



Commissioner Paula Brooks • Commissioner Marilyn Brown • Commissioner John O'Grady  
President

Economic Development & Planning Department  
James Schimmer, Director

# Technical Review Committee Agenda

Franklin County Engineers Office  
970 Dublin Road  
Columbus, OH 43215

Tuesday, December 18, 2012  
1:30 p.m.

## 1. New Business

### A. Planning Commission

#### i. 663-PP – Matt Brown

<b>Applicant:</b>	Fisher Homes
<b>Owner:</b>	Grand Communities Ltd. c/o Fisher Homes
<b>Agent:</b>	Jeffrey Strung, EMH&T
<b>Township:</b>	Jefferson Township
<b>Subdivision:</b>	Royal Elm
<b>Site:</b>	1459 Waggoner Road (PID #171-000025)
<b>Acreage:</b>	16.5-acres
<b>Request:</b>	Requesting Preliminary Plan approval to allow for the creation of an 82 lot single-family home subdivision.

#### ii. 665-PP – Matt Brown

<b>Applicant:</b>	Jason Francis, M/I Homes of Central Ohio
<b>Owner:</b>	DSM Holdings, LLC
<b>Agent:</b>	Jeffrey Strung, EMH&T
<b>Township:</b>	Jefferson Township
<b>Subdivision:</b>	Parkwood
<b>Site:</b>	7664 Clark State Road (PID#170-000018)
<b>Acreage:</b>	76.25-acres
<b>Request:</b>	Requesting Preliminary Plan approval to allow for the creation of a 76 lot single-family home subdivision with 33-acres of open space.

### B. BZA

#### i. AP-3784 – Anthony Hray

<b>Appellant:</b>	Creative Child Care, Inc.
<b>Agent:</b>	Greg Peterson/Istvan Gasary – Peterson, Ellis, Fergus and Pear LLP.
<b>Township:</b>	Franklin Township
<b>Site:</b>	511 Industrial Mile Road (PID # 140-007352)
<b>Acreage:</b>	1.48-acres
<b>Request:</b>	Appealing the decision of the Franklin County Zoning Administrative Officer to issue a Certificate of Zoning Compliance to allow the use of an overflow homeless shelter.

## 2. Adjournment of Meeting to January 23, 2013

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**PRELIMINARY PLAN APPLICATION**  
for unincorporated Franklin County

Franklin County Planning Department  
Franklin County, Ohio

Franklin County Development Department – Franklin County Planning Commission  
150 S. Front Street, FSL Suite 10 Columbus, OH 43215 Phone: (614) 525-3094

to be completed by FCPC Staff

Date Submitted: <u>11/21/12</u>	Received By: <u>R. Lee Brown</u>
Date Accepted / Rejected <u>1/1</u>	By: _____
Application No.: <u>163-PP</u> Fee: <u>Suppl</u>	FCPC Date: <u>1/9/13</u>

Subdivision Name: Royal Elm Township: Jefferson  
 Location of Property: 1459 Waggoner Road (Parcel # 171-000025-00)

**Property Owner**

Name: Grand Communities Ltd. % Fischer Homes  
 Address: 2670 Chanceler Drive Suite 300  
Crestview Hills, Kentucky 47017  
 Phone No.: (317) 501 - 9172

**Applicant**

Name: Fisher Homes  
 Address: 2670 Chanceler Drive Suite 300  
Crestview Hills, Kentucky 47017  
 Phone No.: (317) 501 - 9172

**Engineer**

Name: EMH&T % Jeffrey A. Strong  
 Address: 5500 New Albany Rd  
Columbus Ohio 43054  
 Phone No.: (614) 775 - 4700

Total Number of Lots Proposed: 82 Total Area: 16.458 acres  
Average Lot Dimension: 52 feet by 120 feet Typical Lot Area: 0.14 acre(s)  
Reserve Areas: 0 acres Streets: 3.6 acres Open Space: 0 acres  
Current Zoning? SPRD Number of Proposed Final Plat Phases: 3  
Type of Water Supply Proposed: Central (Jefferson Water & Sewer District)  
Type of Wastewater Disposal Proposed: Central (Jefferson Water & Sewer District)  
Will the Subdivision Have Sidewalks? Yes Curb/gutter? Yes

**Is a Variance to the Franklin County Subdivision Regulations requested? YES/NO  
If YES, Variance application form must be attached with the Preliminary Plan application.**

Twenty (20) copies of the Preliminary Plan, including the E&S Plan, are submitted with this application.

The undersigned acknowledges this Preliminary Plan application does not constitute a Subdivision Plat application and understands the filing deadlines and meeting schedules associated with this request. Approval of a Preliminary Plan does not constitute acceptance of any public improvements shown. Such acceptance can only be made in conjunction with Final Plat requirements and procedures specified in the Franklin County Subdivision Regulations. The Subdivision Plat is not considered filed until a Final Plat application is submitted and accepted, in accordance with the Subdivision Regulations of Franklin County, Ohio.

To the best of my knowledge and belief, information and materials submitted as a part of this Preliminary Plan application are correct, complete and accurate. The Franklin County Technical Review Group members are hereby granted permission to enter the property for inspection and review purposes.

Property Owner's Signature



Date: 11/13/12

Engineer's Signature



Date: 11/13/12

## **EROSION AND SEDIMENT CONTROL POLICY**

### Franklin County Subdivision Regulations

#### **General:**

Per the Franklin County Subdivision Regulations, an Erosion and Sediment Control Plan shall be required for major subdivisions, may be required for other development and shall conform with the *Ohio Department of Natural Resources, Division of Soil and Water Conservation manual, "Rainwater and Land Development."* Implementation of approved erosion control measures should precede earth-disturbing activities. The Ohio Environmental Protection Agency (OPEA) may also have jurisdiction over earth-disturbing activities.

#### **Purpose:**

The erosion and sediment (E&S) control plan is required for the purpose of reducing pollution to public and/or private water by sediment from accelerated soil erosion associated with construction activity.

#### **E&S Control Plan Requirements:**

The E&S plan shall be a separate sheet, be a part of subdivision improvement plans, provide information regarding the entire site and shall include the following:

1. Vicinity Map – Map locating the site in relation to the surrounding area. Indicate the location of receiving waters.
2. Work Limits – Indicate the limits of earth-disturbing activity; include borrow, spoil and stockpile areas.
3. Existing Topography – The existing contours of the entire site and adjacent land should be shown on the plan. Changes to the existing contours should also be shown on the plan. A topographic map should contain an appropriate scale and contour interval to clearly depict the topography of the site.
4. Existing Vegetation – Show existing tree lines, unique vegetation and areas that may affect erosion and sediment controls. Existing vegetation shall remain along waterways: minimum width of buffer strip on each side of the stream shall be two and one-half times the stream width measured from the top of the streambank or 50 feet, whichever is greater.
5. Soils – Show boundaries of the different soil types. A table relating relevant information concerning their limitations for the proposed use may be necessary. Information pertaining to the limitations of soil type can be determined from the Franklin County Soil Survey and Soil Potential Index.

Topsoil shall be segregated and stockpiled during grading of the site and be reapplied before the establishment of permanent vegetation.

6. Existing Drainage Patterns – Drainage patterns should be evident on the plan. Include off-site areas susceptible to sediment deposits or to erosion caused by accelerated runoff, as well as off-site areas affecting potential accelerated runoff and erosion. Indicate size of drainage area contributing to the site. Include any known

existing agriculture field tiles that may be present on the site. Any subsurface drainage tiles encountered during development shall be rerouted or connected into the subdivision's drainage system to ensure that these systems will continue drain upland properties.

7. Special Notes for Critical Areas – Give details and specifications for practices protecting streams, steep slopes, designated trees or stands of trees, etc.
8. Site Development – Show all planned locations of buildings, parking facilities, roads, utilities, easements, etc. Existing structures and facilities should also be shown.
9. Location of Practices – Show the location of all erosion and sediment control and stormwater management practices to be used on-site. Include measures that are to be utilized temporarily or permanently.

Temporary sediment basins and/or traps are to be utilized as the primary means of trapping sediment on site. They should be situated within the lowest points of elevation along the perimeter of the property and also adjacent to waterways whose headwaters originate upslope of the property. Enough land must be reserved to accommodate sediment basins and/or traps sized at 67 cubic yards of storage volume per acre of drainage area. (Note: this is not the same as per acre disturbed acre or per acre of the site). If permanent stormwater management ponds are proposed for the site, they must be retrofit to serve as sediment basins during active construction periods. Basins and traps shall be installed prior to any grading of the site.

Sediment barriers shall be installed to intercept sheet runoff from disturbed areas that do not drain into sediment basins or traps.

Vegetative practices shall be utilized on all disturbed areas within seven days if they are to remain dormant (undisturbed) for more than 45 days. Disturbed areas within 50 feet of any stream shall be stabilized within seven days.

10. Surface Water Locations - Show locations of springs, wetlands, streams, lakes, etc., on or within 200 feet of the site.
11. Detailed Drawings – Any structural practices used should be explained and illustrated with detailed drawings. Detailed drawings should be included for only those practices used on-site.
12. Specifications for Stabilization – Specifications for temporary and permanent seeding, mulching, construction entrances, etc., should be given. Include seeding mixtures and rates, lime and fertilizer application rates, and type and quantity of mulching for both temporary and permanent stabilization.
13. Construction Sequence – Provide a schedule relating the implementation of erosion and sediment control practices and stormwater management practices to major construction operations. By properly scheduling the construction, both the extent of exposed ground and the duration of exposure can be minimized.

Example of Construction Sequence:

1. Clearing and grubbing for those areas necessary for installation of sediment basins and traps and perimeter controls.
  2. Installation of sediment basin/traps and perimeter control.
  3. Continuation of clearing and grubbing within the areas designated to be disturbed.
  4. Road grading.
  5. Sewer and utility installation.
  6. Final grading.
  7. Application of permanent vegetative cover.
14. Maintenance and Inspection – Provide notes and information regarding maintenance for each practice to ensure continued performance.
15. Plan Reference Data – Title, scale, direction, legend and date shall be provided on all plans. The plan should also include name, address and telephone number of person(s) preparing the plan, as well as the owner of the property.
- 

**Plan Review and Enforcement:**

1. Plan Review and Site Inspection – During and at the end of the construction of the subdivision street(s), utilities, etc., the erosion and sedimentation (E&S) control practices will be monitored by the Franklin Soil and Water Conservation District (FSWCD) personnel. The FSWCD personnel, based on a cooperative agreement with the Franklin County Commissioners and Franklin County Engineer, are responsible for plan review and approval will make periodic site inspections to ensure compliance. During inspections it may be determined that other erosion control practices, not already specified on this plan, may be necessary due to unforeseen environmental conditions and/or changes in drainage patterns caused by earth-moving activity.
2. Enforcement – Several milestones are reached at the end of the development process, which will be utilized to ensure proper placement of required conservation practices per the above.
  - A. Release of Surety – No surety, all or in part, will be released until the Franklin County Engineer's office is notified by FSWCD staff that the E&S practices, as previously approved, are in place and are properly functioning.
  - B. "Progress Letter" – The "progress letter" from the Franklin County Engineer to the Franklin County Development Department (providing assurance that street construction has been sufficiently and properly completed such that commencement of house construction is appropriate) will be forwarded only after assurance is received indicating all approved E&S practices are in place and are properly functioning.
  - C. Street Completion – The transfer and acceptance of any street for public purpose will occur only after assurance is received that all approved E&S practices are in place and are properly functioning.

- D. Building Permits and Inspections – The Franklin County Development Department, in cooperation with the FSWCD, reserves the right to withhold the issuance of building permits and inspections at any time during the homebuilding phase of the project until assurance is received that all approved erosion and sediment control practices are in place and are properly functioning.
- E. The Franklin County Planning Commission, in cooperation with the Franklin County Prosecuting Attorney's office and the FSWCD, reserve the right to pursue necessary legal actions at any time during the construction phases of the project to ensure compliance with the approved E&S control plan.

**STATEMENT OF UNDERSTANDING**

I understand and accept the responsibility to plan for and complete the required erosion and sediment control practices and hereby recognize them as an integral part of the subdivision named Royal Elm

I will notify the FSWCD a minimum of three (3) work days prior to any land disturbance and will attend a preconstruction meeting with personnel from the FSWCD to review the implementation of the erosion control plan.

  
Signature of Subdivider/Developer

11 / 13 / 12  
Date

6602 E. 75<sup>th</sup> Street Suite 400  
Address of Subdivider/Developer

Indianapolis, IN. 46250

(317) 501-9172  
Telephone Number

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Franklin County Planning Department  
Franklin County, Ohio

Appendix B

663-PP

**SUBDIVIDER'S AGREEMENT – COUNTY OF FRANKLIN, OHIO**

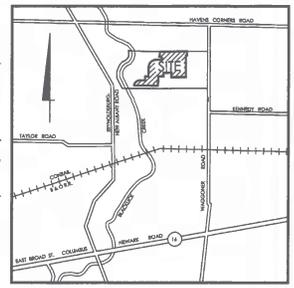
To be signed and submitted with the Construction Plan

NOTE: The county engineer must approve form and content of actual agreement.

This Agreement, between Grand Communities, Ltd. the subdivider, and the County of Franklin concerning the Royal Elm Section 5 subdivision plat, shall set out conditions, requirements and considerations relative to the construction of required improvements and the issuance of county zoning, building and health permits for lots and reserves in the above named subdivision. This Agreement shall be binding on the subdivider(s) and his/her/their personal representatives, heirs and assigns, upon the submission and approval of the construction plan and shall be subject to the following:

- A. All improvement plans (street, drainage, storm water management, sanitary, water, erosion and sedimentation control, grading, etc.) shall be signed by the subdivider's engineer. Improvement plans approved by the county engineer, county drainage engineer, county sanitary engineer, or Franklin County Public Health shall be a part of this Agreement.
- B. Requirements and provisions of the subdivision plat and Subdivision Regulations of Franklin County, Ohio shall be a part of this Agreement.
- C. No county zoning, building or health permits shall be issued for development of lots or reserves in this subdivision until all required improvements have been properly completed to the satisfaction of the county engineer and the Franklin County Economic Development and Planning Department.
- D. The Subdivider further agrees that any violation of, or unsatisfactory compliance with, any provision, stipulation, or requirement of this Agreement, the subdivision plat, or the Subdivision Regulations of Franklin County, Ohio shall constitute a breach of contract and may subject the Subdivider and subdivision to enforcement measures such as, but not limited to: stop work orders, use of surety, forfeiture of deposited funds, moratoria on development permits, fines, revocation of approvals or permits, plat recall, etc.
- E. All work shall be performed within a 1 Year period from the approval date of the Final Plat. However, an extension of time may be granted if approved by the Board of Franklin County Commissioners.

		<u>11/13/12</u>
First Witness	Subdivider	Date
First Witness	Subdivider	Date
Franklin County Engineer	Date	



**SITE STATISTICS:**

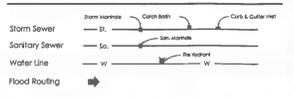
TOTAL ACREAGE:	16.5 AC±
NUMBER OF LOTS:	85
GROSS DENSITY:	4.91 Units per Acre
ZONING:	SPRD

- NOTES:**
- NOTE "A": All of Royal Elm is in the Flood Hazard Zone X and AE as shown on the Federal Emergency Management Agency Flood Insurance Rate Map, Map Number 090402218C, effective date June 17, 2008 and as defined on the Flood Study prepared by EM&T Inc.
  - NOTE "B": All contours shown hereon are two foot intervals.
  - NOTE "C": Prior to construction on lots 1, 7-12, 24-28, 42-61 and 76-81 the footing/foundation for the residential building to be constructed on each of the lots, the builder of such building shall confer with the Franklin County Development Department for the purpose of determining if special foundation and/or basement construction techniques and/or materials are to be employed on such lot.
  - NOTE "D": All of Royal Elm is located in Licking Heights School District and is in the Jefferson Township taxing district.
  - NOTE "E": Pavement widths as shown hereon are from edge of pavement to edge of pavement. It does not include the curb & gutter.
  - NOTE "F": The developer shall install plastic orange construction fencing prior to the commencement of construction and a minimum two rail split rail fence after the completion of construction, which will be located along the property line within the open spaces, in order to separate the private lots from the open space.
  - NOTE "G": The developer shall obtain all required environmental permits.
  - NOTE "H": The subject site for Royal Elm is owned by Grand Communities Ltd, parcel number 171-00025-00.
  - NOTE "I": Four foot sidewalks will be constructed within the road right-of-ways throughout the development on both sides of the street.
  - NOTE "J": Royal Elm is located within the Pollution Potential Index Range from 100-119 in the following hydrogeologic settings: 7240 103, 7A9 115 and 7Aa3 112 as shown in the ODR Division of Soil & Water Resources Franklin County, Ohio.
  - NOTE "K": Section 5 as shown hereon will be constructed in the spring of 2013 with the two remaining sections, Sections 6 and 7, to be constructed the following two years subject to market conditions.
  - NOTE "L": As a part of the final plat of necessary easements for the storm sewer, sanitary sewer, private utilities and flood routing will be provided. All stormwater facilities shall be a part of the Franklin County Ditch Maintenance Program and will be maintained by the Franklin County Engineer's Office.
  - NOTE "M": We have not encountered any existing agricultural files as a part of the development of Royal Elm Sections 1-4. However if we encounter any files as a part of the future development, we will be responsible for their appropriate sewer system.

