PRICE TRENDS FOR MAJOR ROADWAY INPUTS

Final Report 622

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16. Abstract

Fluctuations in construction costs make the tasks of estimating the price of a project and the overall highway program difficult. The objective of this research project was to examine the price fluctuations of the most heavily used construction commodities over both the short and long terms. An index for each of these commodities has been created. The implementation plan for this project is to generate a monthly update of these indices and distribute it to personnel charged with estimating future construction costs for projects and budgeting the highway construction and maintenance programs.

Short Term Fluctuations

	Asphalt	Diesel	Gasoline	Labor	Lumber	PCC	Plastic	Steel
May-06 to Jun-06	+13%	+4%	+2%	+1%	-5%	0%	0%	+2%
May-06 to Jul-06	+21%	0%	+5%	+2%	-6%	0%	+1%	+3%
May-06 to Aug-06	+29%	+6%	+2%	+2%	-10%	+1%	+1%	+3%

Long Term Fluctuations

	Asphalt	Diesel	Gasoline	Labor	Lumber	PCC	Plastic	Steel	Overall
1 year	+77%	+1%	+21%	+3%	-6%	+11%	+20%	+11%	+14%
5 years	*	+147%	+151%	+11%	+4%	+33%	+38%	+59%	+41%
10 years	+171%	+205%	+216%	+33%	-1%	+48%	+39%	+49%	+58%

* There is a gap in the data for asphalt that prevents a calculation of the price change over this time span.

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SI (MODERN METRIC) CONVERSION FACTORS*

APPROXIMATE CONVERSIONS TO SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
	LENGTH			
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
yd	yards	0.914	meters	m
mi	miles	1.61	kilometers	km
	AREA			
in^2	square inches	645.2	square millimeters	mm^2
ft^2	square feet	0.093	square meters	m^2
yd^2	square yards	0.836	square meters	m^2
ac	acres	0.405	hectares	ha
mi^2	square miles	2.59	square kilometers	km^2
	VOLUME			
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liters	L
ft^3	cubic feet	0.028	cubic meters	m^3
yd^3	cubic yards	0.765	cubic meters	m^3
	NOTE: Volumes greater than 1000L shall be shown in m^3.			
	MASS			
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000lb)	0.907	megagrams (or "metric ton")	mg (or "t")
	TEMPERATURE (exact)			
°F	Fahrenheit temperature	5(F-32)/9 or (F-32)/1.8	Celsius temperature	°C
	ILLUMINATION			
fc	foot-candles	10.76	lux	lx
fl	foot-Lamberts	3.426	candela/m^2	cd/m^2
	FORCE AND PRESSURE OR STRESS			
lbf	poundforce	4.45	newtons	N
lbf/in^2	poundforce per square inch	6.89	kilopascals	kPa

APPROXIMATE CONVERSIONS FROM SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
	LENGTH			
mm	millimeters	0.039	inches	in
m	meters	3.28	feet	ft
m	meters	1.09	yards	yd
km	kilometers	0.621	miles	mi
	AREA			
mm^2	square millimeters	0.0016	square inches	in^2
m^2	square meters	10.764	square feet	ft^2
m^2	square meters	1.195	square yards	yd^2
ha	hectares	2.47	acres	ac
km^2	square kilometers	0.386	square miles	mi^2
	VOLUME			
mL	milliliters	0.034	fluid ounces	fl oz
L	liters	0.264	gallons	gal
m^3	cubic meters	35.315	cubic feet	ft^3
m^3	cubic meters	1.308	cubic yards	yd^3
	MASS			
g	grams	0.035	ounces	oz
kg	kilograms	2.205	pounds	lb
mg (or "t")	megagrams (or "metric ton")	1.102	short tons (2000lb)	T
	TEMPERATURE (exact)			
°C	Celsius temperature	1.8C + 32	Fahrenheit temperature	°F
	ILLUMINATION			
lx	lux	0.0929	foot-candles	fc
cd/m^2	candela/m^2	0.2919	foot-Lamberts	fl
	FORCE AND PRESSURE OR STRESS			
N	newtons	0.225	poundforce	lbf
kPa	kilopascals	0.145	poundforce per square inch	lbf/in^2

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GLOSSARY OF ACRONYMS

AzDOT	Arizona Department of Transportation
PCC	Portland Cement Concrete

INTRODUCTION

MISSION

The mission of the Arizona Department of Transportation (AzDOT) is to provide for the safe, efficient, and cost-effective movement of people and products throughout the state. This mission is fulfilled by the construction, maintenance, and operation of the State Highway System. AzDOT's ability to carry out this mission is affected by the costs entailed in these tasks compared to the resources available. Recent acceleration in the costs of major inputs to roadway construction and maintenance negatively impacts AzDOT's ability to fulfill its mission.

BACKGROUND

State highway construction and maintenance is accomplished mainly by awarding contracts to private sector construction firms. AzDOT develops a scope for each construction job and prepares a detailed specification for all components of the job ranging from excavation, to materials, to labor. In addition to estimating the quantities of these items, AzDOT also estimates a likely unit price for each. Over the last year alone, bids on highway construction projects have exceeded AzDOT's estimates by about 18%.

TIME LAG AND PRICE FLUCTUATION

The estimates for all projects are developed in advance of the time bids are called for and received. This requires state engineers to estimate future prices. As long as the trends in prices are stable, the estimate of future prices is likely to be fairly accurate. If prices fluctuate outside of normal trends, it is more likely that the estimates will not correctly anticipate actual future prices.

METHODOLOGY

This report utilizes the U.S. Department of Labor, Bureau of Labor Statistics, Producer Price Index information. This price information is obtained from surveys of producers throughout the nation. The price indicators represent a specific item. As is discussed in various sections, these specific commodities generally reflect the price changes in a broader group of goods. As an example, Portland cement is the specific commodity monitored – yet is used to reflect the general price change in most cement and concrete commodities used in roadway construction (such as cement, concrete, concrete pipe, and structural concrete).

While local (Arizona or a particular region) prices may fluctuate slightly differently from national prices, understanding changes in commodity prices at the national level provides a valuable first insight into the market changes for these commodities.

The Highway and Street Construction Index is, once again, a national price index. The advantage of this measure is that it provides a composite price change for a typical roadway project, including the relative mix of construction commodities needed in this type of infrastructure project.

A final note is focused on labor. The construction labor index is a mix of all direct labor related to the construction of a roadway. This index provides an overview of all labor; including general construction labor, equipment operators, and other specialized labor.

REPORT DATA

The data for this report is obtained from U.S. Department of Labor Bureau of Labor Statistics' web site at http://www.bls.gov/data/. The specific items used were as follows:

Item	Code #
Asphalt	WPU05810112
Construction Labor	CEU2000000006
DIESEL #2	WPU05730302
Gasoline	WPU0571
Lumber	WPU081
Plastic Construction Products	WPU072106
Portland Cement	WPU13220161
Steel Rebar	WPU101708
Highway and Street Construction	PCUBHWY

REMAINDER OF THE REPORT

The remainder of this report portrays and discusses: (1) short term price fluctuations, (2) the longer term trend in prices. Numerous graphs depict the price trends. A full set of data for all items covered in this report is shown in the Appendix.

SHORT TERM FLUCTUATIONS

The purpose of this section is to provide users with information that may help explain differences that may exist between the state estimate and the actual winning bid for a project. State estimates are prepared approximately 3 months prior to the due date for bids. If prices of key components of construction are volatile, the differences between the state's estimate and bid price for a project may be substantial.

As shown in Figure 1, over the most recent time span, asphalt showed the largest fluctuation—rising by 29% for the 3-month period.

