

Hart's Mill COMMON HOUSE

Design Goals and Considerations v2.3

This is a work in progress. PDD has provisionally consented to forward this program to Jonathan Lucas, expecting further questions from him as we specify it to the point that he can begin Concept Design. He's going to make a first estimate of room and area sizes. Meantime we seek feedback from GC. A more specified program will probably be a consent item (along with budget) for the March GC meeting. – Anthony 02/20/19

1. Overall Design Goals and Considerations

A. Ecology: Ecologically Responsible and Regenerative Construction

- Sustainability: Our ways of living and building should do the least environmental harm and aim, as far as practical, to have a net regenerative impact on the environment.
- Build to high performance standards, but do not plan to pursue certifications.
- Incorporate passive solar principles to the greatest degree as practical.
- Balance energy efficiency and cost of construction.
- Aim for net-zero energy usage (at least at community scale)
- Affordable while being as “natural” as possible with the least negative environmental impact.
- Solar: plan for photovoltaic arrays on roofs. Use rule of thumb area for potential net zero energy.

B. Architectural Design and Character

- Complementary to the general aesthetic of the residences
- Orient roofs for solar panel installations.
- Orient layouts for passive solar.
- Lots of natural light into the interior
- 9' ceilings minimum
- Vaulted ceiling over dining space (need to coordinate with second story)
- Feel like the building is alive and breathing, incorporating natural materials, nature inspired design elements, natural ventilation, natural lighting.
- Favor two stories in order to minimize footprints and impervious surface
- Good sound buffering
- Layered relationships from indoors to outdoors and private to public.
- Presume consented HM accessibility standards but reconsider as necessary

C. Construction Materials and Finishes

- Easy maintenance

- Low environmental impact, considered over building lifetime as well
- High carbon sequestration
- Locally and responsibly sourced when possible
- Non or low toxicity
- Natural materials and finishes
- Durable materials

D. Keep materials/methods options open. Various alternative construction approaches are under consideration: therefore, keep plans welcoming to earth-build and DIY approaches, at least for parts of the buildings.

E. Other systems, elements, and considerations

- Allow space in bathrooms for the substitution of self-contained composting toilet in place of regular toilets at a later time.
- Much attention to the surround – landscaping, terracing, patios, etc. as part of overall village layout design – of course!

2. Common House

A. Budget: Aiming for around \$175-200/sf. *Understood that if we build a basement also (see 2E), this could reduce the sf cost though possibly increase the overall cost.*

B. General CH goals

- In general, the CH will be vital to the life of the community and essential to the way we function on a daily basis.
- CH needs to be an extended living room for neighborhood, a gathering space for sharing of resources and enhancement and support and of community
- CH needs to function in part as a cooking/socializing/working/hangout space for suite residents who may not all take much part in the life of their attached homes.
- CH to provide a community resource base in order to reduce the ecological footprints of the homes and to provide an area for entertainment
- CH should reflect and center the identity of the neighborhood/community
- Design for maximum flexibility and fluidity.
 - we'll need to be very frugal with what we build, so **multi-use** is essential
 - future needs and uses are not known to us yet, therefore try to keep the spaces as flexible as possible for future reconfigurations and/or additions

C. Uniqueness and centrality

- CH should have a distinctive or unique character in some way that can be iconic for the village or HM as a whole.
- CH style/uniqueness should complement house styles
- CH should visually stand out as center of village (possible third story in part?)

- Alternative DIY construction methods might be especially appropriate for (parts of) the CH since it is a visibly central and engaging community building and all share in the benefits also

D. Size

- Goal is roughly 3000-3500 sf conditioned space
- Significant second story: 25-33% of total sf could be upstairs (for accessibility, allow for chair lifts, and program equivalent functional spaces on ground level)
- Building footprint up to about 3300 sf (roughly 2400sf footprint of conditioned space (since 33% or so will be upstairs, but unconditioned screened porches etc. under roof will add impervious surface).
- Don't preclude future expansion (up to 6000sf conditioned space, though this needn't be all on one floor))

E. Basement

Consider creating walk-in basement under CH. This would be at the north end of an oval green south of CH, graded from south side to create about 4 feet drop below grade at south side of CH; build access ramp at about 4 feet also (hopefully less) on north side (figure a 1-2 foot drop under CH itself for 10' total basement floor). It would be a fairly cheap way to get a lot of extra space and also create a more interesting building as well as topology around the center of the village.

