Submitted by: Chair of the Assembly at the Request of the Mayor
Prepared by: Development Services
For reading: September 27, 2005

CLERK'S OFFICE
APPROVED
Date: 11-1-05

ANCHORAGE, ALASKA
No. AO 2005-130

AN ORDINANCE REPEALING AND REENACTING ANCHORAGE MUNICIPAL CODE CHAPTER 15.55 AND TITLE 23 TO ADOPT 2003 EDITIONS AND ENACTING LOCAL AMENDMENTS OF THE FOLLOWING CODES: WELL CODE, ADMINISTRATIVE, BUILDING, MECHANICAL, PLUMBING, ELECTRICAL, FIRE, EXISTING BUILDINGS, RESIDENTIAL, FIRE PROTECTION SERVICE OUTSIDE SERVICE AREAS, ENERGY CONSERVATION, SCHOOL RELOCATABLES, SAFETY CODE FOR ELEVATORS AND ESCALATORS, ELECTRICAL CODE, MOBILE AIRCRAFT SHELTERS, GRADING, FUEL AND GAS CODE.

THE ANCHORAGE ASSEMBLY ORDAINS:

Section 1. Anchorage Municipal Code chapter 15.55 is hereby repealed in its entirety and reenacted to read as follows:

Chapter 15.55 WATER WELLS*

15.55.010 Purpose.
15.55.020 Scope.
15.55.030 Definitions.
15.55.040 Prohibited actions.
15.55.050 Permit for domestic water system.
15.55.055 Certificate of On-Site Systems Approval.
15.55.060 General standards for domestic wells.
15.55.070 General standards for potable water hauling and storage facilities.
15.55.080 Well driller and pump installer certification.

15.55.010 Purpose.

The purpose of this chapter is to ensure sources utilized for potable water within the Municipality of Anchorage are constructed and maintained in such a manner as to provide a safe supply of water for domestic use.

15.55.020 Scope.

This chapter applies to all sources of potable water used by single family residences within the municipality that are not licensed and/or regulated by the State of Alaska.

15.55.030 Definitions.

The following words, terms and phrases, when used in this chapter, shall have the

meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Abandoned well means a well whose use has been permanently discontinued and has not been properly decommissioned.

Animal containment area means any outdoor enclosure or group of enclosures containing one (1) or more horse, mule, cow, lama, or similar sized animal; four (4) or more dogs, sheep, goats, or swine, or similar sized animals; ten (10) or more rabbits, fowl, ferrets, or other domesticated small animals.

Approved tank manufacturer means a firm manufacturing tanks approved by the Development Services Department and holding a valid water and wastewater equipment manufacturer certificate issued by the same department.

Aquifer means a formation, group of formations or part of a formation that contains sufficient saturated permeable material to yield water to wells and springs.

Aquifer - Unconfined means a zone of water saturation where atmospheric pressure is freely communicated to the zone. Its upper limit is at atmospheric pressure and it has no upper confining layer.

Aquifer - Confined means a formation in which the groundwater is isolated from the atmosphere, at the point of discharge, by impermeable geologic formations. Confined groundwater is generally subject to pressure greater than atmospheric and rises to a level above the upper limit of its aquifer.

Artesian well means a well in which the water from the confined source aquifer rises above the upper limit of the aquifer.

Bentonite means a montmorillinate aluminum silicate clay. Bentonite comes in the form of powder, granules, or chips.

Bentonite chips means ¼ inch to ¾ inch sized chips of bentonite approved by the NSF for the purpose of water well construction.

Bentonite granules means an 8 to 20 mesh size bentonite clay approved by the NSF for the purpose of water well construction.

Bentonite slurry means a high solids mixture of bentonite particles and water with a consistency of 18% to 22% solids as measured with a marsh funnel.

Casing means the pipe made of material herein specified or otherwise approved by the Development Services Department, installed in a well bore hole to prevent sidewall caving, to provide access to an aquifer, and provide protection from up-hole or surface contamination of the aquifer.

Certificate of On-Site Systems Approval means a written confirmation signed by an engineer and the Development Services Department certifying the on-site wastewater disposal system and/or well serving a single-family dwelling are functional and comply with all state and local regulations and codes. In the event of inconsistency among these regulations and codes, the most restrictive shall apply.

Certified groundwater professional means a groundwater professional certified by a nationally recognized organization.

Certified laboratory means a laboratory certified by the State of Alaska, 18 AAC 80.1100.

Certified pump installer means a person or firm holding a valid state contractor's license, business license, and a current pump installer's certificate issued by the Development Services Department.

Certified well driller means a person or firm holding a valid state contractors license, business license, and a current well driller's certificate issued by the Development Services Department.

Contaminant means any substance which, if introduced into a potable water source, would render the water unsafe for human or animal consumption.

Disinfection means a chemical or physical process utilized to eliminate pathogenic organisms from a potable water source or storage facility.

Domestic use means water used for residential and noncommercial use.

Drawdown means the distance between the static water level and the pumping water level in a well or an aquifer.

Drive shoe means a forged or tempered steel collar with a cutting edge, attached to the lower end of a casing string by threading or welding, to protect the bottom end of the casing as it is driven or otherwise forced into the bored hole.

Engineer means a professional civil engineer registered pursuant to Alaska Statute 8.08.

Flowing artesian well means a water well in which the water from the confined source aquifer flows naturally to the ground surface without benefit of mechanical lift equipment.

Groundwater means subsurface water permanently or seasonally occupying a zone of saturation.

Grout means a stable bentonite clay material that is NSF approved, in a slurry or granular form impervious to and capable of preventing the vertical movement or migration of water.

Hazardous substance means those substances which, because of quantity, concentration, or physical/chemical/infectious characteristics, may pose a threat to human health or to the environment when improperly treated, handled, stored and transported, and disposed of. Hazardous substances include those defined as hazardous under federal, state and municipal laws.

Holding tank means a watertight covered receptacle as required by AMC chapter 15.65 designed and built to receive and store domestic wastewater for disposal at another location.

Hydrogeologist means a certified professional geologist, licensed by the State of Alaska who practices groundwater science or a nationally certified groundwater professional.

Manure/animal excreta means solid waste from domesticated animals, and for the purposes of this chapter, shall also mean bedding or other materials contaminated by animal liquid or solid wastes.

Manure/animal excreta storage area means any area where such material is being stored temporarily or permanently or being composted.

NSF means National Sanitation Foundation.

On-site wastewater disposal system means any wastewater storage, treatment, or disposal system which serves a facility located on a lot which is not connected to a public sewer.

Out of service means has not been functional for ninety (90) or more consecutive days. An example of non-functional wells includes wells without pumps, electrical power or appurtenances (including a surface discharge point).

Outer annular space means the void space between the side wall of the drilled bore hole and the outside casing wall.

Permit means a written document issued by the Development Services Department permitting the construction and/or development of a subsurface potable water source.

Pitless adapter means a device attached to the well casing below ground level, constructed to permit the flow of water from the well casing.

Potable water means water which is satisfactory for drinking and culinary purposes.

Protective well radius means a prescribed horizontal distance between the well head and potential source of contaminants.

Public sewer means a sewage collection system operated by a public utility as defined in Alaska Statute 42.05.701.

Public water means a water distribution system which is operated by a public utility as

defined in Alaska Statute 46.03.020.

Pump means a mechanical device used to recover water from a well or water collection system.

Recovery means the ability of the water in a well to return to its static level after being drawn down during a period of pumping.

Sanitary well seal means a mechanical seal installed on the top of the well which has been approved by the Development Services Department.

Screen means a filtering device used to keep sediment from entering a water well.

Sealing or *sealed* means the act of providing a water tight seal between the casing and the well bore by means of an impervious material.

Septic disposal field means an absorption bed, deep or shallow absorption trench, seepage pit or mound system.

Septic tank means the water tight receptacle designed to receive domestic wastewater and allow the clarified liquids to be discharged into a subsurface soil absorption system.

Setback means distance from a water well to a defined object, point or location.

Static water level means the water level in a well has not been affected by withdrawal of groundwater.

Stick up means the portion of a well's casing extending above the surface of the ground.

Surface water means any persistent natural or man-made source of water, which is not directly attributable to a single rainfall or snowmelt event. Surface waters include all lakes, ponds, streams, springs, intermittent or seasonal flows, natural and artificial bodies of water and all of the water of the State of Alaska as defined in Alaska Statute 5.25.100(5).

Wastewater means water containing human excreta, food waste, wash water and other wastes commonly discharged into a water-carried sewage disposal system, and such diluting water as may have entered the waste disposal system. Wastewater does not mean liquids containing hazardous wastes as defined by federal, state or municipal law.

Water-carried sewage disposal system means a wastewater disposal system through which wastes are conveyed with the aid of water.

Water producing zone means a subsurface zone producing water and separated from another water bearing layer by at least five (5) feet of silt or clay.

Water storage facilities means and shall include all water storage tank(s), pumps and

piping used in the storage of potable water.

Water table means a groundwater surface within an aquifer where pressure is equal to the atmosphere.

Water well means a bored, drilled, or driven excavation utilized for the purpose of extracting groundwater from an aquifer for domestic use.

Well cap means a mechanical cover installed on the top of a well casing which may or may not be water tight.

Well decommissioning means the process or procedure by which production from a well has been discontinued and the well properly removed from service.

Well depth means the depth of the well as measured from ground surface.

Well drilling contractor means a certified well driller, as defined above.

Well log means a written report showing the property owner, location, and all pertinent information and data relative to the drilling and completion of the well.

Well pit means an excavation, opening, shaft or hole surrounding a well.

Well rehabilitation means subsurface improvements designed to alter well yield or the physical characteristics of an existing well.

Well test means a test conducted by a licensed well driller, a certified pump installer, a hydrogeologist, or an engineer to determine the sustained producing capability of the well and the recovery rate of the well.

Well yield means the sustained producing rate of a well determined by a well test.

15.55.040 Prohibited actions.

A. No person shall cause or permit the construction of a surface or subsurface water source for domestic purposes without holding a valid permit issued by the Development Services Department in the name of the property owner for the specific property and construction proposed. The well drilling contractor shall have a copy of the valid permit at the site of the drilling operation.

B. No person shall cause or allow the placement of any refuse, trash, waste, or contaminated or hazardous substance into any existing or abandoned well or domestic water source.

C. The location of a well, on-site wastewater disposal system or subsurface drain, either separately or in combination with each other and other wells, on-site wastewater disposal systems or subsurface drains in the vicinity, shall not have the effect of prohibiting future residential use of an adjacent lot or parcel. The department may require an agreement and necessary easements with the owner of the affected property for the sharing of a well or other resolution of the problem.

The agreement shall be recorded.

D. No person shall cause or allow the construction of a domestic water source violating the laws or regulations of the state or the municipality.

E. No person may cause the construction, installation or use of a cross connection between a domestic, active or decommissioned water well and a public water system.

F. No person shall allow a water supply well to remain out of service for more than ninety (90) days without permanently decommissioning the well.

G. No person shall allow the waste of water by free-flowing wells, whether by surface discharge or into the lower strata underground, without putting it to beneficial use. Flow shall be sealed to the satisfaction of the Development Services Department.

15.55.050 Permit for domestic water system.

A. *Permit to drill.* An application to drill a new or replacement well shall be submitted to the Development Services Department by the property owner or his/her authorized agent prior to the commencement of drilling operations.

1. A permit issued under the terms of this chapter shall only be applicable for single family residential wells.
2. A permit for domestic water source shall not be issued if there is no existing or permitted on-site wastewater disposal system or connection to public sewer service for the property available, scheduled and approved. A variance may be issued for the purposes of groundwater exploration wells constructed in accordance with the standards of this chapter.
3. A permit for a domestic water system shall expire one (1) year from the date of issuance, but may be renewed for one (1) additional year at the current renewal fee.

B. *Application.* The application shall be on a form provided by the Development Services Department, and shall be signed by the property owner or property owner's agent attesting the well shall be sited, drilled and completed in accordance with standards and provisions in chapters 15.55 and 15.65 and State of Alaska, 18 AAC 80 and 72.

1. The applicant shall submit a site plan signed by the property owner or property owner's agent drawn on an 8 1/2 by 11 inch sheet (or larger if necessary to comply with this chapter) to a scale not smaller than one inch to fifty (50) feet. The site plan shall show the:
   a. Legal description of the lot or parcel;
   b. Location of the proposed well;
   c. Lot lines, roads, rights-of-way and easements on or adjacent to the lot;
   d. Location of all existing structures on the lot;
   e. Measured distance to all existing water supply wells within fifty (50) feet of the proposed well site and the location of all wells within two hundred (200) feet on the subject and adjacent properties;
   f. All applicable protective well radii; and
   g. The location or proposed location of all components shown in

Table A-1, and areas containing hazardous waste or other potential pollutants within one hundred fifty (150) feet of the proposed well.

C. *Revocation, suspension and restriction of permits.* The director may revoke, suspend, or otherwise restrict a permit, issued under this chapter upon any of the following grounds:

1. Any false statements set forth in the application;
2. Any violation of the express terms or provisions of the permit;
3. The commission of any act or omission violating the requirements of chapter 15.55; or
4. Failure to comply with state and federal regulations.

15.55.055 Certificate of On-Site Systems Approval.

A. Prior to the transfer by gift, deed or contract of any ownership or use interest in a privately owned on-site water well, the transferor shall obtain a Certificate of On-Site Systems Approval from the Development Services Department.

1. The requirements of this subsection A. do not apply to transfers between spouses.

B. Upon request and subject to the provisions of this section, the Development Services Department may issue or deny the issuance of a Certificate of On-Site Systems Approval for any dwelling or site served by a privately owned well.

C. Where an on-site well does not conform to state and/or municipal laws, but no material health hazard is posed by postponing correction of the well's defects, the Development Services Department may issue a conditional Certificate of On-Site Systems Approval to extend the period of time for corrective action until weather conditions allow. This conditional certificate may be issued with conditions necessary to ensure the public health and safety are not endangered.

D. The Development Services Department shall issue a Certificate of On-Site Systems Approval if the department finds information provided by an engineer demonstrates the system for which the certificate is sought conforms to all applicable provisions of chapter 15.55, regulations promulgated hereunder and applicable state statutes and regulations in effect at the time of original installation or at the time of any subsequent modification and does not presently create a health hazard.

E. The Development Services Department may require a request for a Certificate of On-Site Systems Approval be on forms provided by the department.

F. All test procedures used to collect the information necessary to meet the requirements of this section shall be developed and modified jointly by the Department of Health and Human Services and the Development Services Department.

G. Before a Certificate of On-Site Systems Approval may be issued, drinking water from the well on the property shall be properly sampled and analyzed by a certified laboratory for levels of total coliform bacteria, other bacteria, arsenic and nitrate. The levels of total coliform and other bacteria shall conform to drinking water limits established in section 15.55.060K. For other contaminants, including arsenic and nitrate, the departments shall use current USEPA public drinking water standards as a guideline to trigger actions deemed necessary to protect the public health. If nitrates are present greater than 10.0 mg/l, the applicant shall

comply with subsection H., below.

H. If sampling results from a well on a property requesting a Certificate of On-Site Systems Approval show the nitrate concentration in the well water is greater than 10.0 mg/l, the following steps shall be taken:

1. A visual inspection of the well bore, using a down hole camera, performed by a certified well driller or pump installer, or engineer shall be used to evaluate the integrity of the casing and the well is cased, without perforations, to the required depth.
2. An evaluation of the annular seal around the well casing shall be performed by a certified well driller, pump installer, or engineer in accordance with procedures established under subsection F. Fluorometric dye and water shall be introduced into a temporary basin dug into the ground surface surrounding the well casing stick up. Well water samples for laboratory analysis shall be collected for a minimum of forty-eight (48) hours after dye is introduced and analyzed by a certified laboratory for the presence of the dye. Presence of the dye within forty-eight (48) hours is evidence of an inadequate annular seal around the well casing. The annular seal shall be deemed satisfactory if dye cannot be detected within the first forty-eight (48) hours of introduction.
3. If the annular seal around the casing is determined satisfactory through dye testing, the Development Services Department may issue a Certificate of On-Site Systems Approval provided the well is cased and un-perforated to a minimum depth of forty (40) feet and meets all other well code construction standards in place at the time the well was originally constructed. If the well does not meet the minimum forty (40) feet casing depth, at the time approval is requested from the Development Services Department, a Certificate of On-Site Systems Approval may be issued if the well is retrofitted with a pressure-grouted well liner installed to a minimum depth of forty (40) feet.
4. If water producing zones with greater than 10mg/l nitrates are found below the well casing and there are also other water producing zones with less than 10 mg/l nitrates, the well shall be retrofitted to eliminate cross connection between the water producing zones.
5. If the well casing or annular seal around the casing are determined to be inadequate or unsatisfactory, or if cross connections between water producing zones are found, the well shall be repaired or modified to meet current well construction standards outlined in section 15.55.060 or the well shall be decommissioned in accordance with section 15.55.060L. After the well is brought up to applicable standards, the Development Services Department may issue a Certificate of On-Site Systems Approval. The Development Services Department may require additional monitoring.
6. Upon completion of any rehabilitative well work, the temporary basin created around the well casing for the dye test shall be filled with a bentonite slurry and re-graded to meet the standards in section 15.55.060C.2. The well shall also be disinfected in accordance with section 15.55.060G.1. and retested for nitrates.

15.55.060 General standards for domestic wells.

A. *Prohibited wells.* Well pits are prohibited. The Development Services Department may, at its discretion, allow an existing well pit to remain in use if it is shown the pit provides adequate protection against flooding.

B. *Well location and minimum setbacks.* The location of a well shall be at a site readily accessible year round for testing, repair or maintenance purposes. The minimum separation requirements between wells and other specified facilities or areas shall be:

TABLE A-1

SEPARATION OF WELL FROM:	MINIMUM SEPARATION - DISTANCE IN FEET
Private sewer line	25
Curtain drain	25
Petroleum Hydrocarbon storage tank	25
Sewer trunk line	75
Any other source of potential contamination	75
Holding tank	75
Septic absorption field	100
Sewer manhole or cleanout	100
Septic tank	100
Animal containment areas	50
Manure/animal excreta storage areas	100

C. *Well drilling.* The commercial drilling of a well and subsequent rehabilitation or deepening operation shall be performed by a licensed well driller. Any drilling method used in the construction of a well shall meet the following requirements:

1. The well driller shall notify the Development Services Department of the proposed date of commencement of any drilling or rehabilitation or deepening or decommissioning operation prior to the start of operation.
2. The ground surface surrounding the well for at least ten (10) feet shall be sloped or contoured to allow surface water to drain away from the well.
3. The well driller shall exercise reasonable care during excavation or drilling operation to prevent contamination to any aquifer.
4. Organic drilling fluid may be used only if the fluid is approved for such use by the National Sanitation Foundation (NSF) or by an equivalent organization; these fluids are listed in NSF Standard 60 and NSF Standard 61 and in associated product listings described in these two standards.
5. Water used in the drilling process shall be obtained from a source providing potable water.
6. Water wells shall be drilled and cased with non-perforated pipe to a minimum depth of 40 feet, in unconsolidated materials and in bedrock. If bedrock is encountered at a depth greater than twenty (20) feet and less than forty (40) feet, then the casing shall extend a minimum of twenty (20) feet into the bedrock. Where it is necessary to case bedrock to meet these requirements, an oversized borehole shall be drilled from surface to the

required depth into the bedrock. The resulting oversized borehole shall be grouted in accordance with section 15.55.060D.2.

7. A well completed in unconsolidated formations shall be constructed so water only enters the well from a single water producing zone.

D. *Well casing.* All casing shall be installed with NSF approved potable water materials in new or like new condition, free of pits or breaks. The following wall thickness shall be used, except all casing greater than the nominal size of six (6) inches shall have a wall thickness of at least 0.250 inches:

TABLE A-2

NOMINAL SIZE (INSIDE DIAMETER) (INCHES)	OUTSIDE DIAMETER (INCHES)	WALL THICKNESS (INCHES)
4	4.50	0.237
5	5.50	0.244
5.5	6.00	0.245
6.125 (6 1/8")	6.625 (6 5/8")	0.250

1. *Joints.* All casing joints shall be screw-coupled or welded and shall be water tight. If welded joints are used, the weld shall be at least as thick as the thickness of the well casing.

2. *Grouting.* Grouting the outer annular space is necessary to prevent shallow non-potable water or surface waters from entering into a potable water aquifer. All wells shall be grouted with bentonite slurry or granules as follows:

   a. From the pitless adapter level to at least ten (10) feet below the pitless adapter or, from the surface to a minimum twenty (20) feet below the surface;

   b. If bedrock is encountered as described in section 15.55.060C.6., the following grouting procedures shall be followed:

      i. The permanent well casing shall be grouted from the bottom of the borehole up using high solids bentonite slurry (minimum twenty percent (20%) solids content). The oversized bore shall be stabilized to eliminate caving and sloughing.

      ii. If the permanent casing is used as a tremie to place the grout by circulating from the up, a minimum one (1) inch annulus spacing from the bottom of the bore to surface shall be required.

      iii. If a temporary casing is used to stabilize the oversized bore, it shall be removed upon completion of grouting procedures.

3. *Pitless adapters.* Pitless adapters shall be installed by a certified pump installer, a certified well driller or by an excavator under the supervision of a certified pump installer or well driller. The burial depth and type of pitless adapter installed shall be recorded on the Pump Installation Log pursuant to section 15.55.060J. When installed, pitless adapters shall be

one of the types approved by the Development Services Department.

4. *Well casing stick up.* All well casing shall extend a minimum of eighteen (18) inches above the finished grade, with the ground sloped to drain away from the casing.
5. *Well seal.* The top of the casing shall be closed with a sanitary well seal of a type approved by the Development Services Department.
6. *Drive shoe.* When the casing is driven or otherwise forced into the well bore, the bottom of the casing shall be protected from damage by the use of a drive shoe or mechanical device.
7. *Perforating or slotting.* Perforating or slotting of the casing utilized for the purpose of allowing water to enter the well from water producing zones encountered above the bottom of the casing shall not extend higher than forty (40) feet below the ground surface, unless it meets the requirements of section 15.55.060C.6.

E. *Well Accessories.* The commercial installation of well accessories shall be performed by a certified well driller or certified pump installer.

F. *Minimum water well production and testing.* If the minimum sustained rate of production and recovery of a well is less than one hundred fifty (150) gallons per day per bedroom, as determined by a well yield test and/or recovery test, water storage facilities shall be installed.

1. *Well yield testing.* Upon completion of a well, a well yield test shall be performed by a certified well driller or pump installer or a certified civil engineer or a hydrogeologist. The well yield test shall be performed by bailing, air lifting or by pumping. The well yield test shall accurately determine the well's sustained productivity from test data including, but not limited to, static water level, pumping water level, drawdown rate, recovery rate or any other information useful in determining the sustained producing rate. If the well's initial sustained production rate is less than one (1.0) gallons per minute, the Development Services Department may require additional testing by alternative methods.
2. *Water Quality Testing.* Drinking water from the well shall be properly sampled and analyzed by a certified laboratory for levels of total coliform bacteria, other bacteria, arsenic and nitrate. The results of this sampling shall be submitted to the Development Services Department within thirty (30) days of the completion of the well. The levels of total coliform and other bacteria shall conform to drinking water limits established in section 15.55.060K. For other contaminants, including arsenic and nitrate, the departments shall use the current USEPA public drinking water standards as a guideline to trigger actions deemed necessary to protect the public health. Such actions shall be taken in partnership by the Department of Health and Human Services and the Development Services Department and may include, but are not limited to, issuing a health advisory, discontinuation of the use of water from the well for drinking water, decommissioning of the well, or requiring water treatment. The above departments may require other contaminants to be analyzed if deemed necessary for the protection of public health.

G. *Well disinfection.* Wells shall be disinfected as follows:

1. *New or deepened wells.* Immediately after completion of drilling or deepening wells, the well shall be disinfected. After the well is flushed of drill cuttings, apply a chlorine compound proportioned to provide a concentration of at least fifty (50) ppm as free chlorine to the entire volume of water in the well bore. The chlorine shall be introduced into the well in a manner which shall distribute it throughout the entire water depth. Allow the chlorinated water to remain in the well undisturbed for at least twenty-four (24) hours.
2. *Hydrofractured or redeveloped wells.* While redeveloping or hydrofracturing wells and when possible, a free chlorine residual in the well of at least five (5) ppm shall be maintained.
3. *Pump work.* On completion of pump installation work, a chlorine compound proportioned to provide a concentration of at least fifty (50) ppm as free chlorine to the entire volume of water in the well bore shall be applied. After chlorine is introduced, water shall be circulated in the well so it reaches all parts of the pumping equipment, inside and out. The chlorinated water shall remain in the well for at least one (1) hour.
4. *Flushing.* After the required disinfection time has expired, the well shall be flushed of all chlorinated water before being placed in service.

H. *Well identification.* All wells shall be labeled with a durable form of construction information upon completion. The construction information source shall be secured to the well casing and contain the following information:

1. The name of the drilling contractor;
2. The date the well was completed;
3. The total depth;
4. The total depth of casing;
5. The location and type of well completion;
6. Static water level below the top of the casing;
7. Yield; and
8. Height of casing above finished grade.

I. *Well logs and as-built.* The certified well driller shall provide a well log to the Development Services Department within thirty (30) days of completion of the well. The well log shall include at least the following pertinent information:

1. The property owner's name;
2. The legal description and street address;
3. The method of drilling (rotary, cable tool, etc.);
4. A description, relative depth, and thickness of each soil stratum penetrated from the ground surface to the total depth;
5. The relative depth and thickness of each water bearing stratum (aquifer) penetrated;
6. The total depth drilled;
7. The length, diameter, wall thickness and type of casing used;
8. A description of the liner (if used) and the length and setting depth;
9. The depth and number of perforations, (if any) in the casing and/or liner;
10. The type and location of any screens used;
11. The static water level and drawdown level;
12. The well production test results including the method of testing;

13. The dates of commencement and completion of drilling operations;
14. The number and date of the well drilling permit issued by the Development Services Department;
15. The name and address of the certified well driller; and
16. A description of the method of disinfection process used upon completion of the well.

J. *Pump installation log.* The certified pump installer or well driller shall provide a pump installation log to the Development Services Department within thirty (30) days of completion of the installation of a pump into a water well.
1. The pump installation log shall include at least the following pertinent information:
a. The property owner's name;
b. The legal description and street address of the property;
c. The date of the pump installation;
d. The manufacturer's name, model and size of the pump installed;
e. The depth from top of casing that the pump is installed;
f. The number and date of the well drilling permit issued by the Development Services Department;
g. The name and address of the certified pump installer, or certified well driller or excavator; and
h. A description of the method of disinfection used.

K. *Water quality standards.* Water used for domestic purposes shall not contain concentrations exceeding the following ratios:
1. Total coliform bacteria - 0 colonies per 100 ml.
2. Other bacteria - 10 colonies per 100 ml.

L. *Well decommissioning.* Wells shall be decommissioned by a certified well driller or a certified pump installer in accordance with this subsection:
1. *Permanent decommissioning.* A well may be permanently decommissioned by one of the following methods:
a. Perforate the casing from the bottom to within five (5) feet of the land surface, remove the top five (5) feet, then pressure grout the entire length.
b. Withdraw the casing and fill the borehole with grout, or bentonite as the casing is being withdrawn.
c. Cut off the casing at a point two (2) feet below ground level and fill the casing with a bentonite slurry pumped from the bottom up or with bentonite chips poured in a bridge free manner. The top of the cut off casing shall then be sealed with a 0.25 inch thick (or thicker) plate firmly welded to the top of the casing.

15.55.070 General standards for potable water hauling and storage facilities.

A. When well productivity is less than the requirements of section 15.55.060E., water storage facilities shall be installed.
1. A permit to install water storage facilities shall be obtained from the Development Services Department prior to installation. The permit application shall include:
a. The legal description of the property;

b. An as-built site plan or proposed site plan meeting the requirements of subsection 15.55.050B.1. and including the location of the water storage facilities; and

c. The number of bedrooms served by the well and/or water storage facilities.

B. *Location of buried water storage facilities.* The location of buried water storage facilities shall be at a site readily accessible year round for testing, repair or maintenance purposes. The minimum separation requirement between buried water storage facilities and other specified facilities and areas shall be in accordance with Table A-1.

1. The ground surrounding the access of the storage tank shall be sloped or contoured to allow surface water to drain away.

C. *Water storage facility specifications.* Specifications and requirements for water storage tanks and facilities, for both interior and exterior applications are as follows:

1. Water storage tanks shall have National Sanitation Foundation (NSF) approval; or
2. Water storage tanks shall be designed by an engineer and manufactured by an approved tank manufacturer. Materials and coating used in construction shall be either U.S. Food and Drug Administration (FDA) or NSF approved food grade;
3. All components of water storage facilities shall comply with the latest adopted edition of the Uniform Plumbing Code, as amended where applicable; and
4. Water storage tanks shall have a minimum capacity of:
   a. One thousand (1,000) gallons for homes up to and including three (3) bedrooms without wells or having a well producing less than 150 gallons per day. Each bedroom above three (3) bedrooms shall add 250 gallons to the required capacity of the tank.
   b. Five hundred (500) gallons for homes with wells producing 150 gallons or more of water meeting the requirements of section 15.55.060K. per day but less than the requirement of section 15.55.060E.
5. An exterior water storage tank shall have a minimum of four (4) feet of cover, or insulated to protect from freezing. Tanks buried with less than two (2) feet of cover shall have calculations submitted by an engineer showing adequate measures have been taken to prevent the tank from freezing.
6. Access to water storage tanks shall be clearly and permanently marked "potable water."
7. Water delivery to water storage facilities shall be accomplished only by water haulers certified by the State of Alaska Department of Environmental Conservation (ADEC).
8. Homeowners may haul water to their own water storage facilities provided they obtain the water from a source approved by ADEC and use a tank approved by the Development Services Department.

15.55.080 Well driller and pump installer certification.

A. It shall be unlawful for any person or company to engage in the business of drilling or deepening a water well for domestic use unless the person or company holds a well driller's certificate issued by the Development Services Department.

B. It shall be unlawful for a person or company to engage in the business of installing, removing, or repairing a water well pump, or engage in any other subsurface activity on a water well for domestic use unless the person or company holds a valid pump installer certificate issued by the Development Services Department.

C. A well driller's or pump installer's certificate shall be valid for a period of one (1) calendar year and shall be renewed each subsequent year thereafter.

1. A certificate shall be issued by the Development Services Department annually only when the well driller or pump installer has completed a training class conducted by the department within the past twenty-four (24) months.

2. The certificate may be revoked by the Development Services Department if the certificate holder is found guilty of or pleads guilty to an offense under this chapter. The period of revocation shall be according to the following schedule:

a. One offense within the previous five (5) years shall result in a revocation of the certificate of one (1) month.

b. Two (2) offenses within the previous five (5) years shall result in a revocation of the certificate of two (2) months.

c. Three (3) offenses within the previous five (5) years shall result in a revocation of the certificate of six (6) months.

d. More than three (3) offenses within the previous five (5) years shall result in permanent revocation of the certificate.

Section 2. Anchorage Municipal Code title 23 is hereby repealed in its entirety and reenacted to read as follows:

TITLE 23 BUILDING CODES

23.05	**Building Regulations**
23.10	**Anchorage Administrative Code, 2003 Edition**
23.15	**International Building Code, 2003 Edition, including appendices A-C, G and H**
23.20	**International Mechanical Code, 2003 Edition**
23.25	**Uniform Plumbing Code, 2003 Edition, except Chapters 12 and 15, including appendices A, B, D, I, and L**
23.30	**National Electrical Code, 2005 Edition, including the appendices**
23.45	**International Fire Code, 2003 Edition, including Appendices B – G**
23.55	**Fire Protection Service Outside Service Area**
23.60	**Energy Conservation in New Building Design, ANSI/ASHRAE/IES 90A-1980, ANSI/ASHRAE/IES 90.1-1989, ASHRAE/IES 90B-1975, and ASHRAE 90C-1977**
23.65	**International Existing Buildings Code, 2003 Edition**
23.70	**Anchorage Dangerous Buildings Code**

23.75 American National Standards Institute/American Society of Mechanical Engineers ANSI/ASME A17.1 2004 Safety Code for Elevators and Escalators including appendices
23.76 American National Standards Institute/American Society of Mechanical Engineers ANSI/ASME A18.1-2004 Safety Standard for Platform Lifts and Stairway Chairlifts
23.85 International Residential Code, 2003 Edition, Chapters 1-11, and Appendix E
23.95 School Relocatables, 1997 Edition
23.100 Mobile Aircraft Shelters, 1997 Edition
23.105 Grading, Excavation and Fill, 2003 Edition
23.110 International Fuel Gas Code, 2003 Edition, except Chapter 1, including Appendix A

23.05.010 Adoption of Codes

The Municipality of Anchorage, pursuant to Charter section 10.04, adopts and incorporates by reference the following codes of technical regulation.

TABLE INSET:

23.05	**Building Regulations**
23.10	**Anchorage Administrative Code, 2003 Edition**
23.15	**International Building Code, 2003 Edition, including appendices A-C, G and H**
23.20	**International Mechanical Code, 2003 Edition**
23.25	**Uniform Plumbing Code, 2003 Edition, except Chapters 12 and 15, including appendices A, B, D, I, and L**
23.30	**National Electrical Code, 2005 Edition, including the appendices**
23.45	**International Fire Code, 2003 Edition, including Appendices B – G**
23.55	**Fire Protection Service Outside Service Area**
23.60	**Energy Conservation in New Building Design, ANSI/ASHRAE/IES 90A-1980, ANSI/ASHRAE/IES 90.1-1989, ASHRAE/IES 90B-1975, and ASHRAE 90C-1977**
23.65	**International Existing Buildings Code, 2003 Edition**
23.70	**Anchorage Dangerous Buildings Code**
23.75	**American National Standards Institute/American Society of Mechanical Engineers ANSI/ASME A17.1 1996 Safety Code for Elevators and Escalators including appendices**
23.76	**American National Standards Institute/American Society of Mechanical Engineers ANSI/ASME A18.1-2003 Safety Standard for Platform Lifts and Stairway Chairlifts**
23.85	**International Residential Code, 2003 Edition. Chapters 1-11, and Appendix E**
23.95	**School Relocatables, 1997 Edition**
23.100	**Mobile Aircraft Shelters, 1997 Edition**
23.105	**Grading, Excavation and Fill, 2003 Edition**

23.110	**International Fuel Gas Code, 2003 Edition, except Chapter 1, including Appendix A**

23.05.020 Copies on File. At least one copy of each code of technical regulation adopted by reference in section 23.05.010 shall be kept in the office of the municipal clerk.

23.05.030 Applicability to Service Areas. Except as otherwise expressly provided, all provisions of title 23 shall apply within the Anchorage Building Safety Service Area (ABSSA).

23.05.040 Local Amendments. The various codes adopted by section 23.05.010 are amended by the local amendments set forth in chapters 23.10 through 23.110 inclusive. The last digits of the section numbers (after the title and chapter digits) are the section of the Uniform or International Codes to which the amendment refers; i.e., section 23.20.303.3 refers to amendments to section 303.3 of the International Mechanical Code.

CHAPTER 23.10 ANCHORAGE ADMINISTRATIVE CODE

23.10.101	**Title, Purpose, and Scope**
23.10.102	**Application to Existing Buildings and Building Service Equipment**
23.10.103	**Moved Buildings**
23.10.104	**Temporary and Seasonal Use Structures**
23.10.105	**Historic Buildings**
23.10.106	**Definitions**
23.10.107	**Conflicting Provisions**
23.10.108	**Alternate Materials, Methods of Design and Methods of Construction**
23.10.109	**Modifications**
23.10.110	**Tests**
23.10.201	**Organization and Enforcement**
23.10.202	**Powers and Duties of the Building Official**
23.10.203	**Unsafe Buildings, Structures or Building Service Equipment**
23.10.204	**Board of Appeals**
23.10.205	**Violations**
23.10.206	**Stop Work Order**
23.10.207	**Penalties and Remedies**

23.10.301 Permits
23.10.302 Application for Permit
23.10.303 Permits Issuance
23.10.304 Fees
23.10.305 Inspections
23.10.306 Special Inspections
23.10.307 Structural Observation
23.10.308 Connection to Utilities
23.10.309 Certificate of Occupancy
23.10.Table 3A Building Permit Fees

Section 23.10.101 Title, scope and general.

23.10.101.1 Title. These regulations shall be known as the *Anchorage Administrative Code*, may be cited as such and referred to herein as "this code."

23.10.101.2 Purpose. The purpose of this code is to provide for the administration and enforcement of the technical codes adopted by this jurisdiction.

23.10.101.3 Scope. The provisions of this code shall serve as the administrative, organizational and enforcement rules and regulations for the technical codes regulating site preparation and construction, alteration, moving, demolition, repair, use and occupancy of buildings, structures and building service equipment within this jurisdiction.

23.10.101.4 Other laws. The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

23.10.101.5 Referenced codes. Title 23 adopts numerous codes. Throughout the International Codes and other codes as adopted in title 23, there are references to other codes. In all places where the International Codes make reference to the International Plumbing Code, it shall mean the Uniform Plumbing Code as adopted by the Municipality of Anchorage. In all places where the International Codes and other codes refer to the Electrical, Energy, Elevator, Property Maintenance, Sign, or Security codes, it shall mean those codes as adopted by the Municipality of Anchorage.

Section 23.10.102 Application to existing buildings and building service equipment.

23.10.102.1 General. Buildings, structures and their building service equipment to which additions, alterations or repairs are made shall comply with all the requirements of the technical codes for new facilities, except as specifically provided in this section or the International Existing Buildings Code.

Section 23.10.103 Moved buildings. Buildings or structures moved into the Anchorage Building Safety Service area shall comply with the provisions of this code for new buildings or structures. Buildings or structures moved within the Anchorage

Building Safety Service Area shall comply with the provisions of this code for new or existing buildings or structures, and shall have a code compliance inspection by the Municipality of Anchorage for fire and life safety evaluation prior to the move.

Exception: One- and two-family dwellings not over two stories in height, moved within the Anchorage Building Safety Service Area and not changed from the existing as-built condition, do not require lateral analysis or lateral upgrades.

Section 23.10.104. Temporary and seasonal use structures.

23.10.104.1 Temporary structures. Buildings, structures, sheds, canopies, fences, reviewing stands and other structures of a temporary nature may be erected by special permit from the building official for a period of 180 days. Temporary structures may be erected without meeting all requirements for permanent structures, but shall meet the following conditions:

A. Temporary structures shall be limited to Group A, Group B, Group M, and Group U occupancies;

B. The size of the structure shall not exceed 1,500 square feet nor be more than one story in height;

C. The structure shall meet the required yards and separation from adjacent buildings as provided by the municipal land use regulations, but in no case less than ten feet;

D. Temporary structures extensively used or essential for public use shall comply with the building code for accessibility. Structures directly associated with the actual processes of major construction, such as scaffolding, bridging, or materials hoists, are not included;

E. All temporary structures shall meet structural requirements in regard to type of materials, spans, and stresses as determined to be safe by the building official;

F. Mobile homes and trailers intended for use shall be of manufactured design. Homemade mobile homes or trailers shall not be allowed;

G. The structure and all associated materials shall be removed from the approved location on or before the expiration date of the permit;

H. Permits for temporary structures may be extended on a one-time basis for 180 days, upon application to the building official with a payment per Table 3-A;

I. When a building permit has been issued for new construction or remodeling, a permit for a fence or construction shacks shall not be required;

J. After a temporary structure is removed from a lot, parcel or tract of land, no temporary structure may be placed at the same location for a period of at least 180 days;

K. Normally occupied temporary structures shall have sanitary facilities.

23.10.104.2 Seasonal use structures. Sale stalls, carnivals, fairs and assembly pavilions or tents, including structures, such as tent frames, and attending support structures, such as decks, boardwalks, light poles, and plumbing/mechanical and electrical installations, may be erected without meeting all requirements for permanent structures, but shall meet the following conditions:

A. Seasonal use structures shall be limited to Groups A, B and M type occupancies and located in the B-2, B-3 or I zoning districts;
B. The structure shall not exceed one story in height;
C. Such structures and installations are subject to a maximum occupancy not to exceed eight months in any one calendar year;
D. An annual permit shall be obtained and an annual code compliance inspection performed prior to the establishment of the use or occupancy for each calendar year;
E. The annual code compliance inspection shall certify there are no hazards to health, life, or safety and proper maintenance of the structure or installations has been performed prior to re-occupancy;
F. Continued occupancy of seasonal use structures shall be allowed only if permitted and occupied within six months of the last occupancy, use or vacation. If not, the structure shall be removed from the premises so as to leave it in a clean, level, nuisance-free condition;
G. Seasonal activities with seating areas shall provide handicap-accessible temporary or permanent toilet facilities as required by the Building Code;
H. Seasonal use structures extensively used or essential for public use shall comply with the Building Code, providing accessibility for the disabled;
I. All seasonal use structures shall meet structural requirements in regard to type of materials, spans, and stresses as determined to be safe by the building official.

23.10.104.3 Permit application. The application for a temporary or seasonal use permit shall include:
A. Property owner's name and mailing address;
B. Legal description of the proposed site with a plot plan showing the proposed location of the structure on the premises, location of any existing structures, and the location of any existing or proposed parking areas;
C. Length of use of the proposed structure, if a temporary or special event structure. No permit shall be required if the use is 14 days or less. However, exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in violation of the provisions of this section or any other laws or ordinances of this jurisdiction;
D. Description of the proposed use and a justification of temporary or seasonal occupancy;
E. All required fees and cash bonds.

23.10.104.4 Fees. A nonrefundable fee shall accompany applications for temporary or seasonal use structures. Applications for the annual code compliance inspection, for seasonal use structures shall be accompanied by a fee for each inspector per hour.

23.10.104.5 Cash bonds. For all temporary or seasonal use structures, prior to permit approval, the applicant shall post bond with the building official. The bond shall be in the form of cash or certified check in the amount of $5,000.00:
A. Upon removal of the temporary or seasonal use structure by the applicant and compliance with all terms of this section, the bond shall be returned in full to the applicant;

B. Thirty days after receipt of a notice from the building official to the property owner or applicant of failure to comply with the terms of the permit, the bond shall be forfeited at the applicant's sole expense.

Section 23.10.105. Historic buildings. Repairs, alterations and additions necessary for the preservation, restoration, rehabilitation or continued use of a building, structure, or its building service equipment may be made without conforming to the requirements of the technical code when authorized by the building official, provided:

A. The building or structure has been designated by official action of the Anchorage Municipal Assembly or its delegated authority as having special historical or architectural significance.

B. Unsafe conditions as described in this code are corrected.

C. The restored building or structure and its building service equipment shall be no more hazardous based on life safety, fire safety and sanitation than the existing building.

D. The building or structure shall comply with the historic building requirements in the Existing Building Code.

Section 23.10.106. Definitions. For the purpose of this code, certain terms, phrases, words and their derivatives shall be construed as specified in this section. Where terms are not defined, they shall the ordinary accepted meanings within the context with which they are used in *Webster's Dictionary*, and shall be considered as providing ordinarily accepted meanings. Words used in the singular include the plural and the plural the singular. Words used in the masculine gender include the feminine and the feminine the masculine.

Addition is an extension or increase in floor area or height of a building or structure.

Alter or ***Alteration*** is a change or modification in construction or building service equipment.

Approved, as to materials, types of construction, equipment and systems, refers to approval by the building official as the result of investigation and tests conducted by the building official, or by reason of accepted principles or tests by recognized authorities, technical or scientific organizations.

Approved Agency is an established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when the agency has been approved by the building official.

Building is a structure used or intended for supporting or sheltering a use or occupancy.

Building Code is the Building Code, as adopted by this jurisdiction.

Building, Existing is a building erected prior to the adoption of this code, or one for which a legal building permit has been issued.

Building Official is the officer or other designated authority charged with the administration and enforcement of this code, or a regularly authorized deputy.

Building Service Equipment refers to the plumbing, mechanical, electrical and elevator equipment including piping, wiring, fixtures and other accessories providing sanitation, lighting, heating, ventilation, cooling, refrigeration, fire-fighting and transportation facilities essential to the occupancy of the building or structure for its designated use.

Dangerous Building Code is the Abatement of Dangerous Buildings Code.

Electrical Code is the Electrical Code, as adopted by this jurisdiction.
Elevator Code is the safety code for elevators, dumbwaiters, escalators and moving walks as adopted by this jurisdiction.

Existing Building Code is the Existing Building Code, as adopted by this jurisdiction.

Fuel Gas Code is the Fuel Gas Code adopted by the jurisdiction.

Jurisdiction, as used in this code, is a state or political subdivision, adopting this code for administrative regulations within its area of authority.

Listed and ***Listing*** are terms referring to equipment and materials included in a list published by an approved testing laboratory, inspection agency, or other organization concerned with product evaluation maintaining periodic inspection of current productions of listed equipment or materials. The published list shall state the material or equipment complies with approved nationally recognized codes, standards or tests and has been tested or evaluated and found suitable for use in a specified manner.

Mechanical Code is the Mechanical Code, as adopted by this jurisdiction.

Occupancy is the purpose for which a building, or part thereof, is used or intended to be used.

Owner is any person, agent, firm or corporation with a legal or equitable interest in the property.

Permit is an official document or certificate issued by the building official authorizing performance of a specified activity.

Person is a natural person, heir, executor, administrator or assign, and also includes a firm, partnership or corporation, its or their successor or assign, or agent of any of the aforesaid.

Plumbing Code is the plumbing code, as adopted by this jurisdiction.

Repair is the reconstruction or renewal of any part of an existing building, structure or building service equipment for the purpose of its maintenance.

Retrofit is the replacement of any part of the existing building service equipment with parts developed or made available after the original installation.

Shall, as used in the code, is mandatory.

Structural Observation means the visual observation of the structural system, for general conformance to the approved plans and specifications, at significant construction stages and at completion of the structural system. Structural observation does not include or waive the responsibility for the inspections required in sections 305 and 306.

Structure is that which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner.

Technical Codes refer to those codes adopted by this jurisdiction containing the provisions for design, construction, alteration, addition, repair, removal, demolition, use, location, occupancy and maintenance of buildings and structures and building service equipment as herein defined.

Valuation or ***Value*** as applied to a building and its building service equipment, shall be the estimated cost to replace the building and its building service equipment in kind, based on current replacement costs.

Section 23.10.107 Conflicting provisions.

A. When conflicting provisions or requirements occur between this code, the technical codes and other codes or laws, the most restrictive shall govern.

B. When conflicts occur between the technical codes, those provisions providing the greater safety to life shall govern. In other conflicts where sanitation, life safety or fire safety are not involved, the most restrictive provision shall govern.

C. Where, in a specific case, different sections of the technical codes specify different materials, methods of construction or other requirements, the most restrictive shall govern. When there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

D. When conflicts occur between specific provisions of this code and administrative provisions in a technical code, which is then applicable within this jurisdiction, those provisions becoming the law most recently shall prevail.

Section 23.10.108 Alternate materials, methods of design and methods of construction.

A. The provisions of the technical codes are not intended to prevent the use of any material, method of design or method of construction not specifically prescribed by the technical codes, provided an alternate is approved and its use authorized by the building official.

B. The building official may approve an alternate design, provided the building official finds the proposed design is satisfactory and complies with the provisions of the technical codes and the material, method or work offered is, for the purpose

intended, at least the equivalent prescribed in the technical codes in suitability, strength, effectiveness, fire resistance, durability, safety and sanitation.

C. The building official shall require sufficient evidence or proof be submitted to substantiate claims regarding use. The details of an action granting approval of an alternate shall be recorded and entered in the file of the code enforcement agency.

Section 23.10.109 Modifications. Whenever there are practical difficulties involved in carrying out the provisions of the technical codes, the building official may grant modifications for individual cases. The building official shall first find a special individual reason makes the strict letter of the technical code impractical and the modification is in conformity with the intent and purpose of the technical code, and such modification does not lessen health, life safety and fire safety requirements or any degree of structural integrity. The details of actions granting modifications shall be recorded and entered in the files of the code enforcement agency.

Section 23.10.110 Tests.

A. Wherever there is insufficient evidence of compliance with the provisions of the technical codes or evidence materials or construction do not conform to the requirements of the technical codes, the building official may require tests as evidence of compliance to be made, at no expense to the jurisdiction.

B. Test methods shall be as specified by the technical codes or by other recognized test standards. In the absence of recognized and accepted test methods, the building official shall determine test procedures.

C. Tests shall be made by an approved agency. The building official shall retain reports of such tests for the period required for the retention of public records.

CHAPTER 2 ORGANIZATION & ENFORCEMENT.

23.10.201.1 Creation of enforcement agency. There is hereby established in the jurisdiction a code enforcement agency under the administrative and operational control of the building official.

23.10.201.2 General. Whenever the term or the title "administrative authority," "responsible official," "building official," "chief inspector," "code enforcement officer," or similar designation is used herein or in any of the technical codes, it shall be construed to mean the building official designated by the appointing authority of this jurisdiction.

Section 23.10.202 Powers and duties of the building official.

23.10.202.1 General. The building official is hereby authorized and directed to enforce the provisions of this code. The building official is authorized to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

23.10.202.2 Applications and permits. The building official shall receive applications, review construction documents and issue permits for the erection and alteration, demolition and moving of buildings and structures, inspect the premises for which such permits are issued and enforce compliance with the provisions of this code.

23.10.202.3 Notices and orders. The building official shall issue all necessary notices and orders to ensure compliance with this code.

23.10.202.4 Inspections. The building official shall make all of the required inspections, or the building official is authorized to accept reports of inspections by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or the responsible individual. The building official is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

23.10.202.5 Identification. The building official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

23.10.202.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the building official has reasonable cause to believe there exists in a structure or upon a premises a condition contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the building official is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided if such structure or premises is occupied, credentials shall be presented to the occupant and entry requested. If such structure or premises is unoccupied, the building official shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the building official shall have recourse to the remedies provided by law to secure entry.

23.10.202.7 Department records. The building official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

23.10.202.8 Liability. The building official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not be liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by the officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The building official or any subordinate shall not be liable for cost in any action, suit or proceeding instituted in pursuance of the provisions of this code.

23.10.202.9 Approved materials and equipment. Materials, equipment and devices approved by the building official shall be constructed and installed in accordance with such approval.

23.10.202.9.1 Used materials and equipment. The use of used materials meeting the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless approved by the building official.

23.10.202.10 Modifications. Whenever there are practical difficulties involved in carrying out the provisions of this code, the building official has the authority to grant modifications for individual cases, upon application of the owner or owner's representative, provided the building official shall first find a special individual reason making the strict letter of this code impractical, the modification is in compliance with the intent and purpose of this code, and such modification does not lessen health, life and fire safety, or structural requirements. The details of action granting modifications shall be recorded and entered in the files of the department of building safety.

23.10.202.11 Alternative materials, design, and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds the proposed design is satisfactory and complies with the intent of the provisions of this code, and the material, method or work offered is, for the purpose intended, at least the equivalent prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

23.10.202.11.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

23.10.202.11.2 Tests. Whenever there is sufficient evidence of compliance with the provisions of this code, or evidence a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the building official is authorized to require tests as evidence of compliance, to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the building official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be required for retention of public records.

23.10.202.12 Cooperation of other officials and officers. The building official may request and shall receive, the assistance and cooperation of other officials of this jurisdiction as required in the discharge of the duties required by this code or other pertinent laws or ordinance.

23.10.202.13 Contractor license suspension or revocation. The building official may cancel, suspend, or revoke the license of a contractor who displays incompetence or lack of knowledge in matters relevant to such license, or if such license was obtained by fraudulent measures. If the license of any person is so cancelled or revoked, another such license shall not be granted to such person within twelve (12) months after the date of such cancellation or revocation. Any action may be appealed to the Board of Building Regulation Examiners and Appeals (Building Board).

Section 23.10.203 Unsafe buildings, structures or building service equipment.

23.10.203.1 Conditions. Structures or existing equipment that are or hereafter become unsafe, unsanitary or deficient because of inadequate means of egress facilities, inadequate light and ventilation, or constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or involve illegal or improper occupancy or inadequate maintenance, shall be deemed an unsafe condition. Unsafe structures shall be taken down and removed or made safe, as the building official deems necessary and as provided for in this section. A vacant structure not secured against entry shall be deemed unsafe.

23.10.203.2 Record. The building official shall cause a report to be filed on an unsafe condition. The report shall state the occupancy of the structure and the nature of the unsafe condition.

23.10.203.3 Notice. If an unsafe condition is found, the building official shall serve on the owner, agent or person in control of the structure, a written notice describing the condition deemed unsafe and specifying the required repairs or improvements to be made to abate the unsafe condition, or requires the unsafe structure to be demolished within a stipulated time. Such notice shall require the person notified to declare immediately to the building official acceptance or rejection of the terms of the order.

23.10.203.4 Method of service. Notice shall be deemed properly served if a copy is:

A. Delivered to the owner personally;
B. Sent by certified or registered mail addressed to the owner at the last know address with return receipt requested; or
C. Delivered in any other manner as prescribed by local law.
D. If the certified or registered letter is returned showing the letter was not delivered, a copy of the letter shall be posted in a conspicuous place in or about the structure affected by such notice. Service of notice in the foregoing manner upon the owner's agent or upon the person responsible for the structure shall constitute service of notice upon the owner.

23.10.203.5 Restoration. The structure or equipment determined to be unsafe by the building official is permitted to be restored to a safe condition. To the extent repairs, alterations, or additions are made or a change of occupancy occurs during the restoration of the structure, such repairs, alterations, additions or change of occupancy shall comply with the requirements of this code.

23.10.203.6 Connection of service utilities. No person shall make connections from a utility, source of energy, fuel or power to any building or system regulated by this code for which a permit is required, until released by the building official.

23.10.203.7 Temporary connection. The building official shall have the authority to authorize the temporary connection of the building or system to the utility source of energy, fuel, or power.

23.10.203.8 Authority to disconnect service utilities. The building official shall have the authority to authorize disconnection of utility service to the building, structure, or system regulated by this code and the codes referenced in case of emergency where necessary to eliminate an immediate hazard to life or property. The building official shall notify the serving utility and, whenever possible, the owner and occupant of the building, structure, or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner or occupant of the building, structure, or service system shall be notified in writing as soon as practical thereafter.

Section 23.10.204 Board of appeals.

