

# HUSLIA Health Clinic



## Alaska Rural Primary Care Facility Code and Condition Survey Report

July 23, 2001



## **I. EXECUTIVE SUMMARY**

### **Overview**

The Huslia Clinic was built in approximately 1960 and is located in a rough, weathered log building, similar to many other structures in this village. The clinic is subject to extreme weather condition and heavy use. The clinic generally lacks storage areas and is not accessible. The lack of adequate space for medical supplies and the lack of a trauma room prevent the staff from providing the level of care needed on a daily and emergency basis.

### **Renovation and Addition**

The existing clinic is 1078 s.f. and would require an addition of 922 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 approximately 100% of the 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 160% 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. The community noted a site nearby the existing clinic which appears suitable to build the new clinic. The proposed site is near utilities, the school, and other community services and appears to be of adequate size to accommodate a larger structure.

## **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 May 23, 2001. John Biggs, AIA, Architects Alaska and Ralph DeStefano, PE, RSA Engineering completed the field inspection for this project. Dan Williams of ANTHC and Theresa Gallagher of Tanana Chiefs Conference were the team escorts. Dan and Theresa reviewed alternative site locations with village leaders whom they knew personally. Dan made introductions and conducted the village briefings. 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 Huslia has a current population of 293 as published in the 2000 U.S. Census. It is located 290 miles west of Fairbanks 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 Huslia Clinic was constructed in approximately 1960 and is similar to other log building clinics in the region. This building is generally 26'x 33' in size with several small plywood additions and an entry vestibule. The building is constructed with a log foundation, horizontal log walls, log roof purlins, and 2x6-roof framing. The interior walls are lined with wood paneling.

#### **C. Program Deficiency Narrative**

The main programmatic deficiencies pertain to the small overall size of the existing clinic, the lack of certain key functions, the size of existing spaces, and the lack of handicapped access. Exam spaces and insufficient. The toilet room is large but because fixtures cannot be located at the end of the room on the exterior wall, the room lacks the required 5'-0" turnaround space. In addition, the building lacks a ramp access and all of the interior doors are less than the required 3' wide. In general, almost all of the spaces need to be increased in size in order to meet standard minimum clearances and in order to comply with the APCF minimum program guidelines. A new building meeting all of the required minimum standards is probably the most cost-effective solution for Huslia.

A related programmatic issue is cleanliness. The clinic space is generally small but well arranged, however, the interior and exterior finishes are worn and substandard. Further, the lack of any method of removing dirt from people's shoes as they enter the building causes a build-up of dirt and dust on the floor throughout the clinic, especially at the waiting area and entry. Any expansion of clinic space or new construction should address the problem of keeping the entryway and waiting area clean and free of dust and dirt. This could easily be improved by including grating surfaces at a new entry ramp and recessed walk-off mats at a new entry vestibule.

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**

<b>Purpose/Activity</b>	<b>#</b>	<b>Existing Net SF</b>	<b>#</b>	<b>ARPCF Medium</b>	<b>Difference</b>
Arctic Entry	1	87	2	2 @ 50=100	13
Wait/Recep/Closet	1	110	1	150	40
Trauma/Telemed/Exam	1	113	1	200	87
Office/Exam	1	113	1	150	37
Admin./Records	1	194	1	110	-84
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	120	1	100	-20
HC toilet	1	63	2	2 @ 60=120	57
Janitorial Closet	-		1	30	30
Total Net Area				1270	
Mechanical Room	-			147	147
Morgue	-			30	30

The Huslia Clinic has a current gross area of 1078 s.f. This would require a gross building area expansion of approximately 922 s.f. in order to meet the 2000 s.f. minimum requirements 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 front entry is a small arctic entry which measures approximately 6’ x 8’. The arctic entry is rough and weathered and is ineffective in keeping out the weather or preventing dirt from being tracked into the waiting area.
- **Waiting:** The waiting area is generally functional. Due to a lack of acoustic separation in the building, the waiting area lacks privacy. Because of its proximity to the front door, the waiting area is cold and drafty. The waiting area is not visually controlled by the office area.
- **Trauma/Telemed/Exam:** Huslia clinic has no room which meets the requirements of a trauma room.

- **Office/Exam:** This clinic has two exam rooms. These rooms are small but functional for examinations.
- **Administration/Records:** The administration area is a large office area with space for several workstations and record storage. However, the clinic has outgrown its current space, and the lack of storage throughout the clinic creates a cluttered and inefficient office area.
- **Pharmacy/Lab:** All lab procedures occur within one of the two generic exam rooms.
- **Specialty Clinics:** Specialty clinics require the use of one of the exam rooms and the corridor space. This is a major disruption to clinic activities.
- **Patient Holding/Sleep:** None provided in the clinic.
- **Storage:** Several storage areas exist, however, these areas are small, unorganized, and cluttered.
- **HC Toilet Room:** The toilet room is undersized for handicapped access and lacks handicapped accessible fixtures.
- **Janitor Closet:** None provided.
- **Ancillary Spaces:** There are no ancillary spaces in this clinic.

