Peninsula Hospital Site Redevelopment

Draft Environmental Impact Statement

May 2019



CEQR No.

18DCP124Q

ULURP Nos.

190251 MMQ
190325 ZMQ
N190364 ZRQ
190366 ZSQ
190375 ZSQ

Lead Agency

City Planning Commission
City of New York
Marisa Lago, Chair

PENINSULA HOSPITAL SITE REDEVELOPMENT

DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Project Location: Community District 14, Borough of Queens

CEQR No.: 18DCP124Q

Type of Action: Unlisted

ULURP Nos.: 190251 MMQ, 190325 ZMQ, N190364 ZRQ, 190366 ZSQ, and 190375 ZSQ

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

Lead Agency Contact Olga Abinader
Acting Director, Environmental Assessment & Review Division
New York City Department of City Planning
120 Broadway, 31st Floor
New York, NY 10271-3100
212-720-3493
oabinad@planning.nyc.gov

Applicant: Peninsula Rockaway Limited Partnership

Prepared by: Sam Schwartz Engineering, D.P.C.
322 Eighth Avenue, 5th Floor
New York, NY 10001

Date: May 3, 2019

A public hearing on the DEIS will be held at a later date to be announced. Advance notice will be given of the time and place of the hearing.
Written comments on the DEIS are requested and would be received and considered by the Lead Agency until the 10th calendar day following the close of the public hearing.
The DEIS is available on the website of the New York City Department of City Planning:
http://www1.nyc.gov/site/planning/applicants/eis-documents.page

Executive Summary **S-1**

Chapter 1 : Project Description **1-1**

I. INTRODUCTION **1-1**

II. PROJECT DESCRIPTION **1-3**

Site Conditions plus Background and/or History of the Project Site 1-3

Proposed Actions 1-4

Restrictive Declaration 1-11

III. PROPOSED PROJECT **1-17**

IV. PROJECT PURPOSE AND NEED **1-22**

Zoning Map Amendment 1-23

Zoning Text Amendments 1-24

Large-Scale General Development (LSGD) 1-24

V. FRAMEWORK FOR ANALYSIS **1-25**

Reasonable Worst-Case Development Scenario 1-25

Analysis Year 1-25

The Future without the Proposed Actions (No-Action Condition) 1-25

The Future with the Proposed Actions (With-Action Condition) 1-28

Increment 1-28

VI. PUBLIC REVIEW PROCESS **1-29**

Uniform Land Use Review Procedure (ULURP) 1-29

New York City Environmental Quality Review (CEQR) 1-30

Chapter 2 : Land Use, Zoning, and Public Policy **2-1**

I. INTRODUCTION **2-1**

II. PRINCIPAL CONCLUSIONS **2-1**

III. METHODOLOGY **2-2**

Study Area Definition 2-2

IV. EXISTING CONDITIONS **2-2**

Land Use 2-2

Zoning 2-4

Public Policy 2-12

V. FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION) **2-15**

Land Use 2-15

Zoning and Public Policy 2-18

VI. FUTURE WITH THE PROPOSED ACTIONS (THE "WITH-ACTION" CONDITION) **2-23**

Land Use 2-23

Zoning 2-26
Public Policy 2-29
VII. WRP CONSISTENCY ASSESSMENT 2-31
The Coastal Zone Boundary 2-31

Chapter 3 : Socioeconomic Conditions 3-1
I. INTRODUCTION 3-1
II. PRINCIPAL CONCLUSIONS 3-1
III. METHODOLOGY 3-2
Background 3-2
Determining Whether a Socioeconomic Assessment is Appropriate 3-2
Study Area Definition 3-3
Data Sources 3-4
IV. PRELIMINARY ASSESSMENT 3-6
Indirect Residential Displacement 3-6

Chapter 4 : Community Facilities and Services 4-1
I. INTRODUCTION 4-1
II. PRINCIPAL CONCLUSIONS 4-1
Indirect effects on Public Schools 4-2
Indirect effects on Libraries 4-3
Indirect effects on Child Care Centers 4-3
III. PRELIMINARY SCREENING 4-3
Framework for Analysis 4-3
Direct Effects 4-4
Indirect Effects 4-4
IV. DETAILED ASSESSMENT – Public Schools 4-7
Analysis Approach 4-7
Existing Conditions 4-8
The Future without the Proposed Actions (No-Action Condition) 4-11
The Future with the Proposed Actions (With-Action Condition) 4-13
V. DETAILED ASSESSMENT – Libraries 4-14
Analysis Approach 4-14
Existing Conditions 4-15
No-Action Condition 4-15
With-Action Condition 4-16
VI. DETAILED ASSESSMENT – Publicly Funded Group Child Care and Head Start Centers 4-18

Existing Conditions 4-18
No-Action Condition 4-21
With-Action Condition 4-21
VII. CONCLUSION 4-22

Chapter 5 : Open Space 5-1
I. INTRODUCTION 5-1
II. PRINCIPAL CONCLUSIONS 5-1
III. METHODOLOGY 5-2
Direct Effects 5-2
Indirect Effects 5-2
Study Area 5-2
Impact Significance 5-3
Assessment Methodology 5-3
IV. EXISTING CONDITIONS 5-3
Residential Study Area Population 5-3
Non-Residential Study Area Population 5-6
Inventory of Open Space Resources 5-6
Adequacy of Open Space Resources 5-10
V. FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION) 5-11
Residential Study Area Population 5-13
Non-Residential Study Area Population 5-13
Inventory of Open Space Resources 5-13
Adequacy of Open Space Resources 5-14
VI. FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION) 5-15
Residential Study Area Population 5-19
Non-Residential Study Area Population 5-19
Inventory of Open Space Resources 5-20
Adequacy of Open Space Resources 5-20

Chapter 6 : Shadows 6-1
I. INTRODUCTION 6-1
II. PRINCIPAL CONCLUSIONS 6-1
III. METHODOLOGY 6-2
IV. SCREENING ANALYSIS 6-4
Tier 1 Screening Assessment 6-4
Tier 2 Screening Assessment 6-5

Tier 3 Screening Assessment 6-5
V. DETAILED ANALYSIS 6-12
Open Space Resources of Concern 6-12

