BBP financial model developed/refined over 10+ years

Public updates

First model created as part of initial park planning: 2005
Public presentation of financial model: 2009
Committee on Alternatives to Housing process: 2010
Financial Model Update for Board of Directors: 2013
Financial Model Update for Board of Directors: 2014

 Executing on the model

← 2008: One Brooklyn Bridge Park lease approved
← 2009: First comprehensive maritime inspection
← 2010: First park sections open (Pier 1 and Pier 6)
← 2012: Pier 1 Hotel/Condo lease approved
← 2013: John St and Empire Stores leases approved
← 2014: First maritime repairs, funded out of operating capital
← 2014: Pier 6 development RFP issued
OUTLINE

• Expenses
  • Operating Expenses
  • Maritime Maintenance
  • Capital Maintenance

• Revenue

• Cashflow projections
OPERATING EXPENSES:
Park is 65% complete with 10% under construction

1. Numbers are approximate
OPERATING EXPENSES: After initial park build-out, opex grows with inflation

NOTE: FY12 to FY15 derived from approved BBP budgets, FY16 from proposed budget, and FY17 to FY65 from projections
1. Expense growth during “Park phase-in” based on (i) addition of new parkland, (ii) increased visitation at existing parkland, and (iii) projected inflation
2. CAGR=Compound Annual Growth Rate
3. Park construction projected to be completed during FY19
4. Expense growth during “On-going maintenance” projected to be 3% annually, the historical average rate of inflation in the US
5. Nominal values include inflation
MARITIME MAINTENANCE:
Maritime infrastructure is deteriorating

BBP maritime assets\(^1\)

- 13,000 timber piles
- 11,000 concrete extensions
- 4,500 linear ft of bulkheads\(^2\)
- 830,000 SF of concrete pier deck (1/3 of park)
- 3,200 linear ft of riprap or natural shore

1. Numbers are approximate
2. Concrete and steel

---

Pier 3 pile cross-section showing marine borer damage

Pier 3 pile cross-section showing marine borer damage
MARITIME MAINTENANCE:
Initial cost estimate from 2005 was simplistic

Projected annual expenditure ($M, nominal)

- Total expense over 50 years was $200M (in $2005) (or $450M in $nominal)

NOTE: Initial financial model from 2005 assumed $200M (real$) of maritime expenses over 50 years; it assumed consistent $4M per year expenses (a straight average), grown with inflation
MARITIME MAINTENANCE: More refined lifecycle cost model created in 2010

Model inputs

- Quantity and type of maritime assets
- Rate of deterioration
- Unit cost for repair ($ per linear foot)

Projected expenses ($M)$12

Total expense over 50 years projected to be $200M (in $2010) (or $375M in $nominal)

1. Assumed $700 per linear foot in structural repair costs
2. Dive inspections were projected at ~$220K annually ($2005)
MARITIME MAINTENANCE:
Cost of repairing maritime infrastructure is escalating

Cost increases over previous 5 years

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected expense over 50 yrs(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$200M</td>
</tr>
<tr>
<td>2012</td>
<td>$260M</td>
</tr>
<tr>
<td>2015</td>
<td>$320M</td>
</tr>
</tbody>
</table>

Increases driven by unit cost growth\(^2\)

- Steep growth in unit costs for repairs\(^3\):
  - $1,100/lin. ft. (2015)

- Growth driven by:
  - Improved local economy
  - Numerous active projects in NY Harbor
  - Limited number of specialty contractors leads to strong pricing power

2. Project scope and rate of deterioration have remained consistent with earlier projections
3. Unit costs based on awarded marine contracts for BBP work and consistent with regional averages
4. CAGR=Compound Annual Growth Rate
# MARITIME MAINTENANCE: Reactive vs. preventative approach

