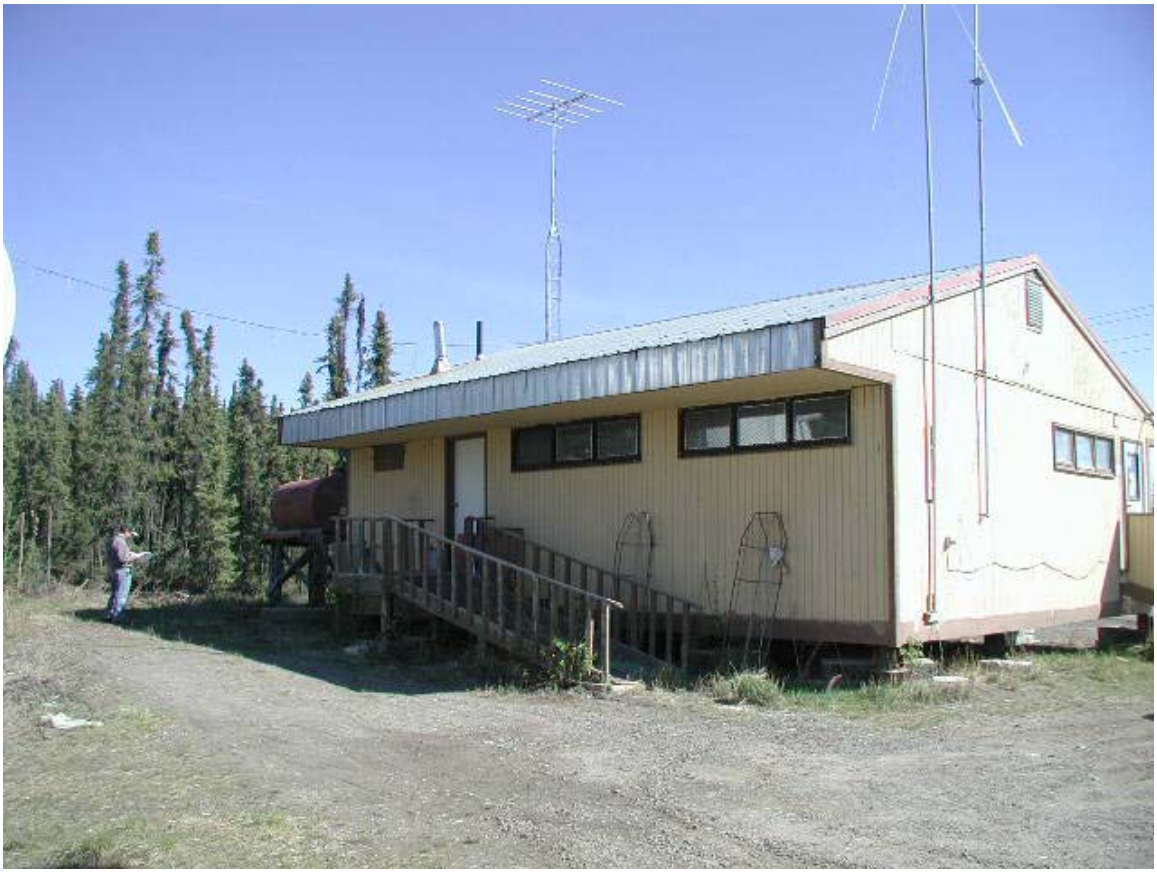
NULATO
Health Clinic



Alaska Rural Primary Care Facility
Code and Condition Survey Report

July 23, 2001

I. EXECUTIVE SUMMARY

Overview:

The Nulato clinic was constructed in 1978. The clinic sits at the base of a hill sloping up from the original townsite on the banks of the Yukon River, up to the new townsite which is located on good soil with tall spruce trees farther up the hill. It is a wood frame building on steel piling with a trussed roof. The building has been modified and improved several times, however, its present condition can be classified as poor. The wall insulation is minimal. The windows need replacement and the flooring is deteriorated. The gypsum board has fallen away from the framing for the ceiling and has been held in place with nail-on batten strips.

