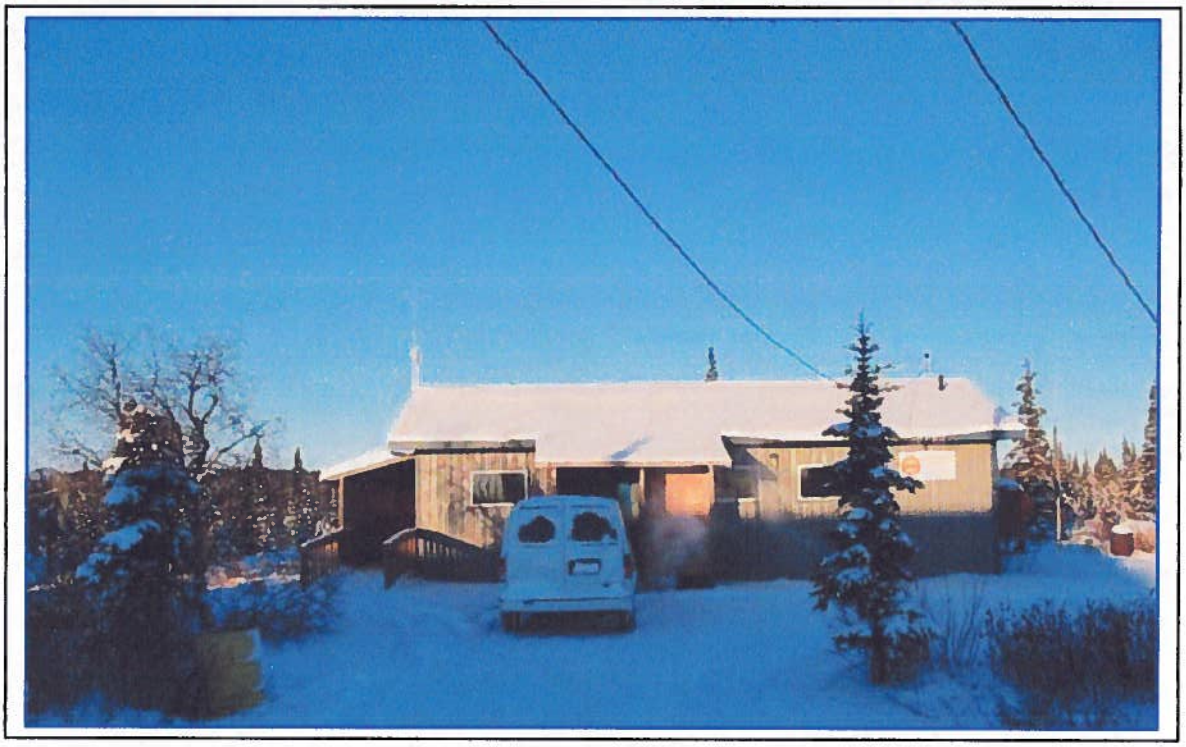
Ekwok Health Clinic

Alaska Rural Primary Care Facility

Assessment and Inventory Report

Final

December 17, 2001



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I. EXECUTIVE SUMMARY

A. OVERVIEW

The Ekwok Health Clinic is approximately 949 gross square feet (SF) of space. The clinic was built and occupied in 1993. The clinic is owned by the City and operated by the Bristol Bay Area Health Corporation. The building footprint is approximately 25' x 40'. The facility has two entries, a front stair entry, and a left-side entry with ramp access. Upon entering the clinic the waiting room is to the right. A sofa/bed serves as both a bed for visiting Itinerant Health Providers (IHP) and seating for waiting patients. The wait area has a desk for the receptionist. Configuration of the waiting room does not permit patient privacy. The clinic consists of an exam/trauma room, exam/Community Health Aid (CHA) office, accessible bathroom, computer/records room, pharmacy, mechanical room and storage/janitor room with shower. There is a small arctic entry.

The clinic is in fairly good condition but lacks spaces required to provide adequate health service programs to the community of 130 residents.

B. RENOVATION/UPGRADE AND ADDITION

The existing clinic requires an additional 1040 square feet to accommodate current needs and meet with Alaska Rural Primary Care Facility (ARPCF) space guidelines. Additional space to be added to the clinic includes a separate janitor's room, receptionist area, pharmacy, storage rooms, offices, kitchen, sleeping room(s), and accessible bathroom nearer exam rooms. The addition of these spaces to the clinic would require some reconfiguration of the existing floor plan. A new covered entry with ADA compliant stairs should also be part of the remodel and addition.

C. NEW CLINIC

Based on the Denali Commissions Standard of Evaluation the estimated cost to remodel/add-onto the existing clinic is more than the cost of new construction. The community has proposed that a new 2000 SF Denali Commission Medium Clinic be built on a new site. A prototypical floor plan has been enclosed in this report. (See Section III.H.)

The community fully supports this effort and is currently assessing appropriate site locations.

