

PROJECT PHASE SUBMISSION REQUIREMENTS GUIDELINES

Capital Projects Division
Design Department

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INTENT OF THE REQUIREMENTS

Intent of the Requirements

The submission requirements outlined in this document provide direction on the technical requirements for design submissions as required in the Agreement. The submission requirements are to be viewed as the minimum information to be presented during the submission of each phase of the design. These requirements are not intended to be all-inclusive. The Design Professional shall use their best judgment in including additional information to support the design at each phase. During the review of the submission for each design phase, the New York City Housing Authority (NYCHA) will utilize these requirements as one of the basis for approving the submission for review, or rejecting the submission and requiring a resubmission.

Use of the Requirements

The Design Professional shall review the submission requirements when planning their internal project work schedules and fees such that the necessary resources are allocated and available for each submission. This includes providing direction to and coordination with all sub consultants, testing and investigation firms, specialty consultants as well as regulatory agencies. These submission requirements shall be provided to all applicable sub consultants and project design team members for their information and use.

The deliverables for each phase are defined by discipline specific requirements. The submission schedule as outlined in the base contract is:

- Predesign with Site Survey & Existing Conditions Report
- Schematic Design Documents
- Design Development
- 50% Contract Documents
- 75% Contract Documents
- 90% Contract Documents
- 100% Contract Documents
- Final Contract Documents

NYCHA will specify the design phase submission schedule that is appropriate for each project. The submission schedule for smaller, less complex projects may require fewer submissions. If a submission schedule with fewer phases is specified, each submission shall contain all information required for that phase plus all information required for any earlier phases not specifically included in the submissions schedule. Large, very complex projects may include additional phases and/or submissions as specified by NYCHA on a project basis.

Not all requirements apply to every project. It is the Design Professional's responsibility to use their professional judgment to determine which of the

requirements are applicable to the scope-of-work. Requirements or disciplines that do not apply to the scope-of-work of a specific project shall be omitted. Submission requirements shall not be modified without written approval from NYCHA.

DOCUMENT DELIVERABLES BY PHASES

1. **Site Survey and Existing Conditions Report**

- a) Site Survey;
- b) Existing Conditions Report;
- c) Photographs; and
- d) Design Progress Meeting Minutes.
- e) Preliminary Cost Estimates
- f) Recommendations

2. **Schematic Design Documents**

- a) Completion of Schematic Design Drawings;
- b) Outline Specifications in C.S.I. Format;
- c) Drawing Index;
- d) Revised Preliminary Cost Estimates; and
- e) Design Progress Meeting Minutes.

3. **Design Development**

- a) Completion of Design Development Drawings and Specifications;
and
- b) Design Progress Meeting Minutes.

4. **Contract Documents**

- a) 50% Completion of Contract Documents with Specifications & signed and sealed filing sets for all applicable regulatory agencies;
- b) 75% Completion of Contract Documents with Specifications;
- c) 90% Completion of Contract Documents, Specifications, and all design calculations;
- d) 100% Contract Documents with Specifications and Rendering or Model;
- e) Final Contract Documents with Final Specifications and Reconciled Cost Estimates;
- f) Approved DOB and/or other Agency documents; and
- g) Design Progress Meeting Minutes.

5. **Bid and Award**

- a) Bid analysis;
- b) Prepare Addenda as required;
- c) Revised Cost Estimates; and
- d) Meeting Minutes.

6. **Services during Construction**

- a) Review & Approve Contractor Submittals
- b) Meeting Minutes and Field Observation Reports during construction;

- c) Respond to Requests for Information as required;
- d) Prepare Bulletins as required;
- e) Punch List preparation; and
- f) All other services required during construction.

7 Services upon Completion of Construction

- a) Meeting Minutes and Field Inspection Reports after construction;
- b) Sign-off letter(s);
- c) Conformed As-Built Drawings/Project Record Drawings; and
- d) All other services required during construction.

Contract Documents

The Design Professional shall provide hard and soft copies of the contract document submissions to NYCHA at each phase as specified in the base contract or as revised by the project specific Task Order Assignment. The Design Professional is also responsible for the assembly of the bidding documents. The bidding documents consist of the contract book which includes the final contract specifications, and the final contract drawings inclusive of HAZMAT and Site Safety Program Templates. Prior to submitting the bidding documents to NYCHA, the Design Professional shall make sure that the bidding documents are complete and suitable for bidding. The Design Professional shall ensure that all applicable HUD and NYCHA Front End documents have been edited and included, that the applicable New York State Department of Labor Wage Rates are included as well as the Notice to Bidders. The project specific Tables of Contents are attached in Appendix ##. The bidding documents must be signed and sealed prior to submission to NYCHA. In addition to the number of hard copies specified in the base contract the Design Professional shall provide an electronic submission to NYCHA in the following formats:

Contract book: PDF

Drawings: PDF and applicable CAD file format (Micro Station, ACAD, etc.)
conforming to NYC DOB Drawing Standards for Plan/Work
Applications.

Note that electronic documents must also be signed and sealed by the Design Professional.

Signing and Sealing of Documents

The Design Professional shall sign and seal the construction documents (Final Submission) submitted to NYCHA. Each drawing shall be stamped with such seal and shall also be signed on the original with the personal signature of such Design Professional. The contract book cover shall also bear the signature and seal of the Design Professional. The Design Professional shall also sign and seal the bidding documents.

For licensed architects, the professional shall also stamp the documents with the following:

“It is a violation of the law for any person, unless acting under the direction of a licensed architect, to alter an item in any way. If an item bearing the seal of an architect is altered, the altering architect shall affix to their item the seal and the notation "altered by" followed by their signature and the date of such alteration, and a specific description of the alteration.”

For licensed professional engineers, the professional shall also stamp the documents with the following:

“It is a violation of this law for any person to alter a document in any way, unless acting under the direction of a licensed professional engineer. If a document bearing the seal of an engineer is altered, the altering engineer shall affix to the document their seal and the notation "altered by" followed by their signature and the date of such alteration, and a specific description of the alteration.”

PREDESIGN WITH SITE SURVEY & EXISTING CONDITIONS REPORT

The Consultant may be directed to perform Pre-Schematic Design work if further investigation is necessary in order to clarify the design goals or project scope. This may include an existing conditions survey and documentation, including any HAZMAT Conditions, programming, basic sustainable design strategy, or master planning. When Pre-Schematic Design services are requested in the Task Order, the Consultant shall evaluate the program, the existing conditions, and the design parameters and produce studies, drawings, or reports as needed. Probes shall be carried out as needed and paid for from allowances. If they are to be carried out by NYCHA Operations a Testing Request Form shall be submitted. Studies shall be accompanied by associated cost estimates. The ultimate goal of Pre-Schematic Design is to establish a defined scope of work and/or program acceptable to all stakeholders in order to move smoothly into Schematic Design without ambiguity related to the basis of design.

Submittal Requirements for All Disciplines

1. Narrative (Site survey and Existing Conditions Report)

- a) Provide a written description of the overall scope and extent of the project. This document shall be agreed to and signed off by all stakeholders before proceeding to the next design phase.
- b) General description of project indicating project goals, use, architectural concept, conformance to requirements, zoning, lot coverage, codes followed, and material and methods of construction.
- c) Include general descriptions of all major building components and systems to be incorporated into the project as defined in each specific discipline section.
- d) Include a current list of all outstanding Department of Buildings violations.
- e) Include a brief description of the existing conditions of building components including but not limited to the various electrical, mechanical, fire protection and plumbing systems serving the building. Include the existing capacity of the mechanical systems and current, existing electrical demand for the building.
- f) Existing problems experienced with the operation of the facility.
- g) Provide photographs to illustrate existing conditions.
- h) Summary of the extent of all required remedial work as well as the nature and extent of any particular deficiencies or violations that exist.

- i) Identify any possible issues which may require further investigations via probes, tests, sampling, and any other means to determine extent of deficiencies and associated scope of work.
- j) The Summary of Work shall be identified in this phase and used as an outline specification for further development in the ongoing project development.

2. Codes, Standards, Ordinances, and References

- a) Code analysis for major requirements must be complete, including a description of significant issues to be addressed and proposed solutions.
- b) List of Applicable Codes and Standards:
 - i. Provide a detailed listing of all current, applicable codes, design guidelines, national standards, New York State (NYS) Department of Health (DOH) standards, OSHA standards, EPA standards, DOB guidelines, NYCECC, NYCBC, ASHRAE 90.1, NYSECC, and/or local laws rules and regulations impacting the design. Include title, year and publishing organization for each Code/Standard indicated. (e.g. NFPA 101-Life Safety Code - National Fire Protection Association).
- c) Code Compliance Summary:
 - i. Provide a written summary of the code analysis for each applicable code or standard.
 - ii. Provide information such as: occupancy classification (include primary and incidental occupancies), construction classification, seismic design category, seismic bracing requirements, fire protection requirements and systems, egress, exiting and separation requirements, etc.
 - iii. Energy Code Analysis:
 - Provide a preliminary energy analysis and narrative of building envelope system demonstrating a pathway to be followed to achieve compliance with the current edition of the New York City Energy Conservation Code.
 - Minimum submission to include a listing of applicable thermal performance criteria and a statement of the anticipated compliance path whether it is ASHRAE / IESNA 90.1 or the prescriptive requirements of Chapter 4 for residential buildings or Chapter 5 for commercial buildings.
- d) Provide any variance request information made to all authorities having jurisdiction, as applicable to the project.

- e) Demonstrate compliance with the Americans with Disabilities Act (ADA) and all applicable accessibility standards and requirements.
- f) For projects subject to Building Commissioning. Commissioning shall be delivered per NYCHA's Building Commissioning Guidelines. NYCHA's Building Commissioning Guidelines reference the Green Building Tax Credit, 6NYCRR Part 638, and Section 638.8-Commissioning.
- g) For projects that require New York City (NYC) filing and permits, consult with NYCHA design phase manager to determine additional required documents to be submitted for this phase.
- h) Department of Buildings violations:
 - i. Include a list of all DOB outstanding violations, the work required to remove the violations, including the cost. The cost is to be included in the cost estimate as a separate item.

3. SCOPE OF WORK AND ESTIMATE OF PROBABLE COSTS

- a) The cost estimator shall prepare a scope of work and estimate of probable costs based upon required building upgrades and achievable funded improvements.

SCHEMATIC DESIGN DOCUMENTS

In the Schematic Design Phase, the Consultant shall investigate issues and evaluate options for meeting NYCHA's programmatic needs that addresses site conditions, context, regulatory requirements, sustainability targets, and budgetary constraints. The goal of this phase is to establish a strong design direction, achieve consensus on site planning and operational issues. Clear and comprehensive approaches towards sustainability and energy code compliance, and Active Design must be identified.

The Consultant begins the design process by investigating existing conditions, identifying opportunities and constraints in the scope of work, and establishing design parameters in dialog with NYCHA. By the mid-point of the phase, the Consultant shall present no fewer than two concept options, or as many as may be required to fully explore applicable design alternatives. The Consultant shall lead a presentation of these options for the stakeholders, from which a general consensus toward a preferred scheme shall emerge. The preferred scheme shall then be developed more fully for the final Schematic Design submission. All investigations recommended in the previous phase are to be performed and the results are to be analyzed during this phase.

Submittal Requirements for All Disciplines

1. Drawings

- a) Specific for each discipline, as applicable; a list of the drawings, general notes, abbreviations, legends, key notes, symbol keys, key plans, column lines, north arrow, coordinated backgrounds.
- b) Energy Code compliant drawings including a tabulated energy analysis.
- c) Flood zone information as required by DOB.
- d) The cover sheet and all typical drawings shall include the following: NYCHA name, address and logo, consultant name(s) and address, project location, project title, project number, sheet name, sheet number, sheet date, drawing scale, graphic scale, revision block and block for seal and signature.
- e) Checked for spelling, grammatical and typographical errors, coordinated with respect to reference symbols, notes, abbreviations, specification sections, schedules and other disciplines.
- f) All drawings shall indicate the scale to which they are drawn and shall be appropriate for the specific item being represented.
- g) The preferred size drawing sheet is 22" h x 34" w, unless

otherwise approved by NYCHA.

- h) The drawings shall be appropriately coordinated with all disciplines.
- i) The drawings shall incorporate all aspects of all latest governing local laws of the city of New York (as applicable).
- j) The drawings must conform to NYC DOB Drawing Standards for Plan/Work Applications.

2. Technical Specifications

- a) Prepare an 'Outline Specification' consistent with the documents that generally reflect the materials and systems from the project.
- b) The specifications shall follow the CSI format. It is recommended that all specifications be produced in BSD Speclink software or the latest NYCHA specification software.
- c) Include a complete, project specific Table of Contents listing all applicable sections.
- d) For unit price contracts, the unit price assembly section of the specifications shall contain a detailed description of work included with each assembly.
- e) Include a preliminary list of drawings.
- f) Any component of a system that is proposed to be provided on a proprietary, single-source, or sole-source basis, shall be reviewed with NYCHA. The Design Professional shall submit all required justifications and documentation.

3 Additional Requirements

- a) NYCHA Design Standards shall be included as appropriate. These items include but are not limited to:
 - i. Compactor Stacks
 - ii. Sidewalk Sheds and Fencing
 - iii. Exterior Site Lighting
 - iv. Roofing
 - v. Roof Railings
 - vi. Boiler Replacements
 - vii. Etc.
- b) Preliminary Cost Estimate.
- c) All specific discipline requirements for the Schematic Design Phase.
- d) Document review comments and responses.
- e) Value engineering suggestions, with recommendations including life cycle costs to determine approaches of best value to the client

HAZMAT / Environmental

Include all approved items listed in the Schematic Design Phase Submittal Requirements for All Disciplines.

1. Narrative

- a) In accordance with regulatory agencies (USEPA, NYSDOL and NYCDEP), identify all existing environmental conditions and hazardous materials including, but not limited to, asbestos containing materials (ACM), lead based paint (consult NYCHA staff), PCB's, mold contaminated building materials, etc.
- b) Identify known and suspected underground storage tanks (consult NYCHA staff), contents, their size and approximate depth below grade, integrity or spill data, and registration status.
- c) Other subsurface contamination known or suspected to be present.
- d) Identify the testing previously conducted to verify these materials (including asbestos).
- e) Description of all proposed remedial actions to be taken as part of this project.
- f) List of all variances and permits required to perform the work.
- g) Description of other environmental considerations including air emissions, ground water, waste water and storm water discharges, solid, hazardous or universal waste expected.
- h) Discuss disturbances of wetlands or natural resources that may require agency approvals.
- i) Provide a hazard assessment of environmental issues affecting the project, including SEQR impacts from SEQR information available from NYCHA.
- j) The report shall include the following:
 - i. Services: A description of the services provided.
 - ii. Inventory: An inventory of environmental hazards, conditions, and materials.
 - iii. Quantities: Identify the quantities of environmental hazards, conditions, and materials.
 - iv. Drawings & Diagrams: Provide as applicable to indicate materials and sample locations.
 - v. Remedial actions: A description of proposed remedial actions, including additional testing or borings that may be needed to evaluate the hazards.

- vi. Permits and approvals: A list of the environmental permits such as air emission, wastewater discharge or tank registrations expected to be required.
- vii. Estimates: Cost estimates of proposed remedial actions.
- viii. Appendices: Provide analytical reports, boring logs, Phase I/ Phase II reports or Environmental Assessment Forms (EAFs); SEQR summary documents such as Negative Declarations, Cultural Resource assessments or Findings Statements; NYC Documents such as the ULURP or BSA permits or variances; and analytical data including, chains of custody, laboratory certifications, etc. used in the report preparation.

2. Drawings shall indicate all sample/test locations.

3. Technical Specifications: See Requirements for All Disciplines section.

Demolition

Include all approved items listed in the Schematic Design Phase Submittal Requirements for All Disciplines.

1. Narrative

- a) Description of the demolition scope of work, including all disciplines as may be applicable on drawings and specifications.
- b) List of items to be salvaged, turned over to the facility, or removed by others.
- c) Description of unacceptable means of demolition (blasting, jack hammers) and disposal.

