

Bronx Special Natural Area District Update

Final Environmental Impact Statement (FEIS)



CEQR No. 19DCP083Y
ULURP Nos. C190403 ZMX, and N190430(A) ZRY

Lead Agency:
City Planning Commission, City of New York
Marisa Lago, Chair

September 13, 2019

This page intentionally left blank.

Bronx Special Natural Area District Update Final Environmental Impact Statement (FEIS)

September 13, 2019

Project Location: Bronx Community District 8

CEQR No: 19DCP083Y

ULURP Nos.: C190403 ZMX, and N190430(A) ZRY

Lead Agency: City Planning Commission, City of New York
Marisa Lago, Chair

Lead Agency Contact: Olga Abinader, Director
Environmental Assessment and Review Division
NYC Department of City Planning
120 Broadway, 31st floor New York, NY 10271
(212) 720-3493
oabinad@planning.nyc.gov

Prepared By: Louis Berger, U.S.
96 Morton Street, 8th Floor
New York, NY 10014

With:
Philip Habib & Associates

This page intentionally left blank.

Table of Contents

LIST OF APPENDICES	XI
LIST OF TABLES.....	XIII
LIST OF FIGURES	XV
ACRONYMS AND ABBREVIATIONS	XVII
FOREWORD	XIX
EXECUTIVE SUMMARY	XXIII
 Introduction.....	xxiii
 Purpose and Need	xxiii
Properties Smaller than 1 Acre in Size	xxvii
Properties of 1 Acre or More in Size.....	xxvii
 Description of the Proposed Action.....	xxviii
Geography.....	xxviii
Review Structure	xxviii
Protection of Natural Features.....	xxix
Use Regulations	xxx
Bulk Regulations.....	xxx
Parking and Curb Cut Regulations	xxx
Special Rules for Plan Review Sites.....	xxx
Approvals	xxxi
 Analytical Framework and Reasonable Worst-Case Development Scenario.....	xxxii
Approach to Analysis	xxxii
Methodology for Analysis	xxxiii
Analysis Year.....	xxxiv
 Principal Conclusions of Environmental Analyses	xxxiv
Land Use, Zoning, and Public Policy	xxxiv
Socioeconomic Conditions	xxxv
Community Facilities	xxxvi
Open Space.....	xxxvii
Shadows.....	xxxvii
Historic and Cultural Resources	xxxvii
Urban Design and Visual Resources.....	xxxviii
Natural Resources	xxxix
Wetland Resources	xxxix
Upland Resources	xxxix
Significant, Sensitive, or Designated Resources	xl
Hazardous Materials.....	xl
Water and Sewer Infrastructure.....	xl
Solid Waste and Sanitation Services.....	xli
Energy	xli
Transportation	xli

Air Quality	xlii
Greenhouse Gas Emissions and Climate Change	xlii
Noise	xlii
Public Health	xliii
Neighborhood Character	xliii
Construction	xliii
Mitigation	xliii
Alternatives.....	xliv
Conceptual Analysis	xlv
Unavoidable Significant Adverse Impacts	xlv
Growth-Inducing Aspects of the Proposed Actions.....	xlvi
Irreversible and Irretrievable Commitment of Resources.....	xlvi
1 PROJECT DESCRIPTION	1-1
Introduction	1-1
Required Approvals and Review Procedures.....	1-4
Background	1-5
Existing Special Districts	1-5
Ecology.....	1-8
Purpose and Need	1-9
Properties Less than 1 Acre	1-13
Properties of 1 Acre or More	1-14
Existing Zoning	1-14
Geography.....	1-14
Review Structure	1-15
Protection of Natural Features.....	1-16
Bulk Regulations.....	1-19
Parking and Curb Cut Regulations	1-21
Approvals	1-21
Proposed Land Use Actions	1-22
Geography.....	1-23
Review Structure	1-25
Protection of Natural Features.....	1-26
Bulk Regulations.....	1-37
Parking and Curb Cut Regulations	1-42
Special Rules for Plan Review Sites.....	1-42
Approvals	1-43
Analytic Framework.....	1-44
Effects of the Proposed Actions.....	1-44
Environmental Review.....	1-45
Public Review Process for the Proposed Action	1-51
Environmental Review.....	1-51
ULURP Public Review Process	1-53
2 LAND USE, ZONING, AND PUBLIC POLICY	2-1
Introduction	2-1

