



Construction Information Packet

**January 22nd,
2024**


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A. PLAN REVIEW / PERMIT SUBMITTAL

The requirements for permit submittal are:

1. Plans must be submitted electronically as Adobe Acrobat (.pdf) documents along with completed a completed permit application found in My Government Online (MGO):
[HAS Permit Application](#)
2. A copy of the HAS Permit Application Submittal Procedure can be found here:

Customer Guide of
How to apply for ne
3. Plans must be accordance with the adopted codes and the HAS Standards. Please find the standards on the Fly2Houston website: [Building Standards, Permits and TIP | Business and Partnerships | Houston Airport System \(fly2houston.com\)](#).
4. A site plan indicating all proposed structures and where those structures are to be placed in relation to property lines, setbacks, and any easements.
5. If a foundation or paving will be a part of the project, all foundation and pavement drawings must be sealed by a professional engineer licensed by the State of Texas.
6. A complete floor plan of the structure(s).
7. Elevation drawings showing exterior wall construction.
8. If the construction is adjacent to another tenant or use, provide the use of the adjacent space.
9. Firewalls – Firewalls, fire barriers and fire partitions must be marked as one of the above and clearly identified and outlined on the plans. Additionally, the fire assembly tested and approved by UL, FM or other approved testing lab must be included in the plans and referenced on the floor plan where the fire assembly is shown.
10. Complete mechanical plans including all equipment, duct layout, dampers, kitchen hood, refrigeration, and calculations.
11. Electrical plans must include the following information:
 - a. Information indicating how the electrical service will be grounded, including lightning protection and cathodic protection as applicable.
 - b. Electrical fault current calculations.
 - c. Electrical short circuit calculations.
 - d. Electrical load calculations.
 - e. One line diagram
 - f. Panel schedules
 - g. Lighting schedules
 - h. Service equipment locations
 - i. Demo plan
12. Complete plumbing plans including DWV system, fixture calculations, water supply, utilities, irrigation, and storm.
13. A COMcheck verifying compliance with the 2021 International Energy Conservation Code. The COMcheck must include: Envelope, Lighting and Mechanical sections.
www.energycodes.gov/comcheck
14. Verification from TDLR that the project has been registered for review of compliance with Architectural Barriers regulations. A copy of the comments from the reviewer must be included. Texas Department of Licensing and Regulation - Texas.gov
15. Asbestos Survey – If the project involves the remodel or demolition of an existing space, you must submit an asbestos survey indicating that no asbestos was found – or, if asbestos was found, you must submit a report indicating that all found asbestos was abated.
www.tshs.texas.gov

16. Signage – Signage is to be permitted separately, all over head signage is to be sealed by engineer.
17. Electronic Locks – All electronic or magnetic locks are to be permitted separately. Drawings are to be sealed by design professional.
18. Fire/Life Safety
 - a. All construction and installations must conform to current HAS Codes & Standards
 - b. All fire and life safety submittal require deferred permits and submittals.
 - c. All fire/life safety systems shall be submitted by a fire protection company licensed in the State of Texas
 - d. Sprinkler plan reviews need to include hydraulic calculations with 10% safety margin.
 - e. Fire alarm submittals need to include battery calculations and voltage drops.
 - f. All submittals shall include necessary product data sheets.
 - g. Additional submittals may generate additional comments.
 - h. Final Approval subject to field inspection

B. GENERAL INSPECTION NOTES

1. All inspections must be requested through My Government Online (MGO). Inspections requested prior to 4:00 pm will be performed the following business day. Inspections requested after 4:00 pm and before 10:30 am will be made that afternoon. For general questions only and for permit information, you may call the office at (281) 233-1051.
2. **Cancellations.** Inspections should not be requested until the contractor has verified that the work is complete and ready for inspection.
3. No construction may begin until a building permit has been issued unless there is prior written approval.
4. The building permit must be displayed in an obvious place that can be seen by the public.
5. Signage is to be permitted separately, and inspections called in for the following,
 - a. Inspection of signage on site with shop drawings present before sign is installed.
 - b. Final inspection of sign after installed.

