

**EQ2015-002-P3 - Department of Environmental Protection Rebuild by Design
Addendum 1**

Part 1: Modifications

#	Page #	Engagement Query Section	Modification
1	4 and 11	I C. Contract Details and XII. Attachments	Added: Attachment 1A - Task Order 1 for the New Meadowlands project SOW.
2	8	VIII. Proposal Content	Change: Proposal due date from February 5, 216 to February 12, 2016. Change: To: Question submission date from January 15, 2016 to January 22, 2016

Engagement Query #: EQ2015-002-P3 - DEP Rebuild by Design
Addendum 2

Part 1 Modifications

#	Page #	Engagement Query Section	Modification
1	4	1. General Information C. Contract Details #4	Construction Management Firm Contracts - Changed status from "Out to Bid" to " Awarded, Selection Determination in Process. "
2	5	II Scope of Work Requirements Task D	Task D was modified to specify the review of invoices in addition to payments and contract deliverables. Please see revised engagement query for details.
3	8	VIII. Proposal Content	Change: Proposal due date from February 12, 2016 to February 19, 2016.

Part 2 Questions and Answers

Some questions have been combined or modified for clarity.

#	Page #	Engagement Query Section	Question	Answer
1	3	I. General Information B. Project Descriptions #1 and #2	The links referred to on page 3 (see the following) do not work. http://www.nj.gov/dep/floodhazard/rbd-hudsonriver.htm http://www.state.nj.us/dep/floodhazard/rbd-meadowlands.htm	The Hudson River Project: http://www.nj.gov/dep/floodhazard/rbd-hudsonriver.htm The New Meadowlands Project: http://www.state.nj.us/dep/floodhazard/rbd-meadowlands.htm
2	3	I. General Information C. Contract Details	The Engagement Query refers to only four contracts. Will a separate Engagement Query be issued in the future for the monitoring of the each of the related project's construction contracts? Will the award of the integrity monitor for these four contracts preclude bidding/awarding of integrity monitoring for the construction contracts?	Construction contracts for the Hudson and Meadowlands projects are not included in this engagement. Once the feasibility studies and EIS are complete, NJDEP will be in a position to evaluate the efficacy and sustainability of the construction of these projects. The monitor procured for this engagement should not be precluded from bidding on future monitoring engagement(s) for construction contracts based solely on participation in this engagement.
3	4	1. General Information C. Contract Details #3	How many vendors are anticipated to be selected for the Design and Construction Administration contract?	For the Meadowlands project, the AECOM team is the primary contractor for the feasibility, design and construction administration contract. A design and construction administration contractor will be selected in the future for the Hudson River RBD project. The total anticipated number of vendors is 2 for design and construction administration for both projects.
4	4	1. General Information C. Contract Details #4	Have any CMF contracts been procured to date? If so, please provide details.	The following consultants have been awarded the CMF contract: <ul style="list-style-type: none"> • MICHAEL BAKER INTERNATIONAL • HILL INTERNATIONAL / LOUIS

				<p>BERGER</p> <ul style="list-style-type: none"> • D'HUY ENGINEERING • HAKS • JAY SHAPIRO & ASSOCIATES <p>The intent is to select two CMFs, one for each project. However, it is possible that a single CMF contractor will be assigned to both projects. That determination will be made at the conclusion of the CMF procurement process.</p>
5	4	1. General Information C. Contract Details #4	How many vendors are anticipated to be selected as CMFs?	Please see question and answer #4.
6	4		Attachment 1A provides the Task Order for the New Meadowlands project. It appears as if the Period of Performance for this first Task Order is 6 months. Will the Task Order be amended or a new Task Order issued to cover the anticipated time frame necessary to complete the Feasibility Study and EIS tasks (Task 3 of the Task Order)?	New Task Orders (Scopes of Work) will be issued to complete the Feasibility/EIS and Design Phases of the project.
7	4	I. General Information C. Contract Details	What type of contract(s) will be awarded to the Construction Management Firms, Dewberry Engineers, Inc., AECOM Technical Services, Inc., and to other contractors for the other design and construction contracts to be awarded (i.e. time and materials, lump sum, GMP)?	Various contract types will be awarded.
8	4	I. General Information C. Contract Details #4	<p>The Construction Management Firm's (CMF) RFP J0334-00 had a bid receipt date of 12/3/15. Have award recommendations been made for the CMF consultants?</p> <p>As an IDIQ contract, DPMC anticipated awarding 6 to 8 term contracts. Which consultants have been awarded term contracts?</p> <p>Will a single/same CMF contractor be assigned the task order for both Rebuild by Design projects subject to this Engagement Query or will multiple task orders be issued to different CMF contractors for the two Rebuild by Design projects?</p> <p>What is the schedule for DPMC receiving Work Order proposals and issuing Work Orders to the CMF to provide services to these two projects?</p>	<p>Please see question and answer #4.</p> <p>See question and answer #13. Additional Work Orders are currently being developed for both projects and are being issued to CMF contractors for review.</p>
9	5	1. General Information C. Contract Details #4	Could we please receive a copy of the CMF RFP that was released for bid in October 2015? We were unable to access it through the DPMC website link provided.	Please see Attachment 1B: Construction Management Firm RFP.
10	5	II. Scope of Work	Regarding Task D, what will be the typical size and timing intervals of the payments and deliverables?	The size of the invoices and deliverables will vary depending on the phase of the project. Payment size will vary based on level of activity. Invoices and payments

				are expected monthly.
11	5-6	II. Scope of Work	<p>The Engagement Query focuses on the integrity monitoring of four potential contracts. Outside of Tasks A, B, E and F, which are generally, focused, Tasks C and D references only the oversight of the Construction Management Firm(s).</p> <p>Will Task D and E apply to the feasibility work and EIS of the Dewberry (Hudson River) contract, the continuing design and construction administration for the Hudson River Project, and the AECOM (New Meadowlands) contract?</p>	<p>Tasks C and D apply to the CMF contract(s) only.</p> <p>It is the responsibility of the Construction Management Firm(s) to oversee the feasibility/EIS, and design contracts for both the Hudson and Meadowlands including invoices, payments and contract deliverables.</p> <p>Construction contracts for the Hudson and Meadowlands projects are not included in this engagement. Once the feasibility studies and EIS are complete, NJDEP will be in a position to evaluate the efficacy and sustainability of the construction of the selected alternatives.</p> <p>The Monitor procured for this engagement query will be responsible for Task E as it applies to responsibilities defined in Tasks B through Task D with Task B applying to the contracts listed in the engagement query.</p>
12	6	II. Scope of Work	<p>Tasks C and D are specifically for the CMFs. Does the ongoing quality assurance/ quality control review work in Task E focus solely on the CMFs or the other contracts as well?</p>	<p>Please refer to the answer for question #11.</p>
13	3 – 6	<p>I. General Information C. Contract Details 1 – 4; II, and</p> <p>II. Scope of Work Tasks A – F</p>	<p>These EQ sections describe four contracts: two that have been awarded, one that is under development, and one that is out for bid. According to the EQ and to the cost quote template, Tasks C and D seem to apply only to the CMF contracts, which are out for bid.</p> <p>In order to provide a price for Oversight and Monitoring of the CMF contracts and the work orders to be written against the contracts, we require additional information such as the number of anticipated CMS contracts and work orders. We also require an estimate of the volume and scope of deliverables and invoices that will be required to be reviewed under Task D.</p> <p>If this information is not available, pricing Tasks C and D is going to be difficult. Please confirm that pricing for Tasks C and D can be provided AFTER CMF contract award if the volume and scope is not available.</p>	<p>See Attachment 1C for the first RBDH CMF Work Order and Addendum. The RBDH Work Order is for 18 months and covers the entire Feasibility and EIS Phase.</p> <p>The RBDM CMF scope cannot be shared at this time because it has not been released to the pool of bidders. The RBDM work order will be for 6 months and will be supplemented with additional work orders.</p> <p>The volume and scope of work for the RBD Meadowlands and Hudson River can be ascertained by reviewing the Feasibility/EIS and CMF contracts for the Hudson River RBD project and the RFP for Feasibility/EIS, Design, and Construction Administration</p>

			With regard to Tasks B, E, and F, are we to assume that they apply only to the CMF contracts, or are we to assume that they apply to ALL contracts (those awarded to Dewberry Engineers and AECOM Technical Services as well as the Design and Construction Administration Contract for the Hudson River Project and the CMF contracts)?	for the Meadowlands RBD project. Please refer to the answer for question #11.
14	7	IV. Other Contractor Requirements	Are bidders allowed to submit an RBD budget that is based on a higher hourly rate than the approved hourly rate for contract T-2939 subsequent to the term of the monitor's current contract (through September 2022, which is the expected construction completion date of the Meadowlands and Hudson projects)?	Bidders are not allowed to submit budgets based on a higher hourly rate than the approved hourly rates under contract G9004 and T2939. Please see the engagement query page 9, section VIII. Proposal Content, #8.
15	7	IV. Other Contractor Requirements	Are bidders allowed to submit separate annual budgets?	Bidders may submit separate annual budgets, but must also include a completed Attachment 4 cost quotes for the entire engagement.
16	7	IV. Other Contractor Requirements	If a firm did not include a subcontractor at the time of proposal submission for RFP 14-X-23110, but wishes to include a subcontractor for the purposes of this engagement query, please confirm that this can be done and the process for doing so.	Pursuant to sections 5.8 and 5.9 of the State of NJ Standard Terms and Conditions: The contractor shall forward a written request to substitute or add a subcontractor or to substitute its own staff for a subcontractor to the State Contract Manager for consideration. If the State Contract Manager approves the request, the State Contract Manager will forward the request to the Director for final approval. No substituted or additional subcontractors are authorized to begin work until the contractor has received written approval from the Director. The contractor must include: <ul style="list-style-type: none"> • A Subcontractor Utilization form, • A Business Registration Certificate, • An Org Chart, and • Resumes for the subcontractor.
17	7	IV. Other Contractor Requirements	Are there any requirements for utilizing women-owned business entities or minority-owned business entities for this engagement query?	Please see terms defined in State contracts G-9004 or T-2939, as applicable, and Attachment 5 - Statement of Assurances.
18	7	V. Length of Engagement	The Engagement Query requests a firm fixed price to cover the integrity monitor's cost for the length of the engagement. As a firm fixed price contract, will payments of monthly services be based on T&M or a	Payments for monthly service will be based on submitted timesheets duly noting hourly rate and hours worked for each task, estimated travel costs and direct costs as outlined in the engagement query

			percentage of completion for each task?	page 9, section VIII. Proposal Content, #8.
19	8	V. Length of Engagement	The chart in this section provides an estimated timeline of the different phases of the Hudson River Project (i.e. Feasibility/EIS, Design and Construction Admin). Is an estimated timeline available for the different phases of the New Meadowlands Project?	See Attachment 2A for the Meadowlands project schedule.
20	8	VIII. Proposal Content	We understand the detailed proposal and budget need to be submitted to Roseann Koval. Are both of these to be submitted electronically to her e-mail, or do you need hard copies shipped to a specific address? If physical copies are required, please indicate specifications (number of physical copies, whether electronic copy is needed, envelope labels, etc.).	Please send the detailed proposal and budget electronically to Roseann Koval at IntegrityOversightMonitor@treas.nj.gov Physical copies are not required.
21	9	VIII. Proposal Content	The Engagement Query states that the Cost Quote must be allocated between the Hudson River and New Meadowlands projects. Task C and D relate to the monitoring of the work products of the CMF. Is the intent to allocate the CMF monitoring costs across the two projects based on the level of effort estimated for each project and their related contracts?	Correct, the intent is to allocate the CMF monitoring costs across the two projects based on the level of effort estimated for each project and their related contracts.
22	11	XII. Attachments	The Engagement Query includes an Attachment 5 – Statement of Assurances for <u>Subrecipients</u> , containing applicable federal CDBG-DR requirements for subrecipient agreement. A similar Statement of Assurances for the New Meadowland Project was included with the DPMC’s RFQ for engineering and design services and DPMC’s IDIQ for construction management. Are these provisions applicable to this Engagement Query’s monitoring effort and/or the contracts subject to monitoring?	Projects that are funded by HUD-CDBG funds must adhere to additional federal requirements which are described in the Statement of Assurances (SOA). All contract and grant agreements (including sub-awards) within a CDBG-funded project must also contain and adhere to the SOA. The provisions are applicable to both the firm who will be awarded the integrity monitoring contract and to the contracts that will be monitored by the IM. As indicated in the Engagement Query (page 1, para 3) the State is seeking a contractor with knowledge of the HUD-CDBG program. Tasks B, D and E all require the IM to ensure compliance with the guidelines, rules, requirements and laws of the federal program (HUD-CDBG).
23	11	XII. Attachments Cost Quote Template	To assist offerors in responding to the engagement query, we request that you revise the cost quote template to show costs that apply just to tasks C and D for the New Meadowlands and Hudson River projects and costs that apply to the overall project.	Due to funding requirements, costs for each project are to be recorded separately. Costs for each task must be allocated between the Hudson River Project and the New Meadowlands Project, including the CMF monitoring costs which should be based on the level of effort estimated for

				<p>each project and their related contracts.</p> <p>The cost quote template will not be revised.</p>
24		Other	<p>NJDEP posted to their Office of Flood Hazard Risk Reduction Measures webpage a Preliminary Estimated Budget for the RBD Hudson River project. http://www.nj.gov/dep/floodhazard/docs/rbd-hudson-prelim-estimated-budget-20151207.pdf Is a similar schedule available to the New Meadowland project?</p>	See question and answer #19

ENGAGEMENT QUERY FOR INTEGRITY OVERSIGHT MONITOR (REVISED)**EQ2015-002-P3 - Department of Environmental Protection - Rebuild By Design Contracts****I. GENERAL INFORMATION:**

On March 27, 2013, L. 2013, c. 37 (N.J.S.A. 52:15D-1 - 2), the Integrity Oversight Monitor Law (Law) was enacted for the purpose of authorizing the deployment of Integrity Oversight Monitors for recovery and rebuilding contracts resulting from Superstorm Sandy and subsequent major storms in NJ. The Law permits the State Treasurer to require integrity oversight monitor services on any State or non-State, federally funded recovery and rebuilding contract of \$5 million or more. Pursuant to the Law, the Treasurer established a pool of qualified integrity oversight monitors from which the Treasurer could require the use of services on any State or non-State, federally funded recovery and rebuilding contracts. Consequently, the Treasurer has required monitoring on any such contracts valued at \$5 million or more.

The Department of the Treasury (Treasury), on behalf of the Department of Environmental Protection, Office of Flood Hazard Risk Reduction Measures (NJDEP), is seeking quotes pursuant to the "Program and Process Management Auditing, Financial Auditing and Grant Management, and Integrity Monitoring/Anti-Fraud Services for Disaster Recovery Assistance" Contract G9004, and the "Prequalification Pools: Auditing and Other Related Services in Support of Disaster Recovery" Contract T2939 from prequalified contractors in Pool 3 - Integrity Monitoring/Anti-Fraud.

The State is seeking to retain the services of one prequalified contractor with knowledge of the Department of Housing and Urban Development (HUD) Community Development Block Grant - Disaster Relief (CDBG-DR) funds, and experience with state and local procurement processes.

The purpose of this engagement query is to provide NJDEP with a Monitor for the Rebuild by Design (RBD) resilience contracts for the projects described below in order to minimize the risk of deobligation and prevent or rectify the duplication of benefits, process and payment errors, waste, fraud, abuse, malfeasance, and mismanagement of funds. The selected contractor will serve as the integrity oversight monitor (Monitor) pursuant to the Law.

The Monitor will be responsible for reviewing the NJDEP's financial and administrative functions for these contracts, ensuring that proper controls are in place, verifying that the contracts are procured in accordance with all federal, state, and local laws, regulations and ordinances, and confirming that all contract requirements, terms and conditions, and deliverables are met for the contracts specified in this engagement query.

The State will procure one Monitor to provide oversight for contracts and potential contracts identified in this engagement query. Monitoring of a potential contract will not begin until the contract is procured, executed, and exceeds the \$5 million threshold as defined by the Law. Contract award is subject to the availability of federal funding, and the level or amount of work awarded to the Monitor is not guaranteed. The State will control the assignment of this work through issuance of task orders.

A. Background

In 2013, President Obama's Hurricane Sandy Rebuilding Task Force created the Rebuild by Design competition (RBD) to develop ideas to improve physical, ecological and economic resilience in regions

affected by Superstorm Sandy. HUD is providing CDBG-DR funding for the feasibility, design and construction of two New Jersey-based projects selected in the competition.

One hundred fifty million dollars (\$150 million) is allocated for the first project, which focuses on the Meadowlands region; and two hundred thirty million dollars (\$230 million) is allocated to the second project, which focuses on the Hudson River region.

Comprehensive information about the RBD process and the winning projects is available on the HUD website: <http://portal.hud.gov/hudportal/HUD?src=/sandyrebuilding/rebuildbydesign> .

This engagement query focuses on four contracts in total that may require monitoring. These contracts either have exceeded the \$5 million threshold, or are expected to exceed the \$5 million threshold. Some contracts may not require oversight if they do not meet the criteria outlined in the Law. If it is determined that a contract requires monitoring, the Monitor shall be responsible for services set forth in the Scope of Work. Information on these projects is provided below, and in the associated links/attachments. The contractor awarded this engagement will have access to all necessary documentation in order to perform the duties outlined in the Scope of Work.

B. Project Descriptions

Each project is divided into three phases: feasibility study/EIS, design and construction. The results from these phases, among other things, will determine additional funding sources, if available, for the projects. Similarly, once the Feasibility Studies and EIS are complete, NJDEP will be in a position to evaluate the efficacy and sustainability of these projects.

1. Hudson River Project: Resist, Delay, Store, Discharge (RBDH)

The Hudson River Project takes a multi-faceted approach intended to address flooding from both major storm surges and high tides as well as from heavy rainfall events. The proposed project will occur throughout the City of Hoboken, and will extend into Weehawken and Jersey City, with the following approximate boundaries: the Hudson River to the east; Baldwin Avenue (in Weehawken) to the north; the Palisades to the west; and 18th Street, Washington Boulevard and 14th Street (in Jersey City) to the south.

The project's comprehensive approach to resilience consists of four integrated components:

- **Resist:** a combination of hard infrastructure (such as bulkheads, floodwalls and seawalls) and soft landscaping features (such as berms and/or levees which could be used as parks) that act as barriers along the coast during exceptionally high tide and/or storm surge events;
- **Delay:** policy recommendations, guidelines and urban green infrastructure to slow stormwater runoff;
- **Store:** green and grey infrastructure improvements, such as bioretention basins, swales, and green roofs, that slow down and capture stormwater, and which will complement the efforts of the City of Hoboken's existing Green Infrastructure Strategic Plan; and
- **Discharge:** enhancements to Hoboken's existing stormwater management system, including the identification and upgrading of existing stormwater/sewer lines, outfalls and pumping stations.

HUD has allocated \$230 million towards the design and construction of this flood reduction and resiliency concept.

Project details are available online at the NJDEP website:

<http://www.nj.gov/dep/floodhazard/rbd-hudsonriver.htm>

and at the HUD website:

http://portal.hud.gov/hudportal/documents/huddoc?id=OMA_IP_Briefing_Book.pdf
(The Portable Document File (pdf) may take a few minutes to download initially.)

2. The New Meadowlands Project: Protect, Connect, Grow! (RBDM)

The New Meadowlands Project proposes to address a wide spectrum of flooding risks while providing civic amenities and creating opportunities for redevelopment.

Due to funding limitations, CDBG-DR funds are to be used to implement the proposal in Pilot Area #1, which includes Little Ferry, Moonachie, Carlstadt, South Hackensack and Teterboro.

HUD has allocated \$150 million towards the feasibility/EIS, design, and construction of this flood reduction and resiliency concept.

Project details are available online at the NJDEP website:

<http://www.state.nj.us/dep/floodhazard/rbd-meadowlands.htm>

and at the HUD website:

http://portal.hud.gov/hudportal/documents/huddoc?id=MIT_IP_Briefing_Book.pdf
(The Portable Document File (pdf) may take a few minutes to download initially.)

C. Contract Details

1. Feasibility Study and Environmental Impact Statement Contract for the Hudson River Project - Dewberry Engineers, Inc.

On June 4, 2015, NJDEP procured the services of Dewberry Engineers, Inc. through an existing NJ Transit Task Order Contract (NJ Transit Contract No. 13-002D Environmental Consulting Services Task Order Contract) for \$8,587,526.68 to perform a feasibility study and complete the federally required Environmental Impact Statement. Dewberry has retained the Office of Metropolitan Architecture (OMA) and SCAPE Landscape Architecture PLLC and nine other sub-consultants/subcontractors to contribute to the project. See Dewberry's technical proposal for details. **(Attachment 1 - Dewberry Technical Proposal)**

2. Feasibility Study; Environmental Impact Statement; Design; and Construction Administration Contract for the New Meadowlands Projects - AECOM Technical Services, Inc.

On October 7, 2015, NJDEP procured the services of AECOM Technical Services, Inc., to provide a feasibility study, environmental impact statement, permitting, professional engineering design and construction administration services for the New Meadowlands project.

This is a term contract. The estimated cumulative amount of work performed under this contract is expected to exceed \$5 million dollars.

The request for proposal and award information is available on the Sandy Transparency website: <http://nj.gov/comptroller/sandytransparency/contracts/sandy/approved/contracts.html>

See **Attachment 1A** for the New Meadowlands Task Order 1.

3. Design and Construction Administration Contract for the Hudson River Project - Under Development

The Design and Construction Administration Contract for the RBD Hudson River project is currently being developed. Elements of this contract will be based on the Design and Construction Administration scope of work, contract requirements, and deliverables outlined in the New Meadowlands Feasibility; Environmental Impact Statement; Design; and Construction Administration RFP described above.

4. Construction Management Firm Contracts - Awarded, Selection Determination in Process.

The State intends to utilize Term Contracts to retain Construction Management Firms (CMFs) to assist with both RBD projects. This contract will be an Indefinite Delivery Indefinite Quantity (IDIQ) contract for the CMF services specified in the Request for Proposal (RFP). The CMFs are expected to provide professional, technical, administrative and clerical personnel as needed for day-to-day oversight of the feasibility/EIS and design projects with an emphasis on meeting goals relating to schedule, budget, scope and quality. The CMF will coordinate with the Consultant as necessary, and will be responsible for:

- Reviewing all deliverables produced by the feasibility study, design and construction administration contractor, and confirm product is complete;
- Reviewing and reporting on project schedule and project budget;
- Producing additional engineering that might be required to meet the project goals and not already part of the feasibility study and design contract;
- Reviewing feasibility, design and construction oversight contractor invoices for completeness and contract compliance; and
- Reviewing and ensuring compliance with federal and state labor standards, reporting requirements, Davis Bacon, Section 3, and other regulations.

The CMF contract is a term contract with work orders written for the various phases of the work. It is anticipated that the contract will be used through feasibility/EIS and design phases of the projects. The RFP was released for bid in October 2015.

The request for proposal is available on the DPMC website:

<http://www.state.nj.us/treasury/dpmc/Projects/Major/IDIQ%20RFP%20CMF%200003%20OSC%20comments%20rev%2010%2016%2015.pdf>

See **Attachment 1B** for the CMF RFP

See **Attachment 1C** for the RBD Hudson CMF Work Order for Feas/EIS Phase and Addendum A.

II. SCOPE OF WORK REQUIREMENTS:

The Monitor must be able to perform all of the following tasks without duplicating or recreating the CMFs' efforts.

Task A: Attend a kick-off meeting with representatives from NJDEP, Treasury and other key participants to discuss the tasks and deliverables required under this work assignment. The Monitor shall document and provide minutes of the meeting to the State Contract Manager within ten (10) business days of the meeting.

Task B: Review NJDEP's financial, procurement and administrative processes for the contracts listed in this engagement query.

1. Ensure that these functions adhere to all grant/assistance program guidelines, procurement rules, and reporting requirements. Ensure that there are proper controls in place to minimize the risk of duplication of benefits, process and payment errors, waste, fraud, abuse, malfeasance and mismanagement of funds.
2. Verify that each contract is, or was, procured in accordance with all federal, State, and local laws, regulations and ordinances.
3. If weaknesses, gaps or errors are detected, develop recommendations and strategies to ensure maximum federal recoveries, compliance with all laws, and prevention of associated risks.

Report findings to NJDEP and copy the State Contract Manager.

Task C: Review the CMFs' plans for day-to-day oversight of the feasibility/EIS and design projects.

1. Verify that the CMFs' plans for deliverable review, schedule and budget reporting, invoice review, administrative assistance, and engineering support is sufficient and complies with all federal, State, and local laws, regulations, and ordinances, as they are applicable to the program. Ensure that plans meet all requirements listed in the CMF RFP.
2. If weaknesses, gaps or errors are detected, develop recommendations and strategies to ensure maximum federal recoveries, compliance with all laws, and prevention of associated risks.

Report findings to NJDEP and copy the State Contract Manager.

Task D: Review the **invoice and** payment process and contract deliverables for the CMF contract(s).

1. Verify that each **invoice and** payment is consistent with applicable all federal, state, and local laws, and that there is no duplication of benefits, process and payment errors, waste, fraud, abuse, malfeasance or mismanagement of funds.

2. Verify that all CMF contract deliverables are provided, and within acceptable timeframes for the duration of the engagement.
3. If weaknesses, gaps or errors are detected, develop recommendations and strategies to ensure maximum federal recoveries, compliance with all laws, and prevention of associated risks.

Report findings to NJDEP and copy the State Contract Manager.

Task E: Provide ongoing quality assurance/quality control reviews for the duration of this engagement.

1. Continue oversight and reviews for the length of the engagement.
2. Provide ongoing guidance and problem resolution to support compliance with all federal, state, and local laws as necessary.

Report findings to NJDEP and copy the State Contract Manager.

Task F: Provide deliverables as set forth in this engagement query.

III. DELIVERABLES

The contractor must ensure compliance with the following:

A. Required Timelines

1. Task A, documenting and providing meeting minutes, is required to be completed within ten (10) business days of the kick-off meeting.
2. Task B, reviewing NJDEP's financial, procurement and administrative processes, is required to be completed within sixty (60) business days of the kick-off meeting.
3. Task C is required to be completed within sixty (60) business days of the CMF's plan approval.
4. All other tasks shall be performed on an ongoing basis for the duration of this engagement, and may have completion dates assigned by Treasury.

B. Required Reports and Documents

1. Findings of potential fraud, malfeasance, or criminal activity

Upon a finding of a likely criminal violation or lesser degree of any malfeasance, waste, fraud, or abuse, report findings to the Sandy Fraud Task Force: sandyfraud@njdcj.org immediately, consistent with the requirements of the Law.

2. Monthly Status Reports

Provide update on activities conducted on, or for, each task to include the type of activity, analysis, results, recommendations, resolutions, and/or preventative measures, and follow up on any previous outstanding issues. Provide monthly status reports to the State Contract Manager: IntegrityOversightMonitor@treas.nj.gov.

3. Quarterly Report (**Attachment 2**)

On the first business day of each calendar quarter, the Monitor shall provide to the State Treasurer, for distribution to the Legislature and the Governor, a report detailing the Monitor's provision of services during the three-month period second preceding the due date of the report and any previously unreported provision of services, which shall include, at a minimum, detailed findings

concerning the Monitor's provision of services and recommendations for corrective or remedial action relative to findings of malfeasance and inefficiency. The report shall include a privilege log, which shall detail each denial of sensitive information that the Monitor exercises in preparing the report for transmission to the Legislature and the Governor pursuant to this subsection. The report shall not include any information that may compromise a potential criminal investigation or prosecution, or contain proprietary information.

4. Time Logs

Copies (and, upon request, originals) of signed time logs shall be maintained by the Monitor and shall include information on the allocation of hours worked by the Monitor and staff to the respective federally-funded programs and all other data required in order to ensure compliance with all federal requirements.

IV. OTHER CONTRACTOR REQUIREMENTS

The Monitor shall comply with all of the terms, including pricing, of its State contract (contracts G-9004 or T-2939, as applicable), the applicable provisions of the New Jersey Standard Terms and Conditions, and the associated Method of Operation for the selected contracts. For the purpose of this engagement, the contractor's indemnification is subject to the provisions and limitation outlined in Section 5.17.1 within Contract T2939

If it becomes necessary for the Monitor to substitute a subcontractor, add a subcontractor or substitute its own staff for a subcontractor, the contractor shall forward a written request to the State Contract Manager in accordance with RFP 14-X-23110 section 5.7, and the State of NJ Standard Terms and Conditions sections 5.8 and 5.9.

Contracts are available on the Department of the Treasury, Division of Purchase and Property website:

Contract G9004 http://www.state.nj.us/treasury/purchase/noa/contracts/g9004_13-r-23144.shtml

Contract T2939 http://www.state.nj.us/treasury/purchase/noa/contracts/t2939_14-x-23110.shtml

V. LENGTH OF ENGAGEMENT

Because the duration of the RBD contracts are expected to exceed the terms of T2939 and G9004, contractors must bid a firm, fixed price to cover the cost of integrity oversight monitor services until the end of the RBD engagement.

This engagement will begin once task orders are issued, and will end when all deliverables have been met and accepted by the State. However, if at any time, the State deems the projects infeasible, the IM engagement will end. In addition, the State shall have the right terminate the IM engagement at any time, in whole or in part, for the convenience of the State, upon no less than thirty (30) days written notice to the Monitor. In such event, the Monitor will be compensated for work performed in accordance with this Engagement Query, up to the date of termination. Such compensation may be subject to adjustments.

Contract	Procurement Date	Expected Completion Date
Hudson River Project		
RBDH Feasibility/EIS - Dewberry	June 2015	June 2017
RBDH Design/Construction Admin <i>This is a single contract that will be used for two distinct phases of the project. The timeline presented shows where that break in function is expected to occur.</i>	November 2016 and January 2019	January 2019 and September 2022
New Meadowlands Project		
RBDM Feasibility/EIS/Design/Construction Admin - AECOM	October 2015	October 2021
Meadowlands and Hudson Projects		
RBDH&M Construction Management Firm (CMF)	November 2015	September 2022

See **Attachment 2A** for New Meadowlands project schedule.

VI. CONFLICT OF INTEREST

Any person with CDBG, FEMA and other federal grant program responsibilities, decision-making power or information may not obtain a financial interest or benefit from CDBG, FEMA and other federal grant program activity or have any interest in the RBD contract(s) or subcontract(s).

VII. CONFLICT FOR FUTURE ENGAGEMENTS

The Department of the Treasury will determine, on a case-by-case basis, if the Monitor will be eligible to receive additional integrity monitoring engagements. If it is determined that award of this engagement presents a conflict of interest for participation in future engagements, the Monitor will be precluded from accepting subsequent Engagement Queries.

VIII. PROPOSAL CONTENT

The contractor shall provide a detailed proposal with a detailed budget to perform the SOW in this engagement to:

Roseann Koval
Integrity Oversight Monitor Liaison
IntegrityOversightMonitor@treas.nj.gov
by 5 p.m. on February 19, 2016

Questions related to this engagement query must be submitted to:

Roseann Koval
Integrity Oversight Monitor Liaison
IntegrityOversightMonitor@treas.nj.gov
by 12:00 noon on January 22, 2016

Note: Use the attached template to submit questions. The compilation of all questions and answers will be sent to the monitor pool prior to the engagement query response due date. **(Attachment 3)**

If the contractor is unable to bid because of a conflict of interest or scheduling, the contractor must provide notice to Treasury within **three (3)** business days of the receipt of engagement query.

The contractor's proposal must contain the following elements:

1. A detailed proposal including a detailed budget to perform the SOW. The proposal must explain how the contractor intends to accomplish each task listed in the SOW.
2. A schedule that shall identify the performance milestones and associated deliverables to be submitted as evidence of completion of each task and/or sub-task within the timeframes established in this engagement query.
3. A description of CDBG, FEMA, and other federal program consulting experience on similar projects that demonstrates knowledge of eligibility, documentation and procurement requirements
4. A detailed list of all engagements, contracts or task orders in which the firm is currently providing services for any type of disaster recovery assistance. The list must include the name of the contracting entity, a description of the scope of services and the contract term.
5. Identification of all subcontractors to be utilized for this engagement, and a summary of their experience. This list of subcontractors must be the same as those identified in the original proposal/bid.
6. Resumes of personnel proposed for this engagement by the contractor or any subcontractor.
7. A statement verifying that there has been no change to the Disclosure of Investigation and Other Actions Involving Bidder Form submitted with the contractor's original proposal or a statement explaining any changes to the information previously provided.
8. A fully completed Cost Quote **(Attachment 4)** showing the hourly rate and total number of person-hours by labor category proposed to complete each task for each contract. The year 3 hourly rates used for each labor category shall be the hourly rates, or lower than the hourly rates specified for year 3 in the contract (either G9004 or T2939).

Since the Hudson River Project and the New Meadowlands Project will have separate project numbers for reimbursement, the contractor must complete the Cost Quote allocating costs for each task between projects. Contractors are expected to bid a firm, not-to-exceed price. Costs quoted are expected to cover the term of each project.

Bidders are to include Estimated travel and direct costs for the duration of the engagement. Refer to contract T2939: 3.7 Travel Expenses and Reimbursements and Section 6.7.2 Bidders' Price Schedule; and contract G9004: 3.6 Travel Expenses and Reimbursements, and Section 6.0 Cost Proposal. (Note: Include total travel and total direct costs on **Attachment 4** in the boxes provided.)

IX. SELECTION PROCESS

The State Contract Manager, on behalf of the Treasurer or the NJDEP, will review the proposals and select the contractor whose proposal is most advantageous, price and other factors considered.

The Treasurer or NJDEP will then issue the task order(s) with a “Not to Exceed” clause to the engaged firm. Any firm may submit pricing lower than its bid price for a specific project. The firm will then be held to that lower pricing for all future engagements.

X. LIQUIDATED DAMAGES

To the extent that actions of the contractor result in failure to meet performance standards, the State may suffer damages that could be difficult or impossible to quantify. Given the significance of rehabilitation of New Jersey communities, businesses, and programs, the necessity that all resources, including resilience project grants, dedicated to the recovery from Superstorm Sandy be applied in an efficient manner, and the need to take all necessary precautions to prevent, detect, and remediate waste, fraud, and abuse, the State and the contractor agree to the specified liquidated damage amounts for late delivery of the following deliverables.

The methodology utilized to calculate liquidated damages pertaining to reviewing the financial/administrative functions and procurement process; ensuring that contract terms and conditions, and deliverables are met; verifying that payment process is consistent with applicable directives; and reporting on status are based on the assumption that failure to have these key elements in place will directly result in loss of federal funds. Also, failure to provide reports could prevent the State from taking action to rectify issues early on, and may cause harm to the public in the form of waste by the government and inefficiency in resilience projects.

Task	Deliverable	Due Date	Liquidated Damages
Task B	Review financial, procurement and administrative functions for contracts listed in this engagement query.	Within sixty (60) business days of the kick-off meeting.	\$1000 a day for each day past due date
Task C	Review CMF(s) plans for day-to-day oversight of the feasibility/EIS and design projects.	Within sixty (60) business days of plan approval.	\$1000 a day for each day past due date
Monthly Status Reports	Provide update on activities conducted on, or for, each task to include the type of activity, analysis, results, recommendations, resolutions, and/or preventative measures; and follow-up on any previous outstanding issues.	On the first business day of each month	\$1000 a day for each day past due date
Quarterly Reports	Report detailing the Monitor’s provision of services during the three-month period second preceding the due date of the report and any previously unreported provision of services	On the first business day of each calendar quarter	\$1000 a day for each day past due date

XI. NOTICE OF EXECUTIVE ORDER 125 REQUIREMENT FOR POSTING OF WINNING PROPOSAL AND CONTRACT DOCUMENTS

Pursuant to Executive Order No. 125, signed by Governor Christie on February 8, 2013, the Office of the State Comptroller (OSC) is required to make all approved State contracts for the allocation and expenditure of federal reconstruction resources available to the public by posting such contracts on an appropriate State website. Such contracts are posted on the New Jersey Sandy Transparency website located at:

<http://nj.gov/comptroller/sandytransparency/contracts/sandy/>

The contract resulting from this engagement query is subject to the requirements of Executive Order No. 125. Accordingly, the OSC will post a copy of the contract, including the engagement query, the winning Bidder's proposal and other related contract documents for the above contract on the Sandy Transparency website.

In submitting its proposal, a Bidder may designate specific information as not subject to disclosure. However, such Bidder must have a good faith legal and/ or factual basis to assert that such designated portions of its proposal (i) are proprietary and confidential financial or commercial information or trade secrets or (ii) must not be disclosed to protect the personal privacy of an identified individual. The location in the proposal of any such designation should be clearly stated in a cover letter, and a redacted copy of the proposal should be provided.

The State reserves the right to make the determination as to what is proprietary or confidential, and will advise the winning Bidder accordingly. The State will not honor any attempt by a winning Bidder to designate its entire proposal as proprietary, confidential and/or to claim copyright protection for its entire proposal. In the event of any challenge to the winning Bidder's assertion of confidentiality with which the State does not concur, the Bidder shall be solely responsible for defending its designation.

XII. ATTACHMENTS

Attachment 1: Dewberry Engineers Technical Proposal

Attachment 1A: New Meadowlands Task Order 1

Attachment 1B: CMF RFP

Attachment 1C: RBDH CMF Work Order for Feas EIS Phase and Addendum A

Attachment 2: Quarterly Report Template

Attachment 2A: New Meadowlands Project Schedule

Attachment 3: Questions Template

Attachment 4: Cost Quote Template

Attachment 5: Statement of Assurances



Client-Focused Means Future-Focused



Final Technical Proposal for:

Rebuild By Design: Resist, Delay, Store, Discharge Project

Feasibility Study and Environmental Impact Statement

New Jersey Transit Corporation

Contract No. 13-002D

May 11, 2015

SUBMITTED BY:

Dewberry Engineers Inc.
600 Parsippany Road
Parsippany, NJ 07054
973.739.9400

SUBMITTED TO:

NJ TRANSIT
One Penn Plaza
Newark, NJ 07105

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ABBREVIATIONS

ACEC	American Council of Engineering Companies
AOC	Area of Concern
APE	Area of Potential Effects
BCA	Benefit Cost Analysis
BMP	Best Management Practice
CAC	Community Action Committee
CAG	Citizen Advisory Group
CDBG-DR	Community Development Block Grant-Disaster Recovery
CSO	Combined Sewer Overflow
CEQ	Council on Environmental Quality
DEIS	Draft Environmental Impact Statement
EIS	Environmental Impact Statement
EJ	Environmental Justice
EO	Executive Order
EDR	Environmental Data Resources
EFH	Essential Fish Habitat
EPA	United States Environmental Protection Agency
ESC	Executive Steering Committee
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FR	Federal Register
FRPC	Federal Review and Permitting Committee
GI	Green Infrastructure
GIS	Geographic Information System
HMGP	Hazard Mitigation Grant Program
HUD	United States Department of Housing and Urban Development
LSRP	Licensed Site Remediation Professional
NHSA	North Hudson Sewerage Authority
NMFS	National Marine Fisheries Service
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NHSA	North Hudson Sewerage Authority
NJAC	New Jersey Administrative Code
NJDEP	New Jersey Department of Environmental Protection
NJDOT	New Jersey Department of Transportation
NJHPO	New Jersey Historic Preservation Office
NOA	Notice of Availability
NOI	Notice of Intent

NOAA	National Oceanic and Atmospheric Administration
PIAP	Public Involvement Action Plan
RBD	Rebuild by Design
ROW	Right of Way
SHPO	New Jersey State Historic Preservation Office
SLR	Sea Level Rise
SOI	Secretary of the Interior
SOW	Scope of Work
SRIRC	Sandy Regional Infrastructure Resilience Coordination
SWMM	Storm Water Management Model
T&E	Threatened & Endangered Species
TCT	Technical Coordination Team
USACE	United States Army Corps of Engineers
USFWS	United States Fish & Wildlife Service
WWTP	Wastewater Treatment Plant

Section 1: Understanding of the Project



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Understanding of the Project

The municipalities of Hoboken, Weehawken, and Jersey City were no stranger to the devastation wrought by Superstorm Sandy in October 2012. With half of Hoboken flooded for several days, emergency services were unavailable, residents were evacuated, and the National Guard was deployed to rescue those who could not escape the storm's wrath in time. The magnitude of Sandy's devastation in Hoboken, primarily attributed to a record-breaking storm surge during high tide, has somewhat dimmed the fact that little precipitation fell during that storm. Had matters been different, Hoboken's past history of flooding during heavy rainfall events indicates the entire city could have been inundated for days.

To address the vulnerabilities so effectively demonstrated during Superstorm Sandy, the United States Department of Housing and Urban Development (HUD) launched a Rebuild by Design (RBD) competition inviting world-class talent to partner with communities in crafting pioneering resiliency solutions. The winning proposal for Hoboken was developed by the Office for Metropolitan Architecture (OMA), who created a strategy entitled, "Resist, Delay, Store, Discharge: A Comprehensive Strategy for Hoboken," which can effectively prevent frequent flooding due to storm surge, high tide, and heavy rainfall. HUD awarded \$230 million to the State of New Jersey for the "Resist, Delay, Store, Discharge: A Comprehensive Strategy for Hoboken," project (Project) in the municipalities of Hoboken, Weehawken, and Jersey City.

The purpose of the Feasibility Assessment, which is the subject of this proposal, is to investigate the constructability, viability, and environmental impacts of the improvements included in the OMA proposal. Those improvements include terraced edges, bulkheads, and deployable flood walls to *resist* storm surges; parkland/terraced edges, green roofs, and bioswales to *delay* runoff; cisterns, bioretention basins, and constructed wetlands to *store* runoff; and pump stations and sewer networks to *discharge* runoff.

The Dewberry team, which includes OMA, will further investigate the types of mitigation measures that can be considered for Hoboken, and will evaluate specific locations for each concept. Design factors such as utility impacts,

subsurface soil conditions, right-of-way impacts, traffic/pedestrian flow, and construction cost will be evaluated for each concept in order to narrow the focus on practical alternatives that can be discussed and evaluated in the context of an Environmental Impact Statement (EIS), which will enable all stakeholders to agree on a recommended alternative for construction.

HUD's award comes in the form of Community Development Block Grant-Disaster Recovery (CDBG-DR) funds which require compliance with the National Environmental Policy Act (NEPA) and its associated regulations as outlined in 24 CFR 58. When not otherwise accounted for by HUD's regulations, the project is also subject to the Council of Environmental Quality (CEQ) NEPA regulations at 40 CFR parts 1500-1508. HUD has further outlined the Project's environmental review compliance requirements in Federal Register (FR) notice 79 FR 62182, published October 16, 2014. The NJDEP is the responsible entity for the implementation of the Project and its environmental review compliance.

Based on the scope of the proposed improvements, we understand that the Project will require an EIS pursuant to HUD requirements. The EIS will demonstrate the Project's compliance with the environmental laws and authorities as stated in HUD regulations (24 CFR 58.5 and 58.6), including compliance with the National Historic Preservation Act (NHPA) of 1966, Floodplain Management and Wetland Protection Executive Orders (EOs) 11988 and 11990, Environmental Justice EO 12898, the Coastal Zone Management Act of 1972, and the Endangered Species Act of 1974.

The cultural resources analyses conducted as part of the EIS also must be prepared in compliance with Section 106 of the NHPA. Section 106 requires federal agencies to identify and assess the effects of their actions on historic properties. As part of this process, consultation with appropriate state and local officials, Indian tribes, and members of the public is required in order to consider their views and concerns about historic preservation issues when making final project decisions. To satisfy the requirements of Section 106, we will conduct a cultural resources study, including limited archaeological testing and architectural survey, in order to

identify historic properties and assess potential impacts that may result from the proposed Project.

HUD requires that all grant funding be obligated by September 30, 2017 and expended by the grantee within two years of obligation as stated in HUD's third funding allocation at 79 FR 62182. To accommodate this schedule we will use a streamlining process to have the environmental review process complete in the most expeditious manner to allow for subsequent phases of the Project to be completed by the funding deadline.

The Project is a "Covered Project" as outlined in 78 FR 69104 Section VI.2.g, published November 18, 2013. Covered Projects are major infrastructure projects that involve a total project cost of \$50 million or more, including \$10 million of CDBG funding, or projects located within two or more counties. Covered Projects also include two or more related infrastructure projects that have a combined total cost of \$50 million or more, including \$10 million in CDBG funding. The subject Project, which is anticipated to receive \$230 million in CDBG funding, is a Covered Project. This classification places additional requirements on the Project's Action Plan Amendment process, as identified in 78 FR 69104.

It is anticipated that the Project will require the preparation and publication of at least one substantial Action Plan Amendment, pursuant to 79 FR 62182 Section VI.4.f. This substantial amendment must be submitted subsequent to the completion of the Draft Environmental Impact Statement (DEIS) and must include a 30-day comment period and a public hearing. To streamline the NEPA and Action Plan Amendment process as recommended in the FR notice, the public meeting for this substantial Action Plan Amendment and the public hearing for the DEIS will be combined.

HUD requires additional substantial Action Plan Amendments be submitted any time the scope of a Covered Project changes whereby the changes to the project call for a re-allocation of more than \$1 million. It is not anticipated that this will occur prior to the submission of the DEIS; however, should this occur, Dewberry will coordinate with NJDEP to allow for the substantial Action Plan Amendment's public meeting to be held at one of the proposed NEPA public meetings. We understand that

NJDEP will prepare and disseminate any substantial Action Plan Amendment necessary.

A critical component to meeting this schedule will be the early identification and management of key project stakeholders and risk factors. Frequent communication with a long roster of stakeholders will help minimize project risks and pave a smoother path towards a more resilient and sustainable Hoboken. The purpose of the Feasibility Assessment is to identify risk factors such as project costs, environmental impacts, constructability, etc., and evaluate each design alternative's impact on those factors. This scope of work outlines the tasks that will be required to meet the Project goals. It will be challenging to integrate a flood risk reduction system proposed by OMA as part of the RBD proposal within the dense urban built condition in the municipalities of Hoboken, Weehawken, and Jersey City. The underlying geology consisting mostly of fill with high levels of groundwater within these municipalities adds another level of complexity for reducing flood risks. Hoboken and its neighbors have taken steps to identify and plan resilience measures within their communities. It is our understanding that any new major development project will have to meet or exceed FEMA's floodplain construction standards. It will be important to coordinate with major projects in the study area, including NJ TRANSIT's Hoboken Long Slip Flood Protection Project, which was awarded \$146.5 million by the Federal Transit Administration; and will be advanced concurrent with the RBD.

Another key component of this flood risk reduction project will be to verify that the project blends in with the surrounding urban fabric. Urban design aspects such as open space, waterfront access, and choice of flood risk reduction options for multipurpose uses will play a key role to get community acceptance.

Streamlining the Environmental Process

Streamlining is a process that recognizes the benefits of effective and successful coordination as a basis of improving cooperation among the Project's many stakeholders. Stakeholders in this case will consist of state and local officials (Executive Steering Committee), state and federal subject matter experts in resilience, planning, environmental review, and permitting (Coastal Hudson County Technical Coordination Team), and community organizations and

interested members of the general public (Community Action Committee). This will be a foundation of the Project’s NEPA review. The streamlining process seeks to identify project priorities, agree upon standards, and encourage open dialogue among stakeholders. To achieve successful streamlining, shared and agreed-upon general principles are paramount to meeting desired goals.

A key component of this process is for all stakeholder groups to define their respective roles as early in the process as possible. Each of the stakeholder groups should come to the table with an open mind, prepared to work to find an acceptable – though not necessarily perfect – solution that is compatible to each group’s mission and the Project’s purpose and need. Issues and conflicts should be addressed and resolved in an expeditious manner as they are identified. Furthermore, and critical to the overall process, at major Project milestones, stakeholder groups must participate in a formal consensus process, thereby verifying mutual understanding and compromise on the Project’s progress. After each formal consensus point, it is recommended that stakeholder groups strive to reach agreement to minimize the need to revisit milestones unless substantive new information is identified that warrants reconsideration. This will preserve the value of the process and support the Project proceeding within its projected timeline. The streamlining will facilitate the NEPA process as shown in the flow chart below. Below is a discussion of the anticipated milestones.

Notice of Intent, Purpose and Need, Scoping, Data Gathering, and Concept Development

The NEPA process milestones at the beginning of the project include the Notice of Intent (NOI), Purpose and Need, Scoping, Data Gathering, and Concept Design. Three major components will inform the NEPA process—engineering concepts, analysis of environmental impacts, and community input. We will advance the three components simultaneously with the goal of developing and selecting a preferred alternative.

The NEPA process will commence at the publication of the NOI. Based on recent HUD guidance, the NOI is anticipated to be published up to 60 days from the Notice to Proceed. Once published, the framework for Public Scoping will be developed. This meeting will be held 15 days after the publication of the NOI. We assume that two rounds of Purpose and Need meetings will need to be held in order to establish reach consensus on the Purpose and Need. The Purpose and Need Statement will form the basis for considering the alternatives. It will have three parts: The Purpose, the Need, and Goals and Objectives. The Purpose will address resiliency concerns for flood protection. It will briefly state the overall positive outcome that the Project is expected to create and be a focused succinct statement that will accommodate a multitude of solutions. The Need will provide the factual data and performance measures, such as infrastructure damage, sewer over capacity data, private property damage, etc., along with the latest planning information to support the Purpose. The Goals and Objectives will describe other issues that need to be resolved as part of a successful solution to the problem and will

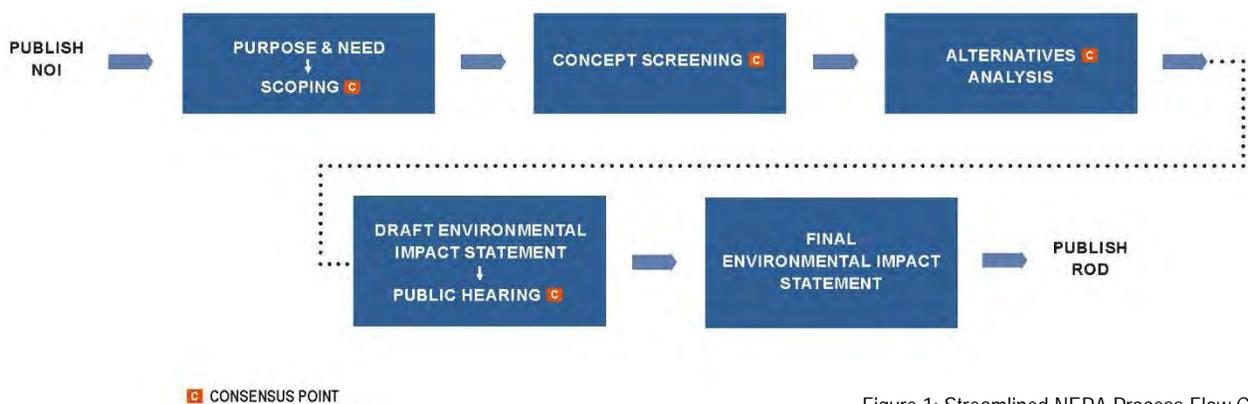


Figure 1: Streamlined NEPA Process Flow Chart

balance the community and environment with the resiliency needs. The Purpose and Need will address concerns including, but not limited to, surge reduction, FEMA accreditation, and insurance relief.

The Purpose and Need will be carried forward into the Scoping Meetings, where concurrence on the draft Purpose and Need will be made. Concurrence is critical, as the Project's Purpose and Need will shape the Concept Design, Alternatives Analysis, and ultimately the Preferred Alternative. Full participation amongst the stakeholder groups, as well as the environmental and engineering team, will allow for these project milestones to be met. We will develop a Draft Scoping Document including scoping meeting agendas, presentations, and documents. An executive summary of this document will also be prepared. These materials will be publically available prior to meetings to inform meeting participants. After the Scoping Meeting is conducted, we will finalize the Scoping Document which will summarize the Project background and data gathered to date, and the agreed-upon Purpose and Need Statement.

Data gathering will proceed concurrently with the development of the Purpose and Need. Our environmental and engineering design teams will work closely during the data gathering phase; each team's research will provide key insight to help guide the concept design process, as framed by the Purpose and Need. We anticipate the data gathering phase to take approximately three and a half months.

Concept Screening

As we develop the project concepts, we will be working closely with the public, including local officials, citizenry, agencies, and other stakeholders to evaluate the impacts of those concepts on the environment, as well as to evaluate the overall cost and feasibility of each concept.

The culmination of the concept development phase will be an evaluation of the concepts through a screening matrix as part of a workshop setting. The concept screening matrix will be developed with input from stakeholders as well as the public. The matrix will include criteria such as Purpose and Need, flood risk reduction, environmental constraints (including but not limited to ROW acquisition, cultural resources, hazardous waste, and environmental justice), community interests, constructability, design criteria, and construction

cost. In the concepts screening workshop meetings, subject matter experts and stakeholders will evaluate concepts and rank the impacts of the concepts. The goal of the concept screening workshops will be to winnow the design concepts to those that meet the project Purpose and Need, minimize impacts, and are cost effective. At the conclusion of the concept screening workshops, we will select three Build Alternatives to advance into the EIS process. These three Build Alternatives (as well as the No-Build Alternative) will be analyzed as part of the EIS.

Alternatives Analysis and Data Gap Surveys

Once the three Build Alternatives are determined, additional surveys and further analysis will be conducted to further refine the environmental constraints and impacts of each Build Alternative. The environmental evaluation will address impacts to such factors as floodplain and wetlands, threatened and endangered species, cultural resources, air quality, noise, environmental justice, land use, hazardous waste, infrastructure, and visual concerns. As required by Section 106, the New Jersey Historic Preservation Office (NJHPO) will be consulted on potential impacts to historic properties. These analyses will be included in and contribute to the overall compilation of the Draft Environmental Impact Statement (DEIS), which represents the culmination of all these efforts dating back to the beginning of the project (Scoping, development of Purpose and Need, existing conditions, shortlisting and evaluation of affected environment).

