



ONE-STOP SHOP 2021 INTERNATIONAL RESIDENTIAL CODE | IRC

HOUSTON PERMITTING CENTER

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PLAN REVIEW SUPPORT SERVICE TEAM:

RESIDENTIAL: VERONICA CANTU AND ERNEST CARMONA



RESIDENTIAL ONE-STOP PERMIT PROCESS

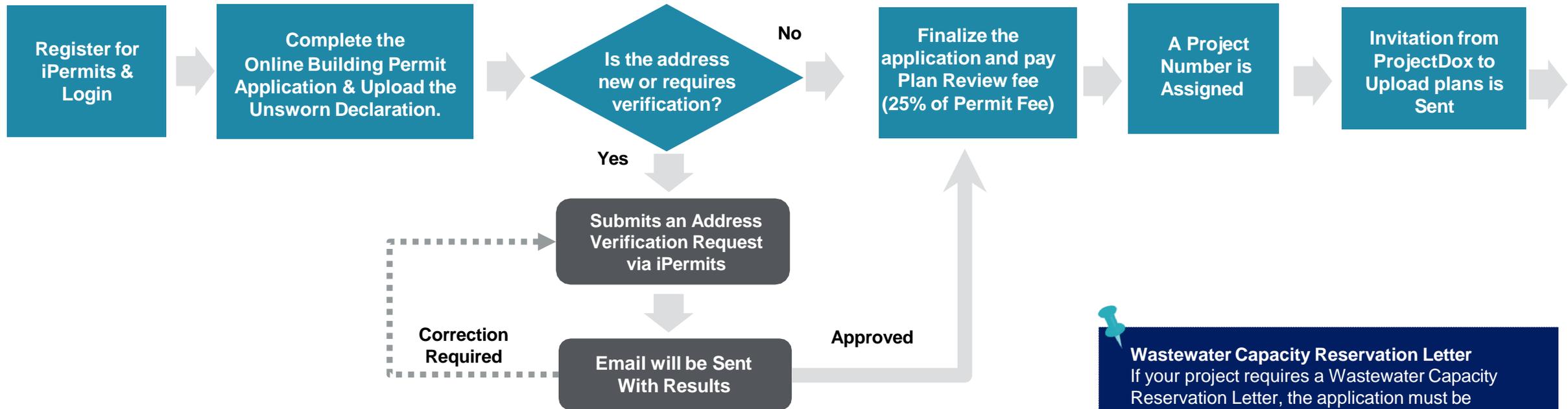
Welcome to the Houston Permitting Center



1002 Washington Avenue
Houston, TX 77002

APPLICATION PROCESS

NOTE: The City of Houston utilizes two systems: iPermits & ProjectDox. iPermits is the online system used to complete and submit the building permit application and pay for any fees due. ProjectDox is used to upload plans and any other required documents.



Wastewater Capacity Reservation Letter
If your project requires a Wastewater Capacity Reservation Letter, the application must be submitted separately through iPermits (preferably before submitting your plans). For more information, visit <https://www.houstonpermittingcenter.org/infrastructure-development-services/impact-fee-administration>

RESIDENTIAL CONSTRUCTION CODES

- 2021 International Residential Code (IRC) & Houston Amendments
- 2021 International Existing Building Code (IEBC) & Houston Amendments
- 2021 Uniform Mechanical Code (UMC) & Houston Amendments
- 2021 Uniform Plumbing Code (UPC) & Houston Amendments
- 2023 National Electrical Code (NEC) & Houston Amendments
- 2021 International Energy Conservation Code (IECC) & Houston Amendments
- 2021 International Swimming Pool and Spa Code (ISPSC) & Houston Amendments

All effective January 1, 2024
NEC effective September 1, 2023



LICENSING & REGISTRATION

Who can purchase what permits and when?

- The building permit may be purchased by the owner, agent, contractor. General Contractors are not required to be licensed.
- Licensed contractors can purchase trade permits after the building permit has been sold. In some cases, a homeowner may purchase certain trade permits. For more information, please contact us rmcacd@houstontx.gov.
 - **Electrical**
Master Electrician must be licensed by the [Texas Department of Licensing and Regulation](#) (TDLR) and be registered with the City of Houston.
 - **Mechanical**
Air Conditioning Contractor must have a type A or B license from the [Texas Department of Licensing and Regulation](#) and be registered with the City of Houston. In some instances, a homeowner may obtain this permit.
 - **Plumbing**
Master Plumber must be licensed by the [Texas State Board of Plumbing Examiners](#) and be registered with the City of Houston. In some instances, a homeowner may obtain this permit.
 - **Sidewalk/Driveway**
Only a bonded contractor with a \$2,000 surety bond may pull this permit, although the homeowner may purchase permits in instances where a curb cut is not required.

PERMIT INFORMATION PACKAGE FOR COMMON RESIDENTIAL ONE-STOP PROJECTS

2021

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WEB RESOURCES

- Houston Permitting Center Page: <https://www.houstonpermittingcenter.org>
- Documents and Forms: <https://www.houstonpermittingcenter.org/resources>
- EPR User Guide: <https://www.houstonpermittingcenter.org/media/2291/download>
- EPR User Guide (Spanish):
<https://www.houstonpermittingcenter.org/media/6526/download>
- ASCE 7 Windspeed: <https://asce7hazardtool.online/>
- Building Permit Fee Calculator: <https://www.houstonpermittingcenter.org/fee-calculator>

Additional resources can be found at the end of the presentation.

WORK EXEMPT FROM PERMITS

Section R105.2 from COH 2021 Amendments

Other than storm shelters, one-story detached accessory structures, provided that the floor area does not exceed 120 square feet.



Fences under 8 feet in height not constructed of masonry or concrete, and that are not electrically energized.



Retaining walls under 4 feet in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge.



Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons and the ratio of height to diameter or width does not exceed 2 to 1.



WORK EXEMPT FROM PERMITS

Sidewalks and driveways not covered under the provisions of the Infrastructure Design Manual; i.e. interior flatwork not exceeding 65% of the total impervious area.



Swings and other playground equipment.



Window awnings supported by an exterior wall which that do not project more than 54 inches from the exterior wall and do not require additional support.

Decks not exceeding 200 square feet in area, that are not more than 30 inches above grade at any point, are not attached to a dwelling and do not serve the exit door required by Section R311.4.



WORK EXEMPT FROM PERMITS

Minor repair and maintenance of existing structures that include:



- Painting, tarping, wallpapering, tiling, carpeting, cabinets, and counter tops repair and replacement and similar finish work;
- Repair to gypsum board (sheetrock or drywall) on existing walls that is not part of a fire-rated assembly and that does not exceed an aggregate of 100 square feet;
- Repair, using the same material, of exterior wood fascia, trim and soffits that do not exceed an aggregate of 128 square feet; or
- Roof covering that does not exceed an aggregate of 100 square feet.

GENERAL REQUIREMENTS

- Application. Building Permit Application is completed via [iPermits.](#)
- Declaration in Support of Application for City of Houston Building Permit. Complete the appropriate form below and upload to iPermits when completing the building permit application.

[Individual Owner](#)

[Business Entity Owner](#)

- Project Number. The project number will be generated by iPermits once the plan review fee (if applicable) is paid.
- Plans. Plans *shall be drawn to scale and clearly labeled with dimensions. Plans cannot be drawn on graph paper.*
- Photos or 3-dimensional drawings are not allowed

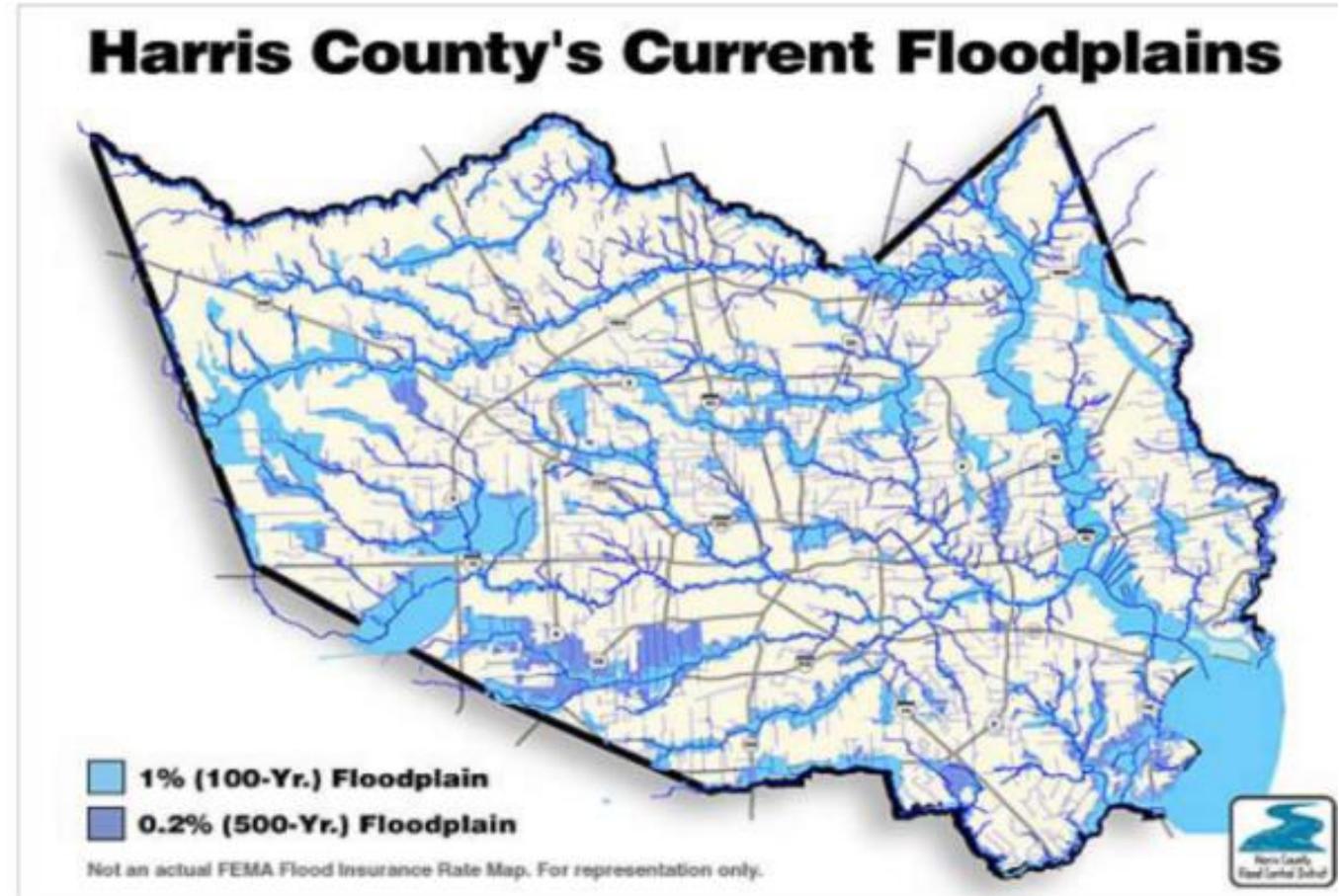
DEED RESTRICTIONS



- It is imperative that you verify if there are any deed restrictions in your subdivision.
- Permits may be revoked for deed restriction violations.

FLOODPLAIN REQUIREMENTS

- Properties located in the floodplain are required to obtain approval from the Flood Plain Section on all projects.



A 2013 map of the estimated 100-year and 500-year floodplains for Harris County, where Houston is located. Army Corps of Engineers, "National Economic Development: Flood Risk Management," 2013.

PERMIT APPLICATION PROCESS FOR NEW SINGLE- OR TWO- FAMILY DWELLINGS OR LIVING UNITS”

2021

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REQUIRED REVIEWS BY PROJECT TYPE

The following chart indicates the various department reviews required depending on the scope of work.

PROJECT TYPE	PLANNING	TAPS & METERS ¹	ONE STOP	FLOOD ²	TRAFFIC	STORM ⁴
New construction	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Addition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Remodel			<input type="checkbox"/>	<input type="checkbox"/>		
Garage/Carport (new)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ³	<input type="checkbox"/>
Repair			<input type="checkbox"/>	<input type="checkbox"/>		
Fence	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		
Driveway/Sidewalk(new)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Driveway/Sidewalk (existing)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Footnotes

- ¹ When the aggregate square footage of all structures on the property is over 3,000 square feet.
- ² Flood applicable if project is in a flood plain
- ³ If driveway is included in scope of work
- ⁴ Storm review required if the residential lot is > 15,000 sq. ft. or if lot ≤ 15,000 sq. ft. with more than 65% impervious area

DESIGN REQUIREMENTS

Plans required

- A complete set of plans is typically required for review. For detailed requirements, please see “Plan Submittal”.

DEFINE THE SCOPE OF WORK



Addition

(Square Footage Added)



Remodel

(Alteration or changes to the floor plan of an existing building)



Repair

(Replacement of materials;
“like for like” ONLY)

PLAN REQUIREMENTS

The Plan Review Department is responsible for ensuring that plans comply with all applicable building codes. All new construction projects, most renovations, repairs, or addition projects require plan approval before purchasing a permit.

The following depicts the minimum plan submittal requirements for some scopes of work.

