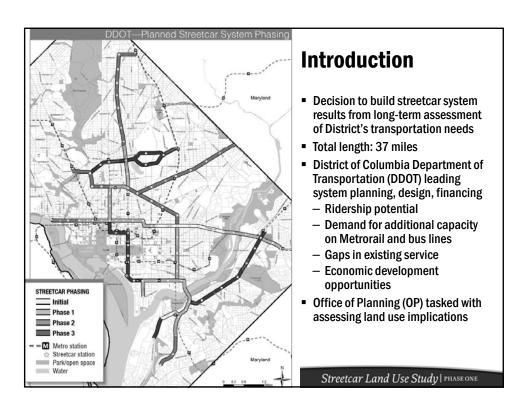
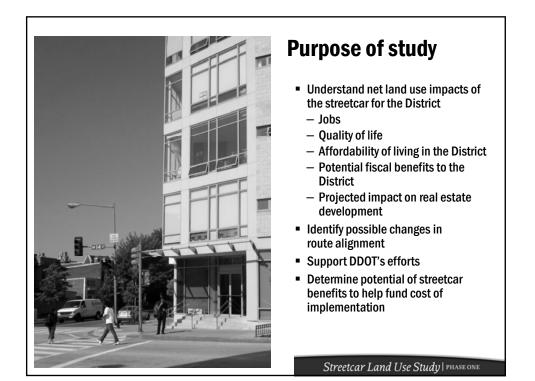
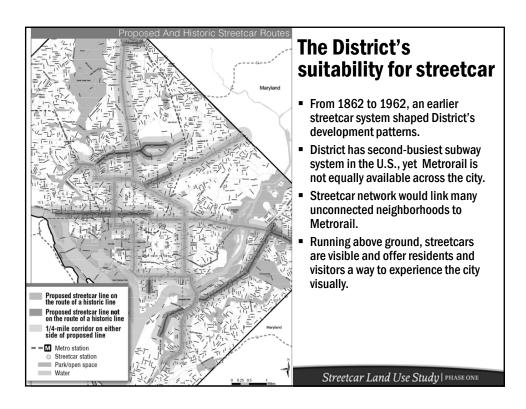
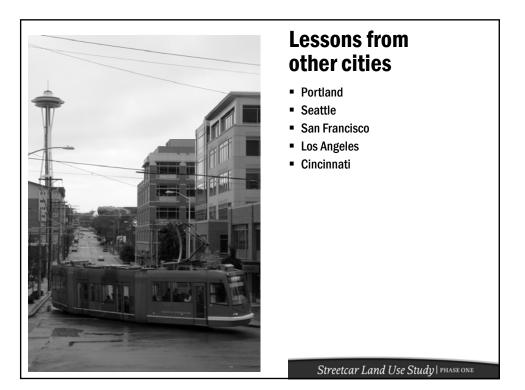


	Streetcar Land Use Study PHASE ONE
Overview	
	 Introduction The Benefits of the Streetcar Quality of Life Real Estate Investment Economic and Fiscal Benefits Systemwide Challenges and Mitigation Corridor/Neighborhood Analysis Benefits and Challenges in Each Corridor Alternative Alignments Strategies and Tools for Optimizing Land Use Impacts Next Steps







