

Connecticut Housing Finance Authority

CHFA Developer Training Seminars

Full Application

prepared by the

Technical Services Department





Welcome to CHFA

- This seminar is the third presentation for a series of five seminars defining the Technical Services acceptance procedure for multifamily developments
- This series will highlight each phase of the Technical Services review process in succession:
 - Pre-Application (Pre-Design/Site Analysis) – 4/24/07
 - Pre-Application Review Process (Feasibility/Concept) – 6/19/07
 - **Full Application (Design Development/Construction Development) – 8/14/07**
 - CHFA Approval/Initial Closing-11/13/07
 - Final Closing – 1/15/08
- This seminar outlines Technical Services' expectations and requirements for the Full Application Review Process





CHFA Technical Services

- CHFA Technical Services Staff
 - Mark Hirsch – Manager, Architectural & Construction Development (Technical Services)
 - August Sarno – Senior Architect/Environmental Reviewer
 - Charles Emerson – Architect
 - George Kleven – Field Observer
 - Orrie Vardar – Field Observer
 - Robert Ottiano – Development Cost Analyst
- The goal for Technical Services is to facilitate the development of quality affordable multifamily housing at the most reasonable cost.
- Housing units must be constructed to last the life of the mortgage (typically 40 years) – plus any extended use terms (up to 15 years)





What Technical Services Does

- Implements the CHFA Standards of Design and Construction through:
 - Development Team Review
 - Design/Construction Documents Review
 - Development/Construction Cost Review
 - Construction Observation
- Review Considerations
 - Utility
 - Convenience
 - Health and Safety
 - Accessibility
 - Comfort
 - Indoor Air Quality
 - Quality Materials
 - Durable Details
 - Energy Efficiency
 - Sustainability/Resource Conservation





Seminar Outline

- CHFA Design Development Review
 - Design Development Submission
 - Drawings
 - Survey
 - Site Plan
 - Residential Building Plans
 - Community and non-residential building plans
- Submission Requirements
 - Capital Needs Assessment (CNA) Report
 - Environmental Site Assessment Report
 - Environmental Site Assessment Process
 - Phase 1 Site Assessment
 - Phase II Site Assessment
 - Phase III Site Assessment
 - Hazardous Materials & Waste
 - Potential Findings On-Site
 - Environmental Attorney
 - Environmental costs
 - Construction Cost Breakdown
- Design Development Review Process
- Questions





CHFA Technical Services

Process

- Step I – Pre-Application: Preliminary Design/Concept/Site Analysis/Feasibility
- **Step II – Full Application: Design Development**
- Step III – Final Review: Construction Documents Development
- Step IV – Initial Closing: Construction Documents/Commitment/Pre-Construction Meeting





Design Development Review

- A definitive, agreed-upon design solution consistent with:
 - The Site Analysis and Site concept
 - CHFA Standards of Design and Construction
 - The available construction budget
 - The needs of the anticipated future residents





Design Development Review Submission

- The Development Team (Owner, Architect and General Contractor) meets with CHFA staff to present the Design Development Review Submission.
- Documents, prepared in accordance with CHFA Design Development Review Submission Requirements, are submitted to the assigned Underwriter for distribution to Technical Services, Asset Management and other Authority departments as may be required.
- The specific requirements of certain funding programs determine the time-sensitivity of the Design Development Review Submission.





Submission Requirements

- Submit one copy of all Design Development Submission documents to CHFA for review:
 - Drawings
 - 40% complete (minimum)
 - Capital Needs Assessment (CNA) Report
 - Environmental Site Assessment
 - Construction Cost Breakdown
 - Design Development Specifications
 - scope and material information (minimum)
 - Finance Application





Submission Requirements Drawings

- Design development drawings are Construction Drawings at a 40% (min.) level of completion, in accordance with CHFA Board Submittal requirements:
 - Drawing titles, sheet numbers, graphic and lettered scales, and a north arrow
 - Dimensions on major areas, typical dwelling units and community facilities
 - Types and sizes of building systems and equipment
 - Typical wall sections and details
 - Provide a rectangular space 1¼" h. x 3½" w. in the upper right corner of all drawings for the CHFA 5-party Initial Closing stamp





Submission Requirements Drawings

- Title Sheet
 - Development location, including location map, names and contact information for the Sponsor, Architect, Landscape Architect, Site Planner, Surveyor, Engineer and any other special consultants, revision dates, CHFA number, index of drawings
 - Development Data Summary
 - Area Tabulations for Residential Spaces and Common Spaces
 - Unit Net Area
 - Unit Gross Area
 - Building Gross Area





