# TOD + Transit

# Making it Great

**GB Arrington**

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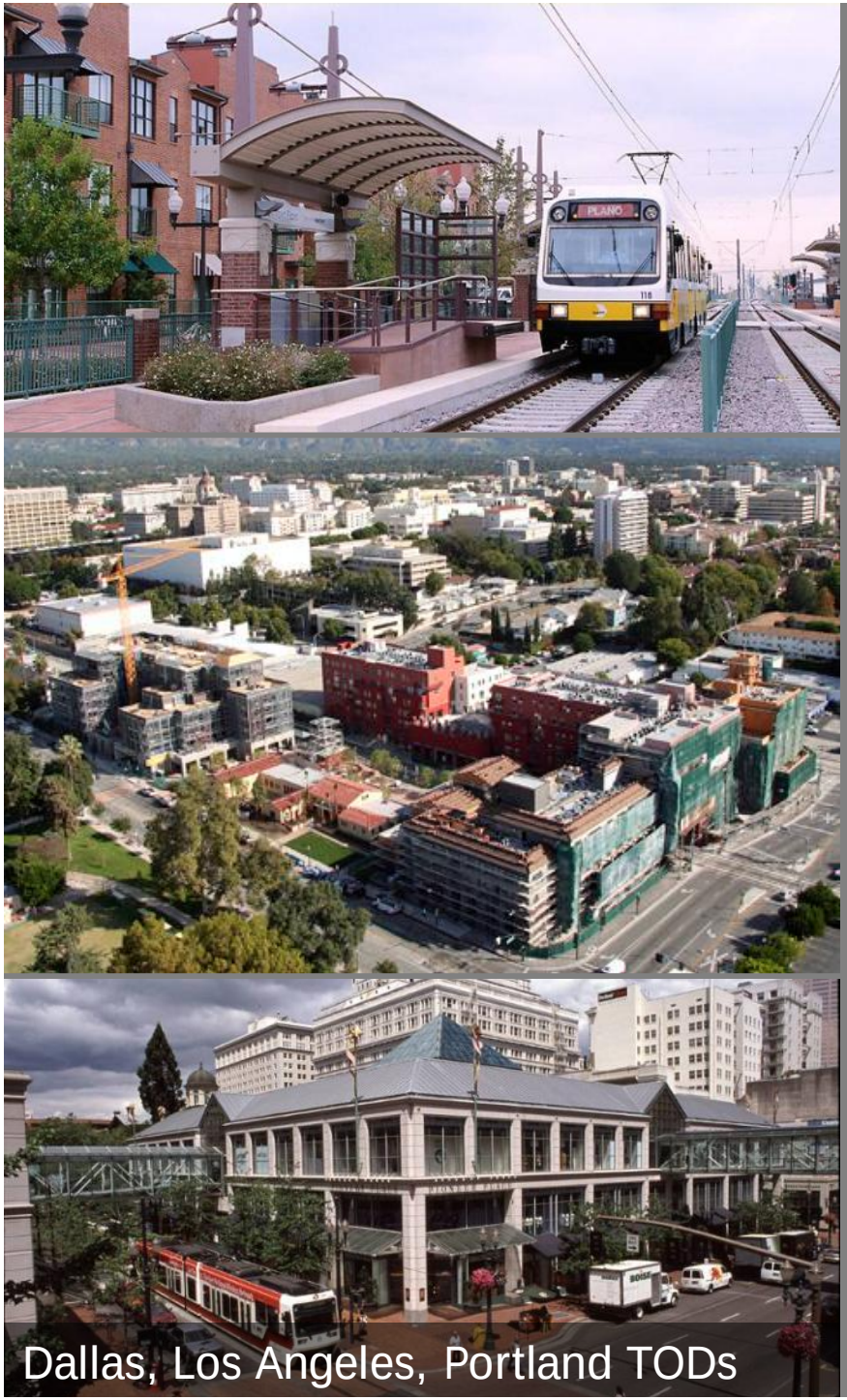
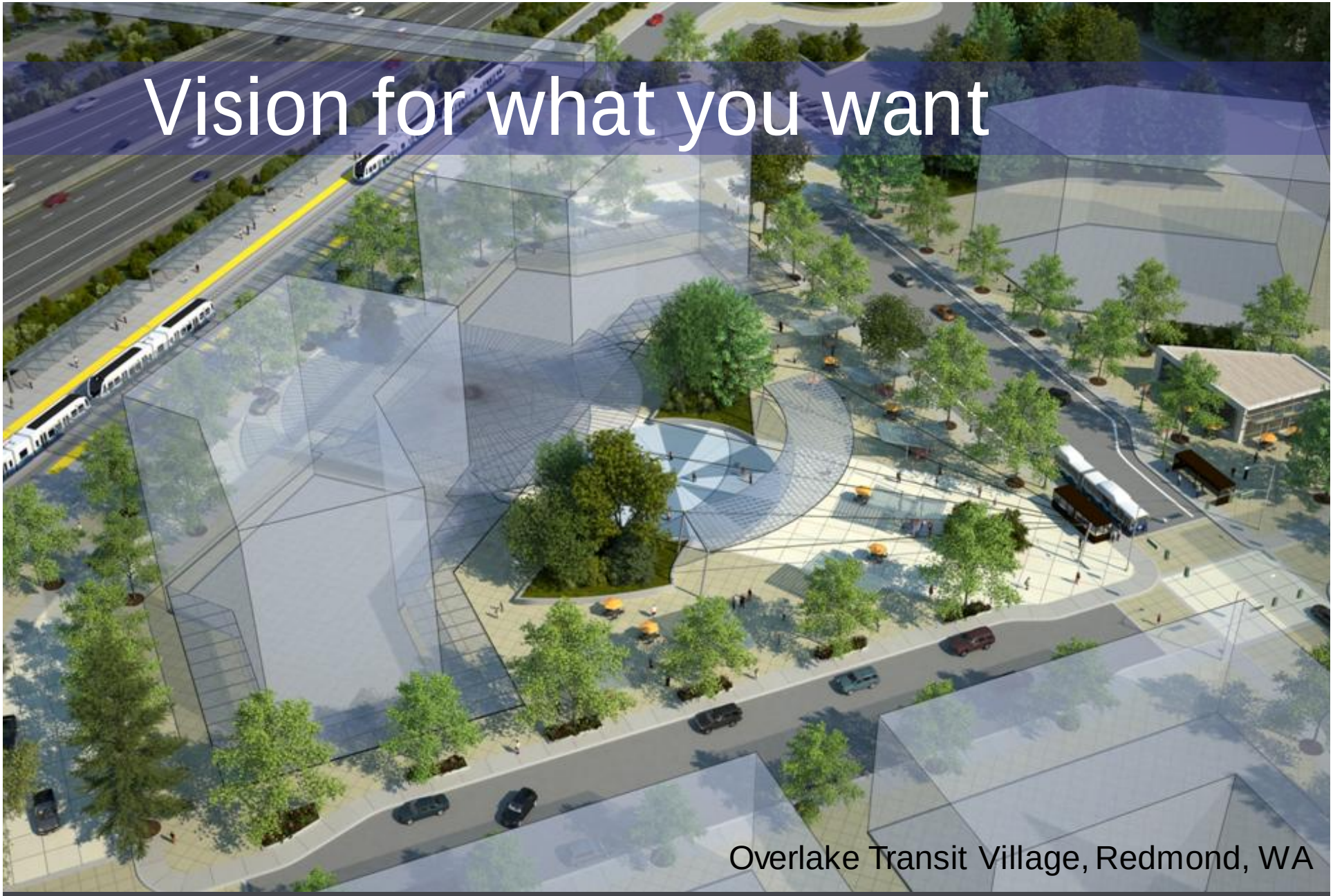



# Overview

Rail~Volution 101 +

- Creating value
- TOD defined
- TOD market
- TOD principles
- Transit Design
- DOT principles
- Designing for development
- Conclusions

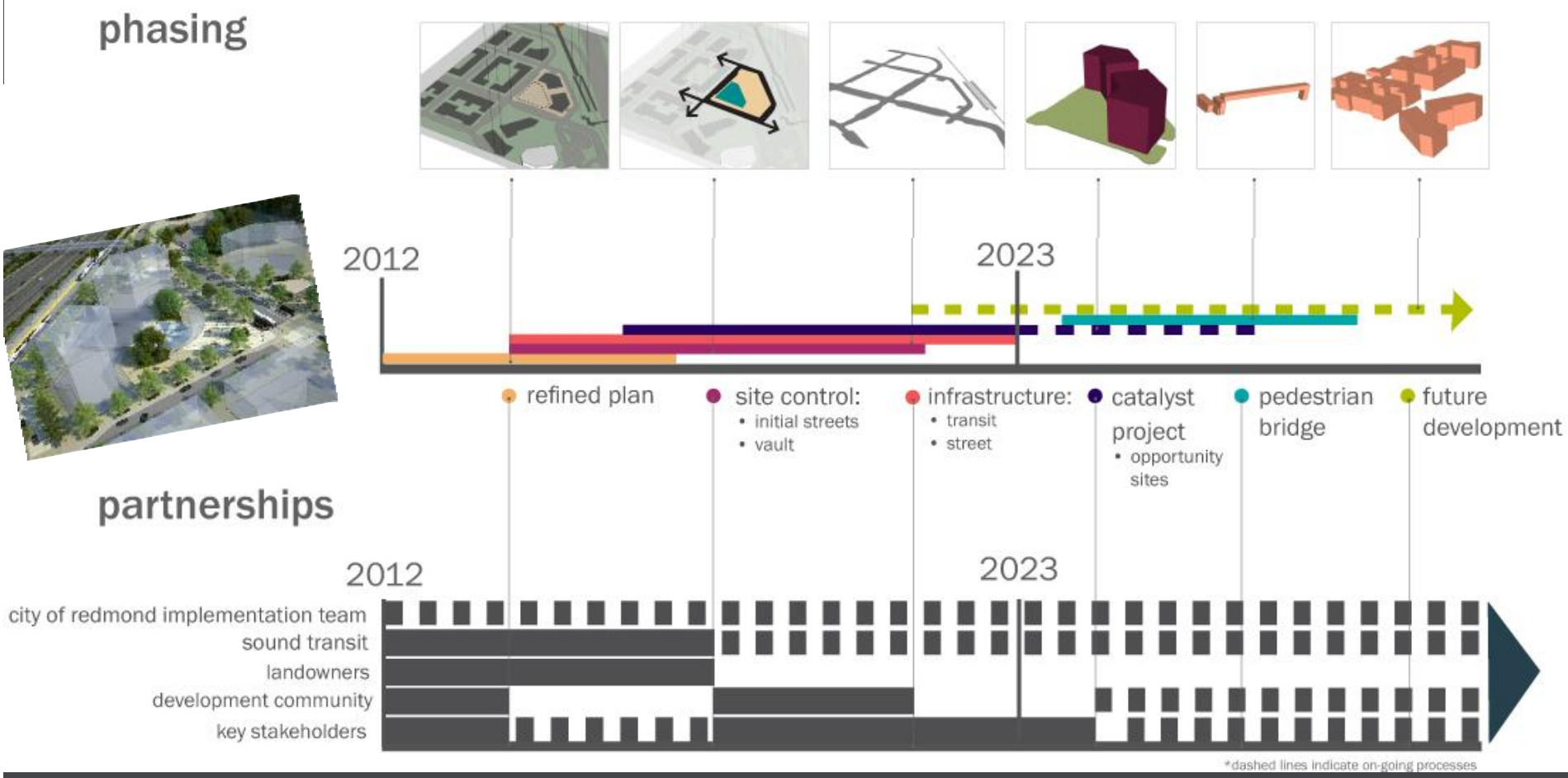
# Vision for what you want



Overlake Transit Village, Redmond, WA

parsons brinckerhoff | placemaking

# Clear path & roles to get there




Overlake Transit Village, Implementation Plan, Redmond, WA

parsons brinckerhoff | placemaking

# Creating value with transit

# Link to a Broader Strategy

*TOD as "means to an end"*
*to achieving community objectives*

- Part of community's vision for growth
- Basis to gain greater broader support & success
- More than transit
- Building partnerships essential

State Center TOD Strategy, Baltimore MD

# TOD or TAD?

*Transit-Oriented Development* *or*
*Transit Adjacent Development*

- Majority of development at US transit stations are not TODs
- TOD is still illegal in at most of US transit stops
- Not enough to be next to transit, must be shaped by transit


Cisco Systems TAD
San Jose, CA

Street Car TOD
Portland, OR

# Shaped by Transit

- Greater density
- Less parking
- Better public realm
- Mix of uses
- Very walkable
- Tame the car


San Diego, Portland, San Francisco, Washington, DC, Denver

# Transit Oriented-Development

# Orenco Station

## Fundamentals for TOD ~ a great neighborhood

- Safe streets
- Strong center
- Local services
- Parks & open space
- Housing choices
- Good jobs



# Market for TOD

# Understanding your market

- *Emerging Trends in Real Estate '10:*
  - *"The future is about green development, infill, and TOD"*
- Majority of TOD residents are childless
  - Empty-nesters & young urban professionals
- TOD households tend to be higher income
  - Reflects newer construction

# Millennial's Want Urban

2011 National Association of Home Builders:

- 88% of Gen Y want to be in an urban setting
- 1/3rd willing to pay for the ability to walk
- Huge market: 80m Gen Y v 76m Boomers




# Decline in Families w/ Children

50% of households

33% of households

12% of households

1950 2000 2010 - 2030

- 30% current US housing demand
  - Dense, walkable, mixed-use communities
- Today less than 2% of housing

# Kids are deferring driving

- Large decline in teens with drivers licenses.
- 1978-2008:
  - 16 year olds: -38%
  - 17 year olds: -35%
  - 18 year olds: -21%
  - 19 year olds: -16%

+

*What is the new cool?*
*Is social networking changing the role of the car for kids?*

# Residents Near Transit Want

## From Transit Community Resident Surveys:

- Well designed communities
- Easy access to a center
- High quality residence
- Quality transit service
- Pedestrian Friendly
- Good price value