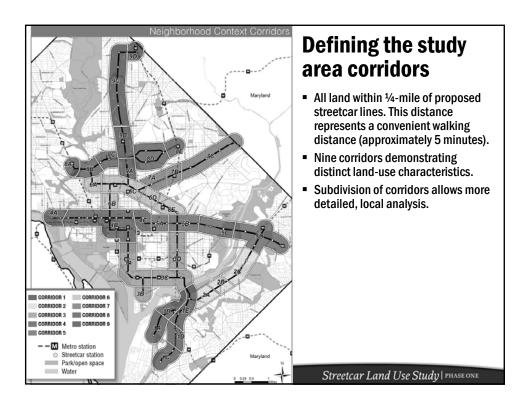


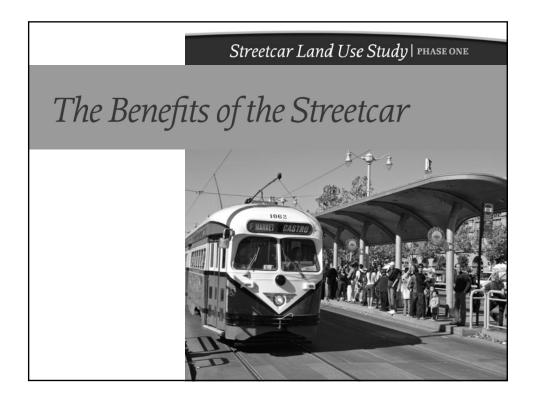


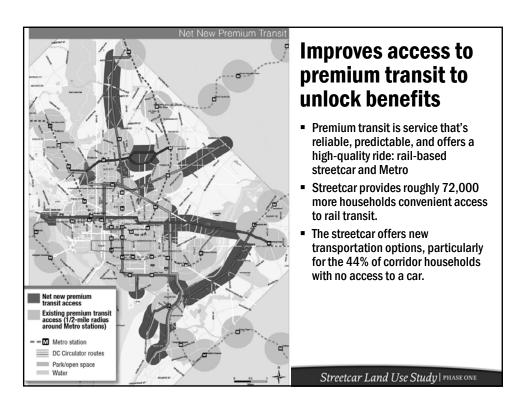


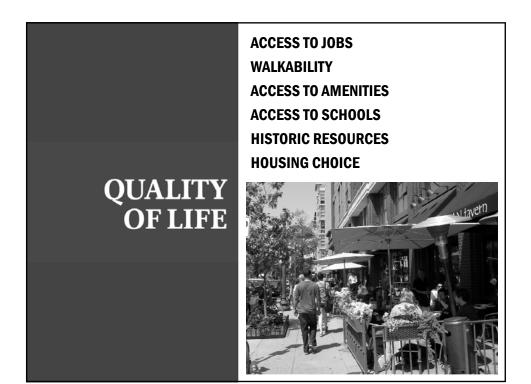
Comparing transit options

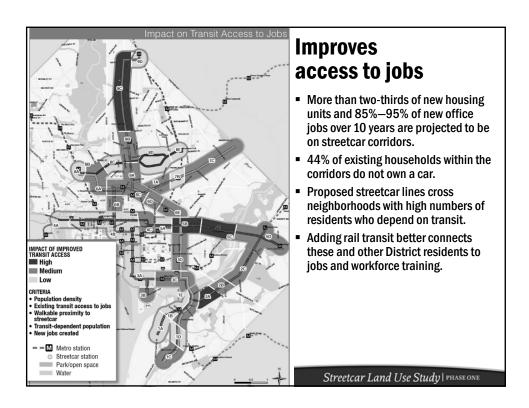
- Bus rapid transit (BRT) costs less to build, can start running sooner, but does not attract same degree of real estate investment.
- Heavy rail costs 5-6 times as much as streetcar, attracts significant real estate investment.
- Streetcar's visibility and permanence also attract private real estate investment. This study projects that increased property value spurred by the streetcar could be 6 to 10 times the system's construction cost.







