City of Madison

Proposed Demolition, Conditional Use & Rezoning

Location
501 East Badger Road

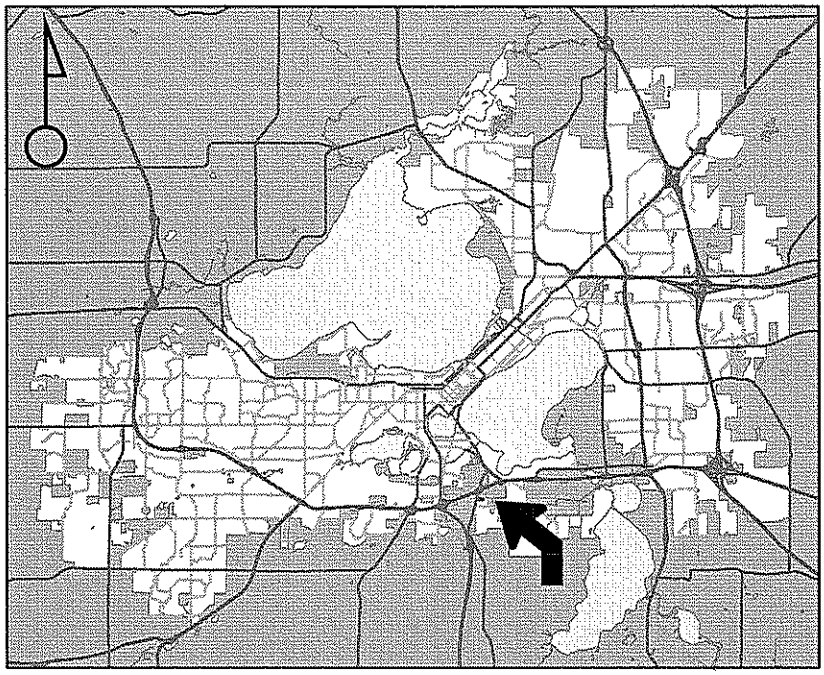
Applicant
Thomas Dunbar - Center for Resilient Cities/
Mark Boehlke - Hoffman, LLC

From: R3 To: C2

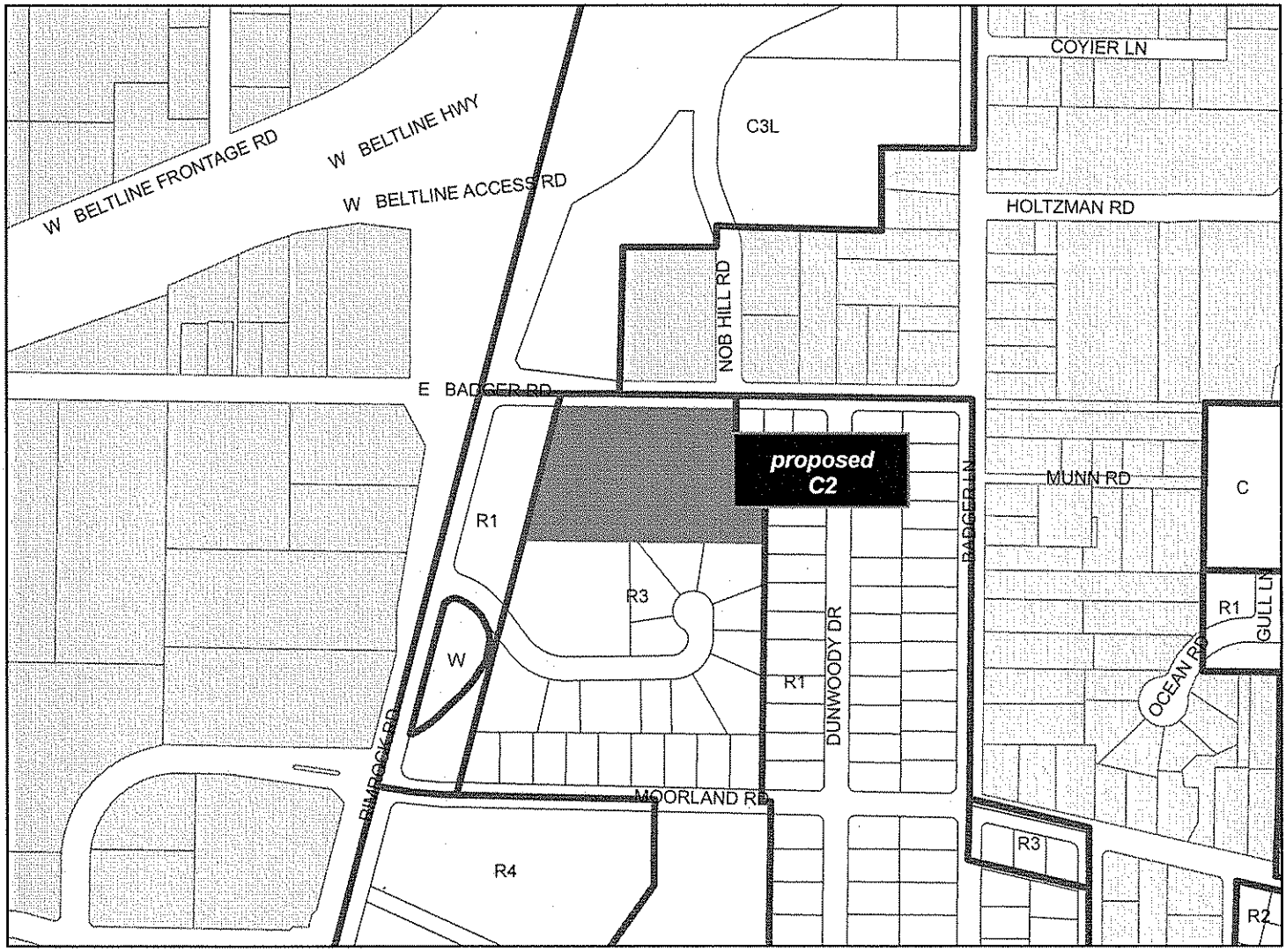
Existing Use
Former School Building

Proposed Use
Demolish former school building and construct Resilience Research Center containing school, neighborhood center, office and retail with outdoor eating area and aquaculture.

Public Hearing Date
Plan Commission
22 November 2010
Common Council
30 November 2010



For Questions Contact:Heather Stouder at: 266-5974 or hstouder@cityofmadison.com or City Planning at 266-4635

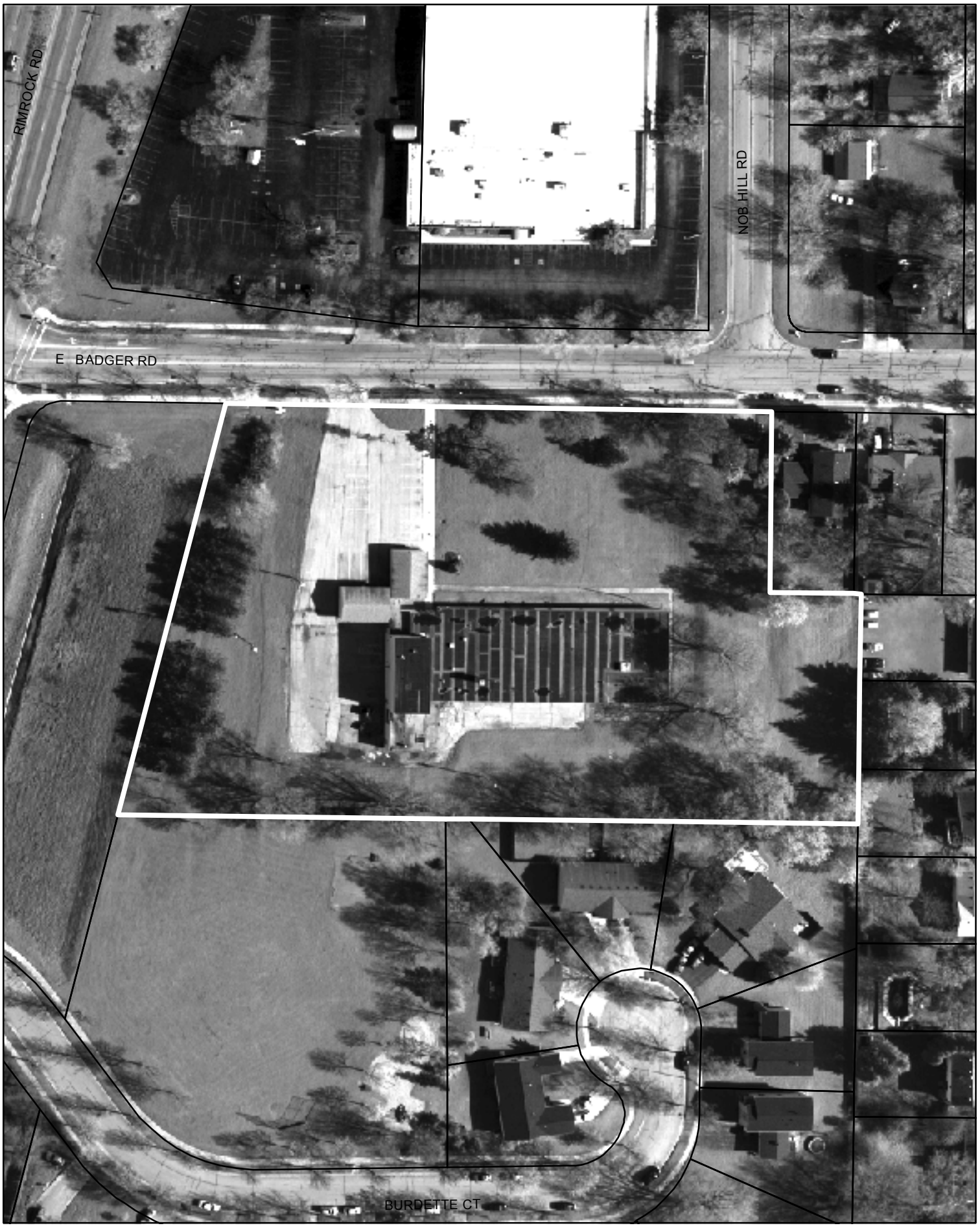


Scale : 1" = 400'

City of Madison, Planning Division : RPJ : Date : 08 November 2010

City of Madison

501 East Badger Road



Date of Aerial Photography : April 2007

LAND USE APPLICATION
Madison Plan Commission

215 Martin Luther King Jr. Blvd; Room LL-100
PO Box 2985; Madison, Wisconsin 53701-2985
Phone: 608.266.4635 | Facsimile: 608.267.8739

- The following information is required for all applications for Plan Commission review except subdivisions or land divisions, which should be filed with the Subdivision Application.
- Before filing your application, please review the information regarding the **LOBBYING ORDINANCE** on the first page.
- Please read all pages of the application completely and fill in all required fields.
- This application form may also be completed online at www.cityofmadison.com/planning/plan.html
- All Land Use Applications should be filed directly with the Zoning Administrator.

FOR OFFICE USE ONLY:

Amt. Paid $1150.00 Receipt No. 113483
Date Received 9/8/10
Received By JK
Parcel No. 0709-363-0224-2
Aldermanic District 14 Tim Bruer
GQ OK
Zoning District R3

For Complete Submittal

Application	✓	Letter of Intent	✓
IDUP	NA	Legal Descript.	✓
Plan Sets	✓	Zoning Text	NA
Alder Notification	✓	*Waiver*	
Ngbrhd. Assn Not.		*Waiver*	
Date Sign Issued	9/8/10		

1. Project Address: 501 E. Badger Road **Project Area in Acres:** 3.85 acres

Project Title (if any): Resilience Research Center

2. This is an application for:

Zoning Map Amendment (check the appropriate box(es) in only one of the columns below)

☑ **Rezoning to a Non-PUD or PCD Zoning Dist.:** Existing Zoning: R3 Single & Two Family Res *to* Proposed Zoning (ex: R1, R2T, C3): C2 General Commer		**Rezoning to or Amendment of a PUD or PCD District:** ☐ Ex. Zoning: [redacted] to PUD/PCD-GDP ☐ Ex. Zoning: [redacted] to PUD/PCD-SIP ☐ Amended Gen. Dev. ☐ Amended Spec. Imp. Plan
☑ **Conditional Use**	☑ **Demolition Permit**	☐ **Other Requests** *(Specify):*

3. Applicant, Agent &Property Owner Information:

Applicant's Name: Center For Resilient Cities, Thomas Dunbar Company: Center For Resilient Cities
Street Address: 200 North Blount Street City/State: Madison, WI Zip: 53703
Telephone: (608) 255-9877 Fax: (608) 255-6793 Email: tdunbar@resilientcities.org

Project Contact Person: Mark Boehlke Company: Hoffman LLC
Street Address: 122 E College Avenue City/State: Appleton, WI Zip: 54911
Telephone: (920) 380-2120 Fax: (920) 380-9120 Email: mboehlke@hoffman.net

Property Owner (if not applicant): Same as Applicant
Street Address: City/State: Zip:

4. Project Information:

Provide a brief description of the project and all proposed uses of the site:

See Attached - Resilience Research Center Project Description

Development Schedule: Commencement Demolition - January, 2011 Completion Summer, 2012

CONTINUE→

5. Required Submittals:

☐ **Plans** submitted as follows below and depicts all lot lines; existing, altered, demolished or proposed buildings; parking areas and driveways; sidewalks; location of any new signs; existing and proposed utility locations; building elevations and floor plans; landscaping, and a development schedule describing pertinent project details:

- ***7 copies*** of a full-sized plan set drawn to a scale of one inch equals 20 feet (collated and folded)
- ***7 copies*** of the plan set reduced to fit onto 11 inch by 17 inch paper (collated, stapled and folded)
- ***1 copy*** of the plan set reduced to fit onto 8 ½ inch by 11 inch paper

☐ **Letter of Intent (*12 copies*)**: describing this application in detail including, but not limited to: existing conditions and uses of the property; development schedule for the project; names of persons involved (contractor, architect, landscaper, business manager, etc.); types of businesses; number of employees; hours of operation; square footage or acreage of the site; number of dwelling units; sale or rental price range for dwelling units; gross square footage of building(s); number of parking stalls, etc.

☐ **Legal Description of Property:** Lot(s) of record or metes and bounds description prepared by a land surveyor. For any application for rezoning, the description must be submitted as an electronic word document via CD or e-mail. For applications proposing rezoning to more than one district, a separate description of each district shall be submitted.

☐ **Filing Fee**: $ 1,150 See the fee schedule on the application cover page. Make checks payable to: *City Treasurer.*

☐ **Electronic Submittal:** All applicants are required to submit copies of all items submitted in hard copy with their application (including this application form, the letter of intent, complete plan sets and elevations, etc.) as Adobe Acrobat PDF files on a non-returnable CD to be included with their application materials, or in an e-mail sent to *pcapplications@cityofmadison.com*. The e-mail shall include the name of the project and applicant. Applicants unable to provide the materials electronically should contact the Planning Division at (608) 266-4635 for assistance.

In Addition, The Following Items May Also Be Required With Your Application:

☐ For any applications proposing demolition or removal of existing buildings, the following items are required:

- Prior to the filing of an application, the applicant or his/her agent is required to notify a list of interested persons registered with the City **30 or 60 days prior to filing** their application using the online notification tool found at: https://www.cityofmadison.com/developmentCenter/demolitionNotification/
- A photo array (6-12 photos) of the **interior and exterior** of the building(s) to be demolished or removed. A written assessment of the condition of the building(s) to be demolished or removed is highly recommended.
- Note: A Reuse and Recycling Plan approved by the City's Recycling Coordinator is required prior to issuance of wrecking permits and the start of construction.

☐ **Zoning Text (12 copies):** must accompany Planned Community or Planned Unit Development (PCD/PUD) submittals

6. Applicant Declarations:

☐ **Conformance with adopted City plans:** Applications shall be in accordance with all adopted City of Madison plans:
→ *The site is located within the limits of* The Comprehensive *Plan, which recommends:* General Commercial *for this property.*

☐ **Pre-application Notification:** Section 28.12 of the Zoning Code requires that the applicant notify the district alder and any nearby neighborhood & business associations in writing no later than ***30*** days prior to filing this request:
→ *List below the Alderperson, Neighborhood Association(s), Business Association(s) AND dates you sent the notices:*
Notice sent August 17, 2010 to Alderman Tim Bruer.
NOTE: If the alder has granted a waiver to this requirement, please attach any such correspondence to this form.

☐ **Pre-application Meeting with staff:** Prior to preparation of this application, the applicant is required to discuss the proposed development and review process with Zoning and Planning Division staff; note staff persons and date.
Planning Staff: Heather Stouder *Date:* 6/17/10 *Zoning Staff:* Matt Tucker *Date:* 6/17/10

☐ **Check here if this project will be receiving a public subsidy.** If so, indicate type in your Letter of Intent.

The signer attests that this form is accurately completed and all required materials are submitted:

Printed Name Mark Boehlke, Hoffman LLC Date 09/08/10

Signature Mark S. Boehlke Relation to Property Owner Project Landscape Architect

Authorizing Signature of Property Owner [signature] Date 09/08/10

CENTER FOR RESILIENT CITIES
Good Living Well Grounded

October 22, 2010

Department of Planning and Development
215 Martin Luther King Jr. Blvd
Madison, WI 53701

RE: **Letter of Intent**
Resilience Research Center
Land Use Application Submittal

Dear Plan Commissioners,

Please accept this letter of intent and attached plans as our formal request for review and approval of the Land Use Application for Rezoning, Demolition Permit, and Conditional Use. This list of building and site elements represents the intent of the owner, and although many elements are integral to the mission of the project, some listed are subject to phasing and funding. The references to 'will' and 'desire/hope/intend' clarify intended status of each.

Project: ***Resilience Research Center***
501 E. Badger Road, Madison, WI 53713
parcel ID #: 251/0709-363-0224-2

DESIGN/CONSTRUCTION TEAM

Owner:	Center for Resilient Cities 200 N. Blount Street Madison, WI 53703 attn: Kate Stalker
Planner/Architect:	Hoffman LLC Appleton, WI
Civil Engineer:	Vierbicher Madison, WI
Stormwater:	Dr. Aicardo Roa Espinoza Belleville, WI

PROJECT LOCATION

The site is 3.85 acres located on the south side of E. Badger Road, just east of Rimrock Road, and south of the Beltline. It is bounded on the west by existing City of Madison storm water management basins, on the north by E. Badger Road and Badger Bowl, to the east by existing residential properties, and to the south by existing residential properties and the City of Madison's Badger Park.

EXISTING CONDITIONS AND USES OF THE PROPERTY

The property is currently zoned R-3. Badger School operated from this building until the mid-1980s. Dane County purchased the property from MMSD for use as a social services center until 2005. As a condition of purchase by the Center for Resilient Cities, Dane County performed asbestos remediation (windows/plumbing/electrical systems removed) in the fall of 2009. The Center for Resilient Cities purchased the property from the County on 1/4/2010.

PROPOSED SITE DATA

Main Building -	51,645 gross square feet (2-story)
Building Footprint	34,421 square feet
Greenhouses (2)	3,472 gross square feet
Parking -	60 stalls proposed
Concrete Surface	27,687 square feet
Grasscrete	10,187 square feet
Decomposed Granite	5,148 square feet
Green Space	85,299 square feet
Total Site Area	3.85 acres (166,448 square feet)

PROJECT DEVELOPMENT SCHEDULE

Demolition of the existing building is scheduled to begin in January of 2011. Site construction will begin in Spring, 2011, and completion of the project is planned for Summer, 2012. The Center for Resilient Cities is committed to working toward a September, 2011 Charter School opening for two 6th grade classes totaling forty students. If that portion of the building required to hold classes cannot be completed by that deadline, a temporary structure will house the school on-site.

Our plan is to begin with that two-story part of the building that will house the school. We will frame the two floors, but build-out the first floor first, in time for fall, 2011 classes. During the school year the second floor build-out will occur, so that in fall, 2012, two more 6th grade classes can join the now 7th graders in the second floor school.

Although it is our intent to construct this facility in two contiguous phases, this is subject to fundraising. If there is a delay between phases, the western-facing façade will be finished in keeping with the rest of the structure.

OWNER/TENANT BUSINESS DETAILS

The Resilience Research Center will be a mixed-use facility, home to several businesses/entities. The following is a listing of tenants who have committed to space here:

NAME OF TENANT	TYPE OF BUSINESS	# FT STAFF	HRS OF OPERATION
Center for Resilient Cities	developer	2	7 am-5 pm
Growing Power	urban ag/retail	2	7 am-6 pm
Badger Rock Middle School	education	7	7 am-5 pm
MG&E	utility	0	(remote)
Neighborhood Center	non-profit	2	7 am-10 pm
Food Fight	restaurant/ food outlet	0	7 am-5 pm

DEMOLITION AND CONSTRUCTION RECYCLING

We are committed to reuse or recycling of the existing structure & trees to be removed as well as construction debris resulting from our new facility. Additionally, over the life of the project as old technologies are removed and replaced with new, each will be offered for reuse or recycling.

BUILDING ELEMENTS

OVERALL IMPRESSION

The Resilience Research Center will be a good neighbor. A mixture of one and two story elements reduce the overall mass of the building so it can relate to both the surrounding homes and to the commercial buildings across Rimrock Road. The three-story stair tower adds interest to the north elevation, visible from Badger Road. Since the topography is such that the first floor roofs will be visible from the second floor windows of adjacent homes and upper floor offices across Rimrock Road, we've designed the structure so they will be able to enjoy the first floor roof gardens. The array of PV panels that may eventually cover the upper roofs will be screened by a minimum 3' mechanicals screen. The main entrance faces south, to help keep it free of winter snow and ice, and to instill in the visitor that this site is not auto-centric, but rather bike/ped-centric. It is our hope that in the long term, we can work with the Parks Department to provide a bike/ped approach to the Center through the adjacent park.

MATERIALS/COLOR SELECTION

It is anticipated that the principal wall finish will be a neutral beige/buttercream. It is also anticipated that a sky blue will be used between some of the windows, on the stair towers, and to wrap most of the columns. The remainder of the columns will be tubular steel. The west and north façades of the building will be more colorful to draw retail interest from the perspective of Rimrock Road. The south and east facades will coordinate but be more subtle, in keeping with our residential neighbors. Light gray cast stone is proposed for the sills and between some of the windows. Corrugated metal panels are proposed for the fascia that runs the length of the colonnade, on the walls that enclose the three curved balconies, as accents above some of the windows, and on a portion of the upper wall of the gymnasium. The north wall of the second floor mechanical room will consist of a metal grille that will conceal the various louvers. This material would also be used to screen any other mechanical equipment that might not be accommodated inside this mechanical room. The colors selected for the window frames, metal copings, panels, fascias, columns, railings, and brackets will add cheerful splashes of color, as will the walls that enclose the second floor offices. It is anticipated that the principal entry doors will be full-glass doors with frames that match the windows. Secondary/service entrances will be painted to blend in with the adjacent wall color.

