

PLAN REVIEW INSTRUCTIONS



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**State of New Jersey
Department of Community Affairs
Division of Codes and Standards
Bureau of Construction Project Review
PO Box 817
101 South Broad Street, 4th Floor
Trenton, New Jersey 08625
609-633-0800 (telephone #)
609-633-2525 (fax #)
Planreviewintake@dca.nj.gov**

www.nj.gov/dca/divisions/codes/offices/bcpr.html



State of New Jersey
Philip D. Murphy, Governor

Department of Community Affairs
Lt. Governor Sheila Y. Oliver, Commissioner

TABLE OF CONTENTS

Introduction	3
When Department review and release is required	3
The Uniform Construction Code	4
Copies of referenced subcodes.....	5
General information and instructions	6
Complete plan release	6
Partial plan release	6
Footings and foundations	7
Underslab utilities	7
Structural framework	7
Exterior building	7
Interior building	7
Plumbing	7
Mechanical	7
Electrical	7
Fire protection.....	8
Elevator	8
Project Review Application	8
Contact Information	10
Fee calculation instructions	11
General instructions	11
Plan review fee schedule.....	11
Volume calculation worksheet	13
Plan submission check lists	14
General instructions	14
Footings and foundations.....	14
Underslab utilities	14
Structural framework	14
Exterior building	14
Interior building	15
Plumbing	15
Mechanical.....	15
Electrical	15
Fire protection.....	16
Elevator	16
Barrier-free.....	17

INTRODUCTION

The Department of Community Affairs, Division of Codes and Standards, Bureau of Construction Project Review has prepared this comprehensive plan review application guide to assist applicants in the plan review and release process. The guide gives step by step instructions to the plan submittal process, including definitions for the various types of construction projects, check lists for both complete plan filings and partial filings, calculation worksheets for fee schedules, addresses, and telephone numbers if there are any questions.

In 1975, the State Legislature enacted the New Jersey Uniform Construction Code Act which established the Department of Community Affairs as the primary building codes and standards agency in the State. The Act provided for a single, mandatory construction code and for a fundamental restructuring of the enforcement process. Hence, the New Jersey Uniform Construction Code (UCC), N.J.A.C. 5:23, et seq., was adopted and became effective January 1, 1977.

When Department Review and Release is Required

Municipalities are delegated the bulk of the responsibility for enforcing the UCC, including performing plan reviews, issuing permits, inspecting construction, and issuing certificates of occupancy. However, the Department is required to perform plan review in municipalities where the subcode officials and construction official do not possess code enforcement licenses of the appropriate class. The construction class of the particular municipality can be obtained through either the municipality's construction office, administrative offices, or by calling Regulatory Affairs at (609)984-7672.

In accordance with the UCC, submission to the Department for plan review must be made if the proposed project is:

- Class IA Departmental plan review and release is required prior to the issuance of a construction permit unless the construction official and each appropriate subcode official in the municipal enforcing agency is certified as a HHS construction official or subcode official;
- Class IIA Departmental plan review and release is required prior to the issuance of a construction permit unless the construction official and each appropriate subcode official in the municipal enforcing agency is certified as a HHS or ICS construction official or subcode official;
- Class III.....A Departmental plan review shall not be required except when the Department acts as the enforcing agency. Application should be made to the local construction office, not the Department.

In addition to the above categories, all plans for the following structures must be submitted to the Department for review and release:

- Electrical generating stations and substations, including nuclear;
- Incineration plants;
- Solid waste disposal plants;
- Public mausoleums, vaults, crypts and other structures intended to hold or contain human remains;
- Health care facilities as defined in N.J.A.C. 5:23-1.4;
- Public school facilities as defined in N.J.A.C. 5:23-1.4;
- State-owned structures, unless delegated to other agencies by memoranda of understanding;
- Prototype plans intended for use in more than one municipality;
- High level alarm systems in terminals, as defined in NJSA 52-27D-214;
- Billboards located on land owned or controlled by any state, county or local department, agency, board, commission, authority, or instrumentality;
- Stadium, arenas and theaters with an occupant load of 5000 or greater;

- Casino hotels; and
- All pre-manufactured systems for Class I and Class II structures, other than those authorized to be approved by an in-plant inspection agency licensed to perform Class I and Class II plan review, and all on-site installation of Class I and Class II pre-manufactured construction within the jurisdiction of a local enforcing agency that is not a Class I or Class II agency.