Survey

- Land Surveyors registered in the State of Connecticut
- Established benchmark and reference datum
- Standard of accuracy for boundary line surveys shall be Class A-2 as defined in the “Regulations of Connecticut State Agencies, Sections 20-300b-1 thru 20-300b-20” of the Connecticut General Statutes (CGS)
- Comply with 2005 ALTA/ACSM Minimum Standard Detail requirements
- CHFA-required long-form certification language (see handout)
- Boundary Survey
 - Standard of accuracy for boundary line surveys shall be Class A-2 as defined in the “Regulations of Connecticut State Agencies, Sections 20-300b-1 thru 20-300b-20” of the Connecticut General Statutes (CGS)
 - Deed References





Survey

- Topographic Survey
 - Standard of accuracy for topographic surveys shall be either Class T-2 or T-3 as defined in the “Regulations of Connecticut State Agencies, Section 20-300b-1 thru 20-300b-20” of the Connecticut General Statutes
 - Elevation Contours
 - Spot Elevations





Survey

- Locations Of Buildings/Retaining Walls
- Ditches/Streams
- Stream Channel Encroachment Lines
- Wetlands/Flood Plain Lines
- Manholes/Catch Basins/Culverts
- Underground/overhead Utility Lines/Sizes
- Poles/Fire Hydrants
- Streets, Drives, Walks
- Fences, Hedges, Boundary of Wooded Sections
- Isolated Trees (Size And Type)
- Any Other Man-made or Natural Features which would interfere with developing the property





Survey

- Invert elevations
- Storm and sanitary sewers, steam lines, bottom of electrical duct bank(s), etc. at manholes
- Existing underground structures and elevations
- Underground tanks, water lines and other utilities including valve boxes serving the area
- Streets and/or property lines within 300 feet of contemplated construction
- “As-drilled” locations of each boring and/or test pit





Survey

- Wetlands, watercourses, or other bodies of water, within or bordering the survey area
 - Wetlands delineated by a registered soil scientist with 3 years professional experience
 - Comply with all local, State and Federal requirements





Site Plan

- Further-developed Site Analysis Plan
 - The arrangement and functional groupings of units refined to a more exact scale
 - A meaningful sequence of usable spaces
 - Specific relationships of unit to structure, and structure to site





Site Plan

- Structures
 - Location, shape, size, arrangements and groupings
- Circulation and Parking
 - Location and materials of vehicular and pedestrian routes
 - Parking/dwelling unit relationship, location and number of spaces
- Soils (may be a separate report)
 - Depth and analysis of topsoil
 - Soil boring locations and data
 - Soil testing locations must include areas within proposed building footprint(s)





Site Plan

- Utilities
 - General major utility layout, easements and connections
 - Irrigation source and pressure
- Recreation
 - Location and type of facilities





Site Plan

- Grading
 - Existing and proposed contours at 2' intervals (minimum – subject to drawing scale and site conditions depicted)
 - Site Section
 - Resolve special and typical relationships
 - Berms and mounds
 - Storm water management; Detention and Retention areas
- Planting (site sections or perspective sketches)
 - General design character
 - Screening concepts
 - Relationship to units and open space, etc., with sections or sketches





Site Plan

- Lighting
 - Location and Character
 - Catalog illustrations
 - Height, wattage and photometric information
 - Separate Site Lighting Photometric Plan





Residential Building Plans

- Definitive designs for typical dwelling units, based on careful study of the development program and concept plan.
- Dwelling Unit Schedule
 - Total Number of Units
 - Number and Percent of Total of Each Unit Type
 - “Net Area” and “Gross Area” of Each Unit Type (see handout)
 - Gross Area of Community Building(s)





Residential Building Plans

- Dwelling Unit Design Development
 - Floor plans and building sections (with dimensions)
 - $\frac{1}{4}$ " = 1'-0 " scale for each unit type
 - Door and window locations
 - Door swings
 - Room area, dimensions and designated use of each room and space (including storage)
 - Demonstration of the “furnish-ability” of each unit type
 - Separate Furniture Layout Plans for all unit floor plans
 - Floor plans and elevations of typical residential buildings
 - $\frac{1}{4}$ " = 1'-0 " scale for each unit type
 - Basic construction techniques and exterior materials
 - Door swings
 - Key dwelling unit plans to building plans, and building plans to the site plan





