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## Memo

**TO:** Addressees

**FROM:** Mary Lacho  
Estimates Engineer

**DATE:** October 7, 2014

**SUBJECT:** Cost Index – 2014 First Quarter

The First Quarter 2014 Minnesota Highway Construction Composite Cost Index is 284.46.

The indicator items that increased significantly compared to 1<sup>st</sup> quarter, 2013 were Excavation and Structural Concrete. Two projects, a Railroad Bridge and a large multiyear project are contributing to the excavation increase due to project related inefficiencies. The structural Concrete item includes many small quantity projects. We will look at removing these outliers in the future.

The first quarter index was based on \$72.95 million of work considered from 28 Projects. First quarter 2014 cost information is compared to first quarter 2013 below.

- The average Excavation cost was \$5.94/CY, up \$2.08/CY from the first quarter of 2013. 8 projects were considered this quarter.
- The average Reinforcing Steel cost was \$1.21/lb, up \$0.17/lb from the first quarter of 2013. 12 projects were considered this quarter.
- The Structural Steel average cost was \$1.50/lb. No data for Structural Steel in 2013. 3 projects were considered.
- The average Structural Concrete cost was \$561.03/CY, up \$69.03/CY from the first quarter of 2013. 14 projects were considered this quarter.
- The average Concrete Pavement cost was \$117.67/CY, down \$0.26/CY from the first



quarter of 2013. 4 projects were considered this quarter.

- The average Plant Mixed Bituminous cost was \$54.67/ton, up \$2.85/ton from the first quarter of 2013. 18 projects were considered this quarter.

First quarter, 2014 project information is compared to first quarter, 2013 below.

**Table 1: Indicator Costs**

Item	First Quarter 2013			First Quarter 2014		
	Quantity	Cost *	Unit Cost	Quantity	Cost *	Unit Cost
Excavation	1,844,214 CY	\$7.13	\$3.86/CY	666,446 CY	\$3.96	\$5.94/CY
Reinforcing Steel	2,586,483 lb	\$2.59	\$1.04/lb	1,923,817 lb	\$2.34	\$1.21/lb
Structural Steel	0 lb	\$0.00	\$0.00/lb	1,342,290 lb	\$2.01	\$1.50/lb
Structural Concrete	19,393 CY	\$9.54	\$492/CY	16,322 CY	\$9.16	\$561.03/CY
Concrete Pavement	40,271 CY	\$4.75	\$117.93/CY	97,558 CY	\$11.48	\$117.67/CY
Plant-Mixed Bit.	1,530,941 ton	\$79.34	\$51.82	804,866 ton	\$44.00	\$54.67/ton
<b>Total</b>		\$103.35			\$72.95	

\* millions of dollars

**Table 2: Minnesota Highway Construction Project Summary**

	First Quarter 2013	First Quarter 2014
Number of Projects Awarded	76	57
Awarded Amount (\$ million)	\$307.05	\$186.14
Total Number of Bidders	283	212
Average Number of Bidders	3.7	3.7
Number of Cost Index Projects	45	28
Cost Index Amount (\$ million)	\$103.35	\$72.95
Excavation Index	192.74	296.52
Structures Index	**	260.71
Surfacing Index	281.70	294.70
Composite Cost Index (CI)	**	284.46

\*\* Not computed due to the absence of data for associated indicator items.

The average number of bidders per project was 3.7 for the first quarter of 2013. In comparison, the average number of first quarter bidders in 2014 was 3.7.

Attached is an explanation of the derivation of the Minnesota Cost index, charts of quarterly and annual Minnesota highway construction cost trends and a table and chart comparing the yearly Minnesota Composite Cost Index with the latest yearly FHWA Index.

