



Request for Proposal ADDENDUM TO THE RFP

Project Name: Building Remodel – Nome State Office Building

Project Number: 2013-0222-1818

ADDENDUM #: 5	
CURRENT SUBMITTAL DEADLINE DATE and TIME: May 3, 2013	2:00 p.m. Local time

PREVIOUS ADDENDUM #: 4	
PREVIOUS SUBMITTAL DEADLINE DATE and TIME: May 3, 2013	2:00 p.m. Local time

ISSUED BY:	Statewide Facilities Physical Address: Department of Administration Division of General Services 550 West 7th Avenue, Suite 1970 Anchorage, Alaska 99501	Mailing Address: Department of Administration Division of General Services 550 West 7th Avenue, Suite 1970 Anchorage, Alaska 99501
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DATE ADDENDUM ISSUED: April 12, 2013

The following items of the Request for Proposal are modified as herein indicated. All other items remain the same.

PROJECT CLARIFICATIONS AND QUESTIONS	
Item No.1:	Regarding the street address of the Nome State Office Building, Delete all references in Contract Documents to "Street address is 240 Front Street Nome Alaska" – Replace with " Street address is 103 Front Street, Nome Alaska ".
Item No.2:	The Addition of a New Fire Sprinkler System, if done, will be as an add-alternate.
Item No.3:	Add the following language to Part C - Evaluation Criteria; Item 4 Proposed Project Staff; " No. 13 Elevator Consultant ".
Item No.4:	Page 8 of the WJE Report was omitted in original posting, attached as Attachment No. 1 is page 8 of the report.
Item No.5:	Add the following to Proposed Statement of Services; Article B4 Supplemental Provisions: " B4.3 Provide a survey of the current conditions of existing elevator and recommendations if any for the need to modernize the Elevator Equipment, Fixtures and Appearance. If a modernization is elected to be done it will be done so as an add-alternate ".
Item No.6:	Add the following to Proposed Statement of Services; Article B4 Supplemental Provisions: B4.4 Voice and Data Requirements – Attached as Attachment No.2 are the " Building Standards for Voice and Data Requirements to be used. "

Item No.7:	Add the following to Proposed Statement of Services; Article B4 Supplemental Provisions: B4.5 Space Planning- The Contracting Agency will provide a conceptual space plan design plan depicting what the Contracting Agency wants to see regarding their recent adoption of the Universal Space Planning Standards, to help facilitate the Contractors requirements under Sec. B2.0.4 Space Planning. Attached as Attachment No.3 is a diagram of a recent space plan converting the space to the new Universal Space Standards. The plan is for reference purposes only to illustrate the conceptual level of space planning drawings currently being completed by the Contracting Agency's space planner.
ItemNo.8:	<p>Add the following to the Project Narrative as an additional item to the scope of work will be</p> <p>❖ Protection Against Flood Damage</p> <p>To mitigate and/or reduce future flooding and or deterioration to the building from floods review Nome Ordinances and NCO 11.50.035(c)(2)(B). The Nome State Office Building can be flood-proofed as contemplated by NCO 11.50.035(c)(2)(B). Flood proofing two of the three feet would be required under the ordinance and is included in the renovation HMS cost estimate, the cost to extend this flood-proofing a final third foot would be inconsequential. Potential Scope would be as follows:</p> <ul style="list-style-type: none"> ▪ Move all critical mechanical and electrical equipment from crawlspace to roof top, this includes air-handlers and ductwork. This avoids future damage as well as mitigates against air quality issues resulting from water related issues such as mold. ▪ Provide sump pump in crawlspace to mitigate potential leakage. Leveraging mechanical means to augment natural drainage. ▪ Waterproof existing foundation and walls to 3' above existing first floor. This includes heavy duty door seals and thresholds to slow water infiltration. ▪ Waterproof coat existing steel columns that are in close proximity to grade. This is in conjunction with repairs to corrosion issues. ▪ Upgrade existing framed walls facing the sea and portions of end walls with concrete walls to mitigate storm debris impact damage. Add metal storm shutters at first floor windows for use during storms. <p>Attached as Attachment No.4, for your reference, is Nome City Ordinance Chapter 11.50 Flood Plain Regulations.</p>
NOTED ATTACHMENTS FOLLOW	

END OF ADDENDUM No. 5

By: *Dan Reynolds*

Dan Reynolds , Facilities Contracting Officer

Total number of pages contained within this Addendum: 19



indicate evidence of distress. An inspection of the piles at depth is probably not practical or merited. However, chloride testing of concrete pile caps and piles will help confirm that no deleterious deterioration is occurring.

GENERAL RECOMMENDATIONS

Based on the findings discussed above and given the understanding that a significant remodel of the building will be undertaken within a period of two years, we recommend the following tasks be included as part of the remodel:

- Excavate soil and remove the concrete encasement from base of all exterior columns and from perimeter steel beams.
- Excavate soil and remove bituminous coating from interior columns.
- Remove all corrosion product and sandblast the steel to bare metal and measure remaining section.
- Weld on new cover plates to restore or increase member capacity as needed for new demands imposed by the remodel design. The level of cover plate retrofitting will be dependent on the retrofit selected as part of the remodel. In some localized areas, member replacement may be more practical.
- Coat the exposed steel with a high quality, two-part epoxy coating system and/or cast new concrete encasements around the columns. Replace any fireproofing that was removed as appropriate.
- Excavate the soil to expose additional piles and pile caps at an additional eight locations.
- Selectively extract 2-inch diameter concrete cores from four different pile caps and four different piles for laboratory examination and testing for chlorides, which can result in deterioration of reinforced concrete elements.
- If no distress is observed or and no issues are discovered in the laboratory examination of the concrete, no further action is anticipated with respect to the piles and pile caps.

Our analysis indicates that it is reasonable to continue to occupy the building in its current condition and perform these tasks as part of the remodel effort that will reportedly take place within the next two years. If the remodel ends up being delayed beyond two years, WJE recommends that these tasks still be performed within a two-year period.

We appreciate the opportunity to assist with this project. Please do not hesitate to contact us with any questions or concerns.

VOICE AND DATA REQUIREMENTS, Telecommunications Distribution System (TDS)

PART 1, GENERAL

DESCRIPTION AND GENERAL SPECIFICATIONS

- A. The intent of this Specification is to place in working order a complete, fully tested and documented Telecommunication Distribution System consisting of wall or free standing equipment racks or cabinets, telecom rooms (where applicable), a Category 5e horizontal cable sub-system, cable pathways, and an optical fiber cable backbone sub-system (where applicable) complying with the Codes and Standards referenced herein. The TDS shall include (but not be limited to) provision of all raceways, sleeves, boxes, gutters, shelves, enclosures, shelf and enclosure supports, backboards, equipment racks, line and low voltage wire and cable, patch cords, pull ropes (in unused conduits), terminal modules, panels, outlets, jacks, splices, connections, cable management, labeling, testing and all other material, equipment, and labor required to make the systems fully operational.
- B. Local access to Fiber Optic Metropolitan Area Networks: For any site to be considered, the offered space shall have direct connectivity to the carrier's fiber connected network at the facilities point of demarcation. The Offeror must include any cost that may be associated with this requirement in the price offer section (6.2) of the RFP.

COORDINATION

- A. The layout and installation of the systems specified herein shall be coordinated such that all special requirements for telecommunications systems shall be provided and incorporated into the project. The systems to be coordinated shall include (but are not limited to) electrical raceway, optical fiber backbones (where applicable) grounding, fire rated assembly, lighting, power distribution, control and instrumentation, and labeling of cables, terminations, outlets, jacks, etc.

CODES AND STANDARDS

- A. Where a Nationally Recognized Testing Laboratory (NRTL) listing or classification exists for a product and the product is suitable for the purpose specified and indicated, the product shall bear the appropriate marking indicating the listing or classification.
- B. Where a UL Standard is in effect, equipment shall:
1. Meet that Standard.
 2. Bear the UL Label.

