Bleecker & Prince Bike Route

Presentation to CB 2 Manhattan

Division of Street Management & Safety
Traffic Operations Bureau
March 2007

NYCDOT Bicycle Program

- Designing each mile of 200 mile, 3 year bicycle route commitment
- Targeting Areas of High Demand & Key Connections
- Design Approach:
  1. Study Best Practices
  2. Apply & Interpret Standards & Guidelines to Constrained NYC Environment
  3. Build off of Existing Plans

Evaluating Routes

- NYC Criteria
  1. **Safety** to cyclists
  2. **Accessibility** & **Directness** to major origins/ destinations
  3. **Connections** with other routes
  4. **Attractiveness** of the route
  5. Low **Conflicts** with other users
  6. **Feasibility** of implementation
- Safety / Stress Level
  - Curb Lane **Width** (larger is better)
  - Curb Lane Traffic **Volume** (lower is better)
  - Vehicle **Speed** (lower is better)

Routes Evaluated

- Eastbound
  - Bleecker St (p)
  - W. Houston
  - Spring St (p)
- Westbound
  - 3rd St (p)
  - W. Houston
  - Prince St (p)
  - Broome St (p)

(p) – Considered “Parallel” Routes

Corridor Characteristics

- W. Houston
  - High traffic volume
  - Multiple lanes
  - 2 conflicts per intersection
  - Truck route
  - Bus routes
  - Med/High vehicle speeds
  - Limited destinations
- Parallel Routes
  - Low traffic volume
  - Single lane
  - 1 conflict per intersection
  - Trucks restricted
  - No buses
  - Low vehicle speeds
  - Significant Destinations

Preliminary Conclusion: Safety advantages of parallel route outweigh reduced directness

Difficult Turning Movements from a Curbside Bike Lane

Issues w/ Two-Way Class 1 Bike Path on W. Houston

- **"Protected" Paths Not Protected at Intersections**
  - 89% of fatalities,
  - 70% of serious injuries, at intersections
- **Intersection Frequency for Paths**
  - Ideal = 4 or less per mile
  - Maximum = 8 per mile
  - W Houston = 18 per mile
- **Bus stop conflicts**
- **Neckdown conflicts**
  - 5 neckdowns on s. side
- **Contra-flow Conflicts**
- **No Curbside Access**

“Protected” Side-Paths Exacerbate Intersection Conflicts

- Cyclist Speed v. Ped
- Right Turns - Set Back
- Left Turns – unexpected conflict
- 2 of 3 Houston Cyclist Fatalities Involve Turning Trucks

Parallel Bike Routes

- Establishing "Parallel" Bike Routes Begun in Mid-1990s
  - Avoids Arterial roadway volumes, vehicle type
  - Avoids routes with frequent turns
  - Simple turns for cyclists
- Foundation of Successful "Bicycle Boulevard" Concept
  - Berkeley, Portland, Palo Alto
  - Parallel streets engineered to maximize bike friendliness
- NYC's Parallel Facilities Popular
  - Dean/Bergen → Parallels Atlantic Avenue
  - Grand St → Parallels Delancey Street
  - 77th/78th St, UWS → Parallels 79th St

