ENGINEERS SURVEYORS BUILDING CODE INSPECTORS MUNICIPAL SERVICES

LIGHT-HEIGEL
& ASSOCIATES, INC.

A full service provider of
Pennsylvania Uniform Construction Code (UCC) services.

Uniform Construction Code

MODULAR CONSTRUCTION BUILDING PERMIT

Lamar Township

LOCAL LIGHT-HEIGEL OFFICE CONTACT INFORMATION:

Light-Heigel & Associates, Inc.
135 Walter Drive Suite 3
Lewisburg Pa 17837
Attn: Building Codes
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FOR ADDITIONAL INFORMATION:
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Website: www.light-heigel.com

Table of Contents

MODULAR CONSTRUCTION BUILDING PERMIT:
Application Requirements

The following items constitute a complete UCC application package for the construction of a building shell. Buildings that are constructed speculatively, with the tenants unknown at the time that application is made for a building permit, are the intended recipients of building shell permits.

1. **A completed UCC APPLICATION FOR BUILDING PERMIT**

    - Please complete this fully. If an informational item does not apply, indicate this with "NA."

2. **Payment in full of the amount(s) determined on the COMMERCIAL FEE SCHEDULE.**

    Fees paid cover plan review and all inspections.

3. **Two (2) complete sets of construction drawings and one (1) set of specifications.**

    - Seals of licensed design professionals must appear on all sheets and be signed and dated by the designer.

    - Drawings must be at least 18" x 24" (but no more than 36" x 42") in size, drawn to scale of no less than 1/8"=1', with sufficient detail to fully indicate the nature and scope of the work to be performed.

    - **On the first page of each set**, indicate any systems or installations for which plan submission is deferred (e.g., fire alarm system, pre-engineered truss system, sprinkler system).

        Applicants/design professionals should note the following regarding deferred submittals:

        a. Plans for any deferred systems must be submitted to Light-Heigel as a plan revision at least 2 weeks before proposed installation.

        b. Per §403.43(k) of the UCC regulation, these plans must bear the signature of the design professional in responsible charge and a brief statement indicating that the design professional has reviewed the plans and found them to be in general conformance with the design of the building or structure.

    - Provide a **building code summary** on the first or second sheet of the drawings, with all applicable building code sections filled out.

4. **Two (2) copies of a site plan showing the size and location of the new construction, with accurate boundary lines, distances from lot lines, and the established street grades and proposed finish grades**. (See also the **UCC PLAN REVIEW CHECKLIST** for additional requirements.)

5. **When construction will occur in a flood plain, one (1) copy of one of the certifications required in section 1612.5 of the International Building Code.**

6. **A letter signed by a licensed design professional containing all of the following:**

    A statement certifying that all construction within the modular units (or the fully assembled modular building) and hidden from view will fully comply with all requirements of the International Building Code 2003 and all other provisions of the Uniform Construction Code.

A listing of all alternative construction methods or materials proposed for use, and a statement certifying that the proposed methods or materials meet the requirements of 34 PA Code §403.44.

If the certification letter mentioned above has been provided, Township inspections of modular construction will be limited to: footers; foundations; any electrical, plumbing or mechanical rough-ins that have been done at the construction site; and, a final inspection. The final inspection will ensure, among other things, that all electrical, plumbing and mechanical systems are functioning properly and that all accessibility requirements have been satisfied.

Uniform Construction Code (UCC)

APPLICATION FOR BUILDING PERMIT

Application Type	☐ Accessibility **Only** Review	☐ Addition	
	☐ Alteration or Renovation	☐ New Building	
	☐ New Structure/Facility	☐ Phased Approval	
	☐ Plan Revision or Partial Occupancy Request	☐ Unapproved Existing Building	
Use/Occupancy Classification: **Check box to left of applicable group. Check all that apply.**	☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5 ☐ B ☐ E		
	☐ F-1 ☐ F-2 ☐ H-1 ☐ H-2 ☐ H-3 ☐ H-4 ☐ H-5		
	☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4 ☐ M ☐ R-1 ☐ R-2		
	☐ R-3 Adult Care ☐ R-3 ☐ R-4 ☐ S-1 ☐ S-2 ☐ U		
Site Information (Political Subdivision & County names are required.)	Project Name _____		
	Street **Name** and # _____		
	City _____ County _____ State ____ Zip Code _____		
	Political Subdivision _____ Tax Parcel # _____		
Special Requirements & Documentation	Check each block below indicating that all of the following will be submitted with this application: ☐ Two (2) site plans ☐ Two (2) complete sets of construction drawings ☐ One (1) completed copy of the **UCC PLAN REVIEW CHECKLIST** ☐ One (1) set of specifications **(only if Addition, Alteration, New Building or New Structure/Facility)**		
	Does this construction involve modular units built in a factory?	☐ Yes ☐ No	If "**Yes**," submit 1 copy of a letter from a licensed design professional certifying that construction within the modular units (or the fully assembled modular building) and hidden from view will fully comply with all requirements of the UCC.
	Is this construction regulated by the Health Care Facilities Act?	☐ Yes ☐ No	If "**Yes,**" submit 1 copy of approval letter from the Pennsylvania Department of Health.
	Is this construction exempt from energy code requirements?	☐ Yes ☐ No	If "**Yes,**" submit 1 copy of letter indicating that that the building or structure will use neither electricity nor fossil fuels, and thus is exempt per *ASHRAE 90.1*, §2.3(B). If "**No**," submit 1 copy of the COMcheck-EZ Certificate or the **ENERGY CODE PRESCRIPTIVE COMPLIANCE REPORT**.
	Is project in flood hazard area?	☐ Yes ☐ No	If "**Yes,**" submit 1 copy of one of the flood hazard certifications mandated in section 1612.5 of the *International Building Code*.
	Are any of the *International Building Code* (Chapter 17) special inspection or structural observations required?	☐ Yes ☐ No	If "**Yes,**" submit 1 copy of the **SPECIAL INSPECTIONS OBSERVATIONS STATEMENT**.
	Will an alternative construction method or material be used on this project?	☐ Yes ☐ No	If "**Yes,**" submit a signed statement indicating that the proposed method or material meets the requirements of 34 PA Code §403.44.
	Is this application for "phased approval"?	☐ Yes ☐ No	If "**Yes,**" submit a letter signed by the design professional and owner acknowledging that the issuance of a permit for phased construction provides no assurance that the municipality will grant approval of any UCC permits needed to complete the construction, and that the design professional and owner will ensure that the building/structure fully complies with all UCC requirements before occupancy.

