Draft Final Report

Bloomington Transit

Transit Operations *Facility Expansion* FEASIBILITY STUDY

wendel

WilburSmith ASSOCIATES

C|C|S

BPTC Maintenance Expansion Study
FINAL REPORT

This report was prepared for:

Bloomington Public Transportation Corporation
130 Grimes Lane
Bloomington, IN 47403

This report was prepared by:

Wendel Duchscherer, Architects & Engineers, PC
140 Audubon Parkway
Buffalo, NY 14228

716-688-0766
Contact: Kirk Burzynski

With Subconsultants:

Wilbur Smith Associates, *Civil Engineering*
275 Southampton Road
Holyoke, MA 01040

413-539-9005
Contact: Marlene Connor

Construction Cost Systems, *Construction Cost Estimating*
1815 S. Meyers Road, Suite 200
Oakbrook Terrace, IL 60181

630-678-0808
Contact: Clive Bransby

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Image 1: Bloomington Transit fixed route bus

EXECUTIVE SUMMARY

The Bloomington Public Transportation Corporation (BPTC) is the local government entity responsible for providing public transit services in the Bloomington Urbanized Area and operates two services, Bloomington Transit fixed route service (image 1) and BT Access (image 2) specializing in van service for people with disabilities.

The City of Bloomington's population (2010 Census) is approximately 80,000 and is the home of Indiana University (IU) which is the major employer in the area. IU enrollment is at an all time high of 42,300. Service on the IU campus is provided by IU Campus Bus (image 3) which is well coordinated with BPTC. IU Campus Bus shares the use of the current Operations and Maintenance facility located at 130 W. Grimes Lane in Bloomington.

Image 2: BT Access van

The present Operations and Maintenance facility was built in 1997 on land that is owned by IU while the buildings and structures are owned by BPTC (image 4). According to IU, Campus Bus is not expected to experience any significant growth in service levels or fleet size, as the IU campus is well-served now and in the foreseeable future. However, minimal Campus Bus growth of 10% from 2010 to 2020 and 10% growth from 2020 to 2030 are assumed for future flexibility.

BPTC fixed route service has grown more than 50% in the past 10 years in terms of revenue hours, revenue miles, and fleet size. BPTC fixed route ridership has increased three-fold over the period 1999 to 2009. The operation of BT Access service has been moved to the Grimes Lane facility in the past year as a result of no longer contracting the service to a private provider. Several factors point to the likelihood of continuing growth in demand for BPTC transit service in the future including the following:

Image 3: Indiana University bus

- A 25-year pattern of continuous growth in ridership in the Bloomington community including a three-fold increase in the past 10 years.
- The continued development of off-campus housing for Indiana University students and the accompanying demand for linkages between housing, campus and other major destinations.
- The anticipation of higher prices and/or diminishing production of liquid fuels over the next 20 years and beyond.
- A global and national effort to limit greenhouse gas emissions and expected greater national investment in public transportation to help achieve this goal.

Image 4: Existing site - aerial

Future expansion of the existing facility will be necessary based on projected growth of BPTC and the fact that the current facility is nearing capacity. The City of Bloomington and BT are committed to employing environmentally sustainable methods in design and construction. The Wendel (Wendel) Team was retained to provide conceptual design, architectural, engineering, and transit planning expertise to study the facility expansion needed to accommodate the existing bus fleets and the desired future expansion of transit service in the community. Team members Wilber Smith and Associates provided site environmental analysis and Construction Cost Systems provided construction cost estimating.

A project goal was mutually developed between the BPTC, IU Campus Bus, and the Wendel Team as follows:

> *PROJECT GOAL: Develop a concept to accommodate growth to 2030 on existing and/or new site.*

To achieve this goal, the Wendel Team process consisted of the following steps:

1) Analyze existing conditions.
2) Assess the existing facility in light of the development of a space program for expansion and analyze various sites to handle the projected operations expansion.
3) Conceptual designs.
4) Construction cost estimates.
5) Recommendations.

The existing Administration and Operations facility is at capacity to provide support for the current fleet levels. As the fleets grow, the Administration and Operations staff and area will also need to increase. In addition, many areas were identified by the staff as being undersized or missing entirely from the current facility.

Any expansion of the fleet will require the addition of Maintenance Bays and Service Lanes while the two service pits, which can support between 80 and 120 buses, will handle the inspection requirements for the projected growth through 2020.

The existing facility is over capacity to provide covered Bus Storage for the current fleet levels with some buses parked outside of the canopies. As the fleets grow, the Vehicle Storage area will also need to increase.

Image 28: Temporary employee parking under transit storage canopy

Image 29: Non-revenue vehicle parking area

Parking for employees has already exceeded capacity. This has necessitated the parking of employees' private vehicles in the bus storage and queuing areas, mixing transit and staff vehicle circulation (image 28). Non-revenue vehicles are parked next to the Administration building, but they are not under cover (image 29).

There is a significant level of public traffic to the facility, but only two designated public parking spaces.

Site and building security are a concern. There is an access easement through the bus storage area for the adjacent automotive salvage yard. This gives access not only to the automotive salvage yard, but also to the bus storage, maintenance and service areas. In the post 9/11 environment, securing transit operating and maintenance facilities has become a high priority.

A Space Program has been developed to describe the current fleet and projected fleet expansion. Fleet descriptions have been projected for the next 10 years (2020) and the next 20 years (2030). The 10 year projection will be designated the "Design Year" and the Concept Design will reflect these numbers. The 20 year projection will be accommodated in the required size of additional property and shown as "expansion space" in the test-fit concepts.

Since the existing site does have operational issues due to overcrowding and will not accommodate any further expansion, it will be necessary to acquire additional property to support projected expansion, as well as solve some issues with the current operation.

The three major criteria that were used in analyzing prospective sites are:

- Use of new site in conjunction with Grimes Lane.
- Size of new site to accommodate the above functions.
- Location of new site in conjunction with Grimes Lane.

Six scenarios were discussed with the Steering Committee as possible uses for new property. They are:

1) Maintain the existing site & acquire adjacent property.

2) Leave existing site as strictly Maintenance for BT and Campus Bus & have Administration, Operations, bus storage and associated staff parking for both at new site.

3) Move BT Access & all Administration to new site.

4) Move Campus Bus to new site.

5) Move BT to new facility and leave Campus Bus at existing site.

6) Build smaller northern or western satellite garage for several BT routes which are in the area.

After review and discussion, the decision was to keep all operations together on one site – either the existing site with adjacent property purchase or a completely new site.

Three different designs were prepared illustrating three different design approaches. These are:

Concept 1: Use existing site + adjacent automobile recycling yard to accommodate the projected transit growth using standard planning tools (e.g. adjacencies, sizes, etc) using the existing maintenance facility and additional construction.

Concept 2: Use an entirely new site to accommodate the projected transit growth using standard planning tools (e.g. adjacencies, sizes, etc).

Concept 3: Use the existing site + adjacent automobile recycling yard by expanding the existing administration and maintenance facility, plus additional construction without adding any 2nd level construction. Growth projections and standard planning tools are not strictly adhered to.

Based on the Concept Designs, conceptual cost estimates were developed.

Item	Program Elements		
	Concept 1	Concept 2	Concept 3
Parked Buses	104	104	117
Non-revenue vehicles	17	17	12
Total employees	225	225	212
Employee parking spaces	191	191	180
Maintenance Bays	14	13	11
Service Lanes	2	2	2
Administration / Operations area (SF)	18,500	18,500	14,700
Estimated Project Cost	$57,910,000	$58,620,000	$10,800,000

If funding is thought to be available, the Team recommends that Concept 2 rather than Concept 1 be pursued because of the following:

- Simple site and building circulation.
- Expansion easily accommodated without impact on operations.
- Phasing is not necessary as operations can continue on the existing site while construction on the new site is completed.
- Solves the traffic concerns with bus and automobile traffic on Grimes Lane and West Allen.

If funding for a new, state-of-the-art facility is not available, the Team recommends Concept 3. This concept permits modest expansion of the facility at a reduced cost. However, more expensive construction would be required to meet the programmed expansion in the future. In addition, off-site employee parking options would need to be explored and employee incentive programs (car pool, transit, bike, charge for parking) may need to be considered.

SECTION 1

Image 5: Transit buses evening pull in

Section 1 - EXISTING CONDITIONS

NOTE: In all cases, "BPTC" includes both the fixed route and paratransit operations unless stated otherwise.

General Conditions: As a first step in this process, the Wendel team visited the facility to: observe the operations; watch the morning pull-out and the evening pull-in; and interview various staff and employees (image 5).

Adjacent to the site on the west is the B-Line Trail, a rail-to-trails project. The B-Line Trail has been implemented in the downtown area and plans for the extension past the site have been completed. A bridge to carry pedestrian traffic over Grimes Lane (Patterson Drive) has been designed and is under construction (Image 6). Due to the accessibility requirements, the bridge is long and is adjacent to the existing facility.

Image 6: Grimes Lane proposed pedestrian bridge

On the north, the site is bounded by an automotive salvage yard (image 7). This property may be available for purchase and would provide expansion room for BPTC. To the east of the site is Clear Creek, a channelized stream (image 8), and on the south is W. Grimes Lane, both fixed boundaries. The properties around the site are commercial in nature and, in fact, the zoning is either Commercial Arterial (CA) or Commercial General (CG) (existing plan image 9).

The existing site and the automotive salvage yard were originally part of a limestone quarry. Due to the nature of the soils, a structural slab on piers was required for the transit buildings. Additionally, approximately half of the existing property is in the floodplain/floodway for Clear Creek. In a 2008 weather event, the creek was observed out of its stream banks and reached the bus storage canopy supports on the site. There are requirements that must be fulfilled if application is made to the City and State for permission to build in the floodway/ floodplain but building is possible.

Image 7: Automotive salvage yard

Corinne Donahue from Wilbur Smith spoke with the Indiana Department of Natural Resources (DNR) regarding the facility expansion. DNR noted that non-residential development is allowed in some parts of the floodway. The elevation requirements must be determined and if a flood insurance study has not been performed, DNR will perform a floodplain analysis at no cost to assist. The analysis, if approved, will lead to the state permitting process. All city ordinances must also be met.

Image 8: Clear Creek

Typically, BT would request to begin the NEPA process from the FTA, which will review the wetlands, floodways, hazardous materials, historic areas, etc. The Environmental Assessment Process (EA) may/may not result in the Finding of No Significant Impact (FONSI) or the need for an Environmental Impact Statement (EIS). If a FONSI, FTA will approve and the facility will have to be designed with mitigation requirements, such as raised floor levels, flood-proofed utilities, etc. The more detailed discussion from Wilbur Smith Associates, Inc. can be found in the Appendix "Floodway Management Process".

The Wendel Design Team has extensive experience with floodway/ floodplain regulations and the City of Bloomington has indicated their willingness to work with BPTC, IU and the Wendel Design Team in the conceptual design process.

Image 9: Existing site aerial image with adjacent properties.

The following chart summarizes the operating statistics for the BPTC Grimes Lane location, illustrating the growth that has occurred in the transit system since the Grimes facility opened in 1997.

	BPTC				Campus Bus
	1997	2002	2008	2010	2010
Ridership (in millions)	0.92	1.96	2.83	3.5	3.3
Revenue vehicles @ 20 ft	0	0	0	6	
Revenue vehicles @ 25 ft	5	8	4	4	
Revenue vehicles @ 30 ft	3	3	7	5	
Revenue vehicles @ 35 ft	17	17	17	18	
Revenue vehicles @ 40 ft	0	12	13	13	27
Revenue vehicles - articulated	0	0	0	0	0
Total revenue vehicles	25	40	41	46	27
Revenue hours (000's)	44.3	74.1	87.8	104.0	
Revenue miles (000's)	609.7	788.1	976.3	1,109.0	
Non-revenue vehicles	5	5	7	7	6
Employee counts	48	75	86	112	80
Fuel consumption - gasoline (gal/ month)	150	200	218	1,702	NA
Fuel consumption - diesel (gal/month)	NA	21,622	23.641	23,037	

Image 10: Administrative building

Image 11: Bike storage and breezeway

Image 12: Drivers' Room

The facility houses the following activities for BPTC & Campus Bus:

- Administration/Operations
- Vehicle Maintenance
- Vehicle Servicing (Fueling and Cleaning)
- Vehicle Storage
- Miscellaneous Site Improvements

Each of these items will be addressed individually below.

Administration/Operations:

The Administration office is open from 8:00 to 4:30, M – F (image 10). The Administration/Operations building is connected to the Maintenance building by a breezeway (image 11). Both BPTC and IU Campus Bus have administrative offices and dispatch offices for each system. The driver room (image 12), locker room (image 13), training room, employee restrooms, and conference room are shared between BPTC and IU Campus Bus.

The Administration building has a lobby with a reception desk (image 16). Public access is partially controlled by a receptionist. As such, the administrative offices are unsecured. There is no significant additional space available for administrative office expansion for either BPTC or IU Campus Bus.

BT Access was brought in-house in November 2009. An administrative office was used to create a BT Access dispatch office. Dispatchers are not in a dedicated Dispatch Center and are only partially separated from operators. This presents a challenge to dispatchers and their ability to effectively manage and dispatch the daily operation for both systems.

BPTC Lost & Found is located in the dispatch area. It is not as large or secure as necessary and contributes to the crowed conditions in the area.

Building maintenance is sub-contracted to Siemens Building Technology through a preventative maintenance contract. The building is in generally good condition.

BPTC staff currently trains both BT and IU Operators. The existing conference room can be partitioned to create two rooms which can be used for employee training and meetings. There has been increasing demand for conference room space for both training and meetings in recent years and often there is not sufficient space.

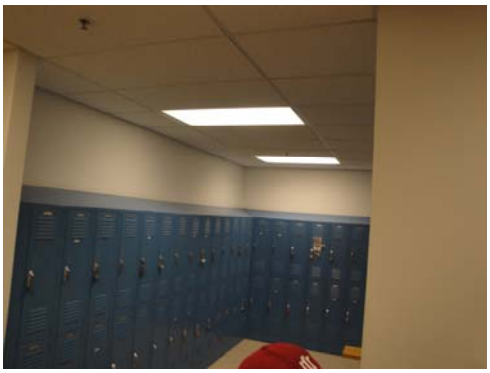


Image 13: Drivers' lockers

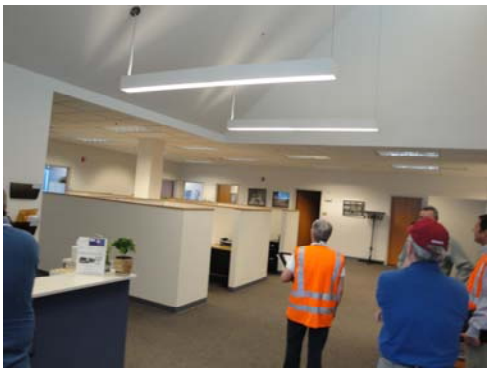


Image 16: Administrative, reception and office space

Image 17: Vehicle maintenance building

Administrative offices are relatively small and storage is at a premium, especially for marketing and financial materials. The Operators locker room is currently at capacity and provides no private space for changing clothes.

The current combined office space and operations space for BT and Campus Bus is approximately 8,000 sf.

Capacity Issues:

The existing Administration and Operations facility is at capacity to provide support for the current fleet levels. As the fleets grow, the Administration and Operations staff and area will also need to increase. In addition, many areas were identified by the staff as being undersized or missing entirely from the current facility. These items (a summary follows) will be discussed more fully in the Needs Analysis section.

- Reception Area.
- Storage for marketing materials, secure financial storage, and general storage.
- A "project work room" where a special project can be worked on.
- Technology storage.
- Additional Administrative Office Space for larger offices, office for a technology expert and office for a planner.
- Board room with the ability to be arranged as a public meeting room.
- Security office area for monitoring security cameras.
- Increased meeting and training areas.
- Larger, more secure Lost & found.
- Operator amenities such as an exercise room, showers, recreation equipment and quiet room.
- Operable windows.
- Secure Money Room for counting and storing fares.
- Small call center with acoustic separation from remaining areas.

Vehicle Maintenance (image 17)

Maintenance is staffed in 3 shifts as follows: The Day shift has 3 BT + 4 IU mechanics = 7 mechanics; 2nd shift has 1 BT mechanic + 1 service employee; 3rd shift has 1 BT mechanic; and the evening/night shift has 6 BT bus wash/service lane employees.

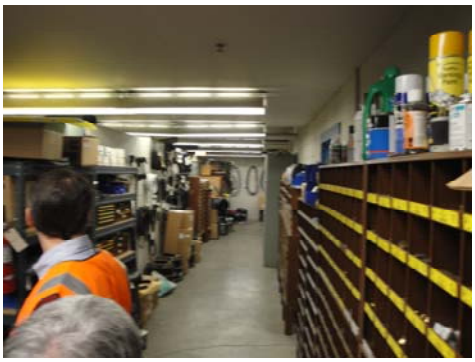


Image 18: Parts storage area

Maintenance offices and storage are cramped. The Parts Storage is separated into areas for BPTC and Campus Bus (image 18). The space currently appears to be adequate, however, mezzanine storage is difficult as it requires a fork lift to access the mezzanine with a pallet jack on the mezzanine to move items around. There is no usable overhead crane and the maintenance staff sees no need for one.

The welding area is cramped and needs better ventilation and lighting.

There is no paint or body shop. It is preferred to send buses out for painting rather than having a body shop with a paint booth in-house. However, windows and panels are installed in-house.

Image 20: Tire shop

The tire maintenance area is shared by IU and BPTC with IU leasing tires and BPTC buying them. Tire shops, tire storage, battery room, lube room and shops are satisfactory now but storage throughout is minimal. (image 20)

There is a separate Chassis Wash or Steam Clean bay which is shared by BPTC and Campus Bus (image 21). The fuel monitor is on the wall of the Chassis Wash which is a wet location not ideal for electronic equipment.

An empty maintenance bay is used for scheduled bus detailing. There is no clean electronics shop to handle farebox or other electronic repairs.

Image 21: Steam clean and bus wash

There are two inspection pits (depressed work areas) (image 22). One inspection is generally scheduled per night. The small buses are scheduled every 4,000 miles and the large buses every 6,000 miles.

There is no dedicated exterior cold storage for snow blowers, bus shelters, snow plows, salt, etc. Most of this equipment is currently stored outside with no protection from the elements (image 23).

There is no loading dock and the staff sees no need for one. A fork lift is used in lieu of a dock and is used approximately three times a month.

BPTC and Campus Bus maintenance bays and parts storage are separate. There are a total of nine (9) maintenance bays with four (4) vehicle lifts and two (2) inspection pits. Three bays, two vehicle lifts, and one pit are designated for BPTC, with the remaining four bays, two vehicle lifts, and one pit designated for Campus Bus.

Image 22: Inspection pit

Image 23: Exterior equipment storage area

Capacity Issues:

Based on the industry standard of 1 maintenance bay per 10 transit buses, the current 9 maintenance bays (including the service pits) can support a combined fleet of approximately 90 vehicles including non-revenue vehicles. Based on the current fleet of 86 vehicles (including non-revenue) the maintenance bays are nearing capacity.

Any significant expansion of the fleet will require the addition of service lanes. However, the two service pits can support between 80 and 120 buses, which will handle the inspection requirements for the projected growth through 2020.

Currently the maintenance bays are dedicated specifically to either BPTC or Campus Bus. By using the bays cooperatively, the usage can be maximized. The 4 bays dedicated to BPTC can support 40 vehicles and the 5 bays dedicated to Campus Bus can support 50 vehicles. Since Campus Bus is only projecting a modest future growth (27 buses currently with 2030 projection of 33), it is evident that 5 maintenance bays for Campus Bus is more than is needed while 4 bays for BPTC is less than is needed.

The addition of articulated buses to the fleet will require a longer maintenance bay with a lift designed to handle a 60-foot bus. This bay would ideally be a drive-thru bay as articulated buses are difficult to back up. The chassis wash bay, although sized for a 40-foot bus, could still be used for an articulated bus as long as the entire bus was not required to be inside the bay. However, in the current configuration, this would block the entrance to several maintenance bays.

The other areas in the Maintenance Building are functioning at capacity, but as the fleets grow the Maintenance area will also need to increase. In addition, some areas were identified by the staff as being undersized or missing entirely from the current facility. These items (a summary follows) will be discussed more fully in the Needs Analysis section:

- Separate welding area.
- Clean electronics shop.
- Exterior cold storage for snow blowers, bus shelters, snow plows, salt, etc.

Image 24: Transit fueling area

Vehicle Servicing (image 24)

The Service Lane, which handles both BPTC and Campus Bus vehicles, is staffed by BPTC. The vehicle queuing space is 3 rows wide. Operators queue the buses at the fuel lane and leave for the day. Service workers take the bus through fueling, interior sweeping, farebox vault removal, fluid top-off, and washing sequence. The buses are then parked, ready for the Operators the following day.

There is a gantry bus wash which is shared by both fleets (image 25). The vehicle wash bay is adjacent to the steam clean bay with no demising wall between the operations to contain the steam cleaning operation.

Image 25: Gantry bus wash

The fare probe and a portable vault receiver are in the bus wash. The fare collection system is only for BPTC as Campus Bus collects no fares. The fare receiver is secured at the end of daily servicing and taken to the counting room the next morning. The mobile vault receiver and fare consolidation process work well for the current fleet size.

Gas forced air heating in the wash bay works well although better ventilation and fans in the summer are desired. Ice buildup on the parking lot, from the bus wash and the washed buses, is an issue in the winter.

Fueling, both gasoline and diesel, is done on-site under a canopy. Gasoline is required to be in an open exterior area, but diesel fueling can be done in a specially designed interior fueling area. There are two diesel fueling positions and one gasoline fueling position.

Lighting levels seem low, particularly in the fuel and wash areas. Mosquitoes are a problem for employees working outside in warmer weather, due to the adjoining open creeks and automotive salvage yard.

Capacity Issues:

The existing facility is near capacity to provide support for the current fleet levels. As the fleets grow, the Service area will also need to increase in size. In addition, some areas were identified by the staff as being undersized or missing entirely from the current facility. These items (a summary follows) will be discussed more fully in the Needs Analysis section:

- Better Service Lane arrangement
- An improved vacuum system.
- Additional diesel position.

Image 26: Transit storage canopy

Image 27: Engine heater electrical connection

Image 28: Temporary employee parking under transit storage canopy

Vehicle Storage (image 26)

Buses are stored under a canopy, which offers protection from precipitation, but is not heated. Buses are plugged into engine heaters during cold nights (image 27). Providing a canopy without walls instead of an enclosed, heated building was a response to the regulations on building in a floodway. Buses are stored two deep, nose-to-tail, which is a workable arrangement. The open structure of the canopy creates a home for pigeons, which is a problem.

Capacity Issues:

The existing facility is over capacity to provide covered storage for the current fleet levels with some buses currently parked outside of the canopies. As the fleets grow, the Vehicle Storage area will also need to increase. Enclosed bus parking would provide protection for buses and employees from weather, alleviate need for engine heaters, solve the pigeon problem and provide better security for buses.

Miscellaneous Site Improvements:

Parking for employees has already exceeded capacity. This has necessitated the parking of employees' private vehicles in the bus storage and queuing areas, mixing transit and staff vehicle circulation (image 28). Non-revenue vehicles are parked next to the Administration building, but they are not under cover (image 29).

There is a significant level of public traffic to the facility, but only two designated public parking spaces.

Site and building security are a concern. There is an access easement through the bus storage area for the adjacent automotive salvage yard. This gives access not only to the automotive salvage yard, but also to the bus storage, maintenance and service areas. In the post 9/11 environment, securing transit operating and maintenance facilities has become a high priority.

There are 2 diesel Under Ground Storage Tanks (UGST) @ 10,000 gal. each (8,000 gal. working capacity) and 1 gasoline UGST @ 3,000 gal. (2,000 gal. working capacity). The tanks are new, code compliant, double-walled tanks with leak detection. The gasoline tank is filled every 2 months and the diesel tanks are filled every 3-4 days. On-site gasoline fueling may not be needed in the future. Local concern has been raised about the possible need to expand fuel storage capacity in order to provide several weeks of fuel for both fleets in the event of global or national fuel shortage.

Image 29: Non-revenue vehicle parking area

Use of the site is constrained by the presence of the floodway/ floodplain and the regulations regarding building permanent structures in same.

Currently there are 50 parking spaces for employees' vehicles in the designated parking lot plus spaces in the bus operating area where private vehicles are parked.

Operations are currently further constrained by delivery vehicles circulating and delivering within the bus circulation paths. There is also an easement through the site for truck access to the automobile salvage yard. Evening rush hour traffic on Grimes Road (backed up to Rogers) argues for an alternate access point for the facility, as the buses entering and leaving the site are often delayed a few minutes by traffic on Grimes Lane.

The stand-by generator has a 2-3 gal. diesel tank, which is filled by hand. The generator only provides power for a few basic functions within the facility.

The existing site is at capacity to provide support for the current fleet levels. There are only 50 existing designated parking spaces to accommodate the current 173 employees. As a planning tool, it is assumed that 85% of the employees should be accommodated which covers shift changes, sick days, etc. Using this tool, there should be 150 parking spaces so that private vehicles are not mixed with the revenue vehicles. As the fleets grow, the exterior site improvements will also need to increase. In addition, some areas were identified by the staff as being undersized or missing entirely from the current facility. These items (a summary follows) will be discussed more fully in the Needs Analysis section:

- Separate and additional parking for bikes and motorcycles.
- Separate bus circulation and parking from employee vehicle circulation and parking.
- Adequate public parking spaces.
- Stand-by generator to power a larger percentage of the facility.
- Access for deliveries away from bus circulation.
- Alternative access to the site from other than Grimes Lane.

