CITY OF DANBURY

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Big Heart

INSPECTIONS ARE SCHEDULED ON MONDAY'S, WEDNESDAY'S AND FRIDAY'S!

Residential Permit Application

☐**New** Single Family ☐Townhouse ☐Duplex ☐Addition ☐Remodel ☐Accessory Structure					
Permit#:			Project Valuation:		
Project Address:					
Lot: Block: Subdivision:					
Project Description:					
Square Footage	Living:	Garage:	Porch:	Total:	Stories:

Owner:	Phone#:	
Address:		
Contact:	Phone#:	Email:

Contractor	Name	Contact Person	Phone#

A permit becomes null and void If work or c;onstructlon is not commenced within 180 days or If c;onstructlon or work Is suspended or abandoned for a period of 180 days at any time after work has commenced.

A certificate of occupancy must be issued before a residence Is occupied.

Applicant Name (print):	Date:
Applicant Signature:	

OFFICE USE ONLY BELOW

Approved By:	Date Approved:
Building Permit Fee:	Total Fees:
Plumbing Permit Fee:	Issued Date:
Mechanical Permit Fee:	Issued By:
Electrical Permit Fee:	Project#:

Revised 5/5/2021 LCP REV B

BUILDERS REQUIREMENTS

1. One (1) set of drawings and specification (Plans).
2. City will issue Building Permit.
3. Builder will post permit card in a visible place on the front of the premises and protected from weather.
4. Requirements for building:

PROPERTY LINES
25' off front
7' off back
10' off side

EASEMENTS
~~25' from front~~
7' from back of property line
10' off side

CORNER LOTS
25' off front and the side facing the road
10' off the other side
7' from the back

FENCE
5' off easement in the back
On sides of the house, the fence can be put on the property line.

DRIVEWAYS

Approx. Sq. Ft _____

Asphalt _____
Concrete _____

Residential Building Inspection Guidelines

The various required inspections are inspected to meet minimum standards and these guidelines are prepared to act as a guide for you while in the field with basic inspection practices. The inspections that will be covered in this handout are as follows

1. Temporary Power Pole	9. Framing Inspection
2. Form Board Survey	10. Electrical Meter Release
3. Plumbing Rough-in	11. Gas Meter Release
4. Foundation	12. Mechanical Final Inspection
5. Sheathing	13. Plumbing Final Inspection
6. Plumbing Top Out	14. Electrical Final Inspection
7. Mechanical Rough-in	15. Building Final Inspection
8. Electrical Rough-in	16. Flatwork

1. Temporary Power Pole 1

1. Address of House on pole braces
2. Two braces supporting the pole
3. Ground rod (8 feet deep) adjacent to TP
4. Ground wire attached with grounding lug to rod
5. Service whip conductor in flexible conduit
6. GFCI receptacles
7. 220 outlets
8. Breaker box with cover
9. Meter base
10. Breaker blanks if breakers missing
11. Building permit packet on pole or on site

2. Form Board Survey

1. Must be approved by a Plans Examiner or City Staff before any other inspections are inspected

3. Plumbing Rough-in

1. Building Permit packet on site
2. Water service connected to water meter
3. Water line only installed and connected with materials approved for that specific use.
4. Water line ball valve cutoff valve at house adjacent to front form boards
5. Water test equal to main pressure and connected to the water meter
6. Sanitary sewer service line connected to sewer lateral at property line with test tee
7. Sewer yard line concreted at sewer lateral test tee connection
8. Sewer line to have a test tee installed at tie in at lateral connection with water test minimum five-foot head above highest fitting
9. Two-way cleanouts consist of two back to back combo fittings with double stacks
10. Concrete in cleanout fittings up to combo hub
11. Water lines to be pressurized within rough at time of inspection
12. Sand bed all PVC waste and drain lines and water service line from meter to house. Sewer lines sand bedding to spring line of pipe from interior rough to sewer connection at sewer lateral
13. Walk entire rough and check for leaks, improper fittings and fittings installed incorrectly
14. No sanitary tee laid on back is allowed
15. Water test to five feet above highest fittings
16. Rough cannot be too wet from rain to determine if system is leaking
17. No negative fall on any drainage or waste lines
18. At rough in inspection Trash Box should be accessible onsite for loose trash.

