971	57.3	0.965	73.5	0.949	104	0.93
295	89.2	0.935	104	0.919	80.7	0.945	49.9	0.971	57.4	0.966	73.5	0.95	104	0.931
300	89.3	0.936	104	0.921	80.7	0.945	49.9	0.972	57.4	0.966	73.6	0.951	104	0.932

TABLE 10.14 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

SPAN	TRUCK # 13 Wt = 119.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 137.4 kips		TRUCK # 16 Wt = 132.4 kips		TRUCK # 17 Wt = 145.4 kips		TRUCK # 18 Wt = 148 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
5	16.9	0.142	16.9	0.128	16.9	0.123	16.9	0.128	16.9	0.116	16.9	0.114
6	18.4	0.154	18.4	0.139	18.4	0.134	18.4	0.139	18.4	0.127	18.4	0.124
7	19.5	0.163	19.5	0.147	19.5	0.142	19.5	0.147	19.5	0.134	19.5	0.132
8	21.9	0.184	21.9	0.166	21.9	0.16	21.9	0.166	21.9	0.151	21.9	0.148
9	23.8	0.2	23.8	0.18	23.8	0.174	23.8	0.18	23.8	0.164	23.8	0.161
10	25.4	0.212	25.4	0.192	25.4	0.185	25.4	0.192	25.4	0.174	25.4	0.171
11	27.2	0.228	27.2	0.205	27	0.197	27.2	0.205	27.2	0.187	27.2	0.184
12	29.3	0.245	29.3	0.221	28.8	0.209	29.3	0.221	29.3	0.201	29.3	0.198
13	31	0.26	31	0.234	30.2	0.22	31	0.234	31	0.213	31	0.21
14	32.5	0.272	32.5	0.246	31.8	0.232	32.5	0.246	32.5	0.224	32.5	0.22
15	33.8	0.283	34.7	0.262	33.5	0.244	34.7	0.262	34.7	0.238	34.7	0.234
16	34.9	0.293	36.6	0.276	35	0.255	36.6	0.276	36.6	0.252	36.6	0.247
17	35.9	0.301	38.2	0.289	36.3	0.264	38.2	0.289	38.2	0.263	38.2	0.258
18	36.8	0.309	39.7	0.3	37.4	0.272	40.1	0.303	40.1	0.276	40.1	0.271
19	37.6	0.315	41.1	0.31	38.4	0.28	42.1	0.318	42.1	0.289	42.1	0.284
20	38.7	0.324	42.3	0.319	39.4	0.287	43.9	0.331	43.9	0.302	43.9	0.297
21	40.1	0.336	43.3	0.327	40.2	0.293	45.5	0.344	45.5	0.313	45.5	0.307
22	41.3	0.346	44.3	0.335	41	0.298	47.6	0.359	47.6	0.327	47.6	0.321
23	42.5	0.356	45.2	0.342	42	0.305	49.5	0.374	49.5	0.34	49.5	0.334
24	43.5	0.364	46.6	0.352	43.1	0.314	51.2	0.387	51.2	0.352	51.2	0.346
25	44.5	0.372	47.8	0.361	44.2	0.322	52.8	0.399	53	0.365	53	0.358
26	45.4	0.38	49	0.37	45.2	0.329	54.3	0.41	55	0.378	55	0.372
27	46.2	0.387	50.3	0.38	46.6	0.339	55.6	0.42	56.8	0.391	56.8	0.384
28	47.1	0.395	51.8	0.391	47.9	0.349	56.9	0.43	58.5	0.402	58.5	0.395
29	48.2	0.404	53.1	0.401	49.1	0.357	58.1	0.439	60.1	0.413	60.1	0.406

TABLE 10.14 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

10-T14-8

SPAN	TRUCK # 13		TRUCK # 14		TRUCK # 15		TRUCK # 16		TRUCK # 17		TRUCK # 18	
	Wt = 119.4 kips		Wt = 132.4 kips		Wt = 137.4 kips		Wt = 132.4 kips		Wt = 145.4 kips		Wt = 148 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
30	49.2	0.412	54.4	0.411	50.2	0.366	59.2	0.447	61.5	0.423	61.5	0.416
31	50.1	0.42	56	0.423	51.3	0.373	60.6	0.458	62.9	0.433	62.9	0.425
32	51	0.427	57.5	0.434	52.3	0.381	62	0.468	64.2	0.442	64.2	0.434
33	52	0.436	58.9	0.445	53.2	0.387	63.2	0.478	65.4	0.45	65.4	0.442
34	53.1	0.445	60.4	0.456	54.1	0.394	64.6	0.488	66.7	0.459	66.5	0.45
35	54.2	0.454	62	0.469	54.9	0.4	66.1	0.499	68.2	0.469	67.8	0.458
36	55.3	0.463	63.6	0.48	56.1	0.408	67.5	0.51	69.5	0.478	69.2	0.467
37	56.6	0.474	65	0.491	57.1	0.416	68.9	0.52	70.8	0.487	70.4	0.476
38	57.8	0.484	66.4	0.501	58.2	0.423	70.1	0.53	72.4	0.498	71.7	0.484
39	59	0.494	67.7	0.511	59.3	0.432	71.3	0.539	73.8	0.508	73	0.493
40	60.1	0.504	68.9	0.52	60.5	0.441	72.5	0.547	75.2	0.518	74.4	0.503
41	61.2	0.513	70.1	0.529	61.7	0.449	73.6	0.556	76.6	0.527	75.8	0.512
42	62.2	0.521	71.2	0.538	62.8	0.457	74.6	0.563	77.8	0.535	77.1	0.521
43	63.2	0.529	72.4	0.547	64.2	0.467	75.8	0.572	79.1	0.544	78.3	0.529
44	64.1	0.537	73.8	0.557	65.5	0.477	77	0.582	80.2	0.552	79.5	0.537
45	65	0.544	75.1	0.567	66.8	0.486	78.3	0.591	81.3	0.559	80.6	0.545
46	65.8	0.552	76.3	0.577	68	0.495	79.5	0.6	82.4	0.567	81.7	0.552
47	66.7	0.558	77.5	0.586	69.1	0.503	80.6	0.609	83.7	0.576	82.7	0.559
48	67.4	0.565	78.7	0.594	70.2	0.511	81.7	0.617	85	0.585	83.7	0.566
49	68.2	0.571	79.8	0.603	71.3	0.519	82.7	0.625	86.2	0.593	84.6	0.572
50	68.9	0.577	80.8	0.611	72.3	0.526	83.7	0.632	87.4	0.601	85.7	0.579
51	69.6	0.583	81.8	0.618	73.3	0.533	84.6	0.639	88.6	0.609	86.9	0.587
52	70.3	0.588	82.8	0.626	74.2	0.54	85.6	0.646	89.7	0.617	88.1	0.595
53	70.9	0.594	83.7	0.633	75.1	0.547	86.4	0.653	90.7	0.624	89.2	0.603
54	71.5	0.599	84.7	0.639	76	0.553	87.3	0.659	91.7	0.631	90.3	0.61

TABLE 10.14 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

10-T14-9

SPAN	TRUCK # 13		TRUCK # 14		TRUCK # 15		TRUCK # 16		TRUCK # 17		TRUCK # 18	
	Wt = 119.4 kips		Wt = 132.4 kips		Wt = 137.4 kips		Wt = 132.4 kips		Wt = 145.4 kips		Wt = 148 kips	
	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt
55	72.1	0.604	85.5	0.646	76.8	0.559	88.1	0.666	92.7	0.638	91.4	0.617
56	72.7	0.609	86.4	0.652	77.6	0.565	88.9	0.672	93.6	0.644	92.4	0.624
57	73.2	0.613	87.2	0.658	78.4	0.571	89.7	0.677	94.5	0.65	93.4	0.631
58	73.7	0.618	87.9	0.664	79.2	0.576	90.4	0.683	95.4	0.656	94.3	0.637
59	74.3	0.622	88.7	0.67	79.9	0.581	91.1	0.688	96.3	0.662	95.2	0.643
60	74.8	0.627	89.4	0.675	80.6	0.587	91.8	0.693	97.1	0.668	96.1	0.649
61	75.6	0.633	90.1	0.681	81.3	0.592	92.5	0.698	97.9	0.673	97	0.655
62	76.3	0.639	90.8	0.686	82.2	0.598	93.1	0.703	98.6	0.678	97.8	0.661
63	77	0.645	91.5	0.691	83	0.604	93.7	0.708	99.4	0.684	98.6	0.666
64	77.6	0.65	92.1	0.696	83.9	0.611	94.3	0.713	100	0.689	99.3	0.671
65	78.3	0.655	92.7	0.7	84.7	0.617	94.9	0.717	101	0.693	100	0.676
66	78.9	0.661	93.3	0.705	85.5	0.622	95.5	0.721	101	0.698	101	0.681
67	79.5	0.666	93.9	0.709	86.3	0.628	96	0.725	102	0.702	102	0.686
68	80.1	0.671	94.5	0.714	87	0.633	96.6	0.73	103	0.707	102	0.691
69	80.6	0.675	95	0.718	87.8	0.639	97.1	0.733	103	0.711	103	0.695
70	81.2	0.68	95.6	0.722	88.5	0.644	97.6	0.737	104	0.715	104	0.699
71	81.7	0.685	96.1	0.726	89.2	0.649	98.1	0.741	105	0.719	104	0.704
72	82.3	0.689	96.6	0.73	89.8	0.654	98.6	0.745	105	0.723	105	0.708
73	82.8	0.693	97.1	0.733	90.5	0.659	99	0.748	106	0.727	105	0.712
74	83.3	0.697	97.6	0.737	91.1	0.663	99.5	0.751	106	0.731	106	0.716
75	83.7	0.701	98	0.74	91.7	0.668	99.9	0.755	107	0.734	106	0.72
76	84.2	0.705	98.5	0.744	92.3	0.672	100	0.758	107	0.738	107	0.723
77	84.7	0.709	98.9	0.747	92.9	0.676	101	0.761	108	0.741	108	0.727
78	85.1	0.713	99.3	0.75	93.5	0.68	101	0.764	108	0.744	108	0.73
79	85.5	0.717	99.8	0.754	94	0.685	102	0.767	109	0.748	109	0.734

TABLE 10.14 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

10-T14-10

SPAN	TRUCK # 13 Wt = 119.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 137.4 kips		TRUCK # 16 Wt = 132.4 kips		TRUCK # 17 Wt = 145.4 kips		TRUCK # 18 Wt = 148 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
80	86	0.72	100	0.757	94.6	0.688	102	0.77	109	0.751	109	0.737
81	86.4	0.724	101	0.76	95.1	0.692	102	0.773	110	0.754	110	0.74
82	86.8	0.727	101	0.763	95.6	0.696	103	0.776	110	0.757	110	0.743
83	87.2	0.73	101	0.765	96.1	0.7	103	0.778	110	0.76	110	0.747
84	87.6	0.733	102	0.768	96.6	0.703	103	0.781	111	0.763	111	0.75
85	87.9	0.737	102	0.771	97.1	0.707	104	0.784	111	0.765	111	0.753
86	88.3	0.74	102	0.774	97.6	0.71	104	0.786	112	0.768	112	0.755
87	88.7	0.743	103	0.776	98	0.714	104	0.789	112	0.771	112	0.758
88	89	0.746	103	0.779	98.5	0.717	105	0.791	112	0.773	113	0.761
89	89.4	0.748	103	0.781	98.9	0.72	105	0.793	113	0.776	113	0.764
90	89.7	0.751	104	0.784	99.3	0.723	105	0.796	113	0.779	113	0.766
91	90	0.754	104	0.786	99.8	0.726	106	0.798	114	0.781	114	0.769
92	90.3	0.757	104	0.788	100	0.729	106	0.8	114	0.783	114	0.771
93	90.6	0.759	105	0.791	101	0.732	106	0.802	114	0.786	115	0.774
94	91	0.762	105	0.793	101	0.735	106	0.804	115	0.788	115	0.776
95	91.2	0.764	105	0.795	101	0.738	107	0.806	115	0.79	115	0.779
96	91.5	0.767	106	0.797	102	0.74	107	0.808	115	0.792	116	0.781
97	91.8	0.769	106	0.799	102	0.743	107	0.81	116	0.795	116	0.783
98	92.1	0.772	106	0.801	102	0.746	108	0.812	116	0.797	116	0.785
99	92.4	0.774	106	0.803	103	0.748	108	0.814	116	0.799	117	0.788
100	92.7	0.776	107	0.805	103	0.751	108	0.816	116	0.801	117	0.79
101	92.9	0.778	107	0.807	103	0.753	108	0.818	117	0.803	117	0.792
102	93.2	0.78	107	0.809	104	0.756	109	0.82	117	0.805	117	0.794
103	93.4	0.783	107	0.811	104	0.758	109	0.821	117	0.806	118	0.796
104	93.7	0.785	108	0.813	104	0.76	109	0.823	118	0.808	118	0.798

TABLE 10.14 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

10-T14-11

SPAN	TRUCK # 13 Wt = 119.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 137.4 kips		TRUCK # 16 Wt = 132.4 kips		TRUCK # 17 Wt = 145.4 kips		TRUCK # 18 Wt = 148 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
105	93.9	0.787	108	0.815	105	0.763	109	0.825	118	0.81	118	0.8
106	94.2	0.789	108	0.816	105	0.765	109	0.827	118	0.812	119	0.802
107	94.4	0.791	108	0.818	105	0.767	110	0.828	118	0.814	119	0.803
108	94.6	0.793	109	0.82	106	0.769	110	0.83	119	0.815	119	0.805
109	94.9	0.795	109	0.821	106	0.771	110	0.831	119	0.817	119	0.807
110	95.1	0.796	109	0.823	106	0.773	110	0.833	119	0.819	120	0.809
111	95.3	0.798	109	0.825	107	0.775	110	0.834	119	0.82	120	0.81
112	95.5	0.8	109	0.826	107	0.777	111	0.836	120	0.822	120	0.812
113	95.7	0.802	110	0.828	107	0.779	111	0.837	120	0.824	120	0.814
114	95.9	0.804	110	0.829	107	0.781	111	0.839	120	0.825	121	0.815
115	96.1	0.805	110	0.831	108	0.783	111	0.84	120	0.827	121	0.817
116	96.3	0.807	110	0.832	108	0.785	111	0.841	120	0.828	121	0.819
117	96.5	0.809	110	0.834	108	0.787	112	0.843	121	0.83	121	0.82
118	96.7	0.81	111	0.835	108	0.789	112	0.844	121	0.831	122	0.822
119	96.9	0.812	111	0.836	109	0.791	112	0.845	121	0.833	122	0.823
120	97.1	0.813	111	0.838	109	0.792	112	0.847	121	0.834	122	0.825
121	97.3	0.815	111	0.839	109	0.794	112	0.848	121	0.835	122	0.826
122	97.5	0.816	111	0.84	109	0.796	112	0.849	122	0.837	122	0.828
123	97.7	0.818	111	0.842	110	0.797	113	0.85	122	0.838	123	0.829
124	97.8	0.819	112	0.843	110	0.799	113	0.852	122	0.839	123	0.83
125	98	0.821	112	0.844	110	0.801	113	0.853	122	0.841	123	0.832
126	98.2	0.822	112	0.845	110	0.802	113	0.854	122	0.842	123	0.833
127	98.3	0.824	112	0.847	110	0.804	113	0.855	123	0.843	123	0.834
128	98.5	0.825	112	0.848	111	0.805	113	0.856	123	0.844	124	0.836
129	98.7	0.826	112	0.849	111	0.807	114	0.857	123	0.845	124	0.837

TABLE 10.14 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

10-T14-12

SPAN	TRUCK # 13 Wt = 119.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 137.4 kips		TRUCK # 16 Wt = 132.4 kips		TRUCK # 17 Wt = 145.4 kips		TRUCK # 18 Wt = 148 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
130	98.8	0.828	113	0.85	111	0.808	114	0.859	123	0.847	124	0.838
131	99	0.829	113	0.851	111	0.81	114	0.86	123	0.848	124	0.839
132	99.1	0.83	113	0.853	111	0.811	114	0.861	123	0.849	124	0.841
133	99.3	0.832	113	0.854	112	0.813	114	0.862	124	0.85	125	0.842
134	99.4	0.833	113	0.855	112	0.814	114	0.863	124	0.851	125	0.843
135	99.6	0.834	113	0.856	112	0.815	114	0.864	124	0.852	125	0.844
136	99.7	0.835	113	0.857	112	0.817	114	0.865	124	0.853	125	0.845
137	99.9	0.837	114	0.858	112	0.818	115	0.866	124	0.855	125	0.846
138	100	0.838	114	0.859	113	0.819	115	0.867	124	0.856	125	0.848
139	100	0.839	114	0.86	113	0.821	115	0.868	125	0.857	126	0.849
140	100	0.84	114	0.861	113	0.822	115	0.869	125	0.858	126	0.85
141	100	0.841	114	0.862	113	0.823	115	0.87	125	0.859	126	0.851
142	101	0.842	114	0.863	113	0.825	115	0.871	125	0.86	126	0.852
143	101	0.843	114	0.864	113	0.826	115	0.871	125	0.861	126	0.853
144	101	0.845	114	0.865	114	0.827	115	0.872	125	0.862	126	0.854
145	101	0.846	115	0.866	114	0.828	116	0.873	125	0.863	127	0.855
146	101	0.847	115	0.867	114	0.829	116	0.874	126	0.863	127	0.856
147	101	0.848	115	0.868	114	0.83	116	0.875	126	0.864	127	0.857
148	101	0.849	115	0.868	114	0.832	116	0.876	126	0.865	127	0.858
149	101	0.85	115	0.869	114	0.833	116	0.877	126	0.866	127	0.859
150	102	0.851	115	0.87	115	0.834	116	0.877	126	0.867	127	0.86
155	102	0.856	116	0.874	115	0.839	117	0.881	127	0.871	128	0.864
160	103	0.86	116	0.878	116	0.844	117	0.885	127	0.875	129	0.869
165	103	0.864	117	0.882	117	0.849	118	0.889	128	0.879	129	0.873
170	104	0.868	117	0.885	117	0.853	118	0.892	128	0.883	130	0.876

TABLE 10.14 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

10-T14-13

SPAN	TRUCK # 13 Wt = 119.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 137.4 kips		TRUCK # 16 Wt = 132.4 kips		TRUCK # 17 Wt = 145.4 kips		TRUCK # 18 Wt = 148 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
175	104	0.872	118	0.889	118	0.858	118	0.895	129	0.886	130	0.88
180	105	0.876	118	0.892	118	0.862	119	0.898	129	0.889	131	0.883
185	105	0.879	118	0.895	119	0.865	119	0.901	130	0.892	131	0.886
190	105	0.882	119	0.898	119	0.869	120	0.903	130	0.895	132	0.889
195	106	0.885	119	0.9	120	0.872	120	0.906	131	0.898	132	0.892
200	106	0.888	120	0.903	120	0.875	120	0.908	131	0.9	132	0.895
205	106	0.891	120	0.905	121	0.878	121	0.91	131	0.903	133	0.897
210	107	0.893	120	0.907	121	0.881	121	0.912	132	0.905	133	0.9
215	107	0.896	120	0.909	121	0.884	121	0.914	132	0.907	134	0.902
220	107	0.898	121	0.912	122	0.887	121	0.916	132	0.909	134	0.904
225	108	0.901	121	0.913	122	0.889	122	0.918	133	0.911	134	0.907
230	108	0.903	121	0.915	123	0.892	122	0.92	133	0.913	134	0.909
235	108	0.905	121	0.917	123	0.894	122	0.922	133	0.915	135	0.911
240	108	0.907	122	0.919	123	0.896	122	0.923	133	0.917	135	0.912
245	108	0.909	122	0.921	123	0.898	122	0.925	134	0.919	135	0.914
250	109	0.91	122	0.922	124	0.9	123	0.926	134	0.92	136	0.916
255	109	0.912	122	0.924	124	0.902	123	0.928	134	0.922	136	0.918
260	109	0.914	122	0.925	124	0.904	123	0.929	134	0.923	136	0.919
265	109	0.916	123	0.927	124	0.906	123	0.931	134	0.925	136	0.921
270	109	0.917	123	0.928	125	0.908	123	0.932	135	0.926	136	0.922
275	110	0.919	123	0.929	125	0.909	124	0.933	135	0.928	137	0.924
280	110	0.92	123	0.93	125	0.911	124	0.934	135	0.929	137	0.925
285	110	0.921	123	0.932	125	0.913	124	0.936	135	0.93	137	0.926
290	110	0.923	124	0.933	126	0.914	124	0.937	135	0.931	137	0.927
295	110	0.924	124	0.934	126	0.916	124	0.938	136	0.932	137	0.929
300	110	0.925	124	0.935	126	0.917	124	0.939	136	0.934	138	0.93

TABLE 10.14 (Continued)
Michigan Legal 2-Unit Truck Normal Loading - Simple Span Reactions

10-T14-14

10-T15-1

SPAN	TRUCK # 19		TRUCK # 20		TRUCK # 21		TRUCK # 22		TRUCK # 23		TRUCK # 24		TRUCK # 25	
	Wt = 111.4 kips		Wt = 87.4 kips		Wt = 145.4 kips		Wt = 155.4 kips		Wt = 148 kips		Wt = 116 kips		Wt = 158 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
5	16.9	0.152	18	0.206	16.9	0.116	16.9	0.109	18	0.122	18	0.155	18	0.114
6	18.4	0.165	18	0.206	18.4	0.127	18.4	0.119	18.4	0.124	18	0.155	18.4	0.117
7	19.5	0.175	18	0.206	19.5	0.134	19.5	0.126	19.5	0.132	18.6	0.16	19.5	0.123
8	20.3	0.182	18	0.206	21.9	0.151	21.9	0.141	21.9	0.148	19.5	0.168	21.9	0.139
9	20.9	0.188	18	0.206	23.8	0.164	23.8	0.153	23.8	0.161	20.2	0.174	23.8	0.151
10	21.5	0.193	19.8	0.227	25.4	0.174	25.4	0.163	25.4	0.171	20.8	0.179	25.4	0.16
11	21.9	0.196	21.3	0.243	26.6	0.183	27.2	0.175	26.6	0.18	21.3	0.183	27.2	0.172
12	22.2	0.199	22.5	0.257	27.6	0.19	29.3	0.188	27.6	0.187	22.5	0.194	29.3	0.185
13	23.2	0.208	23.5	0.269	28.5	0.196	31	0.2	29.5	0.199	23.5	0.203	31	0.196
14	24.7	0.222	24.4	0.28	29.3	0.201	32.5	0.209	31.1	0.21	24.4	0.211	32.5	0.206
15	26	0.233	25.2	0.288	29.9	0.206	33.8	0.218	32.5	0.22	25.2	0.217	33.8	0.214
16	27.1	0.243	25.9	0.296	30.5	0.21	34.9	0.225	34.1	0.231	26.1	0.225	34.9	0.221
17	28.1	0.252	26.5	0.303	31.7	0.218	35.9	0.231	35.9	0.243	27.2	0.234	35.9	0.228
18	29	0.26	27	0.309	32.9	0.226	36.8	0.237	37.6	0.254	28.1	0.242	36.8	0.233
19	29.8	0.267	28.4	0.325	33.9	0.233	37.6	0.242	39	0.264	28.9	0.25	38.3	0.243
20	30.5	0.274	29.7	0.34	35.1	0.241	38.8	0.25	40.3	0.272	29.7	0.256	39.7	0.251
21	31.1	0.279	30.9	0.353	36.5	0.251	40.3	0.259	41.5	0.28	30.9	0.266	41.2	0.261
22	32	0.287	31.9	0.365	37.8	0.26	41.6	0.268	42.8	0.29	31.9	0.275	42.8	0.271
23	33.1	0.297	32.9	0.376	39	0.268	42.9	0.276	44.4	0.3	32.9	0.283	44.4	0.281
24	34.1	0.306	33.8	0.386	40.1	0.276	44	0.283	45.8	0.309	33.8	0.291	45.8	0.29
25	35	0.314	34.6	0.395	41.1	0.283	45	0.29	47.1	0.318	34.7	0.299	47.1	0.298
26	36.3	0.326	35.3	0.404	42	0.289	46	0.296	48.8	0.329	35.8	0.308	48.3	0.305
27	37.6	0.338	36	0.412	42.9	0.295	46.9	0.302	50.3	0.34	36.7	0.317	49.4	0.312
28	38.8	0.348	37.3	0.427	43.6	0.3	47.7	0.307	51.8	0.35	37.6	0.325	50.4	0.319
29	39.8	0.358	38.5	0.44	44.6	0.307	48.8	0.314	53.3	0.36	38.5	0.332	51.3	0.325

TABLE 10.15
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Reactions

10-T15-2

SPAN	TRUCK # 19 Wt = 111.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 145.4 kips		TRUCK # 22 Wt = 155.4 kips		TRUCK # 23 Wt = 148 kips		TRUCK # 24 Wt = 116 kips		TRUCK # 25 Wt = 158 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
30	40.8	0.367	39.6	0.453	45.7	0.314	50.1	0.322	55	0.372	39.6	0.341	52.8	0.334
31	41.8	0.375	40.6	0.465	46.8	0.322	51.3	0.33	56.6	0.383	40.6	0.35	54.2	0.343
32	42.7	0.383	41.6	0.476	47.7	0.328	52.5	0.338	58.1	0.393	41.6	0.359	55.5	0.351
33	43.5	0.39	42.5	0.487	49	0.337	53.5	0.345	59.5	0.402	42.5	0.367	56.7	0.359
34	44.3	0.397	43.4	0.497	50.3	0.346	54.6	0.351	60.8	0.411	43.5	0.375	57.9	0.366
35	45.4	0.407	44.2	0.506	51.4	0.354	55.5	0.357	62	0.419	44.6	0.384	59	0.373
36	46.4	0.417	45	0.515	52.7	0.363	56.4	0.363	63.2	0.427	45.6	0.393	60	0.38
37	47.4	0.426	46.1	0.528	54.1	0.372	57.3	0.369	64.3	0.434	46.5	0.401	61	0.386
38	48.5	0.436	47.2	0.54	55.4	0.381	58.3	0.375	65.5	0.443	47.4	0.408	62.1	0.393
39	49.7	0.446	48.3	0.552	56.7	0.39	59.3	0.382	66.8	0.452	48.5	0.418	63.2	0.4
40	50.9	0.457	49.2	0.563	57.9	0.398	60.4	0.389	68.1	0.46	49.5	0.427	64.5	0.408
41	52	0.467	50.2	0.574	59	0.406	61.4	0.395	69.3	0.468	50.5	0.435	65.7	0.416
42	53	0.476	51.1	0.584	60	0.413	62.6	0.403	70.6	0.477	51.4	0.443	66.9	0.423
43	54	0.485	51.9	0.594	61.1	0.42	63.8	0.411	72	0.486	52.4	0.452	68	0.43
44	55	0.494	52.7	0.603	62	0.427	65	0.418	73.3	0.495	53.5	0.461	69	0.437
45	55.9	0.502	53.5	0.612	63.1	0.434	66.1	0.425	74.5	0.504	54.4	0.469	70	0.443
46	56.8	0.51	54.2	0.62	64.3	0.442	67.1	0.432	75.7	0.512	55.4	0.478	71	0.449
47	57.8	0.519	54.9	0.628	65.4	0.45	68.1	0.438	76.9	0.52	56.3	0.485	71.9	0.455
48	58.9	0.529	55.6	0.636	66.5	0.457	69.1	0.444	78	0.527	57.2	0.493	72.8	0.461
49	60	0.538	56.2	0.644	67.8	0.466	70	0.45	79.1	0.534	58	0.5	73.7	0.467
50	61	0.548	56.9	0.651	69	0.475	70.9	0.456	80.1	0.541	59.2	0.51	74.7	0.473
51	62	0.556	57.5	0.658	70.2	0.483	71.7	0.461	81.1	0.548	60.3	0.52	75.6	0.479
52	62.9	0.565	58	0.664	71.4	0.491	72.5	0.467	82.3	0.556	61.3	0.529	76.5	0.484
53	63.8	0.573	58.6	0.671	72.5	0.499	73.3	0.472	83.6	0.565	62.4	0.538	77.3	0.49
54	64.7	0.581	59.1	0.677	73.5	0.506	74	0.477	84.8	0.573	63.4	0.546	78.2	0.495

TABLE 10.15 (Continued)
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Reactions

10-T15-3

SPAN	TRUCK # 19 Wt = 111.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 145.4 kips		TRUCK # 22 Wt = 155.4 kips		TRUCK # 23 Wt = 148 kips		TRUCK # 24 Wt = 116 kips		TRUCK # 25 Wt = 158 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
55	65.6	0.589	59.6	0.683	74.6	0.513	74.8	0.481	85.9	0.581	64.3	0.555	79	0.5
56	66.4	0.596	60.1	0.688	75.6	0.52	75.5	0.486	87	0.588	65.3	0.563	79.7	0.505
57	67.2	0.603	60.6	0.694	76.5	0.526	76.1	0.49	88.1	0.595	66.1	0.57	80.5	0.509
58	67.9	0.61	61.1	0.699	77.7	0.534	76.8	0.494	89.1	0.602	67	0.578	81.2	0.514
59	68.7	0.617	61.5	0.704	78.9	0.542	77.4	0.498	90.1	0.609	67.8	0.585	81.9	0.518
60	69.4	0.623	62	0.709	80	0.55	78.4	0.504	91.1	0.616	68.6	0.592	82.6	0.523
61	70.1	0.629	62.4	0.714	81	0.557	79.4	0.511	92	0.622	69.4	0.598	83.2	0.527
62	70.7	0.635	62.8	0.718	82.1	0.565	80.4	0.517	92.9	0.628	70.2	0.605	84.1	0.532
63	71.4	0.641	63.2	0.723	83.1	0.571	81.3	0.523	93.8	0.634	70.9	0.611	85	0.538
64	72	0.647	63.6	0.727	84.1	0.578	82.2	0.529	94.7	0.64	71.6	0.617	85.9	0.544
65	72.6	0.652	63.9	0.731	85	0.585	83.1	0.535	95.5	0.645	72.3	0.623	86.7	0.549
66	73.2	0.657	64.3	0.735	85.9	0.591	84	0.54	96.3	0.651	72.9	0.629	87.5	0.554
67	73.8	0.662	64.6	0.739	86.8	0.597	84.8	0.546	97	0.656	73.6	0.634	88.3	0.559
68	74.3	0.667	65	0.743	87.7	0.603	85.6	0.551	97.8	0.661	74.2	0.64	89.1	0.564
69	74.9	0.672	65.3	0.747	88.5	0.609	86.4	0.556	98.5	0.666	74.8	0.645	89.8	0.568
70	75.4	0.677	65.6	0.751	89.3	0.614	87.2	0.561	99.2	0.671	75.4	0.65	90.5	0.573
71	75.9	0.681	65.9	0.754	90.1	0.62	87.9	0.566	99.9	0.675	76	0.655	91.5	0.579
72	76.4	0.686	66.2	0.757	90.9	0.625	88.6	0.57	101	0.68	76.5	0.66	92.4	0.585
73	76.9	0.69	66.5	0.761	91.6	0.63	89.3	0.575	101	0.684	77.1	0.664	93.3	0.59
74	77.3	0.694	66.8	0.764	92.3	0.635	90.2	0.581	102	0.688	77.6	0.669	94.2	0.596
75	77.8	0.698	67	0.767	93	0.64	91.1	0.586	102	0.692	78.1	0.673	95	0.601
76	78.2	0.702	67.3	0.77	93.7	0.645	91.9	0.592	103	0.697	78.6	0.678	95.8	0.607
77	78.7	0.706	67.6	0.773	94.4	0.649	92.7	0.597	104	0.7	79.1	0.682	96.6	0.612
78	79.1	0.71	67.8	0.776	95.1	0.654	93.5	0.602	104	0.704	79.6	0.686	97.4	0.617
79	79.5	0.714	68.1	0.779	95.7	0.658	94.3	0.607	105	0.708	80	0.69	98.2	0.622

TABLE 10.15 (Continued)
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Reactions

10-T15-4

SPAN	TRUCK # 19 Wt = 111.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 145.4 kips		TRUCK # 22 Wt = 155.4 kips		TRUCK # 23 Wt = 148 kips		TRUCK # 24 Wt = 116 kips		TRUCK # 25 Wt = 158 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
80	79.9	0.717	68.3	0.782	96.3	0.663	95.1	0.612	105	0.712	80.5	0.694	98.9	0.626
81	80.3	0.721	68.6	0.784	96.9	0.667	95.8	0.617	106	0.715	80.9	0.698	99.7	0.631
82	80.7	0.724	68.8	0.787	97.5	0.671	96.6	0.621	106	0.719	81.3	0.701	100	0.635
83	81	0.727	69	0.79	98.1	0.675	97.3	0.626	107	0.722	81.8	0.705	101	0.64
84	81.4	0.731	69.2	0.792	98.7	0.679	98	0.63	107	0.725	82.2	0.708	102	0.644
85	81.7	0.734	69.4	0.795	99.2	0.682	98.6	0.635	108	0.729	82.6	0.712	102	0.648
86	82.1	0.737	69.7	0.797	99.7	0.686	99.3	0.639	108	0.732	83	0.715	103	0.652
87	82.4	0.74	69.9	0.799	100	0.69	99.9	0.643	109	0.735	83.3	0.718	104	0.656
88	82.8	0.743	70.1	0.802	101	0.693	101	0.647	109	0.738	83.7	0.722	104	0.66
89	83.1	0.746	70.2	0.804	101	0.697	101	0.651	110	0.741	84.1	0.725	105	0.664
90	83.4	0.749	70.4	0.806	102	0.7	102	0.655	110	0.744	84.4	0.728	106	0.668
91	83.7	0.751	70.6	0.808	102	0.703	102	0.659	110	0.747	84.8	0.731	106	0.671
92	84	0.754	70.8	0.81	103	0.707	103	0.663	111	0.749	85.1	0.734	107	0.675
93	84.3	0.757	71	0.812	103	0.71	104	0.666	111	0.752	85.4	0.737	107	0.679
94	84.6	0.759	71.2	0.814	104	0.713	104	0.67	112	0.755	85.8	0.739	108	0.682
95	84.9	0.762	71.3	0.816	104	0.716	105	0.673	112	0.757	86.1	0.742	108	0.685
96	85.1	0.764	71.5	0.818	105	0.719	105	0.677	112	0.76	86.4	0.745	109	0.689
97	85.4	0.767	71.7	0.82	105	0.722	106	0.68	113	0.762	86.7	0.747	109	0.692
98	85.7	0.769	71.8	0.822	105	0.725	106	0.683	113	0.765	87	0.75	110	0.695
99	85.9	0.771	72	0.824	106	0.727	107	0.686	114	0.767	87.3	0.753	110	0.698
100	86.2	0.774	72.1	0.825	106	0.73	107	0.69	114	0.769	87.6	0.755	111	0.701
101	86.4	0.776	72.3	0.827	107	0.733	108	0.693	114	0.772	87.9	0.757	111	0.704
102	86.7	0.778	72.4	0.829	107	0.735	108	0.696	115	0.774	88.1	0.76	112	0.707
103	86.9	0.78	72.6	0.83	107	0.738	109	0.699	115	0.776	88.4	0.762	112	0.71
104	87.2	0.782	72.7	0.832	108	0.74	109	0.702	115	0.778	88.7	0.764	113	0.713

TABLE 10.15 (Continued)
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Reactions

