Will Construction Abate or Be Great in 2008?

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Current economic influences

- Moderate real GDP growth (2% or so)
- Moderate inflation (CPI change 2-3%)
- Slim job growth, moderate unemployment (avg. 110,000 jobs/mo., 5% unem rate)
- Rising real wages, personal income (1%+)
- Worries about housing, credit, falling dollar

Source: Author, from BEA (GDP, personal income), BLS (CPI, employment, unemployment)

The shifting construction market

Segment	2006	11/07
Total (tril. $, SAAR)	$1.19	$1.17
% of total		
Private residential	54%	42%
New SF	35	22
New MF	4	4
Improvements	14	15
Private nonres.	25	32
Public	21	26

Source: Author, from Census (construction spending)

Current housing situation

- Dec. jobs: -28,000 vs. Nov., -195,000 vs. 12/06
- Dec. permits: -8.1% vs. Nov., -34% vs. 12/06
- Dec. starts: -14% vs. Nov., -38% vs. 12/06
- Nov. spending: -2.5% vs. Oct., -18% vs. 11/06
- Nov. new-home sales: -9.0% vs. Oct., -34% vs. 11/06
- Inventories, time on market remaining high

Source: Census (construction spending, permits, starts, sales), BLS (jobs)

Single-family (SF) vs. multifamily (MF)

- Nov. construction spending (value put in place):
  SF: -5.0% vs. Oct., -28% vs. 11/06
  MF: +0.6% vs. Oct., -14% vs. 10/06
- Dec. housing starts :
  SF: -2.9% vs. Nov., -36% vs. 12/06
  MF: -40% vs. Nov., -45% vs. 12/06
- Dec. building permits :
  SF: -10% vs. Nov., -41% vs. 12/06
  MF: -4.1% vs. Nov., -16% vs. 12/06

Source: Census

Housing outlook

- SF: No end yet to decline in permits, starts or spending
- Starts won't improve until late '08 at best
- MF: Rental construction cushioned the fall in condo starts but now many owners are trying to rent out houses and condos
- Foreclosures will add to inventories, drag down both sales and rentals

Nonres '06 totals, shares, '07 YTD change

Nonresidential total	$545 billion	100%	+16% YTD
Educational	$86 billion	16%	+15%
Commercial	$76 billion	14%	+14%
Highway & street	$72 billion	13%	+ 7%
Office	$55 billion	10%	+21%
Healthcare	$40 billion	7%	+14%
Power	$39 billion	7%	+25%
Manufacturing	$34 billion	6%	+ 7%
Transportation	$27 billion	5%	+16%
Sewage & waste disposal	$23 billion	4%	+ 7%
Communication	$21 billion	4%	+20%
Amusement & recreation	$18 billion	3%	+13%
Lodging	$18 billion	3%	+66%

Other 7% (water; public safety; religious; conservation)

Source: Census

Nonresidential segments

(listed in descending order of public + private spending in 2006)

- Jan-Nov ’07 year-to-date (YTD) share and growth from Jan-Nov ’06 to Jan-Nov ‘07
- Major influences
- Outlook for ’07 and ’08

Source: Census

Educational

- 16% of public + private nonres. spending YTD; YTD change Jan-Nov ‘06 to Jan-Nov ‘07: 15%
- Falling primary school enrollment; rising high-school, college, continuing ed
- K-12 affected by property taxes, house values
- Private school/college spending affected by stock market (through endowment return, gifts)
- 2008 forecast: 3-6% (slower property tax revenue growth, strong college-level const.)

Source: Census; author’s forecasts

Commercial (retail, warehouse, farm)

- 14% of YTD total; 14% YTD growth
- Led by multi-retail (gen. merchandise, shopping centers, malls), 14% YTD growth
- Neighborhood retail follows new housing; other segments affected by home sales or remodeling: furniture, appliance, yard/garden sales
- 2008: +1-4% (expanding GDP but tighter credit)

Source: Census; author's forecasts

Highway and street

- 12% of YTD total; 7% YTD growth
- *No* new revenue after MN bridge collapse; federal, state trust funds are running low
- CBO projects big deficit starting 10/08
- 2008: 3-7% (one-time boost from feds but trouble in 2009)

