

BROOKLYN BAY CENTER

Final Environmental Impact Statement

CEQR No.: 10DCP002K

ULURP Nos.: 11 0047 ZMK
11 0048 ZSK
11 0049 ZSK
11 0050 ZSK
11 0051 ZSK
N11 0052 ZAK
N11 0053 ZCK

Lead Agency:
City Planning Commission, City of New York

Prepared by:
AKRF, Inc.
Langan Engineering
Sam Schwartz Engineering

August 2011

FINAL ENVIRONMENTAL IMPACT STATEMENT
For
BROOKLYN BAY CENTER
August 12, 2011

CEQR No.: 10DCP002K
ULURP Nos.: 110047ZMK
110048ZSK
110049ZSK
110050ZSK
110051ZSK
N110052ZAK
N110053ZCK

LEAD AGENCY:
City Planning Commission
City of New York
Amanda M. Burden, FAICP, Chair

LEAD AGENCY CONTACT:
Robert Dobruskin, AICP, Director
Environmental Assessment and Review Division
New York City Department of City Planning
22 Reade Street, Room 4E
New York, NY 10007
(212) 720-3423

PREPARED FOR THE LEAD AGENCY BY:
AKRF, Inc.
Langan Engineering
Sam Schwartz Engineering

Table of Contents

Foreword.....	F-1
Executive Summary	S-1
1: Project Description	1-1
A. Project Identification.....	1-1
Proposed Actions.....	1-1
Proposed Project.....	1-2
Purpose and Need.....	1-2
B. Analysis Framework for Environmental Review.....	1-3
C. Environmental Review.....	1-4
Uniform Land Use Review Procedure	1-4
Environmental Review	1-4
2: Land Use, Zoning, and Public Policy	2-1
A. Introduction.....	2-1
Principal Conclusions.....	2-1
B. Existing Conditions.....	2-2
Land Use	2-2
Zoning and Public Policy	2-3
C. The Future Without the Proposed Project.....	2-5
Land Use	2-5
Zoning and Public Policy	2-5
D. Probable Impacts of the Proposed Project	2-6
Land Use	2-6
Zoning and Public Policy	2-6
3: Socioeconomic Conditions	3-1
A. Introduction.....	3-1
Principal Conclusions.....	3-1
B. Methodology	3-1
C. Preliminary Assessment.....	3-4
Direct Residential Displacement	3-4
Direct Business and Institutional Displacement.....	3-4
Indirect Residential Displacement.....	3-5
Indirect Business and Institutional Displacement Due to Increased Rents	3-6
Indirect Business Displacement Due to Competition.....	3-11
Adverse Effects On Specific Industries.....	3-12
D. Detailed Analysis: Indirect Business Displacement Due to Competition.....	3-12
The Wholesale Club Concept.....	3-13
Trade Area Delineation	3-14

Existing Conditions	3-15
The Future Without the Proposed Project.....	3-29
Probable Impacts of the Proposed Project	3-31
Potential Impacts on Local Shopping Areas.....	3-33
E. Conclusion.....	3-40
4: Shadows	4-1
A. Introduction	4-1
Principal Conclusions	4-1
B. Preliminary Screening Analysis	4-1
5: Urban Design and Visual Resources	5-1
A. Introduction	5-1
Principal Conclusions	5-1
B. Analysis Thresholds	5-2
C. Methodology	5-2
D. Existing Conditions	5-3
Project Site.....	5-3
Study Area	5-4
E. The Future Without the Proposed Project	5-6
Project Site.....	5-6
Study Area	5-6
F. Probable Impacts of the Proposed Project.....	5-6
Project Site.....	5-6
Study Area	5-9
6: Natural Resources and Water Quality.....	6-1
A. Introduction	6-1
Principal Conclusions	6-1
B. Methodology	6-1
C. Regulations and Permits	6-2
Federal Laws and Regulatory Programs	6-2
New York State Laws and Regulatory Programs	6-4
New York City Laws and Regulatory Programs	6-7
D. Existing Conditions	6-7
Wetlands	6-9
Coastal Erosion Hazard Area.....	6-10
Floodplain	6-11
Aquatic Resources	6-11
E. The Future Without the Proposed Project	6-18
New York/New Jersey Harbor Estuary Program Projects	6-18
New York City Projects.....	6-19
F. Probable Impacts of the Proposed Project.....	6-20
Construction Impacts.....	6-20
Operational Impacts.....	6-24
G. Measures to Minimize Impacts	6-26
7: Hazardous Materials	7-1
A. Introduction	7-1

