



Requirement checklist to obtain a building permit for a:

COMMERCIAL BUILDING

- Complete Commercial Application (must be legible and signed) (**3 Copies**)
- 3 sets** of drawings (drawings must be signed and sealed by architect/engineer)
- 3 copies** of site plan (include all existing structures, proposed structure and their distance to all lot lines)
- Stormwater Management Application Worksheets A&B. Worksheet B needs to be completed if new impervious is over 500 sq. feet. (**2 Copies**)
- Completed and signed earth disturbance activities checklist
- Submit the Current Certificate of Occupancy, if applicable, (required when altering an existing structure or creating an addition to an existing structure)
- Energy compliance documentation if applicable to the project
- Copy of the Contractors Certificate of Liability Insurance
- Driving directions from a known landmark or intersection

In addition to submitting 3 sets of construction drawings it is highly recommended an Electronic copy is submitted also (they can be submitted via email or thumb drive). Failure to provide an electronic copy may result in additional charges. Email to Michele Long, Cumberland Township BCO/Zoning Officer at mlong@cumberlandtownship.com

- ✓ After submitting all require documents your application will be reviewed.
- ✓ Cumberland Township will contact you to let you know if your application has been approved or denied.
- ✓ When the project is approved you will be notified the Building Permit is ready. Prior to obtaining the building permit all charges (i.e administrative, inspection fees) must be paid. Two checks will be required, one payable to Cumberland Township for application fees and one payable to PMCA for inspections.
- ✓ Be advised additional fees may be applied, throughout the project, for failed or missed inspections.



Cumberland Township

1370 Fairfield Road, Gettysburg PA 17325
Phone: 717-334-6485 Fax 717-334-3632

Commercial Building Permit Application

Location Information: (Please print all information)

Building/Business Name: _____ Building Owner: _____
Street Address of Job: _____ City: _____ Zip _____
Tax Parcel Number: _____

Owner Information:

Property Owner: _____
Address: _____ City: _____ Zip _____
Email: _____ Phone: _____

General Contactor Information:

Contractor: _____
Name of Person Responsible for Construction: _____
Address: _____ City: _____ Zip _____
Phone: _____
Email: _____ License No.: _____

Certificate of Liability Insurance needs to be attached.

Registered Design Professional Responsible For this Project:

Name : _____ Phone: _____
Address: _____ City: _____
Zip _____
Email Address: _____ Registration Number: _____
Discipline: _____ Expiration Date _____

Proposed Work

New: ___ Existing Building: ___ Repair to Building: ___ Addition: ___ Alteration: ___

Description of work: _____

Edition of PA UCC/ICC Used: _____

Are building plans and/or construction documents being supplied as part of this permit? ___

Complete this section if this is for an existing building undergoing a renovation or addition

Additional Construction Alterations /Structural Egress Change Repair Renovation
Applicable Code: IBC IEBC Level of Alteration: I II III

Building Height and Area

No. of Floors/Stories (include basement levels) & Area Per Floor (sq. ft.) Existing _____ Proposed _____
Total Area (sq. Ft.) and Total Height (ft) Existing _____ Proposed _____

Use Group (Check as applicable)

A: Assembly A-1 A-2 A-3 A-4 A-5 Type: _____ B. Business _____ E. Educational _____

F: Factory F-1 F-2 H: High Hazard H-1 H-2 H-3 H-4 H-5

I: Institutional I-1 I-2 I-3 I-4 M. Mercantile R. Residential R-1 R-2 R-3 R-4

S. Storage S-1 S-2 U. Utility Mixed Used: Describe: _____

Special Use: Describe: _____

Construction Type (Check as applicable)

IA IB IIA IIB IIIA IIIB IV VA VB

Site Information:

Flood Zone Information: Check if outside Flood Zone _____ or Identify Zone: _____

Hazards to Air Navigation: Is structure within the airport approach area? _____ Yes _____ No

Content of Certificate of Occupancy

Edition of Code: _____ Use Group(s) _____ Type of Construction: _____

Does the building contain a Sprinkler System? _____

Design Occupant Load per Floor and Assembly Space: _____

Special Stipulations: _____

Property Information

Total Lot Area: _____ Total Building Area: _____ Lot #: _____

Total Impervious Surface Area: _____

Sewer: _____ Water: _____ (Please indicate if Public or Private)

Project Information

Value of Construction: _____ Start Date: _____ Finish Date: _____

Total Number of weeks: _____

Signature of Permit Application

I certify that I am the owner of record, or that I have been authorized by the owner of record to submit this application and that the work described has been authorized by the owner of record. I understand and assume responsibility for the establishment of official property lines for required setbacks prior to the start of construction, and agree to conform to all applicable local, state and federal laws governing the executions of this project. I certify that the Code office or his representative shall have the authority to enter the areas in which this work is being performed, at any reasonable hour, to enforce the provisions of Codes governing this project. I further certify that this information is true and correct to the best of my knowledge and belief. Ref. 18 Pa. Cons. Stat. § 4903.