<table>
<thead>
<tr>
<th>Approach</th>
<th>Reactive approach</th>
<th>Preventative approach</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Annual rehabilitation of deteriorated elements only</td>
<td>Encase piles to prevent future deterioration</td>
</tr>
<tr>
<td></td>
<td>Remaining non-rehabilitated elements continue to deteriorate</td>
<td>Repair as many piles upfront as is financially viable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Associated repair</th>
<th>Reactive approach</th>
<th>Preventative approach</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Steel reinforced concrete encasement (4” to 8” width)</td>
<td>¾” epoxy protective encasement (no reinforcing steel or concrete)</td>
</tr>
<tr>
<td></td>
<td>Transfers structural load from pile, to concrete encasement</td>
<td>Piles maintain structural capacity</td>
</tr>
</tbody>
</table>
MARITIME MAINTENANCE:
Current expense projection (reactive approach)

Projected annual expenditure ($M, nominal)

Total expense over 50 years is $320M$ (in $2015)
(or $600M in $nominal)

1. Assumes $1,100 per linear foot in structural repair costs, up from previous cost assumption of $875 per linear foot; grown with inflation of 3% per year
2. Dive inspections are ~$250K annually ($2015) for reactive approach
3. Up from previous estimate of $260M from 2012
MARITIME MAINTENANCE:
Current expense projection (preventative approach)

Projected annual expenditure (\$M, nominal)

Total expense over 50 years is $240M\textsuperscript{3} (in $2015) (or $340M in $\text{nominal}$)

1. Assumes $1,100/linear foot in structural repair (up from $875/lin ft), $525/lin ft in preventative concrete extension repair, and $425/lin ft in preventative pile repair; grown with inflation of 3\% per year
2. Dive inspections are ~$150K annually ($2015) for preventative approach
3. Up from previous estimate of $210M from 2012

WWW.BROOKLYNBRIDGEPARK.ORG
MARITIME MAINTENANCE: Preventative approach has significant advantages

- Cheaper than reactive approach ($80M cheaper in $2015 or $260M in $nominal)
  - Reduced labor costs
  - Less material required
  - Economies of scale in purchasing
- Better for the environment (less fill in East River)
- Less market risk of future cost increases
- Good long-term investment option

1. BBP’s investment policy limits investment of BBP funds to low-risk, modest return vehicles; current annual rate of return on these investment vehicles is <1%
CAPITAL MAINTENANCE:
Refinement of capital maintenance expense estimates

<table>
<thead>
<tr>
<th>2005 estimate</th>
<th>2012 estimate</th>
<th>2015 estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on industry standards</td>
<td>Based on industry standards</td>
<td>Based on lifecycle cost model of all BBP assets</td>
</tr>
<tr>
<td>• 1% to 2% of initial construction costs</td>
<td>• 1% to 2% of initial construction costs</td>
<td>• Full asset inventory</td>
</tr>
<tr>
<td>• $130M construction budget</td>
<td>• $400M construction budget</td>
<td>• Useful life of assets</td>
</tr>
<tr>
<td>~$2M per year</td>
<td>~$5M per year</td>
<td>• Replacement value</td>
</tr>
</tbody>
</table>

NOTE: BBP does not receive public funds for on-going capital maintenance
CAPITAL MAINTENANCE: Lifecycle estimate – illustrative example

1. Identify all park assets
   - Pier 5 astroturf (installed FY2012)

2. Assign useful life to each asset
   - 10 year life

3. Determine replacement value for each asset
   - $800K\(^1\)

4. Project replacement expenses over 50 years
   - Replacement needed in FY22, FY32, FY42 etc.

---

\(^1\)In $2015; model assumes 3% annual cost inflation
CAPITAL MAINTENANCE:
All BBP assets used to project future expenses

