

STRUCTURAL (COMMERCIAL)**1) FINISH FLOOR ELEVATION**

Finish Floor Elevation, Section 512.1. 2021 IBC Houston Amendments. All new buildings constructed within this jurisdiction shall have the top of the finished floor of the first-story of the building or structure elevated not less than 12 inches above the nearest sanitary sewer manhole rim of the sewer connected to and serving the building, or, where no sewer is available, the top of the finished floor of the first-story of the building or structure shall be elevated not less than 4 inches above the crown of the street. Provide on the plans the finish floor elevation and the location and rim elevation of the nearest Sanitary Manhole Rim elevation that the sewer line connects to or in the case of no sanitary sewer, please provide the street crown elevation.

2) FIRE RATED ASSEMBLIES

Provide construction details with matching testing criteria for all fire rated designs. Plans shall include a pdf of the fire-rated design data from an approved testing agency for each fire-rated design specified in the plans or shall be designed to a prescriptive fire resistance rated assembly as per section 721 of the 2021 IBC. Each of the fire-rated assemblies must be clearly identified on the construction plans and meet the minimum design requirements in accordance with Chapter 7 of the 2021 IBC.

3) STAIRS, HANDRAILS, AND GUARDRAILS

- Stair, Rise and Run, Section 1011.5.2 – 2021 IBC: The riser heights shall not be less than 4 inches or greater than 7 inches as per section 1011.5.2. The minimum tread depth is 11 inches as per section 1011.5.2. Stair treads and risers shall be of uniform size and shape. The tolerance between the largest and smallest riser height or between the largest and smallest tread depth shall not exceed 3/8 inch in a stairway flight as per section 1011.5.4.
- Handrails/ Guardrail Design Loads Table 1607.1 & sections 1607.9 thru 1607.9.2 of the 2021 IBC. Provide the design load requirements for handrail and guardrails as per the 2021 IBC and Table 1607.1 and section 1607.9.1. Design loads shall be sealed by a P.E. licensed in the State of Texas and shown as such on the plans. Handrail and Guardrails are designed to resist a load of 50 plf. applied in any direction at top and to transfer this load through the supports to the structure and to resist a single concentrated load of 200 lbs. applied in any direction.
- Stair, Handrail Requirements, Section 1014 – 2021 IBC. Comply with handrail requirements for stairs as required in section 1014.1, Handrails, Height 1014.2- 2021 IBC. Provide the height of the handrails as required per section 1014.2 of the 2021 IBC (34" to 38").
- Stair Component Design Loads, Section 1607.3 & Table 1607.1. 2021 IBC. Provide the design load requirements for components other than the handrail/guards as required per Section 1607.1 of the 2021 IBC. Design loads shall be sealed by a Professional Engineer licensed in the State of Texas and shown as such on the plans.
- Handrail graspability, Section 1014.3 – All required handrails shall comply with Section 1014.3.1 or shall provide equivalent graspability.

4) TOILET ROOMS – WALLS, FLOORS AND GRAB BARS

Walls, Toilet Room, Sec. 1210.2 – 2021 IBC. Toilet room walls within 2 feet of urinals and water closets are required to be covered with a smooth, hard nonabsorbent surface to a height of 4 feet. Section 1210.2.2.

Water Closet Floors. Section 1210.2. 2021 IBC. Provide information showing that floors in water closets comply with Section 1210.2.1 for a smooth, hard non-absorbent surface that extends upward onto the wall at least 6 inches.



STRUCTURAL (COMMERCIAL)

Grab bars, shower seats and dressing room bench seats, section 1607.9.2. 2021 IBC. Grab bars, shower seats and dressing room bench seat systems shall be designed to resist a single concentrated load of 250 pounds (1.11 kN) applied in any direction at any point on the grab bar or seat so as to produce the maximum load effects.

5) WIND SPEED

Per Section 1609.3, The ultimate design wind speed, Vult, in mph, for the determination of the wind loads shall be determined by entering the physical address of the property where the building will be constructed into the ASCE 7 Windspeed Website: <http://hazards.atcouncil.org/>. The proposed design windspeed for the structure shall be based on the appropriate risk category as determined by Table 1604.5. A pdf copy of the windspeed determination from the website shall be included when submitting the design documents/plans for code compliance verification and permit approval.