PRESCRIPTIVE METHOD: R-VALUE COMPUTATION

To show energy conservation compliance using the R-Value Computation Compliance Method (Table R402.1.3 of the 2021 IECC) specify the following required insulation and fenestration values for Climate Zone 2:

- Maximum Fenestration U-Factor: 0.40 (0.65 for Skylights*)
- Maximum Glazed Fenestration SHGC: 0.25
- Minimum Ceiling R-Value: 49
- Minimum Wall R-Value: 13
- Minimum Floor R-Value: 13
- Minimum Duct Insulation R-Value: 8 in attics
- Minimum Duct Insulation R-Value: 6 in other portions of the home

* Skylights may be excluded from glazed fenestration SHGC requirements in climate zones 1 through 3, where the SHGC for such skylights does not exceed 0.30

PLAN REQUIREMENTS

NEW CONSTRUCTION / ADDITIONS/ NEW GARAGES & CARPORTS

A set of complete plans - All dimensions and materials clearly indicated

- Survey by Texas Registered surveyor or a complete site plan with dimensions showing: Existing property lines, Easements, Building Setback Line and Proposed Building
- Foundation plans: needed if a project includes a foundation. Dimensions shall include beams and steel bars with foundation conditions noted on plans.
- Floor plans. For additions indicate footprint of existing building and show in detail new addition/affected area with location of partitions, windows and doors.
- Elevation plans
- Door and window schedule shown on plans
- Wall section details
- Roofing and framing plan indicating purlins, ceiling joists and rafters
- Trusses (when applicable)
- Plans must show prescriptive compliance with the 2021 International Energy Conservation Code or include REScheck or IC3 Compliance Report (if applicable)
- Residential Prerequisite Checklist (Form 1301) Note: For new construction only
- Grading and Fill Worksheet (Form CE-1094)
- Calculation of Impervious Percentage Form (Form CE-1207)
- Windstrapping information

COMPLETE PLANS FOR ADDITIONS INCLUDE

- Texas registered survey or complete site plan showing existing property lines, easements, building setback lines, and showing the existing building, proposed addition and any other structures located on the site.
- Foundation plans showing pad location, concrete strength, beam details with dimensions, and the steel bar layout with sizes noted. (Professional Engineer designed plans may be required for concrete slabs)
- If block and base, indicate the size, spacing, grade, and species of floor joists.
- Floor plans that include the addition and footprint of the existing building showing in detail the adjacent areas of the existing building, with use of each room labeled, and the location of partitions, windows and doors identified.
- Door and window schedule or plan with all dimensions clearly indicated.

COMPLETE PLANS FOR ADDITIONS INCLUDE

- Roofing and Framing plans indicating size, spacing, grade, and species of ceiling joists and rafters, and if required, the location of purlins. (Professional Engineer designed plans may be required)
- Wall section details indicating size, spacing, grade, and species of studs to determine the method of bracing.
- Plans shall indicate materials used.
- Plans must include details showing how compliance with windstorm or strapping is achieved. (Reference Section 302 or Appendix L of the IRC)
- Plans must show prescriptive compliance with the 2021 International Energy Conservation Code or include REScheck, RemRate, IC3 Compliance Report or COH Prescriptive Method

SPECIFIC REQUIREMENTS BY PROJECT TYPE

Grading for Excavation and Fill Worksheet (Form 1094) - The worksheet will determine if a Residential Grading for Excavation and Fill Permit is required.

If required, the “Residential Grading Permits for Excavations and Fill Application (Form 1084)” shall be submitted.

Calculation of Impervious Percentage (Form 1207) - For lots less than 15,000 sq. ft. to determine whether lot has 65% or more of impervious cover. Note: Lots over 15,000 sq. ft. shall be submitted for review by the Storm Section.

PLAN REQUIREMENTS

REMODELS:

A set of complete plans - All dimensions and materials clearly indicated

- Floor plan of existing building and show in detail affected area
- Materials used
- Existing ceiling framing plan to verify if walls are load bearing or non-load bearing
- If applicable, plans must show prescriptive compliance with the 2021 International Energy Conservation Code or include RESCheck or IC3 Compliance Report.
- Demolition of any load bearing walls will need additional requirements to determine direction of ceiling joists, and the location of header and beam. It may also require an engineer seal

For the list of requirements for other residential scopes of work, refer to the [Residential One-Stop Guide \(CE-1050\)](#) or the [Solar Panel Permit & Inspection Guide and Checklist \(CE-1198\)](#)

PLAN REQUIREMENTS

GARAGE CONVERSIONS:

A set of complete plans - All dimensions and materials clearly indicated

- Texas registered survey or complete site plan showing existing property lines, easements, building setback lines, and showing the existing building, and any other structures located on the site to determine off-street parking. (Planning)
- Floor plan with use of each room labeled, and the location of partitions, windows and doors identified.
- Door and window schedule or plan with all dimensions clearly indicated.
- Wall section details to determine bearing and non-load bearing walls.
- Demolition of any load bearing walls will require additional requirements to determine direction of ceiling joists, and the location of header and beam.
- Plans must show prescriptive compliance with the 2021 International Energy Conservation Code or include REScheck, RemRate, IC3 Compliance Report or COH Prescriptive Method

For the list of requirements for other residential scopes of work, refer to the [Residential One-Stop Guide \(CE-1050\)](#) or the [Solar Panel Permit & Inspection Guide and Checklist \(CE-1198\)](#)

COMPLETE PLANS INCLUDE

NEW GARAGES/CARPORTS/STORAGES OVER 120 SQ. FT.

- Foundation plans if addition requires additional foundation, dimensions shall include beams and steel bars, and foundation conditions should be noted on plans. (Professional Engineer designed plans may be required for concrete slabs)
- If block and base, indicate the size, spacing, grade, and species of floor joists.
- Texas registered survey or complete site plan showing existing property lines, easements, building setback lines, and the location of the residence and proposed garage/carport.

COMPLETE PLANS INCLUDE

NEW GARAGES/CARPORTS/STORAGES OVER 120 SQ. FT.

- Floor plan that includes the addition and footprint of the existing building showing in detail the adjacent areas of the existing building, with use of each room labeled, and the location of partitions, windows and doors identified.
- Door and window schedule or plan with all dimensions clearly indicated.
- Roofing and Framing plans indicating size, spacing, grade, and species of ceiling joists and rafters, and if required, the location of purlins. (Professional Engineer designed plans may be required)
- Wall section details indicating size, spacing, grade, and species of studs to determine the method of bracing.
- Plans shall indicate materials used.
- ASCE 7 Windspeed : <https://ascehazardtool.org/> (ASCE/SEI 7-22)(Risk category II)(Wind)

COMPLETE PLANS INCLUDE FENCES

- Texas Registered survey or complete site plan showing existing property lines, easements, building setback line and location of proposed fence layout to determine visibility.
- Structural section plan designed by a Professional Engineer design is required.
- Plans shall indicate materials for fencing and columns.
- Show height elevation.
- Show location of gate(s) and method of operation (e.g., remote control, manual, keypad)

MINOR SITE WORK PROJECTS LIKE-FOR-LIKE CONSTRUCTION

Sidewalk, driveway and curb projects (new, repair or replacement) (Form 1023)

- Texas Registered survey or complete site plan indicating existing property lines, easements, building setback line, and showing the proposed driveway, curbs and/or sidewalk location and layout.

MINOR SITE WORK PROJECTS LIKE-FOR-LIKE CONSTRUCTION

Residential Repair Spec List (Form CE-1059)

- The permit fee for repair, alterations, or remodeling of residential one and two-family dwellings and townhouses shall be 20% of the calculated fee for new construction as specified in Section 118.2.1 and Tables 118(1) and 118(2) of the Building Code.
- The fee shall be based on the total aggregate square footage of the building area being repaired or altered plus the total aggregate vertical square footage of exterior walls being repaired or altered.
- Therefore, the Cost of Improvements field was removed, and other fields were added including Wall Square Footage and Floor Square Footage.

PLAN REQUIREMENTS

REPAIRS:

Permits are required for repairs that involve only replacement of existing structural members and other building elements. A **Repair Spec list** must be submitted indicating the repairs.

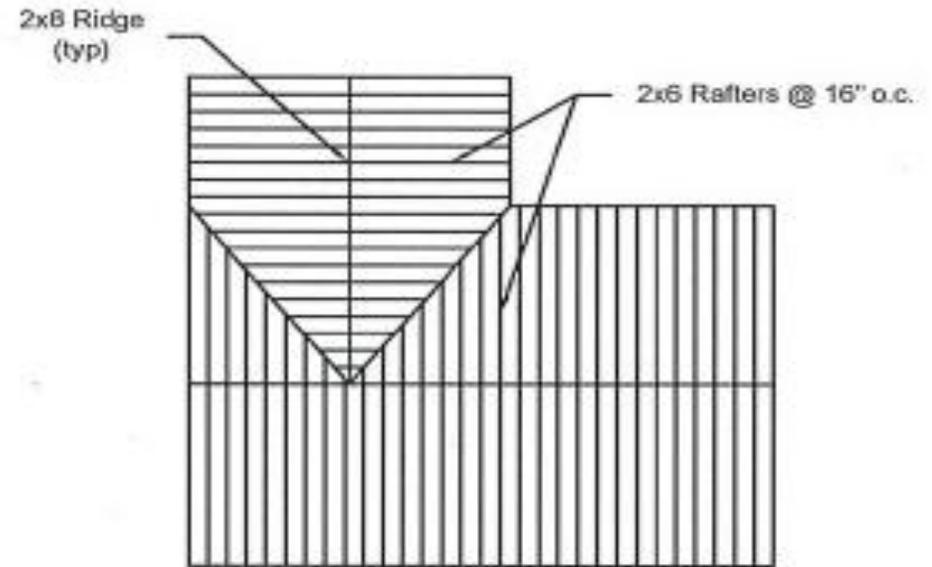
Below are some examples:

- Replace siding/doors/windows / trim / stairs / porch / fireplace
- Replace roof covering / ceiling / wall covering / insulation
- Re-frame walls and /or ceiling

For the list of requirements for other residential scopes of work, refer to the [Residential One-Stop Guide \(CE-1050\)](#) or the [Solar Panel Permit & Inspection Guide and Checklist \(CE-1198\)](#)

COMPLETE PLANS INCLUDE RE-ROOFS

- Residential Re-Roof
Only Worksheet (CE-1109)
- Roofing and Framing plans indicating size, spacing, grade, and species of ceiling joists and rafters, and if required, the location of purlins.
- Professional Engineer designed plans may be required.



ROOF PLAN

COMPLETE PLANS INCLUDE SWIMMING POOLS

Requirements

Permitted separately from any other type of permit such as pergolas, houses, pool houses, cabanas, or outdoor kitchens, etc. The pool deck or paving can be included within the scope of work approved under the pool permit.

- ✓ Survey with the location of the pool
- ✓ Pool plan with dimension from the water's surface to the adjacent property line and structure (including patio covers).
- ✓ Impervious Cover Worksheet
- ✓ Grading and Fill Worksheet

Additional Department Reviews

- ✓ Structural
- ✓ Health Pools
- ✓ Flood (site specific)
- ✓ Storm (site specific)



PARTIAL DEMOLITIONS

R106.2 Site plan or plot plan

The *construction documents* submitted with the application for *permit* shall be accompanied by a site plan showing the size and location of new construction and existing structures on the site and distances from *lot lines*. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The *building official* is authorized to waive or modify the requirement for a site plan where the application for *permit* is for *alteration* or *repair* or where otherwise warranted.

FLAT WORK INSIDE PROPERTY LINE

Requirements:

A complete site plan. Label the proposed flatwork and provide dimensions.

An Impervious Cover worksheet

APPLIED FOR THE WRONG PERMIT?

Scope of work is verified by the plans submitted.

The plan analyst will revise the scope of work and re-route the project to the correct group if necessary.

Common mistakes:

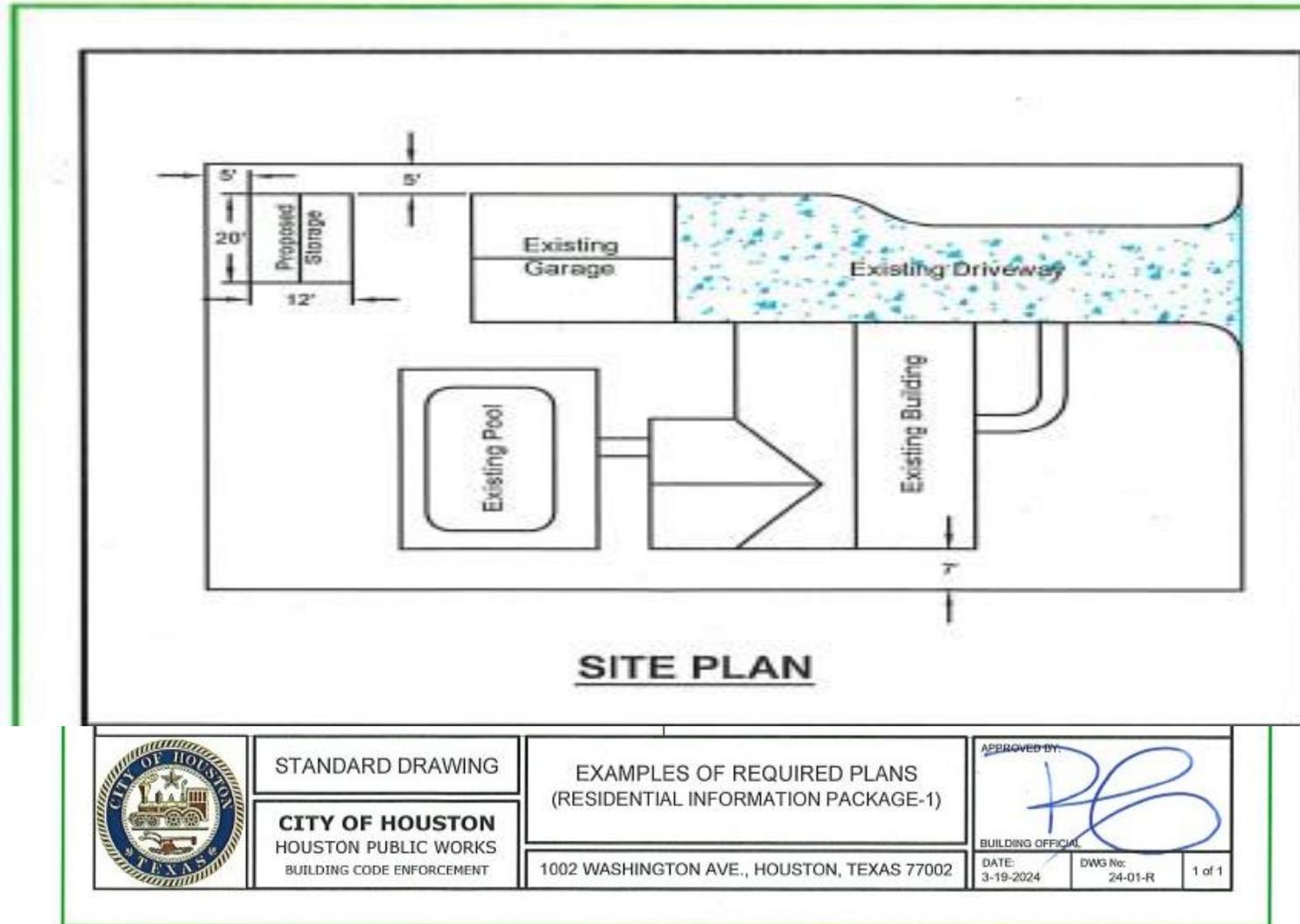
- Applied for a revision when a new structural permit is required.
- Increasing scope of work requires a new structural permit.