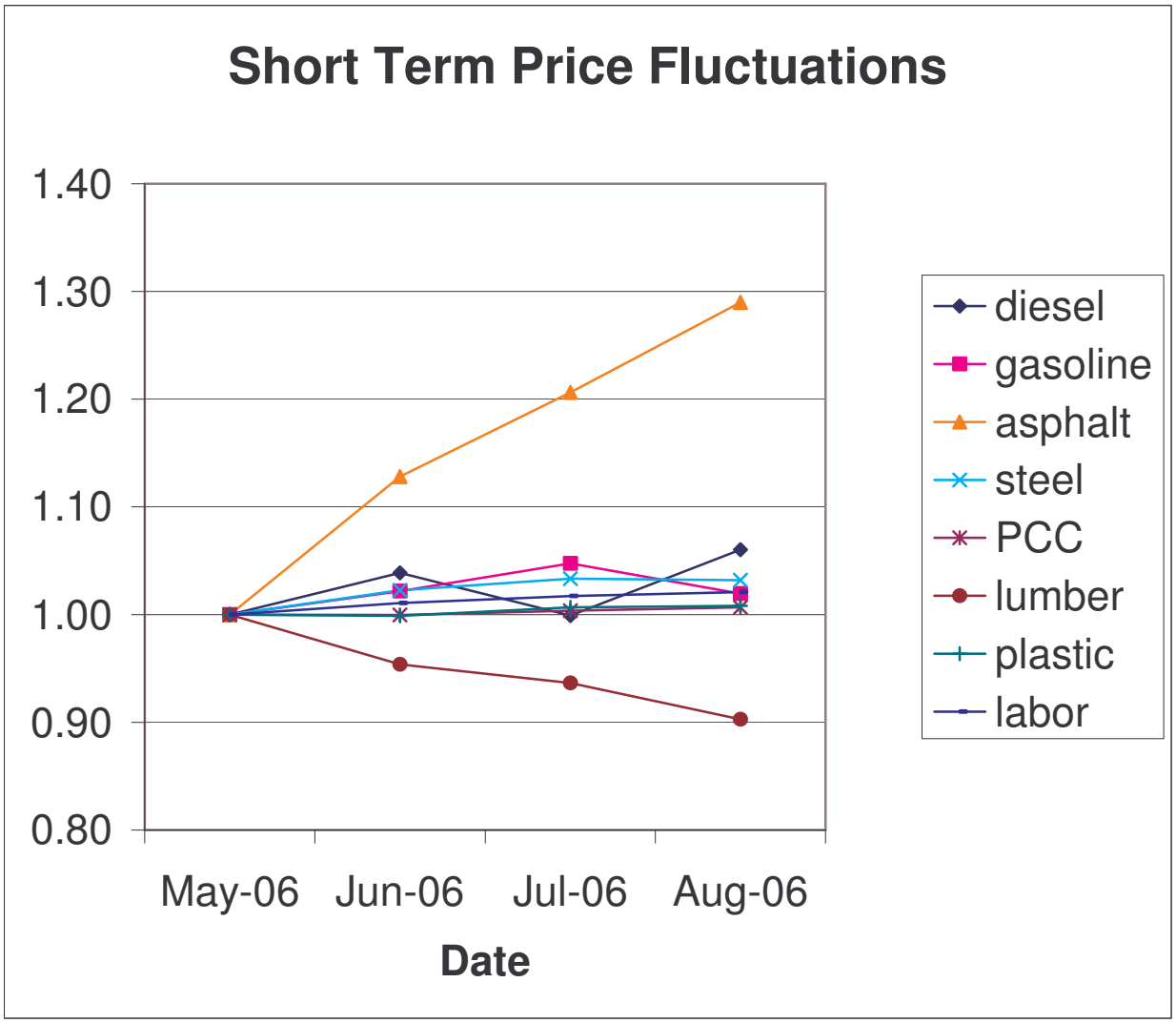

Figure 1. Short Term Price Fluctuations

	Asphalt	Diesel	Gasoline	Labor	Lumber	PCC	Plastic	Steel
May-06 to Jun-06	+13%	+4%	+2%	+1%	-5%	0%	0%	+2%
May-06 to Jul-06	+21%	0%	+5%	+2%	-6%	0%	+1%	+3%
May-06 to Aug-06	+29%	+6%	+2%	+2%	-10%	+1%	+1%	+3%

LONG TERM FLUCTUATIONS

The purpose of this section is to give users a quick look at the relative changes in prices over the time spans of 1-year, 5-years, and 10-years. This gives a sense for which items have been the largest factors affecting the cost of construction projects over time.

1-YEAR

Over the last year, asphalt prices have increased the most (77%). Lumber has actually declined in price (6%). Overall, construction costs have risen by 14%.

5-YEARS

Over the last 5 years, gasoline prices rose the most (151%). Lumber prices rose the least (4%). Overall, construction costs have risen by 41%.

10-YEARS

Over the last 10 years, gasoline prices rose the most (216%). Lumber has actually declined in price (1%). Overall, construction costs have risen by 58%.

	Asphalt	Diesel	Gasoline	Labor	Lumber	PCC	Plastic	Steel	Overall
1 year	+77%	+1%	+21%	+3%	-6%	+11%	+20%	+11%	+14%
5 years	*	+147%	+151%	+11%	+4%	+33%	+38%	+59%	+41%
10 years	+171%	+205%	+216%	+33%	-1%	+48%	+39%	+49%	+58%
* There is a gap in the data for asphalt that prevents a calculation of the price change over this time span.									

The long term graphs for each commodity and the overall index appear on the following pages as Figures 2-10. The full data set is in the Appendix.

TREND

The general pattern over the period covered (1992 to the present) shows a moderate rate of price increases for the first 10 years and an accelerated rate of increases for the most recent 5-year period. Whether this acceleration portends a permanent trend of more rapid growth in construction costs or whether the trend will return to its longer term average is uncertain.

