

# Improving Our Communities: The UMES Experience

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**Improving our Communities: The UMES Experience** addresses the planning and execution of **The Princess Anne Athletic Center**. The Center was a partnership between the University of Maryland Eastern Shore (UMES) and the Town of Princess Anne to convert an old clam factory premises into an outdoor athletic center for the children of low income families of the Town. This 4 ½-acre project was initially funded by the US Department of Housing and Urban Development (HUD) - Historically Black Colleges and Universities (HBCU) program with \$340,000 and the Maryland Department of Natural Resources with \$130,000. This project was executed in two phases: the Demolition and Site Clearance Phase and the Design and Construction Phase. The complete design of the project was done by a Project Team comprising faculty, staff and students who were actively involved in the project drawings and administration. The scope was to design and construct: one Tennis Court, two Basketball Courts, one Volleyball Court, a Soccer Field, a Service Road and a Multi-Purpose Building. The design included a Stormwater, Sediment and Erosion Control Plan, which was used to obtain permits for site grading and construction. To date, total additional funds amounting to \$1,161,787.50 have been received towards the completion of the Center. This paper covers the planning, design and construction activities of the Center and its impact on the community. It highlights faculty, student, and community involvements and addresses the challenges encountered during the project execution, as well as the significant outcomes of the project.

**Key words:** planning, design, construction, sediment and erosion control, community involvement

## Introduction

**Improving our Communities: The UMES Experience** addresses the planning and execution of the **Princess Anne Athletic Center**. The Center was a partnership between the University of Maryland Eastern Shore (UMES) and The Town of Princess Anne to convert a 4.5-acre old clam factory premises into an outdoor athletic center for the children of the Town. The project received the 2004 HUD-HBCU 3-year Grant Award in the value of \$340,000 for the construction of the athletic center. In addition, another \$130,000 received from the Maryland Department of Natural Resources by the Town of Princess Anne was earmarked as part of the cost of the demolition activity in the project. In 2000, the Town of Princess Anne police became concerned that neighborhood children were entering the abandoned plant building and facility and using it as a base for anti-social activities. The Town Code Enforcement Officer condemned the property and the owner cleaned it up and eventually donated it to the town. The plan was to construct an outdoor athletic center for the children of low-income families in Princess Anne on the property. The implementation of the project involved the following activities: **Activity 1: Demolition** included demolishing the old building and dismantling the storage silos and tanks. **Activity 2: Clearance of Site** included taking inventory of matured trees, and disposal of metal tanks, silos and other materials in appropriate landfills. **Activity 3: Site Development and Planning** included the survey of the land, landscape design and development of a site plan with

all proposed features in place. **Activity 4: Design of Infrastructure** included the design of the soccer and volleyball fields, basketball courts, and a play ground. **Activity 5: Construction of Fields and Walkways** included review of building plans, preparing contract documents and the construction of the fields, courts and walkways. **Activity 6: Construction of Equipment Storage Building and Office** included preparation of contract documents and the building of the Athletic Equipment Storage Building and Office.

## **HUD Policy Priorities**

This project satisfied the following HUD Policy Priorities.

### *Improving the Quality of Life in Our Nation's Communities*

This project seeks to turn an abandoned and dilapidated old factory facility that area children turned into a gang meeting place for anti-social activities into an outdoor athletic center where the children of low-income families could have a safe and supervised environment for athletic activities which would impact their healthy physical and emotional development. This would improve the quality of life in this community for the children as well as the adults. The Town of Princess Anne, currently does not have any athletic facility for the children.