PLAN EXAMPLES

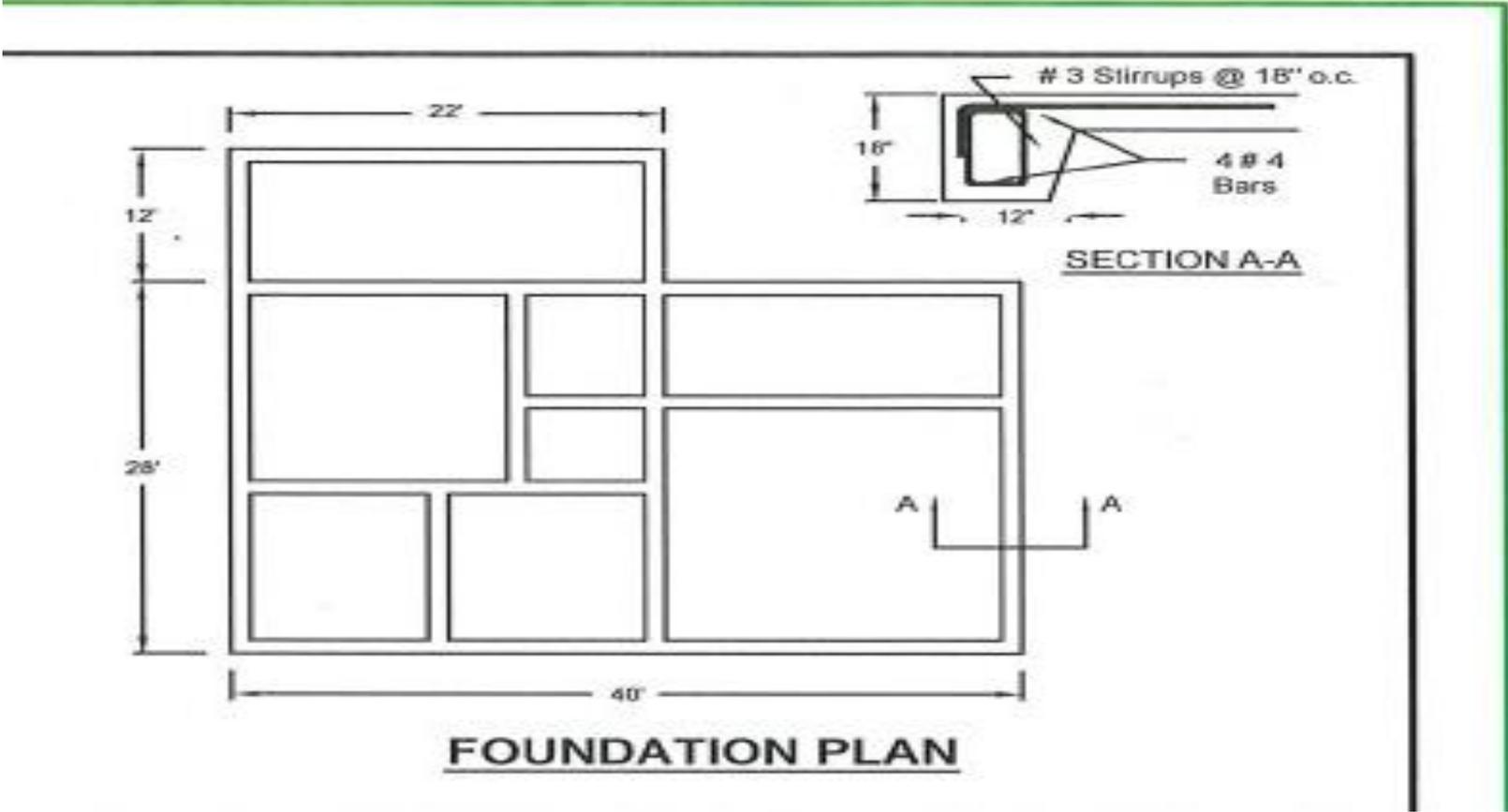
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SITE PLAN

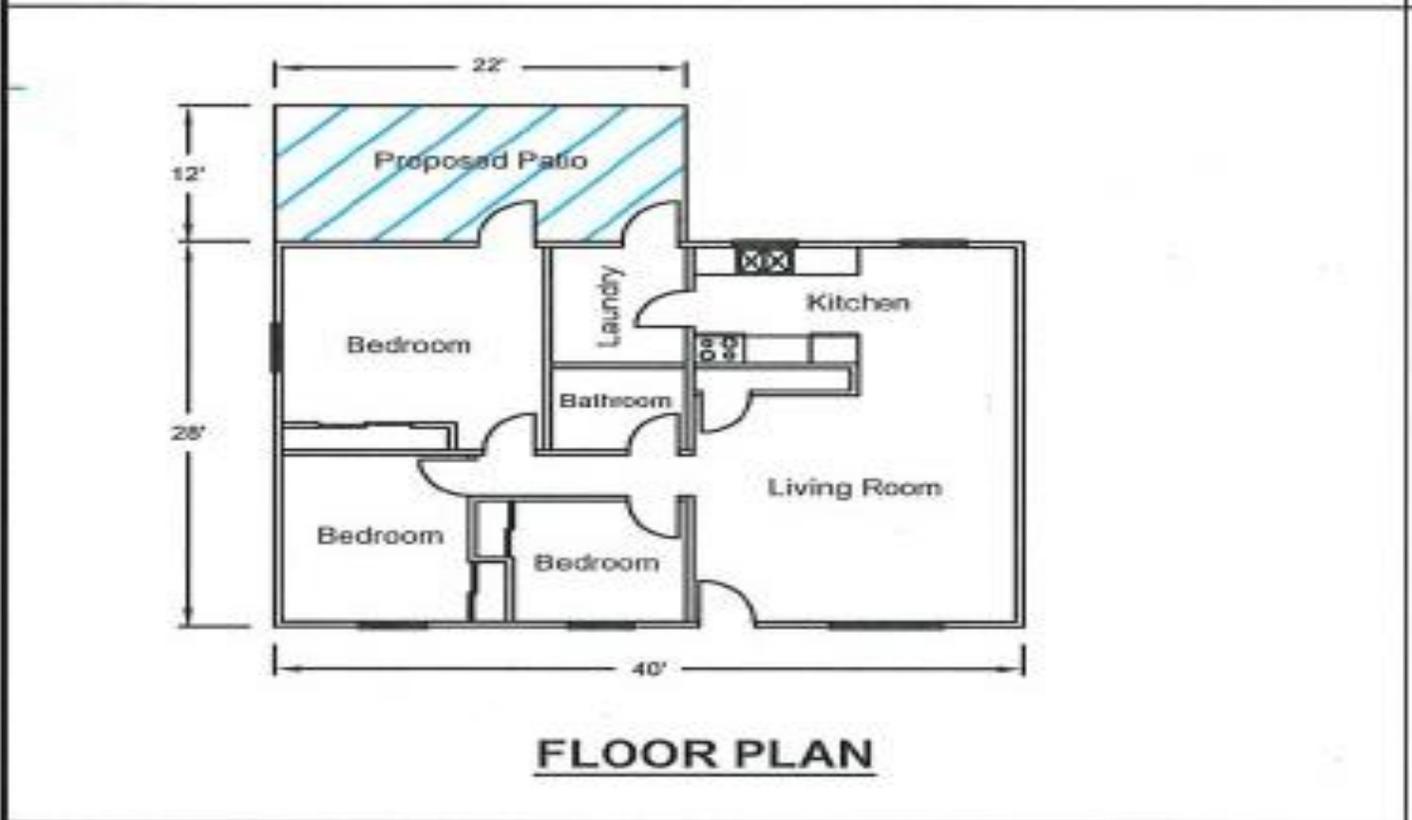


FOUNDATION PLAN



	STANDARD DRAWING	EXAMPLES OF REQUIRED PLANS (RESIDENTIAL INFORMATION PACKAGE-1)	APPROVED BY: 		
	CITY OF HOUSTON HOUSTON PUBLIC WORKS BUILDING CODE ENFORCEMENT		1002 WASHINGTON AVE., HOUSTON, TEXAS 77002	BUILDING OFFICIAL:	DATE: 3-19-2024