10-T15-5

SPAN	TRUCK # 19 Wt = 111.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 145.4 kips		TRUCK # 22 Wt = 155.4 kips		TRUCK # 23 Wt = 148 kips		TRUCK # 24 Wt = 116 kips		TRUCK # 25 Wt = 158 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
105	87.4	0.785	72.9	0.834	108	0.743	109	0.704	115	0.78	88.9	0.767	113	0.715
106	87.6	0.787	73	0.835	108	0.745	110	0.707	116	0.782	89.2	0.769	113	0.718
107	87.8	0.789	73.1	0.837	109	0.748	110	0.71	116	0.784	89.4	0.771	114	0.721
108	88.1	0.791	73.3	0.838	109	0.75	111	0.713	116	0.786	89.7	0.773	114	0.723
109	88.3	0.792	73.4	0.84	109	0.752	111	0.715	117	0.788	89.9	0.775	115	0.726
110	88.5	0.794	73.5	0.841	110	0.755	112	0.718	117	0.79	90.2	0.777	115	0.728
111	88.7	0.796	73.6	0.843	110	0.757	112	0.72	117	0.792	90.4	0.779	115	0.731
112	88.9	0.798	73.8	0.844	110	0.759	112	0.723	118	0.794	90.6	0.781	116	0.733
113	89.1	0.8	73.9	0.845	111	0.761	113	0.725	118	0.796	90.8	0.783	116	0.735
114	89.3	0.802	74	0.847	111	0.763	113	0.728	118	0.798	91.1	0.785	117	0.738
115	89.5	0.803	74.1	0.848	111	0.765	113	0.73	118	0.799	91.3	0.787	117	0.74
116	89.7	0.805	74.2	0.849	112	0.767	114	0.732	119	0.801	91.5	0.789	117	0.742
117	89.9	0.807	74.4	0.851	112	0.769	114	0.735	119	0.803	91.7	0.791	118	0.744
118	90	0.808	74.5	0.852	112	0.771	115	0.737	119	0.805	91.9	0.792	118	0.747
119	90.2	0.81	74.6	0.853	112	0.773	115	0.739	119	0.806	92.1	0.794	118	0.749
120	90.4	0.811	74.7	0.855	113	0.775	115	0.741	120	0.808	92.3	0.796	119	0.751
121	90.6	0.813	74.8	0.856	113	0.777	116	0.743	120	0.809	92.5	0.798	119	0.753
122	90.7	0.815	74.9	0.857	113	0.779	116	0.746	120	0.811	92.7	0.799	119	0.755
123	90.9	0.816	75	0.858	113	0.781	116	0.748	120	0.813	92.9	0.801	120	0.757
124	91.1	0.818	75.1	0.859	114	0.782	116	0.75	120	0.814	93.1	0.802	120	0.759
125	91.2	0.819	75.2	0.86	114	0.784	117	0.752	121	0.816	93.3	0.804	120	0.761
126	91.4	0.82	75.3	0.861	114	0.786	117	0.754	121	0.817	93.4	0.806	121	0.763
127	91.6	0.822	75.4	0.863	114	0.787	117	0.756	121	0.818	93.6	0.807	121	0.765
128	91.7	0.823	75.5	0.864	115	0.789	118	0.758	121	0.82	93.8	0.809	121	0.766
129	91.9	0.825	75.6	0.865	115	0.791	118	0.759	122	0.821	94	0.81	121	0.768

TABLE 10.15 (Continued)
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Reactions

10-T15-6

SPAN	TRUCK # 19 Wt = 111.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 145.4 kips		TRUCK # 22 Wt = 155.4 kips		TRUCK # 23 Wt = 148 kips		TRUCK # 24 Wt = 116 kips		TRUCK # 25 Wt = 158 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
130	92	0.826	75.7	0.866	115	0.792	118	0.761	122	0.823	94.1	0.812	122	0.77
131	92.2	0.827	75.7	0.867	115	0.794	119	0.763	122	0.824	94.3	0.813	122	0.772
132	92.3	0.829	75.8	0.868	116	0.795	119	0.765	122	0.825	94.5	0.814	122	0.774
133	92.4	0.83	75.9	0.869	116	0.797	119	0.767	122	0.827	94.6	0.816	122	0.775
134	92.6	0.831	76	0.87	116	0.799	119	0.768	123	0.828	94.8	0.817	123	0.777
135	92.7	0.832	76.1	0.871	116	0.8	120	0.77	123	0.829	94.9	0.819	123	0.779
136	92.9	0.834	76.2	0.872	117	0.801	120	0.772	123	0.83	95.1	0.82	123	0.78
137	93	0.835	76.3	0.873	117	0.803	120	0.773	123	0.832	95.3	0.821	124	0.782
138	93.1	0.836	76.3	0.873	117	0.804	120	0.775	123	0.833	95.4	0.823	124	0.783
139	93.3	0.837	76.4	0.874	117	0.806	121	0.777	123	0.834	95.6	0.824	124	0.785
140	93.4	0.838	76.5	0.875	117	0.807	121	0.778	124	0.835	95.7	0.825	124	0.786
141	93.5	0.84	76.6	0.876	118	0.809	121	0.78	124	0.836	95.8	0.826	124	0.788
142	93.6	0.841	76.7	0.877	118	0.81	121	0.781	124	0.838	96	0.828	125	0.789
143	93.8	0.842	76.7	0.878	118	0.811	122	0.783	124	0.839	96.1	0.829	125	0.791
144	93.9	0.843	76.8	0.879	118	0.813	122	0.784	124	0.84	96.3	0.83	125	0.792
145	94	0.844	76.9	0.88	118	0.814	122	0.786	124	0.841	96.4	0.831	125	0.794
146	94.1	0.845	76.9	0.88	119	0.815	122	0.787	125	0.842	96.5	0.832	126	0.795
147	94.3	0.846	77	0.881	119	0.816	123	0.789	125	0.843	96.7	0.833	126	0.797
148	94.4	0.847	77.1	0.882	119	0.818	123	0.79	125	0.844	96.8	0.835	126	0.798
149	94.5	0.848	77.2	0.883	119	0.819	123	0.792	125	0.845	96.9	0.836	126	0.799
150	94.6	0.849	77.2	0.884	119	0.82	123	0.793	125	0.846	97.1	0.837	127	0.801
155	95.1	0.854	77.6	0.887	120	0.826	124	0.8	126	0.851	97.7	0.842	128	0.807
160	95.6	0.859	77.9	0.891	121	0.831	125	0.806	127	0.856	98.2	0.847	128	0.813
165	96.1	0.863	78.1	0.894	122	0.836	126	0.812	127	0.86	98.8	0.852	129	0.819
170	96.6	0.867	78.4	0.897	122	0.841	127	0.817	128	0.864	99.3	0.856	130	0.824

TABLE 10.15 (Continued)
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Reactions

10-T15-7

SPAN	TRUCK # 19 Wt = 111.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 145.4 kips		TRUCK # 22 Wt = 155.4 kips		TRUCK # 23 Wt = 148 kips		TRUCK # 24 Wt = 116 kips		TRUCK # 25 Wt = 158 kips	
	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt
175	97	0.871	78.7	0.9	123	0.846	128	0.823	128	0.868	99.8	0.86	131	0.829
180	97.4	0.874	78.9	0.903	124	0.85	129	0.828	129	0.872	100	0.864	132	0.834
185	97.8	0.878	79.1	0.906	124	0.854	129	0.832	130	0.875	101	0.868	132	0.838
190	98.1	0.881	79.4	0.908	125	0.858	130	0.837	130	0.879	101	0.871	133	0.843
195	98.5	0.884	79.6	0.91	125	0.862	131	0.841	130	0.882	101	0.874	134	0.847
200	98.8	0.887	79.8	0.913	126	0.865	131	0.845	131	0.885	102	0.878	134	0.851
205	99.1	0.89	80	0.915	126	0.868	132	0.849	131	0.888	102	0.881	135	0.854
210	99.4	0.892	80.1	0.917	127	0.871	132	0.852	132	0.89	102	0.883	136	0.858
215	99.7	0.895	80.3	0.919	127	0.874	133	0.856	132	0.893	103	0.886	136	0.861
220	99.9	0.897	80.5	0.921	128	0.877	133	0.859	132	0.895	103	0.889	137	0.864
225	100	0.899	80.6	0.922	128	0.88	134	0.862	133	0.898	103	0.891	137	0.867
230	100	0.902	80.8	0.924	128	0.883	134	0.865	133	0.9	104	0.894	137	0.87
235	101	0.904	80.9	0.926	129	0.885	135	0.868	133	0.902	104	0.896	138	0.873
240	101	0.906	81	0.927	129	0.888	135	0.871	134	0.904	104	0.898	138	0.875
245	101	0.908	81.2	0.929	129	0.89	136	0.873	134	0.906	104	0.9	139	0.878
250	101	0.91	81.3	0.93	130	0.892	136	0.876	134	0.908	105	0.902	139	0.88
255	102	0.911	81.4	0.932	130	0.894	136	0.878	135	0.91	105	0.904	139	0.883
260	102	0.913	81.5	0.933	130	0.896	137	0.881	135	0.911	105	0.906	140	0.885
265	102	0.915	81.6	0.934	131	0.898	137	0.883	135	0.913	105	0.908	140	0.887
270	102	0.916	81.7	0.935	131	0.9	138	0.885	135	0.915	105	0.909	141	0.889
275	102	0.918	81.8	0.937	131	0.902	138	0.887	136	0.916	106	0.911	141	0.891
280	102	0.919	81.9	0.938	131	0.904	138	0.889	136	0.918	106	0.913	141	0.893
285	103	0.921	82	0.939	132	0.905	138	0.891	136	0.919	106	0.914	141	0.895
290	103	0.922	82.1	0.94	132	0.907	139	0.893	136	0.921	106	0.916	142	0.897
295	103	0.923	82.2	0.941	132	0.909	139	0.895	136	0.922	106	0.917	142	0.899
300	103	0.925	82.3	0.942	132	0.91	139	0.897	137	0.923	107	0.918	142	0.9

TABLE 10.15 (Continued)
Michigan Legal 3-Unit Truck Normal Loading - Simple Span Reactions

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 47.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 84 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
5	18	0.539	20.8	0.439	16.9	0.311	16.9	0.251	19.2	0.229
6	18	0.539	22.7	0.478	18.4	0.339	18.4	0.273	21.3	0.254
7	18	0.539	24	0.506	19.5	0.359	19.5	0.289	22.9	0.272
8	18	0.539	25	0.527	21.9	0.403	21.9	0.326	24	0.286
9	18	0.539	25.8	0.544	23.8	0.438	23.8	0.354	24.9	0.296
10	19.5	0.585	26.4	0.557	25.4	0.466	25.4	0.376	25.6	0.305
11	20.8	0.623	26.9	0.568	26.6	0.489	27.2	0.403	26.2	0.312
12	21.9	0.654	27.3	0.577	27.6	0.508	29.3	0.434	26.7	0.318
13	22.7	0.681	28.3	0.597	28.5	0.524	31	0.46	27.1	0.322
14	23.5	0.704	29.7	0.626	29.3	0.538	32.5	0.482	27.9	0.332
15	24.2	0.723	30.8	0.651	29.9	0.55	33.8	0.502	29.5	0.351
16	24.7	0.741	31.9	0.672	30.5	0.56	34.9	0.518	30.9	0.368
17	25.2	0.756	32.8	0.692	31.9	0.586	35.9	0.533	32.1	0.382
18	25.7	0.77	33.6	0.709	33.1	0.609	36.8	0.547	33.2	0.396
19	26.1	0.782	34.3	0.724	34.2	0.63	37.6	0.558	34.2	0.407
20	26.5	0.793	35	0.738	35.3	0.648	38.7	0.575	35.1	0.418
21	26.8	0.802	35.6	0.75	36.2	0.665	40.1	0.595	35.9	0.427
22	27.1	0.811	36.1	0.762	37	0.68	41.3	0.613	36.6	0.436
23	27.4	0.82	36.6	0.772	37.8	0.694	42.5	0.63	37.3	0.444
24	27.6	0.827	37	0.782	38.4	0.707	43.5	0.646	37.9	0.451
25	27.9	0.834	37.5	0.79	39.1	0.719	44.5	0.66	39.1	0.466
26	28.1	0.84	37.8	0.798	39.7	0.729	45.4	0.673	40.2	0.479
27	28.3	0.846	38.2	0.806	40.2	0.739	46.2	0.685	41.3	0.491
28	28.5	0.852	38.5	0.813	40.7	0.749	46.9	0.696	42.2	0.503
29	28.6	0.857	38.8	0.819	41.2	0.757	47.6	0.707	43.7	0.52

TABLE 10.16

Michigan Legal 1-Unit Truck Designated Loading - Simple Span Reactions

10-T16-1

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 47.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 84 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
30	28.8	0.862	39.1	0.825	41.6	0.765	48.3	0.717	45	0.536
31	28.9	0.866	39.4	0.831	42	0.773	48.9	0.726	46.3	0.551
32	29.1	0.87	39.6	0.836	42.4	0.78	49.5	0.734	47.4	0.565
33	29.2	0.874	39.9	0.841	42.8	0.787	50	0.742	48.5	0.578
34	29.3	0.878	40.1	0.846	43.1	0.793	50.5	0.75	49.6	0.59
35	29.4	0.881	40.3	0.85	43.5	0.799	51	0.757	50.6	0.602
36	29.6	0.885	40.5	0.854	43.8	0.805	51.5	0.764	51.5	0.613
37	29.7	0.888	40.7	0.858	44.1	0.81	51.9	0.77	52.4	0.624
38	29.8	0.891	40.9	0.862	44.3	0.815	52.3	0.776	53.2	0.634
39	29.8	0.894	41	0.866	44.6	0.82	52.7	0.782	54	0.643
40	29.9	0.896	41.2	0.869	44.8	0.824	53.1	0.787	54.8	0.652
41	30	0.899	41.3	0.872	45.1	0.828	53.4	0.793	55.5	0.66
42	30.1	0.901	41.5	0.875	45.3	0.832	53.8	0.798	56.1	0.668
43	30.2	0.904	41.6	0.878	45.5	0.836	54.1	0.802	56.8	0.676
44	30.3	0.906	41.8	0.881	45.7	0.84	54.4	0.807	57.4	0.683
45	30.3	0.908	41.9	0.884	45.9	0.844	54.7	0.811	58	0.691
46	30.4	0.91	42	0.886	46.1	0.847	54.9	0.815	58.6	0.697
47	30.5	0.912	42.1	0.889	46.3	0.85	55.2	0.819	59.1	0.704
48	30.5	0.914	42.2	0.891	46.4	0.853	55.5	0.823	59.6	0.71
49	30.6	0.915	42.3	0.893	46.6	0.856	55.7	0.826	60.1	0.716
50	30.6	0.917	42.4	0.895	46.7	0.859	55.9	0.83	60.6	0.721
51	30.7	0.919	42.5	0.897	46.9	0.862	56.2	0.833	61.1	0.727
52	30.7	0.92	42.6	0.899	47	0.865	56.4	0.836	61.5	0.732
53	30.8	0.922	42.7	0.901	47.2	0.867	56.6	0.84	61.9	0.737
54	30.8	0.923	42.8	0.903	47.3	0.87	56.8	0.843	62.3	0.742

TABLE 10.16 (Continued)
Michigan Legal 1-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 1 Wt = 33.4 kips		TRUCK # 2 Wt = 47.4 kips		TRUCK # 3 Wt = 54.4 kips		TRUCK # 4 Wt = 67.4 kips		TRUCK # 5 Wt = 84 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
55	30.9	0.925	42.9	0.905	47.4	0.872	57	0.845	62.7	0.747
56	30.9	0.926	43	0.906	47.6	0.874	57.2	0.848	63.1	0.751
57	31	0.927	43	0.908	47.7	0.877	57.3	0.851	63.5	0.756
58	31	0.929	43.1	0.91	47.8	0.879	57.5	0.853	63.8	0.76
59	31.1	0.93	43.2	0.911	47.9	0.881	57.7	0.856	64.2	0.764
60	31.1	0.931	43.3	0.913	48	0.883	57.8	0.858	64.5	0.768
61	31.1	0.932	43.3	0.914	48.1	0.885	58	0.861	64.8	0.772
62	31.2	0.933	43.4	0.915	48.2	0.887	58.2	0.863	65.1	0.775
63	31.2	0.934	43.5	0.917	48.3	0.888	58.3	0.865	65.4	0.779
64	31.2	0.935	43.5	0.918	48.4	0.89	58.4	0.867	65.7	0.782
65	31.3	0.936	43.6	0.919	48.5	0.892	58.6	0.869	66	0.786
66	31.3	0.937	43.6	0.921	48.6	0.893	58.7	0.871	66.3	0.789
67	31.3	0.938	43.7	0.922	48.7	0.895	58.8	0.873	66.5	0.792
68	31.4	0.939	43.7	0.923	48.8	0.897	59	0.875	66.8	0.795
69	31.4	0.94	43.8	0.924	48.9	0.898	59.1	0.877	67	0.798
70	31.4	0.941	43.9	0.925	48.9	0.899	59.2	0.879	67.3	0.801
71	31.4	0.942	43.9	0.926	49	0.901	59.3	0.88	67.5	0.804
72	31.5	0.942	43.9	0.927	49.1	0.902	59.4	0.882	67.8	0.807
73	31.5	0.943	44	0.928	49.2	0.904	59.5	0.884	68	0.809
74	31.5	0.944	44	0.929	49.2	0.905	59.7	0.885	68.2	0.812
75	31.6	0.945	44.1	0.93	49.3	0.906	59.8	0.887	68.4	0.814
76	31.6	0.945	44.1	0.931	49.4	0.907	59.9	0.888	68.6	0.817
77	31.6	0.946	44.2	0.932	49.4	0.909	60	0.89	68.8	0.819
78	31.6	0.947	44.2	0.933	49.5	0.91	60.1	0.891	69	0.821
79	31.6	0.948	44.3	0.934	49.6	0.911	60.1	0.892	69.2	0.824

TABLE 10.16 (Continued)
Michigan Legal 1-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 47.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 84 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
80	31.7	0.948	44.3	0.935	49.6	0.912	60.2	0.894	69.4	0.826
81	31.7	0.949	44.3	0.935	49.7	0.913	60.3	0.895	69.6	0.828
82	31.7	0.949	44.4	0.936	49.7	0.914	60.4	0.896	69.7	0.83
83	31.7	0.95	44.4	0.937	49.8	0.915	60.5	0.898	69.9	0.832
84	31.8	0.951	44.4	0.938	49.8	0.916	60.6	0.899	70.1	0.834
85	31.8	0.951	44.5	0.938	49.9	0.917	60.7	0.9	70.2	0.836
86	31.8	0.952	44.5	0.939	49.9	0.918	60.7	0.901	70.4	0.838
87	31.8	0.952	44.5	0.94	50	0.919	60.8	0.902	70.6	0.84
88	31.8	0.953	44.6	0.94	50	0.92	60.9	0.903	70.7	0.842
89	31.8	0.953	44.6	0.941	50.1	0.921	61	0.904	70.9	0.844
90	31.9	0.954	44.6	0.942	50.1	0.922	61	0.906	71	0.845
91	31.9	0.954	44.7	0.942	50.2	0.923	61.1	0.907	71.1	0.847
92	31.9	0.955	44.7	0.943	50.2	0.924	61.2	0.908	71.3	0.849
93	31.9	0.955	44.7	0.944	50.3	0.924	61.2	0.909	71.4	0.85
94	31.9	0.956	44.8	0.944	50.3	0.925	61.3	0.91	71.6	0.852
95	31.9	0.956	44.8	0.945	50.4	0.926	61.4	0.911	71.7	0.853
96	32	0.957	44.8	0.945	50.4	0.927	61.4	0.911	71.8	0.855
97	32	0.957	44.8	0.946	50.5	0.927	61.5	0.912	71.9	0.856
98	32	0.958	44.9	0.947	50.5	0.928	61.6	0.913	72.1	0.858
99	32	0.958	44.9	0.947	50.5	0.929	61.6	0.914	72.2	0.859
100	32	0.959	44.9	0.948	50.6	0.93	61.7	0.915	72.3	0.861
101	32	0.959	44.9	0.948	50.6	0.93	61.7	0.916	72.4	0.862
102	32	0.959	45	0.949	50.6	0.931	61.8	0.917	72.5	0.863
103	32.1	0.96	45	0.949	50.7	0.932	61.8	0.917	72.6	0.865
104	32.1	0.96	45	0.95	50.7	0.932	61.9	0.918	72.8	0.866

TABLE 10.16 (Continued)
Michigan Legal 1-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 1 Wt = 33.4 kips		TRUCK # 2 Wt = 47.4 kips		TRUCK # 3 Wt = 54.4 kips		TRUCK # 4 Wt = 67.4 kips		TRUCK # 5 Wt = 84 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
105	32.1	0.961	45	0.95	50.8	0.933	61.9	0.919	72.9	0.867
106	32.1	0.961	45.1	0.951	50.8	0.934	62	0.92	73	0.869
107	32.1	0.961	45.1	0.951	50.8	0.934	62	0.921	73.1	0.87
108	32.1	0.962	45.1	0.952	50.9	0.935	62.1	0.921	73.2	0.871
109	32.1	0.962	45.1	0.952	50.9	0.935	62.1	0.922	73.3	0.872
110	32.1	0.962	45.1	0.952	50.9	0.936	62.2	0.923	73.4	0.873
111	32.2	0.963	45.2	0.953	51	0.937	62.2	0.923	73.5	0.875
112	32.2	0.963	45.2	0.953	51	0.937	62.3	0.924	73.6	0.876
113	32.2	0.963	45.2	0.954	51	0.938	62.3	0.925	73.6	0.877
114	32.2	0.964	45.2	0.954	51	0.938	62.4	0.925	73.7	0.878
115	32.2	0.964	45.2	0.954	51.1	0.939	62.4	0.926	73.8	0.879
116	32.2	0.964	45.3	0.955	51.1	0.939	62.5	0.927	73.9	0.88
117	32.2	0.965	45.3	0.955	51.1	0.94	62.5	0.927	74	0.881
118	32.2	0.965	45.3	0.956	51.2	0.94	62.5	0.928	74.1	0.882
119	32.2	0.965	45.3	0.956	51.2	0.941	62.6	0.929	74.2	0.883
120	32.2	0.965	45.3	0.956	51.2	0.941	62.6	0.929	74.3	0.884
121	32.3	0.966	45.3	0.957	51.2	0.942	62.7	0.93	74.3	0.885
122	32.3	0.966	45.4	0.957	51.3	0.942	62.7	0.93	74.4	0.886
123	32.3	0.966	45.4	0.957	51.3	0.943	62.7	0.931	74.5	0.887
124	32.3	0.967	45.4	0.958	51.3	0.943	62.8	0.931	74.6	0.888
125	32.3	0.967	45.4	0.958	51.3	0.944	62.8	0.932	74.6	0.889
126	32.3	0.967	45.4	0.958	51.4	0.944	62.9	0.933	74.7	0.89
127	32.3	0.967	45.4	0.959	51.4	0.945	62.9	0.933	74.8	0.89
128	32.3	0.968	45.5	0.959	51.4	0.945	62.9	0.934	74.9	0.891
129	32.3	0.968	45.5	0.959	51.4	0.945	63	0.934	74.9	0.892

TABLE 10.16 (Continued)
Michigan Legal 1-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 1		TRUCK # 2		TRUCK # 3		TRUCK # 4		TRUCK # 5	
	Wt = 33.4 kips		Wt = 47.4 kips		Wt = 54.4 kips		Wt = 67.4 kips		Wt = 84 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
130	32.3	0.968	45.5	0.96	51.5	0.946	63	0.935	75	0.893
131	32.3	0.968	45.5	0.96	51.5	0.946	63	0.935	75.1	0.894
132	32.4	0.969	45.5	0.96	51.5	0.947	63.1	0.936	75.1	0.895
133	32.4	0.969	45.5	0.961	51.5	0.947	63.1	0.936	75.2	0.895
134	32.4	0.969	45.5	0.961	51.5	0.948	63.1	0.937	75.3	0.896
135	32.4	0.969	45.6	0.961	51.6	0.948	63.2	0.937	75.3	0.897
136	32.4	0.97	45.6	0.962	51.6	0.948	63.2	0.938	75.4	0.898
137	32.4	0.97	45.6	0.962	51.6	0.949	63.2	0.938	75.5	0.898
138	32.4	0.97	45.6	0.962	51.6	0.949	63.2	0.938	75.5	0.899
139	32.4	0.97	45.6	0.962	51.6	0.949	63.3	0.939	75.6	0.9
140	32.4	0.97	45.6	0.963	51.7	0.95	63.3	0.939	75.6	0.901
141	32.4	0.971	45.6	0.963	51.7	0.95	63.3	0.94	75.7	0.901
142	32.4	0.971	45.7	0.963	51.7	0.95	63.4	0.94	75.8	0.902
143	32.4	0.971	45.7	0.963	51.7	0.951	63.4	0.941	75.8	0.903
144	32.4	0.971	45.7	0.964	51.7	0.951	63.4	0.941	75.9	0.903
145	32.4	0.971	45.7	0.964	51.8	0.952	63.4	0.941	75.9	0.904
146	32.5	0.972	45.7	0.964	51.8	0.952	63.5	0.942	76	0.905
147	32.5	0.972	45.7	0.964	51.8	0.952	63.5	0.942	76	0.905
148	32.5	0.972	45.7	0.965	51.8	0.952	63.5	0.943	76.1	0.906
149	32.5	0.972	45.7	0.965	51.8	0.953	63.6	0.943	76.1	0.907
150	32.5	0.972	45.7	0.965	51.8	0.953	63.6	0.943	76.2	0.907
155	32.5	0.973	45.8	0.966	51.9	0.955	63.7	0.945	76.5	0.91
160	32.5	0.974	45.8	0.967	52	0.956	63.8	0.947	76.7	0.913
165	32.6	0.975	45.9	0.968	52.1	0.957	63.9	0.948	76.9	0.916
170	32.6	0.976	45.9	0.969	52.1	0.959	64	0.95	77.1	0.918

TABLE 10.16 (Continued)
Michigan Legal 1-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 1 Wt = 33.4 kips		TRUCK # 2 Wt = 47.4 kips		TRUCK # 3 Wt = 54.4 kips		TRUCK # 4 Wt = 67.4 kips		TRUCK # 5 Wt = 84 kips	
	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt
175	32.6	0.976	46	0.97	52.2	0.96	64.1	0.951	77.3	0.92
180	32.6	0.977	46	0.971	52.3	0.961	64.2	0.953	77.5	0.923
185	32.7	0.978	46.1	0.972	52.3	0.962	64.3	0.954	77.7	0.925
190	32.7	0.978	46.1	0.972	52.4	0.963	64.4	0.955	77.8	0.927
195	32.7	0.979	46.1	0.973	52.4	0.964	64.5	0.956	78	0.929
200	32.7	0.979	46.2	0.974	52.5	0.965	64.5	0.958	78.2	0.93
205	32.7	0.98	46.2	0.974	52.5	0.966	64.6	0.959	78.3	0.932
210	32.7	0.98	46.2	0.975	52.6	0.967	64.7	0.96	78.4	0.934
215	32.8	0.981	46.2	0.976	52.6	0.967	64.7	0.96	78.6	0.935
220	32.8	0.981	46.3	0.976	52.7	0.968	64.8	0.961	78.7	0.937
225	32.8	0.982	46.3	0.977	52.7	0.969	64.9	0.962	78.8	0.938
230	32.8	0.982	46.3	0.977	52.7	0.969	64.9	0.963	78.9	0.939
235	32.8	0.982	46.3	0.978	52.8	0.97	65	0.964	79	0.941
240	32.8	0.983	46.4	0.978	52.8	0.971	65	0.965	79.1	0.942
245	32.8	0.983	46.4	0.979	52.8	0.971	65.1	0.965	79.2	0.943
250	32.8	0.983	46.4	0.979	52.9	0.972	65.1	0.966	79.3	0.944
255	32.9	0.984	46.4	0.979	52.9	0.972	65.2	0.967	79.4	0.945
260	32.9	0.984	46.4	0.98	52.9	0.973	65.2	0.967	79.5	0.946
265	32.9	0.984	46.5	0.98	53	0.973	65.2	0.968	79.6	0.947
270	32.9	0.985	46.5	0.981	53	0.974	65.3	0.969	79.7	0.948
275	32.9	0.985	46.5	0.981	53	0.974	65.3	0.969	79.7	0.949
280	32.9	0.985	46.5	0.981	53	0.975	65.4	0.97	79.8	0.95
285	32.9	0.985	46.5	0.982	53.1	0.975	65.4	0.97	79.9	0.951
290	32.9	0.986	46.5	0.982	53.1	0.976	65.4	0.971	80	0.952
295	32.9	0.986	46.6	0.982	53.1	0.976	65.5	0.971	80	0.953
300	32.9	0.986	46.6	0.983	53.1	0.977	65.5	0.972	80.1	0.954

TABLE 10.16 (Continued)
Michigan Legal 1-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10	
	Wt = 101.4 kips		Wt = 119.4 kips		Wt = 91.4 kips		Wt = 51.4 kips		Wt = 65.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
5	20.8	0.205	20.8	0.174	20.8	0.228	18	0.35	20.8	0.318
6	22.7	0.224	22.7	0.19	22.7	0.248	18	0.35	22.7	0.347
7	24	0.237	24	0.201	24	0.263	18	0.35	24	0.367
8	25	0.247	25	0.209	25	0.274	18	0.35	25	0.382
9	25.8	0.254	25.8	0.216	25.8	0.282	18	0.35	25.8	0.394
10	26.4	0.26	26.4	0.221	26.4	0.289	19.8	0.385	26.4	0.404
11	26.9	0.265	26.9	0.225	26.9	0.294	21.3	0.414	26.9	0.412
12	27.3	0.27	27.3	0.229	27.3	0.299	22.5	0.438	27.3	0.418
13	28.3	0.279	28.3	0.237	28.4	0.311	23.5	0.458	28.4	0.434
14	29.7	0.292	29.7	0.248	29.9	0.327	24.4	0.475	29.9	0.458
15	30.8	0.304	30.8	0.258	31.3	0.342	25.2	0.49	31.3	0.478
16	31.9	0.314	31.9	0.267	32.4	0.355	25.9	0.503	32.4	0.496
17	32.8	0.323	32.8	0.275	33.5	0.366	26.5	0.515	33.5	0.512
18	33.6	0.331	33.6	0.281	34.4	0.376	27	0.525	34.4	0.526
19	34.3	0.339	34.3	0.287	35.2	0.385	28.3	0.55	35.2	0.538
20	35	0.345	35	0.293	36	0.393	29.4	0.573	36	0.55
21	35.6	0.351	35.6	0.298	36.6	0.401	30.5	0.593	36.6	0.56
22	36.1	0.356	36.1	0.302	37.5	0.411	31.4	0.612	37.6	0.575
23	37.5	0.37	37.5	0.314	38.6	0.423	32.3	0.629	38.8	0.593
24	38.8	0.382	38.8	0.325	39.6	0.434	33.1	0.644	39.9	0.61
25	39.9	0.394	39.9	0.334	40.6	0.444	33.8	0.658	40.9	0.626
26	41	0.404	41	0.343	41.9	0.459	34.5	0.671	41.9	0.64
27	42	0.414	42	0.352	43.2	0.473	35.1	0.684	42.7	0.653
28	42.9	0.423	42.9	0.36	44.4	0.486	35.7	0.695	43.5	0.666
29	43.8	0.432	43.8	0.367	45.5	0.497	36.3	0.705	44.3	0.677

TABLE 10.17

Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10	
	Wt = 101.4 kips		Wt = 119.4 kips		Wt = 91.4 kips		Wt = 51.4 kips		Wt = 65.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
30	44.6	0.44	44.6	0.374	46.5	0.509	36.8	0.715	45	0.688
31	45.4	0.447	45.4	0.38	47.4	0.519	37.2	0.724	45.7	0.698
32	46.6	0.46	46.6	0.391	48.3	0.529	37.7	0.733	46.3	0.708
33	47.8	0.472	47.8	0.401	49.2	0.538	38.1	0.741	46.9	0.716
34	48.9	0.483	48.9	0.41	50	0.547	38.5	0.749	47.4	0.725
35	50	0.493	50	0.419	50.7	0.555	38.9	0.756	47.9	0.733
36	51	0.503	51	0.427	51.4	0.562	39.2	0.763	48.4	0.74
37	51.9	0.512	51.9	0.435	52.1	0.57	39.5	0.769	48.9	0.747
38	52.8	0.521	52.8	0.443	52.7	0.577	39.8	0.775	49.3	0.754
39	53.7	0.53	53.7	0.45	53.3	0.583	40.1	0.781	49.7	0.76
40	54.5	0.538	54.5	0.456	53.9	0.589	40.4	0.786	50.1	0.766
41	55.3	0.545	55.7	0.467	54.4	0.595	40.7	0.792	50.5	0.772
42	56	0.552	56.9	0.476	54.9	0.601	40.9	0.797	50.8	0.777
43	56.7	0.559	58	0.485	55.6	0.609	41.2	0.801	51.2	0.782
44	57.4	0.566	59	0.494	56.4	0.618	41.4	0.806	51.5	0.787
45	58	0.572	60	0.503	57.2	0.626	41.6	0.81	51.8	0.792
46	58.6	0.578	61	0.511	58	0.634	41.9	0.814	52.1	0.797
47	59.2	0.584	61.9	0.518	58.7	0.642	42.1	0.818	52.4	0.801
48	59.8	0.589	62.8	0.526	59.4	0.649	42.3	0.822	52.6	0.805
49	60.3	0.595	63.6	0.533	60	0.657	42.4	0.826	52.9	0.809
50	61.1	0.603	64.4	0.539	60.6	0.663	42.6	0.829	53.2	0.813
51	61.9	0.611	65.2	0.546	61.2	0.67	42.8	0.833	53.4	0.817
52	62.7	0.618	65.9	0.552	61.8	0.676	43	0.836	53.6	0.82
53	63.4	0.625	66.6	0.558	62.4	0.683	43.1	0.839	53.9	0.823
54	64.1	0.632	67.3	0.564	62.9	0.688	43.3	0.842	54.1	0.827

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10	
	Wt = 101.4 kips		Wt = 119.4 kips		Wt = 91.4 kips		Wt = 51.4 kips		Wt = 65.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
55	64.8	0.639	68	0.57	63.4	0.694	43.4	0.845	54.3	0.83
56	65.4	0.645	68.6	0.575	63.9	0.7	43.6	0.847	54.5	0.833
57	66.1	0.652	69.3	0.58	64.4	0.705	43.7	0.85	54.7	0.836
58	66.7	0.658	69.9	0.585	64.9	0.71	43.8	0.853	54.8	0.839
59	67.3	0.663	70.4	0.59	65.3	0.715	44	0.855	55	0.841
60	67.8	0.669	71	0.595	65.8	0.72	44.1	0.858	55.2	0.844
61	68.4	0.674	71.5	0.599	66.2	0.724	44.2	0.86	55.4	0.847
62	68.9	0.68	72.2	0.605	66.6	0.729	44.3	0.862	55.5	0.849
63	69.4	0.685	73	0.611	67	0.733	44.4	0.864	55.7	0.851
64	69.9	0.69	73.7	0.617	67.4	0.737	44.5	0.867	55.8	0.854
65	70.4	0.694	74.4	0.623	67.7	0.741	44.6	0.869	56	0.856
66	70.9	0.699	75.1	0.629	68.1	0.745	44.7	0.871	56.1	0.858
67	71.3	0.704	75.8	0.635	68.4	0.749	44.8	0.873	56.3	0.86
68	71.8	0.708	76.4	0.64	68.8	0.753	44.9	0.874	56.4	0.862
69	72.2	0.712	77	0.645	69.1	0.756	45	0.876	56.5	0.864
70	72.6	0.716	77.6	0.65	69.4	0.76	45.1	0.878	56.7	0.866
71	73	0.72	78.2	0.655	69.7	0.763	45.2	0.88	56.8	0.868
72	73.4	0.724	78.8	0.66	70	0.766	45.3	0.881	56.9	0.87
73	73.8	0.728	79.3	0.665	70.3	0.77	45.4	0.883	57	0.872
74	74.2	0.732	79.9	0.669	70.6	0.773	45.5	0.885	57.1	0.874
75	74.5	0.735	80.4	0.674	70.9	0.776	45.5	0.886	57.2	0.875
76	74.9	0.739	80.9	0.678	71.2	0.779	45.6	0.888	57.3	0.877
77	75.2	0.742	81.4	0.682	71.4	0.782	45.7	0.889	57.5	0.879
78	75.6	0.745	81.9	0.686	71.7	0.784	45.8	0.891	57.6	0.88
79	75.9	0.749	82.4	0.69	71.9	0.787	45.8	0.892	57.7	0.882