2 Drawings

- a) Indicate the scope of all demolition work for the project, including site demolition and any other discipline, as applicable, unless incorporated into other drawings.

3. Technical Specifications

- a) See Requirements for All Disciplines section.

Architectural

Include all approved items listed in the Schematic Design Phase Submittal Requirements for All Disciplines.

1. Drawings

- a) Location Plan showing the project location at a minimum scale of $1/8'' = 1'-0''$.
- b) Provide an architectural site plan at a scale to fit on the standard drawing sheet which shall include all architectural site components e.g. building identifications, building entrances and exits, sidewalks and walkways, parking, service areas, and all other site components which will illustrate relationship of components.
- c) Floor Plans ($1/8'' = 1'$ scale minimum, unless otherwise approved by NYCHA) – shall include all required spaces, doors, windows, stairs, square footage, planned occupancies, elevators, exits, and major items of fixed equipment, and illustrating reasonable compatibility with routings of mechanical and electrical services. Provide overall dimensions and dimensions of major components. For new buildings and major renovations, provide grid lines identified by letter in the horizontal direction and numerals vertically.
- d) Roof plan(s) indicating the approximate location of all equipment and accessories. Show roof drainage system and roof slopes.
- e) Program space numbers shall be used to identify programmed spaces. Programmed and actual areas shall be indicated on the plans.
- f) Building Sections ($1/8'' = 1'$ scale minimum) - shall include major cuts in two directions for all structures with basic vertical dimensions. Include key dimensions and material indications.
- g) Sections through mechanical rooms (boiler rooms, pump rooms) shall be at $1/4'' = 1'-0''$ scale minimum.
- h) Building Elevations ($1/8'' = 1'$ scale minimum) – shall include key dimensions and material indications.
- i) Existing construction and new construction shall be clearly defined by notes or legends.
- j) Indicate all accessible routes and entrances/exits.

2 Technical Specifications

See Requirements for All Disciplines section.

Structural

1. Include all items listed in the Schematic Design Phase Submittal requirements for All Disciplines.

2. Narrative

- a) Provide a written description of the basic structural systems to be used on the project (foundations, waterproofing, substructure, superstructure, lateral force resisting system, exterior cladding support, etc). Include a short description of other options that were investigated for each system and why they were not chosen. Provide enough detail to fully describe the system to an experienced engineer for review purposes.
- b) Software:
 - i. List analysis and design software that will be used on the project.
- c) Structural Loading Information (include criteria and reference source). Loads shall be per section 1603 of the Building Code and shall include the following:
 - i. Floor and roof live load.
 - ii. Wind load design data. Include basic wind speed, wind importance factor, wind exposure, the applicable internal coefficient and component and cladding design pressure.
 - iii. Snow load design data. Include ground snow load, flat roof snow load, snow exposure factor, snow load importance factor and thermal factor. Define all design intentions with respect to unbalanced loads, snow drift and sliding snow.
 - iv. Seismic design data. Include seismic importance factor, mapped spectral response accelerations, site class, spectral response coefficients, seismic design category, basic seismic force resisting system, design base shear, seismic response coefficients, response modification factor and analysis procedure used..
 - v. Machinery and equipment loads in accordance with Section 1603.3.1.
 - vi. List all load combinations that will be used and their sources.
- d) Building Performance Design Criteria:
 - i. Maximum allowable drift criteria.
 - ii. Maximum allowable floor LL deflection.

- iii. Maximum allowable roof deflection (LL, SL, ponding, etc).
- iv. Floor flatness and levelness numbers.
- v. Maximum allowable vertical and horizontal deflection for members supporting exterior cladding and materials.
- vi. Floor vibration criteria.
- vii. Floor beam cambering or shoring requirements.
- e) **Geotechnical Design Criteria (Geotechnical Report):**
 - i. General site plan.
 - ii. Test boring location plan showing the as-drilled location of the test borings.
 - iii. Subsurface exploration logs.
 - iv. Description of the site location, topography and overall condition.
 - v. Summary of historic and relevant existing subsurface data at the site.
 - vi. Summary of the subsurface investigation and laboratory testing services performed specifically for this project.
 - vii. A description of the subsurface conditions, including the depth to groundwater and bedrock and a discussion on evidence of contamination or historic fills identified in the test borings.
 - viii. Seismic site classification.
 - ix. The results of laboratory tests performed, as applicable.
 - x. Assessment of the liquefaction potential of site soils per the applicable Building Code.
 - xi. Description of foundation analyses performed and summary of shallow or deep foundation design recommendations. Provide recommendations for foundation type, relevant design criteria and allowable capacities required by the structural engineer.
 - xii. Expected total and differential settlement for the foundation systems analyzed.
 - xiii. Parameters required for the design of below grade basement and retaining walls, including seismic lateral earth pressures where required.
 - xiv. Floor slab design recommendations.
 - xv. Recommendations for waterproofing, damp proofing, footing and floor slab underdrains, if required.
 - xvi. Construction considerations, including recommendations for groundwater control, excavation support, subgrade preparation and backfill materials.
 - xvii. Geotechnical considerations related to development of

- site features, including pavement, utilities, site grading (slopes) and drainage.
 - xviii. Recommendations for monitoring and protection of adjacent structures during construction.
 - xix. Maximum depth of frost penetration.
- f) Define the following parameters
- i. Active Earth Pressure /Equivalent Uniform
 - ii. Passive Earth Pressure (as applicable)
 - iii. Surcharge Coefficient
 - iv. At-Rest Earth Pressure (as applicable)
 - v. Unit Weight of Soil(s)
 - vi. Liquefaction Susceptibility
 - vii. Soil Classification (Basis of seismic design)
 - viii. Maximum Allowable Bearing Capacity: prefer NET
 - Shallow: Typically soil
 - a. Minimum widths for continuous and isolated spread footings
 - Deep: End Bearing, Friction, or Hybrid
 - a. Minimum Bearing Elevation
 - b. Installation tolerances: plumbness, on-center spacing, prescribed sequence, heave potential
 - c. Reinforcement requirements for CIP
 - d. Load Test Requirements
 - ix. Uplift Capacity
 - x. Lateral Resistance
- g) Material Information
- i. Concrete
 - Provide basic material properties for concrete to be used in each of the structural elements. Include compressive strength, entrained air content, maximum aggregate size, allowable w/c, unit weight or aggregate type, and anticipated admixtures.
 - Identify potential for substitution of fly ash or other suitable replacement for cement.
 - Identify concrete mixtures to be used for footings, foundations walls, slab on grade, elevated slabs, super-structure columns and beams, roof slabs.
 - Rebar – bar and welded wire fabric requirements.
 - Provide the ASTM material designation for rebar to be used. Indicate the anticipated uses and locations for special rebar types (epoxy coated, galvanized, high strength, etc).

ii. Masonry

- Provide information and ASTM International (ASTM) designations for typical masonry units to be used on the project including bricks, Concrete Masonry Units (CMU), terra cotta, Glass Fiber Reinforced Concrete (GFRC) units, autoclaved aluminum aerated concrete units, and stone.
- Provide information on the various types of mortar to be used on the project.
- Provide information on lintel materials, flashing materials and installation, ties and anchors.
- Provide information on masonry tolerances to be used on the project.
- Provide information on hot and cold weather installation techniques to be used.

iii. Steel

- Provide the ASTM material designation for the steel to be used for each of the following items: steel columns, steel beams, base plates, built-up beams or girders, steel truss chord members, lateral bracing system; Itemize by American Institute of Steel Construction (AISC) shape as applicable (W, HP, S, C, L, plate, steel pipe, round, square and rectangular HSS), including material types and sizes.
- Type of anticipated structural steel connections.
- Provide the diameter, ASTM material designation, and finish for the typical bolt assembly to be used on the project, including nuts, washers, and bolts.
- Provide a list of the locations where slip-critical bolts are anticipated.
- Provide the test method to be used to verify the bolt tension in the slip critical connections.
- Provide the anticipated type of moment connection to be used on the project.
- Provide basic information on the welding materials and processes that will be used on the project.
- Provide information on the type of base plate / anchor rod assembly. Include material type and sizes.
- Provide basic information regarding priming/painting of steel members including materials, locations, slip coefficients, etc.

iv. Steel Deck - provide basic information on the anticipated steel decking to be used, including profile and depth, ASTM

material designation, span condition, finishes and coatings, and method of attachment. Indicate if shoring will be required. Also indicate any deflection criteria.

v. Wood and Engineered Wood Products

- Indicate grade and species for all anticipated wood framing products.
- Indicate engineering design requirements for engineered wood products.
- Indicate typical spacing for framing members.
- Indicate special treatment requirements (pressure treated, fire resistive).
- Indicate requirements for wood sheet goods (oriented strand board (OSB), plywood), thicknesses, and locations for use (roof deck, floor deck, exterior sheathing).

3. Drawings

- a) Provide schematic drawing of foundation system including walls, footing, and pile locations.
- b) Provide schematic drawings for the typical steel frame layout including column, beam and girder locations: Indicate lateral bracing system on the layout.

4 Technical Specifications: See Requirements for All Disciplines section.

Mechanical

1. Include all items listed in the Schematic Design Phase Submittal Requirements for All Disciplines.

2. Narrative

- a) Provide a narrative of the scope of mechanical work including the system design intent.
- b) Include general descriptions of all major building mechanical components and systems to be incorporated into the project and why they were selected as well as the types of systems considered and reasons for selection. The recommended location for the equipment and systems. Include drawings, specifications, reports to show scope and extent of project.
- c) Identify and describe anticipated special systems such as (but not limited to):

- i. Variable frequency drives.
- ii. Emergency generators and on-site fuel backup.
- iii. Building Management System (BMS) system being proposed and tie into any existing facility BMS system.
- iv. Smoke evacuation systems.
- v. Chas system.
- d) **Mechanical Design Criteria**
 - i. When tying into existing systems:
 - ii. Verify and demonstrate that the existing systems have sufficient capacity to support the new work (heating, cooling, steam, pumping, specialty systems, etc).
 - iii. List all existing major equipment or systems to be reused or salvaged.
 - iv. System design criteria.
 - v. Complete set of preliminary heating and cooling load calculations.
 - Building square footage.
 - Heating: BTUs/Sq. Ft.
 - Cooling: Sq. Ft. per ton.
 - vi. Outside air ventilation requirements.
 - Air changes per hour in spaces requiring it such as storage spaces, electrical switch gear rooms, crawl spaces etc.
 - vii. Diversity factors used and justification.
 - viii. Safety factor(s) used.
 - ix. Equipment redundancy.
 - x. Requirements for seismic bracing including:
 - Building Occupancy Category
 - Seismic Design Category
 - Component Importance Factor
 - Systems and support/bracing requirements
 - xi. Pressure relationships.
 - xii. Sound/noise criteria for equipment.
- e) Energy conservation/efficiency opportunities.
- f) If any component of the system is proposed to be provided on a proprietary, single-source, or sole-source basis, review the requirements with the Owner and submit the required justification and documentation.
- g) For fuel burning equipment or other air emission sources, use the Air Emission Source Permits and the Boiler Permit Flow Chart; list permits and approvals required.

3. Drawings (separate ductwork and piping drawings required for boiler rooms)

- a) Ductwork floor plans for each level.
 - i. All major pieces of equipment shall be located on the floor plans, including new equipment.
 - ii. Existing services located and sized (ductwork, breechings, fans, etc.).
- b) Piping floor plans for each level.
 - i. All major pieces of equipment shall be located on the floor plans, including new equipment.
 - ii. Existing services located and sized (piping, such as water, steam, oil, gas, etc.).
- c) System Schematics and Control Diagrams.
- d) Flow Diagrams and Riser Diagrams.
- e) Equipment schedules set up.
- f) For renovation work, show existing equipment to be demolished and existing equipment to be reused.
- g) Show all temporary heating and cooling equipment including location providing utilized for uninterrupted continuation of services to the facilities.
- h) Show existing locations of chimneys, size and new liners as required by codes and local laws.

4. Technical Specifications: See Requirements for All Disciplines section.

5. For projects subject to Building Commissioning – see Commissioning requirements under Sustainable Design section. Refer to the Pre-Design Phase Commissioning Plan for confirmation of mechanical systems to be commissioned and note mechanical systems to be commissioned in the mechanical Narrative.

Electrical

1. Include all items listed in the Schematic Design Phase Submittal Requirements for All Disciplines.

2. Narrative

- a) Define the proposed electrical systems for each of the following

(as applicable, but not limited to):

- i. Electrical service and distribution.
 - ii. Emergency and standby power.
 - iii. A general description of interior and exterior lighting to be used, lighting levels, and controls.
 - iv. Requirements for seismic bracing including:
 - v. Building Occupancy Category
 - vi. Seismic Design Category
 - vii. Component Importance Factor
 - viii. Systems and support/bracing requirements
 - ix. Any special requirements for grounding.
 - x. Lightning protection (per Appendix L of NFPA 780) and transient voltage surge protection (TVSS).
 - xi. Electrical requirements for fire alarm equipment and fire pumps (NYC only), telecommunications (voice, data, and CATV) outlets, pathways, backbones, and cable types.
 - xii. Security.
 - xiii. CCTV.
 - xiv. Paging and intercommunication.
 - xv. Audiovisual.
 - xvi. Other alarm systems.
 - xvii. Electric on-site generation
 - xviii. Energy conservation/efficiency opportunities.
- b) When tying into existing systems:
- i. Verify and demonstrate that the existing systems have sufficient capacity to support the new work.
 - ii. List all existing major equipment or systems to be reused or salvaged.
 - iii. Verify the access requirements for new equipment.
- c) Determine the anticipated electrical demand for the building.
- d) Clearly describe the utility service connection points and how each service will be obtained from the electric, telephone, and CATV utilities.
- e) For projects subject to Building Commissioning – see Commissioning requirements. Refer to the Pre-Design Phase Commissioning Plan for confirmation of electrical systems to be commissioned and note electrical systems to be commissioned in the Electrical Narrative.

3. Drawings

- a) Preliminary one-line diagram for the normal and emergency power distribution systems.

- b) Floor plans showing:
 - i. Electrical, telecommunications, audiovisual, and security rooms and closets.
 - ii. Major equipment such as switchgear, switchboards, and transformers.
- c) A site plan showing (as applicable):
 - i. Utility service connection points, routing of services to the building (new and existing), and the location of major equipment such as switchgear, switchboards, transformers and standby/emergency generators.
 - ii. Site demolition.

4. Technical Specifications: See Requirements for All Disciplines section.

Plumbing

1. Include all items listed in the Schematic Design Phase Submittal Requirements for All Disciplines.

2. Narrative

- a) Plumbing design criteria.
 - i. Delineate design intent. Include all performance criteria and parameters. For example, water temperature in distribution system, fluid design velocities, etc.
 - ii. Types of systems considered and reasons for selection.
 - iii. Verify and document water pressures in building and at the site.
 - iv. Provide calculations to demonstrate proposed fixture count is Code compliant.
 - v. Provide and justify diversity factors and system redundancy for domestic water, plumbing equipment, etc.
 - vi. Safety factor(s) used.
 - vii. Requirements for seismic bracing including:
 - Building Occupancy Category
 - Seismic Design Category
 - Component Importance Factor
 - Systems and support/bracing requirements
 - viii. List fixtures and locations that will be accessible to the

disabled.

ix. When tying into existing systems:

- Verify and demonstrate that the existing systems have sufficient capacity to support the new work (sanitary, storm, vent, water, gas, fuel oil, and specialty systems capacities).
- List all existing major equipment or systems to be re-used or salvaged.

b) Identify and describe anticipated special systems such as (but not limited to):

- i. Booster pump system.
- ii. Variable frequency drives.
- iii. Emergency generators and method to comply with NFPA 37/NFPA 110.
- iv. Provision of pressure reducing station with meter on make-up line to equipment such as boilers etc.
- v. Secondary roof storm water drainage systems.
- vi. Fuel systems and equipment pressure requirements.
- vii. Hot water heaters.
- viii. Emergency fixtures.
- ix. Drainage system(s) for elevator shafts.
- x. Connections/alarms to the building management system.

c) Delineate cross connection control requirements for the project.

d) If any component of the system is proposed to be provided on a proprietary, single-source, or sole-source basis, review the requirements with the Owner and submit the required justification and documentation.

