New York City
Economic Development
Corporation

MEMORANDUM

To: Deputy Mayor Daniel L. Doctoroff

From: Andrew M. Alper

Date: June 27, 2005

Re: **Estimated Fiscal Impacts of the Proposed Atlantic Yards Project**

I. SUMMARY

The New York City Economic Development Corporation ("NYCEDC") has performed an economic and fiscal impact analysis of the Atlantic Yards project ("Atlantic Yards") as proposed by Forest City Ratner ("FCR"), including the proposed Brooklyn Arena ("Arena") and the surrounding mixed-use development (the "MUD"), comprised of 2 million SF of office space, 4,500 units of residential housing, 300,000 square feet of retail space, and 6 acres of open space. According to the analysis, the project will have a total impact on New York City as follows:

30-year Incremental Fiscal Impact (in $ Millions)

The Arena	**NPV @ 5.5%**
Operations	$139.2
Construction Impacts	$11.1
Total	$150.3
Mixed-Use Development	
Operations	$319.5
Construction Impacts	$54.2
Total	$373.7
Total	**$524.0**

NYCEDC staff prepared the analysis based on discussions with private consultants and Office of Management and Budget staff, as well as a review of other third party studies[1]. A discussion of the specific inputs and methodologies used to arrive at these figures follows. The first section describes the construction and ongoing operational impacts from the Arena and the second describes the construction, operations and real estate-related revenue from the MUD.

II. THE ARENA

A. Impacts from Operations

The construction and operation of the Arena can be reasonably expected to generate incremental fiscal benefits to New York City, primarily through the importation of spending that currently takes place outside of the City or by recapturing spending of City residents that occurs outside of the City. The following table summarizes NYCEDC's estimates of the incremental direct and indirect fiscal impacts of

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[1] "Estimated Fiscal Impact of the Atlantic Yards Project on the New York City and New York State Treasuries" by Andrew Zimbalist, dated 5/1/2004; "Estimated Impact of Forest City Ratner's Brooklyn Arena and 17 High Rise Development on NYC and NYS Treasuries" by Jung Kim and Gustav Peebles, dated 6/21/04.

the Arena for New York City. A discussion of the assumptions and methodology used to prepare the estimates follows.

Arena Fiscal Revenue

(In $Millions)	2009 (Stabilized Year)	30-Year NPV @ 5.5%
Direct Impacts		
Sales	$ 2.95	$ 47.86
Parking	$ 0.14	$ 2.25
Income		
Facilites	$ 0.12	$ 1.95
Exec/Staff	$ 0.05	$ 0.79
Players	$ 0.47	$ 7.58
Visitor Spending		
Arena Visitors	$ 1.21	$ 19.69
Team Visitors	$ 0.17	$ 2.84
Subtotal	**$ 5.11**	**$ 82.97**
Indirect Impacts	**$ 3.46**	**$ 56.25**
TOTAL	**$ 8.57**	**$ 139.21**

Methodology
The starting point for the fiscal impact analysis is a set of gross expenditures that could reasonably be expected to occur under a one-team scenario based on factors including attendance, average ticket prices, per capita expenditures for concessions, premium seating revenues etc. based on benchmark data from other competitive buildings in top markets across the United States. The benchmark data was adjusted to account for New York City specific conditions and expected inflation.

After an examination of total event data at competitive buildings across the country and discussions with promoters and event organizers, a total of 192 events were forecasted, of which 148 were “other events” such as family shows, high school sports, and non-major league professional sports. The following table shows the anticipated direct taxable expenditures that were used to drive the fiscal impact analysis.

One-Team Direct Taxable Expenditures

(In $Millions)	Total	NBA Only	Other Events*
Gross Tickets	**$129.5**	$85.1	$44.4
Concession Gross	**$14.1**	$4.4	$9.6
Catering Gross	**$10.6**	$3.6	$7.0
Merchandise Gross	**$5.0**	$1.5	$3.6
Total Parking Gross	**$8.7**	$1.5	$7.2
Facility Wages	**$13.6**	$13.6	$0.0
Exec/Staff	**$9.9**	$7.8	$2.0
Player Salaries	**$89.8**	$87.4	$2.5
Earnings	**$26.8**	**$20.3**	**$6.5**

*Other events includes additional sporting events, concerts, family shows etc.