6) ADDRESS CORRECTION

To change the address, contact the HPC Addressing team at hpcaddressing.team@houstontx.gov for address change processing details, or you may go to the Permitting department counter located in the lobby area of 1002 Washington Ave. to apply for an Address change.

7) ADJACENT LEASE SPACES

Adjacent Lease Spaces - 2021 IBC. Provide the use and occupant for the adjacent lease space(s). Show the location of all or any Fire Barrier walls and their design number, testing criteria from an approved testing agency and the fire resistive rating. Provide the addresses for all buildings on the property.

8) COMMERCIAL SITE PLAN

Submit a complete detailed site plan drawn to scale to show the following requirements

- A. Designate the location of any area separation walls in the building
- B. Dimensions to all property lines and from other buildings
- C. Exit route from the building to a public way
- D. All existing buildings and their use on the property
- E. All parking requirements
- F. A directional compass point indicating north
- G. Indicate all easements and setback lines
- H. Identify each building by the appropriate address number on the site

9) OCCUPANT LOADS

Please provide an updated occupant load calculation for the lease space based on the proposed use and furniture layout. Occupant load factors shall be per the function space categories as provided in Table 1004.5 of the 2021 IBC.

10) LIFE SAFETY / EGRESS

Provide a complete Life Safety floor plan for review. This is needed to ensure that required exit paths have not been compromised. The Life Safety floor plan shall include but not be limited to: common corridors & lobby spaces, existing or proposed exit stairs, diagonal distance of the area served, the distance between exits or exit access doors, the minimum required number of exits per Section 1006 of the 2021 IBC, common path of travel distances, and the maximum overall travel distance the nearest exit.

11) ADDITIONAL EXITS

Provide additional exits in accordance with Sections 1006, Table 1006.2.1 and Table 1006.3.3. 2021 IBC.

STRUCTURAL (COMMERCIAL)**12) EXIT SIGNS**

Exit Sign(s) Required, Section 1013.1 - 2021 IBC. Provide exit signs at all exit doors and throughout areas as per section 1013.1.

13) CURRENT BUILDING CODES

Please update the cover sheet to provide a statement indicating the current City of Houston approved building code for which the proposed project shall be reviewed.

14) ALLOWABLE BUILDING HEIGHT, NUMBER OF STORIES & AREA CALCULATIONS

Per Section 503, 504 and section 506. 2021 IBC. The height, number of stories and area for buildings of different construction types shall be governed by the intended use of the building and shall not exceed the limits in Table 504.3, Table 504.4 and Table 506.2 except as modified hereafter. Provide clear and definitive allowable area calculations for the proposed scope of work and existing building that demonstrate compliance with Tables 504.3, 504.4 and 506.2. Provide specific information on the drawings indicating the provision of any proposed height, number of stories or area modifications.

15) ELEVATIONS AT DOORS

There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 units vertical in 12 units horizontal (2-percent slope) section 1010.1.4, 2021 IBC. This section/comment applies to all exit doors, required and convenience exits.

16) CORRIDORS

Provide the design number and a pdf of the testing criteria from an approved testing agency for the corridor walls and ceilings as per Table 1020.2. Door assemblies in corridors shall provide fire protection of not less than 20 minutes as required per section 716.2.2.1 2021 IBC. Per Section 1020.5 2021 IBC, dead end corridors can't exceed 20 feet.

17) ENERGY

All information listed on the ComCheck report for the building envelope shall be transferred onto the plans showing the locations of the insulation (roof-walls), the methods (i.e. insulation either cavity or continuous), identifying all fenestration U-factors and SHGC and in the case of non-glazed doors the U-Factors for such doors, etc. Typically, such information is shown on wall sections and/or section cuts elevations and/or door/window schedules.

For apartment buildings 3 stories or less, a REScheck is required to ensure energy compliance. Plans should show prescriptive compliance with the 2021 IECC or be provided with a software calculation showing that they meet the minimum requirements of the 2021 IECC.

18) EXTERIOR WALL OPENINGS

Comply with the maximum area of protected and un-protected openings as set forth in section 705.8 and Table 705.8, 2021 IBC.

19) PROTECTED OPENINGS

Provide the correct fire rating for all fire rated openings in accordance with Section 716 of the amended 2021 IBC. The door and window schedules shall include the correct fire ratings for doors & windows in accordance with Tables 716.1(2) and 716.1 (3) respectively.