Chapter 7 : Historic and Cultural Resources 7-1
I. INTRODUCTION 7-1
II. PRINCIPAL CONCLUSIONS 7-1
Archaeological Resources 7-1
Architectural Resources 7-1
III. ASSESSMENT 7-2
Archaeological Resources 7-2
Architectural Resources 7-2

Chapter 8 : Urban Design and Visual Resources 8-1
I. INTRODUCTION 8-1
II. PRINCIPAL CONCLUSIONS 8-1
III. METHODOLOGY 8-2
Study Area 8-3
Pedestrian Wind Analysis 8-3
Assessment Methodology 8-3
IV. EXISTING CONDITION 8-4
Project Site 8-4
Study Area 8-5
V. FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION) 8-25
Project Site 8-25
Study Area 8-25
VI. FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION) 8-27
Project Site and Study Area 8-27

Chapter 9 : Hazardous Materials 9-1
I. INTRODUCTION 9-1
II. PRINCIPAL CONCLUSIONS 9-1
III. METHODOLOGY 9-2
North Parcels 9-3
South Parcel 9-3
IV. EXISTING CONDITIONS 9-3

North Parcels 9-3
South Parcel 9-5
V. FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION) 9-7
VI. FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION) 9-7

Chapter 10 : Water and Sewer Infrastructure 10-1
I. INTRODUCTION 10-1
II. PRINCIPAL CONCLUSIONS 10-1
Water Supply 10-1
Wastewater Treatment 10-2
Stormwater Drainage and Management 10-2
III. METHODOLOGY 10-3
Water Supply 10-3
Wastewater and Stormwater Conveyance and Treatment 10-3
IV. EXISTING CONDITIONS 10-4
Water Supply 10-4
Wastewater Treatment 10-4
Stormwater Drainage and Management 10-5
V. FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION) 10-8
Infrastructure Improvements 10-8
Water Supply 10-8
Wastewater Treatment 10-8
Stormwater Drainage and Management 10-9
VI. FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION) 10-10
Water Supply 10-10
Wastewater Treatment 10-11
Stormwater Drainage and Management 10-12

Chapter 11 : Solid Waste and Sanitation Services 11-1
I. INTRODUCTION 11-1
II. PRINCIPAL CONCLUSIONS 11-1
III. METHODOLOGY 11-2
IV. EXISTING CONDITIONS 11-2
Description of Current Solid Waste Sanitation Services 11-2
Solid Waste Generation on the Project Site 11-3
V. THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION) 11-3
VI. THE FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION) 11-4

Chapter 12 : Transportation 12-1

I. INTRODUCTION 12-1

II. PRINCIPAL CONCLUSIONS 12-2

Traffic Flow and Operating Conditions 12-2

Transit Facilities 12-3

Pedestrian Facilities 12-3

Parking Conditions 12-4

Vehicular and Pedestrian Safety Assessments 12-4

III. SCREENING METHODOLOGY 12-5

Traffic 12-5

Transit 12-5

Pedestrians 12-6

Parking Conditions 12-6

Vehicular and Pedestrian Safety Assessment 12-6

IV. STUDY AREA 12-8

Study Area Intersection and Roadway Characteristics 12-8

Transit Service 12-13

Pedestrian Elements 12-14

Parking Supply and Inventory 12-14

V. OPERATIONAL ANALYSIS METHODOLOGY 12-18

Traffic Operations 12-18

Transit Operations 12-19

Pedestrian Operations 12-21

Parking Conditions Assessment 12-24

Vehicular and Pedestrian Safety Assessment 12-24

VI. EXISTING CONDITIONS 12-26

Traffic Operations 12-26

Transit Operations 12-41

Pedestrian Operations 12-43

Parking Conditions 12-45

VII. FUTURE WITHOUT THE PROPOSED ACTIONS 12-47

Roadway Improvements 12-50

Traffic Operations 12-51

Transit Operations 12-70

Pedestrian Operations 12-73

Parking Supply and Utilization 12-76

VIII. DESCRIPTION OF THE PROPOSED PROJECT 12-77
IX. FUTURE WITH THE PROPOSED ACTIONS 12-92
Traffic Conditions 12-92
Transit Conditions 12-118
Pedestrian Conditions 12-120
Parking Occupancy and Utilization 12-127
X. SAFETY ASSESSMENT 12-128

Chapter 13 : Air Quality 13-1
I. INTRODUCTION 13-1
II. PRINCIPAL CONCLUSIONS 13-2
III. METHODOLOGY 13-2
Standards and Guidelines 13-2
Background Concentrations 13-5
Mobile Source Modeling 13-5
Parking Facility Analysis 13-7
Stationary Source Screen 13-7
Stationary Source Modeling 13-7
IV. PRELIMINARY ASSESSMENT 13-9
Mobile Source Air Quality 13-9
Parking Facilities 13-12
Heating Ventilation and Air Conditioning (HVAC) 13-12
Large or Major Sources 13-15
Air Toxics and Odors 13-16
V. DETAILED ASSESSMENT 13-18
Existing Conditions 13-18
Future without the Proposed Actions (No-Action Condition) 13-19
Future with the Proposed Actions (With-Action Condition) 13-20
Air Quality E-Designations 13-31

Chapter 14 : Greenhouse Gas Emissions and Climate Change 14-1
I. INTRODUCTION 14-1
II. PRINCIPAL CONCLUSIONS 14-1
III. GREENHOUSE GAS EMISSIONS 14-2
Pollutants of Concern 14-2
IV. METHODOLOGY 14-4
Greenhouse Gas Emissions 14-4

Climate Change 14-5
V. PROJECTED GHG EMISSIONS FROM THE PROPOSED ACTIONS 14-5
Building Operational Emissions 14-5
Mobile Source Emissions 14-6
Summary 14-7
VI. CONSISTENCY WITH THE GHG REDUCTION GOAL 14-8
VII. RESILIENCE TO CLIMATE CHANGE 14-9