**DEVELOPMENT STANDARDS**

SEBACKS:  
 FRONT YARD: 20'-25' MIN. AS SHOWN HEREON  
 SIDE YARD: 5' MIN. EACH SIDE  
 REAR YARD: 25'

**LEGEND:**



**REVISIONS**

DATE	DESCRIPTION

**EMHT**  
 ENGINEERS, ARCHITECTS & DESIGNERS  
 580 New Albany Road, Columbus, OH 43244  
 Phone: (614) 745-4400  
 Fax: (614) 745-4400

JEFFERSON TOWNSHIP, FRANKLIN COUNTY, OHIO  
 PRELIMINARY PLAT  
 FOR  
**ROYAL ELM**  
 SECTIONS 5, 6 & 7

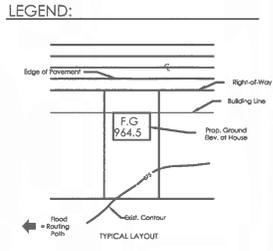
LOCATED IN:  
 QUARTER TOWNSHIP 4, TOWNSHIP 1, RANGE 16  
 UNITED STATES MILITARY LANDS  
 TOWNSHIP OF JEFFERSON, FRANKLIN COUNTY, OHIO

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 Franklin County Planning Department  
 Franklin County, Ohio  
 663-PP

Date	NOVEMBER 21, 2012	Job No.	2012-1161
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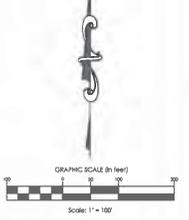
PRELIMINARY PLAT FOR ROYAL ELM

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 Franklin County, Ohio



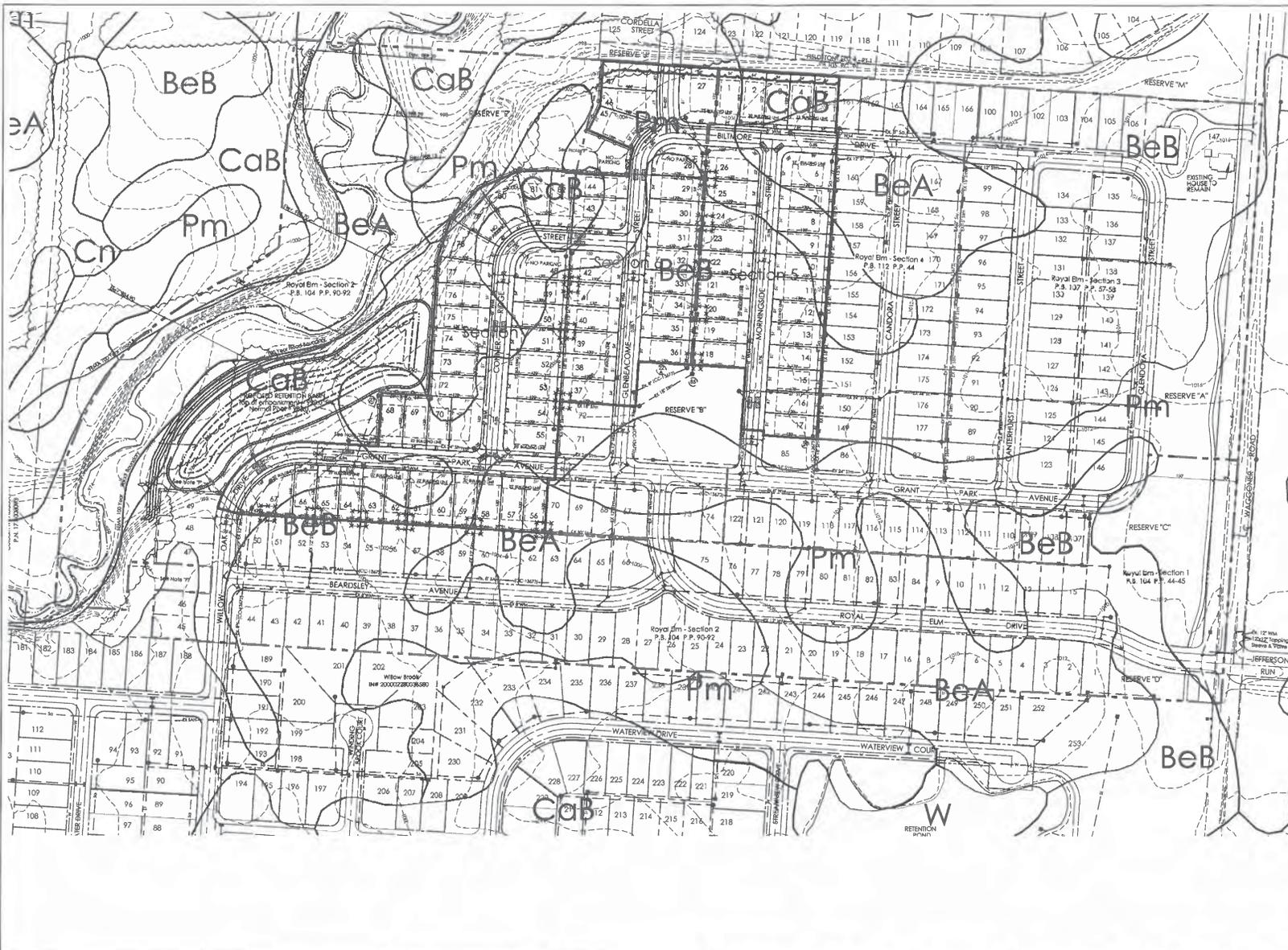
REVISIONS	
DATE	DESCRIPTION



JEFFERSON TOWNSHIP, FRANKLIN COUNTY, OHIO  
 GRADING PLAN  
 FOR  
**ROYAL ELM**  
 SECTIONS 5, 6 & 7

LOCATED IN:  
 QUARTER TOWNSHIP 4, TOWNSHIP 1, RANGE 16  
 UNITED STATES MILITARY LANDS  
 TOWNSHIP OF JEFFERSON, FRANKLIN COUNTY, OHIO

Date	Job No.
NOVEMBER 21, 2012	2012-1161
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**LEGEND:**

- Storm Sewer: 2" - 6" (with arrow pointing to the dashed line)
- Sanitary Sewer: 8" - 12" (with arrow pointing to the dashed line)
- Water Line: 12" - 18" (with arrow pointing to the dashed line)
- Flood Routing: 24" - 36" (with arrow pointing to the dashed line)
- Silt Fence: 42" - 48" (with arrow pointing to the dashed line)
- Dandy Bags: 54" - 60" (with arrow pointing to the dashed line)
- Intel Protection: 66" - 72" (with arrow pointing to the dashed line)
- Recover Dam Sediment Filter: 78" - 84" (with arrow pointing to the dashed line)
- Curb Intel Protection: 90" - 96" (with arrow pointing to the dashed line)
- Riser Pipe Sediment Filter: 102" - 108" (with arrow pointing to the dashed line)
- Temporary Sediment Control Basin: 114" - 120" (with arrow pointing to the dashed line)

**SOILS INFORMATION**

- BeA: Bennington silt loam, 0-2% slopes
- BeB: Bennington silt loam, 2-6% slopes
- CaB: Candorah silt loam, 2-6% slopes
- CaC2: Candorah silt loam, 4-12% slopes, moderately eroded
- Cr: Condit silt loam
- Pm: Pewee silt clay loam
- Sr: Shaws silt loam

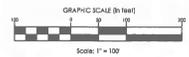
**FIELD FILE:**  
 At field file broken during excavation shall be replaced to its original condition or connected to the storm sewer system as directed by the Engineer. All drain file, form file, and storm sewers damaged, disturbed or removed as a result of the Contractor's operations shall be replaced with the same quality pipe or better, maintaining the same gradient or existing. Replaced drain file shall be laid on compacted bedding equal in density to the surrounding stratum. All drain file shall be replaced at the time of the backfill operation.

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Franklin County Planning Department  
 Franklin County, Ohio

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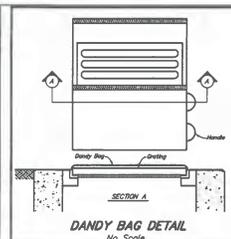
**EMHT**  
 Evans, Machuga, Hamilton & Tibbitts, Inc.  
 Engineers, Architects, Planners & Scientists  
 100 New Albany Road, Columbus, OH 43260  
 Phone: 614.291.4500 Fax: 614.291.4505  
 www.emht.com

JEFFERSON TOWNSHIP, FRANKLIN COUNTY, OHIO  
 EROSION AND SEDIMENTATION PLAN  
 FOR  
**ROYAL ELM**  
 SECTIONS 5, 6 & 7

LOCATED IN:  
 QUARTER TOWNSHIP 4, TOWNSHIP 1, RANGE 16  
 UNITED STATES MILITARY LANDS  
 TOWNSHIP OF JEFFERSON, FRANKLIN COUNTY, OHIO

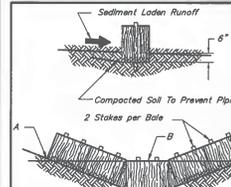
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NOVEMBER 21, 2012	2012-1141
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EROSION AND SEDIMENTATION PLAN FOR ROYAL ELM



**Installation:** Stand grade on end. Place Dandy Bag over grade. Fill gaps over so that open end is up. Pull up back. Push fabric to the rear and grade to ensure full contact. Dandy bags or Dandy Bags will not fit properly. Handle, handle, carefully along Dandy Bag with grade. Inspect for any gaps. Place on that end on top of the Dandy Bag is visible.

**Maintenance:** After fill has dried, remove it from the surface of Dandy Bag with broom.



**Normal Flow Applications:** Bases shall be placed in a single row, lengthwise, oriented perpendicular to the contour, with ends of adjacent bases tightly abutting one another.

The remaining steps for installing a straw bale barrier for short flow applications apply here, with the following addition:

The barrier shall be installed to such a height that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale to insure the sediment-water runoff will flow either through or over the barrier but not around it.

**NOTE:** Hay bales may be used in place of straw bales.

**Maintenance:** Straw bales shall be inspected immediately after each rainfall and end of heavy drizzle prolonged rainfall. Close attention shall be paid to the repair of damaged bales, and runs and underlying base. Necessary repairs to barriers or replacement of bales shall be accomplished promptly.

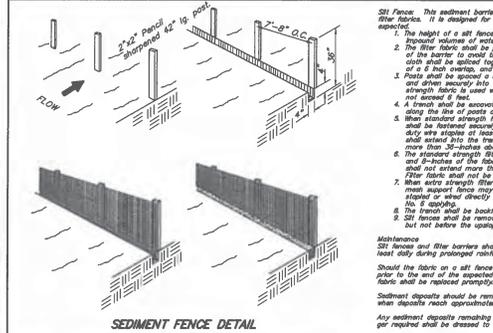
Sediment deposits shall be removed after each rainfall. They must be removed when the level of sediment reaches approximately one-half the height of the barrier.

Any sediment deposits remaining in place after the straw bale barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.



Points A should be Higher Than Point B

**STRAW BALE BARRIER FOR DRAINAGE WAY OR SHEET FLOW**



**Silt Fences:** This sediment barrier utilizes standard strength or extra strength synthetic fiber fabric. It is designed for structures in which only sheet or overland flows are expected.

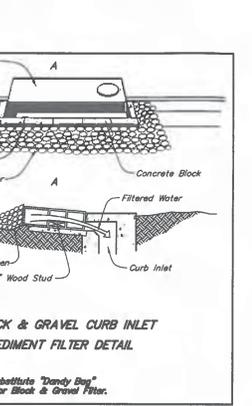
- The height of a silt fence shall not exceed 36-inches (higher fences may impound volumes of water sufficient to cause failure of the structure).
- The fiber fabric shall be purchased in a continuous roll out to the length of the barrier to avoid the use of joints. When joints are necessary, fiber fabric shall be spliced together only at a support post, with a minimum of 12 inches overlap, and securely sealed.
- Posts shall be spaced at a maximum of 10 feet apart of the barrier. Fiber fabric shall be secured to the ground (minimum of 2-inches) and not extend more than 36-inches above the original ground surface.
- The standard strength fiber fabric shall be staked or wired to the fence, and 4-inches of the fabric shall be buried into the trench. The fabric shall not extend more than 36-inches above the original ground surface. Fiber fabric shall not be staked to existing trees.
- When extra strength fiber fabric and close post spacing are used, the wire mesh support fabric may be eliminated, in such a case, the fiber fabric is staked or wired directly to the posts with all other provisions of Item 6.5.2.1.2.
- Fiber fabric shall be installed and not connected over the fiber fabric.
- Silt fences shall be removed when they have served their useful purpose, but not before the upstate area has been permanently stabilized.

**Maintenance:** Silt fences and fiber barriers shall be inspected immediately after each rainfall and end of heavy drizzle prolonged rainfall. Any required repairs shall be made immediately.

Should the fabric on a silt fence or fiber barrier decompose or become ineffective because of the removal of the sediment and the barrier is still necessary, the fabric shall be replaced promptly.

Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier.

Any sediment deposits remaining in place after the silt fence or fiber barrier is no longer required shall be dressed to conform with the existing grade, prepared and seeded.



**CONTRACTOR RESPONSIBILITY:** Details have been provided on the plans in an effort to help the Contractor provide erosion and sedimentation control. The details shown on the plan shall be considered a minimum. Additional or alternate details may be found in the S.C.S. Manual "Water Management and Sediment Control for Urban Areas." The Contractor shall be solely responsible for providing necessary and adequate protection for proper control of erosion and sediment runoff from the site along with proper maintenance and inspection in compliance with the valid General Permit for Storm Water Discharges Associated with Construction Activity.

Prior to Construction Operations in a particular area, all sedimentation and erosion control features shall be in place. Field adjustments with respect to locations and dimensions may be made by the Engineer.

The Contractor shall place inlet protection for the erosion control immediately after construction of the catch basins or inlets which are not tributary to a sediment basin or dam.

If it becomes necessary to remove portions of the barrier during construction to facilitate the grading operations in certain areas. However, the barrier shall be in place in the evening or during any inclement weather.

The limits of seeding and mulching are as shown within the plan. Seeding has been assumed to be 5'-0" outside the work limits or the right-of-way, whichever is greater. All areas not designated to be seeded shall remain under natural ground cover. Those areas disturbed outside the seeding limits shall be seeded and mulched at the Contractor's expense.

**Temporary Seeding:** Any area which will be left dormant (unproductive) for more than 45 days shall be seeded within 7 days of terminated work. If permanent seeding is not applied at this time, temporary seeding shall be done which shall consist of fertilizing, watering and seeding of the rates indicated under item 659. Seed shall be cast from December 1 to June 1 and annual (yr from June 1 to December 1).

**Permanent Seeding:** Shall be done between March 15 and September 15. If seeding is done between September 15 and March 15, it shall be classified as Temporary Seeding. "Per-menn" seed shall be 40% Kentucky Bluegrass, 40% Creeping Red Fescue, 20% Annual Ryegrass. Permanent seeding shall consist of fertilizing, watering and seeding rates indicated under item 659.

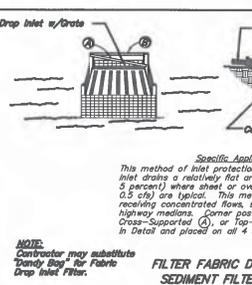
**Notes:** Rates of application of item 659:  
Seed: 2 lbs./1,000 Sq.Ft.  
Fertilizer: 20 lbs./1,000 Sq.Ft.  
Mucic (Shov or Hay): 2 tons/acre

The cost for temporary channels, sediment dams, sediment basins, and other appurtenant earth-moving operations shall be included in the price bid for erosion and sedimentation control quantities.