II. GENERAL INFORMATION

A. Purpose of Report and Assessment Process

ANTHC has entered into a cooperative agreement with the Denali Commission to provide for the management of the small clinic program under Alaska Rural Primary Care Facility (ARPCF) guidelines, 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. Providing each community with a uniform standard of evaluation for comparison with other communities to determine the relative need between for funding assistance for the construction of new or remodeled clinic facilities. The information provided in this report is a component of the scoring for the small clinic RFP the Denali Commission will send to communities in priority groups three and four. 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 cost of new construction vs. remodel/addition will be evaluated to determine the most efficient means to bring rural clinics 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

The survey was conducted on December 17, 2001 by Jerry Hann, AIA, Architect of Larsen Consulting Group, Inc.; Bill Henriksen, PE of RSA Engineering, Inc., and Joshua Smith of ANTHC. Accompanying the field inspection team was Rose Heyano, Director of Community Health Services, Bristol Bay Area Health Corporation. Joshua made introductions and conducted the briefings to ensure complete understanding of the inspection process. Preparation of the information gathered was a cumulative effort between the members of the field team, Holly Kelty, LCG's Project Coordinator and Estimations, Inc.

C. Report Format

The modified "Deep Look" format adopted is 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 are evaluated. The written report includes a floor plan of the clinic, site plan as available and new plans for renovation/upgrade or new clinics. Additional information was gathered during the field visit including 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 city utility upgrades. This information is available for viewing at ANTHC's Anchorage office and will be held for reference.

D. SITE INVESTIGATION

On December 17, 2001, the team flew to the site, made observations, took photos and discussed the facility needs with on-site personnel. Approximately four hours were spent on site. The team spent further time on site the following morning to gather additional information. This was sufficient time to investigate foundations, structure, condition, mechanical/electrical systems, and interview staff to assess current and projected health care needs. No existing plans were available for the clinic. The building was "as-built" to create working plans.

III. CLINIC INSPECTION SUMMARY

A. COMMUNITY INFORMATION

Population:

- 130 (2000 Census)
- 2nd Class City, Unorganized Borough, Southwest Region Schools, Bristol Bay Native Corporation

Location: Ekwok is located along the Nushagak River, 43 miles northeast of Dillingham, and 285 miles southwest of Anchorage. It lies at approximately 59d 22m N Latitude, 157d 30m W Longitude. (Sec. 35, T009S, R049W, Seward Meridian.) Ekwok is located in the Bristol Bay Recording District. The area encompasses 16 square miles of land and 1.4 square miles of water. Ekwok is in a climatic transition zone. The primary influence is maritime, although a continental climate also affects the weather.

History: Ekwok means "end of the bluff". Ekwok is the oldest continuously occupied Yup'ik Eskimo village on the river. During the 1800's, the settlement was used as a fish camp in spring and summer, and as a base for berry picking in the fall. By 1923, Ekwok was the largest settlement along the river. In 1930, a BIA school was constructed. Until a post office opened in 1941, mail was delivered by dog sled from Dillingham. Many of the early homes in Ekwok were located in a low, flat area near the riverbank. After a severe flood in the early 1960's, villagers relocated to higher ground (the existing town site location). The City was incorporated in 1974.

Culture: Ekwok is a Yup'ik Eskimo village with a fishing and subsistence lifestyle.

Economy: Inhabitants depend on subsistence activities for a variety of food sources. A small number of residents trap. Salmon, pike, moose, caribou, duck and berries are harvested. Summer gardens are popular because families do not leave the village to fish for subsistence purposes. Most residents are not interested in participating in a cash economy. Six residents hold commercial fishing permits. The village corporation owns a fishing lodge two miles downriver. Gravel is mined near the community.

Facilities: Individual wells provide water to the majority of the community. The community needs a washeteria with water source and treatment system. Twenty HUD homes have individual wells and piped septic system. The City operates a piped sewage system with a sewage lift station connecting to 16 residences. The remaining homes use septic systems or a flush/haul system; a sewage pumper is available. Thirty-six of forty-two homes have operable plumbing. Refuse collection services are provided. The community would like to relocate the landfill.

Transportation: Air transport is the most common method of transportation in Ekwok. Regular and chartered flights are available from Dillingham. There is a State-owned 2,720' gravel runway. Float planes land on the Nushagak River. Cargo is brought in during ice-free months from Dillingham by Coastal Marine Transport barge service. There are no docking facilities but a barge off-loading is available. Transportation to area villages is accomplished via Skiffs, ATV's and snow machines.