Source: Census; author's forecasts

Office

- 10% of YTD total; +21% YTD growth
- Rebound from weak 2001-05
- Vulnerable to reduced demand from RE agents, mortgage brokers, title companies
- Tighter credit; large-firm mergers, job cuts threaten many large-office markets
- 2008: +0-5% ('06 projects end, fewer new)

Source: Census; author's forecasts

Power

- 8% of YTD total; +25% YTD growth
- Private electric power has ended 5-year slump: +27% YTD growth; public +24%
- New plants, transmission lines; retrofits
- Wind, solar growing but from small base
- 2008: more of the same (+15-25%)

Source: Census; author's forecasts

Healthcare (hosp., med. bldg., special care)

- 7% of YTD total; +14% YTD growth
- Led by private hospitals, 15% YTD growth
- Technology, new housing driving hospital (re)construction; seismic retrofit in CA
- Budget constraints, decline of employer-funded care may slow hospital demand
- 2008: +10-15%

Source: Census; author's forecasts

Manufacturing

- 6% of YTD total; +7% YTD growth
- Catch-up from 1998-2004 slump is over
- Shipments, capacity utilization are flat
- Long lead times on refineries, mining, cement plants; aircraft, heavy equipment
- 2008: 2-5% (big jobs continue; more foreign investment; fewer new starts)

Source: Census; author’s forecasts

Transportation facilities

- 5% of YTD total; +16% YTD growth
- Driven by growth in passengers & freight
- Slower economic growth in 2007 implies less expansion
- 2008: +5-10% (more airport, port work but continuing weakness in trucking, rail)

Source: Census; author's forecasts

Lodging

- 5% of YTD total; +66% YTD growth
- Driven by higher room and occupancy rates; likely to fall if GDP stalls
- Rebound from 2000-01 recession, post-9/11 travel slump
- 2008: -5 to +5% (depends on credit, number of foreign visitors)

Source: Census; author’s forecasts

Communication

- 4% of YTD total; +20% YTD growth
- New round of cell towers, server farms
- 2008: +10-15% (same trends continue but could slow abruptly)

Source: Census; author's forecasts

Sewage & waste disposal

- 4% of YTD total; +7% YTD growth
- Housing slump means fewer new lines
- Major plant and CSO upgrades
- 2008: +1-5% (continued impact of homebuilding slump, tighter finances)

Source: Census; author's forecasts

Amusement & recreation

- 3% of YTD total; +13% YTD growth
- Very diverse: sports venues, playgrounds, parks, convention centers, theaters
- 2008: ? (big stadium projects, bond issues passed in 2006 but flatter public revenues)

Source: Census; author’s forecasts

Materials and components

- Higher increases for construction inputs than for overall economy:

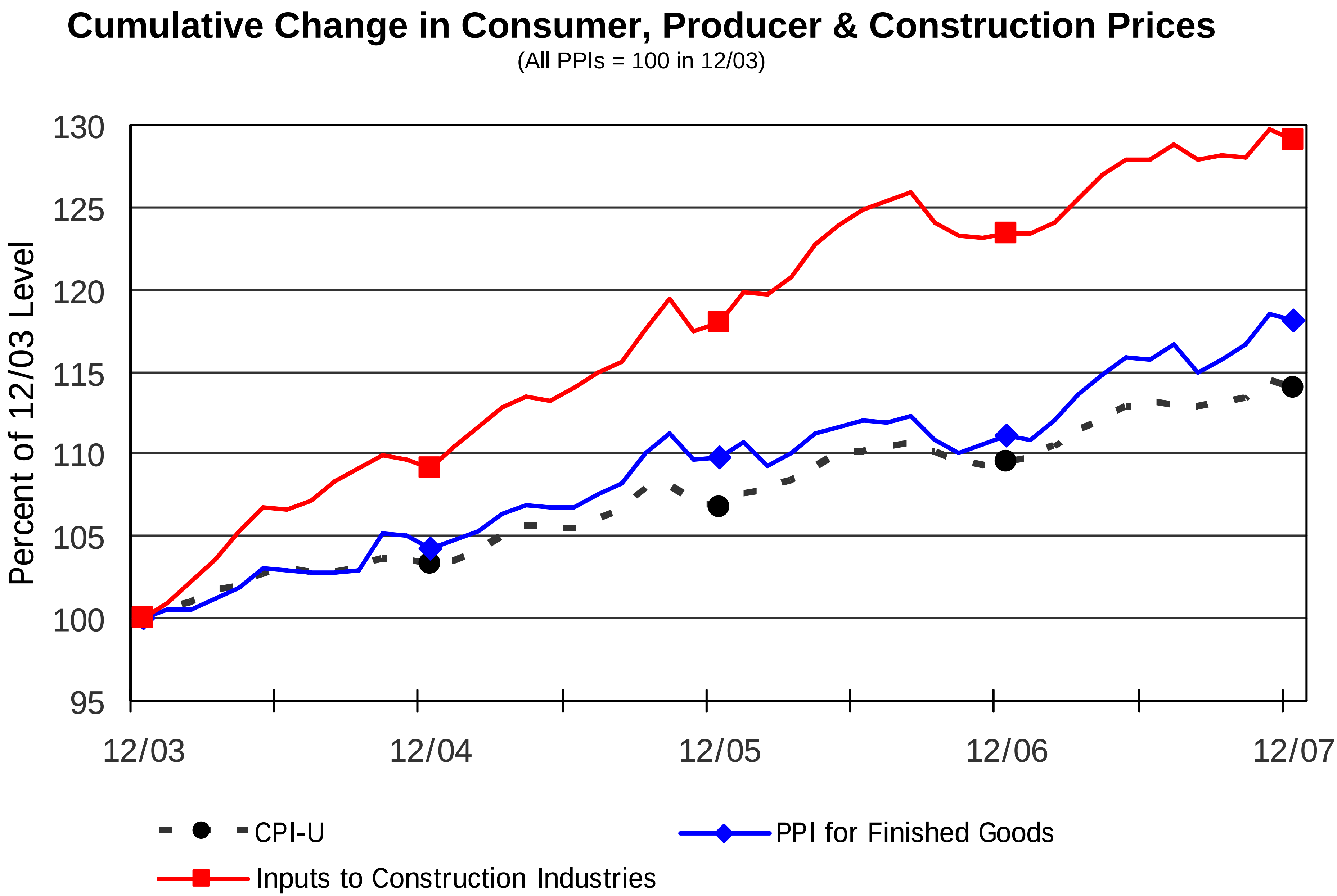
12 mo. to:	12/04	12/05	12/06	12/07
Const PPI	9.1%	8.2%	4.6%	4.5%
CPI-U	3.3%	3.4%	2.5%	4.1%

- Cumulative change double the CPI since 12/03:

Const PPI	29%
CPI-U	14%

- PPI drivers: steel, gypsum, diesel, asphalt, concrete, copper, plastics, aluminum, wood

