



# Commercial Building Permit Application Checklist



2406 Leopard St. Corpus Christi, Texas 78408 | Phone:361.826.3240 Fax: 361.826.4375

**Submittal Packages undergo a Completeness Review". Incomplete Applications/Submittal cannot be forwarded to Plans Examiners for review. To avoid processing delays please use the form below and check to be sure that your application is complete. Complete, sign and include this checklist as the cover sheet for your submittal.**

**Please check mark next to all required items related to your project.**

- **Property is platted.** Addressed Verified through GIS. GIS confirmed address should match all submitted documents. Site plan needed to verify address. **This is recommended to be done prior to submittal.**
  - Verify if project is in a flood plain.
  - Verify if project is affected by a CIP/City of CC. Project
- **Zoning Verified.** Verify that the proposed use is compatible with the zoning district. **This is recommended to be done prior to submittal. Refer to Section 4 of the UDC.**
- **Submit digital plans** and associated documents via email as PDF attachments or drop box link. Max size of file that can be emailed as attachment is 25 MB. **Multi-sheet plans to be submitted as a single PDF file, not individual sheet PDFs.**
- **Building Application** completed. To include name of project, GIS verified address, permit type, occupant & construction type, detailed scope of work, square footage, all valuations. All required names (applicant, owner, engineer/architect/designer, Registered Energy Compliance Inspector and/or Commissioning Authority. **A separate application is required for each structure or suite.**
- **Contractor registration form** filled out for non-registered General Contractors.
- **EAB number** if valuation exceeds \$50,000 based on IBC calculations. **Required at submittal.**
- **WPI-1** for New Construction or substantial alterations or additions to existing structures. **Required at submittal.**
- **2015 Water meter sizing form and Tap Application** completed if Applicable. A water meter size and type of tap must be selected. Select Wastewater tap and Gas if applicable. **Required at submittal.**
- **Engineering Notification** needed for all taps to city utilities. **Required at submittal.**
- **Street Cut Permit** required for all proposed street cuts or boring. **Required at submittal.**
- **Elevation Certificate** for any project in a flood zone (A or V). **Required at submittal.**
- **Asbestos Report** for Remodel, TFO, Demo & additions where openings through existing walls are proposed. **Required at submittal.**

**Energy Review requirements conform to IECC 2015:**

- **ComChecks** for lighting, mechanical and envelope (as needed). Comchecks to be prepared by ECI or registered architect or engineer. **Required at submittal.**
- **Letter of Energy** to include name of Energy Compliance Inspector and method of Energy Compliance to be utilized (Prescriptive or Performance Analysis) If applicable. See attached 2015 Letter of Energy IECC Pre-Post Submittal Requirements. Include ECI name on application. **Required at submittal.**
- **Commissioning Plan/Report** If applicable. Include Commissioning Authority name on Application. Guidelines for Commissioning Plan/Report per C405 & C408, 2015 IECC are attached. **Required at submittal.**

**Digital set of plans.** A complete plan set will include but not limited to the following:

- Project name and address on all sheets.
- All Buildings over 5000 sq. ft. or more than a single story will require that all documents are sealed by an engineer. Buildings over 20,000 sq. ft. require an Architects Seal.
- All plans should be labeled "For Construction" or not labeled at all. Plans labeled "For Review" or "For Permit" will not be approved.
- **Cover page**
  - Construction Type
  - Occupancy Type (see attached construction and occupancy type list)
  - Occupancy Load Calculations
  - Code Summary (2021 for Building, Mechanical, Plumbing and Energy, 2020 for Electrical).
  - If there is no proposed work to any specific portion of an existing building, including walls, mechanical, electrical, plumbing or site, make note on cover page and any other affected pages.

**Floor plans:**

- Conform to IBC 2021.
- Existing wall layout.
- Proposed wall layout with wall details, egress plan, rated walls and doors including UL number.
- Elevations for new construction.
- All Plans should be scaled and dimensioned.
- **Mechanical**
  - Exterior walls within 10' of a property line or adjacent building must be fire rated.
  - Conform to IMC 2021.
  - Existing equipment, air supply and air return locations for Remodels, TFOs and Additions.
  - Proposed equipment, air supply, air return and condensate drain locations.
  - Air exchange calculations, locations of smoke and fire dampers if applicable.
  - Statement saying air balance report will be issued at final inspection.
- **Electrical plan:**
  - To conform to NEC 2020
  - Existing locations of lighting, receptacles, switches, power plan, panel schedule and other electrical sub panels, disconnects or accessories. Required for Remodel, TFO and Additions.
  - Proposed locations of lighting, receptacles, switches & electrical sub panels, disconnects or accessories.
  - One line diagram, power plan and panel schedules.
- **Plumbing plan:**
  - Conform to IPC 2021
  - Location of existing restrooms with ADA accessible toilet(s), sinks and water heaters.
  - Location of proposed restrooms with ADA accessible toilet(s) and sinks. Noted hard washable surfaces are required in areas within 24" of a wet area in proposed restrooms and/or kitchens.
  - Fixture count as related to occupancy load.
  - Hi/lo drinking fountain location & mop sink if occupant load exceeds 15 occupants.
  - Water heater location & temperate water mixing valve locations for proposed public use sinks.
  - AC condensate drain locations.
  - Roof plan that shows location of vents and fresh air intakes and measurements.
  - Riser diagram.
  - Grease trap location and calculations if applicable.
  - Hair trap locations for salons or similar uses.
  - Oil/sand separator for proposed floor drains in car wash, warehouse, fabrication facilities or similar uses.
- **Windstorm Plans/details**, sealed by engineer for new construction buildings.
- **Pre-engineered** metal building plans sealed by engineer.
- **Industrialized seal** for Proposed Modular Buildings (engineer sealed plans from modular building company if applicable). ECI information not required for Modular buildings.
- **Foundation Plan** to include beam & reinforcement details & sealed by engineer. Anchoring detail to be included.
- **Site plan**
  - Dimensions between existing and proposed buildings, easements, property lines, set-backs, proposed parking, mechanical equipment, dumpster locations, zoning districts of abutting properties.
  - Location of existing driveways.
  - Location of proposed driveways with dimension and details. Refer to Section 7.1 of the UDC for requirements.
  - Proposed mechanical equipment and dumpster locations must be noted as screened if located within view of ROW or residential districts.
  - Existing or proposed fire hydrant location showing a 300' hose lay to most remote point of the building or 500' if building is fire sprinkled. Hose lay must be noted as following a driveway & fire lane.
  - Proposed FDC must be noted to be within 100' of an existing or proposed fire hydrant.
  - Proposed buildings cannot cross lot lines.
  - Existing buildings that cross lot lines cannot be expanded unless a re-plat removing lot lines is submitted.
  - Site plan not needed for remodels.
- **Site Key Plan** to determine location of tenant space in a multi-tenant building for TFOs and Remodels.

