Achieving sustainable urban form

Price Check!

City of Hamilton Public Works Committee November 7, 2011 Pamela Blais
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Prices drive development patterns

Urban goods and services

- Land
- Buildings
  - incl. mortgage costs, insurance…
- Transport
  - roads, autos, transit, gas/fuel, insurance, parking…
- Services and Utilities
  - road maintenance, snow clearance…
  - garbage and recycling
  - water, sewer, stormwater
  - phone, cable, electricity, gas, postal…

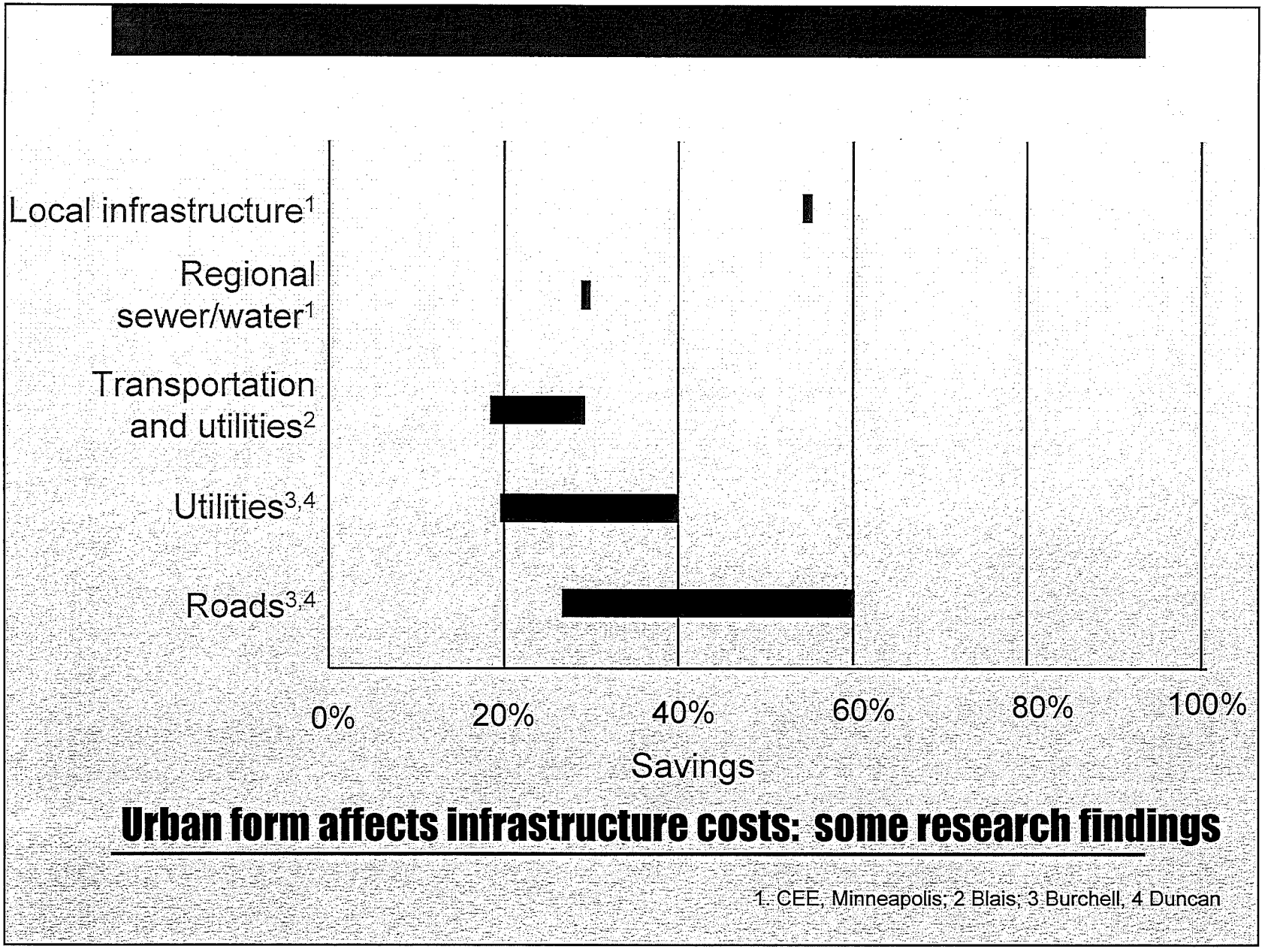
Prices

- Property price/rents
- Mortgage interest
- Mortgage insurance
- Utility rates
- User fees
- Property taxes
- Transportation costs
  - Auto insurance
  - Gas and fuel
  - Parking
- Etc.