180+ asset groups identified

<table>
<thead>
<tr>
<th>Artificial Turf</th>
<th>Paving / Chip Seal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beaches (Pier 4 and Main St)</td>
<td>Picnic Grills</td>
</tr>
<tr>
<td>Benches (slats, supports)</td>
<td>Picnic Tables / Umbrellas</td>
</tr>
<tr>
<td>Boardwalk at EFF</td>
<td>Pier 2 Court Surface</td>
</tr>
<tr>
<td>Bouldering Wall</td>
<td>Plantings and Lawns</td>
</tr>
<tr>
<td>Buildings</td>
<td>Playground Equipment</td>
</tr>
<tr>
<td>Dog Run Surfaces</td>
<td>Playground Surfaces</td>
</tr>
<tr>
<td>Exercise Equipment</td>
<td>Range Fence</td>
</tr>
<tr>
<td>Ferry Dock at Pier 6</td>
<td>Retention Tanks</td>
</tr>
<tr>
<td>Floating Dock at Pier 2</td>
<td>Rink Surface</td>
</tr>
<tr>
<td>Irrigation (pumps, lines)</td>
<td>Shade Sails</td>
</tr>
<tr>
<td>Lights (poles, fixtures)</td>
<td>Sports Netting</td>
</tr>
<tr>
<td>Loop Road + parking lot</td>
<td>Squibb Bridge</td>
</tr>
<tr>
<td>Marine Fence</td>
<td>Steel Shed Structure</td>
</tr>
<tr>
<td>Overwater bridges (7 in total)</td>
<td>Vehicles</td>
</tr>
</tbody>
</table>

Projected capital maintenance expenses

Projected capital maintenance expenses ($nominal)
Annual contribution to capital reserve fund ($nominal)
Average of ~$5M ($2015) per year

NOTE: Above list of assets not comprehensive

WWW.BROOKLYNBRIDGEPARK.ORG
OUTLINE

• Expenses

• Revenue
  • One-time Revenue
  • Recurring Revenue

• Cashflow projections
### ONE-TIME REVENUES:
Revenues from upfront rent, PILOST\(^1\), and PILOMRT\(^2\)

**Projected one-time revenue**

<table>
<thead>
<tr>
<th>Site</th>
<th>One-time rev ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Brooklyn Bridge Park</td>
<td>$4</td>
</tr>
<tr>
<td>Pier 1</td>
<td>$27</td>
</tr>
<tr>
<td>John Street(^3)</td>
<td>$31</td>
</tr>
<tr>
<td>Empire Stores</td>
<td>$32</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$93</strong></td>
</tr>
</tbody>
</table>

**Projected one-time revenues ($M)**

1. PILOT=Payment in Lieu of Sales Tax
2. PILOMRT=Payment in Lieu of Mortgage Recording Tax
3. Includes estimated $10M in participation rent on initial sales

---

**WWW.BROOKLYNBRIDGEPARK.ORG**
## Recurring Revenue: Model Assumptions

### Revenue Variables

<table>
<thead>
<tr>
<th>PILOT amount</th>
<th>PILOT growth rate</th>
<th>Ground rent amount</th>
<th>Ground rent growth rate</th>
</tr>
</thead>
</table>

### Assumptions

- **Resi**: Based on DOF market values for comparable buildings
- **Comm**: Based on projected NOI of each project

- **Ground rent amount**
  - **Residential**: Based on DOF market values for comparable buildings
  - **Commercial**: Based on projected NOI of each project

- **Ground rent growth rate**: 3% annual growth in DOF market value

### Defined in Leases

<table>
<thead>
<tr>
<th>Site</th>
<th>Annual rent</th>
<th>Growth rate (per yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBBP</td>
<td>$1.4M</td>
<td>3.0%</td>
</tr>
<tr>
<td>Pier 1</td>
<td>$0.8M</td>
<td>~1.8%</td>
</tr>
<tr>
<td>John Street</td>
<td>$0.2M</td>
<td>3.0%</td>
</tr>
<tr>
<td>Empire Stores</td>
<td>$1.6M</td>
<td>2.3%</td>
</tr>
<tr>
<td>Marina</td>
<td>$0.3M</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

### Projected Recurring Revenue

<table>
<thead>
<tr>
<th></th>
<th>Rev. per year ($2015 in M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBBP</td>
<td>$2.3</td>
</tr>
<tr>
<td>Pier 1</td>
<td>$3.2</td>
</tr>
<tr>
<td>John St.</td>
<td>$1.0</td>
</tr>
<tr>
<td>Empire Stores</td>
<td>$2.7</td>
</tr>
<tr>
<td>Other</td>
<td>$1.7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$10.9</td>
</tr>
</tbody>
</table>