C. INSPECTIONS REQUIRED

Inspections required for project types are outlined below:

1. Free-standing buildings

Inspections

- a. Temporary Pole (can be done at any time)
- b. Concrete paving, walkways, forms, reinforcement
- c. Plumbing Rough
- d. Grease Trap (only for FOG or Grit producing occupancies)
- e. Tilt Wall (if applicable)
- f. Retaining Wall (If applicable)
- g. Electrical Underground
- h. Foundation
- i. Structural Steel Report (if applicable) before the wall inspection.
- j. Electrical Wall
- k. Plumbing Wall or Top-Out
- l. Gas Rough
- m. Framing Wall
- n. Fireproofing/Firewall
- o. Masonry
- p. Insulation Inspection (prior to installing sheetrock)

- q. Mechanical Duct Rough
- r. Mechanical Duct Insulation
- s. Electrical Ceiling
- t. Framing Ceiling
- u. Grease Duct (for Type I Hoods)
- v. Hood Inspection (for Type I or Type II Hoods)
- w. Electrical Service/Meter Release
- x. Gas Meter Release/Gas Final
- y. Mechanical Final
- z. Electrical Final
- aa. Plumbing Final
- bb. Energy Final
- cc. Fire Alarm
- dd. Fire Sprinkler
- ee. Fire Pump
- ff. Egress/Exit lights
- gg. Fire/Smoke Damper
- hh. Elevator Shaft Wall
- ii. Fire/Life Safety Final
- jj. Accessibility Final (by 3rd Party)
- kk. Signage (foundation, electrical, mounting)
- ll. E-Locks
- mm. Building Final

2. Shell Buildings

Inspections

- a. Temporary Pole (can be done at any time)
- b. Concrete Paving or walkways
- c. Plumbing Rough
- d. Grease Trap (if applicable)
- e. Tilt Wall (if applicable)
- f. Foundation
- g. Structural Steel Report (if applicable), before the wall inspection.
- h. Electrical Wall
- i. Plumbing Wall or Top-Out
- j. Gas Rough
- k. Framing Wall
- l. Fireproofing/Firewall
- m. Masonry
- n. Insulation Inspection – Building Envelope Only (prior to installing sheetrock)
- o. Mechanical Duct Rough – may not be required depending on scope.
- p. Mechanical Duct Insulation – may not be required depending on scope.
- q. Electrical Ceiling
- r. Framing Ceiling
- s. Electrical Service/Meter Release
- t. Gas Meter Release/Gas Final
- u. Mechanical Final – may not be required depending on scope.
- v. Electrical Final
- w. Plumbing Final
- x. Energy Final
- y. Accessibility Final

- z. Fire Alarm (If applicable)
- aa. Fire Sprinkler (If applicable)
- bb. Fire Pump (If applicable)
- cc. Egress/Exit Lights
- dd. Fire/Smoke Damper (If applicable)
- ee. Elevator Shaft Wall (If applicable)
- ff. Fire/Life Safety Final
- gg. Building Final

3. Interior Finish-Out

Inspections

- a. Plumbing Rough
- b. Grease Trap
- c. Leave Out
- d. Electrical Wall
- e. Plumbing Wall or Top-Out
- f. Framing Wall
- g. Fireproofing/Firewall
- h. Insulation Inspection (must be done prior to installing sheetrock)
- i. Insulation Inspection – Building Envelope Only (prior to installing sheetrock)
- j. Mechanical Duct Rough
- k. Mechanical Duct Insulation
- l. Electrical Ceiling
- m. Framing Ceiling
- n. Grease Duct (For Type I Hoods)
- o. Kitchen Hood (For Type I or Type II Hoods)
- p. Electrical Service/Meter Release
- q. Gas Meter Release/Gas Final
- r. Mechanical Final
- s. Electrical Final
- t. Plumbing Final
- u. Energy Final
- v. Accessibility Final
- w. Fire Alarm (If applicable)
- x. Fire Sprinkler (If applicable)
- y. Fire Pump (If applicable)
- z. Egress/Exit Lights
- aa. Fire/Smoke Damper (If applicable)
- bb. Elevator Shaft Wall (If applicable)
- cc. Fire/Life Safety Final
- dd. E-Locks
- ee. Signage
- ff. Building Final

4. Special Inspections 2021 IBC Chapter 17 Special Inspections and Testing.

Certain types of special inspections will also be required. Special inspection can be performed by a qualified testing lab or professional engineer. Reports from the special inspector must be submitted to the Building Inspector for review. Additional reports or testing may be necessary before the special inspection reports can be approved by the Structural Inspector.