**MAINTENANCE:** It is the Contractor's responsibility to maintain the sediment control features used on this project. The site shall be inspected periodically and within 24 hours of significant rainfall. Records of these inspections shall be kept and made available to jurisdictional agencies if requested. Any sediment or debris which has reduced the efficiency of a structure shall be removed immediately. Should a structure or feature become damaged, the Contractor shall repair or replace at no additional cost to the Owner.

Not all details shown on this sheet may be required for this project.

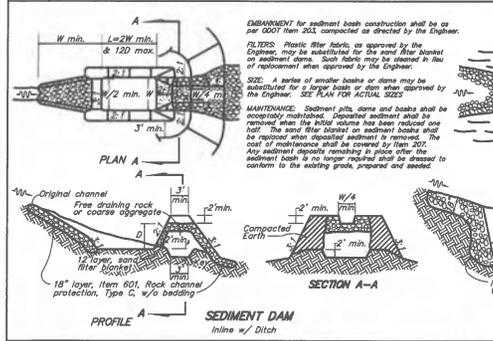
Reference Sediment Control Plan.



**Specific Application:** This method of inlet protection is applicable where the inlet drains a relatively flat area (slopes greater than 5 percent) where sheet or overland flows (not exceeding 0.5 cfs) are typical. This method shall not apply to inlets receiving concentrated flows, such as in sheet and highway medians. Corner posts shall be either Cross-Supported (C) or Top-Supported (T), as shown in Detail and placed on all 4 sides.

**NOTE:** Contractor may substitute "Dandy Bag" for Fabric Drop Inlet Filter.

**FILTER FABRIC DROP INLET SEDIMENT FILTER DETAIL:** This method of inlet protection is applicable where the inlet drains a relatively flat area (slopes greater than 5 percent) where sheet or overland flows (not exceeding 0.5 cfs) are typical. This method shall not apply to inlets receiving concentrated flows, such as in sheet and highway medians. Corner posts shall be either Cross-Supported (C) or Top-Supported (T), as shown in Detail and placed on all 4 sides.



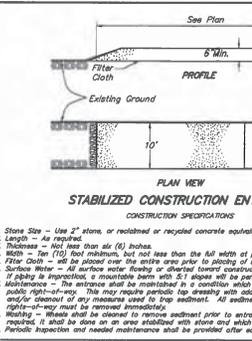
**EMBANKMENT:** For sediment basin construction shall be as per 6007 Item 303, compacted as directed by the Engineer.

**PILEDS:** Plastic filter fabric as approved by the Engineer may be substituted for the same River blanket material. Both fabric may be placed in lieu of replacement when approved by the Engineer.

**SIZE:** A series of smaller basins or dams may be substituted for a larger basin or dam when approved by the Engineer. SEE PLAN FOR ACTUAL SIZES.

**MAINTENANCE:** Sediment basins and basins shall be occupationally maintained. Deposition of sediment shall be removed when the initial volume has been reduced half. The sand filter blanket on sediment basins shall be replaced when deposited sediment is removed. The cost of maintenance shall be covered by Item 207. Any sediment deposits remaining in place after the sediment basin is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

**PROFILE SEDIMENT BASIN:** In-line w/ Ditch



**CONSTRUCTION SPECIFICATIONS:**

- Stone Size - Use 2" stone, or equivalent or recycled concrete equivalent.
- Length - As required.
- Thickness - Not less than six (6) inches.
- Depth - Ten (10) foot minimum, but not less than the full width of points where ingress or egress occurs.
- Clear Chute - All shall be placed over the entire area prior to placing of stone.
- Filter Cloth - All surface water flowing or directed toward construction entrances shall be passed across the entrance. If fabric is impregnated, it must be seams with 5:1 slope to be permitted.
- Maintenance - The entrance shall be maintained in a condition which will prevent erosion during settlement until end of settlement of any measures used to trap sediment. All sediment shall be removed, washed or tracked into suitable right-of-way must be removed immediately.
- Warning - Warning shall be placed to remove sediment prior to entrance into public right-of-way. When seeding is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
- Periodic Inspection and needed maintenance shall be provided after each rain.

**BEAVER DAM DETAIL No Scale:** Installation: Stand grade on end. Side the Beaver Dam Bag on with Dam on top of the grade. Pull up across down. Lay out on its side. Carefully turn the Bag. Press Water into together. Insure the unit making sure front edge of grate is inserted in frame that then lower both into stone. Press Water into together which are located under lifting straps. This insures that result flush with garter.

**Maintenance:** With a stiff broom sweep all dirt and debris off surface after each event.

All erosion and sedimentation controls shall be installed per specifications of Ohio Department of Natural Resources, Erosion and Land Development and Urban Stream Protection, Columbus, Ohio; Ohio Department of Natural Resources, 1994.

**Sedimentation Notes:**

Erosion and sedimentation controls shall be installed as a first step in the construction sequence and shall be functional throughout every disturbing activities of the development phase.

All trench dewatering effluent shall be discharged through a sedimentation basin or other setting device approved by Franklin Soil and Water Conservation District.

A pre-construction meeting of the proposed site shall be arranged between the developer, site engineer, and Franklin Soil and Water Conservation District no less than 7 days prior to beginning of activities associated with the development phase. At this meeting an absolute construction sequence, site control and erosion and sedimentation control plan shall be submitted to the Franklin Soil and Water Conservation District Representative.

Temporary/permanent seed applied to denuded areas within 7 days if they are to remain dormant for more than 45 days.

Temporary/permanent seed shall be applied to denuded areas within 7 days after final grade is reached on any portion of the site.

Sheet flow runoff denuded areas shall be diverted to an approved setting structure.

No-build zones and tree preservation areas shall be clearly identified by high-visibility orange perimeter fencing.

Calculations to utilize the stormwater management ponds as sedimentation basins shall be furnished to Franklin Soil and Water Conservation District.

Personnel from Franklin Soil and Water Conservation District shall make routine inspections to ensure the erosion and sedimentation plan compliance.

Additional or alternate erosion and sedimentation control practices, not indicated on this plan, may be required due to unforeseen environmental and/or changes in drainage patterns caused by earth moving activities. Franklin Soil and Water Conservation District shall contact the site architect indicated at the pre-construction meeting, to address the environmental and erosion and sedimentation control plan.

Right of ways, critical areas, and denuded areas to remain dormant >45 days or final grade shall be seeded prior to being considered for substantial completion.

**Prohibited Construction Activities:**

The contractor shall not use construction proceedings, activities, or operations that may unnecessarily impact the natural environment of the public health and safety. Prohibited construction proceedings, activities, or operations included but not limited to:

- Disposing of excess or unusable excavated material in wetlands or floodplains, even with the permission of the property owner.
- Indiscriminate, arbitrary, or capricious operation of equipment in any stream corridors, waters, and wetlands, or any area outside of the proposed work areas.
- Pumping of sediment-laden water from trenches or other excavations into any surface waters, stream corridors, wetlands, or any area outside of the proposed work areas.
- Discharging pollutants such as chemicals, fuel, lubricants, bituminous materials, raw sewage, and other harmful waste into or alongside of rivers, streams, impoundment, or into natural or man-made channels located thereon.
- Permanent or unspecified alteration of flow line of a stream.
- Damaging vegetation outside of the proposed work limits, inside no-build zones, and tree protection areas.
- Disposal of trees, brush and other debris in any stream corridors, wetlands, surface waters, or any other unapproved location.
- Open burning of project debris without a permit.
- Storage of construction equipment and vehicles and/or stockpiling construction materials on property, public or private, not previously specified for said purpose.
- Disposal of chip wood in such a manner that would allow chip wood leach water to flow to any surface waters, stream corridor, or wetland.
- Tracking of mud and other construction debris onto roadway.

ESTIMATE OF QUANTITIES			
ITEM	QUANT	UNIT	DESCRIPTION
207	42	Each	Dandy Bag or Sediment Fence Filter
207	5330	Lin.Ft.	Filter Fabric Fence
207	38	Each	Beaver Dam Sediment Filter
659	Lump	Sum	Seeding and Mulching (Outside R/W)

**SCHEDULE:** The Contractor shall provide a schedule of operations to the owner. Sedimentation and erosion control features shall be placed in accordance with this schedule.

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Franklin County, Ohio  
663-PP

DATE	DESCRIPTION

**EMHT**  
Erosion Management, Installation & Training, Inc.  
Engineers - Surveyors - Planners - Scientists  
5520 New Albany Road, Columbus, OH 43240  
Phone: 614.757.4850 Fax: 614.757.4850  
M C M H X X V I

JEFFERSON TOWNSHIP, FRANKLIN COUNTY, OHIO  
GRADING PLAN  
FOR  
**ROYAL ELM**  
SECTIONS 5, 6 & 7

LOCATED IN:  
QUARTER TOWNSHIP 4, TOWNSHIP 1, RANGE 16  
UNITED STATES MILITARY LANDS  
TOWNSHIP OF JEFFERSON, FRANKLIN COUNTY, OHIO

Date	Job No.
NOVEMBER 21, 2012	2012-1161

Sheet  
4/4



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Franklin County Planning Department  
Franklin County, Ohio

*663-PP*

5500 New Albany Road  
Columbus, OH 43054  
Phone: 614-775-4500  
Fax: 614-775-4805  
Toll Free: 1-888-775-EMHT

[emht.com](http://emht.com)

2012-1161

**Post-Construction Water Quality  
Operation & Maintenance Plan**

**Royal Elm Subdivision**

**Jefferson Township, Franklin County, Ohio**

**August, 2012**

Engineers

Surveyors

Planners

Scientists

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APPENDIX A: Inspection & Maintenance Report

**EXHIBITS**

EXHIBIT A: Site Maintenance Map



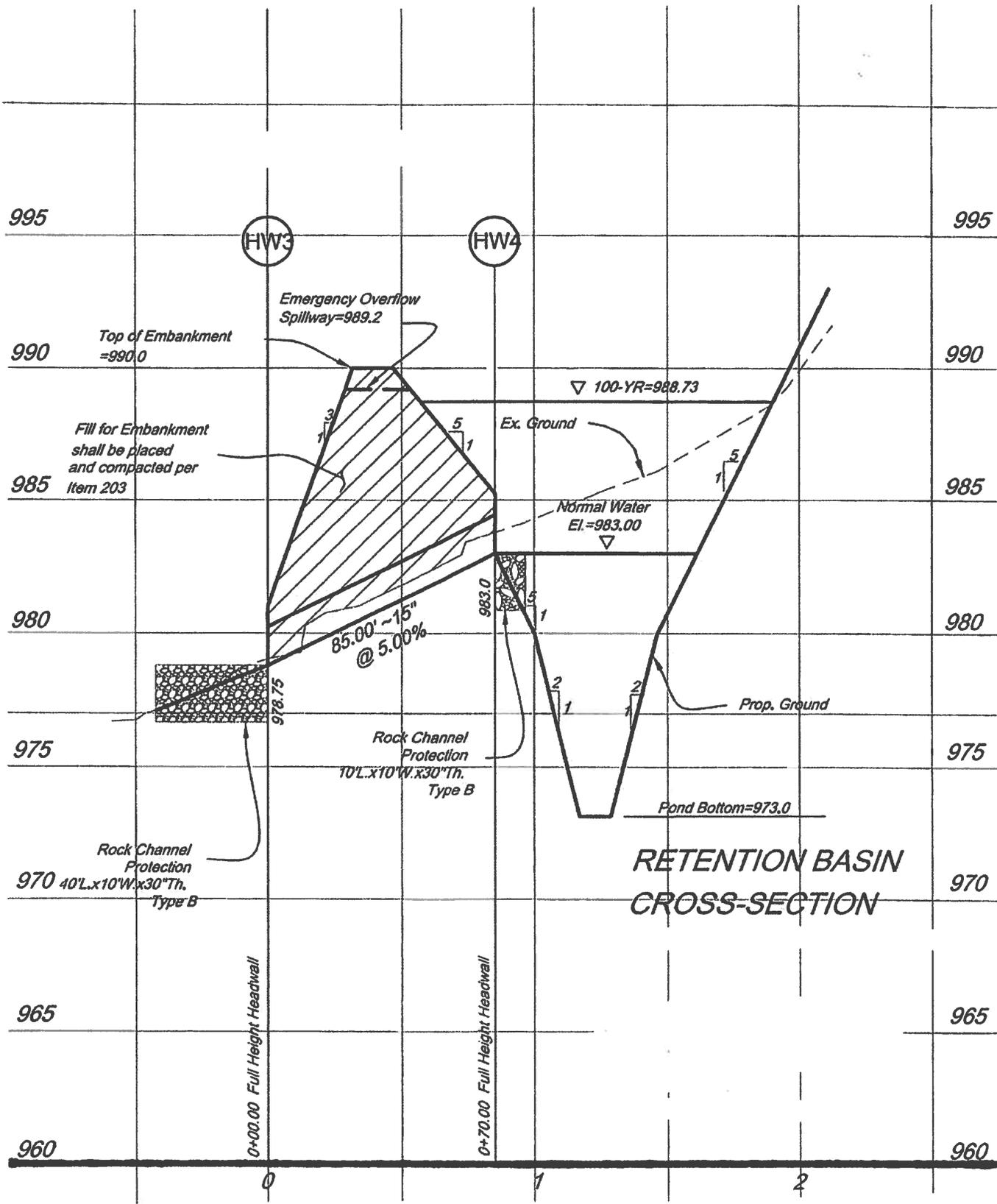
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## **1.0 BEST MANAGEMENT PRACTICE OVERVIEW**

The following report provides inspection and maintenance procedures associated with the post-construction water quality controls for the Royal Elm Subdivision, Sections 5,6 and 7 located West of Waggoner Road, South of Havens Corners Road in Jefferson Township, Franklin County, Ohio. The post-construction water controls and associated inspection and maintenance procedures are required per the Ohio EPA general stormwater permit no. OHC00003 and are intended to comply with Section IV of the Franklin County Engineer's Office Stormwater Drainage Manual to assure long-term adequacy of the stormwater drainage systems.

Stormwater quality treatment and flow rate management for the Royal Elm Subdivision will be addressed by managing stormwater runoff from the site by utilizing the existing wet basin constructed during Section 1 improvements. Impervious areas within the proposed development will discharge (via the proposed storm sewer network) to the existing basin. Wet basins are designed to give the water quality volume an approximate drawdown time of 24 hours.

Stormwater basins treat incoming stormwater runoff by physical, biological, and chemical processes. The primary removal mechanism is the gravitational settling of particulates, organic matter, metals, bacteria and organics as stormwater runoff resides in the permanent pool. Another mechanism for pollutant removal is uptake by algae and wetland plants in the permanent pool, particularly removing nutrients. Other contaminants such as hydrocarbons, are broken down and eliminated by volatilization and chemical activity. Stormwater basins are utilized to remove up to 80% of the total suspended solids load in typical urban post-development runoff when designed and maintained properly. Stormwater basins naturally collect sediment, including gravel, sand and mud, as well as other debris like litter. To maintain its capacity and function, a basin should be kept free of excessive debris, litter, and sediment.





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## **2.0 MAINTENANCE & INSPECTION PROCEDURES**

All maintenance of the existing detention basin and public storm sewer infrastructure will remain the responsibility of the Developer or Home Owners Association (Developer/HOA) until such time as the Franklin County Drainage Engineer's Office assumes maintenance responsibilities. The Developer/HOA is responsible for all inspections and reporting outlined within this Manual and as per the Stormwater Drainage Manual, Section 4.1.2 until the transfer takes place and will be responsible for all trash and debris removal, weed control and mowing of the basin area above the normal pool elevation.

Prior to the Maintenance of the storm system infrastructure being transferred to the Franklin County Engineer's Office, the build out of the subdivision shall be completed and the Developer/HOA must complete the following items:

1. Removal of the Temporary Sediment Riser within the Stormwater Detention Basin.
2. An "As-Built" survey of the Storm Sewer System must be submitted for review to the Franklin County Drainage Engineer to verify the system has been constructed per plan. The entire system includes the Basin, the Basin Outlet Control Structure and outlet pipe as well as all pipe, manholes, catch basins and headwalls associated with the storm system routing to and through the Detention Basin.
3. The basin shall be cleaned of all accumulated sediment and restored to design elevations. The storm sewer infrastructure shall be cleaned thoroughly and any required repairs must be made.
4. The basin and storm sewer system infrastructure shall be inspected by the Franklin County Drainage Engineer.
5. The property owner shall provide an Easement to the Franklin County Drainage Engineer for access and maintenance to the Detention Basin and it shall be at a minimum 20' wide in accordance with the Stormwater Drainage Manual, Section 4.1.1. The Access route shall be provided at a maximum slope of 10' (Horiz) to 1' (Vert.) from the road right-of-way to toward the basin.