Traffic Issues:

Buses and employee vehicles enter and exit the site from Grimes Lane. Since the facility opened in 1997, the traffic east of S. Morton on Grimes Lane has increased almost 40%. This creates some conflicts between buses and traffic. The traffic counts can be found in the Appendix.

Neighborhood:

The adjacent property activities are compatible with the Maintenance Facility. Across W. Grimes Lane to the south is the abandoned rail yard with a shipping and receiving company occupying the old rail building. Adjacent on the west is the former B-Line railroad which is now a recreational trail. As the facility has a security fence around the property, this public use does not present a problem.

To the north of the property is a vehicle salvage yard. Bordering the property on the east, and dissecting the salvage yard, is a channelized drainage ditch called Clear Creek. On the west side of Clear Creek is a continuation of the salvage yard and a car repair facility.

SECTION 2

Section 2 – FACILITY NEEDS ANALYSIS

Methodology:

The Bloomington Public Transportation Corporation (BPTC) fixed route service has experienced significant growth in terms of ridership and service hours and is expected to continue to grow in the future. BT Access ridership and service hours have declined in recent years due to better training for BT Access eligible riders to use fixed route service and the provision of free passage to eligible riders on the fixed route service. However, minimal BT Access growth of 10% from 2010 to 2020 and 10% growth from 2020 to 2030 are assumed for future flexibility.

According to IU, Campus Bus is not expected to experience any significant growth in service levels or fleet size, as the IU campus is well-served now and in the foreseeable future. Again, minimal Campus Bus growth of 10% from 2010 to 2020 and 10% growth from 2020 to 2030 is assumed for future flexibility.

Based on discussions with BPTC staff, the expansion of BPTC for the next 10 and 20 years is based on the estimate of 40% growth from 2010 to 2020 and 20% growth from 2020 to 2030. These percentages were used to calculate the projected number of buses and employees, which in turn were used to calculate the size of the projected facility.

The existing property is completely built-out and is not large enough to accommodate the projected growth, so the investigation of additional property was undertaken. In order to determine the minimum size of additional property required, a preliminary Space Program was developed in order to determine how "big is bigger".

Space Program:

The following space program summary is based on discussions with BPTC and Campus Bus staff, observations of existing BPTC operations and the Design Team's extensive experience with the design of maintenance and operations facilities.

Fleet descriptions have been projected for the next 10 years (2020) and the next 20 years (2030). The 10 year projection will be designated the "Design Year" and the Concept Design will reflect these numbers. The 20 year projection will be accommodated in the required size of additional property and shown as "expansion space" in the test-fit concepts. In the next phases of design, this space program will be refined and expanded to describe each space. At this point in the process, only descriptions of the large areas are needed. This Space Program will be re-evaluated at each stage of design as more up-to-date information becomes available.

The following chart summarizes this information:

Preliminary Specific Information*

Vehicles	Existing	Projected 2020	Projected 2030	
BPTC – Revenue		40% increase to 2020; 20% increase 2020-2030		
20'	6	8	10	
25'	4	6	7	
30'	5	7	8	
35'	18	25	30	
40'	13	18	22	
Articulated	0	10	20	
Campus Bus - Buses				10% increase every 10 years
all 40-ft	27	30	33	
Total Revenue Vehicles	**73**	**104**	**130**	
BPTC - Non-revenue	7	10	12	
Campus Bus - Non-revenue	6	7	7	
Total Non-Revenue Vehicles	**13**	**17**	**19**	
Maintenance Bays	9	12	15	
Service Lanes	1	2	2	
Administration Employees				
BPTC	7	10	12	
Campus Bus	3	3	4	
Operations/Maintenance Employees				
BPTC	25	35	42	Incl. BT Access call center
Campus Bus	2	2	2	
Operators				
BPTC	72	101	121	
Campus Bus	68	74	81	
Total Employees				
BPTC	**104**	**146**	**175**	
Campus Bus	**73**	**79**	**87**	
Employee Parking	150	191	223	Based on 85% of staff parking at any one time
Public Parking	12	15	15	

* In all cases, BPTC includes BT Access

Administration/Operations: The Administration / Operations area will expand to accommodate the increased staff plus add some new spaces that are needed, but are not part of the existing facility. As the fleet becomes larger, some positions which are not currently needed, will become necessary. Other additions address amenities for the employees' e.g. a Quiet Room and Exercise Room. The following areas were mentioned in discussions with the BPTC and Campus Bus staff and these items will be further investigated and vetted in future phases of design:

- Reception area.
- Storage for training items adjacent to training room.
- Technology storage.
- Storage for marketing
- Board room with ability to be arranged as a public meeting room.
- Security office and area for monitoring cameras.
- Larger, more secure, Lost & Found.
- Quiet and recreation equipment room for Operators.
- Secure Money room for fare counting and fare storage.
- Small call center area.
- Storage for marketing materials, secure financial storage, and general storage.
- A "project work room" where a special project can be worked on.
- Technology storage.
- Additional Administrative Office Space for larger offices, office for a technology expert and office for a planner.

Vehicle Maintenance: As discussed earlier, the possible future addition of articulated buses to the fleet will require a Maintenance bay with lift designed to handle a 60-foot bus. This bay would ideally be a drive-thru bay, as articulated buses are difficult to back up. The chassis wash bay, although sized for a 40-foot bus, could still be used for an articulated bus as long as the entire bus was not required to be inside the bay. Creating a chassis wash bay that is properly sized will be evaluated in future design phases.

The industry standard of 1 maintenance bay (including inspection bays) for every 10 vehicles maintained (includes non-revenue vehicles) was used to determine the number of maintenance bays. This is based on two shifts of mechanics. Adding a third shift provides some flexibility to accommodate unexpected growth in the fleet size. These are planning standards and the requirements will be further analyzed during subsequent design. Actual needs will depend on the miles driven, the number of mechanics, the age of the buses and the bus replacement plan, the size of the vehicle maintained, etc.

As the fleets grow, the Maintenance area will also need to increase, not only in size but in complexity. Whereas, in a small shop, mechanics can use an area for multiple tasks, a larger fleet will require more separation of tasks in addition to more employees. For example, the following areas will be included in the expanded facility:

- Separate welding area.
- Electronics repair shop.
- Exterior cold storage for snow blowers, bus shelters, snow plows, salt, etc.

Vehicle Servicing: The work of Vehicle Servicing is projected to be done in specially designed, interior Service Lanes. Each Lane can service 75 – 100 vehicles per day and will have two stations, fluid check (including diesel fueling) and washing. When the bus pulls into the fluid checking station, fare boxes will be probed and emptied (BPTC), fuel will be added, other fluids checked and topped off, and the interior will be swept (or vacuumed). Since the fleet has some vehicles which are fueled on the drivers' side, fuel dispensers will be on both sides of each Lane. Gasoline fueling, if required, will continue to be at an exterior pump.

After the fluid checking sequence is completed, the bus is driven through the bus wash and then parked in the Bus Storage barn without going outside. Detailed cleaning will be done in a dedicated Detail Bay.

Vehicle Storage: In a concept that would include an enclosed bus Storage Barn, the Storage Barn will be minimally heated and ventilated to provide weather protection for employees, alleviate need for engine heaters and provide better security for buses. The Storage Barn will be sized to accommodate the projected 2020 fleet in a nose-to-tail arrangement with room on the site to expand to the projected 2030 size.

In a concept that would include a Canopy over the parked buses, the vehicles will be parked under a canopy and each will have access to an engine heater. The roof structure of the canopy will be enclosed to prevent pigeons from roosting there. Security for the buses will be provided by the general site security. The canopy will be sized to accommodate the projected 2020 fleet in a nose-to-tail arrangement with room on the site to expand to the projected 2030 size.

Additional Site issues: In addition to the above building areas, the new concept will provide accommodations for the following:

- Separate parking for bikes and motorcycles.
- Separate bus and employee vehicle parking and circulation.
- 12 public parking spaces.
- Stand-by generator to cover the entire facility's electrical needs.
- Accommodation for non-revenue vehicles.
- Separation of delivery traffic from bus circulation.
- Two means of egress by buses from the site; one would be an emergency only exit.
- Minimum of two dumpsters: trash and metal for recycling.
- Fuel storage tanks.
- Storage for grounds maintenance equipment.

Site Analysis Methodology:

In discussions with BPTC and the Steering Committee, it was decided that the working hypothesis for facility expansion will be to include the existing site and facility in all instances, since it is in good repair and only 13 years old. Any additional sites investigated would support operations that are in ADDITION to the existing Grimes Lane site.

Since the existing site does have operational issues due to over-crowding and will not accommodate any further expansion, it will be necessary to acquire additional property to support projected expansion, as well as solve some issues with the current operation.

The three major criteria that were used in analyzing prospective sites are:

- Use of new site in conjunction with Grimes Lane.
- Size of new site to accommodate the above functions.
- Location of new site in conjunction with Grimes Lane.

Six scenarios were discussed with the Steering Committee as possible uses for new property. They are:

1. Maintain the existing site & acquire adjacent property.
2. Leave existing site as strictly Maintenance for BT and Campus Bus & have Administration, Operations, bus storage and associated staff parking for both at new site.
3. Move BT Access & all Administration to new site.
4. Move Campus Bus to new site.
5. Move BT to new facility and leave Campus Bus at existing site.
6. Build smaller northern or western satellite garage for several BT routes which are in the area.

In addition to size, other requirements for a new site are:

- Availability and affordability of land.
- Location relative to bus operations to avoid deadhead miles.
- Environmental conditions that might impact site usage and development.
- Presence of required utilities – electric, gas, water, sewer.
- Presence of existing access roads or the ability to affordably add access roads.
- Proper zoning and neighborhood compatibility.

Thirteen sites were identified and discussed as possible expansion sites (see attached map for site locations) based on their location relative to Grimes Lane. These sites were initially reviewed by the Design Team (Wendel, WS, BPTC Steering Committee). Because there are 6 use scenarios, 13 possible sites and 16 site analysis criteria, preparing a single matrix to compare the above would result in a complex 3-dimensional matrix.

As a 3-D matrix is an impractical tool for use in this situation, the Design Team broke the analysis down into steps, as follows:

Step 1: Each of the six scenarios was analyzed for its suitability for accommodating BPTC and Campus Bus operations. Advantages and disadvantages were prepared for each scenario. This resulted in the elimination of three scenarios. A complete analysis of the scenarios is included in Appendix D.

Step 2: Each site was evaluated for use by any or all the scenarios. This resulted in the elimination of seven sites.

Step 3: Test fit plans were developed for the three selected scenarios. These test fits were placed on the selected 6 sites and were analyzed. Two sites were retained in the analysis – #1 - the existing site including the salvage yard and #2 - a generic, as yet to be selected, site of 13 to 15 acres in size. See Appendix E for Test Fits.

Final Step: the result of the above analysis is that two preferred sites and one preferred scenario were selected to discuss more fully and use in comparing estimated construction costs, resulting in two conceptual designs. A third concept was added that is a more modest proposal for use of the existing site including the salvage yard.

SECTION 3

Section 3 – CONCEPTUAL DESIGNS

Methodology:

The Concept Designs are composed of the following areas:

1. Administration
2. Operations
3. Maintenance
4. Service Lane
5. Vehicle Storage
6. Exterior Elements

Administration includes; administrative offices; conference room(s); building entrance and lobby; and administrative employee amenities such as break room, restrooms, etc.

Operations includes: offices for supervisors, driver training room, driver amenities (lounge, lockers, restrooms, etc.), dispatch, and driver check in.

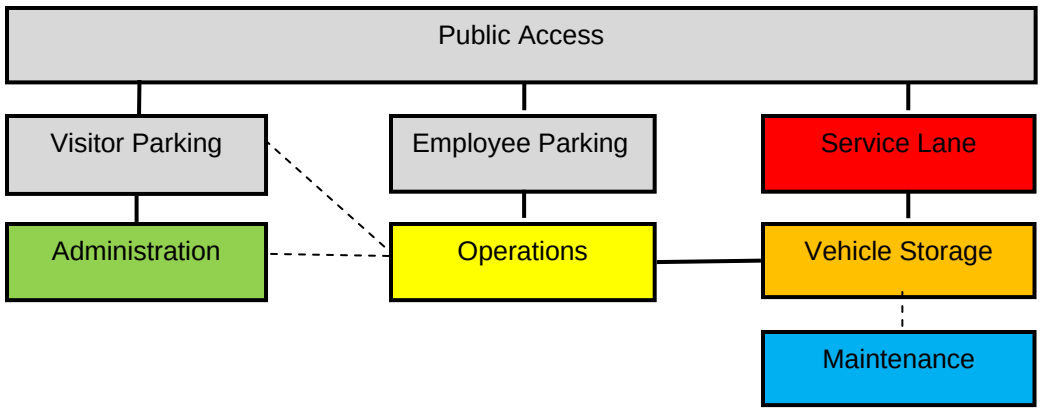
Maintenance includes: vehicle repair bays, inspection bays, chassis wash (steam clean), parts storage, storage for large items and tires, accommodation of building maintenance needs, consumables, etc., offices for maintenance staff and amenities for the maintenance employees.

Service Lane is composed of a two- or three-position lane. One position is for fueling, interior sweeping, fare removal, and fluid top-off, the second position is a cross-over lane for flexibility in case of a disabled bus (if site space allows), and the third position for exterior washing. Also included are spaces for a secure fare counting room, supervisor office, and service lane employee restroom and vehicle wash water recycling equipment. The vehicle wash position is sized to accommodate a 4-brush, drive-through bus wash.

Vehicle Storage is sized to accommodate the programmed mix of revenue vehicle sizes plus the non-revenue vehicles. Circulation is based on turning radii of the 40-foot coach requirements of 45 feet.

Exterior Elements are those that are not in the main buildings. This includes: providing employee and visitor parking with circulation separate from revenue vehicles; site circulation for transit vehicles based on a 45-foot turning radius; accommodations for delivery of supplies and fuel; place for three dumpsters; building and grounds equipment, etc.; and area to accommodate estimated storm water retention / management.

The following diagram illustrates the planning relationship between the various elements. A solid line connecting the elements indicates a primary relationship; a dashed line indicates a secondary relationship.



Conceptual Design Descriptions

The following conceptual designs were prepared as "test fits" to determine if the property in question could support the required program. They are not meant to be the final design concept as there is still much to discuss with BPTC and Campus Bus. Design and construction will be completed using environmentally sustainable methods.

Three different designs were prepared illustrating three different design approaches. These are:

Concept 1: Use existing site + adjacent automobile recycling yard to accommodate the projected transit growth using standard planning tools (e.g. adjacencies, sizes, etc) using the existing maintenance facility and additional construction.

Concept 2: Use an entirely new site to accommodate the projected transit growth using standard planning tools (e.g. adjacencies, sizes, etc).

Concept 3: Use the existing site + adjacent automobile recycling yard by expanding the existing administration and maintenance facility, plus additional construction without adding any 2nd level construction. Growth projections and standard planning tools are not strictly adhered to.

Concept 1

Concept 1 Description: The Renovation and Expansion of the Existing Facility (see Dwgs 1 – 4) is based on acquiring the automobile recycling yard adjacent to the existing facility. It illustrates how the projected 20 year expansion (to year 2030) could function with interior bus circulation and interior bus storage.

The buses enter the site from West Allen Street before going over Clear Creek, enter the Service Lanes and proceed to the Bus Storage building. If the bus requires maintenance, it can enter the Maintenance Bays directly from the Storage area. The buses would exit on the southern façade of the building onto Grimes Lane. Routing the buses over Clear Creek will require the construction of a new bus-friendly bridge.

Personal parking is separated from bus traffic and pedestrian traffic to provide safe and secure circulation for all on site. Visitor parking is at grade, accessed from West Allen Street and located on the Northwest corner of the site, under the 2nd Level Administration/Operations offices with access to the offices above. Employee parking is on the 2nd Level over the Bus Storage Building accessed via a two way circulation ramp and is entered from West Allen Street. A Bicycle Boulevard is identified on Allen Street per the 2008 Bicycle and Pedestrian Transportation and Greenways System Plan so design considerations will need to occur so both can safely coexist. There is a one way second exit from the 2nd Level parking onto West Grimes Street.

The greatest numbers of staff are Drivers and this arrangement provides access to the offices and buses in a straightforward, convenient manner. After the Drivers have checked in with the Operations personnel, they descend to the Bus Parking level, find their bus and exit the site onto West Grimes Lane to start their route.

The existing Maintenance Building is renovated and additions are added to both ends of the current maintenance area. The administration and operations building is demolished to provide room for the maintenance expansion. Part of this expansion will accommodate articulated buses which are 60 feet long. The existing Bus Canopy and Service Lanes are demolished to provide space for the reconfigured and expanded Bus Storage Building and Service Lanes.

The following chart summarizes the program illustrated by the Concept 1 drawings.

Program Item	Concept 1 - Projected to 2020
# Parked Buses	104
# Non-revenue vehicles	17
Total employees	225
Employee parking spaces (85% of staff)	191
Maintenance Bays*	14
Service Lanes	2
Administration / Operations area (SF)	18,500

* Maintenance bays include steam clean, inspection bays, & work bays for revenue & non-revenue

Concept 1 – Community Compatibility: The new Administration/Operations area will be adjacent to the B-Line Trail but now will be away from the new pedestrian bridge abutments that are being built directly next to the existing offices. The office space will be located on the 2nd Level adjacent to the elevated employee parking. The new visitor parking area will be located beneath the new office space. The parking will be open to the public and visible from the Trail and from Allen Street. This will offer controlled access to the site as the working portion of the site will be kept separate and secure from the public access portion.

The new use will have no negative impact on the Department of Public Works building which is eligible for historic designation.

Concept 1 - Implementation: Phasing the construction in order to keep BPTC and Campus Bus in operation is a requirement of reusing this site. For this study, a conceptual phasing plan was prepared as illustrated in Drawings 5 – 8. Phases 1 and 2 complete the facility to accommodate the projected 2020 needs. Phase 3 will complete the buildout for the projected 2030 needs.

Phase 1 will consist of:

- Acquiring the adjacent automobile recycling yard and demolishing the existing buildings on the site.
- Construct the new Service Lane and Bridge Building (connecting to the existing site).
- Add fuel storage tanks.
- Construct a portion of the Bus Storage building with employee parking above.
- Construct new employee vehicle access ramp to new 2nd level parking.
- Construct the visitor parking area with the Administration/Operations area above.
- Add two new maintenance bays

Phase 2 will consist of:

- Demolish the existing Administration/Operations area and the associated parking.
- Demolish the existing fueling area.
- Demolish the existing canopied bus parking area.
- Extend the new Bus Storage building as shown.
- Renovate the existing bus wash building for other maintenance use.
- Add new articulated maintenance bay and one new maintenance bay.
- Construct 2nd ramp from employee parking to Grimes Lane.
- Additional employee parking can be added by painting new lines on the 2nd Level over the Bus Storage building and requires no new construction.

Phase 3 will consist of:

- Constructing an additional articulated bus maintenance bay and a new regular maintenance bay in the existing new structure.
- Extend the Bus Storage building as shown.
- Additional employee parking can be added by painting new lines on the 2nd Level over the Bus Storage building and requires no new construction.

Concept 1 - Summary: In summary, this concept has the following positive features:

- Accommodates the maximum foreseen expansion of both BPTC and Campus Bus".
- Continues use of the existing facility.
- Replaces the automobile recycling yard with new buildings and green space.
- Provides interior circulation for buses from the Service Lane to Storage to Maintenance.
- Separates bus, personal vehicle, and pedestrian traffic.
- Provides pedestrian access to and from the new administrative building and the adjacent B-Line trail.
- Provides enhanced security for the facility.
- Gives Drivers convenient access from car parking to Operations to bus storage.
- Provides a new Service Building with 2 fueling lanes and 2 vehicle washers with water recycling.
- Provides new Stormwater management capabilities to the site.
- Decreases the automobile traffic on West Grimes Street.

This concept has the following negative features:

- Requires careful phasing to implement the design while maintaining current operations.
- Requires building in the floodplain/floodway requiring

Concept 2

Concept 2 – Description: The concept shows a new facility in a rectangular footprint that would require 13-15 acres to build (see Dwg 9). The concept is shown on a generic site for purposes of illustrating the design, but could be adjusted to a particular site. The buses enter the site, go into the Service Lane, and park in the Bus Storage area or if needed enter the maintenance area. The Maintenance Bays are all drive through so that there is no bus backing. If a bus needs to go to Maintenance, it will exit the Bus Storage building and re-enter at the Service Lane bypass or thru the Maintenance entrance. Once in the Maintenance area, it will pull into a Maintenance Bay, servicing will be completed, and the bus will pull out directly into the Bus Storage area for parking.

Drivers, administration and operations personnel will park near the Administration/Operations Building and maintain the separation of personal vehicle and bus movement. Drivers will enter the building, check in with Operations, and, walking down the pedestrian spine, access their bus. Delivery vehicles can circulate around the site with access to all buildings. Buses, pedestrians, delivery vehicles and personal vehicles are separated for safety and security. Maintenance personnel have the option to park near the maintenance bays which provides little to no conflict with bus movement and provides greater flexibility for the staff.

Because this is a new facility on a new site, it can be designed as a state-of-the-art facility without having to compromise the design due to existing conditions. This also means that phasing of construction is a non-issue, as the existing facility will continue to operate until functions are transferred to the new facility so that BPTC and Campus Bus are always able to operate.

The following chart summarizes the program illustrated by the Concept 2 drawings.

Program Item	Concept 2 - Projected to 2020
# Parked Buses	104
# Non-revenue vehicles	17
Total employees	225
Employee parking spaces (85% of staff)	191
Maintenance Bays*	13
Service Lanes	2
Administration / Operations area (SF)	18,500

* Maintenance bays include steam clean, inspection bays, & work bays for revenue & non-revenue

Concept 2 - Implementation: Phasing of this concept is neither as complicated nor expensive as in Concept 1. The facility to house the 2020 fleet will be completed before moving the operations from the existing site. It will start with the acquisition and clearing of the property. Phase 2 will be various additions to the existing facility to accommodate the 2030 fleet as shown on Drawing 9.

Concept 2 - Summary: In summary, this concept has the following positive features:

- Accommodates the projected 20 year expansion of both BPTC and Campus Bus.
- Does not impact Clear Creek floodplain/floodway.
- There are no phasing costs as the initial construction is not phased.
- Provides all drive-through maintenance bays.
- Decreases the bus and automobile traffic on West Grimes Street.
- Provides interior circulation for buses from Service Lane to Storage to Maintenance.
- Separates bus, personal vehicle, and pedestrian traffic.
- Provides enhanced security for the facility.
- Gives Drivers convenient access from car parking to Operations to bus storage.
- Potentially provides additional property for future expansion.
- Future expansion is easily accommodated without affecting on-going operations.
- Existing property can possibly be sold or traded with another City department to lessen the Project Cost.

This concept has the following negative features:

- Does not make use of the existing site.
- New site is undeveloped so may require extension of utility services.
- Depending on site location, operating costs (e.g. deadhead miles) could be negatively impacted.

Concept 3

Concept 3 - Description: This is a more modest concept that illustrates the capacity of the existing site + adjacent automobile recycling yard to accommodate projected increases in transit fleet and personnel (see DWG 10) without adding a 2nd Level, but does not provide the functionality of a state-of-the-art facility. This plan adds an addition to the existing Administration/Operations building to accommodate an increase in personnel, with 12 visitor parking places adjacent to the new addition, with access off Grimes Lane.

There are no accommodations for articulated buses, but 2 additional maintenance bays are added to the existing maintenance building to handle additional standard buses and non-revenue vehicles.

The bus parking is expanded and covered using canopies and electrical engine heaters similar to the existing facility. This will accommodate an additional 44 buses under cover. In order to expand the canopies, the existing fueling facility will be demolished. This will be replaced with a new Service Lane Building that will provide interior diesel fueling (gasoline fueling will necessarily remain exterior) and other standard Service Lane activities as explained above. There will, however, be no crossover lane due to site constraints. A snowmelt system will be installed in the pavement (extent to be determined during Schematic Design) at the Service Building exit to prevent freezing water conditions that are present currently. The existing vehicle wash will be converted into a new use.

The addition to the Administration/Operations building will take the place of the existing employee parking lot and the design will address the adjacent B-Line Trail both in design and pedestrian accessibility.

Employee parking will now be on new lots on the east side of Clear Creek. There is an existing bridge across the creek that, while not supporting bus traffic, will certainly support pedestrian traffic. The bridge will be renovated for safe pedestrian use and a striped pedestrian circulation path will be provided from the bridge to the Administration/Operations building.

In contrast to Concept #1, no 2nd level parking or offices are planned - all expansion is at grade. Because there are no 2nd Levels, the plan does not accommodate the projected expansion for 2020 or 2030. If more expansion becomes necessary, bus parking could replace the automobile parking at grade and a 2nd Level added above the bus parking for automobiles.

The following chart summarizes the program illustrated by the Concept 3 drawings.