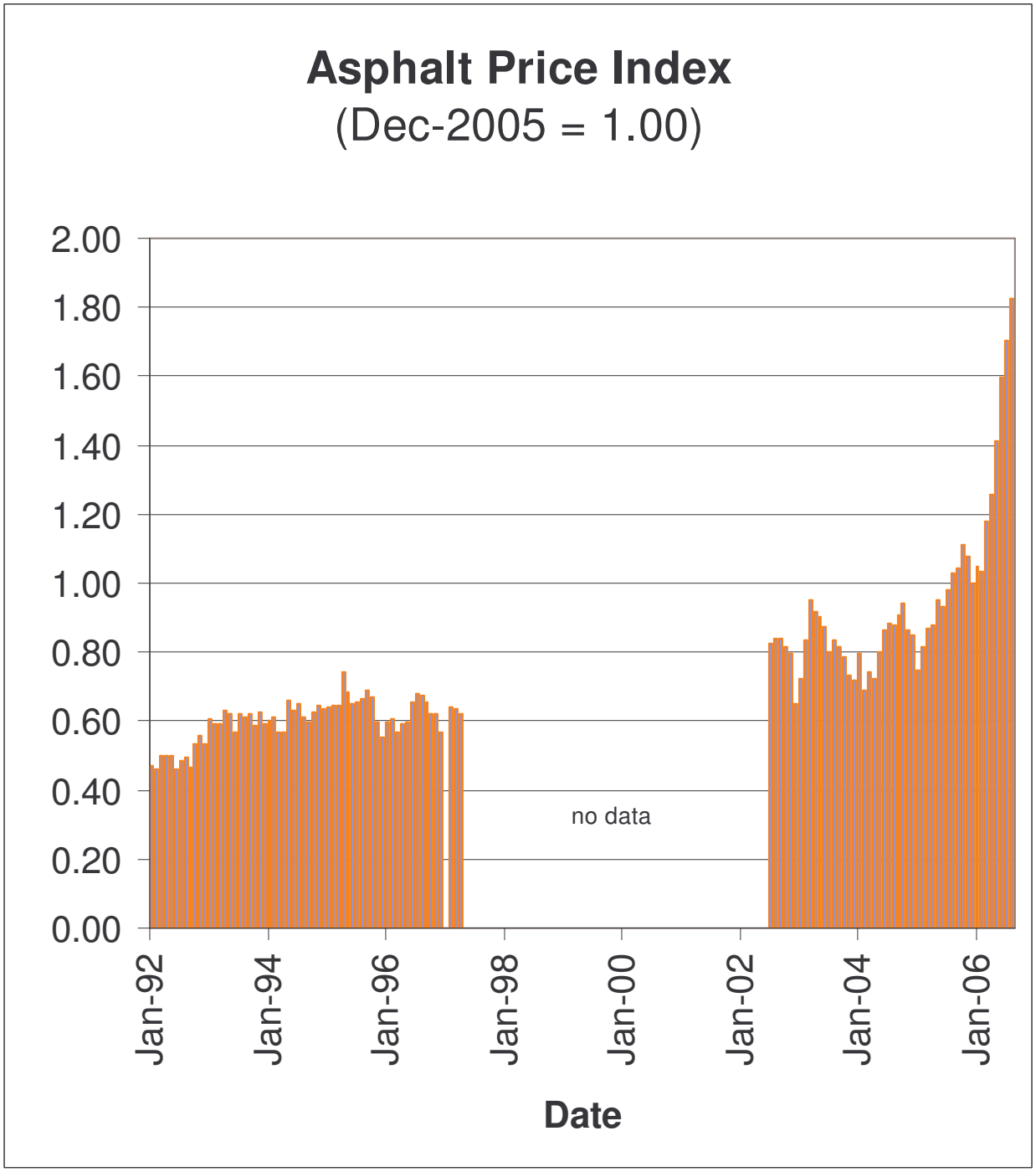

Figure 2. Asphalt Price Index

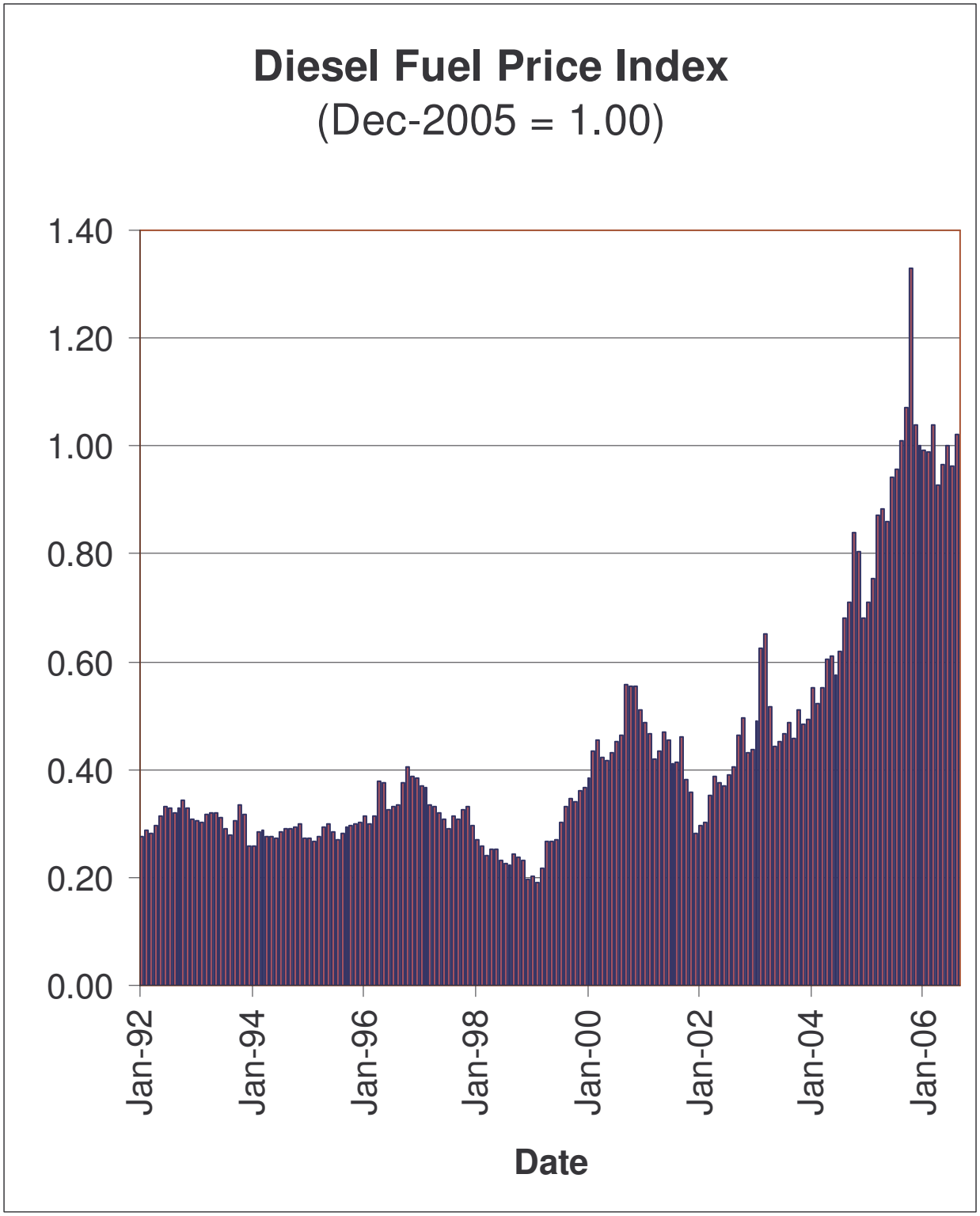

Figure 3. Diesel Fuel Price Index

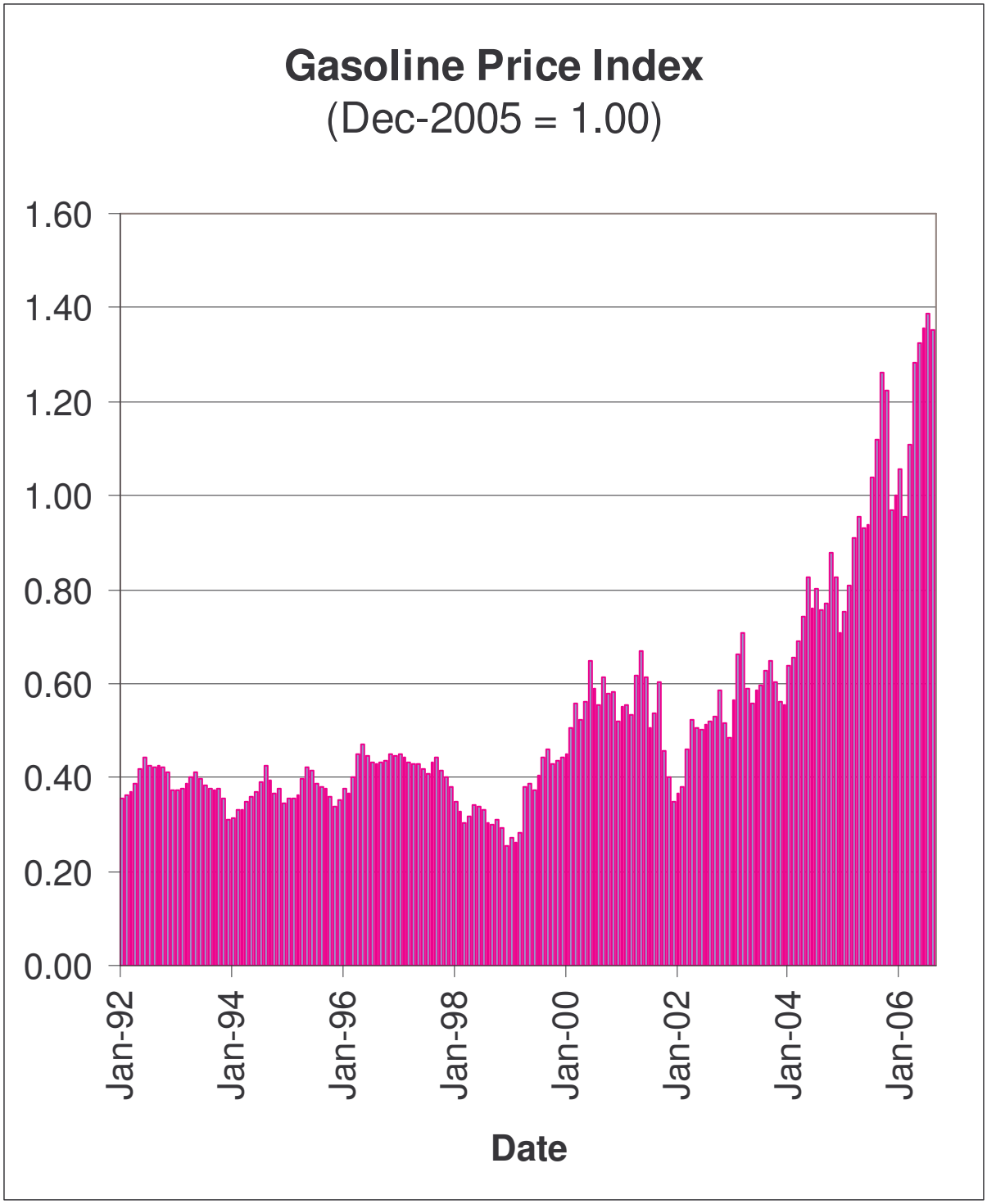

Figure 4. Gasoline Price Index

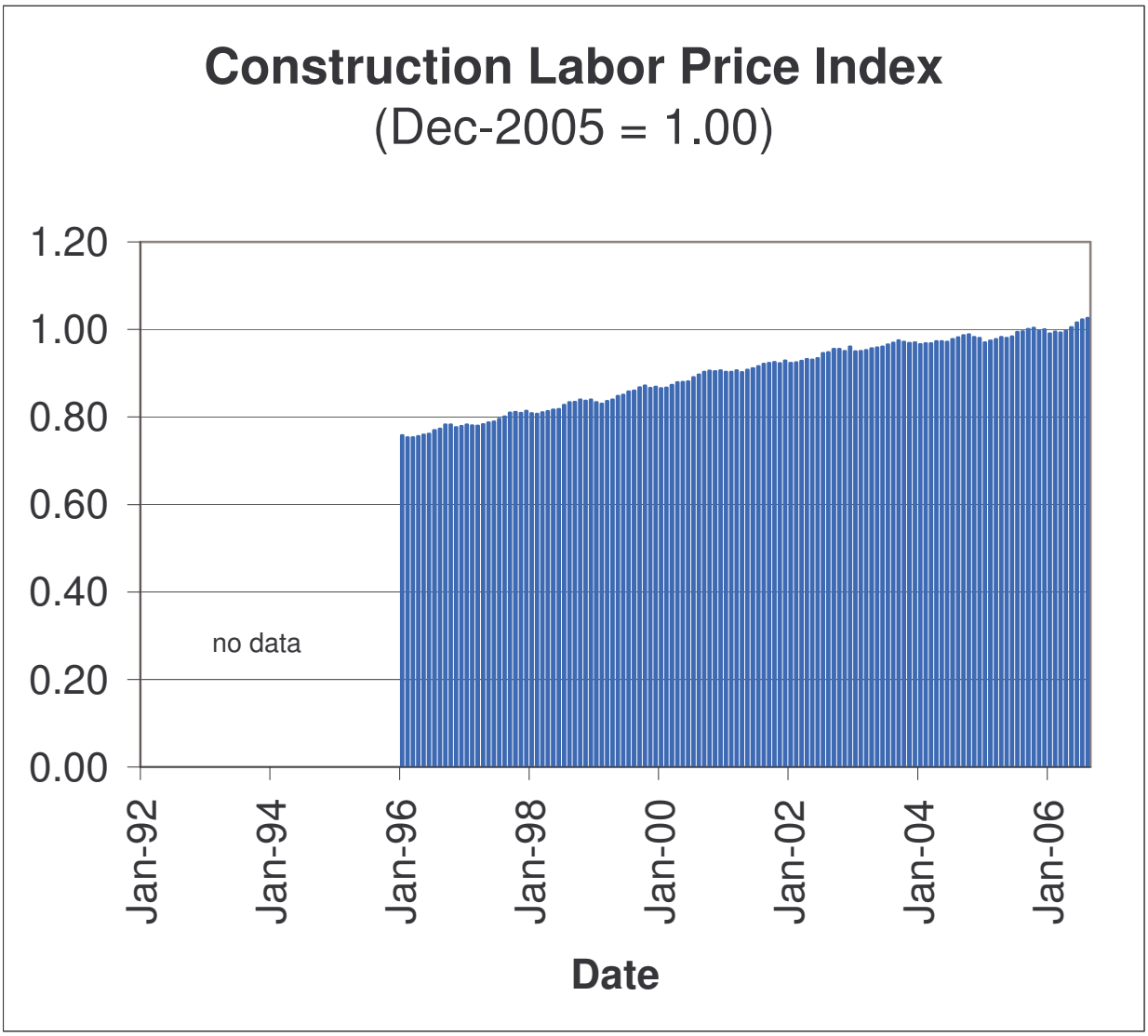

Figure 5. Construction Labor Price Index

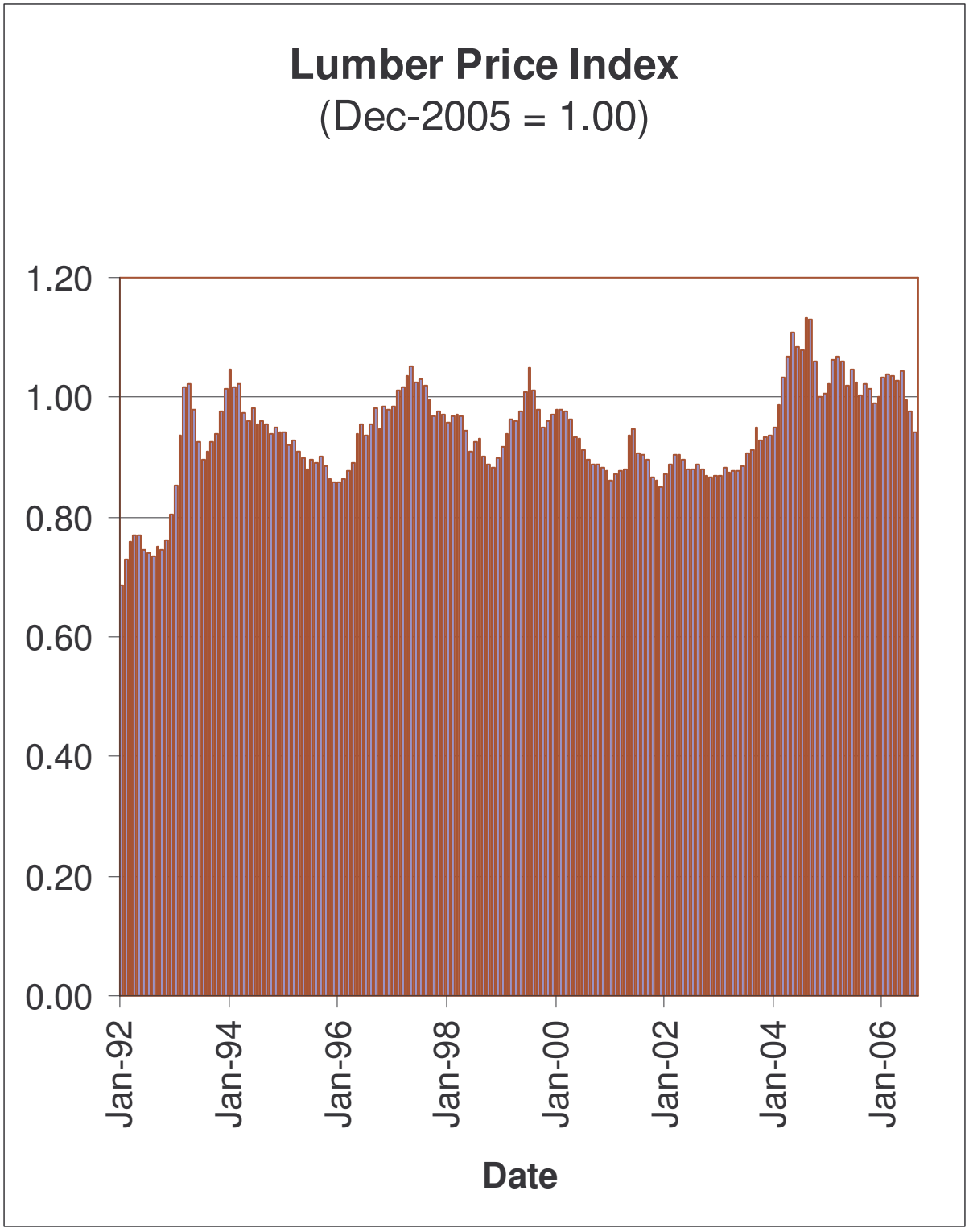

Figure 6. Lumber Price Index

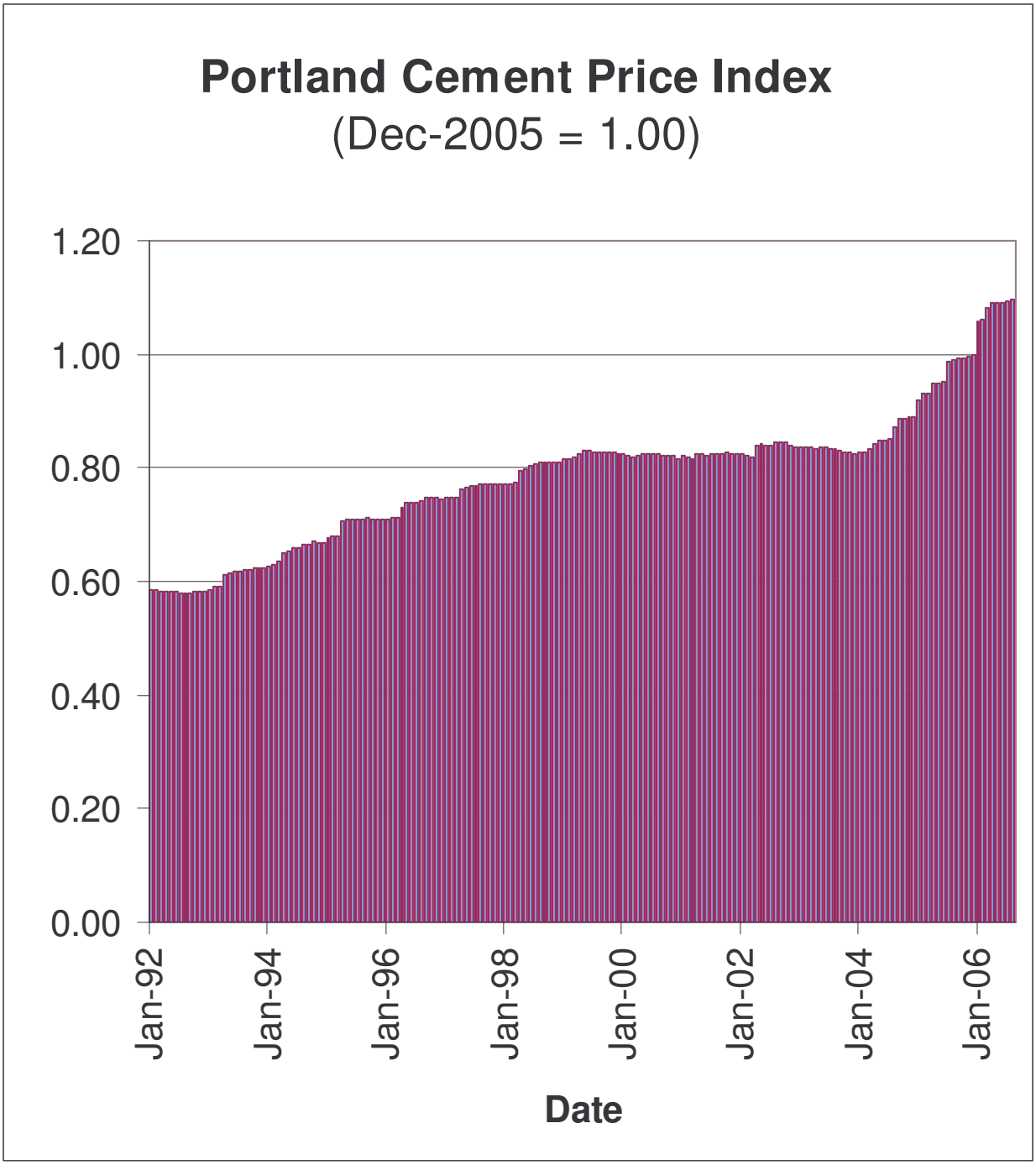

Figure 7. Portland Cement Price Index

Figure 8. Plastic Construction Products Price Index

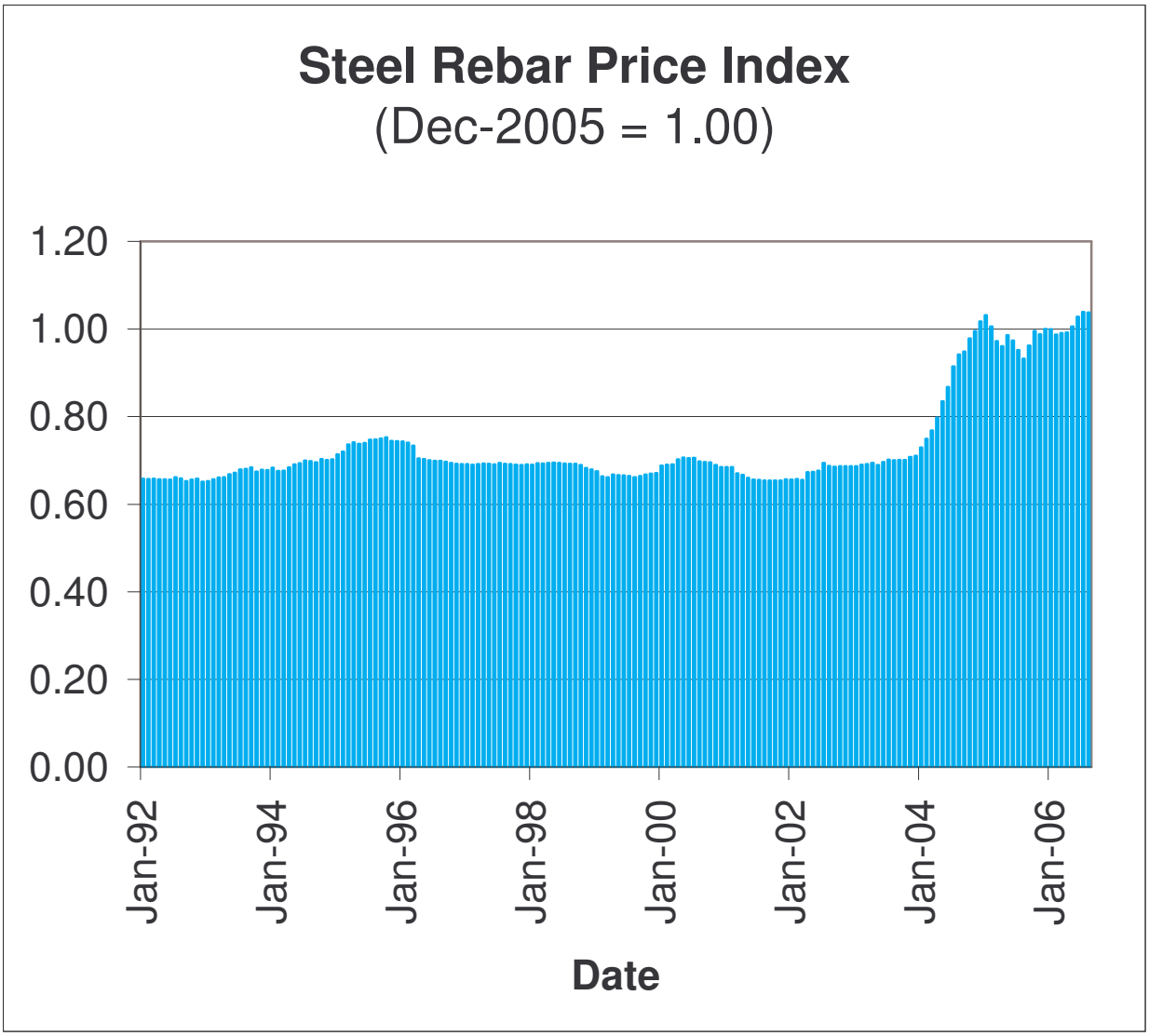

Figure 9. Steel Rebar Price Index

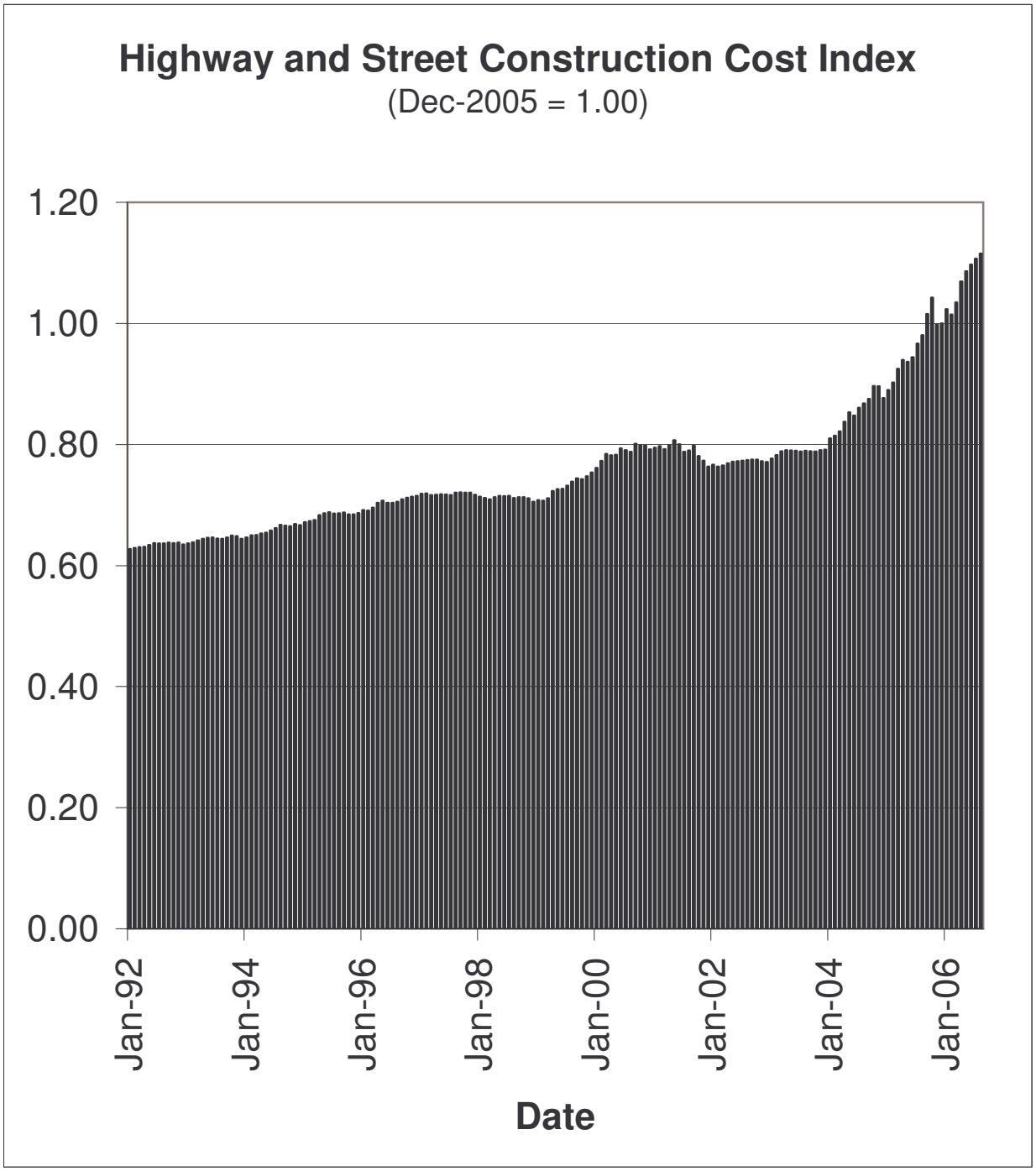

Figure 10. Highway and Street Construction Cost Index

DISCUSSION

LONG TERM CAPACITY ISSUES

The long term prognosis for prices is affected by the balance between supply and demand for any affected commodity. Demand can be impacted in a number of ways, including changes due to internal or national occurrences, localized conditions, changes in technology or use patterns, and spatial characteristics of demand and supply. Examples of changes in international or national conditions are: (1) the emerging and strong growth of foreign economies, such as China or India, with increased demand for public and commercial infrastructure, and (2) natural occurrences, such as hurricanes or earthquakes, causing a large increase in demand to replace destroyed infrastructure and buildings. More localized changes in technology or approach affecting demand can also have dynamic impacts. An example of a change in approach of construction is adding a layer of rubberized asphalt to most freeway projects as a means of improving surface conditions, reducing pollution effects, and reducing the need for large sound walls along freeways. Thus, an increase in the demand for asphalt has impacted the demand for concrete by reducing the need for both resurfacing and sound walls.

