Chapter 14: Alternatives

A. INTRODUCTION

This chapter presents and analyzes alternatives to the proposed Rockefeller University River Building and Fitness Center project (the "proposed project"). As described in the *City Environmental Quality Review (CEQR) Technical Manual*, alternatives selected for consideration in an Environmental Impact Statement (EIS) are generally those which are feasible and have the potential to reduce, eliminate, or avoid adverse impacts of a proposed action while meeting some or all of the goals and objectives of the action.

This chapter considers in detail the following three alternatives to the proposed project:

- A **No Action Alternative**, which is mandated by the State Environmental Quality Review Act (SEQRA) and CEQR, and is intended to provide the lead and involved agencies with an assessment of the expected environmental impacts of no action on their part;
- A **York Avenue Alternative**, in which two new buildings would be constructed along the Rockefeller University campus's west boundary along York Avenue between East 64th Street and demapped East 68th Street in an area currently occupied by parking uses, the Caspary Auditorium, the IT Pavilion, and Sophie Fricke Hall (see **Figure 14-1**).
- A **North-South Alternative,** in which the two new buildings would be constructed on the Rockefeller University campus: one building would be located at the northwest corner of the campus at York Avenue and demapped East 68th Street and the other building would replace Sophie Fricke Hall and would be located between the Bronk Building and the Weiss Research Building (see **Figure 14-2**).

In addition to these three alternatives, two other alternatives were considered—a Lesser Density Alternative and a No Unmitigated Impact Alternative. The Lesser Density Alternative assumes that a smaller laboratory building of approximately 74,000 gsf would be constructed in air space over the Franklin Delano Roosevelt (FDR) Drive, resulting in either a building that only partially spans over the FDR Drive from East 64th to demapped East 68th Streets or a one-story, rather than a two-story, laboratory building spanning the FDR Drive. The Lesser Density Alternative would include a fitness center of the same size and at the same location as with the proposed project. The No Unmitigated Impact Alternative considers a laboratory building that would avoid impacts to shadows, historic and cultural resources, construction noise, and construction-period open space, which are impacts that would occur with the proposed project.

PRINCIPAL CONCLUSIONS

As detailed in this chapter and based on the analyses of the No Action Alternative, York Avenue Alternative, North-South Alternative, Lesser Density Alternative, a No Unmitigated Impact Alternative, the applicant believes that these alternatives would not meet the goals and objectives of the proposed project.

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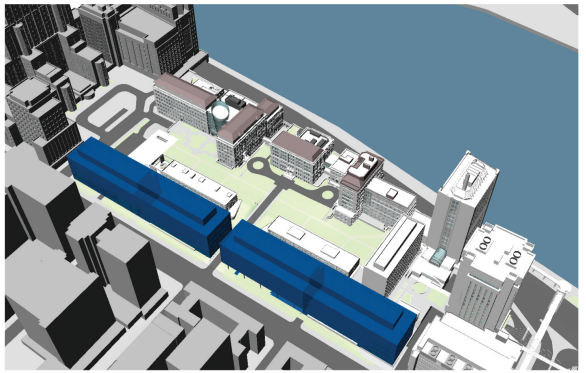

East River

Esplanade

FDR

President's House

Smith Annex

Flexner Hall

Welch Hall

Nurse's Residence

Rockefeller Research Building

Smith Hall

CRC

Founder's Hall

Hospital

Hospital Addition

Gasser Hall

Chiller Plant

Pedestrian Bridge

Scholar's Residence

Bronk Laboratory

Weiss Research Building

Parking/ Tennis Court

Abby Aldrich Hall

Graduate Students Residence

Fricke Hall

CBC

Faculty House

Caspary Auditorium

IT Pavilion

York Avenue

68th St.

67th St.

66th St.

65th St.

64th St.

63rd St.

N

Source: Rafael Vinoly Architects

Large Scale Community Facility Development (LSCFD) (Rockefeller University Campus)

Development Sites

ROCKEFELLER UNIVERSITY

York Avenue Alternative

Figure 14-1

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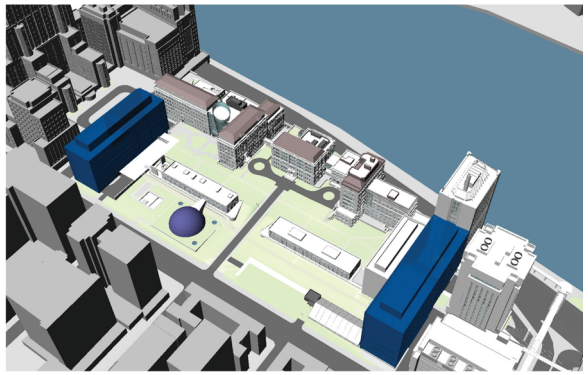

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Source: Rafael Vinoly Architects

Large Scale Community Facility Development (LSCFD) (Rockefeller University Campus)

Development Sites

ROCKEFELLER UNIVERSITY

North-South Alternative

Figure 14-2

B. NO ACTION ALTERNATIVE

DESCRIPTION OF THE NO ACTION ALTERNATIVE

The No Action Alternative assumes that the proposed project is not developed. The air rights spanning the FDR Drive would not be developed and the surface parking lot and canopy structure would remain. There would be no new laboratory building, interactive conference center, or fitness center within the Rockefeller University Large Scale Community Facility Development (LSCFD) site.

As described in Chapter 1, "Project Description," in the No Action Alternative, the temporary IT Pavilion, located south of the University's East 66th Street entrance near York Avenue, will be removed and the site will become a landscaped area. The IT population and equipment will be relocated to other existing buildings and spaces on campus.

This alternative essentially reflects conditions described as the "Future Without the Proposed Project" in Chapters 2 through 13. The analysis that follows compares conditions under the No Action Alternative to conditions with the proposed project in the 2019 analysis year.

COMPARISON OF THE NO ACTION ALTERNATIVE TO THE PROPOSED ACTIONS

The effects of the No Action Alternative in comparison to those of the proposed project are summarized below.

LAND USE, ZONING, AND PUBLIC POLICY

Like the proposed project, the No Action Alternative would not introduce any new incompatible land uses to the project site, would be compatible with existing development in the surrounding area, would not change the underlying zoning of the project site, and would be compatible with the City's Waterfront Revitalization Program (WRP), and would not adversely affect any applicable public policies. With the No Action Alternative, the Rockefeller University campus would remain in its current condition except for the removal of the temporary IT Pavilion and it becoming a landscaped area. A new platform and laboratory building would not be built over the FDR Drive. Unlike the proposed project, the No Action Alternative would not provide Rockefeller University with modern laboratory and support facilities, university amenities, or new open space on the campus.

The No Action Alternative would not require any of the actions and approvals needed for the proposed project. However, the proposed project would not result in significant adverse impacts on land use, zoning, or public policy.

OPEN SPACE

Neither the No Action Alternative nor the proposed project would result in any significant adverse impacts on open space. Both the No Action Alternative and the proposed project would not introduce a new population to the area, and therefore neither would have the potential to result in indirect impacts to open space.

In terms of direct impacts, with the No Action Alternative, the proposed laboratory building with landscaped roof would not be constructed and approximately 57,650 gross square feet (gsf) of open space would not be added to the campus. However, the No Action Alternative would not

result in the displacement of approximately 236 sf of space within the western portion of the East River Esplanade or incremental shadows on the esplanade cast by the proposed structures. Even with the proposed project, the area of displaced open space is a relatively isolated area located immediately adjacent to the FDR Drive, and lightly used. The proposed project would not affect, or alter access points to the portion of the esplanade adjacent to the project site, and the portions of the East River Esplanade that would be affected by construction-related activities for the proposed project would be replaced in-kind. However, as described in Chapter 4, "Shadows," the proposed project would result in a significant adverse shadows impact on the East River Esplanade, an open space resource adjacent to the project site. In contrast to the proposed project, the No Action Alternative would not result in any significant adverse shadows impacts to the esplanade as no new structure would be constructed in air space spanning the FDR Drive. The shadow impact would be partially mitigated through the repair and reconstruction of the bulkhead and substantial upgrades to the East River Esplanade, as described in Chapter 13, "Mitigation."