---

1. DOF=Dept of Finance; ~$120/SF for Pier 1 residential, John St, and OBBP
2. NOI=Net Operating Income
3. Based on historical annual rate of inflation in US
4. Growth rate is 7.5% every 5 years
5. Projected revenue based on first stabilized year of each asset
6. Participation for Pier 1 hotel and Empire Stores assumed to be zero; current projections suggest project revenue and profit thresholds will not be met
7. Includes ~$200K per year in annual Park Transfer Fee beginning in FY2020
8. Includes revenues from marina, concessions, parking, permits, and events

NOTE: Model assumes current tax rates (10.684% for commercial and 12.855% for multifamily residential) in all future fiscal years
## RECURRING REVENUE:
Expiration of tax abatements

<table>
<thead>
<tr>
<th>Type</th>
<th>Length of full abatement</th>
<th>Length of phase out</th>
<th>Abatement expires</th>
<th>Additional rev. to BBP at expiration ($2015 in M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBBP (residential)</td>
<td>J-51</td>
<td>10 yrs</td>
<td>5 yrs</td>
<td>2024</td>
</tr>
<tr>
<td>OBBP (commercial)</td>
<td>ICIP</td>
<td>15 yrs</td>
<td>10 yrs</td>
<td>2034</td>
</tr>
<tr>
<td>Empire Stores</td>
<td>ICAP</td>
<td>15 yrs$^{1}$</td>
<td>10 yrs$^{1}$</td>
<td>2042</td>
</tr>
<tr>
<td>Pier 1 hotel</td>
<td>ICAP</td>
<td>15 yrs</td>
<td>10 yrs</td>
<td>2042</td>
</tr>
</tbody>
</table>

**NOTE:** Years are fiscal years; Empire Stores and Pier 1 hotel abatements have not yet been granted, therefore abatement expirations are projections

1. Only applies to office space and first 10% of building’s retail; all retail over 10% of total building size has a 10 year full abatement and 5 year partial abatement
2. All values are projections based on projected future DOF valuations; Source: BBP
RECURRING REVENUE:
Growth driven by expiring tax breaks, inflation

1. Growth driven by commencement of ground rent and by PILOT values increasing as buildings are constructed and occupied
2. CAGR=Compound Annual Growth Rate
3. Assumes 3% inflation of PILOT, defined escalation terms on ground leases as shown in previous slide
OUTLINE

• Expenses
• Revenue
• Cashflow projections
CASHFLOW PROJECTION:
Assuming no Pier 6¹ (reactive maritime approach)

BBP projected to run out of money in FY2029…

...and at low point, reserve balance is negative $350M+

1. Cashflow projection assumes no revenues from Pier 6 development sites
2. Includes all projected expenses (opex, maritime, and capital maint.) and all projected revenues (one-time, recurring, and rev from abatement expirations)
3. “Cash balance” is aggregate beginning balance of operating, capital maintenance, and maritime maintenance reserve funds in any given year

NOTE: Cost of borrowing during negative “Cash balance” years not included

WWWW.BROOKLYNBRIDGEPARK.ORG
CASHFLOW PROJECTION: Assuming no Pier 6\(^1\) (reactive maritime approach)

1. Cashflow projection assumes no revenues from Pier 6 development sites
2. Includes all projected expenses (opex, maritime, and capital maint.) and all projected revenues (one-time, recurring, and rev from abatement expirations)
3. "Cash balance" is aggregate beginning balance of operating, capital maintenance, and maritime maintenance reserve funds in any given year

NOTE: Cost of borrowing during negative "Cash balance" years not included

BBP projected to run out of money in FY2029…

Not Financially Self-Sufficient

...and at low point, reserve balance is negative $350M+

---

\(1\) BBP projected to run out of money in FY2029...