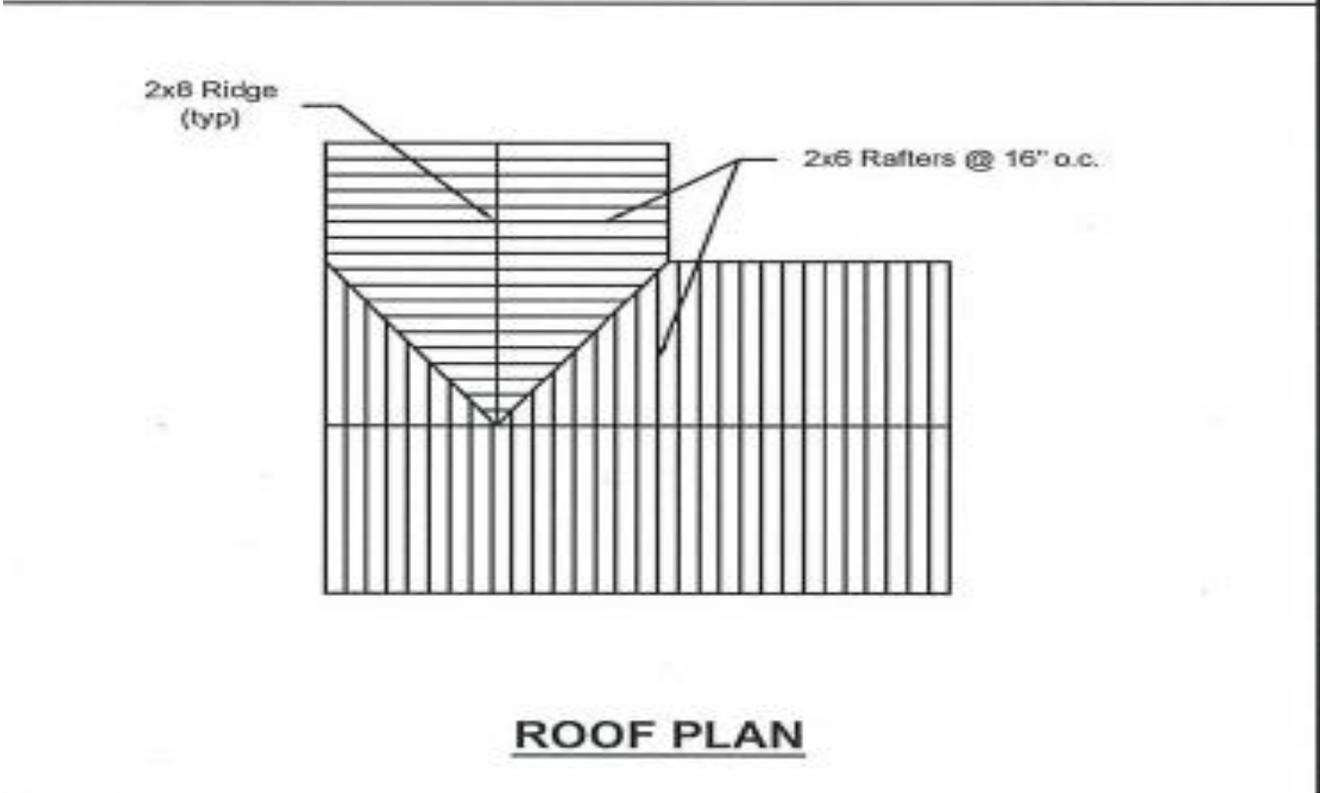
FLOOR PLAN



FLOOR PLAN

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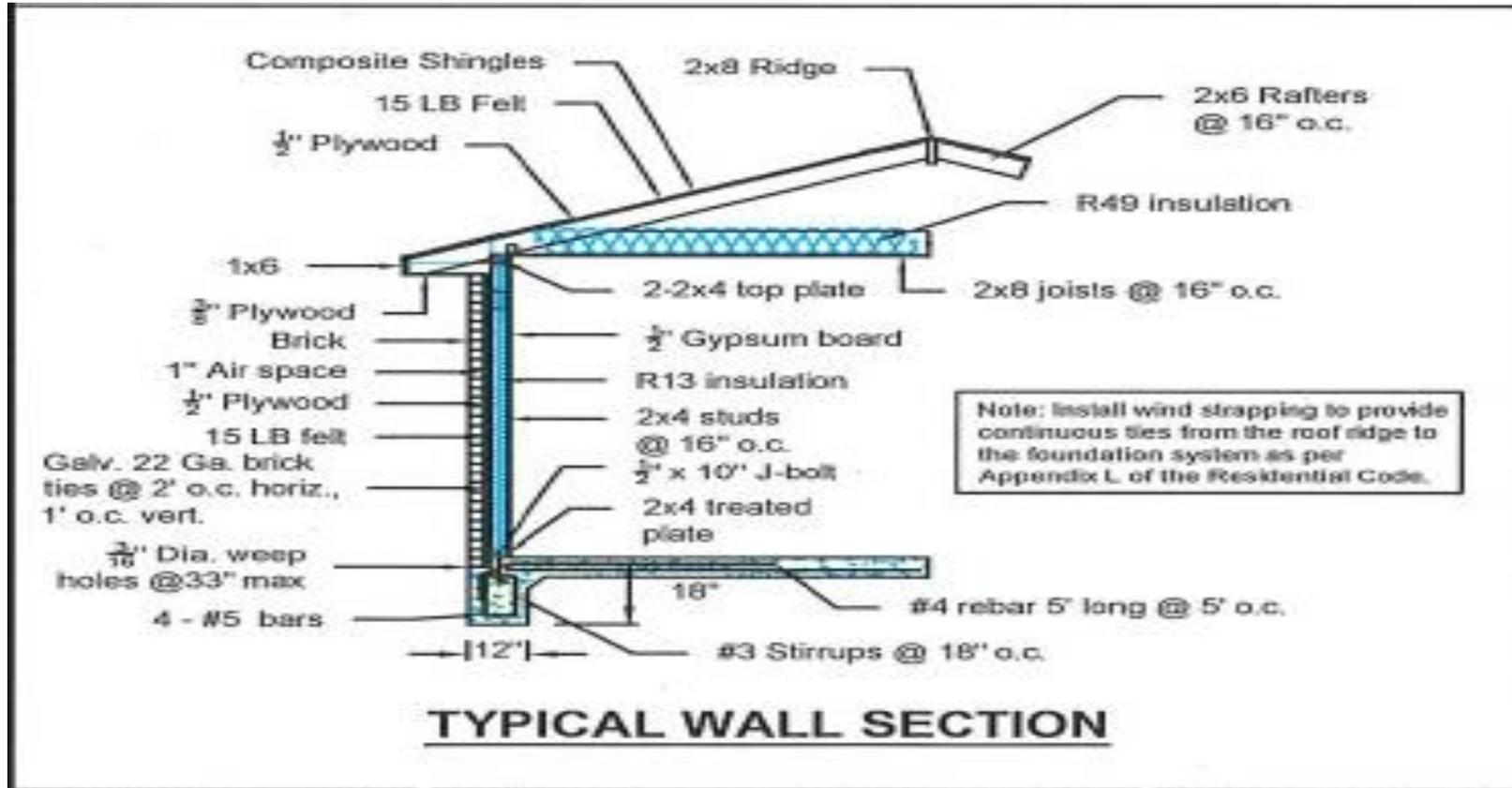
ROOF PLAN



ROOF PLAN

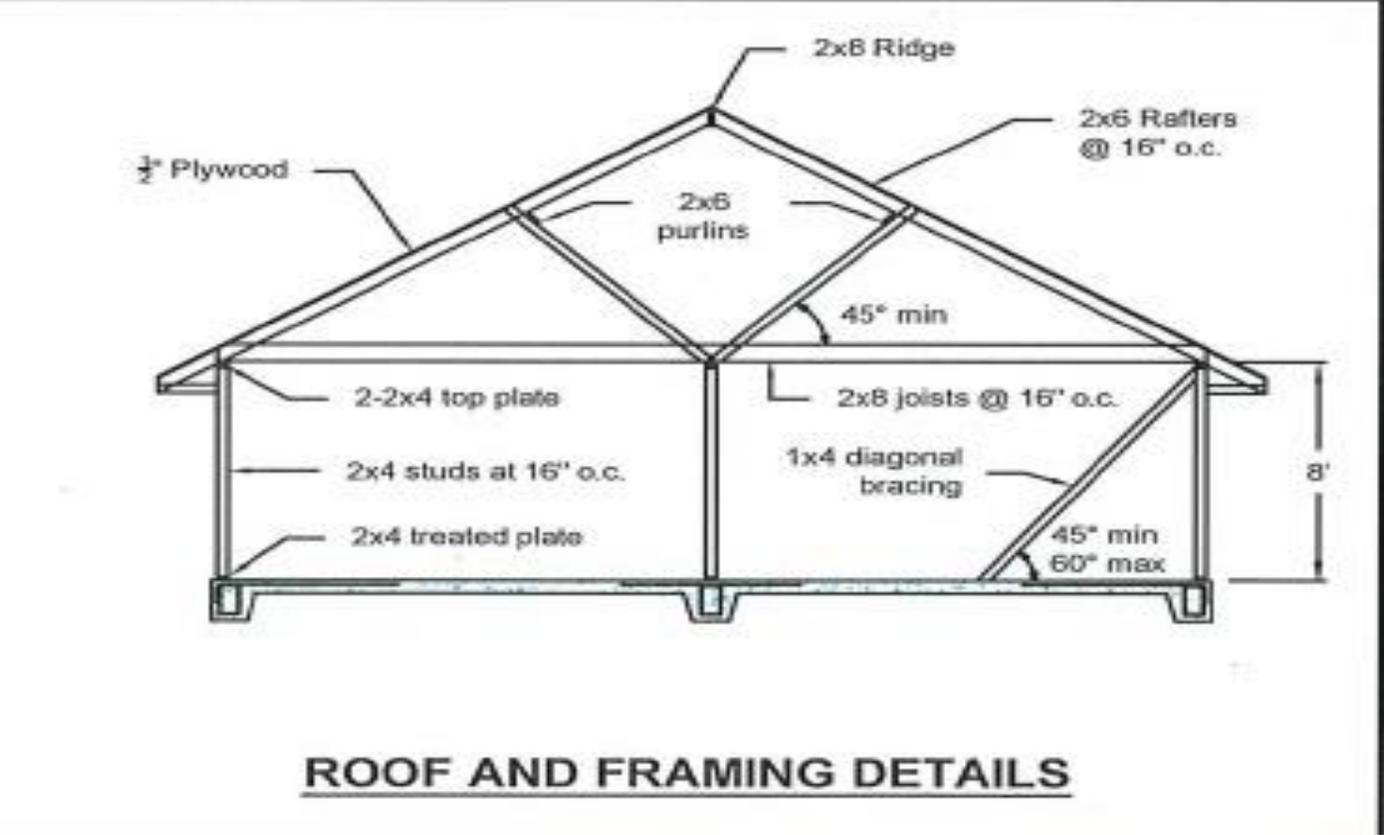
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TYPICAL WALL SECTION



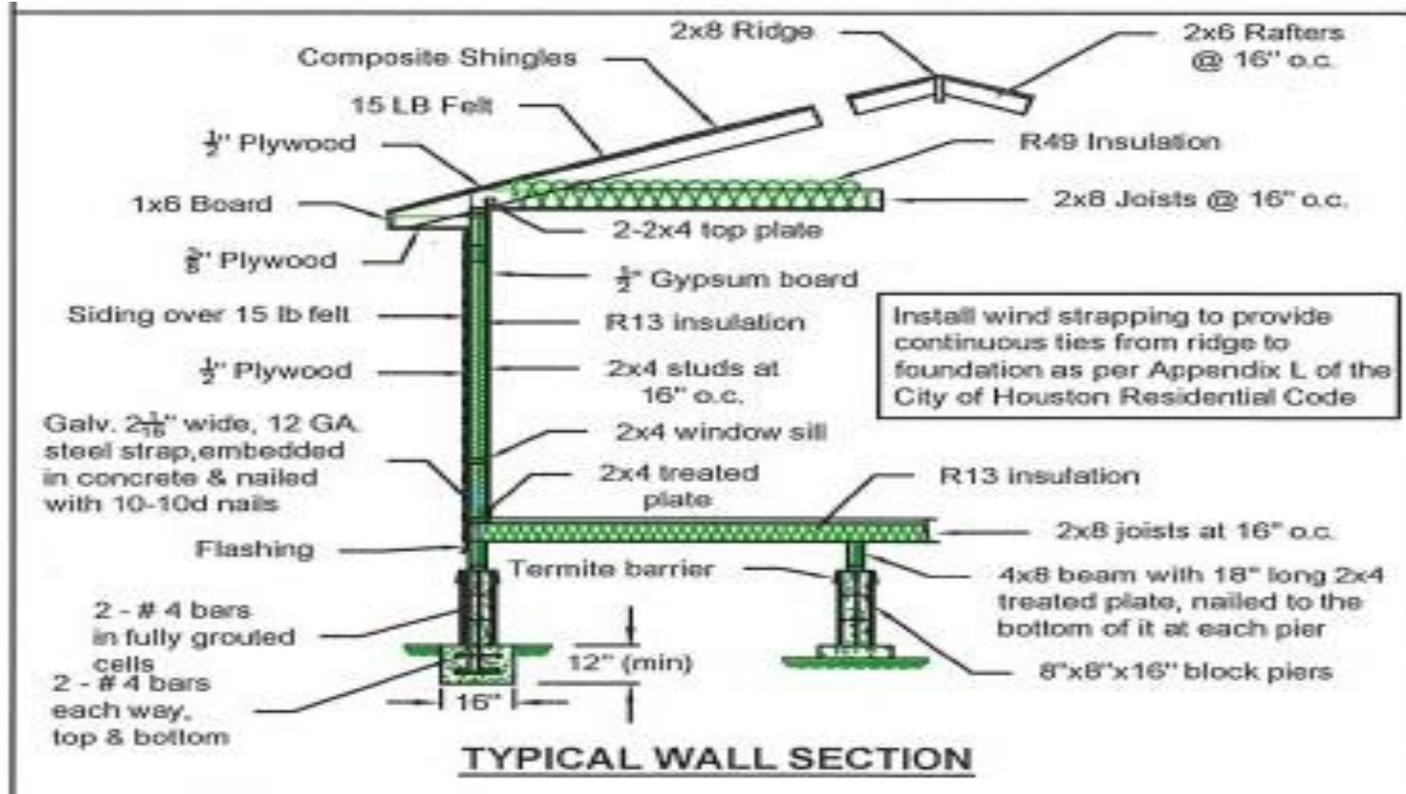
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ROOF AND FRAMING DETAILS



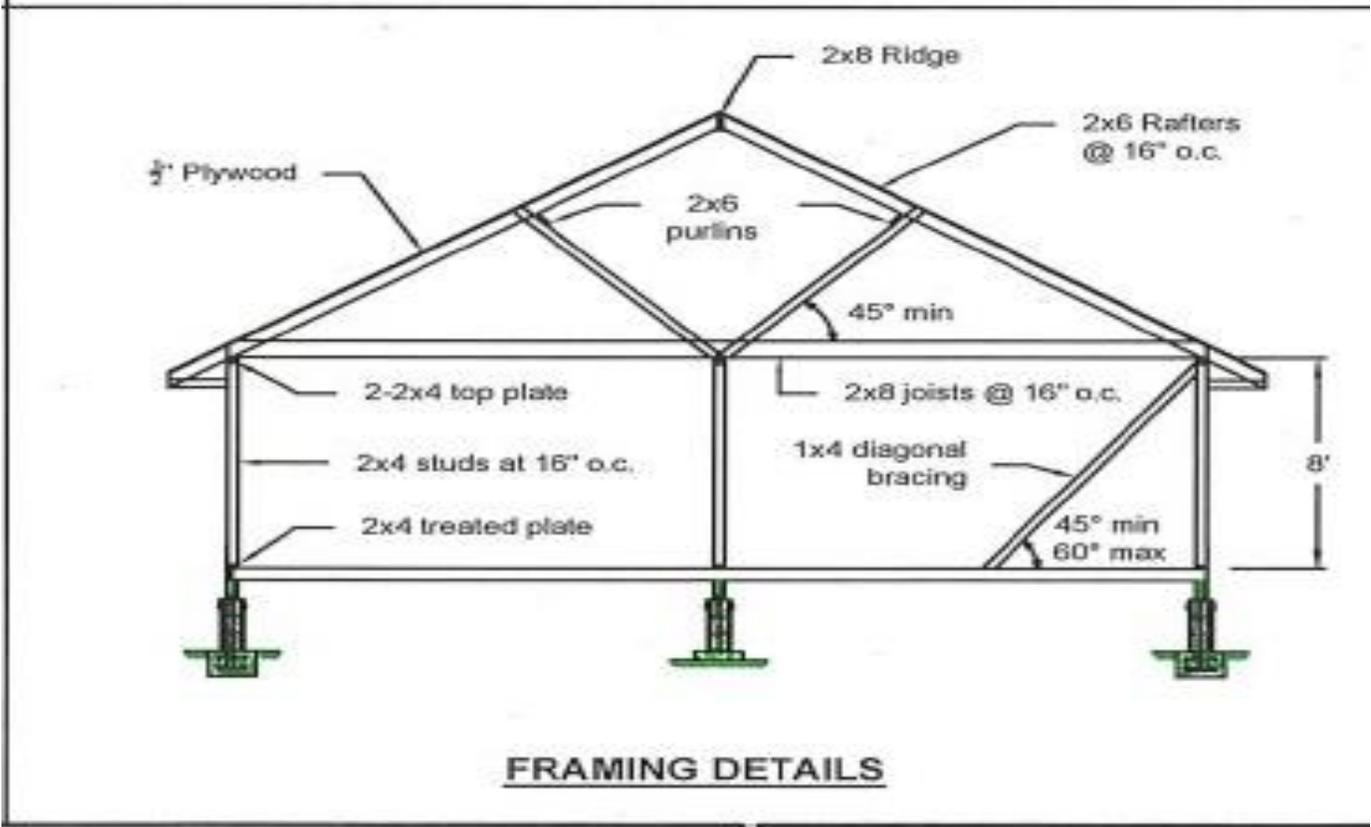
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TYPICAL WALL SECTION