REFERENCE CODES AND STANDARDS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only, latest edition. The reference codes and standards are minimum requirements.

Reference	Title/Revision
ANSI/IEEE C2	National Electrical Safety Code
ANSI/NFPA 70	National Electrical Code
ANSI/TIA/EIA-568-B.1	Commercial Building Telecommunication Cabling Standard Part 1: General Requirements
ANSI/TIA/EIA-568-B.2	Commercial Building Telecommunication Cabling Standard Part 2: Balanced Twisted-Pair Cabling Standards
ANSI/TIA/EIA-568-B.2-1	Commercial Building Telecommunication Cabling Standard Part 2: Addendum 1: Transmission Performance Specifications for 4-Pair 100Ohm category 6 cabling, 2002
ANSI/TIA-568-B.2-10-2008	Transmission Performance Specifications for 4-Pair 100 Ohm Augmented Category 6 Cabling
ANSI/TIA/EIA-569-A	Commercial Building Standards for Telecommunications Pathways and Spaces
ANSI/TIA/EIA-606-A	Administration Standard for Commercial Telecommunications Infrastructure

Reference	Title/Revision
ANSI/TIA/EIA-607	Commercial Building Grounding and Bonding Requirements for Telecommunications
BICSI	Telecommunications Distribution Methods Manual
IEEE	LAN Standards: 802.3; 802.4; 802.5; 802.6
UL 1449	Transient Voltage Surge Protection

OPERATING CONDITIONS

- A. Telecom Rooms shall support electronic equipment designed for office environments and shall maintain continuous operation of such equipment under ambient environment conditions of between 64 degrees F and 75 degrees F. Relative humidity shall be maintained between 30% and 55%, non-condensing. Cooling and humidification/de-humidification to maintain such an environment shall be provided in each Telecom Room. Cooling and humidification/de-humidification to maintain such an environment shall be provided in each Telecom Room, all cooling and humidification/de-humidification equipment required for this room shall not be installed directly above the equipment rack.

QUALITY ASSURANCE

- A. Perform all Work in accordance with all regulatory rules and regulations as well as references in this specification.
- B. Perform all Testing in accordance with ANSI/TIA/EIA-568-B specifications.

QUALIFICATIONS

- A. The telecommunications work specified in this Section is acknowledged to require special skills mastered by education, experience, or both. In an effort to provide a minimum level of quality in products and installation, telecommunications work described in this Section shall be performed by specialty telecommunications contractors.
- B. Installation Certification:
1. The installation shall be performed by a certified installer of the cabling system, pre-qualified by the Manufacturer for the purpose of offering the Extended System Warranty as required in this Section.
- C. Contractor Experience:
1. Specialty subcontractors performing telecommunications work shall have a minimum of three years experience in the construction, testing, and servicing of systems of the type and magnitude specified herein.

REGULATORY REQUIREMENTS

- A. Work shall conform to the requirements of NFPA 70 and all local amendments.
- B. Work shall conform to the requirements of all Federal, State and Local Electrical and Telecommunications Regulations.

Extended WARRANTY

- A. To provide a minimum level of quality in products and installations, the Telecommunication Distribution System shall be provided with a manufacturer backed warranty that shall extend from the date of Project Completion to the longer of twenty (20) years or the length of the Extended Warranty offered by the manufacturer of the system.
- B. The Extended Warranty shall be extended to the Lessor via the manufacturer through a single point of contact and shall be fully backed by the manufacturer. The Extended Product Warranty and System Assurance Warranty for the Telecommunication Distribution System shall consist of the following:
1. Extended Product Warranty - The Extended Product Warranty shall ensure against product defects, that all approved cabling components exceed the specifications of ANSI/TIA/EIA 568-B and ISO/IEC IS 11801-B, exceed the attenuation and NEXT requirements of ISO/IEC IS 11801-B for cabling links/channels, and that the installation will exceed the loss and bandwidth requirements of ISO/IEC IS 11801-B for links/channels. The warranty shall apply to all passive Telecommunication Distribution System (TDS) components.
 2. System Assurance - The System Assurance shall cover the failure of the wiring system to support any existing application, as well as additional application(s) introduced in the future by recognized standards or user forums that use the ANSI/TIA/EIA 568-B or ISO/IEC IS 11801-B component and link/channel specifications for cabling.
 3. All communications system components shall be rated for end-to-end system Category 5e or greater performance levels on all pair combinations and warranted to support any existing or future applications which are designed to operate over a

100 MHz horizontal channel (as defined in ANSI/TIA/EIA 568-B.2.1). Performance shall be guaranteed under the Extended Warranty at 100 meters (328 feet):

C. Warranty programs approved as meeting the specified warranty are listed below.

1. Commscope Systimax Program.
2. Panduit Pan-Net Performance Guarantee
3. Siemon Cabling System Premium 5e Warranty.
4. ADC TrueNet Warranty Program.
5. Ortronics Applications Assurance and Extended Warranty Program

MANUFACTURERS' RECOMMENDATIONS

A. Installation procedures shall be in accordance with the recommendations of the manufacturer of the material being installed. A copy of the recommendations shall be kept at the job site.

TERMINOLOGY

- A. "TDS" shall refer to the Telecommunication Distribution System cabling and hardware infrastructure internal and external to a building or buildings used to transmit voice, video and data, etc.
- B. "Stations" shall refer to individual telephone or computers, or remote peripherals of those systems (e.g., printers, facsimile machines, modems, etc.
- C. "Outlets" shall refer to the group of receptacles or jacks at the location where the stations connect.
- D. "Jacks" or "Ports" shall refer to the individual receptacles where phones, computers, etc. connect.
- E. "Station Cables" shall refer to the horizontal cables connecting patch panels or terminal blocks in the Telecommunications Rooms to the stations.
- F. "Pathways" shall refer to conduits, sleeves, cable-trays, distribution rings, etc., which are employed to route backbone and stations cables between equipment rooms, telecommunications rooms, stations, outlets, etc.
- G. "Backbone Cables", "Riser Cables" or "Tie Cables" shall refer to copper cables 25-pair or more and optical fiber cables 2-strand or more, connecting main cross-connect facilities, intermediate cross-connect facilities and telecommunications rooms. These cables may include riser cables between floors.
- H. "Equipment Rooms" (ER) or "Communication Equipment Rooms" (CER) shall refer to a special-purpose room that provides space and maintains a suitable operating environment for large communications and/or computer equipment. Main rooms may also be referred to as an MDF.
- I. "Telecommunications Rooms (TR)" shall refer to a floor-serving facility for housing telecommunications equipment, cable terminations and cross-connect wiring. This is the point at which station cables terminate. It may also be referred to as an IDF.
- J. "Terminal Blocks" shall refer to multiple punch down cable terminations.
- K. "Patch Panels" shall refer to rack or frame mounted multiple punch down cable terminations with RJ-45 style, 8P8C jacks on the face for "plug and play" cross connect capability.
- L. "Cable Management" shall refer to rings, troughs, gutters etc., mounted in conjunction with telecommunications distribution equipment and terminal blocks, for the orderly routing of cables, patch cords, etc.
- M. "LEC" shall refer to the Local Exchange Carrier providing telephone service to the facility.