Community and Non-residential Building Plans

- Community Facilities
 - Floor plans, building sections and elevations (with dimensions)
 - $\frac{1}{4}$ " = 1'-0 " scale for each unit type
 - Door and window locations
 - Door swings
 - Room area, dimensions and designated use of each room and space (including storage)
 - Demonstration of the "furnish-ability" of community spaces
 - Separate Furniture Layout Plans for all facilities
 - Floor plans and elevations of community buildings
 - $\frac{1}{4}$ " = 1'-0 " scale for each unit type
 - Basic construction techniques and exterior materials
 - Door swings
 - Key community building plans to the site plan





Community and Non-residential Building Plans

- Non-residential Facilities
 - Plans and elevations of commercial and other nonresidential facilities included in the development
- Additional Information
 - Study models and perspective sketches as necessary to fully illustrate development conditions





Submission Requirements

Capital Needs Assessment (CNA) Report

- Prepared within 6 months of Finance Application
- Qualifications of the professionals who prepare the report
 - Connecticut-licensed Architects and/or Engineers
- Observations and assessments based upon physical observations of the building exterior and interior, including mechanical and accessible spaces, attics, roofs, crawl spaces, etc.
- Any spaces not accessed shall be noted
- Narrative description of the development and overall assessment of the property condition
 - Property location, age, physical attributes, number of units inspected and the physical condition of the units inspected
 - Presence, or suspected presence, of environmental hazards, such as asbestos, lead paint or mold





Submission Requirements CNA Report

- Photographs supporting the findings in the report
- Site
 - General topography, ground water drainage, bituminous/concrete pavement, walks and curbs, site amenities, water, storm, sanitary sewer, gas and electric services.
- Structural System
 - Substructures and super-structure, including exterior wall systems, interior bearing walls/columns, doors and windows, roofing system and drainage





Submission Requirements CNA Report

- Common area and unit interiors
 - Existing finishes (carpet, vinyl wall covering, paint, VCT, ceramic tile, etc.)
appliances, cabinets, toilet fixtures, exhaust fans, range hoods, etc.
- Building mechanical systems
 - HVAC systems, plumbing and domestic hot water, fire protection systems, electrical lighting and power systems, communication and security systems, etc.





Submission Requirements CNA Report

- Accessibility
 - Accessibility design conformance consultant's certification that the specific development complies with all ADA, ABA, Section 504 and Fair Housing Act Guidelines. If unable to certify compliance, include recommendations for achieving compliance.
- Interviews with On-Site Property Management and Maintenance Personnel
 - Past repairs, pending repairs and chronic physical deficiencies
 - 5-year history of the Owner's capital repair expenditures for the development





Submission Requirements CNA Report

- Estimated Costs Associated with Delineated Needs and Proposed Improvements and Upgrades
 - Budget and an in-depth scope of work for the work proposed
 - Expenditures and costs for all property improvements that may affect future marketability
 - Upgrades may include adding central air conditioning, community room additions, etc.
 - Spreadsheet with line item costs of proposed improvements expensed in year one, with a life-cycle replacement budget reflecting appropriate line item costs expensed over the proposed mortgage term
 - All costs in today's dollars, with an appropriate rate of inflation for costs expensed over the life-cycle term.