Matchline

Shattuck Avenue

Berkeley, CA – Bike Boulevards Use "Parallel" Routes

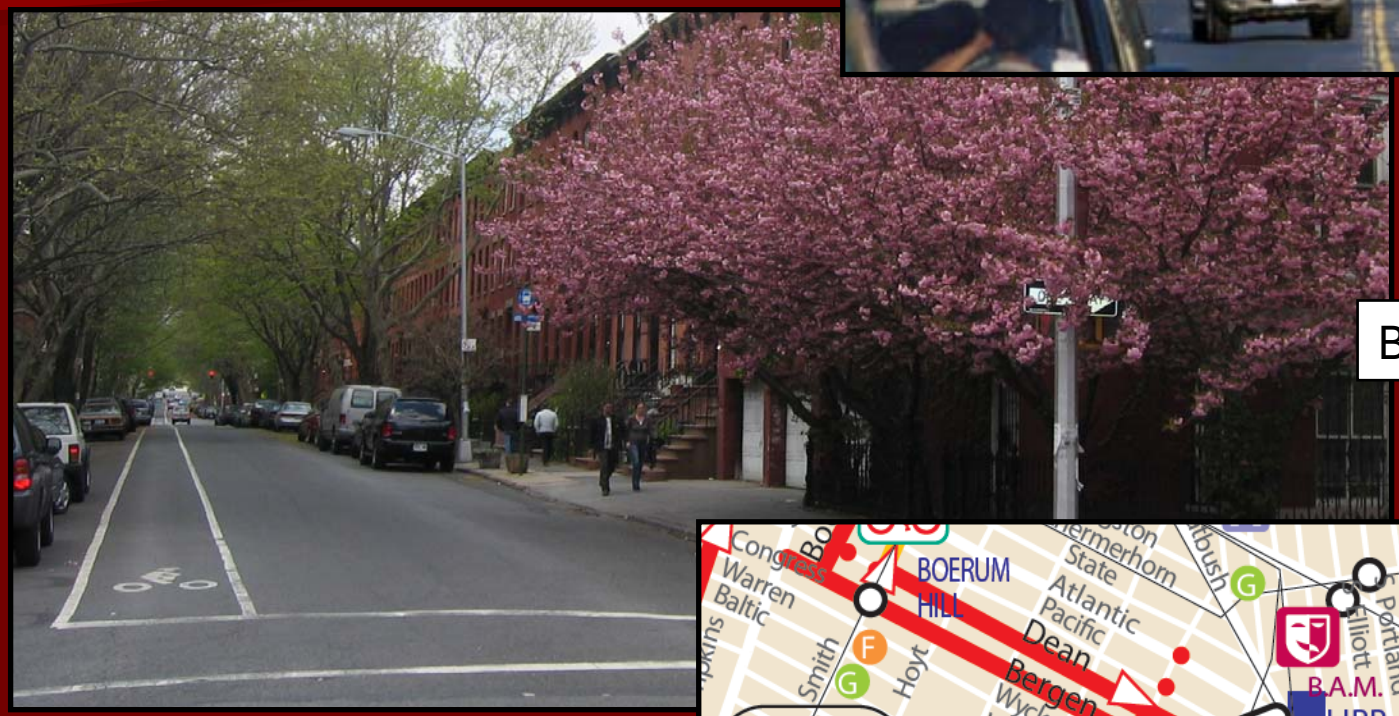
Milvia Street
Bicycle Boulevard

Matchline

Berkeley, CA – Bike Boulevards Use “Parallel” Routes

Bergen-Dean "Parallel" Lanes

Atlantic Ave



Bergen St

Dean-Bergen Lanes on NYC Cycling Map

Grand Street Bike Lanes

- Parallel to Delancey Street
- Feed Williamsburg Bridge
- Positive Response from Cyclists

Effective Parallel Routes

1. **Proximate** - to the major route
2. **Direct** -- minimize circuitousness
3. **Bike Friendly** – potential for quality bike facility (avoid signed only, class 3)

