MEETING OBJECTIVES

I. Welcome + Introductions (5 minutes)

II. Provide Background Overview (5 minutes)
- Planning process
- Main outcomes

III. Conduct Discussion/Work Session (1 hour 30 min)
- For each focus area
  - Priority actions + schedule
  - Progress + updates
  - Ideas + strategies

IV. Discuss Next Steps + Immediate Tasks (20 minutes)

I. Background Overview – Process + Outcomes

Part 1: January – July 2011

- Guiding Principles
- Relocation Plan – Long-Term Goals by Phase + Strategic Focus Area

Product: Relocation Report

Part 2: August – October 2011

- Relocation Mission
- Preliminary Objectives, Action Items + Existing/Potential Funding Opportunities
- Detailed Concepts + Strategies for "Critical Path" Focus Areas

Product: Reference Document

Part 3: October 2011 – March 2012

- Firmed Up Objectives + Priority Actions (aimed at Pioneering phase)
- 2012-2015 Action Plan + Schedule
- Next Steps

Product: Final Strategic Management Plan

Mission Statement + *Maligtaquyarat* (Guiding Principles) for Mertarvik

Mission

The mission of the Mertarvik Relocation is to create a safe and self-sustainable village for this and future generations that is built by and governed by our own people working together as a tribe and people unified by our history, cultural traditions and language.

Maligtaquyarat (Guiding Principles)

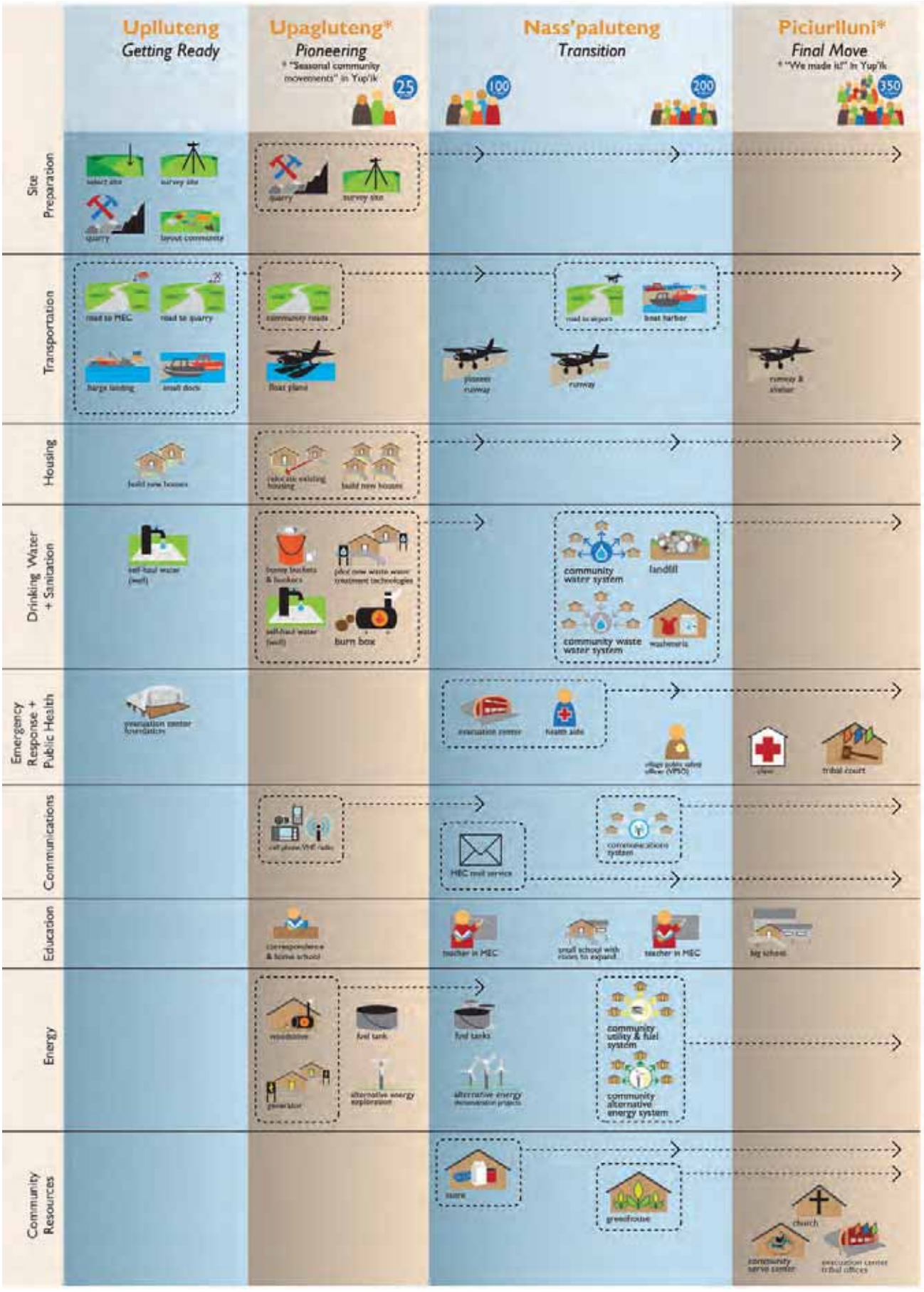
On March 27, 2012, the Newtok Traditional Council unanimously passed and approved a set of guiding principles for the community's relocation to Mertarvik (*Newtok Traditional Council Resolution 12-12,* page 26). It is the hope and intent of the Newtok Traditional Council that all community residents and partners working toward the relocation will respect and promote these guiding principles.

