

**Comments on the DGEIS / Amended GPP  
from Agencies**



# United States Department of the Interior

OFFICE OF THE SECRETARY  
Office of Environmental Policy and Compliance  
408 Atlantic Avenue - Room 142  
Boston, Massachusetts 02210-3894 53

March 12, 2004

ER 04/105

William H. Kelley, Planning Project Manager  
Lower Manhattan Development Corporation  
Attention: Comments WTC Memorial and Redevelopment Plan/DGEIS  
One Liberty Plaza, 20<sup>th</sup> Floor  
New York, NY 10006

Dear Mr. Kelly:

The U.S. Department of the Interior (Department) has reviewed, and has the following comments on, the Draft Generic Environmental Impact Statement (DGEIS) for the World Trade Center Memorial and Redevelopment Plan, Borough of Manhattan, New York (ER-04/105).

## Project Description

The project site is located in Lower Manhattan on three sites: (1) the World Trade Center (WTC) Site, bounded by West, Vesey, Church, and Liberty Streets; (2) the adjacent two city blocks south of the WTC Site, one bounded by Liberty, Washington, Albany, and Greenwich Streets, and the other bounded by Liberty, West, Cedar, and Washington Streets, and a portion of Liberty Street between those parcels and the WTC Site; and (3) below-grade portions of Site 26 in Battery Park City, bounded by North End Avenue and Murray, West, and Vesey Streets. The project sponsor, the Lower Manhattan Development Corporation (LMDC), proposes to construct a memorial to the victims and survivors of the September 11, 2001, terrorist attacks and memorial-related improvements, as well as commercial, retail, museum, and cultural facilities, new open space areas, new street configurations, and certain infrastructure improvements.

## Threatened and Endangered Species

The Federally-listed endangered shortnose sturgeon (*Acipenser brevirostrum*) is found in the Hudson River and coastal areas near the project area. This species is under the jurisdiction of the National Oceanographic and Atmospheric Administration/Fisheries (NOAA/F). The LMDC should contact Mr. Stanley Gorski, Habitat and Protected Resources Division, Area Coordinator, NOAA-F, James J. Howard Marine Sciences Laboratory, 74 Magruder Road, Highlands, NJ 07732 (telephone: 732-872-3037) for additional information on sturgeon and Essential Fish Habitat (EFH).

The shortnose sturgeon is also listed by the State of New York. The New York State Department of Environmental Conservation (NYSDEC) contacts for the shortnose sturgeon are Mr. Peter Nye, Endangered Species Unit, NYSDEC, 625 Broadway, Albany, NY 12233-4753 (telephone: 518-402-8859) and Ms. Kathy Hatalla, NYSDEC, Hudson River Fisheries Unit, New Paltz, NY 12561 (telephone: 845-256-3071).

The NYSDEC requests that you be advised that the peregrine falcon (*Falco peregrinus*), listed as endangered by the State of New York, is known to occur in the vicinity of the project area. The project should, therefore, be coordinated with the NYSDEC. The NYSDEC contact for the peregrine falcon is Mr. Peter Nye (see above contact information).

### Aquatic Impacts

The Department's U.S Fish and Wildlife Service (USFWS or Service) has designated the Lower Hudson River estuary as a Significant Habitat Complex (USFWS 1997). Shellfish such as northern quahog (*Mercenaria mercenaria*), soft clam (*Mya arenaria*), and eastern oyster (*Crassostrea virginica*) are abundant in some areas. This is also an important spawning area for blue crab (*Callinectes sapidus*).

The lower Hudson River estuary is among the most productive systems on the northern Atlantic coast for fisheries (USFWS 1997). Marine finfish that use this area include American eel (*Anguilla rostrata*), Atlantic menhaden (*Brevoortia tyrannus*), fourbeard rockling (*Enchelyopus cimbrius*), bluefish (*Pomatomus saltatrix*), weakfish (*Cynoscion regalis*), northern pipefish (*Syngnathus fuscus*), and longhorn sculpin (*Myoxocephalus octodecemspinosus*). Estuarine fish that spawn in this stretch of the Hudson include winter flounder (*Pleuronectes americanus*), bay anchovy (*Anchoa mitchilli*), hogchoker (*Trinectes maculatus*), striped bass (*Morone saxatilis*), and mummichog (*Fundulus heteroclitus*) (USFWS 1997).

The Department recognizes that the proposed project construction would not occur along the Hudson River shoreline or waterfront areas. However, the proposed buildings would require the withdrawal of an undetermined quantity of cooling water from the Hudson River using the existing intake structures (design flow of 179 million gallons per day). Thermal discharges would also be required using existing infrastructure. Both of these actions can have negative impacts on aquatic species. Water withdrawals can result in fish impingement and entrainment, with early life stages (i.e. eggs, larvae, juveniles) being the most susceptible. Thermal discharges can result in decreases in dissolved oxygen levels and thermal stresses depending on the temperature and quantity of the discharge.

Given the importance of this area for aquatic species resources, the Department recommends using best management practices to avoid impacts associated with impingement/entrainment and thermal discharge. Marine life exclusion systems have been developed to reduce impingement/entrainment and these systems are constantly being improved. Dry-cool technologies are available to reduce the quantity of withdrawal and discharges. Because the existing intake/discharge structures are not currently being used, the LMDC has an opportunity to implement these measures without impacting operations at the proposed facilities.

### Migratory Birds

Migratory birds including waterfowl and passerines use the area during spring and fall migration periods. Waterfowl species such as canvasback (*Aythya valisineria*), brant (*Branta bernicla*), scaup (*Aythya* spp.), and black duck (*Anas rubripes*) can be periodically abundant throughout the

winter months. Manhattan's Central Park is world renowned for providing the public with opportunities to witness a wide diversity of songbirds during migrations.

The Migratory Bird Treaty Act (MBTA) provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture, or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product, manufactured or not without appropriate permits.

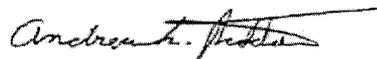
Through the MBTA, the Service is working with agencies and individuals to reduce impacts to migratory birds. We recommend the implementation of measures to avoid or reduce the likelihood of "take". Examples of these measures that would be applicable to this project include: 1) minimizing window lighting and using strobes on aerial towers/antennae for aircraft beacons (especially during migration periods - mid-March to mid-May and mid-August to mid-November), and 2) minimizing reflective window surfaces by using etched glass or adhesive films.

#### Summary Comments

The DGEIS provides an adequate assessment of the resources in the project area and potential impacts to those resources. The Department recommends that the LMDC: 1) contact the NOAA/F for information on EFH and Federally-listed species, 2) contact the NYSDEC for information on State-listed species, 3) use best available technologies to reduce water withdrawals/thermal discharges and minimize entrainment/impingement, and 4) avoid "take" of migratory birds as described above.

We appreciate the opportunity to comment on this project. If you have any questions regarding this letter, please contact me at (617) 223-8565, or Alex Chmielewski at the Service's New York Field Office (telephone: 607-753-9334).

Sincerely,



Andrew L. Raddant  
Regional Environmental Officer

#### Literature Cited:

USFWS. 1997. Significant Habitats and Habitat Complexes of the New York Bight Watershed. Department of the Interior - Fish and Wildlife Service, Coastal Ecosystems Program, Charlestown, Rhode Island.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 2  
290 BROADWAY  
NEW YORK, NY 10007-1866

MAY 11 2004

Kevin M. Rampe  
President  
Lower Manhattan Development Corporation  
One Liberty Plaza, 20<sup>th</sup> Floor  
New York, New York 10006

Rating: EC-2

Dear Mr. Kampe:

The Environmental Protection Agency (EPA) has reviewed the Draft Generic Environmental Impact Statement (draft EIS) for the World Trade Center Memorial and Redevelopment Plan (CEQ # 030567). This review was conducted in accordance with Section 309 of the Clean Air Act, as amended (42 U.S.C. 7609, PL 91-604 12(a), 84 Stat. 1709), and the National Environmental Policy Act (NEPA).

The purpose for the project is to provide both a physical and financial recovery from the terrorist attacks of September 11, 2001. In order to begin this process, the Lower Manhattan Development Corporation (LMDC) developed the *Principles and Preliminary Blueprint for the future of Lower Manhattan* in April 2002. This document presented to the public the concepts for a memorial, transportation improvements, and commercial and residential development, which were to be considered when formulating the plan for redevelopment of the World Trade Center (WTC) site and surrounding area. After significant public and agency involvement to refine the "Blueprint," *A Vision for Lower Manhattan: Context and Program for the Innovative Design Study* was developed. The principles of the "Innovative Design Study" are incorporated into the proposed action.

This draft EIS is an evaluation of the Proposed Action, designed by Studio Daniel Libeskind, which calls for a comprehensive redevelopment plan for a memorial, (recently identified as the Reflecting Absence design), five towers for office space, retail, and a hotel, below grade access to parking and transit and retail, several areas of open space, the permanent PATH station, and Greenwich and Fulton Streets are proposed to be reconnected through the site. The draft EIS also evaluates the No-Build alternative, which is also referred to as the future without the proposed action-current conditions scenario, and consists of leaving the site in its present condition with the exception of the PATH station and the typical development that would occur around the site. Other alternatives are briefly analyzed in the draft EIS such as a memorial only alternative, a restoration to pre-September 11 conditions alternative, and a WTC site only alternative that locates all of the development on the 16 acre WTC site and does not use the other adjacent sites. Based upon our review of the draft EIS, we offer the following comments.

Internet Address (URL) • <http://www.epa.gov>

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on Recycled Paper (Minimum 50% Postconsumer content)

## Air Quality

The draft EIS discusses in great detail the impacts that could be anticipated from the Proposed Action. We are particularly pleased with the level of discussion on cumulative impacts from construction activities and that LMDC elected to institute the Environmental Performance Commitments as developed by the Metropolitan Transit Authority, the Port Authority of New and New Jersey, and the New York State Department of Transportation. However, while the discussion of construction related cumulative air impacts appropriately focuses on particulate matter, a similar discussion of the cumulative impacts on NOx and ozone is also necessary. Within that discussion, the final EIS should contain a definition of receptors for the particulate matter analysis and how those are chosen and evaluated. Also, where possible, the final EIS should evaluate how much the severity of impacts is minimized due to the implementation of the Environmental Performance Commitments.

The draft EIS states that the WTC memorial and redevelopment project will transform lower Manhattan into a new travel destination for a significant number of visitors, but does not go into detail regarding the impact of the additional vehicle miles traveled and increased transit usage on air emissions. Therefore, the final EIS should include a mesoscale analysis that estimates the total emissions impact of the individual project for all modes of travel, including on-road and transit, for the Regional Transportation Plan analysis years of 2005, 2007, 2012 and 2020. These analysis years are consistent with the years that the New York Metropolitan Transportation Council (NYMTC) analyzed in its last conformity analysis for the New York metro area, as well as the guidance provided by the Enhanced Interagency Consultation Procedure that is being used during NYMTC's conformity waiver period. The mesoscale analysis should also take into account the emissions from the envisioned bus terminal that is planned for the redevelopment site. In general, a mesoscale analysis is a build/no build emissions comparison of a geographic area that is larger than the immediate project area, but smaller than the entire system network for the region that is determined by the project sponsor in consultation with EPA. This mesoscale analysis should not include emissions from off-road sources such as construction equipment, because those emissions will be accounted for in the General Conformity analysis.

Also, to ensure the on-road and transit air quality impacts of the project are reflected in the next NYMTC conformity determination, which is due to the Federal Highway Authority in October 2005, LMDC should coordinate with the NYMTC to have the project coded into the base of their newly released Best Practice Model.

The draft EIS discusses that a general conformity analysis will be done should LMDC determine that at least one of the requirements for such an analysis have been met. Since the project will occur in a non-attainment area, the final EIS will need to include, at a minimum, an applicability analysis if the emissions are shown to be below de minimis, or if it is demonstrated that the nonattainment and maintenance area pollutant emissions (VOC, NOx, carbon monoxide (CO) and Particulate Matter (PM)) are above the thresholds outlined in EPA's General Conformity Regulation (40 CFR Part 93), a general conformity determination. If a general conformity determination analysis is required, it should analyze both the direct and indirect emissions associated with the proposed action, and should include steps that will be taken to mitigate and offset those emissions, consistent with the requirements of the Clean Air Act and EPA's regulations. Typical direct emissions include, but are not limited to emissions from construction equipment and fugitive dust from construction activities. Indirect emissions are those that the

Federal sponsor has continuing control over and program responsibility for, and includes impacts that may occur beyond the build date or may be further removed in distance from the project but are reasonably foreseeable.

The draft EIS does not indicate the methodology for how the carbon monoxide (CO) and particulate matter (PM) hotspot intersections were chosen. While we did note that the intersections that are modeled appeared to be the most severely impacted, those intersections may not be the only ones needing evaluation. Intersections that are affected by the Proposed Action that are at level of service D, E or F, or that will deteriorate to these levels due to increased traffic volumes, should be analyzed. Also, one or more of the top three intersections in the nonattainment or maintenance area with the highest traffic volumes as identified in the state implementation plan should be analyzed, if they too are affected by the project. The draft EIS identified that several intersections will be significantly impacted by the Proposed Action, both during construction and in the 2015 timeframe. While the Traffic and Parking and Mitigation chapters indicated that a number of these impacted intersections would be mitigated with measures, (e.g., parking restrictions or signal timing changes), the document was not clear if the levels of service at these intersections were returned to pre-September 11 conditions. This evaluation would be in conjunction with appropriately identifying which intersections would still need a hotspot analysis. The final EIS should address this issue for both the construction period and for the ultimate build out years.

Additionally, the draft EIS discusses the issue of bus idling along the Greenwich Street corridor. The analysis of the emissions is presented, but the document does not discuss the implications of the analysis and how these emissions would be accounted for in the overall emission evaluation for the site. The final EIS should summarize the results of the analysis and the impact to air quality, if there are municipal ordinances to control the amount of bus idling time that would reduce the impact, and discuss the inclusion of these emissions in the overall evaluation in more detail.

### Water Quality

This area of Manhattan has both combined sewers and storm water sewers, which should be taken into consideration when evaluating options for managing the sewer and storm water flows. The discussion of stormwater management during the construction stages states that the stormwater would be directed to municipal sewer catch basins and, since these basins are connected to the combined sewers (CSO), the stormwater would be conveyed to the Newtown Creek Water Pollution Control Plant (WPCP). However, the discussion of the baseline conditions indicates that stormwater was collected in basins and was discharged either to the city sewers or flowed directly into storm sewers and into the Hudson River. Though the document didn't address this, we assume that overflow runoff from the CSOs would continue to be discharged to the Hudson River. Therefore, the use of city combined sewers for the conveyance of storm water during construction does not necessarily eliminate water quality impacts due to construction activities. There is the potential for impacts to surface waters from the pollutants found in storm water runoff from the construction site that would be discharged through the combined sewer outfall, which the draft EIS did not address. The final EIS will need to consider the pollutants and the impact from the discharge of construction runoff into storm sewers when discussing the management of storm water. The final EIS should propose measures to minimize the impacts from discharge of storm water during the construction of the Proposed Action. As a

mitigation measure to consider, we recommend that holding basins are used so that the water collected can be discharged to the sewer system after the rain event.

