



# Value Capture and Funding Transportation

*North Carolina Transportation Commission  
February 28, 2029*

# Overview

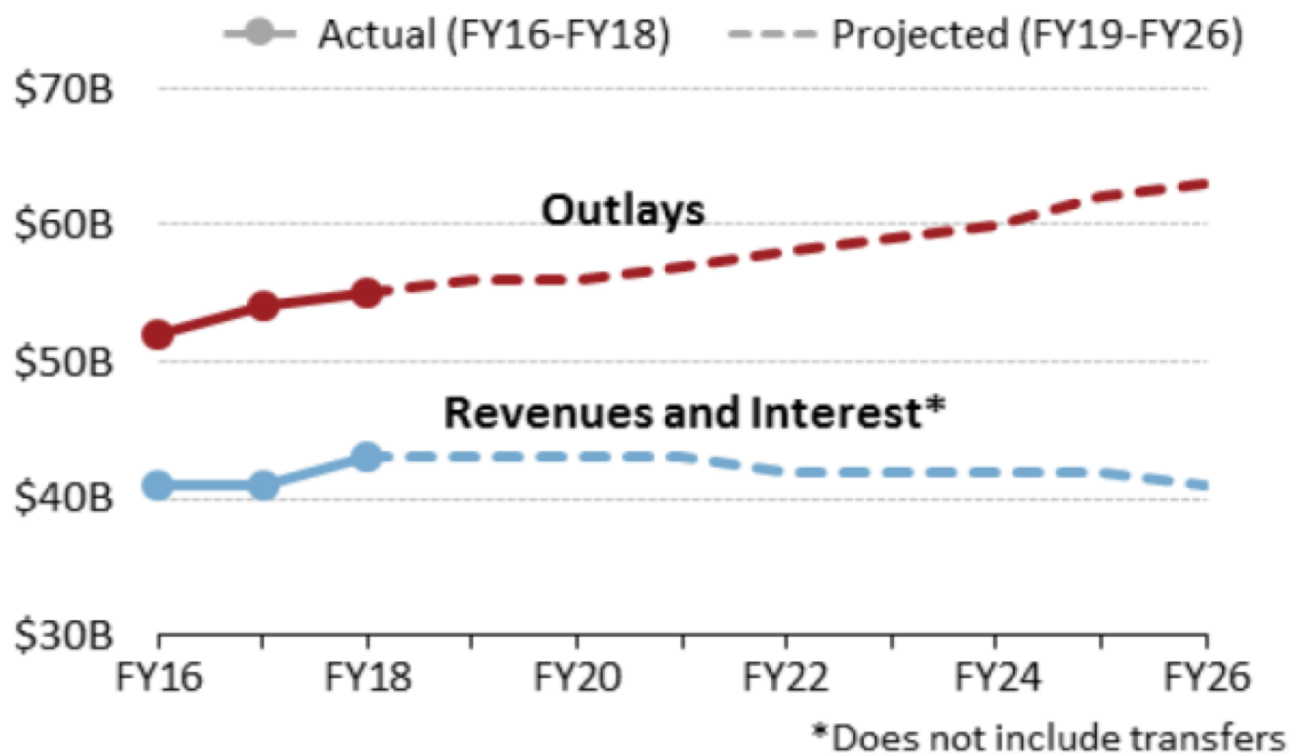
1. Need
2. History
3. Details
4. Examples
  - E-470 Highway: Impact Fees, Vehicle Registration Fees, Joint Development
  - VA 28 and Dulles Metrorail: Special Assessment Funding
  - Atlanta Beltline: Tax Increment Finance
5. Takeaways
  - Denver Union Station: Funding and Financing Plan



# Value Capture Implementation Manual

## ***NEED***

# Traditional funding sources, including Highway Trust Fund, do not meet needs



**Source:** CBO, Highway Trust Fund Accounts—January 2019 Baseline.

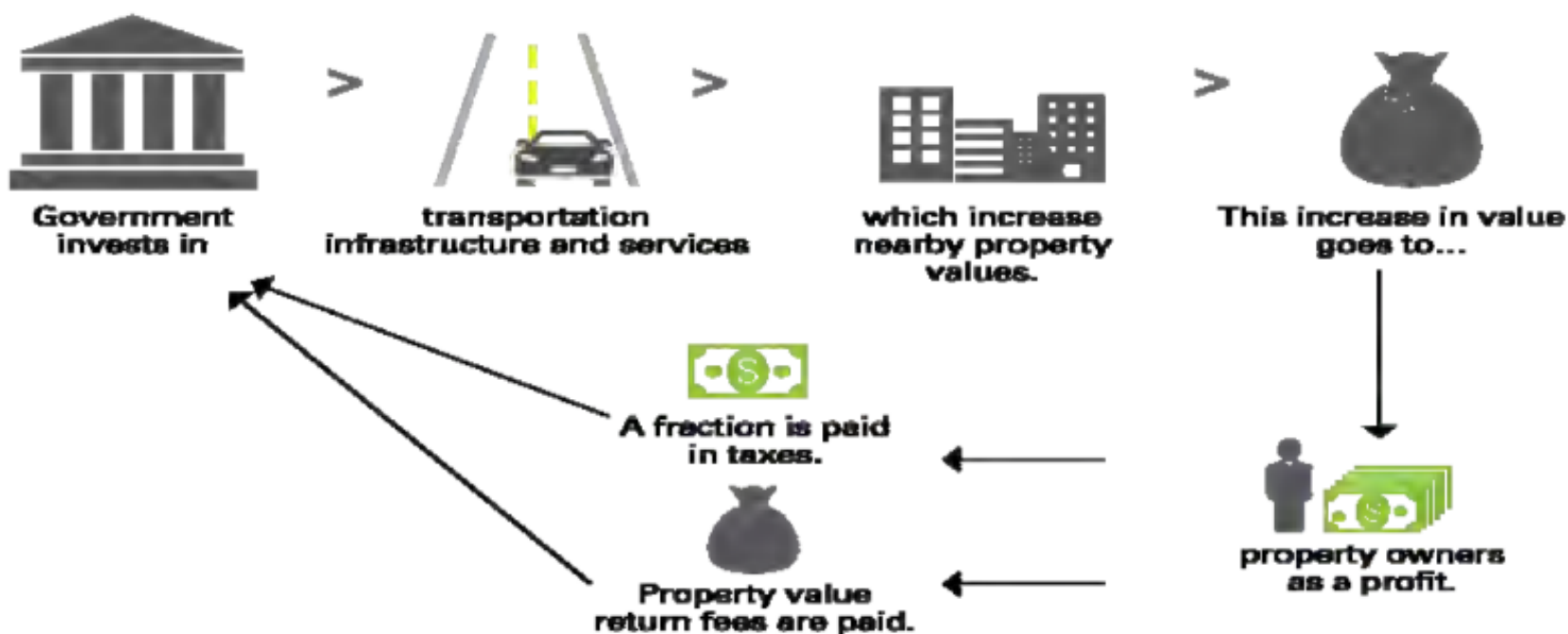


# Highway and road system faces capacity and conditions challenges

- ✓ Two out of every five miles of America's urban interstates are congested
- ✓ One out of every five miles of highway pavement is in poor condition
- ✓ 47,000 bridges in poor condition and 43% (260,000 bridges) are over 50-year old
- ✓ Pedestrian deaths on US roads increased 11% since 2015; (5,977 in 2017)

# What is Value Capture?

Value capture—the recovery of a portion of increased property value created as a result of public infrastructure—can generate significant revenues for highway and transit capital and operating funding



Source: NCHRP Research Report 873

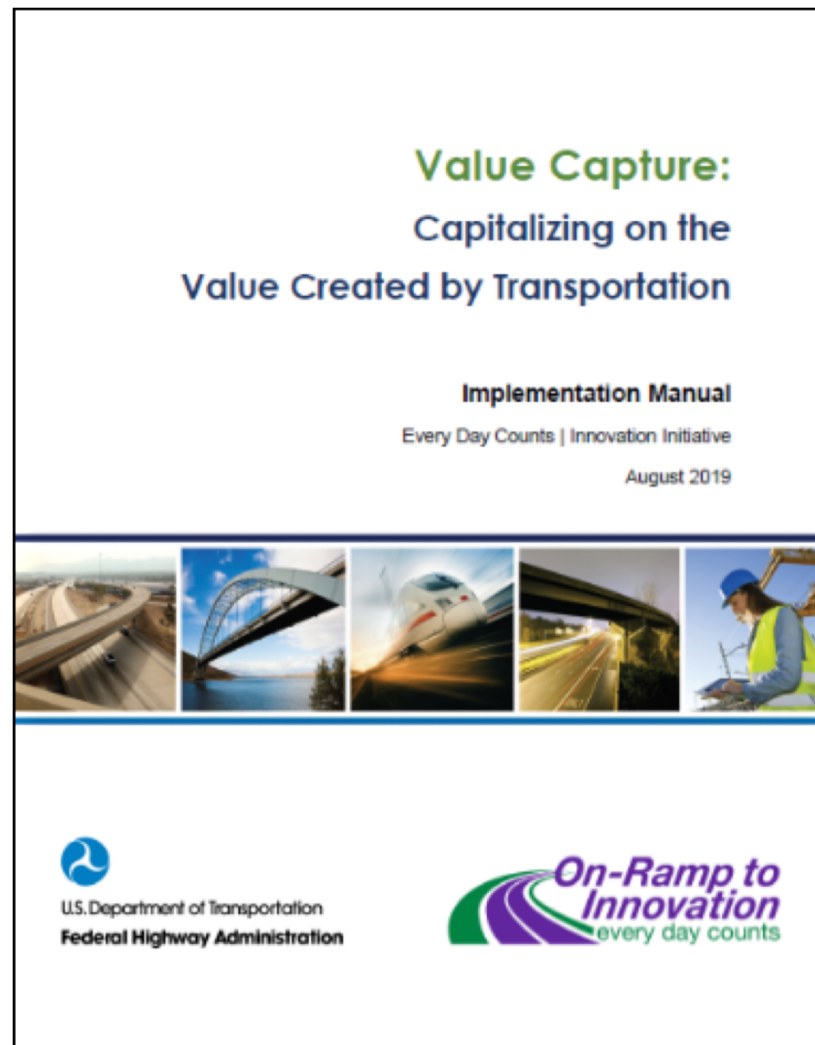
# FHWA's EDC-5 program sponsored development of value capture educational materials

- ✓ This includes the *Value Capture Implementation Manual* (VCIM) available at:



[bit.ly/Value\\_Capture](https://bit.ly/Value_Capture)