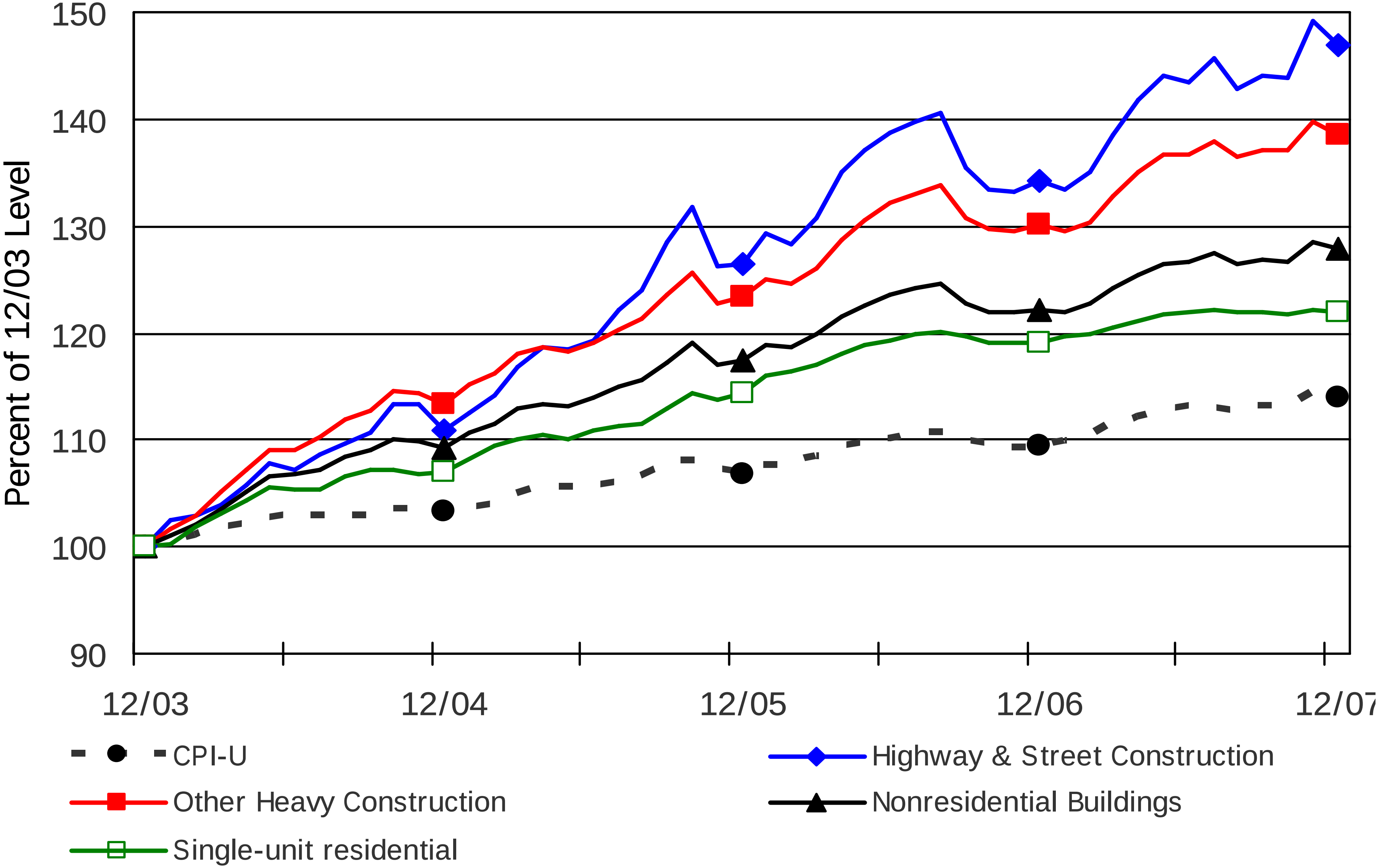
Source: BLS (CPI, PPI)



Cumulative Change in Consumer, Producer & Construction Prices
(All PPIs = 100 in 12/03)
Percent of 12/03 Level
130
125
120
115
110
105
100
95
12/03
12/04
12/05
12/06
12/07
CPI-U
PPI for Finished Goods
Inputs to Construction Industries