Renovation and Addition:

The existing clinic is 959 s.f. and would require an addition of 1041 s.f. to meet the 2000 s.f. minimum area recommended for a medium clinic by the Alaska Rural Primary Care Facility study. The floor plan layout would require the remodel of the entire interior space. Additionally, the poor condition of the building will require extensive upgrades to improve the foundation, thermal enclosure and other building systems. The cost of required renovations and code upgrades, combined with the cost of a new addition equal 178% of the cost of a new clinic.

New Clinic:

Because the cost of renovation and addition is more than 75% of the cost of new construction, a new clinic of at least 2000 s.f. should be built to replace the existing clinic. There are two site options being evaluated by the city for the new clinic, both are in the new townsite on the hill. One site would locate the clinic between two existing buildings on a heavily treed site and the other is an open piece of land with a sloping terrain. Either site would accommodate a clinic with careful planning. A sloping site actually improves access for buildings on piles if the entrance is located on the uphill site. A new clinic is recommended for this village.

II. GENERAL INFORMATION

A. The Purpose of the Report:

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 (ARPCF) assessment, planning, design, and construction. 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 among the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information gathered will be tabulated and analyzed according to a set of fixed criteria that will yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most practical and cost effective means to bring the clinics up to a uniform standard of program and construction quality. 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.

B. The Assessment Team:

The survey was conducted on June 7, 2001. John Crittenden, AIA, Architects Alaska and Ralph DeStefano, PE, RSA Engineering, completed the field inspection for this project. Dan Williams, ANTHC Project and Charles Woodley of Tanana Chiefs made introductions and conducted the meetings. Team members who assisted in the preparation of the report included Stephen Schwicht and Ian VanBlankenstein of NANA/DOWL, project managers for the survey team, and Jay Lavoie of Estimations, Inc.

C. The Site Investigation:

The format adopted is similar to the "Deep Look", a facility 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. This written report includes a floor plan of the clinic and a site plan indicating the existing clinic site. Additional information gathered during the site investigation that is referred to in the report, which includes sketches of building construction details, a building condition checklist, and proposed plans for village utility upgrades, are not included with this report. This information is available for viewing at ANTHC's Anchorage offices and will be held for reference.

III CLINIC INSPECTION SUMMARY

A. Community Information

The community of Nulato has a current population of 336 as published in the 2000 U.S. Census. It is located 40 miles west of Galena in the Nulato Recording District. It is a part of the Doyon Regional Corporation. Refer to the attached Alaska Community Database prepared by the Alaska Department of Community and Economic Development in Appendix C for additional community information.

B. General Clinic Information

The 959 s.f. Nulato clinic was constructed in 1978 as part of a water treatment building/ washeteria. The building, although well designed for its era, is deteriorating due to a combination of age and failure of building systems. Although the building has had a series of maintenance improvements through the years they have not kept pace with the general aging of the structure. It is a conventional wood frame building on steel piling. The building sits on a sloping site halfway between the old town where the school is located, and the new townsite, located further up the hill. The clinic is high enough that it was not inundated in the recent flooding of the old town during the Yukon River break-up.

C. Program Deficiency Narrative

The clinic building is in poor to fair condition overall and space is at a premium. Administration, office, medical treatment, and supply storage areas are limited. As a result, the large waiting area is filled with storage of medical and EMS supplies, patient bed for waiting, and general storage for other items. The furnishings do not support clinic activities well and appear to be random accumulations of various sizes and types not intended for a clinic environment. Some remodeling of existing space could make the clinic much more efficient and usable. The clinic has an area of 959 s.f. which makes it 1041 s.f. less than the ARPCF minimum of 2000 s.f. for a medium clinic.

The following table illustrates a comparison between the current actual square footage (SF) and the 2000 s.f. minimum area recommended by the Alaska Rural Primary Care Facility study for a Medium Clinic:

Table 1 – ARPCF Clinic Area Comparison

Purpose/Activity	#	Existing Net SF	#	ARPCF Medium	Difference
Arctic Entry	2	50	2	2 @ 50=100	50
Wait/Recep/Closet	1	270	1	150	-120
Trauma/Telemed/Exam	2	226	1	200	-26
Office/Exam	1	80	1	150	70
Admin./Records	2	274	1	110	-164
Pharmacy/Lab		-	1	80	80
Portable X-ray		-		-	-
Spec. Clinic/Health Ed./Conf.		-	1	150	150
Patient Holding/Sleep Room		-	1	80	80
Storage	1	22	1	100	78
HC toilet	1	36	2	2 @ 60=120	84
Janitorial Closet		-	1	30	30
Total Net Area				1270	
Mechanical Room	1	-		147	147
Morgue				30	30

The Nulato Clinic has a current gross area of 959 s.f. This would require a gross building area expansion of approximately 1041 s.f. in order to meet the 2000 s.f. minimum ARPCF requirement for a Medium Clinic.