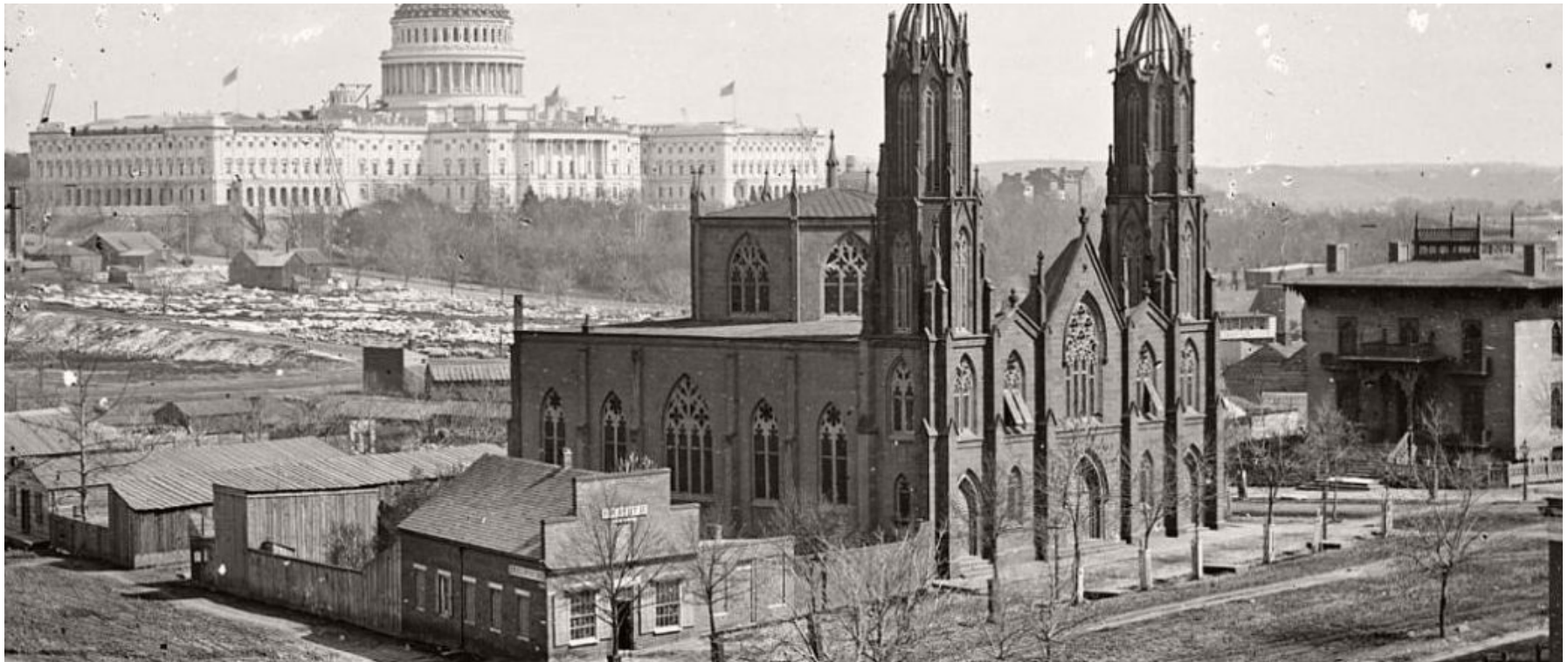
- ✓ Covers:
  - ✓ Definitions
  - ✓ Key techniques
  - ✓ Implementation issues
  - ✓ Financing



# Value Capture Implementation Manual

## *HISTORY*

## VC used to fund DC buildings (joint development) . . .



Source: <https://monovisions.com/vintage-washington-dc-in-the-mid-19th-century-1840s-1860s/>



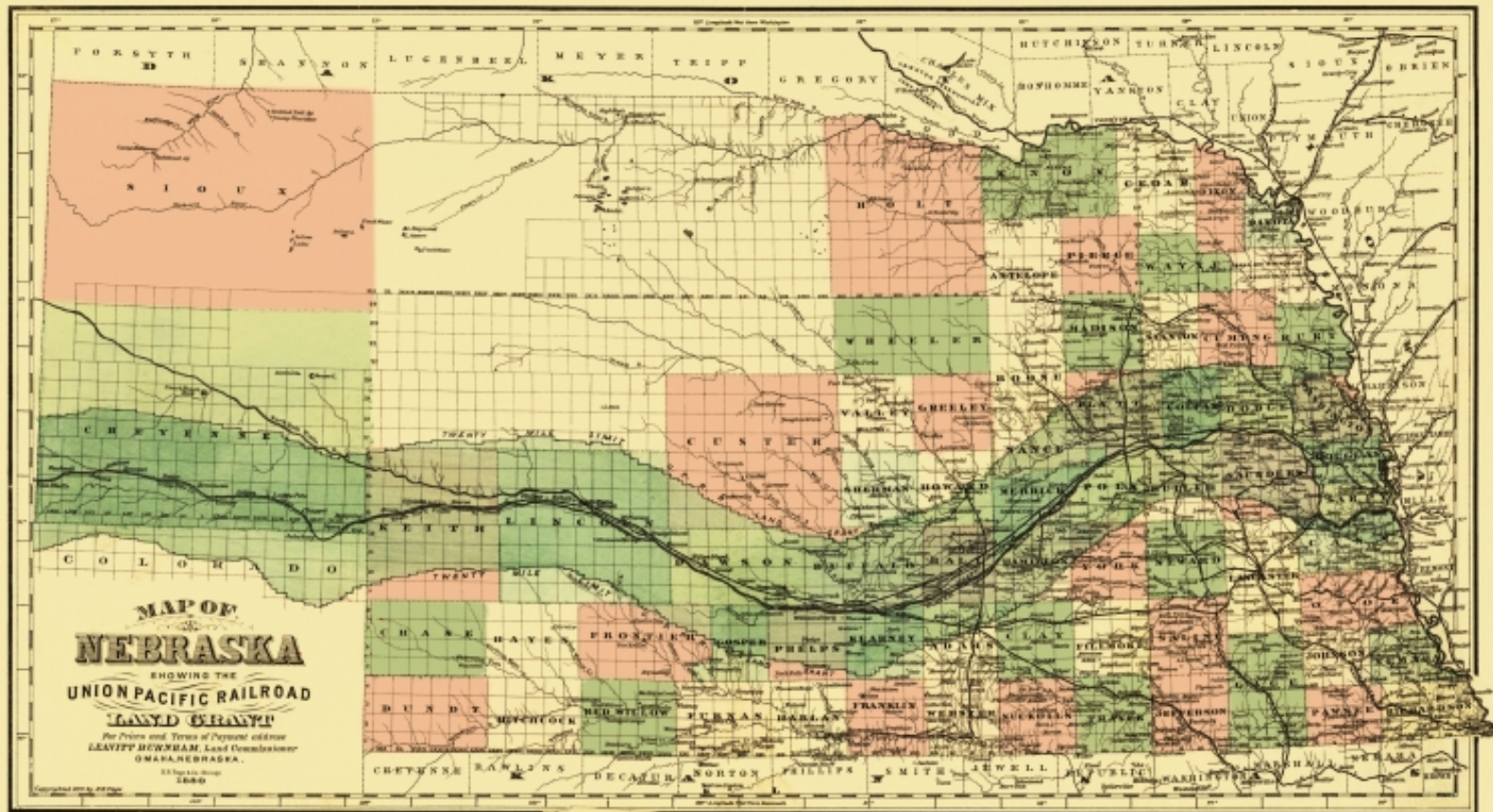
## ... And Haussmann's Paris ...



Source: <https://infos.parisattitude.com/en/town-planning-haussmann-2/>



## . . . . And American Railroads



Source: <https://www.mapsofthepast.com/union-pacific-land-grant-nebraska-page-1880.html>

# Value Capture Implementation Manual

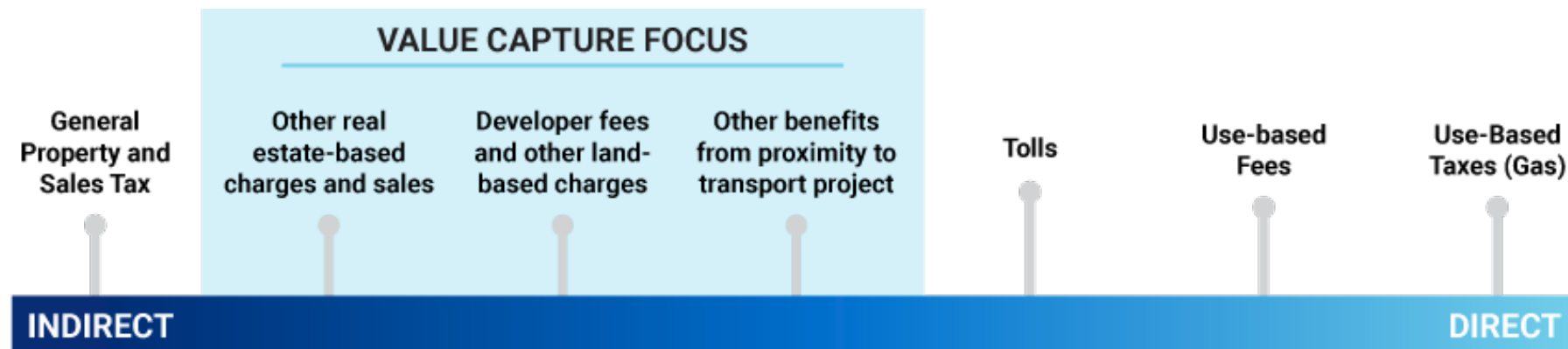
## ***DETAILS***

# Value capture techniques can be grouped in six major categories

| Category                       | Mechanism Included            |
|--------------------------------|-------------------------------|
| 1. Developer Contributions     | Impact Fees                   |
|                                | Negotiated Exactions          |
| 2. Transportation Utility Fees | Transportation Utility Fees   |
| 3. Special Taxes and Fees      | Special Assessment District   |
|                                | Business Improvement District |
|                                | Land Value Tax                |
|                                | Sales Tax District            |
| 4. Tax Increment Financing     | Tax Increment Financing       |
| 5. Joint Development           | At-Grade Joint Development    |
|                                | Above-Grade Joint Development |
|                                | Utility Joint Development     |
| 6. Advertising & Naming Rights | Naming Rights                 |

# Value capture complements traditional funding sources

- ✓ Value capture techniques are **complement to** and not as **substitute for** traditional funding sources
- ✓ Value capture techniques are one part of overall funding and financing solution for transportation project



# Value capture attractive since indirect & innovative; implementation is involved

|             | Funding Sources   |   | Financing Mechanisms  |
|-------------|---|---|---|
|             | Direct System Revenues  | Other, Indirect Sources   |   |
| TRADITIONAL | <ul style="list-style-type: none"> <li>• Direct user-fees (tolls)</li> <li>• Indirect Revenue:               <ul style="list-style-type: none"> <li>◦ Traditional advertising</li> <li>◦ Parking</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• State/Local:               <ul style="list-style-type: none"> <li>◦ Appropriations</li> <li>◦ Sales taxes</li> <li>◦ Other local taxes (gas, lodging, rental car)</li> </ul> </li> <li>• Federal funds</li> </ul>  | <ul style="list-style-type: none"> <li>• Pay-as-you-go</li> <li>• Tax-exempt and taxable bonds</li> <li>• Bank loans</li> </ul>   |
| INNOVATIVE  | <ul style="list-style-type: none"> <li>• Concessions</li> <li>• Parking innovations</li> <li>• Innovative advertising</li> </ul>  | <ul style="list-style-type: none"> <li>• Value capture:               <ul style="list-style-type: none"> <li>◦ Developer contributions</li> <li>◦ Transportation Utility Fees</li> <li>◦ Special taxes &amp; fees</li> <li>◦ Joint development</li> <li>◦ Incremental growth techniques (TIF)</li> <li>◦ Naming rights</li> </ul> </li> <li>• Partner agencies tolls</li> </ul> | <ul style="list-style-type: none"> <li>• Innovative finance:               <ul style="list-style-type: none"> <li>◦ TIFIA/RRIF</li> <li>◦ Tax credit loans</li> <li>◦ SIBs</li> <li>◦ Section 129 Loans</li> </ul> </li> <li>• Via P3 delivery:               <ul style="list-style-type: none"> <li>◦ Private activity bonds</li> <li>◦ Availability/Milestone payments</li> <li>◦ Private equity</li> </ul> </li> </ul> |