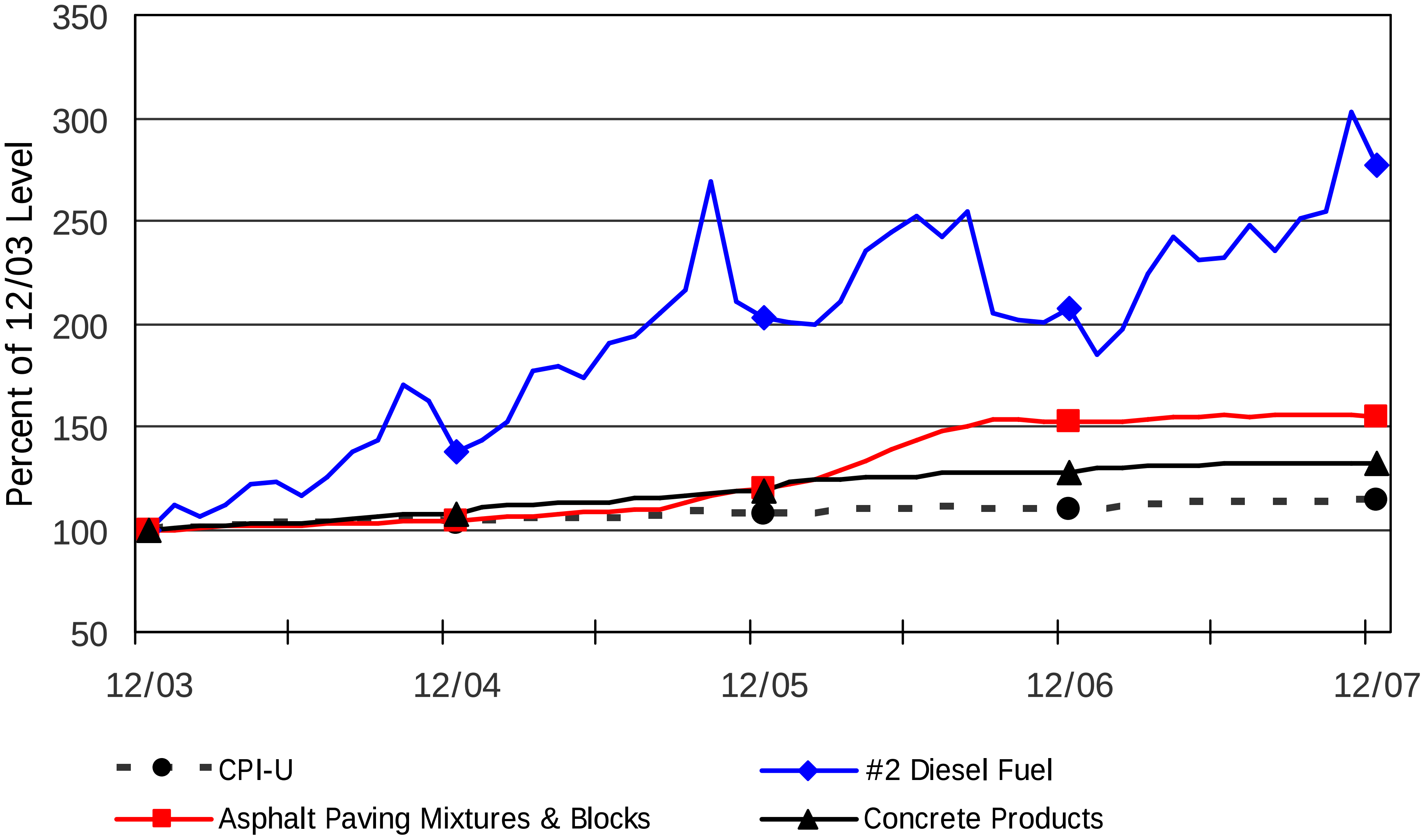
Cumulative Change in PPIs for Construction Types

