

GRAYLING HEALTH CLINIC



Alaska Rural Primary Care Facility Code and Condition Survey

Final
July 23, 2001



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I. Executive Summary

Overview:

The Grayling Clinic, built in 1985, is an original 29' x 31' and 899 SF clinic expanded in 1987 with an addition of 11' x 31" to a total current size of 1330 SF. The clinic is of somewhat typical design for the time it was constructed. This clinic has a generous waiting area, one exam/trauma room, one small exam room, one office space, one toilet/bath/janitor, storage, office/corridor room and mechanical/storage room. The simple wood frame construction on an 8 x 8 treated wood post and pad system over a sandy silty dirt pad is similar to many clinics constructed in the YKHC region over the last 20-30 years. The crawlspace has been enclosed and dirt pushed up against the wood with only deteriorated visqueen and the system is decaying. It has been modified due to heating problems with all exposed internal piping, and is in poor condition and small for the current size of the village, 296 residents.

Renovation/Upgrade and Addition:

The Clinic will require a 670 SF addition to accommodate the current need and Alaska Rural Primary Care Facility space guidelines. This addition would require some reconfiguration of the site and additional new fill and pad work. There would also need to be major renovation and upgrade of the existing clinic. As can be seen from the documentation enclosed, the existing clinic will require major renovation to meet current code and standards as well. The cost of renovation and addition will far exceed the cost of a new clinic facility.

New Clinic:

The city has provided a new site, adjacent to the existing clinic and the City office building. It is available immediately for a new clinic. The community has proposed that a new larger 2000 SF Denali Commission Medium Clinic can be constructed on the new site. We have included preliminary site plan for this site and a new 2000 SF clinic.

The proposed site has all existing utilities and is in easy access to the entire community and other community related facilities

The community has completely supported this effort and have met extensively to assist in new site issues and to resolve any site considerations of the site presented.

II. General Information

A. The Purpose of the Report and Assessment Process:

ANTHC has entered into a cooperative agreement with the Denali Commission to provide management of the small clinic program under the Alaska Rural Primary Care Facility assessment, planning, design and construction. Over 200 clinics will be inspected through the course of the program. The purpose of the Code and Condition survey report is to validate the data provided by the community in the Alaska Rural Primary Care Facility Needs Assessment and to provide each community with a uniform standard of evaluation for comparison with other communities to determine the relative need between the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information provided in this report is one component of the scoring for the small clinic RFP that the Denali Commission sent to communities in priority Groups 1 and 2. The information gathered will be tabulated and analyzed according to a set of fixed criteria that should yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most efficient means to bring the clinics up to a uniform standard of program and construction quality.

A team of professional Architects and Engineers traveled to the site and completed a detailed Field Report that was reviewed by all parties. Subsequently, the team completed a draft and then final report of the facility condition.

B. Assessment Team:

Tom Humphrey, Capital Projects Director, and Senka Paul, the administrator for Yukon Kuskokwim Health Corporation, organized the assessment team. The team for this site visit was Senka Paul, YKHC; Gerald L. (Jerry) Winchester, Architect, Winchester Alaska, Inc.; Bob Jernstrom, PE, Jernstrom Engineering, and Chet Crafts, ANTHC. Team members who assisted in preparation of report from information gathered included members of the field team above and Ben Oien PE, Structural Engineer; Eric Cowling, PE, Electrical Engineer; Carl Bassler PE, Civil Engineer; and Estimation Inc.

C. Report Format:

The format adopted is a modified "Deep Look" format, a facilities investigation and condition report used by both ANTHC and the Public Health Service, in maintaining an ongoing database of facilities throughout the country. Facilities are evaluated with respect to the requirements of the governing building codes and design guidelines. Building code compliance, general facility condition, and program needs have been evaluated. The written report includes a floor plan of the clinic, site plan as available, and new plans for renovation/upgrade or completely new clinics. Additional information was gathered during the field visit which includes a detailed Field Report and building condition checklist, sketches of building construction details, investigations of potential sites for new or replacement clinics, and proposed plans for village utility upgrades. This information is available for viewing at ANTHC's Anchorage offices and will be held for reference.

D. The Site Investigation:

On June 13, 2001, the team flew to the site and made observations, took photos, and discussed the needs with on-site personnel for the facility. Approximately four hours was spent on site, with sufficient time to

investigate foundations, structure, condition, mechanical and electrical systems, and to interview the staff to assess current and projected health care needs.

Interviews were conducted with the Mary Deacon, Health Aide, and other city residents, including city council member Beverly Clark. The city staff provided information on the existing building, site, and utilities. Additional review of existing data from YKHC files from physician's assistants, community health aides, travel clerks, dentists, specialty clinic providers, and medivac teams. These interviews provided clear understanding of the needs of the village, the clinic facility, and the users of the facility.

