

# CITY OF BLOOMINGTON



MAY 9, 2011 @ 5:30 p.m.  
COUNCIL CHAMBERS #115  
CITY HALL

**CITY OF BLOOMINGTON  
PLAN COMMISSION AGENDA  
May 9, 2011 @ 5:30 p.m.**

**❖ City Hall Council Chambers, #115**

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**ROLL CALL**

**MINUTES TO BE APPROVED: March 7 & April 4**

**REPORTS, RESOLUTIONS AND COMMUNICATIONS:**

**APPROVAL OF CONSENT AGENDA:**

- **SP-9-11 Walnut Holdings  
807 N. Walnut St.  
Site plan approval to allow a new mixed-use building within the  
Commercial Downtown zoning district. (Case Manager: Eric Greulich)**

**PETITION WITHDRAWN:**

**PUD-31-10 Car Don & Associates  
2410 E Moores Pike**  
PUD preliminary plan amendment to allow construction of a senior living development within the Renwick PUD. (Case Manager: Patrick Shay)

**PETITIONS CONTINUED TO JUNE 13, 2011:**

**PUD-05-11 McDoel Business Center  
301 W. Patterson Dr.**  
Amendment to parcel E of the Thomson PUD to amend the list of uses. A waiver of the required 2<sup>nd</sup> hearing is requested. (Case Manager: Eric Greulich)

**UV-06-11 Gerald Sowders  
1461 W. Bloomfield Rd.**  
PC recommendation to the BZA re: Use Variance to allow outdoor storage within a Commercial Arterial zoning district. (Case Manager: Patrick Shay)

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**PETITIONS:**

**PUD-02-11 Bloomington Cooperative Plots Eco-Village  
415½ N. Spring St.**  
Rezone to Planned Unit Development from Residential Single-Family to allow development of a cooperative housing project.  
(Case Manager: Patrick Shay)

**UV-08-11 STAT Ambulance (Bloomington Station)  
2505 W. 3<sup>rd</sup> St.**  
PC recommendation to the BZA re: Use Variance to allow an ambulance service within a Commercial Arterial zoning district.  
(Case Manager: Patrick Shay)

**UV-10-11 City of Bloomington Recycling Center  
401 N. Morton St.**  
PC recommendation to the Board of Zoning Appeals re: a Use Variance to allow a Salvage/Scrap yard within the Commercial Downtown zoning district.  
(Case Manager: Jim Roach)

End of Agenda

\*\*Next Plan Commission hearing scheduled for June 13, 2011

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**PETITIONERS:      Bloomington Cooperative Plots Eco-Village  
                                 1710 W. 8<sup>th</sup> Street, Bloomington**

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**REQUEST:** The petitioners are requesting Preliminary Plan and District Ordinance approval to rezone a 2.23 acre property from Residential Single Family (RS) to Planned Unit Development (PUD) to allow the construction of a cooperative housing project. Also requested is a waiver of the 5 acre minimum PUD requirement.

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**SITE INFORMATION:**

<b>Lot Area:</b>	2.23 acres
<b>Current Zoning:</b>	Residential Single Family
<b>Proposed Zoning:</b>	Planned Unit Development
<b>GPP Designation:</b>	Urban Residential
<b>Existing Land Use:</b>	Vacant
<b>Proposed Land Use:</b>	Cooperative Housing
<b>Surrounding Uses:</b>	North – Salvage Yard South – Single Family East – Single Family West – Cemetery

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**CHANGES SINCE FIRST HEARING:** The petitioners have worked to refine their petition since the first hearing. They have met with staff and several neighbors to gain additional input on this case. They have made several changes, as described in this report and their revised PUD statement, to address many of the comments and concerns raised by the Plan Commission, staff, and neighbors. The petitioners have secured an engineer to evaluate and design the utility and drainage plan. These plans have been submitted, but have not been finalized to a point that would allow staff to make a recommendation on this petition. Staff has discussed this with the petitioner, and it has been agreed that the second hearing for this petition should be utilized as an additional informational session due to the number of changes, the lack of a finalized drainage plan, and the overall complexity and uniqueness of the petition. Therefore, staff will present the proposal at the meeting with a recommendation of a third Plan Commission meeting.

*The Village:* The petitioners have reduced the number of proposed sleeping cabin/small homes to a maximum of 10 structures. Originally, a maximum of 25 had been proposed and later reduced to 15 structures at the first hearing. The petitioner is still proposing a maximum of 400 square foot footprints, but has agreed to a maximum of 2-stories in height. They are proposing that flat roofs be permitted to allow for rooftop decks. Staff has no concerns with this request and also believes the number of homes to be appropriate.

It has been established that the individual village homes will be required to have kitchens and bathrooms. All homes will be connected to City water and sanitary sewer.

Maximum # of cabins – 10  
Maximum Footprint – 400 square feet

*Community House:* The petitioners have reduced the number of bedrooms and occupants within the cooperative structure as well. Originally, the petitioners proposed a maximum of 30 bedrooms and 40 unrelated adults. At the first hearing, the petitioners reduced that number to 15 bedrooms and 20 unrelated adults. The petitioners are still proposing 15 bedrooms, but have committed to a combined maximum of 30 unrelated adults in both the village and the community house. This structure would also be required to be connected to City water and sanitary sewer.

*Overall Bedroom/Occupancy:* The petitioners have proposed to limit the combined bedrooms and occupancy of the overall development (the village and the community home) to 40 bedrooms and 30 unrelated adults. Staff would still recommend that each individual home within the village be limited to no more than 3 unrelated adults.

Maximum # of bedrooms – 40  
Maximum Occupancy – 30

*Phasing:* The petitioners have revised the proposed phasing of the project. A specific phasing schedule is provided within the PUD statement. In general, the phasing of the project would be as follows:

- Phase 1: Utilities, ponds, central bathhouse, up to 3 member homes, initial animals, garden preparation and construction, invasive vegetation removal, and native plantings
- Phase 2: Community house, additional member homes, soil maintenance, establish orchard/food forest, and potential animal expansion
- Phases 3-4: Additional member home construction, potential animal expansion

*Composting Toilets/Humanure:* The petitioners have removed the request for composting toilets and use of humanure within the development. As previously stated, all residential structures will be connected to City water and sanitary sewer systems.

*Utilities:* The petitioners have met with the Utilities Department to determine the necessary public utility improvements to serve this property and the proposed use.

- Water – The petitioners will be upgrading existing water service within Spring St. to a 6” line, and connecting to that line with a new 2” line.

- Sanitary Sewer – The site naturally flows to the east. The sanitary sewer will follow the natural contour of the site and connect to an existing 8” line located in Spring St.
- Stormwater – The petitioners have hired an engineer to develop a more specific drainage plan. They have also directed them to design a plan that exceeds the minimum requirements for stormwater runoff rates. The current plan has demonstrated an ability to not only hold post-development runoff rates to the predevelopment rates, but to decrease the runoff rates for 2, 10, and 100-year storm events.

The drainage plan proposes a series of detention ponds and bioswales to not only meet runoff requirements, but also increase water quality for runoff across the site by increasing settling times and introducing filtering vegetation. City staff and the petitioners’ engineer have also looked at the existing drainage issues along Spring St. and W. 8<sup>th</sup> St. Although the petitioners’ plan would reduce the rate of water flowing to this area and should improve the drainage issues, this area will likely still experience some flooding. The main cause for these issues are undersized storm infrastructure within both Spring St. and across 8<sup>th</sup> St. The City will analyze potential solutions for this area and explore funding for potential future improvements.

The petitioners are still proposing a recreational pond for this property. This pond has not been utilized for stormwater calculations. Water from the westernmost bioretention pond will be directed to the recreational pond and will only serve to further detain and filter on-site stormwater.

The drainage plan is still being developed to ensure compatibility with the overall plan for the site. To allow adequate time for development and review of this plan, the petitioners and staff have agreed to seek an additional Plan Commission hearing prior to a potential decision.

*Emergency Drive:* The petitioners are still proposing a fire access lane to be constructed mainly of a pervious system that will allow for vegetation but will maintain structural integrity allowing for fire protection. There is also a requirement for a new fire hydrant at the entrance to this property. The Fire Department has been reevaluating the proposed fire lane. Prior to a Plan Commission decision, the petitioners must receive conceptual approval from the Fire Department for their design.

*Parking:* The petitioners have revised their parking proposal to restrict on-site ownership of cars and have proposed a car-sharing situation with 2 cars and one truck to be used and owned in common by the membership. To accommodate additional vehicles, the petitioners have proposed to install a total of 8 parking spaces; 6 gravel spaces and 2 ADA compliant spaces near the community building.

*Accessory Structures:* The petitioners have provided more detail to the accessory structure standards they wish to have for the PUD. They have requested that they be allowed a maximum of 7500 square feet of accessory structure footprint. They have also shown what 7500 square feet of accessory structures would look like on their site plan. The locations shown are conceptual and final layout of the accessory structures may change. For comparison, 10 single family homes could have a combined total of 8400 square feet of accessory structures.

Staff would also recommend that the maximum accessory structure height of 20 feet remain for all structures with the exception of the barn. Staff recommends that an RE zoning district accessory structure height of 30 feet be allowed for a future barn structure.

*Animals:* The allowance of animals has received considerable discussion with this project. The petitioners have requested that crops and pasturage be allowed within this PUD. Their original request was to have a maximum of 50 chickens and 3 goats on the site. Fifty chickens was based upon the number of chickens that could have been allowed through the accessory chicken flock standards of Title 7 for the approximate 10 single family homes that could have been developed through a conventional subdivision.

Staff recognizes that some animal ownership is an essential and central part of the development concept being proposed by the petitioners. Therefore staff is recommending a phased approach to animal ownership within the PUD. Staff recommends that a baseline ownership of 10 chickens and 3 goats be permitted. Thereafter, staff recommends that additional chickens be permitted in increments of 5 chickens. Additional chickens would only be allowed if adjacent property owner permission is granted in accordance with the City's Animal Control Ordinance. Presuming such approvals are granted, the cap on the number of chickens would be 50.

Staff recommends the following restrictions on animal ownership for this PUD:

- All animal containment areas must maintain a 100 foot setback from the rear property lines of the homes located along Spring St. and 25 feet from the rear property lines of the homes located along 8<sup>th</sup> St.
- Chickens shall be maintained in chicken tractors
- A maximum of 50 chickens are permitted with phasing as described above.
- No roosters shall permitted
- A maximum of three goats are permitted

*Additional Uses:* To address concerns raised at the first hearing, the petitioners has removed uses such as youth hostel, bed and breakfast, and seasonal worker camping (tent platforms) from their request. A cooperative school and educational classes are still proposed within the community house and gardens.

The petitioners have also revised their request for home occupations within the development. They are now requesting that one massage therapist home

occupation be allowed with the initial member homes, and that any future home occupations receive conditional use approval through Board of Zoning Appeals or Hearing Officer.

*Setbacks/Development Standards:* The petitioners have proposed reduced setbacks. Specific setbacks/Development standards have not been proposed. Staff recommends the following standards for this PUD:

- Primary building setbacks
  - North and West – 8 feet regardless of stories
  - East and South – 25 feet
- Accessory building setbacks
  - 35 feet from Spring St. , 5 feet all other setbacks (no change)
- Parking setbacks
  - 25 feet – all sides
- Maximum impervious surface coverage - 40% (no change)
- Maximum Height, Primary Structure – 40 feet (no change)
- Maximum Height, Accessory – 20 feet (Barn may be 30 feet)
- Internal setbacks shall not be required if small lot or zero-lot line development/ownership models are used
- Fence height – Maximum of 8 feet behind front facades of adjacent homes on Spring St.

*Pedestrian Accommodations:* The petitioners have revised the site plan to include an ADA accessible sidewalk connecting Spring St. and ADA parking to the community house. The petitioners also anticipate a more informal path system throughout the development.

*Ownership Structure:* Although the petitioners have asked for flexibility in the ownership structure, they anticipate a common ownership of land with individual village homes being owned as condominium style or zero-lot line homes. The community house would be owned in common by the membership. Staff is comfortable with all of these options and recommends that the exact ownership be developed with future final plans.

*Tree preservation:* The current proposal may not meet the specific tree preservation requirements of the UDO. The petitioners are proposing to remove several areas of small trees to allow for additional sunlight and establishment of the orchard. They do intend on leaving the better stand of trees located on the southeastern portion of the property.

The petitioners will be replanting several fruit and nut trees for food, noise buffers, and new canopy. The petitioners have met on-site with representatives of the Environmental Commission to discuss their preservation and planting plans. The EC has raised no concerns with their proposal.

*Signs:* The petitioners have proposed a limitation of a single 12 square foot sign of 4 feet in height at Spring St. and the potential of an additional sign of the same

size if the B-line is extended in the future adjacent to this property. The future sign would be permitted at a future connection of the site to the trail.

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**ENVIRONMENTAL COMMISSION MEMO:** The EC has discussed this petition multiple times and believes the petitioners have addressed most of their initial concerns. The EC has recommended two items to still be addressed:

1. The petitioner should continue working on the preliminary plan and return to the Plan Commission for a third hearing.
2. The petitioner should submit to the planning department letters from both the US Army Corps of Engineers and the IN Department of Environmental Management stating they do not need permits to complete the planned work in the ravine.

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**NEIGHBORHOOD INPUT:** Staff has received significant input from adjacent property owners. Staff has met several times with the petitioners and neighborhood representatives on this case. The majority of the discussion revolved around drainage, animals, environmental testing, and the scale of the development.

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**RECOMMENDATION:** Staff recommends continuing this petition to the June 13<sup>th</sup> Plan Commission meeting.

# MEMORANDUM

**Date:** April 28, 2011  
**To:** Bloomington Plan Commission  
**From:** Bloomington Environmental Commission  
**Through:** Linda Thompson, Senior Environmental Planner  
**Subject:** PUD-02-11, Bloomington Cooperative Plots Eco-Village and Community House, Second Hearing

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This memorandum contains the Environmental Commission's (EC) comments regarding a change of zoning from residential to Planned Unit Development (PUD). The petition still contains some requests that are not yet typical for PUDs, but the EC believes the sustainable nature of the plan is commendable and beneficial for future paradigm shifts in how we live and develop our cities. The petitioner has addressed many of the questions and concerns that the EC noted at the last hearing as seen below.

1.) LANDSCAPE PLAN:

The petitioner met with staff on several occasions and discussed how the landscape and buffers will be laid out. A modified written plan still needs to be submitted, but the verbal descriptions appear to be on the right track.

2.) WATER QUALITY:

The petitioner has been concentrating on the water quality and quantity issues. By eliminating some features like composting toilets, and employing a stormwater engineer to design a plan, much progress has been made. However, there are still some details to work out before the EC is comfortable with the final stormwater plan.

3.) SITE DENSITY DESIGN:

The EC believes the petitioner has addressed the density issues by lowering the population density of the site.

4.) VERIFICATION OF STATE & FEDERAL PERMITS:

The EC continues to recommend that the petitioner contact the Indiana Department of Environmental Management and the US Army Corps of Engineers to ensure a permit to build a dam across the ravine is not needed. The petitioner should provide letters from the agencies stating their jurisdictional determination.

**EC Recommendations:**

1. The petitioner should continue working on the preliminary plan and return to the Plan Commission for a third hearing.

2. The petitioner should submit to the planning department letters from both the US Army Corps of Engineers and the Indiana Department of Environmental Management stating their jurisdictional determination.



# **Bloomington Cooperative Plots Ecovillage**

Permaculture Urban Demonstration (PUD) Proposal Draft

Bloomington Cooperative Plots Ecovillage  
415 ½ Spring Street  
Bloomington, IN 47404  
btowncooperativeplots@gmail.com

Dear City of Bloomington:

Bloomington Cooperative Plots Ecovillage (“BCP”) is entering the PUD process to obtain permission to design and build an ecovillage/cohousing community and community housing structure. (In doing so we hope to be a precedent for the city to create a zoning district that would enable future ecovillages and community housing structures to be built in Bloomington.) We have purchased 2.23 acres in the northwest of Bloomington with the intention of creating a bicycle-focused community consisting of a community structure and various small footprint houses. BCP is an intentional community of individuals and families who dedicate their unique talents, gifts, and aspirations toward a common vision of creativity, community, sustainability, education, and economic freedom. We will promote sustainable living and community by living, eating, learning, creating, gardening, sharing, and teaching together, within our community as well as the greater Bloomington community. Community is our primary need and the heart of who we are.

To achieve our vision and goals, we will combine concepts of permaculture, organic agriculture, ecological restoration, alternative energies, alternative transportation methods, natural construction, inter-personal connection, and non-violent communication methods. This combination of ideals and practices will allow BCP to minimize the ecovillage’s carbon footprint while maximizing the productivity of the land. BCP is requesting the opportunity to make its vision of community a reality on the Spring Street property. BCP would be glad to provide any additional information needed. Thank you very much for your time and consideration.

Sincerely,

Daniel Weddle

Zach Dwiell

Carolyn Blank

Bloomington Cooperative Plots

**Website:** [BtownCooperativePlots.dwiell.net](http://BtownCooperativePlots.dwiell.net)

**Email:** [BtownCooperativePlots@gmail.com](mailto:BtownCooperativePlots@gmail.com)

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## **Permaculture Urban Demonstration**

What is permaculture? As defined by one of its founders, Bill Mollison, “permaculture is a design system for creating sustainable human environments.”

What is Permaculture Urban Demonstration? It is a play off of the acronym PUD, which stands for Planned Unit Development. Our PUD proposal approaches development from a much wider perspective than a traditional PUD proposal; thus we feel it is appropriate to call it by a more encompassing name.

There is an inherent clash between the formalized PUD process and building a village, a clash that lies in the definition of home. In a typical subdivision the developer assumes the responsibility for building the “homes” or establishes rules that limit the possibility of what future “homes” can be, while also subdividing the property. This regimented “homes” approach allows the developer to explicitly say what the future homes will look like and how they will lie on the land. BCP is approaching the problem much more organically as we cannot explicitly know how future residents will want to construct their homes. Although we are putting certain restrictions into place, we are also focused on using the PUD process in a more creative and encompassing way.

This inherent clash gives us more justification to apply Permaculture principles, which provide a scientific grounding for planning the property based on natural flows. (Flows refer to sources of energy or disturbances such as sun, wind, water, or noise pollution.) By sketching a flows map it is possible to section off the property into best uses. The intention of this proposal is to not only detail placement of individual structures, sidewalks, roads, and trees, but to also detail how the village can become a harmonious piece within its natural systems.

In short, our Permaculture Urban Demonstration is the formalization of zones that lead to the optimal possibility of a sustainable community while promoting organic development so that future villagers have the framework and legal backing to establish their homes.

## **Ecovillage and Coopertive Housing Zoning**

Ecovillage and cooperative housing zoning is not currently part of the city zoning portfolio. A new zoning district would provide viable, sustainable, high-density housing solutions as well as coincide with recommendations from Bloomington’s Peak Oil Task Force Report. Such solutions may be critical for Bloomington’s sustainable growth and well-being in the coming years and decades. We hope our PUD proposal and the subsequent success of our project will serve as a basis for establishing an ecovillage and cooperative housing zoning ordinance.

## **Current Zoning for 415 ½ Spring Street**

The property is zoned RS, which means the 2.23 acres could be subdivided into roughly 10 building lots which could house up to 30 unrelated adults plus children. Such capacity would likely lead to a typical subdivision or trailer park. Both development strategies would require great changes to the existing green space due to roadway infrastructure. Furthermore, being that the property is located on a dead end street and the topography is sloped, a standard auto-centric subdivision would have a major impact on the neighborhood.

## **Timelines**

### ***Infrastructure***

Phase 1, 2011:

- Emergency Access Drive (see Emergency Access Drive in Appendix)
- Run Utilities:
  - Electricity (Possibly from Duke energy, though off grid solar is an option)
  - Sewer
  - Water
  - Gas
- Implementation of Stormwater Plan

### ***Building***

Phase 1, 2011:

- Build Central Village Bathhouse (For use during the construction of homes, it will be attached to water and sewer)
- Member Home Building (Maximum 3 Houses) It is likely the work done this season will be mostly prepping for the following building season, however, more may be accomplished depending on the length of the PUD approval process.

Phase 2, 2012:

- Member Home Building (Maximum 3 Houses)
- Community House (see Community House in Appendix)

Phase 3, 2013:

- Member Home Building (Maximum 3 Houses)

Phase 4, 2014

- Member Home Building (Maximum 3 Houses)

### ***Animals***

*Phase 1, 2012*

- 10 Chickens
- 3 Goats

*Phase 2, 2013*

- Chicken Flock Expansion Begins

## ***Agricultural***

### Phase 1, 2011

- Identify trees to remain on the property
- Inoculate Soil to Build Fertility (Bacteria and Fungus Inoculate)
- Dig Ponds
- Build Raised Beds
- Sow Ladino (white) Clover as a Nitrogen Fixing Cover Crop
- Establish Ponds on the Southwest Side of the Property to Provide Irrigation
- Set Up Honey Bee Hive
- Start Composting System
- Map Out Orchard
- Plan Perennial Food Forest

### Phase 2, 2012

- Inoculate Soil to Build Fertility (Bacteria and Fungus Inoculate)
- Establish Orchard
- Establish Perennial Food Forest

## ***Ecological Restoration***

### Phase 1, 2011

- Clear Land of Invasive Plants: Blackberry, Multi-Floral Rose, Euonymus, Bush Honey-Suckle, etc....
- Reestablish Natives (i.e. Ginseng, Blood Root, Spice Bush, Paw Paw, etc...)
- Establish Riparian Zone on the North Side of the Property
- Establish Bio Filtration Areas

## **Requested Uses**

### *Animals (see Animals in Appendix)*

The current zoning allows for 10 residential lots which would equate to 50 chickens. We would like to raise a maximum of 50 chickens for use in egg production. In addition to chickens we would like to raise 3 goats for milk production and vegetation clearing. The 3 goats would consist of 2 female adults with 1 suckling child to maintain milk production.

“At this point, [the city of Bloomington planning department] staff proposes that the development be allowed a maximum of 10 chickens and 3 goats without neighbor sign-offs. We then recommend that future additional chickens be permitted in increments of 5 up to a maximum of 50 only with neighbor sign-offs. As you know, neighbor sign-offs are typically required as outlined in Title 7 of the City's Municipal Code.” The previous phasing plan was sent to us by Tom Micuda.

### *Accessory Buildings*

Given our desire to become a demonstration site for urban agriculture, Permaculture, and cooperative living, we will require various accessory buildings totaling no more than 7,500 square feet. We created a map to illustrate the 7,500 square feet of accessory structures on property. The buildings will likely shift around, however, a map was made to provide a sense of the space and how it can be utilized. These buildings might entail a barn, gazebo, tool sheds, wood shop, chicken coop, chicken tractors, goat house, greenhouse, root cellar, bike storage shed, music studio, yoga studio, office, etc... Our continued goal will be to keep these structures as small as possible and multi-purposed while still being functional.

The accessory buildings will need to be approved by the planning and building departments.

### *Building Permits*

We will be exploring many types of natural construction; however, we will go through the proper approval and permitting processes prior to the construction of any structures.

### *Commercial Spaces in Houses (see Home Based Business in Appendix)*

One of the founders of the community is a massage therapist and would like to have a room in home dedicated to her practice. Her business would be by appointment only in order to meet the low traffic needs of this proposal. Any future businesses on the property would require a conditional use permit from the city planning department.

### *Crops and Pasture Zoning*

Some of the uses of the property would otherwise fall under Monroe county's current Crops and Pastures zoning.

### *Emergency Access Drive (see Emergency Access Drive)*

Due to our bicycle-focused lifestyle it would be possible for us to live without a road bifurcating the property; however, emergency access is important and thus we have worked out an acceptable compromise. Bloomington's fire truck 1 is the largest truck of the fleet, so our drive will be based on its turn radius of 30 feet. The drive is longer than 150 feet so we will be providing a 20 ft wide access drive with a modified hammerhead turn-around. A fire hydrant will be located at the front entrance of the property and the road will allow the truck to drive within 125 feet from the front of the furthest structure so that firefighters will be able to reach the back of all structures with their 150 foot long hose.

Because the drive will only be used in case of emergency, we will install pervious pavers above an 80 ton capacity road base that would allow us to grow herbs on top of the roadway. The herbs would be selected for species that do not grow over 12 inches so that in the case of fire they

could be run over by the truck. One such herb is creeping thyme which is shorter than most grasses.

#### *Encroach on 25 Foot Insets*

The north side of the property is the best candidate for passive solar home construction. It would greatly benefit our building plans to be able to build all the way to or very close to the property boundary lines on the northern and western property lines. The northern property lines border the CSX railroad tracks and JB Salvage beyond the tracks. The western property line borders the Valhalla Memory Gardens cemetery. This request would enable us to encroach on the 25 foot inset that is typical of home construction. We feel we can make a very strong case for the encroachment given that our impact on those two neighbors will be negligible or non-existent.

#### *Interpretations of Use After Rezoning by the PUD Process*

After approval for the rezoning by the PUD process we request that future interpretations be examined and ultimately approved or denied by the staff of the City of Bloomington Planning Department.

#### *Population of Inhabitants, Structures, and Bedrooms*

We will have a maximum population of 30 unrelated adults. This number is derived from the lot being zoned for 10 houses multiplied by 3 unrelated adults per house as currently permitted in Bloomington. This number is similar to the 13.4 residents per acre ratio of Columbia Ecovillage, a successful ecovillage in Portland, Oregon (<http://columbiaecovillage.org/>). If the project is successful we may choose to petition the city for an expanded population in the future. See also Two Acre Wood Cohousing (<http://www.martyrobertsproductions.com/coho.html>) which current consists of 14 households with 22 adults and 17 kids.

In our survey of other ecovillages and co-housing communities we have found an average ratio of 75% adults to 25% children. Given those numbers there would be an average of 8 children living in an ecovillage 30 adults in size. To ensure there is adequate space for the adults and children we wish to have 40 bedrooms, a number that gives us a couple of extra bedrooms in case we have 10 children instead of 8.

The village will have a maximum of 10 small footprint houses and a larger community house with a maximum of 15 bedrooms. The combined population of the smaller houses and community house will not exceed 30 unrelated adults. Theoretically, the property could hold many more houses; however, we are restricting our development to the areas of the property that have adequate winter sun for passive solar heating. Structures will be organized in a logical way with respect and aspect to Southern sun exposure.

### *Signage*

We would like to place signs with our ecovillage's name on Spring Street and at our private entrance to any future extension of the B-Line. These signs will be no more than 12 square feet and no higher than 4 foot in height. The name is yet to be determined. Bloomington Cooperative Plots is merely a placeholder while we go through the PUD process.

### *Sub-Standard PUD*

The property is only 2.23 acres and thus smaller than the typical PUD requirement of 5 acres. We request the right to enter the PUD process despite being a sub-standard size.

## **Our Values**

### *Building Footprint*

To maximize the number of houses we can fit on the site while minimizing our footprint, individual houses will be restricted to an internal living space footprint of 400 square feet per floor (i.e. a two story house could be 800 square feet of living space). We define it as an internal square foot limit because naturally constructed homes often have thick walls, so there can be a large difference between internal living space and exterior footprint. All structures will be built according to building code and will not encroach on the solar gain of the surrounding living structures.

### *Car Ownership Restrictions*

The community will own 2 cars and 1 truck for the use of community members. Though we cannot legally restrict individuals from owning a car, we will prohibit members from keeping a private car on site or on neighboring public streets.

### *Community Garden*

As part of our desire to work with the neighborhood we are open to setting up a community garden, likely on the East side of the property. Use of the community garden will be done via an application process, similar to the City of Bloomington community gardens. Such community garden infrastructure provides a strong second use of the property should the village for some reason cease to exist. The community garden will also provide space for a neighbor to maintain the garden he has kept on the lot while it was vacant.

### *Consideration of Neighbors*

The two neighbors bordering the community to the east have a vista view of the property. We have been planning our community and agricultural practices to preserve their view.

Noise is a significant concern for neighbors of any development. Although the place is inherently noisy given its proximity to the railroad tracks and JB Salvage, we are taking precautions to mitigate our contribution to such noise. The three most notable actions are caring

for the transitional forest on the south side of the property, planning social gathering spaces on slopes that lead away from the neighbors, and living structure placement. The transitional forest will provide a vegetation sound buffer for a majority of the neighbors. The social gathering space will be on the south side of the property on a north slope that leads away from the neighbors and toward the train tracks. All of the houses are very far from the neighbors, with the exception of the community house.

In addition, we recognize that Sunday is the only day of the week JB Salvage is not operating, thus making Sundays the only quiet, peaceful, day of the week in the neighborhood. In order to benefit and respect the neighborhood as well as our own community we plan on limiting our heavy building and use of loud machinery on Sundays.

### *Educational Offerings*

There are many threads of educational opportunities offered by this project, a number of which are defined below:

#### *Political*

This project will serve as a political precedent for similar projects. The founders have spent nearly 2 years and thousands of hours preparing this proposal. Once approved the proposal will be provided as a PDF for other inspiring ecovillages.

#### *Demonstration Site*

The entire property will become an open source Permaculture demonstration site, which means not only will individuals be able to visit the site, but we will provide free PDFs of the systems that are demonstrated so that they can be replicated with the least amount of overhead.

#### *Cross Generational*

The wide range of generations represented in the planned population of the ecovillage will provide for the cross generational sharing of knowledge and wisdom.

### *Historical Agricultural Use Preservation*

Until the early 1970s the property was an active cattle pasture. Although we will not be reintroducing cattle, we will be operating the property as an urban farm with animals, gardens, and orchards.

### *Local Economy Supporters and Developers*

We are active local community supporters making many things for ourselves while also providing services for members of the greater Bloomington community.

### *Native Habitat Restoration with Forest Sanctuary*

The southeast (and to a more limited extent southwest) portions of the property are young transitional forests overrun by euonymus and honeysuckle. We will be removing the invasive

plants in order to reestablish native woodland herbs. The southeast corner of the property has a small, awkward piece of land jutting off of it. It is likely we will establish this piece of land as a mini forest sanctuary.

We will hire a local Permaculture expert to recommend plants for vegetation buffers and the filtration of water.

#### *No Profit Motive*

We are not in this project to make money. Within the freedoms granted through the PUD process, we hope to create a community of people living and working together who are connected to the land as well as to the neighborhood.

#### *On-Site Home School Cooperative*

The members of the community hope to start a home school cooperative for the homeschooling of their children. Running the school as a cooperative will allow multiple individuals to be involved in building a curriculum and teaching the children. This wide range of teachers will diversify each student's educational experience beyond what any one individual could provide. The students' education will be further enriched by unique opportunities to learn about Permaculture, alternative energy, and other sustainable practices within the community.

#### *Physical Layout of the Structures*

We desire to cluster the housing as opposed to subdividing the lot. Cluster housing is a housing layout technique that places the living structures close together so that a large portion of the green space on the property is preserved.

#### *Sustainability Defined*

There are as many definitions of sustainability as there are people in Bloomington. Below are a few that resonate with us:

- Sustainability is a way of living that promotes not only the continuation but the flourishing of human, and all, life.
- Sustainability refers to an in depth understanding of where you are and what you have, being deeply committed to one's place, and committed to improving it.
- Sustainability requires simultaneously meeting environmental, economic and community needs.
- Sustainability is a base reason for our decision to live in an ecovillage constructed with natural techniques. Clustered housing and small building footprints reduce the overall footprint of the living structures, thus preserving green space for enjoyment, gardens, and life.

#### *Walking Distance*

There are no service nodes - places where community services are offered as depicted in the Peak Oil Task Force report - in the Waterman neighborhood. Our property is within walking distance of most of the neighborhood, making it an excellent location to establish service nodes.

#### *Water Retention and Filtering*

On the southwest side of the property we hope to establish a bio-filtration area with two ponds for irrigation, water pressure, and leisure. The ponds will reduce our need to draw from the city water system and the bio-filtration will filter the water used on the property.

On the north side of the property there is a watershed from the train tracks and the recycling center. The sources of the water are potential polluters and the water currently fans out across the property. In order to prevent contamination we are considering the creation of a riparian zone to slow down and filter the water.

#### *Water Systems*

Each house will have the option to install rain water collection system. House owners will have the option to store water in their own tanks, in communal tanks, or in a pond. Water tanks and ponds will feed gardens and aquaculture tanks both outside and in the greenhouses.

Water from sinks and showers is legally considered grey water. Currently Indiana state law greatly restricts what can be done with grey water but we hope that these restrictions will evolve over time. Our systems will be connected to the sewer in the conventional fashion, however, we will leave room in our systems to accommodate future legal grey water systems. We hope to work with these laws over time, but, since the ultimate decision lies with the state government we feel it is outside the purview of this proposal to include specifics about grey water use.

Ideally we would like for all grey water from village houses to be used for our agricultural purposes. Water would eventually go into public and private aquaculture and agriculture.

Members could elect to store water temporarily in tanks, ponds or swales before passing it on to the aquaculture and agriculture. Upon proper permitting, some residents could choose to reuse this water after filtration instead of tap water from the city. Grey water and rain water systems could either be combined or kept separate.

### **Our Reasoning**

#### *Creativity*

The community's founders are thinkers and artists who wish to work together to minimize the costs of living. The inherent clash between the formalized PUD process and organic creativity is a major difficulty we face entering a process as rigid as PUD. Therefore our proposal, though specific in all areas necessary, leaves space for fostering additional creative projects.

### *Fluid Interconnected Systems*

Most systems that meet our basic needs are often disconnected. By implementing Permaculture at every level of our village design we will be able to create fluid interconnected systems that strive toward a closed loop system.

### *Home*

We are building our homes and thus the utmost care and attention will be paid to making every aspect of the land our home. There has been some concern voiced by the neighbors about renters not being committed to the neighborhood. We believe the neighborhood is an extension of our home and we look forward to building relationships with and respecting the neighbors. We also aspire to reestablish the Waterman Neighborhood Association, an association that ceased activity roughly three years ago.

### *Need for Villages and Creative Housing Alternatives*

Our project in and of itself will not be sufficient for pushing Bloomington toward becoming a sustainable community. The most important aspect of our project is that it sets a precedent for future housing projects; largely this is why we have chosen the formal PUD process as it is the most difficult, precedent-setting avenue. We hope our precedent will not only serve ground-up ecovillages (as such projects will be rare given land constraints) but also clear the way for housing cooperatives and neighborhoods that wish to reestablish their preexisting infrastructure as ecovillages. We truly hope our ecovillage lays some ground work for other sustainable endeavors to follow.

### *Proximity for Bike-Focused Culture*

To ensure that bicycling is a viable transportation option we only considered properties within a 15 minute bike ride of downtown on reasonably safe routes. The Spring Street property is 1.3 miles (9 to 15 minutes) from city hall and the farmer's market. The roads along the way (with the exception of small stints on Vernal Pike and Adams) are primarily small residential streets with low traffic. The new North West extension of the B-line ends roughly 5 blocks from our property.



## **Neighbor, City Officials, and Greater Bloomington Questions**

### *ADA (American with Disabilities Act) Walkways*

There will be an ADA walkway from Spring Street to the community house and one from the handicap parking to the community house.

### *Age of an Adult*

An adult is an individual who is 18 years of age. This was included to further define the unrelated adults portion of the proposed ecovillage population.

### *Animals Grazing in the Orchard*

Chickens and goats are the proposed animals to be grazed in the orchard. The chickens will be kept in mobile coops which reduce smell and runoff of manure by distributing the manure evenly across the land, while maintaining a healthy level of vegetation. There will be no processing of animals for meat or hides on the property as such things are prohibited within city limits.

Example of Ways Animal Noise can be Reduced:

- There will be no roosters which will significantly minimize noise.
- The coops could be positioned to face West toward the cemetery so that the sound of roosting chickens will be directed away from the neighborhood.
- Buildings and parked cars could be placed between the neighbors and chickens.
- There could be a sound barrier (ie. wall or fence).
- The coops could be lined with noise absorbing material.

### *Animal Phasing*

You can find the phasing plan provided by the planning department in the Animals Requested Use in the Requested Use Section above.

### *Anything Goes*

There has been concern that the vagueness of the proposal presented at the first planning commission meeting left the project open to do anything. This current proposal greatly refines what can be done and future accountability of the provisions laid out in this proposal will be maintained by the Bloomington Planning Department.