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10	
	Wt = 101.4 kips		Wt = 119.4 kips		Wt = 91.4 kips		Wt = 51.4 kips		Wt = 65.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
80	76.2	0.752	82.9	0.694	72.2	0.79	45.9	0.893	57.7	0.883
81	76.5	0.755	83.3	0.698	72.4	0.792	46	0.895	57.8	0.885
82	76.8	0.758	83.7	0.701	72.6	0.795	46	0.896	57.9	0.886
83	77.1	0.761	84.2	0.705	72.9	0.797	46.1	0.897	58	0.887
84	77.4	0.764	84.6	0.709	73.1	0.8	46.2	0.898	58.1	0.889
85	77.7	0.766	85	0.712	73.3	0.802	46.2	0.9	58.2	0.89
86	78	0.769	85.4	0.715	73.5	0.804	46.3	0.901	58.3	0.891
87	78.2	0.772	85.8	0.719	73.7	0.807	46.4	0.902	58.4	0.892
88	78.5	0.774	86.2	0.722	73.9	0.809	46.4	0.903	58.4	0.894
89	78.8	0.777	86.5	0.725	74.1	0.811	46.5	0.904	58.5	0.895
90	79	0.779	86.9	0.728	74.3	0.813	46.5	0.905	58.6	0.896
91	79.3	0.782	87.3	0.731	74.5	0.815	46.6	0.906	58.7	0.897
92	79.5	0.784	87.6	0.734	74.7	0.817	46.6	0.907	58.7	0.898
93	79.7	0.786	88	0.737	74.9	0.819	46.7	0.908	58.8	0.899
94	80	0.789	88.3	0.74	75	0.821	46.7	0.909	58.9	0.9
95	80.2	0.791	88.6	0.742	75.2	0.823	46.8	0.91	59	0.902
96	80.4	0.793	88.9	0.745	75.4	0.825	46.8	0.911	59	0.903
97	80.6	0.795	89.3	0.748	75.5	0.827	46.9	0.912	59.1	0.904
98	80.8	0.797	89.6	0.75	75.7	0.828	46.9	0.913	59.2	0.905
99	81.1	0.799	89.9	0.753	75.9	0.83	47	0.914	59.2	0.906
100	81.3	0.801	90.2	0.755	76	0.832	47	0.915	59.3	0.906
101	81.5	0.803	90.5	0.758	76.2	0.833	47.1	0.915	59.3	0.907
102	81.7	0.805	90.7	0.76	76.3	0.835	47.1	0.916	59.4	0.908
103	81.8	0.807	91	0.762	76.5	0.837	47.1	0.917	59.5	0.909
104	82	0.809	91.3	0.765	76.6	0.838	47.2	0.918	59.5	0.91

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10	
	Wt = 101.4 kips		Wt = 119.4 kips		Wt = 91.4 kips		Wt = 51.4 kips		Wt = 65.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
105	82.2	0.811	91.6	0.767	76.8	0.84	47.2	0.919	59.6	0.911
106	82.4	0.813	91.8	0.769	76.9	0.841	47.3	0.919	59.6	0.912
107	82.6	0.814	92.1	0.771	77	0.843	47.3	0.92	59.7	0.913
108	82.7	0.816	92.3	0.773	77.2	0.844	47.3	0.921	59.7	0.913
109	82.9	0.818	92.6	0.775	77.3	0.846	47.4	0.922	59.8	0.914
110	83.1	0.819	92.8	0.777	77.4	0.847	47.4	0.922	59.8	0.915
111	83.3	0.821	93.1	0.779	77.5	0.848	47.4	0.923	59.9	0.916
112	83.4	0.823	93.3	0.781	77.7	0.85	47.5	0.924	59.9	0.916
113	83.6	0.824	93.5	0.783	77.8	0.851	47.5	0.924	60	0.917
114	83.7	0.826	93.8	0.785	77.9	0.852	47.5	0.925	60	0.918
115	83.9	0.827	94	0.787	78	0.854	47.6	0.926	60.1	0.919
116	84	0.829	94.2	0.789	78.1	0.855	47.6	0.926	60.1	0.919
117	84.2	0.83	94.4	0.791	78.3	0.856	47.6	0.927	60.2	0.92
118	84.3	0.832	94.6	0.793	78.4	0.857	47.7	0.928	60.2	0.921
119	84.5	0.833	94.8	0.794	78.5	0.859	47.7	0.928	60.3	0.921
120	84.6	0.835	95	0.796	78.6	0.86	47.7	0.929	60.3	0.922
121	84.8	0.836	95.2	0.798	78.7	0.861	47.8	0.929	60.3	0.923
122	84.9	0.837	95.4	0.799	78.8	0.862	47.8	0.93	60.4	0.923
123	85	0.839	95.6	0.801	78.9	0.863	47.8	0.931	60.4	0.924
124	85.2	0.84	95.8	0.803	79	0.864	47.9	0.931	60.5	0.925
125	85.3	0.841	96	0.804	79.1	0.865	47.9	0.932	60.5	0.925
126	85.4	0.842	96.2	0.806	79.2	0.866	47.9	0.932	60.5	0.926
127	85.5	0.844	96.4	0.807	79.3	0.868	47.9	0.933	60.6	0.926
128	85.7	0.845	96.6	0.809	79.4	0.869	48	0.933	60.6	0.927
129	85.8	0.846	96.7	0.81	79.5	0.87	48	0.934	60.7	0.927

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10	
	Wt = 101.4 kips		Wt = 119.4 kips		Wt = 91.4 kips		Wt = 51.4 kips		Wt = 65.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
130	85.9	0.847	96.9	0.812	79.6	0.871	48	0.934	60.7	0.928
131	86	0.848	97.1	0.813	79.7	0.872	48	0.935	60.7	0.929
132	86.1	0.85	97.3	0.815	79.7	0.873	48.1	0.935	60.8	0.929
133	86.3	0.851	97.4	0.816	79.8	0.874	48.1	0.936	60.8	0.93
134	86.4	0.852	97.6	0.817	79.9	0.874	48.1	0.936	60.8	0.93
135	86.5	0.853	97.7	0.819	80	0.875	48.1	0.937	60.9	0.931
136	86.6	0.854	97.9	0.82	80.1	0.876	48.2	0.937	60.9	0.931
137	86.7	0.855	98.1	0.821	80.2	0.877	48.2	0.938	60.9	0.932
138	86.8	0.856	98.2	0.823	80.3	0.878	48.2	0.938	61	0.932
139	86.9	0.857	98.4	0.824	80.3	0.879	48.2	0.939	61	0.933
140	87	0.858	98.5	0.825	80.4	0.88	48.3	0.939	61	0.933
141	87.1	0.859	98.7	0.826	80.5	0.881	48.3	0.939	61.1	0.934
142	87.2	0.86	98.8	0.828	80.6	0.882	48.3	0.94	61.1	0.934
143	87.3	0.861	99	0.829	80.6	0.882	48.3	0.94	61.1	0.935
144	87.4	0.862	99.1	0.83	80.7	0.883	48.4	0.941	61.1	0.935
145	87.5	0.863	99.2	0.831	80.8	0.884	48.4	0.941	61.2	0.936
146	87.6	0.864	99.4	0.832	80.9	0.885	48.4	0.942	61.2	0.936
147	87.7	0.865	99.5	0.833	80.9	0.886	48.4	0.942	61.2	0.936
148	87.8	0.866	99.6	0.835	81	0.886	48.4	0.942	61.3	0.937
149	87.9	0.867	99.8	0.836	81.1	0.887	48.5	0.943	61.3	0.937
150	88	0.868	99.9	0.837	81.1	0.888	48.5	0.943	61.3	0.938
155	88.4	0.872	101	0.842	81.5	0.891	48.6	0.945	61.5	0.94
160	88.8	0.876	101	0.847	81.8	0.895	48.7	0.947	61.6	0.942
165	89.2	0.88	102	0.852	82.1	0.898	48.7	0.948	61.7	0.943
170	89.6	0.883	102	0.856	82.4	0.901	48.8	0.95	61.8	0.945

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 6		TRUCK # 7		TRUCK # 8		TRUCK # 9		TRUCK # 10	
	Wt = 101.4 kips		Wt = 119.4 kips		Wt = 91.4 kips		Wt = 51.4 kips		Wt = 65.4 kips	
	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt
175	89.9	0.887	103	0.86	82.6	0.904	48.9	0.951	61.9	0.947
180	90.2	0.89	103	0.864	82.9	0.907	49	0.953	62	0.948
185	90.5	0.893	104	0.868	83.1	0.909	49	0.954	62.1	0.949
190	90.8	0.895	104	0.871	83.3	0.911	49.1	0.955	62.2	0.951
195	91.1	0.898	104	0.874	83.5	0.914	49.1	0.956	62.3	0.952
200	91.3	0.901	105	0.878	83.7	0.916	49.2	0.957	62.3	0.953
205	91.6	0.903	105	0.881	83.9	0.918	49.3	0.958	62.4	0.954
210	91.8	0.905	105	0.883	84.1	0.92	49.3	0.959	62.5	0.955
215	92	0.908	106	0.886	84.2	0.922	49.4	0.96	62.6	0.957
220	92.2	0.91	106	0.889	84.4	0.924	49.4	0.961	62.6	0.958
225	92.4	0.912	106	0.891	84.6	0.925	49.4	0.962	62.7	0.958
230	92.6	0.914	107	0.894	84.7	0.927	49.5	0.963	62.7	0.959
235	92.8	0.916	107	0.896	84.9	0.928	49.5	0.964	62.8	0.96
240	93	0.917	107	0.898	85	0.93	49.6	0.964	62.8	0.961
245	93.2	0.919	107	0.9	85.1	0.931	49.6	0.965	62.9	0.962
250	93.3	0.921	108	0.902	85.2	0.933	49.6	0.966	63	0.963
255	93.5	0.922	108	0.904	85.4	0.934	49.7	0.967	63	0.963
260	93.7	0.924	108	0.906	85.5	0.935	49.7	0.967	63	0.964
265	93.8	0.925	108	0.908	85.6	0.937	49.7	0.968	63.1	0.965
270	93.9	0.926	109	0.909	85.7	0.938	49.8	0.968	63.1	0.965
275	94.1	0.928	109	0.911	85.8	0.939	49.8	0.969	63.2	0.966
280	94.2	0.929	109	0.913	85.9	0.94	49.8	0.97	63.2	0.967
285	94.3	0.93	109	0.914	86	0.941	49.9	0.97	63.3	0.967
290	94.5	0.932	109	0.916	86.1	0.942	49.9	0.971	63.3	0.968
295	94.6	0.933	109	0.917	86.2	0.943	49.9	0.971	63.3	0.968
300	94.7	0.934	110	0.918	86.3	0.944	49.9	0.972	63.4	0.969

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 11 Wt = 83.4 kips		TRUCK # 12 Wt = 117.4 kips		TRUCK # 13 Wt = 125.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 143.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
5	20.8	0.249	20.8	0.177	20.8	0.166	16.9	0.128	20.8	0.145
6	22.7	0.272	22.7	0.193	22.7	0.181	18.4	0.139	22.7	0.158
7	24	0.288	24	0.204	24	0.191	19.5	0.147	24	0.167
8	25	0.3	25	0.213	25	0.199	21.9	0.166	25	0.174
9	25.8	0.309	25.8	0.22	25.8	0.206	23.8	0.18	25.8	0.18
10	26.4	0.317	26.4	0.225	26.4	0.211	25.4	0.192	26.4	0.184
11	26.9	0.323	27.2	0.232	27.2	0.217	27.2	0.205	27	0.188
12	27.3	0.328	29.3	0.249	29.3	0.233	29.3	0.221	28.8	0.201
13	28.3	0.339	31	0.264	31	0.247	31	0.234	30.2	0.211
14	29.7	0.356	32.5	0.277	32.5	0.259	32.5	0.246	31.8	0.222
15	30.8	0.37	33.8	0.288	33.8	0.27	34.7	0.262	33.5	0.234
16	31.9	0.382	34.9	0.298	34.9	0.279	36.6	0.276	35	0.244
17	32.8	0.393	35.9	0.306	35.9	0.287	38.2	0.289	36.3	0.253
18	33.6	0.403	36.8	0.314	36.8	0.294	39.7	0.3	37.4	0.261
19	34.3	0.412	37.6	0.321	37.6	0.3	41.1	0.31	38.4	0.268
20	35	0.419	38.8	0.331	38.7	0.309	42.3	0.319	39.4	0.275
21	35.6	0.427	40.3	0.343	40.1	0.32	43.3	0.327	40.2	0.28
22	36.1	0.433	41.6	0.355	41.3	0.33	44.3	0.335	41	0.286
23	37.5	0.449	42.9	0.365	42.5	0.339	45.2	0.342	42	0.293
24	38.8	0.465	44	0.375	43.5	0.347	46.6	0.352	43.3	0.302
25	39.9	0.479	45	0.384	44.5	0.355	47.8	0.361	44.5	0.31
26	41	0.492	46	0.392	45.4	0.362	49	0.37	45.6	0.318
27	42	0.504	46.9	0.399	46.2	0.368	50.3	0.38	47.2	0.329
28	42.9	0.515	47.7	0.406	47.1	0.376	51.8	0.391	48.7	0.34
29	43.8	0.525	48.8	0.415	48.2	0.384	53.1	0.401	50.1	0.349

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 11		TRUCK # 12		TRUCK # 13		TRUCK # 14		TRUCK # 15	
	Wt = 83.4 kips		Wt = 117.4 kips		Wt = 125.4 kips		Wt = 132.4 kips		Wt = 143.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
30	44.6	0.535	50	0.426	49.2	0.392	54.4	0.411	51.4	0.358
31	45.4	0.544	51.2	0.436	50.1	0.4	56	0.423	52.6	0.367
32	46.1	0.552	52.3	0.445	51	0.407	57.5	0.434	53.7	0.375
33	46.7	0.56	53.8	0.458	52	0.415	58.9	0.445	54.8	0.382
34	47.4	0.568	55.2	0.47	53.3	0.425	60.4	0.456	55.8	0.389
35	47.9	0.575	56.5	0.481	54.4	0.434	62	0.469	56.8	0.396
36	48.5	0.582	57.8	0.492	55.5	0.443	63.6	0.48	58	0.405
37	49.2	0.591	59	0.502	57	0.455	65	0.491	59.2	0.413
38	50.1	0.601	60.1	0.512	58.4	0.466	66.4	0.501	60.3	0.421
39	51	0.612	61.2	0.521	59.7	0.476	67.7	0.511	61.6	0.429
40	51.8	0.621	62.2	0.53	61	0.486	68.9	0.52	62.9	0.439
41	52.6	0.63	63.2	0.538	62.2	0.496	70.1	0.529	64.2	0.448
42	53.3	0.639	64.1	0.546	63.3	0.505	71.2	0.538	65.4	0.456
43	54	0.648	65	0.554	64.4	0.514	72.4	0.547	66.8	0.466
44	54.7	0.656	65.8	0.561	65.4	0.522	73.8	0.557	68.2	0.476
45	55.3	0.663	66.6	0.568	66.4	0.53	75.1	0.567	69.6	0.485
46	55.9	0.671	67.4	0.574	67.4	0.537	76.3	0.577	70.8	0.494
47	56.5	0.678	68.4	0.583	68.3	0.545	77.5	0.586	72	0.502
48	57.1	0.684	69.4	0.591	69.5	0.554	78.7	0.594	73.2	0.511
49	57.6	0.691	70.4	0.6	70.6	0.563	79.8	0.603	74.3	0.518
50	58.1	0.697	71.3	0.608	71.7	0.572	80.8	0.611	75.4	0.526
51	58.6	0.703	72.2	0.615	72.8	0.58	81.8	0.618	76.4	0.533
52	59.1	0.709	73.1	0.623	73.8	0.588	82.8	0.626	77.4	0.54
53	59.6	0.714	73.9	0.63	74.7	0.596	83.7	0.633	78.4	0.547
54	60	0.719	74.7	0.637	75.7	0.604	84.7	0.639	79.3	0.553

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 11		TRUCK # 12		TRUCK # 13		TRUCK # 14		TRUCK # 15	
	Wt = 83.4 kips		Wt = 117.4 kips		Wt = 125.4 kips		Wt = 132.4 kips		Wt = 143.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
55	60.4	0.725	75.5	0.643	76.6	0.611	85.5	0.646	80.2	0.559
56	60.8	0.729	76.3	0.65	77.5	0.618	86.4	0.652	81	0.565
57	61.2	0.734	77	0.656	78.3	0.624	87.2	0.658	81.9	0.571
58	61.6	0.739	77.7	0.662	79.1	0.631	87.9	0.664	82.7	0.576
59	62	0.743	78.4	0.668	79.9	0.637	88.7	0.67	83.5	0.583
60	62.3	0.748	79	0.673	80.7	0.643	89.4	0.675	84.5	0.59
61	62.7	0.752	79.6	0.678	81.4	0.649	90.1	0.681	85.5	0.596
62	63	0.756	80.2	0.684	82.1	0.655	90.8	0.686	86.4	0.603
63	63.3	0.76	80.8	0.689	82.8	0.66	91.5	0.691	87.3	0.609
64	63.7	0.763	81.4	0.693	83.5	0.666	92.1	0.696	88.2	0.615
65	64	0.767	82	0.698	84.1	0.671	92.7	0.7	89.1	0.621
66	64.3	0.77	82.5	0.703	84.7	0.676	93.3	0.705	89.9	0.627
67	64.5	0.774	83	0.707	85.3	0.68	93.9	0.709	90.7	0.632
68	64.8	0.777	83.5	0.712	85.9	0.685	94.5	0.714	91.5	0.638
69	65.1	0.78	84	0.716	86.5	0.69	95	0.718	92.2	0.643
70	65.3	0.784	84.5	0.72	87	0.694	95.6	0.722	93	0.648
71	65.6	0.787	85	0.724	87.6	0.699	96.1	0.726	93.7	0.653
72	65.8	0.79	85.4	0.728	88.1	0.703	96.6	0.73	94.4	0.658
73	66.1	0.792	85.8	0.731	88.6	0.707	97.1	0.733	95	0.663
74	66.3	0.795	86.3	0.735	89.1	0.711	97.6	0.737	95.7	0.667
75	66.6	0.798	86.7	0.738	89.6	0.715	98	0.74	96.3	0.672
76	66.8	0.801	87.1	0.742	90.1	0.718	98.5	0.744	96.9	0.676
77	67	0.803	87.5	0.745	90.5	0.722	98.9	0.747	97.5	0.68
78	67.2	0.806	87.9	0.749	91	0.726	99.3	0.75	98.1	0.684
79	67.4	0.808	88.2	0.752	91.4	0.729	99.8	0.754	98.7	0.688

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

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SPAN	TRUCK # 11 Wt = 83.4 kips		TRUCK # 12 Wt = 117.4 kips		TRUCK # 13 Wt = 125.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 143.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
	80	67.6	0.811	88.6	0.755	91.8	0.732	100	0.757	99.3
81	67.8	0.813	89	0.758	92.3	0.736	101	0.76	99.8	0.696
82	68	0.815	89.3	0.761	92.7	0.739	101	0.763	100	0.7
83	68.2	0.817	89.6	0.764	93.1	0.742	101	0.765	101	0.703
84	68.4	0.82	90	0.766	93.4	0.745	102	0.768	101	0.707
85	68.5	0.822	90.3	0.769	93.8	0.748	102	0.771	102	0.71
86	68.7	0.824	90.6	0.772	94.2	0.751	102	0.774	102	0.714
87	68.9	0.826	90.9	0.775	94.5	0.754	103	0.776	103	0.717
88	69	0.828	91.2	0.777	94.9	0.757	103	0.779	103	0.72
89	69.2	0.83	91.5	0.78	95.2	0.759	103	0.781	104	0.723
90	69.4	0.832	91.8	0.782	95.6	0.762	104	0.784	104	0.726
91	69.5	0.834	92.1	0.784	95.9	0.765	104	0.786	105	0.729
92	69.7	0.835	92.4	0.787	96.2	0.767	104	0.788	105	0.732
93	69.8	0.837	92.6	0.789	96.5	0.77	105	0.791	105	0.735
94	70	0.839	92.9	0.791	96.8	0.772	105	0.793	106	0.738
95	70.1	0.841	93.2	0.794	97.1	0.775	105	0.795	106	0.741
96	70.2	0.842	93.4	0.796	97.4	0.777	106	0.797	107	0.744
97	70.4	0.844	93.7	0.798	97.7	0.779	106	0.799	107	0.746
98	70.5	0.845	93.9	0.8	98	0.782	106	0.801	107	0.749
99	70.6	0.847	94.1	0.802	98.3	0.784	106	0.803	108	0.751
100	70.8	0.849	94.4	0.804	98.6	0.786	107	0.805	108	0.754
101	70.9	0.85	94.6	0.806	98.8	0.788	107	0.807	108	0.756
102	71	0.851	94.8	0.808	99.1	0.79	107	0.809	109	0.759
103	71.1	0.853	95	0.81	99.3	0.792	107	0.811	109	0.761
104	71.2	0.854	95.3	0.811	99.6	0.794	108	0.813	109	0.763

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 11		TRUCK # 12		TRUCK # 13		TRUCK # 14		TRUCK # 15	
	Wt = 83.4 kips		Wt = 117.4 kips		Wt = 125.4 kips		Wt = 132.4 kips		Wt = 143.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
105	71.4	0.856	95.5	0.813	99.8	0.796	108	0.815	110	0.766
106	71.5	0.857	95.7	0.815	100	0.798	108	0.816	110	0.768
107	71.6	0.858	95.9	0.817	100	0.8	108	0.818	110	0.77
108	71.7	0.86	96.1	0.818	101	0.802	109	0.82	111	0.772
109	71.8	0.861	96.3	0.82	101	0.804	109	0.821	111	0.774
110	71.9	0.862	96.5	0.822	101	0.805	109	0.823	111	0.776
111	72	0.864	96.6	0.823	101	0.807	109	0.825	112	0.778
112	72.1	0.865	96.8	0.825	101	0.809	109	0.826	112	0.78
113	72.2	0.866	97	0.826	102	0.811	110	0.828	112	0.782
114	72.3	0.867	97.2	0.828	102	0.812	110	0.829	112	0.784
115	72.4	0.868	97.4	0.829	102	0.814	110	0.831	113	0.786
116	72.5	0.869	97.5	0.831	102	0.815	110	0.832	113	0.788
117	72.6	0.871	97.7	0.832	102	0.817	110	0.834	113	0.79
118	72.7	0.872	97.9	0.834	103	0.819	111	0.835	113	0.791
119	72.8	0.873	98	0.835	103	0.82	111	0.836	114	0.793
120	72.9	0.874	98.2	0.837	103	0.822	111	0.838	114	0.795
121	73	0.875	98.4	0.838	103	0.823	111	0.839	114	0.797
122	73	0.876	98.5	0.839	103	0.825	111	0.84	114	0.798
123	73.1	0.877	98.7	0.841	104	0.826	111	0.842	115	0.8
124	73.2	0.878	98.8	0.842	104	0.827	112	0.843	115	0.801
125	73.3	0.879	99	0.843	104	0.829	112	0.844	115	0.803
126	73.4	0.88	99.1	0.844	104	0.83	112	0.845	115	0.805
127	73.4	0.881	99.3	0.846	104	0.831	112	0.847	116	0.806
128	73.5	0.882	99.4	0.847	104	0.833	112	0.848	116	0.808
129	73.6	0.883	99.5	0.848	105	0.834	112	0.849	116	0.809

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

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SPAN	TRUCK # 11 Wt = 83.4 kips		TRUCK # 12 Wt = 117.4 kips		TRUCK # 13 Wt = 125.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 143.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
	130	73.7	0.883	99.7	0.849	105	0.835	113	0.85	116
131	73.8	0.884	99.8	0.85	105	0.837	113	0.851	116	0.812
132	73.8	0.885	100	0.851	105	0.838	113	0.853	117	0.813
133	73.9	0.886	100	0.853	105	0.839	113	0.854	117	0.815
134	74	0.887	100	0.854	105	0.84	113	0.855	117	0.816
135	74	0.888	100	0.855	106	0.841	113	0.856	117	0.818
136	74.1	0.889	100	0.856	106	0.843	113	0.857	117	0.819
137	74.2	0.889	101	0.857	106	0.844	114	0.858	118	0.82
138	74.2	0.89	101	0.858	106	0.845	114	0.859	118	0.822
139	74.3	0.891	101	0.859	106	0.846	114	0.86	118	0.823
140	74.4	0.892	101	0.86	106	0.847	114	0.861	118	0.824
141	74.4	0.893	101	0.861	106	0.848	114	0.862	118	0.825
142	74.5	0.893	101	0.862	106	0.849	114	0.863	119	0.827
143	74.6	0.894	101	0.863	107	0.85	114	0.864	119	0.828
144	74.6	0.895	101	0.864	107	0.851	114	0.865	119	0.829
145	74.7	0.896	102	0.865	107	0.852	115	0.866	119	0.83
146	74.7	0.896	102	0.866	107	0.853	115	0.867	119	0.831
147	74.8	0.897	102	0.867	107	0.854	115	0.868	119	0.833
148	74.9	0.898	102	0.867	107	0.855	115	0.868	120	0.834
149	74.9	0.898	102	0.868	107	0.856	115	0.869	120	0.835
150	75	0.899	102	0.869	108	0.857	115	0.87	120	0.836
155	75.2	0.902	103	0.873	108	0.862	116	0.874	121	0.841
160	75.5	0.905	103	0.877	109	0.866	116	0.878	121	0.846
165	75.7	0.908	103	0.881	109	0.87	117	0.882	122	0.851
170	76	0.911	104	0.885	110	0.874	117	0.885	123	0.855

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 11 Wt = 83.4 kips		TRUCK # 12 Wt = 117.4 kips		TRUCK # 13 Wt = 125.4 kips		TRUCK # 14 Wt = 132.4 kips		TRUCK # 15 Wt = 143.4 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
175	76.2	0.913	104	0.888	110	0.878	118	0.889	123	0.859
180	76.4	0.916	105	0.891	110	0.881	118	0.892	124	0.863
185	76.6	0.918	105	0.894	111	0.884	118	0.895	124	0.867
190	76.7	0.92	105	0.897	111	0.887	119	0.898	125	0.87
195	76.9	0.922	106	0.899	112	0.89	119	0.9	125	0.874
200	77.1	0.924	106	0.902	112	0.893	120	0.903	126	0.877
205	77.2	0.926	106	0.904	112	0.896	120	0.905	126	0.88
210	77.4	0.928	106	0.907	113	0.898	120	0.907	127	0.883
215	77.5	0.93	107	0.909	113	0.9	120	0.909	127	0.886
220	77.7	0.931	107	0.911	113	0.903	121	0.912	127	0.888
225	77.8	0.933	107	0.913	113	0.905	121	0.913	128	0.891
230	77.9	0.934	107	0.915	114	0.907	121	0.915	128	0.893
235	78	0.936	108	0.917	114	0.909	121	0.917	128	0.895
240	78.1	0.937	108	0.918	114	0.911	122	0.919	129	0.897
245	78.2	0.938	108	0.92	114	0.913	122	0.921	129	0.9
250	78.3	0.939	108	0.922	115	0.914	122	0.922	129	0.902
255	78.4	0.941	108	0.923	115	0.916	122	0.924	130	0.903
260	78.5	0.942	109	0.925	115	0.918	122	0.925	130	0.905
265	78.6	0.943	109	0.926	115	0.919	123	0.927	130	0.907
270	78.7	0.944	109	0.927	115	0.921	123	0.928	130	0.909
275	78.8	0.945	109	0.929	116	0.922	123	0.929	131	0.911
280	78.9	0.946	109	0.93	116	0.924	123	0.93	131	0.912
285	79	0.947	109	0.931	116	0.925	123	0.932	131	0.914
290	79	0.948	109	0.932	116	0.926	124	0.933	131	0.915
295	79.1	0.949	110	0.934	116	0.927	124	0.934	131	0.917
300	79.2	0.95	110	0.935	116	0.929	124	0.935	132	0.918

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

10-T17-14

SPAN	TRUCK # 16 Wt = 138.4 kips		TRUCK # 17 Wt = 151.4 kips		TRUCK # 18 Wt = 154 kips		TRUCK # 27 Wt = 72 kips		TRUCK # 28 Wt = 80 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
5	20.8	0.15	20.8	0.137	16.9	0.11	18.6	0.258	16.8	0.21
6	22.7	0.164	22.7	0.15	18.7	0.121	20.7	0.287	18.7	0.233
7	24	0.173	24	0.159	20.6	0.134	22.1	0.308	20	0.25
8	25	0.181	25	0.165	22	0.143	23.3	0.323	21	0.263
9	25.8	0.186	25.8	0.17	23.8	0.155	24.1	0.335	21.8	0.272
10	26.4	0.191	26.4	0.174	25.4	0.165	24.8	0.344	22.4	0.28
11	27.2	0.196	27.2	0.18	27.2	0.177	25.4	0.352	22.9	0.286
12	29.3	0.211	29.3	0.193	29.3	0.19	25.8	0.359	23.3	0.292
13	31	0.224	31	0.205	31	0.201	26.2	0.364	23.7	0.296
14	32.5	0.235	32.5	0.215	32.5	0.211	26.6	0.369	24	0.3
15	34.7	0.251	34.7	0.229	34.7	0.225	26.9	0.373	24.3	0.303
16	36.6	0.264	36.6	0.242	36.6	0.237	27.8	0.385	24.5	0.306
17	38.2	0.276	38.2	0.253	38.2	0.248	28.5	0.396	24.7	0.309
18	40.1	0.29	40.1	0.265	40.1	0.26	29.2	0.406	24.9	0.311
19	42.1	0.304	42.1	0.278	42.1	0.273	29.8	0.415	25.1	0.313
20	43.9	0.317	43.9	0.29	43.9	0.285	30.4	0.422	25.2	0.315
21	45.5	0.329	45.5	0.301	45.5	0.296	30.9	0.429	26.1	0.326
22	47.6	0.344	47.6	0.314	47.6	0.309	31.4	0.436	26.9	0.336
23	49.5	0.357	49.5	0.327	49.5	0.321	31.8	0.441	27.7	0.346
24	51.2	0.37	51.2	0.338	51.2	0.332	32.2	0.447	28.3	0.354
25	52.8	0.381	53	0.35	53	0.344	32.5	0.452	29	0.362
26	54.3	0.392	55	0.363	55	0.357	32.8	0.456	29.5	0.369
27	55.6	0.402	56.8	0.375	56.8	0.369	33.1	0.46	30.1	0.376
28	56.9	0.411	58.5	0.386	58.5	0.38	33.4	0.464	30.6	0.382
29	58.1	0.419	60.1	0.397	60.1	0.39	33.7	0.468	31	0.388

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

10-T17-15

SPAN	TRUCK # 16		TRUCK # 17		TRUCK # 18		TRUCK # 27		TRUCK # 28	
	Wt = 138.4 kips		Wt = 151.4 kips		Wt = 154 kips		Wt = 72 kips		Wt = 80 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
30	59.2	0.427	61.5	0.406	61.5	0.4	33.9	0.471	31.5	0.393
31	60.7	0.439	62.9	0.416	62.9	0.409	34.2	0.475	31.9	0.398
32	62.1	0.449	64.2	0.424	64.2	0.417	34.4	0.477	32.3	0.403
33	63.5	0.459	65.4	0.432	65.4	0.425	34.6	0.48	32.6	0.408
34	65	0.47	66.8	0.441	66.5	0.432	34.8	0.483	32.9	0.412
35	66.7	0.482	68.3	0.451	67.8	0.44	35.4	0.492	33.3	0.416
36	68.2	0.493	69.7	0.461	69.3	0.45	36.2	0.502	33.9	0.424
37	69.7	0.504	71.1	0.47	70.6	0.459	36.9	0.512	34.5	0.431
38	71.1	0.514	72.8	0.481	71.9	0.467	37.5	0.521	35.1	0.438
39	72.4	0.524	74.4	0.492	73.4	0.477	38.2	0.53	35.6	0.445
40	73.7	0.533	76	0.502	75	0.487	38.8	0.538	36.4	0.455
41	74.9	0.541	77.4	0.511	76.4	0.496	39.3	0.546	37.2	0.465
42	76.1	0.55	78.8	0.521	77.9	0.506	40.1	0.557	37.9	0.474
43	77.3	0.559	80.1	0.529	79.2	0.514	40.8	0.567	38.6	0.483
44	78.7	0.569	81.4	0.538	80.5	0.523	41.5	0.577	39.3	0.491
45	80	0.578	82.6	0.546	81.7	0.531	42.2	0.586	39.9	0.499
46	81.3	0.588	83.8	0.553	82.9	0.538	42.9	0.595	40.5	0.507
47	82.5	0.596	85.2	0.563	84	0.546	43.5	0.604	41.1	0.514
48	83.7	0.605	86.6	0.572	85.1	0.553	44.1	0.612	41.7	0.521
49	84.8	0.613	87.9	0.581	86.2	0.56	44.7	0.62	42.2	0.528
50	85.9	0.621	89.2	0.589	87.3	0.567	45.2	0.628	42.7	0.534
51	86.9	0.628	90.4	0.597	88.6	0.576	45.7	0.635	43.2	0.54
52	87.9	0.635	91.6	0.605	89.9	0.584	46.2	0.642	43.7	0.546
53	88.9	0.642	92.7	0.612	91.1	0.592	46.7	0.649	44.2	0.552
54	89.8	0.649	93.8	0.62	92.3	0.599	47.2	0.655	44.6	0.557

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 16		TRUCK # 17		TRUCK # 18		TRUCK # 27		TRUCK # 28	
	Wt = 138.4 kips		Wt = 151.4 kips		Wt = 154 kips		Wt = 72 kips		Wt = 80 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
55	90.7	0.655	94.8	0.627	93.4	0.607	47.6	0.662	45.2	0.566
56	91.5	0.661	95.9	0.633	94.5	0.614	48.1	0.668	45.9	0.573
57	92.3	0.667	96.8	0.64	95.5	0.62	48.5	0.674	46.5	0.581
58	93.1	0.673	97.8	0.646	96.5	0.627	48.9	0.679	47	0.588
59	93.9	0.678	98.7	0.652	97.5	0.633	49.3	0.685	47.6	0.595
60	94.6	0.684	99.6	0.658	98.5	0.639	49.7	0.69	48.1	0.602
61	95.4	0.689	100	0.663	99.4	0.645	50	0.695	48.7	0.608
62	96	0.694	101	0.669	100	0.651	50.4	0.7	49.2	0.615
63	96.7	0.699	102	0.674	101	0.657	50.7	0.705	49.7	0.621
64	97.4	0.704	103	0.679	102	0.662	51.1	0.709	50.1	0.627
65	98	0.708	104	0.684	103	0.667	51.4	0.714	50.6	0.632
66	98.6	0.713	104	0.689	104	0.672	51.7	0.718	51	0.638
67	99.2	0.717	105	0.693	104	0.677	52	0.722	51.5	0.643
68	99.8	0.721	106	0.698	105	0.682	52.3	0.726	51.9	0.649
69	100	0.725	106	0.702	106	0.686	52.6	0.73	52.3	0.654
70	101	0.729	107	0.707	106	0.691	52.9	0.734	52.7	0.659
71	101	0.733	108	0.711	107	0.695	53.1	0.738	53.1	0.663
72	102	0.737	108	0.715	108	0.699	53.4	0.742	53.4	0.668
73	102	0.74	109	0.719	108	0.704	53.6	0.745	53.8	0.673
74	103	0.744	109	0.722	109	0.708	53.9	0.749	54.2	0.677
75	103	0.747	110	0.726	110	0.711	54.1	0.752	54.5	0.681
76	104	0.75	110	0.73	110	0.715	54.4	0.755	54.8	0.686
77	104	0.754	111	0.733	111	0.719	54.6	0.758	55.2	0.69
78	105	0.757	112	0.737	111	0.723	54.8	0.761	55.5	0.694
79	105	0.76	112	0.74	112	0.726	55	0.764	55.8	0.698