These analyses, coupled with concurrence from agencies and the public, will assist in the creation of an alternatives analysis matrix. This matrix will be developed using the refined data that is gathered during the Data Gap surveys. As with the concepts screening process, the three Build Alternatives will be compared using this comprehensive matrix, the outcome of which will be the selection of the Preferred Alternative.

DEIS and Public Comment

The DEIS will include a description of the entire environmental review process and will present the findings of the existing conditions and data gathering studies, the results of the environmental impact and feasibility analyses, and the extensive public participation effort described below. The DEIS will present the reasons why the Preferred

Alternative was selected over the other Build Alternatives generated during the project. The preparation of the DEIS will overlap the previous tasks; overall it will take approximately seventeen months to compile. It is anticipated that Dewberry will submit the DEIS to NJDEP for two weeks of review, after which it will be presented in one round of regulatory agency meetings for pre-draft comment. The comments will be incorporated into the DEIS, after which the DEIS will be submitted for 90 days of general public comment in accordance with 40 CFR 1506.10(b)(1). We will hold a public hearing on the DEIS 15 days after its publication. The notice of EIS availability will be published by HUD prior to making the document available for public comment.

As mentioned earlier, we understand that the substantial Action Plan Amendment as required by 79 FR 62182 Section VI.4.f will be prepared by NJDEP; however, the content of the amendment will rely on the analysis and information presented in the DEIS. In addition, to facilitate the streamlining process, the public hearing required for the substantial Action Plan Amendment will be held at the DEIS public hearing.

Final Environmental Impact Statement and Record of Decision

Comments received during the DEIS publication period will be addressed and incorporated into the Final Environmental Impact Statement (FEIS). The FEIS will be published for a 30-day comment period, per 40 CFR 1506.10(b)(2). This will lead to the issuance of the Record of Decision (ROD), which identifies the Preferred Alternative, describes why that option was selected over the other project alternatives, and provides options on ways to mitigate and alleviate environmental impacts resulting from the Project. The overall public comment periods for this phase of the Project are anticipated to occur over a two-month period.

Section 2: Technical Response



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Technical Response

Task 1: Data Collection and Mapping, and Public Involvement

A. Existing Data

We will begin by collecting and reviewing pre-existing data for this project. The pre-existing data will include the visioning work developed in the “Resist, Delay, Store, Discharge” proposal, the City of Hoboken’s continuing resiliency efforts including the Hoboken Yard Redevelopment Plan, and technical studies conducted for areas of the City of Hoboken, including the information gathered for the Hudson-Bergen Light Rail.

In conjunction with gathering and evaluating the pre-existing data, we will investigate the site conditions. The development of site conditions will include multi-discipline efforts occurring concurrently. We will compile this information (pre-existing data and present site conditions of the study area) into a draft report which will also be the first section of the EIS. The study area is anticipated to include the City of Hoboken, the northern portion of Jersey City, and the southern portion of Weehawken that abuts the City of Hoboken. The study area will be revised as the project progresses.

It should be noted that the RBD proposal identified over 50 potential locations for *Delay*, *Store*, and *Discharge* within the study area. It is our understanding that the State of New Jersey’s Scope of Work (SOW) requires identification of additional potential locations for *Delay*, *Store*, and *Discharge* other than those identified by the RBD proposal. Since the number of potential locations can be extensive, we made an assumption to limit our total number of potential locations to 76 sites for *Delay*, *Store*, and *Discharge*. We also made an assumption that the total area of disturbance from these 76 sites will be restricted to 76 acres and that this project will not include the acquisition of land.

Below is a discussion of the data gathering effort by discipline; our evaluation will include the data gathered during the RBD competition.



Figure 2: Study Area

Natural Resources

We will gather and review relevant pre-existing data regarding the presence of natural resources in the project area, including the NJDEP GIS database of freshwater and coastal wetlands, floodplain maps, and soils maps to identify potential areas of concern and their associated constraints. In addition, we will identify the existing natural features within the project area, including areas of open water, the littoral zone, flood hazard areas, the Mean High and Spring High Water elevations at the shoreline and the intertidal/sub-tidal shallows zones. Since it is anticipated that a coastal *Resist* element will be included in the Build Alternatives, and will involve impacts to wetlands and/or open waters, we will delineate coastal shoreline wetlands that are not bulk headed, in accordance with NJDEP and USACE standards, for subsequent survey and mapping. We will review existing tidelands conveyances from the NJDEP Bureau of Tidelands, as well as those areas that have been filled, but do not have an existing tideland grant, lease, or license. We also will review historical aerial photographs and topographic maps to identify the historic wetland areas and

stream channels that previously existed in the western portions of the City of Hoboken. These areas may be suitable for various green infrastructure features.

Additionally, we will send requests for database searches to the NJDEP and the US Fish & Wildlife Service (USFWS) for records of rare/threatened & endangered (T&E)/special concern species or their habitats, as well as to the National Marine Fisheries Service (NMFS) for information regarding fisheries resources within the project area. Based on a preliminary review, the Hudson River in this area is mapped as habitat for the federally endangered Shortnose Sturgeon (*Acipenser brevirostrum*), so timing restrictions for certain construction activities in the open waters would be expected. If other species or habitat records are identified within the project area, we will verify, to the extent practicable, whether those resources are present while performing a field assessment of the project area. If more detailed studies are required, we will inform the NJDEP of the need for those studies, which could be provided as an out-of-scope extra work item. If data gaps are identified in the existing, available data, we will provide recommendations as to whether the data is critical for future analysis and how the missing information can best be obtained under a separate authorization. The information gathered during the data review process will be included in the EIS and used in future phases including the securing of permits.

Aquatic Ecology

The *Resist* studies to be conducted may result in a finding that a shoreline protection feature is necessary to provide flood protection for the City. A revetment or other structure along the shoreline may result in impacts to the shallow waters of the existing Hoboken waterfront. Therefore, as requested by the NMFS, the existing aquatic ecology of this shoreline area will be evaluated. We will conduct a review of available desktop GIS data and web-based resources associated with the aquatic resources of the area; we will request letters from the following agencies:

- NJDEP Natural Heritage Program for T&E species and critical habitat; and
- NMFS for marine species/habitats in the project area.

In addition, the project area will be reviewed for Essential Fish Habitat (EFH), as required by NMFS.

We will conduct a desktop review of available GIS data and web-based resources to identify the aquatic resources of the area. This will include a review of the USFWS Information, Planning and Conservation System (IPaC) for species and critical habitats, as well as the NMFS on-line EFH Viewer. We also will prepare database request letters to the NJDEP and NMFS for information on T&E species and critical habitats in the project area.

An EFH review will be conducted to evaluate the shoreline area for use by aquatic species to determine if portions of the shoreline area may be identified as EFH. We will conduct a site visit and inspect the project area in regard to any EFH identified. The inspection will be conducted at low tide during fair weather conditions (minimal winds) to allow for the best viewing conditions. We also will evaluate the project area in terms of its water depth, clarity, and site disturbance conditions. A Secchi Disk will be used to measure water clarity, and the depth within the project area will be sounded in at least four locations from the bulkhead along the shoreline.

Socioeconomic, Land Use and Environmental Justice

Data collection for the Socioeconomic, Land Use, and Environmental Justice (EJ) analysis will include: population and income data, land use data from existing sources, and tax information. Additionally, a review of the Hoboken, Weehawken, and Jersey City Master Plans and zoning will be reviewed and summarized. Using GIS tools for analysis and mapping, census block groups and blocks that fall within the project area will be identified. Socioeconomic data will be compiled and presented in tabular formats, and mapped thematically to identify populations and affected communities. Our analysis will also identify open space (local, county, state, and federal parkland), as well as identify local land use patterns. The open space and land use patterns will be compiled through GIS data layers, Recreation Open Space Inventory (ROSI), and field verification. As part of this analysis, we will evaluate view corridors, building character, local landmarks and overall community character. Field reconnaissance surveys and interviews will be conducted to supplement and/or corroborate the findings of public documents, maps, and GIS data.

The EJ analysis will focus on low-income, minority, and Hispanic communities pursuant to Executive Order (EO) 12898. Our analysis will evaluate the presence of EJ populations based on the 2010 US Census and if potential displacements or other direct or indirect impacts would disproportionately affect these populations.

Additionally, socioeconomic data collection will include:

- Mod IV data for property assessments and characteristics. These data are available from New Jersey Department of the Treasury.
- A GIS shapefile that shows the parcels in Hoboken, and includes property characteristics such as zoning, land use, etc.
- Records of property transactions since 2000 in Hoboken.
- Planning studies, economic development studies, housing studies, and other studies that identify the location of low and moderate income populations.
- Information on the revenue, profitability, or employment levels at area businesses, if available.
- The location of public housing projects and other low- and moderate-income populations within the City.
- The location of residents using Section 8 housing vouchers, if available from HUD.

Circulation

We will prepare a schematic plan of the local road and transportation network that can be expected to be affected or involved with the Project. Subject to concurrence by NJDEP, we have identified a network of 48 intersections, which represent the primary roadways into and out of Hoboken as well as additional primary routes that provide circulation within the City. The schematic plan will be a clear and simple presentation of the affected street segments and access routes and how they are used and by what travel modes. It will also display important City destinations that generate significant traffic demand such as parks, transportation hubs, and major private and public offices.

We will collect intersection traffic volume data for the typical AM, PM, and Saturday peak periods (three hours each) at each of the project intersections. We will also solicit related traffic, signal, and travel data from City staff, NJ TRANSIT, and other transit/shuttle service providers. Transit data will include public transportation services and facilities in the study area, including bus service, ferry service, NJ TRANSIT

passenger rail, PATH, and Hudson-Bergen Light Rail. After data are compiled, we will include in the plan detailed traffic data (modal volumes by direction, ridership for transit) for each of the travel modes. We will also solicit input from school bus service providers, emergency service providers, maintenance operators, and utility companies regarding how they use the affected street segments. Input received from these stakeholders will also be presented in the schematic plan. If necessary to convey clear information, we may need to develop more than one schematic plan to best convey the information and data.

Air Quality

Mobile-sources of air emissions will not be created or relocated as part of the Project. In addition, in order to secure funds for this project, HUD previously addressed construction-related sources required for General Conformity. Therefore, mobile-source or construction-source analyses are not necessary to determine compliance with the Clean Air Act.

Noise

Mobile-Source. Roadways will not be created or relocated as part of the proposed project therefore mobile noise sources do not need to be addressed within the EIS.

Stationary-Source. In order to discharge water, improvements include additional pumps within Hoboken. Pump stations are subject to maximum permissible sound levels established within Chapter 29 of the New Jersey Administrative Code (NJAC) 7:29 during weekly testing of emergency generators.

Construction-Source. Proposed improvements include major reconstruction of the Hoboken waterfront. Bulkheads, flood walls, and other forms of protection will require heavy, long-term construction activities. In addition, storm drain lines may be dug and installed throughout Hoboken. The New Jersey statewide noise control code (NJAC 7:29) does not regulate noise from construction activities; however, the statewide noise code includes a provision allowing municipalities to adopt a noise control ordinance, provided that the ordinance is more stringent or otherwise consistent with NJAC 7:29. Hoboken is located within Hudson County and thereby subject to the Hudson Regional Health Commission Noise Ordinance. According to this code,

construction noise is exempt during daytime hours.

However, construction activities are not permitted on private or public right-of-ways on weekdays between 6 pm and 7 am (overnight) or at any time on weekends and legal holidays unless resultant levels are at or below 50 dBA and 65 dBA during overnight and daytime hours, respectively.

Hoboken is a vibrant city and ambient noise levels within the study area are most likely at or above these noise restriction levels already. Therefore, it is considered unfair and unproductive to hold contractors to such stringent levels. Since non-emergent overnight and weekend construction activities related to this project may be necessary, it is appropriate to address construction noise by developing a project-specific construction noise level limit.

A project-specific construction noise level limit will be based on actual background noise levels and then will be used to determine an acceptable noise level limitation above baseline. By doing so, contractors will be allowed to perform necessary work while also being a good neighbor. The background noise level study will be performed in six locations and reasonable project-specific construction noise level limits will be developed and detailed within the EIS. In addition, noise levels related to two construction phases at each monitoring study will be predicted based on the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) to determine whether certain construction tasks can meet the criteria.

Vibration

The proposed project does not include improvements which would cause operational vibration concerns. However, due to the heavy, long-term construction activities related to reconstruction of the Hoboken waterfront, historic, and structurally sensitive properties, and the densely populated study area, a construction-related vibration analysis will be performed. Vibration levels will be predicted based on Federal Transit Noise and Vibration Impact Assessment procedures at four locations. Predicted vibration levels will be compared to structural damage criteria as well as perceivable and annoyance vibration level thresholds established by the Federal Transit Administration. The vibration analyses will be detailed in EIS.

Hazardous Waste

We will review various sources of data in order to identify Areas of Concern (AOCs) with regard to hazardous waste. In order to identify known environmental issues within the project area, we will perform an Environmental Data Resources (EDR) database search for the entire area. Concurrently with review of the EDR data, we will evaluate NJDEP GIS data layers for known contaminated sites within the project area. We will also conduct a project area reconnaissance to identify potential hazardous waste concerns. Additionally, historical aerials as well as Sanborn Fire Insurance Maps will be reviewed to provide a history of potential hazardous waste concerns in the project area. It is well known that most of Hoboken is underlain by historic fill material, and it can be assumed that this material contains contaminants typical of historic fill including elevated concentrations of polycyclic aromatic hydrocarbons and metals. Where the anticipated proposed improvements coincide with historic fill, it can be assumed that these typical contaminants will be encountered. Should online information indicate that contaminated sites coincide with the proposed improvements and have environmental issues beyond that of historic fill, we will complete a regulatory agency file review of the contaminated site to identify specific impacts. In cases where remediation of a site is overseen by a Licensed Site Remediation Professional (LSRP), we will contact the LSRP of Record for site specific information, if warranted.

During file reviews we will obtain NJDEP case files for projects located within the project area that may provide substantial information to limit the need for further subsurface investigation. In particular, we will review case files for the Hudson-Bergen Light Rail and Hoboken Rail Yard projects. Our team has worked on numerous sites for NJ TRANSIT within the project area and we will build upon this experience as part of our data gathering and identification of potential AOCs.

Based on this data gathering process, we will provide a summary of AOCs that represent potential environmental constraints to the proposed project. This information will be used to evaluate the need for future (out of scope) sampling of soil and/or groundwater.

Cultural Resources

As part of the data gathering task for cultural resources, we will visit several repositories to collect information from prior cultural resource studies that were prepared in the project area. We will review published secondary sources, prior architectural surveys, and cultural resource reports, as well as available maps (including National Oceanic and Atmospheric Administration [NOAA] maps) to characterize the architectural, archaeological, and maritime history of the project area. We anticipate conducting the following data gathering research: documentary and site file research at the New Jersey State Museum and the NJHPO, located in Trenton; review of historic maps and local histories available from the New Jersey State Library, located in Trenton; a review of files and information collected and maintained by other local libraries and repositories; and review of various online resources in order to collect additional information relating to the land-use history of the project area. As part of this task, we will also collect data on previously identified historic properties in the project area. Based on our initial review of NJDEP GIS data, multiple historic districts exist within the project area, including the Old Main Delaware, Lackawanna, and Western Railroad Historic District; the Southern Hoboken Historic District; the Stevens Historic District; the Central Hoboken Historic District; the South Hoboken Historic District Extension; and, the 1200-1206 Washington Street Historic District. As part of our data gathering, we will identify additional individual historic properties as well as previously identified areas of archaeological sensitivity.

Infrastructure

We will coordinate with the NJDEP, City of Hoboken, Township of Weehawken, Jersey City, and the Department of Homeland Security to identify critical infrastructure within the study area limits. During the feasibility assessment task, we will review concept options to reduce flood risks from coastal storm surge and rainfall events at these facilities. The study area is serviced by a combined storm-sewer system that collects sewer flow from buildings, combines it with stormwater runoff during rainfall events, and discharges combined flow to the North Hudson Sewerage Authority's (NHTSA's) Adams Street Wastewater Treatment Plant (WWTP). The Adams Street WWTP serves Hoboken, Weehawken, and Union City with a service area of 2.6 square miles. The WWTP collection system includes local collection

sewers, trunk sewers, and Combined Sewer Overflow (CSO) regulators, pump stations, intercepting sewers, force mains, and siphons. The figure below shows the major drainage areas that drain storm-sewer flow from City of Hoboken limits to Adams Street WWTP.

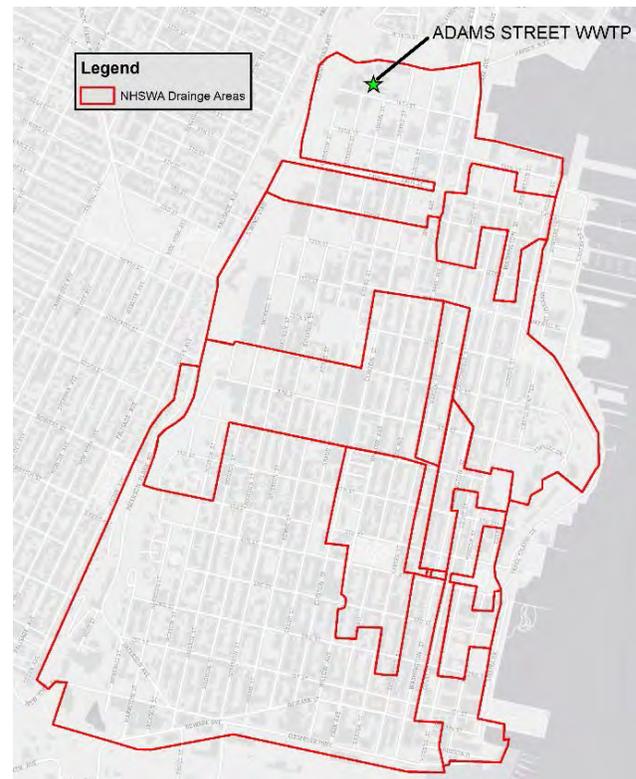


Figure 3: Major drainage areas within the City of Hoboken

We assume that NJDEP will provide us with NHTSA's detailed GIS geodatabase showing locations, inverts, and overts of the entire storm-sewer system. We assume that the NJDEP will also provide NHTSA's existing reports on their operations of the Adams Street WWTP and provide guidance on future plans to upgrade their storm-sewer system. We also assume that NJDEP will coordinate with NHTSA to schedule a site visit with our team to identify various critical storm-sewer facilities within the study area. In addition to our site visit with NHTSA, we will conduct a two-day site visit to verify

NHSA's storm-sewer geodatabase. If significant data gaps are observed between the geodatabase and ground conditions, we will inform NJDEP and NHSA about these data gaps. If needed, we will perform topographic survey to obtain information on the missing storm-sewer assets. We will limit the extent of additional topographic survey for a length of 1.5 miles and a width of 100 feet. This is part of the survey that will be carried out in the survey task described below.

Utilities

Overhead and underground utility record research will be completed by the NJDEP to identify a preliminary list of utility owners. Our preliminary investigation has identified five utility companies and it is assumed there are an additional five utility companies to be identified within the study area.

Utility companies will be contacted by the NJDEP, which will request any available as-built records. We will prepare 100-scale utility base plans to show existing surface utility facilities within the limits of the proposed sites and coastline. In addition, we will review base plans to identify any additional/modifications to their identified existing facilities. Utility company markups will be incorporated onto the utility base plans.

Survey (including Title and Mapping)

We have collected the available LiDAR topographic data and NOAA's bathymetric data for our study area (see below). We will utilize this LiDAR and bathymetric data for hydrologic and flood risk assessment task. We will collect readily available base map survey data from the City of Hoboken and other sources to develop preliminary design drawings (as part of Task 6). If data gaps are identified in available surveys, we will perform topographic survey to fill in these data gaps. We will limit the extent of additional topographic survey for a length of 1.5 miles and a width of 100 feet. This additional topographic survey will be restricted to cover the *Resist* portion of the study. We will utilize available base map surveys for the *Delay*, *Store*, and *Discharge* element of the project.

For the additional topographic survey that will be conducted by Dewberry, we will produce topographic maps at 1" = 50' scale. We will survey visible above-surface utility structures

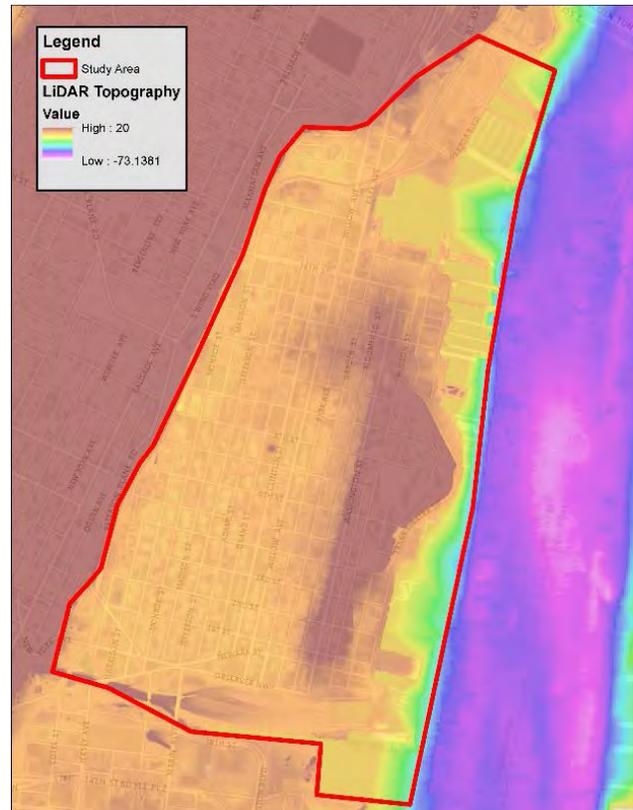


Figure 4: LiDAR topography for the Study Area

not clearly defined on the available LiDAR mapping. Structures may include, but are not limited to, manholes, traffic signals, hydrants, water valves, outfall structures etc. Surface utility locations either visible or marked out prior to the field survey will be surveyed and added to the mapping. Subsurface utility mapping supplied by others will be added to the base mapping as provided. We will not survey subsurface utilities, invert, pipe sizes, and or flow directions.

We will review ownership information compiled and supplied by the City of Hoboken tax assessors for a total of 76 properties within the project area which will include adjacent land underwater, tidelands conveyances, riparian rights (claimed or unclaimed), easements, deed restrictions, and access rights. Information provided will be mapped accordingly. These 76 properties will coincide with the number of properties identified for the *Delay*, *Store*, and *Discharge* element as described in Task 5.

Boundary and deeded information supplied by the City of Hoboken will also be reviewed and evaluated for possible impact as part of this proposal. No title searches will be included as part of this survey effort and complete boundary surveys will not be performed for these 76 parcels.

Survey support for the initial wetlands delineation activities will include the location of the wetland flags placed along the shoreline of the Hudson River. Subsequent survey tasks include the location of the wetland flagging placed in the interior portions of the City.

Floodplain Mapping

As seen from the floodplain map, the 1% annual chance recurrence interval (100-year) floodplain along Hoboken's waterfront is in the coastal VE Zone with a base flood elevation (BFE) of 16-17 feet NAVD. Inland portions of the City are within an AE zone with BFEs ranging from 10-12 feet NAVD. It should be noted that these FEMA base elevations are driven by coastal flooding alone (storm surge) and do not account for rainfall and interior drainage capacity. Hoboken's waterfront is subject to wave impacts, including wave runoff and overtopping. For the 2013 preliminary FEMA study, overland wave modeling was conducted along ten cross-shore transects to map the inland wave hazards. Dewberry has the in-house datasets from the 2013 preliminary FEMA study and we will use this data for feasibility assessment.



Figure 5: 2013 preliminary floodplain maps developed by FEMA for the study area

Visual/Aesthetic Resources

Given Hoboken's location along the Hudson River waterfront, consideration of how the proposed project may affect the community's aesthetics will be an important factor. As part of the preparation of the visual impact assessment, we will first establish a study area for potential visual effects which will be defined as the area of project visibility as determined by the physical constraints of the environment and the physiological limits of human sight. We will then conduct an inventory of visual resources in the study area, including views of the waterfront, public parks, historic buildings and districts, and natural resources.

B. Data Gap Findings

After gathering and reviewing relevant pre-existing data as well as collecting data for the preparation of the report summarizing this effort, we will identify all data gaps and recommend appropriate further action. Further studies would be conducted after the three Build Alternatives are identified and as part of the EIS preparation task, under a separate authorization.

C. Consultation with Stakeholders

As discussed in the Streamlining the Environmental Process section, we will use a streamlining process to advance the NEPA process. Formal Consensus points (further described below) will be built into the schedule.

The proposed project will involve significant local, state, and federal government coordination, in collaboration with public participation, in order to build consensus among stakeholders in the project area. NJDEP is preparing a Citizen Outreach Plan, in consultation with the Executive Steering Committee. Consistent therewith (and as detailed in this proposal), Dewberry will develop a Public Involvement Action Plan (PIAP), as a roadmap for public and inter-agency involvement.

The PIAP will be developed with the goal of conducting early and continuing outreach that will be timely in providing public notices, be broadly disseminated, and be responsive to stakeholder needs. Implementation of this plan will be a crucial ingredient in gaining support from all key stakeholders. The plan will be structured and executed through a phased approach consistent with the project phases and will be designed to meet pertinent needs and

circumstances as they are developed. The early and often coordination and the concurrence at key project milestones gained from stakeholder groups will be key to verifying that the project is able to proceed in a timely manner. It is anticipated that the PIAP will be updated twice during the course of the project.

The PIAP will assist our team in obtaining public input in the development of the concept screening process and Alternatives Screening Process. This will ultimately influence the selection of three Build Alternatives and the recommendation of a Preferred Alternative.

Public participation is an ongoing process that is closely linked and performed in conjunction with the environmental (NEPA) and engineering (feasibility) sides of the project.

A key goal of our stakeholder and public outreach process will be to gain an understanding of the community and its needs and desires in regards to the flood risk reduction system.

Stakeholders

An extensive mailing list of stakeholder groups was developed as part of the initial RBD competition. This list will be used and updated to maintain ongoing contact with the community, transfer information, and to publicize public meeting opportunities via meeting flyers and email notices. This mailing list will be provided to NJDEP and no information will be issued without prior NJDEP approval.

A database of contact information will be developed that will contain the names and addresses of project area representatives, media organizations, and representatives from the business community, as well as other stakeholders. It is anticipated that 5,000 contacts will be included in this mailing list. The list will be continuously updated as the project develops. Presently, project stakeholders include the following:

- Bike Hoboken
- Community Emergency Response Team
- County of Hudson Division of Planning
- FEMA
- Hoboken Boys and Girls Club
- Hoboken Catholic Academy
- Hoboken Chamber of Commerce
- Hoboken City Council
- Hoboken Commuter Community
- Hoboken Cove Community Boathouse
- Hoboken Day Care
- Hoboken Developers
- Hoboken Dual Language Charter School (HOLA)
- Hoboken Green Infrastructure Strategic Plan
- Hoboken Historical Museum
- Hoboken Housing Authority
- Hoboken Jubilee Center
- Hoboken Quality of Life Coalition
- Hoboken RBD Citizen Advisory Committee
- Hoboken Resident Community Hopes
- Hoboken Shade Tree Commission
- Hudson River Waterfront Conservancy
- Jersey City Division of City Planning
- Mile Mesh
- Mayor of Hoboken Dawn Zimmer
- Mayor of Jersey City Steven Fulop
- Mayor of Weehawken Richard Turner
- NJDEP
- New Jersey Economic Development Authority (NJEDA)
- New Jersey Governor’s Office of Recovery and Rebuilding
- NMFS
- NJHPO
- NJ TRANSIT
- New York Waterway
- NHSA
- Port Authority of New York & New Jersey and PATH
- Public Service Electric and Gas Company (PSEG)
- Re.Invest Initiative (Rockefeller Foundation)
- New Jersey Senator Bob Menendez
- New Jersey Senator Cory Booker
- New York Waterway
- Stevens Institute of Technology
- Together North Jersey
- USACE
- HUD
- USFWS
- Weehawken Township Council

Stakeholders will be organized into three committees that will be part of the decision-making process. We will build

upon the existing stakeholder groups developed during the RBD competition. The three committees will include:

- Executive Steering Committee (ESC)
- Coastal Hudson County Technical Coordination Team (TCT)
- Citizen Advisory Group (CAG)

The ESC will be comprised of state and local officials while the Coastal Hudson County TCT is comprised of federal, state and local officials with subject matter expertise in resilience, planning, environmental review and permitting. It was formed by the federally convened Sandy Regional Infrastructure Resilience Coordination (SRIRC) Group. Although Hoboken, Weehawken and Jersey City currently have separate CAGs, in order to foster constructive dialogue, these groups will meet together at the project CAG meetings. It is expected that the CAG will be comprised of approximately 40 people.

These committees will meet at important milestones to foster working relationships, to conduct the necessary public outreach to keep the affected communities apprised, and to verify public concurrence with each phase of the Project as it moves forward.

Below are the proposed milestones which represent important consensus points. Meetings will be held for the ESC, Coastal Hudson County TCT, and the CAG. Due to the level of interest in the Project, it is anticipated that two rounds of meetings will be held at each of the Project milestones.

In addition to the three stakeholder committee groups, the Project Manager and Subject Matter Experts (SMEs) from Dewberry will attend each meeting to help inform stakeholders and the public about technical aspects that are being addressed.

Dewberry will coordinate with NJDEP and ESC to determine when meetings will be scheduled. We will organize the meetings and prepare advance notification of meetings. We will also prepare the materials needed for each meeting, including presentation materials, sign-in sheets, and comment sheets. Materials for the meetings and hearing will be developed in consultation with NJDEP and approved by

NJDEP prior to being finalized and distributed. A stenographer will be retained for the public hearing.

Purpose and Need Meetings

The purpose of these meetings will be to obtain concurrence on the Project's Purpose and Need so that the planning of the Project can continue within the NEPA framework. Stakeholder participation and consensus on this phase of the project is of great importance, as it will facilitate the effective development of the remainder of the project. During these meetings, the design team will listen and collect concept ideas provided by the various stakeholders and subsequently review these ideas/concepts as part of the feasibility analysis.

Scoping/Data Gathering Meetings

The purpose of these meetings will be to achieve full buy-in on the draft Purpose and Need and initiate the scoping process, which will frame the Project as it moves forward. The project team will promote stakeholder coordination over the life of the Project, and identify important issues among participants. The goal of the scoping meetings is to gain consensus on the broad project goals. A summary of existing deficiencies in the Project Area will be presented by the Project Team for input by the participants. Baseline environmental data will be introduced to allow community input on areas of further study and/or concern. The meetings will also inform the stakeholders on the various disciplines that will be researched and the methods that will be used.

Screening Criteria/Metrics Meetings

These meetings will provide an opportunity for all stakeholders to help establish as well as understand what criteria will be used during the concept screening process. The goal of these meetings is to gain consensus on what constraint criteria (i.e. construction cost, ROW impacts, cultural resources, etc.) will be included in the concepts screening matrix as well as what metrics will be utilized for each constraint criteria. Dewberry's SMEs will be on hand to explain what each metric means and provide advice as to how it should be incorporated within the screening matrix. Various display materials will be used as part of the meeting, including display boards and "PowerPoint" presentations. At the conclusion of these meetings, the format for the concept screening matrix will be agreed upon.

Concepts Screening Workshops

Building upon the previous meetings, we will hold workshops to present a detailed review and screening of the concepts developed to date. A screening matrix will be presented at each meeting, with our SMEs in attendance, to explain to stakeholders how we ranked each concept based on its impacts to the areas of study. Based on input from the stakeholder groups, the rankings will be confirmed or changed. Ultimately, the workshops will conclude by ranking concepts in terms of their environmental impacts and engineering constraints. The three concepts that are ranked with the lowest impacts will be advanced for further study as the Build Alternatives.

Alternatives Analysis Workshops

The purpose of these meetings will be to present a review of the three Build Alternatives advanced for further study. An Alternatives Analysis Matrix will be developed; this matrix will be more nuanced than the concepts screening matrix in comparing the key areas of environmental and engineering constraints. The information gathered in the data gap surveys will inform the meeting participants on the impacts of each alternative. As with the concepts screening meetings, we will attend each meeting with a matrix preliminarily filled out, and our SMEs will be present to explain how we ranked each of the alternatives. The stakeholders will provide input as to whether they feel the ranking should be adjusted. The ultimate outcome of this process will be the selection of the Preferred Alternative.

Public Meetings and Public Hearing

In addition to the above stakeholder milestone meetings, there will be three Public Meetings for the general public: first meeting after the scoping meetings; second meeting after the concept screening milestone meetings; and third meeting after the alternatives analysis. A formal public hearing will be held during the DEIS comment period with a stenographer present to record public comments at the hearing. Since people may be uncomfortable presenting in front of a large assembled audience, we will make arrangements to allow people to make comments in other ways. This will help speed the meeting process while allowing for more people to submit formal comments. These meetings will be held in a location that is easy for attendees to reach (transit and ADA accessible) and at a time of day and during the week convenient for the most people. Spanish

language translators will be available. Agendas and handouts will be prepared in English and Spanish.

In accordance with the RBD program requirements as stated in 79 FR 62182, a substantial Action Plan Amendment will be required for this project. Subsequent to the completion of the DEIS, NJDEP will prepare and submit a substantial Action Plan Amendment. As part of the requirements for the Action Plan Amendment, a public meeting will be necessary to describe the Action Plan Amendment. In an effort to streamline the NEPA and Action Plan Amendment process and following what is recommended in the federal register notice, the public meeting for this substantial Action Plan Amendment and the public hearing for the DEIS will be combined.

It is not anticipated that a substantial Action Plan Amendment will be necessary prior to the submission of the DEIS; however, should this occur because the project has significantly changed, we will coordinate with NJDEP to allow for the public meeting to be held at one of the proposed NEPA public meetings.

For the public hearing the proceedings will be recorded by a stenographer, and a full transcript will be prepared. We recommend that the hearing area, wherein a technical presentation will be made and a hearing officer will then invite the public and agency representatives to make formal comments, be accompanied by an Open House area with display boards where project staff are available to answer questions. While the Open House conversations do not become part of the formal transcript, they offer meeting attendees background information and opportunities to ask questions in an informal setting to assist them in crafting their formal comments.

Comments will be gathered through a variety of means—at the meetings themselves in the form of oral testimony and written comment sheets, and during the comment period by mail, email, and fax submittals. These comments will be summarized in a matrix along with the accompanying action that the comment requires.

The activities, format, and supporting materials for the Public Meetings and Alternatives Analysis Workshops will be based on an agenda developed jointly by the Dewberry Team,

the Executive Steering Committee, and other key stakeholders. However, the first of these meetings would serve as an opportunity to educate and raise awareness of the participants about the issues and opportunities in the study area and to also highlight the spectrum of decisions that face the stakeholders and the range of alternatives and opportunities available for the area.

We will prepare and present materials for use in these meetings and presentations. The presentation of ideas and issues will be geared to both technical and non-technical audiences. Materials will include visuals in a graphically rich format and written information as presentation aids. Information will be communicated using “PowerPoint” presentations along with presentation boards, as well as printed “leave behinds” using both graphics and text as appropriate. Stations will be set up with SMEs on hand to help inform the public on the project’s milestones to date.

We will implement a diverse array of hands-on activities that will effectively engage the participants, including post-it note voting, mini-charrettes, and brainstorming exercises. An interactive session will be included in which participants rotate from table to table in small group topical discussions, noting their concerns and interests on table-top maps. The most important purpose of these meetings is to listen to the community. By including an assortment of opportunities to participate, we will increase the likelihood that everyone will find a venue where they feel comfortable participating and providing valuable input to the study. A question and answer period will be included where participants can vocalize concerns and wishes in a more public arena. These activities will be supplemented with a suggestion box for the collection of anonymous thoughts and comments that might not otherwise be captured.

It will be important to verify that the public information meetings and public hearing are accessible to those who would like to participate as well as those who have other commitments. For this reason, we will choose transit-accessible meeting locations and provide translators to assist the Spanish-speaking population in sharing information and provide feedback on the materials being presented.

There will be one public hearing during the DEIS comment period. We will provide administrative support such as, but not limited to, verifying that materials relevant for the

scoping meetings are available for review; developing, producing, and distributing notice(s) of meeting/hearing(s); determining appropriate mailing lists for meeting notifications and distribution of scoping materials; making provisions for hearing officers, stenographers, and note takers; providing a sign-in sheet and comment sheet for attendees; and returning the facility to its original condition at the end of the scoping meeting.

The three public meetings and one public hearing described above will be open to the public. Per HUD regulations, a public notice will be posted in the local media at least 15 days prior to the date of these meetings.

Working Group Meetings

In addition, we assume that fourteen working group meetings, may be scheduled throughout the project duration. These meetings will be held in the event stakeholder groups wish to spend further time with the SMEs to examine issues at certain project milestones. Furthermore, one of these meetings will be in advance of formal scoping as part of the NEPA process, the proposed project will be presented to the SRIRC Federal Review and Permitting (FRP) Team. The FRP Team members are federal officials with responsibility for federal review and permitting of complex Sandy infrastructure projects, who have been convened to facilitate permitting and review for Sandy projects.

On-Going Communication Tools

An assortment of communication tools will also be available throughout the Project. Communication tools that will be used to supplement the public outreach effort include:

Fact Sheets and Newsletters

Up to three informational newsletters and/or fact sheets will be developed at key project milestones to communicate highlights of the study process. Newsletters printed in simple and graphically rich formats are an effective way to present information on the project including brief information about the project, contact information, informational project web site address, and upcoming meeting dates. Newsletters will be no more than four pages in length and fact sheets will be a single-page, with text and graphics on both sides. Per HUD requirements, all newsletters and/or fact sheets will be provided in English and Spanish.

Public Meeting Announcements and Project Flyers
Flyers/public meeting announcements will be developed and distributed before each of the three public meetings and before the public hearing. The flyers/announcements will be informative, with a graphically rich, easy-to-understand format that will catch the attention of the public audience, and when distributed electronically, they provide a low-cost way to communicate news on the public meeting dates. All project flyers/announcements will be developed in a PDF format so that they can be easily emailed to project stakeholders, local neighborhood organizations, business leaders, and other interested parties. They will also be posted in key locations within each community. Per HUD requirements, all flyers/announcements will be provided in English and Spanish.

Media Notices and Press Releases

Public notice of the one public scoping meeting, two additional public meetings, and the one public hearing will be widely announced with approved display advertisements in local, daily, and weekly media publications, including Spanish-language publications. NJDEP with assistance from the project team will draft media display advertising and press releases, which will be subject to review and approval by the Executive Steering Committee before distribution. NJDEP will distribute the outreach material. In addition, press releases can be written and distributed to media outlets at project kick-off (scoping), before the public meetings, and at the project's conclusion to provide more information about the Project. All press release information will be subject to review and approval by Hoboken.

Social Media

We will use social media to inform the public and stakeholders of project efforts. This will primarily be done through Hoboken's current social media outlets. Assuming that Hoboken will maintain control of these outlets, we will work with the City to craft Tweets and other social media to place on their accounts at key milestones and in advance of public meetings.

Web sites

There will be two web sites, one for public information and one for data management.

The NJDEP will be responsible for a Public Information Web site designed to facilitate the dissemination of project information to the public.

In addition, we will develop a Project Execution Collaboration web site through the use of a data management portal. This will assist Dewberry and the entire team by being a single source for all submittals, responses, and approvals. The portal will also be established as a reference library for relevant studies, documents, mappings, and other reports for use by the project professionals. All submittals will be locked on submission and tagged with date, time, status, comments, and submitter, creating a reliable project record. The portal will use role-based security to provide read only access as well as full submittal access as appropriate – keeping all project team members connected to the right data on demand.

Scoping Document

We will develop a Draft Scoping Document including scoping meeting agendas, presentations, and documents. An executive summary of this document will also be prepared. These materials will be publically available prior to the meetings to inform meeting participants. After the Scoping Meeting is conducted, we will finalize the Scoping Document which will summarize the Project background and data gathered to date, and present in detail the agreed-upon Purpose and Need Statement.

Task 1 Deliverables

- Draft written report (for review and comment) summarizing results of Task 1, and identifying data gaps and recommending appropriate steps to collect additional data needed.
- Draft maps/GIS shapefiles (for review and comment).
- Final reports and maps/GIS shapefiles.
- Draft and Final Scoping Document

Task 1 Assumptions

1. No acquisition of land is anticipated for this project.
2. Includes conventional ground topographic survey for an area covering about 1.5 miles in length with a width of 100 feet, with a total area of approximately 19 acres.
3. Includes surveying 75 wetland flags along the shoreline in non-bulkhead locations and up to 50 wetland flags in the interior portions of the City.

4. Includes stakeout survey for 10 soil borings and 80 possible infiltration borings.
6. 5. Access permits will be required. The U.S. Coast Guard will be notified prior to conducting bathymetric survey. Property owners will be contacted prior to field survey work being conducted. Should movable obstructions such as barges or vessels be in the way or impede the work, then we will attempt to arrange for obstructions to be removed or relocated. Title reports are not included.
7. No boundary survey will be performed as part of this scope of work.
8. Survey work will be performed on weekdays only, no weekends or holiday work.
9. Costs do not include preparation and submittal of a NJDEP Letter of Interpretation (LOI) application.
10. Costs do not include conducting detailed T&E field studies.
11. We will verify, to the extent practicable, whether T&E species identified by the NJDEP/ USFWS/NMFS are present while performing a field assessment of the project area. If more detailed studies are required, we will inform the NJDEP of the need for those studies, which could be provided as an out-of-scope extra work item.
12. Historic fill material within the project area is assumed to contain Polycyclic Aromatic Hydrocarbons and metals typical of historic fill.
13. Scheduling of NJDEP file reviews can be expedited to meet project milestones.
14. Utility companies will be contacted by the NJDEP, which will obtain the data and plans necessary to identify and map existing utility locations in the project area prior to Dewberry's NTP for this contract (on or about June 1, 2015). NJDEP will be responsible for all costs required to obtain information from each utility company.
15. There will be no utility test holes or subsurface utility engineering.
16. There will be a maximum of ten utility related meetings.
17. There will be a maximum of ten utility companies.
18. NJDEP will prepare and submit a substantial Action Plan Amendment.
19. There will be one meeting with the ESC at the start of the project.
20. There will be stakeholder meetings during each of the six stakeholder phases of the project. During each round the project team will meet with the ESC, Coastal Hudson County TCT, and CAG. All meetings will be coordinated through the NJDEP Constituent Services manager and the ESC.
21. There will be three public meetings including one each at the conclusion of the Scoping phase, Concept Screening phase, and Alternatives Analysis phase.
22. There will be one Public Hearing which will occur after the publication of the DEIS.
23. Attendance costs are based on up to seven SMEs as well as the management team from Dewberry attending each meeting/hearing. Staff time includes four hours per meeting/hearing per person.
24. There will be one meeting with NJDEP prior to each stakeholder phase of the project (for a total of six meetings). Dewberry will also hold internal meetings prior to each meeting with NJDEP.
25. Includes 14 Working Group Meetings with four SMEs in attendance.
26. NJDEP will coordinate the location and reservation of meeting spaces for meetings.
27. NJDEP will cover any venue fees that may be necessary for three public meetings and one public hearing; all other meeting venues will be held in locations that are free of charge.
28. We will provide administrative support for all meetings (e.g., sign-in sheets, name tags, table tents, room set-up, comment sheets, meeting minutes).
29. We will be represented by up to two public participation specialists at milestone meetings and by up to three public participation specialists at public meetings and the public hearing.
30. We will provide scoping packages/outlines for use at the scoping meetings.
31. We will compile comments received from comment sheets at the public scoping meeting and public hearing, as well as those received via email, web site, or other means during the official comment periods. Comments will be compiled into a matrix.
32. We will provide all meeting materials including agendas, presentation boards, "PowerPoint" presentations, and handouts. A maximum of eight boards will be required at each round of meetings. Written materials will be reviewed and receive prior approval from NJDEP prior to production. The NJDEP graphics shop will be utilized

to the extent practical when information materials are being created.

33. One stenographer will be required for one public hearing.
34. We will develop and distribute invitations for each stakeholder meeting (excluding the PICs and Public Hearing); we will perform RSVP tracking and follow-up. Hard-copy invites will be mailed to stakeholders prior to the scoping meetings inviting them to be part of the process. After scoping, all meeting invitations will be sent electronically via email. Written materials will be reviewed and receive prior approval from NJDEP prior to production. The NJDEP graphics shop will be utilized to the extent practical when information materials are being created.
35. We will develop meeting flyers, which will be distributed before each public meeting and the public hearing. Meeting flyers will be provided English and Spanish. Written materials will be reviewed and receive prior approval from NJDEP prior to production. The NJDEP graphics shop will be utilized to the extent practical when information materials are being created.
36. Interpretation services will be required at up to three public meetings and one public hearing.
37. We will arrange for the translation of newsletters/fact sheets, meeting flyers, advertisements into Spanish. We will not translate presentation boards, "PowerPoint" presentations, meeting minutes, and project reports/documents.
38. NJDEP will write, prepare and issue all press releases.
39. The NJDEP has a project website. This is the official website for the project. Materials will be posted there. The public will be directed there for information.
40. Project Execution Collaboration Portal will include use of hosted SharePoint 2013 Foundation, 50 GB storage, 50 Users, 20 months site usage, and two years domain registration.
41. NJDEP will provide GIS geodatabase of the existing storm-sewer system prior to Dewberry's NTP for this contract (on or about June 1, 2015).

Task 2: Waterfront Structures Inspection

We have collected and performed a preliminary review of the following existing waterfront inspections:

1. Hoboken Privately-Owned Waterfront Structures Inspection Report (June 2011)
2. Hoboken City-Owned/City-Leased Waterfront Structures Inspection (March 2011)

Our preliminary review of these waterfront inspection reports indicates that waterfront inspection followed the recommendations of the ASCE manual titled, "Underwater Inspections – Standard Practice Manual." The report also provides load rating analysis for some existing waterfront structures. It is unclear if any waterfront inspection was conducted following Superstorm Sandy's landfall in the New York/New Jersey area in October 2012.

We will implement the following methodology to conduct the waterfront inspection to obtain the existing load rating capacity of various waterfront structures and bathymetry within the study area:

Step 1: Investigate if there are pre- and post- Superstorm Sandy waterfront inspection reports and bathymetric surveys. We anticipate to inquire with State and City officials about these datasets during the kickoff meeting. We assume that NJDEP and other stakeholders such as NJ TRANSIT will provide us with the waterfront inspection reports for our review. We will review these available existing waterfront inspection reports.

Step 2: If available waterfront inspection reports can provide the existing load rating capacity of waterfront structures; we will use this information from these reports in the conceptual design of coastal flood risk reduction measures.

Step 3: We will conduct a visual inspection of the waterfront. The visual inspection will begin with a sighting along the structures where the wall is visible above the waterline, focused on any indications that the waterfront structure may be compromised. We will identify areas from the available waterfront inspection reports that do not have load rating capacity. Based on our site visit and our evaluation of existing reports, we will then develop a plan to identify areas of waterfront that would need inspections and load rating calculations. Using the information, dive inspections can be directed toward areas of probable deterioration and focusing inspection efforts accordingly.

Before mobilizing the dive inspections, we will coordinate with NJDEP and other stakeholders to obtain consensus on our plan for waterfront inspections.

Step 4: After obtaining approval from NJDEP, we will perform a detailed underwater waterfront inspection. Development of a waterfront structures inspection program will generally follow ASCE's, "Underwater Inspections – Standard Practice Manual." Once the due diligence investigations and assessments are complete, the capacities and anticipated longevity of existing structures can be established. We assume the scope of work will include waterfront inspection for 2,000 linear feet within the study area. We will prepare a report documenting our findings from the waterfront inspection and load calculations along the waterfront area.

Step 5: If bathymetric surveys are unavailable for the areas that were inspected as part of Step 3, we will conduct bathymetric surveys. However, we did not include the costs to perform the bathymetric surveys as part of our cost proposal.

Task 2 Deliverables

During execution of Task 2, we will compile a draft and final report to document our findings from the available inspection reports, data gaps in available waterfront inspection information, plan for conducting waterfront inspection and load calculations, findings from the waterfront inspections, and summary of load calculations along the existing waterfront. The report will include either existing or additional bathymetric information collected as part of this task.

Task 2 Assumptions

1. Underwater waterfront inspection will be limited to 2,000 linear feet.
2. Should movable obstructions, such as barges or vessels, be in the way or impede the work, then NJDEP will arrange for obstructions to be removed or relocated.
3. Daily field inspections will not exceed eight-hour portal to portal days.
4. No excavations will be carried out to assess seawall or bulkhead construction and thickness dimensions.
5. No core samples of timber, concrete, or steel structural members will be obtained in carrying out the field

inspections; as such, no samples will be sent out for laboratory testing to evaluate strength characteristics.

6. Our proposal does not include costs to conduct bathymetric surveys since we intend to use available bathymetric surveys. In the case that bathymetric surveys are unavailable, it will cost \$34,100 and will take additional 15 days to complete 2,000 linear feet of waterfront property that will be inspected as part of this task. These bathymetric surveys would extend 50 feet from shoreline and would not include any areas inaccessible by boat, with areas covered by piers ignored; mudline elevations beneath piers, dry docks, and other obstructions will not be taken. Bathymetric survey will performed on weekdays only.

Task 3: Subsurface Investigation

Task 3.A Geotechnical Investigation

It is important to understand the subsurface conditions characteristics before evaluating the feasibility of constructing coastal flood risk reduction measures within study area. We will coordinate with NJDEP and City of Hoboken to identify an approximate area for the proposed coastal flood risk reduction measures.

We will research various sources for readily available geological data and then develop a geotechnical boring plan to supplement the information that has been obtained. We have assumed that we will drill a maximum of 10 borings along the eastern (waterfront) side of Hoboken to identify soil properties that currently are supported by waterfront structures such as bulkheads and relieving platforms. These borings will be drilled to a maximum depth of 50 feet. Ten groundwater observation wells will be installed at appropriate inland locations to evaluate groundwater levels and fluctuation in conjunction with green infrastructure design and infiltration. The driller will be mobilized once approval of the program is received from NJDEP and the City of Hoboken.

The RBD proposal identified several areas within the City of Hoboken where there is potential to construct green infrastructure measures along with subsurface storage practices to temporarily store storm-sewer flow volume. We have assumed that a maximum of 80 infiltration tests will be performed at various locations that were identified by RBD

proposal and/or additional sites that will be added later from our site walk through. Depending on the type of green infrastructure practice, we will develop a soil testing program on recovered samples from sites on as needed basis, and have assumed a maximum of 80 samples for particle size distribution testing. Infiltration testing will be performed in accordance with the provisions of the New Jersey Stormwater Best Management Practices Manual, Appendix E of the NJDEP.

Task 3.A Deliverables

- Draft Subsurface Investigation Report (for review and comment) and back-up documents
- Final Subsurface Investigation Report

Task 3.A Assumptions

1. Due to an anticipated limited drill rig availability, we intend to utilize two drilling contractors to attempt to maintain the proposed work schedule. Actual costs for each of the specified drillers may shift based on driller availability.
2. The schedule for geotechnical drilling will be governed by the availability of drilling rigs, receipt of required permits, and accessibility of the various locations to be drilled.
3. NJDEP and the City of Hoboken will issue required permits, bonds, and police protection in a timely manner in order to successfully advance the work within schedule guidelines.
4. We will have a maximum of 10 borings up to a depth of 50 feet.
5. We will develop a plan to install 10 groundwater observation wells.
6. A maximum of 80 infiltration tests will be performed.
7. A maximum of 80 samples will be analyzed for particle size distribution.

Task 3.B Hazardous Waste Subsurface Investigation

This task was removed from the scope of work as other departments within NJDEP are addressing hazardous waste subsurface concerns.

Task 4: Hydrology / Flood Risk Assessment

The City of Hoboken is subject to flooding from two sources—coastal storm surge and high intensity/longer duration rainfall events. Superstorm Sandy’s coastal storm surge induced flooding exposed the vulnerable areas within the City. Additionally, there are increasing flood risks from rising sea levels that could potentially affect City’s infrastructure in the future.

Flooding occurs frequently during high intensity rainfall events at certain low-lying areas within the City. Several portions of the study area are prone to (flash) flooding when rain events occur during high tide. Rainfall runoff flow is collected by NHSA’s existing storm-sewer system. Various green infrastructure practices implemented within City of Hoboken help to improve *delay* and *store* a portion of the rainfall runoff flow. Under normal conditions, rainfall runoff is conveyed to NHSA’s Adams Street WWTP; however during high intensity rainfall events, conveyance capacity of the existing storm-sewer system exceeds the combined storm-sewer inflow; thus resulting in street flooding. The City is undertaking steps by implementing discharge techniques such as pump stations to convey the excessive storm-sewer from the surcharged storm-sewer system directly to Hudson River. However, sea level rise and high tides can influence the efficiency of these pump systems. It is important to evaluate the combined effects of storm-sewer system and coastal conditions along the Hudson River together as part of our Hydrology/Flood Risk Assessment task.

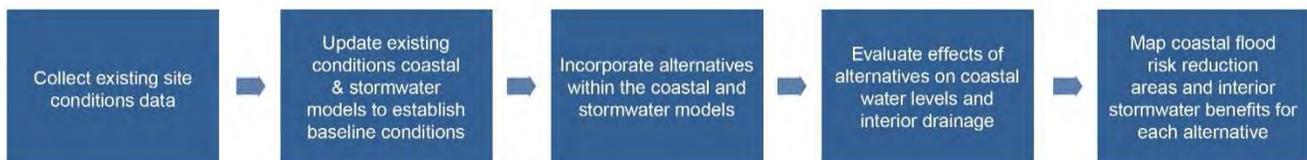


Figure 6: Our methodology to establish baseline conditions and evaluate effects of various alternatives in coastal and stormwater environments.

We will develop alternatives designed to reduce flood risks from coastal storm surge and rainfall runoff. A detailed description of alternatives development is in Task 5.