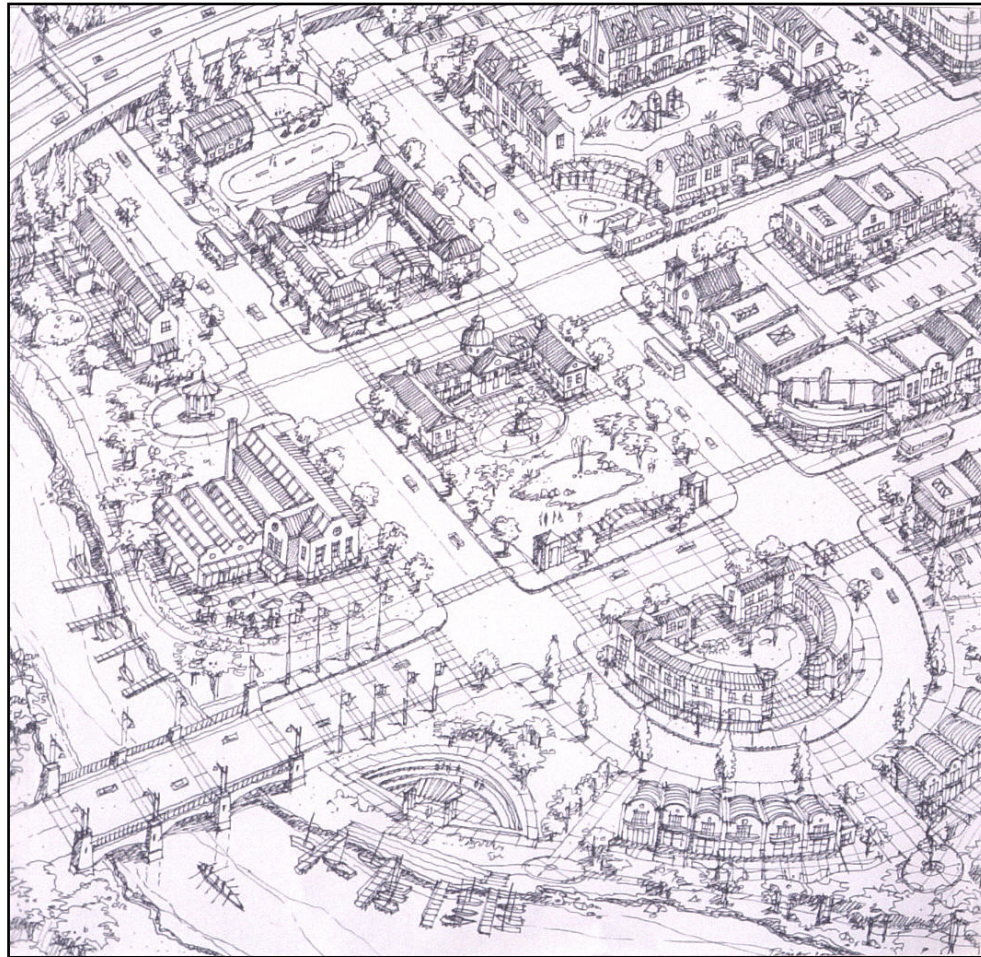


Submission Requirements CNA Report

- Structural Needs and Architectural Needs Assessment Reports
 - In the case of a complete gutting of a building, a Structural Needs Assessment Report prepared by a Structural Engineer (adhering to the latest applicable Codes), and an Architectural Needs Assessment Report prepared by an Architect (to maintain functional and aesthetic integrity of major building components) are required. The reports shall include the age, the material, the condition and life expectancy for all such components.



ENVIRONMENTAL SITE ASSESSMENT





Submission Requirements

Environmental Site Assessment & Hazardous Material Inspection Reports

- Consultant Qualifications
- Requirements per DEP CT Transfer Act Site Assessment Guidance Document (TASA)
- Compliance with ASTM E1527-05 Standard
- Environmental Hazards & Concerns
 - Lead
 - Radon
 - Volatile Organic Compounds (VOCs)
 - Asbestos
 - PCB's
 - Underground storage tanks





Environmental Site Assessment Process

- ESA Components are generally presented in three major phases: **Phase I, II and III**
- It may be cost effective to combine Phase I and Phase II or Phase II and Phase III
- Consultant may conduct activities consistent with Phase III for one part of the site while conducting activities consistent with Phase I or Phase II for other parts of the site.





Phase I Site Assessment

- **A Phase I Site Assessment** is an investigation of the existing and past uses of a site for the purpose of identifying areas on a site at which pollutants may have been released into the environment. Such areas may be identified as “Areas of Concern” or “Potential Release Areas.”
- **Visual Inspection & Observations**
 - Site and Existing Buildings
 - Record & Document Review
 - Interviews – Agencies & Key Persons
 - Historic Site Uses/Prior Construction
 - Date of Construction
- **Report** (shelf life 180 days after site inspection)





Phase II Site Assessment

- **A Phase II Site Assessment** is an investigation of each “Area of Concern” or “Potential Release Area” to determine whether or not pollutants have, in fact, been released to the environment
- Investigation
 - Ground penetration radar survey (GPR)
 - Sub-surface soil/groundwater testing
 - Soil excavation, soil test borings, sampling, lab testing & results





Sample: On-Site Dumping- Area of Concern, Potential Release Area

Drums, Gas Tanks, Containers & Other Waste. Effect on Soil & Groundwater





Phase III Site Assessment

- **A Phase III Site Assessment** is an investigation that fully characterizes the nature and extent of contamination resulting from any release which has occurred on a site.
- While remedial actions to abate pollution may be taken at any time in the course of characterizing a site, only after a complete Phase III investigation can a final remedial action plan be developed.
- Additional Investigation & Testing
 - UST's (age, number, size & location)
 - Leaking or non-leaking
 - Contaminated Soil-Groundwater
 - Define scope or area
 - Quantify
 - Estimated Costs for Site Remediation
 - Remediation Action Plan (RAP)