### *Participation of Minority-Serving Institution in HUD Programs*

As an 1890 Land Grant and a Historically Black University, UMES' mission is focused upon land grant imperatives for community outreach through partnerships and collaborations. The University's goal in Community Outreach activities is to address the needs of the citizens of the local community and the State. In order to achieve this goal, UMES promotes community service and identifies community programs in need of support. UMES has been involved in many enriching activities in the local community in the past. However, this is the first HUD-HBCU grant that UMES has obtained and it is enabling it expand its role and effectiveness in the Princess Anne community by helping to provide this much needed Athletic Center for the children of the Town

## **Project Demolition and Site Clearance Phase**

This phase involved the demolition and removal of the old factory building and all other structures from the site. The site was then cleared and leveled for the construction phase. Contract documents were prepared and a contract was awarded to a local contractor to execute the demolition contract. This phase was adequately executed and has been presented in meetings and reports on the project (Arumala, et al, 2006, Arumala, et al, 2006).

## **Project Planning Design and Construction Activities**

### *Site Development and Planning*

In developing the site, the project team met regularly with town officials to determine desired features in the Center. Figure 1 was the result of the Site Development and Planning activities. The site layout shown was arrived at with the input from the community.

## Design of Infrastructure

In this activity all components of the Athletic Center were designed by the Project Team. These included: Storm Water Management and Sediment and Erosion Control, Soccer Field, Volleyball Field, Basketball courts, Tennis Court, Service Road and Multi-Purpose Building. Figure 2, shows the Sediment and Erosion Control plan.