23.10.204.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the building official relative to the application and interpretations of the technical code, there shall be and is hereby created a board of appeals consisting of members qualified by experience and training to pass upon matters pertaining to building construction and building service equipment, and not employees of the jurisdiction. The building official shall be an ex officio member and shall act as secretary to the board but shall not vote upon any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedures for conducting business and shall render all decisions and findings in writing to the appellant, with a duplicate copy to the building official.

23.10.204.2 Limitations of authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder were incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The board shall have no authority to waive requirements of this code.

23.10.204.3 Board of Building Regulation Examiners and Appeals (Building Board) established.

A. There is established a Board of Building Regulation Examiners and Appeals (hereinafter "Building Board"), as described in section 4.40.030, consisting of eleven (11) members appointed by the mayor, subject to confirmation by the Assembly, qualified by experience or training to pass on matters pertaining to building construction, as follows:

1. At least two (2) members shall be Architects registered in the State of Alaska.

2. At least two (2) members shall be Professional Engineers registered as Civil Engineers in the State of Alaska.
3. At least one (1) member shall be a Professional Engineer registered as a Mechanical Engineer in the State of Alaska
4. At least one (1) member shall be a Professional Engineer registered as an Electrical Engineer in the State of Alaska.
5. At least two (2) members shall be licensed General Contractors actively engaged in general building construction and/or home building.
6. At least one (1) member shall be a licensed Electrical Contractor actively engaged in the electrical trade.
7. At least one (1) member shall be a licensed Plumbing Contractor actively engaged in the plumbing trade.
8. At least one (1) member shall be a licensed Mechanical Contractor actively engaged in the mechanical trade.

B. Six (6) members of the Building Board shall constitute a quorum for the transaction of any business. For affirmative action on quasi-judicial matters by the Building Board, there shall be a concurring vote of six (6) members.

C. Building Board shall hear and decide appeals from actions of administrative officials relating to code regulations under title 23.

23.10.204.4 Secretary to building board. The building official or designee shall be an ex-officio member without vote and shall act as secretary to the Board, shall prepare all correspondence, send out all required notices, keep minutes of all meetings, and maintain a file on each case coming before the Building Board.

23.10.204.5 Appeal filing fee. The cost of filing an appeal to the Building Board is $500.00 and shall accompany the filing of the appeal.

Section 23.10.205 Violations.

23.10.205.1 Unlawful acts. It shall be unlawful for any person, firm or corporation to erect, construct, alter, extend, repair, move, remove, demolish or occupy any building, structure or equipment regulated by this code, or cause same to be done, in conflict with or in violation of any of the provisions of this code.

23.10.205.2 Notice of violation. The building official is authorized to serve a notice of violation or order on the person responsible for the erection, construction, alteration, extension, repair, moving, removal, demolition or occupancy of a building or structure in violation of the provisions of this code, or in violation of a permit or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation.

23.10.205.3 Prosecution of violation. If the notice of violation is not complied with promptly, the building official is authorized to request the legal counsel of the jurisdiction to institute the appropriate proceeding at law or in equity to restrain, correct or abate such violation, or to require the removal or termination of the unlawful occupancy of the building

or structure in violation of the provisions of this code or of the order or direction made pursuant thereto.

Section 23.10.206 Stop work order.

23.10.206.1 Authority. Whenever the building official finds any work regulated by this code being performed in a manner either contrary to the provisions of this code or dangerous or unsafe, the building official is authorized to issue a stop work order.

23.10.206.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order, and the conditions under which the cited work shall be permitted to resume.

23.10.206.3 Unlawful continuance. Any person continuing any work after being served with a stop work order, except such work as the person is directed to perform to remove a violation or unsafe condition, shall be subject to penalties as prescribed by law.

Section 23.10.207 Penalties and remedies.

23.10.207.1 Violation penalties. Any person violating a provision of this code or failing to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law.

23.10.207.2 In addition to any other remedy or penalty provided by this title, any person violating any provision of this title or any code of technical regulation adopted pursuant to this title shall be subject to the civil penalties or injunctive relief, or both as provided by section 1.45.010B.

23.10.207.3 Any person aggrieved by the act or omission of another person constituting a violation of the provisions of this title or the codes of technical regulation adopted herein may, following thirty (30) days written notice to the municipal official or department empowered to enforce the provision, may commence and maintain a civil action for injunctive relief authorized by section 1.45.010B. The court, in issuing a final order in any action brought by a private person under this section may, in its discretion, award costs of litigation to any party. In any action under this section, the municipality, if not a party, may intervene as a matter of right.

Chapter 3 Permits & Inspections

Section 23.10.301 Permits.

23.10.301.1 Permits required. Any owner or authorized agent intending to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure,

or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the building official and obtain the required permit.

23.10.301.1.1 Emergency repairs. Where equipment replacements and repairs must be performed after hours in an emergency situation, the contractor shall call the Building Safety Hotline before commencing the work. The permit application shall be submitted within the next working business day to the building official.

23.10.301.2 Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

23.10.301.2.1 Building permits.

A. A building permit shall not be required for the following:

1. One-story detached accessory buildings used as tool and storage sheds, playhouses, and similar uses, provided the floor area does not exceed 120 square feet.
2. Fences not over eight feet high.
3. Oil derricks.
4. Retaining walls up to four (4) feet in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or III-A liquids.
5. 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 2:1.
6. Platforms, walks and driveways not more than 30 inches above grade and not over any basement or story below.
7. Painting, papering, tiling, carpeting, cabinets, countertops and similar finish work.
8. Temporary motion picture, television and theater stage sets and scenery.
9. Prefabricated swimming pools accessory to a Group R, Division 3 Occupancy, as applicable in section 101.2, less than 24 inches deep, do not exceed 5,000 gallons and installed entirely above ground.
10. Window awnings supported by an exterior wall which do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support of Group R-3, as applicable in section 101.2 and Group U occupancies.
11. Movable cases, counters and partitions not over 5 feet 9 inches high.
12. Permits shall not be required for ordinary maintenance on a building or structure in Groups R-3 and U occupancies. Ordinary maintenance of a building or structure shall not include the cutting away or addition of any wall, partition or portion thereof, the removal of any structural beam or bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure; nor shall ordinary maintenance

include additions to, alterations of, replacement or relocation of any stand-pipe, water supply, sewer, drainage, drain leader, gas, soil, waste vent or similar piping, electrical wiring, mechanical or other work affecting public health or safety. All ordinary maintenance shall be made only in accordance with the applicable provisions of the building code, and other construction or safety codes of the municipality.

13. No building permit shall be required for nonstructural work up to and including $5,000 total construction valuation, including the combination of all building construction, electrical, plumbing, mechanical and structural work. Total construction includes all work (as if contracted out) to complete the project and occupy the structure. This exemption does not affect the need for electrical, plumbing, mechanical and structural permits if electrical, plumbing, mechanical or structural work is done.
14. Shade cloth structures constructed for nursery or agricultural purposes and not including service systems.
15. Swings and other playground equipment accessory to one- and two-family dwellings.
16. Construction site job shacks.
17. Storage racks not over six (6) feet high.
18. Artwork six (6) or less feet tall.
19. Grave markers.
20. Roof antennas not mechanically anchored where the existing roof structure and stability are checked by a civil engineer licensed in the State of Alaska.

B. Unless otherwise exempted by this code, separate plumbing, electrical and mechanical permits shall be required for the above exempted items.

23.10.301.2.2 Electrical permits.

A. An electrical permit shall not be required for the following:

1. Portable motors or other portable appliances energized by means of a cord or cable having an attachment plug end to be connected to an approved receptacle when the cord or cable is permitted by the Electrical Code.
2. Repair or replacement of fixed motors, transformers or fixed approved appliances of the same type and rating in the same location.
3. Temporary decorative lighting.
4. Repair or replacement of current-carrying parts of any switch, contactor or control device.
5. Reinstallation of attachment plug receptacles, but not the outlets.
6. Repair or replacement of any overcurrent device of the required capacity in the same location.
7. Repair or replacement of electrodes or transformers of the same size and capacity in the same location.
8. Taping joints.
9. Removal of electrical wiring.
10. Temporary wiring for experimental purposes in suitable experimental laboratories.
11. Wiring for temporary theater, motion picture or television stage sets.

12. Low-energy power, controls and signal circuits of Class II and Class III as defined in the Electrical Code.
13. Installation, alteration or repair of electrical wiring, apparatus or equipment or the generation, transmission, distribution or metering of electrical energy or in the operation of signals or the transmission of intelligence by a public or private utility in the exercise of its function as a serving utility.
14. The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but shall apply to equipment and wiring for power supply, the installations of towers and antennas.
15. Installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

23.10.301.2.3 Mechanical permits.

A. A mechanical permit shall not be required for the following:
1. A portable heating appliance.
2. Portable ventilating equipment.
3. A portable cooling unit.
4. A portable evaporative cooler.
5. A closed system of steam, hot or chilled water piping within heating or cooling equipment regulated by the Mechanical Code.
6. Replacement of any component part of assembly of an appliance which does not alter its original approval and complies with other applicable requirements of the technical codes.
7. Self-contained refrigeration system containing ten (10) pounds or less of refrigerant and actuated by motors of one (1) horsepower or less.

23.10.301.2.4 Plumbing permits.

A. A plumbing permit shall not be required for the following:
1. The stopping of leaks in drains, soil, waste or vent pipe, provided, however, should any concealed trap, drain pipe, soil, waste or vent pipe become defective and necessary to remove and replace the same with new material, the same shall be considered as new work and a permit shall be procured and inspection made as provided in this code.
2. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures, nor for the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

23.10.301.3 Public Service Agencies. A permit shall not be required for the installation, alteration, or repair of generation, transmission, distribution or metering or other related equipment under the ownership and control of public service agencies by established right.

Section 23.10.302 Application for permit.

23.10.302.1 Application.

A. To obtain a permit, the applicant shall first file an application in writing on a form furnished by the code enforcement agency. Every application shall:
   1. Identify and describe the work covered by the permit for which application is made.
   2. Describe the land on which the proposed work is to be done by legal description, street address or similar description to readily identify and definitely locate the proposed building or work.
   3. Indicate the use or occupancy for which the proposed work is intended.
   4. Be accompanied by plans, diagrams, computations and specifications, and other data as required in section 302.2.
   5. State the valuation of the proposed work.
   6. Be signed by the owner, or the owner's authorized agent.
   7. Give such other data and information as may be required by the building official.
   8. If the work under application is an alteration to or construction of a privately owned residential structure of one to four units, used or intended to be used as a human dwelling, proof of a residential contractor endorsement issued by the State of Alaska shall be provided.

23.10.302.2 Submittal documents. Plans, specifications, engineering calculations, diagrams, soil investigation reports, special inspection and structural observation programs and other data shall constitute the submittal documents and shall be submitted in one or more sets with each application for a permit. When such plans are not prepared by an architect or engineer, the building official may require the applicant submitting the plans or other data to demonstrate state law does not require the plans be prepared by a licensed architect or engineer. The building official may require plans, computations and specifications to be prepared and designed by an engineer or architect licensed by the state of Alaska, even if not required by state law.

Exception: The building official may waive the submission of plans, calculations, construction inspection requirements and other data if it is found the nature of the work applied for is such that reviewing plans is not necessary to obtain compliance with this code.

23.10.302.3 Information on plans and specifications.

A. Plans and specifications shall be drawn to scale on substantial paper or cloth and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail the work conforms to the provisions of this code and all relevant laws, ordinances, rules and regulations.

B. Plans for buildings of other than Group R, Division 3 and Group U Occupancies shall indicate how required structural and fire-resistive integrity will be maintained where penetrations are made for electrical, mechanical, plumbing and communication conduits, pipes and similar systems.

C. The construction documents shall show in sufficient detail the location, construction, size and character of all portions of the means of egress in compliance with the provisions of this code. In other than occupancies in Groups R-2 and R-3, as applicable in section 101.2 and I-1, the construction

documents shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces.

D. Construction documents for all buildings shall describe the exterior wall envelope in sufficient detail to determine compliance with this code. The construction documents shall provide details of the exterior wall envelope as required, including flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves or parapets, means of drainage, water-resistive membrane, and details around openings.

E. The construction documents shall include manufacturing installation instructions that provide supporting documentation the proposed penetration and opening details described in the construction documents maintain the weather resistance of the exterior wall envelope. The supporting documentation shall fully describe the exterior wall system which was tested, where applicable, as well as the test procedure used.

F. The construction documents submitted with the application for permit shall be accompanied by a site plan showing, to scale, the size and location of new construction and existing structures on the site, distances from lot lines, the established street grades and the proposed finished grades; and shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction remaining on the site or plot. The building official is authorized to waive or modify the requirements for a site plan when the application for permit is alteration or repair or when otherwise warranted.

23.10.302.4 Architect or engineer of record.

23.10.302.4.1 General.

A. When documents are required to be prepared by an architect or engineer, the building official may require the owner to engage and designate on the building application an architect or engineer to act as the architect or engineer of record. If the circumstances require, the owner may designate a substitute architect or engineer of record to perform all the duties required of the original architect or engineer of record. The building official shall be notified in writing by the owner if the architect or engineer of record is changed or is unable to continue to perform the duties.

B. The architect or engineer of record shall be responsible for reviewing and coordinating all submittal documents prepared by others, including deferred submittal items, for compatibility with the design of the building.

23.10.302.4.2 Deferred submittals.

A. For the purpose of this section, deferred submittals are defined as those portions of the design not submitted at the time of the application and which shall be submitted to the building official within a specified period.

B. Deferral of any submittal items shall have prior approval of the building official. The architect or engineer of record shall list the deferred submittals on the plans and shall submit the deferred submittal documents for review by the building official.

C. Submittal documents for deferred submittal items shall be submitted to the architect or engineer of record to review them and forward them to the building official with a notation indicating the deferred submittal documents have been reviewed and found to be in general conformance with the design of the building. The deferred submittal items shall not be installed until the design and submittal documents are approved by the building official.

23.10.302.5 Revising application (removing permittee). In order to remove the permittee on a specific permit from responsibility of completing a project and obtaining a Certificate of Occupancy, Building Safety Form *"Formal Transfer of Responsibilities at Time of C.C.O."* shall be completed and signed by the Owner and permittee being removed.

23.10.302.6 Amended construction documents. Work shall be installed in accordance with the approved construction documents, and any changes during construction not in compliance with the approved construction documents shall be resubmitted for approval as an amended set of construction documents.

Section 23.10.303 Permits issuance.

23.10.303.1 Issuance.

A. The application, plans, specifications, computations and other data filed by an applicant for permit shall be reviewed by the building official. Such plans may be reviewed by other departments of this jurisdiction to verify compliance with any applicable laws under their jurisdiction. If the building official finds the work described in an application for a permit and the plans, specifications and other data filed conform to the requirements of this code, the technical codes, and other pertinent laws and ordinances, and all permit fees have been paid, the building official shall issue a permit to the applicant.

Exceptions:

1. The building official may require a permittee to obtain a Certificate of Occupancy for a previous permit with an expired Conditional Certificate of Occupancy prior to issuing another permit.
2. The building official may require a permittee to reopen an expired permit and obtain a Certificate of Occupancy or Certificate of Completion for the expired permit prior to issuing another permit.
3. The building official may require a permittee to remedy a Stop Work Order, Notice of Violation, or Notice of Permit Requirement on a permittee's other project or permit prior to issuing another permit.
4. The building official may require a permittee to remedy a drainage problem on permittee's previous expired or unexpired permit prior to issuing another permit.
5. The building official may require a permittee to remedy water accumulation in a crawlspace of a previous permit prior to issuing another permit.

B. When a permit is issued and plans are required, the building official shall endorse in writing or stamp the plans and specifications APPROVED. Such approved

plans and specifications shall not be changed, modified or altered without authorization from the building official, and all work regulated by this code shall be done in accordance with the approved plans.

C. The building official may issue a permit for the construction of part of a building, structure or building service equipment before the entire plans and specifications for the whole building, structure or building service equipment are submitted or approved, provided adequate information and detailed statements have been filed complying with all pertinent requirements of the technical codes. The holder of a partial permit shall proceed without assurance the permit for the entire building, structure or building service will be granted.

23.10.303.1.2 Small electrical projects.

A. Small electrical projects not requiring a building permit and meeting the requirements of the Work Authorization Program may be performed after completion of a Work Authorization form. Use of this program is not mandatory, and an installer may choose to purchase an electrical permit.

B. In general, this work is limited to the following amount:
   1. Up to six outlets on a single new 20 ampere circuit; or
   2. Up to six outlets added to an existing 20 ampere circuit; or
   3. Up to 1-30 amp dedicated circuit; or
   4. Mast or riser extensions, overhead to underground riser changes, and repairs to service meter/ disconnect equipment.

C. With prior approval of the electrical inspector, up to two forms may be used per project. Each reinspection shall require the use of an additional form. See, Municipality of Anchorage Policy #040, Work Authorization Program, for further requirements.

23.10.303.2 Department records. The building official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. One set of approved plans, specifications and computations shall be retained in the official records for the period required for retention of public records and one set of approved plans and specifications shall be returned to the applicant and shall be kept on the site of the building or work at all times during the work authorized thereby is in progress.

23.10.303.3 Validity of permit. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on construction documents and other data shall not prevent the building official from requiring the correction of errors in the construction documents and other data. The building official is also authorized to prevent occupancy or use of a structure in violation of this code or of any other ordinances of this jurisdiction.

23.10.303.4 Expiration.

A. Every permit issued by the building official under the provisions of the technical codes shall expire by limitation and become null and void, if the building or work

authorized by the permit is not commenced within 360 days from the date of the permit, or if the building or work authorized by the permit is suspended or abandoned at any time after the work is commenced for a period of 360 days. For the purposes of this section, work shall be deemed suspended or abandoned if no inspections have occurred within 360 days. Before such work may be recommenced, a new permit shall be first obtained to do so, and the fee therefore shall be one of half the amount required for a new permit for such work, provided no changes have been made or will be made in the original plans and specifications for such work; and provided further such suspension or abandonment has not exceeded 18 months, unless otherwise approved by the building official. In order to renew action on a permit abandoned or suspended more than 18 months, the permittee shall pay a new full permit fee, unless otherwise approved by the building official.

B. A permittee holding an unexpired permit may apply for an extension of the time within which work may commence under the permit when the permittee is unable to commence work within the time required by this section for good and satisfactory reasons. The building official may extend the time for action by the permittee for a period not exceeding 360 days upon written request by the permittee showing circumstances beyond the control of the permittee prevented action from being taken. Permits shall not be extended more than once.

C. Grading permits in residential zoned areas shall be completed within two (2) years of permit issuance. Once a grading permit expires, a stop work order shall be issued, investigative fees shall be paid to reactivate the permit, and a bond posted. The bond shall be no less than the valuation to complete the work. The bond shall be forfeited if work is not completed within 180 days.

23.10.303.5 Suspension or revocation. The building official may, in writing, suspend or revoke a permit issued under the provisions of this code and the technical codes when the permit is issued in error or on the basis of incorrect information supplied, or in violation of an ordinance or regulation or the provisions of these codes.

23.10.303.6 Licensing and qualifications.

A. No permit shall be issued to any person to do or cause to be done any work regulated by this code, except to a person holding a valid, unexpired, and unrevoked contractor's certificate of qualification or registration as required by this code, except as otherwise provided in this section.

B. A permit may be issued to a properly licensed person not acting in violation of any current contract licensing law.

C. Any permit required by this code may be issued to any person to do any work regulated by this code in a single-family or duplex dwelling used exclusively for living purposes, including the usual accessory buildings and quarters in connection with such buildings, in the event such person is the legal owner of such dwelling and accessory buildings and quarters, and the same are occupied by said owner, provided said owner shall personally perform all labor in connection therewith.

23.10.303.6.1 Definitions.

Building construction contractor is a person who undertakes to perform any part of the construction, reconstruction, alteration, repair, building, highway, road, railroad, excavation, or other structure, project, development, or improvement, including the erection of scaffolding, electric signs, marquees, or other similar structures for which a condition, rule, regulation, or standard is prescribed by the Building Code as adopted and amended by this code. "Building construction contractor" includes those contractors generally classed as mechanical, general, or electrical contractors. "Building construction contractor" does not include regular employees of a building code contractor licensed under this section or a person who, as owner of a building or structure, performs work on the building or structure for his own use and benefit that would otherwise subject him to the licensing requirement of this section.

Electrical contractor is a person who may obtain electrical permits and install electrical wiring and equipment in industrial, commercial or residential categories.

Electrical journeyman is a person who installs electrical systems subject to the standards of the adopted electrical codes. An electrical journeyman shall possess a Journeyman Electrician Certificate of Fitness issued by the State of Alaska when performing electrical work, shall not be able to obtain permits, and shall be employed by a Municipality of Anchorage licensed electrical contractor. A journeyman electrician may perform electrical work in all occupancies and supervise up to two trainees.

Electrical residential wireman is a person who installs residential wiring subject to the standards of the adopted electrical codes. An electrical residential wireman shall possess a residential wireman certificate of fitness issued by the State of Alaska, shall not be able to obtain permits, and shall be employed by a Municipality of Anchorage licensed electrical contractor. A residential wireman is limited to residential occupancies providing no more than four residential units on a common foundation and may supervise up to two trainees.

Electrical trainee is a person employed by an electrical contractor to learn the electrical trade on the job and shall possess an Electrician Trainee Certificate of Fitness issued by the State of Alaska. Trainees may work only when under the direct supervision of a journeyman or wireman, and no more than two trainees may be assigned to a journeyman.

Gas certificate holder may install gas piping and gas equipment, and may also service said equipment, but shall not be issued permits.

Gas piping contractor certificate holder may install and repair gas piping, install and repair gas equipment and obtain permits for such work.

Hydronic heating contractor certificate holder may obtain permits, install, and repair hydronic heating equipment.

Hydronic heating journeyman is a person who labors at the trade of hydronic heating as an employee. A journeyman hydronic heating certificate holder may install and repair hydronic heating equipment.

Plumbing contractor certificate holder may obtain permits, install or repair plumbing, gas piping and mechanical equipment.

Plumbing journeyman is a person who labors at the trade of plumbing as an employee. A journeyman plumber certificate holder may install plumbing, gas piping and mechanical equipment.

Refrigeration contractor certificate holder may obtain permits, install, and repair refrigeration equipment.

Refrigeration journeyman is a person who labors at the trade of refrigeration as an employee. A journeyman refrigeration certificate holder may install and repair refrigeration equipment.

Residential electrical contractor may obtain permits to install electrical wiring and equipment in residential buildings up to four units on a single foundation.

Service station piping contractor certificate holder may obtain permits, install, and repair service station equipment, i.e., tanks, pumps, fuel piping, etc.

Service station piping journeyman is a person who labors at the trade of service station piping as an employee. A journeyman service station piping certificate holder may install and repair service station equipment, i.e., tanks, pumps, fuel piping, etc.

Sewer or sewage disposal contractor is a person who may conduct, carry on or engage in the business of installing, altering or repairing sewers and private sewage disposal systems.

Sheetmetal contractor certificate holder may obtain permits, install or repair mechanical equipment, i.e., HVAC equipment, duct work and venting of appliances.

Sheetmetal journeyman is a person who labors at the trade of sheet metal as an employee. A journeyman sheet metal certificate-holder may install and repair mechanical equipment, i.e., HVAC equipment, duct work, and venting of appliances.

Trainee is a person, other than a contractor or journeyman, who labors at the trade as an employee. The trainee shall be under the direct supervision and in the immediate presence of a contractor or journeyman. The trainee shall be a certificate holder of a valid Municipality of Anchorage Trainee card.

23.10.303.6.2 General provisions.

A. It shall be unlawful for any person to conduct, carry on or engage in the business of, or act in the capacity of a contractor in a trade covered by this code without first being issued a valid contractor's license or certificate of qualification/fitness.

B. An applicant for a building construction contractor's license shall file a copy of the construction contractor's bond required by state law with the application and shall show proof the bond is current and in effect.

C. It shall be unlawful for any person to labor at a trade in the capacity of a journeyman in a trade covered by this code without first being issued a valid journeyman certificate of qualification/fitness.

D. Any contractor or journeyman doing sheet metal or plumbing work covered by this code shall be required to be tested and licensed.

E. It shall be unlawful for any person to labor at a trade covered by this code as a trainee without being issued a valid trainee certificate of registration.

F. It shall be unlawful for any person acting in the capacity of a contractor in a trade covered by this code, or as the responsible agent, manager, supervisor, superintendent or foreman, to knowingly or willfully order, instruct or permit an employee, agent or person under supervision or control to do an act violating the certificate of qualification or registration requirements set forth in subsections C or E.

G. The ratio of individuals holding trainee registration cards shall not be more than two for every certified journeyman on a job site.

23.10.303.6.3 Application for certificate of qualification or registration.

A. Every person required to obtain a certificate of qualification and successfully passes the required test shall, within thirty (30) days of passing the test, obtain such certificate by paying a fee.

B. Every person required to obtain a trainee certificate of registration shall provide the information required on the registration application form and pay a fee.

C. Each applicant, other than an individual, shall designate a supervisory member as the responsible managing employee (RME) to take the required examination and who shall be designated as administrator under the license. No person shall qualify as administrator under more than one license. If the relationship of the administrator with the firm or corporation applicant is terminated, the license shall become void within sixty (60) days unless another administrator is qualified by proper authority. Licenses issued to applicants are nontransferable.

D. Applicants for plumbing or sheetmetal contractors' certificates shall prove they have at least six years (12,000 hours minimum) of previous practical experience. Credit may be allowed for each year, and fraction thereof, of attendance at a recognized school, if the course taken by the applicant was primarily mechanical and directly related to the particular skill or trade being applied for. No credit shall be allowed any applicant for experience gained while doing any mechanical work ordinarily incidental to or associated with non-mechanical occupations, as determined by the building official.

E. Applicants for journeyman certificates shall prove they have at least four (4) years (8,000 hours minimum) of previous experience personally installing, fabricating, altering and repairing work covered by the particular skill or trade being applied for. In lieu of previous practical experience, credit may be allowed for each year, and fraction thereof, of attendance at a recognized school if the course taken by the applicant was primarily mechanical and directly related to the skill or trade being applied for. No credit shall be allowed any applicant for experience gained

while doing any work ordinarily incidental to or associated with non-mechanical occupations as determined by the building official. In lieu of the above qualifications, an applicant may submit proof of successful completion of at least a four-year (8,000 hours minimum) apprenticeship program registered and approved by the U. S. Department of Labor, Bureau of Apprenticeship and Training, as acceptable qualifications. Journeyman and trainee plumbers shall have a state license.

F. Applicants for a trainee certificate do not need prior experience, but shall prove they are working for a properly certified contractor.

G. Applicants for a journeyman gas fitter's license shall prove two years' (4,000 hours minimum) previous experience in the gas piping field.

23.10.303.6.4 Issuance of certificate of qualification or registration.

A. A sheetmetal, plumbing, or gas piping contractor's certificate of qualification shall be issued to every person who makes application for such certificate, pays the required fee, proves required experience and training and successfully passes the examinations.

B. A sheetmetal, plumbing, or gas fitter journeyman's certificate of qualification shall be issued to every person who makes application for such certificate, pays the required fee, proves required experience and training and successfully passes the examinations.

C. All other contractor and journeyman certificates of qualification for refrigeration, hydronic heating, and service station piping trades shall be issued to every person who makes application, proves the required experience and training, and pays the required fee.

D. A trainee certificate of registration shall be issued to every person who makes application for such certificate and pays the required fee.

E. A specialty contractor's certificate of qualification or registration shall be issued to every person who makes application for such certificate, pays the required fee, proves required experience and training, and successfully passes the examinations.

F. A backflow assembly tester certificate of qualification or registration shall be issued to every person who makes application for such certificate, pays the required fee, attends the four-day Backflow Assembly Certification class sponsored by the Municipality of Anchorage Building Safety Division, and successfully passes both the written and the hands-on examination.

G. In lieu of the above, an applicant may submit proof of attendance of a similar class as described in subsection A above, and of successfully passing the required examination(s) of the similar class, provided further the similar class is recognized as equal to the requirement(s) of subsection A above, as determined by the building official.

H. Each person who holds a valid certificate of qualification or registration as a Backflow Assembly Tester shall attend an 8-hour Re-certification class and successfully pass both the written and the hands-on examinations every three (3) years from the date of original issuance.

I. Every person required to have a certificate of qualification shall obtain such certificate:

1. Within thirty (30) days of passing the required test; or

2. Within 30 days of the expiration date shown on the certificate, except if the certificate has been suspended or revoked.

J. Licenses issued under this title are valid for a maximum of two (2) years, and expire on February 14 of each calendar year.

23.10.303.6.5 Re-Examination.

A. Any person who fails to pass the examination may apply for reexamination on the next available test date.

B. Fees for reexamination will be the same as initial examination fees.

23.10.303.6.6 Expiration of certificates of qualification or registration.

A. Every certificate of qualification or registration shall remain in force and effect until its expiration date, unless canceled or revoked.

B. Except for certificates of qualification which lapsed three or more years past the expiration date, all certificates of qualification and trainee registration cards expired beyond thirty (30) days may be renewed by paying the prescribed fee. This fee shall be retroactive to the expiration date of the last certificate issued. In addition, an administrative late fee shall be charged.

C. Certificates of qualification and trainee registration cards shall not be allowed to lapse beyond thirty (30) days of the expiration date without prior approval of the building official.

D. Certificates of qualification lapsing three or more years past the expiration date of the last one issued shall not be renewed, and the person shall be required to re-take the test required for all new applicants.

23.10.303.6.7 Revocation of certificates of qualification or registration.

A. The building official may cancel or revoke any certificate of qualification or registration issued to any person, if such person later shows incompetence or lack of knowledge in matters relevant to such certificate or if such certificate was obtained by fraud. If the certificate of qualification or registration of any person is canceled or revoked, another certificate shall not be granted to the person within twelve (12) months after the date of cancellation or revocation.

B. Certificates of qualification or registration are not transferable from one person to another, and the lending of any certificate or the obtaining of permits thereunder for any other person shall be deemed cause for revocation.

C. The building official may require retesting of any certificate of qualification holder if such person shows incompetence or lack of knowledge in matters relevant to such certificate. Failure to pass this retesting shall result in revocation of the certificate. The person may apply for retesting after thirty (30) days have elapsed.

23.10.303.6.8 Certificate of fitness - right to inspection.

Municipal inspectors may contact any workman performing work for which a certificate of fitness is required (under AS 18.62.010) and request the person to exhibit his/her certificate of fitness. The inspector may immediately serve upon the person a notice to cease any further work in that occupation until he/she has displayed said State of Alaska certificate of fitness.

Section 23.10.304 Fees.

23.10.304.1 General. Fees shall be assessed in accordance with the provisions of this section or shall be as set forth in the fee schedule adopted by this jurisdiction.

23.10.304.2 Permit fees.

A. The fee for each permit shall be as set forth in section 23.10 Tables 3-A through 3-M. Where a technical code is adopted by the jurisdiction for which no fee schedule is shown in this code, the fee required shall be in accordance with the schedule established by the legislative body.

B. The determination of valuation under the provisions of the code shall be based on the Building Valuation Data Chart in the most recent November/December issue of the *Building Safety Journal* as published by the International Code Council. The regional multiplier shall be 1.3. The rates in the November/December issue shall become effective on the following January 1st and continue to January 1st of the following year.

C. The valuation shall be calculated using the dollar per square foot method as provided in the Municipality of Anchorage Handout #45, "Building Permit Fees." The area of the building for determination of building permit fees shall be the gross floor area. The gross floor area shall be the total horizontal area of all the floors of a building, measured between exterior faces of exterior walls, including interior balconies, mezzanines, stairwells, elevator shafts, ventilation shafts, etc., but excluding area without floor structure in atria.

D. Plumbing, mechanical and electrical permit fees shall be calculated as a part of the plan review process. The fee assessment is to be presented to the contractor for payment upon application for permit.

23.10.304.3 Plan review fees.

A. When a plan or other data are required to be submitted by subsection 302.2, plan review fee(s) shall be paid at the time of submitting plans and specifications for review.

Exception: A Fire Department Plan Review fee is not required for R-3 single family and two family dwellings.

B. The plan review fees specified in this section 304.3 are separate fees from the permit fees specified and are in addition to the permit fees.

C. Where plans are incomplete or changed so as to require additional plan review, an additional plan review fee shall be charged at the rate shown in section 23.10 Tables 3-A through 3-M.

D. A plan review fee for plans submitted simultaneously or within the current code cycle for identical structures within the same subdivision or planned unit development (pre-approved plans) shall be charged per section 23.10 Table 3.B. Each identical structure shall be issued a separate building permit.

23.10.304.4 Expiration of plan review. Applications for which no permit is issued within 360 days following the date of application shall expire by limitation, and plans and

other data submitted for review may thereafter be returned to the applicant or destroyed by the building official. The building official may extend the time for action by the applicant for a period not exceeding 180 days, on written request by the applicant showing circumstances beyond the control of the applicant prevented action from being taken. An application shall not be extended if this code or any other pertinent laws or ordinances are amended subsequent to the date of application. In order to renew action on an application after expiration, the applicant shall resubmit plans and pay a new plan review fee unless otherwise approved by the building official.

23.10.304.5 Investigation fees: work without a permit.

23.10.304.5.1 Investigation. Whenever work for which a permit is required by this code is commenced without first obtaining a permit, a code compliance inspection may be required before a permit is issued for such work.

23.10.304.5.2 Fee. When work is begun without proper permits, an investigation fee at a rate shown in Table 3-N, in addition to the permit fee, may be collected whether or not a permit is then or subsequently issued. The payment of the investigation fee shall not exempt an applicant from compliance with all other provisions of either this code or the technical codes nor from the penalty prescribed by law.

23.10.304.6 Fee refunds.

A. The building official may authorize refunding of a fee paid hereunder erroneously paid or collected.

B. The building official may authorize refunding of not more than eighty (80) percent of the permit fee paid when no work is done under a permit issued in accordance with this code.

C. The building official may authorize refunding of one hundred (100) percent of a plan review fee paid when an application for a permit with a plan review fee has been paid is withdrawn or canceled before any examination time is expended.

D. The building official shall not authorize the refunding of any fee paid except upon written application filed by the original permittee.

Section 23.10.305 Inspections.

23.10.305.1 General.

A. Construction or work for which a permit is required shall be subject to inspection by the building official and the construction or work shall remain accessible and exposed for inspection purposes until approved by the building official. In addition, certain types of construction shall have continuous inspection as specified in section 306.

B. Approval, as a result of an inspection, shall not be construed as an approval of a violation of the provisions of this code or other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid.

C. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the building official nor this

jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

D. A survey of the lot may be required by the building official to verify the structure is located in accordance with the approved plans.

E. A survey of a fill or excavation may be required by the building official to verify whether the work conforms to approved plans or code requirements.

23.10.305.2 Inspection requests.

A. It shall be the duty of the person doing the work authorized by the permit to notify the building official such work is ready for inspection. The building official may require every request for inspection be filed at least one working day before such inspection is desired. Such request may be in writing or by telephone at the option of the building official.

B. It shall be the duty of the person requesting any inspections required either by this code or the technical codes to provide access to and means for inspection of the work.

23.10.305.3 Approval required.

A. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the building official. The building official, upon notification, shall make the requested inspections and shall either indicate the portion of the construction is satisfactory as completed or shall notify the permit holder or an agent of the permit holder wherein the same fails to comply with this code. Any portions not in compliance shall be corrected and such portion shall not be covered or concealed until authorized by the building official.

B. There shall be a final inspection and approval of all buildings and structures when completed and ready for occupancy and use.

23.10.305.4 Required inspections. Refer to Building Safety Division Handout #1 "Inspection Schedule" for required inspections.

23.10.305.5 Other inspections. In addition to the called inspections specified above, the building official may make or require other inspections of construction work to ascertain compliance with the provisions of this code or technical codes and other laws enforced by the code enforcement agency.

23.10.305.6 Reinspections.

A. A reinspection fee may be assessed for each inspection or reinspection when such portion of work for which inspection is called is not complete or when corrections called for are not made.

B. This section is not to be interpreted as requiring reinspection fees the first time a job is rejected for failure to comply with the requirements of the technical codes, but as controlling the practice of calling for inspections before the job is ready for such inspection or reinspection.

C. Reinspection fees may be assessed when the approved plans are not readily available to the inspector or for failure to provide access on the date inspection is requested.

Section 23.10.306 Special inspections.

23.10.306.1 General. Special inspection requirements shall be in accordance with International Building Code chapter 17.

Section 23.10.307 Structural observation.

23.10.307.1 General. Structural observation shall be in accordance with International Building Code section 1709.

Section 23.10.308 Connection to utilities.

23.10.308.1 Energy connections. Persons shall not make connections from a source of energy, fuel or power to building service equipment regulated by the technical codes and for which a permit is required by this code, until approved by the building official.

23.10.308.2 Temporary connections. The building official may authorize the temporary connection of building service equipment to the source of energy, fuel or power for the purpose of testing building service equipment, or for use under a temporary Certificate of Occupancy.

Section 23.10.309 Certificate of occupancy.

23.10.309.1 Use or occupancy.

A. Buildings or structures shall not be used or occupied nor shall a change in the existing use or occupancy classification of a building or structure or portion thereof be made until the building official issues a Certificate of Occupancy as provided herein.

B. Issuance of a Certificate of Occupancy shall not be construed as an approval of a violation of the provisions of this code or other ordinances of the jurisdiction. Certificates presuming to give authority to violate or cancel the provisions of this code or other ordinance of the jurisdiction shall not be valid.

23.10.309.2 Change in use. Changes in the character or use of a building shall not be made except as specified in the Building Code.

23.10.309.3 Certificate issued.

A. After the building official and other authorized municipal code enforcement authorities inspect the building, structure and associated land use, and find no violations of the provisions of this title or other laws enforced by municipal code enforcement agencies, and upon submittal of an as-built survey as approved by the building official, the building official shall issue a Certificate of Occupancy containing the following:

1. The building permit number;
2. The address of the building;
3. The name and address of the owner;
4. A description of the portion of the building for which the certificate is issued; and
5. A statement that the described portion of the building has been inspected for compliance with the requirements of this code for the group and division of occupancy and the use for which the proposed occupancy is classified.

23.10.309.4 Conditional certificate.

A. If the building official finds substantial hazard will not result from occupancy of a building or portion thereof before the same is completed, a Conditional Certificate of Occupancy for the use of a portion or portions of a building or structure may be issued prior to the completion of the entire building or structure.

B. Conditional Certificates of Occupancy for exterior work not completed because of weather shall have an expiration date of August 15 of the following summer season.

C. Expired conditional certificates may prevent the same permittee from receiving additional permits, as outlined in section 303of this code.

23.10.309.6 Revocation. The building official may, in writing, suspend or revoke a Certificate of Occupancy issued under the provisions of this title when the certificate is issued in error, or on the basis of incorrect information, or when it is determined the building, structure, land use or portion thereof is in violation of an ordinance, regulation or the provisions of municipal code or state law.

23.10. Table 3-A Building Permit Fees.

1. Total Valuation	*Building Permit Fee*
$1.00 to $500.00	$22.00
$501.00 to $2,000.00	$22.00 for the first $500.00 plus $2.00 for each additional $100.00 or fraction thereof, to and including $2,000.00.
$2,001.00 to $25,000.00	$52.00 for the first $2,000.00 plus $10.00 for each additional $1,000.00 or fraction thereof, to and including $25,000.00.
$25,001.00 to $50,000.00	$282.00 for the first $25,000.00 plus $9.00 for each additional $1,000.00 or fraction thereof, to and including $50,000.00.
$50,001.00 to $100,000.00	$507.00 for the first $50,000.00 plus $7.00 each additional $1,000.00 or fraction thereof, to and including $100,000.00.
$100,001.00 to $500,000.00	$857.00 for the first $100,000.00 plus $4.50 each additional $1,000.00 or fraction thereof, to and including $500,000.00.
$500,001.00 and up	$2,657.00 for the first $500,000.00 plus $4.00 for each additional $1,000.00 or fraction thereof.

2.	Miscellaneous Building Permits	
A.	Permanent flexible fabric structures, per square foot	$17.00
B.	Temporary/seasonal building	$500.00
C.	Demolition	$100.00

23.10. Table 3-B Plan Review Fees.

1. Building Permits		
A. Building plan review	65% of the building permit fee as shown in Table 3-A	
B. Fire Department plan review	25% of the building permit fee as shown in Table 3-A	
C. Pre-approved plan	60% of the full plan review fee	
D. Land use plan review	15% of building permit fee as shown in Table 3-A	
E. Expedited plan review	60% of the building permit fee as shown in Table 3-A in addition to the applicable fee under A. through D., above	
2. Electrical, Mechanical, Plumbing Permits		
A. Permit fee between $1.00 to $500.00		$69.00
B. Permit fee between $501.00 to $1,000.00		$117.00
C. Permit fee between $1,001.00 to $2,000.00		$195.00
D. Permit fee between $2,001.00 and $3,000.00		$293.00
E. Permit fee between $3,001.00 and $4,000.00		$391.00
F. Permit fee between $4,001.00 and $6,000.00		$489.00
G. Permit fee greater than $6,000.00		$587.00
3. Grading/Excavation/Fill Permits		
A. Between 1 and 50 cubic yards	No fee	
B. Between 51 and 100 cubic yards	$69.00	
C. Between 101 and 1,000 cubic yards	$99.00	
D. Between 1,001 and 10,000 cubic yards	$135.00	
E. Between 10,001 and 100,000 cubic yards	$135.00 first 10,000 cubic yards, plus $69.00 each additional 10,000 cubic yards or fraction thereof	
F. Between 100,001 and 200,000 cubic yards	$744.00 first 10,000 cubic yards, plus $42.00 each additional 10,000 cubic yards or fraction thereof	
G. Greater than 200,001 cubic yards	$1,149.00 first 10,000 cubic yards, plus $18.00 each additional 10,000 cubic yards or fraction thereof	
4. Miscellaneous		
A. Plan review or code research, change orders, miscellaneous, per hour, quarter-hour minimum		$115.00
B. Product/fabricator approval review, per hour, two-hour minimum		$115.00
C. Out-sourcing plan review		25% of the building permit fee

23.10. Table 3-C Inspection Fees.

1.	Inspector, per hour, minimum one hour	$115.00
2.	Inspection, unscheduled, each, per hour	$145.00
3.	Inspection outside normal business hours, per hour, per inspector; two-hour minimum	$175.00
4.	Inspection, Sundays and holidays, per hour, per inspector, two-hour minimum	$230.00
5.	Reinspection, per hour, per inspector, one-hour minimum	$175.00
6.	Reinspection, unscheduled, each, per hour	$200.00
7.	Reinspection, outside normal business hours, per hour, per inspector, two-hour minimum	$230.00
8.	Code compliance inspection, per hour, per inspector, one-hour minimum	$115.00
9.	Fine for failure to perform special inspection, per incident	$230.00
10.	Research, per hour, one-hour minimum	$115.00

23.10. Table 3-D Electrical Permit Fees.

1. New Buildings or Additions	
A. Single family and duplexes (R-3)	.0015 ($1.50 per $1,000) of construction valuation, with a minimum $150.00
B. R-1 occupancies, multi-family dwellings, each unit	$195.00
C. All other new buildings or additions:	
i. $0.00 to $55,000.00	$115.00
ii. $55,000.00 to $500,000.00	$2.00 per $1,000.00
iii. Over $500,000.00	$1,035.00 + $0.85 per $1,000.00 > $500,000.00
2. Work Other Than New or Added Square Footage, All Occupancies	
A. 1 to 250 outlets	$109.00 + $3.00 per outlet
B. 251 to 500 outlets	$167.00 + $3.00 per outlet
C. 501 to 1,000 outlets	$265.00 + $3.00 per outlet
D. 1,001 to 1,500 outlets	$380.00 + $3.00 per outlet
E. 1,501 to 2,000 outlets	$512.00 + $3.00 per outlet
F. 2,001 to 3,000 outlets	$633.00 + $3.00 per outlet
G. 3,001 or more outlets	$748.00 + $3.00 per outlet

"***Outlet***" for the purpose of defining permit fees is an outlet that supplies, stores, measures, controls, transforms, utilizes or provides ready access for connection to electrical power.

Examples: A generator, battery-powered emergency light, wall switch, any fire protection device, transformer, service meter, light fixture, receptacle, motor starter, combination motor starter/disconnect, exit sign, transfer switch, etc., are outlets for the purpose of permit fee calculation. A junction box or wireway is not considered an outlet for fee purposes.

3. Small Electric Permit, Municipality of Anchorage Handout #069.	$46.00
4. Miscellaneous	

A. Replacement, upgrade or relocation of existing building electrical meter/disconnect service equipment	$98.00
B. Retrofit of electrical equipment:	$98.00
C. Temporary services:	
i. Single phase 220 volt 200 amperes or smaller, per inspection	$46.00
ii. Over 200 amperes (includes transformers, panel boards, and branch circuits used for temporary power on large projects)	$98.00
D. Electrical sign connection within six feet of connection	$46.00
E. Permanent flexible fabric structures, per square foot	$1.75

23.10. Table 3-E Mechanical Permit Fees.

1. New Buildings or Additions	
A. Issuance of each permit (not charged for single family/duplex)	$23.00
B. Installation of a mechanical heating system including all attachments, per 1,000 input Btu or fraction thereof, up to and including 400,000 Btu (including burners in furnaces, direct-fired heaters, or unit heaters)	$0.40 per 1,000 Btu
C. Installation of a mechanical heating system including all attachments, per 1,000 input Btu or fraction thereof over 400,000 Btu (including burners in furnaces, direct-fired heaters, or unit heaters).	$0.30 per 1,000 Btu
D. Installation of a mechanical cooling or refrigeration system including all attachments, per 1,000 Btu or fraction thereof, up to and including 400,000 Btu.	$0.40 per 1,000 Btu
E. Installation of a mechanical cooling or refrigeration system including all attachments, per 1,000 Btu or fraction thereof, over 400,000 Btu.	$0.30 per 1,000 Btu
F. i. Installation of each ventilation fan, exhaust fan, or air handler for the first 2,000 CFM. Fire dampers and duct connectors are extra, as scheduled below.	$8.00 for first 2,000 CFM
ii. Each additional 1,000 CFM or fraction thereof	$3.00
G. Installation of each fume, or Class II hood	$12.00
H. Installation of each commercial or industrial incinerator, or Class I hood	$70.00
I. Installation of each fuel, waste oil, glycol, or other non-pressure tank not a part of a system for which a fee is already assessed	$58.00
J. Fire damper, each	$8.00
K. Listed ceiling radiation damper, each	$3.00
NOTE: For installation of combination mechanical cooling/heating systems, fees shall be charged at the input, heating, or cooling, whichever is greater, in accordance with B. through E. above.	
L. For each duct connector, with or without a diffuser or grille	$1.50
M. For each piece of equipment or system	The fee shall be by valuation in accordance

regulated by this code, including processes piping as defined in IMC, for which no fee is listed	with 23.10.Table 3-A.
N. New residential single-family/duplex	.00115 ($1.15 per $1,000.00) of construction valuation, with a minimum $115.00
O. HRV heat-recovery ventilation system	$8.00 per unit + $1.50 per diffuser
P. Snow melt system, existing boiler	$30.00 + $11.00 pressure test
Q. Permanent flexible fabric structures, per square foot	$1.75
R. Wood stove installation	$46.00
2. Retrofit (Replacement) Fees	
A. Commercial permit fees for boilers, furnaces and A/C units shall be charged at 50% of the input Btu rating of the equipment installed	
B. Single family and duplex retrofit fee	$86.00
C. Permit issuance, each boiler, furnace, air conditioning and air exchanger unit replaced	$23.00
D. Winterization of hydronic system, each	$46.00

(AO No. 2002-176, § 1, 1-1-03)

23.10. Table 3-F Plumbing Permit Fees.

1. New Buildings or Additions	
A. Issuance of each permit (not charged for single family or duplex)	$23.00
B. Plumbing fixture, each	$6.00
C. Gas outlet, each	$6.00
D. Commercial water heater over 200,000 Btu input, or fraction thereof, per 1,000 Btu, each	$0.35 per 1,000 Btu
E. Water heater 200,000 Btu input or less, each	$23.00
F. Plumbing alteration work, each outlet	$6.00
G. Sprinkler systems (fire protection, or lawn & garden), per head	$3.00
H. Floor or roof drains	$6.00
I. Dishwasher	$6.00
J. Special wastes, fixtures, sumps and tanks	$6.00
K. Laundry tray or washer	$6.00
L. Approved testable reduced pressure principal or double check valve back flow preventer	$46.00
M. Temporary gas, minimum fee per outlet (not to exceed $200.00)	$75.00
N. Winterization of each potable water system	$46.00
O. For each piece of equipment or system not regulated by this code, for which no fee is listed, the fee shall be by valuation in accordance with 23.10. Table 3-A.	
P. New single family/duplex	.00145 ($1.45 per $1,000.00) of construction valuation with a minimum $145.00

Q. Test backflow preventer per hour	$115.00
R. Permanent flexible fabric structures, per sf	$1.75
2. Retrofit (Replacement) Fees	
A. Changes for repair or replacement of a water heater with an input of less than 200,000 Btu	$46.00
B. Commercial permit fees for water heaters over 200,000 Btu's	50% of the input Btu rating

(AO No. 2002-176, § 1, 1-1-03)

23.10.Table 3-G Elevator, Escalator, And Dumbwaiter Permit Fees.

NOTES:

1. Each separately powered unit shall be considered a separate conveyance; applications and permits shall be issued accordingly.
2. Installation fees, including charges for electrical equipment installed in connection with any conveyance and such equipment shall not be subject to a separate electrical permit fee.

1. New Installations and Relocations	
A. Hydraulic elevators	$430.00 $52.00 per hoistway opening
B. Cabled geared & gearless elevator	$805.00 + $58.00 per hoistway opening
C. Residential elevators	$345.00
D. Dumbwaiters, manual doors	$155.00 + $17.00 per hoistway opening
E. Dumbwaiters, power doors	$155.00 + $40.00 per hoistway opening
F. Escalators and moving walks	$1,150.00 + width in inches + run in feet + vertical rise in feet × $6.00
G. Handicap lifts (vertical & inclined)	$265.00
H. Material lift	$345.00 + $35.00 for 2nd and additional level
I. Roped hydraulic	$805.00 + $58.00 per hoistway opening
2. Alterations and Repairs	
A. Handicap lifts (vertical & inclined)	$132.00 + $29.00 per $1,000.00 valuation
B. Other elevators	$173.00 + $29.00 per $1,000.00 valuation
C. Cosmetic alterations, with weight difference less than 5%	$173.00 + $29.00 per $1,000.00 valuation
D. Cosmetic alterations, with weight difference greater than 5%	$173.00 + $29.00 per $1,000.00 valuation
3. Annual Certificate of Inspection Fees	
A. Hydraulic elevators	$167.00 + $14.00 per hoistway opening greater than two
B. Cable elevators	$173.00 + $14.00 per hoistway opening greater than two
C. Sidewalk elevators	$132.00
D. Hand-powered elevators	$132.00
E. Dumbwaiters	$132.00 + $14.00 per hoistway opening greater than two
F. Escalators & moving walks	$195.00
G. Handicap lifts (vertical & inclined)	$126.00 + $14.00 per hoistway opening greater than two

H. Material lift	$144.00 + $35.00 per hoistway greater than two
I. Altering or replacing door opening device	$207.00
J. Escalator performance step index test	$125.00

23.10. Table 3-H Grading Permit Fees.

1. 50 cubic yards or less	$69.00
2. 51 to 100 cubic yards	$99.00
3. 101 to 1,000 cubic yards	$99.00 for first 100 cubic yards, plus $45.00 each additional 100 cubic yards, or fraction thereof
4. 1,001 to 10,000 cubic yards	$504.00 for first 1,000 cubic yards, plus $42.00 each additional 1,000 cubic yards, or fraction thereof
5. 10,001 to 100,000 cubic yards	$882.00 for first 10,000 cubic yards, plus $180.00 each additional 10,000 cubic yards, or fraction thereof
6. Greater than 100,001 cubic yards	$2,502.00 for first 100,000 cubic yards, plus $99.00 each additional 10,000 cubic yards, or fraction thereof

23.10. Table 3-I Mobile Home Permit Fees.

1. Set-up fee	$200.00

23.10. Table 3-J Swimming Pool, Spa And Hot Tub Fees.

1. Each permit issuance	$23.00
2. Each swimming pool:	
A. Public pool	$75.00
B. Private pool	$52.00
3. Replacing filter	$6.00
4. Replacing piping	$6.00
5. Backwash receptor	$6.00
6. Miscellaneous replacements	$6.00
7. For each piece of equipment or system regulated by this code, for which no fee is listed, the fee shall be by valuation in accordance with 23.10, Table 3-A.	

