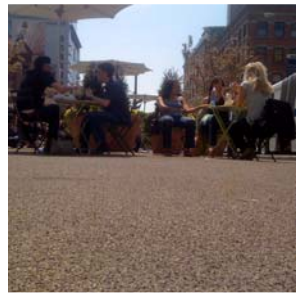


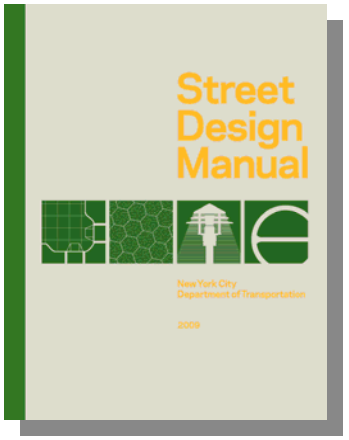
Building Long-Term Innovation:
The NYC Street Design Manual

Michael Flynn AICP, New York City DOT

TRB 89th Annual Meeting

Workshop: Cities at the Cutting Edge

January 10, 2010



Why a Street Design Manual?

Sustainability

Safety

Stormwater Management

Complete Streets

Accessibility

Mode Shift

Safety

Safety

Plazas

Cost-Effectiveness

Pedestrian-Friendly

Bus Rapid Transit

Safety

Active Design

Safety

Multimodal

Greening

LID

Transit-Oriented Development

Livable Streets

Visual Quality

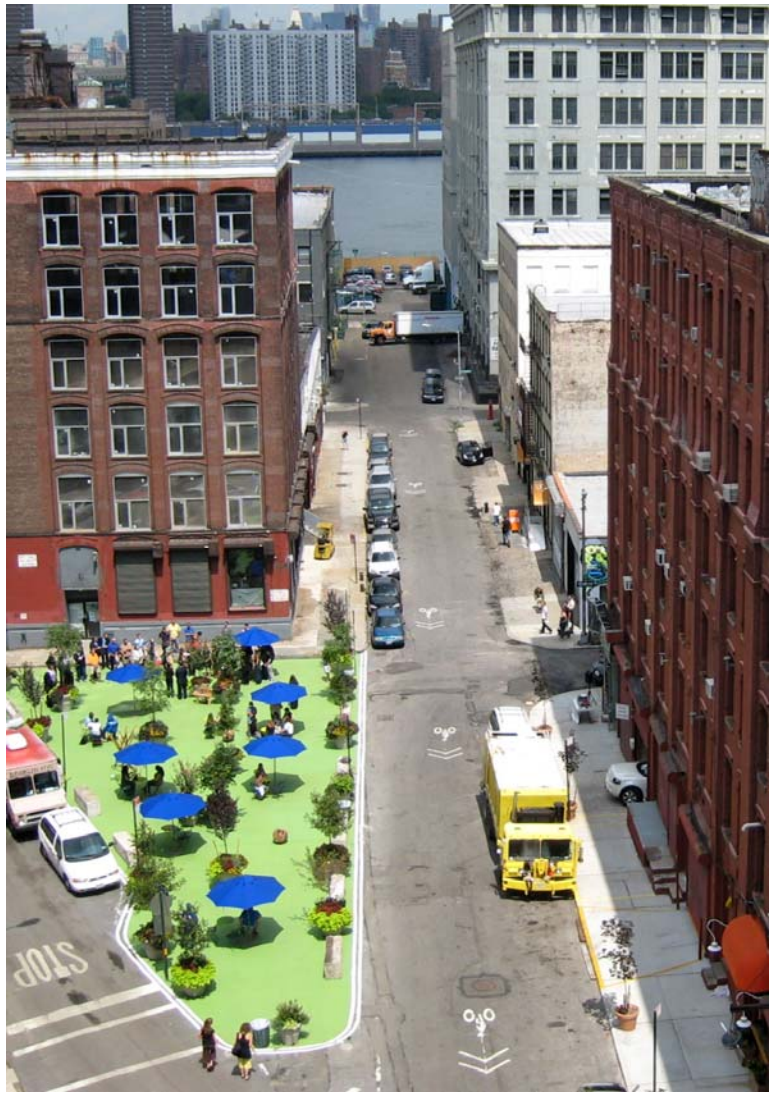
CSS

Bike-Friendly

Short-Term projects

Chelsea Plaza (Manhattan)

