

MODEL WORKFORCE VILLAGE

Sal Aquilina

WORKER HOUSING



What is a "Mancamp"?

A "mancamp" is a slang term for a site where workers live temporarily away from home. These sites are normally metal frame one story buildings in a parking lot that resemble a chicken coop. Although this option is cost effective and can be torn down easily, it is bad for community development and leads the men living in these camps with no real ties to the community that they are living and working in.

Sullivan County and Worker Housing

Although Sullivan County does not have any worker housing communities yet, cheap hotels and motels have been popping up in surrounding areas. These hotels may be occupied presently, however, the drilling for natural gas in the Marcellus region will not last forever. It is estimated that it will only last for 30-60 years. This will lead these hotels to close and leave a permanent, unoccupied structure behind. According to estimates, about 37% of workers in Pennsylvania for Marcellus Shale drilling come from out of state. This accounts for 143 workers coming into Sullivan County and surrounding area for work from out of state.

WORKER VILLAGE

Different options for better Worker Housing complexes



SCENARIO 1

WORKER VILLAGE

This first scenario allows for parking outside of the residences. Each residence is on its own level, allowing for easy access to each unit, but is inefficient and bad for the environment. Allowing for each unit to be on its own wastes a lot of space and greatly reduces open public space.

Plazas create formal public spaces for residents to go to be in the community. These spaces allow for recreational opportunities, events, movie nights, etc.

Open green spaces allow and encourage recreation and outdoor grills give a place to go and be in the open. Fire pits also line the site to encourage community interaction.