Chapter 15 : Noise 15-1
I. INTRODUCTION 15-1
II. PRINCIPAL CONCLUSIONS 15-1
III. METHODOLOGY 15-2
Scope of Analysis 15-2
Analysis Year 15-2
Noise Fundamentals 15-2
Noise Standards and Guidelines 15-5
IV. PRELIMINARY ASSESSMENT 15-8
Noise Monitoring 15-8
Traffic Noise 15-11
V. DETAILED ASSESSMENT 15-12
Existing Conditions 15-12
Future Noise Levels Without the Proposed Actions (No-Action Condition) 15-14
Future with the Proposed Actions (With-Action Condition) 15-16
Window/Wall Attenuation 15-20
Noise E-Designations 15-20

Chapter 16 : Public Health 16-1
I. INTRODUCTION 16-1
II. PRINCIPAL CONCLUSIONS 16-1
III. ASSESSMENT 16-2
Operational Noise 16-2
Construction Noise 16-2
Conclusion 16-2

Chapter 17 : Neighborhood Character 17-1
I. INTRODUCTION 17-1

II. PRINCIPAL CONCLUSIONS 17-1
III. METHODOLOGY 17-2
IV. PRELIMINARY ASSESSMENT 17-2
Defining Features 17-2
Potential to Affect the Defining Features of the Neighborhood 17-5

Chapter 18 : Construction 18-1
I. INTRODUCTION 18-1
II. PRINCIPAL CONCLUSIONS 18-1
Transportation 18-2
Air Quality 18-3
Noise 18-3
Other Technical Areas 18-3
III. REGULATORY FRAMEWORK 18-5
Governmental Coordination and Oversight 18-5
Construction Noise 18-6
IV. ANTICIPATED CONSTRUCTION SCHEDULE AND ACTIVITIES 18-6
Construction Sequencing 18-6
Construction Activities 18-9
Estimate of Construction Period Trucks and Construction Workers 18-10
Peak Period for the Assessment of Cumulative Construction Effects 18-12
Peak Construction Period Conditions 18-12
Construction Working Hours 18-13
Construction Staging Areas, Sidewalk and Lane Closures 18-13
V. PRELIMINARY ASSESSMENT 18-13
Transportation 18-13
Air Quality 18-27
Noise and Vibration 18-28
Other Technical Areas 18-28
VI. DETAILED ASSESSMENT 18-30
Transportation 18-30
Air Quality 18-76
Noise and Vibration 18-83
On-Sources of Noise 18-93
Cumulative Noise Levels 18-94

Chapter 19 : Alternatives 19-1

I. INTRODUCTION 19-1

II. PRINCIPAL CONCLUSIONS 19-2

No-Action Alternative 19-2

No Unmitigated Significant Impacts Alternative 19-2

Lesser Density Alternative 19-2

III. NO-ACTION ALTERNATIVE 19-3

Land Use, Zoning and Public Policy 19-3

Socioeconomic Conditions 19-4

Community Facilities 19-4

Open Space 19-4

Shadows 19-5

Historic and Cultural Resources 19-5

Urban Design and Visual Resources 19-5

Hazardous Materials 19-5

Water and Sewer Infrastructure 19-5

Solid Waste and Sanitation 19-5

Transportation 19-5

Air Quality 19-6

Greenhouse Gas Emissions 19-7

Noise 19-7

Public Health 19-7

Neighborhood Character 19-7

Construction 19-7

IV. NO UNMITIGATED SIGNIFICANT IMPACTS ALTERNATIVE 19-7

Community Facilities and Services 19-8

Open Space 19-9

Transportation 19-9

Noise 19-10

Construction 19-10

V. LESSER DENSITY ALTERNATIVE 19-10

Land Use, Zoning and Public Policy 19-11

Socioeconomic Conditions 19-11

Community Facilities and Services 19-11

Open Space 19-13

Shadows 19-13

Historic and Cultural Resources 19-13

Urban Design and Visual Resources 19-13
Hazardous Materials 19-13
Water and Sewer Infrastructure 19-14
Solid Waste and Sanitation 19-14
Transportation 19-14
Air Quality 19-15
Greenhouse Gas Emissions 19-15
Noise 19-15
Construction 19-15
Public Health 19-15
Neighborhood Character 19-15

Chapter 20 : Mitigation 20-1
I. INTRODUCTION 20-1
II. PRINCIPAL CONCLUSIONS 20-1
Community Facilities and Services 20-1
Open Space 20-2
Transportation 20-2
Air Quality 20-6
Noise 20-7
Construction 20-7
III. COMMUNITY FACILITIES AND SERVICES 20-9
Public Schools 20-9
Publicly-Funded Child Care Centers 20-10
IV. OPEN SPACE 20-11
V. TRANSPORTATION 20-12
Traffic 20-12
Transit 20-43
Pedestrians 20-44
Parking 20-51
VI. AIR QUALITY 20-51
VII. NOISE 20-52
VIII. CONSTRUCTION 20-52
Transportation 20-52
Traffic 20-52
Pedestrians 20-77

Noise 20-78

Chapter 21 : Unavoidable Adverse Impacts 21-1

I. INTRODUCTION 21-1

II. COMMUNITY FACILITIES AND SERVICES 21-1

Public Schools 21-1

Publicly-Funded Child Care Centers 21-2

III. OPEN SPACE 21-2

IV. TRANSPORTATION 21-3

Traffic 21-3

Transit 21-4

Pedestrians 21-4

V. NOISE 21-4

VI. CONSTRUCTION 21-4

Traffic 21-5

Pedestrians 21-5

Noise 21-5

Chapter 22 : Growth-Inducing Aspects of the Proposed Project 22-1

Chapter 23 : Irreversible and Irretrievable Commitments of Resources 23-1

LIST OF APPENDICES

Appendix A: Proposed Zoning Text Amendments

Appendix B: Waterfront Revitalization Program (WRP) Consistency Assessment Form (CAF)