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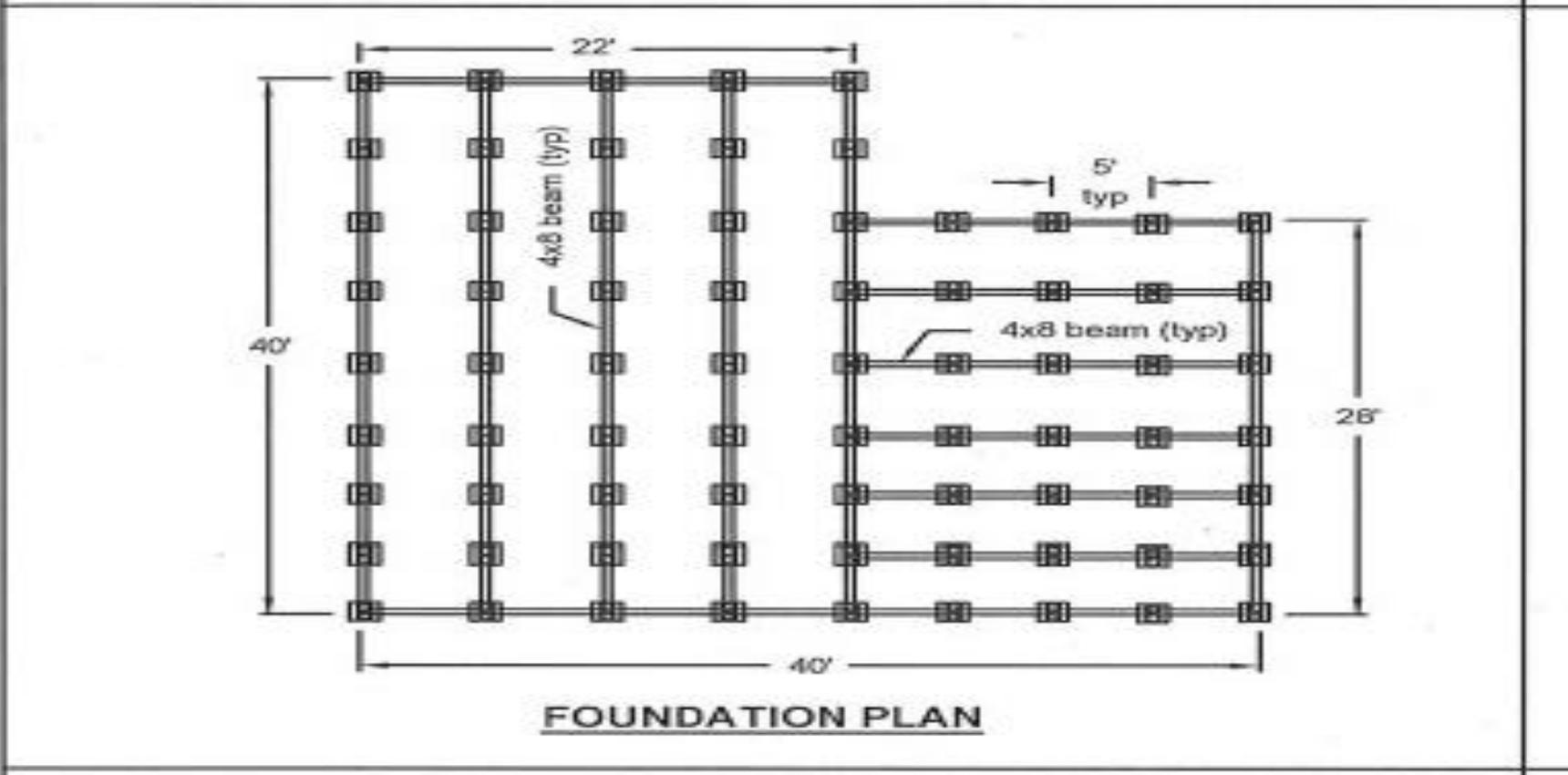
FRAMING DETAILS

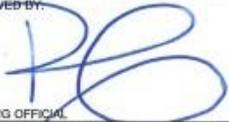


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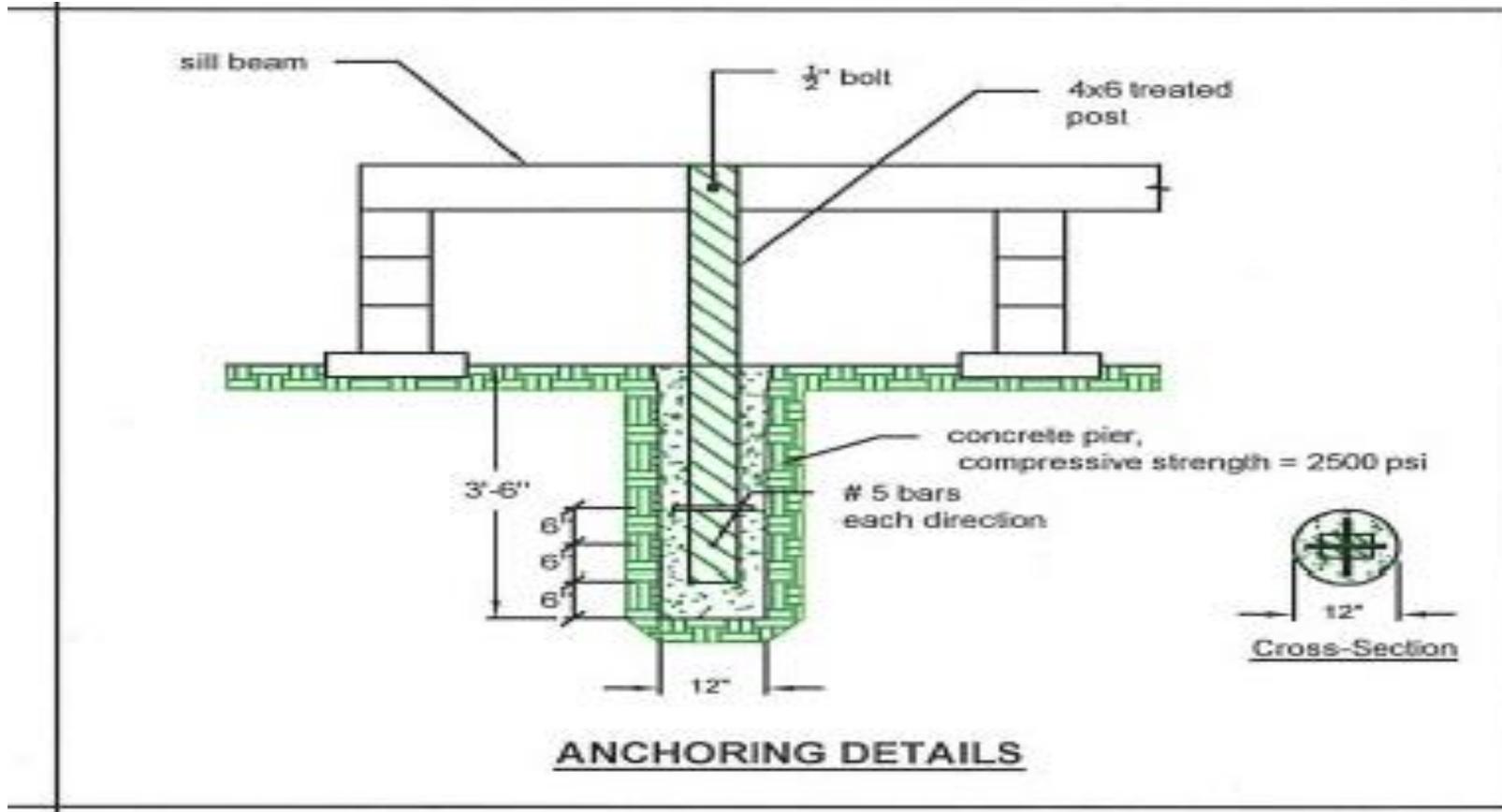
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FOUNDATION PLAN



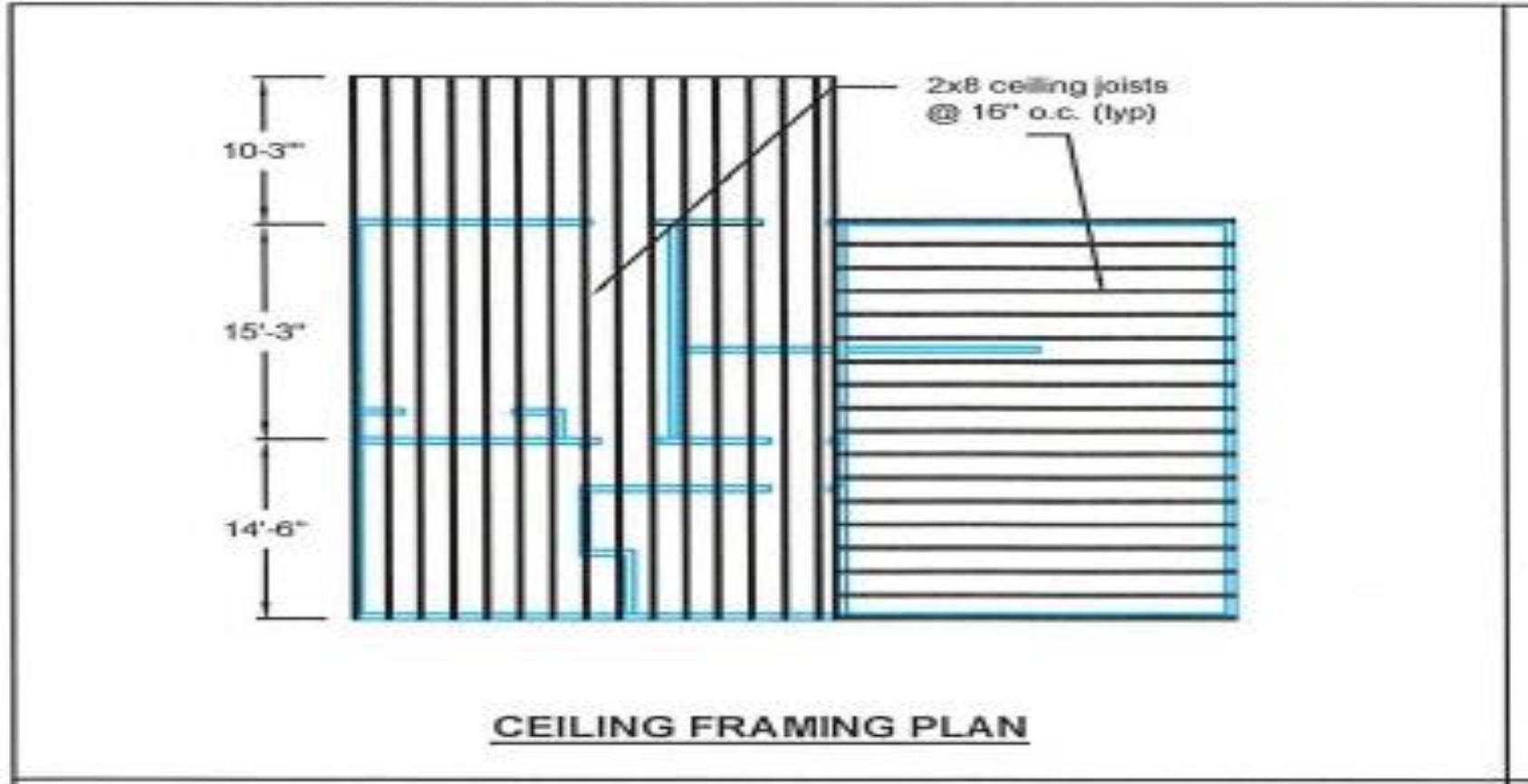
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ANCHORING DETAILS

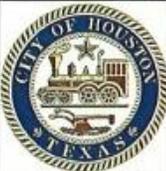


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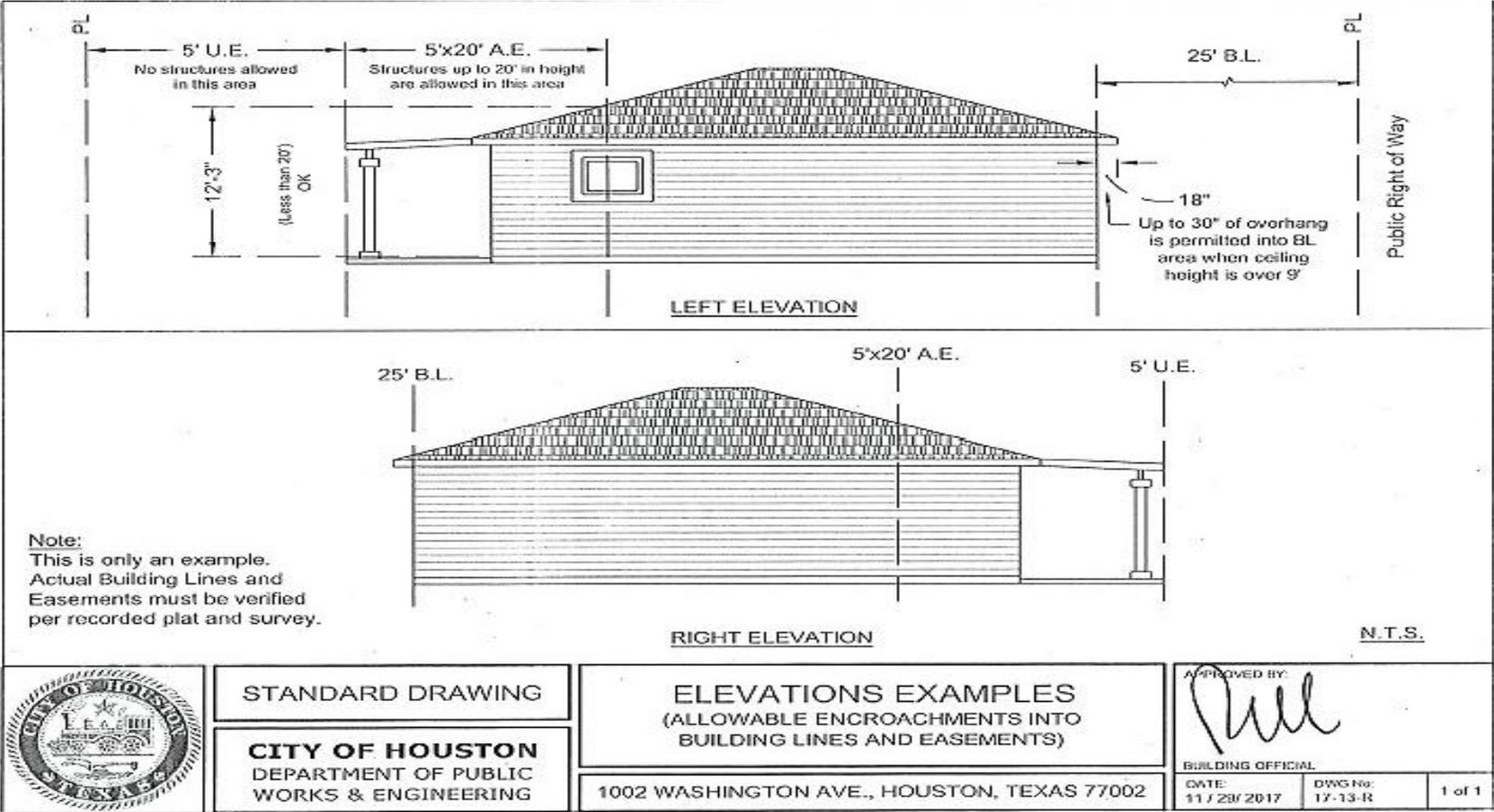
CEILING FRAMING PLAN