Items requiring special inspection include but are not limited to:

Structural Steel - Reports must verify that the structural steel has been installed in accordance with the engineered design. Also, the reports must verify that all connections have been made correctly (i.e., welds, bolts, etc.)

Sprayed Fire-Resistant Materials – Reports must verify that any fireproofing required for the structural members of the building meet the minimum requirements to comply with the building code.

Concrete – Reports must verify that the concrete has been placed and reinforced in accordance with the engineered design and that the concrete is the proper design mix.

Other special inspections or engineered plans or documents may be required by the Building Official as outlined in the International Building Code.

5. Runways and Taxiways

- a. Adhere to all applicable HAS and FAA Standards.
- b. Underground
- c. Sign indicators
- d. Lighting
- e. Power Panels
- f. Final

D. INSPECTION REQUIREMENTS

1. TEMPORARY POWER POLE

- a. Double pole breaker installed for 220 volt plug with GFCI protection.
- b. Single pole breaker installed for 120 volt plug with GFCI protection on all 120 volt receptacles.
- c. Box is to be secured to the pole and NEMA 3 (raintight) rated.
- d. Pole is to be braced.
- e. A full length eight-foot (8') ground rod must be installed.
- f. The installation must meet the Center Point Standards and COH Electrical code requirements.

2. CONCRETE PAVING OR WALKWAYS

All work is to be done per the approved, engineered plans.

3. PLUMBING ROUGH

a. Water Lines

1. One hose bibb with a non-removable vacuum breaker must be installed in the water line to check the pressure on the piping.
2. All hose bibbs must have non-removable vacuum breakers installed at all times except laundry and water heater drains.
3. Copper lines will not be allowed to touch each other.
4. Copper lines must be sleeved or taped with approved materials where passing through concrete or other deleterious materials. Painting of the copper will not be accepted as a means of protection.
5. Lead solder or fluxes containing lead cannot be used to join potable water lines.
6. Temperature and pressure relief drains must terminate into a code approved receptor.
7. All copper lines under a slab must be type "L" copper or thicker.

8. All copper piping located under a slab must be continuous with no joints.
9. The water meter must be in place with all valves open to allow for testing of the lines at City water pressure. If City water is not available, a 50 psi air test can be substituted for the water test. A valid air test will not have any water in the lines.
10. Piping extending through concrete beams must be sleeved.

b. Sanitary Sewer

1. The plumbing rough must be tested with a ten-foot (10') head of water measured at the last stack in the building. The ten-foot measurement will be taken from the top of the ninety (90) degree fitting. The contractor must provide access to the filled stack for the inspector.
2. The water test must include the sewer yard line. A test tee must be installed at the sewer tap.
3. Any water or moisture found in the ditch during a sewer hydro test will result in a failed inspection.
4. No flat venting will be allowed unless the flat portion is washed by a minor fixture such as a lavatory.
5. Full size double clean outs must be installed where the building drain exits the building.
6. The sewer tap must be exposed one foot (1') from either side of the sewer connection. (This means that one foot (1') of the City's green lateral line adjacent to the tie in must be exposed at the time of inspection).
7. Excavations for sewer taps that are deeper than four feet (4'), must be protected by a temporary construction fence. Holes dug for sewer taps that are deeper than four feet (4'), must be protected by a temporary construction fence and approved OSHA shoring.
8. The Building Sewer must be connected to the City's sanitary sewer system.
9. Sewer tap excavations must be filled immediately after approval of the Plumbing Rough inspection. All DWV piping must rest on a two inch (2") bed of sand and all piping, traps and fittings must be completely exposed for inspection.
10. DWV piping extending through concrete beams must be sleeved.

c. Gas Line

1. Where a gas piping system is utilized that contains a working pressure greater than ½ p.s.i., an air test of at least ten pounds per square inch (10 p.s.i) on a diaphragm gauge that has a set hand and has a maximum range of twenty (20) p.s.i. For portions of gas piping that are regulated to a working pressure of less than ½ p.s.i, a 3-psi test with a diaphragm gauge that has a set hand and has a maximum range of six (6) p.s.i. is required.
2. All gas lines must be buried. The top of the underground piping must be located at least eighteen inches (18") below grade.
3. Where poly gas lines are utilized, a number eighteen (18) AWG copper tracer wire must be buried alongside of the line for its complete length.
4. Black pipe gas lines installed in the ground must be factory mill wrapped pipe and all fittings must be properly field wrapped.