The Grayling community has reviewed the use of a Denali Commission Medium Health Clinic design adapted to the Grayling Sites. The site is secured across from the new post office and is dedicated to the new clinic facility.

II. Clinic Inspection Summary

A. Community Information:

Population: 194 (2000 Census)

2nd Class City, Unorganized Borough, Iditarod School District, Doyon Corporation

Location:

Grayling is located in Interior Alaska on the west bank of the Yukon River east of the Nulato Hills. It is 18 air miles north of Anvik. It lies at approximately 62d 57m N Latitude, 160d 03m W Longitude (Sec. 34, T033N, R057W, Seward Meridian). The community is located in the Kuskokwim Recording District. The area encompasses 11 sq. miles of land and 0 sq. miles of water.

History:

In 1900 the Nunivak, a U.S. Revenue steamer, stopped for wood in Grayling and reported 75 inhabitants. The village was later abandoned. In 1962, 25 families moved from Holikachuk on the Innoko River to Grayling. Holikachuk was prone to annual spring flooding, and low water levels made the return trip from Yukon fish camps each year difficult. The City government was incorporated in 1969.

Culture:

The population of Grayling is comprised of Holikachuk and Ingalik Indians. Subsistence activities are import to villagers' livelihoods.

Economy:

Grayling's economy is heavily dependent on subsistence activities, and employment is found primarily in seasonal work during the summer. Eight residents hold commercial fishing permits. Subsistence activities include fishing, hunting, trapping, gathering and gardening. Salmon, moose, black bear, small game and waterfowl are utilized.

Facilities:

Water is derived from an infiltration gallery at Grayling Creek, is treated, stored and piped throughout the community. All but three homes are connected to piped water and sewer system. The remaining three have piped water. Grayling has recently upgraded the water treatment and

plumbed 20 homes. A new landfill site has been funded.

Transportation:

In summer, access to Grayling is by air, riverboat or barge. The State owns and operates a 2,315' gravel runway. No roads connect Grayling with other communities. Skiffs are used for transportation up and down the river during summer. Every other year Grayling is a checkpoint on the annual 1,049 mile Iditarod sled dog race.

Climate:

The climate of Grayling is continental, with long, cold winters and relatively warm summers. Temperature extremes range between -60 to 87. Snowfall averages 110 inches, with 21 inches of total precipitation per year. The Yukon River is ice-free from June through October. Location:

B. General Clinic Information:

Physical Plant Information:

The existing Grayling Health Clinic completed in 1985-87 and occupies 1330 sq. ft. (See attached Plan) It is one of the medium size clinics constructed during the last twenty years with a 320 sf non-code compliant addition existing in the YKHC program area. It has moderate waiting room, medium size toilet/bath/janitor, storage/supply room, office, large exam/trauma room, one other small exam room, one office/corridor room, and a mechanical/storage room. It has a front entry with vestibule, stair and ramp, but does not allow stretcher access and does not meet code. The rear entry has a stair, but does allow straighter access to the exam rooms. The exam/trauma room is in the middle of the clinic and does not allow easy access. The clinic has served with water and sewer from existing water and wastewater systems for the village. There is one sink in the exam/trauma room and none other except the sink in the toilet room. None of the sinks or fixtures are ADA compliant. There is a bath that is made water proof with plastic and duct tape and is not ADA compliant area. There is a no separate janitor facility, the toilet/bath has the mop bucket stored in the dressing area.

Clinic program usage information:

Patient records indicate the clinic sees an average of 145 patients per month in 2000, and 92 in 1999 and 1998. This is an over a 58% increase in patient encounters in the last two years. There are 2 full or part time staff and 1 Itinerant or contract staff equivalent. The office space provided is not adequate and all the office functions, travel, files, and use by all health aides is accomplished in the single office area. There is only one actual exam/trauma room, and one unfinished small exam room with no door, storage, toilet/bath room and hallways. Storage is adequate, however, the space is very inefficient with using an old mechanical room that still has the hot water heater in it for storage, and the storage accessible through the office/corridor at the rear. Basically only one patient can be seen at a time.