# Value capture techniques' key features

|                                       | Capex or O&M  | Use for Highways and Roads | Funding or Financing | Revenue Potential | Timing of Revenue Received |
|---------------------------------------|---------------|----------------------------|----------------------|-------------------|----------------------------|
| <b>Impact Fees</b>                    | Capex         | ✓✓                         | Funding              | ✓✓                | Immediate                  |
| <b>Negotiated Exactions</b>           | Capex         | ✓✓                         | Funding              | ✓✓                | Immediate                  |
| <b>Transportation Utility Fees</b>    | O&M           | ✓✓✓                        | Funding              | ✓                 | Delayed                    |
| <b>Special Assessment Districts</b>   | Capex         | ✓                          | Funding & Financing  | ✓✓/✓✓✓            | Delayed                    |
| <b>Business Improvement Districts</b> | O&M and Capex | ✓                          | Funding              | ✓                 | Immediate                  |
| <b>Land Value Taxes</b>               | Capex / O&M   | ✓                          | Funding              | ✓✓✓               | Delayed                    |
| <b>Sales Tax Districts</b>            | Capex         | ✓✓                         | Financing            | ✓✓✓               | Delayed                    |
| <b>Tax Increment Financing</b>        | Capex         | ✓✓                         | Funding & Financing  | ✓✓/✓✓✓            | Delayed                    |
| <b>Joint Development</b>              | Capex         | ✓✓                         | Funding & Financing  | ✓✓                | Immediate or delayed       |
| <b>Naming Rights</b>                  | Capex / O&M   | ✓✓                         | Funding              | ✓                 | Immediate                  |

# VCIM organization





# Developer Contributions

Payment from developer to public agency to fund portion of infrastructure or services required for new development

Useful when new development creates demands on existing infrastructure or municipal services

- ✓ Opportunities: Economically efficient, relatively easy to implement and create little public resistance
- ✓ Challenges: Estimating incremental cost impact of new development

## Osceola County, Florida Example





# Transportation Utility Fees

Periodic fee paid by property owner or building occupant to municipality based on use of transportation system

An option to fund road maintenance and where property owners accept cost calculation formula

- ✓ Opportunities: May be more equitable and economically efficient than property taxes
- ✓ Challenges: May face significant administrative burden

## Tualatin County, Oregon Example



## Special Taxes and Fees

Includes special assessment districts, business improvement districts, land value taxes and sales tax districts

Useful when substantial funding is required for infrastructure investment that is expected to generate property value increases

- ✓ Opportunities: May generate substantial revenues to fund and finance large projects
- ✓ Challenges: Require significant outreach and implementation costs may be high

### Seattle South Lake Union Streetcar Example



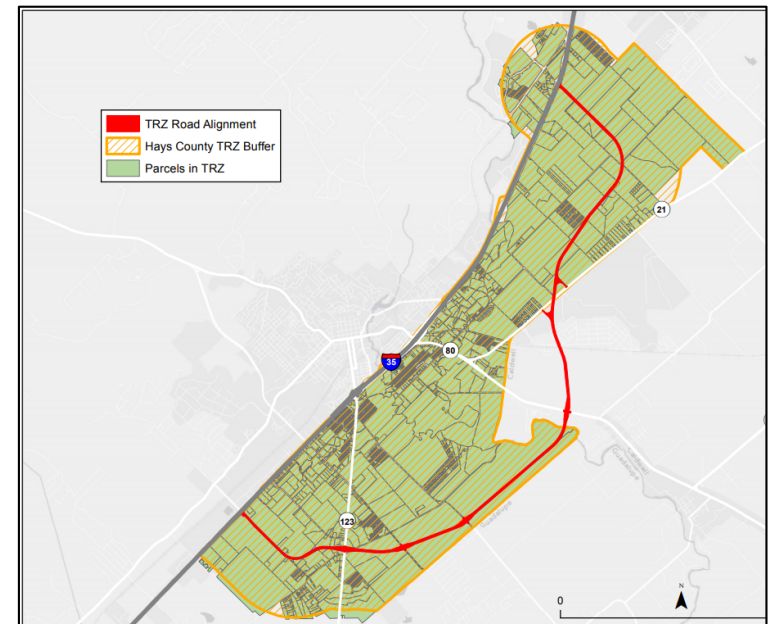
# Tax Increment Financing

Geographic area administered by special authority in which incremental property tax value increases from investment is captured

Appropriate where market value of development is raised by use of Tax Increment Financing

- ✓ Opportunities: Can raise substantial revenues for capital projects through revenue-backed bonds
- ✓ Challenges: Requires significant institutional capacity to manage and can face public resistance

## Hays County Transportation Reinvestment Zone Example



# Joint Development

Public agency/group of agencies partner with private developer or developers to improve use of land near, below or above infrastructure

Agencies may consider joint development to particularly to fund neighborhood connectivity and housing affordability

- ✓ Opportunities: Can help increase impact of key infrastructure and revitalize distressed areas
- ✓ Challenges: Care to ensure that these projects do not create or worsen equity issues

## Capitol Crossing Development Example



# Naming Rights

Public agency sells rights to name infrastructure to private company

Appropriate for transit stations, rest stations and agency-owned fleets as relatively straightforward way to raise funds

- ✓ Opportunities: Can raise moderate sums of money
- ✓ Challenges: Must be weighed against reputational risks

## Example of Branded Safety Patrol Vehicle





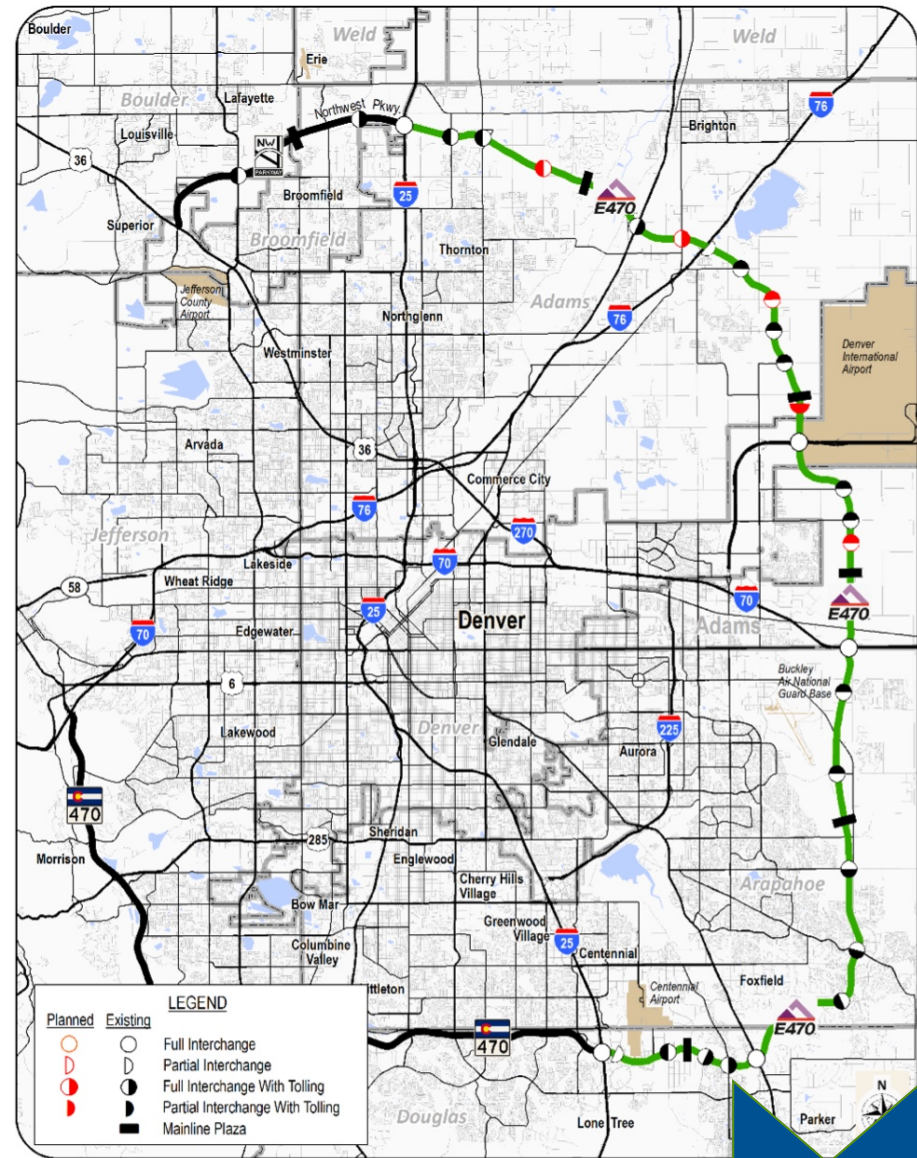


# Value Capture Implementation Manual

## ***E-470 Highway: IMPACT FEES, VEH. REGISTRATION FEES, JOINT DEVELOPMENT***

# E-470 is major portion of beltway around Denver

- ✓ E-470 is 47-mile, four-lane, limited-access toll road that makes up major portion of circumferential beltway around eastern portion of metropolitan Denver
- ✓ E-470 connects in south to I-25/C-470 interchange and in north to I-25/Northwest Parkway interchange
- ✓ It is also major link to Denver International Airport



## In 1987 Colorado Legislature approved Public Highway Authority Act, giving E-470 following powers

1. To construct, finance, operate, or maintain highway
2. To **take private property** by condemnation
3. To establish and collect tolls
4. To collect **highway expansion fees** 1.5 miles on either side of highway centerline
5. To issue bonds and pledge revenues to payment of bonds
6. To succeed to obligations of other governmental entities
7. With voter approval, impose **vehicle registration fees** and create special districts
8. Also, with voter approval, to **impose taxes and fees** within any part of member governments' jurisdiction, such as sales or use tax, an employment privilege tax, business occupation tax, and motor vehicle registration fee

➤ **All used except #8**



## For Segment I, highway expansion & registration fees expected to be important funding sources

| Case                      | 1989 Feasibility Study      | 1991 Opening Revenues | 2015 Annual Revenues |
|---------------------------|-----------------------------|-----------------------|----------------------|
| Tolls                     | 85-92% of capital costs     | \$0.2M                | \$220.0M             |
| Vehicle Registration Fees | 8% or less of capital costs | \$4.7M                | \$10.1M              |
| Highway Expansion Fees    | 7% of capital costs         | \$0.2M                | \$1.3M               |