3. Drawings

a) Piping floor plans for each level.

- i. Proposed new and/or existing services (location and size).
- ii. All major pieces of equipment shall be located on the floor plans.

b) System Schematics.

c) Equipment and fixture schedules set up.

d) For renovation work, show existing equipment to be demolished and existing equipment to be reused.

e) Plumbing riser diagrams for drain, waste, vent, and storm with fixture units.

f) Site plan showing (as applicable):

- i. Incoming services, connection points, routing to the building (new and existing).

4. Technical Specifications: See Requirements for All Disciplines section.

5. For projects subject to Building Commissioning provide Pre-Design Phase Commissioning Plan for confirmation of Plumbing systems to be commissioned and note Plumbing systems to be commissioned in the Plumbing Narrative.

Fire Alarm

1. Include all items listed in the Schematic Design Phase Submittal Requirements for All Disciplines.

2. Narrative

- a) Provide fire alarm schematic design narratives describing the fire alarm systems to be incorporated into the project, including the existing system architecture and reporting points.
- b) Describe all code required fire alarm and fire/smoke detection systems and equipment.
- c) Provide a general description of the overall fire alarm system and interfaces including:
 - i. Type of system, i.e. zoned, addressable, etc., identify the New York City classification.
 - ii. Type of initiation and/or detection devices to be used and locations (including but not limited to manual pull stations, fire protection system devices, and smoke, heat, natural gas, and CO detection).
 - iii. Type of notification appliances and locations.
 - iv. Control panel, transponder, sub-panel, and remote annunciator panel locations, including fire command centers for high rise buildings.
 - v. Information concerning items such as tie-ins to existing fire alarm or building management system.
 - vi. Local fire department notification, supervising station, central station, central monitoring system connections.
 - vii. Fan shutdown.
 - viii. Elevator recall and power shunt trip (where sprinklered).

- ix. Information concerning power supply and system grounding.
- d) The following list provides an example of the systems and interfaces to be addressed along with a brief description of the information to be contained in the narrative. Please note that not all the systems will be included in every project:
 - i. Manual fire alarm systems.
 - ii. Fire/smoke detection systems.
 - iii. Emergency one and two-way voice communication systems.
 - iv. Smoke control systems.
 - v. Door access control systems.
 - vi. Suppression and extinguishing systems i.e. sprinkler systems, clean agent, kitchen hood system, etc.
- e) Existing conditions (where applicable): A description of the existing fire alarm system that will be utilized to provide service for the project. Information on existing fire alarm equipment including approval by the authority having jurisdiction of the existing equipment/system and verification of spare capacity shall be included.
- f) Identify the seismic design category and whether seismic restraints are required for the fire alarm system.
- g) If the proposed system is to be provided on a proprietary, single-source or sole-source basis, review the requirements with the Owner and submit the required justification and documentation.

3. Drawings

- a) Preliminary fire alarm riser diagram.
- b) Floor plans showing:
 - i. Electrical, telecommunications rooms and closets.
 - ii. Major equipment such as fire alarm control panels, sub-panels, transponders, etc.
- c) A site plan showing (as applicable) the location of central fire alarm monitoring stations, connection points, routing of services to the building (new and existing).
- e) For renovation work, show work required to maintain operation of existing system while under construction.

4. Technical Specifications: See Requirements for All Discipline section.

Fire Protection

1. Include all items listed in the Schematic Design Phase Submittal Requirements for All Disciplines.

2. Narrative

- a) Provide a narrative of the scope of fire protection work.
- b) Include general descriptions of all fire protection systems to be incorporated into the project.
- c) Include drawings, specifications, reports to show scope and extent of project.
- d) Identify anticipated systems (as applicable):
 - i. Sprinkler including wet and dry systems.
 - ii. Standpipe.
 - iii. Pre-action systems.
 - iv. Clean agent suppression system.
 - v. Kitchen hood suppression systems.
 - vi. Fire pumps.
 - vii. Tanks.
 - viii. Special fire protection systems.
- e) Describe all code required for fire protection systems and equipment.
- f) Identify the seismic design category and whether seismic restraints are required for the fire protection systems.
- g) Design criteria (by occupancy, density, area of application, maximum coverage etc.)

3. Drawings

- a) Piping floor plans for each level:
 - i. All risers, mains, and major pieces of equipment shall be located on the floor plans. Proposed new and/or existing services located and sized.
- b) Preliminary sprinkler and/or standpipe systems riser diagrams.
- c) Equipment and material schedules set up.
- d) For renovation work, show existing equipment to be demolished and existing equipment to be reused.
- e) A site plan showing (as applicable):
 - i. Incoming water service, connection points, routing of services to the building (new and existing).

4. Technical Specifications: See Requirements for All Disciplines section.

Site

1. Include all items listed in the Schematic Design Phase Submittal Requirements for All Disciplines.

2. Narrative

- a) Description of the site scope of work and proposed construction staging/storage areas required.
- b) General description of the site including its past and current uses, geotechnical features, site features, and current surface drainage patterns as applicable to the work to be performed. Include presence of “historic fill” and contamination sources in past and current uses, e.g. “a filling station”, “a manufactured gas site”, or naturally occurring asbestos formations.
- c) Estimated quantity for rock cuts, earth cuts, and earth fills where applicable.
- d) Descriptions for the various paving systems where applicable, noting all areas of pervious paving strategies.
- e) Existing and anticipated loads on utilities, documentation of all utility analyses performed, and documented contact with utility companies where applicable.
- f) Stormwater impacts, including methods of erosion and sediment control and post construction water quality and water quantity controls.
- g) Description of existing sewer system (separated or combined) at project.

2 Drawings

- a) Construction Site plan(s), (1" = 40' scale minimum) – including, but not limited to: construction parking locations, site security and fencing, field offices, staging/storage areas, surface drainage, emergency and firefighting equipment routes, and access routes for trucks, buses, trash compactors and haulers, barriers, gates, sign locations, and any other information as applicable to the work to be performed.
- b) Site Plan(s) (1" = 40' scale minimum) - shall include location of building or buildings in relation to the immediate area around it,

setback lines if applicable, major dimensions, all existing and/or proposed utility lines, existing and proposed grades, grade elevations, site improvements, lighting, walks, all accessible routes and entrances, roads and parking, locations of stormwater runoff and retention areas, and existing and proposed vegetation.

- c) Location of major site features including site lighting, exterior stairs, sidewalks, retaining walls, and preliminary planting types including site preparations and locations as applicable to the work to be performed.
- d) Locations and contours of the rock surface as it impacts the construction, including the type of rock where applicable.
- e) Existing grade contours and topographical survey data, surface drainage, existing paving and other features where applicable.

4. Technical Specifications: See Requirements for All Disciplines section.

Elevators

(NOTE: The SD, DD, 50% and 75% Construction Document Phases are not applicable)

DESIGN DEVELOPMENT

In the Design Development Phase, the Consultant shall continue the design process, advancing the design presented at the Schematic Design Phase. The Consultant is expected to validate, develop, and refine the project, including all design elements, building systems, materials, details, equipment, maintenance and operational requirements, and both initial and life-cycle costs.

Any open issues regarding zoning or code compliances shall be resolved during the DD phase. If determinations from DOB are required, the consultant must obtain written responses prior to final submission. The Consultant shall modify the design as required to remain within the project budget. The Consultant shall notify NYCHA if they believe that the project scope cannot be achieved within the approved budget, but this does not relieve the Consultant of their responsibility to deliver a project that adheres to the budget.

Update written description of the overall scope and extent of project to include any additional information received with respect to the project requirements. Update the summary of work in the specifications and on drawings.

Provide all required items listed in the Schematic Design Phase Submittal Requirements for All Disciplines, and each specific discipline, as applicable to the project, and not previously submitted. All required items listed in each specific discipline's Design Development Phase.

Provide written responses to all previous design review comments from NYCHA, Construction Manager, and other review entities (as applicable), along with the necessary corrections made to the contract documents. Responses shall be provided in sufficient detail for verification purposes, such as locations of revised details, specification sections, and updated drawing numbers. Generic responses such as "will comply" are not acceptable. Review comments shall be tracked in the NYCHA agreed format. See Appendix ## for sample review sheet.

At the end of the Design Development Phase, all major design decisions are final.

Submittal Requirements for All Disciplines

1. Drawings

- a) The drawings shall be appropriately advanced from the schematic design submission, show more detail, and be coordinated with all disciplines.
- b) Critical dimensions shall be shown.
- c) Specific for each discipline, as applicable; an updated list of the drawings, general notes, abbreviations, legends, key notes, symbol keys, key plans, column lines, north arrow, and coordinated backgrounds.
- d) The drawings shall incorporate all aspects of Executive Order No. 88, the New York State Green Building Construction Act and Building Commissioning as required.

2. Technical Specifications

- a) An updated Table of Contents listing all anticipated sections to be used on the project.
- b) Edited General Requirements and General Conditions.
- c) An updated scope of work description.
- d) Specification sections for all materials and systems proposed for the project.
- e) All specification sections shall be relevant to the project.
- f) Use NYCHA standard specifications where developed and where applicable to the Project. The specifications shall be modified and revised to suit the Project parameters and conditions.
- g) A listing of proposed building mock-ups that will be required to be built for approvals.
- h) All specification sections shall comply with the following:
 - i. Specifications shall be written in standard Construction Specification Institute (CSI) 50 Division three-part format:
 - Part 1 General
 - Part 2 Products
 - Part 3 Execution
 - ii. Specification sections shall have headers on each page, which includes the project title and project number and the date they were printed/revised. Comply NYCHA requirements.
 - iii. Each page shall be numbered at the bottom of the page.
 - iv. Each specification section shall have a submittal section.
 - v. Each specification section shall have a Quality Assurance section, which shall contain, (but not be limited to), the fol-

lowing:

- Information as qualifications of the material installers.
 - Test standards the products shall be manufactured to.
 - Testing requirements required by Codes.
 - Test requirements the contractor is to execute in the field.
 - Who shall witness such testing?
 - Accept/reject criteria as required for rejecting deficient work or accepting satisfactory workmanship.
- vi. When manufacturer's names are cited in the specifications, the Design Professional shall ensure that all products and manufacturers cited meet the specification, not just the manufacturer used as the basis of design.
- vii. Specification sections shall detail all source and field quality control requirements for items subject to Special Inspection, including the types of inspections and tests required, their frequency, and relevant reference standards. For project governed by the New York City Building Code, include inspection requirements for all required Progress Inspections.
- viii. Any component of a system that is proposed to be provided on a proprietary, single-source, or sole-source basis, shall be reviewed with the design phase manager. The Design Professional shall submit all required justifications and documentation.

3. Additional Requirements

- a) Codes, Standards, Ordinances, and References
- b) Energy Code Analysis; include, as applicable, square foot area totals, U-factors, R-values, and glazing shading coefficient values for each major building envelope component.
- c) Submit Statement of Special Inspections and Tests applicable to the project: New York State Building Code or New York City Building Code. For projects subject to the New York City Building Code, provide a list of all required Special and Progress Inspections on the drawings in accordance with BC 28-104.7.7.
- d) Any variances received from authorities having jurisdiction, as applicable to the project.
- e) For projects subject to Building Commissioning – see Commissioning requirements under Sustainable Design section. Commissioning shall be delivered per NYCHA's Building Commissioning Guidelines. NYCHA's Building Commissioning Guidelines reference the Green Building Tax Credit, 6NYCRR

Part 638, Section 638.8-Commissioning, and the USGBC's LEED rating system for commissioning requirements.

- f) For projects that require New York City (NYC) filing and permits, consult with NYCHA design phase manager to determine additional required documents to be submitted for this phase.
- g) Update Department of Buildings violations list
- h) Update cost estimate utilizing the latest Means Cost Estimating Workbook.
- i) Value engineering suggestions.
- j) Complete Phasing Plans (drawings) and Project Schedule.
- k) Provide an estimated construction duration including a bar chart.

HAZMAT / Environmental

1. Include all items listed in the Design Development Phase (50%) Submittal Requirements for All Disciplines.

2. Drawings

- a) Updated and developed drawings provided at SD submission.
- b) Drawings indicating scope of all environmental remedial work for the project including demolition.
- c) Floor and site plans of sufficient size and detail to indicate all locations where abatement/remediation is required including estimated area and quantity.
- d) Field conditions that may impact the project shall be shown.
- e) Building elevations, floors and sections indicating all materials to be abated/remediated, including features and dimensions.
- f) Areas of impacted soil or historic fill, as determined during geotechnical and environmental investigations such as SEQR review, or as identified at the SD design.

3. Technical Specifications

- a) Complete and edited specifications for applicable sections in 50 Division CSI format, with applicable section numbers.
- b) Use the NYCHA standard asbestos abatement, lead/ PCB abatement and other environmental remediation specifications. The specification shall be modified and revised to suit the project parameters and conditions.
- c) Additions to the "Scope of Work" and "Special Job Conditions" sections of the standard asbestos abatement and environmental remediation specifications.

- d) Provide all proposed NYCDEP asbestos abatement variances to be obtained by the Environmental Consultant for review
- e). Coordination and sequencing of environmental activities with demolition and other construction activities
- f). Waste transporters permits (NYSDEC and DOT) and handling license (NYSDOL)
- g) Disposal facility permits and transporter permits for wastes identified at the SD submission
- h) Permit Applications for petroleum or hazardous material storage tanks, air emission sources, wastewater discharges or other approvals identified at the SD submission
- i) Provide authorization requests for stream or wetland disturbances proposed for the project, with mitigation plans if needed
- j) Provide a list of environmentally controlled or hazardous materials to be used or applied, including but not limited to paint and their VOC content; pesticides or biocides including coatings, coolants, lubricants and hydraulic fluids

Demolition

1. Include all items listed in the Design Development Phase Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at SD submission.
- b) Plans of all areas where demolition work is to be performed, indicating specific building and site features to be demolished, existing building and site features to remain, and all required protections.
- c) Details of existing major construction to be demolished where required delineating the scope of all demolition work.
- d) Show the extent of hazardous materials and/or asbestos-containing materials and sequencing of demolition/abatement activities.

3. Technical Specifications

- a) Technical Specifications shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.

Architectural

1. Include all items listed in the Design Development Phase Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at SD submission.
Include the Name of the Phase for SD submission.
- b) Floor plan(s) indicating the following: dimensions, structural grid system, building cores, stairs, elevators, internal partitions, doors, windows, floor slab and level elevations, built-in furniture items, partition types, door and room numbers, toilet fixtures, keyed detail areas, sections, and elevations.
- c) Roof plan(s) indicating locations of all existing and new mechanical equipment, hatches, skylights, keyed details, slope, and drainage areas.
- d) Large scale plans (1/4" scale minimum) of key areas such as lobbies, toilet facilities, public spaces, casework, elevators (including cab finishes, hoistway dimensions and door openings), mechanical(boiler) rooms, pump rooms, electrical switchgear rooms, etc. and stairs.
- e) Interior elevations of key areas such as lobbies, toilet facilities, mechanical (boiler) rooms, pump rooms, electrical switchgear rooms, etc.
- f) Reflected ceiling plans indicating ceiling types, soffits, and heights, mechanical, electrical and fire protection components, exit signs, emergency lighting, and access panels, coordinated with all disciplines.
- g) Door and room finish schedules.
- h) Elevations of all windows, doors and frames, and curtain wall/ribbon window assemblies at 1/4" scale minimum.
- i) Large scale details (3/4" scale minimum) of exterior wall sections, windows, door jambs, sills and heads, casework, roofing work, typical partition types, seismic bracing (as applicable), stairs, and railings.
- j) Identify all rated floor and wall assemblies, indicating UL system or other acceptable rating information. Coordinate and detail the wall framing for all mechanical opening protectives, (fire damper and smoke dampers). Address continuity of fire rated construction around membrane penetrations greater than 16 sq. in. such as fire hose cabinets, electrical panels, valve boxes, etc.