BUILDING ACCENTS

Additional elements that may be incorporated into or attached to the building exterior could include brackets on the brick columns to support colorful banners that might celebrate cultural festivals, the seasons, or other school or neighborhood events. Any banners installed will be in compliance with the City's sign ordinance. These brackets might also be used to support hanging baskets filled with edible plants. The brackets that support the photovoltaic panels on the south façade may be provided with hooks

from which small metal mobiles could be hung to twist and turn in the breeze. The teachers have expressed a desire to mount a weather station on the main roof terrace. This would include a weathervane, thermometer, barometer, rain gauge and other equipment that the students could use to measure and record the weather.

BUILDING ENTRANCES

The multi-use Resilience Research Center will have several entrances, each with its own character. Closest to the entry drive, a colonnade shelters the retail space entrance(s) and directs the eye to southwestern corner of the building where a stair tower and large canopy lead to the main entrance to the Neighborhood Center and School. A covered walkway on the eastern side of the retail space shelters students from winter winds as they walk to/from the bus/parent drop-off on Badger Road and the cafeteria entrance.

OUTDOOR EATING AREAS

Our café/commons area has direct access to an outdoor seating area. This patio will be used for a multitude of purposes, from eating to Middle School art/craft projects. The five tables of four will allow for one entire classroom to work outside on a project. Additionally, a small picnic table may be desired near the entrance to the Growing power offices, to accommodate field workers' lunches.

NATURE EXPLORE CLASSROOM

The Nature Explore™ program is a joint effort of the Arbor Day Foundation and Dimensions Educational Research Foundation in collaboration with organizations such as U.S. Forest Service, U.S. Fish and Wildlife Service, American Society of Landscape Architects, and many others who are committed to reconnecting children with nature.

This concept plan has been developed based on field-tested, research-based principles for creating effective spaces that support children's interactions with the natural world. The Nature Explore Classroom will serve students at Badger Rock Middle School and is also being considered as a site for use by the neighborhood after hours and on weekends.

The entire Nature Explore Classroom space will be divided into distinct activity areas: a music and movement area, garden/dirt digging area, messy materials area, open area, sand area, climbing/crawling area, nature art area, and gathering area. By providing a complete mix of activities, children with a variety of needs and learning styles are engaged. By keeping areas separated, behavioral issues are reduced. More things can be added to each area over time, but creating all recommended areas and providing at least one experience for children in all the areas is important.

INTEGRATING LANDSCAPE ELEMENTS

It is important that the building and landscape complement each other. The addition of whimsical design elements will harmonize with the various garden structures and sculptural elements. Roof gardens and planters built into the balcony walls will provide the Charter School students with direct access from their second floor learning area to outdoor growing spaces. We are working with a 'living wall' designer, and hope to incorporate living walls as a part of our façade treatment on east, south and west building elevations.

ENERGY ELEMENTS

BUILDING SHELL

The Resilience Research Center (RRC) will be a highly energy efficient project that will include renewable energy. Although the site is limited to 3.85 acres, evaluation is currently underway to determine whether it may be feasible and desirable to set a goal of eventually achieving zero-net energy. The basic elements in energy efficiency are an efficient shell and orientation to support daylighting, provide views, and create an inspiring learning and working environment. Window location and specification will provide views while managing glare and solar heat gain.

BUILDING LIGHTING

High performance electric lighting with low lighting power densities will complement the daylight in the facility. As new technologies are developed, the RRC will strive to replace old technologies with new.

HVAC

Ground-sourced heat pumps (geo-thermal energy) are likely the most promising HVAC system because of their high efficiency, the ability to move heat to different locations (including to and from the fish tanks and greenhouses), and flexibility in design and operation.

AIR HANDLING UNITS AND NATURAL VENTILATION

Air handling units will include energy recovery ventilation and be allocated to different spaces to allow partial operation of the facility. Operable windows and clerestories may be used to enable natural ventilation to complement mechanical ventilation.

PHOTOVOLTAIC ELEMENTS

The minimum initial renewable energy goal is to use solar energy to provide 15% of the Resilience Research Center's energy requirement. The long continuous awnings above the south-facing windows are photovoltaic (PV) panels. Solar thermal energy will also be included to support hot water needs in the fish tanks and for kitchen and bathroom use. The PV system will be designed to be expandable so, as funding becomes available, arrays of PV panels and other solar electric systems would extend across the roofs to accomplish the potential goal of providing 100% of the Center's need for energy on a net-zero basis from onsite renewable sources. An option under evaluation for the south-facing slopes of the greenhouse roofs and the main entrance canopy is a BIPV (building integrated photovoltaic) approach that uses PV laminated glass that will generate energy while providing filtered light.

ENERGY RESEARCH ELEMENTS

The RRC is in discussion with MGE (Madison Gas and Electric) regarding using a portion of the roof area, as well as other areas, as a renewable energy research and demonstration center for emerging technologies. These might include low temperature solar energy supporting a Sterling cycle engine to provide electricity, vinyl flat roof adhered PV, SunPower's new T5 Lego Block type PV system, small scale wind applications, and new technologies we can't conceive of now. The vision is to provide energy education and research opportunities that are accessible to the middle school, MGE, and the broader community.

WATER MANAGEMENT

The Resilience Research Center has a focus on water management and conservation that is reflected in building and site use. Water supplied for greenhouses, fish tanks, and site agriculture will use rain water captured and stored on roof areas and supplemented as needed by City water. Water recycling will capture waste water from fish tanks for plant application. Other water conservation techniques will include the use of low-flow fixtures and waterless urinals.

BUILDING CONTROL SYSTEM

The building control system (BCS) will be used to provide user-ready interface with building systems to provide an exceptional indoor environment. In addition to providing control, the monitoring capability of the BCS enables energy efficient operation and educational information on building energy use and renewable energy generation to students, other building users, and the public.

Note: Most, of the above elements are visible in one or more of the attached eye level and "bird's eye" views of the building and site.

COMMUNITY GARDENS

GARDEN PLOTS

Plots will be consistent with City of Madison standard sizes. Several plots are raised planters for handicap accessibility, and the associated pathways are designed to ADA specification.

GARDEN SHEDS

The community gardens will be anchored by three garden sheds. These structures house gardening tools/supplies/hoses available to gardeners. An attached work bench is provided for potting, etc. These structures sit on decomposed granite & are made from treated lumber, and designed to complement the whimsical elements of the Resilience Research Center. Sheds will comply with building code for accessory structures.

PAVILION

A garden pavilion will sit at the crossroads of the community gardens. This open air, rectangular structure consisting of columns and a roof, provides a shaded gathering place where gardeners can rest and get to know each other. It sits on a base of decomposed granite, is made from treated lumber designed to complement the whimsical elements of the Resilience Research Center. Its maximum size is 20'x30', and it will comply with the building code for accessory structures.

ARBOR

The entrance to the community gardens will be defined by an inviting arbor. The words "Community Gardens" announce the transition from the Resilience Research Center Gardens at this gateway. A local artist has offered to donate this custom arbor, constructed of welded steel. It will sit on a base of decomposed granite and will comply with building code for accessory structures.

WATER

Water is available for these gardens through rainwater harvesting, soil moisture-enhancing additives & thoughtfully designed conveyance & infiltration systems, as well as spigots installed near each garden shed.

SITE LIGHTING

One low-level light fixture with motion sensor will be installed on each garden structure. Since the gardens are normally in use during times of lengthy daylight hours, the primary purpose of these lights is as a deterrent to vandalism.

BUFFER FROM NEIGHBORING PROPERTIES

These community gardens are adjacent to residential properties. The City zoning ordinance states that developers of C-2 properties must install a 6-8' fence along the property line shared with R zoned properties. We have initiated discussion with each adjacent property owner, to offer either plantings as they prefer on either their property or ours, and/or a fence, and accessibility to community gardens and the Resilience Research Center directly from their properties. We intend to provide each of these neighbors with a 'custom' buffer that will take into account the views of the RRC from their properties & their desire for either inclusion or privacy.

INTENSIVE URBAN AGRICULTURE LANDS

GREENHOUSES

The greenhouses on our site will be of varying sizes and serve a variety of functions. These structures are constructed primarily of glass and photovoltaic roof areas as feasible, and aluminum, and sit on a continuous concrete footing. We are committed to ongoing maintenance for both continued functionality and appearance. Our greenhouses will comply with building code for accessory structures.

HOOP HOUSES

Although these are considered temporary structures, our hoop houses will remain in place for a considerable period of time and will comply with building code for accessory structures. Our standard hoop house is constructed of an aluminum/treated wood frame with a door at each end. This frame is covered in 2 layers of 6 mil polyethylene film. As the intensivity of agronomy increases, the hoop houses can expand into the garden space. We are committed to quarterly maintenance of these structures, and welcome semi-annual City inspections to avoid or correct any unsightly defects, which would detract from the appearance of the Resilience Research Center and the neighborhood.

EXPERIMENTAL STRUCTURES

In keeping with our mission as a research facility, we intend to explore designs and inventions for structures that may accomplish more intensive agronomic practices. As each option is explored, we will come back to the City with construction drawings for approval. Each will comply with building code for accessory structures. These structures may rotate through the site on an annual or bi-annual basis, and are not intended to be permanent structures. All maintenance standards in place for initial structures apply to these structures as well, and we understand that experimental structures may require approved alterations to the conditional use.

COMPOSTING/VERMACULTURE

Our composting facility plays an integral part in the 'closed loop' system of providing food. Our gardens supply food to Badger Rock Middle School, other on-site users, & local restaurant partners, and in turn, these restaurants supply vegetable scraps back to the Resilience Research Center. The food scraps from on-site users will be composted on site, and that of our restaurant partners at our off-site composting facility 1/2 mile away. Here they are layered in 4' square treated wood containers with worms and soil to produce compost, which in turn, supplies nutrients to the next generation of plants.

Additionally, the energy used in creating compost creates heat. We harness that heat by surrounding the base of the hoop houses with compost, which insulates them from freezing temperatures in winter.

Our drives and walks will be maintained daily to insure that they are free of gardening waste/compost.

FRUIT & NUT TREES

As a major component of our buffer yards, our infiltration basin, bioswales and parking area canopy, fruit & nut trees play an important role in the well-rounded edible landscape. Fruit trees are available in dwarf, semi-dwarf and standard sizes. We will use different cultivars as each application warrants. For example, in a middle school garden, a dwarf tree may be most appropriate, but as parking area canopy, a standard fruit tree would be desired. We will carefully maintain and monitor ripening fruits to avoid 'groundfalls'. Groundfalls will be used for compost.

RESEARCH AGRONOMY/INTENSIVE URBAN AGRICULTURE

Our project partner, Growing Power, has successfully practiced intensive urban agriculture in the City of Milwaukee for decades. As with any farming operation, they have adapted their practices and structures over time to maximize yield. At the Resilience Research Center we will study and record yields, and working with varied soils, sunlight, spacing, practices, etc., will evaluate the productivity of the gardens. The produce generated will be shared with the school and neighborhood center, sold in a Market Basket (CSA) program, and delivered to our restaurant partners.

SCHOOL GARDEN

The Badger Rock Middle School students will be in school year-round to take full advantage of the growing season. Although they will have access to the professionally-run gardens, we intend for them to have their own gardens and greenhouse to use in education.

EXPERIMENTAL AGRONOMY

Dr. Aicardo Roa, formerly of the Dane County Land Conservation Department, has invented several polymers and soil amendments which have a variety of benefits to the agronomist. We are working closely with him to provide opportunities for research in infiltration capacity, nutrient delivery, and soil moisture absorption enhancement as they pertain to the science of agronomy.

AQUACULTURE

Within our hoop houses/greenhouses will be below-grade, timber structures used as fish tanks. These tanks are heated by swimming pool heaters. Above the tanks are a series of treated wooden 'lofts', filled with stone and used for growing plants. The water from the fish tank, containing nutrient-rich fish waste, is pumped up to these lofts where the nutrients are utilized by the plants. The clean water is returned to the fish tank below. At the end of each cycle, both fish and plants are sources of food for the school and restaurant partners, demonstrating a 'closed-loop' system. Our aquaculture facility will comply with City of Madison building code.

WATER

Our roofs will serve as a storm water collection facility. Water may be stored high on the building to gravity-feed the gardens. Prior to a known major rain event, these tanks will be emptied to allow for storage, as a part of our zero net runoff storm water management plan. Additionally, spigots throughout the site and possibly a well, insure water delivery to gardens in times of drought. The rainwater harvesting tanks will also include overflow downspouts directed to a rain garden or other pervious areas in the event the rain volume exceeds the tank capacity.

SITE LIGHTING

One low-level light fixture with motion sensor will be installed at the entrance to each garden structure. Since the gardens are normally in use during times of lengthy daylight hours, the primary purpose of these lights is as a deterrent to vandalism.

SERVICE DRIVE

Our service drive is sized to accommodate an aerial ladder fire truck, but is more generally used for produce pick up, compost drop off, school and facility deliveries, and parking for community gardens and research garden staff. It may also be used to service the incubator kitchen as needed. The largest trucks using this drive, other than fire trucks, will be 2 axle panel trucks and garbage trucks. Semi tractor/trailers will not enter this facility at any time.

BUFFER FROM NEIGHBORING PROPERTIES

These gardens are adjacent to residential properties. The City zoning ordinance states that developers of C-2 properties must install a 6-8' fence along the property line shared with R zoned properties. We have initiated discussion with each adjacent property owner, to offer either plantings as they prefer on either their property or ours, or a fence, and accessibility to gardens and the Resilience Research Center directly from their properties. We intend to provide each of these neighbors with a 'custom' buffer that will take into account the views of the RRC from their properties & their desire for either inclusion or privacy.

PAVED AREAS

DRIVE AISLES

Our drive aisles will be a concrete surface, designed to withstand the load of City emergency and service vehicles. This impervious surface is a trade-off for added pedestrian accessibility, ease of bicycle traffic, and maximum reflection of sunlight.

PARKING STALLS

Grasscrete is an interlocking concrete paver, which installed over a sub-base of gravel, infiltrates storm water at a higher rate than lawn. It also reflects sunlight, reducing the heat island effect. All parking stalls at the Resilience Research Center will be Grasscrete, contributing to storm water infiltration. Any runoff from Grasscrete parking stalls will be conveyed directly into bioswales.

SIDEWALKS ADJACENT TO THE MAIN STRUCTURE

The walks surrounding the main building will be poured concrete for accessibility and reflection of sunlight.

BIKE/PED PATHS

Bike/pedestrian paths on our site will be 10' wide, decomposed granite to allow for two-way (4' wide) bicycle traffic and (2') pedestrian traffic.

GARDEN PATHS

Walks and garden paths will be a variety of widths and materials which reflect the hierarchy of their uses. The most common materials are mulch and decomposed granite, although experimental materials with the potential for improved infiltration capacity will be studied.

STORM WATER TREATMENT & FACILITIES

BIOSWALES, FORESTED WETLAND, INFILTRATION BASIN

Our storm water management plan is based on best management practices (BMPs) as we know them today. The technological advances in this area are coming at such a fast pace, that we can't anticipate how quickly BMPs used on our site will become outdated. We intend to work toward our goal of detaining and infiltrating 100% of the storm water runoff volume generated on site. Additionally, we are working to capture runoff from an approximately 2 off-site acres, as it makes its way toward the City detention area on Rimrock Road. We intend to hold it in storage tanks for use in the community gardens. We are now considering a system that would include bioswales, a forested wetland, and an infiltration basin in a system that infiltrates, conveys, and detains. As new BMPs develop, we intend to incorporate them into our storm water plan and study their impact. At no time during the occupation of the building will the site storm water management practices provide mitigation below the City standards for redevelopment of this type.

The bioretention basins will treat the parking areas for total suspended solids (TSS) and serve as oil and grease control. There will be grass filter strips and grasscrete prior to the bioretention basins that will help extend the life of the bioretention basins and infiltration basin as well. The infiltration basin and bioretention basin will be planted with native plants and prairie grasses. These plants would produce seeds that could be harvested in the future. A local nursery could work with students to educate them on seed harvesting.

POROUS PAVEMENT

There are many types of pavement classified as porous, but Grasscrete, on a substantial bed of gravel, stands out as the one with the greatest potential for infiltration. The amount of storm water directed to the Grasscrete is relatively little, so the surface area is large enough to infiltrate storm water from a large event.

ROOF COLLECTION SYSTEM

We desire to capture and contain one hundred percent (100%) of a 100-year, 24 hour storm volume that lands on the roof of our facility. This storm water will be the primary source of water for our on-site gardens. Although they will never be full for long, twenty-four hours prior to an expected major rain event these tanks will be emptied to insure they are holding at maximum capacity when needed. The rainwater harvesting tanks will also include overflow downspouts directed to a rain garden or other pervious areas in the event the rain volume exceeds the tank capacity. A portion of the roof is also planned to be green. Our roof collection system will comply with the City of Madison building code.

RAIN BARRELS

Rain barrels at the Resilience Research Center will demonstrate that holding tanks can be both functional and aesthetic. As with the roof collection system, these tanks will be emptied to insure they are holding at maximum capacity when needed and will also include appropriate overflow accommodations. Rain barrels will comply with the City of Madison building code.

POLYMERS

We will test water retention and treatment through installation of polymer modified mulch, wood chips, fiber and soil, as invented by Dr. Aicardo Roa, formerly of the Dane County Land Conservation Department. As Dr. Roa and his team invent new polymers and mulches, we hope to use our site as a testing facility for their efficiency in storm water management.

THE ART OF RESILIENCE

LIVING WALLS

The concept of growing plants on a building's exterior walls is an old one. At the Resilience Research Center, we hope to take this ancient concept and turn it into a high-tech solution for:

- insulating the building
- creating additional space for intensive urban agriculture
- utilizing roof run-off
- reducing the perception of a large façade
- introducing plants as public art

The Wisconsin climate is not conducive to containerized plant growth through the winter season, but we plan to study different systems and plant materials on east, south and west facades, to find a way to use plants to beautify our façade while yielding a food crop for our facility.

HISTORIC FARMING SCULPTURES

From windmills to weather vanes, the functional elements of early American farms have stood the test of time as 'objets d'arte' in the rural landscape. One hundred and fifty years later, their beauty and purpose is as relevant as is once was. We hope to showcase some of these historic technologies to illustrate that often the simple approach is the best approach. We intend to be good neighbors in our residential neighborhood, so any sculpture/technology showcased will be to the scale appropriate (minor) and in a location that will not negatively affect our residential neighbors.

KUSARI DOI & RAINWATER DISPERSEMENT SYSTEMS

Japanese inspired rain chains are popping up with more frequency as people learn about simple & ancient storm water practices. The Resilience Research Center showcases rainwater dispersement systems as functional and beautiful ways to enhance the landscape with works of art.

STUDENT/NEIGHBORHOOD CENTER PROJECTS

The Resilience Research Center is a hub of community culture and education. Art is an integral part of the landscape here, where permanent pieces and temporary showings of student/neighborhood center works punctuate the site.

LIVING STRUCTURES

There are many ways to use plants to create outdoor spaces. We bring the full breadth of landscape architecture to this notion in the development of outdoor rooms. Using a variety of plant material, we lead visitors through spaces via intriguing terminal views, and invite them to stop and enjoy these 'living' rooms.

OVERVIEW OF MISSION

Project Description
The Resilience Research Center will transform a vacant school building and site on Madison's South Side into a neighborhood support center, with productive urban agriculture and a project- based charter middle school. It will serve as a multigenerational neighborhood hub for socializing, learning, training, research, and healthy resilient living.

The lead project partners, in addition to the immediate neighborhoods, are Will Allen and Growing Power, the Center for Resilient Cities, Badger Rock Middle School and Madison Gas and Electric. Support and program partners include Sustain Dane, Community Action Coalition, Community Groundworks and MACLT – all organizations with urban agriculture expertise and extensive practice in working with communities.

Activity Areas
The Resilience Research Center will encompass six major areas of activity:

- **Neighborhood-Based, Neighborhood-Focused Services (Mixed Use)**

The neighborhood presently offers little in the way of neighborhood-focused businesses. (Examples: coffee shop, market, other needed services.) The plan offers up to 5000 square feet of space to accommodate neighborhood focused business.

- **Intensive Urban Agriculture**

The entire site will be involved in year-round food production outdoors including community gardens, hoop houses and greenhouses using sustainable growing practices, including worms-as-compost-creators, and fish. Training in food production, preparation, service and marketing will involve entrepreneurial youth development with an emphasis on"green" neighborhood jobs.

- **Neighborhood Center**

The campus will serve as an active hub of youth and teen programming, adult services, senior activities, community activities, events, and gatherings, and "green" job development.

- **Project-Based Charter Middle School – Bring Back Badger**

A 120-student project-based charter middle school will feature an interdisciplinary program focusing on environmental sustainability with culturally-relevant teaching. Approximately 50% of the students will be from the immediate neighborhoods. The campus serves as a living laboratory for hands-on exploration and study of food production and science, energy and water use, and community cooperation—all crucial areas of knowledge for future academic and job success.

• **Energy Services Center**

Madison Gas and Electric and the Resilience Research Center will demonstrate a wide range of innovative approaches to green, energy-efficient design, ranging from low-cost alternatives that anyone can use at home to higher-cost elements that demonstrate cutting-edge technologies and design.

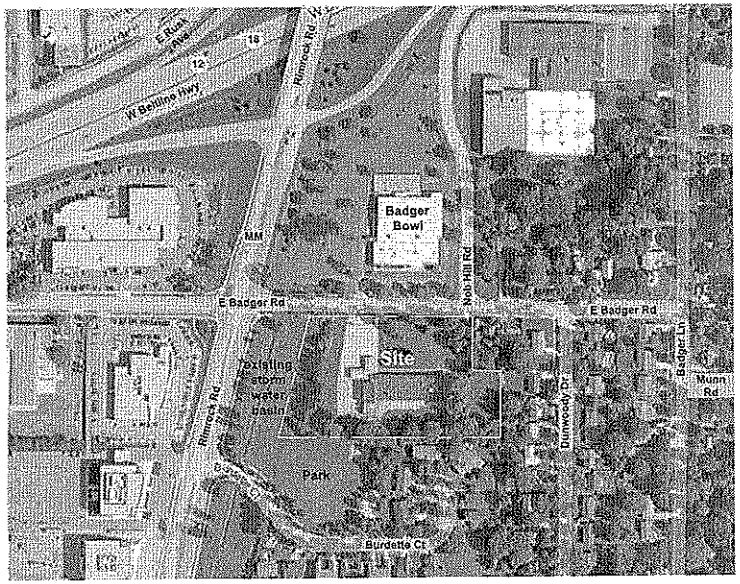
• **Research/Measurement and Outreach**

All of the above activities— neighborhood center and services, intensive urban agriculture, charter school, and energy use in addition to water and health—will be accompanied and enriched by applied research, measurement, testing, and outreach. The goals are to enhance quality improvement of all activities, operations, and services and to make significant contributions to knowledge in every area. In keeping with our mission, we recognize that many of our site and building elements will be replaced eventually, and we may need to have an alteration approved (likely a minor alteration) for some of the changes over time.