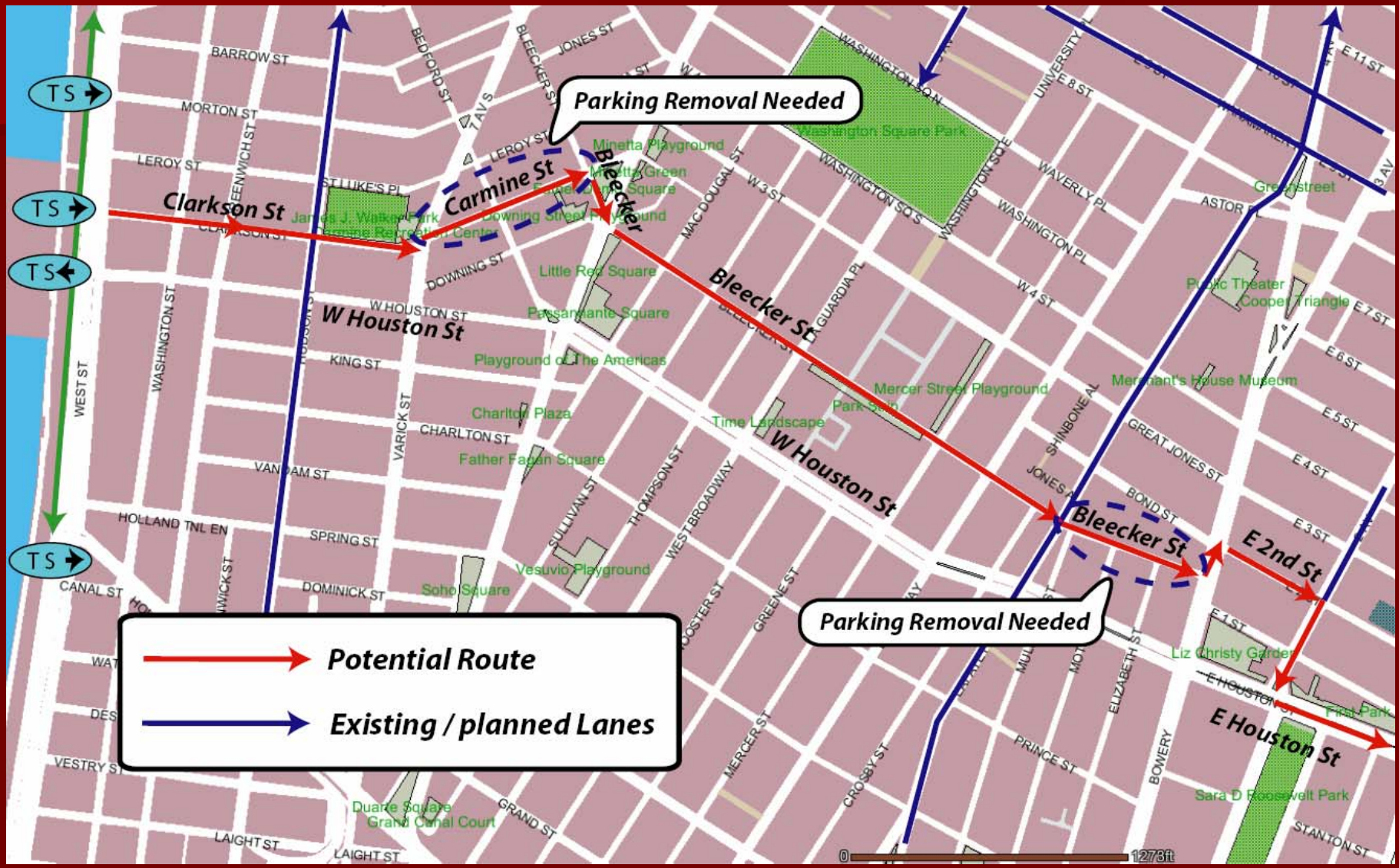
Successful result: Attracts cyclists from more direct, less bike friendly route

Bleecker Corridor Evaluation

- Proximity
  - Good: 490’ (1st block) north of Houston
- Directness
  - Fair: 5 turns, W Village complicated
- Bike Friendliness
  - Good: >30’ wide, fits lane, modest traffic

Conclusion: Bleecker St can be an attractive route, but some changes to curb regulations necessary

