The changes below are from the 2009 International Fuel Gas Code. These mark-ups will be adopted for the 2012 NC Fuel Gas Code. Items shown in STRIKEOUT are to be deleted and UNDERLINED items are to be added.

Chapter 2 – DEFINITIONS

1. APPROVED. Bring forward from the 2009 NC Fuel Gas Code.

2. CLOSET. Bring forward from the 2009 NC Fuel Gas Code.

3. Motion/Second/Passed – Add sentence to read as follows:

   **CONCEALED LOCATION.** A location that cannot be accessed without damaging permanent parts of the building structure or finish surface. Spaces above, below or behind readily removable panels or doors shall not be considered as concealed. Buried underground piping shall not be considered as concealed.

4. LABELED. Bring forward from the 2012 NC Mechanical Code.

5. LISTED. Bring forward from the 2012 NC Mechanical Code.

6. POINT OF DELIVERY. For natural gas systems, the *point of delivery* is the outlet of the service meter assembly or the outlet of the service regulator or service shutoff valve where a meter is not provided. Where a valve is provided at the outlet of the service meter assembly, such valve shall be considered to be downstream of the *point of delivery*. For undiluted liquefied petroleum gas systems, the *point of delivery* shall be considered to be the outlet of the first regulator that reduces pressure to 2 psig (13.8 kPag) or less.

7. REGISTERED DESIGN PROFESSIONAL. Bring forward from the 2009 NC Fuel Gas Code.
Chapter 3 – GENERAL REGULATIONS


**02.303.3 Prohibited locations.** Bring forward from the 2009 NC Fuel Gas Code and delete Item number 4.

Motion/Second/Passed

**03.303.4 Protection from vehicle impact damage.** Bring forward from the 2009 NC Fuel Gas Code.

**04.303.7 Pit locations.** Appliances installed in pits or excavations shall not come in direct contact with the surrounding soil. The sides of the pit or excavation shall be held back a minimum of 12 inches (305 mm) from the *appliance*. Where the depth exceeds 12 inches (305 mm) below adjoining grade, the walls of the pit or excavation shall be lined with concrete or masonry, such concrete or masonry shall extend a minimum of 4 inches (102 mm) above adjoining grade and shall have sufficient lateral load-bearing capacity to resist collapse. The *appliance* shall be protected from flooding in an approved manner.

**05.303.8 Drainage.** Bring forward from the 2012 NC Mechanical Code.

**06.304.4 Makeup air provisions.** Where exhaust fans, clothes dryers and kitchen ventilation systems interfere with the operation of appliances and fireplaces, makeup air shall be provided.

**07.305.7 Clearances from grade.** Bring forward from the 2009 NC Mechanical Code and add the amendment from the Mechanical Minutes for 304.9.3.

**08.[M] 306.3 Appliances in attics.** Bring forward from the 2009 NC Fuel Gas Code, including Exceptions.

**09.[M] 306.3.1 Electrical requirements.** Bring forward the *Deletion* from the 2009 NC Fuel Gas Code.

**10.[M] 306.4 Appliances under floors.** Bring forward NC amendments only (2009 Mechanical Code)

**11.[M] 306.4.1 Electrical requirements.** Bring forward the *Deletion* from the 2009 NC Fuel Gas Code.

**12.[M] 306.5 Appliances on roofs or elevated structures.** Bring forward from the 2009 NC Mechanical Code.

**13.[M] 306.5.1 Sloped roofs.** Bring forward from the 2012 NC Mechanical Code.

15. *[M] 306.6 Guards. Guards shall be provided where appliances or other components that require service and roof hatch openings are located within 10 feet (3048 mm) or 6 feet (1829 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of such appliances, components and roof hatch openings and the top of the guard shall be located not less than 42 inches (1067 mm) above the elevated surface adjacent to the guard. The guard shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the *International Building Code*.


17. SECTION 308 Title – Bring forward from the 2009 NC Fuel Gas Code.

18. 308.2 Reduction Table. Bring forward from the 2009 NC Fuel Gas Code.

19. TABLE 308.2a through k – REDUCTION OF CLEARANCES WITH SPECIFIED FORMS OF PROTECTION – In Item number 5, under the far right Sides and rear Col. 2, change the number 2 to number 3.