Project Data	Lot Number: _____ Block Number: _____ Does municipality have a zoning ordinance? ☐ Yes ☐ No If "**Yes**," has permit been acquired? ☐ Yes ☐ No If "**Yes**," list date acquired: _____ Minimum setbacks required by municipal zoning ordinance (in feet): **Front: _____ Rear: _____ Right Side: _____ Left Side: _____** Sq. ft. of conditioned space _____ Sq. ft. of unconditioned space _____ Number of stories above grade _____ Does it have a basement? ☐ Yes ☐ No Total floor area (sq. ft.) _____ Floor area **new** construction (sq. ft.) _____ Floor area of **addition** (sq. ft.) _____ Floor area **renovated** (sq. ft.) _____ # of multi-family dwelling units _____ # of accessible dwelling units _____ Type(s) of construction per Chapter 6 of the *International Building Code* (check all that apply): ☐ IA ☐ IB ☐ IIA ☐ IIB ☐ IIIA ☐ IIIB ☐ IV ☐ VA ☐ VB Fire suppression: ☐ Full ☐ Partial ☐ None If application applies to an existing building that is **"legally occupied"**, indicate permits held: Fire and Panic Occupancy Permit File Number: _____ Municipal Occupancy Permit Permit Number: _____ Municipality Name _____ L&I UCC Certificate of Occupancy File number: _____ If **"legally occupied,"** you must select which code requirements the building will comply with (choose only one): ☐ *International Existing Building Code* ☐ Chap. 34, *International Building Code* Tax Parcel ID #: _____ Cost of Construction: _____
Design Professional In Responsible Charge Seal **must** be in space to right of name & address.	Name: _____ Address: _____ _____ PA License #: _____ E-Mail: _____ Phone: _____ Fax: _____

Permit #: _____

Date: _____

Owner Information	Owner Name _____ Street Address _____ City _____ State _____ Zip Code _____ Phone Number _____
Deferred Submissions	If you are not submitting plans and other documentation for any of the items listed below with this application, check the appropriate box below and indicate this on the first page of each building plan set. ☐ Fire Alarm System ☐ Truss Shop Drawings (Certified) ☐ Sprinkler System

Fees:

Refer to **COMMERCIAL FEE SCHEDULE**

Applicant's Certification:

As the owner or the authorized agent of the project for which this application is filed, I certify that:

1. The estimated construction cost and all other information provided as part of this application for a building permit is correct.
2. The building or structure described in this application will not be occupied until all known code violations are corrected and a Certificate of Occupancy has been received.
3. This project will be constructed in accordance with the approved drawings and specifications (including any required non-design changes) and the Uniform Construction Code standards as specified in 34 PA Code Chapters 401-405.
4. Any changes to the approved documents will be filed with the municipal UCC Building Code Official.
5. If the licensed architect or engineer in responsible charge of this construction should change, written notice of the change will be provided to the municipal UCC Building Code Official.
6. When required, up to 20% of the total cost of any work performed on an area of primary function in an existing building will be expended to provide an accessible route to the area of primary function.
7. No error or omission in either the drawings and specifications or application, whether approved or not, shall permit or relieve me from constructing the work in any manner other than provided for in 34 PA Code Chapters 401-405.

Applicant Name _____

Street Address _____

City _____ State _____ Zip Code _____

Phone Number _____

Applicant Signature _____ Date _____

Uniform Construction Code (UCC)

COMMERCIAL FEE SCHEDULE

for

Pennsylvania UCC Municipal Enforcement Program

SERVICE	UNIT PRICE
1. New Construction and Additions - **Base Fee**	$0.35/ SqFt
2. Remodeling (see definition below) - **Base Fee**	$0.25/ SqFt

All Plan Reviews and Inspections required on the standard Commercial Submittal Sheet are included in these permit fees.

Note: Special Inspections required by IBC are at Owners Expense.

See Worksheet below to calculate Building Permit and Sub-category fees.

3. Alterations or Repairs to electrical, gas, mechanical or plumbing installations.	
a. Single Event Permit (one inspection only)	$400.00
b. Annual Permit (Inspections in each appropriate discipline are also required)	$400.00
4. Follow-up Inspections for Incomplete or Compliance Inspections for Annual Permit or Single Event Permits requiring additional inspections (per trip)	$200.00
5. Meeting attendance/Hearing attendance	$102.00
6. Next Day Mail Service	$25.00
7. Other services - Provided at No Charge to the Client: Telephone calls, correspondence, mileage, postage	

DEFINITIONS:

Remodeling is work that includes none of the following:

(1) Change in Occupancy/Use Group.
(2) Modify Structural or Firewalls.
(3) Addition or upgrade of electrical, plumbing, or HVAC services.
(4) Addition to structure of any kind.

Annual Permit – as allowed in the UCC regulation (403.42(f)). Applicant must regularly employ qualified tradespeople. Applicant must keep detailed records of all alterations made under the permit. Applicant will submit copies to the BCO on a predetermined time schedule. BCO will schedule appropriate inspections for modifications made in the previous timeframe. Applicant will be billed for each required Compliance Inspection(s) at the time of inspection.

Instructions for Completing the Permit Fee Worksheet

1. Insert **Proposed Total Building Area** in Position A of Worksheet.
   a. If building is new, use Total Building Area.
   b. If work is addition or remodel, use Total Construction Area.
   c. Minimum is 3000 SqFt.
2. Choose Proper Usage Group Code Factor from the Chart below and insert in Position B of Worksheet.
   a. If multiple Usage building, select Primary Usage.
3. Multiply the Area and Usage Factor with the Base Fee to obtain the Building Permit Fee amount for Position D.
4. Calculate Permit Fees for Mechanical, Plumbing, Accessibility/Energy at 25% of the Building Permit Fee. The Electrical Permit is calculated at 30% of the Building Permit Fee. Insert the amounts in Positions E – H as necessary.

COMMERCIAL BUILDING PERMIT FEE WORKSHEET

A. Project or Building Area (Minimum 3000SqFt) _____ SqFt

B. Usage Group Factor X _____

C. Base Fee X $_____

D. Building Permit Fee (BPF) $_____

E. Mechanical Permit Fee 0.25 X $_____ (BPF) = $_____

F. Plumbing Permit Fee 0.25 X $_____ (BPF) = $_____

G. Accessibility/Energy Permit Fee 0.25 X $_____ (BPF) = $_____

H. Electrical Permit Fee 0.30 X $_____ (BPF) = $_____

State Fee + $ **4.50**

TOTAL COMMERCIAL BUILDING PERMIT FEE = $_____

Check made payable to: *LIGHT-HEIGEL & ASSOCIATES, INC*.

FOR OFFICE USE ONLY:
CHECK # _____ RECEIVED ON _____ BY_____

MUNICIPAL FEE = No fee required **$**_____

Make additional check made payable to the Municipality: *Lamar Township*

FOR OFFICE USE ONLY:
CHECK # _____ RECEIVED ON _____ BY_____

Usage Group Factors

Factor	Usage Group
2.0	**I2**
1.6	**A1**
1.5	**(A3-Churches), I3**
1.2	**A2, A4, (A3-nonchurch), A5 B, E, H5, I1, I4, R1, R4**
1.0	**R2, R3**
0.9	**M**
0.7	**F1, F2, H1, H2, H3, H4, S1, S2**
0.5	**U**

Usage Group definitions per Chapter 3 of current International Building Code.