Climate: Ekwok is in a climatic transition zone. The primary influence is maritime, although a continental climate also has an effect on weather. Average summer temperatures range from 30 to 66 degrees Fahrenheit; winter temperatures average 4 to 30 degrees Fahrenheit. Precipitation averages 20 to 35

C. Program Deficiency Narrative

1) Space Requirements and Deficiencies

Space Comparison Matrix
Current Ekwok Actual SF to Denali Commission Medium Clinic

Alaska Rural Primary Care Facility				Current Clinic			Medium Clinic					
Purpose / Activity	Designated Itinerant			Actual Net SF			ARPCF SF			Difference		
	Size	No.	Net Area (SF)	Size	No.	Net Area (SF)	Size	No.	Net Area (SF)	Size	No.	Net Area (SF)
Arctic Entries				21	1	21	50	2	100			-79
Waiting/Recep/Closet	150	1	150	200	1	200	150	1	150			+50
Trauma/Telemed/Exam	200	1	200	155	1	155	200	1	200			-45
Office/Exam				93	1	93	150	1	150			-57
Admin./Records				75	1	75	110		110			-35
Pharmacy/Lab				0	0	0	80	1	80			-80
Portable X-ray												
Specialty Clinic/Health Ed/Conf				0	0	0	150	1	150			-150
Patient Holding/ Sleeping Room				0	0	0	80	1	80			-80
Storage	150	1	150	53	1	53	100	1	100			-47
HC Toilet				44	1	44	60	2	120			-76
Janitor's Closet				0	0	0	30	1	30			-30
Subtotal Net Area			500			641			1270			-629
Circulation & Net/Gross Conv. @ 45%						259			572			-313
Subtotal (GSF)						900			1842			-942
Mechanical Space @ 8%				49	1	49			147			-98
Total Heated Space			**500**			949			1989			-1040
Morgue (unheated enclosed space)			0				30	1	30			30
Ext. Ramps, Stairs, Loading	HC Accessible			As Required			As Required			As Required		

a. Overall Space Deficiencies: The facility size is approximately 1040 SF short of ARPCF space requirements.

b. Specific Room Deficiencies: The clinic lacks sleeping rooms, a kitchen, an ADA shower room, a separate pharmacy and lab, and sufficient storage space. The clinic does not have a specific Health Education Conference Room or a waiting room that gives patients and families privacy.

c. Other Size Issues: The existing spaces are, as described by the staff, comfortable but small.

2) Building Issues

a. Arctic Entries: The arctic entry is only 21 square feet and is inadequate for emergency situations.

b. Waiting / Reception: There is a large waiting/reception area to the right as you enter the clinic. The waiting area is a major complaint of the staff and patient. The area allows for little or no

privacy for patients exiting exam rooms. Patients must carry specimens through the waiting area to return to exam rooms from the bathroom.

c. Exam / Trauma: The space is functional but lacks the required 12' clear space between cabinets. According to staff, the room functions adequately, despite being undersized; however, the room is insufficient during emergency situations.

d. Exam Room: An additional exam room serves as the Community Health Practitioner (CHP) office.

e. Office / Administration / Records: The computer room serves as an office, administration/record area, pharmacy, lavatory and medical supply storage room. The space is insufficient for the multiple functions it supports.

f. Pharmacy / Lab: The pharmacy/lab is located in the computer room. The space is insufficient for the multiple functions it supports.

g. Specialty Clinic / Health Education / Conference: These gatherings are held in Dillingham. There is no space in the Clinic large enough to accommodate these services. If special health education were to be held at the clinic, it would disrupt daily health care activities.

h. Patient Holding / Sleeping Room: There are no sleeping rooms or patient holding rooms in the clinic. The sofa/bed in the waiting room is used for IHP's on overnight visits.

i. Storage: Storage is very minimal.

j. HC Toilet Facilities: The only bathroom meets UBC and ADA requirements.

k. Janitor's Room: The janitor's closet has a mop sink that has been converted into a 'make-shift' shower. The shower does not meet with ADA requirements. The shower is also used by the janitor as a mop sink.

l. Mechanical/Boiler Room: The mechanical room is used for storing clinic materials.

m. Ancillary Rooms: There are no ancillary rooms in the clinic.

3) Functional Design Issues

a. This facility is not functionally adequate for its current program and intended use. The entrance into the facility is not adequate for emergency equipment and unloading. The sanitation and patient care is adequate. The ability to perform required medical functions within the facility is satisfactory. The waiting area a major functional design issue for staff and patients due to lack of privacy. Designed storage areas are almost non-existent.

4) Health Program Issues

a. Patient comfort and privacy: The designated waiting area is the major complaint of the staff and patients. There is little or no privacy when patients enter or exit exam rooms to use bathrooms for urine specimens.

b. Medical/Infectious Waste: Red Bag Waste is shipped to Anchorage by plane.

c. Infection Control: The clinic is well kept and cleaned almost daily. The staff complains that the sheet vinyl is too white and is difficult to keep clean. Integral sheet vinyl cove base would enhance infection control.

d. Insect and Rodent Control: None noted.

e. Housekeeping: There is preventing adequate cleaning and housekeeping in this facility other than that noted above.