The draft EIS discusses the comprehensive water management plan to maximize the reuse of storm water. This discussion makes an excellent point regarding the reuse of storm water to reduce the impacts on the city's sewer system and the WPCPs and that reuse of storm water also minimizes the amount of combined sewage discharged through CSOs during wet weather events. However, the draft EIS does not discuss the ground water captured by the sump pumps. These flows from the sump pumps should be included in this discussion and the final EIS should describe how the water from the pumps will be beneficially reused.

### **Infrastructure**

We applaud LMDC's development of and commitment to the Sustainable Design Guidelines. These guidelines are dynamic in scope in that they address site related actions such as, conservation and recovery of resources, materials reuse, optimizing energy performance, and indoor environmental qualities, while also recognizing the comprehensive and broader benefits to the environment outside of the WTC site and even New York City that can be achieved through their implementation. We believe that the implementation of these innovative and proactive guidelines will provide long term environmental benefits, to water and air quality in particular, and demonstrate the feasibility of such measures for future projects. As an example of this, we are pleased with the proposed concept to recycle stormwater for such efforts as the irrigation of landscaping.

### **Hazardous Materials**

The Hazardous Materials Chapter has several incorrect references to other sections within the Chapter, and therefore, we recommend that it be revised and corrected. We also recommend that LMDC and the Port Authority of New York and New Jersey continue to consult with our agency and with the New York State Department of Environmental Conservation, regarding the treatment of hazardous materials, soils, and ground water.

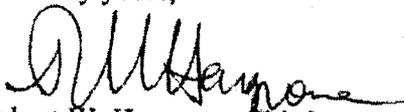
Lastly, regarding the document's format, we recommend that the final EIS not have a separate mitigation chapter, but rather discuss the mitigation for the significant impacts in the chapter where those impacts are identified. It would be beneficial for the reader to present the information as follows: identify the impacts, propose the mitigation, evaluate the effectiveness of the mitigation in the same terms as they were presented in the impacts discussion and refer back to the identified impacts. We also found that the terminologies in the draft EIS for the different scenarios were not always consistent, the most obvious example of this is the traffic and parking chapter. We recommend that the final EIS remain consistent and clear about the analysis scenarios.

In summary, EPA has rated the draft EIS as EC-2, indicating that we have environmental concerns and that further information is necessary (see attached rating sheet). While the draft EIS addressed some very complex issues, additional analysis of both the direct and cumulative impacts to air quality (NO<sub>x</sub>, ozone, and conformity with the SIP), and impacts to water quality (storm water discharge), should be included in the final EIS. However, we commend LMDC for

producing a NEPA document that provides a great deal of information in order to address some very challenging issues for this major project.

Thank you for the opportunity to comment. Should you have any questions concerning this letter, please contact David Carlson of my staff at (212) 637-3502.

Sincerely yours,



Robert W. Hargrove, Chief  
Strategic Planning and Multi-Media Programs Branch

Enclosure

cc: T.Fretwell, HUD  
B. Cohen, FTA, LMRO  
J. Seymour, PANYNJ  
E. Crotty, NYSDEC

## SUMMARY OF RATING DEFINITIONS AND FOLLOW-UP ACTION

### Environmental Impact of the Action

#### LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

#### EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

#### EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

#### EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of environmental quality, public health or welfare. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommend for referral to the Council on Environmental Quality (CEQ).

### Adequacy of the Impact Statement

#### Category 1-Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

#### Category 2-Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

#### Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\*From: EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

# New York State Department of Environmental Conservation



## Division of Environmental Permits, 4<sup>th</sup> Floor

625 Broadway, Albany, New York 12233-1750  
Phone: (518) 402-9182 · FAX: (518) 402-9168

Website: [www.dec.state.ny.us](http://www.dec.state.ny.us)

March 15, 2004

Irene Chang, Vice President for Legal Affairs and Counsel  
Lower Manhattan Development Corporation  
One Liberty Plaza, 20<sup>th</sup> Floor  
New York, NY 10006

Re: Draft Generic Environmental Impact Statement  
World Trade Center Memorial and Redevelopment Plan

Dear Ms. Chang:

The Department of Environmental Conservation has reviewed the Draft Generic Environmental Impact Statement prepared by the Lower Manhattan Development Corporation on the proposed World Trade Center Memorial and Redevelopment Plan. Creation of a memorial to those who died on September 11, 2001 together with restoration of the World Trade Center site will have profound meaning not only to New York, but to the nation. The Department appreciates the opportunity to comment on the DGEIS and commends LMDC in conducting the comprehensive environmental review of a project of such complexity and significance.

We believe that the WTC redevelopment is also an opportunity to demonstrate New York's commitment to environmentally sensitive development. With this and the projects' importance in mind we have carefully considered the DGEIS and have identified the WTC's existing cooling water system as an important item needing further consideration and development. The Department also believes that discussion must be given to the project's compliance with the General Conformity Rule of the federal Clean Air Act. Following are our comments:

### I. **Cooling Water System**

New York State regulations, 6 NYCRR §704.5, require that the location, design, construction and capacity of a cooling water intake structure must

reflect "best technology available" (BTA) to minimize adverse environmental impacts, especially impingement and entrainment of aquatic organisms. As part of the State Pollutant Discharge Elimination (SPDES) permit renewal/modification process for the continued operation and use of the existing WTC intake structure, measures to reduce impingement and entrainment losses will be evaluated by the Department with respect to feasibility, effectiveness, cost, constraints imposed by surrounding property owners, and land uses such as deed restrictions or easements. Based on this evaluation, the Department will determine the BTA for minimizing adverse environmental impacts from all stages or phases of the Proposed Action. Because the final designs for either the 2009 and 2015 scenarios of the Proposed Action are not completed, this determination cannot be made at this time. It is within the context of this regulatory authority that the following comments relative to the cooling water system are made.

**The DGEIS includes an inappropriate analysis of impacts to the Hudson River.** The DGEIS contains a lengthy discussion of the impacts from the proposed cooling water system on the fishery of New York Harbor. Unfortunately, this discussion hinges on the erroneous assertion that adverse environmental impact is determined by comparing the mortality from the cooling water intake system to the overall commercial catch of selected fish or to the population of selected fish on the east coast. The Department has long maintained that any mortality of fish from the use of water for cooling purposes is an adverse environmental impact. Importantly, this approach was recently confirmed by a recent decision of the 2<sup>nd</sup> Circuit Court of Appeals in *Riverkeeper, et al. v. USEPA*, 358 F.3d 174 (2<sup>nd</sup> Cir. 2004). The Department believes that significant adverse impacts are likely to result from both the project's first phase, to be completed in 2009, and from the final build-out in 2015. As such, the DGEIS should identify the adverse environmental impacts that will result from reuse of the pre-existing cooling water intake structure without measures to reduce impingement and entrainment losses.

**The DGEIS gives inadequate attention to meeting federal and state regulatory requirements concerning cooling water intake structures.** The DGEIS should elaborate on the regulatory mandates stated in Section 316(b) of the Clean Water Act and Part 704.5 of the New York Code of Rules and Regulations. This federal law and New York State regulation require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available (BTA) for minimizing adverse environmental impact. Although the determination of the best technology available is briefly mentioned in the document, the discussion is not comprehensive. The process for making a BTA determination involves a detailed site-specific evaluation of

feasible mitigative technologies for minimizing aquatic impacts. Many of these technologies require substantial economic investments and detailed planning. The DGEIS should further elaborate on the various technologies available for minimizing adverse impacts.

**The DGEIS ignores the current opportunity to improve the cooling water system and reduce environmental impacts.** The document concludes that the reuse of the existing cooling water intakes and outfalls is the most economical and efficient method for cooling the components of the new WTC when completed. No analysis is presented as to whether such reuse would also meet the requirement to minimize adverse environmental impacts. In addition, the analysis repeatedly overemphasizes the average pre-September 11 discharge flow (e.g. 90 MGD to 104 MGD) as a basis for comparing potential aquatic impacts associated with the Proposed Action. This analysis is flawed because those averages are significantly less than the stated design flow of the pre-existing intake system of 179 MGD; the Department's regulatory decisions are based on assessment of the impacts of a system's design capacity, not actual use. This analysis should be rewritten without comparisons among past, proposed or maximum design usage volumes. Rather, the environmental analysis of the cooling water system should provide separate assessments based on (a) the projected intake volumes of the project; and (b) the system's maximum potential (i.e., design flow) intake volumes. This will provide a clear picture of both the anticipated and maximum potential impacts of the intake system.

The DGEIS should give serious consideration to the feasibility of using a closed-cycle cooling system as part of the redevelopment. Closed-cycle cooling would reduce water use to extremely low levels thus minimizing the mortality of fish entrained through the cooling system. Although the initial capital costs of a closed-cycle system may exceed those of a once-through system, further in-depth analysis should be conducted before any cooling system option can be ruled out. If a closed-cycle system is determined to be feasible, it should be incorporated early in the design process.

The Department agrees wholeheartedly with the statements on pages 18-3, 18-5 and 18-8, that, as part of the SPDES permitting procedure for the WTC cooling water system, measures to reduce impingement and entrainment losses would be explored. We believe that the time for exploring such alternatives is prior to reconstruction, to assure that any needed system modifications can be achieved in an economical and efficient fashion.

**The DGEIS should address changes to the cooling system's outfall.** As noted on pages 18-64 and 18-65, the existing outfall discharges into North Cove in close proximity to the discharge from the World Financial Center. The outfall structure has recently undergone some modification; the extent of any changes, either past or proposed, should be addressed in the DGEIS. If deemed significant by the Department, a reevaluation of the thermal component of the discharge may be necessary as part of the SPDES permit renewal/modification associated with the action.

**The DGEIS inaccurately characterizes the environmental impacts of the existing cooling water system and potential alternatives.** The DGEIS states that the intakes, pumps, outfalls and associated pipelines remain largely intact, and that withdrawal of Hudson River water would be consistent with the *Sustainable Design Guidelines'* goal by reducing potable water demands by 30 percent. Page 12-20 refers to the pre-September 11 scenario cooling water system as a closed-loop system, "because the river water was drawn from and returned to the Hudson River through a loop of pipes." This more accurately describes a once-through cooling water system which neither minimizes the volume of Hudson River water needed for cooling purposes, nor mitigates impacts on aquatic species.

The DGEIS contains the unsupported statement that "Other cooling alternatives would also significantly increase the consumption of potable water..." (Page 12-21). When an evaluation of cooling alternatives is performed the Department recommends consideration of those options that will result in reduced Hudson River water withdrawal without the need to replace river water with potable water.

## **II. Air Quality**

Separate from the cooling water issues addressed in the preceding, the Department has identified the following concerns relative to DGEIS' treatment of air quality issues.

**The DGEIS should identify the applicability of the General Conformity Rule (GCR) of the federal Clean Air Act.** The GCR requires that Federal actions do not interfere with states' efforts to attain or maintain ambient air quality standards in a timely manner, in accordance with a US Environmental Protection Agency-approved State Implementation Plan (SIP). Since the redevelopment activities will be undertaken in cooperation with or using funds made available from the United States Department of Housing and Urban Development (HUD), the projects are subject to the GCR. As such, LMDC must prepare a Statement of Conformity, demonstrating compliance with the GCR. According to the

Clean Air Act, each federal action must uphold a state's strategy for reducing air quality violations and for attaining the National Ambient Air Quality Standards (NAAQS).

To determine whether or not a proposed action conforms, the impacts from direct and indirect emissions related to the proposed action must be assessed. In non-attainment and maintenance areas, general conformity requirements apply to federal actions where direct and indirect emissions have the potential to equal or exceed prescribed *de minimus* levels. New York City is a non-attainment area for ozone and PM<sub>10</sub> and a maintenance area for CO. The prescribed *de minimus* annual levels are 25 tons for VOC, NO<sub>x</sub> (ozone precursor) and CO and 100 tons for PM<sub>10</sub>. Staff from DEC discussed the conformity process and need for a statement of conformity with LMDC representatives and consultants (AKRF) at a February 25, 2004 Interagency Consultation Group meeting. Department staff are available to assist further in identifying related emissions already accounted for in the SIP.

**The DGEIS' discussion of cumulative air quality impacts requires additional information.** The Department supports LMDC's intention to institute the Environmental Performance Commitments as developed by the Metropolitan Transit Authority, the Port Authority of New and New Jersey, and the New York State Department of Transportation. The discussion of construction related cumulative air impacts from particulate matter should detail how the receptors were chosen and evaluated. In addition, the section should be expanded to include cumulative impacts of NO<sub>x</sub> and ozone.

**Further discussion of the air quality impact of tourism is needed.** The draft EIS acknowledges that tourism will increase as a result of the project. The impacts of this increased traffic on the transportation network, including local traffic and transit usage should be evaluated. A mesoscale analysis should be performed consistent with the guidance provided by the Enhanced Interagency Consultation Procedure that is being used during NYMTC's conformity waiver period. This analysis should be done in consultation with the New York Metropolitan Transportation Council (NYMTC). Also, additional idling emissions from increased bus traffic needs to be addressed.

**Clarification is needed regarding hot spot analyses.** The DGEIS should clarify whether EPA guidelines were followed in selecting the intersections to be analyzed for the carbon monoxide (CO) and particulate matter (PM) hotspot analysis.

In conclusion, the Department appreciates the chance to provide our input on the DGEIS. We will continue to offer staff's expertise and assistance as the projects proceed. If you have any questions please call me.

Very truly yours,  
/s/

John J. Ferguson  
Project Manager

NEW YORK STATE DEPARTMENT OF STATE  
DIVISION of COASTAL RESOURCES  
41 STATE STREET  
ALBANY, NEW YORK 12231-0001 USA  
Phone: (518) 474-6000  
FAX: (518) 473-2464

FAX MESSAGE

TO: William Kelley / LMD C  
FAX NUMBER: 212-962-2431  
FROM: Nancy Welsh / NYS DOS Coastal  
DATE: 4/15/04  
MESSAGE: per our telephone conversation,  
comments on the WTC DGEIS.  
Thanks!

Number of sheets (including this cover sheet): 7pp.

This facsimile transmission may contain confidential or privileged information which is intended only for use by the individual or entity to which the transmission is addressed. If you are not the intended recipient, you are hereby notified that any disclosure, dissemination, copying or distribution of this transmission is strictly prohibited.