Arena Sales and Income Taxes
In order to calculate the sales and income taxes from the arena portion of the project, the baseline expenditures were adjusted using the following assumptions:

- **Net New Spending:** Expenditures at NBA events were estimated to be 59% net new spending to the City and expenditures at "other events" were estimated to be 20% net new to the City. The assumptions underlying these figures are as follows:
    - It was estimated that 59% of the gross expenditures that occur at NBA events would represent new or recaptured spending in New York City. The starting point for this figure was an examination of the residency patterns of current New Jersey Nets season ticket holders, which would represent either new or recaptured spending, depending on residency. NYCEDC then estimated the percentage of remaining attendees from other parts of New York State that would travel into New York City to see an NBA event. Finally, NYCEDC estimated the percentage of expenditures that represented new spending, or "additional discretionary spending", from within New York City from sources that would have been saved or spent elsewhere (corporate money, reduced savings from high income individuals, or money that would have otherwise been spent outside of the City). The table below outlines the results.
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Calculation of New and Recaptured Expenditures in NYC

		# of Ticket Holders
Projected Attendance		17,191
Current NJ Season Ticket Holders		8,936
Current NY and CT Season Ticket Holders		5,802
1.	30% of NJ Season Ticket Holders retained	2,681
2.	50% of NY and CT Season Ticket Holders retained	2,901
3.	Remaining Fans	11,609
4.	25% of Remaining fans new from Long Island, Westchester and other areas of New York State	2,902
5.	15% Additional Discretionary Spending	1,741
Total Net New to NYC (1+2+4+5)		**10,225**
% Net New to NYC of Projected Attendance		**59%**

    - The percentage net new expenditures at "other events" was estimated at 20%, based on the likelihood that much of the spending at "other events" would represent expenditures shifted from other forms of entertainment or from similar events at Madison Square Garden.

- **New York City Residency:** Based on figures from other area professional sports teams, it was estimated that 20% of the players, 35% of the executives and team staff, and 50% of the facility staff would reside in the City. As only NYC residents are subject to NYC personal income tax, this figure impacts the overall income tax revenues to the City.

- **Income Tax Rates:** It was assumed that income for players would be taxed at a rate of 4.45%, the highest City income tax rate, versus a rate of 2.98% for all other arena employees, reflecting the average effective income tax rate Citywide, as calculated by the New York City Department of Finance.

Visitor Spending

In order to calculate non-arena expenditures from individuals traveling to the proposed Arena, the total number of visitor trips was calculated as follows:

Visitor Trips

	NBA	Other Events
Avg Attendace	17,191	9,476
# of Events	41	148
Total Visitor Trips	**704,831**	**1,402,494**
Traveling Staff	30	30
# of Events	41	148
Total Visitor Trips	**1,230**	**4,440**

The total number of trips was then adjusted by the number of visitors that were expected to represent net new spending to the City. For NBA events, this amount was estimated as 43%[2], calculated by taking the 59% net new figure from arena expenditures and subtracting the 15% of those expenditures that represented money from City residents that would likely have been saved or spent elsewhere. For other events, it was assumed that 20% of the visitor spending was new to the City, comparable to the assumption used on in-Arena expenditures, while 100% of the spending by traveling staff was assumed to be new.

Non-Arena Visitor Spending Distribution

	NBA and Other Events	Traveling Staff
Hotels	$0.00	$195.00
Retail Trade	$10.50	$15.00
Food & Drink.	$19.25	$75.00
All Other Amusement and Recreation	$0.00	$0.00
Transportation	$5.25	$15.00
Total	**$35.00**	**$300.00**

Daily spending, as outlined above, was then apportioned according to standard NYC & Company allocations of visitor spending by expenditure type. These totals were then applied to the adjusted trips for new visitors, resulting in total direct new tourism spending in the City of $25 million. All overnight visitors were assumed to stay 1 day and / or night.