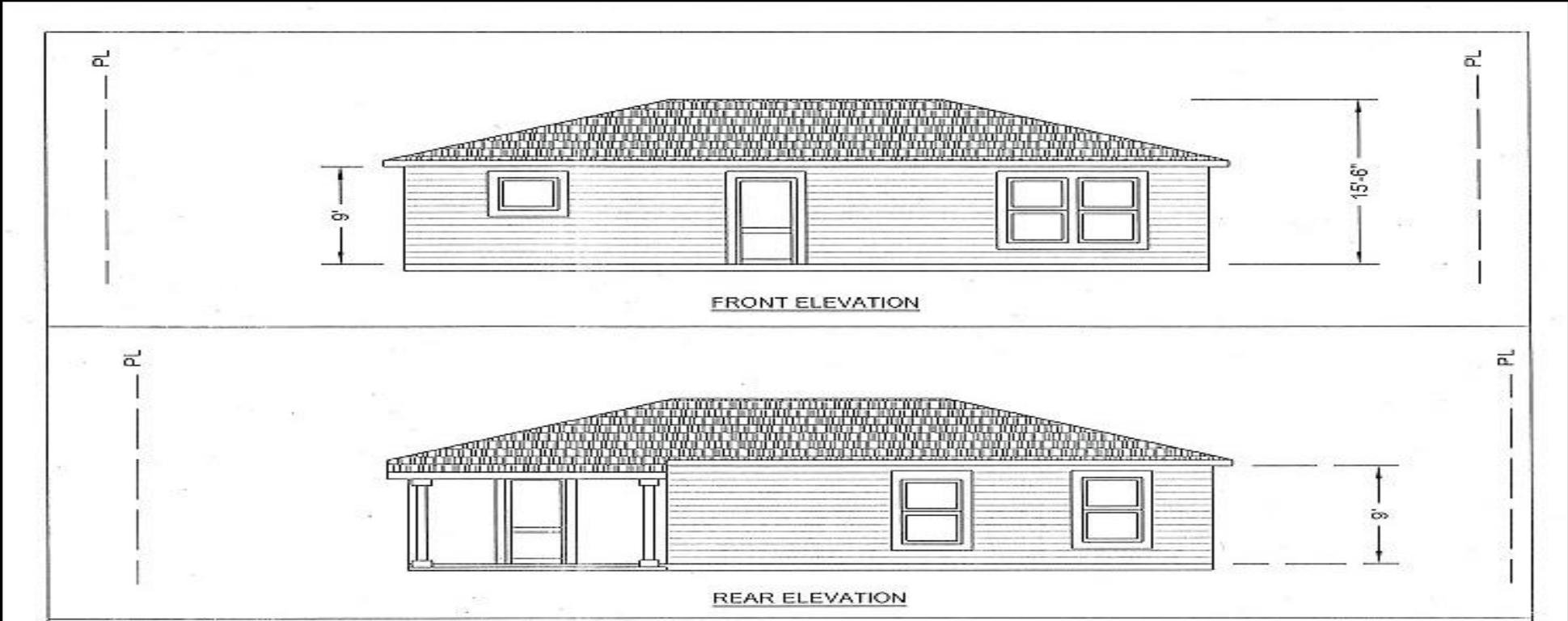
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LEFT AND RIGHT ELEVATION

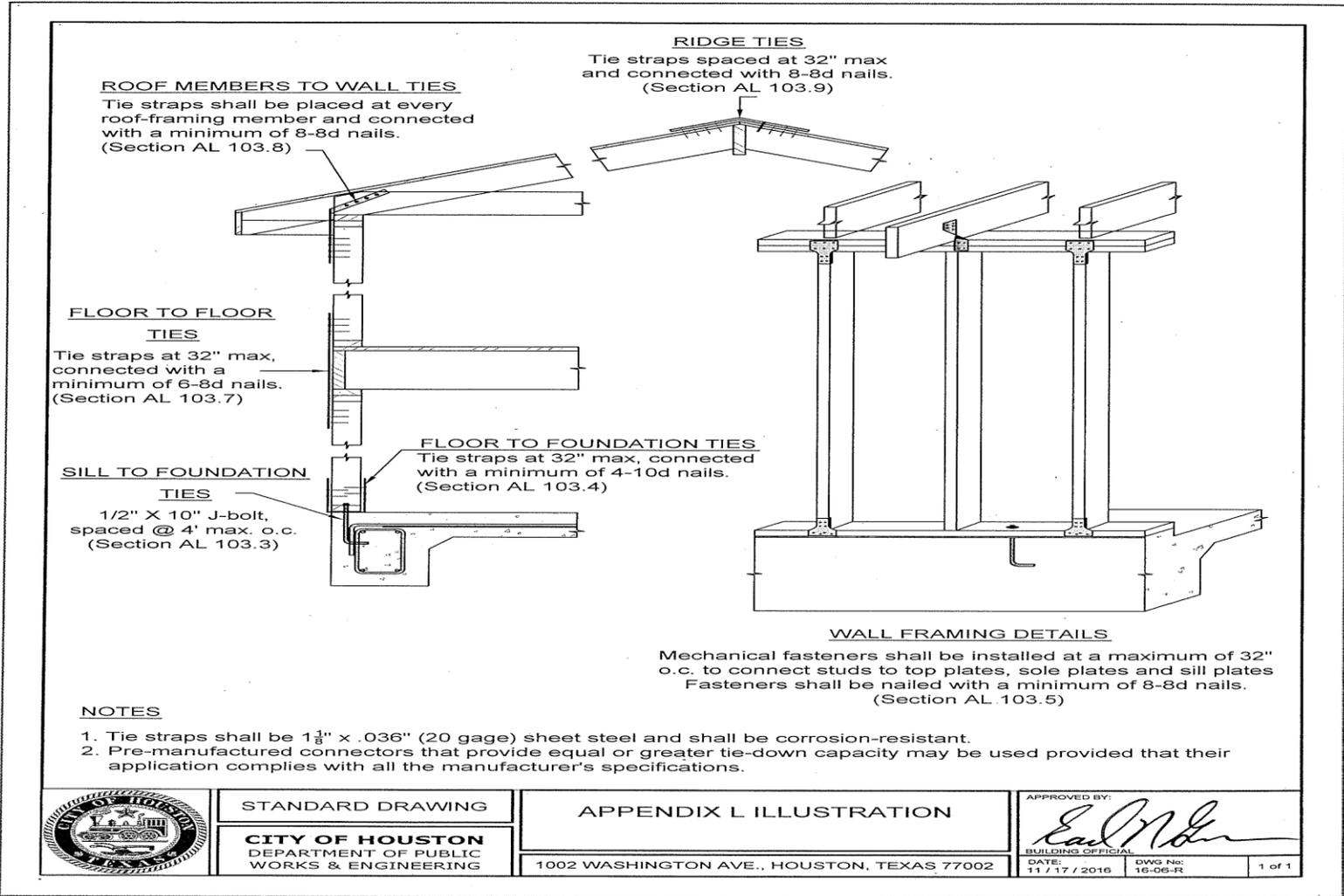


FRONT AND REAR ELEVATION

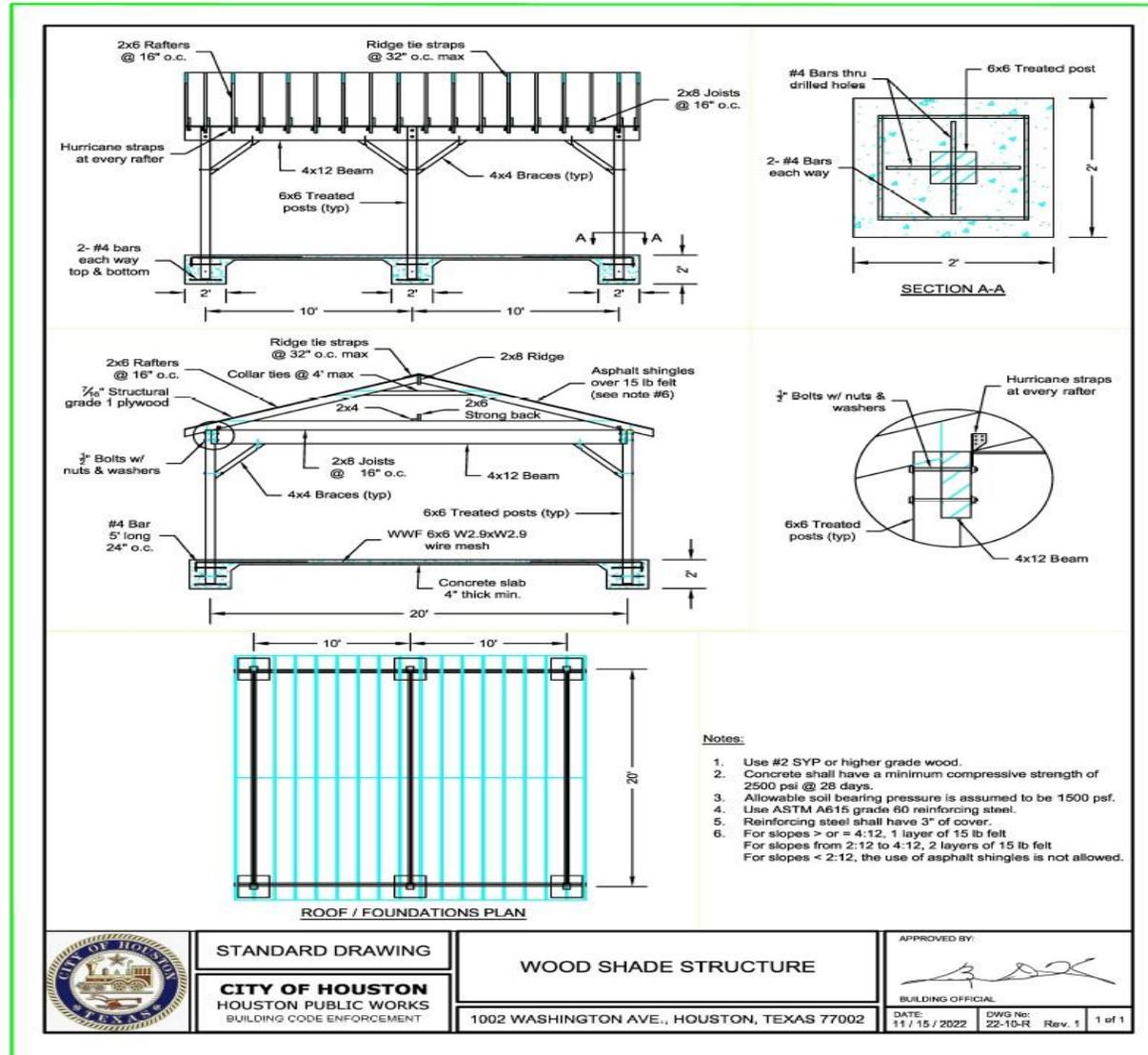


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RIDGE TIES



WOOD SHADE STRUCTURES



STANDARD DRAWING
CITY OF HOUSTON
 HOUSTON PUBLIC WORKS
 BUILDING CODE ENFORCEMENT

WOOD SHADE STRUCTURE

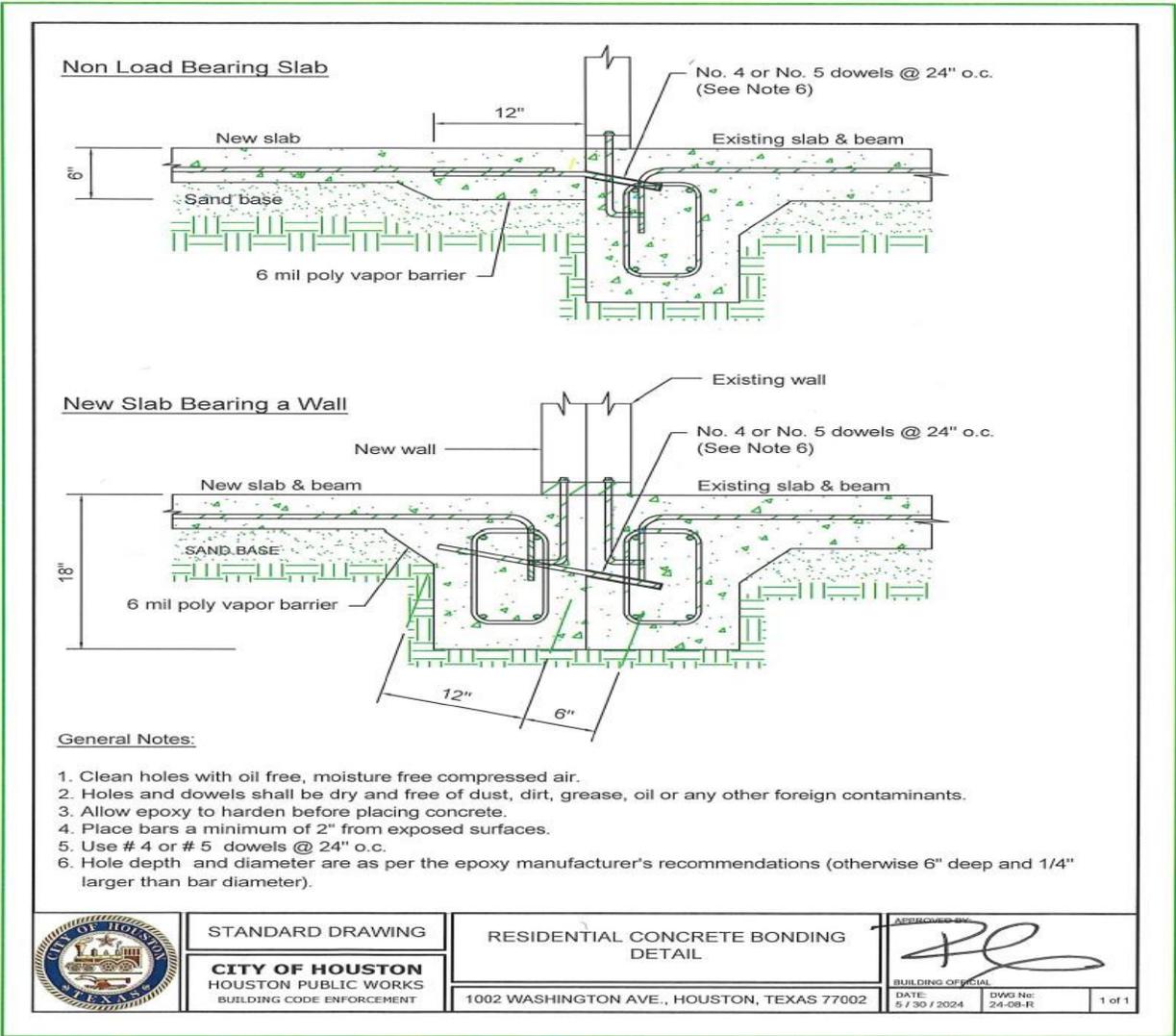
1002 WASHINGTON AVE., HOUSTON, TEXAS 77002