Use of numerical mathematical models provides a convenient and reliable method for comparison of different project alternatives with the existing conditions (baseline) under different combinations of storm surge and rainfall-runoff events. We will rely on mathematical models to evaluate the combined effect of coastal storm surge and rainfall events. We assume that NHTA has developed storm-sewer models using Environmental Protection Agency’s (EPA) Storm Water Management Model (SWMM) for the Adams Street WWTP. We assume that these models, along with the associated storm-sewer data in GIS format, will be provided to Dewberry to develop baseline conditions and proposed alternatives. We will rely on the 2-Dimensional Advanced Circulation (ADCIRC) coastal hydrodynamic model developed as part of the FEMA’s recently completed New York/New Jersey storm surge study. Since Dewberry was part of a Joint Venture team that created the ADCIRC model for FEMA, we possess the datasets. The table below shows the stillwater elevations at the Hoboken shoreline from the 2012 FEMA Region II NY/NJ storm surge study.

Table 1 Preliminary annual-chance stillwater elevations in feet relative to NAVD (FEMA)			
10%	2%	1%	0.2%
6.6	9.5	10.9	14.4

We understand that the RBD proposal team created a simplistic water balance model using SWMM to simulate the hydrology and hydraulics of the existing storm-sewer system. We believe the simplistic water balance model may not accurately represent the existing storm-sewer conditions within the study area.



Figure 7: showing the Existing FEMA’s 2-D ADCIRC Coastal Model developed by Dewberry for New Jersey/New York

It should be noted that FEMA’s 2013 preliminary floodplain maps for Hudson County did not take into account effects from 0.2% annual chance (500-year) coastal storm surge event; instead the 500-year stillwater elevations were used to map the 500-year floodplain. In order to study the effects of 500-year coastal surge and waves; a 500-year wave condition will have to be determined. The FEMA study produced wave characteristics for the 100-year event and the same method will be applied to compute for the 500-year event. We will review the 189 extratropical and synthetic tropical storms that were modeled for the FEMA study and select seven storms that produced surge levels closest to the 500-year level. The maximum wave conditions modeled during each of those storms will then be compiled and evaluated to select an appropriate wave condition for the alternatives being evaluated. These 500-year wave conditions will be used to determine the appropriate design flood elevation for the 2050 500-year event.

Based on our understanding of the available datasets, we propose to implement either one of the three approaches shown below to develop an integrated coastal storm surge and stormwater management model.

Approach 1: Develop integrated coastal and stormwater management model using Danish Hydraulic Institute (DHI)’s MIKE model

We propose to use an integrated model using DHI’s MIKE model system to evaluate the impact of each alternative on coastal hydrodynamics and interior drainage. DHI’s Integrated MIKE model system uses various modules within the MIKE model system interface to simulate stormwater,

coastal hydrodynamics, water quality and ecological processes. The integrated modeling system allows engineers and scientists to utilize various modules within DHI's MIKE model system to simultaneously create models to simulate stormwater, coastal hydrodynamic, water quality, and ecological processes for each alternative.

The use of MIKE DHI model system will depend on the quality and completeness of NHTSA's storm-sewer model. We intend to import NHTSA's storm-sewer model into DHI's MIKE URBAN model. If there are significant data gaps within the NHTSA model, we may not consider using the MIKE model system. Our costs assume that we will be able to import NHTSA's storm-sewer model into MIKE URBAN system successfully within one week to then allow us to integrate with the coastal hydrodynamic model (MIKE 21). We will convert FEMA's ADCIRC model data into MIKE 21 coastal hydrodynamic model. We will link the MIKE URBAN and MIKE 21 model together using MIKE FLOOD to allow for a complete integration of coastal and rainfall runoff processes.

Approach 2: Use existing NHTSA stormwater model + FEMA's ADCIRC coastal model

If Approach 1 is unsuitable due to limitations in NHTSA's storm-sewer model for the entire study area, we will utilize NHTSA's storm-sewer model created in SWMM/XP-SWMM as our stormwater management model. We will coordinate with NHTSA to update this model with recent surveys and other recent project data to create the baseline existing conditions model. For the coastal hydrodynamic model, we will update FEMA's ADCIRC model mesh within the study area with new readily-available bathymetric data to create the baseline conditions model. The coastal model will provide tail water boundary conditions for various coastal storm surge events along the Hudson River coastal model for the stormwater management model.

Approach 3: Create simplified stormwater model with DHI's MIKE URBAN + MIKE 21 coastal hydrodynamic model

If the NHTSA storm-sewer model is unavailable for the entire study area; we will create a simplified storm-sewer model with MIKE URBAN to reflect major drainage areas and include only the major storm-sewer interceptors, pump stations, outfalls, and Adams WWTP design capacity as part

of the model. We will make appropriate assumptions on choice of the hydrologic and hydraulic parameters along with sewer flows for this model and will make every effort to simulate hot spot flooding areas for a known rainfall event during model simulations. We will convert FEMA's ADCIRC model data into MIKE 21 coastal hydrodynamic model. We will link the MIKE URBAN and MIKE 21 model together using MIKE FLOOD to allow for a complete integration of coastal and rainfall runoff processes

Our costs reflect using either one of these three approaches. It should be noted that DHI's MIKE model system is an approved model by FEMA.

Coastal storm surge, sea-level rise, and rainfall conditions for integrated coastal and rainfall model development

FEMA's recent coastal storm surge study for the New York and New Jersey area will provide us with boundary conditions for various storm surge events for the 2-D coastal hydrodynamic model (see example below). We will utilize these boundary conditions as needed for each of the three approaches.

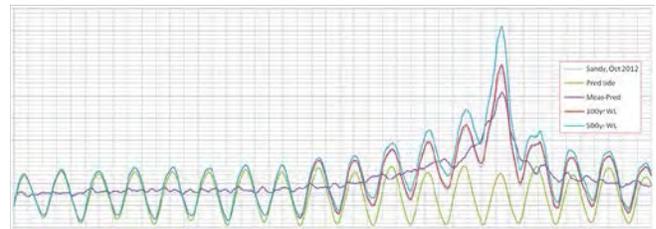


Figure 8 showing an example of Coastal Storm Surge Boundary Conditions developed by Dewberry for FEMA

We have used NOAA's sea-level rise tool to obtain four projections of sea level rise (SLR) for the year 2050 as shown in the table below. We will discuss the use of an appropriate SLR projection scenario to be used in model runs with stakeholders. The appropriate SLR condition will be incorporated into coastal storm surge boundary conditions.

Table 2 Scenarios of Sea Level Rise in feet (inches) using NOAA’s SLR Tool

Lowest	Intermediate-Low	Intermediate-High	Highest
0.3 (3.6 in.)	0.7 (8.4 in.)	1.3 (15.6 in.)	2.0 (24 in.)

We assume that NHSA’s storm-sewer model simulates dry weather flow (DWF) and wet weather flow (WWF) for multiple time durations such as three months, one year, two years, and five years. For this task, we will not address dry weather flows that include sewer flows. We will simulate wet weather flows that may include sewer flows along with rainfall flows. We will confer with the NJDEP and NHSA on the appropriate design rainfall events and appropriate sewer volumes to various rainfall events in each drainage area. We will also confer on the appropriate hydrologic methods to simulate hydrology within the study area. We anticipate using a subset of rainfall depths for various rainfall frequency events as shown in the table below.

Table 3 Rainfall Frequency Events

Storm Frequency (years)	Rainfall, inches
1	2.7
2	3.3
5	4.2
10	5.0
25	6.2
50	7.2
100	8.3

Integrated coastal and stormwater model simulations

The table below presents a non-exhaustive list of proposed combinations of coastal boundary conditions and corresponding hydrologic events to be simulated with the numerical models. The actual conditions to be simulated with the models will be decided after discussion with the applicable federal, state, and city agencies. For this proposal, we anticipate a total of 32 model runs including baseline conditions and the three Build Alternatives.

Table 4 Example of Event Combinations to be simulated with the Numerical Models

Model Run	Coastal Boundary Conditions	Corresponding Hydrologic Event
1	Observed Tide	Observed Flow (if available)
2	MHHW + Sea Level Rise	5-year Rainfall Runoff Flow
3	MHHW + Sea Level Rise	10-year Rainfall Runoff Flow
4	MHHW + Sea Level Rise	100-year Rainfall Runoff Flow
5	10-year Water Level	10-year Rainfall Runoff Flow
6	50-year Water Level	10-year Rainfall Runoff Flow
7	100-year Water Level	10-year Rainfall Runoff Flow
8	500-year Water Level	10-year Rainfall Runoff Flow

We will develop the existing conditions (baseline) model simultaneously with the development of concepts (Task 5). We will develop three Build Alternatives, as described in Task 5. For each Build Alternative, we will update the existing conditions baseline model with the proposed coastal flood risk reduction system footprint along with proposed stormwater management strategies (derived from Task 5) and check if the model shows reduction in flooding in existing interior hot spot flooding areas.

A detailed description of design criteria, evaluation and analysis of various flood risk reduction measures from hydrology/flood risk assessment (stormwater/coastal) is provided in Task 5. It is our understanding that the three Build Alternatives will be developed and evaluated from a multi-disciplinary approach as part of Task 5. We will incorporate the flood risk reduction alternatives developed from Task 5 in the integrated coastal and storm water models that are developed as part of Task 4. We believe that Tasks 4, 5, and 6 have some subtasks that are inter-related.

Task 4 Deliverables

During this task, we will prepare and submit a draft and final hydrology/flood risk assessment report that will document the model development methodology, and results from integrated coastal and stormwater models for existing and three Build Alternatives including the final Preferred

Alternative. It should be noted that this report will be completed after the final Preferred Alternative has been selected.

Task 4 Assumptions

1. NJDEP will coordinate with NHTSA to obtain hydrologic and hydraulic storm-sewer model of Adams Streets WWTP and will provide the model to Dewberry upon NTP.
2. We believe that several components of Task 4 and Task 5 in the State's SOW overlap with each other; hence for this proposal we have assumed Task 4 will be focused on development of coastal storm surge and rainfall runoff models and Task 5 will be focused on development of alternatives.
3. Water quality, sediment transport, and ecological models will not be developed or considered.
4. We will conduct up to 32 model runs.

Task 5: Feasibility Analysis

Step 1 – Concept Development

The concept development process will include the following steps:

- Coordinate with the City of Hoboken, NJDEP, and others to identify available real-estate/areas for coastal flood risk reduction and stormwater management options.
- Identify suitable coastal and stormwater management concepts that have a potential to be constructed within the identified site constraints of the available areas.
- Consider community benefits such as access to waterfront, recreational benefits, and others.

The success of constructing a reliable and permanent comprehensive flood risk reduction system within the study area depends on identifying the choice of a flood risk reduction system along the most suitable alignment for the system to follow within the existing infrastructure constraints. The key to the successful implementation of this project is to design the flood risk reduction system in accordance with the regulatory standards, while verifying that it aesthetically blends in with and enhances the existing environment.

The location of existing infrastructure such as parks, roads, transit, stormwater systems, subsurface utilities, and foundation structures for various types of infrastructure will dictate the available footprint for constructing the flood risk reduction system. The availability of the footprint area would then dictate the use potential flood risk reduction systems such as earthen berms, floodwalls, deployable flood systems, and others. In certain areas, it may be feasible to relocate certain infrastructure facilities; however the project's goal would be to minimize the relocation of facilities. During the development of the potential options for the study area, we will verify that these options can be tied into other flood risk reduction plans that the City of Hoboken may implement in the future.

A brief description of various multi-disciplinary concepts is provided below.

Coastal Flood Risk Reduction Concepts

We have used the NYC Department of City Planning's Urban Waterfront Adaptive Strategies report as a reference toolset to identify various site- and reach-based mitigation strategies that would allow us to use the "multiple lines of defense approach" and enable one or more of these strategies to tie-in with each other to create an integrated flood risk reduction system for the study area. A subset of these strategies was used by the RBD proposal team to identify interventions at suitable locations along Hoboken's waterfront. (see Figure 9 on the following page)

We will conduct a site visit within the study area to identify suitable sets of coastal flood risk reductions options that can be applied. We will divide the study area into distinct zones with each zone receiving one or more option for coastal flood risk reduction.

Stormwater Management Concepts

The RBD proposal used the concepts of *Delay*, *Store*, and *Discharge* of stormwater to alleviate flooding from high intensity/longer duration rainfall events within Hoboken.

- The *delay* element requires identification and evaluation of options to increase infiltration of stormwater into the soil by implementing various types of Green Infrastructure (GI).
- The *storage* concept requires identification and evaluation of options to construct surface

detention/retention facilities or green roofs to temporarily store rainfall runoff.

- The *discharge* concept requires identification and evaluation of options to *discharge* rainfall-runoff from Hoboken into the Hudson River through grey infrastructure such as separate high-level stormwater pipes, outfall structures, and pump stations.

The RBD proposal identified the City of Hoboken's ongoing resiliency measures for *Delay*, *Store*, and *Discharge*. The RBD proposal identified approximately 56 sites that may have the potential to *delay* and *store* stormwater within the study area. For the *discharge* element, the RBD proposal identified three potential locations for stormwater pipes and pumps without providing any specifics. The State's SOW requires the identification of additional opportunities to *delay* and *store* stormwater runoff within the study area. In addition to the 56 sites from the RBD proposal, we will identify up to 20 additional sites (thus, our consideration of 76 sites).

We will coordinate with NJDEP, the City of Hoboken, and other stakeholders to identify the City's ongoing stormwater resiliency measures such as rain gardens, green streets, pump stations, and others that can be included as part of our existing (baseline) conditions. We believe some of the 56 sites that were identified in the RBD proposal will be part of the existing conditions.

Given that the RBD proposal identified concepts to *Delay* and *Store* stormwater management at 56 sites, as well as the constraints of the project schedule, we will proceed with conducting feasibility analysis for these 56 sites prior to the concept screening meeting. As part of the concept development step, we will proceed with identifying and evaluating the type and size of *Delay* and *Store* options at these 56 sites.

We will develop options on three different scales—stormwater basins, roadway swales, and building retrofits to either *delay* and/or *store* rainfall runoff. We will evaluate the following categories of stormwater management techniques for the *Delay* and *Store* elements:

- Basins: these facilities typically include kidney-bean shaped ponds designed to detain, filter, and/or infiltrate large quantities of runoff. They may include extended

detention basins, infiltration basins, bioretention basins, wet ponds, constructed wetlands, etc. Each type of basin is capable of improving water quality as well as reducing peak flow.

- Swales: these long and relatively narrow measures may consist of bioswales, infiltration trenches, subsurface gravel wetlands, rain gardens, etc. They are typically not capable of handling large quantities of water, but are adept at detaining and cleaning runoff emanating from a single urban parcel and/or its corresponding roadway frontage.
- Building Retrofits: Urban structures can sometimes be modified to include green roofs, blue roofs, and/or rain barrels to both delay and clean stormwater runoff generated on specific building roofs. These types of measures are building-specific and are not typically able to collect runoff emanating from areas surrounding the building. Thus, they are particularly suited for urban zones with no setback requirements.

We will evaluate the following grey infrastructure stormwater management techniques for the *Discharge* elements:

- Additional wet weather pump stations
- Separation of storm-sewer system to high level storm pipes to capture rainfall runoff only
- Additional outfall locations

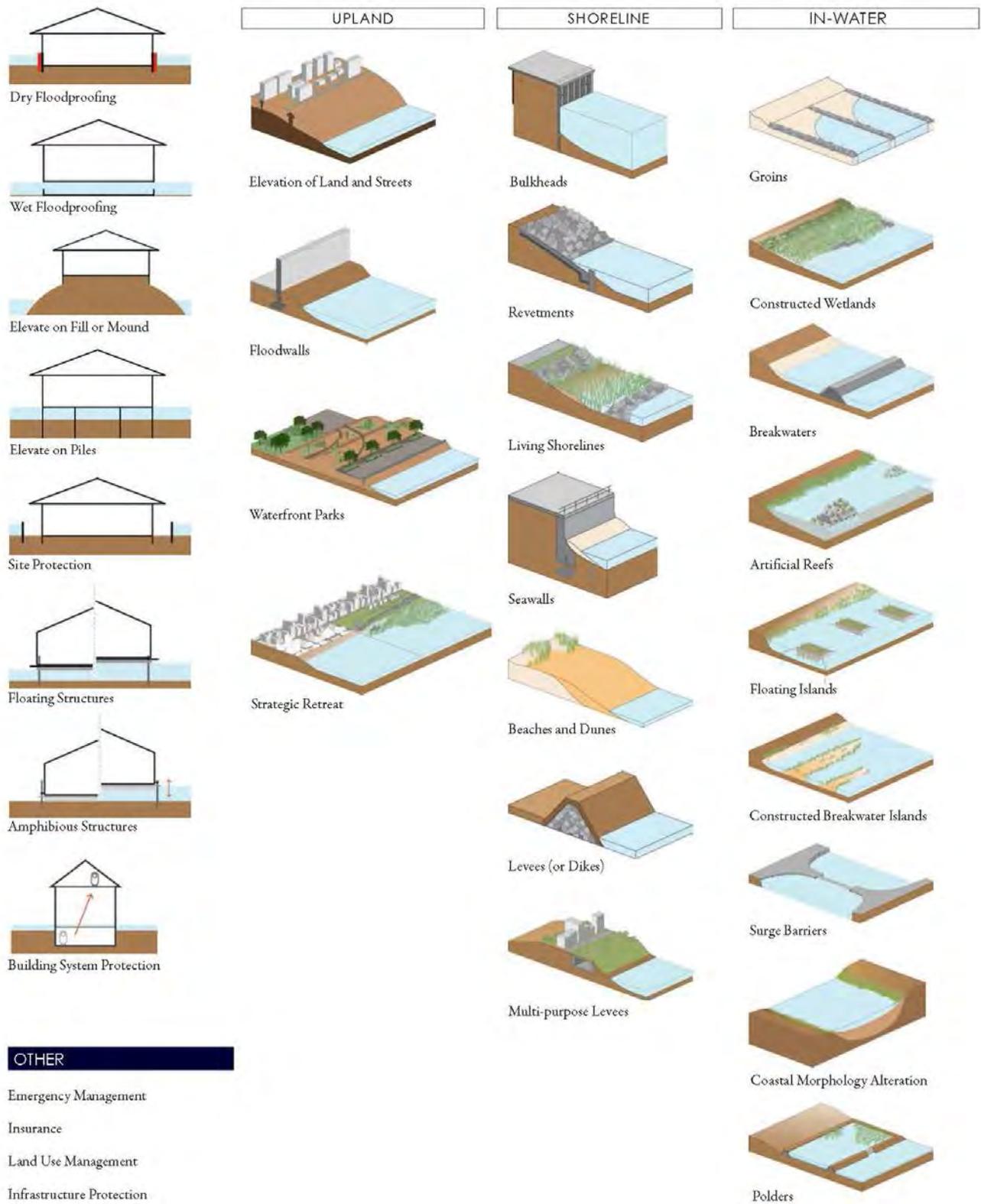


Figure 9: Coastal Flood Risk Reduction Concept Options, courtesy NYC Urban Waterfront Planning Report

The feasibility of implementing each stormwater management option will depend on several factors including, but not limited to, cost, effectiveness, ROW availability, utility impacts, subsurface conditions, maintenance needs, and life-cycle costs. We will undertake the following steps to evaluate stormwater management options prior to the concept screening workshop:

1. Coordinate with NJDEP, City of Hoboken, NHSA, and other stakeholders to develop criteria to identify potential stormwater elements for the *Delay* and *Store* elements within the city limits.
2. Conduct site visits at the 56 sites identified by the RBD proposal and use the criteria developed in Step 1 to identify potential stormwater elements at each site.
3. Upon review of site constraints, we will develop sketches (plan view and typical cross-section) to identify the approximate size and type of the proposed stormwater element (*Delay* or *Store*) at each location.
4. With NJDEP and the City of Hoboken, discuss our findings and provide recommendations for each site.
5. Upon approval from the NJDEP and other stakeholders, proceed with conducting infiltration testing at each site.
6. Depending on the results of the infiltration testing, revise/update the recommendations for each site.
7. Discuss obtaining final approval with the NJDEP and the City of Hoboken of our recommendations for the “Delay” and “Store” stormwater management elements.

We will perform the above steps for the 56 sites that were identified by the RBD proposal. To identify potential, additional *Delay* and *Store* sites that meet the criteria developed as part of Step 1, we will conduct site visits for an area covering up to 200 acres within the City of Hoboken. We also will discuss with NHSA and other stakeholders additional locations for the *Discharge* element of the project. We will conduct site visits at potential *Discharge* locations to identify suitable options. Our integrated coastal and stormwater management model will help us to identify opportunities for additional *Discharge* concepts, as the model will be developed in parallel with the concept development activities.

We will include the findings and recommendations for the additional *Delay*, *Store*, and *Discharge* sites as part of our concepts for stormwater management. We will not perform

infiltration testing at these additional sites until they are vetted during the concept screening workshop and are advanced as the three Build Alternatives.

Environmental Mitigation Concepts

Creation of tidal and freshwater wetlands, with associated riparian vegetation, as well as living shorelines located along the Hudson River waterfront may be options to mitigate environmental impacts from the construction of coastal flood risk reduction system.

Urban Design and Community Benefit Concepts

Coastal/living shorelines located along the Hudson River waterfront will be evaluated, based on the *resist* element(s) along the river’s edge. Living shorelines can tie into and serve as part of the *resist* element, improving resiliency while providing added public benefits, such as:

- Park, open space, and passive recreation areas
- Wildlife viewing platforms and access trail/boardwalk
- Trails with interpretive signage and kiosks (heritage, nature, geological)
- Kayak launch/access points
- Demonstration/pilot oyster reef and/or aquatic vegetation plantings
- Osprey nesting platforms/bird nesting boxes

Other urban design and community benefit concepts will look at creating community places for entertainment, shopping, and other activities. The urban planning concepts will need to blend in with the urban fabric characteristics along the City of Hoboken’s waterfront and interior areas.

Concept Development

We will develop five concepts with each concept consisting of coastal flood risk reduction measures (*Resist*), stormwater management measures (*Delay*, *Store*, *Discharge*), and options for community benefits and recreation.

The first step in developing a concept will be to identify the alignment of the proposed coastal flood risk reduction system. The second step will be to identify the choice of flood risk reduction options for the alignment. Data collected as part of Task 1, along with input from the community and agency stakeholders, will be used to define this alignment and identify appropriate options for each concept. These two steps are intertwined as both account for site constraints. In

each concept, we will consider the following options, among others:

- Coastal flood risk reduction measures
- Stormwater management measures
- Potential recreational benefits
- Waterfront access and transportation connectivity

Each concept for coastal flood risk reduction will have an alignment and distinct zones along its alignment. Each distinct zone will have one type of coastal flood risk reduction option. We anticipate no more than five distinct zones for each concept. We will perform a multi-disciplinary qualitative assessment to verify that the coastal flood risk reduction measures for each concept can be integrated.

Note that the majority of the stormwater management measures that will be included in the concepts will be evaluated prior to the concepts screening workshops. The sites for the *Delay* and *Store* element from the RBD proposal will be evaluated and will have a distinct stormwater management measure associated with each site. The additional sites for the *Delay*, *Store*, and *Discharge* element will have one or more stormwater management measures identified. Each concept will have distinct stormwater management measures for the RBD sites, in common, and a set of additional sites that may comprise of a mix of potential *Delay*, *Store*, and *Discharge* elements of stormwater management measures.

Once a concept is developed for a set of coastal flood risk reduction and stormwater management measures, we will perform a qualitative assessment to identify potential environmental constraints as well as options for urban design, recreational benefits, and waterfront access that are applicable and are suitable for that concept.

We will develop presentation boards, maps, and concept level sketches for each of the five concepts for the concepts screening workshops. Prior to conducting the concepts screening workshops, we will discuss the methodology to develop these five concepts with the project stakeholders, including the ESC, Coastal Hudson County TCT, and CAG.

Step 2 – Community Outreach and Agency Coordination

As discussed above in the Consultation with Stakeholder section, we will first conduct a round of stakeholder meetings to define the criteria metrics. These meetings will confirm the numerous criteria that will be used during the concept screening process. The constraint criteria will be displayed in a matrix and explained by Dewberry SMEs. The goal of these meetings will be to gain consensus on the criteria that will be used to evaluate the five concepts developed.

Following the consensus of the criteria metrics, the next round of stakeholder meetings will occur to screen the five concepts.

Subsequent to establishing the metric criteria, three meetings will be held that will form the screening workshop. This screening workshop, will include a review of the completed screening matrix and a ranking of each concept as it relates to engineering and environmental considerations. At the completion of this round of stakeholder meetings we will shortlist the five concepts to three that will include a set of concepts for coastal flood risk reduction, stormwater management, environmental mitigation, and community benefits and analyzed further as the three Build Alternatives.

Step 3 – Develop Three Build Alternatives and Perform Feasibility Analysis

We will conduct a feasibility analysis on the three Build Alternatives. The assessment will be conducted by a multi-disciplinary team of subject matter experts that will review the various criteria. Table 5 has examples of evaluation criteria that may be considered in the feasibility analysis.

A brief description of the various assessment criteria is provided below. We believe the hydrology/flood risk assessment follows logically with the other multi-disciplinary assessments; therefore we have included it here rather than in Task 4 (as in the State's SOW).

Coastal Engineering Assessment

The coastal engineering analysis will evaluate the following criteria for each alternative:

- Design Flood Elevation (DFE) of the proposed coastal flood risk reduction system
- Reduction in 100-year floodplain area

The choice of appropriate design criteria that is acceptable to federal, state, and city regulatory agencies will be critical during the development of coastal flood risk reduction alternatives. Additionally, it is imperative to include NOAA's projected SLR as part of the design criteria.

The State's SOW reference's the year 2050 500-year elevation as the DFE for the proposed coastal flood risk reduction system. It is our understanding that some of the ongoing resiliency projects within Hoboken are using FEMA's 100-year Base Flood Elevation (BFE) + 2 feet as their design criteria. The use of two different DFE criteria would result in different flood risk reduction benefits within sections of the City of Hoboken. We will reach a consensus among various agency stakeholders on the appropriate choice of DFE criteria.

It should be noted that Federal Register's 44 CFR 65.10 requires FEMA to evaluate the design flood elevation for the proposed coastal levees/flood risk reduction system for the following four cases:

Case 1	Height of 1% wave + 100-year stillwater elevation + 1 feet freeboard
Case 2	Height of maximum wave runup + 100-year stillwater elevation + 1 feet freeboard
Case 3	100-year stillwater elevation + 2 feet freeboard
Case 4	100-year stillwater elevation + crest freeboard to minimize wave overtopping

The maximum elevation obtained from the four cases above should be used as the minimum standards for design flood elevation of the proposed coastal flood risk reduction system. It should be noted that these four cases do not take into account effects of SLR. Based on our past project experience, we believe Case 4 typically yields the maximum design flood elevation.

Since a critical goal is to protect the study area from coastal storm surge, the flood risk reduction system should be able to withstand the forces induced by coastal storm surge, wave action, and hurricane force winds. When the waves induced by hurricane force winds break at a flood risk reduction structure, the wave energy is dissipated at the structure in the form of water sliding up along the flood structure (also referred to as wave run up) as shown in the photo below.

If the flood risk reduction system is not designed to take into account wave run up, the flood water will overtop the structure (referred to as wave overtopping) and may induce flooding on the landward side of the structure. An appropriate drainage system would be required on the landward side to allow for the water that is overtopping the structure to be collected and conveyed through the drainage system.

Table 5 Alternatives Assessment Criteria

Discipline	Evaluation/Assessment Criteria	Description
Engineering	Design flood elevation of proposed coastal flood risk reduction system	Perform coastal analysis to determine design flood elevations using FEMA's Guidelines and Specifications. Verify that Coastal Zone Management Act is considered.
	Develop permanent flood risk reduction system solutions with multiple lines of defense approach	Verify that the choice of proposed flood risk reduction options meets CDBG-DR and FEMA guidelines and specifications for levee construction. Evaluate flood risk reduction options that can fit into the site constraints within distinct zones of the study area.
	FEMA floodplain mapping revisions	Demonstrate that the proposed coastal flood risk reduction measures will not result in increased water levels beyond study area boundary. Alignment of coastal flood risk reduction system should try to maximize removing maximum area from the 2013 preliminary 100-year FEMA floodplain.
	Stormwater management	Primary flooding source is coastal storm surge; however stormwater inundation from two- to 10-year storms is a known flood source. Alternatives should include mitigation of rainfall induced flooding.
	Structural and Geotechnical Evaluation of Proposed Flood Risk Reduction System	Conduct preliminary loading calculations to determine suitable foundation system for the proposed coastal flood risk reduction options. Similarly, conduct preliminary structural loading calculations to determine the approximate size of the flood risk reduction system above ground.
Environmental	Environmental Impacts	Evaluate project impacts to water quality, ecology, and other environmental impacts either qualitatively or in a quantifiable manner.
	Environmental Mitigation	Provide solutions to mitigate identified environmental impacts.
	Environmental Permit Requirements	Identify required permits from local/state/federal agencies along with application costs.
Architecture	Flood proofing of Buildings	Consider dry/wet proofing options for protecting individual buildings/properties.
	Integration of surrounding architecture	The choice of exterior façade of the coastal flood risk reduction alternatives should integrate with the surrounding architecture.
Urban Planning and Landscape Architecture	Open space and waterfront access	Evaluate feasibility of creating open public spaces and access to waterfront.
	Transportation connectivity	Evaluate opportunities to minimize effects on current transportation patterns.
	Recreational benefits	Evaluate opportunities to provide recreational benefits such as walking trails, fishing and others.
Economics	Construction Costs	Use industry engineering cost estimation software to develop comprehensive project budget for alternatives that can be broken down into sections for future implementation.
	Economic Resiliency	Evaluate the economic and real-estate impacts from the project and develop an equitable plan to bring economic resiliency within community
	Benefit -Cost Analysis	For the three shortlisted alternatives; monetize economic benefits and use estimated construction costs to develop Benefit-Cost (BC) ratio. Use FEMA's BCA Tool to develop BCA ratio and full documentation for the Preferred Alternative. BCA ratio > 1.0 is required for CDBG-DR fund eligibility.
	Implementation Plan	Identify challenges in construction and phasing layout of each alternative. Provide a qualitative assessment for the implementation plan. Alternatives should consider opportunities for future enhancements.
	Priority List of Flood Risk Reduction Measures	For each alternative, develop a list of flood risk reduction measures along with a breakdown of construction costs so that these measures can be built sequentially to provide cumulative flood risk reduction benefits.

Our coastal engineering analysis will include effects from wave overtopping and SLR to develop an appropriate DFE for the coastal flood risk reduction system.



Figure 10: Wave overtopping action at waterfront structure (courtesy of FEMA)

Our coastal engineering analysis will include effects from wave overtopping and SLR to develop an appropriate DFE for the coastal flood risk reduction system.

Once we identify the alignment of the coastal flood risk reduction system, we will develop the appropriate DFE for that alignment. An analysis of wave runup and overtopping will be conducted using the latest empirical formulations from the Eurotop Overtopping Manual and USACE. The wave run up and overtopping assessment will provide for additional design guidance on the type of flood risk reduction system that would be required for the site and whether additional armoring or risk reduction is needed as part of the design. Alternatives will be evaluated for two scenarios of 2050 SLR scenarios quantifying the level of risk reduction required with incremental costs. Together with the NJDEP and stakeholders, we will identify these two SLR scenarios. Further, we will update the existing conditions coastal hydrodynamic model to reflect the proposed system in the model. The coastal hydrodynamic modeling for the alternatives will be part of Task 4.

Based on output from the 2-D coastal modeling and wave run up and overtopping analyses, initial design criteria will be established to further assess the feasibility of each

alternative. Current velocities, wave forces, and overtopping flow rates will be utilized for evaluating design components, the need for scour protection, structure crest features, and additional landward protection. Material selection and sizing requirements will be determined for structural coastal protection elements to assist in the development of cost estimates. We will utilize the USACE Coastal Engineering Manual table to evaluate effects of overtopping flow rates.

FEMA uses WHAFIS models to map the floodplain extent of the combined coastal storm and overland wave action for 100-year storm. To evaluate reduction in 100-year floodplain benefits, we will update the existing conditions WHAFIS models to incorporate the proposed coastal flood risk reduction system. This will involve updating the topography, land use, and vegetation characteristics that are input parameters to the WHAFIS model. We will evaluate the impacts to overland waves and coastal hazards with each proposed alternative. A work map will be produced for each alternative to show the revisions to flood hazard zones, as necessary, with the proposed project for comparison purposes. These work maps will meet FEMA's floodplain mapping requirements.

Stormwater Management Assessment

The stormwater management assessment will evaluate the following criterion for each alternative:

- Reduction in rainfall-runoff induced flooding area

The choice of appropriate stormwater design criteria that is acceptable to federal, state, and city regulatory agencies will be critical during the development of stormwater management concepts. Together with the NJDEP and other stakeholders, we will determine an appropriate design rainfall and duration event to consider to evaluate effects on rainfall induced flood levels for existing and proposed conditions.

In each Build Alternative, we will evaluate the feasibility of additional sites that were identified for the *Delay*, *Store*, and *Discharge* elements, other than the RBD sites that already have a unique stormwater management option identified as part of the Build Alternative. For the additional *Delay* and *Store* sites, we will conduct infiltration tests (as part of Task 3) that would allow identify a suitable *delay* or *storage* option.

Considering the Build Alternatives, for each *delay* and *store* site (including the RBD sites) that has a suitable stormwater management option identified, we will make appropriate assumptions on the stormwater volume managed so that we can include these sites in the integrated coastal and stormwater management model. Depending on the model constraints, we may choose to either include each site individually or combined for each drainage basin. The key is to identify the level of flood reduction benefits for various rainfall storm events such as one-year, two-year, and others.

Similar, to the *delay*, and *store* elements, we will update the integrated coastal and stormwater management model for each Build Alternative's *discharge* option. The model simulations will provide the combined effect of *delay*, *store* and *discharge* on the reduction in flood levels from rainfall runoff for various rainfall storm events. The integrated coastal and stormwater model will help us to quantify the reduction in flood levels for each Build Alternative. The reduction in flood levels for each Build Alternative will be used to compare these Alternatives.

Quantifying the reduction in flood levels from these stormwater management options is highly dependent on the availability of storm-sewer models from NHSA. As needed, we will make appropriate assumptions to include the stormwater management strategies into the stormwater model for each Build Alternative.

Environmental Impact Assessment

For each alternative, numerous environmental disciplines will be evaluated including hazardous waste, cultural resources, visual resources, air quality, noise, socioeconomic, land use, Environmental Justice, open space, cumulative impacts, temporary impacts, and ecological concerns will be evaluated. We will work closely with the design team as the project advances in order to develop project alternatives that seek to first avoid and/or minimize environmental impacts. If impacts cannot be avoided or minimized, we will recommend mitigation measures.

Regarding ecological concerns, we will identify the required environmental permit applications to the applicable federal, state, and local agencies. Our design and permitting specialists work together to identify the best solutions that result in a cost-effective, constructible design that avoids

impacts to natural resources to the greatest extent practicable. If the project results in excavation and/or placement of fill within tidal waters of the Hudson River, the design will minimize the impacts and mitigate for unavoidable impacts, typically at a 1:1 ratio. Tidal water impacts will be regulated by the USACE and the NJDEP, as are intertidal/subtidal shallows impacts. Riparian zone impacts to vegetation will be regulated by the NJDEP, typically requiring mitigation at a 2:1 ratio for permanent disturbances. Impacts to state-owned Tidelands will require authorization via a tidelands lease or grant. Freshwater wetlands found in the project area will be mapped; if there are impacts to these wetlands, mitigation would be required, usually at a 2:1 ratio. All required mitigation for project impacts will be evaluated, to determine the most efficient and effective type of mitigation, given existing site conditions and constraints.

Site/Civil/Utilities and Transportation Engineering Assessment

As part of our Site/Civil/Utilities and Transportation engineering assessment, we will evaluate the following criteria:

- Ability to accommodate the footprint of various options into existing infrastructure constraints
- Ability to connect adjacent roadways to the proposed coastal flood risk reduction system
- Identify water intrusion points on the waterside of the proposed coastal flood risk reduction alignment

As part of our site/civil engineering analysis, we will review the existing site condition constraints such as availability of real estate, location of utilities, topography, existing structures, and other constraints to identify a suitable alignment for the proposed coastal flood risk reduction measures. In terms of maintaining transportation routes and networks, the alternatives will need to take into account existing infrastructure alignments and how they will transition into new alignments established or impacted by construction of new flood risk reduction measures.

We will utilize 3D CAD modeling or a BIM modeling package such as AUTOCAD CIVIL 3D or MicroStation InRoads to create three-dimensional models of the proposed coastal flood risk reduction system over existing topography. Our analysis will provide quantities required to construct various

flood risk reduction options, which in turn will be used to estimate construction costs.

Design of a comprehensive flood risk reduction system typically includes evaluating the water intrusion entry points into assets located on the waterside of a flood risk reduction system. These assets can potentially be a source for storm surge intrusion into the infrastructure system. Depending on the elevation and hydraulic gradient line, there is a possibility that the water intrusion through these assets may extend beyond the landward side of the proposed coastal flood risk reduction system and may induce flooding on the landward side. If this situation occurs, it would undermine the purpose of having a flood risk reduction system to protect the area from coastal storm surge. After the three Build Alternatives are identified, we will conduct a site visit to identify these potential water intrusion points. If water intrusion points are identified, we will provide recommendations to add multiple layers of defense to prevent intrusion of coastal storm surge on the landward side of the coastal flood risk reduction system. Similarly, we will identify potential locations for groundwater intrusion on the landward side of the coastal flood risk reduction system. We will provide conceptual level mitigation solutions to address potential groundwater intrusion.

We will assess for potential high risk utility impacts and coordinate with the affected utility companies. Potential utility conflicts between existing utility facilities and proposed flood risk reduction measures will be identified and evaluated. Cost estimates will be prepared for each alternative as it relates to utility impacts.

Geotechnical Engineering Assessment

As part of our geotechnical engineering assessment, we will evaluate the following criteria:

- Ability to accommodate the weight/load of proposed flood risk reduction system on existing soil or subsurface structures

As part of Task 3, we will conduct subsurface investigation along the existing waterfront area. Once the subsurface investigation is completed, representative geologic profiles and design parameters will be developed utilizing both the newly acquired data and available existing information. We will develop an engineering analysis program to assess the

performance of the conceptual coastal resiliency alternatives under service and extreme conditions (flood, earthquake). We anticipate performing conceptual level stability and settlement analyses to assess the viability of the flood risk reduction structure or if ground improvement is required due to the presence of soft, compressible organic soil underlying surficial fill deposits. A conceptual level liquefaction susceptibility assessment may also be performed. The erosion/scour potential and, where applicable, seepage under flood conditions will be assessed along with evaluation of available erosion protection solutions that could potentially be implemented in the conceptual design of the coastal flood protection system (e.g., geosynthetic mats or other products, sacrificial soil/rock cover).

This geotechnical engineering assessment will be restricted to the *Resist* element of the Build Alternatives. *Store* and *Delay* are addressed under the Stormwater Management Assessment.

Structural Engineering Assessment

The key to providing a safe and reliable flood risk reduction system is to verify that the system is structurally stable and can safely withstand extreme forces induced from wind, waves, seepage, and others. It would be challenging to integrate a structurally stable flood risk reduction system within the existing relieving platforms and other foundations that support various types of infrastructure within the study area. The key element during the design of a flood risk reduction system, from a structural engineering standpoint, would be to determine the hydrodynamic wave forces induced on this structure and to perform preliminary structural engineering calculations to determine the appropriate size of the proposed structure. Another critical structural engineering item would be to analyze the interlocking mechanisms of various types of flood risk reduction systems. We will follow general structural engineering design guidelines provided in ASCE-24 Flood Resistant Design and Construction, USACE's Coastal Engineering Manual, and FEMA's Coastal Construction Manual as part our structural assessment of proposed coastal flood risk reduction systems.

Building Architectural Assessment

The “multiple lines of defense” approach may involve architectural modifications to existing building structures that are currently in the FEMA floodplain. We will provide evaluation and concept demonstrations through the use of guiding principles and leading case studies.

Urban Planning and Landscape Treatment Assessment

We will not only produce a viable set of strategies aimed at flood reduction, but also to tie these short- and long-term opportunities in with a larger, productive open space and urban design initiative that serves as a community resource every day. A flood risk reduction system can protect critical infrastructure and neighborhoods, and can also be used as a catalyst for urban design and neighborhood improvement.

Our team experience with stakeholder engagement, ecologically sensitive design, coastal risk reduction, and neighborhood planning will result in an urban design vision that is informed by the flood risk reduction design strategy and creates an everyday asset for the community. This strategy will not only address the shoreline conditions, but how these strategies can affect the economic development and connectivity of upland areas. Through identifying key locations for increased public access, enhanced maritime recreation, new circulation, and educational opportunities, we will develop a large-scale urban design strategy that will be robust and protective in storm conditions yet serve as a new everyday amenity for the City of Hoboken. Emphasizing a collaborative process, all of our work will be coordinated with the community as well as relevant city, state, and federal agencies.

Urban planning for the City of Hoboken will both evaluate the effects, positive and negative, of the flood risk reduction system on the neighborhood and look for ways through creative design to maximize positive benefit. To begin this process, we will coordinate with the community outreach task so that we will have a background understanding of the community and its needs and desires as we begin the evaluation. We will also need to coordinate with other government agencies. The following paragraphs provide details on several key aspects of urban planning and community development that our team will consider as part of this task.

Ancillary benefits

Industrial uses have traditionally cut communities off from the waterfront. As public desire for more connection to the waterfront takes hold, this flood risk reduction project may have an opportunity to provide public amenities and improve connections between neighborhoods, while maintaining and even improving the working waterfront at the core of this project. Our planning process will integrate these disparate concerns.

Waterfront access and public open space

We will also focus on creating access to the water for boats or other recreation that emphasize the area’s connection to the water, and preserving existing parks, infrastructure, and access along the water’s edge. This will be done through shoreline analysis—quantifying and mapping areas that allow for public access and maritime industry – and identifying opportunities for preservation and catalytic change.

Recreational and ecological programs

As a part of our planning process we will do a “soft sites” mapping. These are underutilized areas to investigate which may improve the community from an economic or public amenity perspective. Through working with the community, we will understand and identify key opportunities for changing underutilized sites to recreational or ecological function. We will assess the various sites appropriateness for each of these uses. Particularities of place, elevation, connectivity etc. will facilitate change to recreational, natural or economic development. Our proposed alternatives will lead to a sustainable balance of uses for a balanced and thriving community.

Sustainability Assessment

For each alternative, we will perform a qualitative assessment to identify non-stormwater benefits achieved by implementing comprehensive GI practices within the study area. We will use available literature to provide our assessment of green stormwater co-benefits such as:

- Carbon sequestration
- Urban heat island mitigation
- Reduced energy demand in buildings
- Improved habitat and ecosystem services
- Improved air quality
- Community revitalization
- Flood mitigation

- Improved urban agriculture opportunities
- Green jobs

We will also provide qualitative assessment of the life-cycle environmental costs and economic costs of the GI projects being considered for each alternative.

Economic Assessment

For each alternative, we will estimate the direct benefits of the coastal flood risk reduction and stormwater management system. We will also provide an estimate of several key ancillary economic impacts related to the implementation of the preferred flood risk reduction system to provide a broader context or framework of potential project impacts. Direct and ancillary impacts estimated will include the following:

- High-level real estate impacts, including estimate of reduction in building damage
- High-level estimate of reduction in loss of personal property
- Exploration of potential additional density/building capacity that would be protected (though not yet constructed). We will review vacant land and potential built square feet of property that would be protected by the integrated flood risk reduction system. Though new building standards will result in a reduction in damage, some impacts will still be felt. This is likely to be considered an ancillary benefit; however, it is an important metric in understanding how future development may or may not be affected with the flood risk reduction system.
- Ancillary economic impacts related to capital improvement (spending and labor) of the project itself.
- Ancillary economic impacts related to reduction in lost business spending. We will provide a high-level business scan of the protected Hoboken area to determine major economic activity. Based on reduced inundation levels, a methodology would be developed to estimate reduction in business interruption or the reduction in lost business spending.

The economic analysis will rely on reduction in flood inundation within the study area. We will use a variety of techniques to estimate the impact of improvements, detriments, or other changes in the environment on real estate values. For the impacts of the Hoboken resiliency

measures, we anticipate three approaches to assessing the real estate impacts, which support and reinforce each other:

1. a narrative accounting of the likely impacts;
2. the application of results from the existing literature; and,
3. the calculation of hedonic estimates.

We will use available data related to area real estate square footage, values, year built, existence of basements/subfloors, and use of property. This analysis will reference data collected in Task 1.

Construction Costs

Estimates will be based on measurements taken from the drawings and specifications, using prices from our database, vendor quotations, and knowledge of the local market. Where detailed information is not available for pricing, in the earlier design stages, our estimators will calculate an appropriate figure based on previous similar projects and realistic design assumptions. We will use the NJDOT and/or NJ Turnpike Authority (NJTA) cost estimating software called TransPort (NJDOT) and BidEx (NJTA) to develop cost estimates. These two cost estimating software are based on actual bid prices received by contractors for past projects. The data inputs include item numbers, quantities, and project location. The software then scours the actual bid history to come up with appropriate unit costs for the user's project.

The Order of Magnitude estimate will be AACE Class 3 Estimate, which includes high level of unit cost line items such as Volume of Concrete, Volume of Excavation and backfill, area of influence, Areas of landscaping, length of utilities, length of piling, area of sheeting and area of roadways. We will develop the Order-of-Magnitude cost estimates for full implementation of each alternative with each estimate listing all assumptions such as escalations, hard and soft costs, and contingencies.

At each estimate stage we would identify and analyze cost differences from both, the original budget allocation and previous estimates. Our team will strive to receive quotes for each equipment's and construction method for accuracy and test current market.

Constructability Assessment

To successfully implement this project, it is important to consider the methods of construction that will be required during the evaluation of alternatives. A seasoned engineer experienced with constructing projects in New Jersey will review designs to identify concerns and fatal flaws.

Benefit-Cost Analysis (BCA)

For the three Build Alternatives, the BCA will follow federal guidelines, such as those offered by the Principles and Guidelines for Water and Land Related Resources Implementation Studies (P&G) and will evaluate the funding plan from the perspective of benefits and costs to the US. We will seek NJDEP's approval before using these guidelines for BCA analysis.

We will follow a multi-step process to conduct the BCA:

- **Identify the costs and benefits.** The obvious costs are the construction and operation costs, but they could include other costs, such as environmental, visual, and loss of economic vitality. We will also identify the benefits, such as decreased risk of flooding, recreational and connectivity benefits, benefits identified in other parts of the analysis, and other benefits identified specifically for the BCA. We will take care to be complete, so that we capture all the costs and benefits, and we will also avoid the double counting of benefits or costs.
- **Measure the costs and benefits in their natural units.** Some benefits are naturally measured in dollars and others are not. If increased safety is a benefit, for example, we will measure the number of lives saved, or the number of injuries avoided.
- **Determine the value of each unit of a benefit.** For costs and benefits that are not measured in dollars, we need to determine the dollar value of the individual benefit. Most often this value is taken from the literature. For example, the DOT guidance is that a life saved is valued at \$9.2 million (\$2013). Further, some costs presented in dollars do not reflect the true opportunity costs, and thus need adjusting. For example, often labor rates paid for construction workers are greater than market wages. It is appropriate to use market wages, not mandated labor rates, for BCA purposes (though the financial analysis should use the actual labor rates).
- **Determine the monetary value of each benefit.** This step multiplies units by value, and adjusts for inflation. For example, to determine the value of the safety benefits, we multiply the number of lives saved per year by \$9.2 million, and adjust for price levels.
- **Combine all costs and benefits in a pro-forma.** This step combines all costs and benefits into one spreadsheet, and allows the calculation of annual net costs and net benefits.
- **Choose a discount rate and calculate the appropriate metrics.** This step identifies the appropriate rate at which to discount future benefits. The DOT, for example, requires the use of a 7% real discount rate, and permits the use of an alternative 3% real discount rate. The discount rates are applied to the benefits and costs, and calculate the Net Present Value (NPV), Internal Rate of Return (IRR), and the Benefit Cost Ratio.
- **Conduct sensitivity analysis.** We will vary important assumptions to determine how sensitive the NPV, IRR, and B/C Ratio are to changes in underlying assumptions. This step provides information on risks associated with the analysis.

After, we perform preliminary BCAs for the three Build Alternatives and upon determination of the final project alternative, a comprehensive benefit-cost analysis will be performed using FEMA's Benefit-Cost Analysis (BCA) toolkit.

Depending on the best available information, the final complete BCA will be conducted by using either the Flood or Damage Frequency Assessment Module from the FEMA BCA Toolkit. It is anticipated that the final complete BCA will include the following categories of project benefits:

- **Physical Damages.** Physical damages include damages to buildings, contents, waterfront structures, and infrastructures key systems that may be reduced or eliminated by the proposed project.
- **Loss of Function Costs.** Costs of displacement and/or temporary relocation, and loss of business, public service or key infrastructure costs (i.e., utilities, transportation) that may be reduced or eliminated by the proposed project.
- **Socioeconomic Benefits.** Socioeconomic benefits include costs associated with reduced impacts on low- to

moderate-income households (as defined by HUD), real estate values, adjustments to flood insurance premiums, mental stress and anxiety for residents, and lost productivity for wage-earners that may be reduced or eliminated by the proposed project.

- **Environmental Benefits.** Environmental benefits capture the value of green space associated with projects that eliminate future damage through acquisition of open space or waterfront property, and may also include benefits associated with improved water quality.

The project benefits will then be compared to the final project costs to determine the final project BCA for the selected alternative in the CDBG-DR application. Once the final BCA is complete, the FEMA BCA module run(s) and a complete PDF copy of the BCA results will be included in the Final Feasibility Report. Additionally, the best available hazard information, building information, and project cost data will be compiled into a documentation matrix that will be included as an appendix of the Final Feasibility Report.

Alternatives Analysis

Similar to the concept screening workshops, three meetings will be held that will form the alternatives workshop. These workshop meetings will be conducted at the completion of the feasibility phase. These meetings will represent the further analysis of the three Build Alternatives as well as the No-Build Alternative.

This alternative workshop will include a review of the alternative matrix and a ranking of each Build Alternative as it relates to engineering and environmental considerations. The matrix will highlight the following criteria: flood risk reduction benefits, environmental benefits, environmental mitigation requirements, urban design benefits, community development benefits, economic benefits including benefit-cost ratio, and plan for implementation along with projected construction timeline.

We will strive to come up with designs for the three Build Alternatives that allow for future enhancements.

At the completion of this round of stakeholder meetings the Preferred Alternative will be selected.

Task 5 Deliverables

- Feasibility Report. We will submit a feasibility report with the back-up documents (Final Subsurface Investigation Report, Final maps/GIS shapefiles depicting alternatives). In general, the report will have the following major sections:
 - Executive summary with recommendations for Preferred Alternative
 - Basis of Design Criteria
 - Development and feasibility assessment of flood risk reduction alternatives
 - Cost Estimates
 - Three Build Alternatives including the Preferred Alternative details
 - Implementation and phasing plans
 - List of federal, state, and local permits required and additional information required to support permit applications.

The report will consist of tables, figures, and calculations from the multi-disciplinary team's assessment either in the main report or as an appendix. Our team will create easy-to-understand renderings and graphics of the project alternatives that can be used for meetings with the community and elected officials.

Task 5 Assumptions

1. Five concepts will be developed.
2. We will reach a consensus on the choice of design flood elevation for a coastal flood risk reduction system and rainfall event prior to issuing NOI.
3. We will limit the total number of potential *delay*, *storage*, and *discharge* locations to 76 sites which will include sites identified in the RBD proposal. Out of these 76 sites, we have assumed 50 sites are potential "delay" sites on publicly owned right of way, five sites are potential green roof sites, 15 sites are potential "storage" sites on publicly owned parcels, and six sites are potential "discharge" sites.
4. NJDEP, City of Hoboken, and other stakeholders will assist Dewberry in developing GI siting criteria within 15 working days from NTP.
5. We will limit our site walkthroughs within the City of Hoboken to 10 days to identify potential sites that are beyond those identified in the RBD proposal.

6. We will begin infiltration tests for RBD sites for the *Delay* and *Store* element prior to concept screening workshop.
7. Costs estimates will be developed using NJDOT and/or NJ Turnpike Authority cost estimating software; TransPort (NJDOT) and BidEx (NJTA), and these cost estimating softwares will be accepted by federal agencies
8. We will use FEMA BCA Toolkit for BCA analysis of the final Preferred Alternative.
9. We will create up to 10 renderings per alternative.

Task 6: Preliminary Design and EIS Preparation

A. Preliminary Design

We changed the name of Task 6 from Conceptual Design Development (in the State's SOW) to Preliminary Design to avoid confusion between the five concepts and the three Build Alternatives. We will develop preliminary conceptual design drawings along with artistic renderings for the three Build Alternatives. We assume that the footprint of the coastal flood risk reduction system for the three Build Alternatives will have some overlaps along the alignment. Assuming these overlaps; we will be conducting a topographic survey to develop a base map that would include the maximum extent of the proposed coastal flood risk reduction footprint area. We have assumed that we would survey about an area covering approximately 1.5 miles in length with a width of 100 feet as part of Task 1. We will rely on available the base map survey for the stormwater management options. We will combine these two survey datasets to develop a complete set of final base maps. The preliminary design drawings for the three Build Alternatives including the preferred Alternative will be drawn over these final base maps. These preliminary design drawings for each Build Alternative will include the following sheets:

- Overall site plan showing the footprint of coastal flood risk reduction system and sites for stormwater management
- Plan and typical subsurface and superstructure cross-section views of distinct zones of coastal flood risk reduction system
- Plan and typical cross-section of distinct stormwater management options
- Plan view showing boring and infiltration test locations along with associated soil boring logs and table of infiltration tests
- Plan and section views of typical architectural modifications to buildings (if required)
- Plan and section view of typical applicable landscape treatments

B. Preparation of EIS

The culmination of this entire project will be the completion of the EIS. Building off of the earlier tasks and the ongoing public participation process, including the consensus building that is anticipated from the onset of the project, Dewberry will complete the EIS which will consist of the following sections.