Explanation

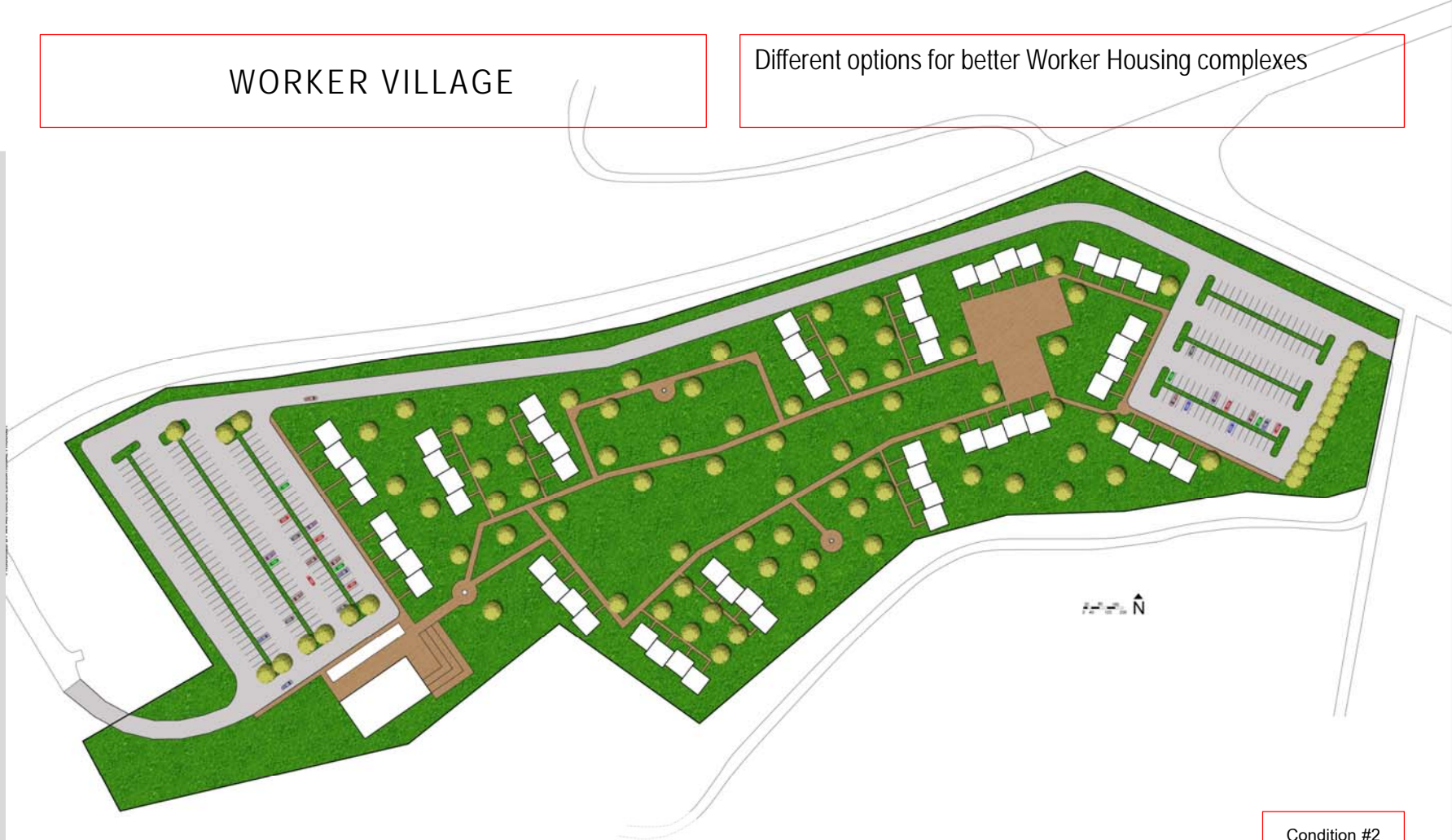
SCENARIO 1

Condition #1



WORKER VILLAGE

Different options for better Worker Housing complexes



Condition #2



SCENARIO 2

WORKER VILLAGE

Different options for better Worker Housing complexes



Condition #2



SCENARIO 2

WORK FORCE VILLAGE

Explanation

This community condenses the parking into two larger lots. It greatly reduces the amount of road and impervious surfaces. The first design, the total amount of impervious surfaces was about 7.5 acres, almost half of the total 16 acre site. This design reduces the amount of impervious surfaces to just over 2 acres. Units in this design are also stacked on one another. This doubles the amount of open space that the site can utilize.

This design also allows for a community and apartment building. The community building is 5,200sf, enough room for a banquet or reception to house all the residents and guests. The community building can be rented out by a resident or it may be used for community meets and recreation. It is possible to have billiards, ping pong, a stage, and a prep kitchen area that can be rented out. Above the community center are 2 stories of apartment style units.

On the East end of the site, a large patio area also gives opportunities for outdoor markets, farmer's markets, flea markets, and can be utilized in the summer months.

All sidewalks will be built from reclaimed brick and will allow water to percolate into the ground.

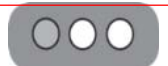
The open space in the center of the community is a large amenity open space. This gives the residents space for both passive and active recreation. Fire pits give communal gathering spaces.

SCENARIO 2

Different options for better Worker Housing complexes

The buildings have opportunities to allow for solar power, wind power, and other forms of green energy. It would also be possible to make green roofs if it was decided for the infrastructure to be permanent. The purpose of this community is for the residents to have a place to be happy to call a home away from home.

Condition #2 Future



RETIREE VILLAGE

Different options for better Worker Housing complexes



Condition #1



SCENARIO 2 Retirement Community

RETIREE VILLAGE

Different options for better Worker Housing complexes



Condition #1



SCENARIO 2 Retirement Community

RETIREE VILLAGE

Different options for better Worker Housing complexes

Explanation

After the Marcellus Development has decreased and eventually ends in the area, Dushore and Sullivan County will benefit from a retirement village to bring people into the area. Sullivan County is already a place for second homes/retirement destination, adding a community will be able to add 150 people, or more, to the permanent residents of Dushore. In other communities, rather than a retirement community, any other special living housing will work. In some cases it can be affordable housing, starter homes, or an eco community. The largest design changes that can be seen are in the parking lot. Accounting for a lack of large trucks to park, parking will not need to be so large. This new parking is one-way 30 degree parking. This reduces parking enough to add rain gardens and bio-swales adjacent to the lot. This will be used as an amenity feature and it will help to filter storm water.