Please Sign Name

Print Name

Date

Position/Title

Acting on Behalf of Company/Business Name

COMMERCIAL APPLICATION PAGE 3

The checklist below is a partial list of documents that may be required. The applicant shall fill out the checklist and provide the contact information of the registered professionals for the documents. The appendix is to be submitted with the building permit application.

CHECKLIST FOR CONSTRUCTION DOCUMENTS
Mark "X" where applicable

No	Item	Submitted	Incomplete	Not Required	Notes
1	<u>Architectural</u>				
2	<u>Foundation</u>				
3	<u>Structural</u>				
4	<u>Fire Suppression</u>				
5	<u>Fire Alarm</u>				
6	<u>HAVC</u>				
7	<u>Electrical</u>				
8	<u>Plumbing</u>				
9	<u>Gas (Natural, Propane, Medical or Other)</u>				
10	<u>Surveved Site Plan (Utilities, Wetland Etc.</u>				
11	<u>Specifications</u>				
12	<u>Structural Peer Review</u>				
13	<u>Structural Tests & Inspections</u>				
14	<u>Fire Protection Narrative Report</u>				
15	<u>Existing Building Survey</u>				
16	<u>Energy Conservation Report</u>				
17	<u>Workers Compensation Insurance</u>				
18	<u>FEMA Elevations Cert. & Flood Plain Documentation</u>				
19	<u>Other</u>				

For Office Use Only PERMIT NUMBER: _____

Application Fee: \$ _____ Issuance Date: _____
 Permit Fee: \$ _____ Expiration Date: _____
 Inspection Fee: \$ _____ Extension Date: _____
 Total Fees due: \$ _____

Signature of Permit officer: _____ Date: _____

Approved: _____ Denied _____

APPLICANT OR AUTHORIZED AGENT IS RESPONSIBLE FOR CONTACTING PA MUNICIPAL CODE ALLIANCE AT 717-496-4996 FOR REQUIRED INSPECTIONS.
FOR ALL OTHER INQUIRES PLEASE CONTACT MICHELE LONG AT CUMBERLAND TOWNSHIP 717-334-69585 EXT.1000 OR mlong@cumberlandtownship.com

✓ Checklist for the Site Plan to be provided with the Building Application

1. Site plans are essential and must be clearly legible and reproducible regardless of the reason for requesting the permit.
2. Use an 8 ½" X 11" sheet of paper at minimum.
3. After locating all the structures on your property show distances in feet to the lot lines and between the structures.

Provide dimensions of the property getting the proposed improvement

- Drawing of approx. property layout (Can use hand drawing, photocopy of survey, etc.)
- Acreage (Refer to deed or survey drawing)
- Approx. boundary dimensions (Can be from the deed, field measurement, or a survey drawing)
- Parcel Number (Not mandatory – obtained from deed or property tax notice)

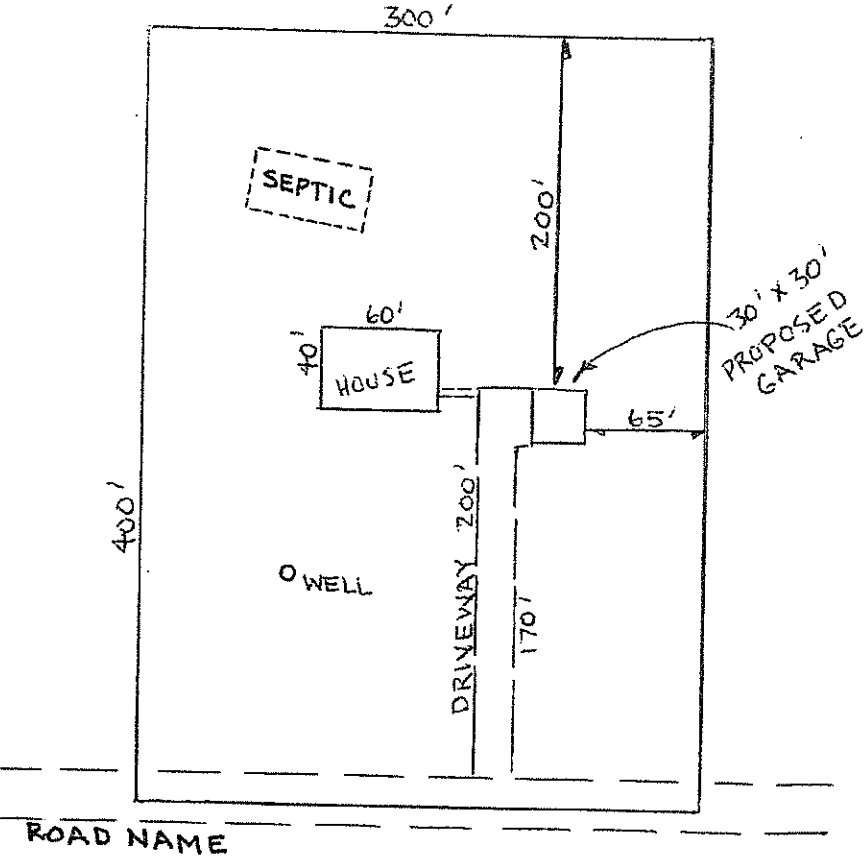
Existing Buildings / Structures with Corresponding Dimensions