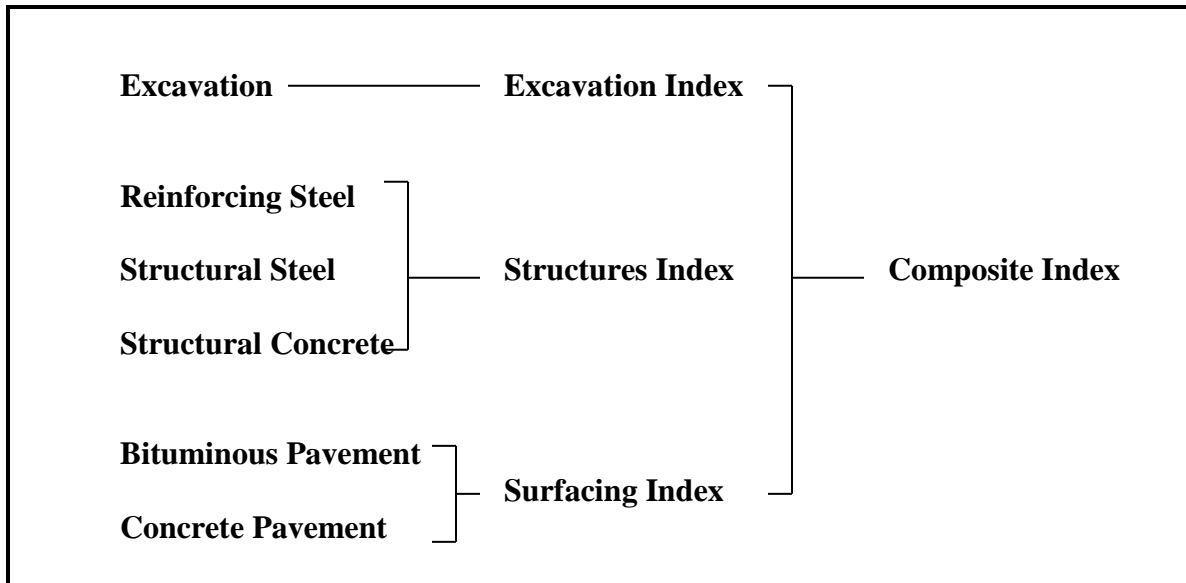
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# Minnesota Construction Cost Index

The Minnesota Construction Cost Index is an indicator of price trends for highway construction.

It is composed of six indicator items: roadway excavation, to indicate the price trends for all roadway excavation; concrete pavement and plant-mixed bituminous, to indicate the price trend for all surfacing types; and reinforcing steel, structural steel, and structural concrete, to indicate the price trend for structures.



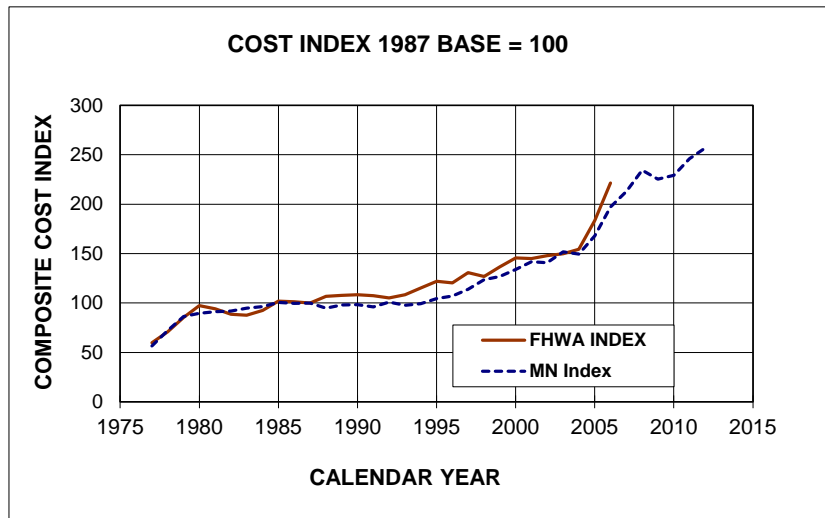
Each quarter, an average unit price is computed for each indicator item. The unit price is based upon the actual bids from projects **excluding Design Build projects**, costing more than \$100,000, and let during that quarter. These unit prices include the cost of material, labor, equipment, overhead and profit.

These unit prices along with the 1987 base unit prices and quantities are used to compute the Excavation, Surfacing, Structures and Composite Index.