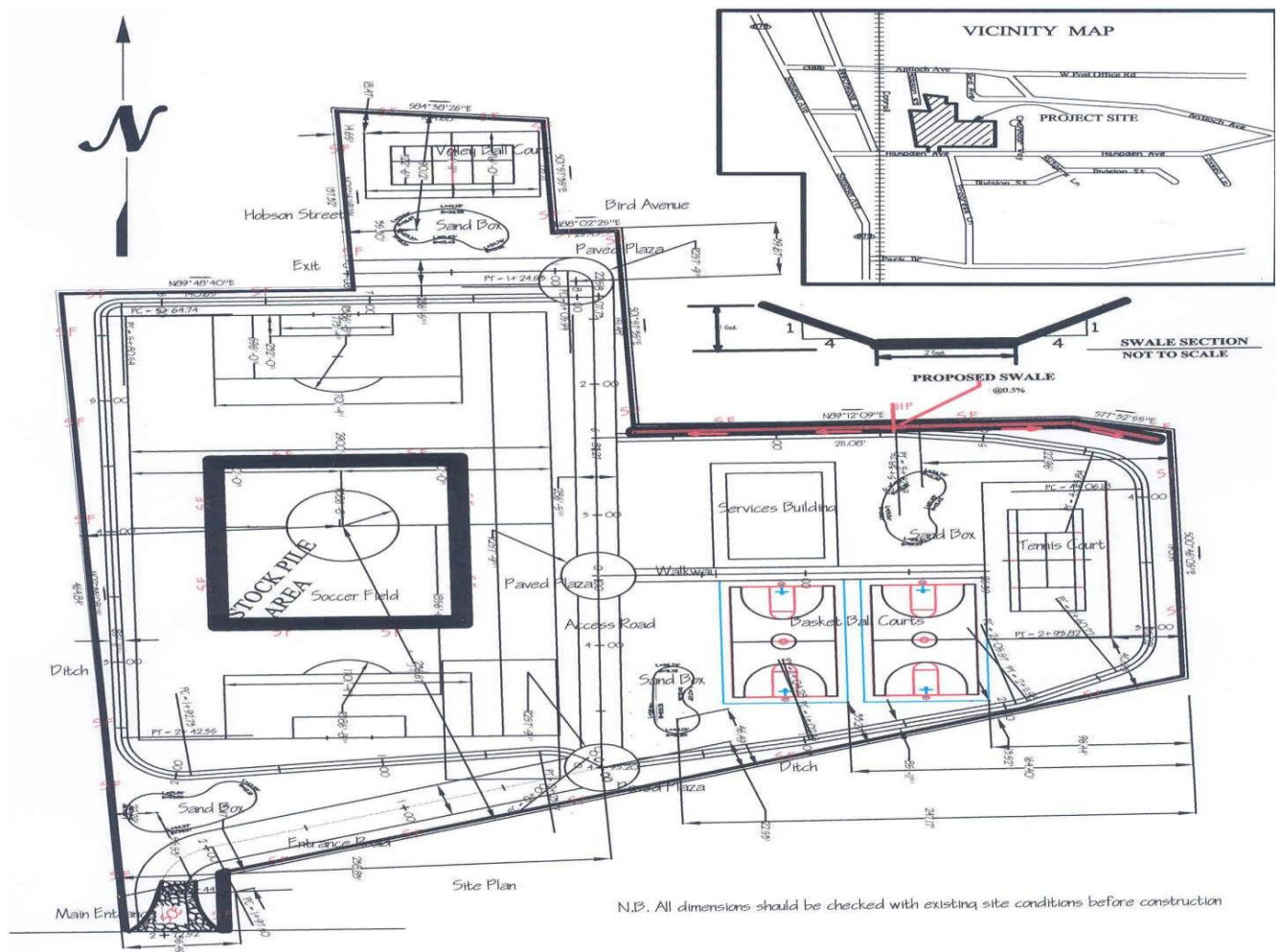
**Figure 2 Project Site Layout**

## Request for Proposal for the Construction Phase

This Request solicited proposals to perform the construction of all the components indicated in the site of the Princess Anne Athletic Center Project according to attached drawings and scope of work in accordance with stated requirements, attached Scope of Work Specifications, and applicable State of Maryland and Federal Laws. The work consisted principally of providing bonds, labor, materials, equipment, and supervision necessary for the execution of the Construction Phase of The Princess Anne Athletic Center Project. The project included but was not limited to the removal and disposal of up to ½ inch stones, bricks, tree roots, debris and clam shells to a depth of 15 inches over the area of the project; the construction of the Service Road, two Basketball Courts, a Tennis Court, a Soccer Field, a Volleyball Court and a Services (Multi-Purpose) Building. The Request for Proposal was in four parts namely:

*Base Bid* - Preparation of site and the construction of the two basket ball courts and the tennis court, *Add*

*Alternate #1* Preparation of site and construction of the site drainage, *Add Alternate #2* Construction of the Services (Multi-Purpose) Building complete with electrical, plumbing and HVAC fixtures as detailed in the construction drawings, and *Add Alternate #3* Preparation and construction of the volleyball court as specified.



**Figure 2. Storm Water Management and Sediment and Erosion Control Design**

All parts or selected portions of the project may be executed depending on the availability of funds. This plan of action was necessary to ensure that only parts that can be covered by the grant fund were executed at this time.

### Construction Contract

Three companies responded to the call for bids. Mike Davidson Excavating, Inc had the lowest bid for the construction of this project with a total bid sum of \$476,050.00. After reviewing the project budget and the general condition of the project site, it was decided that a contract should be awarded to execute the Bid Base and Add Alternate 1 of the portions of the bid to Mike Davidson Excavating for a contract sum of \$160, 450.00. In addition, a

change order for \$61,454.00 that included the sieving of the rest of the site not covered in the contract and the construction of a covered drain was done. The total contract sum was **\$221,904.00**.

### **Sequence of Construction**

Mike Davidson submitted the following schedule for the construction process. The first day of construction was July 23, 2007.

	<b>Days</b>
• Clearing & Grubbing For Install. Of Perimeter Controls	<b>2</b>
• Construction Of Perimeter Controls (SF & SCE)	<b>3</b>
• Remaining Clearing & Grubbing	<b>15</b>
• Road & Court Area Grading	<b>15</b>
• Grade Remainder Of The Site	<b>10</b>
• Final Grading & Stabilization	<b>10</b>
• Removal Of Controls	<b>3</b>
• <b>Total</b>	<b>58 Days</b>

With the above schedule of construction, the expected project completion date was October 11, 2007. The total project with all its components was scheduled to be completed in 180 days, that is, by April 4, 2008.