Prices for urban goods and services

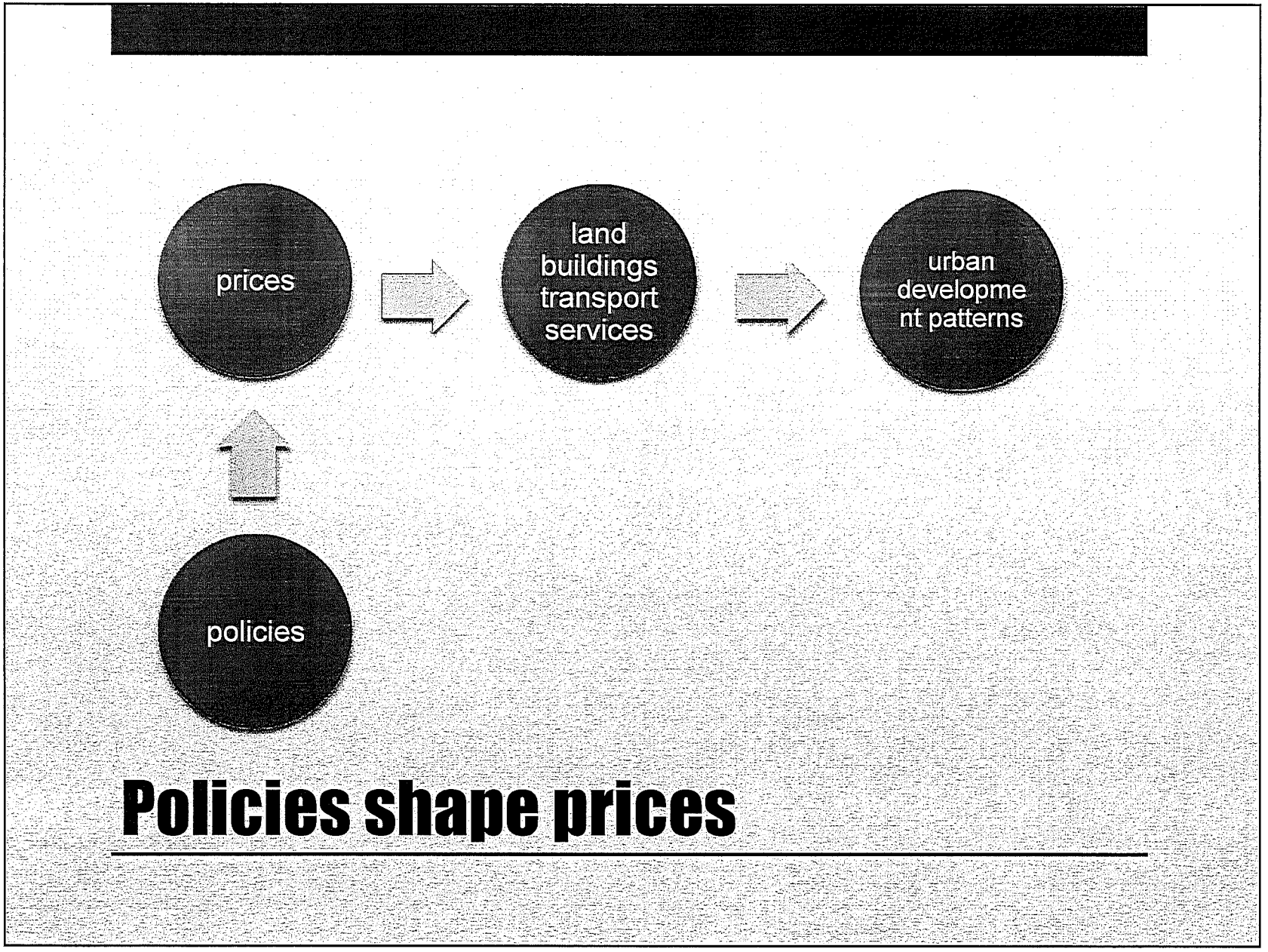
Economic efficiency

- For economic efficiency, prices must reflect costs accurately
- Costs of urban goods and services vary with urban form factors, e.g.
  - Location
  - Density
  - Use
  - Context