The relocation of Newtok will be defined by our Yup'ik way of life. Our Guiding Principles are:

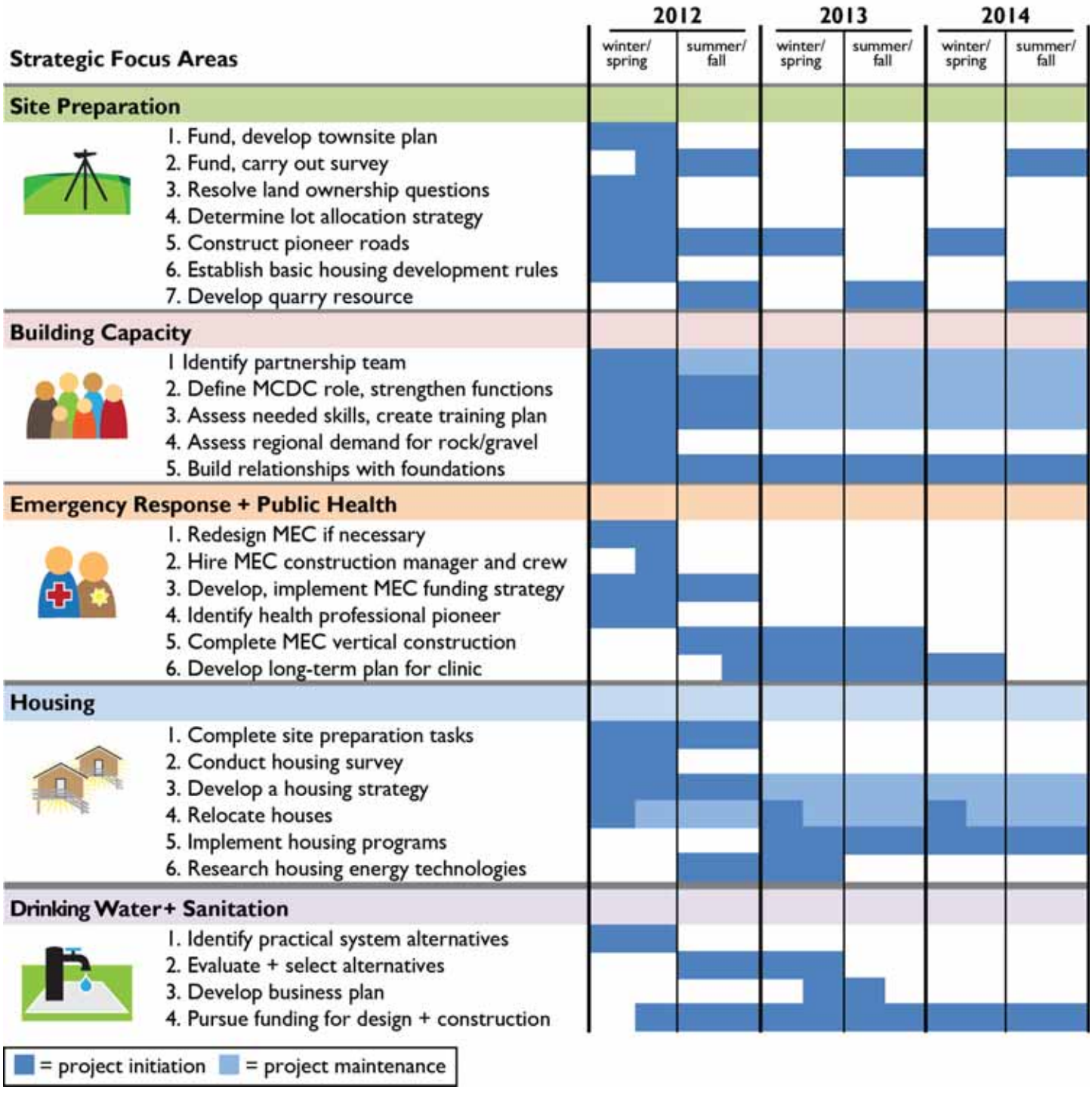
- Remain a distinct, unique community – our own community.
- Stay focused on our vision by taking small steps forward each day.
- Make decisions openly and as a community and look to elders for guidance.
- Build a healthy future for our youth.
- Our voice comes first – we have first and final say in making decisions and defining priorities, by implementing nation-building principles and working with our partners.[1]
- Share with and learn from our partners.
- No matter how long it takes, we will work together to provide support to our people in both Mertarvik and Newtok.
- Development should:
  - Reflect our cultural traditions.
  - Nurture our spiritual and physical well-being.
  - Respect and enhance the environment.
  - Be designed with local input from start to finish.
  - Be affordable for our people.
  - Hire community members first.
  - Use what we have first and use available funds wisely.
- Look for projects that build on our talents and strengthen our economy.