- **Utility plans** to be sealed an engineer and must show:
  - Existing and proposed utilities:
    - Proposed water line location. Line size must match water meter sizing and tap application.
    - Wastewater line location and details. Details should include line size, slope and profiles.
    - Proposed gas line location.
    - Proposed storm water location.
    - Proposed fire line location. ( plans should include location of backflow preventer, FDC and fire protected riser room if applicable).
    - Proposed electrical underground.
    - Private utilities cannot cross interior lot lines.
- **Paving, Grading and Drainage** plans to be sealed by engineer and must include the grading elevations 25 feet beyond all property boundaries from adjacent properties and lots. Refer to Code of Ordinances, Part 3, Chapter 14 Article 2, Division 2, Section 14-14-231 UDC Survey Requirements.
- **Pollution control** plan if proposed work disturbs more than ¼ acre but less than 1 acre or **(SWQMP)** Storm water quality management plan (sealed by engineer) and **N.O.I.** if the area disturbed area exceeds 1 acre. . Refer to Code of Ordinances, Chapter 14, Article X for requirements.
- **Parking plan** for all new construction projects or for a change of use to an existing single occupant or multi-tenant building. A parking tabulation is required as part of the Parking Plan. Refer to Section 7.2 of the UDC for requirements.
- **Landscape plan** drafted by landscape architect, landscape professional or engineer. Irrigation plan required. **Water Meter Sizing Form and Tap Application** required for Irrigation Systems. If no irrigation system is to be used, note hose bibs with 75' of the landscaping on the Landscape Plan. Refer to Section 7.3 of the UDC for requirements.
- **Parking lot and Exterior Lighting plan** required for proposed lighting. A photometric or cone of light detail is required as part of Parking lot and Exterior Lighting Plan. Refer to Section 7.6. of the UDC for requirements.
- **Public Improvement** Plans associated with this project need to be labeled as Public Improvements and submitted separately to [publicimprovements@cctexas.com](mailto:publicimprovements@cctexas.com). This is a separate submittal for the Building Permit Application.
- **Driveway Permit:** Only one driveway permitted with building application (additional driveway permits require separate application). Refer to Section 7.1 of the UDC for requirements.
- **Fire Sprinkler and Alarm Plans** submitted to fire department if applicable.

**TO AVOID DELAYS IN PROCESING:** Provide all required submittal documents together at one time electronically via email attachment, drop box link (or similar), in a single folder containing all files. Clearly name your files so that Plans Examiners can identify them during their review. Files must be unlocked to allow for *Red Line Comments* and City stamping. **Always Contact your Project Manager with Questions.**

**IMPORTANT:** Provide your Master/Parent permit # to your subcontractors so that all child permits associated with this project are together. Associating permits simplifies closing out your project. **The following Child permits cannot be issued until the Master Building Permit has been approved, and paid for: Mechanical Permit, Electrical Permit, Plumbing Permit.**

*I have reviewed the above minimum Commercial Plan Submission requirements and certify that the plan submission contains all the required information and documents necessary for review. I acknowledge that upon review of the application submittal, additional information, documents or permits may be required.*

Project Name and Address \_\_\_\_\_

\_\_\_\_\_

Print Name

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

UDC Link <http://www.cctexas.com/government/development-services/i-need-information/codes-and-ordinances/udc/index>

Code of Ordinances Link [https://library.municode.com/tx/corpus\\_christi/codes/code\\_of\\_ordinances?nodeId=PTIIITHCOOR\\_CH14DESE](https://library.municode.com/tx/corpus_christi/codes/code_of_ordinances?nodeId=PTIIITHCOOR_CH14DESE)



# Commercial Building Permit Application



DEVELOPMENT SERVICES 2406  
LEOPARD STREET CORPUS  
CHRISTI, TX 78408 (361) 826-3240  
(361) 826-4375 (FAX)

Application Type:

- Site Work Only
- Shell Building
- Demolition
- New Construction
- Addition
- Accessory
- Tenant Finish-Out
- Remodel
- Certificate of Occupancy

Project Name: \_\_\_\_\_

Project Address: \_\_\_\_\_

Office Use: \_\_\_\_\_ Intake Date: \_\_\_\_\_ Staff Initials: \_\_\_\_\_

Permit #: \_\_\_\_\_ Expedited:  YES  NO

Subdivision: \_\_\_\_\_ LT \_\_\_\_\_ BLK \_\_\_\_\_

Property Tax ID \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Previous Use: \_\_\_\_\_ Proposed Occupancy Type: \_\_\_\_\_ Construction Type: \_\_\_\_\_  
(TYPE I-A, I-B, II-A, II-B, III-B, IV, V-A, V-B etc.)

**Sprinkler System:**  YES  NO

**Fire Alarm:**  YES  NO

**Platted Property:**  YES  NO

*\*property must be platted to issue building permit\**

**Description of work in detail:**

\_\_\_\_\_  
\_\_\_\_\_

| Area of Work                  | Project Cost        |
|-------------------------------|---------------------|
| 1 <sup>ST</sup> Floor Sq. Ft. | Building:           |
| 2 <sup>ND</sup> Floor Sq. Ft. | Mechanical:         |
| 3 <sup>RD</sup> Floor Sq. Ft. | Electrical:         |
| 4 <sup>TH</sup> Floor Sq. Ft. | Plumbing:           |
| Total Square Footage:         | Total Project Cost: |

*(Include additional floors on a separate sheet)*

**1. TABS#:** \_\_\_\_\_  
Accessibility: Texas Department of Licensing and Regulation requires a TABS (Texas Architectural Barriers Online System) Project# for all PROJECTS greater than or equal to \$50,000. (Website: [www.tdlr.state.tx.us](http://www.tdlr.state.tx.us))

**2. Effective January 10, 2012-Section 14-231. Building code. (19) 107.1.1 Texas Department of Health Requirements. (Asbestos surveys required for renovations and demolitions) Ordinance # 029343**

ASBESTOS SURVEY PROVIDED  
 DOES NOT APPLY

| Names   | E-Mail   | Address, City, Zip | Phone # |
|---|--|--------------------|---------|
| CONTRACTOR:                                       |  |                    |         |
| PROJECT CONTACT:                                  |  |                    |         |
| OWNER:  |  |                    |         |
| ARCHITECT / ENGINEER / DESIGNER:                  |  |                    |         |
| CITY PROJECT MANAGER:                             |  |                    |         |
| ENERGY COMPLIANCE INSPECTOR:<br>(NEW & ADDITIONS) |  |                    |         |
| ENERGY COMPLIANCE OPTION TO BE UTILIZED:          | <input type="checkbox"/> PRESCRIPTIVE ANALYSIS <input type="checkbox"/> PERFORMANCE ANALYSIS |                    |         |
| COMMISSIONING AUTHORITY:                          |  |                    |         |
| WINDSTORM COMPLIANCE OPTION TO BE UTILIZED:       | WP1-1 (NEW BUILDINGS AND ADDITIONS)<br>WPI-3 (ALTERATIONS TO EXISTING STRUCTURES)            |                    |         |

*Please provide Company Name and Contact Person for each field*

I have read the complete application and know the same to be true and correct and hereby agree that if the permit is issued, all provisions of the City Ordinance will be complied with whether herein specified or not. I understand that the permit belongs to the property owner and I am an authorized agent.

Print Signature Name

Signature of Contractor or Authorized Agent

Date

Signature of Owner (If Owner is Builder)

Date

Phone Number



# Contractor Registration



2406 Leopard St. Corpus Christi, TX 78408 | Phone: 361.826.3240 | Fax: 361.826.4375

Date \_\_\_\_\_ New Registration \_\_\_\_\_ Renewal with changes \_\_\_\_\_

**License Holder Information:**

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone #: \_\_\_\_\_ Email: \_\_\_\_\_

**Company Information:**

Company Name: \_\_\_\_\_

Business Location: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone #: \_\_\_\_\_ Email: \_\_\_\_\_

**Contractor Type (select one):**

General Contractor (No Fee) Copy of Driver's License

\*A responsible Contractor may file an Affidavit with the Inspection Division authorizing a designated agent to apply for and receive building permits in said person's behalf, and affirming that said person assumes all responsibility for any building permit obtained by said agent.

Mechanical Contractor Copy of Driver's License Copy of State Master License  
Certificate of Liability (Must show City of Corpus Christi as certificate holder)

\*A person licensed as a Mechanical Contractor by the State of Texas may file an Affidavit with the Inspection Division authorizing a designated agent to apply for and receive mechanical permits in said person's behalf, and affirming that said licensed person assumes all responsibility for any permit obtained by said agent.

Electrical Contractor (No Fee) Copy of Driver's License Copy of State Contractor License  
Copy of State Master License Certificate of Liability (Must show City of Corpus Christi as certificate holder)

\*A responsible Master Electrician may file an Affidavit with the Inspection Division authorizing a designated agent to apply for and receive electrical permits in said person's behalf, and affirming that said person assumes all responsibility for any electrical permit obtained by said agent.