Once a release—either partial or complete—is obtained from the Department’s Bureau of Construction Project Review, the municipalities will issue the appropriate permit(s) and perform inspections so that construction may ensue.

The Uniform Construction Code

The New Jersey Uniform Construction Code (N.J.A.C. 5:23 et seq.) consists of a series of regulations that govern the construction process in the state. All aspects are covered, with subchapters on administration and enforcement; duties, powers and procedures of the various enforcing agencies; licensing of code enforcement officials; rehabilitation; barrier-free requirements; asbestos hazard abatement; radon hazard; and elevator safety. The UCC also adopts certain national model codes, called subcodes, to be an integral part of these regulations. Each subcode covers a specific technical area of construction activity. The subcodes and the sections that adopt them are as follows:

Subcode – Adopted Model Code – UCC Reference/Amendments

Building -- International Building Code/2015 -- N.J.A.C. 5:23-3.14

Plumbing -- National Standard Plumbing Code/2015 -- N.J.A.C. 5:23-3.15

Electrical -- National Electrical Code (NFPA 70)/2014 -- N.J.A.C. 5:23-3.16

Fire protection -- Portions of building, mechanical and electrical subcodes -- N.J.A.C. 5:23-3.17
See indicated UCC reference for specific information/sections

Energy, Commercial -- ASHRAE 90.1-2013 -- N.J.A.C. 5:23-3.18

Energy, Residential -- International Energy Conservation Code/2015 -- N.J.A.C. 5:23-3.18

Mechanical -- International Mechanical Code/2015 -- N.J.A.C. 5:23-3.20

Fuel Gas -- International Fuel Gas Code/2015 -- N.J.A.C. 5:23-3.22

One- & two- family dwelling -- International Residential Code/2015 -- N.J.A.C. 5:23-3.21

Rehabilitation -- New Jersey Rehabilitation Subcode (updated yearly) -- N.J.A.C. 5:23-6

Barrier Free -- Chapter 11 of the building subcode, including ICC/ANSI A117.1-2009, and NJ Barrier Free Subcode -- N.J.A.C. 5:23-3.14 and N.J.A.C 5:23-7

To more fully understand the plan review process and what is required to secure a plan release, the applicant is referred to the New Jersey Uniform Construction Code. This “New Jersey Administrative Code,” Title 5, Chapter 23, may be purchased by contacting the Department’s publications unit at 609-292-7898 and/or submitting an order form which may be obtained at the DCA web site.

Copies of the referenced subcodes may be purchased from the following organizations:

International Code Council, Inc. (ICC)
4051 W. Flossmoor Rd.
Country Club Hills, Ill. 60478-5795
(800) 214-4321

Referenced publications:

- **International Building Code**
- **International Energy Conservation Code**
- **International Mechanical Code**
- **International Residential Code**
- **International Fuel Gas Code**

The National Fire Protection Association (NFPA)
Batterymarch Park
Quincy, Mass. 02269
(617) 770-3000

Referenced publication:

- **The National Electrical Code (NEC)**

The National Association of Plumbing-Heating-Cooling Contractors
P.O. Box 6808
Falls Church, VA 22046
(800) 533-7694

Referenced publication:

- **The National Standard Plumbing Code (NSPC)**

American National Standards Institute
11 West 43rd Street
New York, NY 10036

Referenced publication:

- **ICC/ANSI A117.1**

American Society of Heating, Refrigerating and
Air Conditioning Engineers, Inc.
3916 Ranchero Drive
Ann Arbor MI 48108
(800) 527-4723

Referenced publication:

- **ASHRAE 90.1**

GENERAL INFORMATION AND INSTRUCTIONS

***As of January 1, 2016 all plan submittals to the NJ Bureau of Construction Project Review will be required to be in an electronic format. Please see the NJDCA Electronic Plan Review manual for specifics.**

The applicant must complete an application for each project submission. For detailed guidance in its preparation, refer to instructions later in this section.