Principal Conclusions.....	7-1
B. Existing Conditions.....	7-2
Site and Area History	7-2
Topography and Subsurface Conditions	7-2
Previous Investigations	7-2
C. The Future Without the Proposed Project.....	7-3
D. Probable Impacts of the Proposed Project	7-3
8: Water and Sewer Infrastructure.....	8-1
A. Introduction.....	8-1
Principal Conclusions.....	8-1
B. Existing Conditions.....	8-3
Water Supply.....	8-3
Wastewater Treatment.....	8-3
Stormwater Management	8-4
C. The Future Without the Proposed Project.....	8-5
D. Probable Impacts of the Proposed Project	8-5
Water Supply.....	8-5
Wastewater Treatment.....	8-5
Stormwater Management	8-6
9: Solid Waste and Sanitation Services	9-1
A. Introduction.....	9-1
Principal Conclusions.....	9-1
B. Existing Conditions.....	9-1
C. The Future Without the Proposed Project.....	9-2
D. Probable Impacts of the Proposed Project	9-2
10: Energy.....	10-1
A. Introduction.....	10-1
Principal Conclusions.....	10-1
B. Existing Conditions.....	10-1
C. The Future Without the Proposed Project.....	10-2
Future Energy-Related Initiatives	10-2
D. Probable Impacts of the Proposed Project	10-2
11: Transportation	11-1
A. Introduction.....	11-1
Principal Conclusions.....	11-1
B. Methodology	11-2
Traffic.....	11-2
Signalized Intersections.....	11-2
Unsignalized Intersections	11-3
Transit Analysis Screening.....	11-3
Pedestrians Analysis Screening.....	11-4
C. Existing Conditions.....	11-4
Study Area Roadway Network.....	11-4
Traffic Volumes	11-6
Level of Service	11-6

D. The Future Without the Proposed Project	11-10
Traffic Conditions.....	11-11
E. Probable Impacts of the Proposed Project.....	11-16
Trip Generation.....	11-16
Vehicle Trip Assignment.....	11-19
Site Access and Egress	11-19
Traffic Conditions.....	11-19
Parking.....	11-26
F. Pedestrian Safety	11-27
12: Air Quality	12-1
A. Introduction	12-1
Principal Conclusions	12-1
B. Pollutants for Analysis	12-1
Carbon Monoxide	12-1
Nitrogen Oxides and Volatile Organic Compounds	12-2
Lead	12-2
Respirable Particulate Matter—PM ₁₀ and PM _{2.5}	12-3
Sulfur Dioxide—SO ₂	12-3
Air Toxics	12-3
C. Air Quality Standards.....	12-4
National and State Air Quality Standards.....	12-4
NAAQS Attainment Status and State Implementation Plan (SIP)	12-6
Determining the Significance of Air Quality Impacts	12-7
D. Methodology for Predicting Pollutant Concentrations.....	12-9
Mobile Sources	12-9
Parking Garage	12-12
HVAC Screening Analysis	12-13
Industrial Source Screening Analysis	12-13
E. Existing Conditions.....	12-13
Existing Monitored Air Quality Conditions (2006).....	12-13
Baseline Mobile Sources Analysis	12-14
F. The Future Without the Proposed Actions	12-15
Mobile Sources Analysis	12-15
G. Probable Impacts of the Proposed Actions.....	12-15
Introduction	12-15
Mobile Sources Analysis	12-16
Parking Garage	12-17
HVAC Equipment	12-17
Consistency With New York State Air Quality Implementation Plan	12-17
13: Noise	13-1
A. Introduction	13-1
Principal Conclusions	13-1
B. Acoustical Fundamentals	13-1
“A”-Weighted Sound Level (dBA).....	13-2
Ability to Perceive Changes in Noise Levels	13-2
C. Noise Standards and Criteria.....	13-3
New York City Noise Control Code.....	13-3