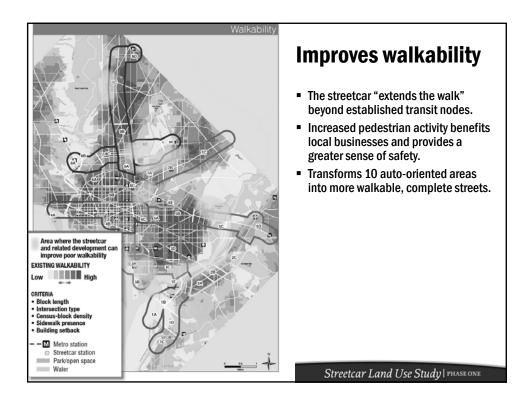


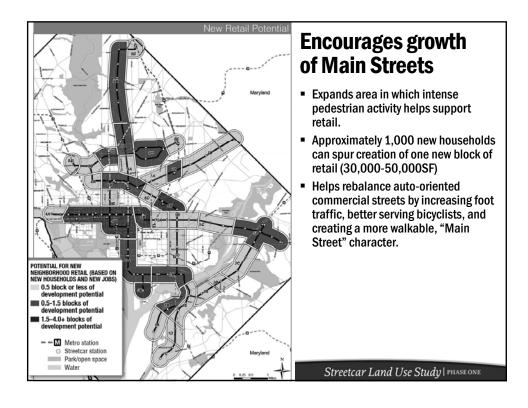


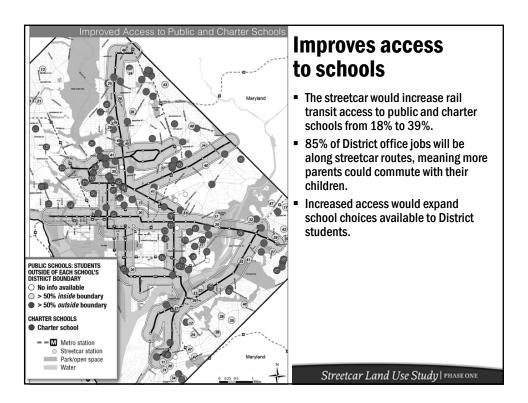


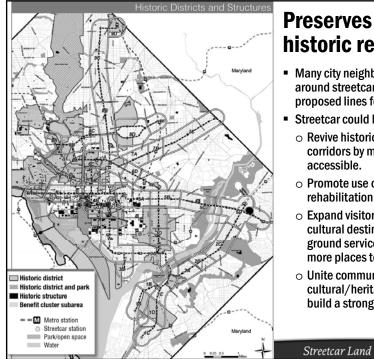
Cuts household transportation costs

- Households can be "car light" or car-free.
- The average automobile cost \$8,437 to own and operate in the District in 2010. Most transit commutes cost less than one-third this amount (annual basis).
- Stronger benefit for lower-income households. Measuring proportion of income, they spend more on transportation than any other group.









Preserves historic resources

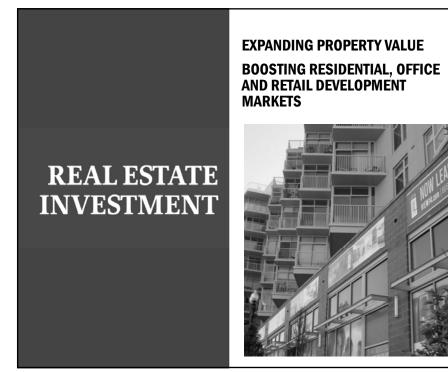
- Many city neighborhoods developed around streetcar lines; two-thirds of proposed lines follow earlier routes.
- Streetcar could help:
 - o Revive historic commercial corridors by making them more
 - Promote use of historicrehabilitation tax credits.
 - Expand visitor access to historic/ cultural destinations (aboveground service lets visitors see more places to eat, shop, visit).
 - o Unite communities around cultural/heritage resources that build a stronger sense of place.

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Streetcar Land Use Study | PHASE ONE
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Expands housing choice

- Areas with little to no new market-rate and/or mixed-income housing,would gain development within a 5-minute walk of the streetcar.
- In other cities, the streetcar has spurred development of new housing types such as lofts, smaller units, and accessory dwelling units.
- In higher-income areas, the streetcar could indirectly yield more affordable housing as it spurs development subject to inclusionary zoning.