Appendix C: Historic and Cultural Resources

Appendix D: Hazardous Materials

Appendix E: Construction Staging Plans

LIST OF TABLES

Table 1-1: Proposed Project 1-19
Table 1-2: No-Action Condition 1-26
Table 1-3: Incremental Development Between No-Action and With-Action Conditions 1-29
Table 2-1: Zoning Districts Located in the Study Area 2-6
Table 2-2: No-Action Condition 2-15
Table 2-3: No-Action Developments Near the Proposed Project 2-19
Table 3-1: Estimated Population in 0.25-mile Radius Census Tracts 3-4
Table 3-2: Housing Units in Study Area 3-6
Table 3-3: Publicly-Funded Housing in Study Area 3-7
Table 3-4: Distribution of Household Incomes 3-7
Table 3-5: Comparable Market-Rate Properties for Rent 3-8
Table 3-6: 2018 New York City Affordable Monthly Rates 3-9
Table 4-1: Community Facilities Thresholds for Detailed Analyses in Queens 4-7
Table 4-2: Public School Enrollment, Capacity, and Utilization for Existing Conditions, School District 27, Sub-District 1 4-10
Table 4-3: SCA Enrollment Projections, 2034* 4-11
Table 4-4: Additional No-Action Enrollment, 2034 4-11
Table 4-5: School Enrollment, Capacity, and Utilization for No-Action Condition, 2034 4-12
Table 4-6: Public School Threshold Calculations 4-13
Table 4-7: School Enrollment, Capacity, and Utilization for With-Action Condition, 2034 4-14
Table 4-8: Public Libraries Serving the Proposed Project 4-15
Table 4-9: No-Action Condition Catchment Area Population 4-16
Table 4-10: With-Action Condition Catchment Area Population 4-16
Table 4-11: 3-K for All programs within 1.5 miles of Project Site 4-18
Table 4-12: Child Care and Head Start Centers within 1.5 miles of Project Site 4-19
Table 4-13: Public Child Care Capacity and Utilization No-Action Condition, 2034 4-21
Table 4-14: Public Child Care Capacity and Utilization With-Action Condition, 2034 4-22
Table 5-1: Study Area Residential Population 5-4
Table 5-2: Residential Study Area Population Age Breakdown 5-5
Table 5-3: Existing Inventory of Open Space Resources 5-8
Table 5-4: Adequacy of Open Space Resources 5-10
Table 5-5: No-Action Development Projects, Residential and Non-Residential Study Areas 5-12
Table 5-6: Study Area Populations 5-13
Table 5-7: Residential Age Breakdown 5-13
Table 5-8: Adequacy of Open Space Resources, No-Action Condition 5-15
Table 5-9: Study Area Populations 5-19

Table 5-10: Residential Age Breakdown....5-19
Table 5-11: Adequacy of Open Space Resources, With-Action Condition....5-20
Table 5-12: Open Space Ratios Summary....5-21
Table 6-1: Sunlight-Sensitive Resources of Concern....6-5
Table 6-2: Analysis Summary....6-12
Table 8-1: Incremental Development Between No-Action and With-Action Conditions....8-27
Table 10-1: Monthly Average Dry Weather Flows from the Rockaway WWTP....10-5
Table 10-2: Surface Types on the Project Site, Existing Conditions....10-6
Table 10-3: Stormwater Runoff on the Project Site, Existing Conditions....10-6
Table 10-4: Water Consumption and Sewer Generation on the Project Site, No-Action Condition....10-9
Table 10-5: Surface Types on the Project Site, No-Action Condition....10-9
Table 10-6: Stormwater Runoff and Wastewater Generation on the Project Site, No-Action Condition....10-10
Table 10-7: Water Consumption and Sewer Generation on the Project Site, With-Action Condition....10-12
Table 10-8: Surface Types on the Project Site, With-Action Condition....10-12
Table 10-9: Stormwater Runoff and Wastewater Generation on the Project Site, With-Action Condition 10-13
Table 11-1: Solid Waste Generation on the Project Site – No-Action Condition....11-4
Table 11-2: Solid Waste Generation on the Project Site – With-Action Condition....11-5
Table 11-3: Comparison of Weekly Solid Waste Generation in Tons on the Project Site....11-6
Table 12-1: Significant Adverse Traffic Impacts at Signalized Intersections....12-2
Table 12-2: Significant Adverse Traffic Impacts at Unsignalized Intersections....12-3
Table 12-3: On-Street Parking Regulation Legend....12-14
Table 12-4: LOS Criteria for Signalized Intersections....12-18
Table 12-5: LOS Criteria for Unsignalized Intersections....12-19
Table 12-6: LOS Criteria for Subway Station Stairs and Control Areas....12-20
Table 12-7: LOS Criteria for Crosswalks and Corners (Signalized intersections)....12-22
Table 12-8: LOS Criteria for Crosswalks and Corners (Unsignalized intersections)....12-22
Table 12-9: LOS Criteria for Sidewalks....12-23
Table 12-10: Signalized Lane Groups Operating Worse than Mid-LOS D – Existing Conditions....12-27
Table 12-11: Unsignalized Lane Groups Operating Worse than Mid-LOS D – Existing Conditions....12-27
Table 12-12: 2016 Existing Conditions Level of Service Analysis – Signalized Intersections....12-36
Table 12-13: 2016 Existing Conditions Level of Service Analysis – Unsignalized Intersections....12-40
Table 12-14: 2016 Existing Conditions Level of Service Analysis – Subway Line-Haul....12-41
Table 12-15: 2016 Existing Conditions Level of Service Analysis – Stairs....12-42
Table 12-16: 2016 Existing Conditions Level of Service Analysis – Control Areas....12-42
Table 12-17: 2016 Existing Conditions Level of Service Analysis – Bus Line-Haul....12-43
Table 12-18: 2016 Existing Conditions Level of Service Analysis – Sidewalks....12-44