The original of this document will be sent by:

- this will be the only form of delivery
- overnight mail
- ordinary mail



STATE OF NEW YORK  
DEPARTMENT OF STATE  
41 STATE STREET  
ALBANY, NY 12231-0001

GEORGE E. PATAKI  
GOVERNOR

RANDY A. DANIELS  
SECRETARY OF STATE

March 15, 2004

Mr. Kevin M. Rampe  
Lower Manhattan Development Corporation  
One Liberty Plaza, 20<sup>th</sup> Floor  
New York, NY 10006

Dear Mr. Rampe:

Thank you for the opportunity to review the Lower Manhattan Development Corporation's draft generic environmental impact statement (DGEIS) for the World Trade Center Memorial and Redevelopment Plan. Please find enclosed our comments on the DGEIS.

Please contact Steven Resler at 518-474-5290 if you have any questions about this submission.

Thank you for your consideration.

Sincerely,

Samuel Messina  
Deputy Director  
Division of Coastal Resources

Comments on  
World Trade Center Memorial and Redevelopment Plan DGEIS

Chapter 1, Item 1.10.4, pages 1-41-1-42:

The manner in which agency roles are listed indicates there appear to be some misunderstandings between federal coastal consistency requirements, and State agency coastal consistency obligations. For example, the Department of State and "Coastal Zone Consistency review" is listed under the item 1.10.4 listing of State agencies and actions required of those agencies. While the Department of State is a State agency and reviews certain activities to determine whether they are or would be consistent with the enforceable policies of the State's federally approved Coastal Management Program (CMP), and with the policies and purposes of the CMP as it is expressed in the City of New York's State and federally approved Waterfront Revitalization Program, this review and the Department's decision-making, which affects the decision-making of federal agencies such as the U.S. Army Corps of Engineers, Federal Emergency Management Agency, Department of Transportation and Federal Highway Administration, and Department of Housing and Urban Development, is a delegated authority in accordance with the federal Coastal Zone Management Act. The Department of State's review and consistency decision-making is for and is part of the decision-making processes of federal agencies listed in item 1.10.2. This role of the Department and its decision-making, for activities undertaken directly by or on behalf of federal agencies, requiring federal agency authorizations, and involving financial assistance from federal agencies, is undertaken in accordance with the federal Coastal Zone Management Act and its implementing regulations in 15 CFR Part 930, and is separate from the consistency obligations of State agencies, which are required to comply with State agency consistency processes and obligations in Article 42 of the State Executive Law, Department of State implementing regulations in 19 NYCRR Part 600, and State Environmental Quality Review Act implementing regulations in 6 NYCRR Parts 617.6(a)(5), 617.9(b)(5)(vi), and 617.11(e).

In those instances involving activities undertaken directly by or on behalf of federal agencies, or involving federal agency authorizations or financial assistance, the Department of State must review those activities for their consistency with the enforceable policies of the New York State Coastal Management Program (CMP). The City of New York's Waterfront Revitalization Program (WRP) is an amendment to and element of the CMP. Therefore, the Department of State's consistency review and decision-making, as part of the decision-making processes of federal agencies, is based on the policies and purposes of the City of New York's State and federally approved Waterfront Revitalization Program.

In separate State processes in accordance with Article 42 of the State Executive Law and implementing regulations in 19 NYCRR Part 600 and 6 NYCRR Part 617, State agencies listed in item 1.10.4 are required to consider and assess the effects and consistency of their own actions with the policies and purposes of the City of New York's approved Waterfront Revitalization Program, and to ensure that their actions are consistent to the maximum extent practicable with the City's WRP. As part of that process, as in this instance involving an Environmental Impact Statement in accordance with the State Environmental Quality Review Act (SEQRA) and implementing regulations in 6 NYCRR Part 617 and 19 NYCRR Part 600, State agencies are required to coordinate their reviews and decision-making actions with the City of New York and the Department of State. In this instance, the Department of State advises State agencies of the consistency of their actions with State coastal policies or the City's WRP, and individual State agencies are ultimately required to determine whether their actions are consistent to the maximum extent practicable with the City's WRP. Those determinations are required to be included in the SEQRA Findings of the involved State agencies, and the agencies are required to certify to the Department of State that the agency has made such a determination. This certification to the Department of State is not the same as a consistency certification.

in accordance with federal regulations in 15 CFR Part 930, Subpart D, by an applicant for federal agency authorization.

Given the preceding information, and for a final EIS, it would be appropriate to include "Department of State (NYS DOS) - Coastal Zone Consistency Review" in item 1.10.3, indicating the Department's review and decision-making is required as part of the decision-making of all of the involved federal agencies. The Department of State could also be retained in the list of State agencies in item 1.10.4, making it clear that the Department's role, for State purposes, is to advise State agencies of their consistency obligations and the consistency of their actions with the City's WRP.

#### Chapter 16, Coastal Zone, item 16.1.1, page 16-1

This Chapter would be best located at the end of the EIS, after all relevant analyses and assessments of affects on the natural and built environment, socioeconomic, and all other relevant issues addressed in an EIS. This is most appropriate since an assessment of the affects of activities on and their consistency with the applicable policies of the CMP, and the policies and purposes of the City's WRP including the land and water use plans contained within and implementing it, must be based on an understanding of the overall effects of the proposed activities on the wide range of subjects addressed by the City's WRP, including the City's comprehensive land and water use plans for the coastal area. While the City's WRP should guide public and private activities and therefore be considered when planning, designing, and budgeting development and other activities, and the EIS should indicate how this has been done, it is most appropriate to include the assessment of the affects of the activities on and their consistency with the policies and purposes of the City's WRP at the end of an EIS, after an assessment of various alternatives. Conclusions regarding the consistency of the activities with the City's WRP, based on the assessments, should be fully supported by the earlier assessments. This comports with the general outline of the content of an EIS in 6 NYCRR Part 61.7.9(b).

This section might be edited to avoid some misunderstandings regarding the roles and obligations of agencies considering and undertaking activities in the coastal area. For example, the first sentence in the third paragraph states:

"For federal and state actions within the city's coastal zone, the New York City Department of City Planning (DCP), acting on behalf of the New York City Coastal Commission, forwards its comments to the state agency making the consistency determination."

While this is correct, it can lead to confusion regarding the interactions of the City and State agencies in separate State and federal review and decision-making processes. The following information is provided to help avoid such confusion

State agencies are required to determine whether their actions are consistent to the maximum extent practicable with the policies and purposes of the City's WRP. To help ensure that State agencies consider relevant effects and policies and purposes of the City's WRP, State agencies are required to contact and coordinate their actions with the Waterfront and Open Space Division of the City's Planning Department. The City's Planning Department is to provide comments to State agencies indicating whether actions being contemplated by State agencies would conflict with any of the policies or purposes of the City's WRP. If the City informs a State agency of a conflict or potential conflict between the action the State agency is considering and the policies and purposes of the City's WRP, the State agency is not to proceed until it meets or coordinates with the City to resolve the conflict. This is not the case for activities directly undertaken by or on behalf of a federal agency, requiring authorizations from federal agencies, or involving financial

assistance from a federal agency (note the term "activities", involving federal agencies, does not have the same meaning as the term "actions" involving State or local agencies).

As noted in the preceding comments on Chapter 1, the New York State Department of State is responsible for reviewing and determining whether activities undertaken by or on behalf of federal agencies, requiring authorizations from federal agencies, and involving financial assistance from federal agencies are or would be consistent with the CMP and the policies and purposes of the City's WRP. These three different circumstances are administered in the following somewhat similar manners:

- When considering directly undertaking their own activities, federal agencies are required to determine whether their own directly undertaken activities would be consistent to the maximum extent practicable with the CMP as it is expressed in the City's WRP, and to submit that determination to the Department of State for its review and consistency decision-making. In that instance the Department of State reviews and determines whether the federal agency activity is or would be consistent with the CMP as it is expressed in the City's WRP, and either concurs with or objects to the federal agency's consistency determination. If the Department of State concurs with the federal agency's consistency determination, the federal agency may proceed with and undertake the activity. If the Department of State objects to the federal agency's consistency determination, the federal agency is required to consult with and the Department to resolve the matter. In any instance in the City's coastal area the federal agency must ensure that its activity is consistent to the maximum extent practicable with the CMP as it is expressed in the enforceable policies of the City's WRP.

- For activities requiring authorizations from federal agencies, applicants for federal agency authorizations are required to submit a consistency certification (note that a consistency certification by an applicant is not the same as a consistency determination by a federal agency) to the federal agency from which the applicant is requesting authorization, and a copy of that certification is required to be provided to the Department of State at the same time it is submitted to the involved federal agency(ies). In the City of New York's coastal area, that certification must indicate that the proposed activity complies with and will be undertaken in a manner consistent with the CMP as it is expressed in the City's WRP. The Department of State reviews the proposed activity and the consistency certification submitted for it, determines whether the activity would be consistent with the policies and purposes of the City's WRP, and either concurs with or objects to the applicant's consistency certification. As part of the Department of State's consistency review and decision-making processes, the Waterfront and Open Space Division of the City of New York's Planning Department provides any comments it might have to the Department of State regarding any potential conflicts that might exist between what is being considered by a federal agency, and the policies and purposes of the City's WRP. The Department of State, in determining whether federal activities are consistent with the CMP and the City's WRP, considers those comments in its part of federal agency review and decision-making processes. The City is responsible for administering its WRP at the City level, and for that reason its comments and opinions carry considerable weight in the Department of State's reviews and decision-making. If the Department of State concurs with an applicant's consistency certification, the involved federal agency(ies) may authorize the activity. If the Department of State objects to the applicant's consistency certification, the consistency provisions of the federal Coastal Zone Management Act prohibit the federal agency from authorizing the activity, unless the Department's objection is overridden on appeal to the U.S. Secretary of Commerce. Such

and appeal must be based on one or both of the grounds that the activity is consistent with the objectives or purposes of the federal Coastal Zone Management Act, or necessary in the interest of national security.

For activities involving financial assistance from federal agencies an applicant is required to provide the Department of State with a copy of the application for assistance and an evaluation of the relationship of the activity the funding would be used for, and any reasonably foreseeable effects on the policies of the CMP as it is expressed in the City's WRP. The Department of State's review includes consultation with the City. If the Department indicates it has no objection to the federal agency's funding of the activity, the federal agency may fund the activity. If the Department of State indicates it objects to the use of the federal financial assistance for the activity, the federal agency is prohibited from funding activity, unless the Department's objection is overridden as described in the preceding paragraph.

**Chapter 18, Regulatory Context, item 18.2.1 on page 18-6 and item 18.2.2 on page 18-8:**

Chapter 18 is entitled "Natural Resources". The statutes included in items 18.2.1, such as the federal Clean Water Act, Endangered Species Act, Magnuson-Stevens Act and Migratory Bird Treaty Act, and in item 18.2.2 such as the State Protection of Waters and Tidal Wetlands Acts are statutes that are limited to the protection and regulation of specific natural resources. Neither the federal Coastal Zone Management Act (CZMA) in item 18.2.1 nor the State Waterfront Revitalization of Coastal Areas and Inland Waterways Act address or involve nor are they limited to addressing issues involving the protection of specific natural resources. Both the federal and State coastal Acts address the wide range of government and private activities involving and affecting the appropriate development, use, and protection of the coastal area and its natural, developed, cultural, and other resources. Given this, and since the CMP and the City's WRP are primarily a land and water use program providing the means of achieving a broad range of governmental objectives, it would more appropriate to include a discussion of these two statutes in a section that includes the State Environmental Quality Review Act (SEQRA), City of New York Environmental Quality Review Act (CEQRA), or National Environmental Policy Act, or all three, and perhaps the City of New York's Zoning, Uniform Land Use Review Process, or other land and water use regulatory programs.

**Item 18.3.1. Water and Aquatic Resources:**

Most of the Hudson River in New York west of the World Trade Center is part of the State designated Lower Hudson Reach Significant Coastal Fish and Wildlife Habitat. The area was designated by the New York Secretary of State in accordance with Article 42 of the State Executive Law and 19 NYCRR Part 602 in order to implement and advance policy 7 of the CMP relating to the protection, preservation, and where practical restoration of the designated habitat. This section of the EIS should include the information contained in the State's habitat documentation for the area, including the information contained in an impact assessment as part of the habitat documentation. That information should be used to assess the effects of water withdrawals from or discharges to the Hudson River, and based on that information, in an assessment of the effects of the activities on and their consistency with, in this instance, Policy 7 of the CMP and any relevant policies and purposes of the City of New York's WRP. The habitat documentation and its associated rating form and impact assessment can be obtained from Jeff Zappieri, of the Department of State's Division of Coastal Resources. Mr. Zappieri may be contacted at (518) 473-2476 (e-mail [jzappier@dos.state.ny.us](mailto:jzappier@dos.state.ny.us))

**Appendix D, References:**

The City of New York's WRP and the Department of State's Lower Hudson Reach Significant Coastal Fish and Wildlife Habitat documentation should be consulted and included as references.

SCR.G-WTCDEIS pd



**Department of  
Environmental  
Protection**

59-17 Junction Boulevard  
Flushing, New York  
11373-5108

**Christopher O. Ward  
Commissioner**

**Legal  
Assistant**

**Office of Environmental  
Planning & Assessment**

tel (718) 395-4398  
fax (718) 395-4479



CEQR No. 04DEP040M

(718) 395-4479

2004 MAR 11 2:01

March 11, 2004

Kevin M. Rampe  
President  
Lower Manhattan Development Corporation  
One Liberty Plaza, 20<sup>th</sup> Floor  
New York, NY 10006

**Re: World Trade Center Memorial and Redevelopment Plan, Lower  
Manhattan  
CEQR No.: 04DEP040M**

Dear Mr. Rampe:

The New York City Department of Environmental Protection, Office of Environmental Planning and Assessment (DEP) has reviewed the January 2004 Draft Generic Environmental Impact Statement (DGEIS) prepared by AKRF, Inc., on behalf of the Lower Manhattan Development Corporation (LMDC) for the above referenced project. It is our understanding that the LMDC is proposing to undertake, in cooperation with the United States Department of Housing and Urban Development (HUD) and the Port Authority of New York and New Jersey (PA), an action that includes the construction of a World Trade Center Memorial as well as commercial, retail, museum, cultural facilities, open space areas, new street configurations, and necessary infrastructure improvements at the World Trade Center (WTC) superblock (bounded by Liberty, Church, and Vesey Streets, and Route 9A) as well as two city blocks south of the WTC site and portions of Liberty and Washington Streets (the Southern Site) in Lower Manhattan's Community District 1. In addition, Site #26, located west of Route 9A between Murray and Vesey Streets, is being considered as an alternative site for the below-grade bus garage proposed at the Southern Site. The proposed project would be constructed in several phases where the first phase to be completed by 2009 would include the Memorial, museum, and cultural buildings, below grade levels, Freedom Tower, up to 1 million square feet of retail, streets, open space, and bus garage. The remaining phases to be completed by 2015 would include the additional office towers and hotel. We have the following comments:

**Hazardous Materials**

- The hazardous materials sampling/analysis conducted in November/December of 2003 only covered the Southern Site and the southeastern portion of the WTC site. Please disclose in the document why an analysis of the northeastern corner and slurry wall portion of the WTC site, as well as Site #26, was not conducted.