Bleecker St. Corridor - Eastbound



Clarkson Street

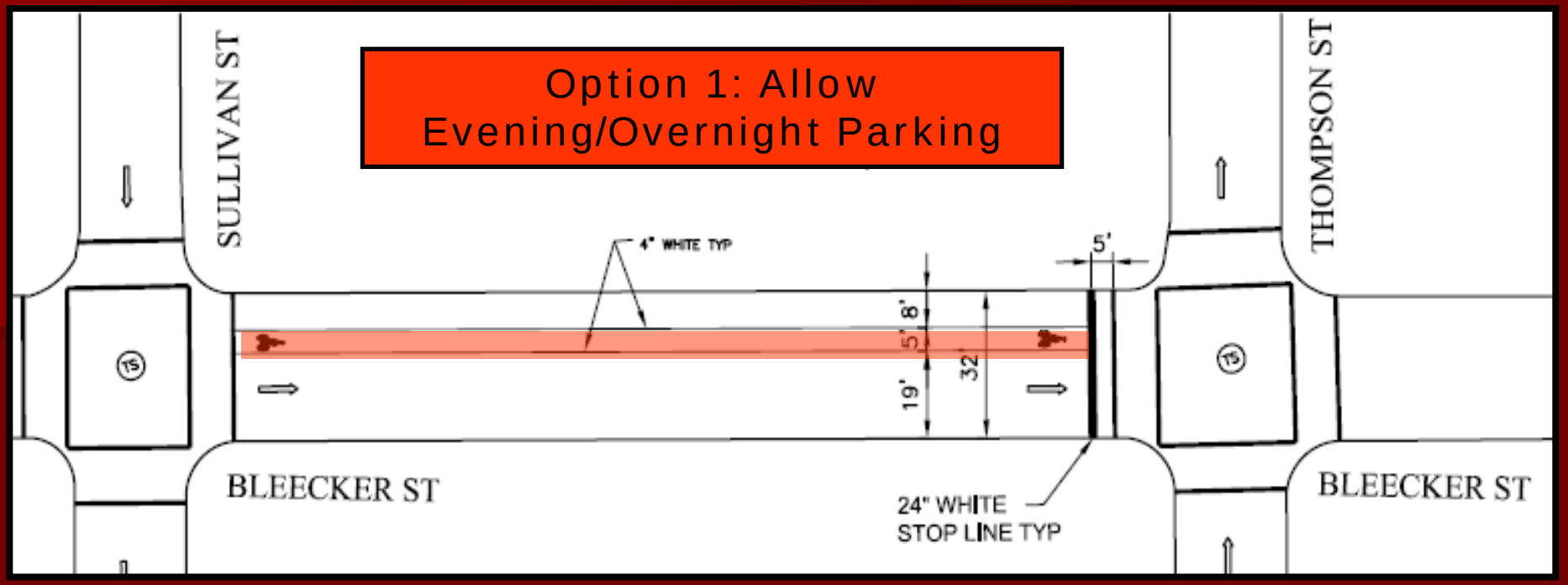
Carmine Street

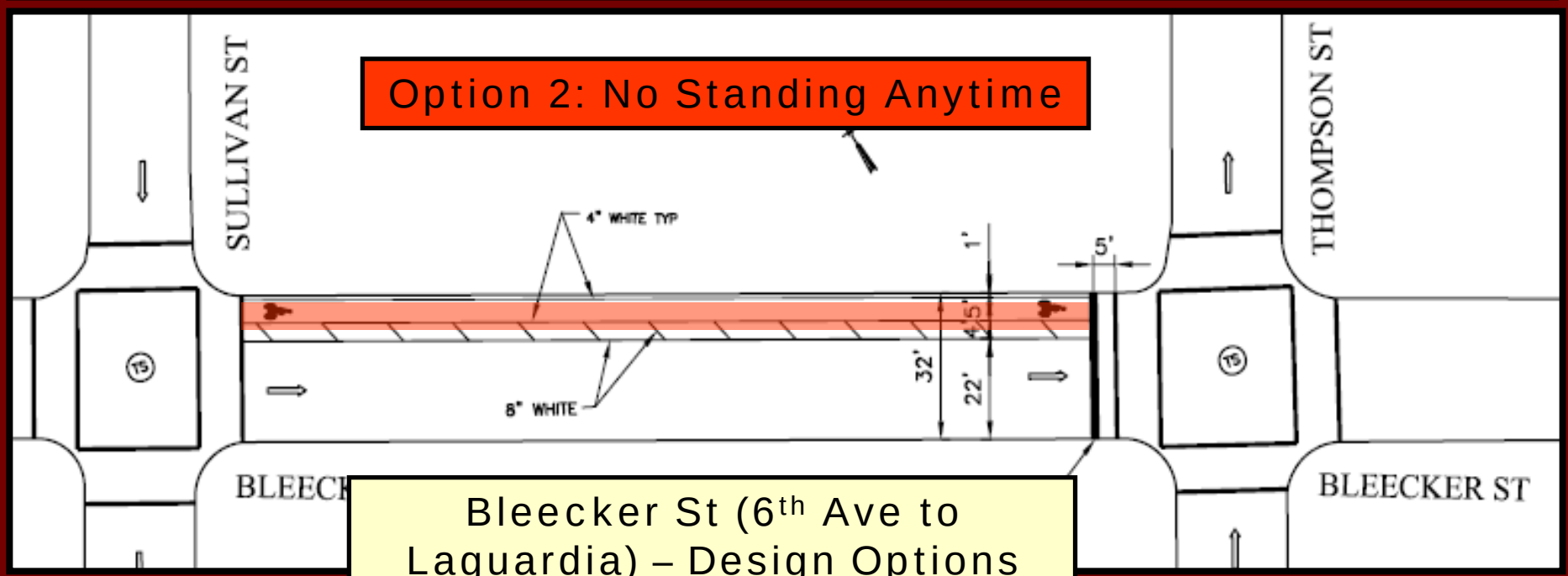
Bleecker Street

@ Ave of the Americas

Bleecker Street

@ Thompson Street





Bleecker St (6th Ave to Laguardia) – Design Options

Bleecker Street

@ Mercer Street

Bleecker Street

@ Crosby Street

Bleecker St Route – Changes Needed