3. Technical Specifications shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.

4. Firestopping

- a) Indicate in the documents (firestopping specification section and drawing notes) that all perimeter fire containment systems, joint systems, and penetrations through fire rated construction must be firestopped using listed and approved firestop assemblies
- b) Provide firestopping details for unique construction or project specific conditions such as curtain wall.
- c) Reference the applicable architectural life safety drawings that clearly indicate fire rated construction. If no such drawings are to be provided, the architectural/construction drawings must clearly indicate fire rated construction.

Structural

1. Include all items listed in the Design Development Phase Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at SD submission.
- b) All structural systems need to be defined to the extent that the reviewer can fully understand the intent and can check the design.
- c) The structural load paths for the structure are completed and designed for all loads including gravity and lateral loads; soils and groundwater loads; wind, snow and seismic loads; equipment and live loads.
- d) Deep foundations are defined including:
 - i. Bearing strata is located.
 - ii. Number, size and capacity of piles or caissons.
 - iii. Pile cap sizes are determined.
- e) Foundation system is fully defined including:
 - i. Wall and slab-on-grade thickness are determined.
 - ii. Brick shelf locations are determined.
 - iii. Slab-on-grade construction is shown.
 - iv. Footing steps and elevator pits are located.

- v. Waterproofing and waterstop systems are defined and shown on the drawings.
- vi. Insulation materials are shown on the drawings.
- vii. Footing schedule is completed and shown on the drawings.
- viii. Typical footing details have been shown.
- ix. Typical pier details have been shown.
- x. Grade beams and tie beams have been sized and shown on the drawings.
- f) All building expansion joints are shown. Foundation wall and slab-on-grade construction and control joints are shown.
- g) Fire rated assemblies are determined and listed systems are shown on the drawings.
- h) Concrete superstructure is defined; all beams, columns, piers and elevated slabs are located and sizes/thickness have been determined. All reinforcing details are shown.
- i) Structural steel superstructure is defined including:
 - i. All columns and beams have been shown.
 - ii. Column sizes and orientation are shown.
 - iii. Beam sizes are shown.
 - iv. Lateral bracing system is indicated.
 - v. Design end reactions, connection moments and axial loads have been designated directly on the drawings in accordance with the AISC Code of Standard Practice.
 - vi. Column schedule is completed.
 - vii. Base plates and anchor bolts are determined and shown on the drawings.
 - viii. Steel beam camber is determined and shown on the drawings.
 - ix. Shear stud type and length has been determined.
 - x. Approximate locations and support for major mechanical equipment are shown. Identify and label equipment and machinery weights over 1000 pounds.
- j) Elevated slab-on-deck has been defined including:
 - i. Slab thickness and typical reinforcing is shown.
 - ii. Steel decking configuration, gauge, and orientation are indicated.
 - iii. Changes in top-of-slab elevation are indicated.
 - iv. Verify thickness is coordinated with Architectural fire rating requirements.
- k) Masonry systems defined including:

- i. Indicate Solid or Cavity Type Construction
 - ii. Indicate typical masonry reinforcing and spacing requirements for both load bearing and non-load bearing walls and partitions.
 - iii. Indicate masonry seismic anchorage and lateral support requirements.
 - iv. Indicate masonry bond beam requirements.
- l) Concrete repair drawings
 - i. Identify type of concrete damage and provide locations and areas of repair.
 - ii. Provide repair details
 - iii. Provide repair details steps
- m) Masonry repair drawings
 - i. Masonry repair areas are identified at all main building facades and roof top structures.
 - ii. Show all masonry repair details.
 - iii. Provide repair details steps
- n) Wood framing systems defined including:
 - i. Non typical wood framing member locations are called out (double joists, multiple wall studs or posts, etc.)
 - ii. Provide nailing and fastener schedule.
- o) Provide typical section for the project:
 - i. Floor - Typical cross sections; Spandrel sections: Parallel and perpendicular to facade
 - ii. Roof - Typical cross sections; Spandrel sections: Parallel and perpendicular to façade
 - iii. Wall - Foundation wall(s); Retaining wall(s); Load Bearing wall(s)
- p) Provide standard detail sheet(s) modified to suit the project.

3. Technical Specifications

- a) Complete and edited specifications for applicable sections in 50 Division CSI format, with applicable section numbers.
- b) Provide a Summary of Work section. Identify work under the specific contract as well as related contract work. Define items not included in the specific contract.

Mechanical

1. Include all items listed in the Design Development Phase Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at SD submission.
- b) Separate Ductwork floor plans indicating:
 - i. All ductwork, boiler breeching etc. (double line duct work and breeching)
 - ii. Registers, motorized and gravity dampers, fire dampers, smoke dampers, diffusers, grilles and louvers. Coordinate fire, smoke, and fire/smoke dampers with the life safety plan. If a life safety plan does not exist, coordinate with the rated construction.
- c) Separate Piping floor plans indicating:
 - i. All piping labeled with system type (HWS, HWR, LPS, LPC, Drain etc.) (Double line piping for pipes 6in size and above).
 - ii. All valves.
 - iii. Equipment and fixtures with labels or tags identifying each.
- d) Roof plan(s) indicating locations of all mechanical equipment, ductwork, roof drains and piping.
- e) Equipment elevations and sections indicating all materials, features and dimensions.
- f) Sections of all congested areas. Sections to show all systems/ components of all trades (e.g., interstitial ceiling space showing ceiling grid, insulated and non-insulated pipe, ductwork, sprinkler pipe, conduit, beams with fireproofing, lights, etc.).
- g) Large scale plans: (3/8" =1'-0")
 - i. Boiler rooms.
 - ii. Mechanical rooms.
 - iii. Pump Rooms.
 - iv. Steam service.
 - v. Other similar large equipment.
- h) Equipment schedules with equipment manufacturers name and model as well as sizing information listed.
- i) Detail drawings:
 - i. Details and elevations necessary to completely describe the scope of work.

- ii. Seismic anchorage and bracing requirements, based on the seismic design category of the building.
- iii. Details must be specific for project scope of work.
- iv. Complete phasing plans
- j) Large scale details for all mechanical equipment not shown in elevations or sections.
- k) Air system schematic flow diagrams, completely labeled.
- l) Duct riser diagrams.
- m) Water system/steam system schematic flow diagrams, completely.
- n) Oil system schematic flow diagrams showing all components and tanks.
- o) Anchorage and bracing requirements for distribution systems and equipment due to seismic forces.
- p) BMS points schedule.

3. Technical Specifications shall include complete and edited specifications for applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.

- a) Other
- b) Complete set of design development heating and cooling load calculations.
- c) Hydronic and air systems' pressure drop calculations.
- d) Calculations demonstrating the equipment (e.g., pumps, tanks, etc.) are appropriately sized.
- e) Calculations demonstrating adequacy of pipe expansion compensation and stress analysis.
- f) Provide catalog cuts of major equipment and manufacturer's installation instructions where appropriate.
- g) A summary of permits and approvals required for fuel burning equipment or other emission sources, as per the SD level.
- h) Boiler flue draft calculations (on drawings)

4. Firestopping

Indicate in the documents (i.e. Basic mechanical Requirements specification section and drawing notes) that all penetrations through fire rated construction shall be firestopped using listed and approved firestop assemblies.

- a) Reference the applicable architectural life safety drawings that clearly indicate fire rated construction. If no such drawings are to be provided, the fire alarm/electrical drawings must clearly indicate fire rated construction.

Electrical

1. All items listed in the Design Development Phase Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at SD submission.
- b) Electrical cover sheet with index of electrical drawings, general notes, abbreviations, and symbols legend.
- c) Floor plans indicating (as applicable):
 - i. Demolition.
 - ii. Relocation information for existing equipment and systems that are affected by the project.
 - iii. Electrical rooms and closets, indicating all proposed equipment, required clearances, and support requirements (e.g., floor, wall, or ceiling mounted).
 - iv. Telecommunications rooms and closets, indicating all proposed equipment and required clearances.
 - v. Power distribution methods and equipment, showing incoming service, switchboards, transformers, panelboards, transfer switches, generators, motor control centers, feeders, and other associated equipment.
 - vi. Elevator machine rooms, indicating receptacles, motors, disconnects and any other equipment requiring power.
 - vii. Utilization equipment, indicating receptacles, motors, starters, and any other equipment requiring power.
 - viii. Emergency distribution and equipment for lighting and power, including generators and transfer switches.
 - ix. Lighting layout, including fixture types, switching, and control equipment for both normal and emergency lighting.
 - x. Grounding and bonding.
 - xi. Lightning protection and transient voltage surge suppression (TVSS).
 - xii. Telecommunications (voice, data, and CATV) outlets, backbone, cabling, cable trays, raceways, racks, grounding and bonding.
 - xiii. Security devices and equipment.
 - xiv. Audiovisual devices and equipment.
 - xv. Intercommunication and paging devices and equipment.
 - xvi. Other alarm systems devices and equipment.
- d) Site utility plans (as applicable):

- i. Electrical service, including utility service point and routing, and the location of major equipment such as switchgear, switchboards, transformers.
 - ii. Telephone service.
 - iii. Other required services such as CATV, security, data, alarm, etc.
 - iv. Site lighting.
 - v. Site grounding.
 - vi. Installation details including manholes, vaults, handholes, ductbanks, trenching, pole bases, and other site features.
- e) Power distribution one line diagram, showing incoming service, switchboards, transformers, panelboards, transfer switches, generators, motor control centers, feeders, and other major equipment, with ratings for each (ampacity, voltage, short circuit).
- f) Riser diagrams for all special systems, identifying equipment type and location, cabling and conduit, and connections to other systems (as applicable):
 - i. Grounding and bonding.
 - ii. Telecommunications (voice, data, and CATV).
 - iii. Security.
 - iv. Audiovisual.
 - v. Intercommunications and paging.
 - vi. Other Alarms.
- g) Large scale floor plans for areas where the space for mounting of equipment is limited and interferences might occur, such as electric rooms, telecommunications rooms, and mechanical rooms. (3/8" = 1'-0" scale)
- h) Detail drawings:
 - i. Details and elevations necessary to completely describe the scope of work.
 - ii. Seismic anchorage and bracing requirements based on the seismic design category of the building.
 - iii. Details must be specific for project scope of work.
- i) Schedules:
 - i. Panel: Indicate rating for voltage, phases, ampacity, short circuit, and features such as main circuit breakers, isolated grounds, oversize neutrals, etc. Note that the branch circuiting does not need to be completed at this phase.

- ii. Load Calculation: Per the National Electrical Code Article 220, included with the panel schedules.
- iii. Lighting Fixture: Indicate type, finish, ballasts, voltage, bulbs, accessories, manufacturer and wattage (per fixture).
- iv. Equipment (e.g., kitchen): Indicate voltage, phases, ampacity, features, and accessories.

3. Technical Specifications

- a) Complete and edited specifications for applicable sections in 50 Division CSI format, with applicable section numbers.
- b) Utility Information: The name of each utility representative with contact information, and a list of applicable utility reference drawings, standards, and documents.

4. Firestopping

- a) Indicate in the documents (i.e. Basic Electrical Requirements specification section and drawing notes) that all penetrations through fire rated construction shall be firestopped using listed and approved firestop assemblies.
- b) Reference the applicable architectural life safety drawings that clearly indicate the fire rated construction. If no such drawings are to be provided, the electrical drawings must clearly indicate fire rated construction.

5. Electrical system information:

- a) Provide a copy of the load letter to the electrical utility.
- b) While a short-circuit, coordination and arc-flash hazard analysis study report is not a required submission for this phase, the design engineer shall perform a preliminary analysis of the electrical distribution system at this point (i.e. to identify any fatal flaws in the design).

Plumbing

1. Include all items listed in the Design Development Phase Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at SD submission.
- b) Piping floor plans indicating:

- i. All piping labeled with system type (HWS, HWR, CW, gas, etc.).(Double line piping for pipes 6in size and above).
 - ii. All valves.
 - iii. Equipment and fixtures with labels or tags identifying each.
- c) Coordinate penetrations with Life Safety Plan or rated construction.
- d) Roof plan(s) indicating locations of all Plumbing vent terminals. Show any roof mounted plumbing equipment and piping.
- e) Equipment elevations and sections indicating all materials, features and dimensions.
- f) Large scale plans indicating:
 - i. Equipment rooms.
 - ii. Plumbing services.
 - iii. Piping layout in toilets.
 - iv. Other similar large equipment.
 - v. Other important plumbing equipment or spaces.
 - vi. Equipment schedules with equipment manufacturers name and model as well as sizing information listed.
- g) Large scale details for all plumbing equipment not shown in elevations or sections.
- h) Gas, fuel oil, compressed air, and other specialty system schematic flow diagrams, completely labeled.
- i) Water system schematic flow diagrams, completely labeled and with flow arrows.
- j) All equipment, including equipment furnished by others but connected to a plumbing service and coordination of contractor responsibilities for all trades.
- k) Anchorage and bracing requirements for distribution systems and equipment due to seismic forces.

3. Technical Specifications shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.

4. Other

- a) Revised fixture count calculations.
- b) Flow/load calculations showing roof drainage and piping systems comply with the Code.
- c) Calculations demonstrating fuel system(s) is/will be appropriately sized.
- d) Calculations showing the sizing of gas and water systems
- e) Calculations demonstrating the equipment (e.g., pumps, tanks,

- etc.) are appropriately sized.
- f) Calculations demonstrating adequacy of expansion compensation.
- g) Statement of which plumbing fixtures are accessible.
- h) Statement of which plumbing fixtures are ultra low-water (lower than code required) or no-water use.
- i) Provide catalog cuts of major equipment and manufacturer's installation instructions where appropriate.

5. Firestopping

- a) Indicate in the documents (i.e. Basic Plumbing Requirements spec section and drawing notes) that all penetrations through fire rated construction must be firestopped using listed and approved firestop assemblies.
- b) Reference the applicable architectural life safety drawings that clearly indicate fire rated construction. If no such drawings are to be provided, the plumbing drawings must clearly indicate fire rated construction.

Fire Alarm

1. Include all items listed in the Design Development Phase Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at SD submission.
- b) Drawings for each level indicating the following:
 - i. Fire alarm initiating devices, notification appliances, equipment, and components.
 - ii. Room names, room numbers, door swings, stairs, windows, etc.
- c) Indicate a layout of the fire alarm system including:
 - i. Location of initiation and/or detection devices to be used.
 - ii. Location of notification appliances (indicate strobe candela ratings as necessary).
 - iii. Control panel, transponder, sub-panel, and remote annunciator panel locations.
 - iv. Information concerning items such as tie-ins to existing fire alarm or building management system.

- v. Local fire department notification, supervising station, central station, central campus monitoring system connections.
 - vi. Fan shutdown.
 - vii. Elevator recall, shunt trip and smoke hatch
 - viii. Location of sprinkler water flow and tamper switches
 - ix. Fire pump interconnections.
 - x. Location of Carbon Monoxide and natural gas detectors or sensors (combination smoke/CO detectors/ gas detectors with sounder bases indicate with sub-symbols).
- d) Provide a fire alarm system riser diagram indicating the following:
- i. Information concerning power supply and grounding.
 - ii. Floor by floor schematic indicating typical initiating devices and notification appliances.
 - iii. FA Control and data gathering panels, remote annunciators.
 - iv. Relays and modules.
 - v. Typical circuits/loops, including alternating circuits for notification appliances
- e) The drawings must indicate the following:
- i. Manual fire alarm systems.
 - ii. Fire/smoke detection systems.
 - iii. Carbon Monoxide/natural gas detection systems.
 - iv. Emergency one and two-way voice communication systems.
 - v. Smoke control systems including interconnections with fire/smoke dampers and fan controllers and/or building management system.
 - vi. Door access control systems.
 - vii. Suppression and extinguishing systems, i.e. sprinkler, clean agent, kitchen hood system, etc.
 - viii. Fire Command Center (when required) with the following features:
 - Elevator monitoring annunciator.
 - Emergency voice/alarm communication system.
 - Fire department communications unit.
 - Status indicators and controls for mechanical systems.
 - Controls for unlocking stair doors.
 - Emergency and standby power status indicators.
 - Telephone for fire department use.
 - Fire Pump status indicators.
 - Fire Alarm annunciator.