TELECOM RACK, CABINET, and DEDICATED ROOMS

A. Telecom cabinets, racks, single, and multiple telecom rooms shall be provided per the following:

Cabinet/Rack/Telecom Room Configuration	Size of Lease Space				
	< 625 ft ²	626 ft ² 1,000 ft ²	1,001 ft ² - 3,000 ft ²	3,001 ft ² - 8,000 ft ²	> 8,000 ft ²
Wall mounted equipment cabinet with two dedicated 20A, 120V power circuits	Provide one wall mounted cabinet per Part 2	N/A	N/A	N/A	N/A

Cabinet/Rack/Telecom Room Configuration	Size of Lease Space				
	< 625 ft ²	626 ft ² 1,000 ft ²	1,001 ft ² - 3,000 ft ²	3,001 ft ² - 8,000 ft ²	> 8,000 ft ²
Wall mounted equipment cabinet with three dedicated 20A, 120V power circuits	N/A	Provide one wall mounted cabinet per Part 2	N/A	N/A	N/A
Single Telecom Room (8' x 10' minimum) with a free standing equipment rack and six dedicated 20A, 120V power circuits	N/A	N/A	Provide one free standing rack per Part 2	N/A	N/
Single Telecom Room (9' x 11' minimum) with a free standing equipment rack and six dedicated 20A, 120V power circuits	N/A	N/A	N/A	Provide one free standing rack per Part 2	N/A
Multiple Telecom Rooms (each 9' x 11' minimum) each with a free standing equipment rack and six dedicated 20A, 120V power circuits	N/A	N/A	N/A	N/A	Provide one telecom room for each 8,000 ft ² each with one free standing rack per Part 2

Notes

1. N/A – Not Applicable
2. For multiple telecom rooms, provide a 12 strand singlemode backbone fiber optic cable between a main telecom room and each additional telecom room.
3. For multiple telecom rooms, provide a 25 pair backbone riser cable between a main telecom room and each additional telecom room.
4. Where Telecom Rooms are shared, provide equipment cabinets in lieu of racks.

PART 2, PRODUCTS

GENERAL

- A. Some specific requirements in Part 2 of this Specification may not be applicable to all Leases. Refer to Part 1 of this Specification to determine specific requirements based upon size of lease space.
- B. Materials shall be as specified, first quality, manufacturer's current production.
- C. Copper cabling, connecting hardware, and related hardware shall be Commscope hardware with Commscope cable as required under the Commscope Systimax Warranty to establish standards for quality and performance. Listed manufacturers meeting all the system quality, performance and warranty requirements of this specification are also acceptable. Any other manufacturer's products must be approved by the State.
 1. Approved alternate connecting hardware products manufacturers are:
 - a. Panduit
 - b. ADC
 - c. Siemon
 - d. Ortronics
 2. Approved alternate cabling products manufacturers are:
 - a. Panduit
 - b. ADC

- c. Belden
- D. Fiber optic cabling, connecting hardware, and related hardware in this section shall be Commscope hardware with Commscope cable as required under the Commscope Systimax Warranty to establish standards for quality and performance. Listed manufacturers meeting all the system quality, performance and warranty requirements of this specification are also acceptable. Any other manufacture's products must be approved by the State.
 - 1. Approved alternate connecting hardware products manufacturers are:
 - a. Corning Cable Systems
 - 2. Approved alternate cabling products manufacturers are:
 - a. Corning Cable Systems
- E. Products shall provide the standard of performance required under paragraph 1.1 and the Special Warranty above.

TELECOM ROOMS

- A. Telecom Rooms shall be placed in a location that provides secure access from a common area and that minimizes the lengths of horizontal cabling so as not to exceed 90 meters in accordance with applicable Standards. Telecom Room doors shall swing outwards except where prohibited by Code and be key lockable. Telecom Room sizes and power requirements shall be based upon the size of the Lease Space as outlined in Part 1 of these Specifications:
- B. Termination Backboards shall be provided in Telecom Rooms consisting of the following:
 - 1. Material: Type AC fire retardant plywood. Mount the plywood with the 'A' side exposed.
 - 2. Size: 3/4 inch to cover all walls.
 - 3. Finish: Flat latex, intumescent fire retardant paint, Flame Control Coatings No. 20-20, or equal. Paint plywood on all sides and edges including the back of the termination board prior to mounting on walls.
- C. Flooring in Telecom Rooms shall consist of the following:
 - 1. For new buildings an anti-static tile floor shall be provided. For remodels when the floor is bare slab, paint it with anti-static paint and seal with anti-static sealant to hold down dust.
 - 2. Material: Static Dissipative, Vinyl Composition Tile equal to Armstrong SDT.
 - 3. Provide grounding connection to each static dissipative flooring system in two locations, in accordance with manufacturer's instructions.

SEISMIC BRACING

- A. Freestanding equipment racks shall be seismically braced in accordance with requirements of the IBC. Seismic bracing shall consist of rigid supports. Cables, wires, chains or other non-rigid materials shall not be used for seismic support. Provide approved fixed equipment anchorage assemblies as published by the manufacturer.

FREE-STANDING EQUIPMENT RACKS

- A. Where required by these Specifications, provide full height 19-inch wide NEMA standard open rack frame with the following features.
 - 1. Vertical cable management channels with front mounted cable management rings and top mounted cable trough.
 - 2. Releasable hook and loop cable support straps.
 - 3. Rack assembly shall fit within 24 inches wide by 16.5 inches floor area.
 - 4. Material and Finish: Steel with black powder-coat painted finish.
 - 5. Electrically isolated 0.125 inch by 1 inch by 60 inches chassis ground bus bar on the right rear side of the rack, bonded to the chassis with #6 braided by 6 inches long bonding jumpers.

WALL MOUNTED EQUIPMENT CABINETS

- A. Where required by these Specifications, provide 19 inch wide, 14 inch deep NEMA standard open-frame, fixed, wall mounted equipment rack with the following features:
 - 1. 21 Rack Unit (RU - 1 3/4 inch) mounting spaces.
 - 2. Laser cut steel, with black anodized finish.
 - 3. Vertical mounted cable management brackets for vertical cables

4. Material and Finish: Steel with black powder-coat painted finish.
5. Electrically isolated 3/16 inch by 3/4 inch by 18-5/16 inches ground busbar on the top rear side of the rack. Mount ground busbar on 1 inch insulating bushed standoffs.
6. Lockable front door.

FREE-STANDING EQUIPMENT CABINETS

- A. Where required by these Specifications, provide full height 19 inch wide 30 inch deep NEMA standard enclosures with the following features:
1. Interior vertical cable management channels with front mounted cable management rings.
 2. Releasable hook and loop cable support straps.
 3. Top, bottom, front, rear, and side panels.
 4. Top panel shall have provisions for two openings for optional 4 inch standard fans.
 5. Top mounted 4-inch cooling fans.
 6. Rack assembly shall fit within 24 inches by 36 inches floor area.
 7. Material and Finish: Steel with black powder-coat painted finish.
 8. Electrically isolated 0.125 inch by 1 inch by 60 inches chassis ground bus bar on the right rear side of the rack, bonded to the chassis with #6 braided by 6 inches long bonding jumpers.
 9. Lockable front and rear doors.

CABLE MANAGEMENT

- A. In Telecom Rooms, provide backboard mounted cable management to arrange cables and wires in a neat and workmanlike manner.
1. Distribution rings installed in telecom rooms shall be "D" ring type. No bridle rings are permitted.
 2. Distribution rings shall be sized according the number and size of cables to be supported plus 25% spare capacity.
- B. In wall and floor mounted, equipment racks and cabinets, provide rack mounted cable management to arrange cables in a neat and workmanlike manner. Provide vertical and horizontal rack mounted cable management per the following:
1. Vertical trough-type cable management for use with standard 7 foot equipment rack shall be minimum 4 inches deep.
 2. Horizontal trough-type cable management shall be 3-1/2 inch wide with horizontal and vertical routing rings, with 2 inches by 1.5 inch cutouts for through cable routing.

IDC TERMINAL MODULES

- A. Hardware shall be rated for ANSI/TIA/EIA 568-B Category 5e ratings and installed in accordance with ANSI/TIA/EIA 568-B guidelines. Blocks shall be color coded and documented in accordance with ANSI/TIA/EIA 606-A. Blocks shall be identified using clear label holders and labels. Blocks shall be UL Listed.
- B. Terminal Modules shall be of the Insulation Displacement (IDC) and shall support the system Category of the permanent channel hardware installed.
- C. Where required, building entrance protection terminals shall be provided by the LEC.