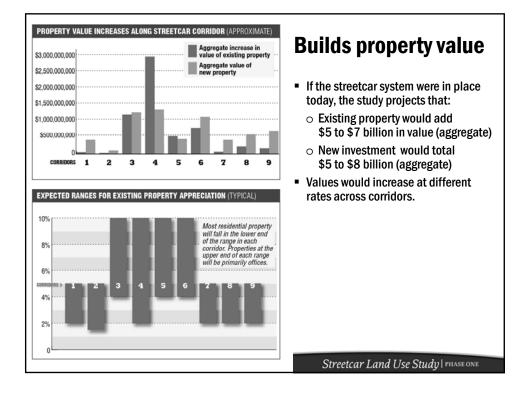


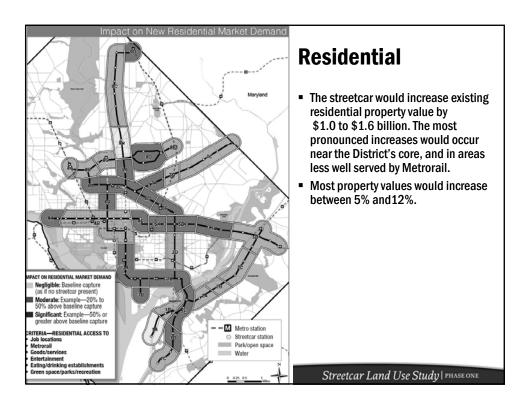


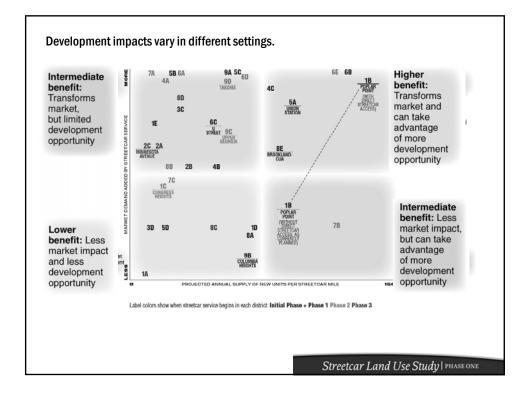
Where and why the streetcar makes a difference

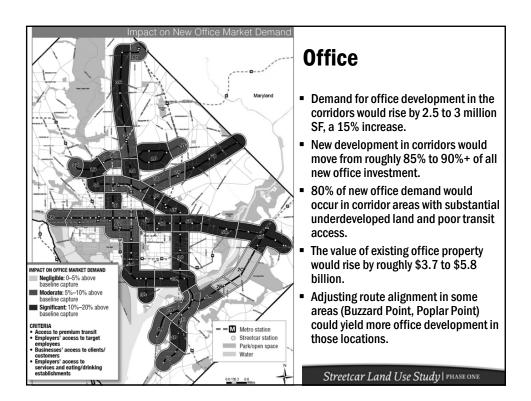
Real estate benefits would be most pronounced where the streetcar:

- improves access to underdeveloped areas.
- encourages expansion of existing commercial districts and developed transit nodes by "extending the walk."
- increases accessibility to areas with existing amenities.





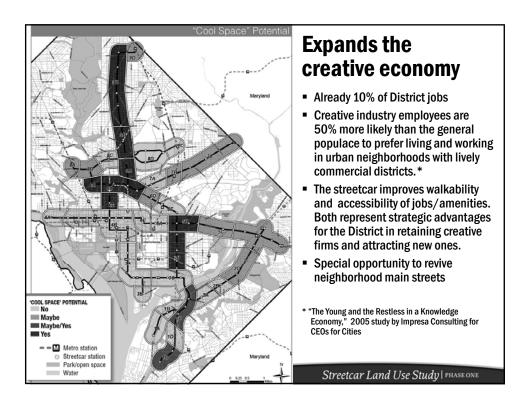




ECONOMIC AND FISCAL BENEFITS

RETAINING JOBS ENHANCING THE INCOME AND PROPERTY TAX BASE

CREATING, ATTRACTING AND



Attracts new residents

- The streetcar could add 4,000 to 12,000 new District households over ten years.
- Better access, amenities would help the District retain existing households that might otherwise move.
- Taken together, these trends could translate into about 1,400 new households annually once the streetcar system is complete.

	BASE (Without streetcar network)	PROJECTED STREETCAR IMPACT * Figures in parentheses show % increase over base condition
OPULATION		
Vet new District residents	34,340	15,500-18,900 (45-55%)
IOUSEHOLDS		
let new District households	22,000	10,800-13,200 (49-60%)
Of net new households, those located long streetcar corridors	16,360	7,400–9,000 (45–55%)
Existing households within I/4 mile of rail transit	39,500 households (16% of 248,300 existing)	72,400 more existing households (29% of existing)
Existing + new households within I/4 mile of rail transit	43,500 to 48,500 households (16–18% of 270,300 existing + new)	96,200 to 97,800 households (34–35% of 270,300 existing + new)
		*Assumes full implementation of streetcar network.