20. 308.3.3 Clearance reduction. Bring forward the Deletion from the 2009 NC Fuel Gas Code.

21. 308.4.3 Clearance reduction. Bring forward the Deletion from the 2009 NC Fuel Gas Code.

**Chapter 4 – GAS PIPING INSTALLATIONS**

1. 401.1 Scope. Bring forward from the 2009 NC Fuel Gas Code.

2. 401.2 Liquefied petroleum gas storage. Bring forward from the 2009 NC Fuel Gas Code.

3. 401.5 Identification. Bring forward from the 2009 NC Fuel Gas Code. Add Exception number 2 to read as follows:

   **Exceptions:**

   2. Black steel piping .5 psi or less, located at dwelling units shall not be required to be labeled.

4. 401.9 Meter location. Bring forward from the 2009 NC Fuel Gas Code.
The committee will begin in Chapter 4 – Section 402.

**The Next Scheduled Meeting.** The next meeting for the Fuel Gas Code Ad-Hoc Committee is Wednesday, October 28th. This meeting will begin at 9:00AM and will be held at NCDOI in Conference Room 239.
Members present: Chairman Ralph Euchner, Skip Higgins, John Wiggins, Mike Gibson, Henry Webster, Billy Hinton, Larry Currin, Marshall Perry, Steven Abernathy, Michael Boggs, and Janie Sutton

The changes below are from the 2009 International Fuel Gas Code. These mark-ups will be adopted for the 2012 NC Fuel Gas Code. Items shown in STRIKEOUT are to be deleted and UNDERLINED items are to be added.

Chapter 4 – GAS PIPING INSTALLATIONS (Continued)

01. TABLE 402.4(36). Bring forward from the 2009 NC Fuel Gas Code.

02. TABLE 402.4(37). Bring forward from the 2009 NC Fuel Gas Code. Title should read as follows:

POLYETHYLENE PLASTIC TUBE SIZING – Sizing between single-or first stage and second stage regulator and building maximum undiluted propane capacities listed are based on 10 psi first stage setting and 1 psi pressure drop Capacities in 1000 Btu/hr

03. 404.4 Piping through foundation wall. Underground piping, where installed below grade through the outer foundation or basement wall of a building, shall be encased in a protective pipe sleeve or shall be protected by an approved device or method. The annular space between the gas piping and the sleeve and between the sleeve and the wall shall be sealed.

04. 404.7 Above-ground outdoor piping. Keep 2009 IFGC and add sentence to the end of the paragraph to read as follows:

Ferrous metal exposed in exterior locations shall be protected from corrosion with one coat of exterior paint. Zinc coatings (galvanized) shall be deemed adequate protection for gas piping above-ground.

05. 404.9 Protection against corrosion underground. Bring forward (Title Only) from the 2009 NC Fuel Gas Code and keep the paragraph from the 2009 IFGC.

06. 404.9.2 Protective coatings and wrapping. Keep 2009 IFGC paragraph. The Exception should read as follows:

Exception: Where installed in accordance with the manufacturer’s installation instructions, field application of coatings and wrappings shall be permitted for pipe nipples, fittings and locations where the
factory coating or wrapping has been damaged or necessarily removed at joints.

07.408.1 Slopes. Bring forward the Deletion from the 2009 NC Fuel Gas Code.

08.408.2 Drips. Bring forward the Deletion from the 2009 NC Fuel Gas Code.

09.408.3 Location of drips. Bring forward the Deletion from the 2009 NC Fuel Gas Code.

10.408.4 Sediment trap. Where a sediment trap is not incorporated as part of the appliance, a sediment trap shall be installed downstream of the appliance shutoff valve as close to the inlet of the appliance as practical. The sediment trap shall be either a tee fitting having a capped nipple of any length installed vertically in the bottommost opening of the tee or other device approved as an effective sediment trap. Illuminating appliances, ranges, clothes dryers, gas logs, log lighters and outdoor grills need not be so equipped.


12.409.5.1 Located within same room. The shutoff valve shall be located in the same room as the appliance. The shutoff valve shall be within 6 feet (1829 mm) of the appliance, and shall be installed upstream of the union, connector or quick disconnect device it serves. Such shutoff valves shall be provided with access. Appliance shutoff valves located in the firebox of a fireplace shall be installed in accordance with the appliance manufacturer’s instructions. This section shall not prohibit the use or the installation of gas shutoff valves in the firebox of fireplaces serving listed gas appliances.