5) Utilities

a. Water Supply: The clinic has a private well. A ¾" copper pipe runs from the well to the mechanical room to the pressure tank, then branches to the electric water heater and cold water supply, an out to the plumbing fixtures throughout the facility. The piping runs through the crawlspace of the clinic. Hot water temperature for the clinic is regulated at the water heater (See Mechanical Narrative).

b. Sewage Disposal: The Clinic has a private septic system. There are reports that the septic system has previously backed up into the clinic. This problem is not reported to be persistent, but does indicate that proper maintenance of the septic system is required on a continuing basis (See Mechanical Narrative).

c. Electricity: The electrical service is provided by single overhead service to the building. The service extends over the roof of the building less than eight feet above the roof (not conforming to NEC). The main disconnect is located at the meter. The building is served with 3/0 copper conductors and neutral. A number of deficiencies are noted in the Electrical Narrative.

d. Telephone: The clinic is served by a total of four telephone lines, one for telephone, a dedicated fax line, a direct line to Kanakanak Hospital in Dillingham, and one serving the Telemed system.

e. Fuel Oil: A single 500-gallon fuel tank serves the clinic. The tank is located less than five feet from the building and is supported on a 2" x 4" wooden structure. The fuel oil supply gravity feeds from the bottom of the tank that extends into the mechanical room inside the clinic. The fuel piping runs to the Toyo stove located in the waiting area of the clinic. Another branch runs to the furnace in the mechanical room. The tank and piping have a number of code violations with respect to support, venting, fill system, piping and valving. These are listed in the deficiency report.

D. Architectural / Structural Condition

1) Building Construction

a. Floor Construction: The floor is sheet vinyl (assumed 1/2" plywood underlayment) over ¾" plywood sub-flooring over BSI floor joist @ 24" o.c.

b. Exterior Wall Construction: The exterior walls are constructed 5/8" Type 'X' GWB over a vapor retarder over 2' x 6' wood studs @ 16" o.c. over ½" plywood sheathing over an air retarder. The finish is metal siding. The insulation is assumed to be R-21.

c. Roof Construction: The roof is a full-span truss at 24" o.c. with plywood deck and metal roof with R-38 batt insulation. There is attic ventilation through continuous eave vents.

d. Exterior Doors: The exterior doors are insulated hollow metal and are in good condition.

e. Exterior Windows: Windows are thermo pane and vinyl casement.

f. Exterior Decks, Stairs, and Ramps: The uncovered part of the ramp at the left side of the clinic is buried in snow and could not be used in an emergency. The deck at the main stair entry is wood and appears to span too great a distance as noted by the 'bounce' when walking upon it. The ramp and stair handrails are at 32" above the deck and stair nosing and do not have proper extensions at the top and bottom. They do not meet with ADA requirements.

2) Interior Construction

a. Flooring: Flooring is sheet vinyl with non-integrated rubber base. There is a 4" rubber base is used throughout.

b. Walls: The walls are constructed with metal studs with 5/8" Type 'X' GWB.

c. Ceilings: The ceilings are paint 5/8" Type 'X' GWB.

d. Interior doors: Interior doors are hollow core wood and provide no sound insulation. Some doors are ADA compliant while others do not have hardware meeting ADA requirements.

e. Casework: The casework used in the clinic was built by locally when the clinic was originally constructed. These cabinets have inappropriate hardware and have not held-up well under daily use. The cabinets are not easily cleaned and are unsanitary. The tops of lower casework are plastic laminate.

f. Furnishings: Furnishings are and assortment of new and old. Most of the older furnishings are metal. The exam tables, stools and desk chairs in exam rooms are newer and maintained well.

g. Insulation:

- Floor Insulation 0
- Wall Insulation R-19 (Assumed)
- Attic/Roof Insulation R-38
- Attic Ventilation Continuous eave and gable venting

h. Tightness of Construction: Aside from add-on entry enclosures, the facility is generally of sound construction and quality.

i. Arctic Design: Arctic design considerations are reasonable for the site. The ramp area should be covered to allow for protection from falling snow. The ramp is otherwise useless during snowy periods.

3) Structural

a. Foundations: The foundation system consists of a perimeter concrete footer with treated foundation walls. There is a pony wall with a concrete footing at the mid-span of the clinic's width.

b. Walls and Roof: Walls and metal roof are in good condition.

c. Stairs, Landings and Ramps: The main entry stair handrails are not code compliant. The entry enclosure and handrails were an addition built to solve issues of a covered entry. It was not designed or crafted professionally.

E. MECHANICAL CONDITION

1) Heating System

a. Fuel Storage and Distribution: A single 500-gallon fuel tank serves the clinic. The tank is located less than five feet from the building and supported by a 2" x 4" wooden structure. The tank is not properly vented. The fill system has no overfill protection and the tank is not equipped with a fuel gauge. The fuel oil supply gravity feeds from the bottom of the tank to a schedule 40 black pipe, through a fuel filter and isolation valve (gate valve), then adapts to a 3/8" soft copper pipe that extends to the mechanical room at the clinic. Upon entering the mechanical room a tee has been installed for fuel piping to run to the Toyo stove in the waiting area. The other branch runs to the furnace in the mechanical room. A fusible valve and fuel filter have been installed before the furnace burner. There is no isolation valve or filter in the fuel oil supply line to the Toyo stove. The burner for the furnace has a 3/8" fuel oil return line extending from the mechanical room to the outside wall then up the wall where it terminates with venting to the atmosphere. It is assumed that the line is used to purge air from the fuel system and normally the return line is closed off in internal bypass. We recommend that a Tiger loop be installed to serve the boiler and the return line be eliminated. The tank and its piping have a number of code violations with respect to support, venting, fill systems, piping and valving. These are listed in the deficiency report.