4. GREASE TRAP

- a. Grease trap must be full of water and not leaking for inspection.
- b. All drain lines to and from the trap must be installed.
- c. All trap vents must be installed per manufacturer's specifications.

- d. Trap must be permitted through COH Health Department.

5. TILT WALL

All steel reinforcement is to be in place and supported per the approved engineered drawings and the forms must be ready for concrete to be placed.

6. SERVICES

- a. Where a panel or disconnect device is tapped more than one-time, approved lugs must be provided.
- b. All panels, breakers, conduit and wire sizes must match approved plans.
- c. If service entrance conductors are more than three feet (3') in length, a disconnect must be provided at the outside of the structure and next to the electrical meter.
- d. Branch circuits must be grouped together with a wire tie or similar device at least at one point in the electrical panel.
- e. Where a panel or disconnect device is tapped more than one time, approved lugs must be provided.
- f. If service entrance conductors are more than three feet (3') in length, a disconnect must be provided at the outside of the structure and next to the electrical meter.

7. ELECTRICAL UNDERGROUND

- a. All conduit must be installed and properly joined.
- b. Burial depths must comply with Table 300.5(A) of the NEC.
- c. Circuits installed in or under a concrete foundation must meet the requirements for wet locations.

8. RETAINING WALL

All work is to comply with approved BSG plans. Call for inspections prior to placing concrete and prior to backfilling behind the wall.

9. ELECTRICAL GROUNDING

- a. A grounding electrode system must be installed per the city approved drawings and Article 250 of the National Electrical Code.
- b. Article 250.50 of the NEC requires all grounding electrodes that are present at each building or structure to be bonded together to form the grounding electrode system. Stainless ground rods are required per HAS Design Guidelines.
- c. Concrete encased electrodes NEC 250.52 (A)(3), (Ufer Grounds) are required whenever new concrete foundations are placed. All grounding electrodes must be inspected while exposed and not covered until approved.
- d. All mechanical connectors connecting the grounding electrode conductor to the grounding electrode require permanent accessibility.
Concrete encased electrodes NEC 250.52 (A)(3), (Ufer Grounds) must be a bare copper conductor not smaller than 4 AWG, or zinc coated or other electrically conductive coated steel bars or rods not less than one-half inch (1/2") in diameter.
- e. Concrete encased electrodes NEC 250.52 (A)(3), (Ufer Grounds) must be at

- least twenty feet (20') in length.
- f. Concrete encased electrodes NEC 250.52 (A)(3), (Ufer Grounds) must be encased in at least two inches (2") of concrete.
- g. Concrete encased electrodes NEC 250.52 (A)(3), (Ufer Grounds) must be located within a portion of the concrete foundation that is in direct contact with the earth.
- h. All exothermic termination must be inspected and approved before covered.
- i. All grounding must be in accordance with the latest adopted version of the NEC.

10. FOUNDATION

(All foundation plans must be sealed by a structural engineer)

- a. If piers were installed and inspected by a special inspector, a pier report must be submitted at least 24 hours prior to requesting a foundation inspection.
- b. Everything must conform with the engineered sealed plans approved by BSG.
- c. The foundation drawing must be on the job with the detail sheet and the site plan (both must be BSG stamped approved).
- d. All cables must be per approved engineer specifications.
- e. All copper piping must be sleeved or taped; painting will not be accepted.
- f. All gas line sleeves to be installed.
- g. Electrical conduit located in the foundation must be installed and approved by the electrical inspector.

- h. All plumbing drain piping must run through beams at a ninety-degree (90°) angle to the beam.
- i. A concrete encased electrode must be installed (see Electrical Grounding above). Concrete encased electrodes must extend at least 20 feet through the concrete.
- j. No changes can be made to the foundation after inspection approval without requesting another foundation inspection.