Program Item	Concept 3 - Site Capacity	Program Requirements - Projected to 2020	Comparison of Capacity to 2020 Projections
# Parked Buses	117	104	13
# Non-revenue vehicles	12	17	-5
Total employees	267	267	0
Employee parking spaces	180	227	-47
Maintenance Bays*	12	14	-2
Service Lanes	2	2	0
Administration / Operations area (SF)	14,700	18,500	-3,800

* Maintenance bays include steam clean, inspection bays, & work bays for revenue & non-revenue

Concept 3 - Implementation: Phasing will be important for this concept as the facility has to continue operations during construction.

Phase 1 will consist of:

- Acquiring the adjacent automobile recycling yard and demolishing the existing buildings on the site with site clean-up, if required.
- Construction of stormwater management items and the new employee parking lots.
- Construct the new Service Lane.
- Add fuel storage tanks.
- Demolish the existing fueling lane and fuel storage tanks.
- Construct the Bus Storage canopies as required by fleet expansion.

Phase 2 will consist of:

- Construct the visitor parking area and the Administration/Operations addition.
- Add two new maintenance bays.
- Renovate the existing bus wash bay to a new use.

Phase 3 will consist of (if required):

- Add new bus canopies with automobile parking above on the automobile parking lot east of Clear Creek to accommodate 20-year projected expansion.

Concept 3 – Community Compatibility: The new Administration/Operations area will be adjacent to the B-Line Trail next to the existing offices. The new visitor parking area will be open to the public and visible from the Trail. This will offer controlled access to the site via automobile or from the B-Line, as the working portion of the site will be kept separate and secure from the public access portion.

The new use will have no negative impact on the Department of Public Works building which is eligible for historic designation. A Bicycle Boulevard is identified on Allen Street per the 2008 Bicycle and Pedestrian Transportation and Greenways System Plan so context design considerations will need to occur so both can safely co-exist.

Concept 3 - Summary: In summary, this concept has the following positive features:

- Provides a new Service Building with 2 fueling lanes and 2 vehicle washers with water recycling.
- Replaces the automobile recycling yard with new parking and green space.
- Provides new Stormwater management capabilities on the site.
- Decreases the automobile traffic on West Grimes Street.
- Separates bus and personal vehicle traffic.
- Provides pedestrian access to and from the administrative building and the adjacent B-Line trail.
- Provides enhanced security for the facility.
- Is the least expensive concept (see project cost estimates in Section 4).

This concept has the following negative features:

- Does not accommodate the projected 2020 expansion program except for the number of buses.
- Requires careful phasing to implement the design while maintaining current operations.
- Requires building in the floodplain/floodway requiring several official approvals.
- Employees must walk from the employee parking lot through the bus parking area, which is a safety concern, to enter the Administration/Operations building.
- Future expansion can only be accommodated by adding a 2nd level for employee parking or by acquiring more adjacent property.

SECTION 4

Section 4 – CONCEPTUAL ESTIMATES

The three concepts were estimated by our cost estimator, reviewed by the Design Team, and discussed with BPTC. The summary of the costs is shown in the following charts.

	Estimated Cost of Item	Comments
Concept #1		
Land Costs	$765,500	Assessed value
Preparation of NEPA documents	$65,000	
Cost of Probable Construction	$45,300,000	
A/E design and engineering fees	$5,436,000	Incl. site survey, geotechnical engineering, etc.
Construction Management	$1,812,000	4% of construction cost
Construction Contingency	$4,530,000	10% - Available to Owner during construction
TOTAL PROJECT COST	**$57,908,500**	
Concept #2		
Land Costs (17 acre portion)	$1,727,321	15/84 of total Assessed value of $9,673,000 for 84 acres
Preparation of NEPA documents	$65,000	
Cost of Probable Construction	$45,100,000	
A/E design and engineering fees	$5,412,000	Incl. site survey, geotechnical engineering, etc.
Construction Management	$1,804,000	4% of construction cost
Construction Contingency	$4,510,000	10% - Available to Owner during construction
TOTAL PROJECT COST	**$58,618,321**	
Concept #3		
Land Costs	$765,500	Assessed value
Preparation of NEPA documents	$65,000	
Cost of Probable Construction	$7,900,000	
A/E design and engineering fees	$948,000	Incl. site survey, geotechnical engineering, etc.
Construction Management	$316,000	4% of construction cost
Construction Contingency	$790,000	10% - Available to Owner during construction
TOTAL PROJECT COST	**$10,784,500**	

* Not included in the above estimates are site and building hazardous materials remediation and other soft costs (e.g. legal fees, permits, etc.)

The higher Project Cost of Concepts 1 and 2 are due to the following elements:

- An enclosed, heated, and ventilated bus storage building, providing interior access from Service Lanes to Maintenance to Bus Storage.
- Employee parking is adjacent to the Administration/Operations building and convenient to the Bus Storage area.
- Can easily accommodate the projected expansion to year 2030.

Concept 3 is less expensive because:

- Does not accommodate the projected 2020 expansion program.
- Buses are stored under a canopy with engine heaters instead of in an enclosed building. The buses must exit the Service Building and proceed, unprotected from the weather, to either the Maintenance Building or the Bus Storage Canopies.
- Employees' parking area is not convenient to the Administration/Operations building.
- Expansion will require construction of multi-level parking and offices.

SECTION 5

Section 5 – RECOMMENDATIONS

The Design Team's recommendations are based on the concept designs and the concept estimates. Concept 1 and Concept 2 illustrate a state-of-the-art facility incorporating standard best design practices used throughout the transit industry. Concept 3 illustrates using the site without adding any 2nd levels, keeping all elements at ground level.

Item	Program Elements		
	Concept 1	Concept 2	Concept 3
Parked Buses	104	104	117
Non-revenue vehicles	17	17	12
Total employees	267	267	212
Employee parking spaces	227	227	180
Maintenance Bays	14	13	11
Service Lanes	2	2	2
Administration / Operations area (SF)	18,500	18,500	14,700
Estimated Project Cost	$57,910,000	$58,620,000	$10,800,000

If funding is thought to be available, the Team recommends that Concept 2 rather than Concept 1 be pursued because of the following:

- Simple site and building circulation.
- Expansion easily accommodated without impact on operations.
- Phasing is not necessary as operations can continue on the existing site while construction on the new site is completed.
- Solves the traffic concerns with bus and automobile traffic on Grimes Lane and West Allen.

If funding for a new, state-of-the-art facility is not available, the Team recommends Concept 3. This concept permits modest expansion of the facility at a reduced cost. However, more expensive construction would be required to meet the programmed expansion in the future. In addition, off-site employee parking options would need to be explored and employee incentive programs (car pool, transit, bike, charge for parking) may need to be considered.

APPENDIX A

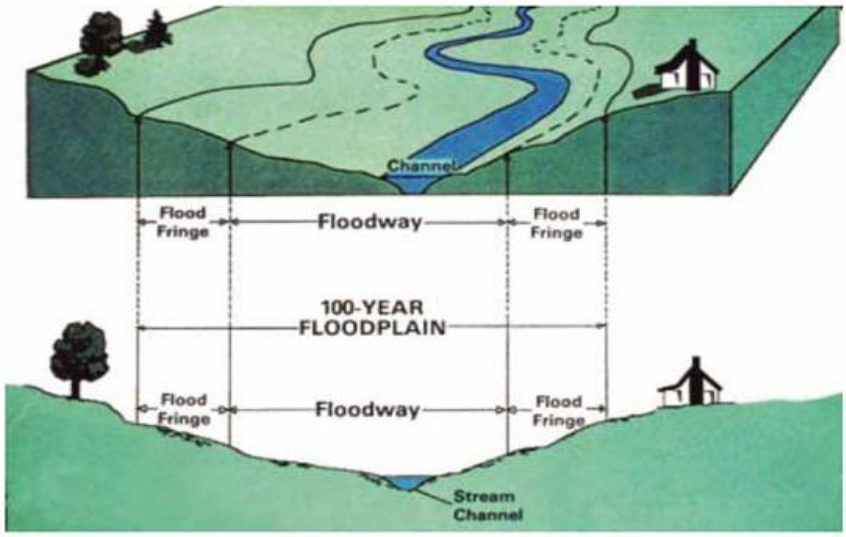
Floodplain Management Process

This report provides information for the potential development of the Bloomington Transit Maintenance Expansion facility on the existing site and the information for next steps, should that site be the preferred alternative. The existing administrative building and maintenance facility for Bloomington Transit is located at 130 West Grimes Lane. The facility was built by BT on a parcel of land owned by Indiana University that is approximately 4.5 to 5.0 acres within a 100-year floodplain. Future plans for the site envision a joint facility for BT and for the Indiana University Campus Bus service.

The typical process for new development or changes in infrastructure requires approval from local planning departments and regulatory agencies, which is discussed in the following pages.

Definition

The Indiana Department of Natural Resources (DNR) defines the floodplain as including both the floodway and floodway fringe.[1] The Federal Emergency Management Association (FEMA) defines the floodway as "an area that includes the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water-surface elevation by more than a designated height" (i.e. the portion of the floodplain in which the water will be moving downstream during the 100-year flood event).



[1] Peters, N. & Nance, A., Indiana Department of Natural Resources, Division of Water. Local Floodplain Administrator's Guide, 1999/2000.

Planning Process

Floodplain development is any activity that changes or alters the existing floodplain. Some activities of development are: filling, drilling, grading, and construction of buildings. Each of these activities requires approval via permits, etc. before any development can begin.[2] Depending on the specific area of development, plans must be submitted for review and determined if the development is in the floodway or floodway fringe. As stated previously, the existing site is within the 100-year Floodplain.

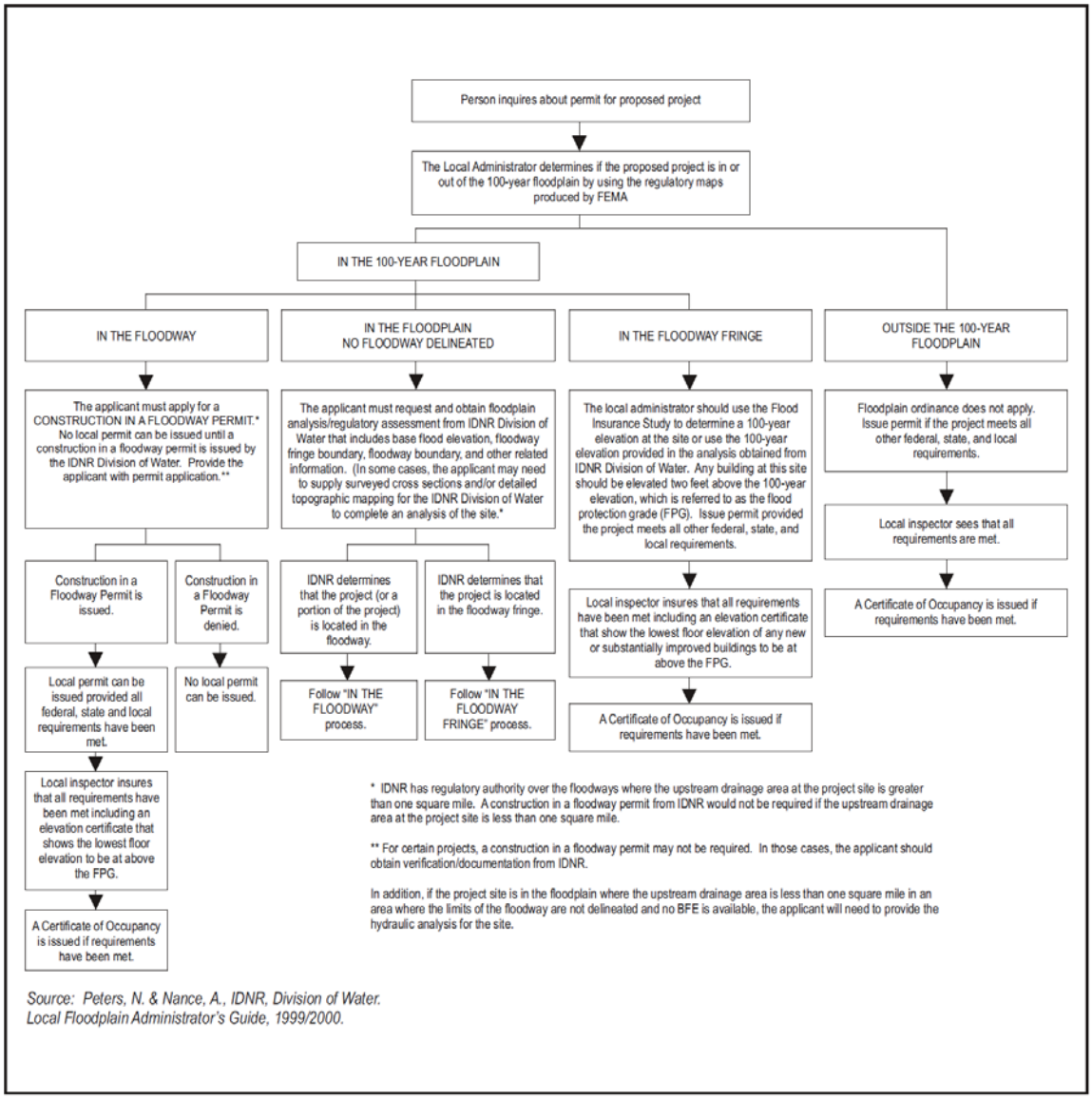
Prior to 2007, development on floodways was permitted at the local level via conditional use permits. The existing BT structures on the University-owned parcel were approved over a decade ago, with unique characteristics to offset floodplain requirements. Local staff also indicated that the site was approved due to state properties having exemption from local planning regulations.

The City of Bloomington updated the Unified Development Ordinance in 2007, which includes city development processes, permits, and fees within Title 20 of the ordinance.[3] Present day regulations through Title 20 for development do not allow construction. However, there are circumstances where exemption may be allowed through use variances at the local level, such as state-owned properties as this site. The standard process for non-exempt locations includes review from the local Planning Commission, who provides a recommendation to the Board of Zoning Appeals. The local Board would also consider expertise and recommendations from the state and federal agencies, INDNR and FEMA. The diagram on the following page presents a typical flow-chart of activities for acquiring approval for construction, as suggested from the DNR.

The next steps for BT are to coordinate with the City of Bloomington Planning Department which will participate in coordinated discussions at the state and federal level to ensure all affected agencies are aware of the project. The local offices would forward the application, along with all pertinent plans and specifications, to the DNR for review and comment. No action shall be taken by the local planning office until either a permit for construction in the floodway or a letter of recommendation citing the 100-year flood elevation and the recommended Flood Protection Grade (FPG) has been received from the Department of Natural Resources.

Under provisions of Indiana Code 13-2-22, a permit from the Natural Resources Commission is required prior to the issuance of a local permit for any excavation, deposit, construction or preparation activities such as filling, grading, clearing, paving, etc. undertaken before the actual start of construction of the building.

[2] http://www.in.gov/nrc_dnr/lakemichigan/watquan/watquand.html#page7b
[3] http://bloomington.in.gov/code/



Source: Peters, N. & Nance, A., IDNR, Division of Water. Local Floodplain Administrator's Guide, 1999/2000.

Every application for an improvement location permit shall be accompanied by a site plan, drawn to scale, showing the location of the structure, improvement, or use to be altered, changed, placed, erected, or located, the dimensions of the lot to be improved, the size of yards and open spaces, existing and proposed streets and alleys adjoining or within the lot, and the manner in which the location is to be improved; also a description of the proposed development, a legal description of the property, the location of the lot in relation to any streams, drainage ditches, rivers, or creeks if located in a Special Flood Hazard Area (SFHA), the site plan showing the existing and proposed land grades if located in a Special Flood Hazard Area (SFHA), and the elevation of the top of the lowest floor, including

basement, of all proposed development if located in a Special Flood Hazard Area (SFHA). An application fee and permit fee will be charged to the applicant.

The floodway permit process typically takes approximately six months. Hydraulic modeling will be required to identify the impacts on the floodway. The DNR will assess the overall impacts to the floodway during the permit application process. Representatives from the State DNR office indicated that non-residential development is allowed in some parts of the floodway. The elevation requirements must be determined. If a flood insurance study has not been performed, the DNR will perform a floodplain analysis at no cost to assist BT. The analysis, if the use is allowed, will lead to the state permitting process as described above, a $200 fee. The required forms are located on the DNR website. All city ordinances must also be met.

Summary

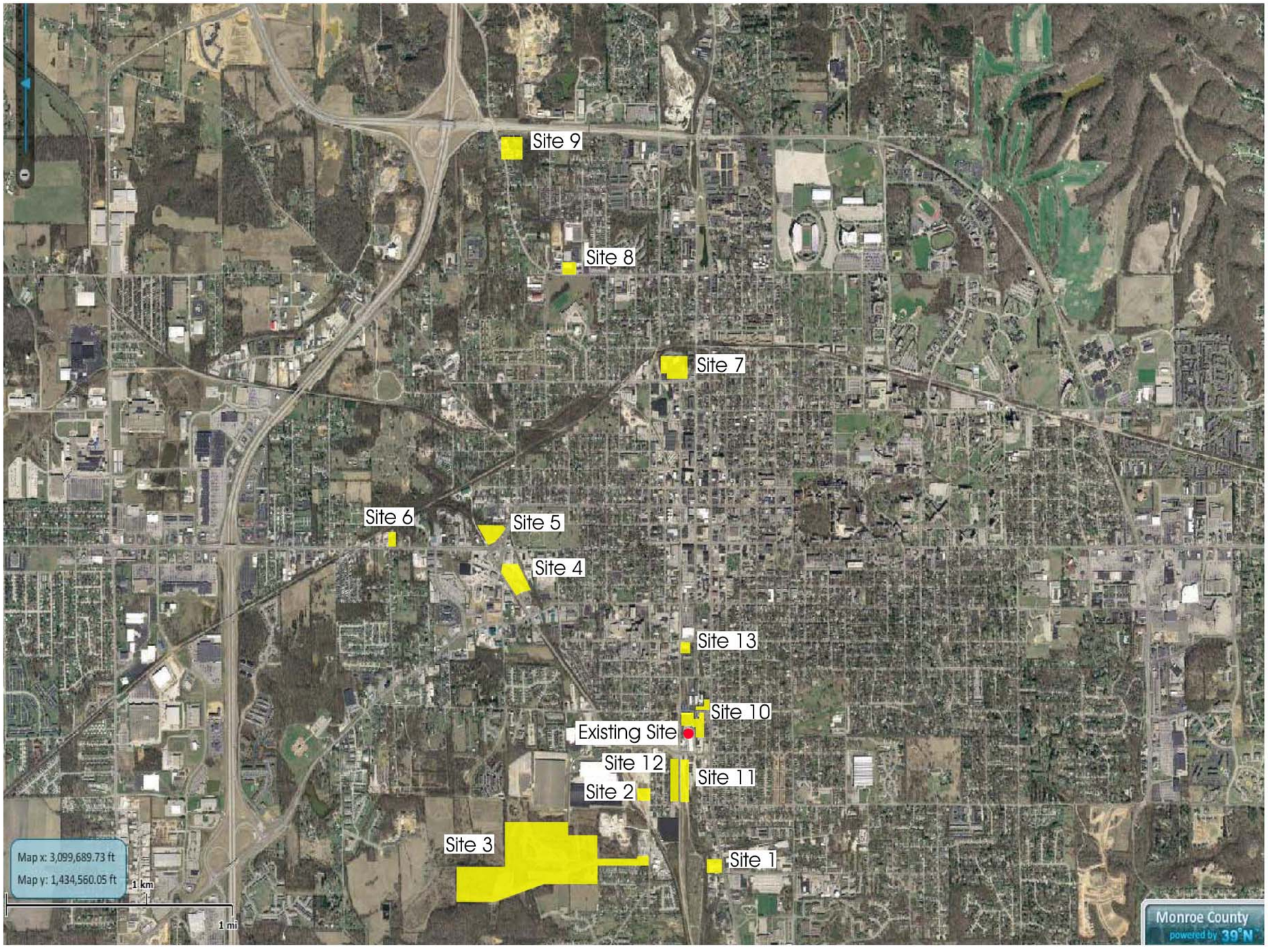
This brief memorandum presents the steps needed to pursue the existing site as a viable alternative for the future facility. Additional conversations will be held by BT for local, state, and federal planners to determine potential options on the site.

APPENDIX B

Traffic Counts – City of Bloomington Planning Department

West	Grimes Lane	E. of Morton	8/6/1998	7540
West	Grimes Lane	East of Morton	6/17/2002	10521
West	Grimes Lane	E. of Morton	10/4/2006	12287
West	Patterson Drive	From S. Madison St. to S. Morton St.	12/1/2008	12486
West	Patterson Drive	From S. Madison St. to S. Morton St.	11/10/2009	12098

APPENDIX C



Site Locations

1. Miller and Walnut
2. Rogers Street near Grimes
3. Strong Street
4. Patterson near 3rd
5. Patterson @3rd
6. 3rd Street
7. Morton Street @11th
8. Roller Rink
9. Arlington Road near 45/46
10. Junkyard
11. Switchyard
12. Warehouse on Grimes
13. !st @ S. Morton Street

Bloomington Transit Site Survey Locations

APPENDIX D

BPTC
Maintenance Expansion Feasibility Study
Scenario Descriptions and Analyses

At the Steering Committee meeting on April, six scenarios for expansion of the BPTC/Campus Bus facility were discussed. The following is a description of these scenarios including pluses and minuses - the most important are in bold type.

SCENARIO #1 – Expand existing site by acquiring or using adjacent properties. The junkyard was discussed as a possible acquisition and use of the railyard across Grimes Lane as a possible joint-use parking lot for BPTC and the future City park.

NOTE: This is the preferred scenario.

Pluses

- **Keeps all departments together**.
- Maintains use of existing maintenance areas.
- Replaces existing junkyard with new use.
- Gives BPTC the ability to be open to the new trail along the western boundary.
- Promotes a partnership with the City by developing parking on the existing railyard which can be used by BPTC & the City.
- Allows the separation of bus and other vehicle circulation patterns.
- Junkyard owner is willing to discuss purchase with BPTC.
- Requires purchase of only one property.
- No increase in deadhead miles.
- Replacing the junkyard will help reduce the mosquito problem.

Minuses

- **Will require extensive NEPA review to determine the feasibility of building in the floodway/plain.**
- Requires purchase of one property.
- May require agreement with the City for use of the railyard.

BPTC
Maintenance Expansion Feasibility Study
Scenario Descriptions and Analyses

SCENARIO #2 – Make existing site strictly Maintenance for BPTC, BT Access and Campus Bus (to include maintenance staff facilities) and move Administration, Operations, Service Lane and Bus Storage for BPTC, BT Access and Campus Bus to a new site.

Pluses

- **Maintains use of existing maintenance areas**.
- Allows the separation of bus and other vehicle circulation patterns.
- Keeps maintenance functions together.

Minuses

- **Separates Maintenance from other departments**.
- **Will require extensive NEPA review to determine the feasibility of building in the floodway/plain.**
- Requires purchase of a large piece of property.
- Vehicles needing maintenance will be ferried from storage to maintenance facility, increasing deadhead miles.
- New property will probably not be as centrally located as the existing.
- Office portion of facility will be demolished.

BPTC
Maintenance Expansion Feasibility Study
Scenario Descriptions and Analyses

SCENARIO #3 – Move Administration and BT Access to a new site and make existing site Operations, Maintenance (including BT Access), Service Lane and Bus Storage for BPTC and Campus Bus.

NOTE: This scenario will not be further analyzed as it does not significantly reduce the space program for the existing site thus not allowing more expansion room. This information will be included in the final report.

Pluses

- **Keeps maintenance functions together**.
- Replaces existing junkyard with new use.
- Promotes a partnership with the City by developing parking on the existing railyard which can be used by BPTC & the City.
- Allows the separation of bus and other vehicle circulation patterns.
- Junkyard owner is willing to discuss purchase with BPTC.
- Maintains use of existing maintenance areas.
- Replacing the junkyard will probably help reduce the mosquito problem.

Minuses

- **Does not significantly reduce the space program for the existing site**.
- **Will require extensive NEPA review to determine the feasibility of building in the floodway/plain.**
- Requires purchase of another property in addition to the junkyard.
- Requires agreement with the City for use of the railyard.
- Separates the departments.

BPTC
Maintenance Expansion Feasibility Study
Scenario Descriptions and Analyses

SCENARIO #4 – Make existing site Administration, Operations, Maintenance Service Lane and Bus Storage for BPTC. Move Campus Bus to a new site.

Pluses

- **Keeps BPTC departments together**.
- Replaces existing junkyard with new use.
- Gives BPTC the ability to be open to the new trail along the western boundary.
- Promotes a partnership with the City by developing parking on the existing railyard which can be used by BPTC & the City.
- Allows the separation of bus and other vehicle circulation patterns.
- Junkyard owner is willing to discuss purchase with BPTC.
- Replacing the junkyard will probably help reduce the mosquito problem.

Minuses

- **Requires new agreement with Campus Bus**, **including possible purchase of existing site by BPTC.**
- **Will require extensive NEPA review to determine the feasibility of building in the floodway/plain.**
- Requires purchase of another property in addition to the junkyard.
- Requires agreement with the City for use of the railyard.
- Duplicates maintenance functions.
- Makes sharing resources between BPTC and Campus Bus more difficult.