- ✓ Separate bonds issued, secured each by:
  - ✓ Toll revenues
  - ✓ Vehicle registration fees

# Economically, E-470 credited with \$ billion of new development



<https://www.calibre-engineering.com/product-page/rockinghorse-development-aurora-co>



# E-470 engaged in JD, including solar panels and cell towers, to reduce operating costs & increase revenues



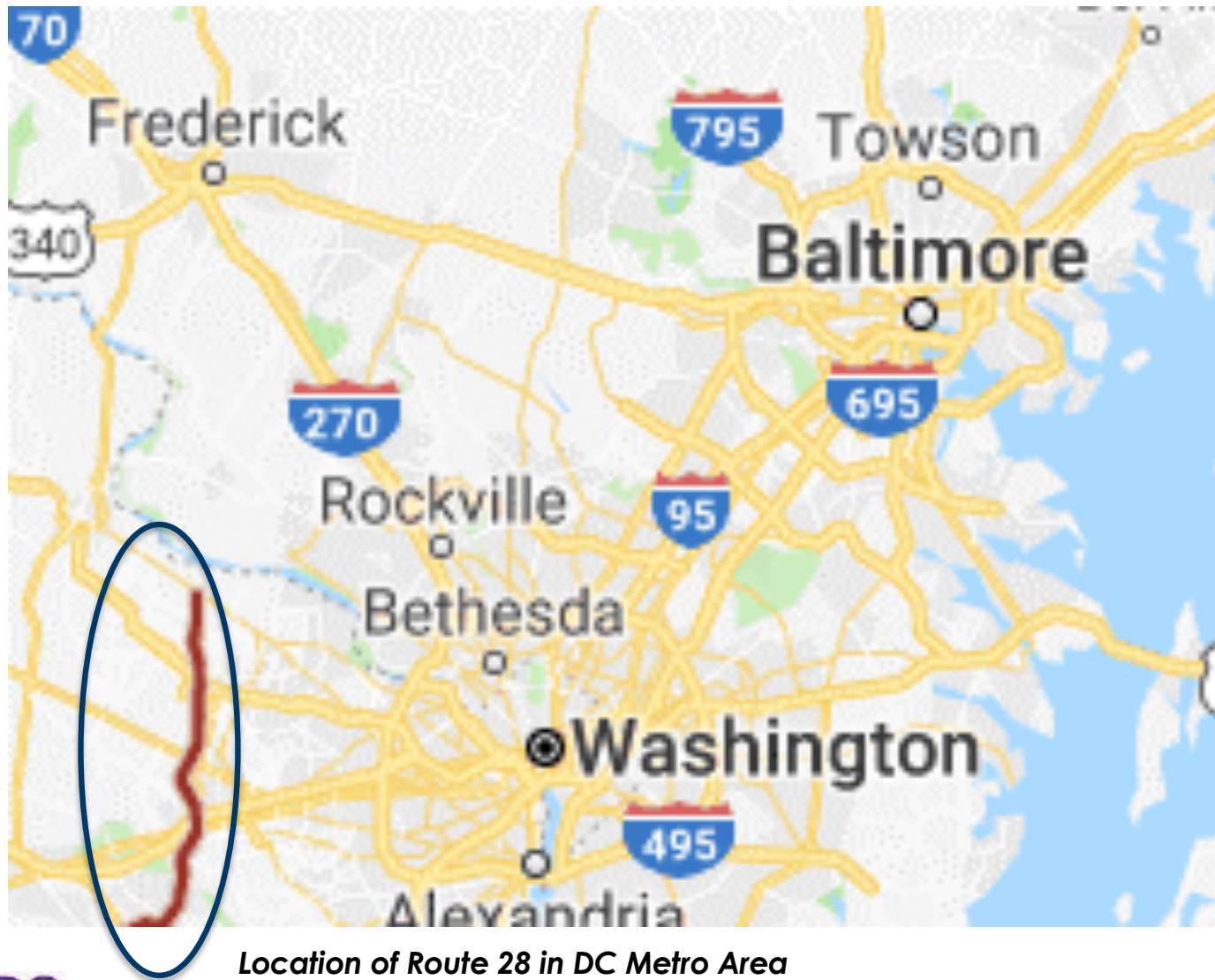
[https://www.fhwa.dot.gov/ipd/value\\_capture/defined/solar\\_energy\\_use.aspx](https://www.fhwa.dot.gov/ipd/value_capture/defined/solar_energy_use.aspx)



# Value Capture Implementation Manual

## ***VA 28 AND DULLES METRORAIL: SPECIAL ASSESSMENT FUNDING***

## Developers & Virginia funded Route 28 improvements with special tax district



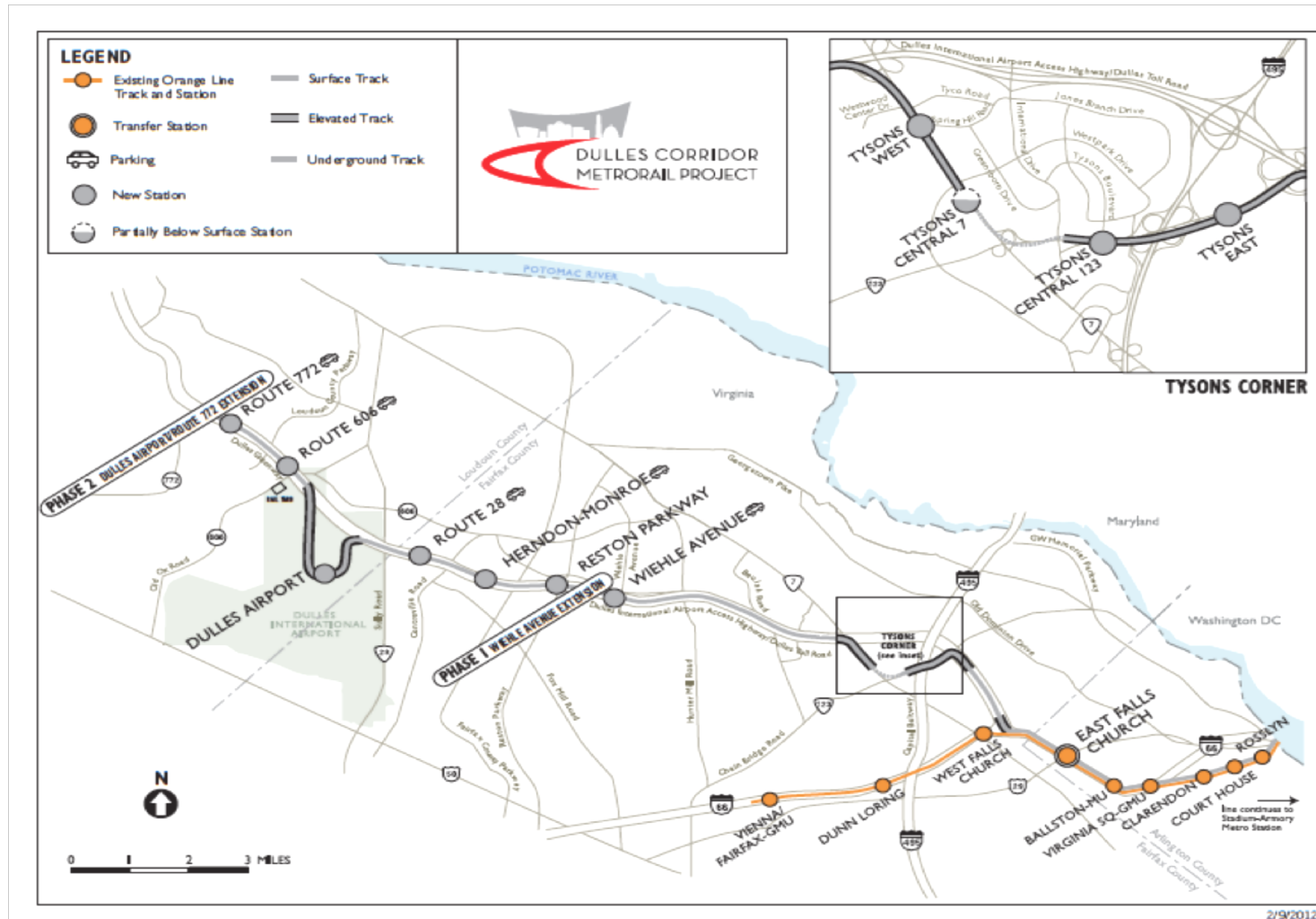
*Location of Route 28 in DC Metro Area*



## Special tax district financed project with state backing

- ✓ Successful SAD required consent of **51% of landowners** who covered 75% of cost of \$500M widening improvements
- ✓ Special tax consisted of 20-cent surcharge per each \$100 in commercial and industrial property value within district, roughly **20% increase** in current taxes
  - ✓ Surcharge financed bonds to pay for improvements
  - ✓ State provided backing for bonds, “double barrel” approach
- ✓ Due to real estate downturn, real estate-related revenues were inadequate to pay for debt service during early years of project, so that it had to rely on Virginia **backstop**

# Dulles Metrorail serving growing (real estate) market



Source: Dulles Corridor Metrorail Project, 2015

# Value capture sources funded 1/5 of project

| Sources of Capital Fund       | Phase 1        | Phase 2        | Rail Project Budget |                           | TIFIA Loan                       |
|-------------------------------|----------------|----------------|---------------------|---------------------------|----------------------------------|
|                               |                |                | Total               | % of Total                |                                  |
| Federal                       | \$900          | -              | \$900 <sup>1</sup>  | 15.8%                     |                                  |
| Commonwealth of Virginia      | 252            | 323            | \$575 <sup>1</sup>  | 10.1%                     |                                  |
| ✓ Fairfax County              | 400            | 515            | 915                 | 16.1% <sup>2</sup>        | 403                              |
| ✓ Loudon County               | -              | 273            | 273                 | 4.8% <sup>2</sup>         | 195                              |
| MWAA (Aviation Funds)         | -              | 233            | 233                 | 4.1% <sup>2</sup>         | -                                |
| MWAA (Dulles Toll Road)       | <u>\$1,354</u> | <u>\$14,34</u> | <u>\$2,788</u>      | <u>49.0%</u> <sup>3</sup> | <u>1,277</u>                     |
| <b>Total Sources of Funds</b> | <b>\$2906</b>  | <b>\$2,778</b> | <b>\$5,684</b>      | <b>100.0%</b>             | <b>\$1,876</b><br>(33% of total) |