C. Program Deficiency Narrative:

1. Space Requirements and Deficiencies:

Space Comparison Matrix - Current Grayling Actual SF to Denali Commission Medium Clinic

Alaska Rural Primary Care Facility

Purpose / Activity	Current Clinic			Medium clinic			Difference			
	Designated Itinerant			Actual Net SF			ARPCF SF			
	Size	No.	Net Area (SF)	Size	No.	Net Area (SF)	Size	No.	Net Area (SF)	
Arctic Entries				28	1	28	50	2	100	72
Waiting/Recep/Closet	150	1	150	212	1	212	150	1	150	-62
Trauma/Telemed/Exam	200	1	200	231	1	231	200	1	200	-31
Office/Exam				111, 86	2	197	150	1	150	-47
Admin./Records				116	1	116	110	1	110	-6
Pharmacy/Lab						0	80	1	80	80
Portable X-ray						0			0	0
Specialty Clinic/Health Ed/Conf						0	150	1	150	150
Patient Holding/ Sleeping Room						0	80	1	80	80
Storage	150	1	150	88	1	88	100	1	100	12
HC Toilet				98	1	98	60	2	120	22
Janitor's Closet						0	30	1	30	30
Subtotal Net Area			500			970			1270	300
Circulation & Net/Gross Conv. @ 45%						266			572	306
Subtotal (GSF)						1236			1842	606
Mechanical Space @ 8%				95	1	95			147	52
Total Heated Space			500			1331			1989	658
			0							
Morgue (unheated enclosed space)							30	1	30	30
Ext. Ramps, Stairs, Loading										
			HC Accessible			As Required			As Required	As Required

- a. Overall space deficiencies: The size of the facility is about 1330 sf short of the ARPCF space requirements. Based on the YKHC efficiently designed facility to meet ARPCF requirements, the existing facility is 670 sf short of the needed space.
- b. Specific room deficiencies: There is minimal vestibule, minimal exam room space, inadequate office space, and no itinerant sleeping area. These deficiencies in combination with other small spaces leave the clinic very program deficient.
- c. Other size issues: Mechanical room is large but the system is currently Toyo oil stoves and the original furnace has been removed. There are no unheated or exterior storage areas.

2. Building Issues:

- a. Arctic Entries - The main entry is not accessible for ADA and is impossible to get a gurney into the room. It does not have a legal ramp and lack of room. The rear entry has a non-legal stair and railings.
- b. Waiting / Reception –The waiting area contains a couch for secondary patient use and two chairs and has equipment and other items stored in the room.
- c. Trauma/Telemed/Exam – There is a trauma exam/trauma room that is really the only exam room available. The room though sized adequately is full of other clinic equipment and storage items.
- d. Office / Exam – There is only one other small exam room which is unfinished and has plywood for walls and a single like in a keyless socket for a light. The door does not close and is 4” too small for the opening and provides no privacy. The lack of sinks in the second small exam room is a sanitation issue for patients. There was no capability of putting a patient in a gurney in the exam room or in any part of the facility other than the trauma room that does not have adequate access. Privacy was very difficult with all hollow core doors.
- e. Administration / Records – There is the single office room space used for all administrative, records, scheduling, telemedicine and other functions. The functions are also spread to the office/corridor in the rear that has a desk and computer for other health workers. Note that electrical service is completely inadequate for the needs of the equipment.
- f. Pharmacy / Lab – There is not Pharmacy and medicines are stored in locked cabinets in the exam/trauma room.
- g. Specialty Clinic / Health Education / Conference - This function is completed in the single exam rooms. There is no special area.
- h. Patient Holding / Sleeping Room – There is no sleeping room and only a rollaway bed for itinerant staff.
- i. Storage – Storage is adequate and is contained in the storage in the rear and the old mechanical room with hot water heater in the front. Though adequate, it is very dysfunctional due to location, lack of shelving and storage systems.
- j. HC Toilet Facilities – A single toilet room serves patients and clinic staff. The toilet room did not meet any of the ADA or UPC requirements. Entry door width was too narrow, and the toilet and sink lacked sufficient clearances and were of incorrect fixture type. There is no vacuum breaker on this sink as required by code. The tub is raised and is waterproofed with duct tape and plastic. All these areas are very unsanitary.
- k. Janitors Room – There is no janitor’s room.
- l. Mechanical/Boiler room – The room consists a room for the hot water heater and currently storage. The heating system is Toyo stoves and there is no central heating system. The access is via a door off of the main vestibule and there is no 1 hr. separation.

- m. Ancillary Rooms – There are no ancillary rooms as all space is used to maximum capacity including storage rooms, exam rooms, toilet rooms, office, waiting room, corridors, and vestibules.

3. Functional Design Issues

This facility is functionally inadequate for its intended use. The spaces do not meet the functional size requirement, access is non-compliant, sanitation and patient care are very poor due to materials, and condition of the facility. The ability to perform required medical functions within the facility is severely hampered by lack of storage, and not adequate sinks.