Plumbing Contractor (No Fee) Copy of Driver's License Copy of State Plumbing License

\*A responsible Master Plumber may file an Affidavit with the Inspection Division authorizing a designated agent to apply for and receive plumbing permits in said person's behalf, and affirming that said person assumes all responsibility for any plumbing permit obtained by said agent.

Irrigator License Copy of Driver's License Copy of State Irrigators License

\*A person licensed as an Irrigation Contractor may file an Affidavit with the Inspection Division authorizing a designated agent to apply for and receive permits in said person's behalf, and affirming that said person assumes all responsibility for any irrigation permit obtained by said agent.

Energy Code Compliance Inspector (No Fee) Copy of Driver's License Copy of Certificate of Insurance

Specific Energy Improvements offered by Company: \_\_\_\_\_

*I hereby affirm under the penalty of perjury that all of the acts, statements, and answers contained herein are true. My signature below is also a binding agreement to comply with all local, state, and federal ordinances as required by the City of Corpus Christi.*

Printed Name \_\_\_\_\_ Signature \_\_\_\_\_

Processed by: \_\_\_\_\_ Date: \_\_\_\_\_ Registration# \_\_\_\_\_



# Instructions for Completing Water Meter Sizing Worksheet



2406 Leopard St. Corpus Christi, TX 78408 | Phone: 361.826.3240 | Fax: 361.826.4375

**The Water Meter Sizing Worksheet helps determine the water meter size needed for projects requiring new or upsized water services.**

**NOTE: The Worksheet must be completed for meter sizes 1½" - 4."**

## **Who needs to complete this form?**

Complete this form if you have new construction, alterations or additions to residential or non-residential use that require a new or upsized water service that will connect to the public water system.

This worksheet must be completed if the applicant:

- Constructs a new building
- Adds or removes plumbing fixtures

Potential commercial building permit applicants are encouraged to complete this worksheet in preplanning or planning stages. Our staff can discuss water services and meter configurations that might meet your needs, and can answer questions related to the water service portion of building permits.

## **What kind of information does this worksheet request?**

The Meter Sizing Worksheet is an inventory of the plumbing fixtures in your project. Each fixture is given a value based on typical water use. Follow the instructions to determine the water meter size that will provide optimum water flow throughout your site. You will calculate Total Fixture Unit Values and be able to match this value to the meter size.

## **Where do I send the worksheet?**

Applicants for building permits typically submit this form with the Tap Application form. Forms can be dropped off at Development Services.

## **Instructions**

1. Enter the total number of each fixture type intended for the completed new structure. If applicable, enter the "Other Fixture Description & Values". The form automatically calculates each individual fixture count.
2. The "Initial Fixture Count" is the sum of the column titled "Fixture Count".
3. Enter the additional gallons per minute (GPM) from Irrigation Systems, Special Equipment or other sources on this meter, if applicable.
4. The "Total Fixture Value" is the sum of the "Initial Fixture Count" and "Gallons per Minute".
5. Use the "Reference Water Meter Size" to determine the "Calculated Meter Size". The values shown for the "Gallons Per Minute (GPM):Fixture Value(FV)" are the maximums for each meter size.
6. Enter the "Calculated Meter Size" and "Requesting Meter Size". The quote for the meter size will be based on the value entered on "Requesting Meter Size".
7. Select "Full Tap" if the applicant is requesting the City performs the tap and meter set.
8. Select both "Meter Set" and "Contractor Supplied Tap" if an approved Utility Contractor will perform the tap.



# Commercial Tap Application

2406 Leopard St. Corpus Christi, TX 78408 | Phone: 361.826.3240 | Fax: 361.826.4375 | [PermitRequests@cctexas.com](mailto:PermitRequests@cctexas.com)

**Project Address:** \_\_\_\_\_

**Subdivision:** \_\_\_\_\_ **Lot** \_\_\_\_\_ **Block** \_\_\_\_\_

**Contractor/Owner:** \_\_\_\_\_ **Phone #:** \_\_\_\_\_

**Address:** \_\_\_\_\_ **City:** \_\_\_\_\_ **Zip Code:** \_\_\_\_\_

**Tax ID#:** \_\_\_\_\_

**Plumbing Company:** \_\_\_\_\_ **Phone #:** \_\_\_\_\_

**Address:** \_\_\_\_\_ **City:** \_\_\_\_\_ **Zip Code:** \_\_\_\_\_

| WATER METER SIZING FORM REQUIRED TO BE FILLED OUT FOR TAPS OVER 1"  |   |                          |   |
|---|---|--------------------------|---|
| Code  | Description                                   | √                        |   |
| TWA02A  | ¾" Meter Set Only- Approve Utility Contractor | <input type="checkbox"/> | <b>APPROVED UTILITY CONTRACTORS WILL ONLY BE CHARGED A PRE-TAP FEE</b><br><br><b>BACK TO FRONT METER MOVES- NO CHARGE</b> |
| TWA02B  | 1" Meter Set Only- Approve Utility Contractor | <input type="checkbox"/> |   |
| TWA02C  | ¾" Pre-tap (Meter Set)                        | <input type="checkbox"/> |   |
| TWA15   | Full Loop ICL                                 | <input type="checkbox"/> |   |
| TWA16   | Meter Move ICL \$66/5ft                       | <input type="checkbox"/> |   |
| TWA20   | Full Loop OCL                                 | <input type="checkbox"/> |   |
| TWA21   | Meter Move OCL \$97.50/5ft                    | <input type="checkbox"/> |   |
| TWA40   | 1 ½" Meter Set                                | <input type="checkbox"/> |   |
| TWA42   | 2" Meter Set                                  | <input type="checkbox"/> |   |
| TWA44   | <b>3" Meter Set- **Plans Required</b>         | <input type="checkbox"/> |   |
| TWA45   | <b>4" Meter Set- **Plans Required</b>         | <input type="checkbox"/> |   |
| <p><i>Water Surcharges will be included as individual items with each meter request. The surcharges do not apply to meter moves or meter loops.</i></p> <p>All meter fees are set by Corpus Christi Water and can be found in the Article V, Chapter 55, Section 55-70 of the Code of Ordinances.<br/> <a href="#">ARTICLE V. - TAPS AND CONNECTIONS   Code of Ordinances   Corpus Christi, TX   Municode Library</a></p> |   |                          | <b>** PLANS REQUIRED TO BE SUBMITTED TO LAND DEVELOPMENT FOR METER 3" OR LARGER</b>                                       |
| WASTEWATER TAP  |   |                          |   |
| Code  | Description                                   | √                        |   |
| TWW01   | Pre-Tap                                       | <input type="checkbox"/> | Permits and Inspections are required to make tap  |
| TWW02/3   | Surcharges                                    | <input type="checkbox"/> |   |
| GAS TAP   |   |                          |   |
| Code  | Description                                   | √                        |   |
| TGA01   | 1"  | <input type="checkbox"/> | Meter larger than 8" requires a quote from the Gas Department<br>361-885-6927   |
| TGA02   | Commercial up to 8" (ICL) or 2" (OCL)         | <input type="checkbox"/> |   |
| TGA04   | Meter Loop                                    | <input type="checkbox"/> |   |
| TGA05   | Meter Move                                    | <input type="checkbox"/> |   |



Purpose:

As a customer service initiative, Development Services (OS) is providing this policy to guide Customers through the application process regarding compliance with the 2015 International Energy Conservation Code (IECC). This information defines, clarifies and sets specific requirements and guidelines for both OS customers and OS staff. Certain items are required to be submitted to DS for review and other items are the review responsibility of the Designer and/or the Licensed Design Professional. This policy was adopted due to customer requests for standard forms to fill out and submit for energy compliance letters to clear energy inspections prior to obtaining a Certificate of Occupancy (CO).