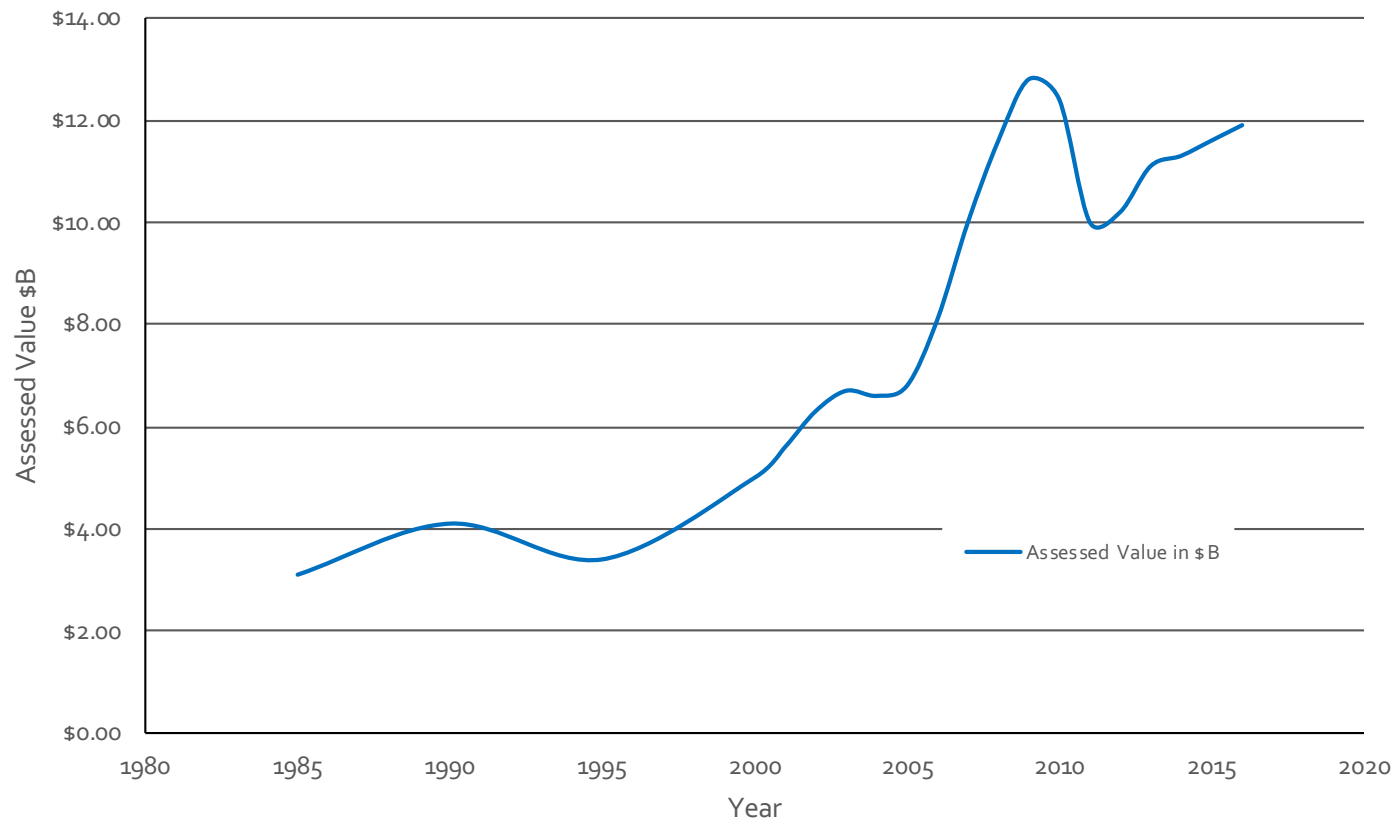
<sup>1</sup>Fixed amount; <sup>2</sup>Fixed percentage of total cost, <sup>3</sup>Residual

Source: Dulles Corridor Metrorail Project, 2015



# Project sponsors incorporated local real estate market volatility in value capture plans

## Phase 1 Dulles Metrorail District Taxable Property Assessed Value

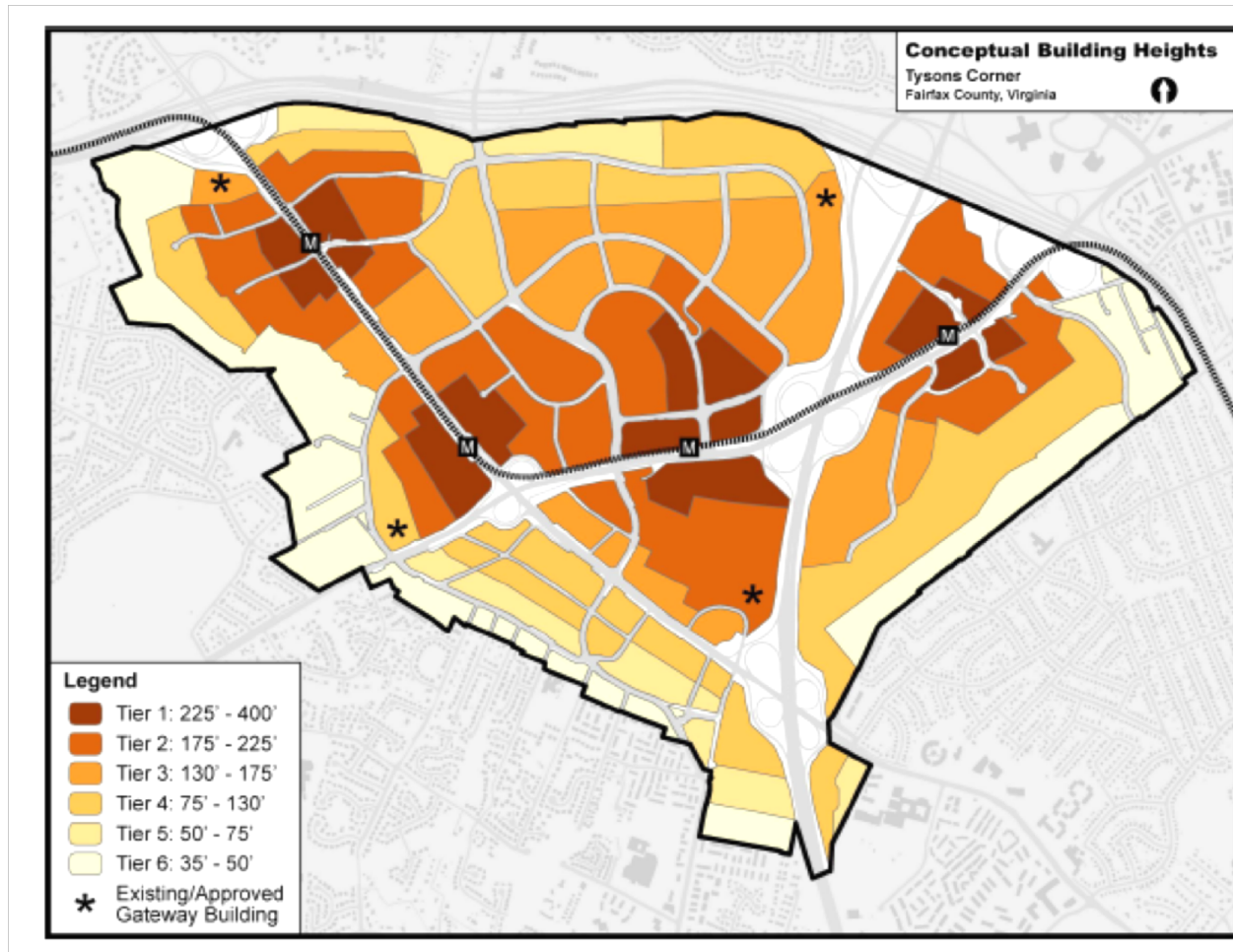


Source: Fairfax County Economic Development Authority, 2016

## Growing market + strong existing market resulted in strong bond ratings

- Bonds rated AA, Aa1, and AA by Fitch, Moody's, and Standard & Poor's, respectively
- Key strengths were :
  - Good coverage and liquidity
  - Tax rate flexibility, allowing rate to change to maintain revenue at sufficient level to cover debt service
  - Strong but concentrated tax base, including headquarters of five Fortune 500 companies

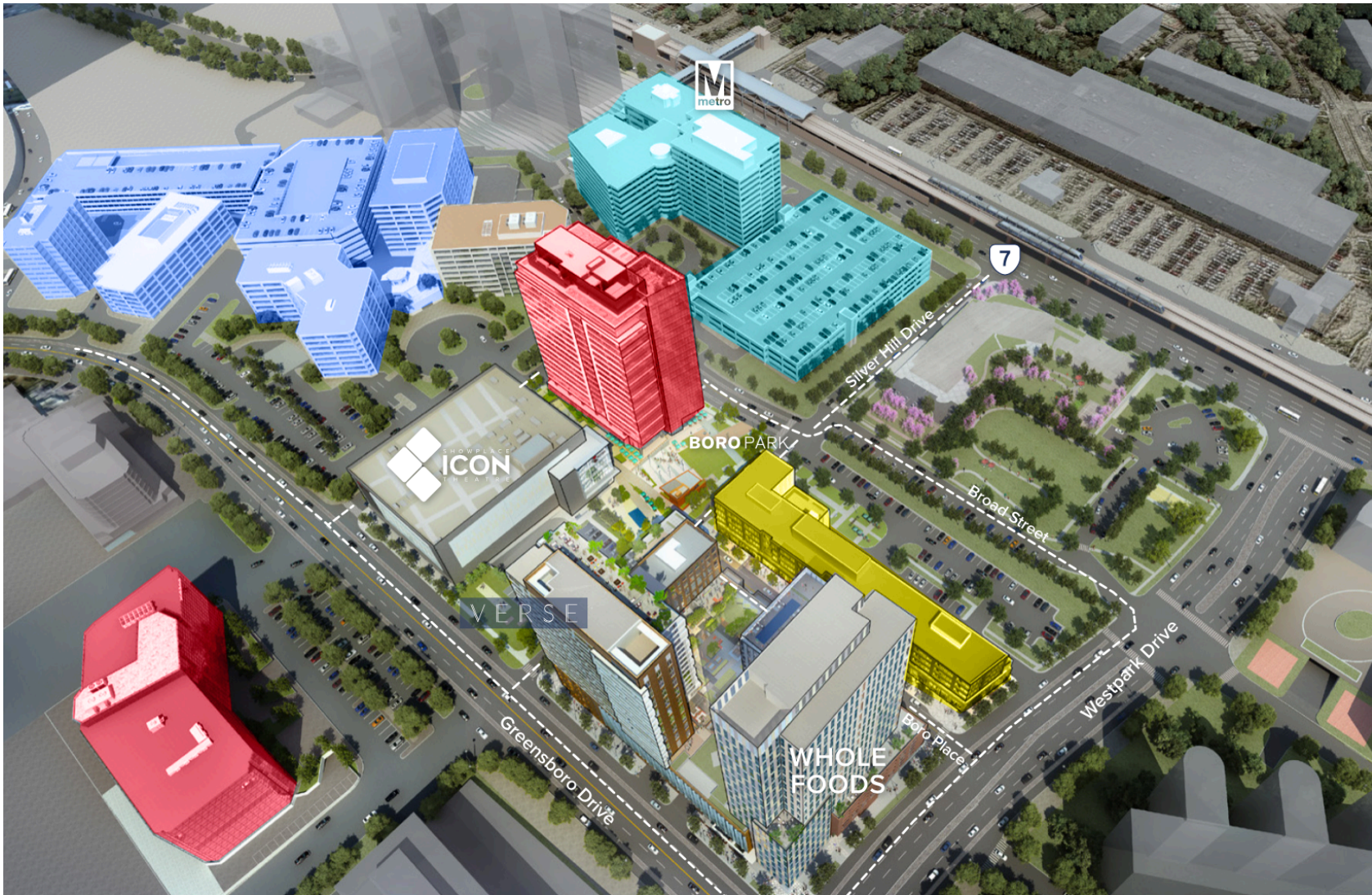
# Project ran in parallel with transit-oriented development (TOD) planning: Discarded parking minimums, density maximums, & land use segregation