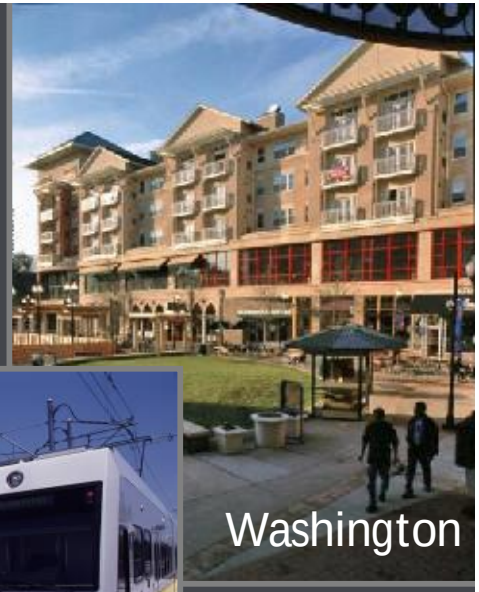
*"The ability to walk to a pint of milk"*

The Merrick

Orenco Town Center

# TOD & Property Values

- Washington, DC
  - + $2 to $4 per foot for commercial
- San Jose
  - + 23% for commercial
- Portland
  - + 10% rent premiums
- Dallas
  - + 39% for residential
  - +53% for office values







Learning
from
transit regions


Winning Region, Transit Region
transit + land use
transformative
Vancouver, BC

# Vancouver, BC

*The Economist:* World's most livable city, 6 years in a row

- 10 years:
  - total trips up 23%
  - vehicle trips down 10%

Compact growth at stations:

- +11,500 high density dwellings 1981 – 2006
- $5 B private investment 1981 – 1989

Main Street Station Vancouver, BC


Revitalized, Growing Transit City
transit + land use
transformative
Washington, DC

# Washington, D.C.: Transit City

- Today a majority of all trips w/out a car
- New growth focused around transit
- Reversed decades of decline
  - Policy goal: 100k new residents @ stations
  - Gained nearly 30k residents in the last decade





Livable, Sustainable, Desirable
transit + land use
transformative
Rosslyn-Ballston, Virginia

# Rosslyn Ballston Corridor

51.1% non-auto trips

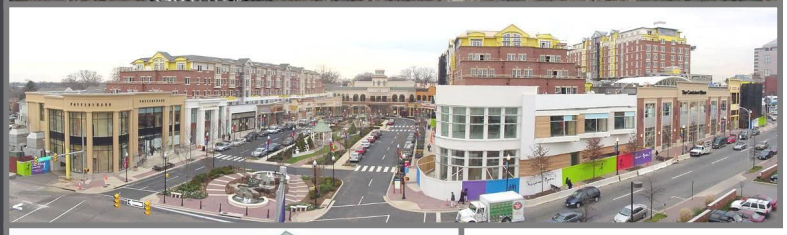
- Travel 1996-2006
  - Arterials +.05% per year
  - Transit +37%
- Development 1970 - 2006

  +15m sq ft office

  +2m sq ft retail

  +19,000 residential units

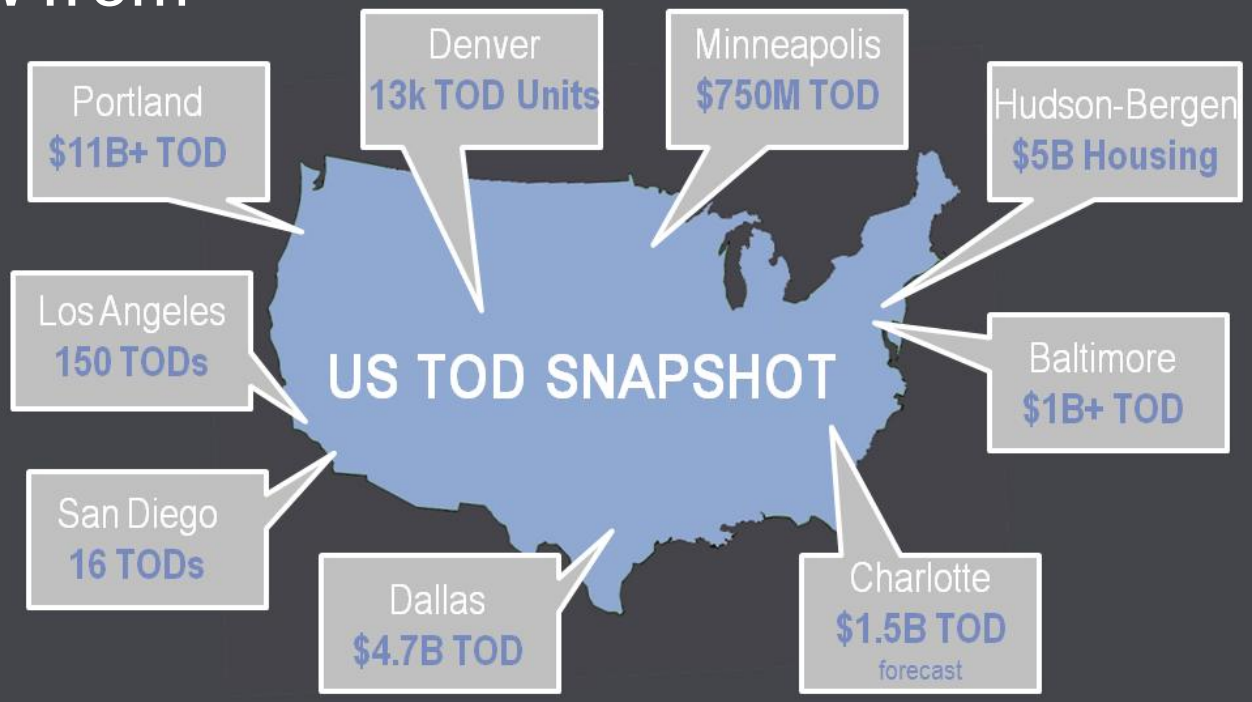
  $12.7B invested

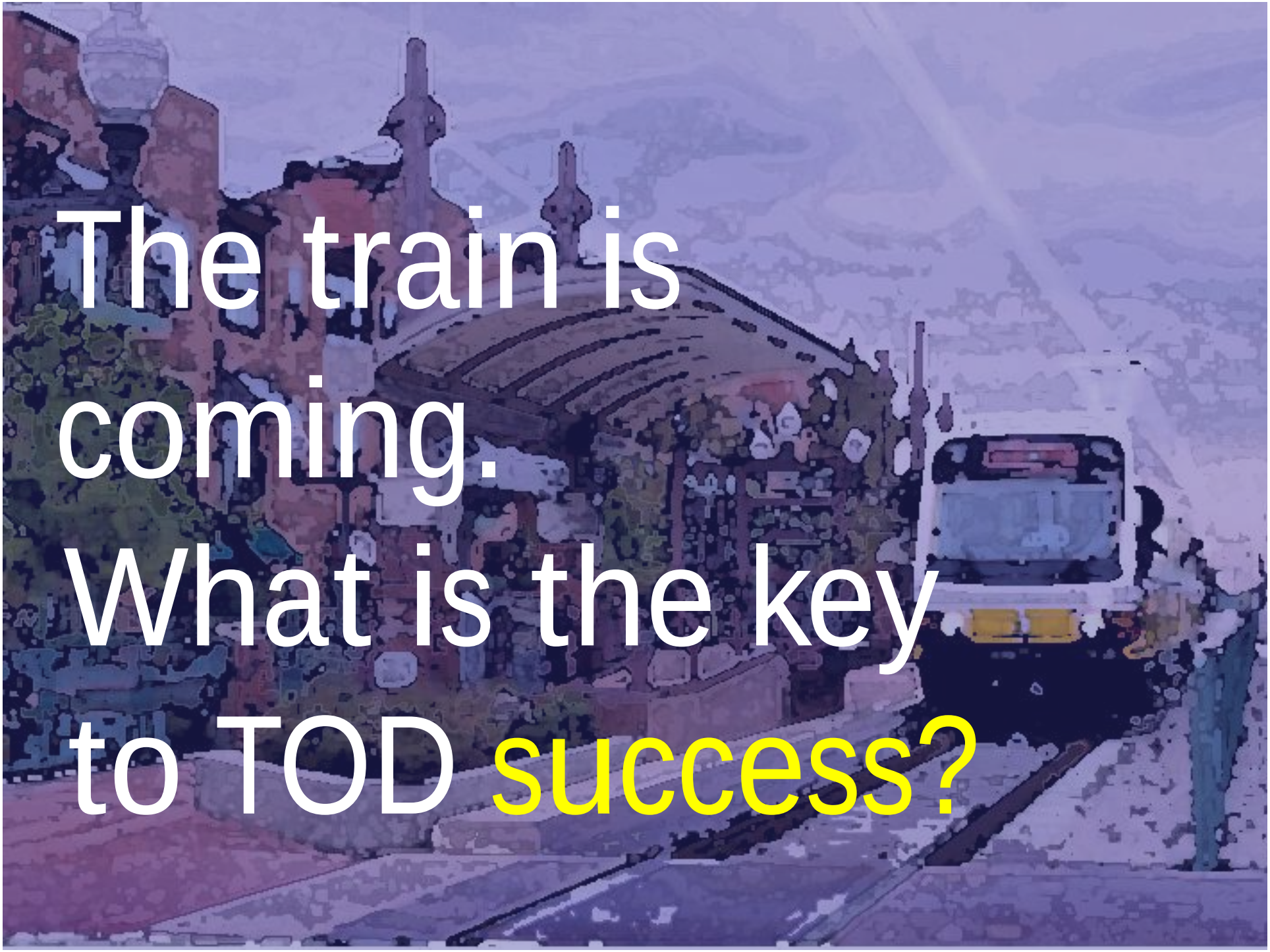




But
those ideas
won’t work here.

# Firm base to draw on

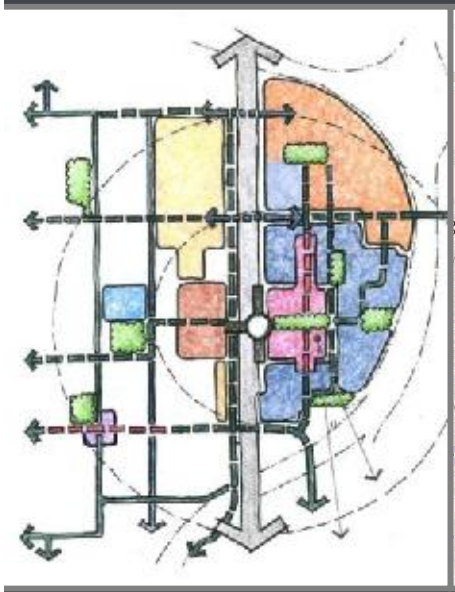
- Market preference for urban housing
- Lot's of experience to draw from
- Demographics trends are favorable
- Federal policy support

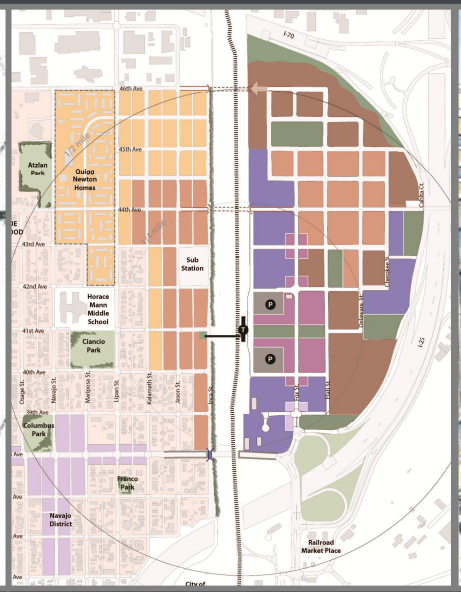


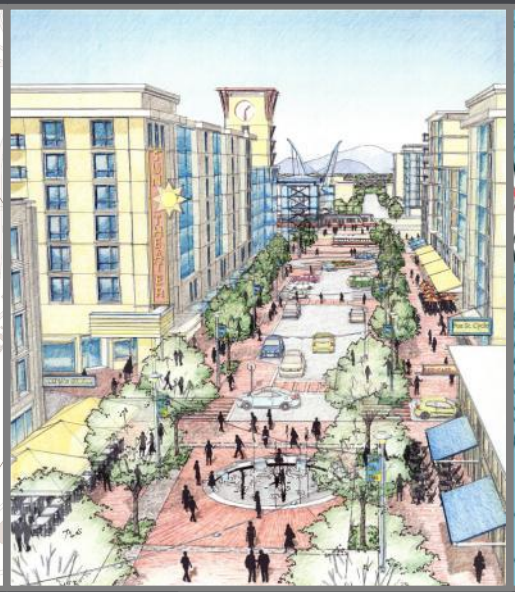

The train is coming.
What is the key to TOD success?

# Keys To TOD Success

- Get the planning right
- Apply the power of partnerships
- Market driven, not transit driven TOD
- Design for the pedestrian





