







unding is available each year to build affordable apartments for Maine seniors. However, the process is competitive and complex. We can help fix that.

Our team has created a design and construction model that works for Maine communities and has been embraced by state and federal funding sources.

Designed specifically for the affordable housing sector, these turnkey buildings open for residents in 60% of the typical time frame—at a significant cost savings over traditional methods. Funding Ready™ affordable senior apartments are in use in Belfast, Dover-Foxcroft, and Newport. A fourth apartment building is ready to begin construction in Bangor.

Bringing safe, affordable housing to our elderly citizens is critically important. If this is of interest, please contact us soon for an obligation-free conversation.

In the meantime, thank you for doing what you do for people in need.

**Rob Frank, PE** 

Business Development Director
WBRC Architects Engineers

Robert M. Link W

**Brian Bowman** 

Co-owner & Vice President
Bowman Constructors



# **Get Your Seniors Home Sooner**

Designed by WBRC Architects Engineers and built by Bowman Constructors, Funding Ready™ Affordable Senior Apartments are a proven design and construction solution that will save Maine housing authorities time and money, and get seniors into their safe new homes up to six months faster.

This turnkey model has been used for three successful affordable senior housing projects — North View Apartments in Dover-Foxcroft, Sebasticook River Apartments in Newport, and Goose River Apartments in Belfast — with a fourth facility now in development.

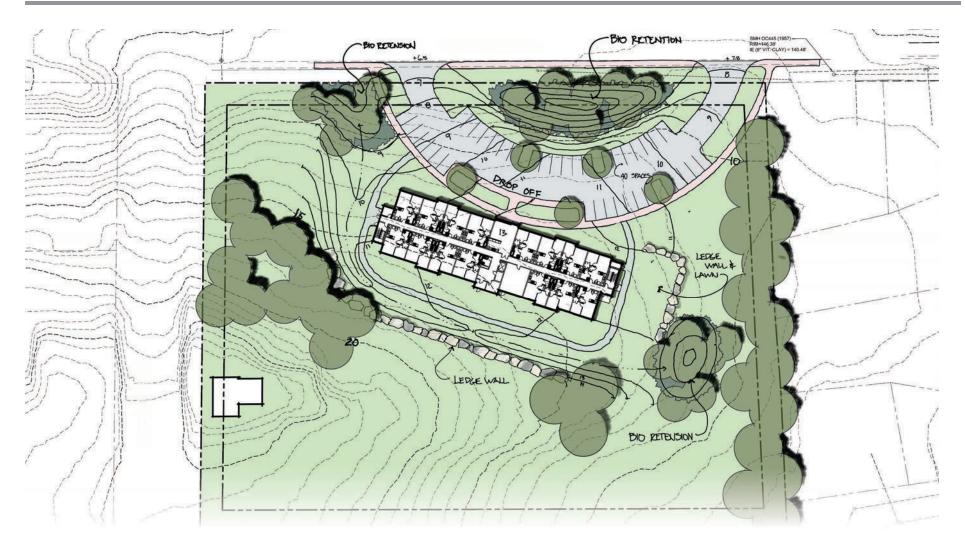
The three completed properties are all 20,500 SF, 24-unit buildings, sized to comply with funding

parameters during previous cycles. Two of these complexes are operating at Near Net Zero energy! This is due to a combination of a 100 KW solar photovoltaic power system, building-wide mechanical heat recovery system, and a remarkably tight energy envelope that includes triple glazed windows, foam insulation, and meticulous attention to design and construction details.

With each project, our team had made refinements to the design and processing, resulting in a highperformance streamlined approach that can be duplicated in your community.



Interested in exploring a turnkey solution for your affordable senior housing project? Contact Rob Frank at 207.947.4511 or Brian Bowman at 207.368.2405.



# It Starts with Fast Site Permitting

With three recent Affordable Senior Housing projects behind our team and a fourth underway, our Site/Civil professionals can bring your project from the concept stage to approval in advance of your application. This strategy virtually guarantees you the minimum 55 points required

to submit a MaineHousing QAP. We have the experienced staff to quickly help you maximize your site's potential. The above conceptual Site Plan for a 32-unit Near Net Zero apartment building uses a curved parking design, allowing the building PVs to be oriented for maximum solar gain.