13.409.5.3 Located at manifold. Deleted.

14.409.6 Shutoff valve for laboratories. Where provided with two or more fuel gas outlets, including table-, bench- and hood-mounted outlets, each laboratory space in educational, research, commercial and industrial occupancies shall be provided with a single dedicated shutoff valve through which all such gas outlets shall be supplied. The dedicated shutoff valve shall be readily accessible, located within the laboratory space served, located adjacent to the egress door from the space and shall be identified by approved signage stating “Gas Shutoff.”

15.410.2 MP regulators. Keep IFGC paragraph and Item numbers 1-5, but bring forward Item number 6 from the 2009 NC Fuel Gas Code.

16.411.1.1 Commercial cooking appliances. Keep IFGC paragraph and modify to read as follows:
Commercial cooking appliances installed on casters and appliances that are moved for cleaning and sanitation purposes shall be connected to the piping system with an appliance connector listed as complying with ANSI Z21.69 or in accordance with Item 1, 3 or 5 of Section 411.1.

**17.411.1.3.3 Prohibited locations and penetrations.** Keep IFGC, but Exception number 1 should read as follows:

1. Connectors constructed of materials allowed for piping systems in accordance with Section 403 shall be permitted to pass through walls, floors, partitions and ceilings where installed in accordance with Section 409.5.2 or 409.5.3.

**SECTION 412 (IFGC) – LIQUEFIED PETROLEUM GAS MOTOR VEHICLE FUEL-DISPENSING FACILITIES** – Bring forward from the 2009 NC Fuel Gas Code.

The committee will begin in Chapter 5 – CHIMNEYS AND VENTS.

*A new meeting was scheduled for December 9th, 2009.

**The Next Scheduled Meeting.** The next meeting for the Fuel Gas Code Ad-Hoc Committee is Tuesday, November 10th. This meeting will begin at 9:00AM and will be held at NCDOI in Conference Room 239.
Fuel Gas Ad-Hoc Committee Meeting
November 10, 2009

Members present: Chairman Ralph Euchner, Skip Higgins, Mike Gibson, Henry Webster, Billy Hinton, Larry Currin, Steve Abernathy, Mike Boggs, and Janie Sutton

The changes below are from the 2009 International Fuel Gas Code. These mark-ups will be adopted for the 2012 NC Fuel Gas Code. Items shown in **STRIKEOUT** are to be deleted and **UNDERLINED** items are to be added.

*Table 402.4(1) through Table 402.4(21) - Bring forward the **DELETION** from the 2009 NC Fuel Gas Code.

CHAPTER 5 – CHIMNEYS AND VENTS

18.501.1 **Scope.** Bring forward from the 2009 NC Fuel Gas Code.

19.504.2.9 **Chimney and vent locations.** Bring forward the **Exception** from the 2009 NC Fuel Gas Code.

20.504.3.20 **Chimney and vent location.** Bring forward the **Exception** from the 2009 NC Fuel Gas Code.

CHAPTER 6 – SPECIFIC APPLIANCES

01.**SECTION 614 (IFGC) – CLOTHES DRYER EXHAUST.** Bring forward from the 2012 NC Mechanical Code.

02.**618.2 Forced-air furnaces.** Bring forward from the 2009 NC Fuel Gas Code.

03.**618.5 Prohibited sources.** Keep 2009 IFGC paragraph with the following modifications:

- **Item number 4** – Bring forward the **Exception** from the 2009 NC Fuel Gas Code.

- **Item number 5** – Bring forward from the 2009 NC Fuel Gas Code.

- **Item number 7** – Bring forward from the 2009 NC Fuel Gas Code with the following modifications:

  A non-conditioned crawl space by means of direct connection to the return side of a forced air system. Transfer openings in the crawl space enclosure shall not be prohibited.
04. **618.8 Return-air intake (nonengineered systems).** Bring forward from the 2009 NC Fuel Gas Code and Renumber to 618.9 like the 2012 NC Mechanical Code.

