



vision42

Informational Briefing for
Manhattan Community
Board Six

October 13, 2010

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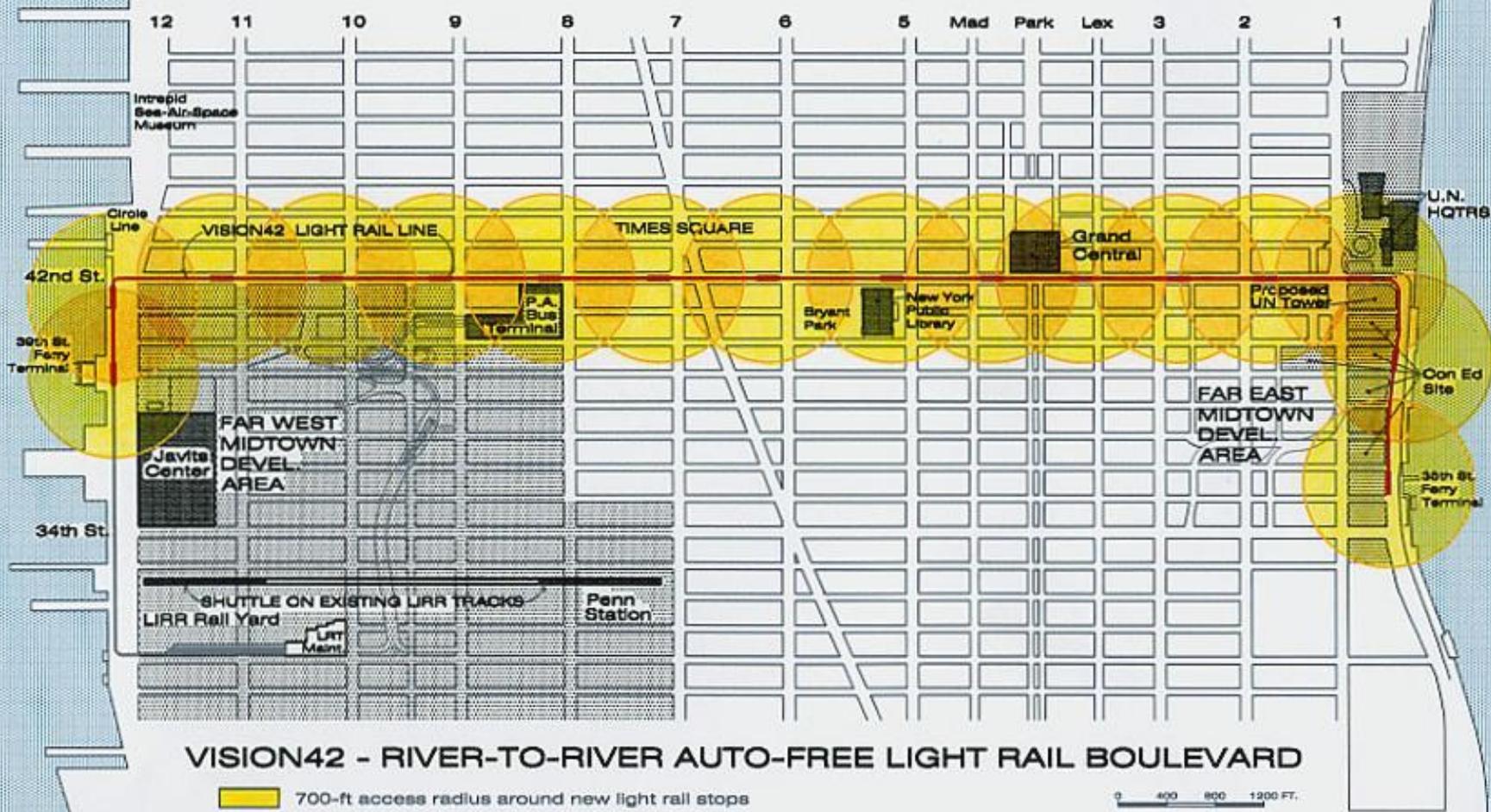
auto-free light rail boulevard for 42nd Street

Roxanne Warren, AIA, Chair

George Haikalis, ASCE, Co-Chair

Institute for Rational Urban Mobility, Inc.

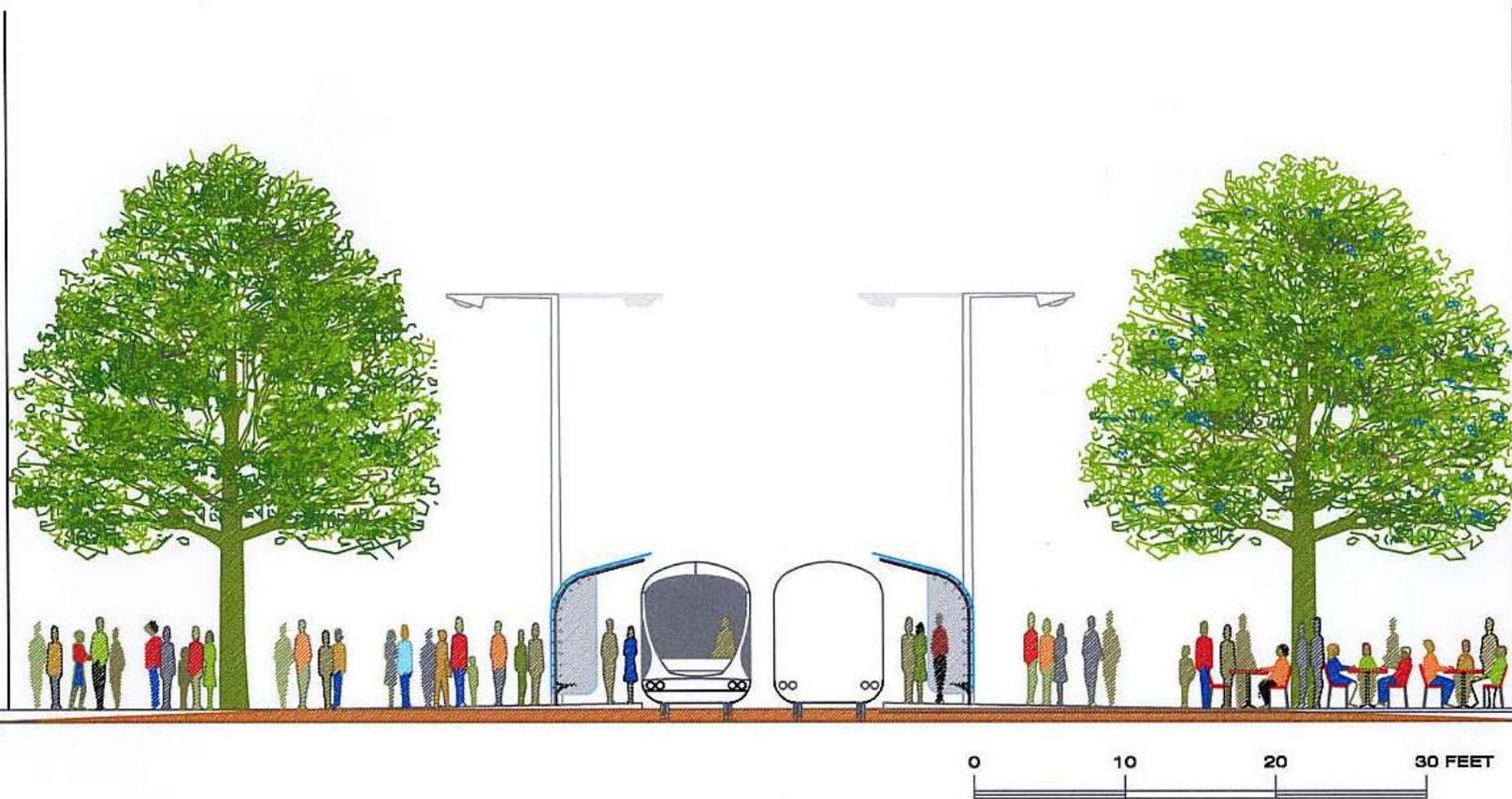
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a 2½-mile low-floor light rail line, river-to-river in 21 minutes

— with vehicles arriving every 3.5 minutes in peak hours

light rail will reach the new development planned at the rivers, stopping at every avenue and transit hub along the way