STRUCTURAL (RESIDENTIAL ONE-STOP)**1) DECLARATION IN SUPPORT OF A BUILDING PERMIT APPLICATION**

Declaration is not signed, or ownership doesn't match.

2) PLANS & DOCUMENTS – R106

No plans were uploaded or provided for review. Please provide complete plans and documents for the full scope of work in accordance with the Residential One Stop Guide (CE-1050):

<https://www.houstonpermittingcenter.org/media/1866/download?inline>

3) IMPERVIOUS COVER FORM (CE-1207)– CITY OF HOUSTON INFRASTRUCTURE DESIGN MANUAL

Fill out the impervious cover calculation form. Please show all areas that are impervious on the site plan.

4) GRADING AND FILL WORKSHEET (CE-1094)

City of Houston form CE-1094 should be completely filled out and attached to the set of plans.

5) ENERGY – 2021 IECC

Plans should show prescriptive compliance with the 2021 IECC or be provided with a software calculation showing that they meet the minimum requirements of the 2021 IECC.

6) SITE PLAN – R106.2

Plans should include a site plan showing all existing and proposed structures and all impervious cover. The site plan should include dimensions from all walls to the closest property line.

7) EXTERIOR WALLS - TABLE R302.1(1)

Label any walls that are less than 5' to the property line as 1 hour rated walls and provide a wall section and design from an approved testing agency. The tested design must specifically state that the design has been tested in accordance with ASTM E-119 or UL 263 with exposure from both sides.

8) ESCAPE AND RESCUE OPENING - R310.1

Basements and bedrooms shall have a door or operational window that opens to a yard or court that leads to the right of way that meets the following minimum requirements:

- 24" minimum clear opening height
- 20" minimum clear opening width
- 5 square feet of clear opening for 1st floor windows
- 5.7 square feet of clear opening for windows on all other floors
- Finished sill height not more than 44" a.f.f.

9) RISERS AND TREADS – R311.7.5

Risers shall not exceed 7-3/4" and treads shall not be smaller than 10".

10) LANDINGS FOR EXTERIOR DOORS – R311.3

Provide a landing at each exterior door. The drop from the top of the threshold to the landing shall not exceed 7-3/4" for doors other than the required egress door.

11) DESIGN CRITERIA – TABLE 301.5

All code references shall reference the 2021 IRC. Plans shall list all applicable live loads, dead loads and wind loads.

STRUCTURAL (RESIDENTIAL ONE-STOP)**12) WALL SECTION – R106.1.1**

Provide a complete wall section from the foundation to the roof showing all framing materials, insulation, exterior finish material, interior finish material, etc.

13) SELF-CERTIFICATION WORKSHEET

No self-certification worksheet when in Flood zone. (Solar panels)

STRUCTURAL (SUBMITTED HOUSES)**1) CARBON MONOXIDE DETECTORS – R315.3**

Carbon monoxide detectors should be shown on the electrical sheet or the floor plan in the immediate vicinity outside of each separate sleeping area. A carbon monoxide alarm is required within the bedroom, where a bedroom or its attached bathroom contains a fuel fired appliance.

2) ENERGY – 2021 IECC

Note: Complete the REScheck checklist. The instructions for completing the checklist are at the top of the first page of the checklist.

Note: If the scope of work includes an attached garage and/or covered porch with conditioned space above, the REScheck should include a line item for floor insulation. The software calculation must represent the entire building thermal envelope.

3) ELECTRICAL PANELS AND METERS – 2023 NEC 110.26A1

Provide the location of the electrical meter and panel (if located on the outside of the building) on the site plan. There must be at least 36 inches of clearance from the energized portions of the meter can or panel box and the property line.

4) GAS METER LOCATION – CENTERPOINT ENERGY REGULATIONS

Indicate on the site plan the proposed location of the gas meter installation. The gas meter should have 36" of clearance between the face of the meter and a property line.

5) MEMBRANE PENETRATIONS (TRUSSES) – R302.4.2

Plans show the floor or roof trusses penetrating the interior membrane of the firewall. Provide a tested design for this membrane penetration or attach a copy of the City of Houston penetration drawing 19-04-M available at the following web address:

<https://www.houstonpermittingcenter.org/media/2751/download?inline>

6) PROJECTIONS LESS THAN 5' – TABLE R302.1(1)

Provide a 1 hour rated soffit design for projections less than 5' from a property line. The protection must be on both the underside and face. Or provide fire blocking from the wall top plate to the underside of the roof sheathing.