Scope:

Part I describes when, and for what types of buildings the 2015 Commercial IECC is applicable. This includes information about remodels of existing buildings, how to submit for shell and tenant finish out phased permits, and how to submit for mixed use buildings that include R-2, R-3, and R-4 occupancies.

Part II lists and describes the energy specific information needed (reports, forms and letters) to submit for plan review as part of a commercial building permit application package, and later, to clear project specific applicable inspections prior to obtaining a CO.

Part III lists the responsibilities of review for the designer and/or licensed design professionals and responsibilities of review for OS staff. This list contains greater detail as to what is submitted with a building permit application package.

Part IV lists the Commissioning Agent requirements, who may conduct commissioning and who may provide the Pre-Commissioning Report to DS.

Part V, as a convenience, sets forth for the customer and DS staff the mandatory sections of the IECC and/or ASHRAE 90.1 that must be complied with. This information can also be found in the IECC Code or ASHRAE standard.

---



City Standard Forms to include Designer/Architect/Engineer's Letter of Certification of Energy Review to be submitted at Plan submission, and the Energy Compliance Letter(s) submitted prior to issuance of the CO are for your use.

## **PART I – APPLICABILITY OF THE COMMERCIAL 2015 IECC**

Applicability - The 2015 IECC Commercial Section is applicable for any new commercial building with conditioned space. This does not include one and two-family dwellings and town-homes covered under the provisions of the International Residential Code. It does not include any Group R-2, R-3 and R-4 buildings three stories or less in height above grade plane. These buildings are covered under the Residential provisions of the 2015 IECC. Multifamily buildings using the residential provisions of the 2015 IECC will require a minimum of 10% of the units be inspected and tested with a minimum of one unit per building. Based on the results of the inspection / testing, additional units may be required to be inspected / tested. See the 2015 IECC Residential Submittal & Close Out Requirements for guidance. The commercial section of the 2015 IECC covers Group R-2, R-3 and R-4 buildings that are 4-stories and higher above grade plane. If using the performance path, a REScheck, IC3 or other software printouts would be submitted for occupancies covered under the Residential Section of the IECC. If using the prescriptive path, all required information must be provided in the project submittal.

Mixed Use with Residential - Where a building has mixed use of residential and commercial, the appropriate section of the IECC shall apply with appropriate submittal documents; Residential and Commercial submittals are required as appropriate for the portion of the mixed use building.

Remodels / Alterations to Existing Buildings - For additions to, remodel/alterations to, repairs of, and change of occupancy or change in use of an existing commercial building, Chapter 5 - Existing Buildings of the 2015 IECC applies and lists specific requirements and exemptions. Generally, a COMcheck or printouts from other energy compliance software is not required unless a building is being "gutted" – brought down to the structural framing and being totally renovated.

Phasing of Permits with Shell and Tenant Finish Out Permits - Commercial buildings are often permitted in phases. In one case, an owner is permitting a building for their own use but submit a shell package and later submit a tenant finish out permit (TFO), often because the interior is still in design. In another case an owner is permitting a shell building with future multi suite tenants who will then submit for TFO permits when a space is leased.

As with any building system, some systems are constructed with the shell stage and others at the TFO permit. Energy systems often work together and in both of the phasing cases mentioned above, the 2015 IECC must be complied with. Due to the complications of phasing of energy systems, when a shell permit is applied for, the DS requires the Designer or Design Professional to:

- A. Submit the IECC C402 or ASHRAE Section 5 building envelope energy system designs with the shell permit. Additional information or revisions to the design may be required with the tenant finish out permit for a system building wide permitted under the TFO.
- B. Submit the proposed C406 additional energy package at the shell permit (included in COMcheck, if the COMcheck is being used as the compliance software).
- C. Provide a schedule regarding each energy system as proposed and under which permit it will be installed and inspected under. Some energy systems are building wide while other systems may be

individual systems for each tenant suite, therefore some systems are required at the shell stage or some building wide TFO, while other systems may be submitted with a TFO.

- D. Where a system may be partially constructed in separate permits, provide information in the schedule regarding who will be responsible for portions of a system in the case of multi-tenant buildings.

For a shell permit, this information is expected to be on the Energy Summary Sheet (See requirements below).

The next Table reflects requirements applicable to normal shell and TFO permits depending on whether the building is being designed and constructed for one owner, or for multiple future tenants with future TFO permits. Unique situations may alter the requirements, but the designer or design professional is expected to communicate the reasons for alterations to the requirements with DS at the time of the shell permit submittal. Please see further information on warehouses after the following table.

| <b>Submittals for a Shell Permit with Future Tenant Finish-Out Permit(s)</b> |   |   |
|--|---|---|
| <b>Energy System</b>   | <b>One Owner Buildings</b>  | <b>Multi-Tenant and Mixed Use with/without Residential</b>  |
| COMcheck or other energy compliance software printout                        | Compliance printout required covering the proposed design of the building envelope systems under C402 or Section 5 of ASHRAE 90.1                                       | Compliance printout required, as well as the detailed design of the building envelope systems under C402 or Section 5 of ASHRAE 90.1  |
| Insulation - R-Value   | Designed at the shell permit and may be phased or constructed entirely at either the shell or TFO   | Must be designed and constructed at the shell stage   |
| Insulation and Assembly U-Factors  | Must be designed at the shell stage. May be constructed at TFO  | Must be designed and constructed at the shell stage   |
| Insulation - Floors  | Must be designed and constructed at the shell stage   | Must be designed and constructed at the shell stage   |
| Roof - Solar Reflectance   | Must be designed at the shell stage<br>May be constructed at TFO  | Must be designed and constructed at the shell stage   |
| Fenestration - Percent Window to Wall Area                                   | Must be calculated and designed at the shell stage.   | Must be calculated and designed at the shell stage.   |
| Required Skylights   | Must be designed and constructed at the shell stage based on current TFO design information. May need to install additional skylights at the TFO if floor plans change. | Must be designed and constructed at the shell stage based on intended TFO information. Tenant may need to install additional skylights at the TFO if floor plans change or become better known. |

|   |  |  |
|---|--|--|
| Skylight to Roof Area   | Must be calculated and designed at the shell stage. May be revised by TFO permit.  | Must be calculated and designed at the shell stage. May be revised by TFO permit.  |
| Air Barriers  | Must be designed at the shell stage. May be constructed at the TFO   | Must be designed and constructed at the shell stage  |
| Additional Energy Package (only if using the 2015 IECC Prescriptive Method) | Proposal submitted at the shell stage. Required for additional package under C406. Can be designed and constructed at the TFO.   | Must be designed at the shell stage. Required for additional package under C406, with clear description of possible phasing and who is responsible for which portion if applicable.  |
| Mechanical Electrical and Plumbing  | May be designed and constructed at the shell or the TFO. A compliance software printout for MEP may be submitted with a TFO. Once the floor plan and ceiling heights are fully known for skylights/daylighting, then electrical daylighting controls must be included. | For Individual systems:<br>May be designed and constructed at the TFO. Once the floor plan and ceiling heights are fully known for skylight requirements, then electrical daylighting controls must be included with possible additional skylights with skylight curb insulation and details of air barrier interface.<br><br>For a Building Wide Systems: Must be designed and constructed at the shell permit, or a separate building wide partial TFO (completion permit – no CO issued). |

Warehouses are unique, especially where the percentage of tenant office space and type and height of materials to be stored are not entirely known. In these unique cases, the entire energy systems, including insulation, may be postponed to the TFO, since the warehouse may not ever be heated or cooled. In addition, where a tenant and materials are known, a warehouse may not be designed with conditioned space, but sprinkler systems installed requiring heating only to prevent freezing. Insulation is also not required until the warehouse is altered to have conditioned space.