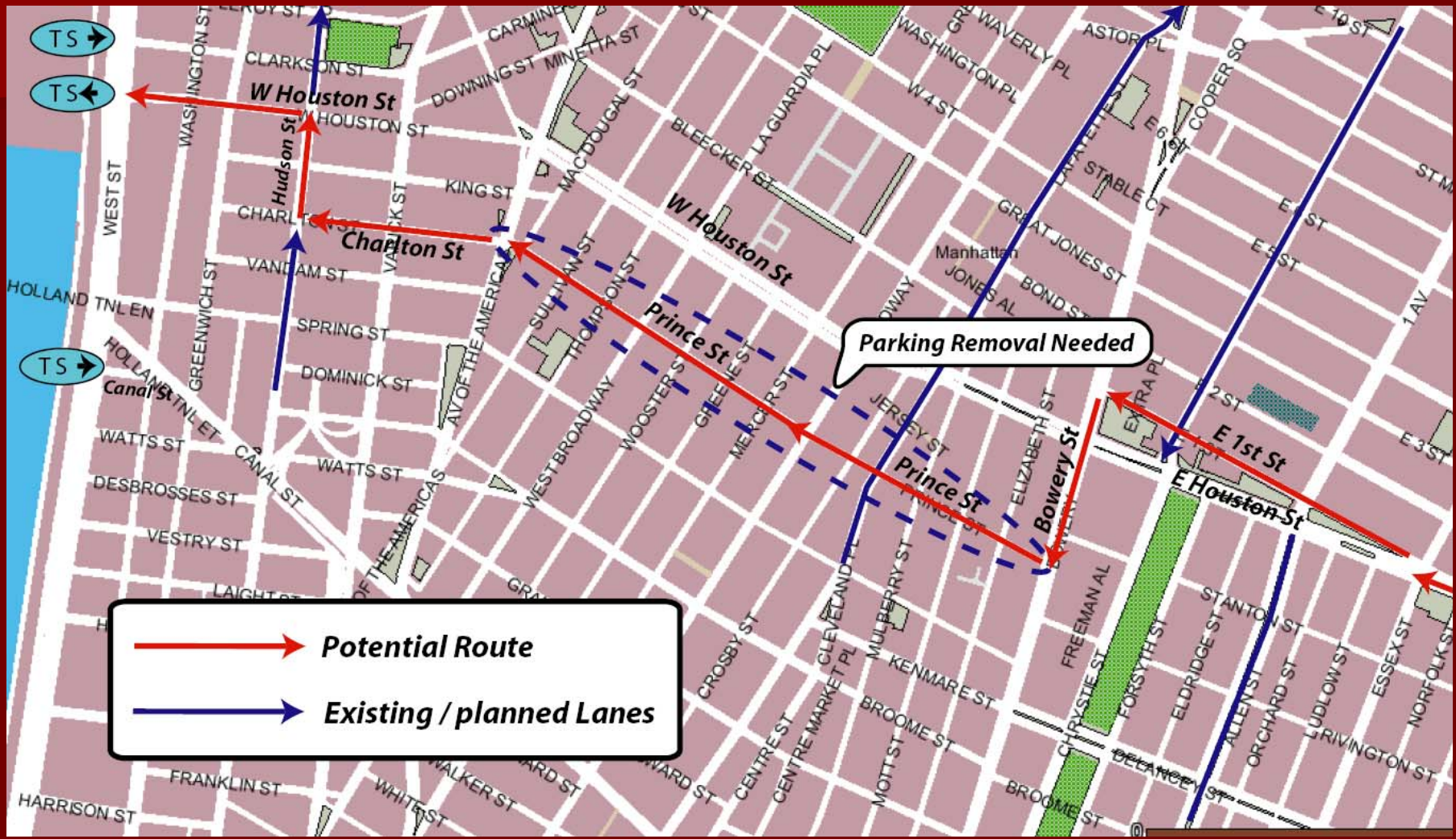
- Carmine, S Side, 7 Ave to Bleecker, 700’
  - Current: 2 Hr Meters 830-7; Except Sunday, 25 metered spaces/nighttime parking spaces
  - Needed: No Standing Anytime (curb bike lane)
- N Side, 6th Ave to LaGuardia, 980’
  - Current: N/P 6a – 6p; No Standing 6p –6a
  - Needed:
    - No Standing Anytime (curb bike lane); or
    - Curb access permitted evenings/overnight (lane next to parking)
- N Side, Lafayette to Bowery, 620’
  - Current: No Parking 7a-6p Except Sunday, 36 nighttime & Sunday parking spaces
  - Needed: No Standing Anytime (curb bike lane)

Prince Corridor Evaluation

- Proximity
  - Good: 460’ (1st block to S.) of Houston St.
- Directness
  - Fair: 4 turns
- Bike Friendliness
  - Mixed: Too narrow (~26’) for Class 2 or 3
  - **Bike Lane OK - if parking/loading removal**