Table 12-19: 2016 Existing Conditions Level of Service Analysis – Signalized Crosswalks.....12-44
Table 12-20: 2016 Existing Conditions Level of Service Analysis – Unsignalized Crosswalks.....12-44
Table 12-21: 2016 Existing Conditions Level of Service Analysis – Corners and Medians 12-45
Table 12-22: 2016 Existing Conditions On-Street Parking Utilization Summary.....12-46
Table 12-23: No-Action Projects.....12-47
Table 12-24: Signalized Lane Groups Operating Worse than Mid-LOS D – No-Action Conditions 12-52
Table 12-25: Unsignalized Lane Groups Operating Worse than Mid-LOS D – No-Action Conditions..12-52
Table 12-26: 2034 No-Action Conditions Level of Service Analysis – Signalized Intersections 12-66
Table 12-27: 2034 No-Action Conditions Level of Service Analysis – Unsignalized Intersections 12-70
Table 12-28: 2034 No-Action Condition Level of Service Analysis – Subway Line-Haul.....12-71
Table 12-29: 2034 No-Action Condition Level of Service Analysis – Stairs 12-71
Table 12-30: 2034 No-Action Condition Level of Service Analysis – Control Areas 12-72
Table 12-31: 2034 No-Action Condition Level of Service Analysis – Bus Line-Haul.....12-72
Table 12-32: 2034 No-Action Condition Level of Service Analysis – Sidewalks 12-73
Table 12-33: 2034 No-Action Condition Level of Service Analysis – Signalized Crosswalks 12-74
Table 12-34: 2034 No-Action Condition Level of Service Analysis – Unsignalized Crosswalks 12-74
Table 12-35: 2034 No-Action Condition Level of Service Analysis – Corner and Medians.....12-75
Table 12-36: 2034 No-Action Condition On-Street Parking Utilization Summary.....12-76
Table 12-37: Peninsula Hospital Site – Proposed Project Trip Generation Estimate Summary 12-79
Table 12-38: Peninsula Hospital Site –Transportation Demand Factors.....12-80
Table 12-39: Peninsula Hospital Site – Proposed Project Detailed Trip Generation Estimates.....12-81
Table 12-40: 2034 With-Action Condition Weekday Project Parking Accumulation.....12-90
Table 12-41: 2034 With-Action Condition Saturday Project Parking Accumulation 12-91
Table 12-42: Significantly Impacted Lane Groups at Signalized Intersections.....12-93
Table 12-43: Significantly Impacted Lane Groups at Unsignalized Intersections.....12-93
Table 12-44: 2034 No-Action and With-Action Conditions Level of Service Analysis – Signalized Intersections.....12-111
Table 12-45: 2034 No-Action and With-Action Conditions Level of Service Analysis – Unsignalized Intersections.....12-116
Table 12-46: 2034 With-Action Condition Level of Service Analysis – Subway Line-Haul 12-118
Table 12-47: 2034 With-Action Condition Level of Service Analysis – Stairs.....12-119
Table 12-48: 2034 With-Action Condition Level of Service Analysis – Control Areas.....12-119
Table 12-49: 2034 With-Action Condition Level of Service Analysis – Bus Line-Haul.....12-120
Table 12-50: Significant Adverse Impacts at Existing and Proposed Sidewalks (Platoon Conditions).....12-121
Table 12-51: 2034 With-Action Condition Level of Service Analysis – Existing Sidewalks.....12-122
Table 12-52: 2034 With-Action Condition Level of Service Analysis – Proposed Sidewalks.....12-122
Table 12-53: Significant Adverse Impacts at Existing Signalized Crosswalks 12-123

Table 12-54: 2034 With-Action Condition Level of Service Analysis – Existing Signalized Crosswalks ... 12-123
Table 12-55: 2034 With-Action Condition Level of Service Analysis – Existing Unsignalized Crosswalks ... 12-123
Table 12-56: 2034 With-Action Condition Level of Service Analysis – Proposed Unsignalized Crosswalks ... 12-124
Table 12-57: Significant Adverse Impacts at Existing and Proposed Corners and Medians ... 12-125
Table 12-58: 2034 With-Action Condition Level of Service Analysis – Existing Corners and Medians ... 12-126
Table 12-59: 2034 With-Action Condition Level of Service Analysis – Proposed Corners ... 12-126
Table 12-60: 2034 With-Action Condition On-Street Parking Utilization Summary ... 12-127
Table 12-61: 2034 With-Action Utilization of Available On-Street Parking Spaces ... 12-127
Table 12-62: Crash Data ... 12-129
Table 13-1: National and New York State Ambient Air Quality Standards ... 13-3
Table 13-2: Background Concentrations ... 13-5
Table 13-3: NYSDOT Functional Classifications for Roadways in the Study Area ... 13-10
Table 13-4: 2034 Traffic Volume Increments > 170 ... 13-11
Table 13-5: HVAC Screen for Project-on-Project Impacts, Natural Gas ... 13-15
Table 13-6: Sites of Interest for Air Toxics within 400 feet of Project Site ... 13-18
Table 13-7: Mobile Source CO (ppm), 2034 No-Action Condition ... 13-19
Table 13-8: Mobile Source PM_{10} ($\mu g/m^3$), 2034 No-Action Condition ... 13-20
Table 13-9: Mobile Source $PM_{2.5}$ ($\mu g/m^3$), 2034 No-Action Condition ... 13-20
Table 13-10: Mobile Source CO ($\mu g/m^3$), 2034 With-Action Condition ... 13-21
Table 13-11: Mobile Source PM_{10} (ug/m^3), 2020 With-Action Condition ... 13-21
Table 13-12: Parking Lot Volumes, 2034 With-Action Condition ... 13-24
Table 13-13: CO Pollutant Concentrations from E2 Building Garage (ppm) ... 13-25
Table 13-14: $PM_{2.5}$ Pollutant Concentrations from E2 Building Garage ... 13-25
Table 13-15: MTA Hourly Bus Volumes ... 13-28
Table 13-16: MTA $PM_{2.5}$ Parking Lot Concentrations (ug/m^3) ... 13-28
Table 13-17: NO_2 and $PM_{2.5}$ Concentrations, Proposed Project on Proposed Buildings ... 13-29
Table 14-1: Global Warming Potential for Primary Greenhouse Gases ... 14-3
Table 14-2: Projected Annual Energy Use ... 14-5
Table 14-3: Projected Annual Building Operational Emissions ... 14-6
Table 14-4: Proposed Actions' Annual Vehicle Miles Traveled (miles per year) ... 14-6
Table 14-5: Annual Mobile Source Emissions for 2034 ... 14-7
Table 14-6: Summary of Proposed Project's Annual GHG Emissions, 2034 ... 14-7
Table 15-1: Sound Pressure Level and Loudness of Typical Noises in Indoor and Outdoor Environments ... 15-4

