

St. Lawrence Island Sub-Regional Services Clinic  
Health Care Facility Needs Assessment and Program Summary  
July 2004

I. Introduction

In July of 2004, NSHC's Capital Projects Office sent a planning and design team to the villages of Gambell and Savoonga to carefully review the programming needs for clinics in the villages and to document any needs that would exceed base funding formula for "Small-Large" clinics. Previous work by NSHC and the respective communities identified a health delivery system that includes mid-level providers in both locations. Both the Commission and NSHC have come to recognize that the service delivery model and corresponding facility space program and layout is outside the Commissions prototype clinic design. This summary details the specific needs in excess of the small model.

Saint Lawrence Island has a population of nearly 1,500 full time residents (NSHC has patient registrations documenting 716 users residing in Gambell and 729 in Savoonga), with each community at the extreme upper end of the population range for the small clinic model. Both communities are located in a geographic region very remote from the Regional Hospital in Nome, healthcare service needs for these communities go beyond that anticipated in the standard clinic program. The "Small-Large" clinic program has been used as a base reference for evaluating service and facility needs. The "Small-Large" clinic is currently approved at 3,140 s.f. including the additional area allocated for dental services and behavioral health services. Each community supports a full-time Physician Assistant and will expand to three Island PA positions with this project. Space needs for PA services have supported by the Commission by adding 1,000 gross square feet to the basic 3,140 s.f. clinic for a total of 4,140 s.f.

The planning team spent four days on the island with the time divided equally between the two villages. While there they and conducted meetings with city and tribal leadership, with the general public, and with the healthcare workers. The results of these meetings confirmed the program needs contained in this report. Meeting notes are included in Section V. This investigation was the fourth site visit related to the new clinic needs as part of a Island service evaluation that began in 2001. Additional meetings have been held in Nome along with earlier trips on the Island to conduct condition inventories, and a Code and Condition Survey of existing facilities. The planning team has developed a comprehensive understanding of the challenges facing healthcare delivery on the Island. The following pages provide a recommended clinic space program and an analysis of the requirements for each space that exceeds the Denali Commission space guidelines.

## II. Recommended Space Program

The following list of clinic spaces starts with Denali Commission's Revised "Small" Clinic Space Guidelines, effective 2/19/03, adding new recommended program spaces in sequence:

	Space Name	Program Area	Denali Area	Diff.	Explanation
1	Vestibule	100	50	50	Needed for access to Trauma Room
2	Vestibule	50	50	0	-
3	Reception/Waiting	275	170	105	PA Increase/Add Benefits Coordinator
4	Trauma Room	360	200	160	Increase for PA
5	Regular Exam Room	100	150	-50	Moved 50 s.f. to HA Offices
6	Regular Exam Room	100	150	-50	Moved 50 s.f. to HA Offices
7	Regular Exam Room	100	0	100	Added on Exam Room
8	Administration	220	110	110	Increased based on 4.4% factor.
9	Lab	130	80	50	Increase for PA
10	Portable X-Ray Unit	40	40	-	-
11	Specialty Clinic	225	150	75	25 s.f. for PT Stor./50 s.f. for PT Activity
12	Patient Holding/Sleep	0	150	-150	Area provided off site.
13	Medical Supplies	180	120	60	Remoteness requires additional storage
14	Patient Toilet	60	60	0	-
15	Public Toilet	60	60	0	-
16	Janitor	30	30	0	-
17	Morgue	30	30	0	-
18	BHS Group Conference	125	100	25	Added to #28 for larger shared Conf. Rm
19	BHS Counseling Office	120	120	0	-
20	BHS Counseling Office	120	0	120	Second Counselor Added
21	Dental	250	200	50	-
22	Dental Storage	50	50	0	-
23	PA Exam Room	150			Increase for PA
24	PA Office/SRS Manager	150			Increase for PA
25	HA Office	150			Space for 3 HA's
26	HA Office	150			Space for 3 HA's (See #5 & #6)
27	Meds Room	75			Increase for PA
28	Trauma Toilet/Shower	60			Added for Trauma Room Support
29	Break/Training Room	150			Shared with BHS and Dental
30	Multi-Use Conference	125			Shared with BHS as Group Room
31	Vitals Station	60			Located in Hall for shared use
32	Med/Counseling	60			HIPA Confidential Counseling Room
33	Detached Support Building				Added to provide protection and security for EMS rescue supplies.
	a. EMS Storage	30			
	b. Morgue	See # 17			
	c. ATV Storage	120			
	d. Search & Rescue	50			
	e. Building Maint.	60			
	<b>Total Net Program Space</b>	<b>4085</b>	<b>2070</b>		
	Net/Gross Multiplier @ 45%	1838	932		
	Subtotal Gross SF	<b>5923</b>	<b>3002</b>		
	Mechanical Space @ 8%	474	240		
	Denali increase for PA	0	1000		
	<b>Total Heated Space</b>	<b>6397</b>	<b>4242</b>	2155	Total increase over Denali guideline.