Purpose and Need

The DEIS will include the final Purpose and Need, which will be a succinct and focused statement.

Affected Environment

The DEIS will describe the affected environment, which includes the existing natural and built environment. This section will be developed primarily from the data gathering effort conducted in Task 1. This section will include a discussion of various disciplines including but not limited to cultural resources, hazardous waste, natural resources (including wetlands, open waters, and T&E species), socioeconomics, environmental justice, utilities, infrastructure, and open space. This section will characterize the environmental constraints present in the project area, including the City of Hoboken and the adjoining communities of Jersey City and Weehawken. This framework will be the baseline from which we will conduct the impact analysis for the design concepts.

Alternatives Analysis

This section will highlight the evolution of the five concepts developed and the subsequent selection of the three Build Alternatives.

We will begin by describing the concept screening matrix development and concept screening workshop along with the community involvement that helped winnow down the five concepts to the three Build Alternatives.

This section will conclude with a discussion of the alternative screening process which includes a second evaluation of a matrix. Ultimately, through further analysis of the three Build Alternatives, the Preferred Alternative will be selected.

Environmental Consequences

We will examine the specific impacts of each of the three Build Alternatives on the environmental conditions discussed in the Affected Environment section of the EIS, supplemented by the additional further studies discussed below. These studies will inform our analysis to determine which of the three Build Alternatives best meets the RBD objectives while remaining feasible and having a minimal adverse impact to identified environmental resources. Additionally, we will explain how the environment would be impacted under the No Build alternative scenario.

Natural Resources

For the three Build Alternatives, we will inspect the proposed impact areas located within the “interior” portions of the City and delineate wetlands/open waters that may be affected by the footprint(s) of the alternatives. Based on the delineation of the wetlands/open waters we will calculate the impacted areas of each of the three Build Alternatives.

Aquatic Ecology

We will review any existing mapping of EFH for the project area prepared by NMFS. The mapping will be reviewed in regard to potential use of the project area by the various species of fish mapped by the NMFS. The EFH review will include a “desktop” model of the project area conditions, using existing available information, including geology, bathymetry, latitude, and biogenic habitat in the project area. The model predicts the suitability of an area for potential EFH, based on existing environmental conditions and database information regarding fish distributions and habitat use. Our EFH review includes an initial meeting/consultation with the NMFS to discuss the EFH review protocols and preparation of the “desktop” model, as well as a formal EFH Assessment, including preparation of the NMFS EFH Worksheet.

We will conduct the EFH review/assessment and prepare a summary report of our findings. We will meet with the NJDEP and/or NMFS, if required, to review and discuss our findings. We will address one round of comments from the

agencies, if any, and prepare a summary of the report for inclusion in the DEIS.

Cultural Resources

Our study will summarize the findings of the data gathering that was conducted as part of Task 1. Upon review of the three Build Alternatives, we will first establish an Area of Potential Effects (APE) for both archaeological and historic architectural resources. The APE will include the geographic area within which the proposed project may directly or indirectly cause changes in the character or use of identified National Register of Historic Places listed or eligible resources. The APE for archaeological resources will be limited to the footprint of project-related ground disturbance. The APE for historic architectural resources would include properties identified to have green roofs as well as properties immediately adjacent to the areas of proposed improvement where visual impacts could occur. We will identify data gaps including areas of archaeological sensitivity and areas that warrant architectural survey for locations within the APE that were not evaluated as part of prior studies. As multiple historic districts are located in the project area, assessment of effects to these historic districts will be a key consideration of our study. The specific studies to be conducted for archaeological and historic architectural resources are summarized below.

Archaeological Resources

As part of our evaluation of archaeological resources, we will conduct a Phase IA Archaeological Survey. We will start by defining the APE into areas of archaeological sensitivity based upon previously identified cultural resources, the cultural history of the surrounding area, and a site-specific land-use history of the site. These sensitivity areas will then be used to provide recommendations for future testing and/or monitoring. The results of the Phase IA survey will be summarized in a final report that will be submitted to the NJHPO. The findings of this report will be summarized in the EIS.

This study will be performed in accordance with the SOI Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716) and the NJHPO Guidelines for Phase I Archaeological Investigations: Identification of Archaeological Resources and Guidelines for Preparing Cultural Resources Management Archaeological Reports Submitted to the Historic Preservation Office (1996, 2000).

All archaeological work will be conducted by and/or under the supervision of individuals who meet the SOI Professional Qualifications Standards for archaeology (48 FR 44738-9).

As part of this effort, we will:

- Summarize the background research conducted as part of the data gathering conducted under Task 1.
- Conduct background research on the environmental context of properties to inform the archaeological sensitivity assessment.
- Conduct a pedestrian reconnaissance to photo-document and visually inspect the APE for evidence of prehistoric or historic archaeological resources and to document current site conditions.
- We will summarize areas of archaeological sensitivity and provide recommendations for future archaeological testing and/or monitoring.

Historic Architectural Resources

We will prepare a study of historic architectural resources that will assess potential effects to identified resources that may result from the proposed project. As part of this task, we will conduct an intensive-level architectural survey of previously unidentified properties. For purposes of this task, we assume that the architectural survey will be limited to 10 properties over 50 years of age that would be subjected to an intensive-level architectural survey in order to assess their potential eligibility for listing in the National Register of Historic Places. Following the NJHPO's Guidelines for Architectural Survey, each property will be recorded on a Base Survey Form, as well as a Building/Element Attachment Form. In addition, an Eligibility Worksheet Form will be prepared for each surveyed property. The results of the intensive-level architectural survey will be summarized in a final report that will be submitted to the NJHPO. The findings of this report will be summarized in the EIS.

As part of this task, we will summarize the background research conducted as part of the data gathering task. Additional property-specific research may be necessary and would be conducted at various libraries and repositories in Hoboken and Hudson County. Specifically, historic maps, aerial photographs, published secondary sources, directories, and other pertinent research data will be reviewed. In addition, interested parties knowledgeable about the history

of the project area will be contacted. As part of the background research conducted under this task, special emphasis will be placed on the identification of character defining features of the various historic districts located in the project area.

Upon completion of the intensive-level architectural survey, Dewberry will apply the Criteria of Adverse Effect to all identified properties. Consideration of impacts to the multiple historic districts in the project area will be an important part of this analysis as avoidance and minimization of impacts to these resources will be a key consideration. Working with the design team, our goal would be to develop designs that are in keeping with the SOI's Standards for the Treatment of Historic Properties in order to minimize the potential for adverse effects.

If adverse effects are identified, a list of potential mitigation measures will be recommended, but completion of mitigation work will be beyond the scope of this task. We will also coordinate the public outreach as required under Section 106 as part of this task, including the distribution of reports to the NJHPO as well as interested and consulting parties.

Circulation

We will prepare a Synchro/SimTraffic traffic analysis model of the project network for use in evaluating the traffic impacts that can be expected during construction of each of the three Build Alternatives. We will complete a similar detailed traffic analysis to assess the traffic performance of up to six construction staging schemes, including mitigation measures, for the Preliminary Preferred Alternative. The Synchro model will be constructed based on the data collected in Task 1. It will be used to generate the appropriate traffic performance metrics that can inform the decision process under the Feasibility Assessment and the Preliminary Design. In addition to the traffic analyses, we will identify and evaluate impacts on public transportation services and facilities in the study area, including bus service, ferry service, NJ TRANSIT passenger rail, PATH, and Hudson-Bergen Light Rail. A Traffic tech memo will be prepared to present (a) the approach used for evaluating traffic and transit performance under the Feasibility task and under Task 6, and (b) the respective traffic performance conditions that can be expected for the scenarios analyzed.

Noise

Stationary-source noise related to proposed pump stations will be qualitatively addressed within the DEIS.

In the event specific construction activities cannot meet established noise criteria, we will design mitigation measures, which may include a combination of path and source controls. However, there may be some major construction activities that cannot meet the project-specific construction noise level limit and, therefore, will be restricted during overnights and weekends. Construction noise analyses and mitigation will be detailed within the DEIS.

Aquatic Noise

In addition to construction activities throughout Hoboken, construction activities in connection with constructing sea walls will be performed along the shoreline. NMFS is currently revising the underwater noise exposure guidelines, which are expected by late 2015. Therefore, analyses will be based on current Fisheries Hydroacoustic Working Group (FHWG) criteria to assess the potential physiological effects upon sturgeon exposure to impulsive noise of 206 dB_{peak} and 150 dB RMS for behavioral modification. Based on general construction scenarios planned along the shoreline, we will determine the most reasonable reference level for the construction method chosen to estimate underwater acoustic levels to compare with both aforementioned thresholds in one applicable location. Only one location is required because it will be representative of each potential pile drive location. In the event underwater noise levels are predicted to exceed acoustic thresholds established, mitigation measures such as bubble curtains will be evaluated. Underwater acoustics analyses and mitigation measures will be detailed within the DEIS.

Vibration

Since construction activities will be performed along the shoreline, radiated vibration into the Hudson River from pile driving will be assessed in one location. In the event vibration levels, either on land or water, exceed established thresholds, mitigation will be evaluated. The vibration analyses and mitigation measures will be detailed within the DEIS.

Visual Impact Assessment

We will evaluate and analyze potential impacts the proposed project may have on visual resources and viewers. As part of this analysis, we will determine the level of impact to be beneficial, adverse or neutral. Our study will also discuss the project design's mitigation and enhancement in terms of construction and design-related mitigation measures. As part of our analysis, key consideration will include aspects of the project that partially or totally block a view corridor or a natural or built visual resource. This will be a critical factor for visual resources that are rare in the area or considered a defining feature of the neighborhood.

Temporary Construction Impacts

The DEIS will include an analysis of the temporary impacts that will occur from each of the Build Alternatives during construction phases of the project. Our analysis will identify the extent and duration of impacts on each area of study. In addition to the circulation analysis we will identify and evaluate impacts on public transportation services and facilities in the study area, including bus service, ferry service, NJ TRANSIT passenger rail, PATH, and Hudson-Bergen Light Rail.

Sustainability

Sustainable design aims to reduce pollutant emissions through the evaluation of multiple areas including noise and vibration, light pollution, air quality, greenhouse gases, and solid and hazardous waste. We will build off of data collected in other phases of the Project to determine areas of impact and ways that the alternatives impact sustainability principles. We will qualitatively review emission sources to identify design elements that can reduce pollutants. Our evaluation of design alternatives will consider the effects on such pollutants. We will explore strategies to employ green technologies in the buildings and structures, including but not limited to the use of LEED principles, green roofs and other green stormwater infrastructure, and solar power.

Cumulative Impacts

As is required by NEPA, our analysis will also include an examination of the three Build Alternative impacts in conjunction with the impacts from other nearby proposed and/or in-development flood mitigation projects, notably the Hoboken Cove Plan, Long Slip Canal Project, and the City of Hoboken's streetscape GI projects. Our Alternatives Analysis

and selection of the Preferred Alternative will consider these other projects. Through our stakeholders we will look at the ways our Project interacts with other nearby related projects and evaluate their combined community and environmental impacts and/or benefits. Ultimately, our alternatives selection process will aim to select a Preferred Alternative whose combined efforts with these other identified projects can best meet the objectives set forth in the Purpose and Need and specifically address the protection of these waterfront communities from future storm and flooding events while minimizing cumulative adverse environmental impacts.

We will also explain how the environment would be impacted under the No Build alternative scenario.

DEIS Submittal

The DEIS will be submitted to NJDEP/HUD for review and approval. We anticipate two weeks of review will occur followed by two weeks for addressing NJDEP/HUD comments. Upon approval, the DEIS will be circulated to the federal agencies for pre-draft comment. It is anticipated that this process will take another two weeks. It is anticipated that 100 comments will be received during this pre-draft comment period. Once the stakeholders have concurred on the content of the DEIS, it will be circulated to the general public as well as appropriate state and federal agencies for review and comment. In coordination with the NJDEP/HUD requirements, we will prepare a mailing list for circulation of the DEIS. Per 24 CFR 58.60, the DEIS must be distributed as accordingly: five copies to the EPA headquarters, five copies to the EPA regional office, copies made available to the responsible entity and the recipient (City of Hoboken, Weehawken Township, and Jersey City), and copies or summaries made available to any person requesting them. The DEIS must remain in comment period for no less than 90 days. Based on the number of stakeholders and agencies involved, we assume that 50 copies of the DEIS document will be required for this purpose. Upon receipt of public and agency comments, we will address comments and prepare the FEIS. It is assumed for the purposes of this proposal that we will need to address 50 public and agency comments during the DEIS public hearing and 50 additional comments through the public distribution of the DEIS. It is assumed that no new technical studies will be required as a result of comments.

HUD Policy has previously required a Responsible Entity to publish a Notice of Availability (NOA) of all DEISs and FEISs on the FR. Recent HUD policy updates, as stated on FR 76 FR 2681, published January 14, 2011, changed this approach. HUD currently requires the Responsible Entity to publish an NOA for a DEIS and FEIS only for projects involving actions with effects of national concern. In these cases, the NOA must be published in the FR, and the Responsible Entity must publish and distribute the DEIS/FEIS nationally consistent with 40 CFR 1506.6(b)(2). For projects only involving effects of local concern, the NOA will be published by the EPA, through their weekly FR notice of all DEIS/FEIS reports received during the previous week. A determination regarding the project's effects on national concerns will be established during the early stages of the project.

Final EIS

The FEIS will be prepared to reflect comments of substance received during the DEIS public comment period. The FEIS must also be circulated in the same fashion as the DEIS, with the addition of one copy being sent to the State, one to the HUD Field Office, and one to the HUD Headquarters library. This may include notices in local and regional publications as well as mailings to interested or affected parties. We will consult with the NJDEP regarding the appropriate level of public notice. In accordance with HUD and CEQ regulations, the FEIS will need to be in public comment period for no less than 30 days. We anticipate that 20 comments will be received during this period; however, we do not anticipate that any of the comments will be substantial.

Record of Decision

Upon completion of the FEIS, the Record of Decision (ROD) will be prepared in accordance with CEQ regulations at 40 CFR 1505. The ROD will state the decision made through the environmental analysis, identify all alternatives that were considered, identify the impacts from each, and explain why the Preferred Alternative was ultimately selected. The ROD will explain mitigation measures or conditional approvals that may be required by regulatory agencies in order to approve the project. We anticipate the ROD may require distribution to agencies and stakeholders as appropriate.

Task 6 Deliverables

- Notice of Intent to Prepare an EIS
- Preliminary Design
- Phase IA Archaeological Survey submitted to NJHPO
- Historic Architectural Resources Technical Environmental Study submitted to NJHPO
- Draft Environmental Impact Statement (for review and comment)
- Final Environmental Impact Statement
- Draft Record of Decision
- Final Record of Decision

Task 6 Assumptions

1. Three Build Alternatives will be developed.
2. For each Build Alternative, we will create a maximum of 30 drawing sheets in AutoCAD or other similar program to cover engineering, architectural, and landscape architectural disciplines.
3. The Request for Relief of Funds will be prepared by HUD.
4. No additional technical studies will be required as a result of comments received.
5. Per NJDEP, it is assumed that Phase IB testing will not be necessary and, as a result, no costs associated with Phase IB testing are included in this proposal.
6. No maritime archaeological surveys are included as part of this effort.
7. No geomorphological studies will be included as part of this effort.
8. Background research is limited to the research institutions provided above.
9. We anticipate conducting an intensive-level architectural survey of no more than 10 properties that are over 50 years of age.
10. No mitigation work will be conducted.
11. One hundred comments will be received during the pre-draft comment period for the DEIS.
12. Fifty copies of the DEIS will be provided.
13. Fifty comments will be received during the public hearing for the DEIS.
14. Fifty copies of the FEIS will be provided.
15. Twenty comments will be received during the draft comment period for the FEIS.

Task 7: Document Management and Programmatic Reporting

Budget, Schedule and Invoicing

- When the Agreement is executed the project schedule will be refined defining project milestones with tasks shown in number of days to complete.
- For the duration of the project, we will submit a progress report each month with the invoice. This progress report will include the following:
 - A detailed progress report of the work completed to date with the current invoice period highlighted.
 - A summary of the costs incurred to date (salary, multiplier, and direct) amount remaining, percentage complete of each task.
 - A summary for each major task showing costs incurred per reporting period, total costs incurred to date, a percent complete of the activity based on actual progress and percent of budget expended, and a schedule showing anticipated finish dates.
 - A summary of the overall project percentage complete based on actual progress and percent of budget expended.
 - A summary of anticipated costs/tasks not initially included in the project budget.
 - A confirmation of upcoming submittals and any possible scheduling conflicts.
- Dewberry will provide quarterly and annual Compliance Reports to HUD in accordance with federal procurement regulations.

Project Management Approach

- As an initial activity, a detailed Project Work Plan (PWP) will be developed. The PWP will provide a team organization chart and communication protocol and a detailed description of the various work tasks, their durations, and the party responsible for the work task. We will use the PWP to maintain the schedule. The PWP will be reviewed weekly by the Dewberry Project Manager who will indicate to the NJDEP the need for coordination “prompting” that may be necessary to maintain the schedule.
- Throughout the project, draft memoranda, letters, and forms will be prepared and submitted to the NJDEP in an electronic format for final printing. This may include

invitations to meetings, responses to inquiries, and correspondence with local stakeholders.

- The Dewberry Project Manager will update the NJDEP on a weekly basis regarding the progress made that week and the tasks to be performed during the next week. Issues requiring coordination and/or decision by NJDOT will be identified and suggestions regarding possible solutions will be made.
- Upon completion of the DEIS, we will attend four meetings with final design teams, as necessary, to kick-off the final design phase and answer questions.

Project Management Meetings

The Project Manager and Deputy Project Manager will prepare for, attend, and prepare minutes for 19 coordination meetings with the NJDEP to discuss the project.

Task 7 Deliverables

- Monthly reports
- Compliance reports

Task 7 Assumptions

1. The overall duration of the project management task will be 19 months.
2. Scope includes the Project Principal, Project Manager, Deputy Project Manager, and one Task Leader to attend one meeting per month for 19 months at NJDEP's office in Trenton. Each of these meetings will be preceded by an internal coordination meeting.
3. Scope includes 1,000 Project Manager and Deputy Project Manager hours for conference calls and other correspondence.
4. HUD compliance reports will be prepared quarterly and annually.
5. Grant management support is not included in this proposal and can be provided as an additional service.
6. Dewberry's scope of work for this proposal concludes when the ROD is signed.
7. The number of meetings with the final designers will not exceed four.

Quality Assurance

We will implement our Quality Assurance Program which has been developed to improve productivity, minimize cost, and provide that our clients are satisfied with the final product.

Quality Management System

Dewberry is firmly committed to technical excellence through continuous improvement, which focuses on preventing nonconformance and improving the work process so that our deliverables consistently meet all contractual and regulatory requirements. Our approach to quality control is efficient, documentable, verifiable, and flexible enough to accommodate change while preserving quality. The objective of our QMS is to foster excellence in all of the services we perform and to verify that we use the best professional talent and solutions. Our QMS process is modeled on the Plan-Do-Check-Act cycle that has been successfully used as the basis for the ISO 9000 quality standards.

Quality Assurance Plan

The Project Manager will prepare a Quality Assurance Plan (QAP), in accordance with our QMS procedures. The QAP will identify:

- key personnel and their responsibilities
- subconsultants and their responsibilities
- technical and safety standards to be followed
- the contractual budgets
- schedule

The plan will be reviewed by our two Quality Assurance (QA) Managers, Andrea Burk, and Ozlen Ozkurt. Upon approval of the QAP, it will be issued to everyone assigned to the project/task including subconsultants. Our subconsultants must also abide by this Plan.

Quality control is the responsibility of each member of the project team; Personnel assigned to the project team recognize that they are individually responsible for their work. Quality Assurance is the responsibility of the Project Manager and is audited by the QA Managers.

Health & Safety Program and Plan

Dewberry has a Health and Safety (H&S) Program which provides a practical guide for managing the health and safety aspects of projects and operations conducted by Dewberry. A copy of Dewberry's H&S Program is available upon request.

The Dewberry H&S Program documents a framework for managing health and safety throughout the company. It identifies the roles and responsibilities of each level of employees, specifies how to conduct hazard assessments and controls, identifies appropriate safety training for employees, and outlines a Medical Surveillance Program for appropriate employees.

Our H&S Manager will prepare a Health & Safety Plan (HASP) for this project and the Project Manager will be responsible for communicating the Plan to the team. The HASP will be completed before the start-up of field activities to identify potential hazards and implement appropriate controls. The HASP will outline the controls to be used, the Standard Operating Procedures to be followed, and the training that personnel should have prior to being assigned to particular tasks. The HASP will also provide emergency information and a method for communication of hazards to employees.

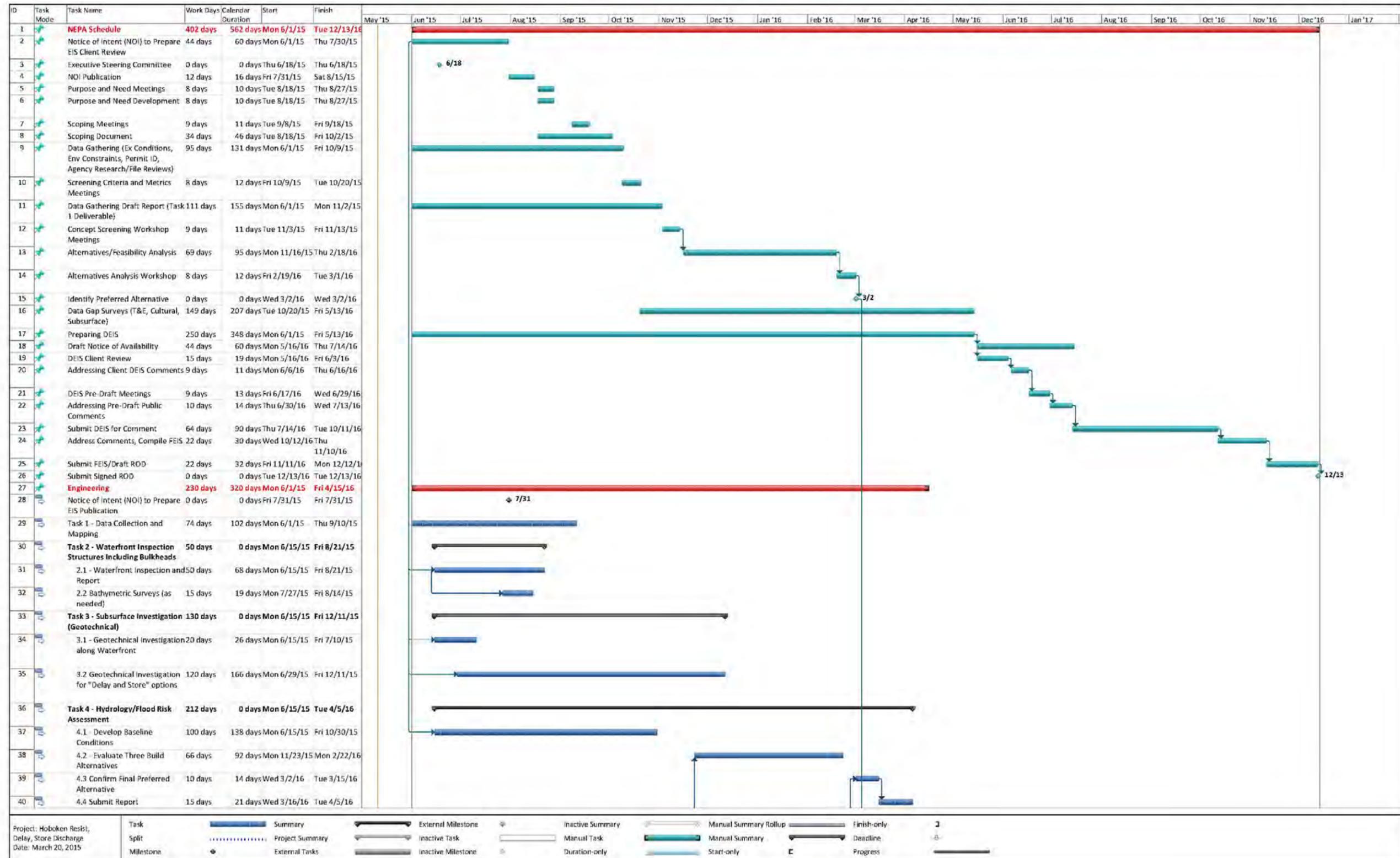
Project Cost and Schedule

Our cost estimate has been submitted under separate cover.

The project schedule was developed to account for the key milestones in the NEPA process including regulatory timeframes to publish the NOI, circulate the draft and final EIS, and finalize the ROD. This is an aggressive schedule, developed with the understanding that federal funds need to be obligated by October 2017. We used a streamlining approach to advance the NEPA process which assumes that the agencies and stakeholders are committed to advancing the project. Meeting the deadline is contingent upon their commitment.

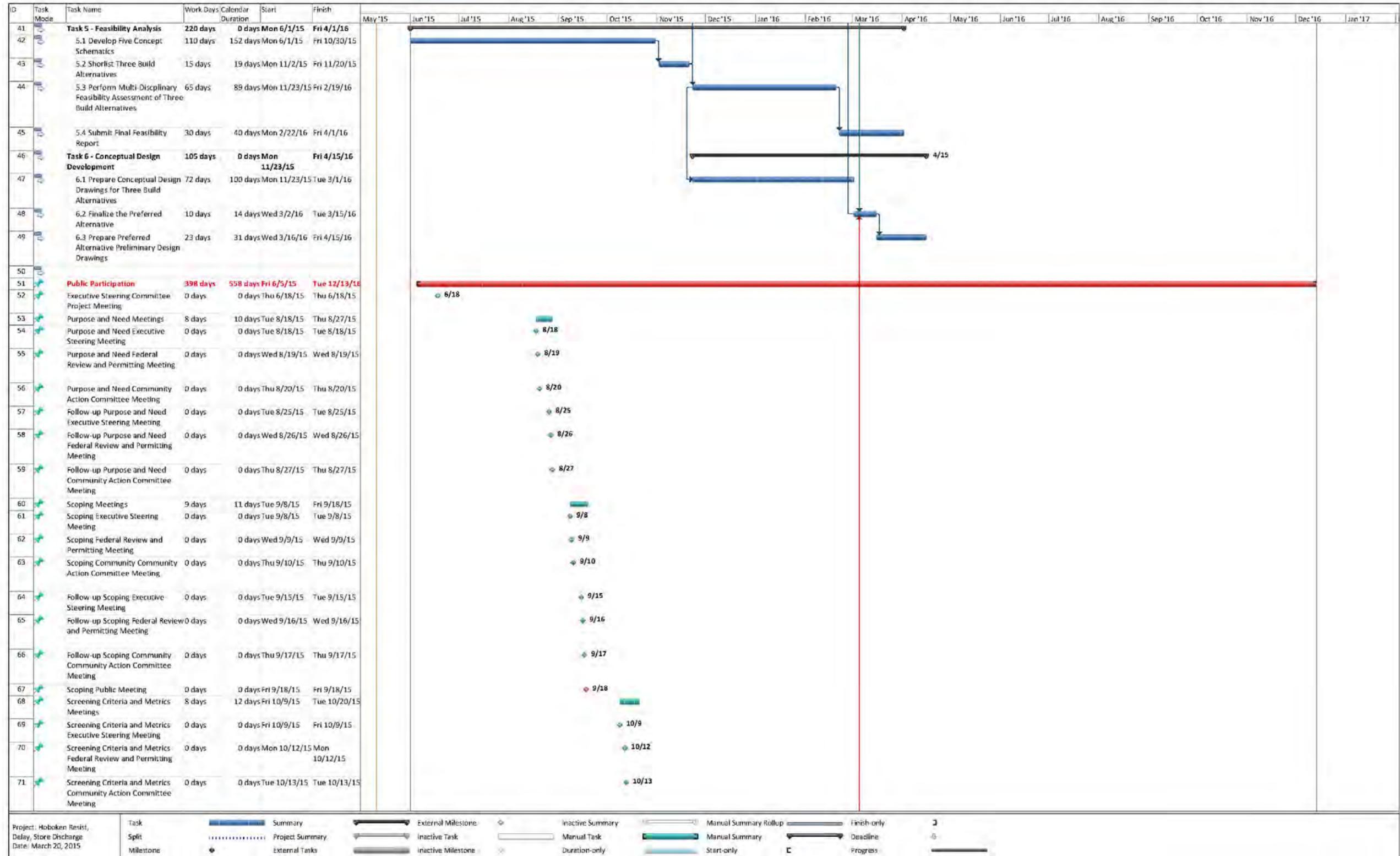
Project Schedule

Sheet 1 of 3



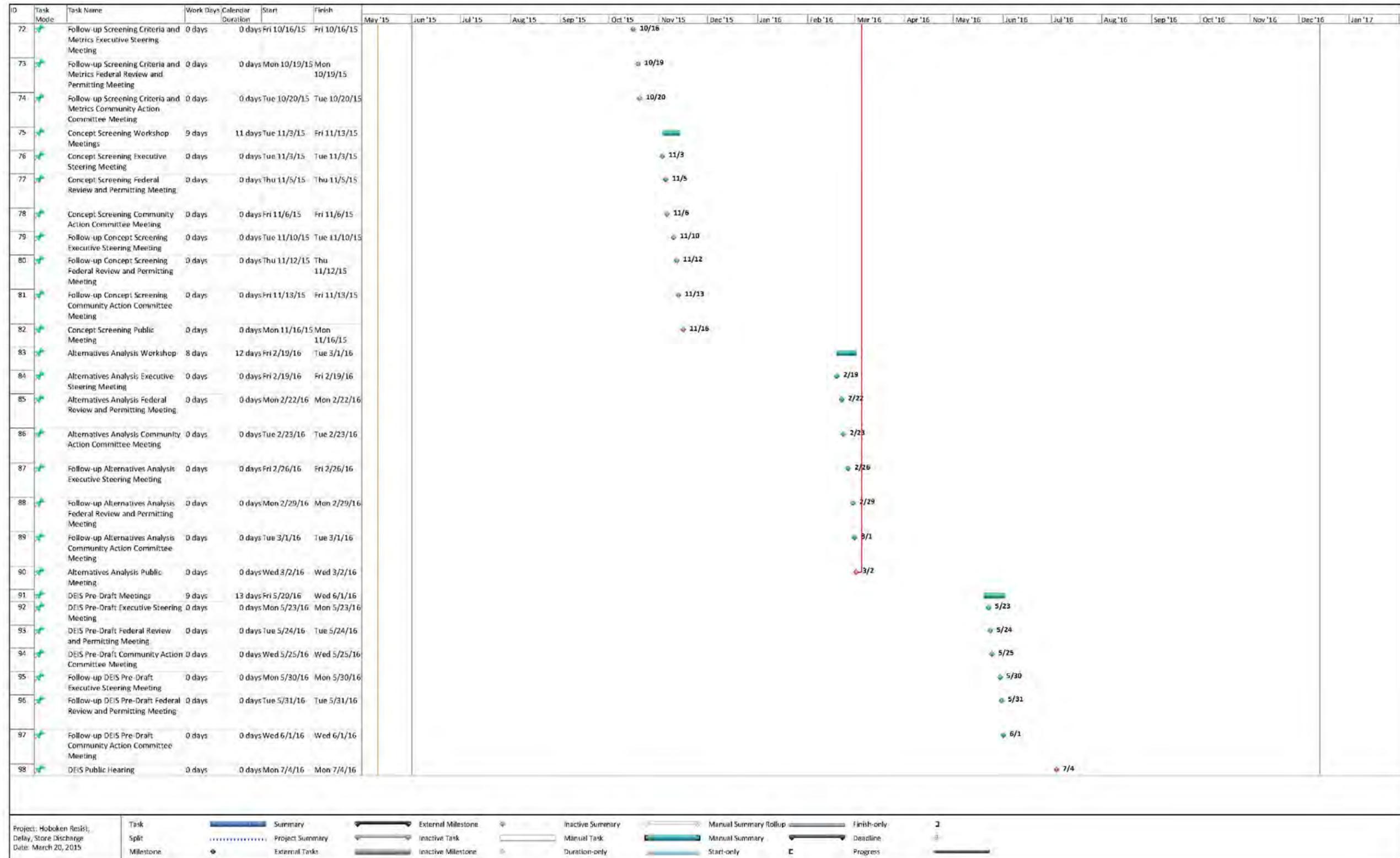
Project Schedule

Sheet 2 of 3



Project Schedule

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Section 3: Project Team



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Project Team

TEAM MEMBERS AND ROLES			
Team Member	DBE	Contract 13-002D	Role
Prime consultant			
Dewberry 600 Parsippany Road, Parsippany, NJ 07054 9773.739.9400		●	Project management; quality assurance; subconsultant management; health and safety oversight; lead for engineering, environmental, and stakeholder outreach
Subconsultants			
Boswell Engineering 330 Phillips Avenue, S. Hackensack, NJ 07606 201.641.0770			Waterfront structures inspection and bathymetric survey
Econsult Solutions Inc. 1435 Walnut St., Ste.. 300, Philadelphia, PA 19102 215.717.2777			Economic analysis
Fitzgerald & Halliday Inc. 416 Asylum Street, Hartford, CT 06103 860.247.7200	●		Stakeholder outreach
Office for Metropolitan Architecture (OMA) 180 Varick Street, Suite 1328, New York, NY 10014 212 337 0770			Urban design Stakeholder involvement
Paul Carpenter Associates, Inc. 23 Vreeland Road, Florham Park, NJ 07932 973.822.8221	●	●	Air quality and noise studies
Scape Landscape Architecture PLLC 277 Broadway, Suite 1606, New York, NY 10007 212.462.2628	●		Landscape architecture
TechniQuest Corporation 4105 US Route 1, Monmouth Junction, NJ 08852 732.274.9500	●		Traffic data collection
Subcontractors			
Craig Geotechnical Drilling Co., Inc. PO Box 427, Mays Landing, NJ 08330 609.625.4862			Geotechnical drilling contractor
Craig Testing Laboratories, Inc. 5439 Harding Highway, Mays Landing, NJ 08330 609.625.1700			Geotechnical testing laboratory
Jersey Boring & Drilling Co., Inc. 36 Pier Lane West, Fairfield, NJ 07004 973.287.6857	●		Geotechnical drilling contractor

Dewberry

Firm Profile

We are a leading professional services firm with a proven history of providing program management, planning, engineering, environmental services, and surveying and mapping services, along with a myriad of technical support. Recognized for combining unsurpassed commitment to client service with deep subject matter expertise, we are dedicated to solving clients' most complex challenges and transforming their communities. Established in 1956, Dewberry is headquartered in Fairfax, Virginia, with more than 40 office locations and 2,000 professional nationwide. We have operated in New Jersey for more than 55 years where we maintain three offices in Bloomfield, Parsippany, and Mount Laurel. Our New Jersey and Manhattan offices have more than 325 personnel.

The true measure of Dewberry lies in the commitment and caliber of our people. Our engineers, scientists, planners, and consultants—many of whom are internationally recognized authorities—offer a proven track record of providing award-winning services and solutions to a variety of public-sector and private-sector clients. We've built long-term, trusted relationships through unsurpassed client service and a dedication to solving today's, and tomorrow's, most complex challenges. In the process, we help our clients transform their communities and improve the quality of life.

Program Management

Our seasoned program managers, many of whom are certified Project Management Professionals, are dedicated to understanding and applying the latest tools, trends, and

technologies in support of our clients' program goals and objectives. We deliver integrated decision-making processes; creditable and auditable cost estimates, budget justifications, and total life-cycle management that considers operational needs while balancing initial costs with operations, energy, and environmental considerations.

We support clients in developing capital improvement programs through project conceptualization (defining objectives, data gathering, stakeholder outreach, conceptual planning, cost estimating and fund sourcing), design (procurement, establishing program criteria, design review and coordination, schedule and budget control, agency coordination), and construction (staging, contract breakout, bid phase services, Requests for Information, public outreach, utility coordination, schedule and budget control, accounts, press and executive briefing).

Federal Funding Compliance

We support clients with federal funding management. In this Post-Sandy world, we collaborated with HUD to shape documentation that will meet CDBG-DR funding. Dewberry was FEMA's first Public Assistance contractor; no company has worked on the program longer than us. We have been a prime contract holder, joint venture partner, or major subcontractor on each of FEMA's major national contracts. We also work with the Federal Transit Administration (FTA) with funding allocations. To support grants under the Public Transportation Emergency Relief Program and the Disaster Relief Appropriations Act of 2013 (Pub. L 113-2), the FTA turned to Dewberry to develop a user-friendly hazard mitigation cost-effectiveness (HMCE) tool and a sea level rise recurrence interval calculator.



Our team includes the very leaders who helped create today's disaster and mitigation programs. Those individuals are available to save our clients critical time and support full funding reimbursement as well as clean performance audits by federal funding agencies.

Climate Change Risk Evaluation and Adaptation / Resiliency

Following the "R4" framework of resiliency (Bruneau et al, 2003), the four measures of resilient systems are:

- **Robustness**—the ability of systems, system elements and other units of analysis to withstand disaster forces without significant degradation or loss of performance;
- **Redundancy**—the extent to which systems, system elements, or other units are substitutable if significant degradation or loss of functionality occurs;
- **Resourcefulness**—the ability to diagnose and prioritize problems and to initiate solutions by identifying and mobilizing material, monetary, informational, technological, and human resources; and
- **Rapidity**—the capacity to restore functionality in a timely manner, containing losses and avoiding disruptions.

Dewberry has a dedicated climate resiliency group that leverages the firm's long-standing experience in mitigation planning, disaster response, flood risk management, coastal modeling, consulting meteorology, geospatial analysis, and web- and desktop-based tool development. Our climate resiliency staff includes expert scientists and engineers who provide, in an integrated manner:

- hazard assessment;
- consequence analysis;
- cost benefit analysis; and
- mitigation and adaptation planning and design.

Working with FEMA, state agencies, and metropolitan planning organizations, we implement programs that overcome the uncertainties associated with climate change and sea level rise by studying multi-scenario frameworks, developing likelihood / consequence models, and weighing scoring to provide effective identification of exposed assets and to facilitate prioritization of adaptation strategies.

Engineering Services

Our clients face aging infrastructure, overworked transportation networks, and extreme funding constraints. We respond not only with technical excellence and regulatory know-how but with solutions borne of our proactive roles in organizations including the the Institute for Sustainable Infrastructure. Services include:

- site selection;
- feasibility analysis;
- cost estimating;
- land and site planning;
- civil engineering;
- coastal engineering;
- geotechnical engineering;
- bridge engineering;
- roadway engineering;
- traffic engineering, maintenance and protection;
- utility infrastructure;
- stormwater management;
- structural engineering;
- sustainable design;
- waterfront/marine engineering;
- constructability and value engineering; and
- contract administration / construction engineering and inspection.

Water Resources Engineering

Our knowledge of stormwater and floodplain management, combined with relationships with regulators, enable us to create efficient and sustainable solutions for site development and infrastructure. Flood mitigation designs include green infrastructure and protective measures like floodwalls, berms, sea walls, shoreline protection, and bulkheads. Retrofit solutions include elevation, wet and dry floodproofing, shutters, shields, backflow valves, sealants, gates, detention system improvements, French drains, infiltration systems, and seepage basins including those for below sea level storage. Broadly stated, services include:

- stormwater management;
- flood mitigation;
- permitting;
- stream restoration;
- National Pollutant Discharge Elimination Systems (NPDES) / Total Maximum Daily Load (TMDL) compliance; and
- water quality.

Facilities Engineering

Our hands-on experience in field observations, system assessments, and troubleshooting informs designs that minimize operation and maintenance requirements while achieving performance objectives. Services include:

- structural engineering (including condition inspection, hardening, and elevation design);
- mechanical, electrical, and plumbing engineering system design; master planning, studies, and system analyses;
- energy audits and commissioning;
- fire protection and alarm systems;
- computerized drawing management;
- voice and data system design;
- commissioning;
- central plants; and
- building and systems performance modeling.

Environmental Services

We offer in-house multi-disciplinary environmental services including environmental planning, natural and cultural resources, hazardous waste services, and support services. Our interdisciplinary approach positions environmental professionals elbow-to-elbow with design engineers early in the planning process to consider all viewpoints in a fully collaborative effort to avoid negative environmental impacts when feasible, minimize unavoidable environmental impacts through design solutions, and mitigate environmental impacts upon project completion.

Environmental Impact Analyses

Dewberry is recognized as one of the region's leading firms in preparing NEPA environmental documentation for infrastructure projects. In addition to large programs, we are

positioned to respond quickly to smaller tasks and the fast turnaround assignments we have come to expect following the American Recovery and Reinvestment Act,

Transportation Investment General Economic Recovery (TIGER), and Post-Sandy federal grants. Services include:

- NEPA and New Jersey Executive Order 215 Compliance (Categorical Exclusions, Environmental Assessments, Environmental Impact Statements);
- cultural resources including Section 106 and Section 4(f) compliance, State Historic Preservation Office liaison, historic resources studies / mitigation, archaeology;
- land use / socioeconomics / zoning;
- natural resources;
- traffic and transportation;
- hazardous waste services;
- air quality and noise services;
- agency coordination; and
- public outreach.

Cultural Resources Services

Our architectural historians and archaeologists bring to each assignment close working relationships with the state historic preservation office and local preservation organizations. We are working every day to support our clients through governing regulations such as NEPA and Section 106 of the NHPA. Since Superstorm Sandy, our architectural historians, terrestrial archaeologists, and maritime archaeologists have supported the NJDEP with the Waterway Debris Removal Program, Route 35 Reconstruction, and CDBG-DR programs, the NJDOT's State Channel Dredging Program, and the City of New York's Build It Back program. Under Build It Back alone, we have reviewed more than 10,000 CDBG-DR funding applications for cultural resources compliance.



Hazardous Waste Related Services

Our engineers, geologists, hydrogeologists, GIS specialists, and environmental scientists support clients in assessing, managing, and remediating soil, groundwater, and in-building contamination. Having played a role in the development of New Jersey's Site Remediation Reform Act and other guidance, we bring insight to guide projects through the regulatory compliance path efficiently. We provide:

- agency coordination;
- due diligence / screening (property acquisition);
- due diligence (pre-construction combined environmental and geotechnical investigation);
- Phase I Environmental Site Assessment;
- Licensed Site Remediation Professional services;
- soil, vapor, and groundwater investigation;
- fate and transport analysis
- risk assessment;
- remedial feasibility studies / technologies evaluation;
- remedial design;
- remedial action;
- compliance monitoring / reporting;
- sustainable remediation;
- UST services; and
- cost recovery / litigation support.

Environmental Permitting and Green Stormwater Infrastructure

We bring strong professional relationships with the regulatory and resource agencies responsible for the review of permit applications. We also bring an in-depth understanding of regulatory requirements based on the large volume of New Jersey projects we have underway at any given time. We provide:

- agency coordination;
- wetland services (delineation, mitigation searches and evaluations, restoration and mitigation design and permitting, restoration and mitigation oversight and monitoring);
- habitat services;
- permitting;
- green stormwater infrastructure alternatives analysis, design, and monitoring; and
- litigation support.

Beginning with pioneering work under Philadelphia's \$2-billion *Green City Clean Waters* program, our green stormwater infrastructure practice has grown to include a series of contracts under the \$2.4-billion *NYC Green Infrastructure Plan*, as well as projects in New Jersey from Camden County to historic downtown Morristown. In addition to our project work, Dewberry professionals support grassroots organizations, provide training, write technical papers, and are frequent lecturers on green stormwater strategies.

Survey, Mapping, GIS

Since Dewberry's founding, we have grown to be an industry leader in surveying and mapping services. Our ability to provide technology, capabilities, capacity, and geographic presence has made us invaluable to a diverse client base. Today our five New Jersey-based survey teams engage a series of technologies and approaches to maximize return on field activities, verify safety procedures, and improve turnaround.

Dewberry employs many of the geospatial industry's recognized and respected experts and thought leaders. We create, analyze, and build tools to share geospatial data, as well as help clients integrate these tools into their daily operations. We fuse multiple data sets together and provide easy-to-use tools that simplify the use of information to allow for more effective and efficient decision making.

Services include:

- GIS/IT
- Remote sensing
- Facility/asset management
- Environmental management

We are a national leader in high-resolution topographic products and one of the nation's largest commercial remote sensing data production operations. The firm holds major national mapping contracts with agencies including US Fish & Wildlife Service, FEMA, US Geological Survey, and NOAA. For NOAA and the Coastal Mapping Program, we are responsible for processing the LiDAR and digital orthoimagery for shoreline delineation following Superstorm Sandy from Myrtle Beach, South Carolina to Long Island, New York.

Disaster Preparedness, Prevention, Mitigation, and Response Recovery

Effective emergency management depends upon the ability to understand how preparedness, prevention, mitigation, and response and recovery are interdependent.

Flood Risk Management

Dewberry has provided flood hazard engineering, mapping, and additional support services for FEMA's National Flood Insurance Program since 1974. Our in-house professionals include 200 flood mapping engineers, geographers, and support personnel (including more than 100 Certified Floodplain Managers) who are dedicated to applying the latest tools to deliver innovative and accurate, high-quality flood hazard information to better inform decision making.

We provide:

- coastal analyses;
- riverine analyses;
- flood risk assessment and communication;
- expert knowledge of FEMA guidelines and specifications;
- digital elevation technologies;
- floodplain mapping / GIS;
- flood warning systems; and
- geospatial web application development.

Emergency Management Planning

Our breadth of experience as former local emergency managers, first responders, and state and federal experts helps us tailor our efforts to meet client needs. By understanding the intricate differences of operations at each level of government, we can bridge the gap between developing and publishing national-level policies and

implementing them at the local / state level. Recognizing that there are no pre-scripted answers to emergency management challenges, we provide planning, training, exercises, and implementation of:

- storm impact forecasting and modeling;
- geospatial support for disaster planning;
- continuity of operations;
- emergency operations;
- debris management;
- evacuation;
- mass fatality;
- public health; and
- recovery plans.

Hazard Mitigation

We have responded to over 400 disasters since 1992. As one of FEMA's primary disaster response and hazard mitigation contractors over the past 25 years, we have been a prime contract holder, joint-venture partner, or major subcontractor on each of FEMA's national technical assistance and inspection contracts. Our hazard mitigation analysis includes weighing alternatives in terms of engineered solutions, policy and procedures, and operations. Services include:

- building, facility and infrastructure hazard assessment;
- provision of optimal mitigation solutions;
- design and specification development;
- RS Means-based pricing;
- Benefit-Cost Analysis (BCA);
- FEMA Hazard Mitigation Grant Program grant application development support; and
- project management.



Subconsultants

Boswell Engineering, based in South Hackensack, will be responsible for waterfront structures inspection and bathymetric survey. Boswell, an *ENR* Top 500 Engineering Firm, has studied and designed many improvements to Hoboken and the Hudson River waterfront.

Econsult Solutions, Inc. (ESA), based in Philadelphia, will conduct economic analyses and will support the BCA including qualitative assessments of socioeconomics and other issues for the three Build Alternatives. ESA brings experience working Hoboken, as well as other urban communities in North Jersey.

Fitzgerald & Halliday Inc. (FHI), a DBE working from offices in Manhattan, will coordinate and facilitate stakeholder outreach. FHI has worked on planning efforts including outreach for the North Jersey Transportation Planning Authority and Together North Jersey's Regional Plan for Sustainable Development and Local Demonstration Project program, which resulted in the development of the Hoboken Green Infrastructure Strategic Plan. FHI is providing stakeholder outreach services for the NYC East Side Coastal Resiliency RBD Project and provided engagement services for the NY Rising Community Reconstruction Program on Staten Island.

Office for Metropolitan Architecture (OMA), from offices in Manhattan, will be responsible for urban design and architecture, and support to stakeholder outreach. OMA is a leading partnership practicing architecture, urbanism, and cultural analysis. OMA led the RBD team for the Resist, Delay, Store, Discharge Project which was recognized for the integration of resiliency into the layered urban environment.

Paul Carpenter Associates, Inc. (PCA), a DBE based in Florham Park, will be responsible for air quality and noise studies. PCA has supported Dewberry on three consecutive NJ TRANSIT environmental task order contracts, our Direct Connection Interchange NEPA EIS, our Route 3 Bridge over the Passaic River NEPA EA. PCA is currently working on the NEPA EIS for NJ TRANSIT's Hoboken Long Slip project.

Scape / Landscape Architecture PLLC, based in Manhattan, will lead the landscape architecture discipline. Scape's practice is focused on retooling landscape architecture relative to the global challenges of climate change and social and environmental justice. Scape's Living Breakwaters project in Staten Island is an RBD winner.

TechniQuest Corporation, a DBE based in Monmouth Junction, will provide traffic data collection. TechniQuest has provided traffic data collection services to collect current traffic flow information for more than one thousand locations, including on many Dewberry projects.

Subcontractors

Craig Testing Laboratories, Inc., based in Mays Landing, will provide geotechnical laboratory services. Craig Testing has supported Dewberry with these services on hundreds of tasks in the past.

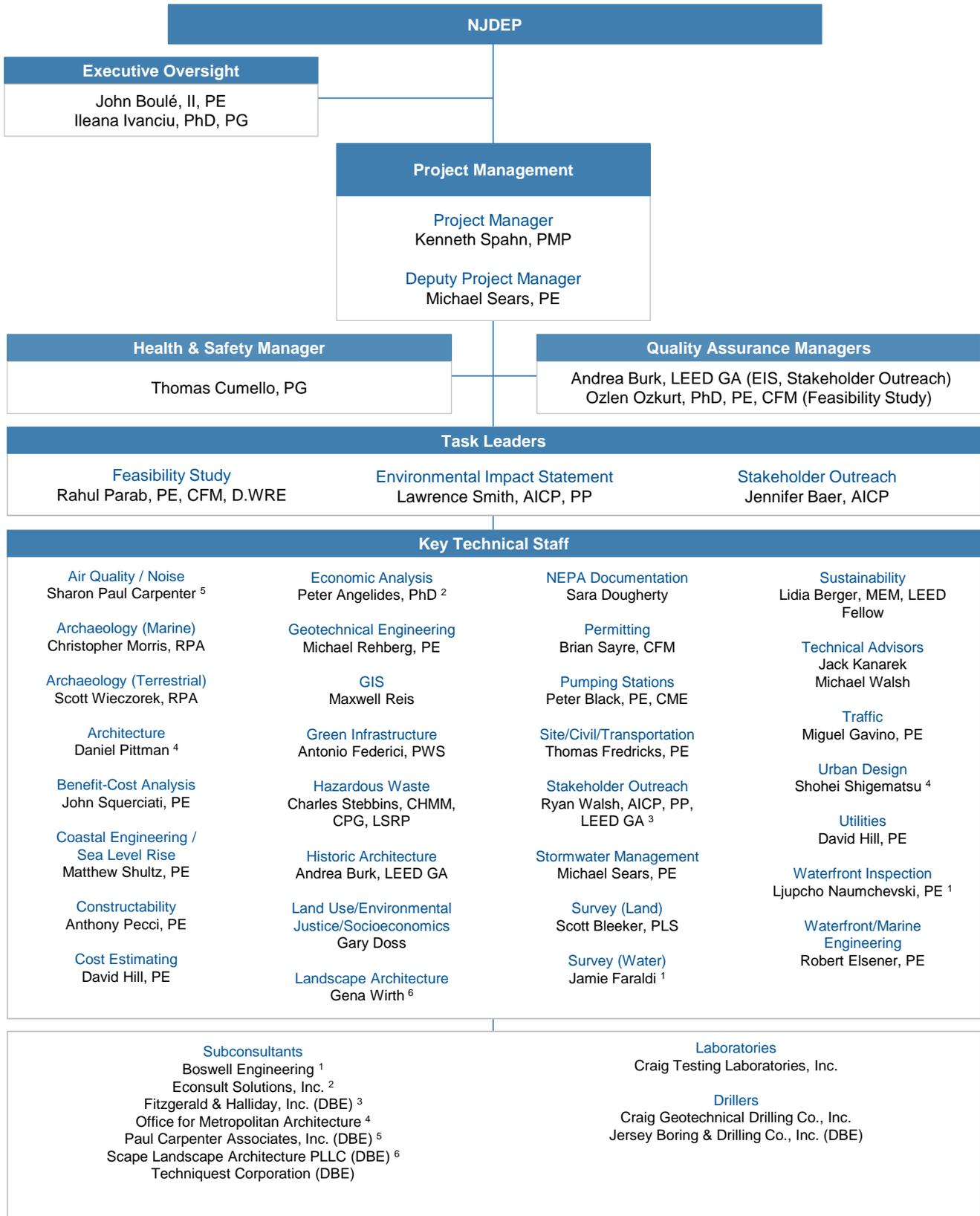
Jersey Boring & Company, Inc., a DBE based in Fairfield, will provide geotechnical drilling services. Jersey Boring has supported Dewberry on many past projects.

Section 4: Key Personnel



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Organizational Chart





John Boulé II PE

Executive Oversight

John Boulé's distinguished career includes the creation of a regional recovery and resiliency program in response to Superstorm Sandy that spanned over twenty local, state, and federal clients including NYC Transit, Long Island Rail Road, NYC Economic Development Corp., HUD, NJDOT, USACE, NYS Department of Environmental Conservation, and the Connecticut Department of Transportation. The program executed more than 50 projects. John served from 2009 to 2012 as commander of the New York District of the USACE responsible for the USACE's water resource development, navigation and regulatory activities on Long Island and in northeastern New Jersey, eastern and south-central New York State, and parts of Vermont, Massachusetts, and Connecticut. As commander, he was responsible for the award and management of 1,000 contracts with an average annual value of over \$1 billion. In 2012 John received the New York Federal Executive Board Award for Continuous Excellence.