4. Health Program Issues

a. Vestibule and comfort:

The front door of the clinic is through a very small vestibule that is inadequate to defer the heat loss. There is no ADA access or gurney access. The waiting room is cold every time the door is opened and the cold air migrates into the clinic where patients are being attended.

b. Medical/Infectious Waste

This is being handled in a very basic method and is hampered by the small non-functional facility.

c. Infection Control

This is being completed with minimal long-term control due to lack of facilities. Floor materials are very worn out and replaced with multiple materials and sizes allowing for control problems. There is no rubber base material, and walls is mostly of plywood paneling that is very dark wood and ceiling materials are old acoustic ceilings are also considerably lacking in cleaning ability. The exposed heat piping also provides very unsanitary conditions and impossible cleaning of the exam rooms. There is neither janitor sink for general cleaning nor sinks in the exam room other than the one trauma room for practioner use. The sink in the trauma room does not meet code for cabinet surfaces or materials for cleaning since it is plywood.

d. Insect and Rodent Control

None noted or investigated

e. Housekeeping

The difficulty in cleaning and housekeeping in such a congested facility is understandable and is being done at the best level currently possible.

5. Utilities

a. Water Supply

The city water is provided by the existing Water and Sewer system.

b. Sewage Disposal

Sewer system is provided by the city system to lagoon.

c. Electricity

See Electrical Narrative

- d. Telephone
A single phone line services the clinic and is inadequate for current needs.
- e. Fuel Oil
The fuel system is not adequate with some leaking having occurred around the existing above ground tank. There is not protection or containment for possible spilling.

D. Architectural / Structural Condition

1. Building Construction:

- a. Floor Construction:
The floor is 2x12 joist over a 6 x 12 floor beams. The beams are supported with 8 x 8 posts with 3 x 12 pads under the posts. There is R-24 insulation in the floor with 3/8" plywood on the bottom of the joist. There is considerable settlement and heaving which has caused doors to stick and floor to be uneven. There is approximately 3 inches of differential in the floor elevations. There is a un-heated crawlspace which has been built after the building was constructed by adding untreated 2 x 4 walls with 1/2" sheathing at the exterior, putting 6 mil visqueen over the plywood, and then pushing dirt up against the building. The resulting lack of ventilation and moisture containment is seriously deteriorating the foundation and floor system. All piping has been relocated internal to the room space or is in arctic pipe due to the crawlspace being unheated.
- b. Exterior Wall Construction:
The walls are 2x6 construction at 24" oc. The sheathing is T-111 plywood siding painted and R-19 fiberglass batt insulation with vapor barrier 1/4" paneling on the interior.
- c. Roof Construction:
The roof is a full-span truss at 24" oc with plywood deck and metal roof. The insulation is approximately 12" or R-38 of batt insulation that is minimal in this climate.
- d. Exterior Doors:
The exterior doors are residential insulated metal. They are in very poor shape and need replacement.
- e. Exterior Windows:
Windows are of thermo-pane wood casement windows and do not all open.
- f. Exterior Decks, Stairs, and Ramps
There are minimal Arctic entries. There is a landing at the front entrance outside the main door, and the rear door the stairs and ramp are deteriorating, and the stairs rise and run do not meet code. The ramp is very steep and does not meet ADA and the handrails and landings do not meet code.

2. Interior Construction:

- a. Flooring:
The flooring is Sheet vinyl over plywood. It has been replaced in many area and is seriously deteriorated in most areas. Duct tape has been used to patch the flooring that is

worn out and covered with duct-tape in other areas. Entire replacement of sub-floor and finish is required to meet sanitary requirements.

b. Walls:

The walls are of 2x4 wood construction, with no sound insulation. The type of wall construction does not provide for patient privacy in any way. The finish is 1/4" paneling covered with wallpaper and is in serious need of repair and replacement. There are many cracks in wall system due to settlement and shifting building.

c. Ceilings:

The ceilings are 12 x 12 acoustic tile over plywood and needing repair. The ceiling is not easily washed and presents a serious sanitation issue.

d. Interior doors:

The interior walls are of hollow core wood construction that provides minimal construction durability and they are all in need of repair. Additionally, these doors are not acceptable for patient privacy and sound control. There has been floor shifting and most of the doors do not close properly. They are not ADA accessible and the hardware does not meet ADA requirement.

e. Casework:

The upper casework is non-existent and the lower casework is of very poor construction. Tops are of plywood and do not fit to walls and are seriously deteriorating. The sanitary issues are very significant with the counters being of such poor construction. Need full replacement.

f. Furnishings:

The furnishings are very old and worn. There is an old couch in the waiting room and a variety of mismatched and old desks, chairs, and tables for other use. The exam tables are older as well.

g. Insulation:

Floor Insulation		R-19
Wall Insulation	R-19	
Attic/Roof Insulation		R-38
Attic Ventilation		Gable Vents only

h. Tightness of Construction:

The facility is of generally poor overall construction, with numerous leaks in construction system at doors, floor, roof, and sills. The un-heated crawlspace with is below grade traps moisture and is rotting the substructure.

i. Arctic Design:

The vestibules are minimal, orientation is OK, and siting of the clinic is adequate. The site is adequate for normal arctic design.