BPTC
Maintenance Expansion Feasibility Study
Scenario Descriptions and Analyses

SCENARIO #5 – Make existing site all facilities for BPTC and Campus Bus. Move BT Access (All functions) to a new site.

NOTE: This scenario will not be further analyzed as it does not significantly reduce the space program for the existing site thus not allowing more expansion room. This information will be included in the final report.

Pluses

- **Maintains use of existing maintenance areas**.
- Replaces existing junkyard with new use.
- Gives BPTC the ability to be open to the new trail along the western boundary.
- Promotes a partnership with the City by developing parking on the existing railyard which can be used by BPTC & the City.
- Allows the separation of bus and other vehicle circulation patterns.
- Junkyard owner is willing to discuss purchase with BPTC.
- Replacing the junkyard will probably help reduce the mosquito problem.

Minuses

- **Does not significantly reduce the space program for the existing site.**
- **Will require extensive NEPA review to determine the feasibility of building in the floodway/plain.**
- Requires purchase of another property in addition to the junkyard.
- Requires agreement with the City for use of the railyard.
- Duplicates maintenance functions.

BPTC
Maintenance Expansion Feasibility Study
Scenario Descriptions and Analyses

SCENARIO #6 – Build smaller northern or western satellite garage for several BPTC routes. Maintenance (Level II) will occur at the satellite location.

NOTE: This scenario will not be further analyzed as it does not significantly reduce the space program for the existing site thus not allowing more expansion room and does not keep all departments and vehicles together. This information will be included in the final report.

Pluses

- **May decrease deadhead miles**.
- Replaces existing junkyard with new use.
- Gives BPTC the ability to be open to the new trail along the western boundary.
- Promotes a partnership with the City by developing parking on the existing railyard which can be used by BPTC & the City.
- Allows the separation of bus and other vehicle circulation patterns.
- Junkyard owner is willing to discuss purchase with BPTC.
- Replacing the junkyard will probably help reduce the mosquito problem.

Minuses

- **Does not significantly reduce the space program for the existing site.**
- **Will require extensive NEPA review to determine the feasibility of building in the floodway/plain.**
- Requires purchase of another property in addition to the junkyard.
- Requires agreement with the City for use of the railyard.
- Duplicates maintenance and other functions.

APPENDIX E

Bloomington Transit Bus Maintenance Master Plan

ALTERNATIVE SITES SUMMARY

7/6/2010

Site	PROPERTIES														
	SIZE (acres)	ACCESS FROM MAIN ROAD	COMPATIBLE NEIGHBORS	# OF PARCELS	ASSESSED VALUE	DISTANCE FROM EXISTING FACILITY	ADJACENT TO THE EXISTING SITE	CLOSE TO BUS ROUTES (#'S)	CONDITION OF ACCESS ROAD	LAND CONTOUR	DEMOLITION REQUIREMENTS	BUSINESSES ON SITE	AVAILABILITY	FLOOD PLAIN	KNOWN ENVIRONMENTAL PROBLEMS
1	3.87	-	+	7	$2,148,100	+	-	+ (1,4,7)	-	+	-	-	?	+	-
2	2.37	+	-	1	$272,600	+	-	+(1,2,4,7)	+	+	+	+	?	-	+
3	84.12	+	+	1	$9,673,000	+	-	-(2,4)	+	-	-	+	+	+	+
4	6.63	+	+	1	$663,000	+	-	-(3,4)	+	+	+	+	+	+	+
5	3.47	+	+	1	$554,600	+	-	-(3,4)	+	+	+	+	?	+	+
6	1.45	-	+	1	$6,700	-	-	-(3,4)	-	-	+	+	+	-	+
7	6.58	+	+	1	$2,229,600	-	-	-(1,2,6)	+	+	-	+	?	+	+
8	1.50	+	-	2	$668,000	-	-	-(2)	+	+	-	-	?	+	+
9	4.00	-	-	1	$208,000	-	-	-	-	+	-	-	?	-	+
10	3.22	+	+	5	$765,500	+	+	+(All)	-	+	-	-	+	-	-
11	0.75	+	+	1	$119,700	+	+	+(All)	-	+	+	+	+	-	-
12	4.72	+	+	1	$1,011,000	+	+	+(All)	-	+	-	-	+	-	+
13	0.99	+	+	2	$472,400	+	-	+(All)	+	+	-	+	+	+	-

APPENDIX F

MAINT.