### III. Space Requirements Analysis

This section reviews the recommendations of NSHC Supervisory Medical Staff, the Community Health Aides, the Community Leaders, and other community members:

- Vestibule 1: The size of the vestibule leading to the Trauma Room was increased from 50 s.f. to 100 s.f. to accommodate stretcher access.
- Reception/Waiting 3: The 105 s.f. increase provides work space for a benefits coordinator and additional space increased workload due to the PA.
- Trauma Room 4: A two-bed trauma room has been provided to account for the needs of a larger community and the presence of a PA.
- Regular Exam 5&6: Our clinic concept does not use the exam rooms for offices. A separate space for HA Offices has been provided. The extra 50 s.f. per room has been moved to supplement the HA Office space.
- Regular Exam 7: One additional exam room has been added. These HA's see patients on a regular basis all day. There is not an anticipated drop in patient visits so the extra room is mandatory.
- Administration 8: The area allocated to administration has been increased based on the Denali funding formula used, which is approximately 4.4% of clinic area. This increases the Administration area from 110 to 220 s.f.
- Lab 9: The area of the lab has been increased to accommodate the additional testing and procedures that are a component of the PA's practice.
- Specialty Clinic 11: The area of the Specialty Clinic has been increased by 75 s.f. to accommodate the storage and treatment needs of a Physical Therapist.
- Patient Hold/Sleep 12: Sleeping space will not be provided within the clinic for itinerants. The communities both have rooming houses to accommodate this. Patients being held overnight waiting for transport will be kept in the Trauma Room or a vacant exam room.
- Medical Supply 13: The area of this room has been increased by 60 s.f. to account for the need for increased supplies due to the isolation of the village.
- BHS Conference 18: The conference space for behavioral health has been increased from 100 s.f. to 125 s.f. and added to the clinic's training/conference room. This change will accommodate larger groups for group counseling, and larger training area for health aides. The larger space can also be used during specialty clinics where group presentation to clients requires a larger space. (See space 28)
- BHS Office 20: The single space anticipated in the Denali guidelines might be sufficient for a smaller village. Gambell and Savoonga both have a significant need for a

variety of mental health counseling services, from individual to family groups. This office provides a second counseling office that will be used by either a second mental health practitioner, the ideal, or by an itinerant counselor that serves both communities on a shared/as needed basis.