HORIZONTAL CABLE PATCH PANELS

- A. Patch Panels: Modular jack panels shall be provided in either 24 (1 Rack Unit) or 48 (2 Rack Units) port configurations. Modular jack panel installations shall contain a retaining trough between every panel. Modular Jack Panels shall be wired for T568A configuration. Patch panels shall have the following characteristics:
1. The terminations shall meet or exceed performance defined by ANSI/TIA/EIA-568-B.2, for Category 5e component, link, and channel performance.
 2. UL Listed.
 3. Comply with FCC Part 68.
 4. Manufactured by an ISO 9001 Certified Manufacturer.

HORIZONTAL CABLE INFORMATION OUTLETS/JACKS

A. Outlet Requirements:

1. Single gang outlet information outlets shall be arranged in a quad-plex jack arrangement.
2. Provide outlet faceplates with both top and bottom labeling positions.
3. Provided blank module inserts for all unused module locations.
4. Provide full set of color coded snap-in icons for workstation outlets for use by the Lessor to mark jacks for analog and digital telephones, two unique classes of data, etc. Store icons in clear plastic bags in each IDF/MDF.

B. Communication Jack Requirements: Communications jacks shall consist of multi-position 8-pin modular (8P8C) jacks, utilizing the T568A termination style. Jacks shall have the following characteristics:

1. Jacks shall be manufactured by the same manufacturer as the modular patch panels.
2. The jacks shall meet or exceed performance defined by ANSI/TIA/EIA-568-B.2, for Category 5e component, link, and channel performance.
3. UL Listed
4. Comply with FCC Part 68.
5. Manufactured by an ISO 9001 Certified Manufacturer.

HORIZONTAL CABLE PATCH CORDS

- A. Provide factory assembled Category 5e Modular Patch Cords for each assigned port on the patch panel. Cords shall conform to the requirements of ANSI/TIA/EIA 568-B Commercial Building Telecommunications Cabling Standard, Horizontal Cabling Section, and be part of the UL LAN Certification and Follow-up Program. Cords shall be equipped with an 8 pin modular connector on each end and the minimum length patch cord shall be provided in each instance, to make an orderly, manageable connection between the patch panels or equipment being cross-connected.
- B. Patch cords shall be round, and consist of 24-AWG copper, stranded conductors, tightly twisted into individual pairs.
- C. Patch cords shall be manufactured by the manufacturer of the patch panels and jacks and meet or exceed the Channel performance defined by ANSI/TIA/EIA-568-B.

HORIZONTAL CABLES

A. General:

1. Horizontal cables shall be rated for Category 5e performance and shall be extended between the station location and its associated TR and shall consist of 4 pair, 24 gauge, UTP, and shall be terminated on the 8 pin modular jacks provided at each outlet. The 4 pair UTP cable shall be UL Listed Type CMP for use in plenum spaces in accordance with Article 800 of the NEC.
2. Provide cables with four FEP insulated conductor pairs (4/0 configuration).
3. Cables shall meet or exceed Category 5e performance specifications for the Channel as defined by ANSI/TIA/EIA-568-B.2.
4. UL or ETL Verified for Category 5e Electrical Performance.
5. UL Listed for Fire Safety.
6. Manufactured by an ISO 9001 Certified Manufacturer.

SINGLE-MODE FIBER OPTIC CABLE

- A. Where back bone fiber optic cables are required due to multiple telecom rooms per Part 1 of this Specification, provide single-mode (SM) fiber optic cable between the telecom rooms. The single-mode fiber optic cable shall be 8.3 μ m (typical) step-index optical glass with nominal 125 μ m core/cladding diameter. The optical fiber shall comply with ANSI/TIA/EIA-492CAAA. Single-mode fiber for indoor applications shall be of the tight buffered design.
- B. Single-mode fiber shall meet the following specifications:
1. Maximum Attenuation: 1.0/1.0 dB/km @ 1310/1550 nm.
 2. Maximum Distance for Running 1 GbE: 5 km @ 1310 nm.
- C. Fibers shall be color coded to facilitate individual fiber identification. Fibers shall have protective coating to ensure color retention, minimize micro-bending losses and improve handling. The coating shall be mechanically strippable.

FIBER OPTIC CABLE PATCH CORDS

- A. Where back bone fiber optic cables are required due to multiple telecom rooms per Part 1 of this Specification, provide fiber optic cable patch cords from same manufacturer as that providing fiber optic cabling. These fibers shall be constructed from glass of the same grade as that used to construct the backbone and horizontal cables.
- B. Single-mode Patch Cord Specifications:
 - 1. The fiber patch cord shall consist of buffered, step-index fiber with an 8.3 micron core (typical) and a 125 micron cladding. The fiber coating shall be covered by Aramid yarn and a flame retardant jacket.
 - 2. Provide two-strand riser rated zipcord style cords for all duplex patch through and equipment connection applications. Provide single strand cords for single equipment connections.
 - 3. Provide patch cords factory terminated with connectors in the type specified herein in the quantity and length(s) required to make an orderly, manageable connection between all patch panels and equipment being cross-connected.

FIBER OPTIC CABLE PATCH PANELS

- A. Provide low density termination and administration points (patch panels) for the fiber cables in the telecommunications rooms where backbone fiber optic cable is required due to multiple telecom rooms per Part 1 of this Specification. The termination and administration points (patch panel) shall meet the following requirements:
 - 1. Stackable and able to fit within a 19-inch rack frame with six adapter panel positions per two unit (3.5 inch) frame.
 - 2. Hinged translucent door on the front side of the connector panels
 - 3. Factory installed lock kit for hinged front panel furnished with two keys for each front panel.
 - 4. Room and provisions to provide fiber identification.
 - 5. Pre-punched and pre-loaded adapter panels with fiber adaptors of the types specified herein, recessed a minimum of 2.5 inches from the front of the shelf for patch cable management.
 - 6. Fully front and rear accessible. The unit shall slide out to allow top access.
 - 7. Protection features for the connectorized fiber to prevent mechanical stress, macro-bending losses at the connection point, and tampering with the circuits.
 - 8. Protection for fiber patching or splicing.
 - 9. Jumper routing bend limiters.

FIBER OPTIC CABLE CONNECTORS

- A. Provide field installable single-mode (SM) connectors to terminate fiber optic cables from cable-to-cable, cable-to-equipment or equipment-to-equipment, and to make jumpers where backbone fiber optic cable is required due to multiple telecom rooms per Part 1 of this Specification.
- B. The connectors shall be capable of mounting on either 0.9 mm buffered fiber or on 3.0 mm cordage and utilize a PC polishing on the tip to provide high yield during installation. All connectors shall have ceramic ferrules, meet EIA and IEC standards for repeatability and have a locking feature to the coupler and assure non-optical disconnect.
- C. Provide type LC connectors, unless otherwise noted. These connectors shall meet the following criteria:
 - 1. LC Connector Specifications:
 - a. Typical Insertion Loss: 0.10 Db.
 - b. Return Loss: better than -26 dB MM, -55 dB SM.
 - c. Temp. Stability: -40°C to 75°C

BACKBONE RISER CABLES

- A. Unshielded multi-pair copper cables shall be used as the vertical riser cables where required due to multiple telecom rooms per Part 1 of this Specification. The cable shall support voice, data and building service applications. The bending radius and pulling strength requirements of all backbone cables shall be observed during handling and installation. The multi-pair copper cables shall be in non-plenum form and placed in conduit as required.
- B. The non-shielded non-plenum cable shall consist of 24-AWG solid-copper conductors insulated with color coded PVC. The cable shall be available in 25, 50, 75 and 100 pair as required. The multi-pair cable shall be UL Verified to ANSI/TIA/EIA 568-B for Category 3 performance levels and have the following characteristics:

1. UL Listed for Fire Safety.
2. Manufactured by an ISO 9001 Certified Manufacturer.

LABELING

- A. Provide machine printed labels for all patch panels, cables, outlets, etc., in accordance with ANSI/TIA/EIA-606-A.
- B. Labeling and color coding identification shall conform to TIA/EIA-606-A for a Class 1 Administrative System where only a wall mounted Equipment Cabinet or a single Telecom Room is required (due to size of the Lease Space per Part 1)..
- C. Labeling and color coding identification shall conform to TIA/EIA-606-A for a Class 2 Administrative System where a Main Telecom Room and additional Telecom Room(s) are required (due to size of the Lease Space per Part 1).