- | | |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ○ Houses ○ Sheds ○ Barns ○ Swimming Pools | <ul style="list-style-type: none"> ○ Deck / Patios ○ Other buildings or structures on the property ○ Location of on lot well and septic IF applicable |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Proposed Improvement(s)

- Proposed Structure Dimensions (House, Shed, Barn, Addition, Deck, etc.)
- Location of Proposed Driveway and Sidewalk

SAMPLE SITE PLAN ►



Cumberland Township Simplified Design Approach Worksheet A

Property Owner's Name _____

Property Owner's Address _____

And phone number _____

Address of Property _____

Tax Map Parcel ID # _____

Parcel Size (Approx.) _____

2 Copies of a Sketch Plan must be included and show the following:

Please complete the following	→	Total existing impervious area on the property _____
		New impervious area proposed _____
		Total impervious area on the property after Project completion _____

Are there any known existing drainage problems or the potential for the proposed project to create drainage problems? (If yes, please explain) _____

Acknowledgement- I declare that I am the property owner, or representative of the owner, and that the information provided is accurate to the best of my knowledge. I understand that stormwater may not adversely affected adjacent properties or be directed onto another property without written permission. I also understand that false information may result in a stop work order or revocation of permits. Municipal representatives are also granted access to the property for review and / or inspection of this project if necessary.

Applicant Signature _____ Date _____

Notary _____ Date _____

My Commission expires _____

• Please Note New Impervious Is Over 500 Sq. Feet. Worksheet B Needs to be completed.

To be completed by authorized municipal official

Type of Stormwater Management Required:

- Exempt from stormwater management plan preparation (Worksheet A and Sketch Plan) _____
- Minor stormwater management site plan preparation (Complete Worksheet B to determine necessary BMP's) _____
- Formal stormwater management plan preparation (Consult of professional) _____

Determined by: _____ Date: _____

Cumberland Township Simplified Design Approach Worksheet B

Step 1: Determine the amount of impervious area created by the proposed projects. This includes any new surface area that inhibits the infiltration of stormwater into the ground. New stone and gravel areas are considered impervious. Existing impervious areas are not included in this calculation.

Table # 1

Surface	Length	x	Width =	Total Impervious Area (SF)
Buildings				
Buildings				
Driveways				
Parking Areas				
Patios/Walkways				
Decks				
Other				
Total Proposed Impervious Area =				

Step 2: Determine the Disconnect Impervious Area (DIA). All or parts of proposed impervious surfaces may qualify as Disconnected Impervious Area if runoff is directed to a pervious area that allows for infiltration, filtration and increased time of concentration. The volume of stormwater that needs to be managed could be reduced through DIA. Prepare a Minor Stormwater Management Site Plan to determine DIA.

Determining Status of DIA

- a) Determine contributing area of the roof/driveway to each disconnected discharge. If it's 500 ft² or less (for a roof) or 1,000 ft² or less (for a driveway), continue to "b". If it's greater than these amounts, the area does not qualify as a DIA.
- b) Determine the length of down slope pervious flow path available for each disconnected discharge.
- c) Determine the % slope of the pervious flow path, % slope = (rise/ run) x 100. Must be 5% or less.
- d) See the table on the next page to determine the percentage of the area that can be treated as disconnected. If the available length of the flow path is equal to or greater than 75 ft, the discharge qualifies as entirely disconnected.

Partial Disconnections		
Length of Pervious Flow Path* (ft) Lots 10,000 ft ² and Under	Length of Pervious Flow Path* (ft) Lots >10,000 ft ²	DIA Credit Factor
0 - 7.9	0 - 14	1.0
8 - 15.9	15 - 29	0.8
16 - 22.9	30 - 44	0.6
23 - 29.9	45 - 59	0.4
30 - 34.9	60 - 74	0.2
35 or more	75 or more	0

*Pervious flow path must be at least 15 feet from any impervious surface and cannot include impervious surfaces.