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

10-T17-17

SPAN	TRUCK # 16		TRUCK # 17		TRUCK # 18		TRUCK # 27		TRUCK # 28	
	Wt = 138.4 kips		Wt = 151.4 kips		Wt = 154 kips		Wt = 72 kips		Wt = 80 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
80	106	0.763	113	0.743	112	0.73	55.3	0.767	56.1	0.701
81	106	0.766	113	0.746	113	0.733	55.5	0.77	56.4	0.705
82	106	0.769	113	0.75	113	0.736	55.7	0.773	56.7	0.709
83	107	0.771	114	0.753	114	0.739	55.9	0.776	57	0.712
84	107	0.774	114	0.755	114	0.742	56	0.778	57.2	0.716
85	108	0.777	115	0.758	115	0.745	56.2	0.781	57.5	0.719
86	108	0.779	115	0.761	115	0.748	56.4	0.784	57.8	0.722
87	108	0.782	116	0.764	116	0.751	56.6	0.786	58	0.725
88	109	0.784	116	0.767	116	0.754	56.8	0.789	58.3	0.728
89	109	0.787	116	0.769	117	0.757	56.9	0.791	58.5	0.732
90	109	0.789	117	0.772	117	0.76	57.1	0.793	58.8	0.734
91	110	0.792	117	0.774	117	0.762	57.3	0.796	59	0.737
92	110	0.794	118	0.777	118	0.765	57.4	0.798	59.2	0.74
93	110	0.796	118	0.779	118	0.767	57.6	0.8	59.4	0.743
94	110	0.798	118	0.781	119	0.77	57.7	0.802	59.7	0.746
95	111	0.8	119	0.784	119	0.772	57.9	0.804	59.9	0.748
96	111	0.802	119	0.786	119	0.775	58	0.806	60.1	0.751
97	111	0.804	119	0.788	120	0.777	58.2	0.808	60.3	0.754
98	112	0.806	120	0.79	120	0.779	58.3	0.81	60.5	0.756
99	112	0.808	120	0.793	120	0.781	58.5	0.812	60.7	0.759
100	112	0.81	120	0.795	121	0.784	58.6	0.814	60.9	0.761
101	112	0.812	121	0.797	121	0.786	58.7	0.816	61.1	0.763
102	113	0.814	121	0.799	121	0.788	58.9	0.818	61.3	0.766
103	113	0.816	121	0.801	122	0.79	59	0.819	61.4	0.768
104	113	0.818	121	0.803	122	0.792	59.1	0.821	61.6	0.77

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 16		TRUCK # 17		TRUCK # 18		TRUCK # 27		TRUCK # 28	
	Wt = 138.4 kips		Wt = 151.4 kips		Wt = 154 kips		Wt = 72 kips		Wt = 80 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
105	113	0.819	122	0.804	122	0.794	59.2	0.823	61.8	0.772
106	114	0.821	122	0.806	123	0.796	59.4	0.824	62	0.775
107	114	0.823	122	0.808	123	0.798	59.5	0.826	62.1	0.777
108	114	0.824	123	0.81	123	0.8	59.6	0.828	62.3	0.779
109	114	0.826	123	0.812	123	0.801	59.7	0.829	62.5	0.781
110	115	0.828	123	0.813	124	0.803	59.8	0.831	62.6	0.783
111	115	0.829	123	0.815	124	0.805	59.9	0.832	62.8	0.785
112	115	0.831	124	0.817	124	0.807	60	0.834	62.9	0.787
113	115	0.832	124	0.818	125	0.809	60.1	0.835	63.1	0.789
114	115	0.834	124	0.82	125	0.81	60.2	0.837	63.2	0.79
115	116	0.835	124	0.821	125	0.812	60.3	0.838	63.4	0.792
116	116	0.836	125	0.823	125	0.813	60.4	0.84	63.5	0.794
117	116	0.838	125	0.824	126	0.815	60.5	0.841	63.7	0.796
118	116	0.839	125	0.826	126	0.817	60.6	0.842	63.8	0.798
119	116	0.841	125	0.827	126	0.818	60.7	0.844	63.9	0.799
120	117	0.842	125	0.829	126	0.82	60.8	0.845	64.1	0.801
121	117	0.843	126	0.83	126	0.821	60.9	0.846	64.2	0.803
122	117	0.845	126	0.832	127	0.823	61	0.847	64.3	0.804
123	117	0.846	126	0.833	127	0.824	61.1	0.849	64.5	0.806
124	117	0.847	126	0.834	127	0.826	61.2	0.85	64.6	0.807
125	117	0.848	127	0.836	127	0.827	61.3	0.851	64.7	0.809
126	118	0.849	127	0.837	128	0.828	61.4	0.852	64.8	0.81
127	118	0.851	127	0.838	128	0.83	61.4	0.854	64.9	0.812
128	118	0.852	127	0.84	128	0.831	61.5	0.855	65.1	0.813
129	118	0.853	127	0.841	128	0.832	61.6	0.856	65.2	0.815

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 16		TRUCK # 17		TRUCK # 18		TRUCK # 27		TRUCK # 28	
	Wt = 138.4 kips		Wt = 151.4 kips		Wt = 154 kips		Wt = 72 kips		Wt = 80 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
130	118	0.854	127	0.842	128	0.834	61.7	0.857	65.3	0.816
131	118	0.855	128	0.843	129	0.835	61.8	0.858	65.4	0.818
132	119	0.856	128	0.844	129	0.836	61.8	0.859	65.5	0.819
133	119	0.857	128	0.846	129	0.837	61.9	0.86	65.6	0.82
134	119	0.858	128	0.847	129	0.839	62	0.861	65.7	0.822
135	119	0.86	128	0.848	129	0.84	62.1	0.862	65.8	0.823
136	119	0.861	129	0.849	129	0.841	62.1	0.863	65.9	0.824
137	119	0.862	129	0.85	130	0.842	62.2	0.864	66	0.826
138	119	0.863	129	0.851	130	0.843	62.3	0.865	66.1	0.827
139	120	0.864	129	0.852	130	0.844	62.4	0.866	66.2	0.828
140	120	0.865	129	0.853	130	0.845	62.4	0.867	66.3	0.829
141	120	0.865	129	0.854	130	0.847	62.5	0.868	66.4	0.831
142	120	0.866	129	0.855	131	0.848	62.6	0.869	66.5	0.832
143	120	0.867	130	0.856	131	0.849	62.6	0.87	66.6	0.833
144	120	0.868	130	0.857	131	0.85	62.7	0.871	66.7	0.834
145	120	0.869	130	0.858	131	0.851	62.8	0.872	66.8	0.835
146	120	0.87	130	0.859	131	0.852	62.8	0.873	66.9	0.836
147	121	0.871	130	0.86	131	0.853	62.9	0.873	67	0.837
148	121	0.872	130	0.861	131	0.854	62.9	0.874	67.1	0.839
149	121	0.873	131	0.862	132	0.855	63	0.875	67.2	0.84
150	121	0.874	131	0.863	132	0.856	63.1	0.876	67.3	0.841
155	121	0.878	131	0.868	132	0.86	63.4	0.88	67.7	0.846
160	122	0.881	132	0.872	133	0.865	63.6	0.884	68.1	0.851
165	122	0.885	133	0.876	134	0.869	63.9	0.887	68.4	0.855
170	123	0.888	133	0.879	134	0.873	64.1	0.891	68.8	0.859

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 16 Wt = 138.4 kips		TRUCK # 17 Wt = 151.4 kips		TRUCK # 18 Wt = 154 kips		TRUCK # 27 Wt = 72 kips		TRUCK # 28 Wt = 80 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
175	123	0.892	134	0.883	135	0.876	64.3	0.894	69.1	0.863
180	124	0.895	134	0.886	135	0.88	64.6	0.897	69.4	0.867
185	124	0.897	135	0.889	136	0.883	64.8	0.899	69.7	0.871
190	125	0.9	135	0.892	136	0.886	64.9	0.902	69.9	0.874
195	125	0.903	135	0.895	137	0.889	65.1	0.905	70.2	0.877
200	125	0.905	136	0.897	137	0.892	65.3	0.907	70.4	0.881
205	126	0.907	136	0.9	138	0.894	65.5	0.909	70.7	0.883
210	126	0.91	137	0.902	138	0.897	65.6	0.911	70.9	0.886
215	126	0.912	137	0.904	138	0.899	65.8	0.913	71.1	0.889
220	126	0.914	137	0.907	139	0.902	65.9	0.915	71.3	0.891
225	127	0.916	138	0.909	139	0.904	66	0.917	71.5	0.894
230	127	0.918	138	0.911	140	0.906	66.2	0.919	71.7	0.896
235	127	0.919	138	0.913	140	0.908	66.3	0.921	71.9	0.898
240	127	0.921	138	0.914	140	0.91	66.4	0.923	72	0.9
245	128	0.923	139	0.916	140	0.912	66.5	0.924	72.2	0.902
250	128	0.924	139	0.918	141	0.913	66.6	0.926	72.4	0.904
255	128	0.926	139	0.919	141	0.915	66.7	0.927	72.5	0.906
260	128	0.927	139	0.921	141	0.917	66.8	0.928	72.6	0.908
265	128	0.928	140	0.923	141	0.918	66.9	0.93	72.8	0.91
270	129	0.93	140	0.924	142	0.92	67	0.931	72.9	0.912
275	129	0.931	140	0.925	142	0.921	67.1	0.932	73	0.913
280	129	0.932	140	0.927	142	0.923	67.2	0.934	73.2	0.915
285	129	0.933	140	0.928	142	0.924	67.3	0.935	73.3	0.916
290	129	0.935	141	0.929	143	0.925	67.4	0.936	73.4	0.918
295	129	0.936	141	0.93	143	0.927	67.5	0.937	73.5	0.919
300	130	0.937	141	0.932	143	0.928	67.5	0.938	73.6	0.92

TABLE 10.17 (Continued)
Michigan Legal 2-Unit Truck Designated Loading - Simple Span Reactions

10-T18-1

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
5	20.8	0.177	18	0.206	20.8	0.137	20.8	0.129	18	0.117	19.2	0.157	19.2	0.117
6	22.7	0.193	18	0.206	22.7	0.15	22.7	0.14	18.7	0.121	21.3	0.175	21.3	0.13
7	24	0.204	18	0.206	24	0.159	24	0.149	20.6	0.134	22.9	0.187	22.9	0.139
8	25	0.213	18	0.206	25	0.165	25	0.155	22	0.143	24	0.197	24	0.146
9	25.8	0.22	18	0.206	25.8	0.17	25.8	0.16	23.8	0.155	24.9	0.204	24.9	0.152
10	26.4	0.225	19.8	0.227	26.4	0.174	26.4	0.164	25.4	0.165	25.6	0.21	25.6	0.156
11	26.9	0.229	21.3	0.243	26.9	0.178	27.2	0.168	26.6	0.173	26.2	0.215	27.2	0.166
12	27.3	0.233	22.5	0.257	27.6	0.183	29.3	0.181	27.6	0.179	26.7	0.219	29.3	0.178
13	28.3	0.241	23.5	0.269	28.5	0.188	31	0.192	29.5	0.192	27.1	0.222	31	0.189
14	29.7	0.253	24.4	0.28	29.4	0.194	32.5	0.201	31.1	0.202	28.7	0.235	32.5	0.198
15	30.8	0.263	25.2	0.288	30.4	0.201	33.8	0.209	32.5	0.211	30.1	0.247	33.8	0.206
16	31.9	0.272	25.9	0.296	31.3	0.207	34.9	0.217	34.1	0.222	31.4	0.257	34.9	0.213
17	32.8	0.279	26.5	0.303	32.9	0.217	35.9	0.223	35.9	0.233	32.5	0.266	35.9	0.219
18	33.6	0.286	27	0.309	34.3	0.227	36.8	0.228	37.6	0.244	33.4	0.274	36.8	0.225
19	34.3	0.292	28.4	0.325	35.6	0.235	37.6	0.233	39	0.253	34.3	0.281	38.3	0.234
20	35.2	0.3	29.7	0.34	37	0.244	38.8	0.24	40.3	0.262	35.1	0.288	39.7	0.242
21	36.3	0.309	30.9	0.353	38.6	0.255	40.3	0.25	41.5	0.269	35.8	0.294	41.2	0.251
22	37.3	0.318	31.9	0.365	40.1	0.265	41.6	0.258	42.8	0.278	36.5	0.299	42.8	0.261
23	38.2	0.325	32.9	0.376	41.4	0.274	42.9	0.266	44.4	0.288	37.8	0.31	44.4	0.271
24	39	0.332	33.8	0.386	42.7	0.282	44	0.273	45.8	0.297	39.1	0.32	45.8	0.279
25	39.8	0.339	34.6	0.395	43.8	0.289	45	0.279	47.1	0.306	40.2	0.33	47.1	0.287
26	40.8	0.348	35.3	0.404	44.8	0.296	46	0.285	48.8	0.317	41.3	0.339	48.3	0.294
27	42.1	0.359	36	0.412	45.8	0.303	47.1	0.292	50.3	0.327	42.3	0.347	49.4	0.301
28	43.3	0.369	37.3	0.427	46.7	0.309	48.5	0.3	51.8	0.336	43.2	0.354	50.4	0.307
29	44.5	0.379	38.5	0.44	47.8	0.316	49.7	0.308	53.3	0.346	44.1	0.361	51.3	0.313

TABLE 10.18
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Reactions

10-T18-2

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
30	45.5	0.388	39.6	0.453	49	0.324	50.8	0.315	55	0.357	44.9	0.368	52.8	0.322
31	46.5	0.396	40.6	0.465	50.1	0.331	51.9	0.322	56.6	0.368	45.6	0.374	54.2	0.331
32	47.4	0.404	41.6	0.476	51.2	0.338	52.9	0.328	58.1	0.377	46.9	0.384	55.5	0.339
33	48.3	0.411	42.5	0.487	52.6	0.347	54.1	0.335	59.5	0.386	48.1	0.394	56.7	0.346
34	49.1	0.418	43.4	0.497	53.9	0.356	55.4	0.343	60.8	0.395	49.2	0.403	57.9	0.353
35	50.1	0.426	44.2	0.506	55.1	0.364	56.7	0.351	62	0.403	50.2	0.412	59.2	0.361
36	51.1	0.436	45	0.515	56.3	0.372	57.9	0.359	63.2	0.41	51.2	0.42	60.6	0.37
37	52.2	0.444	46.1	0.528	57.4	0.379	59	0.365	64.3	0.418	52.2	0.428	61.9	0.378
38	53.1	0.453	47.2	0.54	58.4	0.386	60	0.372	65.6	0.426	53.1	0.435	63.2	0.385
39	54.4	0.463	48.3	0.552	59.4	0.392	61.1	0.378	66.9	0.435	53.9	0.442	64.4	0.393
40	55.6	0.473	49.2	0.563	60.3	0.399	62	0.384	68.3	0.443	54.7	0.448	65.5	0.4
41	56.7	0.483	50.2	0.574	61.2	0.404	62.9	0.39	69.5	0.452	55.9	0.458	66.6	0.406
42	57.8	0.492	51.1	0.584	62.4	0.412	64	0.396	70.9	0.461	57	0.468	67.7	0.413
43	58.8	0.501	51.9	0.594	63.5	0.419	65.3	0.405	72.4	0.47	58.1	0.477	68.6	0.419
44	59.8	0.509	52.7	0.603	64.6	0.426	66.5	0.412	73.9	0.48	59.2	0.485	70	0.427
45	60.7	0.517	53.5	0.612	65.7	0.434	67.7	0.42	75.3	0.489	60.2	0.493	71.3	0.435
46	61.6	0.525	54.2	0.62	67	0.442	68.8	0.427	76.6	0.497	61.1	0.501	72.5	0.442
47	62.5	0.532	54.9	0.628	68.1	0.45	69.9	0.433	77.9	0.506	62	0.509	73.7	0.449
48	63.3	0.539	55.6	0.636	69.3	0.458	71	0.44	79.1	0.513	62.9	0.516	74.8	0.456
49	64.1	0.546	56.2	0.644	70.7	0.467	72	0.446	80.2	0.521	63.8	0.523	75.9	0.463
50	64.9	0.553	56.9	0.651	72	0.475	72.9	0.452	81.3	0.528	64.9	0.532	77	0.469
51	65.6	0.559	57.5	0.658	73.2	0.484	74	0.458	82.4	0.535	66	0.541	78	0.475
52	66.3	0.565	58	0.664	74.4	0.492	75.1	0.466	83.8	0.544	67.1	0.55	78.9	0.481
53	67	0.57	58.6	0.671	75.6	0.499	76.2	0.472	85.1	0.553	68.2	0.559	79.8	0.487
54	67.6	0.576	59.1	0.677	76.7	0.507	77.3	0.479	86.4	0.561	69.1	0.567	80.7	0.492

TABLE 10.18 (Continued)
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Reactions

10-T18-3

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
55	68.2	0.581	59.6	0.683	77.8	0.514	78.5	0.487	87.6	0.569	70.1	0.575	81.9	0.499
56	68.8	0.586	60.1	0.688	78.8	0.521	79.7	0.494	88.8	0.577	71	0.582	83	0.506
57	69.4	0.591	60.6	0.694	79.8	0.527	80.9	0.501	89.9	0.584	71.9	0.59	84.1	0.513
58	70.2	0.598	61.1	0.699	80.8	0.534	82	0.508	91.1	0.591	72.8	0.597	85.2	0.52
59	71	0.605	61.5	0.704	81.7	0.54	83.1	0.515	92.1	0.598	73.6	0.604	86.2	0.526
60	71.8	0.612	62	0.709	82.6	0.546	84.1	0.521	93.2	0.605	74.4	0.61	87.2	0.532
61	72.6	0.618	62.4	0.714	83.5	0.552	85.2	0.528	94.1	0.611	75.2	0.617	88.2	0.538
62	73.3	0.624	62.8	0.718	84.4	0.557	86.1	0.534	95.1	0.618	76	0.623	89.1	0.544
63	74	0.63	63.2	0.723	85.2	0.563	87.1	0.54	96	0.624	76.7	0.629	90	0.549
64	74.7	0.636	63.6	0.727	86	0.568	88	0.545	97	0.63	77.4	0.635	90.9	0.554
65	75.3	0.642	63.9	0.731	86.7	0.573	88.9	0.551	97.8	0.635	78.1	0.64	91.8	0.56
66	76	0.647	64.3	0.735	87.7	0.579	89.8	0.556	98.7	0.641	78.8	0.646	92.6	0.565
67	76.6	0.652	64.6	0.739	88.7	0.586	90.6	0.561	99.5	0.646	79.4	0.651	93.4	0.569
68	77.2	0.657	65	0.743	89.6	0.592	91.4	0.566	100	0.651	80	0.656	94.2	0.574
69	77.8	0.662	65.3	0.747	90.5	0.598	92.2	0.571	101	0.656	80.6	0.661	94.9	0.579
70	78.3	0.667	65.6	0.751	91.3	0.603	93	0.576	102	0.661	81.2	0.666	95.6	0.583
71	78.9	0.672	65.9	0.754	92.2	0.609	93.7	0.581	103	0.666	81.8	0.671	96.3	0.588
72	79.4	0.676	66.2	0.757	93	0.614	94.5	0.585	103	0.671	82.4	0.675	97	0.592
73	79.9	0.681	66.5	0.761	93.8	0.62	95.2	0.59	104	0.675	82.9	0.68	97.7	0.596
74	80.4	0.685	66.8	0.764	94.6	0.625	95.8	0.594	105	0.68	83.4	0.684	98.4	0.6
75	80.9	0.689	67	0.767	95.3	0.63	96.5	0.598	105	0.684	83.9	0.688	99	0.604
76	81.4	0.694	67.3	0.77	96.1	0.635	97.2	0.602	106	0.688	84.4	0.692	99.6	0.607
77	81.9	0.697	67.6	0.773	96.8	0.639	97.8	0.606	107	0.692	84.9	0.696	100	0.611
78	82.3	0.701	67.8	0.776	97.5	0.644	98.4	0.61	107	0.696	85.4	0.7	101	0.615
79	82.8	0.705	68.1	0.779	98.2	0.649	99	0.614	108	0.7	85.9	0.704	101	0.618

TABLE 10.18 (Continued)
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Reactions

10-T18-4

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
80	83.2	0.709	68.3	0.782	98.9	0.653	99.6	0.617	108	0.704	86.3	0.708	102	0.622
81	83.6	0.712	68.6	0.784	99.5	0.657	100	0.621	109	0.707	86.8	0.711	102	0.625
82	84	0.716	68.8	0.787	100	0.661	101	0.624	109	0.711	87.2	0.715	103	0.629
83	84.4	0.719	69	0.79	101	0.666	101	0.628	110	0.714	87.6	0.718	104	0.634
84	84.8	0.723	69.2	0.792	101	0.67	102	0.631	111	0.718	88	0.722	105	0.638
85	85.2	0.726	69.4	0.795	102	0.673	102	0.634	111	0.721	88.4	0.725	105	0.642
86	85.6	0.729	69.7	0.797	103	0.677	103	0.637	112	0.724	88.8	0.728	106	0.647
87	86	0.732	69.9	0.799	103	0.681	104	0.642	112	0.728	89.2	0.731	107	0.651
88	86.3	0.735	70.1	0.802	104	0.685	104	0.646	113	0.731	89.6	0.734	107	0.655
89	86.7	0.738	70.2	0.804	104	0.688	105	0.65	113	0.734	89.9	0.737	108	0.658
90	87	0.741	70.4	0.806	105	0.692	105	0.654	113	0.737	90.3	0.74	109	0.662
91	87.3	0.744	70.6	0.808	105	0.695	106	0.657	114	0.74	90.6	0.743	109	0.666
92	87.7	0.747	70.8	0.81	106	0.698	107	0.661	114	0.742	91	0.746	110	0.67
93	88	0.75	71	0.812	106	0.701	107	0.665	115	0.745	91.3	0.749	110	0.673
94	88.3	0.752	71.2	0.814	107	0.705	108	0.668	115	0.748	91.6	0.751	111	0.677
95	88.6	0.755	71.3	0.816	107	0.708	108	0.672	116	0.75	92	0.754	112	0.68
96	88.9	0.757	71.5	0.818	108	0.711	109	0.675	116	0.753	92.3	0.756	112	0.683
97	89.2	0.76	71.7	0.82	108	0.714	110	0.679	116	0.756	92.6	0.759	113	0.687
98	89.5	0.762	71.8	0.822	109	0.717	110	0.682	117	0.758	92.9	0.761	113	0.69
99	89.8	0.765	72	0.824	109	0.72	111	0.685	117	0.761	93.2	0.764	114	0.693
100	90	0.767	72.1	0.825	109	0.722	111	0.688	117	0.763	93.5	0.766	114	0.696
101	90.3	0.769	72.3	0.827	110	0.725	112	0.691	118	0.765	93.7	0.768	115	0.699
102	90.6	0.772	72.4	0.829	110	0.728	112	0.694	118	0.768	94	0.771	115	0.702
103	90.8	0.774	72.6	0.83	111	0.73	113	0.697	119	0.77	94.3	0.773	116	0.705
104	91.1	0.776	72.7	0.832	111	0.733	113	0.7	119	0.772	94.6	0.775	116	0.708

TABLE 10.18 (Continued)
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Reactions

10-T18-5

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
	105	91.4	0.778	72.9	0.834	111	0.736	113	0.703	119	0.774	94.8	0.777	117
106	91.6	0.78	73	0.835	112	0.738	114	0.706	120	0.776	95.1	0.779	117	0.713
107	91.8	0.782	73.1	0.837	112	0.741	114	0.709	120	0.778	95.3	0.781	117	0.716
108	92.1	0.784	73.3	0.838	112	0.743	115	0.711	120	0.781	95.6	0.783	118	0.719
109	92.3	0.786	73.4	0.84	113	0.745	115	0.714	121	0.783	95.8	0.785	118	0.721
110	92.5	0.788	73.5	0.841	113	0.748	116	0.717	121	0.785	96.1	0.787	119	0.724
111	92.8	0.79	73.6	0.843	114	0.75	116	0.719	121	0.786	96.3	0.789	119	0.726
112	93	0.792	73.8	0.844	114	0.752	116	0.722	121	0.788	96.5	0.791	119	0.729
113	93.2	0.794	73.9	0.845	114	0.754	117	0.724	122	0.79	96.7	0.793	120	0.731
114	93.4	0.796	74	0.847	115	0.756	117	0.727	122	0.792	97	0.795	120	0.733
115	93.6	0.797	74.1	0.848	115	0.759	118	0.729	122	0.794	97.2	0.797	121	0.736
116	93.8	0.799	74.2	0.849	115	0.761	118	0.731	123	0.796	97.4	0.798	121	0.738
117	94	0.801	74.4	0.851	115	0.763	118	0.734	123	0.797	97.6	0.8	121	0.74
118	94.2	0.803	74.5	0.852	116	0.765	119	0.736	123	0.799	97.8	0.802	122	0.742
119	94.4	0.804	74.6	0.853	116	0.767	119	0.738	123	0.801	98	0.803	122	0.745
120	94.6	0.806	74.7	0.855	116	0.769	119	0.74	124	0.802	98.2	0.805	122	0.747
121	94.8	0.808	74.8	0.856	117	0.771	120	0.742	124	0.804	98.4	0.807	123	0.749
122	95	0.809	74.9	0.857	117	0.772	120	0.744	124	0.806	98.6	0.808	123	0.751
123	95.2	0.811	75	0.858	117	0.774	120	0.747	124	0.807	98.8	0.81	123	0.753
124	95.3	0.812	75.1	0.859	117	0.776	121	0.749	125	0.809	99	0.811	124	0.755
125	95.5	0.814	75.2	0.86	118	0.778	121	0.751	125	0.81	99.2	0.813	124	0.757
126	95.7	0.815	75.3	0.861	118	0.78	121	0.753	125	0.812	99.3	0.814	124	0.759
127	95.9	0.817	75.4	0.863	118	0.781	122	0.755	125	0.813	99.5	0.816	125	0.761
128	96	0.818	75.5	0.864	119	0.783	122	0.756	125	0.815	99.7	0.817	125	0.763
129	96.2	0.819	75.6	0.865	119	0.785	122	0.758	126	0.816	99.9	0.819	125	0.764

TABLE 10.18 (Continued)
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Reactions

10-T18-6

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
130	96.4	0.821	75.7	0.866	119	0.786	123	0.76	126	0.818	100	0.82	126	0.766
131	96.5	0.822	75.7	0.867	119	0.788	123	0.762	126	0.819	100	0.821	126	0.768
132	96.7	0.824	75.8	0.868	120	0.79	123	0.764	126	0.82	100	0.823	126	0.77
133	96.8	0.825	75.9	0.869	120	0.791	124	0.766	127	0.822	101	0.824	127	0.771
134	97	0.826	76	0.87	120	0.793	124	0.767	127	0.823	101	0.825	127	0.773
135	97.1	0.827	76.1	0.871	120	0.794	124	0.769	127	0.824	101	0.827	127	0.775
136	97.3	0.829	76.2	0.872	120	0.796	124	0.771	127	0.826	101	0.828	127	0.777
137	97.4	0.83	76.3	0.873	121	0.797	125	0.772	127	0.827	101	0.829	128	0.778
138	97.6	0.831	76.3	0.873	121	0.799	125	0.774	128	0.828	101	0.831	128	0.78
139	97.7	0.832	76.4	0.874	121	0.8	125	0.776	128	0.829	101	0.832	128	0.781
140	97.9	0.834	76.5	0.875	121	0.802	125	0.777	128	0.831	102	0.833	128	0.783
141	98	0.835	76.6	0.876	122	0.803	126	0.779	128	0.832	102	0.834	129	0.784
142	98.1	0.836	76.7	0.877	122	0.805	126	0.78	128	0.833	102	0.835	129	0.786
143	98.3	0.837	76.7	0.878	122	0.806	126	0.782	128	0.834	102	0.836	129	0.787
144	98.4	0.838	76.8	0.879	122	0.807	126	0.783	129	0.835	102	0.838	129	0.789
145	98.5	0.839	76.9	0.88	122	0.809	127	0.785	129	0.837	102	0.839	130	0.79
146	98.7	0.84	76.9	0.88	123	0.81	127	0.786	129	0.838	102	0.84	130	0.792
147	98.8	0.842	77	0.881	123	0.811	127	0.788	129	0.839	103	0.841	130	0.793
148	98.9	0.843	77.1	0.882	123	0.812	127	0.789	129	0.84	103	0.842	130	0.795
149	99	0.844	77.2	0.883	123	0.814	128	0.791	129	0.841	103	0.843	131	0.796
150	99.2	0.845	77.2	0.884	123	0.815	128	0.792	130	0.842	103	0.844	131	0.797
155	99.8	0.85	77.6	0.887	124	0.821	129	0.799	130	0.847	104	0.849	132	0.804
160	100	0.854	77.9	0.891	125	0.827	130	0.805	131	0.852	104	0.854	133	0.81
165	101	0.859	78.1	0.894	126	0.832	131	0.811	132	0.856	105	0.858	134	0.816
170	101	0.863	78.4	0.897	127	0.837	132	0.817	133	0.861	105	0.862	135	0.821

TABLE 10.18 (Continued)
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Reactions

SPAN	TRUCK # 19 Wt = 117.4 kips		TRUCK # 20 Wt = 87.4 kips		TRUCK # 21 Wt = 151.4 kips		TRUCK # 22 Wt = 161.4 kips		TRUCK # 23 Wt = 154 kips		TRUCK # 24 Wt = 122 kips		TRUCK # 25 Wt = 164 kips	
	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt
175	102	0.867	78.7	0.9	127	0.841	133	0.822	133	0.865	106	0.866	136	0.826
180	102	0.871	78.9	0.903	128	0.846	133	0.827	134	0.868	106	0.87	136	0.831
185	103	0.874	79.1	0.906	129	0.85	134	0.831	134	0.872	107	0.874	137	0.836
190	103	0.877	79.4	0.908	129	0.854	135	0.836	135	0.875	107	0.877	138	0.84
195	103	0.881	79.6	0.91	130	0.858	136	0.84	135	0.878	107	0.88	138	0.844
200	104	0.884	79.8	0.913	130	0.861	136	0.844	136	0.882	108	0.883	139	0.848
205	104	0.886	80	0.915	131	0.865	137	0.848	136	0.884	108	0.886	140	0.852
210	104	0.889	80.1	0.917	131	0.868	137	0.852	137	0.887	108	0.889	140	0.855
215	105	0.892	80.3	0.919	132	0.871	138	0.855	137	0.89	109	0.891	141	0.859
220	105	0.894	80.5	0.921	132	0.874	139	0.858	137	0.892	109	0.894	141	0.862
225	105	0.897	80.6	0.922	133	0.877	139	0.861	138	0.895	109	0.896	142	0.865
230	106	0.899	80.8	0.924	133	0.879	140	0.864	138	0.897	110	0.898	142	0.868
235	106	0.901	80.9	0.926	134	0.882	140	0.867	138	0.899	110	0.901	143	0.871
240	106	0.903	81	0.927	134	0.884	140	0.87	139	0.901	110	0.903	143	0.873
245	106	0.905	81.2	0.929	134	0.887	141	0.873	139	0.903	110	0.905	144	0.876
250	106	0.907	81.3	0.93	135	0.889	141	0.875	139	0.905	111	0.906	144	0.878
255	107	0.909	81.4	0.932	135	0.891	142	0.878	140	0.907	111	0.908	144	0.881
260	107	0.91	81.5	0.933	135	0.893	142	0.88	140	0.909	111	0.91	145	0.883
265	107	0.912	81.6	0.934	136	0.895	142	0.882	140	0.911	111	0.912	145	0.885
270	107	0.914	81.7	0.935	136	0.897	143	0.885	140	0.912	111	0.913	146	0.887
275	107	0.915	81.8	0.937	136	0.899	143	0.887	141	0.914	112	0.915	146	0.89
280	108	0.917	81.9	0.938	136	0.901	143	0.889	141	0.915	112	0.917	146	0.891
285	108	0.918	82	0.939	137	0.903	144	0.891	141	0.917	112	0.918	147	0.893
290	108	0.92	82.1	0.94	137	0.904	144	0.893	141	0.918	112	0.919	147	0.895
295	108	0.921	82.2	0.941	137	0.906	144	0.894	142	0.92	112	0.921	147	0.897
300	108	0.922	82.3	0.942	137	0.907	145	0.896	142	0.921	112	0.922	147	0.899

TABLE 10.18 (Continued)
Michigan Legal 3-Unit Truck Designated Loading - Simple Span Reactions

10-T18-7

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt
5	20	0.513	22.1	0.487	20.4	0.408	19.5	0.394	22.1	0.392	19.5	0.291
6	20	0.513	24.1	0.531	22.7	0.453	19.5	0.394	24.1	0.427	19.5	0.291
7	20	0.513	25.5	0.562	24.3	0.486	19.5	0.394	25.5	0.452	19.5	0.291
8	20	0.513	26.6	0.585	25.5	0.51	19.5	0.394	26.6	0.471	19.5	0.291
9	20	0.513	27.4	0.603	26.4	0.529	19.5	0.394	27.4	0.486	19.5	0.291
10	21.9	0.562	28.1	0.618	27.2	0.544	21.5	0.433	28.1	0.497	21.5	0.32
11	23.5	0.601	28.6	0.63	27.8	0.556	23	0.466	28.6	0.507	23	0.343
12	24.8	0.635	29	0.64	28.3	0.567	24.4	0.492	29	0.515	24.4	0.363
13	25.8	0.663	29.9	0.658	28.8	0.575	25.5	0.515	29.9	0.53	25.5	0.38
14	26.8	0.687	31	0.682	29.1	0.583	26.5	0.535	31	0.549	26.5	0.394
15	27.6	0.708	31.9	0.703	29.5	0.589	27.3	0.552	31.9	0.566	27.3	0.407
16	28.3	0.726	32.8	0.722	29.8	0.595	28	0.566	32.8	0.581	28	0.418
17	28.9	0.742	33.5	0.738	30	0.6	28.7	0.579	33.5	0.594	28.7	0.427
18	29.5	0.756	34.2	0.753	30.2	0.604	29.3	0.591	34.2	0.606	29.3	0.436
19	30	0.769	34.8	0.766	30.4	0.608	30.3	0.612	34.8	0.617	30.3	0.452
20	30.5	0.781	35.3	0.778	31.4	0.628	31.3	0.632	35.3	0.626	31.3	0.466
21	30.9	0.791	35.8	0.788	32.3	0.646	32.1	0.649	35.8	0.634	32.1	0.479
22	31.2	0.801	36.2	0.798	33.1	0.662	32.9	0.665	36.5	0.647	33.2	0.494
23	31.6	0.809	36.6	0.807	33.8	0.677	33.7	0.68	37.3	0.662	34.3	0.512
24	31.9	0.817	37	0.815	34.5	0.69	34.3	0.693	38.1	0.676	35.4	0.528
25	32.2	0.825	37.3	0.822	35.1	0.702	34.9	0.706	38.9	0.689	36.4	0.542
26	32.4	0.831	37.6	0.829	35.7	0.714	35.5	0.717	39.5	0.701	37.3	0.556
27	32.7	0.838	37.9	0.835	36.2	0.724	36	0.727	40.2	0.712	38.1	0.568
28	32.9	0.843	38.2	0.841	36.7	0.734	36.5	0.737	40.7	0.722	38.9	0.58
29	33.1	0.849	38.4	0.847	37.2	0.743	36.9	0.746	41.3	0.732	39.6	0.591