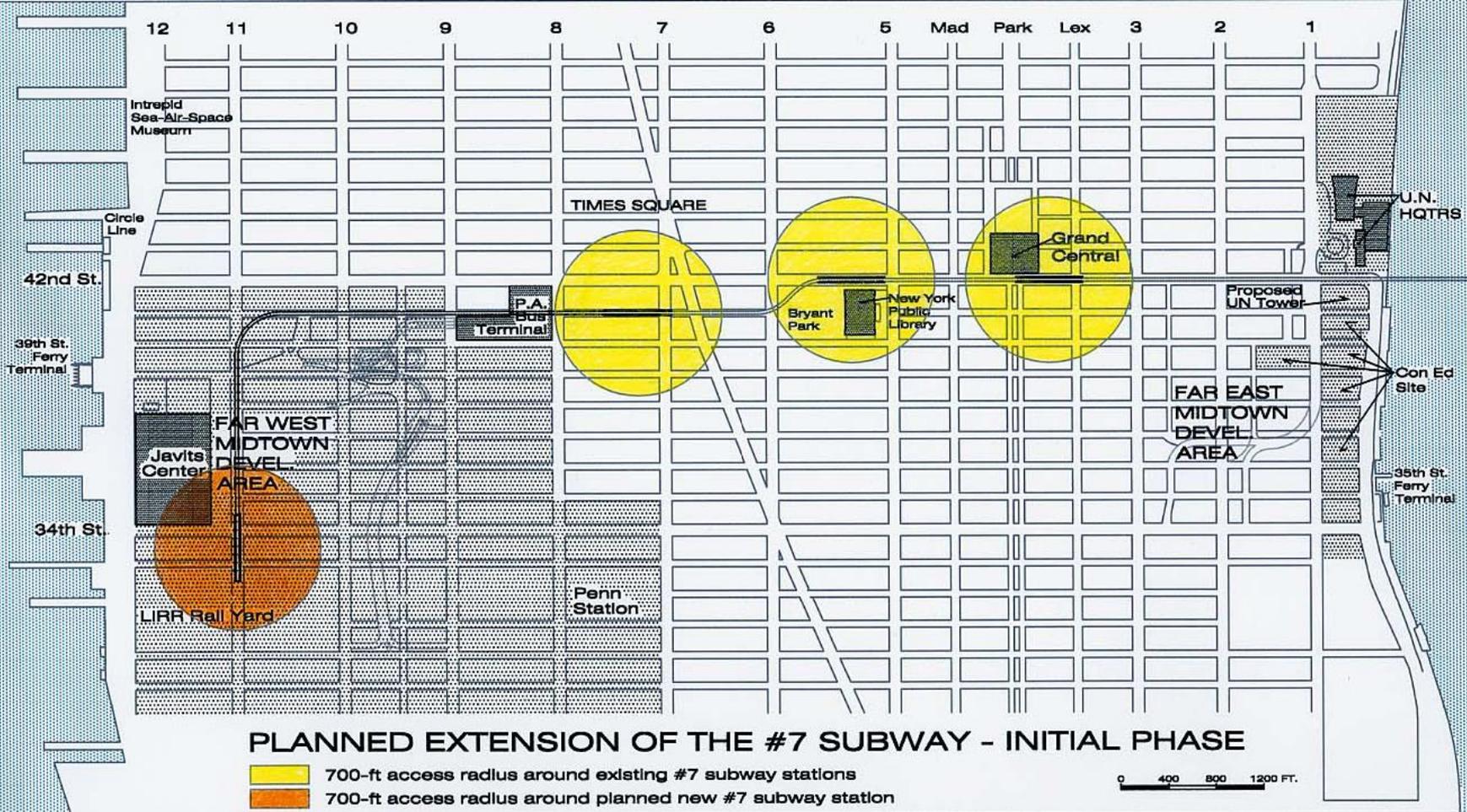


VISION42 - TYPICAL CROSS SECTION

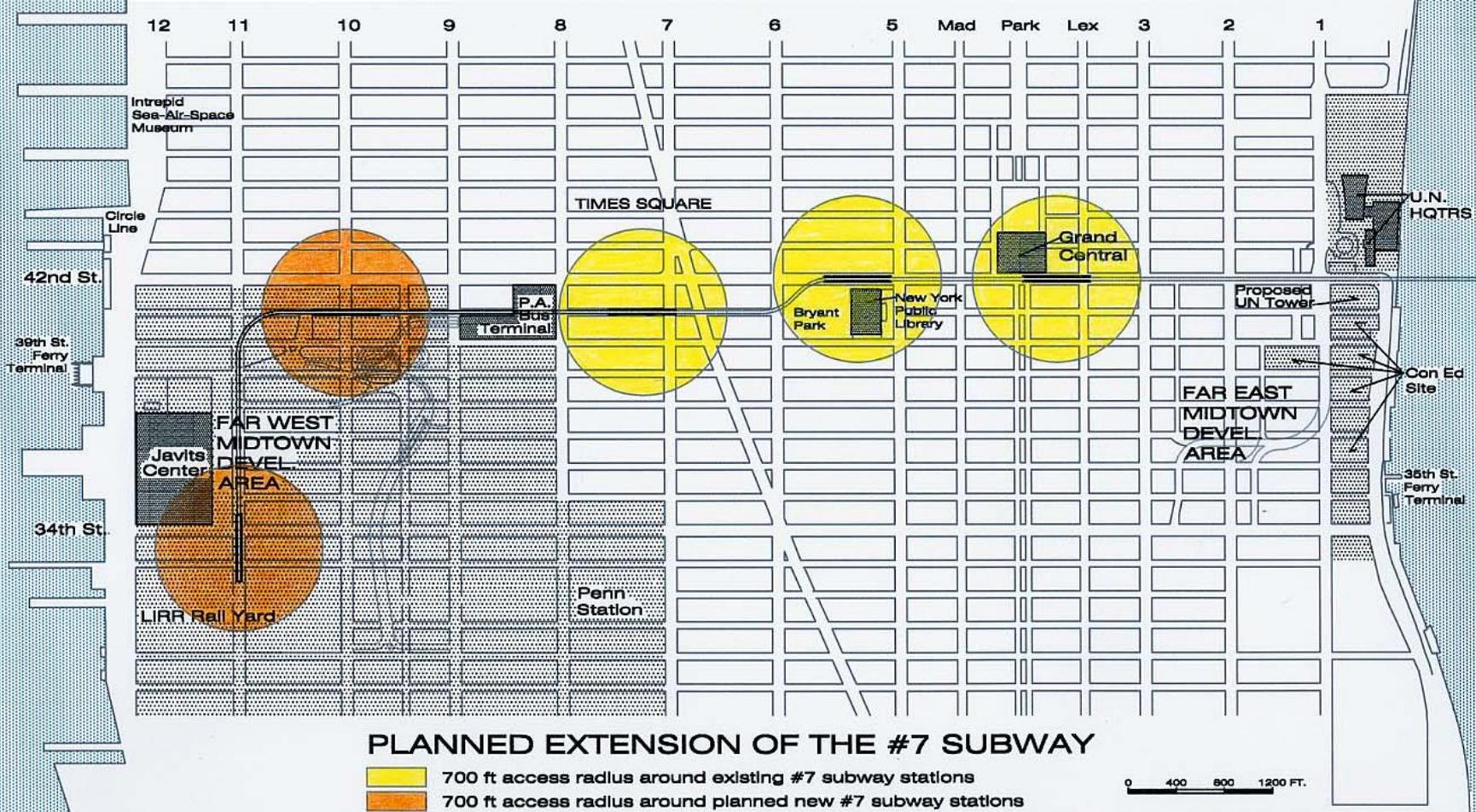
a fully landscaped walking environment for Manhattan's center — eliminating traffic allows space for cafés and other amenities, and provides significant new open space in this park-deprived area of town



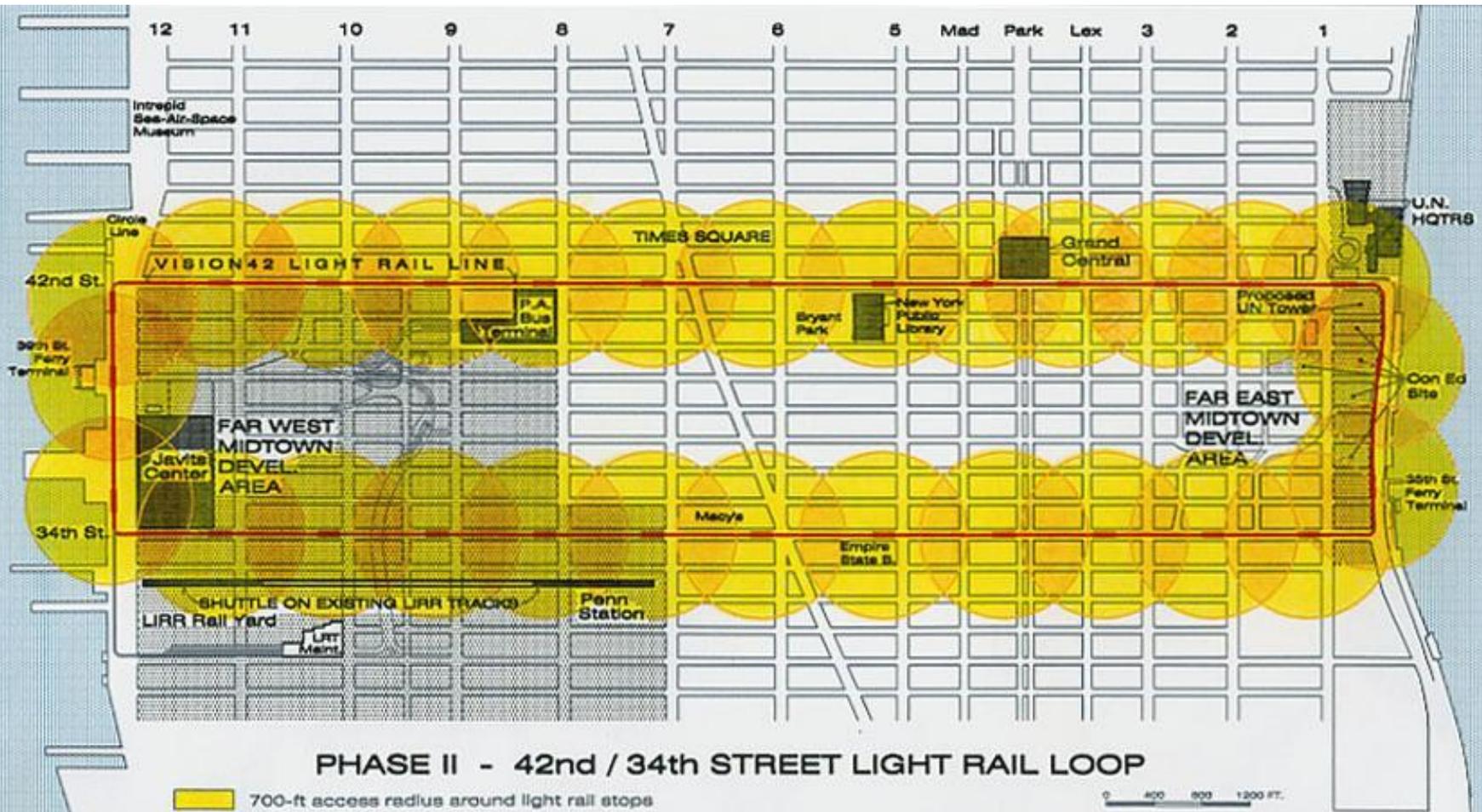
demand for better surface transit and pedestrian space grows with every new development — the Con Ed site will be especially in need of high-quality rail transit access to the center of Midtown