EDUCATION

MS, Resourcing National Strategy, National Defense University at Fort McNair, 2009

MA, National Security and Strategic Studies, Naval War College, 2001

MS, Environmental Fluid Mechanics and Hydrology, Stanford University, 1996

MS, Structural Engineering, Stanford University, 1995

BS, Civil Engineering, United States Military Academy, 1986

REGISTRATIONS

Professional Engineer: VA

YEARS OF EXPERIENCE

28

AFFILIATIONS

Society of American Military Engineers (SAME): Director and Past President, New York Post

Metropolitan Waterfront Alliance: Vice Chairman, Board of Trustees

The Nature Conservancy, Eastern New York Chapter, Board of Directors

Governor's Island Alliance, Special Advisor to the Board of Trustees

American Council of Engineering Companies of New York, Member

Association of United States Army, Member

SELECTED EXPERIENCE

Special Initiative for Rebuilding and Resiliency (SIRR), New York City Office of Long-Term Planning and Sustainability, New York, NY. Project Director for preparation of a coastal protection plan which entailed planning and coordinating a citywide strategy and community-level interventions to significantly reduce damage from severe Sandy-like future storms and climate change, which was published in the City's SIRR report, *A Stronger, More Resilient New York*. The team designed, sited, modeled and analyzed the performance of hard and soft coastal protection measures under multiple storm and sea level rise scenarios.

Superstorm Sandy Recovery Task Orders, MTA New York City Transit, Various Locations, NY. Senior Project Manager for over a dozen restoration and mitigation feasibility studies and design projects at stations, rail yards, and subway tunnels to increase the transit system's resiliency. Representative projects include Montague, Clark and Canarsie Tubes, Brooklyn; St. George and Clifton Rail Yards, Staten Island; and South Ferry Station, Manhattan.

Sandy Recovery FEMA Category B – Emergency Protective Measures, NJDOT, NJ. Senior Project Manager for the resiliency portion of this project which supported the Office of Maritime Resources in investigating, mapping, and prioritizing the condition of all State navigation channels.

Ocean Parkway/Robert Moses Causeway Emergency Repairs, New York State Department of Transportation, Long Island, NY. Project Manager for multi-disciplinary engineering services for repair to a section of Ocean Parkway and the Robert Moses Causeway that were severely damaged during Superstorm Sandy, as well as restoration of sand dunes and shoreline areas that were washed away by the storm surge.



Ileana S. Ivanciu PhD, PG

Executive Oversight

Ileana Ivanciu is a recognized leader and frequent author and lecturer on the planning, design, and implementation of infrastructure improvements in environmentally sensitive areas. She received the 2011 National Environmental Excellence Award for Planning Integration for streamlining the NEPA EIS and permitting on New Jersey's \$900-million Direct Connection Interchange. In addition to managing three consecutive NJ TRANSIT Environmental Services Task Order Contracts, she guided a series of Superstorm Sandy restoration and resiliency contracts in New York and New Jersey.

EDUCATION

PhD, Geology, University of Bucharest, 2012

MS, Geology and Geophysics, University of Bucharest, 1981

BS, Geology and Geophysics, University of Bucharest, 1980

REGISTRATIONS

Professional Geologist: TN

YEARS OF EXPERIENCE

33

AFFILIATIONS

ACEC NJDEP Liaison Committee, Chair

Transportation Research Board – Committee on Environmental Analysis in Transportation

American Society of Civil Engineers

SELECTED EXPERIENCE

Project Management Contract for Superstorm Sandy Waterway Debris Removal, NJDEP, New Jersey. Principal-in-Charge of Dewberry's contract to support the NJDEP in planning and managing a regionally organized contract to remove and monitor debris, while maximizing FEMA reimbursement.

Environmental Assessment (EA) Contract for Superstorm Sandy CDBG-DR Programs, NJDEP, New Jersey. Principal-in-Charge for NEPA EAs and compliance with Section 106 of the NHPA, in support of HUD CDBG-DR funded projects under a series of programs. Contract addressed nearly 400 sites to date.

Management Support Services for Environmental Assessment, Governor's Office of Storm Recovery, Statewide, NY. Principal-in-Charge for environmental and program management services across a range of CDBG-DR funded programs. Programs provide long-term recovery of communities impacted by Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee.

Route 29 Boulevard Feasibility Study and Environmental Analysis, NJDOT, Trenton, NJ. Deputy Project Manager for a study on converting a 1.8-mile-long freeway corridor into an urban boulevard to improve resiliency, access, and open space along the Delaware River waterfront; improve safety; and promote economic development.

Feasibility Assessment and NEPA EIS, Direct Connection Interchange, NJDOT, Camden County, NJ. Deputy Project Manager for the feasibility assessment, EIS, outreach program, permitting, final design, and construction administration for a \$900-million interchange project that is under construction.

Final Scope Development and NEPA EA, Routes 3/21 over the Passaic River, NJDOT, Passaic and Bergen Counties, NJ. Deputy Project Manager for final scope development, NEPA EA, community outreach, final design, and construction administration for the \$159-million Route 3 bridge replacement and associated improvements. Completed in 2014, this project, which is constructed in three municipalities, won the 2015 Globe Award for Environmental Protection and Mitigation.



Kenneth Spahn PMP

Project Manager

Ken Spahn is a Senior Project Manager and certified Project Management Professional. He held senior leadership positions in capital planning and cost analysis, program and asset management, waterfront and intermodal redevelopment, facility management, leasing, and financial management for the Port Authority of New York & New Jersey. He is skilled at establishing organizational effectiveness within culturally diverse, and fiscally and politically challenging environments.

EDUCATION

MS, Management Engineering, New Jersey Institute of Technology, 1991

BS, Marine Transportation - Management, State University of New York Maritime College, 1983

REGISTRATIONS AND TRAINING

Project Management Professional:
US

YEARS OF EXPERIENCE

30

AFFILIATIONS

2010-2013 Board Member, Maritime Association Port of New York/New Jersey

Past Board Director Gateway Regional Chamber of Commerce

SELECTED EXPERIENCE

Port Capital Programs and Redevelopment, Assistant Director. Responsible for overseeing Port Planning, Asset Management, Capital Planning and Redevelopment functions. Responsibility for development and implementation of \$1.7-billion capital plan with annual \$17-million Operating Major Works Program. Division includes supervisory, engineering, project, and program management staff.

- \$250-million expansion Intermodal Rail Terminals
- \$500-million expansion/redevelopment Container Terminals
- Funding and implementation of priority programs, State-of-Good Repair (SGR) projects and dredging programs
- Led port infrastructure Hurricane Sandy recovery effort

Port Finance & Properties, General Manager. Supervised a staff of professionals responsible for all Port Commercial agreements with over 120 tenants, land use and revenue of over \$230 million. Included developing and implementing Port-wide land use plan.

Port Projects and Intermodal Development, General Manager involved in developing and implementing strategies and solutions with external stakeholders and internal authorizations (eight major Board actions) for over \$600 million in Port Authority investment associated with the development of the ExpressRail Intermodal Rail Program.

Aviation Department, Acting Assistant Director for Strategic Planning, External Affairs and Assistant Director Operations, Maintenance & Technical Services. Primary focus included creation of an Air Cargo Business Plan. Functions included oversight of staff, budget, and department-wide business plan development and strategy.

General Manager, New Jersey Marine Terminals. Managed a staff of 25 management and 65 unionized personnel. Responsible for facility operations, lease administration, security, facility maintenance and engineering services, capital development, safety programs, and industry/community liaison for a 2,500-acre marine terminal complex.



Michael Sears PE

Deputy Project Manager

Mike Sears is a seasoned project manager and senior water resources engineer. His experience includes hydrologic and hydraulic work associated with floodplain management, flood control studies, channel relocations, roadway and site drainage, and stormwater management design. He specializes in the planning, design, and implementation of construction involving streams, wetlands, and coastal regions. He is well-versed in the procedures of environmental resource agencies including NJDEP, USACE, and the US Coast Guard.

EDUCATION

BS, Mechanical Engineering,
University of Connecticut, 1992

BS, Metallurgy, University of
Connecticut, 1992

REGISTRATIONS AND TRAINING

Professional Engineer: NJ/CT/NY/PA
National Council of Examiners for
Engineering and Surveying: US

YEARS OF EXPERIENCE

26

AFFILIATIONS

American Society of Civil Engineers
New Jersey Association of Floodplain
Managers

SELECTED EXPERIENCE

Route 29 Boulevard Feasibility Study and Environmental Analysis, NJDOT, Trenton, NJ. Senior Water Resources Engineer for a study on converting a 1.8-mile-long freeway corridor into an urban boulevard to improve resiliency, access, and open space along the Delaware River waterfront; improve safety; and promote economic development.

I-287 Emergency Repair NB PM 44.7, NJDOT, Morris County, NJ. Project Manager. Responsible for engineering design of permanent stabilization measures following Hurricane Irene's (August 2011) record high flow through the main channel of the Rockaway River causing the Northbound right shoulder of Interstate 287 between Stations 237+50 and 241+00 to collapse into the river.

Route 56 Rainbow Lake Dam Emergency Bridge Repairs, Salem County, NJ. Project Manager responsible for emergency bridge repairs and associated approach roadway work after the dam was breached during a 2007 Nor'easter. The key to the design and construction from NJDOT's perspective was to complete the project as quickly as possible and open Route 56 to traffic. The project included removal of the existing spillway, bridge, and damaged roadway/dam. A new two-span, 110-foot-long bridge and a 200-foot-long semi-circular spillway were constructed. This project involved extensive community outreach. The bridge was open to traffic more than six weeks ahead of schedule.

Route 29 Concept Development, NJDOT, Trenton, NJ. Project Manager. Under a statewide drainage/dam studies term agreement project, responsible for the conceptual development of solutions to flooding problems. Drainage deficiencies were investigated; existing aerial survey was combined with field survey in order to construct hydraulic models of existing conditions. The causes of the flooding conditions were ascertained and conceptual solutions were designed and evaluated. Investigations into the locations of existing utilities and available rights-of-way were performed in order to verify whether the concepts examined adversely impacted the surrounding environs. Conceptual cost estimates were developed and a Conceptual Design Report was provided in order to determine whether the project should be advanced to the final design phase.



Andrea Burk LEED AP

Quality Assurance Manager: EIS and Stakeholder Outreach

Andrea Burk is an experienced project manager, architectural historian and planner who has been involved with the environmental and feasibility analysis for some of the largest projects in the region.

SELECTED EXPERIENCE

Environmental Assessment (EA) Contract for Superstorm Sandy CDBG-DR Programs, NJDEP, New Jersey. Project Manager for NEPA EAs and compliance with Section 106 of the NHPA, in support of HUD CDBG-DR funded projects under a series of programs. Contract addressed nearly 400 sites to date.

Feasibility Assessment and NEPA EIS, Direct Connection Interchange, NJDOT, Camden County, NJ. Environmental Task Leader for the technical environmental studies, preparation of an EIS, agency coordination, and public outreach for this \$900-million interchange project that is under construction.

World Trade Center Memorial and Redevelopment Plan Final Generic Environmental Impact Statement (FGEIS), Lower Manhattan Development Corporation, New York, NY. Task Manager for the Historic Resources and Urban Design and Visual Resources sections of the FGEIS. Involved extensive coordination with federal, state, and local agencies, including the New York State Historic Preservation Office (SHPO), the Lower Manhattan Development Corporation, the Federal Highway Administration, the Federal Transit Administration, the Port Authority of NY & NJ and the New York City Landmarks Preservation Commission.

NEPA EIS for the World Trade Center Permanent PATH Terminal, Port Authority of NY/NJ, New York, NY. Task Manager. As a subconsultant, prepared an historic resource analysis and urban design/visual resources assessment for the EIS for the reconstruction of the PATH Terminal. Participated in a coordinated Section 106 review, concurrent with the Draft Generic EIS for the redevelopment of the World Trade Center site. Involved extensive coordination with federal and state agencies as well as consulting parties.

NEPA EIS for the Second Avenue Subway, MTA Capital Construction, New York, NY. Architectural Historian/Planner. In support of the cultural resources analysis prepared for this project's EIS, hundreds of historic properties were surveyed. Work included field surveys, historic research, and the completion of Resource Inventory Forms. Phase I of this project is estimated at \$4.45 billion.

NEPA EIS for the East Side Access Project, MTA-Long Island Rail Road, New York, NY. Architectural Historian. Conducted historic research and prepared numerous New York State Historic Resource Inventory Forms along the project corridor in support of the project's EIS. This project is estimated at \$10.8 billion.

EDUCATION

MS, Historic Preservation, Columbia University, 1999

BA, History and Communication, Rutgers College, 1992

REGISTRATIONS

LEED Green Associate

YEARS OF EXPERIENCE

20

AFFILIATIONS

National Trust for Historic Preservation

Society for Industrial Archeology

Society of Architectural Historians



Ozlen Ozkurt PhD, PE, CFM

Quality Assurance Manager: Feasibility Study

Ozlen Ozkurt has experience in design and modeling of coastal storm surge barriers, design of grey infrastructure to control Combined Sewer Overflow (CSO), development of drainage plans, stormwater management, hydrologic and hydraulic modeling for FEMA flood studies, specifications, and physical modeling of flow and sediment dynamics. She is well versed with federal, state, and local design guidelines and has used future climate change projections to improve resiliency on a variety of projects.

SELECTED EXPERIENCE

Oakwood Beach Flood Resiliency Study, NYS Office of General Services, Staten Island, NY. Project Manager for design of integrated flood protection system consisting of rock revetment, floodwalls, tide gates and others measures to mitigate the coastal and rainfall flooding within Oakwood Beach Area. Included hydrologic and hydraulic models, analysis of flood protection system for climate change, and cost estimates.

Stormwater Green Infrastructure Design Services, Newtown Creek Combined Sewershed Study Areas, NYC Department of Design + Construction, NYC Economic Development Corp., Queens and Brooklyn, NY. Project Manager responsible for managing internal team and subconsultants; internal QA/QC of work products such as drainage basins and locations and design of ROW bioswales and stormwater green streets; utility coordination; geotechnical investigation and report writing.

Tottenville Terminal Station Yard, Flood Mitigation Feasibility Study, MTA New York City Transit, Staten Island, NY. Project Manager for comprehensive hydrologic and coastal flooding analysis for Tottenville Terminal Station Yard. Analysis also included the increased effects of storm surge, wave overtopping, and wave forces in the future due to multiple sea-level rise scenarios. Results were used to properly design the height and size of the bulkhead flood wall to mitigate coastal flooding and make the station yard more resilient.

Flood Mitigation/Resiliency at Six Critical Lower Manhattan Locations, MTA New York City Transit, New York, NY. Deputy Project Manager responsible for design of near-term and long-term solutions to mitigate flooding of six stations in flood-prone areas for Category 2 Hurricane storm surges. These locations required hardening to prevent future disruptions to subway operations.

Queens Drainage Phases I and II, New York City Department of Environmental Protection, Queens, NY. Project Engineer responsible for storm, sanitary, and combined sewer network design for the Springfield Drainage Basin and Southern Jamaica Drainage Basin, which comprised 9,300 acres in Phase I and 4,500 acres in Phase II.

EDUCATION

PhD, Civil Engineering, City University of New York, 2006

MS, Civil Engineering, Istanbul Technical University (Turkey), 1999

BS, Civil Engineering, Istanbul Technical University (Turkey), 1997

REGISTRATIONS

Professional Engineer: NY, CT

Certified Floodplain Manager: US

YEARS OF EXPERIENCE

17

AFFILIATIONS

Association of State Floodplain Managers, Inc.

New Jersey Association of Floodplain Managers

American Society of Civil Engineers



Rahul Parab PE, CFM, D.WRE

Feasibility Study Lead

Rahul Parab is a senior project manager and technical specialist for design of flood control systems, hydrologic and hydraulic modeling, coastal modeling, GIS, stormwater systems, site/civil design, FEMA floodplain studies, environmental and construction engineering. He leads multi-disciplinary projects for a range of clients including FEMA, USACE, and state and local agencies and has presented papers on resiliency projects at national and international conferences. He served as the chair of ASCE-Environmental & Water Resources Institute task force committee on “Stormwater Management during Disasters.”

EDUCATION

MS, Civil Engineering, University of Toledo, 2003

BS, Civil Engineering, University of Mumbai (India), 2001

REGISTRATIONS AND TRAINING

Professional Engineer: NY, TX

Certified Floodplain Manager: US

Diplomate, Water Resources Engineering

YEARS OF EXPERIENCE

13

AFFILIATIONS

American Council of Engineering Companies (ACEC) NJDEP Liaison Committee, Chair

Transportation Research Board – Committee on Environmental Analysis in Transportation

American Society of Civil Engineers

SELECTED EXPERIENCE

Oakwood Beach Flood Resiliency Study, NYS Office of General Services, Staten Island, NY. Deputy Project Manager and Technical

Leader responsible for design of integrated flood protection system consisting of rock revetment, floodwalls, tide gates and others measures to mitigate the coastal and rainfall flooding. Included hydrologic and hydraulic models, analysis of flood protection system for climate change, cost estimates.

Stormwater Green Infrastructure Design Services, Newtown Creek Combined Sewershed Study Areas, NYC Department of Design + Construction, NYC Economic Development Corp., Queens and Brooklyn, NY. Project Engineer for drainage basins, ROW bioswales, Stormwater Green Streets, utility coordination, geotechnical investigation, and report writing.

City of Long Beach Seawall Design, FEMA HMGP, Long Beach, NY. Coastal Engineer responsible for evaluating the appropriate design flood elevation of the proposed integrated flood protection system to protect the City’s Wastewater Treatment Plant from coastal storm surge. Performed coastal wave overtopping calculations; accounted for sea-level rise and developed a summary report.

Willets Point Station Drainage Analysis, Long Island Rail Road, Queens, NY. Technical Advisor responsible for providing guidance to the design team to identify drainage issues; investigating causes for drainage problems; and providing design solution alternatives for mitigating drainage problems.

Nationwide RISKMAP and Flood Mapping Study, FEMA, Various Locations. Project Manager and Technical Leader for flood risk and vulnerability assessment from rainfall and coastal storm surge induced floods. Included hydrologic, hydraulic, coastal analyses using models such as HECHMS, HEC-RAS, SWMM, WHAFIS; use of GIS to delineate floodplains; extensive community outreach; and agency coordination.

Construction Inspection of Avenida Mendez Seawall Project, St. Augustine, Florida. Field Engineer responsible for inspection of the construction of the 1,100-foot-long new seawall in front of a 150-year-old historic seawall.



Lawrence I. Smith AICP, PP

Environmental Impact Study Lead

Larry Smith leads environmental teams in support of impact analyses for large capital projects pursuant to NEPA and related federal, state, and local environmental acts and executive orders. He is an accomplished GIS practitioner experienced in integrating environmental studies with mapping to expedite the analysis and documentation processes, and to facilitate public outreach. He brings broad experience in leveraging technology to improve large-scale, time-sensitive programs and streamline the environmental review process.

EDUCATION

MEP, Environmental Planning,
Arizona State University, 2003

BA, Environmental Studies,
Binghamton University, 1995

REGISTRATIONS

Professional Planner: NJ

Certified Planner: US

YEARS OF EXPERIENCE

17

AFFILIATIONS

American Institute of Certified
Planners

American Planning Association

SELECTED EXPERIENCE

Feasibility Assessment and NEPA EIS for Direct Connection Interchange, NJDOT, Camden County, NJ. Senior Environmental Planner for the feasibility assessment, preparation of an EIS, permitting, final design, and construction administration for a \$900-million interchange currently under construction.

NEPA Environmental Assessment (EA) Contract for Superstorm Sandy CDBG-DR Programs, NJDEP, New Jersey. Deputy Project Manager for NEPA EAs and compliance with Section 106 of the NHPA, in support of HUD CDBG-DR funded projects under a series of programs. Contract addressed nearly 400 sites to date.

NEPA EA for Barge Fleeting Area, Tulsa Port of Catoosa, Catoosa, OK. Senior Environmental Planner for NEPA EA prepared for Port expansion involving a land swap with the USACE Tulsa District.

NEPA Programmatic Environmental Assessments (PEAs) for US Immigration and Customs Enforcement, USACE Fort Worth District, El Centro, CA and Florence, AZ. Project Manager responsible for preparing PEAs to support improvement and facility replacement for a five-year period.

NEPA EA for Route 27 and Wood Avenue Improvement Project, NJDOT, Middlesex County, NJ. Environmental Planner responsible for preparing the EA, creating associated GIS, and participating in public meetings.

EIS for Interchange 14A Improvements, NJ Turnpike Authority, Bayonne and Jersey City, NJ. Senior Planner for NJ Executive Order 215 EIS, technical studies, alternatives analysis, and public outreach for \$160-million project.

EIS for Garden State Parkway Milepost 83.6 to 99.5 Widening, NJ Turnpike Authority, Ocean and Monmouth Counties, NJ. Senior Planner, as a subconsultant, for NJ Executive Order 215 EIS, technical studies, alternatives analysis, and public outreach for \$330-million project. The project involves widening 17 miles of highway including 31 bridges (two new, 20 replacements, nine superstructure elements) in the municipalities of Toms River, Lakewood, Brick, and Wall in Ocean and Monmouth counties.



Jennifer Baer AICP

Stakeholder Outreach Lead

Jennifer Baer has facilitated and coordinated agency liaison and public outreach for projects in New Jersey for more than twenty years. Her work includes community meetings, issue group meetings with project stakeholders and/or area residents, and developing targeted products including web sites, fact sheets, newsletters and brochures.

SELECTED EXPERIENCE

Pre-Construction Services Related to Hurricane Sandy Relief Programs for NYC Economic Development Corporation and Mayor's Office of Housing, New York, NY. Environmental Specialist. Supported New York City's housing recovery program post-Superstorm Sandy with NEPA environmental review to qualify properties for CDBG-DR funding.

Direct Connection Interchange, NJDOT, Camden County, NJ. Senior Planner for public involvement for strategies including Community Advisory Committee Meetings, Agency Coordination Meetings, Public Information Centers, meetings with elected officials, and Public Hearings. This \$900-million project received the 2011 National Environmental Excellence Award for Planning Integration for streamlining the NEPA EIS.

Routes 3/21 over the Passaic River, NJDOT, Passaic and Bergen Counties, NJ. Outreach Specialist responsible for identifying and addressing potential community relations problems and facilitating a public involvement program including maintaining community/stakeholder mailing list, facilitating meetings of community action and community liaison committees, and organizing public hearings. Completed in 2014, this \$159-million project in three municipalities won the 2015 Globe Award for Environmental Protection and Mitigation.

Route 29 Boulevard Feasibility Study and Environmental Analysis, NJDOT, Trenton, NJ. Outreach Specialist responsible for the Public Involvement Action Plan in this multi-lingual, urban environment for a study on converting a 1.8-mile-long freeway corridor into an urban boulevard to improve resiliency, access, and open space along the Delaware River waterfront, improve safety, and promote economic development.

Garden State Parkway Milepost 83.6 to 99.5 Widening, NJ Turnpike Authority, Ocean and Monmouth Counties, NJ. Senior Planner, as a subconsultant, responsible for public involvement activities including coordinating the public information centers and local officials briefings for \$330-million project in the municipalities of Toms River, Lakewood, Brick, and Wall.

NEPA EA for Hoboken Yards, NJ TRANSIT, Hoboken, NJ. Project Manager. Responsible for preparing an EA and associated transportation planning for the redevelopment of Hoboken Yards.

EDUCATION

MA, Public Administration,
New York University, 1985

BA, Political Science,
Drew University, 1983

REGISTRATIONS

Certified Planner: US

YEARS OF EXPERIENCE

26

AFFILIATIONS

American Institute of Certified
Planners

American Planning Association

OMA

Shohei Shigematsu

Partner, OMA New York



Shohei Shigematsu is a Partner at OMA and Director of the New York office. Since joining the office in 1998, he has been a driving force behind many of OMA's projects in the Americas and Asia. Shohei provides design leadership and direction across the company for projects from their conceptual onset to completed construction.

Shohei is in charge of a number of cultural projects including the Quebec National Beaux Arts Museum and the Faena Arts Center in Miami Beach – both scheduled for completion in 2015 – as well as direct collaborations with artists, including a studio expansion for Cai Guo Qiang in New York, the Marina Abramovic Institute for the Preservation of Performance Art in upstate New York, and a pavilion in Cannes housing a seven screen system designed for Kanye West. Sho led the design of the world-traveling Prada exhibition, "Waist Down," as well as the Dominican Republic pavilion for the 2014 Venice Architecture Biennale. Under his direction, the New York office has also been commissioned to design a number of residential towers in San Francisco, New York and Coconut Grove, as well as a mixed-use complex in Santa Monica, Los Angeles. Shohei is also leading a number of large scale masterplans including a new civic center in Bogota, Colombia. Most recently, he led a multidisciplinary team for Rebuild by Design, a post- Hurricane Sandy initiative by the US Department of Housing and Urban Development, which has produced a comprehensive urban water strategy for Hoboken, NJ.

Prior to leading OMA's effort in the Americas, Shohei also directed OMA's winning competition entry for the Shenzhen Stock Exchange (SSE) Headquarters in Shenzhen, China (2006). Having led the team that won the design competition in 2002, he served as project architect for CCTV (China Central Television) Headquarters in Beijing until the end of design development.

Professional Experience

1999 OMA
2006 Director of OMA New York
2009 Partner

Selected Masterplanning & Public Space

West Louisville Food Port, Kentucky, USA
Faena Arts District, Miami Beach, Florida, USA
South Beach ACE, Miami, Florida, USA
Park Grove, Miami, Florida, USA
CCTV Headquarters/ TVCC, Beijing, China
Almere Masterplan Almere, Netherlands
Dallas Connected City, Texas, USA
HUD Rebuild by Design, New York, New York, USA
Bogota Centro Administrativo Nacional, Columbia
The Plaza at Santa Monica, Santa Monica, Florida
Christopher Arts District, New York, USA
MACCOC Centinje Masterplan, Montenegro
Baltic Pearl Masterplan, St. Petersburg, Russia
White City London Masterplan, London, UK
KJ Plein, The Netherlands
UN City, New York, USA
Breda Chasse Campus, Breda, The Netherlands

Selected Projects

Milstein Hall, Cornell University, Ithaca, New York, USA
425 Park, New York, USA
Marina Abramovic Institute, Hudson, New York, USA
Musee National des Beaux Arts du Quebec, Canada
23 East 22nd Street, New York, USA
Shenzhen Stock Exchange, Shenzhen, China
Prada Transformer, Seoul, Korea
7 Screen Pavilion with Kanye West, Cannes, France
Coach Ometesando, Tokyo, Japan
1996-97 NKS Architects Fukuoka, Japan
1997 Matsuoka + Won Architects, Fukuoka, Japan
1996 Toyo Ito Architects & Associates, Tokyo, Japan

Education

1997-8 The Berlage Institute, Rotterdam, Netherlands
Postgraduate Laboratory of Architecture
1996-7 Kyushu University, Tokyo, Japan
Master of Architecture at the Division of Engineering,
Graduate School

GENA WIRTH Associate

Gena is a designer, urban planner, and horticulturalist. As Project Manager at SCAPE, she pulls from her interdisciplinary training to create ecologically rich and culturally relevant landscapes from the infrastructural scale to the site level. She was on the original Oyster-ecture team and was the Project Manager for SCAPE's involvement in SIRR, studying large-scale harbor-wide strategies for coastal protection measures that will be utilized in preparation for the next Superstorm. She was also the Project Manager for SCAPE's winning RBD proposal, *Living Breakwaters*, a climate change resiliency strategy for t Staten Island. Developed in tandem with an interdisciplinary team of architects, engineers, marine biologists, and educators, the project was selected for 60M of implementation funding by HUD in the spring of 2014, and is currently in the EIS and pre-construction phase.

Gena holds a Master of Landscape Architecture and Master of Urban Planning with Distinction from the Harvard University Graduate School of Design and a Bachelor of Science in Horticulture from the University of Delaware.

PRACTICE

SCAPE / LANDSCAPE ARCHITECTURE PLLC, New York, NY / 2009-present
Lexington Wet Weather Storage Facility, Lexington, KY
SIRR Coastal Protection Planning, New York, NY
Living Breakwaters, Rebuild by Design, HUD, NJ/ NY Metropolitan Region (Winner)
Town Branch Commons, Lexington, KY
PAVE Academy, New York, NY
Columbia University Medical Center, Medical Education Building, New York, NY
Oyster-ecture, Gowanus Bay Pilot Project, New York, NY
103rd Street Community Garden, New York, NY (Winner, ASLA Award)
Mt. Sinai Medical Campus Residential Tower, New York, NY
Blue Wall Environmental Center, Cleveland, SC
Petrochemical America Publication, New York, NY

PREX, Project for Reclamation Excellence, Cambridge, MA / 2006-2009

Hargreaves Associates, New York, NY / 2008

A. C. Durham Landscape Architecture, Wilmington, DE / 2004-2005

Longwood Gardens, Kennett Square, PA / 2003

EDUCATION

Harvard University Graduate School of Design, Cambridge, MA

Master of Landscape Architecture, 2009

Master of Urban Planning, 2009

University of Delaware, Newark, DE

Bachelor of Science, Landscape Horticulture, 2005

AWARDS

Charles Eliot Traveling Fellowship in Landscape Architecture, Harvard GSD, 2009

Penny White Traveling Grant, Harvard GSD, 2006, 2008

ACADEMIC

Visiting Critic, "Shale, Salt, and Sylva: Constructing a landscape identity at Syracuse University"
Syracuse University School of Architecture / Spring 2015

Lecturer in Landscape Architecture

Rutgers University School of Environmental and Biological Sciences / 2012

Adjunct Assistant Professor with Kate Orff, in Architecture and Advanced Architecture Design

Columbia University GSAPP / 2010-2013

Studio Instructor in Landscape Architecture, Career Discovery Program

Harvard Graduate School of Design / Summer 2009



LJUPCHO NAUMCHEVSKI, P.E. **Project Manager / Chief Engineer Diver**

EDUCATION

BSCE, Kiril and Metodij University, Skopje, Macedonia

REGISTRATION

PE – NJ, CT, DE, NY PA

KEY QUALIFICATIONS

DIVING CERTIFICATIONS

- PADI Certified Open Water Diver
- BUE On-The-Job Training in Commercial Hard Hat Diving Techniques
- BUE On-The-Job Training in Underwater Inspection of Bridge
- Confined Space Entry – OSHA 29 CFR 1910.146 (g) (4)
- ADCI (Association of Diving Contractors International) Surface-Supplied Air Diver Supervisor I.D. 489, Certification No. 44197
- 40-Hour Health and Safety for Hazardous Waste Site Investigation Personnel

Mr. Naumchevski is a key staff member of Boswell Underwater Engineering (BUE), a division of Boswell Engineering specializing in the investigation and structural evaluation and design of marine infrastructures. As a BUE staff member, he serves in the capacity of project manager, chief engineer diver, and hydrographic/fathometric surveyor and has physically performed underwater diving inspections on the submerged components of more than 720 bridges spanning waterways and conducted over 420 hydrographic/fathometric surveys. He has gained substantial experience over a 23 year span on diving projects requiring underwater inspections of port and harbor facilities, bridge substructures, piers, relieving platforms, waterfront bulkheads, submerged pipeline installations, and offshore platforms, logging over 4100 hours underwater on inspection assignments. Concurrent with this, he has developed a handsome track record of hydrographic/fathometric surveying experience, a substantial amount of which involved scour investigations of bridges spanning waterways and pre-and-post dredging surveys. In addition, his background includes structural design and analysis of bridges, box culverts, and marine facilities, as well as bridge, pier, and relieving platform rehabilitation design and rating. He is skilled in commercial hard hat diving techniques, underwater photographic and videotape documentation, ultrasounding of metal structural elements for determining section loss, and hydrographic surveying techniques using electronic range-azimuth and differential GPS systems. He has extensive experience in the preparation of condition survey reports and is skilled in the use of interactive Auto-CAD software for preparing plan, elevation, and fathometer contour drawings. He is an expert at identifying and evaluating the extent of biodeterioration caused by marine borer intrusion in submerged timber structures through core sampling techniques. He is also actively engaged in BUE's in-house marine borer research test board program, which seeks new ways of controlling marine borer intrusion in timber structures.

RELEVANT EXPERIENCE

PANY&NJ QAD Division On-Call Waterfront Condition Survey Contracts. On-Site P.E. Diver/Team Leader performing condition surveys, structural evaluations, and repair designs on over 51 major assignments.

PANY&NJ Materials Engineering Division (MED) On-Call Waterfront Technical Service Contracts. On-Site P.E. Diver/Team Leader on 200+ inspection assignments on ports / harbors, shipping berths, and waterfront structures.

NYSDOT Regions 1 through 11 Bridge Diving Inspections & Fathometer Surveys. Project Manager & On-Site P.E. Diver/Team Leader on 13 consecutive NYSDOT Bridge Diving Contracts during the last 16 years.

Fathometer Surveys of TBTA Bridges. Team Leader on assignments involving Fathometer Surveys to assess the progression of scour were performed on seven bridges owned by the Triborough Bridge & Tunnel Authority.

TBTA Bridge Diving Inspections. Team Leader on assignments involving bridge diving inspections for the Triborough Bridge & Tunnel Authority on four bridges.

Pre-Dredge Fathometer Survey of Port Liberté, Jersey City, NJ. Team Leader for survey verified dredge volumes required for the proposed deepening of the Port Liberté channel for the private boats of homeowners.

BOSWELL UNDERWATER ENGINEERING

PETER A. ANGELIDES, PhD, AICP

Econsult Solutions, Inc.

CURRENT POSITIONS

Vice President & Principal, Econsult Solutions, Inc. | Philadelphia, PA (2013 – present)

Director, Econsult Corporation | Philadelphia, PA (2008 – 2012)

Conducts financial and strategic analyses for public sector economic and fiscal impact studies. Project areas include commercial corridors, affordable housing, neighborhood change, real estate development, economic development, economic and fiscal impacts, and financial modeling, among others.

Lecturer, University of Pennsylvania | Philadelphia, PA (2004 – present)

Teach in the Urban Studies, City Planning, and the Fels Institute of Government.

Courses: GAFL 724: Infrastructure Investment and Economic Growth

CPLN 503: Urban and Regional Economics

PAST POSITIONS

PricewaterhouseCoopers, Director | Philadelphia, PA (2001 – 2008)

Charles River Associates, Senior Associate | Washington, DC (1999 – 2001)

PHB Hagler Bailly / Putnam, Hayes & Bartlett, Consultant | Washington, DC (1997 – 1999)

University of Minnesota, Instructor | Minneapolis, MN (1993 – 1997)

Wallace Roberts & Todd, Urban and Environmental Planner | Philadelphia, PA (1990 – 1992)

SELECTED PROJECTS

Medicaid Expansion in Pennsylvania – The Pennsylvania Economy League, Inc.

The study used State and Federal spending estimates to analyze the impacts of the proposed Medicaid expansion in Pennsylvania.

Dilworth Plaza & Concourse Improvements – Center City District.

Analyzed the possible job creation and economic development impacts from improvements to Dilworth Plaza as part of the District's application for a TIGER II grant.

Tiger Grant, West Trenton – South Eastern Pennsylvania Transportation Authority (SEPTA).

Assessed the costs and benefits of their track separation project and show to what extent their project will have positive economic, transportation, social, and environmental impacts in order to achieve the desired outcomes of the TIGER grant application.

Delaware Valley Regional Planning Commission.

Using Toll Revenue to Finance Highway and Transit Capital Improvements. Analyzed the ability of tolls on US 422 to finance roadway upgrades and the re-establishment of commuter rail service to Philadelphia.

22nd Street Subway Station – Central Philadelphia Development Corporation (CPDC).

Fiscal Impacts of the Proposed 22nd Street Subway Station. Evaluated potential economic and fiscal impacts.

Coalition for Main Street Fairness.

The Impact of Not Collecting Sales and Use Taxes from Internet Sales into Pennsylvania. Analyzed the economic consequences to Pennsylvania if it were able to collect sales tax from all internet retailers (Pennsylvania).

Philadelphia Water Department.

Economic Analysis of Stormwater Fee Changes on Philadelphia Businesses (Philadelphia, PA)

EDUCATION

Ph.D. of Philosophy in Economics at the University of Minnesota | Minneapolis, MN (1998)

M.S. in Economics at the University of Minnesota | Minneapolis, MN (1996)

Thesis topic: "Auto Ownership and Mode Choice: A Structural Approach"

Fields: Industrial Organization, Financial Economics

Master of City Planning, University of Pennsylvania | Philadelphia, PA (May 1988)

B.A. Urban Studies (Honors); Minor in Mathematics, University of Pennsylvania | Philadelphia, PA (May 1987)



RYAN WALSH, AICP, PP, LEED GA



FITZGERALD & HALLIDAY, INC. PROJECT MANAGER

As a planner and public involvement specialist, Ryan has worked on transportation planning and public involvement projects across the country. He has experience conducting research for transportation programs as well as interviews and surveys for community planning initiatives. Ryan is certified to conduct planning charrettes by the National Charrette Institute, and has great facility in the use of on-line social media for public involvement.

PROJECT EXPERIENCE

HUDSON COUNTY JERSEY CITY/HOBOKEN SUBREGIONAL TRANSPORTATION STUDY | 2010-2011 Ryan led the public outreach on this multi-jurisdictional transportation study which resulted in recommendations for increasing safety for pedestrians, bicyclists, drivers, transit users, and improving connections in a developing area between the cities of Jersey City and Hoboken. Efforts included GIS analysis to identify relevant stakeholders and property owners within the study area; multi-lingual outreach and communication with the diverse stakeholder population; developing and maintaining a project website. Additionally, planned a series of large public meetings to engage stakeholders and involve the public in all stages of the study's development, from visioning to final recommendations. Ryan facilitated small group, subject-focused discussions on transit, bicycle and pedestrian issues, and auto traffic. (Prior to FHI)

NY RISING COMMUNITY RECONSTRUCTION PROGRAM | 2013-ONGOING

Following Hurricane Sandy, Ryan coordinated the public involvement efforts of the NY Rising Community Reconstruction Program for the East and South Shores of Staten Island. Ryan coordinated with a local Community Planning Committee of roughly 30 local experts and with the community as a whole, utilizing meetings, electronic communication, and survey techniques to help develop over \$30 million resiliency projects for this hard hit area. For this outreach effort, Ryan planned and facilitated multiple rounds of committee meetings, public information sessions, and open house events.

PORT AUTHORITY OF NY & NJ (PANYNJ) GOETHALS BRIDGE MODERNIZATION ENVIRONMENTAL IMPACT STATEMENT (EIS) | 2009

Ryan provided public outreach assistance to the PANYNJ and the U.S. Coast Guard as they prepared an EIS for potential replacement to the Goethals Bridge. He assisted with the planning and facilitation of formal public hearings on both the New Jersey and Staten Island sides of the bridge. Responsible for collecting, tracking, and documenting public comments. (Prior to FHI)

NEW YORK CITY DEPARTMENT OF TRANSPORTATION (NYCDOT) GREEN INFRASTRUCTURE | 2013-ONGOING

Ryan is the project manager, assisting the NYCDOT with an interagency effort that includes the Department of Environmental Protection and the Department of Parks and Recreation to site and review locations for right-of-way bioswales, Stormwater Greenstreets, and other green infrastructure in the street right-of-way. Ryan provides general oversight to other DOT green infrastructure consultants and manages of field reports.

NJ TRANSIT LOCAL DEMONSTRATION PROJECT | 2012-2013 Serving as a subconsultant to EE&K and Together North Jersey, Ryan facilitated outreach to municipalities and counties. Involved planning and facilitating workshops to inform the municipalities and counties of the Local Demonstration Program, a component of the Regional Plan for Sustainable Development. Public involvement activities included coordinating workshops. (Prior to FHI)

EDUCATION

- Columbia University Graduate School of Architecture, Master of Science, Urban Planning, 2007
- University of Oregon, Bachelor of Science, Geology and Environmental Studies, 2001

PROFESSIONAL AFFILIATES

- LEED Green Associate, 2013
- New Jersey Professional Planner (PP), 2012
- American Institute of Certified Planners (AICP), 2009
- Member, American Planning Association, 2005-ongoing

YEARS EXPERIENCE

- 1.5 Years with firm
- 8 Years in industry



Paul Carpenter Associates, Inc.

SHARON PAUL CARPENTER, ASCE GRADE PVII
Air Emissions, Noise and Vibration Specialist

EDUCATION

B.S., Meteorology, 1985, Rutgers University

CERTIFICATION

National Highway Institute, Highway Traffic Noise, September 2013

USEPA Quantitative PM2.5 Hot-spot Analysis Training, August 2011

FHWA MOVES2010a Training, December 2010

AERMOD Training, September 2009

FHWA PM2.5 Training, February 2004

FHWA CAL3QHC Transportation Air Quality Dispersion Modeling Training, February 2004

FHWA Traffic Noise Model (TNM2.0) Training, 32 hrs conducted by Bowlby & Associates, Inc., Nov. 2002

PUBLICATIONS

“Deviation from a Standard State Noise Wall Policy”, Sharon Paul Carpenter, Paul Carpenter Associates, Inc., Jane Burns, Paul Carpenter Associates, Inc., Edward Tomaszewski, New Jersey Department of Transportation, Transportation Research Record: **Journal of the Transportation Research Board**, No. 2001; Environmental Issues 2007

KEY QUALIFICATIONS

Sharon Paul Carpenter, president of Paul Carpenter Associates, Inc., possesses 30 years of air emissions, noise and vibration assessment experience. Ms. Paul Carpenter is fluent in noise and vibration level documentation utilizing state-of-the-art monitoring equipment. As project manager, she has extensive mobile-source modeling experience with FHWA’s Traffic Noise Model (TNM2.5). In just over the past 10 years, Ms. Paul Carpenter has performed final noise wall designs totaling \$35.6M in construction costs for public agencies such as New Jersey Department of Transportation and New Jersey Turnpike Authority.

- **Air Quality and Noise Assessments, Final Noise Study; NJDOT I-295 / I-76 / Route 42 Direct Connection, Camden and Gloucester Counties** – Project manager completed air quality and noise Technical Environmental Studies (TESS) which were summarized within the NEPA Final Environmental Impact Statement (FEIS). Also completed final noise study detailing \$13.9M in noise walls and performed stationary-source noise analyses for generators associated with pump stations. Currently performing compliance noise monitoring assistance under construction contracts 1 and 2. (2000-present)
- **Noise and Vibration Assessments; Lincoln Tunnel Helix Deck Rehabilitation, Hudson County, NJ** – Project manager completed background noise monitoring within the vicinity of proposed deck rehabilitation activities. Construction-related noise criteria was developed and included within contract noise specifications. Deployed remote monitoring system utilizing one vibration and three noise monitoring terminals. Currently responsible for deploying Noise Control Officers during overnight construction activities to ensure contractor meets noise criteria. (2011-present)
- **Air Quality and Noise Assessments, Final Noise Study; NJDOT Route 3, Route 46, Valley Road and Notch/Rifle Camp Road Interchange, Passaic and Bergen Counties, NJ** – Project manager performed air quality and noise assessments which were detailed within a CED. Also completed final noise study detailing \$5.5M in noise walls. (2013)
- **HUD Noise Assessments; City of Elizabeth Housing Authority, Union County** – Project manager performed HUD Site Acceptability studies for several sites throughout Elizabethport (158-168 First Street, 212-214 Third Street and 200-206 Third Street). (2012)
- **Air Quality and Noise Assessments, Final Noise Study; NJDOT Route 3 at the Passaic River Bridge Crossing, Passaic and Bergen Counties** – Project manager performed air quality and noise assessments which were detailed within the Environmental Assessment (EA). Also completed final noise study detailing \$3.3M in noise walls. (2009)

Section 5: DBE Participation



www.dewberry.com

Disadvantaged Business Enterprise Participation

Firm Name	Participation	Role
Subconsultants		
Fitzgerald & Halliday Inc. 416 Asylum Street, Hartford, CT 06103 860.247.7200	3.4%	Stakeholder outreach
Paul Carpenter Associates, Inc. 23 Vreeland Road, Florham Park, NJ 07932 973.822.8221	1.2%	Air quality and noise studies
Scape Landscape Architecture PLLC 277 Broadway, Suite 1606, New York, NY 10007 212.462.2628	2.4%	Landscape architecture
Techniquet Corporation 4105 US Route 1, Suite # 10. Monmouth Jct., NJ 08852 732.274.9500	0.4%	Traffic data collection
Subcontractors		
Jersey Boring & Drilling Co., Inc. 36 Pier Lane West, Fairfield, NJ 07004 973.287.6857	2.4%	Geotechnical drilling contractor



SCOPE OF WORK
October 29, 2015

TASK ORDER 1
Term Contract TC-001
DPMC Project P1131-00

**FEASIBILITY, ENVIRONMENTAL IMPACT STATEMENT, DESIGN AND
CONSTRUCTION ADMINISTRATION
REBUILD BY DESIGN: NEW MEADOWLANDS
“PROTECT, CONNECT, GROW”
SERVICES TO BE PERFORMED BY THE CONSULTANT**

BACKGROUND

This project (New Meadowlands) originated with Rebuild by Design (RBD): a design competition sponsored by the U.S. Department of Housing and Urban Development (HUD) that utilized a collaborative process to find effective ways to protect people, homes, businesses and infrastructure, and to increase resilience in Sandy-affected regions as part of recovery from the storm. At the conclusion of the RBD competition, HUD selected two winning projects for the State, with designs that will help densely populated communities with repetitive flooding challenges. The State will receive \$150 million in CDBG-DR funds to implement “Pilot Area 1” of the flood mitigation project known as the “New Meadowlands - Protect, Connect, Grow” (New Meadowlands). Pilot Area 1 encompasses portions of Carlstadt, Little Ferry, Moonachie, South Hackensack and Teterboro. The NJDEP has been designated to oversee these projects on behalf of the State. The New Meadowlands project proposes an integrated vision of protecting, connecting and growing the Meadowlands. Integrating transportation, ecology and development, the project aims to transform the Meadowlands to address a wide spectrum of risks while providing civic amenities and creating opportunities for new redevelopment.

As noted in the Federal Register notice at 79 Fed. Reg. 62182 (Oct. 16, 2014), RBD addresses structural and environmental vulnerabilities that Superstorm Sandy exposed in communities throughout the region and develops fundable solutions to better protect residents from future disasters. Information about RBD can be found at: <http://www.rebuildbydesign.org>. More information regarding the history of the competition can be found in the Federal Register at 78 Fed. Reg. 45551 (July 29, 2013) and 78 Fed. Reg. 52560 (Aug. 23, 2013).

The purpose of this Scope of Work (SOW) is to issue an initial task order (Task Order 1) to begin the process to evaluate and build upon the RBD concept to determine the best, most cost effective way to implement comprehensive flood protection and will serve as the foundation and initial steps for the Feasibility Study, Environmental Impact Statement (EIS), Design and Construction Administration for the “New Meadowlands - Protect, Connect, Grow” project. As per the Federal Register notice, the Consultant may (but is not required to) subcontract with or

seek input from the design team (or members of the design team) that participated in the development of the RBD proposal for the HUD-sponsored competition. The Consultant shall provide technical analyses and design services (as more fully described below) for the Project Areas, namely the areas encompassed by the final “New Meadowlands - Protect, Connect, Grow” RBD Proposal, <http://www.rebuildbydesign.org/project/mit-cau-zus-urbanisten-final-proposal/>. The activities contemplated also include other services, such as supplying NJDEP with all necessary information required for HUD reporting and grant compliance.

This SOW complements the RFP posted on July 16, 2015 and as amended on August 13, 2015. Information contained herein is intended to provide a basic framework for the consultant to follow and propose to NJDEP more detailed proposals associated with specific Task Orders. At the request of the consultant, NJDEP will consider deviating from this framework in cases where the intentions of the project mission may be better served in a different way.

Work completed under any Task Orders must comply with all applicable State and Federal laws and policies, including but not limited to those specified in the applicable Federal Register notice, published at 79 Fed. Reg. 62182 (Oct. 16, 2014). Among other laws and policies, work completed under any Task Orders should comply with the National Environmental Policy Act (“NEPA”), 42 U.S.C. §4321 *et seq.*, HUD regulations implementing NEPA (24 C.F.R. Part 50) and Section 106 of the National Historic Preservation Act. This includes (but is not limited to) preparing a Notice of Intent, gathering data necessary for NEPA compliance, completing a site-specific environmental review checklist, developing screening criteria and screening reasonable alternatives, completing the Statutory Checklist for compliance with 24 C.F.R. §58, drafting the EIS, finalizing the EIS and preparing a Record of Decision. Throughout the process, the Consultant will be responsible for scoping: an open process involving the public and other Federal, state and local, agencies, and coordinating with agencies/consultants implementing other large projects in the area. Public involvement, including consultation under 36 CFR 800.2(c) and (d), and agency coordination must continue throughout the entire process.

A. Overview

This SOW is intended to provide the Consultant with the general requirements of this initial task order and is directed primarily toward the area encompassed by the State’s National Disaster Resiliency Competition Phase 2 application, though data gathered under this task order may incidentally also be applicable to subsequent Project areas. The major components to this SOW include, but are not limited to, the following:

- Gathering and reviewing existing, relevant data and documents pertaining to the Project Area as indicated in the RBD concept and extending to logical alternative project alignments currently limited to the areas within the State’s National Disaster Resiliency Competition Phase 2 application and a potential surge barrier located downstream of the project site.
- Reporting data and data gaps to NJDEP with a plan for filling data gaps.
- Preparing initial Health and Safety Plan.
- Preparing a plan for investigating potentially feasible alternative project components and alignments.

- Initiating the NEPA process for the preparation of an Environmental Impact Statement (EIS), up to the draft Notice of Intent (NOI) phase.
- Preparing Progress Reports on a monthly basis.
- Preparing progress reports for necessary HUD reporting requirements.
- Attending regular meetings with NJDEP staff
- Initiating tasks to support the state in community relations, and legal and technical issues.

B. Basic Services

The possible task assignments include, but are not limited to, the list below and are further defined throughout this SOW:

Task 1 - Data Gathering and Review, Project Organization, Project Schedule

Task 2 – Initiate Feasibility Planning

Task 3 – Initiate the process for an Environmental Impact Statement

Task 4 – Community Relations, Technical and Legal Support

Task 5 – HUD Compliance

C. General Requirements

1. Progress Reporting

The Consultant shall prepare and submit monthly progress reports to NJDEP that contain the following information. This task will cover the first 6 months of the project schedule and will be extended under subsequent task orders:

- Work accomplished during the reporting period
- Status of Task items outlined in the SOW
- Updated project schedule
- Percent of task completion including number of man-hours and cost expended
- Problems or delays experienced during the reporting period
- Actions being taken to address and/or rectify problems and delays
- Activities projected over the next month
- All personnel changes (key personnel changes will require prior approval)
- Billing to date showing detailed breakdown of costs incurred for the month on a task by task basis
- Financial reporting of invoices received and paid
- Other information necessary to satisfy reporting requirements imposed by Housing and Urban Development (HUD)

2. Project Meetings

The Consultant shall prepare for and attend project meetings as required by NJDEP in Trenton, New Jersey or other suitable locations. Project meetings will be held twice per month. Once per month

the meeting will be held in person (6 meetings) with alternate meetings (6 meetings) to be held via conference calls. The meetings topics may include but not be limited to the following topics: data gathering issues, property access issues, regulatory issues, technical issues; progress, budget, change orders and presentations. The Consultant will be required to prepare an agenda and follow up with minutes summarizing the meeting discussions. Additional meeting requirements are detailed under specific tasks below.

3. Project Manager

The project management will be assigned to one person on the Consultant team who will act as the main contact for the execution of this work. The Project Manager is responsible for thorough knowledge of the day to day status of the work in progress. The Project Manager will be present at all meetings requested by NJDEP. The Project Manager will be a NJ Licensed Professional Engineer and may also be a Licensed Site Remediation Professional. The Project Manager will be required to interact with and report to the NJDEP Project Manager

Note: All costs for Progress Reporting, Project Meetings, and the management and coordination of each site specific project shall be included as a separate line item under “General Requirements – Meetings”.