b. Furnace: A single residential grade oil-fired furnace located in the mechanical room provides primary heating to the facility. The furnace was inoperable at the time of inspection. We were informed that a "vapor lock" had occurred in the furnace, though the system was typically reliable. The vapor lock problem would likely be resolved if a Tiger loop were installed in the fuel oil supply to the burner. The furnace has a ducted supply with ductwork running through the crawlspace. Supply air diffusers are installed in each of the perimeter rooms and appear to be well distributed. Return air is ducted in steel ductwork from a grille located in the waiting area of the clinic through the attic and back to the furnace. No provisions have been made to allow outside air to the furnace. All air is continuously re-circulated through the furnace when the thermostat calls for heating. Combustion air was designed for the room using upper and lower 4" drier vents into the mechanical room. Unfortunately the drier vents have been equipped with back draft dampers that do not allow combustion air to function properly. For the system to meet code, the dampers must be removed. Specific code deficiencies are listed in the deficiency report.

c. Back-up heating system: The clinic has been provided with a Toyo stove heater located in the waiting area. During our inspection the Toyo stove was providing heating to the clinic. The stove appeared to be properly installed and vented, but no valves or filter were installed at the fuel oil supply.

2) Ventilation System

a. Supply Air System: The furnace does not have an outside air intake, and is not providing ventilation to the building. All air is re-circulated through the furnace. Operable windows are the only method of ventilation for the clinic. Ventilation requirements will not likely be met in winter, as windows are typically kept closed unless cooling is required. We recommend designing and

installing a positive ventilation system using an air handler unit or providing an outside air intake into the furnace if the system is heated using a furnace. We don't recommend installing outside air capability to the existing furnace system since the amount of outside air required would likely reduce the temperature of air passing over the heat exchanger to a temperature that may result in condensing or crack the heat exchanger.

b. Exhaust Air: Ceiling mounted exhaust fans service the toilet room and shower/janitor room. The fans appear to be operating properly and are ducted to the exterior of the building. The fans appear to be equipped with back draft dampers. Access to the attic area was limited the condition of the ductwork could not be established. It is assumed to be installed correctly.

3) Plumbing System

a. Water System: The clinic has a private well. A ¾" copper pipe runs from the well up to the mechanical room to the Well-X-Trol pressure tank, then branches to the electric water heater and cold water supply to clinic plumbing fixtures. The piping appears to be supported properly and is run through the crawlspace of the clinic. The hot or cold water piping is not insulated. The hot water does not re-circulate and so is delayed at the fixtures when faucets are turned on. The hot water temperature for the clinic is regulated at the water heater. Tempering valves should be provided at the hand wash sinks and the shower to limit maximum water temperature and reduce the risk of scalding.

b. Sewer System: The facility has a private septic system. It is reported that the septic system has backed up in the past. While the problem is not reported to be persistent, it indicates proper maintenance to the septic system is required on a regular basis. We were unable to locate the yard cleanout for the system. It is assumed to be buried below the snow. The waste piping appears to be adequately sized and properly vented. All waste piping in the building has been run in ABS plastic.

c. Fixtures: The bathroom plumbing fixtures are ADA compliant with the exception of a lack of insulation on the P-trap and hot water supply. The toilet is not sealed to the floor well. Toilet seal needs to be addressed to facilitate cleaning and provide for a more sanitary condition. There is no mop sink or janitor sink in the facility. The one installed previously has been replaced with a shower. A janitor sink is required to properly clean the facility. Sinks in exam rooms are stainless steel with gooseneck faucets. The handles on sink faucets are non-ADA knob style. They should be replaced with wrist blade type handles to provide a more sanitary method of water shut-off when washing hands. The shower is not ADA accessible and lacks a tempering valve or pressure balance valve to reduce the risk of scalding.

4) Mechanical Life Safety Issues

a. There were no life safety issues requiring immediate attention. Other code compliance issues and mechanical deficiencies are noted in the deficiency report.

F. Electrical Condition

1) Electrical Service

a. Electrical service is provided by single overhead service to the building. The service extends over the roof of the building less than eight feet above the roof (not conforming to NEC). The main

disconnect is located at the meter. The building is served with 3/0 copper conductors and neutral. A number of deficiencies were noted with respect to the electrical service.

b. The main breaker size at the meter is 100 Amp. The service is 120/240V, 1 Ph, 3 wire.

2) Power Distribution

a. There is a single panel board serving the clinic located in the mechanical room. The panel board serving the clinic is a two pole 125 Amp Cuttler-Hammer panel with space for 22 breakers. All 22 breakers have been installed, but 8 of the breakers are spares. The directory is not up to date. Neutrals and grounds have been separated in the panel.

b. Branch circuit wiring is installed using Romex with a ground conductor. The branch circuit providing power for the well pump has been installed between the panel box and cover and was pinched where the cover was secured. The weatherproof electrical receptacle at the front entrance to the building is not energized and the front light was not working. This indicates that there is likely a wiring problem on the circuit serving those two fixtures.