05. **618.9 and 618.10.** Take language from 918.9 and 918.10 of the 2009 NC Mechanical Code.

06. **621.7 Unvented log heaters.** Bring forward from the 2009 NC Fuel Gas Code.

07. **621.7.1 Ventless firebox enclosures.** Bring forward from the 2009 NC Fuel Gas Code.

08. **SECTION 634 (IFGC).** Bring forward the **Deletion** from the 2009 NC Fuel Gas Code and **DELETE TABLE 634.1**.

**The Next Scheduled Meeting.** The next meeting for the Fuel Gas Code Ad-Hoc Committee is Tuesday, December 9th. This meeting will begin at 9:00AM and will be held at NCDOI in Conference Room 239.
**Fuel Gas Ad-Hoc Committee Meeting**  
**December 9, 2009**

**Members present:** Chairman Ralph Euchner, Mike Gibson, Henry Webster, Billy Hinton, Larry Currin, Steve Abernathy, Mike Boggs, Marshall Perry and John Wiggins

The changes below are from the 2009 International Fuel Gas Code. These mark-ups will be adopted for the 2012 NC Fuel Gas Code. Items shown in **STRIKEOUT** are to be deleted and **UNDERLINED** items are to be added.

**PART VI – FUEL GAS (from Residential Code – Chapter 24)**

**SECTION G2403 (202) – GENERAL DEFINITIONS**

01. **ACCESS (TO).** Bring forward from the 2009 IFGC.

02. **APPROVED.** Bring forward from the 2009 NC Fuel Gas Code.

03. **CLOSET.** Bring forward from the 2009 NC Fuel Gas Code.

04. **CONCEALED.** Add last sentence to read as follows: Buried underground piping shall not be considered as concealed.

05. **FURNACE.** Needs to read the same as Page 516 in 2009 IRC.

06. **LABELED.** Needs to read the same as 2012 NC Fuel Gas Code.

07. **LISTED.** Needs to read the same as 2012 NC Fuel Gas Code.

08. **POINT OF DELIVERY.** For natural gas systems, the point of delivery is the outlet of the service meter assembly or the outlet of the service regulator or service shutoff valve where a meter is not provided. Where a valve is provided at the outlet of the service meter assembly, such valve shall be considered to be downstream of the point of delivery. For undiluted liquified petroleum gas systems, the point of delivery shall be considered to be the outlet of the first regulator that reduces pressure to 2 psig (13.8 kPa) or less.

09. **PURGE.** Bring forward from the 2009 NC Fuel Gas Code.

10. **QUICK-DISCONNECT DEVICE.** Bring forward from the 2009 NC Fuel Gas Code.
11. ROOM LARGE IN COMPARISON WITH SIZE OF EQUIPMENT. Bring forward from the 2009 NC Fuel Gas Code.

The Next Scheduled Meeting. The next meeting for the Fuel Gas Code Ad-Hoc Committee is Tuesday, January 12th. This meeting will begin at 9:00AM and will be held at NCDOI in Conference Room 239.
Members present: Chairman Ralph Euchner, Mike Gibson, Henry Webster, Billy Hinton, Larry Currin, Steve Abernathy, Mike Boggs, Marshall Perry and John Wiggins

Abridged Fuel Gas Code for Residential

PART VI – FUEL GAS (from Residential Code – Chapter 24)

CHAPTER 1 – SCOPE AND ADMINISTRATION

01.101.1 Title. These regulations shall be known as the North Carolina Fuel Gas Code as adopted by the North Carolina Building Code Council on [Date], to be effective [Date]. References to the International Codes shall mean the North Carolina Codes. The North Carolina amendments to the International Codes are underlined.

CHAPTER 2 – GENERAL DEFINITIONS

21.AIR CONDITIONING, GAS FIRED. OMIT.

22.APPLIANCE TYPE-MEDIUM. OMIT.

23.CLOTHES DRYER – Type 2. OMIT.

24.CONSTRUCTION DOCUMENTS. OMIT.

25.COUNTER APPLIANCES. OMIT.

26.DIRECT-VENT APPLIANCE. OMIT from IRC and replace with definition from Fuel Gas Code.

27.DRAFT HOOD. OMIT from IRC and replace with definition from Fuel Gas Code.