4. Foundation Inspection

1. Permit packet on site with approved plans and concrete plans
2. Cable plans in packet
3. Cable details in packet
4. Beam minimum depth per approved plans. Depth from top of form board to bottom of beam ditch
5. Beam width per approved plans
6. Cables installed per approved plans
7. Bottom strand cable supported per approved plans. Check first support from outside form board for support location and height of cable at first support rod
8. Patch all holes in the poly vapor barrier
9. Poly Vapor Barrier extends down from top of fill to bottom side of beams
10. Chairs installed at each cable cross and at mid span
11. Invert chairs at all drop forms to prevent cable from floating up

12. Require grade string lines and measure min. slab thickness
13. Make sure plumber has set all tub and showers boxes
14. Make sure all PVC stacks extending up through slab are sleeved at time of inspection
15. Make sure all PVC exposed crossing grade beams and water lines are sleeved if left exposed
16. Brick ledge matches the approved plans for brick coverage
17. Concrete encased electrode installed adjacent to electrical panel at least 20 feet in length within concrete with minimum of 2-inch concrete cover around the ground
18. Extra rebar installed per Eng. plans a location noted on plans
19. Always require steel sized as specified on plans. Never accept doubled or smaller rebar in lieu of proper sized rebar
20. If void boxes are required, always require ends be sealed to prevent concrete from filling void box
21. All electrical conductor piping within the slab must have a minimum of 2-inch concrete cover over the top of the conduit
22. Stub out rebar dowels through form board at Garage and porch locations to attach flatwork to at time of flatwork inspection (optional)
23. Trash box to be onsite at time of foundation inspection and empty as needed.
24. All sheer wall HOLD DOWN STRAPS shall be in place at time of foundation inspection. (Refer to building plans SW sheet and detail sheet for proper locations)
25. U-fer shall be a minimum of ½ inch rebar 20 feet in length or #4 copper wire

5. Sheathing

1. Sheathing inspection is required prior to placing an exterior wrap or taping of any sheathing joints
2. The nailing pattern is dependent on the material used as listed by the manufacture as to spacing and location
3. No sheathing joints shall be covered prior to this inspection
4. All holes in the exterior sheathing shall be sealed at time of inspection
5. A vapor barrier shall be installed at the brick ledge and be of approved material and design
6. All building corners must be sealed on the interior corner with minimum 6 mil poly behind sheathing, (optional may use approved tape per Manuf. Specs.)
7. All metallic piping shall be sleeved thru the brick or stucco exterior
8. Any piping extending through the sheathing must be sealed around to prevent air leakage
9. If structural Sheating is installed all joint are to be lapped ¾ of an inch per Manuf. Spec. or every joint must be tapped with approved tape
10. Brick ledge vapor barrier material should be in place at this inspection
11. All hold down straps to be installed and secured at this inspection