3. Structural

a. Foundations

The foundation is treated 8 x 8 posts on 3 x 12 pads for support. There is a 2 x 4 untreated pony wall with 6 mil deteriorated plastic as protection of the plywood containing the crawlspace. The crawlspace has been backfilled to floor level. The system is over a silty, sandy dirt base and is in poor structural condition. Pads have settled, walls are racked, and the building has floor level deviation and has substantial cracking on the interior. There is no hold down strapping and the bracing is loose or missing. The addition of the crawlspace wall and exterior dirt has lead to foundation rotting. In general the foundation needs substantial upgrade work for a new useful lifetime or replacement.

- b. Walls and Roof:
The walls and roof seem in relatively stable and adequate condition.
- c. Stairs, Landings, and Ramps
These elements are in poor condition and need of replacement with signs of rotting and deterioration of structural elements.

E. Mechanical Condition

1. Heating System

a. Fuel Storage and Distribution

The clinics heating fuel oil storage tanks are located adjacent to the building and not a minimum of 5 ft. as required by code. The 55-gallon storage barrels do not UL tank standards nor do they have the proper venting, piping, or valving as required by code.

b. Oil-Fired Heaters

Two residential grade, oil-fired, "Toyostoves" provides heating for the entire clinic. The heaters are in fair shape, but are not appropriate in providing the required heating needs of the Health Clinic. The combustion air openings for the heaters are provided in the intake and exhaust kits provided with the heaters. An oil-fired furnace has been remove that once provided the heating needs of the clinic.

c. Heat Distribution System

The furnace supply and return air duct distribution system still remains in the attic. The supply air diffusers and return grille remain in the ceiling.

2. Ventilation System

a. System

There is no mechanical ventilation system. Ventilation is by operable windows. The windows do not open easily and as such do not provide effective ventilation. Some rooms have no windows and as such have no ventilation.

b. Exhaust Air

A ceiling mounted exhaust fan services the toilet room, but is ducted to the attic which is against code. This fan should be ducted outside.

c. Outside Air

Some of the rooms with operable windows have missing operators so the windows cannot be opened.

3. Plumbing System

a. Water System

The water system plumbing is typical ½" and ¾" copper distribution piping to the clinic exam sinks and toilet fixtures. The plumbing vents have not been terminated above the roof, but have terminated in the attic which is not according to code.

b. Sewer System

City sanitary sewer provides the needs of the clinic.

c. Fixtures

The toilet room plumbing fixtures are not ADA approved or UPC code compliant for barrier free access.

d. Water Heater

The water heater is installed in a room with storage nearby which makes inspections, maintenance, and repair difficult. The water heater has not been provided with a code required dielectric unions.

F. Electrical Condition

1. Electrical Service

a. The electrical service is an AVEC overhead connection to the building with a meter/main combination panel located on the exterior of the building. The service entrance disconnect is a Nema 3R combination panel. The dead front cover is missing on the panel.

b. The service is a 100 Amp, 120/240V, 1 Ph, 3 wire.

2. Power Distribution

a. The MDP is a 100 Amp Square D QO load center Series G1 with 16 poles total of which 5 are spare.

b. Type XHHW individual (3) #2 Aluminum power cables with non-insulated ground conductor are routed from the main disconnect to the MDP.

c. Non-metallic sheathed cable (Romex) is used for the branch circuit wiring.

3. Grounding System

a. The building has a single ground wire routed to the crawl space which could not be verified.

4. Exterior Elements

a. Exterior lighting incandescent wall lighting located at each man door. On-Off control is by manual wall switch only.

b. One exterior power receptacles was noted. GFCI protection was not provided.

c. Telephone service enters at a weatherproof protection test block on the exterior of the building.

5. Electrical devices and lighting

a. Receptacles are grounding type.

- b. The lighting is predominately 4 ft fluorescent T12 (2) lamp surface mounted wrap diffuser fixtures. Support rooms are incandescent type A19 lamped fixtures.
 - c. Interior device plates are non-metallic ivory decorative plates.
6. Emergency System
- a. Building has self-luminous egress signage installed at the egress doors.
 - b. No lighting is provided for emergency egress lighting.
7. Fire Alarm System
- a. A partial fire alarm system exists with one pull stations at in the main corridor with a bell inside and the exterior of the building. System does not have horn/strobes or dial out capabilities.
 - b. Battery power single power source type, single station heat detector is provided in the mechanical/electric room and a smoke detector in the corridor.
8. Telecommunication
- a. A very limited voice system is provided. No data system is presently installed.