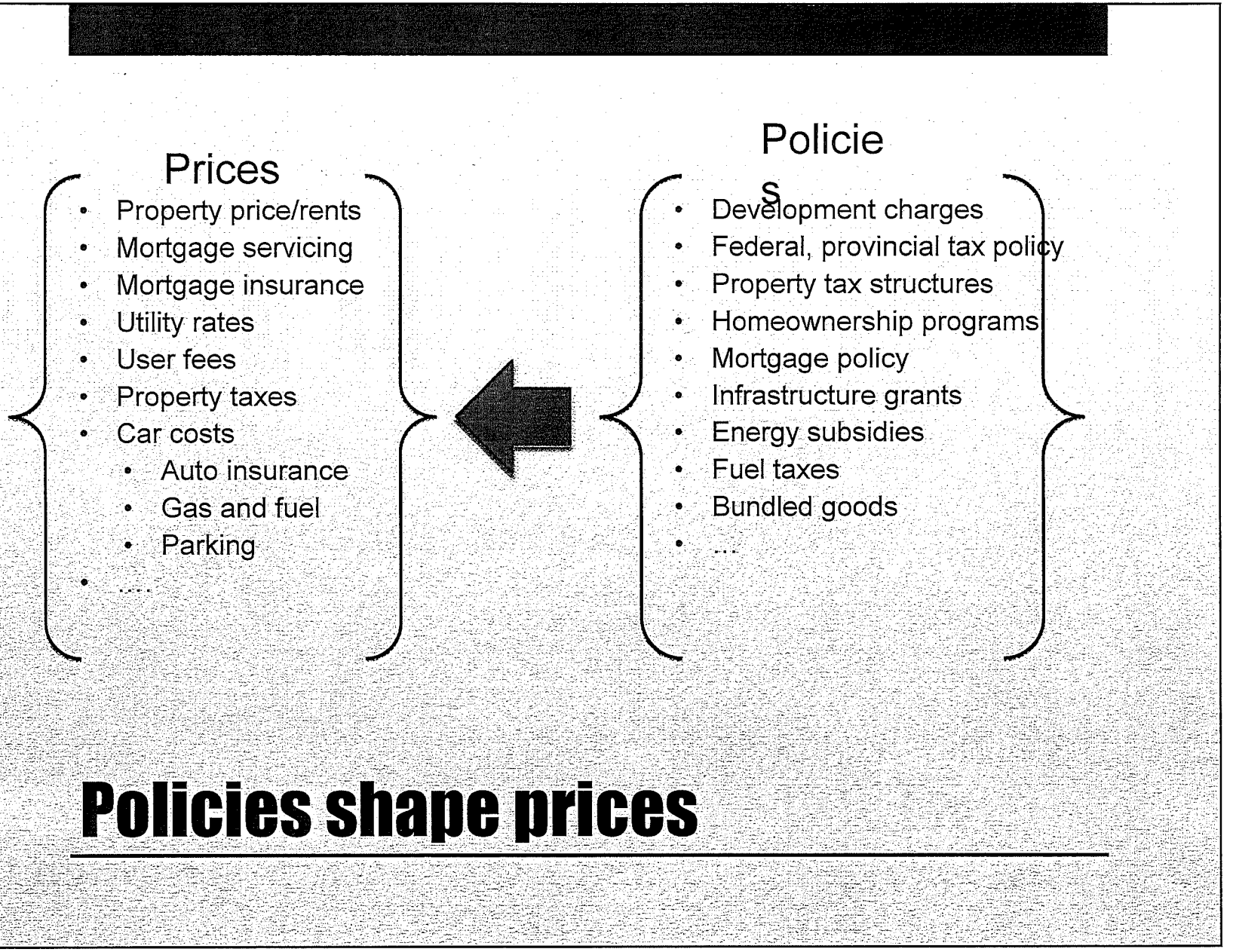


Urban form affects infrastructure costs: some research findings

1. CEE, Minneapolis; 2 Blais; 3 Burchell, 4 Duncan



Policies shape prices


Prices
Property price/rents
Mortgage servicing
Mortgage insurance
Utility rates
User fees
Property taxes
Car costs
Auto insurance
Gas and fuel
Parking
....
Policies
Development charges
Federal, provincial tax policy
Property tax structures
Homeownership programs
Mortgage policy
Infrastructure grants
Energy subsidies
Fuel taxes
Bundled goods
...
Policies shape prices

