

Aurora Station Area Planning and Design



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Portland Firm Beats National Competition

11/5/2002 Rich Riegel www.djc-or.com

- George Crandall, left, and Don Arambula, principals of the Portland urban design firm Crandall Arambula, represent the best of what city planning can be all about.
- Portland-area residents know the city is considered a leader in urban planning. Proof of that idea was given veracity recently. In a bold

G

mercial Real Estate, Pages 20-21

- · Making downtown pedestrian friendly. · Creating a balanced transportation system.
- · Connecting downtown with the surrounding
- neighborhoods.

With these goals in mind, Portland becomes the perfect role model.

Portland's TriMet MAX light-rail transit and streetc system, Tom McCall and Eastbank waterfront park and the historical renovation of numerous buildin represent many of Portland's qualities that Knoxville would like to emulate. Portland's living room, Pioneer Courthouse Square, 23rd Avenue and the recently expanded retail center Pioneer Place also serve as models, making downtown Portland and its surrounding neighborhoods Revitalizing America's Cities vibrant and livable. Portland's housing

the story

larger forces of globaliza-

ind technological change. This continuing transforma-on helps explain why the peo-Costinued on Page 7



Posted Wednesday, March 22, 2006

Council approves downtown master plan

By RICHARD HANNERS, Whitefish Pilot

City Council pushed ahead on a proposed Downtown Master Plan on Monday, but residents should not be surprised by the speed with which things are moving. The plan is moving

The Whitefish

at a deliberate pace," city manager Gary Marks told the Pilot. "There's been

THE NEW YORK TIMES REAL ESTATE SUNDAY, JULY 24, 2005

A Gritty Midwest City Is Reinventing Itself As a **Colony for Artists**

By ROBERT SHAROFF, Published: July 24, 2005

Funding for th

million project

come from the

of the current

Hall site and u

of tax-increme

financing fund

Moving Cent

Avenue up to

number three

position on t

bas achieved a clear, flexible, and realistic vision and has generated a high level of public confidence that will allow the plan to overtome any difficulties in the implementation The plan incorporates the lake and

river to reflect their historic and

potential for public use. Integrating residential uses into Racine's bistor

core will bring an important and

much needed dimension back to the area. While the plan responds to

the necessity of automobile access

and parking, it does not compromist the pedestrian environment

Community residents and busines

leaders rolled up their deeves and

worked hard to bring Racine back

which is given first priority.

from the brink

visual worth as well as their

Marks said.



dain Street

ARCHITECTURA

conomic development. We're here to anchor

e new museum is attracting about 5,000 visitors onth, mainly from Chicago and Milwaukee, ording to Devin Sutherland, executive director e nonprofit Downtown Racine Corporation le are starting to recognize us as a place to lity art," he said.

> ker, the city's mayor, said Racine is tract Chicago people on summer "We're getting more outside influences r Becker said. "Things are changing h. We're still somewhat parochial." part of his job is "talking to service need to be open and accepting about the kid with 18 piercings and

Sunday Business On Lake Michigan, a Glad

The New Hork Eimes



February 8, 2004



Tuesday, March 29, 2005

Downtown plan is a bold vision for the future

And we should not let fear of change blind us Trustee Gus Kostopulos

he recently adopted plan for the redevelopment our downtown is a remarkable document-not just because of its content which is very good, but also because of the broad community process that created it

At no other time in recent memory have so many Oak Park residents been so actively involved in creating a plan. And it shows. I urge anyone who doubts that the plan reflects the will of the community to review the documentation of citizen participation and see for themselves the extent to which the views of the majority shaped the final

Of course, the plan is not without its critics. They

unchanged and will continue to do little to enhance the character of our downtown that critics of the plan claim is so evident.

> As an architect I know the wisdom of preserving history. But my profession also has taught me that unless we balance our passion for preserval the recognition that the new can be good, too, the there can be no future. If we don't make at least a m for the new, where will the next Frank Llovd Wright perfect his craft?

> The values that put Oak Park on the map fostered changes that, in their time, were controversial and even radical to many. But those days are now little are then fond me vies to we Ask Parkers who

*PRIOR TO THE PLAN, PEOPLE SAID, 'WHY NOT JUST BULLDOZE DOWNTOWN AND BE DONE WITH IT?' BUT NOW THE LOCAL GOVERNMENT, BUSINESSES. AND THE CITIZENS ENTHUSIASTICALLY ENDORSE IT.



ple of Racine, like peopl where, often appear appr about the seismic chang ound them. In a world wh technologies can quickly upe dustry and China and Ind large on the economic hor body knows exactly which I es and skills will prove to be "If you're not somewhat you don't understand," Mr said "And the businesses an who are still here and do

Continued From Page 1





Denver and Aurora Light Rail System

What is a Station Area Plan?