3) Grounding System

a. A grounding wire has been extended down from the meter to a grounding rod. The grounding electrode conductor appears to be adequately sized for the service. It is estimated to be at #6 copper conductor at minimum.

4) Exterior Elements

a. High-pressure sodium lights with photocells are located at both building entrances. Fixtures appear to be in good condition but lights are not operating properly. We suggest that the bulbs be changed. If the problem is not resolved, the wiring should be checked. The weatherproof outlet at the front entrance does not function and is not GFCI protected. It should be replaced with a GFCI receptacle and wiring should be inspected and corrected.

5) Electrical Devices and Lighting

a. All receptacles in the building were properly wired and adequate for the clinic size. The power receptacle in the restroom is a GFCI type. There were no GFCI type receptacles near clinic sinks. GFCI type receptacles are recommended although they not required.

b. The lighting is predominately four ft fluorescent fixtures using four lamp F40 bulbs. The fixtures are in fair condition but lighting levels were low in exam room areas. Lighting levels in exam rooms averaged around 30 fc; lighting should be upgraded in those areas to 100 fc or better.

6) Emergency System

a. Emergency egress signs installed in the clinic are paper and should be upgraded to battery lit back-up emergency signs.

b. Emergency egress lights are installed in the appropriate locations. One of two lights on the fixture serving the corridor to the second building exit is dead and should be replaced. The batteries all appeared to be in good working order.

7) Fire Alarm System

a. There is no fire alarm system in the building. A hard-wired smoke detector is located in the lobby/waiting area of the clinic. The smoke detector is in good condition.

8) Telecommunication

a. The clinic is served with a total of four telephone lines, a dedicated phone line, dedicated fax line, direct line to Kanakanak Hospital in Dillingham, and a line dedicated to the Telemed system.

9) Electrical Life Safety Issues

a. There were no life safety issues requiring immediate attention. Other code compliance issues and mechanical deficiencies are noted in the deficiency report.

G. Civil / Utility Condition

1) Location of Building

a. Patient Access: The clinic is near the center of the city and is very accessible to the community. The clinics close proximity to the airport is an advantage for emergency or medi-vac situations.

b. Service Access: Road access is provided to the front entry off the main road. Stair and ramp access is adequate.

c. Other Considerations: The facility is located on the upper side of a sloped site and is in a good location.

2) Site Issues

a. Drainage: Drainage from the site is adequate with the exception of the area near the storage room at the northeast lower level. This location has a tendency to puddle up during thawing.

b. Snow: Aside from heavy snowfall at times, there does not appear to be a snow-drifting problem.

3) Proximity of Adjacent Buildings

a. There are duplexes and single-family houses to the northwest and west with the airstrip to the south of the clinic.

4) Utilities

a. Water Supply: The clinic has a private well. A ¾" copper pipe runs from the well to the mechanical room (See Mechanical Narrative).

b. Sewage Disposal: The Clinic has a private septic system. There are reports of the septic system backing up in the past. This problem is not reported to be persistent, but indicates that proper maintenance of the septic system is required on a regular basis (See the Mechanical Narrative).

c. Electricity: The electrical service is provided by a single overhead service to the building. The building is served with 3/0 copper conductors and neutral.

d. Telephone: The clinic is served with a total of four telephone lines.

e. Fire Alarm System: There is no fire alarm system in the building. There is a hard-wired smoke detector located in the lobby/waiting area of the clinic that was in good condition.

f. Fuel Storage System: A single 500-gallon fuel tank serves the clinic. The tank is less than five feet from the building and is supported on a 2" x 4" wooden structure. The fuel oil supply gravity feeds from the bottom of the tank then extends toward the clinics mechanical room.

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

Following this section we have attached drawings we have been able to identify, find, or create as part of this report.

Map of Region

A1 Site Plan

A2 Existing Floor Plan

A3 Existing Wall Section

A4 Prototypical Clinic

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 Patient Care: Based on assessment of the facilities ability to support the stated services that are required to be provided at the site. Items required for the patients social environment such as storage, privacy, sensitivity to age or developmental levels, clinical needs, public telephones and furnishings for patient privacy and comfort.

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 life safety aspects of building codes including the Uniform Building Code, International Building Code, The Uniform Fire Code, NFPA 101, The Uniform Mechanical and Plumbing Codes and The National Electrical Code. Deficiencies could include inadequacies in fire barriers, smoke barriers, capacity and means of egress, door ratings, safe harbor, and fire protection equipment not covered in other deficiency codes.

03 General Safety: These deficiencies identify miscellaneous safety issues. These are items that are not necessarily code items but are conditions that are considered un-safe by common design and building practices. Corrective actions required from lack of established health care industry safety practices, and local governing body code safety requirements. I.e. Occupational Safety Health Administration (OSHA) codes & standards.