6. Plumbing Top Out Inspection

1. Permit packet on site with approved plans
2. Any 2 inch or larger vent stack shall not be in a 2x4 wall. The wall must be a minimum of 2x6 bottom plate, studs and top plates within the wall cavity where plumbing exists
3. First walk the exterior of the structure to check mill wrapping of all metallic pipe, bonding of gas riser, no gas piping ran along wall exterior outside of frame wall or within the brick ledge.
4. Check for bonding of gas riser pipe
5. Gas line test of all black pipe with diaphragm gauge, 3 to 5 psi test
6. Gas line properly supported and strapped in walls and ceilings
7. Tank water heater in garage on a platform, but not allowed in attic
8. Tankless Water Heaters installed in the attic requires a drain pan and drain line to exterior
9. Tankless water heaters installed in garage per manuf. listing
10. Water Heater T&P line stubbed out through exterior wall with copper, CPVC or PVC
11. Type B vent installed through ceiling joist and through attic out roof
12. Gas Water Heater Type B vent pipe min 1 inch from any combustible material
13. Sanitary drainage waste and vent piping shall be any material approved by code for that use
14. Water test all tubs and shower pans and second floor lavatory arms five feet above highest fitting
15. Clothes washers pan drain located on second floor, to be water tested at top out and shall discharge to exterior wall
16. Solid block rear wall adjacent to tub wall flange
17. Shower pan liner are to be blocked to height of liner
18. Second floor water test required on all tubs, showers and lavatory arms. Lav. arm turn up with 5-foot head pressure water test
19. Nail guards on all water lines or drain lines within 1.5 of edge of stud or top or bottom plates
20. Vent stacks terminated through roof at least 6 inches above roof decking and not within 10 feet of an openable window or door. Vent flashing installed for top out inspection
21. Gas cutoff required at each gas appliance location (accessible).
22. Gas cutoff (CLYDE VALVE) required at all fireplaces both exterior and interior units
23. All water lines installed in an unconditioned space (attic, exterior wall, garage wall) must be insulated
24. All insulation must be installed to the face of the drywall within the wall cavity with no exposed piping material left exposed

7. Mechanical Rough Inspection

1. All flex duct connections and screws to rigid metal or duct lines must be sealed by use of approved sealant
2. All attic furnaces must be strapped and supported (belly band) and not resting on support framing
3. Metal Furnace vent to be installed and terminate through roof deck a minimum of one foot above roof and not be within 1 inch of combustibles below the roof deck

4. Attic furnace installations must have a main drain with p-trap attached to the unit and a vent tee on the downstream side of the p-trap. P-trap must be insulated.
5. All units shall have a secondary drain attached to a metal drain pan beneath the coils of the furnace. Secondary drain shall terminate to a visible location over a window or door without obscured glass
6. Walk the exterior of the house to determine if future condenser unit has required minimum side yard drainage as per local ordinance. All side yards to maintain a minimum of 3-foot side yard drainage easement *(no* build easement) if not approved with lessor dimension
7. Make sure all rooms have enough return and supply duct work and installed per approved plans
8. Any duct extending from first floor thru the second floor into the attic must be sealed properly at each plate line to seal off any voids
9. Bath and Utility exhaust fans are to be ducted to outside
10. Freon lines shall be a minimum of 1.5 inches from roof deck to prevent damage to lines
11. Maximum attic walkway from access opening is 20 feet.
12. Minimum attic height above any attic stairway opening shall be 30 inches to closest obstruction. If attic stairway is installed it must be rated a minimum or 300 pounds and be properly installed
13. All parts of the attic where HVAC or electrical is located must be accessible

8. Electrical Rough in Inspection

1. Permit packet to be on job at time of inspection
2. Walk exterior of house first to inspect for receptacles in metal boxes and Romex ground wire clipped to metal box with green G clip
3. Romex feeding any electrical conductor through masonry must be sleeved with plastic pipe or flexible conduit
4. Make sure the ground wire is installed for future grounding to driven ground rod and U-fer ground wire within the framed wall of the garage to connect to U-fer rod at trim
5. Service entrance conduit nipple is to be stubbed out the exterior wall and attached to the interior electrical panel box. Plastic or rigid metallic piping is allowed for sleeve for service entrance conductors to enter panel
6. If metallic pipe is used for the sleeve that pipe hub must have a bonding bushing attached through the hub into the rigid nipple and then connected to the ground bar inside the panel.
7. Start inspection in garage at electrical panel
8. Make sure all neutral and ground wires are terminated in the appropriate neutral and ground bars and spaced evenly across the bars
9. Make sure the ground wire is attached to the concrete encased electrode in the stud wall adjacent to the electrical service in an accessible box and cover.
10. Protect all conductors with a nail guard or other means as the leave the panel and extend up through the top plate to run the various rooms
11. Before leaving the garage make sure there is at least one receptacle
12. Receptacles within the structure are to be spaced no further than six feet along any usable wall for a total of twelve feet between receptacles.