the \$2 billion #7 subway extension will not reach the waterfronts or the Con Ed site



even if the station at 10th Avenue is built, there will be no rail connection with existing and planned new development near the waterfronts, such as the Con Ed site



light rail could ultimately be extended to create a continuous two-way 42nd/ 34th Street loop, linking all major Midtown transit hubs and ferries with the Javits Center, the United Nations, important tourism venues, and new developments planned along both rivers

Why Light Rail rather than Bus Rapid Transit for the 42nd Street corridor?

“Limited-stop service” is not practical on a crosstown route because each stop is an important transfer point.

Light Rail has additional key advantages:

- three times the capacity**
- smoother, more appealing ride**
- its permanence reinforces new development**
- the rails are a self-enforcing path**



low floors allow the system to perform almost like a moving walkway



light rail auto-free streets in the U.S. include those in Houston, Dallas, San Diego, Sacramento, Portland and Minneapolis



New Jersey Transit chose light rail over buses for its Hudson Bergen line for the greater dependability of its dedicated right-of-way

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TECHNICAL STUDIES

ECONOMIC



TRAFFIC



SAM SCHWARTZ LLC

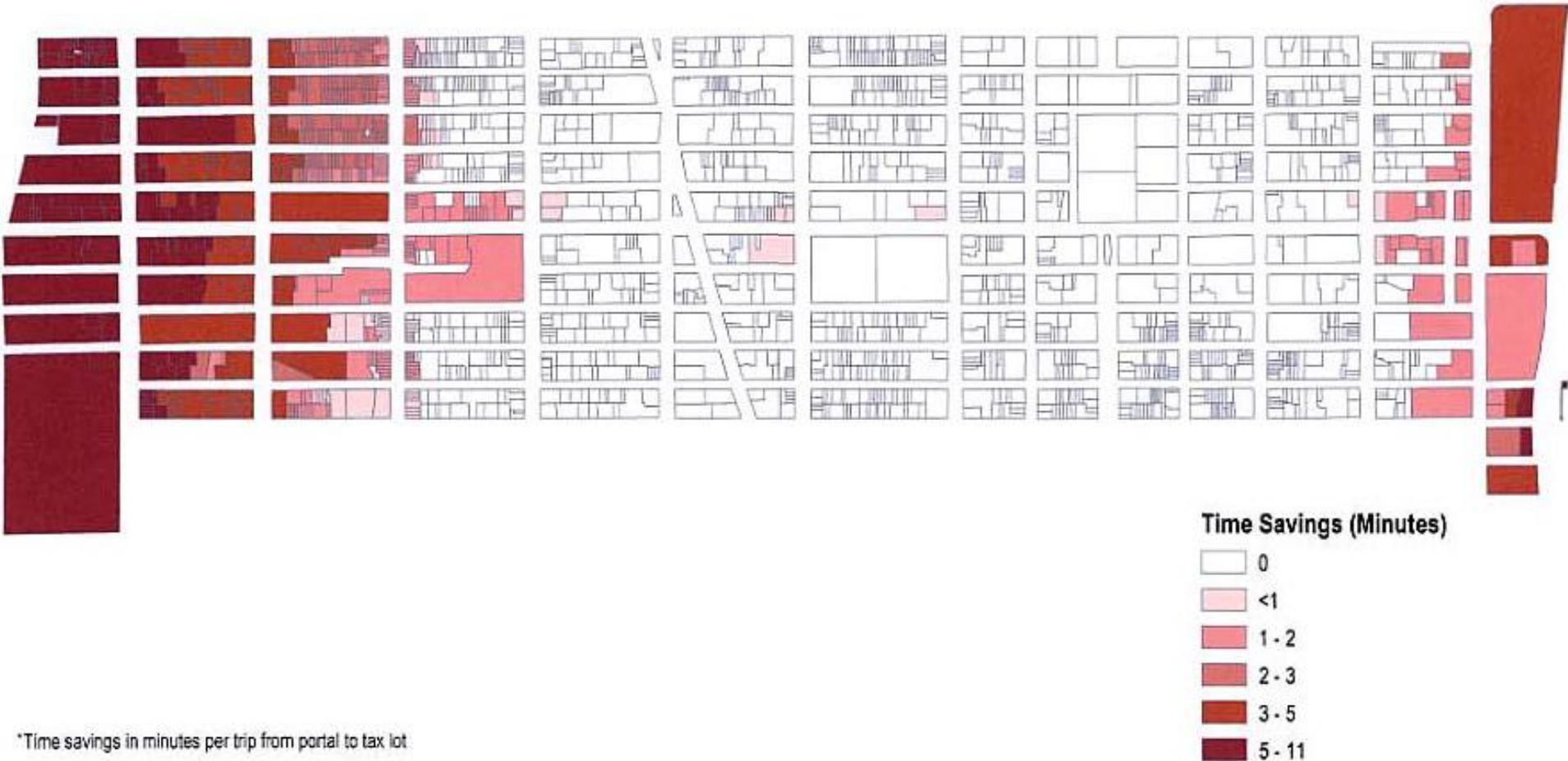
COST



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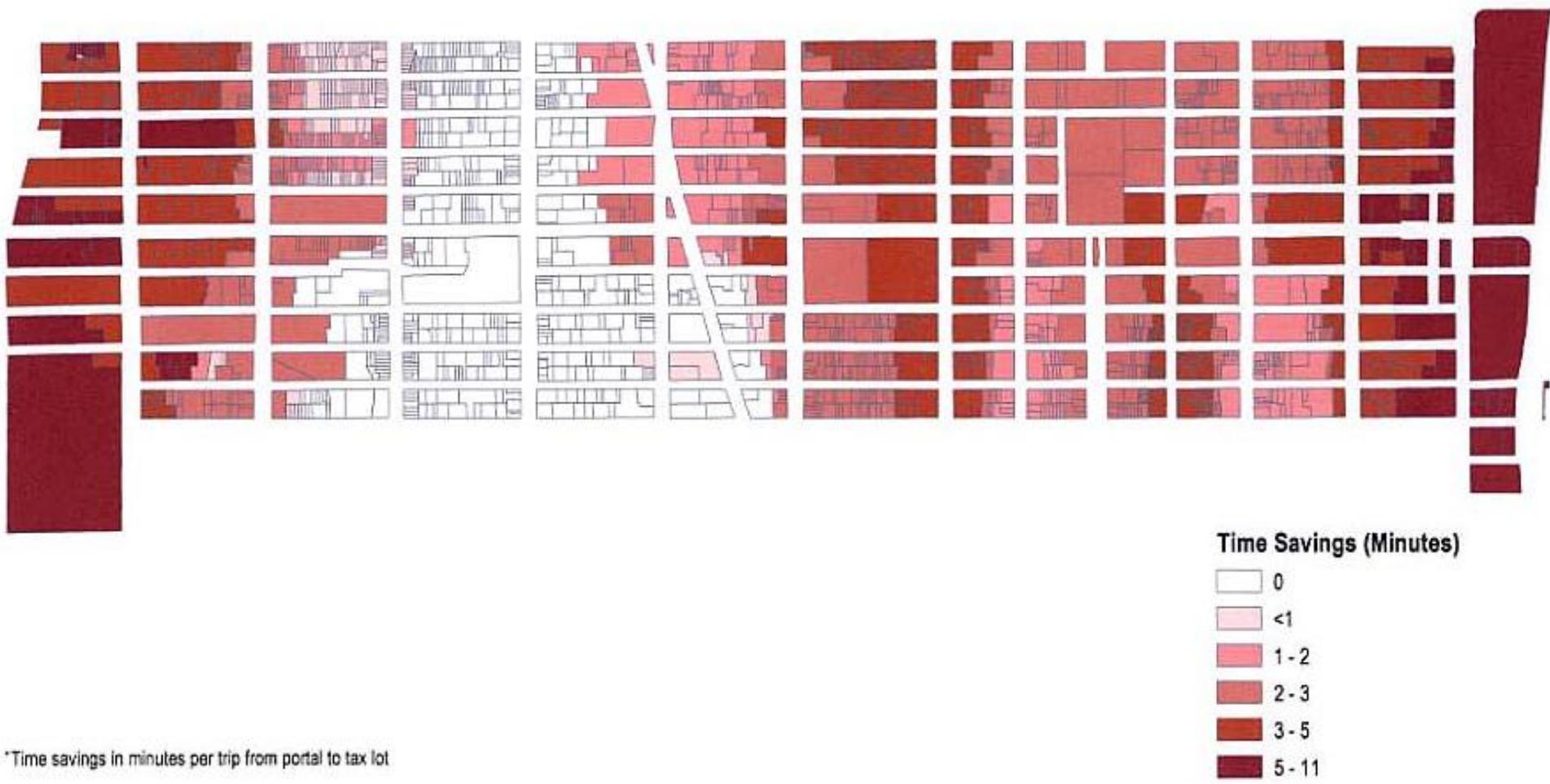


Travel Time Savings Using LRT from Grand Central Terminal





Travel Time Savings Using LRT from Port Authority Bus Terminal



*Time savings in minutes per trip from portal to tax lot



vision42 Produces a Big Gain for Property Owners on 42nd Street

- **Major gains in office property values:**
 - **\$1.0 billion for 398 high-value properties**, an average increase of **\$188/sf** of lot area (4%). This will be important for financing the project.