**Infrastructure**

- Does the projected demand of 31,054 gallons per day (gpd) of water for the Memorial include the water required to operate the two fountains proposed for the footprints of the former towers? From what water source will the fountain water be

obtained? If the City is the water source, is there a plan in place to deal with drought emergencies? Please include a discussion of how the fountain component of the Memorial would be operated.

#### **Air Quality**

- The New York Stock Exchange (NYSE) Security and Streetscape Improvements project also headed by LMDC is proposing multiple traffic diversions that are similar to the traffic diversions from security measures currently in place because of the events of 9/11. A couple of these diversions are along Broadway (at Wall Street and Exchange Place) and although it has been determined that the proposed security measures are not expected to adversely effect traffic circulation around the NYSE, these diversions could have a broader impact on traffic circulation around the WTC site. The NYSE project is not mentioned in the discussion of existing conditions on Broadway (page 13A-9). The NYSE security project's proposed permanent traffic diversions (Phase I) are to be completed by Summer 2004 and should be taken into consideration when discussing the existing conditions on Broadway.
- The proposed project is expected to increase the Vehicle Miles Traveled (VMT) in the region by 1.9 million VMT and by 1.541 million VMT in the New York region by the full build out year of 2015. What is the baseline used to generate these figures? By what percentages would VMT increase due to the proposed action? There is no discussion of whether there is a significant increase or not and if it will or will not have a significant adverse impact on regional air quality (e.g. ozone). Please expand the discussion regarding the VMT analysis and its potential significance to air quality.
- Additionally, the VMT analysis should take into account the addition of 900 taxi medallions by the year 2006 currently being proposed by the NYC Taxi and Limousine Commission.
- Figure 14-2 displays the locations of the four receptor sites chosen for the mobile air analysis. It is apparent that there are multiple intersections near residential uses where congestion is consistent with both no build and build conditions. Please explain why only these four receptors were chosen. Why are the majority (three out of the four) of the receptors located along the western side of the WTC site and none are located on the eastern side? Additional receptors on the eastern and northeastern sections of the study area should be considered in order for the mobile air analysis to be complete.
- The document does not disclose all the locations of the proposed below grade parking facilities and related ventilation points. Please expand on this under Section 14.4.2: Predicted Impacts of Stationary Sources.

#### **Noise**

- The exact location of the entrance/exit for both bus garage alternatives is not disclosed in the DGEIS. Please include the location of the bus garage ingress/egress. What are the expected hours of operation for the proposed bus garage? How many buses are expected to come and go per day? Please include these details in the bus garage operation discussion for the Southern Site and the Site #26 alternative.
- St. Nicholas Church has been identified as a sensitive receptor site for noise for both bus garage alternatives. However, St. Nicholas Church is only in close proximity of the Southern Site bus garage alternative, it is not in close proximity of the Site # 26 alternative. The potential for significant impacts to sensitive receptors adjacent or in close proximity to Site #26 should be analyzed.

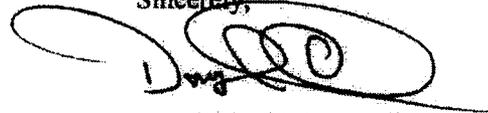
- The proposed Memorial Park (expected completion year 2009) should also be considered a sensitive receptor site for operation noise for both bus garage alternatives.

#### Natural Resources

- According to the CEQR *Technical Manual* the Hudson River, in relation to the proposed project, is considered a "significant coastal fish and wildlife habitat" (the Lower Hudson Reach) under the New York State Department of State's Significant Coastal Fish & Wildlife Program. This is not mentioned in the discussion of various federal, state and local natural resources/water quality regulations and programs related to the proposed project. Under this Program there may be restrictions on certain activities such as dredging or dewatering discharges in to the Hudson. Please include a discussion regarding any activities that would take place within the Lower Hudson Reach, for example, but not limited to, withdrawing cooling water intake and outfalls, and any provisions and/or protections the Program imposes on this significant habitat.
- 1.2 million cubic yards of waste material would be removed from the site during construction. How would this large amount of waste be removed? If waste removal would be conducted by barge on the Hudson River, a discussion of potential significant adverse impacts to the existing coastal fish and wildlife habitat should be included. Furthermore, any dredging activities that would be required to accommodate the barges must also be disclosed/analyzed.

If you have any questions please contact Lauren Gallagher at (718) 595-4351.

Sincerely,



Darryl H. Cabbagestalk  
Director Project Management- NYC  
Projects

cc: Lauren Gallagher  
Gary Heath



Iris Weinshall, Commissioner

TO: Irene Chang

FROM: Andrew Salkin

SUBJECT: Comments on WTC DGEIS

DATE: March 15, 2004

NYCDOT has reviewed the Draft Generic Environmental Impact Statement for the Redevelopment of the World Trade Center site. We are committed to working with LMDC and the various implementing agencies to redevelop the WTC Site and the rest of Lower Manhattan in an efficient and expeditious manner that respects the needs of the residential and business community. We look forward to continuing to work with you and your colleagues to refine this document and to begin its implementation.

I am attaching a memorandum from our CEQR/Policy Analysis unit describing a number of technical issues and concerns regarding the DGEIS. NYCDOT also has a number of policy level comments regarding the DGEIS.

- **Restoration of Lower Manhattan Street Network:** NYCDOT and the City believe that the redevelopment of the site should include the restoration of streets that were closed with the development of the original WTC complex, including Greenwich Street, Fulton Street, Cortlandt Street between Church Street and Greenwich Street, and Dey Street between Church Street and Greenwich Street. These restored streets will accommodate at least a part of the additional traffic that will be generated by the site, provide curb space for loading and unloading of passengers and goods from cars, taxis, for hire vehicles, and trucks, and integrate the site's urban design with the surrounding neighborhood. I have attached a memorandum describing the City's desired street network in and around the WTC Site.
- **Liberty Street:** NYCDOT believes that Liberty Street must be designed to allow two-way operation between Church Street and West Street. Two-way operation would provide a westbound connection to West Street and the Brooklyn Battery Tunnel, replacing the westbound connection that would be lost at Vesey Street (if Vesey Street is converted to one-way operation in order to accommodate the Freedom Tower). As the current design for the Liberty Street access ramp to the underground security area is incompatible with two-way operation of Liberty Street, NYCDOT believes that a redesigned ramp system is necessary.

- **Curb Space Availability and Utilization:** The DGEIS does not go into sufficient detail on the utilization of curb space on streets within and adjacent to the Site. In particular, it does not explain how truck and service vehicles will be accommodated, nor does it include forecasts for trucks or service vehicle volumes. NYCDOT is concerned that the proposed action does not provide sufficient curb space for bus loading/unloading, standing areas for the loading and unloading of passenger vehicles (private autos, black cars, taxis), or for trucks and service vehicles. A deficit of curb space will likely cause double-parking, increased traffic volumes as vehicles search for curb space, and violations of crosswalks and bus stops, which will severely reduce capacity for vehicles and pedestrians and exacerbate problems at impacted intersections.
- **Greenwich Street/Fulton Street Closures:** The DGEIS describes a potential scenario where Fulton and Greenwich Streets may be closed, although it does not describe the potential reasons for such closures. The section describes severe traffic impacts that would result from these closures. However, it does not describe the impact to on-street parking and curb utilization, nor does it recognize the impact to city and express bus operations that would result from the relocation of tourist bus loading and unloading to Church Street. Furthermore, Chapter 22: Mitigation Measures, does not include any information about what measures would be undertaken to mitigate the identified impacts.
- **Security Assessment:** It is unclear whether the proposed action has been subjected to a security assessment, beyond the brief discussion in Chapter 1. If the security assessment recommends significant alterations to street and sidewalk systems (such as the abovementioned closures of Greenwich Street and Fulton Street), the altered plans should be analyzed to determine potential impacts, and mitigation measures should be developed.
- **Impacts to Utility Infrastructure:** The DGEIS does not describe the impact that the proposed action would have on power, gas, steam, water, sewer, and telecommunications infrastructure on Liberty Street, West Street, and other neighboring streets. These impacts could potentially trigger relocation of these utilities to neighboring streets, in neighborhoods that have already endured disruptive reconstruction projects to replace street and transit infrastructure. Mitigation of these impacts could include installation of new utility infrastructure in the restored street network or elsewhere on the Site.
- **Street Management:** Chapter 22: Mitigation Measures offers several suggestions for “Areawide traffic management and improvement strategies,” including ITS, promotion of transit and alternative modes of transportation, and “pricing strategies” that would discourage drivers from driving during peak congestion periods. The NYCDOT and NYCEDC has recently

initiated(with the initial financial support of LMDC) the development of a street management program for Lower Manhattan. This program will include the development of improved ITS systems, curb space management, and prioritization of parts of the street network for critical user groups by time of day. This program provides a clear opportunity to address the extensive impacts described by the DGEIS. NYCDOT and NYCEDC requests that LMDC fully fund the development of the street management program and that it set aside up to \$50 million to fund the implementation of the program.

- **Construction Coordination:** The redevelopment of the World Trade Center site and the construction of several major new transportation facilities will present Lower Manhattan NYCDOT is continuing its street reconstruction program, the utilities have substantial construction activities, and private developers are building and renovating projects around the study area. Chapter 22 describes several activities that would help coordinate and minimize the impact of these projects. NYCDOT and NYCEDC are working with LMDC to develop a Construction Coordination Program that would manage construction access routes and other on-street activities, keep the public informed and provide a visible point of contact, maintain and protect traffic and pedestrian movement, and minimize impacts on those who live, work, and visit Lower Manhattan.
- **Tour Bus Operations:** The description of tour bus operations suggests that Albany Street would be reversed to allow buses to turn right from Greenwich Street and then right again on West Street in order to access the access ramp to the underground garage in the vicinity of Liberty Street. NYCDOT has not approved this reversal, which we believe is incompatible with the intersection of Albany Street and West Street. We recommend that Cedar Street be designed to allow right turns by tour buses at Greenwich Street and West Street.

cc: Comm. Weinshall  
F/D/C Bergtraum  
D/C Primeggia  
N. Rasheed  
S. Hornick



To: Steve Weber, Deputy Borough Commissioner  
Lower Manhattan Development Corporation

From: Naim Rasheed, Chief  
Office of Project Analysis/CEQR

Re: World Trade Center Memorial and Redevelopment Plan  
Draft Generic Environmental Impact Statement

Date: March 15, 2004

---

We have completed our review of the above referenced Draft Generic Environmental Impact Statement and have the following comments:

1. Please provide the background material (ATRs, turning movement counts, vehicle classifications, HCS sheets (hard copy and diskette), official signal timing, physical inventories), methodology for developing the pre 9/11 and post 9/11 baseline conditions.
2. Please provide maps clearly indicating primary and secondary study areas; and a map indicating on-street parking regulations and locations of off-street parking facilities.
3. Please clearly state the boundaries for the primary and secondary study areas in the text.
4. Please justify the exclusion of the weekend Midday and weekday Evening peak hours for traffic analyses.

**No Build Conditions 2009 and 2015**

5. Please use the background growth factor of 0.50% per year for this area of Manhattan, as per CEQR Technical Manual.
6. Please provide a figure which indicates the location of no build soft sites planned for 2009 and 2015, and an accompanying table indicating trip generation and a map showing trip assignment.



March 15, 2004

**Build Condition 2009 and 2015**

7. Please provide Travel Demand Assumption tables for the proposed development plan (i.e. office, retail including destination and local, hotel, cultural facilities, museum, etc.,) identified for 2009 and 2015. Also, provide a table for peak hour truck arrival/departure and indicate their loading and unloading locations.
8. Please ensure that proper passenger car equivalent (PCEs) are applied to buses and trucks generated by the proposed action.
9. We recommend that a progression analysis or corridor analysis should be conducted for Route 9A, Church Street, Vesey Street, Broadway and Liberty Street (This is particularly necessary for Route 9A where the proposed mitigation measure involves signal timing modifications to the cycle length).
10. All proposed changes to roadway geometry should be accompanied by detailed drawings of sufficient detail to demonstrate the adequacy of turning movements for single unit trucks and other vehicles expected to be operating at each location. Proposed changes to lane width should also be presented with demonstrations that lane width would be adequate to provide for buses, trucks and other vehicles, as appropriate. Additionally, the EIS should identify all substandard conditions (e.g., lane width) that would result from the project and mitigation measures. Additionally, please identify taxis and black cars parking/layover areas.
11. The impact of the project on pedestrian and motorist safety should be examined, especially for high accident locations within the study area.

If there are any questions I can be reached at (212) 676-1680, or you may contact Marjorie Bryant at (212) 442-7913.

c: D/C M. Primeggia, B/C A. Salkin, R. Kulikowski (OEC), M. Ubiparip, M. Bryant, File

c:/docs/Bryant/docs/Lower Manhattan Development



**DIAL** Government Services  
**311** & Information for NYC



**New York City  
Department of Transportation**

**Office of the Lower Manhattan  
Borough Commissioner**  
40 Worth Street, 10<sup>th</sup> Floor  
New York, New York 10013  
Tel: 212/788-8989 Fax: 212/788-8986

**Iris Weinshall, Commissioner**

TO: Andrew Salkin  
FROM: Steve Weber  
SUBJECT: WTC Street Dimensions and Configuration  
DATE: February 24, 2004

Attached is a summary of the specific dimensions the City seeks for the streets in and around the WTC Site. Geometric Design has reviewed the proposed dimensions, and found them acceptable in concept.

- Liberty Street runs two-way between Church and West Streets with two 11-foot moving lanes in each direction between Greenwich Street and West Street for a total pavement width of 44 feet. For the segment between Church Street and Greenwich Street we need two 11-foot EB moving lanes, one 11-foot WB moving lane and one 11-foot WB curb lane. The thinking here is that there will be less travel for this block and there will be a need for curb access for Tower 4.
- Cortlandt Street runs one-way (WB) through the site to Greenwich Street, with one 12-foot moving lane and two 8-foot curb lanes (total width: 28 feet).
- Dey Street runs one-way (EB) between Greenwich Street and Church Street with one moving lane and one curb lane (total width: 24 feet).
- Fulton Street runs one-way (WB) through to NB West Street with two 11-foot moving lanes and one 8-foot curb lane (total width: 30 feet). Significant friction due to unauthorized stopping should be assumed for the moving lane adjacent to the south curb.
- Vesey Street runs one-way (EB) with two 11-foot moving lanes between West Street and Church Street, plus an 8-foot parking lane on the north side (except for the block adjacent to 7 WTC) and one 8-foot parking/queuing lane on the south side (total width: 38 feet).
- Greenwich Street runs one-way (SB) as a continuation of West Broadway through the site, with three 11-foot moving lanes, an 8-foot parking lane on the east side and an 11-foot bus stop lane on the west side (total width: 52 feet).
- Church Street runs one-way (NB) with three 11-foot moving lanes, one 15-foot bus lane on the east curb and one 11-foot curb lane on the west curb (total width: 59 feet).