Hazardous Materials and Waste

- **Lead-based Paint**
 - Follow current Federal, State and Local Regulations:
 - HUD Lead Paint Guidelines
 - State CTDPHAS – Guidance Document
 - EPA requirement removal/disposal of LBP
 - OSHA 29 CFR 1926.62-lead construction std.
 - Local Governmental Laws & Regulations
- **Asbestos**
 - Follow current Federal, State and Local Regulations:
 - EPA
 - State CTDPHAS
 - State CTDEP
 - Municipal (City/Town)





Hazardous Materials and Waste

Radon

- Provide Radon Testing. If testing is not provided or possible, a Radon Mitigation System will need to be installed
 - References
 - EPA-Radon resistant construction techniques
 - ASTM-Installation of Radon Mitigation
 - Results of final testing will determine if a Passive or Active System is needed
 - EPA Action Guideline = 4 pCi/L (minimum)

- **Other Hazards**

- Mold
- Urea Formaldehyde Insulation
- PCB (Polychlorinated Biphenyl's)
- Drinking Water/Piping Systems
- Flood Zone Classification
- Wetland Area Designation

RADON

**Invisible, Odorless,
Radioactive Gas**

**The Second Leading
Cause of Lung Cancer**





**MOLD SAMPLES: Wall Cavity,
Wall & Ceiling Areas**





Potential Environmental Findings

- Underground/Above Ground Storage Tanks
- Contaminated Soil and/or Groundwater
- Lead Paint Identified in Existing Buildings
- Asbestos Identified in Existing Buildings
- Radon Levels above EPA Guidelines
- Hazardous Materials/Chemicals/Waste
- Flood Hazard Zone

Results generally identified following Phase II and/or Phase III ESA and Hazardous Material Inspections





Hazardous Waste

Treatment

Process used to change the physical, chemical or biological character of a waste to make it less of an environmental threat.

Storage

Temporary Holding of waste prior to treatment.

Disposal

Approved Landfill Facility designed to permanently contain the waste & prevent release of harmful pollutants.

Recordkeeping/Reporting

Manifest Forms, Reports, Procedures are required for Transport/Facility Owners & Operators.

Additional Resources

US EPA, CT DEP WEBSITES





Environmental Attorney & Environmental Costs

- The Owner's Environmental Attorney needs to review environmental reports and submit a written opinion indicating if the site is considered an "Establishment" per requirements of the CT Transfer Act.
- Submit cost estimate for review upon completion of all inspection, testing and reports, for the determination of abatement and/or site remediation work.



CONSTRUCTION COST BREAKDOWN





Submission Requirements Construction Cost Breakdown

- CHFA forms 2328-MR03 & C-1-48
 - Number of Buildings
 - Total Project Square Footage (all buildings)
 - Total Living Area (all dwelling units)
 - Total Retail Area (all commercial spaces)
 - Total Number of Units
 - Total Common Area
 - Total Management Area





Submission Requirements

Construction Cost Breakdown (continued)

- Submit updated CHFA Form 2328
- Attach CHFA Form C-1-48 Exploded Trade Payment Breakdown (ETB)
- <http://www.chfa.org/Multifamily/CertificationPage.htm>
- ETB Cost flows into CHFA Form 2328-MR03
- Submission of updated drawing requires submission of CHFA Forms 2328 and C-1-48
- Completed drawings require signed CHFA Forms 2828 and C-1-48





Stored Materials

- Stored materials language is on signature page 4 of ETB
- In general, CHFA does not allow payment for stored materials, either on-site or off-site
- CHFA will allow payment for stored 'long-lead' items on request to CHFA Underwriting and Technical Services. Items include:
 - Elevators, Precast Concrete, Structural Steel and Large project-specific mechanical equipment
- Contractor pays for Storage and Insurance
- Contractor provides cost total in General Requirement
- Payment requisitioned when 'long-lead' items are installed and accepted by owner and CHFA Field Observer



DESIGN DEVELOPMENT REVIEW



Design Development Review Process



- Technical Services staff will review and comment on the submitted documents according to a checklist based on CHFA Standards of Design and Construction 2007, and will issue formal written comments at the completion of the review
- The Developer's Design Team shall then prepare and submit a written response to CHFA including comments and desired modifications or waivers of CHFA Standards of Design and Construction, and compelling reasons for CHFA to consider in granting a variance. The General Contractor participates in completing the Contract Documents offering expertise in Value Engineering
- When submitting revised drawings, all changes shall be highlighted by architectural graphic standard "clouds".