SHADOWS

As the No Action Alternative would not result in any new construction within the Rockefeller University LSCFD, the No Action Alternative would not result in any significant adverse impacts due to incremental shadow on the East River Esplanade from the proposed laboratory building and North Terrace.

HISTORIC AND CULTURAL RESOURCES

Archaeological Resources

The No Action Alternative would not result in any in-ground disturbance to the area of moderate archaeological sensitivity adjacent to the Fitness Center Site or the late-18th/early-19th century cemetery (Bass Hardenbrook Family Cemetery) located within the line of East 66th Street in an area occupied by the driveway leading to Founder's Hall. However, as currently contemplated, the proposed project is not expected to result in any impacts to these areas, and if project plans were altered in such a way that impacts would occur in any location of archaeological sensitivity, a Phase 1B archaeological investigation would be recommended to confirm the presence or absence of archaeological resources associated with the 19th century occupation of the Fitness Center Site or of human remains and archaeological resources associated with the cemetery. Therefore, neither the No Action Alternative nor the proposed project would result in any significant adverse physical impacts to archaeological resources in the study area.

Architectural Resources

As the No Action Alternative would not result in any new construction in the Rockefeller University Historic District, it would not result in a significant adverse impact to the canopy structure and parking area as it would not result in the removal of these structures. However, even with the proposed project, this impact would be partially mitigated through the preparation and implementation of a restoration plan for the Philosopher's Garden, which is located immediately south of the Fitness Center Site. The No Action Alternative would not result in the construction of a new laboratory building or exhaust stacks. Compared to the proposed project, which would locate two stacks adjacent to buildings in the historic district that would result in a significant impact to historic and cultural resources, the No Action Alternative would not result in a significant impact to historic and cultural resources. However, with the proposed project,

this impact to historic and cultural resources would be partially mitigated by the location, design, and materials of the stacks, as described in Chapter 13, "Mitigation."

URBAN DESIGN AND VISUAL RESOURCES

With the No Action Alternative, none of the proposed structures would be constructed. The No Action Alternative would not result in any new development on the Laboratory Building Site or the North Terrace Site. However, even with the proposed project, the proposed platform structure for the laboratory building and North Terrace would only affect the pedestrian experience along the adjacent portion of the East River Esplanade, and those changes would not result in any significant adverse impacts. With the No Action Alternative, there would be no new buffer between the users of the esplanade and the cars on the FDR Drive that would be created by the eight Y-shaped columns and two oval columns that would support the platform of the proposed laboratory building and the North Terrace. With the No Action Alternative, the existing gap in the streetwall along the East River Esplanade in front of the Rockefeller University campus's schist retaining wall would remain, whereas this would be replaced by the laboratory building and North Terrace with the proposed project. The No Action Alternative would also not result in any new development on the Fitness Center Site, and would therefore not improve the streetscape and the pedestrian experience by replacing a surface parking area and canopy structure with a one-story building.

HAZARDOUS MATERIALS

Like the proposed project, the No Action Alternative would not result in any significant adverse impacts with respect to hazardous materials. The Laboratory Building Site, the North Terrace Site, and the Fitness Center Site would remain in their current conditions. There are no known significant health risks associated with the development sites. Likewise, there would be no significant health risks at the development sites in the No Action Alternative. The proposed project would undertake site development activities in accordance with various measures that would ensure that no significant adverse impacts related to hazardous materials would be expected during construction of the proposed project. These measures include the preparation of a Subsurface (Phase II) Investigation, and based on its findings, the preparation of a Remedial Action Plan (RAP) and associated Construction Health and Safety Plan (CHASP). These commitments would be included in a Restrictive Declaration.

With both the proposed project and the No Action Alternative, the existing usage of chemicals in laboratory facilities on campus would continue. In both the No Action Alternative and with the proposed project, the use of hazardous materials would be subject to numerous controls that would avoid the potential for adverse impacts.

AIR QUALITY

Neither the proposed project nor the No Action Alternative would result in any new sources of air pollutants or result in any significant adverse air quality impacts. The No Action Alternative would not result in any new construction on the project site, including the laboratory building and the deck structure over the FDR Drive that would both result from the proposed project, and therefore, no changes in air quality would occur. However, even with the proposed project, the air quality analyses demonstrated that a theoretical chemical spill from the laboratory would not result in any pollutant concentrations exceeding health benchmarks due to recirculation of emissions from the exhaust system of the proposed laboratory back into the proposed laboratory

building's air intakes or their dispersion in the area. The potential changes in dispersion of pollutants from on-road vehicles on the FDR Drive due to the construction of the proposed laboratory building over the FDR Drive would not cause any significant adverse air quality impacts. Further, no significant adverse air quality impact on the proposed project would occur as a result of the operation of nearby large emission sources.

NOISE

Like the proposed project, the No Action Alternative would not result in significant adverse noise impacts. However, unlike the proposed project, the No Action Alternative would not result in any changes to noise levels on the esplanade associated with the platform structure spanning the FDR Drive and barrier along the esplanade. While the No Action Alternative would not result in the construction of any of the proposed buildings, the proposed buildings would not require any specific noise attenuation requirements, according to *CEQR Technical Manual* noise exposure guidelines.

PUBLIC HEALTH

The No Action Alternative, like the proposed project, would not result in significant unmitigated adverse impacts in any of the technical areas related to public health.

NEIGHBORHOOD CHARACTER

In the No Action Alternative, no new development would occur within the LSCFD: the air rights spanning the FDR Drive would not be developed and the surface parking lot and canopy structure would remain. The temporary IT Pavilion would be removed and would become a landscaped area. However, changes associated with the proposed project regarding land use, zoning, and public policy; socioeconomic conditions; urban design and visual resources; transportation; and noise are not expected to adversely affect neighborhood character. Even with the proposed changes to the East River Esplanade, the proposed project would not result in any significant adverse impacts to neighborhood character due to open space resources. Similarly, the project-generated incremental shadows that would be cast on portions of the East River Esplanade, and the changes to the Rockefeller University Historic District (State/National Register-eligible [S/NR-eligible], New York City Landmark-eligible [NYCL-eligible]) would not result in significant adverse impacts to neighborhood character. The No Action Alternative would forgo the benefits to neighborhood character that would be realized with the proposed project, which would reinforce the institutional uses in the study area that in part define the character of the area.

CONSTRUCTION

Under the No Build Alternative, no construction would occur on the project site except for the removal of the temporary IT Pavilion and its replacement with a landscaped area. The construction activities associated with the removal of the temporary IT Pavilion and the landscaping of that area would be minor and substantially smaller than those for the proposed project. Therefore, the No Action Alternative would not result in the significant adverse impact that would result from elevated noise levels on a portion of the East River Esplanade and the New York Presbyterian Hospital-Weill Cornell Medical Center (NYPH-Weill Medical College) due to construction of the proposed project. As with the proposed project, the No Build Alternative would not result in significant adverse construction impacts with respect to

transportation; air quality; land use and neighborhood character; socioeconomic conditions; community facilities; historic and cultural resources; natural resources; and hazardous materials.

C. YORK AVENUE ALTERNATIVE

DESCRIPTION OF THE YORK AVENUE ALTERNATIVE

In the York Avenue Alternative, the new buildings would be constructed along the Rockefeller University campus's west boundary between East 64th Street and demapped East 68th Street, in an area currently occupied by parking uses, the Caspary Auditorium, the IT Pavilion, and Sophie Fricke Hall (see **Figure 14-1**).[1] These buildings would include the same uses as the proposed project, but their massings would be taller and narrower due to the constraints of the site as compared to the development site over FDR Drive that would be developed with a platform structure containing a laboratory building and the Interactive Conference Center (ICC) located on the North Terrace.