23.10. Table 3-K Sign Permit Fees.

1. Sign, other than electrical	$40.00

23.10. Table 3-L Licenses and Testing Fees.

1. Test Fees	
A. Contractor testing fee	$75.00
B. Journeyman testing fee	$45.00
2. Issuance or Renewal Fees	
A. Contractor license, 2 years	$288.00

B. Journeyman license, 2 years	$100.00
C. Trainee license, 2 years	$65.00
D. Administrative late fee	$40.00
3. License Requirements.	
A. Backflow Assembly Tester, renewal fee (one-day recertification training required)	$58.00

23.10. Table 3-M On-Site Services Fees

1. Excavator certification		$ 370.00
2. Certificate of on-site systems approval, single family		$ 430.00
3. Separation distance waivers:		
a.	Waiver, lot line	$ 175.00
b.	Waiver, well to tank	$ 920.00
c.	Waiver, well to field	$1,150.00
d.	Waiver, field to surface water	$1,150.00
e.	Waiver, tank to surface water	$ 920.00
f.	Waiver, well to public sewer	$1,150.00
g.	Waivers of setback requirements in chapters 15.55 and 15.65 not listed in current fee schedule	$ 175.00
h.	On-site wastewater disposal system construction permit, single family	$ 460.00
i.	On-site wastewater disposal system construction permit renewal	$ 115.00
j.	On-site wastewater permit exceptions	$ 115.00
k.	Well driller permit	$ 230.00
l.	Waste treatment equipment manufacturer (plan review & facility inspection)	$ 800.00
m.	Water well construction permit, single family	$ 175.00
n.	Sewer inspection	$ 415.00
o.	Well inspection	$ 210.00
p.	Sewer/well inspection	$ 520.00
q.	On-site water/wastewater rush approval	$ 175.00
r.	On-site/continuing education class, per person	$ 60.00
s.	On-site conditional approval	$ 115.00
t.	On-site code compliance re-inspection, per inspection, per hour, one hour minimum	$ 115.00

23.10. Table 3-N Miscellaneous Fees.

1. Code books and publications	Cost
2. Appeal fee, Board of Building Regulation Examiners & Appeals, each	$500.00
3. Research, building permit, per hour	$35.00
4. Fine, building code violations, civil penalty	$100.00 to $500.00
5. Copies, standard 8-1/2"×11" page, each	$0.30
6. Monthly permit list, customer picks up	$6.00
7. Monthly permit list, mailed, annual subscription	$115.00

8. Investigation fee for work begun without proper permit(s), in addition to permit fee, per permit	Permit fee required by this code, or $1,000.00, whichever is greater
9. Training, per person, per class	$50.00
10. Special inspection violation, per violation	$150.00
11. Code abatement fee, per hour, one hour minimum	$115.00

12. **Fine (Contractor), work without a required contractor's license, civil penalty**
    a. First Offense: Issuance fee plus test fee (if applicable) and a $1000.00 fine which may be waived by the building official if required license is obtained within 30 days.
    b. Subsequent Offense: $1000.00 plus issuance fee plus test fee (if applicable) and an additional $1000.00 applied incrementally for each additional offense. As example, the third offense would be $2000.00.
13. **Fine (Journeyman), work without a required Certificate of Qualification**
    a. First Offense: Issuance fee plus test fee and a $250.00 fine which may be waived by the building official if the individual registers for the journeyman test within 72 hours.
    b. Subsequent Offense: $250.00 plus issuance fee plus test fee and an additional $250.00 applied incrementally for each additional offense. For example, a third offense is $500.00.
    c. The contractor for whom the violator is working for shall be subject to the same fines as the violator.
14. **Fine (Trainee), work without a required trainee card**
    a. First Offense: $60.00 (100 % shall be applied toward acquisition of a trainee card, if obtained within 72 hours).
    b. Subsequent Offense: $100.00 plus issuance fee for each offense and an additional $100.00 applied incrementally for each additional offense. For example, a third offense is $200.00.
    c. The contractor for whom the violator is working for shall be subject to the same fines as the violator.

CHAPTER 23.15 LOCAL AMENDMENTS TO THE INTERNATIONAL BUILDING CODE 2003 EDITION

Sections

23.15.100	Local Amendments to the International Building Code, 2003 Edition
23.15.103-115	Delete
23.15.202	"U" Definitions and Abbreviations
23.15.302.1.1	Table 302.1.1 Incidental Use Areas
23.15.305.2	Day Care
23.15.308.2	Group I-1
23.15.308.3	Group I-2
23.15.308.3.1	Child Care Facility
23.15.308.5	Group I-4, Day Care Facilities
23.15.310.1	Residential Group R
23.15.406.1.4	Separation
23.15.419	Occupants Needing Physical Assistance
23.15.419.1	Applicability
23.15.419.2	Definitions
23.15.419.3	Fire Drills and Evacuation Capability Determination
23.15.419.4	Evacuation Capability and Fire Protection Requirements
23.15.420	Special Security Requirements for Group E Buildings
23.15.421	Carbon Monoxide Detectors
23.15.501.3	Location on Property
23.15.504.4	Day Care Facilities
23.15.717.4.2	Groups R-1 and R-2
23.15.803.9.1.1	Suspended Acoustical Ceilings
23.15.903.2	Where Required
23.15.903.2.2	Group E
23.15.903.2.10.1	Stories and Basements Without Openings
23.15.903.3.1.1.1	Exempt Locations
23.15.907.2.3	Group E
23.15.907.2.9	Group R-2
23.15.1008.1.9	Panic and Fire Exit Hardware
23.15.1009.1	Stairways
23.15.1018.1	Minimum Number of Exits
23.15.1025.1	General
23.15.1102	Definitions
23.15.1106.	Parking and Passenger Loading Facilities
23.15.1110.1	Signs
23.15.1203.2	Attic Spaces
23.15.1210.1	Floors
23.15.1210.2	Walls
23.15.1211	Vapor Retarders
23.15.1403.2	Weather Protection
23.15.1404.2	Water-Resistive Barrier
23.15.1503	Weather Protection

23.15.1507.2.2	Slope
23.15.1507.3.3	Underlayment
23.15.1507.3.3.1	Low Slope Roofs
23.15.1507.3.3.2	High Slope Roofs
23.15.	Table 1507.3.7 Clay and Concrete Tile Attachment
23.15.1604.4	Analysis
23.15.1608.1	General
23.15.1608.3	Flat Roof Snow Loads
23.15.1609.3	Basic Wind Speed
23.15.1609.4, Item 4	Exposure Category
23.15.1621.1	Component Design
23.15.1704.1	General
23.15.1704.1.1.1	Preconstruction Special Inspection Meeting
23.15.1704.1.2	Report Requirement
23.15.1704	Special Inspections
23.15.1704.1.3	Special inspector pre-approval program
23.15.1704.1.3.1	Special Inspector Intern Program
23.15.1704.1.3.2	Approval Suspension
23.15.1704.1.3.3	Removal of Pre-Approved Status
23.45.1704.1.4	Ad Hoc Special Inspector Peer Committee
23.15.1704.3	Steel Construction
23.15.1704.3.1	Welding
23.15.1704.11	Sprayed Fire-Resistant Materials
23.15.1802.1	General
23.15.1802.2.2	Expansive soils
23.15.1802.2.3	Groundwater Table
23.15.1802.2.6	Seismic Design Category C
23.15.1802.2.7	Seismic Design Category D, E, or F
23.15.1802.2.8	Permafrost
23.15.1802.4.1	Exploratory Boring
23.15.1802.5	Soil Boring and Sampling
23.15.1802.6	Reports
23.15.1803.3	Site Grading
23.15.1803.5	Compacted Fill Material
23.15.1805.1	General
23.15.1805.2.1	Frost Protection
23.15.1805.2.4	Footing Definitions
23.15.1805.3	Footings On or Adjacent To Slopes
23.15.1805.3.5	Alternate Setbacks and Clearance
23.15.1805.4.1	Footing Design
23.15.1805.4.6	Wood Foundations
23.15.1805.5	Foundation Walls
23.15.1805.6	Foundation Plates or Sill Bolting
23.15.1807.1	Where Required
23.15.1807.1.3	Ground Water Control
23.15. 1807.2.2	Walls
23.15.1807.3	Waterproofing Required

23.15.1808.2.8.3	Load Tests
23.15.1808.2.23.2.1	Design Details for Piers, Piles, and Grade Beams
23.15.1905.12	Cold Weather Requirements
23.15.1907.5.1	Support
23.15.2104.6	Installation of Anchors
23.15.2208	Storage Racks
23.15.2302.1	Definitions
23.15.2305.1.2.1	Framing Members
23.15.2305.2.1	Design of Wood Diaphragms
23.15.2308.9.2.2	Top Plates for Studs Spaced at 24 Inches
23.15.2308.9.8	Pipes In Walls
23.15.2308.10.1	Wind Uplift
23.15	Table 2902.1
23.15.3001.1	Scope
23.15.3001.2	Reference Standards
23.15.3001.4	Change in Use
23.15.3002.1	Hoistway Enclosure Protection
23.15.3003.2	Fire-Fighters' Emergency Operation
23.15.3004.3	Area of Vents
23.15.3005.4	Personnel and Material Hoists
23.15.3006.1	Access
23.15.3006.5	Shunt Trip
23.15.3007	Elevator Sprinkler Requirements
23.15.3008	Underground Hydraulic Elevator Pipes, Fittings, and Cylinders
23.15.3009	Seismic Safety Device
23.15.3010	Reporting Injuries or Unsafe Conditions
23.15.3011	Top-of-Car Inspection of Existing Elevators
23.15.3012	Access to Hoistway on Existing Elevators
23.15.3013	Residential Elevator Inspections
23.15.3014	Inspection Periods
23.15.	CH.34 Existing Structures
23.15.	CH.35 Referenced Standards
23.15.	APP.CH.D Fire Districts
23.15	Appendices A-C, G and H
23.15.H.101.2	Signs Exempt from Permit
23.15.H.101.3	Permits Required
23.15.H.101.4	Application for Permit

23.15.100 Local Amendments to the International Building Code, 2003 Edition.

The amendments to the 2003 Edition of the International Building Code are listed hereafter by section. The last digits of the number (after the title and chapter digits) are the sections of the International Building Code to which the amendments refer.

23.15.103-115 Delete.

Delete IBC sections 103 through 115; refer to the Anchorage Administrative Code.

23.15.202 "U" Definitions and Abbreviations.

Add the following definition:

> ***Usable space*** is space in a structure used for utility or equipment placement, storage, or building service, such as laundry and maintenance areas, and not defined as habitable space. Space used for ducts, water and sewer lines, and electrical wiring is not considered usable space.

23.15.302.1.1 Table 302.1.1 Incidental Use Areas.
Amend Table 302.1.1 by changing the wording in the first block under the left column to read as follows:

> Furnace rooms in E and R-1, R-2, and R-4 occupancies, regardless of Btu input, and furnace rooms of all other occupancies where the largest piece of equipment is over 400,000 Btu per hour input.

23.15.305.2 Day Care.
Amend first paragraph to read as follows:

> The use of a building or structure, or portion thereof, for educational, supervision or personal care services for more than five children older than 2-1/2 years of age, including children related to the staff, shall be classified as a Group E occupancy.

Add a new Exception 1 to read as follows:

1. Family child care homes (R-3) operating between the hours of 6:00 a.m. and 10:00 p.m. may accommodate a total of twelve (12) children of any age without conforming to the requirements of this regulation (E occupancy) except for smoke detectors as specified in subsection 907.2.10, means of egress requirements of section 1003, including emergency escape and rescue openings (as required by section 1025) in napping or sleeping rooms, and fire extinguisher requirements as outlined in the *International Fire Code.*

23.15.308.2 Group I-1.
Amend by adding a new paragraph between the first and second paragraphs to read:

> Facilities within this occupancy classification that have occupants needing physical assistance to respond in emergency situations must comply with section 419.

23.15.308.3 Group I-2.
Amend the last sentence to read:

> A facility, such as the above, with five (5) or fewer persons, including persons related to the staff, shall be classified as a Group R-3.

23.15.308.3.1 Child Care Facility.

Amend paragraph to read:

> A child care facility providing care on a 24-hour basis to more than five (5) children 2-1/2 years of age or less, including children related to the staff, shall be classified as Group I-2.

23.15.308.5 Group I-4, Day Care Facilities.
Amend the second sentence to read:

> A facility, such as the above, with five (5) or fewer persons, including persons related to the staff, shall be classified as a Group R-3.

23.15.310.1 Residential Group R.
Amend by adding a new paragraph between the first and second paragraphs to read:

> For facilities within this occupancy classification with occupants needing physical assistance to respond in emergency situations, see section 419.

23.15.406.1.4 Separation.
Amend by changing the reference "1/2-inch (12.7mm)" in the first sentence of item #1 to "5/8-inch Type X" and add the following to the second sentence of item #1 "and all door openings must have self-closing and latching devices or be automatic closing and latching."

23.15.419 Occupants Needing Physical Assistance.
Chapter 4 is amended by adding special detailed requirements based on use and occupancy by adding a new section 419 for Group I-1 and Group R-4 to read as follows:

> **23.15.419.1 Applicability.**
> The provisions of this section apply to all Groups I-1 and R-4 occupancies where the occupants need physical assistance from staff or others to respond to emergencies.
>
> **23.15.419.2 Definitions.**
> In this section:
>
> ***Evacuation capability*** means the ability of occupants, residents, and staff as a group either to evacuate a building or to relocate from the point of occupancy to a point of safety;
>
> ***Impractical evacuation capability*** means a group does not have the ability to reliably move to a point of safety in a timely manner as measured under section 419.3;
>
> ***Point of safety*** means a location (a) exterior to and away from a building or (b) within a building of any type construction protected throughout by an approved automatic sprinkler system; and is either (1) within an exit enclosure meeting the

requirements of section 1019 or (2) within another portion of the building separated by smoke partitions meeting the requirements of section 710, with not less than one half hour fire resistance rating, and the portion of the building has access to a means of escape or exit conforming to the requirements of this code and does not require return to the area of the fire.

Prompt evacuation capability means a group has the ability to move reliably to a point of safety in a manner equivalent to the ability of a household in the general population as measured under section 419.3;

Slow evacuation capability means a group has the ability to move reliably to a point of safety in a manner not as rapid as members of a household in the general population, as measured under section 419.3;

23.15.419.3 Fire Drills and Evacuation Capability Determination. A fire drill conducted by the fire official or other approved licensee shall make the initial determination of evacuation capability. Changes to the evacuation capability shall be based on a record of drills conducted by the facility and recorded for review by the fire official or other licensing official. The drills shall be conducted six (6) times a year on a bi-monthly basis, with at least two (2) drills conducted during the night when residents are sleeping. Records shall indicate the time taken to reach a point of safety, date and time of the drill, location of simulated fire origin, escape paths used, and comments relating to residents who resisted or failed to participate in the drills. The relation of drill time to evacuation capability is as follows:

1. Three (3) minutes or less – prompt;
2. Over three (3) minutes but under 14 minutes – slow; or
3. Fourteen (14) minutes or more – impractical.

23.15.419.4 Evacuation Capability and Fire Protection Requirements. Fire protection requirements of a facility under this section are as follows:

419.4.1 Prompt Evacuation Capability. Evacuation capability of three (3) minutes or less indicates prompt evacuation capability. In facilities maintaining prompt evacuation capability, the requirements of the code for Groups I-1 or R-4 occupancies shall be followed.

419.4.2 Slow Evacuation Capability. Evacuation capability of more than three (3) but less than fourteen (14) minutes indicates slow evacuation capability. In facilities maintaining slow evacuation capability, the facility shall be protected by (a) an automatic smoke detection system, using addressable smoke detectors, designed and installed in accordance with the provisions of this code and N.F.P.A. 72-2002; and (b) an automatic sprinkler system, with quick response or residential sprinklers, installed in accordance with section 903.3.1.2 (N.F.P.A 13R-2002 sprinkler systems) or 903.3.1.3 (N.F.P.A. 13D-2002 sprinkler systems).

419.4.3 Impractical Evacuation Capability. Evacuation capability of fourteen (14) minutes or more indicates impractical evacuation capability. In facilities maintaining impractical evacuation capability, the facility shall be protected by (a) the protections for a facility with slow evacuation capability under section 419.4.2; (b) one-half hour fire-resistive construction throughout the facility; and (c) direct egress from sleeping rooms for occupants needing evacuation assistance either (1) to the exterior at grade level, to an exterior porch or landing via a thirty-six (36) inch wide door; or (2) if the sleeping rooms are separated from the rest of the building by smoke partitions installed in accordance with section 710, by egress windows conforming to the provisions of section 1025.

23.15.420 Special Security Requirements for Group E Buildings.

Chapter 4 is amended by adding special detailed requirements for certain buildings containing Group E occupancies by adding a new section 420, to read as follows:

420.1 All Group E Buildings with the lower floor level above grade and open on the sides shall be fenced around the building exterior or have skirting below the exterior walls to prevent unauthorized access.

23.15.421 Carbon Monoxide Detectors.

Chapter 4 is amended by adding a new section 421 for carbon monoxide detectors, as follows:

421.1 Carbon monoxide detectors. The provisions of this section shall apply to Group I-1, R-2, R-3 and R-4 occupancies. At least one (1) carbon monoxide detector shall be installed on each floor level. If a floor level contains bedrooms or sleeping rooms, at least one (1) detector shall be located in the immediate vicinity of the sleeping area, outside of the bedrooms/sleeping rooms. Carbon monoxide detectors shall be listed and installed in accordance with their listing. The alarm shall be clearly audible in all sleeping rooms with intervening doors closed.

Exceptions:

1. Carbon monoxide detectors are not required in dwelling units and structures with no combustion appliances and do not have an attached garage.
2. Carbon monoxide detectors are not required in dwelling units and structures with only direct vent combustion appliances and do not have an attached garage.
3. Carbon monoxide detectors are not required in Group I-1 and R-2 occupancies where all combustion equipment is located within a mechanical room separated from the rest of the building by construction capable of resisting the passage of smoke. If the structure has an attached parking garage, the garage shall be ventilated by an approved automatic

carbon monoxide exhaust system designed in accordance with the mechanical code.

421.2 Interconnection. In new construction, all carbon monoxide detectors located within a single dwelling unit shall be interconnected in such a manner that actuation of one alarm shall activate all of the alarms within the individual dwelling unit.

421.3 Power source. In new construction, carbon monoxide detectors shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Wiring shall be permanent and without disconnecting switch other than those required for overcurrent protection. In existing construction, carbon monoxide detectors shall be permitted to be battery powered or cord-and-plug type with battery backup.

23.15.501.3 Location on Property.
Amend chapter 5 by adding a new section to read as follows:

501.3 Location on Property. Buildings shall adjoin or have access to a permanent public way or yard on not less than one side. Required yards shall be permanently maintained.

23.15.504.4 Day Care Facilities.
Add a new subsection to read as follows:

504.4 Day Care Facilities. Facilities operated in a primary residence (R-3) between the hours of 6:00 a.m. and 10:00 p.m., and accommodating up to a total of 12 children of any age may use the second story of the building without providing an automatic sprinkler system, or complying with Table 302.3.2, Table 602, and the Type VA requirements set out in Table 503, provided all other applicable legal provisions for an E Occupancy are met.

23.15.717.4.2 Groups R-1 and R-2.
Amend paragraph to read as follows:

Draftstopping shall be provided in attics, mansards, overhangs or other concealed roof spaces of Group R-2 buildings with three or more sleeping units and in all Group R-1 buildings. The intervening space between any two draft stops or walls shall be designed for adequate cross ventilation in accordance with section 1203.2. Draftstopping shall be installed above, and in line with, tenant and dwelling separation walls that do not extend to the underside of the roof sheathing above.

Amend Exception 3 to read as follows:

Exception 3: Draftstopping in attic spaces of Group R-1 and R-2 occupancies may be installed so the area between draft stops extending from the ceiling to the roof does not exceed 3,000 square feet, and the greatest horizontal dimension does not exceed 60 feet. Such draft stops do not have to be located directly above or in line with walls separating tenant spaces, unless part of construction is dictated by other provisions of this code. Adequate cross ventilation shall be provided in accordance with section 1203.2.

23.15.803.9.1.1 Suspended Acoustical Ceilings.
Amend last sentence by adding the following words:

"and Section 1621.1 for seismic requirements."

23.15.903.2.2 Group E.
Amend paragraph to read as follows:

An automatic sprinkler system shall be provided throughout all Group E occupancies. An automatic sprinkler system shall also be provided for every portion of educational buildings below the level of exit discharge.

Amend Exception 1 to read as follows:

Exception 1: Buildings with E occupancies having an occupant load of 49 or less.

23.15.903.2.10.1 Stories and Basements Without Openings.
Amend by deleting the words "where the floor area exceeds 1,500 square feet (139.4 m^2) and".

23.15.903.3.1.1.1 Exempt Locations.
Amend by adding the following exception number 5:

5. Elevator machine rooms may delete the sprinklers within the machine room where such room is: (1) separated from the remainder of the building in accordance with section 3006.4; (2) smoke detection is provided in accordance with NFPA 72; and (3) notification of alarm activation is received at a constantly monitored location.

23.15.907.2.3 Group E.
Amend section by adding a second paragraph to read as follows:

Rooms used for sleeping or napping purposes within a day care use of a Group E occupancy shall be provided with smoke detectors complying with section 907.2.10.1.2.

23.15.907.2.9 Group R-2.
Amend by deleting Exception 3.

Amend by revising the first sentence to read as follows:

A manual fire alarm system and an automatic fire detection system with smoke detection in public areas shall be installed in Group R-2 occupancies where:

23.15.1008.1.9 Panic and Fire Exit Hardware.
Amend second paragraph by changing the number "100" to "50."

23.15.1009.1 Stairways and Handrails.
Amend section by adding an exception to read as follows:

Exception: Stairs or ladders used only to attend equipment are exempt from the requirements of this section.

23.15.1018.1 Minimum Number of Exits.
Amend section by adding an exception to read as follows:

Exception: Basements or the first level below the first story in all occupancies except R-3, used exclusively for the service of the building may have access to only one (1) exit. For any other use except R-3, the basement or first level below the first story shall have at least two (2) exits arranged in accordance with section 1014.2. For the purpose of this exception, storage rooms, laundry rooms, maintenance offices and similar uses shall not be considered as providing service to the building.

23.15.1025.1 General.
Amend section 1025.1 by deleting all exceptions, except numbers 5 and 6.

23.15.1102 Definitions.
Add the following definition:

Conventional industry tolerances means plus or minus ½ inch up to 36 inches and plus or minus 1 percent over 36 inches. Slopes may be plus or minus 1 percent.

23.15.1106 Parking and Passenger Loading Facilities.
Delete section 1106. Accessible parking and passenger loading facilities shall be provided in accordance with title 21.

23.15.1110.1 Signs.
Delete Items 1 and 2 and replace with the following:

1. Accessible parking spaces required by title 21.
2. Accessible passenger loading zones required by title 21.

23.15.1203.2 Attic Spaces.

In the first sentence, add the words "insulation and" before the word "ceilings."
Amend third sentence by changing "1 inch" to "1 ½ inch."
Amend section by deleting the exception in its entirety.
Add a sentence at the end of the paragraph to read as follows:

Attic access shall not be located in a room containing bathing facilities.

23.15.1210.1 Floors.
Amend paragraph to read as follows:

In other than dwelling units, toilet and bathing room floors shall have a smooth, non-porous, non-absorbent surface such as non-cushioned sheet vinyl, sealed concrete, or ceramic tile with sealed joints or other approved materials. Base shall be of similar materials, shall extend up the wall five inches (127 mm) minimum, and shall be sealed to the flooring and wall surface and allowing differential movement without water penetration.

23.15.1210.2 Walls.
Amend first paragraph to read as follows:

Walls within two feet (610 mm) of the front and sides of urinals and water closets shall have a smooth, non-porous, non-absorbent surface such as non-cushioned sheet vinyl, sealed concrete, ceramic tile with sealed joints, approved plastic panels, or other approved materials, to a height of four feet (1219 mm) minimum.

23.15.1211 Vapor Retarders.
Amend by adding a new section 1211 titled Vapor Retarders:

1211.1 Vapor Retarders. All exterior wall, ceiling, and roof assemblies which enclose heated spaced and which are exposed to outdoor ambient temperatures shall be protected against water vapor transmission. Assemblies not otherwise of impermeable construction shall have installed, on the heated side of the insulation or air spaces, vapor retarders having a perm rating of 0.06 minimum in accordance with ASTM E96 (equivalent to 6 mil polyethylene).

23.15.1403.2 Weather Protection.
Amend third sentence by adding the words "vapor permeable" after "water-resistive."
Amend third sentence by deleting the words "as described in section 1404.2."

23.15.1404.2 Water-Resistive Barrier.
Delete this section in its entirely.

23.15.1503 Weather Protection.
Add new section 1503.6 to read as follows:

1503.6 Protection from falling ice and snow. All exits shall be protected from falling ice and snow.

23.15.1507.2.2 Slope.
Replace slopes of two units vertical in 12 units horizontal with three units vertical in 12 units horizontal.

23.15.1507.3.3 Underlayment.
Replace paragraph with:

> Underlayment shall be self-adhering polymer modified bitumen sheet covering the entire roof.

23.15.1507.3.3.1 Low Slope Roofs.
Delete section in its entirety.

23.15.1507.3.3.2 High Slope Roofs.
Delete section in its entirety.

23.15.Table 1507.3.7 Clay and Concrete Tile Attachment.
Delete column titled "Roof slope up to < 3:12" in its entirety.

23.15.1604.4 Analysis.
Add a paragraph after the last sentence:

> Exterior walls and cladding of building and interior partitions shall accommodate gravity system deflections or be capable of resisting loads imposed by vertical movement of the gravity system.

23.15.1608.1 General.
Add the following sentence:

> Greenhouses heated year round may be designed for ten (10) psf roof live load without considering roof snow loads.

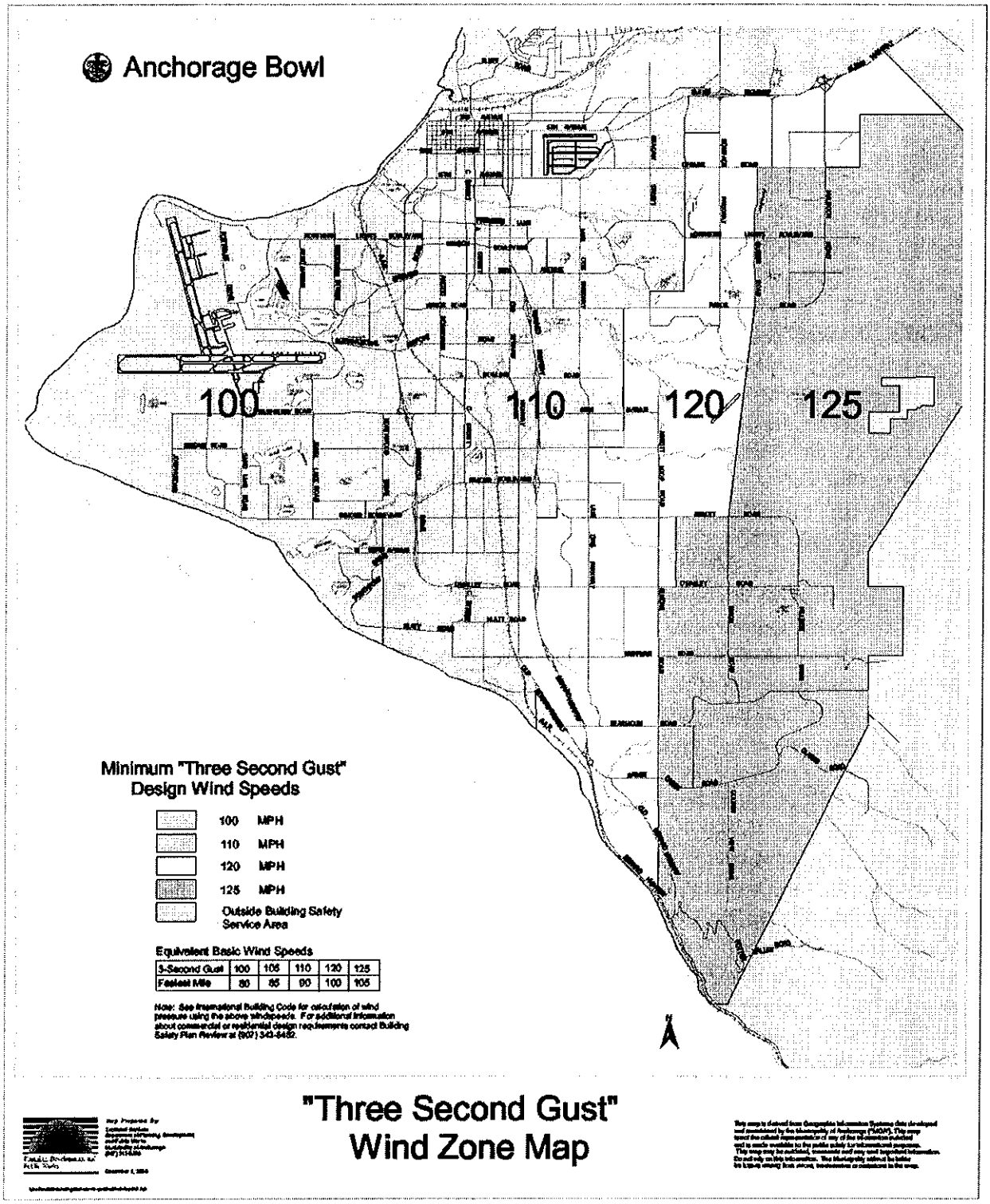
23.15.1608.3 Flat Roof Snow Loads.
Add the following sentence at the end of the first paragraph:

> The minimum flat roof snow load, P_f, shall be forty (40) pounds per square foot.

23.15.1609.3 Basic Wind Speed.
Replace the first sentence with the following:

> The basic wind speed, in mph, for the determination of the wind loads shall be determined in accordance with the Anchorage "Three Second Gust" Wind Zone Map.

Replace Figure 1609 with the Anchorage "Three Second Gust" Wind Zone Map:


Anchorage Bowl
100
110
120
125
Minimum "Three Second Gust"
Design Wind Speeds
100 MPH
110 MPH
120 MPH
125 MPH
Outside Building Safety
Service Area
Equivalent Basic Wind Speeds
3-Second Gust | 100 | 105 | 110 | 120 | 125
Fastest Mile | 80 | 85 | 90 | 100 | 105
"Three Second Gust"
Wind Zone Map

1

23.15.1609.4, Item 4 Exposure Category.
Add the following to the definition of "EXPOSURE D":

Shoreline is defined as the high tide line (as indicated by the edge of vegetation on the most recent Municipality of Anchorage base aerial photograph set).

Unobstructed is defined as any site not sheltered from the shoreline by vegetation or other impediments at least four (4) feet high and covering at least sixty (60) percent of an area extending at least thirty (30) feet perpendicular to a line connecting the building to any point of the shoreline.

23.15.1621.1 Component Design.
After section 1621.1.3 add:

1621.1.4 ASCE 7, 9.6.2.6.2.2, Item b: Add the following sentence:

2" closure angels/molding is not required where approved proprietary slide clips are used at perimeter main beams and perimeter cross tees to prevent border panels from dislodging.

1621.1.5 ASCE 7, 9.6.2.6.2.2, Item e: Add the following sentence:

2" oversize rings/adapters are not required where the sprinkler pipe between the head and the branch line is flexible.

1621.1.6 ASCE 7, section 9.6.2.6.2.2, Item h: Delete Item h in its entirety.

23.15.1704.1 General.
Amend by adding the following to the end of the paragraph:

Provided the Engineer of Record is a registered professional engineer in the State of Alaska, the Engineer of Record shall be deemed qualified to perform special inspections required under this chapter without further statements of qualifications or resumes to the Building Official.

23.15.1704.1.1 Building Permit Requirement.
Add the following subsection:

23.15.1704.1.1.1 Preconstruction Special Inspection Meeting.
A pre-construction special inspection meeting shall be required by the building official or designee, prior to the start of construction, when construction valuation meets or exceeds $1 million. A pre-construction special inspection meeting shall also be required whenever special inspection is performed on an essential facility or when the building official believes such a meeting facilitates the inspection process of any project. Such meetings are tools used to address and coordinate the special inspection activities among all people involved in the construction project. The building official (or designee) shall chair these meetings.

23.15.1704.1.2 Report Requirement.

Delete the fourth and fifth sentences and insert the following:

All discrepancies shall be brought to the immediate attention of the contractor for correction, and shall be documented in a Special Inspection Report. If action is not taken immediately or within an agreed time frame to correct the nonconformance, the Special Inspector shall promptly inform the Engineer of Record and the building official, verbally and in writing through a Special Inspection Report. Discrepancies discovered by the Special Inspector after the fact shall be reported to the Engineer of Record and the building official in writing.

Copies of inspection reports shall be available at the construction site for review by Municipality of Anchorage Building Safety Personnel.

23.15.1704 Special Inspections.

Add the following subsections:

23.15.1704.1.3 Special Inspector Pre-Approval Program.

A. Unless otherwise approved by the building official, special inspectors shall be pre-qualified and approved by the building official before performing special inspection activities on any project within the jurisdiction. Special inspectors shall obtain pre-approval for each category of inspection they wish to perform. Applicants for pre-approval as special inspectors shall submit an application describing documentable qualifications for each category of inspection(s) to be performed, with years of experience, project references, certifications where appropriate, and references with contact information. Once qualifications are accepted by the building official, an applicant special inspector shall be issued a unique special inspector number. Provisions may be made for pre-qualification of special inspector interns not meeting the basic requirements of a special inspector in a certain category, but who are supervised by a pre-qualified special inspector or design professional.

B. Approval shall be by letter from the municipality and shall include a pocket or wallet card defining special inspector's information and the categories the special inspector has been pre-approved. Special inspectors shall carry the wallet card on their person when performing inspections and show the card upon request of building official's representative or designated design professional. Special inspector approvals shall be renewed every two (2) years by reapplication of the special inspector.

23.15.1704.1.3.1 Special Inspector Intern Program.

A. The Special Inspection firm proposing to use an intern for part of their Special Inspection shall submit to the building official a written Special Inspector Intern Program for approval. The program shall define:

   A. Minimum pre-qualifying experience required for the proposed intern to participate as a Special Inspector Intern. Minimum

qualifications to begin the Special Inspector Program shall be defined by the building official.

2. The Special Inspection Intern shall be supervised as described by the written Special Inspector Intern Program. Individuals designated as supervisors shall be pre-approved Special Inspectors in the discipline the Intern is training for. Special Inspection reports and documents shall be signed by the intern and countersigned by the supervisor prior to being submitted to the Contractor, the Engineer of Record, and the building official.
3. Completion of Special Inspector Intern training in a particular category of inspection shall be demonstrated by application for pre-approval as a Special Inspector and acceptance by the building official.
4. Should an Intern fail to perform, the building official may require additional training, additional supervision, or removal from the project.

23.15.1704.1.3.2 Approval Suspension.

The building official may suspend an individual's approval as a special inspector for a project where the special inspector demonstrates a lack of knowledge, neglects duties due to their own fault or falsifies documents. The special inspector shall be provided written notification and shall be afforded the opportunity by the building official to be heard. Decisions may be appealed to the Building Board of Appeals.

23.15.1704.1.3.3 Removal of Pre-Approved Status.

The building official may revoke or suspend an individual's pre-approval status when a special inspector neglects duties, demonstrates a lack of knowledge, falsifies documents or misrepresents qualifications. Pre-approved status may be reinstated on recommendation of the Special Inspector Peer Committee or after 365 days and upon submission of proof of additional training or certifications. The special inspector shall be provided written notification and shall be afforded the opportunity by the building official to be heard. Pre-approval status decisions may be appealed to the Building Board of Appeals.

23.15.1704.1.4 Ad Hoc Special Inspector Peer Committee.

An advisory committee of special inspection peers may meet to provide guidance on special inspection matters including but not necessarily limited to, special inspector qualifications, special inspection related code issues, special inspection requirements, remedies to disputes regarding special inspection duties and procedures, and special inspector approval program issues. The Ad Hoc Special Inspection Committee shall be comprised of a balanced membership of peers and shall include a balanced representation of the special inspection profession, design professionals, and public officials. The committee shall meet as required and shall be chaired by the building official or designee. Decisions by the building official may be appealed to the Building Board of Appeals. For a quorum, a peer committee requires attendance of individuals from four (4) businesses performing similar special inspections, and the building official.

23.15.1704.3 Steel Construction.
Add the following exception under Item 2, to read as follows:

2.6. Welds listed under exception 2 shall not require Special Inspection if design stresses are less than half of the allowable stresses and welds are placed by AWS certified welders. The Engineer of Record shall indicate on the drawings which welds, if any, do not require Special Inspection.

23.15.1704.3.1 Welding.
Add a new paragraph as follows:

For Special Moment-Resisting Frames, the Special Inspector shall be a qualified, AWS Certified Weld Inspector.

23.15.1704.11 Sprayed Fire-Resistant Materials.
Add the following:

Exception: Shotcrete work not of a structural nature or not for water retention structures, fully supported on earth, for minor repairs or when no special hazard exists and special inspection is waived by the building official.

23.15.1802.1 General.
Delete the second sentence and replace with:

The classification and investigation of the soil shall be made by an Alaska registered civil engineer.

23.15.1802.2.3 Groundwater Table.
Replace the subsection with the following:

Any subsurface soil investigation completed in accordance to this chapter shall identify the location and elevation of any ground water found within the limits explored.

23.15.1802.2.6 Seismic Design Category C.
Add the following after the paragraph:

A. Evaluation of liquefaction, slope stability, and surface rupture due to faulting or lateral spreading shall show through historic record, subsurface exploration, and analysis the building site and all natural, permanent cut, fill, or stabilized slopes exhibit an acceptable factor of safety or an acceptable level of risk. It may be necessary to extend the investigation beyond the immediate site boundaries in order to evaluate applicable hazards.

B. The level of evaluation shall be a function of the Seismic Use Group of the structure and its location relative to the mapped Seismically-Induced

Ground Failure Zones shown in the *Municipality of Anchorage 1980 Anchorage Coastal Resource Atlas, Volume I.*

C. Liquefaction: The evaluation of liquefaction potential for Seismic Use Group I structures located in Seismically-Induced Ground Failure Zones 1, 2, or 3 may be based on historic record. The evaluation of liquefaction potential for all Seismic Use Group II and III structures, and for Seismic Use Group I structures located in Seismically-Induced Ground Failure Zones 4 or 5, shall follow an accepted empirical procedure. The potential for liquefaction and soil strength loss shall be evaluated in terms of peak ground acceleration, earthquake magnitude and duration.

D. Slope Stability & Lateral Spreading: Evaluations of slope stability and surface rupture due to lateral spreading may be analyzed following one of two methods defined below. All analyses shall consider the potential loss of soil strength due to liquefaction, or due to remolding of sensitive cohesive materials.

Method 1. Pseudo-Static Analysis: Following a Limit-Equilibrium analysis, the building site and all natural, permanent cut, fill, or stabilized slopes shall exhibit a minimum factor of safety of 1.50 under static loading conditions; and a minimum factor of safety of 1.10 for seismic loading conditions, when applying the minimum horizontal inertia force determined by multiplying the acceleration factor in Table 2315.1802.2.6 to the weight of the potential sliding mass.

Method 2. Dynamic Analysis: The stability of the building site and all natural permanent cut, fill or stabilized slopes shall exhibit an acceptable safety factor or magnitude of displacement under seismic loading following a dynamic analysis. Dynamic analyses shall be based on site-specific design ground motions defined in Table 23.15.1802.2.6.

TABLE 23.15.1802.2.6
Seismic Horizontal Acceleration Factors

Method of Evaluation	Horizontal Acceleration Factor
1. Limit-Equilibrium: Zone[(a)] 1, 2, and 3 Zone[(a)] 4 and 5	 0.30g 0.20g
2. Dynamic Analysis	Peak surface acceleration corresponding to a 475-year return period ground motion (in bedrock), as modified for the site conditions (Ref: Sections 1615.1 and 1615.2).

a. Seismically-Induced Ground Failure Zones (Ref: *Municipality of Anchorage 1980 Anchorage Coastal Resource Atlas, Volume I*).

23.15.1802.2.7 Seismic Design Category D, E, or F.
In Item 2, delete the last two sentences. Delete the Exception.

23.15.1802.2.8 Permafrost.
Add a new subsection 1802.2.8 to read as follows:

A subsurface investigation shall be performed to evaluate whether permafrost exists at any building site located within areas delineated on the Mass Wasting map (*Anchorage Coastal Resources Atlas, Volume 1: The Anchorage Bowl, 1980*) as having a high potential for isolated permafrost conditions.

23.15.1802.4.1 Exploratory Boring.
Amend by replacing "registered design professional" with "Alaska registered Civil Engineer."

23.15.1802.5 Soil Boring and Sampling.
Amend by replacing "registered design professional" at the end of the first sentence with "Alaska registered Civil Engineer."

23.15.1802.6 Reports.
Amend by adding "by a civil engineer licensed in the State of Alaska" after "shall be submitted."

Add the following items after item 9:

10. When groundwater is known or suspected to exist within six feet (1.8m) of final grade, the report shall include surface and subsurface drainage recommendations.
11. The report shall address the potential for isolated permafrost. When permafrost is known or suspected to exist within the building site, the report shall include discussion of the potential for thaw or creep settlement and foundation recommendations to mitigate such consequences.

12. The soils report shall provide a summary of the methods, parameters and assumptions used to evaluate the hazards of liquefaction, slope stability, and lateral spreading.

23.15.1803.3 Site Grading.

Add the following paragraph to the end of the section:

There shall not be an increase in surface drainage to adjacent properties. Approved discharge locations shall include street gutters, drainage easements, ditches or other approved locations. Surface runoff may be retained on site to prevent impacts to neighboring properties.

Add the following paragraph to the end of the section:

Footing drains or sump pumps shall discharge to a ditch or storm sewer for new construction where available. Backup emergency systems may discharge to the surface. Primary systems shall not discharge onto adjacent properties. Where sump pumps or footing drains discharge on the soil surface, the effluent shall be directed toward drainage easements, street gutters, ditches or other approved locations. Effluent may be retained on site to prevent impacts to neighboring properties.

23.15.1803.5 Compacted Fill Material.

Replace "90 percent" in the Exception with "Ninety-five (95) percent".

23.15.1805.1 General.

Add the following at the beginning of the paragraph:

Footings and foundations shall be constructed of masonry, concrete, or treated wood. Footings of concrete and masonry shall be of solid material. Foundations supporting wood shall extend at least six (6) inches above the adjacent grade. Unless other recommendations are provided by a foundation investigation report, footings shall meet the following requirements:

Except for the upper 12 inches, peat or organic silts (Pt. OL, or OH soils - as defined by the Unified Soil Classification System) shall not be used for backfill within eighteen (18) inches of the footing or stem wall.

23.15.1805.2.1 Frost Protection.

Delete "Except where otherwise protected from frost," and change "foundation" to "Foundation."

Add the following at the end of the section:

Minimum footing depths shall be as indicated in Table 23.15.1805.2.1. Footings shall bear on undisturbed natural inorganic soil, or suitably compacted fill.

Cast-in-place concrete piers shall be founded at a depth suitable for structural support or as indicated in Table 23.15.1805.2.1, whichever is greater. Connecting grade beams between piers on perimeter walls of warm buildings shall extend at least thirty-six (36) inches below ground surface and shall be protected from frost heave. The potential for frost heave below grade beams of cold structures shall be accounted for in the design of these elements.

Table 23.15.1805.2.1

Foundation Type	Minimum Footing Depth, Inches [6] (mm)	
	Warm Foundation	Cold Foundation [3,4]
Perimeter Footing [1]	42 (1067)	60 (1524)
Interior or Interior Isolated Spread Footing [2]	8 (203)	60 (1524)
Cast-in-Place Concrete Pier	42 (1067)	120 [5] (3048)
Exterior Isolated Foundation	NA	120 [5] (3048)

Notes:

1. Dimension indicated is from bottom of footing to adjacent exterior grade. Required depth to bottom of footing within a crawl space shall not be less than eight (8) inches (203 mm). Basements or crawl space walls supporting more than five (5) feet (1524 mm) differential fill on opposite faces shall be restrained as necessary against lateral movement.
2. Dimension indicated is from bottom of footing to nearest adjacent grade.
3. Exterior decks, landings, and platforms not rigidly attached to the building and not greater than thirty (30) inches (702 mm) above grade may bear directly on the ground. Bearing materials shall meet other provisions of this code.
4. The minimum footing depths may not be adequate for frost susceptible soils. Cold footings shall be founded below the frost line, or be protected from freezing with insulation or other appropriate means. In addition, provisions shall be made to resist uplift forces due to frost jacking on the sides of cold foundations.
5. Foundations installed in non-frost-susceptible material may be sixty (60) inches (five feet) (1524 mm).
6. Non-load-bearing site structures not attached to the building, such as fences, light poles, sign posts, shall have a footing depth based on an analysis of the vertical and lateral loads on the structure and the structure's susceptibility to damage from frost action.

23.15.1805.2.4 Footing Definitions.

Add a new subsection 1805.2.4 as follows:

1805.2.4 Footing Definitions.

Warm Foundation: Any foundation where the temperature of the bearing soil is normally maintained above freezing.

Cold Foundation: Any foundation where the temperature of the bearing soil is normally subject to freezing.

23.15.1805.3 Footings On Or Adjacent To Slopes.
Add the following paragraph before the first sentence:

When a foundation investigation is required in accordance with section 23.15.1802.2.7, the minimum building and structure clearances and setbacks shall be as defined in sections 1805.3.1 and 1805.3.2, or fifteen (15) feet (4572 mm) from the surface projection of the most critical theoretical failure plane determined from the slope stability analysis, whichever is greater.

23.15.1805.3.5 Alternate Setbacks And Clearance.
Change "registered design professional" to "civil engineer registered in the State of Alaska."

23.15.1805.4.1 Footing Design.
Add the following to the beginning of the first paragraph:

All footings shall be concrete.

23.15.1805.4.6 Wood Foundations.
Add the following to the beginning of the first paragraph:

All footings shall be concrete. All-weather wood foundation systems may only be installed in Type GW, GP, SW, and SP soils unless a complete soils investigation and foundation design, prepared by a civil engineer registered in the State of Alaska, is submitted for approval.

Add a second paragraph as follows:

Hot dipped zinc-coated fasteners may not be used for basement or crawl space construction. Fasteners and anchor bolts used in concrete footings shall be stainless steel. Anchor bolts shall be a minimum ten inch (10") by 5/8-inch nominal diameter embedded at least seven (7) inches (178 mm) into the concrete. Treated wood foundation plates or sills shall be installed in accordance with section 23.15.1805.6.

23.15.1805.5 Foundation Walls.
Add the following after the paragraph:

Foundation walls in all-weather wood foundation systems shall be restrained at the footing line by the following methods:

1. Basement. A four-inch (102 mm) concrete slab either poured against a minimum one-inch (25.4 m) x four-inch (102 mm) treated wood screed or a four-inch (102 mm) concrete slab poured against a keyway between the studs.
2. Crawl Space. A minimum four-inch (102 mm) x four-inch (102 mm) nominal size pressure-treated or decay-resistant member installed

immediately adjacent to the wall and bolted to the footing with 5/8-inch (15.9 mm) diameter anchor bolts maximum two feet 0 inches (610 mm) on center. The maximum soils height against the wall is three feet 0 inches (914 mm).

Exception: The above need not apply if a suitable alternate design is prepared by a civil engineer registered in the State of Alaska and approved by the building official.

23.15.1805.6 Foundation Plates Or Sill Bolting.

Add the following at the end of the paragraph:

Foundation plates or sills shall be bolted to the foundation or foundation wall with galvanized steel bolts.

23.15.1807.1 Where Required.

Add the following sentence at the end of the paragraph:

All crawlspace walls below exterior grade shall be damp-proofed.

23.15.1807.1.3 Ground Water Control.

Add the following at the end of the paragraph:

The space between the side of a basement excavation and the exterior of a basement wall shall be backfilled for half the height of the excavation with the same material (Type GW, GP, SW, or SP soils) on which the footing is placed.

23.15. 1807.2.2 Walls.

Add a third paragraph to read as follows:

Approved damp-proofing shall be applied over the below-grade portion of exterior crawl space walls prior to backfilling. A treated lumber or plywood strip shall be attached to the wall to cover the top edge of the approved damp-proofing. The wood strip shall extend at least two (2) inches (50.8 mm) above and five (5) inches (127 mm) below finish grade level to protect the approved dampproofing from exposure to light and from mechanical damage at or near grade. The joint between the strip and the wall shall be caulked full length prior to fastening the strip to the wall. Alternatively, brick, stucco, or other covering appropriate to the architectural treatment may be used in place of the wood strip. The approved damp-proofing shall extend down to the bottom of the concrete footing.

23.15.1807.3 Waterproofing Required.

Add the following at the end of the paragraph:

In addition, all exterior below grade walls enclosing habitable spaces shall be waterproofed in accordance with section 1807.3.2.

23.15.1808.2.8.3 Load Tests.

Delete "registered design professional, but shall be no greater than two times the test load that produces a settlement of 0.3 inches (7.6 mm)" in the fifth sentence and add "civil engineer registered in the State of Alaska".

23.15.1808.2.23.2.1 Design Details for Piers, Piles and Grade Beams.
Delete the first two sentences.

23.15.1905.12 Cold Weather Requirements.
Amend by adding the following sentence at the end of Item 1.

For purposes of near freezing weather considerations, 40°F shall be used. The protection shall be capable of maintaining the temperature of the curing concrete at or above the required 50°F for the required time periods mentioned in section 1905.11.

23.15.1907.5.1 Support.
Amend by adding a new paragraph to the end of the section to read as follows:

1907.5.1.1 Installation of Anchors. Except where approved by the registered design professional, anchors shall be in place prior to placing concrete.
Exception: Anchors having a required embedment length of seven (7) inches or less may be field placed while concrete is in plastic condition.

23.15.2104.6 Installation of Anchors.
Add a new section 2104.6 to read as follows:

2104.6 Installation of Anchors. Anchors shall be in place prior to grouting.
Exception: Anchors having a required embedment of thirteen (13) inches or less may be field placed while grout is in plastic condition.

23.15.2208.1 Storage Racks.
Add the following exception to 2208.1:

Exception: The building official may waive the design requirement for storage racks less than or equal to eight (8) feet in height.

23.15.2302.1 Definitions.
Add the following sentence at the end of the definition of Diaphragm Rigid:

Wood structural panel diaphragms may be considered flexible.

23.15.2305.1.2.1 Framing Members.
Add to the last sentence:

Double two (2) inch nominal framing members may be used in lieu of 3x framing at abutting panel edges where the panel joint occurs between the members and the members are spliced for shear forces.

23.15.2305.2.1 Design of Wood Diaphragms.

Add the following at the end of the paragraph:

Wood structural panel diaphragms may be considered flexible for the purposes of analysis except as restricted by section 23.05.2.5 for three sided and cantilevered diaphragms.

23.15.2308.9.2.2 Top Plates for Studs Spaced at 24 Inches.

Delete paragraph in its entirety and substitute the following:

When bearing studs are spaced at 24-inch (610 mm) intervals, joists or trusses shall bear within five inches (127 mm) of the studs beneath or a third plate shall be installed.

23.15.2308.9.8 Pipes In Walls.

Amend the section by adding a paragraph as follows:

All studs in exterior plumbing walls shall be a minimum six-inch (152 mm) nominal width unless otherwise approved.

23.15.2308.10.1 Wind Uplift.

Add as follows:

Metal framing anchors with a 400 pound uplift capacity shall be spaced no further apart than 48 inches (1,219 mm) for roof rafters or trusses with spans less than 20 feet (6,096 mm) in length, and no further apart than 24 inches (610 mm) for spans greater than 20 feet (6,096 mm) in length. Where walls have structural panel sheathing, the anchor may be placed on the inside of the wall without direct anchorage to studs below. The continuity of the load path through the walls and floors below shall be considered. For roof rafters or trusses with spans greater than 40 feet (12,192 mm), properly substantiated calculations shall be submitted to the building official for review.

(**Note**: These values are now in code, but the new table does not include 120 mph.)

Amend by adding the following sentence at the end of the paragraph:

Uplift anchors shall be installed on each truss end.

23.15 Table 2902.1

Replace the reference to section 410.1 of the International Plumbing Code with the following:

Where water is served in restaurants, drinking fountains shall not be required. In other occupancies where drinking fountains are required, bottle water dispensers shall be permitted to be substituted for the required drinking fountains. Drinking

fountains shall not be required in B and S occupancies containing break rooms with sinks.

Replace the reference to section 419.2 of the International Plumbing Code with the following:

Substitutions for water closets. In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets.

Replace the reference to section 411 of the International Plumbing Code with the following:

Waste connections shall not be required for emergency showers and eyewash stations.

23.15.3001.1 Scope.
Delete paragraph and replace with the following:

This chapter governs the design, construction, installation, alteration, operation, maintenance, and repair of elevators and conveying systems, such as dumbwaiters, escalators, moving walkways, and material lofts, and their components.

23.15.3001.2 Reference Standards.
Add the following referenced standards after A17.1:

...with supplements A17.1c-1999 addenda and A17.1d-2000 addenda,

Add the following after ASME B20.1:

...,ANSI A10.4,

23.15.3001.4 Change in Use.
Add new paragraph to read as follows:

Any change of use shall not be made without the approval of the building official. Approval shall be granted only after it is demonstrated the installation conforms to the requirements of ASME A17.1 and its supplements.

23.15.3002.1 Hoistway Enclosure Protection.
Add the word "escalator," after the word elevator.

Add second sentence to read:

Refer to ASME A17.1, Chapter VIII, Section 801.

Add new paragraph to read as follows:

Elevator hoistway shaft enclosure walls not required to have a fire resistive rating may be constructed with glass. Such glass shall be laminated glass passing the requirements of ANSI A17.1.

23.15.3003.2 Fire-Fighters' Emergency Operation.

Add a second paragraph to read as follows:

Elevators shall be tested on normal and on emergency power. Elevators shall be tested by activating the smoke detectors and by use of the recall key switch. These tests shall be performed at intervals not to exceed one (1) year after certification, and yearly thereafter.

23.15.3004.3 Area of Vents.

Delete the last sentence of section 3004.3 and insert the following:

Vents shall be mechanically operated and shall be activated upon operations of any elevator lobby smoke detector or elevator machine room detector. Vents shall be equipped with a fail-safe device to open when power failure occurs.

The venting of each individual hoistway shall be independent from any other hoistway venting, and the interconnection of separate hoistways for the purpose of venting is prohibited.

23.15.3005.4 Personnel and Material Hoists.

Add new first sentence to read:

Personnel and material hoists shall meet the requirements of ANSI A10.4.

Add new subsection 3005.4.1 to read:

3005.4.1 Elevators for Construction and Demolition. All elevators, hoists, and material lifts used for construction to convey personnel and materials for construction and demolition operations shall be required to be certified by either the elevator or lift manufacturer or an independent, NAESA certified elevator inspector at the start of construction, prior to initial use, and each six (6) months thereafter while it remains installed at the project site. Such inspection shall include, but is not be limited to, inspection of the erected frame, the motor, hoist mechanisms, braking mechanism, means of entry and egress, load testing, and governor test. Tests reports and certification letter shall be submitted to the elevator section of the Building Safety Division within 72 hours of completion of the inspection. This requirement shall be retroactive to all permits, started prior to the approval of this code which remain open.

All outstanding non-conformances to ANSI A10.4 shall be corrected, reinspected, and certified before said elevator or hoist is placed in use.

23.15.3006.1 Access.

Add new paragraph to read:

Access to elevator machine rooms above grade shall be from the inside of the building or shall be by an enclosed, ventilated, and well lighted passageway protected from the weather. Passageway shall be a minimum of 3'- 6" wide by 6'- 8" high, and shall meet the material and construction requirements of this code.