### *Bike Safety*

It is feared that the increase of bikers to the property and speed of drivers on 8th street will result in injuries to bikers. Although cars may travel too fast on 8th street, it is very wide which makes it suitable for biking. Spring Street is a dead end and traffic slows down greatly. The most dangerous parts traveling into town are the short stints on Vernal Pike and Adams. Although these roads are not particularly good for bikers, the duration on these roads is short traveling to either the new North West B-line extension or the Near West Neighborhood. Additionally, we see the potential for the city to install a bike line or traffic calming infrastructure on 8th street intended to slow down the cars.

### *Building*

Any new or renovated structures on the property will go through the same building department permitting process that any structure goes through in Bloomington.

### *Burning or Fire Pit*

Any burning done on the property will be done in accordance with the laws that govern all citizens within city limits.

### *Businesses in Houses*

The request for businesses in houses has been reduced to one business, to accommodate a current massage therapist who is a member of the group. This is not to say that there will not be more businesses in the future. In the future individuals who wish to have businesses in their own home will need to seek a conditional use permit from the city. This case by case conditional use review of new home based business was recommended by Commissioner Joe Hoffman.

### *Composting of Human Feces*

Although it is possible to safely compost human feces and there are many working precedents, we have removed this from the PUD at this point in time.

### *Culvert*

The watershed that crossed the property from the north comes from a 30" culvert run beneath the tracks. In the first proposal the source of the water was not made clear and we want to clarify this.

### *Drugs*

One concern that has been voiced is the potential for more drugs entering the neighborhood and, in particular, the increase of meth labs. The current and future members of the ecovillage are active citizens of the Bloomington community who wish to build an environment in which one improves his/her quality of life and feels he/she belongs without the use of drugs. To ensure this, we have a year long membership process to get to know prospective members before they are allowed to build and own homes in our community. This process will help us to ensure individuals with current substance abuse addictions do not move into the ecovillage.

### *Existing Neighborhood Concerns that Need Political Voice*

From our discussions with neighbors we not only received concerns about our project, but also became aware of concerns regarding the greater Waterman neighborhood. As a result of tending to these concerns, we've decided to use our current political influence to shed light on some of these neighborhood requests, some of which are expanded upon below.

### *City Bus Route Extension*

A good point brought up by a neighbor is that there is no bus system that directly enters and services our portion of the Waterman neighborhood. Although we don't have control over such a decision, we too feel that such service would not only greatly benefit our project but the neighborhood as a whole.

### *JB Auto Salvage Storm Water System*

A neighbor has been investigating the storm water system of JB Salvage and believes it to be in bad shape. Though we don't know the state of the water system we feel an investigation may be appropriate.

### *Parking Along Spring Street*

One neighbor, who is concerned with us parking along Spring Street, has expressed that the current cars parked along the street would inhibit emergency services from reaching her house. We are unsure of what can be done to remedy this situation; however, an investigation into the appropriateness of on street parking on Spring Street may uncover a true threat.

### *Tires on the Train Tracks*

There are currently many tires lying to the sides of the train tracks from our property moving eastward to Adams Street. We are not sure who should be responsible for clean up; however, the tires will undoubtedly create a breeding environment for mosquitoes. If the city were willing to provide a truck and take care of the tire disposal fees, we would be happy to provide volunteer labor to pick up the tires.

### *Watershed Issues in the Waterman Neighborhood*

Watershed issues seem to be the largest outstanding concern of the neighbors. Historically, the properties abutting the intermittent stream of water on our property have been subject to flooding. Although we are working to greatly reduce the shedding of water which originates on our property, there remains a large flow that bifurcates our property and ultimately floods an open culvert in the neighborhood. We believe it will be necessary for the city to resolve this and other problems in the neighborhood for there to be any hope of completely resolving the watershed issues.

### *Fencing the Perimeter*

A neighbor has requested that we fence the property. Such a large fence would likely be cost prohibitive for us as well as going against our desire to be an open and accessible part of the neighborhood. However, we plan to use vegetation buffers to create privacy and to reduce noise.

### *Food Production Capabilities on 2.23 Acres*

A mixed omnivorous diet of an honest proportion for one individual requires 14,000 square feet or roughly a 1/3 of an acre per year using polyculture and the most space efficient growing practices, which include Permaculture design, food forest, vertical growing, raised beds, successive planting, and other intensive growing methods. Producing the wide range of foods required in a mixed diet is not practical on our property as many food staples, such as grain, are produced far more efficiently in larger scale operations and thus it is better to specialize and trade or focus on one or a few facets of nutrition. We are choosing to focus primarily on the production of vegetables.

It is possible to grow 8,000 pounds of vegetables on an acre of ground. An adult requires 500 pounds of vegetables per year. Our growing space for vegetables lies between 1 and 1.5 acres, enough to provide 100 percent of the vegetables needed for 16 to 24 adults. Given a population

of 30 adults and 10 children, which we will consider 60% of an adult, it would be possible to grow between 44 and 66 percent of the vegetable needs of each individual. Beyond vegetable production, the diet would be supplemented by on site production of eggs, goat milk, fruit, herbs and mushrooms.

#### *Handicap Accessibility*

The common areas of the community house will be handicap accessible and the structure will have an ADA compliant walkway off of Spring street and ADA compliant parking spots. Although the community house will be handicap accessible, the accessibility of individual homes will be at the discretion of the home owners. Special consideration will be given to providing building plots near the fire drive for handicapped individuals who may wish to construct a house in the community. Given the topography of the land, there will be many places that will not be readily accessible to the handicapped. However, it is foreseeable that parts of the domesticated landscape (for example, a 3 foot high raised garden bed) could be made handicap accessible.

#### *Houses without Toilets (Bathrooms) and Kitchens*

Although we prefer to give homeowners the option on such infrastructure, all houses are required to have kitchens and bathrooms by state law and thus we will include them in all our homes.

#### *Houses without Electricity, Water, Sewer, and Gas*

The community will be connected to all utilities and will go through the standard processes for the installation of each. Water and Sewer are required by law; however, gas and electric are not. Though the community is opting to have gas and electric run to the property, hooking up to these utilities is at the discretion of individual home owners. It is possible that some houses may choose to generate there own electricity as opposed to connecting to the grid.

#### *Limiting Membership (see Membership Process in Appendix)*

Anyone who lives in the ecovillage will be required to go through an extensive membership process; a process laid out in detail in the appendix. In order to have an effective community we must thoroughly screen new members. Beyond screening, the restriction of car ownership and the overall concept of the project will largely weed out individuals who are not a fit or are not committed to joining the community.

#### *In Writing*

This written proposal sets the guidelines of the final approved project. All of our aims and objectives are set in writing. In the future this proposal and a final site design, which must be presented to the planning department after the City Council votes, will be used to make sure the property is being utilized in an agreed upon way.

#### *Interpersonal Relationships in Living Cooperatively (See Interpersonal Relationships in Appendix)*

In order to maximize cohesion between the members of our community, we will be trained in Consensus Decision Making and Non-Violent Communication. In addition to interpersonal communication training, we also have a mediator trained in the Restorative Circles and Community Justice and Mediation Center mediation techniques.

### *Milestones with Neighborhood Review*

A neighbor recommended that the ecovillage be phased in through milestones with neighborhood review. This option was discussed at the first planning commission meeting and there seemed to be favor both ways. Ultimately, Patrick Shay, Assistant Director of the City Planning Department, said that there was no formal process for doing this and that a best bet option would be to scale back the project to something that the neighbors would be comfortable with from the start. We hope that the large changes to this proposal will be sufficient to provide comfort with the project from the start.

### *More Formal Interpretations About the Plans and Layout*

Since the first meeting we have gone through a great deal of mapping, which can be found in the map section below. In addition to mapping ourselves, we have hired an engineer to survey the property, a Permaculturist to identify property flows and design vegetation buffers, and an architect to make some conceptual drawings.

### *Neighborhood Feedback Opportunities*

Since the first Planning Commission Meeting we held a neighborhood meeting moderated by the city, hosted an open house, and went to over 130 houses in person to hear concerns and invite neighbors to the open house and next Planning Commission Meeting.

### *No Cars*

We recognize that cars can provide valuable services and that many individuals view living without a car as an impossibility. Therefore, in order to uphold our policy of no car ownership we are developing a car share for the ecovillage members. The car share consists of 2 shared cars and individuals can opt to buy a share and pay for each mile driven. Although we cannot legally prohibit an individual from owning a car, we can require that they do not park their car in the ecovillage or in the Waterman neighborhood. The structure and nature of our project will self select members; i.e. if someone can not imagine a life without a personal car then it will be very unlikely that they can imagine a life in a community that greatly restricts such freedom.

### *Ownership Structure*

We are currently exploring our options for ownership structures. A direct answer to the question is considerably difficult as liability is hard to navigate in cooperative housing situations. As laws relating to ecovillages becomes better understood and case law is established, we learn more about how they can be structured. To add context, Earthaven ([www.earthaven.org](http://www.earthaven.org)), a well established, 15-year-old model ecovillage, is still modifying their legal structure. For this reason, we want to be careful about what we restrict ourselves to in this section. That said, the land will most likely be owned by a homeowners association. The land under homes in the village would then either be owned by the homeowner, or leased internally to the homeowner.

The land will likely be set apart from the community land with a zero lot line. The community house will likely be owned by the homeowners association.

### *Parking Overflow onto North Spring Street*

To avoid spilling over onto Spring Street, we are going to set up 8 parking spots. Six spots will be gravel parking spots that are 9 feet wide by 18 feet deep. 3 of the spots will be for our car share cars and community truck and 3 spots will be for guest parking. The remaining 2 spots

will be ADA compliant and located next to the community house. These numbers came directly from our discussion with Tom Micuda and Patrick Shay of the City Planning Department.

#### *Pets*

Too many pets was a concern of more than one neighbor and it is a concern shared by most ecovillages and us. Too many animals can wreak havoc on the song bird population, gardens, and general peace, to name just a few of the potential problems. Though we do not yet have a formal rule for pet ownership, such a rule will be in our internal bylaws.

#### *Plant Buffer / Natural Fence*

We have hired local Permaculturst Keith Johnson to aid us in designing a living fence that can serve as a buffer. Keith has put together a diverse species fence around his  $\frac{3}{4}$  acre property. We hope to present this information at the next planning commission meeting.

#### *Pond Damming or Digging Permission*

Ultimately the ponds were not featured in the water shed design for the property; however, we are still going to assess whether their construction is feasible and will obtain the necessary clearances from the US Army Corps of Engineers and Indiana Department of Environmental Management prior to the digging. Should it be determined that the ponds will not hold water naturally we will install ponds using a liner.

#### *Pond Fencing/Wall*

The entire property, the pond, or some area around the pond will have a 5 foot fence/wall, as the pond will be more than 36 inches in depth and thus requires a fence/wall by law. We had originally intended to have the pond accessible to wildlife; however the safety of the neighborhood children supersedes the wildlife access.

#### *Ponds and Mosquitoes*

The ponds will contain fish and frogs to control mosquitoes.

#### *Rainwater Collection for Drinking*

Many individuals in the community will collect rainwater, which can be suitable for drinking once filtered, and each house will also have city water to meet state law.

#### *Religious Affiliation*

BCP does not promote a specific religious creed. It is not a "religious community." Members of the community may follow their own unique religious callings or none at all.

#### *Secondary Heating Systems*

We are structuring our community for optimal passive solar heating. We also recognize the sun is not always a viable option for heating and, therefore, will have secondary systems in place.

Thus, all structures will be outfitted with a secondary heating system that is approved by the building department. Examples include a wood burning stove, radiant floor heating (wood, gas or electric), or conventional forced air gas/electric furnaces.

#### *Setback Encroachment*

We would like to encroach on the North side of the property, along the railroad tracks, so that we can get better solar gain. We would like to encroach on the West side of the property, along the cemetery, to have more space for our houses.

#### *Three Story Limit on Small Houses or Two*

Though we favor three story structures for our small homes we have opted to remain with only two stories to address the concern from the fire department regarding tall structures with small foot prints.

#### *Tree Portfolio Protecting the Existing Trees*

Currently we do not have a fully flushed out map of the trees on the property; however, we have some ideas on what we are going to remove, leave, and plant. We will do our best to visit this topic prior to the next planning commission meeting so that we will have some information to present.

##### Remove

We plan on removing the clump of trees in the South west corner of the property that shade the southern slope with all of the small houses. We all plan on removing the very small trees on the southern slope where we have made plans to plant an orchard.

##### Leave

We plan on leaving the trees along the property line along the South of the property and the stand of trees on the small piece of property that juts out to the South, the piece on the South East side of the property.

##### Plant

We have plans to plant a fruit orchard on the South side of the property. Along the North we plan to plant pine nut trees and native nut trees, the former as a high, year round noise barrier, and both as food sources. Along all of the boundaries we will be reintroducing the native Paw Paw as a food source and mid canopy vegetation buffer.

#### *Uncommitted Individuals working on the Project (see Membership Process in Appendix)*

In order to prevent half completed structures by individuals who are initially excited by our ecovillage project but ultimately wander away, we have a very rigorous application, interview, and a yearlong live-in membership process.

#### *Utilities Pressure*

BCP will be upgrading the current 2" line that runs down Spring Street to a 6" line. A 2" line will then run from the 6" line onto the ecovillage. The 6" line will end in a hydrant that will be sufficient for the fire protection of the ecovillage. The hydrant and 6" line will be the property of and maintained by the city; however, the cost of upgrade will be borne by BCP. The 2" line will be the property of and maintained by BCP.

A neighbor was concerned that the ecovillage may reduce the water pressure in the neighborhood. We have contacted the water utility office to determine what impact the ecovillage will have and are awaiting a reply.

### *Watershed and Swimming Pond Water Quality*

Fortunately watershed and swimming pond water quality can be improved with the same solution. By setting up the swimming pond as a natural swimming pond it will be possible to keep the swimming water clean without chemicals and to further clean the water before it flows off of the property. A natural swimming pond is a pond lined by plants that constantly filter water.

Examples of Water Filtering Plants:

Sedges, Rushes, Lesser Cattails, Aquatic Irises, Pickerel Weed, Arrowhead, Water Primroses, Common Waterweed Hornwort, and Common Duckweed.

There is concern that animal manure poses a threat to the pond water and property water shed.

In order to mitigate this threat we will be raising chickens in chicken tractors and rotationally grazing the goats. Both of these techniques prevent over grazing of the land and spread manure evenly across the property. Also, excess chicken and goat manure will be used in our gardens as a source of nitrogen, thus any excess manure will be collected on a routine basis. We consider animal manure a resource too valuable to let wash away.

### *Watershed Quantity*

We have hired an engineering firm to do this work. You can find their report in the appendix.

### *Who is Paying for the Improvements Needed to the City Infrastructure*

The ecovillage will be responsible for the upgrading of the water line down Spring Street and the installation of the water and sewer lines onto the property. The project will not be subsidized by tax payer dollars. Members of BCP are interested in working with the neighborhood to push for city improvements to the neighborhood infrastructure including storm water infrastructure and transportation services. Reviving the inactive Waterman Neighborhood Association could be a good first step towards this goal.

### *Youth Hostel, Summer Camps, and Tent People*

All of these items have been removed from the original PUD proposal. The youth hostel, seasonal workers camping, as well as the bed and breakfast, were removed to avoid the community going over it's population allowance. Those items as well as the summer day camp proposal were also removed to reduce car traffic to the ecovillage and neighborhood.

### **Ownership Structure**

Protecting the individual property of community members is a rather involved and evolving process, as there is not as much precedence for communal ownership of land as for private ownership of land. Without the proper protection, a lawsuit filed against one person could jeopardize the whole property if each individual is considered a joint owner. Even Earthaven, one of the most established model ecovillages of 16 years is still adapting their ownership structure to reflect newly discovered legal loop holes they may be susceptible to.

The land will be cooperatively owned and managed by the consensus of all members of the community (see membership process). Home ownership will be more typical in that individuals will be free to design and change them so long as they pass all of the local legal requirements

and internal BCP bylaws: maximum 400 square feet living space, can not block another's home access to direct light from the sun, etc.

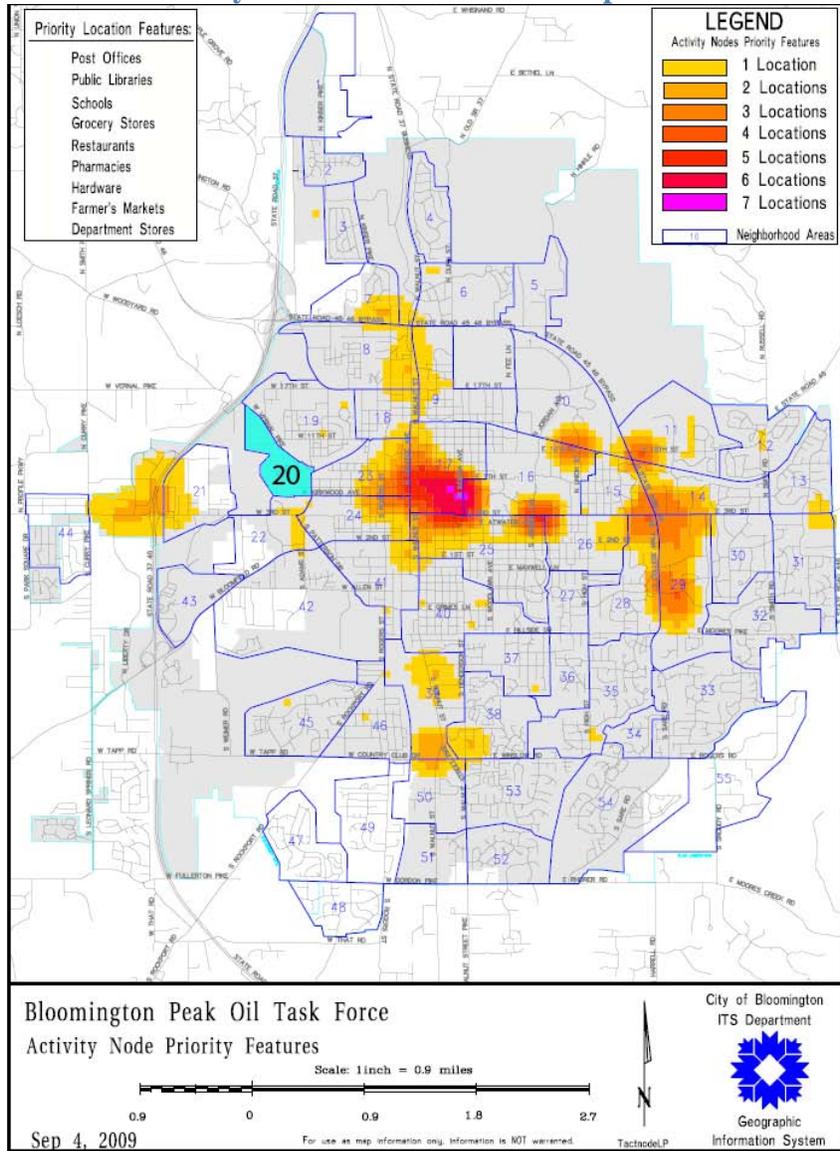
In order to more concretely commit to a cooperative organizational and ownership structure we plan to adhere to the Rochdale Cooperative Principals. One of these principals is democratic member control which according to the ICA's Statement on the Co-operative Identity means that "Co-operatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership." The Rochdale Cooperative Principals are a standardized set of principals used around the world by cooperatives. By adhering to these Principals we can guarantee that we will be a cooperative, without inadvertently limiting ourselves from using the most protective and applicable legal structure.

We have done a lot of research and the following is our current plan for fitting our above ideals into the existing legal framework. The land will be owned by a homeowners association which itself is owned and managed democratically by all members of the community. In the village, individuals will own their homes, however, the land under the home will be owned by the homeowners association.

**Peak Oil Task Force Report & County Comprehensive Plan**

**Peak Oil Task Force Report**

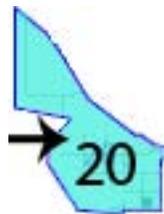
**The Spring Street Property is in the Heart of Natural Neighborhood 20 Identified in the City's Peak Oil Task Force Report**



**MAP A: Activity Nodes**

Report of the Bloomington Peak Oil Task Force

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**Spring Street Property Location  
in the Neighborhood**

From the Peak Oil Task Force Report: “The goal (of neighborhood planning) should be to promote small, self-contained neighborhoods with a clearly-defined center providing essential services, ideally no further than a quarter mile from the edge.”

**Neighborhood 20** is devoid of any Priority Location Features (depicted in the map on the previous page) essential to the sustenance of a neighborhood. Fortunately, the Spring Street property is near to the heart of the neighborhood and has the potential to provide many Priority Features.

### ***County Comprehensive Plan***

Our ideas align well with the ideas put forth by the Monroe County Comprehensive Plan. We feel the need for dense population close to town is absolutely essential for the development of a Bloomington that has a sustainable tax and energy usage structure. The following three ideas, from the Residential Development section (starting on page 71) of the plan, do a wonderful job of encapsulating and illustrating the importance of our proposal.

1. “Encourage development with adequate recreational space to meet the needs of the residents.”
2. “Encourage innovative concepts in housing designs and architecture that demonstrate quality and character and are aesthetically pleasing. Substandard and uninhabitable housing shall be prevented.”
3. “Strive to preserve the rural character and minimize the visual impact of large-scale development. Wherever possible, the maximum amount of natural vegetation on each site should be preserved.”

### **Cooperative Living Precedence in Bloomington**

*Bloomington Cooperative Living, Inc.*

Mission: “Bloomington Cooperative Living fosters an economically, ecologically, and socially sustainable society. The organization is an opportunity for members of the Bloomington, Indiana community to share both the values of cooperation and diversity.”

<http://bloomingtoncoop.org/>

*Bloomington Christian Radical / Catholic Worker*

Mission: “The Bloomington Christian Radical CW is an ecumenical Christian community that tries to live, pray and work both with each other and with the poor we encounter. We try to offer housing, food, clothing and love to people facing homelessness. We perform the works of mercy and non-violently oppose the works of war. We strive to practice the Sermon on the Mount, community living, voluntary poverty, personalism, and care for the environment. We have families and children here, all trying to build community together. We love hosting visitors and prospective volunteers so give us a call.”

<http://www.catholicworker.org/communities/commlistall.cfm#IN>

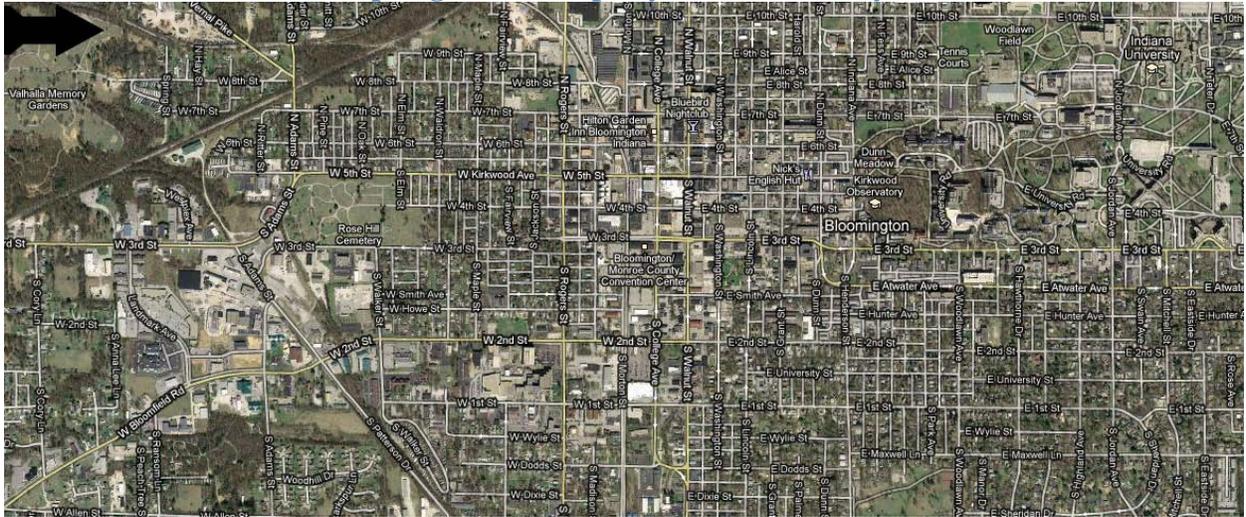
NASCO (BCP is a member of this organization)

Mission: “The North American Students of Cooperation (NASCO) Family [of associations] organizes and educates affordable group equity co-ops and their members for the purpose of promoting a community oriented cooperative movement.”

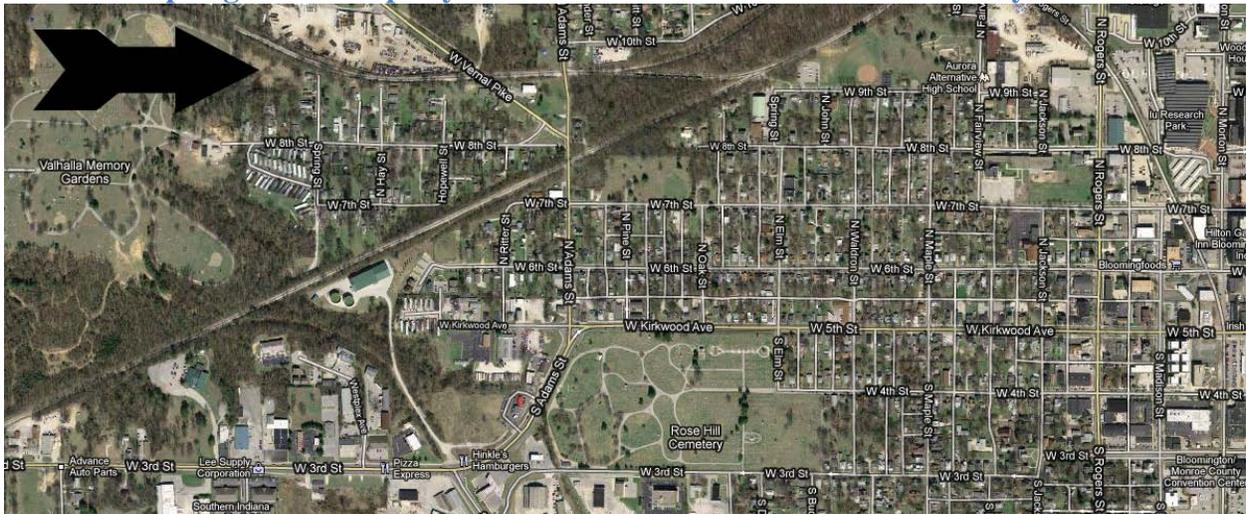
<http://www.nasco.coop/node/17>

### Spring Street Physical Location

Spring Street Property Relation to City



Spring Street Property Relation to the Farmers Market and City Hall



## **Permaculture Urban Demonstration (PUD) Maps**

Our PUD maps will include a Permaculture site analysis in addition to the city requirements. Each map that follows will have a short description below providing additional information.

### *Map Index*

#### **Compilation of All Maps**

##### **Physical and Political Features**

- Compilation of Physical and Political Features
- Property Boundaries
- Off Set
- Contour
- Transitional Forest
- Streams

##### **Living Structures**

- Compilation Living Structures
- Village Houses
- Community House

##### **Auxiliary Structures**

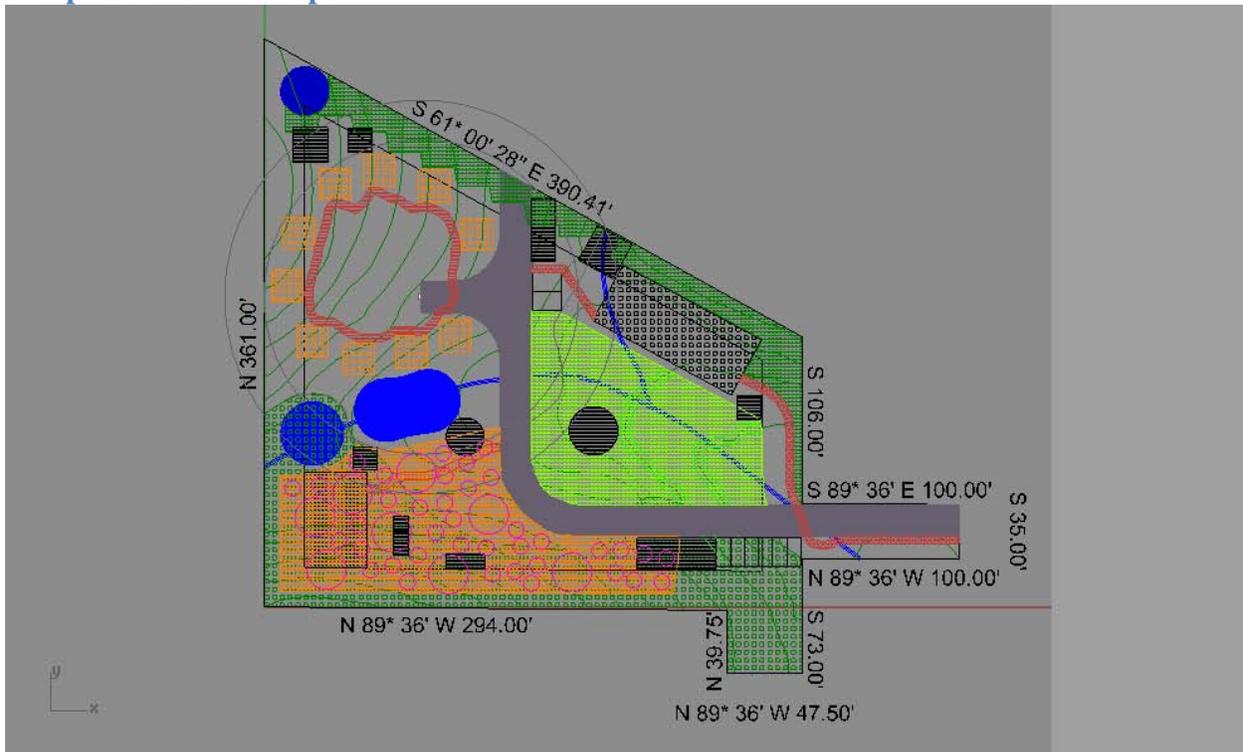
##### **Agricultural**

- Compilation Agriculture
- Annual Gardens
- Garden Beds on Contour
- Community Gardens
- Orchard
- Animal Grazing
- Food Forest
- Ponds
- Water Storage

##### **Mobility**

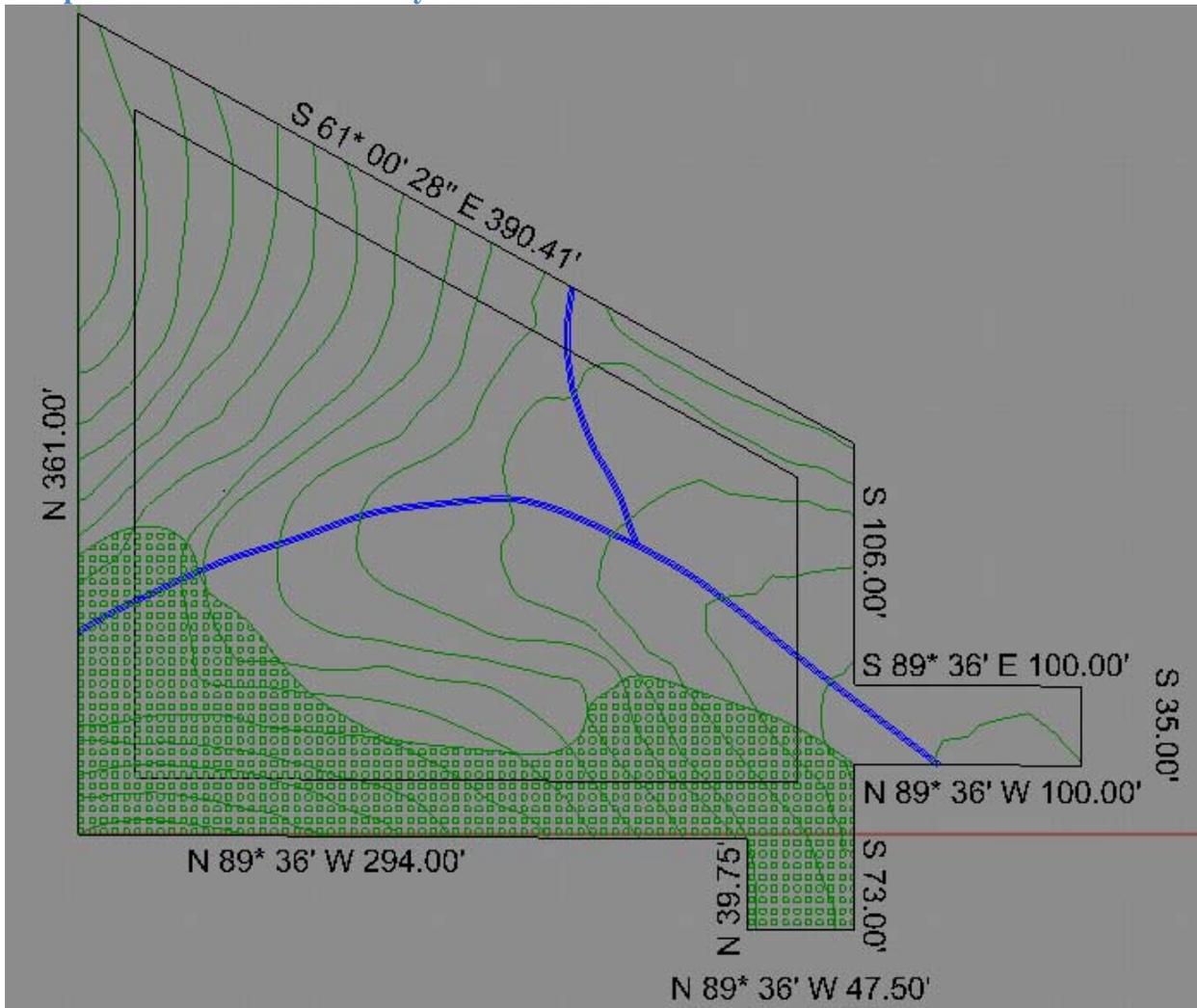
- Compilation Mobility
- Emergency Access Drive
- Walking Path

## Compilation of All Maps

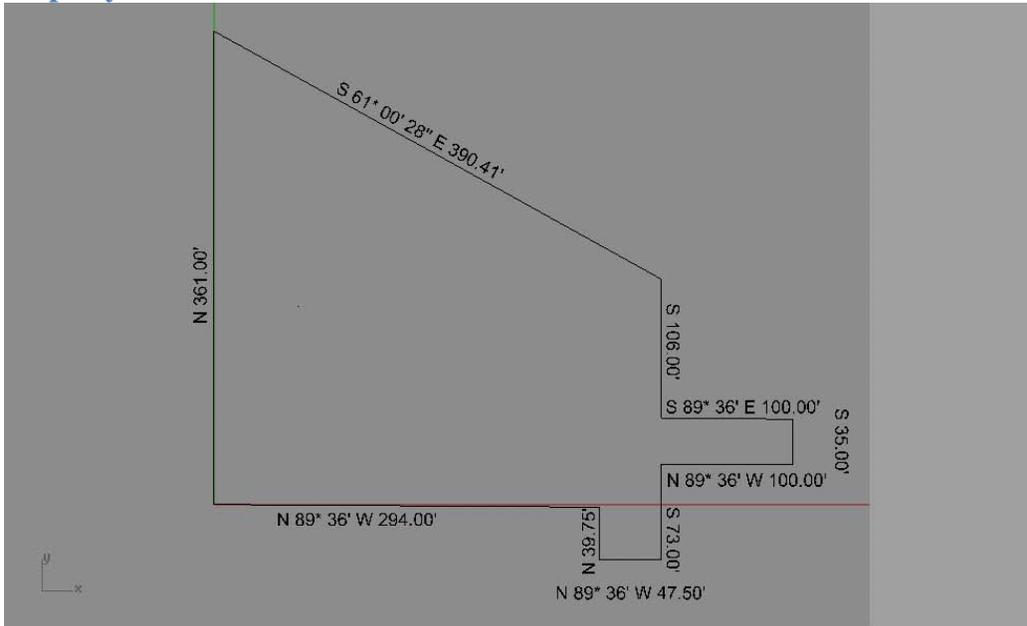


Here is our current compilation map. In the following maps we will break down this map into the groupings: Political and Physical Features, Living Structures, Auxiliary Structures, Agriculture, and Mobility. These groupings will be further broken down into individual elements with descriptions.