**NOTE: In 2007, the FHWA stopped collecting Price Trend data,  
and no longer provide the reports necessary to complete the comparison graphs.**

**HIGHWAY CONSTRUCTION COST INDEX 1987 BASE-100**

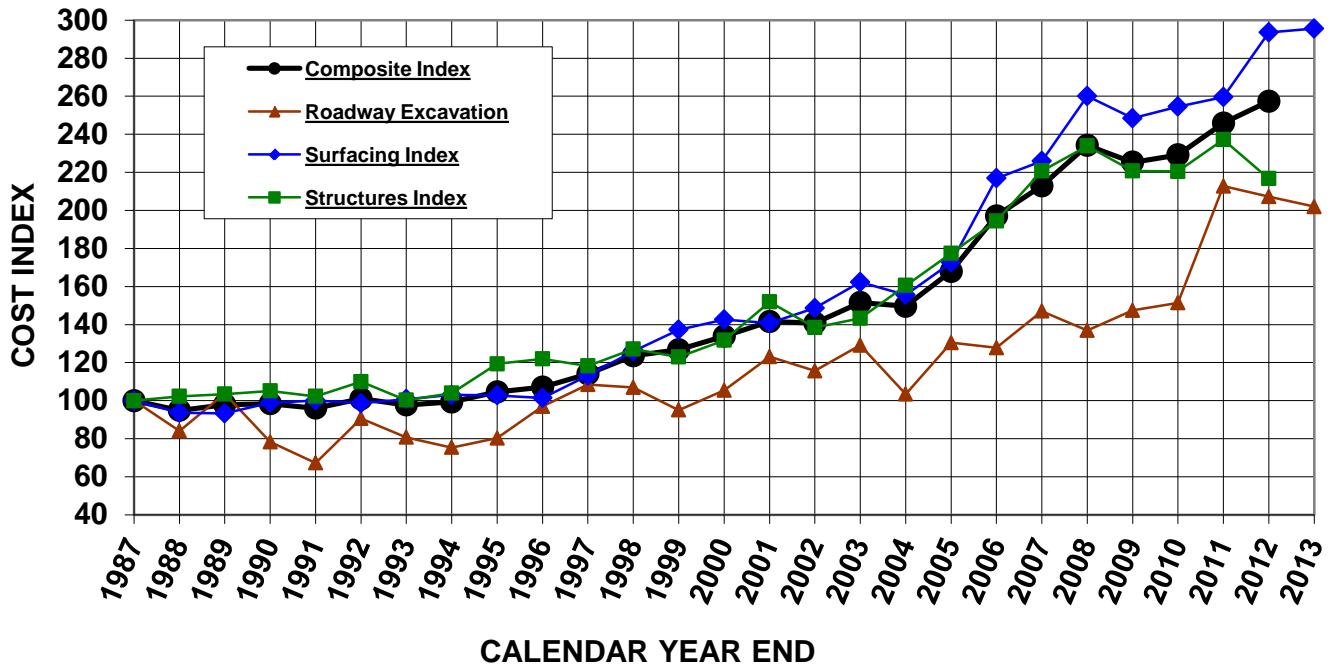
<u>Year End</u>	<u>FHWA Index</u>	<u>MN Index</u>
1975		
1976		
1977	59.80	56.40
1978	70.70	72.10
1979	85.50	86.30
1980	97.20	89.60
1981	94.20	91.20
1982	88.50	91.80
1983	87.60	94.80
1984	92.60	96.40
1985	102.00	100.70
1986	101.10	99.60
<b>1987</b>	<b>100.00</b>	<b>100.00</b>
1988	106.60	94.90
1989	107.70	97.90
1990	108.50	98.40
1991	107.50	96.00
1992	105.10	101.00
1993	108.30	97.70
1994	115.10	99.30
1995	121.90	104.60
1996	120.20	107.10
1997	130.60	114.00
1998	126.90	123.58
1999	136.50	126.75
2000	145.60	133.91
2001	144.80	141.61
2002	147.90	140.73
2003	149.80	151.60
2004	154.40	149.61
2005	183.60	167.97
2006	221.30	197.10
2007		212.88
2008		234.22
2009		225.32
2010		229.17
2011		245.95
2012		256.94
2013		
2014		
2015		