Table 15-2: CEQR Noise Exposure Guidelines for Use in City Environmental Impact Review 15-6
Table 15-3: Required Attenuation Values to Achieve Acceptable Interior Noise Levels 15-7
Table 15-4: Observed Noise Levels (dBA) 15-10
Table 15-5: 2034 Traffic Volumes 15-11
Table 15-6: Peak Hour Traffic Volumes and Noise Levels, Existing Conditions 15-13
Table 15-7: Peak Hour Noise Levels, Future without Proposed Action 15-15
Table 15-8: Peak Hour Noise Levels, Future with Proposed Action 15-19
Table 15-9: Required Attenuation for Proposed Project 15-20
Table 18-1: Significant Adverse Impacts at Signalized Intersections 18-2
Table 18-2: Significant Adverse Impacts at Unsignalized Intersections 18-2
Table 18-3: Construction Oversight in New York City 18-5
Table 18-4: Anticipated Construction Schedule 18-7
Table 18-5: Project Phasing 18-8
Table 18-6: Average Number of Daily Construction Workers and Trucks by Quarter 18-11
Table 18-7: Weekday Q3 2027 Peak Incremental Construction Vehicle Trip Projections (in PCEs) 18-15
Table 18-8: Saturday Q3 2027 Peak Incremental Construction Vehicle Trip Projections (in PCEs) 18-15
Table 18-9: Signalized Lane Groups Operating Worse than Mid-LOS D – Q3 2027 No-Action Condition 18-37
Table 18-10: Unsignalized Lane Groups Operating Worse than Mid-LOS D – Q3 2027 No-Action Condition 18-37
Table 18-11: Q3 2027 No-Action Condition Level of Service Analysis – Signalized Intersections 18-46
Table 18-12: Q3 2027 No-Action Condition Level of Service Analysis – Unsignalized Intersections 18-49
Table 18-13: Q3 2027 No-Action Condition – Bus Line-Haul 18-51
Table 18-14: Q3 2027 No-Action Condition – Sidewalks 18-52
Table 18-15: Q3 2027 No-Action Condition – Signalized Crosswalks 18-52
Table 18-16: Q3 2027 No-Action Condition – Unsignalized Crosswalks 18-53
Table 18-17: Q3 2027 No-Action Condition – Corners 18-54
Table 18-18: Q3 2027 No-Action Condition On-Street Parking Utilization Summary 18-55
Table 18-19: Significantly Impacted Lane Groups at Signalized Intersections 18-56
Table 18-20: Significantly Impacted Lane Groups at Unsignalized Intersections 18-56
Table 18-21: Q3 2027 No-Action vs. Peak Construction Period Condition Level of Service Analysis – Signalized Intersections 18-67
Table 18-22: Q3 2027 No-Action vs. Peak Construction Period Condition Level of Service Analysis – Unsignalized Intersections 18-71
Table 18-23: Q3 2027 Peak Construction Period Condition – Bus Line-Haul 18-73
Table 18-24: Q3 2027 Peak Construction Period Condition – Sidewalks 18-73
Table 18-25: Q3 2027 Peak Construction Period Condition – Signalized Crosswalks 18-74
Table 18-26: Q3 2027 Peak Construction Period Condition – Unsignalized Crosswalks 18-74

Table 18-27: Q3 2027 Peak Construction Period Condition – Corners 18-75

Table 18-28: Q3 2027 Peak Construction Condition On-Street Parking Utilization Summary 18-76

Table 18-29: Q3 2027 Peak Construction Utilization of Available On-Street Parking Spaces 18-76

Table 18-30: Ambient Air Quality Standards and De Minimis Guidelines 18-77

Table 18-31: Background Air Pollutant Concentrations 18-77

Table 18-32: Maximum Pollutant Concentrations from the Proposed Project (ug/m3) 18-81

Table 18-33: Construction Equipment Noise Emission Levels at 50 Feet (L_{max} in dBA) 18-85

Table 18-34: Average Number of Daily Workers, Commutation Vehicles, Trucks, and Noise PCEs by Quarter 18-90

Table 18-35: Hourly Distribution of Construction Trips, Third Quarter, 2027 18-91

Table 18-36: Receptor Groups and Maximum Construction Traffic Noise (dBA) (Q3 2027, 7:00 AM – 8:00 AM) 18-92

Table 18-37: Construction Equipment Noise Levels and Increments 18-95

Table 19-1: Lesser Density Alternative 19-11

Table 19-2: Proposed Project vs. Lesser Density Alternative Trip Generation Comparison 19-14

Table 20-1: Summary of Impacted and Unmitigated Intersections and Lane Groups – Signalized Intersections 20-3

Table 20-2: Summary of Impacted and Unmitigated Intersections and Lane Groups – Unsignalized Intersections 20-4

Table 20-3: Summary of Impacted and Unmitigated Sidewalks (Platoon Conditions) 20-5

Table 20-4: Summary of Impacted and Unmitigated Signalized Crosswalks 20-5

Table 20-5: Summary of Impacted and Unmitigated Intersections and Lane Groups – Signalized Intersections 20-8

Table 20-6: Summary of Impacted and Unmitigated Intersections and Lane Groups – Unsignalized Intersections 20-8

Table 20-7: Proposed Traffic Mitigation 20-19

Table 20-8: 2034 Weekday AM Peak Hour No-Action vs. With-Action vs. Mitigated Conditions Level of Service Analysis – Signalized Intersections 20-28

Table 20-9: 2034 Weekday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions Level of Service Analysis – Signalized Intersections 20-31

Table 20-10: 2034 Weekday PM Peak Hour No-Action vs. With-Action vs. Mitigated Conditions Level of Service Analysis – Signalized Intersections 20-34

Table 20-11: 2034 Saturday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions Level of Service Analysis – Signalized Intersections 20-37

Table 20-12: 2034 Weekday AM Peak Hour No-Action vs. With-Action vs. Mitigated Conditions Level of Service Analysis – Unsignalized Intersections 20-40

Table 20-13: 2034 Weekday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions Level of Service Analysis – Unsignalized Intersections 20-41

Table 20-14: 2034 Weekday PM Peak Hour No-Action vs. With-Action vs. Mitigated Conditions Level of Service Analysis – Unsignalized Intersections 20-42

Table 20-15: 2034 Saturday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions Level of Service Analysis – Unsignalized Intersections....20-43

Table 20-16: Summary of Significant Adverse Transit Impacts – Bus Line-Haul....20-44