Compilation of Political and Physical Features

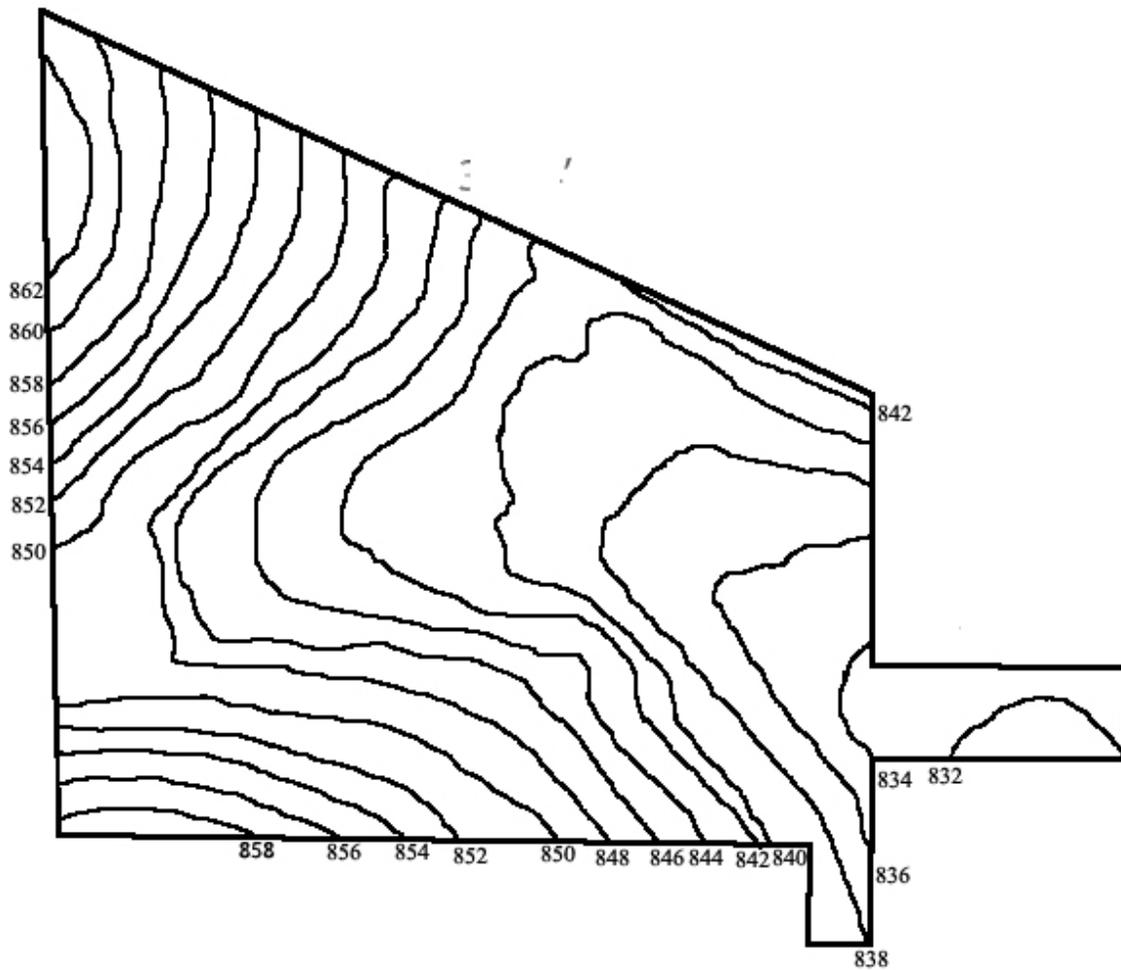
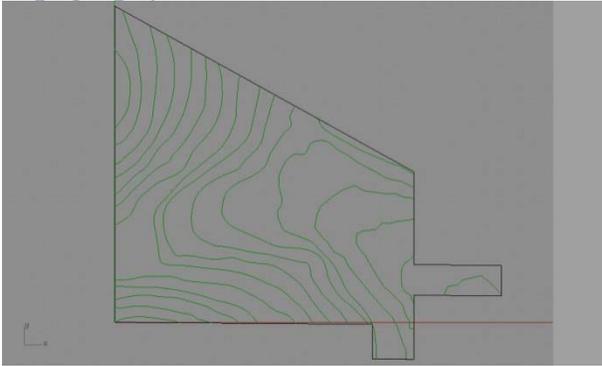


## Property Boundaries



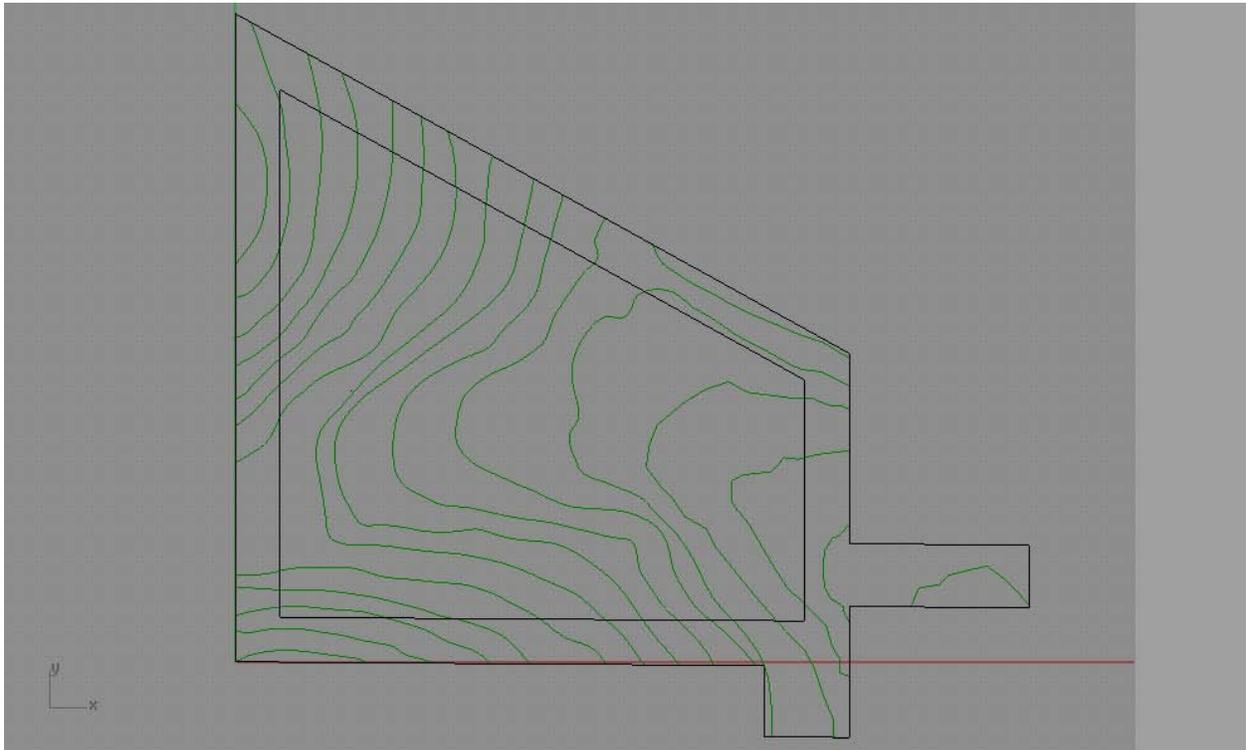
In the top map you will find the property lines defined by the legal description as provided by the deed of the land. The bottom map shows the boundaries relative to the surrounding neighbors.

## Topography



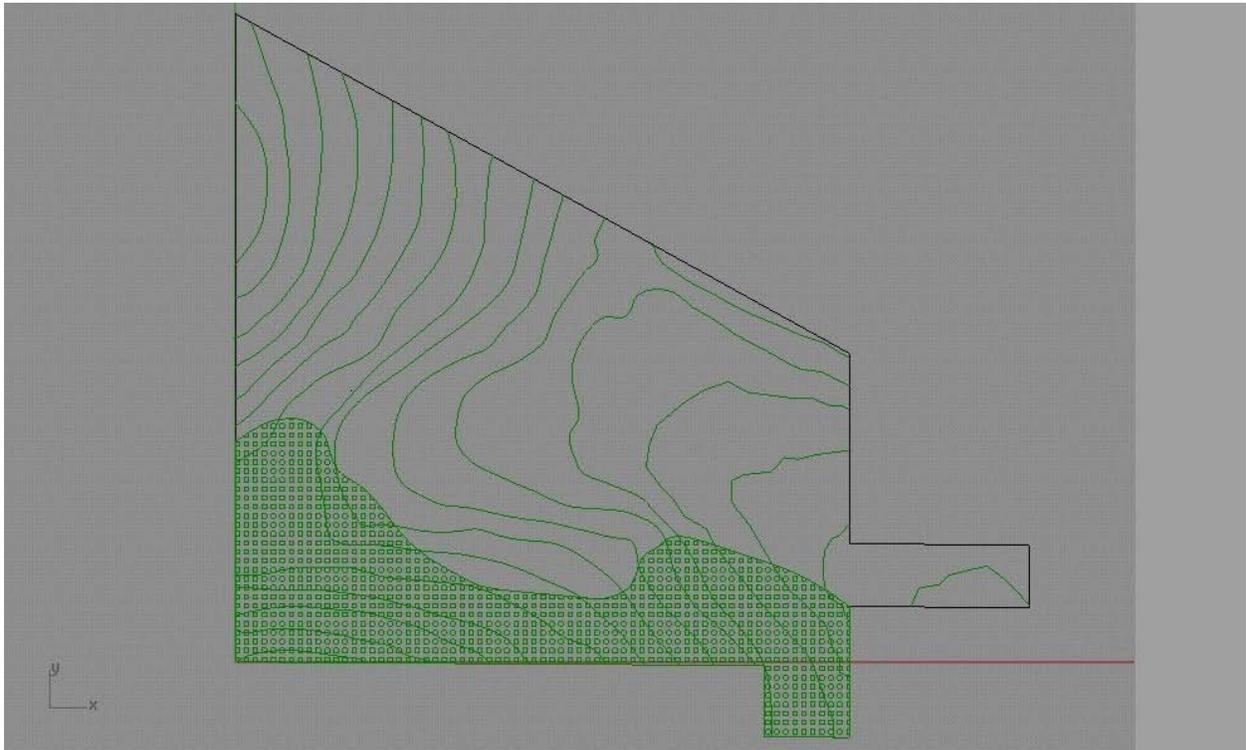
The property contains a small valley. We want to cluster the small footprint houses in the top West corner; the best location for solar gain and furthest from any potential flooding. The community house will be in East corner for solar gain as well.

## Offset



The offset for construction of homes within the city limits is 25' on each border. We are asking permission to encroach on the borders on the **North** and **West** sides as these neighbors are a railroad track and graveyard respectively. Encroaching on this offset will provide us a lot more building room in the North and West sides of the property opening up the best locations for passive solar gain for the small houses and community house.

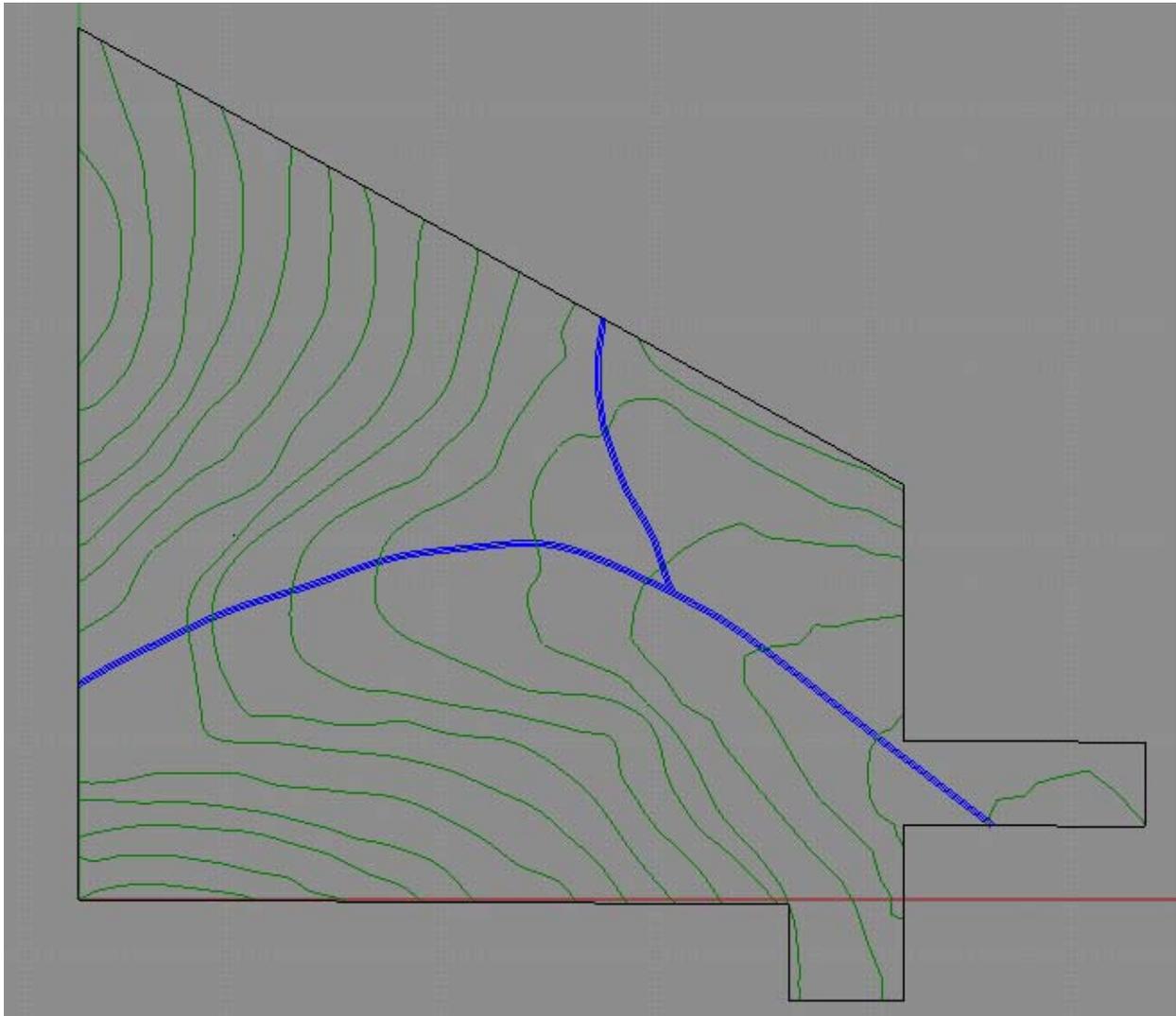
## Transitional Forest



The southern part of the property currently has some high canopy trees. At this time the forest floor is covered in euonymus and honey suckle. It will take at least a couple of seasons to remove the euonymus, but once it is gone we will be reintroducing native plants. We are considering establishing a mini forest sanctuary on the South East corner of the property, where the small rectilinear piece sticks out. There will be selected cutting of a few large trees in the Southwest corner of the property, trees that currently shade the small house hillside. Additionally the small trees on the South side of the property will be replaced with a fruit orchard. The large trees along the South fence line and the stand of trees to the South East will remain although many of these larger trees are on neighboring properties and not ours to retain or remove.

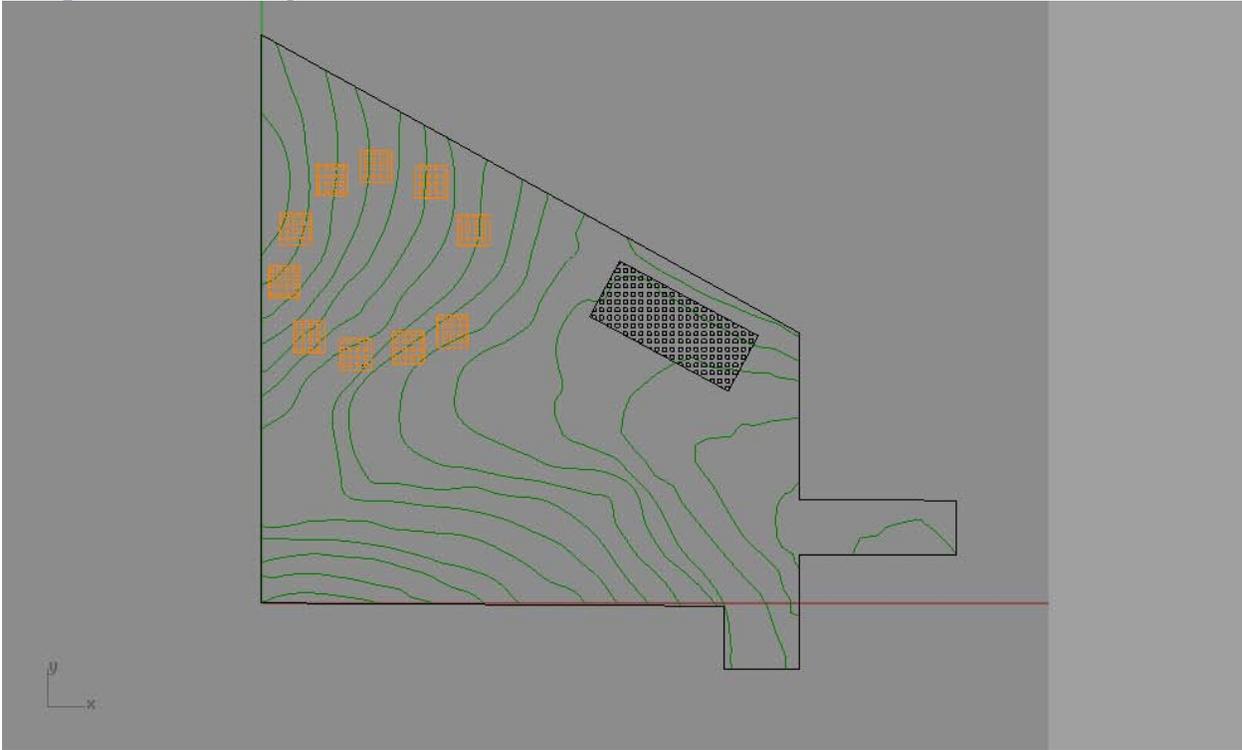
We will be planting high nut trees on the North side of the property and Paws Paws and other native trees in perimeter spaces.

## Streams

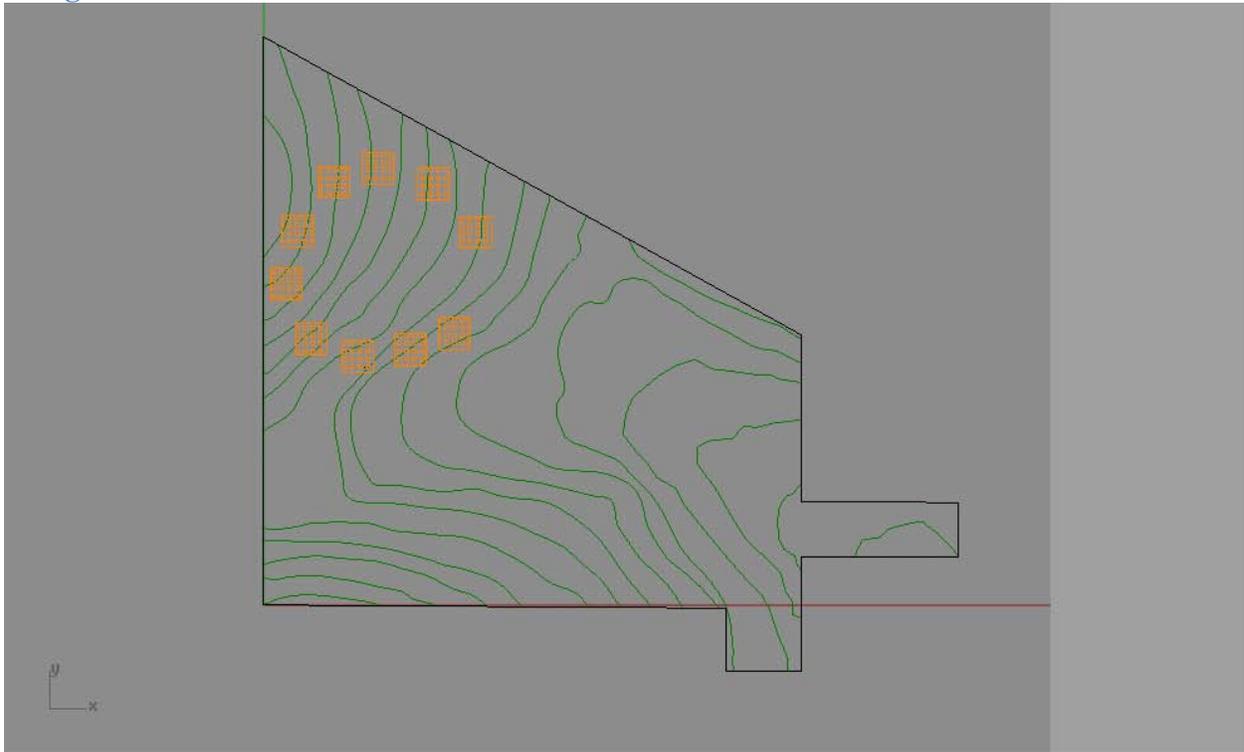


From the West running East there is a waterway that was considered a potential intermittent waterway of the State of Indiana; however, it has been determined by Linda Thompson of the city planning department that it is not and thus not subject to intermittent stream buffers. The other water way is an artificial shed from the North coming through a 30" culvert beneath the tracks and was likely created by the superimposing of the railroad tracks, a subdivision, and JB Salvage.

Compilation of Living Structures

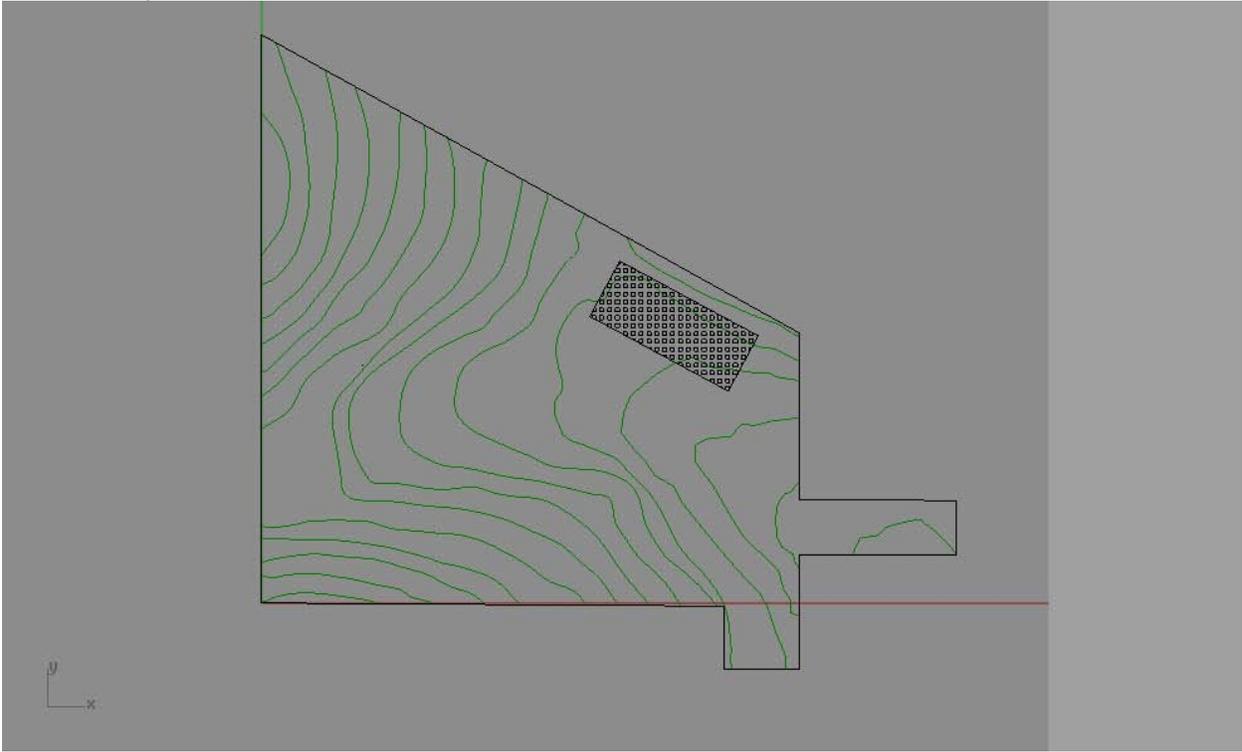


## Village Houses



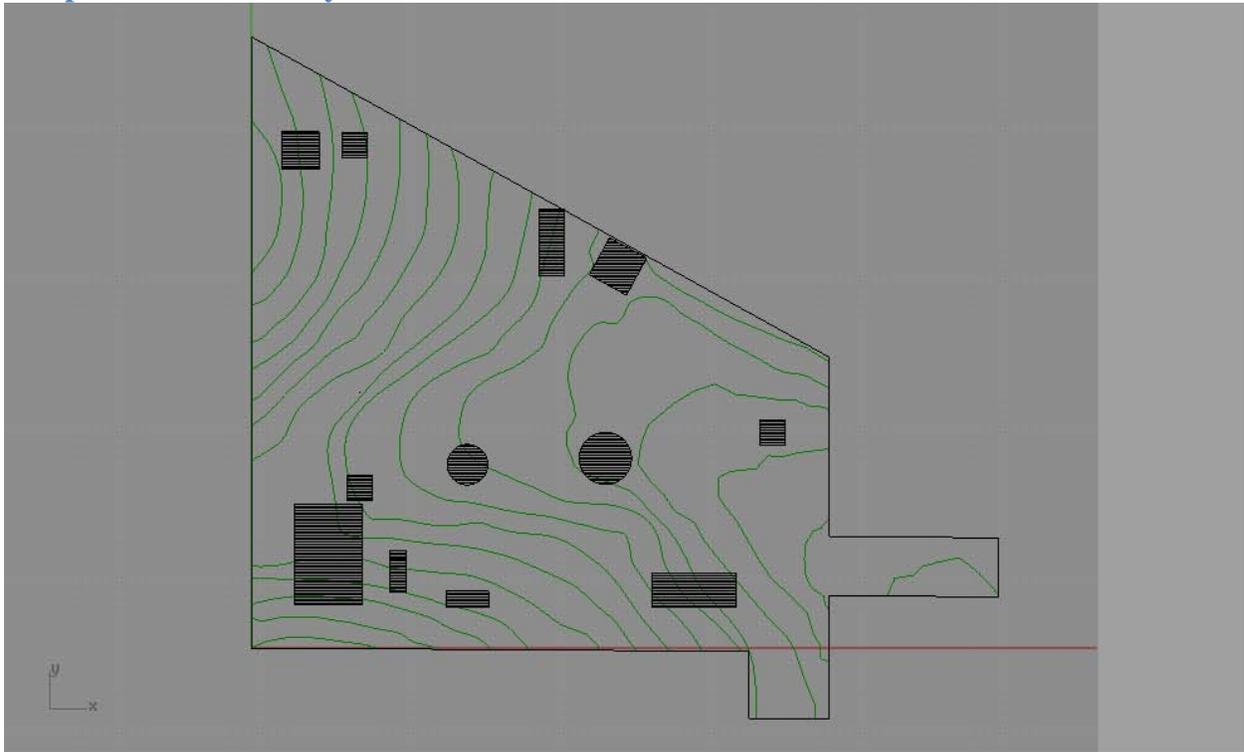
We are restricting the size of each living structure's footprint to 400 internal square feet per floor. This map shows one potential layout for the 10 village houses. Though the ultimate layout of the houses may differ this map shows how 10 houses could lay on the land. The ultimate goal of the layout is to maximize both passive solar gain and aesthetic feel.

Community House



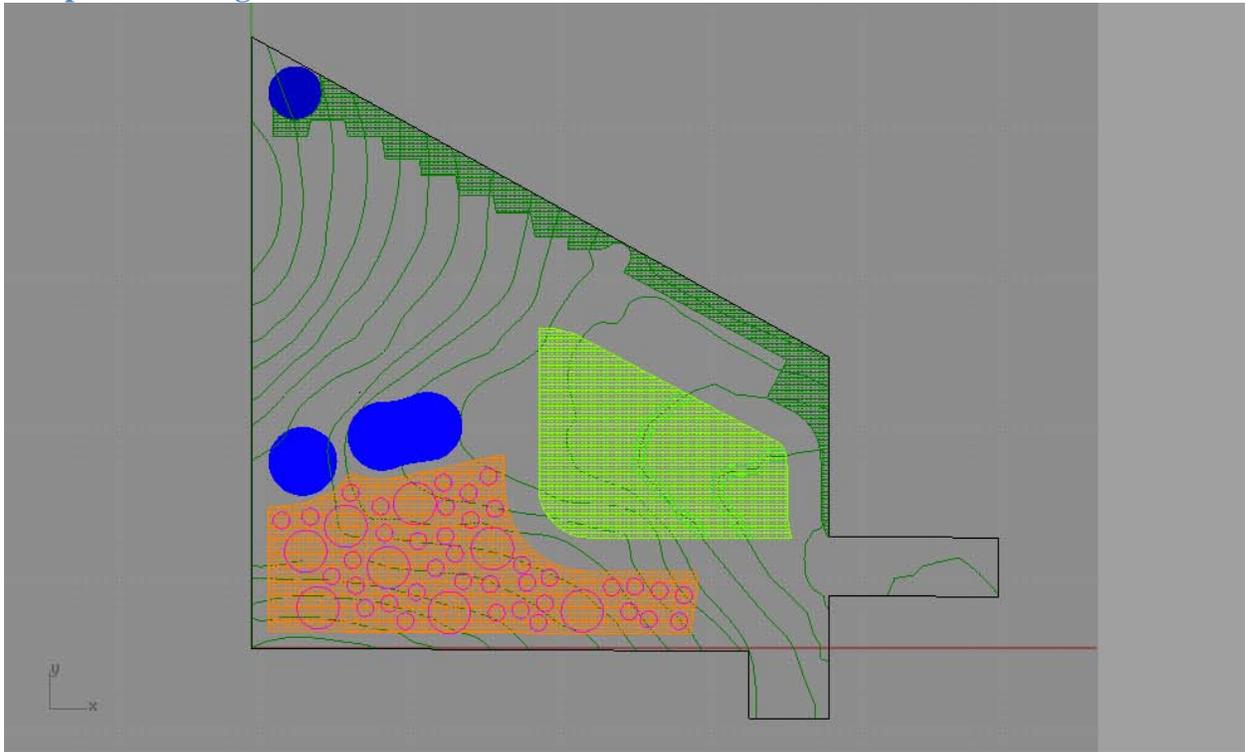
The community house will be located on the North East of the property. It will be on a small rise to protect it from flooding and South facing to maximize passive solar gain.

## Compilation of Auxiliary Structures



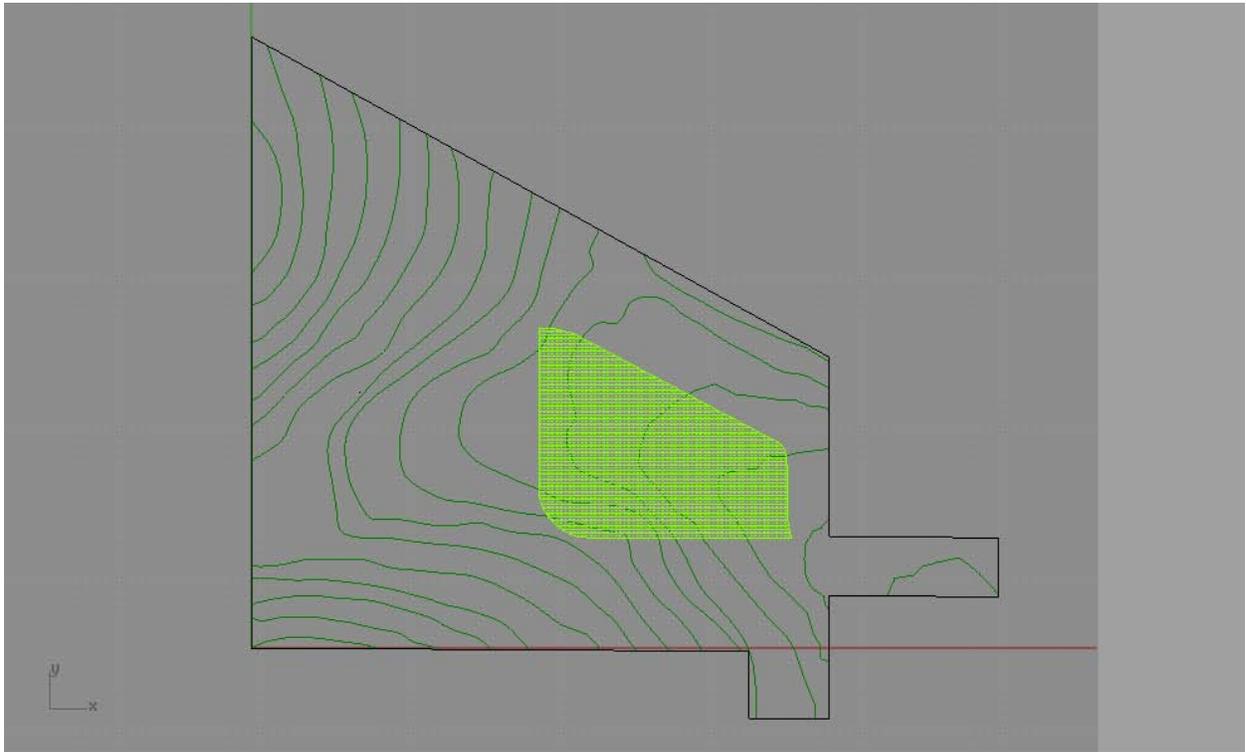
This map was made to illustrate what 7500 square feet of auxiliary structures looks like on the property. The structures included are a barn, tool sheds, gazebos, chicken tractors, a root cellar, a shop, a bath house, a bike shed, and a goat house. The structures are superimposed over parts of the orchard and annual garden; however, their final locations have yet to be fully determined.

## Compilation of Agriculture



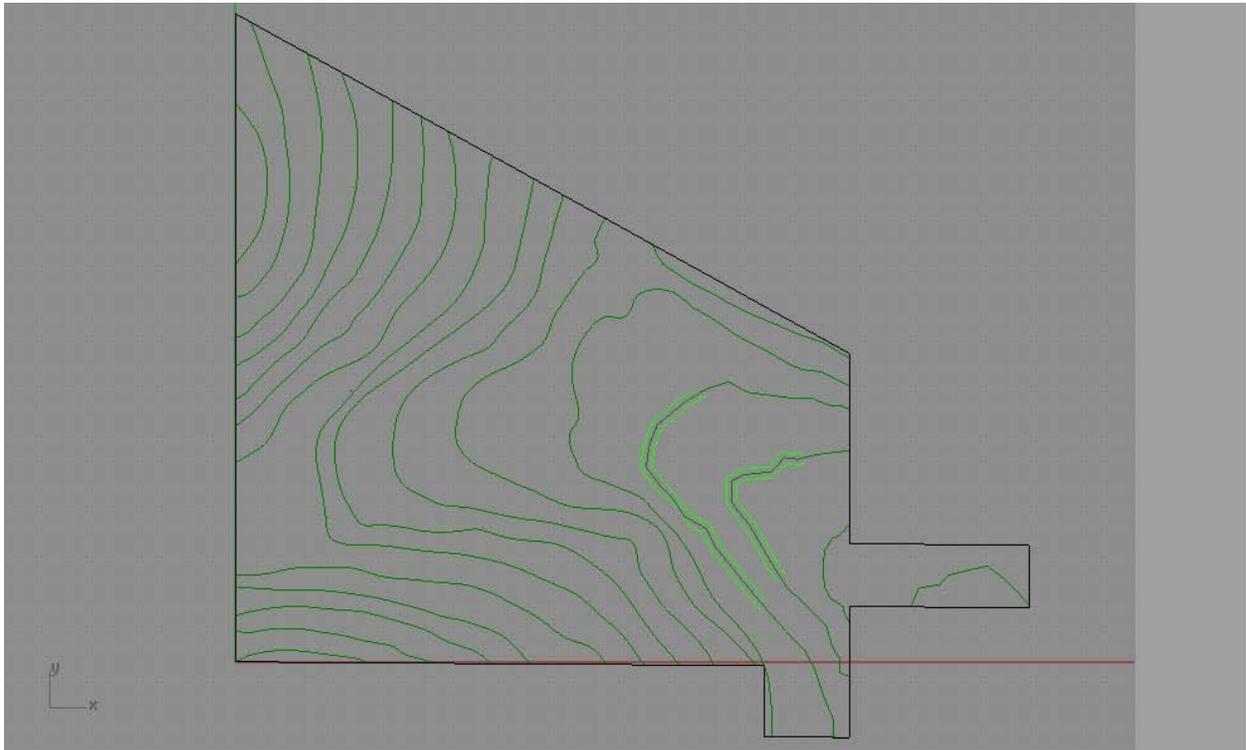
This map shows the combined food forest, gardens, orchards, ponds and animal grazing areas.