A Assembly
A-1 Theaters
A-2 Restaurants
A-3 Worship, recreation and amusement
A-4 Indoor Sports
A-5 Outdoor Sports

B Business

E Education

F Factory
F-1 Moderate Hazard
F-2 Low Hazard

H High Hazard
H-1 Detonation Hazard
H-2 Deflagration or Accelerated burning
H-3 Readily support combustion
H-4 Health hazards
H-5 Semiconductor fabrication

I Institutional
I-1 Ambulatory
I-2 Hospital
I-3 Prison
I-4 Day Care

M Mercantile

R Residential
R-1 Hotel
R-2 Apartment House
R-3 One & Two Family
R-4 Assisted Living

S Storage
S-1 Moderate Hazard
S-2 Low Hazard

U Utility & Misc

Uniform Construction Code (UCC)

UCC PLAN REVIEW CHECKLIST

This checklist must accompany permit applications for new buildings/structures, additions and renovation projects (those which exceed the scope of ALTERATIONS-LEVEL 1) **ALL INFORMATION MUST BE FILLED IN, CHECKED OR MARKED "N/A"**	
Project Name:	
Project Address:	
Owner/Agent:	Telephone:
Design professional or other person we can contact about info on this form and other project details (if same as Owner/Agent, just provide fax # and e-mail address):	Telephone: _____ Fax: _____ E-mail: _____

General Requirements:

All drawings shall be sealed, signed, and dated by a design professional (licensed architect or engineer). The only exception is when all of the following apply:

a) The proposed work only involves remodeling or alterations of an existing building or structure.
b) The proposed work does not change the building's structure or means of egress.
c) The person preparing the plans is not compensated for the preparation of the drawings.

All drawings must be neatly drawn with clean, crisp lettering --- they must remain legible after reduction for microfilming.

Computer-generated vicinity maps obtained from web-based services (such as *MapQuest*) are acceptable, as long as the roadways or street names are legible and will remain that way after reduction for microfilming.

When photographs (including digital ones) are submitted to show building elevations, the images must be in focus and correctly exposed.

A Pennsylvania Department of Transportation (PennDOT) permit allowing access to a highway under its jurisdiction is not required at the time that application is made for a UCC building permit. If the highway occupancy permit issued by PennDOT requires a location of the building/structure differing from that approved under the UCC buildingpermit, applicants must send the municipal UCC BCO a letter requesting a determination whether a revision of approved plans will be required.

While we understand that many items on this checklist may not be included in some alteration or renovation projects, we request that all applicants work through the entire checklist to ensure that any necessary items are included. If any item is not necessary, please check N/A ("not applicable"). This will greatly facilitate review and approval of projects.

If any of the non-mandatory sections (any sections other than Site Plans and Architectural Plans) in this document do not apply to the proposed work, please check the "N/A" box beside the section title (rather than fill in "N/A" next to each item in that section.

SITE PLANS:

☐ Yes ☐ N/A a. Site plans shall be prepared to scale (not less than 1"=20'), with legend, north arrow, and separate vicinity (site location) map.
☐ Yes ☐ N/A b. Show the correct street address, parcel number and required municipal zoning (if there is local zoning ordinance) on the site plans.
☐ Yes ☐ N/A c. Show and identify all property lines and rights-of-way, with distance from property lines and adjacent buildings on site plans.
☐ Yes ☐ N/A d. Show all accessible parking spaces and signage per ICC/ANSI A117.1 and the *International Building Code* on site plan.
☐ Yes ☐ N/A e. Show accessible curb cuts, ramps and access ways to the building.
☐ Yes ☐ N/A f. Show all existing and proposed driveway entrances.
☐ Yes ☐ N/A g. Identify adjacent land uses and zoning.
☐ Yes ☐ N/A h. Show all easements, flood ways, and required buffers.
☐ Yes ☐ N/A i. Show existing and proposed utilities (with backflow preventers) to serve the site.
☐ Yes ☐ N/A j. Show existing and proposed finish grades.
☐ Yes ☐ N/A k. Show details, sections, and elevations needed for construction.
☐ Yes ☐ N/A l. Show all buffer and screening landscaping.
☐ Yes ☐ N/A m. Show all required parking and loading spaces and calculations.

ARCHITECTURAL PLANS:

☐ Yes ☐ N/A a. Show architectural floor plans of each floor. These pages must be at least 18" x 24" in size (but not more than 36" x 42"), drawn to a scale of not less than 1/8" = 1'. Indicate (or reproduce) the approved, tested hourly rating, number, and location of all rated members and assemblies (walls, columns, beams, floor and ceiling, and ceiling and roof fire-rated design assemblies).
☐ Yes ☐ N/A b. Show the square footage of each floor on the corresponding floor plans.
☐ Yes ☐ N/A c. Identify the names and uses of each room.
☐ Yes ☐ N/A d. Furnish door schedule(s), including size, type, rating (if any) and hardware.
☐ Yes ☐ N/A e. Provide all glazing schedules.
☐ Yes ☐ N/A f. Show elevations with dimensions defining overall building height, floor-to-floor heights, or heights to ridge and eave as applicable to the type of building construction listed on the UCC application. (Note: Where an existing building is involved, photographs of all sides of the building may be submitted to show elevations. **These will be acceptable only if they show <u>all elements</u> necessary to determine compliance with the UCC.**)
☐ Yes ☐ N/A g. Provide basement percentage-below-grade calculations.
☐ Yes ☐ N/A h. Indicate roof slopes, drainage system and sized through wall scupper, if applicable to the project.
☐ Yes ☐ N/A i. Show fixed seating for assembly occupancy to allow determination of occupancy posting required by *International Building Code.*
☐ Yes ☐ N/A j. Show wall sections with proposed material sizes, construction, and fire-rated assemblies.
☐ Yes ☐ N/A k. Show proposed plumbing fixtures and privacy screens on the plans.
☐ Yes ☐ N/A l. If masonry construction is proposed, include the following information:
___ Type of brick ties and spacing of weep holes
___ Control joints
___ Placement of wall flashing and reinforcement
☐ Yes ☐ N/A m. If appropriate for the proposed occupancy, plans should identify all hazardous material control areas, fire barriers, and the required fire-resistance ratings for these barriers. All identified control areas shall list the name, class, quantity and method of storage of all hazardous materials processed, manufactured or used in a manufacturing process and contained within its fire barriers. Provide a Material Safety Data Sheet for each listed hazardous material. See sections 414 and 415 of the *International Building Code*.
☐ Yes ☐ N/A n. Show the floor slab vapor barrier.
☐ Yes ☐ N/A o. Show foundation waterproofing, if applicable.
☐ Yes ☐ N/A p. All penetrations of fire-rated construction must be per manufacturer's details. The details shall meet or exceed the rating of construction being penetrated. The penetration details shall be exactly as tested by an approved testing laboratory or agency and shall include

their system numbers. New penetrations of existing fire-rated walls and assemblies shall be shown with appropriate designs.