TABLE 10.19

Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Reactions

10-T19-1

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt
30	33.3	0.854	38.7	0.852	37.6	0.752	37.4	0.755	41.8	0.741	40.3	0.601
31	33.5	0.859	38.9	0.857	38	0.76	37.7	0.763	42.3	0.749	41.1	0.612
32	33.7	0.863	39.1	0.861	38.4	0.768	38.1	0.77	42.7	0.757	41.9	0.624
33	33.8	0.867	39.3	0.865	38.7	0.775	38.5	0.777	43.1	0.764	42.7	0.636
34	34	0.871	39.5	0.869	39.1	0.781	38.8	0.783	43.5	0.771	43.4	0.646
35	34.1	0.875	39.6	0.873	39.4	0.787	39.1	0.79	43.9	0.778	44	0.657
36	34.3	0.878	39.8	0.876	39.7	0.793	39.4	0.796	44.2	0.784	44.7	0.666
37	34.4	0.882	39.9	0.88	39.9	0.799	39.6	0.801	44.5	0.79	45.3	0.675
38	34.5	0.885	40.1	0.883	40.2	0.804	39.9	0.806	44.9	0.795	45.9	0.684
39	34.6	0.888	40.2	0.886	40.5	0.809	40.2	0.811	45.2	0.801	46.4	0.692
40	34.7	0.89	40.4	0.889	40.7	0.814	40.4	0.816	45.4	0.806	46.9	0.699
41	34.8	0.893	40.5	0.892	40.9	0.819	40.6	0.82	45.7	0.81	47.4	0.707
42	34.9	0.896	40.6	0.894	41.1	0.823	40.8	0.825	46	0.815	47.9	0.714
43	35	0.898	40.7	0.897	41.3	0.827	41	0.829	46.2	0.819	48.3	0.72
44	35.1	0.9	40.8	0.899	41.5	0.831	41.2	0.833	46.4	0.823	48.8	0.727
45	35.2	0.903	40.9	0.901	41.7	0.835	41.4	0.836	46.7	0.827	49.2	0.733
46	35.3	0.905	41	0.903	41.9	0.838	41.6	0.84	46.9	0.831	49.6	0.739
47	35.4	0.907	41.1	0.905	42.1	0.842	41.7	0.843	47.1	0.835	49.9	0.744
48	35.4	0.909	41.2	0.907	42.3	0.845	41.9	0.847	47.3	0.838	50.3	0.75
49	35.5	0.911	41.3	0.909	42.4	0.848	42.1	0.85	47.5	0.841	50.6	0.755
50	35.6	0.912	41.4	0.911	42.6	0.851	42.2	0.853	47.6	0.845	51	0.76
51	35.6	0.914	41.4	0.913	42.7	0.854	42.4	0.856	47.8	0.848	51.3	0.764
52	35.7	0.916	41.5	0.914	42.8	0.857	42.5	0.858	48	0.851	51.6	0.769
53	35.8	0.917	41.6	0.916	43	0.86	42.6	0.861	48.1	0.853	51.9	0.773
54	35.8	0.919	41.7	0.918	43.1	0.862	42.8	0.864	48.3	0.856	52.2	0.777

TABLE 10.19 (Continued)
Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Reactions

10-T19-2

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
55	35.9	0.92	41.7	0.919	43.2	0.865	42.9	0.866	48.4	0.859	52.4	0.781
56	35.9	0.922	41.8	0.921	43.4	0.867	43	0.869	48.6	0.861	52.7	0.785
57	36	0.923	41.9	0.922	43.5	0.87	43.1	0.871	48.7	0.864	52.9	0.789
58	36.1	0.924	41.9	0.923	43.6	0.872	43.2	0.873	48.8	0.866	53.2	0.793
59	36.1	0.926	42	0.925	43.7	0.874	43.3	0.875	49	0.868	53.4	0.796
60	36.2	0.927	42	0.926	43.8	0.876	43.4	0.877	49.1	0.87	53.7	0.8
61	36.2	0.928	42.1	0.927	43.9	0.878	43.5	0.879	49.2	0.873	53.9	0.803
62	36.2	0.929	42.1	0.928	44	0.88	43.6	0.881	49.3	0.875	54.1	0.806
63	36.3	0.93	42.2	0.929	44.1	0.882	43.7	0.883	49.4	0.877	54.3	0.809
64	36.3	0.932	42.2	0.931	44.2	0.884	43.8	0.885	49.5	0.879	54.5	0.812
65	36.4	0.933	42.3	0.932	44.3	0.886	43.9	0.887	49.7	0.88	54.7	0.815
66	36.4	0.934	42.3	0.933	44.4	0.887	44	0.888	49.8	0.882	54.9	0.818
67	36.4	0.935	42.4	0.934	44.4	0.889	44.1	0.89	49.9	0.884	55.1	0.821
68	36.5	0.936	42.4	0.935	44.5	0.891	44.1	0.892	50	0.886	55.2	0.823
69	36.5	0.937	42.5	0.936	44.6	0.892	44.2	0.893	50	0.887	55.4	0.826
70	36.6	0.937	42.5	0.936	44.7	0.894	44.3	0.895	50.1	0.889	55.6	0.828
71	36.6	0.938	42.6	0.937	44.8	0.895	44.4	0.896	50.2	0.891	55.7	0.831
72	36.6	0.939	42.6	0.938	44.8	0.897	44.4	0.898	50.3	0.892	55.9	0.833
73	36.7	0.94	42.6	0.939	44.9	0.898	44.5	0.899	50.4	0.894	56	0.835
74	36.7	0.941	42.7	0.94	45	0.9	44.6	0.901	50.5	0.895	56.2	0.838
75	36.7	0.942	42.7	0.941	45	0.901	44.6	0.902	50.6	0.896	56.3	0.84
76	36.8	0.942	42.7	0.942	45.1	0.902	44.7	0.903	50.6	0.898	56.5	0.842
77	36.8	0.943	42.8	0.942	45.2	0.903	44.8	0.904	50.7	0.899	56.6	0.844
78	36.8	0.944	42.8	0.943	45.2	0.905	44.8	0.906	50.8	0.9	56.8	0.846
79	36.8	0.945	42.8	0.944	45.3	0.906	44.9	0.907	50.8	0.902	56.9	0.848

TABLE 10.19 (Continued)

Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Reactions

10-T19-3

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
80	36.9	0.945	42.9	0.944	45.4	0.907	44.9	0.908	50.9	0.903	57	0.85
81	36.9	0.946	42.9	0.945	45.4	0.908	45	0.909	51	0.904	57.1	0.852
82	36.9	0.947	42.9	0.946	45.5	0.909	45.1	0.91	51.1	0.905	57.3	0.853
83	36.9	0.947	43	0.946	45.5	0.91	45.1	0.911	51.1	0.906	57.4	0.855
84	37	0.948	43	0.947	45.6	0.911	45.2	0.912	51.2	0.907	57.5	0.857
85	37	0.948	43	0.948	45.6	0.913	45.2	0.913	51.2	0.909	57.6	0.859
86	37	0.949	43.1	0.948	45.7	0.914	45.3	0.914	51.3	0.91	57.7	0.86
87	37	0.95	43.1	0.949	45.7	0.915	45.3	0.915	51.4	0.911	57.8	0.862
88	37.1	0.95	43.1	0.949	45.8	0.916	45.4	0.916	51.4	0.912	57.9	0.863
89	37.1	0.951	43.1	0.95	45.8	0.916	45.4	0.917	51.5	0.913	58	0.865
90	37.1	0.951	43.2	0.951	45.9	0.917	45.5	0.918	51.5	0.914	58.1	0.866
91	37.1	0.952	43.2	0.951	45.9	0.918	45.5	0.919	51.6	0.915	58.2	0.868
92	37.1	0.952	43.2	0.952	46	0.919	45.5	0.92	51.6	0.916	58.3	0.869
93	37.2	0.953	43.2	0.952	46	0.92	45.6	0.921	51.7	0.916	58.4	0.871
94	37.2	0.953	43.3	0.953	46	0.921	45.6	0.922	51.7	0.917	58.5	0.872
95	37.2	0.954	43.3	0.953	46.1	0.922	45.7	0.923	51.8	0.918	58.6	0.873
96	37.2	0.954	43.3	0.954	46.1	0.923	45.7	0.923	51.8	0.919	58.7	0.875
97	37.2	0.955	43.3	0.954	46.2	0.923	45.7	0.924	51.9	0.92	58.8	0.876
98	37.3	0.955	43.3	0.955	46.2	0.924	45.8	0.925	51.9	0.921	58.9	0.877
99	37.3	0.956	43.4	0.955	46.2	0.925	45.8	0.926	52	0.922	59	0.879
100	37.3	0.956	43.4	0.956	46.3	0.926	45.9	0.926	52	0.922	59	0.88
101	37.3	0.957	43.4	0.956	46.3	0.926	45.9	0.927	52.1	0.923	59.1	0.881
102	37.3	0.957	43.4	0.956	46.4	0.927	45.9	0.928	52.1	0.924	59.2	0.882
103	37.3	0.957	43.4	0.957	46.4	0.928	46	0.929	52.1	0.925	59.3	0.883
104	37.4	0.958	43.5	0.957	46.4	0.929	46	0.929	52.2	0.925	59.3	0.884

TABLE 10.19 (Continued)
Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Reactions

10-T19-4

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt	V TRUCK	V/Wt
105	37.4	0.958	43.5	0.958	46.5	0.929	46	0.93	52.2	0.926	59.4	0.886
106	37.4	0.959	43.5	0.958	46.5	0.93	46.1	0.931	52.3	0.927	59.5	0.887
107	37.4	0.959	43.5	0.958	46.5	0.931	46.1	0.931	52.3	0.927	59.6	0.888
108	37.4	0.959	43.5	0.959	46.6	0.931	46.1	0.932	52.3	0.928	59.6	0.889
109	37.4	0.96	43.5	0.959	46.6	0.932	46.2	0.932	52.4	0.929	59.7	0.89
110	37.4	0.96	43.6	0.96	46.6	0.932	46.2	0.933	52.4	0.929	59.8	0.891
111	37.5	0.961	43.6	0.96	46.6	0.933	46.2	0.934	52.4	0.93	59.8	0.892
112	37.5	0.961	43.6	0.96	46.7	0.934	46.2	0.934	52.5	0.931	59.9	0.893
113	37.5	0.961	43.6	0.961	46.7	0.934	46.3	0.935	52.5	0.931	60	0.894
114	37.5	0.962	43.6	0.961	46.7	0.935	46.3	0.935	52.6	0.932	60	0.895
115	37.5	0.962	43.6	0.961	46.8	0.935	46.3	0.936	52.6	0.932	60.1	0.895
116	37.5	0.962	43.7	0.962	46.8	0.936	46.4	0.937	52.6	0.933	60.1	0.896
117	37.5	0.963	43.7	0.962	46.8	0.936	46.4	0.937	52.7	0.934	60.2	0.897
118	37.6	0.963	43.7	0.962	46.8	0.937	46.4	0.938	52.7	0.934	60.3	0.898
119	37.6	0.963	43.7	0.963	46.9	0.938	46.4	0.938	52.7	0.935	60.3	0.899
120	37.6	0.964	43.7	0.963	46.9	0.938	46.5	0.939	52.7	0.935	60.4	0.9
121	37.6	0.964	43.7	0.963	46.9	0.939	46.5	0.939	52.8	0.936	60.4	0.901
122	37.6	0.964	43.7	0.964	47	0.939	46.5	0.94	52.8	0.936	60.5	0.901
123	37.6	0.964	43.8	0.964	47	0.94	46.5	0.94	52.8	0.937	60.5	0.902
124	37.6	0.965	43.8	0.964	47	0.94	46.6	0.941	52.9	0.937	60.6	0.903
125	37.6	0.965	43.8	0.964	47	0.941	46.6	0.941	52.9	0.938	60.6	0.904
126	37.6	0.965	43.8	0.965	47	0.941	46.6	0.942	52.9	0.938	60.7	0.905
127	37.7	0.966	43.8	0.965	47.1	0.941	46.6	0.942	52.9	0.939	60.7	0.905
128	37.7	0.966	43.8	0.965	47.1	0.942	46.7	0.943	53	0.939	60.8	0.906
129	37.7	0.966	43.8	0.966	47.1	0.942	46.7	0.943	53	0.94	60.8	0.907

TABLE 10.19 (Continued)

Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Reactions

10-T19-5

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
130	37.7	0.966	43.8	0.966	47.1	0.943	46.7	0.943	53	0.94	60.9	0.908
131	37.7	0.967	43.9	0.966	47.2	0.943	46.7	0.944	53.1	0.941	60.9	0.908
132	37.7	0.967	43.9	0.966	47.2	0.944	46.7	0.944	53.1	0.941	61	0.909
133	37.7	0.967	43.9	0.967	47.2	0.944	46.8	0.945	53.1	0.942	61	0.91
134	37.7	0.967	43.9	0.967	47.2	0.945	46.8	0.945	53.1	0.942	61.1	0.91
135	37.7	0.968	43.9	0.967	47.2	0.945	46.8	0.946	53.2	0.942	61.1	0.911
136	37.7	0.968	43.9	0.967	47.3	0.945	46.8	0.946	53.2	0.943	61.2	0.912
137	37.8	0.968	43.9	0.968	47.3	0.946	46.8	0.946	53.2	0.943	61.2	0.912
138	37.8	0.968	43.9	0.968	47.3	0.946	46.9	0.947	53.2	0.944	61.3	0.913
139	37.8	0.969	43.9	0.968	47.3	0.947	46.9	0.947	53.2	0.944	61.3	0.914
140	37.8	0.969	44	0.968	47.3	0.947	46.9	0.947	53.3	0.945	61.3	0.914
141	37.8	0.969	44	0.968	47.4	0.947	46.9	0.948	53.3	0.945	61.4	0.915
142	37.8	0.969	44	0.969	47.4	0.948	46.9	0.948	53.3	0.945	61.4	0.915
143	37.8	0.969	44	0.969	47.4	0.948	47	0.949	53.3	0.946	61.5	0.916
144	37.8	0.97	44	0.969	47.4	0.948	47	0.949	53.4	0.946	61.5	0.917
145	37.8	0.97	44	0.969	47.4	0.949	47	0.949	53.4	0.946	61.5	0.917
146	37.8	0.97	44	0.97	47.5	0.949	47	0.95	53.4	0.947	61.6	0.918
147	37.8	0.97	44	0.97	47.5	0.949	47	0.95	53.4	0.947	61.6	0.918
148	37.8	0.97	44	0.97	47.5	0.95	47	0.95	53.4	0.948	61.6	0.919
149	37.9	0.971	44	0.97	47.5	0.95	47.1	0.951	53.5	0.948	61.7	0.919
150	37.9	0.971	44.1	0.97	47.5	0.95	47.1	0.951	53.5	0.948	61.7	0.92
155	37.9	0.972	44.1	0.971	47.6	0.952	47.1	0.953	53.6	0.95	61.9	0.922
160	37.9	0.973	44.1	0.972	47.7	0.954	47.2	0.954	53.7	0.951	62.1	0.925
165	38	0.973	44.2	0.973	47.7	0.955	47.3	0.955	53.7	0.953	62.2	0.927
170	38	0.974	44.2	0.974	47.8	0.956	47.4	0.957	53.8	0.954	62.4	0.929

TABLE 10.19 (Continued)
Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Reactions

10-T19-6

SPAN	1 UNIT TRUCKS						2 UNIT TRUCKS					
	TRUCK # 1 Wt = 39 kips		TRUCK # 2 Wt = 45.4 kips		TRUCK # 26 Wt = 50 kips		TRUCK # 9 Wt = 49.5 kips		TRUCK # 10 Wt = 56.4 kips		TRUCK # 11 Wt = 67.1 kips	
	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt	V _{TRUCK}	V/Wt
175	38	0.975	44.2	0.975	47.9	0.958	47.4	0.958	53.9	0.956	62.5	0.931
180	38.1	0.976	44.3	0.975	47.9	0.959	47.5	0.959	54	0.957	62.6	0.933
185	38.1	0.976	44.3	0.976	48	0.96	47.5	0.96	54	0.958	62.7	0.935
190	38.1	0.977	44.3	0.977	48	0.961	47.6	0.961	54.1	0.959	62.9	0.937
195	38.1	0.978	44.4	0.977	48.1	0.962	47.6	0.962	54.2	0.96	63	0.938
200	38.1	0.978	44.4	0.978	48.1	0.963	47.7	0.963	54.2	0.961	63.1	0.94
205	38.2	0.979	44.4	0.978	48.2	0.964	47.7	0.964	54.3	0.962	63.2	0.941
210	38.2	0.979	44.4	0.979	48.2	0.965	47.8	0.965	54.3	0.963	63.3	0.943
215	38.2	0.98	44.5	0.979	48.3	0.965	47.8	0.966	54.4	0.964	63.3	0.944
220	38.2	0.98	44.5	0.98	48.3	0.966	47.8	0.967	54.4	0.965	63.4	0.945
225	38.2	0.981	44.5	0.98	48.3	0.967	47.9	0.967	54.5	0.965	63.5	0.947
230	38.3	0.981	44.5	0.981	48.4	0.968	47.9	0.968	54.5	0.966	63.6	0.948
235	38.3	0.981	44.5	0.981	48.4	0.968	47.9	0.969	54.5	0.967	63.7	0.949
240	38.3	0.982	44.6	0.982	48.5	0.969	48	0.969	54.6	0.968	63.7	0.95
245	38.3	0.982	44.6	0.982	48.5	0.97	48	0.97	54.6	0.968	63.8	0.951
250	38.3	0.983	44.6	0.982	48.5	0.97	48	0.971	54.6	0.969	63.9	0.952
255	38.3	0.983	44.6	0.983	48.5	0.971	48.1	0.971	54.7	0.97	63.9	0.953
260	38.3	0.983	44.6	0.983	48.6	0.971	48.1	0.972	54.7	0.97	64	0.954
265	38.4	0.984	44.6	0.983	48.6	0.972	48.1	0.972	54.7	0.971	64.1	0.955
270	38.4	0.984	44.7	0.984	48.6	0.972	48.2	0.973	54.8	0.971	64.1	0.956
275	38.4	0.984	44.7	0.984	48.6	0.973	48.2	0.973	54.8	0.972	64.2	0.956
280	38.4	0.984	44.7	0.984	48.7	0.973	48.2	0.974	54.8	0.972	64.2	0.957
285	38.4	0.985	44.7	0.984	48.7	0.974	48.2	0.974	54.9	0.973	64.3	0.958
290	38.4	0.985	44.7	0.985	48.7	0.974	48.2	0.975	54.9	0.973	64.3	0.959
295	38.4	0.985	44.7	0.985	48.7	0.975	48.3	0.975	54.9	0.974	64.4	0.959
300	38.4	0.985	44.7	0.985	48.8	0.975	48.3	0.976	54.9	0.974	64.4	0.96

TABLE 10.19 (Continued)

Michigan Legal 1 and 2 Unit Truck Special Designated Loading - Simple Span Reactions

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	SHEAR	SPAN	SHEAR	SPAN	SHEAR	SPAN	SHEAR	SPAN	SHEAR
5	32 (T)	40	38.8 (L)	75	50 (L)	110	61.2 (L)	145	72.4 (L)
6	32 (T)	41	39.1 (L)	76	50.3 (L)	111	61.5 (L)	146	72.7 (L)
7	32 (T)	42	39.4 (L)	77	50.6 (L)	112	61.8 (L)	147	73 (L)
8	32 (T)	43	39.8 (L)	78	51 (L)	113	62.2 (L)	148	73.4 (L)
9	32 (T)	44	40.1 (L)	79	51.3 (L)	114	62.5 (L)	149	73.7 (L)
10	32 (T)	45	40.4 (L)	80	51.6 (L)	115	62.8 (L)	150	74 (L)
11	32 (T)	46	40.7 (L)	81	51.9 (L)	116	63.1 (L)	155	75.6 (L)
12	32 (T)	47	41 (L)	82	52.2 (L)	117	63.4 (L)	160	77.2 (L)
13	32 (T)	48	41.4 (L)	83	52.6 (L)	118	63.8 (L)	165	78.8 (L)
14	32 (T)	49	41.7 (L)	84	52.9 (L)	119	64.1 (L)	170	80.4 (L)
15	32.5 (T)	50	42 (L)	85	53.2 (L)	120	64.4 (L)	175	82 (L)
16	33 (T)	51	42.3 (L)	86	53.5 (L)	121	64.7 (L)	180	83.6 (L)
17	33.4 (T)	52	42.6 (L)	87	53.8 (L)	122	65 (L)	185	85.2 (L)
18	33.8 (T)	53	43 (L)	88	54.2 (L)	123	65.4 (L)	190	86.8 (L)
19	34.1 (T)	54	43.3 (L)	89	54.5 (L)	124	65.7 (L)	195	88.4 (L)
20	34.4 (T)	55	43.6 (L)	90	54.8 (L)	125	66 (L)	200	90 (L)
21	34.7 (T)	56	43.9 (L)	91	55.1 (L)	126	66.3 (L)	205	91.6 (L)
22	34.9 (T)	57	44.2 (L)	92	55.4 (L)	127	66.6 (L)	210	93.2 (L)
23	35.1 (T)	58	44.6 (L)	93	55.8 (L)	128	67 (L)	215	94.8 (L)
24	35.3 (T)	59	44.9 (L)	94	56.1 (L)	129	67.3 (L)	220	96.4 (L)
25	35.5 (T)	60	45.2 (L)	95	56.4 (L)	130	67.6 (L)	225	98 (L)
26	35.7 (T)	61	45.5 (L)	96	56.7 (L)	131	67.9 (L)	230	99.6 (L)
27	35.9 (T)	62	45.8 (L)	97	57 (L)	132	68.2 (L)	235	101 (L)
28	36 (T)	63	46.2 (L)	98	57.4 (L)	133	68.6 (L)	240	103 (L)
29	36.1 (T)	64	46.5 (L)	99	57.7 (L)	134	68.9 (L)	245	104 (L)
30	36.3 (T)	65	46.8 (L)	100	58 (L)	135	69.2 (L)	250	106 (L)
31	36.4 (T)	66	47.1 (L)	101	58.3 (L)	136	69.5 (L)	255	108 (L)
32	36.5 (T)	67	47.4 (L)	102	58.6 (L)	137	69.8 (L)	260	109 (L)
33	36.6 (T)	68	47.8 (L)	103	59 (L)	138	70.2 (L)	265	111 (L)
34	36.9 (L)	69	48.1 (L)	104	59.3 (L)	139	70.5 (L)	270	112 (L)
35	37.2 (L)	70	48.4 (L)	105	59.6 (L)	140	70.8 (L)	275	114 (L)
36	37.5 (L)	71	48.7 (L)	106	59.9 (L)	141	71.1 (L)	280	116 (L)
37	37.8 (L)	72	49 (L)	107	60.2 (L)	142	71.4 (L)	285	117 (L)
38	38.2 (L)	73	49.4 (L)	108	60.6 (L)	143	71.8 (L)	290	119 (L)
39	38.5 (L)	74	49.7 (L)	109	60.9 (L)	144	72.1 (L)	295	120 (L)
								300	122 (L)

Notes:

(T) Denotes the maximum value is controlled by standard truck loading.

(L) Denotes the maximum value is controlled by standard lane loading.

**TABLE 10.20
H20 Truck - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	SHEAR	SPAN	SHEAR	SPAN	SHEAR	SPAN	SHEAR	SPAN	SHEAR
5	32 (T)	40	55.2 (T)	75	63 (T)	110	65.9 (T)	145	72.4 (L)
6	32 (T)	41	55.6 (T)	76	63.2 (T)	111	65.9 (T)	146	72.7 (L)
7	32 (T)	42	56 (T)	77	63.3 (T)	112	66 (T)	147	73 (L)
8	32 (T)	43	56.4 (T)	78	63.4 (T)	113	66.1 (T)	148	73.4 (L)
9	32 (T)	44	56.7 (T)	79	63.5 (T)	114	66.1 (T)	149	73.7 (L)
10	32 (T)	45	57.1 (T)	80	63.6 (T)	115	66.2 (T)	150	74 (L)
11	32 (T)	46	57.4 (T)	81	63.7 (T)	116	66.2 (T)	155	75.6 (L)
12	32 (T)	47	57.7 (T)	82	63.8 (T)	117	66.3 (T)	160	77.2 (L)
13	32 (T)	48	58 (T)	83	63.9 (T)	118	66.3 (T)	165	78.8 (L)
14	32 (T)	49	58.3 (T)	84	64 (T)	119	66.4 (T)	170	80.4 (L)
15	34.1 (T)	50	58.6 (T)	85	64.1 (T)	120	66.4 (T)	175	82 (L)
16	36 (T)	51	58.8 (T)	86	64.2 (T)	121	66.4 (T)	180	83.6 (L)
17	37.6 (T)	52	59.1 (T)	87	64.3 (T)	122	66.5 (T)	185	85.2 (L)
18	39.1 (T)	53	59.3 (T)	88	64.4 (T)	123	66.5 (T)	190	86.8 (L)
19	40.4 (T)	54	59.6 (T)	89	64.4 (T)	124	66.6 (T)	195	88.4 (L)
20	41.6 (T)	55	59.8 (T)	90	64.5 (T)	125	66.6 (T)	200	90 (L)
21	42.7 (T)	56	60 (T)	91	64.6 (T)	126	66.7 (T)	205	91.6 (L)
22	43.6 (T)	57	60.2 (T)	92	64.7 (T)	127	66.7 (T)	210	93.2 (L)
23	44.5 (T)	58	60.4 (T)	93	64.8 (T)	128	67 (L)	215	94.8 (L)
24	45.3 (T)	59	60.6 (T)	94	64.9 (T)	129	67.3 (L)	220	96.4 (L)
25	46.1 (T)	60	60.8 (T)	95	64.9 (T)	130	67.6 (L)	225	98 (L)
26	46.8 (T)	61	61 (T)	96	65 (T)	131	67.9 (L)	230	99.6 (L)
27	47.4 (T)	62	61.2 (T)	97	65.1 (T)	132	68.2 (L)	235	101 (L)
28	48 (T)	63	61.3 (T)	98	65.1 (T)	133	68.6 (L)	240	103 (L)
29	48.8 (T)	64	61.5 (T)	99	65.2 (T)	134	68.9 (L)	245	104 (L)
30	49.6 (T)	65	61.7 (T)	100	65.3 (T)	135	69.2 (L)	250	106 (L)
31	50.3 (T)	66	61.8 (T)	101	65.3 (T)	136	69.5 (L)	255	108 (L)
32	51 (T)	67	62 (T)	102	65.4 (T)	137	69.8 (L)	260	109 (L)
33	51.6 (T)	68	62.1 (T)	103	65.5 (T)	138	70.2 (L)	265	111 (L)
34	52.2 (T)	69	62.3 (T)	104	65.5 (T)	139	70.5 (L)	270	112 (L)
35	52.8 (T)	70	62.4 (T)	105	65.6 (T)	140	70.8 (L)	275	114 (L)
36	53.3 (T)	71	62.5 (T)	106	65.7 (T)	141	71.1 (L)	280	116 (L)
37	53.8 (T)	72	62.7 (T)	107	65.7 (T)	142	71.4 (L)	285	117 (L)
38	54.3 (T)	73	62.8 (T)	108	65.8 (T)	143	71.8 (L)	290	119 (L)
39	54.8 (T)	74	62.9 (T)	109	65.8 (T)	144	72.1 (L)	295	120 (L)
								300	122 (L)

Notes:

(T) Denotes the maximum value is controlled by standard truck loading.

(L) Denotes the maximum value is controlled by standard lane loading.

**TABLE 10.21
HS20 Truck - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
5	60	60	60	60	60	50.4	50.6	37.4	36.3	31.9
6	60	60	60	60	60	56	57.5	42.5	41.3	36.3
7	60	60	60	60	60	60	62.4	46.1	44.8	39.4
8	60	60	60	60	60	63	66.1	48.9	47.4	41.7
9	60	60	60	60	60	65.3	69	51	49.5	43.5
10	60	60	60	60	60	67.2	71.3	56.1	54.5	47.9
11	60	60	60	60	60	68.7	73.2	60.3	58.5	51.4
12	60	60	60	60	65	70	74.8	63.8	61.9	54.4
13	60	60	60	60	69.2	71.1	76.1	66.7	64.7	56.9
14	60	60	60	60	72.9	72	77.2	69.2	67.2	60.1
15	60	60	60	64	76	72.8	78.2	71.4	69.3	63.8
16	60	60	60	67.5	78.8	73.5	79.1	73.3	71.2	67.1
17	60	60	60	70.6	81.2	76.6	80.5	75	72.8	69.9
18	60	60	60	73.3	83.3	79.3	82.4	76.5	74.3	72.5
19	60	60	60	75.8	85.3	81.8	84.1	77.8	75.6	74.8
20	60	60	60	78	87	84	85.7	79.1	77.7	76.9
21	60	60	62.9	80	88.6	86	87.1	80.1	79.7	78.7
22	60	60	65.5	81.8	90	87.8	89.4	82.2	81.5	80.4
23	60	60	67.8	83.5	91.3	89.5	91.5	84.1	83.1	82
24	60	60	70	85	92.5	91	93.4	85.9	85	83.4
25	60	60	72	86.4	93.6	92.4	95.2	87.4	87.1	84.7
26	60	62.3	73.8	87.7	94.6	93.7	96.9	89.4	89.1	86.3
27	60	64.4	75.6	88.9	95.6	94.9	98.4	91.6	90.9	88.1
28	60	66.4	77.1	90	96.4	96	99.8	93.7	92.6	89.8
29	60	68.3	78.6	91	97.2	97	101	95.6	94.9	91.5
30	60	70	80	92	98	98	102	97.4	97	92.9
31	61.9	71.6	81.3	92.9	98.7	98.9	104	99.1	99	95
32	63.8	73.1	82.5	93.8	99.4	99.8	105	101	101	96.9
33	65.5	74.5	83.6	94.5	100	101	106	102	103	98.7
34	67.1	75.9	84.7	95.3	101	101	107	104	104	100
35	68.6	77.1	85.7	96	101	102	107	105	106	102
36	70	78.3	86.7	96.7	102	103	108	106	107	104
37	71.4	79.5	87.6	97.3	102	103	109	107	109	106
38	72.6	80.5	88.4	97.9	103	104	110	108	110	108
39	73.8	81.5	89.2	98.5	103	104	111	109	111	110
40	75	82.5	90	99	104	105	111	110	112	112
41	76.1	83.4	90.7	99.5	104	106	112	111	113	113
42	77.1	84.3	91.4	100	104	106	113	112	115	115
43	78.1	85.1	92.1	100	105	106	113	113	116	116
44	79.1	85.9	92.7	101	105	107	114	114	117	118
45	80	86.7	93.3	101	105	107	114	115	117	119
46	80.9	87.4	93.9	102	106	108	115	116	118	120
47	81.7	88.1	94.5	102	106	108	115	116	119	121
48	82.5	88.8	95	103	106	109	116	117	120	123
49	83.3	89.4	95.5	103	107	109	116	118	121	124

**TABLE 10.22
Standard Permit Vehicles - Class A - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
50	84	90	96	103	107	109	117	118	122	125
51	84.7	90.6	96.5	104	107	110	117	119	122	126
52	85.4	91.2	96.9	104	107	110	117	119	123	127
53	86	91.7	97.4	104	108	110	118	120	124	128
54	86.7	92.2	97.8	104	108	110	118	121	124	129
55	87.3	92.7	98.2	105	108	111	119	121	125	129
56	87.9	93.2	98.6	105	108	111	119	122	126	130
57	88.4	93.7	98.9	105	108	111	119	122	126	131
58	89	94.1	99.3	106	109	112	120	123	127	132
59	89.5	94.6	99.7	106	109	112	120	123	127	133
60	90	95	100	106	109	112	120	124	128	133
61	90.5	95.4	100	106	109	112	120	124	128	134
62	91	95.8	101	106	109	112	121	124	129	135
63	91.4	96.2	101	107	110	113	121	125	129	135
64	91.9	96.6	101	107	110	113	121	125	130	136
65	92.3	96.9	102	107	110	113	122	126	130	137
66	92.7	97.3	102	107	110	113	122	126	131	137
67	93.1	97.6	102	107	110	113	122	126	131	138
68	93.5	97.9	102	108	110	114	122	127	131	139
69	93.9	98.3	103	108	110	114	123	127	132	139
70	94.3	98.6	103	108	111	114	123	127	132	140
71	94.6	98.9	103	108	111	114	123	128	132	140
72	95	99.2	103	108	111	114	123	128	133	141
73	95.3	99.5	104	108	111	114	123	128	133	141
74	95.7	99.7	104	109	111	115	124	128	134	142
75	96	100	104	109	111	115	124	129	134	142
76	96.3	100	104	109	111	115	124	129	134	143
77	96.6	101	104	109	111	115	124	129	134	143
78	96.9	101	105	109	112	115	124	130	135	143
79	97.2	101	105	109	112	115	124	130	135	144
80	97.5	101	105	110	112	116	125	130	135	144
81	97.8	101	105	110	112	116	125	130	136	145
82	98	102	105	110	112	116	125	131	136	145
83	98.3	102	106	110	112	116	125	131	136	145
84	98.6	102	106	110	112	116	125	131	136	146
85	98.8	102	106	110	112	116	125	131	137	146
86	99.1	103	106	110	112	116	126	131	137	147
87	99.3	103	106	110	112	116	126	132	137	147
88	99.5	103	106	110	113	116	126	132	137	147
89	99.8	103	107	111	113	117	126	132	138	148
90	100	103	107	111	113	117	126	132	138	148
91	100	104	107	111	113	117	126	132	138	148
92	100	104	107	111	113	117	126	133	138	149
93	101	104	107	111	113	117	127	133	139	149
94	101	104	107	111	113	117	127	133	139	149

**TABLE 10.22 (Continued)
Standard Permit Vehicles - Class A - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
95	101	104	107	111	113	117	127	133	139	149
96	101	104	108	111	113	117	127	133	139	150
97	101	105	108	111	113	117	127	133	139	150
98	102	105	108	111	113	117	127	134	140	150
99	102	105	108	112	113	118	127	134	140	151
100	102	105	108	112	113	118	127	134	140	151
101	102	105	108	112	113	118	127	134	140	151
102	102	105	108	112	114	118	128	134	140	151
103	103	105	108	112	114	118	128	134	141	152
104	103	106	108	112	114	118	128	135	141	152
105	103	106	109	112	114	118	128	135	141	152
106	103	106	109	112	114	118	128	135	141	152
107	103	106	109	112	114	118	128	135	141	153
108	103	106	109	112	114	118	128	135	141	153
109	103	106	109	112	114	118	128	135	142	153
110	104	106	109	112	114	118	128	135	142	153
111	104	106	109	112	114	118	128	135	142	153
112	104	107	109	113	114	119	128	136	142	154
113	104	107	109	113	114	119	129	136	142	154
114	104	107	109	113	114	119	129	136	142	154
115	104	107	110	113	114	119	129	136	142	154
116	104	107	110	113	114	119	129	136	143	154
117	105	107	110	113	114	119	129	136	143	155
118	105	107	110	113	114	119	129	136	143	155
119	105	107	110	113	114	119	129	136	143	155
120	105	108	110	113	115	119	129	137	143	155
121	105	108	110	113	115	119	129	137	143	155
122	105	108	110	113	115	119	129	137	143	156
123	105	108	110	113	115	119	129	137	143	156
124	105	108	110	113	115	119	129	137	144	156
125	106	108	110	113	115	119	129	137	144	156
126	106	108	110	113	115	119	130	137	144	156
127	106	108	111	113	115	119	130	137	144	156
128	106	108	111	113	115	119	130	137	144	157
129	106	108	111	113	115	119	130	137	144	157
130	106	108	111	114	115	120	130	138	144	157
131	106	109	111	114	115	120	130	138	144	157
132	106	109	111	114	115	120	130	138	144	157
133	106	109	111	114	115	120	130	138	145	157
134	107	109	111	114	115	120	130	138	145	157
135	107	109	111	114	115	120	130	138	145	158
136	107	109	111	114	115	120	130	138	145	158
137	107	109	111	114	115	120	130	138	145	158
138	107	109	111	114	115	120	130	138	145	158
139	107	109	111	114	115	120	130	138	145	158