Like the proposed project, the York Avenue Alternative would require a modification of Rockefeller University's previously-approved LSCFD and a determination of consistency with the New York City Waterfront Revitalization Program (WRP). However, unlike the proposed project, the York Avenue Alternative would not require any of the actions relating to the construction in air space over the FDR Drive, including the special permit, the elimination of the FDR Drive right-of-way and disposition of property, the approvals pursuant to the 1973 agreement, approvals from the Public Design Commission and NYCDOT, or any of the permits related to in-water or FDR Drive construction.

The York Avenue Alternative would eliminate some of the Rockefeller University campus open space that defines the public edge of the campus along York Avenue. It would require significant demolition prior to construction, and the proximity to other buildings would interfere with campus operations. The York Avenue Alternative would not result in the desired laboratory floor plates to meet the current and future needs for collaborative research, and would not allow for connections to existing research buildings on the campus. The York Avenue Alternative site would not allow for the low, linear design of the proposed project, and would be less visually cohesive with the existing campus. This alternative would also not allow for the creation of new open space on the campus but would instead remove existing campus open space.

COMPARISON OF THE YORK AVENUE ALTERNATIVE TO THE PROPOSED ACTIONS

The York Avenue Alternative would involve the construction of buildings containing the same uses as the buildings with the proposed project. These buildings would be located within the Rockefeller University LSCFD, but would have different massings and be sited at different locations in the LSCFD than with the proposed project. As the York Avenue Alternative would involve the same uses, development size, and bulk as the proposed project, and would require fewer actions, there would not be any substantial difference between the proposed project and

[1] As described in Chapter 1, "Project Description," the temporary IT Pavilion will be removed and replaced with a landscaped area in the Future No Action scenario, as it was built in 2007 to temporarily house certain IT uses and staff that needed to be relocated when the Collaborative Research Center (CRC) and laboratory renovations of Smith and Flexner Halls were under construction.

the York Avenue Alternative in the following analysis areas: socioeconomic conditions; community facilities and services; natural resources; water and sewer infrastructure; solid waste and sanitation; energy; transportation; or greenhouse gas emissions. The analysis areas in which the York Avenue Alternative may differ from the proposed Rockefeller University project are discussed in more detail below.

LAND USE, ZONING, AND PUBLIC POLICY

Like the proposed project, the York Avenue Alternative would not introduce any new incompatible land uses to the project site, would be compatible with existing development in the surrounding area, would not change the underlying zoning of the project site, and would be compatible with the City's Waterfront Revitalization Program (WRP), and would not adversely affect any applicable public policies. Both the proposed project and the York Avenue Alternative would require a modification of Rockefeller University's previously-approved LSCFD and a determination of consistency with the New York City WRP. Because the York Avenue Alternative would not construct a new platform and laboratory building over the FDR Drive, this alternative would not require any of the actions relating to the construction in air space over the FDR Drive that would be necessary with the proposed project.

OPEN SPACE

Neither the York Avenue Alternative nor the proposed project would result in any significant adverse impacts on open space. Both the York Avenue Alternative and the proposed project would not introduce a new population to the area, and therefore neither would have the potential to result in indirect impacts to open space.

With the York Avenue Alternative, the proposed laboratory building with landscaped roof would not be constructed and approximately 57,650 gsf of open space would not be added to the campus. In contrast to the proposed project, the York Avenue Alternative would not result in the displacement of approximately 236 sf of space within the western portion of the East River Esplanade or incremental shadows on the esplanade cast by the proposed structures. Even with the proposed project, the area of displaced open space is a relatively isolated area located immediately adjacent to the FDR Drive, and lightly used. The proposed project would not affect, or alter access points to the portion of the esplanade adjacent to the project site, and the portions of the East River Esplanade that would be affected by construction-related activities for the proposed project would be replaced in-kind. In contrast to the proposed project, the York Avenue Alternative would not result in any significant adverse shadows impacts to the esplanade. With the proposed project, the shadow impact would be partially mitigated through the repair and reconstruction of the bulkhead and substantial upgrades to the East River Esplanade, as described in Chapter 13, "Mitigation."

With the York Avenue Alternative much of the existing Rockefeller University campus open space that defines the public edge of the campus along York Avenue would be removed to allow for the construction of two buildings on the campus's York Avenue frontage. Both this alternative and the proposed project would also involve the removal of the concrete canopy structure and parking area at the campus's northwest corner. Unlike with the proposed project, the York Avenue Alternative would not allow for the creation of new open space on the campus but would instead remove existing campus open space.

SHADOWS

The York Avenue Alternative would not result in any significant adverse impacts due to increases in shadow on the East River Esplanade that would result from the proposed laboratory building and North Terrace. However, even with the proposed project, the impact to the East River Esplanade would be partially mitigated with improvements, as described in Chapter 13, "Mitigation." The York Avenue Alternative would result in new buildings within the Rockefeller University Historic District and adjacent to part of the campus's Dan Kiley-designed landscape (which is within the eligible historic district boundary and contains sunlight-dependent features). The buildings in the York Avenue Alternative would be taller than the proposed buildings in order to accommodate the same program without the advantages of building over FDR Drive. For these reasons, the York Avenue Alternative could have the potential to result in new shadows impacts on sunlight-dependent resources on the campus. The potential impacts resulting from the York Avenue Alternative would likely occur in the late afternoons in the spring, summer, and fall.

HISTORIC AND CULTURAL RESOURCES

Archaeological Resources

The York Avenue Alternative would locate two buildings in areas that have the potential to contain archaeological resources. With this alternative, LPC would be consulted and, if requested, a Phase 1A Archaeological Documentary Study would be prepared for the areas of disturbance to determine their potential for archaeological sensitivity. If sensitivity is determined, then a Phase 1B archaeological investigation would be undertaken and recommendations would be made, as needed.

Like the proposed project, the York Avenue Alternative would involve construction near the identified area of archaeological sensitivity but would not involve any construction activities in the vicinity of the Bass Hardenbrook Family Cemetery. Both the proposed project and the York Avenue Alternative's northern building would involve construction near the identified area of archaeological sensitivity east of Abby Aldrich Rockefeller Hall. Therefore, like the proposed project, the York Avenue Alternative could result in disturbance of this area. However, as currently contemplated, the proposed project is not expected to result in any impacts to either of these archaeologically sensitive areas. If project plans were altered in such a way that impacts would occur in any location of archaeological sensitivity, a Phase 1B archaeological investigation would be recommended to confirm the presence or absence of archaeological resources associated with the 19th century occupation of the Fitness Center Site or of human remains and archaeological resources associated with the cemetery. Likewise, if the York Avenue Alternative plans were likely to result in any impacts to these sensitive areas, similar measures would be undertaken to avoid impacts to archaeological resources.

Architectural Resources

Unlike the proposed project, which would result in some development outside the boundaries of the Rockefeller University Historic District, the York Avenue Alternative would result in development entirely within the boundaries of the historic district. The York Avenue Alternative would result in the demolition of two existing buildings that are contributing buildings within the historic district (Caspary Auditorium and Sophie Fricke Hall), as well as the canopy structure and parking area on the north end of the campus, which LPC has determined to be contributing elements to the Dan Kiley-designed landscape within the historic district. In addition, the York

Avenue Alternative would require the removal of the Philosopher's Garden and the plantings and fence that establish the historic district's west boundary. The landscape features are also contributing element to the historic district. While the impact to the canopy structure and parking area resulting from the proposed project could be partially mitigated through a restoration plan for the Philosopher's Garden, this partial mitigation would not be possible with the York Avenue Alternative since this alternative would also involve the removal of the Philosopher's Garden.

The York Avenue Alternative would also result in the development of new buildings adjacent to three contributing buildings within the historic district: the Bronk Building, the Graduate Students Residence, and Abby Aldrich Rockefeller Hall. Therefore, the York Avenue Alternative could result in impacts to architectural resources beyond those that would result from the proposed project. While the proposed project's design has been developed after close consideration of the potential effects of the two exhaust stacks located on the roof of the proposed laboratory building, the stacks with the proposed project would result in a significant impact to historic and cultural resources. However, this impact would be partially mitigated by the location, design, and materials of the stacks, as described in Chapter 13, "Mitigation." The York Avenue Alternative would involve different siting of these stacks within the historic district. Therefore, the York Avenue Alternative could result in further potential impacts to historical resources due to the different siting locations of the exhaust stacks within the historic district.