When making application for plan review, the applicant must determine certain information. Most importantly, the applicant must decide which type of review process to request—complete or partial plan release. Consider the following points when deciding:

Complete Plan Release

A complete plan release may be requested when all plans, specifications, and fees are presented to the Bureau at the time of original project submission. The advantage of this is that all individual elements of the project can be coordinated and cross-checked for code compliance, reducing the possibility of last minute plan changes to correct errors across the various subcodes. Release(s) and/or written notice of rejection(s) will be forwarded to the project coordinator within 20 business days of submission of a complete application. The following items are to be provided for consideration as a complete plan release:

1. One complete set of plans with digital signatures and seals is required for the original project submission. A set should include, as appropriate:
 - Footings and foundations
 - Underslab utilities
 - Structural framework
 - Exterior building
 - Interior building
 - Plumbing
 - Mechanical
 - Electrical
 - Fire protection
 - Elevators
 - Complete specifications, calculations, soil reports as required
 - Site plans
 - Letter of barrier-free accessibility costs, for renovation and alteration projects
2. The application/fee schedule must be submitted with a Scope of Work by the applicant at <http://dcaplanreview.nj.gov>.
3. Plans will not be assigned for review and the 20-day clock will not begin to run until this office is in receipt of the required plan review fee and all required documentation. The payment should be paid via <http://dcaplanreview.nj.gov>.

Partial Plan Release

Requests for partial plan release are generally submitted when the entire project is not fully designed and it is necessary to begin construction due to considerations such as weather, finance, local requirements, etc. An advantage of this procedure is that additional work can be done to fine tune and complete plans not immediately required for construction. Disadvantages are that coordination of reviews is not possible and time may be lost in changing plans due to inconsistencies in submitted drawings. Each release request will be subject to either release or written notice of rejection within 20 business days of assignment to the review team. In any case, no partial release will be issued until all fees have been paid. The submission procedure for partial releases is as follows:

1. The application/fee schedule must be submitted with a Scope of Work by the applicant at <http://dcaplanreview.nj.gov>.

2. Fees should be calculated and paid to cover the type of work being done--either new buildings and additions or alterations and renovations.
3. Please note that drawings with digital signatures and seals are submitted pursuant to a specific partial release should, to the greatest extent possible, contain only information related to that release. In any case, the Bureau's release stamp affixed to the drawings will indicate the applicable releases; permits or work on any other aspects of the drawing will not be authorized.
4. Specific requirements for each type of partial release are:
 - a. Footings and foundations release
 - Footing and foundation design drawings
 - Soil bearing analysis reports; if pile foundation, provide test pile information
 - Structural load calculations in compliance with the building subcode
 - It is strongly recommended that, in order to avoid complications further on in the review process, a full set of architectural plans - preliminary or final - be submitted at this time. The applicant will be advised by the Bureau of any changes that may be necessary for these architectural plans to conform to the code.
 - b. Underslab utilities release
 - Plans for underslab plumbing and electrical installation as appropriate
 - c. Structural framework release
 - Structural framework plans
 - Structural calculations
 - d. Exterior building release
 - Architectural plans indicating site plan, sections, building elevations, other exterior details required to show code compliance as outlined in the attached check lists
 - e. Interior building release
 - Architectural plans, indicating occupancy loads, floor plans with dimensions, all interior partitions and walls, including trim, finish, and door materials. Include details on means of egress, and other information indicated in the attached check lists
 - f. Plumbing release
 - Complete plumbing plans
 - g. Mechanical release
 - Complete mechanical plans
 - h. Electrical release
 - Complete electrical plans
 - i. Fire protection release
 - Complete fire protection drawings that include system design and head locations; hydraulic calculations; water flow tests from an approved agency
 - Shop drawings are not required as long as sufficient details are provided to verify compliance with the Code

j. Elevator release

- Drawings - refer to elevator check list for specific items that must be included
- Shop drawings are not required as long as sufficient details are provided to verify compliance with the Code

5. For construction of speculative buildings, all partial releases except interior building must be obtained. Tenant space fit-up work will be processed as a separate project, but it will be considered as an alteration to the speculative building. The tenant project number will be the same as the main building with the addition of an alphabetic suffix.
6. The holder of a partial release proceeds at his own risk, without assurance that a release for any other part or for the entire structure will be granted.
7. Final release is mandatory and can only be issued when all necessary drawings, fees, and other approvals have been secured and released.