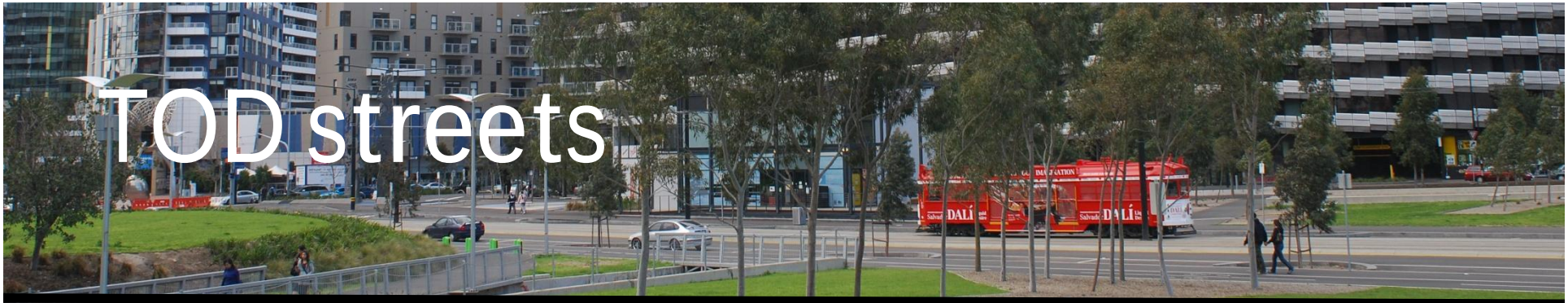



41st & Fox Commuter Rail Station Denver

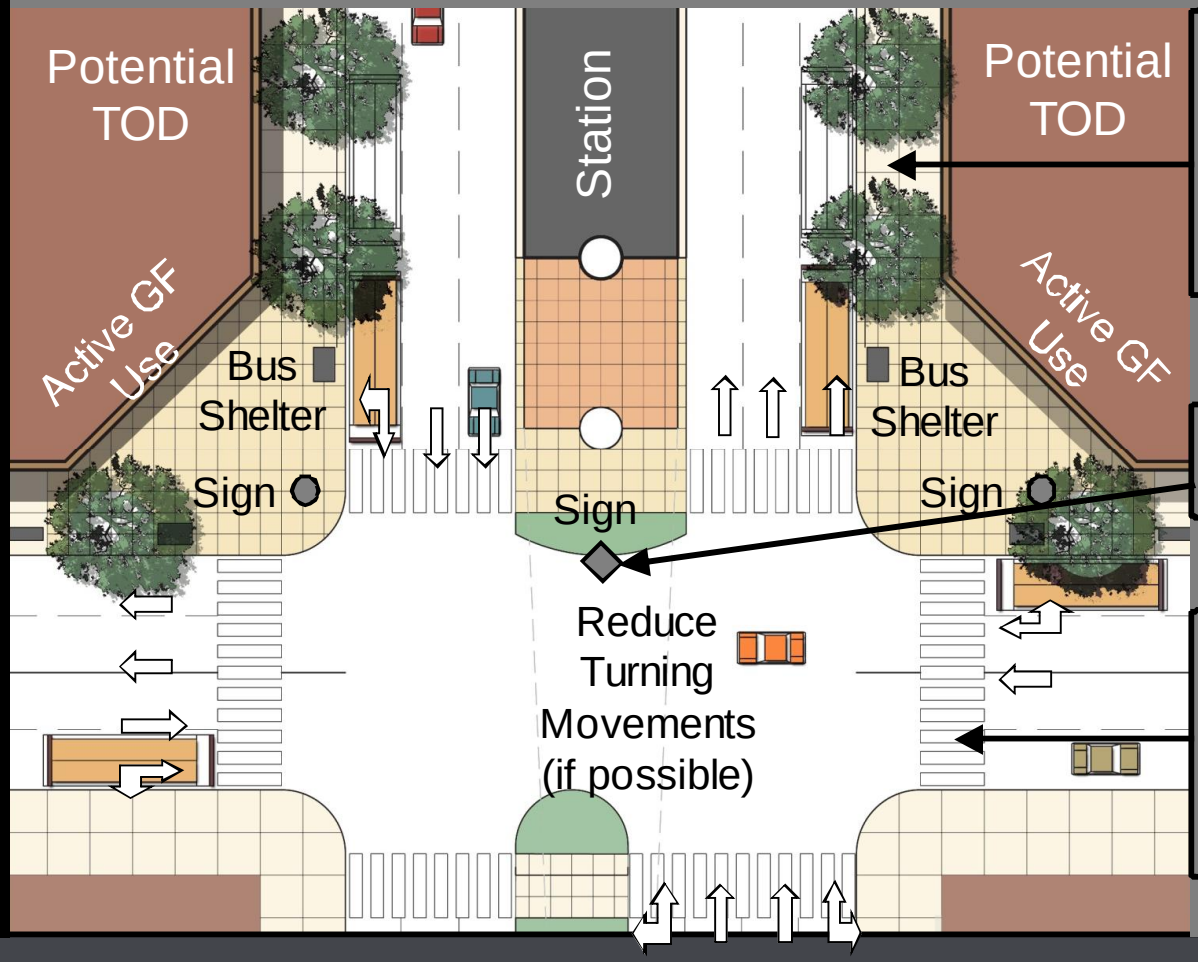
# TOD Typology
# Successful TOD at Many Scales


Great places
are defined
by great streets.

# TOD streets



## TOD streets and right-of-way diagram



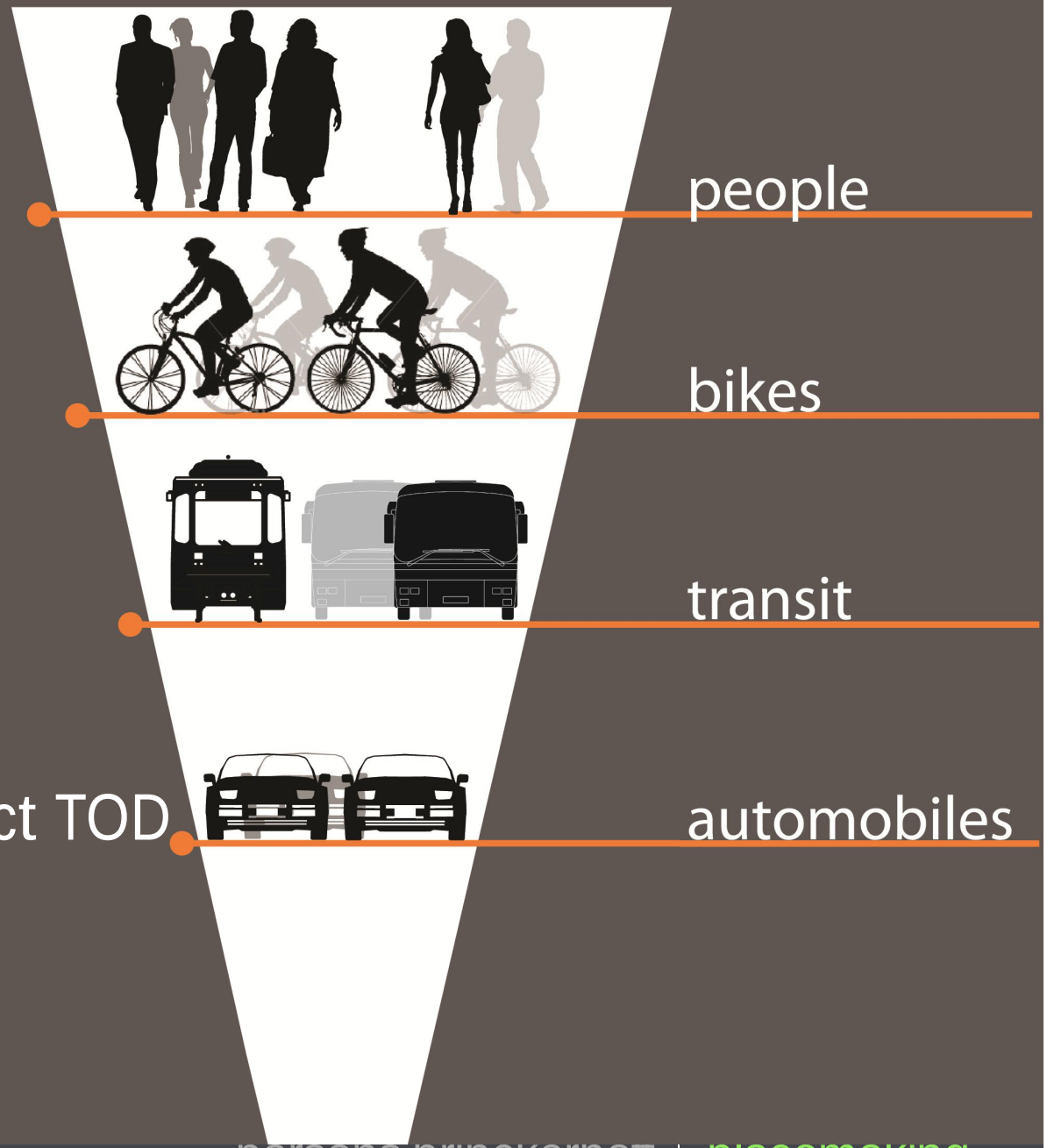

Wide Sidewalks & Attractive Streetscaping

Wayfinding

Clearly Marked Pedestrian Crossings

# Circulation in a TOD

- Context sensitive
- Lower speed
- Small block size –
  - 400 x 400 max
- Favor active uses
- Seamlessly connect TOD to community




Scale matters

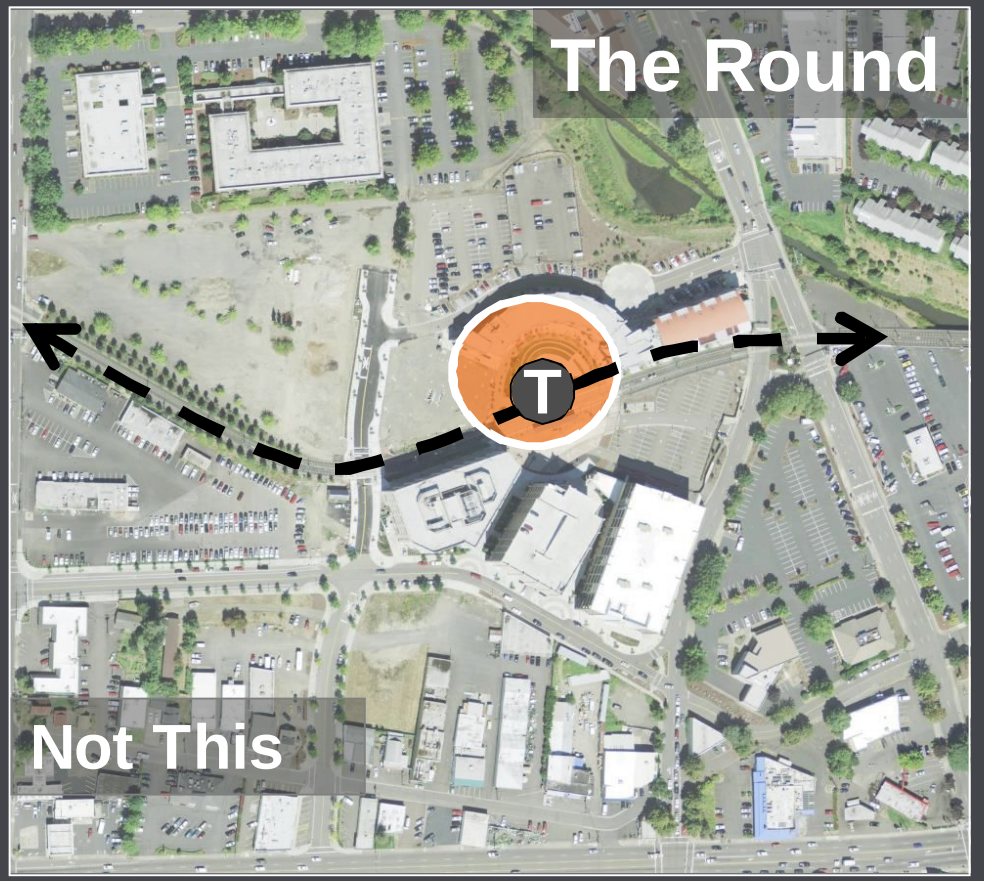
# More than a Parcel, More than a Project

- Create a walkable district
  - Area w/in a 5 minute walk
  - Approximately 125 acres
  - Walkable complete community
- Most "TODs" don't meet this standard
  - Requires broader strategy, cooperation
  - Understanding the bar needs to be higher

Santa Ana TOD

Santa Ana Station Development

# TOD: District not a Project



TOD principles

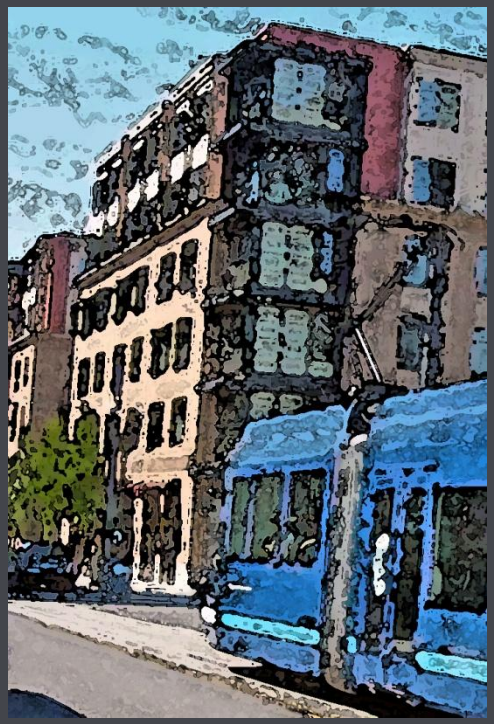
# Six Principles for a successful TOD


1. Medium to higher density
2. Mix of uses
3. Compact pedestrian-oriented
4. Active defined center
5. Limited, managed parking
6. Public leadership

1.

# Principles for a successful TOD

## 1. Medium to higher density



- Greater than community average
- Distance to transit matters
- To support transit on average:
  - 6 to 7 du/ac for frequent bus
  - 9 to 25 du/ac for rapid transit
- Retail & office closet to transit
- Minimum density effective tool

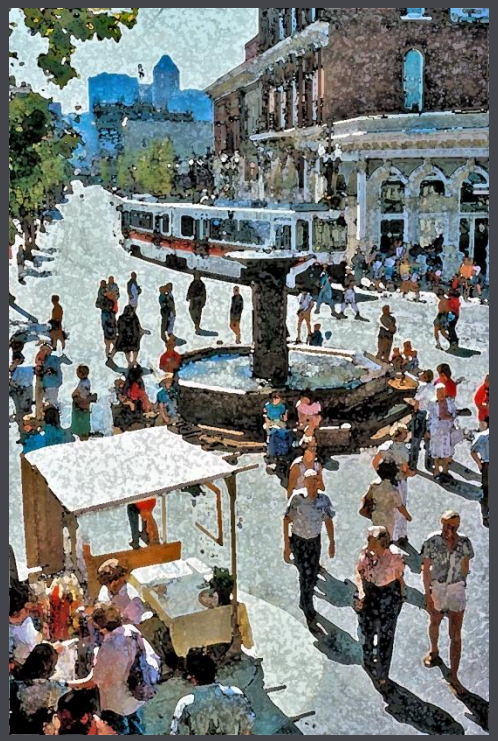
# Market Common Clarendon, VA

- US Best practice
  - 240k retail
  - 100k office
  - 300 apartments
  - 87 townhomes
- Opened in Nov ‘01
  - 100% leased
- Worked closely with neighborhoods


2.

# Principles for a successful TOD

## 2. Mix of uses



- Vertical or Horizontal
- Most difficult TOD element
- Great TOD benefits
  - More walking
  - More ridership
  - Reduced auto-use
- Prohibit auto-oriented uses closest to transit

# Pearl District Portland

- Mixed-Use TOD
- Public & private partnership
  - Housing
  - Infrastructure
  - Parks
- Since1997
- $1B+ Development
- 3,000+ units
- Tight parking
- 25% affordable

3.