☐ Yes ☐ N/A q. Show penthouse drawings.

☐ Yes ☐ N/A r. Provide on the drawings the calculations for the means of egress widths for the entire floor occupancy load and the existing capacity of all exits including all stairs, doors, corridors and ramped exits.

☐ Yes ☐ N/A s. Show required ventilation louvers and vent sizes.

STRUCTURAL PLANS: ☐ **N/A**

☐ Yes ☐ N/A a. Show foundation plans indicating the proposed slab elevations and type of foundation (i.e., mat foundation, caissons, spread footings, etc.)

☐ Yes ☐ N/A b. Provide preliminary soil analysis data done by a licensed engineer, if required.

☐ Yes ☐ N/A c. Indicate dimensions of foundations.

☐ Yes ☐ N/A d. Show type, size and location of piling and pile caps for pile foundation.

☐ Yes ☐ N/A e. Indicate grade beam sizes.

☐ Yes ☐ N/A f. Indicate a footing schedule defining footing sizes and the required reinforcing.

☐ Yes ☐ N/A g. Show the established footing depth below grade and method of frost protection allowed in section 1805.2.1 of the *International Building Code*.

☐ Yes ☐ N/A h. Indicate the thickness of the floor slab, size of reinforcing, slab elevations, and type and details of foundations.

☐ Yes ☐ N/A i. Indicate location, size, and amount of reinforcing steel.

☐ Yes ☐ N/A j. Show foundation corner reinforcing bars and minimum overlapping (as applicable to project structure).

☐ Yes ☐ N/A k. Provide strength of concrete according to designed soil reports.

☐ Yes ☐ N/A l. Show beams, joists, girders, rafters, and/or truss layouts and details of connections, structural steel stud gage, gage size, and connections.

☐ Yes ☐ N/A m. Indicate the sizes and species of all wood members and their respective design strength.

☐ Yes ☐ N/A n. Show all columns, girders, joists, purlins, beams, and base plates; for wood construction show all headers.

☐ Yes ☐ N/A o. Provide a complete lintel schedule.

☐ Yes ☐ N/A p. Indicate the type of anchoring for steel bearing directly on masonry.

☐ Yes ☐ N/A q. Indicate design dead and live, wind, snow, seismic loads for floor areas, roofs, balconies, porches, breezeways, corridors, stairs, mezzanines, and platforms. Show concentrated loads, i.e. file rooms, machinery and forklift areas, if greater than those shown on the Code Summary Sheet. Identify shear walls, bracing, strapping, fastening, reinforcement and any special anchoring required.

☐ Yes ☐ N/A r. Where applicable, indicate on roof framing plan where concentrated loads (mechanical equipment, cranes, etc.) will be placed.

☐ Yes ☐ N/A s. Indicate on foundation and framing plans the location and lateral load resisting system. (Show walls, braced frames, moment connections, etc.)

FIRE PROTECTION PLANS: ☐ **N/A**

☐ Yes ☐ N/A a. Complete a sprinkler design data sheet and include it on the first plan of the sprinkler drawings.

☐ Yes ☐ N/A b. Show floor plans for each floor with sprinkler piping layout, pipe sizes, pipe hanger details, piping materials, doors, walls and room identities.

Often, these shop drawings are not available at the time of initial plan submission. If this is the case, write in "NA," but note the following:

- These shop drawings must be submitted for review and approval **at least two weeks before the projected installation date.**
- Failure to obtain approval of these drawings before installation could result not only in delay of the final inspection and issuance of an occupancy permit, but also in removal and reconstruction of installations which fail to meet UCC requirements.

☐ Yes ☐ N/A c. Show ceiling plans with sprinkler head(s) layout, walls, soffits, openings, doors, dimensions and room identities.

☐ Yes ☐ N/A d. Verify system design by providing hydraulic calculations along with the following:
___ Recent water flow test
___ 10 percent safety margin
___ Type of backflow-preventer or reduced pressure zone showing equivalent foot loss
___ Fire pump summary

☐ Yes ☐ N/A e. Note the type of sprinkler system used (e.g. 13, 13D, or 13R)

☐ Yes ☐ N/A f. For residential occupancies such as apartments and condominiums, show sprinkler head locations at breezeways, if applicable.

☐ Yes ☐ N/A g. Indicate the certified testing laboratory agency (e.g. U.L.), their test number and hourly ratings of all new and/or affected rated members and assemblies (i.e. columns, beams, floor/ceiling and ceiling/roof fire-rated design assemblies). Show all new and/or affected fire-rated walls with their ratings, if not show elsewhere.

☐ Yes ☐ N/A h. All penetrations of fire-rated construction must be per manufacturer's details. Details shall meet or exceed ratings of construction being penetrated. Penetration details shall be exactly as tested by a certified testing laboratory or agency and shall include their system numbers. All new penetrations of existing fire-rated walls and assemblies shall be shown with appropriate designs.

☐ Yes ☐ N/A i. Provide a fire alarm riser showing connection to a UL-approved central station. Show tamper switcher on both OS and Y valves of backflow prevention device, unless shown elsewhere.

☐ Yes ☐ N/A j. Indicate commodity class (per section 2303 of the *International Fire Code*) and height of any storage.

☐ Yes ☐ N/A k. Provide Material Safety Data Sheets for any hazardous materials (also specified under "**Architectural Plans**").

☐ Yes ☐ N/A l. Where special temperature-rated or high-temperature sprinklers are required, show sprinkler type(s) per area, office size, cut sheets with K-factor, water requirements, spray pattern, coverage and other pertinent data.

SYSTEM CALCULATIONS (FIRE PROTECTION): ☐ **N/A**

Hydraulically calculated and pipe schedule fire systems should be designed with a 10 percent safety margin for all new buildings and additions to existing buildings. Calculations for hydraulic systems should include:

☐ Yes ☐ N/A a. Flow and pressure at each flowing sprinkler head

☐ Yes ☐ N/A b. Flow diagram for a grid system.

PLUMBING PLANS: ☐ **N/A**

☐ Yes ☐ N/A a. Show a site utilities plan, if not provided with the civil drawings.
___ 1. Show the domestic water, fire, and irrigation services.
___ 2. Show the location of water meters, backflow protection type and location.
___ 3. Show the sanitary sewer service from building to public sewer or approved private sewage disposal system.

☐ Yes ☐ N/A b. Show interceptors as applicable to project and size by flow rate. (i.e. grease, oil, lint, acid, sand)

☐ Yes ☐ N/A c. Provide plumbing plan layouts for each floor. These should show the water distribution and drain-waste-vent piping, and all details, notes, legends and schedules necessary to define the system being installed.