Application Process

Once the type of review process has been decided, the applicant should proceed to complete the application at <http://dcaplanreview.nj.gov> . The following details are for specific areas on the project review application; refer to it as each item is detailed.

1. Project identification

- Enter project name as it should be identified in the plan review, release and permitting process.
- Enter the street address of the project.
- Enter municipality where project is located – DO NOT indicate mailing address.
- Enter county where project is located.
- Enter block/lot numbers as per the official municipality map.

ONLY ONE ADDRESS PER PROJECT IS ALLOWED.

2. Project type and filing method

- Check the project type box(es) that apply for new construction and/or addition, change of use, repair, renovation, alteration or reconstruction.
- Check the filing type box for either a complete or partial review release, as desired by the applicant.

3. Project specifications

- Fill in all spaces as applicable to the project structure.
- Enter Use Group, as defined in the building subcode.
- Enter area of largest floor.
- Enter gross area of building.
- Enter total building volume [refer to volume calculation worksheet for computation methods].
- Specify number of stories.
- Indicate maximum height of building.
- Show construction type, as defined in the building subcode.
- Enter the total cost of the project including all partial releases, even if they are not yet submitted.
- If the project is for renovations or alterations to an existing building, enter that portion of the total project cost that is dedicated to improving barrier-free accessibility. This amount is not required if the project is for a new structure, an addition, or repairs.

Note: All items in this section will be compared with information shown on submitted drawings—any discrepancies will be noted and may require resubmission of the application/fee schedule.

4. Partial releases requested

- This section must be filled out.

5. Applicant information

- Owner Name: enter name, address, phone number and email address of the individual, organization or governmental agency that is the titled owner of the project. **Note:** owner information must always be filled in even if there is an owner's designated agent.

- Owner's Designated Agent Name: Enter name, address, phone number and email address of the individual/organization that is acting on behalf of the project owner and will be receiving all project related correspondence from the Bureau. **Note:** do not list the architect/engineer of record as the owner's designated agent.

- Architect/Engineer: enter name, address, firm name, phone number and email address of the design professional responsible for preparation of drawings and specifications.

- Comments and partial releases will be sent to the project coordinator. All comments and releases can also be found in specific reports in Eplans.

-Project Coordinator: person who will upload all documents and plans.

Contact information

Bureau mailing address is:

NJ Department of Community Affairs
Bureau of Construction Project Review
PO Box 817
101 South Broad St, 4th Floor
Trenton, NJ 08625

To contact the Trenton Office, call 609-633-0800 or email planreviewintake@dca.nj.gov .

Atlantic City Office mailing address is:

NJ Department of Community Affairs
Bureau of Construction Project Review
112 Park Place, 4th Floor
Atlantic City, NJ 08401

To contact the Atlantic City Office, call (609) 441-7349

FEE CALCULATION INSTRUCTIONS

The volume worksheet must accompany the Fee Schedule for all new construction or additions. In the case of both new construction plus renovations, a volume calculation worksheet for only the new construction must be submitted. The volume is used to complete Sections 1A and 2C of the Fee Schedule. Cost of reconstruction, alteration, renovation, and repair, if any, is used to complete Sections 1B and 2D of the Fee Schedule.

General Instructions

The following information is required on the Project Review Application, and Sections 1A and 2C of the Plan Review Fee Schedule:

Use Group (See building subcode, Chapter 3: Use and Occupancy Classification)

- a. B.....Business
E.....Educational
HHigh hazard
I-1.....Institutional, residential
I-2.....Institutional, incapacitated
I-3.....Institutional, restrained
I-4.....Day Care Facilities
M.....Mercantile
R-1Residential, hotels
R-2Residential, multi-family
R-3Residential, 1 and 2 family over 3 stories
R-4Residential, therapeutic
R-5Residential, 1 and 2 family 3 stories or less
UUtility and miscellaneous

- b. A-1Assembly, theaters
A-2Assembly, nightclubs, restaurants
A-3Assembly, lecture halls, museums, churches, libraries
A-4Assembly, arenas, skating rinks
A-5Grandstands, bleachers, stadiums
F-1.....Factory, moderate hazard
F-2.....Factory, low hazard
S-1.....Storage, moderate hazard
S-2.....Storage, low hazard

- c. Farm use buildings: Refer to N.J.A.C. 5:23 - 3.2(d) for specific information on applicability and requirements.