---
CASHFLOW PROJECTION: Assuming no Pier 6\(^1\) (preventative maritime approach)

- BBP projected to run out of money in FY2016...
- ...and not recover for ~50 years

1. Cashflow projection assumes no revenues from Pier 6 development sites
2. Includes all projected expenses (opex, maritime, and capital maint.) and all projected revenues (one-time, recurring, and rev from abatement expirations)
3. "Cash balance" is aggregate beginning balance of operating, capital maintenance, and maritime maintenance reserve funds in any given year

NOTE: Cost of borrowing during negative "Cash fund balance" years not included
CASHFLOW PROJECTION: Assuming no Pier 6\(^1\) (preventative maritime approach)

1. Cashflow projection assumes no revenues from Pier 6 development sites
2. Includes all projected expenses (opex, maritime, and capital maint.) and all projected revenues (one-time, recurring, and rev from abatement expirations)
3. "Cash balance" is aggregate beginning balance of operating, capital maintenance, and maritime maintenance reserve funds in any given year

NOTE: Cost of borrowing during negative "Cash balance" years not included

BBP projected to run out of money in FY2016…
...and not recover for ~50 years

Not Financially Self-Sufficient
CASHFLOW PROJECTION:
What does a self-sustaining park look like?

NOTE: For illustrative purposes only; does not represent a real projection

1. "Cash balance" is aggregate beginning balance of operating, capital maintenance, and maritime maintenance reserve funds in any given year
2. 2006 PILOT legislation allows City to sweep excess PILOT funds after FY2026
CASHFLOW PROJECTION:
Pier 6 development site Proposed Building Program
Subject to approval by BBP Board

• Residential Units:
  o 192 market rate condominium units
  o 147 mixed income rental units
    – 117 permanently affordable
    – 30 market rate
• Ground Floor Retail
  o ~5,000 SF
• Community Facilities/Amenities
  o 75-seat universal Pre-K
  o Additional park restrooms
  o 1,500 SF additional community facility
• 30’ Building Height Reduction
• Union Construction
  o Approximately 500 jobs

1. Affordable Unit mix includes 50% at 165% AMI, 25% at 130% AMI, 25% at 80% AMI
2. Specific tenant to be named at a later date
CASHFLOW PROJECTION:
Pier 6 development site financial offer
Subject to approval by BBP Board

<table>
<thead>
<tr>
<th>One-time revenue</th>
<th>Recurring revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upfront rent $106M</td>
<td>Ground rent $0.6M/yr</td>
</tr>
<tr>
<td>PILOST(^1) $4M</td>
<td>PILOT(^1) $1.6M/yr</td>
</tr>
<tr>
<td>PILOMRT(^1) $6M</td>
<td>Park Transfer Fee $0.3M/yr</td>
</tr>
<tr>
<td>Participation(^2) $0M</td>
<td>TOTAL $2.5M/yr</td>
</tr>
<tr>
<td><strong>TOTAL</strong> $116M</td>
<td></td>
</tr>
</tbody>
</table>

1. Projected values based on current DOF valuation of comparable buildings
2. Participation rent offer is 15% of all revenues over an average net per square foot sales price of $2,000; given current market conditions, BBP is not projecting any revenue from this offer
3. Growth rate is 7.5% every 5 years
4. Beginning ten years after Substantial Completion, BBP receives Park Transfer Fee of 0.75% of the sale price of each sold unit
CASHFLOW PROJECTION: With Pier 6 (preventative approach)

1. “Cash balance” is aggregate beginning balance of operating, capital maintenance, and maritime maintenance reserve funds in any given year.

NOTE: Figures include annual 1% return on invested capital (i.e., the cash balance)
CASHFLOW PROJECTION:
With Pier 6 (preventative approach)
Adjusted for inflation\(^1\), With City Sweep

1. Assuming 3% annual inflation
2. City is permitted to sweep excess PILOT revenues no sooner than FY2025; model projects City sweep could begin in FY2035
3. “Cash balance” is aggregate beginning balance of operating, capital maintenance, and maritime maintenance reserve funds in any given year

NOTE: Figures include annual 1% return on invested capital (i.e., the cash balance)
Conclusion

• Model has long history and has been publicly vetted over 10+ years

• BBP constantly refining model assumptions to reflect latest on-the-ground realities and market dynamics

• Despite major economic changes over past decade, current projections are still largely in-line with originally conceived financial plan

• Without revenues from Pier 6 development sites BBP cannot fulfil its mandate to be financially self-sufficient

• The recommended Pier 6 RFP proposal provides an appropriate level of revenues to ensure the park remains financially solvent