1 Two Approaches to Economic Development on American Indian Reservations: One Works, the Other Doesn't by Stephen Correll, and Joseph P. Kalt, 2006. The Harvard Project on American Indian Economic Development.

Figure A. Mertarvik Relocation Plan (Vision + Long-Term Goals)



Mertarvik 2012-2015 Action Plan + Proposed Schedule



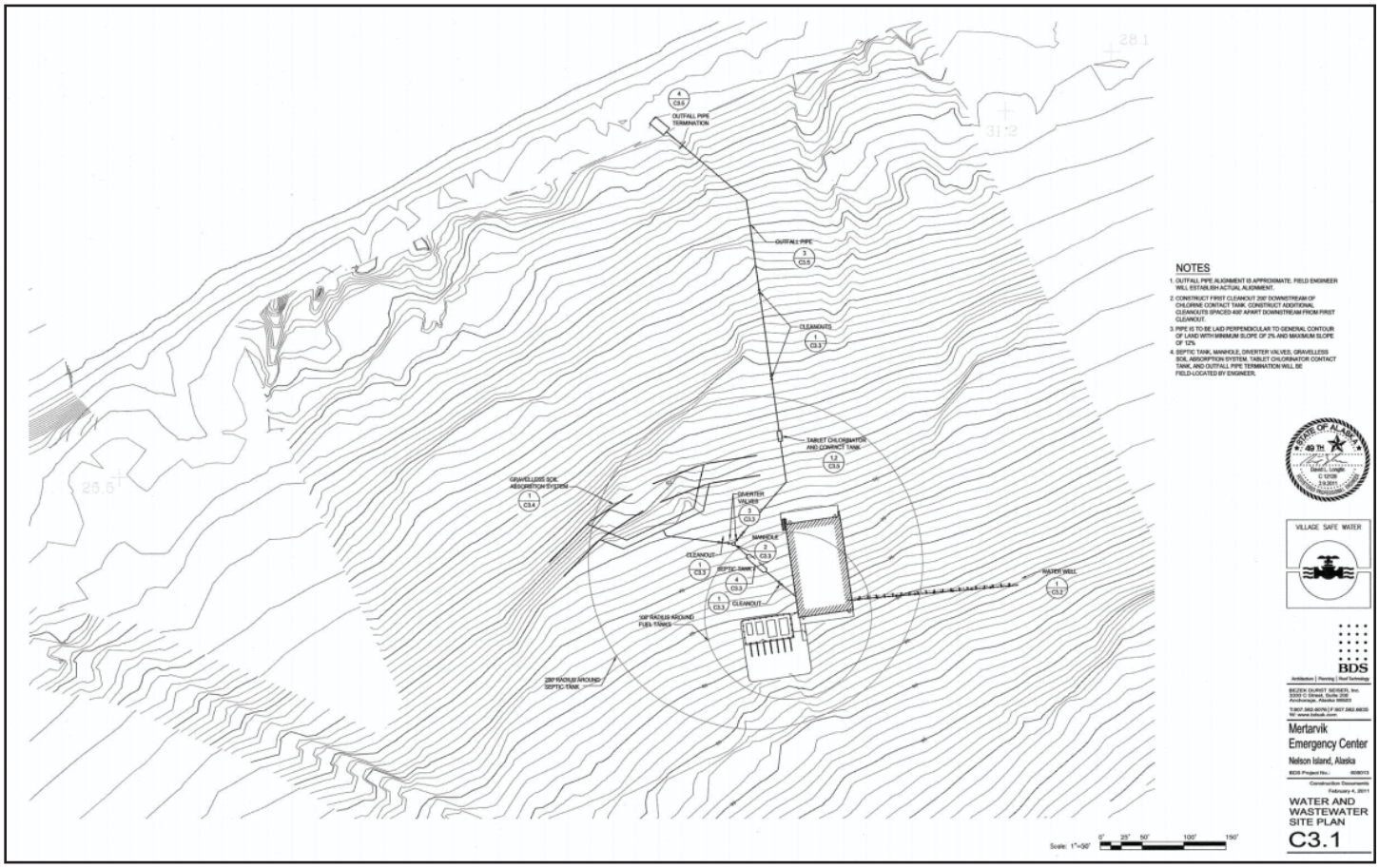
Mertarvik 2012-2015 Action Plan + Proposed Schedule

(cont'd)

Strategic Focus Areas	2012 winter/ spring	2012 summer/ fall	2013 winter/ spring	2013 summer/ fall	2014 winter/ spring	2014 summer/ fall
Transportation						
1. Complete Waterfront Development Plan		■	■			
2. Newtok Long Range Transportation Plan						
3. Determine gravel development feasibility	■					
4. Identify pioneer roads + apply for funding		■	■			
5. Runway permitting, design + construction		■	■			
Energy						
1. Finalize pioneer energy provision strategy		■				
2. Locate fuel storage + generator		■	■			
3. Investigate renewable/low-cost energy		■	■			
4. Funding for energy demonstration projects				■		
Education						
1. Determine education needs (survey)						
2. Home school materials for pioneer families		■				
3. Temporary teaching facility	■	■				
4. Plan for new school + closing old facility	■	■	■			
Communications + Community Resources						
1. Cell phones/VHF radio for pioneers		■				
2. Feasibility of mail service		■				
3. Develop cold storage facility		■				
4. Research funding for garden/greenhouse		■	■			
Newtok Closure + Restoration						
1. Practice emergency plan		■		■		■
2. Inventory resources useable at Mertarvik		■	■	■	■	■
3. Develop preliminary plans for closing village			■	■	■	■
4. Identify activities for supporting pioneers	■					

■ = project initiation ■ = project maintenance

Developing the Mertarvik Townsite Plan Concept Guidelines



Balancing Flexibility + Certainty – Building a village is an iterative, organic process; the townsite plan will evolve over time in response to specific opportunities and challenges. At the same time, the townsite plan needs to establish a fixed framework so, for example, the community does not find itself with key buildings in the wrong location, or no space for future utilities.