- Public Address system (when required).
- Generator supervision devices, manual start and transfer features.
- f) Roof plan(s) indicating locations of all new and existing mechanical equipment, hatches, and skylights.
- g) Reflected ceiling plans indicating ceiling types, soffits, heights, all mechanical, electrical and fire protection components, exit signs, emergency lighting, and access panels.
- h) Seismic bracing details (as applicable).
- i) Fire alarm control matrix for all functions with associated devices and systems.
- j) For renovation work show existing equipment to be demolished and existing equipment to be reused.

3. Technical Specifications shall include complete and edited specifications for applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.

4. Firestopping

- a) Indicate in the documents (i.e. Basic Fire Alarm/Electrical Requirements specification section and drawing notes) that all penetrations through fire rated construction must be firestopped using listed and approved firestop assemblies.
- b) Reference the applicable architectural life safety drawings that clearly indicate fire rated construction. If no such drawings are to be provided, the fire alarm/electrical drawings must clearly indicate fire rated construction.

Fire Protection

1. Include all items listed in the Design Development Phase Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at SD submission.
- b) Floor Plans and Key Plans must be provided which clearly identify the work areas and the work to be performed.
- c) Identify all column lines and a plan north orientation.
- d) Complete riser diagrams.
- e) Indicate all fire protection systems and components, including standpipes, wet, preaction, and dry sprinkler systems.

- f) Indicate fire service mains including required backflow protection and post indicator valves or approved exterior control valves.
- g) Coordinate location of fire department connections with local fire department.
- h) Pipe runs shall be complete and pipe sizes indicated per the hydraulic calculations, include all mains, cross mains, branch and drain piping.
- i) Indicate all specialized fire suppression systems, including clean agent, CO₂, kitchen hood, etc.
- j) Indicate initiating devices, notification appliances, and control systems for preaction and clean agent systems.
- k) Locations of all major fire protection equipment, including adequate access space.
- l) Electrical ratings for fire protection equipment are shown.
- m) Special equipment entry requirements addressed.
- n) Sprinkler types indicated.
- o) Major equipment scheduled.
- p) Coordination of all major items of work shall be complete.
- q) Sprinkler layout nearly complete and coordinated with the reflected ceiling plans.
- r) Details and schematics for incoming fire service, fire pump, alarm and dry valves, preaction systems, floor control valve assemblies, seismic restraints, equipment, etc.
- s) All existing and new backflow preventers indicated.
- t) Floor plans indicating the following: room names and numbers, building cores, stairs, elevators, interior partitions, doors, windows, built-in furniture items, partition types, doors and door swings, toilet fixtures.
- u) Roof plan(s) indicating locations of all mechanical equipment.
- v) Reflected ceiling plans indicating ceiling types, soffits, heights, all mechanical, electrical and fire protection components, exit signs, emergency lighting, and access panels.
- w) All fire protection system equipment and components must be fully coordinated with all other drawings, including architectural, plumbing, mechanical, electrical, etc.
- x) Seismic bracing details (as applicable).
- y) Special construction required for special systems
- z) For renovation work show existing equipment to be demolished and existing equipment to be reused.
- aa) If required for clarity, provide full height cross section, or schematic diagram, including structural member information, ceiling construction, soffit construction, and method of

- protection for non-metallic piping.
- bb) Most demanding area(s) and Hydraulic Nodes shall be included on drawing.

3. Technical Specifications shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.

4. Provide hydrant flow test results and sprinkler hydraulic calculations.

5. Firestopping

- a) Indicate in the documents (i.e. Basic Fire Protection Requirements spec section and drawing notes) that all penetrations through fire rated construction must be firestopped using listed and approved firestop assemblies.
- b) Reference the applicable architectural life safety drawings that clearly indicate fire rated construction. If no such drawings are to be provided, the fire protection drawings must clearly indicate fire rated construction.

Site

1. Include all items listed in the Design Development Phase Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at SD submission
- b) Preliminary major details for utilities, site work, and paving, as applicable, including:
 - i. Utility inverts and pitch
 - ii. Typical paving details
 - iii. Sections and major details for typical site features such as retaining walls, exterior stairs/ramps, pervious paving, underground retention or treatment systems, and other site amenities
 - iv. Areas of contaminated soil identified for removal
- c) Erosion and Sediment Control Plan prepared in accordance with NYS-DEC Standards and Specifications for Erosion and Sediment Control. Include Best Management Practices that

minimize discharge of pollutants from the construction site, including, but not limited to, provisions for dust control, inlet protection, soil stabilization, and stabilized construction entrance(s)

- i. Locate erosion and sediment control practices and coordinating notes for transferring ownership and maintenance of practices to other contractors under subsequent project phases
- d) Post construction storm water management practices for water quality and water quantity
- e) Landscaping plans for structural storm water management practices and any site reforestation or re-vegetation
- f) Preliminary planting plan and planting schedule.

3. Technical Specifications shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.

Elevators

(NOTE: The SD, DD, 50% and 75% Construction Document Phases are not applicable)

CONSTRUCTION & FINAL DOCUMENTS

Submittal Requirements for All Disciplines

(Note: All drawings and specifications are to be fully completed at this submission)

During this phase the Consultant prepares final Construction and Final Bid Documents, including drawings and specifications, for regulatory approval and public bidding. Comprehensiveness and constructability are critical to the Consultant's successful completion of this phase and NYCHA's acceptance of the bid documents for bidding and construction. There are five deliverables in this phase: 50% CD, 75% CD, 90% CD, 100% CD, and the Final Bid Documents. Although all CD phases have similar requirements, the level of development at each submission is different.

At **50% Completion**, the drawings of the Contract Documents shall be dimensioned, showing partition, windows, and door types; plan elevations, sections, and details showing heights and materials; indicating method of construction; and incorporation of all agreed changes from NYCHA's review at the end of the Design Development phase. Responses shall be made in sufficient detail for verification purposes, such as locations of revised details, specification sections, and updated drawing numbers. Generic responses such as "will comply" are not acceptable. The Consultant shall file the necessary drawings and calculations with the NYC Department of Buildings and all agencies having jurisdiction. Evidence of all filings shall be submitted to NYCHA. The Consultant must receive NYCHA's written Notice to Proceed prior to proceeding to 75% completion.

At **75% Completion**, the Contract Documents shall be substantially complete. All drawings shall be dimensioned, noted and cross-referenced, and shall reflect the input of all participants. The documents shall include any written recommendations, corrections and revisions required by NYCHA upon review of the 50% Completion phase. The Consultant is obligated to make all necessary changes to the documents required by the Department of Buildings. The Consultant must receive NYCHA's written Notice to Proceed, prior to proceeding to 90% Completion.

At **90% Completion**, the final set of Contract Documents shall be coordinated and shall include the complete final design, all design calculations for NYCHA review, and detailed final drawings and specifications, along with all data necessary for the preparation of an invitation for bid. The documents shall include any written recommendations, corrections and revisions required by NYCHA upon review of the 75% Completion phase. The drawings shall be prepared with

construction details completely shown, with figure dimensions given and coordinated with complete specifications. The Consultant must receive NYCHA's written Notice to Proceed, prior to proceeding to 100% Completion.

The **100% Complete** Documents shall include any written recommendations, corrections and revisions required by NYCHA upon review of the 90% completion phase. All drawings, specifications and construction cost estimates shall be checked and coordinated with the work of all other consultants relative to the general construction contract and with all other trades. All approvals from all agencies having jurisdiction shall be in place and submitted to NYCHA with the 100% Contract Document submission. The Consultant must receive NYCHA's written Notice to Proceed, prior to proceeding to Final Contract Documents.

The **Final Bid submission** is a formal turnover of complete documents ready for bid. There is no review at this time. Written responses to all previous design review comments from NYCHA, the Client, Construction Manager, and other review entities (as applicable), along with the necessary corrections made to the contract documents shall be incorporated.

1. Drawings

- a) The drawings shall be complete and ready for bidding including the professional's seal and signature on each sheet (See Signing and Sealing of Documents, at the beginning of these requirements).
- b) Specific for each discipline, as applicable; an updated list of the drawings, general notes, abbreviations, legends, key notes, symbol keys, key plans, column lines, north arrow, and coordinated backgrounds.
- c) The cover sheet and all typical drawings shall include the following: NYCHA name, address and logo, consultant name(s) and address, client name, project location, project title, project number, sheet name, sheet number, sheet date, drawing scale, graphic scale, revision block and block for seal and signature.
- d) Checked for spelling, grammatical and typographical errors, coordinated with respect to reference symbols, notes, abbreviations, specification sections, schedules and other disciplines.
- e) Fully coordinated with all disciplines and ready for approval to bid.

2. Contract book

- a) Technical Specifications
 - i. Each document shall be prefaced with an individualized cover page. Where Bid Document information is to be provided by NYCHA at a later date, insert pages appropriately marked "Prepared by NYCHA", or as appropriate for the pending information as referenced in the Table of Contents.
- b) An updated Table of Contents listing all included technical specification sections included and coordinated with all included sections.
- c) An updated and coordinated list of drawings.
- d) Technical specifications shall be complete and edited specifically to suit the project.
- e) Contractor's Submittal Schedule
- f) The cover of the Contract book shall be signed and sealed by the professional (See Signing and Sealing of Documents, at the beginning of these requirements)

3. Additional Requirements

- a) Submit the updated Statement of Special Inspections and Tests. Edit General Requirements, Quality and Code Requirements, and include the applicable Statement of Special Inspections and Tests as an attachment. For projects subject to the New York City Building Code, update the list of Special and Progress Inspections provided on the drawings.
- b) For projects subject to Building Commissioning – see Commissioning requirements under Sustainable Design section. Commissioning shall be delivered per NYCHA's Building Commissioning Guidelines. NYCHA's Building Commissioning Guidelines reference the Green Building Tax Credit, 6NYCRR Part 638, Section 638.8-Commissioning, and the USGBC's LEED rating system for commissioning requirements.
- c) For projects that require New York City (NYC) filing and permits, consult with NYCHA design phase manager to determine additional required documents to be submitted for this phase.
- d) Reconciled final cost estimate utilizing the latest means.
- e) Project Phasing Plan.
- f) Project Schedule.
- g) An updated estimated construction duration with bar chart.

HAZMAT / Environmental

(Note: All drawings and specifications are to be fully complete at this submission)

- 1. Include all items listed in the Construction Documents Phase (100%) Submittal Requirements for All Disciplines.**
- 2. Drawings - updated and developed drawings provided at 50% submission.**
 - a) Show areas where contaminated soil is to be removed.
- 3. Contract book**
 - a) Technical Specifications shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.
 - b) Include all asbestos filings and variances obtained by the Environmental Consultant.
 - c) Identification of PCBs, lead, or other hazardous materials and potential hazardous waste to be removed and disposed.
 - d) Include application for an US EPA ID if hazardous waste will be above the threshold as defined by the Toxic Substances Control Act (TSCA).
 - e) Include copies of Letters of Acceptance/permits from disposal facilities certifying that they have the capacity and authorization to accept the identified wastes, and intended disposition.
 - f) Include copies of receipted Permit Application submittals and responses obtained by Environmental Consultant, or exemptions identified from permitting.
 - g) Include Authorization Requests or exclusions for wetland or waterway disturbances obtained by Environmental Consultant.

Demolition

(Note: All drawings and specifications are to be fully complete at this submission)

- 1. Include all items listed in the Construction Documents Phase (100%) Submittal Requirements for All Disciplines.**
- 2. Drawings – update and develop drawings provided at DD submission.**

3. **Contract book shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.**

Architectural

(Note: All drawings and specifications are to be fully complete at this submission)

1. **Include all items listed in the Construction Documents Phase (100%) Submittal Requirements for All Disciplines.**
2. **Drawings**
 - a) Update and develop drawings provided at DD submission that have been fully coordinated with other disciplines.
 - b) Completed details for all architectural related work.
3. **Contract book shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.**
4. **Firestopping**
 - a) All required items not included in the DD submittal.
 - b) Ensure the General Requirements identify the contract responsible for firestopping.

Structural

(Note: All drawings and specifications are to be fully complete at this submission)

1. **Include all items listed in the Construction Documents Phase (100%) Submittal Requirements for All Disciplines.**
2. **Drawings**
 - a) Update and develop drawings provided at DD submission.
 - b) Deep Foundation Drawings:
 - i. Indicate the final number and size of deep foundation members at each location.
 - ii. Indicate the design depth (tip or bottom of caisson eleva-

- tion) of each deep foundation member for bidding purposes.
- iii. Indicate test pile or caisson locations.
- iv. Provide completed pile cap schedule including top of cap elevations, reinforcing, and anchorage.
- v. Provide tie-beam information including size, reinforcing, clearances and connection details to pile caps.
- c) **Concrete Foundation/Framing Drawings**
 - i. Provide typical details for concrete footings, beams, columns, slabs, and walls as required for the project; do not include details that do not apply to the scope of work.
 - ii. Provide completed concrete column, beam, pilaster, and footing schedules.
 - iii. Indicate information for concrete slab construction including:
 - Slab joint pattern for concrete slabs-on-grade.
 - Slab thickness and top of slab elevations.
 - Slab reinforcing including sizes, spacing, placement, and clearances.
 - Typical slab construction details including construction and control joint details, typical details at slab-column isolation joints, slab-wall joint details, waterstop and waterproofing details, and slab insulation details.
 - Indicate all changes in slab elevations including depressions and pits, sump pits at the bottom of all elevator pits.
 - Indicate all sloped slab locations with both beginning and ending slope elevations.
 - iv. Indicate information for all continuous and isolated footings including:
 - Indicate footing sizes and locations.
 - Top of footing elevations.
 - Step footing locations and the top of footing elevations at each step.
 - Waterproofing and waterstop details and requirements.
 - Footing reinforcing sizes, spacing, and clearances.
 - Required keyways and dowels.
 - v. Indicate information for foundation walls including:
 - Elevation at top of wall.
 - Elevation at top of brick shelf or other supports.
 - Elevation at beam pockets and changes in wall heights.
 - Wall thickness and location to column lines.
 - Wall reinforcing size, direction, spacing, and clearances.

- Integral pier or pilaster size, location, reinforcing, and elevation.
- Waterproofing, waterstop, and insulation details.
- Wall penetrations including size, locations, and additional reinforcing.
- Locations and details for embedded items such as connection plates or anchors.

d) **Steel Framing Drawings**

- i. Indicate all steel framing member sizes. Include all shear stud and camber information for floor framing members.
- ii. Indicate all connection design loads including vertical reactions and design moments for moment connections.
- iii. Indicate column orientation on framing plans.
- iv. Indicate all locations requiring the installation of slip-critical bolts.
- v. Indicate all bridging and bracing member sizes, locations, and connections.
- vi. Indicate metal decking sizes, span criteria, and direction.
- vii. Provide all relevant typical details. Do not include details that do not apply to the project.
- viii. Provide a complete column schedule including member sizes, splice locations and types, base plate sizes and orientation, column loads and heights.
- ix. Provide anchor bolt sizes, hardware, and pattern.
- x. Provide all non-typical or non-standard connection details.
- xi. Indicate all dunnage and support steel members. Provide sizes and details.
- xii. Indicate all lintels (loose and attached) and support angles.

3. **Contract book**

- a) Technical Specifications shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.
- b) Specifications shall be written for the specific project. Generic or unedited standard specifications are not acceptable. Do not include information that is not pertinent to the project.