Principal Conclusions	2-2
Methodology.....	2-2
Existing Conditions	2-3
Land Use	2-3
Zoning	2-9
Special District Regulations.....	2-11
Review Structure.....	2-15
Prototypical Analysis Sites	2-16
Public Policy	2-17
No Action Scenario.....	2-24
Land Use, Zoning, and Public Policy	2-24
Prototypical Analysis Sites	2-24
With Action Scenario.....	2-26
Land Use	2-27
Zoning	2-27
Review Structure.....	2-37
Prototypical Analysis Sites	2-38
Public Policy	2-41
Conclusion	2-48
3 SOCIOECONOMIC CONDITIONS.....	3-1
Introduction.....	3-1
Principal Conclusions	3-2
Direct Residential Displacement.....	3-2
Direct Business Displacement	3-2
Indirect Residential Displacement	3-2
Indirect Business Displacement.....	3-3
Adverse Effects on Specific Industries	3-3
Methodology.....	3-3
Initial Screening Analysis	3-4
Preliminary Assessment	3-6
Direct Residential Displacement.....	3-6
Direct Business Displacement	3-6
Indirect Residential Displacement	3-6
Indirect Business Displacement.....	3-7
Adverse Effects on Specific Industries	3-8
Conclusion	3-9
4 COMMUNITY FACILITIES AND SERVICES	4-1
Introduction.....	4-1
Principal Conclusions	4-2
Methodology.....	4-2
Screening Analysis.....	4-2
Direct Effects	4-3
Indirect Effects.....	4-3
Conclusion	4-5

5 OPEN SPACE.....	5-1
Introduction	5-1
Principal Conclusions	5-2
Methodology.....	5-2
Direct Effects	5-2
Indirect Effects.....	5-3
Existing Public Open Space Resources	5-3
Preliminary Assessments	5-6
Direct Effects	5-6
Indirect Effects.....	5-6
Conclusion	5-7
Direct Effects	5-7
Indirect Effects.....	5-7
6 SHADOWS	6-1
Introduction.....	6-1
Principal Conclusions	6-1
Methodology.....	6-2
Prototypical Analysis Sites	6-5
Detailed Analysis	6-6
Prototypical Analysis Site 4	6-8
Conclusion	6-13
7 HISTORIC AND CULTURAL RESOURCES.....	7-1
Introduction.....	7-1
Principal Conclusions	7-2
Archaeological Resources.....	7-2
Architectural Resources	7-2
Screening Analysis.....	7-3
Archaeological Resources.....	7-3
Architectural Resources	7-3
Archaeological Resources Impact Assessment	7-4
Increased Ground Disturbance.....	7-4
Decreased Ground Disturbance	7-4
Similar Ground Disturbance	7-4
Analysis	7-5
Architectural Resources Impact Assessment.....	7-6
Conclusion	7-7
8 URBAN DESIGN AND VISUAL RESOURCES.....	8-1
Introduction.....	8-1
Principal Conclusions	8-1
Methodology.....	8-2
Study Area Definition.....	8-4
Preliminary Analysis.....	8-4