New York CEQR Noise Criteria	13-4
D. Impact Definition	13-4
E. Existing Conditions.....	13-6
Site Description	13-6
Selection of Noise Receptor Locations	13-6
Noise Monitoring	13-7
Equipment Used During Noise Monitoring	13-7
Results of Baseline Measurements.....	13-7
F. Noise Prediction Methodology	13-8
General Methodology.....	13-8
Analysis Procedure.....	13-9
G. The Future Without the Proposed Actions.....	13-10
H. Probable Impacts of the Proposed Actions	13-11
I. Attenuation Requirements	13-13
J. Mechanical Systems.....	13-13
K. Conclusion	13-13
14: Public Health.....	14-1
A. Introduction.....	14-1
Principal Conclusions.....	14-1
B. Analysis	14-1
15: Neighborhood Character	15-1
A. Introduction.....	15-1
Principal Conclusions.....	15-2
B. Existing Conditions.....	15-2
C. The Future Without the Proposed Project.....	15-4
D. Probable Impacts of the Proposed Project	15-5
16: Construction Impacts	16-1
A. Introduction.....	16-1
Principal Conclusions.....	16-1
B. Construction Stages and Activities	16-2
Demolition/Site Preparation	16-2
Excavation and Foundation	16-3
Structure and Shell	16-3
Interior Construction and Finishing	16-4
Construction Workers and Deliveries	16-4
Construction Hours	16-4
C. The Future Without the Proposed Project.....	16-4
D. Probable Impacts of the Proposed Project	16-5
Land Use and Public Policy	16-5
Socioeconomic Conditions.....	16-5
Open Space.....	16-5
Community Facilities	16-5
Historic Resources.....	16-6
Natural Resources	16-6
Hazardous Materials.....	16-6
Infrastructure	16-7

Traffic and Transportation	16-7
Air Quality	16-8
Noise	16-8
Neighborhood Character	16-11
17: Mitigation.....	17-1
A. Introduction	17-1
B. Transportation	17-1
Signalized Intersections	17-1
18: Unavoidable Adverse Impacts	18-1
A. Introduction	18-1
B. Transportation	18-1
19: Alternatives.....	19-1
A. Introduction	19-1
B. No Build Alternative	19-1
Land Use, Zoning and Public Policy	19-1
Socioeconomic Conditions	19-2
Shadows.....	19-2
Urban Design and Visual Resources	19-2
Natural Resources.....	19-2
Hazardous Materials	19-3
Water and Sewer Infrastructure	19-3
Solid Waste and Sanitation Services	19-3
Energy.....	19-3
Transportation.....	19-3
Air Quality	19-4
Noise	19-4
Public Health	19-4
Neighborhood Character.....	19-4
Construction Impacts.....	19-5
C. No Significant Adverse Impact Alternative	19-5
20: Growth-Inducing Aspects of the Proposed Project.....	20-1
21: Irreversible and Irretrievable Commitment of Resources.....	22-1
22: Response to Comments on the DEIS	22-1
A. Introduction	22-1
B. List of Organizations and Individuals Who Commented on the Draft Environmental Impact Statement.....	22-1
Elected Officials	22-1
Community Boards.....	22-1
Organizations.....	22-1
Interested Public	22-2
C. Comments and Responses	22-2
General/Project Description.....	22-2
Natural Resources.....	22-3