Table 20-17: With-Action with Mitigation – Bus Line-Haul....20-45

Table 20-18: Summary of Significant Adverse Pedestrian Impacts – Sidewalks....20-46

Table 20-19: Summary of Significant Adverse Pedestrian Impacts – Signalized Crosswalks....20-46

Table 20-20: Summary of Significant Adverse Pedestrian Impacts – Corners and Medians....20-47

Table 20-21: With-Action with Mitigation – Sidewalk Conditions....20-48

Table 20-22: With-Action with Mitigation Crosswalk – Signalized Conditions....20-49

Table 20-23: With-Action with Mitigation – Corner and Median Conditions....20-50

Table 20-24: 2034 With-Action with Traffic Mitigation – Crosswalks at Newly Signalized Intersections...20-51

Table 20-25: 2034 With-Action with Traffic Mitigation - Crosswalks at Newly Signalized Intersections With Mitigation....20-51

Table 20-26: 2034 With-Action with Traffic Mitigation – Corners....20-51

Table 20-27: 2034 With-Action with Traffic Mitigation – Corners with Mitigation....20-51

Table 20-28: 2034 With-Action with Traffic Mitigation – Corners at Proposed Intersections....20-52

Table 20-29: Mobile Source $PM_{2.5}$ (ug/m^3), 2034 With-Action Condition....20-52

Table 20-30: Proposed Construction-Related Traffic Mitigation....20-58

Table 20-31: Q3 2027 Weekday AM Peak Hour No-Action vs. Peak Construction vs. Mitigated Conditions Level of Service Analysis – Signalized Intersections....20-63

Table 20-32: Q3 2027 Weekday PM Peak Hour No-Action vs. Peak Construction vs. Mitigated Conditions Level of Service Analysis – Signalized Intersections....20-66

Table 20-33: Q3 2027 Saturday AM Peak Hour No-Action vs. Peak Construction vs. Mitigated Conditions Level of Service Analysis – Signalized Intersections....20-69

Table 20-34: Q3 2027 Saturday PM Peak Hour No-Action vs. Peak Construction vs. Mitigated Conditions Level of Service Analysis – Signalized Intersections....20-72

Table 20-35: Q3 2027 Weekday AM Peak Hour No-Action vs. Peak Construction vs. Mitigated Conditions Level of Service Analysis – Unsignalized Intersections....20-75

Table 20-36: Q3 2027 Weekday PM Peak Hour No-Action vs. Peak Construction vs. Mitigated Conditions Level of Service Analysis – Unsignalized Intersections....20-76

Table 20-37: Q3 2027 Saturday AM Peak Hour No-Action vs. Peak Construction vs. Mitigated Conditions Level of Service Analysis – Unsignalized Intersections....20-77

Table 20-38: Q3 2027 Saturday PM Peak Hour No-Action vs. Peak Construction vs. Mitigated Conditions Level of Service Analysis – Unsignalized Intersections....20-78

Table 20-39: Q3 2027 Peak Construction Condition with Traffic Mitigation – Crosswalk....20-79

Table 20-40: Q3 2027 Peak Construction Condition with Traffic Mitigation – Crosswalks at Newly Signalized Intersections....20-79

Table 20-41: Q3 2027 Peak Construction Condition with Traffic Mitigation – Corners....20-79

Table 20-42: Q3 2027 Peak Construction Condition with Traffic Mitigation – Corners with Mitigation....20-80

LIST OF FIGURES

Figure 1-1: Site Location Map 1-2
Figure 1-2: Zoning Map 1-6
Figure 1-3: Alteration Map 1-8
Figure 1-4a: Waiver Plan 1-12
Figure 1-4b: Waiver Plan 1-13
Figure 1-4c: Waiver Plan 1-14
Figure 1-4d: Waiver Plan 1-15
Figure 1-4e: Waiver Plan 1-16
Figure 1-5: Proposed Project Site Plan 1-20
Figure 1-6: Proposed Project Rendering 1-21
Figure 1-7: No-Action Condition Site Plan 1-27
Figure 2-1: Land Use Map 2-9
Figure 2-2: Edgemere and Arverne Urban Renewal Areas 2-10
Figure 2-3: Current Zoning Map 2-11
Figure 2-4: NYC Coastal Zone 2-14
Figure 2-5: No-Action Condition Site Plan 2-16
Figure 2-6: No-Action Developments near the Project Site 2-22
Figure 2-7: Proposed Zoning Map 2-24
Figure 2-8: Proposed Project Site Plan 2-25
Figure 2-9: 2015 Floodplain Preliminary FIRM 2-36
Figure 2-10: NPCC 2020s Floodplain Projections 2-37
Figure 2-11: 2050s Floodplain Projections 2-38
Figure 2-12: 2080s Floodplain Projections 2-39
Figure 2-13: 2100 Floodplain Projections 2-40
Figure 2-14: Building Features and 1% Annual Chance Flood Elevations 2-44
Figure 2-15: Future High Tide with Sea Level Rise for the 2080s 2-45
Figure 3-1: Socioeconomic Study Area 3-5
Figure 4-1: Public Schools School District 27, Sub-District 1 4-9
Figure 4-2: Public Libraries Serving the Proposed Project 4-17
Figure 4-3: Public Child Care and Head Start Centers within 1.5 miles of Project Site 4-20
Figure 4-1: Public Schools School District 27, Sub-District 1 4-9
Figure 4-2: Public Libraries Serving the Proposed Project 4-17
Figure 4-3: Public Child Care and Head Start Centers within 1.5 miles of Project Site 4-20
Figure 5-1: Existing Open Space Map 5-9
Figure 5-2: Proposed Project Site Plan 5-16
Figure 5-3: Proposed Project Pedestrian Plaza and Play Area 5-17