UNSPECIFIED EQUIPMENT AND MATERIAL

- A. Any item of equipment or material not specifically addressed in this document and required to provide a complete and functional TDS installation shall be provided in a level of quality consistent with other specified items.

PART 3 EXECUTION

GENERAL

- A. Wiring shall be neatly tied or laced in cabinets and terminated on terminal strips provided for the purpose.
- B. Outlet/Jacks shall be identified with machine printed labels. Hand lettered labels shall not be used.
- C. Labels and color-coded inserts for each jack at patch panels and wall outlet shall be in accordance with TIA/EIA-606-A.
- D. Installation of lighting, ventilation and all other systems in the telecom rooms shall be coordinated with other trades and systems to avoid interferences.
- E. In each TR, IC, MDF, IDF and equipment room a minimum 22 inches by 34 inch CAD drawing indicating an appropriate floor plan and a telecommunication one-line (where applicable) shall be provided. The floor plan shall indicate telecommunication outlets with the appropriate outlet designation indicated on the plan. Mount drawing beneath a sheet of 1/8 inch clear Plexiglas on wall. Provide marking pens attached with Velcro to facilitate marking when moves, adds, or changes occur. Plexiglass and floor plan shall be mounted in such a way as to allow easy and rapid updates to the underlying floor plan. Include all copper and optical fiber systems (where applicable) on this drawing.

CODES AND PERMITS

- A. Work shall be performed with the necessary permits, etc. and by obtaining serving utility and governmental approvals where required.
- B. Coordinate work with the serving utility.
- C. Raceway fill requirements for communications systems shall be in accordance with ANSI/TIA/EIA-569-A and BICSI.
- D. NEC bending radius of all communications ducts, raceways, cabletrays, etc., shall be not less than the installed cable manufacturer's recommendations, and the applicable ANSI and BICSI Standards.
- E. Communications work shall be in complete accordance with the following:
 1. National Electrical Code (NEC), latest legally enacted edition.
 2. Regulations of the State Fire Marshall.
 3. National Fire Protection Association (NFPA) Codes.
 4. State, county and local codes and ordinances.

LAYOUT

- A. Maximum height for terminal blocks and patch panels shall be 6 feet-6 inches, minimum height shall be 1 feet-6 inches. Cables shall be racked and supported in a workmanlike fashion. Work shall be labeled according to ANSI/TIA/EIA 606-A, and color coded according to BICSI Standards. The following guidelines shall apply governing the layout of terminations.
 1. Horizontal cables from a common outlet shall terminate sequentially (in groups) on the same patch panel.
 2. Pairs from each cable shall be terminated sequentially from left to right, top to bottom starting with the lowest assigned number at the upper left hand corner of the frame.

3. Trunk or riser cables shall terminate on dedicated terminal blocks, separate from but adjacent to horizontal terminal blocks. Cross-connect or patch cords longer than 18 feet shall be avoided. Install stress relief hardware where needed.
- B. Up to date "As-built" record drawings detailing the layout of all equipment racks and cabinets, telephone, data and trunk terminations, including a typed listing of cables/rooms served by each terminal block and patch panel shall be provided to the Lessor by the installer.

CABLE INSTALLATION

- A. Cable pathways and supports shall be sized for 40% fill ratios.
- B. Follow cable manufacturer's specification regarding handling methods, retaining/support methods, bending radius and maximum pulling tension limitations.
- C. Telecommunication cables shall not be installed in the same raceway as power cables.
- D. Cables shall be installed in a neat and orderly manner and shall not cross or interlace other cables except at breakout points.
- E. Cables in vertical trays shall be individually retained with straps at a maximum of 6 feet on center.
- F. Tie wraps shall not deform the cable insulation when tightened.
- G. Cables shall be routed to minimize EMI and RFI interference. Cable shall be routed according to the following table. Spacings are minimum for all Category 3 and higher cable.

Minimum Separation Of Telecommunications Pathways From 480 Volt Or Less Power Lines			
Condition	<2 kVA	2-5 kVA	>5 kVA
Unshielded power lines or electrical equipment in proximity to telecommunications open or nonmetal pathways.	5 in	12 in	24 in
Unshielded power lines or electrical equipment in proximity to telecommunications grounded metal conduit pathways	2.5 in	6 in	12 in
Power lines enclosed in a grounded metal conduit (or equivalent shielding) in proximity to a telecommunications grounded metal conduit pathway	N/A	3 in	6 in
Power lines enclosed in a grounded metal conduit (or equivalent shielding) in proximity to telecommunications open or nonmetal pathways.	2.5 in	6 in	12 in
Mechanical ductwork, metal floors and other metallic planes to telecommunications open or nonmetal pathways.	2 in		
Mechanical ductwork, metal floors and other metallic planes to telecommunications open or grounded metal conduit pathways.	0 in		
Fluorescent or HID lighting fixtures	5 in	5 in	5 in

DISTRIBUTION RINGS AND CABLE SUPPORTS

- A. J-hooks shall be mounted on appropriate mounting hardware suitable for the specific application. Mount securely to the building structure. Maximum support spacing shall be 4 feet on center.
- B. The layout of cableways and pathways shall be coordinated with other trades.

CROSS-CONNECTIONS

- A. Cross-Connections at and/or between all terminal hardware shall be provided to form a complete and functioning system.
- B. Patch Cords shall be used to make all Cross-Connections.

INTERCONNECTIONS

- A. Interconnections at terminal hardware shall be provided to form a complete and functioning system.

EQUIPMENT RACKS

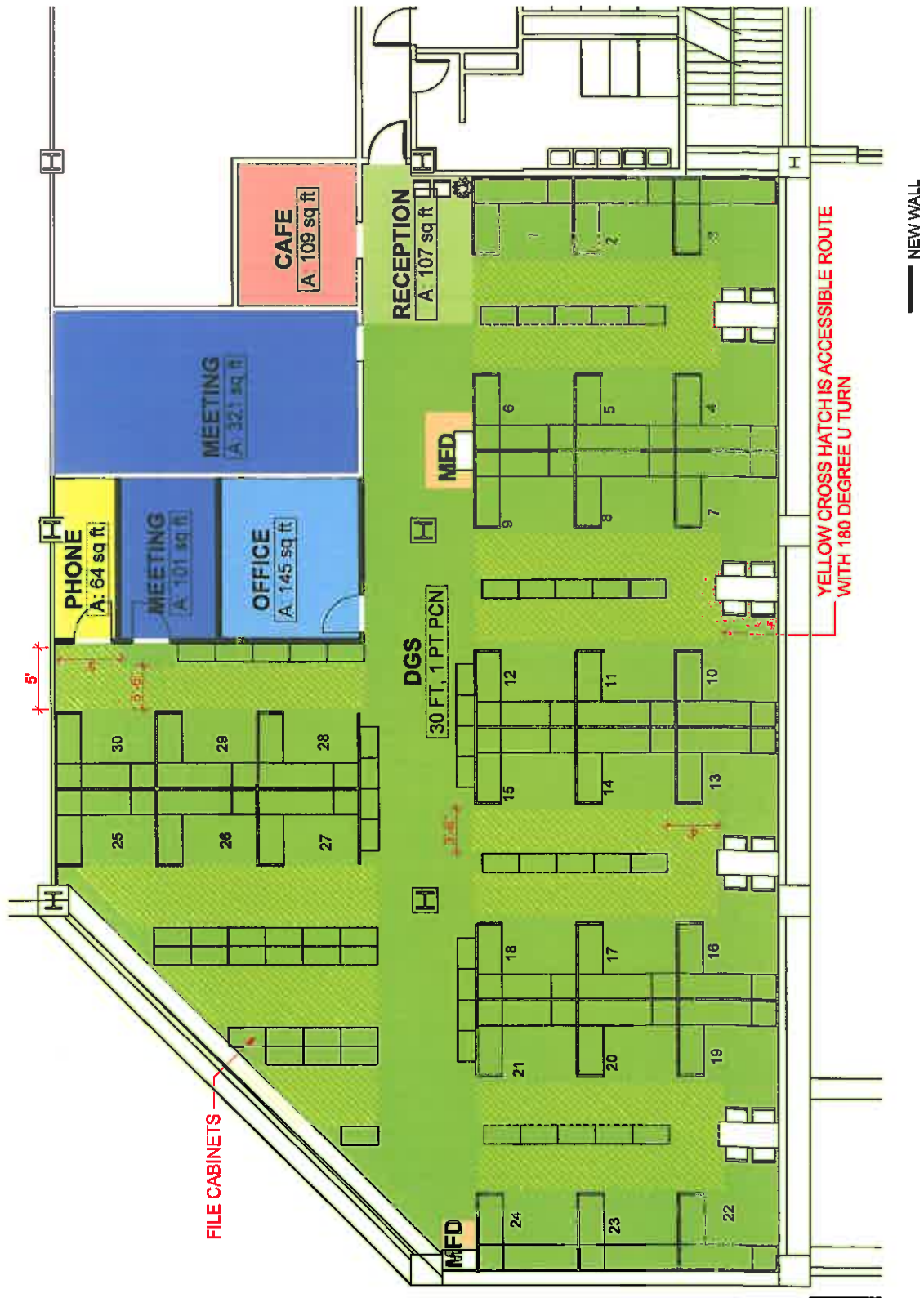
- A. Equipment racks shall be seismically braced by securely bolting to the structural floor supplemented with additional braces as required for the Seismic Zone.
 - 1. Mount ground bars on insulating bushed standoffs.
 - 2. Electrically separate open and enclosed racks with insulating washers and nonconductive screws.