Visit DOT's Website at [www.nyc.gov/calldot](http://www.nyc.gov/calldot)  
Got a transportation problem/question/complaint? Dial 212 or 718  
TTY Deaf or Hearing-Impaired, Dial 212/442-9488

**CALL DOT**  
\*225-5368

- Washington Street is closed between Cedar Street and Liberty Street.
- Cedar Street is reconnected between Greenwich Street and Washington Street and provides one moving lane and one parking lane (total width: 24 feet). The turning radius at the intersection with Greenwich Street should be wide enough (25 feet) to accommodate buses turning from Greenwich Street. The turning radius at West Street should also accommodate buses turning north on West Street.

cc: AM Turner



CITY PLANNING COMMISSION  
CITY OF NEW YORK  
OFFICE OF THE CHAIR

March 8, 2004

Hon. John Whitehead  
Chairman  
Hon. Kevin Rampe  
President  
Lower Manhattan Development Corporation  
1 Liberty Plaza – 20<sup>th</sup> floor  
New York, New York 10006

Dear Chairman Whitehead and President Rampe:

The City Planning Commission (the "Commission") has reviewed the Lower Manhattan Development Corporation's ("LMDC") World Trade Center Memorial and Cultural Program Amended General Project Plan, dated September 16, 2003 ( the "WTC GPP") at a Special Review Session held on March 1, 2004. The WTC GPP is subject to Commission review pursuant to the provisions of subdivision 3 of section 16 of the New York State Urban Development Corporation Act which provide that a planning board or commission may recommend approval, disapproval or modification of a general project plan, whenever such plan requires the override of local law or regulation for implementation, or in the case of a project where the Empire State Development Corporation or a subsidiary intends to acquire real property by eminent domain.

In the case of the WTC GPP, override of local law or regulation is needed for implementation for at least three reasons related to the proposed acquisition and redevelopment of the "Southern Site", defined as the two city blocks south of the World Trade Center site, one bounded by Liberty, Washington, Albany and Greenwich Streets, and the other bounded by Liberty, West, Cedar and Washington Streets, as well as a portion of Liberty Street between those parcels and the World Trade Center site. As confirmed by LMDC, the three overrides of local law or regulation currently anticipated by the expansion to the Southern Site are as follows : First, override of the City Map to permit the acquisition of Washington Street between Cedar and Liberty Streets and the incorporation of the area of the street bed into the new, proposed Liberty Park; Second,

Amanda M. Burden A.I.C.P., *Chair*  
22 Reads Street, New York, N.Y. 10007-1216  
(212) 720-3200 FAX (212) 720-3219  
nyc.gov/planning

1



override of the City Map to permit the acquisition of portions of Liberty Street between West and the new Greenwich Street, for purposes of above and below-grade infrastructure; Third, override of the Floor Area Ratio and height, setback and coverage provisions of the New York City Zoning Resolution to facilitate development of Tower 5. In addition, implementation of the WTC GPP may involve acquisition of real property by eminent domain.

The Commission believes that adoption of the WTC GPP will be an important milestone in the redevelopment of the World Trade Center site and congratulates both the LMDC and the Port Authority for their outstanding work in creating an open, participatory, and inclusive planning process that has involved countless meetings, discussions, and forums with affected stakeholders. Throughout the process, staff of the Department of City Planning have met and discussed issues with staff of the LMDC and the Port Authority and have fashioned a collaborative, problem-solving approach towards site planning. We look forward to continuing that constructive relationship as the planning process moves into a new phase following adoption of the WTC GPP.

The Commission believes that the WTC GPP establishes a sound framework for future planning and design, consistent with the general principles which have guided planning efforts since adoption of the *Revised Blueprint for the Future of Lower Manhattan* issued on June 5, 2002. In particular, the WTC GPP takes important steps towards reintegrating the former WTC site into the rest of Lower Manhattan; creating a mixed-use neighborhood of commercial, retail, and transportation uses; providing for new cultural institutions in Lower Manhattan; and creating an accessible and attractive open space system for the site. Most importantly, by incorporating Michael Arad and Peter Walker's memorial design concept, "Reflecting Absence", the WTC GPP respects the World Trade Center site as a place of remembrance.

In making recommendations for modification of the WTC GPP, the Commission has identified a small number of changes which it believes are important to ensuring that the goals shared by the LMDC, the Port Authority, and the City for redevelopment of the site are fulfilled. We understand and are pleased that LMDC staff is considering proposing many of the same or similar changes to the LMDC Board of Directors.

The Commission understands that a "General Project Plan" establishes a broad framework for development over time, rather than a detailed set of regulations. The Commission has therefore carefully distinguished between those issues which it believes warrant modification of the WTC GPP, and those for which it encourages the LMDC and the Port Authority to pursue a direction and anticipates further dialogue among planners.

The Commission recognizes that certain urban design issues of importance to the City are more appropriately addressed in "Design Guidelines" for the site, in order to accommodate needed flexibility. The current WTC GPP contemplates the use of such Design Guidelines and describes their general contents. See WTC GPP at Pages 7-8. As discussed in greater detail below, there are a limited number of such issues which we believe must be addressed in the Design Guidelines. With respect to these specified

items, as distinguished from the Design Guidelines in general, the City, acting through the Department of City Planning, should have a role in guideline adoption and modification commensurate with that of the LMDC and the Port Authority. ( We express no opinion regarding any other City role with respect to other Design Guidelines and understand that this is a matter for discussion among the parties). We also believe that the WTC GPP must be clear and unequivocal that the Design Guidelines are binding upon redevelopment of the site unless modified pursuant to an agreed-upon process; the Commission believes that the current language of the WTC GPP which provides that the Design Guidelines "... constitute a significant component of the land use plan and controls for the Project Site" ( WTC GPP at Page 8) and "will form part of the land use plan and controls for the Project Site" ( WTC GPP at Page 9) describes this in an appropriate fashion and should be retained.

The Commission's specific recommendation for modification of the WTC GPP with respect to the contents of Design Guidelines and the process for their adoption and modification is set forth in Appendix A to this letter. Individual items proposed for inclusion as required elements of the Design Guidelines are discussed in more detail below.

The discussion of the WTC GPP which follows is divided into four sections, reflecting our concerns for the public realm and open space; the pedestrian experience at the site; traffic and transportation; and infrastructure. A fifth section discusses concerns related to the below-grade concourses and their entrances and exits; while these are not elements of the WTC GPP itself, they are discussed here in recognition of the fact that they will function as integrated elements of the site development.

### **I. Public Realm and Open Space: Reintegrating the Site With Lower Manhattan**

We share the longstanding goal of the LMDC and the PA to reintegrate the World Trade Center Site into the fabric of Lower Manhattan. The current WTC GPP and WTC GPP Site Plan reflect important steps towards fulfilling this objective through the restoration of Greenwich and Fulton Streets across the site and the addition of new open spaces. We believe that additional measures should be taken to more fully integrate the site into its surroundings with regard to streets, sidewalks, pedestrian flow, public open space and urban design. These are discussed below.

#### **a. Extend Dey and Cortlandt Streets From Church to Greenwich Streets**

The September 13, 2003 WTC GPP Site Plan ( "2003 Site Plan" ) and February 18, 2004 Revised Site Plan ( "2004 Site Plan" ) are ambiguous with respect to the status of Dey and Cortlandt Streets, between Church and Greenwich Streets. Dey Street is not indicated on the 2003 Site Plan, while the 2004 Site Plan shows Dey Street with dashed lines, suggesting the possibility of its restoration in some form. The 2003 Site Plan appears to show Cortlandt Street between Church and Greenwich as a street or way closed to vehicular traffic and crossed by a two-level pedestrian bridge or platform

linking Towers 3 and 4. The 2004 Site Plan appears to suggest a potential pedestrian corridor.

It is critical to the successful integration of the site with the rest of Lower Manhattan that Dey and Cortlandt Streets be extended as real streets between Church and Greenwich. These streets must be designed to accommodate both vehicular and pedestrian use. The public realm in New York is primarily composed of streets and sidewalks. As such, Dey and Cortlandt provide key opportunities to expand the amount of open space and accessibility into the site. Furthermore, these streets will ensure that the typical block size along Church Street remains the same as the blocks to the north and south. In New York, with few exceptions, larger block sizes (for example, blocks as long as the dimension between Liberty and Dey Streets) are provided only for our most significant public buildings such as Grand Central Station.

Accordingly, we propose the following modifications to the WTC GPP :

- Page 6, first Paragraph under the heading “d. Streets and Public Open Spaces”, a new second sentence is added to read as follows:

“ It also provides for the design and construction of Dey and Cortlandt Streets between Church and Greenwich Streets.”

- Attachment 1, Proposed Project Site Plan, is revised to show Dey and Cortlandt Streets between Church and Greenwich Streets as streets in the same manner as Greenwich and Fulton Streets. The alignments of Dey and Cortlandt streets shall be as set forth in the 2004 Site Plan.

b. Ensure the Provision of Open Space in Front of the Performing Arts Center

The Commission notes that the 2003 and 2004 Site Plans reflect different open space configurations. We understand that this results in part from the proposed addition of usable open space within the Memorial Plaza, and that the net result is to add to the overall amount of open space within the site. The Commission expresses no opinion regarding this reconfiguration overall, but is concerned that the 2004 Site Plan eliminates the open space originally proposed in front of the Performing Arts Center on Fulton Street. Like many cultural buildings in our city, we feel it is essential that the Performing Arts Center have open space in front of it on Fulton Street, as originally proposed, to provide ceremonial space that will give the building appropriate grandeur.

Accordingly, we propose that open space in front of the Performing Arts Center continue to be shown in the final WTC GPP Site Plan, and continue to be described under the heading “ Streets and Public Open Spaces” in the GPP’s description of the Redevelopment Program ( WTC GPP Pages 6-7). We express no opinion whether the name “Park of Heroes” should be retained.

c. Pedestrian Flow through the WTC Site

Given the numbers of pedestrians that will experience the site, we share the goal of making the pedestrian flow through the site as comprehensible as possible for workers, residents, and visitors. We are particularly concerned that public spaces, sidewalks, signage, and entrances to the memorial and other cultural buildings reinforce pedestrian flows along Fulton Street, and to this end we strongly recommend that the observation deck entrance for Tower 1 be prominently placed on Fulton Street across from the Memorial and next to the Performing Arts Center. Similarly, we suggest that tourists should be encouraged not only to visit the World Trade Center site, but also be incentivized by ground floor retail activities, streetscape, and other elements to walk the streets of Lower Manhattan, including the walk down Broadway's "Canyon of Heroes" to the Battery and the Harbor's magnificent destinations.

d. Establish Minimum Sidewalk Dimensions

As stated previously, the open space network provided in much of New York City is composed of its streets and sidewalks. Sidewalks in particular play a key role in shaping the pedestrian experience at-grade and form the armature of the public realm around which buildings and uses are placed. As such, ample sidewalks, both in terms of width and configuration, must be provided on site in order to protect and enhance the pedestrian experience. We note in this regard that the DGEIS assumes that minimum sidewalk widths will be implemented, without specifying dimensions. ( See DGEIS Project Description at Page 1-25).

Accordingly, we propose the following modification to the GPP:

- Page 6, a new second paragraph is added under the heading "d. Streets and Public Open Spaces", as follows:

" In order to optimize the pedestrian experience, minimum sidewalk widths will be implemented throughout the WTC Site. For Greenwich and Fulton Streets (with the exception of the north edge of the Memorial Site) , as well as on the west side of Church Street and south side of Vesey Street, sidewalks will have a minimum width of 25 feet. On Dey and Cortlandt Streets, between Church and Greenwich Streets, sidewalks will have a minimum width of 15 feet."

e. Ensure Appropriate Streetwall and Minimum Setback Requirements in the Design Guidelines

Much like sidewalks and open space, the Commission believes that minimum streetwall and setback requirements for the commercial buildings are vital to the public realm. The height and configuration of streetwalls directly contribute to the quality of the pedestrian experience by affecting the amount of light and air at street level, as well as providing wind breaks to mitigate the wind conditions associated with tall buildings. The

Commission recognizes the need for greater design flexibility for the Performing Arts Center and other cultural buildings.

Our preliminary view is that a streetwall requirement of 85' to 130' feet for commercial buildings would ensure adequate flexibility for the commercial uses on the lower levels of the building while also providing light and air at grade. Likewise, a minimum first setback of 15 feet at the top elevation of the streetwall would provide for marketable commercial tower floorplates above the required streetwalls. The Commission recognizes that the most significant purpose of such controls is to enhance the pedestrian realm, by providing light and air, and protecting pedestrians from wind. Accordingly, such controls should be flexible if it can be demonstrated that an alternative approach meets or exceeds desired performance standards.

While the Commission believes that the streetwall and setback requirements described above are generally appropriate and would contribute to a successful urban design for the WTC Site, we also recognize that precise heights and dimensions are more appropriate for Design Guidelines capable of adjustment without need to modify the GPP itself. The WTC GPP should therefore be modified to require such streetwall and setback requirements as an element of the Design Guidelines. See Appendix A.

- f. Provide for Minimum Separations Between the Performing Arts Center and Tower 1

We believe that, in order to be architecturally successful as a major new cultural facility, the Performing Arts Center must be physically separated from Tower 1. Like the fantastic and inspiring new PATH terminal, public and cultural buildings must be separated from commercial ones. This is vital for the Performing Arts Center to establish its separate civic identity, and is in keeping with other major cultural and public buildings throughout New York City.

Accordingly, we propose that the WTC GPP be modified as follows:

- Page 5, paragraph under heading " ii.Cultural Buildings and Programming", the sixth sentence is modified as follows:

" The site at the northwest corner of Fulton and Greenwich Streets is being considered for a performing arts center of potentially 800 to 2,200 seats; in order to enhance the architectural prominence of this center and promote its identity as a major new cultural institution, the performing arts center shall be separated from Tower 1 by approximately 30 feet.

- Attachment 1, Proposed Site Plan, is revised to show an approximate 30 foot separation between the performing arts center and Tower 1 discussed above.

g. Ensure Appropriate Slopes and Grades

The Commission recognizes the difficulties faced by planners in integrating important sub-grade infrastructure into the site plan. However, it is vital that sub-grade infrastructure not create an above-ground environment in which steep sidewalk grades and elevations impede pedestrian movement and obstruct accessibility into and across the site. Further, under the current design, the rise and descent of streets along their length creates the potential to obstruct view corridors along the street and impede pedestrian access. The potential for severe grade conflicts under the current design is highlighted by sectional studies of the configuration of Liberty Street and West Street. As currently conceived, the sidewalk on the north side of Liberty Street will be essentially a concrete channel formed by the edge of the truck ramp on the south and the raised Memorial plinth on the north. Similarly the sidewalk condition on West street will be constrained by the raised Memorial edge which rises up to 12 feet above the sidewalk.