13. In all sleeping rooms, and hallways leading to sleeping rooms, media room and at head of the stairs if two stories and one on the first floor a smoke detector is required as well as carbon monoxide detectors as outlined in the NEC. These can be combo units
14. All lighting in the ceiling and walls are to be boxed. The only exception is under counter lights in the kitchen that may not be boxed
15. Check all Romex for cuts in the insulation and that each run is strapped within 12 inches of every receptacle box

9. Framing Inspection

1. Building Permit packet onsite at time of inspection
2. Review plans before frame inspection
3. *All bottom and top plates are required to be a minimum 2 x 6 as well as adjacent studs within the plumbing cavity of 2 inch or larger pipes. After leaving that cavity around the plumbing the remainder of the walls can be furred out so wall is in alignment*
4. Walk **the exterior** of the house to check the following:
    - Sheathing lapped 1.5 inch minimum or taped to seal joints if Structural Sheathing installed. If Zip Board Installed all joints tapped after sheathing is inspected
    - Check for holes or damaged sheathing that need to be sealed or repaired
    - Make sure all windows and exterior doors and roof is installed to prevent moisture in house
    - 6 mil. Poly lap at foundation behind sheathing at brick ledge to prevent water from running under brick into house interior or other approved methods
    - All sheathing is nailed properly
    - All exterior corners are poly wrapped behind sheathing or tapped on the exterior if manufactures specifications allows
    - Make sure brick ties are installed and spaced minimum 18 inches by 18 inches
    - Always check plans for sheer wall locations
    - All windows installed
4. **Interior frame inspection list:**
    - Decide on where in the house you will begin every frame inspection I always start at the garage and always follow the following routine in every room inspected to ensure nothing is missed.
    - Check sole plate anchors. Anchor bolts are required within 12 inches of every plate joint and every 6 feet on centers.
    - All sole plates are to be treated materials along the exterior walls
    - Make sure all studs are installed in proper locations on correct center spacing
    - Make sure required wall bracing and corner bracing is installed per approved plans.
    - All ceiling joist are installed and are not over spanned for the particular wood species as outlined in the building code span table or as included in the approved plans
    - All rooms require a joist support called a ***Stiff back*** or ***Strong back*** down the center of the room which is blocked under for support at both ends of the room to a load bearing wall. The ***stiff back***

or **strong back** is commonly a 2x6 installed on its edge vertical and perpendicular to the adjacent ceiling joist, and a flat 2x4 nailed directly to the ceiling joist and 2x6 standing on edge. This prevents the ceiling joist from racking or twisting.