Source: Tysons Corner Comprehensive Plan, 2010



Some results include a Whole Foods, condos, offices and new street grid



<http://theborotysons.com/neighborhood/>





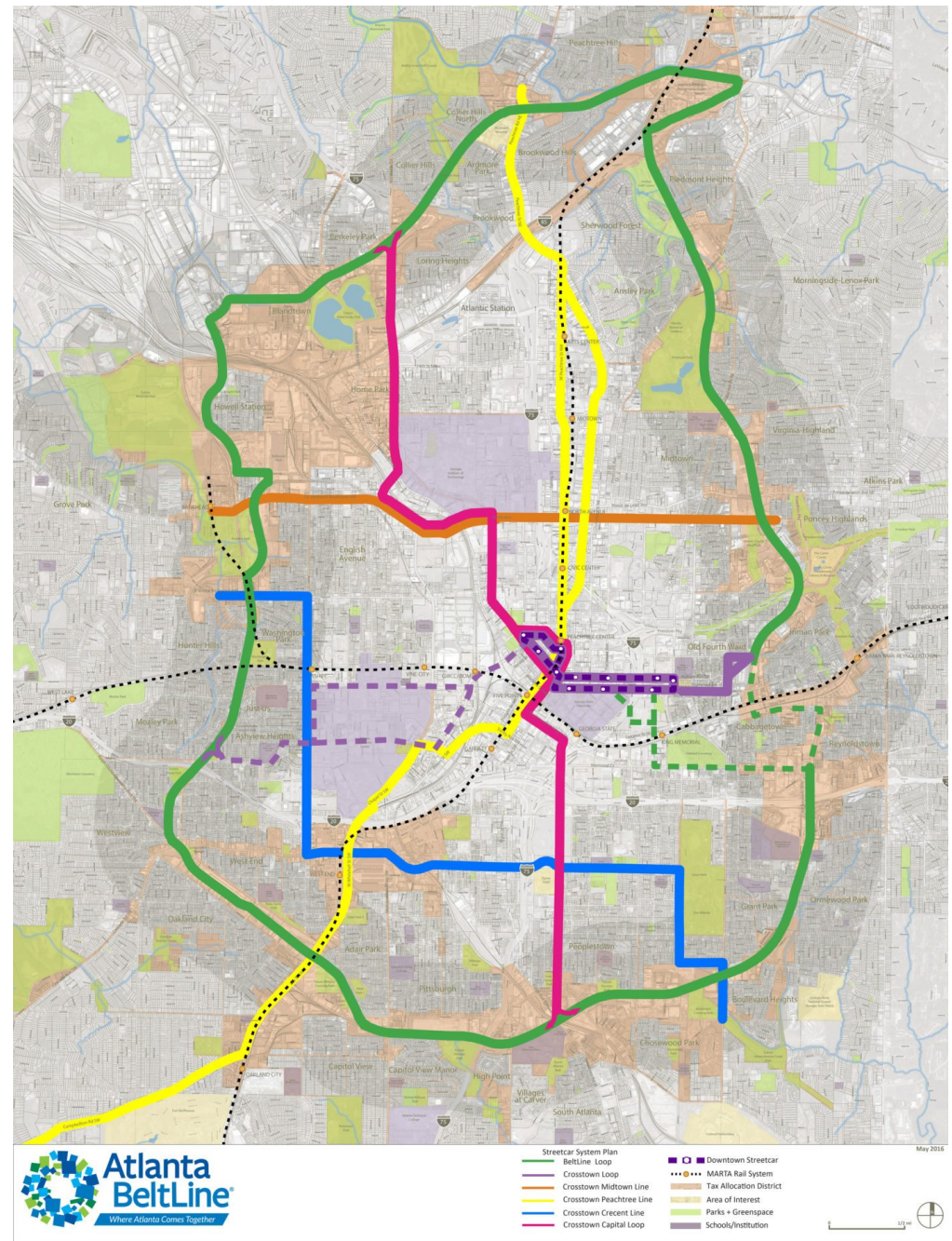
# Value Capture Implementation Manual

## ***Atlanta Beltline: TAX INCREMENT FINANCE***



**AB is built on historic  
22-mile rail corridor,  
near 1/5 of Atlanta's  
population**

Source: <https://beltlineorg-wpengine.netdna-ssl.com/wp-content/uploads/2017/01/SSP-Large-Format-Map-updated-12.27.2016-web.jpg>

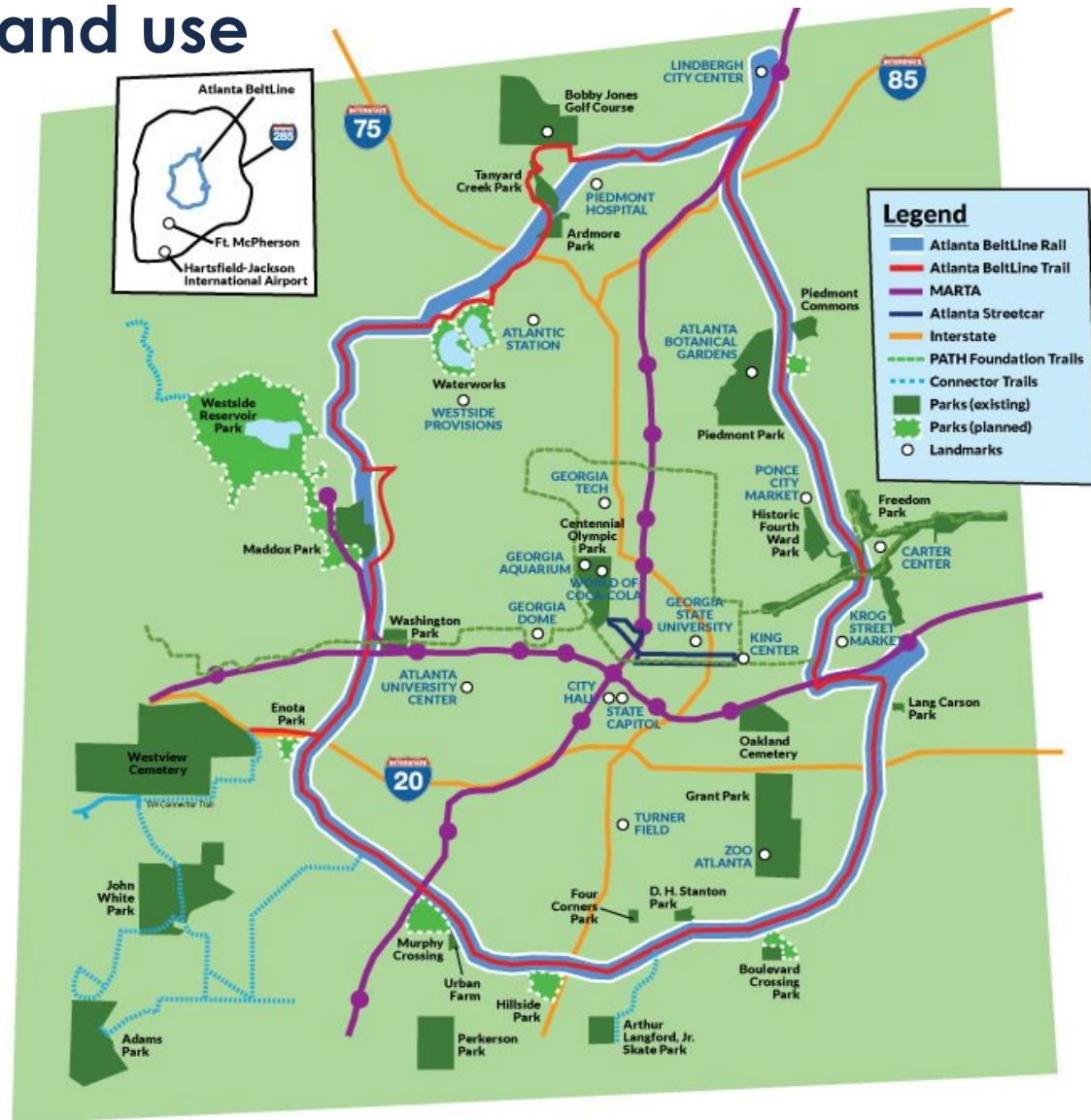


# Organization Structure



Source: Atlanta Beltline Inc.

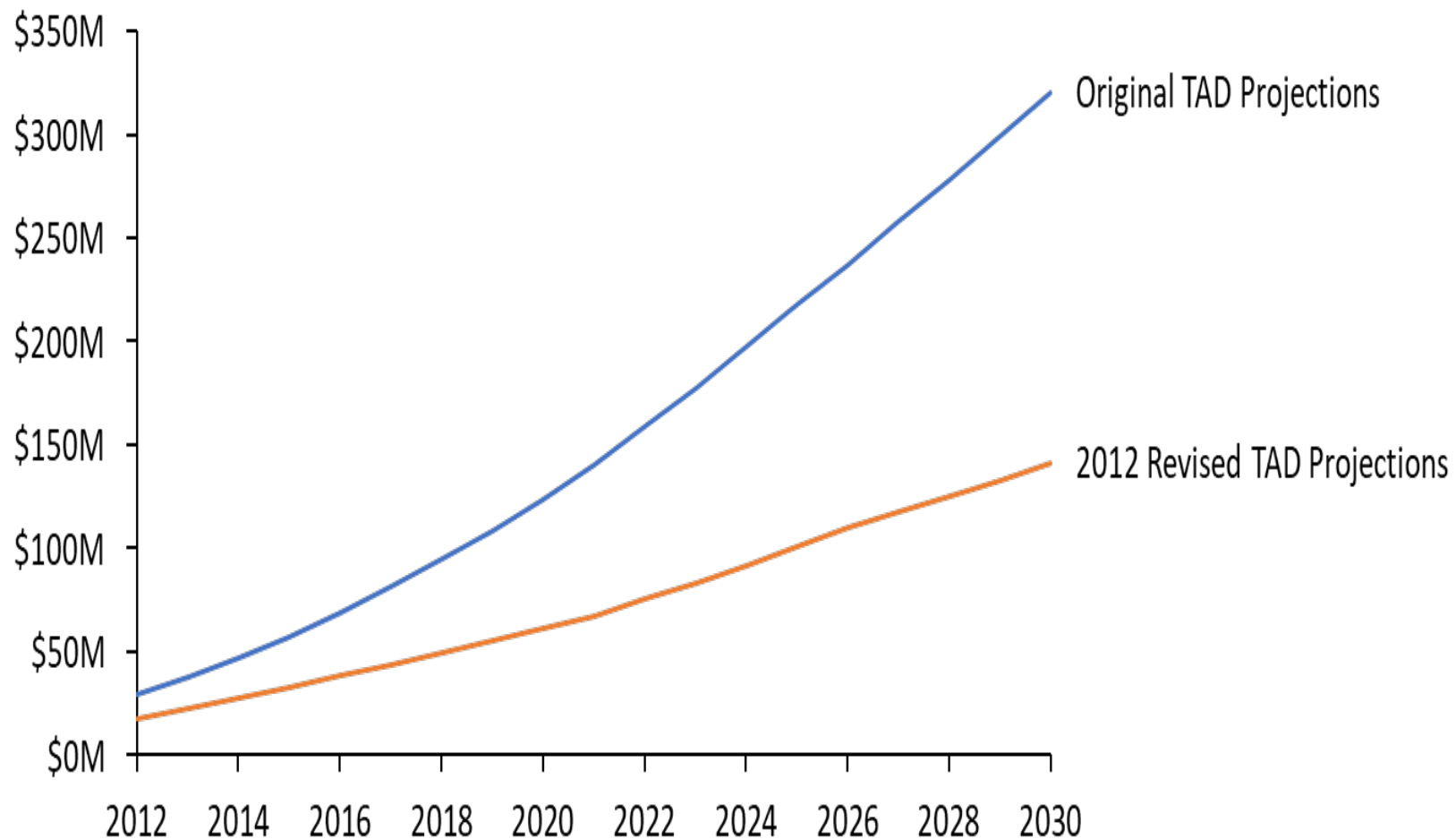
# AB development combined transportation and land use planning



Source: "AB Overview." *AB in 5*, 2018, <https://beltline.org/about/the-atlanta-beltline-project/atlanta-beltline-overview/>.