Other Economic Gains Are Projected

Economic impacts on retail shops, restaurants, hotels and theaters on 42nd Street

- **Structured interviews with senior managers**
- **Pedestrian modeling**



vision42 Expected to Produce Major Gains for Retail Shops, Restaurants, Hotels and Theaters

Surveys: when asked to rate vision42 on a scale of 1 to 5, with 5 being most favorable:

- **4.0 Retail shops**
- **3.9 Restaurants**
- **4.6 Hotels**
- **3.4 Theaters**



Projected Increase in Pedestrian Trips by Block Segment



vision42:
**Pedestrian Generation of
Pedestrianization and LRT**

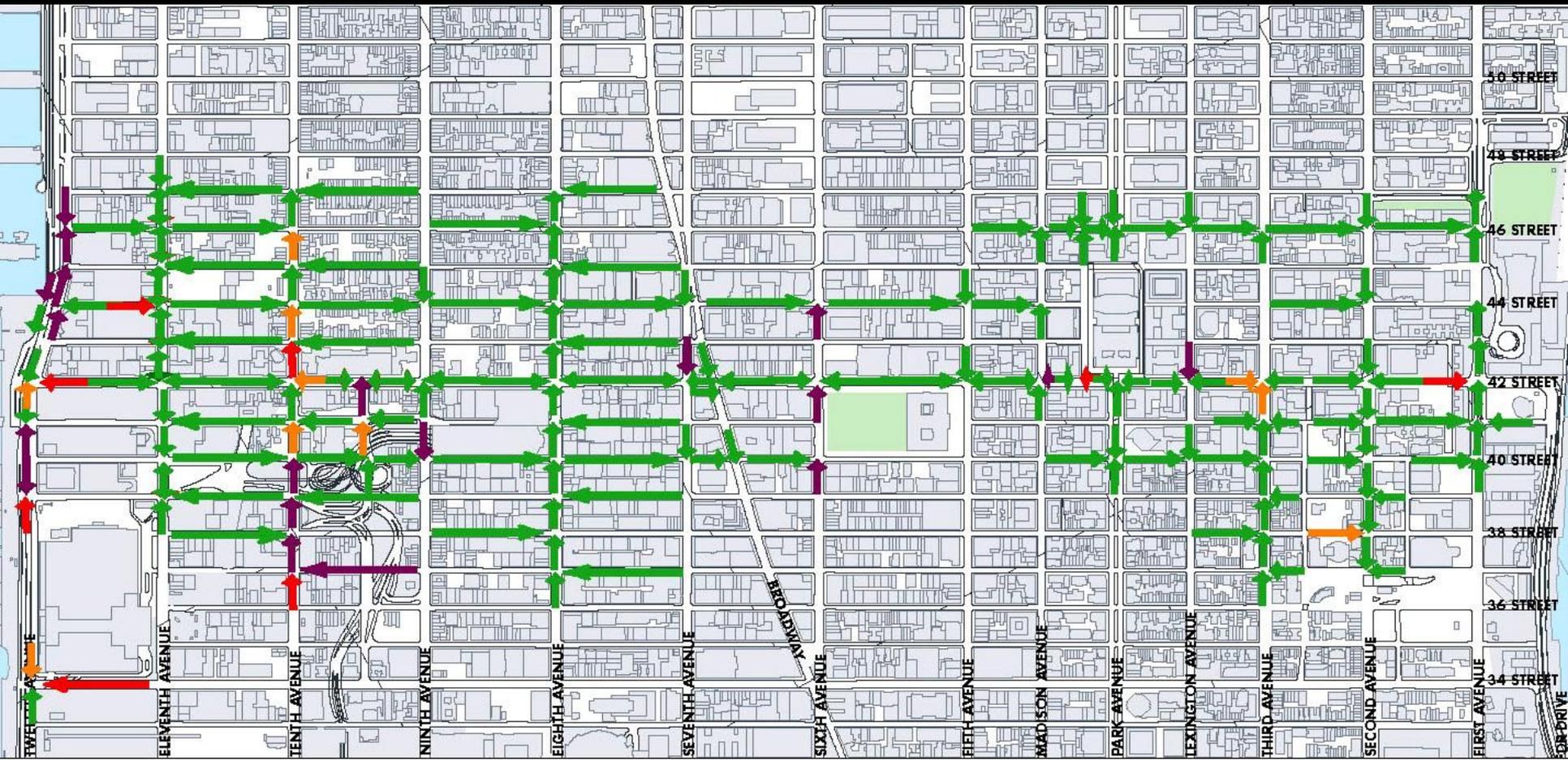
Percent Change Midday

- 15.3% - 21.8%
- 21.9% - 32.9%
- 33.0% - 50.4%
- 50.5% - 73.7%
- 73.8% - 90.8%

Projected gains in retail and restaurant sales are based on an average increase of 35 percent.



Traffic – Level of Service – 2010, PM, No Build



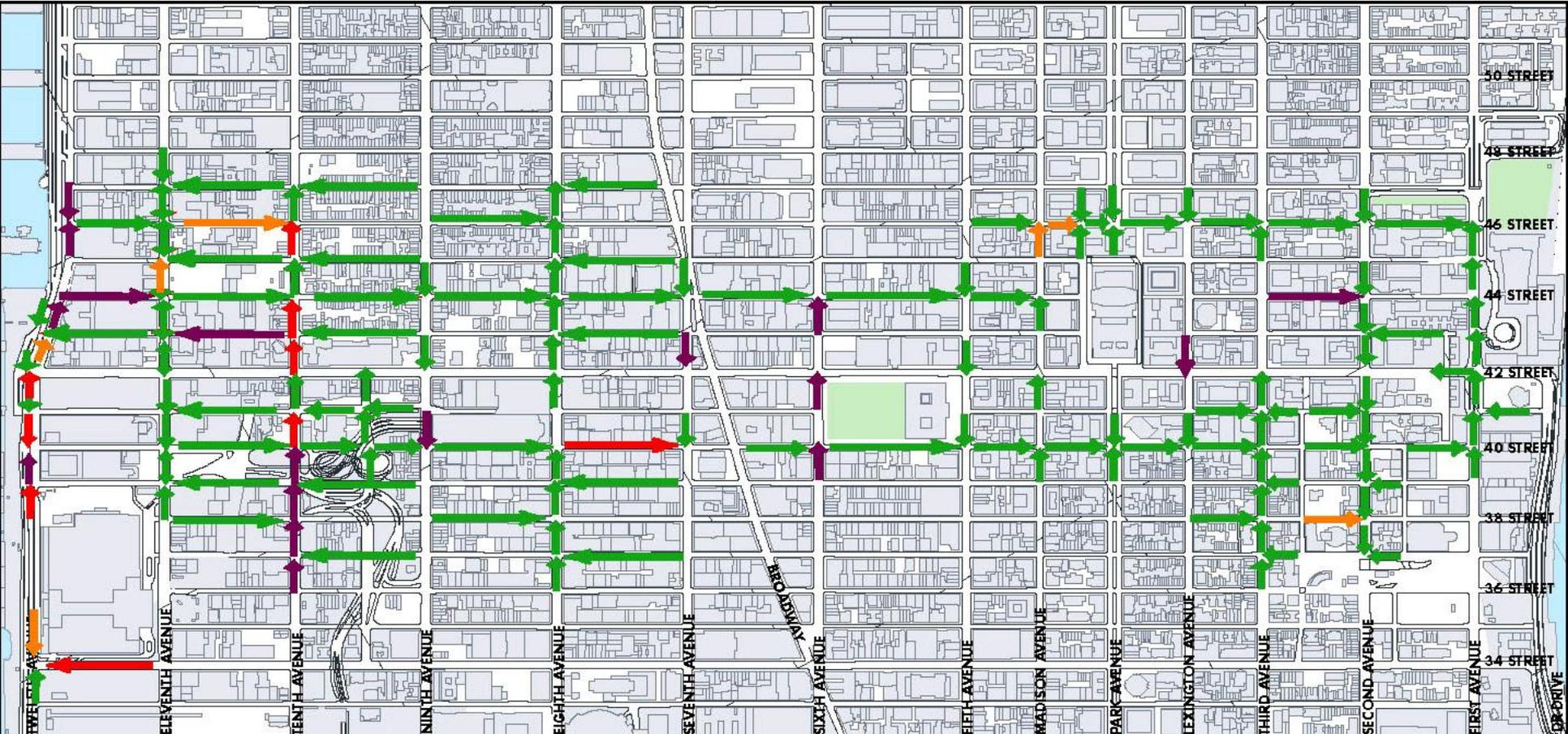
KEY	Delay, LOS
	>80 sec. Delay, LOS F
	< 80 sec Delay, LOS E,F
	>45 sec. Delay, LOS D
	< 45 sec Delay, LOS D,C,B,A