# Principles for a successful TOD

## 3. Compact pedestrian-oriented

- Block sizes for 5-minute walk
  - Max of 400 ft block face
- Orient buildings to sidewalks
- Calm streets
- Active street edges with wider sidewalks

# Distance & Mode Share

WMATA Survey – *transit share decreases with distance*

- First 600 ft really matters
- Office mode share drops about 1% every 100 ft
- ½ mile residential share 200% higher than office

*Lesson: put office & retail closest to station*

| Distance from Station | Metrorail Mode Share | |
|---|---|---|
| | Office | Residential |
| At Station | 35% | 54% |
| 1/4 mile | 23% | 43% |
| 1/2 mile | 10% | 31% |

# Rule of Thumb v. Reality

- Mapping walk distance very different than radius
  - Can you really get there
- Between 1/4 & 1/2 mile share of riders walking drops by 50%
  - 10% increase in distance = 10% decline in ridership


Actual Walk Distance

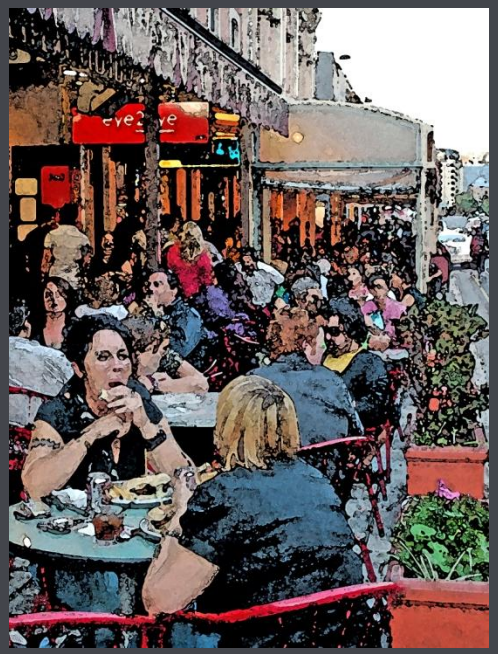
- 0-600 ft
- 600 ft –1/4mile
- 1/4mile –1/2mile

Century City Station Options
Los Angeles

4.

# Principles for a successful TOD

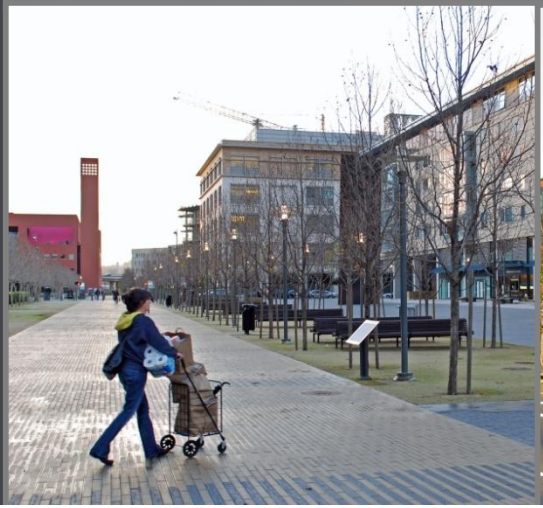
## 4. Active defined center



- 18 hours of activity
- Quality public realm /sense of place
- Employment closest to transit
- Compact & dense

# Mission Bay San Francisco

- Mission Bay redevelopment
- University Campus
- High Density Housing
- Mixed-use
- Station at PacBell Park – SF Giants



5.

# Principles for a successful TOD

## 5. Limited, managed parking


- Always a challenging issue
- Consider: size, location, design & management
- No minimum ratios, maximums
- Disconnect parking from buildings, manage by district

# TODs create less traffic

- TOD residents are:
  - Twice as likely not to own a car as US Households
  - 5 times more likely to commute by transit than others in region
- Self-selection:
  - Responsible for up to 40% of TOD ridership bonus

Rio Vista, San Diego


Columbia City, Seattle

# TODs behave Differently

Daily car trips for 50 dwellings

| | |
|---|---|
| • SF | 500 |
| • MF | 333 |
| • TOD MF | 177 |

*TOD housing generates 50% less traffic than conventional housing*

3.55 Daily Car Trips

Multifamily TOD

6.67 Daily Car Trips

Multifamily

10 Daily Car Trips

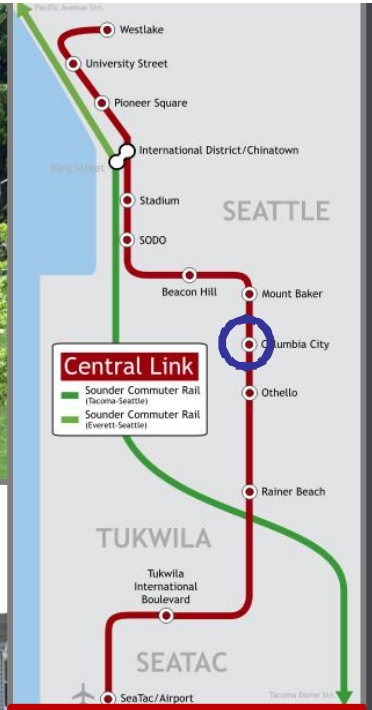
Single Family

# Principles for a successful TOD

6.

## 6. Public leadership

- Generally critical for success
- Align “political will” & TOD objectives
- TOD plans + capital budget aligned
- Focus on implementation
- Nurture progressive developers

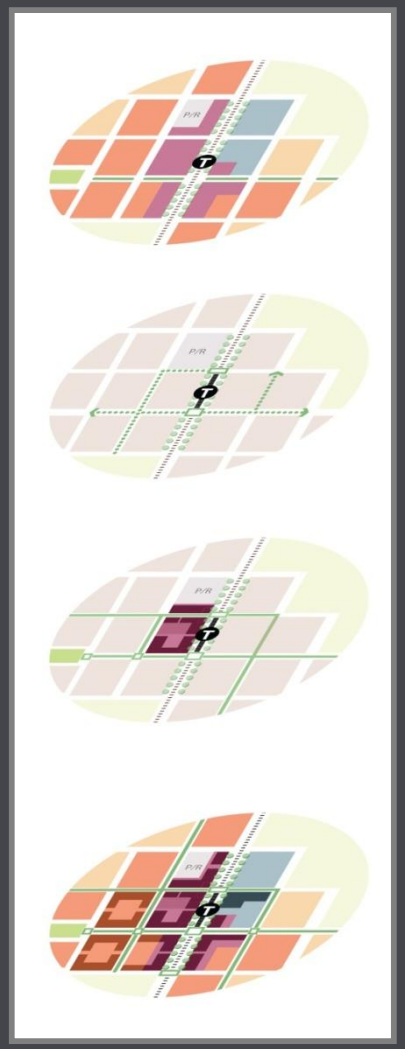


# Rainier Vista Seattle

- Public housing redevelopment
- Mixed-Use TOD
- 850 units
- Low income + market rate


TOD
evolution
what happens
when?

# TOD EVOLUTION

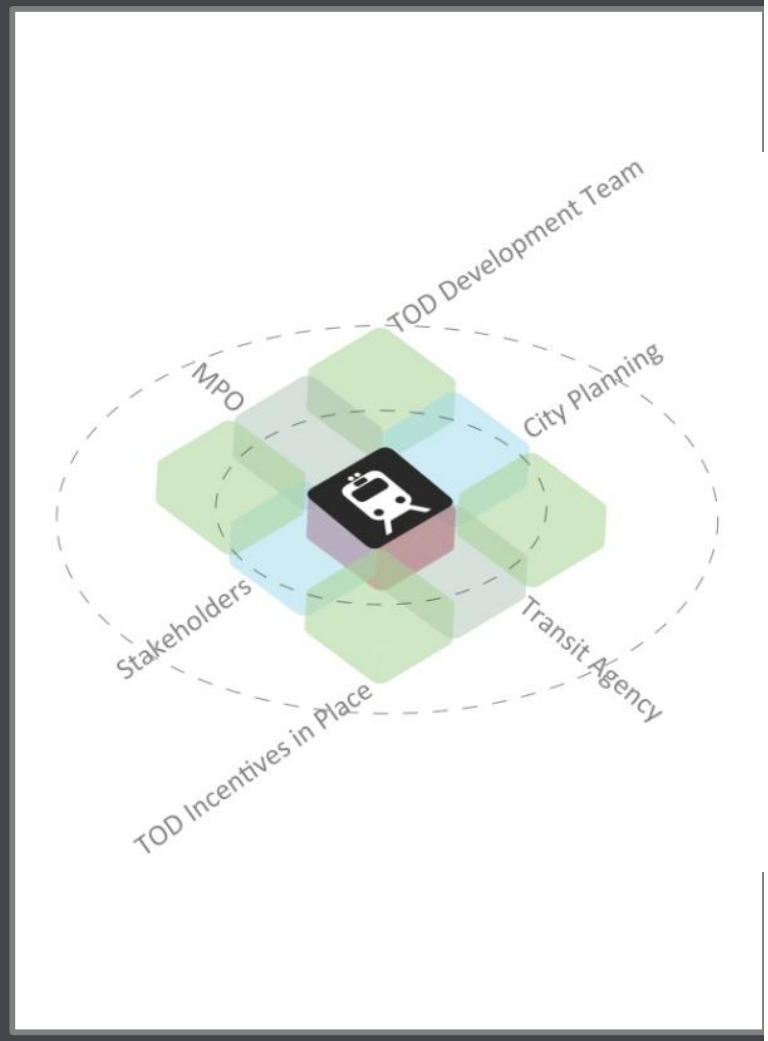


The TOD plan

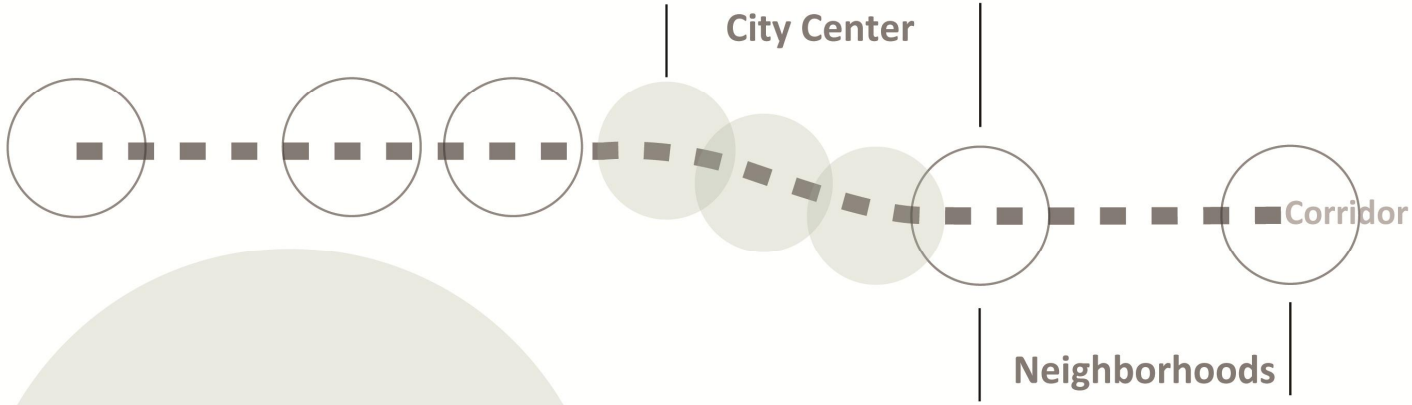
Rail + walkable streets

Parks + TOD demonstration project

Built TOD district

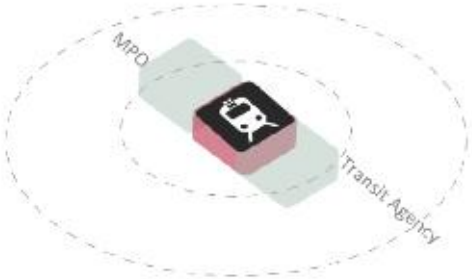


# What to Do When




## AA/ PE

- Locate stations for TOD
- TOD corridor strategy
- Undertake Station Area TOD Plans



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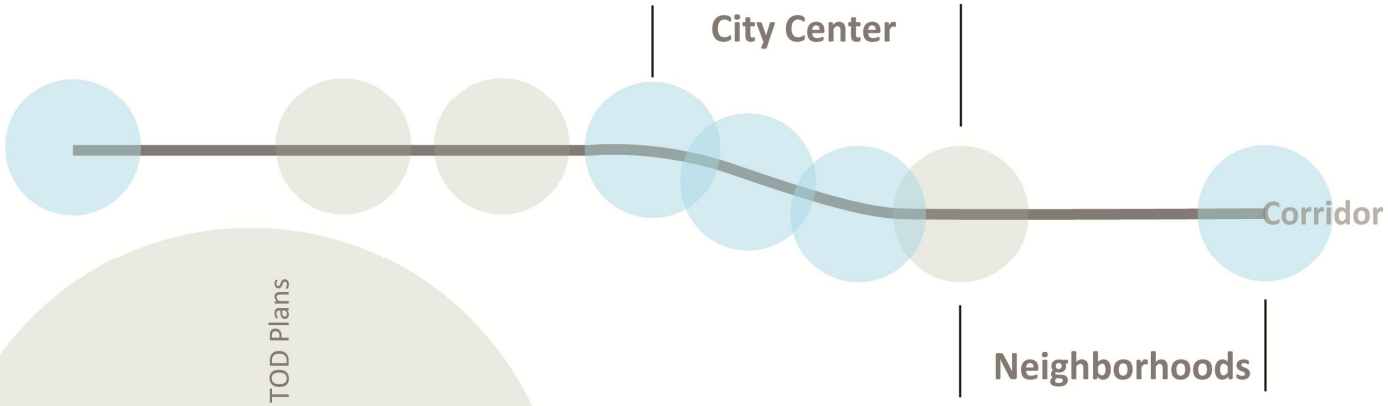


## AA/ PE

- Locate stations for TOD
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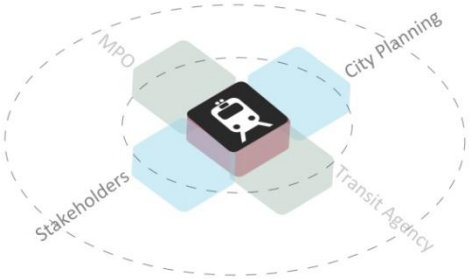
## Final Design/ Construction

- Refine transit design / acquisition for TOD
- Closely working with developers
- Adopt TOD plans, zoning