For the City of Houston standard design, follow the link:

<https://www.houstonpermittingcenter.org/media/2751/download?inline>

7) WINDOW SILL HEIGHTS FOR WINDOWS MORE THAN 72" ABOVE GRADE – R312.2.1

Provide the finished sill heights for all operational windows more than 72" above grade on the exterior of the building. If the sill height is less than 24" above the finished floor, upload a copy of the manufacturer's specifications for the opening control devices or fall prevention devices that comply with ASTM F 2090.

8) DRAINAGE PLANS - R401.3

Plans should show a complete drainage pattern to the right of way and note that the grade will fall a minimum of 6 inches within the first 10 feet away from the foundation or provide a swale where a physical barrier does not allow a 6-inch drop in the first 10 feet. *This is typically a two-part rejection for the drainage pattern and the statement for the grade note.*

STRUCTURAL (SUBMITTED HOUSES)**9) FIREWALL CONTINUITY R302.2.3**

Plans and/or sections should show that any required firewalls are to be built continuously from the foundation to the underside of the roof sheathing, deck or slab.

10) WALL SECTION – R106.1

Provide a complete wall section from the foundation to the roof showing all framing materials, insulation, exterior finish material, interior finish material, etc.

11) PROJECTIONS – TABLE R302.1(1)

Roof projections may not extend to a point less than 2' to a property line.

12) HANDRAIL/GUARDRAIL DESIGN – R301.5 (TABLE)

Plans should specifically note that the required handrails and guardrails will be designed for a 200-pound live load in any direction along the top.

13) DESIGN CRITERIA – DESIGN CRITERIA – R301.2, R301.4, R301.5

All code references shall reference the 2021 IRC. Plans shall list all applicable live loads, dead loads and wind loads.

14) SQUARE FOOTAGE (FEES)

Provide a breakdown of the total square footage of the structures. Include everything under cover.

15) GARAGE (SEPARATION) TABLE 302.6 2021 IRC

The garage shall be separated from the residence and its attic area by not less than 1/2-inch gypsum board applied to the garage side and 5/8" Type X gypsum board where the separation is a floor/ceiling assembly.

16) GARAGE OPENING PROTECTION (DOOR) R302.5.1 2021 IRC

Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches in thickness, solid or honeycomb-core steel doors not less than 1 3/8 inches thick, or 20- minutes fire-rated doors. Doors shall be self-latching and equipped with a self-closing or automatic-closing device.

ELECTRICAL

Plans should be specific as to the scope of the proposed electrical work. The documents are required to include the load analysis, a one-line diagram, the ISCA Value, a panel schedule with the panel location clearly shown on the floor plan, a power and lighting lay-out plan, electrical details, etc.

1) ENGINEER OR MASTER ELECTRICIAN

All Electrical Plans and Electrical Sheets are required to be signed by a State of Texas Registered Professional Engineer in accordance with the State of Texas Engineer Practice Act. Section 302 City of Houston Electrical Code and Code Word 2021-B06 or a Master Electrician registered by the City of Houston may design the electrical system, Per Section 302.2 City of Houston Electrical Code and Code Word 2021-B06. All Electrical Plans and Electrical Sheets shall include the Master Electrician's Name, Master's License Number, Master's Signature, and be dated on all electrical plans.

Engineer Firm Name and Registration Number: All engineering documents released, issued, or submitted by or for a registered State of Texas engineering firm, must clearly indicate the firm name and registration number. Section 302.2 City of Houston Electrical Code

2) CODE REFERENCE

The 2023 National Electrical Code (NEC) was adopted by the State of Texas and became effective September 1, 2023. (NEC) will be based on the 2023 NEC for all projects in the City of Houston.



ELECTRICAL**3) INTERIOR/EXTERIOR LIGHTING COMCHECK COMPLIANCE CERTIFICATE**

As of January 1, 2024, commercial buildings and structures shall comply with the 2021 IECC or 2019 ASHRAE 90.1, pursuant to Section 19.53 of Chapter 34, Texas Administrative Code. The Interior/Exterior Lighting Compliance Certificate (2021 I.E.C.C.) shall be filled out signed and sealed by an Architect, Engineer or Master Electrician.