.....compiled from the data of 3 major
environmental impact studies



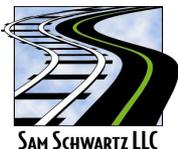


Traffic – Level of Service – 2010, PM, Build Mitigated



KEY	Delay, LOS
	>80 sec. Delay, LOS F
	< 80 sec Delay, LOS E,F
	>45 sec. Delay, LOS D
	< 45 sec Delay, LOS D,C,B,A

mitigation methods include changes in traffic signals, traffic lane allocation, and parking regulations



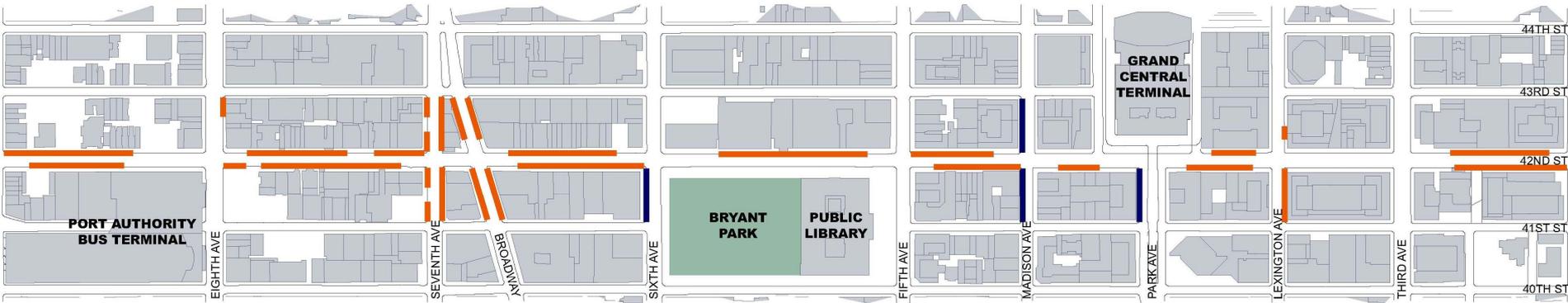
Freight Entrances between 3rd and 8th Aves



most large office buildings have their freight entrances on 41st or 43rd St., since ground floor rents on 42nd St. are too high for this function



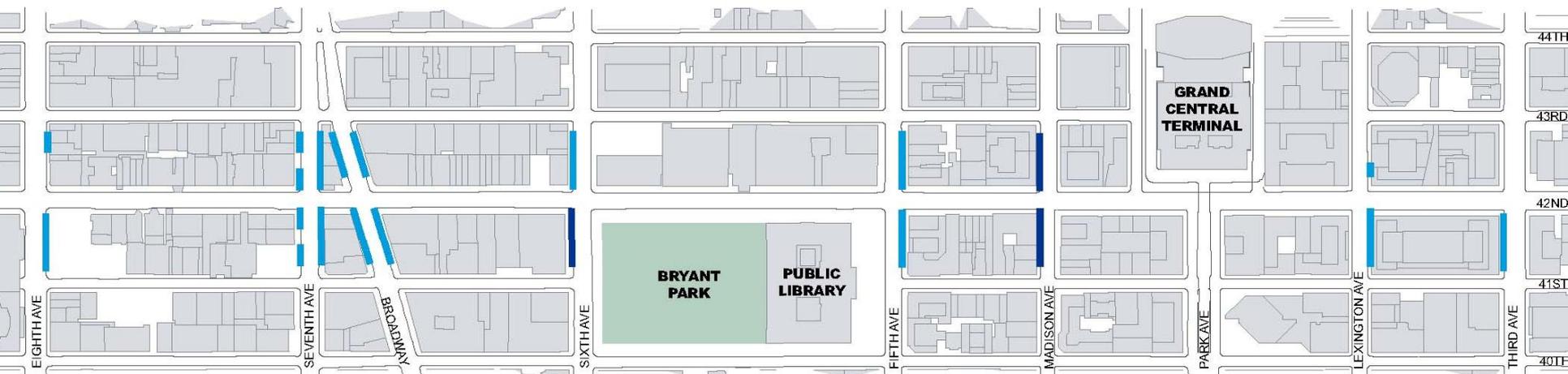
Traffic Study Inventoried Existing Delivery Truck Parking Locations, 3rd to 8th Avenues



At the peak hours of usage for each curb, the curb feet-minutes currently occupied by delivery trucks were carefully observed and compared with the curb space available.

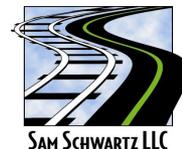
-  EXISTING NO STANDING Except Trucks Loading and Unloading
-  EXISTING NO STANDING Except Commercial Vehicles--Metered Parking (3 Hour Limit)

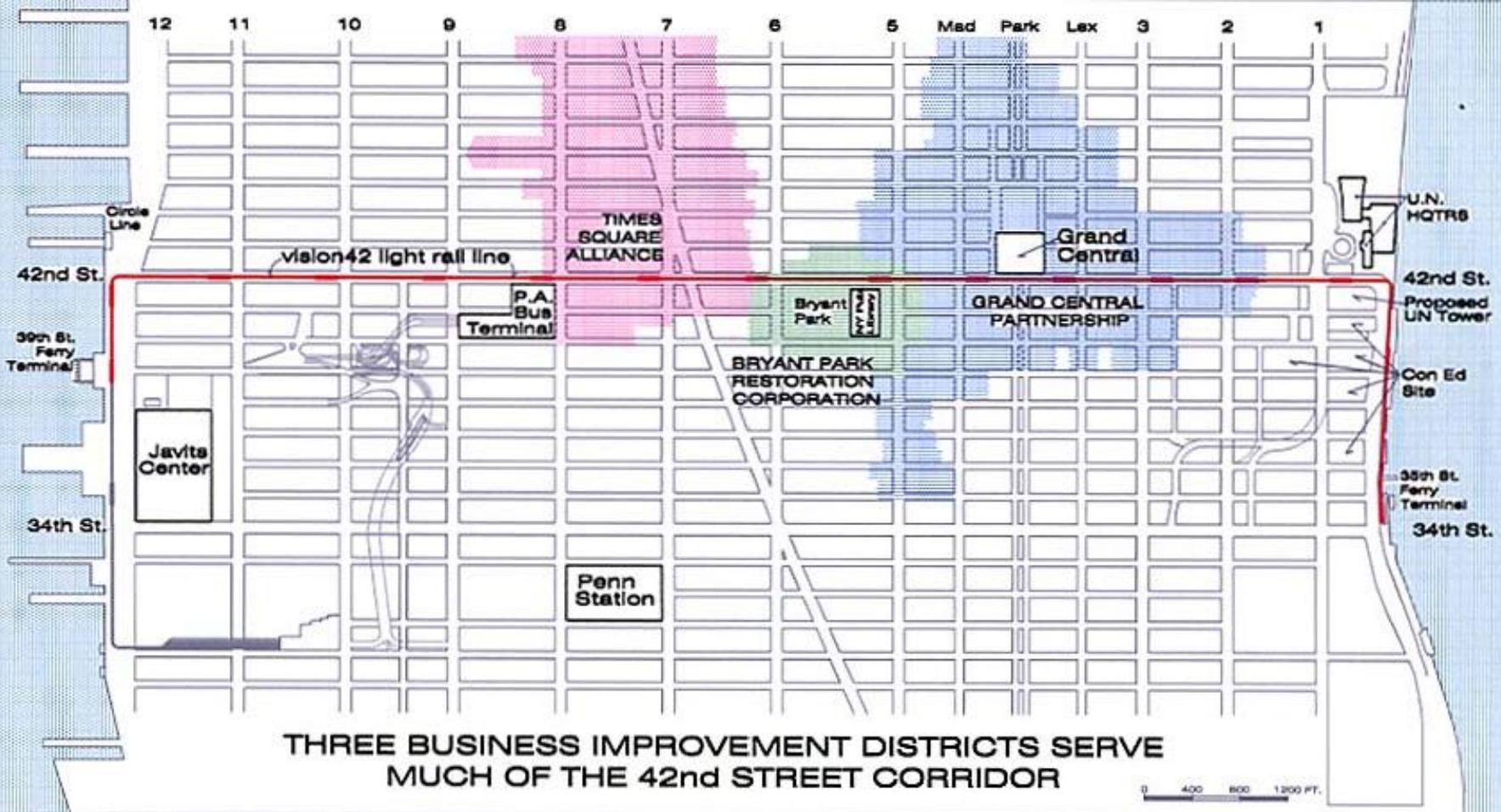
Adequate Space for Delivery Truck Parking Locations Would be Reserved on the Avenues