## Annual Gardens



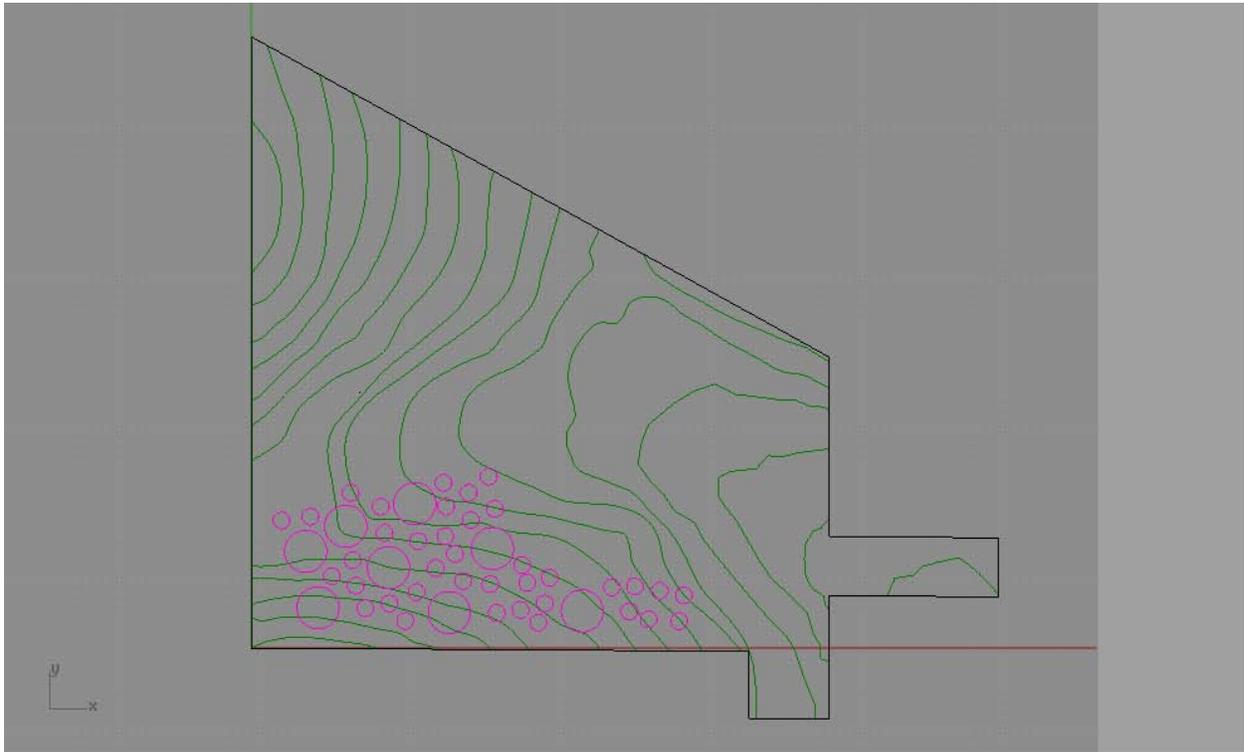
This map shows the primary annual gardens on the east side of the property; however, there will be more annual gardens amidst the houses on the North West side of the property.

## Garden Beds on Contour



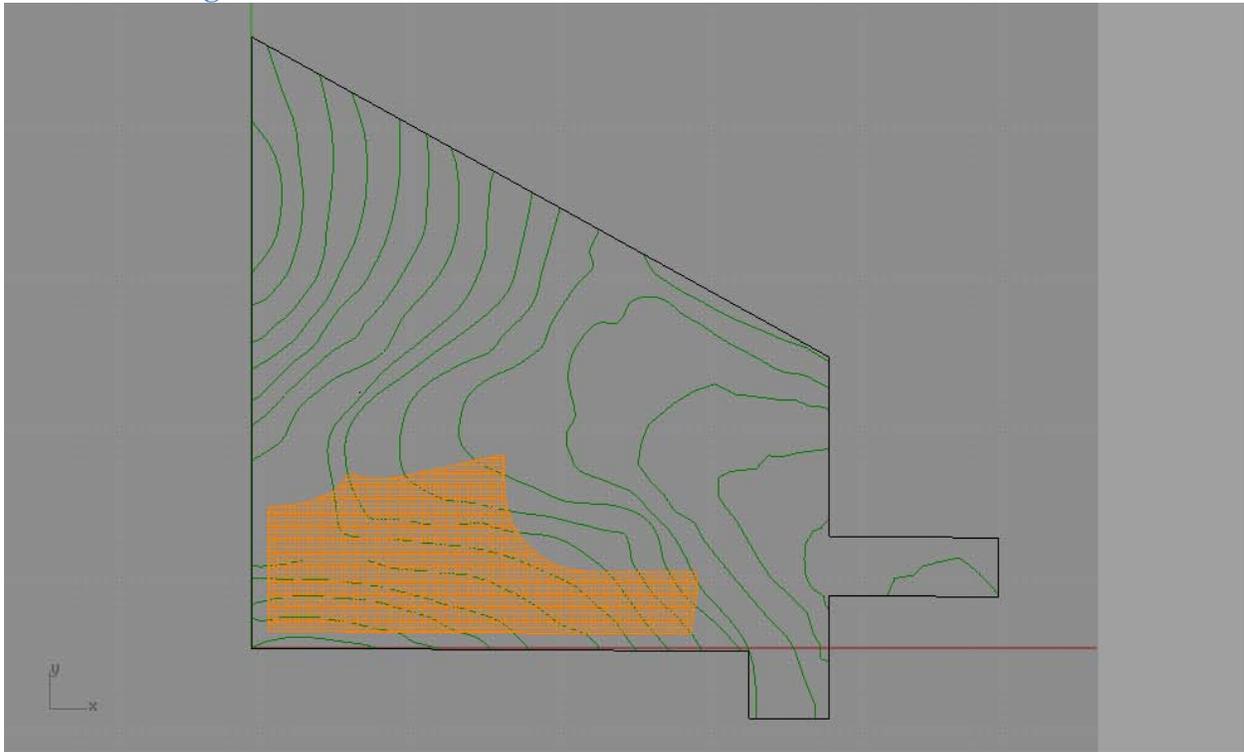
The garden beds in the gardening areas will likely be placed on contour. The two bright green garden beds above are depicted on contour. Placing garden beds on contour slows down the water that is running across the property and encourages it to soak into the soil.

## Orchard



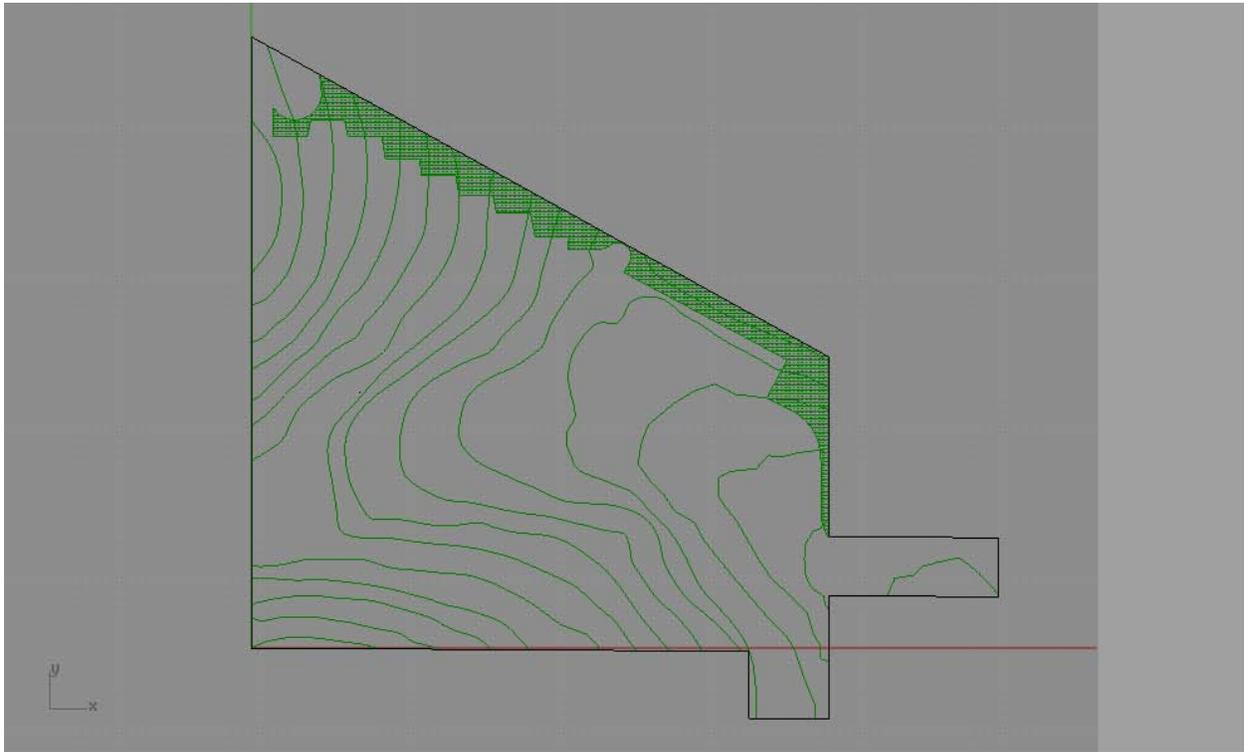
The orchard is located to the South of the property on the only significant portion of north-slope. Orchards are best located on north slopes as the longer period of cool weather in the spring keeps the buds from flowering too early. If the buds flower too early then they run a significant chance of getting damaged by frost, which lowers fruit yield.

## Animal Grazing



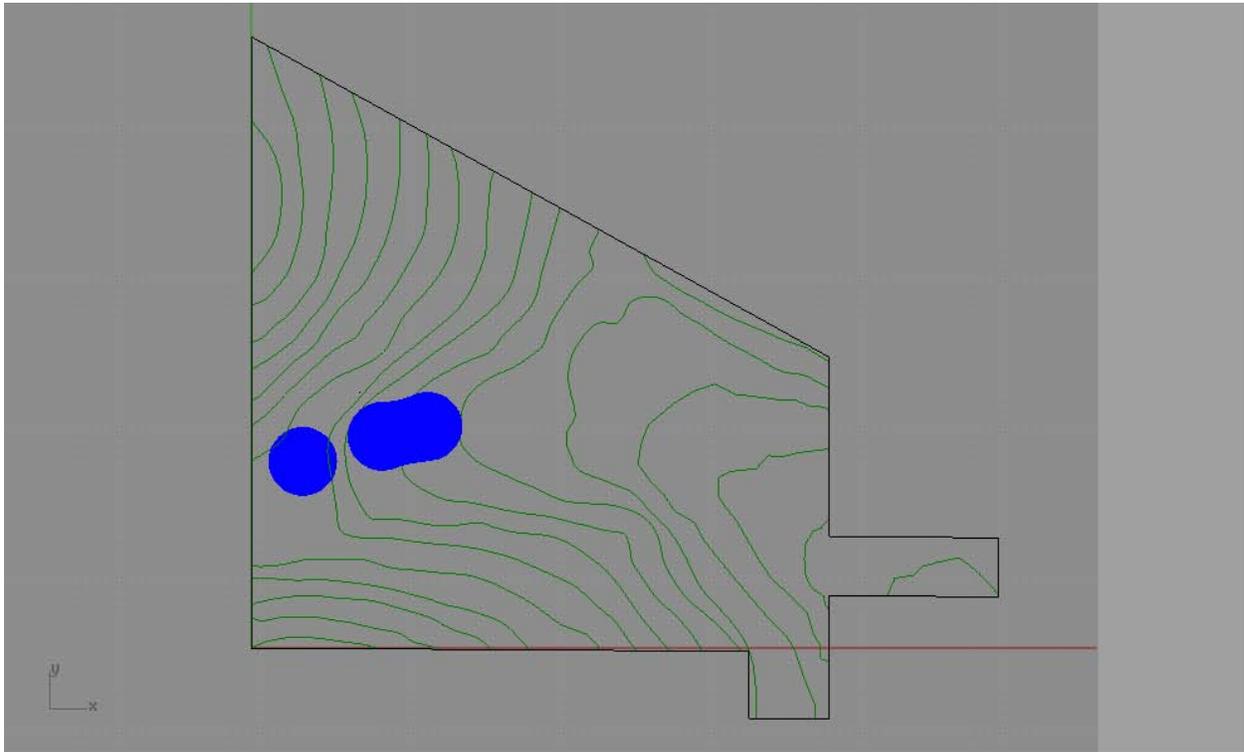
The chickens and goats will be grazed amongst the trees in the orchard. The chickens will be contained in mobile chicken tractors while the goats will be rotationally grazed. Both mobile chicken tractors and rotationally grazing protect the ground from over grazing while spreading the manure evenly.

## Food Forest



Food forests are agricultural systems that use perennial plants to produce a yield year after year. The upkeep of such plants is easier than replanting annuals every year and the yields increase as the forest matures. In addition to more food and less work this form of gardening encourages the planting of diverse species which leads to more complexity within the natural system resulting in an overall increase in stability.

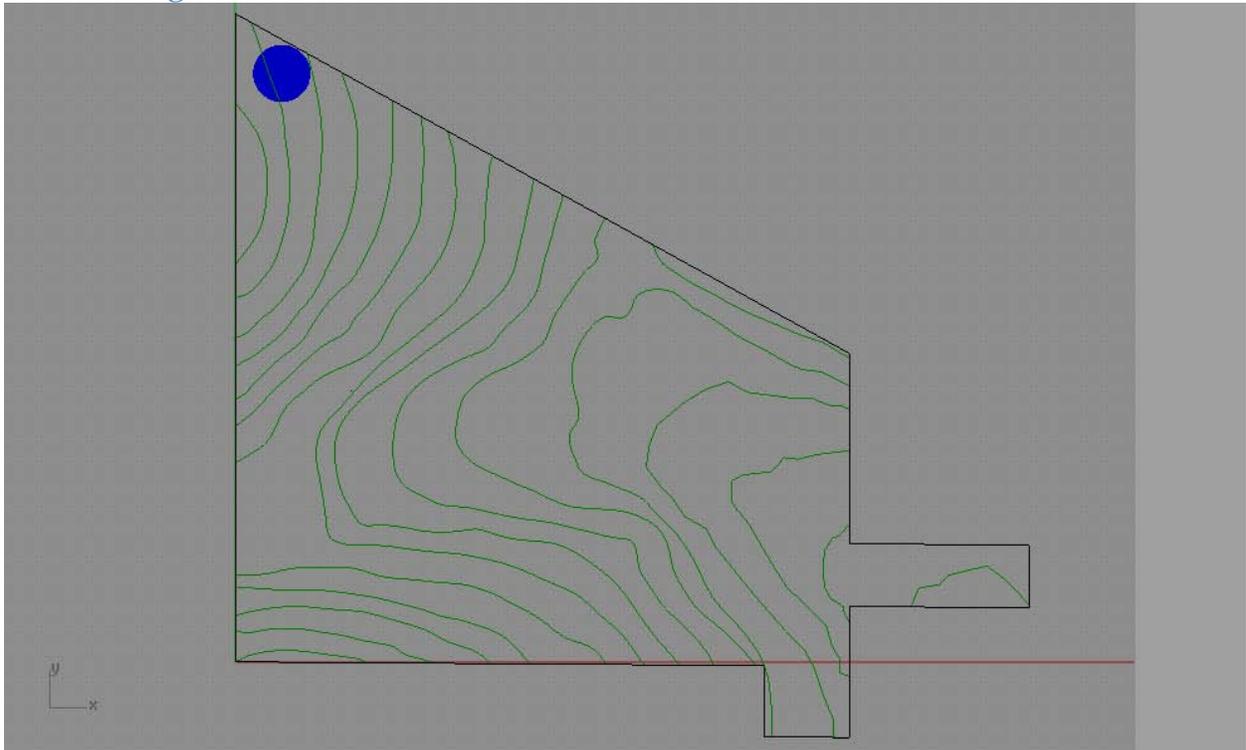
## Ponds



We plan on having a large swimming pond. In addition to recreation and enjoyment the swimming pond will serve as irrigation for the property. The swimming pond is the largest pond located in the center of the map.

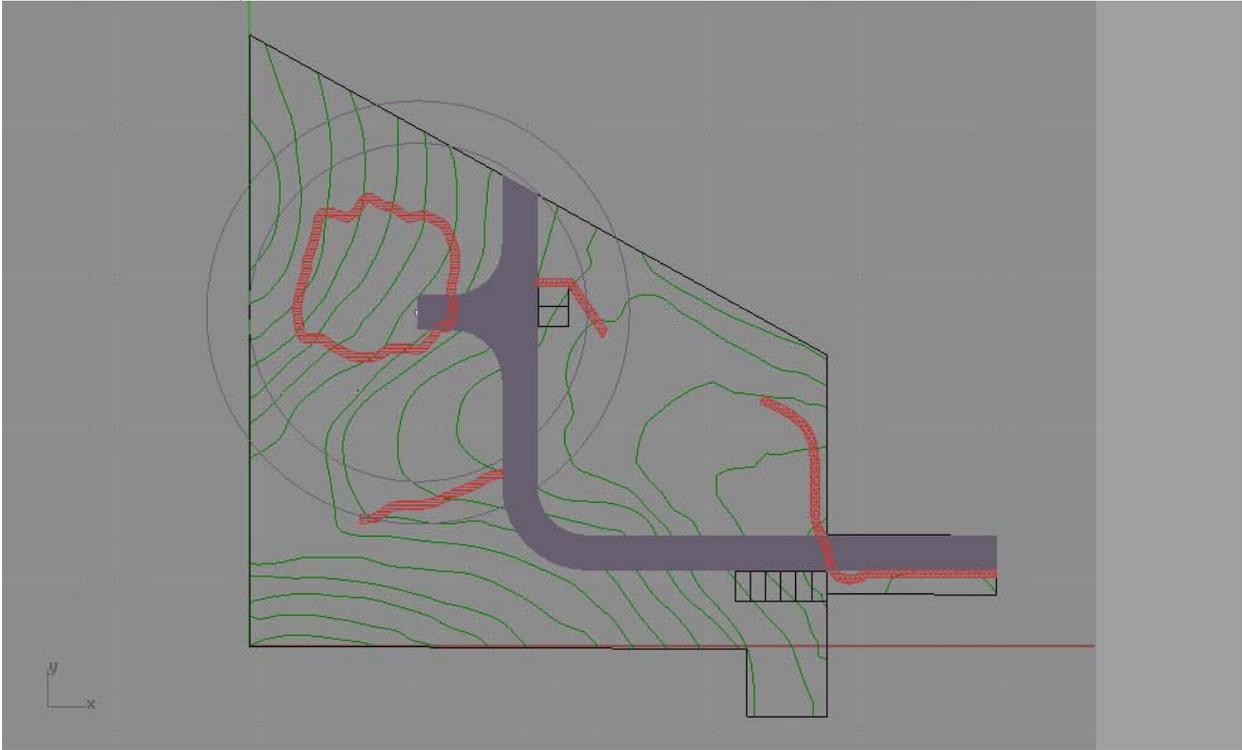
To the West is an intermittent stream that we want to slow down and turn into a forested pond or bio-retention area. This type of body of water would allow us to grow many of Indiana's native wetland plants in addition to filtering the water before entering our swimming and irrigation pond.

## Water Storage

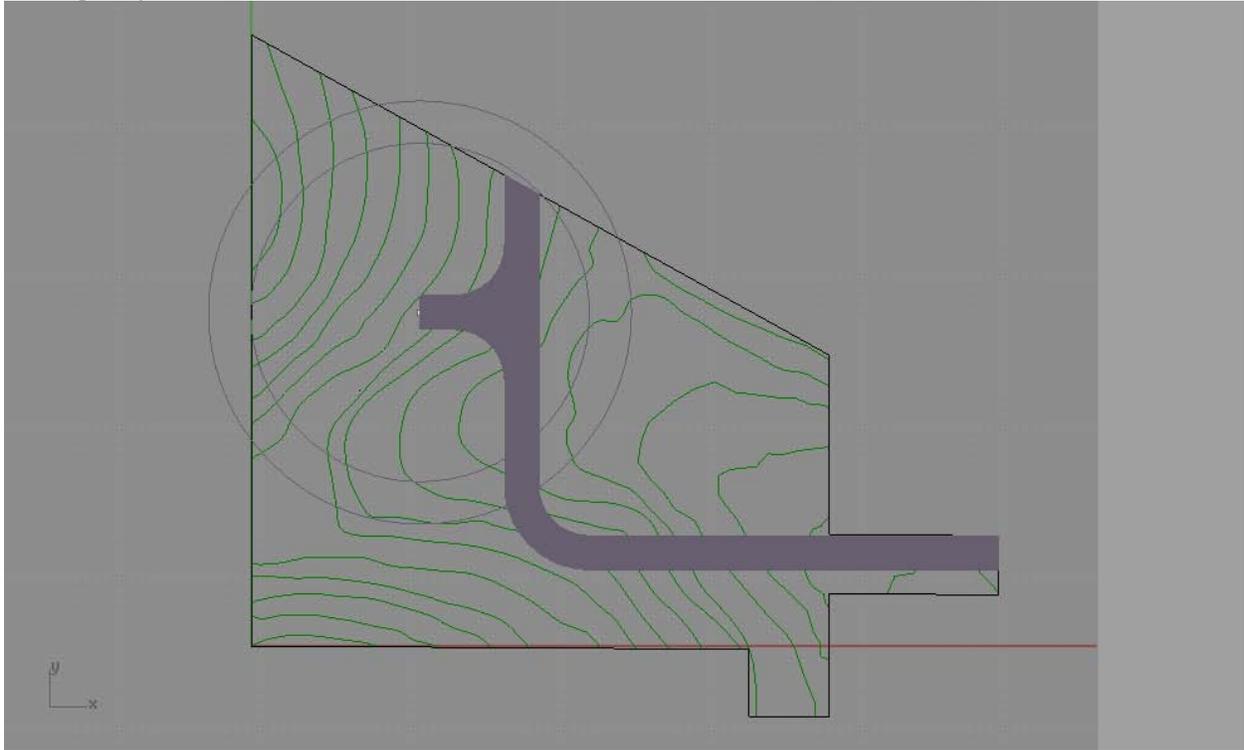


Water collected from the roofs of the structures on the highest part of the property will be channeled into ferro-cement storage tanks.

Overview Mobility



## Emergency Access Drive



We worked with Tim Clapp the Monroe County fire inspector to ensure the emergency access drive would be adequate to handle an 80 ton fire truck. The turn radii of the turns in the access drive will be no less than 30'. This driveway currently depicted is different from the original we showed Tim Clapp; however, it observes the same width and turn radius requirements. We have a meeting scheduled with Tim on April 29<sup>th</sup> to discuss the new drive.

Though not depicted in the map, there will be a fire hydrant with the appropriate additional width of the driveway located just off of Spring Street.



## **Glossary**

**Aquaculture** --- also known as aqua-farming, is the farming of aquatic organisms such as fish, crustaceans, mollusks and aquatic plants.

**Car Share** --- A cooperative ownership structure where members each pay a monthly fee and a fee per mile driven to use a car.

**Chicken Tractor** --- a mobile chicken pen that does not have a floor. Once or twice daily the chicken tractor is moved so that the chickens do not destroy the vegetation on the ground. This is a rotational grazing strategy that improves the health of the soil by increasing plant diversity and evenly spreading chicken manure.

**Co-Housing** --- A group of unrelated individuals living together in order to share basic costs of living, workload, and to create community connections. Co-housing does not necessarily imply the same sense of ecological responsibility that the similar term ecovillage implies

**Community House** --- This will be our central community structure with a large kitchen, dining hall, meeting space, and bedrooms.

**Consensus** ---A group decision-making process that seeks the agreement of all participants.

**Cooperative Living** --- This is a living style in which members of a community work together to achieve goals.

**Natural Swimming Pond** --- A pond that uses vegetation for filtering the water as opposed to chemicals.

**Non-Violent Communication** --- It is a way to communicate with greater compassion and clarity. It focuses on two things: honest self-expression — exposing what matters to oneself in a way that's likely to inspire compassion in others, and empathy — listening with deep compassion.

**Passive Solar Energy** --- Use of the sun to help meet a building's energy needs by means of architectural design such as arrangement of windows and materials, floors that store heat, or other thermal mass.

**Perennial Food Forest** --- a Permaculture cornerstone—a perennial food forest mimics the architecture and beneficial relationships of a natural forest. Food forests are not “natural” but are designed and managed ecosystems that are very rich in biodiversity and productivity.

**Pervious Pavers** --- The 80 ton road base will be covered with pervious pavers, a structural plastic grid that can support the weight of the fire truck while allowing low growing plants to be grown in shallow soil contained in the empty spaces within the grid. These plants will help to manage storm water run off while also providing additional room for us to raise crops.

**Riparian Zone** --- ecosystems located along the banks of rivers, streams, or other water bodies.

**Appendix**

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Membership Process.....81 - 89  
Natural Building Techniques..... 89-90  
Press..... ..91 - 95  
Watershed Engineering Report.....95 to End

## **Alternative Energy Production**

*Active Solar*—the use of mechanical devices (i.e. photovoltaic panels, solar cells, etc) to derive energy directly from the sun and convert it into a usable form of energy that may be used to provide space heating, hot water, and/or electricity.

*Geothermal energy*—the use of heat under the ground to heat water and/or convert energy into electricity

*Solar Pumps*—solar pumps work on the basic principle that the sun's heat is always in the air, even in cold air. A heat pump extracts this heat from the outside air and transfers it into the interior of the house by way of the house's internal duct work. This heat is circulated through the ducts by a high-powered fan after it passes over a condensing unit to either add or remove heat from the air.

*Vertical Windmills*—windmills that have a rotor shaft that points vertically. Axis does not have to point directly into the wind. Advantages of vertical windmills include less building materials and produces energy regardless of wind direction

## **Animals**

### *Chickens*

There will be multiple chicken tractors kept in the orchard. A chicken tractor is a movable chicken coop that lacks a floor but provides protection from predators. The tractor is mobile so that the chickens can migrate throughout the lawn to feast on insects as well as fertilize the soil.

### **Chicken Tractor**



## *Goats*

Upholding the Urban Agriculture ordinance passed unanimously by the Bloomington City Council in August 2009, raising a small number of goats (3) on the land would benefit the Bloomington community in the following ways, as stated by the ordinance: need for sustainable food production, educational opportunities, and maintenance of agriculture infrastructure. Keeping goats would accomplish all of these goals. Keeping goats at the eco-village would, in time, produce milk for its members (sometimes 1/2 gallon per day sustainably) as well as provide educational opportunities for a community so disconnected with the natural world (*see Neighborhood Asset in Appendix*). The land was historically a cattle farm, and although we do not intend to raise cattle, we hope to ensure the continuation of the land use by raising goats.

In many cities across the U.S. keeping goats as part of urban agriculture has become increasingly accepted and is proving to be extremely possible in our own backyards. Goats are currently acceptable to raise within Portland, OR, Seattle, WA, Pasadena, CA and Oakland, CA city limits.

### **Contingency Plan**

This is the plan to be followed if Bloomington Cooperative Plots experiences one of the following situations:

- \* Bloomington Cooperative Plots goes bankrupt or otherwise has no way to repay debts
- \* Bloomington Cooperative Plots decides to disband

The property will be zoned for cooperative living thus the three best local candidates for taking over the property are Bloomington Cooperative Living, the Catholic Workers Union, and the Quaker Fellowship. There may be other cooperative organizations which form after this document is written which might also be good local candidates.

Plan 1: Sell the property for the equity invested in it. This would allow the members to be bought out and the buyer of the property would get an exceptional deal as it is certain the real value of the property will exceed the equity invested in it.

Plan 2: Sell the property for any outstanding debt and use the tax write off to repay members. This would allow us to pay back any lenders and though the members would still lose their equity it would be returned in future tax breaks.

Plan 3: Donate the property outright. This is the most difficult option though it does allow the members to recoup equity losses through future tax breaks. It leaves debts unsettled. The =unsettled debts will be split amongst the members.

In all three scenarios Bloomington Cooperative Living will be offered the property first, the Catholic Workers Union 2nd, and finally the Quaker Fellowship. If none of the above are

interested in buying the land it will be offered to Sycamore Land Trust or the Indiana New Farm School.

## **Emergency Access Drive**

### *Road Base*

In order to support the City of Bloomington's largest fire truck, fire truck 1, the road base must be capable of holding 80 tons. According to Rodger's Group Crushed Stone of Bloomington a road base capable of holding this capacity will be comprised of 6" of #2 gravel topped by 3" of #53 gravel.

### *Pervious Pavers*

The strips of road base will be covered with pervious pavers, a structural plastic grid that can support the weight of the fire truck while allowing low growing plants to be grown in shallow soil contained in the empty spaces within the grid. See before and after pervious paver parking lot project photos below.



### *Low Growing Herbs*

T. praecoxarcticus (English wild Thyme): best for medicinal purposes; very hardy; 3" height

S. Montana repanda (Creeping Winter Savory): culinary herb; 3" height

M. requiem (Carsican Mint): medicinal and culinary herb; 1" height

## **Endorsements**

### *Bloomington Commission on Sustainability*

On January 11<sup>th</sup> 2011 Bloomington Cooperative Plots was invited by the Bloomington Commission on Sustainability to attend the Planning Departments presentation of this eco-village project. After a round a questions the commission unanimously passed a motion to endorse a letter of support written by Peter Bane and to send a representative to the Planning Commission and Common Council meetings.

\* You will find the BCOS Memo of Support on the next page.

### *Bloomington's Environmental Commission*

Bloomington Cooperative Plots met with the Environmental Commission to discuss the eco-village project on February 17<sup>th</sup> 2011 and Thursday April 14<sup>th</sup> 2011.



**MARK KRUZAN  
MAYOR**

**CITY OF BLOOMINGTON**

401 N Morton St Suite 130  
PO Box 100  
Bloomington IN 47402

**DEPARTMENT OF ECONOMIC  
& SUSTAINABLE DEVELOPMENT**

p 812.349.3418  
f 812.349.3520

**City of Bloomington Commission on Sustainability  
Recommendation regarding the Bloomington Cooperative Plots proposal  
Approved January 11, 2011**

The Bloomington Commission on Sustainability recommends that the Bloomington Cooperative Plots proposal be given serious consideration.

While many aspects of this proposal remain to be refined, it brings to the city's attention the reality of implementing sustainability criteria and how these challenge the structure of present zoning and other regulations.

The essential nature of this proposal is to achieve much lower per person levels of energy and materials use, both in the development and over the long term, while providing high quality housing with significant amenity near the city center. As such, the proposal deserves serious consideration by city staff and the various boards and commissions charged with carrying out city objectives.

It should be recognized at the outset that many aspects of the proposal call for unconventional solutions to the needs of urban living, but that the intent of the developer is to provide safe, affordable, energy-efficient, and attractive housing with a maximum of green space and a minimum of automobile and energy impact on the city infrastructure and neighborhood life. Therefore, where the proposal falls outside current guidelines or goes beyond them, staff and boards should make every effort to help the developer adapt its ideas in ways that meet the city's concerns for safety and sanitation, aesthetic and community impact, and environmental protection and improvement without falling into the trap of insisting on formulaic responses.

We recognize and endorse the following objectives of city policy that this proposal attempts to achieve:

Reduced automobile use and greater dependence on pedestrian, bicycle, and transit modes for transport within the city by specifically limiting space devoted solely to cars and renouncing customary auto usage by future residents.

- Conservation of residential energy use both in construction and for maintenance through passive solar design, smaller building footprints, and more economical shared use of infrastructure.
- Conservation of water resources, thereby reducing impact on city facilities and increasing resilience.
- Increased community gardening and edible landscaping, contributing to greater food security.
- Creating a central focus for one of the city's natural neighborhoods where none presently exists, thus advancing a decentralized economy and social structure for the whole community consistent with expected needs of the next phase of Bloomington's evolution.

Respectfully submitted,

Maggie Sullivan  
Chair, City of Bloomington Commission on Sustainability

### **Environmental Investigation**

415 ½ Spring Street is located in the heart of the PCB hot zone, next to a railroad, and next to a recycling operation. Due to these threats we hired Fields Environmental Incorporated to do a Phase 2 investigation of the threats of PCBs and heavy metal. The property was non-detect on PCBs. There was detection of arsenic but Rudy Fields said that this was normal background arsenic for the region. There was also detection of lead, but only enough to make wells a dangerous form of drinking water.

We donated our environmental investigation material to the city of Bloomington, as part of their efforts to map the areas affected by PCBs.

\* You will find the entirety of the environmental document starting on the next page.



Fields Environmental, Inc.

1309 West Vernal Pike  
 Bloomington, IN 47404  
 Phone: (812) 333-5333  
 www.fieldsenvironmentalinc.com

**Sample Locations, Bloomington Plots,  
 North Spring Street, Bloomington, Indiana  
 2005 Aerial Photo / Parcel Boundary Lines**

For: Bloomington Plots

Date: 11 - 15 - 10

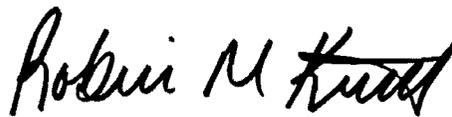
Project # 10-05.01

Graphics obtained from: Monroe County GIS  
 (<http://gis.co.monroe.in.us/egis/#>)

## ANALYTICAL REPORT

Job Number: 510-58211-1  
Job Description: Plots - Bloomington IN

For:  
Fields Environmental  
1309 West Vernal Pike  
Bloomington, IN 47404  
Attention: Rudy Fields



Approved for release.  
Robin M Kintz  
Project Manager I  
11/8/2010 9:22 AM

---

Robin M Kintz  
Project Manager I  
robinm.kintz@testamericainc.com  
11/08/2010

The test results in this report meet all NELAC requirements for parameters which accreditation is required or available. Any exceptions to NELAC requirements are noted in this report. Pursuant to NELAC, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the Project Manager who signed this test report. Valparaiso IL EPA Accreditation #100432.

**Job Narrative**  
**510-58211-1**

**Comments**

No additional comments.

**Receipt**

All samples were received in good condition within temperature requirements.

**GC Semi VOA**

Method(s) 8082: The following samples required a mercury clean-up to reduce matrix interferences caused by sulfur: (510-58211-6 MS), (510-58211-6 MSD), PL-1 (510-58211-1), PL-2 (510-58211-2), PL-3 (510-58211-3), PL-4 (510-58211-4), PL-5 (510-58211-5), PL-6 (510-58211-6).

Method(s) 8082: The following samples required a sulfuric acid clean-up to reduce matrix interferences: (510-58211-6 MS), (510-58211-6 MSD), PL-1 (510-58211-1), PL-2 (510-58211-2), PL-3 (510-58211-3), PL-4 (510-58211-4), PL-6 (510-58211-6).

Method(s) 8082: The following samples required several sulfuric acid clean-ups to reduce matrix interferences: PL-5 (510-58211-5).

No other analytical or quality issues were noted.

**Metals**

Method(s) 6010B: The serial dilution performed for the following sample(s) was outside control limits for barium and lead; however, the sample concentration was less than 100x's the reporting limit. Data is acceptable.  
PL-5 (510-58211-5)

No other analytical or quality issues were noted.

**General Chemistry**

No analytical or quality issues were noted.

**Organic Prep**

No analytical or quality issues were noted.