Water + Wastewater – Preserve option for a gravity-fed, community-wide piped water and wastewater system, even if alternatives to piping are explored in the early years. This objective requires laying out roads and building sites with appropriate easements for essential infrastructure.

Overall Development Pattern – Concentrate uses to reduce energy use and infrastructure costs. Spend enough time on site to ensure townsite plan is realistic, and responds to both community needs and physical constraints and opportunities. Protect access to areas that may be important for environmental quality or subsistence.

Community Buildings – Reserve space for a core of public buildings including both near term needs like the MEC and other future uses like a school, health clinic and store.

Energy + Communication – Reserve sites and easements for delivery and storage of fuel and for a community generator building. Locate the generator where waste heat can be used for space heating of public buildings like the school. Reserve sites that may be used for wind or other alternative energy sources.

Housing – Identify zones where houses should be located initially during the pioneer phase as well as during later phases, leaving open sites for community buildings and reserving easements or corridors for roads and other infrastructure. Provide flexibility to accommodate different forms of housing, from single family to multi-family units.

Roads + Trails – Reserve a basic framework of public access routes, wide enough to work for pedestrians, snow machines and ATVs and to accommodate utilities and utility vehicles, but not wider than necessary for safe movement. Encourage double loaded streets.

Airport + Waterfront Uses – Reserve space for both a near-term pioneer runway and long-term runway, shelter, and airport access road. Reserve space for small boat harbor, CVRF Community Serve Center, and harbor-related storage areas.

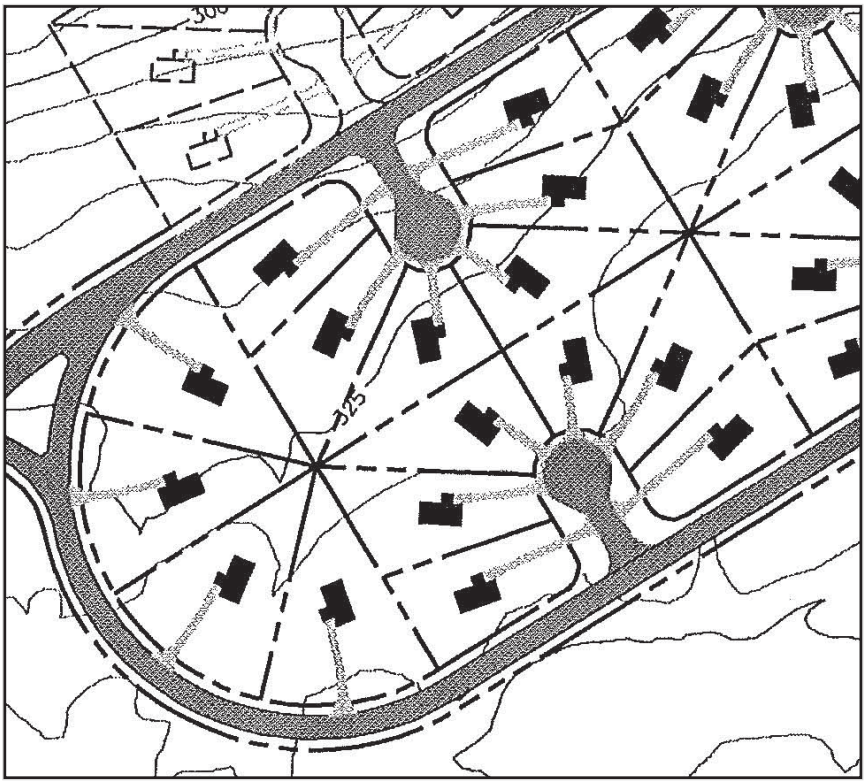
Parcel Layout + Survey Options

Option 1 – Individual Surveyed Lots

Ownership: by individuals, Tribe or Corporation

Advantages:

- Clear site control
- Separation between homes
- Clear, legal access for infrastructure, e.g. roads, future water, sewer, power communications
- Easier to access to lender financing
- Simplifies future land transactions