- Dental 21: The dental area provided by Denali has been increased to provide an additional dental chair. This extra chair requires an extra 50 s.f.
- PA Exam Room 23: A larger exam room has been added to accommodate the needs of the PA. A PA handles the more complex caseload and also offers training to the health aides requiring space in the room for multiple practitioners, and for specialized diagnostic equipment.
- PA Offices/Manager: An office has been provided to accommodate a resident PA and a PA/SRS Manager serving both communities. The PA will be a resident of one community, but travel frequently between villages. Optimally, both communities will have two PA's in residence.
- HA Offices 25&26: The two office areas for Health Aides provide workspace for six. The workspace for each Health Aide is not shared, but assigned to the active health aides. The space has been divided into two offices to maintain a more intimate work environment and more space ownership. These clinics have a higher workload and clinic staff than most smaller communities. The space provides for current clinic office space needs.
- Meds Room 27: A separate room for medicine storage and preparation has been provided. The PA has a larger list of medicines that they can prescribe. The space is 75 s.f.
- Trauma Toilet 28: A toilet with a shower has been incorporated into the plan for the Trauma Room. This toilet will serve clinic needs, showering needs, and overnight needs for patients waylaid by weather. 60 s.f. has been added for this.
- Break/Training 29: This space accommodates the break, lunch, and meeting needs of the clinic staff. It is designed to accommodate 8-10 maximum, with a table for six. It will have a counter, microwave, sink and refrigerator.
- Multi-Use Conf: 125: The 125 s.f. allocated to this space has been added to the 125 s.f. from the BHS Conference 18 to create a 250 s.f. conference room that can serve the needs of group counseling, staff training, specialty clinic, and community meeting.
- Vitals Station 31: This area provides space for an adult scale, a baby scale, a working counter and a chair. The area is to be used for collecting vital statistics on patients prior to being admitted to exam rooms. It offers a way to improve patient flow.
- Med. Counsel 32: This is a small consultation room adjacent to the waiting area to provide private conversations between the PA or HA and patient regarding the acquisition and use of drugs, or the care and treatment of illness. The space allows the clinic to be in compliance with HIPA regulations.

Detached Support 33: This space was the most debated of the clinic spaces. Not because some people didn't think it was needed, but rather, how to present this need in a way that would avoid its categorization as simply a garage. This space is seen as a detached structure which could be built at the beginning of the construction project to provide warm secure storage for materials and smaller parts, a warm storage for construction vehicles, and, a warm-up room for workers. At the completion of construction the space would be refinished to provide space for the Morgue, Emergency Medical Supplies, Search and Rescue Equipment, and a work area for the building maintenance employee. The room would have an open interior that could be used to protect and care for the clinic four-wheeler, and/or snow machine, or for the storage of a special sled equipped for patient transport that could be pulled behind a private snow machine or 4-wheeler.

EMS Storage 33a: EMS storage consists of a wall with cubicles for emergency response equipment. The wall would be organized for quick inventory and would have space for emergency stretchers, splints, blankets, medical supplies and similar equipment. It would be located for easy loading on a patient transport trailer.

Morgue 33B: The village health aides recommended a morgue with space for four bodies. The morgue unit anticipated is a self-contained refrigerated unit with stacking shelves. Difficulties in lifting bodies limits the usable stacking height to two bodies. Two units with a shared aisle could require more than 30 s.f., but if the aisle is shared with other uses the 30 s.f. should be sufficient.

ATV Storage 33c: The most appropriate vehicle for both patient transport and search and rescue continues to be discussed. Gambell has considered a snow-track type vehicle while a sled or wheeled trailer has been discussed in Savoonga. At a minimum, space for either a four-wheeler or a snow machine has been planned which would sit in the center of the support building.

Bldg. Maint.33d: Placing this space in the mechanical mezzanine was considered, however, a location in the support building would put this person near the rescue equipment and would provide workspace for equipment repair.

The building square-foot summaries in the Section II indicate the impact of these additional space needs on the building's Total Heated Space. The total is approximately 50% above the Denali Commission's initial space allocations for the clinic. The spaces above have been evaluated over a two-year period. Based on the community input from this and previous visits, it seems that the clinic model addresses most health care needs, while maximizing shared use spaces.