## **PART II – ENERGY FORMS/REPORTS AND LETTERS TO SUBMIT**

### **A Building Permit Application Package shall include:**

- A. REQUIRED - Fill out that portion of the Commercial Building Permit Application that provides information regarding which energy compliance options are chosen by the design team.
  1. Which Method of Energy Compliance will be used?
    - a. 2015 IECC or ASHRAE 90.1-2013
  2. If 2015 IECC is chosen, which sub-compliance method will be used?
    - a. Prescriptive Path (C402 through C406), or Total Building Performance Path (C407)

- b. Will the Air Barrier Details be provided, or will there be a building pressure test?
- 3. If 2013 ASHRAE 90.1 is chosen, which sub-method will be used?
  - a. Prescriptive Path (See 5.2.1), or
  - b. Energy Cost Budget Method (Section 11)
- 4. Is Commissioning required for the project?
 

The 2015 IECC may require a Mechanical and Plumbing Commissioning Plan at submittal and later a Pre-Final Commissioning Report prior to CO based on the HVAC details per C408.2. Commissioning for the Electrical system is always required under the 2015 IECC per C408.3. If ASHRAE 90.1-2013 is chosen, Commissioning is always required but the commissioning plan and pre-final commissioning report are turned in to DS only for HVAC system(s) if the project has over 50,000 square feet of conditioned space per ASHRAE 90.1-2013 (6.7.2.4).
- 5. For the IECC Prescriptive Path, provide which additional Efficiency Package is chosen and provided in design documents - Section C406.
- 6. For the ASHRAE 90.1-2013 path, provide a description of the whole building energy monitoring system/devices used to monitor natural gas, fuel oil, propane, steam, chilled water and hot water. ASHRAE 90.1-2013 Section 10.4.5 and subsections. Exceptions are listed in 10.4.5.2.

B. **REQUIRED** - Provide an **energy analysis for the building design** (software printout showing energy compliance) based on the chosen compliance strategy. The design itself must utilize the specific energy values indicated by the energy analysis. Mandatory sections of the 2015 IECC or ASHRAE 90.1-2013 must be complied with even if the energy analysis software printout passes without the design in compliance with a mandatory section.

COMcheck is one option depending on the path chosen, but there are other energy compliance software options. The software used to show energy compliance must indicate that it complies with the 2015 IECC commercial provisions or, if applicable, compliance with ASHRAE 90.1-2013, and must reflect the actual requirements of the 2015 IECC or ASHRAE 90.1-2013. The next table summarizes software choices by compliance path.

| Compliance Path and Software Submitted                                    | 2015 IECC Prescriptive | 2015 IECC Total Building Performance | ASHRAE 90.1-2013 Prescriptive | ASHRAE 90.1-2013 Energy Cost Budget |
|---|------------------------|--------------------------------------|-------------------------------|-------------------------------------|
| COMcheck 2015 IECC  | X                      |                                      |                               |                                     |
| COMcheck ASHRAE 90.1-2013   |                        |                                      | X                             |                                     |
| Other Energy Analysis Software based on the 2015 IECC or ASHRAE 90.1-2013 | X                      | X                                    | X                             | X                                   |

C. **REQUIRED** - Submit the **Designer/Architect/Engineer’s Letter of Energy Review** (Included in the Appendix). This letter lists the energy reviews that the designer and licensed professionals (A/E) are responsible for; that the listed design items have been reviewed and found to be in substantial compliance with the 2015 IECC or ASHRAE 90.1- 2013. The Letter is required to be submitted even if all the items are checked “No”. Items listed by the designer or A/E indicating that they will not be responsible for reviewing will require DS to perform the review, and calculations/details will need to be provided on the plans / submittal package for review.

- D. **REQUIRED** – Submit as part of the design drawings, an **Energy Summary Sheet(s)**. The Energy Summary Sheet(s) shall contain the information in the table in Part III and is so indicated in the table where required. This includes the building envelope systems, and the mechanical plumbing and electrical systems related to energy. The energy summaries may be located by discipline on their own sheets, or combined and included in one location in the design drawings. Some required information does not translate well in the form of a table, list, or narrative summary on an Energy Summary Sheet. These items would be located where most appropriate. For example, the IECC requires that the thermal envelope be shown on the plans, which is appropriate for an architectural plan view rather than a summary sheet. Lack of an energy summary sheet(s) will generate plan review comments causing additional submittals, resulting in a longer time frame to issue the permit.  
For shell permits, the Energy Summary Sheet must include a schedule of design and construction of energy systems indicating how the systems will be phased in terms of design, which permit submittals will contain the energy system and who will be responsible for that system or a sub-system. (See Part I above for details and a table of requirements)
- E. **PROJECT DEPENDENT** - Submit a **Statement of Commissioning Requirements**. (Under the 2015 IECC, commissioning of the controls for automatic lighting systems are always required.) The Statement of Commissioning is simply a commissioning plan for mechanical, service water heating systems and electrical lighting systems where required by C408.2 and C408.3. This includes requirements for air balancing, list of mechanical, electrical and plumbing systems to be included in commissioning and functional testing of controls (mechanical, electrical and plumbing).  
The commissioning plan must include the following:
- a. Narrative description of the activities that will be accomplished during each phase of commissioning including the personnel intended to accomplish each task. The Commissioning agent for the project (if known) or the proposed certifications of such agent.
  - b. A listing of the specific equipment, appliances or systems to be tested and a description of the tests to be performed
  - c. Functions to be tested including calibrations and economizer controls
  - d. Conditions under which the tests are to be performed
  - e. Measurable criteria for performance

### **Mandatory and Project Dependent Inspections:**

Energy Compliance Letters, Preliminary Commissioning Report, Test Results and related inspections are required to be cleared by letters and/or reports submitted to DS prior to obtaining a CO (Forms attached).

- A. Inspections are cleared, by one or by separate **Energy Compliance Letter(s)** from the Architect, Engineer or Energy Consultant providing statements of acceptable installation for the following energy related components/systems:
1. **REQUIRED** - Type of insulation materials and R-Values as installed.
  2. **REQUIRED** - Type reflective roof - Roof solar reflectance and thermal emittance as installed.
  3. **REQUIRED** - Fenestration (vertical and horizontal) U-Factors, SHGC, and VT as

installed.

4. REQUIRED - Mechanical system insulation and R-Values and Mechanical Equipment Efficiencies
5. PROJECT DEPENDENT – Plumbing Hot Water Service type of insulation and R-Values, and Equipment Efficiencies (if Hot Water Service is required or provided in the building)
6. PROJECT DEPENDENT – Efficiencies of Motors and Transformers

B. PROJECT DEPENDENT - **Preliminary Report of Commissioning** that corresponds to the Commissioning Plan provided with the permit application. The Final Report of Commissioning is to be provided to the Owner. DS does not require or accept the final Commissioning report, which only is provided to the Owner. The City form for this report is attached.

The preliminary report for mechanical and plumbing hot water systems should include an itemization of deficiencies found that have not been corrected by the time of the report, list of deferred tests not accomplished because of climatic conditions, and conditions necessary for scheduling of deferred tests. The report should address the following in particular:

- a. Mechanical, and service hot water commissioning – Air system balancing, hydronic systems balancing C408.2.2; 6.7.2.3.1
- b. Functional Performance Testing of HVAC and Hot Water System Equipment and Controls C408.2.3; 6.7.2.4
- c. Lighting System Controls Functional Testing C408.3; 9.4.3. Under the 2015 IECC, lighting system controls testing is always required for all commercial projects. A letter from the registered design professional or commissioning agent that follows the requirements in C408.3.1 will fulfill this requirement. This includes in particular:
  - a. Occupant sensor controls, applicable for all projects C405.2.1
  - b. Time switch controls, applicable for all projects C405.2.2
  - c. Daylight responsive controls, where applicable C405.2.3
  - d. Specific application controls, where applicable C405.2.4 (display lighting, display cases and hotel, motel rooms.
  - e. Exterior lighting controls, where applicable C405.2.5

C. PROJECT DEPENDENT - **Duct Leakage Test Results** - If applicable to the project. For ducts designed to operate in excess of 3 in water gauge and all ductwork outside conditioned space 6.4.4.2.2, or Section C403.2.9.1.3. The City form for this report is attached.