The stormwater basin and associated outlet structures along with the storm sewer pipe and structures will be inspected and maintained to ensure the stormwater system is functioning properly. Inspections and maintenance will be coordinated by the Developer/HOA and submitted to the Franklin County Drainage Engineer's Office prior to the County assuming maintenance of any storm system related infrastructure. The Developer/HOA shall ensure that inspections occur at the following instances: The basin shall be inspected within 48 hours of significant rain events ( $\geq$  0.5 inches of rain over a 24 hour period) during construction and after the first year of use following the completion of construction activities. An annual inspection frequency can be determined based upon the results of the first year inspections, but should be no less than twice per year unless otherwise noted. Guidance on the frequency of the first year maintenance activities is included in this section. A copy of each inspection log shall be sent annually by December 31<sup>st</sup> of each year to the Franklin County Drainage Engineer.



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Post-Construction Operator: **Franklin County Drainage Engineer**  
Franklin County Engineer's Office  
970 Dublin Road  
Columbus, OH 43215

Email: **[jramsey@franklincountyengineer.org](mailto:jramsey@franklincountyengineer.org)**  
Phone: **(614) 525-7318**

### **Inspection and Maintenance Procedures**

A report shall be prepared that summarizes the observations made during the site inspection. The reports shall additionally indicate maintenance needs. The reports are to be kept on file and a signed and dated copy of the report should be sent to the Franklin County Engineer's Office (attn. **Jim Ramsey**) on an annual basis, prior to the end of each year. Inspection reports are provided within Appendix A.

### **Outlet Structure**

The proposed existing headwall and 15" diameter outlet pipe are located within the existing basin and tributary storm drainage catch basins that route to the basin are as shown in the Maintenance Site Plan, Exhibit A. Outlet control is provided by the 15" diameter basin outlet pipe. The outlet structure location is indicated on the site map.

### **Establishing a Maintenance Fund for Public Maintenance of Stormwater Infrastructure and BMP's**

Please refer to the Franklin County Stormwater Drainage Manual, Section 4.1.5 and Section 4.1.5.1.

## Wet Basin Inspection and Maintenance

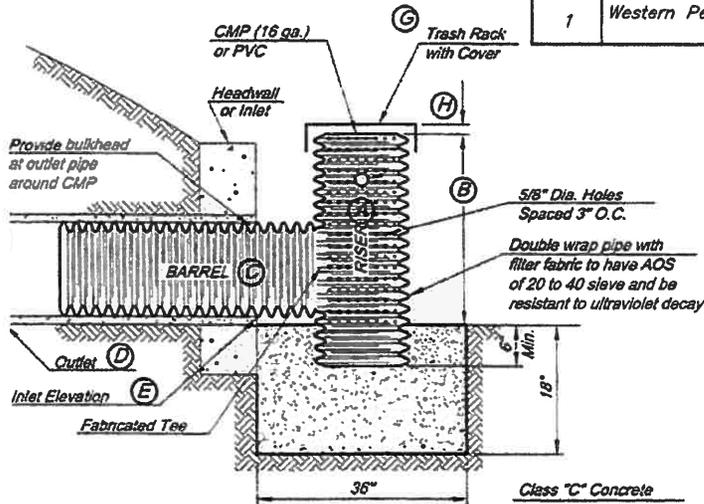
Inspection Item	Maintenance Procedures	Frequency of Inspection
<b>Inlet/Outlet Structure &amp; Side Slopes</b>	<ul style="list-style-type: none"> <li>• Do not fertilize vegetation surrounding basin.</li> <li>• Remove accumulated sediment and debris from inlet and outlet structures as needed (determined by inspection).</li> <li>• Mow side slopes (all mowing by developer).</li> </ul>	Monthly
<b>Basin Embankment</b>	<ul style="list-style-type: none"> <li>• Repair undercut/eroded areas and stabilize.</li> </ul>	As Needed
<b>Storm Sewer System</b>	<ul style="list-style-type: none"> <li>• Remove debris from the sewer system to ensure positive flow to the basin.</li> </ul>	As Needed
<b>Stormwater Basin</b>	<ul style="list-style-type: none"> <li>• Inspect for damage, paying particular attention to the outlet control structure.)</li> <li>• Check for signs of eutrophic conditions (algae buildup)</li> <li>• Note signs of hydrocarbon buildup, remove appropriately.</li> <li>• Monitor sediment accumulation in the facility</li> <li>• Examine to ensure inlet and outlet devices are free of debris and are operational.</li> <li>• Inspect for invasive vegetation if wetland components included.</li> </ul>	Annually
<b>Stormwater Basin Sediment Accumulation</b>	<ul style="list-style-type: none"> <li>• Monitor sediment accumulations and remove sediment when the pool volume has become reduced significant (25% of permanent pool volume lost) or the pond becomes eutrophic.</li> </ul>	5 to 10 years

The Franklin County Drainage Engineer's Office shall be responsible for the inspection and maintenance of the stormwater basin associated outlet structure and all other maintenance procedures listed above. Inspection and maintenance that are conducted shall be documented and filed for future reviews by the Franklin County Drainage Engineer's Office. These responsibilities are for perpetuity and apply to this development or any future owners.

Stormwater Basins treat incoming stormwater runoff by physical, biological and chemical processes. The primary removal mechanism is the gravitational settling of particulates, organic matter, metals, bacteria and organics as stormwater runoff resides in the basin. Another mechanism for pollutant removal is uptake by algae and wetland plants in the wet basin permanent pool, particularly removing nutrients. Other contaminants such as hydrocarbons are broken down and eliminated by volatilization and chemical activity. Stormwater Basins are utilized to remove up to 80% of the total suspended solids load in typical urban post-development runoff when designed and maintained properly.

Stormwater basins naturally collect sediment, including gravel, sand and mud as well as other debris like litter. To maintain its capacity and function, a basin should be kept free of excessive debris, litter, and sediment. The permanent pool for the proposed basin is designed to be 10.0' in depth. This design depth should be verified by the developer at completion of construction activities and every 5-10 years to ensure that the basin will continue to function properly. Property owners or contracted personnel should use a boat, canoe, kayak or similar means to position themselves in the middle of the stormwater basin. Several measurements around center of the stormwater basin shall be taken using a Stadia Rod to determine the depth of the permanent pool. Measurements taken when basin water level is at N.P. Elevation (min. 72 hours after rain event). Once the depth of the stormwater basin reaches four feet or less, the accumulated sediment shall be excavated to restore the permanent pool depth to the original design depth. The stormwater basin is to be temporarily drained/pumped down so that the accumulated sediment can be removed. Sediment excavated from stormwater basin is required to be tested to determine where to appropriately dispose of the material offsite. Sediment removed from the stormwater basin should be stored properly until disposal to ensure no exposure to stormwater runoff and properly disposed of per local guidelines.

Temporary Sediment Basin Schedule												
Basin No.	Location	Tributary Acreage	Required Basin Volume (67.0 CY/Ac)	Provided Basin Volume	Control Structure							
					Riser-(A)	Height-(B)	Barrel-(C)	Outlet-(D)	Inlet Elev.-(E)	Dewatering Note (F)	Trash Rack (G)	Rack Height (H)
1	Western Perimeter	53.5 AC.	3584.5 C.Y.	6526 C.Y.	15"	3'	15"	85' @ 5.0%	983.0	N/A	21"	7"



**TEMPORARY SEDIMENT CONTROL STRUCTURE**

SCALE: NONE

**GENERAL NOTES:**

- Sediment basins shall be constructed and operational before upslope land disturbance begins.**
- RISER PIPE BASE:**  
The riser pipe shall be set at a minimum of 6 in. in the concrete base.
- TRASH RACKS:**  
The top of the riser shall be fitted with trash racks firmly fastened to the riser pipe.
- SEDIMENT CLEANOUT:**  
Sediment shall be removed and the sediment basin restored to its original dimensions when the sediment has filled to one-half the height of the riser. Sediment removed from the basin shall be placed so that it will not erode and stabilized similar to other fill material placed on the site.
- FINAL REMOVAL:**  
The sediment control structure shall be removed only after the upstream drainage area is stabilized and upon approval from the Franklin County S.W.C.D. (614) 486 - 9613 Dewatering and removal shall not cause sediment to discharge.



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**APPENDIX A:**  
**Inspection & Maintenance Report**

**Inspection Report**  
**Wet Basin**

<b>Facility Name and Address</b>	
<b>Date of Inspection</b>	
<b>Inspector Name and Phone Number</b>	
<b>Best Management Practice (BMP) Inspected</b>	

**Inspection References:**

*ODNR Manual, Rainwater and Land Development, Latest Edition*  
*Approved Site Improvement Construction and Stormwater Management Plans*

**Instructions:**

One inspection report shall be prepared for each BMP. Identify the BMP inspected as indicated on the Site Plan if multiple BMPs are present on-site. Please sign and date the inspection report and return the original to the Franklin County Drainage Engineer's Office. Please provide pictures taken during the inspection and attach them to the report.

## Operation and Maintenance Inspection Report for Stormwater Basins and Wetlands <sup>(4)</sup>

**Inspector Name** \_\_\_\_\_ **Project Location (inc. SP coordinates):** \_\_\_\_\_  
**Inspection Date/Time** \_\_\_\_\_ \_\_\_\_\_  
**Stormwater Pond:** \_\_\_\_\_ **Watershed** \_\_\_\_\_  
     **Normal Pool** \_\_\_\_\_ **Owner Name** \_\_\_\_\_  
     **Normal Dry** \_\_\_\_\_

Inspection Items	Checked? Yes/No	Maintenance Needed? Yes/No	Inspection Frequency	Comments
<b>Pond Components</b>				
<b>1. Embankment and Emergency Spillway</b>				
a. Adequate vegetation and ground cover			A	
b. Embankment erosion			SA	
c. Animal burrows			A	
d. Unauthorized plantings			A	
e. Cracking, bulging, or sliding of dam				
i. Upstream face			A	
ii. Downstream face			A	
iii. At or beyond toe				
Upstream			A	
Downstream			A	
iv. Emergency spillway			A	
f. Pond, toe & chimney drains clear and functioning			A	
g. Leaks on downstream face			A	
h. Abutment protection or riprap failures			A	
i. Visual settlement or horizontal misalignment of top of dam				
j. Emergency spillway clear of debris			A	
k. Other (specify)			A	
<b>2. Riser and principal spillway</b>				
Type: Reinforced concrete _____				
Corrugated pipe _____				
Masonry _____				
a. Low flow orifice obstructed			A	
b. Low flow trash rack				
i. Debris removal necessary			A	
ii. Corrosion control			A	

Inspection Items	Checked? Yes/No	Maintenance Needed? Yes/No	Inspection Frequency	Comments
c. Weir trash rack i. Debris removal necessary			A	
ii. Corrosion control			A	
d. Excessive sediment accumulation inside riser			A	
e. Concrete/Masonry condition Riser and barrels				
i. Cracks or displacement			A	
ii. Minor spalling (<1")			A	
iii. Major spalling (rebars exposed)			A	
iv. Joint failures			A	
v. Water tightness			A	
f. Metal pipe condition			A	
g. Control valve				
i. Operational/exercised			A	
ii. Chained and locked			A	
h. Pond drain valve			A	
i. Operational/exercised			A	
ii. Chained and locked			A	
i. Outfall channels flowing			A	
j. Other (specify)			A	
3. Permanent pool (wet ponds)				
a. Undesirable vegetative growth			M	
b. Floating or floatable debris removal required			M	
c. Visible pollution			M	
d. High water marks			M	
e. Shoreline problems			M	
f. Sediment accumulation			M	
g. Other (specify)			M	
4. Sediment forebays				
a. Sedimentation noted			M	
b. Sediment removal when depth <20% design depth			M	
5. Dry pond areas				
a. Vegetation adequate			M	
b. Undesirable vegetative growth			M	
c. Undesirable woody vegetation			M	
d. Low flow channels clear of obstructions			M	
e. Standing water or wet spots			M, S	
f. Sediment and/or trash accumulation			M	
g. Other (specify)			M	

Inspection Items	Checked? Yes/No	Maintenance Needed? Yes/No	Inspection Frequency	Comments
6. Condition of outfalls into pond				
a. Riprap failures			A,S	
b. Slope erosion			A,S	
c. Storm drain pipes			A,S	
d. Endwalls/headwalls			A,S	
e. Other (specify)			A,S	
7. Other				
a. Encroachments on ponds or easement area			M	
b. Complaints from residents (describe on back)			M	
c. Aesthetics				
i. Grass height			M	
ii. Graffiti removal necessary			M	
iii. Other (specify)			M	
d. Any public hazards (specify)			M	
e. Maintenance access			M	
f. Monitor mosquito larvae presence (seasonal)			M	
8. Constructed wetland areas				
a. Vegetation healthy and growing (50% surface area coverage)			M	
b. Evidence of invasive species			M	
c. Excessive sedimentation in wetland area			M	

Inspection Frequency Key A = Annual, SA = Semi-annual, M = Monthly, S = After major storm

(\*) Source: Georgia Stormwater Management Manual – Adapted from Watershed Management Institute, Inc. (1997)

**Summary**

1. Inspectors Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Overall condition of Facility (Check one)

Acceptable  
 Unacceptable

2. Dates any maintenance must be completed by: \_\_\_\_\_  
\_\_\_\_\_

**CERTIFICATION STATEMENT**

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION ON THIS FORM AND BELIEVE THE INFORMATION IS TRUE, ACCURATE AND COMPLETE.

\_\_\_\_\_  
Authorized Representative Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

## **OTHER MAINTENANCE ITEMS**

---

Site Inspection Pictures Attached:  Yes  No

**Remedial items to be completed within 30 days of the inspection. Please contact the Franklin County Drainage Engineer's Office at 614-525-3030 when remedial items are completed.**

**Inspector:**

---

Signature

Printed Name

Date



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**EXHIBIT A:**  
**Maintenance Plan**



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**Royal Elm Farms  
Franklin County, Ohio  
Floodplain Study  
Blacklick Creek Tributary C  
January 2004**

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Franklin County Planning Department  
Franklin County, Ohio

*663-PP*

Scope of Study

The purpose of this study is to provide an analysis of the impact to the 100-year flood elevations on the proposed Royal Elm Farms site. Blacklick Creek, Tributary C is a FEMA studied stream, shown on Flood Insurance Rate Map (FIRM) panel 39049C0195G. This study begins upstream where the tributary enters approximately 140 ft above the northwest part of the site and ends, approximately 1070 ft downstream, at know cross section B as shown in the Franklin County, Ohio and Incorporated Areas Flood Insurance Study. Refer to **Exhibit No. 1**, a floodplain workmap, for a diagram of the site and cross-section locations.

Hydrology

The 100-year peak flow rate associated with the watershed for Tributary C of Blacklick Creek, 1150 cfs, was taken from the Flood Insurance Study (FIS) for Franklin County, Ohio and Incorporated Areas. According to the FIS, the drainage area is 2.25 acres at the stream's confluence with Blacklick Creek. A constant discharge is used for the entire reach of the floodplain study described herein.

Hydraulics

The hydraulic analysis was performed using the U.S. Army Corps of Engineer's HEC-RAS 3.1.1 hydraulic computer program to calculate 100-year flood elevations for the undeveloped conditions. The HEC-RAS model output, cross-sections, and flood profile are all contained within this report.