How policies shape prices

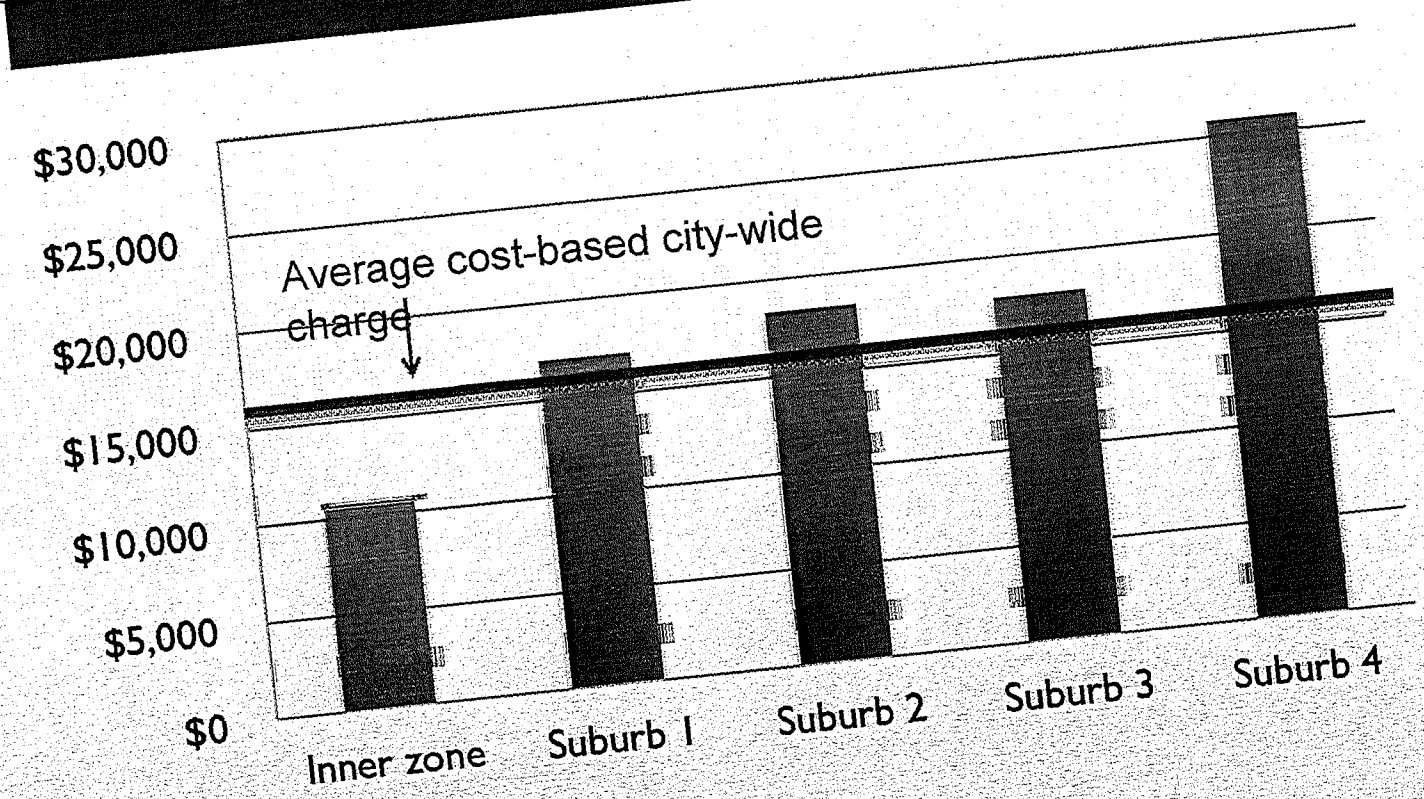
Example 1: DCs

New suburban house

30' lot
Upper tier DC = $31,000
DC = $1,033 per front foot

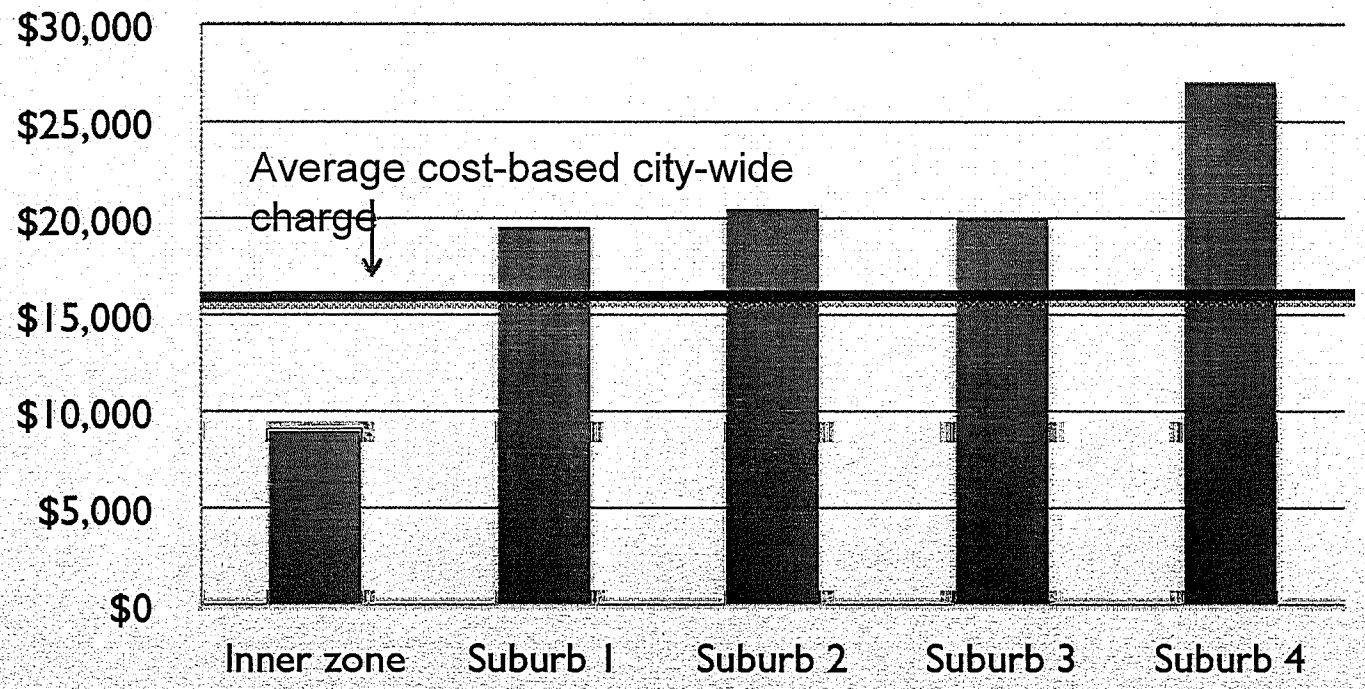
New suburban house

60' lot
Upper tier DC = $31,000
DC = $516 per front foot



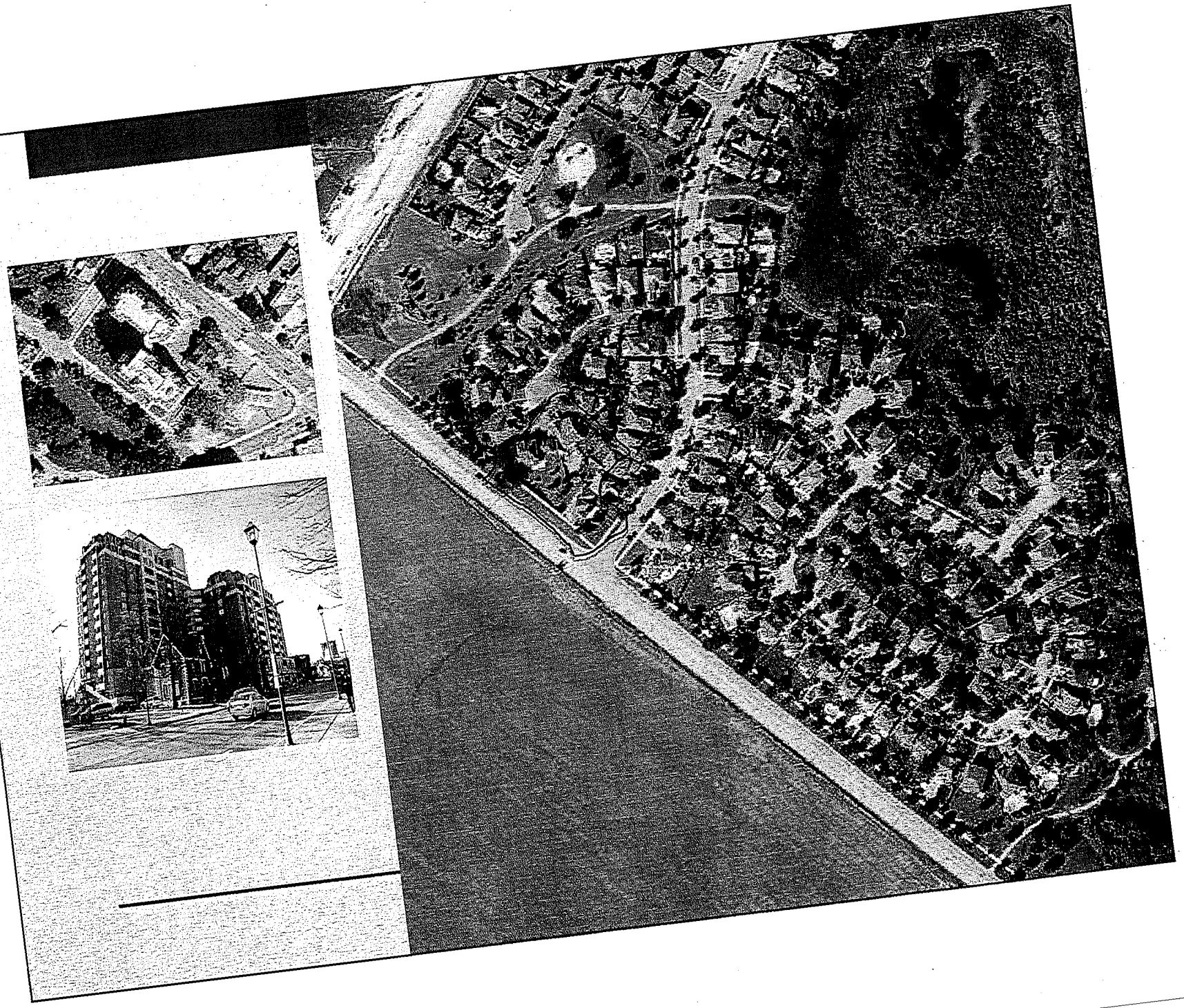
Average cost vs. actual cost DCs

Effects of location

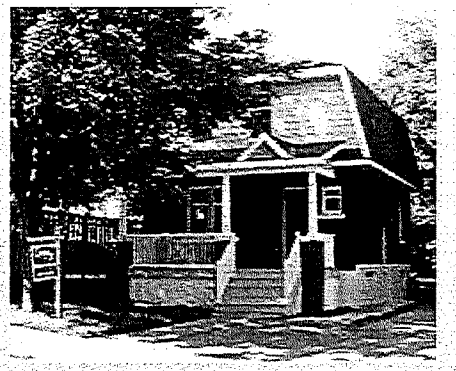


Average cost vs. actual cost DCs

Effects of location + density (illustration)



Urban



28' wide lot
$625,000
Property taxes = $7,400 pa
Share network services: $2,812
Tax paid per frontage foot: $100

Suburban

54' wide lot
$408,000
Property taxes = $4,750 pa
Share network services: $1,805
Tax paid per frontage foot: $33

How policies shape prices

Example 2: Property taxes

- "Prices" (taxes) unrelated to actual costs
- Assume costs/front foot are equal for 2 properties:
  - Urban property pays taxes at rate 3X suburban property for network infrastructure
- Implicit cross-subsidy from high-value to low-value, ie often central to suburban

How policies shape prices

Example 2: Property taxes

- DCs
- Property taxes
- Road use
- “Free” parking
- Utilities – water rates, gas, hydro, cable, internet etc.
- Homeownership programs
- Policies and prices that ignore urban context