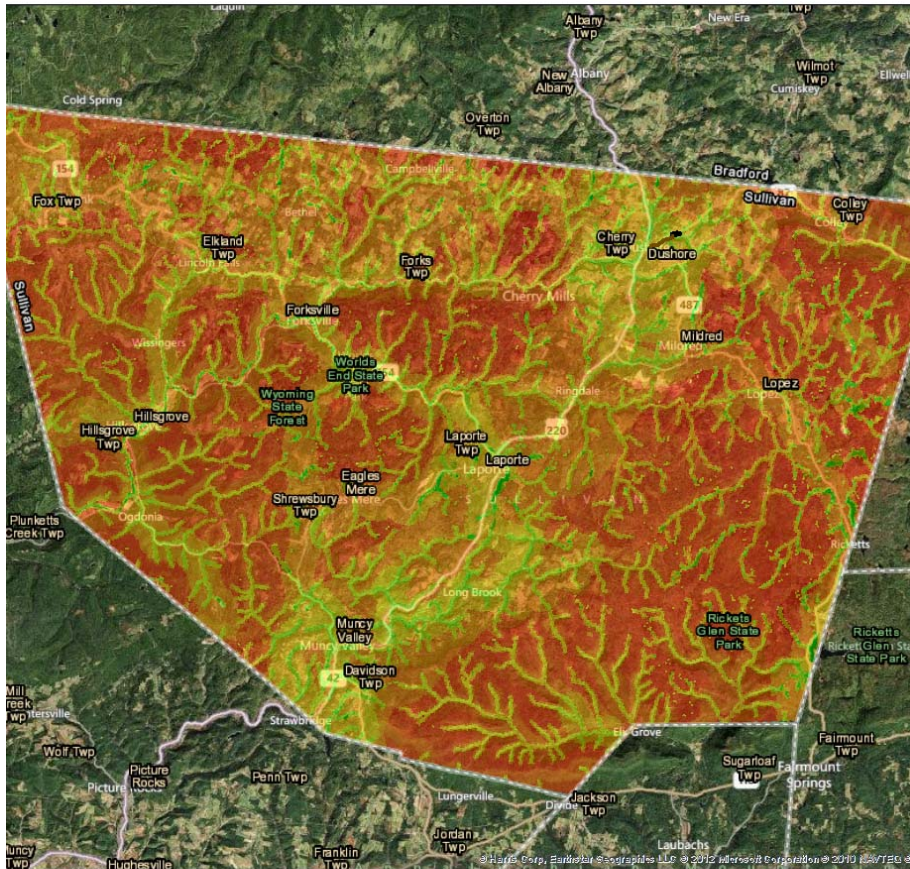
SCENARIO 2 Retirement Community

Condition #2 Future



SUPPORTING MATERIAL: MODEL WORKFORCE VILLAGE

MODEL WORKFORCE VILLAGE



Suitability Analysis of Sullivan County

The suitability analysis shows the places in Sullivan County that are viable for a workforce housing community. This takes into account slope, distance to main roads, and follows Act 13 guide lines. The matrix is detailed on the next slide.

Although the map shows several areas suitable in Sullivan County, the Dushore area is best suited for a new community. It has the highest population in Sullivan County, and is close to Bradford County, where a large amount of Marcellus development is happening.

	Good					Bad
Buildings (500 ft)	1					
MARC1 500						6
State Park						6
Wetland						6
Gas Well						6
Stream (150 feet)						6
Stream (250 feet)					5	
State Road (.5 miles)	1					
Slope 0-10%	1					
Slope 11-20%		2				
Slope 21-100%						6
Population Centers - Dushore	1					
Population Centers - Cherry			3			
Population Centers - Eagles Mere			3			
Population Centers- Forksville			3			
Population Centers- Laporte			3			
Population Centers- Forks				4		
Population Centers- Colley				4		
Population Centers- Elkland				4		
Population Centers- Davidson					5	
Population Centers- Hillsgrove					5	
Population Centers- Fox						6
Population Centers- Shrewsbury						6
220- (.5 miles)	1					
220- (1 mile)		2				
220- (2 miles)			3			
Land Use- Agriculture				4		
Land Use- Forest		2				
Land Use- Wetland						6
Land Use - Water						6
Land Use- High Density Urban	1					
Land Use- Low Density Urban						
Rt 87 (.5 miles)		2				
Buildable Soils	1					

Suitability Analysis Matrix

In order to have a suitable site for a new community in Sullivan County, several factors were taken into account. It was important to be near other infrastructure (within 500 ft), have easy access to state roads like Interstate 220 and 87, and have a high density land use. It was important to avoid wetlands, state parks, gas wells and pipelines, rural areas, and out of the flood plain. Along with these factors, finding an area large enough was also important. Taking into consideration current land use and population centers was also a factor.