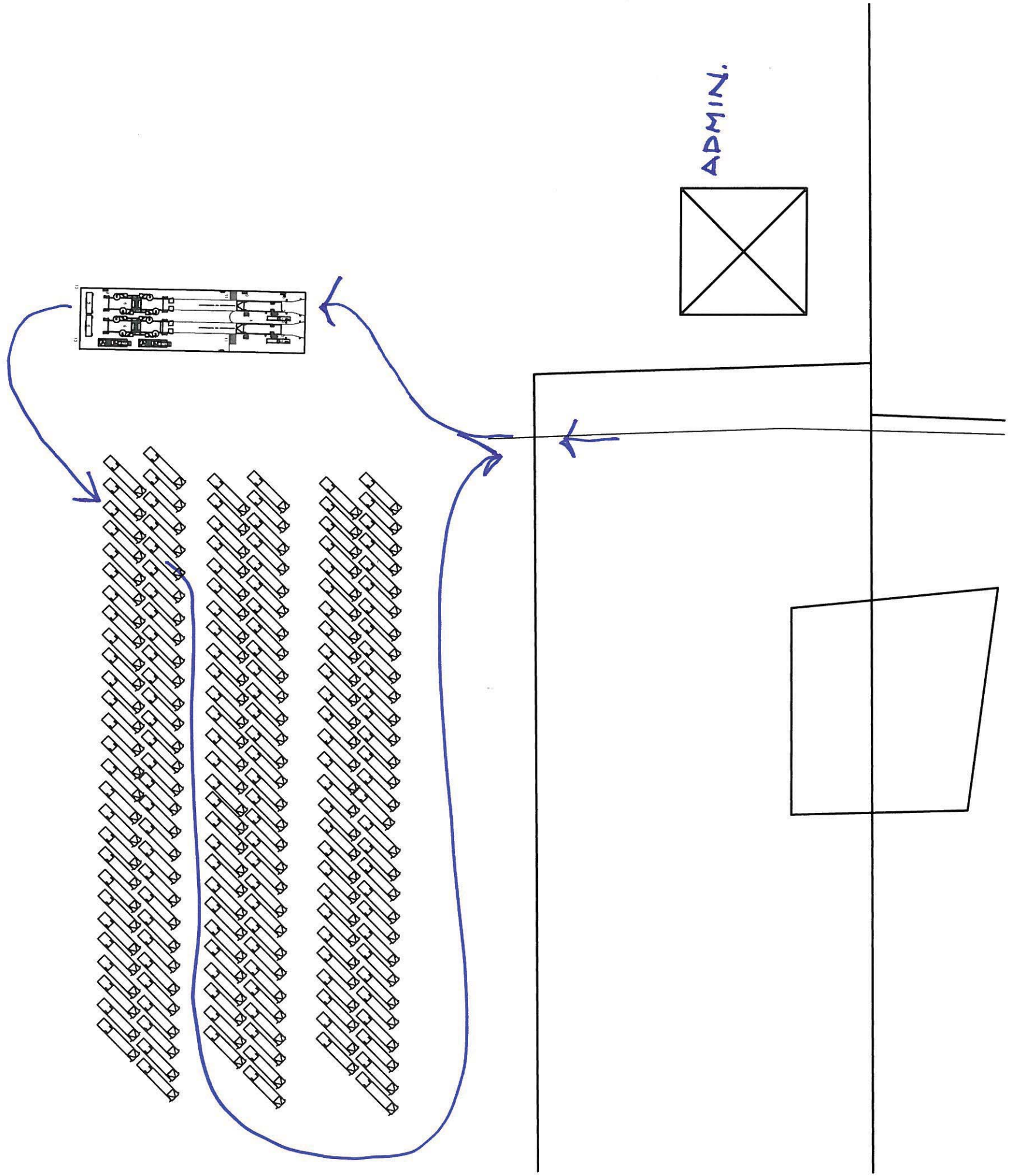
SERVICE

KOH-I-NOOR

103 ·
20 Al

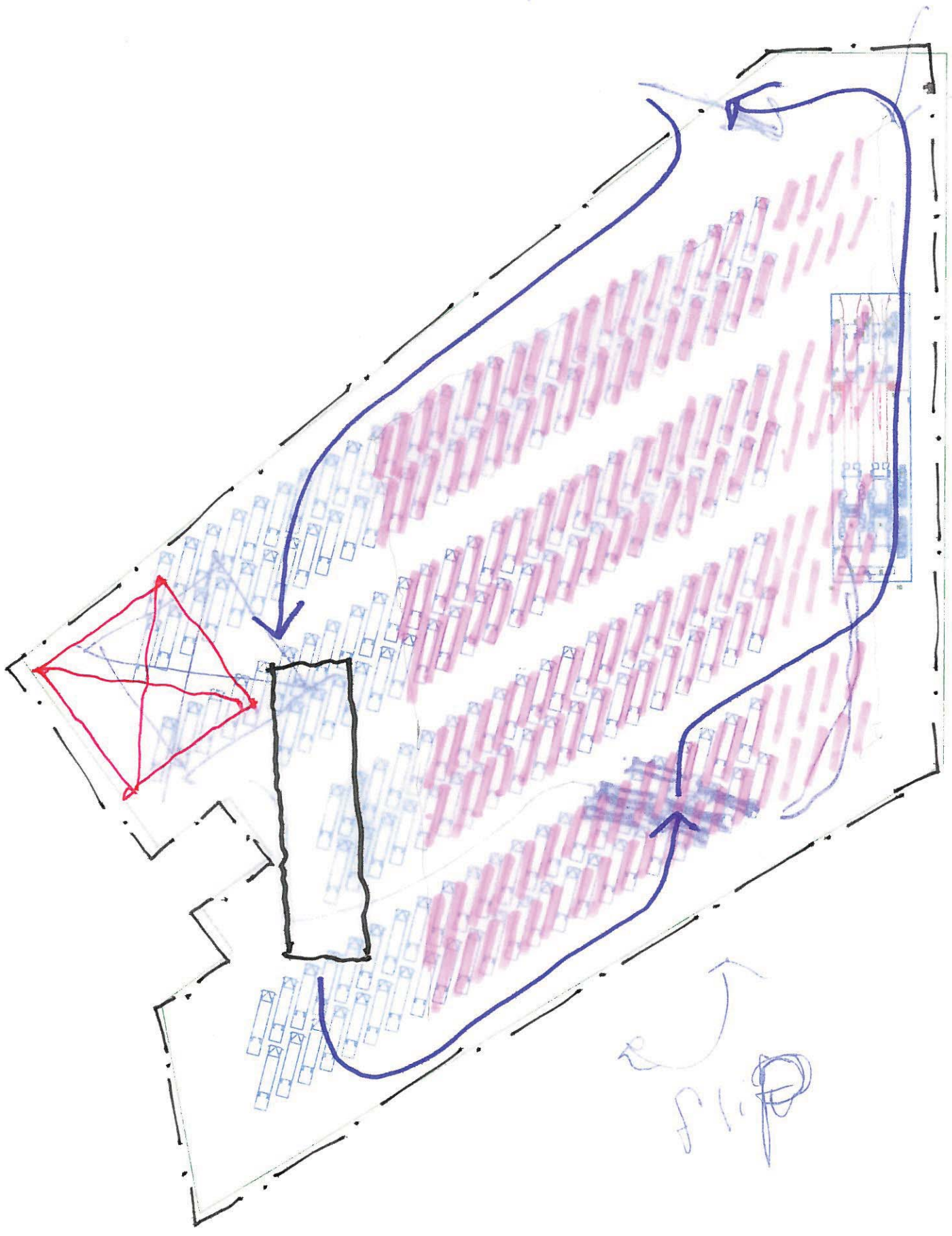
#1 Existing

#2 SITE 3

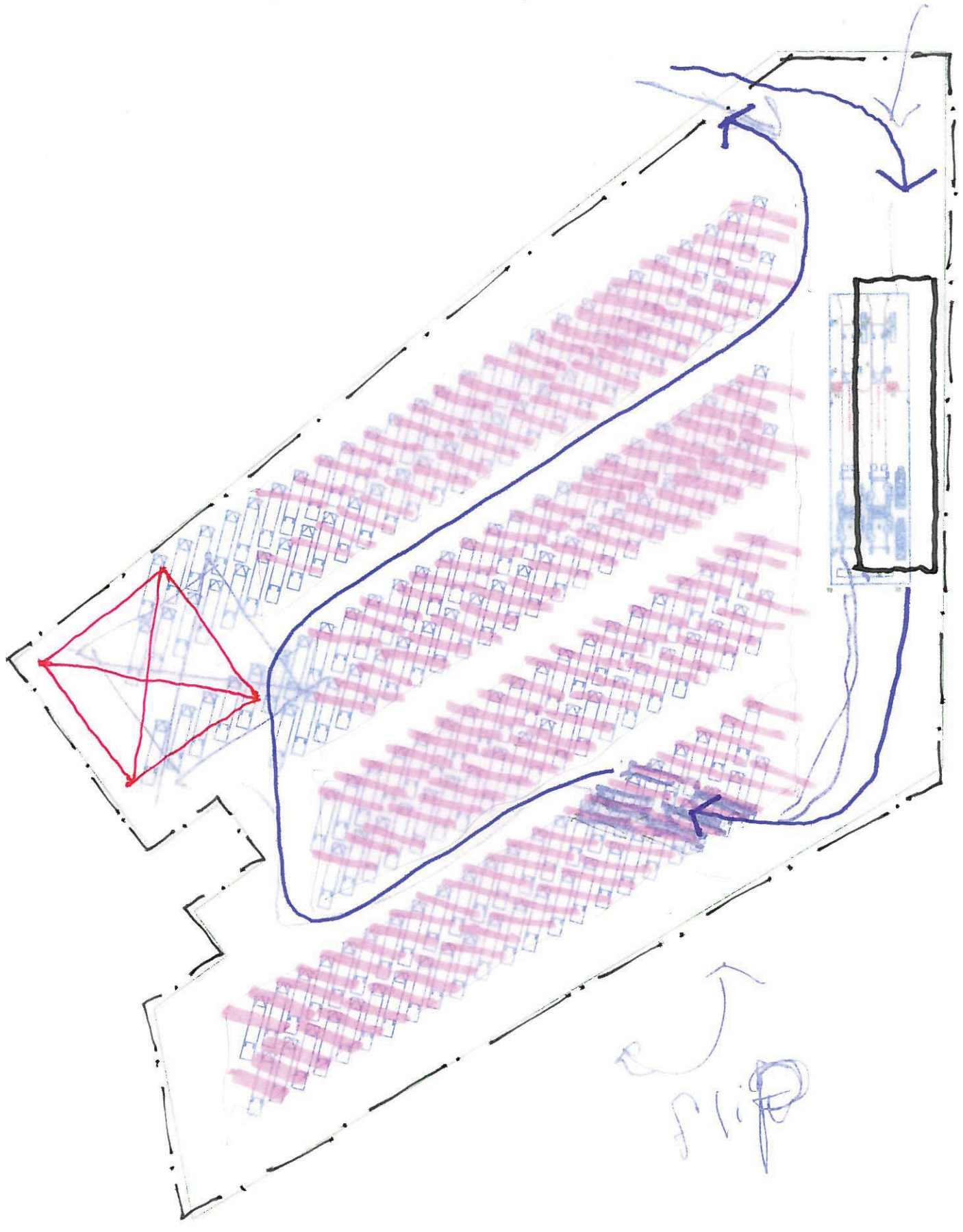


#2 -B SITE 4

#2 -B SITE 4



#22 - B SITE 4



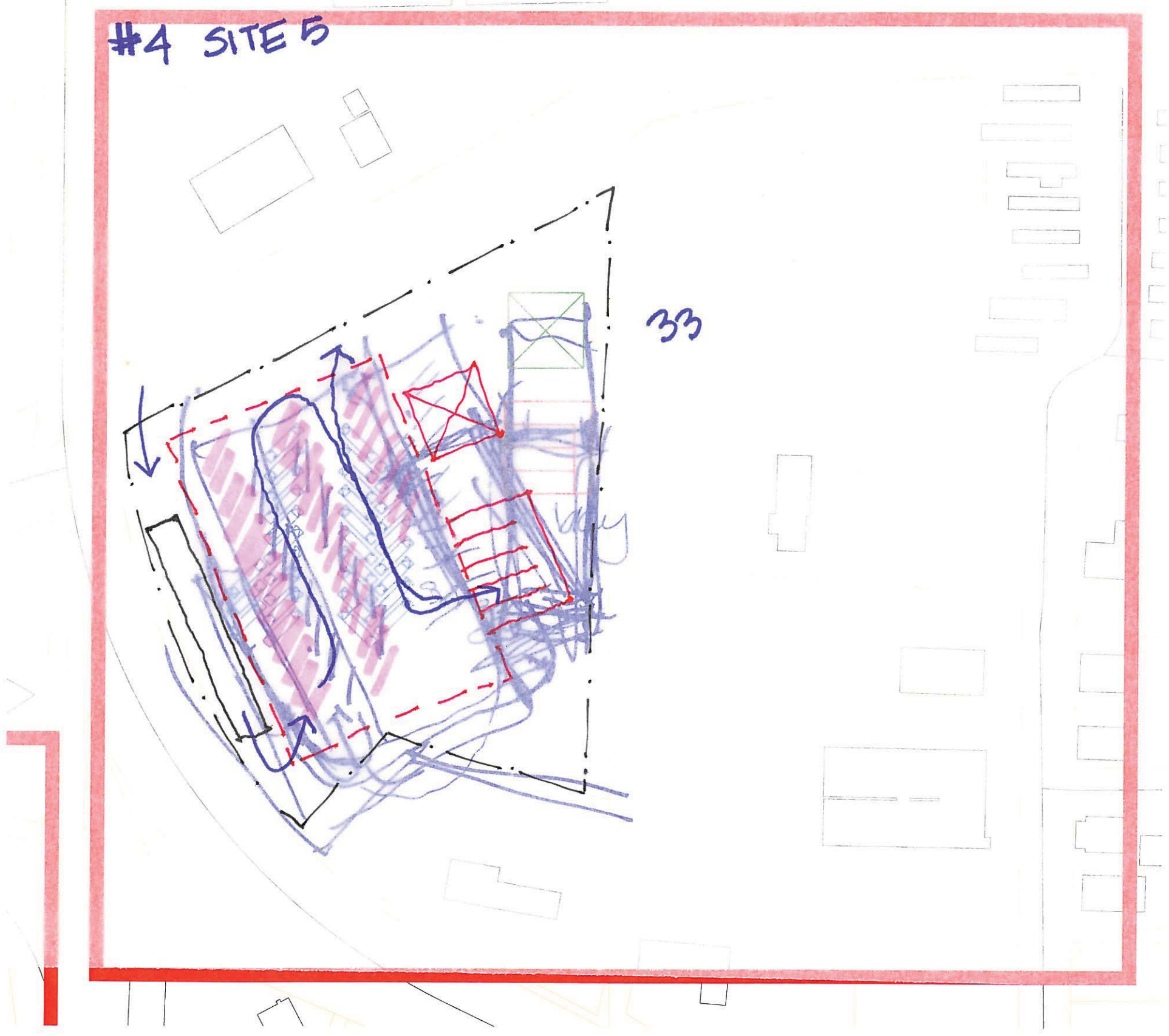
174

#2 SITE 5

nose to tail

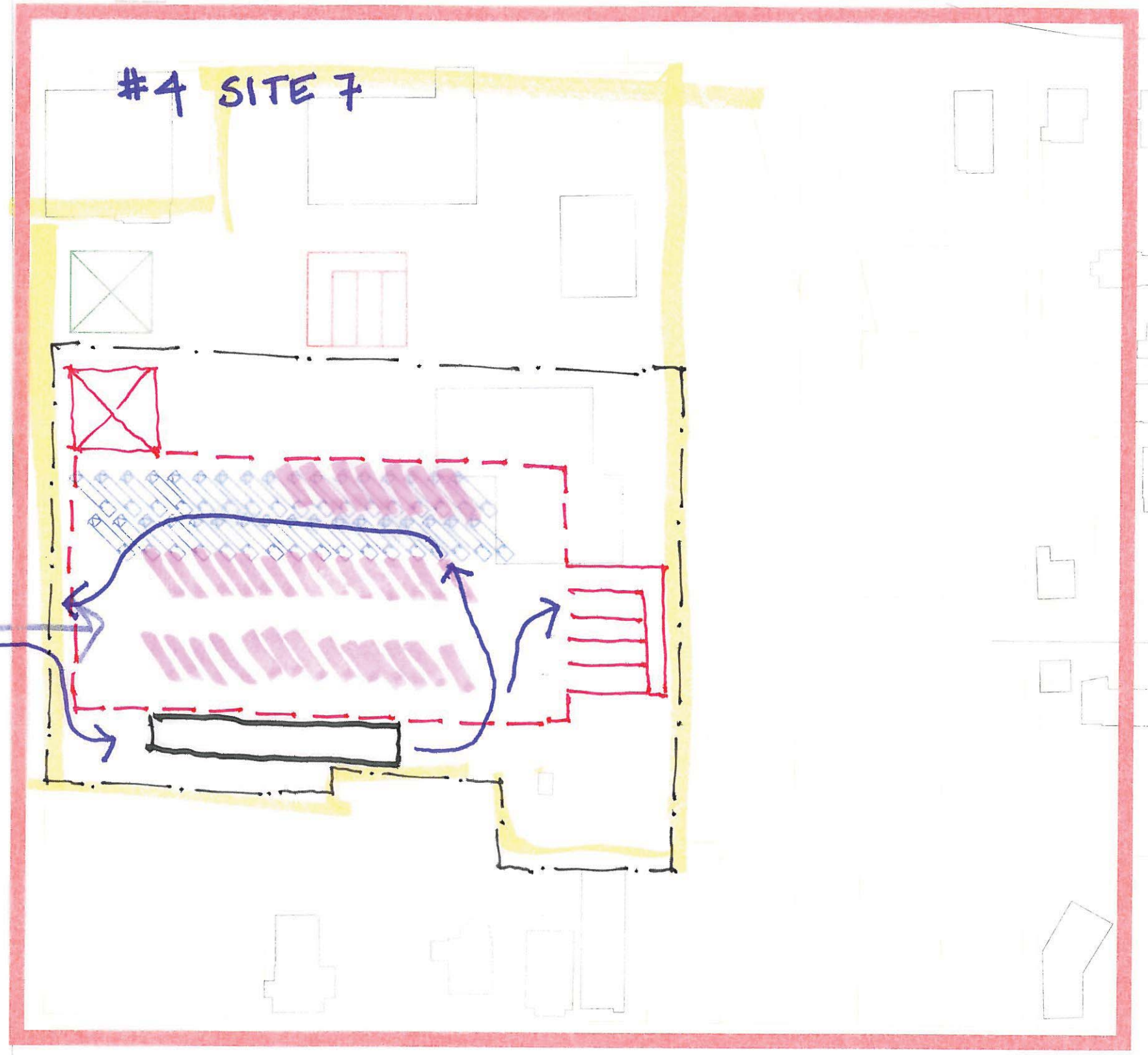
#4 SITE 4

#4 SITE 5

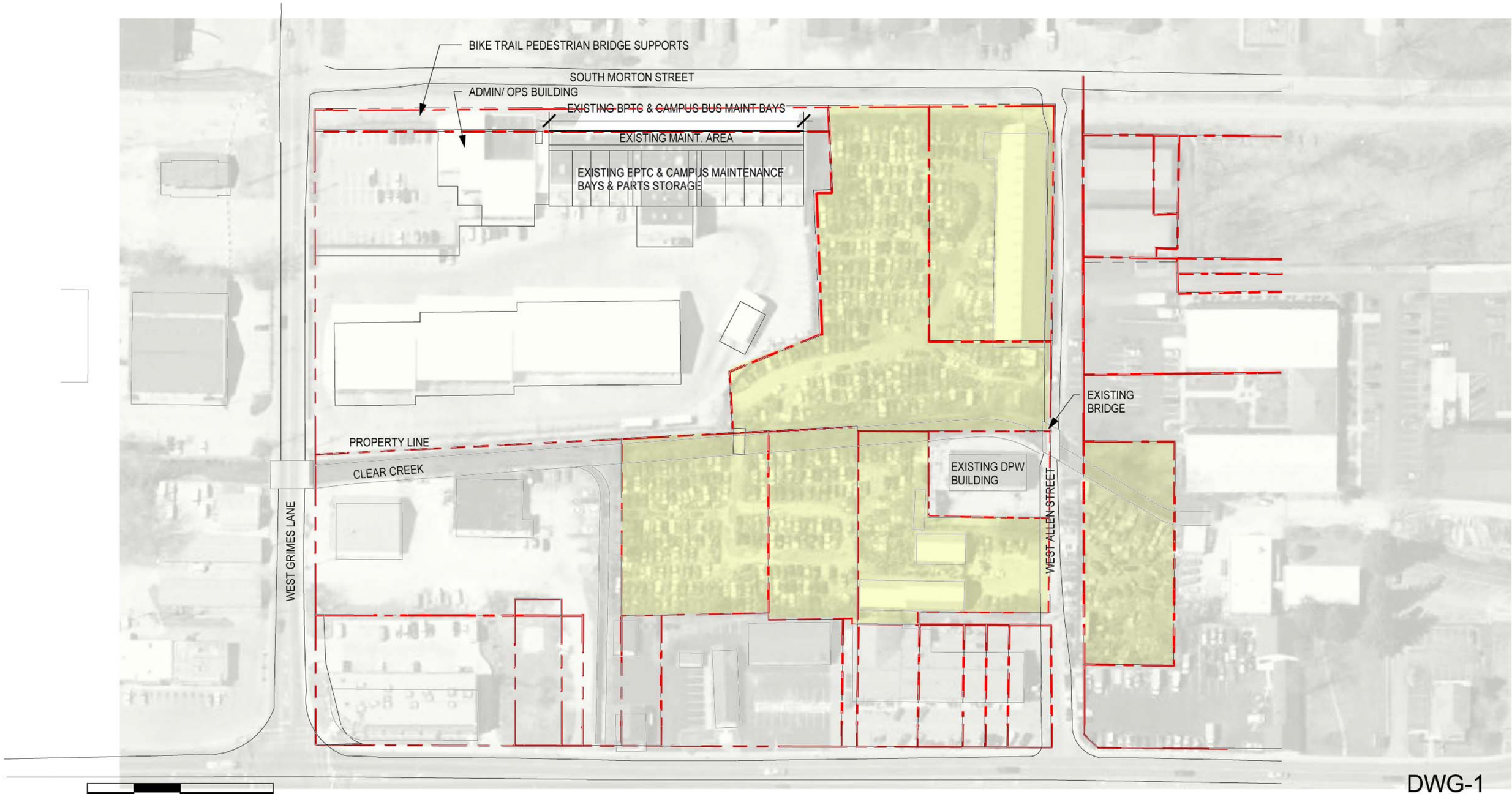


Service lane

#4 SITE 7



APPENDIX G



DWG-1

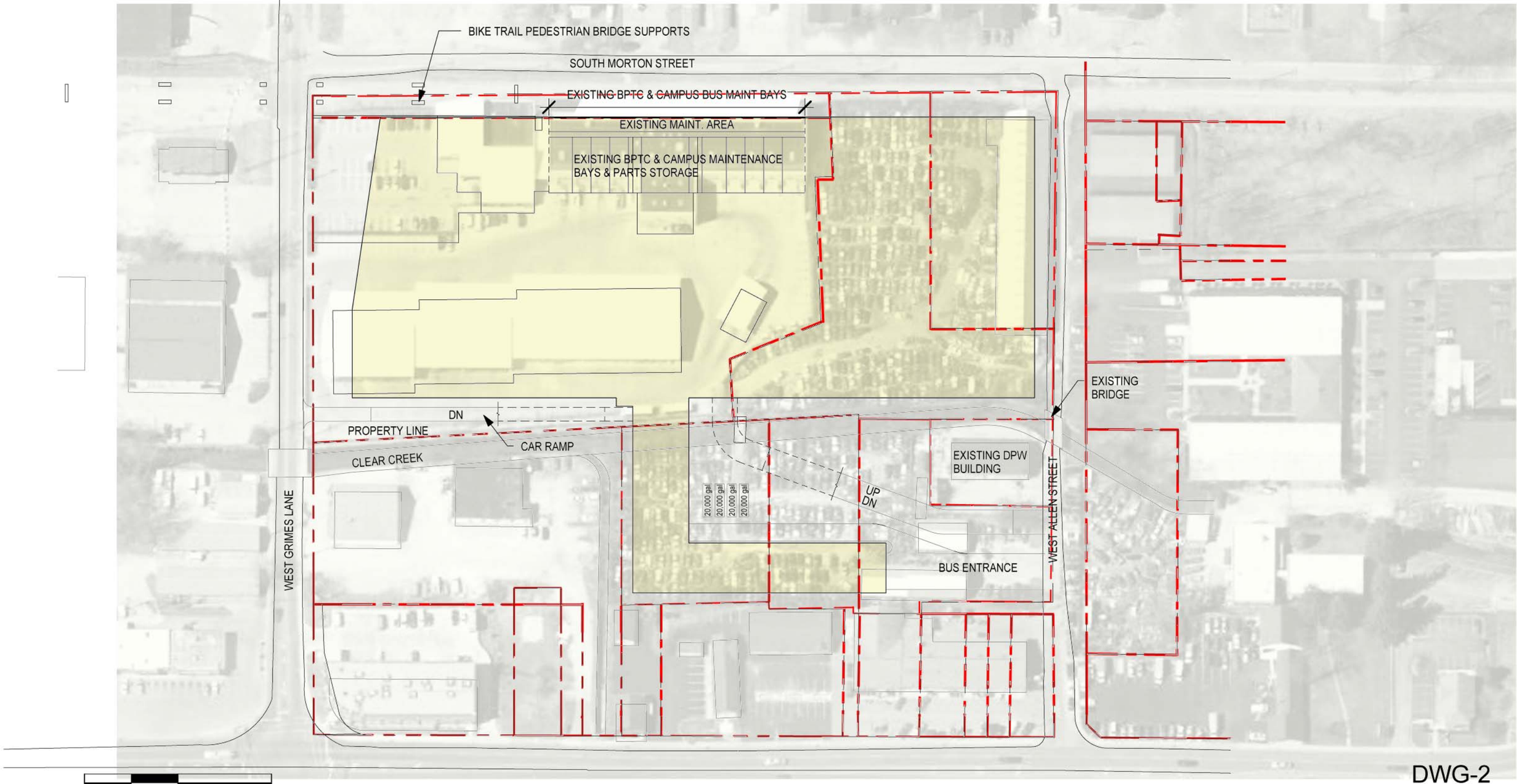
EXISTING SITE PLAN

01/21/11

Bus Maintenance Facility
BPTC/ Campus Bus
Bloomington, IN

MASTER PLAN

wendel



DWG-2

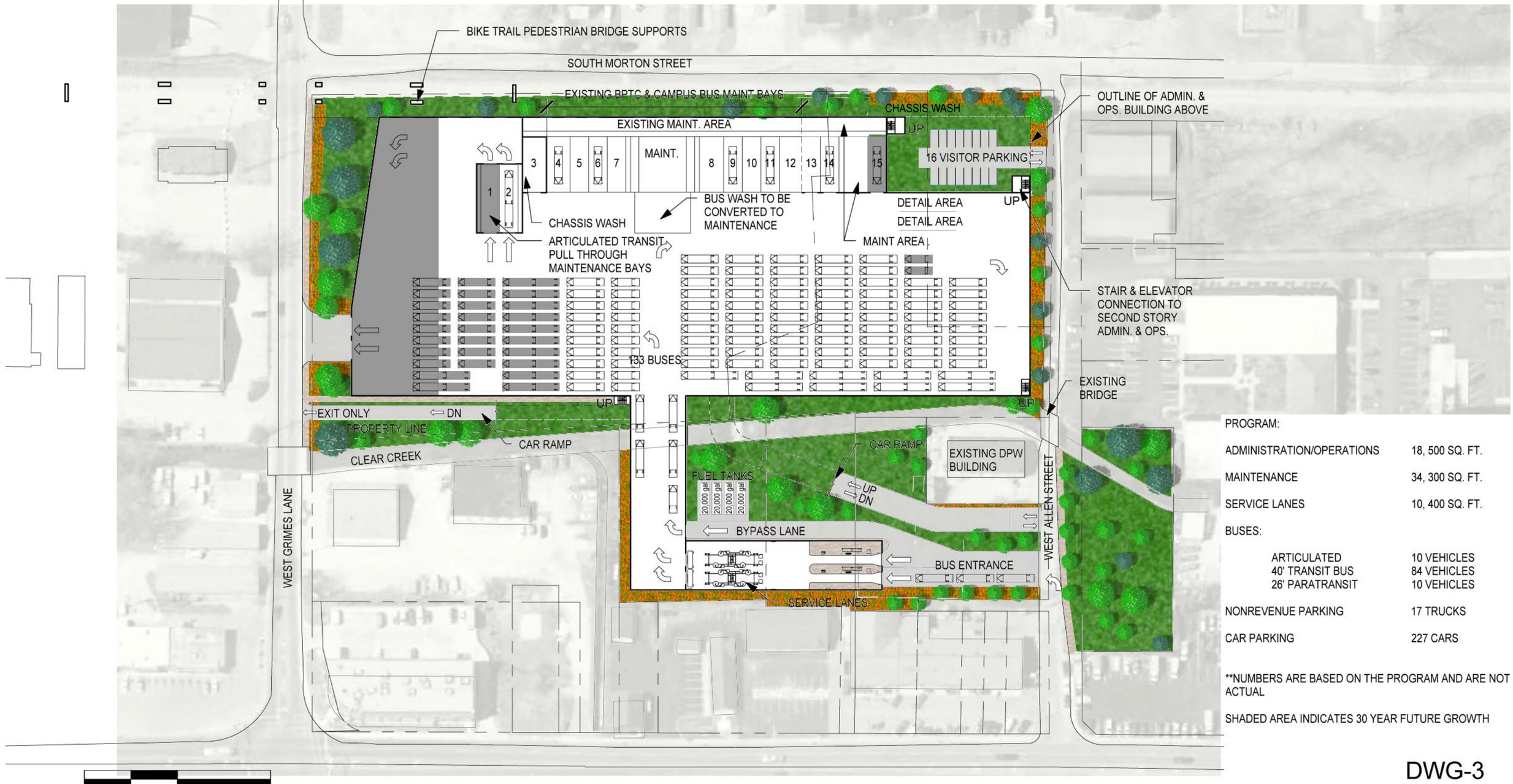
EXISTING SITE WITH NEW OVERLAY
CONCEPT 1

01/21/11

Bus Maintenance Facility
BPTC/ Campus Bus
Bloomington, IN

MASTER PLAN

wendel



PROGRAM:

ADMINISTRATION/OPERATIONS	18, 500 SQ. FT.
MAINTENANCE	34, 300 SQ. FT.
SERVICE LANES	10, 400 SQ. FT.
BUSES:	
ARTICULATED	10 VEHICLES
40' TRANSIT BUS	84 VEHICLES
26' PARATRANSIT	10 VEHICLES
NONREVENUE PARKING	17 TRUCKS
CAR PARKING	227 CARS

**NUMBERS ARE BASED ON THE PROGRAM AND ARE NOT ACTUAL

SHADED AREA INDICATES 30 YEAR FUTURE GROWTH

DWG-3

EXISTING SITE LEVEL 1
CONCEPT 1

01/21/11

MASTER PLAN

Bus Maintenance Facility
BPTC/ Campus Bus
Bloomington, IN

wendel

PROGRAM:	
ADMINISTRATION/OPERATIONS	18, 500 SQ. FT.
MAINTENANCE	34, 300 SQ. FT.
SERVICE LANES	10, 400 SQ. FT.
BUSES:	
ARTICULATED	10 VEHICLES
40' TRANSIT BUS	84 VEHICLES
26' PARATRANSIT	10 VEHICLES
NONREVENUE PARKING	17 TRUCKS
CAR PARKING	227 CARS

**NUMBERS ARE BASED ON THE PROGRAM AND ARE NOT ACTUAL

SHADED AREA INDICATES 30 YEAR FUTURE GROWTH

0' 50' 100' 200'
SCALE: 1"= 100'

DWG-4

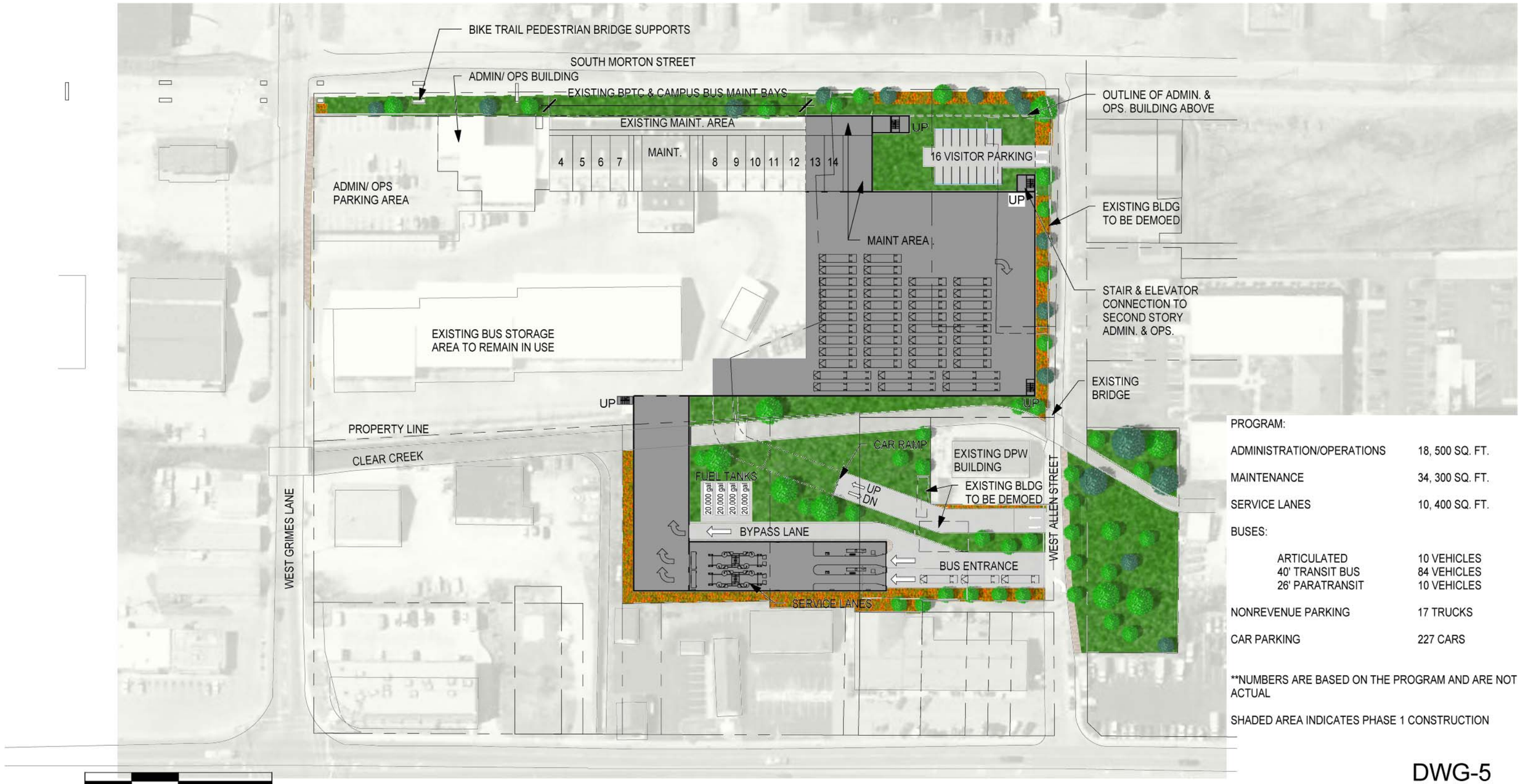
EXISTING SITE SCENARIO 1 LEVEL 2
CONCEPT 1

01/21/11

Bus Maintenance Facility
BPTC/ Campus Bus
Bloomington, IN

MASTER PLAN

wendel



PROGRAM:

ADMINISTRATION/OPERATIONS	18, 500 SQ. FT.
MAINTENANCE	34, 300 SQ. FT.
SERVICE LANES	10, 400 SQ. FT.
BUSES:	
ARTICULATED	10 VEHICLES
40' TRANSIT BUS	84 VEHICLES
26' PARATRANSIT	10 VEHICLES
NONREVENUE PARKING	17 TRUCKS
CAR PARKING	227 CARS

**NUMBERS ARE BASED ON THE PROGRAM AND ARE NOT ACTUAL

SHADED AREA INDICATES PHASE 1 CONSTRUCTION

DWG-5

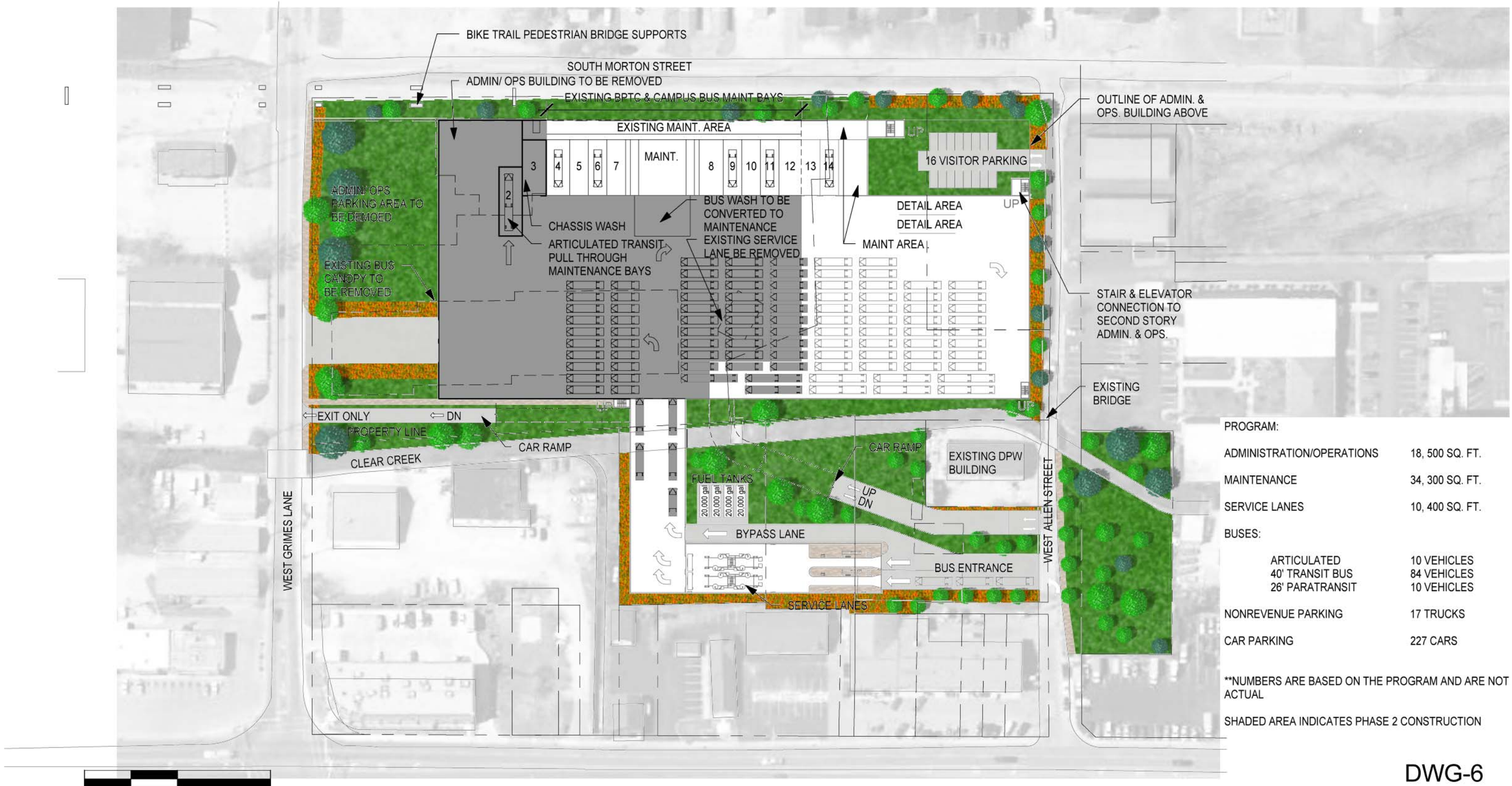
FIRST FLOOR PLAN PHASE 1
CONCEPT 1

01/21/11

Bus Maintenance Facility
BPTC/ Campus Bus
Bloomington, IN

MASTER PLAN

wendel



PROGRAM:

ADMINISTRATION/OPERATIONS	18, 500 SQ. FT.
MAINTENANCE	34, 300 SQ. FT.
SERVICE LANES	10, 400 SQ. FT.
BUSES:	
ARTICULATED	10 VEHICLES
40' TRANSIT BUS	84 VEHICLES
26' PARATRANSIT	10 VEHICLES
NONREVENUE PARKING	17 TRUCKS
CAR PARKING	227 CARS

**NUMBERS ARE BASED ON THE PROGRAM AND ARE NOT ACTUAL

SHADED AREA INDICATES PHASE 2 CONSTRUCTION

DWG-6

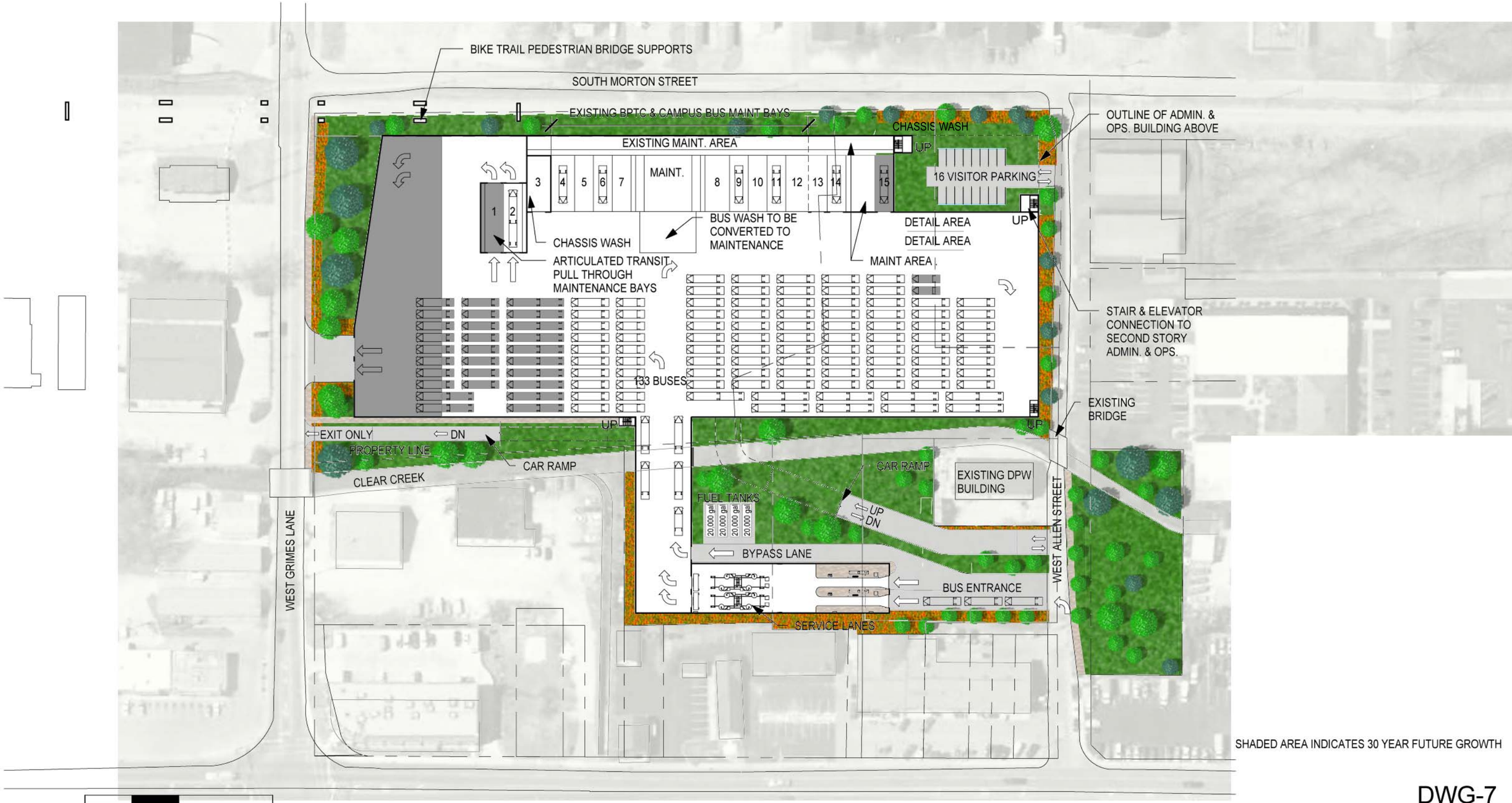
FIRST FLOOR PLAN PHASE 2
CONCEPT 1

01/21/11

Bus Maintenance Facility
BPTC/ Campus Bus
Bloomington, IN

MASTER PLAN

wendel



SHADED AREA INDICATES 30 YEAR FUTURE GROWTH

0' 50' 100' 200'

SCALE: 1"= 100'

