

MTA Capital Program

- Capital work is funded in 5 year programs
- Capital program funding is approved by MTA Board and Capital Program Review Board (CPRB)
- Changes exceeding 10% in an overall program element (e.g. fan plants) require CPRB approval
- Major changes to project scope and the addition or deletion of a project require MTA Board approval

NYCT Engineer's Estimates

- Estimates are prepared at:
 - Profile
 - Master Plan
 - Preliminary engineering
 - Final Design
 - Pre-Bid
- } Used to develop MTA's 5-year Capital Program
- Estimates are prepared in-house

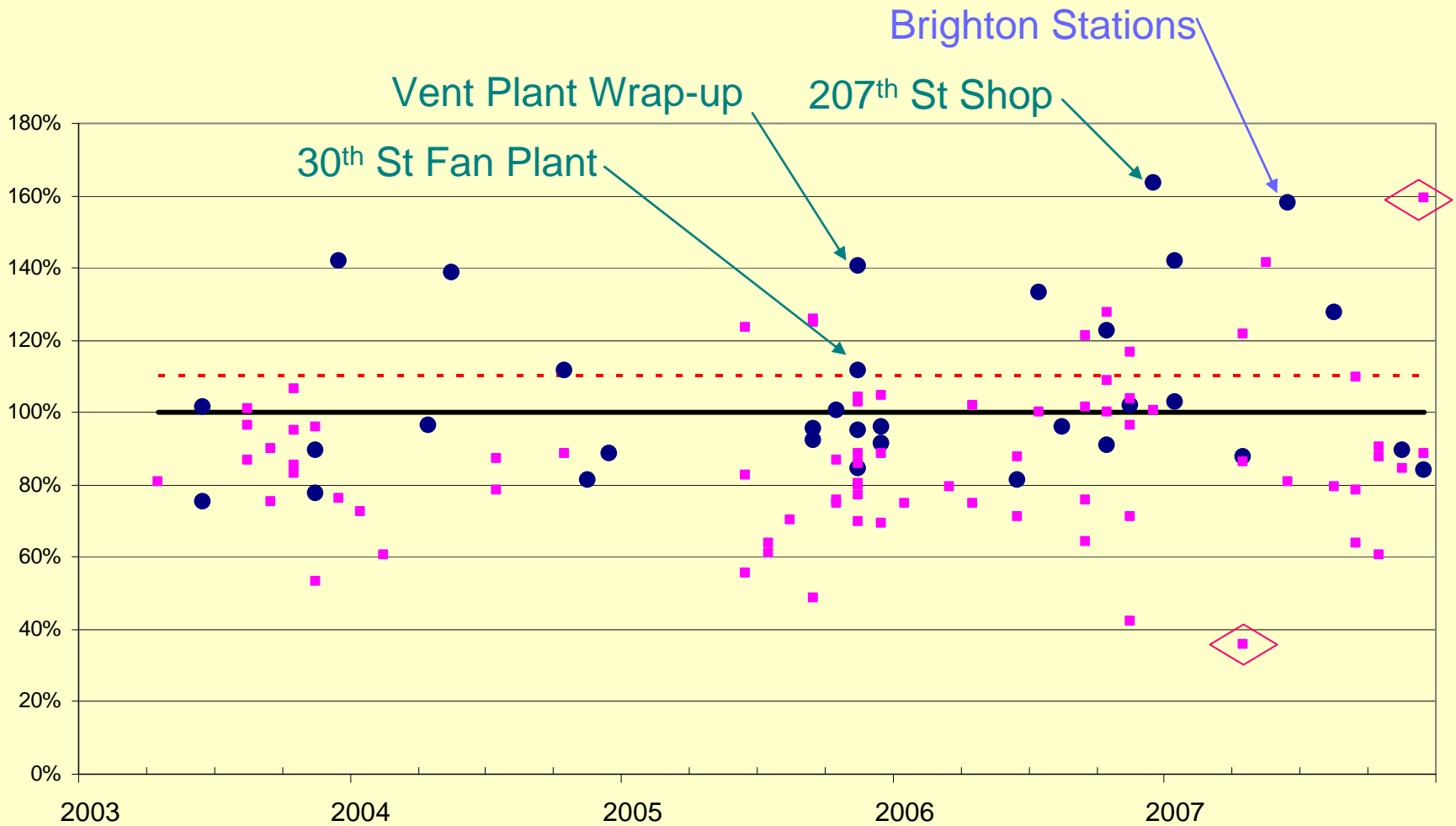
NYCT Engineer's Estimates

- Estimates are “bottom up” based on:
 - Scope – drawings and specifications
 - Schedule – duration, phasing, hours of work
 - General conditions
 - Field conditions
 - Constructability reviews

NYCT Engineer's Estimates

- Estimates take into account:
 - Full quantity take-offs
 - Labor and material rates
 - Vendor quotes
 - Subcontractor administration
 - Special equipment
 - Terms and conditions
 - Escalation
 - Bonding and insurance
 - Risks - complexity, location, duration, etc.
 - Potential number of bidders

NYCT Bidding Experience



● Low Bid >20M ■ Low Bid <20M - - - 110% Eng Estim — Eng Estim

Response to Market Conditions

- NYCT's Capital Cost Containment Committee:
 - Improve change management
 - Improve GO reporting and controls
 - Define testing and acceptance criteria
 - Apply Asset Management approach
 - Identify areas of over-compliance
 - Review Access & Protection requirements
 - Explore aggressive closures and phasing
 - Space out bids
 - Range estimates

Response to Market Conditions

- MTA Blue Ribbon Panel on Construction Costs
 - Comprised of 26 representatives - contractors, labor, owners, associations
 - Recommendations on:
 - Bonding and insurance – 7-Line Extension
 - Delivery methods – Explore CMGC
 - Manpower – demand peaks in 2011 or beyond
 - Technology projects – risk assessments
 - Contract provisions – further discussion on dispute resolutions, damages for delay, AWOs, etc.

Other Measures

- BIM
- Electronic specifications
- Establish procedures and timelines for user department inspections and reviews