11. LEAVE-OUT INSPECTION (Interior finish-out construction only)

- a. The plumbing rough must be inspected and approved.
- b. Rebar must be drilled into existing concrete per City approved plans.
- c. Moisture barrier must be installed.
- d. Any underfloor electrical component must be installed.

12. ELECTRICAL WALL

- a. Must follow current HAS Standards guidelines and current NEC guidelines.
- b. All boxes must have covers.
- c. All boxes must be properly bonded.
- d. All penetrations in fire rated assemblies must be properly sealed.
- e. All conduit and boxes must be properly supported.
- f. All required ground stingers must be installed.
- g. HAS specifications prohibited the use of MC and BX wiring to be used.
- h. Electrical conduit and wiring shall be strapped per the NEC.
- i. All metal boxes must be bonded and securely fastened to the structure.

13. PLUMBING WALL

- a. All fixtures must be stack vented and all vents must extend through the roof with flashings installed at the roof.

- b. No vents may be less than 45 degrees from the horizontal until they are at least six inches (6") above the flood rim of the fixture.
- c. All copper lines must be properly supported.
- d. All water heaters must have a drip pan with a drain line to the outside. Plumbing vents must be at least ten feet (10') from or two feet (2') above any window that can be opened.
- e. Frost proof hose bibbs with integral vacuum breakers must be installed.
- f. Lead solder and fluxes containing lead are prohibited materials to be used in potable water pipes.
- g. Press fittings are an approved method for domestic water per HAS Design Criteria.
- h. All Plumbing Demo to be terminated at point of utility providers connection, permitted, inspected and approved prior to covering.

14. GAS ROUGH

- a. Where a gas piping system is utilized that contains a working pressure greater than one-half (½) p.s.i., an air test of at least ten pounds per square inch (10 p.s.i) on a diaphragm gauge that has a set hand and has a maximum range of twenty (20) p.s.i. For portions of gas piping that are regulated to a working pressure of less than one-half (½) p.s.i, a 3-psi test with a diaphragm gauge that has a set hand and has a maximum range of six (6) p.s.i. is required.
- b. For wood frame construction, holes cut for gas lines may only be large enough for the line to penetrate.
- c. Gas piping must be properly supported.
- d. Gas piping located between bricks and studs must be mill wrapped.
- e. Gas appliance vents must be at least four feet (4') away from or two feet (2') above windows that can be opened.

15. FRAMING WALL

a. Wood Stud Framing

- 1. Wood rafter and joist spans must conform to the International Building Code.
- 2. All lumber must be grade stamped. Unstamped lumber is unacceptable as a framing structural framing member.
- 3. Brick wall ties must be installed and inspected prior to installing brick.

b. Metal Stud Framing

(A structural steel report must be turned in at least 24 hours prior to requesting the inspection)

- 1. Studs must be fastened in accordance with the approved engineer details.
- 2. Required fire rated wall assemblies (fire walls) must exactly match the specifications of the UL, FM or other testing agency.

16. FIREPROOFING/FIREWALL

- a. All rated wall, ceiling and floor assemblies must be inspected to verify that all specifications of the testing lab are met. For example, if a wall is referencing UL U408 as the assembly, all portions of the assembly listed in UL U408 must be met exactly. No deviation is allowed from the referenced listing.

17. MASONRY

- a. Masonry to comply with engineered details.

18. ENERGY INSULATION

- a. All wall insulation must be installed per the COMcheck.

- b. All windows and doors must meet the minimum requirements contained in the COMcheck document.
- c. Ceiling insulation must comply with the minimum requirements contained in the Com-check document.