URBAN DESIGN AND VISUAL RESOURCES

The York Avenue Alternative would result in the development of the same uses as the proposed project, but the buildings would be in different locations and would have taller, narrower massings than the proposed buildings. Unlike the proposed project, the York Avenue Alternative would not affect the pedestrian experience along the portion of the East River Esplanade adjacent to the campus. However, even with the proposed project, these changes to the pedestrian experience of the esplanade with respect to urban design and visual resources would not result in any significant adverse impacts.

Instead, the York Avenue Alternative would alter the pedestrian experience of the Rockefeller University campus along York Avenue, which currently is a tree-lined, landscaped public edge of the campus, and includes more modern campus buildings that partially obscure views of the campus to the east. As the buildings built under the York Avenue Alternative would need to be taller and narrower to accommodate program needs, these buildings could negatively affect views along York Avenue, including views of the NYPH-Weill Medical College central tower. Further, as the development of the York Avenue Alternative would require the removal of trees and landscaping elements along the western edge of the campus, it would adversely affect views and the pedestrian experience of the green expanse of the Rockefeller University campus along York Avenue. In contrast, the proposed project would not remove trees along the campus's York Avenue frontage and would not adversely affect the pedestrian experience of the Rockefeller University campus from nearby areas.

HAZARDOUS MATERIALS

Like the proposed project, the York Avenue Alternative would undertake site development activities in accordance with various measures that would ensure that no significant adverse impacts related to hazardous materials would be expected during construction of the proposed project. These measures include the preparation of a Subsurface (Phase II) Investigation, and

based on its findings, the preparation of a Remedial Action Plan (RAP) and associated Construction Health and Safety Plan (CHASP). These commitments would be included in a Restrictive Declaration. With both the proposed project and the York Avenue Alternative, the existing usage of chemicals in laboratory facilities on campus would continue. With both the York Avenue Alternative and the proposed project, the use of hazardous materials would be subject to numerous controls that would avoid the potential for adverse impacts.

AIR QUALITY

As the York Avenue Alternative would result in the same uses as the proposed project, neither the York Avenue Alternative nor the proposed project would result in any new sources of air pollutants or any significant adverse air quality impacts. The York Avenue Alternative would not result in any construction over FDR Drive, and would therefore not result in any potential changes in the dispersion of pollutants from on-road vehicles on the FDR Drive. Even with the proposed project, these potential changes in the dispersion of pollutants would not cause any significant adverse air quality impacts. The York Avenue Alternative would result in the construction of a laboratory building similar to the proposed project, but at two locations along York Avenue. However, even at a different location on the Rockefeller University campus, the ventilation mechanical systems and stacks could be designed to ensure that a theoretical chemical spill from the laboratory would not result in any pollutant concentrations exceeding health benchmarks due to recirculation of emissions from the exhaust system of the laboratory back into the laboratory building's air intakes or their dispersion in the area. Further, no significant adverse air quality impact to the York Avenue Alternative buildings would occur as a result of the operation of nearby large emission sources.

NOISE

Like the proposed project, the York Avenue Alternative would not result in an increase to the Rockefeller University residential, user, or worker populations. Therefore, neither the proposed project nor the York Avenue Alternative would have the potential to increase traffic and would not result in a significant mobile source noise impact due to project-generated traffic. However, unlike the proposed project, the York Avenue Alternative would result in no changes to noise levels on the esplanade associated with the construction of a platform over the FDR Drive and barrier along the esplanade. Both the proposed project and the York Avenue Alternative would require specific noise attenuation requirements according to *CEQR Technical Manual* noise exposure guidelines. The buildings that would be developed with the York Avenue Alternative would need to maintain interior noise levels of 45 "A"-weighted sound level (dBA) or lower for noise sensitive uses and 50 dBA or lower for commercial/office uses in order to provide at least 28 dBA of window/wall attenuation for noise sensitive uses and 23 dBA of window/wall attenuation for commercial/office uses. These requirements would be based on measured $L_{10(1h)}$ noise levels at noise receptor sites 5 and 6 near the corner of York Avenue and demapped East 68th Street (see Figure 9-1 of Chapter 9, "Noise").

PUBLIC HEALTH

The York Avenue Alternative, like the proposed project, would not result in significant unmitigated adverse impacts in any of the technical areas related to public health.

NEIGHBORHOOD CHARACTER

The York Avenue Alternative would result in the development of the same uses as the proposed project. Therefore, like the proposed project, the York Avenue Alternative would not result in any significant adverse impacts to neighborhood character due to land use, zoning, and public policy; socioeconomic conditions; transportation; noise; or open space. Like the proposed project, the York Avenue Alternative could result in impacts due to shadows and impacts on architectural resources. Like the proposed project, these impacts would not be expected to change the overall character of the neighborhood. However, compared to the proposed project, the buildings under the York Avenue Alternative would be in different locations and would have taller, narrower massings than the proposed buildings. As a result, the buildings under the York Avenue Alternative could alter views of the Rockefeller University campus along York Avenue, which currently serves as the tree-lined public edge of the campus, and is defined by more modern additions to the campus that partially obscure views of the campus to the east.

CONSTRUCTION

Under the York Avenue Alternative, unlike the proposed project, construction would be concentrated along the western edge of the campus, and there would be no construction at the FDR Drive. Therefore, unlike the proposed project, the York Avenue Alternative would not result in any significant adverse construction impacts due to noise levels on the East River Esplanade or to open space. Like the proposed project, the York Avenue Alternative would include construction in the northern portion of the campus, and would therefore likely result in elevated noise levels during construction at the neighboring NYPH-Weill Medical College. However, the NYPH-Weill Medical College building has double-glazed windows and central air-conditioning and would be expected to provide at least 28-35 dBA of attenuation of exterior noise. Consequently, this building would be expected to experience interior $L_{10(1)}$ values during most of the time that are below 45 dBA $L_{10(1)}$, which is the CEQR acceptable interior noise level criteria. Since construction would be concentrated along the western edge of the campus, the York Avenue Alternative could result in noise impacts at residences and medical facilities located along the west side of York Avenue across from the Rockefeller University campus that would not occur with the proposed project. Therefore, the York Avenue Alternative could result in further potential noise impacts due to the different siting locations of the construction activities. Although the York Avenue Alternative would not result in construction-period impacts to publicly accessible open space, this alternative would remove substantial amounts of private open space within the Rockefeller University campus, including open space that is a contributing element in the Rockefeller University Historic District.

As discussed above, construction under the York Avenue Alternative would be concentrated along the western edge of the campus and would be much closer to the residences and medical facilities along the west side of York Avenue as compare to the proposed project. However, York Avenue would serve as a buffer between the emissions sources and these sensitive locations and air emissions generated by construction activities would therefore be greatly dispersed before reaching the receptors, and would result in very low concentration increments.

In addition, the construction of the York Avenue Alternative would likely include the use of equipment with the extensive emission controls that would be provided with the proposed project. Therefore, similar to the proposed project, construction of the York Avenue Alternative would not result in significant adverse air quality impacts.

As discussed above, like the proposed project, the York Avenue Alternative would remove the canopy structure and parking area from the northwest corner of the campus. Further, the York Avenue Alternative would demolish three additional architectural resources located within the Rockefeller University Historic District. This alternative, like the proposed project, would involve a new structure adjacent to Abby Aldrich Rockefeller Hall. In addition, the York Avenue Alternative would be adjacent to the Bronk Building and the Graduate Students Residence, which are also contributing buildings within the historic district. Therefore, the York Avenue Alternative could result in construction-related impacts to architectural resources beyond those that would result from the proposed project.