23.15.3006.5 Shunt Trip.
Delete section 3006.5 "Shunt Trip".

23.15.3007 Elevator Sprinkler Requirements.
Add new section 3007 as follows:

3007 Elevator Sprinkler Requirements.

3007.1 General Requirements. Sprinkler systems shall not be allowed in elevator machine rooms. Sprinkler heads shall not be allowed at the top of elevator hoistways.

23.15.3008 Underground Hydraulic Elevator Pipes, Fittings, and Cylinders.
Add new section 3008 as follows:

3008 Underground Hydraulic Elevator Pipes, Fittings, and Cylinders.

A. All newly installed underground pressure cylinders and pipes containing hydraulic elevator fluids shall be encased by an outer plastic containment system meeting the following requirements:
   1. The plastic casing shall be constructed of high density polyethylene (HDPE), polyethylene or polyvinyl chloride (PVC). The plastic pipe wall thickness shall not be less than 0.125 inches (3.175 mm). The casing shall be capped at the bottom and all joints shall be solvent or heat welded.
   2. The casing shall be sealed and dry around the hydraulic pipe and cylinder to contain any leakage into the ground and to prevent electrolysis to hydraulic pipe and cylinder. Dry sand may be used to stabilize the hydraulic cylinder.
   3. A 0.50 inch (12.7 mm) pipe nipple with a one-way check valve shall be located between the casing and cylinder for monitoring purposes.
   4. On new and existing hydraulic installations, there shall be a log kept in the machine room of the oil level, usage, and loss. Any unaccounted loss in hydraulic fluids shall require shut down of the elevator and full load static test to determine continued capacity. Elevators shall not be returned to service until loss source is identified and corrections are made, followed by inspection.

B. By January 1, 2006, all existing cylinders buried in the ground shall be provided with a safety bulkhead with an orifice of a size

permitting the car to descent at a speed not greater than 0.075 m/s (15 ft/min.), nor less than 0.025 m/s (5 ft/min.). A space of not less than 25 mm (1 in.) shall be left between the welds of the safety bulkhead and the cylinder head. Safety bulkheads shall conform to 3.18.3.6 of the ASME A17.1-2004 edition of the Safety Code for Elevators and Escalators. An outer plastic containment shall be provided to meet 1, 2, and 3 described above.

C. These elevators shall have immediate full load pressure tests, and static pressure test performed to the hydraulic system, and shall have these tests performed every three (3) months thereafter until the jacks are replaced. If they fail the tests due to leaking of hydraulic fluid into the ground, they shall be placed out of service immediately until the hydraulic jacks are replaced.

D. If an elevator indicates a manufacture date of 1972, the building owner shall provide documentation from the original manufacturer indicating it has a safety bulkhead in the jack, or the jack shall be considered to have a single bottom plate, and shall need to be replaced.

23.15.3009 Seismic Safety Device.

Add new section 3009 as follows:

3009 Seismic Safety Device.

All electric and hydraulic elevators shall be equipped with a seismic safety in accordance with the requirements of Seismic Requirements, Part XXIV of ASME A17.1.

3009.1 Existing Elevator Seismic Upgrade Requirements. All electric and hydraulic elevators within the jurisdiction of the Municipality of Anchorage shall be upgraded to include an appropriate seismic safety device within five (5) years of the date of adoption of these amendments to the 2003 International Building Code. The minimum requirements for such elevators shall be:

1. Electric Elevators: A counterweight displacement switch shall be installed in accordance with rule 2409 of ASME A17.1.
2. Hydraulic Elevators: An elevator safety valve shall be installed in accordance with rule 2410.6 of ASME A17.1 to be located at the elevator pit level.
3. Permit, Inspection, and Approval: A permit for installation of the seismic upgrade shall be taken out by a licensed elevator contractor. Once complete, inspections shall be called for to verify completeness of installation.

3009.2 Roped Hydraulic Elevators. Roped hydraulic elevators shall have snag guards installed as part of their seismic safety system.

23.15.3010 Reporting Injuries or Unsafe Conditions.

Add new section 3010 as follows:

3010 Reporting Injuries or Unsafe Conditions.
Refer to ASME 17.1 and supplements.

3010.1 Reporting Requirements. An owner or operator shall report, in detail and within forty-eight (48) hours, any accident involving an elevator or escalator resulting in injury to a person. If the deadline for the report falls on a weekend or holiday, the report shall be made at the beginning of the next municipal working day. The report shall be in the form of a written narrative to the building official, and shall be signed by author.

3010.2 Unsafe Conditions. When an inspection reveals an unsafe condition, the inspector shall immediately file with the owner and the building official a full and true report of such inspection and such unsafe condition. If the building official finds the unsafe condition endangers human life, the building official shall cause to be placed on such elevator, escalator, or moving walk, in a conspicuous place, a notice stating such conveyance is unsafe and may order the operation and use of the conveyance to cease until all necessary repairs are made and the conveyance is reinspected and released to return to operation. The owner shall see such notice of unsafe conditions is legibly maintained where placed by the building official. The building official shall also issue an order in writing to the owner requiring the repairs or alterations to be made to such conveyance as necessary to render it safe, and may order the operation discontinued until the repairs or alterations are made or the unsafe conditions are removed. A posted notice of unsafe conditions shall be removed only by the building official when satisfied the unsafe conditions are corrected.

23.15.3011 Top-of-Car Inspection of Existing Elevators.
Add new section 3011 as follows:

3011 Top-of-Car Inspection of Existing Elevators.
All existing elevators shall have top-of-car operating devices as specified below:

1. Elevators with automatic or continuous-pressure operation shall have a continuous-pressure button-operating switch mounted on the top of the car for the purpose of operating the car solely from the top of the car. The device shall operate the car at a speed not exceeding 150 fpm (0.76 m/s).
2. The means for transferring the control of the elevator to the top-of-car operating device shall be on the car top and located between the car cross-head and the side of the car nearest the hoistway entrance normally used for access to the car top.

23.15.3012 Access To Hoistway On Existing Elevators.
Add new section 3012 as follows:

3012 Access To Hoistway On Existing Elevators.

A. All existing elevators shall have mechanical (lunar key) means to access hoistway at the top and bottom landing. Elevators with walk in pit access may exclude this access at the bottom landing.

B. Hoistway door unlocking devices shall conform to the following:
1. The device shall unlock and permit the opening of the hoistway door from the access landing irrespective of the position of the car.
2. The device shall be installed at the access landings, and may be provided at other landings for emergency purposes.
3. The device shall be designed to prevent unlocking the door with common tools.
4. The operating means for unlocking the door shall be available to and used only by inspectors, elevator maintenance and repair personnel, and qualified emergency personal.
5. The unlocking-device keyway shall be located at a height not greater than 6 feet 11 inches (2.11m) above the floor.

23.15.3013 Residential Elevator Inspections.
Add new section 3013 as follows:

3013 Residential Elevator Inspections.
Annual certificates of inspection shall not be required for conveyances within one and two family dwelling units.

23.15.3014 Inspection Periods.
Add new section 3014 as follows:

3014 Inspection Periods.
Power passenger elevators, material lifts, escalators, and moving walks shall be reinspected and recertified every twelve (12) months.

23.15.CH.34 Existing Structures.
Delete chapter 34 in its entirety and refer to the Anchorage Existing Buildings Code.

23.15.CH.35 Referenced Standards.
Revise by changing the referenced standards' publication dates from those listed to the following:

N.F.P.A. 12-2000	*Carbon Dioxide Extinguishing System*
N.F.P.A. 12A-1997	*Halon 1301 Fire Extinguishing System*
N.F.P.A. 13-1999	*Installation of Sprinkler Systems*
N.F.P.A. 13D-1999	*Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*
N.F.P.A. 13R-1999	*Installation of Sprinkler Systems in Residential Occupancies Up to and Including Four Stories in Height*
N.F.P.A. 14-2000	*Standpipe and Hose System*
N.F.P.A. 72-1999	*National Fire Alarm Code*
N.F.P.A. 2001-2000	*Clean Agent Fire Extinguishing Systems*

Add reference to:

N.F.P.A. 20-1999 *Installation of Centrifugal Fire Pumps*

23.15.APP.CH.D Fire Districts.
Delete Appendix chapter D in its entirety.

23.15 Appendix.
Adopt Appendices A-C, G and H.

23.15.H.101.2 Signs Exempt from Permits.
Delete subsection in its entirety and substitute the following:

A. The following signs shall not require a permit under this chapter. An exemption shall not affect the requirement that a sign be installed and maintained so as to conform with the new requirements of this code and any other applicable law.
   1. The changing of the advertising copy or message on a painted or printed sign only. Except for theater marquees or similar signs specifically designed for the use of replaceable copy, electric signs shall not be included in this exemption.
   2. Painting, repainting or cleaning of an advertising structure or the changing of advertising copy or message thereon shall not be considered an erection or alteration requiring a sign permit, unless structural change is made.
   3. Official signs erected by a federal, state or municipal agency.
   4. Signs not exceeding six (6) square feet in area on any one of its faces.
   5. Signs affixed to or painted on a currently operable and licensed vehicle.
   6. Printed messages carried on any surface not attached to or supported from the ground or from a structure. (OA 88-30S).

23.15.H.101.3 Permits Required.
Add a new section H.101.3 as follows:

A sign permit shall be required before any sign is erected. No permit shall be issued unless the proposed sign fully conforms to all requirements of this chapter and of Anchorage Municipal Code title 21.

23.15.H.101.4 Application for Permit.
Add a new section H.101.4 as follows:

A. An application for a sign permit shall be made in writing on forms prescribed by the building official and shall be complete only if accompanied by:
   1. The location by street and number of the proposed sign structure;
   2. The name, address, and telephone number of owner of the property on which the sign is to be erected;
   3. The name, address, and telephone number of the sign contractor or erector;

4. A drawing to scale showing the design of the sign, including dimensions, sign size, method of attachment, structural specifications, source of illumination and showing the relationship to any building or structure to which it is or is proposed to be installed or affixed to which it relates;
5. For permanent, freestanding signs only, a plot plan to scale, indicating location of the sign relative to property lines, streets and sidewalks, utility easements, buildings, driveways, parking spaces, existing signs (for B-1 and R-0 zones only), and structures identified by their principal use;
6. For B-1 and R-0 zones only, a list of all existing signs on the property on which the proposed sign is to be erected and a description of the size and square footage of each such existing display surface area; and
7. Such other information as the building official determines is reasonably necessary to an evaluation of the proposed sign's compliance with this code.

CHAPTER 23.20 LOCAL AMENDMENTS TO THE INTERNATIONAL MECHANICAL CODE 2003 EDITION

Sections

23.20.100	Local Amendments to the International Mechanical Code, 2003 Edition
23.20.101.2	Scope
23.20.202	Definitions
23.20.303.4	Protection from Damage
23.20.303.8	Elevator Shafts
23.20.304.3	Elevation of Appliances and Other Ignition Sources
23.20.306.3	Furnaces in Strip Mall Ceilings
23.20.306.4	Appliances Under Floors
23.20.306.5	Equipment and Appliances On Roofs or Elevated Structures
23.20.306.7	Mezzanine and Platforms
23.20.401.5.4	Mechanical Intake Openings
23.20.	TABLE 401.6 Opening Sizes in Louvers, Grilles and Screens Protecting Outdoor Exhaust and Air Intake Openings
23.20.403.3	Ventilation Rate
23.20.406.1	General
23.20.501.2	Outdoor Discharge
23.20.504.6.1	Clothes Dryer Exhaust Duct Length
23.20.505.1	Domestic Systems
23.20.511.1	Dust, Stock and Refuse Conveying Systems
23.20.514.2	Prohibited Applications
23.20.514.4	Kitchen Ventilation Heat Recovery Equipment
23.20.515.1	Multi-Port Exhaust Fans
23.20.601.3	Contamination Prevention
23.20.602.1	General
23.20.603.9	Joints, Seams and Connections

23.20.604.1	General
23.20.701.3	Circulation of Air
23.20.701.4.2	Attic Space
23.20.711	Combustion Air
23.20.801.21	Locations and Support Of Venting Systems Other Than Masonry Chimneys
23.20.802.9	Vent Terminals - Ice Dam Protection
23.20.804.3.4	Horizontal Terminations
23.20.807.1	Gypsum Wall Board (Sheetrock) Clearances
23.20.918.9	Multi-Zone Systems
23.20.923.2	Small Ceramic Kilns - Ventilation
23.20.1001.1	Scope
23.20.1006.7	Boiler Safety Devices
23.20.1006.7	Table 10A Controls and Limit Devices for Automatic Boilers
23.20.1006.8	Electrical Requirements
23.20.1007	Boiler Low-Water Cutoff
23.20.1105.3	Refrigerant Detector
23.20.1105.6.2	Make-up Air
23.20.1204.2	Required Thickness
23.20.1301.1	Scope
23.20.	International Fire Code Compressed Gases, International Fire Code Chapter 30
23.20.	International Fire Code Service Stations and Repair Garages, International Fire Code

23.20.100 Local Amendments To The International Mechanical Code, 2003 Edition.

The amendments to the International Mechanical Code are listed hereafter by section. The last digits of the section number (after the title and chapter digits) are the section of the International Mechanical Code to which the amendment refers, i.e., 23.20.303 refers to amendments to section 303 of the International Mechanical Code).

Delete entire chapter except for section 101 and 102.

23.20.101.2 Scope.

Delete exception number 1.

23.20.202 Definitions

Amend by adding the following definitions:

Heat Recovery Device is an assembly containing a heat recovery element.

Heat Recovery Element is a device or series of devices whose purpose is to reclaim only the heat content of air, vapors, gases, and/or fluids being expelled through the exhaust system, and transferring the thermal energy so reclaimed to a location whereby a useful purpose may be served.

23.20.303.4 Protection from Damage.

Add the following paragraphs, 1 through 9:

1. If the equipment platform is a minimum of 30" high and the equipment does not extend beyond the face of the platform, additional barriers are not required.
2. If equipment is installed in an alcove, a barrier shall not be required as long as the equipment does not protrude beyond the face of the wall and the height of the alcove platform, measured from the floor to the top of the platform, is a minimum of 30" in height.
3. If the equipment platform is less than 30" high, one or more barriers shall be installed.
4. The barriers shall be a minimum 30" high and be constructed of a minimum 2" diameter schedule 40 iron pipe.
5. The barrier shall have a minimum of 6" setback from the platform or equipment. The maximum unprotected distance shall not exceed five (5) feet.
6. The barrier shall be installed per one of the following methods:
   a. Buried a minimum of 2'-0" deep in compact soil and imbedded in concrete slab.
   b. Set in a minimum 1'-0" x 1'-0" square x 1'-0" deep block of concrete (slab included).
   c. Secured to a wood framed garage floor with flange and stainless steel bolts and imbedded in concrete slab.
   d. Secured to the concrete slab using a floor flange with a minimum of four 3/8" diameter x 3 ½" long galvanized or stainless steel bolts.
7. Piping is not allowed to be surface mounted on the face of the platform, where it may be subjected to damage.
8. Unit heaters and related piping shall be mounted clear of any potential vehicle interference, per the requirements of chapter 3.
9. Physical clear width and depth of the garage shall be maintained per title 21.

23.20.303.8 Elevator Shafts.

Add exception as follows:

Exception: Mechanical equipment and devices exclusively serving the elevator.

23.20.304.3 Elevation of Appliances and Other Ignition Sources.

Amend by deleting section 304.3 and replace with the following:

A. Equipment and appliances with components that generate a glow, spark, or flame (such as switches, electrical receptacles, thermostats, washing machines, dryers, furnaces, boilers, water heaters, pumps, freezers, refrigerators, motors, etc.) located in spaces of a building where flammable vapors may accumulate due to leakage or spills from fuel tanks

of motorized equipment, shall have such ignition sources elevated at least 18" (457mm) above the floor.

1. Repair garages (S-1 occupancies), aircraft hangars (S-2 occupancies), or fuel dispensing and storage areas are also classified as hazardous locations by electrical, mechanical, and fire codes, and shall meet additional and more restrictive installation requirements.
2. Places with overhead doors where equipment containing combustible fuels may have access, such as areas used for wholesale or warehouse activities (F, M, S-1, or S-2 occupancies) and parking garages (S-2 occupancies) shall comply with the 18" (457mm) requirement for elevation of ignition sources.
3. Private residential garages (U occupancies) shall also comply with the 18" (457mm) requirement. (Note: Rooms or spaces not part of the habitable living space and that communicate directly into a garage are considered to be part of the garage.)

   Exceptions: Locations where equipment and appliances do not have to be elevated 18" are occupied spaces designated as habitable (a space in a building for living, sleeping, eating, or cooking. Bathrooms, toilet rooms, closets, hallways, storage or utility spaces, and similar areas are not considered habitable spaces) and separated as described:

   a. Habitable portions of a private dwelling unit, separated from the attached garage (U occupancy), by one-hour protection on the garage side with self-closing, gasketed all around, and rated door(s).
   b. Areas of a building separated by a minimum one-hour occupancy separation protection with a vestibule type room providing a two doorway separation with self-closing, gasketed all around rated doors, from spaces accessible by motorized equipment containing combustible fuels.

23.20.306.3 Furnaces in Strip Mall Ceilings.

Add #1 to the first Exception.

Add a new Exception #2 as follows:

Exception #2. The passageway and level surface are not required for replacement of horizontal furnaces located above drop ceilings in strip malls. All other code requirements apply.

23.20.306.4 Appliances Under Floors.

Amend by adding the following as the first sentence:

Installation of fuel burning appliances in underfloor crawl spaces is prohibited unless prior written approval is obtained from the authority having jurisdiction.

23.20.306.5 Equipment and Appliances On Roofs or Elevated Structures.

Amend by deleting section 306.5 and replace with the following:

A. Where new or replaced equipment and appliances requiring access are installed on roofs or elevated structures of new or existing buildings, such access shall be provided by a permanent approved means of access, the extent of which shall be from grade or floor level to the equipment and appliances' level service space. Such access shall be located interior to the building and shall not require climbing over obstructions greater than 30 inches (762mm) high or walking on roofs having a slope greater than four (4) units vertical in twelve (12) units horizontal (33-percent slope).

B. Permanent ladders installed to provide the required access shall comply with the following minimum design criteria:
   1. Ladders shall have rung spacing not to exceed fourteen (14) inches (356mm) on center.
   2. Ladders shall have a toe spacing not less than six (6) inches (152mm) deep.
   3. There shall be a minimum of eighteen (18) inches (457mm) between rails.
   4. Rungs shall have a minimum 0.75-inch (19mm) diameter and be capable of withstanding a 300-pound (136.1kg) load.
   5. Ladders over thirty (30) feet (9144mm) in height shall be provided with offset sections and landings capable of withstanding 100 pounds (488.2 kg/m^2) per square foot.

C. Catwalks installed to provide the required access shall be not less than twenty-four (24) inches (610mm) wide and shall have railings as required for service platforms.

Exceptions:
1. Replaced equipment may be accessed by portable ladder on the single story portion of an existing building not exceeding sixteen (16) feet (4880 mm) in height. If the existing building exceeds sixteen (16) feet (4880mm) in height, an approved interior access shall be provided.
2. This section shall not apply to Group R-3 occupancies.
3. Existing buildings with an existing approved exterior access permanently mounted to the structure.

23.20.306.7 Mezzanine and Platforms.

Every mezzanine or platform more than eight (8) feet (2438 mm) above the ground or floor level shall be made accessible by a stairway or ladder fastened to the structure. The ladder shall be constructed in compliance with the provisions of Local Amendment 23.20.306.5.

23.20.401.5.4 Mechanical Intake Openings.

Mechanical outdoor intake openings shall be located a minimum of six (6) feet horizontally from a gas pressure regulator valve relief vent outlet. Where a gas meter is located within six (6) feet horizontally of a mechanical outdoor intake opening, such opening shall be located a minimum of two (2) feet below the meter. Measurements shall be taken from the gas pressure regulator valve relief vent outlet.

23.20.TABLE 401.6 Opening Sizes in Louvers, Grilles and Screens Protecting Outdoor Exhaust and Air Intake Openings. Revise the minimum and maximum opening sizes as follows:

OUTDOOR OPENING TYPE	MINIMUM AND MAXIMUM OPENING SIZES IN LOUVERS, GRILLES AND SCREENS MEASURED IN ANY DIRECTION
Exhaust openings	½ inch
Intake openings in residential occupancies	½ inch
Intake openings in other than residential occupancies	Not < ½ inch and not > 1 inch

23.20.403.3 Ventilation Rate.
Amend by adding to the end of the first sentence the words "or in accordance with the latest version of ASHRAE Standard 62."

23.20.406.1 General.
Delete section 406.1.

23.20.501.2 Outdoor Discharge.
Delete Exception #1 to 501.2.

23.20.504.6.1 Clothes Dryer Exhaust Duct Length.
Amend by adding a new paragraph to the beginning of Exception #1:

> The maximum length of a clothes dryer exhaust duct may be increased when necessary due to location of the dryer in relationship to an exterior wall or roof, not to exceed the dryer manufacturer's recommendations. When exceeding the maximum allowable length, a dryer placard (available at the Building Safety Division handout shelves) stating the length of the run and the amount of ninety (90) degree elbows shall be posted on the wall next to the dryer exhaust connection. The placard shall be laminated or in a moisture resistant sleeve and be secured using screws, staples, or thumbtacks. Push pins are not acceptable. The duct shall be routed using the shortest possible distance to the exterior.

Add a new Exception #2:

> **Exception #2**: For distances exceeding the dryer manufacturer's recommendations, a booster fan, listed for the purpose, shall be used for lengths up to the booster fan manufacturer's recommendations.

23.20.505.1 Domestic Systems.

Delete the first sentence and replace with:

> All domestic ranges, fuel-fired or electric, shall be equipped with range hoods or a downdraft exhaust and shall discharge to the outdoors through ducts constructed of galvanized steel, stainless steel, aluminum, or copper.

Delete Exception 1 to **505.1**.

23.20.511.1 Dust, Stock and Refuse Conveying Systems.
Amend by adding the following exception to **511.1** to read as follows:

> **Exception:** Listed dust collectors and separator designed and installed in accordance with NFPA 664.

23.20.514.2 Prohibited Applications.
Delete Item 4.

23.20.514.4 Kitchen Ventilation Heat Recovery Equipment.
Amend by adding a new section **514.4** as follows:

> **514.4.1 General.** The provisions of this section apply to installation of kitchen ventilation heat recovery equipment installed within the interior of the building.
>
> **514.4.2 Ceiling Penetrations.** Any grease duct or hood penetrating a ceiling (whether or not the ceiling is rated) shall be considered concealed and shall be enclosed within a rated duct enclosure per section 506.3.10.
>
> **514.4.3 Equipment Installations.** Only fans associated with heat recovery devices, and heat recovery devices serving Type I hoods may be located in the grease duct within a rated enclosure. This equipment shall be specifically listed or the equipment housing shall maintain the integrity of the externally welded liquid tight duct up to the entrance of and the exit from the exhaust fan and/or heat recovery element for kitchen ventilation application. Provisions shall be made for access to the equipment and internal components of devices containing fans and/or heat recovery elements for proper maintenance and cleaning. Duct access doors shall comply with section 506.3.8. Access doors to enclosure shall comply with section 506.3.11.
>
> **514.4.4 Duct and Equipment Enclosure.** A grease duct enclosure may be enlarged to enclose equipment or may connect to the equipment housing if the equipment housing meets the rating of the grease duct enclosure. The duct may be run exposed within the rated equipment enclosure to the entrance of, and the exit from, the equipment which complies with section 514.4.3.

514.4.5 Fire Dampers. Other associated duct work located within the grease duct enclosure per section 514.4.3 shall be fire dampered where penetrations of the enclosure occur.

514.4.6 Exhaust Outlets. The grease duct shall terminate above the roof per sections 506.3.12 and 506.4. A grease duct enclosure stopping at the rated equipment enclosure shall be vented to the exterior as if the rated equipment enclosure were a continuation of the duct enclosure.

23.20.515.1 Multi-Port Exhaust Fans.

A. This type of fan shall be used for exhausting environmental air such as bathrooms and toilet rooms and shall not be used for clothes dryer or range exhaust.

B. If this fan is installed in the attic, it shall be within three (3) feet of the attic access and the exhaust registers it serves shall be permanently labeled as to the location of the fan for service and maintenance.

C. The operating range for these fans is limited to -40 degrees F to +140 degrees F.

D. Combustion air requirements for fireplaces, water heaters, furnaces, boilers, etc., shall not be effected by the use or operation of this type of fan.

E. These fans shall not be used to exhaust combustible or flammable vapors, fumes, or dusts.

F. The exhaust fan and ductwork shall be insulated with minimum two (2) inch thick fiberglass duct insulation to minimize heat transfer to the attic space, which can result in ice damming on the roof.

G. All ceiling vapor barrier penetrations shall be sealed airtight to minimize condensation build-up in the attic and ice damming on the roof.

H. All duct seams shall be sealed airtight with duct mastic/sealer to prevent condensation damage in the attic.

23.20.601.3 Contamination Prevention.

Amend by adding the following exception to **601.3** to read as follows:

Exception: Environmental air exhaust ducts under positive pressure may extend into or through ducts or plenums if one of the following design approaches is used:

a. Route environmental air exhaust ducts inside a shaft when passing through a duct or plenum.

b. Install a second duct around the environmental air exhaust duct where passing through ducts and plenums to minimize leakage to the duct or plenum; seal both ends of the outer duct to outside.

c. Seal the environmental air exhaust ducts along all seams and joints using a listed low to medium pressure duct sealant, typically applied by brush, trowel, or caulking gun; install sealant per manufacturer's recommendations.

d. Provide flexible duct with no seams in the duct or plenum only to a limit of eight (8) feet. The eight (8) feet limit is

due to high static losses. Also, sleeving the metal duct with flexible seamless duct is acceptable.

23.20.602.1 General.

Delete from the second sentence the words "uninhabited crawl spaces."

Add the following sentence to the end of the paragraph:

Underfloor crawlspaces shall not be used as plenums.

23.20.603.9 Joints, Seams and Connections.

Delete the last sentence from the paragraph and replace with the following:

All joints, longitudinal and transverse seams, and connections in ductwork, shall be sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems, or tapes. Tapes and mastics used to seal ductwork shall be listed and labeled in accordance with UL 181A or UL 181B. Duct connections to flanges of air distribution system equipment shall be sealed and mechanically fastened. Duct tape is not permitted as a sealant on any metal ducts.

Add the following exception:

Exception: Continuously welded and locking-type longitudinal joints and seams on ducts operating at static pressures less than 2 inches w.g. (500 Pa) pressure classification.

23.20.604.1 General.

Delete the words "and the International Energy Conservation Code."

Add to the end of the paragraph:

All supply and return air ducts and plenums shall be insulated with a minimum of R-5 insulation when located in unconditioned spaces and with a minimum of R-8 insulation when located outside the building envelope. When located within a building envelope assembly, the duct or plenum shall be separated from the building exterior or unconditioned or exempt spaces by a minimum of R-8 insulation.

Exceptions:

1. When located within equipment.
2. When the design temperature difference between the interior and exterior of the duct or plenum does not exceed 15°F (8°C).
3. When located within the under floor crawlspace of a one or two family dwelling unit.

23.20.701.3 Circulation of Air.

Amend by adding the following paragraph to section **701.3**:

Fuel burning appliances may be required to pass a back draft test as a part of the final plumbing or mechanical inspection. This test shall be conducted with all exhaust fans operating and with fireplace draft open.

23.20.701.4.2 Attic Space.
Delete the wording of this section and replace with the following:

Combustion air shall not be obtained from the attic unless prior written approval is obtained from the authority having jurisdiction.

23.20.711 Combustion Air.
Amend chapter 7 by adding new section 711:

Section 711 Cold Climate Alternate Requirements For Combustion and Ventilation Air.

711.1 Purpose. The purpose of this section is to provide alternate methods of designing combustion air and ventilation air systems for fuel burning appliances in cold climate regions. Only persons registered to practice engineering in the applicable jurisdiction shall be permitted to use these alternate design methods.

711.2 Scope. The requirements of this section apply to all fuel gas burning appliances.
Exception: Direct vent appliances, listed cooking appliances, appliances with separated combustion system, enclosed furnaces, refrigerators and domestic clothes dryers.

711.3 Definitions.
Certain words and terms used in this section shall have meanings as listed. The definitions listed below shall apply to this section only, even though they may differ with broader definitions found elsewhere in the code.

Combustion air is air required for stoichiometric combustion, plus excess air, plus flue dilution air.

Free area is the net actual open area of a louver, screen, duct, or intake grille.

Ventilation air is air required for cooling of the appliance enclosure to maintain temperatures required for proper equipment operation.

711.4 General.

711.4.1 Air Supply. Fuel-burning equipment shall be provided with a sufficient supply of combustion and ventilation air.
711.4.1.1 Enclosures Containing Fuel Burning Appliances. Enclosures shall be provided with minimum unobstructed combustion air openings as

specified in section 711.9, and arranged as specified in sections 711.5 and 711.6, and ventilation air systems as specified in section 711.10.

711.4.1.2 Existing Buildings. When fuel-burning appliances are installed in an existing building containing other fuel-burning equipment, the enclosure shall be provided with sufficient combustion and ventilation air for all fuel-burning equipment contained therein as specified in sections 711.9 and 711.10.

711.5 Combustion Air Openings.

711.5.1 Location. The combustion air opening(s) may be located anywhere in the enclosure provided there is an unobstructed area extended to the fire box that does not increase the total combustion air system static pressure requirements.

711.5.2 Dampers Prohibited. Combustion air openings shall not be installed so as to open into construction where fire dampers are required. Volume dampers shall not be installed in combustion air openings.

Exception: Motor operated dampers interlocked with appliance controls to open damper prior to firing appliance are permitted, if damper blade actuated end switches are provided to prevent appliance operation should dampers fail to open.

711.5.3 Screening. Combustion air openings shall be covered with corrosion-resistant screen of 1/2 inch (12.8 mm) mesh, except as provided in section 711.7.3.

Exception: Combustion air openings serving a nonresidential portion of a building may be covered with a screen having openings larger than 1/2 inch (12.8 mm) but in no case larger than 1 inch (25.4 mm).

711.6 Sources Of Combustion And Ventilation Air.

711.6.1 Air from Outside. Combustion and ventilation air obtained from outside the building shall be supplied as follows:

1. Through permanent openings of the required area directly to the outside of the building through the floor, roof, or walls of the appliance enclosure; or
2. Through continuous ducts of the required cross-sectional area extending from the appliance enclosure to the outside of the building.

711.6.2 Under-Floor Supply. Combustion and ventilation air openings may connect with under-floor areas conforming to the following requirements:

1. Under-floor spaces having unobstructed openings to the exterior which are sized to not exceed the maximum system static pressure requirements specified in sections 711.9 and 711.10.
2. The height of the under-floor space shall comply with the requirements of the Building Code and shall be without obstruction to the free flow of air.

711.6.3 Interior Spaces. Large indoor areas may be used for combustion and/or ventilation air if sufficient infiltration or other outside air supply is available by nature of the building construction, system design, or building use.

711.6.4 Prohibited Sources. Openings and ducts shall not connect appliance enclosures with space where the operation of a fan may adversely affect the flow of combustion air. Combustion and ventilation air shall not be obtained from a hazardous location or from any area in where objectionable quantities of flammable vapor, lint or dust are given off. Combustion and ventilation air shall not be taken from a machinery room.

711.7 Combustion And Ventilation Air Ducts.

711.7.1 General. Combustion and ventilation air ducts shall:

1. Be of galvanized steel complying with chapter 6 or equivalent corrosion-resistant material approved for this use;
2. Have a minimum cross-sectional dimension of three (3) inches; and
3. Serve a single appliance enclosure.

711.7.2 Dampers. Combustion air ducts shall not be installed so as to pass through construction where fire dampers are required, unless properly enclosed in a rated shaft. Volume dampers shall not be installed in combustion air ducts.

Exception: Motor operated dampers interlocked with appliance controls to open damper prior to firing appliance are permitted, if damper blade actuated end switches are provided to prevent appliance operation should dampers fail to open.

711.7.3 Screen. Neither end of ducts terminating in an attic shall be screened.

711.8 Special Conditions Created By Mechanical Exhausting Or Fireplaces.

Operation of exhaust fans, kitchen ventilation systems, clothes dryers or fireplaces shall be considered in determining combustion and ventilation air requirements to avoid unsatisfactory operation of installed fuel burning appliances.

711.9 Area Of Combustion Air Openings.

711.9.1 General. The free area of openings, ducts or plenums, screens and louvers supplying combustion air to enclosures containing fuel-burning appliances shall be as required: The opening(s) shall communicate directly or by means of ducts with outdoors or to such spaces (crawl space) that freely communicate with outdoors and shall be sized in accordance with Table No. 7-1.

711.10 Ventilation Air.

711.10.1 General. In addition to the combustion air required, sufficient ventilation shall be supplied for proper operation of equipment. Ventilation system shall be designed to maintain positive or atmospheric pressures within the enclosure. If exhaust fans are provided, mechanical make-up air fan shall be installed to make-up exhausted air. Natural or gravity make-up air is not allowed.

TABLE NO. 7-1 COMBUSTION AIR SYSTEM DESIGN CRITERIA

Fuels	System Static Pressure Limits[1]			Combustion Air Requirements
	Atmospheric		Forced Draft	
	Draft Hoods	Barometric Dampers		All Types
GAS (Natural, Propane, Butane)	0.02" WG	0.02" WG	0.05" WG	24 CFM / 100,000 BTUH
LIQUID (Light Oil, Heavy Oil)	0.02" WG	0.02" WG	0.05" WG	27.1 CFM / 100,000 BTUH
SOLID (Coal, Coke)	0.02" WG	0.02" WG	0.05" WG	30.8 CFM / 100,000 BTUH

Note 1: Static pressure values represent maximum static pressure losses across all components of the combustion air system including screens, louvers, ducts and fittings.

Note 2: For enclosures containing both atmospheric and forced draft appliances, the most restrictive design requirements shall apply.

PER ASHRAE 1993 FUNDAMENTALS HANDBOOK
CHAPTER 15 TABLE 11 (Pg 15.10)

1 cu. ft. natural gas requires 9.6 cu. ft. air
1 gallon No. 2 fuel oil requires 106 lbs. air
1 lb. semi bituminous coal requires 11.2 lbs. air
Convert to CF/1000 Btu/h

GAS: $\frac{9.6 \text{ cu. ft. air}}{1 \text{ cu. ft. gas}} \times \frac{1 \text{ cu. ft. gas}}{1000 \text{ Btuh}} = \frac{9.6 \text{ cu. ft. air}}{1000 \text{ Btuh}}$ (14.4 @ 50% excess)

OIL: $\frac{106 \text{ lbs. air}}{1 \text{ gallon oil}} \times \frac{1 \text{ cu. ft. air}}{0.0698 \text{ lbs.}^*} \times \frac{1 \text{ gallon oil}}{140{,}000 \text{ Btuh}} \times 1000 = 10.85$ cu. ft. air/1000 Btuh (16.3 @ 50% excess)

COAL**: $\frac{11.2 \text{ lbs. air}}{1 \text{ lb. coal}} \times \frac{1 \text{ cu. ft. air}}{0.0698 \text{ lbs.}^*} \times \frac{1 \text{ lb. coal}}{13{,}000 \text{ Btu}} \times 1000 = 12.3$ cu. ft. air/1000 Btu (18.5 @ 50% excess)

* Air at 2000 feet above sea level. Installations above this shall derate appliance output 4%/1000 feet.

** Confirm heat capacity of coal, since it varies with type of coal.

EXAMPLE: Combustion Air Flow Rates (CFM) per 100,000 Btuh input. Verify heating values and adjust CFM as required.

	STOICHIOMETRIC 0% Excess air	COMBUSTION @ 50% Excess air
Natural Gas 1000 Btuh/cu. ft.	16.0 CFM 100,000 Btuh	24 CFM 100,000 Btuh
No. 2 Fuel Oil 140,000 Btuh/gal.	18.1 CFM 100,000 Btuh	27.1CFM 100,000 Btuh
Coal - Semi Bituminous 13,000 Btuh/lb	20.5 CFM 100,000 Btuh	30.8 CFM 100,000 Btuh

23.20.801.21 Locations And Support Of Venting Systems Other Than Masonry Chimneys.

Add a new section **801.21** as follows:

> Unless a vent listed for exterior use in cold weather climates is installed, a venting system installed exterior to the building outside the thermal envelope shall be installed in an insulated (R-19 minimum) shaft. The portion of the vent system above the last roof and its projected plane need not be enclosed. The portion of the venting system passing through an attic space need not be insulated or enclosed.

23.20.802.9 Vent Terminals - Ice Dam Protection.

Amend by adding new section 802.9 as follows:

> Vent terminations penetrating a metal roof with a pitch shall be protected by an ice dam or deflector of an approved type acceptable to the Administrative Authority.

23.20.804.3.4 Horizontal Terminations.

Add the following two sentences to Item 6:

> An anticipated snow depth of twelve (12) inches shall be used when determining the manufacturer's minimum vent termination height. Measurements shall be made to the bottom of the vent outlet.

23.20.807.1 Gypsum Wall Board (Sheetrock) Clearances.

GWB shall be considered a noncombustible material when determining minimum required clearances. It should be noted GWB cannot be used to reduce clearances to combustibles. For example, "B" vent shall be installed with a one inch (1") minimum clearance from wood, even if the wood is covered with GWB.

23.20.918.9 Multi-Zone Systems.

Add new section as follows:

> Prior to the final inspection, the installer shall measure and record the temperature rise across the heat exchanger under all possible operating scenarios. The temperature rise shall be within the furnace nameplate rating. At the time of the

final inspection, the installer shall submit the test results to the mechanical inspector. Since the inspector may require an additional test in his/her presence to verify the results, the installer shall be present. If the results show the furnace is not operating within its listed parameters under all possible scenarios, the test shall be noted as failed. The installer shall be responsible for correcting any deficiencies and demonstrating proper operation of the furnace.

23.20.923.2 Small Ceramic Kilns – Ventilation.
Amend by adding section **923.2** as follows:

923.2 Ventilation. A canopy-type hood shall be installed directly above each kiln. The face opening area of the hood shall be equal to or greater than the top horizontal surface area of the kiln. The hood shall be constructed of not less than 0.024-inch (0.61mm) (No. 24 U.S. gauge) galvanized steel or equivalent and be supported at a height of between twelve (12) inches (305 mm) and thirty (30) inches (750 mm) above the kiln by noncombustible supports.

Exception:

a. Electric kilns installed with listed exhaust blowers may be used when marked as being suitable for the kiln and installed in accordance with manufacturer's instructions.

b. Each hood shall be connected to a gravity ventilation duct extending in a vertical direction to outside the building. This duct shall be of the same construction as the hood and shall have a minimum cross-sectional area of not less than one-fifteenth of the face opening area of the hood. The duct shall terminate a minimum of twelve (12) inches (305 mm) above any portion of a building within four (4) feet (1.22 m) and terminate no less than four (4) feet (1.22 m) from any openable windows or other openings into the building or adjacent property line. The duct opening to the outside shall be shielded, without reduction of duct area, to prevent entrance of rain into the duct. The duct shall be supported at each section by noncombustible supports.

c. Provisions shall be made for air to enter the room in which a kiln is installed at a rate at least equal to the air being removed through the kiln hood.

23.20.1001.1 Scope.
Amend Exception 7 by deleting the words "or state".

23.20.1006.7 Boiler Safety Devices.
Amend by adding "Table 10-A" after the word "instructions."

Table 10-A –CONTROLS AND LIMIT DEVICES FOR AUTOMATICE BOILERS

				Trial for Main Burner Flame	Safety Control Timing (Nominal Maximum Time in Seconds)										
Boiler Group	Fuel	Fuel Input Range[1] (Inclusive) (x0.293071 for W)	Type Of Pilot[2]	Trial for Pilot	Direct Electric Ignition	Flame Pilot	Main Burner Flame Failure[3]	Assured Fuel Supply Control[4]	Assured Air Supply Control[5]	Low Fire Start Up Control[6]	Pre-Purging Control [7]	Hot Water Temp. and Low Water Limit Controls[8]	Steam Pressure and Low Water Limit Controls[9]	Approved Fuel Shutoff[10]	Control and Limit Device System Design[11]
A	Gas	0-400,000 Btu/h	Any type	90	Not required	90	90	Not required	Required	Not required	Not required	Required	Required	Not required	Required
B	Gas	400,001-2,500,000Btu/h	Interrupted or intermittent	15	15	15	2-4	Not required	Required	Not required	Not required	Required	Required	Not required	Required
C	Gas	2,500,001-5,000,000Btu/h	Interrupted or intermittent	15	15	15	2-4	Required	Required	Required	Required	Required	Required	Required	Required
D	Gas	Over 5,000,000 Btu/h	Interrupted	15	15	15	2-4	Required	Required	Required	Required	Required	Required	Required	Required
E	Oil	0-400,000 Btu/h	Any type	Not required	90	90	90	Not required	Required	Not required	Not required	Required	Required	Not required	Required
F	Oil	400,001-1,000,000 Btu/h	Interrupted	Not required	30	30	2-4	Required	Required	Not required	Not required	Required	Required	Not required	Required
G	Oil	1,000,001-3,000,000 Btu/h	Interrupted	Not required	15	15	2-4	Required	Required	Not required	Not required	Required	Required	Not required	Required
H	Oil	Over 3,000,000 Btu/h	Interrupted	15	15	60	2-4	Required	Required	Required	Required	Required	Required	Required	Required
K	Elec.	All	Not required	Not required	Not required	Not required	Not required	Not required	Not Required	Not required	Not required	Required	Required	Not required	Required

23.20.1006.7 Table 10A Controls and Limit Devices for Automatic Boilers.

Fuel input shall be determined by one of the following:

1.1 The maximum burner input as shown on the burner nameplate or as otherwise identified by the manufacturer.

2.2 The nominal boiler rating, as determined by the building official, plus 25 percent.

2 Automatic boilers shall have one flame failure device on each burner which shall prove the presence of a suitable ignition source at the point where it will reliably ignite the main burner, except that boiler Groups A, B, E, F and G which are equipped with direct electric ignition shall monitor the main burner, and all boiler groups using interrupted pilots shall monitor only the main burner after the prescribed limited trial and ignition periods. Boiler Group A equipped with continuous pilot shall accomplish 100 percent shutoff within 90 seconds upon pilot flame failure. The use of intermittent pilots in boiler Group C is limited to approved burner units.

3 In boiler Groups B, C and D, a 90-second main burner flame failure limit may apply if continuous pilots are provided on manufacturer-assembled boiler-burner units approved by an approved testing agency as complying with nationally recognized standards approved by the building official. Boiler Groups F and G equipped to reenergize their ignition system within 0.8 second after main burner flame failure shall be permitted 30 seconds for Group F or 15 seconds for Group G to reestablish its main burner flame.

4 Boiler Groups C and D shall have controls interlocked to accomplish a nonrecycling fuel shutoff upon high or low gas pressure, and boiler Groups F, G and H using steam or air for fuel atomization shall have controls interlocked to accomplish a nonrecycling fuel shutoff upon low atomizing steam or air pressure. Boiler Groups F, G and H equipped with a preheated oil system shall have controls interlocked to provide fuel shutoff upon low oil temperature.

5 Automatic boilers shall have controls interlocked to shut off the fuel supply in the event of draft failure if forced or induced draft fans are used or, in the event of low combustion airflow, if a gas power burner is used. Where a single motor directly driving both the fan and the oil pump is used, a separate control is not required.

6 Boiler Groups C, D and H, when firing in excess of 400,000 Btu (117 kW) per combustion chamber, shall be provided with low fire start of its main burner system to permit smooth light off. This shall normally be a rate of approximately one-third of its maximum firing rate.

7 Boiler Groups C, D and H shall not permit pilot or main burner trial for ignition operation before a purging operation of sufficient duration to permit a minimum of four complete air changes through the furnace, including combustion chamber and the boiler passes. Where this is not readily determinable, five (5) complete air changes of the furnace, including combustion chamber up to the first pass, shall be considered equivalent. An atmospheric gas burner with no mechanical means of creating air movement or an oil burner which obtains two-thirds or more of the air required for combustion without mechanical means of creating air movement shall not require purge by means of four (4) air changes so long as its secondary air openings are not provided with means of closing. If such burners

have means of closing secondary air openings, a time delay shall be provided which puts these closures in a normally open position for four (4) minutes before an attempt for ignition. An installation with a trapped combustion chamber shall in every case be provided with a mechanical means of creating air movement for purging.

8 Every automatic hot-water-heating boiler, low-pressure hot-water-heating boiler, and power hot-water boiler shall be equipped with two (2) high-temperature limit controls with a manual reset on the control with the higher setting interlocked to shut off the main fuel supply, except the manual reset on the high-temperature limit control shall not be required on any automatic package boiler not exceeding 400,000 Btu/h (117 kW) input and approved by an approved testing agency. Every automatic hot-water heating, power boiler and package hot-water supply boiler shall be equipped with one low-water-level limit control with a manual reset interlocked to shut off the fuel supply, installed to prevent damage to the boiler and to permit testing of the control without draining the heating system except on boilers used in Group R Occupancies of less than six (6) units and in Group M Occupancies and further, except the low-water-level limit control is not required on package hot-water-supply boilers approved by a nationally recognized testing agency. However, a low-water-flow limit control installed in the circulating water line may be used instead of the low-water-level limit control for the same purpose on coil-type boilers.

9 Every automatic low-pressure steam-heating boiler, small power boiler and power steam boiler shall be equipped with two high-steam pressure limit controls interlocked to shut off the fuel supply to the main burner with manual reset on the control with the higher setting, and two (2) low-water-level limit controls, one of which shall be provided with a manual reset device and independent of the feed water controller. Coil-type flash steam boilers may use two (2) high-temperature limit controls, one of which shall be manually reset in the hot-water coil section of the boiler instead of the low-water-level limit control.

10 Boiler Groups C, D and H shall use an approved automatic reset safety shutoff valve for the main burner fuel shutoff, which shall be interlocked to the programming control devices required. On oil burners where the safety shutoff valve shall be subjected to pressures in excess of ten (10) psi (69 kPa) when the burner is not firing, a second safety shutoff valve shall be provided in series with the first. Boiler Groups C and D, using gas in excess of 1-pound-per-square-inch (6.9 kPa) pressure or having a trapped combustion chamber or employing horizontal fire tubes, shall be equipped with two (2) approved safety shutoff valves, one of which shall be an automatic-reset type, one of which may be used as an operating control, and both of which shall be interlocked to the limit-control devices required. Boiler Groups C and D using gas in excess of 1-pound-per-square-inch (6.9 kPa) pressure shall be provided with a permanent and ready means for making periodic tightness checks of the main fuel safety shutoff valves.

11 Control and limit device systems shall be grounded with operating voltage not to exceed 150 volts except, on approval by the building official, existing control equipment to be reused in an altered boiler control system may use 220-volt single phase with one side grounded, provided such voltage is used for all

controls. Control and limit devices shall interrupt the ungrounded side of the circuit. A readily accessible means of manually disconnecting the control circuit shall be provided with controls so arranged that when they are de-energized the burner shall be inoperative.

23.20.1006.8 Electrical Requirements.
Delete section in its entirety.

23.20.1007 Boiler Low-Water Cutoff.
Delete section in its entirety.

23.20.1105.3 Refrigerant Detector.
Add a second sentence to read as follows:

Refrigerant detectors shall alarm both inside and outside the machinery room or refrigerated space.

23.20.1105.6.2 Make-up Air.
Amend last sentence by changing ¼ -inch to ½ -inch..

23.20.1204.2 Required Thickness.
Revise section heading and paragraph to read as follows:

1204.2 Required Insulation. The surface temperature of piping located within normal reach of building occupants shall not exceed 120°F.

23.20.1301.1 Scope.
Revise the first sentence of the section to read as follows:

The design, installation, construction, and repair of fuel oil storage and piping systems shall be in accordance with this chapter and NFPA 31.

23.20. International Fire Code Compressed Gases, International Fire Code Chapter 30

Chapter 30 of the International Fire Code is hereby adopted by reference.

23.20. International Fire Code Service Stations and Repair Garages, International Fire Code Chapter 22

Service Stations and Repair Garages from the International Fire Code are hereby adopted by reference.

CHAPTER 23.25 LOCAL AMENDMENTS TO THE UNIFORM PLUMBING CODE 2003 EDITION

Sections

23.25.100	Local Amendments to the Uniform Plumbing Code, 2003 Edition
23.25.102-103	Delete
23.25. 204.0	"B" Definitions
23.25.313.7	Protection of Piping, Materials, and Structures
23.25.314.5.1	Hangars and Supports
23.25.315.0	Trenching, Excavation, And Backfill
23.25.402.4.	Metered Faucets
23.25.409.2.2	Water Closet Seats
23.25.412.1.1	Unvented Garage Floor Drains
23.25.413.0	Minimum Number of Required Fixtures
23.25.415.1	Access to Whirlpool Bathtub Pump
23.25.422.0	Minimum Hot Water Supply Temperature
23.25.507.0	Air for Combustion and Ventilation
23.25.508.1	Other Water Heater Installation Requirements
23.25.508.4.1	Other Water Heater Installation Requirements
23.25.508.5	Relief Valve Discharge
23.25.508.6	Added or Converted Equipment
23.25.508.28	Water Heaters Located in Mobile Homes
23.25.603.0	Cross-Connection Control
23.25.603.3	General Requirements
23.25.603.4.6.5	Lawn Irrigation
23.25.603.4.9	Water Cooled Compressors, Degreasers
23.25.603.4.11	Potable Water Makeup Connections To Steam Or Hot Water Boilers
23.25.603.4.23	Potable Water Supply To Dental Chairs
23.25.603.4.24	Hydronic Heating/Cooling
23.25.603.4.25	Steam Systems
23.25.603.4.26	Cooling Towers
23.25.604.1	Materials - Water Pipe And Fittings
23.25.604.2	Materials - Copper Tube
23.25.604.8	Materials - Plastic Pipe Materials
23.25.608.0	Water Pressure, Pressure Regulators And Pressure Relief Valves
23.25.609.3.2	Installation
23.25.609.3.3	Water Supply Accessibility
23.25.609.4	Testing
23.25.609.10.1	Air Chambers
23.25.610.8	Size of Meter And Building Supply Pipe Using Table 6-5
23.25.612.0	Indoor Water Meter Setter
23.25.613	Sizing Criteria for One- and Two-Family Dwelling Units
23.25.701.1.2	ABS and PVC DWV Piping Installation – Sanitary Drainage
23.25.710.15	Elevator Pit Damage
23.25.719.0	Cleanouts
23.25.TABLE 7-7	Minimum Horizontal Distance Required From Building Sewer
23.25.801.3	Bar and Fountain Sink Traps

23.25.815.0	Condensate Wastes and Control
23.25.816.0	Soda Fountains, Condensates, Drip Pans, Ice Machines, and Other Similar Equipment
23.25.903.1.2	ABS and PVC DWV Piping Installation - Vents
23.25.TABLE 10-1	Horizontal Distance Of Trap Arms
23.25.1007.0	Trap Seal Protection
23.25.1014.1	Grease Traps
23.25.1014.8	Grease Interceptors for Commercial Kitchens
23.25.1017.1	Interceptors Required
23.25.1101.1	Where Required
23.25.1101.3	Material Uses
23.25.1101.5	Subsoil Drains
23.25.1101.6	Building Subdrains
23.25.1101.9	Filling Stations And Motor Vehicle Washing Establishments
23.25.1101.11.1	Primary Roof Drainage
23.25.1101.11.2.2	Secondary Roof Drainage
23.25.1108.0	Controlled-Flow Roof Drainage
23.25.CH 12	Fuel Piping
23.25.1301.1	Application
23.25.1309.1	Veterinary Clinics
23.25.1309.8	Vacuum Systems for Dental Offices
23.25.1310	Definitions

23.25.100 Local Amendments To The Uniform Plumbing Code, 2003 Edition.

Amendments to the 2003 Uniform Plumbing Code and appendices A, B, D, I, and L, except chapters 12 and 15, are adopted and listed hereafter by section. The digits after the title and chapter digits are the section number of the Uniform Plumbing Code to which the amendment refers, e.g., 23.25.510.8 refers to section 510.8 of the Uniform Plumbing Code.

23.25.102-103 Delete.

Delete sections 102 and 103; refer to the Anchorage Administrative Code.

23.25. 204.0 "B" Definitions.

Amend by deleting the definition of *bathroom* and substitute the following:

> ***Bathroom***: Any room or space containing a bathtub, shower, hot tub, Jacuzzi or swimming pool.

23.25.313.7 Protection of Piping, Materials, and Structures.

Amend paragraph by deleting all wording following "Building Code." The paragraph shall read as follows:

> All piping penetrations of fire resistance rated walls, partitions, floors, floor/ceiling assemblies, roof/ceiling assemblies, or shaft enclosures shall be protected in accordance with the requirements of the Building Code.

23.25.314.5.1 Hangers and Supports.
Amend paragraph by deleting the words "In seismic zones 3 and 4," beginning the sentence to read as follows:

Hubless cast iron piping…

23.25.315.0 Trenching, Excavation, And Backfill.
Amend section **315.4** by adding, after the third sentence, the following:

Backfill material shall be 3/8" pea gravel or smaller. In the case of cast iron drain, waste and vent piping, the backfill material shall be ¾" gravel and earth or smaller.

23.25.402.4 Metered Faucets.
Add to the end of the first sentence of section **402.4**:

…bus stations, cocktail lounges, bars, concert halls, sports arenas, theaters, and shopping malls.

23.25.409.2.2 Water Closet Seats.
Amend by adding the words, or for private use, after "dwelling units" to read as follows:

409.2.2 All water closet seats, except those within dwelling units or for private use, shall be of the open front type.

23.25.412.1.1 Unvented Garage Floor Drains.
A. A maximum of three (3) unvented floor drains may be installed in one- and two-family residential garages. Each shall have a three-inch (3") (76mm) minimum trap and trap arm, and two-inch (2") (50.8mm) floor drain. The tail piece need not be vented. No other plumbing fixtures may be connected to the garage drain piping. When a contractor or homeowner installs this type of system, they shall install the waste lines as per the Uniform Plumbing Code regarding slopes and backfill material.
B. Underground inspections of these floor drains are not required, but spot checks may be made by inspectors. If requested, MOA staff performs this inspection at no additional fee.