Short-Term projects



Pearl Street Plaza, DUMBO (Brooklyn)

Short-Term projects

9th Avenue (Manhattan)

Short-Term projects

Grand Army Plaza (Brooklyn)

Short-Term projects

Green Light for Midtown (Manhattan)

Short-Term projects

Summer Streets / Weekend Walks (Bronx)

Capital projects

Short-Term (**Operational**)

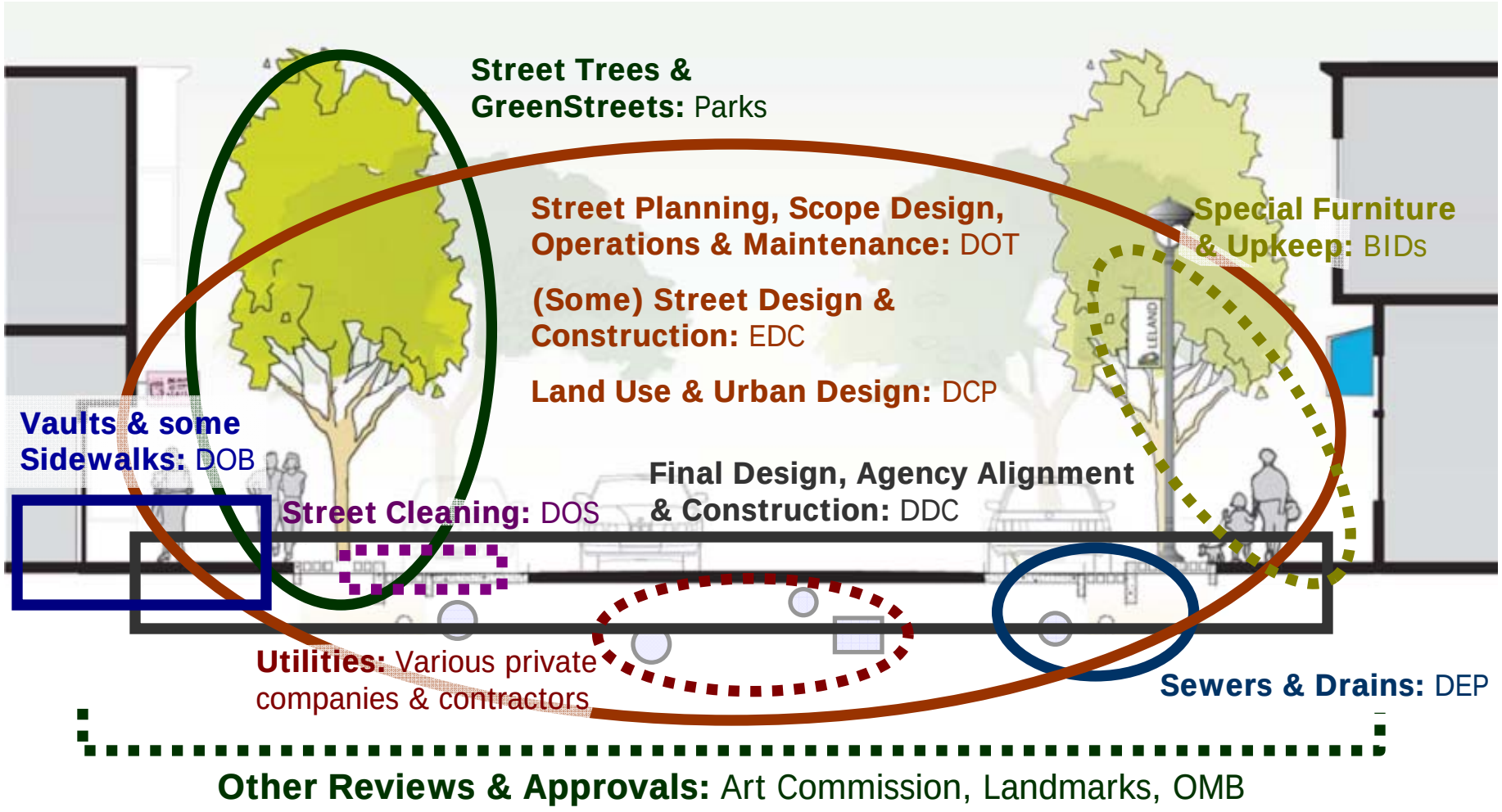
vs.