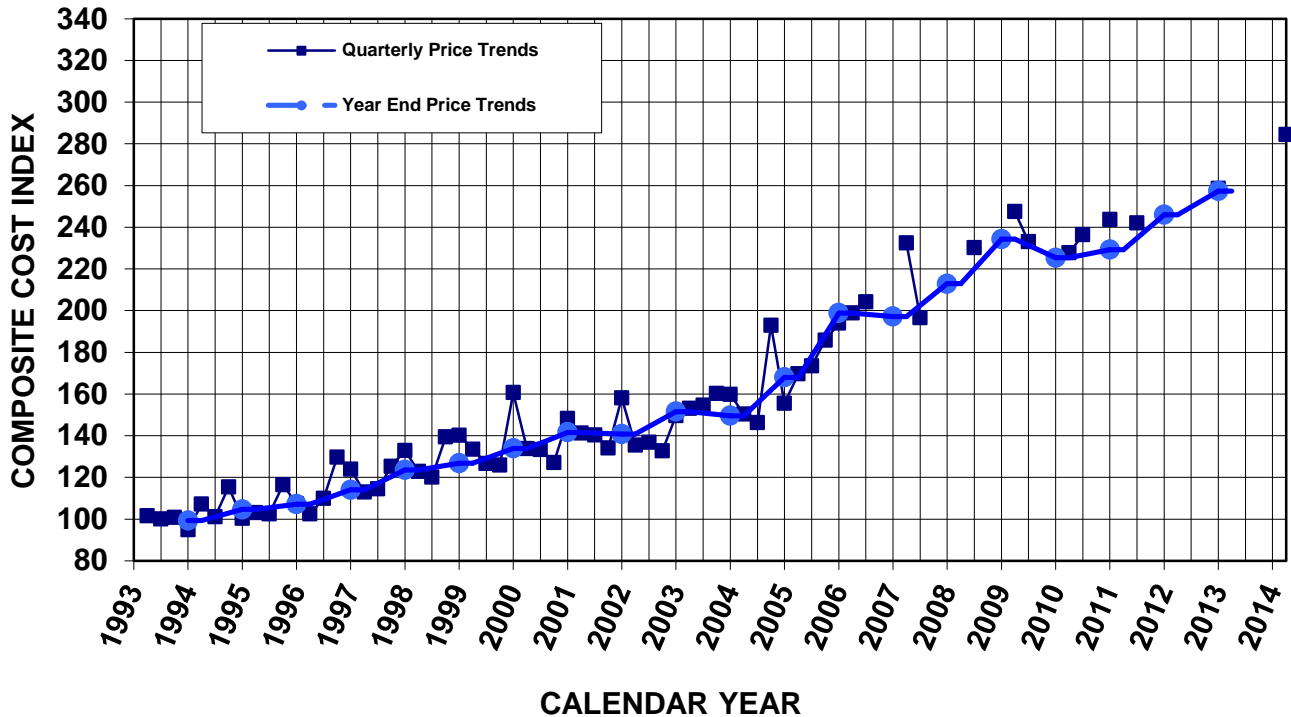
1987 Base Year = 100  
 FHWA Index includes projects > \$500,000  
 Mn/DOT Index includes projects > \$100,000