28.FIRING VALVE. OMIT.

29.FLOOR FURNACE. OMIT from IRC and replace with definition from Fuel Gas Code.
30. **GASEOUS HYDROGEN SYSTEM.** OMIT.

31. **HYDROGEN CUT-OFF ROOM.** OMIT.

32. **HYDROGEN GENERATING APPLIANCE.** OMIT.

33. **INCINERATOR.** OMIT.

34. **INDUSTRIAL AIR HEATERS, DIRECT-FIRED NONRECIRCULATING.** OMIT

35. **INDUSTRIAL AIR HEATERS, DIRECT-FIRED RECIRCULATING.** OMIT

36. **JOINT, FLANGED.** OMIT

37. **JOINT, WELDED.** OMIT

38. **LABELED.** OMIT from IRC and replace with definition from Fuel Gas Code.

39. **LISTED.** OMIT from IRC and replace with definition from Fuel Gas Code.

40. **LUBRICATED PLUG-TYPE VALVE.** OMIT

41. **PORTABLE FUEL CELL APPLIANCE.** OMIT

42. **STATIONARY FUEL CELL POWER PLANT.** OMIT

43. **UNIT HEATER.** OMIT

44. **UNLISTED BOILER.** OMIT

**CHAPTER 3 – GENERAL REGULATIONS**

01. **304.6 Outdoor combustion air.** Outdoor combustion air shall be provided through opening(s) to the outdoors in accordance with Section 304.6.1 or 304.6.2. The minimum dimension of air openings shall be not less than 3 inches (76 mm). Penetration of the thermal envelope shall comply with the 2009 North Carolina Energy Conservation Code.

02. **305.3.2 Parking garages.** OMIT

03. **305.4 Public garages.** OMIT

04. **305.5 Private garages.** Keep paragraph as is and modify the **Exception** as follows:
**Exception:** The requirements of this section shall not apply where the appliances are protected from motor vehicle impact and installed in accordance with Section 305.3 and NFPA 30A.

05.305.9 (IFGS) Parking structures. OMIT

06.305.10 (IFGS) Repair garages. OMIT

07.305.11 (IFGS) Installation in aircraft hangars. OMIT

08.[M] 306.5 Equipment and appliances on roofs or elevated structures. OMIT

**CHAPTER 4 – GAS PIPING INSTALLATIONS**

01.402.6 Maximum design operating pressure. The maximum design operating pressure for piping systems located inside buildings shall not exceed 5 pounds per square inch gauge (psig) (34 kPa gauge), except where one or more of the following conditions are met:

02.403.12 Flanges. – 403.13 Flange gaskets. OMIT

03.405.4 Elbows. OMIT

04.406.3.1 Expansion joints. OMIT

05.406.7 Purging. Purging of piping shall comply with Sections 406.7.1 through 406.7.4.

**Exception:** Purging is not required for low pressure gas piping 2 inches nominal pipe size or less and length not exceeding 200 feet. The open end of piping systems being purged shall not discharge into confined spaces or areas where there are sources of ignition unless precautions are taken to perform this operation in a safe manner by ventilation of the space, control of purging rate and elimination of hazardous conditions.

06.406.7.1 Removal from service. OMIT last sentence only:

‘The remaining gas in this section of pipe shall be displaced with an inert gas as required by Table 406.7.1.’

07.TABLE 406.7.1 – LENGTH OF PIPING REQUIRING PURGING WITH INERT GAS FOR SERVICING OR MODIFICATION – OMIT

08.406.7.2 Placing in operation. Where piping full of air is placed in operation, the air in the piping shall be displaced with fuel gas, except where such piping is required by Table 406.7.2 to be purged with an inert gas prior to introduction of fuel gas. The air can be safely displaced with fuel gas provided that a moderately rapid and continuous flow of fuel gas is
introduced at one end of the line and air is vented out at the other end. The fuel gas flow shall be continued without interruption until the vented gas is free of air. The point of discharge shall not be left unattended during purging. After purging, the vent shall then be closed. Where required by Table 406.7.2, the air in the piping shall first be displaced with an inert gas, and the inert gas shall then be displaced with fuel gas.