Mechanical

(Note: All drawings and specifications are to be fully complete at this submission)

1. Include all items listed in the Construction Documents Phase (100%) Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at DD submission.
- b) Ductwork floor plans indicating:
 - i. All ductwork, depicted double lines, supply and return indicated, with all sizes shown.
 - ii. All equipment showing connections, flexible connectors, transitions.
 - iii. Registers, dampers, fire dampers, smoke dampers, diffusers, grilles and louvers all labels with appropriate sizing, neck size and flow information (if not shown on a schedule). Scheduled items are to be tagged and referenced to the schedule.
- c) Piping floor plans indicating:
 - i. All piping labeled with system type (HWS, HWR, etc.) and sizes. Six inch and greater piping depicted with double lines.
 - ii. All anchors, guides, expansion compensation and seismic supports.
- d) Equipment schedules with all fields complete.
- e) Large-scale details for all mechanical equipment not shown in elevations or sections with all components labeled and sizes indicated where appropriate.
- f) Air system schematic flow diagrams showing CFM of all segments.
- g) Water and steam system schematic flow diagrams:
 - i. Flow arrows.
 - ii. GPM for all segments.
- h) Oil system schematic flow diagrams showing all sizes and settings for components.
- i) Control diagrams.

3. Contract book

- a) Include commissioning requirements in all specifications. Coordinate technical commissioning specification requirements with the Authority's Commissioning Authority.

- b) Include permit requirements, timing, and inspections for fuel burning equipment and other air emission sources, as required

4. Firestopping

- a) All required items not included in the DD submittal.
- b) Ensure the General Requirements identify the contract responsible for firestopping.

5. Final Calculations:

- a) Final set of mechanical load calculations.
- b) Final copy of the Modeling Summary Sheet (as applicable).

Electrical

(Note: All drawings and specifications are to be fully complete at this submission)

1. Include all items listed in the Construction Documents Phase (100%) Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at DD submission.
- b) Electrical Systems: Provide a final layout of the electrical systems.
- c) Electrical Diagrams, Details, and Schedules: Finalize the electrical diagrams details, and schedules.

3. Contract book

- a) Technical Specifications shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings
- b) Include testing requirements in all specification sections.
- c) Include commissioning requirements in all specifications.

4. Firestopping

- a) All required items not included in the 50% submittal.
- b) Ensure the General Requirements identify the contract responsible for firestopping.

5. Electrical system information:

- a) Provide a short-circuit, coordination and arc-flash hazard

analysis study report. The study report shall be as described in NETA ATS 2007 section 6.

- b) Supporting documentation that the utility service configuration and over current devices have been approved by the electrical utility.

Plumbing

(Note: All drawings and specifications are to be fully complete at this submission)

1. Include all items listed in the Construction Documents Phase (100%) Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at DD submission.
- b) Piping floor plans indicating:
 - i. Plumbing connections to all equipment, including equipment furnished by others.
 - ii. All anchors, guides, expansion compensation and seismic supports.
 - iii. Keyed details as required to properly show the work.
- c) Roof plan(s) indicating locations of all roof drain, Plumbing equipment, mechanical Equipment (including outside air intake) and associated fuel piping.
- d) Equipment schedules with all fields complete.
- e) Large-scale details for all plumbing equipment not shown in elevations or sections with all components labeled and sizes indicated where appropriate.
- f) Air, water, fuel, and gas system schematic flow diagrams showing:
 - i. Flow arrows.
 - ii. Flow rates for all segments.
- g) Plumbing riser diagrams for drain, waste, vent, and storm with fixture units and sizes.

3. Contract book

- a) Technical Specifications shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.

- b) Include commissioning requirements in all specifications.

4. Firestopping

- a) All required items not included in the 50% submittal.
- b) Ensure the General Requirements identify the contract responsible for firestopping.

Fire Alarm

(Note: All drawings and specifications are to be fully complete at this submission)

1. Include all items listed in the Construction Documents Phase (100%) Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at DD submission.
- b) Fire Alarm System: Provide a final layout of the fire alarm system.
- c) Fire Alarm Riser Diagram: Finalize the fire alarm system riser diagram.

3. Contract book shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.

4. Firestopping

- a) All required items not included in the DD submittal.
- b) Ensure the General Requirements identify the contract responsible for firestopping.

Fire Protection

(Note: All drawings and specifications are to be fully complete at this submission)

1. Include all items listed in the Construction Documents Phase (100%) Submittal Requirements for All Disciplines.

2. Drawings

- a) Update and develop drawings provided at DD submission.
- b) Fire Protection System: Provide a final layout of the fire

- protection systems.
- c) Fire Protection Riser Diagrams: Finalize the fire protection system riser diagram.
- d) Hydraulic Calculations

3. Contract book shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.

4. Firestopping

- a) All required items not included in the DD submittal.
- b) Ensure the General Requirements identify the contract responsible for firestopping.

Site

(Note: All drawings and specifications are to be fully complete at this submission)

1. Include all items listed in the Construction Documents Phase (100%) Submittal Requirements for All Disciplines.

2. Submission of the final Stormwater Pollution Prevention Plan (SWPPP) and confirmation of SPDES permit coverage (Notice of Intent) from New York State Department of Environmental Conservation for stormwater impacts.

3. Drawings

- a) Update and develop drawings provided at DD submission.
- b) Completed details for all site related work.

4. Contract book shall include complete and edited specifications for all applicable sections, in 50 Division CSI format, with applicable section numbers and fully coordinated with the drawings.

Elevators

(Note: All drawings and specifications are to be fully complete at this submission)

1. Include all items listed in the Construction Documents Phase (90%

and 100%) Submittal Requirements for All Disciplines. (NOTE: The SD, DD, 50% and 75% Construction Document Phases are not applicable).

2. Drawings

- a) Update and develop drawings provided at 90% submission.
- b) Pit Plans indicating:
 - i. Inside pit wall to wall dimensions
 - ii. Applicable Equipment location along with identification of equipment (i.e., buffers, ladders, access entrances, counterweight frame, counterweight guards, compensation, stop switches, light switches, light fixtures, car and counterweight rails, buffer inspection platforms, governor tension sheaves, alarm bells and sump pits)
- c) Hoistway Plans indicating:
 - i. Inside hoistway wall to wall dimensions
 - ii. Clear hoistway depth dimensions (to hoistway door sill)
 - iii. Counterweight space, running clearance and door space dimensions
 - iv. Back to back of guides and face to face of guides dimensions
 - v. Car platform, inside cab and car/hoistway door size dimensions
 - vi. Applicable Equipment location along with identification of equipment (i.e., hoistway doors-type, center panels, hall pushbutton fixtures, fireman's service fixture, hall position indicator, counterweight frame, car and counterweight rail sizes, governor tension sheaves, alarm bells, car platform, cab , cab door, car top emergency exit and size, cab mirror, cab hand-rail, cab exhaust fan, car station, car position indicator and car lantern)
- d) Machine Room Plans indicating:
 - i. Clear inside machine room wall to wall dimensions
 - ii. Smoke hole dimensions
 - iii. Applicable Equipment location along with identification of equipment (i.e., hoist machines and type, rope gripper devices, car controllers and type, machine beams, governor, exhaust fan, air intake louver, thermostat, smoke hole, disconnect switches, circuit breakers, light switch, light fixtures , access stairs, access entrances and micro-switch)
 - iv. Machine beam reactions

- e) Section Elevation indicating:
 - i. Pit depth, total travel distance, floor to floor heights, top floor to machine room slab dimension, clear overhead dimension, machine beam size, slab thickness, clear machine room height, cab height, cab/hoistway door height, counterweight frame height.
 - ii. Floors served and indication of main egress floor
 - iii. Applicable Equipment location along with identification of equipment (i.e., buffers, ladders, access doors, counterweight frame, counterweight guards, counterweight blocking, compensation, stop switches, light switch, top of car/bottom of car light fixtures, buffer inspection platform, pit/under platform alarm bells, sump pits, hoistway/car doors, car platform, carframe, car safety, cab enclosure, door operator, independent door operator support, inspection station, hoist machine, rope gripper device, machine isolation beams, machine beams, deflector sheaves)
 - iv. Buffer reactions
- f) NYCHA Standard Elevator Cab and Entrance Details:
 - i. Sheets EV-201.00 and EV-202.00.
- g) Electrical Plans indicating:
 - i. Inside machine room and pit wall to wall dimensions
 - ii. Applicable Equipment location along with identification of equipment (i.e., machine room and pit lighting fixtures/light switches/GFCI outlets., Machine room circuit breaker panel and disconnect switches, machine room exhaust fan and intake louver, thermostat, electrical riser diagram for feeders, circuit breaker panel schedule, car controller and hoist machine motor)
 - iii. Fire stop details
- h) Mechanical Plans indicating:
 - i. Inside machine room wall to wall dimensions
 - ii. Applicable Equipment location along with identification of equipment (i.e., Exhaust fan and louver locations, thermostat, car controller and hoist machine)
 - iii. Fan and louver Schedule showing Fan Data and Motor data (i.e. Fan manufacturer, model #, Horsepower, type, size, CFM) and Louver Data (i.e., Louver manufacturer, model number, type, size).

3. **Contract book**

- a) Technical Specifications shall include complete and edited specifications for all applicable sections, in a Non-CSI Single Trade format and fully coordinated with the drawings. NYCHA Master Elevator specification to be used as a guide.
- b) Identification of lead to be removed and disposed if applicable
- c) Indicate Contractor to prepare to all municipal agencies having jurisdiction all drawings and applications required by them, and obtain all necessary permits and certificates of compliance from such agencies.
- d) Include Maintenance and Service specifications in a Non-CSI Single Trade format. NYCHA Master Elevator Maintenance and Service specifications to be used. Only footer needs modification

4. **Firestopping**

- a) Ensure the General Requirements identify the contract responsible for firestopping.



New York City Housing Authority

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SUBMISSION CHECK LIST - GENERAL

DEVELOPMENT: Sample Houses
PROJECT: Comprehensive Rehab
REVIEW DATE: 8/7/2015
Note: 0

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
GENERAL		Contract Documents			
1	ECR	Have all hazmats (ACM, Lead, etc.) been investigated and identified			
2	ECR	Have field observations and/or probes been performed to confirm scope of work			
3	ECR	Have all standing DoB violations been identified			
4	ECR	Is the work is compliant with FEMA and flood zone requirements			
5	ECR	Are the datum elevations correlated with the USGS elevations			
6	ECR	Have the documents undergone internal QA/QC			
7	DD	All previous, agreed upon review comments have been incorporated			
8	DD	Cost estimate been provided			
9	DD	Costs Estimate has been reconciled between the AE, CM, & NYCHA			
10	DD	Contract documents have been submitted to Planning for a cost estimate			
11	DD	Have Restoration Summary and Work Cost Breakdown been coordinated.			
12	DD	Quantities shown in drawings and specs are consistent with restoration summary			
13	90%	Request NYCHA Safety Requirements Section 01 35 23 and SSP Template from CPD QA			
14	90%	Have the documents been filed with all regulatory agencies having jurisdiction required for DOB approval			
15	90%	Have the documents been filed with DOB			
16	90%	Have the documents been sent to OMB (if applicable)			
17	100%	Confirm receipt and inclusion in spec of NYCHA Safety Requirements Section 01 35 23 and SSP Template from CPD QA			
18	100%	All applicable regulatory approvals been received			
19	F	Contract book follows correct table of contents			
20	F	FOP contains latest work cost breakdown			
21	ALL	Have all previous review comments been addressed			
22					
GENERAL		Do the Drawings show:			
23	ECR	Development Name			
24	ECR	Program Unit Name			
25	ECR	Borough Name			
26	SD	Oracle Number			
27	SD	Zone No.			
28	SD	Block No.			
29	SD	Lot No.			
30	SD	E.D.P. No.			
31	SD	Development No.			
32	SD	Drawing by			
33	SD	Checked by			
34	SD	Date			
35	SD	Scale			
36	SD	Drawing Number			
37	SD	Sheet Numbering per DOB requirements			
38	SD	Contract Title			
39	SD	Comprehensive drawing List, is it comprehensive			
40	SD	Development Key Plan			
41	SD	Consistent title block across set			
42	SD	Current design phase			
43	SD	Scope of Work			
44	SD	Complete list of abbreviations & symbols			
45	SD	Current code references			
46	SD	North Arrow			
47	SD	Complete list of Special Inspections			
48	SD	Correct buildings in key plan			
49	SD	All applicable drawing scales			
50	SD	Consistent and correct text fonts			
51	SD	Consistent and correct line weights			



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SUBMISSION CHECK LIST - GENERAL

DEVELOPMENT: Sample Houses
 PROJECT: Comprehensive Rehab
 REVIEW DATE: 8/7/2015
 Note: 0

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
52	SD	Clear distinction between existing conditions and new construction on all plans, sections, elevations and details			
53	SD	Proper identification of all existing conditions and items			
54	DD	Revision Number			
55	DD	Correct numbering			
56	75%	All easements, right-of-way, and interfaces with public, city or county utilities			
57	75%	Plans and sections are consistently oriented			
58	90%	Full coordination between details, plans & sections			
59	90%	Full dimensioning of all construction items			
60	90%	Complete Restoration Summary			
61	90%	Signature block on T-001 contains correct names			
62	90%	Contract Number			
63	100%	Seal & Signature			
GENERAL		Do the Specifications include:			
64	SD	Check that they are not recycled from a previous project			
65	SD	The latest Divion 1			
66	SD	Correct development name			
67	SD	Correct oracle number			
68	SD	Correct table of contents			
69	SD	Unit Price Assembly section that accurately reflects SOW			
70	SD	Unit Price Assembly section that is coordinated with the details and Restoration Summary			
71	SD	Current code references			
72	SD	Draft submittal log			
73	SD	Product references that include three suggested manufacturers "or equal"			
74	75%	All warrantees and guarantees and are they coordinated with the general ones in Division 01			
75	75%	All physical smaple and mock-up submissions			
76	90%	Correct contract number			
77	100%	NYCHA Safety Requirements Section 01 35 23 and SSP Template from CPD QA			

PHASES ECR -> SD -> DD -> 50% -> 75% -> 90% -> 100% -> F



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SUBMISSION CHECK LIST - HAZMAT

DEVELOPMENT: Sample Houses
PROJECT: Comprehensive Rehab
REVIEW DATE: 8/7/2015
Note: 0

These items shall be reviewed in addition to the items listed on the general Check List

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
HAZMAT		GENERAL			
1	ECR	Are all HAZMAT items identified			
2	ECR	Any non-ACM item touching the ACM item are considered to be ACM.			
3					
ARCHITECTURAL		Do the Specifications include:			
4	DD	ACM and Lead Abatement specifications and templates			
5	DD	ACM components listed			
6	50%	Abestos Work Plan per NYCHA template			
7					

PHASES ECR -> SD -> DD -> 50% -> 75% -> 90% -> 100% -> F



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SUBMISSION CHECK LIST - ARCHITECTURAL

DEVELOPMENT:

Sample Houses

PROJECT:

Comprehensive Rehab

REVIEW DATE:

8/7/2015

Note:

0

These items shall be reviewed in addition to the items listed on the general Check List