Existing Conditions	8-4
No Action Scenario	8-16
With Action Scenario	8-17
Prototypical Analysis Sites	8-19
Conclusion	8-22
9 NATURAL RESOURCES	9-1
 Introduction	9-1
 Principal Conclusions	9-1
Water Resources.....	9-1
Wetland Resources	9-2
Upland Resources	9-2
Built Resources	9-3
Significant, Sensitive, or Designated Resources	9-3
 Methodology.....	9-4
 Existing Conditions	9-4
Water Resources.....	9-6
Wetland Resources	9-8
Upland Resources	9-12
Built Resources	9-12
Significant, Sensitive, or Designated Resources	9-13
 No Action Scenario.....	9-17
Natural Resources.....	9-17
Prototypical Analysis Sites	9-17
 With Action Scenario.....	9-18
Zoning Text Amendments	9-19
Prototypical Analysis Sites	9-21
 Conclusion	9-25
10 HAZARDOUS MATERIALS.....	10-1
 Introduction	10-1
 Principal Conclusions	10-2
 Screening Assessment	10-2
 Hazardous Materials Analysis	10-4
Increased Ground Disturbance.....	10-4
Decreased Ground Disturbance	10-4
Similar Ground Disturbance	10-4
Analysis	10-5
 Conclusion	10-5
11 WATER AND SEWER INFRASTRUCTURE.....	11-1
 Introduction	11-1
 Principal Conclusions	11-1
Water Supply	11-2
Wastewater and Stormwater Conveyance and Treatment	11-2
 Screening Analysis.....	11-2

Water Supply	11-3
Wastewater and Stormwater Conveyance and Treatment	11-3
Conclusion	11-5
12 SOLID WASTE AND SANITATION SERVICES	12-1
Introduction	12-1
Principal Conclusions	12-1
Screening Analysis.....	12-2
Conclusion	12-2
13 ENERGY	13-3
Introduction	13-3
Principal Conclusions	13-3
Screening Analysis.....	13-4
Conclusion	13-5
14 TRANSPORTATION.....	14-1
Introduction	14-1
Principal Conclusions	14-1
Screening Analysis.....	14-2
Clusters/Cumulative Analysis.....	14-3
Conclusion	14-3
15 AIR QUALITY	15-1
Introduction	15-1
Principal Conclusions	15-1
Mobile Sources.....	15-1
Stationary Sources	15-2
Methodology.....	15-2
Mobile Sources Screening Methodology	15-2
Stationary Sources Screening Methodology.....	15-3
Large and Major Source Detailed Analysis Methodology	15-5
Screening Analysis.....	15-5
Mobile Sources Screening Analysis	15-5
Stationary Sources Screening Analysis	15-6
Industrial Sources Screening Analysis	15-7
Large and Major Emission Sources Screening Analysis	15-7
Detailed Analyses	15-8
Large/Major Source Detailed Analysis.....	15-8
Conclusion	15-10
Mobile Sources.....	15-10
Stationary Sources	15-10
16 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE.....	16-1
Introduction	16-1
Principal Conclusions	16-2
Screening Analysis.....	16-2
Resilience of Proposed Actions to Climate Change	16-3

Conclusion	16-3
17 NOISE.....	17-1
Introduction.....	17-1
Principal Conclusions	17-2
Methodology.....	17-2
Screening Analysis.....	17-3
Mobile Sources.....	17-3
Stationary Sources	17-3
Conclusion	17-4
18 PUBLIC HEALTH	18-1
Introduction.....	18-1
Principal Conclusions	18-1
Screening Analysis.....	18-2
Conclusion	18-2
19 NEIGHBORHOOD CHARACTER.....	19-1
Introduction	19-1
Principal Conclusions	19-1
Methodology.....	19-2
Screening Analysis.....	19-2
Land Use	19-2
Socioeconomic Conditions	19-3
Open Space.....	19-3
Shadows.....	19-3
Historic and Cultural Resources	19-3
Urban Design and Visual Resources.....	19-4
Transportation	19-4
Noise	19-5
Conclusion	19-5
20 CONSTRUCTION	20-1
Introduction.....	20-1
Principal Conclusions	20-1
Construction Regulations and General Practices.....	20-2
Construction Oversight	20-2
Construction Hours.....	20-3
Lane and Walkway Closures	20-3
Public Safety.....	20-3
Screening Analysis.....	20-4
Conclusion	20-4
21 MITIGATION.....	21-1
Introduction	21-1
Principal Conclusions	21-1
Historic and Cultural Resources	21-1
Hazardous Materials.....	21-2
22 ALTERNATIVES.....	22-1