23.25.413.0 Minimum Number of Required Fixtures.
Delete section 413.0 and refer to the Building Code.

23.25.415.1 Access to Whirlpool Bathtub Pump.
Add to section 415.1:

The access shall be required to be a minimum of 16"x16", although alternate access arrangements may be considered. The intent is the pump may be removed easily and safely. Any pump required to be located so the supporting or securing

bolts are no more than two (2) feet from the access opening. The access panel may be siliconed in place and shall remain easily removable. If removal of a pump motor is in question, the contractor shall be required to remove the pump motor to demonstrate proper access.

23.25.422.0 Minimum Hot Water Supply Temperature.
The minimum hot water temperature to showers, tub and shower combinations, and tub fillers shall be 110°.

23.25.507.0 Air for Combustion and Ventilation.
Delete section 507.0 Air for Combustion and Ventilation and refer to the Mechanical Code and the Fuel Gas Code.

23.25.508.1 Other Water Heater Installation Requirements.
Amend by changing "may" to "shall".

23.25.508.4.1 Other Water Heater Installation Requirements.
Water heaters shall be provided with an approved floor drain within the water heater enclosure. Floor drains shall be readily accessible. In lieu of the floor drain, a water heater may be installed in a liquid tight pan provided with a minimum ¾" (19mm) O.D. drain opening located within 2" (50.8mm) of the pan bottom. Pans shall be of an approved type acceptable to the authority having jurisdiction, and pan drains shall terminate at a floor drain or other approved location.

Exception: Water heaters installed on a concrete slab or grade.

Exception: Pan drains shall not be required if water heater is equipped with an approved safety device to control flooding.

23.25.508.5 Relief Valve Discharge.
Delete this section in its entirety.

23.25.508.6 Added or Converted Equipment.
Delete section 508.6 through end of chapter, in its entirety.

23.25.508.28 Water Heaters Located in Mobile Homes.
Add new section as follows:

508.28 Water Heaters Located in Mobile Homes.

A. Installation of a hot water heater located in a compartment off the bedroom shall be acceptable if the hot water heater was factory installed, if the compartment is sealed from the bedroom by a panel screwed to the wall, and if the combustion air is taken from a source outside of the bedroom and complies with the adopted Fuel Gas Code or the adopted Mechanical Code.

B. A water heater replaced in an existing mobile home shall be replaced with a water heater tested, approved, and listed for use in mobile homes. The proper combustion air shall be installed to supply the new hot water heater per the adopted Fuel Gas Code or the adopted Mechanical Code.

23.25.603.0 Cross-Connection Control.

Amend by adding the following:

PURPOSE AND SCOPE: The purpose of this section is to protect the public health by controlling or eliminating actual or potential installation of cross-connections. The control or elimination of cross-connections shall be in accordance with this code, the current edition of the cross-connection control manual published by the Pacific Northwest section of The American Water Works Association and the manual of Cross-Connection Control published by the University of Southern California Foundation for Cross-Connection Control. In the event a conflict exists between the technical publications adopted herein and the Uniform Plumbing Code, the most stringent provision shall apply.

UNSAFE FACILITIES: The Municipality of Anchorage may refuse to furnish water and may discontinue services to any premises where plumbing facilities, appliances, or equipment using water are dangerous, unsafe, or not in conformity with the water utility tariff or other related municipal ordinances. No potable water service connection to any premises shall be installed or continued in use by a purveyor unless the potable water supply is protected by all necessary backflow prevention devices and assemblies. The installation or maintenance of a cross-connection, endangering the quality of the purveyor's water supply, shall be unlawful and is prohibited.

ADMINISTRATIVE AUTHORITY: The Building Official or authorized representative.

PURVEYOR: The operator or owner of a water supply.

PREMISES: Real property, including any house or building thereon, located within the Municipality of Anchorage.

CROSS-CONNECTION INSPECTIONS: No water shall be delivered to any structure hereafter built within the Municipality of Anchorage until it is inspected by the Administrative Authority for possible cross-connections and approved as being protected from such cross-connections.

Inspections shall be made periodically of all potentially hazardous buildings, structures, or improvements of any nature now receiving water through the municipal water system, for the purpose of ascertaining whether cross-connections exist. Such inspections shall be made by the Administrative Authority.

Any building modification requiring a plumbing or mechanical permit may require a cross-connection inspection and compliance.

POSSIBLE CROSS-CONNECTIONS: Backflow prevention assemblies or devices shall be installed in any premises where, in the judgment of the Administrative Authority, the nature and extent of activities, or the materials used or stored on the premises, may present a hazard to the potable water supply in the event a cross-connection were to be made; even though such cross-connection has not been made. Such circumstances include, but are not limited to:

- Premises having an auxiliary water supply.
- Premises having intricate plumbing arrangements making it impractical to ascertain whether or not cross-connections in fact exist.
- Premises where entry is restricted so inspection for cross-connections cannot be made with sufficient frequency or on sufficiently short notice to assure cross-connections do not exist.
- Premises having a repeated history of cross-connections being established or re-established.
- Premises on which any substance is handled under pressure, so as to permit entry into the water supply. This shall include the handling of process waters and cooling waters.
- Premises where materials of a toxic or hazardous nature are handled in such a way if back siphonage should occur, a health hazard might result.
- The following facilities, or portions of a building containing one of the listed facilities, when connected to a potable water supply, require backflow prevention assemblies or devices unless the authority with jurisdiction determines no hazard exists. An example of a facility within a building is a dental office in a multi-story office building. For this application, a reduced pressure principle backflow preventer is required to be installed on the hot and cold water serving the dental office and backflow prevention is not be required on the main supply to the building. This protects both the city main and the occupants in the building:
    - Hospitals, mortuaries, and clinics;
    - Laboratories;
    - Metal plating industries;
    - Piers and docks;
    - Sewage treatment plants;
    - Food or beverage processing plants;
    - Chemical plants;
    - Petroleum processing or storage plants;
    - Radioactive material processing plants, nuclear reactors, or other facilities where radioactive materials may be utilized;
    - Manufacturing facilities;
    - Car wash facilities;
    - Water systems not within the definition of potable water supply;
    - Fire sprinkler systems;
    - Medical/dental facilities;
    - Waterfront facilities;
    - Irrigation systems;

- Laundries and dry cleaners;
- High rise or other buildings above system pressure which require booster pumps; and
- Sand, gravel and concrete plants or other material processing plants.

23.25.603.3 General Requirements.

Amend by adding a second paragraph to section **603.3.1** as follows:

Backflow assemblies and devices shall be approved if they successfully passed both the laboratory and field evaluation tests conducted by the University of Southern California Foundation for Cross-Connection Control.

23.25.603.4.6.5 Lawn Irrigation.

Add new paragraphs as follows:

The Uniform Plumbing Code regulates the installation of these types of plumbing systems up to and including the required type(s) of backflow preventer. A permit, plan check, and inspection is required to ensure the potable water piping is sized correctly for the number of fixture units effected by such a system and required piping material and backflow preventer(s) are installed. The installation down stream of the required backflow preventer is not regulated by the plumbing code and is considered non-potable water piping.

Installation of backflow preventers and/or vacuum breakers on public systems shall be done by a plumbing contractor properly licensed with the Municipality of Anchorage. Private installations require either a plumbing contractor or a legal owner complying with all the requirements in the local amendments to Anchorage Administrative Code section 23.10.303.1.

23.25.603.4.9 Water Cooled Compressors, Degreasers.

Amend section by adding a second paragraph to read as follows:

Installation, operation or use of air conditioning or cooling units employing water or other fluid as a cooling agent without a recovery and recirculation unit is prohibited.

23.25.603.4.11 Potable Water Makeup Connections To Steam Or Hot Water Boilers.

Amend by deleting section 603.4.11 its entirety.

23.25.603.4.23 Potable Water Supply To Dental Chairs.

Add new section as follows:

603.4.23 Potable water supply to each individual dental chair shall be protected by a backflow preventer as approved by the administrative authority.

23.25.603.4.24 Hydronic Heating/Cooling

Add a new section as follows:

603.4.24 Hydronic Heating/Cooling. Systems with heat transfer fluids containing plain water or water/propylene glycol mixture require a minimum double check valve with intermediate atmospheric vent backflow preventer to be installed on any directly connected potable water makeup piping to the system. (A suitable example of this backflow preventer is a Watts 9D or a Hersey BCP valve.) In addition, the below listed requirements shall be complied with when a system contains propylene glycol:

1. Water/propylene mixture shall contain a food grade powder dye. (A suitable example is FD+C Powder Dye.) Liquid food coloring is not acceptable due to its potential dissipation into the system.
2. A warning tag shall be installed on the backflow preventer stating the following information:
   A. System contains propylene glycol - use no other substitute.
   B. Do not add ethylene glycol or automotive anti-freeze of any type.
   C. No high hazard toxic chemicals permitted to be added to this system.

Systems with a heat transfer fluid containing Ethylene Glycol approved for such use require minimum protection of the potable water makeup system by installation of a physical air gap or a reduced pressure principal backflow preventer.

23.25.603.4.25 Steam Systems.

Add new section 603.4.25 as follows:

Due to potential addition of toxic chemicals in any steam system, the minimum protection for the potable water makeup shall be by installation of a physical air gap or a reduced pressure principal backflow preventer.

23.25.603.4.26 Cooling Towers.

Add new section as follows:

603.4.26 Cooling Towers. Cooling towers obtaining makeup water from a potable source shall have a reduced pressure principal backflow preventer or air gap separation installed at the source of the potable water.

23.25.604.1 Materials - Water Pipe And Fittings.

Delete the second sentence of section 604.1.

23.25.604.2 Materials - Copper Tube.

Amend to delete the words "or underground outside of structures" in the Exception.

23.25.604.8 Materials - Plastic Pipe Materials.

Amend by deleting paragraph 604.8 and the exception and substitute the following:

604.8 Plastic piping materials shall not be used for water service piping from the street service main to a building or premises.

23.25.608.0 Water Pressure, Pressure Regulators And Pressure Relief Valves.

Amend by deleting paragraph 608.5 and substitute the following:

608.5 Relief valves shall be provided with a drain, not smaller than the relief valve outlet of galvanized steel or hard drawn copper pipe and fittings, CPVC or listed relief valve drain tube with fittings which shall not reduce the internal bore of the pipe tubing (straight lengths as opposed to coils), and shall extend from the valve to a floor drain or other approved location inside the building. The drain pipe shall terminate not more than two (2) feet (610 MM) nor less than six (6) inches (152 MM) above the floor drain or other approved location and point downward. No part of such drain pipe shall be trapped, and the terminal end shall not be threaded. Each relief valve drain shall be piped independently of other relief valve drains.

23.25.609.3.2 Installation.

Add exception:

Exception: Brazing shall not be required on non-pressurized, non-potable piping such as trap primers. Where joints are permitted, they shall be of the approved type.

23.25.609.3.3 Water Supply Accessibility.

Where the building water supply pipe enters the building, it shall exit the ground or slab in an area with a minimum of forty inches (40") clear space between ground or slab and bottom of structure, and provide an unobstructed passageway no less than forty (40) inches high and twenty-two (22) inches wide from the water supply entrance to the crawlspace access.

23.25.609.4 Testing.

Amend by deleting the words "Except for plastic piping" before "a fifty (50) pound test, to read as follows:

Upon completion of a section or of the entire hot and cold water supply system, it shall be tested and proved tight under a water pressure not less than the working pressure under which it is to be used. The water used for tests shall be obtained from a potable source of supply. A fifty (50) pound per square inch (344.5 k Pa) air pressure may be substituted for the water test. In either method of test, the piping shall withstand the test without leaking for a period of not less than fifteen (15) minutes.

23.25.609.10.1 Air Chambers.

Delete paragraph 609.10.1 in its entirety and substitute the following:

609.10.1 Air chambers a minimum of twelve (12) inches (305 mm) in length and the same diameter as the fixture supply shall be installed at all fixtures, or other approved mechanical devices shall be provided to reduce water hammer or line noises to such an extent no pressure hazard to the piping system shall exist.

23.25.610.8 Size Of Meter And Building Supply Pipe Using Table 6-5.

Amend by deleting the last sentence of section 610.8 and substitute the following:

No street service or building supply pipe shall be less than one (1) inch (25.4 mm) in diameter.

23.25.612.0 Indoor Water Meter Setter.

Add new sections as follows:

612.0 Indoor Water Meter Setter.

612.1 All newly constructed single family, duplex and triplex residences shall install an approved indoor water meter setter with meter idler or a removable section of pipe to facilitate the future installation of water meters in a horizontal position. It shall be located in the vicinity of the main supply full-way valve, ahead of any branch lines and shall also be valved on the outlet side. An easily accessible frost-proof area with adequate clearances shall be provided for meter installation, maintenance or removal. "Easily accessible" shall be considered an open area not concealed by an appliance, furnace, water heater or standard building material. When the meter is installed in under floor or crawl spaces, the maximum distance from the access opening to the meter shall not exceed ten (10) feet (3048 mm).

612.2 A horizontal section of pipe may be used in lieu of the indoor meter setter provided the pipe is equal in length to a water meter of the same size including meter couplings, but in no case shall it be less than twenty inches (20") in (508 mm) length. The piping shall be supported to provide a permanent support for the water meter when installed.

612.3 When the water tariff is revised to allow the metering of these residences, the utility shall furnish two meters and remote feed-outs at its expense and its crews shall install remote read-out meters at the time of actual meter installation.

23.25.613 Sizing Criteria for One- and Two-Family Dwelling Units.

Add new section as follows:

613 Sizing Criteria for One- and Two-Family Dwelling Units. One-inch (1") diameter building water supply piping shall be allowed based upon Plumbing Code, Appendix L, without performing water pipe sizing calculations as long as the following requirements are met:

1. No more than three and one-half (3½) bathroom groups exist in the residence; includes basement rough-ins.
2. Distance from key box to foundation wall where water piping enters the building is not greater than 100 feet.

If either of the above two items are exceeded, a water distribution pipe sizing calculation shall be performed and submitted to Building Safety to verify the minimum water pipe size required for the project. This calculation shall meet the requirements of the current adopted Plumbing Code.

23.25.701.1.2 ABS and PVC DWV Piping Installation – Sanitary Drainage.

Amend section by deleting the words:

Chapter 15 "Firestop Protection for DWV and Stormwater Application." and replace with the words "the building code".

23.25.710.15 Elevator Pit Drainage.

A. The Safety Code for Elevators and Escalators requires a means of pit drainage. This code prohibits a direct connection to the sanitary drainage system.

B. Where possible, elevator pits shall be drained by means of a gravity system with an indirect connection to the sanitary drainage system in accordance with the Plumbing Code.

C. Where gravity drainage is not possible, pit drainage shall be provided as follows:

1. All elevator pits shall contain a watertight concrete sump at the base of the pit, adequately sized for the installation of a sump pump. The sump shall be covered with a grate to create a uniform, level pit surface.
2. Pits not subject to ground water accumulation shall comply with the following: A minimum 1½-inch sump pump discharge line shall be installed. The line shall be routed from the pit to an approved point of collection and/or disposal on the exterior of the building. The line shall be equipped with an accessible check valve and gate or ball valve at the termination in the pit. The gate or ball valve shall be located on the discharge side of the check valve. Each end shall be capped. The discharge on the building exterior shall be clearly and permanently labeled "ELEVATOR PIT DISCHARGE".
3. Pits subject to either periodic or continuous ground water accumulation shall comply with the following: A permanent dewatering system shall be installed. The discharge line shall be 1½-inch minimum and contain a check valve and gate or ball valve. The gate or ball valve shall be located on the discharge side of the check valve. The system shall discharge to either the sanitary drainage system or an approved location on the exterior of the building. Connections to the sewer shall be through a code

compliant air gap or air break to an approved indirect waste receptor. The receptor shall be of such shape and capacity as to prevent splashing or flooding and shall be located where readily accessible for inspection. The gravity drainage line serving the indirect waste receptor shall be sized at two fixture units per GPM of pump flow. Trap seal protection shall be provided at the indirect waste receptor on systems receiving periodic ground water flow.

D. Hydraulic oil, grease, or any product that may cause damage to the drainage system or public sewer shall not be discharged to the sanitary drainage system. Piping shall not be routed through the elevator machine room.

23.25.719.0 Cleanouts.

Delete first paragraph of 719.1 and substitute the following:

719.1 Cleanouts shall be placed at the end of building drains, two (2) feet (610 mm) outside building and shall be of same material as building drain.

23.25.TABLE 7-7 Minimum Horizontal Distance Required From Building Sewer.

Amend Table 7-7, on-site domestic water service line as follows:

Change one (1) foot (0.3 mm) in right hand column to ten (10) feet (3048 mm).

23.25.801.3 Bar And Fountain Sink Traps.

Amend paragraph 801.3 by deleting the words "5 feet" from the last sentence and substituting the words "fifteen (15) feet."

23.25.815.0 Condensate Wastes and Control.

Delete Section 815.0.

23.25.816.0 Soda Fountains, Condensates, Drip Pans, Ice Machines, and Other Similar Equipment.

Add new section as follows:

816.0 Soda Fountains, Condensates, Drip Pans, Ice Machines, and Other Similar Equipment.

A. If the drain outlet for this type of equipment is below or remotely located from an approved point of disposal, the equipment may drain by gravity to a single pump, lift station receiver based on the following:

1. A "Little Giant" condensate unit or equal is acceptable for lift station receiver. The pump shall be appropriately sized for the required condition.
2. The equipment drain outlet or tailpiece may not exceed 1" I.D.
3. The equipment drain pipe from the outlet or tailpiece to the lift station receiver shall not exceed five (5) feet measured along the centerline of the pipe and shall be piped per UPC section 803.0.

4. The discharge pipe and fittings from the lift station receiver shall be a material approved for drainage piping and shall be piped to an approved indirect waste receptor per Uniform Plumbing Code section 701.

B. Vending company employees may install the drainage piping from the equipment they install to the approved point of disposal, provided such piping is in accordance with the Uniform Plumbing Code requirements.

C. If the equipment installed requires a water supply, it shall be provided by a properly licensed plumber to within ten (10) feet of the equipment, complete with any required backflow prevention device. The vendor employee may make the water connection from that point to the equipment.

23.25.903.1.2 ABS and PVC DWV Piping Installation – Vents.

Amend paragraph by deleting reference to "Chapter 15 Firestop Protection" and replacing with "the Building Code."

23.25.TABLE 10-1 Horizontal Distance Of Trap Arms

Add ** after Horizontal Distance of Trap Arms and add below Table 10-1 the following:

** Trap arms for residential floor drains may be extended beyond the limits of Table 10-1 to where they pass under the nearest wall before installing the required vent.

23.25.1007.0 Trap Seal Protection.

Amend section by adding the following exception:

Exception: R-3 occupancies (one- and two- family dwelling units).

23.25.1014.1 Grease Traps.

Amend by replacing to read as follows:

1014.1 When, in the judgment of the authority having jurisdiction, waste pre-treatment is required, an approved type of grease trap complying with the provisions of this section shall be installed in the waste line leading from pot sinks (two- and three-compartment), scullery sinks, dishwashing sinks, silverware sinks, drains, and other fixtures and equipment in establishments such as restaurants, cafés, lunch counters, cafeterias, bars and clubs, hotel, hospital sanitarium, factory or school kitchens, or other establishments where grease may be introduced into the drainage or sewage system in quantities that may effect line stoppage or hinder sewage treatment or private sewage disposal. A grease trap is not required for individual dwelling units or for any private living quarters.

23.25.1014.8 Grease Interceptors for Commercial Kitchens.

Delete this section in its entirety.

23.25.1017.1 Interceptors Required.
Amend by deleting reference to "550 gallons" and replacing with "100 gallons".

23.25.1101.1 Where Required.
Delete from the second sentence the words "In the case of one- and two-family dwellings," and "such as streets or lawns".

23.25.1101.3 Material Uses.
Amend by deleting reference to "Chapter 15 Firestop Protection" and replacing with "the Building Code".

23.25.1101.5 Subsoil Drains.
Amend section 1101.5.1 by adding the following to the beginning of the section:

> When required by the authority having jurisdiction…

23.25.1101.6 Building Subdrains.
Amend section 1101.6 by deleting the word "public" and inserting the word "storm".

23.25.1101.9 Filling Stations And Motor Vehicle Washing Establishments.
Amend section 1101.9 by adding to the beginning of the paragraph:

> When required by the authority having jurisdiction…

23.25.1101.11.1 Primary Roof Drainage.
Delete the first sentence and replace with the following, to read as follows:

> Roof areas of a building shall be drained by roof drains, gutters, scuppers, or sheet flow off the edge of the roof.

23.25.1101.11.2.2 Secondary Roof Drainage.
Delete from the first sentence the words "shall be separate from the primary system and".

23.25.1108.0 Controlled-Flow Roof Drainage.
Delete sections 1108.1 and 1108.2 in their entirety.

23.25.CH 12 Fuel Piping.
Chapter 12 has not been adopted; refer to the adopted Fuel Gas Code. The sizing methods in section 1217, referenced tables, and Figure 12-2 shall be considered acceptable for sizing gas piping.

23.25.1301.1 Application.
Amend by adding to the end of the first sentence the words "or in accordance with the latest version of AIA Guidelines for Design and Construction of Hospital and Health Care Facilities."

23.25.1309.1.1 Veterinary Clinics.
Amend by adding new section:

23.25.1309.1 Veterinary Clinics.
The material requirements, installation, and testing practices of NFPA 99 for Level 3 gas and vacuum systems shall apply to veterinary clinics except third party verification is not required.

23.25.1309.8 Vacuum Systems for Dental Offices.
Amend by adding new section:

23.25.1309.8 Vacuum Systems for Dental Offices.
The purpose of this amendment is to point out and clarify the requirements for wet vacuum systems in dental offices. Refer to NFPA 99C (most current edition) [NFPA 99 5.3.10] for full text of these requirements.

A. Level 3 wet vacuum systems (in dental offices) may be installed using schedule 40 PVC with pressure fittings [NFPA 99 5.3.10.2 and 5.3.10.3]. Piping and fittings installed in plenums shall have a flame spread index of not more than 25 and a smoke developed rating of not more than 50.

B. The wet vacuum system (in dental offices) is considered a Level 3 system if:
   1. The system is entirely separate from other Level 1 systems.
   2. The occupancy to be served and the function of the occupancy is distinct from other occupancies in the building.
   3. The patient population, during or subsequent to treatment, are not dependent for life on the vacuum system, and the treatment the facility performs may be completed without detrimental effect on patient outcomes in the event of sudden loss of vacuum systems [NFPA 99 Chapter 18].

C. The wet vacuum system (in dental offices) shall be verified by a third party technically competent and experienced in the field of Level 3 vacuum systems and testing, and meeting the requirements of ANSI/ASSE Standard 6030 [NFPA 5.3.12.3.1.3].

23.25.1310.3.1 Definitions – Health Care Facilities.
Health Care Facilities – Buildings or portions or buildings in which medical, dental, psychiatric, nursing, obstetrical or surgical care is provided.

CHAPTER 23.30 LOCAL AMENDMENTS TO THE NATIONAL ELECTRICAL CODE 2005 EDITION

Sections:

23.30.010	Local Amendments to the National Electrical Code 2005Edition
23.30.020	Certificate of Fitness - Right to Inspection
23.30.210.8(a)	Dwelling Units

23.30.210.8(b)	Other Than Dwelling Units
23.30.210.23(e)	Outlets Per Circuit
23.30.210.52(I)	Parking Spaces
23.30.210.52(J)	Underfloor (Crawl) Spaces
23.30.230.1	Scope
23.30.230.32	Protection Against Damage
23.30.230.70 (A) (1)	Disconnect at Readily Accessible Location
23.30.230.70 (A) (3)	Remote control
23.30.230.70(B)	Marking
23.30.240.24	Location in or on Premises
23.30.250.52(A)(1)	Metal Underground Water Pipes
23.30.250.53(D)(2)	Metal Underground Water Pipes
23.30.250.118	Types of Equipment Grounding Conductors
23.30.300.4(g)	Protection Against Physical Damage
23.30.300.5(d)	Protection from Damage - Buried Cables or Conductors
23.30.310.13	Conductor Construction and Applications
23.30.330.40	Insulating Bushing
23.30.334.10	Uses Permitted
23.30.334.12	Uses Not Permitted
23.30.334.104	Conductors
23.30.362.12	Uses Not Permitted
23.30.410.8	Fixtures in Clothes Closets
23.30.445.18	Disconnecting Means Required for Generators
511.3(A)(3)	Specific Areas Adjacent to Classified Locations
511.3(A)(5)	Up to a Level of 450mm (18in.) Above the Floor in Lubrication or Service rooms Where Class I Liquids Are Transferred
511.3(A)(7)	Within 450mm (18) of the Ceiling
511.3(B)(3)	Lubrication or Service Room Where Class I Liquids or Gaseous Fuels (Such as Natural Gas, or Hydrogen, or LPG) Are Transferred
511.3(B)(4)	Within 450mm (18) of the Ceiling

23.30.010 Local Amendments To The National Electrical Code 2005 Edition.

The amendments to the 2005 edition of the National Electrical Code are listed here by section. The last digits of the number after the title and chapter digits are the article and section of the National Electrical Code to which the amendment refers, i.e., 23.30.210-8(a) refers to section 210-8(a) of the National Electrical Code, 2005 Edition.

23.30.020 Certificate Of Fitness - Right To Inspection.

Municipal electrical inspectors may contact any electrical worker performing work for which a certificate of fitness is required by Alaska Statue 18.62.070 and request the person to exhibit their certificate of fitness or trainee certificate of fitness. The inspector may immediately serve upon that person a notice to cease any further work in that occupation until the person has demonstrated possession of the required certificate.

23.30.210.8(a) Dwelling Units.

Replace 210.8(a)(7) as follows:

Sinks. Where receptacles are installed within six (6) feet of the outside edge of a sink.

23.30.210.8(b) Other Than Dwelling Units.

Add sections 210-8(b)(4) and 210-8(b)(5) as follows:

(4) Outdoors where accessible from ground level.
(5) Within six (6) feet of the outside edge of a sink.

23.30.210.23(e) Outlets Per Circuit.

Add a subsection (e) to section 210.23 to read as follows:

Outlets per circuit. In dwelling units, no more than thirteen (13) outlets are allowed on one branch circuit. All smoke detectors on a circuit may be counted as a total of one outlet. Appliance circuits are limited to six (6) duplex receptacles per circuit.

Exception: Fixed lighting circuits designed to meet the appropriate sections of the code.

23.30.210.52(I) Parking Spaces.

Add a new subsection (I) as follows:

(I) Parking spaces. For each dwelling unit and mobile home, there shall be at least one (1) exterior G.F.C.I protected duplex outlet on a separate 20-ampere circuit adjacent to on-site parking locations.

Add exception to new subsection (I) as follows:

Exception: For multi-family dwellings, eight-plex and larger where indoor parking is provided, the required number of exterior duplex receptacles may be reduced by the number of indoor heated parking locations.

23.30.210.52(J) Underfloor (Crawl) Spaces.

Add a new subsection (J) as follows:

A receptacle shall be provided in each unconnected space; the receptacle shall be located adjacent to a sump when one is provided.

23.30.230.1 Scope.

Add the following:

The service installation shall also conform to the electric service requirements of the utility serving the area.

23.30.230.32 Protection Against Damage.
Add a second paragraph as follows:

Physical protection of underground service laterals for residential services of 200 amperes and less shall consist of not more than nine feet of liquid tight flexible metal conduit.

23.30.230.70(A)(1) Disconnect at Readily Accessible Location.
Revise the section to read:

The service disconnecting means shall be installed at a readily accessible location either outside of a building or structure or inside nearest the point of entrance of the service conductors.

The service disconnecting means shall be operable from the exterior of the building if the service disconnect is within the building. A fire pump service disconnect is not required to be operable from the exterior of the building.

23.30.230.70(A)(3) Remote control.
Revise the section to read:

Where a remote control device(s) is used to actuate the service disconnecting means, the service disconnecting means shall be located in accordance with section 230.70(A)(1). The control device shall meet the requirements of the electrical utility and the Anchorage Fire Department Electrical Disconnects Bulletin #05-003.

(FPN: See electrical utility standards for their requirements; AFD Electrical Disconnects Bulletin #05-003 is available at Building Safety.)

23.30.230.70(B) Marking.
Add a sentence to end of the section as follows:

Identification signage shall meet the requirements of Anchorage Fire Department Electrical Disconnects Bulletin #05-003.

23.30.240.24 Location in or on Premises.
Add a subsection (f) as follows:

Overcurrent devices shall not be installed over stairs.

23.30.250.52(A)(1) Metal Underground Water Pipes.
Delete the following:

Exception: In industrial and commercial buildings where conditions of

maintenance and supervision ensure that only qualified persons service the installation, interior metal water piping located more than1.52 meters (5ft) from the point of entrance to the building shall be permitted as part of the grounding electrode system or as a conductor to interconnect electrodes that are part of the grounding electrode system, provided that the entire length, other than short sections passing perpendicular through walls, floors or ceilings, of the interior metal water pipe that is being used for the conductor is exposed.

23.30.250.53(D)(2) Metal Underground Water Pipes.
Delete the following:

Exception: The supplemental electrode shall be permitted to be bonded to the interior metal water piping at any convenient point as covered in 250.52(A)(1), Exception.

23.30.250.118 Types Of Equipment Grounding Conductors.
Delete subsections (2) thru (14) and replace with:

(2) The copper sheath of mineral insulated, metal-sheathed cable.
(3) Metal enclosures of busways listed for grounding.

23.30.300.4 Protection Against Physical Damage.
Amend by adding new subsection (g):

(g) Roofs. Raceways run on the surface of a roof or subject to damage from snow, ice, or foot traffic, shall be rigid metal or intermediate metal conduit only.

23.30.300.5(d) Protection From Damage - Buried Cable Or Conductors.
Add a paragraph as follows:

(1) When direct buried cables or conductors cross or are installed parallel to, sewers, water lines, gas or other fuel lines, steam lines, communication and other electric cables or conductors, a twelve (12) inch (300 mm) radial separation shall be maintained.

23.30.310.13 Conductor Construction And Applications.
Amend by adding the following sentence to the end of the section:

Thermoplastic type insulation shall not be installed when the temperature is less than -7C (20F).

23.30. 330.40 Insulating Bushing.
Amend by adding the following words to the end of the paragraph:

An insulated bushing or its equivalent protection shall be provided between the conductors and the outer metal sheath and must be visible for inspection.

23.30. 334.10 Uses Permitted.

Delete the following subsection:

(3) Other structures permitted to be of Types III, IV and V construction except as prohibited in 334.12. Cables shall be concealed within walls, floors, or ceilings that provide a thermal barrio of material that has at least a 15-minute finish rating as identified in listings of fire-rated assemblies.

23.30.334.12 Uses Not Permitted.

Add subsection "e." to (A)(10):

e. When the temperature in a building is lower than -7 C (20 F), non-metallic sheathed cable shall not be installed.

23.30.334.104 Conductors.

Replace the section with:

The insulated power conductors shall be sizes 14 AWG through 2 AWG with copper conductors or sizes 10 AWG through 2 AWG with aluminum or copper-clad aluminum conductors. Conductors supplying receptacles shall be minimum size 12 AWG copper conductors or sizes 10 AWG with aluminum or copper-clad aluminum conductors. The signaling conductors shall comply with 780.5. The communication conductors shall comply with Part V of Article 800.

23.30.362.12 Uses Not Permitted.

Add a subsection (11):

(11) When the temperature in a building is lower than -7C (20F), electrical non-metallic tubing shall not be installed nor have wires installed in it.

23.30.410.8 Fixtures In Clothes Closets.

Add a section (e):

(e) Other closet or storage spaces: Luminaries (fixtures) shall meet the location requirements for clothes closets or be of a totally enclosed florescent.

23.30.445.18 Disconnecting Means Required for Generators.

Add a sentence to the end of the section as follows:

Generator disconnecting means shall conform to the requirements of

23.30.230.70(A)(1) and 23.30.230.70(A)(3).

23.30.511.3 Classifications of Locations.

511.3(A)(3) Specific Areas Adjacent to Classified Locations.
Replace section with:

(4) Areas Adjacent to Defined Locations or with Positive-Pressure Ventilation. Areas adjacent to defined locations in which flammable vapors are not likely to be released, such as stock rooms, switchboard rooms, and other similar locations, shall not be classified in existing buildings where designed with positive air pressure or where effectively cut off by walls or partitions.

511.3(A)(5) Up to a Level of 450mm(18in.) Above the Floor in Lubrication or Service rooms Where Class I Liquids Are Transferred.
Delete the entire section.

511.3(A)(7) Within 450mm (18) of the Ceiling.
Revise by adding the word "existing" to make (A) (7) read:

(7) In existing major repair garages, where lighter than air gaseous fuels (such as natural gas or hydrogen) vehicles are repaired or stored, the area within 450 `mm (18 in.) of the ceiling shall be considered unclassified where ventilation of at least 1 cfm/sq ft of ceiling area taken from a point within 450 mm (18 in.) of the highest point in the ceiling is provided.

511.3(B)(3) Lubrication or Service Room Where Class I Liquids or Gaseous Fuels (Such as Natural Gas, or Hydrogen, or LPG) Are Transferred.
Delete the words "that are not designed in accordance with 511.3(A)(5)" from the first portion of the first sentence so that it reads "The following spaces shall be classified as follows".

511.3(B) (4) Within 450mm (18) of the Ceiling.
Delete the words "that are not designed in accordance with 511.3(A) (7)" so the last portion of the sentence reads: "ceiling spaces shall be classified as Class I, Division 2".

CHAPTER 23.45 LOCAL AMENDMENTS TO THE INTERNATIONAL FIRE CODE, 2003 EDITION

Sections

23.45.100	Local Amendments to the International Fire Code, 2003 Edition
23.45.102.1	Construction and Design Provisions
23.45.105.1.2	Types of Permit
23.45.105.2.2	Inspection Authorized
23.45.105.6	Required Operational Permits
23.45.202	"A" Definitions And Abbreviations

23.34.202	Institutional Group I-1
23.45.202[B]	Educational Group E, Day Care
23.45.202[B]	Institutional Group I, Group I-2
23.45.202[B]	Institutional Group I, Group I-2, Child Care Facility
23.45.202	Group I-4, Day Care Facilities
23.45.202	Group R-4
23.45.308.3.1	
23.45.311.1.1	Abandoned Premises
23.45.401.3.4	False Alarm Charges
23.45.405	Emergency Evacuation Drills
23.45.408	Use and Occupancy-Related Requirements
23.45.508.2	Type Of Water Supply
23.45.508.3	Fire Flow
23.45.508.5.4	Obstructions
23.45.604.2.15.2	Pick Up Time
23.45.901.4	Marking Of Fire Protection Equipment And Fire Hydrants
23.45.901.6.2.1	Reports
23.45.901.9	Certification
23.45.901.10	Damage Protection
23.45.903.2	Where Required
23.45.903.2.2	Group E
23.45.903.2.12.1	Stories and Basements Without Openings
23.45.903.3.1.1.1	Exempt Locations
23.45.903.4.1	Signals
23.45.903.6.2	Alterations and Additions to E Occupancies
23.45.907.1.1 [B]	Construction Documents
23.45. 907.2.1.1	System Initiation In Group A Occupancies With An Occupancy Load Of 1,000 Or More
23.45.907.2.8	Group R-1
23.45.907.2.9	Group R-2
23.45.907.15.1	Connection To Municipal Fire Alarm Circuit
23.45.1008.1.9	Panic and Fire Exit Hardware
23.45.1009.1	Stairway Width
23.45.1011.1	Means Of Egress Obstructions
23.45.1018.1	Minimum Number of Exits
23.45.1025 [B]	Emergency Escape and Rescue
23.45.2211.2.3	
23.45.3404.2.13.1.3	Underground Tanks Out Of Service One Year
23.45.3404.2.14.1	General
23.45.35	Reference Standards
23.45.APPENDIX B, Section B103.3	
23.45.APPENDIX B, Table B105.1	
23.45.APPENDIX D, Section D104.1	

23.45.100 Local Amendments To The International Fire Code, 2003 Edition.

The amendments to the 2003 Edition of the International Fire Code are listed hereinafter by section. The last digits of the section number (after the title and chapter digits) refer to the section of the International Fire Code to which the amendment applies, i.e., 23.45.103.3.1.1 refers to section 103.3.1.1 of the International Fire Code (2003 Edition). The 2003 International Fire Code and its Appendices, except for Appendix A, shall be adopted as amended.

23.45.102.1 Construction and Design Provisions.

Add the following to the end of Item 3:

> ...except in reference to voluntary upgrades, as defined and governed by the adopted Existing Buildings Code.

23.45.105.1.2 Types of Permit.

Delete Item 2, Construction Permit.

23.45.105.6 Required Operational Permits.

Amend **105.6** as follows:

Delete sections **105.6** and subsections **105.6.1** through **105.6.46**.

Replace **105.6** with the following:

> The code official is authorized to issue operational permits for the operations set forth in 105.6.1 through 105.6.7.

Add seven new subsections as follows:

105.6.1 *Amusement Buildings.* An operational permit is required to operate a special amusement building as defined in Section 202 of this code.

105.6.2 *Carnivals and Fairs.* An operational permit is required to operate a carnival or fair.

105.6.3 *Battery Systems.* A permit is required to install stationary lead-acid battery systems having a liquid capacity of more that 50 gallons (189 L).

105.6.4 *Connection to Municipal Fire Alarm.* An operational permit is required to connect a private fire alarm system to the municipal fire alarm circuit.

105.6.5 *Places of Assembly.* An operational permit is required to operate a place of assembly with an occupant load of 500 or more.

105.6.6 *Pyrotechnics Special Effects Material.* An operational permit is required for use and handling of pyrotechnic special effects material as defined in section 3302.1 of this code.

105.6.7 *Temporary Membrane Structures, Tents and Canopies.* An operational permit is required to operate an air-supported temporary membrane structure or tent having an area in excess of 200 square feet (19 m2), or a canopy in excess of 400 square feet (37 m2).

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. Fabric canopies and awnings open on all sides which comply with all the following:
   - 2.1 Individual canopies shall have a maximum size of 700 square feet (65 m2).
   - 2.2 The aggregate area of multiple canopies placed side by side without a fire break clearance of 12 feet (3658 mm) shall not exceed 700 square feet (65 m2) total.
   - 2.3 A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be provided.

23.45.202 [B] Educational Group E, Day Care.

Amend paragraph to read as follows:

The use of a building or structure, or portion thereof, for education, supervision or personal care services for more than five (5) children older than 2-1/2 years of age, including children related to the staff, shall be classified as an E occupancy.

Add Exception to read as follows:

Exception: Family child care homes (R-3) operating between the hours of 6:00 a.m. and 10:00 p.m. may accommodate a total of twelve (12) children of any age without conforming to the requirements of an E occupancy except for smoke detectors as specified in subsection 907.2.10, means of egress requirements of section 1003, including emergency escape and rescue openings (as required by section 1009) in napping or sleeping rooms, and fire extinguisher requirements as outlined in section 906.

23.45.202 [B] Institutional Group I-1.

Revise by adding new paragraphs between the first and second paragraphs of the definition of "Institutional Group I-1" in "Occupancy Classification" to read:

A facility in this occupancy classification with occupants who need physical assistance to respond in emergency situations shall comply with the International Building Code, section 419.

First sentence of the last paragraph of the definition "Institutional Group I-1" is revised to read:

A facility such as one described above with five or fewer persons, including persons related to the staff, shall be classified as group R-3.

23.45.202 [B] Institutional Group I, Group I-2.
Amend last sentence to read as follows:

A facility such as the above with five or fewer persons, including persons related to the staff, shall be classified as Group R-3.

23.45.202 [B] Institutional Group I, Group I-2, Child Care Facility.
Amend paragraph to read as follows:

A child care facility providing care on a 24-hour basis to more than five (5) children 2-1/2 years of age or less, including children related to the staff.

23.45.202 [B] Institutional Group I, Group I-4, Day Care Facilities.
Revise second sentence of the definition Group I-4 Day Care Facilities, to read:

A facility within this occupancy classification with five (5) or fewer persons, including persons related to the staff, shall be classified as a Group R-3.

23.45.202 [B] Institutional Group I, Group R-4.
Revise by adding a new paragraph of the definition R-4 in Residential Group Occupancy R of Occupancy Classification between the first and second paragraphs to read:

Facilities within this occupancy classification with occupants needing physical assistance to respond in emergency situations shall comply with the International Building Code, section 419.

23.45.308.3.1
After the words "combustible balconies" add "and decks".

23.45.311.1.1 Abandoned Premises.
Amend paragraph by deleting reference to "the International Property Maintenance Code".

23.45.401.3.4 False Alarm Charges.
Amend by deleting 2000 amendment, replacing with:

401.3.4 False Alarm Charges.
The owner of a building containing a fire alarm system shall pay a charge in accordance with section 8.40.040 for each and every false alarm to which the fire department responds.

As used in this section, "*false alarm*" means an alarm signal generated by a fire alarm system reporting an alarm for which no fire or emergency actually exists, and includes system malfunctions, faulty operation of detectors, and false alarms not classified above. It does not include incidents where the detector or system operated as designed, such as but not limited to, a smoke detector sounding from someone smoking under the detector or a manual pull station being pulled.

23.45.405 Emergency Evacuation Drills.

Amend by adding a new subsection 405.10 to read as follows:

405.10 False Alarms.

False alarms may not be counted as a fire drill for the purposes of this article.

23.45.408 Use and Occupancy-Related Requirements.

Amend by adding a new subsection 408.3.5 to read as follows:

408.3.5 False Alarms.

False alarms may not be counted as a fire drill for the purposes of this section.

23.45.508.2 Type Of Water Supply.

Amend by adding a second paragraph and a new exception to 508.2 to read as follows:

The water system shall be designed to the standards of, and have the approval of the water utility providing service in the area. If the water system for a structure is not in an area served by a water utility, it shall meet the standards of the nearest water utility.

Exception: In areas of jurisdiction not served by a water utility, the requirements for water systems as outlined in section 508 need not be met, provided all structures other than R-3 and U occupancies are at least type A construction as defined in the International Building Code, 2003 Edition, or are provided with a fire extinguishing system designed in accordance with section 903.3.1.1.

23.45.508.3 Fire Flow.

Amend by deleting the existing paragraph and replace with the following paragraph:

Water supplies for the fire flow requirements for buildings or portions of buildings and facilities shall be calculated using the provisions of Appendix Chapter B and Table B105.1.

23.45.508.5.4 Obstructions.

Amend by adding a third sentence at the end of the paragraph to read as follows:

No vehicle shall be parked within fifteen (15) feet of the front and ten (10) feet of the sides of a fire hydrant, fire department connection, or fire protection control valve on private or public property.

23.45.604.2.15.2.2 Pick Up Time.
Revise by the addition of new subsection to read:

The emergency power system shall pick up its connected loads within ten (10) seconds of failure of the normal power supply.

23.45.901.4 Marking Of Fire Protection Equipment And Fire Hydrants.
Amend by adding a new second paragraph to read as follows:

Fire Department connection devices for building sprinkler systems in new and existing buildings shall be identified by the installation of approved reflective markers or signs installed above the device in an unobstructed location at approximately seven (7) feet above grade.

23.45.901.6.2.1 Reports.
Add a new subsection 901.6.2.1 to read as follows:

901.6.2.1 Reports. A copy of all services reports shall be sent to the Fire Prevention Division. Each system shall be tagged by the inspection agency, indicating the date of service and whether or not the system is in conformance with the associated standards.

23.45.901.9 Certification.
Add a new subsection to read as follows:

901.9 Certification. Companies installing and/or performing maintenance on sprinkler systems shall have at least one individual certified to a minimum of NICET Level II in Sprinkler Systems as required under 13 AAC 50.035.

23.45.901.10 Damage Protection.
Add a new subsection to read as follows:

901.10 Damage Protection. When exposed to probable vehicular damage due to proximity to alleys, driveways or parking areas, standpipes, post indicator valves and sprinkler system or standpipe system, connections shall be protected in an approved manner.

23.45.903.2.2 Group E.
Revise as follows:

An automatic sprinkler system must be provided throughout all buildings in Group E occupancies and for every portion of educational buildings below the

level of exit discharge. The use of a fire wall does not establish a separate building for purposes of this section.

Exception: Buildings with Group E occupancies having an occupant load of 49 or less.

Daycare uses licensed to care for more than five (5) persons between the hours of 10 p.m. and 6 a.m. shall be equipped with an automatic sprinkler system designed and installed in accordance with subsection 903.3.13 or an approved equivalent system.

23.45.903.2.12.1 Stories and Basements Without Openings.

Amend paragraph by deleting the words "where the floor area exceeds 1,500 square feet and".

23.45.903.3.1.1.1 Exempt Locations.

Amend by adding a new item to read as follows:

6. Elevator machine rooms may delete the sprinklers within the machine room where such room is: (a) separated from the remainder of the building in accordance with the International Building Code section 3006.4; (b) smoke detection is provided in accordance with NFPA 72; and (c) notification of alarm activation is received at a constantly monitored location.

23.45.903.4.1 Signals.

Amend section by adding a new sentence to read as follows:

Central stations, remote stations or proprietary monitoring stations shall be located within the Municipality of Anchorage or shall have a local representative capable of responding to the location within sixty (60) minutes of notification.

23.45.903.6.2 Alterations and Additions to E Occupancies.

Add a new subsection to read as follows:

903.6.2 Alterations and Additions to E Occupancies. An approved automatic fire extinguishing system shall be installed in an E Occupancy in accordance with section 903.2.2 whenever alterations or additions are made to an existing structure containing an E Occupancy.

23.45.907.1.1 [B] Construction Documents.

Revise by adding the following construction documents to those require to be submitted for plan review:

12. System riser diagrams.

23.45. 907.2.1.1 System Initiation In Group A Occupancies With An Occupancy Load of 1,000 or More.

Amend by adding a new exception 2 to read as follows:

2. Churches sprinklered throughout.

23.45.907.2.9 Group R-2.

Amend in two places:

Change current amendment by changing the deleted section from #2 to #3

Amend first paragraph to read as follows:

A manual fire alarm system and an automatic fire detection system with smoke detection in the public areas shall be installed in Group R-2 occupancies where:

23.45.907.15.1 Connection To Municipal Fire Alarm Circuit.

Amend by adding a new section to read as follows:

907.15.1 Connection to municipal fire alarm circuit.

A. A person having a private fire alarm system for one building may connect the system to a municipal fire alarm circuit, or directly connect the system to the fire department communications center, after obtaining a permit for the connection from the fire chief. The fire chief may issue a permit for the connection if it is determined the connection:
   1. Is compatible with the municipal fire alarm circuit or system.
   2. Connects an adequate, properly installed and maintained private alarm system.
   3. Substantially benefits the municipal fire prevention system.

B. The permit required by this section shall be issued subject to the Fire Department rules and regulations and shall be conditional upon such reasonable requirements, terms and conditions as the fire chief may require.

C. A permit may be revoked by the fire chief for noncompliance with the permit standards, rules, regulations, conditions, or restrictions. The permit may be revoked by the fire chief if, in the fire chief's discretion, it is found the disconnection of the private alarm system is in the best interests of the Municipality. The permit holder may appeal a decision to revoke a permit to the Building Board.

D. The permit holder shall pay the Municipality for the cost of a radio fire alarm box or for covering an existing radio fire alarm box, and for the cost of the initial hookup (one box per building). The permit holder shall pay the cost of providing, installing and maintaining the private system, up to the radio fire alarm box. The maintenance of the private system shall be by a qualified person engaged in the business of installing and maintaining a supervisory fire alarm system, who shall use NFPA 72 as an installation and maintenance standard.

D. It shall be unlawful for a person not authorized by the fire chief to connect or disconnect, temporarily or otherwise, a private fire alarm system, or other wires or conduits leading to a municipal fire alarm circuit or municipal fire system. The fire chief shall authorize specific connection or disconnection by written permit.

E. The permit holder shall pay the following fees for the connection of the private fire alarm system, for one building, to the municipal fire system:
   1. Permit Fee $10.
   2. Initial Connection Fee $150.
   3. Annual Inspection Fee $1,200.

F. It shall be unlawful for any person, firm, association, or corporation to do any act prohibited under this section or to fail to do any act required under this section. Any person, firm, association, and/or corporation violating this section shall be guilty of a misdemeanor and shall be subject to the penalties and remedies set forth in section 23.10.025.

23.45.908.7 Carbon Monoxide Detectors.

Add new section in section 908 Emergency Alarm Systems:

908.7 Carbon monoxide detectors. The provisions of this section shall apply to Group I-1, R-2, R-3 and R-4 occupancies. At least one (1) carbon monoxide detector shall be installed on each floor level. If a floor level contains bedrooms or sleeping rooms, at least one (1) detector shall be located in the immediate vicinity of the sleeping area, outside of the bedrooms/sleeping rooms. Carbon monoxide detectors shall be listed and installed in accordance with their listing. The alarm shall be clearly audible in all sleeping rooms with intervening doors closed.

Exceptions:

4. Carbon monoxide detectors are not required in dwelling units and structures with no combustion appliances and with no attached garage.
5. Carbon monoxide detectors are not required in dwelling units and structures with only direct vent combustion appliances and with no attached garage.
6. Carbon monoxide detectors are not required in Group I-1 and R-2 occupancies where all combustion equipment is located within a mechanical room separated from the rest of the building by construction capable of resisting the passage of smoke. If the structure has an attached parking garage, the garage shall be ventilated by an approved automatic carbon monoxide exhaust system designed in accordance with the mechanical code.

908.7.1 Interconnection. In new construction, all carbon monoxide detectors located within a single dwelling unit shall be interconnected in such a manner that actuation of one alarm shall activate all of the alarms within the individual dwelling units.

908.7.2 Power source. In new construction, carbon monoxide detectors shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Wiring shall be permanent and without disconnecting switch other than those required for overcurrent protection. Carbon monoxide detectors shall be permitted to be cord-and-plug type with battery backup, or battery powered in existing construction.

23.45.1008.1.9 Panic and Fire Exit Hardware.
Revise by changing "an occupant load of 100 or more" in the second full paragraph to "an occupant load of 50 or more".

23.45.1009.1 Stairway Width.
Revise by adding the following exception:

Exception: 5. Stairs or ladders used only to attend equipment are exempt from the requirements of this section.

23.45.1011.1 Means Of Egress Obstructions.
Amend by adding a new paragraph after the first paragraph to read as follows:

No kiosks, merchandise or similar obstructions shall be placed in such a way to restrict the minimum clear width required by the International Building Code.

23.45.1018.1 Minimum Number of Exits.
Revise by adding the following exception:

Exception: Basements or the first level below the first story in all occupancies building, may have access to only one exit. Any other use of the basement or first level below the first story shall have at least two (2) exits arranged as described in section 1014.2. For purposes of this exception, storage rooms, laundry rooms, maintenance offices, and similar uses are not considered as providing service to the building.

23.45.1025 [B] Emergency Escape and Rescue.
Revise by deleting Exceptions 1, 2, 3, 4, and 7.

23.45.1102.1
The first sentence of the definition of "*Airport*" is revised to delete the words "with an overall length greater than 39 feet (11887mm) and an overall exterior fuselage width greater than 6.6 feet (2012mm)."

23.45.2211.2.3

Subsection 2211.2.3, first paragraph of the International Fire Code is revised by adding a sentence to read: "Where oil separators or traps are provided, neither the oil nor water phase may drain to septic systems, dry wells, or other means of underground discharge."

23.45.3404.2.13.1.3 Underground Tanks Out Of Service One Year.

Amend by adding a new sentence at the end of the paragraph to read as follows:

This shall not apply to residential R-3 occupancies (single family and duplex) properties.

23.45.3404.2.14.1 General.

Amend by adding new item 6 to read as follows:

6. The internal tank environment shall be monitored by a combination gas detector during the removal of the tank.

23.45.35 Reference Standards.

Chapter 35 of the I.F.C. is revised by changing the referenced standards from the publication date listed to the following edition, and the standards are adopted by reference:

N.F.P.A.	10-2002 *Portable Fire Extinguishers;*
N.F.P.A.	13-2002 *Installation of Sprinkler Systems;*
N.F.P.A.	13D-2002 *Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes;*
N.F.P.A.	13R-2002 *Installation of Sprinkler Systems in Residential Occupancies Up To and Including Four Stories in Height;*
N.F.P.A.	14-2003 *Standpipe and Hose System;*
N.F.P.A.	72-2002 *National Fire Alarm Code;*
N.F.P.A.	750-2003 *Standard on Water Mist Fire Protection System*

23.45.APPENDIX B, Section B103.3

Amend by deleting the reference to "NFPA 1231" and replace with "NFPA 1142 (2001 Edition) and adopted by reference."

23.45.APPENDIX D, Section D104.1

Delete entire section.

CHAPTER 23.55 FIRE PROTECTION SERVICE OUTSIDE SERVICE AREAS

Sections:

23.55.100 Definitions
23.55.200 Policy
23.55.300 Implementation
23.55.400 Cost of Services

23.55.500 Responsibility for Payment
23.55.600 Enforcement

23.55.100 Definitions.

Whenever the term "municipally financed fire protection" is used, it shall include services received from the Municipality of Anchorage Fire Department, and other service areas offering tax-supported fire-protection services.

A. *Accidental alarm* means an alarm set off and transmitted through accidental operation of an automatic or manual fire alarm device, frequently caused by low air pressure on an automatic fire-extinguishing system, dry valves, excessive heat due to industrial processes or cold weather.

B. *Call out* means the initial response of a fire department to a report of a fire.

C. *Needless alarm* means an alarm of fire apparently given in good faith which proves to be needless because fire department assistance was not required.

23.55.200 Policy.

The policy of the municipality is to provide fire protection within service areas to the maximum extent possible within the budgets approved by the Assembly and supported by taxes raised within the service areas. Further, the municipality recognizes a supplementary obligation to protect lives and property from destruction by fire in areas of the municipality which do not support fire protection services by taxes or voluntary contributions sufficient to maintain a volunteer fire department capable of responding adequately to all calls twenty-four (24) hours per day, seven (7) days per week throughout the year.

23.55.300 Implementation.

The mayor is authorized to permit the use of municipally financed fire protection services outside of the areas providing tax or other adequate support for the services on the following conditions:

A. The first obligation is to areas furnishing tax support, and the service to the outside areas shall not jeopardize the service to the areas furnishing tax support,

B. The second obligation is to areas which voluntarily contribute to the maintenance of a 24-hour-per-day, seven-day-per-week fire department.