Letter of Intent (***12 copies)***: describing this application in detail including, but not limited to: existing conditions and uses of the property; development schedule for the project; names of persons involved (contractor, architect, landscaper, business manager, etc.); types of businesses; number of employees; hours of operation; square footage or acreage of the site; number of dwelling units; sale or rental price range for dwelling units; gross square footage of building(s); number of parking stalls, etc.

Resilience Research Center

501 E. Badger Avenue, Madison, WI



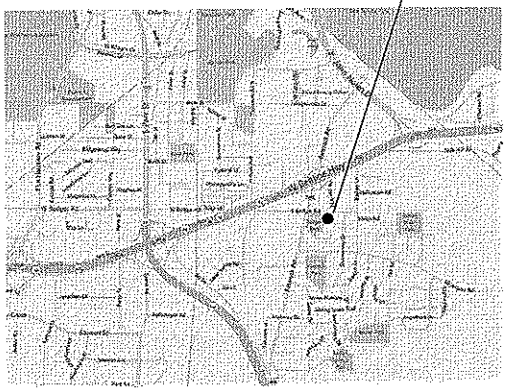
0 100' 200' 400'

Graphic Scale

Site Aerial

N

Site Location



Location Map

Sheet Index:

Owner:

CENTER FOR RESILIENT CITIES
Good Living Well Grounded

Center for Resilient Cities
200 N. Blount Street
Madison, WI 53703

Tel. 608.255.9877
Fax 608.255.6793
www.resilientcities.org

Architect / Construction Manager:

Hoffman

Hoffman, LLC
122 East College Avenue, Suite 1 G
Appleton, WI 54911

Tel. 800.236.2370
www.hoffman.net

P.O. Box 8034
Appleton, WI 54912

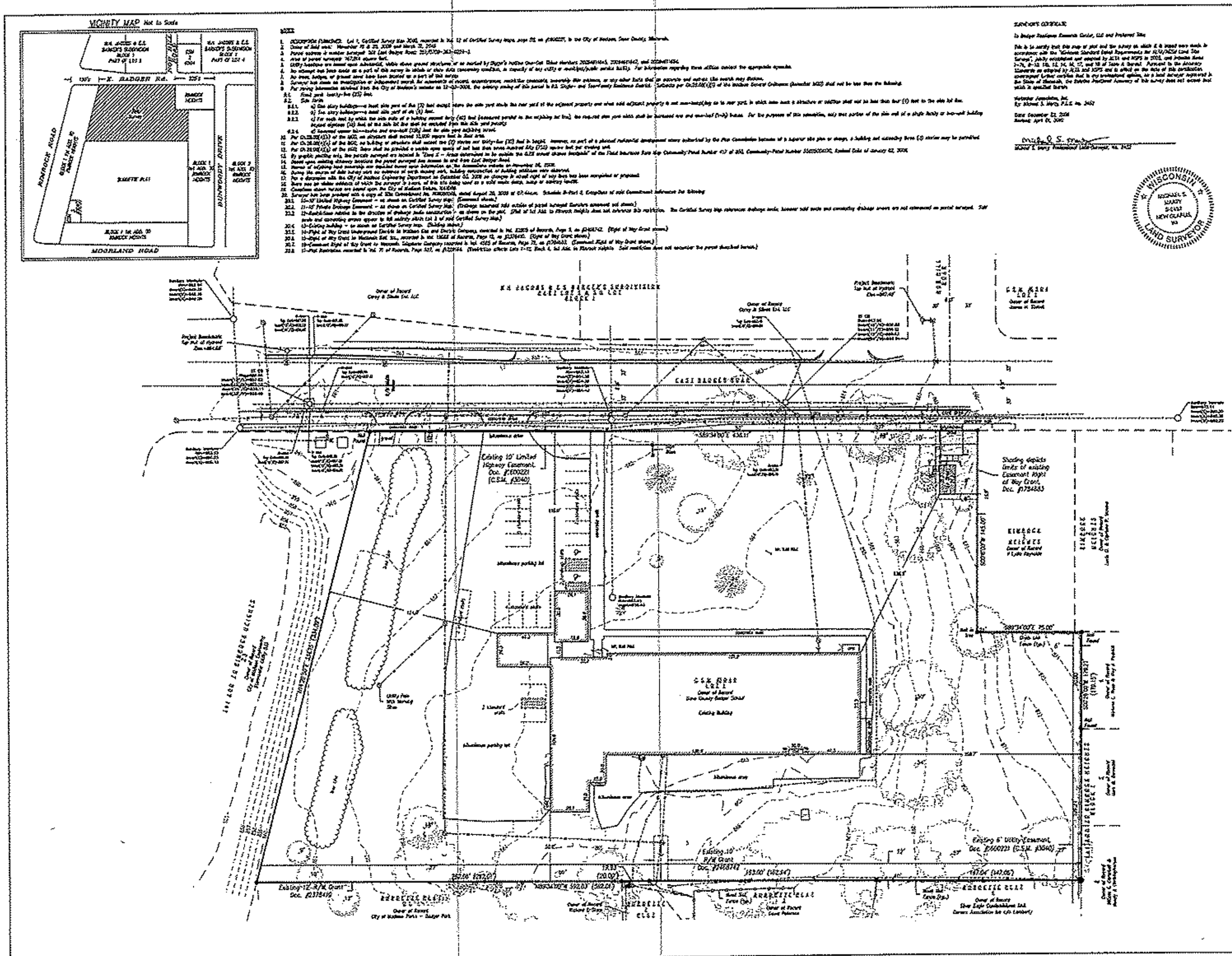
City of Madison

Land Use Application Submittal

Resilience Research Center

8 September 2010 / Revised 22 October 2010

Hoffman planners • architects • construction managers 800.236.2370 www.hoffman.net | tpm



vierbicher
planners | engineers | advisors

Surveyed For:
Badger Resilience
Research Center, LLC
200 North Blount Street
Madison, WI 53703

REVISION DATE	DESCRIPTION
04/01/2010	LOCATION OF TREES

PROJECT NO. 05107230
CAD FILE NAME
DRAWN BY PEH & MSM
CHECKED BY JRD
DATE December 22, 2009
CLIENT PROJECT NO.

TITLE
ALTA/ACSM Land Title Survey-501 E. Badger Rd.
LOT 1, CERTIFIED SURVEY MAP NUMBER 5040, AS RECORDED IN VOLUME 12 OF CERTIFIED SURVEY MAPS, ON PAGES 28-29, AS DOCUMENT NUMBER 1600221, DANE COUNTY REGISTRY, LOCATED IN THE NE¼ OF THE SW¼ OF SEC 36, T07N, R09E, CITY OF MADISON, DANE COUNTY, WISCONSIN

SHEET | MAP NUMBER S-262

0' 30' 60' 120'
Graphic Scale

Existing Conditions Plan

N

Sheet No. 1.0

Existing Conditions Plan
Resilience Research Center
22 October 2010

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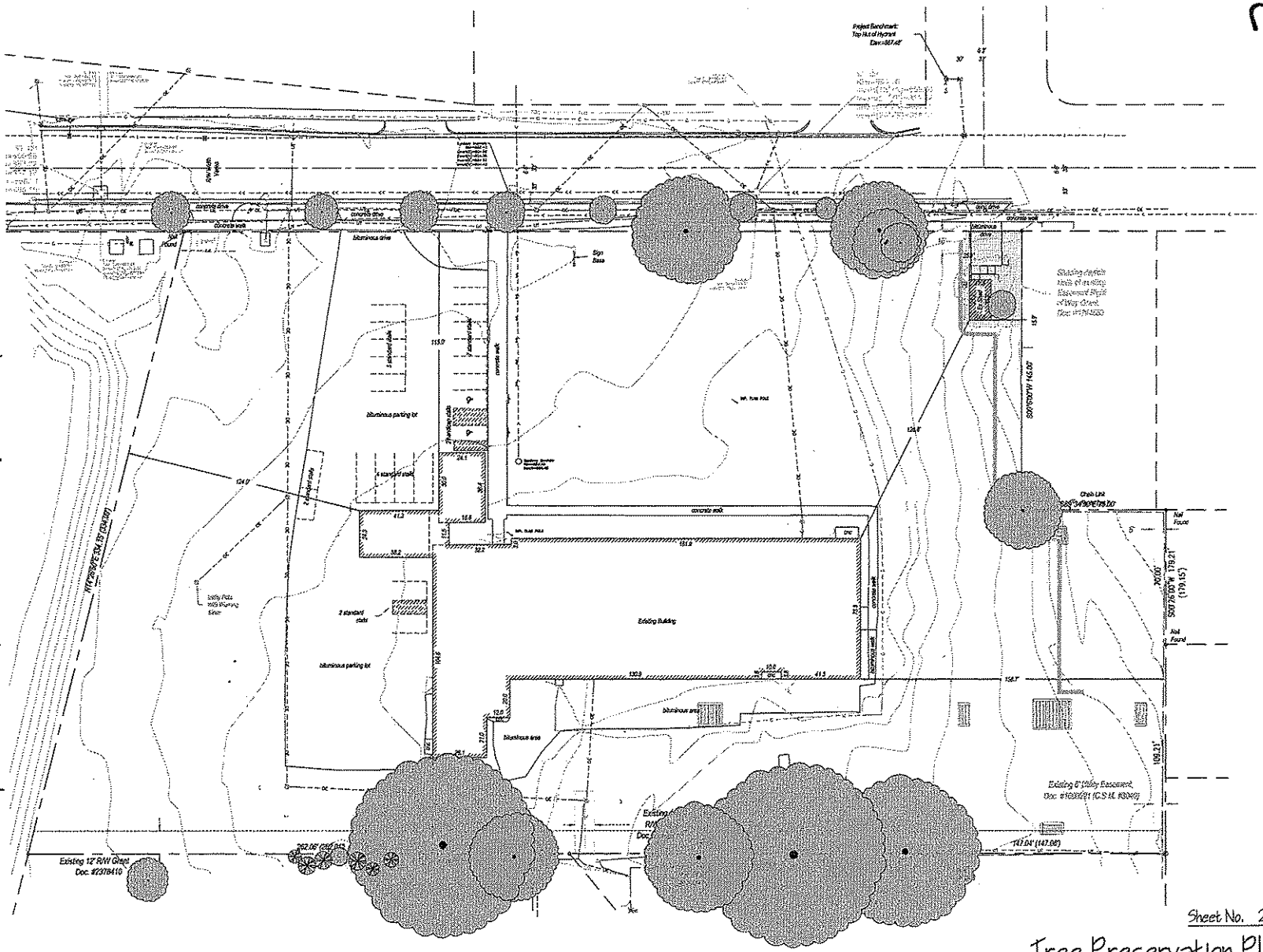
notes:

1. PRIOR TO START OF WORK, ARBORIST TO TOP PRUNE EXISTING TREES WITHIN LIMITS OF CONSTRUCTION AS NEEDED TO MITIGATE POTENTIAL DAMAGE TO ROOTS.
2. IN EARLY SPRING OR LATE FALL, PRIOR TO START OF WORK, ARBORIST TO APPLY A DEEP-ROOT FERTILIZER WITHOUT NITROGEN, SUCH AS 9-20-10 THROUGHOUT THE FEEDER ROOT AREA OF EACH EXISTING TREE WITHIN LIMITS OF CONSTRUCTION.
3. PRIOR TO START OF WORK, ARBORIST TO INSTALL BARRIER FENCING @ A MIN. 5' OUTSIDE TREE CANOPY, CREATING A COMPLETE LOOP.
4. GENERAL CONTRACTOR TO PAY A FINE OF $1,000 PER DAY, PER BREACH OF FENCING.
5. FENCING TO BE REMOVED BY ARBORIST WITHIN ONE WEEK AFTER FINAL INSPECTION OF BUILDING CONSTRUCTION.

key

existing deciduous tree

existing evergreen



0' 20' 40' 80'

Graphic Scale

Tree Preservation Plan

N

Sheet No. 2.0

Tree Preservation Plan

Resilience Research Center

22 October 2010

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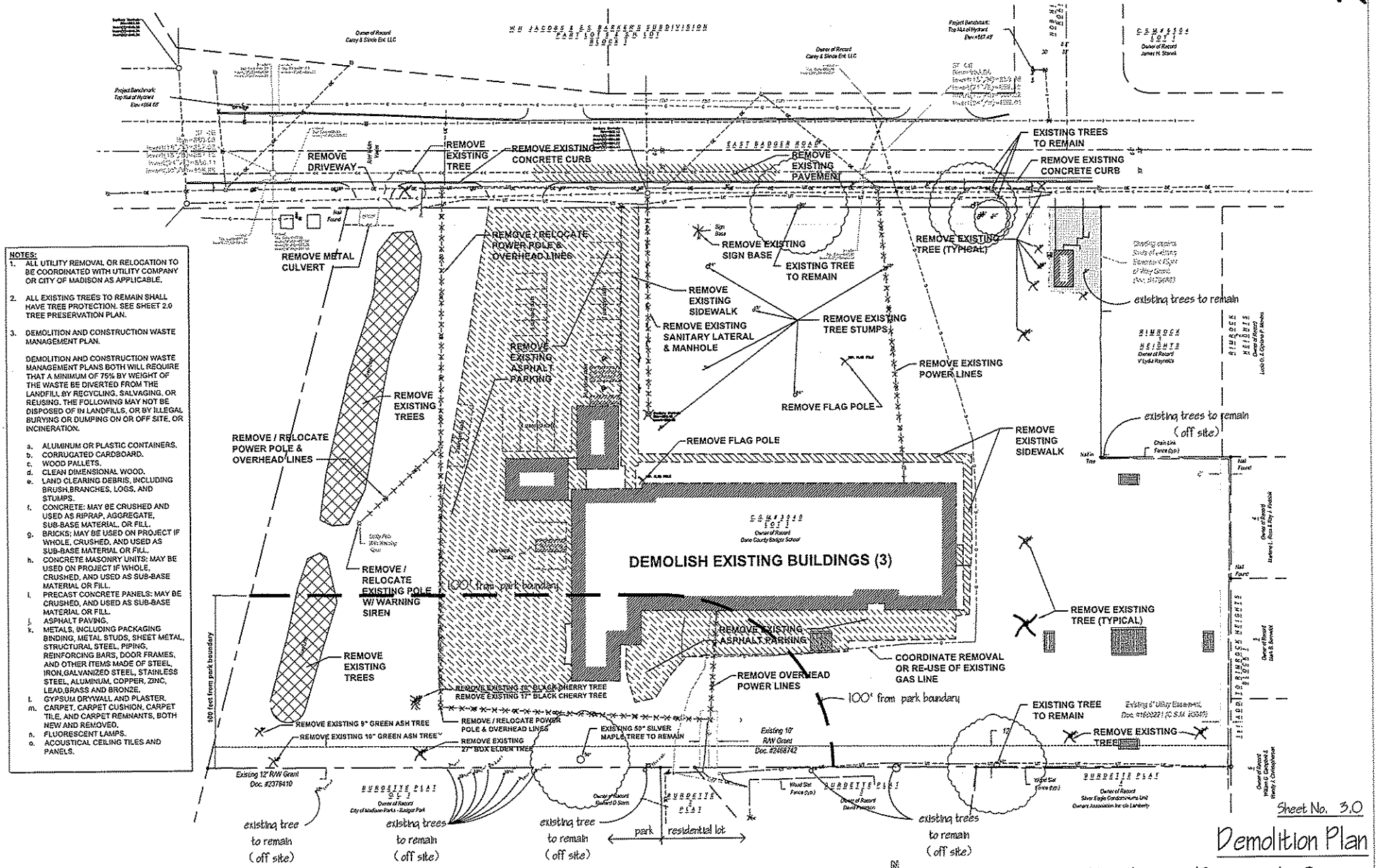

NOTES:

1. ALL UTILITY REMOVAL OR RELOCATION TO BE COORDINATED WITH UTILITY COMPANY OR CITY OF MADISON AS APPLICABLE.
2. ALL EXISTING TREES TO REMAIN SHALL HAVE TREE PROTECTION. SEE SHEET 2.0 TREE PRESERVATION PLAN.
3. DEMOLITION AND CONSTRUCTION WASTE MANAGEMENT PLAN.

   DEMOLITION AND CONSTRUCTION WASTE MANAGEMENT PLANS BOTH WILL REQUIRE THAT A MINIMUM OF 75% BY WEIGHT OF THE WASTE BE DIVERTED FROM THE LANDFILL BY RECYCLING, SALVAGING, OR REUSING. THE FOLLOWING MAY NOT BE DISPOSED OF IN LANDFILLS, OR BY ILLEGAL BURYING OR DUMPING ON OR OFF SITE, OR INCINERATION.

   a. ALUMINUM OR PLASTIC CONTAINERS.
   b. CORRUGATED CARDBOARD.
   c. WOOD PALLETS.
   d. CLEAN DIMENSIONAL WOOD.
   e. LAND CLEARING DEBRIS, INCLUDING BRUSH,BRANCHES, LOGS, AND STUMPS.
   f. CONCRETE: MAY BE CRUSHED AND USED AS RIPRAP, AGGREGATE, SUB-BASE MATERIAL, OR FILL.
   g. BRICKS: MAY BE USED ON PROJECT IF WHOLE, CRUSHED, AND USED AS SUB-BASE MATERIAL OR FILL.
   h. CONCRETE MASONRY UNITS: MAY BE USED ON PROJECT IF WHOLE, CRUSHED, AND USED AS SUB-BASE MATERIAL OR FILL.
   i. PRECAST CONCRETE PANELS: MAY BE CRUSHED, AND USED AS SUB-BASE MATERIAL OR FILL.
   j. ASPHALT PAVING.
   k. METALS, INCLUDING PACKAGING BINDING, METAL STUDS, SHEET METAL, STRUCTURAL STEEL, PIPING, REINFORCING BARS, DOOR FRAMES, AND OTHER ITEMS MADE OF STEEL, IRON,GALVANIZED STEEL, STAINLESS STEEL, ALUMINUM, COPPER, ZINC, LEAD,BRASS AND BRONZE.
   l. GYPSUM DRYWALL AND PLASTER.
   m. CARPET, CARPET CUSHION, CARPET TILE, AND CARPET REMNANTS, BOTH NEW AND REMOVED.
   n. FLUORESCENT LAMPS.
   o. ACOUSTICAL CEILING TILES AND PANELS.

REVISED 10-22-10:
- ADD TREE SPECIES (TREES WITHIN 100'OF PARK).
- ADD DEMOLITION AND CONSTRUCTION WASTE MANAGEMENT NOTE #3

0' 20' 40' 80'
Graphic Scale

Demolition Plan

Sheet No. 3.0

Demolition Plan

Resilience Research Center

22 October 2010

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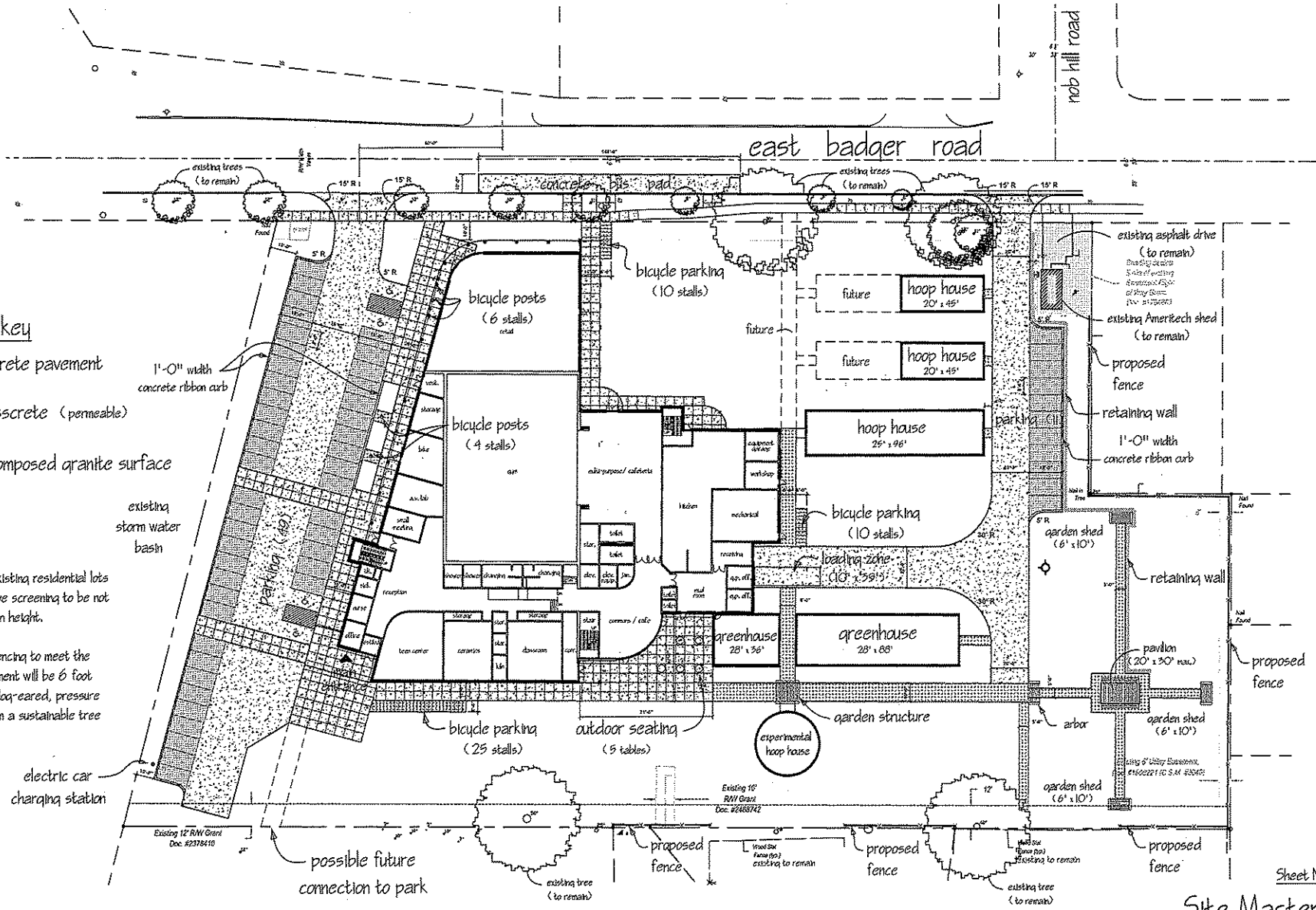

pavement key

- concrete pavement
- grasscrete (permeable)
- decomposed granite surface

existing storm water basin

notes:

1. Site adjoining existing residential lots shall have effective screening to be not less than 6 feet in height.

2. All proposed fencing to meet the screening requirement will be 6 foot board on board, dog-eared, pressure treated wood from a sustainable tree farm.