4. Licensed Site Remediation Professional

The professional services provided to the NJDEP include the retention of a Licensed Site Remediation Professional (LSRP). The Site Remediation Reform Act (SRRA) at N.J.S.A. 58:10C-1 et seq. was enacted by the State Legislature on May 7, 2009. It established the LSRP program whereby State-qualified licensed environmental professionals direct and oversee remedial activities in accordance with New Jersey regulations including, but not limited to, the Administrative Requirements for the Remediation of Contaminated Sites (ARRCS) at N.J.A.C. 7:26C and NJDEP’s Technical Requirements for Site Remediation (Tech Rule), at N.J.A.C. 7:26E. SRRA established the Site Remediation Professional Licensing Board to oversee the licensing and performance of these environmental professionals. LSRP services may include:

- Planning and oversight of sampling activities
- Preparation of Preliminary Assessment/Site Investigation Documents
- Preparation and submittal of all appropriate SRP forms and reports, as necessary

TASK 1 - DATA GATHERING AND REVIEW, PROJECT ORGANIZATION, PROJECT SCHEDULE

DATA GATHERING AND REVIEW

The Consultant shall gather and review all obtainable and relevant pre-existing information concerning the Project Area from local, county, State and Federal agencies, Authorities, property owners and non-governmental organizations such as environmental or community advocacy groups. The Consultant is responsible for disclosing and applying all pertinent

information that is gathered. The Consultant shall develop and, if needed, recommend to NJDEP the need for expansion and/or modification of this SOW. The data gathered shall include but not be limited to the following topics within the project area:

- Existing reports, studies, community plans and other background documents, within the project area defined within the State's National Disaster Resiliency Competition Phase 2 application and the New Meadowlands "Protect, Connect, Grow" proposal which can be viewed at <http://www.rebuildbydesign.org/project/mit-cau-zus-urbanisten-final-proposal>. Transportation planning studies will be gathered including the Bergen County Bus Rapid Transit Study and the most recent transit studies for the Meadowlands Sports Complex, the American Dream Development and for other major developments in the Study Area for use as needed in the NEPA process.
- Topographical and bathymetric mapping and geotechnical information
- Wetlands/Waters of the US (WOUS) delineations, Letters of Interpretation, and other information that can be utilized to estimate the location of wetlands and other WOUS boundaries such as wetland inventory maps, soil surveys, and aerial photography.
- State and Federally listed threatened and endangered species and designated critical habitat for those species
- All relevant Special Areas as defined at N.J.A.C. 7:7E of the Coastal Zone Management Rules, including intertidal/subtidal shallows, flood hazard areas, riparian zones, wetlands and wetland buffers
- Current land use (including as-built plans if available), as well as applicable zoning and master plans
- Other proposed projects that could affect the project
- Open space/parkland (local, county, state and federal)
- Properties encumbered by easements or deed/conservation restrictions
- Local circulation patterns (vehicular, bicycle, transit, and pedestrian), including park/waterfront access routes and important destinations, as well as existing maintenance and operations routes and requirements. This will include information on bus and rail services for use as needed in the NEPA process.
- Significant urban design relationships such as view corridors, building character, local landmarks, and overall neighborhood character
- Known environmental contamination issues, both in-water and upland sites
- Compile information on previously identified historic properties (both archaeological and architectural resources), which include National Historic Landmarks (NHLs); properties listed in the New Jersey Register of Historic Places and/or the National Register of Historic Places (S/NR) or formally determined eligible for S/NR listing (S/NR-eligible), or properties contained within a S/NR listed or eligible historic district; and potential historic resources (i.e., properties not identified by one of the programs listed above, but that appear to meet their eligibility requirements). The proposed project has the potential to affect multiple locations across the extent of Pilot Area #1 throughout South Hackensack, Little Ferry, Teterboro, Moonachie, and Carlstadt and beyond to the phase 2 NRDC application area and the potential surge barrier site.
- As part of the data gathering task for historic properties, we will visit several repositories to collect information from prior cultural resource studies that were prepared in the project area. We will review published secondary sources, prior architectural surveys,

and cultural resource reports, as well as available maps to characterize the architectural, archaeological, and environmental history of the project area. We anticipate conducting the following data gathering research: documentary and site file research at the New Jersey State Museum and the New Jersey Historic Preservation Office (NJHPO), located in Trenton; review of historic maps and local histories available from the New Jersey State Library, located in Trenton; a review of files and information collected and maintained by other local libraries and repositories; the Bergen County Historic Sites Survey of 1980-81; and review of various online resources in order to collect additional information relating to the land-use history of the project area. As part of this task, we will also collect data on previously identified historic properties in the project area and will consult the reference material on file with the New Jersey Meadowlands Commission and the Hackensack Riverkeeper.

- As part of our data gathering, we will prepare contextual studies to provide a baseline upon which the significance of potentially important historic properties within the study area can be evaluated against. Contextual studies will focus on both the prehistoric and historic use of the project area and may include following: Precontact, Commercial, Residential, Institutional, Industrial, Cemeteries & Churches, and Transportation. The results of the data gathering and contextual studies will form part of the project's existing conditions summary.
- In order to evaluate the potential for soil contamination in the study area a Preliminary Hazardous Materials Assessment will be completed using publically available websites. Specifically, the NJ-GeoWeb, an environmental interactive mapping application will be accessed to determine the existence of the following within the prescribed search area: Deed Notice Areas, Historic Fill, Groundwater Contamination Areas, NJPDES Regulated Facilities, Known Contaminated Sites List, Chromate Sites, Gas Stations, Dry Cleaners, Auto Body Shops and Underground Storage Tanks Facilities. If environmental sites are identified using NJ-GeoWeb, they will be further evaluated using NJDEP DataMiner. In addition, the EPA EnviroMapper website can be reviewed for sites with the potential to impact the study area.
- Infrastructure extent and capacity, including location and functioning of all stormwater outfalls
- All utilities
- Critical infrastructure, including power facilities and substations
- Floodplains, including most recent Preliminary Flood Insurance Rate Maps (FIRMs) or Digital FIRMs (DFIRMs)
- Hydrologic and hydrographic studies conducted by government agencies or other entities, including dredging maintenance for the Hackensack River.
- Property ownership and titles of the properties within the Project Area and adjacent land under water, including tideland conveyances, and other easements and deed restricted areas
- Location, ownership and operative status of each existing tide control structure that influences the Project Area
- Location, ownership and existing inspection reports, drawings, loading rates, records of repair and existing permits for any waterfront structures such as bulkheads, seawalls, piers, fender systems and other marine and shore protection structures

- To determine existing conditions, we will review publically available ambient air quality monitoring data from locations near the project for a period of five years. This data will be summarized in a table and compared with the existing and proposed national and state ambient air quality regulations. In addition, we will collect meteorological data from nearby Newark Liberty International Airport for a period of five years. This data will be used to establish prevalent wind patterns for the project area. Data gaps will be highlighted during this phase.
- Data collection for the Socioeconomic, Land Use, and Environmental Justice (EJ) analysis will include: population and income data, land use data from existing sources, and tax information. Additionally, a review of Little Ferry and Moonachie, portions of Carlstadt, Hackensack City and Hasbrouck Heights, portions of East Rutherford, Rutherford and Wood Ridge, South Hackensack and Teterboro Master Plans and zoning will be reviewed and summarized. Using GIS tools for analysis and mapping, census block groups and blocks that fall within the project area will be identified. Socioeconomic data will be compiled and presented in tabular formats, and mapped thematically to identify populations and affected communities. Our analysis will also identify open space (local, county, state, and federal parkland), as well as identify local land use patterns. The open space and land use patterns will be compiled through GIS data layers, Recreation Open Space Inventory (ROSI), and field verification. As part of this analysis, we will evaluate view corridors, building character, local landmarks and overall community character. Site visits, as needed, will be conducted to ground truth, supplement, and/or corroborate the findings of public documents, maps, and GIS data.
- The EJ analysis will focus on low and moderate income (LMI) families, minority, and Hispanic communities pursuant to Executive Order (EO) 12898. Our analysis will evaluate the presence of EJ populations based on the 2010 US Census and if potential displacements or other direct or indirect impacts would disproportionately affect these populations.
- Review and provide comments on the Citizen Outreach Plan template developed by NJDEP.
- Review and agree to the NJ Meadowlands Commission data sharing agreement prior to transfer of NJMC data from NJDEP to AECOM.
- Any other relevant data

The Data Gathering and Review task shall include a reconnaissance level site inspection of the project area and the potential surge barrier locations by the project team.

PROJECT ORGANIZATION

The Consultant shall submit and maintain a description of the proposed project team organization for the RBD project. The chart shall show all key engineering, environmental and all other personnel (including an LSRP) assigned to the project from the list supplied with the Consultant's bid proposal. Proposed subcontractors shall also be included and key subcontractor personnel.

PROJECT SCHEDULE

The Project Schedule shall detail the engagement timeframes approved during the engagement process and shall be inclusive for the entire project through complete construction. The Project Schedule shall conform to HUD timelines for expenditure and duration of funding as outlined in the Federal Register notice published at 78 Fed. Reg. 14329 (March 5, 2013) as well as the Department of Community Affairs, Superstorm Sandy Community Development Block Grant – Disaster Recovery, Action Plan Amendment 12. The Project Schedule will be prepared using Microsoft Project 2010 and will be revised as needed with NJDEP approval through the life of the project.

The Project Schedule shall include a Task/Sub Task activity bar chart or critical path method (CPM) sequence of events. The initial project schedule shall show tasks and sub-tasks for the initial phases of the project up to the completion of the Preliminary Draft EIS. The schedule for subsequent tasks will be shown at a master task level and will be developed in greater detail in subsequent task orders. The detailed portion of the Project Schedule shall include but not be limited to all applicable items from the following for the site specific engagement:

- Task/Subtask start and completion dates
- Deliverable dates for all deliverables, including construction bid package
- NJDEP Review Periods
- Subcontractor period of performance
- Periods for coordination with NJDEP and other Agencies and Stakeholders
- Preliminary Draft Environmental Impact Statement

After the project schedule receives NJDEP approval, it shall become effective on NJDEP's written notification to the Consultant.

TASK 1 DELIVERABLES

The deliverables for Task 1 are the following:

- 1) Data Summary including:
 - a summary of all synthesized data listed in Task 1 and any additional relevant data
 - maps and GIS shape files, as applicable, for each task listed in Task 1 for which information was obtained
 - List of apparent data gaps (methodology to fill the data gaps is included in Task 2)
- 2) Project Organization
- 3) Detailed project schedule for tasks up to the development of the Preliminary Draft EIS (the schedule for subsequent tasks will be shown at a master task level and will be developed in greater detail in subsequent task orders)

The above deliverables shall be submitted draft to NJDEP Project Manager for approval according to the project schedule required above. Based on NJDEP comments and modifications, the Consultant shall provide the final documents within 30 days of receipt of

NJDEP comments. The Consultant shall supply 5 hard copies of the draft and 5 hard copies of the final, along with an electronic copy.

TASK 2 – FEASIBILITY PLANNING

Based upon an evaluation of the data gathered in Task 1, the Consultant shall prepare and submit the following:

- Feasibility Investigation Plan
- Health and Safety Plan (HASP) for the initial Task 1 reconnaissance level site inspection only (the HASP will be expanded in future task orders for subsequent field operations)

FEASIBILITY INVESTIGATION PLAN

The Feasibility Investigation Plan shall be a narrative report describing and justifying the investigations required for carrying out the feasibility and design effort. These investigative activities may include any combination of the following activities:

- a. Evaluation of existing topographic and bathymetric mapping to determine the scope of the Field Survey Work Plan
- b. Geotechnical testing of soil, rock, or fill materials
- c. Soil boring, sample collection and laboratory analysis
- d. Sample collection may include: surface soils, surface wastes, surface liquids, sediments, subsurface soil, air, ground water and potable water
- e. Obtaining all necessary permits for data gathering activities
- f. Condition Surveys/Field inspections
- g. Assisting NJDEP in obtaining access agreements as needed
- h. Other activities as required

The Feasibility Investigation Plan shall define all field activities related to the work, as well as a list of field and laboratory activities that will require the use of subcontractors. In subsequent task orders, for subcontractor services not conducted by subcontractors identified in the Consultant's proposal, the Consultant will be required to solicit competitive bids. This solicitation effort requires the following:

- a. Invitation for Bid preparation or Request for Proposal preparation to be submitted to the State for approval.
- b. Mailing and receiving bids.
- c. Bid tabulation, evaluation and recommendation to the State. The State shall have the final approval regarding the subcontractor award.

QUALITY ASSURANCE PROJECT PLAN

The Consultant shall develop the initial aspects of the Project Quality Assurance/Quality Control Plan. The plan shall establish the frame work for the entire project including project filing and communication protocols. For Task Order 1 the Consultant shall, identify staff for detailed checking, and Independent Technical Reviewers for key milestones within Task Order 1, and where practicable for future Task Orders as well, and approximate dates when

reviews are anticipated. The Plan shall summarize the Task Order Scope of Services and list the Project Deliverables along with dates anticipated for submission.

HEALTH AND SAFETY PLAN

The Consultant shall prepare an initial Health and Safety Plan (HASP) for all field personnel engaged in Task Order 1. The Consultant will be responsible for applying, monitoring and modifying the Plan's guidelines throughout the course of field activities.

Site activities concerning inspections, investigations and remedial actions that may be necessary during the course of this project must be performed in such a manner as to assure the safety and health of workers engaged. All site activities shall be conducted in accordance with all pertinent general industry (29 CFR 1910) and construction (29 CFR 1926) standards of the Federal Occupational Safety and Health Administration (OSHA), U.S. Department of Labor, as well as any other State or Municipal codes or ordinances that may apply. Special attention must be given to compliance with those requirements set forth in OSHA's final rule entitled "Hazardous Waste Operations and Emergency Response", Section 1910.120 of Subpart H of 29 CFR 1920, as described in the Federal Register of March 6, 1990.

TASK 2 DELIVERABLES

The Task 2 deliverables will be submitted to NJDEP for review and approval in accordance with the approved project schedule. All Task 2 deliverables must be complete documents but marked "Draft" when submitted for NJDEP review and comments. Based on NJDEP comments and modifications, the Consultant shall provide the approved final documents within 2 weeks of receipt of comments. These Task 2 deliverables shall consist of the following documents:

1. Feasibility Investigation Plan - 5 copies of draft and 5 copies of final.
2. Quality Assurance Project Plan- 5 copies of Draft and 5 copies of Final.
3. Health and Safety Plan - 5 copies of draft and 5 copies of final.

In addition to paper copies requested above, one electronic copy of the final versions, in Word and PDF formats, with "bookmarks" for each chapter, shall be provided. Additional hard copies shall be provided upon request.

The Task 2 deliverables shall be prepared and submitted in the sequence by which they are numbered in order to allow for a continuous transfer of information and to accomplish necessary negotiations leading to the next Task.

TASK 3 – FEASIBILITY STUDY, HYDRAULIC STUDIES/FLOOD RISK ASSESSMENT, ALTERNATIVES ANALYSIS AND DRAFT ENVIRONMENTAL IMPACT STATEMENT

FEASIBILITY STUDY

The Consultant shall initiate steps to develop/conduct a detailed feasibility study of the current RBD concept proposal and the State's National Disaster Resiliency competition application that considers both fluvial and tidal flooding scenarios. Attributes to be considered in this study should include (but not limited to) the following items:

- terraced edges, berms, levees, sheet pile flood walls, bulkheads or other flood control barriers with integrated environmental and recreational features
- project tie-backs to the upland
- tide control structures
- green design and green infrastructure
- bioswales and permeable paving
- constructed, enhanced or restored wetlands
- bioretention basins
- various stormwater management features
- rain gardens
- reclamation of previously paved areas
- creation/modification/landscaping of open space
- buyouts
- biodiversity
- transportation improvement opportunities, including transit service concepts such as bus rapid transit

The full feasibility study will be conducted under subsequent task orders. In preparation for the feasibility study, the Consultant shall consider the existing hydrologic and hydraulic conditions and analyses already performed and compiled under Task 1.

HYDRAULIC STUDIES/FLOOD RISK ASSESSMENT (EXISTING CONDITIONS)

The construction of shoreline protective measures are primarily aimed at providing protection from storm surge events. However, such protection needs to account for both sea storm surge events and underlying sea level rise. The Consultant should utilize the NOAA Sea Level Rise Tool (<http://54.243.129.238/SLR.html#>) at the year 2075 interval using all two predictive scenarios (i.e., intermediate-low and intermediate-high) to develop and evaluate for the river system the existing riverine and tidal flood conditions that will be the basis for subsequent analyses of approaches that protect communities and assets in the 2075s 500-year floodplain and other higher frequency events against flood risk, with the simultaneous goal of providing resiliency benefits and enhanced public open space. The evaluation of multiple frequency events (i.e. from 10- to 500-year return periods) should be conducted to get a baseline for evaluating alternatives and follow-on benefit-cost analyses.

This initial existing condition analysis for screening purposes should use best available bathymetry and topographical data, supplemented by field survey identified in the Field Survey Work Plan in Task 2. Using a two-person survey crew for three weeks, the Consultant shall obtain additional drainage outfall and culvert elevations and spot

elevations in marsh areas, where feasible, to confirm elevations shown in the available mapping. The Consultant shall expend two weeks of office work to process the field survey data and add the information to the mapping so that it can be used in the riverine and coastal model.

An integrated stormwater, riverine, and coastal flood model will be developed using the Mike modeling suite by DHI (Danish Hydraulic Institute) to establish the extent and elevation of flooding for existing conditions. The model will be developed for the Hackensack River and Meadowlands study area extending (approximately) from the Route 4 crossing at the northern boundary to the confluence with the Passaic River at the southern boundary. The model will be validated using recent historical storms for which data is available, such as Hurricanes Irene and Sandy. The validated model will then be used to assess both coastal and rainfall storm events and various combinations. Simulations will be conducted for the 10-, 50-, 100-, and 500-year coastal storm surge events and for the 5- and 10-year rainfall events. Typical tidal simulations and assessment of the salinity regime will also be conducted. It is anticipated that a total of 12 simulations with combinations of coastal surge, rainfall, and sea level rise scenarios will be established and serve as the baseline for existing conditions.

To determine the relationship between coastal storm surges and fluvial flooding a correlation analysis between storm tide levels and inland rainfall data using historical records. The purpose of the analysis is to establish the proper tail water conditions to be used to evaluate interior flooding under future task orders.

Upon review of the preliminary FEMA flood hazard areas, the 1% floodplain in the study area is dominated by coastal surge flooding and no floodway is defined. The Consultant will use the existing conditions model for the 1% event the baseline to determine if any proposed flood mitigation alternatives pose any adverse flooding impacts. No riverine floodway will be delineated as it is not applicable at this location. Utilizing the results of this preliminary hydraulics the Consultant should meet with NJDEP Land Use Regulatory Program (LURP) staff to discuss the results of the preliminary hydraulic studies of the river and to determine acceptable criteria for moving forward.

The initial hydraulic analysis shall also include preliminary modeling of a surge barrier located across the Hackensack River in the vicinity of the NJ Transit bridge crossing between Kearny and Jersey City, NJ. The initial modeling of this barrier shall be at a level necessary to estimate the potential upstream area that could be protected by the proposed surge barrier during the 1% annual exceedance probability (i.e. 100-year event) and 0.2% annual exceedance probability (i.e. 500-year event) storms.

DRAFT ENVIRONMENTAL IMPACT STATEMENT

The Consultant shall initiate the preparation of a Draft Environmental Impact Statement (DEIS) to comply with National Environmental Policy Act (“NEPA”), 42 U.S.C. §4321 *et seq.*

As part of this task the Consultant shall facilitate a two (2) day scoping meeting with the NJDEP project team to discuss the NEPA EIS process for this project and develop the framework of a plan to execute the EIS within the federally mandated schedule.

To initiate the preparation of the DEIS the Consultant shall:

- Develop a draft list of Federal, State, Tribal, and local stakeholders working in conjunction with the NJDEP and HUD that may have interest in this NEPA process and Section 106 of the National Historic Preservation Act.
- Synthesize relevant data as obtained by the Team through the Task 1 Data Gathering effort; these data will be retained as part of the NEPA Administrative Record and used to inform the NEPA analysis presented within the DEIS. A review of these data will serve as an initial screen of potential environmental resources of concern.
- Develop a preliminary draft Description of Proposed Action and Alternatives (DOPAA), which will provide key initial draft components of Chapters 1 and 2 of the DEIS. The preliminary draft DOPAA will include preliminary draft versions of the purpose and need statement, description of the Proposed Action, an outline of initial reasonable alternatives to be studied in detail, a brief initial discussion of alternatives considered but eliminated from further analysis, a preliminary list of environmental resources of concern and those not anticipated to be of concern per 40 CFR 1501.7, and a preliminary impact analysis matrix “shell” that will be filled in as the NEPA analysis proceeds. The preliminary draft DOPAA is anticipated to be broad and serve as the starting basis for further refinement as the Proposed Action and Alternatives for the DEIS become more formalized. Provide the preliminary draft DOPAA for NJDEP/HUD review and discussion.
- Respond to client comments on the preliminary draft DOPAA and prepare a draft DOPAA. The draft DOPAA will be used as a basis to prepare the preliminary draft NOI.
- Using the draft DOPAA as its basis, prepare a preliminary draft NOI to prepare an EIS, pursuant to the requirements of NEPA and HUD regulations implementing NEPA (24 C.F.R. Part 50) for review and comment by NJDEP/HUD.
- Respond to client comments on the preliminary draft DOPAA and prepare a draft NOI.
- Develop a draft Public Involvement Plan (PIP) for review and comment by the NJDEP/HUD. The draft PIP will include the list of external stakeholders and anticipated public outreach activities, events and locations.

TASK 3 DELIVERABLES

1. Existing conditions River Hydrology/Flood Risk Assessment Report (including preliminary Surge Barrier Analysis), 5 copies draft and 5 copies final
2. NEPA Process Documents, 5 copies each, including:
 - a. Draft list of Federal, State, Tribal, and local stakeholders
 - b. Preliminary Draft DOPAA
 - c. Draft DOPAA
 - d. Preliminary Draft NOI

- e. Draft NOI
- f. Draft Public Involvement Plan

TASK 4 - COMMUNITY RELATIONS, TECHNICAL AND LEGAL SUPPORT

Consultant will serve as a technical consultant to the State and assist in carrying out specific aspects of the Community Relations Program which is developed by the State and implemented by the State throughout the duration of the project. The work under this task is separate from, and in addition to, the NEPA Public Involvement Process and draft Public Involvement Plan (PIP) developed in the prior task that will be executed during subsequent task orders. As directed by NJDEP, Consultant will assist in the presentation of information concerning feasibility, alternatives, EIS, design criteria and construction implementation to town, county, and State officials and the news media, other government agencies, and the general public.

Local Briefings, Public Information Sessions, Public Meetings, and Dress Rehearsal meetings are expected to occur at major milestones throughout the project. Consultant will present and discuss technical activities involving the project to a lay audience at the request of the State. It is understood that allowance of man hours for community relations will be as directed by NJDEP.

Fact Sheets and Information Requests

For the purpose of this cost estimate, two to three page Fact Sheets will be prepared to provide information about the activities and objectives related to the Project for each major phase of the project (i.e. feasibility, design and construction). These fact sheets may describe feasibility study, alternatives analysis, design concepts, provide test and laboratory findings, present scheduling for the project, etc.

In general, all information requests from the public, elected officials and the media concerning the project should be referred to the NJDEP Project Manager.

All material requested above should be submitted by the Consultant directly to the NJDEP Project Manager who will forward it to the appropriate Community Relations Coordinator.

Site Visits and/or Local Briefings

Site visits and/or local briefings will be scheduled by the State as needed to present information about feasibility, alternatives and design concepts and objectives, to local officials and to the public.

Public Information Sessions and/or Public Meetings

As directed by NJDEP, Consultant will assist in preparation for Public Information Sessions with a fact sheet, board graphics, and other audio/visual aids such as display equipment for an informal open house style meeting. If it is determined by NJDEP that a Public Meeting should be held, the NJDEP or other State agency will make all arrangements, including public notification. Additional requirements for public meetings are as follows:

1. At least one month prior to the public meeting, Consultant will prepare a fact sheet, graphics and appropriate audio/visual aids as described above under direction of the State.
2. Consultant will be responsible for an approximately 20-25 minute presentation. This should include graphic materials which are clearly visible from a distance of at least 200 feet. Slides and supplementary board graphics, including a project area map, are preferred to overhead projected materials. All materials should be clear and understandable by the general public, e.g., avoid technical jargon and uncommonly known abbreviations.
3. Hard copies of proposed slides should be sent to the NJDEP Project Manager for State review at least two weeks before a Dress Rehearsal Meeting which is held approximately two weeks prior to the Public Meeting. This will enable the State to advise the Consultant of changes before the final slides are produced. Hard copies of slides incorporating these changes should be sent to the NJDEP Project Manager at least a week before the dress rehearsal meeting.
4. A Dress Rehearsal Meeting is held at the State offices for each public session planned (Site Visits, Local Briefings, Public Information Sessions and/or Public Meetings). At the Dress Rehearsal Meeting all participants are required to go through each presentation of the entire agenda. It is important that the Consultant comes prepared with all pertinent material for a professional presentation. For Public Information Sessions this would include board graphics and a pointer. For formal Public Meetings this would also include slides and a slide projector with extra light bulbs.

The following public and stakeholder meetings are included in this initial task order:

- Project and Schedule update meeting with NJDEP Commissioner
- Attendance at six (6) Bi-Monthly Executive Steering Committee Meetings
- Attendance at three (3) Monthly Technical Coordination Team Meetings
- Attendance at six (6) Monthly Citizen Advisor Group (CAG) Meetings

The Consultant shall include an allowance for attendance of additional staff, subject matter experts at external meetings or for additional meetings required for Work Order #1.

TASK 5 – HUD COMPLIANCE

Assist the State in developing a Project Policy in conjunction with NJ Sandy Section 3 policy, including Section 3 triggers and outreach plans and assist with Section 3 reporting collection for the Project Team.

Develop Project Policy in conjunction with NJ MWBE requirements including MWBE triggers and outreach plans and work with reporting requirements.

The Consultant shall develop a file system consistent with State of New Jersey Sandy Programs (electronic or hard copy) to meet HUD requirements for monitoring visits. Also monitor the

development of the files for necessary material inclusion to expedite HUD Monitoring, including routine file reviews. Retain all records, documents, and communications of any kind (including electronic records, documents, and communications either in disk or print form) that relate in any manner to the award and performance of this Contract. The Consultant shall maintain all such records, documents, and communications for a period of five (5) years from the date that the State closes its disaster recovery grant. Such records shall be made available to the State (including the Office of the State Comptroller pursuant to N.J.A.C. 17:44-2.2) and/or to HUD for audit and review, upon request. Relevant records, documents, and communications germane to the NEPA and decision-making processes will be included in the Administrative Record for the EIS.

TASK 5 DELIVERABLES

- This initial task order will include Monthly reports for the first 6 months of the project.

**STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
DIVISION OF PROPERTY MANAGEMENT & CONSTRUCTION**

**REQUEST FOR PROPOSAL
FOR**

**INDEFINITE DELIVERY INDEFINITE QUANTITY (IDIQ)
MULTIPLE AWARD TERM CONTRACT (CMF 003)
FOR CONSTRUCTION MANAGEMENT SERVICES
ON REBUILD BY DESIGN PROJECTS AND OTHER NJ DEP FLOOD
MITIGATION AND ENVIRONMENTAL INFRASTRUCTURE PROJECTS**

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1.0 PURPOSE AND INTENT

The term contracts awarded under this Request for Proposals (RFP) will be used to solicit proposals from Construction Management Firms (CMFs) for professional, technical, administrative and clerical personnel as needed to perform required construction management services on flood mitigation and environmental infrastructure projects as designated by the Division of Property Management and Construction (DPMC) and/or NJ Department of Environmental Protection (DEP).

Among other projects, DPMC intends to utilize this contract to retain construction management firms to assist with two Rebuild by Design (RBD) projects. The RBD project concepts originated with a design competition sponsored by the U.S. Department of Housing and Urban Development (HUD) that utilized a collaborative process to find effective ways to protect people, homes, businesses and infrastructure, and to increase resilience in regions affected by Superstorm Sandy as part of recovery from the storm. At the conclusion of the RBD competition, HUD selected two winning projects for the State, with designs that will help densely populated communities with repetitive flooding challenges. The State will receive \$150 million in Community Development Block Grant-Disaster Recovery (CDBG-DR) funds to implement the first phase of the flood mitigation project known as the “[New Meadowlands, Productive City + Regional Park](#)” and \$230 million in CDBG-DR funds to implement the flood mitigation project in the Hudson River Region known as “Resist, Delay, Store, Discharge.” The successful proposals are available online at <http://www.rebuildbydesign.org/project/mit-cau-zus-urbanisten-final-proposal/> and <http://www.rebuildbydesign.org/project/oma-final-proposal/>. The NJDEP has been designated to oversee these projects on behalf of the State. The Disaster Relief Appropriations Act (Pub. L. 113-2, approved January 29, 2013) requires that funds for the RBD projects be obligated not later than September 30, 2017; this obligation is tied to approval of a CDBG-DR RBD Action Plan Amendment that only can be prepared following the completion of a Draft Environmental Impact Statement (EIS). As a result, the draft EIS for each project must be completed no later than May 30, 2017.

This is an indefinite delivery indefinite quantity (IDIQ) contract for the CMF services specified and the period(s) stated within this RFP in Section 3.0. For each contract awarded to a CMF, the maximum aggregate contract total over the term of the entire contract (initial term of two years plus four potential option years) is \$30,000,000.

Nothing in this RFP shall preclude the DPMC Contracting Officer (CO) from soliciting quotes or proposals for similar services outside of this contract for any project work when deemed appropriate by DPMC.

2.0 CONSULTANT QUALIFICATIONS

2.1 DISCIPLINES

The Consultant shall be a firm pre-qualified with the Division of Property Management & Construction (DPMC) in the Construction Management Discipline (P029) and have a rating of "Unlimited". The Consultant must also have in-house capabilities or sub-consultants pre-qualified with DPMC in the Critical Path Method (CPM) Scheduling (P030) and Estimating/Cost Analysis (P025) specialty disciplines. The DPMC prequalification rating required for CPM Scheduling must also be "Unlimited".

Additional subconsultants may be included on the CMF's team as necessary for a specific work order assignment. For example, subconsultants in the following areas/disciplines may also be necessary for an IDIQ assignment: Civil Engineering, Hydrology & Hydraulics, Landscape Architecture, Surveying, Environmental Assessments/EIS, Environmental Permitting, Environmental Site Investigation, Environmental Remedial Support, Archaeology Services, Construction Inspection, GIS, Historic Architecture/Preservation Surveys, Geotechnical Design, Pre-stressed/Precast Concrete Inspection, Claims Analysis support services. The CMF firm must maintain their prequalification during the term of the contract. All subconsultant firms requiring DPMC Consultant Prequalification must also have a valid prequalification to participate on the CMF's team. If the CMF or a subconsultant allows its prequalification to lapse, that firm will not be included in any competitive selections for a specific project until its prequalification is renewed and valid.

2.2 **SUBCONTRACTING**

If any part of the work covered by this Term Contract is subcontracted, the subconsultant must also be prequalified by DPMC. If there is no prequalification category for the discipline of a specific subconsultant, that firm must be approved by the DPMC Project Director prior to the CMF using the subconsultant for a specific work order.

Payment of all subconstutants and/or subcontractors is the sole responsibility of the Consultant. Nothing contained in this RFP shall create a contractual relationship between any subconsultant and the State or DPMC.

3.0 **PERFORMANCE PERIOD**

Services shall be provided under this contract from the date of award until the expiration or earlier termination of any or all options exercised under this contract.

The base period of performance of this contract shall be two years commencing on the date of the contract award, during which time work orders may be placed by the State DPMC. Actual performance of work orders may extend beyond this contract period until completion of construction contracts for which services are provided under the work orders, and the terms of this contract shall extend until completion of the service(s). The State shall have the unilateral option of extending this contract for four (4) additional one year terms, to be exercised at the discretion of the Contracting Officer, for a potential contract duration of six (6) years from the contract award date.

Renewal Option: The option periods shall extend the performance period of the contract commencing on the expiration of the preceding base contract performance period. DPMC

may exercise an option by issuing a written notification (regular mail, email or otherwise furnished) to the contracted CMF(s).

Delays of Work Under Other Contracts: If the performance of all or any part of the CMF's work is, for an unreasonable period of time, suspended, delayed, or interrupted by changes, suspensions of work, differing site conditions, or other compensable causes under the Design Consultant contract (as defined below), construction contract, or other related State contracts, an adjustment may be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance was delayed by the fault or negligence of the CMF.

4.0 GENERAL INFORMATION REGARDING PROPOSAL PREPARATION & AWARD

This RFP is issued by the Division of Property Management and Construction, located at the address listed below, which is the sole point of contract in the State for the purpose of this RFP and related communications.

**State of New Jersey
Department of the Treasury
Division of Property Management & Construction
33 West State Street, 9th Floor, Plan Room
P.O. Box 039
Trenton, New Jersey 08625-0039
Attention: Catherine Douglass
Contract Procurement Unit**

Telephone inquiries regarding this RFP shall be made to: (609) 777-3094.

- 4.1 **Proposals shall be received no later than 2:00 PM, December 3, 2015.** Proposals must be submitted in the return envelope provided. If the proposal is transmitted via overnight mail, enclose the proposal in the return envelope and place within the carrier's packaging.
- 4.2 The proposal must be signed by a principal of the firm, dated and notarized. Unsigned proposals will be rejected as non-responsive and have no binding effect and will exclude the firm from consideration for this procurement.
- 4.3 CMFs are advised to thoroughly read and understand the entire RFP, including the Agreement, General Conditions and any attachments, exhibits and addenda prior to preparing and submitting their proposals.
- 4.4 Technical Proposals: CMFs shall submit a complete technical proposal in addition to the required forms listed in Item 3 of the RFP Instructions. The technical proposal shall also include a Key Team Member Project Experience Data Sheet for each proposed CMF team member Level 5 and above. The technical proposal must respond to the evaluation criteria in the cover letter and attached CMF 003 Evaluation Criteria form. The technical proposal will be evaluated by the selection committee in accordance with the evaluation criteria.

- 4.5 Price/Rate Proposals: The CMF's shall submit a complete price/rate proposal on the form provided in the RFP. This form is entitled, "CMF 003 Term Contract Rate Schedule" and includes all-inclusive, "loaded" hourly rates for the various Personnel Types/Disciplines that may be required during the term of the contract. These loaded hourly rates should include all costs required for each personnel type, including, all direct costs, overhead costs, fringe benefits, supplies, equipment, administrative costs, insurance, in-State travel, meals and lodging, professional fees and profit. The hourly rates listed by the CMF and accepted at contract award will be the rates that will be used as the basis for pricing future work orders issued under this contract. Price increases will not be granted for any alleged omissions or miscalculations of contract pricing. The base year and each option period are to be separately priced based on the CMF 003 Rate Schedule provided by the CMF.

The State will competitively solicit the majority of the work orders to be placed under the contract among the successful awardees meeting the necessary prequalification requirements. Services may be procured as firm fixed price tasks (FFP) or "time and materials (T&M) tasks and each work order may contain both FFP and T&M tasks. The fee for the work order along with a technical proposal will be requested for each competitive assignment. The fee for each work order shall include all management, supervision, direct costs, materials, supplies and equipment (except as otherwise provided). The technical proposal shall provide all information to assure effective performance of all services described in the respective work order.

However, as outlined in Section 6.2.2 of this RFP, there may be instances when the State determines that it is not in the best interest of the State to request proposals for a work order from all approved CMFs. In such an instance, the State shall have the option to negotiate with one CMF for that assignment. In these instances, the hourly rates provided by the CMF for the contract periods (base and option years) and accepted (via negotiation if necessary prior to contract award) will be used by the State to unilaterally place the work order for the services required.

- 4.6 Contract Award: CMF 003 Term Contract awards will be made to the CMF's whose technical and pricing quotes are considered most advantageous to the State based on cost and technical qualifications in accordance with the evaluation criteria listed in the cover letter and the attached evaluation criteria form. Each CMF proposal will be evaluated by the Selection Committee based on these criteria and ranked.

The State may enter into discussions and negotiations with the top-ranked firms before or after soliciting "Best and Final Offers." After the opportunity to resolve any issues or ambiguities in the proposals, Best and Final offers may be requested and evaluated and awards will be made to the responsive firms whose proposals are determined to be the most advantageous, based on cost and technical qualifications in accordance with the evaluation criteria listed in the cover letter and the attached evaluation criteria form. It is the intent of the DPMC to make approximately six (6) to eight (8) awards under this solicitation. Recipients will be notified by the DPMC CO of the awards.

- 4.7 Contract Documents: This contract is comprised of the following elements:

- 4.7.1 TERM CONTRACT REQUEST FOR PROPOSAL (RFP) including all attachments, exhibits and addenda, if any;
- 4.7.2 AGREEMENT BETWEEN THE STATE OF NEW JERSEY AND THE CMF FOR TERM CONTRACT CMF 003;
- 4.7.3 STATEMENT OF ASSURANCES, ADDITIONAL FEDERALLY FUNDED AGREEMENT PROVISIONS FOR CDBG-DR FUNDED PROJECTS;
- 4.7.4 TERM CONTRACT CMF 003 CONSULTANT PROPOSAL consisting of the CMF AFFIDAVIT, CMF 003 TERM CONTRACT RATE SCHEDULE, and CMF's TECHNICAL PROPOSAL.
- 4.7.5 NOTICE OF TERM CONTRACT CMF 003 AWARD.

Additional Contract Requirements: Alternate funding sources may be identified for a specific IDIQ work order. On those specific work orders, additional requirements may need to be met by the CMF under this IDIQ contract. These funding sources and their requirements may include HUD (including CDBG or CDBG-DR funds), the Federal Emergency Management Agency, USGA or other federal and/or State sources. As such, the CMF will be required as part of its contract responsibilities in a specific work order to comply with the specific funding source requirements. Therefore, as appropriate for the funding source, the CMF must ensure that all applicable standards of performance and requirements (federal or State prescribed) are complied with.

- 4.7 The DPMC CO reserves the right to reject all proposals when such rejection is in the best interest of the State.

5.0 GENERAL DESCRIPTION OF REQUIRED SERVICES

5.1 OVERVIEW

The term contracts awarded in response to this RFP will enable CMFs to provide professional management, quality control and administrative support services as required to the DPMC and DEP to supplement the State's available in-house staff in the execution of construction projects for the HUD Rebuild by Design initiatives and other flood mitigation and environmental infrastructure projects in the State.

Typical projects requiring services by the CMF generally will be bid using the State's traditional delivery process (design-bid-build) and the delivery and oversight of these projects through feasibility studies, design and/or construction projects performed by contracted consultants and contractors. HUD is providing CDBG-DR grant funding for the study, design and construction of conceptual designs selected in HUD's Rebuild by Design (RBD) competition. The design competition was a response to Superstorm Sandy's devastation and was developed to create innovative community and policy-based solutions to protect U.S. cities that are vulnerable to increasingly intense weather events. In 2014 two projects were selected by HUD for implementation in New Jersey: (1) Resist, Delay, Store, Discharge: A Comprehensive Strategy for Hoboken and (2) New Meadowlands, Productive City + Regional

Park. Additional information regarding the DEP's timeline for the oversight of the feasibility study, design and construction of this project is available in the October 16, 2014 Federal Register, Docket No. FR-5696-N-11 (available online at <http://www.gpo.gov/fdsys/pkg/FR-2014-10-16/pdf/2014-24662.pdf>). The CMF will assist the DEP in managing the implementation of these RBD initiatives. Additional projects may include storm surge and coastline/beachfront protection, flood mitigation/resistance, environmental restoration, tide control structures, landscaping, demolition and reconstruction, dams and levees, and other infrastructure improvement projects. The specific scope of services for CMFs will be contained within a brief scope of services or within the body of each individual Work Order written to the contract.

5.2 DEFINITIONS

The following definitions outline the basic CMF services that may be required throughout the CMF's contract term and involvement in a project:

Concept Design: The purpose of concept design is to present basic design development strategies and proposed basic engineering, landscape architectural and architectural design criteria and project requirements, taking into account functional relationships, space allocations, esthetics, environmental considerations, safety, accessibility, urban design, historic preservation (if appropriate), and corresponding impacts, costs, maintenance, and other relevant considerations.

Construction Documents: The construction documents are the plans and specifications for the work to be performed on the project. They are prepared by the Design Consultant to explain and describe, in detail, the design to potential construction contractors, for the initial purpose of bidding, and the ultimate purpose of construction.

Contract Executive (CE): The CE is the principle CMF employee responsible for the overall management, direction and accomplishment of CMF activities on this term contract. The CE shall be the principal point of contact between the CMF and the Contracting Officer, as well as the principal point of contract for work order proposal requests and contract changes or amendments by the CMF.

Construction Management Firm (CMF): The CMF is the firm selected to provide the State with project management and consulting services including, but not necessarily limited to pre-planning, feasibility, programming, procurement support, program management, design management, construction management, scheduling, cost estimating, commissioning, and post-construction support services.

Contracting Officer (CO): The DPMC Deputy Director, Contract Administration is responsible for reviewing, approving and signing design and construction contracts, work orders and agreements for various consultants, contractors and vendors. The CO may delegate certain responsibilities to authorized representatives.

Design Development: The design development phase will convey and specify materials, structures and systems to be utilized for flood protection, resiliency or

environmental infrastructure projects, including sizes, layouts, and the appearance of the facility or project.

Design Consultant: The Design Consultant is the professional services consultant responsible to DPMC for the architectural and engineering design of the project. The Design Consultant may perform additional services for DPMC during the construction phase such as construction administration and technical consultation services and submittal/shop drawing review. The CMF assists DPMC in managing and administering the Design Consultant's contract and assists in coordinating and conducting design reviews and inspections of on-going and completed work for design conformance. However, CMF participation in the design review will not relieve the Design Consultant from its responsibilities under its own contract with the State.

Design Phase: The Design Phase includes all of the various design phases of a project including the programming, schematic, design development, final document and permit phases. The Design Phase will specify materials, structures and systems to be utilized for flood protection, resiliency or environmental infrastructure projects, including sizes, layouts, and the appearance of the facility or project.

Feasibility Study and Alternatives Analysis: (as applied to flood protection, resiliency or environmental infrastructure projects): The purpose of feasibility study and alternatives analysis for these projects is to solve an infrastructure need or problem through the evaluation of the feasibility of the project given environmental and construction considerations, the evaluation of multiple design alternatives from an environmental, historical, and cost-effectiveness perspective, and the development, selection and implementation of a concept design that will solve the infrastructure need and improve flood protection and resiliency. The feasibility study and analysis may also include preparation of an Environmental Impact Statement and/or compliance with the National Environmental Policy Act (NEPA), 42 U.S.C. §4321 *et seq.*, and HUD regulations implementing NEPA (24 C.F.R. Parts 50 & 58).

Inspector(s): CMF employed inspectors are responsible for performing field inspection work during construction; recommending approval/rejection of the construction contractor's materials, workmanship, and equipment; monitoring labor and health and safety provisions; maintaining inspection logs and records, reporting defects and omissions; and other related activities.

Partnering: A management process that promotes successful project development and execution through voluntary commitments to accomplish established agreed-upon project objectives by all involved parties to their mutual benefit.

Project Director (PD): The DPMC, DEP or agency representative designated to assist and direct the CMF with regard to the contract and project work. The PD's responsibilities include, but are not necessarily limited to, determining the adequacy of performance by the CMF in accordance with the terms and conditions of this contract; acting as the State's representative in charge of work at the project site; ensuring compliance of the work with contract requirements; and advising the CO of any factors which may cause delay in performance of the work and the project completion.

Project Manager: The CMF employee designated to manage project tasks or assist the Senior Project Manager or other CMF personnel in the supervision and coordination of the project tasks.

Project Team: Includes representatives of the State DPMC, DEP, CMF, Design Consultant or other funding agency, and contractors participating in the project.

Senior Project Manager: The CMF employee designated to manage and coordinate project tasks and supervise a Project Manager(s) or other CMF personnel assigned to the project.

5.3 REQUIRED DISCIPLINES AND REQUIRED MINIMUM EXPERIENCE:

Contract Executive (CE) : Principal, partner or officer of the firm responsible for assigning various projects to the different CMF personnel in the firm and overseeing the financial side of project management.

Senior Project Manager: The CMF employee designated to supervise the CMF team members and oversee project tasks with a minimum of 7 years of experience in this position managing and coordinating project activities, schedule progress, budget and costs. Experience must include preparation of EIS, compliance with NEPA, and Federal, State and local land use permitting.

Project Manager: The CMF employee designated to assist the Senior Project Manager or other CMF personnel in the supervision and coordination of the project tasks with a minimum of 5 years of experience in this position including experience in NEPA/EIS and Federal, State and local land use permitting. Project Managers shall be civil engineers.

Superintendent: The Superintendent is the CMF employee designated as the key, on-site representative of the CMF with a minimum of 7 years of experience in this position responsible for ensuring delivery of the day-to-day quality management services to be provided by the CMF under the contract and each work order.

Architect: A NJ licensed architect with a minimum of 3-5 years of design and construction experience of overall conceptual design, providing solutions for complex architectural problems.

Engineer: A NJ licensed Professional Engineer in the respective discipline having a minimum of 3-5 years design experience in the respective discipline's design and is familiar with all applicable building and environmental requirements.

Scheduler: An individual with 7 years of experience in project planning and scheduling using the most recent project management software.

Inspector: Individual with a minimum of 3 years of experience in the construction site observation and administration and is familiar with all applicable building code and environmental requirements.

Estimator: Individual with a minimum of 3 years of experience in labor and material estimating and specifications along with knowledge of value engineering techniques.

Permit Coordinator/Expeditor: Individual with a minimum of 5 years of experience in providing permit coordination, coordination of code inspections and/or other construction-related expediting or coordination tasks.

QA/QC Manager: Individual with a minimum of 3 years of experience in providing quality assessment and quality control on construction projects.

Accountant/Auditor: An individual or firm with experience in cost control reporting systems including the review of financial data required to monitor cost versus budget for the project or in performing auditing functions on various projects.

Secretary/Administrative Assistant: Individual shall possess knowledge of word processing and other computer programs, have experience in general office skills, and/or providing administrative assistance to CMF staff on construction projects.

5.4 **GENERAL REQUIREMENTS OF WORK ORDER PROCESS FOR DELIVERY OF SERVICES**

General Responsibilities: Assist in managing design and construction projects for the DPMC and DEP with an emphasis on meeting goals relating to schedule, budget, scope and quality. Provide management, quality control, technical, and administrative resources to assist in achieving these goals in an expeditious and economical manner consistent with the best interests of the State. DPMC serves as the contracting agency, owner representative and will provide a Project Director for each project.

Authority: The CMF is not an agent of the State and has no contractual authority over other parties under contract to the State. The CMF shall carefully avoid taking any independent actions that would cause an obligation of State funds. Certain actions are reserved solely for the State and shall not be performed by the CMF. The CMF may not:

- Authorize deviations from construction contract documents.
- Approve or authorize substitutions of materials or equipment.
- Expedite the work of the Design Consultant or construction contractor.
- Reject work or require special inspection or testing.
- Order the Design Consultant or construction contractor to stop work or any portion thereof, except in life threatening situations.
- Grant a time extension.
- Obligate an expenditure of State funds.
- Terminate the Design Consultant or construction contracts.
- Execute change orders.

CMF Role: The CMF shall coordinate with the project participants (construction contractors, consultants, code inspectors, owner representatives, client agency representatives, etc.) for each work order and report on the various activities of the project participants and their adherence to schedule commitments, budget constraints, technical requirements and quality standards.

The CMF's primary point of contact for each work order is the DPMC or DEP Project Director. The CMF shall provide assistance and expertise to the DPMC or DEP project team in the form of coordination, management and administration of the planning, programming, design, bidding and construction process. The CMF shall assist DPMC or DEP in achieving contract compliance by the Design Consultants and construction contractor, especially during construction. The CMF shall also provide services as a technical review source, with emphasis on quality control and constructability, and assist in CPM scheduling, cost estimating/analysis, problem solving, management of administrative details and documentation.

Disclosure of Procurement Information: If CMF employees become privy to confidential information that is either procurement and/or security-sensitive, the CMF will be required to take precautions to ensure that this information is carefully controlled. Procurement and/or security -sensitive information must not be discussed or revealed to other non-State personnel and must remain confidential. The CMF shall instruct its personnel involved in procurement actions that unauthorized disclosure of procurement or security sensitive information is prohibited, could compromise the procurement or security of the facility, and can result in the State taking remedial action against the CMF.

Conflicts: Potential conflicts of interest by any of the CMF's members or Project Team with other consultants or contractors on the same project must be brought to the attention of the CO in writing immediately.

Computer-aided design (CAD): DPMC requires the use of CAD by its Design Consultants on all projects. Project work orders may require the CMF to have the capability, and expertise to review Design Consultant deliverables developed on CAD systems and submitted in electronic media form.

Payments to CMFs: The CMF may invoice monthly based on services performed. The CMF may be requested to provide a draft to the Project Director before the invoice is prepared, so that both parties agree on the amount of work completed and the correct amount of the invoice.

Partnering Sessions: Formal partnering practices have been implemented successfully on certain DPMC projects. The CMF may be required to provide or obtain the services of a professional facilitator to conduct formal partnering sessions among the DPMC, DEP, client agencies, Design Consultants, CMF, construction contractor, and subcontractors to promote a partnering philosophy and establish cooperation and mutual respect among the team members. If required, the CMF will be requested to include the cost of this service in its work order.

Project Labor Agreement: A Project Labor Agreement (PLA) may be required on certain projects due to their dollar value or location in relation to other projects in close proximity or on the same site. The CMF may be required to provide analysis and recommendations regarding the use of a PLA, and coordinate the development, negotiation, approval and implementation of the PLA for a project managed under an approved work order as part of this contract.

CMF Personnel: For each work order request, the CMF shall submit to the CO the personnel with its proposal to accomplish the tasks included in that order. The information required is: name, proposed position on project staff and responsibilities, and a detailed resume with past experience.

Removal of CMF Employees: The Project Director, with the approval of the CO, shall have the right to effect the removal of any CMF employee at any time during the duration of a work order, if that employee is deemed not to be of the level of competence or ability that was required under the work order, or if said employee for any other reason is found to be unsuitable for the work. In such case, the CMF shall promptly submit the name and qualifications of a replacement.

Personnel Replacements: In the event that any personnel named for a work order are unable to perform their duties due to death, illness, resignation from the CMF's employ, the CO's request for removal, or similar reasons, the CMF shall promptly submit to the CO, in writing, the name and qualifications of a proposed replacement. No substitution shall be made without prior approval of the CO. Any approved substitutions shall be made at no increase in the contract price.

Failure to Provide Qualified Personnel: Repeated failure or excessive delay by the CMF to provide qualified personnel acceptable to the State, to perform services under a work order may be deemed sufficient reason to terminate work under the work order or the contract, in whole or in part, in accordance with the termination clause of the CMF Agreement.

Orientation of Personnel: The CMF shall ensure that all personnel working under the contract are knowledgeable of applicable federal and State laws and requirements, including DEP laws and requirements and all DPMC regulations, procedures, policies, and requirements of the contract affecting the conduct of their work. Orientation shall be arranged with the PD immediately after the award of each work order.

Office Facilities:

- CMF Staff: The CMF may be responsible for providing its own on-site office facilities space with heating/cooling, plumbing, toilet facilities, telephones, janitorial services, physical security, furniture, supplies, etc. as required for the CMF's staff. Where available, DPMC shall provide the CMF space & utilities for its office space.
- DPMC Staff: If necessary, the CMF shall provide on-site office space, with continuous adequate heating and cooling, for use by DPMC or DEP personnel, equipped with computer hardware and software compatible with the system used by DPMC, copier and

facsimile machines with all related maintenance and supplies, furniture, etc. Where available, DPMC or the client agency may provide the required space & utilities for its office space.

Expenses for such space and equipment to be provided by the CMF will be included in the CMF's work order in an allowance.

6.0 ASSIGNING AND EXECUTING WORK ORDERS

6.1 PROJECT DATA

Specific project data will be provided to the CMF for each work order including:

- Project No/Title/Location.
- CCE (Construction Cost Estimate): The CCE represents the estimated costs for the construction of the project.
- CWE (Current Working Estimate): The CWE represents the construction cost estimate and all consulting, permitting and administrative fees. The amount represents the client agency's financial budget for the project based on the Scope of Work and shall not be exceeded during the various project phases unless the Project Team members approve the proposed change.

Significant data pertaining to the scope of a project will be available to the competing CMFs at the time a work order proposal is solicited. Listed below are certain documents and information that the CMF should refer to for background information on the project:

- Design Consultant's scope of work and contract
- Site data, including as-built drawings of existing buildings, historic structures reports, environmental impact statements, and site surveys/soil borings
- Preliminary drawings and specifications
- Budget or Cost Estimates
- Proposed schedule or completion dates

6.2 ORDERING OF SERVICES

The CMF shall not perform any service except as authorized by a work order issued in accordance with the CMF's contract. Work orders will be issued using the DPMC CMF-003 Form. The CMF shall furnish to the DPMC, when and if ordered, the services and general conditions items specified, up to and including the maximum amount.

Except for the order limitations outlined in this section, there is no limit on the number of orders that may be issued. The DPMC may issue a work order requiring the performance of services at multiple locations. The DPMC may elect to award a single work order or to award multiple work orders to two or more firms if necessary.

Any work order issued during the effective period of the contract and not completed within that period shall be completed within the time specified in the order. The contract shall govern the CMF's and State's rights and obligations with respect to that work order to the same extent as if the work order were completed during the contract's effective period; provided that the CMF will not be required to provide services after the established completion date of the final work order.

Each work order shall include all the services and the cost of the services required to meet the obligations of the task(s) requiring delivery or performance. The work order shall be supplemented by a proposal prepared by the CMF that includes the team organization, staffing, subconsultants included, approach to the project tasks, experience of the firm/team, and other necessary information.

The CMF's hourly personnel rates shall be used for pricing the level of effort in each work order. If specialty consultants are required to complete a work order task and were not included in the initial term contract, they will be included in the work order as an allowance. All rates and costs for these specialty consultants will be evaluated for cost reasonableness prior to approval. All work orders are subject to the terms and conditions of the contract. The CMF's fees for each work order shall be based on the hourly personnel rates established in the contract, the negotiated level of effort for each discipline, travel (if authorized), miscellaneous items, allowances for specialty consultant costs, reproduction costs, deliverables and other terms agreed by the parties. In the event of conflict between a work order and the contract, the contract shall control.

A work order is considered "issued" when the CO emails, mails or faxes the approved work order to the CMF along with a Notice to Proceed for the specific work order. When urgencies occur, the CO may unilaterally issue work orders on a not-to-exceed price basis and the CMF shall immediately proceed with performing all such work. Final pricing for such work orders shall be resolved as quickly as possible after the work order is issued through negotiations between the parties.

The DPMC reserves the right to perform work of the same type covered in this contract, with its own forces or by contract.

6.2.1 Order Limitations

Minimum Order: There is no minimum order under this term contract.

Maximum Order: The maximum aggregate limitation for each CMF contract is **\$30,000,000**.

6.2.2 Method of Placement of Orders Under Multiple Award Contracts

The DPMC will provide each awardee a fair opportunity to compete and be considered for each work order unless a separate determination is made to request quotations from a lesser number in accordance with (a) – (d) below.