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Suitability Analysis of Dushore (Zoomed In)

This map represents Dushore. The green areas are suitable for a community and red areas are unsuitable. The suitability map over the imagery map. The site was chosen for its proximity to the downtown of Dushore, access to main roads, and the size of the land available. The outlined area represents the footprint of the proposed work force housing community. The footprint represents an area of about 16 acres and is just outside of the Dushore boundary.

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The top image shows a perspective of the main entry area of the community. To the right of the image shows the community center. The community center will be able to hold community functions, meetings, banquets, and dinners. It can be available to rent out to residents. A prep kitchen will allow banquets and receptions to easily be held here. An outdoor seating area adds space to the community center. It can be used along with the community center for different functions, or just for daily use.

Above the community center are apartment style units. There can be as many as 16 units, depending on the size. Decisions could be made to expand some of these apartments to make them larger if there is a need for family housing as well.

The bottom image depicts the opposite end of the entry area. This area will make users feel like this is a more urban area. The straight lines and trees lining the homes and parking lot will enclose the user. Rain gardens adjacent to the parking lot will help to filter the water coming off of the lot. Throughout the whole community, straight lines and controlled nature give an urban feeling in the middle of rural Sullivan County.



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The top image shows a perspective of the fire pit area and event lawn. This area will be used to encourage community interaction. The fire pit, horseshoe pit, and other lawn games will be held here. This gives the community a place for interaction between members begins. This area is intentionally left more open for several games to be played at once and for a diverse set of games. Providing areas like this for recreation are important. It is important for the mental health of a person to be able to be outside and relax with things they enjoy. This space is meant to be open to change to the needs of the community.

The bottom image shows the main patio. Again, the urban feeling of the community is apparent. This courtyard is a centerpiece to the community. Different events, farmer's markets, flea markets, and other vendors can come with permission of the community. The wide open patio gives the space room to evolve into whatever the community deems necessary.






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Comparing Work Force Community and Retirement Community

The images to the left show changes from the workforce community to the retirement community after the Marcellus Development has passed. The main difference to be seen in the layout of the design is the parking lots. A larger spot is needed for the workforce community because many of the men coming to work will likely have large pick-up trucks. This is not the case for the retirement community, if they have cars at all. The same number of spots are in the retirement community, but parking is reduced by making the roads one-way and turning the parking to 30 degrees. This leaves some extra room for rain gardens to line the entry area. These rain gardens provide an extra amenity to the community and will help rainwater filtration coming off of the parking lot.

Typical "Mancamp"	Model Workforce Village	Model Post-Workforce Village
Marcellus Shale drillers from out of the area from which they are working	Marcellus Shale drillers from out of the area from which they are working	Retirement community, affordable housing, other special living option housing.
Usually houses 200-300 residents; can house thousands	15 acres in Sullivan County area; minimum 15 people per acre	15 acres in Sullivan County area; minimum 15 people per acre
Modular "train car" dormitory style units; one story; transportable	Modular, stackable units; 650sf; low impact; transportable or permanent	Modular, stackable units; 650sf; low impact; transportable or permanent
>75% Impervious surfaces; requires mostly flat land and/or abandoned land	12.5% Impervious surfaces; options for use of solar and wind power; use recycled, reclaimed and re-purposed materials; allows for spending in surrounding community	12% Impervious surfaces; options for solar and wind power; use recycled, reclaimed, and re-purposed materials; allows for spending in surrounding community
Mess hall; 24 hour security; shared bathrooms; affordable living close to work	Private kitchenettes; private bathrooms; private living room; community center; fire pits; open recreational space; private gardens; community support; opportunities for community events; rain gardens; affordable living close to work	Private kitchenettes; private bathrooms; private living room; community center; fire pits; open recreational space; private gardens; community support; opportunities for community events; rain gardens; community vegetable garden; affordable special living community.
		

Comparing Typical Mancamp to Proposed Housing Community

This infographic shows the differences between a typical mancamp and the proposed housing community. Most of the 'who', and 'size and density' are equivalent to each other. The infrastructure is a great change from the "mancamp" to Work Force Village. The impact is also greatly different. Most of a mancamp's footprint is completely impervious. Only about 12% of the proposed village is impervious, and still have room for greenroofs, solar panels, and wind turbines. The amenities is the largest different between the three. The mancamp's amenities are far fewer than that of the proposed community. The amenities of the proposed community are in place to ensure the residents will have pride in the community that they live in.