C. The third obligation is to other areas.

23.55.400 Cost Of Services.

A. In areas outside of fire service areas, $500.00 shall be charged for call out of the Fire Department. After the first hour, hourly rates for each piece of fire apparatus used in suppressing the fire shall be charged in accordance with the following:

1. Pumper: $75.00 per hour;
2. Tanker: $75.00 per hour;
3. Brush tank: $75.00 per hour;
4. Bulldozer: $75.00 per hour.

23.55.500 Responsibility For Payment.

A. The responsibility for payment of the charges in section 23.55.040 shall rest jointly and severally upon the following:

1. Owners of the property upon which the fire originated;
2. Tenants of the property upon which the fire originated;
3. Persons residing on the property upon which the fire originated; and
4. Any person legally responsible for the fire by reason of negligence or otherwise.

B. For the purpose of this section only, the term "fire" is meant to include not only fires but any action or omission to act which results in a needless or accidental alarm.

23.55.600 Enforcement.

The municipality shall have the right to bring suit for the collection of these charges, plus costs and attorneys' fees, against any or all of the parties responsible for payment.

CHAPTER 23.60 ENERGY CONSERVATION IN NEW BUILDING DESIGN

Sections:

23.60.100 Applicability
23.60.200 Local Amendments
23.60.4.3.2.2 Roof/Ceiling

23.60.100 Applicability.

A. Except as otherwise expressly provided, the provisions of ASHRAE Standard Energy Conservation in New Building Design, ANSI/ASHRAE/IES 90A-1980, ANSI/ASHRAE/IES 90.1-1989, ASHRAE/IES 90B-1975, and ASHRAE 90C-1977, published by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers and Illuminating Engineering Society of North America, shall apply to the construction, alteration and repair of any building or structure within the municipality.

B. Additions, alterations, repairs and changes of use or occupancy in all buildings and structures shall comply with the provisions for new buildings and structures except as otherwise provided in the International Building Code.

23.60.200 Local Amendments.

The amendments to the provisions of ANSI/ASHRAE/IES 90.1-1989 and ASHRAE/IES 90B-1975 are listed hereafter by section. The last digits of the section number (after the title and chapter numbers) are the section number of ANSE/ASHRAE/IES 90.1-1989 and ASHRAE/IES 90B-1975 to which the amendment refers, i.e., 23.65.4.3.2.2 refers to amendments to Section 4.3.2.2 of ANSE/ASHRAE/IES 90A-1989.

23.60.4.3.2.2 Roof/Ceiling.

Amend by deleting Exception following subsection 4.3.2.2.

CHAPTER 23.65 LOCAL AMENDMENT TO THE 2003 INTERNATIONAL EXISTING BUILDING CODE

Sections

3.65.100 Local Amendments to the International Existing Building Code, 2003 Edition
23.65.103-117 Delete Sections
23.65.507.3 Roof Diaphragm
23.65.604.2.0 Automatic Sprinkler Systems
23.65.604.2.2.2 Group E Occupancy
23.65.605.4.4 Panic Hardware
23.65 Appendix A

23.65.100 Local Amendments to the International Existing Building Code, 2003 Edition.

The amendments to the 2003 Edition of the International Existing Building Code are listed hereafter by section. The last digits of the number (after the title and chapter digits) are the sections of the International Existing Building Code to which the amendments refer.

23.65.103-117 Delete Sections.

Delete IEBC sections 103 through 117; refer to the Anchorage Administrative Code.

23.65.507.3 Roof Diaphragm.

Add the following sentence:

> Evaluations of insufficiency shall be based on the code under which the structures were built.

23.65.604.2.0 Automatic Sprinkler Systems.

Amend section 604.2 by adding the sentence "Wherever this code requires a work area to be sprinklered, the entire floor shall be sprinklered or the sprinkler area shall be separated from the non-sprinklered area by a one-hour fire-resistance-rated construction.

23.65.604.2.2.2 Group E Occupancy.

Add the following new section:

> **604.2.2.2** An approved automatic fire extinguishing system shall be installed in an E occupancy in accordance with the fire code whenever alterations or additions are made to an existing structure containing an E occupancy.

23.65.605.4.4 Panic Hardware.

Amend section 605.4.4 by changing the number 100 to 49.

23.65 Appendix A.
Adopt Appendix A.

CHAPTER 70 ABATEMENT OF DANGEROUS BUILDINGS.

Sections

23.70.701 Purpose and scope
23.70.702 Definitions
23.70.703 Administration
23.70.704 Notices and orders
23.70.705 Notice to vacate
23.70.706 Appeal
23.70.707 Performance of work, repair, demolition or removal by owner
23.70.708 Enforcement by code official
23.70.709 Emergency abatement by code official
23.70.710 Recovery of costs by code official

Section 23.70.701 Purpose & Scope.

23.70.701.1 Purpose.

A. It is the purpose of this chapter to provide a just, equitable and practicable method, to be cumulative with and in addition to any other remedy provided by the codes, or otherwise available by law, whereby buildings or structures which from any cause endanger the life, limb, health, morals, property, safety or welfare of the general public or their occupants shall be required to be repaired, demolished or removed.

B. The purpose of this chapter is not to create or otherwise establish or designate any particular class or group of persons who shall or should be especially protected or benefited by the terms of this chapter.

23.70.701.2 Scope. The provisions of this chapter shall apply to all dangerous buildings or structures, as defined in section 702, now in existence or which may hereafter become dangerous in this jurisdiction.

23.70.701.3 Abatement of dangerous building standards. All buildings or structures required to be repaired under the provisions of this chapter shall be subject to the provisions of the International Existing Building Code, as adopted by the Municipality of Anchorage.

Section 23.70.702 Definitions.

23.70.702.1 General. For the purpose of this chapter, certain terms, phrases, words and their derivatives shall be construed as specified in either this chapter or as specified in the code. Where terms are not defined, they shall have the ordinary accepted meanings within the context with which they are used. Webster's Dictionary shall be construed as providing ordinary accepted meanings. Words used in the singular include

the plural and the plural the singular. Words used in the masculine gender include the feminine and the feminine the masculine.

Abatement is the code compliant corrections of all conditions or defects described in section 702, as confirmed by the code official.

Beyond Economic Feasibility to Repair is when the estimated cost of repair exceeds the estimated replacement cost of the entire structure.

Code or Codes are the relevant codes, as adopted by this jurisdiction.

Code Official is the building official or designee.

Dangerous Building is, for the purpose of this chapter, any building or structure with any or all of the conditions or defects hereinafter described to such an extent the condition endangers life, limb, health, morals, property, safety, or welfare of the general public or its occupants.

1. Whenever any door, aisle, passageway, stairway or other means of exit is not of sufficient width or size or is not so arranged as to provide safe and adequate means of exit in case of fire or panic.
2. Whenever the walking surface of any aisle, passageway, stairway or other means of exit is so warped, worn, loose, torn or otherwise unsafe as to not provide safe and adequate means of exit in case of fire or panic.
3. Whenever the stress in any materials, member or portion thereof, due to all dead and live loads, is more than one and one half times the working stress or stresses allowed in the code for buildings of similar structure, purpose or location.
4. Whenever any portion thereof has been damaged by fire, earthquake, wind, flood or by any other cause, to such an extent the structural strength or stability thereof is materially less than before such catastrophe and is less than the minimum requirements of the code for buildings of similar structure, purpose or location.
5. Whenever any portion or member or appurtenance thereof is likely to fail, or to become detached or dislodged, or to collapse and thereby injure persons or damage property.
6. Whenever any portion of a building or structure, or any member, appurtenance or ornamentation of the exterior thereof is not of sufficient strength or stability, or is not so anchored, attached or fastened in place so as to be capable of resisting a wind pressure of one half of that specified in the code for such buildings or structures.
7. Whenever any portion thereof has wracked, warped, buckled or settled to such an extent that walls or other structural portions have materially less resistance to winds or earthquakes than is required in the case of similar construction.
8. Whenever the building or structure, or any portion thereof, because of:
    a. Dilapidation, deterioration or decay;
    b. Faulty construction;
    c. The removal, movement or instability of any portion of the ground necessary for the purpose of supporting such building or structure;

d. The deterioration, decay or inadequacy of its foundation; or
e. Any other cause, is likely to partially or completely collapse.

9. Whenever, for any reason, the building or structure, or any portion thereof, is unsafe for the purpose of which it is being used.

10. Whenever the exterior walls or other vertical structural members list, lean or buckle to such an extent a plumb line passing through the center of gravity does not fall inside the middle one-third of the base.

11. Whenever the building or structure, exclusive of the foundation, shows thirty-three (33) percent or more damage or deterioration of its supporting member or members, or fifty (50) percent damage or deterioration of its non-supporting members, enclosing or outside walls or coverings.

12. Whenever the building or structure has been so damaged by fire, wind, earthquake or flood, or has become so dilapidated or deteriorated as to become
a. An attractive nuisance to children;
b. A harbor for vagrants, criminals or immoral persons; or
c. Enables persons to resort thereto for the purpose of committing unlawful or immoral acts.

13. Whenever any building or structure has been constructed, exists or is maintained in violation of any specific requirement or prohibition applicable to such building or structure provided by the building regulations of this jurisdiction, as specified in the code, or of any law or ordinance of this state or jurisdiction relating to the condition, location or structure of buildings.

14. Whenever any building or structure which, whether or not erected in accordance with all applicable laws and ordinances, has in any non-supporting part, member or portion less than fifty (50) percent, or in any supporting part, member or portion, less than sixty-six (66) percent of the
a. Strength;
b. Fire-resisting qualities or characteristics; or
c. Weather-resisting qualities or characteristics required by law in the case of a newly constructed building or structure of like area, height and occupancy in the same location.
d. This subsection does not apply to strength required to resist seismic loads.

15. Whenever a building or structure, used or intended to be used for dwelling purposes, because of inadequate maintenance, dilapidation, decay, damage, faulty construction or arrangement, inadequate light, air or sanitation facilities, or otherwise, is determined by the code official to be unsanitary, unfit for human occupancy or in such a condition it is likely to cause sickness or disease.

16. Whenever any building or structure, because of obsolescence, dilapidated condition, deterioration, damage, inadequate exits, lack of sufficient fire-resistive construction, faulty electric wiring, gas connections or heating apparatus, or other cause, is determined by the code official to be a fire hazard.

17. Whenever any building or structure is in such a condition as to constitute a public nuisance known to the common law or in equity jurisprudence.

18. Whenever any portion of a building or structure remains on a site after the demolition or destruction of the building or structure or whenever any building or structure is abandoned for a period in excess of six months so as to constitute such

building or structure or portion thereof an attractive nuisance or hazard to the public.

Habitual - Customarily, or by frequent practice or use; does not mean entirely or exclusively.

Imminent or Immediate - Near at hand, or if left unattended to on the point of happening; an observable structural, electrical, mechanical or plumbing failure to the extent a reasonable person may believe it poses a serious threat to life and safety.

Record Owner – any legal interest of record disclosed from official public records.

Unfit for Human Occupancy – A building or structure is unfit for human occupancy whenever the code official finds such structure is unsafe, unlawful or because of the degree to which the building or structure is in disrepair or lacks maintenance, is unsanitary, vermin or rat infested, contains filth and contamination, or lacks ventilation, illumination, sanitary or heating facilities or other essential equipment required by this code, or because the location of the building or structure constitutes a hazard to the occupants of the building or structure or to the public.

Unlawful Building or Structure- is one found in whole or in part to be occupied by more persons than permitted under this code, or was erected, altered or occupied contrary to law.

Unsafe Building or Structure – is one found to be dangerous to the life, health, property or safety of the public or the occupants of the building or structure by not providing the minimum safeguards to protect or warn occupants in the event of fire, or because such building or structure contains unsafe equipment or is so damaged, decayed, dilapidated, structurally unsafe or of such faulty construction or unstable foundation, that partial or complete collapse is possible.

Unsafe Equipment – includes any boiler, heating equipment, elevator, moving stairway, electrical wiring or device, flammable liquid containers or other equipment on the premises or within the building or structure in such disrepair or condition that such equipment is a hazard to life, health, property or safety of the public or occupants of the premises, building or structure.

Section 703 Administration.

23.70.703.1 Authority.

A. The code official is hereby authorized to enforce the provisions of this chapter.

B. The code official shall have the power to render interpretations of this chapter and to adopt and enforce rules and supplemental regulations in order to clarify the application of its provisions. Such interpretations, rules and regulations shall be in conformity with the intent and purpose of this chapter.

23.70.703.2 Extension of time to perform work. Upon receipt of a written request from the person required to conform to a notice and order and by agreement of such person to comply with the notice and order if allowed additional time, the code official may grant an extension of time, not to exceed an additional one hundred twenty (120) days, within which to complete said repair, demolition or removal, if the code official determines such an extension of time will not create or perpetuate a situation imminently dangerous to life or property. The code official's authority to extend time is limited to the physical repair, demolition or removal of the building or structure and shall not in any way affect the time to appeal the notice and order.

23.70.703.3 Inspections. The health officer, the fire marshal and the code official are hereby authorized to make such inspections and take such actions as may be required to enforce the provisions of this chapter.

23.70.703.4 Right of entry. When it is necessary to make an inspection to enforce the provisions of this chapter, or when the code official or the code official's authorized representative has reasonable cause to believe there exists in a building or structure a condition which is contrary to or in violation of this chapter and makes the building or structure dangerous or unlawful, the code official may enter the building or structure at reasonable times to inspect or to perform the duties imposed by this chapter, provided if such building or structure be occupied that credentials be presented to the occupant and entry requested. If such building or structure is unoccupied, the code official shall first make a reasonable effort to locate the owner or other persons having charge or control of the building or structure and request entry. If entry is refused, the code official shall have recourse to the remedies provided by law to secure entry.

23.70.703.5 Abatement of dangerous buildings. All buildings or structures or portions thereof determined after inspection by the code official to be dangerous or unlawful as defined in this chapter are hereby declared to be public nuisances and shall be abated by repair, demolition, or removal in accordance with this code.

23.70.703.6 Violations. It shall be unlawful for any person, firm or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the same to be done in violation of this chapter.

23.70.703.7 Board of appeals. In order to hear and decide appeals of orders, decisions or determinations made by the code official relative to the application and interpretations of this chapter, there shall be and is hereby created a board of appeals. The board of appeals for these issues is the Board of Building Regulation Examiners and Appeals (Building Board) as defined in section 23.10.204. Appeals to the board shall be processed in accordance with the provisions contained in section 705 of this chapter, and Anchorage Municipal Code of Regulations section 23.10.010.

Section 23.70.704 Notices and Orders.

23.70.704.1 Commencement of proceedings. When the code official has inspected a building or structure and determined it is a dangerous or unlawful building, the code official shall commence proceedings to cause the repair, demolition, or removal of the building or structure.

23.70.704.2 Notice of violation. All violations noted by the code official shall receive a notice of violation. A notice of violation shall be posted at the location of the building or structure determined by inspection to have a violation. The code official shall give the owner three (3) business days to meet with the code official to determine the extent of the repair, demolition or removal necessary. After the three (3) business days, the code official shall determine if a notice and order shall be issued.

23.70.704.3 Notice and order. The code official shall issue a notice and order directed to the record owner of the building or structure. The notice and order shall contain:

1. The street address and a legal description sufficient for identification of the property upon which the building or structure is located.
2. A statement the code official found the building or structure to be dangerous or unlawful with a brief and concise description of the conditions found to render the building or structure dangerous or unlawful under the provisions of section 702.
3. A statement of the action required to be taken as determined by:
   - 3.1 If the code official has determined the building or structure must be repaired or removed, the order shall require all required permits be secured therefore and the work physically commenced within sixty (60) days from the date of the order. The repairs shall be completed within such time as the code official shall determine is reasonable under all the circumstances and specified in the Notice and Order.
   - 3.2 If the code official has determined the building or structure must be vacated, the order shall require the building or structure shall be vacated within a time certain from the date of the order as determined by the code official to be reasonable and specified in the Notice and Order. The notice to vacate shall be posted as per section 705.
   - 3.3 If the code official has determined the building or structure must be demolished, the demolition shall be completed within such time as the code official determines is reasonable and shall be specified on the Notice and Order.
4. Statements advising if any required repair or demolition work is not commenced within the time specified, the code official:
   - a. May order the Notice to Vacate as per section 705, and
   - b. May proceed with causing the repair, demolition or removal as per section 708.
5. Statements advising:
   - a. The notice and order may be appealed to the board of appeals as per section 706; and
   - b. Failure to appeal shall constitute a waiver of all right to an administrative hearing and determination of the matter.

23.70.704.4 Service of notice and order. The notice and order, and any amended or supplemental notice and order, shall be served upon the record owner and posted on the property. The failure of the code official to serve any person required herein to be served shall not invalidate any proceedings hereunder as to any other person duly served or relieve any such person from any duty or obligation imposed by the provisions of this section.

23.70.704.5 Method of service.

A. Such notice shall be deemed to be properly served if a copy thereof is:
   1. Delivered personally;
   2. Sent by certified or first-class mail addressed to the last known address, return receipt requested; or
   3. Posted in a conspicuous place in or about the structure affected by such notice.

23.70.704.6 Recordation of notice and order.

A. If the order has not been complied with in the time specified therein, and no appeal has been properly and timely filed, the code official shall file in the Anchorage District Recorder's Office a certificate describing the property and certifying:
   1. The building or structure is a dangerous or unlawful building; and
   2. The owner has been so notified.

B. When the corrections ordered have been completed or the building or structure demolished so it no longer exists as a dangerous or unlawful building or structure on the property described in the certificate, the code official shall file a new certificate with the Anchorage District Recorder certifying the building or structure has been removed, demolished or all required repairs have been made so the building or structure is no longer dangerous or unlawful.

23.70.704.7 Transfer of ownership. It shall be unlawful for the owner of any building or structure who has received a notice and order or notice of violation to sell, transfer, mortgage, lease or otherwise dispose of such building or structure to another until the provisions of the notice and order or notice of violation have been complied with, or until such owner shall first furnish the grantee, transferee, mortgagee or lessee a true copy of any notice and order or notice of violation issued by the code official and shall furnish the code official a signed and notarized statement from the grantee, transferee, mortgagee or lessee, acknowledging the receipt of such notice and order or notice of violation fully accepting the responsibility without condition for making corrections or repairs required by such notice and order or notice of violation.

Section 23.70.705 Notice to Vacate.

23.70.705.1 Notice to vacate. The code official may post a building or structure with a notice to vacate if the building or structure is determined by the code official to contain an imminent or immediate life safety violation or condition. A notice to vacate shall be served under the same requirements for a notice and order as section 704.

23.70.705.2 Posting. Every notice to vacate shall, in addition to being served as provided in section 705.1, be posted at or upon each exit of the building or structure and shall be in substantially the following form:

DO NOT ENTER
UNSAFE TO OCCUPY
It is a misdemeanor to occupy this building or structure,
or to remove or deface this notice.
CODE OFFICIAL

23.70.705.3 No occupancy compliance. Whenever such notice is posted, the code official shall include a notification thereof in the notice and order issued under section 704, reciting the emergency and specifying the conditions which necessitate the posting. No person shall remain in or enter any building or structure so posted, except entry may be made to repair, demolish or remove such building or structure under permit. No person shall remove or deface any such notice after it is posted until the required repairs, demolition or removal are completed and a certificate of occupancy issued pursuant to the provisions of the code. The code official may assess fines as per 23.10.Table 3-N for each building code violation and the hourly rate for the code officials time as per the code abatement fee for failure to comply.

23.70.705.4 Code compliance inspection. All buildings or structures posted with a notice to vacate shall have a code compliance inspection performed before any permit for repair or removal shall be issued.

Section 23.70.706 Appeal.

23.70.706.1 Form of appeal. Any person entitled to service under sections 704 or 705 may appeal any notice and order or any action of the code official under this chapter by submitting an application and the filing fee for an appeal to the Board of Building Regulation Examiners and Appeals at the office of the code official. The appeal shall be filed within thirty (30) days from the date of the service of such order or action of the code official; provided, however, if the building or structure is in such condition as to make it immediately dangerous to the life, limb, health, morals, property, safety or welfare of the general public or their occupants and is ordered vacated and is posted in accordance with section 705, such appeal shall be filed within ten (10) days from the date of the service of the notice and order of the code official.

23.70.706.2 Processing of appeal. Upon receipt of any appeal filed pursuant to this section, the code official shall present it at the next regular or special meeting of the board of appeals.

23.70.706.3 Scheduling and noticing appeal for hearings. As soon as practicable after receiving the written appeal, the board of appeals shall fix a date, time and place for the hearing of the appeal by the board. Such date shall not be less than ten (10) days nor more than sixty (60) days from the date the appeal was filed with the code official. Written notice

of the time and place of the hearing shall be given at least ten (10) days prior to the date of the hearing to each appellant by the secretary of the board either by causing a copy of such notice to be delivered to the appellant personally or by mailing a copy thereof, postage prepaid, addressed to the appellant at the address shown on the appeal.

23.70.706.4 Effect of failure to appeal. Failure of any person to file an appeal in accordance with the provisions of section 706 shall constitute a waiver of the right to an administrative hearing and adjudication of the notice and order or any portion thereof.

23.70.706.5 Scope of hearing of appeal. Only those matters or issues specifically raised in the notice and order or actions by any persons with authority under this chapter shall be considered in the appeal hearing.

23.70.706.6 Staying of order under appeal. Except for notice to vacate order made pursuant to section 705, enforcement of any notice and order of the code official issued under this chapter shall be stayed during the appeal therefrom which is properly and timely filed.

Section 23.70.707 Performance of Work, Repair, Demolition or Removal by Owner.

23.70.707.1 Repair, demolition or removal by owner. The following standards shall be followed by the code official in allowing the owner to complete the repair, demolition or removal of any dangerous building or structure:

1. Any building or structure declared a dangerous building or structure under this chapter shall be made to comply by the owner with the following:
   - 1.1 The building or structure shall be repaired in accordance with the code applicable to the type of substandard conditions requiring repair. All work shall be permitted and inspected according to the code; or
   - 1.2 The building or structure shall be demolished at the option of the owner. A demolition permit shall be obtained prior to the work being performed; or
   - 1.3 The building or structure shall be removed at the option of the owner. If building or structure is to be moved to another location within the jurisdiction, a code compliance inspection shall be performed prior to the removal.

Section 23.70.708 Enforcement by Code Official.

23.70.708.1 General. After any notice and order, board of appeals decision, contract agreement, or extension has been finalized, no person to whom any such order is directed shall fail, neglect, or refuse to obey any such order.

23.70.708.2 Failure to obey order. If, after any notice and order, board of appeals decision, contract agreement, or extension has been made final, the person to whom such order is directed shall fail, neglect or refuse to comply with such order, the code official may institute any appropriate action to abate such building or structure as a public nuisance.

23.70.708.3 Failure to commence work.

A. Whenever the required repair, demolition or removal of building or structure is not commenced within time specified under the notice and order, appeals board action, contract agreement or extension the following becomes effective:

1. The code official shall cause the building or structure described in such notice and order to be vacated as per section 705.
2. No person shall remove or deface any such notice so posted until the repairs, demolition or removal ordered by the code official are completed and a certificate of occupancy issued pursuant to the provisions of this code.
3. The code official may, in addition to any other remedy provided herein, cause the building or structure to be repaired, demolished or removed according to this chapter. The cost of any such repairs, demolition, or removals shall be recovered in the manner provided in this chapter.

23.70.708.4 Personal property. Prior to the time of repair, demolition or removal, the code official has the authority to enter the dangerous building or structure to make an inspection for any personal property of value abandoned on the premises. If such property is discovered, an inventory shall be taken and made part of the case file. If the owner fails to remove the discovered property prior to the demolition, the owner may redeem said property only under the conditions set forth below. At the time of demolition, the demolition contractor has the authority to remove the inventoried abandoned property from the premises and store the same safely. The record owner of the demolished property may, within thirty (30) days after the date of demolition, redeem the stored property upon the payment of a reasonable storage fee to the demolition contractor. If the record owner of the demolished building or structure fails to redeem the stored property, it shall become the property of the demolition contractor who shall have no recourse against the record owner of the demolished building or structure or the Municipality for any storage charges.

23.70.708.5 Repair, demolition or removal by code official. When any work, repair or demolition is to be done pursuant to section 708.3, the code official shall cause the required work to be accomplished by personnel of this jurisdiction or by private contract. All necessary permits shall be obtained prior to any work. If any part of the work is to be accomplished by private contract, standard Municipality of Anchorage contractual procedures shall be followed.

23.70.708.6 Interference with repair, demolition or removal work prohibited. No person shall obstruct, impede or interfere with the code official engaged in the work of repairing, demolishing or removing any such building or structure, pursuant to the provisions of this chapter, or in performing any necessary act preliminary to or incidental to such work or authorized or directed pursuant to this chapter.

Section 23.70.709 Emergency Abatement by Code Official.

23.70.709.1 Summary abatement. The code official, with written approval of the city manager, may abate any public nuisance without notice in an emergency where the lives

or safety of the public is endangered and where immediate action is necessary and timely notice cannot be given. All other abatement proceedings, except the necessity and the manner and method of giving notice shall apply to the nuisance summarily abated, including the recovery of the costs of the summary abatement.

Section 23.70.710 Recovery of Costs by Code Official.

23.70.710.1 Responsibility for Payment. The responsibility for payment of the charges for all expenses incurred during abatement by code official as set forth in this chapter shall rest solely upon the owners of the property upon which the abatement occurred. Owners, as used in this section, includes the record owner upon the date of service of notice and order as served under section 704, jointly and severally with any subsequent owner until all costs assessed under this chapter are paid in full.

23.70.710.2 Enforcement. The Municipality shall have the right to bring suit for the collection of charges for abatement as set forth in this chapter plus costs and attorney's fees against any or all of the parties responsible for payment.

23.70.710.3 Account of Expense.

A. The code official shall cause to be kept an account of the cost, including incidental expenses, incurred by the Municipality in the repair, demolition or removal of any building or structure done pursuant to the provisions of this chapter. Upon the completion of the work for repair, demolition or removal of the building or structure, the code official shall forward one or more bills for collection to the record owner as identified in this chapter, specifying the nature and costs of the work performed. Such costs shall be considered charges against the property and may be collected pursuant to this chapter or through any other legal means.

B. The term "incidental expenses" shall include, but not be limited to, the actual expenses and costs of the Municipality in the preparation of notices, specifications and contracts, overhead for account work, work inspection, and the cost of printing and mailing notices required hereunder.

C. If the bill for collection remains unpaid thirty (30) days after mailing of notice to the record owner(s), the Municipality shall be entitled to late fees on the amount billed from the date of mailing until paid at the rate prescribed by law for delinquent real property taxes. Any payments made or received shall be first applied to accumulated late fees.

23.70.710.4 Lien procedure. Charges for the repair, demolition or removal of any building or structure done pursuant to the provisions of this chapter become a lien upon the real property upon which the building or structure is or was located. The code official shall record a claim of lien at the Anchorage District Recorder's Office. The Lien placed shall meet all Alaska Statutes and municipal codes.

23.70.710.5 Bill to collections. When charges for the repair, demolition or removal of any building or structure remain unpaid after thirty (30) days from the date

the code official forwards an invoice for payment to the record owner as identified in this chapter, the code official shall forward the bill to collections as per MOA policies and procedures.

23.70.710.6 Collection of abatement charges. The lien created herein may be enforced as provided in Alaska Statute. The enforcement of the lien is a cumulative remedy and does not bar the collection of the charges for abatement as provided in section 709.

CHAPTER 23.75 LOCAL AMENDMENTS TO THE AMERICAN NATIONAL STANDARDS INSTITUTE/AMERICAN SOCIETY OF MECHANICAL ENGINEERS ANSI/ASME A17.1-SAFETY CODE FOR ELEVATORS AND ESCALATORS, 2004 Edition

Sections:

23.75.1.1.4	Effective Date
23.75.2.12.6.2.6	Access to Hoistway on Existing Elevators
23.75.3.12.3	Access to Hoistway on Existing Elevators
23.75.2.26.1.4.2.1	Top-Of-Car Inspection of Existing Elevators
23.75.3.26.2.1	Top-Of-Car Inspection of Existing Elevators
23.75.8.6.1.1.4	Implementation of Mandatory Maintenance
23.75.8.11.1.3	Periodic Inspection and Test Frequency
23.75.8.11.1.3.1	Residential Elevator Inspections
23.75.11.1.3.2	Reporting Injuries Involving Elevators and Escalators
23.75.8.7.1.1(c)	Applicability of Alteration Requirements
23.75.1.1.1.2	Addenda to ASME A17.1 2004
23.75.2.2.4.2	Access to Pits

23.75.1.1.4 Effective Date.
The effective date for the standard shall be July 1, 2005

23.75.2.12.6.2.6 Access to Hoistway on Existing Elevators.

23.75.3.12.3
Add the following:

All existing elevators shall have mechanical (lunar key) means to access hoistway at the top and bottom landing. Elevators with walk in pit access may exclude this access at the bottom landing.

Hoistway door unlocking devices shall conform to the following:

1. The device shall unlock and permit the opening of the hoistway door from the access landing irrespective of the position of the car.
2. The device shall be installed at the access landings, and may be provided at other landings for emergency purposes.

3. The device shall be designed to prevent unlocking the door with common tools.
4. The operating means for unlocking the door shall be available to and used only by inspectors, elevator maintenance and repair personnel, and qualified emergency personnel.
5. The unlocking-device keyway shall be located at a height not greater than 6 feet 11 inches (2.11m) above the floor.

23.75.2.26.1.4.2.1 Top-Of-Car Inspection of Existing Elevators.

23.75.3.26.2.1
Add the following:

1. Elevators with automatic or continuous-pressure operation shall have a continuous-pressure button operating switch mounted on the top of the car for the purpose of operating the car solely from the top of the car. The device shall operate the car at a speed not exceeding 150 fpm (0.76 m/s) and comply with all provisions of 23.75.2.26.1.4.
2. The means for transferring the control of the elevator to the top-of-car operating device shall be on the car top and located between the car cross-head and the side of the car nearest the hoistway entrance normally used for access to the car top.

23.75.8.6.1.1.4 Implementation of mandatory maintenance program.
Add the following:

The enforcement of section 8.6 (Maintenance Repair and Replacement) shall not begin until January 1, 2006 or for a period of six (6) months after the adoption of the ANSI A17.1 2004 code by the Municipality of Anchorage, whichever is later.

23.75.8.11.1.3 Periodic Inspection and Test Frequency.
Add the following:

The inspection and test period for all units covered by the 2004 A17.1 shall be as noted in Appendix N, Table N-1 except where periodic inspection intervals were six (6) months change to twelve (12) months.

23.75.8.11.1.3.1 Residential Elevator Inspections.
Add the following:

Annual certificates of inspection shall not be required for conveyances within a dwelling unit.

23.75.8.11.1.3.2 Reporting Injuries Involving Elevators and Escalators.
Add the following:

Reporting Requirements: An owner or operator shall report, in detail and within forty-eight (48) hours, any accident involving an elevator or escalator which results in injury to a person. If the deadline for the report falls on a weekend or holiday, the report shall be made at the beginning of the next municipal working day. The report shall be in the form of a written narrative to the Municipality of Anchorage Building Official, Development Services, Works, Division of Building Safety. The report shall be signed by the author.

Unsafe Conditions: When an inspection reveals an unsafe condition, the inspector shall immediately file with the owner and the building official a full and true report of such unsafe condition. If the building official finds the unsafe condition endangers human life, the building official shall cause to be placed on such elevator, escalator, or moving walk, in a conspicuous place, a notice stating such conveyance is unsafe and may order the operation and use of the conveyance to cease until all necessary repairs are made and the conveyance is reinspected and released to return to operation. The owner shall see to it such notice of unsafe conditions is legibly maintained where placed by the building official. The building official shall also issue an order in writing to the owner requiring the repairs or alterations to be made to such conveyance as necessary to render it safe and may order the operation thereof discontinued until the repairs or alterations are made or the unsafe conditions are removed. A posted notice of unsafe conditions shall be removed only by the building official when satisfied the unsafe conditions have been corrected.

23.75.8.7.1.1(c) Applicability of Alteration Requirements.
Delete, if adopted by the authority having jurisdiction.

23.75.1.1.1.2 Addenda to ASME A17.1 2004.
Add the following:

All addenda to the ASME A 17.1 2004 shall be adopted on the date recommended by ASME and approved by the Municipality of Anchorage Building Official.

23.75.2.2.4.2 Access to Pits.
Change lines:

A clear distance of not less than 180 mm (7in.) from the centerline of the rungs, cleats, or steps to the nearest permanent object in back of the ladder shall be provided. Change 180 mm to 115 mm (4.5in.).

Delete the following:

When unavoidable obstructions are encountered, the distance shall be permitted to be reduced to 115 mm (4.5in.).

CHAPTER 23.76 LOCAL AMENDMENTS TO THE AMERICAN NATIONAL STANDARDS INSTITUTE/AMERICAN SOCIETY OF MECHANICAL ENGINEERS ANSI/ASME A18.1-2003 SAFETY STANDARD FOR PLATFORM LIFTS AND STAIRWAY CHAIRLIFTS.

Sections:

23.76.1.1.4 Effective Date
23.76.10.2.1 Inspection and Test Periods

Proposed Code Amendments to the ASME A18.1-2003.
Add line:

Section 1.1.4 Effective Date.
The effective date of this standard shall be July 1, 2005.

Change line:

Section 10.2.1 Inspection and Test Periods.
Change six (6) months to twelve (12) months in the first sentence.

CHAPTER 23.85 LOCAL AMENDMENTS TO THE INTERNATIONAL RESIDENTIAL CODE, 2003 EDITION.

Sections:

23.85.R100 Local Amendments to the 2003 International Residential Code
23.85.R100.1 Administrative
23.85.R101.2 Scope
23.85.R301.2(1) Climatic and Geographic Design Criteria
23.85.R301.2(4) Basic Wind Speeds For 50-Year Mean Recurrence Interval
23.85.R301.2.1.1 Design Criteria
23.85.R301.2.2.1.1 Alternate Determination of Seismic Design Category
23.85.R308.6.9 Testing and Labeling
23.85.R309.1 Opening Protection For Fire Ratings For Attached Garages
23.85.R309.2 Separation Required
23.85.R310.1 Emergency Escape and Rescue Required
23.85.R316.2 Loose-Fill Insulation
23.85.R317.1 Two-Family Dwellings
23.85.R317.4 Common Wall Insulation
23.85.R318.1 Moisture Control
23.85.R319.1 Location Required
23.85.R319.3 Fasteners
23.85.R324 Carbon Monoxide Detectors
23.85.R324.1 Interconnection

23.85.R324.2	Power Source
23.85.R401.1	Application
23.85.R401.3	Drainage
23.85.R401.4	Soil Tests
23.85.R403.1	General
Table 23.85.R403-16	Reinforced Concrete
Figure 23.85.R403-25	Typical Foundation And Footing Details
Figure 23.85.R403-29	Typical Step Footing
Figure 23.85.R403-31	Typical Pony Wall for Split Level
Figure 23.85.R403-34	All Weather Wood Foundation
Figure 23.85.R403-37	Typical Basement Foundation Wall
Table 23.85.R403.1	
23.85.R403.1.1	Minimum Size
23.85.R403.1.3	Seismic Reinforcing
23.85.R403.1.4.1	Frost Protection
23.85.R403.2	Footings For Wood Foundations
23.85.R404.1.1	Masonry Foundation Walls
23.85.R404.2	Wood Foundation Walls
23.85.R404.3	Wood Sill Plates
23.85.R404.4.1	Application Limits
23.85.R406.1	Concrete and Masonry Foundation Damp-proofing
23.85.R406.2	Concrete Masonry Foundation Waterproofing
23.85.R406.3	Damp-proofing for Wood Foundations
23.85.R406.3.2	Below-Grade Moisture Barrier
23.85.R407.2	Steel Column Protection
23.85.R602.3.2	Top Plate
23.85.R703.3.1	Panel Siding
23.85.R703.8	Flashing
23.85.R802.2	Design and Construction
23.85.R802.10.1	Truss Design Drawings
23.85.R802.10.2	Design
23.85.R802.10.3	Bracing
23.85.R806.1	Ventilation Required
23.85.R806.2	Minimum Area
23.85.R807.1	Attic Access
23.85.R903.1	General
23.85.R903.4	Roof Drainage
23.85.R905.2.2	Slope
23.85.R905.2.4	Asphalt Shingles
23.85.R905.2.7	Underlayment Application
23.85.R905.2.7.1	Ice Protection
23.85.R905.2.8	Flashing
23.85.R905.2.8.2	Valleys
23.84.R905.3	Clay and Concrete Tile
23.85.R905.3.3	Underlayment

23.85.R905.4	Metal Roof Shingles
23.85.R905.5	Mineral-Surfaced Roll Roofing
23.85.R905.6	Slate and Slate-Type Shingles
23.85.R905.7	Wood Shingles
23.85.R905.8	Wood Shakes
23.85.R905.9.1	Slope
23.85.R905.10	Metal Roof Panels
23.85.R905.14	Sprayed Polyurethane Foam Roofing
23.85.Chapter 11	Energy Efficiency
23.85.Chapters 12-42	
23.85.Appendix	
23.85.AE100	Mobile and Manufactured Homes
23.85.AE101	Scope
23.85.AE102.7	Mobile Homes, Campers, And Travel Trailers
23.85.AE102.7.1	Mobile Homes
23.85.AE102.7.2	Campers And Travel Trailers
23.85.AE201	Definitions
23.85.AE301.1	Initial Installation
23.85.AE301.5	Gas And Plumbing Service
23.85.AE302.4	Who May Apply
23.85.AE307	Utility Service
23.85.AE502.3	Footings And Foundations
23.85.AE502.6	Under-Floor Clearances-Ventilation And Access
23.85.AE503.1	Skirting And Permanent Perimeter Enclosures
23.85.AE604.1	Ground Anchors

23.85.R100 Local Amendments To The 2003 International Residential Code.

The amendments to the 2003 International Residential Code are listed hereafter by section. The last digits of the number (after the title and chapter digits) are the section of the 2003 International Residential Code to which the amendments refers, i.e., 23.85.R310 refers to amendments to section R310 of the 2003 International Residential Code.

23.85.R100.1 Administrative.

Delete sections R103 through R114; see Anchorage Administrative Code chapter 23.10 for Administrative Provisions, Fees, and Special Inspections.

Section on Structural Observation does not apply to one and two family structures unless specifically required by the Engineer of Record. Engineer of Record may be Special Inspector.

23.85.R101.2 Scope.

Delete words in exception:

"the International Existing Building Code".

Replace with:

"the Existing Building Code adopted by MOA".

23.85.R301.2(1) Climatic and Geographic Design Criteria.

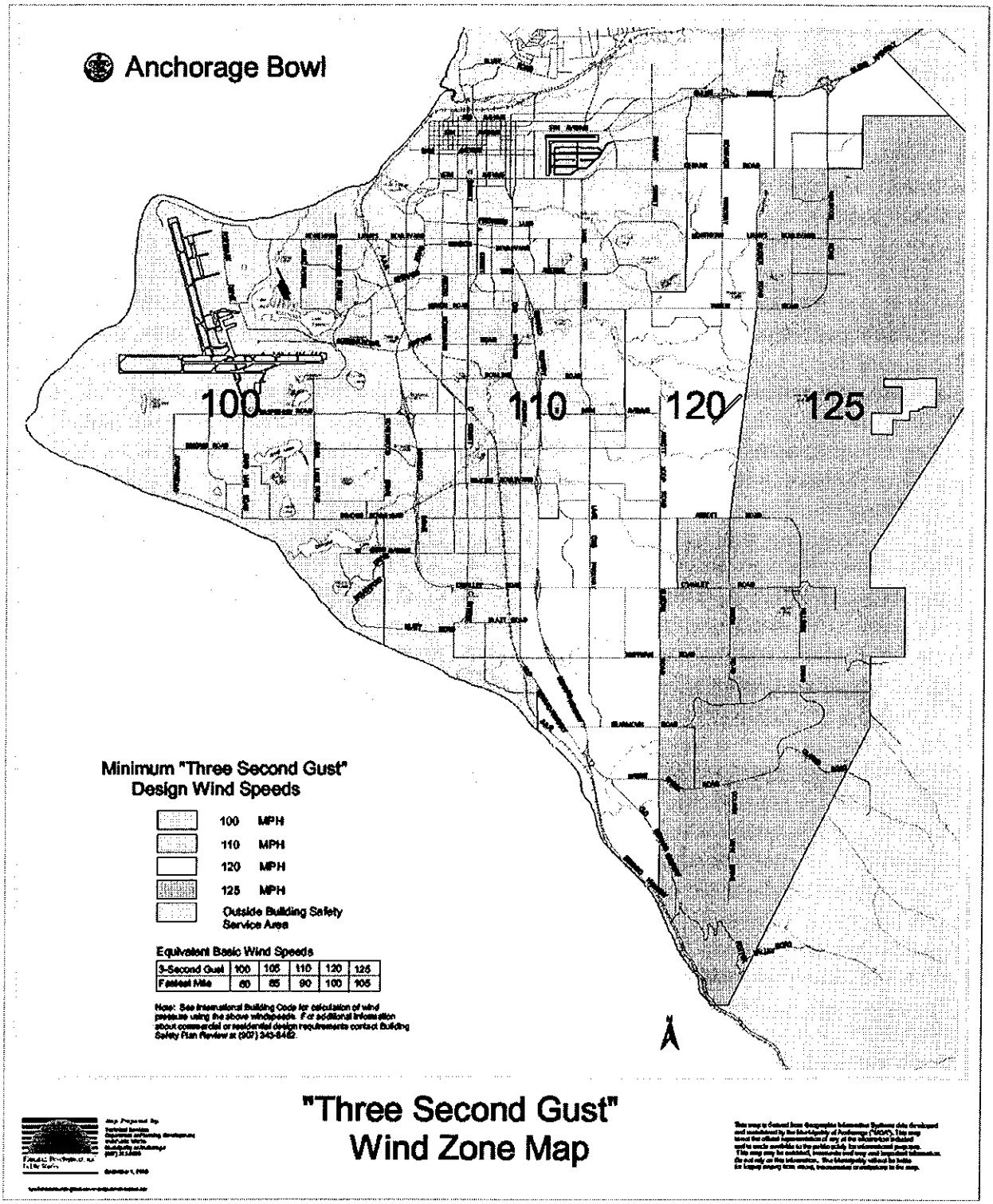
TABLE NO. R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA
Add the following information in the table:

Ground snow load	50PSF; equates to 40 psf roof snow load
Wind Speed	Figure 23.85.R301.2(4)
Seismic Design Category	D_2
Subject to damage from:	
Weathering	Yes, severe
Frost Line Depth	42" for warm foundation, 60" for cold foundation
Termite	No
Decay	Yes
Winter Design Temperature	-25 deg F
Ice Shield Underlayment Required	Yes
Flood Hazards	Yes, see flood hazard maps
Air Freezing Index	3500
Mean Annual Temperature	35°F

23.85.R301.2(4) Basic Wind Speeds For 50-Year Mean Recurrence Interval.

Amend by deleting Figure R301.2(4) and replace with the following:

Replace Figure R301.2(4) with attached Anchorage Bowl "Three Second Gust" Wind Zone map:


Anchorage Bowl
100
110
120
125
Minimum "Three Second Gust"
Design Wind Speeds
100 MPH
110 MPH
120 MPH
125 MPH
Outside Building Safety
Service Area
Equivalent Basic Wind Speeds
3-Second Gust 100 105 110 120 125
Fastest Mile 80 85 90 100 105
"Three Second Gust"
Wind Zone Map

1

23.85.R301.2.1.1 Design Criteria.
Add to section R301.2.1.1:

Exception: Outbuilding 400 square feet or less.

23.85.R301.2.2.1.1 Alternate Determination of Seismic Design Category.
Delete paragraphs R301.2.2.1.1, R301.2.2.1.2, and table R301.2.2.1.1 and replace with the following:

The seismic design category for Anchorage shall be D_2.

23.85.R308.6.9 Testing and Labeling.
Add sentence to end of paragraph:

Will accept literature provided on site to show skylights meet criteria of section, in lieu of label adhered to skylight.

23.85.R309.1 Opening Protection For Fire Ratings For Attached Garages.
Amend by adding a third sentence to read as follows:

Doors shall be self-closing and have smoke gaskets at top and sides of doors and adjustable threshold or sweep.

23.85.R309.2 Separation Required.
Amend by deleting section in its entirety and replacing with the following:

A. A garage shall be separated from the residence and its attic area with a one-hour occupancy separation. The occupancy separation may be limited to the installation of approved materials approved for one-hour fire resistance construction on the garage side only. 5/8 Type X gypsum wall board shall be considered adequate protection for one-hour construction on the garage side at rated walls and ceilings. All plastic pipe, such as condensate lines, vacuum lines, drain lines, waste lines, and vent lines, require an approved tested fire collar or equivalent at rated wall and ceiling penetrations on garage side only. All ferrous metal pipe penetrations are required to be filled with gypsum wall board compound or other approved materials. Fire dampers need not be installed in air ducts passing through the wall, floor, or ceiling separating garage from the dwelling, provided such ducts within the garage are constructed of steel having thickness not less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gauge) and have no opening into the garage.

B. Access to a crawlspace from a garage shall meet minimum requirements of self-closing, tight fitting, solid wood door measuring 1-3/8 inches or greater in thickness, or equivalent laminated plywood or combination plywood and properly secured 5/8 inch Type X gypsum wallboard or 20 minute approved door assembly.

23.85.R310.1 Emergency Escape and Rescue Required.
Add the following to read as follows:

Exception: Where windows are provided as a means of escape or rescue in a basement, they shall have a finished sill height of not more than forty-eight (48) inches above the finished floor.

23.85.R316.2 Loose-Fill Insulation.
Add the following paragraph after exception:

Depth gages or truss markings shall be provided for blown-in insulation to allow for verification of depth throughout the attic space.

23.85.R317.1 Two-Family Dwellings.
Add the following exception:

Exception: A one-hour fire-resistive separation shall not be required between an Accessory Dwelling Unit (ADU) as defined under section 21.45.035, and the primary residence.

23.85.R317.4 Common Wall Insulation.
Add new section:

The portion of the common wall(s) between dwelling units located in the attic space shall be fireblocked at ceiling line(s) and insulated equivalent to the attic space directly above the fireblocking.

23.85.R318.1 Moisture Control.
Delete section and exceptions, and add the following:

All exterior wall, ceiling, roof and floor assemblies which enclose heated spaces and are exposed to outdoor ambient temperatures shall be protected against water vapor transmission. Assemblies not otherwise of impermeable construction shall have installed, on the heated side of the insulation or air spaces, vapor retarders having a perm rating of .006 minimum (equivalent to 6 mils polyethylene sheeting) or other material approved by the Building Official.

23.85.R319.1 Location Required.
Amend first sentence by deleting the words "or decay-resistant heartwood of redwood, black locust, or cedars".

23.85.R319.3 Fasteners.
Delete exception.

23.85.R324 Carbon Monoxide Detectors.

Add new section:

A. At least one carbon monoxide detector shall be installed on each floor level. If a floor level contains bedrooms, at least one (1) detector shall be located in the immediate vicinity but outside of the bedrooms. Carbon monoxide detectors shall be listed and installed in accordance with their listing. Combination carbon monoxide/smoke detectors are acceptable as long as they meet all requirements.

Exceptions:

1. Carbon monoxide detectors are not required in dwelling units with no combustion appliances and without an attached garage.
2. Carbon monoxide detectors are not required in dwelling units with only direct vent combustion appliances and without an attached garage.

23.85.R324.1 Interconnection.

Add new subsection:

In new construction, carbon monoxide detectors shall be interconnected in such a manner that actuation of one alarm shall activate all of the alarms in the individual dwelling unit.

23.85.R324.2 Power Source.

Add new subsection:

In new construction, carbon monoxide detectors shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery back-up. Wiring shall be permanent and without disconnecting switch other than those required for overcurrent protection. In existing construction, carbon monoxide detectors shall be permitted to be battery powered or cord-and-plug type with battery back-up.

23.85.R401.1 Application.

Add the following exception:

3. Wood foundations shall be per figure 23.85.R403-34.

23.85.R401.3 Drainage.

Add the following sentence to the end of the paragraph:

There shall not be a net increase in surface drainage across property lines. Approved discharge locations shall include street gutters, drainage easements, ditches, or other approved locations. Surface runoff may be retained on site to prevent impacts to neighboring properties.

23.85.R401.4 Soil Tests.

Add the following:

A. Special site investigations shall be performed in potentially hazardous areas as follows:

1. Special site investigations are required in delineated seismic hazard zones after consideration of the proposed location, use, and building type. The required level of documentation is specified in the following paragraphs according to designations in Table 23.85.R401.4.

a For site investigation requirement "A", submit geotechnical information sufficient for the Building Official to verify the assumed hazard zonation is consistent with known site conditions.

b. For site investigation requirement "B", provide all information described above; plus submit geotechnical investigation per 2003 IBC 1802 and a structural analysis, both prepared by a professional engineer registered in the State of Alaska, to determine structural suitability to the site in terms of proposed occupancy and use. It may be necessary to extend the investigation beyond the immediate site boundaries in order to evaluate applicable hazards.

2. Where the soil investigation section of the Anchorage Administrative Code requires a geotechnical investigation to be performed, the potential for isolated permafrost shall be addressed in the geotechnical report.

TABLE 23.85.R401.4

OCCUPANCY	SITE INVESTIGATION REQUIREMENT HAZARD ZONE (SEE NOTES)				
Residential	5B	4B	3A	2A	1A

NOTES: For details and descriptions of site investigation requirements, see IBC chapter 18.

Hazard Zones*

1. Lowest Ground Failures Susceptibility
2. Moderately Low Ground Failure Susceptibility
3. Moderate Ground Failure Susceptibility
4. High Ground Failure Susceptibility
5. Very High Ground Failure Susceptibility

*Reference: Municipality of Anchorage, Geotechnical Hazard Assessment Study, 1979.

23.85R.403.1 General.

Delete the last sentence of R403.1 and figures R403.1(1), R403.1(2), and R403.1(3) and Table R403.1, and add or replace with the following:

1. Definitions.
   a. *Warm Foundations*: Any foundation where the temperature of the bearing soils are normally maintained above freezing;
   b. *Cold Foundation*: Any foundation where the temperature of the bearing soils are normally subjected to freezing.
2. Foundations shall be constructed as shown in Table 23.85.R403-16 and Figures 23.85.R403-25, 23.85.R403-29, 23.85.R403-31, 23.85.R403-34, and 23.85.R403-37 or foundations designed under the provisions of the IBC. Footings and foundations shall be constructed of masonry, concrete, or treated wood. Footings of concrete and masonry shall be of solid material. Foundations supporting wood shall extend at least six (6) inches above the adjacent grade. Unless other recommendations are provided by a foundation investigation report, footings shall meet the following requirements:
   a. Minimum footing depths shall be indicated in Table 23.85.R403.1. Footings shall bear on undisturbed natural inorganic soil, or suitably compacted fill.
   b. Cast-in place concrete piers shall be founded at a depth suitable for structural support or as indicated in Table 23.85.R403.1, whichever is greater. Connecting grade beams between piers on perimeter walls of warm buildings shall extend at least thirty-six (36) inches below ground surface and shall be protected from frost heave. The potential for frost heave below grade beams of cold structure shall be accounted for in the design of these elements.

Table 23.85.R403-16 Reinforced Concrete.

1. Reinforced concrete walls shall be anchored to all floors and roofs in accordance with section 1604.8.2 of the International Building Code.
2. All intersecting reinforced concrete walls shall be tied together. (IBC 1907.13)
3. All interior and exterior concrete walls shall be reinforced. (IBC 1910.1)
4. All structural members framing into or supported on concrete walls or columns shall be anchored. (IBC 1910.1)
5. All deformed reinforcing bars shall meet or exceed ASTM A615 requirements. (IBC 1903.5.1)
6. Concrete in seismic zone D shall have a minimum compressive strength of 3000 psi for severe exposure. (See IBC 1805.9 and table 1904.2.2(2))
7. The following minimum reinforcement requirements shall apply to all below grade concrete walls (i.e. basement walls and crawlspace walls). This reinforcing does not apply to above grade walls, which shall be designed in accordance with the requirements of IBC section 1910.1.

MINIMUM REINFORCEMENT FOR CONCRETE WALLS

(Horizontal and Vertical Spacing)

Width of Wall	#5 Bar	#4 Bar
6" Walls	#5 @ 18" O.C. hor. #5 @ 18" O.C. vert.	#4 @ 16" O.C. hor. #4 @ 18" O.C. vert.
8" Walls	#5 @ 18" O.C. hor. #5 @ 18" O.C. vert.	#4 @ 12" O.C. hor. #4 @ 18" O.C. vert.
10" Walls	#5 @ 15" O.C. hor. #5 @ 18" O.C. vert.	#4 @ 10" O.C. hor. #4 @ 16" O.C. vert.
12" Walls	#5 @ 12" O.C. hor. #5 @ 18" O.C. vert.	#4 @ 8" O.C. hor. #4 @ 12" O.C. vert.

Figure 23.85.R403-25
Typical Foundation And Footing Details.