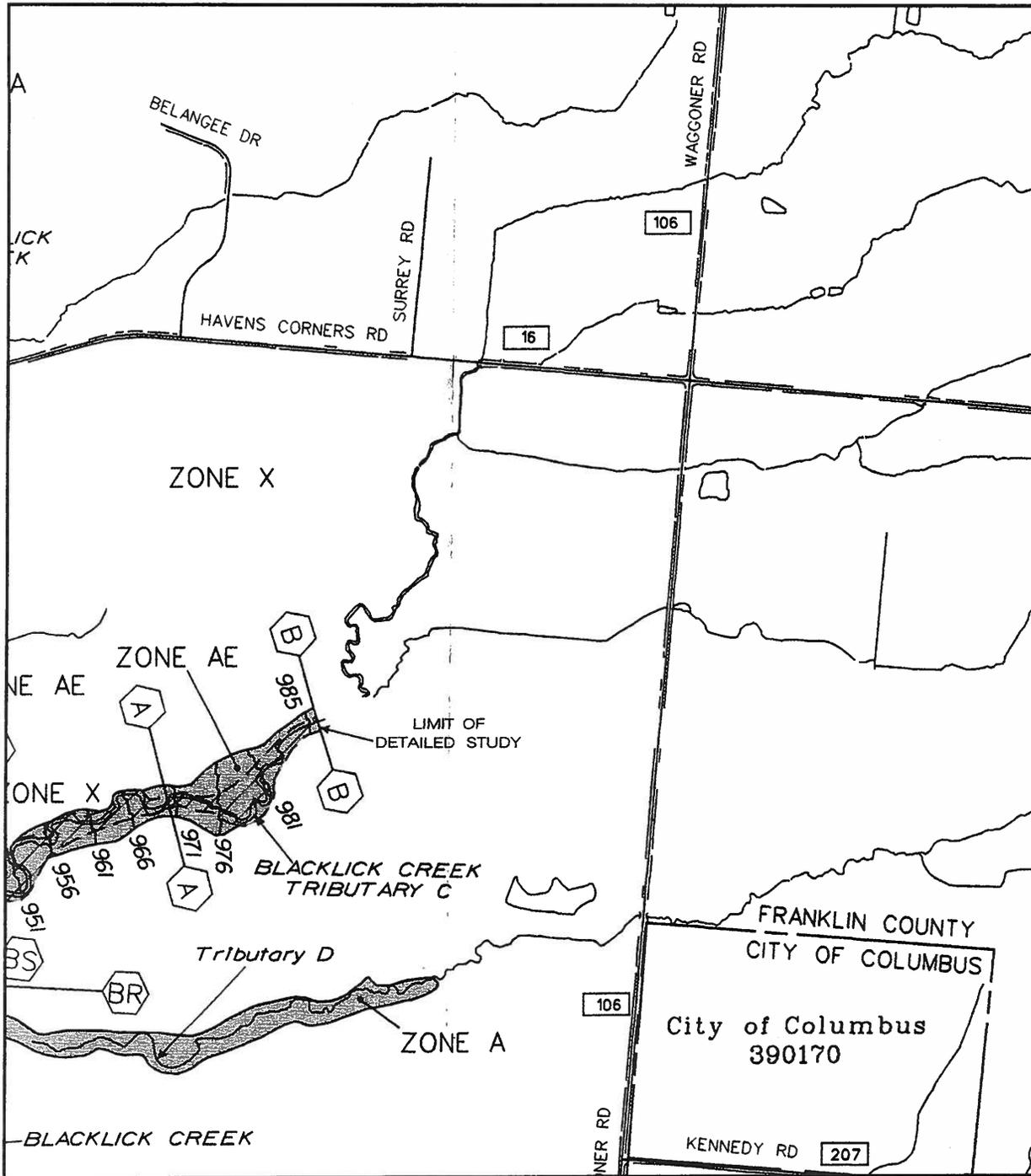
The "existing conditions" model (Royal.prj) reflects undeveloped conditions along the watercourse as determined from site reconnaissance and topographic information. The starting water-surface elevation is based on the base flood elevation at Cross Section B shown in the Franklin County, Ohio and Incorporated Areas Flood Insurance Study. Manning's 'n' value estimates are based on visual observations of the stream and overbank areas.

Results

The enclosed **Exhibit No. 1** shows the existing 100-year floodplain and cross-section locations.

**Table No. 1**  
**Comparison of 100-year Flood Elevations**

<b>Cross-Section</b>	<b>Existing Conditions (ft)</b>
99 (B)	984.9
100	985.41
200	985.7
300	988.13
400	988.99
500	989.29
600	991.22



APPROXIMATE SCALE  
 1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
 FLOOD INSURANCE RATE MAP  
 FRANKLIN COUNTY,  
 OHIO  
 AND INCORPORATED AREAS

PANEL 195 OF 387  
 (SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
COLUMBUS, CITY OF	390170	095	G
NEW ALBANY, VILLAGE OF	390895	095	G
UNINCORPORATED AREAS	390867	095	G

Notice to User: The MAP NUMBER shown below should be used when placing map orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

MAP NUMBER  
 39049C0195 G

EFFECTIVE DATE:  
 AUGUST 2, 1995



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

HEC-RAS Version 3.1.1 May 2003  
U.S. Army Corp of Engineers  
Hydrologic Engineering Center  
609 Second Street, Suite D  
Davis, California 95616-4687  
(916) 756-1104

```
X   X  XXXXXX   XXXX       XXXX       XX       XXXX
X   X  X       X   X       X   X       X   X   X
X   X  X       X           X   X       X   X   X
XXXXXXXX XXXX   X           XXX XXXX   XXXXXX   XXXX
X   X  X       X           X   X       X   X       X
X   X  X       X   X       X   X       X   X       X
X   X  XXXXXX   XXXX       X   X       X   X   XXXXX
```

PROJECT DATA

Project Title: Royal Elm Farms  
Project File : Royal.prj  
Run Date and Time: 7/9/2003 7:14:09 AM

Project in English units

PLAN DATA

Plan Title: Plan1  
Plan File : Q:\PROJECT\stormwater\stormwater\2002-0770\Royal.p01

Geometry Title: Blacklick Tributary  
Geometry File : Q:\PROJECT\stormwater\stormwater\2002-0770\Royal.g01

Flow Title : flow data  
Flow File : Q:\PROJECT\stormwater\stormwater\2002-0770\Royal.f01

Plan Summary Information:

Number of:	Cross Sections =	7	Multiple Openings =	0
	Culverts =	0	Inline Structures =	0
	Bridges =	0	Lateral Structures =	0

Computational Information

Water surface calculation tolerance = 0.01  
Critical depth calculaton tolerance = 0.01  
Maximum number of interations = 20  
Maximum difference tolerance = 0.3  
Flow tolerance factor = 0.001

Computation Options

Critical depth computed only where necessary  
Conveyance Calculation Method: At breaks in n values only  
Friction Slope Method: Average Conveyance  
Computational Flow Regime: Subcritical Flow

FLOW DATA

Flow Title: flow data

Flow File : Q:\PROJECT\stormwater\stormwater\2002-0770\Royal.f01

Flow Data (cfs)

River	Reach	RS	PF 1
Blacklick Tribut1		600	1150

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
Blacklick Tribut1		PF 1		Known WS = 984.9

GEOMETRY DATA

Geometry Title: Blacklick Tributary

Geometry File : Q:\PROJECT\stormwater\stormwater\2002-0770\Royal.g01

CROSS SECTION

RIVER: Blacklick Tribut

REACH: 1 RS: 600

INPUT

Description:

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
40	1005	88	1004	115	1002	135	1000	145	998
170	996	185	994	190	992	215	990	288	988
300	987.8	305	988	310	990	320	992	330	994
342	996								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
40	.06	288	.04	305	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	288	305		230	240	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	991.76	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.54	Wt. n-Val.	0.060	0.040	0.060
W.S. Elev (ft)	991.22	Reach Len. (ft)	230.00	240.00	240.00
Crit W.S. (ft)		Flow Area (sq ft)	170.96	56.36	14.77
E.G. Slope (ft/ft)	0.009723	Area (sq ft)	170.96	56.36	14.77
Q Total (cfs)	1150.00	Flow (cfs)	648.66	458.93	42.41
Top Width (ft)	116.27	Top Width (ft)	88.19	17.00	11.08
Vel Total (ft/s)	4.75	Avg. Vel. (ft/s)	3.79	8.14	2.87
Max Chl Dpth (ft)	3.42	Hydr. Depth (ft)	1.94	3.32	1.33
Conv. Total (cfs)	11662.7	Conv. (cfs)	6578.3	4654.2	430.1

Length Wtd. (ft)	236.65	Wetted Per. (ft)	88.27	17.01	11.58
Min Ch El (ft)	987.80	Shear (lb/sq ft)	1.18	2.01	0.77
Alpha	1.55	Stream Power (lb/ft s)	4.46	16.38	2.22
Frctn Loss (ft)	2.00	Cum Volume (acre-ft)	3.26	2.63	3.71
C & E Loss (ft)	0.03	Cum SA (acres)	1.81	0.63	1.78

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.  
This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: Blacklick Tribut

REACH: 1 RS: 500

INPUT

Description:

Station Elevation Data		num=		21					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
90	1005	130	1004	150	1002	175	1000	188	998
205	996	218	994	233	992	250	990	278	988
293	986	300	985.4	310	986	380	988	404	990
422	992	460	994	475	996	507	998	528	1000
555	1001								

Manning's n Values		num=		3	
Sta	n Val	Sta	n Val	Sta	n Val
90	.06	293	.04	310	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	293	310		200	210	200	.1 .3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	989.73	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.44	Wt. n-Val.	0.060	0.040	0.060
W.S. Elev (ft)	989.29	Reach Len. (ft)	200.00	210.00	200.00
Crit W.S. (ft)		Flow Area (sq ft)	45.94	61.00	170.13
E.G. Slope (ft/ft)	0.007390	Area (sq ft)	45.94	61.00	170.13
Q Total (cfs)	1150.00	Flow (cfs)	121.41	455.77	572.82
Top Width (ft)	135.49	Top Width (ft)	33.03	17.00	85.46
Vel Total (ft/s)	4.15	Avg. Vel. (ft/s)	2.64	7.47	3.37
Max Chl Dpth (ft)	3.89	Hydr. Depth (ft)	1.39	3.59	1.99
Conv. Total (cfs)	13377.8	Conv. (cfs)	1412.4	5301.9	6663.5
Length Wtd. (ft)	205.44	Wetted Per. (ft)	33.21	17.04	85.54
Min Ch El (ft)	985.40	Shear (lb/sq ft)	0.64	1.65	0.92
Alpha	1.65	Stream Power (lb/ft s)	1.69	12.34	3.09
Frctn Loss (ft)	0.52	Cum Volume (acre-ft)	2.69	2.30	3.20
C & E Loss (ft)	0.09	Cum SA (acres)	1.49	0.54	1.52

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: Blacklick Tribut

REACH: 1 RS: 400

INPUT

Description:

Station Elevation Data		num=		15					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
70	1001	90	1000	110	998	130	996	140	994
150	992	160	990	181	988	270	986	300	984
330	986	372	988	380	990	405	998	430	1000

Manning's n Values		num=		3	
Sta	n Val	Sta	n Val	Sta	n Val
70	.06	270	.04	330	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	270	330		150	160	190	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	989.11	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.13	Wt. n-Val.	0.060	0.040	0.060
W.S. Elev (ft)	988.99	Reach Len. (ft)	150.00	160.00	190.00
Crit W.S. (ft)		Flow Area (sq ft)	181.88	239.18	85.37
E.G. Slope (ft/ft)	0.001273	Area (sq ft)	181.88	239.18	85.37
Q Total (cfs)	1150.00	Flow (cfs)	240.41	795.85	113.74
Top Width (ft)	205.30	Top Width (ft)	99.36	60.00	45.95
Vel Total (ft/s)	2.27	Avg. Vel. (ft/s)	1.32	3.33	1.33
Max Chl Dpth (ft)	4.99	Hydr. Depth (ft)	1.83	3.99	1.86
Conv. Total (cfs)	32229.4	Conv. (cfs)	6737.6	22304.3	3187.5
Length Wtd. (ft)	159.66	Wetted Per. (ft)	99.43	60.13	46.11
Min Ch El (ft)	984.00	Shear (lb/sq ft)	0.15	0.32	0.15
Alpha	1.59	Stream Power (lb/ft s)	0.19	1.05	0.20
Frctn Loss (ft)	0.42	Cum Volume (acre-ft)	2.16	1.58	2.61
C & E Loss (ft)	0.04	Cum SA (acres)	1.19	0.35	1.22

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: Blacklick Tribut

REACH: 1 RS: 300

INPUT

Description:

Station Elevation Data		num=		16					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1	1001	5	1000	22	998	55	996	70	994
80	992	100	990	179	988	262	986	295	984
300	983.96	305	984	315	986	320	988	322	990
340	1000								

Manning's n Values		num=		3	
Sta	n Val	Sta	n Val	Sta	n Val
1	.06	295	.04	305	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	295	305		250	235	245	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	988.65	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.52	Wt. n-Val.	0.060	0.040	0.060
W.S. Elev (ft)	988.13	Reach Len. (ft)	250.00	235.00	245.00
Crit W.S. (ft)		Flow Area (sq ft)	197.97	41.55	37.03
E.G. Slope (ft/ft)	0.008600	Area (sq ft)	197.97	41.55	37.03
Q Total (cfs)	1150.00	Flow (cfs)	629.91	369.88	150.21
Top Width (ft)	146.45	Top Width (ft)	121.32	10.00	15.13
Vel Total (ft/s)	4.16	Avg. Vel. (ft/s)	3.18	8.90	4.06
Max Chl Dpth (ft)	4.17	Hydr. Depth (ft)	1.63	4.15	2.45
Conv. Total (cfs)	12400.5	Conv. (cfs)	6792.4	3988.4	1619.7
Length Wtd. (ft)	242.04	Wetted Per. (ft)	121.40	10.00	15.77
Min Ch El (ft)	983.96	Shear (lb/sq ft)	0.88	2.23	1.26
Alpha	1.92	Stream Power (lb/ft s)	2.79	19.86	5.11
Frctn Loss (ft)	2.13	Cum Volume (acre-ft)	1.51	1.06	2.35
C & E Loss (ft)	0.03	Cum SA (acres)	0.81	0.22	1.08

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.  
 This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: Blacklick Tribut

REACH: 1 RS: 200

INPUT

Description:

Station Elevation Data num= 24

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
60	1005	80	1004	135	1002	160	1000	178	998
188	996	203	994	220	992	240	990	250	988
267	986	278	984	290	982	300	981.5	310	982
330	984	410	986	420	988	425	990	430	992
440	994	445	996	450	998	453	1000		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
60	.06	290	.04	310	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.	
	290	310		210	200	195	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	986.49	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.79	Wt. n-Val.	0.060	0.040	0.060
W.S. Elev (ft)	985.70	Reach Len. (ft)	210.00	200.00	195.00
Crit W.S. (ft)		Flow Area (sq ft)	40.41	79.06	112.05
E.G. Slope (ft/ft)	0.009025	Area (sq ft)	40.41	79.06	112.05
Q Total (cfs)	1150.00	Flow (cfs)	143.96	696.90	309.14
Top Width (ft)	129.48	Top Width (ft)	21.37	20.00	88.11
Vel Total (ft/s)	4.97	Avg. Vel. (ft/s)	3.56	8.82	2.76
Max Chl Dpth (ft)	4.20	Hydr. Depth (ft)	1.89	3.95	1.27
Conv. Total (cfs)	12105.3	Conv. (cfs)	1515.4	7335.8	3254.1
Length Wtd. (ft)	198.22	Wetted Per. (ft)	21.68	20.02	88.23
Min Ch El (ft)	981.50	Shear (lb/sq ft)	1.05	2.22	0.72
Alpha	2.06	Stream Power (lb/ft s)	3.74	19.61	1.97

Frctn Loss (ft)	0.74	Cum Volume (acre-ft)	0.83	0.74	1.93
C & E Loss (ft)	0.19	Cum SA (acres)	0.40	0.14	0.79

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: Blacklick Tribut

REACH: 1 RS: 100

INPUT

Description:

Station Elevation Data	num=	18
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
140 999 211 998 269 990 270 988 285 986		
290 984 300 978 305 980 340 982 423 984		
437 986 445 988 450 990 453 992 462 994		
468 996 484 998 510 1000		

Manning's n Values	num=	3
Sta n Val Sta n Val Sta n Val		
140 .06 290 .04 305 .06		

Bank Sta: Left Right Lengths: Left Channel Right	Coeff Contr.	Expan.
290 305 200 195 200	.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	985.56	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.15	Wt. n-Val.	0.060	0.040	0.060
W.S. Elev (ft)	985.41	Reach Len. (ft)	200.00	195.00	200.00
Crit W.S. (ft)		Flow Area (sq ft)	2.50	76.21	361.81
E.G. Slope (ft/ft)	0.002013	Area (sq ft)	2.50	76.21	361.81
Q Total (cfs)	1150.00	Flow (cfs)	2.10	344.63	803.28
Top Width (ft)	146.43	Top Width (ft)	3.53	15.00	127.90
Vel Total (ft/s)	2.61	Avg. Vel. (ft/s)	0.84	4.52	2.22
Max Chl Dpth (ft)	7.41	Hydr. Depth (ft)	0.71	5.08	2.83
Conv. Total (cfs)	25634.8	Conv. (cfs)	46.7	7682.1	17906.0
Length Wtd. (ft)	198.15	Wetted Per. (ft)	3.81	17.05	128.08
Min Ch El (ft)	978.00	Shear (lb/sq ft)	0.08	0.56	0.35
Alpha	1.40	Stream Power (lb/ft s)	0.07	2.54	0.79
Frctn Loss (ft)	0.42	Cum Volume (acre-ft)	0.72	0.38	0.87
C & E Loss (ft)	0.01	Cum SA (acres)	0.34	0.06	0.31