D. PROJECT DEPENDENT - **Pressure Testing of the Envelope Test Results** (under Section C402.5) (if applicable). The City form for this report is attached.

All reports/letters listed above to clear inspection may be uploaded to the building permit through the DS Dynamic Portal software system or may be e-mailed to the DS Project Manager assigned to the Commercial project.

### **PART III – RESPONSIBILITIES FOR ENERGY REVIEW AND SPECIFIC SUBMITTAL REQUIREMENTS**

The project Designer and/or Architect and Engineers (A/E) will perform some reviews/quality checks for the building design in regards to energy compliance. The Designers and/or A/E will submit a required statement

(or multiple statements from the designers, architect and engineers) that the item(s) under their responsibility were reviewed for energy compliance. (The form to be submitted is the “Designer/Architect/Engineer’s Letter of Energy Review” provided). For those items the City will not perform an additional review. But it is expected the information is on the plans as indicated in the next few tables.

The following tables describe individual responsibilities in more detail, indicating what should be on an Architectural Energy Summary Sheet and on MEP Energy Summary Sheets. In addition, the daylighting areas and building thermal envelope is required to be shown in the plans.

| Items to Provide for review on an Architectural Energy Summary Sheet   |                                       |   |   |
|--|---------------------------------------|---|---|
| Description  | Section of IECC                       | Section of ASHRAE                                 | Comment   |
| Provide the intended R-Value of roofs, walls and slabs   | C402.1.3<br>Prescriptive<br>Path Only | 5.5.3<br>Prescriptive<br>Only                     | If using the Table C402.1.3 - Provide R-Value for the building thermal envelope Energy Summary Sheet  |
| Provide the Assembly Method U-Factors, C-Factors and/or F-Factors  | C402.1.4<br>Prescriptive<br>Path Only | 5.5.3<br>Prescriptive<br>Only                     | If using the Assembly method for the building thermal envelope  |
| Provide the Roof solar reflectance and thermal emittance (3-year), or Solar Reflectance Index (3-year) for low slope roofs   | C402.3<br>Prescriptive<br>Path Only   | 5.5.3.1.1<br>Prescriptive<br>Only                 | Provide minimum initial Solar Reflectance of 0.35 or a minimum Solar Reflectance Index of 29.   |
| Provide the Percent of windows in each wall area   | C402.4<br>Prescriptive<br>Only        | 5.5.4.2.1,<br>Table 5.5-2<br>Prescriptive<br>Only | Provide indication to use daylight responsive controls to increase fenestration area, and indication of meeting requirements in C402.4.1.1. |
| Provide the skylight area as a percentage of the roof area   | C402.4<br>Prescriptive<br>Only        | 5.5.4.2.2,<br>Table 5.5-2<br>Prescriptive<br>Only | Provide indication to use daylight responsive controls to increase skylight area, and indication of meeting requirements in C402.4.1.2.     |
| Where skylights are required by C402.4.2 for certain spaces, provide daylight zone as a percentage of that floor area/space. | C402.4.2<br>Prescriptive<br>Only      | 5.5.4.2.3<br>Prescriptive<br>Only                 | Provide Visible Transmittance of chosen skylight(s) and well factor(s)  |
| Provide maximum U-factor and SHGC for specified fenestration and for skylights   | C402.4.3<br>Prescriptive<br>Only      | 5.5.4.3,<br>5.5.4.4<br>Prescriptive<br>Only       | Provide Area Weighted U-Factors where appropriate   |
| Indicate whether Air Leakage requirements will be met by Materials, Assemblies or by Testing during construction             | C402.5.1.2<br>Always<br>Required      | 5.4.3.1<br>Always<br>Required                     | Provide details of air permeability of materials, or air leakage rate of assemblies. Provide air sealing details.                           |

| <b>Architectural Items required on an architectural plan sheet</b>                         |                 |                   |  |
|--|-----------------|-------------------|--|
| Description  | Section of IECC | Section of ASHRAE | Comment  |
| Provide location of skylights and location and dimensions of daylight zones on floor plans | C103.2          |                   | Provide locations and dimensions of both top light daylight zones and sidelight daylight zones |
| Indicate the location of the building thermal envelope on a floor plan and on elevation    |                 | 5.7.4             |  |

| <b>Items to Provide for review on a MEP Energy Summary Sheet</b>  |                               |                                   |   |
|---|-------------------------------|-----------------------------------|---|
| Description   | Section of IECC               | Section of ASHRAE                 | Comment   |
| Total BTU/h for Cooling and Combined BTU/h for Heating/Hot Water  | C403.2.1<br>Always Required   | 6.4.2.1<br>Always Required        | For Commissioning Requirements  |
| Provide description/narrative of HVAC controls:   | C403.2.4<br>Always Required   | 6.4.3.1<br>Always Required        | HVAC Equipment and systems controls: thermostat controls, location/description of heating and cooling zones, description of the dead- band, set point overlaps, off-hour controls and controls for shutoff dampers                    |
| Greatest Air Flow Rate of each Fan System and Percent of Outdoor Air, Provide the percent of outdoor Air at full design airflow | C403.2.7<br>Always Required   | 6.5.6<br>Prescriptive Path Only   | To Determine the need for an Energy Recovery Ventilation System for a Cooling System (not required for Heating)   |
| Design Air Flow of Spaces, Presence of Air Side Economizers, Presence of Automatic Modulating Control of Outdoor Air Dampers    | C403.2.6.1<br>Always Required | 6.4.3.8<br>Always Required        | To determine the need for Demand Controlled Ventilation   |
| Narrative of Enclosed Parking Garage Ventilation  | C403.2.6.2<br>Always Required | 6.4.3.4.5<br>Always Required      | To determine the need for configuring the staging/modulating of fans  |
| Provide Kitchen Exhaust System Air Balancing; provide total kitchen hood exhaust flow rate for each hood.                       | C403.2.8<br>Always Required   | 6.5.7.1<br>Prescriptive Path Only | To Check for the need for listed factory built kitchen hoods and check airflow/balancing - Replacement Air for kitchen exhaust hoods, balance with hood exhaust flow rates, transfer air, total building required exhaust flow rates; |