4) COMMISSIONING STATEMENT, 2021 IECC OR ASHRAE 90.1 (2019)

As of January 1, 2024, commercial buildings and structures shall comply with the 2021 IECC or 2019 ASHRAE 90.1, pursuant to Section 19.53 of Chapter 34, Texas Administrative Code.

5) NEW CONSTRUCTION

Provide short circuit calculations, indicate method used (Point to point or IEEE) for each service panel board, load center, motor control ctr., distribution ctr., etc. The intent is to verify that all circuit breakers and fuses have adequate interrupting capacity rating and the bracing in each item of equipment in the system. If current limiting device are used, let-through current will be required to be shown on the plans as well. With respect to Article 110.9 & 10, 2023 N.E.C

6) MODIFICATION

Where modifications to the electrical installation occur that affect the available fault current at the service, the available fault current shall be verified or recalculated as necessary to ensure the service equipment ratings are sufficient for the available fault current at the line terminals of the equipment. NEC 110.24(B) AFC

7) LOAD ANALYSIS

Load Analysis shall show method of calculation as per Art. 215 & Art. 220 or the connected load whichever is greater. Show code reference to any demand factors used. Demand factors other than as set out in the National Electrical Code are not permitted. Feeder conductors shall have an ampacity not less than required to supply the load, as computed using the correct voltage. See part "II" & "III" of Article 220 of the N.E.C.

8) SERVICE ONE LINE DIAGRAM

A complete one-line diagram of the service feeders, showing voltage, wire size, type of insulation, raceway type and size, over-current-protection size and type. Section 302 (B), HBC.

9) POWER LAYOUT

Provide a complete power layout showing all circuiting, home runs, panels and circuit number. Section 302 (C), C.O.H. Elec. Code.

10) LIGHTING LAYOUT

A complete lighting layout is required showing circuitry and home run to panel and circuit number it is fed from. Show all switching. Include a Light Fixture schedule. City of Houston Electrical Code, section 302.

11) LIGHTING CONTROLS (MANDATORY)

Lighting systems shall be provided with controls as specified in Sections C405.2.1, C405.2.2, C405.2.3, C405.2.4 and C405.2.5 of the 2021 IECC. Identify the occupant sensor control function in compliance with Section C 405.2.1.1

Each area of the building that is not provided with occupant sensor controls complying with Section C405.2. 1.1 shall be provided with time switch controls complying with Section C405.2.2.1 and C405.2.2.2 of the 2021 IECC.

ELECTRICAL**12) PANEL SCHEDULE**

Panel Schedules shall contain the following information:

- (a) Voltage and Phases
- (b) Panel bracing & ISCA value
- (c) Bus rating=(amps)
- (d) Load per circuit
- (e) Size all over-current devices & number of poles & wire size
- (f) Mounting type "surface or recess"
- (g) If more than one panel, identify each
- (h) Panel location and NEMA Rating Class
- (i) A Load Analysis
- (j) Clear, evident, and specific to the purpose or use of each circuit including spare positions with an unused overcurrent device

National Electrical Code ref: 110.09,225.40, Section 506 NFPA

At the bottom of the panel show connected load with continuous loads @ 125%

Also, code load. NEC 2023 Article 408.4

13) SITE PLAN

A site plan scaled with a common "architect or engineer scale" is required, and should include but not be limited to the following minimum information:

- a) Building location, with the location of the C.P.E. service clearly indicated on the plan and showing the routing of conductors to the building.
- b) The site plan should also clearly document all exterior electrical equipment/ utility meter, panels. Lights located in the parking lot, or exterior building lighting, etc.

MECHANICAL**1) MECHANICAL PLAN**

Clarify the HVAC system is an existing or new system, otherwise current code requirement shall be complied with

- a. 2021 UMC with Houston Amendments for mechanical. The 2021 Houston Amendments can be found at: <https://www.houstonpermittingcenter.org/construction-code-modernization/code-amendment>
- b. 2021 Energy Code, either 2021 International Energy Code Conservation with Houston Amendments or ASHRAE 90.1 (2019).
- c. 2021 IBC for roof loads on existing building.