In general, the Commission believes that site grading and sidewalk elevations should follow the natural contours of Lower Manhattan, sloping in a consistent manner downward from Church Street to West Street, similar to the grades that existed on the site prior to the development of the original World Trade Center. Likewise, the effect of grade changes, where they do occur, should be softened through use of stairs, ramps or benches. In general, blank retaining walls adjacent to public sidewalks should be avoided.

The Commission recognizes, however, that precise grade and elevation requirements are more appropriate for Design Guidelines capable of adjustment without need to modify the WTC GPP itself. The WTC GPP should therefore be modified to require maximum slope, elevation and other grade controls for streets and sidewalks as an element of the Design Guidelines, in order to provide appropriate streetscape transition between level changes and protection of view corridors, as well as to avoid pedestrian conflicts. See Appendix A.

h. Promote Use of Security Devices that Minimize Conflict with Urban Design and the Pedestrian Experience

The Commission recognizes that security devices are likely to be installed in streets and sidewalks within the WTC Site. The Department of City Planning's recent experience working collaboratively with the LMDC on the Financial District Streetscape Improvements Project highlights that security measures and design concerns need not be in conflict, and that a thoughtful security plan design can in fact enhance the pedestrian experience. That study has proven that innovative thinking can result in the substitution of stock security devices such as fixed bollards, jersey barriers, and delta barriers with amenities that provide equal or greater levels of security such as benches, retractable bollards, fountains, and the like.

The Commission believes that the WTC GPP should be modified to include design standards for security devices installed in streets, sidewalks or other open spaces as an element of the Design Guidelines, in order to ensure, to the maximum extent possible

consistent with security needs, that such devices are integrated with streetscape elements and do not impede pedestrian flow. See Appendix A.

## **II. Commercial and Cultural Program: Creating a Pedestrian Environment**

The Commission believes that the creation of an active pedestrian environment in the WTC Site depends on more than building wide sidewalks and that maximizing ground retail floor uses in the commercial buildings is essential to a vital street life.

The WTC GPP contains a brief description of the retail program, stating that “[t]he new retail program at the WTC Site will provide for up to 1 million square feet of retail, some of which would be located in the hotel and office buildings.” (WTC GPP at Page 6). We believe that several provisions, discussed below, should be added to the WTC GPP to facilitate a successful above-grade retail environment.

In addition, the Commission believes that the proposed sequencing of redevelopment described in the DGEIS, under which the retail bases of all commercial buildings would be constructed prior to the tower structures themselves, is a logical and feasible approach to creating a successful pedestrian environment early in the process. The Commission encourages the LMDC and the Port Authority to pursue this goal.

Hotel and conference center use is also described in the WTC GPP as an element of the Redevelopment Program. We strongly concur in the view that hotel space is needed to serve existing and expected new businesses and residents, as well as visitors to the new cultural and Memorial uses, and that conference facilities are desirable because of the site’s central location and excellent access to the regional transportation network. We therefore recommend that hotel and conference center use remain part of the WTC GPP project description, without amendment. We believe that the location of the hotel and conference center space should remain flexible.

The Commission’s specific recommendations are as follows:

### **a. Ensure a Significant Proportion of Retail Space At or Above Grade**

The Commission recognizes that the WTC GPP anticipates retail uses on two below-grade concourse levels, and concurs with the view that below-grade retail uses would enliven the east-west pedestrian connection linking the permanent PATH Terminal to the World Financial Center and the subway system at Church Street. At the same time, the Commission believes that most of the 1 million square feet of retail anticipated by the WTC GPP and DGEIS must be located at or above grade in order to ensure a vital street life.

Accordingly, the Commission recommends that the WTC GPP be modified as follows:

- Page 6, paragraph under heading “b. Retail”. the second sentence is modified as follows:

“ The new retail program at the WTC Site will provide for up to 1 million square feet of retail, [some] most of which would be located at or above grade in the hotel and office buildings.”

- b. Prescribe minimum retail frontage and transparency requirements for ground floor retail

The Commission believes that, in order for ground floor retail to activate the streets, it must form a continuous presence around building perimeters on key streets and that storefronts must be open and visually accessible from the street. Our experience with Midtown Zoning on streets such as Madison Avenue shows that a minimum retail frontage requirement of 80% and a requirement that at least 50 to 75% of each storefront be of a transparent material can achieve this objective. The Commission recognizes, however, that minimum retail frontage and transparency percentages are an appropriate subject for Design Guidelines, rather than the WTC GPP itself and therefore proposes that the WTC GPP be modified to include them among the required elements of the Design Guidelines. See Appendix A.

- c. Maximize Retail Square Footage on the Ground Floor Level

The Commission believes that , in addition to a requirement for minimum percentage of retail frontage, the Design Guidelines should include other provisions to maximize the amount of ground floor retail space relative to ground floor lobby and other uses. Such measures could include, for example, a minimum ground floor retail coverage requirement of 75%. They should also include provisions to encourage third-floor elevated lobbies that would be reached by escalator in Towers 2, 3 and 4. The use of elevated lobbies would not only allow additional square footage to be dedicated to ground floor retail, but would also allow for security and other lobby functions to be placed on upper, less commercially valuable levels that can also act as private amenity levels for tenants. No less significant is the need for office lobby entrances to be sited in mid-block rather than corner locations, in order to free up corners for more valuable retail uses.

The Commission therefore believes that the WTC GPP should be amended to include provisions to maximize the amount of ground floor retail as an element of the Design Guidelines. See Appendix A.

- d. Signage Controls

While retail uses add to the vitality of street life, retail signage can sometimes detract from the visual quality of the pedestrian environment. The Commission believes that the Design Guidelines must include signage controls for retail signage to address such issues as size, height, projection and illumination. Particular attention should be given to retail

signage on the Greenwich Street frontage facing the Memorial Plaza in order to ensure appropriate respect for and sensitivity to the Memorial use.

The Commission therefore proposes that the WTC GPP be modified to include such signage controls as a required element of the Design Guidelines. See Appendix A .

### III. Traffic and Transportation: Lower Manhattan Street Management

The restoration of streets to the WTC Site provides a critical opportunity to reintegrate the WTC site with the rest of the Lower Manhattan street network. While we understand that security needs may dictate closures or other use restrictions, the streets themselves should be designed and built to accommodate vehicular and pedestrian traffic and must match the existing street network in terms of vehicle capacity and directionality in order to permit a true reintegration.

The Commission notes in particular the importance of reintroducing Liberty Street as a two-way street through the site, assuming a relocation of the truck ramp is determined to be feasible. See IV.a.below.

#### a. Establish Street Directions and Lane Capacity

Consistent with the above, the Commission believes that the directions of streets within the Project Site and their lane capacities should be established in the WTC GPP, it being recognized that directions and lane capacity may change over time.

Accordingly, we propose the following modification to the WTC GPP:

- Page 6, under the heading “d. Streets and Public Open Spaces”, a new second paragraph is added to read as follows:

“ Streets through the site shall be designed and built to meet or exceed NYCDOT standards and shall have the following directions and lane capacity , except as may be agreed to by NYCDOT:

<u>Street</u>	<u>Direction</u>	<u>Lane Number</u>
Church	Northbound	5
Greenwich	Southbound	4 or 5
Vesey	Eastbound	5
Fulton	Westbound	3
Dey	Eastbound	3
Cortlandt	Westbound	3
Liberty	Two-way	4 or 5*

\* In the event truck ramp is located elsewhere on the Project Site. Direction and lane capacity to be determined in the event the truck ramp is not relocated.

The Commission notes that the above information may also appropriately be set forth in graphic form as an attachment to the WTC GPP, should the LMDC prefer this approach.

b. Avoid the Use of Bridges Across Streets as a Method for Pedestrian Movement

The Commission believes that streets should be open to the sky and that the use of platforms across streets to provide continuous retail or above-grade pedestrian concourses is detrimental to the public realm. In this regard, the Commission is deeply concerned that the 2003 Site shows a platform connecting Towers 3 and 4. While the 2004 Site Plan does not clearly indicate this feature, we understand that it remains a potential element of the site plan.

Use of "sky-bridges" or other similar platform devices is a discredited approach to urban design that is incompatible with the New York City environment. Such devices significantly diminish light and air, obstruct view corridors, and reduce street level activity. The Commission understands that the Port Authority currently wishes to retain the ability to build such platforms over streets, and will not support a limitation on their use at this time. The Commission encourages the Port Authority to reconsider this position, and to affirm that the goals of opening streets through the site and avoiding the outmoded "superblock" configuration that guided the former World Trade Center site plan will not be compromised through use of these devices.

#### **IV. Infrastructure: Managing User Needs**

The Commission recognizes the importance of the proposed sub-grade infrastructure as a means to accommodate the parking, delivery and other needs generated by development above-grade, and appreciates the difficulties faced by planners in reconciling conflicting demands. At the same time, it must be recognized that the siting of sub-grade vehicular access points can have a significant impact on the quality of the above-grade environment. In particular, ramps to the sub-grade must be carefully sited so as not to impede pedestrian flow, create pedestrian-vehicle conflict, or obstruct view corridors. The Commission's specific concerns with regard to the locations of the Liberty Street and Vesey Street ramps are discussed in more detail below.

The Commission notes that while the proposed sub-grade infrastructure includes parking for trucks, buses, and tenants, no provision is made for public parking for visitors. The Commission recognizes that this limitation arises from the multiple needs generated by site users, but believes it can be partially addressed by such measures as making tenant parking areas accessible to patrons of the Performing Arts Center in the

evenings or to shoppers on weekends. The Commission encourages the LMDC and the Port Authority to explore such options.

The Commission's specific recommendations with regard to sub-grade infrastructure facilities are as follows:

a. Relocate the Liberty Street Ramp

The location of the truck ramp on Liberty Street could seriously impede pedestrian movement to and from the Memorial and the waterfront, and has the potential to compromise the integrity of the Memorial Site as a location for contemplation and reflection. The location of the ramp between the Memorial and Liberty Park South is also unfortunate given the public nature of those uses, particularly given the "concrete channel" aspect described previously. In addition, the ramp precludes two-way traffic on Liberty Street, which we believe to be an important element of traffic flow across the site, as described above.

The Commission recognizes that the LMDC and Port Authority share the goal of moving the truck ramp to another location within the Project Site, and have been actively working to study alternatives. We understand that, in addition to studying alternative locations for a truck ramp entrance to a centralized loading facility, the LMDC and Port Authority are exploring the option of decentralized or semi-centralized loading facilities. The Commission acknowledges that these alternatives may have cost implications and pose engineering challenges, but believes that they should be pursued fully in the long-term interest of ensuring a successful redevelopment of the site. The Commission expects that the City will be presented with the results of all engineering and cost analysis, and have an opportunity to meet and confer with the LMDC and Port Authority on this subject.

Accordingly, we propose the following modification to the WTC GPP:

- Page 7, first paragraph under heading "f. Infrastructure and Utilities" is modified to add a new third sentence as follows:

" Consistent with this objective, the Liberty Street truck ramp shall be relocated if a feasible alternative location within the Project Site is identified by the LMDC and the Port Authority, and the environmental effects of such alternative location are no greater than those associated with the Liberty Street location."

b. Move the Vesey Street Ramp East of the Washington Street View Corridor

The current location of the vehicular entrance and exit ramp on Vesey Street, as shown on both the 2003 Site Plan and 2004 Site Plan, obstructs the Washington Street view corridor and pedestrian access into the site that would be facilitated through adoption of the Commission's recommendation to provide a minimum 30 foot separation

between the Performing Arts Center and Tower 1. See I.f. above. The ramp should be relocated at least 30 feet east of the Washington Street Corridor.

Accordingly, we propose the following modification to the WTC GPP:

- Attachment 1, Proposed Site Plan, is revised to show the Vesey Street vehicular ramp at a location no less than 30 feet east of the Washington Street view corridor.
- c. Ensure Inclusion of an On-Site Bus Parking Facility in the Project Description

The Commission believes that, in order to accommodate the large number of expected visitors to the site, a bus parking facility must be included in the plan. This facility should be located within the Project Site, rather than on Site 26 in Battery Park City.

The Commission notes in this regard that the GPP states that visitor services and amenities on the site “may” include a bus parking facility ( WTC GPP at Page 7) , while the DGEIS Project Description includes a bus parking facility on-site or on Site 26. ( DGEIS at Page 1-20.)

Accordingly, we propose the following modification to the WTC GPP:

- Page 7, second paragraph under the heading “f. Infrastructure and Utilities, the second sentence is revised as follows:

“ This [may] shall include a bus parking facility.”

#### **V. Below-Grade Concourses and Related Above-Ground Infrastructure**

The Commission recognizes that the below-grade retail concourses and associated infrastructure will be reviewed under a process separate from the WTC GPP. Nonetheless, this infrastructure is strongly related to site planning under the WTC GPP (e.g., with respect to retail spaces and pedestrian flows through the site) and deserves mention here. The Commission believes that the below-grade East-West Concourse connecting the World Financial Center, the PATH terminal, and the new Fulton Transit Center is a valuable transportation asset. However, the proposed North-South Concourse running between Church and Greenwich Streets is highly problematic, since it will have the effect of keeping pedestrians off the street and within an underground environment. Consequently, the Commission recommends that this North-South Concourse and its related entrances and exits be eliminated from future planning for the site , in order to encourage pedestrians to flow onto City streets from the magnificent new PATH terminal. This will also serve to maximize pedestrian flow along the retail storefronts at grade.

\*\*\*\*\*

The Commission looks forward to adoption of the WTC GPP by the LMDC Board of Directors, together with the modifications proposed in this letter. Recognizing that the WTC GPP is an instrument binding on the LMDC only, the Commission also urges the Port Authority to enter into a Memorandum of Understanding or other agreement at the earliest possible date by which it will commit itself to redevelop the site in accordance with the terms of the WTC GPP governing the Redevelopment Plan.

Accordingly, please be advised that the Commission, by unanimous consent of all members present (11) during the consideration of this item at the March 8, 2004 Review Session, recommends approval of the World Trade Center Memorial and Cultural Program Amended General Project Plan, together with the modifications set forth herein.

Sincerely,



Amanda Burden, AICP

Chair

- C: J. Seymour
- D. Doctoroff
- R. Barth
- D. Karnovsky
- V. Chakrabarti

## APPENDIX A

Section 8 of the WTC GPP is modified as follows:

Deletions in brackets; additions underlined

### 8. Design Guidelines

The redevelopment of the Project Site will be carried out in phases over an anticipated period of approximately 12 years. In order to assure that the open spaces, buildings and other features of the Project designed and built throughout the entire development period reintegrate the site with the rest of Lower Manhattan, exemplify excellence in design, fit into the vision for the site, and are compatible with the intent of the WTC Memorial and Redevelopment Plan, a set of design guidelines will be adopted by LMDC and the Port Authority with input from involved and interested parties, including the Department of City Planning and the Port Authority's net lessees, to guide future development for the Memorial Program and the Redevelopment Program.

The City of New York, acting through the Department of City Planning, shall participate in the adoption and modification of certain such design guidelines to the same extent and in the same manner as the LMDC and the Port Authority. The design guidelines adopted and modified with such participation of the Department of City Planning are as set forth in Exhibit 1 hereto.