Although the building sites under the York Avenue Alternative would result in construction activities concentrated in different areas than under the proposed project, the siting differences under the York Avenue Alternative would not be expected to result in any additional construction impacts with respect to transportation, land use and neighborhood character, socioeconomic conditions, community facilities, open space, natural resources, and hazardous materials.

D. NORTH-SOUTH ALTERNATIVE

DESCRIPTION OF THE NORTH-SOUTH ALTERNATIVE

In the North-South Alternative, new buildings would be constructed on the Rockefeller University campus in two locations: at the northern edge of the campus at York Avenue and demapped East 68th Street, and in the southern portion of the campus between the Bronk Building and the Weiss Research Building. These two new buildings would include the same uses as the proposed project, but their massings would be taller and narrower due to the constraints of the site as compared to the proposed development site over FDR Drive.

Like the proposed project, the North-South Alternative would require a modification of Rockefeller University's previously-approved LSCFD and a determination of consistency with WRP. However, unlike the proposed project, the North-South Alternative would not require any of the actions relating to the construction over the FDR Drive, including the special permit, the elimination of the FDR Drive right-of-way and disposition of property, the approvals pursuant to the 1973 agreement, approvals from the Public Design Commission and NYCDOT, or any of the permits related to in-water or FDR Drive construction.

The North-South Alternative would require construction above a loading dock and the demolition of Sophie Fricke Hall, the Plaza Building, in addition to the canopy structure and parking area on the north end of the campus. The south building would also be located adjacent to the Bronk Building's south façade, reducing the functionality of adjacent spaces by obscuring window openings. The North-South Alternative would not result in the desired laboratory floor plates to meet the current and future needs for collaborative research, and would not allow for connections to existing research buildings on the campus. The site would not allow for the low, linear design of the proposed project, and the taller buildings would create a visual barrier to NYPH-Weill Medical College to the north.

COMPARISON OF THE NORTH-SOUTH ALTERNATIVE TO THE PROPOSED ACTIONS

The North-South Alternative would involve the construction of building containing the same uses as the buildings with the proposed project. These buildings would also be located within the Rockefeller University LSCFD, but would have different massings and be sited at different locations in the LSCFD than with the proposed project. As the North-South Alternative would involve the same uses, development size, and bulk as the proposed project, and would require fewer actions, there would not be any substantial difference between the proposed project and the North-South Alternative in the following analysis areas: socioeconomic conditions; community facilities and services; natural resources; water and sewer infrastructure; solid waste and sanitation; energy; transportation; or greenhouse gas emissions. The analysis areas in which the North-South Alternative may differ from the proposed Rockefeller University project are discussed in more detail below.

LAND USE, ZONING, AND PUBLIC POLICY

Like the proposed project, the North-South Alternative would not introduce any new incompatible land uses to the project site, would be compatible with existing development in the surrounding area, would not change the underlying zoning of the project site, and would be compatible with the City's Waterfront Revitalization Program (WRP), and would not adversely affect any applicable public policies. Both the proposed project and the North-South Alternative would require a modification of Rockefeller University's previously-approved LSCFD and a determination of consistency with the New York City WRP. Because the North-South Alternative would not construct a new platform and laboratory building over the FDR Drive, this alternative would not require any of the actions relating to the construction in air space over the FDR Drive that would be necessary with the proposed project.

OPEN SPACE

Neither the North-South Alternative nor the proposed project would result in any significant adverse impacts on open space. Both the North-South Alternative and the proposed project would not introduce a new population to the area, and therefore neither would have the potential to result in indirect impacts to open space.

In contrast to the proposed project, the North-South Alternative would not construct a laboratory building with landscaped roof and approximately 57,650 gsf of open space on the campus. Unlike the proposed project, the North-South Alternative would not result in the displacement of approximately 236 sf of space within the western portion of the East River Esplanade or incremental shadows on the esplanade cast by the proposed structures. Even with the proposed project, the area of displaced open space is a relatively isolated area located immediately adjacent to the FDR Drive, and lightly used. The proposed project would not affect, or alter access points to the portion of the esplanade adjacent to the project site, and the portions of the East River Esplanade that would be affected by construction-related activities for the proposed project would be replaced in-kind. In contrast to the proposed project, the North-South Alternative would not result in any significant adverse shadows impacts to the esplanade. With the proposed project, the shadow impact would be partially mitigated through the repair and reconstruction of the bulkhead and substantial upgrades to the East River Esplanade, as described in Chapter 13, "Mitigation."

With both the proposed project and the North-South Alternative, the concrete canopy structure and parking area at the campus's northwest corner would be removed. Unlike with the proposed project, the North-South Alternative would not create new open space on the campus but would instead remove existing campus open space.

SHADOWS

The North-South Alternative would not result in any significant adverse impacts due to increases in shadow on the East River Esplanade that would result from the proposed laboratory building and North Terrace. However, with the proposed project, the impact to the East River Esplanade would be partially mitigated through the repair and reconstruction of the bulkhead and substantial upgrades to the East River Esplanade, as described in Chapter 13, "Mitigation." The North-South Alternative would result in new buildings within the Rockefeller University Historic District and would be adjacent to part of the campus's Dan Kiley-designed landscape (which is within the eligible historic district boundary and contains sunlight-dependent features). The buildings in the North-South Alternative would be taller than the proposed buildings in order to accommodate the same program without the advantages of building over FDR Drive. For these reasons, the York Avenue Alternative could have the potential to result in new shadows impacts on sunlight-dependent resources on the campus, including areas of the Kiley-designed landscape.

HISTORIC AND CULTURAL RESOURCES

Archaeological Resources

Neither the proposed project nor the North-South Alternative would involve construction activities near the Bass Hardenbrook Family Cemetery; neither alternative would result in the potential to affect this archaeological resource. Like the proposed project, the northern building in the North-South Alternative would involve construction near the identified area of archaeological sensitivity east of Abby Aldrich Rockefeller Hall. Therefore, like the proposed project, the North-South Alternative could result in disturbance of this area. It should be noted that, as currently contemplated, the proposed project is not expected to result in any impacts to either of these archaeologically sensitive areas. If project plans were altered in such a way that impacts would occur in any location of archaeological sensitivity, a Phase 1B archaeological investigation would be recommended to confirm the presence or absence of archaeological resources associated with the 19th century occupation of the Fitness Center Site or of human remains and archaeological resources associated with the cemetery. Likewise, if the North-South Alternative plans were likely to result in any impacts to these archaeologically sensitive areas, similar measures would be undertaken to avoid impacts to archaeological resources.

Architectural Resources

Unlike the proposed project, in which the bulk of the new development would occur outside of the boundaries of the Rockefeller University Historic District, the majority of the development under the North-South Alternative would be within the historic district.

The North-South Alternative would result in the demolition of Sophie Fricke Hall (a contributing building within the Rockefeller University Historic District), a portion of the Rockefeller Research Building, the Plaza Building south of the Bronk Building whose roof acts as a courtyard connecting Sophie Fricke and Gasser Halls, as well as the canopy structure and parking area on the north end of the campus, which are contributing elements to the historic

district's Dan Kiley-designed landscape. As with the proposed project, the impact to the canopy structure and parking area could be partially mitigated through a restoration plan for the Philosopher's Garden.

The North-South Alternative would also result in the development of new buildings adjacent to three contributing buildings within the historic district: the Bronk Building, Theobald Smith Hall, and Abby Aldrich Rockefeller Hall. Therefore, the North-South Alternative could result in impacts to architectural resources beyond those that would result from the proposed project. While the proposed project's design has been developed after close consideration of the potential effects of the two exhaust stacks located on the roof of the proposed laboratory building, the stacks with the proposed project would result in a significant impact to historic and cultural resources. However, this impact would be partially mitigated by the location, design, and materials of the stacks, as described in Chapter 13, "Mitigation." The North-South Alternative would involve different siting of these stacks within the historic district. Therefore, the North-South Alternative could result in other potential impacts to historic resources due to the different siting locations of the exhaust stacks within the historic district.