CROSS SECTION

RIVER: Blacklick Tribut

REACH: 1 RS: 99

INPUT

Description:

Station Elevation Data	num=	12
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		

50	990	75	988	120	986	180	984	260	982
298	980	300	974	310	980	315	984	330	990
335	994	345	996						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
50	.06	298	.04	310	.06

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	298	310		.1	.3

CROSS SECTION OUTPUT Profile #PF 1

E.G. Elev (ft)	985.13	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.23	Wt. n-Val.	0.060	0.040	0.060
W.S. Elev (ft)	984.90	Reach Len. (ft)			
Crit W.S. (ft)	983.27	Flow Area (sq ft)	312.35	94.80	15.51
E.G. Slope (ft/ft)	0.002273	Area (sq ft)	312.35	94.80	15.51
Q Total (cfs)	1150.00	Flow (cfs)	614.85	508.47	26.67
Top Width (ft)	164.25	Top Width (ft)	145.00	12.00	7.25
Vel Total (ft/s)	2.72	Avg. Vel. (ft/s)	1.97	5.36	1.72
Max Chl Dpth (ft)	10.90	Hydr. Depth (ft)	2.15	7.90	2.14
Conv. Total (cfs)	24122.2	Conv. (cfs)	12897.0	10665.7	559.5
Length Wtd. (ft)		Wetted Per. (ft)	145.09	17.99	8.83
Min Ch El (ft)	974.00	Shear (lb/sq ft)	0.31	0.75	0.25
Alpha	2.01	Stream Power (lb/ft s)	0.60	4.01	0.43
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

SUMMARY OF MANNING'S N VALUES

River:Blacklick Tribut

Reach	River Sta.	n1	n2	n3
1	600	.06	.04	.06
1	500	.06	.04	.06
1	400	.06	.04	.06
1	300	.06	.04	.06
1	200	.06	.04	.06
1	100	.06	.04	.06
1	99	.06	.04	.06

SUMMARY OF REACH LENGTHS

River: Blacklick Tribut

Reach	River Sta.	Left	Channel	Right
1	600	230	240	240
1	500	200	210	200
1	400	150	160	190
1	300	250	235	245
1	200	210	200	195

1	100	200	195	200
1	99			

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS

River: Blacklick Tribut

Reach	River Sta.	Contr.	Expan.
1	600	.1	.3
1	500	.1	.3
1	400	.1	.3
1	300	.1	.3
1	200	.1	.3
1	100	.1	.3
1	99	.1	.3

Profile Output Table - Standard Table 1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)
1	600	PF 1	1150.00	987.80	991.22		991.76	0.009723	8.14	242.09
1	500	PF 1	1150.00	985.40	989.29		989.73	0.007390	7.47	277.07
1	400	PF 1	1150.00	984.00	988.99		989.11	0.001273	3.33	506.43
1	300	PF 1	1150.00	983.96	988.13		988.65	0.008600	8.90	276.54
1	200	PF 1	1150.00	981.50	985.70		986.49	0.009025	8.82	231.51
1	100	PF 1	1150.00	978.00	985.41		985.56	0.002013	4.52	440.51
1	99	PF 1	1150.00	974.00	984.90	983.27	985.13	0.002273	5.36	422.67

Profile Output Table - Standard Table 2

Reach	River Sta	Profile	E.G. Elev (ft)	W.S. Elev (ft)	Vel Head (ft)	Frctn Loss (ft)	C & E Loss (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)
1	600	PF 1	991.76	991.22	0.54	2.00	0.03	648.66	458.93	42.41
1	500	PF 1	989.73	989.29	0.44	0.52	0.09	121.41	455.77	572.82
1	400	PF 1	989.11	988.99	0.13	0.42	0.04	240.41	795.85	113.74
1	300	PF 1	988.65	988.13	0.52	2.13	0.03	629.91	369.88	150.21
1	200	PF 1	986.49	985.70	0.79	0.74	0.19	143.96	696.90	309.14
1	100	PF 1	985.56	985.41	0.15	0.42	0.01	2.10	344.63	803.28
1	99	PF 1	985.13	984.90	0.23			614.85	508.47	26.67

HEC-RAS Plan: regular River: Blacklick Tribut Reach: 1 Profile: PF 1

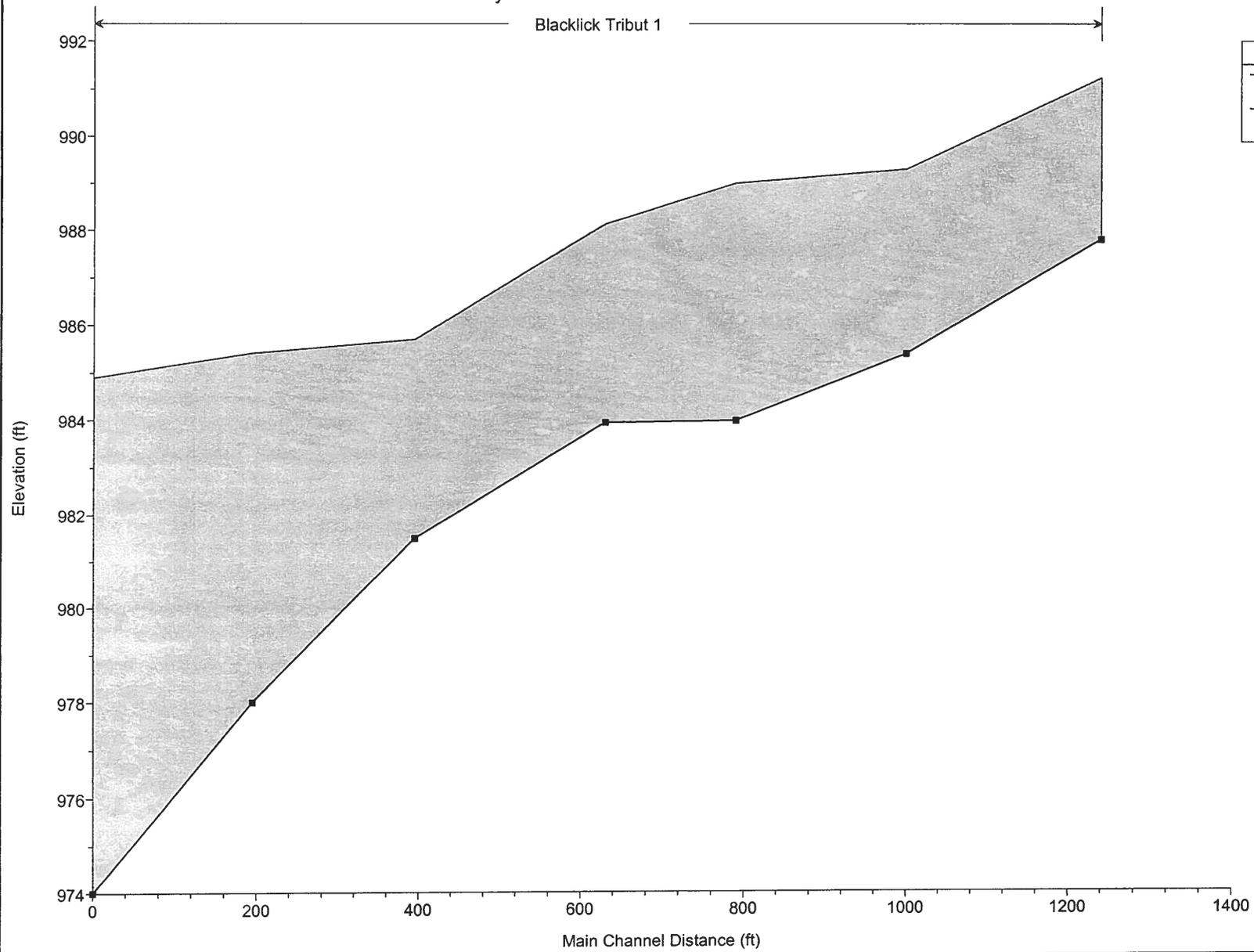
Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chi
1	600	PF 1	1150.00	987.80	991.22		991.76	0.009723	8.14	242.09	116.27	0.79
1	500	PF 1	1150.00	985.40	989.29		989.73	0.007390	7.47	277.07	135.49	0.70
1	400	PF 1	1150.00	984.00	988.99		989.11	0.001273	3.33	506.43	205.30	0.29
1	300	PF 1	1150.00	983.96	988.13		988.65	0.008600	8.90	278.54	146.45	0.77
1	200	PF 1	1150.00	981.50	985.70		986.49	0.009025	8.82	231.51	129.48	0.78
1	100	PF 1	1150.00	978.00	985.41		985.56	0.002013	4.52	440.51	146.43	0.35
1	99	PF 1	1150.00	974.00	984.90	983.27	985.13	0.002273	5.36	422.67	164.25	0.34

HEC-RAS Plan: regular River: Blacklick Tribut Reach: 1 Profile: PF 1

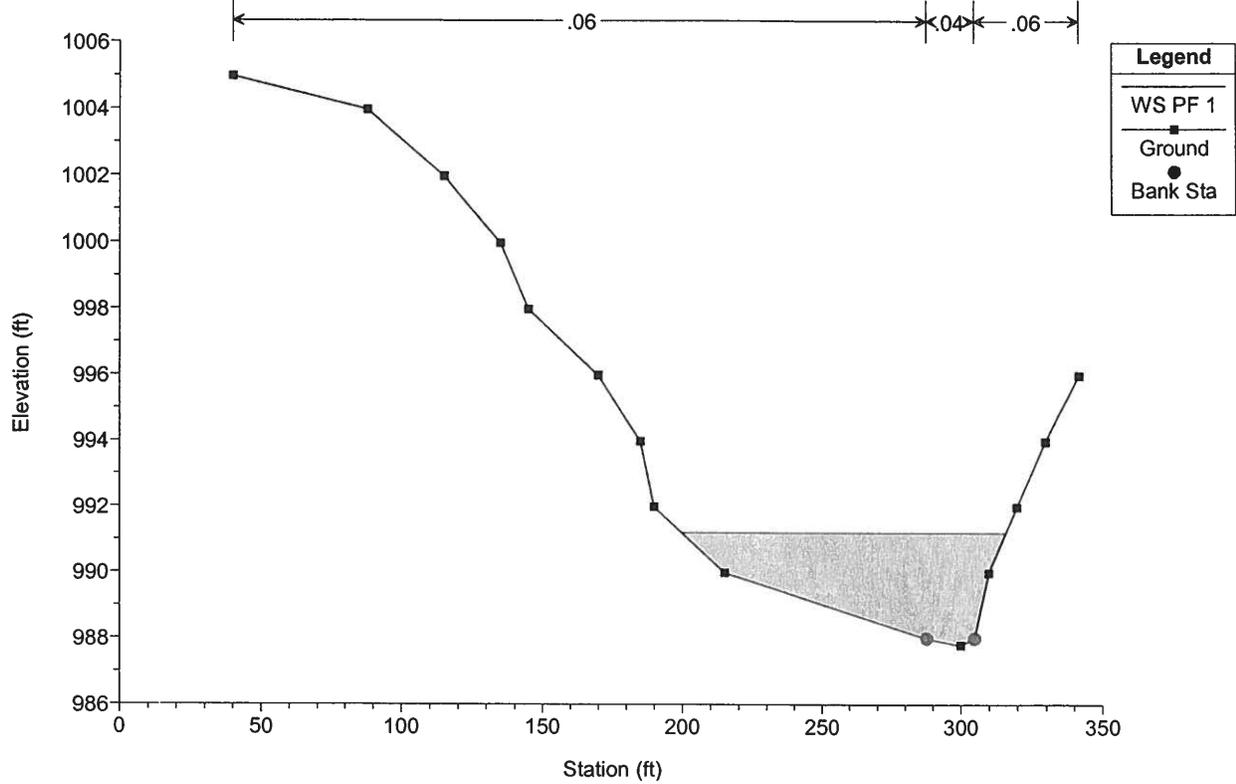
Reach	River Sta	Profile	E.G. Elev (ft)	W S. Elev (ft)	Vel Head (ft)	Frctn Loss (ft)	C & E Loss (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)
1	600	PF 1	991.76	991.22	0.54	2.00	0.03	648.66	458.93	42.41	116.27
1	500	PF 1	989.73	989.29	0.44	0.52	0.09	121.41	455.77	572.82	135.49
1	400	PF 1	989.11	988.99	0.13	0.42	0.04	240.41	795.85	113.74	205.30
1	300	PF 1	988.65	988.13	0.52	2.13	0.03	629.91	369.88	150.21	146.45
1	200	PF 1	986.49	985.70	0.79	0.74	0.19	143.96	696.90	309.14	129.48
1	100	PF 1	985.56	985.41	0.15	0.42	0.01	2.10	344.63	803.28	146.43
1	99	PF 1	985.13	984.90	0.23			614.85	508.47	26.67	164.25

Royal Elm Farms Plan: Plan1 7/9/2003

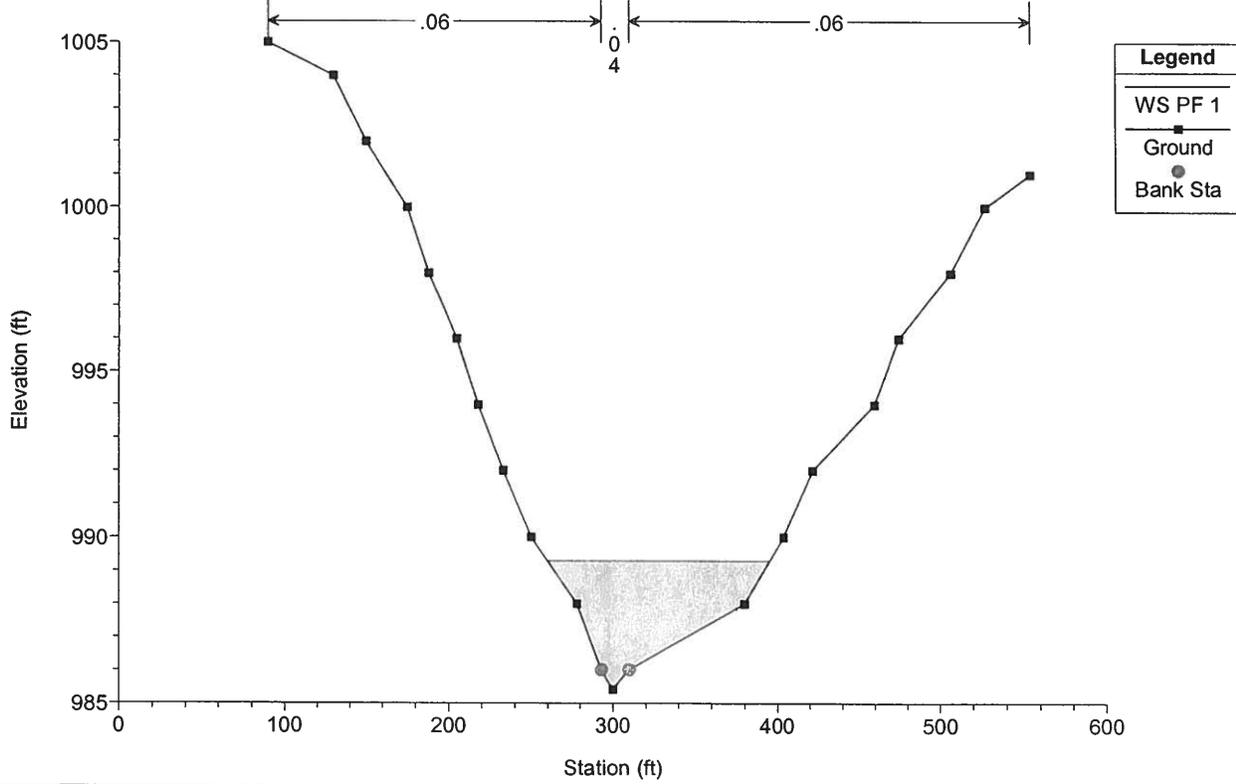
Blacklick Tribut 1



Royal Elm Farms Plan: Plan1 7/9/2003  
 River = Blacklick Tribut Reach = 1 RS = 600