REVISED 10-22-10:
- UPDATE BUILDING ENVELOPE & FLOOR PLAN.
- REVISE GARDEN STRUCTURE NOTES.
- ADD RIBBON CURB & GRASSCRETE TO PARKING AREAS

0' 20' 40' 80'

Graphic Scale

Site Master Plan

Sheet No. 4.0

Site Master Plan

Resilience Research Center

22 October 2010

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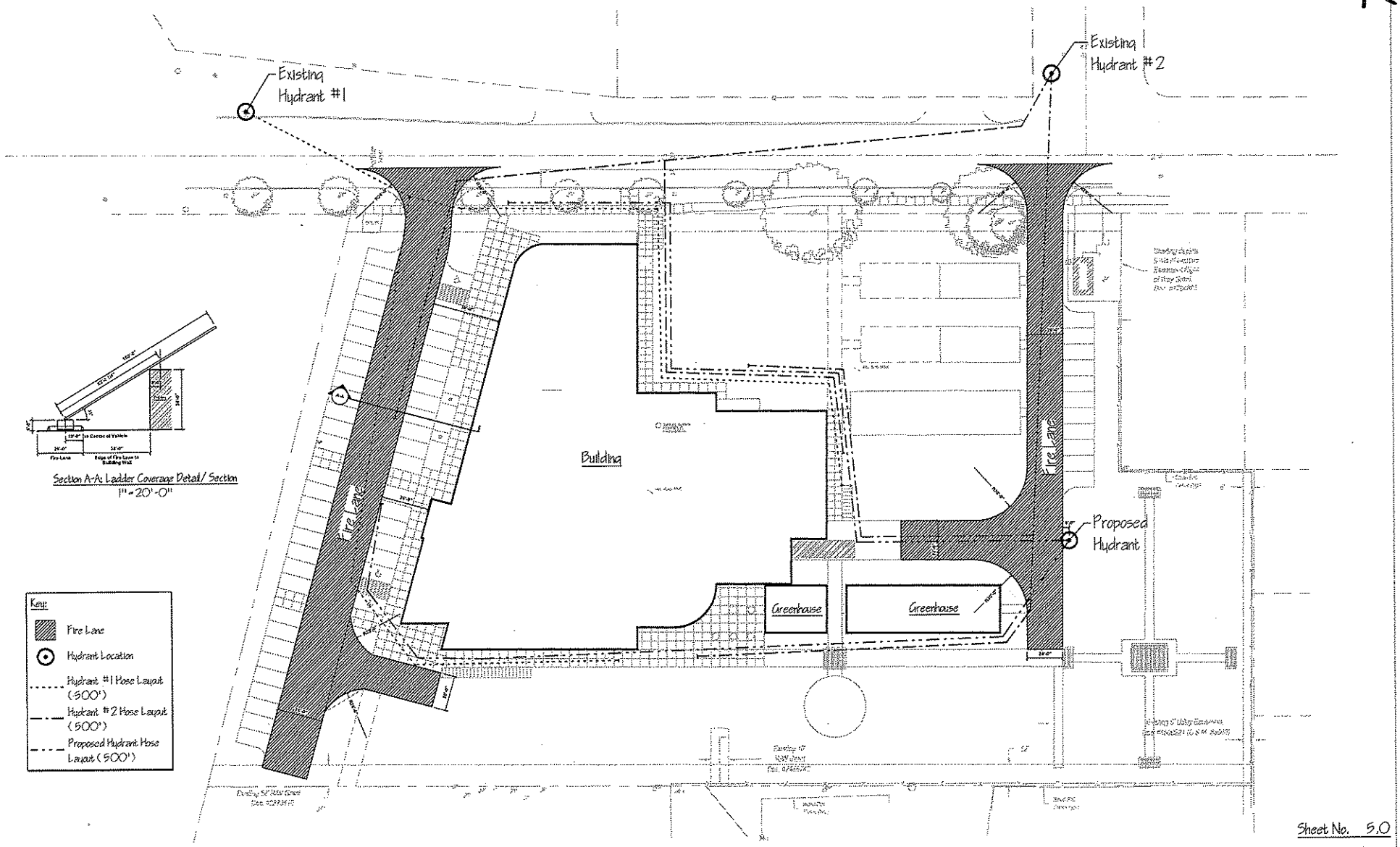

Section A-A: Ladder Coverage Detail / Section
1" = 20'-0"

Site Access Plan

Sheet No. 5.0

Site Access Plan

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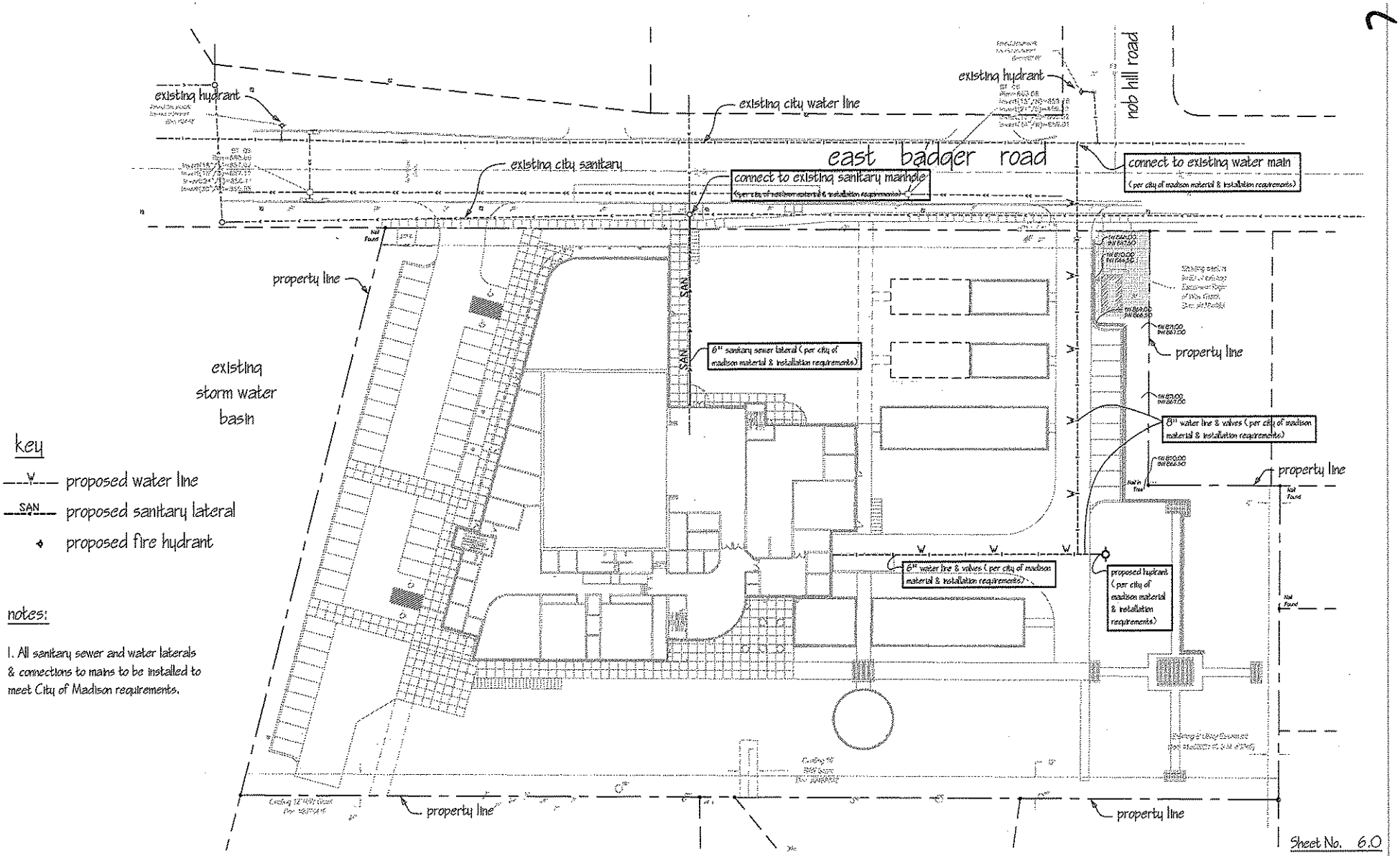

key

- proposed water line
- SAN proposed sanitary lateral
- proposed fire hydrant

notes:

1. All sanitary sewer and water laterals & connections to mains to be installed to meet City of Madison requirements.

REVISED 10-22-10:
- REMOVED GRADING CONTOURS AND SPOT ELEVATIONS
- REMOVED BIOFILTRATION BASINS

0' 20' 40' 80'

Graphic Scale

Utility Plan

N

Sheet No. 6.0

Utility Plan

Resilience Research Center

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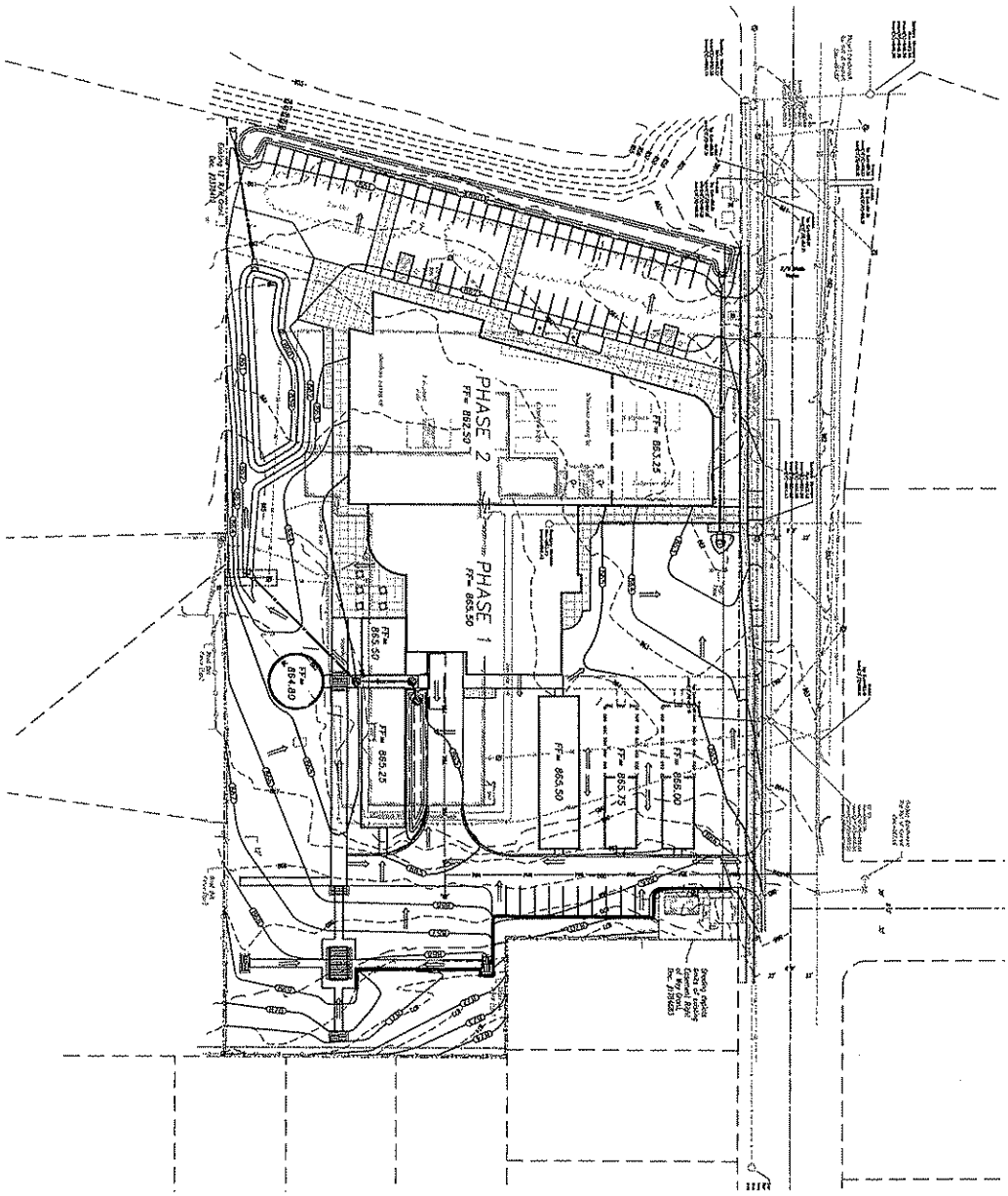
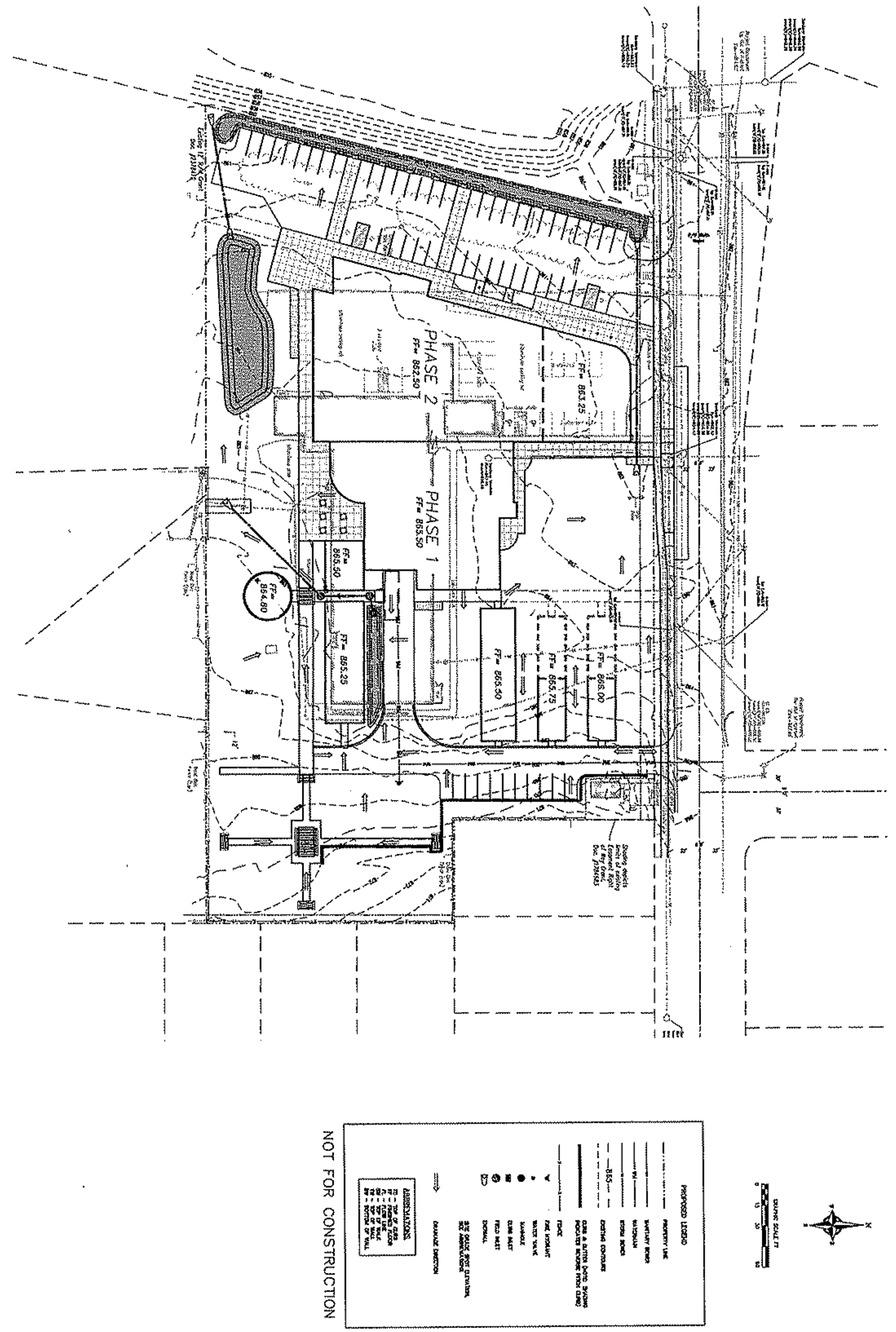


7.0

Conceptual Grading Plan
Resilience Research Center
501 E. Badger Avenue
Madison, Wisconsin

vierbicher
planners | engineers | advisors
REEDSBURG - MADISON - PRAIRIE DU CHIEN
999 Fourier Drive, Suite 201 Madison, Wisconsin 53717
Phone: (608) 826-0532 Fax: (608) 826-0530



Conceptual Stormwater Management Plan

Resilience Research Center
501 E. Badger Avenue
Madison, Wisconsin

Scale: 1" = 30'

Sheet 8.0

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999 Fourier Drive, Suite 201 Madison, Wisconsin 53717
Phone: (608) 826-0532 Fax: (608) 826-0530

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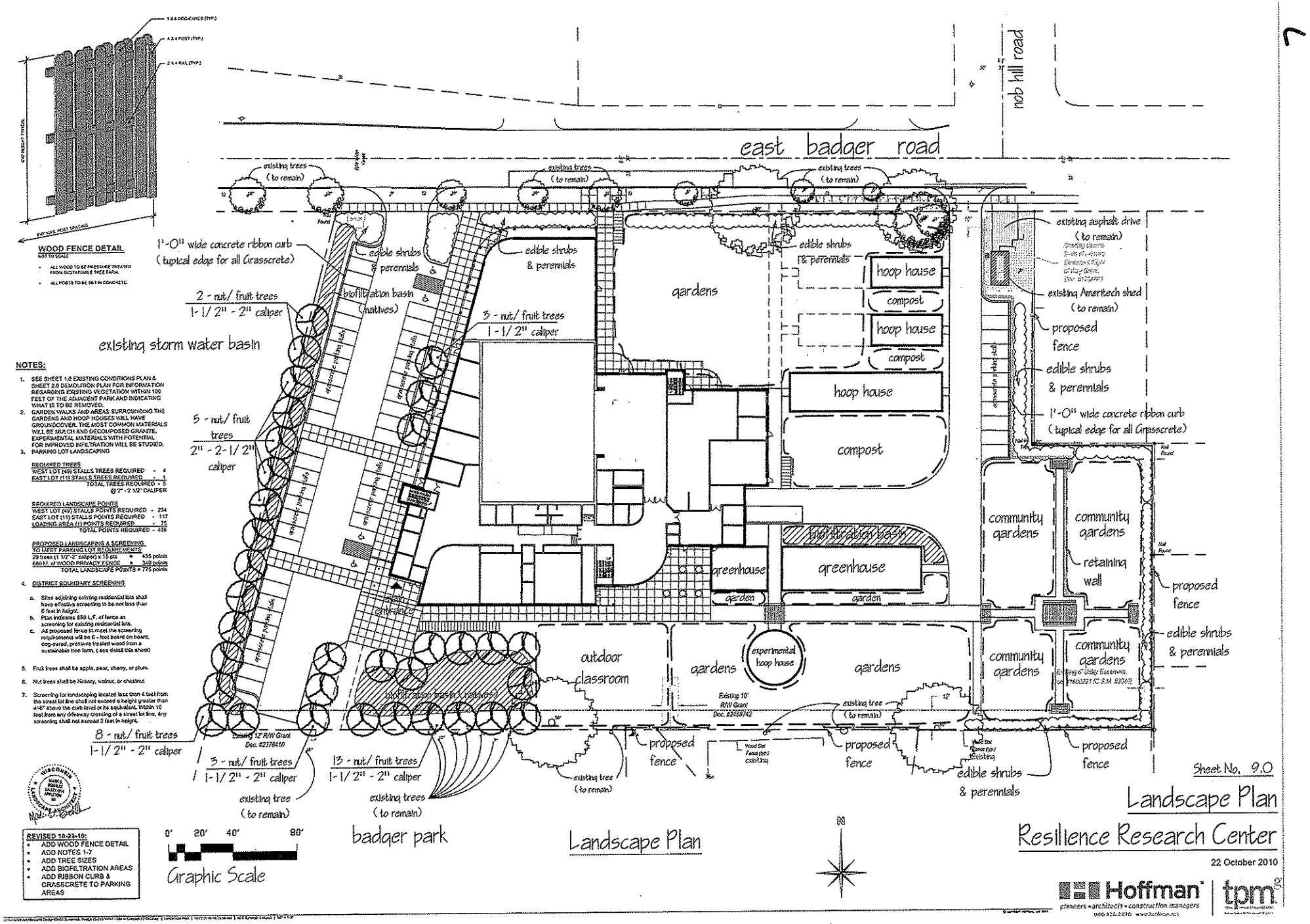

NOTES:

1. SEE SHEET 1.0 EXISTING CONDITIONS PLAN & SHEET 2.0 DEMOLITION PLAN FOR INFORMATION REGARDING EXISTING VEGETATION WITHIN 100 FEET OF THE ADJACENT PARK AND INDICATING WHAT IS TO BE REMOVED.
2. GARDEN WALKS AND AREAS SURROUNDING THE GARDENS AND HOOP HOUSES WILL HAVE GROUNDCOVER. THE MOST COMMON MATERIALS WILL BE MULCH AND DECOMPOSED GRANITE. EXPERIMENTAL MATERIALS WITH POTENTIAL FOR IMPROVED INFILTRATION WILL BE STUDIED.
3. PARKING LOT LANDSCAPING

REQUIRED TREES
WEST LOT (69) STALLS TREES REQUIRED - 4
EAST LOT (11) STALLS TREES REQUIRED - 1
TOTAL TREES REQUIRED = 5
@ 2" - 2 1/2" CALIPER

REQUIRED LANDSCAPE POINTS
WEST LOT (69) STALLS POINTS REQUIRED - 294
EAST LOT (11) STALLS POINTS REQUIRED - 117
LOADING AREA (1) POINTS REQUIRED - 75
TOTAL POINTS REQUIRED = 486

PROPOSED LANDSCAPING & SCREENING TO MEET PARKING LOT REQUIREMENTS
29 trees (1 10"-2" caliper) x 15 pts = 435 points
660 l.f. of WOOD PRIVACY FENCE x 340 points
TOTAL LANDSCAPE POINTS = 775 points

4. DISTRICT BOUNDARY SCREENING
   a. Sites adjoining existing residential lots shall have effective screening to be not less than 6 feet in height.
   b. Plan indicates 880 L.F. of fence as screening for existing residential lots.
   c. All proposed fence to meet the screening requirements will be 6 - foot board on board, dog-eared, pressure treated wood from a sustainable tree farm. (see detail this sheet)
5. Fruit trees shall be apple, pear, cherry, or plum.
6. Nut trees shall be hickory, walnut, or chestnut.
7. Screening for landscaping located less than 4 feet from the street lot line shall not exceed a height greater than 4'-6" above the curb level or its equivalent. Within 10 feet from any driveway crossing of a street lot line, any screening shall not exceed 2 feet in height.