Attracts new jobs and increases workers who also live in the District

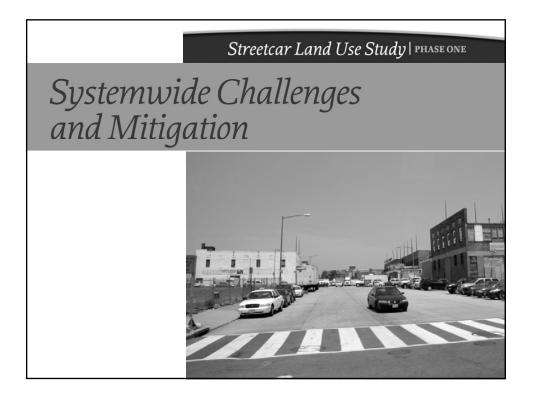
- The streetcar could draw 6,300 to 7,700 new jobs.
- Workers who also live in the District—and pay its income tax—would rise from 31.5% to 32.5% of the workforce over 10 years and reach approximately 34% over 20 years.

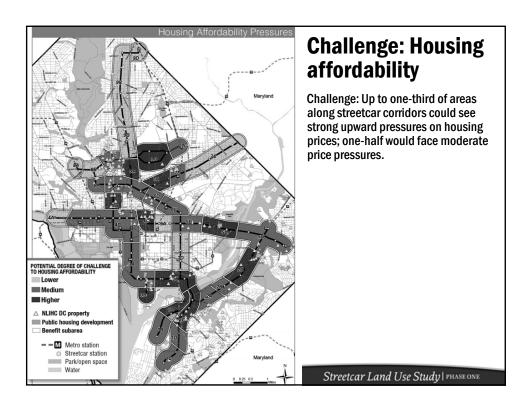
	BASE (Without streetcar network)	PROJECTED STREETCAR IMPACT * Figures in parentheses show % increase over base condition
Net new jobs*	78,133	6,300-7,700 (8-10%)
Net new workforce	22,900	10,300-12,600 (45-50%)
Number of jobs in District held by residents—2010	248,220 (31.5% of 788,160 jobs)	n/a
Number of jobs in District held by residents—2020	271,116 (31.5% of 860,760 jobs)*	10,300–12,600 more workforce; 6,300–7,700 more office and retail jobs
Number of jobs in District held by residents—2030	294,013 (31.9% of 922,259 jobs)	10,300–12,600 more workforce; 6,300–7,700 more office and retail jobs
esidents—2030	(31.9% of 922,259 Jobs)	6,300–7,700 more office and retail jobs
		Streetcar Land Use Study PHASE ONE

Increases tax revenue

- Taxes generated by existing commercial and residential property would increase by a projected \$88 to \$107 million over ten years.
- Taxes paid by new residents would add a projected \$65 to \$80 million after full system buildout.
- New retail spending after full buildout would generate a projected increase of \$14 million in annual sales-tax revenue.

	BASE (WITHOUT STREETCAR)	PROJECTED STREETCAR IMPACT	OMBINED (BASE + STREETCAR IMPACT)
COMMERCIAL REVNEUES			
Existing property tax— commercial	\$1,260,000,000-\$1,540,000,000	\$79,200,000-\$96,800,000	\$1,339,200,000–\$1,636,800,000
Added property tax from commercial development	\$135,000,000-\$165,000,000	\$5,700,000-\$6,900,000	\$140,700,000-\$171,900,000
RESIDENTIAL REVENUES			
Existing property tax— residential	\$244,800,000-\$299,200,000	\$9,000,000-\$11,000,000	\$253,800,000-\$310,200,000
Added property tax from residential development	\$136,800,000-\$167,200,000	\$68,400,000-\$83,600,000	\$205,200,000-\$250,800,000
Added income tax (new residents due to streetcar)	\$117,900,000-\$144,100,000	\$64,300,000-\$78,600,000	\$182,200,000-\$222,700,000
Added sales tax (new retail sales due to streetcar)	\$21,600,000-\$26,400,000	\$11,900,000-\$14,500,000	\$33,500,000-\$40,900,000
Total fiscal benefit	\$1,916,100,000-\$2,341,900,000	\$238,400,000-\$291,400,000	\$2,154,500,000-\$2,633,300,000
residents due to streetcar) Added sales tax (new retail sales due to streetcar)	\$21,600,000-\$26,400,000	\$11,900,000-\$14,500,000	\$33,500,000-\$40,90









Challenge: Market shifts

- The streetcar would likely draw businesses from other areas of the District.
- Market interests would likely intensify along streetcar corridors.
- Owners worry that streetcar may threaten existing businesses by triggering rent increases and inviting more competition.