URBAN DESIGN AND VISUAL RESOURCES

The North-South Alternative would result in the development of the same uses as the proposed project, but the buildings would be in different locations and would have taller, narrower massings than the proposed buildings. Unlike the proposed project, the North-South Alternative would not affect the pedestrian experience along the portion of the East River Esplanade adjacent to the campus. However, even with the proposed project, these changes to the pedestrian experience of the esplanade with respect to urban design and visual resources would not result in any significant adverse impacts.

Instead, the North-South Alternative would alter the pedestrian experience of the Rockefeller University campus from areas near the northern and southern ends of the campus. As the buildings built under the North-South Alternative would be taller and narrower to accommodate program needs, these buildings could adversely affect views of the Rockefeller University campus from demapped East 68th Street in the north and from the East 64th Street gate in the south. In the north, the North-South Alternative would create a barrier to views of NYPH-Weill Medical College, a visual resource and prominent element of the urban design of the area.

HAZARDOUS MATERIALS

Like the proposed project, the North-South Alternative would undertake site development activities in accordance with various measures that would ensure that no significant adverse impacts related to hazardous materials would be expected during construction of the proposed project. These measures include the preparation of a Subsurface (Phase II) Investigation, and based on its findings, the preparation of a Remedial Action Plan (RAP) and associated Construction Health and Safety Plan (CHASP). These commitments would be included in a Restrictive Declaration. With both the proposed project and the North-South Alternative, the existing usage of chemicals in laboratory facilities on campus would continue. In both the North-South Alternative and with the proposed project, the use of hazardous materials would be subject to numerous controls that would avoid the potential for adverse impacts.

AIR QUALITY

As the North-South Alternative would result in the same uses as the proposed project, neither the North-South Alternative nor the proposed project would result in any new sources of air pollutants or any significant adverse air quality impacts. The North-South Alternative would not result in any construction over the FDR Drive, and would therefore not result in any potential changes in the dispersion of pollutants from on-road vehicles on the FDR Drive. Even with the proposed project, these potential changes in the dispersion of pollutants would not cause any significant adverse air quality impacts. The North-South Alternative would result in the construction of two laboratory buildings similar to the proposed project, but with two separate buildings, with one building located at the northwest corner of the campus and the other building located between the Bronk Building and the Weiss Research Building at East 64th Street. However, even at these locations, the ventilation mechanical systems and stacks could be designed to ensure that a theoretical chemical spill from the laboratory would not result in any pollutant concentrations exceeding health benchmarks due to recirculation of emissions from the exhaust system of the laboratory back into the laboratory building's air intakes or their dispersion in the area. Further, no significant adverse air quality impact to the North-South Alternative buildings would occur as a result of the operation of nearby large emission sources.

NOISE

Like the proposed project, the North-South Alternative would not result in an increase to the Rockefeller residential, user, or worker populations. Therefore, neither the proposed project nor the North-South Alternative would have the potential to increase traffic and would not result in a significant mobile source noise impact due to project-generated traffic. However, unlike the proposed project, the North-South Alternative would result in no changes to noise levels on the esplanade associated with the construction of a platform over the FDR Drive and barrier along the esplanade. Both the proposed project and the North-South Alternative would require specific noise attenuation requirements for project buildings according to *CEQR Technical Manual* noise exposure guidelines. The buildings that would be developed with the North-South Alternative would need to maintain interior noise levels of 45 dBA or lower for noise sensitive uses and 50 dBA or lower for commercial/office uses in order to provide at least 28 dBA of window/wall attenuation for noise sensitive uses and 23 dBA of window/wall attenuation for commercial/office uses. These requirements would be based on measured $L_{10(1h)}$ noise levels at noise receptor sites 5 and 6 near the corner of York Avenue and demapped East 68th Street (see Figure 9-1 of Chapter 9, "Noise").

PUBLIC HEALTH

The North-South Alternative, like the proposed project, would not result in significant unmitigated adverse impacts in any of the technical areas related to public health.

NEIGHBORHOOD CHARACTER

The North-South Alternative would result in the development of the same uses as the proposed project. Therefore, like the proposed project, the North-South Alternative would not result in any significant adverse impacts to neighborhood character due to land use, zoning, and public policy, socioeconomic conditions, transportation, noise, or open space. Like the proposed project, the North-South Alternative could result in impacts due to shadows and impacts to architectural resources. However, like the proposed project, these impacts would not be expected to change

the overall character of the neighborhood. However, compared to the proposed project, the buildings under the North-South Alternative would be in different locations and would have taller, narrower massings than the proposed buildings. As a result, the buildings under the North-South Alternative could alter views of the Rockefeller University campus from demapped East 68th Street in the north and from the East 64th Street gate in the south. In the north, the North-South Alternative would create a barrier to views of NYPH-Weill Medical College, a visual resource and prominent element of the urban design of the area.

CONSTRUCTION

Unlike with the proposed project, with the North-South Alternative, construction would be concentrated on the western portion of the campus, along the northern and southern edges, and there would be no construction at the FDR Drive. Therefore, unlike the proposed project, the North-South Alternative would not result in any significant adverse construction impacts due to noise levels on the East River Esplanade or open space. Like the proposed project, the North-South Alternative would include construction in the northern portion of the campus, and would therefore likely result in elevated noise levels during construction at NYPH-Weill Medical College. However, the NYPH-Weill Medical College building has double-glazed windows and central air-conditioning and would be expected to provide at least 28-35 dBA of attenuation of exterior noise. Consequently, this building would be expected to experience interior $L_{10(1)}$ values during most of the time that are below 45 dBA $L_{10(1)}$, which is the CEQR acceptable interior noise level criteria. Since construction would be concentrated on the western portion of the campus, along the northern edge and at East 64th Street, the North-South Alternative could result in noise impacts not identified with the proposed project at the following sensitive receptor locations: residences and medical facilities located along the west side of York Avenue across from the Rockefeller University campus; and the Scholars Residence located partially over the FDR Drive between East 62nd and East 63rd Streets. Therefore, the North-South Alternative could result in further potential noise impacts due to the different siting locations of the construction activities. Although the North-South Alternative would not result in construction-period impacts to publicly accessible open space (i.e., the East River Esplanade), this alternative would remove substantial amounts of private open space within the Rockefeller University campus, including open space that is a contributing element in the Rockefeller University Historic District.

As discussed above, construction under the North-South Alternative would be concentrated on the western portion of the campus, along the northern edge and at East 64th Street, and would be much closer to the residences and medical facilities along the west side of York Avenue and the Scholars Residence as compare to the proposed project. However, York Avenue and East 63rd Street would serve as buffers between the emissions sources and these sensitive locations respectively. Air emissions generated by construction activities would therefore be greatly dispersed before reaching the receptors, and would result in very low concentration increments. In addition, the construction of the North-South Alternative would likely include the use of equipment with the extensive emission controls that would be provided with the proposed project. Therefore, similar to the proposed project, construction of the North-South Alternative would not result in significant adverse air quality impacts.

As discussed above, like the proposed project, the North-South Alternative would remove the canopy structure and parking area from the northwest corner of the campus. Further, the North-South Alternative would demolish Sophie Fricke Hall, another architectural resources located within the Rockefeller University Historic District. This alternative, like the proposed project, would involve a new structure in close proximity to Abby Aldrich Rockefeller Hall. In addition,

the North-South Alternative would be adjacent to the Bronk Building, which is also a contributing building within the historic district. Therefore, the North-South Alternative could result in construction-related impacts to architectural resources beyond those that would result from the proposed project.

Although the building sites under the North-South Alternative would result in construction activities concentrated in different areas than under the proposed project, the siting differences under the North-South Alternative would not be expected to result in any additional construction impacts with respect to transportation, land use and neighborhood character, socioeconomic conditions, community facilities, open space, natural resources, and hazardous materials.