## METHOD SUMMARY

Client: Fields Environmental

Job Number: 510-58211-1

Description	Lab Location	Method	Preparation Method
<b>Matrix</b> <b>Solid</b>			
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL VAL	SW846 8082	
Automated Soxhlet Extraction	TAL VAL		SW846 3541
Metals (ICP)	TAL VAL	SW846 6010B	
Preparation, Metals	TAL VAL		SW846 3050B
Mercury (CVAA)	TAL VAL	SW846 7471A	
Preparation, Mercury	TAL VAL		SW846 7471A
Percent Moisture	TAL VAL	EPA Moisture	

### Lab References:

TAL VAL = TestAmerica Valparaiso

### Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

---

**METHOD / ANALYST SUMMARY**

Client: Fields Environmental

Job Number: 510-58211-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8082	Ivers, Catherine L	CLI
SW846 6010B	Tharpe, Matt	MT
SW846 7471A	Thomas, Deidra	DT
EPA Moisture	Hall, Jennifer L	JLH

### SAMPLE SUMMARY

Client: Fields Environmental

Job Number: 510-58211-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
510-58211-1	PL-1	Solid	10/22/2010 1500	10/23/2010 0910
510-58211-2	PL-2	Solid	10/22/2010 1505	10/23/2010 0910
510-58211-3	PL-3	Solid	10/22/2010 1515	10/23/2010 0910
510-58211-4	PL-4	Solid	10/22/2010 1525	10/23/2010 0910
510-58211-5	PL-5	Solid	10/22/2010 1540	10/23/2010 0910
510-58211-6	PL-6	Solid	10/22/2010 1555	10/23/2010 0910

Rudy Fields  
 Fields Environmental  
 1309 West Vernal Pike  
 Bloomington, IN 47404

Job Number: 510-58211-1  
 Lab Sample Id: 510-58211-1  
 Client Matrix: Solid  
 Date Sampled: 10/22/2010 1500  
 Date Received: 10/23/2010 0910  
 % Moisture: 10.7

Client Sample ID: PL-1

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
<b>GC SEMI VOA</b>							
PCB-1016	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
PCB-1221	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
PCB-1232	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
PCB-1242	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
PCB-1248	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
PCB-1254	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
PCB-1260	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
Surrogate					Acceptance Limits		
DCB Decachlorobiphenyl	90	%		8082	14 - 147		
Dibutylchloroendate	59	%		8082	10 - 132		
<b>GENERAL CHEMISTRY</b>							
Percent Moisture	11	%	0.10	Moisture		10/24/2010 1603	1.0
Percent Solids	89	%	0.10	Moisture		10/24/2010 1603	1.0

Rudy Fields  
 Fields Environmental  
 1309 West Vernal Pike  
 Bloomington, IN 47404

Job Number: 510-58211-1  
 Lab Sample Id: 510-58211-2  
 Client Matrix: Solid  
 Date Sampled: 10/22/2010 1505  
 Date Received: 10/23/2010 0910  
 % Moisture: 9.5

Client Sample ID: PL-2

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
<b>GC SEMI VOA</b>							
PCB-1016	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
PCB-1221	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
PCB-1232	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
PCB-1242	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
PCB-1248	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
PCB-1254	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
PCB-1260	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
Surrogate					Acceptance Limits		
DCB Decachlorobiphenyl	94	%		8082	14 - 147		
Dibutylchloroendate	60	%		8082	10 - 132		
<b>GENERAL CHEMISTRY</b>							
Percent Moisture	9.5	%	0.10	Moisture		10/24/2010 1603	1.0
Percent Solids	91	%	0.10	Moisture		10/24/2010 1603	1.0

Rudy Fields  
 Fields Environmental  
 1309 West Vernal Pike  
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Job Number: 510-58211-1  
 Lab Sample Id: 510-58211-3  
 Client Matrix: Solid  
 Date Sampled: 10/22/2010 1515  
 Date Received: 10/23/2010 0910  
 % Moisture: 10.2

Client Sample ID: PL-3

Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
<b>GC SEMI VOA</b>						
PCB-1016	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523 1.0
PCB-1221	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523 1.0
PCB-1232	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523 1.0
PCB-1242	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523 1.0
PCB-1248	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523 1.0
PCB-1254	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523 1.0
PCB-1260	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523 1.0
Surrogate				Acceptance Limits		
DCB Decachlorobiphenyl	90	%		8082	14 - 147	
Dibutylchloroendate	61	%		8082	10 - 132	
<b>GENERAL CHEMISTRY</b>						
Percent Moisture	10	%	0.10	Moisture	10/24/2010 1603	1.0
Percent Solids	90	%	0.10	Moisture	10/24/2010 1603	1.0

Rudy Fields  
 Fields Environmental  
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Job Number: 510-58211-1  
 Lab Sample Id: 510-58211-5  
 Client Matrix: Solid  
 Date Sampled: 10/22/2010 1540  
 Date Received: 10/23/2010 0910  
 % Moisture: 6.8

Client Sample ID: PL-5

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
<b>GC SEMI VOA</b>							
PCB-1016	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1221	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1232	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1242	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1248	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1254	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1260	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
Surrogate					Acceptance Limits		
DCB Decachlorobiphenyl	44	%		8082	14 - 147		
Dibutylchloroendate	11	%		8082	10 - 132		
<b>METALS</b>							
Arsenic	11	mg/Kg	3.2	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Barium	120	mg/Kg	11	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Cadmium	<11	mg/Kg	11	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Chromium	43	mg/Kg	1.1	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Lead	250	mg/Kg	5.3	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Selenium	4.5	mg/Kg	2.1	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Silver	<4.2	mg/Kg	4.2	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Mercury	0.91	mg/Kg	0.021	7471A	10/26/2010 0850	10/26/2010 1604	1.0
<b>GENERAL CHEMISTRY</b>							
Percent Moisture	6.8	%	0.10	Moisture		10/24/2010 1603	1.0
Percent Solids	93	%	0.10	Moisture		10/24/2010 1603	1.0

Rudy Fields  
 Fields Environmental  
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Job Number: 510-58211-1  
 Lab Sample Id: 510-58211-5  
 Client Matrix: Solid  
 Date Sampled: 10/22/2010 1540  
 Date Received: 10/23/2010 0910  
 % Moisture: 6.8

Client Sample ID: PL-5

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
<b>GC SEMI VOA</b>							
PCB-1016	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1221	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1232	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1242	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1248	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1254	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1260	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
Surrogate					Acceptance Limits		
DCB Decachlorobiphenyl	44	%		8082	14 - 147		
Dibutylchloroendate	11	%		8082	10 - 132		
<b>METALS</b>							
Arsenic	11	mg/Kg	3.2	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Barium	120	mg/Kg	11	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Cadmium	<11	mg/Kg	11	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Chromium	43	mg/Kg	1.1	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Lead	250	mg/Kg	5.3	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Selenium	4.5	mg/Kg	2.1	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Silver	<4.2	mg/Kg	4.2	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Mercury	0.91	mg/Kg	0.021	7471A	10/26/2010 0850	10/26/2010 1604	1.0
<b>GENERAL CHEMISTRY</b>							
Percent Moisture	6.8	%	0.10	Moisture		10/24/2010 1603	1.0
Percent Solids	93	%	0.10	Moisture		10/24/2010 1603	1.0

Rudy Fields  
 Fields Environmental  
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 Bloomington, IN 47404

Job Number: 510-58211-1  
 Lab Sample Id: 510-58211-6  
 Client Matrix: Solid  
 Date Sampled: 10/22/2010 1555  
 Date Received: 10/23/2010 0910  
 % Moisture: 7.8

Client Sample ID: PL-6

Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
<b>GC SEMI VOA</b>						
PCB-1016	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
PCB-1221	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
PCB-1232	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
PCB-1242	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
PCB-1248	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
PCB-1254	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
PCB-1260	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
Surrogate					Acceptance Limits	
DCB Decachlorobiphenyl	64	%		8082	14 - 147	
Dibutylchloroendate	43	%		8082	10 - 132	
<b>GENERAL CHEMISTRY</b>						
Percent Moisture	7.8	%	0.10	Moisture	10/24/2010 1603	1.0
Percent Solids	92	%	0.10	Moisture	10/24/2010 1603	1.0

**DATA REPORTING QUALIFIERS**

Client: Fields Environmental

Job Number: 510-58211-1

Lab Section	Qualifier	Description
Metals	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

## Quality Control Results

Client: Fields Environmental

Job Number: 510-58211-1

### Surrogate Recovery Report

#### 8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

##### Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	DBC1 %Rec
510-58211-1	PL-1	90	59
510-58211-2	PL-2	94	60
510-58211-3	PL-3	90	61
510-58211-4	PL-4	84	62
510-58211-5	PL-5	44	11
510-58211-6	PL-6	64	43
MB 510-71103/1-A		97	47
LCS 510-71103/2-A		99	77
510-58211-6 MS	PL-6 MS	78	63
510-58211-6 MSD	PL-6 MSD	72	61

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-147
DBC = Dibutylchloroendate	10-132

**Quality Control Results**

Client: Fields Environmental

Job Number: 510-58211-1

**Method Blank - Batch: 510-71103**

**Method: 8082  
Preparation: 3541**

Lab Sample ID: MB 510-71103/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 11/04/2010 1407  
Date Prepared: 11/01/2010 0815

Analysis Batch: 510-71330  
Prep Batch: 510-71103  
Units: mg/Kg

Instrument ID: SGCA  
Lab File ID: B3501.D  
Initial Weight/Volume: 30 g  
Final Weight/Volume: 5 mL  
Injection Volume: 1 uL  
Column ID: PRIMARY

Analyte	Result	Qual	RL
PCB-1016	<0.010		0.010
PCB-1221	<0.010		0.010
PCB-1232	<0.010		0.010
PCB-1242	<0.010		0.010
PCB-1248	<0.010		0.010
PCB-1254	<0.010		0.010
PCB-1260	<0.010		0.010

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	97	14 - 147
Dibutylchloroendate	47	10 - 132

**Lab Control Sample - Batch: 510-71103**

**Method: 8082  
Preparation: 3541**

Lab Sample ID: LCS 510-71103/2-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 11/04/2010 1422  
Date Prepared: 11/01/2010 0815

Analysis Batch: 510-71330  
Prep Batch: 510-71103  
Units: mg/Kg

Instrument ID: SGCA  
Lab File ID: B3502.D  
Initial Weight/Volume: 30 g  
Final Weight/Volume: 5 mL  
Injection Volume: 1 uL  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
PCB-1016	0.167	0.181	109	71 - 118	
PCB-1260	0.167	0.175	105	72 - 125	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	99	14 - 147
Dibutylchloroendate	77	10 - 132

**Quality Control Results**

Client: Fields Environmental

Job Number: 510-58211-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 510-71103**

**Method: 8082  
Preparation: 3541**

MS Lab Sample ID: 510-58211-6  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 11/04/2010 1624  
Date Prepared: 11/01/2010 0815

Analysis Batch: 510-71330  
Prep Batch: 510-71103

Instrument ID: SGCA  
Lab File ID: B3510.D  
Initial Weight/Volume: 15.09 g  
Final Weight/Volume: 5 mL  
Injection Volume: 1 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 510-58211-6  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 11/04/2010 1639  
Date Prepared: 11/01/2010 0815

Analysis Batch: 510-71330  
Prep Batch: 510-71103

Instrument ID: SGCA  
Lab File ID: B3511.D  
Initial Weight/Volume: 15.32 g  
Final Weight/Volume: 5 mL  
Injection Volume: 1 uL  
Column ID: PRIMARY

Analyte	% Rec		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
PCB-1016	96	99	71 - 118	1	30		
PCB-1260	91	94	72 - 125	2	30		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
DCB Decachlorobiphenyl		78	72			14 - 147	
Dibutylchlorendate		63	61			10 - 132	

**Quality Control Results**

Client: Fields Environmental

Job Number: 510-58211-1

**Method Blank - Batch: 510-70854**

**Method: 6010B  
Preparation: 3050B**

Lab Sample ID: MB 510-70854/1-A ^2  
Client Matrix: Solid  
Dilution: 2.0  
Date Analyzed: 10/28/2010 0931  
Date Prepared: 10/27/2010 0958

Analysis Batch: 510-70951  
Prep Batch: 510-70854  
Units: mg/Kg

Instrument ID: MICPC  
Lab File ID: 101561C  
Initial Weight/Volume: 1.0 g  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Arsenic	<3.0		3.0
Barium	<10		10
Cadmium	<10		10
Chromium	<1.0		1.0
Lead	<5.0		5.0
Selenium	<2.0		2.0
Silver	<4.0		4.0

**Lab Control Sample - Batch: 510-70854**

**Method: 6010B  
Preparation: 3050B**

Lab Sample ID: LCS 510-70854/2-A ^2  
Client Matrix: Solid  
Dilution: 2.0  
Date Analyzed: 10/28/2010 0937  
Date Prepared: 10/27/2010 0958

Analysis Batch: 510-70951  
Prep Batch: 510-70854  
Units: mg/Kg

Instrument ID: MICPC  
Lab File ID: 101561C  
Initial Weight/Volume: 1.0006 g  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	138	130	94	80 - 120	
Barium	269	268	100	79 - 121	
Cadmium	71.0	68.6	97	82 - 118	
Chromium	105	101	96	80 - 120	
Lead	144	140	97	80 - 120	
Selenium	200	196	98	79 - 122	
Silver	45.1	45.1	100	66 - 134	

**Quality Control Results**

Client: Fields Environmental

Job Number: 510-58211-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 510-70854**

**Method: 6010B  
Preparation: 3050B**

MS Lab Sample ID: 510-58211-5  
Client Matrix: Solid  
Dilution: 2.0  
Date Analyzed: 10/28/2010 0953  
Date Prepared: 10/27/2010 0958

Analysis Batch: 510-70951  
Prep Batch: 510-70854

Instrument ID: MICPC  
Lab File ID: 101561C  
Initial Weight/Volume: 1.0241 g  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 510-58211-5  
Client Matrix: Solid  
Dilution: 2.0  
Date Analyzed: 10/28/2010 0959  
Date Prepared: 10/27/2010 0958

Analysis Batch: 510-70951  
Prep Batch: 510-70854

Instrument ID: MICPC  
Lab File ID: 101561C  
Initial Weight/Volume: 1.0075 g  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Arsenic	99	99	75 - 125	1	20		
Barium	105	101	75 - 125	1	20		
Cadmium	97	96	75 - 125	1	20		
Chromium	83	82	75 - 125	0	20		
Lead	146	106	75 - 125	6	20	4	4
Selenium	104	102	75 - 125	0	20		
Silver	106	103	75 - 125	1	20		

**Quality Control Results**

Client: Fields Environmental

Job Number: 510-58211-1

**Method Blank - Batch: 510-70777**

**Method: 7471A**  
**Preparation: 7471A**

Lab Sample ID: MB 510-70777/9-A  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 10/26/2010 1527  
Date Prepared: 10/26/2010 0850

Analysis Batch: 510-70839  
Prep Batch: 510-70777  
Units: mg/Kg

Instrument ID: MHGC  
Lab File ID: 102610hg.PRN  
Initial Weight/Volume: 1.0 g  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Mercury	<0.010		0.010

**Lab Control Sample - Batch: 510-70777**

**Method: 7471A**  
**Preparation: 7471A**

Lab Sample ID: LCS 510-70777/10-A  
Client Matrix: Solid  
Dilution: 10  
Date Analyzed: 10/26/2010 1530  
Date Prepared: 10/26/2010 0850

Analysis Batch: 510-70839  
Prep Batch: 510-70777  
Units: mg/Kg

Instrument ID: MHGC  
Lab File ID: 102610hg.PRN  
Initial Weight/Volume: 0.1001 g  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	25.3	31.5	125	67 - 133	

**Quality Control Results**

Client: Fields Environmental

Job Number: 510-58211-1

**Method Blank - Batch: 510-70702**

**Method: Moisture  
Preparation: N/A**

Lab Sample ID: MB 510-70702/1  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 10/24/2010 1603  
Date Prepared: N/A

Analysis Batch: 510-70702  
Prep Batch: N/A  
Units: %

Instrument ID: GBALB  
Lab File ID: N/A  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Result	Qual	RL
Percent Moisture	100		0.10
Percent Solids	0.026		0.10



## Login Sample Receipt Check List

Client: Fields Environmental

Job Number: 510-58211-1

**Login Number: 58211**

**List Source: TestAmerica Valparaiso**

**Creator: Looney, Christina M**

**List Number: 1**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

## **Finances**

At the time of submission of this proposal, we have been financed by five people: Zach Dwiell, Daniel Joseph Weddle, Ann Kreilkamp, Shodo Spring, and Travis Andrew Puntarelli. Most of the funding has gone towards the purchase of the property. Some has been invested in cleaning up the property. We are currently seeking additional funding sources for initial infrastructure projects such as the emergency access drive and utilities installation.

## **Interpersonal Relationships**

*Community Justice and Mediation Center*

32-hour Basic Mediation Training

“Basic Mediation Training” is a great tool to add to the lifelong toolbox of community members interested in healing community harm, resolving neighbor-to-neighbor conflicts, alternative dispute resolution, criminal justice issues, or helping youth.

Participants who complete CJAM’s “Basic Mediation Training” are eligible to work as CJAM volunteer mediators; however, any community member interested in learning basic mediation skills is also welcome to participate.

*Restorative Circles and Non-Violent Communication*

Daniel Weddle one the founding members has studied Non-Violent Communication and plans on using restorative circles, a mediation technique, to resolve conflicts within the community.

What is Restorative Circles: Building a Compassionate Justice System

Born in the shanty towns of Brazil, the systemic approach of Restorative Circles guides communities to consciously choose their justice system - proactively preventing or diminishing harm while giving all those involved a real-life experience of the practical power of nonviolence. Restorative Circles can fit into existing systems and contribute to greater connection, safety and well-being in your own schools, families, legal systems, neighborhoods, local governments, workplaces, religious groups and other communities.

Restorative Circles offer ways for individuals and communities to establish connection, discover meaning and recover empowerment and humanity on profound levels. By creating a unique values based forum for reaching agreements, based in Marshall Rosenberg’s Nonviolent Communication work, these circles help sustain effective and nurturing relationships both personally and within society.

Restorative Circles have developed within the Restorative Justice movement, which in recent decades, inspired by aboriginal peacemaking circle systems, has rediscovered and adapted ways for communities to promote responsibility and healing. Rethinking justice, and engaging

with the challenge of consciously building whole system responses to community well-being, has opened up revolutionary possibilities for furthering a culture of peace.

With just 2.8 % of the world's population, Brazil has over 13.8% of all violent crimes committed worldwide, as reported by the UN. The current models for addressing such conflicts in Brazil were being overwhelmed, and the country consumed with evermore violence. In 2004, the Brazilian Ministry of Justice and Education invited Dominic Barter to develop a model of justice implementing the Restorative Justice principles. What began as a few Pilot Projects in 2004, has mushroomed into hundreds throughout Brazil. Early data show that the number of cases 'judicialized' - reaching the judge - diminish significantly where the Circles are present in the schools and community. Anecdotal feedback indicates that an unprecedented cultural shift can occur in schools as the Circles are adapted as a way to handle conflict. National awards have been presented to recognize what has been accomplished in an astonishingly short period of time. The task now is how fast can they roll out this process to all reaches of society in Brazil. This is a rare opportunity to witness and experience an emerging path 21st Century Justice.

This unique Model of Restorative Circles presents a systemic approach developed by Dominic Barter as he worked with organizations, schools, court systems, intentional communities and prisons. Applied in the Brazilian Justice and Education systems, this process makes exquisite use of Nonviolent Communication to reconnect those separated by conflict and support them in reaching not only agreed action, but opportunity for individual and community empowerment and healing as well.

## Membership Process

### Bloomington Cooperative Plots Eco-Village Membership Process

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#### Types of Membership

##### ■ Friend

- Someone who may occasionally assist with projects related to the eco-village, but who makes no formal commitment to the group.

##### ■ Financial or Working Supporter

- Someone who offers monetary gifts or hours of service, one-time or recurring, to the eco-village and are currently not ready to make a formal commitment to the group. They are welcome to attend meetings and participate but do not have voting power.

##### ■ Seed (Provisional Members)

- An individual interested in becoming “Rooted Members.” While renting they will be evaluated by the group at 3, 6, 9, and 12 months to determine community fit. A Seed must attend some meetings, are encourage to make community proposals, but

have voting rights that limit the blocking of proposals and do not count in consensus.

- A Seed must live with a “Rooted Member” or on the community grounds for one full calendar year.
- Provide at least 2 references, a personal 1 and a work 1
- Must attend X number of meetings per month
- Sign a Seed Dues Contract
- Sign a Seed Service Contract
- Sign Vision Contract
  - Join or create at least one committee and work x number of hours per week.

■ Seedling Members

- An individual who has been through the Seed stage and has been invited to become a lifelong member of the community, but has decided to continue as a renter.
- Seedlings will have full voting rights; however, Seedlings in the membership process will not be able to block a proposal and will not be counted in decisions requiring consensus.
- Leases are for 8 or 12 month periods and are up for renewal each year. (should they have the intent to building eventual? Within a certain amount of time?)
  - Rent will be \$200 to \$300 per month, plus food and utilities.
  - Must attend X number of meeting per month
  - Sign a Seedling Dues Contract
  - Sign a Seedling Service Contract
  - Sign Vision Contract
  - Join or create at least one committee and work 5 of hours per week.

■ Rooted (Full Member)

- An individual who has been through the Seed stage and has been invited to become a lifelong member of the community.
  - Must attend X number of meeting per month
  - Sign a Rooted Dues Contract

- Sign a Rooted Service Contract
- Sign Vision Contract
  - Join or create at least one committee and work 5 of hours per week.
- Invitational Membership
  - Rooted members reserve the right to invite members into the community to any level of the membership process on a case to case basis by the process of full consensus.
- :
- Building Members
  - Each building member will be responsible for obtaining any and all building permits or variances needed for their personal structure.

### **Step-by-Step Outline**

The membership process takes at least 1 year to complete. You must complete all of the steps within the membership process to become a Rooted Member of the Bloomington Cooperative Plots Eco-Village. Below is an outline of the steps that an individual will go through to obtain membership.

### **Steps:**

1. Fill out Application and Wellness Evaluation
2. Provide a Letter of Recommendation
3. Write Letter of Intent
4. Schedule an Interview
5. Sign Vision Contract, Dues Contract, and Service Contract
6. Begin living with a Rooted Member or at Bloomington Cooperative Plots
7. Fill contracts by meeting attendance, logging service hours, paying community dues, etc.
8. Attend evaluation meetings at 3, 6, 9, and 12 months during membership

### **Application**

Name:

Age:  
Sex:  
E-mail:  
Phone number:

### ***Why Bloomington Cooperative Plots Eco-Village?***

What do you know about BCP?  
What attracts you to BCP? What are you looking for? Do you feel the community can provide what you are looking for?  
How do you think you could contribute to BCP?  
How did you hear about BCP?  
If you personally know any of the BCP members list their names:

### ***About You***

Describe yourself in 5 words:  
What goals do you wish to accomplish in the next 5 years?  
Are you an artist? If so what do you consider your mediums?  
Do you play a musical instrument or instruments? If so which ones?  
How soon would you be interested in constructing a naturally built home? How would you approach constructing a home?  
Is there anything specific you want us to know about you?  
Health situation (any physical disabilities, current medication or treatments, mental health history, chronic health history, health insurance, or current health concerns):  
Financial situation (debts, monthly bills, or financial needs beyond immediate self care):  
Do you drink alcohol or smoke cigarettes?  
What are the significant relationships in your life now? If so is your partner interested in the community?  
What are your needs for being social, and for solitude?  
Please describe a major obstacle in your life and how you overcame it.  
What do you typically do when someone does something that upsets you?

### ***Community Involvement and Living Arrangements***

Current living situation (where, with whom, how long?):  
Current working situation  
What communities do you belong to?  
Experiences with rural living, community living, garden and farm work, cooking, cleaning, building maintenance, carpentry, outdoor physical work, office work:  
What was your best experience with Group Living?  
What was your worst experience with Group Living?  
What have you learned from past living arrangements?  
Write about a time when you demonstrated your trustworthiness or integrity in school or at work:

### ***Experience***

Experience with meditation or other spiritual practice.

### ***General Housekeeping***

What do you do in your spare time?

What is your current diet?

Do you have a car or pet?

What are your needs for computer, television, radio, recorded music, car, or telephone?

Why do people climb mountains?

Is there intelligent life in outer space?

### ***Personal Reference***

Name:

Relationship:

Phone Number:

Email:

If you wish you may have your personal reference write a letter and submit it with the application.

### ***Wellness Evaluation***

Please answer the questions on the Wellness Evaluation (see below)

### ***Final Interview Prep***

Write at least two questions you want us to address during your interview.

Bring a Letter of Intent stating why you are interested in becoming a member of Radical Plots

### **Wellness Evaluation**

**If the answer is YES for your entire life (either since early childhood or puberty, and ever since), place a check next to symptoms that may fit you.**

- Is everything at home and work (or school) in unfinished piles?
- Do you have a long-standing history of not being able to stay on task?
- Are you easily distractible?
- Do you seem to alternate between not staying focused and being so focused that a bomb could go off without you noticing it?
- Do you have a history of feeling really great and then getting yourself in trouble because of feeling so great (and being somewhat out of control and feeling invincible)?
- Are you moody?
- Are you angry all the time, with spells of rage?
- Are you empty and bored even doing something you enjoy?
- Do you get paranoid under stress?
- Do you have ups and downs that you can virtually plan on?
- Are there times every month when you just can't function (not including PMS)?
- Are you oversensitive to rejection and criticism?
- Has it always seemed that others find it easy to be happy and you don't?
- Have you spent most of your life between not quite depressed and not quite happy?
- Are you a perfectionist to the point where it keeps you from getting things done?
- Are you a pack rat?
- Do you have trouble trusting other people to do things because you're sure they'll mess it up?
- Do you obsess about something to the point where it interferes with your life?

- Do you have any ritual behaviors that you can't stop, like washing your hands too much, checking the door lock too much, counting things, etc.?
- Are you nervous more than you're not?
- Do you always feel scared?
- Does your mind never shut off, and has been that way since you were a child?

### **Formal Interview Process**

After an individual submits an application and wellness evaluation we will arrange to have an interview. The interviewee is expected to bring a letter of Intent and questions to the interview. After the interview the individual will be asked to leave and the interviewers will discuss whether or not they feel the individual is a good fit for the community. The interviewers will then come to a decision, present their decision to the larger group at the next meeting, and then barring any objections from the larger group will contact the individual with a decision. The individual should be contacted no later than the week after the next community meeting.

#### **Specifics of Interview**

- If possible interview must be done in person
- If not possible to interview in person the interview should be conducted via phone. When possible, video chat is preferable to voice only.
- At least 3 interviewers should be present.
- Each interviewer will be required to generate 2 personal questions to ask during the interview.
- There should be a minimum of one hour scheduled for the meeting.
- We should record the interview.
- The decision must be made by 100% consensus.

#### **Questions**

- What is your life story?
- What are your beliefs about the state of the world?
- Why are you drawn to our group?
- What do you hope to find with us?
- What do you have to offer the group?
- Do you use any drugs?
- Do you have a strong understanding of our systems, financial, co-housing model, etc...
- Do you have any questions for us?

### **Evaluation Meeting**

An evaluation meeting is a formal meeting where seed, seedling, and rooted members come together to discuss what is working and not working for both parties. It is during these meetings that fit for the community is assessed with honest and open feedback. Along the way seeds may have things pointed out that are not working so that they can adjust before a final decision is made at the end of the year.

The Evaluation meetings must consist of at least X number of members.

The meeting will consist of:

- potential member concerns/questions
- peer review by community members

At the 12 month meeting community members will vote for one of the three options:

### **1) Unfit Candidate**

- This is a potential member that has been voted as incompatible with the community by vast majority.
- This individual will not be given the option of renting the next year.
- This individual can consult with the community about the possibility of reapplying if they wish

### **2) Seedling Member**

- This is a potential member that has been voted by the community to extend membership process by 3, 6, 9, or 12 months by vast majority.
- This individual will be given the option of renting another year.
- This individual can request to be reevaluated for root membership at any of the evaluation meetings throughout the second year.
- Rent will be nonrefundable during the second year of renting.

### **3) New Root Member**

- This is a potential member that has been voted into root/seedling membership by consensus.
- This member's past rent within the community will count towards the membership buy-in.

## **Vision Contract**

I, \_\_\_\_\_, have fully read, understand, and align myself with the following documents:

- Vision Letter
- Community Vision Pillars
- Bylaws

I affirm and agree to uphold the Vision, Community Pillars, and Bylaws of the Bloomington Cooperative Plots Eco-Village.

Name Printed:

Name Signed:

Date:

### **Service Contract**

This service contract is an agreement to dedicating x number of hours to the work of a BCP committee and to attend x number of meets and work parties every month. You will report your committee hours weekly on G-Mail.

#### **Reasons for this Contract:**

#### **Commitment**

We are looking to start a community and have a ton of work to do to ensure we can start as soon as possible. These hours of commitment will boost everyone's moral as many hands make light, bountiful, and beautiful work. If many of us are working hard to make this dream happen then others will be inspired to work alongside us, ultimately making the property cheaper and life easier.

#### **Committees**

As part of being in the BCP community each member is required to serve on at least one committee. You can serve on more than one committee if you wish and the summation of your hours will count toward the total you must work every month.

#### **Meeting Quality**

To ensure the decisions made at meetings are a fair representation of our group it is necessary for many of us to attend each meeting. Higher attendance also leads to the generation of better ideas.

#### **Signing the Contract:**

I, \_\_\_\_\_, have read, understand, and agree with the service contract and am willing to dedicate x per week to the Bloomington Cooperative Plots Eco-Village community.

Name Printed:

Name Signed:

Date:

### **Dues Contract**

This dues contract is an agreement, between those interested in founding Bloomington Cooperative Plots Eco-Village, to pay XX dollars monthly in a jointly held account.

#### **Reasons for this Contract:**

#### **Commitment and Steady Income**

We collect dues in order to fund continual improvements to the site and cooperative infrastructure. Examples might include periodic repair of the roads, ponds, forests and communal buildings, property taxes, grants, etc.

#### **Signing the Contract:**

I(Your Name)have read, understand, and agree with the contractual savings plan and am willing to save XX dollars a month.

Name Printed:

Name Signed:

Date:

### **Buy In and Buy Out Processes**

- We are not an income sharing community
- Buy in will be between 125 and 150% of the purchase price of land plus infrastructure, work parties will likely reduce the fee down to 100%, it can be paid up front or in \$100 monthly installments (We choose this route as many communities expect money up front and we do not believe that is reasonable.
- Buy in is transferable and upon leaving you may sell your share and home to another person who is membership or the community may buy you out at \$100 per month, This is not a great investment as the goal is not to help individuals gain money but rather to build a home that holds some equity instead of renting.
- There will be monthly dues for people living directly on the land and they will likely be \$100 per month, it is with such revenue we will build future cooperative infrastructural.

### **Natural Building Techniques**

Below is a list of natural building techniques. This list is far from exhaustive, but it is meant to serve as introduction to the many different building techniques. It is possible that we will explore techniques not listed below.

#### *Cob*

Cob or cobb is a building material consisting of clay, sand, straw, water, and earth, similar to adobe. Cob is fireproof, resistant to seismic activity, and inexpensive. It can be used to create artistic, sculptural forms and has been revived in recent years by the natural building and sustainability movements.

#### *Cordwood or Stackwood*

Cordword or stackwood is rather similar to brick. Spilt or unsplit logs are stacked with mortar between the joints.

#### *Deltec Homes*

<http://www.deltechomes.com/floorplans.php>

Deltec homes are circular designs with the smallest being 328 square feet.

#### *Earthship*

An Earthship is a type of passive solar home made of natural and recycled materials. Recycled

tires are rammed full of soil to become the walls in this building technique.

### *Geodesic Dome*

A geodesic dome is a spherical or partial-spherical shell structure or lattice shell based on a network of great circles (geodesics) lying on the surface of a sphere.

### *Post and Beam:*

Post and beam (or Post and lintel) is a simple architrave where a horizontal member (the lintel or header) is supported by two vertical posts at either end. This form is commonly used to support the weight of the structure located above the openings in a bearing wall created by windows and doors.

### *Rammed Earth*

Building a rammed earth wall involves a process of compressing a damp mixture of earth that has suitable proportions of sand, gravel and clay (sometimes with an added stabilizer) into an externally supported frame, creating a solid wall of earth.

### *Sandbag*

Walls are gradually built up by laying bags in courses — forming a staggered pattern similar to bricklaying. The bags are sturdy sacks filled with inorganic material usually available on site (such as sand, gravel, or clay).

### *Straw Infill*

Straw infill buildings use straw bales as insulation and not to bear the load of the roof. The structure of the wall which bears the load can be built of many materials, typically lumber or timber frame.

### *Slip Straw*

This method is a lot like rammed earth; however, instead of an earth mixture being rammed between forms it is a mixture of straw with very wet clay mixed in.

### *Strawbale*

A building which uses straw bales both as insulation and to bear the load of the roof.

## **Press**

### *WFHB Eco-Report Radio Interview*

Please disregard the inconsistency of the numbers in this interview with those found in this proposal. Though the interview is a good, honest example of what the founders have in mind and why they have applied to the PUD process, the material is out dated.

<http://www.wfhb.org/news/ecoreport-january-13-2011>

Bloomington Cooperative Plots is an EcoVillage project forming on Bloomington's west side, an intentional community of individuals and families who dedicate their unique talents, gifts, and aspirations toward a common vision of sustainability. The group purchased a two-acre plot in December and intend to construct a cooperative house for 12 to 15 people plus a campus of 9 smaller houses. EcoVillage founder Danny Weddle outlines their vision as our guest this week on EcoReport, a weekly program providing independent media coverage of environmental and ecological issues with a focus on local, state and regional people, issues, and events in order to foster open discussion of human relationships with nature and the Earth and to encourage you to take personal responsibility for the world in which we live.

<http://www.wfhb.org/news/ecoreport-march-10-2011>

We are the opening story.

### *Permaculture Activist Article*

Please disregard the inconsistency of the numbers in this article with those found in this proposal. Though the article is a good, honest example of what the founders have in mind and why they have applied to the PUD process, the material is out dated.

\* A photocopy of the article begins on the next page.

## D-I-Y Meets P.U.D.

# Bringing the Village into the City

Peter Bane

**Y**OU WANT TO LIVE with your friends, plant a garden, build a natural home, and bike to work, the library, the market, and the clubs. Where can you do it?

It was a year and a half into the Great Recession and the US economy had just gone over the first of a series of cliffs on the way to a new world of lowered expectations. Not a great time to float a new venture, but when you're young and you have a pretty good idea that the world is going to change hard, fast, and not likely for the better, there's no reason to postpone making your dreams come true. A group of twenty-somethings and a few older friends in a midwestern college town begin talking about a village, and co-op housing, and renewable energy, and garden farming, and making a neighborhood, and living mortgage-free. Permaculture gets thrown into the mix, and more people join in. Soon it's December of 2009 and 14 people are meeting every other week. The real estate market is soft, a land search is on, and a likely property is on the hook for \$260,000. The talk is heating up: there's always talk in college towns.

"Talk can get money," says Danny Weddle, "but it won't make a project happen." I'm sitting in the basement of a local coffee bar on Bloomington's main street a few blocks from the front gates of Indiana University, famous music school and epicenter of the sexual revolution, thanks to the intrepid researcher, Dr. Alfred Kinsey. Weddle and business partner Zach Dwiell are explaining to me how they wound up buying 2.23 acres on the city's near-west side and are on track to realize a dream they call Bloomington Cooperative Plots.

The two of them together don't have 50 years on the planet, but they're learning fast. "We want to build our own homes. We want to live in town," explains Weddle, an artist, story-teller, and recent IU grad. I know him from a permaculture course at the university. Dwiell I've seen around town a handful of times. Both men have roots here, grew up in the city and still have family in the Hoosier Hills. This uplifted seabed region made its mark with the limestone quarried from its ground and sent round the country to be the face of famous buildings. Danny's dad still works in the industry, and the son has hauled his share of cut stone too.

### *In search of a vision*

"We had five members who wanted a cooperative, and seven whose vision was for a village," says Zach, explaining the dynamic that had developed within their group by the end of last



*Bloomington Cooperative Plots visioning. Zach Dwiell to far right.*

year. "We had our sights on a property, but the deal fell apart last March, and we came up short, wondering what we were doing," interjects Danny. "We really felt some burnout after many intense months of meetings and land search, so we dropped back for a bit." He pauses. "We now realize we started out too selflessly. We weren't putting our own needs into the equation. There was a big shift after that from nurturing the group toward making a home. We put it to the rest of the members that we wanted to build our own homes, and the group pretty much fell apart after that."

That didn't stop them, however. The months of land search had honed their instincts and given them an intimate understanding of the local market. So the sign hadn't been up even a week on a lot on West 8th Street when they stumbled across it. The property hadn't been listed yet, but they now knew enough to seize a good opportunity and keep it under wraps. They entered into negotiations with the owner and settled on what seems to them a real bargain, less than a third of what the first deal would have cost. And they didn't tell anyone but a few close supporters until they had the deal inked and the deed recorded.