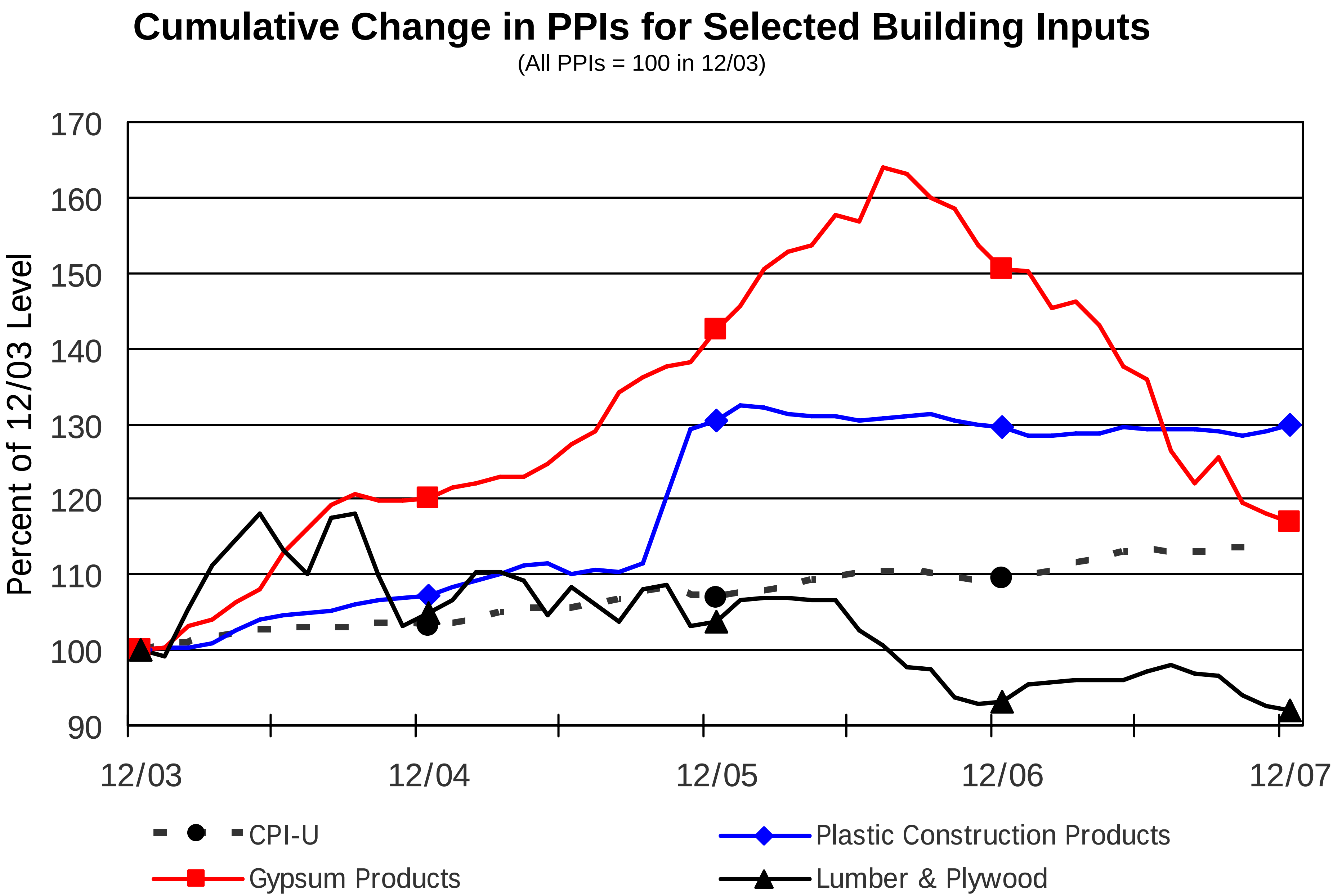
(All PPIs = 100 in 12/03)