Plan Review Fee Schedule

Upon determining the use group and volume for new structures and/or total cost of renovation for existing ones, proceed to the Fee Schedule and enter all required information. Only those items pertaining to the particular project type need to be completed. Healthcare projects are separated on the Fee Schedule because their fees are different. If unsure as to whether a Healthcare review is required for all or a portion of the project, please contact the Bureau before completing the Schedule and remitting the fee.

Each section of the Fee Schedule contains instructions on how to complete it. If there is any question about fees, please request assistance at (609) 633-0800.

Permits:

The Plan Review Fee Schedule is not to be used to determine permit fees. Each municipality has a permit fee schedule established by local ordinance which will be used for this purpose. The municipality is required to credit the applicant an amount equal to 20 percent of their permit fee, since the plan review was performed by the Department rather than the local agency.

If the project submitted for review is a State-owned facility, contact the State Buildings Unit at 609-633-7010.

VOLUME CALCULATION WORKSHEET

In accordance with N.J.A.C. 5:23 - 2.28, "volume computation," the volume of the structure shall be calculated as follows:

Structures with basements: (N.J.A.C. 5:23 - 2.28(b)) Height extending from basement or cellar floor to

Top of the roof beams of a flat roof	_____	ft.
Mean height of a pitched roof	_____	ft.
Floor area	_____	sq. ft.
Total volume = floor area multiplied by height	_____	cu. ft.

Structures without basements: (N.J.A.C. 5:23 - 2.28(c)) Height extending from one-fifth the distance from the first floor level to bottom of the footings—not exceeding 2-1/2 feet below the first floor level to

Top of the roof beams of a flat roof	_____	ft.
Mean height of a pitched roof	_____	ft.
Floor area	_____	sq. ft.
Total volume = floor area multiplied by height	_____	cu. ft.

Open sheds: (N.J.A.C. 5:23 - 2.28(d)) The volume shall be measured within the perimeter of the roof for a height from the grade line to the mean roof level.

PLAN SUBMISSION CHECK LISTS

General Instructions

The following pages contain items grouped by release area that indicate the typical kinds of information to be submitted on plans and specifications. Please understand that these check lists are intended to be only a guide, therefore they will not be accepted in lieu of actual plans and specifications. In no way should they be considered all-inclusive; nor should it be assumed that every project requires all of the items included below. The lists have been developed from our experience as to what we have found to be missing from submitted documents and are presented in an effort to simplify the submittal and review process.

Footings and foundations

1. Enclose soil engineer's report for foundation investigation that provides recommendations for bearing capacity and includes certified test pit / boring location plans.
2. For pile foundations, enclose details for pile type, installed capacity, driving criteria, load test details for piles, as per the building subcode.
3. Enclose foundation plan, foundation sections, and specifications of materials to be used.
4. Enclose a site diagram, showing to scale the location of the new construction.
5. For basements or other retaining walls below grade, enclose structural calculations and details of wall thickness, reinforcement, etc.
6. For column foundations / wall foundations, enclose a chart showing load calculations per floor to top of column / wall footing or top of soil.