An analysis of the existing building's program functions follows. Please also refer to the floor plan in Section H:

- **Arctic Entries**: The two arctic entries to this building are each approximately 20 s.f. This size works for one person at a time, but is an obstacle for stretcher access. Although there is a ramp to the back door it is not used due to the difficulty in getting around the corner and through the narrow vestibule.

- **Waiting:** The waiting area measures 270 s.f. plus a small niche for patient holding. A remodel could convert this large space into program support areas. Patient care areas open directly off the waiting area. This compromises privacy of clinic operations and patient confidentiality.

- **Trauma/Telemed/Exam:** None provided. Trauma cases must be handled in the main waiting area. This does not lend itself to privacy and medical control.

- **Office/Exam:** One of the two exam rooms is used as office/exam/med/lab. The other is used primarily as an exam room. There is only one effective exam room in the clinic. It is too small for most situations. A larger primary exam room is needed, particularly if it is the only one.

- **Administration/Records:** A large corner room equipped with a stove/sink/refrigerator unit serves as the administrative work area. It incorporates file storage cabinetry and workspace for only one person. It is not an effective working environment.

- **Pharmacy/Lab:** All lab procedures occur within one of the two generic exam rooms.

- **Specialty Clinics:** The clinic cannot accommodate specialty clinics.

- **Patient Holding/Sleep:** A bed placed in the oversized waiting area serves as a patient holding area.

- **Storage:** A small storage room (5' x 7') keeps the main medical/medicinal supplies. This room is located directly off the patient waiting area. It is too small to be very useful.

- **HC Toilet Room:** The toilet room is undersized for handicapped access. The tub sits up on two steps. The room has limited clearance and an awkward layout for general usage.

- **Janitor Closet:** Janitorial supplies are stored in the furnace room.

- **Ancillary Spaces:** There are no ancillary spaces in this clinic.

D. Architectural/Structural Condition

This clinic is in poor to fair condition. The floor needs replacement and the ceiling is sagging. The walls need additional insulation, the windows need replacement, and the ceiling light fixtures need to be replaced. The building needs all new casework, the ramp and stairs need to be replaced, and the foundation is failing.

E. Site Considerations

The existing site is subject to discontinuous permafrost. The steel piling foundation of the existing clinic has shown signs that it is not stable. The community has selected a new site adjacent to the community office building in the new townsite. Soil in this area does not appear to have permafrost as evidenced by the performance of adjacent existing buildings. The site is somewhat limited, however, with careful planning, and the advantage of having good soils, it is possible to place a clinic in this location. The contours at this site drop off considerably to the back so that the back entrance would have to be elevated above grade.

The city has an existing plan designed for this site, however, there are a number of aspects of the plan which do not support the ACPCF program objectives. The clinic designed would have to be modified considerably to meet the design criteria. The community would like to start the design process over, using medical planning and clinic design experience from other regions, to obtain a quality health care facility.

Site utilities include village water, sewer, power, and telephone service. The water and sewer are obtained from village wide piped systems.

F. Mechanical Condition

Heating and Fuel Oil: A Miller forced air furnace provides heating for the clinic. The furnace is located in a mechanical/storage room adjacent to the waiting room. Supply ductwork for the furnace is located in the crawl space below the building, a very confined area that was not possible to access. Return air from the clinic is ducted from the waiting area of the clinic back into the mechanical room where the furnace is located. There is no outside air for the furnace, so it is not used to help ventilate the building. The furnace is not working properly and is unable to maintain temperature in the clinic during cold conditions. A monitor heater was installed in the clinic waiting room to provide additional heat for the furnace, but it was out of order during the time of the visit. The furnace and its flue both need to be replaced. They are at the end of their useful life and the flue was not provided with a barometric damper.