Long-Term (**Capital**)

	Budget	Cost	Time	Impact
Operational	Expense	$	Months	Short-Medium
Capital	Capital	$$$	Years	Long

Capital projects

- So many stakeholders!



Capital projects

- How do we maximize the impact?

Less difficult → **More difficult**

DOT In-House Projects

Other City Agencies' Street Work

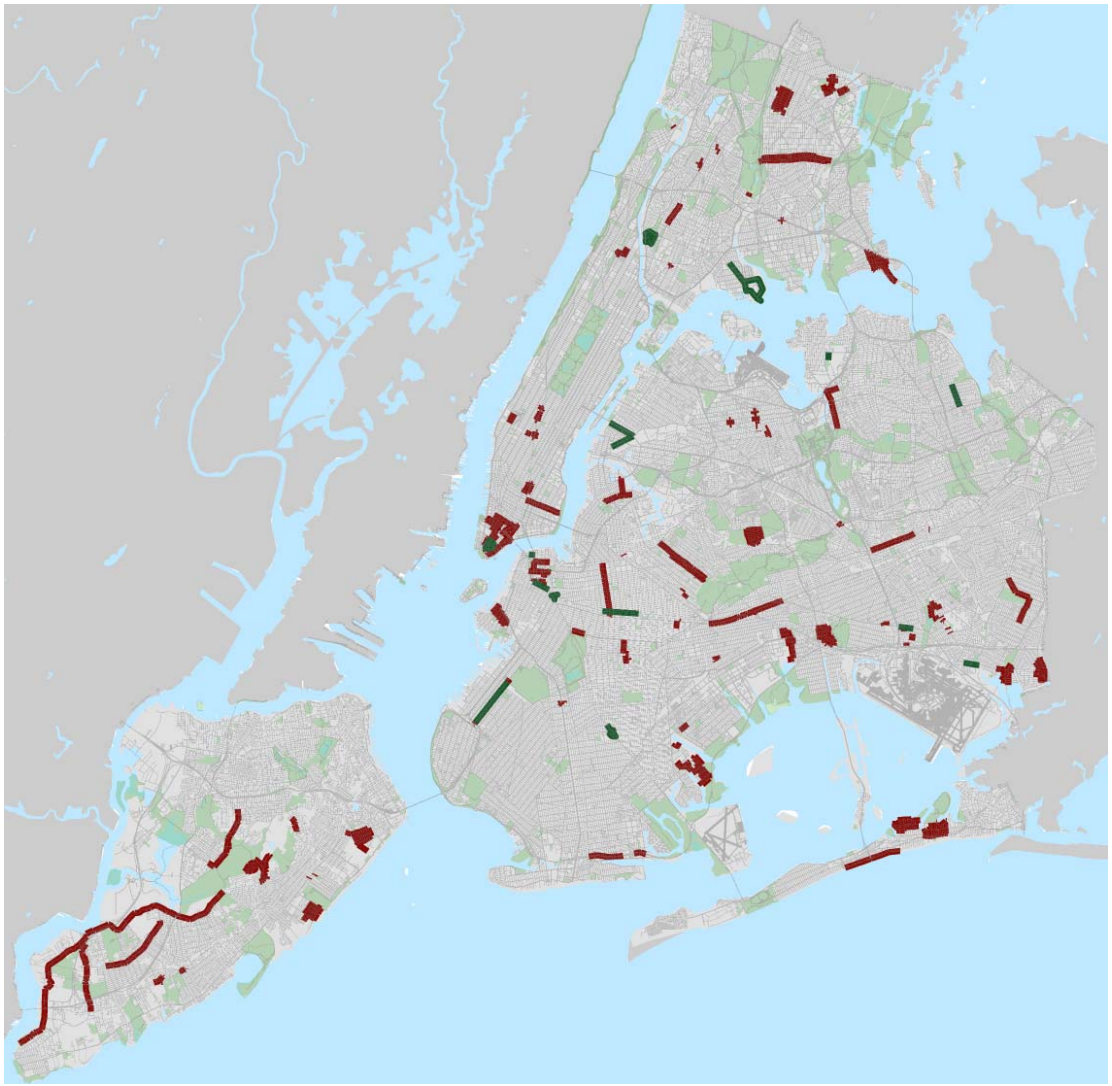
Other City Agency Projects that impact streets