Underslab utilities

1. Provide details of plumbing and/or electrical installation within or beneath main foundation slab. Only those items directly involved with plumbing and/or electrical work beneath the slab need be shown.
2. For electrical installations, specify the following items:
 - Depth of cover from top surface of conductor, cable, conduit, or other raceway, to finished grade
 - Indicate grounding details as appropriate for slab installation
 - Specify underslab conductor sizes/types, and breaker sizes being supplied by them
3. For plumbing installations, provide the following:
 - Show all sanitary and storm drainage lines, indicating pipe size(s), slope, and materials used
 - Indicate point of discharge for storm drainage systems
 - Show details of underslab piping for domestic water and fire suppression systems, including pipe size(s) and materials

Structural framework

1. Enclose structural floor plans, roof plan showing sizes of members, and structural computations.
2. Enclose drawings showing connection details, and other technical data.
3. For trusses / floor joists, enclose drawings showing details of sizes, design criteria for live load / dead load, forces in member, specifications for lumber, sizes of lateral braces, sizes of purlins, their maximum spacings, and maximum deflection of members under working load.
4. For outer walls, provide calculations for horizontal wind load, justifying thickness of wall and size of reinforcement, if any.
5. Provide details for design criteria (live load / dead load, snow load, earthquake load, wind load) and specifications of material (steel, lumber, concrete, reinforcing steel bars, etc.), indicating allowable stress.

Exterior building

1. Provide setback distance of building from lot lines or other structures on same lot on all sides.
2. Provide the fire rating of exterior walls in hours; specify design/UL number (if rating is required).

3. Indicate accessible route of travel from parking lot to front door, and details of ramps with indicated slopes, for compliance with the barrier-free subcode.
4. Provide elevations, exterior wall/building sections, and details on all exterior doors and windows.

Interior building

1. If mixed use, indicate exact location, occupancy load, and square footage for these uses. Also show incidental uses, if appropriate.
2. If design is such that complete information cannot be shown on the project review application, indicate on plans all construction types, number of stories, and building heights.
3. Indicate door, window, and finish schedules on plans.
4. Provide thermal ratings of walls, ceilings, etc.
5. Provide the fire rating of corridor walls, floors, ceilings, exit stairways, shafts, columns, girders, beams, and roofs in hours; specify design/UL number (if rating is required).
6. For residential use, show STC ratings of partition walls and ceilings.
7. Show exit calculations; indicate the number of exits provided per floor, and specify the maximum travel distance in feet.
8. Indicate interior accessible routes of travel and details of ramps with indicated slopes, for compliance with the barrier-free subcode.
9. Provide details on location of telephones, water fountains, toilet rooms, laboratory and shop facilities, for compliance with the barrier-free subcode.
10. If a fire suppression system is required by the building subcode, verify that drawings comply with the fire protection subcode.

Plumbing

1. A site plan, showing plumbing lines into and out of the building to a distance five feet from the building line, must be submitted.
2. Include a sanitary drain and vent riser diagram, plan and elevation.
3. Include a fixture schedule listing each fixture, description, trap, vent sizes, DFU valve, SFU valves, hot and cold-water connection sizes.
4. Include materials specifications, or reference on the drawings for piping materials.
5. Show storm water piping system, noting square foot area served by each roof drain, piping size and pitch. Plumbing plans must show storm water lines and pitch from building to approved discharge outfall, public storm sewer, or site drainage system.
6. Include a hot and cold-water riser diagram, showing size and SFU counts.
7. Cleanouts must be indicated and labeled in all drainage lines.
8. Wall penetration sleeves should be indicated and details shown.
9. If a multi-story building, riser diagram for cold water must correspond in format and contain information shown in Appendix B of the plumbing subcode.
10. Plumbing fixtures and elevations / details shall conform to the barrier-free subcode - specifically fixture heights, spacing, etc.

Mechanical

1. Show calculation for ventilation air requirement based on occupant load (refer to mechanical subcode).
2. Include Cop / EER value of HVAC units, boiler efficiency, etc. Supply the required energy calculations.
3. Include specifications on duct construction and installation, such as supports, loads, etc.
4. Include schematics and details of hazardous exhaust in units such as laboratory hoods.
5. Provide manufacturer's recommendation information for laundry / dryer exhaust.
6. Show locations of all fire dampers.
7. Include drawings for kitchen exhaust hood, duct and hood fire suppression system. Drawings must contain information required by the mechanical subcode and the fire protection subcode.
8. Include all details, specifications, and calculations (building, volume, air change, riser diagram) for smoke exhaust / control, stair pressurizations, etc., as applicable per building and fire protection subcodes.
9. Show details of all hydronic, gas, and fuel oil piping.
10. Include calculations for combustion air requirement.
11. Show all details of chimneys and vents.
12. Show machinery layout plan, equipment schedule, and details of the processes involved.
13. Show height of all mechanical controls, for compliance with the barrier-free subcode.