Fuel is provided to the clinic's furnace from a 500-gallon, single walled tank mounted on wooden stand located away from the building. Fuel for the monitor stove is stored in a 55-gallon barrel mounted on wooden stands located adjacent to the building. The 500-gallon tank needs to be resupported and piping and valves between the tank and the furnace needs to be replaced and supported. The 55-gallon tank is UL listed, improperly supported and is too close to building. The tank, its supports and piping need to be replaced and properly installed.

Ventilation: There is no mechanical ventilation or exhaust for the clinic. The only source of ventilation for the occupied spaces is though operable windows. There was a bathroom exhaust fan at one time, but it has been removed. The clinic needs to be provided with a mechanical ventilation system and should not rely on operable windows alone.

Plumbing: Water is provided to the clinic from the village water supply. An electric hot water heater generates hot water for the clinic. A three-inch waste line flows by gravity from the building to the village sewer system. Vermin are able to enter the building around the sewer entrance into the building. It needs to be sealed. Plumbing fixtures in the clinic include a toilet, lavatory, and shower/tub in the restroom, none of which meet ADA requirements. Service and clean-up water for the facility is provided by exposed hose bibbs mounted on an interior wall near the backdoor. It is not provided with a vacuum breaker to protect the domestic water from cross contamination.

G. Electrical Condition

Power: 120/240-volt single-phase service is provided to the clinic's electrical meter through an overhead service. The meter base is grounded from a wire extended down to a ground rod. The ground rod does not appear have been fully driven into the ground. A 100-amp breaker is located in the electrical panel. Copper conductors are used to feed the panel. The panel has a total of 20 breakers installed and all but two are used. There is no room for additional breakers. Wire from the panel is run in EMT. The wiring for the clinic is in fair to poor condition. There are an inadequate number of receptacles in the building. Outlet strips are being used. Receptacles within 10 feet of exam room sink, the restroom sink, and the one located outside at the entrance were not GFCI protected. There were a number of electric problems and deficiencies noted. These are found in the Deficiency Evaluation and Cost Assessment Forms.

Lighting and Emergency Fixtures: Florescent lights provide interior lighting using four lamp 4-ft., 35-watt F40 bulbs in surface mounted fixtures. The light fixture bulbs are reportedly burning out faster than expected, possibly due to voltage irregularities. Lighting levels in the clinic are poor. There is a single exterior light located at the entrance to the building. Two emergency lights serve the building, but when tested the batteries were found to be dead. Exit signs are provided in the clinic, but they are in poor condition and need to be replaced. The fire alarm system consists of a single battery operated smoke detector installed in the clinic kitchen.

Telecommunications: The telecommunication system includes one phone line serving the entire clinic. There is no Internet access nor is there a Telemed system installed in the clinic.

H. Existing Facility Floor Plan

See following sheet for the floor plan of the existing clinic.

J. Community Plan

Refer to the attached community plan for location of the existing clinic and the proposed location for the new clinic. If the existing clinic site is the preferred location or if a new site has not yet been selected, only the existing clinic location will be shown.

IV. DEFICIENCY EVALUATION AND COST ASSESSMENT

The attached deficiency reporting forms are based on Public Health Service form AK H SA-43. The forms are numbered sequentially for each discipline starting with **A01** for Architectural and structural deficiencies, **M01** for Mechanical deficiencies and **E01** for Electrical deficiencies.

A. Deficiency Codes

Deficiencies are further categorized according to the following PHS Deficiency codes to allow the work to be prioritized for federal funding, should that apply. Deficiency codes used in this survey include:

02 **Fire and Life Safety:** These deficiencies identify areas where the facility is not constructed or maintained in compliance with provisions of the state mandated building codes including the International Building Code, The Uniform Fire Code, NFPA 101, The Uniform Mechanical and Plumbing Codes and The National Electrical Code.

03 **Safety:** These deficiencies identify miscellaneous safety issues.

04 **Environmental Quality:** This addresses DEC regulations, hazardous materials and general sanitation.

05 **Program Deficiencies:** These are deficiencies which show up as variations from space guidelines established in the Alaska Primary Care Facility Facility Needs Assessment Project and as further evaluated through observation at the facility site and documented in the facility floor plans

07 **Disability Access Deficiencies:** The items with this category listing are not in compliance with the Americans with Disabilities Act.