DWG-7

FIRST FLOOR PLAN PHASE 3

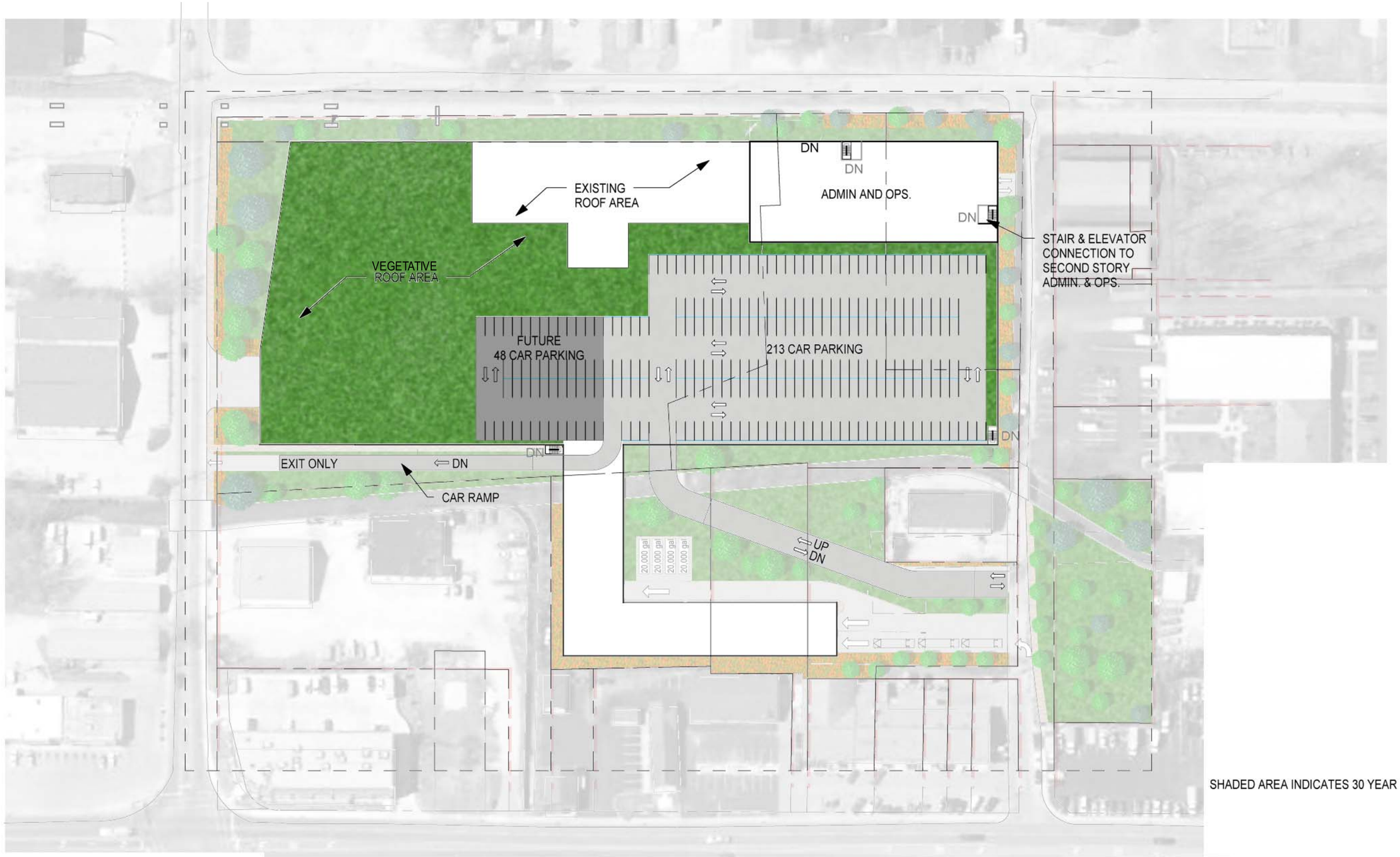
CONCEPT 1

01/21/11

Bus Maintenance Facility
BPTC/ Campus Bus
Bloomington, IN

MASTER PLAN

wendel



SHADED AREA INDICATES 30 YEAR FUTURE GROWTH

0' 50' 100' 200'
SCALE: 1"= 100'

DWG-8

SECOND FLOOR PLAN PHASE 3
CONCEPT 1

01/21/11

Bus Maintenance Facility
BPTC/ Campus Bus
Bloomington, IN

MASTER PLAN

wendel

ADMINISTRATION/OPERATIONS	18, 500 SQ. FT.
MAINTENANCE	34, 300 SQ. FT.
SERVICE LANES	10, 400 SQ. FT.
BUSES:	
ARTICULATED	10 VEHICLES
40' TRANSIT BUS	84 VEHICLES
26' PARATRANSIT	10 VEHICLES
NONREVENUE PARKING	17 TRUCKS
CAR PARKING	227 CARS

- NUMBERS ARE BASED ON THE PROGRAM
- SHADED AREA INDICATES 30 YEAR FUTURE GROWTH

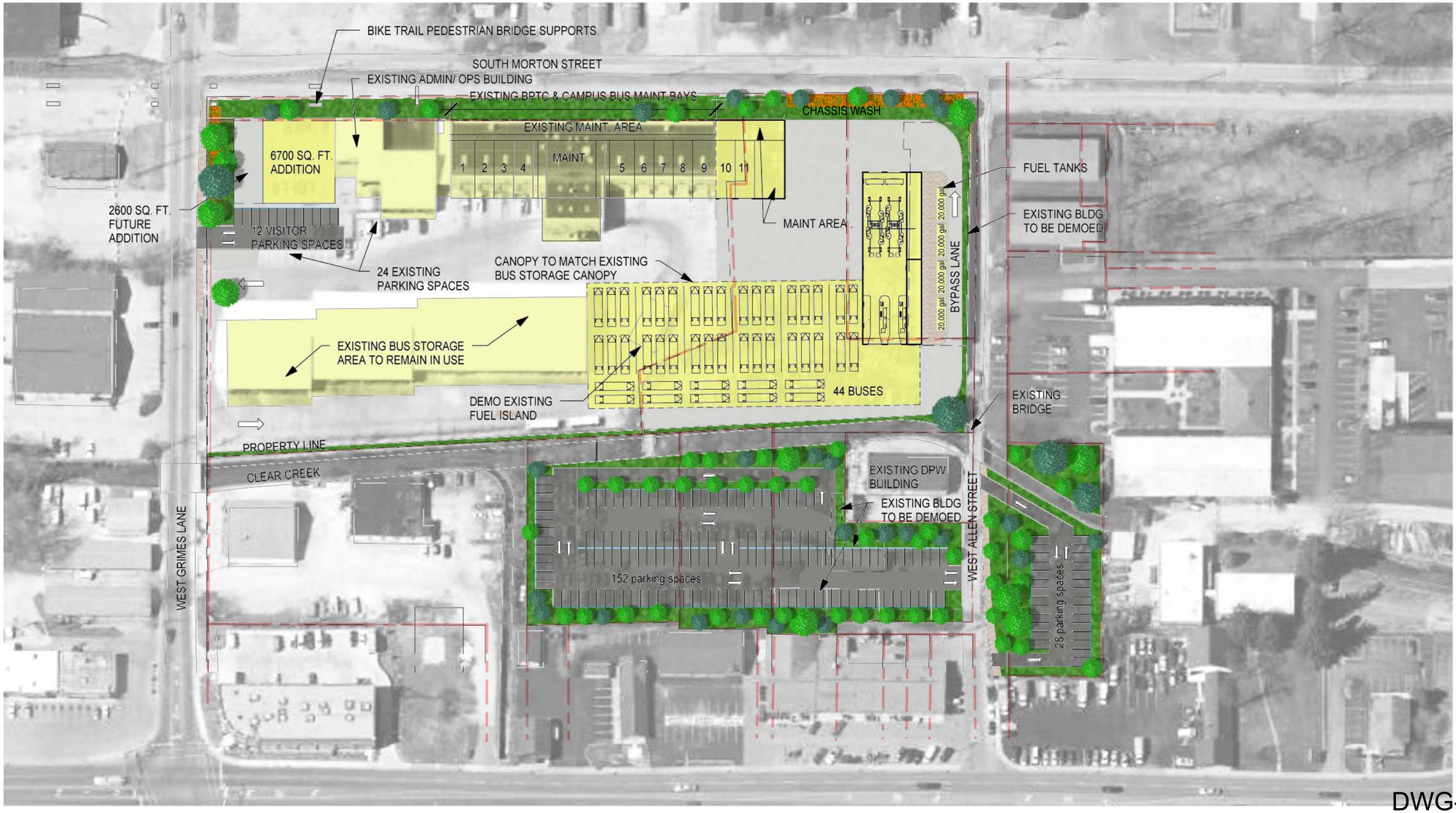
0' 50' 100' 200'
SCALE: 1"= 100'

DWG-9
SITE 3 LEVEL 1
CONCEPT 2 01/21/11

MASTER PLAN

Bus Maintenance Facility
BPTC/ Campus Bus
Bloomington, I.N.

wendel



0' 50' 100' 200'
SCALE: 1"= 100'

DWG-10
EXISTING SITE LEVEL 1
CONCEPT 3 01/21/11

Bus Maintenance Facility
BPTC/ Campus Bus
Bloomington, IN

MASTER PLAN

wendel

APPENDIX H

CONSTRUCTION
COST
SYSTEMS, INC.

Objectively
Managing
Building Costs

1815 S. Meyers Rd.
Suite 200
Oakbrook Terrace, IL
60181

800.443.8607
630.678.0808
630.678.0858 fax

WWW.CCSOS.COM

Bus Maintenance Facility

Bloomington, Indiana

Concept Estimate
Option 1

February 10, 2011

Base Estimate	Raw Cost	General Conditions Overhead & Profit 10.00%	Design Contingency 20.00%	Escalation 4.00%	Phasing 2.50%	Total Cost	Cost / SQFT	SQFT
Renovation & Addition	$32,176,377	$3,217,638	$7,078,803	$1,698,913	$1,104,293	**$45,276,023**	**$226.12**	200,228
CONSTRUCTION TOTAL	$32,176,377	$3,217,638	$7,078,803	$1,698,913	$1,104,293	**$45,276,023**	**$226.12**	200,228

OPTION	Raw Cost	General Conditions Overhead & Profit 10.00%	Design Contingency 20.00%	Escalation 4.00%		Total Cost	Cost / SQFT	SQFT
FUTURE SPACE	$3,444,958	$344,496	$757,891	$181,894		**$4,729,238**	**$189.17**	25,000
CONSTRUCTION TOTAL	$3,444,958	$344,496	$757,891	$181,894		**$4,729,238**	**$189.17**	25,000

BLOOMINGTON MAINTENANCE FACILITY

OPTION 1

EXISTING SITE

C | C | S
CONSTRUCTION COST SYSTEMS, INC.

Objectively Managing Building Costs

1815 S.Meyers Rd
Suite 200
Oakbrook Terrace

800.443.8607
630.678.0808
630.678.0858 Fax

WWW.CCSOS.COM

PROJECT NAME: **Bloomington Bus Facility - Renovation and Addition**

ESTIMATE DATE: 2/10/2011

NOTES REGARDING THIS ESTIMATE:

This Program estimate is based on program data, as well as concept floor plans prepared by the office of Wendel Duchscherer received 11-9-2010 together with discussions with their staff.

This estimate assumes a normal market condition.

This estimate assumes five or more qualified Contractors competitively bidding on this project.

This estimate assumes one contract awarded to one General Contractor.

Those cost estimates provided by the Architect and/or Consultants are identified in the body of the estimate.

THIS ESTIMATE EXCLUDES:

1) Professional fees, testing, moving expense, etc. for Owner's account,
2) Site remediation
3) Hazardous material removal and abatement,

This estimate is based on preliminary information available at this time. The scope of this estimate should be reviewed to insure our interpretation of the drawings and other information is correct. This estimate should be updated as the design evolves and is completed.

This cost estimate represents our opinion of probable construction cost for this project. We have exercised due professional diligence in the preparation of this estimate. Since we have no control over final material selection, bidding strategies and market conditions, no guarantee is given or implied with this estimate.

C | C | S
CONSTRUCTION COST SYSTEMS, INC.

Objectively Managing Building Costs

1815 S.Meyers Rd
Suite 200
Oakbrook Terrace

800.443.8607
630.678.0808
630.678.0858 Fax

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PROJECT NAME: **Bloomington Bus Facility - Renovation and Addition**

ESTIMATE DATE: 2/10/2011

COMMENTS AND OBSERVATIONS FOR ARCHITECTURAL / STRUCTURAL:

1) Site remediation of aquired plot is not included and assumed to be done by others
2) It is assumed the building height is 20'
3) The entire site is assumed to be raised an average of 3'
4) Equipment is included in the estimate at the request of Wendel Duchscherer
   Total $1,100,000 - $800,000 for Bus Maintenance Equipment (4 Bays) + $300,000 (2 Washers & Water Recycle) in Service Building

COMMENTS AND OBSERVATIONS FOR PLUMBING / MECHANICAL:

1) Plumbing & Mechanical provided as $/SF

COMMENTS AND OBSERVATIONS FOR ELECTRICAL:

2) Electrical provided as $/SF

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Renovation and Addition
SHELL TYPE : CMU
SHELL COST : $132.43
GROSS AREA: 200228 SF **Date:** 2/10/2011

COST SUMMARY

DESCRIPTION	TOTAL COST	RATE/SF
01 - FOUNDATIONS	$381,620	$1.91
011 - Standard Foundations	$381,620	$1.91
012 - Special Foundations	$0	$0.00
02 - SUBSTRUCTURE	$1,181,232	$5.90
021 - Slab on Grade	$1,181,232	$5.90
022 - Basement Excavation	$0	$0.00
023 - Basement Walls	$0	$0.00
03 - SUPERSTRUCTURE	$9,034,765	$45.12
031 - Floor Construction	$462,500	$2.31
032 - Roof Construction	$8,492,265	$42.41
033 - Stair Construction	$80,000	$0.40
04 - EXTERIOR CLOSURE	$1,863,020	$9.30
041 - Exterior Walls	$1,358,550	$6.79
042 - Exterior Doors & Windows	$504,470	$2.52
05 - ROOFING	$4,159,346	$20.77
06 - INTERIOR CONSTRUCTION	$2,644,372	$13.21
061 - Partitions	$589,824	$2.95
062 - Interior Finishes	$821,048	$4.10
063 - Specialties	$1,233,500	$6.16
07 - CONVEYING SYSTEMS	$85,000	$0.42
08 - MECHANICAL	$5,762,562	$28.78
081 - Plumbing	$1,517,728	$7.58
082 - HVAC	$3,604,104	$18.00
083 - Fire Protection	$640,730	$3.20
084 - Special Systems	$0	$0.00

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Renovation and Addition
SHELL TYPE : CMU
SHELL COST : $132.43
GROSS AREA: 200228 SF **Date: 2/10/2011**

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
09 - ELECTRICAL		$4,004,560		$20.00
091 - Service & Distribution	$1,201,368		$6.00	
092 - Lighting & Power	$1,201,368		$6.00	
093 - Special Systems	$1,601,824		$8.00	
10 - GENERAL CONDITIONS & PROFIT		$3,217,638		$16.07
NET BUILDING CONSTRUCTION COST	$32,334,114			
11 - EQUIPMENT		$1,100,000		$5.49
111 - Fixed & Movable Equipment	$1,100,000		$5.49	
112 - Furnishings	$0		$0.00	
113 - Special Construction	$0		$0.00	
12 - SITEWORK		$3,059,900		$15.28
121 - Site Preparation	$961,650		$4.80	
122 - Site Improvements	$1,015,500		$5.07	
123 - Site Utilities	$1,082,750		$5.41	
124 - Off-site Work	$0		$0.00	
NET PROJECT CONSTRUCTION COST	$36,494,014			
13 - CONTINGENCIES		$9,882,009		$49.35
131 - Design	$7,078,803		$35.35	
132 - Escalation	$1,698,913		$8.48	
133 - Phasing	$1,104,293		$5.52	
TOTAL PROJECT CONSTRUCTION COST	**$45,276,023**			**$226.12**

PARAMETER COSTING MODEL

PROJECT NAME: **Bloomington Bus Facility - Renovation and Addition**
SHELL TYPE : **CMU**
SHELL COST : **$132.43** **Date:** **2/10/2011**

DESCRIPTION	ITEM	QUANTITY	UNIT	UNIT PRICES	TOTAL
	GENERAL WORK				
	Basement excavation	0	CY	$0.00	$0
Assuems No Excavation	Mass Excavation	0	CY	$0.00	$0
Fill Included Under Site Preperation	Mass Fill	0	CY	$0.00	$0
Continuous Footing	Foundation Wall & Footing	2327	LF	$60.00	$139,620
Concrete Column Footing	Column Footing	242	EA	$1,000.00	$242,000
6" Thick, Including Reinforcement Aggregate Base & Finishing	Slab on Grade	181728	SF	$6.50	$1,181,232
Steel Framing, Metal Deck, Concrete Slab	Elevated Floor Structure	18500	SF	$25.00	$462,500
Heavy Steel Framing, Metal Deck, Concrete Slab, Waterproofing	Roof Structure	188717	SF	$45.00	$8,492,265
Assumes 4 Stair Locations Leading to Parking Deck	Stairs	4	EA	$20,000.00	$80,000
Grout Filled CMU, Painted Exterior & Interior	Exterior Enclosure	54342	SF	$25.00	$1,358,550
Storefront & Punched Window	Window Wall	6038	SF	$65.00	$392,470
Assumes 50% Standard HM & 50% Overhead Rolling Doors	Exterior Doors	20	EA	$5,600.00	$112,000
Demo Existing Masonary Walls for Layout Modifications	Exterior Demolition	8780	SF	$5.00	$43,900
Vegetative Roof 30% Parking 55% Flat Roof 15%	Roofing	188717	SF	$21.80	$4,114,031
Coping Metal Facia & Gutters	Roof Edge	3021	LF	$15.00	$45,315
Elevator	Elevator	1	EA	$85,000.00	$85,000
	MECHANICAL				
Allowance for systems cost	Plumbing	200228	SF	$7.58	$1,517,728
Allowance for systems cost	H.V.A.C	200228	SF	$18.00	$3,604,104
Allowance for systems cost	Fire Protection	200228	SF	$3.20	$640,730
	ELECTRICAL				
Allowance for systems cost	Service & distribution	200228	SF	$6.00	$1,201,368
Allowance for systems cost	Lighting & Power	200228	SF	$6.00	$1,201,368
Allowance for systems cost	Special systems	200228	SF	$8.00	$1,601,824

CONSTRUCTION COST SYSTEMS, INC

FILE NAME:

TOTAL SHELL COST **$26,516,004**

RATE/SF **$132.43**

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Objectively Managing Building Costs

1815 S. Meyers Rd.
Suite 200
Oakbrook Terrace, IL
60181

800.443.8607
630.678.0808
630.678.0858 fax

WWW.CCSOS.COM

Bus Maintenance Facility

Bloomington, Indiana

February 10, 2011

Concept Estimate

Option 2

Base Estimate	Raw Cost	General Conditions Overhead & Profit 10.00%	Design Contingency 20.00%	Escalation 4.00%	Total Cost	Cost / SQFT	SQFT
Maintenance Building	$29,894,317	$2,989,432	$6,576,750	$1,578,420	**$41,038,918**	**$164.49**	249,493
Admin Building	$2,932,337	$293,234	$645,114	$154,827	**$4,025,512**	**$217.60**	18,500
CONSTRUCTION TOTAL	$32,826,654	$3,282,665	$7,221,864	$1,733,247	**$45,064,431**	**$168.16**	267,993

OPTION	Raw Cost	General Conditions Overhead & Profit 10.00%	Design Contingency 20.00%	Escalation 4.00%	Total Cost	Cost / SQFT	SQFT
Maintenance Future	$3,645,986	$364,599	$802,117	$192,508	**$5,005,210**	**$180.37**	27,750
Admin Future	$792,504	$79,250	$174,351	$41,844	**$1,087,949**	**$271.99**	4,000
CONSTRUCTION TOTAL	$4,438,490	$443,849	$976,468	$234,352	**$6,093,159**	**$191.91**	31,750

BLOOMINGTON MAINTENANCE FACILITY

OPTION 2

MANTENANCE BUILDING

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Suite 200
Oakbrook Terrace

800.443.8607
630.678.0808
630.678.0858 Fax

WWW.CCSOS.COM

PROJECT NAME: **Bloomington Bus Facility - New Building**

ESTIMATE DATE: 2/10/2011

NOTES REGARDING THIS ESTIMATE:

This Program estimate is based on program data, as well as concept floor plans prepared by the office of Wendel Duchscherer received 11-9-2010 together with discussions with their staff.

This estimate assumes a normal market condition.

This estimate assumes five or more qualified Contractors competitively bidding on this project.

This estimate assumes one contract awarded to one General Contractor.

Those cost estimates provided by the Architect and/or Consultants are identified in the body of the estimate.

THIS ESTIMATE EXCLUDES:

1) Professional fees, testing, moving expense, etc. for Owner's account,
2) Furnishings and equipment other than those shown in the body of the estimate,

This estimate is based on preliminary information available at this time. The scope of this estimate should be reviewed to insure our interpretation of the drawings and other information is correct. This estimate should be updated as the design evolves and is completed.

This cost estimate represents our opinion of probable construction cost for this project. We have exercised due professional diligence in the preparation of this estimate. Since we have no control over final material selection, bidding strategies and market conditions, no guarantee is given or implied with this estimate.

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PROJECT NAME: **Bloomington Bus Facility - New Building**

ESTIMATE DATE: 2/10/2011

COMMENTS AND OBSERVATIONS FOR ARCHITECTURAL / STRUCTURAL:

1) Estimate is based on New builing on of 249,500 SF
2) 27,750 SF of Future space is not included in this estimate
3) Estimate includes site clearing & leveling
4) Building height is assumed to be 20'
5) Exterior is assumed to be Brick & Block
6) Equipment is included in the estimate at the request of Wendel Duchscherer
   Total $2450000 - $2,150,000 for Bus Maintenance Equipment (4 New Bays & 9 Replacement Bays)
   + $300,000 (2 Washers & Water Recycle) in Service Building

COMMENTS AND OBSERVATIONS FOR PLUMBING / MECHANICAL:

1) Plumbing / Mechanical is included per $/SF

COMMENTS AND OBSERVATIONS FOR ELECTRICAL:

1) Electrical is included per $/SF

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - New Building
SHELL TYPE : CMU
SHELL COST : $96.94
GROSS AREA: 249493 SF **Date:** 2/10/2011

COST SUMMARY

DESCRIPTION	TOTAL COST	RATE/SF
01 - FOUNDATIONS	$380,380	$1.52
011 - Standard Foundations	$380,380	$1.52
012 - Special Foundations	$0	$0.00
02 - SUBSTRUCTURE	$1,621,705	$6.50
021 - Slab on Grade	$1,621,705	$6.50
022 - Basement Excavation	$0	$0.00
023 - Basement Walls	$0	$0.00
03 - SUPERSTRUCTURE	$6,237,325	$25.00
031 - Floor Construction	$0	$0.00
032 - Roof Construction	$6,237,325	$25.00
033 - Stair Construction	$0	$0.00
04 - EXTERIOR CLOSURE	$1,942,050	$7.78
041 - Exterior Walls	$1,550,160	$6.21
042 - Exterior Doors & Windows	$391,890	$1.57
05 - ROOFING	$3,026,211	$12.13
06 - INTERIOR CONSTRUCTION	$1,772,121	$7.10
061 - Partitions	$783,895	$3.14
062 - Interior Finishes	$873,226	$3.50
063 - Specialties	$115,000	$0.46
07 - CONVEYING SYSTEMS	$0	$0.00
08 - MECHANICAL	$6,349,597	$25.45
081 - Plumbing	$1,559,331	$6.25
082 - HVAC	$3,991,888	$16.00
083 - Fire Protection	$798,378	$3.20
084 - Special Systems	$0	$0.00

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - New Building
SHELL TYPE : CMU
SHELL COST : $96.94
GROSS AREA: 249493 SF **Date: 2/10/2011**

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
09 - ELECTRICAL		$4,490,874		$18.00
091 - Service & Distribution	$1,496,958		$6.00	
092 - Lighting & Power	$1,496,958		$6.00	
093 - Special Systems	$1,496,958		$6.00	
10 - GENERAL CONDITIONS & PROFIT		$2,989,432		$11.98
NET BUILDING CONSTRUCTION COST	$28,809,694			
11 - EQUIPMENT		$2,450,000		$9.82
111 - Fixed & Movable Equipment	$2,450,000		$9.82	
112 - Furnishings	$0		$0.00	
113 - Special Construction	$0		$0.00	
12 - SITEWORK		$4,074,055		$16.33
121 - Site Preparation	$535,975		$2.15	
122 - Site Improvements	$2,125,330		$8.52	
123 - Site Utilities	$1,412,750		$5.66	
124 - Off-site Work	$0		$0.00	
NET PROJECT CONSTRUCTION COST	$35,333,749			
13 - CONTINGENCIES		$8,155,170		$32.69
131 - Design	$6,576,750		$26.36	
132 - Escalation	$1,578,420		$6.33	
133 - Construction	$0		$0.00	
TOTAL PROJECT CONSTRUCTION COST	**$41,038,918**			**$164.49**

PARAMETER COSTING MODEL

PROJECT NAME: **Bloomington Bus Facility - New Building**
SHELL TYPE : **CMU**
SHELL COST : **$96.94** **Date:** **2/10/2011**