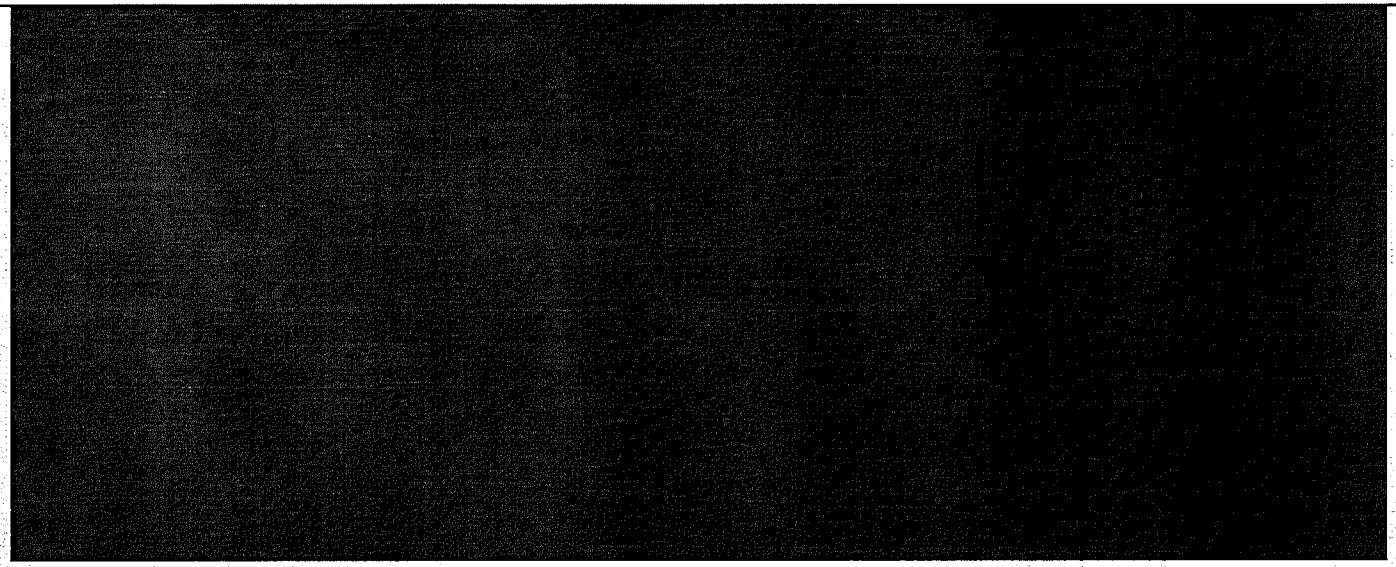
Mispricing around urban development is common

- Policies mean "prices" don't reflect costs accurately
- Remove potential for accurate price signals to inform decision-making, ensuring efficient outcomes
- Uniform DCs make developers indifferent to real cost variations
- Distortions reflected in market prices:
  - Efficient development overpriced/inefficient underpriced
  - Price differentials that should exist between efficient and inefficient development are eliminated
- Affects consumer and business owner decision-making

Distorted pricing = distorted decisions

Some Implications

- "Artificial incentives to sprawl / disincentives to denser, more efficient forms
- Directly contravenes and undermines planning policy, weakening its impact
- Inefficient urban development patterns mean overspending on infrastructure: direct link between mispricing and overspending
- Opportunity costs of overspending on dumb infrastructure re competitiveness, quality of life, sustainability…
- Implicit cross-subsidies raise issues of fairness and equity, choice and informed decision-making
- Cost impacts for affordable housing
- We have sprawl because that is what people want and the market is simply responding to demand