Using step 2 calculations calculated from the minor stormwater site plan, complete the table below. This will determine the impervious area that may be excluded from the area that needs to be managed through stormwater management BMP's. If total impervious area to be managed is zero, the area can be considered entirely disconnected and further calculations are not needed.

Table # 2

Surface	Area (SF)	x	DIA Credit =	Impervious Area to be Managed (SF)
Buildings				
Buildings				
Buildings				
Buildings				
Buildings				
Driveways				
Driveways				
Parking Areas				

*If total impervious surface area to be managed is greater than zero, continue to Step 3.

Step 3: Calculate the volume of stormwater runoff created by proposed impervious surfaces.

$$\begin{array}{rcl}
 \text{Impervious Area (SF) to be} & \times & 2.8\text{in}/12\text{in} = 0.233 = \\
 \text{Managed (Sum from Table 2)} & & \text{(from 24hr rainfall)} \quad \text{Volume of Stormwater} \\
 & & \text{to be Managed (CF)} \\
 & \times & 0.233 =
 \end{array}$$

Step 4: Select BMP's and size according to the volume of stormwater that needs to be managed in Step 3.

Table # 3 - BMP Sizing Table*

BMP Type	Necessary Volume** (from Step 3 above)	Length	Width	Depth	Void Ratio	Volume ***
Infiltration Bed or Trench					0.4	
Infiltration Berm					1	
Rain Garden					0.4 in stone 1.0 above ground	
Rain Barrel or other usable storage		Use known volume of rain barrel, etc. 1 cubic foot is equal to 7.48 gallons.			1	
Other						

* Chart should only be used when a formal SWM Site Plan is not required.
 ** Should not include areas that were proven to be 100% disconnected

August 2020

BASIC CHECKLIST FOR INFORMING THE PUBLIC ABOUT REQUIREMENTS PERTAINING TO
EARTH DISTURBANCE ACTIVITIES IN PA

1. Will the project involve an earth disturbance activity? Yes, No (circle one)
2. If yes, what is the approximate size of the earth disturbance activity in sqft?
_____ ** A plan should be provided which depicts to scale, the limits of earth disturbance boundary over the life of the project.
3. Does the project involve earth disturbance activities greater than 5000 sqft but below one acre?
YES NO If YES, a written e&s plan is required. Refer to "typical" for general guidance
4. Could the project have a sum total of 1 or more acres of earth disturbance over the entire life of the project? YES NO
If YES, you should inform the applicant to contact the Conservation District to obtain an NPDES construction permit application.
5. Does the proposed project involve earth disturbance activities in, along or adjacent to Waters of this Commonwealth? YES NO If YES, contact the Conservation District

Definitions -taken from the Ch. 102 (erosion and sediment control regulations):

Earth disturbance activity – a construction or other human activity which disturbs the surface of the land, including, but not limited to, clearing and grubbing, grading, excavations, embankments, land development, agricultural plowing or tilling, timber harvesting activities, road maintenance activities, mineral extraction, and the moving, depositing, stockpiling, or storing of soil, rock or earth materials

Waters of this Commonwealth – rivers, streams, creeks, rivulets, impoundments, ditches, watercourses, storm sewers, lakes, dammed water, wetlands, ponds, springs and other bodies or channels of conveyance of surface and underground water, or parts thereof, whether natural or artificial, within or on the boundaries of this Commonwealth

***** For earth disturbance activities of less than 5000 sqft, erosion and sediment control best management practices shall still be incorporated into the project.**

Your signature implies that the municipality has provided you with an erosion and sediment control (e&s) checklist. This checklist was prepared by the Adams County Conservation District (District). The checklist was developed in order to bring public awareness to the basic requirements pertaining to earth disturbance activities.

It should also be noted that the District has legal authority to enter onto properties to perform inspections of earth disturbance activities.

Property Address _____

County Parcel # _____

Print name: _____

Signature: _____

Witnessed by: _____

Date: _____

***The Municipality should provide the applicant a copy of the signed document.**

DIRECTIONS TO THE SITE LOCATION

Please give directions to the work site from a known landmark and/or intersection. Use a directional drawing also in the space provided below if that would assist.

Applicant: _____ Phone: _____

Site Street Address: _____

Directions: _____

Use this space if needed to further clarify the site location:

Please Note: Inspectors cannot inspect what they cannot find, Be certain the directions are clear. Use Road or Street names, distances between turn offs, and the direction of that travel (North South East or West). Landmarks are very helpful.