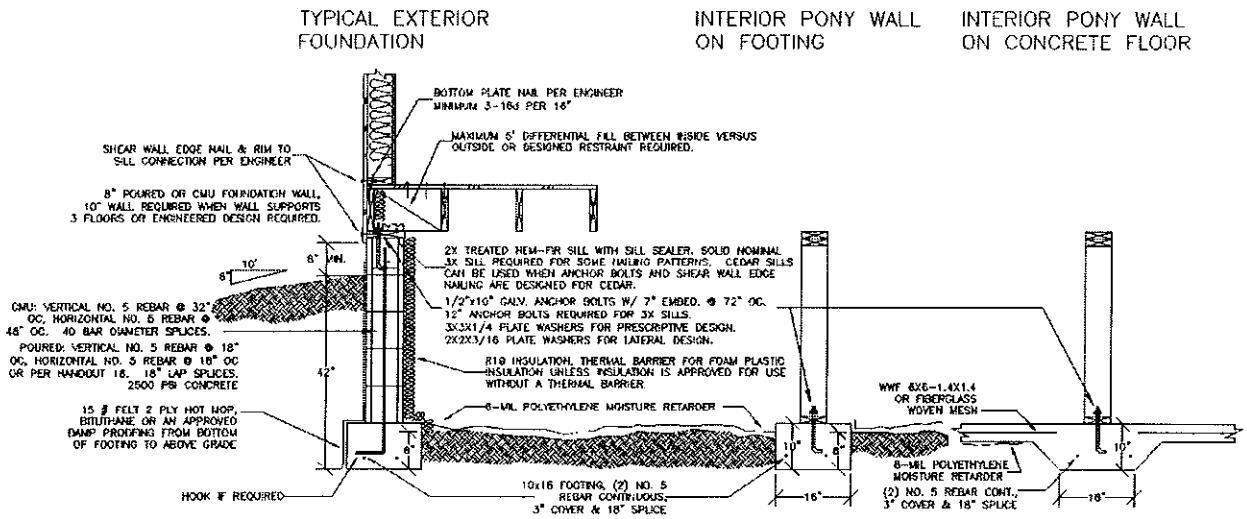


Figure 23.85.R403-29
Typical Step Footing

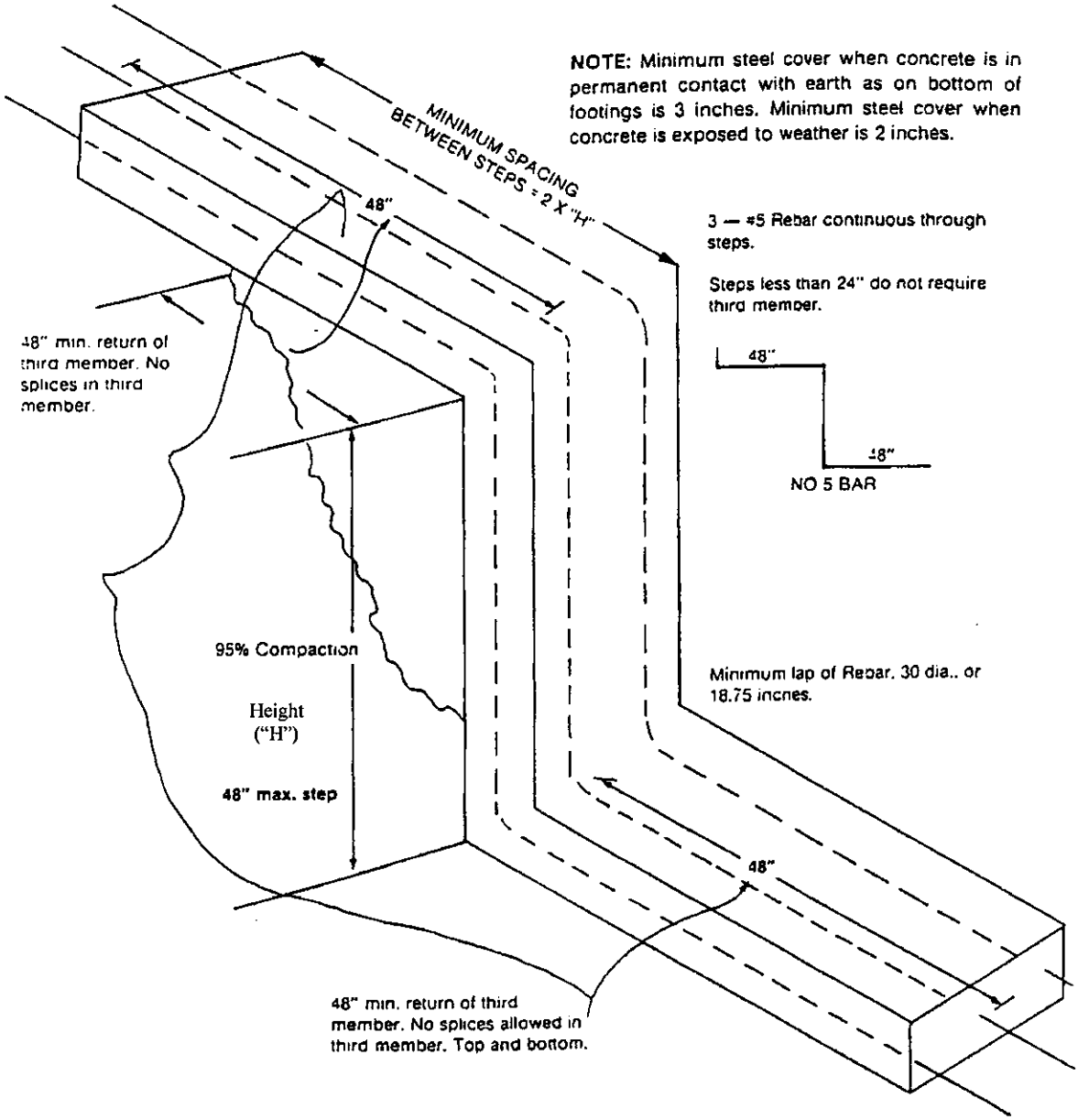


Figure 23.85.R403-31
Typical Pony Wall for Split Level.

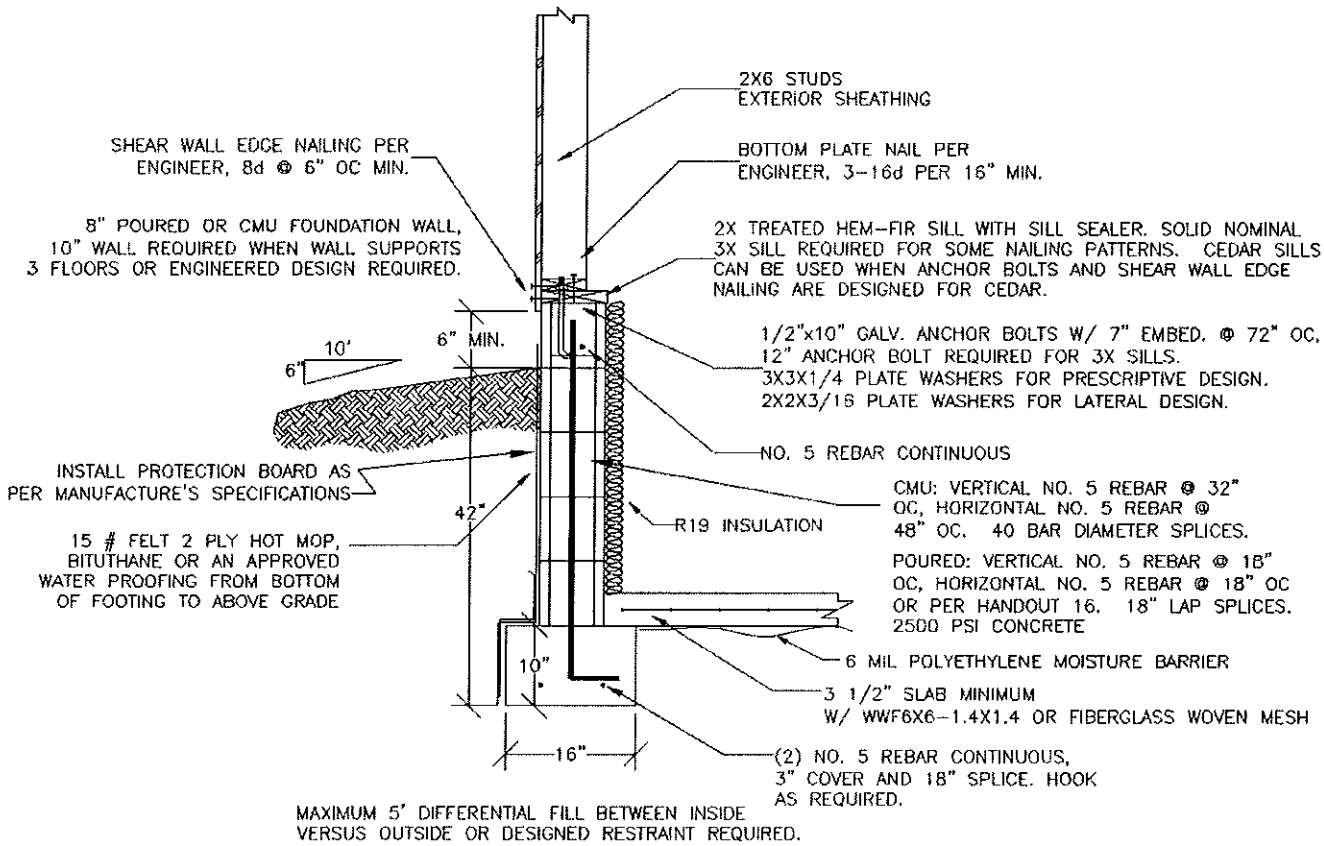
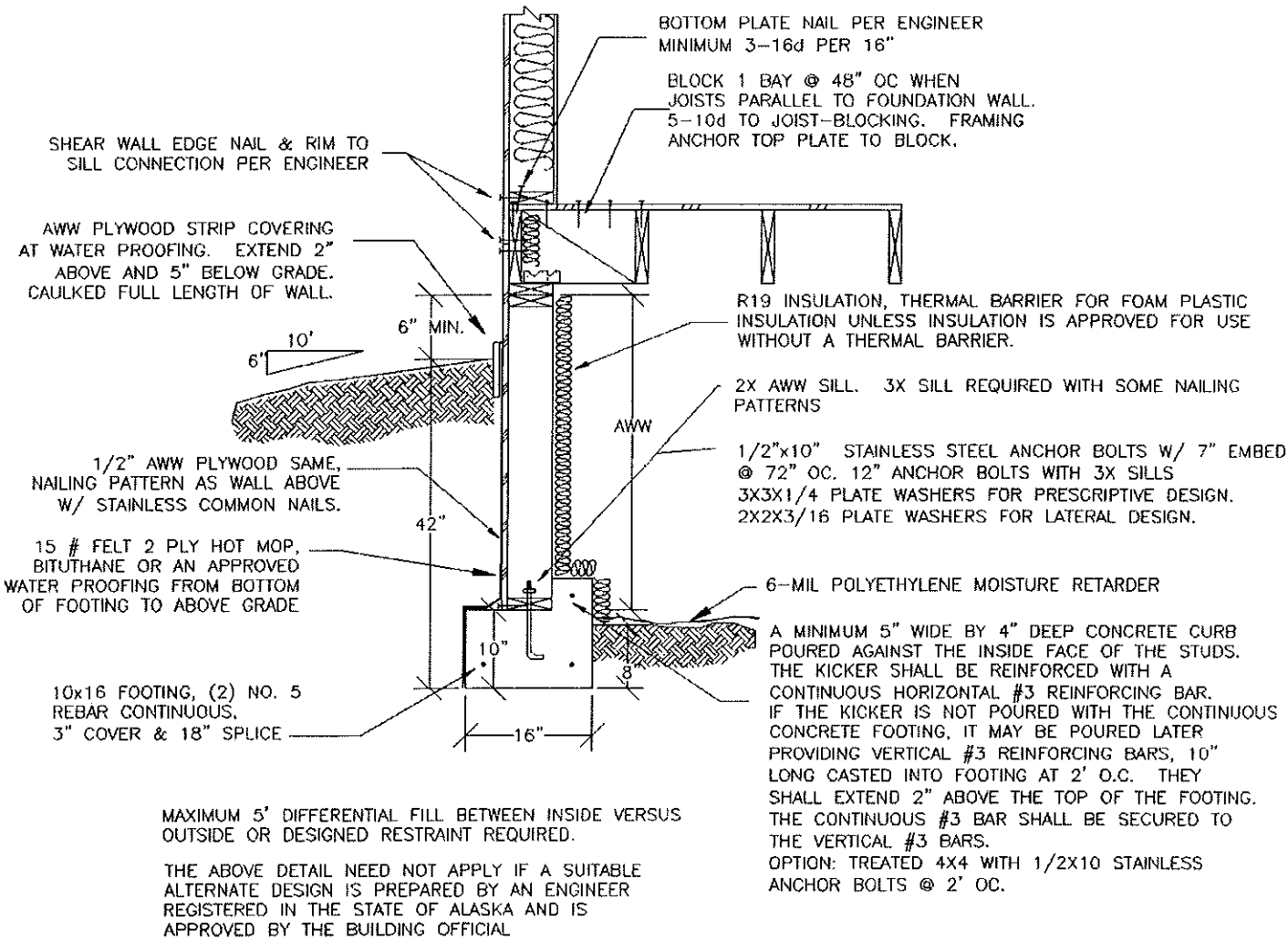


Figure 23.85.R403-34
All Weather Wood Foundation.



MAXIMUM 5' DIFFERENTIAL FILL BETWEEN INSIDE VERSUS OUTSIDE OR DESIGNED RESTRAINT REQUIRED.

THE ABOVE DETAIL NEED NOT APPLY IF A SUITABLE ALTERNATE DESIGN IS PREPARED BY AN ENGINEER REGISTERED IN THE STATE OF ALASKA AND IS APPROVED BY THE BUILDING OFFICIAL

Figure 23.85.R403-37
Typical Basement Foundation Wall.

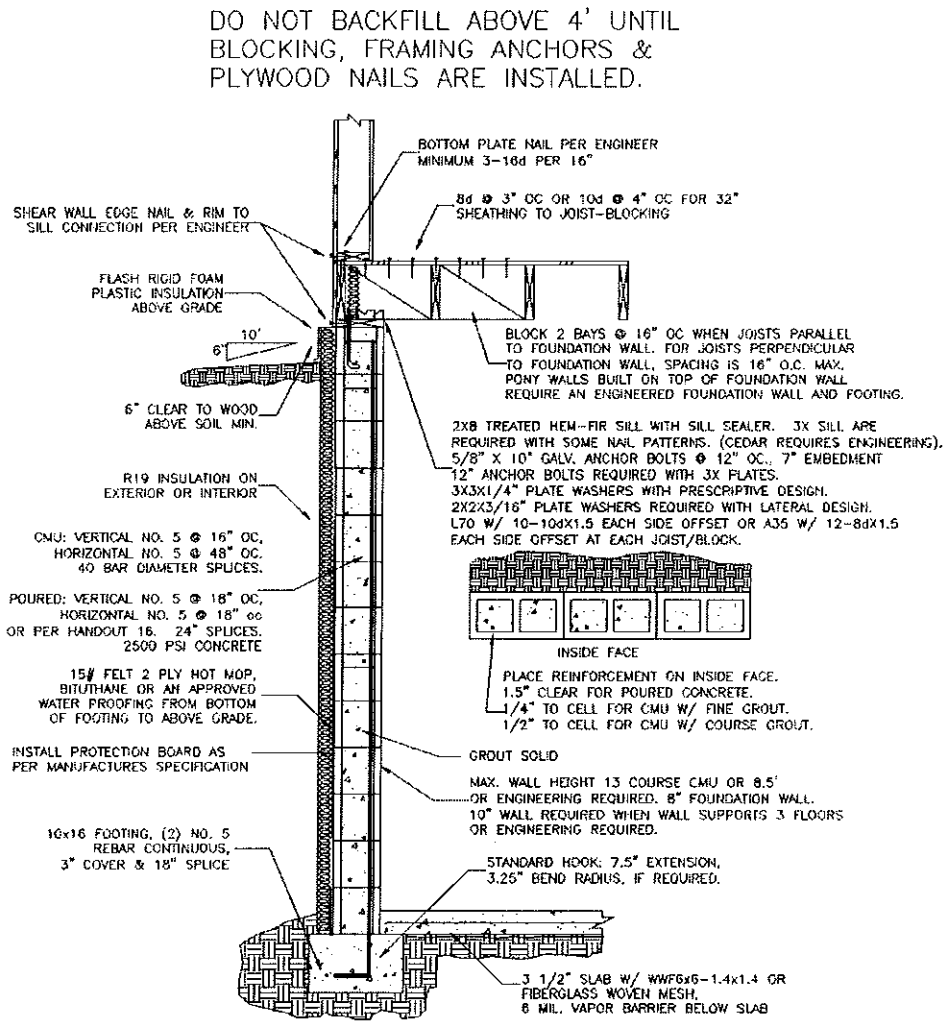


TABLE 23.85.R403.1

Foundation Type	Minimum Footing Depth (Inches)		
	Warm Foundation		Cold Foundation (3)(4)
Perimeter Footing (1)	42	all measurements	60
Interior or Interior Isolated Spread Footings (2)	8	are from top of finished	60
Cast-in-Place Concrete Pier	42	grade	120 (5)

NOTES TO TABLE:

1. Dimension indicated is from bottom of footing to adjacent exterior grade. Required depth to bottom of footing within a crawl space shall not be less than eight (8) inches. Basements or crawlspace walls supporting more than five (5) feet differential fill on opposite faces shall be restrained as necessary against lateral movement.
2. Dimension indicated is from bottom of footing to nearest adjacent grade.
3. Exterior decks, landings, and platforms not rigidly attached to the building and not greater than thirty (30) inches above grade may bear directly on the ground. Bearing materials shall meet other portions of this code.
4. The minimum footing depths may not be adequate for frost susceptible soils. Cold footings shall be founded below the frost line, or be protected from freezing with insulation or other appropriate means. In addition, provisions shall be made to resist uplift forces due to frost jacking on the side of cold foundations.
5. Cast-in-place concrete piers installed in non-frost-susceptible material may be 60 inches (five feet).

23.85.R403.1.1 Minimum Size.
Delete section – see 23.85.R403.1.

23.85.R403.1.3 Seismic Reinforcing.
Delete exception.

23.85.R403.1.4.1 Frost Protection.
Change method #1 to reference Table 23.85.R403.1, not R301.2(1).

23.85.R403.2 Footings for Wood Foundations.
Delete entire paragraph and replace with the following:

Wood foundations shall be per figure 23.85.R403-34.

23.85.R404.1.1 Masonry Foundation Walls.
Delete sections R404.1.1 through R404.1.8.

Delete Tables R404.1.1(1), R404.1.1(2), R404.1.1(3), R404.1.1(4), and Figure R404.1.5(1).

See section 23.85.R403.1.

23.85.R404.2 Wood Foundation Walls.
Delete subsection in its entirety; reference Figure 23.85.R403-34 All Weather Wood Foundation.

23.85.R404.3 Wood Sill Plates.
Delete paragraph and substitute with the following:

> Wood sill plates shall be minimum 2-inch x by 6-inch and shall be bolted to the foundation or foundation wall with not less than ten (10) inch by one half (1/2) inch nominal diameter galvanized steel bolts embedded at least seven (7) inches into the concrete or in fully grouted cells of reinforced masonry and spaced not more than six (6) feet zero (0) inches apart. There shall be a minimum of two bolts per piece with one bolt located within twelve (12) inches of each end of each piece. Wood sill plates must be treated material specified in section R319.1.

23.85.R404.4.1 Application Limits.
Add exception to end paragraph:

> Flat insulating concrete form wall systems shall be allowed in the Anchorage area. Reinforcement shall be per Table 23.85.R403-16 or engineer design.

23.85.R406.1 Concrete and Masonry Foundation Damp-proofing.
Delete section and substitute with the following:

> Except where required to be waterproofed by section 23.85.R406.2, foundation walls retaining earth shall be damp-proofed from the top of the footing to the finished grade, and damp-proofing shall cover the top of the footing, and lap over the outer edge a minimum of one (1) inch. Masonry walls shall have not less than 3/8 inch (9.5 mm) portland cement parging applied to the exterior of the wall. The parging shall be damp-proofed with a bituminous coating, three (3) pounds per square yard (1.63 kg/m^2) of acrylic modified cement, 1/8-inch (3.2 mm) coat of surface-bonding mortar complying with ASTM C 887 or any material permitted for waterproofing in section 23.85.R406.2. Concrete walls shall be damp-proofed by applying any one of the above listed damp-proofing materials or any one of the waterproofing materials listed in section 23.85.R406.2 to the exterior of the wall. Foundation walls backfilled on both sides, such as

those used in conjunction with a "slab on grade", do not require damp-proofing or waterproofing.

23.85.R406.2 Concrete Masonry Foundation Waterproofing.

Delete section and substitute with the following:

Exterior foundation walls retaining earth and enclose habitable or usable spaces located below grade shall be waterproofed with a membrane extending from the top of the footing to the finished grade, and waterproofing shall cover the top of the footing, and lap over the outer edge a minimum of one (1) inch. The membrane shall consist of 2-ply hot-mopped felts, 55 pound (25 kg) roll roofing, or 40-mil (1 mm) polymer-modified asphalt. The joints in the membrane shall be lapped and sealed with an adhesive compatible with the waterproofing membrane. Foundation walls backfilled on both sides, such as those used in conjunction with a "slab on grade", do not require damp-proofing or waterproofing.

Exception: Organic solvent based products such as hydrocarbons, chlorinated hydrocarbons, ketons and esters shall not be used for ICF walls with expanded polystyrene form material. Plastic roofing cements, acrylic coatings, latex coatings, mortars and pargings are permitted to be used to seal ICF walls. Cold setting asphalt or hot asphalt shall conform to type C of ASTM D 449. Hot asphalt shall be applied at a temperature of less than 200 degrees.

23.85.R406.3 Damp-proofing for Wood Foundations.

Delete the word "damp-proofing" in heading and body of section and replace with "waterproofing".

23.85.R406.3.2 Below Grade Moisture Barrier.

Delete R406.3.2 and replace with the following:

Approved waterproofing shall be applied over the below-grade portion of exterior basement and crawlspace walls prior to backfilling. A treated lumber or plywood strip shall be attached to the wall to cover the top edge of the approved waterproofing. The wood strip shall extend at least two (2) inches above and five (5) inches below finish grade level to protect the approved waterproofing from exposure to light and from mechanical damage at or near grade. The joint between the strip and the wall shall be caulked full length prior to fastening the strip to the wall. Alternatively, brick, stucco, or other covering appropriate to the architectural treatment may be used in place of the wood strip. The approved waterproofing shall extend down to the bottom of the concrete footing.

23.85.R407.2 Steel Column Protection.

Delete this section in its entirety.

23.85.R602.3.2 Top Plate.

Delete exception.

23.85.R703.3.1 Panel Siding.
Add the following:

Exterior type plywood siding with a grooved pattern shall not be installed horizontally and used as the weather resistant siding.

23.85.R703.8 Flashing.
Amend section by deleting Exception 4.

23.85.R802.2 Design and Construction.
Add a sentence to end of paragraph as follows:

Minimum depth from roof sheathing to wall plate at exterior side of exterior wall shall be 11 ¼ inches.

23.85.R802.10.1 Truss Design Drawings.
Amend first sentence by deleting the words: "and approved prior to installation."

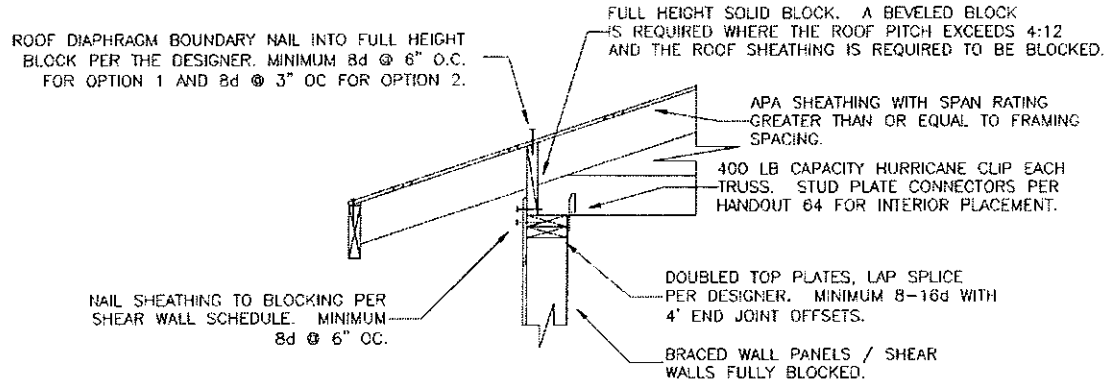
23.85.R802.10.2 Design.
Add the following sentence to end of paragraph:

Minimum depth of truss at exterior wall plate shall be 11 ¼ inches at exterior side plate.

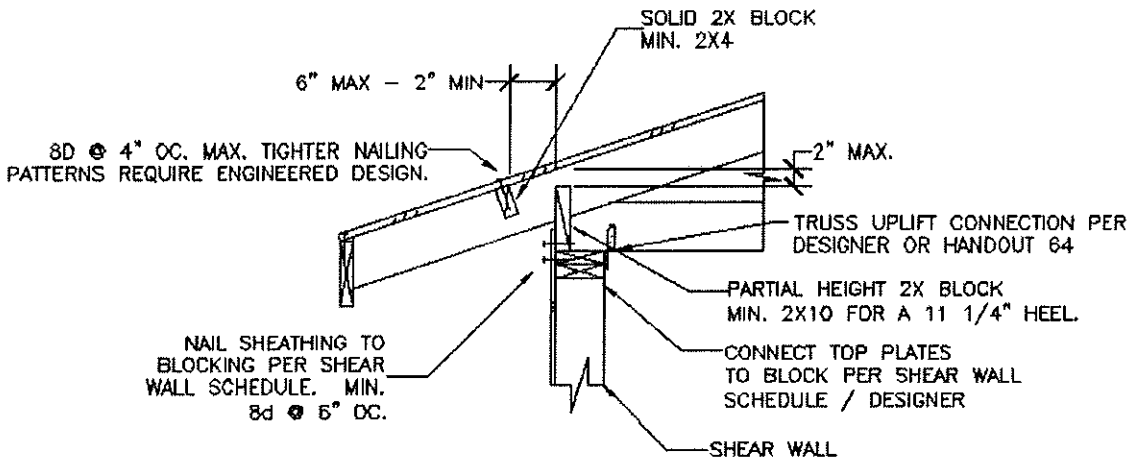
23.85.R802.10.3 Bracing.
Add the following details and verbiage to section:

OPTION 1: FULL HEIGHT BLOCK IN EVERY SPACE WITH 3 OR MORE 2" DIAMETER OR LARGER HOLES AT TOP OF BLOCK.

OPTION 2: ALTERNATE FULL HEIGHT BLOCK WITH 3 OR MORE 2" DIAMETER HOLES AT TOP OF BLOCK AND PARTIAL HEIGHT BLOCK EVERY OTHER SPACE WITH AN AIR GAP BETWEEN 1"–2" FROM ROOF SHEATHING TO TOP OF PARTIAL HEIGHT BLOCK – MIN. 2X10 BLOCK.



OPTION 3: THIS CONFIGURATION MAY BE USED IN LIEU OF FULL HEIGHT BLOCKS ABOVE EXTERIOR WALLS FOR TRUSSES WITH HEELS OF 11 1/4".



Other configurations may be deemed acceptable when supported by calculations.

23.85.R806.1 Ventilation Required.

Add the following sentence to end of paragraph:

A non-ventilated roof system may be allowed as an alternate method when its design is approved by the Building Official.

23.85.R806.2 Minimum Area.
Revise the first sentence of section R806.2 by deleting the phrase, "except that total area is permitted to be reduced to 1 to 300, provided" and adding the word "and" in its place.

Delete the last sentence of R806.2.

23.85.R807.1 Attic Access.
Add the following to section R807.1:

Attic access shall not be located in a room containing bathing facilities. Access may be located in closets with minimum depth of twenty-three (23) inches and minimum width of forty-eight (48) inches.

23.85.R903.1 General .
Add the following paragraph to the end of section:

1. No penetrations shall be located in required ice and water shield locations.
2. All valleys shall have a modified bitumen ice and water shield lapped eighteen inches (18") each side of the valley.
3. Heat radiating penetrations, i.e, heating appliance vents, dryer vents, and exhaust fans shall be located a minimum of six feet from the valleys and eaves.

23.85.R903.4 Roof Drainage.
Roofs and gutter downspouts shall not create a water flow that damages neighboring properties.

23.85.R905.2.2 Slope.
Delete section R905.2.2 and replace with the following:

Asphalt shingles shall only be used on roof slopes of three units vertical in twelve (12) units horizontal or greater. Underlayment shall be in accordance with section 23.85.R905.2.7 and ice protection shall be in accordance with section 23.85.R905.2.7.1.

23.85.R905.2.4 Asphalt Shingles.
Add the following to the end of the paragraph:

Asphalt shingles shall have a minimum weight of 235 lbs per square.

23.85.R905.2.7 Underlayment Application.
Delete section and replace with the following:

A. For roof slopes from three (3) vertical units in twelve (12) horizontal units (3:12) up to but not including four (4) vertical units in twelve (12) horizontal units (4:12), underlayment shall be one (1) layer of self-adhering polymer modified bitumen.

B. For slopes four (4) units vertical in twelve (12) units horizontal (4:12) and greater, underlayment shall be one (1) layer of Type 15 felt. Underlayment shall be installed starting with four inch (4") lap over ice protection. Each subsequent layer shall be lapped two inches (2") horizontally, and four inches (4") vertically to shed water continuing to the ridge, fastened sufficiently to hold in place. Ice protection shall be in accordance with section 23.85.R905.2.7.1.

23.85.R905.2.7.1 Ice Protection.

Amend section by deleting from the paragraph the words "...of at least two layers of underlayment cemented together or..."

Amend by changing the dimension at the end of the paragraph from twenty-four (24) inches to thirty-six (36) inches.

23.85.R905.2.8 Flashing.

Add the following at the end of the paragraph:

Flashing shall be no less than four inches (4") by four inches (4") in width.

23.85.R905.2.8.2 Valleys.

Delete numbers 1, 2, and 3; refer to section 23.85.R903.1, #2.

23.85.R905.3 Clay and Concrete Tile.

Delete subsections R905.3.1 through R905.3.3; refer to subsections R905.2.1; 23.85.R905.2.2; 23.85.R905.2.7; and 23.85.R905.2.7.1.

23.85.R905.4 Metal Roof Shingles.

Delete subsections R905.4.1 through 905.4.3; refer to subsections R905.2.1; 23.85.R905.2.2; 23.85.R905.2.7; and 23.85.R905.2.7.1.

23.85.R905.5 Mineral-Surfaced Roll Roofing.

Delete subsections R905.5.1 through 905.5.3; refer to subsections R905.2.1; 23.85.R905.2.2; 23.85.R905.2.7; and 23.85.R905.2.7.1.

23.85.R905.6 Slate and Slate-Type Shingles.

Delete subsection R905.6.3; refer to subsections 23.85.R905.2.7; and 23.85.R905.2.7.1.

23.85.R905.7 Wood Shingles.
Delete subsections R905.7.1 through R905.7.3; refer to subsections R905.2.1; 23.85.R905.2.2; 23.85.R905.2.7; and 23.85.R905.2.7.1.

23.85.R905.8 Wood Shakes.
Delete subsections R905.8.1 through R905.8.3; refer to subsections R905.2.1; 23.85.R905.2.2; 23.85.R905.2.7; and 23.85.R905.2.7.1.

23.85.R905.9.1 Slope.
Delete the words: "except for coal-tar built-up roofs, which shall have a design slope of a minimum one-eighth unit vertical in 12 units horizontal (1-percent slope)."

23.85.R905.10 Metal Roof Panels.
Delete subsections R905.10 through R905.10.2; refer to subsections R905.2.1; 23.85.R905.2.2; 23.85.R905.2.7; and 23.85.R905.2.7.1.

23.85.R905.14 Sprayed Polyurethane Foam Roofing.
Delete section and all subsections.

23.85 Chapter 11 Energy Efficiency.
Delete chapter 11 in its entirety and replace with the following:

Chapter 11 Energy Efficiency. All one- and -two family dwellings and townhouses shall comply with the following insulation standards or show compliance with the 2000 International Energy Conservation Code.

Minimum Insulation R-Value [(hrft^{2}degF)/Btu]

	Maximum Glazing U-Factor	Ceilings	Walls	Basement Walls	Crawlspace Walls	Exposed Floors Above Grade (Cantilevered Floors)	Foundation Walls with Slab Floors
Minimum R-Value	0.35	R-38	R-19	R-19	R-19	R-30	R-8

23.85. Chapters 12-42.
Amend by deleting in their entirety Mechanical, Plumbing and Electrical.

23.85. Appendix.
Amend by deleting Appendices A-D, F-J, and L.

23.85.AE100 Mobile and Manufactured Homes.
This section replaces chapter 23.35, Mobile Homes Construction Standards.

23.85.AE101 Scope.
Amend the first sentence to read:

These provisions shall apply to manufactured homes, mobile homes, campers, and travel trailers serving as single dwelling units placed either on private (nonrental) lots or within mobile home parks licensed by the Municipality of Anchorage, and shall apply to the following:

Add the following section:

23.85.AE102.7 Mobile Homes, Campers, And Travel Trailers.

23.85.AE102.7.1 Mobile Homes.

Every mobile home built prior to June 15, 1976, shall be labeled as required in Section A201, and shall conform to all of the following:

1. *FIRE WARNING SYSTEM* - Smoke detectors shall be provided with in accordance with R317.
2. *FIRE PROTECTION* – Each mobile home shall be equipped with at least one 2-A rated portable fire extinguisher installed in accordance with NFPA 10-98.
3. *ELECTRICAL SYSTEM* - All electrical equipment, wiring, and appliances shall be installed per Building Safety Handout No. 04 - Mobile Home Requirements, as maintained by the Building Official.
4. *MECHANICAL SYSTEM* - All heating facilities shall be maintained in a safe condition. Additions, alterations, repairs and replacements shall comply with manufacturer's instructions and the currently adopted edition of the International Mechanical Code. Gas piping shall conform to the currently adopted edition of the Uniform Plumbing Code.
5. *PLUMBING SYSTEM* - All plumbing facilities shall be maintained in a safe and sanitary condition. Additions, alterations, repairs and replacements shall comply with manufacturer's instructions and the currently adopted edition of the Uniform Plumbing Code.
6. *EXIT FACILITIES* - Mobile homes shall have a minimum of two external doors located remotely from each other and so arranged as to provide means of unobstructed travel to the outside of the mobile home.
7. *GROUND FAULT INTERUPTER CIRCUIT* - Every mobile home shall have every electrical circuit serving bathroom, kitchen, and ground level service outlets protected by a ground fault interrupter circuit I, as required by Article 550-8(b) of the National Electrical Code.

23.85.AE102.7.2 Campers And Travel Trailers.

Campers and travel trailers moved into or relocated within the Municipality of Anchorage shall comply with:

1. All of the construction requirements of NFPA 501C, 1996 edition.
2. Items 1 through 6 of section 23.85.A102.7.1. Any camper or travel trailer not located within a licensed Camper Park shall not be occupied as a residence more than fourteen (14) days at a time for a total of more than thirty (30) days in any twelve (12) month period.

23.85.AE201 Definitions.

Add the following:

Camper park. A tourist facility approved by the Municipality for use by dependent and independent recreational vehicles, including motor homes, pickup campers, travel trailers, tent campers and similar recreational vehicles as opposed to a mobile home park which is licensed to accommodate mobile homes.

Mobile home park. Any parcel or adjacent parcels of land in the same ownership which is utilized for occupancy by more than two (2) mobile homes. This term shall not be construed to mean tourist facilities for parking of travel trailers or campers.

Add the following at the end of the first paragraph in the definition of ***Manufactured home:***

> Each manufactured home shall bear a certification label in accordance with the Manufactured Home Standards.

Add the following at the end of the first sentence of the second paragraph in the definition of ***Manufactured home:***

> ..., and the mobile home shall conform to section 23.85.A102.7.

Add the following to the definition of ***Manufactured Home Standards***:

> Every manufactured home installed in the Municipality of Anchorage shall be certified for the "North Zone" (40 pounds per square foot) for snow load and heat loss "Comfort Zone 3" in accordance with HUD standards.

23.85.AE301.1 Initial Installation.

Add the following after the word "be" in the first sentence of the first paragraph:

> ...relocated, moved,...

Add a new section:

> **23.85.AE301.5 Gas And Plumbing Service.**
>
> The owner of a manufactured home or a licensed mobile home contractor may install or retrofit gas piping, gas appliances, or plumbing only under the following conditions:
>
> 1. The owner performing such work shall be a current occupant of the manufactured home and shall personally perform all work.
> 2. A licensed mobile home contractor may perform work on gas and plumbing utility connections only by use of a licensed journeyman

plumber or journeyman gas fitter who is an employee of the contractor. All such work shall bear a tag with the identification number of the journeyman plumber or journeyman gas fitter who performs the work.

3. Except as provided in items 1 and 2 of this section, all plumbing, gas piping, or gas appliance retrofit work shall be performed by a licensed plumbing or gas contractor.
4. No person may pipe natural gas to service gas fired equipment unless:
   a. such equipment has been certified by the manufacturer as being suitable to that use; and
   b. such equipment has first been converted for use of natural gas.

23.85.AE302.4 Who May Apply.

Only the owner of a manufactured home or a licensed mobile home contractor may apply for a permit under this section.

23.85.AE307 Utility Service.

Add the following sentence:

All sewer, electricity, gas, and water services shall be installed and maintained in a safe manner in accordance with the appropriate adopted codes.

23.85.AE502.3 Footings And Foundations.

Replace the last sentence of the first paragraph with the following:

Footings shall have a minimum depth of forty-two (42) inches below exterior grade on privately owned (nonrental) lots, unless a greater depth is required by the Building Official based on a foundation investigation or other information. Footings or piers in mobile home parks may be placed at surface grade, provided all other requirements are met.

23.85.AE502.6 Under-Floor Clearances-Ventilation And Access.

Add to the second paragraph the following:

Where combustion air is not taken from the crawl space, and where the floor area of the home does not exceed 800 square feet, the ventilation requirement may be met by operable vents of eight inches (8") by sixteen inches (16") installed in skirting not less than eighteen inches (18") above exterior grade at opposite ends of the manufactured home.

23.85.AE503.1 Skirting And Permanent Perimeter Enclosures.

Replace the first sentence of the first paragraph with the following:

Every manufactured home shall be skirted around its perimeter from the floorline to exterior grade with a skirting material having a insulation value of R-19 as published by the American Society of Heating, Refrigeration, and Air Conditioning

Engineers (ASHRAE). A minimum of 6 mil polyethylene film vapor retarder shall entirely cover the soil surface of the crawl space.

23.85.AE604.1 Ground Anchors.

Replace the first paragraph with the following:

Ground anchors shall be designed and installed to resist overturning and lateral movement of the manufactured home, and shall extend at least sixty inches (60") below exterior grade, or deeper if required by the Building Official because of poor soils. Ground anchors shall be installed for every manufactured home, except where a permanent foundation bearing at least forty-two inches (42") below grade is demonstrated by calculation to resist the forces as determined by chapter 16 of the International Building Code.

CHAPTER 23.95 RELOCATABLE ANCILLARY BUILDINGS.

Sections

23.95.100 Building Permit; Exemption
23.95.200 Requirements for Building Permit
23.95.300 Definitions

23.95.100 Building Permit: Exemption.

Relocatable ancillary buildings, which meet the requirements of section 23.95.200 qualify for a building permit. Relocatable ancillary buildings are exempt from the requirements of section 102.6, moved buildings, and section 102.7, temporary structures of the Anchorage Administrative Code, or any successor or local amendment thereto.

23.95.200 Requirements for Building Permit.

A relocatable ancillary building which meets all of the following requirements, qualifies for a building permit:

A. The relocatable ancillary building shall comply with the provisions of the technical codes for new buildings or structures relating to fire, building and life safety concerns and are current as of the date of the building plan review, except the relocatable ancillary building is not required to have:
   1. Plumbing facilities;
   2. Water service;
   3. Permanent foundation;
   4. Active fire alarm system, provided the relocatable ancillary building is less than 1,000 square feet in size and has at least two exit door openings;
   5. Fire sprinkler system; or
   6. Accessibility for the disabled, provided a similar education program is offered in the permanent building accessible to the disabled.

B. The relocatable ancillary building must be secured to prevent overturning or sliding by lateral forces, including wind, and to minimize movement during seismic activities.

C. A plan for the proposed location of the relocatable ancillary buildings shall be approved by the municipal Fire Department and the Building Safety Division of the Department of Development Services.

D. An electrical permit and reinspection for the relocatable ancillary building is required following each relocation thereof.

E. A plumbing permit and reinspection for any relocatable ancillary building having plumbing facilities or water service is required following each relocation thereof.

23.95.300 Definitions.

A. *Relocatable ancillary building* means a publicly or privately owned moveable educational classroom or support facility meeting the Group E occupancy definition of the Building Codes contained in title 23 and constructed for multi-year use in conjunction with one or more publicly or privately owned permanent building and which meets all of the following criteria:

1. Is a public or private educational facility which serves a public education purpose;
2. Is ancillary to a permanent building and serves the same general purpose and function as the permanent building;
3. Is located in close proximity to the permanent building; and
4. Is used as a classroom for students who have access to the plumbing facilities and water service of the permanent building or is used as a storeroom solely for classroom supplies.

CHAPTER 23.100 MOBILE AIRCRAFT SHELTERS.

Sections:

23.100 Mobile Aircraft Shelters
23.10.102.9 Mobile Aircraft Shelters

A. *General.* Notwithstanding other requirements of this code, mobile structures for the housing of aircraft may be moved and maintained subject to the requirements set forth in this section.

B. *Location.* Existing Mobile Aircraft Shelters (shelters) may be relocated on municipal airports. No such shelter shall be located closer than twenty (20) feet from any permanent building, mobile home or lot line, except where lot lines are along streets or aircraft taxiways whereby the twenty (20) feet may be measured from the centerline of the right of way; and except where such shelters are situated in a configuration providing periodic fire breaks in conformity with required building and fire codes. The location of each structure shall also comply with the requirements of title 21.

C. *Occupancy.* Mobile Aircraft Shelters shall be used only for the following authorized purposes:

1. Storage of personal or business use aircraft and related spare parts;
2. Storage or use of tools subject to the limitations contained in subsection D. below; and

3. Minor maintenance or repair of aircraft by their owners or contract/licensed mechanics.

D. *Authorized Activities.* Authorized activities shall include storage or maintenance of the following:

1. Storage of an aircraft for personal or business use, or in the case of smaller aircraft, more than one aircraft;
2. Hand tools and small power tools required to support authorized activities;
3. Spare parts such as:
   a. tires and wheels
   b. propellers
   c. seats
   d. avionics
   e. hardware
   f. wire and wiring supplies
   g. lamps
   h. small structural sections
   i. personal and cargo parachutes, including packing and repairs to parachutes.
4. Work benches and shelves;
5. Storage cabinets;
6. Aircraft ingress winches and required electrical and communications utilities to support the same;
7. Routine cleaning of aircraft parts or the shelter;
8. Minor aircraft repairs, adjustments, and configurations;
9. Inspections, including annual inspections;
10. Installation or changing, or changing calibration of avionics;
11. Replacement of control surfaces, axles, bearings and aircraft accessories including but not limited to generators, alternators, fuel pumps, oil and vacuum pumps, magnets, batteries, cylinder heads and cylinder barrel replacement;
12. Open houses and posting signs for the purpose of showing or selling or subleasing a mobile aircraft shelter;
13. Storage of snowblowers or snow removal equipment;
14. Storage of compressors and related tools;
15. Unused oil not to exceed two (2) cases or ten (10) gallons;
16. Aircraft fuel in the aircraft tanks;
17. Lubricants in factory containers;
18. Emergency electrical generators;
19. Seasonal equipment such as ice augers, survival equipment and non-commercial fishing equipment; and
20. Personal vehicles in place of the aircraft when the aircraft is flying.

E. *Unauthorized Activities.* Mobile aircraft shelters shall not be used for any of the following:

1. Commercial activities including but not limited to:
   a. performing for hire annual inspections for other aircraft owners;

b. commercial basing of aircraft for the purposes of guiding, air cargo or commuter operations where the mobile aircraft shelter is used for ancillary uses other than the actual storage of this aircraft; and
c. commercial basing of aircraft for instructional purposes when the mobile aircraft shelter is used for purposes other then only storage of the aircraft.

2. Major repairs, including engine tear downs;
3. Welding of any kind;
4. Painting except for minor touch up painting utilizing small, hand-held spray cans;
5. Storage of non-aviation related products including but not limited to:
   a. furniture not related to authorized shelter uses;
   b. unrelated business records or files;
   c. equipment, tools, or other items of household or business use;
   d. vehicles not otherwise allowed, including snowmachines, motorcycles, all-terrain vehicles, automobiles, trucks;
   e. boats, except for rubber rafts and their motors;
   f. campers and camper shells;
   g. mobile homes;
   h. trailers;
   i. commercial generators and welders;
   j. used oil;
   k. fuel in drums or portable containers in excess of a total of five (5) gallons;
   l. hydraulic oil in excess of a total of one (1) gallon.

F. *Heating Methods*. Heating mobile aircraft shelters may be provided as follows:
1. The following may be used as methods of heating authorized aircraft, vehicle, equipment or shelters:
   a. electric block-type with UL approval for such purposes;
   b. pan adhesion with UL approval for such purposes;
   c. individual catalytic heaters with UL approval for such purposes; and
   d. Forced air sealed combustion chamber heaters using outside combustion air connected to natural gas PROVIDED such heaters are UL approved and are designed, installed and operated in conformity with applicable building and fire codes.
2. The following shall not be used as methods of heating aircraft, vehicles, equipment or shelters:
   a. open flame heaters of any kind;
   b. propane heaters;
   c. diesel fired heaters; and
   d. "salamander" or kerosene catalytic heaters.

G. *Area and Height Limitations*. Individual shelters shall not exceed two thousand five hundred (2,500) square feet of usable floor area. Where two or more shelters are grouped together (or "nested" in "T-Hangar" configuration), the total gross floor area of such grouping shall not exceed twenty thousand (20,000) square feet on non-combustible construction without an approved area separation wall.

1. Adjacent shelters may be joined with non-combustible materials of similar design to original construction providing that they are separated by a one (1) hour rated fire door and applicable hardware. All floors shall be ground level, and no balcony or mezzanine floors shall be permitted, except that the areas which are not in the landing gear "footprint" may be insulated with insulfoam covered with plywood where said exposed materials are covered with an approved, rated, fire retardant coating.
2. Minimum spacing between groupings of shelters shall be sixty-five (65) feet, except when an area separation wall is provided as noted above and in concert with applicable building and fire codes. Maximum height of any portion of the structure above grade shall be twenty-five (25) feet, and subject to the appropriate, approved and adopted airport height zoning map.

H. *Design.* Shelters may be constructed of any non-combustible materials permitted by this code. Adequacy of design shall be evidenced by International Conference of Building Officials (ICBO) Research Report, computations by a registered engineer in the State of Alaska, or other additional information such as manufacturer's specification sheets and test results, subject to the approval of the building official.

I. *Utilities.* Shelters may be connected to electrical, communications and natural gas utilities provided all devices utilized and all methods of installation and use meet the appropriate building codes and Municipal amendments thereto. If shelters are required in the future to be connected to water and/or sewer, and when and if such a requirement is perceived to exist, the Building Official shall provide guidance and where deemed appropriate and in the public interest, issue appropriate permits.

J. *Foundations.* Shelters shall be founded on a concrete slab with a sufficient sill between each unit to prevent liquid from flowing from one unit to another unit with appropriate anchorage for the units into the concrete slab. Maximum soil pressures shall be in accordance with this code.

K. *Anchorage.* Shelters shall be anchored to resist uplift and lateral forces. Anchors shall resist various forces through gravity and soil pressures. The suitability and capacity of anchors shall be established by appropriate test reports or computations. Anchors shall be installed in accordance with the manufacturer's recommendations.

L. *Structural Strength.* Existing shelters are grandfathered. Any modifications to existing shelters shall be designed and constructed to meet criteria as required by the building code.

M. *Exits.* Exit requirements for portable aircraft shelters shall be as required in the building code.

N. *Protective Finish.* Shelters shall have protective finishes required by building code on exposed surfaces.

CHAPTER 23.105 GRADING, EXCAVATION AND FILL.

Sections:

23.105.101 Purpose
23.105.102 Scope
23.105.103 Permits Required
23.105.104 Hazards
23.105.105 Definitions
23.105.106 Grading Permit Requirements
23.105.107 Grading Fees
23.105.108 Bonds
23.105.109 Cuts
23.105.110 Fills
23.105.111 Setbacks
23.105.112 Drainage and Terracing
23.105.113 Erosion Control
23.105.114 Grading Inspection
23.105.115 Completion of Work

Section 23.105.101 Purpose.

The purpose of this section is to safeguard life, limb, property and the public welfare by regulating grading on private property.

Section 23.105.102 Scope.

This section sets forth rules and regulations to control excavation, grading and earthwork construction, including fills and embankments; establishes the administrative procedure for issuance of permits; and provides for approval of plans and inspection of grading construction.

The standards listed below are recognized standards.

1. Testing.

    1.1. ASTM D 1557, Moisture-Density Relations of Soils and Soil Aggregate Mixtures
    1.2. ASTM D 1556, In Place Density of Soils by the Sand-Cone Method
    1.3. ASTM D 2167, In Place Density of Soils by the Rubber-Balloon Method
    1.4. ASTM D 2937, In Place Density of Soils by the Drive-Cylinder Method
    1.5 ASTM D 2922 and D 3017, In Place Moisture Contact and Density of Soils by Nuclear Methods

Section 23.105.103 Permits required.

23.105.103.1 Permits required. Except as specified in section 103.2 below, no person shall do any grading without first having obtained a grading permit from the code official.

23.105.103.2 Exempted work. A grading permit is not required for the following:

1. When approved by the code official, grading in an isolated, self-contained area if there is no danger to private or public property.
2. An excavation below finished grade for basements and footings of a building, retaining wall or other structure authorized by a valid building permit. This shall not exempt any fill made with the material from such excavation or exempt any excavation having an unsupported height greater than five (5) feet (1524 mm) after the completion of such structure.
3. Cemetery graves.
4. Refuse disposal sites controlled by other regulations.
5. Excavations for wells or tunnels or utilities.
6. Mining, quarrying, excavating, processing or stockpiling of rock, sand, gravel, aggregate or clay where established and provided for by law, provided such operations do not affect the lateral support or increase the stresses in or pressure upon any adjacent or contiguous property.
7. Exploratory excavations under the direction of soil engineers or engineering geologists.
8. An excavation (a) less than 2 feet (610 mm) in depth or (b) does not create a cut slope greater than 5 feet (1524 mm) in height and steeper than 1 unit vertical in 1½ units horizontal (66.7% slope).
9. A fill less than 1 foot (305 mm) in depth and placed on natural terrain with a slope flatter than 1 unit vertical in 5 units horizontal (20% slope), or less than 3 feet (914 mm) in depth, not intended to support structures, that does not exceed 50 cubic yards (38.3 m^3) on any one lot and does not obstruct a drainage course.
10. Exemption from the permit requirements of this chapter shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this chapter or any other laws or ordinances of this jurisdiction.

Section 23.105.104 Hazards.

Whenever the code official determines any existing excavation or embankment or fill on private property has become a hazard to life and limb, or endangers property, or adversely affects the safety, use or stability of a public way or drainage channel, the owner of the property upon which the excavation or fill is located, or other person or agent in control of said property, upon receipt of notice in writing from the code official, shall within the period specified therein repair or eliminate such excavation or embankment to eliminate the hazard and to be in conformance with the requirements of this code.

Section 23.105.105 Definitions.

For the purposes of this appendix, the definitions listed hereunder shall be construed as specified in this section.

Approval shall mean the proposed work or completed work conforms to this chapter in the opinion of the code official.

As-graded is the extent of surface conditions on completion of grading.

Bedrock is in-place solid rock.

Bench is a relatively level step excavated into earth material on which fill is to be placed.

Borrow is earth material acquired from an off-site location for use in grading on a site.

Civil engineer is a professional engineer registered in the state to practice in the field of civil works.

Civil engineering is the application of the knowledge of the forces of nature, principles of mechanics and the properties of materials to the evaluation, design and construction of civil works.

Compaction is the densification of a fill by mechanical means.

Earth material is any rock, natural soil or fill or any combination thereof.

Engineering geologist is a geologist experienced and knowledgeable in engineering geology.

Engineering geology is the application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works.

Erosion is the wearing away of the ground surface as a result of the movement of wind, water or ice.

Excavation is the mechanical removal of earth material.

Fill is a deposit of earth material placed by artificial means.

Geotechnical engineer. See *Soils engineer*.

Grade is the vertical location of the ground surface.

Grade, existing is the grade prior to grading.

Grade, finish is the final grade of the site that conforms to the approved plan.

Grade, rough is the stage at which the grade approximately conforms to the approved plan.

Grading is any excavating or filling or combination thereof.

Key is a designed, compacted fill placed in a trench excavated in earth material beneath the toe of a proposed fill slope.

Professional inspection is the inspection required by this code to be performed by the civil engineer, soils engineer or engineering geologist. Such inspections include those performed by persons supervised by such engineers or geologists and shall be sufficient to form an opinion relating to the conduct of the work.

Site is any lot or parcel of land or contiguous combination thereof, under the same ownership, where grading is performed or permitted.

Slope is an inclined ground surface the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

Soil is naturally occurring superficial deposits overlying bedrock.

Soils engineer (Geotechnical engineer) is an engineer experienced and knowledgeable in the practice of soils engineering (geotechnical) engineering.

Soils engineering (Geotechnical engineering) is the application of the principles of soils mechanics in the investigation, evaluation and design of civil works involving the use of earth materials and the inspection or testing of the construction thereof.

Terrace is a relatively level step constructed in the face of a graded slope surface for drainage and maintenance purposes.

Section 23.105.106 Grading permit requirements.

23.105.106.1 Permits required. Except as exempted in section 103.2, no person shall do any grading without first obtaining a grading permit from the code official. A separate permit shall be obtained for each site, and may cover both excavations and fills.

23.105.106.2 Application. The provisions of the Anchorage Administrative Code section 301 are applicable to grading. Additionally, the application shall state the estimated quantities of work involved.

23.105.106.3 Grading designation. Grading in excess of 5,000 cubic yards (3825 m^3) shall be performed in accordance with the approved grading plan prepared by a civil engineer, and shall be designated as "engineered grading." Grading involving less than 5,000 cubic yards (3825 m^3) shall be designated "regular grading" unless the permittee chooses to have the grading performed as engineered grading, or the code official determines special conditions or unusual hazards exist, in which case grading shall conform to the requirements for engineered grading.

23.105.106.3.1 Engineered grading requirements.

A. Application for a grading permit shall be accompanied by two sets of plans and specifications, and supporting data consisting of a soils engineering report and engineering geology report. The plans and specifications shall be prepared and

signed by an individual licensed by the state to prepare such plans or specifications when required by the code official.