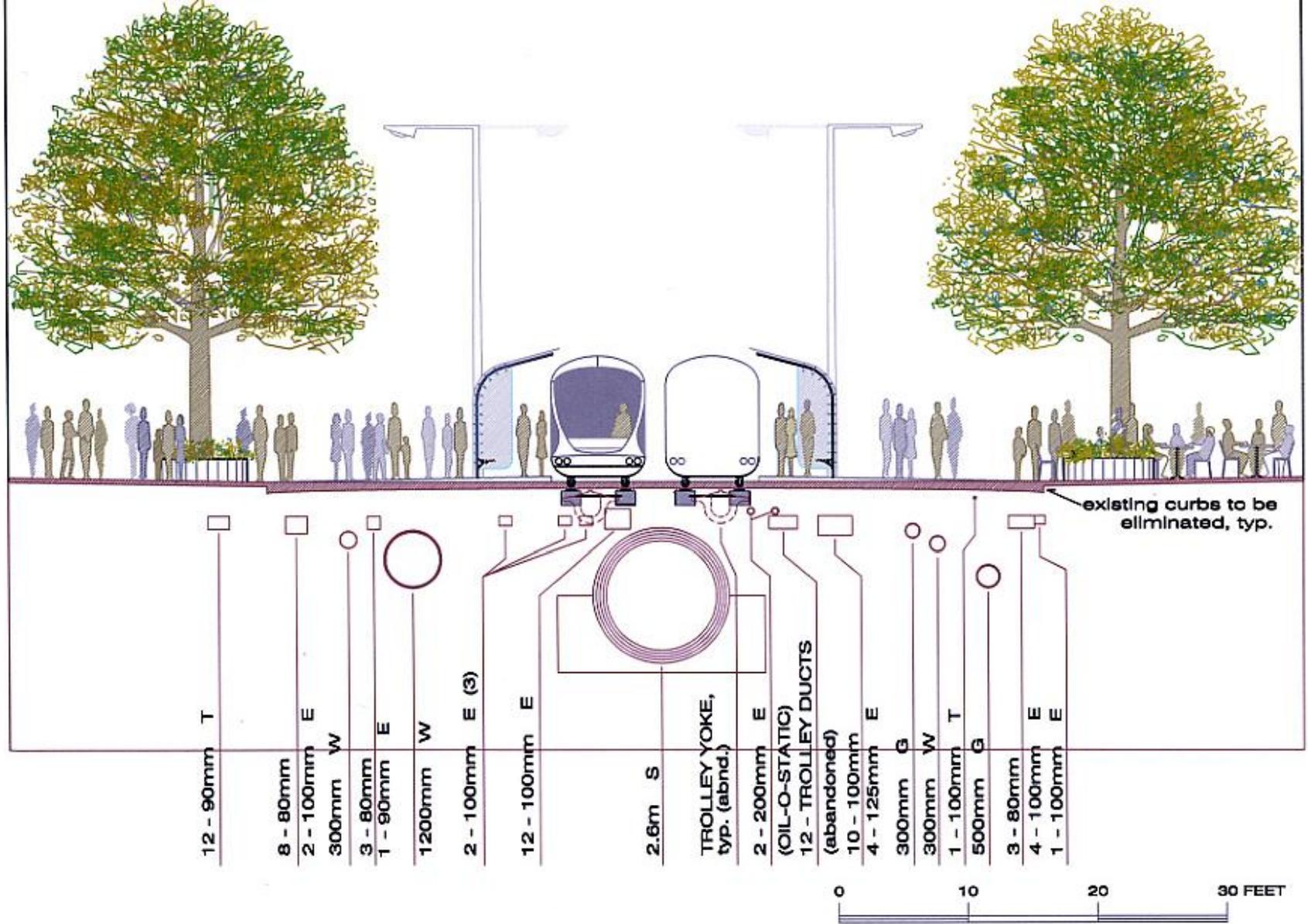
With some changes in parking regulations, sufficient space for delivery trucks can be provided by reserving curb space on adjacent avenues.

-  EXISTING NO STANDING Except Trucks Loading and Unloading
-  PROPOSED NO STANDING Except Trucks Loading and Unloading





the three Business Improvement Districts that cover much of the 42nd St. corridor could handle maintenance and security of the pedestrian street — the BIDs have expressed openness to extending their areas of responsibility

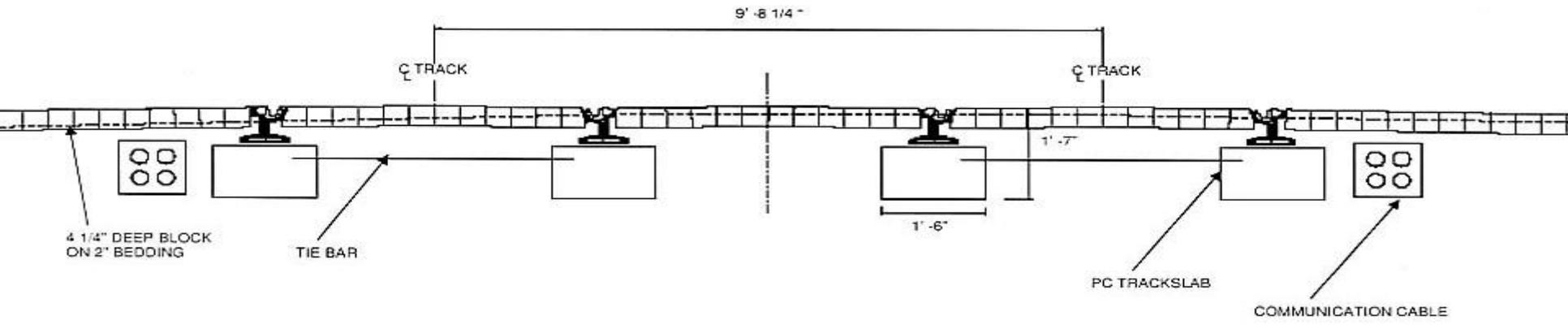


VISION42 - CROSS SECTION THROUGH UTILITIES AT 10TH AVENUE

streetcars ran for decades over the underground utilities, until 1946



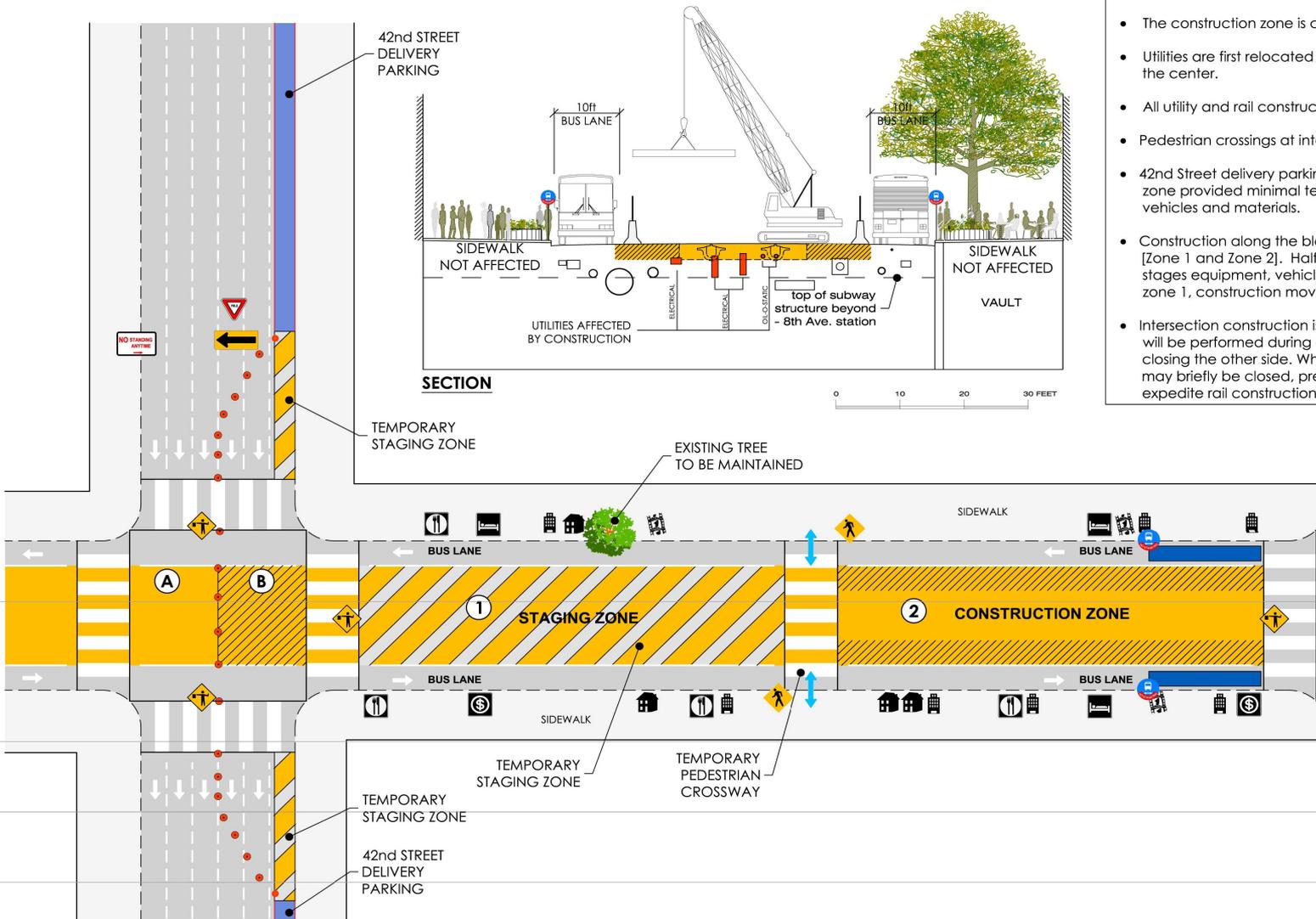
Section Through Discreet Beams Stabilizing the Rails



construction system employed in Edinburgh:
instead of a continuous slab, **precast concrete beams**
with intermittent tie bars **will allow manholes**
between rails **for utility maintenance and repair**

Stage 2 - Minimum Utility Relocation : Utility and Rail Construction

TYPICAL BLOCK



- Bus service is moved to the outer lanes;
- The construction zone is confined to the center of the street.
- Utilities are first relocated to the outside, and then rails laid down the center.
- All utility and rail construction is limited to the center of the street;
- Pedestrian crossings at intersections are preserved with steel plates
- 42nd Street delivery parking along the avenue remains. 1/3 of the zone provided minimal temporary construction staging space for vehicles and materials.
- Construction along the block segment is divided into two zones [Zone 1 and Zone 2]. Half is under construction while the other half stages equipment, vehicles and materials. Upon completion of zone 1, construction moves to zone 2.
- Intersection construction is divided into two zones, A and B, which will be performed during off peak hours finishing one side before closing the other side. When setting the rails, the entire intersection may briefly be closed, prefabricated materials will be use to expedite rail construction.