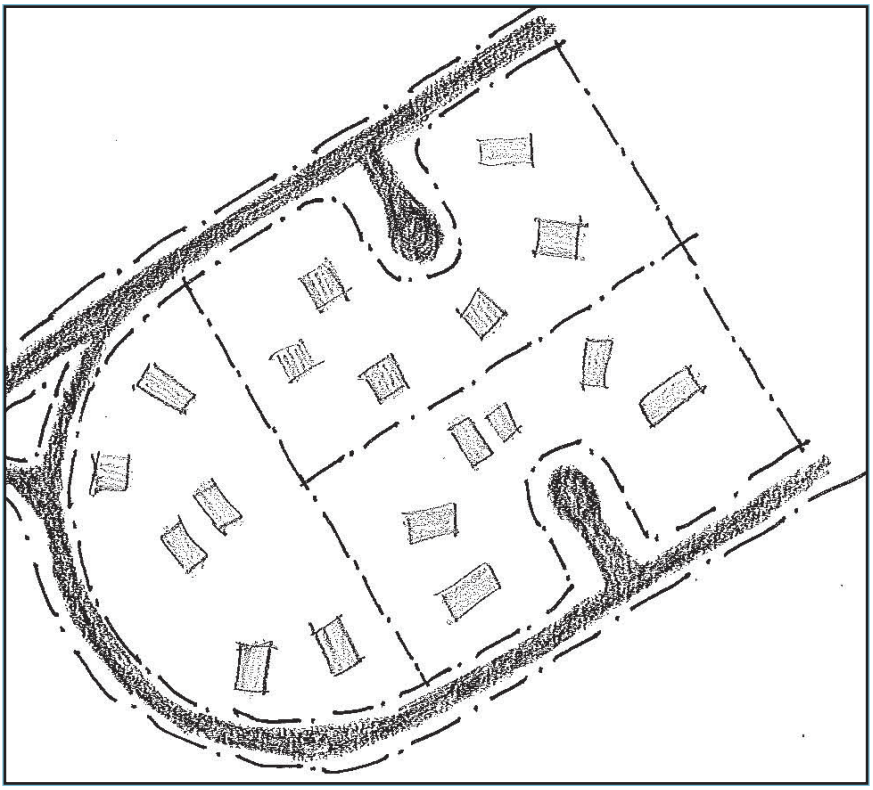


Option 2 – Shared Larger Parcels

Ownership: by a family or group of individuals, Tribe or Corporation

Advantages:

- More closely matches traditional informal village development patterns
- More flexibility in locations of homes
- Option for increased density (which lowers infrastructure and land costs per home)
- Less extensive, less costly survey process
- Less monotonous appearance



Rethinking Rural Housing Options

Weighing the full range of housing options is a key step in defining the community's housing needs.

SINGLE FAMILY HOMES

Traditional Homes

E.g. Throughout Rural Alaska

PROS

- Offers privacy
- Familiar construction techniques.

CONS

- Construction costs have traditionally been high
- Poor quality materials and construction leads to shortened lifespan
- Typically have low energy efficiency and high energy costs
- Low density spreads out development increasing the cost to install roads and other infrastructure
- Average service lines in the region for one house: cost $24,000 to $45,000 for water hook up, $22,500 to $43,500 for sewer hook up (ANTHC)

Improved Traditional Homes

E.g. Crooked Creek

PROS

- Offers privacy
- Looks the same, just built better
- Emphasis on quality leads to reduced energy costs, greater durability and improved safety
- Emphasis on reduction of construction costs spreads dollars across more homes

CONS

- Low density spreads out development increasing the cost to install roads and other infrastructure
- Average service lines in the region for one house: cost $24,000 to $45,000 for water hook up, $22,500 to $43,500 for sewer hook up (ANTHC)

Pilot Homes for New Designs

E.g. Anaktuvik Pass Demonstration House

PROS

- Offers privacy
- Emphasis on quality leads to reduced energy costs, greater durability and improved safety
- Designs test new models for rural housing
- Construction costs depend on materials used