In Arizona, one of the key characteristics in differences to national levels of prices is the limitation on the availability of supply. In many markets, critical infrastructure commodities are in high demand, but within Arizona and its metro areas, this increase is substantial compared to other metro markets for key roadway construction commodities. Both of these factors have caused the price level for a number of commodities to be higher than the national average, or compared to other specific markets. The Maricopa Association of Governments is conducting additional research[1] to examine whether these "localized demand and supply conditions" effect more than just the relative price, but also the rate of change in prices compared to national trends.

Because rising demand puts upward pressure on prices, profit margins for suppliers of the demanded commodities will rise. This will attract more suppliers into the market. Consequently, supply will normally respond to meet rising demand unless impediments are placed in the way.

These impediments stem from governmental actions of one sort or another. Hostile actions at the international level, such as wars, blockades, or boycotts and quotas, can impede the flow of supplies to where demand for them exists. For example, war in the Middle East (a major supply source of the world's oil for petroleum and other oil-based products) has resulted in lowered supply, higher prices, and greater uncertainty in oil prices.

Regulations like price-controls, import quotas, and environmental restrictions can impede either the production or flow of supplies to meet demand. For example, demands that regulations be implemented to stop "price-gouging" for gasoline will deter suppliers from responding to the imbalance between supply and demand. This will prolong shortages and tend to keep prices higher.

[1] Contact Jeff Romine, Maricopa Association of Governments, 302 North 1st Avenue, Suite 300, Phoenix, Arizona 85003; Phone (602) 254-6300 for more information.