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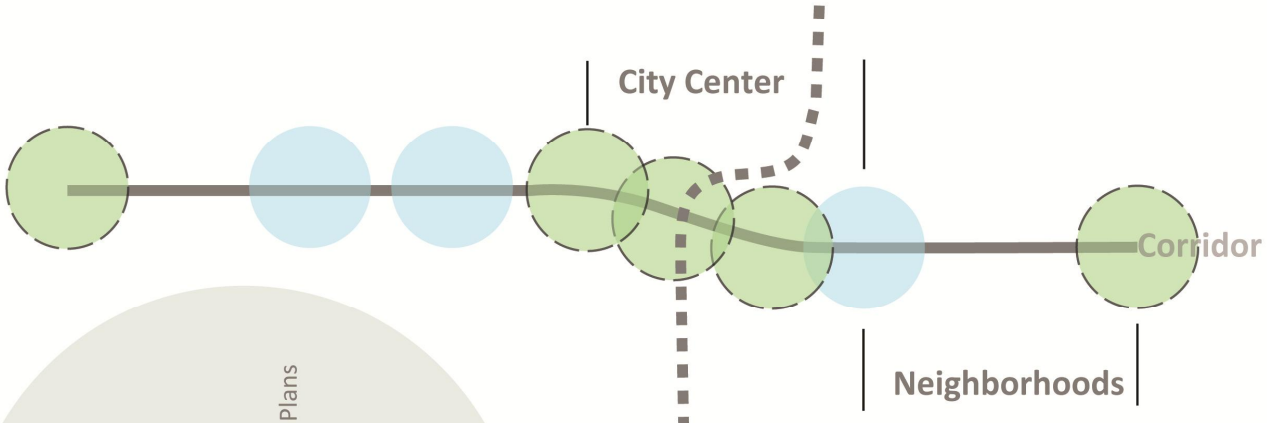



## AA/ PE

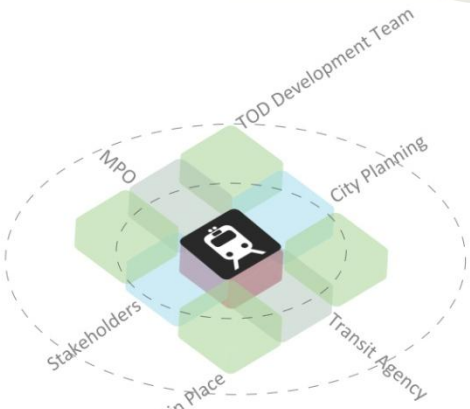
- Locate stations for TOD
- TOD corridor strategy
- Undertake Station Area TOD Plans

## Final Design/ Construction

- Refine transit design / acquisition for TOD
- Real estate acquisition tied to TOD
- Closely working with developers
- Adopt TOD plans, zoning

## By Operations

- TOD program / staff & incentives in place
- Prioritize TOD opportunity sites
- TOD Master Planning and demonstration projects

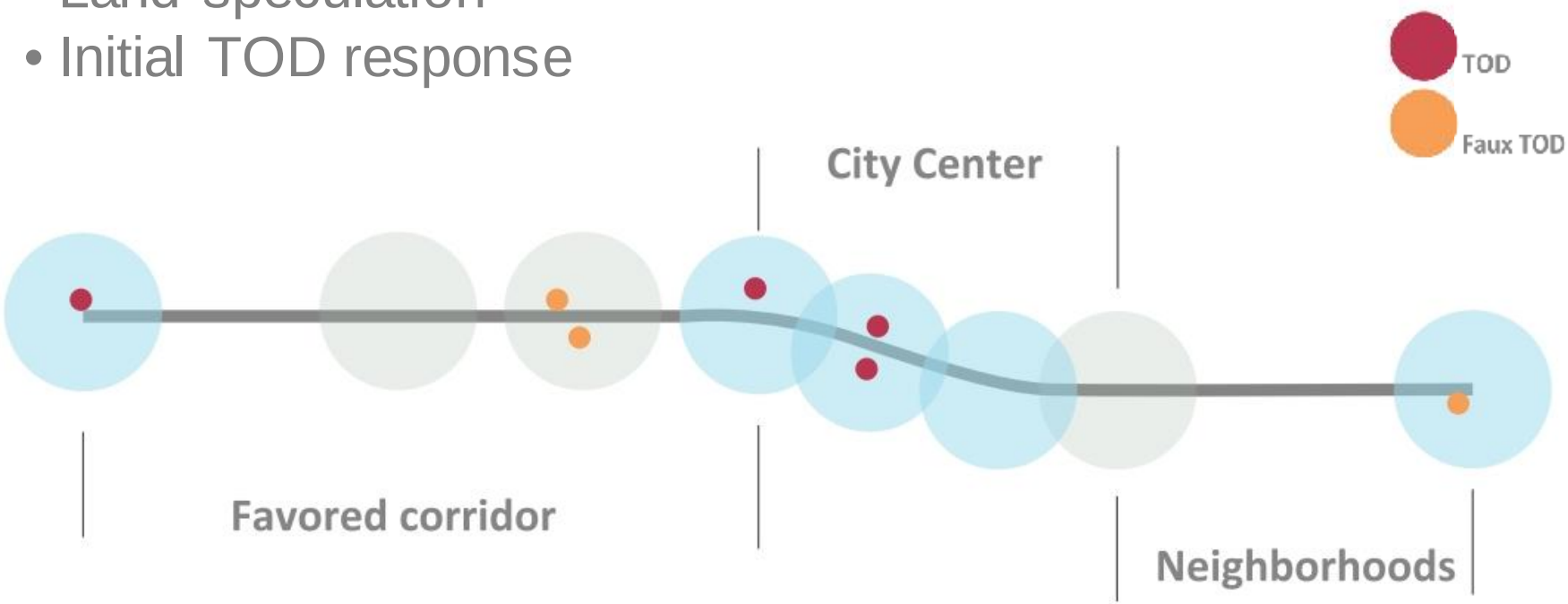


# What Development Happens When

- Planning / Advocacy / Education
- Land speculation
- Initial TOD response

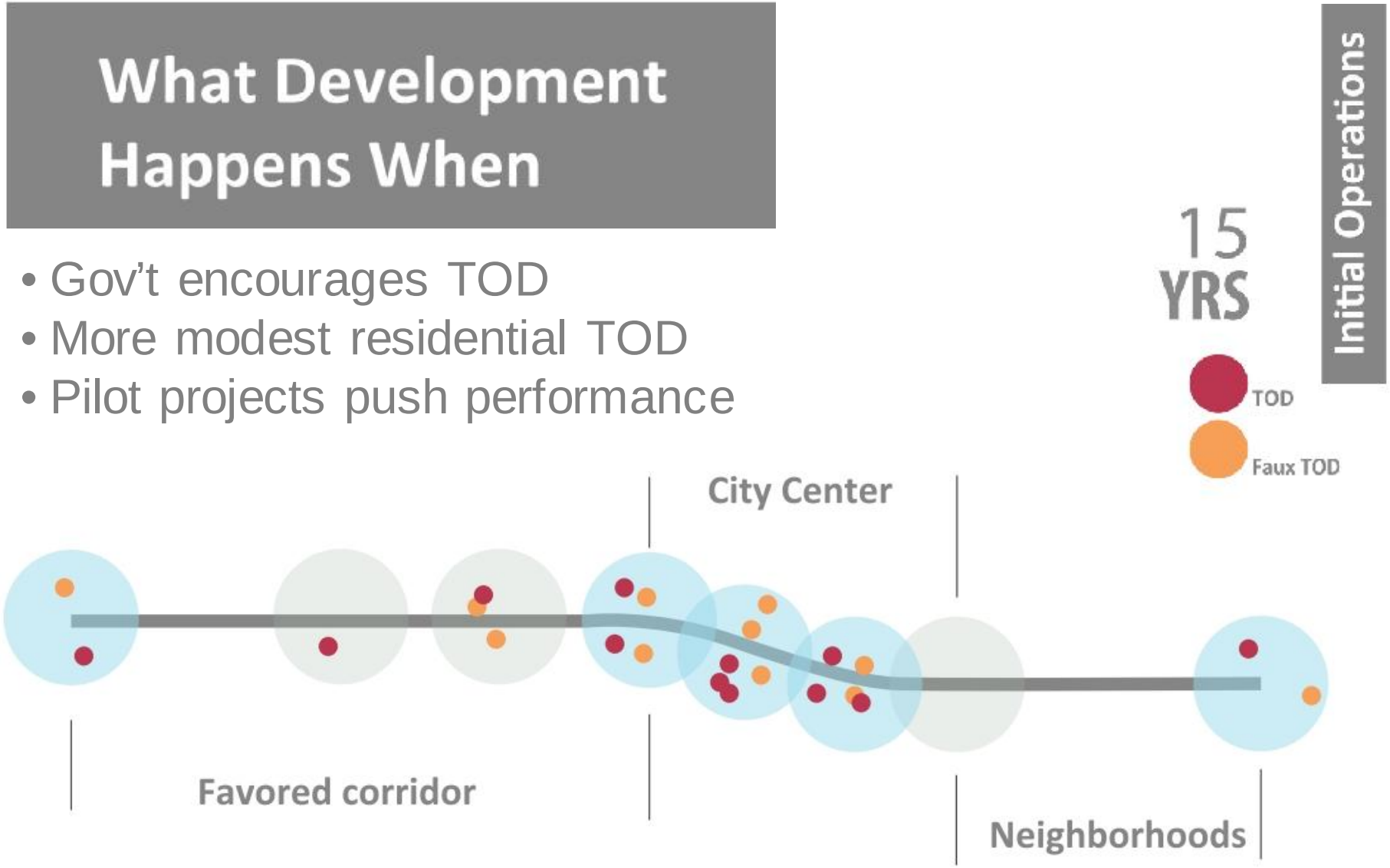
0-10 YRS

Construction



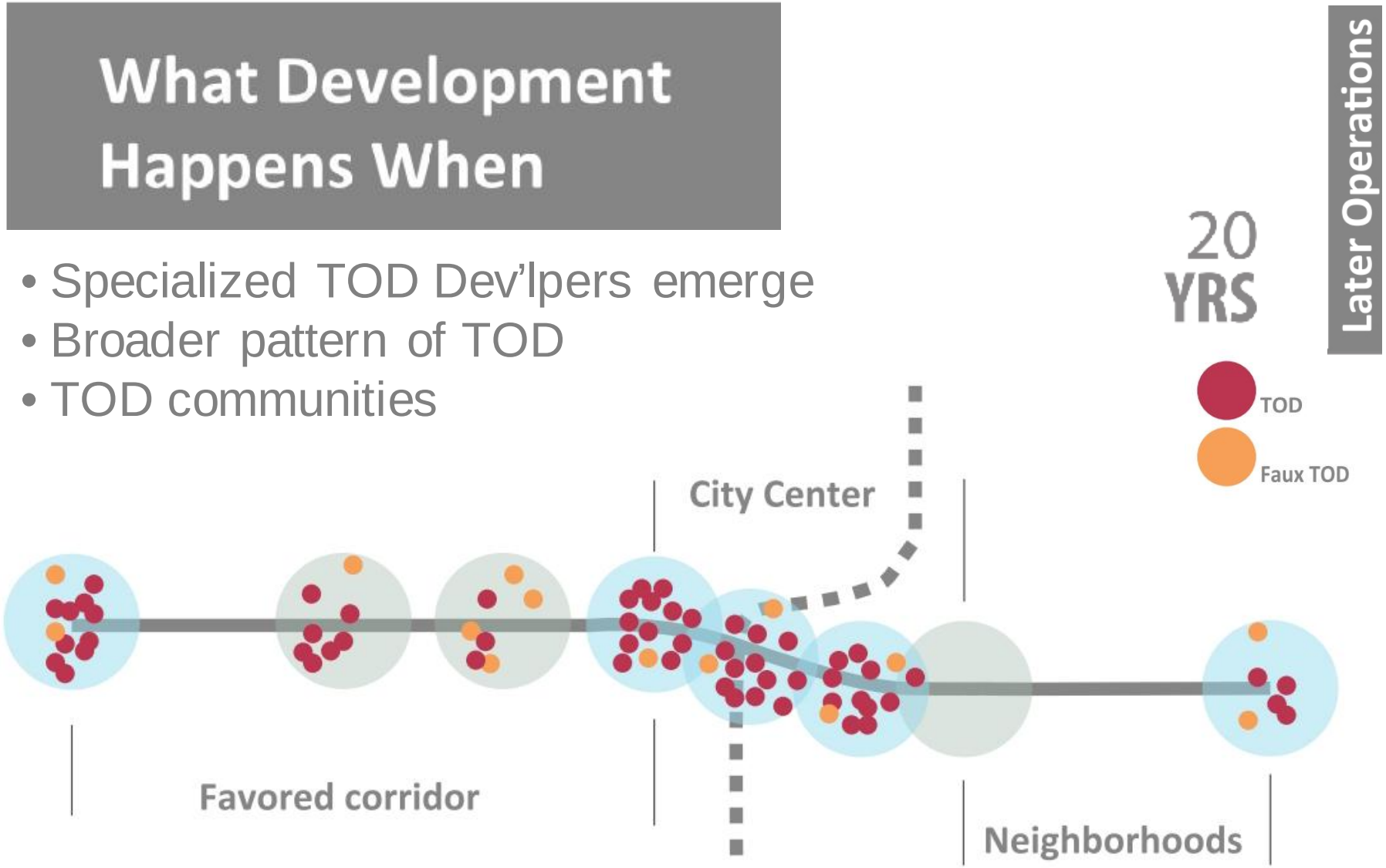
# What Development Happens When

- Gov't encourages TOD
- More modest residential TOD
- Pilot projects push performance