09. TABLE 406.7.2 – LENGTH OF PIPE REQUIRING PURGING WITH INERT GAS BEFORE PLACING IN OPERATION – OMIT

10. 409.3 Shutoff valves for multiple-house line systems. Where a single meter is used to supply gas to more than one building or tenant, a separate shutoff valve shall be provided for each building or tenant.

11. 409.3.1 Multiple tenant buildings. OMIT

12. 409.6 Shutoff valve for laboratories. OMIT

13. 411.1.1 Commercial cooking appliances. OMIT

14. SECTION 412 (IFGC) – LIQUEFIED PETROLEUM GAS MOTOR VEHICLE FUEL-DISPENSING FACILITIES – OMIT

15. SECTION 413 (IFGC) – COMPRESSED NATURAL GAS MOTOR VEHICLE FUEL-DISPENSING FACILITIES – OMIT

16. SECTION 414 (IFGC) – SUPPLEMENTAL AND STANDBY GAS SUPPLY – OMIT

CHAPTER 5 – CHIMNEYS AND VENTS

01. 503.2.1 Ventilating hoods. OMIT

02. 503.2.2 Well-ventilated spaces. OMIT

03. 503.3.4 Ventilating hoods and exhaust systems. OMIT

04. 503.3.6 Above-ceiling air-handling spaces. OMIT

05. 503.6.10.1 Appliance separation. OMIT

06. FIGURE 503.6.10.1 – PLAN VIEW OF PRACTICAL SEPARATION METHOD FOR MULTISTORY GAS VENTING – OMIT

07. 503.10.2.5 Medium-heat appliances. OMIT

08. TABLE 503.10.2.5 – OMIT

09. 503.10.15 Medium-heat connectors. OMIT
10.505.1.1 Commercial cooking appliances vented by exhaust hoods. OMIT

11.506.3 Medium-heat appliances. OMIT

CHAPTER 6 – SPECIFIC APPLIANCES

01. SECTION 606 (IFGC) – INCINERATORS AND CREMATORIES – OMIT

02. SECTION 607 (IFGC) – COMMERCIAL-INDUSTRIAL INCINERATORS – OMIT

03. SECTION 611 (IFGC) – NONRECIRCULATING DIRECT-FIRED INDUSTRIAL AIR HEATERS – OMIT

04. SECTION 612 (IFGC) – RECIRCULATING DIRECT-FIRED INDUSTRIAL AIR HEATERS – OMIT

05. [M] 614.7 Commercial clothes dryers. OMIT

06. [M] 614.8 Common exhaust systems for clothes dryers located in multistory structures. OMIT

07. 615.7.1 Warning notice. OMIT

08. 618.5 Prohibited sources. OMIT Item # 3.

09. SECTION 620 (IFGC) – UNIT HEATERS – OMIT

10. 623.6 Commercial cooking appliance venting. OMIT

11. SECTION 625 (IFGC) – REFRIGERATORS – OMIT

12. SECTION 626 (IFGC) – GAS-FIRED TOILETS – OMIT

13. SECTION 627 (IFGC) – AIR-CONDITIONING APPLIANCES

    Keep 627.1 General.
    Keep 627.8 Refrigeration coils.
    OMIT the rest of the section

14. 630.4 (IFGS) Installation in commercial garages and air-craft hangars. OMIT

15. SECTION 632 (IFGC) – EQUIPMENT INSTALLED IN EXISTING UNLISTED BOILERS – OMIT

16. SECTION 633 (IFGC) – STATIONARY FUEL-CELL POWER SYSTEMS – OMIT
17. SECTION 634 (IFGC) – CHIMNEY DAMPER OPENING AREA – OMIT

18. TABLE 634.1 – FREE OPENING AREA OF CHIMNEY DAMPER FOR VENTING FLUE GASES FROM UNLISTED DECORATIVE APPLIANCES FOR INSTALLATION IN VENTED FIREPLACES – OMIT

19. SECTION 635 (IFGC) – GASEOUS HYDROGEN SYSTEMS – OMIT

CHAPTER 7 – GASEOUS HYDROGEN SYSTEMS – OMIT

The Next Scheduled Meeting. The next meeting for the Fuel Gas Code Ad-Hoc Committee is Tuesday, January 19th. This meeting will begin at 9:00AM and will be held at NCDOI in Conference Room 204.