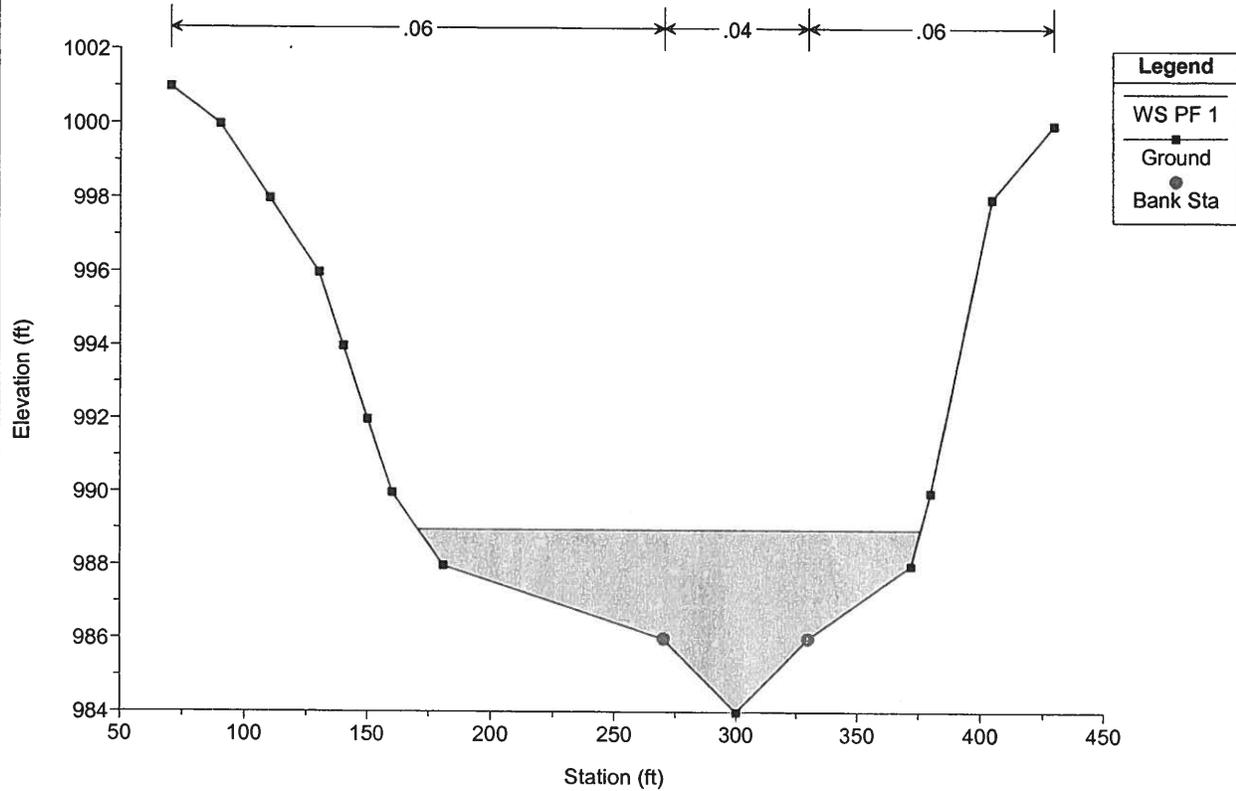


Royal Elm Farms Plan: Plan1 7/9/2003  
 River = Blacklick Tribut Reach = 1 RS = 500



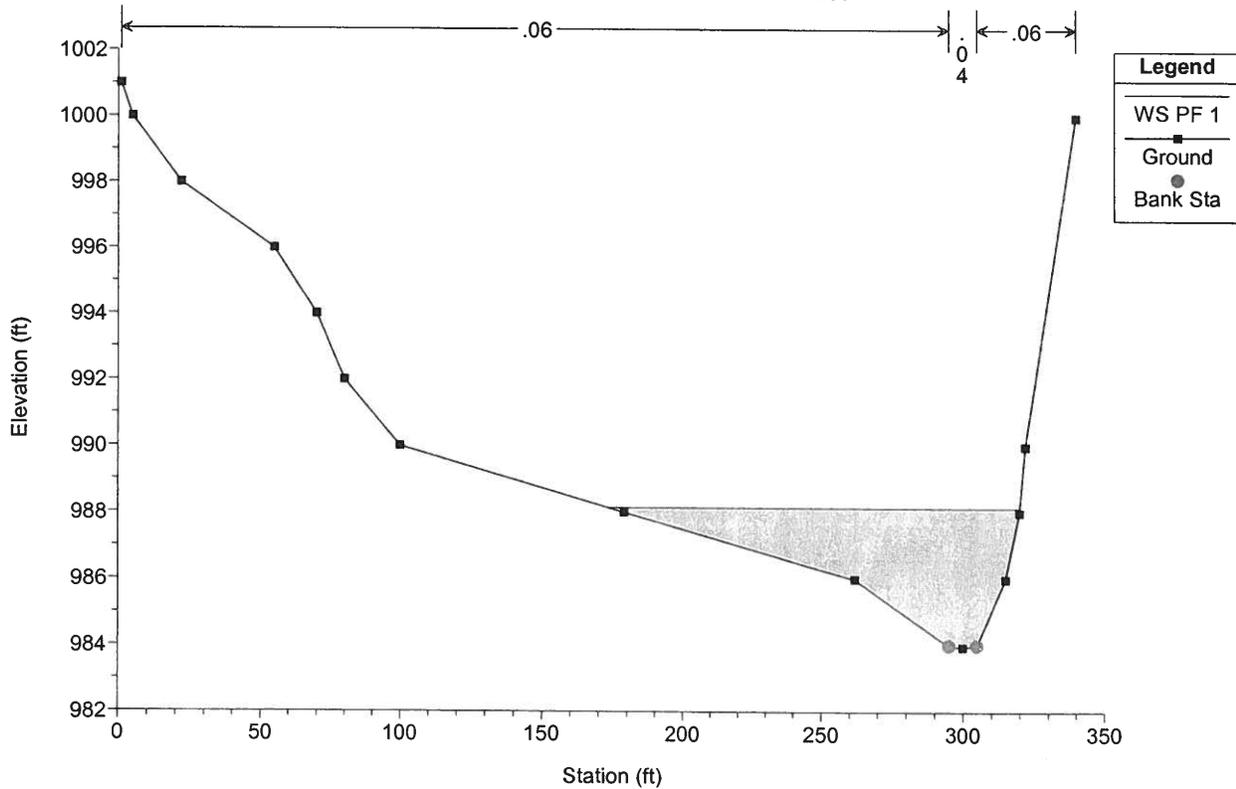
Royal Elm Farms Plan: Plan1 7/9/2003

River = Blacklick Tribut Reach = 1 RS = 400



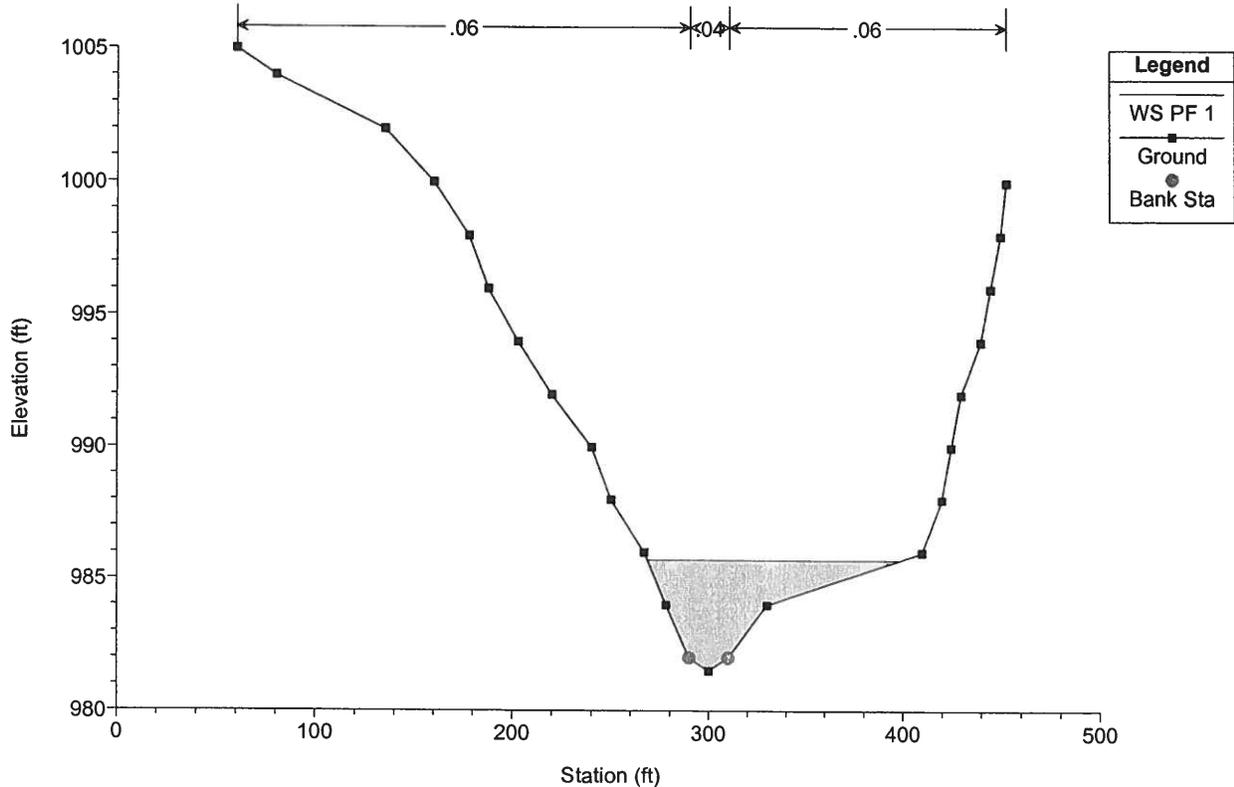
Royal Elm Farms Plan: Plan1 7/9/2003

River = Blacklick Tribut Reach = 1 RS = 300



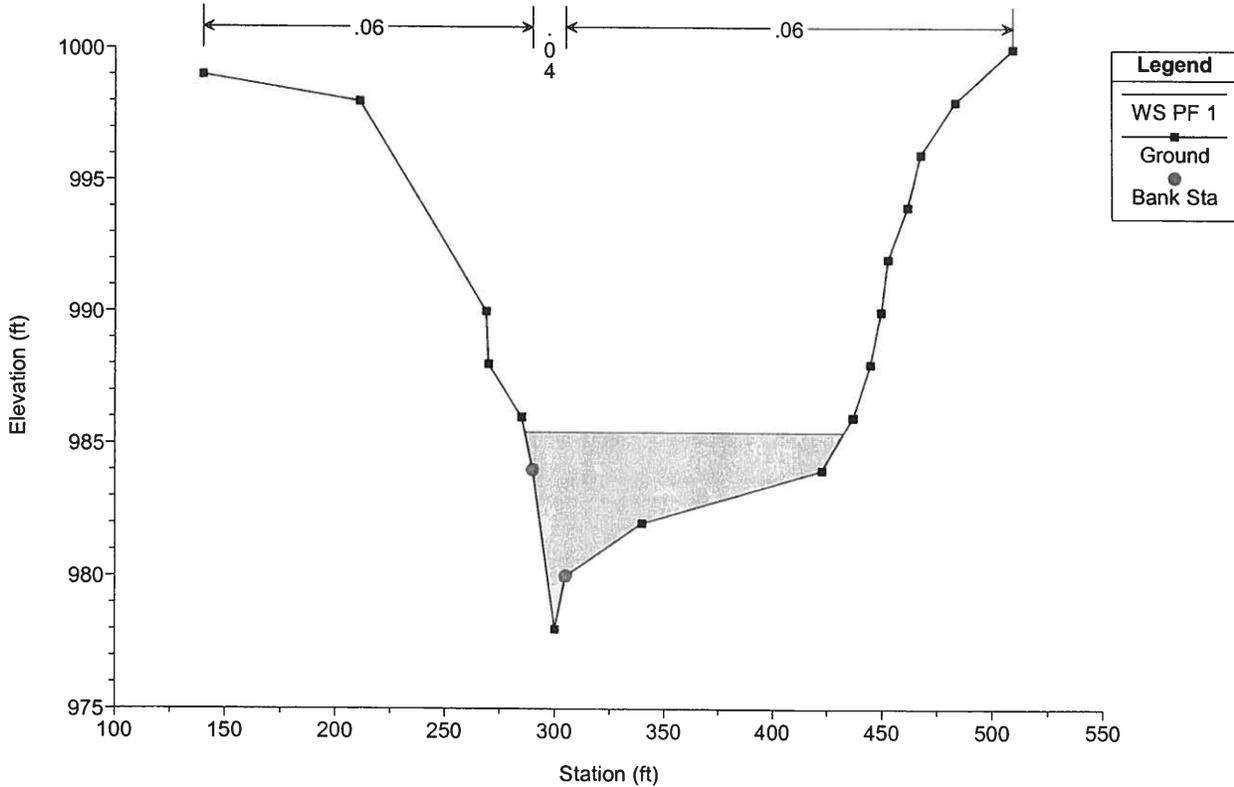
Royal Elm Farms Plan: Plan1 7/9/2003

River = Blacklick Tribut Reach = 1 RS = 200



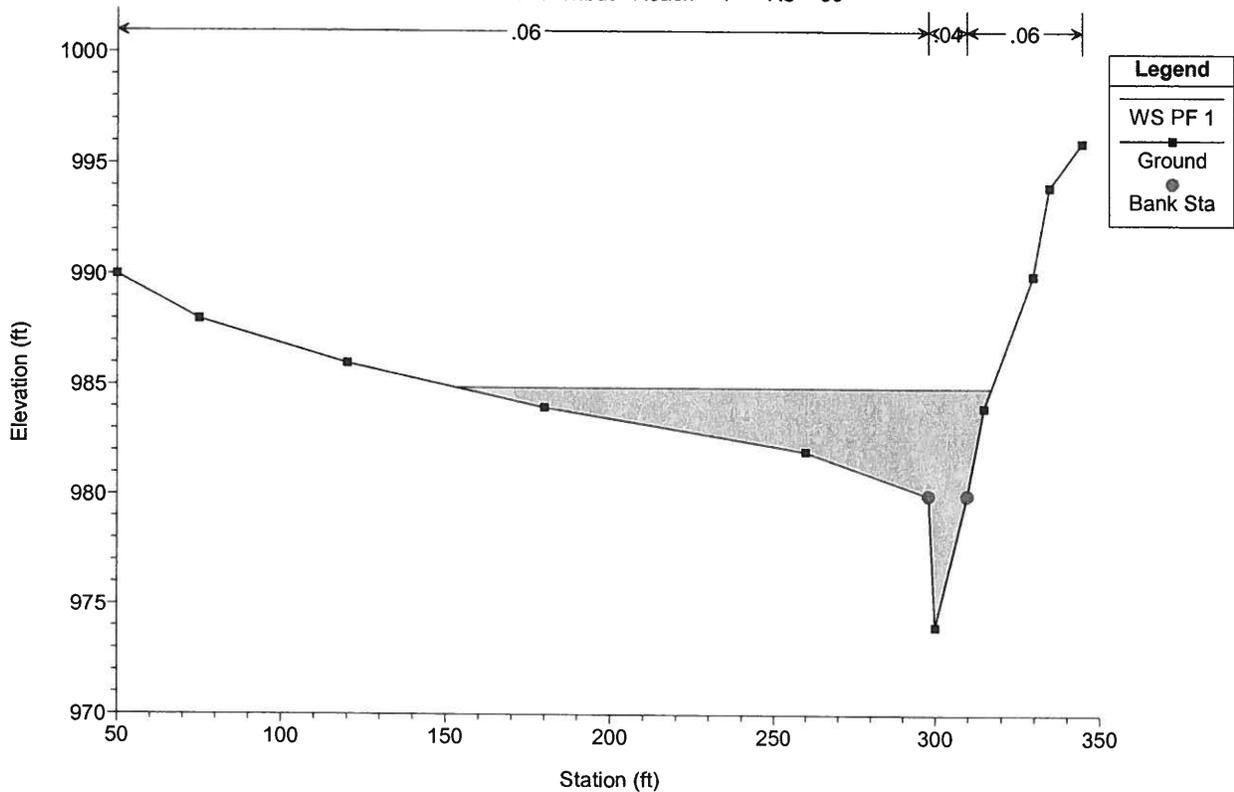
Royal Elm Farms Plan: Plan1 7/9/2003

River = Blacklick Tribut Reach = 1 RS = 100



Royal Elm Farms Plan: Plan1 7/9/2003

River = Blacklick Tribut Reach = 1 RS = 99





Total Number of Lots Proposed: 76 Total Area: 76.255 acres  
 Average Lot Dimension: 100 feet by 150 feet Typical Lot Area: 0.34 acre(s)  
 Reserve Areas: 33.16 acres Streets: 8.3 acres Open Space: 33.16 acres  
 Current Zoning? PSRD Number of Proposed Final Plat Phases: 3  
 Type of Water Supply Proposed: Central Water  
 Type of Wastewater Disposal Proposed: Central Sewer  
 Will the Subdivision Have Sidewalks? Yes Curb/gutter? Yes

**Is a Variance to the Franklin County Subdivision Regulations requested? YES/NO  
 If YES, Variance application form must be attached with the Preliminary Plan application.**

Twenty (20) copies of the Preliminary Plan, including the E&S Plan, are submitted with this application.