### *Between the dead and the undead*

"It's an odd scrap of land right next to the railroad tracks and the salvage yard. It slopes and has a small drainage running through it, and the best land for houses is farthest from the street side," Danny tells me. "No one knew what to do with it, which is why I think we got it cheap. Plus, the market has been down

everywhere, so this was a good time to buy." The Waterman neighborhood is an out-of-the-way section squeezed between a low-level rail feeder line, the city's largest cemetery, and a main east-west arterial road. A few blocks of houses built 70-100 years ago push up against a more recent trailer park. In the language of the city's planning department, the area has no "priority infrastructure" that would support neighborhood development: no shops, no services, no public offices, no centers of employment. But it's only 1.3 miles from City Hall and the buzzing revival of downtown that's been shepherded by a series of Bloomington's recent mayors. And Waterman's almost forgotten agricultural and industrial heritage may yet be its salvation. As late as the 1970s cattle were pastured in part of the neighborhood, which was then a remnant of still operating farms just beyond the highway bypass to the west. As the junction of the city's main rail lines connecting north, west, and south, Waterman suffered the onus of low property values and industrial zoning, but with those rail corridors either partly abandoned or undergoing active rails-to-trails conversion, today the neighborhood is positioned supremely well for bike connectivity throughout the city, just what these two hope their urban ecovillage can exploit.

## The months of land search had honed their instincts and given them an intimate understanding of the local market.

### Building a new world

Weddle and Dwiell converged last year during the community's first phase of norming and storming. They share parallel and positive experiences of community, Weddle in Bloomington's only cooperative household, a largely student-run situation with almost two dozen members, and Dwiell in a smaller student co-op in the Bay Area called Ft. Awesome. Both men were inspired by the ecovillage movement, partly from tales of Earthaven in North Carolina, and even more so by visits each made to Dancing Rabbit in northeast Missouri. The latter's young membership, agricultural focus, and low-cost, do-it-yourself financial model appealed to them. The vision has emerged organically from pieces they seem to be collecting by the month, imaginations on fire.

The Cooperative Plots will be a hub of urban agriculture with a large, central cooperative house sheltering six or a dozen bedrooms, and servicing smaller satellite residences. Some of those might have their own kitchens. Both men liked the decen-

tralized social structure at Dancing Rabbit with its many pods, each pod with a handful of members sharing food. "You take the stress off questions of diet and lifestyle when you let people organize their own food," Danny asserts, sagely I think to myself. That was a major lesson I drew from community living, so I'm glad he's confident about it so early in the process. They want to cluster houses and limit cars, creating a small car co-op with a handful of vehicles for the 30 or more residents they envision. If they get their way, they'll persuade the city to let them limit pavement and not chop up the property with internal roads. Small building footprints with variety in heights would be arranged with meandering internal paths to make the small site seem larger than it is. A wooded buffer to the south would be thickened, ponds created in the drainages, and much of the space planted to forest gardens, heritage fruit trees, and mixed vegetables with a good-sized flock of hens. (Bloomington already permits urban chickens with some constraints.)

### Social entrepreneurship

Active visioning has helped keep these two motivated, and drawn allies to them, but it took street smarts and real money to buy the property, and they only had some of it themselves. "We needed some backers, and we were fortunate to find three local angels," says Zach, whose name is on the deed. "We probably could have gotten what we needed from one of them, but we wanted to use our lenders as teachers too, and besides, each of them brings their own social network, so by broadening our base of support we have access to a much larger pool of money for future projects."

Weddle and Dwiell have been taking on teachers whenever they can, it seems. The two hooked up with Diana Christian, ecovillage author and former editor of *Communities* magazine,



Spring Street aerial view showing contours and property boundaries. Housing proposed for NW corner. Note Railroad tracks and Salvage yard to north.

when she visited Bloomington in 2009. They sought advice on legal structures, membership process, and a raft of how-to steps.

But I pinch myself. This is not happening in a county in rural Missouri with no zoning. Bloomington just adopted a Unified Development Ordinance a few years ago, and has been laboring to get a government handle on decades of scattershot land development that has left the city a sprawling patchwork of lawn order and vacuous suburban excess grafted onto its old urban core around the University. With good intentions and a little belatedly, city staff have embraced New Urbanism. What in the heck will Planning Director Tom Micuda think about cordwood sleeping cabins and strawbale co-op dorms?

### City politics

Quite a lot it seems. Dwiel and Weddle have been talking with Micuda for several months and they report that he's excited and supportive. They're intending to bring a Planned Unit Development (P.U.D.) proposal to the city in a series of meetings that begin January 24th, and which they hope will lead to planning permission and the start of construction by midsummer. I'd just come the night before from a meeting of the city's Commission on Sustainability, where two of its members were giving



*City survival skills. Ecovillage members dress out a road-kill deer, harvesting some of the city's unwanted abundance. (problem into solution...)*

the whole panel an earful about the Cooperative Plots project. The rooms was full of smiles, friendly questions, and nodding heads. "We're talking to the City Council members," says Danny "so when this comes before them for approval, they'll have all their questions answered." The two evince some political savvy. They've started with the most supportive and influential councillors—winning them over, and they're refining their story as they work their way down the list of likely favorable votes.

Bloomington is one of five cities in the US to have acknowledged the predicament of peak oil and to have commissioned an advisory report about adapting to its consequences. Mayor Mark Krizan is supportive and has also committed the city to the US Mayors' Climate Challenge. Council members adopted the Task Force recommendations in December of 2009 by a vote of 8 to 0 with one abstention. The report was frank in its assessment: oil production has likely peaked, other fuels will peak within two decades, substitutions will be difficult to impossible, economic growth is over. Decentralization is the future of our economy, which means we must expand local agriculture, improve housing energy efficiency, shift transport to bikes and transit, make the city more walkable, bring back neighborhood commerce. So the councillors are awake, the gauntlet is down. And the question Dwiel and Weddle are asking is, "Will the city act on what it says it believes?"

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**The Cooperative Plots will be a hub of urban agriculture with a large, central cooperative house sheltering six or a dozen bedrooms, and servicing smaller satellite residences.**

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### Ask for what you want

"We made an upfront request of Tom Micuda," Danny explains, "We want this... How do we do it? We are being open about the conflicts between our vision and the city's regulations. We could probably have gotten Council approval for most of this, as a special case, but we were willing to do it the hardest way." They elected to use the P.U.D. process, which they describe as too rigid, in order to set precedent for similar developments to follow. As Dwiel explained, "We want other ecovillages to happen in the city, not just this one." "Check," I think. "We want the city to adopt planning language that makes it possible. That's

why we're calling this a 'Permaculture Unit Development'," says Danny, grinning.

Planned Unit Development may strike these two as rigid, but it's the authorized way to circumvent formal planning limits. It's the model developers use when they want to bargain with the city. Concessions are expected on both sides. "We're pushing the limits," says Danny. "We want a higher density." "So does every developer, I think to myself, 'it's more profitable.' These guys probably just think it's more fun. The property is zoned for 4.5 houses per acre, about 10 units on this site. And the city has another ordinance that limits the number of unrelated persons per household to three, a consequence of lobbying by landlords wanting to regulate the student housing market and pressure from city homeowners leary of party houses developing from too many young people piled into four walls. "We're entitled to 30 bedrooms," says Dwiel, "but we don't want ten stand-alone houses to hold them. We might prefer a dozen bedrooms in the main co-op house and nine two-bedroom cabins." They are proposing to limit energy consumption (electric, gas, water) to 90% of the amount used by 30 average individuals in return for permission to house up to 40 persons or even more. Part of their vision is to have space for WWOOFers (Willing Workers on Organic Farms), conferees, or workshop participants for a week or a month. The big co-op dormitory house would have a commercial kitchen, not only for events, but for canning and preserving as well as for group meals, and even a possible neighborhood-wide meal-share program.

These ideas are subversive of the conventional paradigm, but they hit squarely in the middle of the energy descent vision: lower energy footprints, far less auto dependency and usage, urban infill, local food growing, neighborhood social development, much more sharing and building of social capital, city-center work and shopping. Will Bloomington be able to walk its talk? We'll know in a few months.

Dwiel acknowledges what they both have learned: that limited ownership is a source of problems for communities. His name on the deed is meant to be temporary, lasting only until they can transfer ownership to the right form of corporate structure. The partners have been working with architects to develop concept sketches for the P.U.D. application, and with a young woman who persisted from the earlier group, Carolyn Blank, who has been helping them develop written materials, a membership protocol, and mediation processes. They have backed away from an open recruitment to what they now call "closed membership," meaning they are looking for 20-40 members whom they already know or who are known to their friends. They think there are plenty of people in the community who will find the prospect of sweat equity and low-dollar-cost buy-in attractive, and whose "excitement for their own homes" will propel them into the project. "We're building the scaffolding," says Danny. "Other people will build the house."

### The money game

Their savvy land purchase and creative financing have given them an enviable room for manoeuvre. "There's too much inertia



Danny (r) clearing bush honeysuckle on the property in December.

in the financial system," opines Weddle. We talked to banks repeatedly, and they wanted to lend us \$150,000. We only needed a third of that, but they didn't get it how we could get by on so little. We can carry the payments on our loans ourselves until the group is ready, so we aren't under pressure to recruit people for money. And all that's because of finding low-cost land and holding to a low-cost development strategy." In hard times, I think, they are in a much better bargaining position with city officials. And if not here, then where better might this get a start? Bloomington's been the sparkplug for one society-wide upheaval already; maybe it's on the edge of a development revolution too.

I ask them what the sticking points are likely to be. "Animals," they agree. "We'll start with hens. We think we should be able to get 40 hens on a lot this size. And the other issue is people density. Oh, and the fire-truck turnaround..." There are lots of hurdles to be jumped. They want renewable energy, including windmills. The power company might insist on separate meters for every building; BCP would rather have one bill and sub-meter internally. These two are taking on some very entrenched patterns in our society.

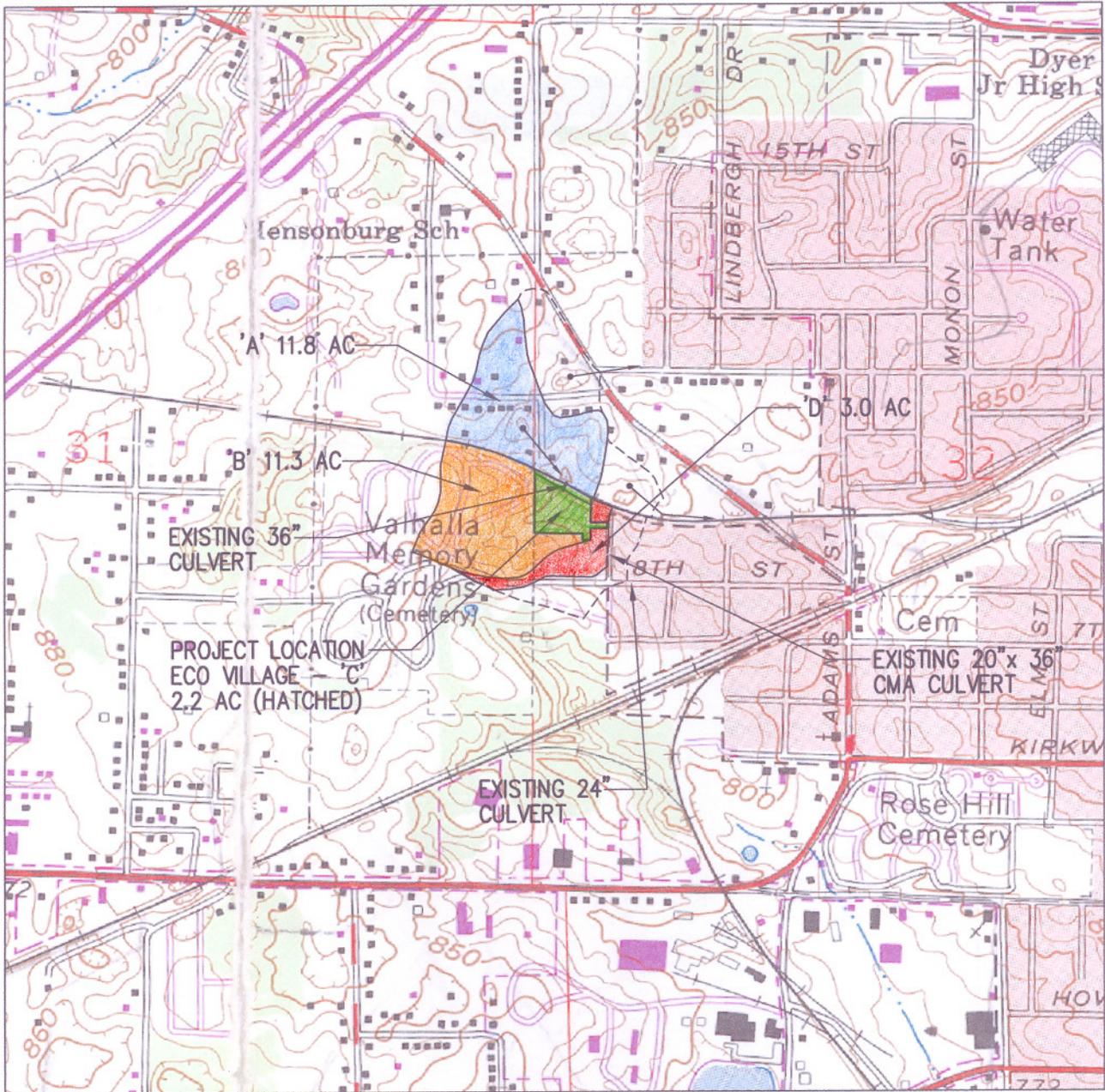
"My folks have been expressing interest in having a house with us," says Danny. "My dad's 52 and he's tired of his job. They could retire now; they've done the math. All they have to do is get rid of the SUVs. Livin' in the country, driving big vehicles..." he mutters. "But they want to ease into it, take ten more years, and we don't want vacation homes or empty houses." "Another frontier," I think. Mixed ages, family, flexible living arrangements... "I'd give it another thought," I offer, sensing the possibility in the air. Maybe lowered expectations could be good for all of us. △

*Peter Bane is publisher of Permaculture Activist and a consultant to Indiana University in permaculture education. Once upon a time, when he was a young nobody, he co-founded Earthaven Ecovillage. Bloomington Cooperative Plots can be contacted via [danieljosephweddle@gmail.com](mailto:danieljosephweddle@gmail.com).*

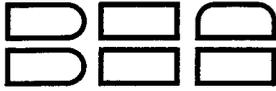
**Watershed Engineer Report**

\* A copy of the report can be found on the next page.





ECO VILLAGE  
BASIN MAP  
1" = 1,000'



BYNUM FANYO & ASSOCIATES, INC.

ARCHITECTURE  
 CIVIL ENGINEERING  
 PLANNING

***Eco Village***  
*Detention Summary Table*  
 April 22, 2011

<i>2-Year Event, cfs</i>				
Basin Area	Pre-Developed Discharge	Post-Developed Discharge	Allowable Discharge	* Actual Discharge
A	12.8			
B	7.8			
C (Subject Site)	2.0	1.8		
D	5.0			
Combined to CMA	23.1		23.1	5.2

<i>10-Year Event, cfs</i>				
Basin Area	Pre-Developed Discharge	Post-Developed Discharge	Allowable Discharge	* Actual Discharge
A	17.7			
B	10.8			
C (Subject Site)	2.7	2.5		
D	6.9			
Combined to CMA	31.8		31.8	13.9

<i>100-Year Event, cfs</i>				
Basin Area	Pre-Developed Discharge	Post-Developed Discharge	Allowable Discharge	* Actual Discharge
A	24.7			
B	15.0			
C (Subject Site)	3.8	3.4		
D	9.6			
Combined to CMA	44.5		44.5	31.8

\* With Detention/Water Quality Ponds constructed. Does not include underdrain discharges.

CMA (Corrugated Metal Arch Culvert Pipe) located in Spring Street.

Bynum Fanyo & Associates

g:/Engineering/jobs2011/401120/Computations/Modeling/Detention Summary Table.doc

**Eco Village**  
*Storm Basin Characteristics*  
 4/22/2011

<b>Pre-Development</b>											
Basin	Area (acres)	Chnl L (ft)	Chnl Slope (%)	OvrlnL L (ft)	OvrlnL Slope (%)	$r_{ovrlnd}$	$T_{co}$ (min)	$T_{cc}$ (min)	$T_c$ (min)	C-Value	Basin Description
A	11.8	927	5.2	300	4.7	0.28	14	5	19	0.35	12% grvl + 6% asph + 52% lrg lot + 30% to sink
B	11.3	500	7.4	300	5.7	0.35	14	3	17	0.21	73% park + 22% steep woods + 5% sml lot
C	2.2	334	4.5	166	10.8	0.35	9	2	11	0.22	Mostly steep lawn, few trees
D	3.0	484	8.7	300	4.0	0.28	14	2	16	0.50	Small lot residential
<b>Post-Development</b>											
Basin	Area (acres)	Chnl L (ft)	Chnl Slope (%)	OvrlnL L (ft)	OvrlnL Slope (%)	$r_{ovrlnd}$	$T_{co}$ (min)	$T_{cc}$ (min)	$T_c$ (min)	C-Value	Basin Description
C	2.2	334	4.5	166	10.8	0.35	9	2	11	0.20	4.2% house + 10.8% aux. strs + 9.5% paver + 24.5% lawn w/ orchard

$T_{co}$  - Overland travel time calculated using the Kerby-Hathaway Formula

$T_{cc}$  - Channel travel time calculated using the Kirpich Formula

$T_c$  - Total time of concentration =  $T_{co} + T_{cc}$

**C Values**

Asphalt = 0.95

Gravel = 0.68

Auxillary Structures = 0.95 (community house, barns, sheds, etc)

Home Rooftops = 0.60 (collect for irrigation & toilets)

Pervious Pavers = 0.12 (moderate to steep)

Park = 0.20 (moderate to steep)

Woods = 0.17 (steep)

Lawn = 0.24 (steep)

Lawn = 0.19 (steep w/ orchard and gardens)

Large Lot Residential = 0.35

Small Lot Residential = 0.50

# Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	Rational	12.80	1	19	14,592	---	---	---	Area A Existing
2	Reach	11.99	1	21	14,686	1	---	---	Route thru B and D
3	Rational	7.83	1	17	7,983	---	---	---	Area B Existing
4	Reach	7.17	1	19	8,055	3	---	---	Route thru C and D
5	Rational	1.98	1	11	1,310	---	---	---	Area C Existing
6	Rational	5.03	1	16	4,826	---	---	---	Area D Existing
7	Combine	23.09	1	20	28,877	2, 4, 5, 6	---	---	Existing to CMA Culvert
8	Rational	12.80	1	19	14,592	---	---	---	Area A Existing
9	Rational	1.80	1	11	1,191	---	---	---	Area C Post
10	Combine	13.29	1	19	15,782	8, 9	---	---	Combine A and C
11	Reservoir	2.03	1	35	10,532	10	836.79	13,799	Pond 2
12	Rational	7.83	1	17	7,983	---	---	---	Area B Existing
13	Reservoir	0.95	1	32	636	12	846.59	7,740	Pond 1
14	Rational	5.03	1	16	4,826	---	---	---	Area D Existing
15	Combine	5.19	1	16	15,993	11, 13, 14	---	---	Proposed to CMA Culvert

Proj. file: Drainage 4.22.11.gpw

Return Period: 2 yr

Run date: 04-25-2011

# Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	Rational	17.65	1	19	20,125	---	---	---	Area A Existing
2	Reach	16.55	1	21	20,254	1	---	---	Route thru B and D
3	Rational	10.76	1	17	10,978	---	---	---	Area B Existing
4	Reach	9.88	1	19	11,077	3	---	---	Route thru C and D
5	Rational	2.71	1	11	1,787	---	---	---	Area C Existing
6	Rational	6.90	1	16	6,627	---	---	---	Area D Existing
7	Combine	31.82	1	20	39,745	2, 4, 5, 6	---	---	Existing to CMA Culvert
8	Rational	17.65	1	19	20,125	---	---	---	Area A Existing
9	Rational	2.46	1	11	1,625	---	---	---	Area C Post
10	Combine	18.32	1	19	21,750	8, 9	---	---	Combine A and C
11	Reservoir	7.74	1	30	16,499	10	837.30	16,773	Pond 2
12	Rational	10.76	1	17	10,978	---	---	---	Area B Existing
13	Reservoir	5.14	1	26	3,631	12	846.79	8,593	Pond 1
14	Rational	6.90	1	16	6,627	---	---	---	Area D Existing
15	Combine	13.92	1	27	26,757	11, 13, 14	---	---	Proposed to CMA Culvert

Proj. file: Drainage 4.22.11.gpw	Return Period: 10 yr	Run date: 04-25-2011
----------------------------------	----------------------	----------------------

# Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	Rational	24.72	1	19	28,181	---	---	---	Area A Existing
2	Reach	23.19	1	21	28,360	1	---	---	Route thru B and D
3	Rational	15.02	1	17	15,320	---	---	---	Area B Existing
4	Reach	13.80	1	19	15,457	3	---	---	Route thru C and D
5	Rational	3.75	1	11	2,477	---	---	---	Area C Existing
6	Rational	9.62	1	16	9,233	---	---	---	Area D Existing
7	Combine	44.51	1	20	55,528	2, 4, 5, 6	---	---	Existing to CMA Culvert
8	Rational	24.72	1	19	28,181	---	---	---	Area A Existing
9	Rational	3.41	1	11	2,252	---	---	---	Area C Post
10	Combine	25.65	1	19	30,432	8, 9	---	---	Combine A and C
11	Reservoir	17.10	1	25	25,181	10	837.58	18,548	Pond 2
12	Rational	15.02	1	17	15,320	---	---	---	Area B Existing
13	Reservoir	10.43	1	22	7,973	12	846.96	9,352	Pond 1
14	Rational	9.62	1	16	9,233	---	---	---	Area D Existing
15	Combine	31.80	1	23	42,388	11, 13, 14	---	---	Proposed to CMA Culvert

Proj. file: Drainage 4.22.11.gpw

Return Period: 100 yr

Run date: 04-25-2011

# Reservoir Report

Reservoir No. 1 - Pond 1

Hydraflow Hydrographs by Intelisolve

## Pond Data

Pond storage is based on known contour areas. Average end area method used.

## Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	843.00	180	0	0
1.00	844.00	900	540	540
2.00	845.00	2,244	1,572	2,112
3.00	846.00	3,884	3,064	5,176
4.00	847.00	4,800	4,342	9,518
5.00	848.00	5,700	5,250	14,768

## Culvert / Orifice Structures

	[A]	[B]	[C]	[D]
Rise in	= 15.0	0.0	0.0	0.0
Span in	= 15.0	0.0	0.0	0.0
No. Barrels	= 1	0	0	0
Invert El. ft	= 842.00	0.00	0.00	0.00
Length ft	= 50.0	0.0	0.0	0.0
Slope %	= 1.00	0.00	0.00	0.00
N-Value	= .010	.000	.000	.000
Orif. Coeff.	= 0.60	0.00	0.00	0.00
Multi-Stage	= n/a	No	No	No

## Weir Structures

	[A]	[B]	[C]	[D]
Crest Len ft	= 10.00	0.00	0.00	0.00
Crest El. ft	= 846.50	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Riser	---	---	---
Multi-Stage	= Yes	No	No	No

Exfiltration Rate = 0.00 in/hr/sqft Tailwater Elev. = 0.00 ft

Note: All outflows have been analyzed under inlet and outlet control.

## Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	Civ D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Total cfs
0.00	0	843.00	0.00	---	---	---	0.00	---	---	---	---	0.00
1.00	540	844.00	3.62	---	---	---	0.00	---	---	---	---	0.00
2.00	2,112	845.00	3.62	---	---	---	0.00	---	---	---	---	0.00
3.00	5,176	846.00	3.62	---	---	---	0.00	---	---	---	---	0.00
4.00	9,518	847.00	11.68	---	---	---	11.68	---	---	---	---	11.68
5.00	14,768	848.00	13.67	---	---	---	13.65	---	---	---	---	13.65

# Reservoir Report

Reservoir No. 2 - Pond 2

Hydraflow Hydrographs by Intelisolve

## Pond Data

Pond storage is based on known contour areas. Average end area method used.

## Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	832.00	180	0	0
1.00	833.00	980	580	580
2.00	834.00	2,240	1,610	2,190
3.00	835.00	3,880	3,060	5,250
4.00	836.00	4,800	4,340	9,590
5.00	837.00	5,800	5,300	14,890
6.00	838.00	6,900	6,350	21,240

## Culvert / Orifice Structures

	[A]	[B]	[C]	[D]
Rise in	= 24.0	8.0	0.0	0.0
Span in	= 24.0	8.0	0.0	0.0
No. Barrels	= 1	1	0	0
Invert El. ft	= 830.00	835.00	0.00	0.00
Length ft	= 100.0	0.0	0.0	0.0
Slope %	= 1.00	0.00	0.00	0.00
N-Value	= .010	.013	.000	.000
Orif. Coeff.	= 0.60	0.60	0.00	0.00
Multi-Stage	= n/a	Yes	No	No

## Weir Structures

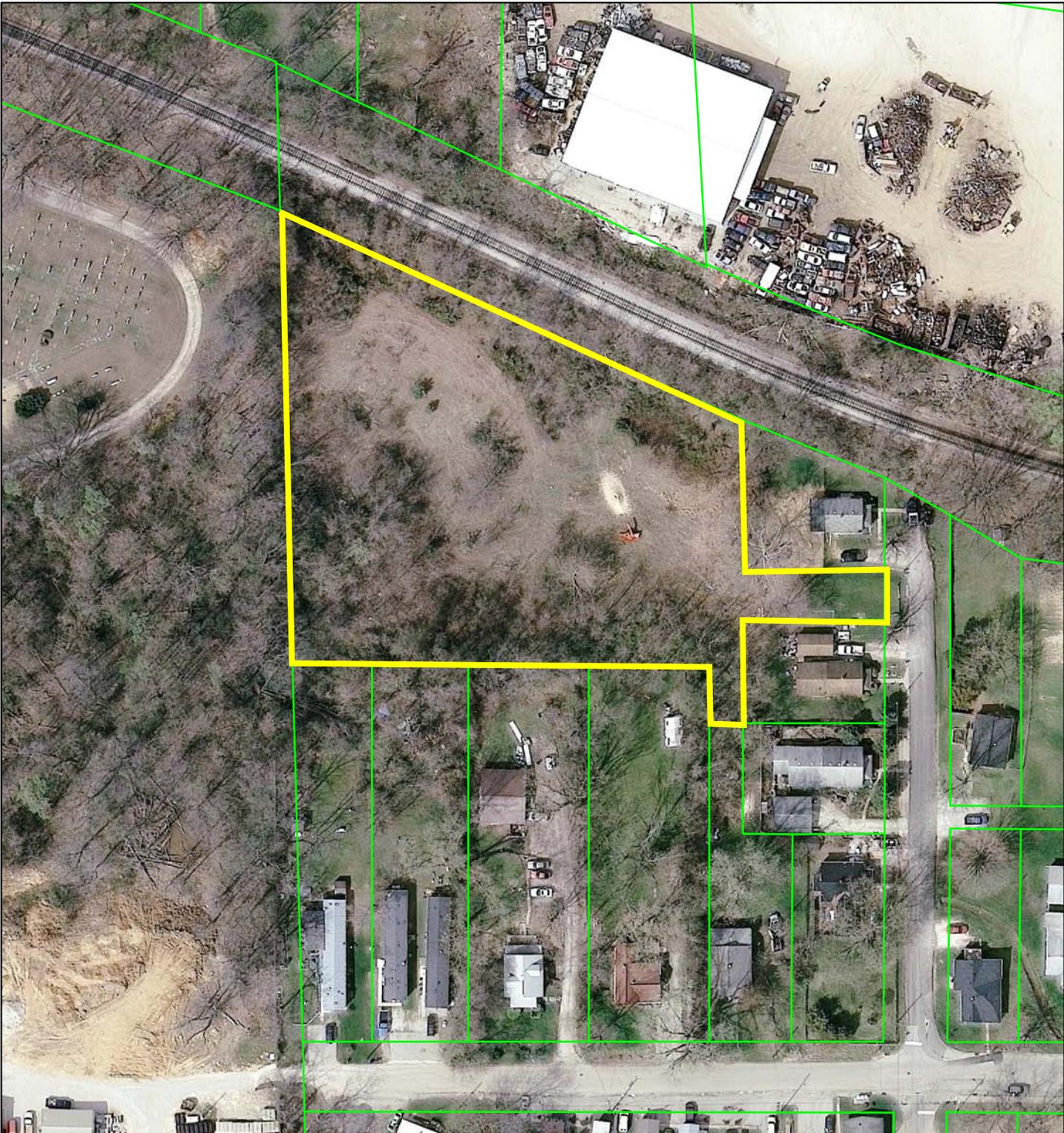
	[A]	[B]	[C]	[D]
Crest Len ft	= 10.00	0.00	0.00	0.00
Crest El. ft	= 837.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Riser	---	---	---
Multi-Stage	= Yes	No	No	No

Exfiltration Rate = 0.00 in/hr/sqft Tailwater Elev. = 0.00 ft

Note: All outflows have been analyzed under inlet and outlet control.

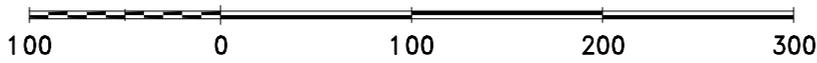
## Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	Civ D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Total cfs
0.00	0	832.00	0.00	0.00	---	---	0.00	---	---	---	---	0.00
1.00	580	833.00	15.12	0.00	---	---	0.00	---	---	---	---	0.00
2.00	2,190	834.00	15.12	0.00	---	---	0.00	---	---	---	---	0.00
3.00	5,250	835.00	15.12	0.00	---	---	0.00	---	---	---	---	0.00
4.00	9,590	836.00	15.12	1.37	---	---	0.00	---	---	---	---	1.37
5.00	14,890	837.00	15.12	2.17	---	---	0.00	---	---	---	---	2.17
6.00	21,240	838.00	35.38	2.08	---	---	33.30	---	---	---	---	35.38



PUD-02-11 Bloomington Cooperative Plots  
Aerial Photo

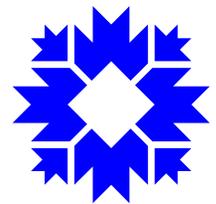
By: shayp  
11 Jan 11



For reference only; map information NOT warranted.



City of Bloomington  
Planning



Scale: 1" = 100'

**BLOOMINGTON PLAN COMMISSION  
STAFF REPORT  
Location: 2505 W. 3<sup>rd</sup> Street**

**CASE #: UV-08-11  
DATE: May 9, 2011**

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**PETITIONER:** STAT Ambulance (Chad Holcomb)  
1704 Central Avenue, Columbus, IN 47201

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**REQUEST:** The petitioner is requesting use variance recommendation to allow a private ambulance service within the Commercial Arterial (CA) zoning district.

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<b>Zoning:</b>	<b>CA</b>
<b>GPP Designation:</b>	<b>Community Activity Center</b>
<b>Existing Land Use:</b>	<b>Commercial/Industrial</b>
<b>Proposed Land Use:</b>	<b>Ambulance Service</b>
<b>Surrounding Uses:</b>	<b>East</b> – Commercial, Auto Repair <b>South</b> – Multi-Family <b>West</b> – Single Family <b>North</b> – Commercial

---

**REPORT:** The petitioner runs a private ambulance service and is seeking a permanent location to house their use. The Unified Development Ordinance (UDO) does not include private ambulance service as a defined land use. Staff has not found another use that is closely associated enough for it to be classified as a permitted land use. Therefore, a use variance must be requested to allow this use. Since this use is not permitted anywhere without a use variance, an appropriate zoning district should be determined to allow this use.

The petitioner has proposed a location, 2505 W. 3<sup>rd</sup> Street, within the Commercial Arterial (CA) zoning district. The Plan Commission and Board of Zoning Appeals must determine if the CA district, and specifically this location, is appropriate for this use. The petitioner's use would include an office component, ambulance dispatch, vehicle storage, and vehicle maintenance. This use is required to have licensing from the State of Indiana but is not anticipated to include 911 emergent runs. A separate local board, the Ambulance Advisory Board, regulates those allowed to receive 911 calls.

To determine the appropriate district for this use, staff considered the other uses allowed in certain districts. After discussion of districts such as the Industrial General and Medical districts, staff analyzed the CA district and found it to be the most appropriate. Uses with similar impacts that are permitted within the CA district include:

- Transportation Terminal
- Building Trade Shop
- Auto Body Shop
- Police, Fire or Rescue Station
- Vehicle Repair
- Vehicle Sales/Rental

Furthermore, the CA district is intended to “Identify locations for higher intensity commercial developments along major thoroughfares”. In general, staff finds the proposed use to be consistent with the impacts of other uses within the CA district. As this is one of the more permissive districts in terms of use, staff finds this site within the CA district to be an appropriate location for the proposed use.

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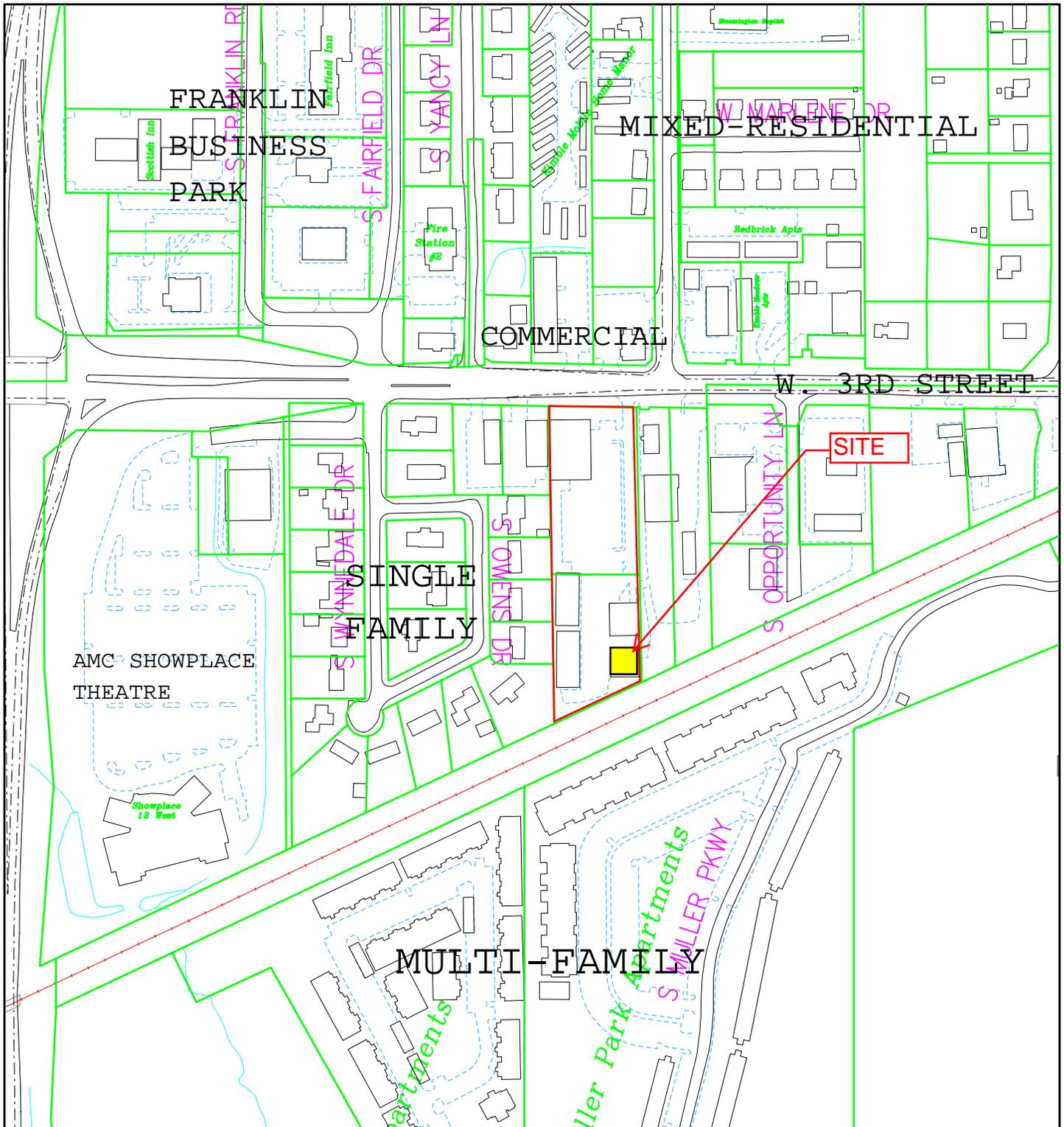
**GROWTH POLICIES PLAN:** The petition site is located within an area designated as Commercial Activity Center (CAC) by the Growth Policies Plan (GPP). The CAC intent states that it is “designed to provide community-serving commercial opportunities in the context of a high density, mixed use development.” The land use policies of this designation also state “the primary land use in the CAC should be medium scaled commercial retail and service use.” Staff finds that the proposed use is not inconsistent with any of the land use policies of the Community Activity Center.