2) ENERGY CODE COMPLIANCE WITH COMCHECK

Provide a calculation of heating and cooling loads - Section C403.1.1, 2021 IECC

Design loads associated with heating, ventilating and air conditioning of the building shall be determined in accordance with ANSI/ ASHRAE/ ACCA Standard 183 or by an approved equivalent computational procedure using the design parameters specified in Chapter 3



MECHANICAL**3) VENTILATION REQUIREMENT**

Provide outdoor air ventilation per Section 402. The outdoor air calculation shall be based on Section 403 and 404 with Table 402.1, 2021 UMC.

The design outdoor air intake flow rate for a ventilation system shall be determined in accordance with 2021 UMC Section 403.2 through Section 403.8 in conjunction with Table 403.2.2 or 403.5.2, and exhaust rates Table 403.7 respectively.

4) PENETRATION WITH PROTECTION DEVICE

Where required rated-damper – Section 717.5, 2021 IBC0

Fire dampers, Smoke dampers and Combination fire/smoke dampers; or Ceiling radiation dampers shall be provided at the location as prescribed in Sections 717.5.1 through 717.5.7 and 717.6, 2021 IBC

5) COMBUSTION AIR AND PROCESS AIR REQUIREMENT

Provide a combustion air calculation and intake air method for gas fire furnace, dryer machine, water heater/boiler, etc. based on Chapter 7, 2021 UMC

6) BUILDING AIR BALANCE AND CALCULATION

Provide a makeup air and building air balance to exhaust system installed in the space such as nail salon ventilation system, kitchen exhaust hood, any product conveying system, etc., and shall comply with Chapter 5, 2021 UMC

7) COMBUSTIBLE MATERIALS AND LOCATION

Combustible materials within return air ducts/plenums are prohibited per Section 602.2, 2021 UMC
Materials exposed within ducts or plenums shall have a flame-spread index of not more than 25 and a smoke-developed rating of not more than 50 when tested as a composite product in accordance with ASTM E84 or UL 723.

8) PROHIBITED INSTALLATION LOCATIONS

- a. The installation of boiler and refrigeration units within the same room is prohibited – Section 1106.8, 2021 UMC
- b. Clothes dryer moisture exhaust ducts under positive pressure shall not extend into or through ducts or plenums.
- c. Manually operated dampers shall not be installed in combustion-air openings.

9) PROHIBITED PENETRATIONS

Penetrations into enclosures for exit access stairways, exit access ramps, interior exit stairways, interior exit ramps or an exit passageway shall be allowed only when permitted by Section 1019, 1023.5 or 1024.6. respectively – Section 707.7.1, 2021 IBC

10) AIR MOVEMENT IN CORRIDORS

Corridors shall not serve as supply, return, exhaust, relief, or ventilation air ducts Section 1020.6, 2021 IBC

11) LOUVERS IN HURRICANE PRONE REGIONS

Provide a manufacture spec. and installation instructions of wall louvers that meet AMCA 540 and 550 per Sections 315.1.1 and 315.1.2 in 2021 UMC. Also, Sections 1604.5, 1604.5.1, and 1609.1.2.1, 2021 IBC with Houston Amendment respectively where the wind load and risk categories are applicable.



PLUMBING**1) CONSTRUCTION DOCUMENTS**

Construction documents, engineering calculations, diagrams, and other data shall be submitted in two or more sets with each application for permit. The construction documents, computations, and specification shall be prepared by, and the plumbing designed by, a registered design professional. Construction documents shall be drawn to scale with clarity to identify that the intended work to be performed is in accordance with the code. (2021 UPC Section 104.3.1)

2) MINIMUM STANDARDS

Pipe, pipe fittings, traps, fixtures, material, and devices used in a plumbing system shall be listed or labeled (third-party certified) by a listing agency (accredited conformity assessment body) and shall comply with the approved applicable recognized standards referenced in this code and shall be free from defects. Plastic pipe and the fittings used for plastic pipe, other than those for gas, shall meet the requirements of NSF 14. Unless otherwise provided for in this code, materials, fixtures, or devices used or entering into the construction of plumbing systems, or parts thereof, shall be submitted to the Authority Having Jurisdiction for approval. (2021 UPC Section 301.2)

3) LISTED MATERIALS

All pipe, pipe fittings, traps, fixtures, material, and devices used in a plumbing system shall be listed or labeled (third-party certified) by a listing agency (accredited conformity assessment body) and shall conform to approved applicable recognized standards referenced in this code and shall be free from defects. (2021 UPC Section 301.2)