## Minnesota Highway Construction Cost Trends

### ANNUAL PRICE TRENDS



### YEARLY & QUARTERLY PRICE TRENDS



**MN/DOT COST INDEX**

<u>Year</u>	<u>Roadway Excavation</u>	<u>Bituminous Surfacing</u>	<u>Concrete Surfacing</u>	<u>Surfacing Index</u>	<u>Reinforce- Steel</u>	<u>Structural Steel</u>	<u>Structural Concrete</u>	<u>Structures Index</u>	<u>Composite Index</u>
<b>1987</b>	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
<b>1988</b>									
1st Quarter	66.35	92.87	76.99	89.60	108.25	113.11	91.18	98.44	88.98
2nd Quarter	111.84	96.02	107.04	98.29	107.22	103.87	95.60	99.37	100.58
3rd Quarter	87.81	94.14	104.76	96.33	110.27	110.57	110.45	110.43	99.46
4th Quarter	89.72	103.63		103.63	115.44	107.04	94.37	100.80	100.39
Year End	84.08	95.68	85.55	93.59	109.73	109.34	97.90	102.26	94.90
<b>1989</b>									
1st Quarter	121.34	88.57	92.72	89.42	120.87	141.72	101.41	112.36	101.11
137.56	70.45	90.06	87.63	89.56	108.73	102.24	98.24	101.04	90.35
3rd Quarter	137.56	107.54	135.39	113.28	116.66	107.48	94.73	101.34	113.09
4th Quarter		91.13		91.13	138.53	121.78	146.33	140.47	111.64
Year End	103.72	92.01	94.50	93.23	115.99	111.15	97.29	103.45	97.90
<b>1990</b>									
1st Quarter	75.54	100.19	81.67	96.37	115.62	140.73	102.05	111.55	98.06
2nd Quarter	67.71	96.79	104.57	98.39	122.11	105.43	110.57	111.97	98.17
3rd Quarter	97.07	122.17	102.13	118.04	117.17	112.70	92.03	100.67	109.65
4th Quarter	66.99	106.72	148.85	115.41	118.55	108.99	133.76	126.38	111.83
Year End	78.30	100.58	97.24	98.89	117.48	112.81	99.09	105.17	98.41
<b>1991</b>									
1st Quarter	86.48	103.02	111.23	104.71	115.23	123.22	91.37	101.72	101.16
2nd Quarter	67.72	96.75	105.58	98.57	110.99	128.81	103.22	109.27	97.43
3rd Quarter	105.04				122.95		110.48	113.49	110.44
4th Quarter	47.98	81.65	111.81	87.87	106.38	84.44	80.29	86.22	81.62
Year End	67.31	97.72	109.11	100.07	111.54	121.31	93.98	102.28	96.04
<b>1992</b>									
1st Quarter	134.20	110.24	90.36	106.14	106.10	96.66	92.71	96.07	107.07
2nd Quarter	84.69	95.94	103.65	97.53	119.25	109.95	112.93	113.67	100.67
3rd Quarter	90.06	102.36	92.40	100.31	99.53	108.35	131.75	121.22	105.29
4th Quarter	99.54	105.41		105.41	105.69	91.58	116.35	109.83	106.01
Year End	90.60	99.05	97.07	98.64	106.37	105.54	112.38	109.98	100.98
<b>1993</b>									
1st Quarter	81.02	104.73	87.06	101.08	118.06	139.75	102.08	111.88	101.53
2nd Quarter	81.51	101.97	101.79	101.93	109.83	128.78	97.52	105.46	100.08
3rd Quarter		117.01		117.01	97.06		65.66	73.25	100.83
4th Quarter	73.97	94.47	84.12	92.33	119.80	112.58	104.90	109.22	94.91
Year End	80.75	101.91	96.30	100.75	108.13	127.30	90.07	100.21	97.70