# **Jumpstart Your Funding Application**

obtaining funding for your affordable senior apartment project is a competitive process. This is true whether you're applying for Maine State Housing funds or a program that emerges in response to COVID-19. In uncertain times, Funding Ready™ Affordable Senior Housing by WBRC + Bowman provides a proven template for success.

These building prototypes have met MaineHousing's QAP funding application criteria on four occasions. The three completed projects also met the criteria of multiple parties. This includes the USDA, private developers, banks, and local housing authorities.

If you are a public housing authority capable of utilizing 4% Low Income Housing Tax Credits (LIHTC), and in need of creating senior housing solutions, you likely already qualify for many of the 55 minimum points necessary to be eligible for this first come, first serve program. By taking advantage of Funding Ready™ Affordable Senior Housing, you might already be eligible to submit.

Do you have seniors on your waiting list? Are you considering applying for new project funding? We invite you to call Rob Frank or Brian Bowman for an obligation-free discussion of your needs and goals.

*Projects, from top:* North View Senior Apartments, Dover-Foxcroft; Sebasticook River Senior Apartments, Newport; Goose River Senior Apartments, Belfast.

#### PROJECTED CONSTRUCTION COST PER UNIT



\* Assumes single elevator and two exterior rated stairwells for all scenarios.

# We've Done a lot of the Legwork for You

There are dozens of steps needed to get seniors at risk into their new affordable apartments. Funding Ready™ Affordable Senior Housing consolidates many of those steps, getting those residents into their homes months sooner, for significantly lower design and financing costs.

Our team is ready to assist you through the entire QAP or other funding acquisition process. Services include site selection/design, assistance with funding applications, public presentations, and permitting.

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When you combine a faster application, design and construction process, these apartments open for residents in just 60% of the typical time frame.



- Designed specifically for affordable housing sector
- Open for residents in 60% of typical time frame
- Quality design and workmanship by trusted Maine professionals
- Design approved on projects funded by HUD, Rural Development, Maine State Housing Authority, Boston Capital, Machias Savings Bank, and private developers.

Top right: Covered drop-off at Belfast, Maine (Goose River)
Insets: 48-unit configuration on a confined site.





# **Design Considerations in Light of COVID-19**

The COVID-19 pandemic has caused society to rethink nearly every aspect of modern life. That includes building design. We all know seniors are at a heightened risk for this dangerous virus. While a building's design and features alone cannot prevent the spread of any airborne illness, apartment buildings owners and operators will need to do more to help mitigate the spread of this and other infectious diseases.

National health and safety organizations such as the CDC and OSHA provide ongoing guidance that will inform best design practices, and professional organizations such as ASHRAE and AIA will continue to refine recommendations.

**Facilitating Proper Hygiene and Social Distancing** 

Practices that were once only seen in hospitals now need to be considered in congregate spaces housing seniors. These include touchless or anti-microbial doors, strategic placement of handwashing and hand sanitizing stations, convenient and appropriate storage for cleaning supplies and materials, and instructional signage to help residents share congregate spaces safely.

#### **Controlling Airborne Transmission**

ASHRAE has issued specific tactics to control airborne infectious disease transmission through HVAC systems. These include ventilation rates, airflow regimes, filtration, and ultraviolet germicidal irradiation (UVGI).

According to ASHRAE, four areas need to be considered when selecting HVAC systems for

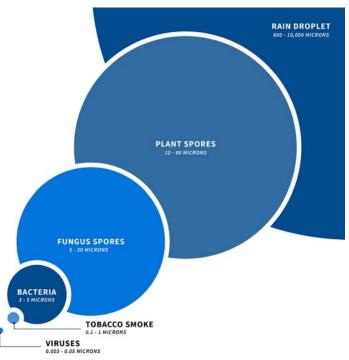
congregate settings, such as an affordable senior apartment building. These include:

- ☑ Bring more outside air into the building.
- Exhausting contaminated air into to the outdoors
- Diluting the air in a space with cleaner air by bringing in more air from outdoors and/or by filtration.
- Cleaning the air within the room using methods such as filters and ultraviolet germicidal irradiation cleaners.

Anti-microbial and self-cleaning technologies should be considered for all new spaces. The good news is, new and modified products are being introduced daily to help mitigate the spread of infection in shared living spaces.