---

**CONCLUSION:** Due to the lack of ambulance service as a use within the UDO, staff understands the necessity to find an appropriate zoning district for this use. Staff finds that the CA zoning district contains several other vehicle-based uses and is generally a permissive zoning district. Therefore, staff finds this request to be consistent with the GPP and to be the most appropriate district for this use.

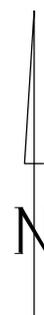
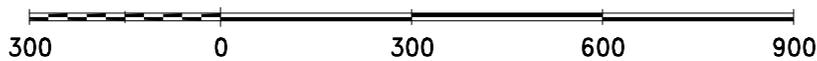
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**RECOMMENDATION:** Staff recommends forwarding UV-08-11 to the Board of Zoning Appeals with a favorable Growth Policies Plan recommendation.

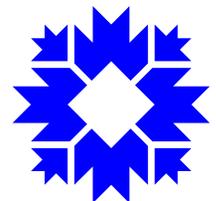


UV-08-11 STAT AMBULANCE  
 2505 W. 3RD STREET  
 LOCATION/ZONING/LAND-USE MAP  
 PLAN COMMISSION/BOARD OF ZONING APPEALS

By: shayp  
 5 May 11



City of Bloomington  
 Planning

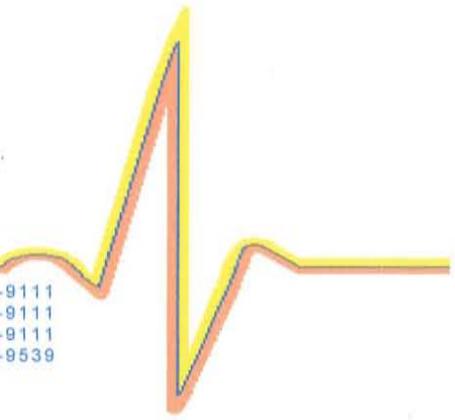


Scale: 1" = 300'

For reference only; map information NOT warranted.



# STAT AMBULANCE



1704 Central Avenue  
Columbus, Indiana 47201-5326  
(812) 379-9111

Bloomington (812) 333-9111	Mooreville (317) 831-9111
Franklin (317) 736-9111	Salem (812) 883-9111
Greenwood (317) 881-9111	Toll Free (888) 650-9111
Martinsville (765) 349-9111	Fax (812) 379-9539

## Petitioner's statement

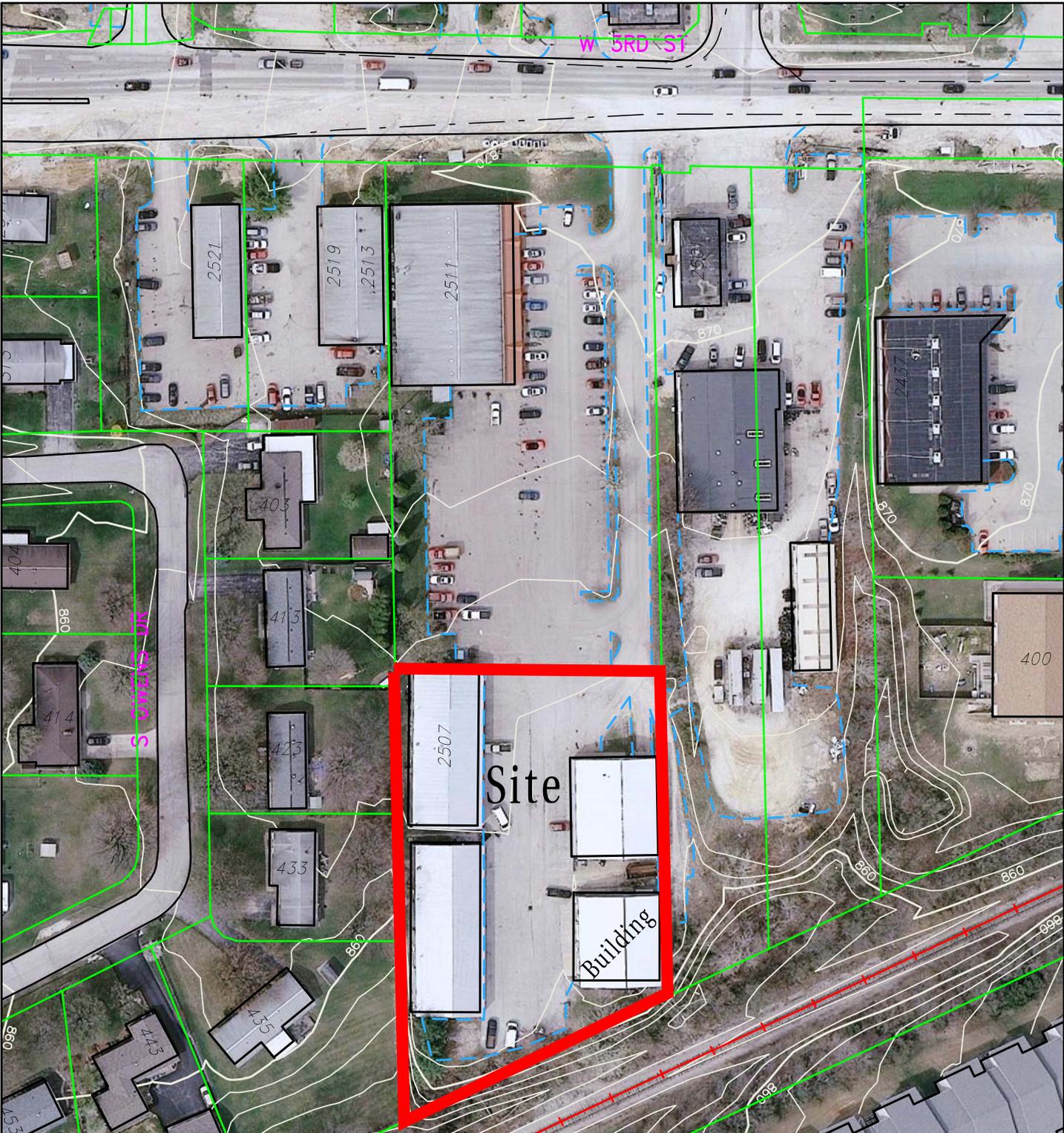
STAT Ambulance is a family owned business headquartered in Columbus, Indiana where we have been providing services since 1959. STAT Ambulance provides emergent and non-emergent ambulance services to the local nursing homes and residents of Monroe County. STAT Ambulance provides care with the latest in life saving equipment and highly trained staff available at a moment's notice.

STAT Ambulance has a commitment to lease a 1,711 square foot portion of a metal industrial building located at 2505 W. Third Street. The building is set back from 3<sup>rd</sup> Street over 500 feet. The building is located in a cluster of four industrial small shop buildings owned by the same owner (Don Cowden). To the west are two of the four industrial buildings. To the south runs Indiana Rail Road's main line. To the east is the rear (vacant) portion of the Tire & Wheel Center.

The space is current vacant. Other uses in the small shop cluster include *Ello's Exhaust, total tan, etc.* Formerly there was a gun shop in an adjacent building. There is direct access to 3<sup>rd</sup> Street via the owner's property.

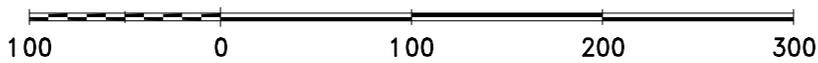
The building would be used for office purposes (including dispatch), storage of ambulance and wheel chair vans, and light repair and maintenance of fleet vehicles. The modifications to the interior of the structure will be cosmetic or minor: new carpet, drywall repair, bathroom upgrades, overhead door lift installation, etc. The exterior of the building and parking area will not be modified.

Per the UDO, office and parking garages/structure are permitted uses in CA districts. Private ambulance services are not expressly a permitted or conditional use in any zoning district. However, several similar uses are permitted in CA districts: police, fire and rescue stations (public); transportation terminals; vehicle repair; and vehicle sales/rental. In addition, several very high intensity uses are permitted in CA districts, including auto body repair and sexually oriented businesses.



UV-08-11  
 SITE PLAN  
 AERIAL PHOTO

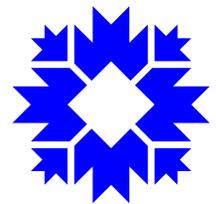
By: greulice  
 15 Apr 11



For reference only; map information NOT warranted.



City of Bloomington  
 Planning



Scale: 1" = 100'

**BLOOMINGTON PLAN COMMISSION  
STAFF REPORT  
Location: 807 N. Walnut Street**

**CASE #: SP-09-11  
DATE: May 9, 2011**

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**PETITIONER: Walnut Holdings, LLC  
602 N. Walnut St., Bloomington**

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**REQUEST:** The petitioner is requesting site plan approval in order to build a 3-unit mixed-use building.

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<b>Area:</b>	<b>0.18 Acres</b>
<b>Zoning:</b>	<b>CD/Downtown Gateway Overlay (DGO)</b>
<b>GPP Designation:</b>	<b>Downtown</b>
<b>Existing Land Use:</b>	<b>Surface parking lot</b>
<b>Proposed Land Use:</b>	<b>Commercial/Multi-family Residences</b>
<b>Surrounding Uses:</b>	<b>North</b> – Mixed-Use
	<b>East</b> – Residential
	<b>South</b> – Office
	<b>West</b> – Office/Multi-family Residences

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**REPORT SUMMARY:** The subject property is located on the west side of N. Walnut Street mid-block between W. 11<sup>th</sup> Street and E. 12<sup>th</sup> Street. This 0.18 acre property is zoned Commercial Downtown (CD) and is within the Downtown Gateway Overlay (DGO) District. The property is currently being used as a surface parking lot. The petitioner is proposing to remove the parking lot and construct a new three-story, mixed use building with a 1,000 sq. ft. office, two 2-bedroom units and one 3-bedroom unit.

With this petition, the existing drivecut for the parking lot would be removed on Walnut Street. The sidewalk system will be extended along the front as well as a street tree installation. Parking for the commercial space will be provided by four parking spaces that are accessed from the alley to the west.

**Plan Commission Site Plan Review:** Three aspects of this project require that the petition be reviewed by the Plan Commission, per BMC 20.03.300. These aspects are as follows:

- The proposal is adjacent to a residential use (residential to the east)
- The proposal includes ground floor residential units.
- The petitioner is requesting a waiver to the standards in BMC 20.03.340. The following waiver is being requested:
  - Void-to-solid ratio.

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## SITE PLAN REVIEW

**Residential Density:** The petitioner is proposing three units with a total of 7 bedrooms for an overall density of 17 units per acre (including DUE's). The maximum allowed density in this zoning district is 33 units per acre.

**Parking:** The UDO does not require any parking spaces for residential uses with less than 10 bedrooms. The UDO requires 75% of the maximum parking spaces required for the commercial uses, which would be four spaces. The petitioner is proposing to provide four parking spaces on the site which are located off of the alley to the west.

**Streetscape:** The petitioner is required to install a continuous 5' wide concrete sidewalk along the Walnut Street frontage upon removal of the drivecut. Street trees not more than 40' from center are also required, and one street tree is required along this frontage. This needs to be shown on the final landscape plan prior to issuance of a grading permit.

**Bicycle Parking:** A 7 bedroom, mixed use development requires 8 bicycle parking spaces to be placed within 50' of the entrance of each building. The location of these spaces must be shown prior to issuance of a grading permit.

**Architecture:** The building will be finished with hardiplank siding. The roof is an 8/12 pitch and will be finished with shingles. All mechanical equipment will be inside the building or below ground.

**Void-to-solid Percentage:** The DGO sets a minimum first floor void-to-solid architectural standard at 40%, with upper floors required to have a minimum of 20%. The petition contains approximately 30% void-to-solid for all floors. The 40% standard was developed with strictly commercial buildings in mind and is more appropriate for those buildings. Higher void-to-solid ratios are difficult to incorporate into residential style buildings.

**Void-to-solid Waiver-20.03.130(b)(2)(A):** A waiver from the architectural standard of the UDO is required to allow the first floor to have less than 40% void area. The need for this waiver is driven by the desired residential look of this type of building style. Staff believes the design of the building, with the amount of void-to-solid ratio shown, is appropriate and supports this waiver.

**Access:** The parking area is located in the rear of the building and will be accessed entirely from the alley. The existing drivecut on Walnut St. will be removed with this petition.

**Landscaping:** With this petition there would be new landscaping installed around the buildings and parking areas. The property will be landscaped to meet all UDO requirements.

**Utilities:** Water and sanitary sewer service are available along Walnut St. Stormwater and utility plans have been submitted to the City Utilities Department and are under review. Final approval from CBU is required prior to issuance of a grading permit.

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**ENVIRONMENTAL COMMISSION RECOMMENDATIONS:** The Bloomington Environmental Commission (EC) has made 2 recommendations concerning this development.

- 1.) The petitioner shall provide a complete landscaping plan that emphasizes native plant species.

**Staff response:** A complete landscape plan showing the species of all new landscaping is required prior to issuance of a grading permit. Although not required, Staff encourages the petitioner to use native vegetation for any new landscaping.

- 2.) The petitioner should include as many green building features as possible and provide space for recycling-bin pick up

**Staff response:** Although not required, staff encourages the petitioner to incorporate as many green building practices as possible.

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**DEVELOPER TRACK RECORD:** The developer owns and manages several rental units in the City. There are no known zoning violations that have been reported concerning these properties.

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**CONCLUSION:** The Planning Department staff finds that the petition satisfies all but one of the requirements of the Unified Development Ordinance. While the void-to-solid ratio of the building does not meet the standards of the DGO, the requested waiver is appropriate based on the merits of proposal, its compatibility with surrounding buildings, and compliance with the recommendations of the Downtown Plan. Staff finds this mixed-use development to be a desirable re-use of an existing grandfathered surface parking lot.

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**RECOMMENDATION:** Staff recommends approval of this petition with the following conditions of approval:

1. A minimum of 8 bike parking spaces must be placed within 50' of the entrance to the building.
2. Construction of the proposed building must be consistent with the submitted elevations and materials.
3. A complete landscape plan is required prior to issuance of a grading permit.
4. A handicap accessible connection from the front of the building to the sidewalk on Walnut Street must be provided.

# MEMORANDUM

**Date:** April 28, 2011  
**To:** Bloomington Plan Commission  
**From:** Bloomington Environmental Commission  
**Through:** Linda Thompson, Senior Environmental Planner  
**Subject:** SP-9-11, WS Homes, 807 N. Walnut St.

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This memorandum contains the Environmental Commission's (EC) recommendations regarding a Site Plan for a 2½ story mixed-use structure with commercial space on one half of the first floor, and 3 residential units totaling seven bedrooms.

## **ISSUES OF CODE COMPLIANCE:**

### 1.) LANDSCAPE PLAN:

The Landscape Plan submitted is not satisfactory because it does not provide enough information on numbers and types of plants. A complete Landscape Plan that provides scientific and common names of new and existing species, and proposed numbers and locations of each still needs to be provided.

The EC suggests that the petitioner use a diverse mix of native tree, shrub and prairie species. Besides enhancing our city's sense of place and its native biodiversity, these efforts will attract residents and shoppers to the downtown, thus helping to stimulate the economic vitality of the area. Native species do not require inputs of chemical fertilizers or pesticides, are water efficient once established, and provide habitat for birds, butterflies and other beneficial insects promoting biodiversity in the city. For suggestions, please see the EC's Natural Landscaping materials at [www.bloomington.in.gov/beqi/greeninfrastructure/htm](http://www.bloomington.in.gov/beqi/greeninfrastructure/htm) under 'Resources' in the left-hand column. For excellent photos of native prairie species, see:

[http://www.prairiemoon.com/store/template/product\\_display.php?NID=88&SID=04303bb59359492983a1d255f50dd2d2](http://www.prairiemoon.com/store/template/product_display.php?NID=88&SID=04303bb59359492983a1d255f50dd2d2).

For additional suggestions plus an excellent guide to Midwest sources of native prairie and other species see: <http://www.inpaws.org/landscaping.html>.

## **ISSUES OF SOUND ENVIRONMENTAL DESIGN:**

### 1.) GREEN BUILDING AND SITE DESIGN:

The EC recommends green building and site features. Green building can provide substantial savings in energy costs to a building over its life cycle and is thus an especially prudent investment in this time of rising energy prices. Green building features are consistent with the spirit of the UDO and supported by

Bloomington's overall commitment to sustainability and its green building initiative (<http://Bloomington.in.gov/greenbuild>). Sustainable building practices are explicitly called for by the Mayors' Climate Protection Agreement signed by Mayor Krusan, by City Council resolution 06-05 supporting the Kyoto Protocol and reduction of our community's greenhouse gas emissions, and by City Council resolution 06-07, which recognizes and calls for planning for peak oil.

Green building options are many and continue to grow. The city's municipal code includes a section of green development incentives (Unified Development Ordinance: 20.05.045 Green Development Incentives, GD-01, pp. 5-40:5-42). Some examples of green building and landscaping features consistent with the UDO include: energy saving lighting and appliances (20.05.049 GD-01 (a) (1) (B)); solar systems (e.g. passive solar space or water heating; solar photovoltaic cell system) (20.05.049 GD-01 (a) (1) (C)); recycled or salvaged construction and demolition debris (20.05.049 GD-01 (a) (1) (D)); utilization of local building materials or products (20.05.049 GD-01 (a) (1) (E)); use of permeable pavement materials (20.05.049 GD-01 (a) (2) (A)); use of native vegetation and other conservation design techniques to convey and filter stormwater (20.05.049 GD-01 (a) (2) (B)); and capture and use of rainwater for common and public space irrigation (20.05.049 GD-01 (a) (2) (C)).

## 2.) RECYCLING:

The EC recommends that the petitioner allocate space within the site design to accommodate recycling materials storage. The pick-up service is readily available in Bloomington if space is planned in advance at the site. Lack of recycling services is the number one complaint that the EC receives from apartment dwellers in Bloomington. People are educated about the importance of recycling from youth these days and it has become an important norm that has many important benefits in energy and resource conservation. The EC feels that recycling is an important contributor to Bloomington's environmental quality and sustainability and that it will also increase the attractiveness of the apartments to prospective tenants.

## **EC RECOMMENDATIONS:**

### Code Compliance Recommendations

1.) The petitioner shall provide a complete landscaping plan that emphasizes native plant species.

### Other Recommendations

2.) The petitioner should include as many green building features as possible and provide space for recycling-bin pick up.

## MEMORANDUM

**TO:** MEMBERS OF THE PLAN COMMISSION

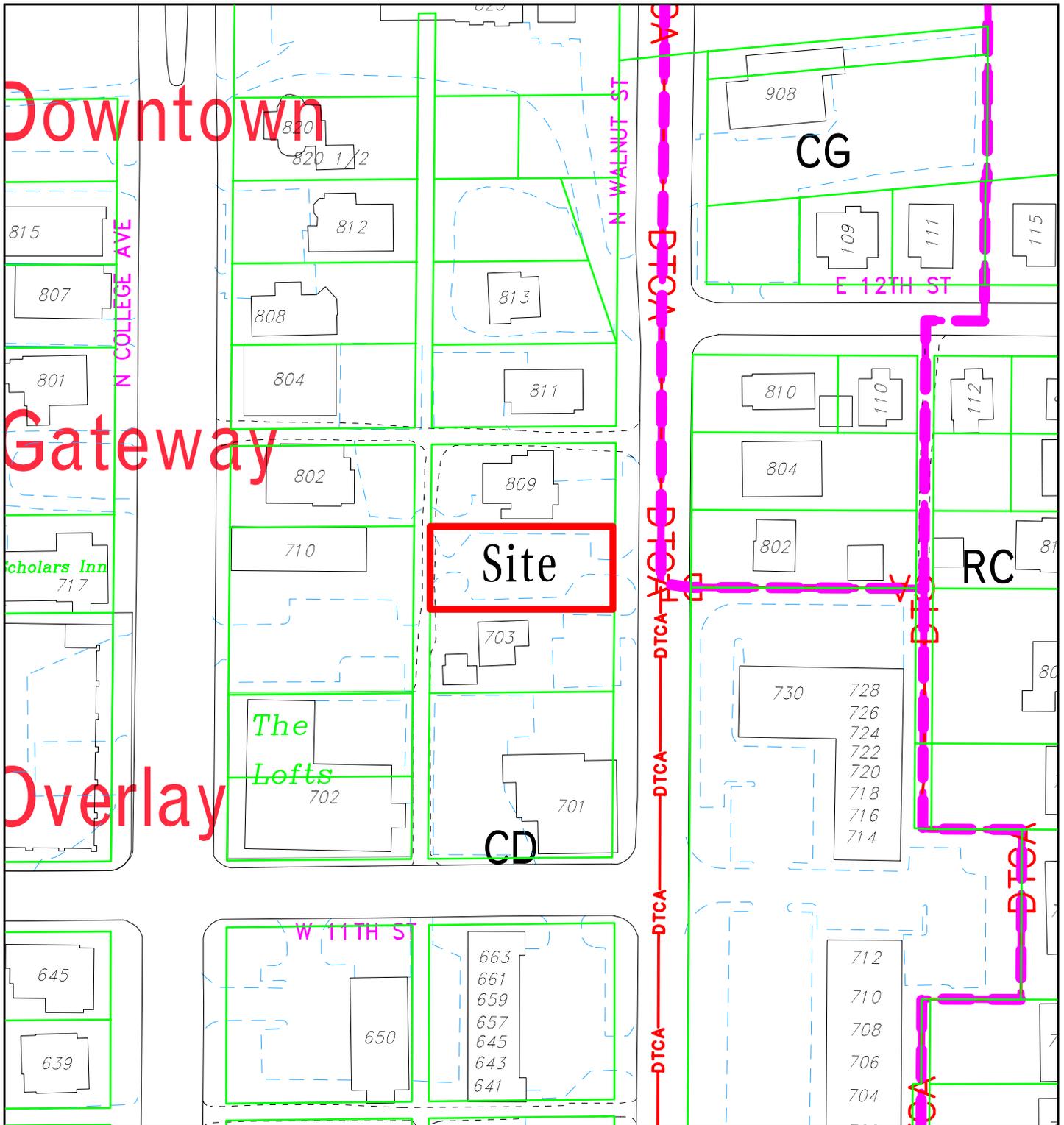
**FROM:** VINCE CARISTO/BICYCLE AND PEDESTRIAN COORDINATOR  
*Planning Dept. liaison to the Bloomington Bicycle and Pedestrian Safety Commission*

**RE:** 807 N WALNUT

**DATE:** May 2, 2011

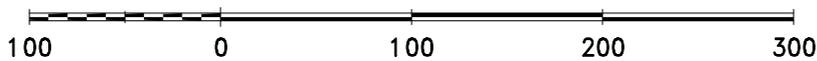
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At its regular meeting on April 18, 2011, the Bicycle and Pedestrian Safety Commission (BPSC) reviewed the site plan approval to allow a new mixed-use building within the Commercial Downtown zoning district, at 807 N Walnut St. While generally supportive of the site plan, the Commission was concerned that the number of automobile parking spaces, while meeting the minimum requirements as listed in the UDO, might not be adequate to meet the need. Thus, to help reduce the demand for auto parking at this site, they recommended covered bike parking be considered by the developer as a way to encourage bicycle use.

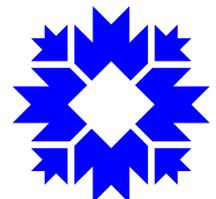


SP-09-11 Walnut Holdings LLC  
 807 N Walnut Street  
 Plan Commission  
 Site Location, Zoning, Land Use, Parcels

By: greulice  
 5 May 11



City of Bloomington  
 Planning



Scale: 1" = 100'

For reference only; map information NOT warranted.

Pat Shay  
City of Bloomington  
Planning Department  
401 N. Morton Street  
Bloomington, IN 47404

**RE: 807 N. Walnut St., Bloomington Indiana Petitioner's Statement**

Dear Patrick,

Please accept this application for Site Plan approval of a new 3 Unit Mixed-Use Building on 0.17ac. The property is located at just north of 11<sup>th</sup> street on the West side of the road. The property is currently vacant.

The new building will have three residential units and an office suite and will be served by 4 parking spaces in the rear off the existing public alley.

The design of the structure is residential in nature to preserve the residential feel of the surrounding area.

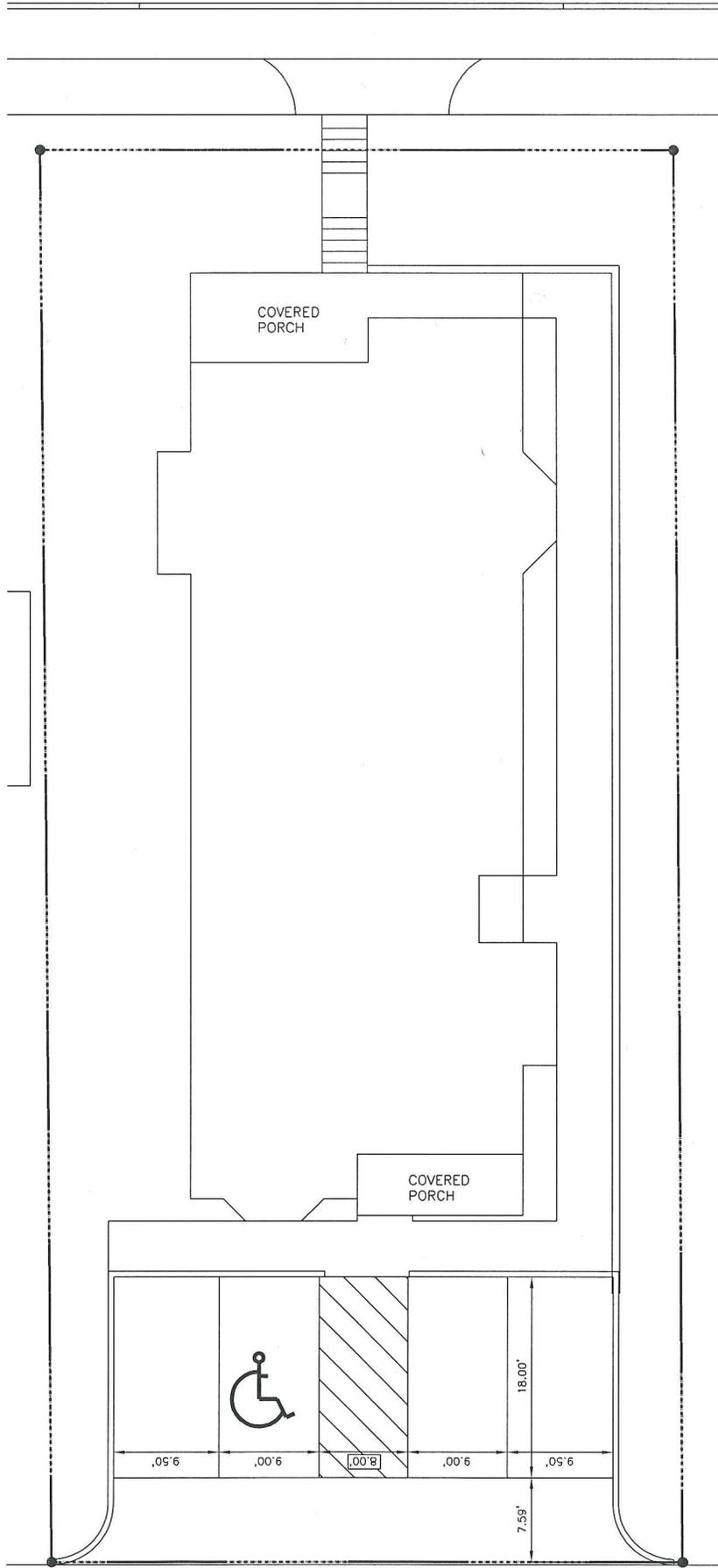
Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'AS', with a long horizontal line extending to the right.

Aaron Stolberg  
807 N Walnut Holdings, LLC

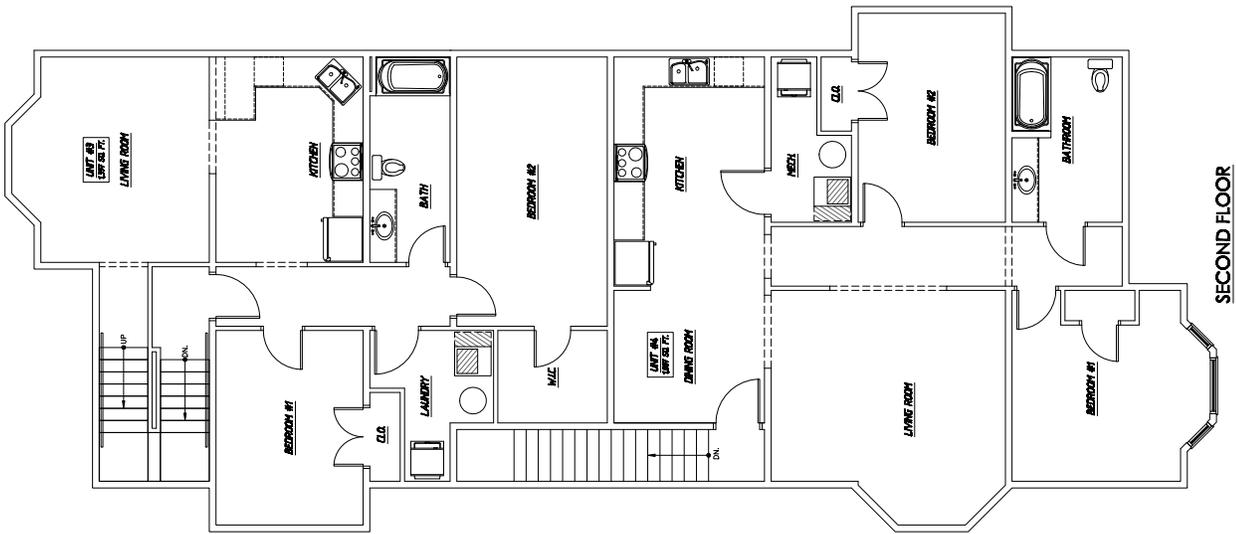
Walnut Street



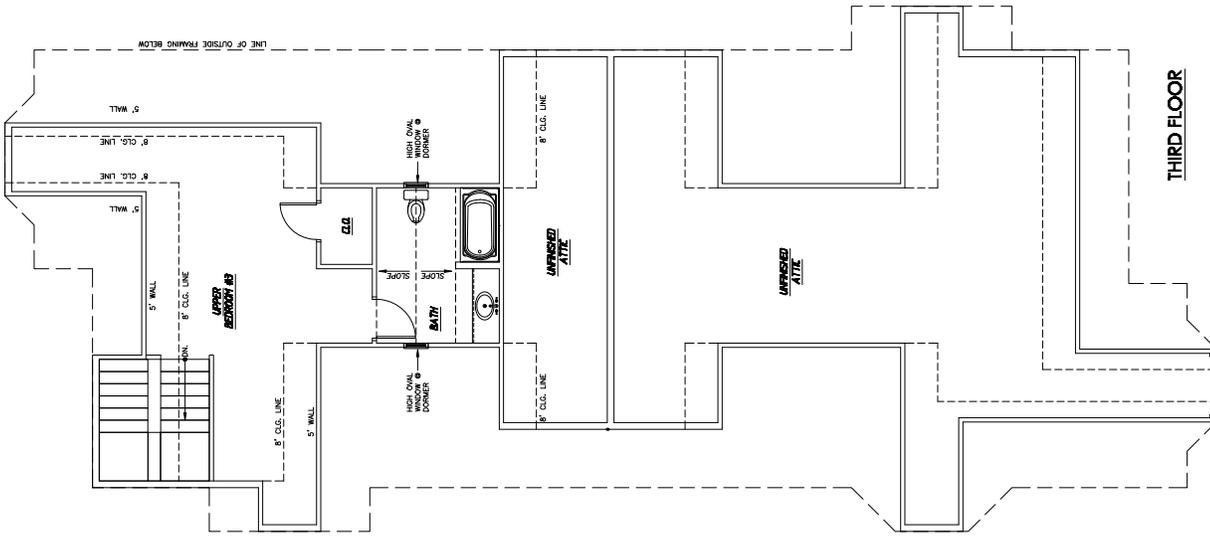
15'  
1" = 15'



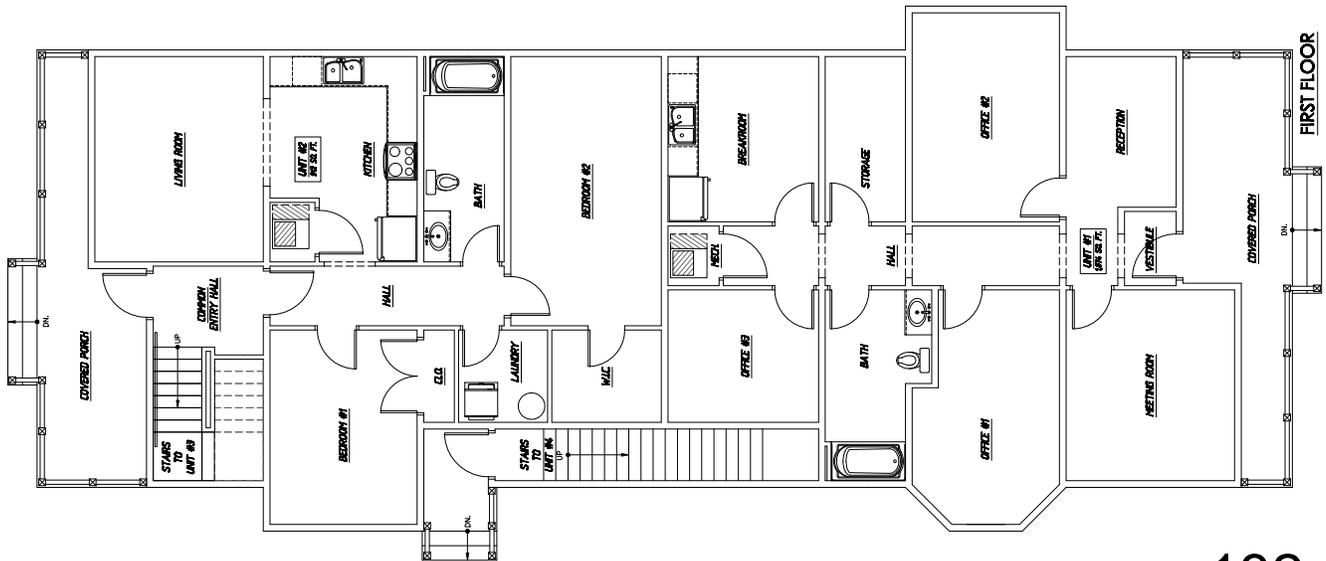




SECOND FLOOR



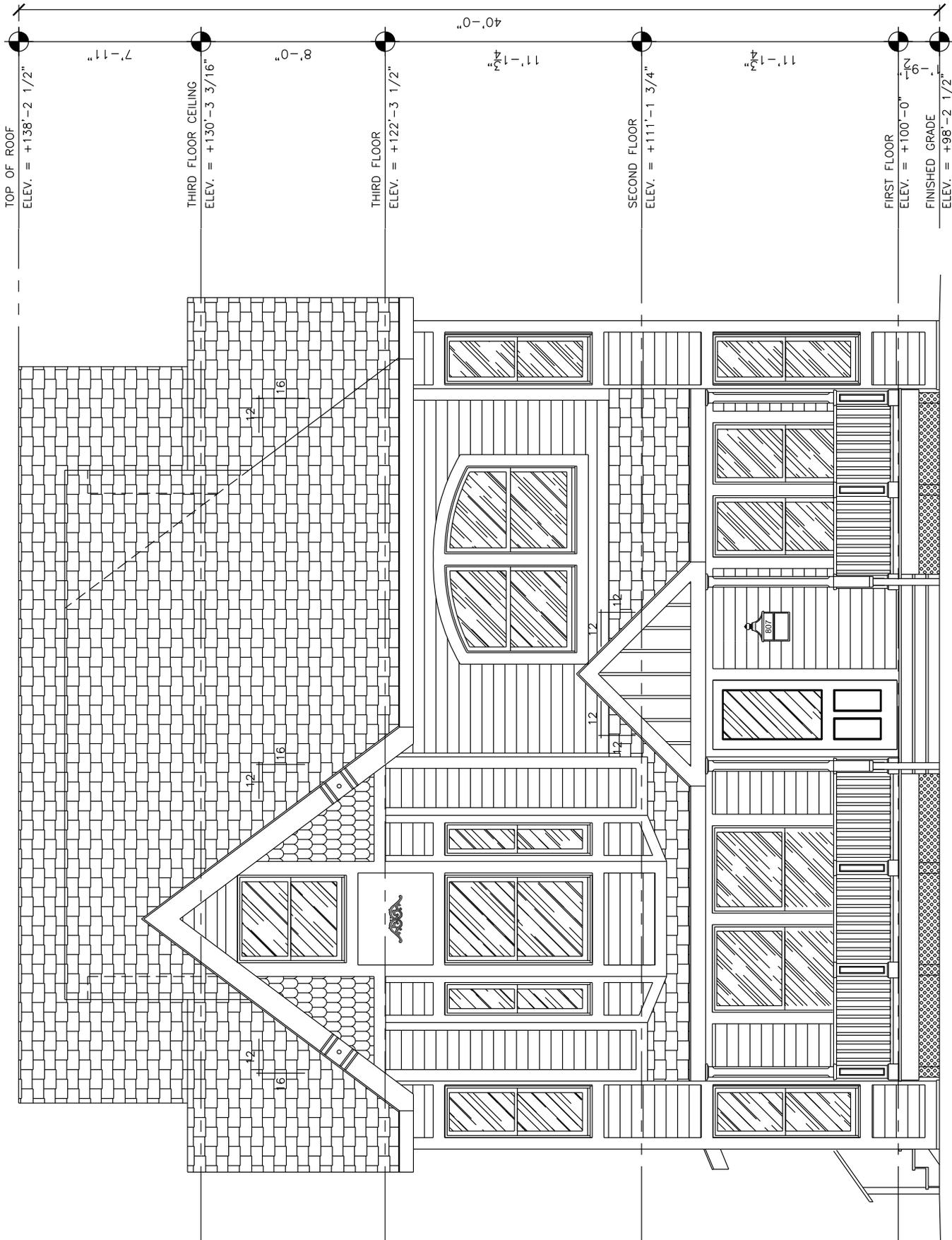
THIRD FLOOR



FIRST FLOOR

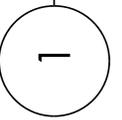
CONCEPTUAL FLOOR PLANS


  
 1/4" = 1'-0"
   