E. LESSER DENSITY ALTERNATIVE

DESCRIPTION OF THE LESSER DENSITY ALTERNATIVE

A Lesser Density Alternative to the proposed actions was considered to determine whether the purpose and need for the proposed actions could be accomplished while avoiding the significant adverse impacts that have been identified with the proposed actions. The Lesser Density Alternative assumes that a smaller, approximately 74,000-gsf laboratory building would be constructed in air space over the FDR Drive, resulting in a one-story laboratory building, with rooftop pavilions and landscaping that, like the proposed project, would span over the FDR Drive from East 64th to demapped East 68th Streets. Like the proposed project, this alternative would also include a new fitness center, that would be the same size as with the proposed project, at the campus's northwest corner.

The Lesser Density Alternative would not be compatible with the goals and objectives of the proposed project as this alternative would provide a smaller laboratory building with reduced support space. The Lesser Density Alternative would result in a facility of limited capacity that would accommodate 50 percent fewer laboratories, researchers, and support space than with the proposed project. Although the Lesser Density Alternative would have a single large floor plate that would allow for interactive collaboration among researchers, which is a critical element of the proposed project's purpose and need, at only one-story, the laboratory facility with the Lesser Density Alternative would not maximize opportunities for interactive collaboration. Further, a smaller laboratory building would require some researchers to remain in older, technologically obsolete laboratories.

COMPARISON OF THE LESSER DENSITY ALTERNATIVE TO THE PROPOSED ACTIONS

The Lesser Density Alternative would involve the construction of buildings containing the same uses as the buildings with the proposed project that would be located within the Rockefeller University LSCFD. The laboratory building in the Lesser Density Alternative would be a one-story building compared to the laboratory building with the proposed project. Both the proposed project and the Lesser Density Alternative would require the same actions as they relate to constructing a building in air space over the FDR Drive and modifications to the Rockefeller University LSCFD.

Both the proposed project and the Lesser Density Alternative would result in significant adverse impacts with respect to historic and cultural resources (i.e., regarding the exhaust stacks and fitness center), shadows, construction-related noise, and construction-period impacts to open

space. Mitigation measures to partially alleviate impacts of the proposed project are described in Chapter 13, "Mitigation."

There would not be substantial differences between the proposed project and the Lesser Density Alternative with regard to impacts in the following analysis areas: socioeconomic conditions; community facilities and services; natural resources; water and sewer infrastructure; solid waste and sanitation; energy; transportation; or greenhouse gas emissions. The analysis areas in which the Lesser Alternative may differ from the proposed Rockefeller University project with regard to impacts are discussed in more detail below. For other technical areas, where the proposed actions would not result in significant adverse impacts, the Lesser Density Alternative would result in the same or lesser impacts than those occurring with the proposed actions. In addition, the applicant has stated that since the Lesser Density Alternative would not meet the goals and objectives of the proposed project, they are not prepared to proceed with this alternative.

LAND USE, ZONING, AND PUBLIC POLICY

Like the proposed project, the Lesser Density Alternative would not introduce any new incompatible land uses to the project site, would be compatible with existing development in the surrounding area, would not change the underlying zoning of the project site, and would be compatible with the City's Waterfront Revitalization Program (WRP), and would not adversely affect any applicable public policies. Both the proposed project and the Lesser Density Alternative would require approvals related to constructing a building in air space over the FDR Drive, a modification of Rockefeller University's previously-approved LSCFD, and a determination of consistency with the New York City WRP.

OPEN SPACE

Neither the Lesser Density Alternative nor the proposed project would result in any significant adverse impacts on open space. Neither the Lesser Density Alternative nor the proposed project would not introduce a new population to the area, and therefore neither would have the potential to result in indirect impacts to open space.

Like the proposed project, the Lesser Density Alternative could include a landscaped roof containing approximately 57,650 gsf of rooftop green space, however, the Lesser Density Alternative could only accommodate rooftop green consistent with the smaller floor plate, which would be less green space than with the proposed project. Like the proposed project, the Lesser Density Alternative would also result in the displacement of approximately 236 sf within the western portion of the East River Esplanade for the placement of columns and footings. In addition, the Lesser Density Alternative, like the proposed project would result in incremental shadows on the esplanade cast by the proposed structures. Like the proposed project, the area of displaced open space with the Lesser Density Alternative would be a relatively isolated area located immediately adjacent to the FDR Drive, and which is lightly used. Both the proposed project and the Lesser Density Alternative would not affect, or alter access points to the portion of the esplanade adjacent to the project site, and the portions of the East River Esplanade that would be affected by construction-related activities would be replaced in-kind. With the proposed project, the significant adverse shadows impact would be partially mitigated through the repair and reconstruction of the bulkhead and substantial upgrades to the East River Esplanade, as described in Chapter 13, "Mitigation."

Both this alternative and the proposed project would involve the removal of the concrete canopy structure and parking area at the campus's northwest corner. With both the proposed project and the Lesser Density Alternative, new landscaped areas would be added to the campus.

SHADOWS

Both the proposed project and the Lesser Density Alternative would result in significant adverse impacts due to increases in shadow on the East River Esplanade that would result from the laboratory building and North Terrace. With the proposed project, the impact to the East River Esplanade would be partially mitigated with improvements, as described in Chapter 13, "Mitigation."

HISTORIC AND CULTURAL RESOURCES

Archaeological Resources

Neither the proposed project nor the Lesser Density Alternative would involve construction activities near the Bass Hardenbrook Family Cemetery; neither alternative would result in the potential to affect this archaeological resource. Both the proposed project and the Lesser Density Alternative would involve construction near the identified area of archaeological sensitivity east of Abby Aldrich Rockefeller Hall, and therefore, could result in disturbance of this area. It should be noted that, as currently contemplated, the proposed project is not expected to result in any impacts to either of these archaeologically sensitive areas. If project plans were altered in such a way that impacts would occur in any location of archaeological sensitivity, a Phase 1B archaeological investigation would be recommended to confirm the presence or absence of archaeological resources associated with the 19th century occupation of the Fitness Center Site or of human remains and archaeological resources associated with the cemetery. Likewise, if the Lesser Density Alternative plans were likely to result in any impacts to these archaeologically sensitive areas, similar measures would be undertaken to avoid impacts to archaeological resources.

Architectural Resources

With both the proposed project and the Lesser Density Alternative, the new laboratory facility would primarily occupy air space over the FDR Drive, placing the bulk of the footprint of the new structure outside the boundaries of the Rockefeller University Historic District. Modifications to certain contributing buildings within the Rockefeller University Historic District to connect these structures to the proposed laboratory building would be required. These modifications would include: sealing existing openings, extending existing window openings to doorways, and creating connections to basements and sub-basements.

It is possible that with the Lesser Density Alternative that only one exhaust stack could be required to vent the laboratory building compared to the two stacks required with the proposed project. The proposed project would result in a significant impact to historic and cultural resources. With the proposed project, this impact to historic and cultural resources would be partially mitigated by the location, design, and materials of the stacks, as described in Chapter 13, "Mitigation." With the Lesser Density Alternative, even a smaller laboratory building would require a single stack or two stacks of heights similar to those with the proposed project as stack height is determined by the heights of operable windows in adjacent buildings. Therefore, the Lesser Density Alternative would be expected to result in a significant impact to historic and cultural resources.

With both the Lesser Density Alternative and the proposed project, the new buildings would be sited at or near the edges of the historic district boundary. With both scenarios, the stacks and the removal of the Dan Kiley-designed canopy structure and parking area would result in a significant impact to the historic district. As detailed in Chapter 13, "Mitigation," with the proposed project, this impact would be partially mitigated through the preparation and implementation of a restoration plan for the Philosopher's Garden, which is located immediately south of the Fitness Center Site. This plan would be developed in consultation with LPC and would be prepared and implemented prior to construction of the fitness center. Therefore, because the Lesser Density Alternative would require a stack or stacks as part of the laboratory building and would remove the canopy structure from the campus's northwest corner, the Lesser Density Alternative would be expected to result in impacts to architectural resources similar to those that would occur with the proposed project.