G. Civil / Utility Condition

1. Location of building
- a. Patient Access
Located in the relative center of the village for ease of access and seems to work fine. It is off of the main road to the airport that is an advantage.
 - b. Service Access
Road access is provided to front and rear entry. Neither stair nor ramp access to rear, or stairs to front entry meet code access requirements. Ramps are excessively steep providing a slipping hazard in winter months.
 - c. Other Considerations:
The facility is located on a flat site and is a good location.
2. Site Issues
- a. Drainage
Drainage from the site is adequate although the south side is lower and looks like it ponds during some times of the year. There is no significant pad on which the building is constructed, just the silty sandy dirt. Correction would include putting a new extended pad on the site prior to placing the post and pad system, shoring of the site, and new gravel to stabilize.
 - b. Snow
There does not appear to be a snow-drifting problem as the facility sits in the open.

3. Proximity of adjacent buildings
There is a telephone facility to the north and the city hall is to the east and no other buildings in close proximity.
4. Utilities
 - a. Water Supply
The new city water supply provides adequate water for the facility.
 - b. Sewage Disposal
Sewage disposal is provided by City system and lagoon.
 - c. Electricity
Power from Village system via overhead wire. See Photos
 - d. Telephone
Overhead phone with only one phone connection, requiring fax and phone on same line.

H. Existing Facility Floor Plan (Site Plan if available):

We have attached drawings, as we have been able to identify, find, or create as part of this report. We have endeavored to provide all drawings for all the sites; however, in some cases exact existing site plans were not available. We have provided as indicated below:

- A1.1 Existing Site Plan is attached if available
- A1.2 Existing Facility Floor Plan is attached following.
- A1.3 The Existing typical wall section is attached following as required by the report guidelines.
- A2.1 The Addition to the Existing Facility as required to meet ARPCF Space Guidelines is attached following.
- A3.1 The New Clinic Site plan is attached as proposed based on the community input.
- A3.2 The New Denali Commission Clinic Floor Plan meeting the ARPCF Space Guidelines and proposed for this location is attached.

IV. Deficiency Evaluation

A. Deficiency Codes:

The deficiencies are categorized according to the following deficiency codes to allow the work to be prioritized for funding. The codes are as follows:

- 01 Program Deficiencies:** Based on assessment of the facility's ability to support the stated services that are required to be provided at the site.
- 02 Fire and Life Safety Deficiencies:** Based on the identified areas where the facility is not in compliance with provisions of the state building codes including, UBC, UFC, NFPA 101, UMPC, NEC. These are organized sequentially from Architectural
- 03 General Safety:** Based on items that are not necessarily code items but are conditions that are considered un-safe by common design and building practices.
- 04 Environmental Compliance:** Based on non-conformance with DEC regulations, hazardous materials and general sanitation.
- 05 Program Deficiencies:** These are items that are required for delivery of the medical services model currently accepted for rural Alaska. This may include space requirements, functional needs, or other items to meet the delivery of quality medical services.
- 06 Unmet Supportable Space Needs:** These are items that are required to meet the program delivery of the clinic and may not be show or delineated in the Alaska Primary Care Facility Space Guidelines.
- 07 Disability Access Deficiencies:** Items not in compliance with the Americans with Disabilities Act.
- 08 Energy Conservation:** These are items that are required for energy conservation and good energy management.
- 09 Plant Management:** This category is for items that are required for easy and cost efficient management and maintenance of the Physical Plant.
- 10 Architectural M & R:** Items affecting the architectural integrity of the facility, materials used, insulation, vapor retarder, attic and crawlspace ventilation, and general condition of interiors, and prevention of deterioration of structure and systems.
- 11 Structural M & R:** Deficiencies and items affecting the integrity of the building. These include foundations, roof and wall structure, materials used, insulation, vapor retarders, attic and crawlspace ventilation, and general condition of interiors.
- 12 Mechanical M & R:** Deficiencies in plumbing, heating, ventilation, air conditioning, or medical air systems.

- 13 Electrical M & R:** Deficiencies with electrical generating, distribution, fire alarm, and communications systems.
- 14 Utilities M & R:** Deficiencies with the utilities hook-ups, systems, and distribution.
- 15 Grounds M & R:** Deficiencies with the civil site issues, drainage, access, etc.
- 16 Painting M & R:** Deficiencies of painting, exterior, interior, trim and soffit.
- 17 Roof M & R:** Deficiencies in roofing, and related systems including openings.
- 18 Seismic Mitigation:** Deficiencies in seismic structural items or other related issues to seismic design including material improperly anchored to withstand seismic effect.