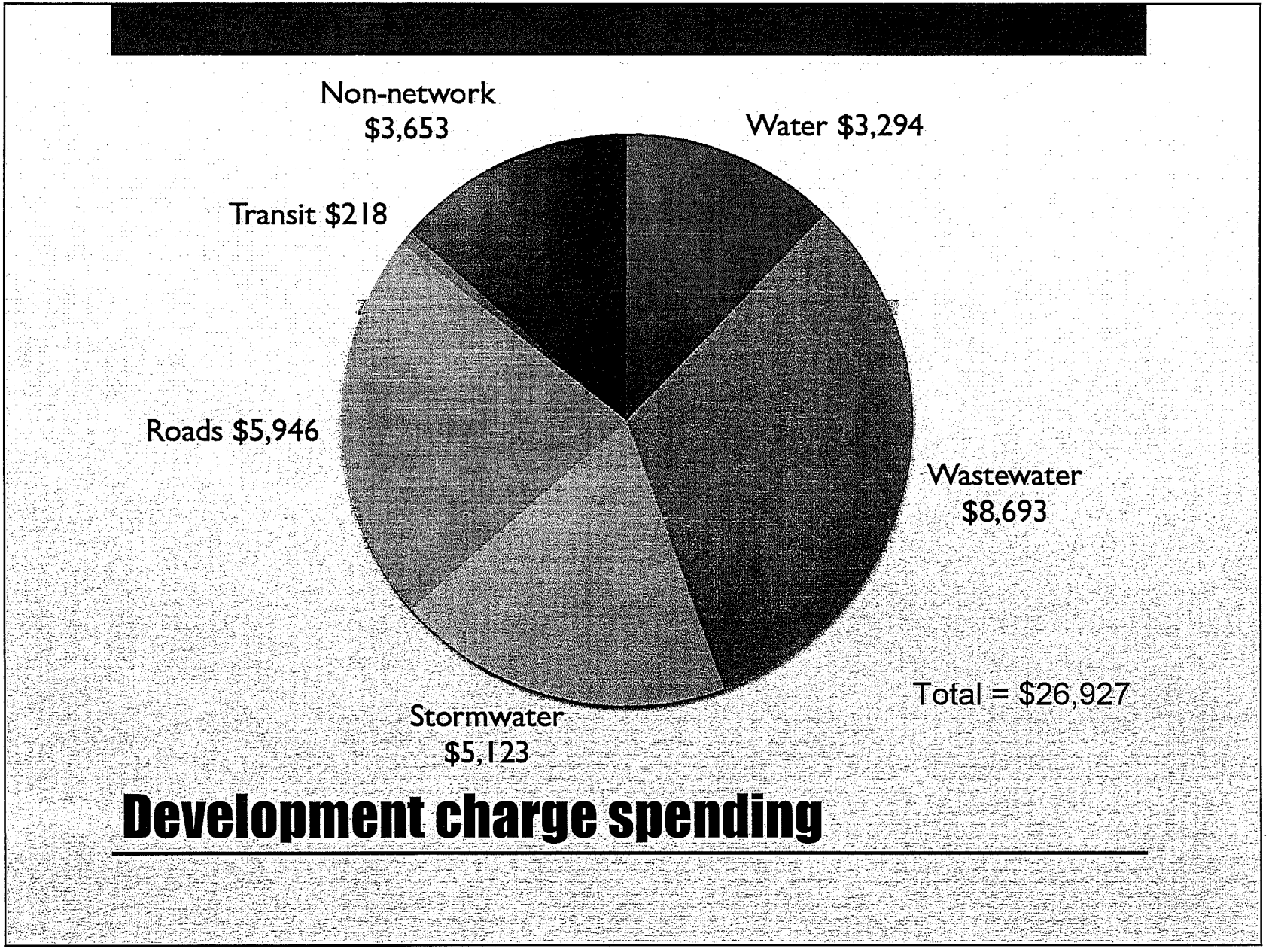
Fix it

Removing market distortions to allow efficient urban form

Current DC structure: residential

- By dwelling type
- + special areas
- - downtown

Single & Semi	$26,927
Towns	$19,300
Large	$16,626
Small Apartments	$11,094


Non-network
$3,653
Water $3,294
Transit $218
Roads $5,946
Wastewater
$8,693
Total = $26,927
Stormwater
$5,123
Development charge spending

Things to consider

Single & Semi	$26,927
Towns	$19,300
Large	$16,626
Small Apartments	$11,094

- Lot size and density?
- Cost variations within the urban area? Zones?
- Downtown exemption: above-average cost developments still subsidised
- Land or impervious-area based stormwater charge?

Zone	Charge	
	Land-related	People-related
1	$50,000 per ha. +	$5,000 per single detached unit $4,000 per row house $2,000 per apartment
2	$120,000 per ha. +	$25,000 per single detached unit $20,000 per row house $12,000 per apartment
3	$100,000 per ha. +	$20,000 per single detached unit $16,000 per row house $10,000 per apartment
4	$95,000 per ha. +	$17,500 per single detached unit $14,000 per row house $6,000 per apartment

- ✓ location
- ✓ density
- ✓ use
- ✓ context

True cost-based DC, an example

District	CHARGE PER NET HA.
Don Mills / Browns Corner	$31,377
Armadale	$11,425
Armadale NE	$14,862
Milliken Mills	$209,694
PD 1-7	$543,119
Rodick / Miller Road Planning District	$313,240
South Unionville	$58,516
South Unionville - Helen Avenue	$822,647
Markham Centre	$51,673
Markham Centre - Clegg	$68,374
Markham Centre - Hotel	$906,731
Markham Centre - South Hwy 7	$343,709
Markham Centre - Sciberras	$578,595
Markham Centre - East Precinct	$560,676
Rouge North East	$7,363
Wismer	$7,101
Cathedral	$3,318
York Downs	$25,827
404 North Employment Lands	$18,405