Hazardous Materials.....	22-5
Traffic.....	22-6
General/Miscellaneous	22-9

LIST OF APPENDICES

Appendix A: Waterfront Revitalization Program Consistency Assessment Form

Appendix B: Socioeconomic Conditions

Appendix C: Agency Correspondence

Appendix D: Noise

Appendix E: Public Comments

List of Tables

3-1	Employment Distribution Within Study Area, 2000.....	3-8
3-2	Business and Employment in the Study Area in 2008	3-9
3-3	Retail Employment and Sales in Brooklyn, 1987–2006	3-15
3-4	Retail Employment and Sales in New York City, 1987–2006.....	3-16
3-5	Population and Population Trends, 1990 to 2008	3-17
3-6	Households and Household Trends, 1990 to 2008.....	3-18
3-7	Median Household Income, 1989 to 2008	3-18
3-8	Vehicles Available Per Household, Primary Trade Area and New York City, 2000...	3-19
3-9	Household Retail Demand in the Primary Trade Area, Brooklyn, and New York City, 2008	3-27
3-10	Retail Expenditures and Total Retail Sales, Primary Trade Area, 2008	3-28
3-11	Retail Expenditures and Total Retail Sales, Brooklyn, 2008	3-28
3-12	Retail Expenditures and Total Retail Sales, New York City, 2008.....	3-28
3-13	Estimated Sales of Retail Projects to Be Built in the Primary Trade Area By 2013...	3-30
3-14	Retail Sales and Total Expenditure Potential Without the Proposed Actions in the Promary Trade Area, 2013	3-30
3-15	Estimated Retail Sales for the Proposed Actions	3-31
3-16	Comparison of Estimated Retail Capture Rates in Primary Trade Area: Esisting Conditions, Future Without the Proposed Actions, and Future With the Proposed Actions.....	3-32
3-17	Retail Storefronts in Local Area of Potential Competitive Impact	3-34
3-18	Selected Supermarkets Within Local Area of Potential Competitive Impact	3-34
6-1	Birds With the Potential to Breed Within the Project Site	6-9
6-2	Amphibians and Reptiles With the Potential to Exist Within the Project Site.....	6-9
6-3	NYSDEC Standards for Fresh and Saline Waters Found Within New York City	6-12
6-4	Interstate Environmental Commission Numeric Water Quality Standards.....	6-12
6-5	Summary of Essential Fish Habitat (EFH) Designations	6-17
8-1	Average Daily Flows By Month at the Owl’s Head WWTP	8-4
8-2	Proposed Development’s Estimated Water Demand	8-5

10-1	Projected Energy Consumption of Proposed Development.....	10-3
11-1	2008 Existing Conditions Level of Service Analysis Signalized Intersections	11-8
11-2	2008 Existing Conditions Level of Service Analysis Unsignalized Intersections	11-10
11-3	2008 Existing and 2013 No Build Conditions Level of Service Analysis Signalized Intersections	11-12
11-4	2008 Existing Conditions and 2013 No Build Scenario Level of Service Analysis Unsignalized Intersections	11-16
11-5	Brooklyn Bay Center: Destination Retail Trip Generation.....	11-17
11-6	Brooklyn Bay Center: Public Walkway Trip Generation	11-18
11-7	Brooklyn Bay Center: Total Trip Generation	11-18
11-8	2013 No Build and Build Conditions Level of Service Analysis Signalized Intersections	11-20
11-9	2013 No Build and Build Scenarios Level of Service Analysis Unsignalized Intersections	11-25
11-10	Estimated Parking Demand.....	11-27
12-1	National Ambient Air Quality Standards (NAAQS)	12-5
12-2	Mobile Source Analysis Intersection Locations	12-12
12-3	Representative Monitored Ambient Air Quality Data	12-14
12-4	Baseline (2008) Maximum Predicted 8-Hour Carbon Monoxide Concentrations (Parts Per Million)	12-14
12-5	No Build (2013) Maximum Predicted 8-Hour Carbon Monoxide Concentrations (Parts Per Million)	12-15
12-6	Build (2013) Maximum Predicted 8-Hour Carbon Monoxide Concentrations (Parts Per Million)	12-16
13-1	Common Noise Levels.....	13-2
13-2	Average Ability to Perceive Changes in Noise Levels	13-3
13-3	New York City Noise Control Code.....	13-4
13-4	Noise Exposure Guidelines for Use in City Environmental Impact Review1	13-5
13-5	Required Attenuation Values to Achieve Acceptable Interior Noise Levels.....	13-6
13-6	Noise Receptor Locations	13-6
13-7	Measured Existing Noise Levels (in Dba).....	13-7
13-8	2013 Future Noise Levels Without the Proposed Actions (in Dba).....	13-11
13-9	2013 Future Noise Levels With the Proposed Actions (in Dba).....	13-11
13-10	Open Space Analysis	13-12
13-11	Building Attenuation Requirements	13-13

Brooklyn Bay Center

16-1 Construction Equipment Noise Emission Levels16-9

17-1 Recommended Mitigation Measures.....17-2

17-2 2013 No Build, Build, and Build With Mitigation Conditions Level of Service
Analysis - Weekday Midday Peak Hour17-6

17-3 2013 No Build, Build, and Build With Mitigation Conditions Level of Service
Analysis - Weekday PM Peak Hour.....17-7