B. Photographs:

We have provided photographs attached which are noted to describe the various deficiencies described in the narratives and itemized in the summary below. The photos do not cover all deficiencies and are intended to provide a visual reference to persons viewing the report who are not familiar with the facility.

We have included additional photos as Appendix B for general reference. These are intended to add additional information to the specific deficiencies listed and to provide general background information.

C. Cost Estimate General Provisions

1. New Clinic Construction

- **Base Cost**

The Base Cost provided in Section VI of this report is the direct cost of construction, inclusive of general requirements (described below) and contingency for design unknowns (an estimating contingency) The base cost is exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The Project Factors and Area Cost Factor are multipliers of the base costs.

General Requirements are based on Anchorage costs without area adjustment. It is included in the Base Cost for New Clinics. These costs are indirect construction cost not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc. The general requirements factor has not been adjusted for Indian Preference.

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned.

- **Project Cost Factors**

- Equipment Costs for new medical equipment has been added at 17% of the cost of new floor space.
- Design Services is included at 10% to cover professional services including engineering and design.
- Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.
- Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Estimated Total Project Cost of New Building**

This is the total estimated cost of the project, including design services. The construction contract will be work subject to Davis Bacon wages, and assumes construction before year-end 2001. No inflation factor has been applied to this data.

2. Remodel, Renovations, and Additions

- **Base Cost**

The Base Cost provided in the specific deficiency sheets is the direct cost of construction, exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Most of the deficiency items do not constitute projects of sufficient size to obtain efficiency of scale. The estimate assumes that the projects are completed either individually, or combined with other similar projects of like scope. The numbers include moderate allowances for difficulties encountered in working in occupied spaces and are based on remodeling rather than on new construction costs. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The General Requirements, Design Contingency and Area Cost Factors are multipliers of the base costs.

The cost of Additions to clinics is estimated at a unit cost higher than New clinics due to the complexities of tying into the existing structures.

Medical equipment is calculated at 17% of Base Cost for additions of new space only and is included as a line item in the estimate of base costs.

- **General Requirements Factor**

General Requirements Factor is based on Anchorage costs without area adjustment. The factor is 1.20. It is multiplied by the Base Cost to get the project cost, exclusive of planning, architecture, engineering and administrative costs. This factor assumes projects include multiple deficiencies, which are then consolidated into single projects for economies of scale. The general requirements factor has not been adjusted for Indian Preference.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Contingency for Design Unknowns (Estimating Contingency)**

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned. The factor used is 1.15.

- **Estimated Total Cost**

This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2001. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

- **Project Cost Factors**

Similar to new clinics, the following project factors have been included in Section VI of this report.

- Design Services is included at 10% to cover professional services including engineering and design.
- Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.
- Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Estimated Total Project Cost of Remodel/Addition**

This is the total estimated cost of the project including design services, the construction contract cost for work completed under Davis Bacon wages and assuming construction before year-end 2001. No inflation factor has been applied to this data.

V. Summary of Existing Clinic Deficiencies

The attached sheets document the deficiencies; provide recommendations on how to make repairs or accommodate the needs and provide a cost estimate to accomplish the proposed modifications. The summary addresses individual deficiencies. If all deficiencies were to be addressed in a single construction project there would be cost efficiencies that are not reflected in this tabulation.

These sheets are reports from the Access Data Base of individual Deficiencies that are compiled on individual forms and attached for reference.

Refer to Section VI. New Clinic Analysis for a comparison of remodel/addition to new construction.

VI. New Clinic Analysis

The analysis of whether a new clinic is required is based on the Denali Commission standard of evaluation that "New Construction is viable if the cost of Repair/Renovation and Addition exceeds 75% of the cost of New Construction".

We have therefore determined the cost of a New Clinic Construction to meet the Alaska Rural Primary Care Facility (ARPCF) Space Guidelines for a size of village. We have also determined the cost of Repair/Renovation & Addition to the existing Clinic to meet the same ARPCF Space Guidelines.