|   |   |  |   |
|---|---|--|---|
| Provide a narrative of controls for walk-in coolers, freezers and refrigerated warehouses and refrigerated display cases  | C403.2.15<br>Always Required                            | 6.4.5, 6.4.6<br>Always Required                  |   |
| Provide capacity of each cooling unit. Provide total chilled water system capacity minus capacity of cooling units with air economizers if applicable   | C403.3<br>Only under the Prescriptive Path              | 6.5.1<br>Prescriptive Path Only                  | To determine the need for economizers and where an exemption is taken.  |
| Provide narrative of the economizer controls if required. Provide the type of economizer provided; show that an air economizer can supply 100% of design supply air as outdoor air. Show design of water-side - 100% of cooling load as outdoor air not greater than 50 degrees F | C403.3.3<br>Only under the Prescriptive Path            | 6.5.1<br>Prescriptive Path Only                  | Show that fault protection is provided  |
| Provide description/narrative of controls for Hydronic and multiple- zone HVAC systems equipment, any heat rejection equipment and fan speed control, and VAV systems; Provide description/narrative of controls for complex mechanical equipment serving multiple zones          | C403.4,<br>C403.4.4<br>Only under the Prescriptive Path | 6.5.2, 6.5.3,<br>6.5.4<br>Prescriptive Path Only | Details of Hydronic and multiple zoned systems, fan speed control   |
| Provide the narrative/description of the controls for a hot water recirculation pump or heat trace system   | C404.7<br>Always Required                               | 7.4.4<br>Always Required                         |   |
| Provide a narrative of the lighting controls (occupant sensor function, time switch controls, light reduction controls, manual controls and daylight - responsive controls in daylight zones).  | C405.2<br>Always Required                               | 9.4.1<br>Always Required                         |   |
| Provide the total interior lighting power calculated under Equation 4-9 C405.4.1.   | C405.4.1<br>Always Required                             | 9.5 9.6<br>Always Required                       | Provide the result from Equation 4-9 C405.4.1 See 9.1.3 in ASHRAE   |
| Provide the interior lighting power calculated under C405.4.2 - Building Area Method C405.4.2.1 or the Space by Space Method C405.4.2.2   | C405.4.2<br>Always Required                             | 9.2.2<br>Prescriptive Path Only                  | Provide the calculation result of the interior lighting power using either the Building Area Method C405.4.2.1 or the Space by Space Method |
| Provide the comparison of the two above calculated interior power - C405.4.1 vs C405.4.2  | C405.4.1 and C405.4.2<br>Always Required                | 9.2.2.3<br>Prescriptive Path Only                | Total lighting power calculated under C405.4.1 can't be greater than interior lighting power calculated under C405.4.2                      |

|  |   |                             |  |
|--|---|-----------------------------|--|
| Provide summary of the total exterior lighting power   | C405.5.1<br>Tables<br>C405.5.2<br>(1) and (2)<br>Always<br>Required | 9.4.2<br>Always<br>Required | Provide a narrative of external lighting power, and results of calculations of the exterior lighting power in regards to the allowable exterior lighting power |
| Provide details of an Additional Energy Package chosen | C406 Only<br>under the<br>Prescriptive<br>Path                      | Not<br>applicable           |  |

#### **PART IV – COMMISSIONING REQUIREMENTS**

An Architect or Engineer licensed under the Texas Board of Architectural Examiners or the Texas Board of Professional Engineers may perform commissioning and submit the Preliminary Report of Commissioning. Along with the report, submit the City form provided.

As an option to a Texas licensed design professional, the Architect, Contractor or Owner may engage the services of a certified commissioning agent to perform the commissioning and provide the Preliminary Report of Commissioning to DS. There are a number of organizations that train, and certify commissioning agents. These certifications include:

- CBCP – Certified Building Commissioning Professional – Association of Energy Engineers
- CCP – Certified Commissioning Professional – Building Commissioning Association
- CPMP – Certified Process Management Professional – ASHRAE
- CxA – Certified Commissioning Authority – AABC Commissioning Group

This list is not exhaustive. Other options exist for nationally recognized certifications. To hire commissioning agents that have other certifications, these certification agency requirements must be approved by DS.

#### **PART V – LIST OF MANDATORY REQUIREMENTS OF THE 2015 IECC OR ASHRAE 90.1-2013**

If ASHRAE 90.1-2013 is Chosen, there is a Prescriptive Path (Sections 5 through 10) and an Energy Cost Budget Method (Section 11). Customers must choose one or another. Mandatory provisions of the Energy Cost Budget Method (Section 11) are:

- A. Section 5.4 Thermal Envelope Mandatory Provisions: Insulation, Fenestration, and Air Leakage
- B. Section 6.4 HVAC Mandatory Provisions: Minimum Efficiencies, Equipment Sizing, HVAC Controls, HVAC construction and Insulation, Walk-in Coolers and Freezers
- C. Section 7.4 Service Water Heating Equipment: Load Calculations, Equipment Efficiencies, Insulation, and Controls
- D. Section 8.4 Electrical Mandatory Provisions: Maximum voltage drop, Receptacle Control, Energy Monitoring; Low Voltage Dry Type Distribution Transformers
- E. Section 9.4 Lighting Mandatory Provisions: Lighting Controls (Interior and Exterior), Functional Testing
- F. Section 10.4 Other Mandatory Provisions: Electric Motors, Service Water Pressure Booster Systems, Elevators, Escalators and Moving Walkways, Whole Building Energy Monitoring
- G. Energy Cost Budget less than or equal to the Design Energy Cost (Software for Energy Cost

Budget – DOE-2, BLAST, other software that complies with Section 11.4.1.1)

Mandatory Provisions of the **ASHRAE 90.1-2013 Prescriptive Path** are:

- A. Section 5 Building Envelope; Sections 5.1, 5.2, 5.3, 5.4, 5.7, 5.8 and either
  - a. Section 5.5 OR
  - b. Section 5.6
- B. Section 6 HVAC; Sections 6.1, 6.2, 6.7, and either
  - a. Section 6.3 OR
  - b. Section 6.4 and 6.5
- C. Section 7 Service Water Heating; All of Section 7
- D. Section 8 Electrical Power; All of Section 8
- E. Section 9 Lighting; Sections 9.1, 9.2, 9.4, 9.7, and either
  - a. Section 9.5 OR
  - b. Section 9.6.

If the 2015 IECC path is Chosen, there is a **Prescriptive Path (Sections C402 through C406)** and **a Total Building Performance Path (Section C407)**. Customers must choose one or another. Mandatory provisions of the **Total Building Performance Path (Section C407)** are:

- A. Section C402.5 Air Leakage
- B. Section 403.2 HVAC; Minimum Efficiencies, Equipment Sizing, HVAC Controls, Energy Recovery Ventilators, HVAC construction and Insulation, Fan Horsepower and Efficiencies, Walk-in Coolers and Freezers
- C. Section C404 Service Water Heating
- D. Section C405 Electrical Power and Lighting
- E. Section C407 Total Building Performance; Building Energy Costs shall be equal to or less than 85% of the standard reference building design
- F. Section C408 System Commissioning

Mandatory Provisions of the **2015 IEC Prescriptive Path** are:

- A. All of Sections C402 through C405; Building Envelope, HVAC, Service Water Heating, Power and Lighting
- B. Commercial Buildings must comply with C406 Additional Efficiency Package (Chose one of 6 options)
- C. Tenant Spaces must comply with C406.1.1 (either one of the following)
  - a. Where the shell building is not in compliance, tenant spaces must comply with one of the following additional energy efficiency packages:
    - i. C406.2 or
    - ii. C406.3 or
    - iii. C406.4 or
    - iv. C406.6 or
    - v. C406.7
  - b. Where the shell building is in compliance, comply with C406.5 On-Site Renewable Energy



## Designer/Architect/Engineer's Letter of Energy Review



Project Name \_\_\_\_\_

Project Address \_\_\_\_\_

Project Permit # \_\_\_\_\_

The project referenced above is being designed under the commercial provisions of the 2015 IECC or ASHRAE 90.1-2013. We have reviewed the design of this project for the following energy related items. It is our opinion that the items checked below, as designed, meets the substantial intent of the 2015 IECC or ASHRAE 90.1-2013. Items not checked will be provided to DS for review with application submittal for a building permit.