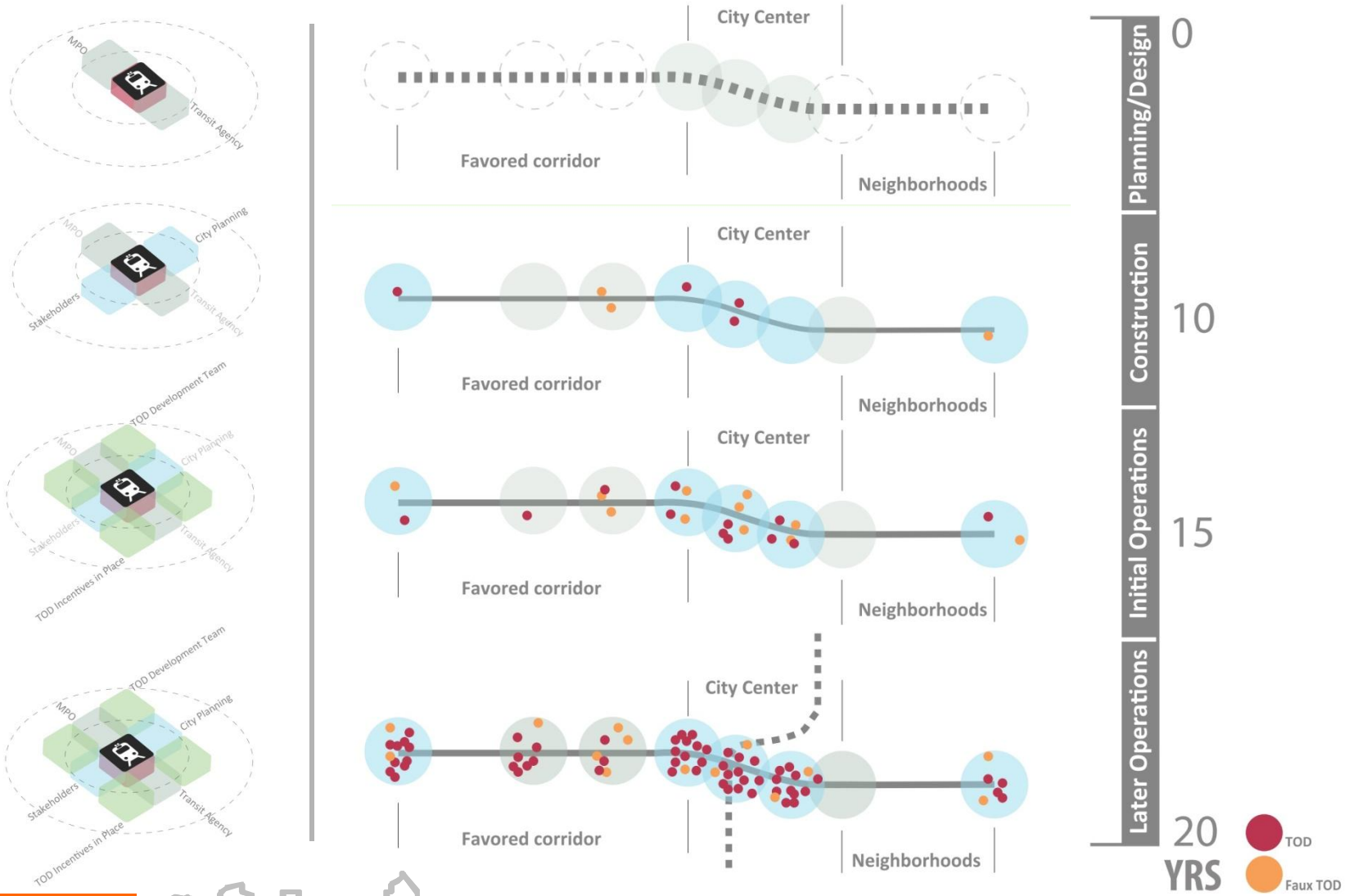


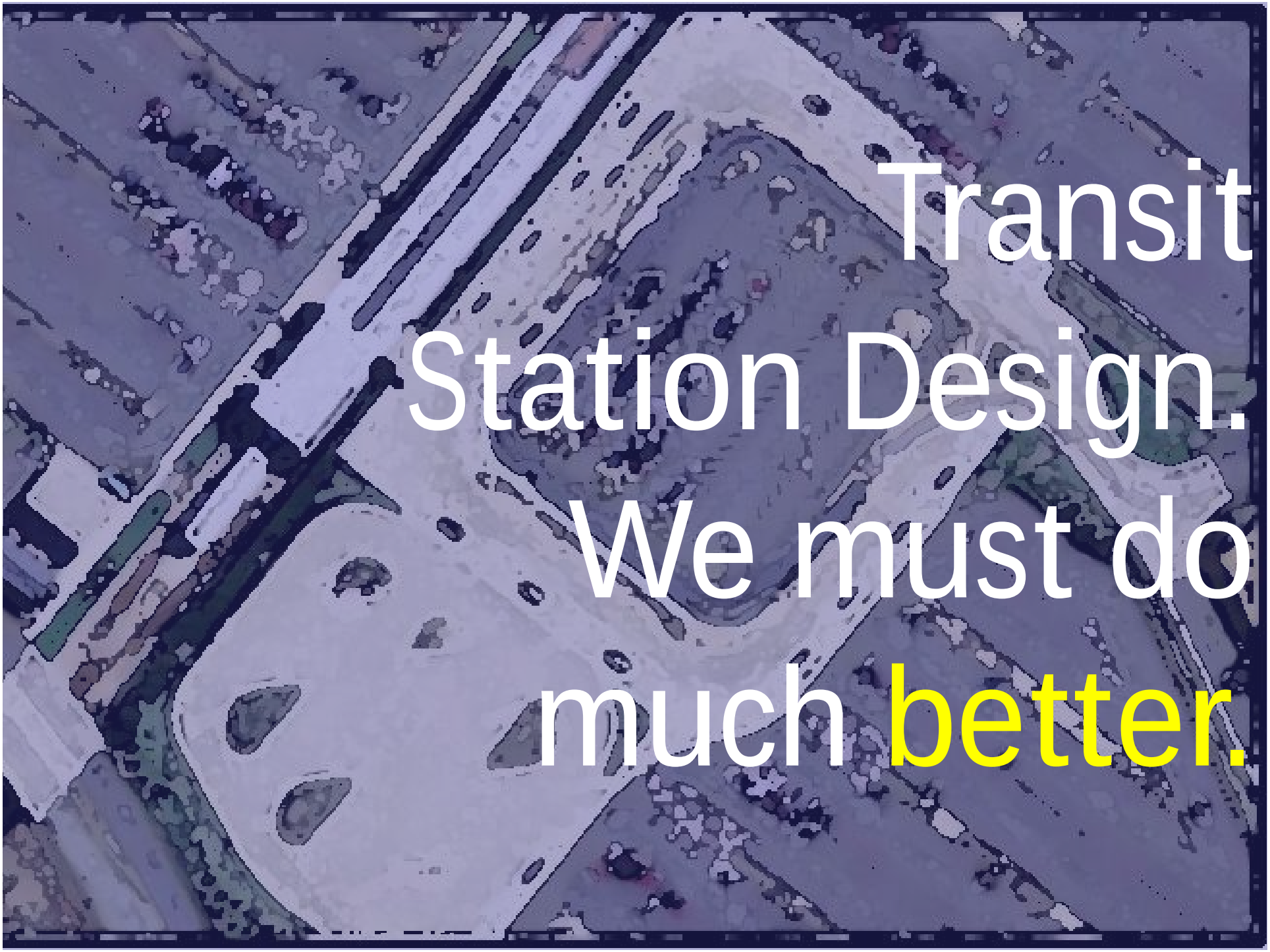
# What Development Happens When

- Specialized TOD Dev'lpers emerge
- Broader pattern of TOD
- TOD communities

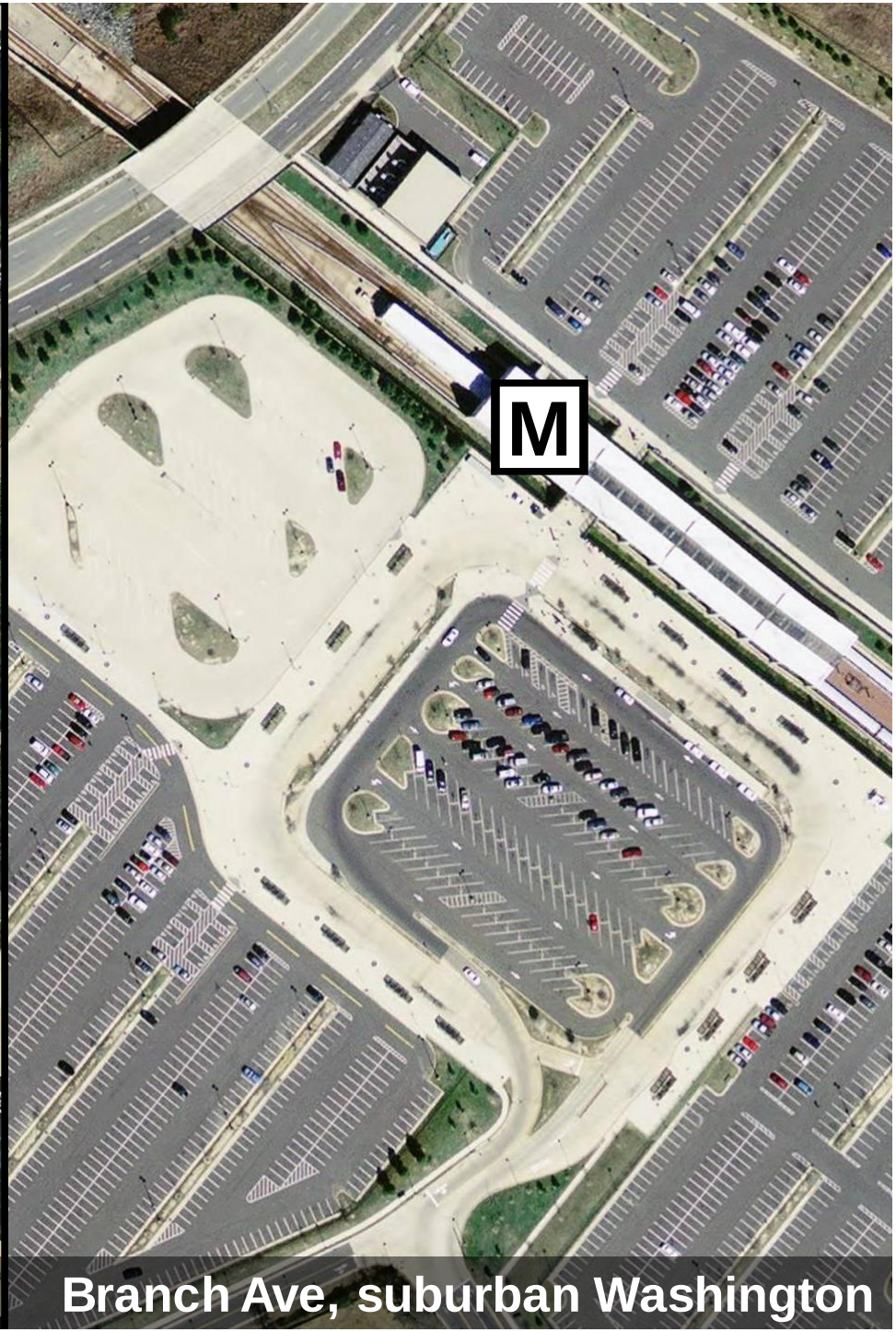


# Who :: What :: Where :: When

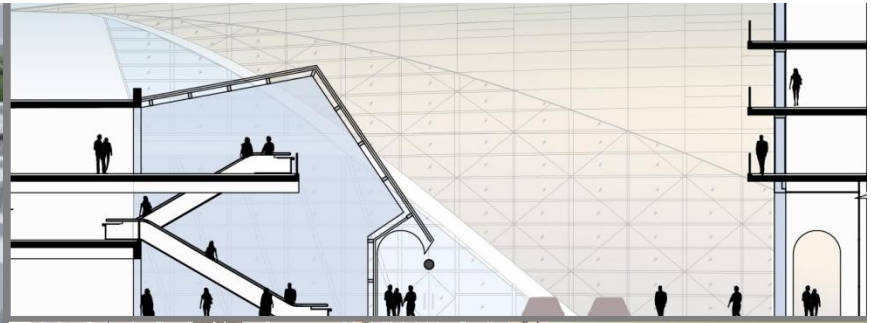


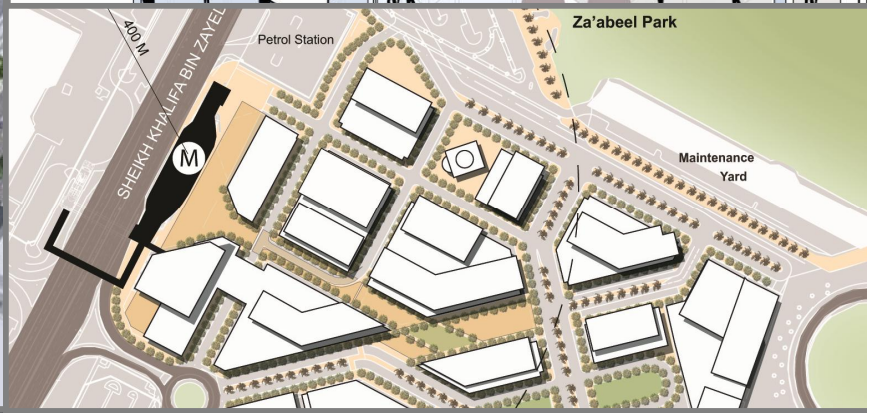

Transit
Station Design.
We must do
much better.


DuPont Circle, Washington, D.C.