APPROVED BY:

[Signature]
 BUILDING OFFICIAL

DATE: 11 / 15 / 2022 DWG No: 22-10-R Rev. 1 1 of 1

RESIDENTIAL CONCRETE BONDING DETAILS



2018 TO 2021 MAJOR HIGHLIGHTS OF THE SIGNIFICANT CHANGES AND CODE ENFORCEMENT UPDATES

2021

International Residential Code | IRC

CODE ENFORCEMENT EFFECTIVE SEPTEMBER 1, 2024

2. Auto Sensor Light Switches

R404.2 Interior lighting controls

Permanently installed lighting fixtures shall be controlled with either a dimmer, an occupant sensor control or other control that is installed or built into the fixture.

Exception: Lighting controls shall not be required for the following:

- Bathrooms
- Hallways
- Exterior lighting fixtures
- Lighting designed for safety or security



CODE ENFORCEMENT EFFECTIVE SEPTEMBER 1, 2024

3. Opening Protectives

- R301.2.1.2 Protection of openings.
 - Exterior glazing in buildings located in *windborne debris regions* shall be protected from windborne debris. Glazed opening protection for windborne debris shall meet the requirements of the Large Missile Test of ASTM E1886 and ASTM E1996 as modified in Section 301.2.1.2.1. Garage door glazed opening protection for windborne debris shall meet the requirements of an *approved* impact-resisting standard or ANSI/DASMA 115. See Exceptions.
- CADDtools ASCE 7-22 Wind Load Program
https://www.caddtools.com/asce7_22.html

CODE ENFORCEMENT EFFECTIVE SEPTEMBER 1, 2024

3. Opening Protection Note for Plans

Site is located in a hurricane-prone region as defined by the Houston Residential Code (2021). Glazed openings shall be protected against wind-borne debris in accordance with Section R301.2.1.2.

In lieu of providing calculated design pressures based on the structure and its site: Window openings at minimum shall be provided with a maximum positive pressure of 64 psf and a maximum negative pressure of -78 psf, and door openings at minimum shall be provided with a maximum positive pressure of 62 psf and a maximum negative pressure of -76 psf, based on worst case scenario design wind loads and opening pressures.

2018 IRC – SIGNIFICANT CHANGES

Code Section

Definitions

R202

IRC Changes:

Clarification of the definition of ‘fenestration’

- General term for vertical fenestration and skylights and sloped glazing

New definition for ‘vertical fenestration’

- Certain doors and windows installed at less than 15° from vertical

Clarification of the definition of ‘skylights and sloped glazing’

- Glass or other glazing material installed at a slope of 15° (previously 30 °) or more



Skylights

istock.com/Lex20

2018 IRC – SIGNIFICANT CHANGES

Code Section

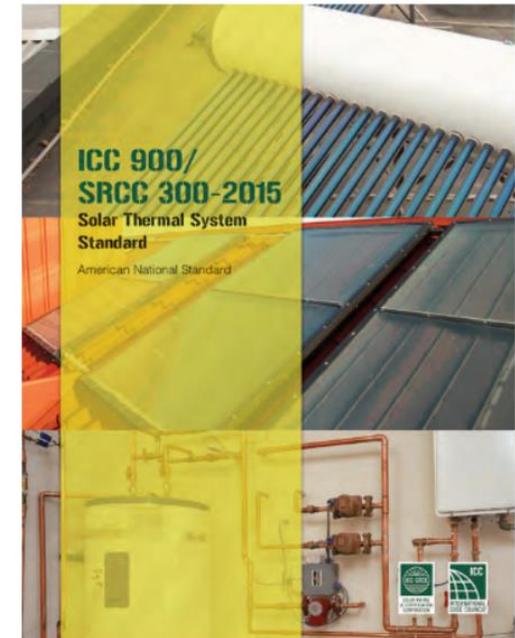
Definitions

R202

IRC Changes:

New definitions related to solar energy systems for clarification in the related provisions in chapters 3 and 9. New definitions for:

- Solar energy system
- Solar thermal collector
- Solar thermal system



New defined terms for solar thermal systems and collectors are from ICC 900/SRCC 300

2021 IRC – SIGNIFICANT CHANGES

Code Section

Definitions

R202

IRC Changes:

New definition for Live/Work Unit.

- A dwelling unit or sleeping unit in which a significant portion of the space includes a nonresidential use that is operated by the tenant.

New definition for Sleeping Unit.

- A single unit that provides rooms or spaces for one or more persons, includes permanent provisions for sleeping and can include provisions for living, eating and either sanitation or kitchen facilities but not both. Such rooms and spaces that are also part of a dwelling unit are not sleeping units.

2021 IRC – SIGNIFICANT CHANGES

Code Section

Dwelling-Garage Opening Protection

R302.5.1

IRC Changes:

Modification of R302.5.1

- Door openings between the garage and residence to be self-latching



2018 IRC – SIGNIFICANT CHANGES

Code Section

Glazing Adjacent to Doors

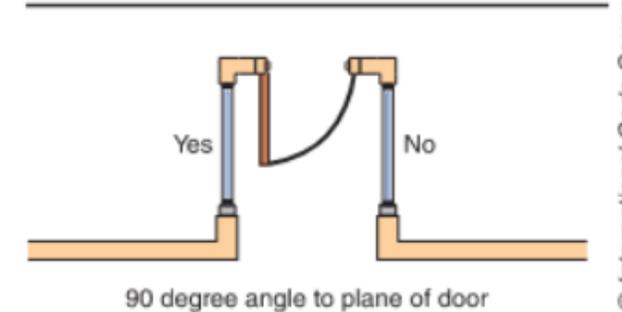
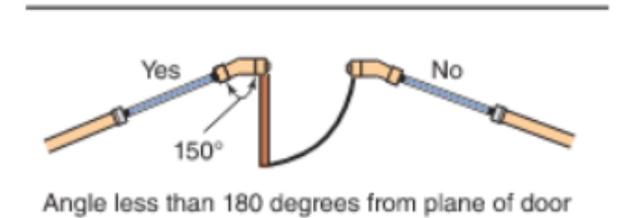
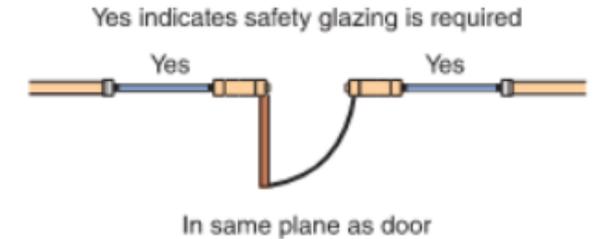
R308.4.2

IRC Changes:

- Location of glazing that should be considered hazardous Condition 2 modified.
- For glazing on a wall less than 180° from plan of door in the closed position and within 24 inches (610 mm) of the hinge side of an in-swinging door.



Windows at an angle to adjacent door



Glazing adjacent to doors

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2018 IRC – SIGNIFICANT CHANGES

Code Section

R311.7

Stairways. Where required by this code or provided, *stairways* shall comply with this section.

Exceptions:

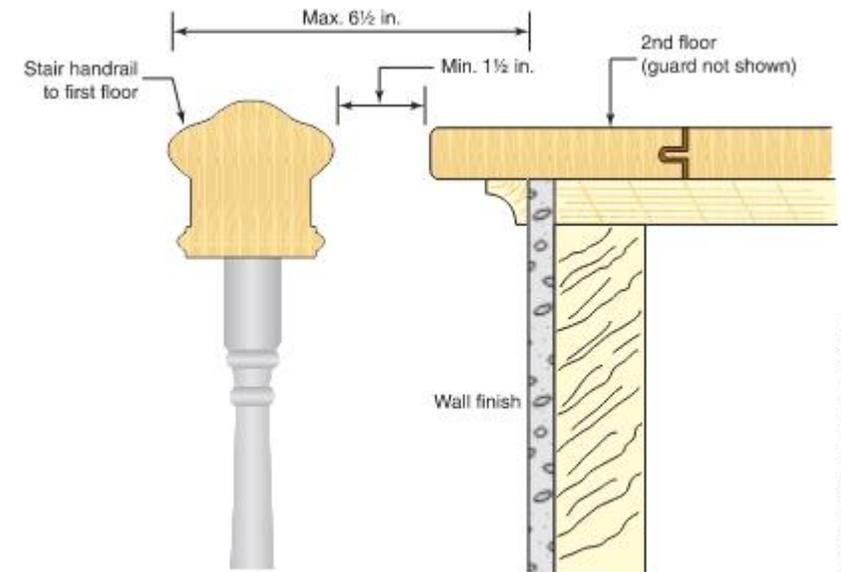
1. Stairways not within or serving a building, porch or deck.
2. Stairways leading to Non habitable attics.
3. Stairways leading to *crawl spaces*.

Handrail Projection

R311.7.1, R311.7.8

IRC Changes:

- Additional exception to section R311.7.8.2 allowing handrails to project a maximum 6.5” at nosing
- New Section R311.7.8.3 handrails adjacent to a wall shall have a space of not less than 1.5” between the wall and handrail
- Revised Section R311.7.8.4 revised for clarity and consistency



Greater projection allowed where handrail passes a floor nosing

2018 IRC – SIGNIFICANT CHANGES

Code Section

Deck

R507.1
and
R507.2

IRC Changes:

- Section R507.1 Exterior Decks. The section is reorganized for ease of use and added design specifications for common deck materials.
- Section R507.2 Deck materials. All wood materials shall be No. 2 grade at a minimum. Materials must be in accordance with Sections R317 or R318.
- Section R507.2.1.1 Engineered wood products shall be in accordance with Section R502.
- Added section R507.2.3 and Table R507.2.3. Section and table add requirements for fasteners and connectors.
- Added Section R507.2.4 Flashing. Flashing must be corrosion resistant and have a minimum thickness of 0.019” or an approved non-metal material compatible with the used materials.
- Added Section R507.2.5 Alternate Materials. Permits the use of alternate materials including glass and metals.



Fasteners in wood decking must be of approved material

2018 IRC – SIGNIFICANT CHANGES

Code Section

Deck Footings

R507.3

IRC Changes:

- Added section R507.3. Footings are to be concrete or an approved structural system that can accommodate all loads in accordance with R301. Footing depth shall be in accordance with Section R403.1.4 Exception for decks with joists directly supported on grade over their entire length.
- Section R507.3.1. The minimum size of concrete footings shall be in accordance with Table R507.3.1 based on the tributary area and allowable soil-bearing pressure in accordance with Table R401.4.1.
- Section R507.3.2. the minimum depth shall extend below the frost line Specified in Table R301.2(1) in accordance with Section R403.1.4.1.

Exceptions:

- Freestanding decks where all the following are met: The walking area is a maximum 20” above grade measured at any point within 36 “ from the edge, the area of the deck does not exceed 200 sf, and the joists bear directly in precast concrete blocks at grade without the support of beams or posts.



Freestanding deck

iStock.com/dlerick

2018 IRC – SIGNIFICANT CHANGES

Code Section

Deck Posts

R507.4

IRC Changes:

- Section reorganized so deck posts is in the middle of Section R507.4.
- Table R507.4 Deck Post Height added post size 8 x 8 with a maximum height of 14 feet and modified the allowed height of 4 x 4 beams to be 6' - 9'.
- New foot note added so that the maximum height is based on a 40 psf live load.
- New foot note added for posts sized 4 x 4 are limited to 8' in height for one-ply and two-ply beams and a maximum 6'-9" for three-ply beams.
- Section R507.4.1 Deck post to deck footing connection. Connections must be in accordance with Section R403 and Figure R507.4.1 and permits the use of other footing systems.
- Exception: Where expansive, compressible, shifting, or other questionable soils are present, surrounding soils shall not be relied upon for lateral support.



Deck post with cap

© International Code Council

QUESTION & ANSWER

You Have Questions, We are here to help !!!



ONLINE TOOLS



UPDATE

2021 Construction Codes Adoption Effective January 1, 2024

[Learn More](#)

Find us at

Welcome to the Houston Permitting Center

The Houston Permitting Center combines the majority of the City of Houston's permitting and licensing into one convenient location. We opened in June 2011 with a mission to help customers achieve their goals while complying with the City's regulations. Providing excellent service, streamlining business processes, implementing innovative technologies, and proactively engaging customers are all cornerstones of our mission.