### **Construction Project Execution**

The first activity by the contractor was the installing of the silt fence. The grading and construction of the unpaved Service Road were then completed. Once the road was completed, the sieving activity started on the east side of the site, where the Basketball and Tennis Courts and the Services Building are to be located. The second activity was the construction of the Basketball and Tennis Courts. This included the preparation of the bases and the installation and compaction of the gravel base. This was followed by the construction of the asphalt concrete surfaces for the courts. The Soccer Field and the Volleyball Court areas were sieved and leveled. The Stormwater Management and Sediment and Erosion Control design required that a swale should be provided at the North East End of the project. The third was the construction of the walkway leading to the Basketball Courts and Tennis Court. The project team and the Town reviewed the site and agreed that the major drain on the site should be covered for safety and aesthetic considerations.

### **Faculty and Students Involvement**

Construction Management Technology faculty and students were actively involved in this project. The estimating class was required to prepare a bid for the demolition of the facility by the course faculty. The class visited the site and took measurements of all the features on the site. They prepared an inventory of all materials to be demolished and removed from site. They also obtained information on local metal recycling centers and landfills. With all the information gathered including the inventory, the class was able to prepare an estimate for the cost of demolition and site clearance for the project. The class discovered that the regular estimating software used in the class did not offer much help for this project, and it had to look for unit rates and other parameters from other sources. This exercise was a great learning experience on demolition projects for the students. The architectural drawing and the site

development classes were also involved in the planning and development of the athletic center. The site plan for the project was obtained from the local court house. With the lengths and bearings of the sides of the plot, the site was plotted. Next, the standard sizes of each of the proposed courts and fields, e.g. soccer field, basketball court and volleyball court, etc, were obtained from architectural data books, (Callender, 1982, Ballast, 1990) and AutoCAD (Autodesk, 2005) was used to obtain several schemes of placing these field and courts on the site. An aerial map of the site was downloaded from the internet (Google Earth, 2005, Terra Server, 2005). This is a free resource that provides aerial maps of several US sites. The most recent aerial photo of Princess Anne, MD was in 1998. The site was virtually unchanged from 1998, the date the aerial photograph was taken and therefore the map proved to be valid. The Principal Investigator and other Faculty, Staff and students involved in the project held regular construction meetings to discuss the progress and plan the sequencing of the project. They visited the site and met with the contractor often. In addition, three students worked regularly on the site to monitor the day to day progress of the work. They ensured that the work was done according to the contract terms. They measured out the areas to be dug out and removed and took photographs of the activities of the contractor regularly. One of the students helped to develop a Webpage (The Princess Anne Athletic Center Webpage, 2005) for the project. Faculty and students were actively involved in the planning, designing and management of this project. Students assisted in preparing CAD/Blue Printing Drawings for the construction bid documents

## **Community Involvement**

The Project Management and Evaluation Committee comprising representatives from the Town of Princess Anne and UMES met regularly to evaluate, discuss, and monitor the progress of the tasks and activities of the project. One of the main goals of the Committee was to fully involve the community in the project by creating an awareness of the project in various community forums. The Committee through its activities ensured that the project was being executed at all stages according to the tasks in the Activities set forth in the grant application. At the completion of this project, this committee became The Princess Anne Athletic Center Caretaker Committee that oversees the proper management of the Center. In August 2005, the committee organized a picnic for the community at the project site to heighten the community awareness of the project. During this picnic, the people completed questionnaires to indicate the kind of activities they want built in the Center. There were two sets of questionnaires: one for children and the other for young adults/adults. A total of 125 questionnaires were completed and the results indicated that basketball is the most desired sport in the center. The responses were considered in the final design of a community friendly athletic center. Also the Town has already obtained several grants using the project documents to complete several items in the Center. This project, through its Project Management and Evaluation Committee is enhancing the relationship between UMES and the Town of Princess Anne and is leading to the formation of an Action Group for the Town of Princess Anne and Committees to look into the creation of Maturity and Youth Centers for the community. The dedication of the Center was done in mid-October 2008 and was fully attended by the community, University Officials, Town Officials and Commissioners, Representatives of the State Senators and funding Agencies.