Indirect Impacts

Expenditure data for ticket sales, concessions, catering, merchandise, and parking was used as the starting point for the estimated indirect impacts from arena operations. Expenditures were adjusted by a "leakage factor" of 41% to account for the fact that some expenditures would not recirculate through the New York City economy. This factor was calculated by comparing total gross expenditures with the level of expenditures that could reasonably be expected to remain in New York City after accounting for expected residency patterns. Total wage estimates were then derived using RIMS II multipliers (as developed by the U.S. Bureau of Economic Analysis and adapted specifically for the New York City economy). The following categories of multipliers were used:

- Professional sports clubs and promoters
- Eating and drinking places

[2] Difference due to rounding.

- Retail trade
- Other amusement and recreation
- Parking

To arrive at the final indirect tax estimates, a rate of 11.85% was applied to indirect earnings, which is equal to the average proportion of total City tax revenues to overall wages and salaries in the City.

B. Impacts from Arena Construction
Based on the estimated $430 million dollar construction cost of the arena, NYCEDC estimated a *one-time* direct fiscal impact of $12.7 million over the two years of construction in 2007 and 2008. This figure is based solely on personal income, business income and personal and business sales taxes from the labor portion of hard and soft costs. Divided out over a 2-year construction period, the net present value at 5.5% equals $11.1 million.

III. THE MIXED-USE DEVELOPMENT

The construction of the MUD can also be expected to have incremental fiscal impacts for New York City based on the income and spending of new residents and employees. In order to estimate the incremental fiscal impacts from the operations of the MUD for New York City, NYCEDC utilized the development program as proposed by FCR as a starting point and adjusted it as described below.

Estimates of Impacts from Mixed-Use Development

(In $Millions)	**30-Year NPV @ 5.5%**
Residential Units	
Income	$131.8
Sales	$67.5
Commercial Space	
Income	$35.2
Sales	$14.2
Total from Income and Sales	$248.7
Property-Related Impacts	
Commercial Properties	$37.0
Residential Properties	$54.6
Discount from Current Property Tax Revenues	($20.8)
Total Property-Related Impacts	$70.8
Total Impact from Mixed-Use Development	$319.5

A. Impacts from Operations
Impacts from the mixed-use development include several elements: income and sales tax from residents of the new residential units, income and sales tax from workers in the commercial development, and property tax estimates from the new development.

All impacts have been adjusted to reflect only new revenues to the City. This adjustment acknowledges that a portion of the office space and the residential units will be filled with current City employees and residents and will not constitute new revenues to the City overall. At the same time, it also assumes that the City will realize a net benefit from the revenues generated by new jobs and new residents that will be able to locate across the City due to the creation of this new space in Brooklyn. Each of these assumptions for the commercial and residential development is detailed within the sections below. Property tax revenue is also discounted to account for the revenue currently generated from these sites.

Indirect impacts were estimated using a standard multiplier of 1.5, applied to direct fiscal revenues, meaning that for every dollar spent in the New York economy, 0.5 dollars will be generated in indirect and induced earnings as money recirculates through the City economy. This multiplier is a conservative estimate of the average direct earnings multiplier, from the RIMS II model, for all New York City industries (actual value for all non-zero industries in New York is 1.64).

Impacts from Residential Units

Income

Given the current shortage of housing in New York City, the analysis assumes that all 4,500 new units to be constructed as part of the MUD will represent an equivalent increase in households Citywide, either directly in the project itself or as infill in units vacated by households relocating to the project.

Income tax revenue is based on an average income of $45,000, the Citywide average for all industries. This is consistent with the assumption that these units would be *net* new to the City overall, thus residents in these units are likely to be employed in any industry in the City. Total income was then escalated annually at a rate of 3.0% and adjusted to reflect the anticipated construction timeframe. The multiplier of 1.5 was then applied to the direct revenues to estimate indirect effects.

Sales

In addition to the fiscal revenue from income tax, the analysis also includes revenues resulting from increased retail spending in the City by these new households. The sales tax revenue was estimated by assuming that approximately 25% of before-tax income is spent on taxable items in New York City. Because all 4,500 households are assumed to be new to NYC, all of this spending was applied to the NYC sales tax rate of 4.125% to estimate fiscal revenue.

Impacts from Mixed-Use Development

Residential Key Assumptions	
New Households	4,500
% Net New to the City*	100%
Average Income	$45,000
% Income Spent on Taxable Goods	25%

*Created directly in the project or generally in the 5 boroughs.