State/ Authority Projects that impact streets

Private Development that impacts streets

Capital projects

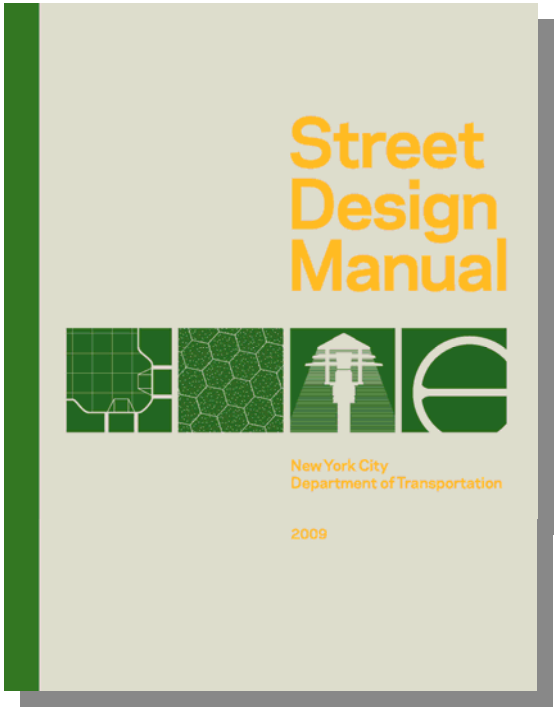
- DDC & EDC 5-year Programs



NYC's **Approach**

New York City **Street Design Manual**

- Comprehensive blueprint for safer, greener, livable streets
- Contains policies, guidelines & reference information
- To be used as guide for all Capital Projects
  - DOT, EDC, DEP, etc
  - Large private developments

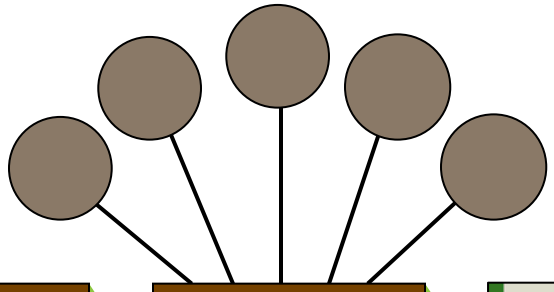


NYC's **Approach**

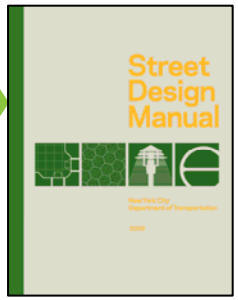
How it was developed

DOT
DCP
DDC
DEP
DOB

Stakeholders



Inter-Agency Task Force formed → Site Visits → Committee Work & Research → Draft Concepts → Reviews & Approvals



DPR
EDC
LPC
PDC
SBS
Mayor's

Policy
Process
Framework
Toolbox
Cost-Benefit

NYC's **Approach**

Who it's for

Government Agencies and staff	Planning, Engineering & Design **Consultants**	Private **Developers**
Utilities & **Contractors**	**Community & Neighborhood** Groups	Elected **Officials**

Content

Content

Median

USAGE: WIDE

A raised area separating different lanes, traffic directions, or roadways within a street.

The width as well as design of medians can vary widely. They can range from narrow raised concrete islands to tree–lined promenades to intensively landscaped boulevard medians.

In contrast to MEDIAN REFUGE ISLANDS (2.2.3a), medians extend for most or all of the street block.

Median with Greenstreet and sidewalk: Carlton Avenue, Brooklyn

Benefits

- Reduces risk of left–turn and vehicle head–on collisions
- Calms traffic by narrowing roadway
- Enhances pedestrian safety and accessibility by reducing crossing distances and providing refuge for pedestrians to cross road in stages
- If designed for walking access, can provide additional pedestrian capacity
- Greens and beautifies the streetscape with trees and/or plantings
- Improves environmental quality and can incorporate stormwater source controls
- Can provide space for a SIDEWALK (2.2.1) and/or SEPARATED BIKE PATH (2.1.2b), particularly as part of a boulevard treatment