04 Environmental Quality: Deficiencies based on Federal, State and Local environmental laws and regulations and industry acceptable practices. For example this addresses DEC regulations, hazardous materials and general sanitation.

05 Program Deficiencies: These are deficiencies that show up as variations from space guidelines evaluated through industry practices and observation at the facility site and documented in the facility floor plans. These are items that are required for the delivery of medical services model currently accepted for rural Alaska. This may include space modification requirements, workflow pattern improvements, functional needs, modification or re-alignment of existing space or

other items to meet the delivery of quality medical services. (Account for new space additions in DC 06 below)

06 Unmet Supportable Space Needs: _____ These are items that are required to meet the program delivery of the clinic and may not be shown or delineated in the Alaska Primary Care Facility Space Guideline. Program modifications requiring additional supportable space directly related to an expanded program, personnel or equipment shall be identified in this section; for example additional dental space, specialty clinic, storage, or program support space that requires additional space beyond the established program.

07 Disability Access Deficiencies: _____ The items with this category listing are not in compliance with the Americans with Disabilities Act. This could include non-compliance with accessibility in parking, entrances, toilets, drinking fountains, elevators, telephones, fire alarm, egress and exit access ways, etc.

08 Energy Management: _____ These deficiencies address the efficiency of lighting, heating systems/fuel types and the thermal enclosures of buildings, processes, and 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 operational and facilities management and maintenance tasks 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, general condition of interiors, and prevention of deterioration of structure and systems.

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, interior mechanical utilities, requiring maintenance due to normal wear and tear that would result in system failure.

13 Electrical Deficiencies: _____ These are deficiencies with normal or emergency power, electrical generating and distribution systems, interior electrical and communications utilities, fire alarm systems, power systems and communications systems within a

building that should be repaired or replaced on a recurring basis due to normal wear and tear that would otherwise result in system failure.

14 Utilities M & R: _____ This category is used for site utilities for incoming services to facilities that are required for the building to be fully operational. Deficiencies may include sewer and water lines, water wells, water tanks, natural gas and propane storage, electric power and telecommunications distribution, etc.

15 Grounds M & R: _____ Real property grounds components that should be replaced on a recurring basis due to normal wear and tear. Deficiencies with respect to trees, sod, soil erosion, lawn sprinklers, parking, bridges, pedestrian crossings, fences, sidewalks & roadways, and site illumination etc. are considerations.

16 Painting M & R: _____ Any painting project that is large enough to require outside contractors or coordination with other programs.

17 Roof M & R: _____ Deficiencies in roofing, and related systems including openings and drainage.

18 Seismic Mitigation: _____ Deficiencies in seismic structural items or other related issues to seismic design, including material improperly anchored to withstand current seismic requirements effect. The elements under consideration should include the cost incidental to the structural work like architectural and finishes demolition and repairs.

B. PHOTOGRAPHS

We have attached photographs depicting the various deficiencies described in the narrative, itemized in the summary below. Photos do not cover all deficiencies and are intended to provide a visual reference to persons viewing the report 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 provide general background information.

C. Cost Estimate General Provisions

1) New Clinic Construction

a. 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 costs not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc.
- 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.

b. 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.

c. 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, 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 city, following the site visit, and were modified, if necessary.

d. 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 2002. No inflation factor has been applied to this data.

2) Remodel, Renovations and Additions

a. 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 a flat rate of $32/SF for additions of new space only and is included as a line item in the estimate of base costs.

b. 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.

c. 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, 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 city, following the site visit, and were modified, if necessary.

d. 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.

e. Estimated Total Cost: This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2002. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

f. Project Cost Factors: Similar to new clinics, the following project factors have been included in Section VI of this report.

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

g. 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 2002. No inflation factor has been applied to this data.

V. SUMMARY OF EXISTING CLINIC DEFICIENCIES

The attached sheets document deficiencies and provide recommendations for repairs or accommodation of current needs. A cost estimate for accomplishing the proposed modifications is also attached. The summary addresses individual deficiencies. If all deficiencies were to be addressed in a single construction project, there would be cost efficiencies 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 determined the cost of a New Clinic Construction to meet the Alaska Rural Primary Care Facility (ARPCF) Space Guidelines for this size of city. We have also determined the cost of Repair/Renovation & Addition to the existing clinic to meet the same ARPCF Space Guidelines.