- Flexible space: use for craftshops, meeting or exercise rooms, etc. Possible guest room. Possibly at first partly unfinished (best uses will emerge)
- Grading to create a series of terraces or berms or retaining walls at the sides. For near-grade access on the north side we would need some combination of grading and ramp
- ** Michael Harvey (Orange Cty Planning Dept) says we probably wouldn't be required to install an elevator even if we had a stair. We'd be in a "Private clubhouse" kind of category. We might be required to ensure that equivalent functions are also on main floor.
- If possible, leave space for potential elevator retrofit if desired in the future; stacked closets or the like) ← *This is medium priority.*

F. Architectural Design and Character (particular to CH)

- We are setting aside the FHA Common House schematic design – both the FHA aesthetic and their layout – to start afresh
- flexible (intimate spaces, larger gathering spaces, multi-use spaces)
- modest (careful of budget) but not bare-bones either
- inviting flow between indoor spaces, porch(s), outdoor spaces; airy, open feeling
- single building (we might not object to a breezeway, maybe enclosable when desired, or some other way of framing the view from the N side of the CH through to the green)
- Open floor plan with Kitchen and Dining areas contiguous (but also: kitchen should have the option to be closed off to avoid food prep, classes, or other kitchen work disrupting activities in the other room (or vice versa)
- some curved or round elements and/or oblique angles are desirable for variety and interest
- some vernacular elements are desirable (the building "should feel like it belongs here"):

G. Spaces

- **Central multi-use space:** dining area that can also be used for meetings, subdivided into smaller spaces for parallel separate activities; cleared and used for dance floor, kids' activities, etc. Dining/living/multi-use area (seating for 50-60 for meetings or films; 30ish for dining), with ability to break up dining to allow for smaller intimate usage and larger group usage,
 - opens up to screened porch and/or deck; also allows extra seating for big meetings
 - adequate storage space for toys and other materials
 - includes fireplace
 - also usable for theater; kid play areas, dances, etc.

- **Kitchen.** Main food prep area adequate to preparing large meals for fully-used dining space
 - nodes; with possible multiple small cooking areas in addition (for suite residents especially; also better supports alternative diets, e.g. meat/nonmeat, kosher, etc.)
 - again, kitchen should have the option to be closed off to avoid food prep, classes, or other kitchen work disrupting activities in the other room (or vice versa)
 - possible use for classes
 - food service bar (for community serving, and for a functional teaching area)
 - large pantry/larder for bulk dry goods etc.
 - commercial appliances not necessary, but some may be desirable (e.g. commercial D/W)
 - extensive food processing capacity? or farmhouse or other farm structures, or rent elsewhere?

- **Café,** informal coffee and hang-out, work, etc area adjacent to DR but somewhat separated (maybe with partly moveable barriers so the café space can be joined to the larger DR space for large meetings). Fireplace could double-side into café also. Small, inviting, comfortable, adjustable lighting.

- **Laundry.** 3 washers (min.) dryers (1-2)
 - Entrance both from CH space and directly from outside
 - access to outdoor clotheslines for drying

- Large **screened porch** easily accessed from DR and also from outside (near outdoor kitchen), usable also for expanded meeting space (sliding doors?)
 - Allow for plastic sheeting etc. to close in enough for winter use (except when very cold)

- **Outdoor kitchen** near screened porch and with good access to indoor kitchen.
 - pizza oven?
 - grill
 - running water

- **Other outside contiguous spaces** (decks, patio, porches, terrace)
- **Bathrooms – 2.** Half-baths near central area. Could have shared sink area with two toilets in separate rooms to the side (like Arcadia CH).
- probably will need bathrooms on each level
- **Guest rooms: 2**
 - shared full bathroom/ “family style”
 - could be finished in later phase if necessary (?)
 - provide for sleeping nooks in other spaces (meeting rooms?) for additional guest accommodation
- **Library/ meeting space** – one main level, one upstairs or basement
- **Office space** (administrative office, shared printers, etc.)
- Other possibilities:
 - root cellar? But this probably should go to farm bldgs (farm house?), though CH could have *some* basement food storage area
 - separate teen area?
 - basement big enough for even bigger meetings than upstairs?
 - music room?
- **Storage.** We’ve been moving toward separate provision for storage, off-site or in much less expensive unconditioned space.

H. Other systems, elements, and considerations

- Consider that we will want to collect rainwater in some form

I. Construction strategy

Basement or second floor (or parts) could be left unfinished at first (cost-saving, and also so we can learn from experience what sorts of additional functions/spaces we will need.