Considerations

- May impact underground utilities
- Design must account for impact of median on emergency vehicle
- Landscaping or stormwater source controls require a partner for ongoing maintenance
- Changes in traffic circulation resulting from addition of median should be understood so as to not force drivers to travel on inappropriate routes or make U–turns
- If continuous, median may prevent left turns into driveways on opposite side of street

Application

- Two–way streets with three or more roadway travel lanes in total
- Consider on all two–way multilane streets
- On streets of limited width, it may be preferable in some situations to include other treatments (e.g., expanded sidewalks or dedicated transit or bicycle facilities) rather than a median if there is not adequate room for all treatments and travel lanes

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Consider on all two-way multilane streets

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Content

Median on a local residential street: Glenwood Road, Brooklyn

Design

Medians should be wide enough to provide refuge to pedestrians at crossings: 5 feet minimum; 6 feet or greater preferred

Medians should extend beyond the crosswalk at intersections wherever possible, while accommodating vehicle turning movements; the "nose" of the median should not infringe on the crosswalk width at intersections and should include bollards to protect pedestrians from wayward vehicles

Provide a path across the median at crossings, flush with the roadway and as at least as wide as the crosswalk

Provide a large pedestrian storage area at crossings to permit groups of pedestrians to safely wait to cross

Medians must provide tactile cues for pedestrians with visual impairments to indicate the border between the pedestrian refuge area and the motorized travel lanes

Include street trees or plantings wherever safe and feasible, using structural soil where appropriate

Use unpaved and permeable surfaces wherever possible with medians

Include planted areas and stormwater source controls within medians wherever possible when a maintenance partner is identified

Medians must be designed so as to maintain drainage of stormwater and not cause ponding

Grade roadways to direct stormwater towards medians if the medians include sufficient stormwater source controls

If work includes tree planting, consider the location of utility infrastructure, including NYC DEP sewers and water mains

Sustainability Opportunities

Locate trees and/or plantings within median

Maximize permeable surface of median, e.g., with vegetation, permeable paving, or both

Design any planted areas within median so as to capture stormwater according to current standards