- Establishes the community's vision
- Establishes land use and circulation framework plans for any future development
- Guides possible policy and zoning changes
- Identifies infrastructure improvements
- Establishes project funding priorities
- Establishes implementation schedules and identifies responsibilities

What can a Station Area Plan do?

- Create developer interest where there may be none today
- Provide certainty and predictability for property owners and neighbors
- Be flexible- anticipate changes in future market and other conditions

Ideal Station





Ideal Transit Oriented Development (TOD) Assumptions



Transit Oriented Neighborhoods





Typical Land Ownership



Great Streets = Great Neighborhoods



Bad Streets = Bad Neighborhoods





Traditional Retail Main Street















Public Plaza



Park (Active)



Park (Passive)



Park (Active and Passive)



<u>Great Transit</u>

- Frequent service
- Dependable service
- Direct connections to the downtown
- Transfers minimized
- A variety of modes (light rail, streetcar, bus)



Light Rail



Bus





TOD Housing – Portland, OR

TOD Housing





Housing Mix (20 Market Rate Blocks & 5 Affordable Blocks)



Context



Market Rate


Market Rate Rental



Pedestrian/Bicycle Connections



Child Friendly



Denver and Aurora Light Rail System



Aurora Station Area Land Use Vision



I-225 Alignment Alternatives



Peoria-Smith Station







Option A

Commercial Office Housing RTD Lot RTD Structure

1,500 Spaces

Commercial Office Housing RTD Lot RTD Structure Option B 500,000 SF 1,600,000 SF

00,000 SF 2,000 Units 750 Spaces 750 Spaces Option C

Office 2,000,000 SF	
Housing 2,900 Units	
RTD Lot 550 Spac	е
RTD Structure 1000 Spac	e

Peoria-Smith Options



Land Use



Employment Land Use



Residential Land Uses



Required Ground Floor Commercial Uses



Park Blocks



Active Edges



Build-to Lines



Parking Structure

Peoria-Smith Station

Development Summary

Commercial 106,000 SF Office

Residential

erivate Investment Park-n-Ride (A

Park

2,500,000 SF **51 Billion**



Smith-Peoria Station



I-225 Alignment Alternatives



Fitzsimons-Colfax Station Location



Elevated Stations



Colfax Avenue – Looking East





Fitzsimons-Colfax Station – Aurora, Colorado



Fitzsimons-Colfax Station – Aurora, Colorado



Fitzsimons-Colfax Station



I-225 Alignment Alternatives



13th Avenue Station Options



Option A: Single-Sided Development

Office Housing RTD Parking Lot 80,000 SF 180 Dwelling Units 270 Spaces



Option B: Double-Sided Development

Office Housing RTD Parking Lot 88,000 SF 220 Dwelling Units 270 Spaces

13th Avenue Station Options



Fitzsimons-Colfax Station - Land Use & Development Potential



New and Enhanced Streets

13th Avenue LRT Platform – Looking North



13th Avenue Station **Development Summary** Commercial 161,500 SF 220,000 SF Office 51.2 Billion Private Investment Residential Structured Park New



13th Avenue Station



I-225 Alignment Alternatives



RTD Proposed Abilene Station - Looking North



Option C

Station Retail	20,000 SI
Housing	1,100 Units
Park-n-Ride	370 spaces

Option B

Station Retail 10,000 SF Housing 1,100 Units Park-n-Ride 370 spaces

Option A

10,000 SF

1,100 Units

Station Retail Housing Park-n-Ride 380 spaces

Abilene-2nd Avenue Station Options


Abilene - Land Use and Development Potential

Proposed 2nd Avenue Underpass at I-225





Abilene-2nd Avenue Station

Development Summary

54,000 SF Retail 93,000 SF Commercial **\$1.3 Billion** Private Investment Residential Park-n-Ride Lot New



Abilene Station



I-225 Alignment Alternatives



Iliff Station Light Rail Platform Location



Fundamental Concept



Land Use & Development Summary



Primary Pedestrian & Bicycle Circulation









Public Investment



Investment Ratio





Critical Issues

Environmental

Global warming
 Economic

- Energy shortage
- Rising energy costs
 Health
- Child and adult obesity

Representative CA Project

Downtown Revitalization Master Plans

- Fairbanks, AK
- Oak Park, IL
- Whitefish and Missov
- Lincoln, NE
- Santa Fe, NM
- Knoxville, TN
- Racine, WI

Transit Oriented Development (TOD) Projects

- Denver and Aurora, CO
- Portland, OR
- Bellevue, Redmond and Spokane, WA
- Edmonton, Alberta, Canada