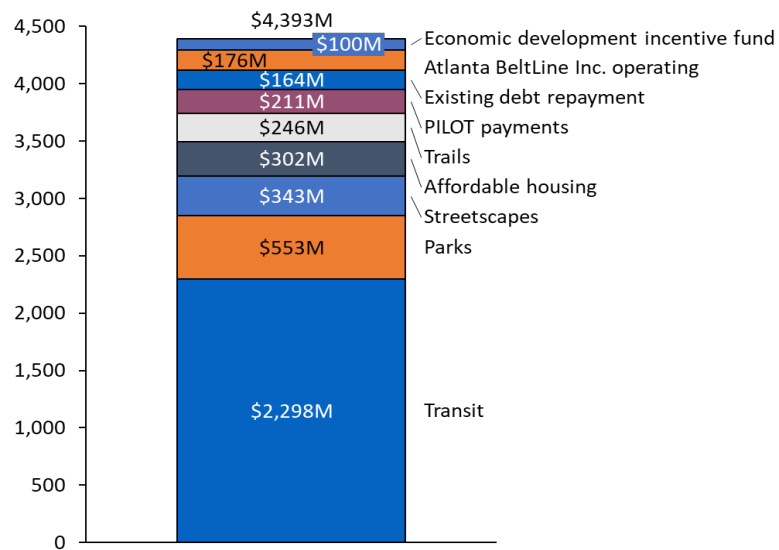
# Recession of 2008 halved AB's original TAD funding forecasts



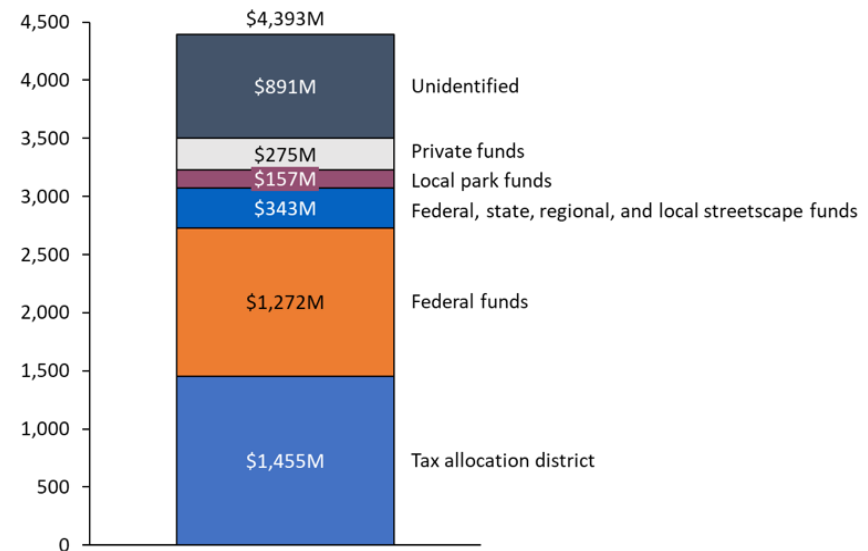
Source: "How the Atlanta Beltline is Funded." *The Atlanta Beltline*. 2018, <https://beltline.org/about/the-atlanta-beltline-project/funding/>

# In revised financial plan—with a gap—TAD was expected to fund 1/3 of project

## AB—Uses of Funds (2012)



## AB—Sources of Funds (2012)



Source: AB 2030 Strategic Implementation Plan: Final Report



## Before . . .



Source: AB FHWA EDC-5 Presentation, October 18, 2018



## ... and After



Source: AB FHWA EDC-5 Presentation, October 18, 2018



## Before . . .



Source: AB FHWA EDC-5 Presentation, October 18, 2018



## . . . and After



Source: AB FHWA EDC-5 Presentation, October 18, 2018



## Photos from September 23, 2019





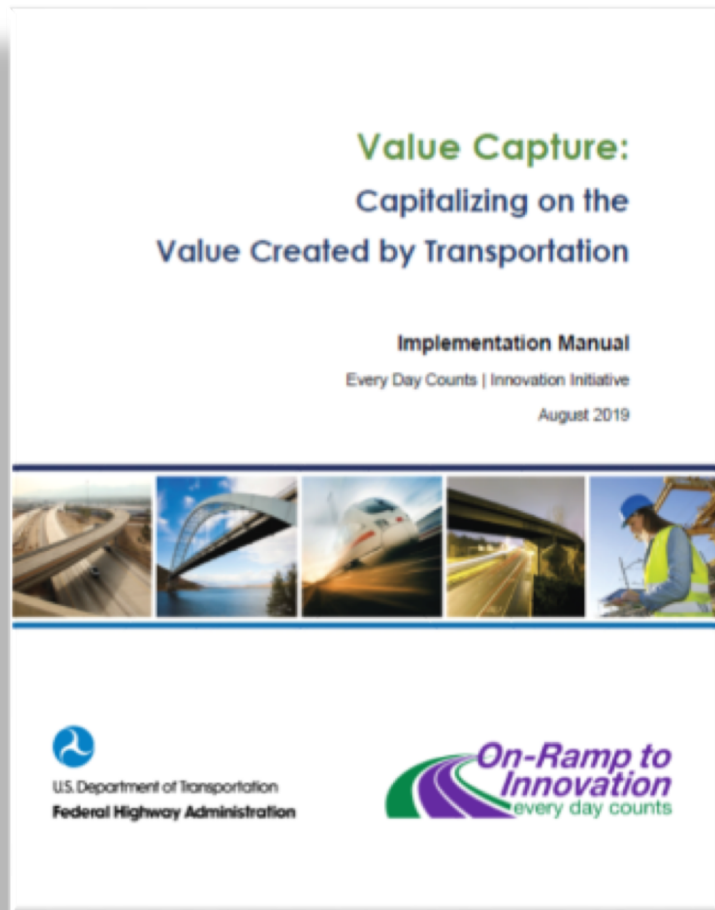
## Photos from September 23, 2019



# Concluding thoughts

- Value capture presents an opportunity to **meet funding challenges** for transportation projects at a local and state level and deliver on public policy objectives
- While value capture can contribute significant revenue to projects for both capital and operating needs, it usually **supplements, rather than replaces**, traditional funding sources
- As shown through multiple case studies, it is critical for sponsors of projects involving value capture techniques to **involve stakeholders** and foster public involvement
- **Careful planning and implementation** is required to deliver on the potential benefits of value capture. This includes awareness of the economic, legal, and delivery implications of the various value capture techniques

# Questions?



[bit.ly/Value\\_Capture](https://bit.ly/Value_Capture)

# Value Capture Program - Leads

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U.S. Department  
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**Federal Highway  
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# Value Capture Implementation Manual

## ***DENVER UNION STATION AND FUNDING AND FINANCING PLAN***

# Denver Union Station (DUS) shows how value capture can be combined with other funding, mitigating risks

- ✓ DUS is multimodal transportation hub
- ✓ Funded with special assessment districts, tax increment finance and joint development
- ✓ Project also financed with TIFIA and RRIF loans

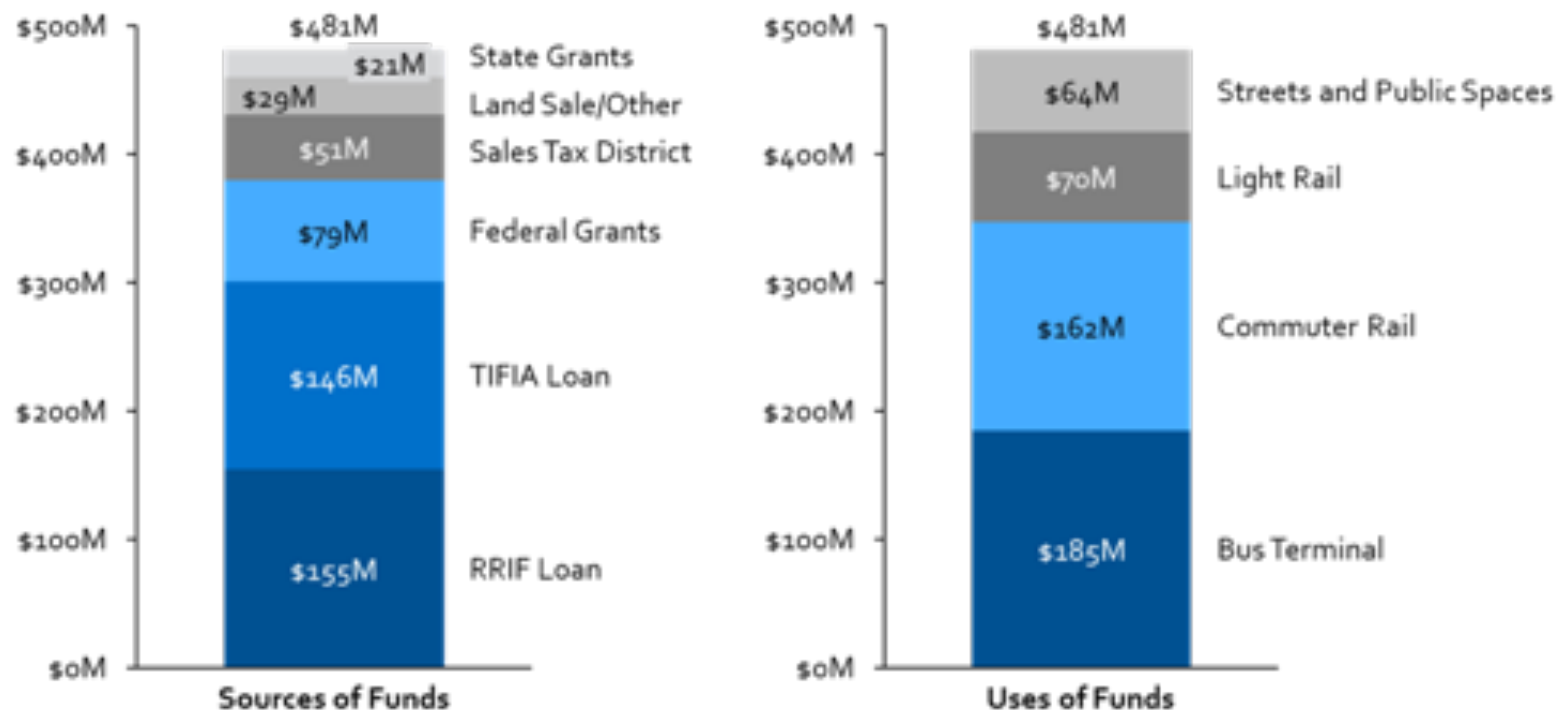


<https://blaineharrington.photoshelter.com/gallery-image/USA-Colorado-Denver-Union-Station-Exterior/G0000WVFB.el3CIY/I0000vxS9ecW6iOY/C0000SwZrZz7em70>