REVISED 10-22-10:
- ADD WOOD FENCE DETAIL
- ADD NOTES 1-7
- ADD TREE SIZES
- ADD BIOFILTRATION AREAS
- ADD RIBBON CURB & GRASSCRETE TO PARKING AREAS

Sheet No. 9.0

Landscape Plan

Resilience Research Center

22 October 2010

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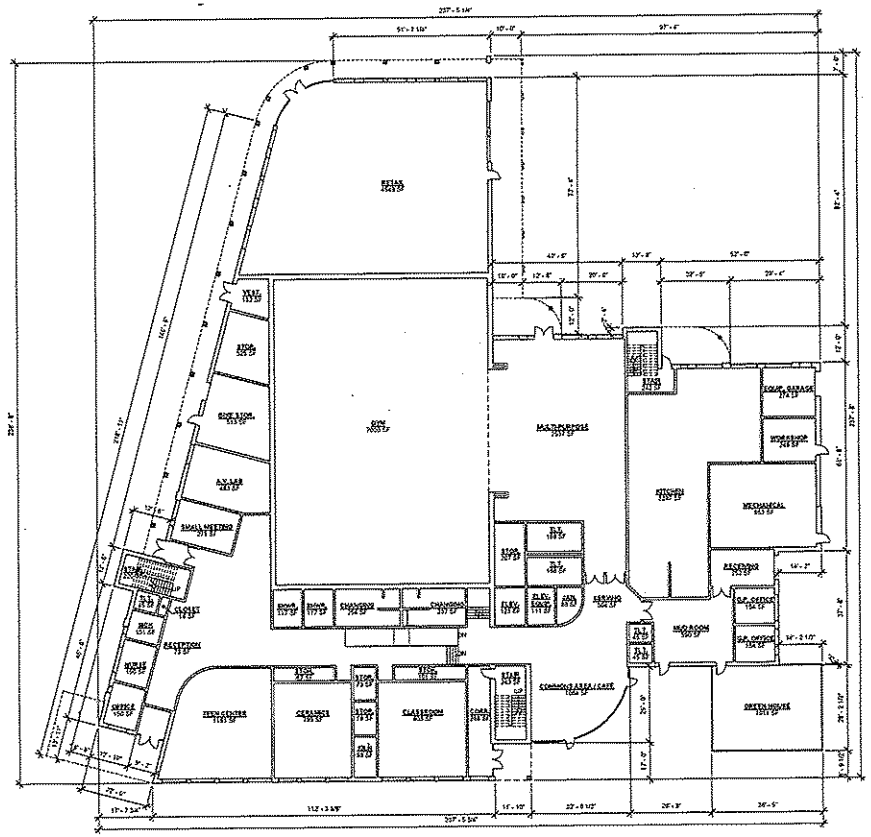
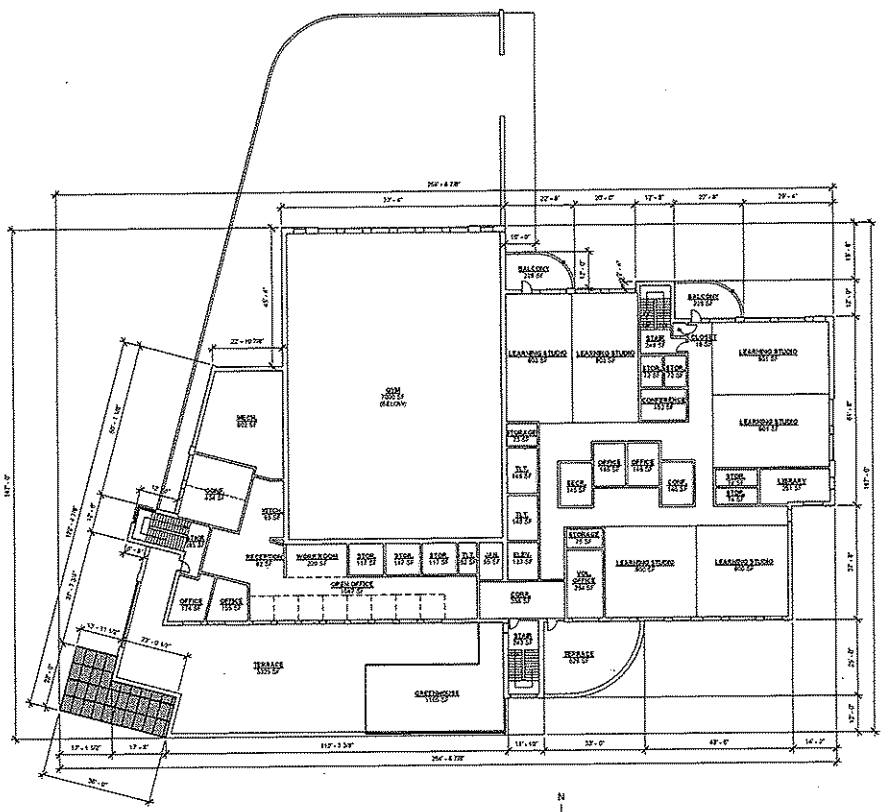


First Floor Plan



Second Floor Plan

Sheet No. 10.0

Floor Plans

Resilience Research Center

22 October 2010

REVISED 10-22-10:
- ALTERED STAIR ORIENTATION / LOCATIONS.
- MODIFIED MAIN ENTRANCE
- UPDATED PLAN AT OFFICES, LEARNING STUDIOS AND MECHANICAL AREAS

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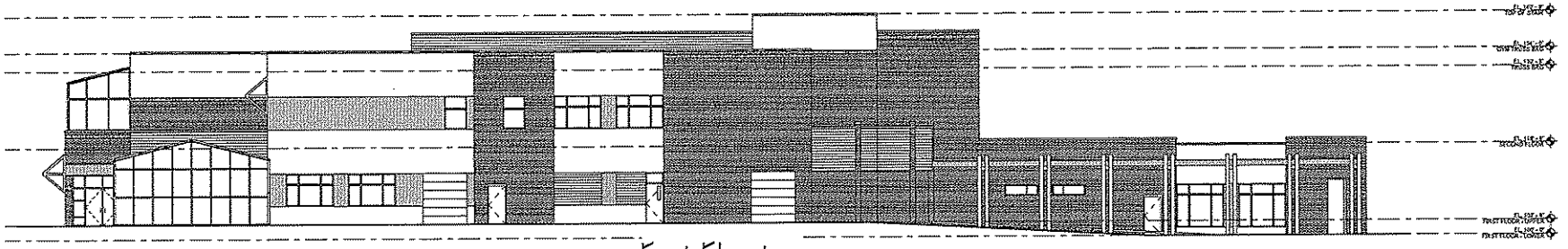
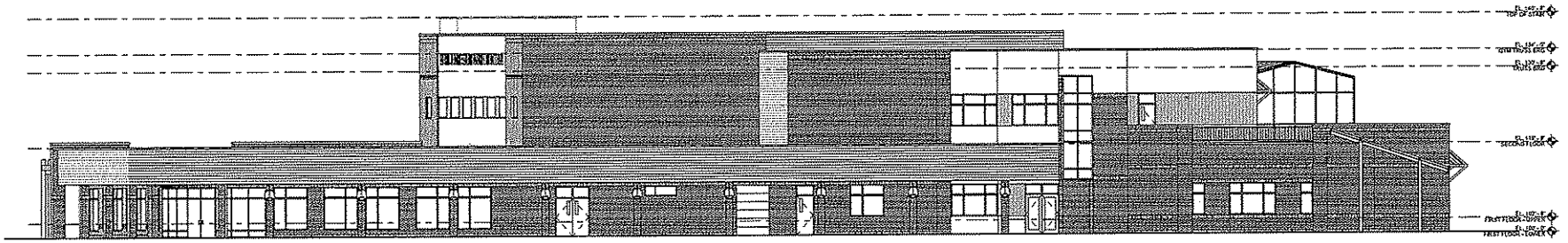
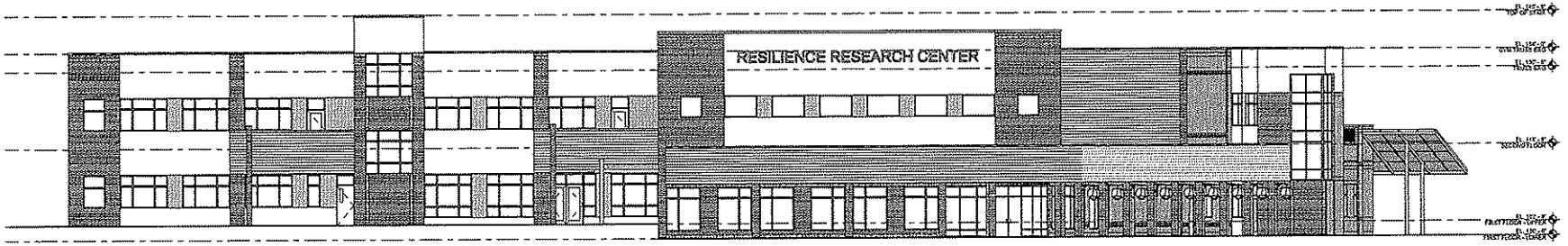


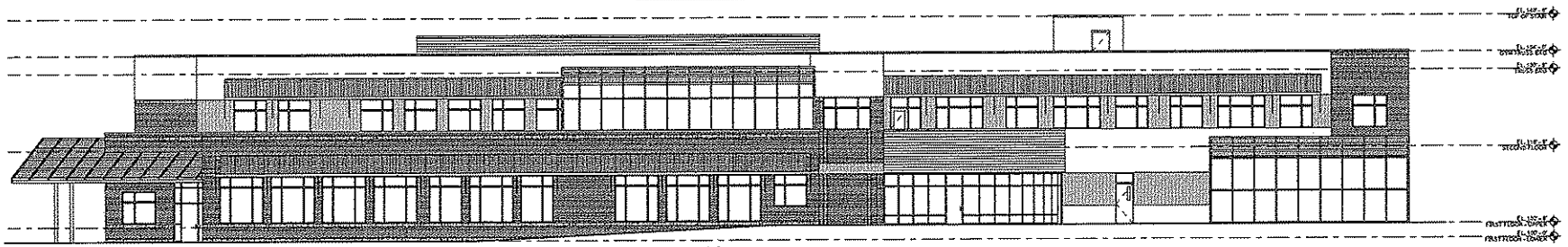
East Elevation



West Elevation



North Elevation



South Elevation

GRAPHIC SCALE

REVISED 10-22-10:
- ALTERED STAIR ORIENTATION / LOCATIONS
- MODIFIED MAIN ENTRANCE
- UPDATED MATERIALITY AND WINDOW LAYOUT

Sheet No. II.O

Building Elevations
Resilience Research Center

22 October 2010

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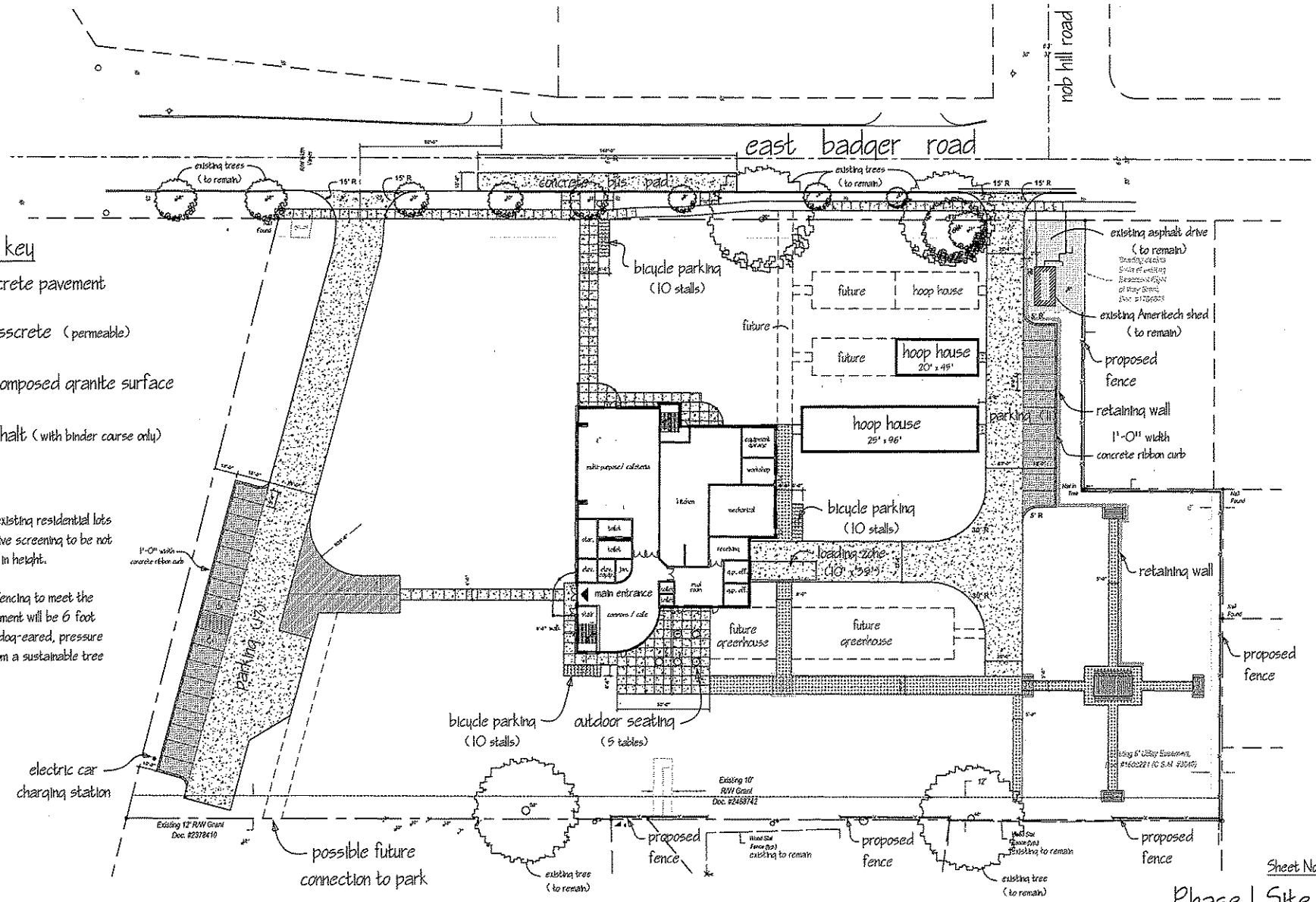

pavement key

- concrete pavement
- grasscrete (permeable)
- decomposed granite surface
- asphalt (with binder course only)

notes:

1. Site adjoining existing residential lots shall have effective screening to be not less than 6 feet in height.

2. All proposed fencing to meet the screening requirement will be 6 foot board on board, dog-eared, pressure treated wood from a sustainable tree farm.

0' 20' 40' 80'

Graphic Scale

Phase I Site Plan

N

Sheet No. 12.0

Phase I Site Plan

Resilience Research Center

22 October 2010

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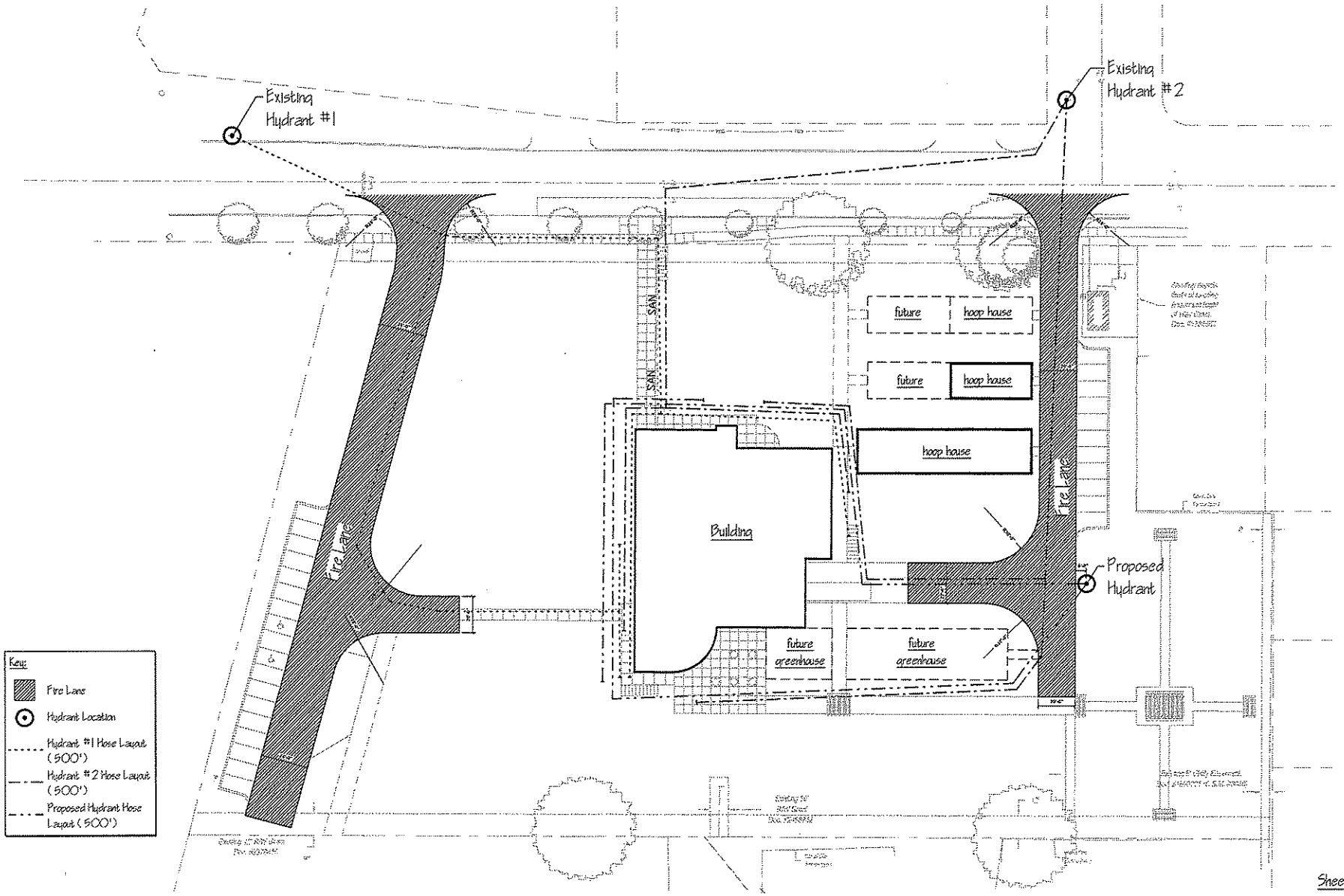

0' 20' 40' 80'

Graphic Scale

Phase 1 - Site Access Plan

N

Sheet No. 13.0

Phase 1 - Site Access Plan
Resilience Research Center

22 October 2010

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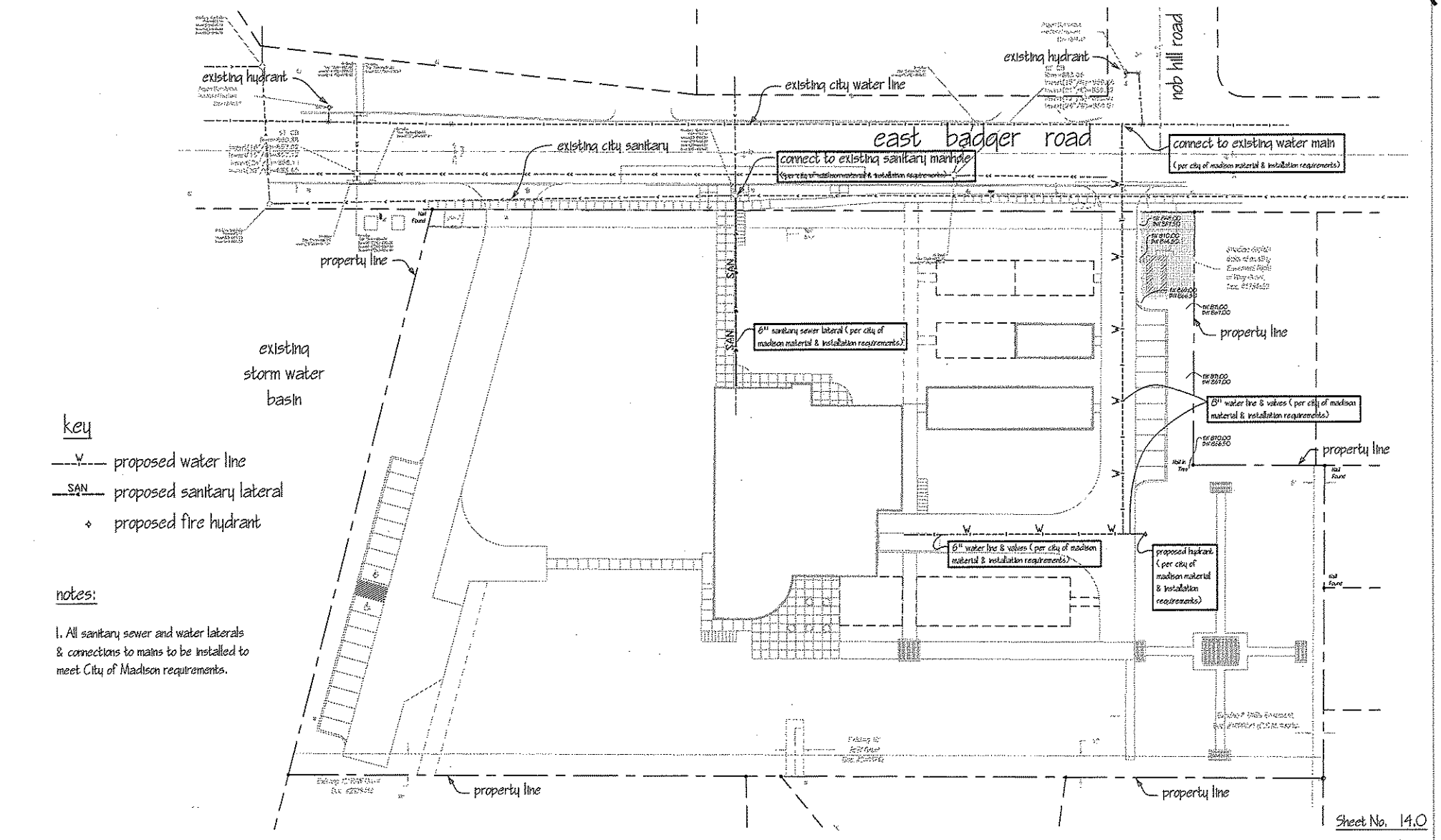

key

- proposed water line
- proposed sanitary lateral
- proposed fire hydrant

notes:

1. All sanitary sewer and water laterals & connections to mains to be installed to meet City of Madison requirements.

0' 20' 40' 80'