#### **D. Architectural/Structural Condition**

The clinic building is a rustic log structure of approximately 1078 s.f. The foundation is log sill beams on 2x12 pads laid on a gravel pad. Intermediate supports are provided by wood posts on 2x12 pads. The floor structure is a 2x4 plywood sandwich panel supported on 4x12 sawn logs. The walls are log, with interior furring. The ceiling is painted plywood suspended by wood framing. The roof is a low-grade metal roof. No trim or flashing was apparent, and roofing underlayment was not apparent. Because of the questionable load-capacity of the floor system and the questionable load capacity of the roof system, it would be unwise to attempt to tie a modern, tight building into the existing log building. While it may be feasible to add an addition of similar construction and structural nature, a new building with a much more rigid frame, increased load capacities, and solid foundation would probably not weather and wear at the same rate as the existing building and could potentially cause substantial and continuous problems with joints and sealants in the long run. Structurally and architecturally, the recommended solution is to abandon the existing log building and build a new separate clinic building.

**E. Site Considerations**

The existing clinic is in a central location with access by main roads in the community. If a replacement clinic is constructed, a nearby site was designated and recommended by the community which is close to utilities and services. Site utilities at the existing site include village water, sewer, power, and telephone service directly to the building.

**F. Mechanical Condition**

**Heating and Fuel Oil:** A Weil-McLain model WTGO boiler heats the clinic. The heat is distributed throughout the clinic via a single circulation pump and residential quality baseboard. The heating system is not separated into zones, the heat is either on or off in the entire clinic. This is not suitable for a clinic, especially in rooms that need their own temperature control such as exam rooms or procedure rooms. Fuel for the boiler is provided from a single wall, 1000-gallon tank mounted on a wooden stand located close to the facility. The tank needs to be moved away from the building and replaced with a UL listed properly vented and piped tank.

**Ventilation:** The clinic has no mechanical ventilation, except for the exhaust fan in the restroom. The only other source of ventilation for the occupied spaces is through operable windows. The clinic needs to be provided with a mechanical ventilation system.

**Plumbing:** Cold water is provided to the clinic from the piped circulating village water system; hot water is provided from an electric water heater. Sewer services is provided via a piped village sewer system. Plumbing fixtures in the clinic include a toilet and lavatory in the restroom, neither meeting ADA requirements. There are residential lavatory type sinks in the exam rooms; these should be replaced with stainless steel clinic quality sinks.

**G. Electrical Condition**

**Power:** 120/240-volt single-phase power is provided to the clinic through an underground service. The electrical power system for the facility is generally in poor condition and is a safety hazard. Receptacles within 10 feet of exam room sinks or the restroom sink are not GFI protected. There were no receptacles on the exterior of the building at the clinic entrances. There is exposed romex on the front of the building and open junction boxes with exposed wire nuts in the attic. The main breaker panel is located in the waiting room and does not have a front cover. These deficiencies are described in detail in the Deficiency Evaluation and Cost Assessment forms.

**Lighting and Emergency Fixtures:** Fluorescent fixtures provide the interior lighting. Lighting levels are poor throughout the facility; the lighting is not adequate for a clinic and needs to be replaced. Emergency light fixtures are installed, but the clinic does not have any emergency exit signs. Exterior lighting is provided with incandescent fixtures at the clinic entrance. The fire alarm system consists of two battery-operated smoke detectors installed in the hallway.

**Telecommunications:** The telecommunication system includes one phone line serving the clinic. The clinic does not have a Telemed system.

**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 Huslia 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 Huslia	1.63*	
Adjusted Cost per s.f.		\$433/ s.f.

**Total Project Cost of NEW BUILDING 2,000 x \$433 = \$866,000**

- **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**		\$375,375 Renovation
Projected cost of remodeling work (See A08)		
1,078 s.f. clinic @ 100% remodel = 1,078 s.f.		\$251,991 Remodel
Projected cost of building addition (See A07)		
2,000 s.f. – 1,078 s.f. = 922 s.f.		\$453,628 Addition
<u>Design 10%, Const. Contingency 10%, Const. Admin. 8%</u>		<u>\$302,678</u>

**Total Project Cost of REMODEL ADDITION \$1,383,672**

- **Ratio of remodel:new is \$1,383,672 : \$866,000 = 1.60X**

The cost of a remodel/addition for this clinic would cost 160% 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 Huslia.

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