Impacts from Commercial Space

Income

It is expected that approximately 2 million square feet of commercial space will be added to the City as a result of this project. This new construction creates the potential for 7,100 jobs to be added based on an average of 250 square feet per employee and a 7% average vacancy rate. The fiscal impact analysis, however, assumes that only 30% of these jobs, or just over 2,000 workers, are new to the New York economy. This number is equivalent to one medium-sized (500,000 sf) office building and is compatible with current estimations of the Brooklyn allocation of office-using employment from City-wide projections for employment growth. This assumption was also used in the analysis to address double counting of residents who both live and work in the mixed-use development and are already accounted for in the residential analysis.

In addition, the analysis also reduced the total impact by assuming that only 60% (1,300) of these jobs will be new State residents and only 60% of these (780) will be new City residents. The fiscal revenue projections are based only on these new workers. In addition, the analysis uses an average salary of $64,800, based on the average salary for non-finance related office-using employment City-wide. This is higher than the overall City-wide average salary of $45,000, but more accurately reflects salaries in outer borough office jobs, because the latter figure includes non-office employment. The average effective income tax rates of 2.98% and 4.41% for the City and State respectively were applied to total new income generated by these workers, and grown at a rate of 3% per year. Indirect impacts were estimated using a multiplier of 1.5 to direct fiscal revenue.

Sales
Sales tax revenue is based on the percentage of income typically spent in the City by workers at the typical office salary level of $65,000. This assumption, that workers spend 25% of their salary in the New York economy, is based on the Consumer Expenditure Survey. Sales tax revenues were estimated using only the retail spending from those workers assumed to be new to the City in jobs that are new to the New York economy but exclude the spending from those jobs going to new residents already accounted for in the residential analysis. Sales tax rates of 4.125% for the City and 4.5% for the State were applied to these estimates of spending. Indirect effects were then estimated using a multiplier of 1.5.

Impacts from Mixed-Use Development

Commercial Key Assumptions	
Square feet of development	1,900,000
# of Jobs	7,100
% Net New to City	30%
Workers New to City	780
Average Income	$64,800

Property Related Impacts
The development of residential, retail, and commercial space as part of the Atlantic Yards project will result in the creation of new property tax revenues for the City. In order to estimate the present value of these taxes, NYCEDC prepared a 30-year analysis of the expected property tax receipts from the proposed development utilizing the following assumptions:

- *Commercial Office Buildings*
  Construction of a new commercial office building would begin approximately every two years, with construction of the first building commencing in 2007. Assessed values started at approximately $65 psf, based on estimates for a comparable large scale outer borough development project provided by the NYC Department of Finance and were grown at 3% per annum. It was assumed that all commercial office buildings would be eligible for a 25-year ICIP exemption on improvements.

- *Residential Buildings*
  Construction of residential buildings followed a staggered schedule, with the first building starting construction in 2007. Assessed values started at approximately $59 psf, based on estimates for a comparable large-scale outer borough development project provided by the NYC Department of Finance and were increased at 3% per annum. Residential buildings expected to include an affordable housing component were assumed to be eligible for a 25-year exemption under the 421(a) program; those buildings that were not expected to include an affordable component were assumed to be eligible for a 15-year 421(a) exemption.

Expected property tax receipts were adjusted downward to account for the likelihood that the City may not collect a portion of the property taxes on development that occurs on property currently owned by the MTA. Property taxes currently received on the site were subtracted from the analysis.

B. Impacts from Mixed- Use Development Construction

In addition to the operations-related revenue generated by the new residents and new jobs able to be located in the City as a result of this development, the construction of these new buildings is also expected to generate new revenues for the City. This analysis was based on the total SF estimates and an anticipated development schedule. Each SF of new construction generated a corresponding amount of benefit to the City, based on a total construction cost (hard and soft) of $225 psf. This value is the average construction cost for office, retail and residential development. Total earnings per square foot was derived assuming that about 40% of the total construction costs are attributable to labor, and these earnings were then applied to an average income tax rate of 2.98% and a rate of 4.2% for other tax revenue, including personal and business sales tax, business income tax and miscellaneous City taxes. Indirect revenues were estimated using the RIMS II multiplier for the construction industry (about 1.5 for New York City).