Graphic Scale

Phase 1 - Utility Plan

N

Sheet No. 14.0

Phase 1 - Utility Plan

Resilience Research Center

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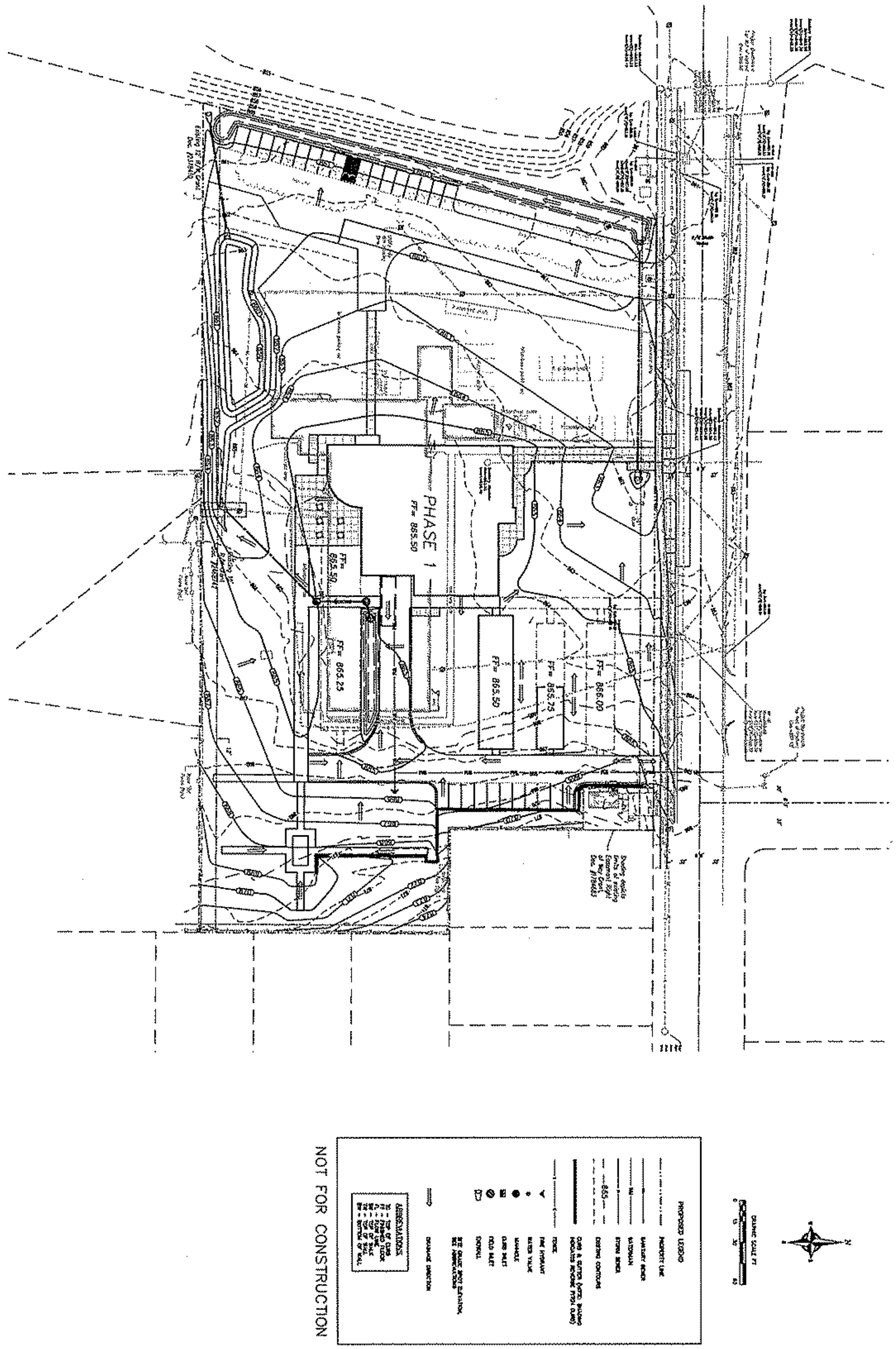

Phase 1 Conceptual Grading Plan

Resilience Research Center
501 E. Badger Avenue
Madison, Wisconsin

NO.	DATE	REVISIONS REMARKS

vierbicher
planners | engineers | advisors
REEDSBURG - MADISON - PRAIRIE DU CHIEN
999 Fourier Drive, Suite 201 Madison, Wisconsin 53717
Phone: (608) 826-0532 Fax: (608) 826-0530

SHEET 15.0

7

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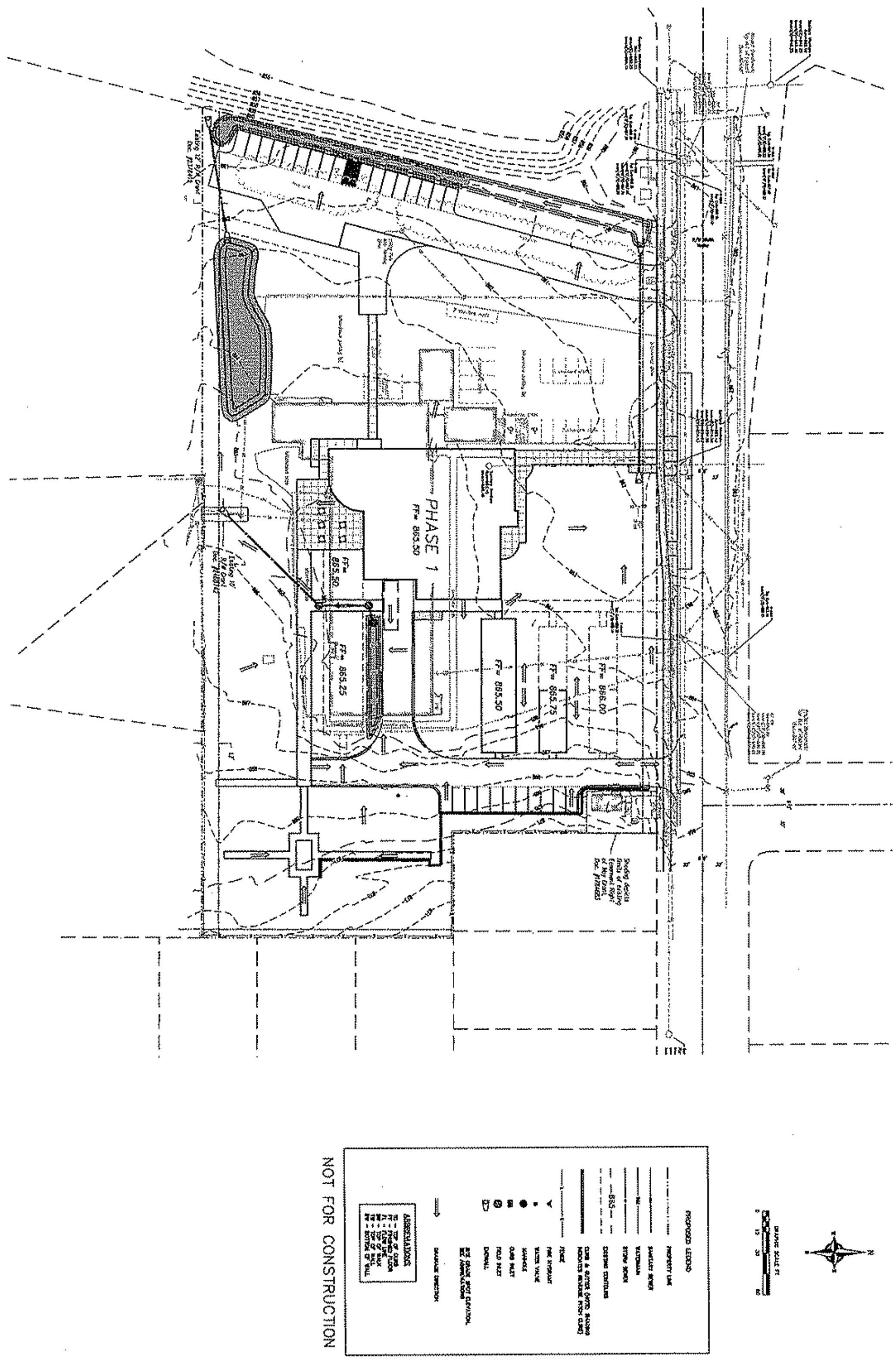

Phase 1 Conceptual Stormwater Management Plan

Resilience Research Center
501 E. Badger Avenue
Madison, Wisconsin

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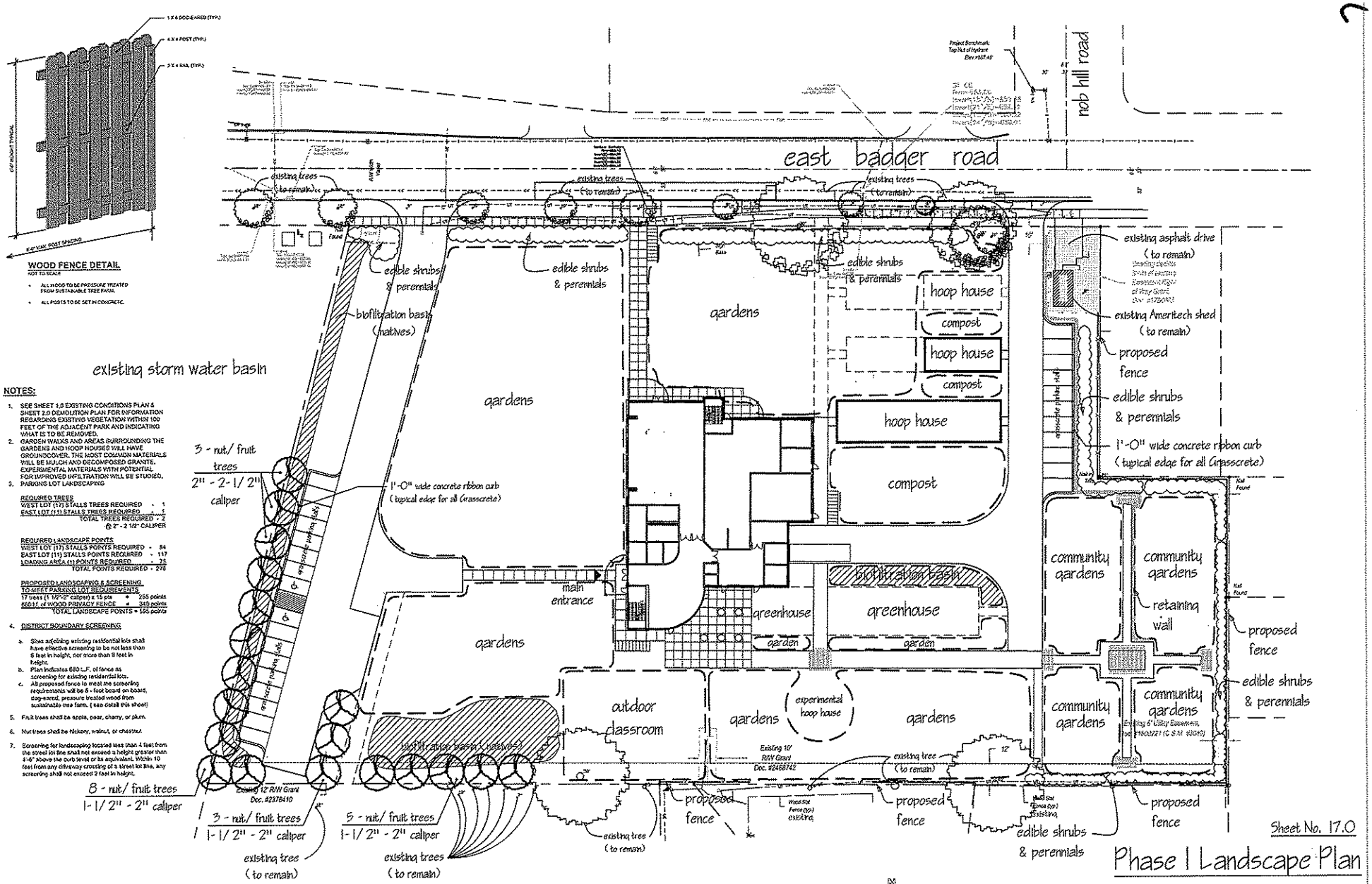
16.0



NOTES:

1. SEE SHEET 1.0 EXISTING CONDITIONS PLAN & SHEET 2.0 DEMOLITION PLAN FOR INFORMATION REGARDING EXISTING VEGETATION WITHIN 100 FEET OF THE ADJACENT PARK AND INDICATING WHAT IS TO BE REMOVED.
2. GARDEN WALKS AND AREAS SURROUNDING THE GARDENS AND HOOP HOUSES WILL HAVE GROUNDCOVER. THE MOST COMMON MATERIALS WILL BE MULCH AND DECOMPOSED GRANITE. EXPERIMENTAL MATERIALS WITH POTENTIAL FOR IMPROVED INFILTRATION WILL BE STUDIED.
3. PARKING LOT LANDSCAPING

REQUIRED TREES
WEST LOT (17) STALLS TREES REQUIRED - 1
EAST LOT (11) STALLS TREES REQUIRED - 1
TOTAL TREES REQUIRED = 2
@ 2" - 2 1/2" CALIPER

REQUIRED LANDSCAPE POINTS
WEST LOT (17) STALLS POINTS REQUIRED - 84
EAST LOT (11) STALLS POINTS REQUIRED - 117
LOADING AREA (1) POINTS REQUIRED - 75
TOTAL POINTS REQUIRED = 276

PROPOSED LANDSCAPING & SCREENING TO MEET PARKING LOT REQUIREMENTS
17 trees (1 1/2"-2" caliper) x 15 pts = 255 points
680 l.f. of WOOD PRIVACY FENCE = 340 points
TOTAL LANDSCAPE POINTS = 595 points

4. DISTRICT BOUNDARY SCREENING
   a. Sites adjoining existing residential lots shall have effective screening to be not less than 6 feet in height, nor more than 8 feet in height.
   b. Plan indicates 680 L.F. of fence as screening for existing residential lots.
   c. All proposed fence to meet the screening requirements will be 6 - foot board on board, dog-eared, pressure treated wood from sustainable tree farm. (see detail this sheet)
5. Fruit trees shall be apple, pear, cherry, or plum.
6. Nut trees shall be hickory, walnut, or chestnut.
7. Screening for landscaping located less than 4 feet from the street lot line shall not exceed a height greater than 4'-6" above the curb level or its equivalent. Within 10 feet from any driveway crossing of a street lot line, any screening shall not exceed 2 feet in height.

Sheet No. 17.0

Phase I Landscape Plan

Resilience Research Center

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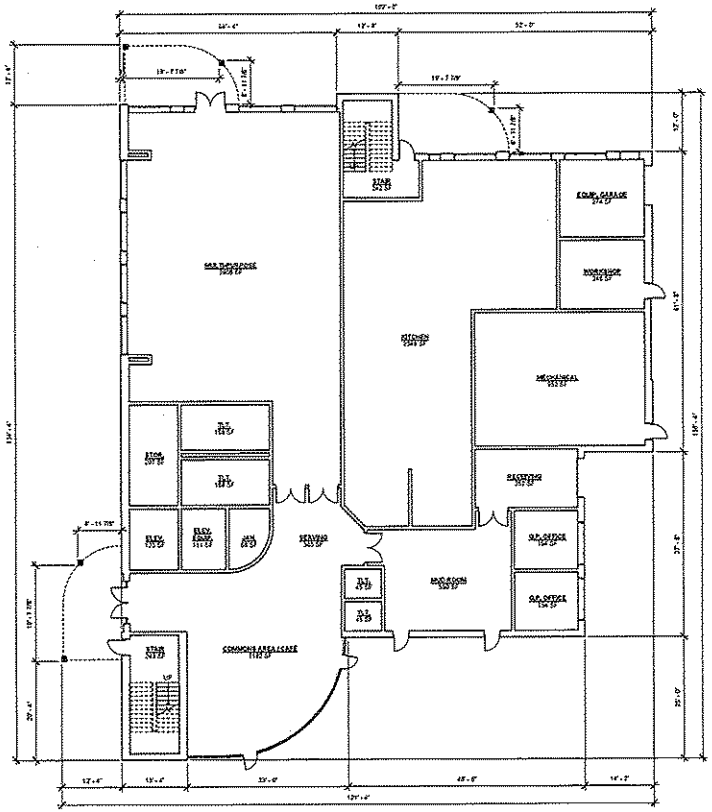
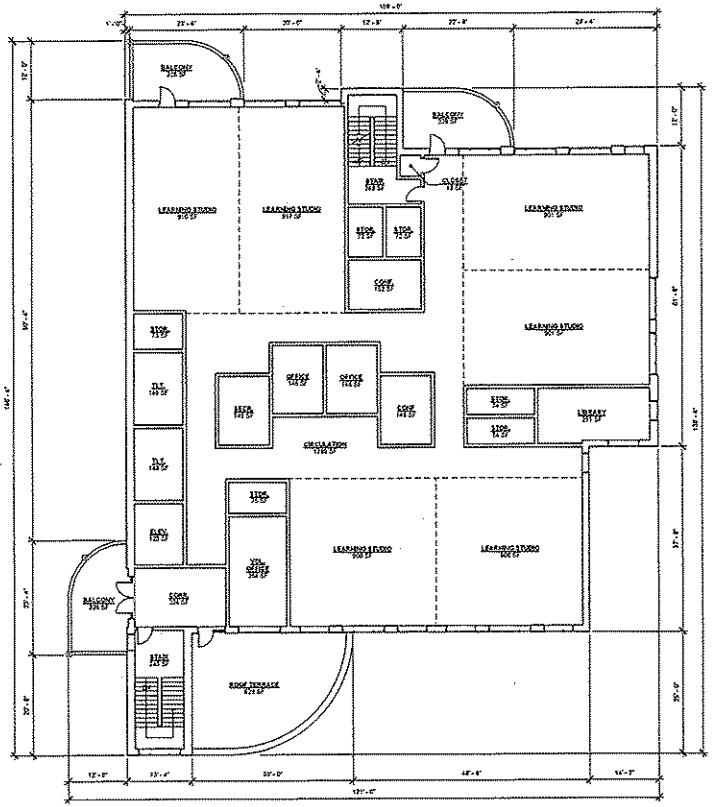


Phase I
First Floor Plan



Phase I
Second Floor Plan

Sheet No. 18.0

Phase I Floor Plans
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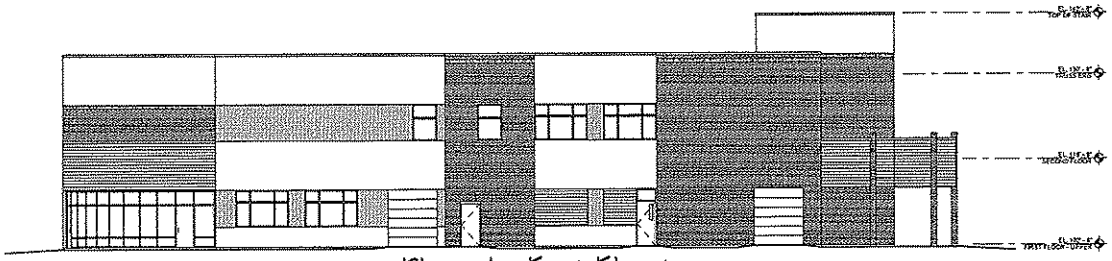
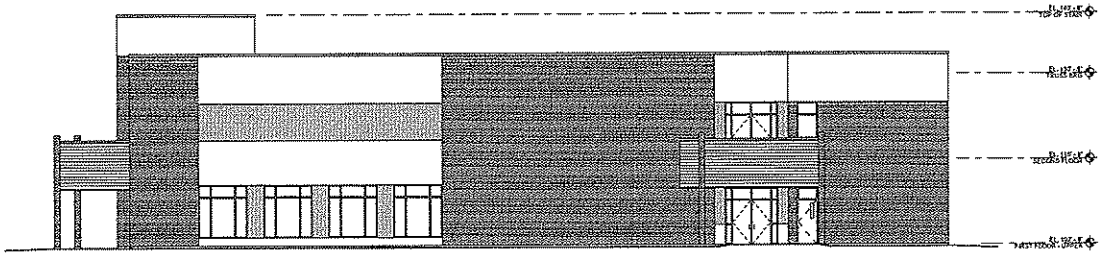
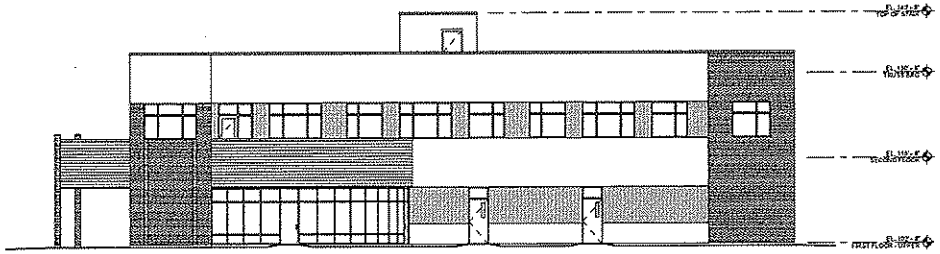


Phase I - East Elevation



Phase I - West Elevation

Phase I - North Elevation



Phase I - South Elevation

SCALE: 1/8" = 1'-0"

Sheet No. 19.0

Phase I Building Elevations
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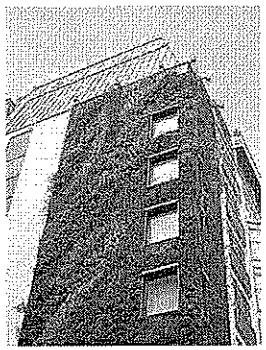
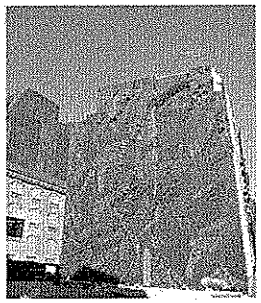
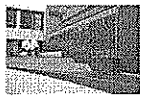
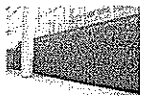
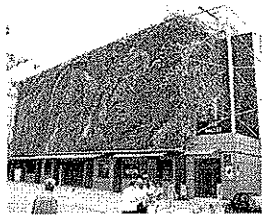
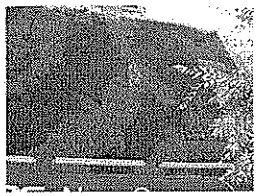
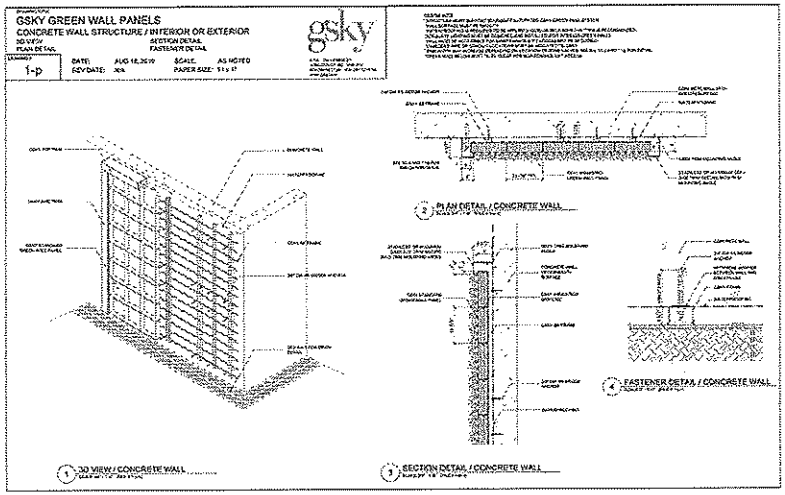






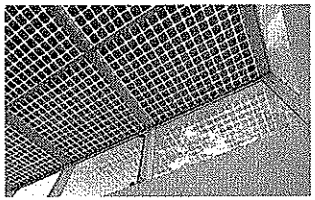
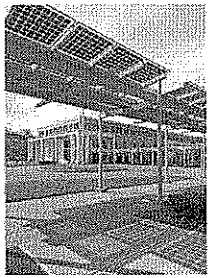
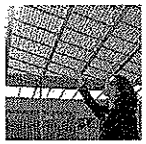


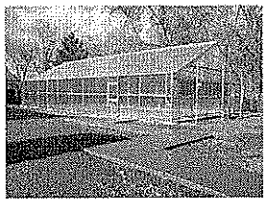
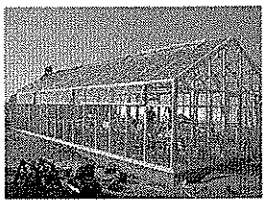
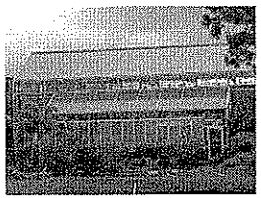
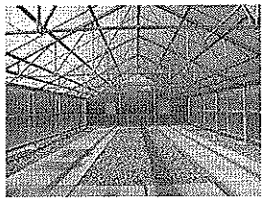
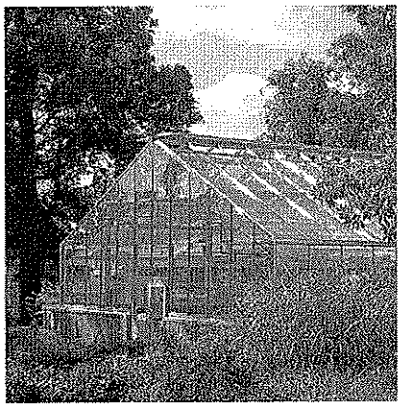
Living Wall Example Images
(GSky Green Wall Panels or Equal)



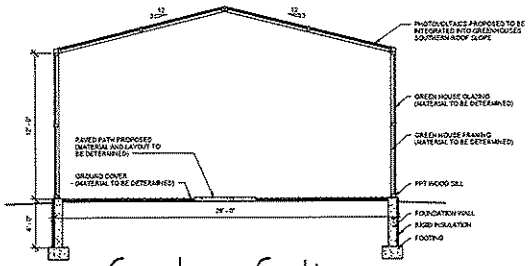
Living Wall Details
(GSky Green Wall Panels or Equal)

Greenhouse Roof Example Images
(Laminated Photovoltaic Cells)

Greenhouse Example Images



Greenhouse Section

NOTE:

GREENHOUSE CONSTRUCTION WILL COMPLY WITH THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE, AND ALL APPLICABLE MADISON GENERAL ORDINANCES.