Make a Difference



Portland Energy Conservation Project - 1977

American Planning Association, National Award, 1978





















Typical Residential District

Auto Travel*

	Vehicle Trips	Vehicle Miles
To/from Work	21.9 %	27.3%
Work Related	4.1	8.4
Shopping	20.9	14.2
Other family/personal business	25.4	19.3
School/church	4.9	3.7
Medical/dental	2.2	2.2
Vacation	0.4	1.7
Visit friends/relatives	6.2	9.4
Other social/recreation	13.6	13.1
Other	0.4	0.7
Total	100.0 %	100.0 %

* 2001 National Household Travel Survey

Typical U.S. Household





Typical Residential District



Commercial Hot Spot

- Jobs
- Shopping
- Business/government
- Medical/dental
- Social/recreation
- Cultural
- School/church
- Open space

Public Square

Commercial Center District
Residential

Commercial Hot Spot

Commercial Center District



Commercial Center District



Commercial Center District





Protected Bikeways



Bicycle Centered District

Types of Cyclists

7%

60% Capable but Cautious 33% No Way No How

Strong, Fearless,
Enthused &
Confident



Strong & Fearless Cyclists



On-street Bike Lanes (Best case ridership, 10% of all trips)







Survey after survey and poll after poll has found again and again that the number one reason people do not ride bicycles is because they are afraid to be in the roadway on a bicycle. When they say they are "afraid" it is the fear of people driving automobiles.

Four Types of Cyclists Roger Geller, Bicycle Coordinator Portland Office of Transportation



"When you get right down to it, it's the strong and experienced vehicular cyclist who are happy with the current system. That's because they are more worried about being forced off the main road than about attracting large new numbers of riders.

The current system primarily serves a population that is white, that already bicycles, that already is healthy. Women are generally more risk adverse and don't want to cycle without some separation from traffic."

Ann Lusk, Harvard University School of Public Health

Pedaling Revolution



"I think separated cycle paths (protected bikeways) are what are next for the U.S." –

Noah Budnick Transportation Alternatives New York



"The most important approach to making cycling safe and convenient is the provision of separate cycling facilities along heavily traveled roads and intersections... " –

John Pulcher, Rutgers University

Pedaling Revolution

Bicycle Use Comparison

		Daily Trips	
	Bike	Walk	Transit/ Auto
United States (Typical) 1%	3%	96%
Netherlands			
Utrecht (288,000)	31%	23%	46%
Wageningen (33,000)	41%	18%	41%



Capable but Cautious Cyclists

Types of Cyclists





40% Solution



Strong & Fearless Will ride with auto traffic (will ride within on-street bike lanes and on bike boulevards)

Capable but Cautious Will **NOT** ride with auto traffic (will only ride on protected bikeway)





Protected Bikeways (Ridership, over 40% of all trips)



















Protected Bikeways (Ridership, over 40% of all trips)





Household Gasoline Expenditure* 21,253 miles/yr \$4,251 /year

* 20 miles/gallon @ \$4.00 per gallon = \$0.20 per mile



Household Gasoline Expenditure* 21,253 miles/yr 8,926 miles

21,253 miles/yr \$4,251 /year 8,926 miles/yr \$1,785 /year

30% Reduction in Av. Trip Length +40% Of Trips by Bike

* 20 miles/gallon @ \$4.00 per gallon = \$0.20 per mile



20 miles/gallon @ \$4.00 per gallon = \$0.20 per mile





Household Gasoline Expenditure*21,253 miles/yr8,926 miles/y24,251 /year\$1,785 /year

Annual Local Economic Stimulus** \$0 stimulus \$84 million

- * 20 miles/gallon @ \$4.00 per gallon = \$0.20 per mile
- ** Energy savings times a multiplier of 3 for money spent locally

Potential Annual Economic Stimulus*

	Population	Annual Stimulus
Aurora	319,057	\$ 971 million
Portland	545,140	\$1,560 million
Salem	142,940	409 million
Lake Oswego	37,000	106 million

* \$84 million for every 27,600 population

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Missoula Bicycle Centered Prototype



Protected Bikeways - Higgins Avenue









TOD (Transit Oriented Development)





TOD + BCD = MOD (Mobility- Oriented District)







TOD (Five minute walk)



TOD (Five minute walk) & MOD (Five minute bike ride)



TOD (Five minute walk) & MOD (Five bike minute ride)



TOD (Five minute walk) & MOD (Five minute bike ride)

Potential Economic Benefits

Annual

Economic Stimulus* (12 MOD) \$ 1,008 million

Farebox Revenue** (168,000 trips/day) \$ 95 million

TOTAL

\$ 1,103 million

* \$84 million for every MOD

** \$2.25/trip

CRANDALL ARAMBULA www.ca-city.com

Critical Issues

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