Introduction	22-1
Principal Conclusions	22-2
No Action Alternative	22-2
No Unmitigated Significant Adverse Impacts Alternative	22-2
Potential CPC Modification Alternative	22-3
No Action Alternative	22-3
Description of Alternative.....	22-3
No Action Alternative Compared with The Proposed Actions	22-6
No Unmitigated Significant Adverse Impacts Alternative	22-11
Description of Alternative.....	22-11
Potential CPC Modification Alternative.....	22-13
Description of Alternative.....	22-13
Potential CPC Modification Alternative Compared with The Proposed Actions.....	22-14
Conclusion	22-16
23 CONCEPTUAL ANALYSIS	23-1
Introduction	23-1
Conceptual Analysis Site 1: R1-2 with 4-Lot Subdivision	23-2
Land Use, Zoning, and Public Policy	23-5
Socioeconomics	23-6
Community Facilities and Services.....	23-7
Open Space.....	23-7
Shadows.....	23-8
Historic and Cultural Resources	23-8
Urban Design.....	23-8
Natural Resources.....	23-8
Hazardous Materials.....	23-9
Water and Sewer Infrastructure.....	23-9
Solid Waste and Sanitation	23-10
Energy	23-10
Transportation	23-10
Air Quality	23-11
Greenhouse Gases and Climate Change	23-11
Noise	23-11
Public Health	23-12
Neighborhood Character	23-12
Construction	23-12
Conceptual Analysis Site 2: R1-1 with Private Road and Habitat Preservation	23-12
Land Use, Zoning, and Public Policy	23-14
Socioeconomics	23-16
Community Facilities and Services.....	23-17
Open Space.....	23-17
Shadows.....	23-18

Historic and Cultural Resources	23-18
Urban Design.....	23-18
Natural Resources.....	23-18
Hazardous Materials.....	23-19
Water and Sewer Infrastructure.....	23-19
Solid Waste and Sanitation	23-19
Energy	23-20
Transportation	23-20
Air Quality.....	23-20
Greenhouse Gases and Climate Change.....	23-21
Noise	23-21
Public Health	23-21
Neighborhood Character	23-22
Construction	23-22
Conceptual Analysis Site 3: R4 with Development Plan	23-22
Land Use, Zoning, and Public Policy	23-24
Socioeconomics	23-26
Community Facilities and Services.....	23-26
Open Space.....	23-27
Shadows.....	23-27
Historic and Cultural Resources	23-28
Urban Design.....	23-28
Natural Resources.....	23-28
Hazardous Materials.....	23-29
Water and Sewer Infrastructure.....	23-29
Solid Waste and Sanitation	23-29
Energy	23-29
Transportation	23-30
Air Quality.....	23-30
Greenhouse Gases and Climate Change.....	23-31
Noise	23-31
Public Health	23-31
Neighborhood Character	23-31
Construction	23-32
24 UNAVOIDABLE, SIGNIFICANT, ADVERSE IMPACTS	24-1
25 GROWTH-INDUCING ASPECTS	25-3
26 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES	26-1
27 RESPONSE TO COMMENTS.....	27-1
Introduction	27-1
List of Organizations and Individuals that Commented on the Draft Environmental Impact Statement	27-2
Elected Officials and Government Agencies	27-2
Organizations	27-2
Interested Public.....	27-2

Comments and Responses on the Draft Environmental Impact Statement ..	27-5
Process	27-5
Proposed Actions	27-7
28 REFERENCES.....	28-1

List of Appendices

- Appendix 1: Land Use Actions
- Appendix 2: Prototypical Analysis Sites
- Appendix 3: Conceptual Analysis Sites
- Appendix 4: NYC Waterfront Revitalization Program, Consistency Assessment Form
- Appendix 5: Air Quality Stationary Source Screening
- Appendix 6: New York Natural Explorer Lists
- Appendix 7: Agency Correspondence
- Appendix 8: Proposed Text Amendment
- Appendix 9: Comments Received on the DEIS
- Appendix 10: Technical Memorandum 001
- Appendix 11: Potential CPC Text Modifications

This page intentionally left blank.