The [guidelines] design guidelines will outline general building envelopes for each identified development parcel, including height, bulk, massing, floor plates, setbacks, and lobby locations. They will define (1) retail boundaries, volumes and plan concepts; (2) street/open space edges and connections, as well as service access points; and (3) sustainability, security and life safety, and material/aesthetic issues for building facades and retail storefronts. The guidelines [are intended] process is intended to be flexible enough to accommodate future modifications as changing conditions may require and will include [ a process] mechanisms to do so as needed.

The design guidelines will constitute a significant component of the land use plan and controls for the Project Site.

EXHIBIT 1

(1) for commercial buildings other than Tower 1: (a) a minimum and maximum streetwall requirement; (b) a minimum first setback or similar requirement; (c) a minimum percentage retail frontage requirement on Greenwich, Church and Fulton Street frontages; (d) provisions designed to maximize the amount of ground floor retail space relative to lobby and other uses; and (e) a minimum percentage ground floor transparency requirement on Greenwich, Church and Fulton Street frontages;

(2) size, height, projection and illumination controls for exterior retail signage, including special controls for Greenwich Street frontages facing the Memorial site;

(3) design standards and configurations for security devices installed in streets, sidewalks or other open spaces to ensure, to the maximum extent possible consistent with security needs, that such devices are integrated with streetscape elements and do not impede pedestrian flow; and

(4) maximum slope, elevation and other grade controls for streets and sidewalks, in order to provide an appropriate streetscape transition between level changes and protection of view corridors.

The above shall be clearly and separately identified in the design guidelines document and its table of contents.

# ENVIRONMENTAL REVIEW

LMDC /SEQRA-M 01/29/04  
PROJECT NUMBER DATE RECEIVED

## PROJECT

WTC MEMORIAL & REDEVELOPM

- No architectural significance
- No archaeological significance
- Designated New York City Landmark or Within Designated Historic District
- Listed on National Register of Historic Places
- Appears to be eligible for National Register Listing and/or New York City Landmark Designation
- May be archaeologically significant; requesting additional materials

## COMMENTS

The LPC is in receipt of the DGEIS dated January, 2004. Architectural comments are as follows. The following properties in Table 5-1 should be updated to indicate that they have been heard by the LPC: Item 14, 45-47 Park Place; item 15, 23-25 Park Place; item 59, 94 Greenwich St.; item 60, 94 1/2 Greenwich St.; item 61, 96 Greenwich St.; item 69, 67 Greenwich St. The remainder of the text is acceptable for architectural resources.

cc: SHPO

  
SIGNATURE DATE 02/09/04

# ENVIRONMENTAL REVIEW

LMDC/SEQRA-M

01/29/04

PROJECT NUMBER

DATE RECEIVED

## PROJECT

WTC MEMORIAL & REDEVELOPM

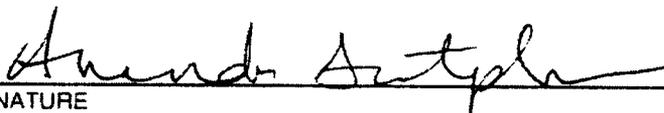
- No architectural significance
- No archaeological significance
- Designated New York City Landmark or Within Designated Historic District
- Listed on National Register of Historic Places
- Appears to be eligible for National Register Listing and/or New York City Landmark Designation
- requesting additional materials *related to archaeology - see below*

## COMMENTS

The LPC is in receipt of the DGEIS dated January 2004. The comments for archaeology are as follows.

The LPC notes that the text reflects the findings of Historical Perspectives' Phase 1As for B 54 and B 56 and for B 58 both dated November 2003. LPC noted on 1/14/2004 that these reports should be revised to include the individual lot histories of the lots that HPI noted may contain archaeological resources before the need for further archaeological research can be established as until this work is completed no assessment of the potential significance may be made. In addition, LPC further notes that more research is needed to verify that any archaeological resources on B 58 may have survived construction of the WTC. The text for the DGEIS should be changed to reflect these recommendations.

cc: SHPO

  
SIGNATURE

02/10/04

DATE

**COMMUNITY BOARD #1 – MANHATTAN**  
**RESOLUTION**

DATE: FEBRUARY 17, 2004

COMMITTEE OF ORIGIN: WTC REDEVELOPMENT

COMMITTEE VOTE: 12 In Favor 0 Opposed 0 Abstained 0 Recused  
BOARD VOTE: 22 In Favor 6 Opposed 5 Abstained 1 Recused

RE: World Trade Center Memorial and Redevelopment Plan

WHEREAS: The Lower Manhattan Development Corporation (LMDC) has prepared a Draft Generic Environmental Impact Statement (DGEIS) for the World Trade Center Memorial and Redevelopment Plan (Proposed Action), and

WHEREAS: The DGEIS analyzes a broad range of alternatives in terms of their potential effects on land use, neighborhood character, open space, traffic, air quality, noise, shadows, historic and archaeological resources, natural resources and other areas of socioeconomic and environmental concern, and

WHEREAS: Community Board #1 strongly supports the redevelopment of the World Trade Center and the creation of the World Trade Center Memorial, and

WHEREAS: The construction of this massive project, along with many other pending reconstruction projects in the area, will significantly affect Lower Manhattan and adequate steps must be taken to properly mitigate the anticipated impact of these projects on this community, and

WHEREAS: The completion of the WTC Redevelopment and Memorial will likewise have a significant impact upon Lower Manhattan and these impacts also need to be properly planned for and mitigated during this phase of the project, and

WHEREAS: The extremely lengthy duration of this reconstruction project will put tremendous strain upon a still unsettled Lower Manhattan economy and will greatly affect the lives of residents, workers and visitors to this vitally important district, and

WHEREAS: It is essential that all the parties involved in the Proposed Action take the necessary steps to minimize the adverse effects of this massive reconstruction project to insure that each phase of the Proposed Action is successful and serves as a springboard for the continued growth and revitalization of Lower Manhattan, now

THEREFORE  
BE IT  
RESOLVED

THAT: Community Board #1 offers the following comments and recommendations on the DGEIS:

*Introductory*

- We note that the DGEIS makes certain analytic assumptions without adequate explanation of the relevant underlying factual basis for such assumptions. No later than March 10, 2004, we request a meeting with the LMDC and its consultants to answer specific questions that Community Board #1 has regarding the analysis process and underlying assumptions used in the DGEIS.
- We also note the DGEIS does not appropriately consider either the individual impact of certain elements of the Proposed Action or the cumulative impact of the Proposed Action when considered with other projects expected to proceed concurrently with the Proposed Action, including the construction of the new PATH station, the new Fulton Transit Center, the Second Avenue Subway line or the reconstruction of Route 9A. The final EIS should consider all potential effects of the Proposed Action on the community, both on an individual basis and in the context of these and other concurrent projects, as well as the effects of anticipated population growth in Lower Manhattan for the purposes of planning and determining the impacts and appropriate mitigation.

*Environmental*

- We note the DGEIS indicates that particulate matter emitted from diesel engines will be “substantially higher” than New York City’s interim guidance threshold and will “substantially exceed” the EPA’s air quality standards. Therefore, we request that appropriate measures be taken to protect the air quality of Lower Manhattan, including, but not limited to the following:
  - Incorporate the provisions of the 191-A law (which requires that city construction contracts use ultra low sulfur diesel and best available pollution control technology on heavy diesel construction machinery) into all contracts related to the World Trade Center Redevelopment, and extend the law to include contracts with the MTA, Port Authority, Con Edison, Verizon and other telecommunications utilities and provide for appropriate enforcement mechanisms;
  - Immediately extend the 191-A law to include all moving vehicles used in all Lower Manhattan construction projects – not just those that are part of the Proposed Action;

- Modify appendix A, SEQ-5 (which does not go as far as 191-A since it refers to only non-road construction equipment of 60 hp or greater) to include diesel retrofit technology;
- Enforce New York City's three consecutive minute idling law for trucks and buses with diesel engines and manage construction scheduling to avoid idling;
- Implement the LMDC's suggestion of "reducing the exposure of people to PM (particulate matter) by installation of HEPA filters at fresh air inlets in hotels, office buildings and residential buildings, and the purchase of air conditioning units with HEPA filters for residences with operable windows, in the immediate vicinity of the project site;"
- Develop an air monitoring program along the perimeter of the entire World Trade Center site (including 130 Liberty Street and 30 West Broadway) and the Fulton Street Station to track cumulative impact of the numerous construction projects on the adjacent residential and commercial areas and post monitoring data on the LMDC's website;
- Include a detailed analysis of the impact of trucking slurry powder to the site and any resulting air quality impacts in the DGEIS;
- Require the use of Sustainable Design Guidelines that meet or exceed the existing Battery Park City Authority Green Guidelines that mandate increased energy efficiency by 20% and use of ultra low sulfur diesel for all construction vehicles;
- Monitor the soil for compliance with all applicable federal, state and local rules and regulations in accordance with the Health and Safety Soil Management Plans and post monitoring data on the LMDC's website;
- Utilize all appropriate measures to clean and secure trucks and other vehicles leaving the WTC site to ensure that they do not bring contaminants to other areas of the neighborhood including, for example, spraying water and installing metal grates to clean tires of exiting vehicles and contain debris within the site; and
- Require that all MTA and tourist buses use low sulfur fuel and be designed or retrofitted to use current low emission technologies.

*Construction*

- We support the establishment of the Lower Manhattan Construction Command Center (LMCCC) to coordinate the construction projects and ensure that schedules are arranged to minimize adverse noise, traffic, pedestrian and other

adverse impacts and we request that it include representatives of the Buildings Department and Community Board #1 as well as residents and businesses most directly affected by the Proposed Action.

- The LMCCC should be responsible for community outreach and should coordinate with DOT's Lower Manhattan Task Force and other local community organizations.
- A representative of the LMCCC should be available on-site 24 hours per day during construction and be reachable directly via a phone number that is widely available to the public. A LMCCC Project Coordinator should be appointed to oversee the work of the LMCCC and to respond to public comments and questions regarding the project.
- The LMCCC should produce a weekly traffic and construction map, reflecting all significant construction projects (including residential conversions and interior commercial office space rebuilds) south of Canal Street in order to enable efficient mitigation of the effects of such projects.
- The DGEIS does not appear to appropriately address the day-to-day issues that will inevitably arise during the construction process; to mitigate this problem, we suggest that an appropriate grievance and response mechanism be established to promptly and thoroughly address all issues as they arise.
- We recommend that consideration be given to limiting or changing the hours of construction on weekends and in the evenings as well as providing for "flex" hours and consulting with Community Board #1 to coordinate hours of operation in response to the needs of the community, recognizing however the importance of achieving an appropriate balance between the legitimate concerns of the community and the need to expeditiously complete construction, to coordinate overall scheduling requirements, and to properly address noise, air quality and other environmental concerns and other issues.
- Given that there are residential units in close proximity to the site of the Proposed Action and that the DGEIS notes that construction activities may result in "annoyance" to nearby residents, mitigation should include soundproof windows being provided to all residential buildings adjacent to the site. As indicated below under the heading "*Noise*," we urge the LMDC to develop a monitoring program to track noise levels and post monitoring data on the LMDC's website.
- The DGEIS assumes that the Sustainable Design Guidelines are in place. However, Appendix A notes that the Guidelines are still in draft form. Either the LMDC and Port Authority need to adopt the Guidelines or the DGEIS needs to be reevaluated in the context of the actual requirements that will be in place during construction.

- All mitigation measures listed in section 22-21 and SEQ-5 should be adopted, including but not limited to the following:
  - Acoustic barriers and walled enclosures around certain construction activities;
  - Placement of construction equipment in shielded locations, such as below grade;
  - Installation of silencers on jackhammers and other equipment;
  - Use of electrically operated rather than combustion equipment;
  - Use of soil beds, exterior rubber lining on truck body and other methods to reduce rock impact noise during loading and unloading; and
  - Placement of most loading/unloading inside the bathtub.

*Noise*

- While Community Board #1 supports the concept of wind generated energy on the Freedom Tower, the DGEIS does not provide the results of any studies that may have been done regarding the effects of wind turbines in close proximity to residential housing or address recent studies in the British press that suggest that low frequency sounds emitted by wind turbines can cause health problems, including headaches and depression in people living a mile away (*Telegraph*, 1/25/04). These studies should be assessed before the plan for wind turbines atop the Freedom Tower proceeds.
- The LMDC and its project partners must ensure that sound receptor stations are established at various locations throughout and near the site and regularly monitored to ensure that agencies and contractors adhere to sound level guidelines. We urge the LMDC to develop a monitoring program to track noise levels and post monitoring data on the LMDC's website.
- Other than noise generated by construction equipment, the DGEIS does not adequately address the potential impact of noise and estimates of projected noise impacts from mobile sources, *i.e.* projected noise from traffic and pedestrians, seem very low throughout the document. The LMDC should explain how these estimates were reached. While the community supports the restoration of a commercial center on this site, the noise impacts to be expected from the development of a hub that will be active day and night and all weekend (unlike the WTC which was mostly 9-5 M-F) must be acknowledged and mitigated as much as possible.

- The DGEIS should recognize and take into account that the NYC Noise Code is being revised and consider whether the Proposed Action would comply with the revised code and, if not, what actions can be taken to ensure compliance.
- The DGEIS notes that allowable maximum noise levels are exceeded throughout the site. Every effort should be made to meet HUD Site Acceptability Standards of 65 dBA for the Memorial. Ideally, the site, when fully built, exceed the current NYC Noise Code ambient noise quality criteria for noise quality zones N-3 of Leq-70 dBA measured for any one hour (subchapter 6, Section 24-243.) We oppose any wall or other physical barrier along West Street, however, as inconsistent with the overall Master Plan goal to integrate the WTC site with Battery Park City and the waterfront.
- Consideration should be given to how new and evolving technologies might eliminate or at least partially mitigate the noise levels created by the Proposed Action, including but not limited to the following:
  - Reducing the amount of vehicular traffic (see traffic recommendations).
  - Setting guidelines for stationary noise sources, similar to the Sustainable Design Guidelines, that meet or exceed – not just comply with – all existing and pending codes and regulations. This would include setting standards for the type, size, quality, and placement of HVAC systems, generators, and mechanical equipment. For example, because the flow of air as well as HVAC equipment itself can create significant noise, maximum face velocity should be limited to 1000 fpm at discharge louvers and HVAC equipment should have a minimum of 7 feet of 2" thick, 3 lb. density duct liner from the unit to the louver face on the exterior of the building and high-quality sound traps.
  - Exterior condensing units should be eliminated as much as possible and all condensing units should be treated with high-quality sound absorbing panels to reduce reflection of sound to adjacent buildings.
  - Emergency generators should be hospital grade or better with acoustically treated radiator discharge, intake, and exhaust pipe. This treatment should include 3 ft. sound traps for the radiator intake/discharge and a critical-grade muffler for the exhaust.