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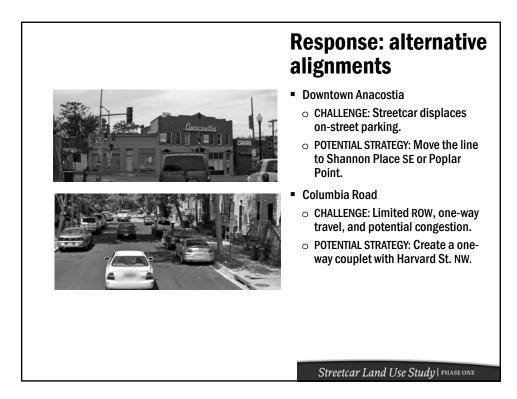


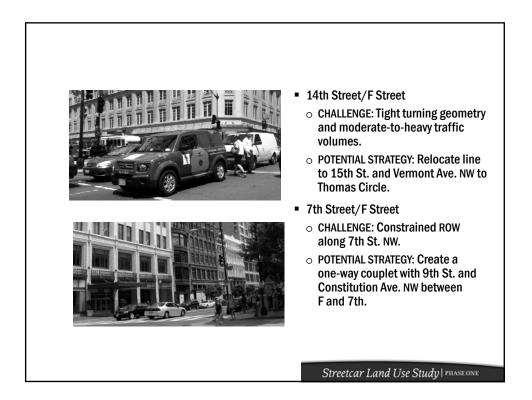
Response: Plan ahead

- Identify market-based uses that do not need sites near premium transit.
- Make sure zoning and development policy promotes mixed-use, transitoriented development where it has not historically occurred.
- Experience of other cities suggests that greater consumer activity generated by streetcars tends to help "mom and pop" stores.
- Use streetcar planning to identify strategic ways to use existing District business-assistance programs, which have limited funding.



STREET CON	STRAINTS							
		mes they hav	e available t	o traffic durir	a neak hou	rs Rankinas move	from areater to les	ser constraints within those groupings,
	mbination of factors: con							
		NUMBER OF LANES			PRIORITY			
SUBAREAS	CORRIDOR	OF LANES (PEAK HOUR)	PARKING	BIKE LANES	BUS	CONGESTION	AVERAGE DAILY TRIPS PER LANE	MITIGATION NEEDS
8B, 8C	Columbia Road	2	full-time		no*	very high	6,400-12,800	Consider additional alignment options
3D	8th Street	2	full-time		yes	moderate	4,000-5,500	Coordinate with WMATA, residents, and merchants
3B	Canal Street	2	full-time		yes	low	900	
9D	Butternut Street	2	restricted		yes	low	1,800-3,500	Address restricted parking
9A, 9B, 9C	Georgia Avenue	4	full-time		yes	high	4,800-7,300	Coordinate with WMATA
6D	Florida Avenue	4	no		yes	high	4,600-7,000	Manage congestion
4A, 4B	K Street	4	no		partial	high	4,500-6,000	
6A, 6C	U Street	4	full-time		yes	moderate/high	3,000-3,475	Manage congestion
2A, 2B, 2C	Minnesota Avenue	4	restricted		no*	moderate/high	2,500-5,800	Address restricted parking
6A, 8B	18th Street	4	restricted		yes	low	3,475	Adddress restricted parking
6B	14th Street	4	full-time	proposed	yes	moderate	5,600-6,600	Manage congestion
1A, 1B	South Capitol Street	4	no		no*	moderate	2,500-4,250	
1C, 1D, 1E	MLK Jr. Avenue	4	restricted	proposed	yes	moderate	3,000-5,000	Address restricted parking
8A	Calvert Street	5	full-time	yes	yes	high	3,500-4,800	Address bike-design issues
5C	Benning Road	6	full-time		yes	moderate/high	2,600-6,300	
5D	Benning Road	6	full-time		yes	moderate/high	5,750-7,600	
	Florida Avenue	6	no		yes	moderate	3,600	
8E	Michigan Avenue	6	restricted		yes	moderate	2,500-9,000	Adddress restricted parking
7A, 7B, 7C	Rhode Island Avenue	6	restricted	proposed	partial	moderate	3,000-6,400	Adddress restricted parking
8D	Irving Street	6	no		no*	low	600-3,000	
ЗA	7th Street	6	restricted		yes	low	2,000-3,000	Adddress restricted parking
3A, 3C	M Street	6	restricted	proposed	yes	low	2,100-4,500	Adddress restricted parking