## IV. Site Selection

Both communities have gone through the site evaluation and selection process. The sites selected and approved by each community are strategically placed within the communities, and are located for direct access to the airports. Both sites have water, sewer, and power available in the direct vicinity of the sites. Both communities have selected sites of approximately 220 ft. x 220 ft. that is adequate for the placement of the proposed building. This area allows for both site and building expansion.

The site plan and building concept plan attached shows the building program superimposed on an imaginary site. The drawing shows the a site area of approximately 200 ft. x 220 ft. is required for initial clinic construction, and to allow room for parking, emergency room access, and future expansion.

During this recent visit the snow drifting patterns at each site were reviewed in detail, accounting for the differing weather patterns in each community and the variations in drifting resulting from prevailing winds and storm winds. It was also determined that the areas dedicated to emergency access should be placed on the lee side of the buildings based on storm wind conditions.

Additional community discussion related to the emergency vehicle and equipment storage needs and the siting requirements for a structure to accommodate these needs.

## V. Meeting Notes

The most recent trip to St. Lawrence Island was planned to engage the community as fully as possible in the evaluation of the program requirements for the new clinic. The following notes document input from four community meetings held the week of July 12. In addition to the planning team, members of the steering committee participated in the first day of meetings:

### Planning Team:

Stephen Christopher, PE, Dir. Capital Projects, NSHC  
Eddie Hebert, Project Manager, Capital Projects Office  
John Crittenden, Architects Alaska  
Dave Moore, Architects Alaska

### Steering Committee Members on Trip

Carol Piscoya, VP Village Services  
Shirley Thornton, Acting Director of Village Health  
Karen Fagerstrom, Director Health Aide Training  
Edith Tunguyan, Grant Writer for Kawerak and City of Gambell  
Brad Taylor, Director of Radiology

### Day 1 AM – Savoonga Meeting #1 Notes

1. Savoonga needs to obtain a CDBG grant.
2. How should we address the use of the old “new” clinic?
3. Dental needs dedicated rooms. One of the first new dental technicians trained at the New Zealand program is from Savoonga and will be returning home to work soon.
4. What about BHS/VBC and Alcohol Services: We mentioned that Denali had funded a base level BHS program for the Small-Large clinic.
5. Need storage for a “mini-ambulance”.
6. Storage space needed for EMS and Search and Rescue supplies. These need to be maintained and have inventory control at the clinic. This is a volunteer program.
7. On-call volunteers carry stretchers to the airport. Pagers, a VHS system, or phone forwarding system for volunteers and clinic would help a lot with communication.
8. Savoonga has a fire truck, which operates only in the summer. It is operated by “first responders” who were trained under an old program.
9. Mike Owens, EMS manager at the Regional Hospital, comes yearly to certify EMS training.
10. Community really has some problems. It might help to have a community coordinator to oversee problems in the community. Perhaps this position could work through the clinic.

### Specific Needs Identified in Savoonga on Day 1:

- Need to have good schedules for the refilling of chronic meds and some way to anticipate when individuals are coming close to time for renewal of prescriptions. This could be accomplished by the Nome pharmacy. The time window for ordering and delivery could be adjusted to account for problems with remoteness.
- Eyecare clinics only occur once a year, but when they come they disrupt the clinic. The specialty exam room might alleviate this.

- Need a Repeater/VHF to better advise on flight arrivals/departures.
- Mental Health needs require VBC's. Two persons are needed. NSHC could save money by supporting VBC and could work through ANMC like currently done for ENT and Women's clinics.
- Need to schedule regular exams for TB and regular X-rays. We had an outbreak of TB a few years ago.

#### Day 1 – Gambell – Meeting #1 Notes

After an initial meeting with the Gambell community leaders the design team sat down with design tools, a spreadsheet, and some sketch paper to provide a schematic design response to the evolving program for the SRS clinic. The two days spent in Gambell included visits by numerous curious onlookers and some with real insight and good questions. The trip ended with an evening briefing to the tribal leaders at their monthly planning session.