CONS

- Construction costs depend on materials used
- New techniques require training
- Cultural acceptance of alternative housing designs is largely untested
- Low density spreads out development increasing the cost to install roads and other infrastructure
- Average service lines in the region for one house: cost $24,000 to $45,000 for water hook up, $22,500 to $43,500 for sewer hook up (ANTHC)

MULTI-UNIT HOMES

Multifamily 2-3-4 Plex Housing

E.g. Toksook Bay

PROS

- Requires less materials per unit due to shared walls
- Shared walls reduce monthly energy costs
- Concentrating development helps reduce the amount of required roads and other community infrastructure
- Consolidates water and sewer lines, reducing overall cost to build

CONS

- Shared walls reduce privacy
- Very common elsewhere but largely untested in rural Alaska; may be cultural acceptance barriers
- Can be rental or ownership property; depending on financing, rents may be too high for typical income levels

Independent Senior Housing

E.g. 5 Plex Senior Housing, North Slope Communities

PROS

- Requires less materials per unit due to shared walls
- Shared walls reduce monthly energy costs Concentrating development helps reduce the amount of required roads and other community infrastructure
- Consolidates water and sewer lines, reducing overall cost to build
- Funding opportunities are more readily available for senior housing
- Common gathering areas foster cultural traditions
- Have been shown to be financial feasible in rural Alaska

CONS

- Shared walls reduce privacy

Larger Multifamily Housing

E.g. 19 Units in Hooper Bay

PROS

- Requires less materials per unit due to shared walls
- Shared walls reduce monthly energy costs
- Concentrating development helps reduce the amount of required roads and other community infrastructure
- Consolidates water and sewer lines, reducing overall cost to build

CONS

- Shared walls reduce privacy
- Very common elsewhere but largely untested in rural Alaska; may be cultural acceptance barriers
- Most often rental property; depending on financing, rents may be too high for typical income levels

Sample Housing Strategy for Mertarvik – A Starting Point

This "sample" housing strategy is based on the following facts:

- The very land the Newtok community sits on is threatened by severe erosion and housing is the critical factor in making relocation to safe ground at Mertarvik possible.
- Approximately 80 houses are needed at Mertarvik as soon as possible.
- No special program or funds exist to relocate communities.
- AVCP Housing receives approximately $15 million per year in NAHASDA funds and is a large, capable organization with many resources to bring to the table.
- The Y-K region suffers from some of the greatest housing need in the state, but no community faces the same urgency or the same repercussions as Newtok.
- Tapping private foundations as a means of funding large-scale housing programs is untested, though promising.

To meet Newtok's housing need within an acceptable time frame will require:

- Moving as many homes as possible from Newtok to Mertarvik. The community of Shishmaref moved homes in a very cost effective way by placing them on skis and hooking them up to a bulldozer.
- Quick, efficient construction of new, energy efficient homes. For example, when a flood ravaged the village of Crooked Creek in Spring 2011, outside volunteers partnered with CCHRC and the community to construct nine energy efficient, high quality homes in just seven weeks. They did this by using full-frame truss construction (see the Learning from the Experience of Crooked Creek box at the end of this chapter).
- Individual investment (in labor, loans/mortgages, or both). For example, in the community of Kwinhagak, the community is developing a build-to-own pilot program that combines homeowner labor and individual mortgages with grant funding to spread limited grant dollars across more homes.
- Leveraging of NAHASDA funds to secure loans.
- AVCP Housing and regional financial support.
- Foundation, corporation, or other private investor support.
- To ensure investments are sound, designs for houses that are durable, highly energy efficient, safe, and low cost are needed – housing that is a good investment should last for generations not just the life of the mortgage.

Phase 1. Build initial homes to establish pioneer movement

Strategy 1: Secure funds for and build initial pioneer homes

- BIA HIP homes for elderly
- AVCP Housing's NAHASDA allocation to Newtok

Phase 2. Move 15 homes, build 5, demonstrate capacity and develop skills to build more

(Requires first round of surveyed lots and land assignments or ownership)

Strategy 1: Move as many houses as possible.

- AVCP funds the move of its Newtok homes.
- Secure ICDBG funding to assess which homes can be moved and to move them.