Branch Ave, suburban Washington

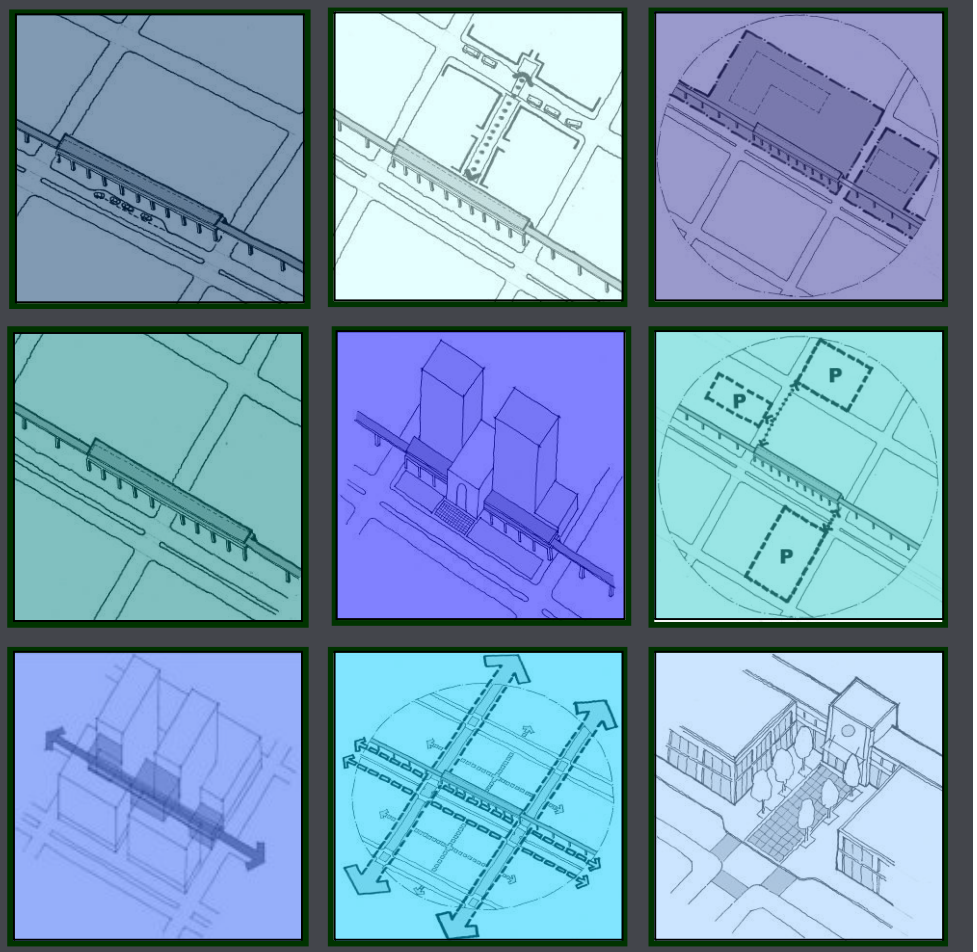



400 M
SHEIKH KHALIFA BIN ZAYEL
Petrol Station
Za'abeel Park
Maintenance
Yard

# Making it all work

*No one right solution for each place*

- Bus transfer
- ROW takes
- Platform location
- Kiss & Ride
- Parking
- Joint Development
- Pedestrian access
- Station as place
- Station entry




Automobile
oriented transit

Auto-Oriented Transit




Development-Oriented Transit


Development
oriented transit

# Making transit behave

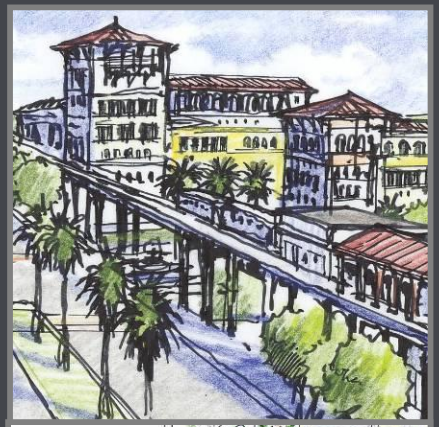
- Design great transit & great places
  - Keep vision in mind, not the automobile
  - Break the mold
  - Look outside the ROW
- Balance "place" and speed
  - Create a great destination
  - Going nowhere fast has little value

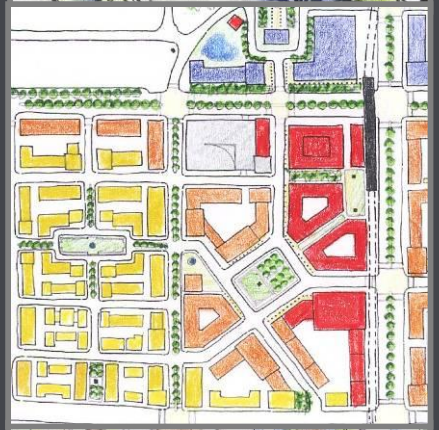

# Development-Oriented Transit "DOT"

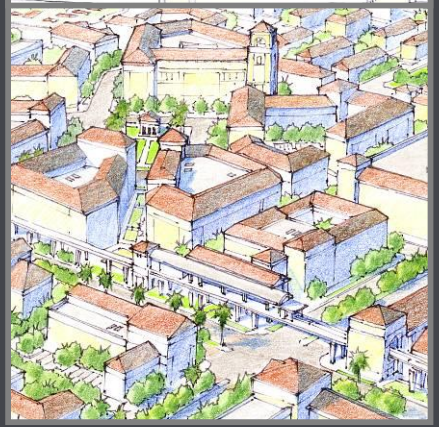
- Transit designed with development in mind
  - Corridor selection
  - Station function
  - Pedestrian access
  - Parking location
  - Community partnerships
  - Incorporate TOD

# DOT Checklist:

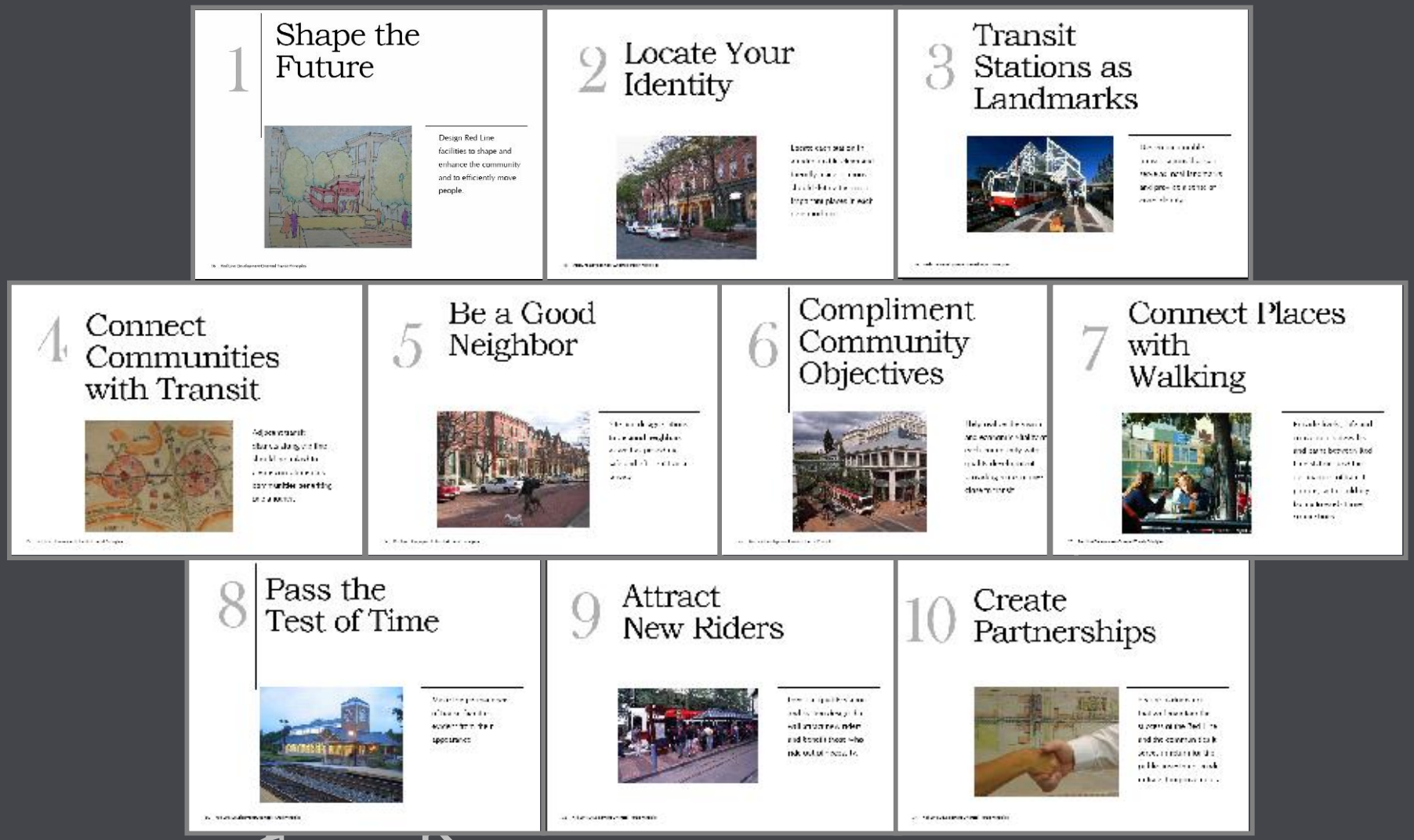
- Typical issues to address
  - Is the station located in an area with development potential?
  - Does the design allow for pedestrian connections?
  - Is transit well connected into the community?
  - Is TOD incorporated into the design?





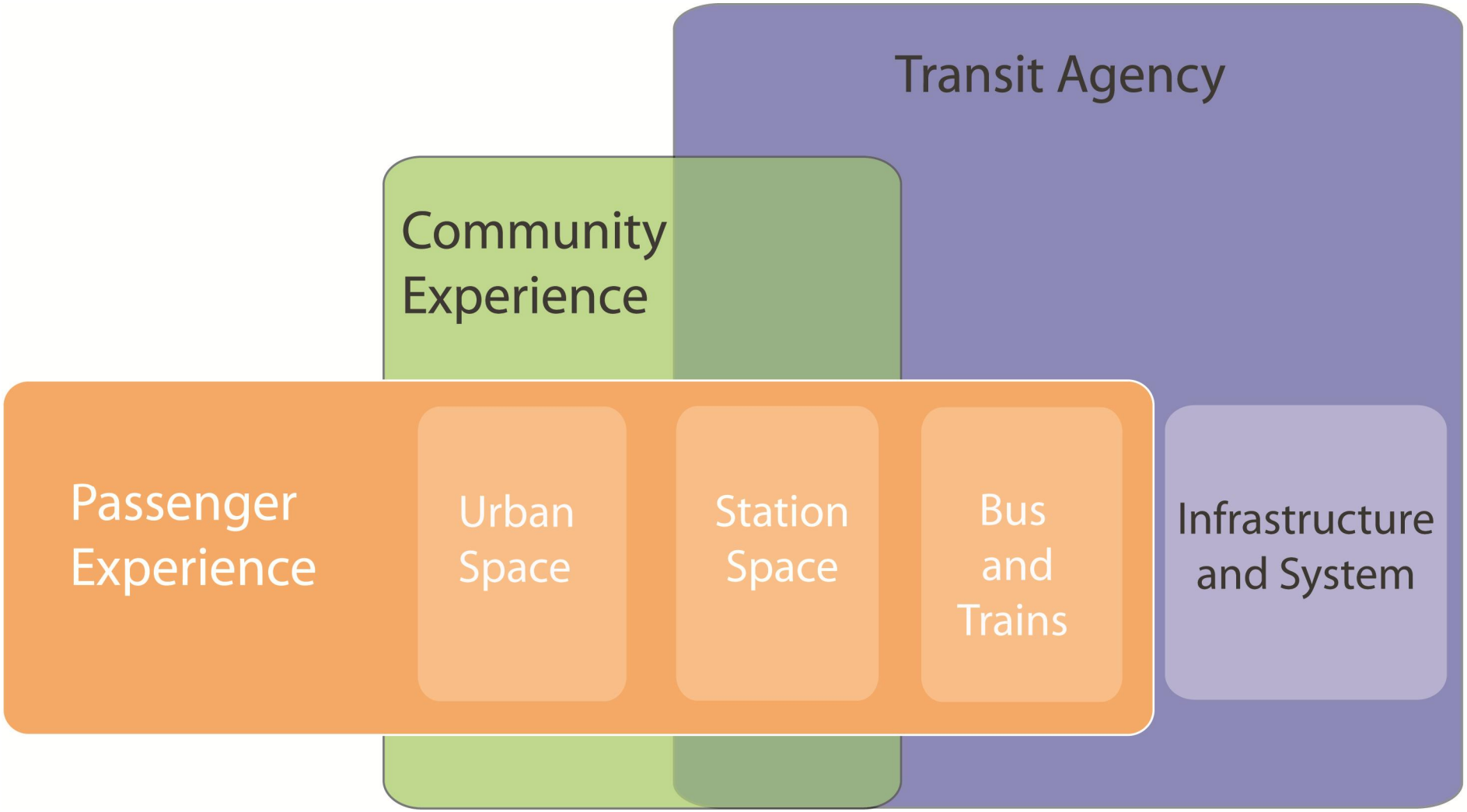


# Baltimore DOT Principles



# Solve for both development & cars

| 1 | 2 | 3 |
| --- | --- | --- |
| Make a Place | Connect to Community | Make Transit Work |
| Make Transit Work | Make a Place | Connect to Community |
| Connect to Community | Make Transit Work | Make a Place |


Transit Agency
Community Experience
Passenger Experience
Urban Space
Station Space
Bus and Trains
Infrastructure and System


New Carrollton TOD Master Plan

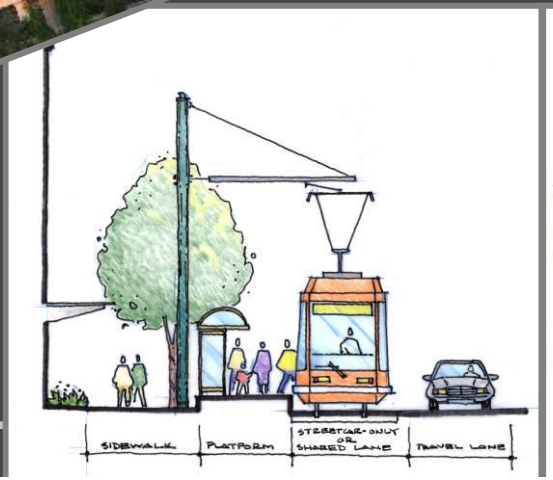
parsons brinckerhoff | placemaking

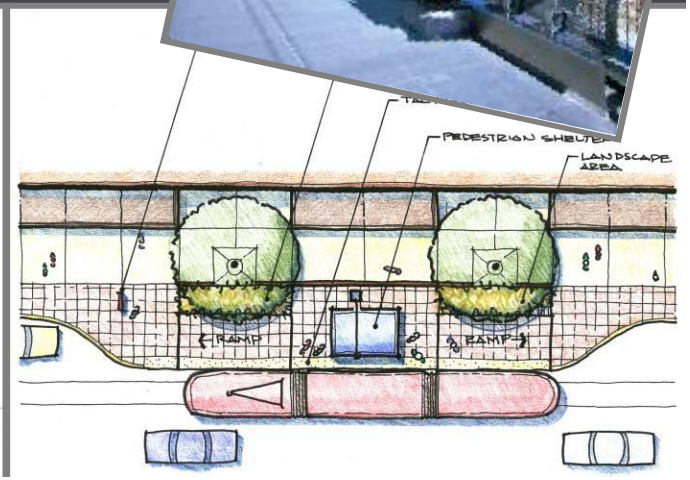
# Thinking about stations

# What is a Station?

Minimum building blocks of a station:

- 12’+ Platform
- Shelter
- Bench
- Lighting
- Information
- Trash can
- Safe



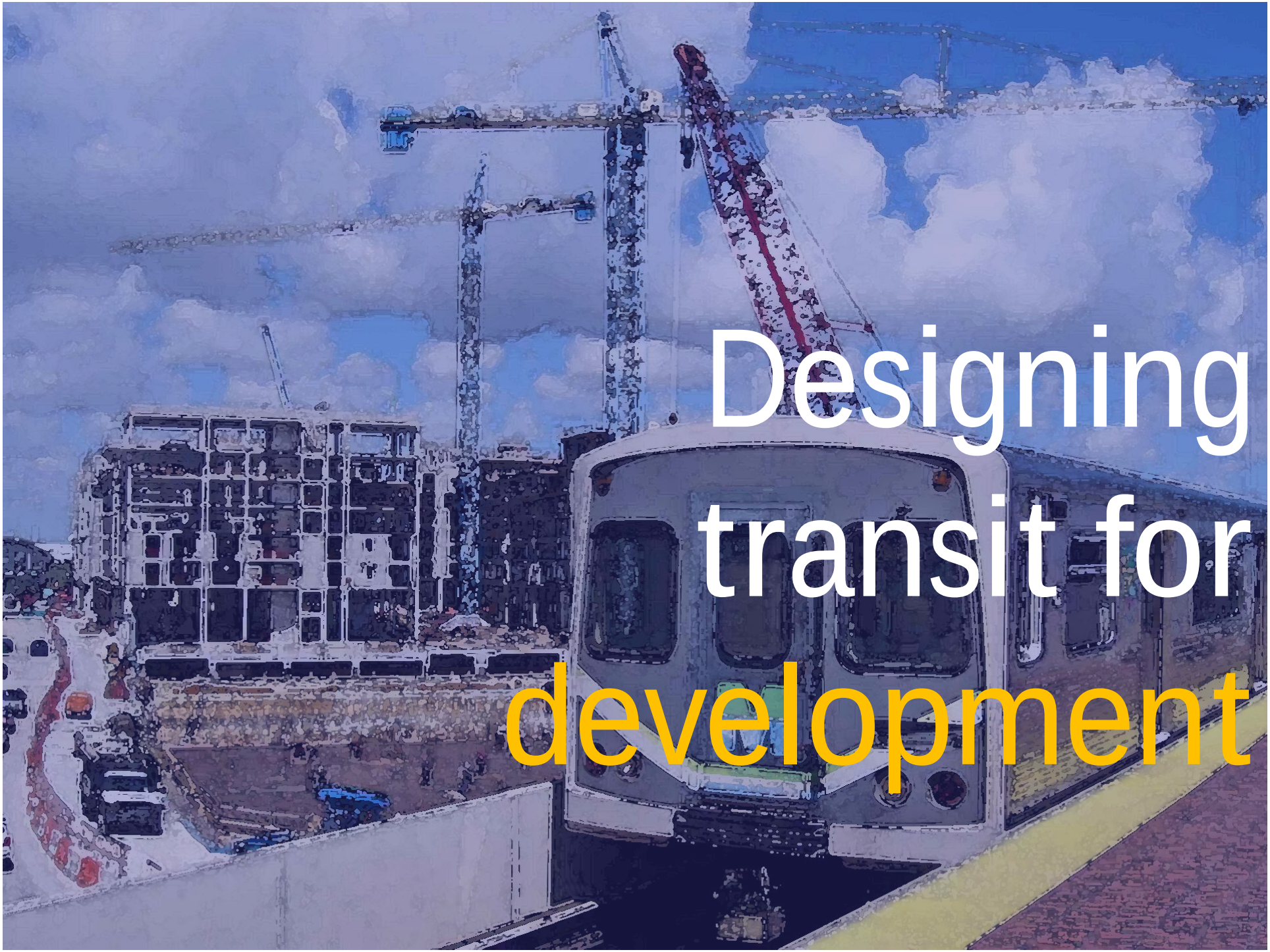
# Station Location Considerations

- Proximity to uses that generate ridership
- Direct accessibility
- Safety and security
- Visibility to users
- System connections

# Place Making at Stations

## Places to come back to, not just to leave from

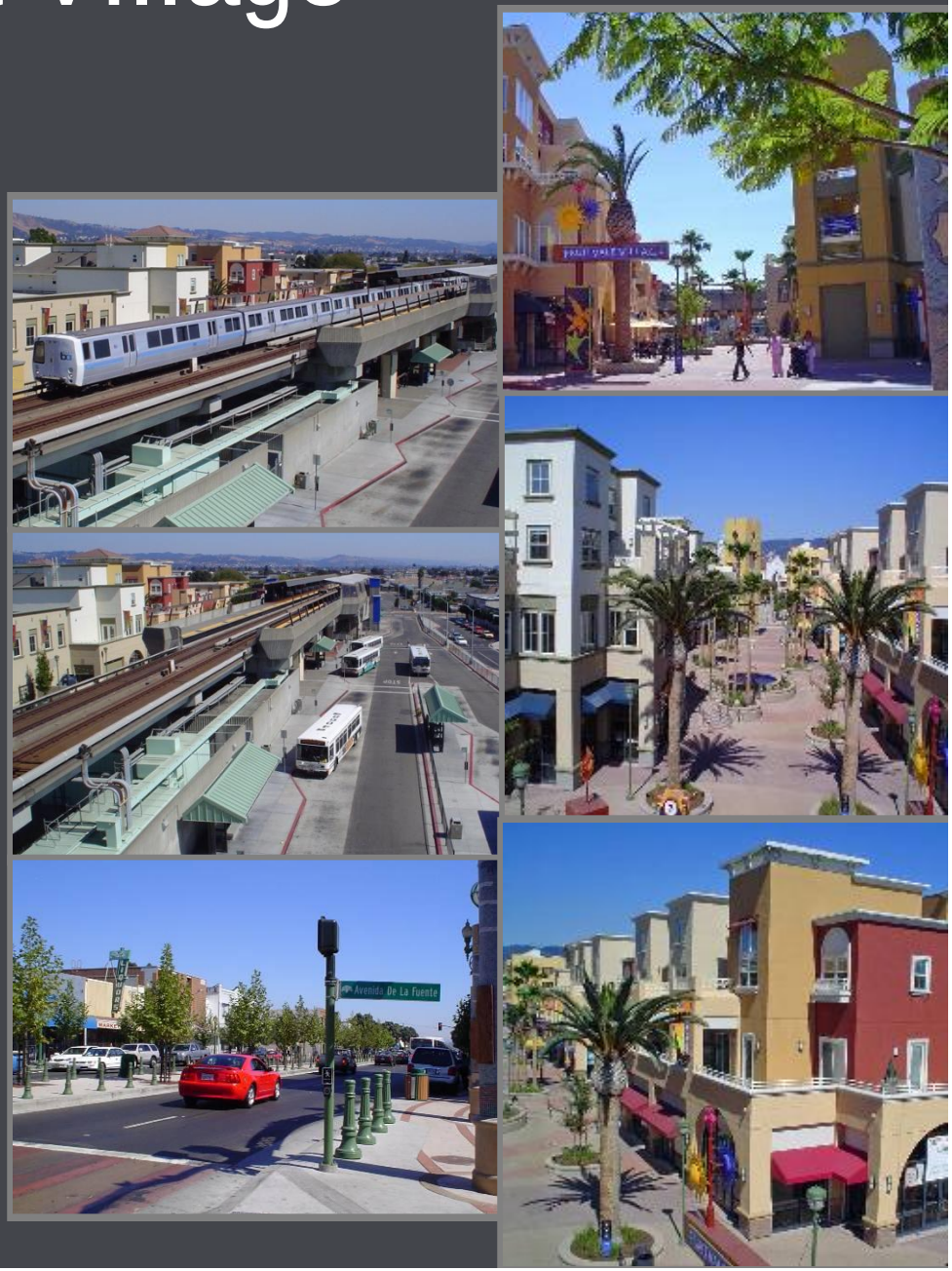
- Four different strategies:
  - Station as a place
  - Station invisible to complement place
  - TOD defines place
  - TOD serves as place

# Designing transit for development

# Fruitvale Transit Village

- Joint Development of BART parking
- Transit center one side, development other
- Revitalized low-income community
- Calmed major arterial

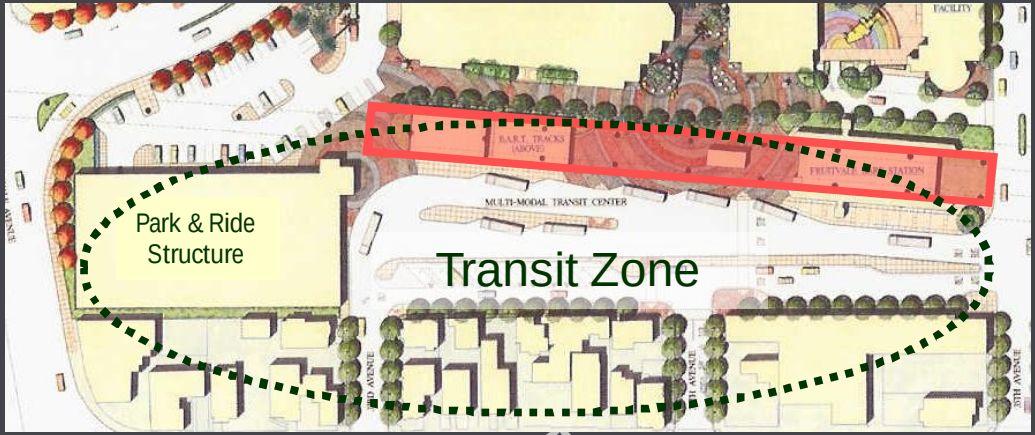


# Fruitvale BART


parsons brinckerhoff | placemaking

# Fruitvale Transit Village

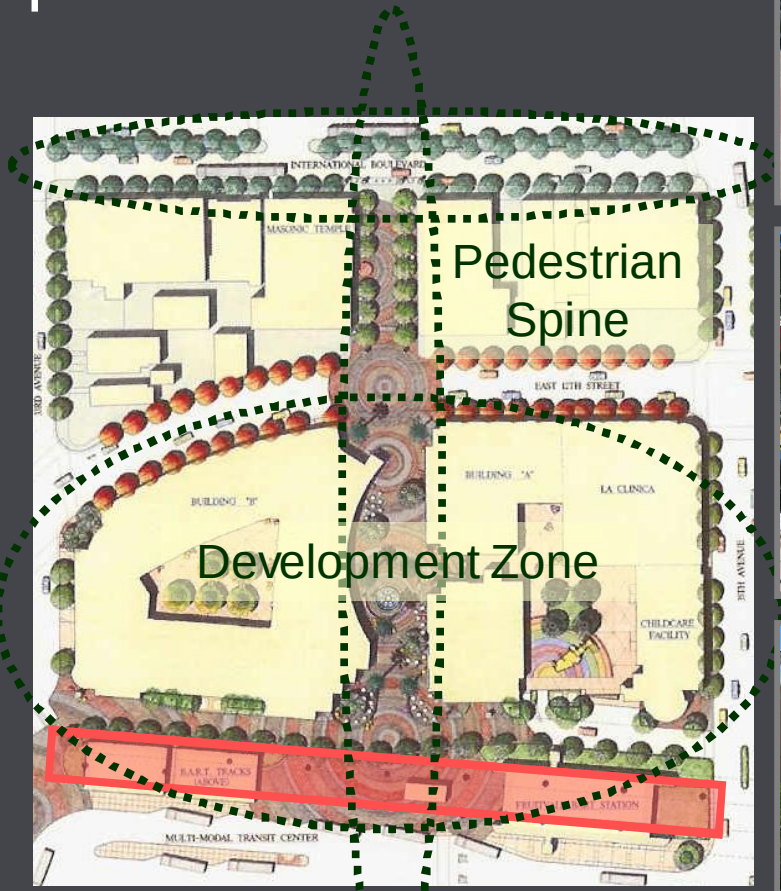
- Full service transit
  - Rail Station
  - Bus transfer
  - Park & ride
  - Kiss & ride



# Fruitvale Transit Village

## Community developed TOD

- Community Center
- Affordable & senior housing
- Medical Clinic
- Retail

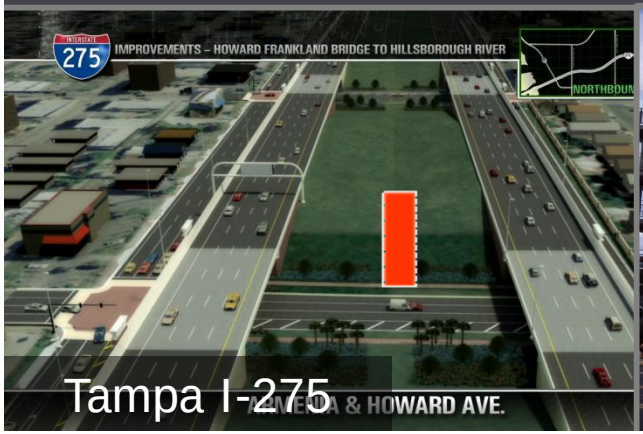




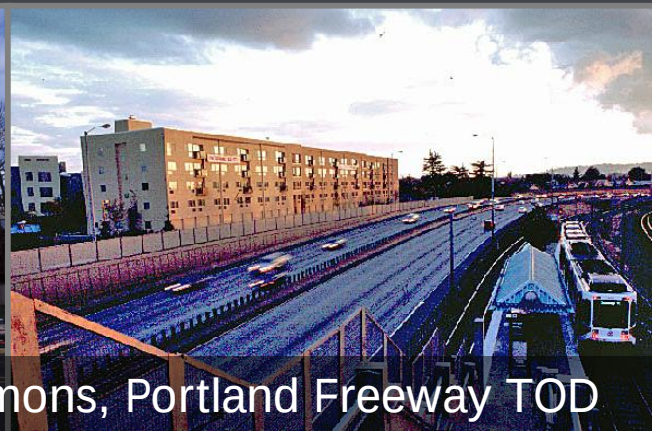

Where
to put the
train?

# Freeway Stations

- Most problematic  for TOD
- Center worst possible station location
  - Limits walkable area to transit
  - Increases hostile environment
- Stations at edge of freeway or away from interchange optimum



Tampa I-275



Center Commons, Portland Freeway TOD

# Arterial Stations

- Works well for TOD
- Calming arterial key to creating TOD
  - Busy streets limit walkable area
- Stations away from major intersections optimum
- Arterials near freeway interchanges problematic


Portland Arterial TODs

# Railroad ROW Stations

- Can work very well for TOD
  - Bring TOD right to station
- Challenge of accessibility
  - Road & pedestrian access can be difficult
- Older industrial  uses may be a challenge


Portland Railroad ROW TODs

# Transit & Great Places

- Solve for Transit + Development
  - Active good places, walkable, mix of uses
- Inclusive process
  - Start early w/ DOT principles
- Station: most important place
  - People for activity
  - Unique address

# Community building + people moving

- Trends are on your side
- Plan for the pedestrian
- Leverage the power of partnerships
- Raise your aspirations
- Make TOD legal & easy
- Develop a strategy equal to the task