DESCRIPTION	ITEM	QUANTITY	UNIT	UNIT PRICES	TOTAL
	GENERAL WORK				
Assumes 1' Average Excavation to Footprint of Building	Mass Excavation	9240	CY	$15.00	$138,600
Continuous Footing	Foundation Wall & Footing	2153	LF	$60.00	$129,180
Concrete Column Footing	Column Footing	314	EA	$800.00	$251,200
6" Thick, Including Reinforcement Aggregate Base & Finishing	Slab on Grade	249493	SF	$6.50	$1,621,705
Bar Joist, Metal Decking	Roof Structure	249493	SF	$25.00	$6,237,325
Brick w/ Grout Filled CMU Backup, Painted & Interior	Exterior Enclosure	38754	SF	$40.00	$1,550,160
Storefront & Punched Window	Window Wall	4306	SF	$65.00	$279,890
Assumes 50% Standard HM & 50% Overhead Rolling Doors	Exterior Doors	20	EA	$5,600.00	$112,000
Flat Roof, TPO	Roofing	249493	SF	$12.00	$2,993,916
Coping Metal Facia & Gutters	Roof Edge	2153	LF	$15.00	$32,295
	MECHANICAL				
Allowance for systems cost	Plumbing	249493	SF	$6.25	$1,559,331
Allowance for systems cost	H.V.A.C	249493	SF	$16.00	$3,991,888
Allowance for systems cost	Fire Protection	249493	SF	$3.20	$798,378
	ELECTRICAL				
Allowance for systems cost	Service & distribution	249493	SF	$6.00	$1,496,958
Allowance for systems cost	Lighting & Power	249493	SF	$6.00	$1,496,958
Allowance for systems cost	Special systems	249493	SF	$6.00	$1,496,958

CONSTRUCTION COST SYSTEMS, INC

FILE NAME:

TOTAL SHELL COST **$24,186,741**

RATE/SF **$96.94**

BLOOMINGTON MAINTENANCE FACILITY

OPTION 2

MANTENANCE BUILDING - FUTURE

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - New Facility Future Expansion
SHELL TYPE : CMU
SHELL COST : $119.07
GROSS AREA: 27750 SF **Date: 2/10/2011**

COST SUMMARY

DESCRIPTION	TOTAL COST	RATE/SF
01 - FOUNDATIONS	$83,220	$3.00
011 - Standard Foundations	$83,220	$3.00
012 - Special Foundations	$0	$0.00
02 - SUBSTRUCTURE	$180,375	$6.50
021 - Slab on Grade	$180,375	$6.50
022 - Basement Excavation	$0	$0.00
023 - Basement Walls	$0	$0.00
03 - SUPERSTRUCTURE	$693,750	$25.00
031 - Floor Construction	$0	$0.00
032 - Roof Construction	$693,750	$25.00
033 - Stair Construction	$0	$0.00
04 - EXTERIOR CLOSURE	$780,950	$28.14
041 - Exterior Walls	$566,640	$20.42
042 - Exterior Doors & Windows	$214,310	$7.72
05 - ROOFING	$344,805	$12.43
06 - INTERIOR CONSTRUCTION	$224,771	$8.10
061 - Partitions	$127,646	$4.60
062 - Interior Finishes	$97,125	$3.50
063 - Specialties	$0	$0.00
07 - CONVEYING SYSTEMS	$0	$0.00
08 - MECHANICAL	$706,238	$25.45
081 - Plumbing	$173,438	$6.25
082 - HVAC	$444,000	$16.00
083 - Fire Protection	$88,800	$3.20
084 - Special Systems	$0	$0.00

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - New Facility Future Expansion
SHELL TYPE : CMU
SHELL COST : $119.07
GROSS AREA: 27750 SF **Date: 2/10/2011**

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
09 - ELECTRICAL		$499,500		$18.00
091 - Service & Distribution	$166,500		$6.00	
092 - Lighting & Power	$166,500		$6.00	
093 - Special Systems	$166,500		$6.00	
10 - GENERAL CONDITIONS & PROFIT		$364,599		$13.14
NET BUILDING CONSTRUCTION COST	$3,878,207			
11 - EQUIPMENT		$0		$0.00
111 - Fixed & Movable Equipment	$0		$0.00	
112 - Furnishings	$0		$0.00	
113 - Special Construction	$0		$0.00	
12 - SITEWORK		$132,377		$4.77
121 - Site Preparation	$32,377		$1.17	
122 - Site Improvements	$50,000		$1.80	
123 - Site Utilities	$50,000		$1.80	
124 - Off-site Work	$0		$0.00	
NET PROJECT CONSTRUCTION COST	$4,010,584			
13 - CONTINGENCIES		$994,625		$35.84
131 - Design	$802,117		$28.91	
132 - Escalation	$192,508		$6.94	
133 - Construction	$0		$0.00	
TOTAL PROJECT CONSTRUCTION COST	**$5,005,209**			**$180.37**

PARAMETER COSTING MODEL

PROJECT NAME: **Bloomington Bus Facility - New Facility Future Expansion**
SHELL TYPE : **CMU**
SHELL COST : **$119.07** **Date:** **2/10/2011**

DESCRIPTION	ITEM	QUANTITY	UNIT	UNIT PRICES	TOTAL
	GENERAL WORK				
Assumes 1' Average Excavation to Footprint of Building	Mass Excavation	1028	CY	$15.00	$15,420
Continuous Footing	Foundation Wall & Footing	787	LF	$60.00	$47,220
Concrete Column Footing	Column Footing	45	EA	$800.00	$36,000
6" Thick, Including Reinforcement Aggregate Base & Finishing	Slab on Grade	27750	SF	$6.50	$180,375
Bar Joist, Metal Decking	Roof Structure	27750	SF	$25.00	$693,750
Brick w/ Grout Filled CMU Backup, Painted & Interior	Exterior Enclosure	14166	SF	$40.00	$566,640
Storefront & Punched Window	Window Wall	1574	SF	$65.00	$102,310
Assumes 50% Standard HM & 50% Overhead Rolling Doors	Exterior Doors	20	EA	$5,600.00	$112,000
Flat Roof, TPO	Roofing	27750	SF	$12.00	$333,000
Coping Metal Facia & Gutters	Roof Edge	787	LF	$15.00	$11,805
	MECHANICAL				
Allowance for systems cost	Plumbing	27750	SF	$6.25	$173,438
Allowance for systems cost	H.V.A.C	27750	SF	$16.00	$444,000
Allowance for systems cost	Fire Protection	27750	SF	$3.20	$88,800
	ELECTRICAL				
Allowance for systems cost	Service & distribution	27750	SF	$6.00	$166,500
Allowance for systems cost	Lighting & Power	27750	SF	$6.00	$166,500
Allowance for systems cost	Special systems	27750	SF	$6.00	$166,500

CONSTRUCTION COST SYSTEMS, INC

FILE NAME:

TOTAL SHELL COST **$3,304,258**

RATE/SF **$119.07**

BLOOMINGTON MAINTENANCE FACILITY

OPTION 2

ADMIN BUILDING

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - New Building - Admin. And Ops.
SHELL TYPE : CMU
SHELL COST : $131.14
GROSS AREA: 18500 SF **Date:** 2/10/2011

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
01 - FOUNDATIONS		$59,300		$3.21
011 - Standard Foundations	$59,300		$3.21	
012 - Special Foundations	$0		$0.00	
02 - SUBSTRUCTURE		$120,250		$6.50
021 - Slab on Grade	$120,250		$6.50	
022 - Basement Excavation	$0		$0.00	
023 - Basement Walls	$0		$0.00	
03 - SUPERSTRUCTURE		$370,000		$20.00
031 - Floor Construction	$0		$0.00	
032 - Roof Construction	$370,000		$20.00	
033 - Stair Construction	$0		$0.00	
04 - EXTERIOR CLOSURE		$410,906		$22.21
041 - Exterior Walls	$258,750		$13.99	
042 - Exterior Doors & Windows	$152,156		$8.22	
05 - ROOFING		$230,625		$12.47
06 - INTERIOR CONSTRUCTION		$394,975		$21.35
061 - Partitions	$160,950		$8.70	
062 - Interior Finishes	$197,025		$10.65	
063 - Specialties	$37,000		$2.00	
07 - CONVEYING SYSTEMS		$0		$0.00
08 - MECHANICAL		$669,700		$36.20
081 - Plumbing	$148,000		$8.00	
082 - HVAC	$462,500		$25.00	
083 - Fire Protection	$59,200		$3.20	
084 - Special Systems	$0		$0.00	

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - New Building - Admin. And Ops.
SHELL TYPE : CMU
SHELL COST : $131.14
GROSS AREA: 18500 SF **Date:** 2/10/2011

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
09 - ELECTRICAL		$555,000		$30.00
091 - Service & Distribution	$185,000		$10.00	
092 - Lighting & Power	$148,000		$8.00	
093 - Special Systems	$222,000		$12.00	
10 - GENERAL CONDITIONS & PROFIT		$293,234		$15.85
NET BUILDING CONSTRUCTION COST	$3,103,990			
11 - EQUIPMENT		$0		$0.00
111 - Fixed & Movable Equipment	$0		$0.00	
112 - Furnishings	$0		$0.00	
113 - Special Construction	$0		$0.00	
12 - SITEWORK		$121,581		$6.57
121 - Site Preparation	$21,581		$1.17	
122 - Site Improvements	$50,000		$2.70	
123 - Site Utilities	$50,000		$2.70	
124 - Off-site Work	$0		$0.00	
NET PROJECT CONSTRUCTION COST	$3,225,570			
13 - CONTINGENCIES		$799,941		$43.24
131 - Design	$645,114		$34.87	
132 - Escalation	$154,827		$8.37	
133 - Construction	$0		$0.00	
TOTAL PROJECT CONSTRUCTION COST	**$4,025,512**			**$217.60**

PARAMETER COSTING MODEL

PROJECT NAME: **Bloomington Bus Facility - New Building - Admin. And Ops.**
SHELL TYPE : **CMU**
SHELL COST : **$131.14** **Date:** **2/10/2011**

DESCRIPTION	ITEM	QUANTITY	UNIT	UNIT PRICES	TOTAL
	GENERAL WORK				
Assumes 1' Average Excavation to Footprint of Building	Mass Excavation	685	CY	$15.00	$10,275
Continuous Footing	Foundation Wall & Footing	575	LF	$60.00	$34,500
Concrete Column Footing	Column Footing	31	EA	$800.00	$24,800
6" Thick, Including Reinforcement Aggregate Base & Finishing	Slab on Grade	18500	SF	$6.50	$120,250
Bar Joist, Metal Decking	Roof Structure	18500	SF	$20.00	$370,000
Brick w/ Grout Filled CMU Backup, Painted & Interior	Exterior Enclosure	6469	SF	$40.00	$258,750
Storefront & Punched Window	Window Wall	2156	SF	$65.00	$140,156
Glass Storefront & Entry, HM Side Entry	Exterior Doors	5	EA	$2,400.00	$12,000
Flat Roof, TPO	Roofing	18500	SF	$12.00	$222,000
Coping Metal Facia & Gutters	Roof Edge	575	LF	$15.00	$8,625
	MECHANICAL				
Allowance for systems cost	Plumbing	18500	SF	$8.00	$148,000
Allowance for systems cost	H.V.A.C	18500	SF	$25.00	$462,500
Allowance for systems cost	Fire Protection	18500	SF	$3.20	$59,200
	ELECTRICAL				
Allowance for systems cost	Service & distribution	18500	SF	$10.00	$185,000
Allowance for systems cost	Lighting & Power	18500	SF	$8.00	$148,000
Allowance for systems cost	Special systems	18500	SF	$12.00	$222,000

CONSTRUCTION COST SYSTEMS, INC

FILE NAME:

TOTAL SHELL COST	**$2,426,056**
RATE/SF	**$131.14**

BLOOMINGTON MAINTENANCE FACILITY

OPTION 2

ADMIN BUILDING – FUTURE

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - New Building - Admin. And Ops.
SHELL TYPE : CMU
SHELL COST : $145.42
GROSS AREA: 4000 SF **Date:** 2/10/2011

COST SUMMARY

DESCRIPTION	TOTAL COST	RATE/SF
01 - FOUNDATIONS	$18,240	$4.56
011 - Standard Foundations	$18,240	$4.56
012 - Special Foundations	$0	$0.00
02 - SUBSTRUCTURE	$26,000	$6.50
021 - Slab on Grade	$26,000	$6.50
022 - Basement Excavation	$0	$0.00
023 - Basement Walls	$0	$0.00
03 - SUPERSTRUCTURE	$80,000	$20.00
031 - Floor Construction	$0	$0.00
032 - Roof Construction	$80,000	$20.00
033 - Stair Construction	$0	$0.00
04 - EXTERIOR CLOSURE	$139,650	$34.91
041 - Exterior Walls	$82,800	$20.70
042 - Exterior Doors & Windows	$56,850	$14.21
05 - ROOFING	$50,760	$12.69
06 - INTERIOR CONSTRUCTION	$178,390	$44.60
061 - Partitions	$98,790	$24.70
062 - Interior Finishes	$42,600	$10.65
063 - Specialties	$37,000	$9.25
07 - CONVEYING SYSTEMS	$0	$0.00
08 - MECHANICAL	$144,800	$36.20
081 - Plumbing	$32,000	$8.00
082 - HVAC	$100,000	$25.00
083 - Fire Protection	$12,800	$3.20
084 - Special Systems	$0	$0.00

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - New Building - Admin. And Ops.
SHELL TYPE : CMU
SHELL COST : $145.42
GROSS AREA: 4000 SF **Date:** 2/10/2011

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
09 - ELECTRICAL		$120,000		$30.00
091 - Service & Distribution	$40,000		$10.00	
092 - Lighting & Power	$32,000		$8.00	
093 - Special Systems	$48,000		$12.00	
10 - GENERAL CONDITIONS & PROFIT		$79,250		$19.81
NET BUILDING CONSTRUCTION COST	$837,090			
11 - EQUIPMENT		$0		$0.00
111 - Fixed & Movable Equipment	$0		$0.00	
112 - Furnishings	$0		$0.00	
113 - Special Construction	$0		$0.00	
12 - SITEWORK		$34,664		$8.67
121 - Site Preparation	$4,664		$1.17	
122 - Site Improvements	$15,000		$3.75	
123 - Site Utilities	$15,000		$3.75	
124 - Off-site Work	$0		$0.00	
NET PROJECT CONSTRUCTION COST	$871,755			
13 - CONTINGENCIES		$216,195		$54.05
131 - Design	$174,351		$43.59	
132 - Escalation	$41,844		$10.46	
133 - Construction	$0		$0.00	
TOTAL PROJECT CONSTRUCTION COST	**$1,087,950**			**$271.99**

PARAMETER COSTING MODEL

PROJECT NAME: **Bloomington Bus Facility - New Building - Admin. And Ops.**
SHELL TYPE : **CMU**
SHELL COST : **$145.42** **Date:** **2/10/2011**

DESCRIPTION	ITEM	QUANTITY	UNIT	UNIT PRICES	TOTAL
	GENERAL WORK				
Assumes 1' Average Excavation to Footprint of Building	Mass Excavation	148	CY	$15.00	$2,220
Continuous Footing	Foundation Wall & Footing	184	LF	$60.00	$11,040
Concrete Column Footing	Column Footing	9	EA	$800.00	$7,200
6" Thick, Including Reinforcement Aggregate Base & Finishing	Slab on Grade	4000	SF	$6.50	$26,000
Bar Joist, Metal Decking	Roof Structure	4000	SF	$20.00	$80,000
Brick w/ Grout Filled CMU Backup, Painted & Interior	Exterior Enclosure	2070	SF	$40.00	$82,800
Storefront & Punched Window	Window Wall	690	SF	$65.00	$44,850
Glass Storefront & Entry, HM Side Entry	Exterior Doors	5	EA	$2,400.00	$12,000
Flat Roof, TPO	Roofing	4000	SF	$12.00	$48,000
Coping Metal Facia & Gutters	Roof Edge	184	LF	$15.00	$2,760
	MECHANICAL				
Allowance for systems cost	Plumbing	4000	SF	$8.00	$32,000
Allowance for systems cost	H.V.A.C	4000	SF	$25.00	$100,000
Allowance for systems cost	Fire Protection	4000	SF	$3.20	$12,800
	ELECTRICAL				
Allowance for systems cost	Service & distribution	4000	SF	$10.00	$40,000
Allowance for systems cost	Lighting & Power	4000	SF	$8.00	$32,000
Allowance for systems cost	Special systems	4000	SF	$12.00	$48,000

CONSTRUCTION COST SYSTEMS, INC

FILE NAME:

TOTAL SHELL COST **$581,670**

RATE/SF **$145.42**

CONSTRUCTION
COST
SYSTEMS, INC.

Objectively
Managing
Building Costs

Bus Maintenance Facility

Bloomington, Indiana

February 7, 2011

Concept Estimate

Option 3

Base Estimate	Raw Cost	General Conditions Overhead & Profit 10.00%	Design Contingency 20.00%	Escalation 4.00%	Total Cost	Cost / SQFT	SQFT
ADMIN ADDITION	$1,291,346	$129,135	$284,096	$68,183	**$1,772,759**	**$264.59**	6,700
MAINTENANCE ADDITION	$1,355,728	$135,573	$298,260	$71,582	**$1,861,144**	**$332.35**	5,600
CANNOPY ADDITION	$1,058,450	$105,845	$232,859	$55,886	**$1,453,040**	**$35.88**	40,500
SERVICE BUILDING	$1,403,442	$140,344	$308,757	$74,102	**$1,926,645**	**$188.89**	10,200
GENERAL SITE & UTILITY WORK	$676,692	$67,669	$148,872	$35,729	**$928,962**		
CONSTRUCTION TOTAL	$5,785,657	$578,566	$1,272,845	$305,483	**$7,942,550**	**$126.07**	63,000

OPTION	Raw Cost	General Conditions Overhead & Profit 10.00%	Design Contingency 20.00%	Escalation 4.00%	Total Cost	Cost / SQFT	SQFT
FUTURE ADMIN SPACE	$467,854	$46,785	$102,928	$24,703	**$642,270**	**$247.03**	2,600
CONSTRUCTION TOTAL	$467,854	$46,785	$102,928	$24,703	**$642,270**	**$247.03**	2,600

1815 S. Meyers Rd.
Suite 200
Oakbrook Terrace, IL
60181

800.443.8607
630.678.0808
630.678.0858 fax

WWW.CCSOS.COM

C | C | S
CONSTRUCTION COST SYSTEMS, INC.

Objectively Managing Building Costs

1815 S.Meyers Rd
Suite 200
Oakbrook Terrace

800.443.8607
630.678.0808
630.678.0858 Fax

WWW.CCSOS.COM

PROJECT NAME: **BLOOMINGTON BPTC**

ESTIMATE DATE: 2/7/2011

NOTES REGARDING THIS ESTIMATE:

This Program estimate is based on program data, as well as concept floor plans prepared by the office of Wendel Duchscherer received 1-14-2011 together with discussions with their staff.

This estimate assumes a normal market condition.

This estimate assumes five or more qualified Contractors competitively bidding on this project.

This estimate assumes one contract awarded to one General Contractor.

Those cost estimates provided by the Architect and/or Consultants are identified in the body of the estimate.

Escalation has been included assuming construction start of July 2012 w/ 18 month construction schedule.

THIS ESTIMATE EXCLUDES:

1) Professional fees, testing, moving expense, etc. for Owner's account,
2) Site remediation is not included in this estimate.
3) Hazardous material removal and abatement,

This estimate is based on preliminary information available at this time. The scope of this estimate should be reviewed to insure our interpretation of the drawings and other information is correct. This estimate should be updated as the design evolves and is completed.

This cost estimate represents our opinion of probable construction cost for this project. We have exercised due professional diligence in the preparation of this estimate. Since we have no control over final material selection, bidding strategies and market conditions, no guarantee is given or implied with this estimate.

BLOOMINGTON MAINTENANCE FACILITY

OPTION 3

ADMIN BUILDING

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Admin / Opps Addition
SHELL TYPE : CMU
SHELL COST : $143.39
GROSS AREA: 6700 SF **Date:** 2/7/2011

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
01 - FOUNDATIONS		$54,000		$8.06
011 - Standard Foundations	$54,000		$8.06	
012 - Special Foundations	$0		$0.00	
02 - SUBSTRUCTURE		$30,150		$4.50
021 - Slab on Grade	$30,150		$4.50	
022 - Basement Excavation	$0		$0.00	
023 - Basement Walls	$0		$0.00	
03 - SUPERSTRUCTURE		$100,500		$15.00
031 - Floor Construction	$0		$0.00	
032 - Roof Construction	$100,500		$15.00	
033 - Stair Construction	$0		$0.00	
04 - EXTERIOR CLOSURE		$282,800		$42.21
041 - Exterior Walls	$184,800		$27.58	
042 - Exterior Doors & Windows	$98,000		$14.63	
05 - ROOFING		$73,400		$10.96
06 - INTERIOR CONSTRUCTION		$228,786		$34.15
061 - Partitions	$56,786		$8.48	
062 - Interior Finishes	$67,000		$10.00	
063 - Specialties	$105,000		$15.67	
07 - CONVEYING SYSTEMS		$0		$0.00
08 - MECHANICAL		$237,984		$35.52
081 - Plumbing	$129,377		$19.31	
082 - HVAC	$75,241		$11.23	
083 - Fire Protection	$33,366		$4.98	
084 - Special Systems	$0		$0.00	

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Admin / Opps Addition
SHELL TYPE : CMU
SHELL COST : $143.39
GROSS AREA: 6700 SF **Date:** 2/7/2011

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
09 - ELECTRICAL		$180,900		$27.00
091 - Service & Distribution	$60,300		$9.00	
092 - Lighting & Power	$73,700		$11.00	
093 - Special Systems	$46,900		$7.00	
10 - GENERAL CONDITIONS & PROFIT				$0.00
NET BUILDING CONSTRUCTION COST	$1,188,520			
11 - EQUIPMENT		$0		$0.00
111 - Fixed & Movable Equipment	$0		$0.00	
112 - Furnishings	$0		$0.00	
113 - Special Construction	$0		$0.00	
12 - SITEWORK		$102,826		$15.35
121 - Site Preparation	$62,000		$9.25	
122 - Site Improvements	$40,826		$6.09	
123 - Site Utilities	$0		$0.00	
124 - Off-site Work	$0		$0.00	
NET PROJECT CONSTRUCTION COST	$1,291,346			
13 - CONTINGENCIES		$481,414		$71.85
131 - Design	$284,096		$42.40	
132 - Escalation	$68,183		$10.18	
133 - GCOH&P	$129,135		$19.27	
TOTAL PROJECT CONSTRUCTION COST	**$1,772,759**			**$264.59**

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Admin / Opps Addition
SHELL TYPE : CMU
SHELL COST : $143.39 **Date:** 2/7/2011

S.O.G.	BASEMENT AREA	BSMT DEPTH	EXCAV.	FILL	SUSPENDED SLAB	BAY SIZE
6700	0	0	1.00	0.00	0	500

PERIMETER	ROOF AREA	ROOF EDGE	EXT WALL PERIMETER	BLDG. HT.	WINDOWS	SKYLIGHT	GROSS AREA
320	6700	320	320	22.00	25%	0	6700

DESCRIPTION	ITEM	QUANTITY	UNIT	UNIT PRICES	TOTAL
	GENERAL WORK				
Assumes No Basement	Basement Excavation	0	CY	$0.00	$0
Assumes No Excavation	Mass Excavation	0	CY	$0.00	$0
Fill Included Under Site Preparation	Mass Fill	0	CY	$0.00	$0
Continuous Footing	Foundation Wall & Footing	320	LF	$100.00	$32,000
Concrete Column Footing	Column Footing	22	EA	$1,000.00	$22,000
4" Slab on Grade	Slab on Grade	6700	SF	$4.50	$30,150
	ARCHITECTRUAL				
Cold Formed Metal Framing, Metal Deck	Roof Structure	6700	SF	$15.00	$100,500
Assumes No Stairs	Stairs	0	EA	$0.00	$0
Brick w/ CMU Backup	Exterior Enclosure	5280	SF	$35.00	$184,800
Storefront & Punched Window	Window Wall	1760	SF	$50.00	$88,000
Assumes Aluminum Entry & Steel Exterior Doors	Exterior Doors	5	EA	$2,000.00	$10,000
Demo Existing Masonry Walls for Layout Modifications	Exterior Demolition	100	SF	$10.00	$1,000
Flat Roof	Roofing	6700	SF	$10.00	$67,000
Coping Metal Fascia & Gutters	Roof Edge	320	LF	$20.00	$6,400
	MECHANICAL				
Allowance for systems cost	Plumbing	6700	SF	$19.31	$129,377
Allowance for systems cost	H.V.A.C	6700	SF	$11.23	$75,241
Allowance for systems cost	Fire Protection	6700	SF	$4.98	$33,366
	ELECTRICAL				
Allowance for systems cost	Service & Distribution	6700	SF	$9.00	$60,300
Allowance for systems cost	Lighting & Power	6700	SF	$11.00	$73,700
Allowance for systems cost	Special Systems	6700	SF	$7.00	$46,900

CONSTRUCTION COST SYSTEMS, INC

FILE NAME:

TOTAL SHELL COST **$960,734**

RATE/SF **$143.39**

Bloomington Bus Facility - Admin / Opps Addition

Estimate Level - Concept Date: 2/7/2011

121 SITE PREPARATION

LINE	DESCRIPTION	QUANTITY	UM	UNIT COST	ESTIMATED COST
121.010	Demo Pavement at Location of New Admin/Opps Addition	2,000	SQYD	$3.50	$7,000
121.020	Site Grading & Prep	2,000	SQYD	$27.00	$54,000
121.030					
121.040					
121.050					
121.060					
121.070					
121.080					
121.090					
121.100					
121.110					
121.120					
121.130					
121.140					
121.150					
121.160					
121.170					