Strategy 2: Aggressively pursue funding and labor for a demonstration project.

- Demonstration challenge – Can a material package be developed for $50,000? Secure Cold Climate Housing Research Center (CCHRC) design support and leverage MCDC construction team to build low cost, high efficiency, high quality (durable), and safe houses.
- Tribe borrows against its NAHASDA funds – Title VI allows you to receive five years of NAHASDA funds up front.
- Individuals borrow funds through USDA Section 502 Loan Program or alternatively AHFC Small Building Materials Loan Program (if program requirements can be modified) – Demonstration houses go to individuals who a) do not have homes that can be moved, b) are capable of pioneering, and c) meet eligibility requirements for a loan.
- Secure additional foundation or other private sector financial support.
- Test full-frame truss construction in summer months (similar to Crooked Creek); develop local workforce skills.
- Secure IRT labor to assist with building pads and truss construction (and possibly to move materials?).
- Investigate lower cost shipping options.

Phase 3. Build 20, 30, 40 more homes, pursue a mix of other housing options.

(Requires remaining lots to be surveyed and assigned)

Strategy 1: **Make it easier for families to build their own homes.**

- Subsidize the construction of building pads; every family has a lot and a building pad.
- As population of Mertarvik increases, salvage more and more materials from Newtok for home construction.
- Pursue EPA or other environmental funding to support efforts to salvage materials.

Strategy 2: **Scale up – Build on success of demonstration project and scale efforts/build capacity for year round truss construction.**

- Region borrows against region's NAHASDA funds – Solicit support of AVCP and other tribes to use and leverage regional NAHASDA funds with a Title VI loan.
- AHFC Small Building Mortgage loans to individuals for income eligible families.
- Use combination of local workforce and future homeowner labor.
- Secure additional foundation or other private sector financial support.

Strategy 3: **Request that AVCP construct rental housing.**

Strategy 4: **Pursue funding for senior housing (both individual homes and multiplex).**

Credit: Special thanks to the contributions of David Vought of HUD, who provided significant feedback for the above sample strategy.

Learning from the Experience of Crooked Creek

In Spring 2011, a flood ravaged the village of Crooked Creek. In response, outside volunteers partnered with the Cold Climate Housing Research Center (CCHRC) and the community to construct nine energy efficient high quality homes in just seven weeks. They did this using full-frame truss construction. At Mertarvik (where many houses need to be built quickly), this model could allow community members to build full-frame trusses during the winter months, then construct the houses during the summer months.

Advantages:

- Ability to work on many houses of varying sizes at the same time.
- Ability to work on home construction during the winter – in Crooked Creek, the trusses were created during the summer; Mertarvik could shift to year-round operation.
- Maximizes the short construction season – the legwork is done ahead during the summer months; housing foundations and beams are laid, then houses are erected and enclosed.
- Ability to erect many houses quickly.

What the community would need:

- Inside workspace: Large enough to accommodate truss construction (a typical truss might be 24 feet wide) during the winter months. The MEC could likely be used for this purpose.
- Specialized equipment: Would need to purchase a press for tying the trusses together.

Specialized skills required:

- Building and tying trusses.
- Spraying foam insulation.

How it works: When the house structure and framework are ready to go, all that building the house entails is putting the trusses together. Once the trusses are up, the exterior siding is attached and spray foam applied. Interior walls are created using plywood with a high quality finish on one side and painted with a fire retardant paint. The house is lower cost, very energy efficient, durable, and if you provide for good ventilation, healthy.

IV. Next Steps + Immediate Tasks

- How do we bring the SMP "to life"? How will we initiate the three-year action plan? How will we work together on immediate next steps?

- How will we monitor progress on and update the SMP? How should we use the SMP going forward?

- How will we share the SMP with a broader audience?

- How will we get formal support from existing partners + develop additional support from potential partners?

MERTARVIK

Nunaullemteggun ikayuqulluta tamamta,
assirluta aknirtenritellerkamtenun,
nuggtarllemtenun ciunerkamteni

a community that builds together
for the safe and healthy future of Newtok