Cumberland Township

1370 Fairfield Road, Gettysburg PA 17325

Phone: 717-334-6485 Fax 717-334-3632

When applying for a commercial building permit you need the following:

- ✓ Fill out the appropriate application answering all questions applicable to your job. The application must be legible and signed (**3 Copies**)
- ✓ A Site Plan showing the location of the existing improvements/structures on your property and approx. distances to all property lines, well, septic system, driveway, etc. Also, show the location of the proposed construction. (**3 Copies**)
- ✓ **3 sets** of drawings showing the details of the construction you want to do. Drawings should be drawn to scale and shall provide the necessary information to verify compliance with the building code. **All drawings shall bear the stamp and signature of the design professional responsible for the design.**
- ✓ If you are doing the work, please submit a workers compensation certificate of liability OR if you will be contracting out the work please submit a copy of the contractor's certificate of liability insurance.

After Building Permit Application is submitted:

- ✓ After submitting all the required documents your application will be reviewed.
- ✓ Cumberland Township will contact you with an approval or denial.
- ✓ If approved, your permit will be issued, and the inspection & administrative fees are due when you pick up the permit. You will also obtain a copy of your original application and stamped set of plans.

After the Building Permit is issued:

- ✓ The Building Permit placard is to be visible on-site at all times during the construction process.
- ✓ To schedule and inspection call PA Municipal Code Alliance at 717-496-4996. Be prepared to have your Permit Number, Address and type of inspection you are requesting. If you call on a workday and provide all the needed information prior to 3:00p.m. every effort is made to schedule the inspection for the following workday.
- ✓ A copy of your application, approved plans are to remain on-site when the building inspectors come for inspections. Be advised: we cannot inspect if these are not on-site and you may incur additional costs due to extra trip(s) by the inspector.

Building Plan Requirements for Commercial Projects

Three (3) sets of construction drawings shall be submitted and shall include:

1. **Title Page Drawings;** to include the contact information for all design professionals, description of square footage per floor, number of floors, type of construction to be utilized, area modifications utilized, use group classification(s), separation or non- separation of mixed-use groups, design occupant load(s), finish materials classification, design codes utilized.
2. **Site Plan Drawings;** to include all utility layouts, handicap parking & access, designated fire lanes, distance between adjacent structures and property lines.
3. **Floor Plan Drawings;** to include the use of all areas, location & types of fire-resistant construction, U.L. Listing of fire-resistant construction, means of egress components, handicap access.
4. **Structural Drawings;** to include the structural design calculations, geo-technical engineering report, uniform live load, dead loads, roof & snow loads, wind loads, footing construction detail, foundation construction details, framing construction details, concrete construction details, masonry construction details, wood construction details, steel construction details.
5. **Electrical Drawings;** to include all lighting facilities, electrically operated equipment, and electrical circuits required for all service equipment of the building or structure. Drawings should include panel schedules, grounding systems, and wirings methods.
6. **Mechanical Drawings;** to include size & type of appliances, construction of flues and chimney systems, ventilation air provided, fresh air make-up provided, location of all ducting and piping.
7. **Plumbing Drawings;** to include a plan view and riser diagram if waste & water piping, pipe sizing, grade of piping, drainage fixture until loads on stack and drains, water distribution design criteria.
8. **Fire Protection System;** to include the submittal guide for each type of system. See specific submittal guide requirements.

► PLAN SUBMITTAL REQUIREMENTS FOR COMMERCIAL CONSTRUCTION ◀

PLANS AND SPECIFICATIONS:

Your Plan Review will reflect the extent and completeness of the documents you submit. This document is a listing (by discipline) of the plans, specifications, and engineering details which should be submitted. Please submit 3 complete sets of materials when requesting a Plan Review.

► BUILDING PLAN REQUIREMENTS: (The following specifications, drawings and details should be submitted)

Complete signed and sealed architectural plans, structural plans and material specifications of all work.

A site plan including the following information:

- Size and location of all new construction and all existing structures on the site.
- Distances from lot lines.
- Established street grades and proposed finish grades.

Architectural plans and specifications to include:

- Description of uses and the proposed use group(s) for all portions of the building. The design approach for mixed-uses (as applicable).
- Proposed type of construction of the building.
- Fully dimensioned drawings to determine areas and building height.
- Adequate details and dimensions to evaluate means of egress, including occupant loads for each floor, exit arrangement and sizes, corridors, doors, stairs, etc.
- Exit signs/means of egress lighting, including power supply.
- Accessibility provisions.
- Description and details of proposed special occupancies such as a covered mall, high-rise, mezzanine, atrium, public garage, etc.
- Adequate details to evaluate fire resistive construction requirements, including data substantiating required ratings.
- Details of plastic, insulation, and safety glazing installation.
- Details of required fire protection systems.

Structural plans, specifications, and engineering details to include:

- Soils report indicating the soil type and recommended allowable bearing pressure and foundation type.
- Signed and sealed structural design calculations which support the member sizes on the drawings.
- Local design load criteria, including frost depth.
- Earthquake seismic zone/effective peak acceleration coefficient.
- Details of foundations and superstructure.
- Provisions for required special inspections.
- Applicable construction standards and material specifications (i.e., masonry, concrete, wood, steel, etc.).