List of Tables

Table 1-1.	SNAD Tier II Sites Lot Coverage Governed by Average Percent Slope of the Site	1-20
Table 1-2.	SNAD Tier II Lot Coverage if Steep Slope is Disturbed.....	1-20
Table 1-3.	Proposed Tree Credit System.....	1-28
Table 1-4.	Proposed Biodiversity Requirements	1-31
Table 1-5.	Proposed Maximum Lot Coverage for R1 and R2	1-38
Table 1-6.	Minimum Residential Footprint.....	1-39
Table 1-7.	Maximum Hard Surface Area.....	1-40
Table 1-8.	Prototypical Analysis Sites*	1-50
Table 2-1.	Existing Land Uses within Special Natural Area District NA-2	2-7
Table 2-2.	Existing Zoning Districts in Special Natural Area District NA-2	2-11
Table 2-3.	Prototypical Analysis Sites – Existing Conditions	2-16
Table 2-4.	Prototypical Analysis Sites – No Action Scenario	2-25
Table 2-5.	Proposed Tree Credit System.....	2-29
Table 2-6.	Proposed Biodiversity Regulations.....	2-31
Table 2-7.	Proposed Maximum Lot Coverage in R1 and R2 Districts	2-32
Table 2-8.	Proposed Lowest Required Lot Coverage.....	2-35
Table 2-9.	Proposed Maximum Hard Surface Area.....	2-36
Table 2-10.	Prototypical Analysis Sites – With Action Scenario.....	2-40
Table 4-1.	Community Facility Thresholds for Detailed Analysis	4-4
Table 5-1.	Residents and Workers by Prototypical Analysis Site	5-7
Table 6-1.	Prototypical Analysis Sites Warranting Analysis.....	6-6
Table 6-2.	Duration of Shadows on Sunlight-Sensitive Resources (Increment Compared to No Action).....	6-7
Table 7-1	Proposed Regulatory Changes with Potential to Increase Ground Disturbance.....	7-5
Table 9-1.	Mapped Wetland Resources in the Study Area.....	9-12
Table 9-2.	Comparison of Prototypical Analysis Site Buildout Under Existing and Proposed Zoning Requirements.....	9-23
Table 11-1.	Prototypical Analysis Sites and Thresholds Needed to Require Preliminary Analysis.....	11-4
Table 13-1.	Average Annual Whole-Building Energy Use in New York City	13-5
Table 13-2.	Annual Energy Use, Prototypical Analysis Sites.....	13-5
Table 14-1.	Development Program of Prototypical Analysis Sites	14-4
Table 15-1.	Prototypical Analysis Sites: Incremental Development.....	15-4
Table 15-2.	HVAC Screening Analysis Results.....	15-6
Table 15-3.	HVAC Detailed Analysis Results for Hebrew Home	15-9
Table 17-1.	SNAD Preliminary Screening Analysis	17-3
Table 22-1.	No Action Alternative – Prototypical Analysis Sites	22-5

Table 22-2. Proposed Regulatory Changes with the Potential to Increase Ground Disturbance.....	22-12
--	-------