4) FIXTURE LEGEND (LIST)

Provide detailed drawings that include a legend (list) of all the proposed plumbing fixtures located in the new plumbing systems. The legend (list) must show the proposed pipe sizes for each fixture listed. Include an itemized materials legend (list) keyed to the plumbing plans that identify all plumbing and piping materials used in the project for each plumbing system. We do not accept specification books as part of the submittal documents. (2021 UPC Section 301.2, 301.2.1, 301.2.2)

5) LIMITATION OF HOT WATER TEMPERATURE FOR PUBLIC LAVATORIES

Hot water delivered from public-use lavatories shall be limited to a maximum temperature of 120°F (49°C), unless limited to a maximum temperature of 110°F (43°C) for public safety as regulated by the Health Department. The maximum temperature shall be regulated by one of following means: (1) A limiting device conforming to either ASSE 1070/ASME A112.1070/CSA B125.70, or (2) A water heater conforming to ASSE 1084. (2021 UPC Section 407.3)

6) FIXTURE COUNT

Each building shall be provided with sanitary facilities as prescribed in Chapter 29, Table 2902.1 of the Building Code. (2021 UPC Amendment Section 422.1)

7) WATER HEATER T&P AND PAN DRAIN

The Temperature & Pressure relief valve and pan drain lines must discharge to an approved indirect waste receptor or outside the building. (2021 UPC Section 504.6, 608.5, & 805.1)

8) BACKFLOW PREVENTION

No plumbing fixture, device, or construction shall be installed or maintained, or shall be connected to a domestic water supply, where such installation or connection provides a possibility of polluting such water supply or cross-connection between a distributing system of water for drinking and domestic purposes and water that becomes contaminated by such plumbing fixture, device, or construction unless there is provided a backflow prevention device approved for the potential hazard. (2021 UPC Section 602.3)



PLUMBING**9) WATER ENTRY DETAIL**

Provide a domestic water detail showing how the piping enters the building. Comply with specifications indicated in the section specified and include detailed drawings to clearly document compliance. (2021 UPC, Section 606.2 and Section 606.10 amendment)

10) CONDENSATE DISCHARGE FOR A/C

Air-conditioning condensate waste pipes shall connect indirectly to the drainage system through an air gap or air separation to trapped and vented receptors, dry wells, leach pits, or the tailpiece of plumbing fixtures. A condensate drain shall be trapped in accordance with the appliance manufacturer's instructions. (2021 UPC, Sections 814.0)

11) VENTED TRAPS

All traps must be properly vented. The details located in the plans must clearly document the minimum required trap venting. (2021 UPC, 901.2)

12) TRAPS REQUIRED

Each plumbing fixture, excepting those having an integral trap, shall be separately trapped by an approved liquid seal trap. (2021 UPC, Section 1001.2)

13) TRAP SEAL PROTECTION

Floor drains or similar traps connected directly to drain system and subject to infrequent use shall be protected with a trap seal primer, except where not deemed necessary for safety or sanitation by Authority Having Jurisdiction. Trap seal primers shall be accessible for maintenance. (2021 UPC, Section 1007.0)

14) SEPARATE FACILITIES. Where plumbing fixtures are required, separate facilities shall be provided for each sex.**Exceptions:**

1. Separate facilities shall not be required for dwelling units and sleeping units.
2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or less.
3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 100 or less.
4. Separate facilities shall not be required in business occupancies in which the maximum occupant load is 25 or fewer.
5. Separate facilities shall not be required to be designated by sex where single-user toilets rooms are provided in accordance with Section 2902.1.2.
6. Separate facilities shall not be required where rooms having both water closets and lavatory fixtures are designed for use by both sexes and privacy for water closets are installed in accordance with Section 405.3.4 of the International Plumbing Code. Urinals shall be located in an area visually separated from the remainder of the facility or each urinal that is provided shall be located in a stall.

(2021 IBC, Section 2902.2)

15) PLUMBING FIXTURE REQUIREMENT (SERVICE SINK)

This plumbing fixture is a requirement for the proposed occupancy. (2021 IBC, Table 2902.1, footnote e)

16) PLUMBING FIXTURE REQUIREMENT (DRINKING WATER)

This plumbing fixture is a requirement for the proposed occupancy. (2021 IBC, Table 2902.1, Section 2902.6 and Section 2904 amendment)