19. MECHANICAL DUCT ROUGH

- a. **2021 UMC 105.1** An inspection is required before covering or concealing any electrical, plumbing, utility, mechanical, fire sprinkler, fire alarm or structural systems.
- b. **2021 UMC 105.2** Work may not progress beyond any point for which an inspection is required until the Contractor receives an approved inspection report for the inspected work.
- c. **2021 UMC 602.3** Metal ducts must be screwed and taped or sealed with an approved mastic material.
- d. **2021 UMC 603.4** Flex duct must be sealed with tape or mastic at the register. Only zip tying at the register is not an approved method per the manufacturer's installation instructions.
- e. **2021 UMC 603.4** Flexible ducts must be supported and turns made in such a way that the air flow is not deterred. Per **HAS Standard 2023 2.5.7**. All flexible ductwork connections to grilles and air devices will have a radius forming brace installed at the connection. Per **HAS Standard 2023 section 2.5.7** Flexible ductwork will comply with UL 181 Class 1 and will meet or exceed NFPA 90A-90B rating. Maximum length of flexible duct will be 5 feet. All diffusers will have dampened insulated boxes with minimum box height of 1 foot.
- f. **2021 UMC Table 802.7.3.3** A minimum six-inch (6") clearance from combustible materials must be maintained around type B gas appliance vents.
- g. **2021 UMC 310.5** Air conditioning (primary) condensate drains must be tied into an approved plumbing waste.
- h. **2021 UMC 310. 2** Where air-conditioning condensate drain pans are in an attic (space or plenum) a secondary drain must be installed with the condensate line discharging to an approved location.
- i. **HAS Standard 2023 Section 24 Plumbing 2.2.2** Per Heating, Ventilation and Air – Conditioning (HVAC) Equipment Unit Drains: Hard drawn copper drainpipe with silver solder (95-5) no lead.
- j. **2021 UMC Table 310.3** Condensate drain lines must be a minimum of three-fourth (3/4") inch in diameter.
- k. **2021 UMC 310.5** Traps located on the roof must be protected from freezing.
- l. Exhaust ducts shall terminate outside the building and shall be equipped with backdraft dampers or with motorized dampers that automatically shut where the systems or spaces served are not in use.
- m. **2021 UMC 504.4.5** Support of Ducts. Installers shall provide the manufacturer's field fabrication and installation instructions. Factory-made air ducts that are in accordance with UL 181 shall be supported in accordance with the manufacturer's installation instructions. Other ducts shall comply with SMACNA HVAC Duct Construction Standards – Metal and Flexible.

20. MECHANICAL DUCT INSULATION

- a. **2021 UMC Table 503.7.2 and HAS Standard 2023 Section 26 Heating, Ventilation, and Air Conditioning 2.2.2 2.** All ducts are to be insulated per the requirements of the Com-check document. Per Internal Duct: Generally, all ductwork except exhaust ductwork will be externally insulated in accordance with temperatures involved, the current International Energy Conservation Code (IECC), and International Fire Code. Ductwork insulation materials will be selected for the function involved, considering sound absorption coefficients, velocities, etc. Particular attention will be given to the first 20 feet of duct mounted on the supply (discharge)

side of AHUs.

21. ELECTRICAL CEILING

- a. All temporary power must be removed.
- b. All boxes must have covers.
- c. All circuits must be completed including low voltage.
- d. All boxes must be properly bonded.
- e. All penetrations in fire rated assemblies must be properly sealed.
- f. All light fixtures must be installed and properly supported.
- g. All conduit and boxes must be properly supported.
- h. Electrical and other systems must be clearly labeled and identified.
- i. Low voltage wiring must be properly supported and off the ceiling grid.
- j. All device boxes for ceiling mounted equipment must be installed and properly supported.
- k. Access must be provided to all boxes above the ceiling.

22. FRAMING CEILING

- a. All ceiling grid must be properly supported.
- b. All penetrations in fire assemblies must be properly sealed.
- c. All engineered details to be followed.

23. GREASE DUCT

- a. **2021 UMC 510.5.6** Grease ducts are required to be liquid tight. The contractor is required to supply a bright light that has three hundred sixty-degree (3600) coverage at the time of inspection to verify the joints are tight and no pinholes exist. Lights in the space must be turned off during the light test of the hood.
- b. **2021 UMC 507.4** Grease ducts must be located at least eighteen inches (18") from any combustible materials. Ducts may be closer if listed by the manufacturer or protected by a fire assembly or fire wrap. The fire assembly must comply with an assembly tested by UL or other nationally recognized testing lab. Fire wrap must be installed in accordance with the manufacturer's installation standards.
- c. **2021 UMC 508.3** Grease ducts must be constructed of carbon steel not less than 0.054 inches in thickness (No. 16 MSG) or stainless steel not less than 0.043 inches in thickness (No. 18 MSG).
- d. **2021 UMC 508.8.3.2** All joints must be welded or sealed by a listed means.
- e. **2021 UMC 510.9.1** Rooftop terminations must be compliant.