**TABLE 10.22 (Continued)
Standard Permit Vehicles - Class A - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
140	107	109	111	114	115	120	130	138	145	158
141	107	109	111	114	115	120	130	138	145	158
142	107	109	112	114	115	120	130	139	145	159
143	107	110	112	114	115	120	131	139	146	159
144	108	110	112	114	115	120	131	139	146	159
145	108	110	112	114	115	120	131	139	146	159
146	108	110	112	114	115	120	131	139	146	159
147	108	110	112	114	116	120	131	139	146	159
148	108	110	112	114	116	120	131	139	146	159
149	108	110	112	114	116	120	131	139	146	159
150	108	110	112	114	116	120	131	139	146	160
155	108	110	112	115	116	121	131	139	147	160
160	109	111	113	115	116	121	131	140	147	161
165	109	111	113	115	116	121	132	140	147	161
170	109	111	113	115	116	121	132	140	148	162
175	110	111	113	115	116	121	132	141	148	162
180	110	112	113	115	116	121	132	141	148	162
185	110	112	114	115	116	121	132	141	148	163
190	111	112	114	116	117	122	132	141	149	163
195	111	112	114	116	117	122	133	142	149	164
200	111	113	114	116	117	122	133	142	149	164
205	111	113	114	116	117	122	133	142	149	164
210	111	113	114	116	117	122	133	142	150	164
215	112	113	114	116	117	122	133	142	150	165
220	112	113	115	116	117	122	133	142	150	165
225	112	113	115	116	117	122	133	143	150	165
230	112	113	115	116	117	122	133	143	150	166
235	112	114	115	116	117	122	133	143	151	166
240	113	114	115	117	117	123	134	143	151	166
245	113	114	115	117	117	123	134	143	151	166
250	113	114	115	117	117	123	134	143	151	166
255	113	114	115	117	117	123	134	143	151	167
260	113	114	115	117	117	123	134	144	151	167
265	113	114	115	117	118	123	134	144	151	167
270	113	114	116	117	118	123	134	144	152	167
275	113	115	116	117	118	123	134	144	152	167
280	114	115	116	117	118	123	134	144	152	168
285	114	115	116	117	118	123	134	144	152	168
290	114	115	116	117	118	123	134	144	152	168
295	114	115	116	117	118	123	134	144	152	168
300	114	115	116	117	118	123	134	144	152	168

**TABLE 10.22 (Continued)
Standard Permit Vehicles - Class A - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
5	60	52.8	54	39.6	33.6	29.4	30.1	40.8	33.2	33.5
6	60	58.7	60	44	37.3	32.8	33.7	45.3	37.5	37.3
7	60	62.9	64.3	47.1	40	36.1	36.2	48.6	40.7	40.1
8	60	66	67.5	49.5	42	38.6	38.2	51	43	42.2
9	60	68.4	70	55	46.7	42.1	41.6	52.9	46.2	46.4
10	60	70.4	72	59.4	50.4	46.3	45.2	54.4	50.5	50.2
11	60	72	73.6	63	53.5	49.8	48.1	55.6	54	53.4
12	60	73.3	75	66	56	52.7	50.5	56.7	56.9	56
13	64.6	74.5	76.2	68.5	60.3	56.2	53.6	57.5	59.4	59.9
14	68.6	76.5	77.1	70.7	64	60.2	57.1	58.3	61.5	63.7
15	72	78.2	78	72.6	67.2	63.6	60.2	58.9	63.4	67
16	75	79.8	78.8	74.3	70	66.7	62.9	59.5	65	69.9
17	77.6	81.1	80.3	75.7	72.5	69.4	65.3	60.7	66.4	72.4
18	80	82.3	81.7	77	74.7	71.8	67.4	61.7	67.7	74.7
19	82.1	83.4	82.9	78.2	76.6	73.9	69.3	62.6	68.8	76.7
20	84	84.3	84	79.2	78.4	75.8	71	64.6	69.8	78.5
21	85.7	85.2	85	80.8	80	77.6	72.5	66.4	70.7	80.2
22	87.3	86	85.9	82.2	81.5	79.1	73.9	68	71.6	81.7
23	88.7	86.7	86.7	83.5	82.8	80.6	75.2	71	72.3	83.1
24	90	87.4	87.5	84.7	84	81.9	76.3	73.7	73.2	84.3
25	91.2	88	88.2	85.8	85.7	83.4	77.4	76.2	74.3	85.5
26	92.3	88.6	88.8	86.8	87.2	84.9	79	78.5	76.1	86.5
27	93.3	89.1	89.4	87.8	88.7	86.4	81.5	80.6	77.6	87.5
28	94.3	89.6	90	88.6	90	87.7	84.2	82.6	79.2	88.4
29	95.2	91	90.5	89.4	91.2	89	86.6	84.4	81.6	89.3
30	96	93.9	91	90.2	92.4	90.2	88.9	86.1	83.8	90.1
31	96.8	96.5	91.5	90.9	93.5	91.3	91	87.7	85.9	90.8
32	97.5	99	91.9	91.6	94.5	92.3	93	89.3	87.9	91.5
33	98.2	101	92.3	92.2	95.5	93.3	94.9	90.7	89.7	92.4
34	98.8	104	92.6	92.8	96.4	94.2	96.6	92	91.4	93.8
35	99.4	106	95.1	93.3	97.2	95.1	98.3	93.6	93.1	95.2
36	100	108	97.5	93.9	98	95.9	99.9	95.1	94.6	96.5
37	101	109	99.7	94.4	98.8	96.6	101	96.5	96.1	97.7
38	103	112	102	94.8	99.5	97.4	103	97.8	97.4	98.9
39	105	114	104	95.6	100	98.1	105	99.1	98.7	100
40	107	116	106	97.4	101	98.7	106	100	100	101
41	108	117	108	99	101	99.3	108	101	101	102
42	110	119	109	101	102	99.9	109	103	102	103
43	112	121	111	104	103	101	111	104	103	104
44	113	122	113	106	103	101	112	105	104	105
45	115	124	114	108	105	102	113	106	105	106
46	116	125	116	110	107	104	114	106	106	107
47	117	127	117	112	108	106	116	107	107	108
48	119	128	119	113	110	107	117	108	108	109
49	120	129	121	115	112	109	118	109	109	110

**TABLE 10.22 (Continued)
Standard Permit Vehicles - Class A - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
50	121	131	122	117	114	111	119	110	110	111
51	122	132	124	118	116	113	120	110	110	112
52	123	133	125	120	118	114	121	111	111	112
53	125	134	126	121	120	116	122	112	112	113
54	126	135	128	123	122	118	123	112	113	114
55	127	136	129	125	124	120	123	113	113	114
56	128	137	130	126	126	122	124	114	114	115
57	128	138	131	128	128	124	125	116	114	116
58	129	139	132	129	129	126	126	117	115	116
59	130	140	133	131	131	128	127	119	116	117
60	131	141	134	132	133	130	127	120	116	117
61	132	141	135	133	134	131	128	122	117	118
62	133	142	136	134	136	133	129	123	117	119
63	133	143	137	136	137	135	129	124	118	119
64	134	144	138	137	139	136	130	125	119	120
65	135	144	139	138	140	138	131	127	120	120
66	135	145	140	139	142	139	131	128	121	120
67	136	146	141	140	143	141	132	129	122	121
68	137	146	141	141	145	142	132	130	123	121
69	137	147	142	142	146	144	133	132	124	122
70	138	148	143	143	147	145	133	133	125	124
71	139	148	144	144	149	147	134	135	126	125
72	139	149	144	145	150	148	134	136	128	127
73	140	149	145	146	151	149	135	138	129	128
74	140	150	146	147	152	151	135	140	130	130
75	141	151	146	148	153	152	136	141	131	131
76	141	151	147	149	155	153	137	143	132	133
77	142	152	148	149	156	154	139	145	133	135
78	142	152	148	150	157	156	140	146	134	136
79	143	153	149	151	158	157	142	148	135	138
80	143	153	149	152	159	158	143	150	136	139
81	144	154	150	152	160	159	145	151	137	141
82	144	154	151	153	161	160	146	153	138	142
83	145	154	151	154	162	161	147	154	139	143
84	145	155	152	155	163	162	149	155	140	145
85	145	155	152	155	163	163	150	157	141	146
86	146	156	153	156	164	164	151	158	143	147
87	146	156	153	157	165	165	152	160	144	148
88	147	157	154	157	166	166	154	161	146	150
89	147	157	154	158	167	166	155	163	147	151
90	147	157	155	158	168	167	156	164	148	152
91	148	158	155	159	168	168	157	165	150	153
92	148	158	155	159	169	169	158	167	151	154
93	148	158	156	160	170	170	159	168	152	156
94	149	159	156	161	171	171	160	169	154	157

**TABLE 10.22 (Continued)
Standard Permit Vehicles - Class A - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
95	149	159	157	161	171	171	161	170	155	158
96	149	159	157	162	172	172	162	171	156	159
97	150	160	157	162	173	173	163	173	157	160
98	150	160	158	163	173	174	164	174	158	161
99	150	160	158	163	174	174	165	175	159	162
100	151	161	159	164	175	175	166	176	160	163
101	151	161	159	164	175	176	167	177	161	164
102	151	161	159	165	176	176	168	178	162	165
103	151	161	160	165	176	177	169	179	163	166
104	152	162	160	165	177	178	170	180	164	167
105	152	162	160	166	178	178	170	181	165	168
106	152	162	161	166	178	179	171	182	166	169
107	153	163	161	167	179	180	172	183	167	170
108	153	163	161	167	179	180	173	184	168	171
109	153	163	162	168	180	181	174	185	169	171
110	153	163	162	168	180	181	174	186	170	172
111	154	164	162	168	181	182	175	187	171	173
112	154	164	162	169	181	182	176	187	172	174
113	154	164	163	169	182	183	177	188	173	175
114	154	164	163	169	182	184	177	189	173	176
115	154	165	163	170	183	184	178	190	174	176
116	155	165	164	170	183	185	179	191	175	177
117	155	165	164	171	184	185	179	192	176	178
118	155	165	164	171	184	186	180	192	177	179
119	155	165	164	171	185	186	181	193	177	179
120	156	166	165	172	185	187	181	194	178	180
121	156	166	165	172	186	187	182	195	179	181
122	156	166	165	172	186	188	183	195	180	181
123	156	166	165	173	186	188	183	196	180	182
124	156	166	166	173	187	188	184	197	181	183
125	156	167	166	173	187	189	184	197	182	183
126	157	167	166	173	188	189	185	198	182	184
127	157	167	166	174	188	190	186	199	183	185
128	157	167	167	174	188	190	186	199	184	185
129	157	167	167	174	189	191	187	200	184	186
130	157	168	167	175	189	191	187	201	185	186
131	158	168	167	175	190	191	188	201	186	187
132	158	168	167	175	190	192	188	202	186	188
133	158	168	168	175	190	192	189	203	187	188
134	158	168	168	176	191	193	190	203	187	189
135	158	168	168	176	191	193	190	204	188	189
136	158	169	168	176	191	193	191	204	189	190
137	159	169	168	176	192	194	191	205	189	190
138	159	169	169	177	192	194	192	205	190	191
139	159	169	169	177	192	194	193	206	190	191

**TABLE 10.22 (Continued)
Standard Permit Vehicles - Class A - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
140	159	169	169	177	193	195	193	207	191	192
141	159	169	169	177	193	195	194	207	191	193
142	159	169	169	178	193	196	194	208	192	193
143	159	170	170	178	194	196	195	208	192	194
144	160	170	170	178	194	196	195	209	193	194
145	160	170	170	178	194	197	196	209	194	194
146	160	170	170	179	195	197	196	210	194	195
147	160	170	170	179	195	197	197	210	195	195
148	160	170	170	179	195	198	197	211	195	196
149	160	170	171	179	195	198	198	211	196	196
150	160	171	171	179	196	198	198	212	196	197
155	161	171	171	180	197	200	201	214	198	199
160	162	172	172	181	198	201	203	216	200	201
165	162	172	173	182	200	202	205	218	202	203
170	163	173	174	183	201	204	207	220	204	205
175	163	173	174	184	202	205	209	222	206	206
180	164	174	175	185	203	206	211	224	208	208
185	164	174	175	185	204	207	212	225	209	210
190	165	175	176	186	205	208	214	227	211	211
195	165	175	176	187	205	209	216	228	212	212
200	165	176	177	187	206	210	217	230	214	214
205	166	176	177	188	207	211	218	231	215	215
210	166	176	178	189	208	211	220	232	216	216
215	166	177	178	189	209	212	220	233	218	217
220	167	177	178	190	209	213	221	234	219	218
225	167	177	179	190	210	214	222	236	220	219
230	167	178	179	191	210	214	223	237	221	220
235	167	178	179	191	211	215	224	238	222	221
240	168	178	180	191	212	215	225	239	223	222
245	168	178	180	192	212	216	226	239	224	223
250	168	179	180	192	213	217	227	240	225	224
255	168	179	181	193	213	217	228	241	225	225
260	169	179	181	193	214	218	229	242	226	225
265	169	179	181	193	214	218	230	243	227	226
270	169	180	182	194	215	219	230	244	228	227
275	169	180	182	194	215	219	231	244	229	227
280	170	180	182	194	215	220	232	245	230	228
285	170	180	182	195	216	220	233	246	231	229
290	170	180	182	195	216	220	233	246	231	229
295	170	180	183	195	217	221	234	247	232	230
300	170	181	183	195	217	221	235	248	233	230

**TABLE 10.22 (Continued)
Standard Permit Vehicles - Class A - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
5	60	60	59	54	52	43.2	41.8	31.9	29.7	26.4
6	60	60	59	54	52	48	47.5	36.3	33.8	30
7	60	60	59	54	52	51.4	51.6	39.4	36.6	32.6
8	60	60	59	54	52	54	54.6	41.7	38.8	34.5
9	60	60	59	54	52	56	57	43.5	40.5	36
10	60	60	59	54	52	57.6	58.9	47.9	44.6	39.6
11	60	60	59	54	52	58.9	60.5	51.4	47.9	42.5
12	60	60	59	54	56.3	60	61.8	54.4	50.6	45
13	60	60	59	54	60	60.9	62.8	56.9	53	47.1
14	60	60	59	54	63.1	61.7	63.8	59	55	49.7
15	60	60	59	57.6	65.9	62.4	64.6	60.9	56.7	52.8
16	60	60	59	60.8	68.3	63	65.3	62.5	58.2	55.5
17	60	60	59	63.5	70.4	65.6	66.5	64	59.6	57.9
18	60	60	59	66	72.2	68	68.1	65.3	60.8	60
19	60	60	59	68.2	73.9	70.1	69.5	66.4	61.8	61.9
20	60	60	59	70.2	75.4	72	70.8	67.4	63.6	63.6
21	60	60	61.8	72	76.8	73.7	71.9	68.4	65.2	65.1
22	60	60	64.4	73.6	78	75.3	73.8	70.1	66.6	66.5
23	60	60	66.7	75.1	79.1	76.7	75.6	71.7	68	67.8
24	60	60	68.8	76.5	80.2	78	77.2	73.2	69.5	69
25	60	60	70.8	77.8	81.1	79.2	78.7	74.6	71.3	70.1
26	60	62.3	72.6	78.9	82	80.3	80	76.2	72.9	71.4
27	60	64.4	74.3	80	82.8	81.3	81.3	78.1	74.4	72.9
28	60	66.4	75.9	81	83.6	82.3	82.4	79.9	75.8	74.4
29	60	68.3	77.3	81.9	84.3	83.2	83.5	81.6	77.6	75.7
30	60	70	78.7	82.8	84.9	84	84.6	83.1	79.4	76.9
31	61.9	71.6	79.9	83.6	85.5	84.8	85.5	84.5	81	78.6
32	63.8	73.1	81.1	84.4	86.1	85.5	86.4	85.9	82.5	80.2
33	65.5	74.5	82.2	85.1	86.7	86.2	87.2	87.1	83.9	81.7
34	67.1	75.9	83.3	85.8	87.2	86.8	88	88.3	85.3	83.1
35	68.6	77.1	84.3	86.4	87.7	87.4	88.8	89.4	86.6	84.7
36	70	78.3	85.2	87	88.1	88	89.5	90.5	87.8	86.4
37	71.4	79.5	86.1	87.6	88.5	88.5	90.1	91.5	88.9	88
38	72.6	80.5	86.9	88.1	88.9	89.1	90.8	92.5	90	89.6
39	73.8	81.5	87.7	88.6	89.3	89.5	91.3	93.4	91	91
40	75	82.5	88.5	89.1	89.7	90	91.9	94.2	91.9	92.4
41	76.1	83.4	89.2	89.6	90	90.4	92.5	95	92.9	93.7
42	77.1	84.3	89.9	90	90.4	90.9	93	95.8	93.7	95
43	78.1	85.1	90.6	90.4	90.7	91.3	93.5	96.5	94.6	96.2
44	79.1	85.9	91.2	90.8	91	91.6	93.9	97.2	95.4	97.3
45	80	86.7	91.8	91.2	91.3	92	94.4	97.9	96.1	98.4
46	80.9	87.4	92.3	91.6	91.6	92.3	94.8	98.6	96.8	99.4
47	81.7	88.1	92.9	91.9	91.8	92.7	95.2	99.2	97.5	100
48	82.5	88.8	93.4	92.3	92.1	93	95.6	99.8	98.2	101
49	83.3	89.4	93.9	92.6	92.3	93.3	96	100	98.9	102

**TABLE 10.23
Standard Permit Vehicles - Class B - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
50	84	90	94.4	92.9	92.6	93.6	96.3	101	99.5	103
51	84.7	90.6	94.9	93.2	92.8	93.9	96.7	101	100	104
52	85.4	91.2	95.3	93.5	93	94.2	97	102	101	105
53	86	91.7	95.7	93.7	93.2	94.4	97.3	102	101	106
54	86.7	92.2	96.1	94	93.4	94.7	97.6	103	102	106
55	87.3	92.7	96.5	94.3	93.6	94.9	97.9	103	102	107
56	87.9	93.2	96.9	94.5	93.8	95.1	98.2	104	103	108
57	88.4	93.7	97.3	94.7	94	95.4	98.5	104	103	109
58	89	94.1	97.7	95	94.1	95.6	98.8	105	104	109
59	89.5	94.6	98	95.2	94.3	95.8	99	105	104	110
60	90	95	98.3	95.4	94.5	96	99.3	105	104	110
61	90.5	95.4	98.7	95.6	94.6	96.2	99.5	106	105	111
62	91	95.8	99	95.8	94.8	96.4	99.8	106	105	112
63	91.4	96.2	99.3	96	94.9	96.6	100	106	106	112
64	91.9	96.6	99.6	96.2	95.1	96.8	100	107	106	113
65	92.3	96.9	99.8	96.4	95.2	96.9	100	107	106	113
66	92.7	97.3	100	96.5	95.3	97.1	101	107	107	114
67	93.1	97.6	100	96.7	95.5	97.3	101	108	107	114
68	93.5	97.9	101	96.9	95.6	97.4	101	108	107	115
69	93.9	98.3	101	97	95.7	97.6	101	108	108	115
70	94.3	98.6	101	97.2	95.8	97.7	101	109	108	116
71	94.6	98.9	101	97.4	95.9	97.9	102	109	108	116
72	95	99.2	102	97.5	96.1	98	102	109	109	116
73	95.3	99.5	102	97.6	96.2	98.1	102	109	109	117
74	95.7	99.7	102	97.8	96.3	98.3	102	110	109	117
75	96	100	102	97.9	96.4	98.4	102	110	110	118
76	96.3	100	102	98.1	96.5	98.5	102	110	110	118
77	96.6	101	103	98.2	96.6	98.6	103	110	110	118
78	96.9	101	103	98.3	96.7	98.8	103	110	110	119
79	97.2	101	103	98.4	96.8	98.9	103	111	111	119
80	97.5	101	103	98.6	96.9	99	103	111	111	119
81	97.8	101	103	98.7	96.9	99.1	103	111	111	120
82	98	102	104	98.8	97	99.2	103	111	111	120
83	98.3	102	104	98.9	97.1	99.3	103	112	111	120
84	98.6	102	104	99	97.2	99.4	103	112	112	121
85	98.8	102	104	99.1	97.3	99.5	104	112	112	121
86	99.1	103	104	99.2	97.3	99.6	104	112	112	121
87	99.3	103	104	99.3	97.4	99.7	104	112	112	122
88	99.5	103	105	99.4	97.5	99.8	104	112	112	122
89	99.8	103	105	99.5	97.6	99.9	104	113	113	122
90	100	103	105	99.6	97.6	100	104	113	113	122
91	100	104	105	99.7	97.7	100	104	113	113	123
92	100	104	105	99.8	97.8	100	104	113	113	123
93	101	104	105	99.9	97.8	100	105	113	113	123
94	101	104	105	100	97.9	100	105	113	114	123

**TABLE 10.23 (Continued)
Standard Permit Vehicles - Class B - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
95	101	104	106	100	98	100	105	114	114	124
96	101	104	106	100	98	101	105	114	114	124
97	101	105	106	100	98.1	101	105	114	114	124
98	102	105	106	100	98.2	101	105	114	114	124
99	102	105	106	100	98.2	101	105	114	114	125
100	102	105	106	100	98.3	101	105	114	115	125
101	102	105	106	101	98.3	101	105	114	115	125
102	102	105	106	101	98.4	101	105	115	115	125
103	103	105	107	101	98.4	101	105	115	115	125
104	103	106	107	101	98.5	101	106	115	115	126
105	103	106	107	101	98.6	101	106	115	115	126
106	103	106	107	101	98.6	101	106	115	115	126
107	103	106	107	101	98.7	101	106	115	116	126
108	103	106	107	101	98.7	101	106	115	116	126
109	103	106	107	101	98.8	101	106	115	116	127
110	104	106	107	101	98.8	101	106	115	116	127
111	104	106	107	101	98.8	102	106	116	116	127
112	104	107	107	101	98.9	102	106	116	116	127
113	104	107	108	101	98.9	102	106	116	116	127
114	104	107	108	101	99	102	106	116	116	127
115	104	107	108	101	99	102	106	116	116	128
116	104	107	108	101	99.1	102	106	116	117	128
117	105	107	108	102	99.1	102	106	116	117	128
118	105	107	108	102	99.2	102	107	116	117	128
119	105	107	108	102	99.2	102	107	116	117	128
120	105	108	108	102	99.2	102	107	116	117	128
121	105	108	108	102	99.3	102	107	117	117	129
122	105	108	108	102	99.3	102	107	117	117	129
123	105	108	108	102	99.3	102	107	117	117	129
124	105	108	108	102	99.4	102	107	117	117	129
125	106	108	109	102	99.4	102	107	117	118	129
126	106	108	109	102	99.5	102	107	117	118	129
127	106	108	109	102	99.5	102	107	117	118	129
128	106	108	109	102	99.5	102	107	117	118	130
129	106	108	109	102	99.6	102	107	117	118	130
130	106	108	109	102	99.6	102	107	117	118	130
131	106	109	109	102	99.6	103	107	117	118	130
132	106	109	109	102	99.7	103	107	117	118	130
133	106	109	109	102	99.7	103	107	118	118	130
134	107	109	109	102	99.7	103	107	118	118	130
135	107	109	109	102	99.8	103	107	118	118	130
136	107	109	109	102	99.8	103	108	118	119	131
137	107	109	109	102	99.8	103	108	118	119	131
138	107	109	109	103	99.9	103	108	118	119	131
139	107	109	110	103	99.9	103	108	118	119	131

**TABLE 10.23 (Continued)
Standard Permit Vehicles - Class B - Simple Span Reactions**

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SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
140	107	109	110	103	99.9	103	108	118	119	131
141	107	109	110	103	99.9	103	108	118	119	131
142	107	109	110	103	100	103	108	118	119	131
143	107	110	110	103	100	103	108	118	119	131
144	108	110	110	103	100	103	108	118	119	131
145	108	110	110	103	100	103	108	118	119	132
146	108	110	110	103	100	103	108	118	119	132
147	108	110	110	103	100	103	108	119	119	132
148	108	110	110	103	100	103	108	119	119	132
149	108	110	110	103	100	103	108	119	119	132
150	108	110	110	103	100	103	108	119	120	132
155	108	110	110	103	100	103	108	119	120	132
160	109	111	111	103	100	104	108	119	120	133
165	109	111	111	103	101	104	109	120	120	133
170	109	111	111	104	101	104	109	120	121	134
175	110	111	111	104	101	104	109	120	121	134
180	110	112	111	104	101	104	109	120	121	134
185	110	112	112	104	101	104	109	120	121	135
190	111	112	112	104	101	104	109	121	122	135
195	111	112	112	104	101	104	109	121	122	135
200	111	113	112	104	101	104	110	121	122	136
205	111	113	112	104	101	104	110	121	122	136
210	111	113	112	104	101	105	110	121	122	136
215	112	113	113	104	101	105	110	121	123	136
220	112	113	113	105	101	105	110	122	123	137
225	112	113	113	105	101	105	110	122	123	137
230	112	113	113	105	102	105	110	122	123	137
235	112	114	113	105	102	105	110	122	123	137
240	113	114	113	105	102	105	110	122	123	137
245	113	114	113	105	102	105	110	122	123	138
250	113	114	113	105	102	105	110	122	124	138
255	113	114	113	105	102	105	111	122	124	138
260	113	114	113	105	102	105	111	122	124	138
265	113	114	114	105	102	105	111	123	124	138
270	113	114	114	105	102	105	111	123	124	138
275	113	115	114	105	102	105	111	123	124	139
280	114	115	114	105	102	105	111	123	124	139
285	114	115	114	105	102	105	111	123	124	139
290	114	115	114	105	102	106	111	123	124	139
295	114	115	114	105	102	106	111	123	124	139
300	114	115	114	105	102	106	111	123	125	139

**TABLE 10.23 (Continued)
Standard Permit Vehicles - Class B - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
5	53	44.4	46.8	33.6	28.8	24.5	25.7	34.8	28	28.6
6	53	49.3	52	37.3	32	27.3	28.7	38.7	31.7	31.9
7	53	52.9	55.7	40	34.3	30.1	30.9	41.4	34.4	34.3
8	53	55.5	58.5	42	36	32.2	32.5	43.5	36.3	36
9	53	57.6	60.7	46.7	40	35.1	35.4	45.1	39	39.7
10	53	59.2	62.4	50.4	43.2	38.6	38.5	46.4	42.7	43
11	53	60.5	63.8	53.5	45.8	41.5	41	47.5	45.6	45.7
12	53	61.7	65	56	48	43.9	43.1	48.3	48.1	47.9
13	57.1	62.6	66	58.2	51.7	46.8	45.7	49.1	50.2	51.2
14	60.6	64.3	66.9	60	54.9	50.1	48.7	49.7	52	54.5
15	63.6	65.8	67.6	61.6	57.6	53	51.3	50.3	53.5	57.3
16	66.3	67.1	68.3	63	60	55.6	53.6	50.8	54.9	59.7
17	68.6	68.2	69.6	64.2	62.1	57.8	55.6	51.7	56.1	61.9
18	70.7	69.2	70.8	65.3	64	59.8	57.4	52.6	57.2	63.9
19	72.5	70.1	71.8	66.3	65.7	61.6	59.1	53.4	58.1	65.6
20	74.2	70.9	72.8	67.2	67.2	63.2	60.5	55.1	59	67.2
21	75.7	71.7	73.7	68.5	68.6	64.6	61.8	56.6	59.8	68.6
22	77.1	72.3	74.5	69.7	69.8	65.9	63	58	60.5	69.9
23	78.3	72.9	75.2	70.9	71	67.1	64.1	60.5	61.1	71
24	79.5	73.5	75.8	71.9	72	68.3	65.1	62.8	61.8	72.1
25	80.6	74	76.4	72.8	73.4	69.5	66	65	62.8	73.1
26	81.5	74.5	77	73.7	74.8	70.8	67.3	66.9	64.3	74
27	82.4	74.9	77.5	74.5	76	72	69.5	68.7	65.6	74.8
28	83.3	75.3	78	75.2	77.1	73.1	71.8	70.4	66.9	75.6
29	84.1	76.6	78.4	75.9	78.2	74.2	73.8	72	69	76.4
30	84.8	78.9	78.9	76.5	79.2	75.2	75.8	73.5	70.8	77
31	85.5	81.2	79.3	77.1	80.1	76.1	77.6	74.8	72.6	77.7
32	86.1	83.3	79.6	77.7	81	76.9	79.3	76.1	74.3	78.3
33	86.7	85.2	80	78.2	81.8	77.7	80.9	77.3	75.8	79
34	87.3	87.1	80.3	78.7	82.6	78.5	82.4	78.5	77.3	80.3
35	87.8	88.8	82.5	79.2	83.3	79.2	83.8	79.8	78.6	81.4
36	88.3	90.4	84.5	79.6	84	79.9	85.1	81.1	79.9	82.5
37	88.8	92	86.4	80.1	84.6	80.5	86.4	82.3	81.2	83.6
38	90.7	93.8	88.3	80.5	85.3	81.1	87.7	83.4	82.3	84.5
39	92.4	95.5	90	81.1	85.8	81.7	89.2	84.5	83.5	85.5
40	94.1	97.1	91.7	82.6	86.4	82.3	90.5	85.6	84.5	86.4
41	95.7	98.7	93.2	84	86.9	82.8	91.9	86.5	85.5	87.2
42	97.2	100	94.7	86	87.4	83.3	93.1	87.5	86.5	88.2
43	98.6	102	96.1	87.9	87.9	83.8	94.3	88.3	87.4	89.1
44	100	103	97.5	89.7	88.4	84.2	95.4	89.2	88.2	90
45	101	104	98.8	91.5	89.6	85.4	96.5	90	89.1	90.9
46	103	105	100	93.1	91.3	86.7	97.6	90.8	89.9	91.7
47	104	107	102	94.7	92.9	88	98.6	91.5	90.6	92.5
48	105	108	103	96.3	94.5	89.2	99.5	92.2	91.3	93.3
49	106	109	105	97.7	96	90.6	100	92.9	92	94

**TABLE 10.23 (Continued)
Standard Permit Vehicles - Class B - Simple Span Reactions**

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SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
50	107	110	106	99.1	97.9	92.2	101	93.6	92.7	94.7
51	108	111	107	100	99.8	93.8	102	94.2	93.3	95.4
52	109	112	108	102	102	95.3	103	94.8	94	96
53	110	113	109	103	103	96.9	104	95.4	94.6	96.6
54	111	114	111	104	105	98.6	105	96	95.1	97.2
55	112	114	112	106	106	100	105	96.5	95.7	97.8
56	113	115	113	107	108	102	106	97.4	96.2	98.4
57	113	116	114	108	109	104	107	98.7	96.7	98.9
58	114	117	115	110	111	105	107	100	97.2	99.4
59	115	117	115	111	112	107	108	101	97.7	99.9
60	116	118	116	112	114	108	109	102	98.2	100
61	116	119	117	113	115	110	109	104	98.6	101
62	117	120	118	114	116	111	110	105	99.1	101
63	118	120	119	115	118	112	110	106	99.7	102
64	118	121	120	116	119	113	111	107	100	102
65	119	121	120	117	120	115	111	108	101	103
66	120	122	121	118	122	116	112	109	102	103
67	120	123	122	119	123	117	112	110	103	103
68	121	123	123	120	124	119	113	111	104	104
69	121	124	123	121	125	120	113	112	105	105
70	122	124	124	122	126	121	114	114	106	106
71	122	125	125	122	127	122	114	115	107	107
72	123	125	125	123	129	123	115	116	108	108
73	123	126	126	124	130	125	115	118	109	110
74	124	126	126	125	131	126	115	119	110	111
75	124	127	127	125	132	127	116	121	111	112
76	125	127	127	126	132	128	117	122	111	114
77	125	127	128	127	133	129	118	124	112	115
78	126	128	129	127	134	130	119	125	113	116
79	126	128	129	128	135	131	121	126	114	118
80	127	129	130	129	136	131	122	128	115	119
81	127	129	130	129	137	132	123	129	116	120
82	127	130	130	130	138	133	124	130	117	121
83	128	130	131	131	139	134	126	131	118	123
84	128	130	131	131	139	135	127	133	119	124
85	128	131	132	132	140	136	128	134	120	125
86	129	131	132	132	141	136	129	135	121	126
87	129	131	133	133	142	137	130	136	122	127
88	129	132	133	133	142	138	131	138	123	128
89	130	132	134	134	143	139	132	139	124	129
90	130	132	134	134	144	139	133	140	125	130
91	130	133	134	135	144	140	134	141	127	131
92	131	133	135	135	145	141	135	142	128	132
93	131	133	135	136	146	142	136	143	129	133
94	131	133	135	136	146	142	137	144	130	134

**TABLE 10.23 (Continued)
Standard Permit Vehicles - Class B - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
95	132	134	136	137	147	143	137	145	131	135
96	132	134	136	137	147	143	138	146	132	136
97	132	134	136	138	148	144	139	147	133	137
98	133	135	137	138	149	145	140	148	134	138
99	133	135	137	138	149	145	141	149	135	139
100	133	135	137	139	150	146	142	150	135	140
101	133	135	138	139	150	146	142	151	136	140
102	134	136	138	140	151	147	143	152	137	141
103	134	136	138	140	151	148	144	153	138	142
104	134	136	139	140	152	148	145	154	139	143
105	134	136	139	141	152	149	145	154	140	144
106	135	136	139	141	153	149	146	155	141	144
107	135	137	139	141	153	150	147	156	141	145
108	135	137	140	142	154	150	147	157	142	146
109	135	137	140	142	154	151	148	158	143	147
110	135	137	140	142	155	151	149	158	144	147
111	136	138	141	143	155	152	149	159	144	148
112	136	138	141	143	155	152	150	160	145	149
113	136	138	141	143	156	153	151	161	146	149
114	136	138	141	144	156	153	151	161	147	150
115	136	138	142	144	157	153	152	162	147	151
116	137	139	142	144	157	154	152	163	148	151
117	137	139	142	145	158	154	153	163	149	152
118	137	139	142	145	158	155	154	164	149	153
119	137	139	142	145	158	155	154	165	150	153
120	137	139	143	146	159	155	155	165	151	154
121	138	139	143	146	159	156	155	166	151	155
122	138	140	143	146	159	156	156	167	152	155
123	138	140	143	146	160	157	156	167	152	156
124	138	140	144	147	160	157	157	168	153	156
125	138	140	144	147	161	157	157	168	154	157
126	138	140	144	147	161	158	158	169	154	157
127	139	140	144	147	161	158	158	170	155	158
128	139	141	144	148	162	159	159	170	155	158
129	139	141	145	148	162	159	159	171	156	159
130	139	141	145	148	162	159	160	171	156	159
131	139	141	145	148	163	160	160	172	157	160
132	139	141	145	149	163	160	161	172	157	160
133	139	141	145	149	163	160	161	173	158	161
134	140	141	145	149	163	161	162	173	158	161
135	140	142	146	149	164	161	162	174	159	162
136	140	142	146	150	164	161	163	174	159	162
137	140	142	146	150	164	161	163	175	160	163
138	140	142	146	150	165	162	164	175	160	163
139	140	142	146	150	165	162	164	176	161	164

**TABLE 10.23 (Continued)
Standard Permit Vehicles - Class B - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
140	140	142	146	150	165	162	165	176	161	164
141	141	142	147	151	165	163	165	177	162	165
142	141	143	147	151	166	163	166	177	162	165
143	141	143	147	151	166	163	166	178	163	165
144	141	143	147	151	166	164	167	178	163	166
145	141	143	147	151	167	164	167	178	164	166
146	141	143	147	152	167	164	167	179	164	167
147	141	143	148	152	167	164	168	179	164	167
148	141	143	148	152	167	165	168	180	165	168
149	142	143	148	152	168	165	169	180	165	168
150	142	143	148	152	168	165	169	181	166	168
155	142	144	149	153	169	166	171	183	168	170
160	143	145	149	154	170	168	173	184	169	172
165	143	145	150	155	171	169	175	186	171	174
170	144	145	150	155	172	170	177	188	173	175
175	144	146	151	156	173	171	178	189	174	177
180	145	146	151	157	174	172	180	191	176	178
185	145	147	152	157	175	172	181	192	177	179
190	145	147	152	158	175	173	183	193	178	180
195	146	147	153	158	176	174	184	195	180	182
200	146	148	153	159	177	175	185	196	181	183
205	146	148	154	160	177	175	186	197	182	184
210	147	148	154	160	178	176	187	198	183	185
215	147	149	154	160	179	177	187	199	184	186
220	147	149	155	161	179	177	188	200	185	187
225	147	149	155	161	180	178	189	201	186	187
230	148	149	155	162	180	179	190	202	187	188
235	148	150	156	162	181	179	191	203	187	189
240	148	150	156	162	181	180	192	203	188	190
245	148	150	156	163	182	180	193	204	189	191
250	149	150	156	163	182	181	194	205	190	191
255	149	150	157	163	183	181	194	206	190	192
260	149	151	157	164	183	181	195	206	191	193
265	149	151	157	164	183	182	196	207	192	193
270	149	151	157	164	184	182	196	208	193	194
275	150	151	158	165	184	183	197	208	193	194
280	150	151	158	165	185	183	198	209	194	195
285	150	151	158	165	185	183	198	210	195	196
290	150	152	158	165	185	184	199	210	196	196
295	150	152	158	166	186	184	200	211	196	197
300	150	152	158	166	186	184	200	211	197	197