These impediments can play a significant role in affecting price levels and price change patterns in a number of the commodities used in building new roadways in Arizona. Interestingly, labor conditions are equally impacted by spatial characteristics. Most general regional economic theory suggests labor is quite mobile, and will generally flow to areas where labor is scarce – which would be observed through bidding up relative wage levels. Interestingly, construction labor has not exhibited the expected patterns during the recent economic surge in the Phoenix metro market. This outcome is especially true for unskilled labor in the metro areas.

In 2001, a national recession was felt throughout the United States. The recession was noted to have begun in April 2001, and was generally quite short and mild. The recession was followed by a "jobless recovery" (i.e., Gross Domestic Product rose during this period, while employment levels were more stable). As would be expected, both the recession and the recovery were not felt evenly throughout the United States. In fact, the Phoenix metro area experienced only one quarter of weak employment growth. Many nearby metro markets experienced, not just six months to a year of job reductions or little job gain, but a number of years of weak employment activity. Theory would suggest workers would migrate to the Phoenix metro market from other nearby (and national) metro markets faring less well.

Actual experience and data suggest this did not occur, especially to the degree one would have expected. The metro Phoenix and Arizona construction labor markets experienced shortages of various skilled and unskilled workers causing significant overtime activity, while in other markets these workers were working at less than full time status. The "stickiness" of labor to home locations has resulted in varied labor rates for similar jobs throughout the U.S. (A separate labor analysis is now underway to better reflect the changes in labor wage changes faced in meeting labor demands of roadway construction activity in Arizona.[2])