A. The cost of a New Denali Commission 2000 SF Large Clinic in Grayling is projected to be:

• Base Anchorage Construction Cost per s.f.		\$183
• Project Cost Factor:	@ 45%	\$ 82
Medical Equipment	17%	
Construction Contingency	10%	
Design Fees	10%	
Construction Administration	8%	
• <u>Multiplier for Village</u>	<u>@ 1.28</u>	<u>\$ 74</u>
Adjusted Cost per SF		\$340

Projected Cost of a New Clinic: 2000 s.f. X \$340 = \$680,000

B. The cost of the Repair/Renovation and Additions for the existing Clinic are projected to be:

• Code & Condition Repairs/Renovations		
Cost from Deficiency Summary		\$300,997
• Remodel/Upgrade work (See Def. Code 19)		
75% of clinic 1330 SF = 1000 SF @ \$104/SF		\$103,379
• Additional Space Required by ARPCF (See Def. Code 01}		
o Base Anchorage Cost		\$183
Additional Costs –	@ 52%	\$115
Medical Equipment	17%	
General Requirements	20%	
Estimation Contingency	15%	
o <u>Multiplier for Village</u>	<u>@ 1.28</u>	<u>\$ 84</u>
Adjusted Cost per SF		\$382
Total Addition Cost of 650 SF @ \$382		\$249,291
• Project Cost Factor:	@ 28%	\$183,027
Construction Contingency	10%	
Construction Administration	8%	
Design Fees	10%	

Total cost of remodel/addition \$836,694

C. Comparison of Existing Clinic Renovation/Addition versus New Clinic:

Ratio of Renovation/Addition versus New Clinic is:
\$836,694 / \$680,000 = 1.23 x cost of New Clinic

Based on Denali Commission standard of evaluation; the remodel/addition costs are more than 75% of the cost of new construction. A new clinic is recommended for this community.

* Note: Village factors may have been adjusted for recent 2001 cost adjustments and may have changed from previously published data distributed to the villages.

VII. Conclusions and Recommendations

The existing Grayling Clinic has served the community well for many years. Base on current ANTHC and YKHC delivery model for health care to rural Alaska, the facility is not adequate in size or in condition to meet these needs. The existing structure could be adapted for many other less clinical and medically stringent uses without extensive remodeling.

After careful review it is the recommendation of the consultant team that a new Denali Commission Medium 2000 SF Clinic be considered for Grayling. The addition of approximately 670 SF of clinic space required by the current ARPCF Program Space Guidelines and the major renovation and upgrading of the existing clinic space will cost 1.23 times the cost of a new clinic. This results in the recommendation of a new clinic for this village.

We reviewed the options with the local community leaders the consensus was that the New Medium Clinic would meet the current community needs and for years to come. In addition, they agreed and provided a new clinic site adjacent to the existing City Hall on the same site as the current Health Clinic. The new site is adjacent to all existing city utilities.

The community believes this is a good solution and will produce the best return for funds invested in a clinic that meets the needs of Grayling community and is aggressively moving to assist in any way to accomplish this goal.

Appendix A: Specific Deficiencies Listings

The attached sheets represent the individual deficiencies identified for this project and the corrective action required to meet current codes and standards of construction. The deficiencies are further summarized in Section V. Summary of Existing Clinic Deficiencies.

Appendix B: General Site Photographs



Aerial from the east



Exterior from West



Exterior from Northwest



Exterior from Southeast



Exterior from Northeast



Front Ramp



Crawlspace door and bermed earth



Crawlspace



Rear Stair



Waiting Area



Main office area



Sink in Toilet room



Bath tub not code compliant



Exam/Trauma Room



Exam / Trauma Room



Back office / Hall, Storage.



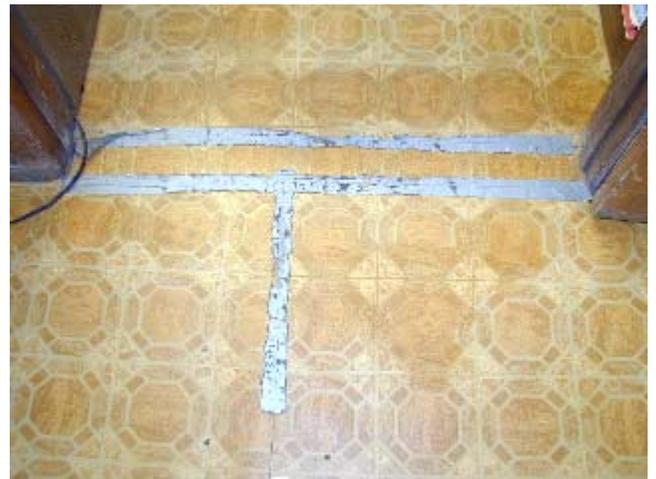
Storage Room



Back office to small second exam



Floor and Threshold non-compliant



Typical floor condition



Hallway from back to front



Proposed New Clinic Site from Southwest



Proposed New Clinic site from West



Proposed New Clinic Site from East)

This Report was Prepared by
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