Figure 6-1: Tier 1 Shadow Analysis 6-6
Figure 6-2: Tier 2 Shadow Analysis 6-7
Figure 6-3: Tier 3 Shadow Analysis, December 21st Analysis Day 6-8
Figure 6-4: Tier 3 Shadow Analysis, March 21st Analysis Day 6-9
Figure 6-5: Tier 3 Shadow Analysis, May 6th Analysis Day 6-10
Figure 6-6: Tier 3 Shadow Analysis, June 21st Analysis Day 6-11
Figure 6-7: No-Action Condition Shadow Coverage 6:19 AM, May 6th Analysis Day (#1) 6-14
Figure 6-8: With-Action Condition Shadow Coverage 6:19 AM, May 6th Analysis Day (#1) 6-15
Figure 6-9: No-Action Condition Shadow Coverage 6:34 AM, May 6th Analysis Day (#1) 6-16
Figure 6-10: With-Action Condition Shadow Coverage 6:34 AM, May 6th Analysis Day (#1) 6-17
Figure 6-11: No-Action Condition Shadow Coverage 5:55 AM, June 21st Analysis Day (#1) 6-18
Figure 6-12: With-Action Condition Shadow Coverage 5:55 AM, June 21st Analysis Day (#1) 6-19
Figure 6-13: No-Action Condition Shadow Coverage 6:05 AM, June 21st Analysis Day (#1) 6-20
Figure 6-14: With-Action Condition Shadow Coverage 6:05 AM, June 21st Analysis Day (#1) 6-21
Figure 6-15: No-Action Condition Shadow Coverage 2:35 PM, December 21st Analysis Day (#2) 6-22
Figure 6-16: With-Action Incremental Shadows 2:35 PM, December 21st Analysis Day (#2) 6-23
Figure 6-17: No-Action Condition Shadow Coverage 3:02 PM, December 21st Analysis Day (#2) 6-24
Figure 6-18: With-Action Incremental Shadows 3:02 PM, December 21st Analysis Day (#2) 6-25
Figure 8-1: Aerial Map and Keyed Photos 8-8
Figure 8-2: Existing Height Map 8-23
Figure 8-3: Existing Density Map 8-24
Figure 8-4: No-Action Condition Site Plan 8-26
Figure 8-5: Proposed Project Site Plan 8-28
Figure 8-6: Proposed Project Views 8-32
Figure 10-1: Rockaway WWTP Sewer System 10-7
Figure 12-1: Proposed Project Vehicular Study Locations 12-11
Figure 12-2: Transit Map 12-15
Figure 12-3: Proposed Project Pedestrian Study Locations 12-16
Figure 12-4: On-Street Parking Regulation Map 12-17
Figure 12-5: 2016 Existing Conditions Traffic Volumes Weekday AM Peak Hour 12-28
Figure 12-6: 2016 Existing Conditions Traffic Volumes Weekday MD Peak Hour 12-30
Figure 12-7: 2016 Existing Conditions Traffic Volumes Weekday PM Peak Hour 12-32
Figure 12-8: 2016 Existing Conditions Traffic Volumes Saturday MD Peak Hour 12-34
Figure 12-9: Known No-Action Sites in the Vicinity of Project Site 12-49
Figure 12-10: 2034 No-Action Conditions Traffic Volumes Weekday AM Peak Hour 12-58
Figure 12-11: 2034 No-Action Conditions Traffic Volumes Weekday MD Peak Hour 12-60
Figure 12-12: 2034 No-Action Conditions Traffic Volumes Weekday PM Peak Hour 12-62

Figure 12-13: 2034 No-Action Conditions Traffic Volumes Saturday MD Peak Hour 12-64
Figure 12-14: Project Increment Traffic Volumes Weekday AM Peak Hour.....12-82
Figure 12-15: Project Increment Traffic Volumes Weekday MD Peak Hour 12-84
Figure 12-16: Project Increment Traffic Volumes Weekday PM Peak Hour.....12-86
Figure 12-17: Project Increment Traffic Volumes Saturday MD Peak Hour 12-88
Figure 12-18: 2034 With-Action Traffic Volumes Weekday AM Peak Hour 12-103
Figure 12-19: 2034 With-Action Traffic Volumes Weekday MD Peak Hour 12-105
Figure 12-20: 2034 With-Action Traffic Volumes Weekday PM Peak Hour 12-107
Figure 12-21: 2034 With-Action Traffic Volumes Saturday MD Peak Hour.....12-109
Figure 13-1: Axonometric View of Proposed Project 13-13
Figure 13-2: Project Site and Surrounding Land Uses within 400 Feet of the Project Site 13-17
Figure 13-3: Parking Facility Driveways on the Project Site 13-23
Figure 13-4: MTA Far Rockaway Bus Depot 13-26
Figure 13-5: HVAC Stack Locations 13-30
Figure 15-1: 2016 and 2018 Noise Monitoring Locations 15-9
Figure 15-2: Axonometric View of Proposed Project 15-18
Figure 17-1: Aerial Map.....17-4
Figure 18-1: Q3 2027 Construction Increment, Weekday AM Construction Peak Hour.....18-17
Figure 18-2: Q3 2027 Construction Increment, Weekday PM Construction Peak Hour.....18-19
Figure 18-3: Q3 2027 Construction Increment, Saturday AM Construction Peak Hour 18-21
Figure 18-4: Q3 2027 Construction Increment, Saturday PM Construction Peak Hour 18-23
Figure 18-5: Construction Vehicular Study Locations.....18-34
Figure 18-6: Construction Pedestrian Study Locations 18-35
Figure 18-7: Q3 2027 No-Action Condition Traffic Volumes – Weekday AM Peak Hour.....18-38
Figure 18-8: Q3 2027 No-Action Condition Traffic Volumes – Weekday PM Peak Hour.....18-40
Figure 18-9: Q3 2027 No-Action Condition Traffic Volumes – Saturday AM Peak Hour 18-42
Figure 18-10: Q3 2027 No-Action Condition Traffic Volumes – Saturday PM Peak Hour 18-44
Figure 18-11: Q3 2027 Peak Construction Period Condition Traffic Volumes - Weekday AM Peak Hour18-59
Figure 18-12: Q3 2027 Peak Construction Period Condition Traffic Volumes - Weekday PM Peak Hour18-61
Figure 18-13: Q3 2027 Peak Construction Period Condition Traffic Volumes – Saturday AM Peak Hour18-63
Figure 18-14: Q3 2027 Peak Construction Period Condition Traffic Volumes - Saturday PM Peak Hour 18-65
Figure 18-15: Air Quality Receptor Locations 18-79
Figure 18-16: Worst-Case Noise Receptor Locations 18-88