TOTAL **$61,000**

Bloomington Bus Facility - Admin / Opps Addition

Estimate Level - Concept Date: 2/7/2011

122 SITE IMPROVEMENTS

LINE	DESCRIPTION	QUANTITY	UM	UNIT COST	ESTIMATED COST
122.010	Concrete Sidewalk Allowance	1,000	SQFT	$5.00	$5,000
122.020	Asphalt Parking Lot	5,864	SQFT	$4.50	$26,388
122.030	Concrete Curb & Gutter	155	LNFT	$12.50	$1,938
122.040	Landscape Allowance	1	LSUM	$7,500.00	$7,500
122.050					
122.060					
122.070					
122.080					
122.090					
122.100					
122.110					
122.120					
122.130					
122.140					
122.150					
122.160					
122.170					

TOTAL **$40,826**

BLOOMINGTON MAINTENANCE FACILITY

OPTION 3

MAINTENANCE BUILDING

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Maintenance Addition
SHELL TYPE : CMU
SHELL COST : $107.33
GROSS AREA: 5600 SF **Date:** 2/7/2011

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
01 - FOUNDATIONS		$33,500		$5.98
011 - Standard Foundations	$33,500		$5.98	
012 - Special Foundations	$0		$0.00	
02 - SUBSTRUCTURE		$36,400		$6.50
021 - Slab on Grade	$36,400		$6.50	
022 - Basement Excavation	$0		$0.00	
023 - Basement Walls	$0		$0.00	
03 - SUPERSTRUCTURE		$84,000		$15.00
031 - Floor Construction	$0		$0.00	
032 - Roof Construction	$84,000		$15.00	
033 - Stair Construction	$0		$0.00	
04 - EXTERIOR CLOSURE		$168,656		$30.12
041 - Exterior Walls	$133,594		$23.86	
042 - Exterior Doors & Windows	$35,063		$6.26	
05 - ROOFING		$59,375		$10.60
06 - INTERIOR CONSTRUCTION		$32,650		$5.83
061 - Partitions	$4,650		$0.83	
062 - Interior Finishes	$28,000		$5.00	
063 - Specialties	$0		$0.00	
07 - CONVEYING SYSTEMS		$0		$0.00
08 - MECHANICAL		$126,336		$22.56
081 - Plumbing	$56,952		$10.17	
082 - HVAC	$46,928		$8.38	
083 - Fire Protection	$22,456		$4.01	
084 - Special Systems	$0		$0.00	

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Maintenance Addition
SHELL TYPE : CMU
SHELL COST : $107.33
GROSS AREA: 5600 SF **Date:** 2/7/2011

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
09 - ELECTRICAL		$84,000		$15.00
091 - Service & Distribution	$0		$0.00	
092 - Lighting & Power	$56,000		$10.00	
093 - Special Systems	$28,000		$5.00	
10 - GENERAL CONDITIONS & PROFIT		$0		$0.00
NET BUILDING CONSTRUCTION COST	$624,917			
11 - EQUIPMENT		$0		$0.00
111 - Fixed & Movable Equipment	$0		$0.00	
112 - Furnishings	$0		$0.00	
113 - Special Construction	$0		$0.00	
12 - SITEWORK		$730,811		$130.50
121 - Site Preparation	$40,811		$7.29	
122 - Site Improvements	$690,000		$123.21	
123 - Site Utilities	$0		$0.00	
124 - Off-site Work	$0		$0.00	
NET PROJECT CONSTRUCTION COST	$1,355,728			
13 - CONTINGENCIES		$505,416		$90.25
131 - Design	$298,260		$53.26	
132 - Escalation	$71,582		$12.78	
133 - GCOH&P	$135,573		$24.21	
TOTAL PROJECT CONSTRUCTION COST	**$1,861,144**			**$332.35**

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Maintenance Addition
SHELL TYPE : CMU
SHELL COST : $107.33 **Date:** 2/7/2011

S.O.G.	BASEMENT AREA	BSMT DEPTH	EXCAV.	FILL	SUSPENDED SLAB	BAY SIZE
5600	0	0	1.00	0.00	0	900

PERIMETER	ROOF AREA	ROOF EDGE	EXT WALL PERIMETER	BLDG. HT.	WINDOWS	SKYLIGHT	GROSS AREA
225	5600	225	225	25.00	5%	0	5600

DESCRIPTION	ITEM	QUANTITY	UNIT	UNIT PRICES	TOTAL
	GENERAL WORK				
Assumes No Basement	Basement Excavation	0	CY	$0.00	$0
Assumes No Excavation	Mass Excavation	0	CY	$0.00	$0
Fill Included Under Site Preparation	Mass Fill	0	CY	$0.00	$0
Continuous Footing	Foundation Wall & Footing	225	LF	$100.00	$22,500
Concrete Column Footing	Column Footing	11	EA	$1,000.00	$11,000
Heavy Duty Slab on Grade	Slab on Grade	5600	SF	$6.50	$36,400
	ARCHITECTRUAL				
Cold Formed Metal Framing, Metal Deck	Roof Structure	5600	SF	$15.00	$84,000
Assumes No Stairs	Stairs	0	EA	$0.00	$0
Grout Filled CMU, Painted Exterior & Interior	Exterior Enclosure	5344	SF	$25.00	$133,594
Storefront & Punched Window	Window Wall	281	SF	$50.00	$14,063
Assumes Aluminum Entry & Steel Exterior Doors	Exterior Doors	3	EA	$7,000.00	$21,000
Demo Existing Masonry Walls for Layout Modifications	Exterior Demolition	1600	SF	$5.50	$8,800
Flat Roof	Roofing	5600	SF	$10.00	$56,000
Coping Metal Fascia & Gutters	Roof Edge	225	LF	$15.00	$3,375
	MECHANICAL				
Allowance for systems cost	Plumbing	5600	SF	$10.17	$56,952
Allowance for systems cost	H.V.A.C	5600	SF	$8.38	$46,928
Allowance for systems cost	Fire Protection	5600	SF	$4.01	$22,456
	ELECTRICAL				
Allowance for systems cost	Service & Distribution	5600	SF	$0.00	$0
Allowance for systems cost	Lighting & Power	5600	SF	$10.00	$56,000
Allowance for systems cost	Special Systems	5600	SF	$5.00	$28,000

CONSTRUCTION COST SYSTEMS, INC

FILE NAME:

TOTAL SHELL COST **$601,067**

RATE/SF **$107.33**

Bloomington Bus Facility - Maintenance Addition

Estimate Level - Concept Date: 2/7/2011

121 SITE PREPARATION

LINE	DESCRIPTION	QUANTITY	UM	UNIT COST	ESTIMATED COST
121.010	Demo Pavement at Location of New Admin/Opps Addition	956	SQYD	$6.50	$6,211
121.020	Site Grading & Prep	956	SQYD	$27.00	$25,800
121.030					
121.040					
121.050					
121.060					
121.070					
121.080					
121.090					
121.100					
121.110					
121.120					
121.130					
121.140					
121.150					
121.160					
121.170					

TOTAL **$32,011**

Bloomington Bus Facility - Maintenance Addition

Estimate Level - Concept Date: 2/7/2011

122 SITE IMPROVEMENTS

LINE	DESCRIPTION	QUANTITY	UM	UNIT COST	ESTIMATED COST
122.010	*** Allowance *** Bus Maintenance Equpiment	2	EA	$200,000.00	$400,000
122.020	*** Allowance *** Bus Washer Equipment	2	EA	$125,000.00	$250,000
122.030	*** Allowance *** Water Recycle Equipment	1	LSUM	$40,000.00	$40,000
122.040					
122.050					
122.060					
122.070					
122.080					
122.090					
122.100					
122.110					
122.120					
122.130					
122.140					
122.150					
122.160					
122.170					

TOTAL **$690,000**

BLOOMINGTON MAINTENANCE FACILITY

OPTION 3

CANNOPY ADDITION

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Canopy
SHELL TYPE :
SHELL COST : $23.67
GROSS AREA: 40500 SF **Date: 2/7/2011**

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
01 - FOUNDATIONS		$13,000		$0.32
011 - Standard Foundations	$13,000		$0.32	
012 - Special Foundations	$0		$0.00	
02 - SUBSTRUCTURE		$263,250		$6.50
021 - Slab on Grade	$263,250		$6.50	
022 - Basement Excavation	$0		$0.00	
023 - Basement Walls	$0		$0.00	
03 - SUPERSTRUCTURE		$364,500		$9.00
031 - Floor Construction	$0		$0.00	
032 - Roof Construction	$364,500		$9.00	
033 - Stair Construction	$0		$0.00	
04 - EXTERIOR CLOSURE		$0		$0.00
041 - Exterior Walls	$0		$0.00	
042 - Exterior Doors & Windows	$0		$0.00	
05 - ROOFING		$167,850		$4.14
06 - INTERIOR CONSTRUCTION		$0		$0.00
061 - Partitions	$0		$0.00	
062 - Interior Finishes	$0		$0.00	
063 - Specialties	$0		$0.00	
07 - CONVEYING SYSTEMS		$0		$0.00
08 - MECHANICAL		$0		$0.00
081 - Plumbing	$0		$0.00	
082 - HVAC	$0		$0.00	
083 - Fire Protection	$0		$0.00	
084 - Special Systems	$0		$0.00	

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Canopy
SHELL TYPE :
SHELL COST : $23.67
GROSS AREA: 40500 SF **Date: 2/7/2011**

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
09 - ELECTRICAL		$149,850		$3.70
091 - Service & Distribution	$0		$0.00	
092 - Lighting & Power	$149,850		$3.70	
093 - Special Systems	$0		$0.00	
10 - GENERAL CONDITIONS & PROFIT				$0.00
NET BUILDING CONSTRUCTION COST	$958,450			
11 - EQUIPMENT		$0		$0.00
111 - Fixed & Movable Equipment	$0		$0.00	
112 - Furnishings	$0		$0.00	
113 - Special Construction	$0		$0.00	
12 - SITEWORK		$100,000		$2.47
121 - Site Preparation	$45,000		$1.11	
122 - Site Improvements	$55,000		$1.36	
123 - Site Utilities	$0		$0.00	
124 - Off-site Work	$0		$0.00	
NET PROJECT CONSTRUCTION COST	$1,058,450			
13 - CONTINGENCIES		$394,590		$9.74
131 - Design	$232,859		$5.75	
132 - Escalation	$55,886		$1.38	
133 - GHOH&P	$105,845		$2.61	
TOTAL PROJECT CONSTRUCTION COST	**$1,453,040**			**$35.88**

PARAMETER COSTING MODEL

PROJECT NAME: **Bloomington Bus Facility - Canopy**
SHELL TYPE :
SHELL COST : **$23.67** **Date:** **2/7/2011**

S.O.G.	BASEMENT AREA	BSMT DEPTH	EXCAV.	FILL	SUSPENDED SLAB	BAY SIZE
40500	0	0	1.00	0.00	0	1600

PERIMETER	ROOF AREA	ROOF EDGE	EXT WALL PERIMETER	BLDG. HT.	WINDOWS	SKYLIGHT	GROSS AREA
0	40500	0	0	0.00	0%	0	40500

DESCRIPTION	ITEM	QUANTITY	UNIT	UNIT PRICES	TOTAL
	GENERAL WORK				
Assumes No Basement	Basement Excavation	0	CY	$0.00	$0
Assumes No Excavation	Mass Excavation	0	CY	$0.00	$0
Fill Included Under Site Preparation	Mass Fill	0	CY	$0.00	$0
Continuous Footing	Foundation Wall & Footing	0	LF	$0.00	$0
Concrete Column Footing	Column Footing	26	EA	$500.00	$13,000
Heavy Duty Slab on Grade	Slab on Grade	40500	SF	$6.50	$263,250
	ARCHITECTRUAL				
Cold Formed Metal Framing	Roof Structure	40500	SF	$9.00	$364,500
Assumes No Stairs	Stairs	0	EA	$0.00	$0
	Exterior Enclosure	0	SF	$0.00	$0
	Window Wall	0	SF	$0.00	$0
	Exterior Doors	0	EA	$0.00	$0
	Exterior Demolition	0	SF	$0.00	$0
Metal Roof	Roofing	40500	SF	$4.00	$162,000
Gutters	Roof Edge	650	LF	$9.00	$5,850
	MECHANICAL				
Allowance for systems cost	Plumbing	0	SF	$0.00	$0
Allowance for systems cost	H.V.A.C	0	SF	$0.00	$0
Allowance for systems cost	Fire Protection	0	SF	$0.00	$0
	ELECTRICAL				
Allowance for systems cost	Service & Distribution	0	SF	$0.00	$0
Allowance for systems cost	Lighting & Power	40500	SF	$3.70	$149,850
Allowance for systems cost	Special Systems	0	SF	$0.00	$0

CONSTRUCTION COST SYSTEMS, INC

FILE NAME:

TOTAL SHELL COST	**$958,450**
RATE/SF	**$23.67**

Bloomington Bus Facility - Canopy

Estimate Level - Concept

Date: 2/7/2011

121

LINE	DESCRIPTION	QUANTITY	UM	UNIT COST	ESTIMATED COST
121.010	Demo Concrete Paving	15,000	SF	$3.00	$45,000
121.020					
121.030					
121.040					
121.050					
121.060					
121.070					
121.080					
121.090					
121.100					
121.110					
121.120					
121.130					
121.140					
121.150					
121.160					
121.170					

TOTAL **$45,000**

Bloomington Bus Facility - Canopy

Estimate Level - Concept Date: 2/7/2011

122 SITE IMPROVEMENTS

LINE	DESCRIPTION	QUANTITY	UM	UNIT COST	ESTIMATED COST
122.010	*** Allowance *** Engine Heater Plugins	44	EA	$1,250.00	$55,000
122.020					
122.030					
122.040					
122.050					
122.060					
122.070					
122.080					
122.090					
122.100					
122.110					
122.120					
122.130					
122.140					
122.150					
122.160					
122.170					

TOTAL **$55,000**

BLOOMINGTON MAINTENANCE FACILITY

OPTION 3

SERVICE BUILDING

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Service Building
SHELL TYPE : CMU
SHELL COST : $107.32
GROSS AREA: 10200 SF **Date:** 2/7/2011

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
01 - FOUNDATIONS		$61,200		$6.00
011 - Standard Foundations	$61,200		$6.00	
012 - Special Foundations	$0		$0.00	
02 - SUBSTRUCTURE		$66,300		$6.50
021 - Slab on Grade	$66,300		$6.50	
022 - Basement Excavation	$0		$0.00	
023 - Basement Walls	$0		$0.00	
03 - SUPERSTRUCTURE		$153,000		$15.00
031 - Floor Construction	$0		$0.00	
032 - Roof Construction	$153,000		$15.00	
033 - Stair Construction	$0		$0.00	
04 - EXTERIOR CLOSURE		$281,000		$27.55
041 - Exterior Walls	$241,000		$23.63	
042 - Exterior Doors & Windows	$40,000		$3.92	
05 - ROOFING		$109,230		$10.71
06 - INTERIOR CONSTRUCTION		$0		$0.00
061 - Partitions	$0		$0.00	
062 - Interior Finishes	$0		$0.00	
063 - Specialties	$0		$0.00	
07 - CONVEYING SYSTEMS		$0		$0.00
08 - MECHANICAL		$230,112		$22.56
081 - Plumbing	$103,734		$10.17	
082 - HVAC	$85,476		$8.38	
083 - Fire Protection	$40,902		$4.01	
084 - Special Systems	$0		$0.00	

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Service Building
SHELL TYPE : CMU
SHELL COST : $107.32
GROSS AREA: 10200 SF **Date:** 2/7/2011

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
09 - ELECTRICAL		$193,800		$19.00
091 - Service & Distribution	$61,200		$6.00	
092 - Lighting & Power	$71,400		$7.00	
093 - Special Systems	$61,200		$6.00	
10 - GENERAL CONDITIONS & PROFIT				$0.00
NET BUILDING CONSTRUCTION COST	$1,094,642			
11 - EQUIPMENT		$0		$0.00
111 - Fixed & Movable Equipment	$0		$0.00	
112 - Furnishings	$0		$0.00	
113 - Special Construction	$0		$0.00	
12 - SITEWORK		$308,800		$30.27
121 - Site Preparation	$0		$0.00	
122 - Site Improvements	$284,800		$27.92	
123 - Site Utilities	$24,000		$2.35	
124 - Off-site Work	$0		$0.00	
NET PROJECT CONSTRUCTION COST	$1,403,442			
13 - CONTINGENCIES		$523,203		$51.29
131 - Design	$308,757		$30.27	
132 - Escalation	$74,102		$7.26	
133 - GCOH&P	$140,344		$13.76	
TOTAL PROJECT CONSTRUCTION COST	**$1,926,645**			**$188.89**

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Service Building
SHELL TYPE : CMU
SHELL COST : $107.32 **Date:** 2/7/2011

S.O.G.	BASEMENT AREA	BSMT DEPTH	EXCAV.	FILL	SUSPENDED SLAB	BAY SIZE
10200	0	0	1.00	0.00	0	1600

PERIMETER	ROOF AREA	ROOF EDGE	EXT WALL PERIMETER	BLDG. HT.	WINDOWS	SKYLIGHT	GROSS AREA
482	10200	482	482	20.00	5%	0	10200

DESCRIPTION	ITEM	QUANTITY	UNIT	UNIT PRICES	TOTAL
	GENERAL WORK				
Assumes No Basement	Basement Excavation	0	CY	$0.00	$0
Assumes No Excavation	Mass Excavation	0	CY	$0.00	$0
Fill Included Under Site Preparation	Mass Fill	0	CY	$0.00	$0
Continuous Footing	Foundation Wall & Footing	482	LF	$100.00	$48,200
Concrete Column Footing	Column Footing	13	EA	$1,000.00	$13,000
Heavy Duty Slab on Grade	Slab on Grade	10200	SF	$6.50	$66,300
	ARCHITECTRUAL				
Cold Formed Metal Framing, Metal Deck	Roof Structure	10200	SF	$15.00	$153,000
Assumes No Stairs	Stairs	0	EA	$0.00	$0
Grout Filled CMU, Painted Exterior & Interior	Exterior Enclosure	9640	SF	$25.00	$241,000
	Window Wall	0	SF	$0.00	$0
Assumes 4 Metal Rolling Doors 15'	Exterior Doors	4	EA	$10,000.00	$40,000
	Exterior Demolition	0	SF	$0.00	$0
Flat Roof	Roofing	10200	SF	$10.00	$102,000
Coping Metal Fascia & Gutters	Roof Edge	482	LF	$15.00	$7,230
	MECHANICAL				
Allowance for systems cost	Plumbing	10200	SF	$10.17	$103,734
Allowance for systems cost	H.V.A.C	10200	SF	$8.38	$85,476
Allowance for systems cost	Fire Protection	10200	SF	$4.01	$40,902
	ELECTRICAL				
Allowance for systems cost	Service & Distribution	10200	SF	$6.00	$61,200
Allowance for systems cost	Lighting & Power	10200	SF	$7.00	$71,400
Allowance for systems cost	Special Systems	10200	SF	$6.00	$61,200

CONSTRUCTION COST SYSTEMS, INC

FILE NAME:

TOTAL SHELL COST **$1,094,642**

RATE/SF **$107.32**

Bloomington Bus Facility - Service Building

Estimate Level - Concept Date: 2/7/2011

122 SITE IMPROVEMENTS

LINE	DESCRIPTION	QUANTITY	UM	UNIT COST	ESTIMATED COST
122.010	4 Dbl. Wall 20,000 Gal. Above Ground Tank Installed	4	EA	65,000	$260,000
122.020	Dispensing Equipment. Allowance	1	LSUM	$24,800.00	$24,800
122.030					
122.040					
122.050					
122.060					
122.070					
122.080					
122.090					
122.100					
122.110					
122.120					
122.130					
122.140					
122.150					
122.160					
122.170					

TOTAL **$284,800**

Bloomington Bus Facility - Service Building

Estimate Level - Concept Date: 2/7/2011

123 Fuel Station Demo

LINE	DESCRIPTION	QUANTITY	UM	UNIT COST	ESTIMATED COST
123.010	Tank Removal Including Excavation	1	LSUM	$4,350.00	$4,350
123.020	Tank Sludge Removal & Disposal	1	LSUM	$4,800.00	$4,800
123.030	BF & Soil Compaction	1	LSUM	$9,450.00	$9,450
123.040	ARCH Demolition	1	LSUM	$5,400.00	$5,400
123.050					
123.060					
123.070					
123.080					
123.090					
123.100					
123.110					
123.120					
123.130					
123.140					
123.150					
123.160					
123.170					

TOTAL **$24,000**

BLOOMINGTON MAINTENANCE FACILITY

OPTION 3

GENERAL SITE & UTILITY WORK

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Site
SHELL TYPE :

GROSS AREA: 51905 SF **Date: 2/7/2011**

COST SUMMARY

DESCRIPTION	TOTAL COST	RATE/SF
01 - FOUNDATIONS	$0	$0.00
011 - Standard Foundations	$0	$0.00
012 - Special Foundations	$0	$0.00
02 - SUBSTRUCTURE	$0	$0.00
021 - Slab on Grade	$0	$0.00
022 - Basement Excavation	$0	$0.00
023 - Basement Walls	$0	$0.00
03 - SUPERSTRUCTURE	$0	$0.00
031 - Floor Construction	$0	$0.00
032 - Roof Construction	$0	$0.00
033 - Stair Construction	$0	$0.00
04 - EXTERIOR CLOSURE	$0	$0.00
041 - Exterior Walls	$0	$0.00
042 - Exterior Doors & Windows	$0	$0.00
05 - ROOFING	$0	$0.00
06 - INTERIOR CONSTRUCTION	$0	$0.00
061 - Partitions	$0	$0.00
062 - Interior Finishes	$0	$0.00
063 - Specialties	$0	$0.00
07 - CONVEYING SYSTEMS	$0	$0.00
08 - MECHANICAL	$0	$0.00
081 - Plumbing	$0	$0.00
082 - HVAC	$0	$0.00
083 - Fire Protection	$0	$0.00
084 - Special Systems	$0	$0.00

PARAMETER COSTING MODEL

PROJECT NAME: Bloomington Bus Facility - Site
SHELL TYPE :

GROSS AREA: 51905 SF **Date: 2/7/2011**

COST SUMMARY

DESCRIPTION	TOTAL COST		RATE/SF	
09 - ELECTRICAL		$0		$0.00
091 - Service & Distribution	$0		$0.00	
092 - Lighting & Power	$0		$0.00	
093 - Special Systems	$0		$0.00	
10 - GENERAL CONDITIONS & PROFIT				$0.00
NET BUILDING CONSTRUCTION COST	$0			
11 - EQUIPMENT		$0		$0.00
111 - Fixed & Movable Equipment	$0		$0.00	
112 - Furnishings	$0		$0.00	
113 - Special Construction	$0		$0.00	
12 - SITEWORK		$676,692		$13.04
121 - Site Preparation	$85,422		$1.65	
122 - Site Improvements	$561,335		$10.81	
123 - Site Utilities	$29,935		$0.58	
124 - Off-site Work	$0		$0.00	
NET PROJECT CONSTRUCTION COST	$676,692			
13 - CONTINGENCIES		$252,271		$4.86
131 - Design	$148,872		$2.87	
132 - Escalation	$35,729		$0.69	
133 - GCOH&P	$67,669		$1.30	
TOTAL PROJECT CONSTRUCTION COST	**$928,962**			**$17.90**

Bloomington Bus Facility - Site

Estimate Level - Concept

Date: 2/7/2011

121

LINE	DESCRIPTION	QUANTITY	UM	UNIT COST	ESTIMATED COST
121.010	Demo Existing Buildings	7,427	SF	$4.50	$33,422
121.020	Rough Grading	52,000	SF	$1.00	$52,000
121.030					
121.040					
121.050					
121.060					
121.070					
121.080					
121.090					
121.100					
121.110					
121.120					
121.130					
121.140					
121.150					
121.160					
121.170					

TOTAL **$85,422**

Bloomington Bus Facility - Site

Estimate Level - Concept Date: 2/7/2011

122 SITE IMPROVEMENTS

LINE	DESCRIPTION	QUANTITY	UM	UNIT COST	ESTIMATED COST
122.010	Asphalt Paving - New South Parking Lot	51,905	SF	$4.50	$233,573
122.020	Concrete Curb & Gutter	1,150	LNFT	$10.50	$12,075
122.030	Fill - Assumes 2-1/2' Across Portion of Acquired Site	9,125	CUYD	$13.50	$123,188
122.040	Concrete Pavement	35,000	SF	$5.50	$192,500
122.050					
122.060					
122.070					
122.080					
122.090					
122.100					
122.110					
122.120					
122.130					
122.140					
122.150					
122.160					
122.170					

TOTAL **$561,335**

Bloomington Bus Facility - Site

Estimate Level - Concept Date: 2/7/2011

123 Fuel Station Demo

LINE	DESCRIPTION	QUANTITY	UM	UNIT COST	ESTIMATED COST
123.010	Storm Piping - Site	1	LSUM	$29,935.00	$29,935
123.020	No additional site utilities required fo water or sanitary. Assumed to be tie-in to existing mains				
123.030					
123.040					
123.050					
123.060					
123.070					
123.080					
123.090					
123.100					
123.110					
123.120					
123.130					
123.140					
123.150					
123.160					

TOTAL **$29,935**