Increasing the number and quality of outdoor spaces will also provide your senior residents more places to interact while benefiting from beneficial airflow.

Early on in the planning process, our team will work with you to provide current cost information on options to help keep your most vulnerable residents safer and healthier.



Above: The tiny size of viruses makes mitigation through methods such as filtration difficult. A multi-pronged approach to building design modification is needed. This combines air handling, traffic flow, and facilitating frequent sanitation, hand washing, and appropriate separation.





# **Senior-Friendly Features**

Senior-friendly design was a top priority in creating these affordable apartment buildings for elderly residents. Easy wins included well-lit hallways, conveniently located elevators, accessible common rooms, and a telemedicine room to provide universal healthcare access.

The ability to age in place was another important consideration. Details throughout accommodate residents with diminished mobility and visual acuity. On the three completed projects, 14 of the units comply with ADA and UFAS. The remaining ten have the infrastructure in place if a settled resident requires increased safety and accessibility measures.















# **Superior Construction Standards**

Meticulous attention to detail is critical to the long-term comfort, efficiency, and durability of these buildings. Bowman Constructors used walls that were panelized offsite to reduce waste and allow for quicker construction, and many building materials were made from recycled content. Energy-saving decisions include rigid insulation under the slab, rigid and spray foam insulation in the exterior wall system, and triple pane windows with a U factor of .19.









# **Low Energy Costs Year After Year**

The Funding Ready™ Affordable Senior Housing building model has been tested with both gas and photovoltaic heating systems, with great results.

The heating systems of North View and Sebasticook are entirely electric, offset by the south-facing 100KW photovoltaic rooftop system and a Central Maine Power net metering agreement which eliminates the need for any fossil fuel. Triple paned windows, LED lighting, and a building envelope that meets Passivehaus standards further reduce operating costs, and energy recovery units provide tempered fresh air throughout the facility. While Goose River in Belfast is heated with gas and was built with a less aggressive insulation program, it is still a high-performing building with surprisingly low annual energy use.

## Three Project Comparison: Traditional vs. Alternative Energy Systems

DATA	GOOSE RIVER - 2014	NORTH VIEW - 2015	SEBASTICOOK RIVER - 2017
Location	Belfast, ME	Dover-Foxcroft, ME	Newport, ME
Building Area	20,478	20,478	20,478
Number of units	24	24	24
Construction completed	7/13/2014	9/15/2015	12/15/2017
Construction cost	\$2,907,984	\$3,350,940	\$3,482,500
Cost per unit	\$121,166	\$139,623	\$145,104
Cost per SF	\$142	\$164	\$170
Slab insulation	R-15 for 2'-0" /R-5 Field	R-20	R-20
Slab perimeter insulation	R-5	R-5	R-5
Foundation insulation	R-15	R-15	R-15
Wall insulation	R-22.5	R-40.5	R-40.5
Attic insulation	R-49	R-67.5	R-67.5
Window u-value	U.32	U.19	U.19
Alum door u-value	0.283	0.283	0.283
Steel door u-value	0.168	0.168	0.168
Appliances	Energy Star	Energy Star	Energy Star
Hot water system	Gas fired hot water	Electric heat pump pre-heat w/electric resistance central water heater	Heat recovery from solar inverter
Plumbing fixtures	Low Flow	Low Flow	Low Flow
Heating system	Hot water fin tube base board	Electric Baseboard	Electric Baseboard
Cooling system	N/A	N/A	N/A
Lighting	Fluorescent	LED	LED
Renewable energy system	N/A	100KW Photovoltaic System	100KW Photovoltaic System
Annual energy heat/cooling/hot water costs	\$31,200	\$15,500	\$12,000





# If stimulus funding becomes available, will your project be ready?

None of us knows the U.S. Government's plans for an economic stimulus in response to the current pandemic. We do know COVID-19 has been and continues to be a threat to the elderly. Housing that allows low-income seniors to age in place and live independently is part of the path forward.

It's safe to assume that an economic stimulus will include incentives to create affordable housing. Whatever the final criteria, our team's Funding Ready™ design and construction approach removes several unknowns from the equation.

Housing developers with a plan in place and permitted building site will have a huge advantage over those who start on square one when new programs emerge.