A. Projected Cost of a New Clinic

The cost of a New Denali Commission 2000 SF Small Clinic in Ekwok is projected to be:

• Base Anchorage Construction Cost per sf.			$183
• Project Cost Factor:		@ 45%	$ 82
Medical Equipment	17%		
Construction Contingency	10%		
Design Fees	10%		
Construction Administration	8%		
• Multiplier for City		@ 1.32	$ 85
Adjusted Cost per SF			$350

Projected Cost of a New Clinic: 2000 sf. X $350 = $700,000

B. Projected Cost of the Repair/Renovation & Additions for Existing Clinic

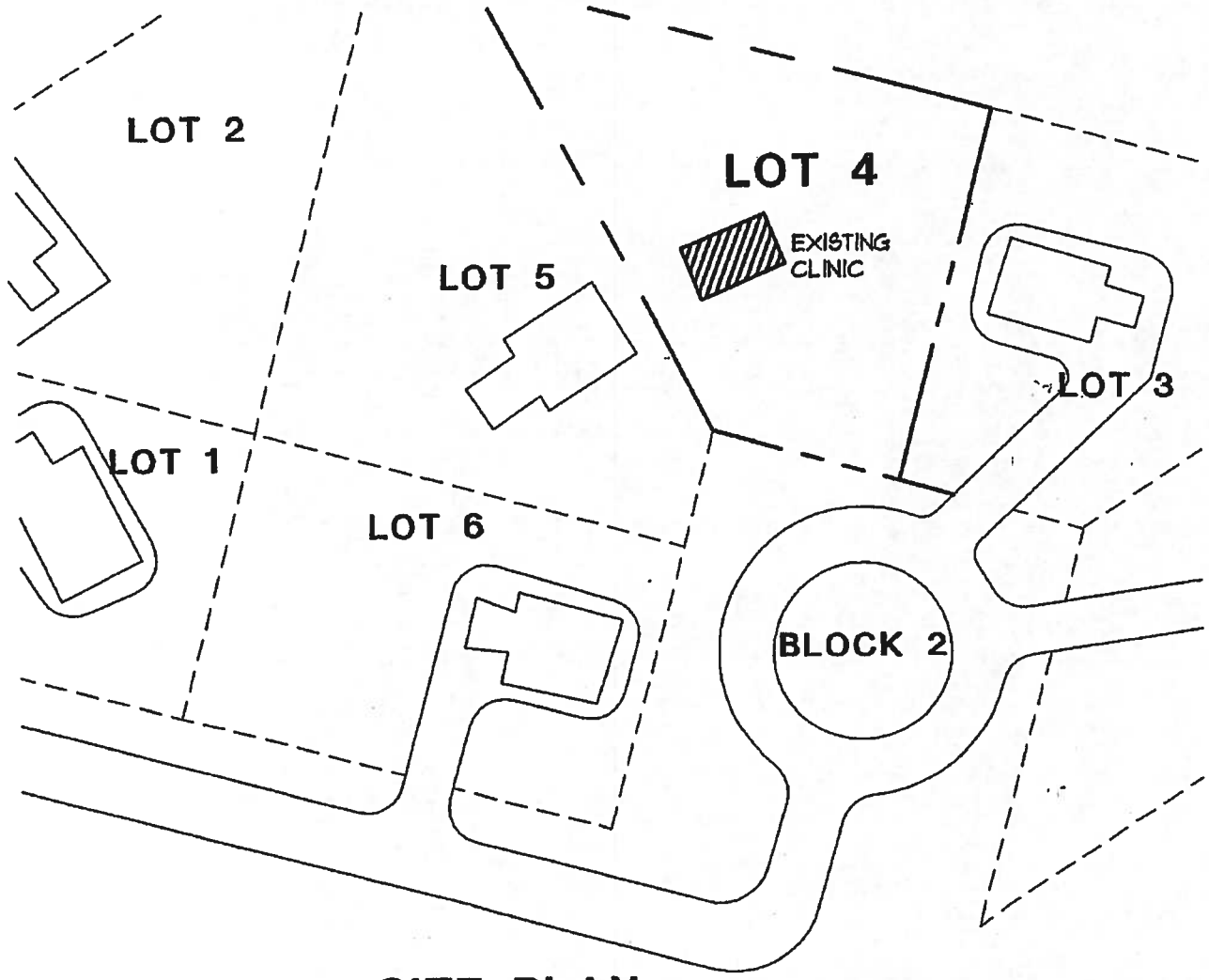
- Code & Condition Repairs/Renovations $115,833
  (Cost from Deficiency Summary)
- Remodel/Upgrade Work (Def. Code 01 / Def. Aek10)..... $100,820
  100% of clinic 949 SF = 949 @ $106/SF
- Additional Space Required by ARPCF – 1040 SF (Def Code 06 / Def. Aek01)
  - Base Anchorage Cost $230
    - Medical Equipment 32
  - Additional Costs 92
    - General Requirements 20%
    - Estimation Contingency 15%
  - Multiplier for City at 1.32 AAF..... $113

  Adjusted Cost per SF $467

Total Addition Cost of 1040 SF at $467 = ... $486,086
Project Cost Factor @ 28% = ... $196,767

Construction Contingency	10%
Construction Administration	8%
Design Fees	10%

Total Cost of Remodel/Addition $899,506



SITE PLAN

SCALE: NTS

ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

LCG, Inc.
LARSEN CONSULTING GROUP
architecture · engineering · surveying

FACILITY ASSESSMENT AND
INVENTORY SURVEYS
FOR EKWOK
ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

DESIGNED BY:	
DATE:	01/21/02
SCALE:	NTS
JOB NO:	223.07

SHEET
A 1 OF 3