- In addition to the stiff back or strong back where the ceiling joist are installed and not nailed directly to an adjoining frame member a ***Rat Run*** which is a flat 2x4 installed directly on top of the ceiling joist not directly nailed to another joist. This to prevent racking and twisting of the joist toward the ends of the joist span.
- Next step inspect the roof support structure to make sure all hips and valleys are supported mid span and braced only to a load bearing wall or beam.
- If a hip or valley is spliced that splice must be cut on an angle or what's called a ***Dove Tail.*** This splice must be supported on each side of the splice with plywood called a gusset plate.
- The spliced hip or valley must be supported under the splice to a load bearing wall or beam
- No roof support member can be braced to a single ceiling joist. Only if the ceiling joist is doubled this creates a beam. The beam then must be supported by two studs down to the sole plate.
- Anytime a beam or lam beam is installed the beam must be supported down to the bottom sole plate with the same number of studs equal to the width of the beam. i.e. two-member beams = two studs, three-member beams = three studs for support
- Purling supports are required when the roof rafters are over spanned according to code span tables. Purling are supported by ***Struts*** braces on an angle no greater than 45 degrees and braced to load bearing walls or beams
- Purling are required to be one size larger member than the rafter it supports
- Struts are required to be installed 4 feet on center along the purling span
- Last inspection of the roof support system is the collar ties installed adjacent to the roof ridge at the peak of the roof area. Collar ties are spaced every four feet from rafter to rafter below the adjacent roof ridge
- Finally roof ridge is the member the rafters connect to at the peak of the roof. The ridge is required to be one size larger than the adjacent rafter, i.e. 2x6 rafter = 2x8 ridge etc.
- At no time are finger joint studs allowed to be used for roof supports for hips, valleys or struts
- Fire place draft stops are required at the plate line above all fireplaces. If two stories then on draft stop is required on the first floor and one on the second floor. All draft stops are to be poly sealed to prevent cold air from entering the wall cavity and making the adjacent room not energy efficient
- Review the plans for the sheer wall locations and make sure the walls are installed and nailed properly according to the material used. Staples are to be installed parallel to the grain of the wood not perpendicular
- All attic stairways are to be rated a minimum of 300 lb. capacity and be installed in direction to access the attic platform
- Review approved plans for sheer wall locations and metal hold downs bolted to the slab as indicated on the approved plans

10. Electrical Meter Release Inspection

1. Walk exterior of house making sure the meter base is installed, Oncor service ran and connected to power company's lugs inside meter base, private service entrance conductor attached to lugs and installed into electrical panel
2. Two forms of grounding are required 1.) Concrete encased electrode box is open for inspection and ground wire is attached under lug. 2.) Copper clad ground rod is installed outside beneath meter base and ground wire attached under grounding lug. Rod must be visible at least 1 inch above grade level
3. Walk around house to inspect that all outdoor receptacles are installed and in a weatherproof box cover.
4. Make sure all light fixtures are installed or if not blanked off until set for electrical final
5. Inspect every room inside the house for receptacles and switches installed and lights installed or blank covers over the box
6. Inspect to make sure all sleeping rooms smoke detectors and carbon monoxide detectors are installed in sleeping rooms, halls leading to sleeping rooms and media room. If two story house one is required above the head of the stairs on the second floor
7. Lower attic access ladder and inspect attic for light switch, receptacle and that furnace fan circuit is connected, and proper Romex connectors are installed to protect the Romex insulation
8. Make sure if a center island is included in the floor plan and at least one receptacle is installed on the island
9. Panel covers shall be left on for this inspection as a safety measure
10. Once you have determined all is installed correctly then release to the appropriate utility company to set the meter

11. Gas Meter Release Inspection

1. Find gas riser and read the pressure gauge to determine if the lines are holding pressure. If a 5 PSI gauge is installed we require 3-5 lb. PSI pressure, if a 15lb PSI gauge is installed we require a 10 lb. PSI test
2. Make sure all gas lines are run to each gas appliance, cook top, fireplaces, attic furnace and water heater or fire pit.
3. All gas lines serving a gas appliance is required to have a cutoff at each appliance. Make sure the gas stop is open at time of your inspection to test all black pipe in the system
4. If all the above is installed correctly then release the meter to be set at the house.

12. Mechanical Final Inspection

1. Inspect the outside A/C condenser to see the unit is connected to the Freon lines, electrical conductor
2. Make sure the Freon caps installed are locking or magnetic to prevent removal by unauthorized people
3. Inspect every room and see that all grills are installed
4. Bathroom and utility exhaust fans installed, and trim attached

5. Inspect the attic to see the furnace has the main condensate drain attached to the unit and ran to an active plumbing trap. Make sure a p-trap is installed before the vent tee and that the trap is insulated from freezing
6. Make sure the secondary drain pan is installed under the furnace coil and that the drain pan is piped to the outside above a window or door. Should water be seen coming from the secondary drain then the main drain is stopped up beneath the coil.
7. Furnace vent is to be ran to the outside and at least 1 inch away from any combustible materials
8. Thermostat must be installed
9. All A/C disconnects must be in site of the A/C condenser
10. All Freon lines serving the A/C condenser must be covered with a UV protective paint or approved UV rated sleeve materials.