TERMINATIONS

- A. Wire twist shall be maintained to within 0.25 inch of the termination.

COMPLETION AND TESTING

- A. Telecommunications System test reports shall be submitted to and approved by the Contracting Agency. The test reports shall certify that the Telecommunications Distribution System is complete, passes test criteria, is fully operational, and that all work has been witnessed as specified.
- B. Final Inspection Tests:
 - 1. Link testing of all copper cabling shall be performed. Complete, end to end test results shall be submitted to the Contracting Agency.
 - a. Category 5e cable runs shall be tested for conformance to the specifications of EIA/TIA 568-B.2, Category 5e. Testing shall be done with a ANSI/TIA/EIA 568-B ETL verified Level II-E test set.
 - 1). Test shall include all requirements of ANSI/TIA/EIA 568-B.
 - 2). Any cables not meeting the requirements of the standard shall be brought into compliance at no additional charge.
 - 2. Where backbone fiber optic cable is required due to multiple telecom rooms per Part 1 of this Specification, Perform in-place testing of all installed, terminated fibers in accordance with TIA/EIA OFSTP-7 methods. Document and submit all test results in accordance with the Specifications.
 - a. Single-mode Testing:
 - 1). Perform optical power loss measurements in accordance with TIA/EIA Standard OFSTP-7 using method A.3.
 - 2). Method A.3: Using an Optical Loss Test Set (OLTS) with hard-copy and disk/CD output capability to test each installed single-mode permanent link fiber from both directions at 1310 and 1550 nm.
 - 3). Cables not meeting the requirements of the standard shall be brought into compliance at no additional charge.



FILE CABINET COUNT
40 - 36" WIDE
12 - 30" WIDE

Addendum #5
Attachment #3

SCALE: 1/8" = 1'-0"

Chapter 11.30 PLATTING AUTHORITY

Sections:

- 11.30.010 Platting board.
- 11.30.020 Platting regulations.
- 11.30.030 Consultation.
- 11.30.040 Appeal.

11.30.010 Platting board.

The planning commission shall assume all jurisdiction and authority as the Nome platting board. (Ord. O-93-6-6 § 1 (part), 1994)

11.30.020 Platting regulations.

The platting board shall recommend to the city council regulations for real estate subdividing within the city, including but not limited to regulations controlling all physical aspects of the subdivision, regulations controlling the form of plat documentation, and regulations establishing procedures for the approval, modification, correction or disapproval of plats submitted for filing. The planning commission shall publish notice of and hold at least one hearing on the proposed regulations before submitting its recommendations to the city council and the city council shall publish notice of and hold at least one hearing on the proposed regulations before enactment by resolution. The planning board may require by regulation the submission of a preliminary or sketch subdivision plat during the platting procedure. (Ord. O-93-6-6 § 1 (part), 1994)

11.30.030 Consultation.

During the process of reviewing a proposed subdivision, the platting board shall consult with and obtain recommendations from the city manager and any administrative staff personnel possessing specialized expertise regarding the specific issue for decision. (Ord. O-93-6-6 § 1 (part), 1994)

11.30.040 Appeal.

Any person aggrieved by a decision of the platting board regarding a proposed filing of a subdivision plat may appeal to the board of adjustment in accordance with the procedures set forth in Chapter 18.160 NCO. (Ord. O-09-03-02 § 4, 2009; Ord. O-93-6-6 § 1 (part), 1994)

Chapter 11.50 FLOODPLAIN REGULATIONS

Sections:

- 11.50.010 Statement of purpose.
- 11.50.015 Lands to which this chapter applies.
- 11.50.016 Basis for establishing the areas of special flood hazard.
- 11.50.020 Applications.
- 11.50.025 Floodplain coordinator.

- 11.50.030 Protection against flood damage.
- 11.50.035 Standards for residential and nonresidential construction.
- 11.50.040 Implementation.
- 11.50.050 Disclaimer of liability.
- 11.50.051 Abrogation and greater restrictions.
- 11.50.052 Interpretation.
- 11.50.060 Definitions.
- 11.50.070 Variance procedures.

11.50.010 Statement of purpose.

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to attempt to minimize public and private losses due to flood conditions in specific areas, by provisions designed:

- (a) To protect human life and health;
- (b) To attempt to minimize expenditure of public money and costly flood control projects;
- (c) To attempt to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (d) To attempt to minimize prolonged business interruptions;
- (e) To attempt to minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;
- (f) To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- (g) To ensure that potential buyers are notified that property is in an area of special flood hazard; and
- (h) To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. (Ord. O-10-04-01A § 2 (part), 2010)

11.50.015 Lands to which this chapter applies.

This chapter shall apply to all areas of special flood hazard. (Ord. O-10-04-01A § 2 (part), 2010)

11.50.016 Basis for establishing the areas of special flood hazard.

A scientific and engineering report entitled "The Flood Insurance Study for the City of Nome, Alaska," dated May 3, 2010, and any revisions thereto, with accompanying flood insurance rate maps (FIRMs), and any revisions thereto, are hereby adopted by reference as the official Flood Insurance Study for the city of Nome and as the basis for regulation of development under this chapter. The flood insurance study is on file at Nome City Hall. (Ord. O-10-04-01A § 2 (part), 2010)

11.50.020 Applications.

- (a) Application for a building, remodeling, or moving permit for each structure within flood hazard areas shall be accompanied by the required fee. The application for a building,

remodeling or moving permit within flood hazard areas shall be made on a form furnished by and returned to the building official.

(b) The information furnished in the application shall include, but is not limited to:

- (1) The name and address of the owner of the tract;
- (2) A legal description of the tract;
- (3) Statement of the following elevations:
 - (A) The ground elevation after site preparation;
 - (B) Projected first-floor elevation;
 - (C) The basement floor elevation, if applicable;
 - (D) Base flood elevation data if the application is for a proposed subdivision or other development of more than fifty lots or larger than five acres;
- (4) If the structure is located in a flood hazard area, information that demonstrates that the structure will be adequately protected against flood damage and that the structure or site preparation will not adversely affect flood elevations or velocities. The required protective measures are set forth in NCO Section 11.50.035.