☐ Yes ☐ N/A d. Show the location of all major components required for a complete system.

☐ Yes ☐ N/A e. Provide fixture and equipment schedule showing fixture number, detailed description, hot water, cold water, waste and vent connection sizes and other pertinent data.

☐ Yes ☐ N/A f. Identify all fixtures on floor plans and in riser diagrams with the plumbing fixture schedule number.

☐ Yes ☐ N/A g. Supply and Waste/Vent piping shall be shown on the floor plans. All pipe sizes shall be clearly shown. In congested areas (e.g. restaurants, grocery stores, etc.), isometrics are required.

☐ Yes ☐ N/A h. On buildings two stories and above, provide isometric diagrams and/or schematic riser diagrams for Supply and Waste/Vent piping and identify the risers by number (e.g. R1, R2, etc.). Show where all riser base terminations connect to the building drain, along with all interconnected piping on each floor plan. All pipe sizes shall be clearly defined.

☐ Yes ☐ N/A i. Show the water, sanitary drain-waste-vent piping and storm leaders/drains. Indicate sizes and materials for above/below grade.

☐ Yes ☐ N/A j. Show slope of horizontal sanitary and storm drains that equal or exceed 3" diameter, if less than 1/8" per foot.

☐ Yes ☐ N/A k. Indicate roof drains and emergency roof drains/scuppers with the areas they impact. Note that "emergency" = "secondary" = "overflow." See following roof drainage examples:

Roof Drain – 6" RD (16880 SF)
Emergency Roof Drain – 6" ERD (8180 SF)
Parapet Wall Scupper – 8" x 5" WS (4000 SF)
Emergency Scupper – 8" x 7" ES (4200 SF)

☐ Yes ☐ N/A l. Show toilet room layouts with minimum of ¼" = 1 foot scale.

☐ Yes ☐ N/A m. Show drinking fountain locations.

☐ Yes ☐ N/A n. All penetrations of fire-rated construction must be per manufacturer's details. The details shall meet or exceed rating of construction being penetrated. The penetration details shall be exactly as tested by an approved testing laboratory or agency and shall include their system numbers.

☐ Yes ☐ N/A o. Room names and numbers for each floor should be on a floor plan for each level.

☐ Yes ☐ N/A p. Provide minimum facilities calculations.

☐ Yes ☐ N/A q. Column line notations, if provided on the architectural/structural plans, shall be indicated on the plumbing plans.

MECHANICAL PLANS: ☐ **N/A**

☐ Yes ☐ N/A a. Show all required wall louvers, penetrations and fans.

☐ Yes ☐ N/A b. Indicate roof-mounted equipment locations.

☐ Yes ☐ N/A c. Show all mechanical equipment, piping, ductwork (above/below slab) on the mechanical floor and/or roof plan.

☐ Yes ☐ N/A d. Provide mechanical plans for each floor and the roof. These shall show the ductwork layouts, schedules, notes, legends, piping schematics, and details necessary to define the system being installed.

☐ Yes ☐ N/A e. Indicate air distribution devices and show cfm for all supply, return and exhaust devices.

☐ Yes ☐ N/A f. Indicate the location of all equipment components required for a complete system.

☐ Yes ☐ N/A g. Show the smoke ventilation of atriums and pressurization of high-rise stairwells.

☐ Yes ☐ N/A h. Show condensation drains, primary and secondary, from the unit to the point of discharge.

☐ Yes ☐ N/A i. Indicate toilet exhaust requirements.

☐ Yes ☐ N/A j. Show mechanical room layouts at sufficient scale for dimensions and details to be ascertained.

☐ Yes ☐ N/A k. Show the size of duct runs.

☐ Yes ☐ N/A l. Indicate controls for fan shutdown: emergency manual and automatic smoke detection.

☐ Yes ☐ N/A m. Show the location of all UL 555-certified fire dampers, ceiling radiation dampers, smoke dampers, and fire doors.

☐ Yes ☐ N/A n. Show all fire-rated walls (both existing and new) with their ratings on the mechanical plans.

☐ Yes ☐ N/A o. All penetrations of fire-rated construction must be per manufacturer's details.

☐ Yes ☐ N/A p. Room names and numbers for each floor should be on a floor plan for each level.

☐ Yes ☐ N/A q. Provide outside air ventilation rate per the *International Mechanical Code*.

☐ Yes ☐ N/A r. Column line notations, if provided on the architectural/structural plans, shall be identified on the mechanical plans.

☐ Yes ☐ N/A s. Provide gas piping layout on the floor plan for each floor. If it is a multi-story building, all gas piping shall be shown per floor. Include pipe sizes, water column, and type of material. Provide a schedule of connected equipment, total BTUH demand, total equivalent length, and most remote gas appliance.

ELECTRICAL PLANS: ☐ **N/A**

☐ Yes ☐ N/A a. Provide panel schedules with circuit and feeder loading, overcurrent protection, and NEC load summaries for all new and/or affected panels and services (loading has to be evaluated by highest phase); include fault current data, short circuit ratings and fault current protection co-ordination.

☐ Yes ☐ N/A b. Provide a single line riser diagram showing all new and/or affected services, feeders, wire sizes and insulation types, and conduit sizes and types.

☐ Yes ☐ N/A c. Indicate number of services and their physical locations; clearly indicate mains and characteristics.

☐ Yes ☐ N/A d. Indicate the grounding electrode conductor size with new and/or affected services and transformers; where necessary provide details or notes on methods.

☐ Yes ☐ N/A e. Show physical locations of all new and/or affected panels and switchgear (indicate front).

☐ Yes ☐ N/A f. Indicate receptacle plans with circuitry.

☐ Yes ☐ N/A g. Indicate lighting plans with circuitry.

☐ Yes ☐ N/A h. Show electrical plans for each affected floor, including the roof.

☐ Yes ☐ N/A i. Show wiring method(s), conduit sizes and types, termination temperature (60, 75, 90) requirements, conductor sizes and insulation types.

☐ Yes ☐ N/A j. Indicate the design and/or operation for any of the following applicable life safety systems: emergency generators, smoke evacuation, shaft pressurization and relief, smoke detection, egress and emergency lighting, and fire alarms.

☐ Yes ☐ N/A k. Indicate how special needs such as classified (hazardous), corrosive and patient care are treated. Provide detailed plan of classified areas, the classifications and how complied with (i.e. hangers, waste treatment and collection, flammable dusts, gases or liquids, spray booths, vehicle servicing and parking, etc.).

☐ Yes ☐ N/A l. Provide all HVAC nameplate data, including MCA and MOCP. List all other appliance and/or equipment (other than those which will be connected to a general use receptacle) with nameplate data (i.e. voltage, phasing, HP, KVA, FLA, RLA, etc.).

☐ Yes ☐ N/A m. Indicate all motor horsepower ratings, if not supplied elsewhere.