Electrical

1. Show details of all grounding, including:
 - Grounding electrode system;

- Distribution grounding;
 - Transformer grounding — if needed, show how neutral is established from transformer;
 - All wire sizes.
2. Show all overcurrent protection — indicate whether breakers are inverse, instantaneous, or non-adjustable.
 3. Indicate the specific wiring method to be used in all the various areas.
 4. Show circuitry of all emergency systems and emergency lighting, including fire pumps, elevators, and exit discharge.
 5. Show details of all wiring and bonding for pools, spas, hot tubs, etc.
 6. Indicate the type of conductors to be used, copper or aluminum, and their type of insulation and temperature rating.
 7. Indicate all wire and conduit sizes.
 8. If neutral is reduced, provide calculations.
 9. Show all panel locations; indicate working clearances about all electrical equipment, switch boards and panel boards.
 10. Provide panel schedules and identify all circuits.
 11. Provide riser diagrams.
 12. Show circuitry, wire size, type of insulation and conduit size of fire signal systems.
 13. Show height of all controls, for compliance with the barrier-free subcode.

Fire protection

1. For sprinkler and standpipe systems, specify system type, water supply information, and pipe sizes. Also indicate type of piping and fittings used throughout.
2. Provide hydraulic calculations for sprinklers; indicate hydraulic reference points.
3. Show measurements between branch lines and heads on lines, and indicate type of sprinkler heads used throughout the system.
4. Indicate height and location of all standpipe hose connections.
5. Provide a complete sprinkler system riser diagram with all parts identified.
6. For storage areas, provide hazardous material data sheets on commodities stored as appropriate, including quantity(s) stored.
7. Show installation details and location of fire department siamese connection to sprinkler/standpipe systems.
8. For all suppression and alarm systems, show location of control panel, control valves, detectors, pull stations, strobe lights, abort switches, fusible links, alarm bells, warning lights, signs, etc.
9. If fire pump is to be used, specify capacity and type. Indicate whether electric or diesel powered, and provide all details on diesel fuel supply. Provide details of all piping, fittings, control and relief valves, as well as test header details. Indicate method of temperature maintenance for pump and associated equipment.
10. For Halon / CO₂ systems, show location and type of detectors and nozzles. Show location and size of agent container and piping, as well as types of piping and fittings. Provide system calculations.
11. Show details and schematics on all electrical connections for all fire protection systems, including information on emergency power supplies.
12. For barrier-free accessibility, show height of pull stations.
13. Indicate all fire alarm area zones.
14. For dry chemical systems, indicate type of chemical being used. Show size and location of agent containers. Provide a copy of the installation manual for the system. Provide details on discharge alarms, pipe sizes, and types of materials.
15. For range hood systems, refer to Mechanical check list, Item no. 7.
16. Provide details on smoke control system as required in Mechanical check list, Item no. 8.

Elevator

1. The building subcode utilizes Standard A17.1 of the American Society of Mechanical Engineers(ASME) as its elevator referenced standard. All elevator related drawings must comply with this.
2. Specify elevator type (passenger, freight —specify class of loading, wheel chair manlift, private residence, other).
3. Show elevator capacity and loading.
4. Show size of buffer.
5. Indicate speed, travel length, number of landings.
6. Show cab details, dimensions, door operation, hand rail and control locations to comply with the above noted referenced standard and the barrier-free subcode.
7. Show type of drive, giving details of suspension.
8. Provide details of emergency operation — firefighter's service.
9. Show all clearances and guide rail details.
10. Provide details of hoistway venting.
11. Provide pit details — light, accessibility, etc.
12. Show equipment layout in the elevator machine room — also show light and ventilation.

Barrier-free

The following table is a reference index of items included in the preceding check lists of those releases that are affected by the barrier-free subcode:

<u>Partial release</u>	<u>Barrier-free item</u>
Exterior building	3
Interior building	8 and 9
Plumbing	10
Mechanical	13
Electrical	13
Fire protection	12
Elevators	6