08 **Energy Management:** These deficiencies address the efficiency of heating systems/fuel types and the thermal enclosures of buildings.

11 **Structural Deficiencies:** These are deficiencies with the fabric of the building. It may include the foundations, the roof or wall structure, the materials used, the insulation and vapor retarders, the attic or crawl space ventilation and the general condition of interior finishes. Foundation systems are included in this category.

12 **Mechanical Deficiencies:** These are deficiencies in the plumbing, heating, ventilating, air conditioning, or medical air systems.

13 **Electrical Deficiencies:** These are deficiencies with electrical generating and distribution systems, fire alarm systems and communications systems.

14 **Utilities:** This category is used for site utilities, as opposed to those within the building and may include sewer lines and water and power distribution.

B. Photographs

Each sheet has space for a photograph. Some deficiencies do not have photos. Photographs do not cover all areas where the deficiencies occur but are intended to provide a visual reference to persons viewing the report who are not familiar with the facility. Additional photographs of the clinic and the surrounding area are included in Appendix B.

C. Cost Estimate General Provisions

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.

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 table summarizes the deficiencies at the clinic and provides a cost estimate to accomplish the proposed modifications. If all deficiencies were to be addressed in a single construction project there would be cost savings that are not reflected in this tabulation. The total cost of remodel/addition shown in Section VI is intended to show an overall remodel cost that reflects this economy. Refer to Section VI for a comparison of remodel/addition costs to the cost of new construction. The specific deficiency sheets are included in Appendix A.

VI. NEW CLINIC ANALYSIS

The decision on whether to fund new clinic construction or a remodel/addition of the existing clinic is to be determined by comparing the cost of a new facility designed to meet the program requirements of the Alaska Rural Primary Care Facilities minimum area requirements with the projected combined cost of renovating, remodeling and adding onto the existing building to provide an equivalent facility. If the cost of the remodel/addition project is greater than 75% of the cost of constructing an altogether new facility then a new facility is recommended. That ratio is computed as follows:

- **The cost of a new clinic in Nulato is projected to be:**

Base Anchorage Cost per s.f.		$183/ s.f.
Medical Equipment Costs @ 17%		$31
Design Services 10%		$18
Construction Contingency 10%		$18
Construction Administration. 8%		$15
Sub-total		$265/ s.f.
Area Cost Factor for Nulato	1.46*	
Adjusted Cost per s.f.		$386/ s.f.

Total Project Cost of NEW BUILDING 2,000 x $386 = $772,000

- **The cost of a Remodel/Renovation/Addition is projected to be:**

Projected cost of code/condition renovations (From the deficiency summary)
90% of cost of code/condition improvement** $422,562 Renovation

Projected cost of remodeling work (See A12)
959s.f. clinic @ 100% remodel = 959 s.f. $112,767 Remodel

Projected cost of building addition (See A13)
2,000 s.f. – 959 s.f. = 1,041 s.f. $536,750 Addition
Design 10%, Const. Contingency 10%, Const. Admin. 8% $300,182

Total Project Cost of REMODEL ADDITION **$1,372,261**

- **Ratio of remodel:new is $1,372,261 : $772,000 = 1.78X**

The cost of a remodel/addition for this clinic would cost 178% the cost of a new clinic, therefore, a new clinic is recommended for this community.

* The Area Cost Factor was refined by Estimations, Inc. in July 2001 based on information obtained during the site visit.

** The 90% factor represents economy of scale by completing all renovation work in the same project.

Appendix A: SPECIFIC DEFICIENCIES LISTING

Refer to the attached sheets for the listing of the individual deficiencies and the corrective action recommended.

Appendix B: GENERAL SITE PHOTOGRAPHS

The following sheets provide additional photographic documentation of the existing building and surroundings.

Appendix C: ADCED Community Profile

Refer to the attached document prepared by Alaska Department of Community and Economic Development profiling the community of Deering.

This Report was Prepared by

NANA/DOWL, JV

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A Division of DOWL

Architects Alaska
A Professional Corporation

Architecture
Facility Planning
Interior Architecture

900 W. 5th Ave. Suite 403
Anchorage, AK 99501
(907) 272-3567

R S A Engineering, Inc.