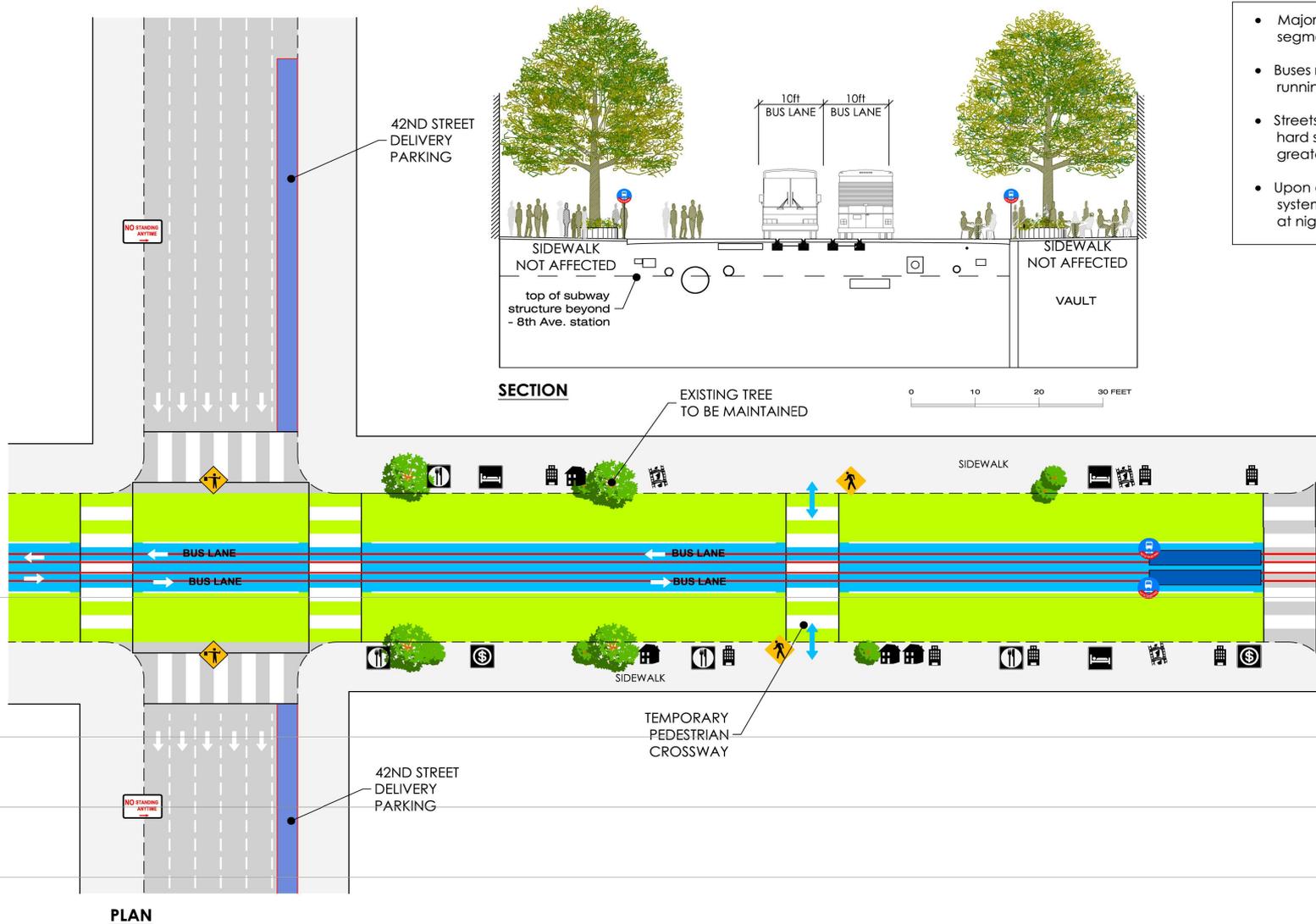
	Pre-Excavation	Utility Relocation Construction	Rail Construction	Streetscaping	Commissioning	Platform Construction with LRT operational
Year 1						
JAN						
FEB						
MAR						
APR						
MAY						
JUN						
JUL						
AUG						
SEP						
OCT						
NOV						
DEC						
Year 2						
JAN						
FEB						
MAR						
APR						
MAY						
JUN						
JUL						
AUG						
SEP						
OCT						
NOV						
DEC						

TIMELINE

at the outset, the street becomes auto-free — throughout construction, the sidewalks remain untouched, and bus service is maintained

Stage 3 - Minimum Utility Relocation : Streetscaping and Light Rail Commissioning

TYPICAL BLOCK

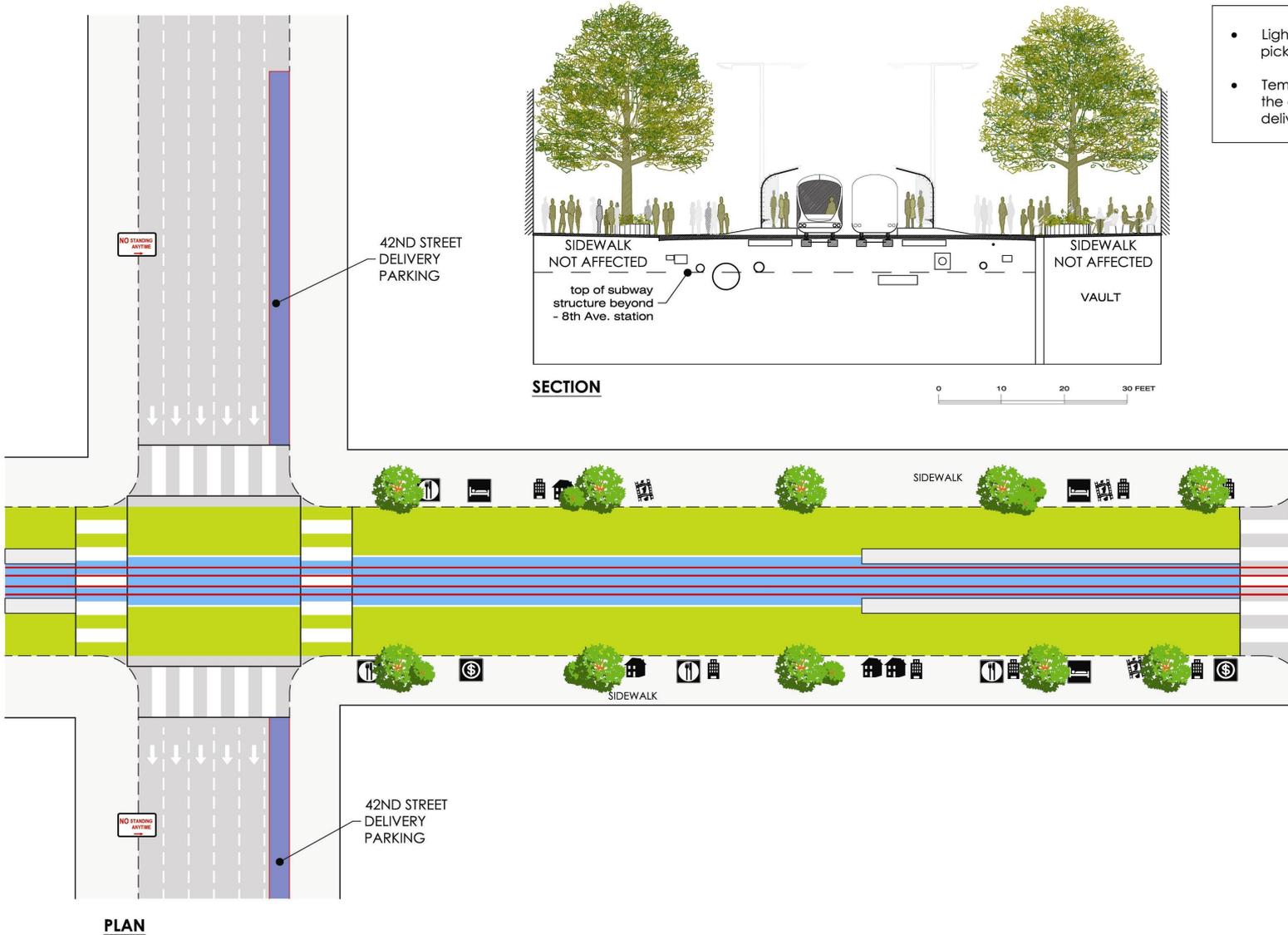


- Major construction within the avenue segment is complete;
- Buses return to the center of the street, running over the rails;
- Streets are landscaped, pavers installed, hard scape and streets opened up for greater pedestrian use;
- Upon completion of the entire rail line, the system is commissioned with vehicles tested at night.