Upon identification of a need, the DPMC will forward the scope of work and evaluation criteria to the awardees. Non-price evaluation factors which may be considered in placing an order with a particular awardee may include, but are not limited to, proposed staffing or team members for the work order assignment, past experience of firm and proposed team member(s), approach to meeting objectives of the services required, ability to provide scheduling services to monitor and meet schedule requirements, past performance on previous work orders under this contract, cost, or other factors that the DPMC believes are relevant to the award of a delivery order to an awardee under the contract.

Interviews of proposed candidates and/or project teams may be held when evaluating and selecting an awardee for a specific work order.

The DPMC need not seek competition from the awardees if:

- (a) The public exigency requires the immediate performance of the service; or
- (b) The dollar value of the services is less than the bid advertising threshold under N.J.S.A. 52:34-7; or
- (c) Only one such CMF is capable of providing such items or services required at the level of quality required because the items or services ordered are unique or highly specialized; or
- (d) Additional services are required as a logical follow-on to a work order previously issued, provided that all awardees were given a fair opportunity to be considered for the original work order.

6.2.3 Processing Work Orders

Each work order proposal should reference the following:

- (a) Contract Number.
- (b) Work Order Number.
- (c) Date of Order.
- (d) Place or Location of Services
- (e) Scope of work/services to be provided
- (f) Start and Completion Date. Each work order shall specify the start and completion date of the work or services. The starting date shall not be less than three (3) calendar days after the issuance of an approved work order and NTP for the work order by the CMF.
- (g) Whether the work is to be performed during normal working hours or during other than normal working hours.
- (h) The applicable hourly rates and costs in effect at the time of request for a proposal for the personnel, services and items included in the work order.
- (i) Work Order. A work order form will be provided by the DPMC for use by the CMF firms in providing technical and cost proposals for each work order. No work should be

performed under this contract until an approved work order and notice to proceed (NTP) have been issued to the selected CMF firm. For the purpose of this contract, a work order shall be deemed to be "issued" at the time the DPMC emails, mails or faxes the approved work order to the selected firm.

(j) All work order proposals shall be submitted to the DPMC Contracting Officer for approval.

6.3 RESPONSIBILITY FOR CONTRACT ADMINISTRATION AND PAYMENTS

- 6.3.1 Contracting Officer (CO): The Contracting Officer (CO) is the final authority in all contractual matters relating to the CMF's contract and any work order placed against the contract. The CO has overall responsibility for the administration of the contract and is authorized to take action on behalf of the State to amend, modify or deviate from the contract terms, conditions, requirements, specifications, details and or delivery schedules. The CO may delegate these responsibilities to authorized representatives.
- 6.3.2 Project Director (PD): The PD will be designated on each specific CMF work order to assist the CO in discharge of responsibilities when the CO is unable to be directly in touch with the contract work. Responsibilities of the PD include, but may not be limited to, determining the adequacy of performance by the in accordance with requirements, terms and conditions of the CMF contract; acting as the State's representative in charge of work at the site; and advising the CO of any factors which may cause delay in performance of the work. All services to be provided under this CMF contract shall be provided to the PD except for those services reserved to the CO and identified as reserved in this contract in the PD delegation of authority.
- 6.3.4 Invoicing Requirements: Invoices shall be submitted on a monthly basis on an original DPMC Invoice Form only, to the PD specified in the work order. Invoices must include all required information, signatures and supporting back-up documentation prior to acceptance, approval and processing by the DPMC.
- 6.3.5 Adjusting Payments: Upon review of the invoice, the PD may adjust the payment of the invoice if any services do not conform with the contract requirements of the work order and/or this contract or if the CMF has not provided supporting back-up documentation. The PD will inform the CMF in writing, of the type and dollar amount of the deductions prior to processing the remainder of the invoice. The CMF may, after notification of the proposed deduction, present to the PD, in writing, specific reasons why any or all of the proposed deductions are not justified. Reasons must be solidly based and must provide specific facts that justify reconsideration and/or adjustment of the amount to be deducted. Failure to respond within the 10 day period will be interpreted to mean that the CMF accepts the deductions proposed. After consideration of the CMF's reply, if any, the PD will make any adjustments in deduction which are warranted, determine the dollar amount of deductions, and notify the CMF of the decision.
- 6.3.6 Payments: Payments shall be made in accordance with the Prompt Payment Act, N.J.S.A. 52:32-32 et seq.

6.3.6 Disposition of Materials. Upon termination or completion of work under a work order, the CMF shall forward all materials produced in connection with the performance of this contract as may be directed by the PD or CO, or as specified in other provisions of the contract. All materials produced, or required to be delivered under this contract become and remain the property of the State.

7.0 FEASIBILITY AND DESIGN PHASE SERVICES

7.1 GENERAL REQUIREMENTS

The CMF shall assist the PD during the concept, feasibility, program or design phases by coordinating and managing feasibility, programming and design development phases, performing study and design reviews, assisting with problem resolution, performing schedule reviews and control, reviewing budget and project cost estimates and keeping the State's P D apprised of design status.

The CMF shall update and report on the project schedule monthly. The CMF shall notify DPMC of all issues brought to the attention of the Design Consultant by the CMF, and of the Design Consultant's response to each. The CMF shall notify the Design Consultant and Project Team members if the Design Consultant's submissions appear inadequate or incomplete and identify any issues that have the potential to significantly impact or jeopardize the project goals and objectives.

While the CMF makes recommendations to the Design Consultant to correct constructability issues or problems, and advises regarding potential errors and omissions discovered, the CMF shall not take any action that infringes on the Design Consultant's professional and contractual responsibility for the project design.

The CMF's primary tasks during the feasibility and/or design phases are as follows:

- Scheduling and coordinating feasibility and design progress meetings and record minutes
- Monitoring Design Consultant progress
- Reviewing design intent and general concept drawings
- Preparing, maintaining and monitoring the preliminary or master project schedule
- Preparing budget and independent cost estimates
- Reviewing/analyzing cost estimates for accuracy
- Providing cost verification and budget monitoring and control
- Preparing budget and independent cost estimates
- Reviewing Design Consultant vouchers and recommending payments
- Reviewing Design Consultant proposed contract modifications and recommending approval or disapproval
- Assisting in problem resolution
- Recommending alternate solutions when design details affect project cost or schedule
- Performing document and constructability reviews
- Performing commissioning services

- Providing analysis and recommendations regarding the use of a PLA
- Providing monthly reports to the project team
- Compiling documentation
- Invoice Review
- Document retention and management
- HUD Reporting

7.2 PREDESIGN CONFERENCE (IF APPROPRIATE)

The CMF shall schedule a predesign conference with the project Design Consultant soon after the design contract is awarded to review the scope of the design services required by the contract. The conference should be convened before the design effort starts. The meeting should preferably be held at the Design Consultant's office, to facilitate maximum participation by the Design Consultant's staff.

7.3 DESIGN PROGRESS MEETINGS

The CMF shall schedule and coordinate design progress meetings. The CMF shall prepare a complete agenda prior to each scheduled meeting. Normally design progress meetings are chaired by the Design Consultant, supported administratively by the CMF. The CMF records the minutes including action items, responsible parties, and deadlines. The agenda for meetings typically covers (1) minutes of the last meeting, (2) outstanding issues, and (3) new business. The CMF distributes the minutes to all participants in time for preparation for the next progress meeting. Meetings may be held at the DPMC, DEP or Design Consultant's offices.

7.4 BUDGET/COST CONTROL

The CMF shall assist the State in reviewing all Design Consultant cost estimates and submissions to verify that project costs remain within the project budget. The CMF must report any disparities discovered in the project costs to the Project Team for resolution before proceeding on to the next phase of the design.

The CMF shall establish a uniform procedure for reviewing, analyzing, and assessing each estimate submitted by the Design Consultant and preparing an independent estimate for comparison purposes.

The CMF cost review should verify that:

- Unit costs are accurate
- Quantity takeoffs are accurate
- All design elements are included
- Level of detail is appropriate to design stage
- Formats are correct
- Cost escalation factors are properly applied
- Balance of costs among building and other systems are acceptable
- Areas and other measurements are correct
- Up-to-date scope modifications are reflected

Prepare and submit an independent construction cost estimate for comparison to the Design Consultant's cost estimate on the appropriate DPMC form with accompanying detail back-up for each phase estimate prepared by the Design Consultant. Make recommendations for corrective action or project revisions if it appears that the construction cost estimate (CCE) may exceed the project budget.

7.5 FEASIBILITY and DESIGN SUBMISSIONS & REVIEWS

Design Submissions: Submissions shall be reviewed to determine if the project requirements are being met by the project Design Consultant. Formal design reviews are required at the completion of each design phase milestone of the project. Review all documents for clarity, consistency and completeness. Provide advice and recommendations for improvements. Refer to the Work Order for detailed requirements for each design phase, typically organized as follows:

- Feasibility Study and Programming Phase
- Schematic Design Phase
- Design Development Phase.
- Construction Documents/Final Design Phase
- Permit Phase

The CMF's design review should ensure at a minimum:

- All project deliverables are submitted
- Materials and equipment are appropriate, available, and non-proprietary
- Drawings are coordinated among disciplines and bid packages
- Areas of conflict are eliminated
- Site will accommodate access, logistics and storage requirements
- Existing conditions are shown correctly and adequately
- Selected building materials, systems and construction details are compatible and constructible, and long lead items are identified
- Construction duration, phasing, bid packages, bid options, unit prices, and labor availability are accurate, reasonable and appropriate
- Cost estimates are proper and within budget
- Permit, regulatory and code compliance requirements are met
- Documents are ready for permit review by the DCA or applicable regulatory agency
- Safety and security responsibilities are clear and appropriate in the contract documents

Design Review Meetings. The CMF shall schedule meetings with the Design Consultant to review each design submission. The meetings may be held at the Design Consultant's office to facilitate the visual review of the work-in-progress at the areas of production and minimize disruption to the Design Consultant. At times it may be expedient to conduct a design review

meeting at a consultant's office, if the scope of a particular review centers on the progress of a single consultant.

Constructability Review: The CMF is primarily responsible for constructability reviews. The CMF shall develop a consistent procedure for conducting design reviews, including the Design Consultant's conformance to the scope of services in the design contract, constructability, marketability, coordination among disciplines, and material usage.

Design Review Report: After completion of each design review, the CMF shall assemble and organize the comments from the various reviewers (DPMC PD, DEP representative, DPMC Code Review Unit, DCA UCC Unit) or other required regulatory agency and incorporate them into a consolidated design review report. The report shall contain comments on required corrections and improvements by discipline and specification section or drawing number.

The PD will formally transmit the design review report to the Design Consultant for action. The CMF and project team shall meet with the Design Consultant to present and discuss its contents. The CMF shall evaluate the Design Consultant response to all comments and develop directives resulting from the design review. The CMF shall review subsequent submissions to ensure that all directives and revisions have been incorporated into the design documents by the Design Consultant.

Permit Phase: The CMF shall consolidate and assemble the code comments from the Department of Community Affairs Uniform Construction Code Unit or the DPMC Code Review Unit as necessary, and forward the comments to the State's PD for transmittal to the Design Consultant.

The CMF will be responsible to review responses from the Design Consultant to ensure all code comments have been adequately revised and corrections incorporated into the plans and specifications.

7.6 RECORD KEEPING

During all phases of the project, the CMF shall maintain record copies of all documents and CMF reviews. These documents consist of:

- Studies
- Formal design submissions
- Corresponding design review reports
- Minutes of formal design review meetings
- Final accepted Value Engineering (VE) report
- Final cost estimate
- Modifications to the design scope of work
- Documentation of clarifications and decisions
- General Correspondence
- Other records and documents as required by HUD for CDBG-DR funded projects, and other records in a format and storage location acceptable to the DEP for a duration of time that is compliant with CDBG requirements.

7.7 VALUE ENGINEERING (VE)

The CMF shall provide Value Engineering (VE) comments if required by the specific work order. VE services are to be provided for mechanical systems, roofing systems, finishes, energy management systems, lighting and power systems, and site work. The CMF shall prepare a final report summarizing the VE sessions and reviews. All VE proposals must be accompanied by a rationale, including a discussion of trade-offs, and analysis of design revision impacts including subsequent project delays. Studies shall include maintainability and operability considerations. Each VE proposal developed during the workshop will be submitted through the CMF to DPMC for final decisions on acceptance or rejection. Acceptance may require a redesign of the affected work elements by the Design Consultant.

7.8 SITE UTILIZATION PLAN

Provide a proposed site utilization plan of the entire construction site; illustrating areas available for contractor construction access and trailer areas, access to adjacent facilities and related materials. The plan should illustrate and identify site utilization over the major construction phases of the project. Recommend the extent, location and configuration of temporary construction support facilities and coordinate with the various contractors.

7.9 CONSTRUCTION CONTRACTOR'S SUBMITTALS

With respect to the construction contractor's submittals, the CMF shall:

- Review the plans and specifications with the Design Consultant to establish and implement procedures for construction contractor submittals for review and/or approval of all shop drawings, catalogs and samples to the Design Consultant and DPMC;
- Develop a comprehensive listing, by contractor, of all submittals required in the contract documents, including milestone dates when each submittal must be processed; and
- Take appropriate action to insure adherence by all parties to this schedule, referring failures to do this to the DPMC, with recommendations of appropriate action to correct the situation.

7.10 PERMITS

The CMF shall become familiar with all of the permits and regulatory approvals required for the project. The CMF may be asked to:

- Assist in obtaining permit approvals, building permits and all special permits for permanent improvements;
- Verify that the CMF, DEP, Design Consultant or DPMC has paid applicable fees and assessments;
- Assist in obtaining approvals from authorities having jurisdiction over the project.

8.0. **BID & AWARD PHASE SERVICES & REQUIREMENTS**

8.1 GENERAL REQUIREMENTS

The Bid & Award Phase is the construction procurement period between design completion and construction contract award. This procurement phase consists of advertising, bidding, analysis, and award. This section assumes that procurement of construction is by advertisement, receipt of bids, and award of a firm fixed-price contract to the lowest responsible bidder. Adjustments may be necessary if alternate procurement approaches are used to procure the construction contracts.

The DPMC Contracts & Procurement Unit (CPU), under the direction of the CO, will be responsible for the majority of the procurement tasks. The CMF may be required to assist the CPU and CO and/or project team by:

- Preparing a procurement schedule: include all activities necessary to award a construction contract
- Assisting in Project Labor Agreement (PLA) discussions and approvals
- Canvassing the market to determine contractor interest
- Preparing a potential source list
- Drafting the solicitation (invitation for bids or request for proposals)
- Assembling the solicitation package (final technical specifications and drawings)

The CMF's primary tasks during the Bid and Award phase are as follows:

8.2 PRE-BID CONFERENCE

Coordinate, schedule and chair the construction contractor pre-bid meeting at the proposed construction site. Prepare an agenda, record minutes and questions, provide logistical or other administrative support, or assist the CO as otherwise instructed. Assist the Design Consultant to respond to technical questions asked by the bidders, discuss project logistics, project phasing requirements, CPM scheduling and mandatory milestones. Prepare and coordinate Bulletins with the Design Consultant for distribution by DPMC. On technical changes to the specifications or drawings, review the Design Consultant's work for constructability, cost and construction schedule impacts.

8.3 BID OPENING

Attend the bid opening at the DPMC offices and assist the PD and Design Consultant in evaluating the bids and proposals.

8.4 BIDDERS CONFERENCE

With the Design Consultant's and PD assistance, the CMF shall conduct post-bid and pre-award conferences with bidders to review contract award procedures, schedule, project staffing and other pertinent issues; assist the State in evaluating contractor bids and advise the State and Design Consultant on the acceptability of subcontractors and material suppliers proposed by the prime contractors, as well as any proposed substitutions of materials or equipment.

8.5 RECORD KEEPING

During the Bid & Award Phase, the CMF shall assist the PD with documentation and record keeping. The CMF may serve as the contact point for prospective bidders during the bidding period, assisting in answering written questions, resolving problems, and coordinating the activities of the project participants, particularly those of the Design Consultant if additional design services are required in connection with the bid documents.

9.0 CONSTRUCTION PHASE SERVICES

9.1 GENERAL

The construction phase commences with the award of a construction contract. The construction phase is considered complete when DPMC grants "substantial contract completion" to the construction contractor(s). However, many construction phase activities continue after the substantial completion date such as construction finish work and cleanup; correction of deficiencies and omissions; equipment turnover and operations; installation of telecommunications, furniture and other equipment; and occupancy. CMF's will continue to provide construction management services following substantial completion until contract close-out.

The primary areas of responsibility for the CMF during the construction phase are listed below and discussed in the paragraphs that follow.

- Monitor Contractor progress including on-site project/program management
- Pro-active monitoring of work
- Verification and monitoring of CPM schedule
- Record keeping and documentation
- Progress reporting
- Budget control and cost accounting/auditing
- Submittals and shop drawing receipt, cataloging and processing
- Progress payment and invoice review
- Health & Safety
- Inspection
- Testing
- Building Commissioning services
- Information requests
- Contract modifications
- Claims analysis and management
- Monitor labor issues/assist owner as requested
- Progress Photographs
- Final inspection, substantial completion, settlement and close-out
- Occupancy/Move Coordination

9.2 RECORD KEEPING AND DOCUMENTATION

The CMF is responsible for documenting all the major project actions and must maintain complete records of the construction contract, including correspondence, contract modifications, claims submittals, daily diaries, etc. The project files must be well organized and indexed for easy access. All project documents must be copied to the DPMC Central File during the CMF's service period for the work order. The complete project files will be turned over to DPMC at the conclusion of the project.

9.3 PROGRESS REPORTING

Daily Diary: The CMF shall maintain a daily diary to record job site conditions, weather, activities, issues, and documents communications. The daily diary shall be organized to include reports from each on-site representative. Daily diaries shall be compiled and submitted as attachments to the weekly report.

Weekly Report: The weekly report describes project progress during the week, highlights concerns which could impact the delivery of the project, and provides information and recommendations to the PD. The format of the weekly report should be as follows:

- An executive summary prepared by the CMF consisting of a one-page overview of the week's progress.
- Summary of the week's major milestones, planned and actual.
- A cost summary, covering base contracts, contract modifications, claims, and other cost issues.
- Critical issues or synopsis of important problems and issues DPMC should be made aware of.
- Minutes of meetings held during the week

Project Financial Status Report: The CMF shall be required to prepare a Financial Status Report (FSR) as necessary (monthly, quarterly, annually) on specified projects. The reporting system monitors the progress of "cost versus budget" for the project.

Monthly Reports: Monthly progress reports shall describe and summarize the activities and progress of the month, highlighting areas of concern, making recommendations for corrective action. They may include reports prepared for the DPMC CO, DEP, or HUD.

The monthly progress report should include:

- Master project schedule, with updates and revisions
- Key milestones (achieved and slipped), including a discussion of each slippage and other issues affecting the schedule
- Work-in-place, or percentage of construction planned and actual
- Monthly cost status, including contract modification and claims summaries
- Inspection report, including deficiencies identified and status of corrective actions
- Significant issues, problems and questions resolved and pending, including recommendations for resolution
- Monthly progress photos

- A look ahead to next month's activities
- Other related information as requested or required by HUD or the State

Certificate of Performance: The CMF shall sign the DEP "Certification of Performance" each month on DEP projects and other specified projects. The CMF certifies by its signature that the work performed by the construction contractor during the month has met any and all requirements for quality control and quality assurance as they relate to all equipment, materials, and construction systems currently being installed. Also that all equipment, materials, and construction systems are being installed in accordance with the contract specifications, contract construction drawings, and Design Consultant approved submittals. In addition, the CMF certifies that a safety oversight program has been implemented to comply with all federal, State and local safety authorities, insurance requirements, and any local, county, municipal, or union health rules and regulations.

9.4 BUDGET CONTROL & COST ACCOUNTING/AUDITING

The CMF may be required to establish and maintain a construction cost accounting system for DPMC or the DEP during the construction phase. The purpose of the construction cost accounting system is to establish a consistent monitoring procedure to track project expenditures and to maintain sufficient balances to see the project through to completion.

The cost accounting system should document obligations on a monthly basis, including the amounts spent or reserved to date for construction, including base contracts, options and contract modifications. Also, the system should document outlays on a monthly basis, including expenditures to date. Expenditures are generally the sum of the progress payments.

The DPMC may also require that the CMF utilize its in-house staffing or a subconsultant to assist in the audit of contracts and payments of contractors and consultants as necessary.

9.5 SCHEDULING

CMF Schedule Oversight: The CMF shall review the initial and final CPM network schedules submitted by the construction contractor and make recommendations for acceptance, revision, or rejection by the Project Director. The CMF should verify that each activity is reasonably priced, that the schedule is not front-end loaded, and that the work flow is logical, efficient, and not contrived to unfairly benefit the contractor or jeopardize the State.

The CMF shall develop a monitoring system for overseeing progress achieved by the construction contractor. The system should compare actual progress to the master project schedule. The CMF must be continuously aware of the status of actual project progress as compared to planned progress. The schedule oversight system should take into consideration progress payments, receipt of submittals, phasing, or any other time sensitive activities.

The CMF should anticipate delays and advise DPMC or the DEP PD when problems are predicted. The CMF shall highlight such matters in the CMF's periodic progress reports. If during the construction phase, a delay in the work is identified, the CMF shall:

- Report the delay to the PD in writing
- Assess the impact of the delays
- Determine if the delay is excusable or not, and
- Recommend appropriate course(s) of action to overcome or mitigate the delay.

If delays continue and it appears that the construction contractor is not cooperating in correcting the problem, the CMF may recommend stronger contract enforcement actions such as:

- Show cause and/or cure notices
- Withholding of payments, retainage
- Full or partial termination
- Assessing liquidated damages
- Other recommendations for correcting the delay problem

9.6 SHOP DRAWINGS AND SUBMITTALS

The CMF shall establish a submittal control procedure to develop a uniform system for handling all construction contractor submittals. The CMF shall identify and coordinate the effort between the CMF, the PD, the construction contractor, and the Design Consultant. The CMF shall ensure that all the submittals are prepared and processed in a timely fashion, consistent with the activities planned in the construction schedule.

This submittal control process should include:

- A delineation of approval authorities
- Target time periods for review, approval or rejection, and return of submittals
- A tracking system for submittals
- A system for delivering, reviewing, approving or rejecting, and distributing submittals of each type, including re-submissions
- A monitoring mechanism to track progress

The CMF shall assume overall monitoring, receiving, cataloging, logging and processing of all contract shop drawings, samples, product data, operations manuals, warranties, project closeout paperwork and other submittals, from the contractor in conformance with the project specifications. The CMF shall review each submittal package for completeness, rejecting incomplete submittal packages and forwarding all others to the Design Consultant for review. The CMF shall return to the construction contractor(s) all Design Consultant reviewed submittal packages. The CMF shall maintain an accurate, up-to-date Submittal Log, in a form acceptable to the DPMC, which shall include, but not be limited to, a description of each submittal package by specification number, the date to be submitted by the construction contractor, the date actually received by the contractor, the date sent to the Design Consultant, the date returned by the Design Consultant, the date forwarded back to the contractor and the status of the returned submittal. The CMF shall generate a submittal log weekly for the State PD, which shall list the status of all project submittal packages and notify the contractor(s) of any overdue submittal packages.

The CMF is responsible for coordinating the submittals from their receipt through their approval and return to the construction contractor. The CMF shall review the submittal schedule, as developed by the construction contractor for reasonableness. The CMF shall monitor the construction contractor's submittal progress, reminding the contractor of pending and delinquent submittals.

The CMF shall also monitor the Design Consultant's progress in reviewing and approving submittals, reminding the Design Consultant if submittals become overdue.

9.7 PROGRESS PAYMENTS

The CMF shall assist DPMC in processing invoice payments by reviewing the contractor's payment invoices, and recommending to the PD the correct payment amount. The CMF shall review the contractor's invoice to determine if the amount of work completed and the amount of the invoice are accurate. The CMF shall make recommendations to the PD for disposition thereof in accordance with the DPMC's procedures, certifying same, and shall, whenever appropriate, make recommendation to the PD concerning the denial or reduction of any payment of the contractor's monthly invoice should the CMF have cause to be dissatisfied with the contractor's performance under its contract. The CMF's certification for payment shall constitute a representation to the State, based on the CMF's determinations at the site and on the data comprising the contractor's invoice, that, to the best of the CMF's knowledge, information and belief, the work has progressed to the point indicated and the quality of the work is in accordance with the contractor's contract documents. Final approval of the payment amount is by the PD.

The CMF may be required to assist DPMC to expedite the processing of the payments in order to meet the requirements of the State's Prompt Payment Act, and to avoid incurring interest charges on late payments.

9.8 HEALTH AND SAFETY

During the course of construction, the CMF shall monitor the construction contractor's project safety plan. The CMF shall conduct weekly inspections of the site and prepare an inspection report of the project safety conditions. Project safety shall be a key element of the CMF's daily inspections.

The CMF shall advise the construction contractor immediately of any safety hazards observed. If the remedy to a safety hazard is not apparent, the CMF may assist the construction contractor in developing a corrective action plan.

The CMF shall maintain a file of all accident and fire safety reports generated by the contractor. The CMF shall monitor the submission and processing of reports to the proper DPMC officials. The CMF is required to prepare and submit accident and fire reports in addition to the construction contractor's reports of accidents or fires, using the same forms. The CMF shall review all safety investigation reports prepared by state inspectors pertaining to the project and take appropriate measures to preclude recurrences.

The CMF shall also provide a safety plan prior to initiation of the construction work at the project site describing the preventive measures needed to protect and provide care for the CMF's employees.

Accident and Fire Reporting: In the event of an accident or fire, the CMF must notify the Project Director or Contracting Officer immediately.

The CMF shall comply with all Federal and State Health and Safety Regulations and laws and monitor consultant and contractor compliance with federal and state health and safety regulations and laws.

9.9 INSPECTIONS

The CMF shall provide qualified Project Managers, technical staff or Inspectors to verify that the workmanship, materials, and equipment being installed by the construction contractor meet or exceed the requirements of the contract drawings and specifications.

The CMF is responsible for the inspection of all work performed by the construction contractor, and for promptly notifying the construction contractor and the PD of discrepancies. The CMF shall plan and coordinate inspections with the construction contractor to minimize impacts on construction operations, and confirm that critical inspections occur as required. Inspections of critical activities may require that the construction contractor notify the CMF in advance of certain operations.

The CMF is responsible for requesting and coordinating any required inspections by the appropriate regulatory agency(s) and/or the DCA Code Inspection Unit (if necessary) in accordance with the State's Uniform Construction Code when requested by the contractor or Design Consultant. On flood mitigation and resiliency projects, the CMF's inspectors may be required to hold appropriate inspection and testing certifications.

The CMF is responsible for documenting inspections, for identifying items that have been satisfactorily inspected, and those that require correction. The CMF is responsible for activities that include:

- Inspecting the work daily
- Completing daily diary entry's) to record work inspected
- Notifying the construction contractor and the PD of discrepancies that are not corrected promptly
- Maintaining CMF and Design Consultant inspection records
- Maintaining records of all Inspections and Reports
- Maintaining an active list of Design Consultant errors and omissions, indicating corrective status
- Marking up a set of as-built drawings to verify the contractor's official set of as-built drawings
- Reviewing contract drawings, specifications, and approved submittals in preparation for upcoming inspections

9.10 TESTING

The CMF must be aware of all construction elements or activities that require tests, as reflected in the construction contract. The CMF shall prepare a complete testing schedule and monitor test results. The project work order may require the CMF to perform independent testing for DPMC. If the CMF does not have in-house testing capabilities, the CMF shall solicit competitive bids for the testing services on a reimbursable basis and award a fixed price or not-to exceed subcontract. Payments will be made from the appropriate work order allowance.

The CMF's testing responsibilities include:

- Verifying that tests are being conducted as scheduled
- Witnessing tests as directed by the PD to confirm that testing procedures are proper
- Monitoring test results for acceptability
- Retaining records of tests
- Describing testing activities in the periodic reports
- Conducting verification tests as required by PD
- Notifying the PD of test failures and planning correction and re-testing
- Overseeing corrective measures arising from test failures

9.11 INFORMATION REQUESTS

CMF Responsibilities: The CMF is responsible for coordinating Requests for Information (RFIs) among the Design Consultant, PD, and construction contractor. The CMF shall develop and coordinate procedures for tracking RFIs so that all parties understand and agree to their roles and responsibilities.

The CMF shall review RFIs and determine if a response can be drafted based on a review of the contract documents. The CMF may refer the RFI to the Design Consultant for technical clarifications or to DPMC for clarifications of general conditions.

The CMF shall develop procedures to notify all parties (the contractor, the Design Consultant, and the PD of RFIs responses, fully document all RFI responses, and confirm that all parties agree with the contract interpretation.

9.12 CONTRACT MODIFICATIONS

Special Authority: The CMF must avoid any instructions to the contractor that could be interpreted as authorizing modifications to the contract, or otherwise committing State funds. All modifications to the contract must be processed as formal contract modifications in the form of a change order on form DPMC 9. The DPMC CO has sole final authority for authorizing contract modifications after proper documentation and approvals are provided by the PD and CMF.

Contract Modification Processing System: The CMF shall establish a contract modification processing system, consistent with DPMC's change order processing procedures, for initiating, defining, coordinating, tracking, and documenting contract modifications. The system must encompass potential contract modifications, contract modifications in progress, and completed contract modifications for the Design Consultant and the construction contractor(s).

The contract modification processing system shall provide for:

- Defining the roles and responsibilities of the parties involved
- Identifying, evaluating, and justifying the need for modifications
- Defining the scope of modifications
- Tracking of potential, pending and completed modifications, including a contract modification numbering system
- Prescribing all steps necessary to process modifications
- Listing all required documents and forms
- Identifying cost impacts of modifications on the project budget
- Establishing time impacts of modifications on the project

The CMF shall evaluate potential modifications to determine if they are justified and within the scope of the contract, consulting as necessary with the Design Consultant on technical issues or the PD on general conditions.

The CMF must prepare a written justification supporting the need for the modification and recommendation for approval.

Design Deficiencies: If the reason for a contract modification appears to be a design deficiency, the CMF shall make an initial assessment of Design Consultant liability, including documentation of the deficiency and provide its findings to the PD and CO. The CMF's assessment of Design Consultant liability shall be based on a review of the contract documents and other circumstances leading to the change. The Design Consultant will be given an opportunity to rebut any determinations of apparent design deficiencies by the CO. The Design Consultant's position on the deficiency shall be provided to the PD with the proposed contract modification. The CO will make the final decision on liability and whether to pursue recovery from the Design Consultant.

Estimate: The CMF must review and prepare an independent estimate of the cost of the change, considering direct costs, time impacts, and construction contractor and subcontractors' overhead and profit. The estimate shall include a detailed breakdown of labor, material, and equipment costs for the various work elements. Markups for overhead and profit, as allowed by the construction contract, shall be shown separately. The sources of cost data must be indicated. The estimate must be signed by the preparer and dated. The CMF shall provide a detailed evaluation of the contractor's proposal with a recommendation for a negotiated and approved price.

Not to Exceed (NTE) Modification: Some modifications must be expedited to avoid delaying construction or increasing costs excessively. In such cases, the modification may be processed

as a NTE. The CMF shall review the NTE process with the PD, to determine its applicability to specific circumstances. If a modification requires immediate action, the CMF will recommend that the modification be processed as a NTE. The PD will decide if circumstances warrant expedited processing of the modification and a Letter of Direction will be issued to the construction contractor for the change order. A NTE change order is issued for a not-to-exceed price. The final price is negotiated after the contract modification is issued. The NTE process is not intended to be a "time and material" process.

Negotiation: The CMF shall assist the PD and CO in establishing negotiation strategies, including acceptable settlement range, and in negotiating contract change orders with the construction contractor.

Documentation: After negotiating a firm-fixed price, the CMF shall assist the PD by drafting a Memorandum of Negotiations that shall include:

- Purpose of the negotiation and description of the change
- Date, place, and persons involved in the negotiations
- Contractor's proposed price and the State's or independent estimate
- The recommended contract change order amount and time extensions
- A description of the considerations that led to the negotiated price, in terms of scope, unit costs, markups, and time

The CMF shall assemble and prepare the final contract change order package with all supporting documentation for the PD. The final contract modification will be issued by the CO.

9.13 CLAIMS ANALYSIS AND MANAGEMENT

Upon the issuance of an authorized work order, the CMF may be required to conduct an independent study and objective analysis of a specific construction project or contract issue, for the purpose of identifying and evaluating the extent and liability for additional costs and delays associated with a construction contractor or Design Consultant claim or claims. The CMF shall maintain a philosophy focused on claims avoidance, and assist DPMC in preventing adversarial situations from escalating into disputes.

If the CMF observes or suspects that a problem exists that may result in a claim, the CMF shall: (1) evaluate the risk to DPMC or DEP, (2) explore alternatives for resolving the problem with the construction contractor or Design Consultant, (3) consider preparing supplemental guidance for issuance to the construction contractor or Design Consultant to clarify contract requirements, and (4) if appropriate, initiate a change order or contract amendment to compensate the construction contractor or Design Consultant for changed conditions or additional services.

Claims Analysis: The CMF's role is limited to analysis of the claim and the preparation of materials for the defense of the claim. These services may be required during and after completion of the construction phase, and include:

- Analyze the progress of construction to identify the cause and duration of project delays. This may include a comparison of the planned and as-built construction schedules, the impact of differing site conditions, and an evaluation of both the State's and contractor's actions during the course of the project.
- Analyze the impact of change orders on the scheduled completion of the project.
- Analyze the impact of the State, Design Consultant, and construction contractor decision-making processes on the project schedule.
- Assess the relative liability of the State and Contractor for delays and cost increases.
- Review any actions that were or should have been taken by the construction contractor to mitigate the damages claimed.
- Evaluate any damages that the construction contractor may recover from the State, and those damages which are the result of the construction contractor's negligence, faulty conduct, or poor performance of work.
- Evaluate any liquidated damages due the State.
- Prepare a report detailing recommendations for contractor entitlement. The recommendation should take into consideration whether the cost of defending the claim exceeds the amount claimed and any impacts the decision might have on the contractor's performance of the balance of the work.
- Prepare an estimate of the entitled damages, and draft a finding of facts to support the entitlement.
- Provide technical assistance in claim negotiations.
- Act as either a testifying or non-testifying expert witness on behalf of the State.
- Create and maintain pertinent documents in a claim file.

9.14 PROGRESS PHOTOGRAPHS

The CMF shall take monthly progress photographs with a digital camera. The photographs must document the general progress of the construction work and equipment installations, with multiple views of the important aspects of the project completion. Both interior and exterior views are required. At a minimum:

- Exterior photographs shall be taken each month from all quadrants, using the same camera locations
- Interior views will vary depending on the progress of construction but will usually include equipment, mechanical rooms, building systems (structural, electrical, mechanical, and plumbing) and finish work in progress.

9.15 PROJECT CLOSEOUT - FINAL INSPECTION, SUBSTANTIAL COMPLETION, AND SETTLEMENT

The CMF shall schedule and coordinate the final inspection with the PD, the CMF and Design Consultant. The CMF shall have an on-going punch list of items that can be consolidated into a final punch list. The CMF shall transmit the final punch list to the construction contractor and the PD.

Final Close-out/Completion: The CMF shall closely monitor the corrective work and update the final punch list, removing each deficiency as it is corrected. The CMF shall ensure all the construction contract requirements are met and completed before deeming the project completed and recommending the initiation of the contract close-out process to the PD for the construction contractor and the Design Consultant.

9.16 OCCUPANCY/MOVE COORDINATION/BENEFICIAL USE

The CMF may be required to assist DPMC or DEP in coordinating agency move-in and occupancy and to perform tasks required prior to occupancy or beneficial use. This may involve coordination of buildouts, installation of systems and equipment, furnishings, and/or telecommunications. It may require scheduling, tracking and/or coordinating agency moves; or may involve supporting the building manager or DPMC and DEP in coordinating moves, building or structure use, or start-up of buildings or systems and equipment. Such coordination and services will be included in the specific work order if necessary.

END OF RFP FOR CMF 003

SCOPE OF SERVICES
REBUILD BY DESIGN HUDSON RIVER PROJECT
January 21 2016

IDIQ Multiple Award Term Contract:	CMF-003
DPMC Term Contract Number:	J0334-00
Work Order Number:	01
Work Order Services Description:	FEASIBILITY STUDY / EIS PHASE
Due Date:	18 months from date of execution
Total Fee:	Not to Exceed (NTE)

BACKGROUND/OVERVIEW

RDBH Hudson River Project

The RBD Hudson River Project (Hudson River Project) takes a multi-faceted approach intended to address flooding from both major storm surge and high tide as well as from heavy rainfall events. These events often occur individually, but can also occur together, increasing their impacts. The project seeks to benefit flooding areas inside the Study Area, which encompasses the City of Hoboken, extending into Weehawken and Jersey City, with the following approximate boundaries: the Hudson River to the east; Baldwin Avenue (in Weehawken) to the north; the Palisades to the west; and 18th Street, Washington Boulevard and 14th Street (in Jersey City) to the south. The State has received \$230 million in CDBG-DR funds to implement this project.

The Hudson River Project's comprehensive approach to flood reduction and resiliency consists of four integrated components:

1. Resist: a combination of hard infrastructure (such as bulkheads, floodwalls and seawalls) and soft landscaping features (such as berms and/or levees which could be used as parks) that act as barriers along the coast during exceptionally high tide and/or storm surge events;
2. Delay: policy recommendations, guidelines and urban green infrastructure to slow stormwater runoff;
3. Store: green and grey infrastructure improvements, such as bioretention basins, swales, and green roofs, that slow down and capture stormwater, and which will complement the efforts of the City of Hoboken's existing Green Infrastructure Strategic Plan; and
4. Discharge: development of new stormwater lines and pumping facilities to support Delay and Store infrastructure.

The Hudson River Project was selected by HUD through the RBD competition, and HUD Community Development Block Grant-Disaster Recovery (CDBG-DR) funds have been allocated to it. CDBG-DR funding requires compliance with the National Environmental Policy Act (NEPA) as stated in HUD's

regulations as outlined in 24 CFR part 58. The Project is also subject to the Council of Environmental Quality (CEQ) NEPA regulations at 40 CFR parts 1500-1508. HUD has further outlined the project's environmental review requirements in Federal Register (FR) notice 79 FR 62182, published October 16, 2014 [Docket No. FR-5696-N-11.

The State of New Jersey, acting through the New Jersey Department of Community Affairs, is the responsible entity that has assumed environmental responsibilities for the Sandy CDBG-DR programs in accordance with 24 CFR §58.1(b)(1). The New Jersey Department of Community Affairs has designated NJDEP to assist with the environmental review. In accordance with HUD's procedures for NEPA found at 24 CFR Part 58, an Environmental Impact Statement (EIS) is being prepared. NJDEP has engaged Dewberry Engineers, Inc. (Dewberry) to complete a feasibility analysis, prepare the EIS and assist with NEPA compliance. Dewberry's services were procured via a publicly-advertised Request for Proposals. In September 2013, Dewberry was awarded NJ TRANSIT Contract No. 13-002D to perform Environmental Consulting Services. In May 2015, that existing contract was utilized to enable NJDEP to expeditiously perform a feasibility study and EIS for the Hudson River Project.

Dewberry is referred to as the Design Consultant (Dewberry) for the remainder of this work order.

PROJECT MANAGER

The CMF will assign a Project Manager for this project and appropriate project management and technical staff to complete the work order assignments for the Hudson River project. The CMF's Project Manager will be responsible for thorough overall management of the work order assignments and the knowledge of the day-to-day status of the work in progress. The CMF's Project Manager will be present at all meetings requested by NJDEP. The CMF Project Manager will be a NJ Licensed Professional Engineer and may also be a Licensed Site Remediation Professional. The CMF Project Manager will be required to interact with and report to the NJDEP Project Team Manager, the Design Consultant's (Dewberry) Project Manager, their respective sub consultant representatives and NJDEP's Integrity Monitor as required. The CMF shall notify the NJDEP and DPMC Contracting Officer in advance of any proposed change in the Project Manager and key personnel assigned to the project position and request approval of the change in accordance with the RFP-Contract Section 5.4.

SCOPE OF SERVICES

The purpose of this Scope of Services is to engage a Construction Management Firm (CMF) to assist the DEP in managing the Hudson River RBD project throughout the phases of the project lifecycle. Initially, this first work order will be for the Feasibility Study and EIS (FS/EIS) phases of this project with an emphasis on meeting goals relating to project deliverables, schedule, budget, scope and quality. The CMF will provide management, quality control, technical, and administrative resources to assist in achieving these goals in an expeditious and economical manner consistent with the best interests of the State. Additional work orders may be requested from the CMF as the project progresses and additional services are required.

In accordance with Section 7.0 Feasibility and Design Phase Services in the CMF RFP, the CMF's primary tasks for this Work Order #01 are related to the current Feasibility Study and EIS phase (FS/EIS) and are generally summarized as follows:

- Scheduling and coordinating Feasibility Study and EIS progress meetings
- Recording meeting minutes if required
- Monitoring Design Consultant (s) progress
- Reviewing design intent and general concept drawings
- Preparing, maintaining and monitoring preliminary and master project CPM schedules
- Preparing budget and independent cost estimates as required
- Reviewing/analyzing cost estimates for accuracy
- Providing cost verification and budget monitoring and control
- Reviewing Design Consultant payment vouchers and recommending payments as required
- Reviewing Design Consultant proposed contract modifications and recommending approval or disapproval
- Assisting in problem resolution
- Recommending alternate solutions when design details affect project cost or schedule milestones
- Recommend alternate phasing or accelerated design and construction to expedite project work
- Performing document and constructability reviews
- Providing monthly reports to the NJDEP project team
- Compiling documentation as required
- Document retention and management
- HUD Compliance Reporting

The duration of this Work Order shall not exceed 18 months from the date of execution. Additional Work Orders may be executed prior to the expiration of this Work Order. Based on these requirements, the CMF is tasked with providing the following services:

TASK 1: General Monthly Reporting Requirements

The CMF shall submit monthly written progress reports to the NJDEP by the 15th of the next month, including, at a minimum, information concerning the adequacy of the services and project manpower/resources of the design consultant, the percentage of completion, submittal status, the number and amount of contract amendments/change orders (if any), the updated schedule with reports, and project budget and cost summary reports.

Additionally, the monthly progress report shall include current and potential problems deemed of sufficient importance to require NJDEP monitoring or action during the forthcoming month and a recommended course of action to achieve resolution of these problems.

TASK 2: Contractor(s) Deliverable Review

The CMF will be required to review and provide the NJDEP with written comments and recommendations on each deliverable required by the Design Consultant's work order and contract.

After completing review of deliverables, the CMF will convey to the NJDEP a written statement including comments and recommendations that should include all requirements outlined in Section 7.5 of the CMF-003 RFP, and specifically:

- Confirm all required project deliverables are submitted
- Summarize deficiencies associated with each deliverable.
- Recommendations as to how to improve or correct deliverable.
- Compliance, or lack thereof, with all Federal, State and Local rules and regulations.
- Cost reasonableness.
- Schedule/time reasonableness
- Comparison of FS/EIS work products and deliverables to best management practices for the industry and that of other projects of similar size, nature and scope.
- Recommendation to the course of action if Design Consultant's deliverable recommends or proposes a course of action
- Existing conditions are shown correctly and adequately on plans and sketches
- Selected building materials, systems and construction details are compatible and constructible as proposed, and long lead items are identified and accurate
- Review all invoices and make recommendations regarding whether work has been completed satisfactorily and in accordance with contractual requirements, and whether the invoice should be paid in full or adjusted
- All initial invoice reviews are considered critical and must be completed within 15 calendar days.

TASK 3: Work Order/Scope of Work Development

Assist NJDEP with future work order scope reviews, the development of CMF and additional design consultant work orders and other contract engagements. We do not expect many work orders to be generated using this work order during this engagement period. **However for estimating purposes of this Task 3, the CMF should estimate six (6) work orders/scope of works will be developed.** Some work order development requests will be considered time critical and be required within five (5) working days. All other requests will be required within 15 calendar days.

TASK 4: Provide Independent Cost Estimates (ICE) and Independent Analysis (IA)

The CMF shall provide, at the request of the NJDEP, an Independent Cost Estimates (ICE) based on the scope of services required for future Design Consultant Work Orders and other DEP contract engagements. The ICE would estimate the cost and fees to be presented by the Design Consultant or other DEP contract engagements. These ICE(s) shall be complete with number of hours needed for each task broken down by pay grade, task allowances, hourly rates, total costs etc. The ICE will serve as a comparison to evaluate the fee proposal from the Design Consultant or other DEP contract engagements. Discrepancies between the ICE and the Work Order cost and fee proposal should be

evaluated and may result in negotiations with the Design Consultant(s) if necessary. The CMF shall also be responsible for a cost reasonable analysis which will explain any remaining differences between the ICE and the fee proposal.

Additionally, the CMF will perform an ICE for each of the final three (3) build alternatives proposed and advanced by the FS/EIS contractor. This ICE will be used a qualitative and quantitative analysis of the cost estimates and utilized to further inform the NJDEP. Some ICE requests will be considered time critical and be required within five (5) working days. All other requests will be required within 15 calendar days.

In addition, the CMF may be tasked by the NJDEP to perform an Independent Analysis or supporting analysis of specific work performed by other NJDEP contracted consultants/contractors or at the direction of the NJDEP on an as needed basis. The CMF should estimate nine (9) such requests during this engagement. Each independent analysis will be clearly identified with objectives, goals and deliverable deadlines prior to start.

TASK 5: Policies and Procedures Project Manual

The CMF shall prepare a Policy and Procedures Project Manual which sets forth in detail the procedures and administrative provisions necessary to accomplish the project described in an approved work order and in accordance with the intent of the terms of the Integrity Monitor, CMF, FS/EIS Consultants and other NJDEP Contracts related to this project. Many State and Federal Agencies will contribute to the development of this Policy and Procedure Project Manual and this task will require significant coordination and multiple meetings to develop, finalize and maintain. Some work on the manual has already been developed and this will be shared with the CMF.

TASK 6: Master Project Schedule and Master Project Budget

The CMF shall develop Critical Path Method (CPM) master project schedules for all activities listed in this phase and future phases of the overall project to be completed at the latest by 2022 as required by HUD. The CMF needs to recognize the FS/EIS design consultants existing schedule and incorporate into the master project schedule. The CMF shall use Microsoft Project 2010 or newer software for this task.

The CMF shall also review, analyze, comment on and monitor the FS/EIS design consultant's schedule. The focus of these activities will be to minimize delays and increase efficiency where possible or have the potential to significantly impact or jeopardize the project goals and objectives of the master project schedule. The current master schedule is Attachment IV.

The CMF shall submit updates to the master project schedules in conjunction with the Task 1 Monthly

Progress Reports by the 15th of the next month.

Additionally, the CMF shall analyze the Master Project Budget (\$230M) for all activities listed in this FS/EIS phase and entire project as a whole. The CMF needs to recognize the Design Consultant's existing budget and other current DEP contracts budgets and incorporate into the master project budget through 2022. The CMF shall also review, analyze and comment on the overall project budget and status in order to identify and to minimize shortfalls that have the potential to significantly impact or jeopardize the project goals and objectives or the master project schedule. The current estimated master budget is Attachment IV.

The CMF shall submit updates to the master project budget in conjunction with the Task 1 Monthly Progress Reports by the 15th of the next month.

TASK 7: Case Study and Lessons Learned Document

Develop an implementation case study and lessons learned document, recording the implementation process for the Hudson River RBD Project, to be submitted to HUD prior to grant close-out. HUD anticipates that new and creative coordination structures, partnerships, and decision-making processes may be developed during the implementation process and will use these case studies and lessons learned documents to inform future recovery efforts. The CMF will develop this document using a scope and methodology acceptable to the NJDEP. HUD will work with NJDEP and the CMF to develop an acceptable format for this document.

TASK 8: Statement of Assurances Compliance

The CMF is expected to be familiar with all HUD reporting and submission requirements, including, but not limited to: Davis-Bacon Act, Hatch Act, Section 3, etc. These requirements are also outlined in the CMF's Statement of Assurances document in the CMF's term contract (CMF-003). The CMF shall review all Design Consultant deliverables for HUD compliance and provide written comments as to how each submission should meet HUD compliance, if applicable. The CMF shall review all of the Design Consultant's, other NJDEP contractors and sub-consultant invoices and payroll to ensure compliance with all the requirements outlined in the appropriate Statement of Assurances document and other contract specific requirements.

Work completed under this Scope of Work must comply with all applicable State and Federal laws and policies, including but not limited to those specified in the applicable Federal Register notice, published at 79 Fed. Reg. 62182 (Oct. 16, 2014). Among other laws and policies, work completed under any Task Orders should comply with the National Environmental Policy Act ("NEPA"), 42 U.S.C. §4321 et seq., HUD regulations implementing NEPA (24 C.F.R. Part 50) and Section 106 of the National Historic Preservation Act.

In addition, the CMF agrees to comply with all applicable federal CDBG-DR laws, guidelines and standards in a manner satisfactory to the State and HUD. To the extent that the CMF utilizes any sub

consultants/subcontractors, the CMF shall require and ensure that each sub consultant/subcontractor comply with all applicable federal CDBG-DR laws, guidelines and standards; any subcontracts entered into by CMF shall set forth these requirements. The CMF also agrees to comply with all applicable cross-cutting statutes and regulations, subject to waivers cited in the Federal Register, Docket No. FR-5696-N-01 (March 5, 2013) (Allocations, Common Application, Waivers, and Alternative Requirements for Grantees Receiving CDBG - DR funds in Response to Superstorm Sandy), and all other waivers granted by HUD. The failure to list herein a legal requirement applicable to services performed by the CMF does not relieve the CMF from complying with that requirement.

TASK 9: CMF Review of Contractor Invoices

On a monthly basis, the CMF shall track and recommend for approval, the invoicing of the Design Consultant and other contractors hired by the NJDEP. The CMF shall assist the NJDEP in any disputes or negotiations with the Design Consultant or other contractors.

- Verify that each payment is consistent with applicable all federal, state, and local laws, and that there is no duplication of benefits, process and payment errors, waste, fraud, abuse, malfeasance or mismanagement of funds.
- Verify that all CMF contract deliverables are provided, and within acceptable timeframes for the duration of the engagement.
- If weaknesses, gaps or errors are detected, develop recommendations and strategies to ensure maximum federal recoveries, compliance with all laws, and prevention of associated risks.
- Report findings to NJDEP and DPMC Contracting Officer.
- All initial invoice reviews are considered critical and must be completed with 15 calendar days.

TASK 10: Meetings and Conference Calls

In order to stay informed on the day to day progress of the project, the CMF Project Manager and/or other appropriate personnel will be expected to attend many meetings in various locations throughout the metropolitan area and participate in many conference calls regarding the project. These meetings or conference calls will be regularly scheduled and additional meetings and/or conference calls may be scheduled as issues arise during the various stages of this project as necessary.

TASK 11: CMF Invoices

In accordance with the RFP, CMF invoices shall be submitted on a monthly basis on an original DPMC Invoice Form only, to the PD specified in the work order. Invoices must include all required information, signatures and supporting back-up documentation prior to acceptance, approval and processing by the DPMC.

TASK 12: Integrity Monitor

The NJDEP is in the process of securing the services of an Integrity Monitor (IM), as per the Integrity Oversight Monitor Law (Law) which was enacted for the purpose of authorizing the deployment of Integrity Oversight Monitors for recovery and rebuilding contracts resulting from Superstorm Sandy

and subsequent major storms in NJ. The Law permits the State Treasurer to require Integrity Oversight Monitor services on any State or non-State, federally funded recovery and rebuilding contract of \$5 million or more.

The CMF project manager shall interface with the Integrity Monitor (IM) in order to confirm that all contract requirements, terms and conditions, and deliverables of NJDEP are met.

Integrity Monitor current scope of work for this project includes:

- Review the CMFs' plans for day-to-day oversight of the feasibility/EIS.
- Verify that the CMFs' plans for deliverable review, schedule and budget reporting, invoice review, administrative assistance, and engineering support is sufficient and complies with all federal, State, and local laws, regulations, and ordinances, as they are applicable to the program.
- Ensure that plans meet all requirements listed in the CMF RFP.
- If weaknesses, gaps or errors are detected, develop recommendations and strategies to ensure maximum federal recoveries, compliance with all laws, and prevention of associated risks.
- Report findings to NJDEP and copy the State Contract Manager.

The Integrity Monitor shall also review the payment process and contract deliverables for the CMF contracts and engagements:

- IM shall verify that each CMF payment is consistent with applicable all federal, state, and local laws, and that there is no duplication of benefits, process and payment errors, waste, fraud, abuse, malfeasance or mismanagement of funds.
- IM shall verify that all CMF contract deliverables are provided, and within acceptable timeframes for the duration of the engagement.
- If weaknesses, gaps or errors are detected, develop recommendations and strategies to ensure maximum federal recoveries, compliance with all laws, and prevention of associated risks.
- Report findings to NJDEP and copy the ~~DPMC Contracting Officer~~ ~~State Contract Manager~~.

TASK 13: Bid & Award Phase Services (CMF RFP Section 8)

The NJDEP is currently on a traditional Design-Bid-Construct path to complete the project by September 2022. Based on the preliminary master project schedule prepared to date, we anticipate completion of the FS/EIS in 2016 and a Record of Decision in early 2017. A design and construction oversight contract template has been prepared to provide the next phase of the project for 2017 through 2022. A Construction Contract development phase is anticipated to begin in late 2017. The current master schedule is Attachment IV.

As part of this Work Order the CMF is tasked to:

- Evaluate and recommend improvements to the current master project schedule and budget (using the current Design-Bid-Construction approach outline above).
- Develop and evaluate two (2) alternate bidding strategies (such as Design-Build, Time Incentives, etc.) in order evaluate to possible saving to project budget and/or schedule.

- Upon direction from the NJDEP prepare a future work order proposal to investigate possible contractor interest, drafting the solicitation (invitation for bids or request for proposals) and assembling the solicitation package (final technical specifications and drawings).