17-4 2013 No Build, Build, and Build With Mitigation Conditions Level of Service
Analysis - Saturday Peak Hour17-8

List of Figures

	<i>Following page</i>
S-1	Ground Floor Plan/Landscape Site Plan S-2
S-2	Parking Levels and 2nd Floor Tenants S-2
S-3	Proposed Building Elevations..... S-2
S-4	Aerial View - No Build Conditions S-2
S-5	Aerial View - Proposed Project S-2
1-1	Ground Floor Plan/Landscape Site Plan1-2
1-2	Parking Levels and 2nd Floor Tenants1-2
1-3a	Proposed Building Elevations.....1-2
1-3b	Proposed Building Sections1-2
1-3c	Proposed Signage.....1-2
1-4	Aerial View - No Build Conditions1-2
1-5	Aerial View - Proposed Project1-2
2-1	Land Use2-2
2-2	Existing Zoning.....2-4
2-3	Coastal Zone Boundary.....2-4
2-4	Proposed Zoning2-6
3-1	Socioeconomic Conditions Study Area3-2
3-2	Primary Trade Area.....3-2
3-3	Area of Potential Competitive Impact3-16
3-4	Selected Supermarkets within Area of Potential Competitive Impact3-34
4-1	Daily Shadow Sweeps – Proposed Retail Building4-2
4-2	Daily Shadow Sweeps – Proposed Garage4-2
5-1a	Urban Design and Visual Resources Photograph Locations.....5-2
5-1b	Project Location Aerial Map.....5-2
5-2	Views of Project Site Urban Design and Visual Resources – View 1 and 25-4
5-3	View of Project Site Urban Design and Visual Resources – View 3.....5-4
5-4	Views of Study Area Urban Design and Visual Resources – View 4 and 5.....5-4
5-5	Comparison of No Action Scenario and Proposed Project – View 6a and 6b5-6
5-6	Comparison of No Action Scenario and Proposed Project – View 7a and 7b5-6
5-7	Comparison of No Action Scenario and Proposed Project – View 8a and 8b5-6
5-8	Comparison of No Action Scenario and Proposed Project – View 9a and 9b5-6
6-1	Natural Resources Site Photograph Locations.....6-8
6-2	Site Photographs – View 1 and 26-8
6-3	Site Photographs – View 3 and 4.....6-8

Brooklyn Bay Center

6-4	Site Photographs – View 5 and 6	6-8
6-5	Site Photographs – View 7 and 8	6-8
6-6	Site Photographs – View 9 and 10	6-8
6-7	Site Photographs – View 11 and 12	6-8
6-8	Site Photographs – View 13 and 14	6-8
6-9	Site Photographs – View 15 and 16	6-8
6-10	Site Photographs – View 17	6-8
6-11	NWI Wetlands Map.....	6-10
6-12	NYSDEC Tidal Wetlands Map	6-10
6-13	FEMA Flood Insurance Rate Map	6-12
6-14	CEHA Map.....	6-12
11-1	Traffic Study Area.....	11-4
11-2	2008 Existing Traffic Volumes Weekday Midday Peak Hour.....	11-6
11-3	2008 Existing Traffic Volumes Weekday PM Peak Hour	11-6
11-4	2008 Existing Traffic Volumes Saturday Peak Hour	11-6
11-5	2013 No Build Traffic Volumes Weekday Midday Peak Hour	11-16
11-6	2013 No Build Traffic Volumes Weekday PM Peak Hour	11-16
11-7	2013 No Build Traffic Volumes Saturday Peak Hour.....	11-16
11-8	Auto and Taxi Project Generated Trip Assignments - Percent-Ins	11-24
11-9	Auto and Taxi Project Generated Trip Assignments - Percent-Outs.....	11-24
11-10	Project Generated Traffic Volumes Weekday Midday Peak Hour	11-24
11-11	Project Generated Traffic Volumes Weekday PM Peak Hour	11-24
11-12	Project Generated Traffic Volumes Saturday Peak Hour.....	11-24
11-13	2013 Build Traffic Volumes Weekday Midday Peak Hour	11-24
11-14	2013 Build Traffic Volumes Weekday PM Peak Hour.....	11-24
11-15	2013 Build Traffic Volumes Saturday Peak Hour	11-24
13-1	Noise Receptor Locations	13-6

*