Conclusion: Prince Ideal Conditional on Curb Loading Parking Removal

Prince St. Corridor - Westbound



Prince Street

@ Mott Street

Prince Street

@ Mercer Street

Prince Street

@ Wooster Street

Prince Street

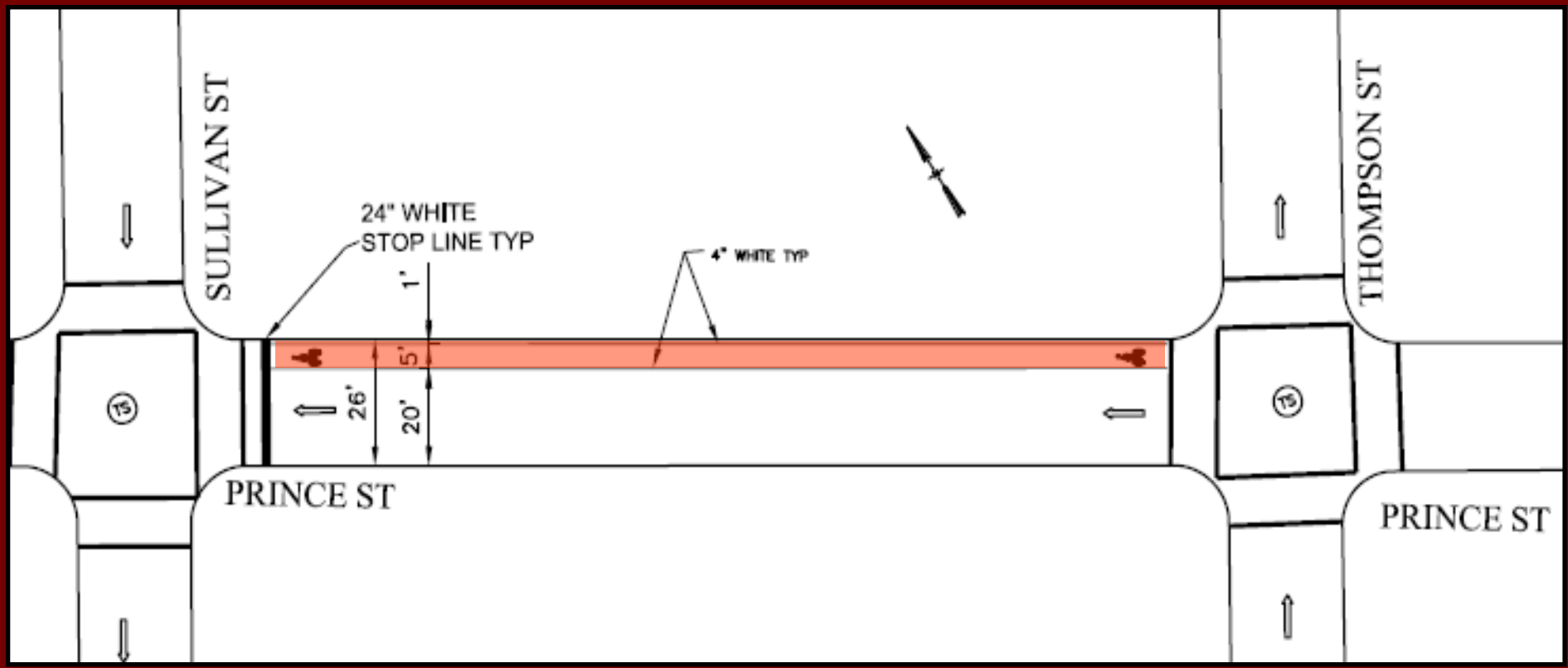
@ Thompson St

Prince St Curb Occupancy

- Regulations
  - Typical No Parking 8a – 6p Mon-Fri
  - ~20% of curbs allow all day parking (ASP regulation)
- No Loading Access Impacts of change to N/S/A regulations
- <20% capacity utilization by commercial vehicles
- 126 mostly Nighttime & Weekend spaces need removal

							Capacity	230		
Time	Day	Date	Trucks	Vans / Other Commercial	Passenger Cars (not commercial)	Total	Capacity Utilization - Commercial	Capacity Utilization - All		Permits
8a - 9p	Fri	27-Oct-06	10	9	61	80	8%	35%		4
11a - 12p	Thurs	26-Oct-06	7	29	73	109	16%	47%		10
12p - 1p	Thurs	26-Oct-06	19	24	81	124	19%	54%		12
2p - 3p	Thurs	26-Oct-06	2	33	84	119	15%	52%		23
2p - 3p	Fri	27-Oct-06	8	28	82	118	16%	51%		14
5p - 6p	Thurs	26-Oct-06	3	9	101	113	5%	49%		n/a
5p - 6p	Fri	27-Oct-06	1	25	100	126	11%	55%		9