(c) The information furnished in the application may include plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. If plans are included they shall contain the following information:

- (1) Elevation in relation to mean sea level of the lowest floor (including basement) of all structures;
- (2) Elevation in relation to mean sea level to which any structure has been floodproofed;
- (3) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in NCO Section 11.50.035(d)(2); and
- (4) Description of the extent to which a watercourse will be altered or relocated as a result of proposed development. (Ord. O-10-04-01A § 2 (part), 2010; Ord. 01-12-1 § 4, 2001; Ord. O-93-6-6 § 1 (part), 1994)

11.50.025 Floodplain coordinator.

(a) The city manager or her designee shall be the floodplain coordinator. The floodplain coordinator is authorized to administer and implement this chapter including granting or denying development permit applications.

(b) Duties of the floodplain coordinator shall include, but not be limited to:

- (1) Review all development permits to determine that the permit requirements of this

chapter have been satisfied.

(2) Review all development permits to determine that all necessary permits have been obtained from those federal, state, or local governmental agencies from which prior approval is required.

(3) Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, determine if the encroachment provisions of NCO Section 11.50.035 are met.

(4) Review subdivision proposals and other development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding. If a subdivision or other development proposal is in an area of shallow flooding, determine if:

(A) Such proposals minimize flood damage.

(B) Public utilities and facilities are proposed to be constructed so as to minimize flood damage.

(C) Adequate drainage is provided.

(5) Where elevation data is not available either through the flood insurance study, FIRM, or from another authoritative source, review applications for building permits to determine if the proposed construction will be reasonably safe from flooding.

(6) Where BFE data are utilized in Zone A, obtain and maintain records of the lowest floor and floodproofing elevations for new and substantially improved construction.

(7) When base flood elevation data has not been provided (A and V Zones) in accordance with NCO Section 11.50.016, Basis for establishing the areas of special flood hazard, obtain, review, and reasonably use any base flood elevation and floodway data available from a federal, state or other source, in order to administer NCO Section 11.50.035.

(8) Where base flood elevation data is provided through the flood insurance study, FIRM, or required as in this section, obtain and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and record whether the structure contains a basement.

(9) For all new or substantially improved floodproofed structures where base flood elevation data is provided through the flood insurance study, FIRM, or as required in this section:

(A) Verify and record the actual elevation (in relation to mean sea level);

(B) Maintain any required floodproofing certifications;

(C) Maintain for public inspection all records pertaining to the administration of this chapter.

(10) Make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazard.

(11) Alteration of Watercourses.

(A) Notify adjacent communities and the State Floodplain Coordinator prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.

(B) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished. (Ord. O-10-04-01A § 2 (part), 2010)

11.50.030 Protection against flood damage.

(a) Within flood hazard areas no building, remodeling or moving permit shall be issued by the building official unless all of the following requirements and all applicable flood hazard regulations of the city are satisfied:

- (1) Any new or substantially improved structure shall be designed (or modified) and anchored to prevent flotation, collapse or lateral movement of the structure.
- (2) Construction materials and utility equipment that are resistant to flood damage and construction practices and methods that will minimize flood damage shall be utilized.
- (3) Construction or substantial improvement shall not be permitted unless the applicant demonstrates that any associated new or replacement water supply system and sanitary sewage system, including on-site systems, will be designed and constructed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.

(b) In determining if the requirements of this section have been fulfilled, the intent of this chapter and at least the following items shall be considered:

flood proofing
measures

- (1) The adequacy of anchorage to resist flotation and lateral movement;
- (2) The installation of watertight doors, bulkheads and shutters, or similar methods of closure;
- (3) The reinforcement of walls to resist water pressures;
- (4) The use of paints, membranes or mortars to reduce seepage of water through walls;
- (5) The addition of mass or weight to structures to resist flotation;
- (6) The installation of pumps to lower water levels in structure;
- (7) The construction of water supply and waste treatment systems so as to prevent the entrance of flood waters;
- (8) The installation of pumps or comparable facilities for subsurface drainage systems to relieve external foundation wall and basement flood pressures;

- (9) The building design and construction to resist rupture or collapse caused by water pressure of floating debris;
- (10) The location and installation of all electrical equipment, circuits, appliances and heating systems so that they are protected from inundation;
- (11) The location of storage facilities for chemicals, explosives, buoyant materials, flammable liquids or other toxic materials which could be hazardous to public health, safety and welfare, or design of such facilities to prevent flotation of storage containers, or damage to storage containers which could result in the escape of toxic materials into flood waters;
- (12) The use of material such as sheathing, siding, subflooring and underlayment that are not subject to water damage due to prolonged submersion;
- (13) The use of closed cell insulation to prevent waterlogging and consequent loss of insulating ability;
- (14) The location of oil storage tanks outside the structure and anchoring to prevent disturbance by flood water. Tanks should be placed upon and secured to a concrete base slab of sufficient volume to prevent flotation. In the calculation of required anchorage, little recognition should be given to shear or friction values of the soils as they will be substantially reduced due to saturation. Both fill and vent pipes should extend above the expected high water level;
- (15) The installation of a back water valve in sewer lines in an accessible location immediately adjacent to the exterior foundation wall. (Ord. O-10-04-01A § 2 (part), 2010; Ord. 01-12-1 § 5, 2001; Ord. O-93-6-6 § 1 (part), 1994)

11.50.035 Standards for residential and nonresidential construction.

In all areas of special flood hazard where base flood elevation data has been provided (Zones A1 through A30, AH, and AE), no application for a development permit shall be approved unless all the following requirements are satisfied:

(a) Residential Construction.

- (1) New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more above the base flood elevation.
- (2) Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
 - (A) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
 - (B) The bottom of all openings shall be no higher than one foot above grade.

(C) Openings may be equipped with screens, louvers, or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters.

(b) Nonresidential Construction. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated at or above the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

- (1) Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
- (2) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
- (3) Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans;
- (4) Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor; and
- (5) Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building floodproofed to the base flood level will be rated as one foot below).

(c) Area of Shallow Flooding (AO Zones). In these areas, the following provisions apply in addition to any other applicable standards:

- (1) New construction and substantial improvements of residential structures and manufactured homes within AO zones shall have the lowest floor (including basement) elevated above the highest grade adjacent to the building one foot or more above the depth number specified on the FIRM (at least two feet if no depth number is specified).

(2) New construction and substantial improvements of nonresidential structures within AO zones shall either:

(A) Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site one foot or more above the depth number specified on the FIRM (at least two feet if no depth number is specified); or

2' depth
per FIRM



(B) Together with attendant utility and sanitary facilities, be completely floodproofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

- (3) Adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

(d) Coastal High Hazard Areas. In these areas, in addition to any other applicable standard, the following provisions shall also apply:

(1) All new construction and substantial improvements in Zones V1 through V30 and VE (V if base flood elevation data is available) shall be elevated on pilings and columns so that:

(A) The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated one foot or more above the base flood level; and

(B) The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in any given year (one-hundred-year mean recurrence interval); and

(C) A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of subsections (d)(1)(A) and (B) of this section.

(2) Provide the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures in Zones V1 through V30, VE, and V, and indicate whether such structures contain a basement.

(3) All new construction shall be located landward of the reach of mean high tide.

(4) Provide that all new construction and substantial improvements have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purpose of this section, a breakaway wall shall have a design safe loading resistance of not less than ten and no more than twenty pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of twenty pounds per square foot (either by design or when so required by local or state codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

(A) Breakaway wall collapse shall result from water load less than that which would occur during the base flood; and

(B) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and nonstructural). Maximum wind and water loading values to be used in this determination shall each have a one percent chance of being equaled or

exceeded in any given year (one-hundred-year mean recurrence interval).

(5) If breakaway walls are utilized, such enclosed space shall be useable solely for parking of vehicles, building access, or storage. Such space shall not be used for human habitation.