<b>1994</b>									
1st Quarter	115.56	97.54	95.57	97.13	115.00	95.98	123.67	120.83	107.11
2nd Quarter	75.92	102.90	104.22	103.17	114.87		109.55	110.84	101.09
3rd Quarter	152.37	109.02	136.56	114.70	99.78	111.66	96.09	99.56	115.44
4th Quarter	65.52	110.42	103.89	109.08	109.23	98.51	98.97	100.93	100.29
Year End	75.38	102.48	104.96	102.99	105.52	110.88	101.55	103.98	99.32
<b>1995</b>									
1st Quarter	85.69	95.53	115.74	99.70	120.72	122.37	114.68	117.23	103.10
2nd Quarter	71.02	99.49		99.49	121.32	132.48	117.95	121.17	102.42
3rd Quarter	77.42	113.46	111.29	113.02	151.42		144.16	145.92	116.46
4th Quarter	92.70	107.55	109.43	107.93	121.52		111.82	114.16	107.29
Year End		99.81	113.94	102.73	121.47	126.83	116.53	119.32	104.63
<b>1996</b>									
1st Quarter	83.05	92.20	123.35	98.62	118.80	178.06	100.96	118.05	102.38
2nd Quarter	119.58	95.01	113.11	98.74	130.48		127.59	128.29	109.88
3rd Quarter	124.27	131.87	150.79	135.77	120.96		119.41	119.79	129.72
4th Quarter	95.12	124.66	113.40	122.34	141.02		144.36	143.55	123.91
Year End	97.01	97.12	117.89	101.40	120.85	178.06	106.59	121.98	107.13
<b>1997</b>									
1st Quarter	117.41	107.57	112.89	108.66	117.44	93.82	125.60	118.39	112.93
2nd Quarter	96.00	107.53	153.26	116.96	129.60	107.48	117.89	118.40	114.38
3rd Quarter	122.35	130.99		130.99	124.92	119.62	116.28	118.59	125.27
4th Quarter	127.75	134.59	0.00	134.59					132.88
Year End	108.51	109.84	125.63	113.10	122.08	99.44	122.32	118.25	114.03
<b>1998</b>									
1st Quarter	100.29	124.56	135.20	126.75	130.86		125.58	126.86	122.75
2nd Quarter	104.63	122.21	133.04	124.44	123.71		118.20	119.53	120.10
3rd Quarter	135.95	150.01	129.84	145.85	133.21		126.04	127.51	139.40
4th Quarter		155.16		155.16	122.66	146.08	110.58	119.22	140.22
Year End	106.99	124.06	132.22	125.95	127.70	146.08	121.58	127.10	123.58
<b>1999</b>									
1st Quarter	90.59	130.95	210.30	147.31	133.64		126.39	128.14	133.51
2nd Quarter	92.34	137.50	139.09	137.83	121.34		121.92	121.78	126.58
3rd Quarter	85.22	135.66		135.66	125.58	168.87	121.78	130.81	125.78
4th Quarter	182.25	143.08	202.56	155.34	132.10	107.12	183.75	160.00	160.66
Year End	95.07	135.87	142.46	137.23	124.73	114.64	124.72	122.95	126.75
<b>2000</b>									
1st Quarter	96.35	141.29	153.08	143.73	142.36	151.96	125.61	133.57	133.77
2nd Quarter	111.93	138.88	158.17	142.86	137.49	136.03	120.21	126.43	133.33
3rd Quarter	102.18	128.03		128.03	137.29		140.48	139.71	127.13
4th Quarter	115.61	136.47	170.73	143.53	149.27		185.41	176.66	148.21
Year End	105.38	138.87	157.19	142.65	139.49	137.59	127.59	131.71	133.91