**TABLE 10.23 (Continued)
Standard Permit Vehicles - Class B - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
5	60	60	57	49	44	36	34.1	26.4	24.2	22
6	60	60	57	49	44	40	38.8	30	27.5	25
7	60	60	57	49	44	42.9	42.1	32.6	29.9	27.1
8	60	60	57	49	44	45	44.6	34.5	31.6	28.8
9	60	60	57	49	44	46.7	46.5	36	33	30
10	60	60	57	49	44	48	48.1	39.6	36.3	33
11	60	60	57	49	44	49.1	49.3	42.5	39	35.5
12	60	60	57	49	47.7	50	50.4	45	41.3	37.5
13	60	60	57	49	50.8	50.8	51.3	47.1	43.2	39.2
14	60	60	57	49	53.4	51.4	52	48.9	44.8	41.4
15	60	60	57	52.3	55.7	52	52.7	50.4	46.2	44
16	60	60	57	55.1	57.8	52.5	53.3	51.8	47.4	46.3
17	60	60	57	57.6	59.5	54.7	54.3	52.9	48.5	48.2
18	60	60	57	59.9	61.1	56.7	55.5	54	49.5	50
19	60	60	57	61.9	62.5	58.4	56.7	54.9	50.4	51.6
20	60	60	57	63.7	63.8	60	57.7	55.8	51.8	53
21	60	60	59.7	65.3	65	61.4	58.7	56.6	53.1	54.3
22	60	60	62.2	66.8	66	62.7	60.2	58	54.3	55.5
23	60	60	64.4	68.2	67	63.9	61.7	59.4	55.4	56.5
24	60	60	66.5	69.4	67.8	65	63	60.6	56.7	57.5
25	60	60	68.4	70.6	68.6	66	64.2	61.7	58.1	58.4
26	60	62.3	70.2	71.6	69.4	66.9	65.3	63.1	59.4	59.5
27	60	64.4	71.8	72.6	70.1	67.8	66.3	64.7	60.6	60.8
28	60	66.4	73.3	73.5	70.7	68.6	67.3	66.1	61.8	62
29	60	68.3	74.7	74.3	71.3	69.3	68.1	67.5	63.3	63.1
30	60	70	76	75.1	71.9	70	69	68.8	64.7	64.1
31	61.9	71.6	77.2	75.9	72.4	70.6	69.8	69.9	66	65.5
32	63.8	73.1	78.4	76.6	72.9	71.3	70.5	71.1	67.2	66.8
33	65.5	74.5	79.5	77.2	73.3	71.8	71.2	72.1	68.4	68.1
34	67.1	75.9	80.5	77.8	73.8	72.4	71.8	73.1	69.5	69.3
35	68.6	77.1	81.4	78.4	74.2	72.9	72.4	74	70.5	70.6
36	70	78.3	82.3	78.9	74.6	73.3	73	74.9	71.5	72
37	71.4	79.5	83.2	79.5	74.9	73.8	73.5	75.7	72.4	73.4
38	72.6	80.5	84	79.9	75.3	74.2	74	76.5	73.3	74.6
39	73.8	81.5	84.8	80.4	75.6	74.6	74.5	77.3	74.1	75.8
40	75	82.5	85.5	80.9	75.9	75	75	78	74.9	77
41	76.1	83.4	86.2	81.3	76.2	75.4	75.4	78.6	75.7	78.1
42	77.1	84.3	86.9	81.7	76.5	75.7	75.8	79.3	76.4	79.1
43	78.1	85.1	87.5	82	76.7	76	76.2	79.9	77.1	80.1
44	79.1	85.9	88.1	82.4	77	76.4	76.6	80.5	77.7	81.1
45	80	86.7	88.7	82.8	77.2	76.7	77	81	78.3	82
46	80.9	87.4	89.2	83.1	77.5	77	77.3	81.6	78.9	82.9
47	81.7	88.1	89.7	83.4	77.7	77.2	77.7	82.1	79.5	83.7
48	82.5	88.8	90.3	83.7	77.9	77.5	78	82.6	80	84.5
49	83.3	89.4	90.7	84	78.1	77.8	78.3	83	80.5	85.3

**TABLE 10.24
Standard Permit Vehicles - Class C - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
50	84	90	91.2	84.3	78.3	78	78.6	83.5	81	86
51	84.7	90.6	91.6	84.5	78.5	78.2	78.9	83.9	81.5	86.7
52	85.4	91.2	92.1	84.8	78.7	78.5	79.1	84.3	82	87.4
53	86	91.7	92.5	85.1	78.9	78.7	79.4	84.7	82.4	88
54	86.7	92.2	92.9	85.3	79	78.9	79.7	85.1	82.9	88.7
55	87.3	92.7	93.3	85.5	79.2	79.1	79.9	85.5	83.3	89.3
56	87.9	93.2	93.6	85.8	79.4	79.3	80.1	85.9	83.7	89.9
57	88.4	93.7	94	86	79.5	79.5	80.4	86.2	84.1	90.4
58	89	94.1	94.3	86.2	79.7	79.7	80.6	86.5	84.4	91
59	89.5	94.6	94.7	86.4	79.8	79.8	80.8	86.9	84.8	91.5
60	90	95	95	86.6	79.9	80	81	87.2	85.1	92
61	90.5	95.4	95.3	86.8	80.1	80.2	81.2	87.5	85.5	92.5
62	91	95.8	95.6	86.9	80.2	80.3	81.4	87.8	85.8	93
63	91.4	96.2	95.9	87.1	80.3	80.5	81.6	88.1	86.1	93.4
64	91.9	96.6	96.2	87.3	80.4	80.6	81.7	88.3	86.4	93.9
65	92.3	96.9	96.5	87.4	80.6	80.8	81.9	88.6	86.7	94.3
66	92.7	97.3	96.7	87.6	80.7	80.9	82.1	88.9	87	94.7
67	93.1	97.6	97	87.8	80.8	81	82.2	89.1	87.3	95.1
68	93.5	97.9	97.2	87.9	80.9	81.2	82.4	89.3	87.5	95.5
69	93.9	98.3	97.5	88.1	81	81.3	82.6	89.6	87.8	95.9
70	94.3	98.6	97.7	88.2	81.1	81.4	82.7	89.8	88.1	96.3
71	94.6	98.9	97.9	88.3	81.2	81.5	82.8	90	88.3	96.6
72	95	99.2	98.2	88.5	81.3	81.7	83	90.3	88.6	97
73	95.3	99.5	98.4	88.6	81.4	81.8	83.1	90.5	88.8	97.3
74	95.7	99.7	98.6	88.7	81.5	81.9	83.3	90.7	89	97.7
75	96	100	98.8	88.9	81.5	82	83.4	90.9	89.2	98
76	96.3	100	99	89	81.6	82.1	83.5	91.1	89.4	98.3
77	96.6	101	99.2	89.1	81.7	82.2	83.6	91.2	89.7	98.6
78	96.9	101	99.4	89.2	81.8	82.3	83.8	91.4	89.9	98.9
79	97.2	101	99.6	89.3	81.9	82.4	83.9	91.6	90.1	99.2
80	97.5	101	99.8	89.4	82	82.5	84	91.8	90.3	99.5
81	97.8	101	99.9	89.5	82	82.6	84.1	92	90.4	99.8
82	98	102	100	89.6	82.1	82.7	84.2	92.1	90.6	100
83	98.3	102	100	89.7	82.2	82.8	84.3	92.3	90.8	100
84	98.6	102	100	89.8	82.2	82.9	84.4	92.4	91	101
85	98.8	102	101	89.9	82.3	82.9	84.5	92.6	91.2	101
86	99.1	103	101	90	82.4	83	84.6	92.7	91.3	101
87	99.3	103	101	90.1	82.4	83.1	84.7	92.9	91.5	101
88	99.5	103	101	90.2	82.5	83.2	84.8	93	91.7	102
89	99.8	103	101	90.3	82.6	83.3	84.9	93.2	91.8	102
90	100	103	101	90.4	82.6	83.3	85	93.3	92	102
91	100	104	101	90.5	82.7	83.4	85.1	93.5	92.1	102
92	100	104	102	90.5	82.7	83.5	85.2	93.6	92.3	102
93	101	104	102	90.6	82.8	83.5	85.3	93.7	92.4	103
94	101	104	102	90.7	82.9	83.6	85.3	93.8	92.5	103

**TABLE 10.24 (Continued)
Standard Permit Vehicles - Class C - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
95	101	104	102	90.8	82.9	83.7	85.4	94	92.7	103
96	101	104	102	90.9	83	83.8	85.5	94.1	92.8	103
97	101	105	102	90.9	83	83.8	85.6	94.2	92.9	103
98	102	105	102	91	83.1	83.9	85.6	94.3	93.1	104
99	102	105	102	91.1	83.1	83.9	85.7	94.4	93.2	104
100	102	105	103	91.1	83.2	84	85.8	94.5	93.3	104
101	102	105	103	91.2	83.2	84.1	85.9	94.7	93.4	104
102	102	105	103	91.3	83.3	84.1	85.9	94.8	93.6	104
103	103	105	103	91.3	83.3	84.2	86	94.9	93.7	105
104	103	106	103	91.4	83.3	84.2	86.1	95	93.8	105
105	103	106	103	91.5	83.4	84.3	86.1	95.1	93.9	105
106	103	106	103	91.5	83.4	84.3	86.2	95.2	94	105
107	103	106	103	91.6	83.5	84.4	86.3	95.3	94.1	105
108	103	106	103	91.6	83.5	84.4	86.3	95.4	94.2	105
109	103	106	104	91.7	83.6	84.5	86.4	95.5	94.3	105
110	104	106	104	91.8	83.6	84.5	86.4	95.6	94.4	106
111	104	106	104	91.8	83.6	84.6	86.5	95.6	94.5	106
112	104	107	104	91.9	83.7	84.6	86.6	95.7	94.6	106
113	104	107	104	91.9	83.7	84.7	86.6	95.8	94.7	106
114	104	107	104	92	83.8	84.7	86.7	95.9	94.8	106
115	104	107	104	92	83.8	84.8	86.7	96	94.9	106
116	104	107	104	92.1	83.8	84.8	86.8	96.1	95	106
117	105	107	104	92.1	83.9	84.9	86.8	96.2	95.1	107
118	105	107	104	92.2	83.9	84.9	86.9	96.2	95.2	107
119	105	107	104	92.2	83.9	85	86.9	96.3	95.3	107
120	105	108	105	92.3	84	85	87	96.4	95.4	107
121	105	108	105	92.3	84	85	87	96.5	95.5	107
122	105	108	105	92.4	84	85.1	87.1	96.5	95.5	107
123	105	108	105	92.4	84.1	85.1	87.1	96.6	95.6	107
124	105	108	105	92.5	84.1	85.2	87.2	96.7	95.7	107
125	106	108	105	92.5	84.1	85.2	87.2	96.8	95.8	108
126	106	108	105	92.6	84.2	85.2	87.3	96.8	95.9	108
127	106	108	105	92.6	84.2	85.3	87.3	96.9	95.9	108
128	106	108	105	92.6	84.2	85.3	87.4	97	96	108
129	106	108	105	92.7	84.2	85.3	87.4	97	96.1	108
130	106	108	105	92.7	84.3	85.4	87.5	97.1	96.2	108
131	106	109	105	92.8	84.3	85.4	87.5	97.2	96.2	108
132	106	109	105	92.8	84.3	85.5	87.5	97.2	96.3	108
133	106	109	105	92.8	84.4	85.5	87.6	97.3	96.4	108
134	107	109	105	92.9	84.4	85.5	87.6	97.4	96.4	109
135	107	109	106	92.9	84.4	85.6	87.7	97.4	96.5	109
136	107	109	106	93	84.4	85.6	87.7	97.5	96.6	109
137	107	109	106	93	84.5	85.6	87.7	97.5	96.6	109
138	107	109	106	93	84.5	85.7	87.8	97.6	96.7	109
139	107	109	106	93.1	84.5	85.7	87.8	97.6	96.8	109

**TABLE 10.24 (Continued)
Standard Permit Vehicles - Class C - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 1	VEHICLE 2	VEHICLE 3	VEHICLE 4	VEHICLE 5	VEHICLE 6	VEHICLE 7	VEHICLE 8	VEHICLE 9	VEHICLE 10
140	107	109	106	93.1	84.5	85.7	87.9	97.7	96.8	109
141	107	109	106	93.1	84.6	85.7	87.9	97.8	96.9	109
142	107	109	106	93.2	84.6	85.8	87.9	97.8	97	109
143	107	110	106	93.2	84.6	85.8	88	97.9	97	109
144	108	110	106	93.2	84.6	85.8	88	97.9	97.1	110
145	108	110	106	93.3	84.7	85.9	88	98	97.1	110
146	108	110	106	93.3	84.7	85.9	88.1	98	97.2	110
147	108	110	106	93.3	84.7	85.9	88.1	98.1	97.2	110
148	108	110	106	93.4	84.7	85.9	88.1	98.1	97.3	110
149	108	110	106	93.4	84.8	86	88.2	98.2	97.4	110
150	108	110	106	93.4	84.8	86	88.2	98.2	97.4	110
155	108	110	107	93.6	84.9	86.1	88.4	98.5	97.7	110
160	109	111	107	93.7	85	86.3	88.5	98.7	97.9	111
165	109	111	107	93.8	85.1	86.4	88.6	98.9	98.2	111
170	109	111	107	94	85.2	86.5	88.8	99.1	98.4	111
175	110	111	107	94.1	85.2	86.6	88.9	99.3	98.6	112
180	110	112	108	94.2	85.3	86.7	89	99.5	98.8	112
185	110	112	108	94.3	85.4	86.8	89.1	99.6	99	112
190	111	112	108	94.4	85.5	86.8	89.2	99.8	99.1	113
195	111	112	108	94.5	85.5	86.9	89.3	99.9	99.3	113
200	111	113	108	94.6	85.6	87	89.4	100	99.5	113
205	111	113	108	94.7	85.6	87.1	89.5	100	99.6	113
210	111	113	109	94.7	85.7	87.1	89.6	100	99.8	113
215	112	113	109	94.8	85.7	87.2	89.6	100	99.9	114
220	112	113	109	94.9	85.8	87.3	89.7	101	100	114
225	112	113	109	95	85.8	87.3	89.8	101	100	114
230	112	113	109	95	85.9	87.4	89.9	101	100	114
235	112	114	109	95.1	85.9	87.4	89.9	101	100	114
240	113	114	109	95.1	86	87.5	90	101	100	115
245	113	114	109	95.2	86	87.6	90.1	101	101	115
250	113	114	109	95.3	86.1	87.6	90.1	101	101	115
255	113	114	110	95.3	86.1	87.6	90.2	101	101	115
260	113	114	110	95.4	86.1	87.7	90.2	101	101	115
265	113	114	110	95.4	86.2	87.7	90.3	101	101	115
270	113	114	110	95.5	86.2	87.8	90.3	102	101	115
275	113	115	110	95.5	86.2	87.8	90.4	102	101	115
280	114	115	110	95.6	86.3	87.9	90.4	102	101	116
285	114	115	110	95.6	86.3	87.9	90.5	102	101	116
290	114	115	110	95.6	86.3	87.9	90.5	102	101	116
295	114	115	110	95.7	86.4	88	90.6	102	101	116
300	114	115	110	95.7	86.4	88	90.6	102	102	116

**TABLE 10.24 (Continued)
Standard Permit Vehicles - Class C - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
5	46	37.2	40.8	28.8	24	20.8	20.2	28.8	24	24.3
6	46	41.3	45.3	32	26.7	23.2	22.6	32	27.2	27
7	46	44.3	48.6	34.3	28.6	25.6	24.3	34.3	29.4	29
8	46	46.5	51	36	30	27.3	25.6	36	31.1	30.5
9	46	48.2	52.9	40	33.3	29.8	27.9	37.3	33.4	33.6
10	46	49.6	54.4	43.2	36	32.8	30.3	38.4	36.6	36.4
11	46	50.7	55.6	45.8	38.2	35.3	32.2	39.3	39.1	38.7
12	46	51.7	56.7	48	40	37.3	33.9	40	41.2	40.6
13	49.5	52.5	57.5	49.8	43.1	39.8	35.9	40.6	43	43.4
14	52.6	53.9	58.3	51.4	45.7	42.6	38.3	41.1	44.5	46.1
15	55.2	55.1	58.9	52.8	48	45.1	40.4	41.6	45.9	48.5
16	57.5	56.2	59.5	54	50	47.2	42.2	42	47	50.6
17	59.5	57.1	60.7	55.1	51.8	49.1	43.8	42.8	48.1	52.5
18	61.3	58	61.7	56	53.3	50.8	45.2	43.6	49	54.1
19	62.9	58.7	62.6	56.8	54.7	52.3	46.4	44.2	49.8	55.6
20	64.4	59.4	63.5	57.6	56	53.7	47.6	45.6	50.5	56.9
21	65.7	60	64.2	58.7	57.1	54.9	48.6	46.9	51.2	58.1
22	66.9	60.6	64.9	59.8	58.2	56.1	49.5	48	51.8	59.2
23	68	61.1	65.5	60.7	59.1	57.1	50.4	50.1	52.3	60.2
24	69	61.6	66.1	61.6	60	58	51.2	52	53	61.1
25	69.9	62	66.6	62.4	61.2	59	51.9	53.8	53.8	61.9
26	70.8	62.4	67.1	63.1	62.3	60.2	53	55.4	55.1	62.7
27	71.6	62.8	67.6	63.8	63.3	61.2	54.7	56.9	56.2	63.4
28	72.3	63.1	68	64.5	64.3	62.2	56.4	58.3	57.3	64.1
29	73	64.1	68.4	65	65.2	63	58.1	59.6	59.1	64.7
30	73.6	66.1	68.8	65.6	66	63.9	59.6	60.8	60.7	65.3
31	74.2	68	69.1	66.1	66.8	64.7	61	61.9	62.2	65.8
32	74.8	69.8	69.4	66.6	67.5	65.4	62.4	63	63.6	66.3
33	75.3	71.4	69.7	67.1	68.2	66.1	63.6	64	64.9	66.9
34	75.8	72.9	70	67.5	68.8	66.7	64.8	64.9	66.2	68
35	76.2	74.4	71.9	67.9	69.4	67.3	65.9	66.1	67.4	69
36	76.7	75.8	73.7	68.3	70	67.9	67	67.1	68.5	69.9
37	77.1	77.1	75.4	68.6	70.5	68.5	68	68.1	69.5	70.8
38	78.7	78.6	76.9	69	71.1	69	69	69.1	70.5	71.6
39	80.2	80	78.5	69.5	71.5	69.5	70.1	69.9	71.5	72.4
40	81.7	81.4	79.9	70.8	72	69.9	71.2	70.8	72.4	73.2
41	83	82.7	81.3	72	72.4	70.4	72.2	71.6	73.2	73.9
42	84.3	83.9	82.6	73.7	72.9	70.8	73.2	72.4	74.1	74.7
43	85.6	85.1	83.8	75.3	73.3	71.2	74.2	73.1	74.8	75.5
44	86.8	86.2	85	76.9	73.6	71.6	75.1	73.8	75.6	76.3
45	87.9	87.3	86.1	78.4	74.7	72.6	75.9	74.5	76.3	77
46	89	88.3	87.5	79.8	76.1	73.7	76.7	75.1	77	77.7
47	90	89.3	88.7	81.2	77.4	74.8	77.5	75.7	77.6	78.4
48	91	90.2	90	82.5	78.8	75.8	78.3	76.3	78.2	79
49	92	91.1	91.1	83.8	80	77	79	76.9	78.8	79.6

**TABLE 10.24 (Continued)
Standard Permit Vehicles - Class C - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
50	92.9	92	92.3	85	81.6	78.4	79.7	77.4	79.4	80.2
51	93.8	92.8	93.3	86.1	83.1	79.7	80.4	78	80	80.8
52	94.7	93.6	94.4	87.2	84.6	81	81	78.5	80.5	81.3
53	95.5	94.4	95.4	88.3	86	82.3	81.6	78.9	81	81.9
54	96.3	95.1	96.3	89.5	87.4	83.9	82.2	79.4	81.5	82.4
55	97	95.8	97.3	90.7	88.7	85.3	82.8	79.9	82	82.9
56	97.8	96.5	98.2	91.8	90	86.7	83.3	80.6	82.4	83.3
57	98.5	97.2	99	92.9	91.2	88.1	83.9	81.7	82.9	83.8
58	99.1	97.8	99.9	93.9	92.4	89.4	84.4	82.8	83.3	84.2
59	99.8	98.4	101	94.9	93.6	90.7	84.9	83.8	83.7	84.7
60	100	99	101	95.9	94.7	91.9	85.4	84.8	84.1	85.1
61	101	99.6	102	96.9	95.7	93.1	85.8	85.8	84.5	85.5
62	102	100	103	97.8	96.9	94.3	86.3	86.7	84.8	85.9
63	102	101	104	98.7	98.1	95.4	86.7	87.6	85.4	86.2
64	103	101	104	99.5	99.2	96.5	87.1	88.5	86.1	86.6
65	103	102	105	100	100	97.6	87.5	89.4	86.7	86.9
66	104	102	106	101	101	98.7	87.9	90.2	87.4	87.3
67	104	103	106	102	102	99.8	88.3	91	88	87.6
68	105	103	107	103	103	101	88.7	91.8	89	87.9
69	105	104	107	103	104	102	89	92.9	89.8	88.7
70	106	104	108	104	105	103	89.4	93.9	90.7	89.8
71	106	104	109	105	106	104	89.7	95	91.6	90.8
72	107	105	109	106	107	105	90.1	96	92.4	91.8
73	107	105	110	106	108	106	90.4	97.3	93.2	92.8
74	108	106	110	107	109	107	90.7	98.6	93.9	94
75	108	106	111	107	110	108	91	99.8	94.7	95.2
76	108	106	111	108	110	109	91.9	101	95.4	96.4
77	109	107	112	109	111	109	92.9	102	96.1	97.5
78	109	107	112	109	112	110	94	103	96.8	98.6
79	109	108	112	110	113	111	95	105	97.5	99.7
80	110	108	113	110	113	112	95.9	106	98.2	101
81	110	108	113	111	114	112	96.9	107	99	102
82	111	109	114	111	115	113	97.8	108	99.9	103
83	111	109	114	112	115	114	98.7	109	101	104
84	111	109	115	112	116	115	99.6	110	102	105
85	111	109	115	113	117	115	100	111	102	106
86	112	110	115	113	117	116	101	112	103	107
87	112	110	116	114	118	117	102	113	104	108
88	112	110	116	114	119	117	103	114	106	108
89	113	111	116	115	119	118	104	115	106	109
90	113	111	117	115	120	119	105	116	107	110
91	113	111	117	116	120	119	105	117	108	111
92	114	111	117	116	121	120	106	118	109	112
93	114	112	118	116	121	120	107	118	110	113
94	114	112	118	117	122	121	107	119	111	114

**TABLE 10.24 (Continued)
Standard Permit Vehicles - Class C - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
95	114	112	118	117	122	121	108	120	112	114
96	115	112	119	118	123	122	109	121	113	115
97	115	112	119	118	123	122	109	122	114	116
98	115	113	119	118	124	123	110	123	114	117
99	115	113	120	119	124	123	111	123	115	117
100	115	113	120	119	125	124	111	124	116	118
101	116	113	120	119	125	124	112	125	117	119
102	116	114	120	120	126	125	113	126	118	120
103	116	114	121	120	126	125	113	126	118	120
104	116	114	121	120	126	126	114	127	119	121
105	117	114	121	121	127	126	114	128	120	122
106	117	114	121	121	127	127	115	128	120	122
107	117	115	122	121	128	127	115	129	121	123
108	117	115	122	122	128	128	116	130	122	124
109	117	115	122	122	128	128	116	130	122	124
110	118	115	122	122	129	128	117	131	123	125
111	118	115	123	122	129	129	117	132	124	125
112	118	115	123	123	130	129	118	132	124	126
113	118	116	123	123	130	130	118	133	125	127
114	118	116	123	123	130	130	119	133	126	127
115	118	116	123	124	131	130	119	134	126	128
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117	119	116	124	124	131	131	120	135	127	129
118	119	116	124	124	132	131	121	136	128	129
119	119	117	124	125	132	132	121	136	128	130
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122	120	117	125	125	133	133	122	138	130	131
123	120	117	125	125	133	133	123	138	131	132
124	120	117	125	126	133	133	123	139	131	132
125	120	117	125	126	134	134	124	139	132	133
126	120	118	125	126	134	134	124	140	132	133
127	120	118	126	126	134	134	124	140	133	134
128	120	118	126	127	135	135	125	141	133	134
129	121	118	126	127	135	135	125	141	133	135
130	121	118	126	127	135	135	126	142	134	135
131	121	118	126	127	135	136	126	142	134	135
132	121	118	126	127	136	136	126	143	135	136
133	121	118	127	128	136	136	127	143	135	136
134	121	119	127	128	136	136	127	143	136	137
135	121	119	127	128	136	137	128	144	136	137
136	121	119	127	128	137	137	128	144	137	138
137	122	119	127	128	137	137	128	145	137	138
138	122	119	127	129	137	138	129	145	137	138
139	122	119	128	129	137	138	129	145	138	139

**TABLE 10.24 (Continued)
Standard Permit Vehicles - Class C - Simple Span Reactions**

**MICHIGAN DEPARTMENT OF TRANSPORTATION
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SPAN	VEHICLE 11	VEHICLE 12	VEHICLE 13	VEHICLE 14	VEHICLE 15	VEHICLE 16	VEHICLE 17	VEHICLE 18	VEHICLE 19	VEHICLE 20
140	122	119	128	129	138	138	129	146	138	139
141	122	119	128	129	138	138	130	146	139	139
142	122	119	128	129	138	139	130	147	139	140
143	122	120	128	129	138	139	131	147	139	140
144	122	120	128	130	139	139	131	147	140	141
145	122	120	128	130	139	139	131	148	140	141
146	123	120	128	130	139	139	132	148	140	141
147	123	120	129	130	139	140	132	148	141	142
148	123	120	129	130	139	140	132	149	141	142
149	123	120	129	130	140	140	133	149	142	142
150	123	120	129	131	140	140	133	149	142	143
155	123	121	130	131	141	141	135	151	144	144
160	124	121	130	132	142	142	136	153	145	146
165	124	121	131	133	143	143	138	154	147	147
170	125	122	131	133	143	144	139	155	148	148
175	125	122	132	134	144	145	140	157	149	150
180	125	123	132	134	145	146	141	158	150	151
185	126	123	132	135	146	147	142	159	152	152
190	126	123	133	135	146	147	144	160	153	153
195	126	123	133	136	147	148	145	161	154	154
200	127	124	134	136	147	149	145	162	155	155
205	127	124	134	137	148	149	146	163	156	156
210	127	124	134	137	148	150	147	164	157	156
215	128	124	135	138	149	150	147	165	157	157
220	128	125	135	138	149	151	148	166	158	158
225	128	125	135	138	150	151	149	166	159	159
230	128	125	135	139	150	152	150	167	160	160
235	128	125	136	139	151	152	150	168	161	160
240	129	126	136	139	151	153	151	168	161	161
245	129	126	136	139	152	153	152	169	162	161
250	129	126	136	140	152	153	152	170	163	162
255	129	126	137	140	152	154	153	170	163	163
260	129	126	137	140	153	154	153	171	164	163
265	129	126	137	141	153	155	154	171	164	164
270	130	126	137	141	153	155	155	172	165	164
275	130	127	137	141	154	155	155	172	166	165
280	130	127	137	141	154	156	156	173	166	165
285	130	127	138	141	154	156	156	173	167	166
290	130	127	138	142	154	156	156	174	168	166
295	130	127	138	142	155	156	157	174	168	167
300	130	127	138	142	155	157	157	175	169	167

**TABLE 10.24 (Continued)
Standard Permit Vehicles - Class C - Simple Span Reactions**

10-T25-1

Material	Period Built (approx.)	Year of MDOT Spec.	ASTM Specification	Ultimate Stress Min. fu (psi)	Yield Stress Min. fy (psi)	ALLOWABLE STRESS METHOD ONLY			
						INVENTORY RATING		OPERATING RATING	
						Gross Section 0.55fy (psi)	Net Section 0.50fu (psi)	Gross Section 0.75fy (psi)	Net Section 0.67fu (psi)
STRUCTURAL STEEL	1873-89		Wrought Iron	46,000	26,000	14,500	23,000	19,500	30,820
	<1905	1890	Soft Steel	52,000-62,000	26,000	14,500	26,000-31,000	19,500	34,840-41,540
	1905-1923	1901	A-7, OH	52,000-62,000	1/2 Tensile Stress	16,500	26,000-31,000	22,500	34,840-41,540
	1924-1932	1924	A-7	55,000-65,000	30,000	16,500	27,500-32,500	22,500	36,850-43,550
	1933-1962	1933 T	A-7	60,000-72,000	33,000	18,000	30,000-36,000	24,500	40,200-48,240
	1957-1962	1954	A-373	58,000-75,000	32,000	18,000	29,000-37,500	24,500	38,860-50,250
	1963-	1960	A-36	60,000-80,000	36,000	20,000	30,000-40,000	27,000	40,200-53,600
	1946-1962	1941 T	A-242, or						
	1963-	1960	A-441 3/4" thick	70,000	50,000	27,500	35,000	37,500	46,900
			A-441 3/4"-1.5" thick	67,000	46,000	25,000	33,500	34,500	44,890
			A-441 1.5"-4" thick	63,000	42,000	23,000	31,500	31,500	42,210
	1929-1954	1954	A-94 Sil. <=1 1/8"	80,000-95,000	45,000	24,500	40,000-47,500	33,500	53,600-63,650
	1965-1979	1968	A-588 <=4"	70,000	50,000	27,500	35,000	37,500	46,900
	>1979								
	>1980	1979	A-572 Grade 50 <=2"	65,000	50,000	27,500	32,500	37,500	43,550
1996	1996 (Metric)	AASHTO M270 Gr. 250	65,000	50,000	27,500	32,500	37,500	43,550	
1996	1996 (Metric)	AASHTO M270 Gr. 345	65,000	50,000	27,500	32,500	37,500	43,550	
PIPE		1951	A-53 Grade B	60,000	35,000	19,500	30,000	26,000	40,200
		1951	A-53 Grade A	48,000	30,000	16,500	24,000	22,500	32,160

TABLE 10.25
Structural Steel

Period Built (approx.)	Year of MDOT Spec.	ASTM Specification	Ultimate Stress Min. fu (psi)	Yield Stress Min. fy (psi)	ALLOWABLE STRESS METHOD ONLY	
					INVENTORY RATING (psi)	OPERATING RATING (psi)
<1954	Unknown	A-15 Structural	55,000-75,000	33,000	18,000	25,000
1955-1967	1954	A-15 Structural	70,000-90,000	36,000	20,000	28,000
1968-1976	1968	A-615 Grade 40	70,000	40,000	20,000	28,000
>1977	1976-1990	A-615 Grade 60	90,000	60,000	24,000	36,000
1996	1996 (Metric)	A-615M Grade 400	90,000	60,000	24,000	36,000

TABLE 10.26
Reinforcing Steel

10-T27-1

Period Built (approx.)	Year of MDOT Spec.	ASTM Specification	Diameter	Area (in ²)	Ultimate Strength Min f_{ps} (kips)	Ultimate Stress Min. $f's$ (ksi)	Yield Stress f^*y (ksi)	INVENTORY RATING	OPERATING RATING
								Stress Prior to Transfer (ksi) (Prior to Losses)	$0.9f^*y$ (ksi)
1954-1961	1957	A-416 (Grade 250)	3/8 "	0.080	20.00	250	212.5	175	191.25
		A-416 (Grade 250)	7/16 "	0.108	27.00	250	212.5	175	191.25
		A-416 (Grade 250)	1/2 "	0.144	36.00	250	212.5	175	191.25
1962-	1965	A-416 (Grade 270)	3/8 "	0.085	22.95	270	229.5	189	206.55
		A-416 (Grade 270)	7/16 "	0.115	31.05	270	229.5	189	206.55
		A-416 (Grade 270)	1/2 "	0.153	41.31	270	229.5	189	206.55
1970-	1970	A-416 (Grade 250) Stress-Relieved	1/2 "	0.153	38.25	250	212.5	175	191.25
		A-416 (Grade 270) Stress-Relieved	1/2 "	0.153	41.31	270	229.5	189	206.55
1976-	1976	A-416 (Grade 270)	1/2 "	0.153	41.31	270	229.5	189	206.55
1990-1996	1990	A-416 (Grade 270) Supplement I, Low Relaxation	1/2 "	0.153	41.31	270	243	202.5	218.7
1996-	1996 (Metric)	A-416M [Grade 1860 MPa] Low Relaxation [Grade 270 ksi]	1/2" (12.7 mm)	0.153 [98.71 mm ²]	41.31	270	243	202.5	218.7
1997-	1996 (Metric)	A-416M [Grade 1860 MPa] Low Relaxation [Grade 270 ksi]	0.6" (15.24 mm)	0.217 [140 mm ²]	58.59	270	243	202.5	218.7

TABLE 10.27
Prestressing Steel

10-T28-1

Period Built (approx.)	Grade	f'c, psi (Values for Design)	f'c, psi (Specification)	Es/Ec=n (approx.)*	ALLOWABLE STRESS METHOD ONLY	
					fc INVENTORY RATING* (psi)	fc OPERATING RATING* (psi)
<1921		2000	2500	15	800	1200
1922-1935	A	2500	3000	12	(a) 1000 (b) 1075	1500
1936-1943	A	2500	3000	12	(a) 1000 (b) 1125	1500
1944-1972	A	3000	3500	10	1200	1900
	AA	3500	4000	10	1200	1900
	B	2500	3000	12	1000	1500
1973-1975	40S	3500	4000	10	1300	2100
1976-1990	45D	4000	4500	8	1600	2400
	35S	3000	3500	10	1200	1900
>1996	D	4000 (28 MPa)	4500 (31 MPa)	8	1600	2400
	S2	3000 (21 MPa)	3500 (24 MPa)	10	1200	1900

* Per AASHTO Manual for Condition Evaluation of Bridges section 6.6.2.4.1

(a) Simple spans

(b) At supports of continuous spans

TABLE 10.28
Reinforced Concrete

10-T29-1

Period Built (approx.)	f'c, psi (Values for Deck Design)	f'c, psi (Values for Beam Design)	$E_{\text{beam}}/E_{\text{deck}}=n$ (approx.)	Es/Ec beam=n (approx.)**	fc	
					INVENTORY RATING (psi)	OPERATING RATING (psi)
<1973	3000	5000	1.3	7	2000	2750
1973-1975	3500	5000	1.2	7	2000	2750
	3500	6000	1.3	6	2400	3300
1976-1990	4000	5000	1.1	7	2000	2750
	4000	6000	1.2	6	2400	3300
>1990	4000	*	*	*	(0.4xf'c)	(0.55xf'c)

* The Standard Specifications for Construction require a minimum f'c of 5000 psi. However, prestressed concrete compressive strengths generally range from 5000 psi to 7000 psi during this time period. Consult the existing bridge plans for actual design strengths