1. Visitors from Siberia are not health screened. The community suggested a program to provide health screening to these visitors.
2. Are curious about the Arctic Health aspect. What kind of storage will be needed for a research lab? It was suggested that a file cabinet would be the only long-term storage needed, but that the researchers would require some interim workspace for a few years.
3. Village to do the cleaning of toxic wastes, an activity that poses health risks to both workers and the community. Recommendation was made for a decontamination shower. Clinic needs training in HazCom response.
4. There is still a language barrier in communicating illness in English. Care needs to be taken to diagnose and communicate illnesses in native language so that patients understand.
5. Want to use and develop local staff for the clinic construction.
6. Still do want the detached storage element.
7. Many Traditional Healers from Gambell have passed Away. Need to find a way to recover this lore and knowledge before it disappears.

The second day was spent working on the program and preparing a conceptual plan.

#### Day 3 – Gambell – Meeting #2 Notes

At the end of the two days the design team presented the tribal leaders with a copy of the freehand drawings of the building floor plan and projected a three dimensional model of the proposed layout showing building height, volume, and massing. The rendering even included the entry deck, ramp, doors and windows. When asked directly about the detached support services building those present favored a detached building from one incorporated into the final building construction. This would be a building with a more basic construction type, possibly using a slab-on-grade and conventional frame wall construction.

#### Day 3 - Savoonga – Meeting #2 Notes

1. Want to carefully consider the functional aspects of the patient emergency access.
2. Would prefer the boiler to be on the main floor if it is a really larger boiler. Actually, a fairly small boiler is planned which would not be difficult to replace when needed.

3. Prefer to consolidate conference space and reduce the size of the employee break room to make a larger shared use conference room.
4. The sketch of the dental area appears to be a bit narrow for the two chairs.
5. One of the exam rooms should have negative pressure option for TB holding.
6. Want to understand how the behavioral health area functions. It needs consultation privacy, which would be difficult with two practitioners working at the same time from a single office.
7. Health Aide offices appear to be a bit small for 5 or 6 health aides.
8. Would like to have an office area for a dental tech.
9. Savoonga likes the concept of a detached support services building as opposed to something built into the facility.
10. Savoonga wants to have the behavioral health services in the clinic where the VBS, etc., can receive help from other medical staff, and participate in the training and healing of the clinic environment.
11. Lot area of 225 ft. x 225 ft. appears to be adequate for the facility.

Day 4 –Steering Committee Wrap-Up at Norton Sound Regional Hospital in Nome:

1. To accommodate the HA's want to increase area of HA offices to 300 s.f. and make it into two offices for 3 persons each.
2. Would like the med room to accommodate a rolling cart for chronic meds.
3. The area of the Sleep Room included in the Denali space guideline can be applied to the space required for the Trauma Room shower room.
4. Recommend reducing the area of the Break Room to 150 s.f. and increasing the area of the general conference room by an equal amount. Prefer to have a single larger meeting/conference room rather than smaller gathering areas.
5. Allocate workspace in the Administration area for a benefits coordinator.
6. Prefer to place the EMS storage in close proximity to the Trauma Room rather than in the support building.
7. The Vital Signs station planned for the hall needs to be more than a counter. It should be more of a niche that contains a somewhat semi-private counter for weighing babies and taking their temperature.
8. The Behavioral Health area should not be planned as a single shared office but rather two offices. The counselors use their offices for counseling one-on-one which requires the second practitioner to leave the room.
9. HIPA requires a separate consultation space, a small space with a writing counter and two chairs, for interviewing and consulting with patients about medicine, travel, etc.
10. Think locating the PA office nearer to the Specialty Exam room would make good sense. This would allow better access to the telemed machine that will be resident in the Spec. Exam Rm.
11. The lab needs to be wheelchair accessible and it needs a phlebotomy chair. This is operational and safety issue. All blood draws are done in a single controlled environment.
12. Should provide a wheelchair for patient use within the facility.
13. The lab sink should be located to divide the clean side from the dirty side.

End