## **Project Challenges**

In the execution of the project the Project Team encountered several challenges which arose mainly because the Design/Project Team members had no release time for the duration of the project. Other challenges included:

- 1) **The Design Stage.** In the middle of the design of the Center and construction contract document preparation, the architectural engineer in the Design Team left UMES in the summer of 2006. This made the preparation of the contract drawings difficult and prolonged. At the height of this problem, UMES Vice



President for Administrative Affairs stepped in and detailed the Director of Physical Plant to assist the Design Team in the preparation of the drawings and contract bid documents.

- 2) **Mike Davidson Excavating.** Mike Davidson was the Contractor that executed the construction contract. In its schedule for construction, it stated that it will take 58 working days to complete the construction on the project. However over 120 working days later, Mike Davidson was still struggling to close-out the project. This meant that the project was still not fully completed as of March, 2008. The original date of completion was October 2007. Owing to the inability of Mike Davidson to complete the project after a punch list was generated, the University reached an agreement with the company to terminate the contract and the Town of Princess Anne agreed to complete the items on the punch list. The university paid the Town for completing the project as indicated in the punch list.

### Project Significant Outcomes

The following are significant outcomes of the project: the project converted an Old Clam Factory site into an Athletic Center for the children of the community and the relationship between the University and the Town has been greatly enhanced by the project. In connection with this project, the Town has received the following additional grants: \$170,000 – from the Department of Natural Resources (DNR) Open Space Community Parks and Playground program for playground equipment, a 3-year \$48,000 per year – from the Governor's Office of Crime Control and Prevention for a part-time Youth Coordinator, \$509,250 – from the Department of Juvenile Services for the Services (Multi-Purpose) Building, and \$143,000 from DNR Open Space program, to fund the perimeter fencing and perimeter lighting. In addition, the following contributions were made towards the project: \$19,981 by Mike Davidson Excavating for basket ball hoops supply and installation and other items, \$40,556.50 by UMES, \$5000 by UMES Rural Development Center for site survey and project sign. The total amount leveraged by the initial **\$340,000** HUD grant is **\$1,161,787.50**. This makes the total funds from ALL sources to be **\$1,501,787.50**. Segments of the Center are shown in Figure 3.



**Figure 3 Segments of the Athletic Center**

## Conclusion

This project successfully converted a 4 ½ acre abandoned, dilapidated and crime-ridden clam processing factory to an outdoor Athletic Center for the children of low-income families of the community. The highlights of the project include:

- The Demolition and Site Clearance and Design and Construction phases of the project was fully completed
- Features provided in this Center include: two Basketball Courts, one Tennis Court, a Soccer field, a Volleyball field, an unpaved Service Road and a 4,800 square-foot Multi-Purpose Building.
- The project provided a great learning opportunity for faculty, staff and students to be involved in a community project of this magnitude. The planning, design, preparation of contract documents and the general management of the project were done in house by the Design/Project Team.
- In addition, this project, through its Project Management and Evaluation Committee has enhanced the relationship between UMES and the Town of Princess Anne
- The Center's main features have been completed and it was dedicated for use in mid October 2008.
- An additional **\$1,161,787.50** of external grant money has been received by the Town towards completing the Center.
- To date a total of **\$1,501,787.50** has been committed to the project.

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## Acknowledgement

The Project Team acknowledges the initial funding for The Princess Anne Athletic Center by the US Department of Housing and Urban Development (HUD) - Historically Black Colleges and Universities (HBCU) program and the Maryland Department of Natural Resources. They acknowledge the Town of Princess Anne for providing the land for the project. They also acknowledge the funding received from: the U.S. Department of Juvenile Services, MD Department of Natural Resources Open Space Community Parks and Playground and Open Space programs, Mike Davidson Excavating and UMES.