Sheet No. 20.0

Details

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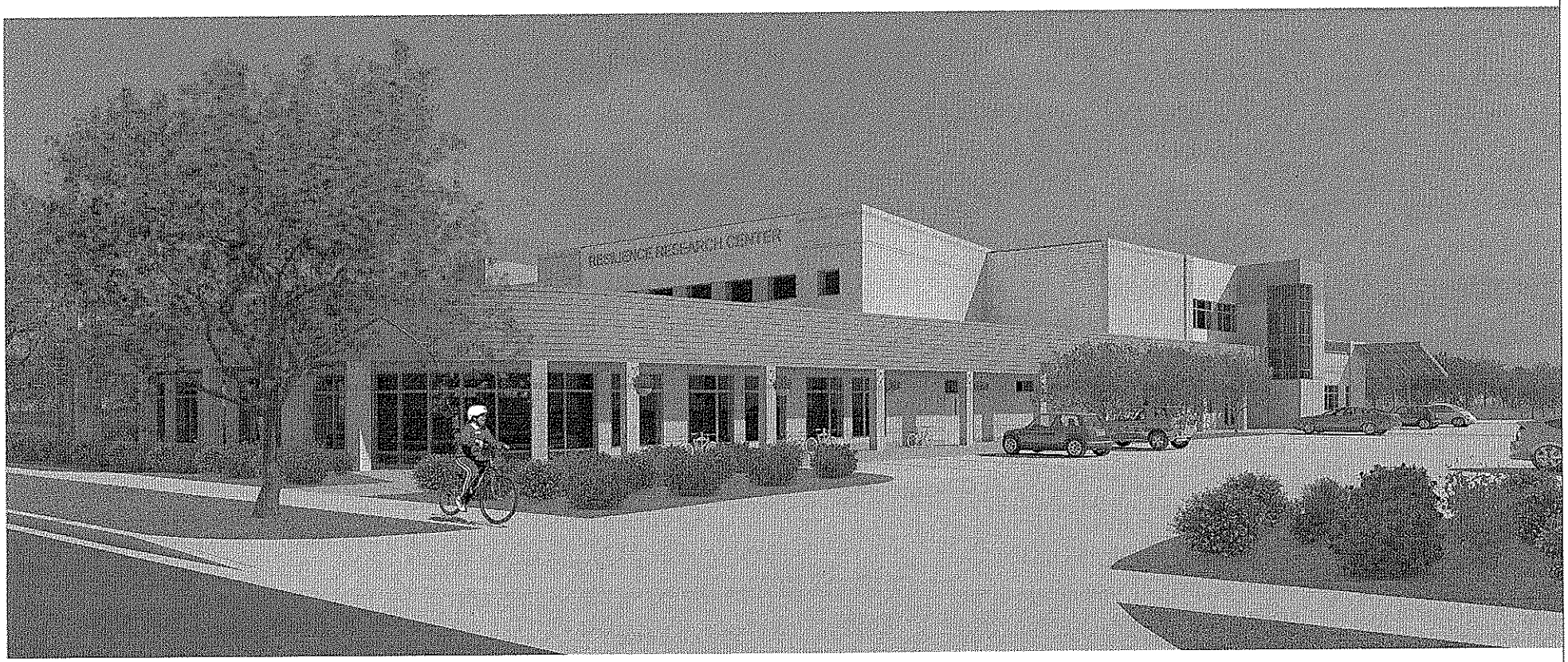

Northwest Eyelevel View

Conceptual Rendering
Resilience Research Center

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Northeast Eyelevel View

Conceptual Rendering
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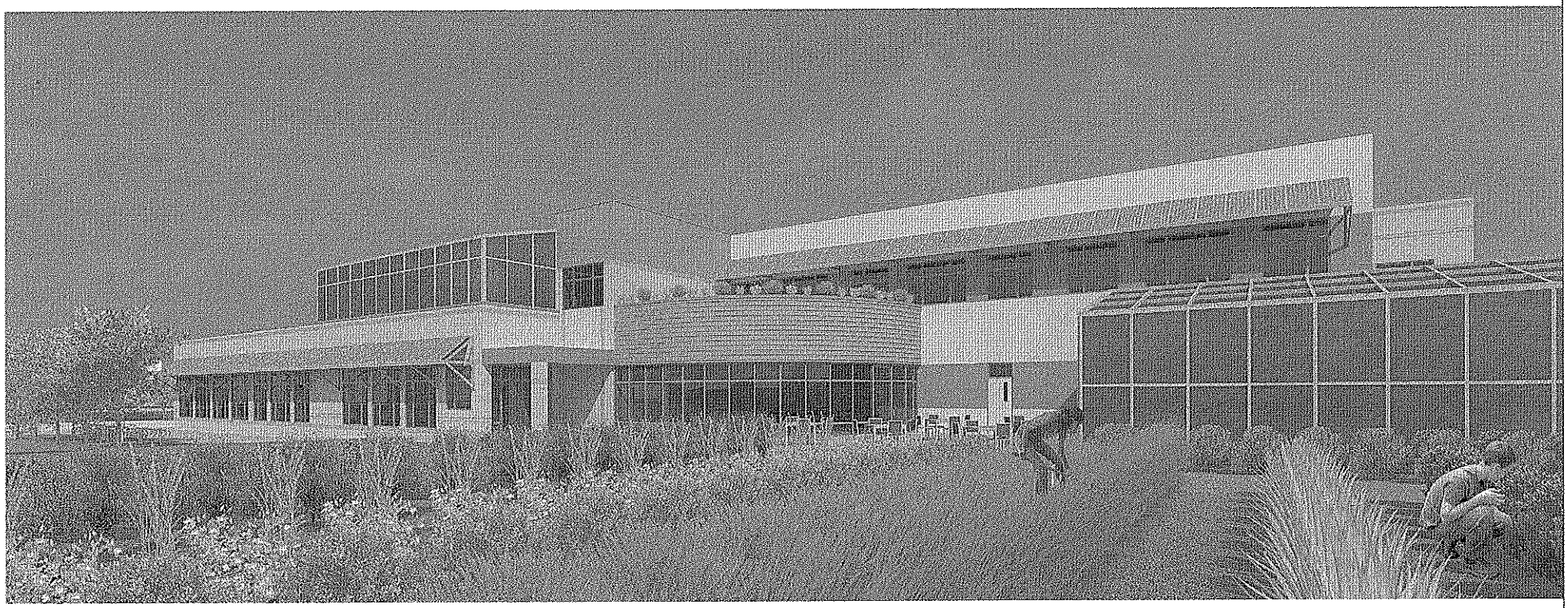

Southeast Eyelevel View

Conceptual Rendering
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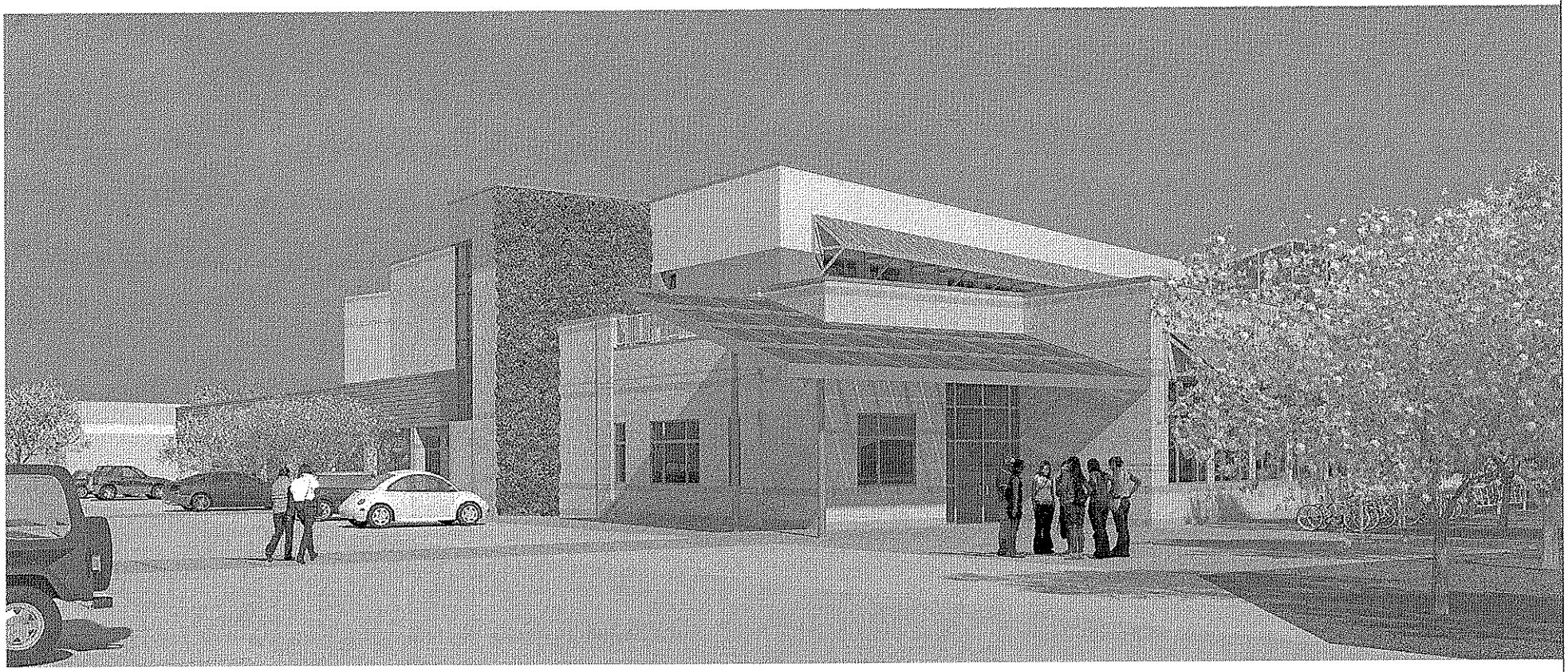

Southwest Eyelevel View

Conceptual Rendering
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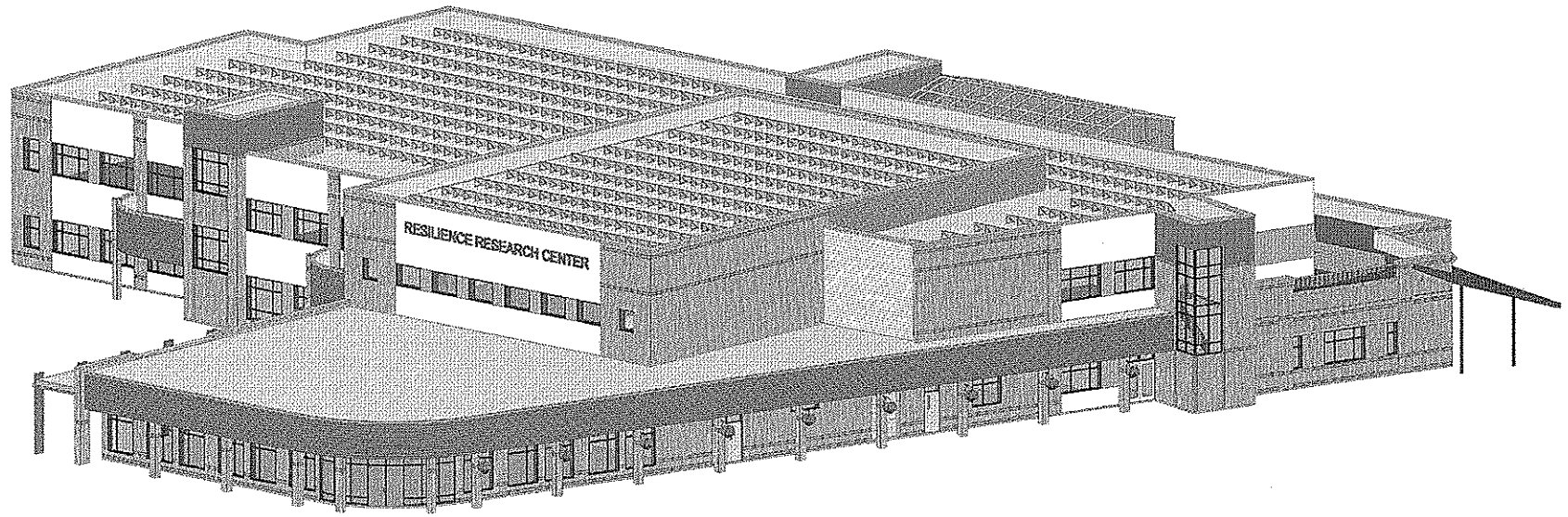

Northwest Bird's Eye View

Conceptual Massing
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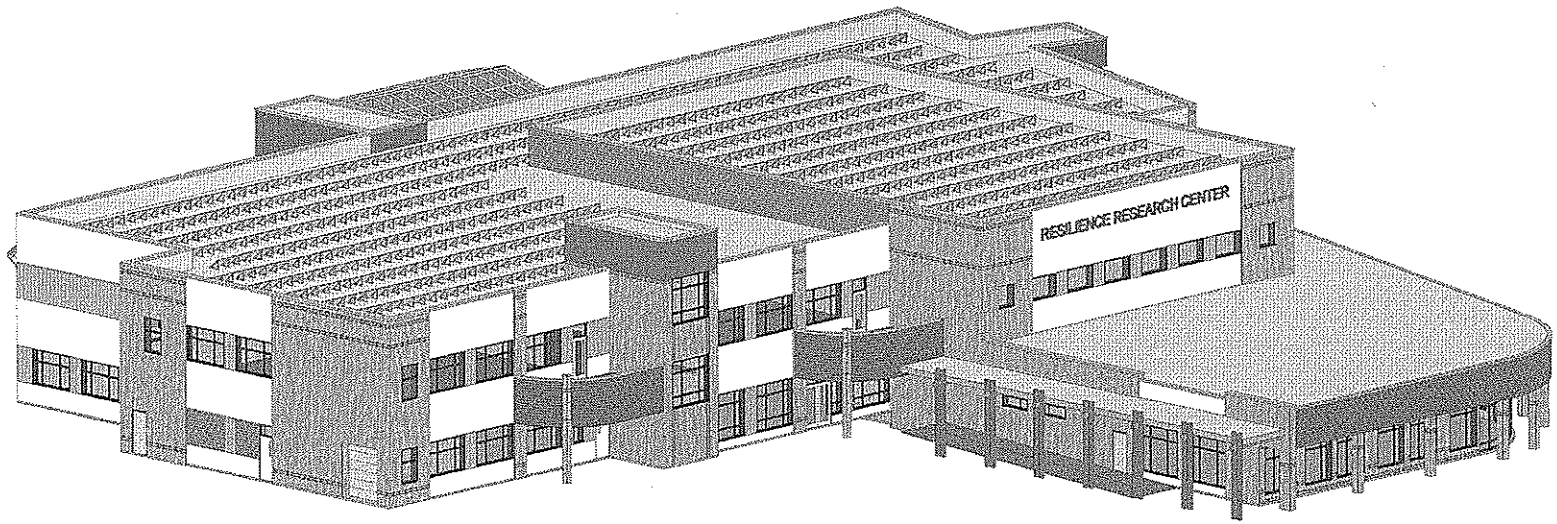

Northeast Bird's Eye View

Conceptual Massing
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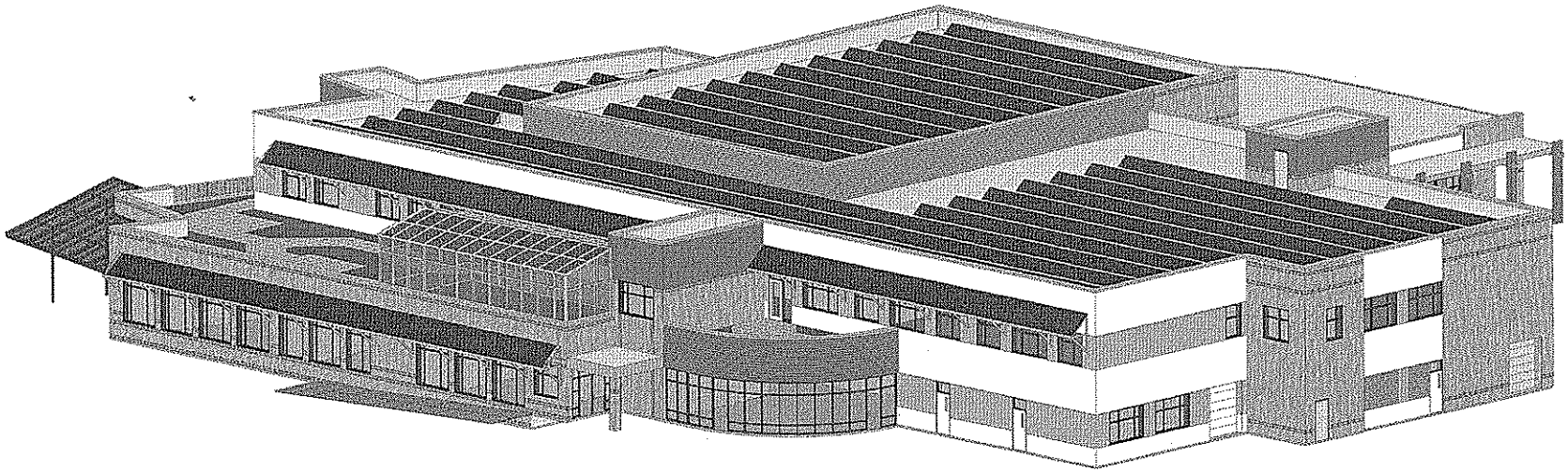

Southeast Bird's Eye View

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Southwest Bird's Eye View

Conceptual Massing
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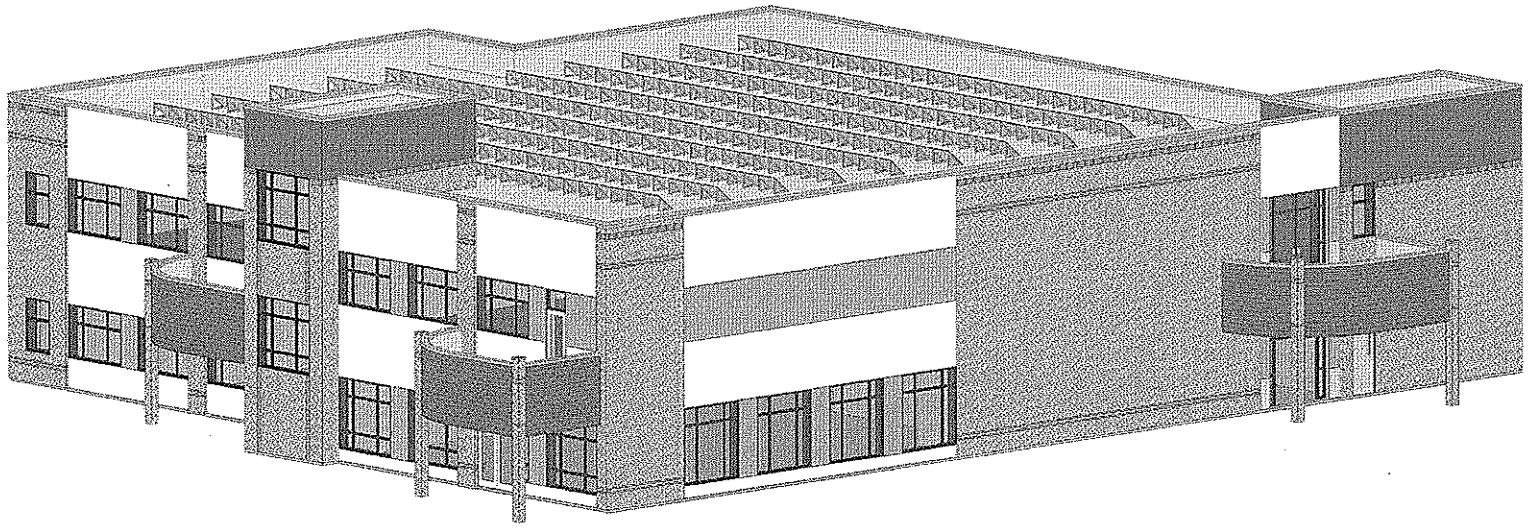

Phase I - Northwest Bird's Eye View

Phase I Conceptual Massing
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Phase I - Northeast Bird's Eye View