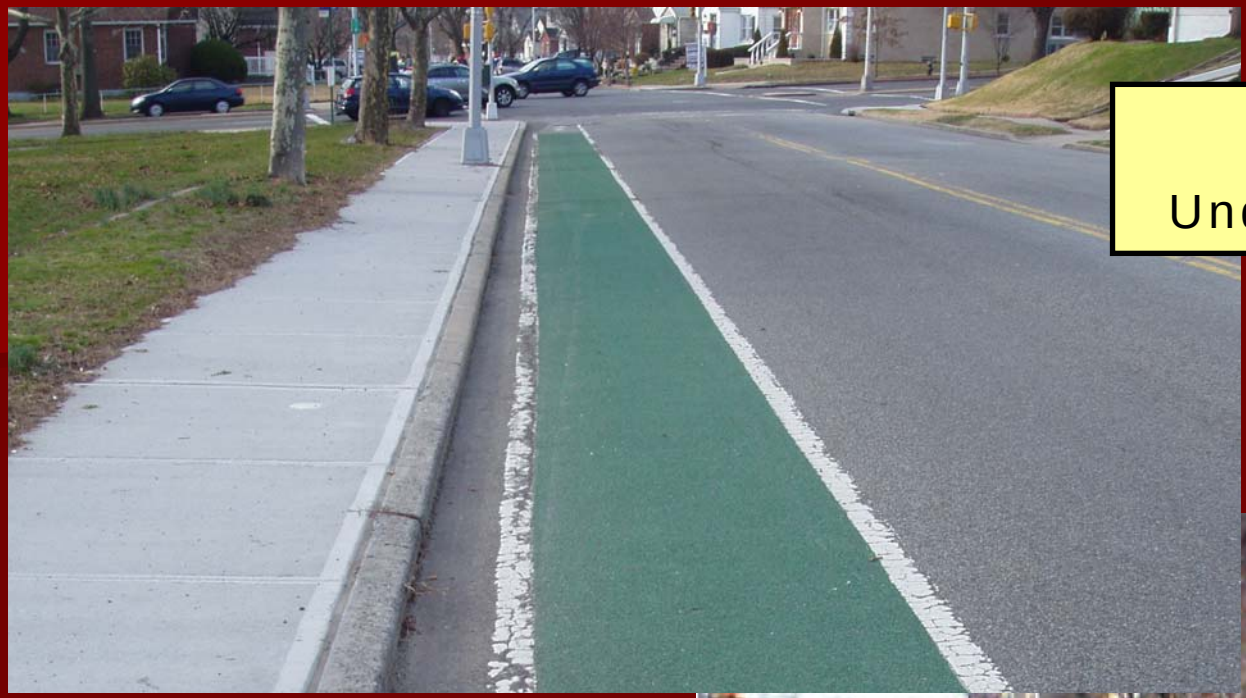
Prince St – Conceptual Design



Effectiveness of Curbside Bike Lane

1. Successful Precedents
   - Clinton Street (Downtown Brooklyn)
   - Sands Street (Brooklyn Bridge Approach)
2. Potential Green Lane Markings
   - Henry Street, Brooklyn; Effective in Helping Compliance
3. Enforcement Plan
   - DOT outreach and coordination with NYPD
   - Clear sidewalks

Clinton St



Green Lane

Underhill Ave, Queens

Henry St, Brooklyn

Sands St., Brooklyn

Summary of Parking Impacts

Quality 3 Mile Parallel Bike Facility is Feasible if Parking is Strategically Removed

Street	Parking Loss	Parking Type
Carmine*	25	Meters/Night
Bleecker (Lafayette to Bowery)	36	Night/Sunday
Prince	126	Night/Weekend
Total	**187**	

* Possible Class 3 Alternative

Conclusions

- Regardless of Street, Bike Routes Takes from Other Public Space
- Quality route feasible and favored by DOT
  - Based on nationally recognized approaches
- Requires community sacrifice of parking availability
- Parallel facility will provide:
  - Higher mobility for cyclists (turns)
  - Safer travel
    - Fewer conflicts on one-way streets
    - Lower volumes
    - Lower speeds

Key Input Needed

1. Type of Lane/Curb Regulation for Bleecker Street
2. Prince Street Colored Lane
3. Carmine Street Alternatives

End of Presentation