ISSUES FOR THE LONG TERM

Because the future is unknown, no one can consistently forecast events. As a result, occasions will arise that disrupt the smooth flow of business. Prices serve as a prime gauge for the relative change in the market equilibrium conditions of these commodities. Increases in the price will appear either due to increase demand or reduced supply. In either case, this price change provides a powerful signal to firms to adjust demand or supply of these goods. Price increases inform users to conserve the now more expensive commodity. Price increases, also, tell suppliers to bring forward more expensive reserves to meet the growing need.

While state and local infrastructure plans reflect a generally consistent pace of activity, other markets are more affected by the relative price of commodities and other market conditions. These development activities account for a much larger share of commodity demand than does roadway and other public infrastructure demand. The "chilling" of these other markets can have a "calming effect" on both the demand and resulting price of critical construction commodities. On the other hand, a "heating up" of activity in these other markets can play a major role in boosting prices faced by state and local agencies responsible for roadway construction and maintenance.

[2] Contact Jeff Romine, Maricopa Association of Governments, 302 North 1st Avenue, Suite 300, Phoenix, Arizona 85003; Phone (602) 254-6300 for more information.

Project and program managers desire to better understand the short and long-term price changes. This report, and others related to this effort, attempt to help these managers and other decision makers achieve this improved understanding of current and future conditions related to commodity price changes.