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
ARCHITECTURAL		GENERAL			
1	50%	Is the work is compliant with the current city EEC			
2	50%	Is the work is compliant with the ADA			
3	SD	Dimensions for finishes shall be face-to-face			
4	75%	Mounting heights for all ADA items, toilets, room accessories, ramp slopes, stair design			
5	SD	Is privacy maintained with regards to sightlines into bathrooms			
A-DRAWINGS		Do the Plans show:			
6	50%	All necessary plans			
7	75%	Wall details that ensure that the minimum 'U' value is met?			
8	75%	Roofing details that ensure that the minimum 'U' value is met?			
9	75%	All access panels and are they coordinated with access locations for mechanical, electrical and plumbing equipment			
10	50%	Rated partitions			
11	50%	ADA features			
12	75%	Location of all drinking fountains, fire extinguishers, hoses, etc.			
13	50%	All built-in equipment			
14	50%	The roof slope			
15	50%	Finished floor elevations			
A-DRAWINGS		Do the Elevations show:			
16	SD	All necessary exterior and interior elevations of the building			
17	75%	All elevations keyed in to the correct plan(s)			
18	75%	All new/existing material labels			
19	50%	Visible rooftop mechanical equipment			
A-DRAWINGS		Do the Reflected Ceiling Plans show:			
20	75%	Full coordination with mechanical, electrical, data, sprinkler system, access panels, and lighting			
21	50%	All ceiling materials			
22	75%	The design intent of ceiling grid			
A-DRAWINGS		Do the Sections & Details show:			
23	50%	All necessary sections & details			
24	50%	All required fire stopping details			
25	75%	Proper Scales (i.e., 3/4" = 1'-0" for interior & exterior walls)			
26	75%	All roof edges, expansion joints, penetrations with isometric drawing of scupper or any non-standard situations			
27	75%	All head, jamb and sill details for all doors & windows, complete with dimensions			
28	75%	Stairs, stringers, landings completely detailed with floor and base finishes			
A-DRAWINGS		Do the Schedules & Legends show:			
29	75%	Finishes			
30	50%	Partitions			
31	50%	Doors & Windows			
32	75%	Toilet & kitchen accessories			
ARCHITECTURAL		Do the Specifications include:			
33	75%	Firestopping			
34	75%	Access Doors & Panels			
35	75%	Specialties			
36	75%	Hardware Schedule			
37					

PHASES ECR -> SD -> DD -> 50% -> 75% -> 90% -> 100% -> F



New York City Housing Authority

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SUBMISSION CHECK LIST - LANDSCAPE ARCHITECTURAL

DEVELOPMENT:

PROJECT:

REVIEW DATE:

Note:

These items shall be reviewed in addition to the items listed on the general Check List

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
LA-DRAWINGS		GENERAL - Title Sheet / Key Plan			
1		Do all site plans correlate with each other?			
2		Is the orientation (North arrow) shown on all plans?			
3		Is the scale shown for all drawings?			
4		Are all plans Scaled properly?			
5		Is the Index of Drawings accurate?			
6		Is DOB signature block included? Is note a Construction element?			
7	Title Block	Is the Key Plan accurate?			
8	Title Block	Is the Key plan the same orientation as the plans?			
9	Title Block	Is the Program Unit accurate?			
10	Title Block	Is the development name accurate?			
11	Title Block	Is the building address and the building # accurate?			
12	Title Block	Is the borough and the oracle # accurate?			
13	Title Block	Are the signature names and titles accurate?			
14	Title Block	Is the Zone #, Zoning Map #, Bloc #, Lot #, EDP # and Development # accurate?			
15	Title Block	Is the contact title and contract # correct?			
16	Title Block	Is the Drawing Title accurate?			
17	Title Block	Insure all dates on all sheets are consistent.			
18	Title Block	Is the Drawing # accurate?			
19	Title Block	Is the sheet # accurate?			
20					
LA-DRAWINGS		General Notes, Symbols and Abbreviations			
21		Is the Responsibility Clause in place?			
22		All General and Additional Notes included? Edited for specific job?			
23		Does the Legend include all elements on the Drawings? Vice versa?			
24		Are Additional Notes correctly included? Edited for specific job?			
25		Are Electrical/Lighting Notes correctly included? Edited for specific job?			
26		Are Building Dept Notes correctly included? Edited for specific job?			
27		Are Structural Notes correctly included? Edited for specific job?			
28		Are Foundation & Site Work Notes correctly included? Edited for specific job?			
29		Are all abbreviations included?			
30		Is the Building Address included and accurate?			
31		When creating a Site Lighting contract include General Notes Lighting Sheet?			
32					
LA-DRAWINGS		Removals / Demolition Plans			
33		Are Drawing Title's consistent?			
34		Is the graphic scale accurate?			
35		Are subgrade utilities included?			
36		Are existing contour lines included? (as necessary)			
37		Are all note sizes and fonts consistent and standard?			
38		Are all hatches consistent and accurate?			
39		Are all existing Trees located on drawing? VIF			
40		Are all existing Drains located on drawing? VIF			
41		Are all existing elements to remain located on drawing? VIF			
42		Are all notes consistent on plans?			
43		Coordinate areas in Removals Plan with areas in Materials Plan.			
44		Include temporary construction fence as well as proposed staging area.			
45		Include protection for existing drains and trees.			
46	Title Block	Is Key Location Plan accurate with Work Area depicted?			
47		Include Street names and Addresses in plans.			
48					
LA-DRAWINGS		Materials / Construction Plans			
49		Are Drawing Title's consistent?			
50		Is the graphic scale accurate?			



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SUBMISSION CHECK LIST - LANDSCAPE ARCHITECTURAL

DEVELOPMENT:

PROJECT:

REVIEW DATE:

Note:

These items shall be reviewed in addition to the items listed on the general Check List

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
51		Are all note sizes and fonts consistent and standard?			
52		Are all hatches consistent and accurate?			
53		Are all groups of notes aligned?			
54		Are detail bubbles accurately cross referenced to the construction details			
55		Are various fences graphically accurate?			
56		Are various curbs graphically accurate? (# or letter denoting style)			
57		Are various pavements graphically accurate? (various hatch and patterns)			
58		Do vehicular drop curbs meet DOT regulations?			
59		Does exterior compactor meet Sanitation regulations?			
60		Does BBQ Area meet NYCHA regulations?			
61		Are ADA accessibility features (ramps, curb cuts) identified?			
62		Are high walls (over 4') reviewed by structural engineers?			
63		Coordinate areas in Materials Plan with areas in Removals Plan.			
64		Is the required Transition and Accessible Ramp indicated for Safety Surfacing?			
65		Include Street names and Addresses in plans.			
66		Does design conform to NYCHA design guidelines?			
67	Title Block	Is Key Location Plan accurate with Work Area depicted?			
68					
LA-DRAWINGS		Dimensions Plans			
69		Are Drawing Title's consistent?			
70		Is the graphic scale accurate?			
71		Are existing conditions accurate.			
72		Are all new site amenities shown and dimensioned?			
73		Are all new pavements shown and dimensioned?			
74		Are all new play equipment and spray showers shown and dimensioned?			
75		Are dimensions shown clearly and legibly.			
76	Title Block	Is Key Location Plan accurate with Work Area depicted?			
77					
LA-DRAWINGS		Grading, Electrical & Plumbing Plans			
78		Are Drawing Title's consistent?			
79		Is the graphic scale accurate?			
80		Indicate top elevation of all catch basins and manholes.			
81		Are grades indicated? Is direction of pitch indicated? Is slope percentage indicated?			
82		All new pavements to meet existing adjacent pavement flush.			
83		All new curbs to meet existing adjacent curbs flush and true. Reveals to match.			
84		Show Exterior Ramp and Stair spot elevations and slopes			
85		Are all plumbing systems in compliance with applicable codes?			
86		Are all required backflow prevention devices shown?			
87		Does the Spray Shower / Hose Bibb / Water Fountain system show:			
88		1. All water supply lines and sizes?			
89		2. All connections to existing water supply within the adjacent building?			
90		3. Are all valves and controls shown? Locations?			
91		Is the type and size of drain pipe specified?			
92		Is the location of all drinking fountains, hose bibs and spray showers indicated?			
93		Is all new lighting specified and labeled properly?			
94		Are all lamps/fixtures LED?			
95	Title Block	Is Key Location Plan accurate with Work Area depicted?			
96					
LA-DRAWINGS		Planting Plans			
97		Are Drawing Title's consistent?			
98		Is the graphic scale accurate?			
99		Are plants cross referenced with Planting List accurately.			
100		Do groundcover quantities use accurate square footage calculations.			
101	Title Block	Is Key Location Plan accurate with Work Area depicted?			



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SUBMISSION CHECK LIST - LANDSCAPE ARCHITECTURAL

DEVELOPMENT:

PROJECT:

REVIEW DATE:

Note:

These items shall be reviewed in addition to the items listed on the general Check List

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
102					
LA-DRAWINGS		Construction Details			
103		Show anchor bolt embedments for fence posts and bench installations			
104		Are Exterior Handrails posts "plated and bolted" to curbs/walls?			
105		Is there a Soil Erosion Control Detail provided?			
106		Is the curb bridging for tree root detail provided			
107		Is the temporary wooden tree guard detail provided?			
108		Are all bubbles cross referenced accurately?			
109		Are all details legible when printed?			
110					



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SUBMISSION CHECK LIST - STRUCTURAL

DEVELOPMENT:

Sample Houses

PROJECT:

Comprehensive Rehab

REVIEW DATE:

8/7/2015

Note:

0

These items shall be reviewed in addition to the items listed on the general Check List

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
ARCHITECTURAL		GENERAL			
1	SD	All structural design criteria such as seismic, wind, snow, etc.			
2	SD	Structural elements are properly and accurately dimensioned from column grids			
3	DD	Are there any special structural details that require a sequence of erection narrative			
4	DD	The number of drawings is established			
5	DD	The number of details to be created is established			
6	DD	Are the types of drawings e, g. Title Sheet, General Notes Demolition, Elevation, Restoration Summary Table to be created established			
7	DD	Are sidewalk shed details current			
8	DD	Are all HAZMAT items identified			
9	DD	Any non-ACM item touching the ACM item are considered to be ACM.			
10	DD	Are all symbols and legends clearly identified			
11	DD	Are all dimensions clearly identified and labeled			
12	90%	Are all items in Restoration Summary Tables coordinated with the Unit Price Assembly section of Specifications			
13					
S- DRAWINGS		Do the Plans show:			
14	DD	Top of floor slab			
15	DD	Railing details that are coordinated with the existing conditions and the roofing details			
16	DD	Footing elevations			
17	DD	Plan of buildings with dimensions			
18					
S- DRAWINGS		Do the Elevations show:			
19	DD	All required building façade elevations with all floor numbers			
20	DD	All required masonry expansion and control joints with dimensions			
21	DD	Control joints shown in all concrete walls			
22	DD	All defects clearly			
23	DD	Key plans with elevation numbers			
24	DD	Key plan with a north arrow			
25	DD	Elevations numbers that coordinated the key plans			
26	DD	Elevations widths that are coordinated with the key plans			
27	DD	All window types marked			
28	DD	All the window openings			
29	DD	All façade legends and symbols			
30	90%	All HAZMAT elevations clearly showing the ACM items and quantities to be abated			
31	90%	All ACM items symbol & legends			
32					
S-DRAWINGS		Do the Sections & Details show:			
33	90%	All necessary Sections & Details			
34	90%	All Repair steps for repair details			
35	90%	Sections shown are coordinated with plans			
36	90%	Clearly marked components			
37	90%	Clearly marked existing items to remain			
38	90%	All replaced item materials noted in specifications			
39	90%	All components are marked clearly			
40	90%	Clearly marked dimensions			
41					
STRUCTURAL		Do the Specifications include:			
42	DD	All the Divisions and Sections required for the project			
43	DD	Site Safety specifications and template provided by QA/QC (NYCHA)			
44	DD	All necessary Division 1 sections			
45	DD	A list of all used materials and manufacturers			
46	DD	All recommended manufacturers exist			
47	DD	All recommended manufacturers names are followed by 'OR Equal'			
48	DD	Specifications coordinated with drawings			



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SUBMISSION CHECK LIST - STRUCTURAL

DEVELOPMENT:

Sample Houses

PROJECT:

Comprehensive Rehab

REVIEW DATE:

8/7/2015

Note:

0

These items shall be reviewed in addition to the items listed on the general Check List

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
49	DD	Unit Pice Assemblies that match the restoration summary			
50					

PHASES ECR -> SD -> DD -> 50% -> 75% -> 90% -> 100% -> F



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SUBMISSION CHECK LIST - MECHANICAL

DEVELOPMENT:

Sample Houses

PROJECT:

Comprehensive Rehab

REVIEW DATE:

8/7/2015

Note:

0

These items shall be reviewed in addition to the items listed on the general Check List

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
MECHANICAL		GENERAL			
1		Is scope of Work is clearly identified on the drawings and it matches the Specs.			
2		Are all General Construction Notes and Building Code requirements and all Nomenclatures shown			
3		Are all proposed alternates shown clearly and accurately, and consistent between specifications and drawings			
4		Are connections and services identified			
5		Is sufficient access provided to all mechanical components, near buildings, on roof tops, etc.			
6		Are all fire/smoke dampers provided in all rated walls/ceilings			
7		Is all ductwork designed in compliance with ASHRAE and SMACNA			
8		Are ductwork pressure testing/leakage restrictions indicated			
9		Was clash detection carried out the mechanical work to ensure no conflicts with other trades, equipment or structures?			
10		Is adequate access provided to mechanical equipment located in attic spaces via ladders, catwalks, etc.?			
MECHANICAL		Boilers			
11		Is the heating load calculated according to NYCHA criteria and latest ECC code requirement?			
12		Are the number and capacity of each boiler specified to satisfy the heating load and required domestic hot water?			
13		Are the type of boiler and number of passes specified?			
14		Is the schedule of all Boiler Room equipment shown on the Schedule drawing?			
15		Do the boilers in their proposed configuration fit in the boiler room space with the manufacturers' and DoB mandated clearances			
16		Are Breeching double wall, dimensions and configuration clearly shown?			
17		Is chimney brick work needs repair? Coping O.K?			
18		Does the chimney have a liner and it was tested to be in good condition?			
19		Do the boilers to be provided operate on dual fuel (Gas & Oil)?			
20		Are there existing Fuel Oil Tanks? How many and capacity each?			
21		Are existing oil tanks in good conditions, sized per NYCHA criteria and satisfy Code requirements?			
22		Are Demolition drawing(s) precise in point of connection?			
23		Does the Boiler Room ceiling need to be replaced and insulated?			
24		Are the Boiler Room floor and walls waterproofed properly?			
25		Are the sump pump details with thermostatic controls shown on the plan and on equipment schedule?			
26		Does the prepared cost estimate cover all Boiler Room equipment?			
27		Does the Boiler Room electrical panel need to be upgraded and replaced?			
28		If electrical panel needs to be upgraded, is there complete wiring diagram with all loads indicated?			
29		Are the motorized dampers sized properly according to DoB and DEP requirements and connected to burner firing?			
30		Are the required Boiler Controls and Lead-lag system shown on drawings with all necessary details and on the specs?			
31		Are the schematics of chemical feed system shown on drawings?			
32		Are all steam and condensate piping identified with sizes shown on drawings?			
33		Are all steam safety valves number and size shown according to boiler manufacturer's recommendation?			
34		Are the boilers concrete pads designed properly with all structural details shown on the drawings?			
35		Are Domestic Hot Waters Heaters getting their steam from boilers?			
36		Are Domestic Hot Waters Heaters gas fired?			
37		Details for sealing all walls and ceiling penetrations			
38		The water heater relief piping and discharge point			
39		Are typical details and sections clearly shown?			
40		Is all boiler equipment shown on the plan:			
41		1. Is the Condensate Receiver sized according to NYCHA criteria and the capacity indicated?			
42		2. Are the dimensions shown correctly according to size indicated?			
43		3. Are the details of piping shown on the drawing			
44		4. Are Feedwater Pumps number and size indicated on the Equipment Schedule?			
45		5. Is the total rate of Feedwater Pumps designed to provide double the rate			
46		required for all boilers, with two pumps alternating and third one stand-by?			
47		6. Are all required Backflow Prevention devices shown?			
48		7. Are all controls and schematics shown?			
M-DRAWINGS		Community & Senior Centers			
49		Are all fire/smoke dampers provided in all rated walls/ceilings?			
50		Is detail shown for sealing all walls and ceiling penetrations?			