► MECHANICAL PLAN REQUIREMENTS:

In order to perform a thorough Mechanical Plan Review, the following specifications, drawings and details should be submitted:
Complete signed and sealed plans and specifications of all heating, ventilating and air conditioning work.

Labeling criteria of all mechanical equipment.

Heating equipment data including the following information:

- Equipment capacity (BTU).
- Controls.
- Appliance layouts showing location, access and clearances.
- Disconnect switches.
- Indoor and outdoor design temperatures.

Ventilation data, ductwork and equipment including the following:

- Ventilation schedule indicating the amount of outside air (in c.f.m.) supplied to each room or space.
- Layout showing outside air intakes.
- Construction of ducts, including support and sheet metal thickness.
- Duct lining and insulation materials with flame spread and smoke-developed ratings.
- Exhaust fan ductwork layout and termination to the outside.
- Size of louvers and grilles for attic ventilation.

Boiler and water heater equipment and piping details including safety controls and distribution piping layout.

Gas and fuel oil piping layout, material, sizes, and valves.

Combustion air intake quantities and details.

Commercial kitchen exhaust equipment details including hood and fan drawings, details of automatic fire suppression, and clearances.

Chimney and chimney connector or vent and vent connector details and connector gages and clearances.

Mechanical refrigeration equipment data and details.

Solid fuel burning appliance details including incinerator and fireplace drawings and details.

Energy conservation equipment data and details.

► PLAN SUBMITTAL REQUIREMENTS FOR COMMERCIAL CONSTRUCTION ◀

► PLUMBING PLAN REQUIREMENTS:

In order to perform a thorough Plumbing Plan Review, the following specifications, drawings and details should be submitted:
 Complete signed and sealed plans and specifications of all plumbing work.
 Plumbing fixture and piping material specifications including identification of the applicable referenced standard.

Plumbing fixture information to include:

The occupant load used to determine the number of required plumbing fixtures.	Separate facilities for each sex.	Anti-scald shower valves.
Number and distribution based on the use group.	Accessible plumbing facilities and details.	

- Plumbing piping plan showing layout, pitch of drainage lines, cleanouts, size of traps, and riser diagram.
- Water supply and distribution plan showing piping sizes, valves, water heater details and temperature-pressure relief valve with discharge pipe.
- Sanitary drainage and vent system riser diagram showing drainage fixture units (dfu), sizes and vent termination details through the roof.
- Potable water system riser diagram showing piping sizes and provisions for protection of potable water supply.
- Piping support and installation schedule.
- Storm drainage details including rain gutter or roof drain sizes and downspout/leader sizes.
- Health care plumbing and fixture details.

► ELECTRICAL PLAN REQUIREMENTS:

In order to perform a thorough Electrical Plan Review, the following specifications, drawings and details should be submitted:
 Complete signed and sealed plans and specifications of all electrical work.
 Labeling criteria of all electrical equipment.

- Lighting floor plan including electrical circuits indicating conduit and wiring sizes.
- Power floor plans including electrical circuits indicating conduit and wiring sizes, equipment and disconnect switches.
- Exit sign/means of egress lighting location and power supply.
- Panelboard schedule. Lighting fixture schedule. Symbol schedule and diagrams.

Specifications to include requirements for:

1. Raceway and conduit with fittings.	11. Switchboards.
2. Wire and cable.	12. Grounding.
3. Electrical boxes, fittings and installation.	13. Transformers.
4. Electrical connections.	14. Panelboards.
5. Electrical wiring devices.	15. Motor control centers.
6. Circuit and motor disconnects.	16. Lighting fixtures.
7. Hangers and supporting devices.	17. Fire protective signaling systems.
8. Electrical identification.	18. Automatic fire detection systems.
9. Service entrance and details.	19. Emergency/standby systems.
10. Overcurrent protection.	

► SPRINKLER PLAN REQUIREMENTS:

In order to perform a thorough Sprinkler Plan Review, the following items should be submitted:
 Complete signed and sealed plans and specifications for the sprinkler system and related equipment with description and locations of uses within the building. Design details in accordance with the appropriate reference standard (i.e. NFPA 13, 13D, 13R) as referenced by the ICC International Building Code:

Working plans shall be drawn to an indicated scale, on sheets of uniform size, with a plan of each floor, and shall show those items from the following list that pertain to the design of the system.