13. Plumbing Final Inspection

1. Walk the exterior of the house to see that all cleanout caps are installed in the exterior wall
2. Make sure all roof top furnace vent and water heater vent caps are in place
3. Inspect at the front two-way cleanout the caps cap hubs are glued in place and caps installed
4. Water line cutoff valve is required and located in the front adjacent to where the water line enters the house. The valve box must be clean and the ball valve accessible
5. All interior plumbing fixtures are to be tested for leaks and see if hot water comes to the fixture where hot water is required
6. All toilets, lavatory, kitchen sinks water heaters tank less water heaters are to be installed and operational
7. Check beneath each fixture for leaks and make sure the lines are properly connected
8. Inspect for gas cut off valves at all gas appliance, fire places etc.
9. Make sure water hammer devices are installed at every ice maker, refrigerator and clothes washer

14. Electrical Final Inspection

1. Inspect exterior of the house to see all outdoor wall receptacles are installed and cover still attached and light fixtures in place
2. Make sure the ground rod is still visible at the meter base and ground wire is attached to lug
3. All light fixtures are to be installed a final inspection, no blanked off boxes are allowed
4. All smoke detectors and carbon dioxide detectors installed in the appropriate rooms and halls
5. Make sure all breakers are installed in the panel and each breaker is labeled in ink
6. Make sure ARC fault breakers are installed for all receptacles for bedrooms
7. Test all GFCI receptacles to make sure they trip and reset properly
8. All garage, outside and any receptacles adjacent to sinks or lavatory. are GFCI protected
9. Incandescent fixtures in closets are not allowed within 12 inches above the closet shelf or plane of the shelf. Florissant fixtures are allowed within 6 inches of closet shelf or plane of the shelf

10. Make sure the approved energy label is affixed to the electrical panel cover to ensure the home meets the Energy Code

15. Building Final Inspection

1. Pick up final letters from the permit packet for Termite Certification, Final Survey drawing, Energy Compliance Inspection, Eng. Pre Pour letter of inspection of slab foundation, and Notarized Letter on Fire Escape ladder placement at time of Bldg. Final
2. Address posted both front and rear of house
3. Brick expansion joints caulked
4. No cracks in drive or sidewalks
5. Roof PVC vent stacks painted
6. Required trees planted in front yard
7. Sod planted in front yard
8. Tempered glass labels on all glass windows subject to impact at tubs, sliding doors, study French doors and side lights windows within 24 inches of an exterior door
9. Yard is clean of all trash and construction debris and any adjacent lot clean of construction debris
10. An Escape Ladder is required and to be in each bedroom adjacent to the second means of egress window

16. Flatwork Inspection, (driveway, sidewalk and patio's)

1. All sidewalks and driveways require 2 inches sand cushion
2. Minimum rebar is 3/8 inch 18 inches on centers supported by plastic chairs
3. Drive approach radius shall be 5-foot radius
4. Drive shall be doweled to the garage apron, street and alley
5. If 6-inch curbs are installed within the subdivision two bars of 3/8 rebar is required within the curb, stacked one on top of the other, but not dowelled into the existing curb line
6. Redwood expansion joint is required at the property line and be the full depth of the proposed pour
7. Additional expansion joint shall be installed against all existing concrete
8. Dowels shall be 1/2-inch slick dowels and not be tied to adjacent rebar within Right of Way
9. Before approving any flatwork, it must be clear of trash, supported on plastic chairs and no ponding water or mud and be ready to pour
10. All streets and alleys at time of inspection is to be free of mud or dirt
11. All vacant lots adjacent to the building is to be free of all debris

Revised 7-2-2020