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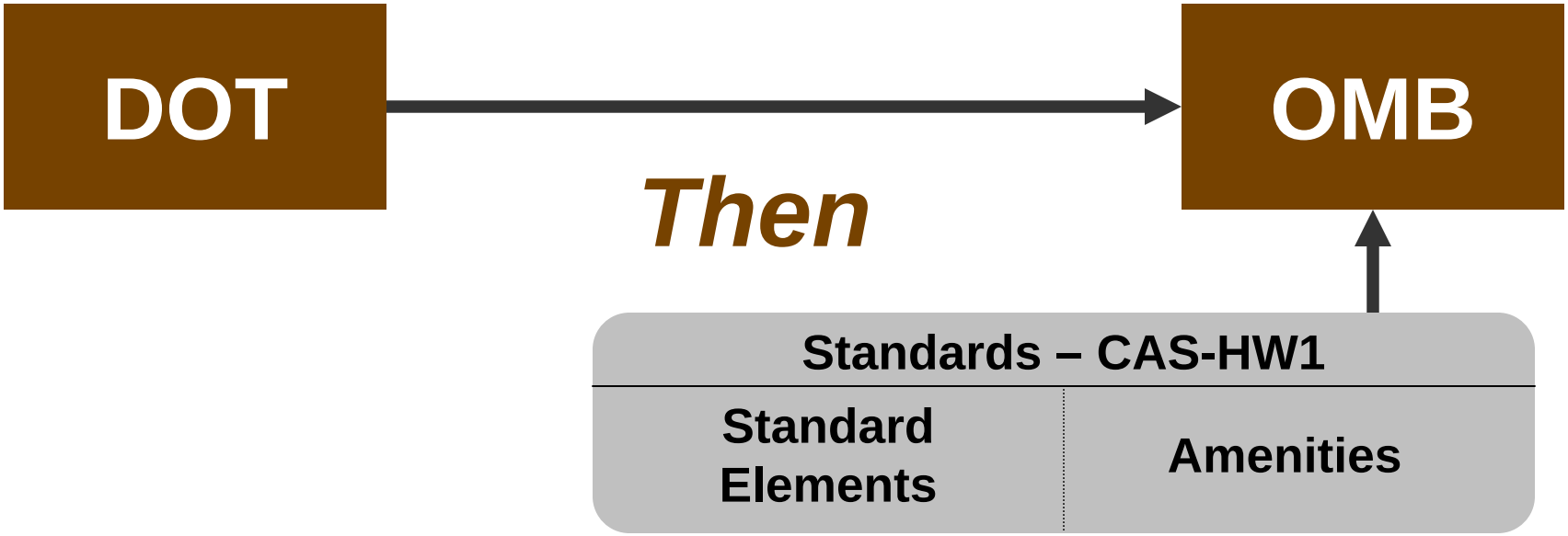
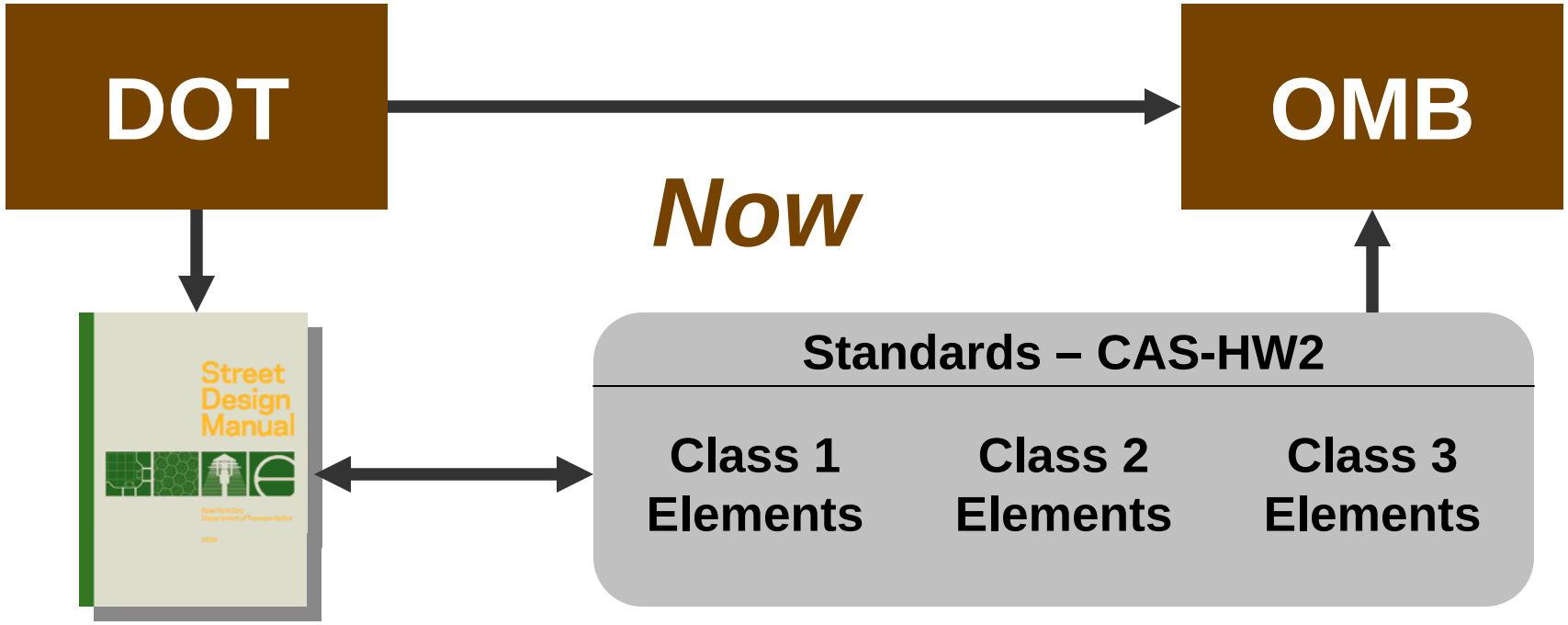
Approvals – OMB

- Standards needed updating
  - Limited view of role of streets
  - 2 categories of elements – all or nothing
  - Best practices not “standard” elements
- Extended approval times



Approvals – OMB

- New standards & streamlined review
  - 3 categories of elements & levels of approval
  - Includes current best practices
- Can update framework as practices evolve
- Collaborative dynamic