Phase I Conceptual Massing
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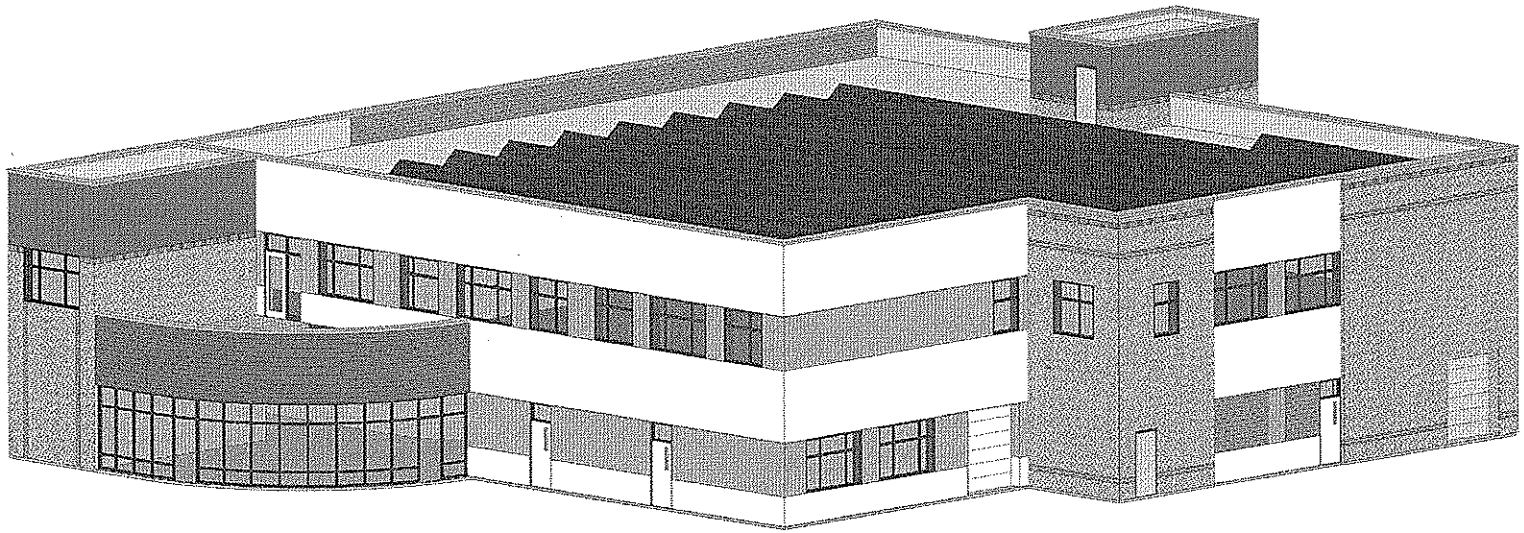

Phase I - Southeast Bird's Eye View

Phase I Conceptual Massing
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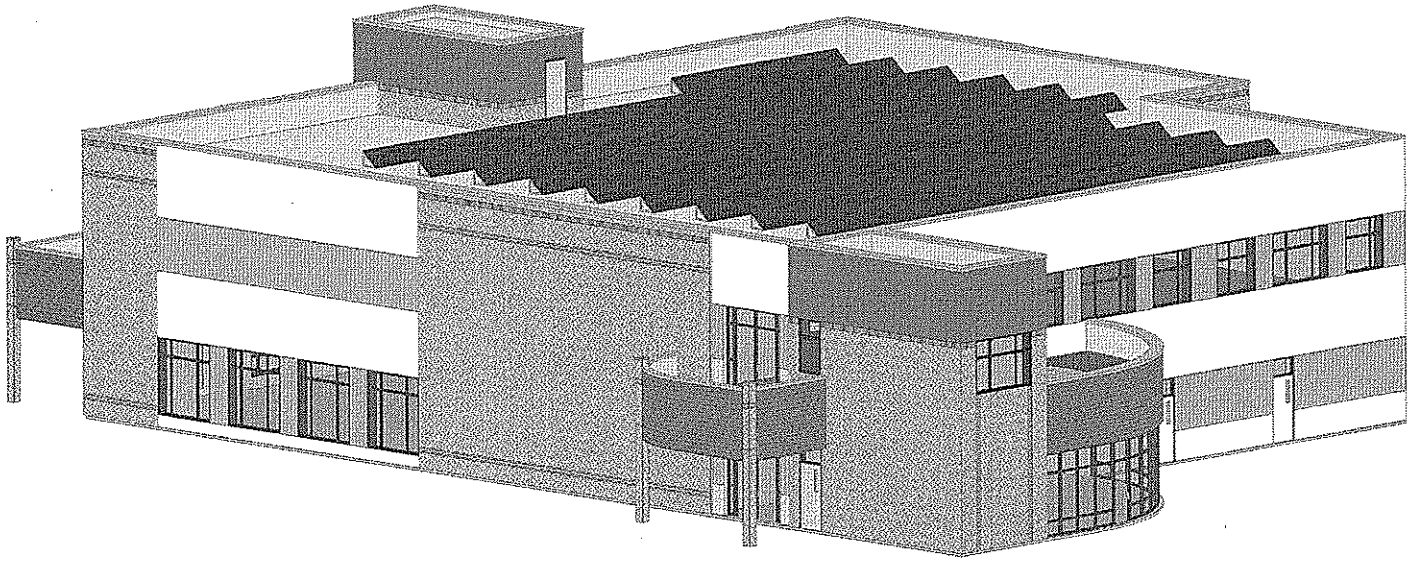

Phase I - Southwest Bird's Eye View

Phase I Conceptual Massing
Resilience Research Center

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RESILIENCE RESEARCH CENTER

PRELIMINARY PLANT LIST, 10.22.10

Groundcovers/Perennials

Armoracia rusticana	Horseradish
Asparagus, spp.	Asparagus
Fragaria, spp.	Strawberry
Gaylussacia brachycera	Box Huckleberry
Ribes uva-crispa	Gooseberry
Rubus, spp.	Raspberry
Vaccinium macrocarpon	Cranberry
Vaccinium vitis-idaea	Lingonberry

Vines

Schizandra chinensis	Eastern Prince Magnolia Vine
Vitus, spp.	Grape

Shrubs

Aronia melanocarpa 'Nero'	Nero Aronia
Eleagnus multiflora	Sweet Scarlet Goumi
Hippophae rhamnoides	Sea Buckthorn
Lonicera kamchatika	Blue Moon Honeyberry
Ribes, spp.	Currant
Vaccinium, spp.	Blueberry

Trees

Acer saccharum	Sugar Maple
Carya ovata	Shagbark Hickory
Juglans nigra	Black Walnut
Malus, spp.	Apple
Prunus, spp.	Plum/Cherry
Pyrus, spp.	Pear
Sorbus aucuparia x aronia	Ivanis Beauty Russian Mountain Ash
Sorbus aucuparia ' pyrus	Shipova Mountain Ash


Resilience Research Center
Existing Conditions - Exterior Photo
Badger Park
E Badger Rd
E Badger Rd
25 feet
10 m
© 2010 Microsoft Corporation © 2010 NAVTEQ © AND
© 2010 Pictometry International Corp.

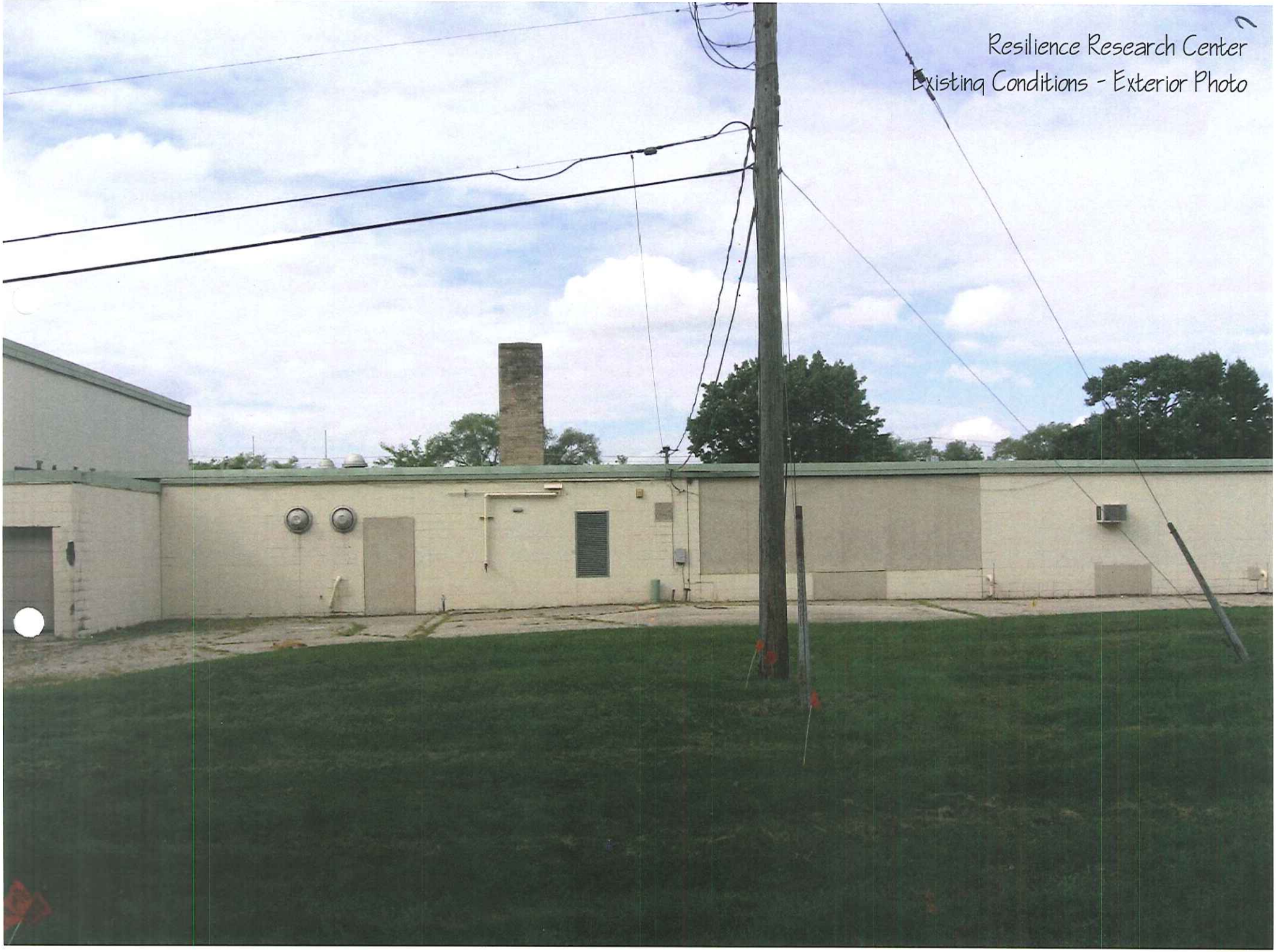
Resilience Research Center

Existing Conditions - Exterior Photo

Resilience Research Center
Existing Conditions - Exterior Photo


Resilience Research Center
Existing Conditions - Exterior Photo

Resilience Research Center
Existing Conditions - Exterior Photo



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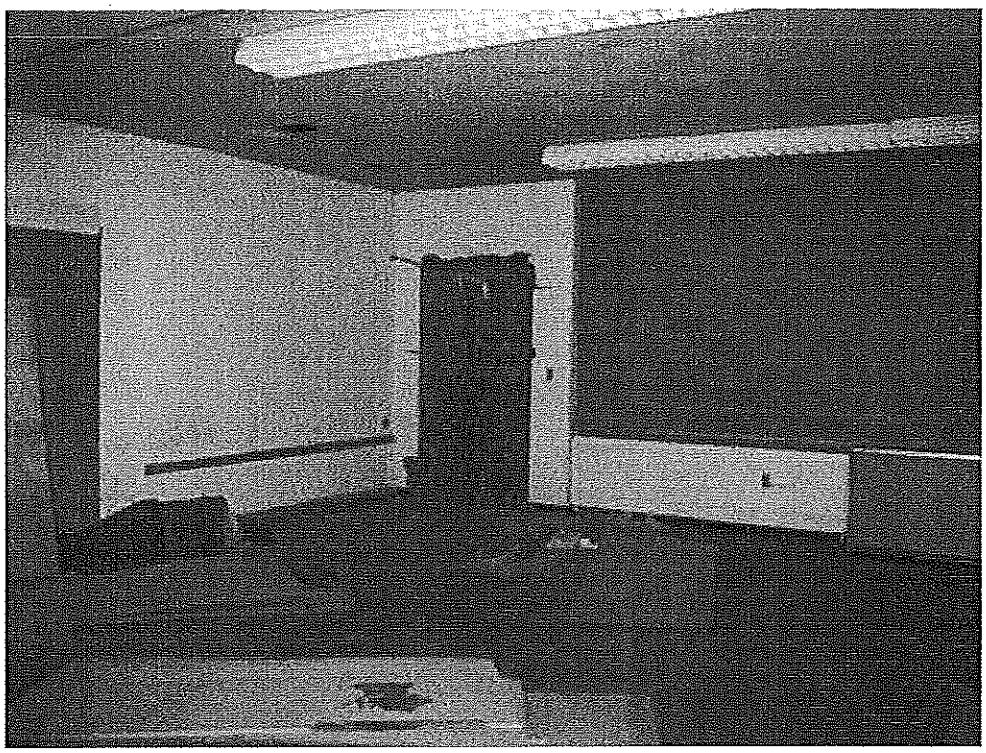
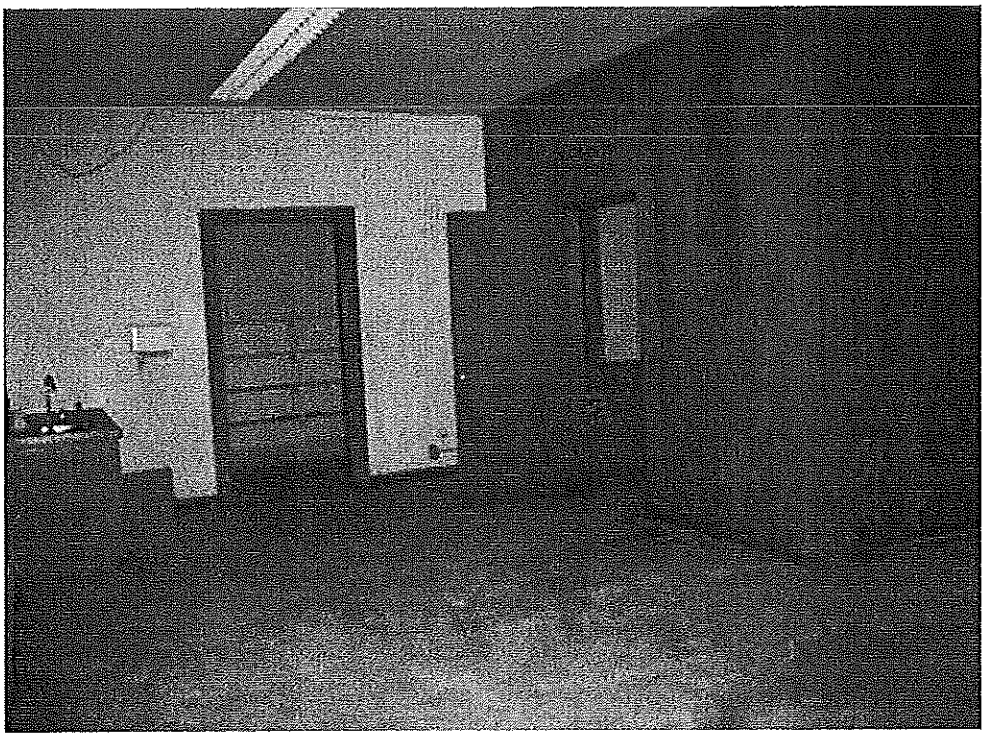
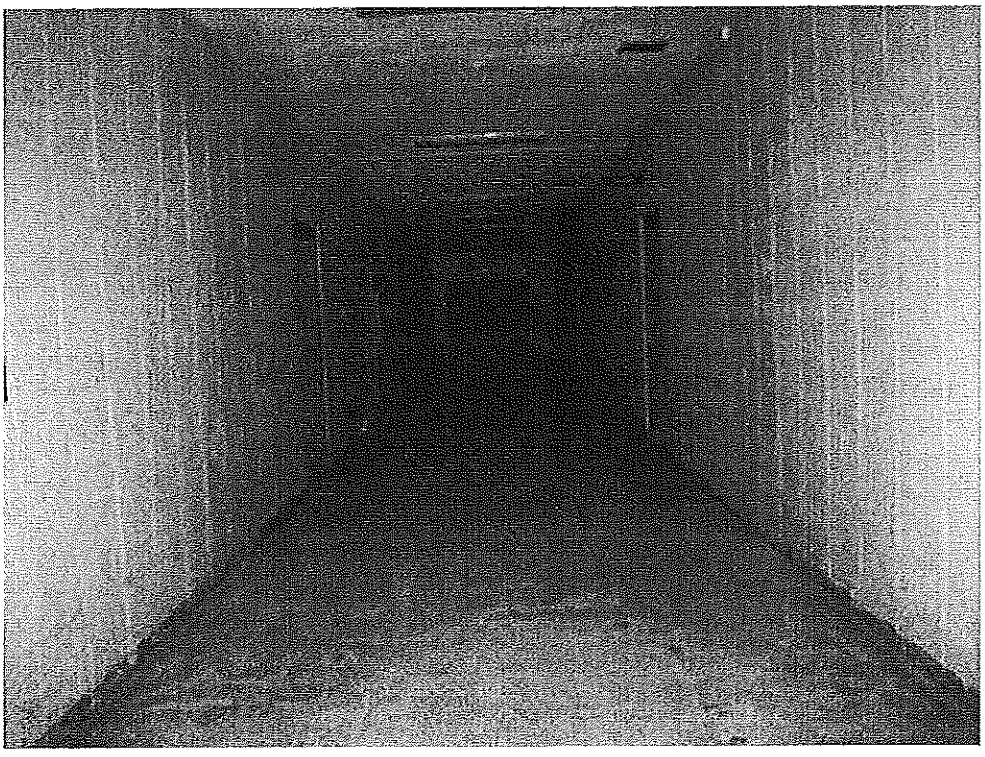
Existing Conditions - Exterior Photo

501 E Badger Road: Interior Photographs

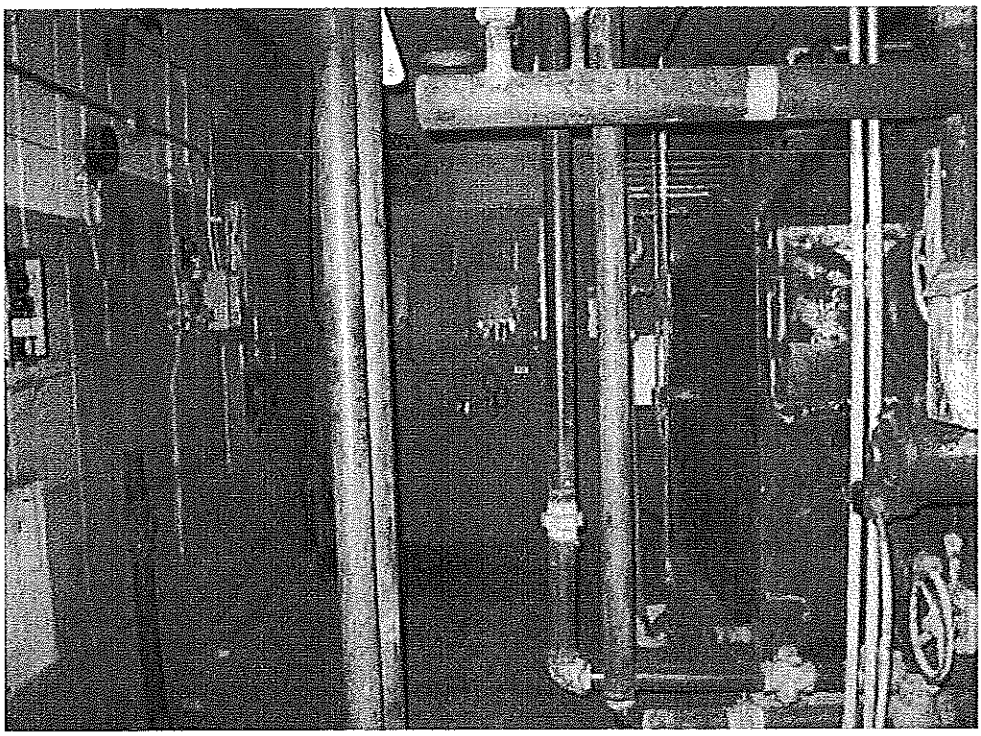


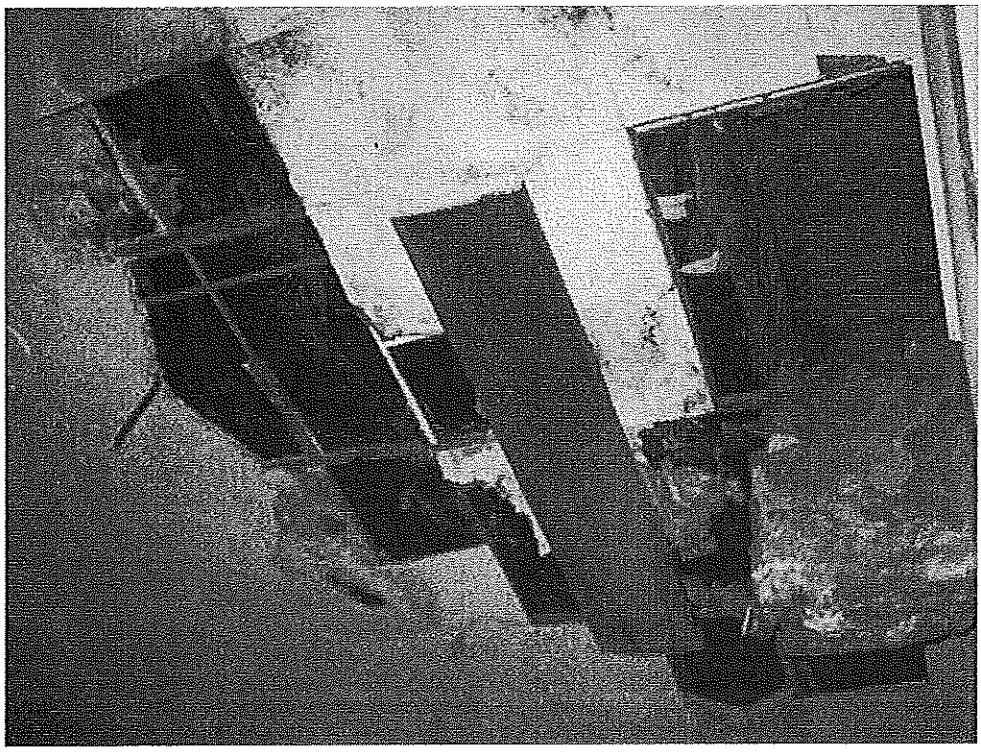
501 E Badger Road: Interior Photographs





501 E Badger Road: Interior Photographs





501 E Badger Road: Interior Photographs