New York City Housing Authority

90 CHURCH STREET, New York, NY 10007

TEL: (212) 306-3000, <http://nyc.gov/nycha>

SUBMISSION CHECK LIST - MECHANICAL

DEVELOPMENT:

Sample Houses

PROJECT:

Comprehensive Rehab

REVIEW DATE:

8/7/2015

Note:

0

These items shall be reviewed in addition to the items listed on the general Check List

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
51		Is all ductwork designed in compliance with ASHRAE and SMACNA?			
52		Are ductwork pressure testing/leakage restrictions indicated			
53		Are all systems in compliance with Universal Basis of Design requirements?			
54		Are "Wing" type coils specified on air handling equipment?			
55		Are all plumbing systems in compliance with recent applicable codes?			
56		Is the following equipment provided in all attics?			
57		1. Access opening, platforms, and walkways, where applicable.			
58		2. Lighting			
59		3. Auxiliary pans/drains for air conditioning equipment.			
60		4. GFI convenience outlets.			
61		Do all kitchen hoods conform to mechanical and fire codes?			
62		Do all chemical fume hoods conform to mechanical and fire codes?			
63		Are all air conditioning condensate lines with discharge shown?			
64		Does the discharge conform to codes?			
65		Are all required backflow prevention devices shown?			
66		Does the fire sprinkler system show:			
67		1. Details of water source?			
68		2. Type of sprinkler system?			
69		3. Plan of sprinkler system?			
70		4. Are risers shown?			
71		5. Are connections to existing systems shown?			
72		6. Are all valves and controls shown?			
73		Is the temperature Control system provided			
74		Is the energy management system provided?			
75		Is the building automation system provided?			
76		Are the temperature Control energy management and building automation			
77		System's schematics shown on the drawings?			
78		Are the sequences of the HVAC systems of operation provided, complete with a point list			
79		Are the ceilings diffuser and sprinkler head locations coordinated with the			
73		Architectural reflected ceiling plans?			
74		Was clash detection made of the mechanical work to ensure no conflicts with other work, equipment or structures?			
75		Is adequate access provided to mechanical equipment located in attic spaces			
76		Is adequate access provided to mechanical equipment located in attic spaces Via ladders, catwalks, etc.			
MECHANICAL		Vacuum & Condensate Pumps			
77		Number of pumps, size & rating shown			
78		Are all details & sections adequate?			
79		Is all equipment covered in the schedule?			
80		Are all required general notes, construction notes incorporated in dwgs.			
81		Drawings show clearly the scope of work as defined?			
82		The finalization of the previously submitted and approved design phases.			
83		All items provided by Owner installed by Contractor, in matrix format.			
84		All items installed by Owner, in matrix format.			
85		Does key plan shown area of work?			
86		Schedule to show Bldg.#, Bldg. address			
87		Are demolition drawing(s) precise in point of disconnection? (POD)			
88		Intake & Discharge pipe sizes shown?			
89		Concrete pads to remove /stay?			
90		To remain items clearly identified?			
91		Location of replacement/new pump shown?			
92		Pump schedule shows all details about pump?			
93		Electrical connections, need upgrade/ New from main disconnect			
94		Drain connection shown to nearest floor drain?			
95		If location is in pit, approach ladder condition? Need replacement/ painting?			



New York City Housing Authority

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SUBMISSION CHECK LIST - MECHANICAL

DEVELOPMENT: Sample Houses
PROJECT: Comprehensive Rehab
REVIEW DATE: 8/7/2015
Note: 0

These items shall be reviewed in addition to the items listed on the general Check List

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
96		Pit drain is in good condition? Need replacement?			
97		Condensate return from trap has slope for gravity flow?			
97		Elevation of cond. Pump intake for condensate flow from HW Tank?			
98					
MECHANICAL		Zone Valve Stations			
99		Number of valve stations, size & ratings (lbs of steam/hr.).			
100		Are all details & sections adequate?			
101		Is all equipment covered in the schedule?			
102		Are all required general notes, construction notes incorporated in dwgs.			
103		Scope of work in specs and drawings match?			
104		Drawings show clearly the scope of work as defined?			
105		The finalization of the previously submitted and approved design phases.			
106		All items provided by Owner installed by Contractor, in matrix format.			
107		All items installed by Owner, in matrix format.			
108		Are Demolition drawing(s) precise in point of disconnection? (POD)			
109		Are pipe sizes shown?			
110		To remain items clearly identified?			
111		Location of replacement/new zone valve shown?			
112		By-pass rig shown?			
113		By-pass valve type and size?			
114		Is new valve location changed or same as existing?			
115		Electrical connections, need upgrade/ New from main disconnect?			
116		Do the heating control panels need to be replaced?			
117		If yes, are the new control panels compatible with the new zone valve stations?			
118					



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SUBMISSION CHECK LIST - ELECTRICAL

DEVELOPMENT:

Sample Houses

PROJECT:

Comprehensive Rehab

REVIEW DATE:

8/7/2015

Note:

0

These items shall be reviewed in addition to the items listed on the general Check List

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
ARCHITECTURAL		GENERAL			
1		Identify connections and services			
2		Was constructability coordination performed to ensure there aren't any conflicts with other disciplines work?			
3		Is the lighting layout coordinated with the architectural reflected ceiling plan?			
4		Is lighting system in accordance with NYCHA guidelines?			
5		Does all electrical design comply with the latest NYC Electrical Code, i.e.,			
6		1. Are all conductors specified as copper?			
7		2. Are space requirements adequate?			
8		Is the electrical legend and symbols complete?			
9		Are all required panel board schedules provided?			
10		1. Do they show voltage and phase?			
11		2. Is the rating of the main disconnect shown?			
12		3. Are all circuit numbers shown?			
13		4. Is the number of poles shown?			
14		5. Are all trip-amperes shown?			
15		6. Are all Volt-amperes shown?			
16		7. Are all wire sizes shown?			
17		8. Are all conduit sizes shown?			
18		Is a lighting fixture schedule shown?			
19		Are all fixtures and ballasts of the energy-saving types (LED preferred)?			
20		Are all rooms designated as shown on architectural plan?			
21		Is the lighting layout coordinated with the architectural reflected ceiling plan?			
ARCHITECTURAL		Do the Drawings show:			
22		Is an electrical site plan included showing utilities			
23		Is an exterior lighting photometric plan included?			
24		Are single line/riser diagrams shown for electrical service			
25		Are single line/riser diagrams shown for fire alarm system			
26		Are fire alarm drawings included if required			
27		Are single line/riser diagrams shown for intercom system			
28		Are single line/riser diagrams shown for telecommunications system			
29		Are single line/riser diagrams shown for computer data system			
30		Are the panel board locations shown on plan drawings			
31		Are the switch gear locations shown on plan drawings			
32		Are all locations of mechanical equipment and their circuits shown			
33		Details for sealing all walls and ceiling penetrations			
GENERAL		Do the Specifications include:			
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REVIEW COMMENTS - GENERAL

DEVELOPMENT: Sample Houses

PROJECT: Comprehensive Rehab

REVIEW DATE: 8/9/2017

Note:

Response Types	Response Types	%
1	D - Duplicate	20%
1	T - Technical / \$\$\$	20%
1	G - Grammar/Spelling	20%
1	1 - Division 1	20%
1	S - Suggestion	20%
5	Total	100%

Response Codes

A - Agree

D - Disagree

X - Further discussion required

Comment #	Reviewer	Reference	Comment	Response Code	Response Type	Response	Status
1					1		
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SUBMISSION CHECK LIST - ELEVATOR

DEVELOPMENT: Sample Houses
PROJECT: Comprehensive Rehab
REVIEW DATE: 8/7/2015
Note: 0

These items shall be reviewed in addition to the items listed on the general Check List

ITEM ID	PHASE	ITEM DESCRIPTION	YES	NO	N/A
G- DRAWINGS		GENERAL			
1	90	Riser diagram(s)			
2					
EV-DRAWINGS		Do the Plans show:			
3	90	Device Identificaion number(s)			
4	90	Elevator platform size			
5	90	Inside dimensions of cab enclosure			
6	90	Car and shaft door types and size			
7	90	Top emergency exit location			
8	90	Exhaust fan location			
9	90	Handrail			
10	90	Mirror location			
11	90	Signal equipment locations			
12	90	Shaft dimensions (overall and clear)and construction			
13	90	Required equipment clearance dimensions			
14	90	Size and location of of car and counterweight rails along with distance between rails (B-B and F-F)			
15	90	Number of car and counterweight buffers and locations			
16	90	Buffer insection ladder(s) or platform(s)			
17	90	Pit access door(s)			
18	90	Pit access ladder(s)			
19	90	Pit stop and light switches			
20	90	Pit light fixture location(s)			
21	90	Counterweight guard(s)			
22	90	Compensation			
23	90	Governor tension sheave location(s)			
24	90	Alarm bell location(s)			
25	90	Machine room size dimensions			
26	90	Machine type(s)			
27	90	Rope gripper/rope brake device location			
28	90	Machine beam locations			
29	90	Machine beam reactions			
30	90	Access doors, ladders and guards			
31	90	Machine room ventilation and thermostat location			
32	90	Smoke hole location(s)			
33	90	Governor location(s)			
34	90	Disconnect switch location(s)			
35	90	Circuit breaker panel location(s)			
36	90	Light switch and light fixture location(s)			
37	90	Contoller location(s)			
38					
EV-DRAWINGS		Do the Elevations show:			
39	90	Hoistway door size and type			
40	90	Signal equipment location(s)			
41	90	Vision panel size and location			
42	90	Entrance frame and filler panel			
43	90	Required signage and location(s)			
44					
EV-DRAWINGS		Do the Sections & Details show:			
45	90	Buffer type and support steel			
46	90	Buffer impact reactions			
47	90	Blocking for rope stretch			
48	90	Counterweight guard(s)			
49	90	Counterweight frame height			

50	90	Compensation			
51	90	Pit access entrance			
52	90	Pit access ladder(s)			
53	90	Pit stop and light switches			
54	90	Alarm bell location(s)			
55	90	Occupied or unoccupied space below pit			
56	90	Sump pit			
57	90	Pit depth dimension			
58	90	Car in relation to car buffer (runbys)			
59	90	Counterweight in relation to counterweight buffer (runbys)			
60	90	Identify Main Egress floor			
61	90	identify Top Terminal Floor			
62	90	Hoistway door height dimension and type			
63	90	Clear overall cab height dimension			
64	90	Cab floor to underside of crosshead dimension			
65	90	Cab floor to top of crosshead dimension			
66	90	Cab equipment (Top of car inspection box, door operator, door operator support, lights and Bell)			
67	90	Refuge space dimension			
68	90	Car runby dimension			
69	90	Clear overhead dimension			
70	90	Deflector sheave & guard location and roping			
71	90	Machine beam location and orientation (flush or below slab)			
72	90	Machine room height dimension			
73	90	Hoist machine & motor location and roping			
74	90	Machine bedplate (A.K.a. Subframe or grillage) location			
75	90	Machine blocking beam(s) and plate(s) location as required			
76	90	Rope gripper/rope brake location			
77	90	Rail force reactions			
78	90	Identify floors served			
79	90	Total travel dimension			
80					
EV-DRAWINGS		Do the Drawings Show:			
81	90	NYCHA Standard Elevator Cab and Entrance Details (EV-201 and EV-202)			
82					
EV-DRAWINGS		Do the Schedules & Legends show:			
83	90	All referenced abbreviations and symbols			
84					
E-DRAWINGS		Do the E-Drawings show:			
85	90	Machine room and pit lighting fixtures/light switches/GFCI outlets., Machine room circuit breaker panel and disconnect switches, machine room exhaust fan and intake louver, thermostat, electrical riser diagram for feeders, circuit breaker panel schedule, car controller and hoist machine motor			
85					
M-DRAWINGS		Do the M-Drawings show:			
86	90	Inside machine room wall to wall dimensions, Exhaust fan and louver locations, thermostat, car controller and hoist machine, Fan manufacturer, model #, Horsepower, type, size, CFM, Louver manufacturer, model number, type, size			
87					
ELEVATOR		Do the Specifications include:			
88	90	All the Technical specifications required for the project			
89	90	The Maintenance and Service specifications for this project			
90					



New York City Housing Authority

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REVIEW COMMENTS - ARCHITECTURAL

DEVELOPMENT: Sample Houses

PROJECT: Comprehensive Rehab

REVIEW DATE: 8/7/2017

Note:

Response Types	Response Types	%
0	D - Duplicate	0%
0	T - Technical / \$\$\$	0%
0	G - Grammar/Spelling	0%
3	1 - Division 1	100%
0	S - Suggestion	0%
3	Total	100%

Response Codes		
A - Agree	3	1 - Division 1
D - Disagree	0	S - Suggestion
X - Further discussion required	3	Total

Comment #	Reviewer	Reference	Comment	Response Code	Response Type	Response	Status
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REVIEW COMMENTS - LANDSCAPE ARCHITECT

DEVELOPMENT: Sample Houses

PROJECT: Comprehensive Rehab

REVIEW DATE: 8/7/2015

Note:

ARCHITECT

Response Types	Response Types	%	
0	D - Duplicate	0%	
0	T - Technical / \$\$\$	0%	
Response Codes	0	G - Grammar/Spelling	0%
A - Agree	3	1 - Division 1	100%
D - Disagree	0	S - Suggestion	0%
X - Further discussion required	3	Total	100%

Comment #	Reviewer	Reference	Comment	Response Code	Response Type	Response	Status
1					1		
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REVIEW COMMENTS - STRUCTURAL

DEVELOPMENT: Sample Houses
PROJECT: Comprehensive Rehab
REVIEW DATE: 8/7/2015

Note:

Response Types	Response Types	%
0	D - Duplicate	0%
0	T - Technical / \$\$\$	0%
0	G - Grammar/Spelling	0%
A - Agree	1 - Division 1	100%
D - Disagree	S - Suggestion	0%
X - Further discussion required	Total	100%

Comment #	Reviewer	Reference	Comment	Response Code	Response Type	Response	Status
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REVIEW COMMENTS - MECHANICAL

DEVELOPMENT: Sample Houses
PROJECT: Comprehensive Rehab
REVIEW DATE: 8/7/2015

Note:

	Response Types	Response Types	%
	0	D - Duplicate	0%
	0	T - Technical / \$\$\$	0%
Response Codes	0	G - Grammar/Spelling	0%
A - Agree	3	1 - Division 1	100%
D - Disagree	0	S - Suggestion	0%
X - Further discussion required	3	Total	100%

Comment #	Reviewer	Reference	Comment	Response Code	Response Type	Response	Status
1					1		
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REVIEW COMMENTS - ELECTRICAL

DEVELOPMENT: Sample Houses
PROJECT: Comprehensive Rehab
REVIEW DATE: 8/7/2015

Note:

	Response Types	Response Types	%
	0	D - Duplicate	0%
	0	T - Technical / \$\$\$	0%
Response Codes	0	G - Grammar/Spelling	0%
A - Agree	3	1 - Division 1	100%
D - Disagree	0	S - Suggestion	0%
X - Further discussion required	3	Total	100%

Comment #	Reviewer	Reference	Comment	Response Code	Response Type	Response	Status
1					1		
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REVIEW COMMENTS - PLUMBING

DEVELOPMENT: Sample Houses
PROJECT: Comprehensive Rehab
REVIEW DATE: 8/7/2015

Note:

	Response Types	Response Types	%
	1	D - Duplicate	33%
	0	T - Technical / \$\$\$	0%
Response Codes	0	G - Grammar/Spelling	0%
A - Agree	2	1 - Division 1	67%
D - Disagree	0	S - Suggestion	0%
X - Further discussion required	3	Total	100%

Comment #	Reviewer	Reference	Comment	Response Code	Response Type	Response	Status
1					1		
2					D		
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REVIEW COMMENTS - ELEVATORS

DEVELOPMENT: Sample Houses
PROJECT: Comprehensive Rehab
REVIEW DATE: 8/7/2015

Note:

Response Types	Response Types	%
1	D - Duplicate	33%
0	T - Technical / \$\$\$	0%
0	G - Grammar/Spelling	0%
A - Agree	1 - Division 1	67%
D - Disagree	S - Suggestion	0%
X - Further discussion required	Total	100%

Comment #	Reviewer	Reference	Comment	Response Code	Response Type	Response	Status
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