☐ Yes ☐ N/A n. Indicate the certified testing laboratory or agency (e.g. UL), their test # and hourly ratings of all new and/or affected rated members and assemblies (i.e. columns, beams, floor/ceiling, and ceiling/roof fire-rated design assemblies). Show all new and/or affected fire-rated walls with their ratings, if not shown elsewhere.

☐ Yes ☐ N/A o. All penetrations of fire-rated construction must be per manufacturer's details. The details shall meet or exceed ratings of construction being penetrated. Penetration details shall be exactly as tested by an approved testing laboratory or agency and shall include their system numbers. New penetrations of existing fire-rated walls and assemblies shall be shown with appropriate designs.

☐ Yes ☐ N/A p. Provide all applicable *International Energy Conservation Code* compliance data on the Building Code Summary sheet or on the electrical plans.

☐ Yes ☐ N/A q. All submittals should include a listing and labeling statement. (All electrical materials, devices, appliances and equipment shall be labeled and listed by a certified testing laboratory or agency.)

Uniform Construction Code (UCC)

SPECIAL INSPECTIONS AND OBSERVATIONS STATEMENT

This statement must accompany permit applications for all construction for which special inspections and observations are required in section 1704 and 1709 of the *International Building Code 2003*.	
Project Name:	
Project Address:	
Owner:	Telephone:

This is to certify that all the inspections and observations that I have checked on pages 2-3 **and** on page 4 of this statement are required for the project named above and will be performed by the designated individuals or firms. By signing this statement, I also acknowledge that:

- these inspections and observations must be performed by competent individuals in accordance with sections 1704 and 1709 (as applicable) and that the construction work must comply with the approved plans and specifications and all applicable provisions of the Uniform Construction Code;
- records of all required special inspections and testing observations (including any discrepancies and methods of correction of these discrepancies) will be retained and made available to Municipal UCC Officials, upon request; and,
- the Final Report section of this statement must be signed by me and a copy of this statement submitted to the municipal UCC inspector, at the time that the final inspection is performed and before a certificate of occupancy is issued.

_____
Name of Design Professional in Responsible Charge

_____
Signature of Design Professional in Responsible Charge

_____ _____
PA License Number Date signed (Month/Day/Year)

PLEASE AFFIX SEAL IN SPACE TO THE LEFT.

CHECK EACH THAT APPLIES	TYPE OF SPECIAL INSPECTION OR OBSERVATION	NAME AND ADDRESS OF INDIVIDUAL AND/OR FIRM PERFORMING INSPECTION OR OBSERVATION	CREDENTIALS (Enter acronym from page 4. If "Other," please specify special training or basis for competency to perform work.)
☐	Inspection of Fabricators		
☐	Inspection of Steel Construction		
☐	Inspection of Concrete Construction		
☐	Inspection of Masonry Construction		
☐	Inspection of Wood Construction		
☐	Inspection of Soil Conditions		

CHECK EACH THAT APPLIES	TYPE OF SPECIAL INSPECTION OR OBSERVATION	NAME AND ADDRESS OF INDIVIDUAL AND/OR FIRM PERFORMING INSPECTION OR OBSERVATION	CREDENTIALS (Enter acronym from page 4. If "Other," please specify special training or basis for competency to perform work.)
☐	Inspection of Pile Foundations		
☐	Inspection of Pier Foundations		
☐	Inspection of Wood Panels and Veneers		
☐	Inspection of Sprayed Fire-Resistant Materials		
☐	Inspection of Smoke Control		
☐	Inspection of Exterior Insulation & Finish System (EIFS)		
☐	Structural Observations		

FINAL REPORT

Required Special Inspections or Observations:

- ☐ Inspection of Fabricators
- ☐ Inspection of Steel Construction
- ☐ Inspection of Concrete Construction
- ☐ Inspection of Masonry Construction
- ☐ Inspection of Wood Construction
- ☐ Inspection of Soil Conditions
- ☐ Structural Observations
- ☐ Inspection of Pile Foundations
- ☐ Inspection of Pier Foundations
- ☐ Inspection of Wood Panels and Veneers
- ☐ Inspection of Sprayed Fire-Resistant Materials
- ☐ Inspection of Smoke Controls
- ☐ Inspection of Exterior Insulation & Finish System (EIFS)

I certify that I have reviewed the report on each of the inspections or observations checked above. These reports indicate that the covered work is in compliance with the approved plans and specifications and all applicable provisions of the Uniform Construction Code.

Signature of Design Professional in Responsible Charge:

_____

Date signed (Day/Month/Year):

_____

KEY for use in **CREDENTIALS** column:
(on pages 2 and 3)

ACI	American Concrete Institute Certified Concrete Field Testing Technician
AWS	American Welding Society Certified Welding Inspector
ASNT	American Society of Non-Destructive Testing
AWCI	Association of Wall and Ceiling Industries
MCA	Model code agency (ICC, BOCA, SBCCI, ICBO) special inspection certification
PA	Professional Architect (currently licensed)
PE	Professional Engineer (currently licensed)
OTHER	Specialized training coursework or other basis for competency deemed acceptable

Uniform Construction Code (UCC)

ENERGY CODE PRESCRIPTIVE COMPLIANCE REPORT

PROJECT INFORMATION

Project Name: _____

Street Number and Name: _____

City: _____ Zip Code: _____

Political Subdivision: _____ County: _____

IECC **Climate Zone**	*ASHRAE/IESNA 90.1* **Table**
☐ Zone 10B	☐ B-13
☐ Zone 11B	☐ B-14
☐ Zone 12A	☐ B-15
☐ Zone 12B	☐ B-16
☐ Zone 13B	☐ B-17
☐ Zone 14A	
☐ Zone 15	

PROJECT DESCRIPTION

Building floor area: _____ square feet

☐ New construction ☐ Addition (conditioned) ☐ Alteration
☐ Unconditioned shell ☐ Unconditioned addition

If using *ASHRAE/IESNA* 90.1 prescriptions, indicate if ☐ Semi-heated Space or if ☐ Cooled Space

APPLICABLE STANDARDS

Check which standards will be used for each component listed below.

	IECC CHAPTER 8	*ASHRAE/IESNA 90.1*
Building Envelope	☐	☐
Mechanical Systems	☐	☐
Electrical/Lighting Systems	☐	☐

If no Building Envelope box was checked above, please indicate why the building envelope is exempt from the energy conservation requirements:

☐ Peak design rate of energy usage will be less than 3.4 Btu/h/sq. ft.

☐ Building or structure will be neither heated nor cooled.

Attach either the IECC Chapter 8 or the ASHRAE/IESNA "Prescriptive Report" for each of the components checked above.