Office of the City Engineer

The Office of the City Engineer (OCE) implements and administers the provisions in the City's Code of Ordinances state and federal regulations relating to floodplain management, street cuts, and storm water quality.

Building Code Enforcement

Building Code Enforcement manages Building Code Services and administers the provisions in the City's Code of Ordinances and state/federal regulations relating to private building construction, and sign administration.

Infrastructure & Development Services

The Infrastructure & Development Services agency is part of the Houston Water service line.

ONLINE TOOLS

REGISTER | LOG IN ACCESSIBILITY LANGUAGE

HOUSTON PERMITTING CENTER

ABOUT PERMITS A TO Z RESOURCES CONTACT ESERVICES

Commercial Plan Review

- APPOINTMENTS
- CONTACT US
- LIVE CHAT
- PLAN REVIEW CONTACT LIST
- REPORT AN IT ISSUE

[About Us](#) / [Houston Public Works](#) / [Building Code Enforcement](#) / [Commercial Plan Review](#)

Commercial plan review is required if you are in the corporate city limits of Houston and are planning to erect a commercial building or structure, or are adding to existing commercial building or structures.

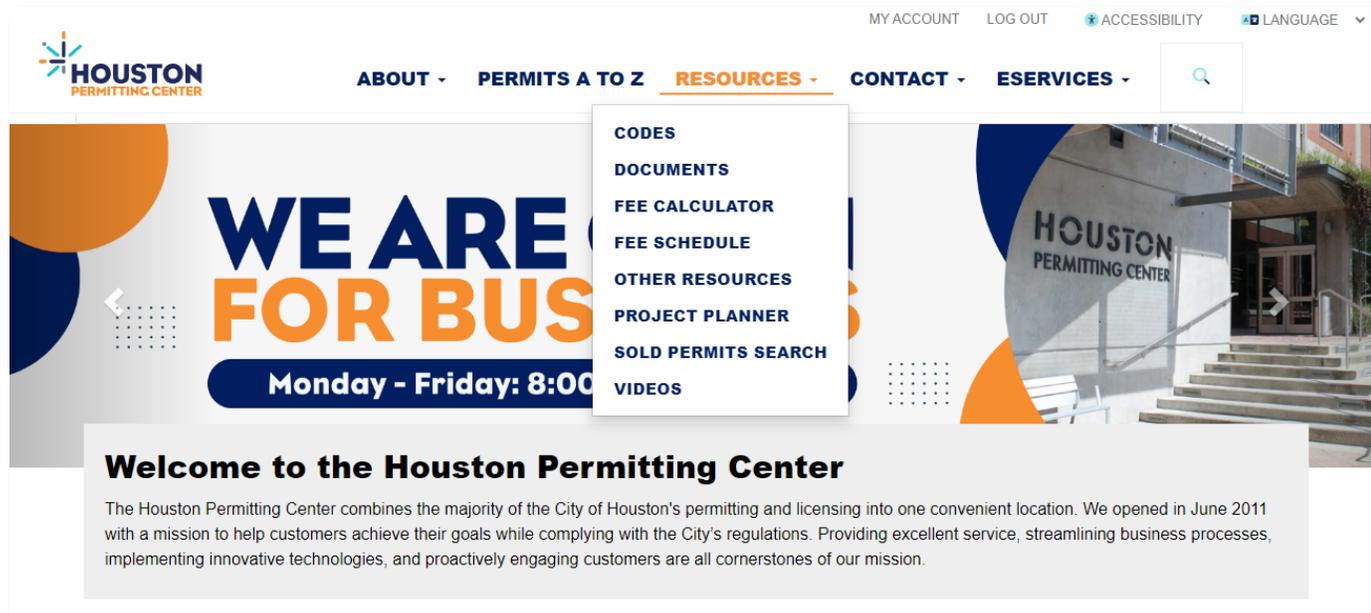
- CONTACT**
- GENERAL INFORMATION
- COMCHECK WORKSHOP

CONTACT

- 1002 Washington Ave., 3rd floor
Houston, TX 77002
- 832.394.8810
- commercial.planreview@houstontx.gov
- 8 am to 3 pm
- Live Chat

ONLINE TOOLS

HPC Webpage - www.houstonpermittingcenter.org



RESOURCES

Codes

(2021 Code Amendments)

Documents

(Guides, Forms, and Other Documents)

Fee Calculator

(Online tool that allows customers to estimate their building permit fees.)

Fee Schedule

(View or download printable versions of Building Code Enforcement's 2024 fee schedules)

Project Planner

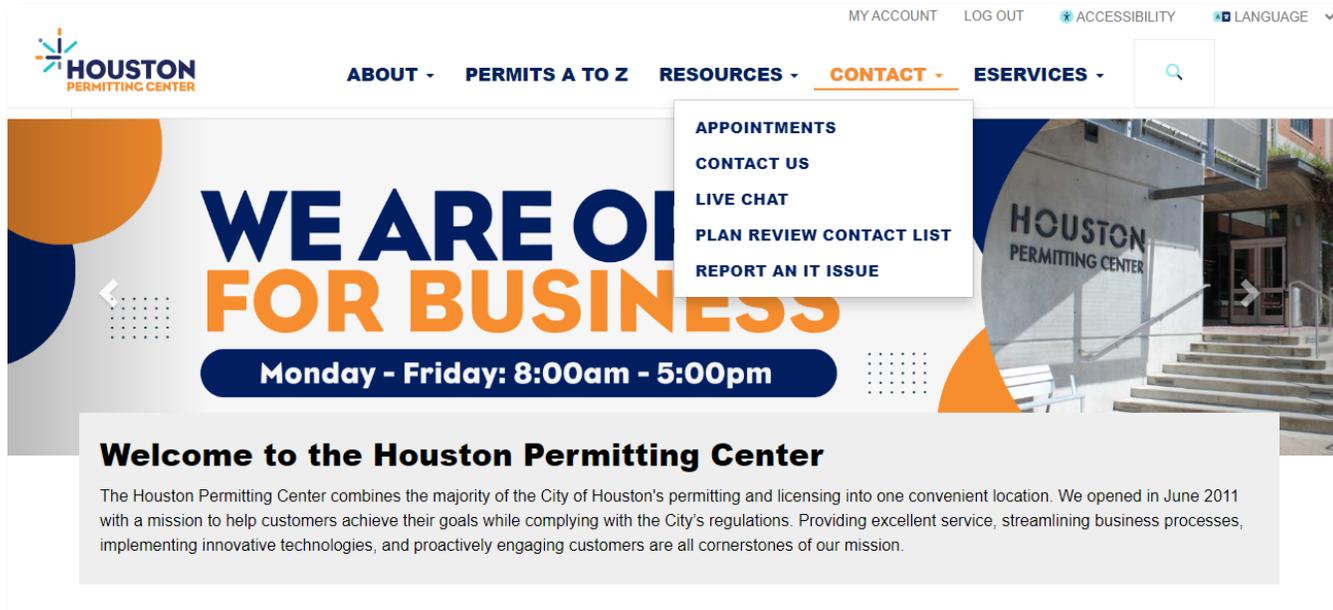
(Answer questions about your business or construction project, and the Project Planner will identify the permits you'll need from the City of Houston)

Sold Permits Search

(To obtain information about basic permit history, you can use this search option)

ONLINE TOOLS

HPC Webpage - www.houstonpermittingcenter.org



CONTACT

Appointments

(Customers can conveniently schedule and check-in for appointments and obtain a digital QFlow eTicket for walk-in services for certain groups)

Live Chat

Available
Monday - Friday: 9:00 AM - 2:30 PM

Plan Review Contact List

(This list is updated monthly)

Report An IT Issue

(Use this form to report only IT issues you are having with iPermits or ProjectDox)

ONLINE TOOLS

HPC Webpage - www.houstonpermittingcenter.org



ESERVICES

iPermits
(Register & Apply for a Permit)

ProjectDox
(Upload & Submit Plan)

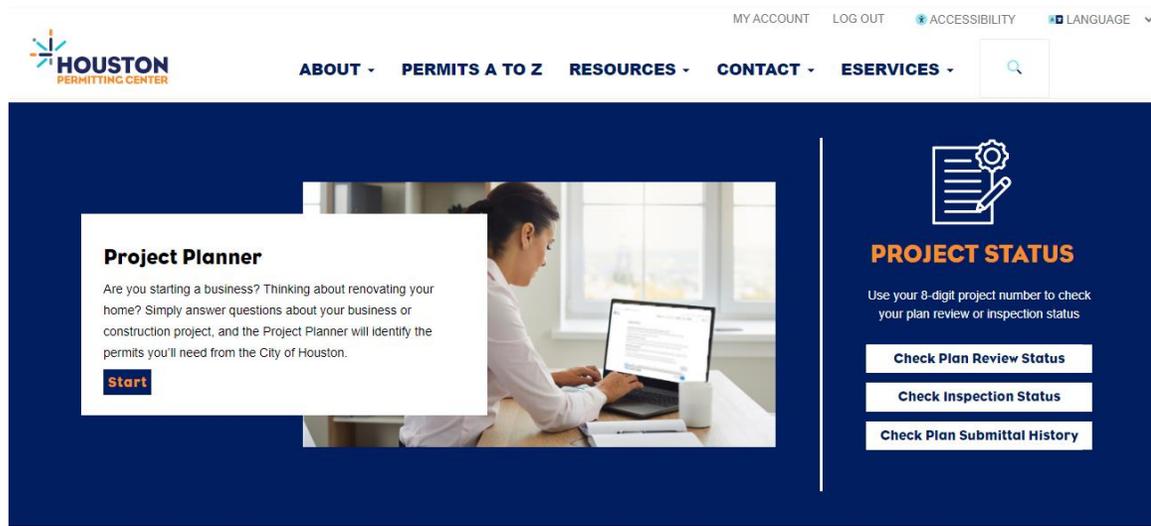
How-To-Guides
(Residential and Commercial Electronic Permitting Guides)

Inspection Notifications System
(Receive text notifications informing you about upcoming site inspections by inspectors.)

Water Meters
(Taps and Meters Permits)

ONLINE TOOLS

HPC Webpage - www.houstonpermittingcenter.org



Check Plan Review Status

(Customers can check the status of their plan review and view any correction comments)

Check Inspection Status

(Customers can schedule inspections and then review the results and comments from those inspections)

Check Plan Submittal History

(Customers can review the submission history of a project's plans)

ONLINE TOOLS

HPC Webpage - www.houstonpermittingcenter.org



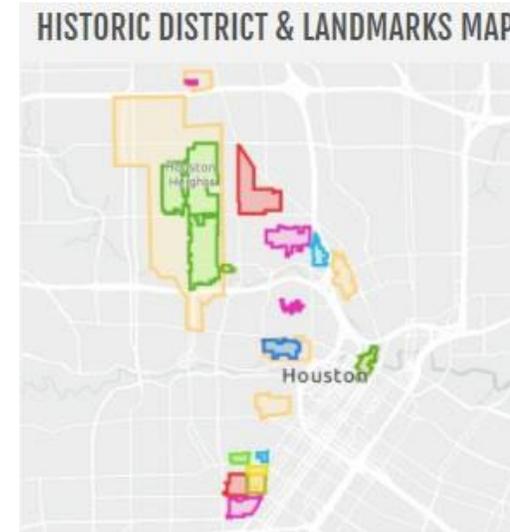
Performance Dashboard

Interactive dashboard provides an at-a-glance view of our daily performance, including the total plans in the system for review and the number of business days of the oldest plan.

RESOURCES & OTHER INFORMATION

- **Building Code Enforcement Permit Fees:** <https://www.houstonpermittingcenter.org/help/fee-schedules>
- **City Fee Schedule:** https://cohweb.houstontx.gov/FIN_FeeSchedule/default.aspx
- **Water & Sewer Rates:** <https://www.houstonpermittingcenter.org/infrastructure-development-services/impact-fee-administration#agency-links-1976>
- **Tax Increment Redevelopment Zone (TIRZ):** TIRZs are special districts created by City Council to attract new investments to an area. TIRZs help finance the cost of redeveloping or encouraging infill development in an area that would otherwise not attract sufficient market development in a timely manner. Taxes attributable to new improvements (tax increment) are set-aside in a fund to finance public improvements in the zone.

Historic Designation: As a designated City of Houston historic building, your property will be exempt from compliance with Energy Code requirements in the Building Code. You are eligible for a 50% discount on building permit fees if the Houston Archeological and Historical Commission (HAHC) issued a Certificate Of Appropriateness (COA) for the approved work. Historical Preservation Ordinance regulates exterior alteration, new construction, relocation or demolition of any historic structure, object or site.



RESOURCES & OTHER INFORMATION

- **Open Records:** The Open Records Section provides permit records and residential plans beginning in 1988 to the present. Register and submit your request at [https://houstontx.govqa.us/WEBAPP/_rs/\(S\(x14z2kpr2bi4qf1133vkwa4v\)\)/SupportHome.aspx](https://houstontx.govqa.us/WEBAPP/_rs/(S(x14z2kpr2bi4qf1133vkwa4v))/SupportHome.aspx)
- **Reporting Unpermitted Work:** An anonymous complaint can be submitted to the City of Houston 311 Help & Information Section for work without a permit. A tracking number will be assigned and can be used to follow up with their office regarding the concern.

An investigator will conduct a site visit and inform the responsible party of the required actions and time frame.

The complaint can be submitted via phone by contacting the City of Houston 311 Help & Information Section at 713.837.0311 or online at: <http://hfdapp.houstontx.gov/311/index.php>



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Houston Permitting Center
1002 Washington Ave.
Houston, TX 77002



832.394.9000



www.houstonpermittingcenter.org



cacd@houstontx.gov



SURVEY OF TRAINING NEEDS PERMITTING WORKSHOP 2024

[BIT.LY/3MXBGC](https://bit.ly/3MXBGC)



Thank you!



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