*Traffic, Parking, Transit and Pedestrian*

- Because traffic, parking, transit and pedestrian impact conclusions are highly sensitive to assumptions regarding trip generation and fully populated numbers, these assumptions should account for how all projected workers and visitors will come to and leave the site. For example:

- Vehicle trip generation is based on a rate per square office foot, which may be an appropriate method, but unless all workers and visitors are accounted for, it is not possible to test the reasonableness of the trip numbers so estimated.
- Similarly, the transit trip generation numbers do not appear to be based on any estimate of total workers or visitors.
- The projected 5% Proposed Action vehicular traffic increase over pre-9/11 scenario is counter-intuitive.
- The DGEIS appears to conclude that even without the Proposed Action, traffic congestion at studied intersections will be at “unacceptable” levels, and that therefore, much of the “unacceptable” traffic congestion projected from the Proposed Action need not be mitigated. This is a consequence of the DGEIS cumulative impact approach, addressed in the Introductory section, above.
- The DGEIS does not appropriately differentiate among types of traffic – buses, trucks, black cars, taxis, etc. Navigating a street clogged with trucks and buses is far different from navigating that same street with a similar number of automobiles. For example,
  - Delivery truck impact on the residential neighborhoods south of the WTC site and Greenwich Street is not adequately addressed.
  - The large number of anticipated “black cars” is not addressed. An underground staging of these vehicles is essential to avoid significant adverse effects throughout the area.

The effect of delivery truck, commuter bus and tour bus traffic on Route 9A, including any differences in such effects under the alternative at-grade and by-pass scenarios, is not adequately addressed. We are concerned that proposed truck and bus routing would take most truck and bus traffic to at-grade lanes on Route 9A, causing unacceptable congestion adjacent to the site.

- The effect of locating a ramp for delivery trucks on Liberty Street on traffic on Cedar Street and adjacent residential neighborhoods is not addressed and we are particularly concerned the truck ramp and pedestrian traffic accessing the Memorial on Liberty Street will impede access to Battery Park City by Ladder Company 10. Alternative truck ramps should be considered as well as strategies for truck staging on Greenwich Street and other locations.
- The DGEIS ignores the fact that, pre-9/11, the “service road” adjacent to the WTC along Church and Liberty Street and along a portion of West Street, functioned as a buffer area, absorbing certain traffic impacts, such as black cars and buses, and that the different geography of the Proposed Action will divert

such traffic onto local streets absent adequate accommodation and planning for such traffic. Thus, even if the DGEIS estimate of only an overall 5% increase in traffic in comparison to the pre-9/11 scenario were correct, the DGEIS does not properly account for the fact that much of the pre-9/11 scenario high-impact traffic would be diverted onto neighboring streets under the Proposed Action.

- Key assumptions underlying the analyses are not stated and therefore not testable.
  - Assumptions regarding the basis of transit trip generation are not stated.
  - The background rate of trip increase is larger for transit (0.5%) than for vehicles (0.25%), even though the source appears to call for using a 0.5% rate for both.
  - The DGIS assumes 2/3 of Route 9A traffic would choose tunnel lanes (if the by-pass alternative were built) without explanation. Any underestimate of Proposed Action-generated traffic presumably understates the proportion of Route 9A traffic that would remain at-grade under the by-pass alternative.
  - The requested meeting with the LMDC and its consultants, referred to in the Introductory section, above, should include an explanation of methods and assumptions in order for Community Board #1 to properly address the issues raised by the DGEIS.
- The DGEIS should consider negative impacts of through traffic on Greenwich Street and West Broadway on areas north and south of WTC and the implications of using Greenwich Street as the proposed “drop off” for tour buses and of using the Greenwich Street-Albany Street-West Street routing for delivery trucks. Residents of Tribeca and students and teachers at PS-234, BMCC, PS/IS-89, Stuyvesant High School, as well as users of Washington Market Park, will be adversely affected if Greenwich Street and West Broadway become alternatives to Broadway and West Street. Poorly planned truck and bus routing will also adversely affect the residential community south of the WTC.
- Community Board #1 believes that we need to reduce vehicular traffic in Lower Manhattan rather than accept the increase of traffic to intolerable levels as inevitable. This need will only become more critical as a result of the Proposed Action and other development projects such as the new PATH station, the new Fulton Transit Center, the Second Avenue Subway line and as the population of residents, workers and visitors in Lower Manhattan experiences significant expected growth. We strongly support the adoption of traffic management systems and other mitigation measures to discourage vehicular traffic in Lower Manhattan and manage inevitable traffic increases, including the adoption of “intelligent transportation systems” (ITS), the promotion of public transit modes to divert would-be drivers out of their cars and into PATH (including improvement of associated park and ride facilities), subways, buses, and ferry

services and the development of a “one-stop” ride to regional airports. The members of Community Board #1 have differences of opinion regarding the use of pricing strategies, however, and urge that this issue be studied further.

- It is unacceptable to suggest “the anticipated saturation of Route 9A with traffic destined to the Project Site and its immediate environs could be better distributed to other streets with available capacity” (p. 22-3). Route 9A was designed to mitigate overburdened city streets; redirecting traffic through residential neighborhoods is not a wise or viable alternative.
- A separate EIS process is necessary to adequately address the alternative proposals for Route 9A.
- Tour and commuter bus parking are not adequately addressed. Adequate plans for underground parking of tour buses under the WTC site, the site of the Deutsche Bank building or Site 26 is essential to avoid significant adverse effects throughout the area. We note, at the same time, that the DGEIS indicates that the underground tenant parking will be underutilized even after the Proposed Action is completed in 2015.
- Construction worker personal vehicle impact is understated and the effects of construction worker and other commuter vehicle traffic and parking requirements are not adequately addressed. Informal surveys of local construction projects show that construction worker personal vehicles tend to be larger truck vehicles. Consideration should be given to banning personal vehicles from the site as well as strategies for facilitating construction worker and other commuter access to the site, such as establishing “Park and Ride” lots in areas outside of Lower Manhattan, shuttle bus services and incentives to use public transportation.

#### *Neighborhood Character*

- We note the DGEIS asserts that “the Proposed Action would have substantial positive effects on neighborhood character throughout the study area and all of Lower Manhattan” (p. 10-25), while at the same time acknowledging that there will be “substantial pedestrian and vehicular traffic congestion” and “thousands of tourists filling the streets, sidewalks, and subway stations on weekdays and weekends” – all of which will have a significant impact on the overall character of each adjacent neighborhood as well as the entire study area. Many who currently live in these neighborhoods may disagree that “neighborhood character throughout the study area would be both enhanced and improved by the Proposed Action, and no significant adverse impacts would occur” (p. 10-16). To fully understand the potential impacts and how they might be mitigated, the DGEIS should provide a thorough analysis of the unique character of each of the surrounding neighborhoods and a detailed study of the potential impact of the Proposed Action on neighborhood character, including:

- Potential to increase commercial rents and drive out businesses and amenities that cater to residents rather than tourists.
  - Anticipated impact on small businesses, including street closings, signage changes, restricted pedestrian access, construction barriers and other similar factors.
  - Potential to change property values.
  - Anticipated increase of noise and traffic – especially at nights and on weekends – in neighborhoods that are now relatively quiet after working hours.
  - Potential threats to safety and health, including impact of increased traffic and potential for increased crime.
  - Implications for the thousands of students who go to PS-234, BMCC, PS/IS-89, Stuyvesant High School, and other downtown schools.
  - Potential to change residential demographics and the corresponding impact of such changes.
- Analysis of possible mitigating factors, including tax rebates and other financial incentives for small business owners and residents who are adversely affected by the construction phase of the Proposed Action and other appropriate forms of assistance.

#### *Community Facilities*

- The DGEIS states that the NYPD and NYFD are adequately prepared to handle any situation, yet given the enormous influx of visitors, workers and new residents, we urge the LMDC to ensure that the NYPD and NYFD be staffed according to planned growth of the area and that communications between the NYPD, the NYFD and the Port Authority Police be fully integrated so as to avoid problems that have occurred in the past when the departments failed to communicate with each other.
- The potential impact on existing schools, libraries, and day care centers, open spaces, recreational facilities and hospitals and the need for new facilities to serve the anticipated increase in the population of residents, workers and tourists in Lower Manhattan should be covered by the final EIS. It is not accurate to conclude that, simply because the Proposed Action does not include residential development that there will be no impact on the community facilities that typically serve residential populations, such as schools, day-care centers and recreational facilities. In fact, the Community Board #1 district has historically experienced significant load on such facilities from commuting workers who

choose to have their children attend schools and day care facilities near the commuters' place of work.

#### *Radio Frequency Electronic Fields*

- The LMDC and the Port Authority indicate that any Radio Frequency Electromagnetic Fields (RFEMF) will be within or below all guidelines and standards for RFEMF radiation. We urge the LMDC to make this a mandatory requirement and that inspection and enforcement procedures be implemented.
- We urge the LMDC and the Port Authority to require that only fully tested, state-of-the-art antennas or transmission devices be used on the Freedom Tower and other tall buildings at the site in order to benefit from any improvements since the antenna was originally installed on the North Tower of the WTC, with regard to any potential health effects as well as adverse radio and television reception impacts near the site.
- Since the Freedom Tower will have both the observation deck and the broadcast antenna, we urge that proper shielding be in place to protect visitors and workers. We urge the LMDC to develop a monitoring program to track RFEMF and post monitoring data on the LMDC's website.

#### *Wind*

- The DGEIS indicates that the Proposed Action would result in "comparable" pedestrian-level wind conditions, but then later notes at some times wind conditions "may produce difficult walking conditions and pose potential safety problems..." unless measures are taken to reduce and mitigate undesirable wind effects. We urge that appropriate mitigation measures be taken to reduce any deleterious effects of wind.

#### *Open Space*

- We urge the LMDC to verify and explain a number of assumptions with regard to open space. For example, the DGEIS indicates that "open spaces include sidewalks and streetscape" (page 2-4, Table 2-1) and therefore we ask for a recalculation of purely "park" space and the verification of overall open space and confirmation that the amount of usable open space in Lower Manhattan will not in fact decline as a result of the Proposed Action instead of increasing to improve the quality of life and account for significantly increased populations.

#### *Other Issues*

- A new location needs to be determined for the Greenmarket that reopened in June 2003 at Liberty Plaza which has since subsequently closed due to Plaza renovations.

- A recent residential housing survey conducted by Community Board #1 estimates that by 2005 more than 13,000 new residential units would increase the population from 35,000 to 60,000. By the year 2015, when we expect the Proposed Action to be completed, the population of Lower Manhattan can be expected to have increased even more significantly. The DGEIS does not adequately address the impact of such increased population and the related demands on services, community facilities, traffic or other concerns.

THEREFORE  
BE IT  
FURTHER  
RESOLVED

THAT: Community Board #1 expects that the LMDC and the Port Authority will provide regular updates and submit for review and comment specific designs and proposals for mitigating adverse impacts of the Proposed Action, including without limitation traffic management, security barrier installation and all other design elements that will affect the residents, workers, businesses and visitors to Lower Manhattan.

---

From: Galloway, Jeff [mailto:galloway@HughesHubbard.COM]  
Sent: Monday, March 15, 2004 4:30 PM  
To: WTCENVIRONMENTAL  
Cc: Irene Chang; William Kelley; Madelyn Wils (E-mail); Anthony Notaro (E-mail); Catherine McVay Hughes (E-mail); Jeff Galloway (E-mail 2); Jen Hensley (E-mail); Julie Menin (E-mail); Michael Connolly (E-mail); Richard Kennedy (E-mail); Tim Lannan (E-mail)  
Subject: Further CB1 Comments on WTC DGEIS

Thank you for the trip generation data that you supplied to the WTC Committee of Community Board 1 on Friday, March 12. Given the short space of time that we have had for review and analysis of this data, our comments are necessarily incomplete, and may be subject to change. Please note that this comment is being filed as part of Community Board 1's comments to the DGEIS.

Our initial review of the data reinforces our concern that the treatment of vehicular trip generation in the DGEIS may underestimate the trips that will actually occur.

For example, Table 1, a summary of the peak hour person-trips for 2009, projects an AM Peak Hour in-bound person-trip total of 6,604 attributable to Office Uses. The DGEIS at page 13A-21, however, assumes that the daily trip generation rate for commercial office space would be 18 person-trips per 1,000 square feet of commercial office space (including employees and visitors). Multiplying 18 by 2.6 million (the commercial square footage projected for 2009) and then dividing the total by 1000 results in 46,800 daily-person-trips. Dividing this amount by 6,604 (the peak hourly rate), it appears that it would take over 7 hours of person-trips at the peak hourly rate to fill the commercial space. This does not seem reasonable; it implies that the peak hourly rate will be higher.

Of equal concern is the low percentage of person-trips attributed to automobile traffic, including taxi trips, and the high percentage attributed to walking, as reflected in Table 1 (and Table 3, for 2015). The modal breakdown reflected in these tables runs counter to our personal experience living and working in the area. We would expect a higher percentage of vehicular trips and a lower percentage of pedestrian trips. It is also unclear to us what the assumed point of origin is for the pedestrian trips. For employee person-trips to commercial office space, any pedestrian point of origin other than the pedestrian's home would appear to ignore the likelihood that the pedestrian used some other mode of transport into the vicinity of the WTC site, and that mode should be counted as part of the totals for that mode.

The modal breakdown as between types of vehicular traffic, as reflected in all four tables, also concerns us. First, the projection that office and retail uses will have higher rates of personal auto use than of taxis is counter-intuitive. Of even greater concern is the fact that, although Table 1 projects that nearly 10 percent of the person-trips will be by means of some form of bus, Table 2 does not show any new local bus or express bus trips -- in other words, it appears that the DGEIS assumes that existing mass transit bus routes will satisfy all of the mass transit bus trips generated by the site. This does not appear to be a reasonable conclusion.

Because the "real world" impact of the Proposed Action will be felt in combination with the impacts of the other development projected through 2015, errors in the Proposed Action-specific projections can render planning and mitigation conclusions so unreliable as to fall outside of any reasonable range of error.

As noted, in the short space of time between Friday and today, we have not been able to perform a full analysis of the vehicular data. Given the critical importance of the accuracy of the trip generation projections, including the modal breakdown, we ask that LMDC carefully analyze these issues as it prepares the Final GEIS, and that the Final GEIS include a full presentation of supporting data and underlying assumptions. We also ask that LMDC meet again with representatives of Community Board 1 as needed to help address the community's concerns raised above.

Respectfully submitted,

Jeff Galloway  
Member, WTC Committee  
Community Board 1

\*\*\*\*\*  
\*\*\*\*\*

This email and any files transmitted with it may contain privileged or confidential information. Use, disclosure, copying or distribution of this message by anyone other than the intended recipient is strictly prohibited. If you have received this email in error please notify the sender by reply email and destroy all copies of this message in your possession, custody or control.

\*\*\*\*\*  
\*\*\*\*\*