| Code Section <sup>a</sup>  | Reference <sup>b</sup>  | Checked Yes/No | Not Required for Project |
|--|---|----------------|--------------------------|
| Insulation materials/Assemblies and their R-values/U- Factor or Component Performance (calculations)   | C402.1, C402.2, 5.5.3   |                |                          |
| Roof Solar Reflectance and Thermal Emittance   | C402.3, 5.5.3.1.1   |                |                          |
| Fenestration U-factors and solar heat gain coefficients (SHGCs), Percentage of vertical fenestration to wall area, and percent skylights to roof area  | C402.4, 5.5.4.2   |                |                          |
| Area-weighted U-factor and SHGC calculations, Area weighted calculations, details of dynamic glazing, Calculations for fenestration orientation (ASHRAE)   | C402.4.3, 5.5.4.6, 5.5.4.5  |                |                          |
| Air Barrier – materials and assemblies compliance  | C402.5.1.2, 5.4.3.1.3   |                |                          |
| Mechanical system design criteria - Calculations for Sizing Equipment & Controls, Sequence of Operation Economizer<br>Demand Control Ventilation<br>Kitchen Exhaust System<br>Energy Recovery Ventilator | C403.2.2, 6.4.2.1<br><br>C403.3<br>C403.2.7<br>C403.2.8<br>C403.2.7 |                |                          |
| Mechanical and service water heating system and equipment types, sizes and efficiencies  | C403.2.3, C404.2, 6.4.1.1, 7.4.2                                    |                |                          |
| Calculations for Maximum Hot Water Volume or Length (IECC)   | C404.5  |                |                          |
| Lighting Controls  | C405.2  |                |                          |

|  |  |  |  |
|--|--|--|--|
| Efficiency rating of all refrigeration and freezer equipment   | C403.2.14,<br>6.4.1.1                    |  |  |
| Economizer fault detection and diagnosis   | C403.2.4.7                               |  |  |
| Fan motor horsepower (hp) and controls efficiencies  | C403.2.12,<br>6.5.3.1                    |  |  |
| HVAC duct and plenum sealing, and insulation details, Hot Water Piping fluid temperatures and insulation | C403.2.9,<br>C404.4,<br>6.4.4.1.2-3      |  |  |
| Lighting fixtures – Calculations for total connected interior and exterior power                         | C405.4.1,<br>C405.5.1,<br>9.2.2.3, 9.4.2 |  |  |
| Calculations for interior lighting power by the building area method or the space by space method        | C405.5.1, 9.2.2,<br>9.5, 9.6             |  |  |

Notes

- a. Some code sections may not be applicable dependent on the chosen compliance path
- b. Code References: Cxxx.x refers to an 2015 IECC section; while 5.x.x, 6.x.x etc., refer to a section in ASHRAE90.1-2013

If you have any questions, please call.

Respectfully,

[Designer/Architect/Engineer Signature Here]

Provide on Firm Letterhead or Provide Contact Information:

Name: \_\_\_\_\_

Firm/Company name: \_\_\_\_\_

Address: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Phone: \_\_\_\_\_



**2015 Commercial International  
Energy Compliance Testing Reports  
(page 1 of 2)**

**(New Buildings, Additions, and new Insulation components)**



**Your Name:** \_\_\_\_\_

**Company Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone:** \_\_\_\_\_ **Email Address:** \_\_\_\_\_

**Project Permit Number(s):** \_\_\_\_\_

**Project Address:** \_\_\_\_\_

**Building Number(s):** \_\_\_\_\_ **Suite Number:** \_\_\_\_\_

**The following Energy Conservation Letters Section may be filled out by the Architect, Engineer, or Energy Compliance Inspector.**

The following checked items/systems were installed on between dates \_\_\_\_\_; verified on date(s) \_\_\_\_\_ and consisted of the following energy verifications. *(Check each you are confirming)*

**Energy Conservation Letters**

**Building Thermal Envelope – Insulation (REQUIRED)**

- Verified or NA? Wall Insulation R-Values
- Verified or NA? Ceiling Insulation R-values
- Verified or NA? Air Barrier

**Building Thermal Envelope - Roof Reflectance**

- Verified or NA? Roof Solar Reflectance & Thermal Emittance

**Building Thermal Envelope – Windows (REQUIRED)**

- Verified or NA? Fenestration U-factors SHGC, and VT
- Verified or NA? Minimum and Maximum Skylights

**Plumbing – Service Hot Water Systems**

- Verified or NA? Water heating Equipment Efficiencies
- Verified or NA? Hot Water Piping Insulation
- Verified or NA? Controls for Hot Water Recirculation

**Mechanical Systems**

- Verified or NA? Minimum Equipment Efficiencies (REQUIRED)
- Verified or NA? HVAC System Controls (REQUIRED)
- Verified or NA? Duct Insulation and Sealing (REQUIRED)
- Verified or NA? Energy Recovery System
- Verified or NA? Kitchen Exhaust System
- Verified or NA? Demand Controlled Ventilation
- Verified or NA? Fan Efficiencies
- Verified or NA? Economizers
- Verified or NA? Walk-in Coolers Freezers/Refrigeration

**Electrical Systems (REQUIRED)**

- Verified or NA? Occupant Sensors
- Verified or NA? Time Switch Controls
- Verified or NA? Daylight Responsive Controls
- Verified or NA? Electric Motor Efficiencies



2015 Commercial International Energy Compliance Testing Reports (page 2 of 2)



Provide the following information: (provide details for designs with varying values - Provide on a separate sheet as needed) Place "N/A" for items that do not apply to the project

R Values or U-Factors of the Roof system/Ceiling \_\_\_\_\_

R Values or U-Factors of the Exterior Envelope Walls \_\_\_\_\_

R Values or U-Factors of Floor if applicable \_\_\_\_\_

Roof Solar Reflectance / Thermal Emittance \_\_\_\_\_

Fenestration – Vertical Window and Skylights U-Factors, Solar Heat Gain Coefficients, and Vertical Transmittance \_\_\_\_\_

Insulation R Values of Mechanical ducts \_\_\_\_\_

Insulation R Values of Plenum \_\_\_\_\_

Insulation R Values of Plumbing Hot water piping systems \_\_\_\_\_

Mechanical Equipment Efficiencies (in units as appropriate to the particular equipment) \_\_\_\_\_

Plumbing Hot Water Equipment Efficiencies (in units as appropriate to the particular equipment) \_\_\_\_\_

CERTIFICATION STATEMENT:

By checking this box, I am confirming that at the time of this test/inspection all items checked and noted above were installed, tested and/or inspected in accordance with the 2015 International Energy Code. I am affirming that this project is consistent with the City approved plans and the Energy Compliance Path chosen during design and permitting.

Date: \_\_\_\_\_

Name (Print): \_\_\_\_\_

Title/Designation: \_\_\_\_\_

Name (Signature): \_\_\_\_\_



# 2015 Commercial International Pre-Commissioning Reports



Project Name: \_\_\_\_\_

Project Address: \_\_\_\_\_

Permit#: \_\_\_\_\_

**The following Pre-Commissioning Statement may be filled out by the Architect, Engineer, or Certified Commissioning Agent**

**Pre-Commissioning Report – Testing Reports for High Pressure Ducts and/or Air Barrier (Attach report(s) with this form)**

(Check which Pre-Commissioning and/or Testing Report is being submitted to fulfill requirements required by the project – Check any that apply. Code sections reference the 2015 IECC)

Mechanical System Commissioning

Verified or NA?          System Adjusting and Balancing C408.2.2

Verified or NA?          Functional Performance Testing, Equipment Controls and Economizers C408.2.3

Commissioning Hot Water Recirculation Controls C408.2.3.2

Commissioning Electrical Functional Testing of Controls C408.3

Verified or NA?          Occupant Sensor Controls

Verified or NA?          Time Switch Controls

Verified or NA?          Daylight Responsive Control

Duct Leakage Testing for High Pressure Ducts if applicable C403.2.9.1.3

Building Pressure Testing of the Air Barrier (if required) C402.5.2

**CERTIFICATION STATEMENT:**

Qualified individuals from this office visited the site to perform the Pre-Commissioning or Duct/Air Barrier Testing checked above for general conformance with the previously submitted Commissioning Plan / Architect Engineer’s design and requirements of the 2015 International Energy Conservation Code.

In my opinion, based on our experience, knowledge, information and belief, the Pre-Commissioning and/or Testing Report(s) submitted accurately reflects the testing of controls or systems checked above.

Date: \_\_\_\_\_

Name (Print/Signature): \_\_\_\_\_

Title/Designation: \_\_\_\_\_

Professional License or Commissioning Certification Number: \_\_\_\_\_