24. HOODS

- a. **2021 UMC 508.3** Type I Hoods must be constructed of steel with a thickness not less than 0.043 inches (No. 18 MSG) or stainless steel not less than 0.037 inches in thickness (No. 20 MSG).
- b. **2021 UMC 519.2** Type II Hoods must be constructed of steel not less than 0.024 inches in thickness (No. 24 gauge). Hoods constructed of copper must be constructed of copper sheets weighing not less than 0.17 ounces per square inch.
- c. **2021 UMC 519.2** Joints in the hood must be welded or sealed by a listed sealant. All joints must be liquid tight.
- d. **2021 UMC 508.5.1** Hoods must extend not less than six inches (6") beyond the edge of the cooking surface on open sides and the vertical distance between the top of the hood and the cooking surface shall not exceed four feet (4').
- e. **2021 UMC 508.3.2** Any penetration into the hood must be listed in accordance with NFPA 96:5.1.3 and all penetrations must be sealed devices.

25. ELECTRICAL SERVICE/METER RELEASE

(Inspection approval allows for release of electric meter)

- a. Cover must be off the main panel box.
- b. Required fixtures and equipment installed and wired.
- c. Required receptacles switches and fixtures installed and wired.
- d. All items which could result in a difference in potential must be bonded. This includes building steel, metal water pipes, gas lines, etc.
- e. Grounding electrode system must be complete.
- f. All connections between the grounding electrode conductor and the electrode must be accessible.
- g. Neutral and ground conductors must be properly coded and identified.
- h. Lightning protection must be complete and signed and notarized affidavit must be provided. The Contractor is required to transmit, on their letterhead, an affidavit bearing the notarized signature of the LPI Certified Master Installer.
- i. The ESID number, correct address and the BSG project number must be provided to the electrical inspector in a copy and paste format, after passing the inspection. That information will be sent to Center Point.

26. GAS SERVICE RELEASE/GAS FINAL

(Inspection approval allows for release of gas meter)

- a. Where a gas piping system is utilized that contains a working pressure greater than one-half ($\frac{1}{2}$) p.s.i., an air test of at least ten pounds per square inch (10 p.s.i) on a diaphragm gauge that has a set hand and has a maximum range of twenty (20) p.s.i. For portions of gas piping that are regulated to a working pressure of less than one-half ($\frac{1}{2}$) p.s.i, a 3-psi test with a diaphragm gauge that has a set hand and has a maximum range of six (6) p.s.i. is required.
- b. All open gas lines and shut-off valves must be capped. A shut-off valve does not eliminate the requirement to cap the line.

27. MECHANICAL FINAL

- a. All mechanical equipment must be installed per code and manufacturer's installation instructions.
- b. All mechanical equipment must be installed with all connections complete.
- c. Controls and devices in the system must be operational.
- d. All boilers (including water heaters) exceeding 199,000 BTU's must be inspected and approved by the Boiler Division of TDLR.

28. ELECTRICAL FINAL

- a. All electrical must be complete and electrical meter must be installed.
- b. All receptacles and light fixtures must be installed, wired and working properly.
- c. Circuits must be labeled with ink or typewriter in the breaker box.
- d. All remaining temporary power (lighting and t-pole) must be removed.
- e. All appropriate GFCI protection to be installed.
- f. The calculated short circuit rating must be marked on industrial control panels, motor controls, HVAC equipment and machinery.
- g. Receptacles less than 5.5' off the floor installed in hotels, motels and childcare facilities must be tamper resistant.
- h. The electrical installation must meet the HAS Design Manual, City of Houston Electrical code and NEC.