## Around 1/5 of DUS funding secured by value capture monies (sources for half of RRIF loan + land sales)

|             | Funding Sources  |  | Financing Tools  |
|-------------|--|--|--|
|             | Direct System Revenues   | Other, Indirect Sources  |  |
| TRADITIONAL |  | <ul style="list-style-type: none"> <li>• Sales taxes</li> <li>• State grants</li> <li>• Federal grants</li> </ul>  |  |
| INNOVATIVE  | <ul style="list-style-type: none"> <li>• Retail Concessions</li> </ul> | <ul style="list-style-type: none"> <li>• Value capture:               <ul style="list-style-type: none"> <li>○ Land Sale</li> <li>○ Joint development (long-term lease of station for hotel and retail)</li> <li>○ Special assessment district</li> <li>○ Incremental growth techniques (TIF)</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Innovative finance:               <ul style="list-style-type: none"> <li>○ TIFIA</li> <li>○ RRIF</li> </ul> </li> </ul> |

## Around 1/5 of DUS funding secured by value capture monies (sources for half of RRIF loan + land sales) (cont'd)



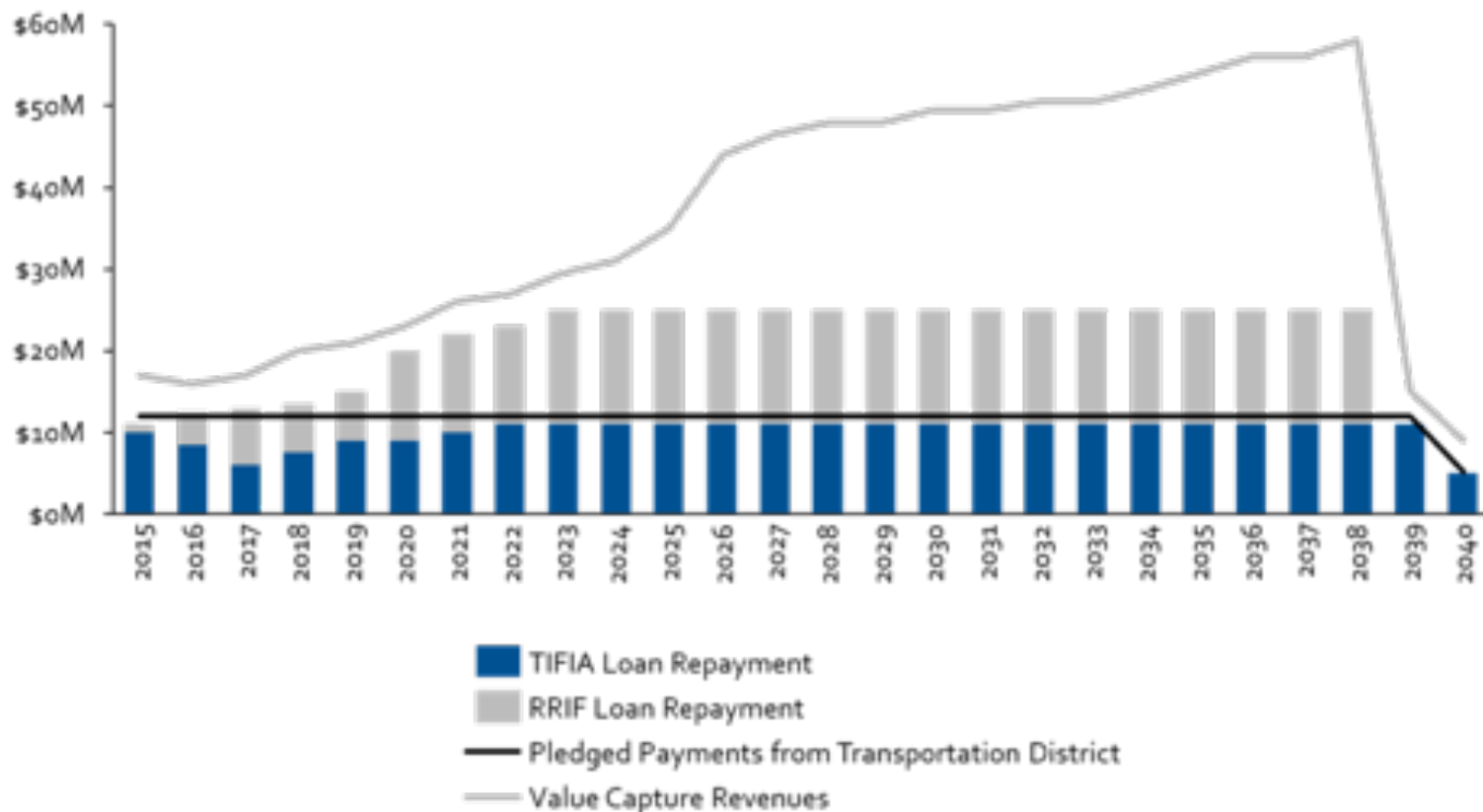


## DUS financed with TIFIA & RRIF loans instead of municipal bonds due to risk and recession

- ✓ Real estate risk **too high** for municipal bonds so that project secured TIFIA and RRIF loans:
  - ✓ Backed by **sales taxes** and
  - ✓ TIF district and special tax district, including:
    - ✓ **Tax increment (TIF)**: over 30 years from 44.5 acre Denver Downtown Development Authority area
    - ✓ **Special assessment district (SAD)**: 2% property tax on properties within DUS district, 30 % tax rate increase
    - ✓ City of Denver **backs 50%** of TIF and SAD revenues
- ✓ Flow of Funds:
  - ✓ TIFIA has first lien on revenues, primarily from **sales taxes**
  - ✓ RRIF relies on **value capture & City guarantee**

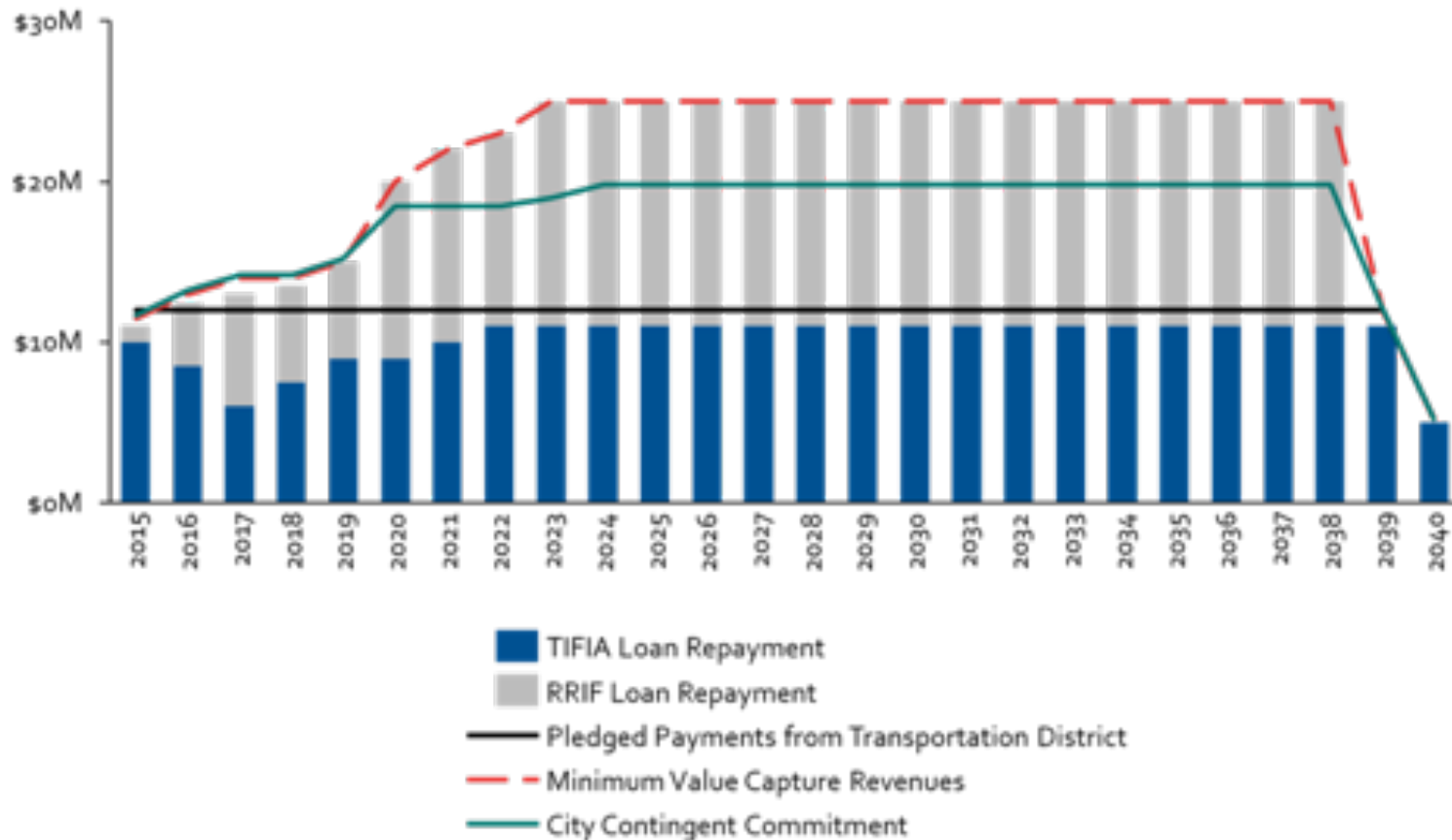
# TIFIA benefits from first lien, relying primarily on sales taxes; RRIF relies on value capture & City guarantee

## DUS Debt Service and Base Case Value Capture Revenues



# With Denver contingent commitment and only 20 percent of forecasted revenues, RRIF still repaid

## DUS Downside Case



## Some of the value that being captured at DUS . . .



<https://www.apartmentfinder.com/Colorado/Denver-Apartments/Ashley-Union-Station-Apartments-vcdsqpd>