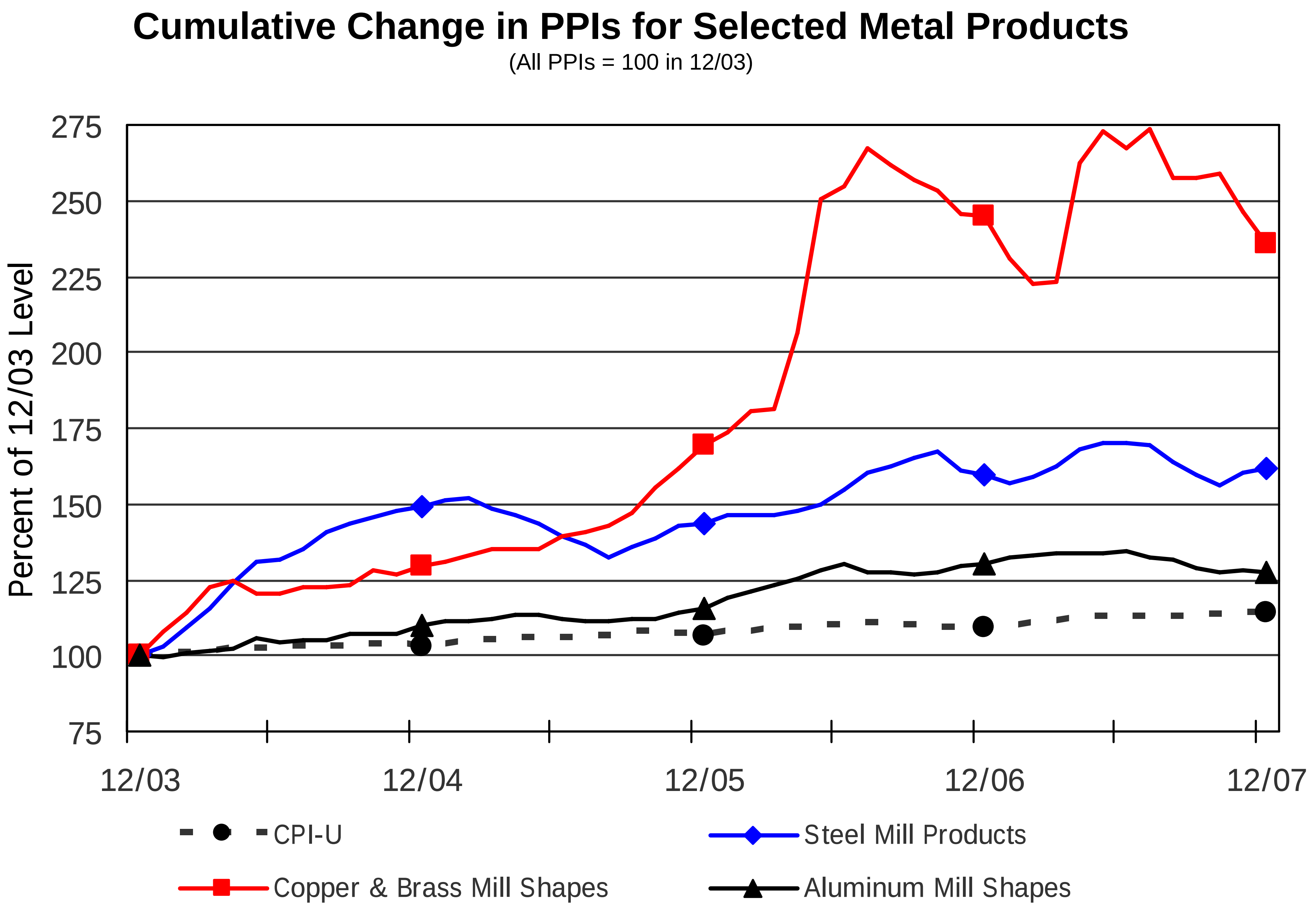


Cumulative Change in PPIs for Selected Highway Inputs

(All PPIs = 100 in 12/03)




Cumulative Change in PPIs for Selected Building Inputs
(All PPIs = 100 in 12/03)
Percent of 12/03 Level
170
160
150
140
130
120
110
100
90
12/03
12/04
12/05
12/06
12/07
CPI-U
Plastic Construction Products
Gypsum Products
Lumber & Plywood



Cumulative Change in PPIs for Selected Metal Products
(All PPIs = 100 in 12/03)
Percent of 12/03 Level
275
250
225
200
175
150
125
100
75
12/03
12/04
12/05
12/06
12/07
CPI-U
Steel Mill Products
Copper & Brass Mill Shapes
Aluminum Mill Shapes

Outlook for materials (3-6 months)

- Falling prices: wood, gypsum products
- Likely to rise: diesel, asphalt, copper
- No shortages but longer lead times for some items
- Year-over-year PPI change: 4-6%

Source: Author’s forecasts

Outlook for materials (1-5 years)

- Construction remains **dependent on specific materials**
- Same materials in demand worldwide, with uncertain supply growth (e.g., copper, oil)
- Construction **requires physical delivery**
- Thus, industry is subject to **price spurts**, **transport bottlenecks, fuel price swings**
- Expect 6-8% PPI increases, higher spikes

Source: Author’s forecast

Construction labor costs, availability

Average hourly earnings, 12/06-12/07: +4.4%

- Construction employment: -2.5%

  -Residential construction : -5.8%

  (residential building & specialty trades)

  -Nonresidential construction: no change

  (nonres building & specialty trades, heavy & civil engineering const.)

- Architectural, engineering services: +3.9%
- Nonfarm total: jobs +1.0%, wages +3.7%

Source: Author's calculations from BLS

True nonres job gains (12/07 vs. 12/06)

- Decline in res. spending (11/06-07): -17%
- ‘Official’ decline in res. employment: -6%
- If job loss = spending drop, then 390,000 ‘res’ specialty trades are working in nonres
- ‘Official’ change in nonres jobs: 0% (-600)
- +390K = Actual nonres job gain: 9%
- Wage increase: 4.4% in ’07, 5-6% in ‘08

Source: Author’s calculations from BLS

Summary for 2008

- Total construction spending: -3 to +1%

  Res: -10 to -5% (turnaround in late 2008)

  Nonres: +2-6% (led by energy & power, hospitals; weaker highways, lodging)
- Materials costs: +6-8%
- Labor costs: +5-6%

Source: Author's forecasts

AGC Economic Resources

(sign up by email to simonsonk@agc.org)

- *The Data DIGest:* weekly one-page email
- Audioconferences: twice yearly
- PPI tables: emailed monthly
- *Construction Inflation Alert*: Oct. & March
- State-specific emails (timing varies) and
  fact sheets: www.agc.org /factsheets

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