OVERVIEW ANALYSIS OF CURRENT PRICE TRENDS

This report provides data to reveal the degree to which commodity prices changed. The largest growth has been observed in asphalt, cement/concrete, and diesel oil prices. These prices changes have been a result of international and nation pressure on limited supplies, increased demand, and impacts from the ability to easily move goods to meet demand. These price conditions have resulted in changes in governmental trade policy (with respect to Mexican produced cement) and increased investment by suppliers in production and distribution. The two primary construction factors holding down overall price growth have been labor and lumber. Steel prices have been moderately rising, but raw material prices have been rising relatively quickly in recent Producer Price surveys.

A second factor that may mitigate some of the local price impacts is the recent slowdown in new housing construction. While commercial and retail construction is growing, the degree and length of the residential construction slowdown is unclear at this time. Some current estimates are that between 9 and 12 months of supply of housing is now available in the marketplace. While this may be overstated, recent earnings and activities reports from major housing developers may foreshadow a more conservative housing development pattern in the immediate future. Housing development is major demand on construction commodities, so even a minor slowdown in this industry can play an important role in reducing national, state, and local commodity markets and prices.

Again, the degree of pent-up demand for new retail and commercial construction is also unclear. Most analysts suggest the commercial demand for new space is quite strong. Combining this demand, with the scheduled increase in roadway construction in Arizona in general and within the metro Phoenix and Tucson markets in particular, may offset the reduction in demand for commodities from the slowed residential market.

Additional insights on the overall and industry-specific demand for construction commodities should be undertaken to increase understanding of the short and mid-term impact of commodity availability and demand. A more complete understanding would likely provide additional insights into the likely change of prices in the future.

IMPLEMENTATION

The following implementation steps will be taken:

- The Arizona Transportation Research Center (ATRC) will publish a monthly update of this construction cost index.
- This publication will appear on the ATRC web site.
- An e-mail subscriber list will be compiled.
- Subscribers will be notified and sent the web site link each month.

APPENDIX: DATASET

Dec-2005 = 100									
Date	Diesel	Gasoline	Asphalt	Steel	Concrete	Lumber	Plastic	Labor	Overall
Jan-92	28%	36%	47%	66%	59%	68%	61%	0%	63%
Feb-92	29%	36%	46%	66%	58%	73%	61%	0%	63%
Mar-92	28%	37%	50%	66%	58%	76%	62%	0%	63%
Apr-92	29%	39%	50%	66%	58%	77%	62%	0%	63%
May-92	31%	42%	50%	66%	58%	77%	63%	0%	63%
Jun-92	33%	44%	46%	66%	58%	75%	63%	0%	64%
Jul-92	33%	42%	48%	66%	58%	74%	63%	0%	64%
Aug-92	32%	42%	49%	66%	58%	73%	62%	0%	64%
Sep-92	33%	43%	47%	65%	58%	75%	62%	0%	64%
Oct-92	34%	42%	53%	66%	58%	74%	62%	0%	64%
Nov-92	33%	41%	56%	66%	58%	76%	62%	0%	64%
Dec-92	31%	37%	53%	65%	58%	80%	62%	0%	63%
Jan-93	31%	37%	61%	65%	59%	85%	63%	0%	64%
Feb-93	30%	38%	59%	66%	59%	94%	63%	0%	64%
Mar-93	32%	39%	59%	66%	59%	102%	64%	0%	64%
Apr-93	32%	40%	63%	66%	61%	102%	64%	0%	64%
May-93	32%	41%	62%	67%	61%	98%	64%	0%	65%
Jun-93	31%	40%	57%	67%	62%	92%	64%	0%	65%
Jul-93	29%	38%	62%	68%	62%	89%	65%	0%	64%
Aug-93	28%	38%	61%	68%	62%	91%	65%	0%	64%
Sep-93	31%	37%	62%	68%	62%	93%	65%	0%	65%
Oct-93	33%	37%	59%	67%	62%	94%	66%	0%	65%
Nov-93	32%	36%	63%	68%	63%	98%	66%	0%	65%
Dec-93	26%	31%	59%	68%	62%	101%	66%	0%	64%
Jan-94	26%	31%	60%	68%	63%	105%	66%	0%	65%
Feb-94	28%	33%	61%	68%	63%	102%	66%	0%	65%
Mar-94	29%	33%	57%	68%	64%	102%	66%	0%	65%
Apr-94	28%	35%	57%	68%	65%	97%	66%	0%	65%
May-94	28%	36%	66%	69%	65%	96%	67%	0%	65%
Jun-94	27%	37%	63%	69%	66%	98%	67%	0%	66%
Jul-94	28%	39%	65%	70%	66%	95%	67%	0%	66%
Aug-94	29%	43%	61%	70%	67%	96%	68%	0%	67%
Sep-94	29%	39%	60%	70%	67%	96%	70%	0%	67%
Oct-94	29%	37%	63%	70%	67%	94%	71%	0%	66%
Nov-94	30%	38%	65%	70%	67%	95%	71%	0%	67%
Dec-94	27%	34%	64%	70%	67%	94%	72%	0%	67%
Jan-95	27%	35%	64%	71%	68%	94%	72%	0%	67%
Feb-95	27%	36%	64%	72%	68%	92%	73%	0%	67%
Mar-95	28%	36%	65%	74%	68%	93%	73%	0%	68%
Apr-95	29%	40%	74%	74%	71%	91%	75%	0%	68%
May-95	30%	42%	68%	74%	71%	90%	75%	0%	69%
Jun-95	29%	42%	65%	74%	71%	88%	75%	0%	69%
Jul-95	27%	39%	65%	75%	71%	90%	75%	0%	69%
Aug-95	28%	38%	66%	75%	71%	89%	75%	0%	69%
Sep-95	29%	38%	69%	75%	71%	90%	75%	0%	69%
Oct-95	30%	36%	67%	75%	71%	89%	74%	0%	68%
Nov-95	30%	34%	60%	74%	71%	86%	73%	0%	68%

Dec-2005 = 100									
Date	**Diesel**	**Gasoline**	**Asphalt**	**Steel**	**Concrete**	**Lumber**	**Plastic**	**Labor**	**Overall**
Dec-95	30%	35%	56%	74%	71%	86%	73%	0%	69%
Jan-96	31%	38%	60%	74%	71%	86%	72%	76%	69%
Feb-96	30%	37%	61%	74%	71%	86%	72%	75%	69%
Mar-96	32%	40%	57%	73%	71%	88%	72%	75%	70%
Apr-96	38%	45%	59%	70%	73%	89%	72%	76%	70%
May-96	38%	47%	60%	70%	74%	94%	72%	76%	71%
Jun-96	33%	45%	65%	70%	74%	96%	73%	76%	70%
Jul-96	33%	43%	68%	70%	74%	94%	73%	77%	70%
Aug-96	34%	43%	67%	70%	74%	95%	73%	77%	71%
Sep-96	38%	43%	66%	70%	75%	98%	73%	78%	71%
Oct-96	40%	44%	62%	69%	75%	95%	72%	78%	71%
Nov-96	39%	45%	62%	69%	75%	98%	73%	78%	71%
Dec-96	38%	45%	57%	69%	74%	98%	72%	78%	72%
Jan-97	37%	45%	0%	69%	75%	98%	71%	78%	72%
Feb-97	37%	44%	64%	69%	75%	101%	71%	78%	72%
Mar-97	33%	43%	63%	69%	75%	102%	70%	78%	72%
Apr-97	33%	43%	62%	69%	76%	103%	71%	78%	72%
May-97	32%	43%	0%	69%	76%	105%	71%	79%	72%
Jun-97	31%	42%	0%	69%	77%	102%	71%	79%	72%
Jul-97	29%	41%	0%	69%	77%	103%	71%	80%	72%
Aug-97	31%	43%	0%	69%	77%	102%	71%	80%	72%
Sep-97	31%	44%	0%	69%	77%	99%	71%	81%	72%
Oct-97	33%	41%	0%	69%	77%	97%	71%	81%	72%
Nov-97	33%	40%	0%	69%	77%	98%	71%	81%	72%
Dec-97	30%	38%	0%	69%	77%	97%	71%	81%	72%
Jan-98	27%	35%	0%	69%	77%	96%	71%	81%	71%
Feb-98	26%	33%	0%	69%	77%	97%	70%	81%	71%
Mar-98	24%	30%	0%	69%	77%	97%	70%	81%	71%
Apr-98	25%	32%	0%	69%	80%	97%	70%	81%	71%
May-98	25%	34%	0%	69%	80%	95%	70%	82%	72%
Jun-98	23%	34%	0%	69%	80%	91%	70%	82%	71%
Jul-98	22%	33%	0%	69%	81%	93%	69%	83%	72%
Aug-98	22%	30%	0%	69%	81%	93%	69%	83%	71%
Sep-98	24%	30%	0%	69%	81%	90%	69%	83%	71%
Oct-98	24%	31%	0%	69%	81%	89%	69%	84%	71%
Nov-98	23%	29%	0%	68%	81%	88%	69%	84%	71%
Dec-98	20%	25%	0%	68%	81%	90%	69%	84%	71%
Jan-99	20%	27%	0%	68%	82%	92%	69%	83%	71%
Feb-99	19%	26%	0%	66%	82%	94%	69%	83%	71%
Mar-99	22%	28%	0%	66%	82%	96%	69%	84%	71%
Apr-99	27%	38%	0%	67%	82%	96%	69%	84%	72%
May-99	27%	39%	0%	67%	83%	98%	70%	85%	73%
Jun-99	27%	37%	0%	67%	83%	101%	70%	85%	73%
Jul-99	30%	41%	0%	66%	83%	105%	71%	86%	73%
Aug-99	33%	44%	0%	66%	83%	101%	72%	86%	74%
Sep-99	35%	46%	0%	66%	83%	98%	72%	87%	74%
Oct-99	34%	43%	0%	67%	83%	95%	72%	87%	74%
Nov-99	36%	43%	0%	67%	83%	96%	73%	87%	75%
Dec-99	37%	44%	0%	67%	82%	97%	73%	87%	75%
Jan-00	38%	45%	0%	69%	82%	98%	73%	87%	76%
Feb-00	43%	51%	0%	69%	82%	98%	74%	87%	77%