LIQUIDATED DAMAGES

The CMF must provide all deliverables and complete all tasks/subtasks within the time frames specified herein. The CMF must immediately advise the NJDEP and DPMC Contracting Officer of any circumstance or event that could result in late completion of any deliverable, task or subtask called for to be completed on a date certain

Late delivery will harm the State but the extent of this harm is difficult or impossible to quantify with precision. If the CMF cannot provide any deliverable or complete any task or subtask required to be delivered or completed by a specified date, the CMF agrees to be liable to the State for the sum of \$500 per workday that such deliverable, task, subtask or work remains incomplete following the date specified in this Work Order. The parties agree that such sum represents a good faith effort to estimate the actual damage that will probably ensue from a delay and that such sum constitutes liquidated damages and not a penalty.

The State shall have the sole discretion to allow a grace period or toll the time periods for the failure by the CMF to meet designated schedules and completion dates. If no time frame is specified herein or the deliverable is considered non- critical both parties will mutually agree to a reasonable delivery date so as not to adversely impact the project. If the State assesses liquidated damages, it may deduct those liquidated damages from any payment made to the CMF.

Attachments

Attachment I – Dewberry Technical Proposal Excerpt.

Attachment II – Stevens Contract Excerpt.

Attachment III – NERAS Contract Excerpt.

Attachment IV –Master Project Schedule Links

Attachment I Dewberry Engineers Technical Proposal Excerpt

Feasibility Study and Environmental Impact Statement Contract for the Hudson River Project

On June 4, 2015, NJDEP procured the services of Dewberry Engineers, Inc. through an existing NJ Transit Task Order Contract (NJ Transit Contract No. 13-002D Environmental Consulting Services Task Order Contract) for \$8,587,526.68 to perform a feasibility study and complete the federally required Environmental Impact Statement. Dewberry has retained the Office of Metropolitan Architecture (OMA) and SCAPE Landscape Architecture PLLC and nine other subconsultants/subcontractors to contribute to the project. See Dewberry's technical proposal for details. Please see web link for full Dewberry Contract and proposal. As an overview Dewberry's task order contract is broken into seven subparts listed below. The CMF is to review, comment and provide a summary report of all Dewberry deliverables listed below.

General

- Review Dewberry Technical Proposal
- Review all documents posted on the RBD Hudson River Website and DEP FTP Site
- Dewberry Invoice review will not be required under this task order as the service is being provided by New Jersey Transit.

Dewberry Task 1 Data Collection and Mapping, Public Involvement

- Draft written report (for review and comment) summarizing results of Task 1, and identifying data gaps and recommending appropriate steps to collect additional data needed.
- Draft maps/GIS shapefiles (for review and comment).
- Final reports and maps/GIS shapefiles.
- Draft and Final Scoping Document

Dewberry Task 2 Water front Structures Inspection

- During execution of Task 2, Dewberry will compile a draft and final report to document our findings from the available inspection reports, data gaps in available waterfront inspection information, plan for conducting waterfront inspection and load calculations, findings from the waterfront inspections, and summary of load calculations along the existing waterfront. The report will include either existing or additional bathymetric information collected as part of this

task.

Dewberry Task 3.A Subsurface Investigation Geotechnical Investigation Deliverables

- Draft Subsurface Investigation Report (for review and comment) and back-up documents
- Final Subsurface Investigation Report

Dewberry Task 4 Hydrology/Flood Risk Assessment Deliverables

- During this task, Dewberry will prepare and submit a draft and final hydrology/flood risk assessment report that will document the model development methodology, and results from integrated coastal and stormwater models for existing and three Build Alternatives including the final Preferred Alternative. It should be noted that this report will be completed after the final Preferred Alternative has been selected.

Dewberry Task 5 Feasibility Analysis Deliverables

- Feasibility Report. Dewberry will submit a feasibility report with the back-up documents (Final Subsurface Investigation Report, Final maps/GIS shapefiles depicting alternatives). In general, the report will have the following major sections:
 - Executive summary with recommendations for Preferred Alternative
 - Basis of Design Criteria
 - Development and feasibility assessment of flood risk reduction alternatives
 - Cost Estimates
 - Three Build Alternatives including the Preferred Alternative details
 - Implementation and phasing plans
 - List of federal, state, and local permits required and additional information required to support permit applications.
- The report will consist of tables, figures, and calculations from the multi-disciplinary team's assessment either in the main report or as an appendix. Our team will create easy-to-understand renderings and graphics of the project alternatives that can be used for meetings with the community and elected officials.

Dewberry Task 6: Preliminary Design and EIS Preparation Deliverables

- Notice of Intent to Prepare an EIS
- Preliminary Design
- Phase IA Archaeological Survey submitted to NJHPO
- Historic Architectural Resources Technical Environmental Study submitted to NJHPO

- Draft Environmental Impact Statement (for review and comment)
- Final Environmental Impact Statement
- Draft Record of Decision
- Final Record of Decision

Dewberry Task 7: Document Management and Programmatic Reporting Deliverables

- Monthly reports
- Compliance reports
- For the duration of the project, we will submit a progress report each month with the invoice. This progress report will include the following:
 - A detailed progress report of the work completed to date with the current invoice period highlighted.
 - A summary of the costs incurred to date (salary, multiplier, and direct) amount remaining, percentage complete of each task.
 - A summary for each major task showing costs incurred per reporting period, total costs incurred to date, a percent complete of the activity based on actual progress and percent of budget expended, and a schedule showing anticipated finish dates.
 - A summary of the overall project percentage complete based on actual progress and percent of budget expended.
 - A summary of anticipated costs/tasks not initially included in the project budget.
 - A confirmation of upcoming submittals and any possible scheduling conflicts.
- If required, Dewberry will provide quarterly and annual Compliance Reports to HUD in accordance with federal procurement regulations.

Attachment II NJ Sea Grant Consortium Contract EC16-011 Excerpt

Please see link for full EC16-011 contract and proposal

http://nj.gov/comptroller/sandytransparency/contracts/pdf/seagrant_proposal.pdf

Excerpt

The New Jersey Transit (NJT) has issued Task Order 12 as part of Contract 13-002D Environmental Consulting Services Task Order Contract to perform a feasibility study and environmental impact statement for Rebuild by Design's "Resist, Delay, Store, Discharge" project. As part of this task order, Dewberry will carry out the feasibility analysis of five (5) concept design schemes that will allow for the selection of the three (3) feasible build alternatives for further assessment and further development, leading to the choice of a preferred alternative to be formally evaluated applying NEPA requirements. The assessment will include a thorough investigation of the site potential in view of the matrix of project drivers and requirements. One of the assessment tools evaluates existing conditions and three build alternatives using an integrated coastal and stormwater management hydrodynamic model. Dewberry intends to use Danish Hydraulic Institute (DHI)'s MIKE FLOOD model to simulate coastal and stormwater events. Dewberry will request NJDEP to engage Stevens Institute of Technology's Davidson Laboratory (SITDL) to assist the project team by performing the following scope of work items –

1. SITDL will assist Dewberry to perform coastal storm surge model validation and will specifically provide Dewberry with boundary condition hydrographs and observed water depths from the available SITDL's NYHOPS model for Superstorm Sandy. SITDL will participate in a 4-hour meeting (inclusive of total meetings listed in item 4) to decide on the specifics of the data from Superstorm Sandy to be used by Dewberry. SITDL will provide Dewberry with the required Superstorm Sandy dataset within 2 working days after the meeting.
2. Dewberry will provide SITDL choices of the coastal storm surge, rainfall and sea level rise combination events to be considered for the project (up to 8 combination events) for their review and comments.
3. Dewberry will perform the wave analysis using FEMA's Guidelines and Specifications to obtain the 0.2-percent-chance wave heights (500-year). SITDL will review and provide written comments on this wave height analysis computation within 5 working days from the receipt of the data and memo/report.
4. Review the final configuration of the Resist portion of the project and consider impacts to Jersey City and Weehawken as a result of that final configuration.
5. SITDL will attend up to 15 meetings comprising of technical discussion meetings, attending public meetings and community advisory group meetings (2 people max for 4 hours per

meeting) along with Dewberry to discuss and review concepts, alternatives, technical information and modeling results related to coastal flood risk assessment. Dewberry will attempt to provide SITDL with appropriate read ahead information a day prior to the meeting. After the meeting, SITDL will provide written comments and suggestions on the items presented during the meeting for Dewberry's review.

Attachment III NERAS Contract 14-X-22866RFP Excerpt

Excerpt

As part of the ongoing geotechnical work at the RBD Hudson River Project, unanticipated excess soil and drill cuttings have been generated that will require proper analysis and disposal.

The excess material was not anticipated or budgeted in the original NJT Task Order 12 with Dewberry Engineers. The excess soil and drill cuttings will need to be analyzed and disposed of properly in accordance with all environmental regulations. The NJDEP Publicly Funded Response Element Bureau of Site Management (BSM) will assist the NJDEP Office of Flood Hazard Risk Reduction Measures (OFHRRM) through the existing NJDEP Non-Emergency Remedial Action Services (NERAS) CONTRACT 14-X-22866RFP to properly sample the excess soil and drill cuttings and dispose of the material properly at a facility approved to take the waste.

NJDEP Non-Emergency Remedial Action Services (NERAS) CONTRACT 14-X-22866RFP NERAS RFP-X-22866 cost estimating work sheets have been attached supporting the spending plan estimate of \$25,163.00.

Attachment IV Master Project Schedule and Budget

Please see following links below

<http://www.state.nj.us/dep/floodhazard/docs/rbd-hudson-project-schedule-20151207.pdf>

<http://www.state.nj.us/dep/floodhazard/docs/rbd-hudson-prelim-estimated-budget-20151207.pdf>

STATE OF NEW JERSEY
DEPARTMENT OF TREASURY
DIVISION OF PROPERTY MANAGEMENT & CONSTRUCTION
P.O. BOX 034, TRENTON, NJ 08625-0034

PROJECT: J0334-00, Work Order #01
IDIQ Multiple Award Term Contract (CMF-003)
For Construction Management Services on Rebuild By Design
Projects and Other NJ DEP Flood Mitigation and Environmental
Infrastructure Projects

DATE: February 4, 2016

ADDENDUM "A"

This ADDENDUM is issued for the purpose of clarifying and amending certain requirements of the Request for Proposal as noted hereinafter, and is hereby made part of and incorporated in the Consultant's Contract. The consultant is to consider these matters when preparing their technical and fee proposals for this contract. Unless specifically noted or specified hereinafter, all work shall comply with the applicable provisions of the Contract.

The due date for proposals is extended to no later than 2:00 p.m., Thursday, February 11, 2016.

Responses to Consultant Questions (*Responses are in Italics*)

Jay Shapiro & Associates

Please see below questions regarding the DPMC Project #J0334-00, Term Contract CMF-003, Work Order No. 01, Feasibility Study / EIS Phase, Rebuild by Design Hudson River Project, Town of Hoboken and Parts of Jersey City and Weehawken.

A) Schedule / Timeline Questions

1. We request details regarding Dewberry's progress on tasks and deliverables since award in June 2015. Please list Dewberry tasks that been completed and accepted by the State as of January 28, 2016.

Answer: Please find below a list of Dewberry Tasks completed or ongoing. However, all deliverables will be reviewed by the CMF regardless of status

Dewberry Task 1 Data Collection and Mapping, Public Involvement

- *Draft and Final Scoping Document*

Dewberry Task 2 Waterfront Structures Inspection

- *Draft waterfront inspection report*

Dewberry Task 5 Feasibility Analysis Deliverables

- *Basis of Design Criteria*
- *Development and feasibility assessment of flood risk reduction alternatives*

Dewberry Task 6: Preliminary Design and EIS Preparation Deliverables

- *Notice of Intent to Prepare an EIS*

Dewberry Task 7: Document Management and Programmatic Reporting Deliverables

- *Monthly reports*
- *Compliance reports*

2. The Dewberry schedule indicates that EIS Data Gathering started 3rd quarter of 2015. Is this correct?

Answer: Yes

3. The Dewberry schedule indicates that the Feasibility Study was started 3rd Quarter of 2015. Is this correct?

Answer: Yes

4. The Dewberry schedule indicates that design will start in the 4th quarter of 2016. Will the design start prior to the completion of the EIS process, with the anticipated Record of Decision in early 2017? If so, are we to include oversight of the design in this proposal?

Answer: No. This Work Order is for the Feasibility Study and EIS phase of the project. However, it is anticipated that the Design Consultant will be engaged in the late fall 2016/early spring 2017 and additional Work Orders will be issued to incorporate the design and construction phase services as appropriate.

5. Please advise duration on which to base CMF services for the purposes of this proposal. For example, if Dewberry's scope is completed at the end of 2016, the basis of the CMF schedule will be 10 months. Or should we propose CMF services over a full 18 month schedule?

Answer: The CMF services for the Feasibility Study and EIS shall be proposed for a full 18 month schedule.

6. Will the CMF's Microsoft Project master project schedule need to be cost loaded? Will it be used as a tool for approving payments?

Answer: No. The master project schedule will not be required as a tool for approving payments during this phase or under this Work Order.

B) A/E Team Contract Questions

7. Can we receive a copy of Dewberry's NJ Transit contract?

Answer: The technical proposal for Dewberry's NJ Transit contract was provided via email to the CMF's on January 22. The full contract is in the process of being placed on the State's Sandy Transparency Site and will be available at:

<http://nj.gov/comptroller/sandytransparency/contracts/sandy/approved/contracts.html>

8. Is Dewberry's Task Order subject to Liquidated Damages?

Answer: No, the Dewberry NJ Transit contract does not have liquidated damages provisions at this time.

9. To confirm existing conditions are shown correctly, are we to include our own visual inspections, or rely on data gathered by Dewberry?

Answer: The CMF is to rely on data gathered by Dewberry. No duplication of effort is planned for this work order. However, some spot visual inspections in order to complete your review should be anticipated.

C) CMF Team Member Qualification Question

10. Please confirm if it is acceptable to propose a candidate for CMF Project Manager who is presently a NY State Licensed Professional Engineer, and will have a NJ PE License prior to Work Order contract commencement.

Answer: Yes, that is acceptable.

- D) CMF Task Order – Invoice Format** 11. The Master Agreement primarily describes a Lump Sum fee structure per Work Order. Since this Task Order is stated as Not to Exceed (NTE), we request confirmation of level of detail required with each monthly CMF invoice.

Answer: This project is funded with CDBG-DR grant funds and, as such, requires the CMF to provide appropriate supporting back-up documentation to meet all grant fund requirements and comply with the Statement of Assurances that was included with the CMF RFP and contract.

E) Other

12. It is indicated in CMF Task 7 that Case Study & Lessons Learned should be submitted to HUD prior to grant close-out. Is this to be done on a preliminary basis at the end of the Feasibility Study / EIS Phase?

Answer: Yes, this document will be developed over a long time period and included material gathered over many phases.

13. Please advise if responses to these submitted questions will be received at least five (5) business days prior to submission date of February 9, 2016 (i.e., by February 2, 2016)? If not, may the due date be extended?

Answer: Yes, the due date will be extended accordingly if necessary.

HAKS

Our team has the following questions:

1. Work Order Schedule – It is stated clearly in the Scope of Work that the duration of this Work Order shall not exceed 18 months from date of execution (page 3) however some Tasks may require involvement by the CMF beyond the 18 months, particularly those pertaining to work by the Designer that may not be completed within 18 months. Will the DPMC extend Work Order No. 1 or issue additional Work Orders to cover this eventuality?

Answer: Additional work orders will be issued as necessary and as required. This Work Order is for the Feasibility Study and EIS phase of the project. However, it is anticipated that the Design Consultant will be engaged in the late fall 2016/early spring 2017 and additional work orders will be issued to incorporate the design and construction phases as appropriate.

2. Task #5 Clarification – This task calls for the preparation of a Policy and Procedures Manual. Have portions of this Manual already been developed and can this information be shared with the participating firms at this time, or after award?

Answer: This information will be made available after award of the work order.

3. Will independent cost estimate and master schedule scenarios be required for all design concepts currently under consideration, or just for the final three build alternatives as stated on page 5?

Answer: Just for the three (3) build alternatives that are selected to advance.

4. Will selection for this Work Order pose a potential conflict to selection for future work orders on the Hoboken Project?

Answer: No

5. Will identification of a CMF as a stakeholder in this project pose a potential conflict to selection for work on this project?

Answer: Yes, selection as a CMF for this project will result in a potential conflict for the selection of other contracts on this project that will have to be evaluated on a case-by-case basis.

6. For Fee Proposal effort, are you able to provide more detail regarding the nature of potential Independent Analyses described under Task 4?

Answer: No, each independent analysis will be clearly identified with objectives, goals and deliverable deadlines prior to start. The independent cost analysis will be used to estimate costs and fees to be prepared by the Design Consultant or other DEP contract engagements.

7. Can you confirm that the third bullet under Task #13 is potential additional work and thus not to be included in the Fee Proposal?

Answer: No, the CMF may be required to develop the work order described in order to advance the project and should be included in the Fee Proposal for Work Order #01.

8. Page 12 of the original solicitation dated October 22, 2015 indicates that the CMF “may” be responsible to acquire office space suitable for its internal staff and also DPMC staff. The expense of said space would be allowed to be submitted as an allowance. Can the NJDPMC confirm that for task order no. 1 office space in the Hoboken area will be necessitated? If so, can the NJDPMC confirm the amount of space needed for its own staff?

Answer: There is no need for CMF field office, DEP or DPMC staff space anticipated as part of this Work Order.

9. Would the Team be allowed to bring additional consultants on board to supply specialty services as needed, given the scope of work for Work Order No. 1?

Answer: The CMf should provide all planned consultants to be utilized for Work Order #01.

D'Huy Engineering

The following are our questions for the CMF-003 Work Order 1:

1. Please provide a list and copies of deliverables submitted by Design Consultant to date.

Answer: See answer to Question 1 above

2. Please provide an updated gantt chart schedule for the Design Consultant activities. The schedule provided in Attachment IV is from March 2015.

Answer: An updated schedule will be provided upon award.

3. The scope indicates that some work has already been completed on the policy and procedures manual (Task 5). Can this information be provided during the proposal phase so that the level of effort can be confirmed?

Answer: After award, a current draft will be provided.

4. Is it possible to receive a copy of a recent pay application from Design Consultant so that the level of effort for review can be confirmed? Obviously some of the information can be redacted if needed at this time.

Answer: After award, a recent pay application will be provided. The CMF will be required to perform a qualitative review of the Design Consultant's invoices. The following are the questions to be answered as a part of that review:

- *The amount of hours charged this period seems reasonable as supported by the work logs and monthly/weekly reports.*
- *The amount of hours charged to-date on the project is reasonable compared to the work accomplished to-date, and performed in accordance with the contract.*
- *Expenses billed during this period for the project(s) are reasonable.*
- *Subcontractor costs for the project(s) listed are reasonable.*
- *Subcontractors billed against the project(s) have worked during this period.*

See also answer to question 8 below for additional invoice review requirements.

Additionally, delete the following statement from the Scope of Services dated January 21, 2016 on page 10, Attachment I Dewberry Engineers Technical Proposal Excerpt, Feasibility Study and Environmental Impact Statement Contract of the Hudson River Project, General - Bullet 3:

- The Design Consultant's invoices are already being reviewed by NJ TRANSIT for cost compliance.

5. Addendum B for CMF-003 clarified that rates for sub-consultants for items in Section 2.1, paragraph 2 of the RFP should not be included in the CMF's loaded labor rates. How should rates for these sub-consultants be reflected in the proposal forms?

Answer: In an Allowance with information provided regarding the specialty sub-consultants hourly rates for personnel and the estimated number of hours being included.

6. Please provide an example monthly report prepared by Design Consultant.

Answer: Please see Dewberry Task 7 in Attachment 1 for the items that should be included in a monthly report.

7. Please confirm how markup on sub-consultants should be handled for the not-to-exceed contract.

Answer: There would be no additional markup included as these costs are included in the CMF's loaded hourly rates submitted per the CMF 003 RFP.

8. Please confirm that any formal auditing for compliance with the Statement of Assurances will be provided by the Integrity Monitor or another 3rd party. CMF review for compliance would consist of monitoring the documentation submitted by the Design Consultant.

Answer: Yes, but in accordance with Work Order Task 8 the CMF shall review all of the Design Consultant's, other NJDEP contractors and sub-consultant invoices to ensure compliance with all the requirements outlined in the appropriate Statement of Assurances document and other contract specific requirements.

9. Please confirm whether the CMF is to review deliverables that have already been completed

Answer: Yes

10. Please confirm whether the CMF will need to perform additional technical review of the MIKE FLOOD model, which is already receiving a peer review by Stevens Institute.

Answer: The CMF will be reviewing the results of the MIKE FLOOD model as part of deliverable review.

Louis Berger

The Louis Berger-Hill JV Team would like to present the following questions for DPMC Project #J0334-00, Term Contract CMF-003:

1. Task 10 (Meetings and Conference Calls): This task is open to a wide interpretation to quantify the number of meetings and anticipated resources required for each meeting. Can the NJDEP provide an Allowance Item with a pre-established cost on the Bid form and Cover sheet to enable appropriate technical support team resources to attend meetings as needed (excluding the PM)? If not, can an assumed number of meetings per month be provided?

Answer: It is anticipated that there would be three (3) meetings per week that would require two individuals. It is likely that, depending on the meeting subject matter, different individuals would be

needed at different meetings. It should be anticipated that at least one of these meetings per week will require travel to Trenton, Hoboken, New York City, or other nearby location.

2. Task 11- Invoicing: The task order requests all backup documentation and indicates this is a Not To Exceed (NTE) task order. We are assuming that this is a billing rate task order requiring backup for all tasks and that the NTE applies to the entire task order and not the individual tasks. Please confirm.

Answer: See response above to Question 11 on page 3.

3. General: If resumes are placed in the appendices of the submittal will they be included in the page count?

Answer: Yes. If resume was submitted as a part of the original proposal, it is already on file and should not be re-submitted. However, the page limit has been increased from 25 pages to 35 pages for the work order proposal.

End of Addendum "A, Work Order #01"

State of New Jersey
Department of Treasury
Integrity Monitoring Reporting Model
Engagement:
For Quarter Ending: xx/xx/2015

Reports required under A-60 will be submitted by Integrity Monitors on the first business day of each calendar quarter to the State Treasurer and will contain detailed information on the projects/contracts/programs funded by the Disaster Relief Appropriations Act.

No.	Recipient Data Elements	Response	Comments
A. General Info			
1.	Recipient of funding		
2.	Federal Funding Agency? (e.g. HUD, FEMA)		
3.	State Funding (if applicable)		
4.	Award Type		
5.	Award Amount		
6.	Contract/Program Person/Title		
7.	Brief Description, Purpose and Rationale of Project/Program		
8.	Contract/Program Location		
9.	Amount Expended to Date		
10.	Amount Provided to other State or Local Entities		
11.	Completion Status of Contract or Program		
12.	Expected Contract End Date/Time Period		
B. Monitoring Activities			
13.	If FEMA funded, brief description of the status of the project worksheet and its support.		
14.	Quarterly Activities/Project Description (include number of visits to meet with recipient and sub recipient, including who you met with, and any site visits warranted to where work was completed)		

State of New Jersey
Department of Treasury
Integrity Monitoring Reporting Model
Engagement:
For Quarter Ending: xx/xx/2015

Reports required under A-60 will be submitted by Integrity Monitors on the first business day of each calendar quarter to the State Treasurer and will contain detailed information on the projects/contracts/programs funded by the Disaster Relief Appropriations Act.

No.	Recipient Data Elements	Response	Comments
15.	Brief Description to confirm appropriate data/information has been provided by recipient and what activities have been taken to review in relation to the project/contract/program.		
16.	Description of quarterly auditing activities that have been conducted to ensure procurement compliance with terms and conditions of the contracts and agreements.		
17.	Have payment requisitions in connection with the contract/program been reviewed? Please describe		
18.	Description of quarterly activity to prevent and detect waste, fraud and abuse.		
19.	Provide details of any integrity issues/findings		

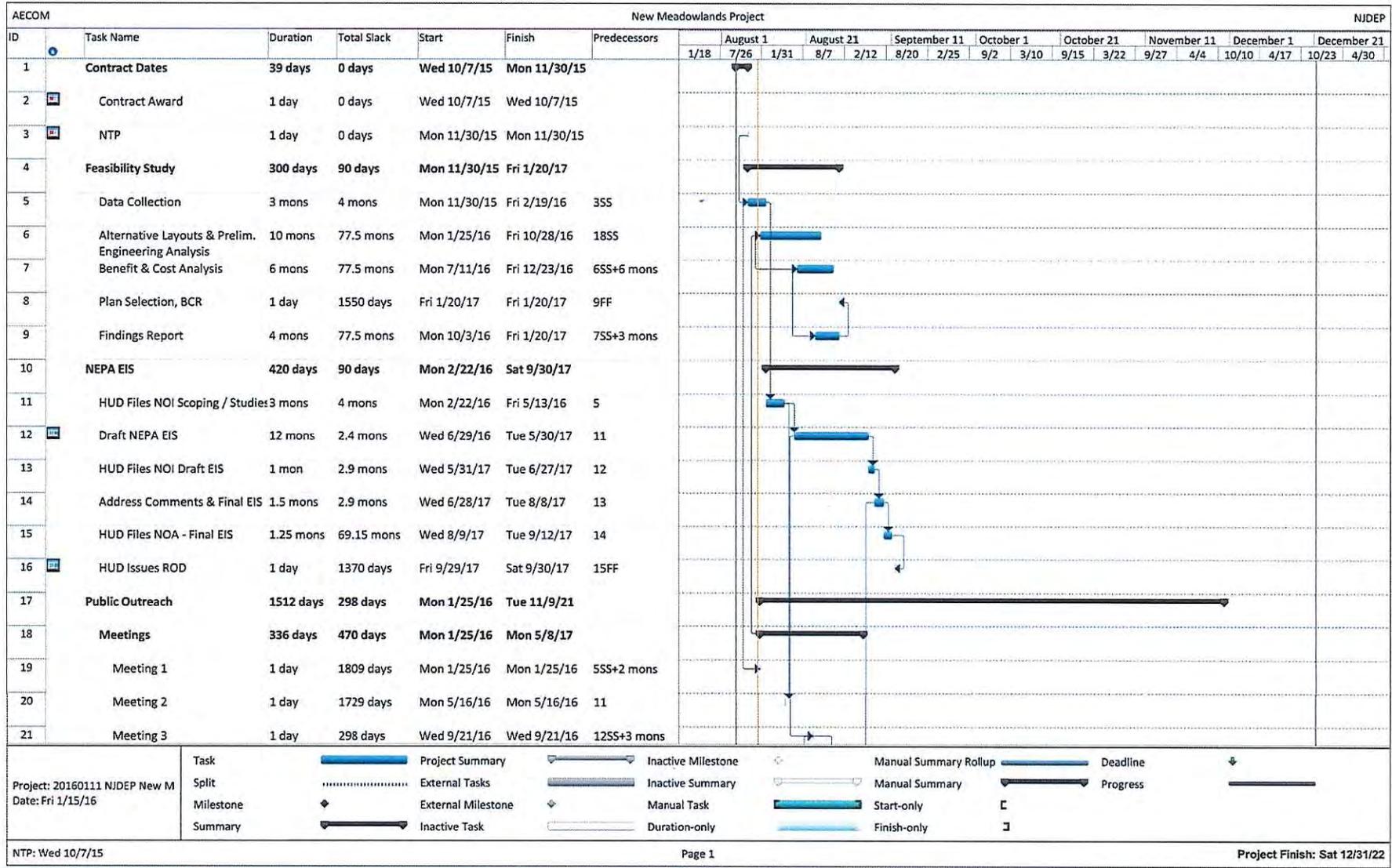
State of New Jersey
 Department of Treasury
 Integrity Monitoring Reporting Model
 Engagement:
 For Quarter Ending: xx/xx/2015

Reports required under A-60 will be submitted by Integrity Monitors on the first business day of each calendar quarter to the State Treasurer and will contain detailed information on the projects/contracts/programs funded by the Disaster Relief Appropriations Act.

No.	Recipient Data Elements	Response	Comments
20.	Provide details of any work quality or safety/environmental/historical preservation issue(s).		
21.	Provide details on any other items of note that have occurred in the past quarter		
22.	Provide details of any actions taken to remediate waste, fraud and abuse noted in past quarters		
C. Miscellaneous			
23.	Attach a list of hours and expenses incurred to perform your quarterly integrity monitoring review		
24.	Add any item, issue or comment not covered in previous sections but deemed pertinent to monitoring program.		

Name of Integrity Monitor: Name of Report Preparer: Signature: Date:

Preliminary Draft Schedule



ID	Task Name	Duration	Total Slack	Start	Finish	Predecessors	Gantt Chart																
							August 1	August 21	September 11	October 1	October 21	November 11	December 1	December 21									
22	Meeting 4	1 day	1474 days	Thu 12/15/16	Thu 12/15/16	21FS+3 mons	1/18	7/26	1/31	8/7	2/12	8/20	2/25	9/2	3/10	9/15	3/22	9/27	4/4	10/10	4/17	10/23	4/30
23	Meeting 5	1 day	1474 days	Fri 3/10/17	Fri 3/10/17	22FS+3 mons																	
24	Meeting 6	1 day	1474 days	Mon 5/8/17	Mon 5/8/17	23FS+2 mons																	
25	Web Page	67 mons	14.9 mons	Wed 9/21/16	Tue 11/9/21	21SS																	
26	Design Phase	656 days	2 days	Wed 6/28/17	Wed 1/1/20																		
27	1st Bid package	12 mons	2.9 mons	Wed 6/28/17	Tue 5/29/18	14SS																	
28	2nd Bid package	12 mons	2.9 mons	Wed 12/13/17	Tue 11/13/18	27SS+6 mons																	
29	3rd Bid package	12 mons	2.9 mons	Wed 5/30/18	Tue 4/30/19	28SS+6 mons																	
30	4th Bid package	12 mons	0.1 mons	Thu 1/31/19	Wed 1/1/20	29SS+6 mons																	
31	Construction	1044 days	0 days	Tue 1/1/19	Sat 12/31/22																		
32	1st Bid package	32 mons	20.2 mons	Tue 1/1/19	Mon 6/14/21	27																	
33	2nd Bid package	32 mons	20.2 mons	Tue 1/1/19	Mon 6/14/21	28																	
34	3rd Bid package	32 mons	15.9 mons	Wed 5/1/19	Tue 10/12/21	29																	
35	4th Bid package	39 mons	0 mons	Mon 1/6/20	Sat 12/31/22	30																	

Project: 20160111 NJDEP New M
Date: Fri 1/15/16

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
Split		External Tasks		Inactive Summary		Manual Summary		Progress	
Milestone		External Milestone		Manual Task		Start-only			
Summary		Inactive Task		Duration-only		Finish-only			

Engagement Query Questions or Request for Clarification

Firm:

Engagement Query #: EQ2015-002-P3 - DEP Rebuild by Design

Page #	Engagement Query Section	Question

STATEMENT OF ASSURANCES FOR SUBRECIPIENT

**ADDITIONAL FEDERALLY FUNDED AGREEMENT PROVISIONS
APPLICABLE TO COMMUNITY DEVELOPMENT BLOCK GRANT-
DISASTER RECOVERY FUNDED PROJECTS**

The purpose of this Statement of Assurances is to list requirements applicable to programs funded in whole or in part by Community Development Block Grant-Disaster Recovery (“CDBG-DR”) funds received from the U.S. Department of Housing and Urban Development (“HUD”). Not all of the requirements listed herein shall apply to all activities or work under the Agreement.

Subrecipient agrees to comply with all *applicable* federal CDBG-DR laws, guidelines and standards in a manner satisfactory to the State of New Jersey and HUD, including all administration and compliance requirements set forth by this Statement of Assurances. To the extent that Subrecipient utilizes any contractors, consultants or other third parties to supply goods or perform services in connection with the Agreement activities and paid with CDBG-DR funds, Subrecipient shall require and ensure that each contractor, consultant or other third party comply with all *applicable* federal CDBG-DR laws, guidelines and standards; any subcontracts entered into by such third parties shall set forth these requirements.

Subrecipient also agrees to comply with all *applicable* cross-cutting statutes and regulations, subject to waivers cited in the Federal Register, Docket No. FR-5696-N-01 (March 5, 2013) (Allocations, Common Application, Waivers, and Alternative Requirements for Grantees Receiving CDBG - DR funds in Response to Superstorm Sandy), and all other waivers granted by HUD.

Subrecipient agrees to comply with the requirements of Title 24 of the CFR, Part 570 (HUD regulations concerning Community Development Block Grants), except that it does not assume the environmental responsibilities described in 24 CFR 570.604.

The failure to list herein a legal requirement applicable to activities undertaken by Subrecipient does not relieve Subrecipient from complying with that requirement.

A. GENERAL PROVISIONS

1. Under provisions of the Hatch Act that limit the political activity of employees and HUD regulations governing political activity (24 CFR 570.207), CDBG funds shall not be used to finance the use of facilities or equipment for political purposes or to engage in other partisan political activities, such as candidate forums, voter transportation, or voter registration. However, a facility originally assisted with CDBG funds may be used on an incidental basis to hold political meetings, candidate forums, or voter registration campaigns, provided that all parties and organizations have access to the facility on an equal basis, and are assessed equal rent or use charges, if any.
2. No federally appointed funds shall be used for lobbying purposes regardless of level of government, in accordance with 2 CFR 200.450.
3. HUD rules prohibit the use of CDBG funds for inherently religious activities, as set forth in 24 CFR 570.200(j), except for circumstances specified in the Department of Housing and Urban Development Allocations, Common Application, Waivers, and Alternative Requirements for Grantees Receiving CDBG Disaster Recovery Funds in Response, 78 FR 14329 (March 5, 2013).

4. HUD rules impose drug-free workplace requirements in Subpart B of 2 CFR part 2429, which adopts the government-wide implementation (2 CFR Part 182) of sections 5152-5158 of the Drug-Free Workplace Act of 1988.
 5. Citizens will be provided with an appropriate address, phone number, and times during which they may submit complaints regarding activities carried out utilizing these CDBG-DR funds. The State will provide a written response to every citizen complaint within fifteen (15) working days of the complaint.
- B. PERSONALLY IDENTIFIABLE INFORMATION:** To the extent the Subrecipient receives personally identifiable information, it will comply with the Privacy Act of 1974 and HUD rules and regulations related to the protection of personally identifiable information. The term “personally identifiable information” refers to information which can be used to distinguish or trace an individual’s identity, such as their name, social security number, biometric records, etc., either alone or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as date and place of birth, mother’s maiden name, etc. See 2 CFR 200.79 & OMB M-07-16. Subrecipient shall require all persons that have access to personally identifiable information (including subcontractors/subconsultants and their employees) sign a Non-Disclosure Agreement.

C. FINANCIAL MANAGEMENT AND PROCUREMENT

1. *To the extent applicable*, Subrecipient shall adhere to the principles and standards governing federal grant distribution as set forth in the OMB Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards (2 CFR Part 200).
2. Subrecipient shall comply with all *applicable* laws pertaining to financial management, including 2 CFR Part 180 and 2 CFR Part 2424, which prohibit the making of any award or permitting any award (sub grant or contract) at any tier to any party that is debarred or suspended or is otherwise excluded from or ineligible for participation in federal assistance programs. To the extent that it uses contractors or consultants, Subrecipient must verify that none of them are on the List of Parties Excluded from Federal Procurement or Non-procurement Programs promulgated in accordance with Executive Orders 12549 and 12689, “Debarment and Suspension,” as set forth at 24 CFR Part 24. No contractors or subcontractors that are on the List may receive any CDBG funds.
3. Conflict of interest rules, as set forth in 24 CFR 570.489, 24 CFR 570.611, and 2 CFR 200.112, apply. Subrecipient shall disclose in writing any potential conflict of interest to DEP.
4. *To the extent applicable*, Subrecipient shall comply with 24 CFR Part 570 regarding the management and disposition of cash, real and personal property acquired with CDBG-DR funds.
5. *To the extent applicable*, Subrecipient shall comply with 24 CFR 570.489(j) regarding change of use of real property. These standards apply to real property within its control (including activities undertaken by subcontractors/subconsultants). These standards apply from the date CDBG-DR funds are first spent until five years after the close-out of the Program.

D. RECORDS AND RECORDS RETENTION

1. Subrecipient shall be responsible for maintaining records, in accordance with N.J.A.C. 17:44-2.2(b), 2 CFR 200.333, 24 CFR 570.506 and 570.502. Records shall be maintained for the longer of:
 - (a) a period of three (3) years from submission of the final expenditure report for the Rebuild by Design Program; and
 - (b) a period of five (5) years from the date of final payment.
2. If any litigation, claim, or audit pertaining to the Agreement has been started before the expiration of the five-year record retention period, records must be retained until completion of the action and resolution of all issues which arise from it, or until the end of the required five-year period, whichever is later.
3. Subrecipient shall provide the State and HUD, including their representatives or agents, access to and the right to examine all records, books, papers, or documents related to the Agreement and the use of CDBG funds.

E. FEDERAL LABOR STANDARDS: *To the extent applicable, Subrecipient shall comply with Federal Labor Standards, including:*

1. Section 110 of the Housing and Community Development Act of 1974, 42 U.S.C. §5310, 24 CFR §570.603 and HUD Handbook 1344.1 Federal Labor Standards Requirements in Housing and Urban Development Programs, as revised, which require that all laborers and mechanics (as defined at 29 CFR §5.2) employed by Subrecipient (including its contractors/consultants) in connection with construction contracts over \$2,000, are paid wages at rates not less than those prevailing on similar construction in the locality as per the Davis-Bacon Act (40 U.S.C. §3141 *et seq.*), as amended; except that these requirements do not apply to the rehabilitation of residential property if such property contains less than 8 units;
2. The Contract Work Hours and Safety Standards Act (40 U.S.C. 3701 *et seq.*), requiring that mechanics and laborers (including watchmen and guards) employed on federally assisted contracts of \$100,000 or greater be paid wages of not less than one and one-half times their basic wage rates for all hours worked in excess of forty in a work-week, and projects must comply with safety standards;
3. The Federal Fair Labor Standards Act (29 U.S.C. 201 *et seq.*), requiring that covered nonexempt employees be paid at least the minimum prescribed wage, and also that they be paid one and one-half times their basic wage rate for all hours worked in excess of the prescribed work-week;
4. The Copeland “Anti-Kickback” Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR part 3) (which apply to contracts and subcontracts for construction, prosecution, completion, or repair of public buildings, public works or buildings or works financed in whole or in part by Federal loans or grants and require payment of wages once a week and allows only permissible payroll deductions);
5. Department of Labor regulations in parallel with HUD requirements above:
 - a. 29 CFR part 1: Procedures for Predetermination of Wage Rates.

- b. 29 CFR part 5: Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction (Also, Labor Standards Provisions Applicable to Non-Construction Contracts Subject to the Contract Work Hours and Safety Standards Act).
- c. 29 CFR part 6: Rules of Practice for Administrative Proceedings Enforcing Labor Standards In Federal and Federally Assisted Construction Contracts and Federal Service Contracts.
- d. 29 CFR part 7: Practice Before the Administrative Review Board With Regard to Federal and Federally Assisted Construction Contracts.

F. SECTION 3 REQUIREMENTS

1. *To the extent applicable, Subrecipient shall comply with Section 3 of the Housing and Urban Development Act of 1968, as amended (“Section 3”). Section 3 is intended to encourage recipients of HUD funding to direct new employment, training, and contracting opportunities to the greatest extent feasible to low- and very low-income persons, and to businesses that employ these persons, within their community. Section 3 applies to grantees and subrecipients that receive assistance exceeding \$200,000 in certain types of HUD funding, including CDBG funding, and to contractors and subcontractors that enter into contracts in excess of \$100,000 funded by certain types of HUD funding, including CDBG funds, for any activity that involves housing construction, rehabilitation, and demolition, or other public construction. A guide to Section 3 applicability and compliance requirements is located at HUD’s http://portal.hud.gov/hudportal/HUD?src=/program_offices/fair_housing_equal_opp/section3/section3, under Frequently Asked Questions (FAQs).*
2. **Pursuant to 24 CFR 135.38, the following language shall be included in all contracts and subcontracts:**
 - a. *The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.*
 - b. *The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with 24 CFR part 135.*
 - c. *The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and shall post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.*

- d. *The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor shall not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.*
- e. *The contractor shall certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.*
- f. *Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.*
- g. *With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).*

G. FAIR HOUSING AND NON-DISCRIMINATION

- 1. *To the extent applicable, Subrecipient shall comply with the following fair housing and non-discrimination laws. Any act of unlawful discrimination committed by Subrecipient or failure to comply with applicable laws shall be grounds for termination of the Contract.*
 - a. *Title VI of the Civil Rights Act of 1964 and as amended in 1988, 42 U.S.C. §200d et seq., as amended, and the regulations issued pursuant thereto (24 CFR 1), which provide that no person in the United States shall on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which it receives federal financial assistance and shall immediately take any measures necessary to effectuate this assurance. If any real property or structure thereon is provided or improved with the aid of federal financial assistance extended to it this assurance shall obligate it , or in the case of any transfer of such property, and transferee, for the period during which the property or structure is used for another purpose involving the provision of similar services or benefits.*
 - b. *Fair Housing Act (Title VIII of the Civil Rights Act of 1968, as amended, 42 U.S.C. 3601–3619), which requires administering all programs and activities relating to housing and community development in a manner to affirmatively further fair housing. Title VIII further prohibits discrimination against any person in the sale or rental of housing, or the provision of brokerage services, including in any way making unavailable or denying a dwelling to any person, because of race, color, religion, sex, national origin, handicap or familial status.*
 - c. *Title II of the Civil Rights Act of 1968 (25 U.S.C. 1301-1303), which prohibits discrimination because of race, color, religion, or natural origin in certain places of public accommodation.*

- d. Architectural Barriers Act (ABA) of 1968, 42 U.S.C. 4151 *et seq.* The ABA requires access to buildings designed, built, altered, or leased by or on behalf of the federal government or with loans or grants, in whole or in part, from the federal government. As used in the ABA, the term “building” does not include privately owned residential structures not leased by the government for subsidized housing programs.
- e. Title IX of the Education Amendments Act of 1972, 20 U.S.C. 1681 *et seq.*, which prohibits discrimination on the basis of sex in any federally funded education program or activity.
- f. Section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. 794, which provides that no otherwise qualified individual shall, solely by reason of his or her handicap be excluded from participation, denied program benefits or subjected to discrimination under any program or activity receiving federal funding assistance.
- g. Section 508 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. 794d, which requires Federal agencies to make their electronic and information technology (EIT) accessible to people with disabilities, and applies to all federal agencies when they develop, procure, maintain or use electronic and information technology.
- h. Section 109 of Title I of the Housing and Community Development Act of 1974, and the regulations issued pursuant thereto (24 CFR 570.602), which provides that no person in the United States shall, on the grounds of race, color, national origin, or sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity funded in whole or in part with funds provided under that Part. Section 109 further prohibits discrimination to an otherwise qualified individual with a handicap, as provided under Section 504 of the Rehabilitation Act of 1973, as amended, and prohibits discrimination based on age as provided under the Age Discrimination Act of 1975. The policies and procedures necessary to ensure enforcement of section 109 are codified in 24 CFR 6.
- i. Section 104(b)(2) of the Housing and Community Development Act of 1974, 42 U.S.C. 5304(b), which requires communities receiving community development block grants to certify that the grantee is in compliance with various specified requirements.
- j. Age Discrimination Act of 1975, 42 U.S.C. 6101 *et seq.*, which prohibits discrimination on the basis of age in programs and activities receiving federal financial assistance.
- k. Title II of the Americans with Disabilities Act of 1990, 42 U.S.C. 12131 *et seq.*, which prohibits discrimination against people with disabilities by public entities, which includes any state or local government and any of its departments, agencies or other instrumentalities.
- l. Housing for Older Persons Act of 1995 (“HOPA”) (42 U.S.C. 3607), which governs housing developments that qualify as housing for persons age 55 or older
- m. Accessibility requirements contained in Title III of the Americans with Disabilities Act of 1990 (42 U.S.C. 12181 *et seq.*).
- n. Executive Order 11063: Equal Opportunity in Housing, November 20, 1962, as amended by Executive Order 12259, and the regulations issued pursuant thereto, which pertains to equal opportunity in housing and non-discrimination in the sale or rental of housing built with federal assistance.
- o. Executive Order 11246 (Johnson), September 24, 1965, as amended by Executive Order 11375 (Johnson), October 13, 1967, as amended by Executive Order 13672 (Obama), July 21, 2014, which prohibit discrimination in employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. Further contractors and subcontractors on federal and federally assisted construction contracts shall take affirmative action to insure that equal opportunity is provided in all aspects of their employment, including, but not limited to: employment, upgrading, demotion, or transfer; recruitment or

- recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training and apprenticeship.
- p. Executive Order 12086: Consolidation of contract compliance functions for equal employment opportunity, October 5, 1978.
 - q. Executive Order 12892: Leadership and Coordination of Fair Housing in Federal Programs: Affirmatively Furthering Fair Housing, January 17, 1994.
 - r. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994.
 - s. Executive Order 13166: Improving Access to Services for Persons with Limited English Proficiency (LEP), August 11, 2000; and Federal Register Notice FR-4878-N-02 (available online at <http://www.gpo.gov/fdsys/pkg/FR-2007-01-22/pdf/07-217.pdf>), which require recipients of federal financial assistance to ensure meaningful access to programs and activities by LEP persons. (The State's Language Access Plan (LAP) is available online at http://www.renewjerseystronger.org/wp-content/uploads/2014/08/NJ-DCA-LAP_Version-1.0_2015.01.14-for-RenewJerseyStronger.pdf.)
 - t. Executive Order 13217: Community-Based Alternatives for Individuals with Disabilities, June 19, 2001.
 - u. Executive Order 13330: Human Service Transportation Coordination, February 24, 2004.
 - v. Implementing regulations for the above:
 - i. 24 CFR part 1: Nondiscrimination in Federally Assisted Programs of HUD.
 - ii. 24 CFR part 3: Nondiscrimination on the Basis of Sex in Education Programs or Activities receiving Federal Financial Assistance.
 - iii. 24 CFR 5.105: Other Federal Requirements.
 - iv. 24 CFR 6: Nondiscrimination in Programs, Activities Receiving Assistance under Title I of the Housing and Development Act of 1974.
 - v. 24 CFR part 8: Nondiscrimination Based on Handicap in Federally Assisted Programs and Activities of the Department of Housing and Urban Development.
 - vi. 24 CFR 50.4(l) and 58.5 (j): Environmental Justice.
 - vii. 24 CFR 91.225(a)(1): Affirmatively Furthering Fair Housing.
 - viii. 24 CFR 91.325(a)(1): Affirmatively Furthering Fair Housing.
 - ix. 24 CFR 91.325(b)(5): Compliance with Anti-discrimination laws.
 - x. 24 CFR 91.520: Performance Reports.
 - xi. 24 CFR part 100 - part 125: Fair Housing.
 - xii. 24 CFR part 107: Non-discrimination and Equal Opportunity in Housing under Executive Order 11063 (State Community Development Block Grant Grantees).
 - xiii. 24 CFR part 121: Collection of Data.
 - xiv. 24 CFR part 135: Economic Opportunities for Low- and Very Low-Income Persons.
 - xv. 24 CFR part 146: Non-discrimination on the Basis of Age in HUD Programs or Activities Receiving Federal Financial Assistance.
 - xvi. 24 CFR 570.206(c): Fair Housing Activities.
 - xvii. 24 CFR 570.487(b): Affirmatively Furthering Fair Housing.
 - xviii. 24 CFR 570.487(e): Architectural Barriers Act and Americans with Disabilities Act (State Community Development Block Grant Grantees).
 - xix. 24 CFR 570.490(a)-(b): Recordkeeping requirements.
 - xx. 24 CFR 570.491: Performance Reviews and Audits.
 - xxi. 24 CFR 570.495(b): HCDA Section 109 nondiscrimination.
 - xxii. 24 CFR 570.506(g): Fair Housing and equal opportunity records.
 - xxiii. 24 CFR 570.601: Affirmatively Further Fair Housing.
 - xxiv. 24 CFR 570.608 and Part 35: Lead-Based Paint.
 - xxv. 24 CFR 570.614: Architectural Barriers Act and Americans with Disabilities Act.
 - xxvi. 24 CFR 570.904: Equal Opportunity and Fair Housing Review

H. CONTRACTING WITH SMALL AND MINORITY- AND WOMEN-OWNED BUSINESSES, VETERAN-OWNED BUSINESSES, AND LABOR SURPLUS AREA FIRMS

1. Subrecipient shall take all necessary affirmative steps to ensure contracting opportunities are provided to small business concerns, minority businesses, woman businesses, veteran-owned businesses, and labor surplus area firms. As used in this contract, the terms “small business concern” means a business that meets the criteria set forth in section 3(a) of the Small Business Act, as amended (15 U.S.C. 632), and “minority business” and “women’s business” means a business that is at least fifty-one percent (51%) owned and controlled by minority group members or women. For purposes of this definition, “minority group members” are African-Americans, Spanish-speaking, Spanish surnamed or Spanish-heritage Americans, Asian-Americans, and Native Americans. Subrecipient may rely on written representations by businesses regarding their status as minority and women businesses in lieu of an independent investigation.
2. Affirmative steps shall include:
 - a. Placing qualified small and disadvantaged businesses, minority firms, veteran- and women-owned businesses on solicitation lists;
 - b. Ensuring that small and disadvantaged businesses, minority firms, veteran- and women-owned businesses are solicited whenever they are potential sources, for goods and/or services required in furtherance of Sandy recovery programs;
 - c. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and disadvantaged businesses, minority firms, veteran- and women-owned businesses;
 - d. Establishing delivery schedules, where the requirement permits, which encourage participation by small and disadvantaged businesses, minority firms, veteran- and women-owned businesses; and
 - e. Using the service and assistance of the Small Business Administration, and the Minority Business Development Agency of the U.S. Department of Commerce.

I. ENVIRONMENTAL REGULATORY COMPLIANCE

To the extent applicable, Subrecipient must comply with HUD regulations found at 24 CFR Parts 50 & 58, implementing the National Environmental Policy Act (“NEPA”), 42 U.S.C. §4321 *et seq.*, and other Federal environmental requirements, including but not limited to:

1. Floodplain management and wetland protection:
 - a. Executive Order 11990, Protection of Wetlands (May 24, 1977) (42 FR 26961), 3 CFR, 1977 Comp., p. 121, as interpreted by HUD regulations at 24 CFR 55, particularly sections 2 and 5 of the order;
 - b. Executive Order 11988, Floodplain Management, May 24, 1977 (42 FR 26951), 3 CFR, 1977 Comp., p. 117, as interpreted in HUD regulations at 24 CFR part 55, particularly section 2(a) of the order;
2. The Coastal Zone Management Act of 1972 (16 U.S.C. § 1451 *et seq.*), as amended, particularly sections 307(c) and (d) (16 U.S.C. §§1456(c) and(d));

3. In relation to water quality:
 - a. Executive Order 12088, as amended by Executive Order 12580, relating to the prevention, control and abatement of water pollution;
 - b. The Safe Drinking Water Act of 1974 (42 U.S.C. §§ 201, 300(f) et seq. and U.S.C. §349), as amended, particularly Section 1424(e) (42 U.S.C. §§ 300h-303(e)), which is intended to protect underground sources of water. No commitment for federal financial assistance can be entered into for any project which the U.S. Environmental Protection Agency (“EPA”) determines may contaminate an aquifer which is the sole or principal drinking water source for an area (40 CFR 149); and
 - c. The Federal Water Pollution Control Act of 1972, as amended, including the Clean Water Act of 1977, Public Law 92-212 (33 U.S.C. §1251, et seq.) which provides for the restoration and maintenance of the chemical, physical and biological integrity of the nation’s water.
4. Endangered Species Act of 1973 (16 U.S.C. §1531 et seq.), as amended, particularly section 7 (16 U.S.C. §1536);
5. The Fish and Wildlife Coordination Act of 1958, as amended;
6. Wild and Scenic Rivers Act of 1968 (16 U.S.C. § 1271 et seq.), particularly sections 7(b) and (c) (16 U.S.C. §1278(b) and (c));
7. Executive Order 11738, section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), and EPA regulations (40 CFR part 15) (applicable to contracts and subcontracts in excess of \$100,000);
8. The Clean Air Act of 1970 (42 U.S.C. § 7401 et seq.) as amended, particularly sections 176(c) and (d) (42 U.S.C. § 7506(c) and (d)), and 40 CFR 6, 51, 93, which prohibits engaging in, supporting in any way, providing financial assistance for, licensing or permitting, or approving any activity which does not conform to State or Federal implementation plans for national primary and secondary ambient air quality standards.
9. The Farmland Protection Policy Act of 1981, 7 U.S.C.A. §4201 et seq., particularly sections 1540(b) and 1541 (7 U.S.C. §4201(b) and §4202), and Farmland Protection Policy, 7 CFR 658, which require recipients of federal assistance to minimize the extent to which their projects contribute to the unnecessary and irreversible commitment of farmland to nonagricultural uses;
10. Noise abatement and control requirements at 24 CFR part 51 subpart B;
11. Explosive and flammable operations requirements at 24 CFR part 51 subpart C;
12. Requirements at 24 CFR 58.5(i) relating to toxic chemicals and radioactive materials;
13. Environmental Justice, Executive Order 12898—Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994 (59 FR 7629), 3 CFR, 1994 Comp. p. 859.

J. EQUAL EMPLOYMENT OPPORTUNITY

1. All federally assisted construction contracts must include the equal opportunity clause provided under 41 CFR §60-1.4(b). Federally assisted construction contracts include any agreement or modification thereof between any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the federal government.

Construction work is defined as “the construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.” 41 CFR 60-1.3.

2. Pursuant to 41 CFR §60-1.4(b), the following language shall be included in all federally assisted construction contracts and subcontracts:

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other Agreement or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontractor purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontractor purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.