IECC Prescriptive Report: BUILDING ENVELOPE

Window and Glazed Door Area/Above Grade Wall Area Ratio: _____ **%**

Skylights

Total Roof Area: _____ **square feet**
Total Skylight Area: _____ **square feet**
U-factor: _____
Assembly Type: _____

R value of slab or below-grade walls: _____

Windows and Glass Doors (list individual assemblies):

Number/Location	PF	SHGC	U

Roof Assembly (list each type of assembly used):

Elements of Roof Assembly	Insulation Between Framing (R-Value)	Continuous Insulation (R-Value)

Floors Over Outdoor Air or Unconditioned Spaces (list each type of assembly used):

Elements Of Floor Assemblies	Insulation Between Framing (R-Value)	Continuous Insulation (R-Value)

Above-Grade Walls (list each type of assembly used):

Elements of Wall Assembly Used	No Framing (R-Value)	Metal Framing (R-Value)	Wood Framing (R-Value)

IECC BUILDING ENVELOPE CHECKLIST (requirements that will also be checked during inspection process):

- All joints and penetrations caulked, gasketed, weather-stripped, or otherwise sealed.
- Windows, doors, and skylights certified as meeting leakage requirements.
- All component R-values and U-factors labeled as certified.
- Stair, elevator shafts, vents and other dampers integral to building envelope are equipped with motorized dampers. (Gravity dampers may be used in buildings less than 3-stories in height.)
- Cargo/loading dock doors weather sealed.
- Recessed lighting fixtures installed per Section 802.3.7
- Vestibule provided at building entrances, with self-closing doors.
- Vapor retarder installed.

IECC Prescriptive Report: MECHANICAL SYSTEMS

Fill in all the requested information for either a simple or complex HVAC system.

Simple HVAC System & Equipment:
The section 803.2.1 design loads calculated per the ASHRAE *Fundamentals Handbook* are:
Heating Load = _____
Cooling Load = _____

803.2.2 HVAC Equipment Performance

Manufacturer Model Number	Capacity	Equipment Efficiency	Table used from Section 803	Required Efficiency

Complex HVAC Systems & Equipment:
The section 803.2.1 design loads calculated per the ASHRAE Fundamentals Handbook are:
Heating Load = _____
Cooling Load = _____

803.2.1 HVAC Equipment Performance

Manufacturer Model Number	Capacity	Equipment Efficiency	Table used from Section 803	Required Efficiency

Fill in all the information requested below for the service water heating system.

Section 804 Service Water Heating Equipment Performance

Manufacturer Model Number	Capacity	Equipment Efficiency	Equipment Type	Required Efficiency

IECC Building Mechanical Systems & Service Water Heater Requirement Checklist (requirements that will also be checked during inspection process):

- Load calculations per *ASHRAE Fundamentals Handbook-2001*.
- Plant Equipment and system capacity not greater than needed to meet loads.
- Minimum one temperature control device per zone.
- Stair and elevator shaft vents are equipped with motorized dampers
- Discharge dampers prohibited on constant volume fans & variable volume fans with motors >25hp.
- Balancing and pressure test connections on all hydronic terminal devices.
- Single–duct Variable Air Volume (VAV) terminals reduce primary air before reheating.
- Dual-duct (VAV) mixing boxes installed to minimize mixing.
- Controls capable of resetting supply air temperature (SAT) by 25% of SAT-room temperate difference.
- Minimum one humidity control device per installed humidification/dehumidification system.
- Automatic Controls: Setback to 55 degrees F (heat) & 85 degrees F (cool)
- Outside air supply and exhaust ducts equipped with gravity or motorized dampers with automatic shut off.
- Duct insulation: R-5 unconditioned spaces, R-8 outside building, R-8 between duct and exterior envelope.
- Duct construction per *International Mechanical Code* (IMC).
- Balancing devices provided in accordance with IMC.
- Minimum pipe insulation per Table 803.3.
- Heat traps in inlet/outlet fittings for service water heating.
- Pipe insulation for Service Water Heating per Section 804.5
- Water temperature controls: 110 degrees F for dwelling units, or 90 degrees F for other occupancies.
- Hydronic three-pipe systems not used.
- Operation and maintenance manual provided to building owner.

IECC Prescriptive Report: Electrical Power & Lighting Systems

Fill in all the requested information for either the entire building method or the tenant portion/portion of the building method.

Entire Building Method:

Building Use or Area Type from Table 805.5.2: _____

Total Area of the Building (Sq. Ft.): _____

Total Interior Light Power (Watts): _____

Tenant Area or Portion of Building Method:

Tenant Area/ Building Portion	Use From Table 805.5.2	Total Area sq.ft.	Total Interior Lighting Power (Watts)

IECC Electrical Power & Lighting Systems Requirements Checklist requirements that will also be checked during inspection process):

- Exterior Lighting: Efficacy greater than 45 lumens/W
- Independent controls for each space (switch/occupancy sensor).
- Master switch at entry to hotel/motel guest rooms.
- Individual dwelling units separately metered.
- Each space provided with a manual control to provide uniform light reduction capability.
- If area is corridor, storeroom, restroom, or lobby; area must be continuously illuminated; areas greater than 250 sq. ft. or use less than 0.6 watts/sq. ft.
- Photocell/astronomical time switch on exterior lighting.
- Tandem wired one-lamp & 3-lamp ballasted luminaries.

ASHRAE/IESNA 90.1 Prescriptive Report: Electrical Power & Lighting Systems

Fill in all the requested information for either the entire building method or the tenant portion/portion of the building method.

Entire Building Method:

Building Use or Area Type from Table 9.3.1.1: _____

Total Area of the Building (Sq.Ft.): _____

Total Interior Light Power (Watts): _____

Tenant Area or Portion of Building Method:

Tenant Area/ Building Portion	Use From Table 9.3.1.2	Total Area Sq. Ft.	Total Interior Lighting Power (Watts)

ASHRAE/IESNA 90.1 Electric Power & Lighting Requirements Checklist (requirements that will also be checked during inspection process):

- Minimum Efficacy of 60 lumens/watts for lamps greater than 100W used for exterior lighting.
- Lighting power for freestanding canopy areas for building entrances with canopies less than or equal to 3 watts per square foot.
- Lighting power for building entrances without a canopy less than or equal to 33 watts per linear foot of exterior door width.
- Lighting power for buildings exits less than or equal to 20 watts per linear foot of exit door width.
- Lighting power for building facades less than or equal to 0.25 watts per square foot of the illuminated area.
- Independent manual or occupancy sensing controls for each space (remote switch with indicator allowed for safety or security).
- Automatic shutoff control for lighting in > 5000 sq.ft. buildings by time-of-day device, occupant sensor or other automatic control.
- Master switch at entry to hotel/motel guest room.
- Photocell/astronomical time switch on exterior lights (except areas requiring lighting during daylight hours).
- Tandem wired one-lamp and three-lamp ballasted luminaries (except high-frequency ballasts; luminaries not on same switch).
- Feeder conductors have been designed for a maximum voltage drop of 2 percent.
- Branch circuit conductors have been designed for a maximum voltage drop of 3 percent.