(6) Use of fill for structural support of buildings is prohibited.

(7) Manmade alteration of sand dunes which would increase potential flood damage is prohibited.

(e) Critical Facility. Construction of new critical facilities shall be, to the extent possible, located outside the limits of the special flood hazard area (SFHA). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet above highest adjacent grade or to the height of the five-hundred-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.

(f) Manufactured Homes.

(1) All manufactured homes to be placed or substantially improved on sites:

(A) Outside of a manufactured home park or subdivision;

(B) In a new manufactured home park or subdivision;

(C) In an expansion to an existing manufactured home park or subdivision; or

(D) In an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as the result of a flood;

shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot or more above the base flood elevation and be securely anchored to an adequately designed foundation system to resist flotation, collapse and lateral movement.

(2) Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1 through A30, AH, and AE on the FIRM that are not subject to the above manufactured home provisions shall be elevated so that either:

(A) The lowest floor of the manufactured home is elevated one foot or more above the base flood elevation; or

(B) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six inches in height above grade and is securely anchored to an adequately designed foundation system to

resist flotation, collapse, and lateral movement. (Ord. O-10-04-01A § 2 (part), 2010)

11.50.040 Implementation.

(a) Permits issued pursuant to NCO Section 5.10.070 and NCO Title 18 shall conform to all ordinances or regulations as are from time to time established or amended; however, this chapter shall control in the event of any conflict unless specifically stated otherwise or unless the conflicting ordinance is more restrictive.

(b) In case any structure is constructed or substantially improved in violation of this chapter, NCO Section 5.10.070 or NCO Title 18, the city shall institute any proper actions or proceedings necessary, including enjoining of connections to public utilities, to restrain, correct or abate such violations.

(c) The city may enter into contracts and agreements with other government entities for the purpose of implementing the provisions of this chapter.

(d) The city shall consider the flood plan management program of neighboring municipalities when enforcing the ordinance or developing a flood plan management program.

(e) Nothing in this chapter shall be construed as applying to any structure existing prior to the effective date of the ordinance codified in this chapter unless it is substantially improved after the effective date. (Ord. O-10-04-01A § 2 (part), 2010; Ord. O-09-03-02 § 5, 2009; Ord. O-93-6-6 § 1 (part), 1994)

11.50.050 Disclaimer of liability.

The grant of a building, remodeling or moving permit or approval of a subdivision plan in the flood hazard area shall not constitute a representation guarantee or warranty of any kind by the city or by any official or employee thereof of the practicability or safety of the proposed use, and shall create no liability upon the city, its officials or employees. (Ord. O-10-04-01A § 2 (part), 2010; Ord. 01-12-1 § 6, 2001; Ord. O-93-6-6 § 1 (part), 1994)

11.50.051 Abrogation and greater restrictions.

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. (Ord. O-10-04-01A § 2 (part), 2010)

11.50.052 Interpretation.

In the interpretation and application of this chapter, all provisions shall be:

(a) Considered as minimum requirements;

(b) Liberally construed in favor of the city; and

(c) Deemed neither to limit or repeal any other powers granted under state statutes. (Ord. O-10-04-01A § 2 (part), 2010)

11.50.060 Definitions.

As used in this chapter:

“Accessory building” means a building customarily incidental and subordinate to, and

located on the same lot with, the principal building.

“Area of shallow flooding” means a designated AO or AH Zone on the flood insurance rate map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.

“Area of special flood hazard” means those areas identified by the Federal Insurance Administration in a scientific and engineering report entitled “The Flood Insurance Study for the City of Nome, Alaska” dated May 3, 2010, and any revisions thereto, and in accompanying flood insurance rate maps (FIRMs), and any revisions thereto as areas of special flood hazard. Said engineering report with accompanying flood insurance rate maps (FIRMs), and any revisions thereto, are hereby adopted by reference. The flood insurance study is on file at Nome City Hall. This area is intended to include all the land in the flood plain within the city of Nome subject to a one percent or greater chance of flooding in any given year. Designation of this area on maps always includes the letters A or V.

“Base flood” means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the “one-hundred-year flood.” Designation of this area on maps always includes the letters A or V.

“Basement” means any area of the building having its floor subgrade (below ground level) on all sides.

“Breakaway wall” means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

“Coastal high hazard area” means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on the FIRM as Zone V1 through V30, VE or V.

“Critical facility” means a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to schools, nursing homes, hospitals police, fire and emergency response installations, installations which produce, use or store hazardous materials or hazardous waste.

“Development” means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard.

“Elevated building” means, for insurance purposes, a nonbasement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

“Existing manufactured home park or subdivision” means a manufactured home park subdivision for which the construction of facilities for servicing the lots on which the

manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of Ordinance No. O-10-04-01A.

“Expansion to an existing manufactured home park or subdivision” means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

“Flood” or “flooding” means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters; and/or
- (2) The unusual and rapid accumulation of runoff of surface waters from any source.

“Flood insurance rate map (FIRM)” means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

“Flood insurance study” means the Flood Insurance Study for the City of Nome, Alaska, dated May 3, 2010, and any revisions thereto.

“Floodway” means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

“Lowest floor” means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building’s lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of NCO Section 11.50.035(d)(1)(C).

“Manufactured home” means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term “manufactured home” does not include a recreational vehicle.

“Manufactured home park or subdivision” means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

“New construction” means structures for which the start of construction commenced on or after the effective date of the ordinance codified in this chapter.

“New manufactured home park or subdivision” means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of Ordinance No. O-10-04-01A.

“Start of construction” includes substantial improvement, and means the date the building

permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within one hundred eighty days of the permit date. The “actual start” means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

“Structure” means anything artificially built up or composed of parts joined together in some definite manner which requires location on the ground or attachment to something located on the ground. Structures include building, radio, T.V. and cellular telephone towers, storage vans, connex vans, sheds, water, sewer or fuel tanks, and permanent signs.

“Substantial damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty percent of the market value of the structure before the damage occurred.

“Substantial improvement” means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure either:

- (1) Before the improvement or repair is started; or
- (2) If the structure has been damaged and is being restored, before the damage occurred.

For the purposes of this definition, “substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term does not, however, include either:

- (1) Any project for improvement of a structure to correct existing violations of state or city health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
- (2) Any alteration of a structure listed on the National Register of Historic Places or a state inventory of historic places.

“Variance” means a grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter. (Ord. O-10-05-01 § 1, 2010; Ord. O-10-04-01A § 2 (part), 2010; Ord. 01-12-1 § 7, 2001; Ord. O-93-6-6 § 1 (part), 1994)

11.50.070 Variance procedures.

(a) Requests for variances shall be determined by the planning commission under the provisions of NCO Section 5.10.090.

(b) In addition to the standards for variances contained in NCO Section 5.10.090, the planning commission shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter, and:

- (1) The danger that materials may be swept onto other lands to the injury of others;
- (2) The danger to life and property due to flooding or erosion damage;
- (3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- (4) The importance of the services provided by the proposed facility to the community;
- (5) The necessity to the facility of a waterfront location, where applicable;
- (6) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
- (7) The compatibility of the proposed use with existing and anticipated development;
- (8) The relationship of the proposed use to the comprehensive plan and flood plain management program for that area;
- (9) The safety of access to the property in times of flood for ordinary and emergency vehicles;
- (10) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and
- (11) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

(c) The planning commission may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.

(d) The floodplain coordinator shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

(e) Conditions for Variances. In addition to the standards of NCO Section 5.10.090, the following standards govern requests for variances from requirements for development permits:

- (1) Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items in subsection (b) of this section have been fully considered. As the lot size increases the technical

justification required for issuing the variance increases.

(2) Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in this section.

(3) Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.

(4) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(5) Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry floodproofing, where it can be determined that such action will have low damage potential, and complies with all other variance criteria.

(f) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. (Ord. O-10-04-01A § 2 (part), 2010)