**Es=28,000,000 psi for prestressing strands
Ec beam=33wc^{1.5}f'c^{0.5}, where wc=145 pcf and f'c is in units of psi

TABLE 10.29
Prestressed Concrete

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Chapter 11

REFERENCES

January 3, 2002

MICHIGAN DEPARTMENT OF TRANSPORTATION BRIDGE ANALYSIS GUIDE

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The following is a list of publications that were used in the preparation of this Bridge Analysis Guide:

1. Manual for Condition Evaluation of Bridges, 2nd Edition
American Association of State Highway and Transportation Officials
444 North Capitol Street, NW
Suite 249
Washington, D.C. 20001
(202) 624-5800
www.aashto.org
2. Standard Specifications for Highway Bridges, 16th Edition
American Association of State Highway and Transportation Officials
444 North Capitol Street, NW
Suite 249
Washington, D.C. 20001
(202) 624-5800
www.aashto.org
3. LRFD Bridge Design Specifications
American Association of State Highway and Transportation Officials
444 North Capitol Street, NW
Suite 249
Washington, D.C. 20001
(202) 624-5800
www.aashto.org
4. LRFD Manual of Steel Construction, 2nd Edition
American Institute of Steel Construction, Inc.
One East Wacker Drive
Suite 3100
Chicago, IL 60601
(312) 670-2400
www.aisc.org
5. ASD Manual of Steel Construction, 9th Edition
American Institute of Steel Construction, Inc.
One East Wacker Drive
Suite 3100
Chicago, IL 60601
(312) 670-2400
www.aisc.org
6. Iron and Steel Beams 1873-1952 (1953)
American Institute of Steel Construction, Inc.
One East Wacker Drive

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Suite 3100
Chicago, IL 60601
(312) 670-2400

www.aisc.org

7. Building Code Requirements for Structural Concrete (318-99)
and Commentary (318R-99)

American Concrete Institute
P.O. Box 9094
Farmington Hills, MI 48333
(248) 848-3700

www.aci-int.org

8. Michigan Bridge Analysis Guide, 1983 Edition

Michigan Department of Transportation
425 West Ottawa St.
P.O. Box 30050
Lansing, MI 48909
(517) 322-1676

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Michigan Department of Transportation
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Lansing, MI 48909
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Michigan Department of Transportation
425 West Ottawa St.
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13. Truck Driver's Guidebook, 5th and 6th Editions
Michigan Center for Truck Safety
1131 Centennial Way, Suite 2
Lansing, MI 48917
(800) 682-4682
www.truckingsafety.org

14. Moments, Shears and Reactions for Continuous Highway Bridges
American Institute of Steel Construction, Inc.
One East Wacker Drive
Suite 3100
Chicago, IL 60601
(312) 670-2400
www.aisc.org

15. Structural Analysis, 3rd Edition
Harold I. Laursen
McGraw-Hill Book Company
1221 Avenue of the Americas
New York, NY 10020
(800) 352-3566
www.bookstore.mcgraw-hill.com

16. Design of Concrete Structures, 11th Edition
Arthur H. Nilson and George Winter
McGraw-Hill Book Company
1221 Avenue of the Americas
New York, NY 10020
(800) 352-3566
www.bookstore.mcgraw-hill.com

17. Distribution of Wheel Loads on Highway Bridges, Phase III
NCHRP Project 12-26/2
Zokaie, Mish and Imbsen
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National Research Council
2101 Constitution Avenue, NW
Washington, D.C. 20418
www4.trb.org/trb/crp.nsf

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Publication No. FHWA-PL-00-029
August 2000
400 7th Street, SW

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Washington, D.C. 20590
www.fhwa.dot.gov

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Michigan Department of Transportation
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425 West Ottawa St.
P.O. Box 30050
Lansing, MI 48909
(517) 322-1676
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20. Bridge Engineering, Synthesis of Planning, Design, Construction,
Maintenance, Materials and Research
Andrzej S. Nowak, Chris Eamon and Maria M. Szerszen
University of Michigan
Report UMCEE 98-30 (MDOT Report RC-1369)
December 1988
425 West Ottawa St.
P.O. Box 30050
Lansing, MI 48909
(517) 322-1676
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21. 2000-2001 Michigan Vehicle Code. Public Act 300 of 1949
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Lansing, MI 48918-2050
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1221 Avenue of the Americas
New York, NY 10020
(800) 352-3566
www.bookstore.mcgraw-hill.com

23. Guide Specifications for Strength Evaluation of Existing Steel and Concrete
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American Association of State Highway and Transportation Officials
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P.O. Box 30050
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University of Michigan, Department of Civil and Environmental Engineering for
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27. Development of a Guide for Evaluation of Existing Bridges. 1998
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425 West Ottawa St.
P.O. Box 30050
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National Cooperative Highway Research Program, Research Results Digest
Number 234 - November, 1998.
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2101 Constitution Ave.
Washington, D.C. 20418

The following is a list of web sites that were not specifically used in the preparation of this guide but may contain helpful information:

Government & Agency Sites

1. American Association Standard Specification for Highway Bridges
www.transportation.org

2. American Society of Civil Engineers
www.asce.org

3. American Society of Material
www.asm-intl.org

4. U.S. Army Corps of Engineers
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6. Michigan Road Builder Association

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www.epa.com

8. Portland Cement Association
www.portcement.org

9. Precast & Prestressed Concrete Institute
www.pci.org

10. American Iron and Steel Institute
www.steel.org

Software Vendors

1. Best - Design & Analysis Curved & Straight Girder Bridge
www.cee.umd.edu/best/

2. AASHTOWare
www.aashtoware.org

3. Bentley - Microstation Software
www.bentley.com

4. Leap Software - Pier, Prestressed Girder Design & Analysis
www.leapsoft.com

GT Strudl - Structural Analysis & Design
www.ststrudl.gatech.edu

5. Risa - Finite Element Software
www.risatech.com

6. STAAD - Structural Analysis & Design
www.reiusa.com

7. Enercalc - Beam, Foundation, Wall ... Design
www.enercalc.com

8. EnbeamC - Design & Analysis of Prestressed Girders
www.ensoftinc.com

9. MDX - Curved & Straight Steel Bridge Design & Analysis
www.mdxsoftware.com

General Information

1. Bridgepros - Fun, Fact, & Free Software
www.bridgepros.com

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE**

2. Bridgesite - Fun, Fact, & Free Software
www.bridgesite.com
3. Fun for Kids
www.brantacan.co.uk/bridges.htm

MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE ANALYSIS GUIDE

Chapter 12
GLOSSARY

September 28, 2001

MICHIGAN DEPARTMENT OF TRANSPORTATION BRIDGE ANALYSIS GUIDE

ASD: allowable stress design.

Axle: the common axis of rotation of one or more wheels whether power driven or freely rotating, and whether in one or more segments and regardless of the number of wheels carried thereon.

Bridge owner: an organization or agency responsible for the construction, maintenance, inspection and load rating of bridges.

Bridge: a structure including supports erected over a depression or an obstruction, such as water, highway or railway, and having a track or passageway for carrying traffic or other moving loads, and having an opening measured along the center of the roadway or more than 20 feet between undercopings of abutments or spring lines or arches, or extreme ends of openings of multiple boxes; it may also include multiple pipes, where the clear distance between openings is less than half of the smaller contiguous opening.

Condition rating: the result of the determination of the functional capability and the physical condition of bridge components including the extent of deterioration and other defects.

Dead loads: are those loads that are constant in magnitude and fixed in location throughout the lifetime of the structure.

Designated route or highway: a highway approved by the state transportation department or a local authority with respect to a highway under its jurisdiction.

Gross weight: the weight of a vehicle without load plus the weight of any load thereon.

Gross combination weight rating (GCWR): the value specified by the manufacturer as the loaded weight of a combination vehicle. In the absence of a value specified by the manufacturer, GCWR will be determined by adding the GVWR of the power unit and the total weight of the towed unit and any load on that unit.

Gross vehicle weight rating (GVWR): the value specified by the manufacturer as the loaded weight of a single vehicle.

Inventory rating: the inventory rating generally corresponds to the customary design level of stresses but reflects the existing bridge and material conditions with regard to deterioration and loss of section. Load ratings based on the inventory rating allow comparisons with the capacity for new structures and , therefore, results in a live load which can safely utilize an existing structure for an indefinite period of time.

LFD: load factor design.

LFR: load factor rating.

Live loads: consist chiefly of traffic loads and/or pedestrian loads. They may be either fully or partially in place or not present at all, and may also change in location. Their

MICHIGAN DEPARTMENT OF TRANSPORTATION BRIDGE ANALYSIS GUIDE

magnitude and distribution at any given time are uncertain, and even their maximum intensities throughout the lifetime of the structure are not known with precision.

Load rating: the determination of the live load carry capacity of an existing bridge using existing bridge plans supplemented by information gathered from a field inspection.

Local authorities: every municipal and other local board or body having authority to enact laws relating to traffic under the constitution and laws of this state.

LRFD: load and resistance factor design.

LRFR: load resistance factor rating.

Maximum axle load: the gross weight over the axle which includes vehicles and load.

Motor vehicle: every vehicle that is self-propelling, but for purposes of Chapter 4 of Act 300 of 1949, from the Michigan Vehicle Code, does not include industrial equipment such as a forklift, a front-end loader or other construction equipment that is not subject to registration under the aforementioned Act. Motor vehicle does not include an electric patrol vehicle being operated in compliance with the electric patrol vehicle act.

Operating rating: load ratings based on the operation rating generally describe the maximum permissible live load to which the structure may be subjected. Allowing unlimited numbers of vehicles to use the bridge at operating level may shorten the life of the bridge.

Posted: restricted as to the maximum loads allowed on a bridge. If an analysis shows that maximum legal loads exceed the operating rating of a bridge, the bridge must be posted with signs indicating it's operating capacity.

Road tractor: every vehicle designed and used for drawing other vehicles and not so constructed as to carry any load thereon either independently or any part of the weight of the vehicle or load so drawn.

Semi-trailer: every vehicle with or without motive power, other than a pole-trailer, designed for carrying persons or property and for being drawn by a motor vehicle and so constructed that some part of its weight and that of its load rests upon or is carried by another vehicle.

Spacing between axles: the distance from axle center to axle center.

Tandem axle: two axles spaced more than 3 ft 6 in and less than 9 ft apart.

Tandem axle assembly: two axles spaced more than 3 ft 6 in and less than 9 ft apart, 1 axle in front of the other and so attached to the vehicle wherein an attempt is made by connecting mechanism to distribute the weight equally between the two axles.

Tank vehicle: any commercial motor vehicle that is designed to transport any liquid or

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gaseous material within a tank that is either permanently or temporarily attached to the vehicle. Tank vehicle does not include a vehicle attached to a portable tank having a rated capacity less than 1,000 gallons.

Trailer: every vehicle with or without motive power, other than a pole-trailer, designed for carrying property or persons and for being drawn by a motor vehicle and so constructed that no part of its weight rests upon the towing vehicle.

Trailer coach: every vehicle primarily designed and used as temporary living quarters for recreational, camping or travel purposes and drawn by another vehicle.

Tridem axle assembly: three axles spaced more than 3 ft 6 in and less than 9 ft apart, 1 axle in front of the other and so attached to the vehicle wherein an attempt is made by connecting mechanism to distribute the weight equally between the three axles.

Truck tractor: every motor vehicle designed and used primarily for drawing other vehicles, and not so constructed as to carry a load other than a part of the weight of the vehicle and load so drawn, except that a truck tractor and semitrailer engaged in the transportation of automobiles may transport motor vehicles on part of the power unit.

Truck: every motor vehicle designed, used or maintained primarily for the transportation of property.

Trunkline: A highway owned by the State of Michigan. All Interstate (I), United States (US) And Michigan (M) routes in Michigan are trunklines.

Vehicle: every device in, upon, or by which any person or property is or may be transported or drawn upon a highway, except devices exclusively move by human power or used exclusively upon stationary rails or tracks and except, only for the purpose of tilting and registration under Act 300 of 1949, from the Michigan Vehicle Code, a mobile home as defined in Section 2 of the mobile home commission act, Act No. 96 of the Public Acts of 1987, being section 125.2302 of the Michigan Compiled Laws.

Wrecker: a truck with a hoist, towing apparatus or self-loading flatbed, or any combination of these items, permanently affixed to the truck, used to transport not more than two vehicles, except for a motor vehicle equipped with a fifth wheel or a motor vehicle that tows the second vehicle on a trailer.

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BRIDGE ANALYSIS GUIDE

Chapter 13
BLANK FORMS

September 28, 2001

MICHIGAN DEPARTMENT OF TRANSPORTATION BRIDGE ANALYSIS GUIDE

BLANK FORMS

The following blank forms are included in this Chapter to aid in the understanding of the entire Michigan Bridge Load Rating Process:

Structure Inventory and Appraisal form (SI&A), Form 1717A.

This form is used by MDOT and local agencies to record and report all pertinent information regarding all bridges within Michigan.

MDOT Bridge Analysis Summary,

Used internally by MDOT to summarize the reasons for analyzing a structure, the method used and the analysis results.

MDOT Bridge Analysis Report, Form 0231

Used internally by MDOT to report the need for and approve a bridge posting order.

MDOT Application for Extended Transportation Permit C, Form 2282

Used to apply to MDOT for a permit for multiple trips to transport overweight/oversize Construction Equipment.

MDOT Application for Extended Transportation Permit Misc., Pages 1 and 2, Form 2266

Used to apply to MDOT for a permit for multiple trips to transport overweight/oversize miscellaneous items.

MDOT Application for Special Transportation or Building Moving Permit, Form 2258

Used to apply to MDOT for a permit for a single trip to transport overweight/oversize miscellaneous items.

Kent County Application for Special Transportation or Building Moving Permit

Used to apply to Kent County for a permit for a single trip to transport overweight/oversize miscellaneous items.

Delta County Application for Transportation Permit

Used to apply to Delta County for a permit to transport overweight/oversize miscellaneous items.

Bridge Analysis Data Sheet

Sheet proposed for use to summarize data and assumptions used in a specific bridge analysis.

Michigan Department of Transportation Structure Inventory and Appraisal

Control Section

MDOT Bridge ID

Code in red ink

NBI Bridge ID

Struct Num

Region

TSC

County

City

Resp

City Location

7- Facility Carried

User Name

6- Feature Intersected

9- Location

Latitude

Longitude

Owner

Maint Resp

Bridge History, Type, Materials

27- Year Built	
106- Year Reconstructed	
202- Year Painted	
203- Year Overlay	
43- Main Span Bridge Type	
44- Appr Span Bridge Type	
77- Steel Type	
78- Paint Type	
79- Rail Type	
80- Post Type	
107- Deck Type	
108A- Wearing Surface	
108B- Membrane	
108C- Deck Protection	

Route Carried By Structure (ON Record)

5A- Record Type	
5B- Route Signing	
5C- Level of Service	
5D- Route Number	
5E- Direction Suffix	
10L- Best 10ft Uncl- Lt	
10R- Best 10ft Uncl- Rt	
PR Number	
Control Section	
11- Mile Point	
12- Base Highway Network	
13- LRS Route-Subroute	
19- Detour Length	
20- Toll Facility	
26- Functional Class	
28A- Lanes On	
29- ADT	
30- Year of ADT	
32- Appr Roadway Width	
32A/B- Ap Pvt Type/Width	
42A- Service Type On	
47L- Left Horizontal Clear	
47R- Right Horizontal Clear	
53- Min Vert Clr Ov Deck	
100- STRAHNET	
102- Traffic Direct	
109- Truck %	
110- Truck Network	
114- Future ADT	
115- Year Future ADT	
Freeway	

Route Under Structure (UNDER Record)

5A- Record Type	
5B- Route Signing	
5C- Level of Service	
5D- Route Number	
5E- Direction Suffix	
10L- Best 10ft Uncl- Lt	
10R- Best 10ft Uncl- Rt	
PR Number	
Control Section	
11- Mile Point	
12- Base Highway Network	
13- LRS Route-Subroute	
19- Detour Length	
20- Toll Facility	
26- Functional Class	
28B- Lanes Under	
29- ADT	
30- Year of ADT	
42B- Service Type Under	
47L- Left Horizontal Clear	
47R- Right Horizontal Clear	
54A- Left Feature	
54B- Left Underclearance	
54C- Right Feature	
54D- Right Underclearance	
Under Clearance Year	
55A- Reference Feature	
55B- Right Horiz Clearance	
56- Left Horiz Clearance	
100- STRAHNET	
101- Traffic Direction	
109- Truck %	
110- Truck Network	
114- Future ADT	
115- Year Future ADT	
Freeway	

Structure Dimensions

34- Skew	
35- Struct Flared	
45- Num Main Spans	
46- Num Appr Spans	
48- Max Span Length	
49- Structure Length	
50A- Width Left Curb/SW	
50B- Width Right Curb/SW	
33- Median	
51- Width Curb to Curb	
52- Width Out to Out	
112- NBIS Length	

Inspection Data

90- Inspection Date	
91- Inspection Freq	
92A- Frac Crit Req/Freq	
93A- Frac Crit Insp Date	
92B- Und Water Req/Freq	
93B- Und Water Insp Date	
92C- Oth Spec Insp Req/Freq	
93C- Oth Sped Insp Date	
176A- Und Water Insp Method	
58- Deck Rating	
58A- Deck Surface Rtg	
59- Superstructure Rating	
59A- Paint Rating	
60- Substructure Rating	
61- Channel Rating	
62- Culvert Rating	

Structure Appraisal

36A- Bridge Railing	
36B- Rail Transition	
36C- Approach Rail	
36D- Rail Termination	
67- Structure Evaluation	
68- Deck Geometry	
69- Underclearance	
71- Waterway Adequacy	
72- Approach Alignment	
103- Temporary Structure	
113- Scour Criticality	

Proposed Improvements

75- Type of Work	
76- Length of Improvement	
94- Bridge Cost	
95- Roadway Cost	
96- Total Cost	
97- Year of Cost Estimate	

Load Rating and Posting

31- Design Load	
41- Open, Posted, Closed	
63- Oper Rtg Method	
64F- Fed Operating Rtg	
64M- Mich Oper Rtg	
65- Inv Rtg Method	
66- Inventory Load	
70- Posting	
141- Posted Loading	
195- Analysis ID	
193- Overload Class	

Navigation Data

38- Navigation Control	
39- Vertical Clearance	
40- Horizontal Clearance	
111- Pier Protection	
116- Lift Brdg Vert Clear	

Miscellaneous

37- Historical Significance	
98A- Border Bridge State	
98B- Border Bridge %	
101- Parallel Structure	
EPA ID	
Stay in Place Forms	

BRIDGE ANALYSIS SUMMARY

Bridge ID:

Old Analysis ID (MC #)

The above structure was analyzed for the following reason(s):

- New Bridge
- Construction project (Overlay, new deck, etc)
- Load Factor Conversion
- Newly Reported Deterioration
- Request From _____
- Other _____

Structure analyzed by:

- Virtis
- BARS
- Other _____

Controlling Member: _____

ALL ANALYSIS BASED ON INSPECTION DATED: ____ / ____ / ____

New Inventory Coding:

Fed Operating	Inventory	Mich Operating	Open/Post	Posting	Temp Str	Overload Cl			
<input style="width: 30px; height: 30px;" type="text"/>	<input style="width: 60px; height: 30px;" type="text"/>	<input style="width: 30px; height: 30px;" type="text"/>	<input style="width: 30px; height: 30px;" type="text"/>	<input style="width: 30px; height: 30px;" type="text"/>	<input style="width: 30px; height: 30px;" type="text"/>	<input style="width: 30px; height: 30px;" type="text"/>			
Method 63 code	Capacity 64F metric T	Method 65 code	Capacity 66 metric T	Truck 64MA code	Capacity 64MB US Ton	41 code	70 code 0-5	103 T or blank	193 A - C

Analyzed By	____ / ____ / 20 Date
Checked By	____ / ____ / 20 Date
Reviewed By	____ / ____ / 20 Date
Database Updated By	____ / ____ / 20 Date

BRIDGE ANALYSIS REPORT

BRIDGE FILE	
NO.	
DATE	

LOCATION _____

DESCRIPTION _____

POSTINGS FOR ROADWAY WIDTH & OVERHEAD CLEARANCE

EXISTING DIMENSIONS	POSTINGS		
ROADWAY WIDTH	POSTED FOR	EXISTING	RECOMMENDED
	Narrow Bridge		
OVERHEAD CLEARANCE	One Way Traffic		
	Overhead Clearance		

POSTING FOR LOAD LIMITS

TYPE OF LOAD	COMPUTED LOAD LIMIT	RECOMMENDED POSTING
ON ANY AXLE	9 Ft. or More Apart Tons	Tons
	Less Than 9 Ft. Apart Tons	Tons
GROSS WEIGHT	One Unit Tons	Tons
	Two Units Tons	Tons
	Three Units Tons	Tons

THIS ANALYSIS IS BASED ON A FIELD INSPECTION DATED: _____ "H" RATING: _____

CONTROLLING MEMBER _____

REDUCTION DUE TO DETERIORATION	%	EXISTING POSTING: Maximum Axle Load	Lbs.
--------------------------------	---	----------------------------------------	------

PREPARED BY - ANALYST (Signature):	DATE	CHECKED BY (Signature):	DATE
------------------------------------	------	-------------------------	------

REVIEWED BY - BRIDGE MANAGEMENT ENGINEER (Signature):	DATE
-------------------------------------------------------	------

RECOMMENDED FOR APPROVAL - BRIDGE OPERATIONS ENGINEER (Signature)	DATE
-------------------------------------------------------------------	------

APPROVED - ENGINEER OF DELIVERY (Signature)	DATE
---------------------------------------------	------

APPLICATION FOR EXTENDED TRANSPORTATION PERMIT ON STATE TRUNKLINES FOR THE MOVEMENT OF OVERWEIGHT/OVERSIZE CONSTRUCTION EQUIPMENT

C

Information required by Act 300, P.A. 1949 to obtain a permit.

INSTRUCTIONS

Type or print legibly in **ink**. Make check payable to Michigan Department of Transportation.

Do not send cash. See *schedule for current fee*.

**Mail one copy to: Michigan Department of Transportation, Real Estate Division - Transport Permits Unit,
P.O. Box 30648, Lansing, MI 48909.**

See reverse for additional requirements. Any changes or erasures except initialed amendments by MDOT will void this permit.

To the Michigan Department of Transportation, Lansing, Michigan, Date: _____ 20 _____

_____ requests permission to transport oversized or overweight equipment on all highways in Michigan under the jurisdiction of the Michigan Department of Transportation in accordance with the following conditions and restrictions.

PLEASE NOTE: List transporting vehicles (trucks, tractors, lowboys, etc.) and the construction equipment that will be moved, either loaded or self-propelled. List only one vehicle or item of equipment per page.

<input type="checkbox"/> Towed <input type="checkbox"/> Self Propelled <input type="checkbox"/> Loaded	MAKE AND MODEL	UNIT NO.	LICENSE NO.	VEHICLE IDENTIFICATION NO.	SERIAL NO.	UNLOADED WEIGHT	UNLOADED DIMENSIONS		
							WIDTH	HEIGHT*	LENGTH
TYPE OF EQUIPMENT									

***FOR TRAILERS, INDICATE DECK HEIGHT.**

CONDITIONS AND RESTRICTIONS:

1. Subject to the conditions, restrictions and approval, this permit for the transportation of construction equipment has been issued for movement on all State trunklines except US-131 between M-11 and I-196 within the City of Grand Rapids, M-40 from US-12 to M-60 in Cass County, and M-100, entire length, between I-96 and I-69 in Clinton and Eaton Counties.
2. The permittee shall be responsible for damages to the highway, to persons and to property caused by or arising from operations covered by this permit.

The permittee shall indemnify and save harmless the Transportation Commission, the department and all of their employees from any and all suits, claims and damages of every kind arising out of, under or by reason of this permit, or from operations covered by this permit.
3. The driver of the vehicle shall carry the original permit in the vehicle to which it applies and shall have it available for inspection by any police office or agent of the Department of Transportation. The driver shall stop at all highway weigh stations for permit inspection.
4. Insurance coverage required in the law of this state shall be in effect for moves operating with an overweight or oversize permit.
5. Any of the following actions shall immediately void the permit and subject the applicant to appropriate legal action:
(a) Misrepresentation of information set forth in an application for permit. (b) Noncompliance with the conditions, restrictions or provisions on which a permit is issued. (c) A change or erasure on a permit.
6. Extended Permits will not be issued for a period of less than 30 days.
7. Permits will be issued only for vehicles owned by the applicant or operated under a bona fide lease or rental agreement. Each vehicle within a combination of vehicles (tractor, semi-trailer, lowboy, etc.) and each object being moved must have a valid permit.

If a permit is granted, the applicant agrees to comply with all the conditions and restrictions listed on this application.

TO BE COMPLETED BY APPLICANT				FOR MDOT USE ONLY	
FIRM NAME				APPROVAL OF APPLICATION AND ISSUANCE OF PERMIT BY DEPARTMENT OF TRANSPORTATION	
STREET ADDRESS				PERMIT NUMBER	
CITY or TOWN		STATE	ZIP	EXPIRATION DATE	
PHONE NO.	FED ID NO./SOC. SEC. NO.			DATE APPROVED	
SIGNATURE			DATE	APPROVED	
TITLE				BY (Michigan Department of Transportation)	

APPLICATION FOR EXTENDED TRANSPORTATION PERMIT ON STATE TRUNKLINES

MISC

Information required by Act 300, P.A. 1949 to obtain a permit.

INSTRUCTIONS

*Type or print legibly in ink. Make check payable to Michigan Department of Transportation.
Do not send cash. See schedule for current fee.*

**Mail one copy to: Michigan Department of Transportation, Real Estate Division - Transport Permits Unit,
P.O. Box 30648, Lansing, MI 48909.**

See reverse for additional requirements. Any changes or erasures except initialed amendments by MDOT will void this permit.

To the Michigan Department of Transportation, Lansing, Michigan, Date: _____ 19 _____

_____ requests permission to transport oversize and/or overweight vehicles or loads on all highways in Michigan under the jurisdiction of the Michigan Department of Transportation in accordance with the following conditions and restrictions.

EQUIPMENT	MAKE AND MODEL	UNIT NO.	VEHICLE IDENTIFICATION NO.	SERIAL NO.	LICENSE NO.	WEIGHT	DIMENSIONS			
							WIDTH	HEIGHT	LENGTH	
Truck-Tractor										
Semi-Trailer										
Trailer										
Object Being Moved										
MAXIMUM WEIGHT & DIMENSIONS (Vehicle and Load)										

WEIGHT — AXLE SPACING — TIRES

Axle	1	2	3	4	5	6	7	8	9	10	11
Axle Weight											
Tire Size In Inches											
No. of Tires											
AXLE SPACING (in feet & inches)	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	10 to 11	

CONDITIONS AND RESTRICTIONS:

- Subject to the conditions, restrictions and approval, this permit for the transportation of overweight and/or oversize equipment listed above has been issued for movement on all State trunklines except US-131 between M-11 and I-196 in Grand Rapids; M-40 from US-12 to M-60 in Cass County; and M-100, entire length, between I-96 and I-69 in Clinton and Eaton Counties.
- The permittee shall be responsible for damages to the highway, to persons, and to property caused by or arising from operations covered by this permit.
The permittee shall indemnify and save harmless the Transportation Commission, the Department and all of their employees from any and all suits, claims and damages of every kind arising out of, under or by reason of this permit, or from operations covered by this permit.

If a permit is granted, the applicant agrees to comply with all the conditions and restrictions listed on this application.

TO BE COMPLETED BY APPLICANT				FOR MDOT USE ONLY	
FIRM NAME				APPROVAL OF APPLICATION AND ISSUANCE OF PERMIT BY DEPARTMENT OF TRANSPORTATION	
STREET ADDRESS				PERMIT NUMBER	
CITY or TOWN		STATE	ZIP	EXPIRATION DATE	
PHONE NO.	FED ID NO./SOC. SEC. NO.			DATE APPROVED	
SIGNATURE			DATE	APPROVED	
TITLE				BY (Michigan Department of Transportation)	

APPLICATION FOR SPECIAL TRANSPORTATION OR BUILDING MOVING PERMIT

For movement of oversize/overweight vehicles or loads on highways under MDOT jurisdiction.

Information required by Act 300, P.A. 1949 to obtain a permit.

INSTRUCTIONS

Type or print legibly in ink. Make check payable to Michigan Department of Transportation.

Do not send cash. See schedule for current fee.

Mail one copy to: Michigan Department of Transportation, Real Estate Division - Transport Permits Unit,
P.O. Box 30648, Lansing, MI 48909.

See reverse for additional requirements. Any changes or erasures except initialed amendments by MDOT will void this permit.

* COMPLETE AREAS MARKED WITH ASTERISKS FOR OVERWEIGHT MOVES ONLY.

OBJECT OR LOAD TO BE MOVED - Describe. Give make, model of shovel, crane or other object.	OBJECT WEIGHT	APPLICATION NO. 250201
-------------------------------------------------------------------------------------------	---------------	----------------------------------

FROM (Include movement of empty vehicle if over legal limits.)	TO (Locate by distance and direction to nearest town or State Trunkline Intersection.)
----------------------------------------------------------------	----------------------------------------------------------------------------------------

VIA (Give State Trunkline Numbers.)

OBJECT WIDTH	OBJECT HEIGHT	OBJECT LENGTH	VEHICLE WIDTH	TRAILER LENGTH	* VEHICLE GAUGE	OVERALL WIDTH	OVERALL HEIGHT	OVERALL LENGTH	REAR OVERHANG

VEHICLE TO BE USED
 Truck Truck-Tractor Semi-Trailer Trailer Pole Trailer Dollies Other:

DATE OF MOVEMENT	TRUCK-TRACTOR LIC. NO.	SEMI-TRAILER LIC. NO.	TRAILER LIC. NO.
------------------	------------------------	-----------------------	------------------

WEIGHT — AXLE SPACING — TIRES																			
AXLE NO. →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
* AXLE WEIGHT	/																		
* TIRE WIDTH IN INCHES	/																		
* NO. OF TIRES	/																		
* AXLE SPACING	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	10 to 11	11 to 12	12 to 13	13 to 14	14 to 15	15 to 16	16 to 17	17 to 18	18 to 19	

APPLICANT: I certify that, to the best of my knowledge and belief, statements contained in this application are true and correct. I have read and understand the conditions on the reverse of this application, and if granted a Special Transportation Permit, I will have the required insurance noted in Paragraph J (Conditions and Restrictions) in effect while transporting under this permit and I will comply with all conditions and restrictions which apply to this movement.

FIRM NAME	PHONE	FEDERAL I.D. NO. or SOC. SEC. NO.
STREET ADDRESS	BY (Signature of authorized representative)	
CITY or TOWN	ZIP	DATE
	TITLE	

The following is to be completed ONLY when requesting to move a building exceeding 16 feet in width.

TYPE OF CONSTRUCTION <input type="checkbox"/> Frame <input type="checkbox"/> Brick <input type="checkbox"/> Other - Describe:	NO. OF STATE TRUNKLINE MILES
----------------------------------------------------------------------------------------------------------------------------------	------------------------------

FROM (Present Street Address)	TO (Future Street Address)
-------------------------------	----------------------------

APPROVAL OF APPLICATION AND ISSUANCE OF PERMIT BY MDOT For Office Use Only

SPEED LIMITED TO:	APPLICATION NO. 250201
SPECIAL PROVISIONS (See reverse side.)	PERMIT NO.

**THIS PERMIT NOT VALID ON
COUNTY ROADS OR CITY STREETS**

APPROVED BY	DATE	ISSUED BY (Michigan Department of Transportation)	DATE
-------------	------	---------------------------------------------------	------

KENT COUNTY ROAD COMMISSION
APPLICATION FOR SPECIAL TRANSPORTATION OR BUILDING MOVING PERMIT
 (For movement of oversize/overweight vehicles or loads)

OBJECT TO BE MOVED	OBJECT WEIGHT
--------------------	---------------

ROUTE: _____

OBJECT WIDTH	OBJECT HEIGHT	OBJECT LENGTH	OVERALL WIDTH	OVERALL HEIGHT	OVERALL LENGTH	REAR OVERHANG

VEHICLE TO BE USED

- Truck
 Truck-Trailer
 Semi-Trailer
 Trailer
 Pole Trailer
 Dollies
 Other:

DATE OF MOVEMENT (No permits issued for Sat., Sun., holidays)(moves during daylight hrs. only)	TRUCK-TRACTOR LIC. NO.	SEMI-TRAILER LIC. NO.	TRAILER LICENSE NO.
------------------------------------------------------------------------------------------------	------------------------	-----------------------	---------------------

WEIGHT - AXLE SPACING - TIRES

AXLE NO.	1	2	3	4	5	6	7	8	9
*AXLE WEIGHT									
*TIRE SIZE									
*NO. OF TIRES									
	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	
*AXLE SPACING									

***COMPLETE FOR OVERWEIGHT MOVES ONLY.**

FIRM NAME	PHONE	FAX
STREET ADDRESS	CITY	ZIP
CONTACT PERSON (Please print):		

To be completed ONLY when requesting to move a building exceeding 16 ft. in width

- Frame
 Brick
 Other-Describe:

The undersigned further agrees that if this application is approved he will meet all legal requirements and that he will be responsible to the Kent County Road Commission for any damages to the highway or highway structures or to the structures of any private company within the right-of-way of the highway, and that he shall well and truly pay all damages, fines and penalties which he shall become liable to pay and shall save the Kent County Road Commission harmless from all suits, claims, damages and proceedings of any kind due to his operations within the highway.

Signature of Applicant _____ For _____

Approved by _____ Engineering Dept. Date _____

Approved by _____ Traffic Dept. Date _____

Approved by _____ Maintenance Dept. Date _____

ALLOWABLE AXLE WEIGHTS:

WEIGHT CATEGORY	LEGAL	20%	30%	40%	50%
SINGLE AXLE:	18,000	21,600	23,400	25,200	27,000
TANDEM AXLE:	17,000	20,400	22,100	23,800	25,500
MULTI AXLE	13,000	15,600	16,900	18,200	19,500

OTHER SPECIFICATIONS:

- A. Before June 30, 1992, the mobile home is not more than sixteen feet (16') wide in the Upper Peninsula of the state of Michigan.
- B. A jurisdictional authority shall not issue a permit described in subsection (2) or (3) for the transport of a mobile home on a Saturday, Sunday, Legal Holiday, or during the hours between sunset and sunrise.
- C. For a mobile home and towing vehicle that, when combined, are more than eighty feet (80') in length or more than twelve feet (12') in width, all of the following:
 - C1. Notice that the mobile home shall be equipped with two (2) flashing amber lights on the rear of the mobile home and one (1) flashing amber light on the top of the towing vehicle.
 - C2. Notice that the signs with the words "OVERSIZE LOAD" shall be displayed on the front bumper of the towing vehicle and the back of the mobile home.
 - C3. Notice that the signs identified in subparagraph two (2) shall be of durable material, in good condition, with black lettering on a yellow background, and that each letter shall be of block lettering not less than twelve inches (12") in height at the front and not less than sixteen inches (16") in height at the rear of the unit.

BACK OF PERMIT

PG. 2

BRIDGE ANALYSIS DATA SHEET

Bridge Identification: _____

Year Constructed/Reconstructed _____

Material Properties

Concrete	$f'c =$ _____	
Reinforcing Steel	$f_y =$ _____	ASTM Spec _____
Prestressed Concrete	$f'c =$ _____	
Structural Steel	$f_y =$ _____	ASTM Spec _____
Prestressing Steel	$f_u =$ _____	ASTM Spec _____
	$f_y =$ _____	size = _____

Basis for Material Properties

Existing Plans _____
Standard Specs for Construction (19__) _____
Previous Load rating _____
Material History from Bridge Analysis Guide _____

Condition Information

Steel Beam Loss _____ % flange & cover plate _____ % web
Deck Loss _____
Substructure _____
Other _____

Members Rated

Primary superstructure structural members _____
Other superstructure members _____
Substructure _____

Notes:

- 1 Rating based on MDOT Bridge Analysis Guide
- 2 Unit weight dead loads from AASHTO Standard Specs for Highway Bridges
- 3 Condition Information from Bridge Inspection Report by others _____
Site Inspection _____
- 4 Future dead loads not included

Analyzed by

Date

Checked by

Date