- i. Name of owner and occupant.
- ii. Location, including street address.
- iii. Point of compass.
- iv. Full height cross section, or schematic diagram, including structural member information if required for clarity and including ceiling construction and method of protection for nonmetallic piping.
- v. Location of partitions.
- vi. Location of fire walls.
- vii. Occupancy class of each area or room.
- viii. Location and size of concealed spaces, closets, attics, and bathrooms.
- ix. Any small enclosures in which no sprinklers are to be installed.
- x. Size of city main in street and whether dead end or circulating; if dead end, direction and distance to nearest circulating main; and city main test results and system elevation relative to test hydrant (see A-9-2.1).
- xi. Other sources of water supply, with pressure or elevation.
- xii. Make, type, model, and nominal K-factor of sprinklers.
- xiii. Temperature rating and location of high-temperature sprinklers.
- xiv. Total area protected by each system on each floor.

► PLAN SUBMITTAL REQUIREMENTS FOR COMMERCIAL CONSTRUCTION ◀

SPRINKLER PLAN REQUIREMENTS, Cont.

- xv. Number of sprinklers on each riser per floor.
- xvi. Total number of sprinklers on each dry pipe system, preaction system, combined dry pipe-preaction system, or deluge system.
- xvii. Approximate capacity in gallons of each dry pipe system.
- xviii. Pipe type and schedule of wall thickness.
- xix. Nominal pipe size and cutting lengths of pipe (or center-to-center dimensions). Where typical branch lines prevail, it shall be necessary to size only one typical line.
- xx. Location and size of riser nipples.
- xxi. Type of fittings and joints and location of all welds and bends. The contractor shall specify on drawing any sections to be shop welded and the type of fittings or formations to be used.
- xxii. Type and locations of hangers, sleeves, braces, and methods of securing sprinklers when applicable.
- xxiii. All control valves, check valves, drain pipes, and test connections.
- xxiv. Make, type, model, and size of alarm or dry pipe valve.
- xxv. Make, type, model, and size of preaction or deluge valve.
- xxvi. Kind and location of alarm bells.
- xxvii. Size and location of standpipe risers, hose outlets, hand hose, monitor nozzles, and related equipment.
- xxviii. Private fire service main sizes, lengths, locations, weights, materials, point of connection to city main; the sizes, types and locations of valves, valve indicators, regulators, meters, and valve pits; and the depth that the top of the pipe is laid below grade.
- xxix. Piping provisions for flushing.
- xxx. Where the equipment is to be installed as an addition to an existing system, enough of the existing system indicated on the plans to make all conditions clear.
- xxxi. For hydraulically designed systems, the information on the hydraulic data nameplate.
- xxxii. A graphic representation of the scale used on all plans.
- xxxiii. Name and address of contractor.
- xxxiv. Hydraulic reference points shown on the plan that correspond with comparable reference points on the hydraulic calculation sheets.
- xxxv. The minimum rate of water application (density), the design area of water application, in-rack sprinkler demand, and the water required for hose streams both inside and outside.
- xxxvi. The total quantity of water and the pressure required noted at a common reference point for each system.
- xxxvii. Relative elevations of sprinklers, junction points, and supply or reference points.
- xxxviii. If room design method is used, all unprotected wall openings throughout the floor protected.
- xxxix. Calculation of loads for sizing and details of sway bracing.
 - xl. The setting for pressure-reducing valves.
 - xli. Information about backflow preventers (manufacturer, size, type).
 - xl. Information about antifreeze solution used (type and amount).
 - xl. Size and location of hydrants, showing size and number of outlets and if outlets are to be equipped with independent gate valves. Whether hose houses and equipment are to be provided, and by whom, shall be indicated. Static and residual hydrants that were used in flow tests shall be shown.
- xliv. Size, location, and piping arrangement of fire department connections.

Design calculations indicating the discharge requirements of the system with evaluation of the arrangement and source of the water supply. Results of a current flow test indicating the location and date of the test. Working drawings indicating all pipe sizes and the spacing between branch lines and sprinklers on the branch line. Material specifications and equipment specifications. All materials used should be verified that they are installed in accordance with their listing.

► ENERGY PLAN REVIEW REQUIREMENTS:

Commercial Energy Plan Reviews are based on Chapter 7 of the IECC or the referenced edition of ASHRAE/IER 90.1, *Energy Code for Commercial and High-Rise Residential Buildings* as applicable.

In order to perform a thorough Energy Plan Review for commercial buildings and residential buildings greater than three stories in height, the following specifications, drawings and details should be submitted:

GENERAL

1. Complete signed and sealed architectural, mechanical, plumbing and electrical plans and specifications of all work.
2. A site plan including the size and location of all new construction and all existing structures on the site.
3. Interior and exterior design conditions consistent with climate.
4. Labeling criteria of all mechanical, electrical and service water heating (SWH) peripherals and equipment.