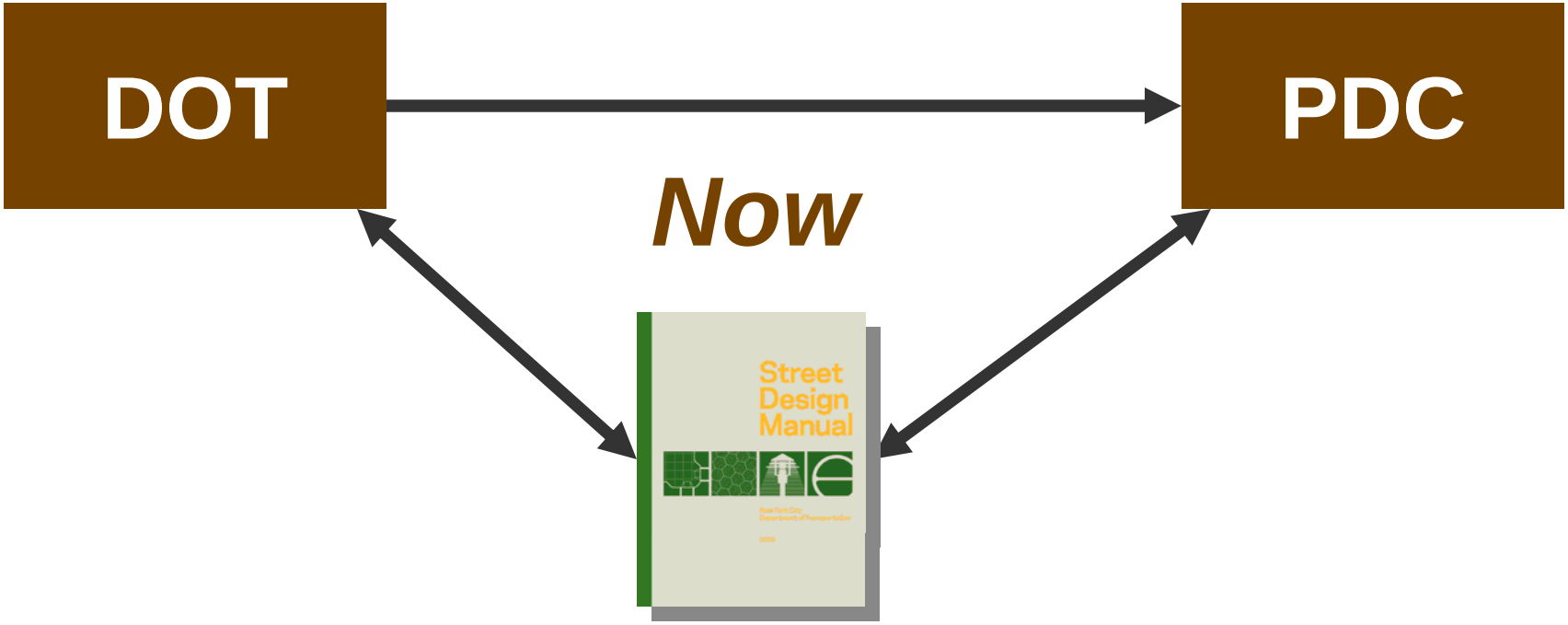


Approvals – PDC

- No specific standards
- Difficult to anticipate preferences
- Adds significant time to projects

Approvals – PDC

- SDM creates common playbook
- Should streamline approvals going forward
- More collaborative dynamic



In **Summary**

NYC's strategy:

- **Fast:** Quickly developed a product that can be refined going forward
  - → A basis for discussion
- **Simple:** No legislative/regulatory actions were required
  - → Downside: Less "teeth"
- **Accessible**:
  - → Readable & attractive
  - → Usable by a broad range of stakeholders

In **Summary**

NYC's strategy:

- **Flexible:**
  - → **Development process**: Stakeholders shaped format and content of final product
  - → **Guidelines**: Not standards; not prescriptive
  - → **Implementation**: Determining best mechanisms as we go based on experience & feedback

www.nyc.gov/streetdesignmanual

streetdesignmanual@dot.nyc.gov

Partner Agencies

Dept. of Buildings

Dept. of City Planning

Dept. of Design & Construction

Dept. of Environmental Protection

Dept. of Parks & Recreation

Dept. of Small Business Services

Design Commission

Economic Development Corporation

Landmarks Preservation Commission

Mayor's Office

Office of Management & Budget

DOT Project Team

Wendy Feuer

Michael Flynn

Ed Janoff

Margaret Newman

Bruce Schaller

Andy Wiley-Schwartz