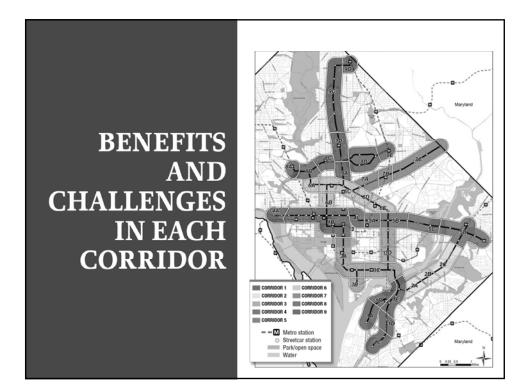


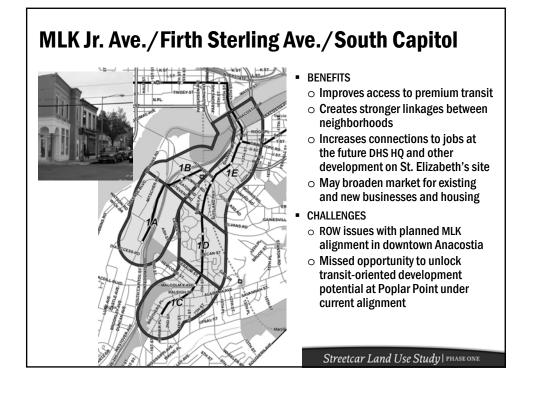


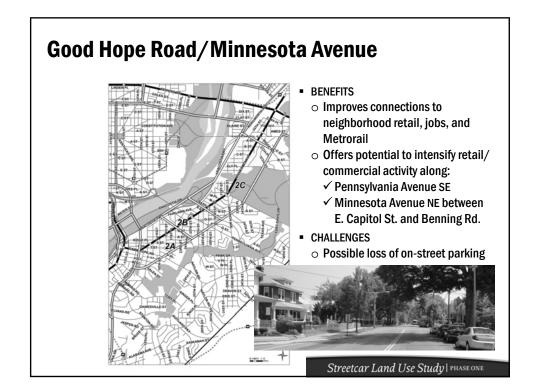
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Corridor/ Neighborhood Analysis

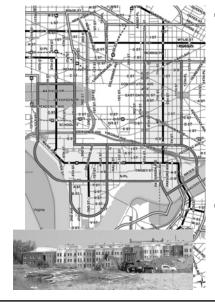








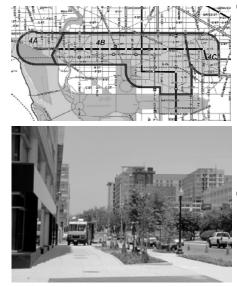
Capitol Riverfront/Buzzard Point/ Capitol Hill/7th Street



- BENEFITS
 - Generates the most economic benefits in locations without premium service today (SW Waterfront, Buzzard Point)
 - Route alignment for Buzzard Point could respond to proposed development.
 - Convenient access to downtown and St. Elizabeth's site
- Possible redevelopment of public housing near Waterfront-SEU Metro
- 7th Street leg creates key work-to-housing and business-to-business connections
- $\,\circ\,$ New options for National Mall visitors
- CHALLENGES
- $\,\circ\,$ 8th St. NE/SE offers only a single travel lane in each direction
- Parking and delivery at Barracks Row

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K and H streets to Union Station/ F, 14th, 7th streets downtown