ENVELOPE

1. Architectural plans and specifications to include:

- a. Description of uses and the proposed use group(s) for all portions of the building.
- b. Thermal performance of envelope components.
- c. Fenestration performance details (U-factor, SC, SHGC, VLT, air leakage rates, etc.).
- d. Fully dimensioned drawings to determine gross and net areas of all envelope components.
- e. Details of vapor barrier and insulation installation, caulking, gasketing, weatherstripping and other means of sealing joints, cracks, holes and penetrations in the building envelope.
- f. ENVSTD output (where applicable).

2. Design conditions (interior and exterior) consistent with local climate.

▶ PLAN SUBMITTAL REQUIREMENTS FOR COMMERCIAL CONSTRUCTION ◀

ENERGY PLAN REQUIREMENTS, Cont.

ELECTRICAL POWER & LIGHTING

1. Complete plans and specifications of all electrical work.
2. Riser diagram(s) of the distribution system indicating:
 - a. Check metering provisions for individual dwelling units.
 - b. Subdivision of feeders by end use: 1) Lighting, 2) HVAC, 3) SWH and systems over 20 kW.
3. Lighting fixture schedule(s) depicting location, fixture lamps, ballasts, ballast specifications, fixture input watts, fixture wiring methods, power factor, etc.
4. Lighting plan(s) for building exteriors including total exterior Connected Lighting Power.
5. Lighting and power floor plans for building interiors including total interior CLP.
6. LTGSTD output (where applicable).
7. Interior and exterior means of lighting control.
8. Electric motor schedule including type, HP and efficiencies.

MECHANICAL SYSTEMS & EQUIPMENT

1. Mechanical equipment data, plans and specifications of all mechanical work including:
 - a. Equipment type, capacity (Btu/h) and efficiency (peak and part-load).
 - b. System design air flow rates (cfm).
 - c. Details of equipment/system sizing.
 - d. System and/or zone control capabilities including terminal device schedule, provisions for humidity control (where applicable) and the corresponding testing of system controls.^a
 - e. Provisions for automatic setback/shutdown.
 - f. Indicate supply and exhaust systems to have automatic shutoff or volume reduction dampers.
 - g. Energy consumed by fans in the form of an Air Transport Factor (ATF) and pumps.^a
2. Economizers (air or water) including provisions for integrated control.^a
3. Duct construction and system static pressure(s), including provisions for sealing.
4. Duct and/or hydronic-piping lining and insulation materials.
5. Provisions for air and/or hydronic system balancing.
6. Boiler and water heater equipment and piping details including safety controls and distribution piping layout.

SERVICE WATER HEATING (SWH)

1. SWH equipment data including type, capacity and efficiency.
2. SWH pipe insulation, thickness, conductivity and vapor retarder (where appropriate).
3. Water conservation requirements.
4. Energy conservation measures for swimming pools (where applicable).
 - ^a Commercial buildings and residential buildings greater than three stories in height only.
 - ^b Multifamily residential buildings three stories or less in height; the non-dwelling-unit portions only.

▶ ACCESSIBILITY PLAN REQUIREMENTS

Accessibility Plan Reviews are based on the specified edition of the ICC/ANSI A117.1 standard as referenced by the building code. In order to perform a thorough Accessibility Plan Review, the following specifications, drawings and details should be submitted.

1. Complete signed and sealed (as required by applicable laws) architectural plans and material specifications of all work. Details and plans drawn to scale with sufficient clarity, details and dimensions to show the nature and extent of the work proposed.
2. A site plan including the following information:
 - a. Size and location of all new construction and all existing structures on the site.
 - b. Location of any recreational facilities (i.e., pool, tennis courts, etc.)
 - c. Established street grades and proposed finished grade.
 - d. Accessible parking, other locations of public access to the facility, accessible exterior routes and locations of accessible entrances.
3. Architectural plans and specifications to include:
 - a. Description of uses and the proposed use group(s) for all portions of the building. The design approach for mixed-uses (as applicable).
 - b. Fully dimensioned drawings to determine areas and building height.
 - c. Adequate details and dimensions to evaluate accessible means of egress, including occupant loads for each floor, exit arrangement and sizes, corridors, doors, stairs, areas of refuge, etc.
 - d. Adequate details and dimensions to evaluate the accessible route to areas required to be accessible, including corridors, doors, protruding objects, maneuvering clearances, clear floor space at fixtures and controls, etc.
 - e. Accessibility provisions including but not limited to access to services, seating, listening systems, accessible fixtures, elevators, work surfaces, etc.
 - f. Accessible plumbing facilities and details.
 - g. Tactile signage provided.
 - h. Details of required fire protection systems.

Note: The Accessibility Review will cover the scoping requirements in Chapter 11 and other accessibility related Requirements mainstreamed throughout the applicable building code. Technical requirements covered will be based on the applicable edition of ICC/ANSI A117.1. Accessible and Usable Buildings and Facilities.