Dec-2005 = 100									
Date	**Diesel**	**Gasoline**	**Asphalt**	**Steel**	**Concrete**	**Lumber**	**Plastic**	**Labor**	**Overall**
Mar-00	45%	56%	0%	69%	82%	98%	75%	87%	78%
Apr-00	42%	52%	0%	70%	82%	96%	75%	88%	78%
May-00	42%	56%	0%	71%	82%	93%	76%	88%	78%
Jun-00	43%	65%	0%	71%	83%	93%	77%	88%	79%
Jul-00	45%	59%	0%	71%	83%	91%	77%	89%	79%
Aug-00	46%	56%	0%	70%	82%	90%	76%	90%	79%
Sep-00	56%	61%	0%	70%	82%	89%	76%	90%	80%
Oct-00	55%	58%	0%	70%	82%	89%	75%	91%	80%
Nov-00	56%	58%	0%	69%	82%	88%	74%	90%	80%
Dec-00	51%	52%	0%	68%	82%	88%	74%	91%	79%
Jan-01	49%	55%	0%	68%	82%	86%	73%	90%	79%
Feb-01	47%	55%	0%	68%	82%	87%	74%	90%	80%
Mar-01	42%	53%	0%	67%	82%	88%	74%	91%	79%
Apr-01	44%	62%	0%	67%	82%	88%	75%	90%	80%
May-01	47%	67%	0%	66%	82%	94%	75%	91%	81%
Jun-01	45%	61%	0%	66%	82%	95%	74%	91%	80%
Jul-01	41%	51%	0%	66%	82%	91%	74%	92%	79%
Aug-01	41%	54%	0%	65%	82%	90%	74%	92%	79%
Sep-01	46%	60%	0%	65%	82%	90%	72%	92%	80%
Oct-01	38%	46%	0%	65%	83%	87%	72%	93%	78%
Nov-01	36%	40%	0%	65%	82%	86%	73%	92%	77%
Dec-01	28%	35%	0%	66%	82%	85%	72%	93%	76%
Jan-02	30%	37%	0%	66%	82%	87%	72%	92%	77%
Feb-02	30%	38%	0%	66%	82%	89%	73%	92%	76%
Mar-02	35%	46%	0%	66%	82%	90%	73%	93%	77%
Apr-02	39%	52%	0%	67%	84%	90%	74%	93%	77%
May-02	38%	51%	0%	67%	84%	90%	76%	93%	77%
Jun-02	37%	50%	0%	68%	84%	88%	77%	93%	77%
Jul-02	39%	51%	82%	69%	84%	88%	77%	95%	77%
Aug-02	41%	52%	84%	69%	84%	89%	78%	95%	77%
Sep-02	47%	53%	84%	69%	84%	88%	78%	96%	78%
Oct-02	50%	59%	81%	69%	84%	87%	77%	96%	78%
Nov-02	43%	52%	80%	69%	84%	87%	75%	95%	77%
Dec-02	44%	48%	65%	69%	84%	87%	74%	96%	77%
Jan-03	49%	56%	72%	69%	84%	87%	75%	95%	78%
Feb-03	62%	66%	83%	69%	84%	88%	76%	95%	78%
Mar-03	65%	71%	95%	69%	84%	87%	77%	95%	79%
Apr-03	52%	59%	92%	69%	83%	88%	78%	96%	79%
May-03	44%	56%	90%	69%	84%	88%	78%	96%	79%
Jun-03	45%	59%	88%	70%	84%	89%	77%	96%	79%
Jul-03	47%	60%	80%	70%	83%	91%	77%	97%	79%
Aug-03	49%	63%	83%	70%	83%	91%	76%	97%	79%
Sep-03	46%	65%	81%	70%	83%	95%	77%	98%	79%
Oct-03	51%	60%	78%	70%	83%	93%	77%	97%	79%
Nov-03	48%	56%	73%	71%	83%	93%	77%	97%	79%
Dec-03	49%	56%	72%	71%	83%	94%	77%	97%	79%
Jan-04	55%	64%	80%	73%	83%	95%	77%	97%	81%
Feb-04	52%	65%	69%	75%	83%	99%	77%	97%	81%
Mar-04	55%	69%	74%	77%	83%	103%	78%	97%	82%
Apr-04	60%	74%	72%	80%	84%	107%	79%	97%	84%
May-04	61%	83%	80%	83%	85%	111%	80%	97%	85%

Dec-2005 = 100									
Date	**Diesel**	**Gasoline**	**Asphalt**	**Steel**	**Concrete**	**Lumber**	**Plastic**	**Labor**	**Overall**
Jun-04	58%	76%	86%	87%	85%	108%	80%	97%	85%
Jul-04	62%	80%	88%	91%	85%	108%	81%	98%	86%
Aug-04	68%	76%	88%	94%	87%	113%	81%	98%	87%
Sep-04	71%	77%	91%	95%	89%	113%	81%	99%	88%
Oct-04	84%	88%	94%	98%	89%	106%	82%	99%	90%
Nov-04	80%	83%	86%	100%	89%	100%	82%	98%	90%
Dec-04	68%	71%	85%	102%	89%	101%	82%	98%	88%
Jan-05	71%	75%	75%	103%	92%	102%	83%	97%	89%
Feb-05	75%	81%	81%	101%	93%	106%	84%	97%	90%
Mar-05	87%	91%	87%	97%	93%	107%	85%	98%	93%
Apr-05	88%	96%	88%	96%	95%	106%	85%	98%	94%
May-05	86%	93%	95%	99%	95%	102%	85%	98%	94%
Jun-05	94%	94%	93%	97%	95%	105%	85%	98%	94%
Jul-05	96%	104%	98%	95%	99%	102%	85%	99%	97%
Aug-05	101%	112%	103%	93%	99%	100%	85%	100%	98%
Sep-05	107%	126%	105%	96%	99%	102%	86%	100%	102%
Oct-05	133%	122%	111%	100%	99%	101%	92%	100%	104%
Nov-05	104%	97%	108%	99%	100%	99%	99%	100%	100%
Dec-05	100%	100%	100%	100%	100%	100%	100%	100%	100%
Jan-06	99%	106%	105%	100%	106%	103%	102%	99%	102%
Feb-06	99%	95%	104%	99%	106%	104%	101%	99%	101%
Mar-06	104%	111%	118%	99%	108%	104%	101%	99%	103%
Apr-06	93%	128%	126%	99%	109%	103%	101%	100%	107%
May-06	96%	133%	141%	101%	109%	104%	101%	101%	109%
Jun-06	100%	135%	160%	103%	109%	100%	101%	102%	110%
Jul-06	96%	139%	171%	104%	109%	98%	101%	102%	111%
Aug-06	102%	135%	182%	104%	110%	94%	102%	103%	112%