List of Figures

Figure ES-1.	Ecological Areas Based on Proximity to Natural Resources.....	xxvi
Figure 1-1.	Existing Special District.....	1-7
Figure 1-2.	Example Project Types and Regulations.....	1-10
Figure 1-3.	Major Natural Assets in the Bronx and Northern Manhattan.....	1-12
Figure 1-4.	Ecological Areas Based on Proximity to Natural Resources.....	1-12
Figure 1-5.	Proposed Ecological Areas Based on Proximity to Natural Resources.....	1-23
Figure 1-6.	Map of Proposed Ecological Areas	1-24
Figure 1-7.	Comparison between Existing and Proposed Tree Credit System	1-27
Figure 1-8.	Map of Potential Aquatic Resources	1-36
Figure 2-1.	Land Use Study Area.....	2-4
Figure 2-2.	Existing Land Use, SNAD NA-2	2-6
Figure 2-3.	Existing Zoning, SNAD NA-2	2-10
Figure 2-4.	Coastal Zone Boundary	2-20
Figure 5-1.	Bronx Open Space Resources – Existing Special Natural Area District (NA-2)	5-5
Figure 6-1.	Prototypical Analysis Site 4: December 21.....	6-9
Figure 6-2.	Prototypical Analysis Site 4: March 21	6-10
Figure 6-3.	Prototypical Analysis Site 4: May 6	6-11
Figure 6-4.	Prototypical Analysis Site 4: June 21	6-12
Figure 8-1.	Urban Design and Visual Resource Study Area.....	8-5
Figure 8-2.	Existing Built Floor Area Ratios in Special Natural Area District (NA-2), Bronx	8-6
Figure 8-3.	Existing Building Heights in Special Natural Area District (NA-2), Bronx	8-7
Figure 8-4.	Existing Conditions Photographs in Special Natural Area District (NA-2), Bronx	8-9
Figure 8-5.	Prototypical Analysis Site 3—No Action to With Action Comparison	8-21
Figure 9-1.	Natural Resources in Existing Special Natural Area District (NA-2).....	9-5
Figure 9-2.	National Wetlands Inventory Wetlands in Existing Special Natural Area District (NA-2)	9-7
Figure 9-3.	NYSDEC Freshwater Wetlands in Existing Speical Natural Area District (NA-2)	9-9
Figure 9-4.	NYSDEC Tidal Wetlands in Existing Special Natural Area District (NA-2).....	9-10
Figure 9-5.	Potential Aquatic Resources in Existing Special Natural Area District (NA-2)	9-11
Figure 23-1.	Conceptual Analysis Site 1: Site Plan and Tree Planting Requirements.....	23-4
Figure 23-2.	Conceptual Analysis 2: Site Plan	23-14
Figure 23-3.	Conceptual Analysis Site 3: Long-term Development Site Authorization Approval	23-24

This page intentionally left blank.

Acronyms and Abbreviations

µg/m ³	micrograms per cubic meter
°F	Degrees Fahrenheit
CAPA	City Administrative Procedure Act
CB	Community Board
CD	Community District
CEQR	City Environmental Quality Review
CMP	Coastal Management Program
CO	Carbon Monoxide
CPC	City Planning Commission
dBA	A-weighted Decibel
DCP	(New York City) Department of City Planning
DEIS	Draft Environmental Impact Statement
DOB	Department of Buildings
DOT	(New York City) Department of Transportation
EIS	Environmental Impact Statement
FAR	Floor Area Ratio
FEIS	Final Environmental Impact Statement
GHG	Greenhouse Gas
HVAC	Heating, Ventilation, and Air Conditioning
IPaC	(USFWS) Information, Planning, and Conservation System
LPC	(New York City) Landmarks Preservation Commission
MBTU	1,000 British Thermal Units
NAAQS	National Ambient Air Quality Standards

NO ₂	Nitrogen Dioxide
NOC	Notice of Completion
NPCC	New York City Panel on Climate Change
NPCC2	Second New City Panel on Climate Change
NWI	National Wetlands Inventory
NYCDEP	New York City Department of Environmental Protection
NYCL	New York City Landmark
NYC Parks	New York City Department of Parks and Recreation
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOS	New York State Department of State
PM _{2.5}	Particulate Matter with a Diameter of Less than 2.5 Micrometers
PM ₁₀	Particulate Matter with a Diameter of Less than 10 Micrometers
RCNY	Rules of the City of New York
RWCDS	Reasonable Worst-Case Development Scenario
SCA	(New York City) School Construction Authority
SEQRA	(New York) State Environmental Quality Review Act
SHPD	Special Hillsides Preservation District
SNAD	Special Natural Area District
S/NR	State/National Register
SNRD	Special Natural Resources District
SO ₂	Sulfur Dioxide
TPPN	Technical Policy and Procedure Notice
ULURP	Uniform Land Use Review Procedure
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WRP	Waterfront Revitalization Program
ZR	Zoning Resolution