29. PLUMBING FINAL

- a. Gas meter must be installed.
- b. All gas lines must be connected. Gas stops and caps must be installed on any gas line installed for future use.
- c. All plumbing fixtures must be installed. Handicap Accessible toilets must have a

- clearance of at least 18" from any side wall or partition to the center of the toilet.
- d. All non-handicap accessible toilets must have a clearance of at least 15" from any side wall or partition to the center of the toilet and a clearance of at least 21" in front of the toilet.
 - e. All hose bibbs must have integral vacuum breakers.
 - f. Sewer cleanouts must be cut to grade.
 - g. PVC vent stacks must be painted with latex paint.
 - h. Hot water must correspond to the left side of fittings on plumbing fixtures.
 - i. All public hand sinks must have tempered water.
 - j. Water heater set point 120 degrees maximum.
 - k. Provide documentation that existing sewer is in serviceable condition via video.
 - l. All sewer lines must be inspected with a video system and a copy of the video in mp4 format on a thumb drive must be submitted for approval.
 - m. Install piping Labels for all systems per HAS Design Criteria
 - n. Provide COH Health Department pre-opening inspection report.
 - o. Provide any/all annual required permits i.e. waste generator.
 - p. Provide backflow inspection reports.

30. ENERGY FINAL

- a. The Lighting portion of the COMcheck must be available for the inspector to verify compliance with the energy code.

31. ACCESSIBILITY FINAL

- a. All items must comply with Chapter 11 of the IBC as well as TAS review comments. RAS approval letter will be required.

32. Signage

- a. Signage is to be permitted separately, all over head signage is to be sealed by engineer. Separate electrical inspections must be called for the project.

33. E-Locks

- a. All electronic or magnetic locks are to be permitted separately. Drawings are to be sealed by design professional.

34. BUILDING FINAL

- a. All equipment must be installed, wired and working properly.
- b. A permanent address must be installed on the front of the building with numbers of contrasting color to background. The address must also be installed on the back door (if there is a back door)
- c. Knox box must be installed.
- d. Street, alley, and all flatwork must be clean and clear of mud and debris.
- e. Parking areas must be properly striped. Fire lanes must be properly striped. Accessible parking spaces must be properly marked with signs and painting.
- f. All landscape work must conform with the approved landscape plan. Trees and shrubs must not be damaged or dead.
- g. The site must conform to the approved site plan.
- h. Yard must be clear of debris and final grade completed.
- i. Exit signs must clearly identify the egress pathway from the building.
- j. All panic hardware must be installed. Exit doors must be openable from the inside of the building without the use of a key or any special knowledge.
- k. All wall surfaces adjacent to toilets and urinals must be composed of a hard, smooth easily cleanable surface. Painting the surface only will not comply with this requirement.

35. FIRE/ LIFE SAFETY FINAL

- a. Signed and stamped plans must be on-site for all Fire Alarm and Sprinkler Inspections.
- b. Fire Alarm must be fully operational and accepted by FLS Inspector.
 - Test every smoke and heat detector to ensure proper FA activation.
 - HVAC Duct Detectors must be tested with smoke.
 - Magnets may not be used to test any initiating devices.
 - Intelligibility of voice messages.
 - Visual inspection of every device
 - Synchronization of all Audio and Visual devices.
- c. Fire Sprinkler must be fully operational and accepted by FLS Inspector
 - Hydrostatic Testing
 - Visual inspection for pipe size, head placement, hanger placement, obstructions, etc.
 - Tamper and Water Flows
 - If a fire pump is required, the pump shall be tested, under normal and emergency power conditions, to meet 100% and 150% ratings for the pump.
- d. Fire and Life Safety Final
 - All Life Safety devices must be installed, operational, and accepted by the FLS Inspector
 - Egress lighting and Exit signage must function under normal and emergency/battery power.
 - All life safety devices must be accessible and unobstructed.
 - Egress paths shall be clear and unobstructed.
 - Fire Extinguishers must be installed as required by code and must be new with manufacturers tag.

E. ADOPTED CODES

The above requirements are only a general list of building, electrical, plumbing, and mechanical code regulations. For a complete list of building requirements refer to:

2021 International Building Code
2021 Uniform Mechanical Code
2021 Uniform Plumbing Code
2021 International Energy Conservation Code
2021 International Fire Code
2018 NFPA 1
2021 NFPA 101
2023 National Electrical Code

For a copy of City of Houston amendments to the above codes, please see: [Codes | Houston Permitting Center](#)