	Pre-Excavation	Utility Relocation Construction	Rail Construction	Streetscaping	Commissioning	Platform Construction with LRT operational
Year 1						
JAN						
FEB						
MAR						
APR						
MAY						
JUN						
JUL						
AUG						
SEP						
OCT						
NOV						
DEC						
Year 2						
JAN						
FEB						
MAR						
APR						
MAY						
JUN						
JUL						
AUG						
SEP						
OCT						
NOV						
DEC						

upon completion of the utilities and track work in the center, bus service will move to the center, running over the rails — landscaping will then proceed

TYPICAL BLOCK



- Light rail vehicles are fully operational, picking up passengers at the platform;
- Temporary construction storage areas along the avenues are returned to short-term delivery parking areas.

when all segments are complete, the light rail service can begin



Estimate of Capital Costs for Alternative LRT Options

Cost figures are in 2007 dollars.

Component	catenary system, full utility replcmt	self-powered LRT, full utility replcmt	self-powered LRT, min. utility work
Utility Relocation	\$364.01 M	\$364.01 M	\$215.27 M
All Other Work	204.53 M	218.30 M	195.98 M
Net Capital Cost	\$568.54 M	\$582.31 M	\$411.25 M

Depending upon the chosen option, the annual debt service requirement will range from \$36.1 million to \$51.1 million.



Annual Operating Costs of LRT & Replaced Bus Services

The annual operating costs of the high-quality LRT service will be lower than the bus services it replaces, particularly when measured in terms of the passenger-miles it is able to serve.

Operating costs, annual:	LRT	Replaced bus services
Vehicle operations	\$4,749,000	\$6,272,000
Vehicle maintenance	1,293,000	969,000
Non-vehicle maintenance	806,000	56,000
General administration	429,000	56,000
Subtotals	\$7,278,000	\$7,352,000
Cost per Place Mile	\$0.10	\$0.37



Annual Economic Benefits and Costs

• Travel Time Savings		\$152.0 M
• Office rent & occupancy increases		\$181.1 M
• Accident reduction savings		\$ 1.2 M
• LRT operational savings		\$ 0.1 M
• Increased Business Revenues	Restaurant/Retail	\$408.4 M
	Hotels	\$ 5.7 M
	Theaters	\$ 14.3 M
• Increased Worker Earnings		<u>\$ 26.2 M</u>
• Total Benefits		\$789.0 M
• Increased Costs of Traffic diversion		\$ 83.8 M
• Increased Costs of deliveries		<u>\$ 0.3 M</u>
• Total Costs		\$ 84.1 M
• Net Gain		\$ 704.9 M



Annual Economic and Fiscal Benefits

• Net Economic Gains	\$704.9 M
• Fiscal Gains	
– NYC Property Tax	\$ 55.1 M
– Other NYC Taxes	\$ 54.1 M
– NYS Taxes	<u>\$ 66.3 M</u>
– Total	\$175.5 M
• Total Economic & Fiscal Gains	\$880.3 M



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Capital Costs — estimated at **\$411.3 to \$582.3 million**
(2007 USD)

Annual Debt Service — **\$36.1 to \$51.1 million**

The **NYC tax gain of \$55.1 M** exceeds the required annual debt service, which can be recouped by one of two basic mechanisms, either:

Tax Increment Financing (TIF), or creating a
Transit Benefit Improvement District (TID)



STUDY AREA for FINANCING vision42



VISION42
Study Area and
Hudson Yards
Financing District

- Legend**
-  V42 Study Area
 -  Hudson Yards Financing District
 -  LRT_Align
 -  LRT_Station_Platforms



The study area incorporates existing and new development five blocks to the north and five blocks to the south of the light rail line, and excludes the Hudson Yards District.



FINANCING vision42



VISION42
TIF Method:
3% Value
Capture of Land
Value Increase
for Select
Properties

- LRT Alignment
- LRT Station Platforms
- V42 Study Area**
- No Increase/Other Prop Type
- \$1 - \$49,999
- \$50,000 - \$99,999
- \$100,000 - \$249,999
- \$250,000 - \$499,999
- \$500,000 - \$999,999
- \$1,000,000 - \$1,499,999
- \$1,500,000 - \$3,322,606

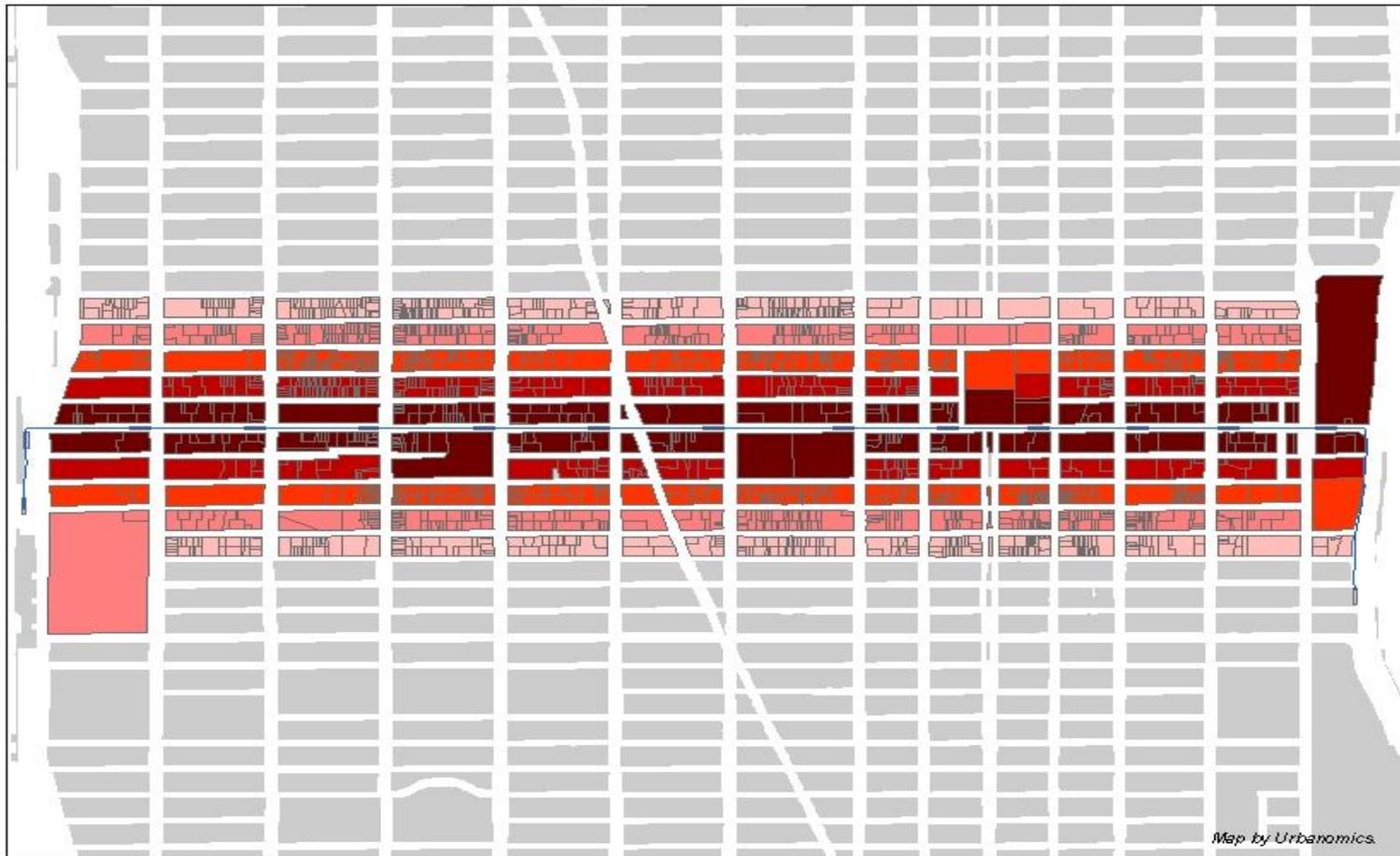
Urbanomics
of New York

Map by Urbanomics.

Tax Increment Financing (TIF) would apply 3% of land value increases generated by improved transit access, yielding \$53.0 M per year.



FINANCING vision42



VISION42
Benefit District
by Gradient

- Legend**
- LRT Alignment
 - LRT Station Platforms
 - District Gradients**
 - 1
 - 2
 - 3
 - 4
 - 5

Map by Urbanomics.



A likely option — Gradients of levy would be established corresponding to the proximity of each block to the light rail transit line.



FINANCING vision42



Transit Improvement District (TID)—levies would be established as a percent (from 1 to 5%) of current tax rates yielding \$66.8 M per year.



FINANCING vision42 — EFFORTS ENTAILED

- **Form a Transit Benefit Assessment Task Force**, to specify boundaries and determine the rate structure.
- **Gain support of the MTA**, as potential builder and operator.
- **Conduct a referendum** by district property owners, to accept implementation of Transit Benefit Assessment District at the proposed rate structure.
- **Gain approval by Community Boards, City Council**, and other bodies.



interfacing with ferry terminals at both rivers — and in the process, making ferry travel more attractive and ferry operations more efficient



connecting massive residential towers and theaters to Midtown's center



pedestrians at Times Square will greatly benefit from better transit access



linking major terminals to Midtown's east and west extremities



creating a fittingly ceremonial approach to the United Nations