Let's be frank: Our team is promoting our turnkey, proven approach to affordable senior housing because new projects keep us in business.

But it's more than that. WBRC and Bowman are both companies focused on making Maine a better place. While we've been part of some large-scale projects, none give us more satisfaction than knowing we've helped provide safe, comfortable homes for Maine senior citizens.

Interested in learning more? Perhaps in taking a tour of one of these comfortable, energy-efficient buildings? Please reach out to Rob Frank at rob.frank@wbrcae.com or Brian Bowman at brian. bowman@bowmanconstructors.com at your earliest convenience.

### **Recent WBRC Housing Projects**

WBRC Architects Engineers has been providing design services within the State of Maine since 1902. Since the mid-1980s, we have been involved in over 160 housing projects statewide.

WBRC is currently involved in over 300 units of housing from design development to construction administration.

Two of our HUD 515 funded projects have achieved a Near Net Zero goal. These projects also met standards such as National Association of the Builders Standard for Residential Construction and Energy Star.

Nearly all of our current work must meet the MaineHousing construction and Green Building Standards and/or Rural Development standards. Six of our Penobscot Indian Nation housing single family homes were awarded LEED Gold status.

Recent affordable housing clients served include:

- Bangor Housing Authority, Bangor, ME multiple projects
- Sebasticook River Apartments (MSHA/RD) private developer
- Northview Apartments, Dover Foxcroft (MSHA/RD) private developer
- Goose River Apartments, Belfast (MSHA/RD) private developer
- The Housing Authority of the City of Old Town multiple projects
- Maliseet Indian Housing Authority multiple projects
- Indian Island Housing multiple projects
- Applewood Apartments, Camden (MSHA) private developer
- North School Apartments, Portland (MSHA) private developer

Below is a list of new or extensively renovated apartment buildings which WBRC completed under the Maine State Housing Authority and LIHTC programs. Many of the projects also included other funding sources.

**Waterworks Apartments Bangor** (35 Units)

Caribou Apartments (32 Units)

**Country View Pembroke** (16 Units)

**Goose River Apartments Belfast** (24 Units)

**Grand Isle Estates** (FmHA) (16 Units)

**Maliseet Housing Authority Houlton** 

Meadow View Rockland (20 Units)

North View Apartments Dover-Foxcroft (24 Units)

**Newport Townhouses (FmHA)** 

**Riverview Apartments Howland** 

**Sebasticook River Apartments Newport** (24 Units)

**Town Hall Apartments LaGrange** (24 Units)

**Village Green Fort Fairfield** 

Water Street Apartments Augusta (24 Units)

**Woodland Acres Apartments Milo** (24 Units)

## **Recent Bowman Housing Projects**

partment-style housing is a core construction type for Bowman A partment-style mousing is a core construction for creating a Constructors. Our team has earned a reputation for creating a smooth, streamlined construction process and cultivating positive relationships with the entire project team.

#### AFFORDABLE HOUSING/LIHTC

Steele Properties Apartment Renovations (8 properties) Owner: Monroe Group

Yarmouth Senior Housing **Bartlett Woods** New Construction (28-unit/3-story) Yarmouth, ME Owner: Avesta Housing

Sebasticook River Apartments New Construction (24-unit/2-story) Newport, ME Owner: Sebasticook River Partners, LP

**North View Apartments** New Construction (24-unit/2-story) Dover-Foxcroft, ME Owner: North View Partners, LP

**Goose River Apartments** New Construction (31-unit/2-story) Belfast, ME Owner: Goose River Partners, LP

**VOANNE Saco Senior Housing** New Construction (31-unit/2-story) Saco, ME Owner: Volunteers of America NNE **VOANNE Bangor Senior Housing** New Construction (55-unit/4-story) Bangor, ME Owner: Volunteers of America NNE

**Northeast Creek Housing** New 31 Single Family Housing Bar Harbor, ME Owner: Bar Harbor Housing Authority

Veazie Village Senior Housing New Construction (24-unit) Veazie, ME Owner: Veazie Village Senior Housing, LLC

#### STUDENT HOUSING

Downeast Institute Student Housing Beals Island, ME Owner: Downeast Institute

Foxcroft Academy Student Housing

Dover-Foxcroft, ME Owner: Foxcroft Academy





#### **CONTACT US**

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