 ARCHITECTURE & INTERIORS
   
 TAYLOR BRUCE
   
 601 W. 10TH ST. SUITE 200
   
 DENVER, CO 80202
   
 303.733.1111
   
 601.747.1111



EAST ELEVATION

1/4" = 1'-0"





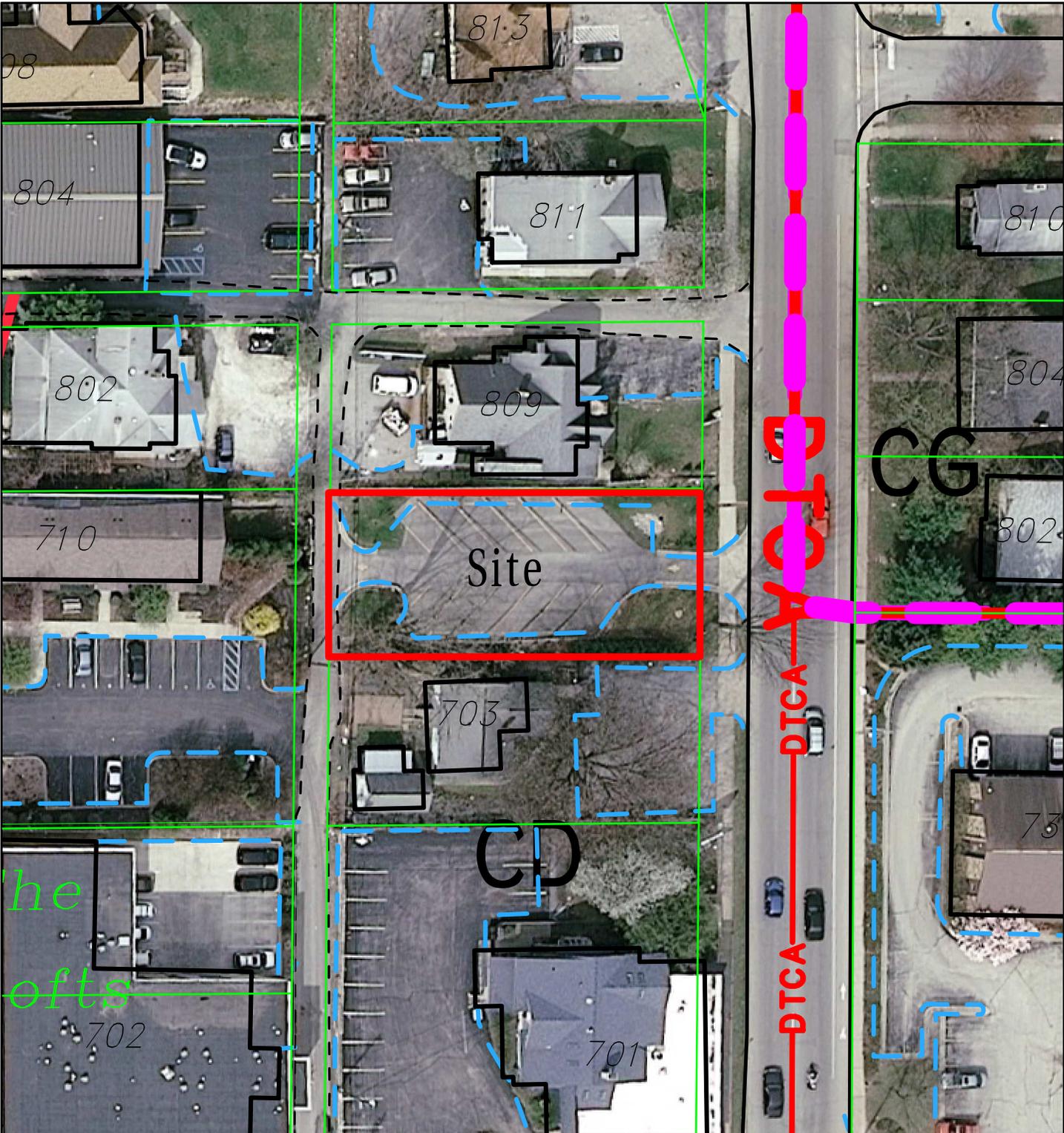
EAST EXTERIOR ELEVATION

1/4" = 1'-0"

SP-09-11

Sample Color Elevations

134



SP-09-11 Walnut Holdings LLC

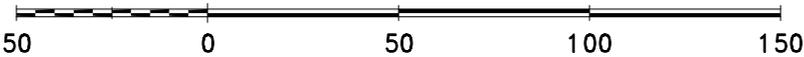
807 N Walnut Street

Plan Commission

2010 Aerial Photograph

By: greulice

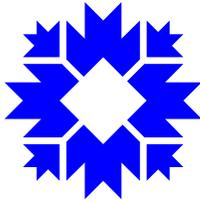
5 May 11



For reference only; map information NOT warranted.



City of Bloomington  
Planning



Scale: 1" = 50'

**BLOOMINGTON PLAN COMMISSION  
STAFF REPORT  
Location: 489 W. 10th Street**

**CASE #: UV-10-11  
DATE: May 9, 2011**

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**PETITIONER:** City of Bloomington  
401 N. Morton Street, Bloomington

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**REQUEST:** The petitioner is requesting use variance approval to allow a “Salvage and Scrap Yard” use in the Commercial Downtown (CD) zoning district. This use variance request requires Plan Commission review and recommendation to the Board of Zoning Appeals.

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**SUMMARY:** The property is located at the southeast corner of W. 10th Street and N. Rogers Street and is zoned Commercial Downtown. The property is owned by the City of Bloomington and is part of the larger Showers Center complex. The site is currently used as a surface parking lot for City vehicles. Other parking spaces on the lot are leased by CFC for users in their portion of the Showers Center. Surrounding uses include the Showers Center to the east and southeast, the IU Food Storage Building to the north, the Bloomington Iron & Metal salvage and scrap yard and the B-Line trail to the west, and Cook Group health clinic to the southwest.

The City has come into a partnership with Bloomington Pedal Power and the Monroe County Solid Waste Management District to establish a Downtown Recycling Center at this location. Pedal Power is currently located at 615 N. Fairview Street and received approval for a salvage and scrap yard use in 2008 (UV-46-08). Pedal Power operates a bike powered downtown recycling service, which currently serves mainly businesses. Under the new partnership, the City will provide the location for the use, Pedal Power will operate the center at no cost to taxpayers and Solid Waste will provide the covered, lockable roll-off containers for the recyclables.

The proposed recycling center will cover what are currently 19 parking spaces. The City vehicles that are currently parked in these spaces will be relocated to the “Garage Market” parking garage. The center will be surrounded by a 6 foot tall opaque vinyl fence with a sliding “scissor” style gate on the north side. The center will be open Monday through Saturday from 7:30 to 5:30 and will be staffed by at least one person, most likely a volunteer. The four roll off containers will have tops and will be locked at night. Also within the fenced area will be a 336 square foot building to house offices for the center. This building will include some innovative environmental featuring. Possible features include solar arrays, rainwater collection, passive solar heating and gardening.

Salvage and Scrap Yard uses are only permitted in the Industrial General (IG) zoning district. The UDO defines this use as “A facility, usually outdoors, where waste or scrap materials are bought, sold, exchanged, collected, salvaged, stored, baled, packed, disassembled, or handled, including, but not limited to, motor vehicles or parts thereof, used lumber, household garbage, inoperable machinery or appliances, scrap iron and other metals, paper, plastics, glass, rags or tires.” The City is requesting a

Use Variance to allow this use on the subject property. This use variance request requires Plan Commission review for compliance with the Growth Policies Plan and recommendation to the Board of Zoning Appeals.

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**GROWTH POLICIES PLAN:** The Plan Commission must make a recommendation to the BZA regarding the appropriateness of the uses and their consistency with the Growth Policies Plan. More specifically, the Plan Commission must rule that the proposed use will not substantially interfere with the GPP. The GPP designates this property as “Downtown”. The “Downtown” designation is designed to “foster a vibrant downtown area” and “improve downtown as a compact, walkable, and architecturally distinctive area.” provide community-serving commercial opportunities in the context of a high density, mixed-use development.” Some of the relevant policies for this area state that:

- The Downtown area should be targeted for increased residential density (100 units per acre) and for intensified usage of vacant and underutilized buildings.
- The mix of retail goods and services must be expanded and diversified.
- New surface parking areas and drive-through uses should be limited, if not forbidden.
- As downtown develops and redevelops, the City must take advantage of opportunities to improve the entire portfolio of public services to meet growing demand.

In addition, the GPP’s “Nurture Environmental Integrity” Guiding Principle states that “It is equally essential that development move toward sustainable design practices that emphasize renewable energy and resource use and pollution prevention. Education about and promotion of sustainable design are critical steps in Bloomington’s development as a sustainable city.” (GPP pg. 11)

While this property is not located within the Public/Semi-Public/Institutional land use category, the policies of this category may provide guidance for this large tract of City property. The GPP states that “uses in this category should provide measures to mitigate undesirable operational impacts such as light and noise pollution, traffic congestion, and spillover parking.”

Finally, while the Downtown Vision and Infill Strategy Plan makes few land use recommendations, it does emphasize an increased demand for housing in the downtown, and with that the need for additional services.

Staff finds that the proposed use variance does not interfere with the GPP and would in fact further many of these goals, including environmentally sustainable practices, additional use of a surface parking lot and locating services near neighborhoods. The size of the property and the need to still accommodate City fleet vehicles and CFC parking will keep the proposed uses from growing beyond the anticipated scale. The proposed fence as well as the placement of the use away from neighborhoods and the heavy traffic of N. Rogers Street will reduce the impacts of the use while still providing a desirable service.

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**CONCLUSION:** Staff finds that this property is an ideal location for this use with good access to surrounding roads, sidewalks and the B-Line Trail. This use will provide a convenient, needed service to downtown residents, many of whom do not have recycling collection available to them. It will also allow convenient service to visitors to Showers Center and the Farmer's Market.

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**RECOMMENDATION:** Staff recommends that the Plan Commission forward a positive recommendation for the use variances to the Board of Zoning Appeals.

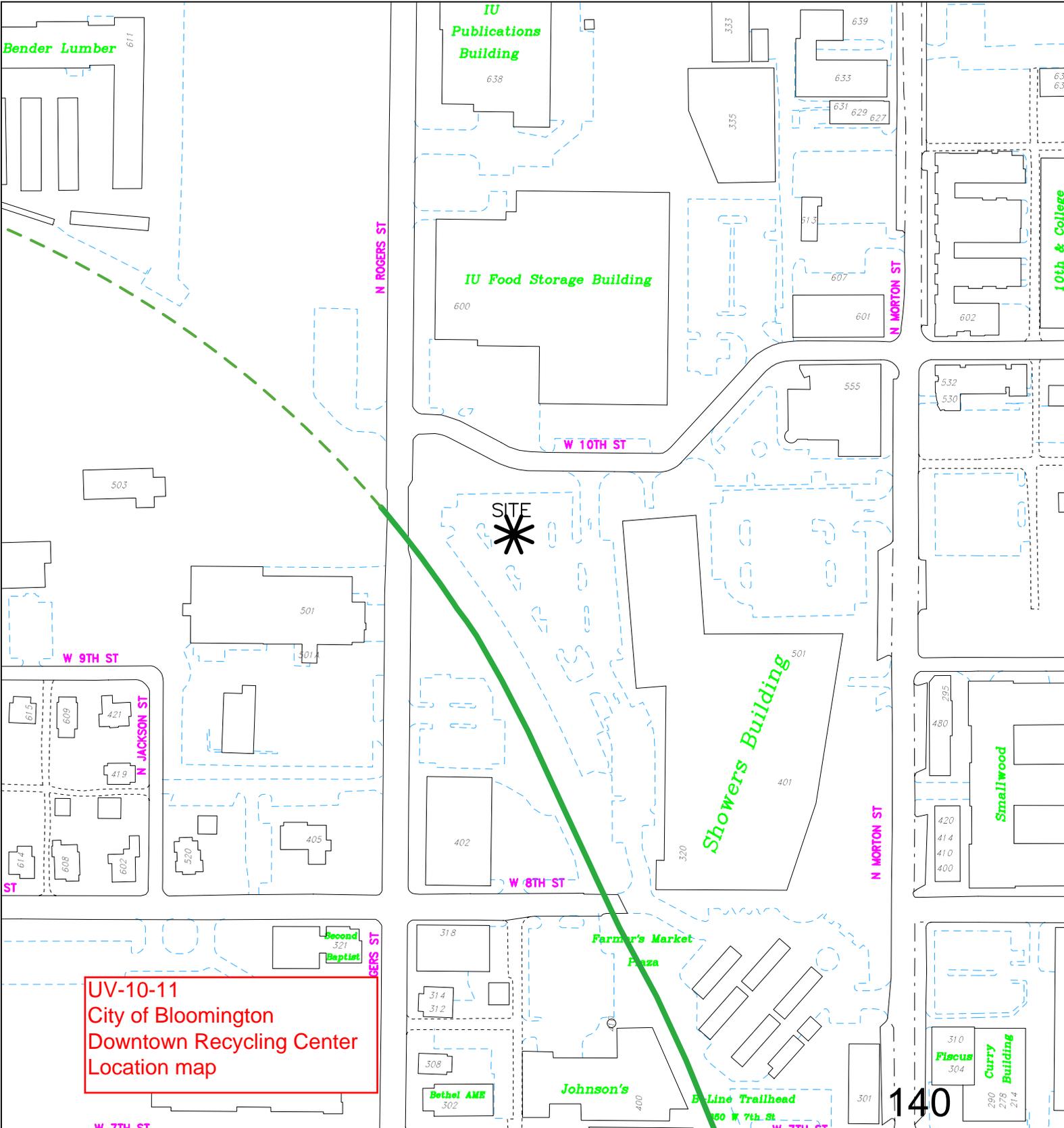
# MEMORANDUM

**Date:** April 28, 2011  
**To:** Bloomington Plan Commission  
**From:** Bloomington Environmental Commission  
**Through:** Linda Thompson, Senior Environmental Planner  
**Subject:** UV-10-11, Downtown Bloomington Recycling Center

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This memorandum contains the Environmental Commission's (EC) comments regarding a Plan Commission recommendation to the Board of Zoning Appeals regarding a Use Variance in the Commercial Downtown Zoning District. The petitioner is requesting a variance to allow a salvage/scrap yard to be a permitted use in this district. "Salvage/scrap yard" is the closest appropriate use-designation within which a recycling center falls.

The EC questions whether or not this site is the best location for a recyclables collection facility because of its small size, and the possibility of noise, leachate runoff, and attraction of bees and other insect pests. The convenience to downtown businesses and apartment dwellers, on the other hand, does make it a very desirable location. The EC applauds the petitioner for designing such an environmentally conscientious office building for the employees and volunteers. The EC recommends approval of this variance.



UV-10-11  
 City of Bloomington  
 Downtown Recycling Center  
 Location map

March 31, 2011

Patrick Shay, Development Review Manager  
401 N. Morton St.  
Bloomington, IN 47403

Dear Mr. Shay:

The City of Bloomington, Pedal Power and the Monroe County Solid Waste Management District (MCSWD) respectfully request permission from the City of Bloomington Plan Commission to establish a Downtown Recycling Center (DRC) in the parking lot owned by the City of Bloomington located on the southeast corner of Rogers and 10<sup>th</sup> Streets.

This DRC will make recycling much easier for the hundreds of new apartment dwellers in the downtown and the many small businesses in the downtown. The DRC will be open to pedestrians, bicycles and non-commercial passenger vehicles.

Pedal Power will manage the DRC and the MCSWD will provide 4 roll off containers to facilitate the collection of plastics 1-7, cardboard and paper, cans, and glass bottles. Those roll off containers will be located on 19 parking spaces on the southeast corner of Rogers and 10<sup>th</sup> Streets.

All drop-off and pickup will be directed to use 10<sup>th</sup> Street and **not** the access road to the south. The containers will be properly fenced and the area monitored several times each day for cleanliness. Should any dumping of trash occur, the City Sanitation Department would collect that trash on a daily basis.

Chad Roeder, owner of Pedal Power is managing the site at no cost to taxpayers with his only compensation proceeds from the sale of recyclables. Middle Way House will receive 10% of the profits from cardboard resale, in perpetuity.

Respectfully,

Susie Johnson, Director Public Works  
Chad Roeder, Owner, Pedal Power

UV-10-11  
City of Bloomington  
Downtown Recycling Center  
Petitioner's Statement

## Downtown Bloomington Recycling Center:

An Investment in the Future of Sustainability

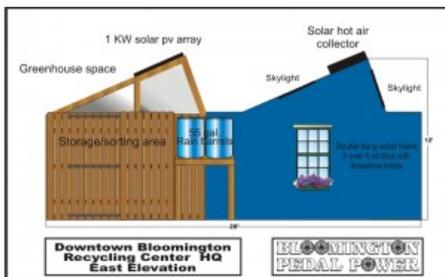
by Chad Roeder, Bloomington Pedal Power

When Mayor or Kruzan [announced at a press conference on March 30<sup>th</sup>](#) that the City of Bloomington, the Monroe County Solid Waste Management District, and Bloomington Pedal Power would be entering into a public/private partnership to establish a Downtown Bloomington Recycling Center (DBRC), the future of a sustainable Bloomington became a little brighter. The event was well attended, and the tone was really positive.



I was honored to be part of such a special gathering of people, and I am thrilled to be working with an administration that I have seen evolve into a truly active, progressive force in not only Monroe County, but the State of Indiana, all the while garnering national attention for its economic successes during a time of federal fiscal uncertainty and global political unrest.

The new Downtown Recycling Center will be a place for people to bring their recyclable materials, and experience a sense of community, much like the South Walnut Recycling Center. At this downtown location, we hope to do as much as we can with the space that we have; this is truly a unique opportunity, and the potential for strengthening Bloomington's core constituency through this initiative is now very real.



In addition to the four roll-off containers provided by the District (equal to \$25,000 if purchased new), the City is providing the real estate through displacement of 19 permit parking spaces, as well as a tasteful, recycled content vinyl dog-ear fence adorned with panel art via the Economic Development Director for the Arts and Local Artists to further enhance the character of this project (roughly another \$25,000). I will provide

management of the site, which will operate 60 hours per week, Monday through Saturday, 7:30 am – 5:30 pm. The site will be staffed the entire time. It is important to have somebody on-site who can answer questions, monitor compliance, and clean up at the end of a shift.

But this is more than just a recycling center; this project represents the confluence of numerous public and private agencies, individuals, and businesses, all of whom have a vested interest in the success of this operation. So why not take it to the next level, and help put Bloomington on the map as a regional leader of sustainable development? This is the meta-goal of the DBRC; to serve as a model of intelligent social development and infrastructure, while helping to change the culture of waste in the downtown.

The DBRC will require a shelter/office for the staff and volunteers who will be there 10 hours a day, 6 days a week. Initially, I considered simply buying a shed "off the shelf", to

UV-10-11  
City of Bloomington  
Downtown Recycling Center  
Petitioner's Statement

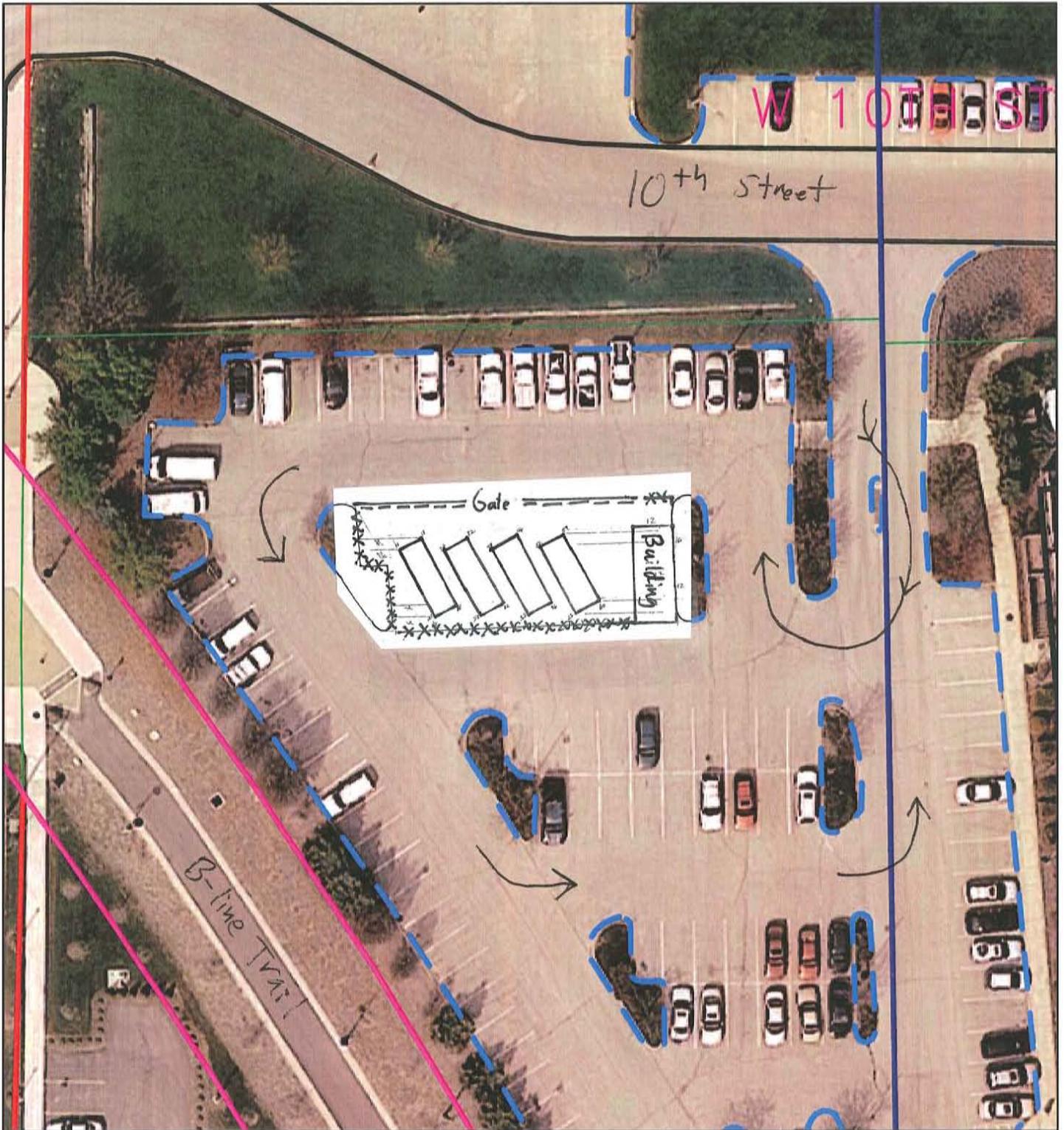
save time and money. As I thought about it more, that idea seemed absurd. Keep it local, and let's draw on the interest of the business community to make something special. So, the idea of the shed evolved into a construction project...something simple, four walls, a gabled roof, maybe a canopy...that idea grew to include a small solar electric system, then a rain barrel, then...wait, why not make this thing a real architectural model for sustainability operating completely off the grid year-round? That brings us to the current, and I think, final incarnation of the design, which is inspired in part by the existing architecture of the Showers Complex, but also by the idea of self-reliance and embracing progressive technology and thinking for the future.

Some of the main features of the structure include a robust solar electric system, a solar hot air collector, greenhouse space, skylights, evaporative cooling, water catchment system, locally sourced construction materials, and passive solar heating. There will be a container garden on-site, the fruit of which will be donated to the Food Bank, and profits from the sale of cardboard will benefit Middle Way House. We may even include a propane system to provide fuel for a hotplate, back-up heat in the darkest days of winter, and a propane powered refrigerator. Just because it's off the grid doesn't mean that it can't be an inviting, cozy space to inhabit. Because so many people will be moving through and occupying this space throughout the years, I feel it's important that we do as much as we can to put the stamp of Bloomington on this site; make it not just a shelter from the cold, but the Command Center in the War on Waste; inspire the folks for whom this project was conceived in the first place, and reap not only the rewards of reduced waste locally, but of increased visibility on a national scale for the City and its business community. The educational potential of the project is perhaps its most important quality; a living-learning center for the Public; a place where people can come to experience something truly unique and imminently practical, and leave with renewed hope for our collective experience.

So, as we move forward, we call upon local business leaders to help us make this dream a reality. We are approaching about 30 locally owned, core Bloomington businesses to donate \$500 each to the cause, whether in material support or cash; this will allow us to build the structure, and contribute to start-up costs (for insurance, tools, shipping costs, unforeseen obstacles, basically, the "rainy day fund") so that we may hit the ground running and begin our attack on waste in earnest. Several have already stepped up with pledges of cash and material support; Alex Jarvis of Solar Systems of Indiana will be donating his time and skills to the installation of the electric system, Rusty Peterson will be the head carpenter, Black Lumber has agreed to provide discounted materials, several folks will be volunteering labor to construct the HQ, Stranger's Hill has pledged plants for the urban garden, Nick's, Pizza X, Bloomington Brewing Co., Bloomingsfoods, and others have all pledged cash support...basically, there is great momentum building around the project, which is a good thing, since we're on track to have it ready by early June.

In conclusion, I'd like to thank those businesses who have helped make Pedal Power what it is today, and to humbly request support during this exciting time. Together, we *can* make a difference. The DBRC will serve this community well for many years, and provide the people for whom it exists with an inspiring example of sustainability, built on the foundation of local cooperation.

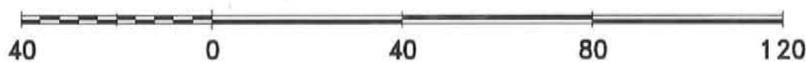
UV-10-11  
City of Bloomington  
Downtown Recycling Center  
Petitioner's Statement



Site plan and traffic plan

UV-10-11  
 City of Bloomington  
 Downtown Recycling Center

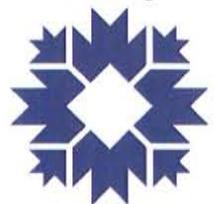
By: roachja  
 29 Apr 11



For reference only; map information NOT warranted.



City of Bloomington  
 Planning



Scale: 1" = 40'

1 KW solar pv array

Solar hot air collector

Greenhouse space

Skylight

Skylight

Storage/sorting area

55 gal.  
Rain barrels

Double hung wood frame  
6 over 6 window with  
limestone lintels

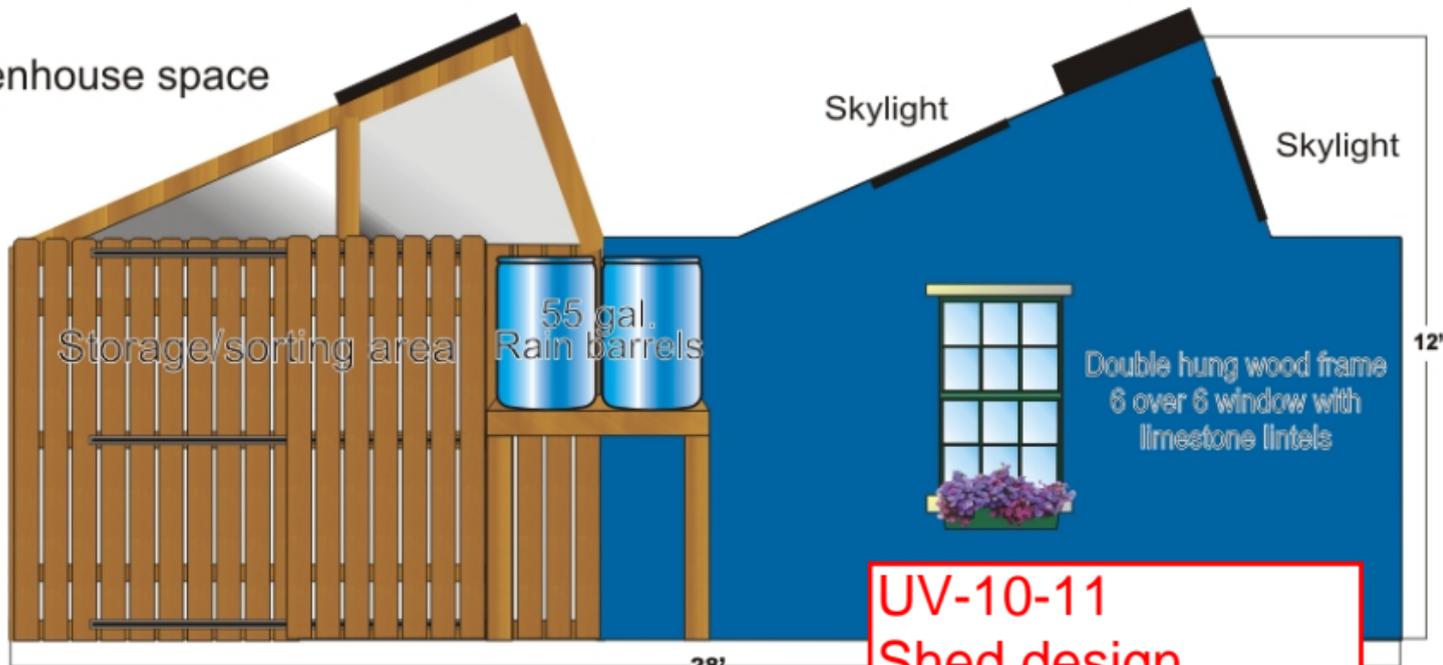
12'

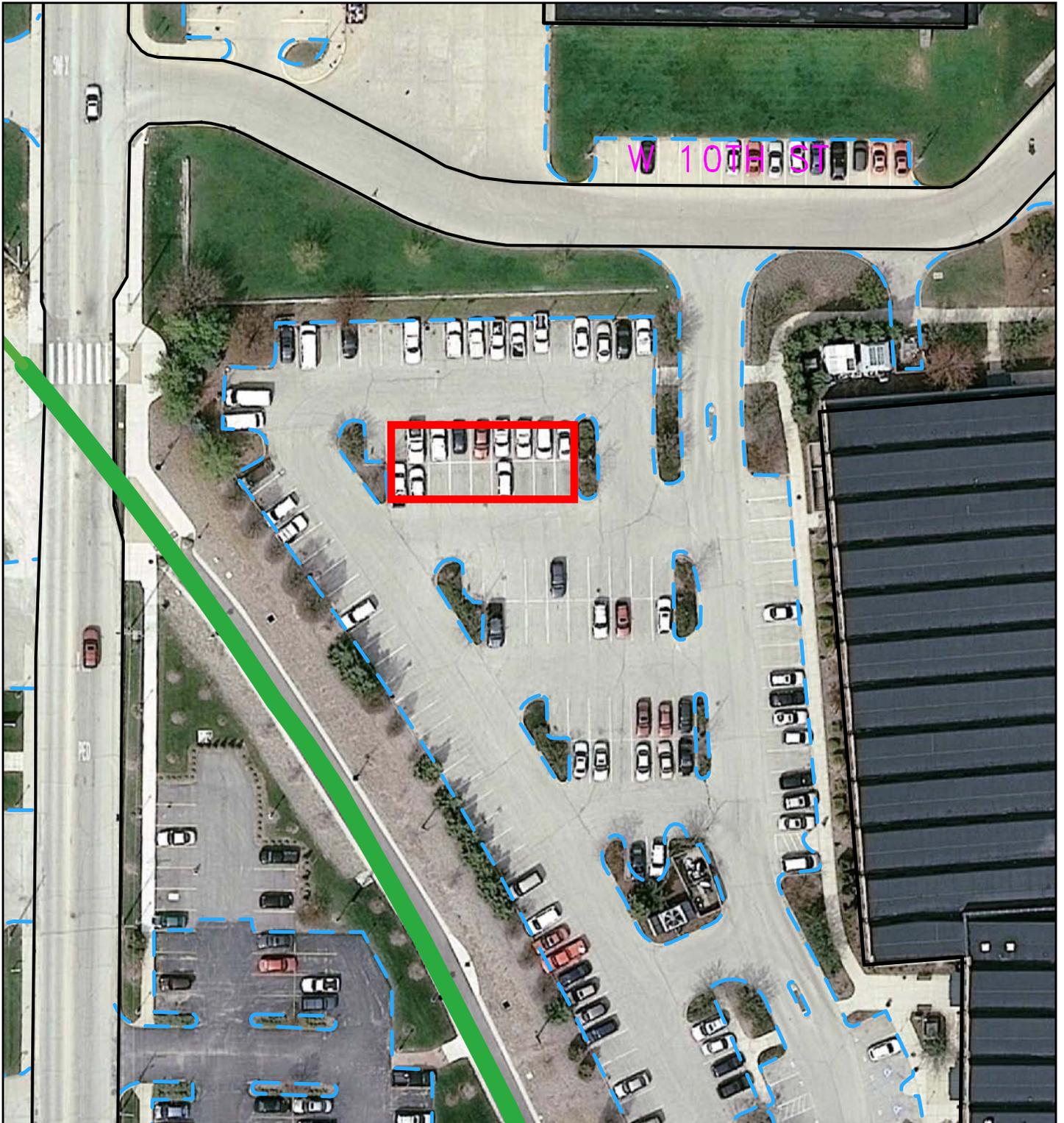
28'

UV-10-11  
Shed design

**Downtown Bloomington  
Recycling Center HQ  
East Elevation**

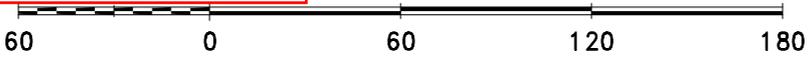
**BLOOMINGTON  
145  
PEDAL POWER**





UV-10-11  
City of Bloomington  
Downtown Recycling Center  
2010 Aerial Photo

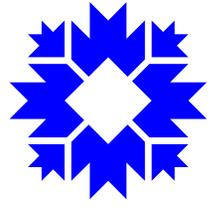
By: [unclear]  
15 Apr 11



For reference only; map information NOT warranted.



City of Bloomington  
Planning



Scale: 1" = 60'