URBAN DESIGN AND VISUAL RESOURCES

The Lesser Density Alternative would result in the development of the same uses as the proposed project but would have either smaller floor plates or only one-story, compared to the proposed project. Like the proposed project, the Lesser Density Alternative would also affect the pedestrian experience along the portion of the East River Esplanade adjacent to the campus. However, like the proposed project, these changes to the pedestrian experience of the esplanade with respect to urban design and visual resources would not result in any significant adverse impacts.

In addition, neither the proposed project nor the Lesser Density Alternative would remove trees along the campus's York Avenue frontage, nor would either the proposed project or the Lesser Density Alternative adversely affect the pedestrian experience of the Rockefeller University campus from nearby areas.

HAZARDOUS MATERIALS

Like the proposed project, the Lesser Density Alternative would undertake site development activities in accordance with various measures that would ensure that no significant adverse impacts related to hazardous materials would result from the proposed actions. These measures include the preparation of a Subsurface (Phase II) Investigation, and based on its findings, the preparation of a Remedial Action Plan (RAP) and associated Construction Health and Safety Plan (CHASP). These commitments would be included in a Restrictive Declaration. With both the proposed project and the Lesser Density Alternative, the existing usage of chemicals in laboratory facilities on campus would continue and the use of hazardous materials would be subject to numerous controls that would avoid the potential for adverse impacts.

AIR QUALITY

Since the Lesser Density Alternative would result in the same uses as the proposed project, neither the Lesser Density Alternative nor the proposed project would result in any new sources of air pollutants or any significant adverse air quality impacts. The Lesser Density Alternative, like the proposed project, would not cause any significant adverse air quality impacts resulting from potential changes in the dispersion of pollutants. In addition, similar to the proposed project, the ventilation mechanical systems and stacks with the Lesser Density Alternative could be designed to ensure that an accidental chemical spill in any of the laboratory fume hoods and any ensuing emissions from the ventilation system on air quality in the laboratory building (near

air intakes) and in the surrounding area would not result in any pollutant concentrations exceeding health benchmarks. With the proposed project, these commitments would be established in the Restrictive Declaration.

NOISE

Similar to the proposed project, the Lesser Density Alternative would not result in an increase to the Rockefeller University residential, user, or worker populations. Therefore, neither the proposed project nor the Lesser Density Alternative would have the potential to increase traffic and would not result in a significant mobile source noise impact due to project-generated traffic. Similar to the proposed project, the Lesser Density Alternative could be designed to include the construction of a five-foot barrier along eastern side of the FDR Drive between the FDR Drive and the East River Esplanade that would reduce noise levels on the esplanade and would result in noise levels on the esplanade that, depending upon the distance from the FDR Drive, would be less than or comparable to existing noise levels. The buildings with the Lesser Density Alternative could be designed to provide sufficient window/wall attenuation, as with the proposed project, to result in interior $L_{10(1)}$ noise levels that would be less than or equal to 50 dBA.

PUBLIC HEALTH

The Lesser Density Alternative, like the proposed project, would not result in significant unmitigated adverse impacts in any of the technical areas related to public health.

NEIGHBORHOOD CHARACTER

The Lesser Density Alternative would result in a project with the same uses as the proposed project. Therefore, similar to the proposed project, the Lesser Density Alternative would not result in any significant adverse impacts to neighborhood character due to land use, zoning, and public policy; socioeconomic conditions; transportation; noise; or open space. Similar to the proposed project, the Lesser Density Alternative could result in impacts due to shadows and impacts on architectural resources. These impacts would not be expected to change the overall character of the neighborhood.

CONSTRUCTION

With both the Lesser Density Alternative and the proposed project, construction activities would result in significant construction impacts due to noise levels on the East River Esplanade and open space. Similar to the proposed project, the Lesser Density Alternative would include new construction at the northwest corner of the campus, and would therefore likely result in elevated noise levels during construction at the neighboring NYPH-Weill Medical College. It should be noted that the NYPH-Weill Medical College building has double-glazed windows and central air-conditioning and would be expected to provide at least 28-35 dBA of attenuation of exterior noise, as described in Chapter 12, "Construction." Consequently, this building would be expected to experience interior $L_{10(1)}$ values during most of the time that are below 45 dBA $L_{10(1)}$, which is the CEQR acceptable interior noise level criteria. Therefore, the Lesser Density Alternative would result in similar construction period noise impacts on the NYPH-Weill Medical College building as with the proposed project. However, the duration of construction, and consequently the duration of construction-related noise impacts with the Lesser Density Alternative, would be expected to be shorter than those predicted to occur with the proposed

project due to the construction of a smaller building over the FDR Drive that would be built with the Lesser Density Alternative. Therefore, the Lesser Density Alternative could result in a reduced construction period noise impact.

Construction-period significant impacts to open space, (i.e., the portion of the East River Esplanade adjacent to the project site) would occur with both the proposed project and the Lesser Density Alternative. Both scenarios would involve construction of a platform structure spanning the FDR Drive, with columns set within the western edge of the esplanade, and necessary narrowing of the esplanade during construction to protect esplanade users passing through the open space. With the proposed project, partial mitigation for the construction open space impact would be implemented, including maintaining a minimum eight-foot-wide walkway during the construction period. However, the duration of construction, and consequently the duration of construction-related open space impacts with the Lesser Density Alternative would be expected to be shorter than those predicted to occur with the proposed project.

As discussed above, like the proposed project, the Lesser Density Alternative would remove the canopy structure and parking area from the northwest corner of the campus. This alternative, like the proposed project, would involve the construction of a new structure adjacent to Abby Aldrich Rockefeller Hall. Therefore, the Lesser Density Alternative would result in construction-related impacts similar to those that would result from the proposed project. However, with the proposed project, a CPP would be developed and implemented in consultation with LPC to protect architectural resources within 90 feet of construction activities.

F. NO UNMITIGATED IMPACT ALTERNATIVE

DESCRIPTION OF THE NO UNMITIGATED IMPACT ALTERNATIVE

A No Unmitigated Impact Alternative was considered as described in Section 190 of the *CEQR Technical Manual*. The applicant took a hard look at the No Unmitigated Impact Alternative to consider a laboratory building that would avoid the significant adverse impacts to shadows, historic and cultural resources, construction noise, and construction-period open space, which are impacts that would occur with the proposed project. There is no feasible No Unmitigated Impact Alternative. Any laboratory building alternative would require stacks that would need to be sited at similar locations and be of a similar size as those of the proposed project. A building of any size constructed in air space over the FDR Drive would result in shadow impacts. In addition, any building constructed adjacent to the East River Esplanade would result in construction noise impacts and construction open space impacts. Avoiding these construction-period impacts would require locating a building away from the FDR Drive, which was analyzed in the No Action Alternative, York Avenue Alternative, and the North-South Alternative. A No Unmitigated Impact Alternative would not be feasible because it would not meet the goals and objectives of the applicant without resulting in unmitigated impacts.

COMPARISON OF THE NO UNMITIGATED IMPACT ALTERNATIVE TO THE PROPOSED ACTIONS

Locating a new laboratory building elsewhere on campus, as analyzed in the York Avenue Alternative and the North-South Alternative, would be expected to result in certain significant adverse impacts, including historic and cultural resources impacts resulting from the removal of

substantial areas of the Rockefeller University Historic District, in addition to potential impacts from shadows and construction-period noise. Further, the design and location of the laboratory building with the proposed project responds to the fundamental design constraints and opportunities of the campus.

Developing a smaller laboratory building to avoid impacts would not allow for the development of a laboratory building with large open floor plates that could accommodate a sufficient number of researcher teams and that would support collaborative interactions among researchers while providing state-of-the art facilities that attract top flight researchers to Rockefeller University. Further, a smaller laboratory building would require some researchers to remain in older, technologically obsolete laboratories. Therefore, the No Unmitigated Impact Alternative would not meet the goals and objectives of the proposed project. Therefore, there is no feasible No Unmitigated Impact Alternative that would meet the purpose and need of the proposed project while avoiding an adverse impact. ✷