**MN/DOT COST INDEX**  
(CONTINUED)

<u>Year</u>	<u>Roadway Excavation</u>	<u>Bituminous Surfacing</u>	<u>Concrete Surfacing</u>	<u>Surfacing Index</u>	<u>Reinforce. Steel</u>	<u>Structural Steel</u>	<u>Structural Concrete</u>	<u>Structures Index</u>	<u>Composite Index</u>
<b>2001</b>									
1st Quarter	91.27	131.58	133.42	131.96	166.65		196.86	189.55	141.28
2nd Quarter	116.05	135.28	149.20	138.15	135.53	219.62	144.03	155.60	140.36
3rd Quarter	109.17	130.04	154.51	135.09	140.67	166.76	138.68	144.01	134.11
4th Quarter	157.83	160.90	185.56	165.98	149.31	86.82	158.62	144.16	158.06
Year End	123.17	137.25	153.92	140.69	142.53	171.70	149.25	151.85	141.61
<b>2002</b>									
1st Quarter	123.44	147.14	119.78	141.50	151.68	143.03	120.19	130.48	135.49
2nd Quarter	148.48	149.69	140.07	147.71	150.31	165.23	85.03	112.13	136.82
3rd Quarter		132.77		132.77					132.77
4th Quarter	95.26	157.12	161.93	158.12	167.64	154.74	158.85	159.88	149.61
Year End	115.64	150.27	142.16	148.60	159.74	157.32	126.43	138.49	140.73
<b>2003</b>									
1st Quarter	119.16	168.38	149.65	164.51	165.32	124.83	149.85	148.55	153.05
2nd Quarter	149.11	166.29	171.88	167.44	168.38	109.25	130.53	134.34	154.57
3rd Quarter	126.34	162.12	190.96	168.07	166.04		161.37	162.50	160.21
4th Quarter	142.18	144.11		144.11	162.08	139.53	213.05	189.98	159.77
Year End	129.12	163.83	156.17	162.25	166.37	116.91	143.23	143.23	151.60
<b>2004</b>									
1st Quarter	89.34	157.99	145.67	155.45	184.40	166.06	166.16	169.78	150.36
2nd Quarter	101.93	156.99	153.21	156.21	193.40		135.92	149.83	146.23
3rd Quarter	156.87	173.66	220.06	183.23	231.70	126.15	253.80	226.99	192.95
4th Quarter	171.37	153.88	126.70	148.28	175.45	195.43	146.69	160.98	155.53
Year End	103.48	159.35	141.15	155.60	191.19	162.96	150.02	160.50	149.61
<b>2005</b>									
1st Quarter	91.95	159.35	221.30	172.12	206.72	281.37	176.99	201.24	169.57
2nd Quarter	152.75	163.52	230.40	177.31	206.89	201.87	159.27	176.24	173.44
3rd Quarter	135.85	214.40	173.97	206.06	195.34	199.90	158.17	172.91	185.71
4th Quarter	131.93	211.41		211.41	219.49		192.75	199.22	193.94
Year End	130.43	169.66	183.55	172.53	202.26	201.13	162.78	177.39	167.97
<b>2006</b>									
1st Quarter	179.64	216.37	168.40	206.48	209.17	167.23	196.99	194.19	198.82
2nd Quarter	137.70	241.00	191.38	230.77	192.81	194.21	184.52	187.87	204.11
3rd Quarter	137.17	217.53	*	**	257.26	*	230.67	**	**
4th Quarter	95.01	228.13	*	**	247.81	*	212.00	**	**
Year End	127.80	228.04	173.91	216.88	205.99	183.53	193.74	194.39	197.10
<b>2007</b>									
1st Quarter	190.17	255.61	222.49	248.78	236.81	283.08	202.21	223.31	232.47
2nd Quarter	114.76	224.06	155.14	209.85	221.84	187.19	214.66	211.27	196.60
3rd Quarter	*/**	213.40	*	**	*	*	*	**	**
4th Quarter	117.03	209.36	*	**	*	*	*	**	**
Year End	147.02	232.91	198.59	225.84	233.69	262.24	204.79	220.64	212.88
<b>2008</b>									
1st Quarter	143.43	235.23	361.90	261.34	409.19	*	189.70	**	**
2nd Quarter	134.37	278.48	170.51	256.22	286.47	267.39	199.61	228.83	230.20
3rd Quarter	*/**	314.60	*	**	295.44	215.32	196.42	219.48	**
4th Quarter	217.71	350.82	*	**	242.71	*	187.20	**	**
Year End	136.85	282.00	175.62	260.06	349.63	239.92	195.24	233.87	234.22
<b>2009</b>									
1st Quarter	130.35	267.53	179.27	249.34	212.65	703.64	212.26	298.60	247.42
2nd Quarter	205.07	254.33	210.92	245.38	220.70	249.11	218.60	224.37	233.08
3rd Quarter	*/**	293.20	*	**	*	*	*	**	**
4th Quarter	255.96	266.65	174.42	247.63	202.59	*	211.65	**	**
Year End	147.46	265.08	184.33	248.43	213.94	252.12	214.03	220.70	225.32
<b>2010</b>									
1st Quarter	118.81	297.94	155.03	268.47	215.46	171.69	212.82	206.13	227.65
2nd Quarter	207.89	271.58	181.95	253.10	226.17	253.31	208.48	219.88	236.32
3rd Quarter	266.22	268.87	*	**	*	*	*	**	**
4th Quarter	263.08	260.16	186.16	244.90	222.91	197.32	245.20	232.35	243.64
Year End	151.35	277.15	167.66	254.58	222.32	197.81	226.24	220.47	229.17
<b>2011</b>									
1st Quarter	282.29	277.18	138.12	248.51	267.60	*	233.93	**	**
2nd Quarter	187.26	289.19	147.37	259.95	249.70	216.82	236.44	235.64	241.97
3rd Quarter	206.87	306.20	130.31	269.94	*	*	*	**	**
4th Quarter	290.62	311.17	161.76	280.36	253.69	*	261.73	**	**
Year End	212.74	289.32	145.22	259.61	254.49	216.82	237.48	237.25	245.95
<b>2012</b>									
1st Quarter	168.12	330.92	164.11	296.53	282.92	*	274.47	**	**
2nd Quarter	251.04	318.01	191.58	291.94	267.40	*	218.35	**	**
3rd Quarter	220.88	351.69	154.88	311.11	228.22	*	*	**	**
4th Quarter	206.53	308.84	260.42	298.86	260.22	221.19	193.13	211.43	258.54
Year End	207.23	322.38	182.48	293.54	261.73	221.19	201.04	216.68	257.36
<b>2013</b>									
1st Quarter	192.74	299.93	211.51	281.70	237.57	*	236.42	**	**
2nd Quarter	185.76	337.29	208.92	310.83	259.80	*	294.45	**	**
3rd Quarter	*	*	*	**	*	*	*	**	**
4th Quarter	304.08	329.32	181.06	298.75	284.22	*	304.71	**	**
Year End	201.96	320.88	197.83	295.51	277.52	*	285.73	**	**
<b>2014</b>									
1st Quarter	296.52	316.42	211.06	294.70	276.99	210.59	269.59	260.71	284.46

\* No information available

\*\*Not computed due to the absence of data for indicator item(s).