ASHRAE/IESNA 90.1 Prescriptive Report: Building Envelope

Roof Assembly (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Opaque Elements**	**Assembly Max. U**	**Insulation Min. R**

Walls, Above-Grade (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Opaque Elements**	**Assembly Max. U**	**Insulation Min. R**

Floor Assembly (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Opaque Elements**	**Assembly Max. U**	**Insulation Min. R**

Slab on Grade Floors (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Opaque Elements**	**Assembly Max. U**	**Insulation Min. R**

Wall, Below Grade (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Opaque Elements**	**Assembly Max. U**
		_____
		_____
		_____
		_____

Opaque Doors (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Opaque Elements**	**Assembly Max. U**
		_____
		_____
		_____
		_____

ASHRAE/IESNA 90.1 Prescriptive Report: Building Envelope (Continued)

Fenestration (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**% Vertical Glazing**	**SHGC Multiplier**	**Assembly Max. U**	**SHGC North**	**SHGC All**

Skylights (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Type**	**% of Roof**	**Assembly Max.**	**SHGC Max.**

ASHRAE/IESNA 90.1 Building Envelope Requirements Checklist (requirements that will also be checked during inspection process):

- Open-blown or poured loose-fill insulation has not been used in attic roof spaces with ceiling slope greater than 3 in 12.
- Wherever vents occur, vents are baffled to deflect incoming air above the insulation.
- Recessed lights, equipment and ducts are not affecting insulation thickness.
- No roof insulation is installed on a suspended ceiling with removable ceiling panels.
- All exterior insulation is covered with protective material.
- Cargo and loading dock doors are equipped with weather seals.
- Windows & skylights are labeled & certified by the manufactures for U-factor & SHGC.
- Fixed windows & skylights unlabeled by manufacturer have been site labeled using the default U-factor & SHGC.
- Other unlabeled vertical fenestration, operable and fixed, not labeled by the manufacturer, has been site labeled using the default U-factor and SHGC.
- All joints & penetrations are caulked, gasketed, weather-stripped, or otherwise sealed.
- Windows, doors, and skylights certified as meeting leakage requirements.
- Components R-values & U-factors labeled as certified.
- Building entrance doors have a vestibule and equipped with closing devices.

ASHRAE/IESNA 90.1 Prescriptive Report: Mechanical Systems (Simple)

A building that is less than 2 stories in height, and, has less than 25,000 total square feet floor area, and, has a single HVAC zone, must meet the requirements for a simple mechanical system.

If the requirements for a **simple mechanical system** apply, fill in all of the following information.

Cooling (if provided)			
Manufacturer Name	_____		
Mfg'er Specified Efficiency	_____		
☐	Air Conditioner	Min. Efficiency (Table 6.2.1A)	____
☐	Heat Pump	Min. Efficiency (Table 6.2.1B)	____
☐	Packaged Terminal & Room AC & Heat Pump	Min. Efficiency (Table 6.2.1D)	____
	Is Economizer required per Table 6.1.3?	☐ Yes ☐ No	
Heating			
Manufacturer Name	_____		
Mfg'er Specified Efficiency	_____		
☐	Heat Pump	Min. Efficiency (Table 6.2.1A)	____
☐	Heat Pump	Min. Efficiency (Table 6.2.1D)	____
☐	Fuel Fired Furnace	Min. Efficiency (Table 6.2.1E)	____
☐	Fuel Fired Boiler	Min. Efficiency (Table 6.2.1F)	____
☐	Electric Resistance Heat		
Service Hot Water			
Manufacturer Name	_____		
Mfg'er Specified Efficiency	_____		
	Load calculated per 7.2.1	_____	
	Efficiency/Performance Requirements per 7.2.2	_____	
	Prescriptive Path per 7.3, if combined boiler/service hot water	_____ _____	

ASHRAE/IESNA 90.1 Mechanical Systems (Simplified) Requirements Checklist (requirements that will also be checked during inspection process):

- Energy recovery ventilation required if outside air quality supplied by the system is greater than 3000 cfm & greater than 70% of the supply air quantity at min. outside air designs.
- Manual change over or dual set-point thermostat supplied.
- Heat pump controls to prevent supplemental heater operation.
- Systems controls to prevent reheat or any other form of simultaneous heating & cooling for humidity control supplied.
- Programmable time clock on HVAC systems greater than 15,000 BTU/H & supply fan greater than 3/4/hp.
- HVAC piping shall be insulated in accordance with Table 6.2.4.1.3 insulation suitable for outdoor service.
- Ductwork & plenums insulated in accordance with Table 6.2.4.1.2A & 6.2.4.1.2B and ducted systems air balanced.
- Thermostats shall be interconnected to prevent simultaneous heating & cooling.

ASHRAE/IESNA 90.1 Mechanical Systems (Simple) Requirements Checklist (continued)

- Dampers automatically shut on systems greater than 300 cfm.
- Optimum start controls supplied on systems with capacities greater than 10,000 cfm.

ASHRAE/IESNA 90.1 Service Hot Water Systems Requirements Checklist (requirements that will also be checked during inspection process):

- Service Hot Water Piping Insulation meets 7.2.3
- Temperature maintenance automatic time switches installed (7.2.4.2)
- Outlet temperature controls installed (7.2.4.4)
- Circulating pump controls installed (7.2.4.4)
- Storage temperature controls installed (7.2.4.1)
- Heat traps installed (7.2.6)

ASHRAE/IESNA 90.1 Prescriptive Report: Mechanical Systems (Complex)

If the requirements for a **complex mechanical system** apply, fill in all of the following information.

Heating System Design Load: _____
Cooling System Design Load: _____

HVAC Equipment Performance per section 6.2.1

Manufacturer/ Model #	Capacity	Equipment Efficiency	Table used from Section 6.2.1	Required Efficiency	1992 Epact

Service Hot Water		
Manufacturer Name	_____	
Mfg'er Specified Efficiency	_____	
	Load calculated per 7.2.1	_____
	Efficiency/Performance Requirements per 7.2.2	_____
	Prescriptive Path per 7.3, if combined boiler/service hot water	_____ _____

ASHRAE/IESNA 90.1 Mechanical Systems (Complex) Requirements Checklist (requirements that will also be checked during inspection process):

- Economizers per 6.3.1
- Simultaneous heating & cooling limitations per 6.3.2
- Air system design & condoles per 6.3.3
- Hydronic system design & control 6.3.2.2.3
- Heat rejection equipment per 6.3.5
- Energy recovery per 6.3.6.
- Exhaust Hoods per 6.3.7
- Radiant Heating systems per 6.3.8
- Hot gas bypass limitations per 6.3.9
- Service hot water piping insulation meets 7.2.3
- Temperature maintenance automatic time switches installed per 7.2.4.2
- Outlet temperature controls installed per 7.2.4.3
- Circulating pump controls installed per 7.2.4.4
- Storage temperature controls installed per 7.2.4.1
- Heat traps installed per 7.2.6