- BENEFITS
 - Fills gap between Metro stations at Mount Vernon Square, Gallery Place, Judiciary Square, Union Station, and New York Avenue
 - $\circ\,$ Reinforces conditions favorable for development
 - $\,\circ\,$ Increased property values yield a major boost in tax revenues
 - $\circ\,$ Strong new connection to Georgetown
 - $\,\circ\,$ 7th, F, and 14th street alignments add important connections to jobs, Metro stations, and existing amenities
- CHALLENGES
- $\,\circ\,$ Major redesign, reconstruction of K St.
- Street widths, intersection geometry, and traffic levels along 7th, F, and 14th in downtown

H Street/Benning Road



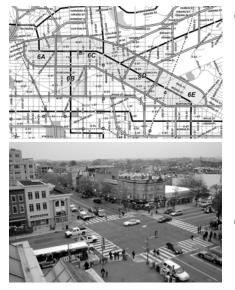


BENEFITS

- Connection to Union Station boosts access to jobs, other transportation modes
- \circ Important redevelopment potential:
 - ✓ Shopping center at 8th St. NE
 - ✓ Proposed housing redevelopment north of Hechinger Mall
 - ✓ Long-term potential for Hechinger Mall
- Moderate to significant increases in value of existing properties
- Potential mixed-income housing redevelopment
- CHALLENGES
- $\,\circ\,$ New infrastructure with shorter blocks needed
- Better pedestrian accommodations needed
- Restoring street grid at Benning/Minnesota Ave. would improve traffic flow, walkability

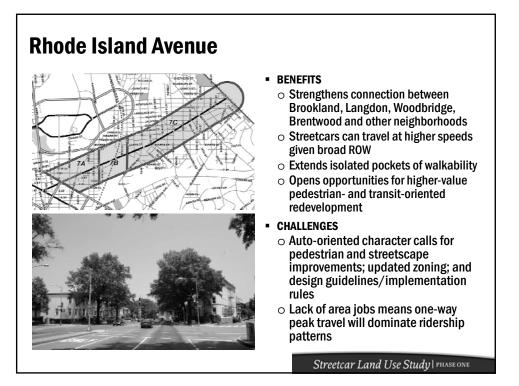
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14th Street/18th Street (Adams Morgan)/ U Street/Florida Avenue/8th Street

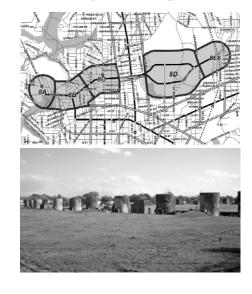


BENEFITS

- Extends walkable area from Metro stations along five streetcar corridors
- Reinforces market interest in existing and new residential, commercial space
- Development potential varies
 - ✓ Many areas already built-out or under historic-preservation controls
 - ✓ Several large parcels along 14th St.
- Improves access to New York Avenue Metro station
- Improves access to Adams Morgan retail/restaurant district
- CHALLENGES
 - $\,\circ\,$ Street conditions for pedestrians need improvement



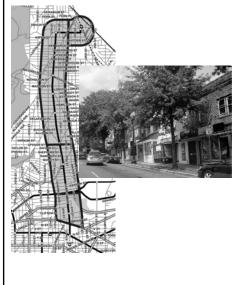
Woodley Park/Columbia Heights/ Washington Hospital Center/Brookland



BENEFITS

- Route ties together areas divided by Rock Creek, institutional uses, and a rail corridor
- Relieves capacity constraints at the core of the Metrorail system
- $\,\circ\,$ Benefits Woodley Park hotels
- Improves access to Washington Hospital Center
- CHALLENGES
- $\circ~\mbox{ROW}$ constraints on Columbia Road
- $\circ\,$ Auto-oriented character near
- hospital center and Brookland-CUA Metro calls for pedestrian and streetscape improvements; updated zoning; and design guidelines/ implementation rules

Georgia Avenue NW and Takoma



BENEFITS

- Makes auto-oriented portions of Georgia Avenue more transit-oriented
- Expands walkable area at Georgia Avenue-Petworth Metro
- Better connects northern part of Howard campus and Shaw-Howard University Metro
- Strengthens Georgia Avenue's appeal to creative-economy businesses
- Many commercial parcels hold strong potential for infill development
- $\circ\,$ Walter Reed campus redevelopment
- CHALLENGES
 - Managing traffic volumes in Georgia ROW
 - Auto-oriented development calls for pedestrian and streetscape improvements