B. Specifications shall contain information covering construction and material requirements.

C. Plans shall be drawn to scale upon substantial paper or cloth and shall be of sufficient clarity to indicate the nature and extent of the work proposed and show in detail that they will conform to the provisions of this code and all relevant laws, ordinances, rules and regulations. The first sheet of each set of plans shall give location of the work, the name and address of the owner, and the person by whom they were prepared.

D. The plans shall include the following information:

1. General vicinity of the proposed site;
2. Property limits and accurate contours of existing ground and details of terrain and area drainage;
3. Limiting dimensions, elevations or finish contours to be achieved by the grading, and proposed drainage channels and related construction;
4. Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams and other protective devices to be constructed with, or as a part of, the proposed work, together with a map showing the drainage area and the estimated runoff of the area served by any drains;
5. Location of any buildings or structures on the property where the work is to be performed and the location of any buildings or structures on land of adjacent owners within fifteen (15) feet (4572 mm) of the property or that may be affected by the proposed grading operations;
6. Recommendations included in the soils engineering report and the engineering geology report shall be incorporated in the grading plans or specifications. When approved by the code official, specific recommendations contained in the soils engineering report and the engineering geology report, applicable to grading, may be included by reference;
7. The dates of the soils engineering and engineering geology reports together with the names, addresses and phone numbers of the firms or individuals who prepared the reports; and
8. An engineered grading special inspection program prepared by the engineers responsible for inspection. The program shall include a scope of work outlining the engineering inspector's duties, per sections 23.105.114 and 23.105.115.

23.105.106.4 Soils Engineering report. The soils engineering report required by section 106.3.1 shall include data regarding the nature, distribution and strength of existing soils, conclusions and recommendations for grading procedures and design criteria for corrective measures, including buttress fills, when necessary, and opinion on adequacy for the intended use of sites to be developed by the proposed grading as affected by soils engineering factors, including the stability of slopes.

23.105.106.5 Engineering geology report. The engineering geology report required by

section 106.3.1 shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and opinion on the adequacy for the intended use of sites to be developed by the proposed grading, as affected by geologic factors.

23.105.106.6 Liquefaction study. The code official may require a geotechnical investigation in accordance with an approved geologic engineer when, during the course of an investigation, all of the following conditions are discovered. The report shall address the potential for liquefaction:

1. Shallow ground water, 50 feet (15240 mm) or less.
2 Unconsolidated sandy alluvium.
3. Seismic Zones D, E, and F.

23.105.106.7 Regular grading requirements. Each application for a grading permit shall be accompanied by a plan in sufficient clarity to indicate the nature and extent of the work. The plans shall give the location of the work, the name of the owner and the name of the person who prepared the plan. The plan shall include the following information:

1. General vicinity of the proposed site.
2. Limiting dimensions and depth of cut and fill.
3. Location of any buildings or structures where work is to be performed, and the location of any buildings or structures within fifteen (15) feet (4572 mm) of the proposed grading.

23.105.106.8 Issuance.

A. The provisions of the Anchorage Administrative Code section 303 are applicable to grading permits. The code official may require grading operations and project designs be modified if delays occur which incur weather-generated problems not considered at the time the permit was issued.
B. The code official may require professional inspection and testing by the soils engineer. When the code official has cause to believe that geologic factors may be involved, the grading will be required to conform to engineered grading.

Section 23.105.107 Grading fees.

23.105.107.1 General. Fees shall be assessed in accordance with the provisions of this section or shall be as set forth in the fee schedule adopted by the jurisdiction.

23.105.107.2 Plan review fees. When a plan or other data are required to be submitted, a plan review fee shall be paid at the time of submitting plans and specifications for review. Said plan review fee shall be as set forth in the Anchorage Administrative Code chapter 23.10, Table 3B. Separate plan review fees shall apply to retaining walls or major drainage structures as required elsewhere in this code. For excavation and fill on the same site, the fee shall be based on the volume of excavation or fill, whichever is greater.

23.105.107.3 Grading permit fees. A fee for each grading permit shall be paid to the code official as set forth in the Anchorage Administrative Code chapter 23.10, Table 3H. Separate permits and fees shall apply to retaining walls or major drainage structures as required elsewhere in this code. There shall be no separate charge for standard terrace drains and similar facilities.

Section 23.105.108 Bonds.

A. The code official may require bonds in such form and amounts as may be deemed necessary to ensure the work, if not completed in accordance with the approved plans and specifications, shall be corrected to eliminate hazardous conditions.

B. In lieu of a surety bond. the applicant may file a cash bond or instrument of credit with the code official in an amount equal to that required in the surety bond.

Section 23.105.109 Cuts.

23.105.109.1 General.

A. Unless otherwise recommended in the approved soils engineering or engineering geology report, cuts shall conform to the provisions of this section. Cuts shall not cause a net increase in surface runoff across property lines. Runoff shall discharge to approved locations or be retained on site.

B. In the absence of an approved soils engineering report, these provisions may be waived for minor cuts not intended to support structures.

23.105.109.2 Slope. The slope of cut surfaces shall be no steeper than is safe for the intended use and shall be no steeper than 1 unit vertical in 2 units horizontal (50% slope) unless the permittee furnishes a soils engineering or an engineering geology report, or both, stating the site has been investigated and giving an opinion that a cut at a steeper slope is stable and does not create a hazard to public or private property.

Section 23.105.110 Fills.

23.105.110.1 General.

A. Unless otherwise recommended in the approved soils engineering report, fills shall conform to the provisions of this section. Fills shall not cause a net increase in surface runoff across property lines. Run-off shall discharge to approved locations or be retained on site.

B. In the absence of an approved soils engineering report, these provisions may be waived for minor fills not intended to support structures.

23.105.110.2 Preparation of ground. Fill slopes shall not be constructed on natural slopes steeper than 1 unit vertical in 2 units horizontal (50% slope). The ground surface shall be prepared to receive fill by removing vegetation, noncomplying fill, topsoil and other unsuitable materials scarifying to provide a bond with the new fill and, where slopes are steeper than one (1) unit vertical in five (5) units horizontal (20% slope) and the height is greater than five (5) feet (1524 mm), by benching into sound bedrock or other competent material as determined by the soils engineer. The bench under the toe of

a fill on a slope steeper than one (1) unit vertical in five (5) units horizontal (20% slope) shall be at least ten (10) feet (3048 mm) wide. The area beyond the toe of fill shall be sloped for sheet overflow or a paved drain shall be provided. When fill is to be placed over a cut, the bench under the toe of fill shall be at least ten (10) feet (3048 mm) wide but the cut shall be made before placing the fill and acceptance by the soils engineer or engineering geologist or both as a suitable foundation for fill.

Exception: When based on a geotechnical engineer's recommendation and designed by a civil engineer, parking lots may be constructed by placing structural fill over peat. A geotechnical site investigation is required prior to future buildings being constructed on such sites to determine the amount of peat to be removed below the building footprint.

23.105.110.3 Fill Material. Detrimental amounts of organic material shall not be permitted in fills. Except as permitted by the code official, no rock or similar irreducible material with a maximum dimension greater than twelve (12) inches (305 mm) shall be buried or placed in fills.

Exception: The code official may permit placement of larger rock when the soils engineer properly devises a method of placement, and continuously inspects its placement and approves the fill stability. The following conditions shall also apply:

1. Prior to issuance of the grading permit, potential rock disposal areas shall be delineated on the grading plan.
2. Rock sizes greater than twelve (12) inches (305 mm) in maximum dimension shall be ten (10) feet (3048 mm) or more below grade, measured vertically.
3. Rocks shall be placed so as to assure filling of all voids with well-graded soil.

23.105.110.4 Compaction. All fills shall be compacted to a minimum of ninety (90) percent of maximum density.

23.105.110.5 Slope. The slope of fill surfaces shall be no steeper than is safe for the intended use. Fill slopes shall be no steeper than one (1) unit vertical in two (2) units horizontal (50% slope).

Section 23.105.111 Setbacks.

23.105.111.1 General. Cut and fill slopes shall be set back from site boundaries in accordance with this section. Setback dimensions shall be horizontal distances measured perpendicular to the site boundary. Setback dimensions shall be as shown in Figure A-1.

23.105.111.2 Top of cut slope. The top of cut slopes shall not be made nearer to a site boundary line than one-fifth of the vertical height of cut with a minimum of two (2) feet (610 mm) and a maximum of ten (10) feet (3048 mm). The setback may need to be increased for any required interceptor drains.

23.105.111.3 Toe of fill slope. The toe of fill slope shall be made not nearer to the site boundary line than one-half the height of the slope with a minimum of two (2) feet (610 mm) and a maximum of twenty (20) feet (6096 mm). Where a fill slope is to be located near the site boundary and the adjacent off-site property is developed, special precautions shall be incorporated in the work as the code official deems necessary to protect the adjoining property from damage as a result of such grading. These precautions may include but are not limited to:

1. Additional setbacks.
2. Provision for retaining or slough walls.
3. Mechanical or chemical treatment of the fill slope surface to minimize erosion.
4. Provisions for the control of surface waters.

23.105.111.4 Modification of slope location. The code official may approve alternate setbacks. The code official may require an investigation and recommendation by a qualified engineer or engineering geologist to demonstrate the intent of this section has been satisfied.

Section 23.105.112 Drainage and terracing.

23.105.112.1 General. Unless otherwise indicated on the approved grading plan, drainage facilities and terracing shall conform to the provisions of this section for cut or fill slopes steeper than one (1) unit vertical in three (3) units horizontal (33.3% slope).

23.105.112.2 Terrace.

A. Terraces at least six (6) feet (1829 mm) in width shall be established at not more than thirty (30) foot (9144 mm) vertical intervals on all cut or fill slopes to control surface drainage and debris except where only one terrace is required, it shall be at midheight. For cut or fill slopes greater than sixty (60) feet (18 288 mm) and up to one hundred twenty (120) feet (36 576 mm) in vertical height, one terrace at approximately midheight shall be twelve (12) feet (3658 mm) in width. Terrace widths and spacing for cut and fill slopes greater than 120 feet (36 576 mm) in height shall be designed by the civil engineer and approved by the code official. Suitable access shall be provided to permit proper cleaning and maintenance.

B. Swales or ditches on terraces shall have a minimum gradient of five percent (5%) and shall be paved with reinforced concrete not less than three (3) inches (76 mm) in thickness or an approved equal paving. They shall have a minimum depth at the deepest point of one (1) foot (305 mm) and a minimum paved width of five (5) feet (1524 mm).

C. A single run of swale or ditch shall not collect runoff from a tributary area exceeding 13,500 square feet (1254.2 m^2) (projected) without discharging into a down drain.

23.105.112.3 Subsurface drainage. Cut and fill slopes shall be provided with subsurface drainage as necessary for stability.

23.105.112.4 Disposal.

A. All drainage facilities shall be designed to carry waters to the nearest practicable drainage way approved by the code official or other appropriate jurisdiction as a safe place to deposit such waters. Erosion of ground in the area of discharge shall be prevented by installation of nonerosive down-drains or other devices.

B. Footing drains or sump pumps shall discharge to a ditch or storm sewer for new construction where available. Backup emergency systems may discharge to the surface. Primary systems shall not discharge onto adjacent properties. Where sump pumps or footing drains discharge on the soil surface, the effluent shall be directed toward drainage easements, street gutters, ditches or other approved locations. Effluent may be retained on site to prevent impacts to neighboring properties.

C. Building pads shall have a drainage gradient of two percent (2%) toward approved drainage facilities, unless waived by the code official.

Exception: The gradient from the building pad may be one percent (1%), if all of the following conditions exist throughout the permit area:

1. No proposed fills are greater than ten (10) feet (3048 mm) in maximum depth; and
2. No proposed finish cut or fill slope faces have a vertical height in excess of ten (10) feet (3048 mm); and
3. No existing slope faces steeper than one (1) unit vertical in ten (10) units horizontal (10% slope) have a vertical height in excess of ten (10) feet (3048 mm).

23.105.112.5 Interceptor Drains. Paved interceptor drains shall be installed along the top of all cut slopes where the tributary drainage area above slopes toward the cut and has a drainage path greater than forty (40) feet (12 192 mm) measured horizontally. Interceptor drains shall be paved with a minimum of three (3) inches (76 mm) of concrete or gunite and reinforced, shall have a minimum depth of twelve (12) inches (305 mm), and a minimum paved width of thirty (30) inches (762 mm) measured horizontally across the drain. The slope of drain shall be approved by the code official.

Section 23.105.113 Erosion Control.

23.105.113.1 Slopes. The faces of cut and fill slopes shall be prepared and maintained to control against erosion. This control may consist of effective planting. The protection for the slopes shall be installed as soon as practicable and prior to calling for final approval. Where cut slopes are not subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.

23.105.113.2 Other Devices. Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide safety.

Section 23.105.114 Grading Inspection.

23.105.114.1 General. Grading operations requiring a permit shall be subject to inspection by the code official. Professional inspection of grading operations shall be

provided by the civil engineer, soils engineer, and the engineering geologist, retained to provide such services in accordance with section 114.5 for engineered grading and as required by the code official for regular grading.

23.105.114.2 Civil engineer. The civil engineer shall provide professional inspection within such engineer's area of technical specialty, consisting of observation and review as to the establishment of line, grade and surface drainage of the development area. If revised plans are required during the course of work, they shall be prepared by the civil engineer.

23.105.114.3 Soils engineer. The soils engineer shall provide professional inspection within such engineer's area of technical specialty, including observation during grading and testing for required compaction. The soils engineer shall provide sufficient observation during the preparation of the natural ground, and placement and compaction of the fill, to verify such work is being performed in accordance with the conditions of the approved plan and the appropriate requirements of this chapter. Revised recommendations relating to conditions differing from the approved soils engineering and engineering geology reports shall be submitted to the permittee, the code official and the civil engineer.

23.105.114.4 Engineering geologist. The engineering geologist shall provide professional inspection within such engineer's area of technical specialty, including professional inspection of the bedrock excavation to determine if conditions encountered are in conformance with the approved report. Revised recommendations relating to conditions differing from the approved engineering geology report shall be submitted to the soils engineer.

23.105.114.5 Permittee.

A. The permittee shall be responsible for the work to be performed in accordance with the approved plans and specifications, and in conformance with the provisions of this code.
B. The permittee shall engage consultants, if required, to provide professional inspections on a timely basis.
C. The permittee shall act as a coordinator between the consultants, the contractor and the code official.
D. In the event of changed conditions, the permittee shall be responsible for informing the code official of such change and shall provide revised plans for approval.
E. The permittee shall monitor the progress of the work.
F. The permittee shall schedule inspections at start of work, fifty percent (50%) completion, one hundred percent (100%) completion, and at significant stages outlined by the design consultants for engineered grading.
G. The permittee shall schedule inspections at fifty percent (50%) completion and one hundred percent (100%) completion for regular grading.
H. The permittee shall provide the engineering inspection reports to the code official during required inspections for engineered grading.

23.105.114.6 Code official. The code official shall inspect the project at the various stages of work requiring approval to determine adequate control is being exercised by the professional consultants. The code official may require a survey to be performed or test holes to be dug or soils tests to be performed to verify the work complies with the approved plans and applicable code requirements.

23.105.114.7 Notification of noncompliance. If, in the course of fulfilling their respective duties under this chapter, the civil engineer, the soils engineer or the engineering geologist finds the work is not being done in conformance with this chapter or the approved grading plans, the discrepancies shall be reported immediately in writing to the permittee and to the code official.

23.105.114.8 Transfer of responsibility. If the civil engineer, the soils engineer, or the engineering geologist of record is changed during grading, the work shall be stopped until the replacement has agreed, in writing, to accept their responsibility within the area of technical competence for approval upon completion of the work. It shall be the duty of the permittee to notify the code official in writing of such change prior to the recommencement of such grading.

Section 23.105.115 Completion of work.

23.105.115.1 Final reports.

A. Upon completion of the rough grading work and at the final completion of the work, the following reports and drawings and supplements thereto are required for engineered grading or when professional inspection is performed for regular grading, as applicable:

1. An as-built grading plan prepared by the civil engineer retained to provide such services in accordance with section 114.5 showing original ground surface elevations, as-graded ground surface elevations, lot drainage patterns, and the locations and elevations of surface drainage facilities and of the outlets of subsurface drains. As-constructed locations, elevations and details of subsurface drains shall be shown as reported by the soils engineer.
    a. Civil engineers shall submit a statement indicating, to the best of their knowledge, the work within their area of responsibility was done in accordance with the final approved grading plan.
2. A report prepared by the soils engineer retained to provide such services in accordance with section 114.5, including locations and elevations of field density tests, summaries of field and laboratory tests, other substantiating data, and comments on any changes made during grading and their effect on the recommendations made in the approved soils engineering investigation report.
    a. Soils engineers shall submit a statement indicating, to the best of their knowledge, the work within their area of responsibilities is in

accordance with the approved soils engineering report and applicable provisions of this chapter.

3. A report prepared by the engineering geologist retained to provide such services in accordance with section 114.5, including a final description of the geology of the site and any new information disclosed during the grading and the effect of same on recommendations incorporated in the approved grading plan.
   a. Engineering geologists shall submit a statement indicating, to the best of their knowledge, the work within their area of responsibility is in accordance with the approved engineering geologist report and applicable provisions of this chapter.
4. The grading contractor shall submit, in a form prescribed by the code official, a statement of conformance to said as-built plan and the specifications.

23.105.115.2 Notification of completion. The permittee shall notify the code official when the grading operation is ready for final inspection. Final approval shall not be given until all work, including installation of all drainage facilities, their protective devices, and all erosion-control measures, are completed in accordance with the final approved grading plan, and the required reports have been submitted.

CHAPTER 23.110 LOCAL AMENDMENTS TO THE INTERNATIONAL FUEL GAS CODE, 2003 EDITION.

Sections

23.110.100	Local Amendments to the 2003 International Fuel Gas Code
23.110.101.3	Scope
23.110.103	Delete
23.110.104	Delete
23.110.105	Delete
23.110.106	Delete
23.110.107	Delete
23.110.108	Delete
23.110.109	Delete
23.110.110	Authority to Render Gas Service
23.110.303	Appliance Location (LPG Facilities and Piping)
23.110.303.3	Prohibited Locations
23.110.303.4	Protection from Damage
23.110.304	Combustion, Ventilation, and Dilution Air
23.110.304.1	General
23.110.304.6	Outdoor Combustion Air
23.110.304.8	Engineered Installations
23.110.304.10	Louvers and Grilles
23.110.304.11	Combustion Air Ducts
23.110.304.11.8	Combustion Air Openings vs. Snow Depth
23.110.305.3	Elevation of Appliances and Other Ignition Sources

23.110.305.9	Aircraft Servicing and Storage Areas
23.100.306.3	Furnaces in Strip Malls
23.110.306.4	Appliances Under Floors
23.110.306.5	Appliances on Roofs or Elevated Structures
23.110.306.7	Mezzanine and Platforms
23.110.402.3	Sizing
23.110.403.10.1	Pipe Joints
23.110.403.10.2	Tubing Joints
23.110.403.10.4	Metallic Fittings
23.110.404	Piping System Installation
23.110.404.4	Piping Through Foundation Wall
23.110.404.9	Minimum Burial Depth
23.110.404.9.1	Individual Outside Appliances
23.110.406.4.1	Test Pressure
23.110.406.8	Temporary Gas Provisions
23.110.406.8.1	Temporary Gas Installations – Permit Required
23.110.406.8.2	Temporary Gas Installations – Permit Not Required
23.110.501.7	Connection to Fireplace
23.110.501.8	Equipment Not Required To Be Vented
23.110.502	Vents
23.110.503.7.7.1	Gypsum Wall Board (Sheetrock) Clearances
23.110.503.8	Venting System Termination Location
23.110.503.10.2.1	General
23.110.614.6.1	Clothes Dryer Exhaust Duct Length
23.110.621	Unvented Room Heaters
23.110.623	Cooking Appliances
23.110.629.2	Small Ceramic Kilns--Ventilation
23.110.634	Chimney Damper Opening Area
23.110.Appendix A	Sizing and Capacities of Gas Piping

23.110.100 Local Amendments to the International Fuel Gas Code, 2003 Edition.

The amendments to the International Fuel Gas Code are listed hereafter by section. The last digits of the number (after the title and chapter digits) are the section of the International Fuel Gas Code to which the amendments refers, i.e., 23.110.210 refers to amendments to section 210 of the International Fuel Gas Code.

23.110.101.2 Scope.

Delete the letter "s" in "Exceptions".
Delete Exception #1 in its entirety.
Change Exception #2 to Exception #1.

23.110.103 – 23.110.109

Delete sections 103 through 109.

23.110.110 Authority to Render Gas Service.

Add new section to read as follows:

110.1 Unlawful acts. It shall be unlawful for any person, firm, or corporation, excepting an authorized agent or employee of a person, firm, or corporation engaged in the business of furnishing or supplying gas and whose service pipes supply or connect with the particular premises, to turn on or reconnect gas service in or on any premises where and when gas service is, at the time, not being rendered.

110.2 Authority to disconnect. The administrative authority or the serving gas supplier is hereby authorized to disconnect any gas piping or appliance, or both, found not to conform to the requirements of this code or found defective and in such condition as to endanger life or property. Where such disconnection is made, a notice shall be attached to such gas piping, appliance, or both stating the same has been disconnected, together with the reasons therefore.

23.110.303 Appliance Location (LPG Facilities and Piping).
Amend by adding new sections 303.8 and 303.9, to read as follows:

303.8 Liquefied Petroleum Gas Facilities. Liquefied petroleum gas facilities shall not be located in any pit, basement, crawlspace, under show windows, or interior stairways, in engine, boiler, heater, or electric meter rooms. LPG facilities means tanks, containers, container valves, regulating equipment, meters, and/or appurtenances for the storage and supply of LPG for any building structure or premises.

303.9 Liquefied Petroleum Gas Piping. Liquefied petroleum gas piping shall not serve any gas appliance located in a pit or basement where heavier than air gas might collect to form a flammable mixture.

23.110.303.3 Prohibited Locations.
Amend section by deleting Exceptions 2, 3, and 4, and add new section 6, as follows:

6. Domestic gas-fired clothes dryers may be installed in bathrooms if provided with make-up air in accordance with section 614.5.

23.110.303.4 Protection from Damage.
Add the following paragraphs, 9 through 17:

9. If the equipment platform is a minimum of thirty inches (30") high and the equipment does not extend beyond the face of the platform, additional barriers are not required.
10. If equipment is installed in an alcove, a barrier shall not be required, as long as the equipment does not protrude beyond the face of the wall and the height of the alcove platform, measured from the floor to the top of the platform, is a minimum of thirty inches (30") in height.

11. If the equipment platform is less than thirty inches (30") high, one or more barriers shall be installed.
12. The barriers shall be a minimum thirty inches (30") high and be constructed of a minimum two inch (2") diameter schedule forty (40) iron pipe.
13. The barrier shall have a minimum of six inches (6") setback from the platform or equipment. The maximum unprotected distance shall not exceed five (5) feet.
14. The barrier shall be installed with one of the following methods:
    a. Buried a minimum of two feet (2'-0") deep in compact soil and imbedded in concrete slab; or
    b. Set in a minimum one foot by one foot (1'-0" x 1'-0") square x one foot (1'-0") deep block of concrete (slab included); or
    c. Secured to a wood framed garage floor with flange and stainless steel bolts and imbedded in concrete slab; or
    d. Secured to the concrete slab using a floor flange with a minimum of four (4) 3/8" diameter x 3 ½" long galvanized or stainless steel bolts.
15. Piping is not allowed to be surface mounted on the face of the platform, where it may be subjected to damage.
16. Unit heaters and related piping shall be mounted clear of any potential vehicle interference, per the requirements of chapter 3.
17. Physical clear width and depth of the garage shall be maintained per title 21.

23.110.304 Combustion, Ventilation, and Dilution Air.

Amend by adding new sections 304.13 and 304.14 to read as follows:

304.13 LPG Systems. Appliances using LPG shall have two (2) combustion air openings. The lower opening shall be at floor level or below and shall be sloped down toward the exterior. These systems shall be continuously ducted to outside the building.

304.14 Use of underfloor areas for supply of combustion air to LPG burning appliances is prohibited.

23.110.304.1 General.

Add the following sentence to the end of section 304.1:

Appliances located in group U garages may obtain combustion, ventilation, and dilution air in accordance with sections 304.5.1 and 304.7.

23.110.304.6

Delete Figure 304.6.1(1).
Delete Figure 304.6.1(2).
Delete Alternate Opening Location in Figure 304.6.2.

23.110.304.8 Engineered Installations.
Add new subsection:

Section 304.8.1 Cold Climate Alternate Requirements For Combustion and Ventilation Air.

304.8.1.1 Purpose. The purpose of this section is to provide alternate methods of designing combustion air and ventilation air systems for fuel burning appliances in cold climate regions. Only persons registered to practice engineering in the applicable jurisdiction will be permitted to use these alternate design methods.

304.8.1.2 Scope. The requirements of this section apply to all fuel gas burning appliances.

Exception: Direct vent appliances, listed cooking appliances, appliances having separated combustion system, enclosed furnaces, refrigerators and domestic clothes dryers.

304.8.1.3 Definitions.
Certain words and terms used in this section shall have meanings as listed. The below-listed definitions shall apply to this section only, even though they may differ with broader definitions found elsewhere in the code.

Combustion air is air required for stoichiometric combustion, plus excess air, plus flue dilution air.

Free area is the net actual open area of a louver, screen, duct, or intake grille.

Ventilation air is air required for cooling of the appliance enclosure to maintain temperatures required for proper equipment operation.

304.8.1.4 General.

304.8.1.4.1 Air Supply. Fuel-burning equipment shall be provided with a sufficient supply of combustion and ventilation air.

304.8.1.4.1.1 Enclosures Containing Fuel Burning Appliances. Enclosures shall be provided with minimum unobstructed combustion air openings as specified in section 304.8.1.9 and arranged as specified in sections 304.8.1.5 and 304.8.1.6, and ventilation air systems shall be as specified in section 304.8.1.10.

304.8.1.4.1.2 Existing Buildings. When fuel-burning appliances are installed in an existing building containing other fuel-burning equipment, the enclosure shall be provided with sufficient combustion and ventilation air for all fuel-burning equipment contained therein as specified in sections 304.8.1.9 and 304.8.1.10.

304.8.1.5 Combustion Air Openings.

304.8.1.5.1 Location. The combustion air opening(s) may be located anywhere in the enclosure provided there is an unobstructed area extended to the fire box that does not increase the total combustion air system static pressure requirements.

304.8.1.5.2 Dampers Prohibited. Combustion air openings shall not be installed so as to open into construction where fire dampers are required. Volume dampers shall not be installed in combustion air openings.

Exception: Dampers electrically interlocked with the firing cycle of the appliance, so as to prevent operation of the appliance when the dampers are not proven open.

304.8.1.5.3 Screening. Combustion air openings shall be covered with corrosion-resistant screen of one-half (1/2) inch (12.8 mm) mesh, except as provided in section 304.8.1.7.3.

Exception: Combustion air openings serving a nonresidential portion of a building may be covered with a screen having openings larger than one-half (1/2) inch (12.8mm) but in no case larger than one (1) inch (25.4 mm).

304.8.1.6 Sources Of Combustion And Ventilation Air.

304.8.1.6.1 Air from Outside. Combustion and ventilation air obtained from outside the building shall be supplied as follows:

1. Through permanent openings of the required area directly to the outside of the building through the floor, roof, or walls of the appliance enclosure; or
2. Through continuous ducts of the required cross-sectional area extending from the appliance enclosure to the outside of the building.

304.8.1.6.2 Under-Floor Supply. Combustion and ventilation air openings may connect with under-floor areas conforming to the following requirements:

1. Under-floor spaces having unobstructed openings to the exterior, sized to not exceed the maximum system static pressure requirements specified in sections 304.8.1.9 and 304.8.1.10.
2. The height of the under-floor space shall comply with the requirements of the Building Code and be without obstruction to the free flow of air.

304.8.1.6.3 Interior Spaces. Large indoor areas may be used for combustion and/or ventilation air if sufficient infiltration or other outside air supply is available by nature of the building construction, system design, or building use.

304.8.1.6.4 Prohibited Sources. Openings and ducts shall not connect appliance enclosures with space where the operation of a fan may adversely affect the flow of combustion air. Combustion and ventilation air shall not be obtained

from a hazardous location or from any area in which objectionable quantities of flammable vapor, lint or dust are given off. Combustion and ventilation air shall not be taken from a machinery room.

304.8.1.7 Combustion And Ventilation Air Ducts.

304.8.1.7.1 General. Combustion and ventilation air ducts shall:

1. Be of galvanized steel complying with chapter 6 or equivalent corrosion-resistant material approved for this use.
2. Have a minimum cross-sectional dimension of three inches (3").
3. Serve a single appliance enclosure.

304.8.1.7.2 Dampers. Combustion air ducts shall not be installed so as to pass through construction where fire dampers are required, unless properly enclosed in a rated shaft. Volume dampers shall not be installed in combustion air ducts.

Exception: Motor operated dampers interlocked with appliance controls to open damper prior to firing appliance are permitted, if damper blade actuated end switches are provided to prevent appliance operation should dampers fail to open.

304.8.1.7.3 Screen. Neither end of the ducts terminating in an attic shall be screened.

304.8.1.8 Special Conditions Created By Mechanical Exhausting Or Fireplaces.

Operation of exhaust fans, kitchen ventilation systems, clothes dryers or fireplaces shall be considered in determining combustion and ventilation air requirements to avoid unsatisfactory operation of installed fuel burning appliances.

304.8.1.9 Area Of Combustion Air Openings.

304.8.1.9.1 General. The free area of openings, ducts or plenums, screens and louvers supplying combustion air to enclosures containing fuel-burning appliances shall be as required: The opening(s) shall communicate directly or by means of ducts with outdoors or to such spaces (crawl space) freely communicating with outdoors and shall be sized in accordance with Table No. 304.8.1.1.

304.8.1.10 Ventilation Air.

304.8.1.10.1 General. In addition to the combustion air required, sufficient ventilation shall be supplied for proper operation of equipment. Ventilation system shall be designed to maintain positive or atmospheric pressures within the enclosure. If exhaust fans are provided, a mechanical make-up air fan shall be installed to make-up exhausted air. Natural or gravity make-up air is not allowed.

TABLE NO. 304.8.1.1 COMBUSTION AIR SYSTEM DESIGN CRITERIA

Fuels	System Static Pressure Limits[1]			Combustion Air Requirements
	Atmospheric		Forced Draft	
	Draft Hoods	Barometric Dampers		All Types
GAS (Natural, Propane, Butane)	0.02" WG	0.02" WG	0.05" WG	24 CFM 100,000 BTUH

Note 1: Static pressure values represent maximum static pressure losses across all components of the combustion air system including screens, louvers, ducts and fittings.

Note 2: For enclosures containing both atmospheric and forced draft appliances, the most restrictive design requirements shall apply.

PER ASHRAE 1993 FUNDAMENTALS HANDBOOK
CHAPTER 15 TABLE 11 (Pg 15.10)

1 cu. ft. natural gas requires 9.6 cu. ft. air
Convert to CF/1000 Btu

GAS: $\frac{9.6 \text{ cu. ft. air}}{1 \text{ cu. ft. gas}} \times \frac{1 \text{ cu. ft. gas}}{1000 \text{ Btu}} =$ 9.6 cu. ft. air/1000 Btu (14.4 @ 50% excess)

*Air at 2000 feet above sea level. Installations above this shall derate appliance output 4%/1000 feet.

EXAMPLE: Combustion Air Flow Rates (CFM) per 100,000 Btuh input. Verify heating values and adjust CFM as required.

	STOICHIOMETRIC 0% EXCESS AIR	COMBUSTION @ 50% EXCESS AIR
Natural Gas 1000 Btu/cu. ft.	16.0 CFM 100,000 Btuh	24 CFM 100,000 Btuh

23.110.304.10 Louvers and Grilles.

Delete the words "not smaller than 1/4 inch and replace with "of one-half inch (½") for residential and one-half inch (½") to up to one inch (1") for commercial applications."

23.110.304.11 Combustion Air Ducts.

Delete the exception to Item 1 in its entirety.
Delete Item 5 and replace with:

> Combustion air shall not be obtained from the attic, unless prior written approval is obtained from the authority having jurisdiction.

23.110.304.11.8 Combustion Air Openings vs. Snow Depth.

Insert the following words at the beginning of the paragraph:

Due to a one foot (1') anticipated snow depth…

Change the reference of twelve (12) inches (305mm) to twenty-four (24) inches (610mm).

23.110.305.3 Elevation of Appliances and Other Ignition Sources.

Amend by deleting section 305.3 and replace with the following:

Equipment and appliances with components generating a glow, spark, or flame (such as switches, electrical receptacles, thermostats, washing machines, dryers, furnaces, boilers, water heaters, pumps, freezers, refrigerators, motors, etc.) located in spaces of a building where flammable vapors may accumulate due to leakage or spills from fuel tanks of motorized equipment, shall have such ignition sources elevated at least eighteen inches (18") (457mm) above the floor.

4. Repair garages (S-1 occupancies), aircraft hangars (S-2 occupancies), or fuel dispensing and storage areas are also classified as hazardous locations by electrical, mechanical, and fire codes, and must meet additional and more restrictive installation requirements.
5. Places with overhead doors where equipment containing combustible fuels may have access, such as areas used for wholesale or warehouse activities (F, M, S-1, or S-2 occupancies) and parking garages (S-2 occupancies) shall comply with the 18" (457mm) requirement for elevation of ignition sources.
6. Private residential garages (U occupancies) shall also comply with the eighteen inches (18") (457mm) requirement. (**Note**: Rooms or spaces not part of the habitable living space communicating directly into a garage are considered to be part of the garage.)

Exceptions: Locations where equipment and appliances do not have to be elevated eighteen inches (18") are occupied spaces designated as habitable (a space in a building for living, sleeping, eating, or cooking. Bathrooms, toilet rooms, closets, hallways, storage or utility spaces, and similar areas are not considered habitable spaces) and separated as described:

A. Habitable portions of a private dwelling unit, separated from the attached garage (U occupancy), by one-hour protection on the garage side with self-closing, gasketed all around, and rated door(s).
B. Areas of a building separated by a minimum one (1) hour occupancy separation protection with a vestibule type room providing a two (2) doorway separation with self-closing, gasketed all around rated doors, from spaces accessible by motorized equipment containing combustible fuels.

23.110.305.9 Aircraft Servicing and Storage Areas.
Amend by adding a new section 305.9 to read as follows:

305.9 Aircraft Servicing and Storage Areas. Overhead heaters installed in aircraft storage or servicing areas shall be at least ten feet (10') (3048 mm) above or away from the upper surface of wings or engine enclosures of the tallest aircraft which may be housed in the hangar.

23.110.306.3 Furnaces in Strip Mall Ceilings.
Add Exception #3 as follows:

3. The passageway and level surface are not required for replacement of horizontal furnaces located above drop ceilings in strip malls. All other code requirements apply.

23.110.306.4 Appliances Under Floors.
Amend by adding the following as the first sentence:

Installation of appliances in underfloor crawlspaces is prohibited unless prior written approval is obtained from the administrative authority.

23.110.306.5 Appliances on Roofs or Elevated Structures.
Amend by deleting section 306.5 and replace with the following:

A. Where new or replaced equipment and appliances requiring access are installed on roofs or elevated structures of new or existing buildings, such access shall be provided by a permanent approved means of access, the extent of which shall be from grade or floor level to the equipment and appliances' level service space. Such access shall be located interior to the building and shall not require climbing over obstructions greater than thirty (30) inches (763mm) high or walking on roofs having a slope greater than four (4) units vertical in twelve (12) units horizontal (33-percent slope).

B. Permanent ladders installed to provide the required access shall comply with the following minimum design criteria:
   1. Ladders having rung spacing not to exceed fourteen (14) inches (356mm) on center.
   2. Ladders shall have a toe spacing not less than six (6) inches (152mm) deep.
   3. There shall be a minimum of eighteen (18) inches (457mm) between rails.
   4. Rungs shall give a minimum 0.75-inch (19mm) diameter and be capable of withstanding a 300-pound (136.1kg) load.

5. Ladders over thirty (30) feet (9144mm) in height shall be provided with offset sections and landings capable of withstanding 100 pounds (488.2 kg/m^2) per square foot.

C. Catwalks installed to provide the required access shall be not less than twenty-four (24) inches (610mm) wide and shall have railings as required for service platforms.

Exceptions:

1. Replaced equipment may be accessed by portable ladder on the single story portion of an existing building not exceeding sixteen (16) feet (4880mm) in height. If the existing building exceeds sixteen (16) feet (4880mm) in height, an approved interior access shall be provided.
2. This section shall not apply to Group R-3 occupancies.
3. Existing buildings with an existing approved exterior access that is permanently mounted to the structure.

23.220.306.7 Mezzanine and Platforms.

Every mezzanine or platform more than eight (8) feet (2438 mm) above the ground or floor level shall be made accessible by a stairway or ladder fastened to the structure. The ladder shall be constructed in compliance with the provisions of Local Amendment 23.20.306.5.

23.110.402.3 Sizing.

Amend by adding the following sentence at the end of the paragraph:

Section 1217 referenced in tables and figure 12-2 in the Uniform Plumbing Code shall be considered an acceptable method of sizing gas piping.

23.110.403.10.1 Pipe Joints.

Amend by adding the following at the end of the paragraph:

All joints in underground ferrous piping shall be welded when any of the following conditions apply:

1. The nominal pipe diameter is 2 ½ inches or larger.
2. The pipe is installed under a driveway.
3. Medium pressure systems.

23.110.403.10.2 Tubing Joints.

Amend by adding the following sentence at the end of the paragraph:

All joints in underground copper shall be brazed with wrought copper fittings. No underground joints shall be permitted unless the underground length of run exceeds sixty (60) feet (18.3 m). All pipe to tubing transitions shall be made above ground.

23.110.403.10.4 Metallic Fittings.

Amend Item 2 by deleting the words "cast iron."

Delete Item 5.

Add a new section, **Right and Left Nipples and Couplings**:

9. Where unions are necessary, right and left nipples and couplings shall be used. Ground joint unions may be used at exposed fixture, appliance, or equipment connections and in exposed exterior locations immediately on the discharge side of a building shutoff valve.

23.110.404 Piping System Installation.
Add the following paragraphs to read as follows:

404.17 At all points where fuel gas piping enters or leaves the ground, there shall be installed, above ground, an approved, listed connector, capable of absorbing a six-inch (6") displacement, in any direction, due to frost heave action. A Dormont, series 30 or 31, stainless steel flex is an example of a suitable connector.

404.18 Flex connectors listed for outdoor use may be used between meter and house main. No flex connector may pass through any wall, partition, panel or other barrier. Solid fittings shall be used on each end.

404.19 At points where copper tubing type systems enter or leave the ground, they shall be protected from frost heave action by the incorporation of suitable above ground six-inch (6") (152 mm) radius bends or approved flex connection of equal size.

404.20 Pounds to inches water column regulators serving mobile homes and connected to copper tubing shall be attached directly to the inlet connection on the exterior of the mobile home, and shall not be located under the mobile home.

23.110.404.4 Piping Through Foundation Wall.
Delete paragraph in its entirety and replace with the following:

All building fuel gas piping entrances and exits shall be located above grade or in an approved vented vault.

23.110.404.9 Minimum Burial Depth.
Amend by adding the following sentence to the end of the paragraph:

Plastic and copper gas piping shall have at least eighteen inches (18") of earth cover or other equivalent protection.

23.110.044.9.1 Individual Outside Appliances.

Delete this section in its entirety.

23.110.406.4.1 Test Pressure.

Replace the reference to "1 ½" with "ten (10)".

Replace the minimum test pressure of three (3) psig with ten (10) psig and add the following sentences at the end of the paragraph:

Required pressure tests of ten (10) psig shall be performed with gauges of 1/10 psi increments or less.

Welded pipe shall be tested with not less than sixty (60) psig test pressures.

23.110.406.8 Temporary Gas Provisions.

The installation of temporary gas shall comply with sections 406.8.1 and 406.8.2.

23.110.406.8.1 Temporary Gas Installations – Permit Required.

A. Temporary gas approval is given to allow "comfort heating" appliances to be used to provide temporary heat to a building or building site prior to the completion of the building's primary heating system.

B. The most commonly used appliance is a natural gas portable space heater. Other comfort heat appliances allowed for temporary heat purposes are warm air furnaces, boilers, and unit heaters. It is NOT the policy of the Building Safety Division or Enstar Natural Gas Company to allow "decorator fireplaces" or "ranges" to be utilized as temporary heat for buildings. These appliances are not designed or "listed" for such purpose.

C. All appliances used to provide temporary heat for buildings shall be installed in accordance with the manufacturers' instructions and terms of their listing, with particular attention being paid to the clearances to combustibles from the top, bottom, front, back, and sides of these appliances.

D. Unit heaters used for temporary heat shall be installed per manufacturer's instructions and listed clearances to combustibles from the top, bottom, front, back, and sides of these appliances.

E. Unit heaters used for temporary heat shall be installed per manufacturer's instructions and listed clearances to combustibles. The vent connector shall be graded at one-quarter inch (¼") per foot slope upward to the outside and it shall be changed to "B" vent at the wall penetration. The "B" vent must maintain its listed clearance to combustibles, extend a minimum of five (5) feet vertically, and be secured.

F. Furnaces used for temporary heat shall comply with the same requirements as for unit heaters as stated above. In addition, the return air for the furnace shall be ducted a minimum of ten (10) feet from the furnace.

G. Portable space heaters shall be provided with one hundred percent (100%) outside air to the back end of the heater. In most cases, the gas regulator attached to these heaters shall be piped to the outside. If the regulator vent discharges, it shall not be allowed to discharge into the space being heated.

H. Gas hose used for temporary heaters shall be a type approved by the Building Safety Division and all manufacturers' listed clearances shall be maintained. The hose shall have an internal wire mesh or braid and be "kink proof". Supporting wire shall run the full length of the hose. Each time a hose is moved from one lot to another, it shall be retested with sixty (60) psi air pressure.

23.110.406.8.2 Temporary Gas Installations – Permit Not Required.

A permit and inspection shall not be required for residential temporary construction heat serving tented footings and foundations. This provision is for thawing ground and curing concrete, not comfort heat for workers, such as plumbers installing underground. This allowance is limited to portable 'SURE FLAME' type heaters and not intended for unit heaters, furnaces, and boilers with special venting considerations. All heaters and hoses shall be of the approved type. Heaters shall be listed by an approved listing agency. All hoses shall have an internal wire mesh or braid, and be "kink proof". Supporting wire shall run the full length of the hose. One hundred percent (100%) outside air shall be provided to heater at all times. Listed clearances to combustibles shall be maintained. A licensed journeyman plumber or gasfitter shall perform all work.

23.110.501.7 Connection to Fireplace.

Delete wording of section 501.7 and replace with the following:

Gas fired appliances shall not be connected to fireplace chimneys without prior approval of the Administrative Authority.

23.110.501.8 Equipment Not Required To Be Vented.

Delete Item 8.

23.110.502 Vents.

Amend by adding new sections 502.7 and 502.8 to read as follows:

502.7 Venting systems installed exterior to the building outside the thermal envelope shall be enclosed in an insulated (R-19 minimum) shaft. The portion of the vent system above the last roof and its projected plane need not be enclosed. The portion of the venting system passing through an attic space need not be insulated or enclosed.

502.8 Vent terminations penetrating a metal roof with a pitch shall be protected by an ice dam or deflector of an approved type acceptable to the Administrative Authority.

23.110.503.7.7.1 Gypsum Wall Board (Sheetrock) Clearances.

Add new paragraph as follows:

GWB shall be considered a noncombustible material when determining minimum required clearances. It should be noted GWB cannot be used to reduce clearances to combustibles. For example, B vent shall be installed with a one

inch (1") minimum clearance from wood, even if the wood is covered with GWB.

23.110.503.8 Venting System Termination Location.

Amend by adding new Item 5 to read as follows:

5. An anticipated snow depth of twelve inches (12") shall be used when determining the manufacturer's minimum vent termination height. Measurements shall be made to the bottom of the vent outlet.

23.110.503.10.2.1 General.

Amend by adding the following at the end of the paragraph:

Single wall material of noncombustible corrosion-resistant material capable of withstanding the flue gas temperatures produced by the appliance, such as in Tables 503.10.2.4 and 506.10.2.5 may be used to vent the following:

A. Vent connector serving a single gas appliance connected to an individual vent system.
B. Vent connector system serving two (2) gas appliances connected to a common vent.
C. Three (3) or more gas appliances connected to a common vent system may have single wall vent connectors to the point of connection to the common vent connector.
D. An engineered system acceptable to the Administrative Authority.

23.110.614.6.1 Clothes Dryer Exhaust Duct Length.

Amend by adding a new paragraph to the beginning of Exception #1 and add a new Exception #2:

The maximum length of a clothes dryer exhaust duct may be increased when necessary due to location of the dryer in relationship to an exterior wall or roof, not to exceed the dryer manufacturer's recommendations. When exceeding the maximum allowable length per code, a dryer placard (available at the Building Safety Department handout shelves) stating the length of the run and the amount of ninety (90) degree elbows shall be posted on the wall next to the dryer exhaust connection. The placard shall be laminated or in a moisture resistant sleeve and be secured using screws, staples, or thumbtacks. Push pins are not acceptable. The duct shall be routed using the shortest possible distance to the exterior.

2. For distances exceeding the dryer manufacturer's recommendations, a booster fan, listed for the purpose, shall be used for lengths up to the booster fan manufacturer's recommendations.

23.110.621 Unvented Room Heaters.

Delete section 621 in its entirety.

23.110.623 Cooking Appliances.

Add new subsections 623.7 and 623.8 to read as follows:

623.7 Ventilating Hoods. Ventilating hoods shall be installed over all domestic free standing or built-in ranges, unless the range is otherwise listed for forced down draft ventilation. The hood or ventilation system shall exhaust to exterior of the building.

623.8 Vertical Clearance above Cooking Top. Domestic freestanding or built-in ranges shall have a vertical clearance above the cooking top of not less than thirty (30) inches (762 mm) to unprotected combustible material. When the underside of such combustible material is protected with insulating millboard at least one-quarter (¼) inch (6 mm) thick covered with 0.021-inch-thick (0.41 mm) (No. 28 U.S. gauge) or a metal ventilating hood, the distance shall not be less than twenty-four (24) inches (610 mm).

23.110.629.2 Small Ceramic Kilns—Ventilation.

Add a new subsection 629.2 to read as follows:

Ventilation.

A. A canopy-type hood shall be installed directly above each kiln. The face opening area of the hood shall be equal to or greater than the top horizontal surface area of the kiln. The hood shall be constructed of not less than 0.024-inch (0.61mm) (No. 24 U.S. gauge) galvanized steel or equivalent and be supported at a height of between twelve (12) inches (305 mm) and thirty (30) inches (750 mm) above the kiln by noncombustible supports.

Exception: Electric kilns installed with listed exhaust blowers may be used when marked as being suitable for the kiln and installed in accordance with manufacturer's instructions.

B. Each hood shall be connected to a gravity ventilation duct extending in a vertical direction to outside the building. This duct shall be of the same construction as the hood and shall have a minimum cross-sectional area of not less than one fifteenth of the face opening area of the hood. The duct shall terminate a minimum of twelve (12) inches (305 mm) above any portion of a building within four (4) feet (1.22 m) and terminate no less than four (4) feet (1.22 m) from any openable windows or other openings into the building or adjacent property line. The duct opening to the outside shall be shielded, without reduction of duct area, to prevent entrance of rain into the duct. The duct shall be supported at each section by noncombustible supports.

C. Provisions shall be made for air to enter the room in which a kiln is installed at a rate at least equal to the air being removed through the kiln hood.

23.110.634 Chimney Damper Opening Area.

Delete section 634 and Table 634.1 in their entirety.

23.110.Appendix A Sizing and Capacities of Gas Piping.

Adopt Appendix A in its entirety.

Section 3: This ordinance shall become effective *January 1, 2006.

PASSED AND APPROVED by the Anchorage Assembly this 1st day of November, 2005.

Anna L. Fairclough
Chair of the Assembly

ATTEST:

Municipal Clerk
G:\mat\open matters\2003 Building Code Amendments\Final Rev AO.DOC

*AO 2005-172 established effective date.

MUNICIPALITY OF ANCHORAGE
Summary of Economic Effects -- General Government

AO Number: 2005-130

Title: AN ORDINANCE REPEALING AND REENACTING ANCHORAGE MUNICIPAL CODE CHAPTER 15.55 AND TITLE 23 TO ADOPT 2003 EDITIONS AND ENACTING LOCAL AMENDMENTS OF THE FOLLOWING CODES: WELL CODE, ADMINISTRATIVE, BUILDING, MECHANICAL, PLUMBING, ELECTRICAL, FIRE, EXISTING BUILDINGS, RESIDENTIAL,

Sponsor:
Preparing Agency: DEPARTMENT OF DEVELOPMENT SERVICES
Others Impacted: SAME

CHANGES IN EXPENDITURES AND REVENUES:	**(In Thousands of Dollars)**				
	FY05	**FY06**	**FY07**	**FY08**	**FY09**
Operating Expenditures					
1000 Personal Services					
2000 Non-Labor					
3900 Contributions					
4000 Debt Service					
TOTAL DIRECT COSTS:	**0**	**0**	**0**	**0**	**0**
Add: 6000 Charges from Others					
Less: 7000 Charges to Others					
FUNCTION COST:	**0**	**0**	**0**	**0**	**0**
REVENUES:	**0**				
CAPITAL:	**0**				
POSITIONS: FT/PT and Temp	**0**				

PUBLIC SECTOR ECONOMIC EFFECTS:

The adoption of the 2003 editions of the new codes may have a positive economic savings in total building cost to the public sector for any buildng built with tax dollars. We do not think the codes will increase the cost of development.

PRIVATE SECTOR ECONOMIC EFFECTS:

The adoption of the 2003 editions of the new codes may have an overall savings in total building cost to the private sector. There could be fines assessed if work is not done to the adopted codes, but that is based upon the individual contractors doing the work incorrectly. Otherwise, there is no economic effect estimated.

Prepared by: Ron Thompson — Telephone: 343-8307
Director, Development Services Department

Validated by OMB: _____ Date: _____

Approved by: _____ Date: _____
(Director, Preparing Agency)

Concurred by: _____ Date: _____
(Director, Impacted Agency)

Approved by: _____ Date: _____
(Municipal Manager)

Municipality of Anchorage
ASSEMBLY MEMORANDUM

No. AM 687 -2005

Meeting Date: September 27, 2005

FROM: Mayor
SUBJECT: Repeal and Reenactment of AMC Title 15 Chapter 55 and Title 23 to Adopt the 2003 Versions of the Building Codes

The attached ordinance repeals existing editions of the various building codes and their local amendments and adopts new codes and revised local amendments. The new codes and proposed amendments have been reviewed and recommended by the Anchorage Building Board after seven subcommittees comprised of over 85 private sector and MOA professionals reviewed the national codes and made recommendations to the Building Board. This process took approximately six months to complete. All meetings were open to the public. The Building Board held two public hearings on the new codes and proposed local amendments and with no public testimony, the Board unanimously passed these amendments. The State of Alaska has already adopted the 2003 version of the building codes and the administration is forwarding the enclosed document for Assembly approval.

These proposed changes repeal the existing codes and amendments, and adopt the new codes, with local amendments. National codes are changed on a three-year cycle. We are proposing to repeal the 2000 editions of the codes and adopt the 2003 editions of the respective codes, except the National Electrical Code and the Elevator Code, which are 2005 and 2004 editions. The new 2003 International Existing Buildings Code is being proposed to replace the Anchorage Existing Buildings Code. The Anchorage Dangerous Buildings Code has been taken out of the Anchorage Existing Buildings Code and made a stand-alone code. Staff worked in conjunction with the Anchorage Building Board and the Legal Department to insure the easiest and most understandable way to present the new codes and amendments. It was determined that bracketing material to be deleted and underlining changes and new material would be too confusing, as the 2003 codes are entirely new codes. Due to length and complexity of building codes, this ordinance is structured in a complete repeal and re-adoption format. Experience has proven this is the least confusing way to adopt the technical building codes.

The technical provision found throughout the codes and local amendments should not be controversial because every reasonable attempt has been made to resolve technical issues during committee meetings and public hearings.

The administration recommends these documents be approved by the Assembly. All issues contained in the technical building codes portion of this document have been addressed in detail by committees established by the Building Board, through advertised and posted public hearings before the separate committees, and by the Building Board as a whole.

Prepared by: Ron Thompson, Director, Department of Development Services
Concur: Denis LeBlanc, Municipal Manager
Respectfully Submitted: Mark Begich, Mayor

AO 2005- 130

Content Information

Content ID : 003248

Type: Ordinance - AO

Title: AN ORDINANCE REPEALING AND REENACTING ANCHORAGE MUNICIPAL CODE CHAPTER 15.55 AND TITLE 23 TO ADOPT 2003 EDITIONS AND ENACTING LOCAL AMENDMENTS OF THE FOLLOWING CODES: WELL CODE, ADMINISTRATIVE, BUILDING, MECHANICAL, PLUMBING, ELECTRICAL, FIRE, EXISTING BU

Author: gonzalezv

Initiating Dept: Dev_Svs

Select Routing: Standard

Review Depts: HHS, Merrill

Description: 2003 Building Codes

Date Prepared: 9/1/05 4:16 PM

Director Name: Ron Thompson

Assembly Meeting Date MM/DD/YY: 9/27/05

Public Hearing Date MM/DD/YY: 10/25/05

Workflow History

Workflow Name	Action Date	Action	User	Security Group	Content ID
AllOrdinanceWorkflow	9/1/05 4:20 PM	Checkin	gonzalezv	Public	003248
Dev_Svs_SubWorkflow	9/1/05 4:28 PM	Approve	thompsonrj	Public	003248
HHS_SubWorkflow	9/6/05 5:05 PM	Approve	wooleybk	Public	003248
Merrill_SubWorkflow	9/8/05 10:57 AM	Approve	lundebyda	Public	003248
OMB_SubWorkflow	9/9/05 5:01 PM	Approve	mitsonjl	Public	003248
Legal_SubWorkflow	9/12/05 2:53 PM	Approve	fehlenrl	Public	003248
MuniManager_SubWorkflow	9/15/05 11:33 AM	Approve	leblancdc	Public	003248
MuniMgrCoord_SubWorkflow	9/16/05 8:19 AM	Approve	abbottmk	Public	003248