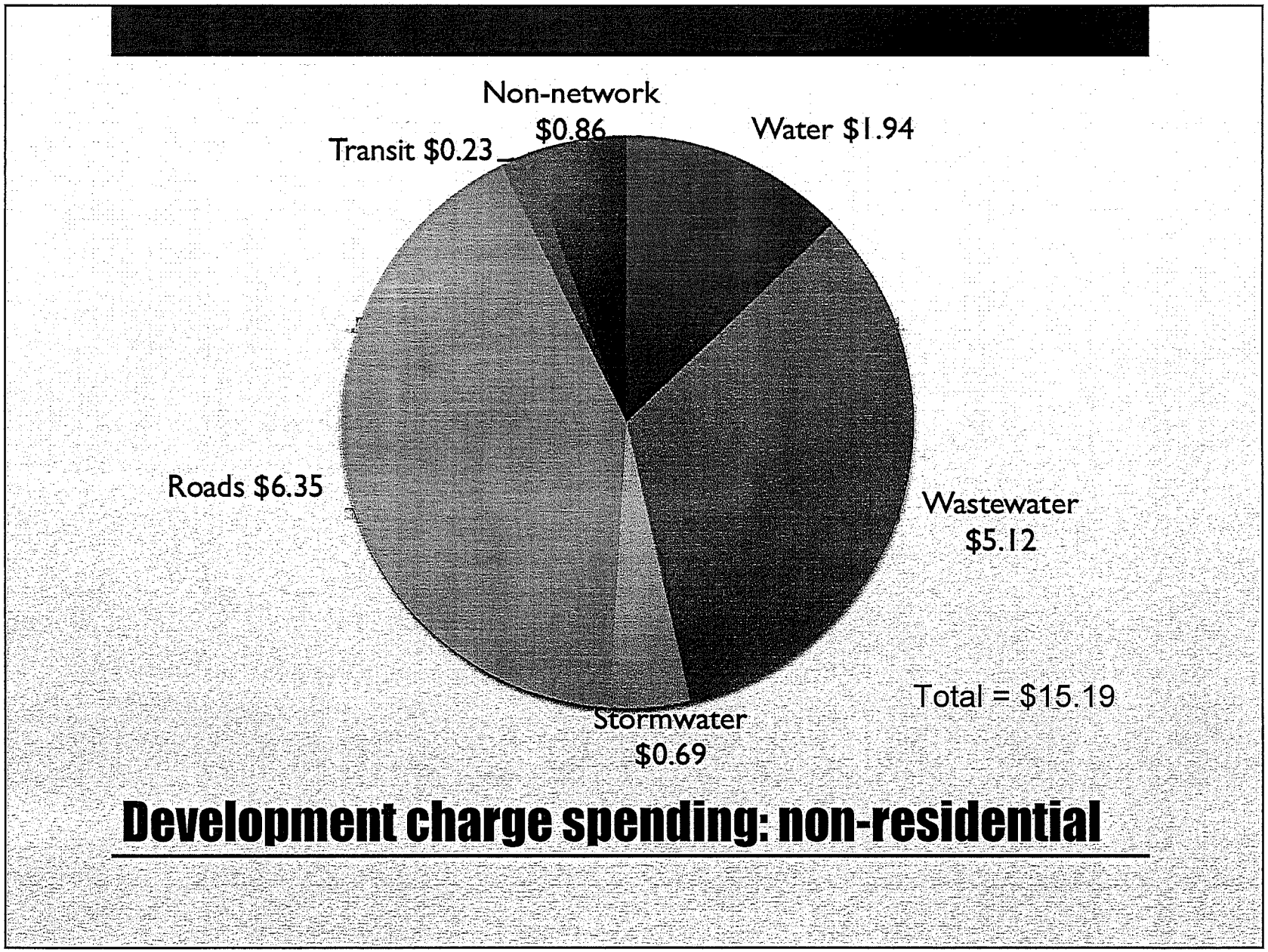
	Single/Semi	Town	Large Apt.	Small Apt.
Town-wide Hard	$8,591	$6,760	$5,317	$3,195
Town-wide Soft	$9,884	$7,759	$6,109	$3,669

← Residential and Non-Residential

Town of Markham DC

Industrial	$6.65/sq.ft. gfa
Commercial/Institution	
First 5,000 sq.ft.	$7.60/sq.ft. gfa
Second 5,000 sq.ft.	$11.39/sq.ft.
10,000+ sq.ft.	$15.19/ sq.ft. gfa

Current DC structure: non-residential



Development charge spending: non-residential

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10,000+ sq.ft.	$15.19/ sq.ft. gfa

- Zone cost variations?
- Step scale: density disincentive?
- Land area basis to incentivise density?
- Use-related cost variations, e.g. retail, fast-food

Things to consider

Zone	Office/Institutional	Retail	Mfg.	Warehouse/ Dist'n.
		$/hectare		
1	$100,00	$100,00	$60,000	$90,000
2	$500,00	$500,00	$400,00	$450,00
3	$400,00	$400,00	$300,00	$350,00
4	$275,00	$300,00	$200,00	$250,00
	0	0	0	0

- ✓ location
- ✓ density
- ✓ use
- ✓ context

True-cost non-residential DC, an example

Non-Residential DC BPs

York Region Non-Residential DCs

	Ind'l/Office/Inst'l	Retail
	(per square metre gfa)	
Water	$26.59	$28.09
Sewer	$49.52	$55.97
→ Roads	$37.03	$128.42
Transit	$2.15	$7.10
Subway	$6.67	$22.71
General	$2.70	$3.88
TOTAL	$124.66	$246.17

Markham Town-Wide Charges

Hard $/net		$180,023 ←
Soft $/sq.m. gfa	IOI	$8.14
	Retail	$8.84
	Mixed Use	$5.58

Fixing property tax

- Underlying problem: MVA-based property taxes not reflective of cost causation for network services
- Remove network services from property tax, charge user fees that reflect usage and cost causation
  - e.g. garbage/recycling, road maintenance, water/sewer
- Phase in fix for inherited distortions

Kitchener, Ontario storm water management charges

- Charges based on impervious area
- Small detached house: $6.30/month
- Large house: $13.80/month
- Credits for on-site controls that reduce runoff

User fees best practice

Simple user fees for roads

- Basic access fee
- Costs related to usage (km travelled) (maintenance, policing costs)
  - Standard fee per vehicle
  - Based on VKT (annual or at license renewal)
- Costs related to lot size (cleaning, snow clearance, maintenance)
  - Fee based on lot size or frontage

Takeaway

1. Pricing…especially mispricing…drives urban form
2. Mispricing drives overspending on infrastructure
3. If you want smart growth, compact development, reurbanisation, affordable infrastructure, sustainable communities…. mispricing must be addressed!
4. Planning and pricing must work together: alignment
5. Many many options for smart pricing

The failure to use price – as an *explicit* system – in the public sector of the metropolis is at the root of many, if not most, of our urban problems.

Wilbur Thompson

The City as a Distorted Price System, 1968

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More information