The undersigned acknowledges this Preliminary Plan application does not constitute a Subdivision Plat application and understands the filing deadlines and meeting schedules associated with this request. Approval of a Preliminary Plan does not constitute acceptance of any public improvements shown. Such acceptance can only be made in conjunction with Final Plat requirements and procedures specified in the Franklin County Subdivision Regulations. The Subdivision Plat is not considered filed until a Final Plat application is submitted and accepted, in accordance with the Subdivision Regulations of Franklin County, Ohio.

To the best of my knowledge and belief, information and materials submitted as a part of this Preliminary Plan application are correct, complete and accurate. The Franklin County Technical Review Group members are hereby granted permission to enter the property for inspection and review purposes.

Property Owner's Signature   
 Engineer's Signature 

Date: 12/11/12  
 Date: 12/10/12

## EROSION AND SEDIMENT CONTROL POLICY

### Franklin County Subdivision Regulations

#### **General:**

Per the Franklin County Subdivision Regulations, an Erosion and Sediment Control Plan shall be required for major subdivisions, may be required for other development and shall conform with the *Ohio Department of Natural Resources, Division of Soil and Water Conservation manual, "Rainwater and Land Development."* Implementation of approved erosion control measures should precede earth-disturbing activities. The Ohio Environmental Protection Agency (OPEA) may also have jurisdiction over earth-disturbing activities.

#### **Purpose:**

The erosion and sediment (E&S) control plan is required for the purpose of reducing pollution to public and/or private water by sediment from accelerated soil erosion associated with construction activity.

#### **E&S Control Plan Requirements:**

The E&S plan shall be a separate sheet, be a part of subdivision improvement plans, provide information regarding the entire site and shall include the following:

1. Vicinity Map – Map locating the site in relation to the surrounding area. Indicate the location of receiving waters.
2. Work Limits – Indicate the limits of earth-disturbing activity; include borrow, spoil and stockpile areas.
3. Existing Topography – The existing contours of the entire site and adjacent land should be shown on the plan. Changes to the existing contours should also be shown on the plan. A topographic map should contain an appropriate scale and contour interval to clearly depict the topography of the site.
4. Existing Vegetation – Show existing tree lines, unique vegetation and areas that may affect erosion and sediment controls. Existing vegetation shall remain along waterways: minimum width of buffer strip on each side of the stream shall be two and one-half times the stream width measured from the top of the streambank or 50 feet, whichever is greater.
5. Soils – Show boundaries of the different soil types. A table relating relevant information concerning their limitations for the proposed use may be necessary. Information pertaining to the limitations of soil type can be determined from the Franklin County Soil Survey and Soil Potential Index.

Topsoil shall be segregated and stockpiled during grading of the site and be reapplied before the establishment of permanent vegetation.

6. Existing Drainage Patterns – Drainage patterns should be evident on the plan. Include off-site areas susceptible to sediment deposits or to erosion caused by accelerated runoff, as well as off-site areas affecting potential accelerated runoff and erosion. Indicate size of drainage area contributing to the site. Include any known

existing agriculture field tiles that may be present on the site. Any subsurface drainage tiles encountered during development shall be rerouted or connected into the subdivision's drainage system to ensure that these systems will continue drain upland properties.

7. Special Notes for Critical Areas – Give details and specifications for practices protecting streams, steep slopes, designated trees or stands of trees, etc.
8. Site Development – Show all planned locations of buildings, parking facilities, roads, utilities, easements, etc. Existing structures and facilities should also be shown.
9. Location of Practices – Show the location of all erosion and sediment control and stormwater management practices to be used on-site. Include measures that are to be utilized temporarily or permanently.

Temporary sediment basins and/or traps are to be utilized as the primary means of trapping sediment on site. They should be situated within the lowest points of elevation along the perimeter of the property and also adjacent to waterways whose headwaters originate upslope of the property. Enough land must be reserved to accommodate sediment basins and/or traps sized at 67 cubic yards of storage volume per acre of drainage area. (Note: this is not the same as per acre disturbed acre or per acre of the site). If permanent stormwater management ponds are proposed for the site, they must be retrofit to serve as sediment basins during active construction periods. Basins and traps shall be installed prior to any grading of the site.

Sediment barriers shall be installed to intercept sheet runoff from disturbed areas that do not drain into sediment basins or traps.

Vegetative practices shall be utilized on all disturbed areas within seven days if they are to remain dormant (undisturbed) for more than 45 days. Disturbed areas within 50 feet of any stream shall be stabilized within seven days.

10. Surface Water Locations - Show locations of springs, wetlands, streams, lakes, etc., on or within 200 feet of the site.
11. Detailed Drawings – Any structural practices used should be explained and illustrated with detailed drawings. Detailed drawings should be included for only those practices used on-site.
12. Specifications for Stabilization – Specifications for temporary and permanent seeding, mulching, construction entrances, etc., should be given. Include seeding mixtures and rates, lime and fertilizer application rates, and type and quantity of mulching for both temporary and permanent stabilization.
13. Construction Sequence – Provide a schedule relating the implementation of erosion and sediment control practices and stormwater management practices to major construction operations. By properly scheduling the construction, both the extent of exposed ground and the duration of exposure can be minimized.

**Example of Construction Sequence:**

1. Clearing and grubbing for those areas necessary for installation of sediment basins and traps and perimeter controls.
  2. Installation of sediment basin/traps and perimeter control.
  3. Continuation of clearing and grubbing within the areas designated to be disturbed.
  4. Road grading.
  5. Sewer and utility installation.
  6. Final grading.
  7. Application of permanent vegetative cover.
14. Maintenance and Inspection – Provide notes and information regarding maintenance for each practice to ensure continued performance.
15. Plan Reference Data – Title, scale, direction, legend and date shall be provided on all plans. The plan should also include name, address and telephone number of person(s) preparing the plan, as well as the owner of the property.

**Plan Review and Enforcement:**

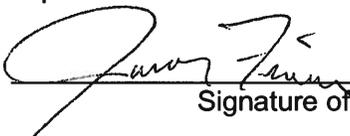
1. Plan Review and Site Inspection – During and at the end of the construction of the subdivision street(s), utilities, etc., the erosion and sedimentation (E&S) control practices will be monitored by the Franklin Soil and Water Conservation District (FSWCD) personnel. The FSWCD personnel, based on a cooperative agreement with the Franklin County Commissioners and Franklin County Engineer, are responsible for plan review and approval will make periodic site inspections to ensure compliance. During inspections it may be determined that other erosion control practices, not already specified on this plan, may be necessary due to unforeseen environmental conditions and/or changes in drainage patterns caused by earth-moving activity.
2. Enforcement – Several milestones are reached at the end of the development process, which will be utilized to ensure proper placement of required conservation practices per the above.
  - A. Release of Surety – No surety, all or in part, will be released until the Franklin County Engineer's office is notified by FSWCD staff that the E&S practices, as previously approved, are in place and are properly functioning.
  - B. "Progress Letter" – The "progress letter" from the Franklin County Engineer to the Franklin County Development Department (providing assurance that street construction has been sufficiently and properly completed such that commencement of house construction is appropriate) will be forwarded only after assurance is received indicating all approved E&S practices are in place and are properly functioning.
  - C. Street Completion – The transfer and acceptance of any street for public purpose will occur only after assurance is received that all approved E&S practices are in place and are properly functioning.

- D. Building Permits and Inspections – The Franklin County Development Department, in cooperation with the FSWCD, reserves the right to withhold the issuance of building permits and inspections at any time during the homebuilding phase of the project until assurance is received that all approved erosion and sediment control practices are in place and are properly functioning.
- E. The Franklin County Planning Commission, in cooperation with the Franklin County Prosecuting Attorney’s office and the FSWCD, reserve the right to pursue necessary legal actions at any time during the construction phases of the project to ensure compliance with the approved E&S control plan.

**STATEMENT OF UNDERSTANDING**

I understand and accept the responsibility to plan for and complete the required erosion and sediment control practices and hereby recognize them as an integral part of the subdivision named PARKWOOD

I will notify the FSWCD a minimum of three (3) work days prior to any land disturbance and will attend a preconstruction meeting with personnel from the FSWCD to review the implementation of the erosion control plan.

  
\_\_\_\_\_  
Signature of Subdivider/Developer

12/10/12  
Date

**M/I Homes of Central Ohio**  
\_\_\_\_\_  
Address of Subdivider/Developer

**3 Easton Oval**  
\_\_\_\_\_

**Columbus, Ohio 43219**  
\_\_\_\_\_

**(614)-418-8023**  
\_\_\_\_\_  
Telephone Number

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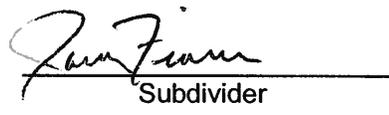
**SUBDIVIDER'S AGREEMENT - COUNTY OF FRANKLIN, OHIO**

To be signed and submitted with the Construction Plan  
NOTE: The county engineer must approve form and content of actual agreement.

This Agreement, between M/I Homes of Central Ohio the subdivider, and the County of Franklin concerning the Parkwood subdivision plat, shall set out conditions, requirements and considerations relative to the construction of required improvements and the issuance of county zoning, building and health permits for lots and reserves in the above named subdivision. This Agreement shall be binding on the subdivider(s) and his/her/their personal representatives, heirs and assigns, upon the submission and approval of the construction plan and shall be subject to the following:

- A. All improvement plans (street, drainage, storm water management, sanitary, water, erosion and sedimentation control, grading, etc.) shall be signed by the subdivider's engineer. Improvement plans approved by the county engineer, county drainage engineer, county sanitary engineer, or Franklin County Public Health shall be a part of this Agreement.
- B. Requirements and provisions of the subdivision plat and Subdivision Regulations of Franklin County, Ohio shall be a part of this Agreement.
- C. No county zoning, building or health permits shall be issued for development of lots or reserves in this subdivision until all required improvements have been properly completed to the satisfaction of the county engineer and the Franklin County Economic Development and Planning Department.
- D. The Subdivider further agrees that any violation of, or unsatisfactory compliance with, any provision, stipulation, or requirement of this Agreement, the subdivision plat, or the Subdivision Regulations of Franklin County, Ohio shall constitute a breach of contract and may subject the Subdivider and subdivision to enforcement measures such as, but not limited to: stop work orders, use of surety, forfeiture of deposited funds, moratoria on development permits, fines, revocation of approvals or permits, plat recall, etc.
- E. All work shall be performed within a \_\_\_\_\_ period from the approval date of the Final Plat. However, an extension of time may be granted if approved by the Board of Franklin County Commissioners.

  
\_\_\_\_\_  
First Witness

  
\_\_\_\_\_  
Subdivider

12-10-12  
\_\_\_\_\_  
Date

\_\_\_\_\_  
First Witness

\_\_\_\_\_  
Subdivider

\_\_\_\_\_  
Date

\_\_\_\_\_  
Franklin County Engineer

\_\_\_\_\_  
Date

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**SITE STATISTICS:**

TOTAL ACREAGE: 274.255 ACRES  
 NUMBER OF LOTS: 74  
 TYPICAL 100'x150': 7 (LOTS 1-40 AND 68-74)  
 TYPICAL 120'x120': 7 (LOTS 41-43)  
 GROSS DENSITY: 21.0 LOTS/ACRE  
 TOTAL OPEN SPACE: 53.16 ACRES (43.4%)  
 ZONING CLASSIFICATION: R250

**DEVELOPMENT STANDARDS**

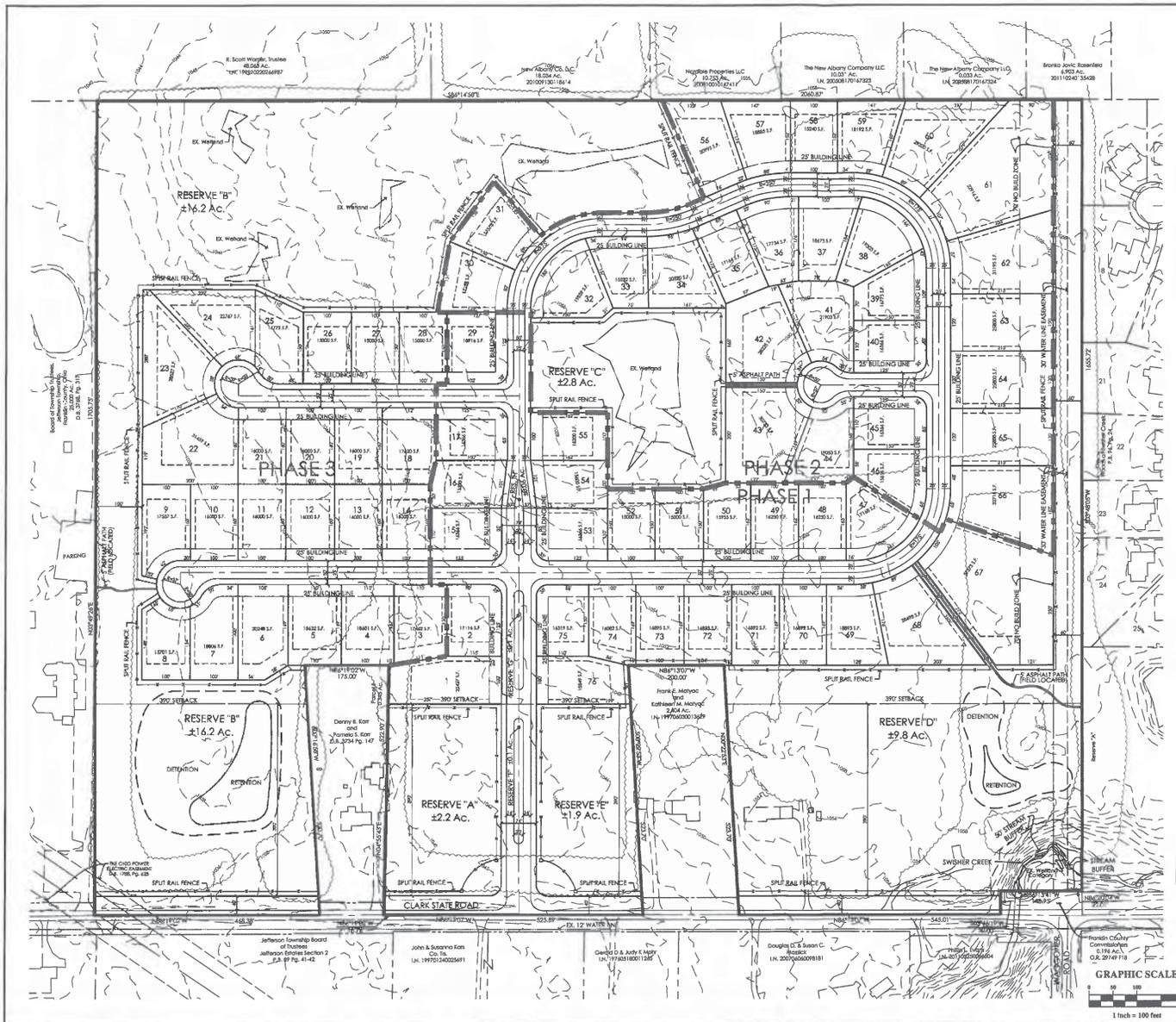
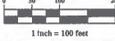
BUILDING LINE: 25 FEET  
 SIDE YARD SETBACK: 10 FEET  
 REAR YARD SETBACK: 20% TOTAL LOT DEPTH  
 MINIMUM LOT WIDTH: 100 FEET  
 MINIMUM LOT DEPTH: 150 FEET  
 MAXIMUM BUILDING HEIGHT: 35 FEET

**NOTES**

- NOTE "A":** All of Parkwood is in the Flood Hazard Zone X as shown on the Federal Emergency Management Agency Flood Insurance Rate Map, Map Number 39049C0216K, effective date June 17, 2006.
- NOTE "B":** Reserves "A" through "I" shall be owned by Jefferson Township and maintained by the Parkwood Homeowners Association as Positive Park / Open Space and Detention/Retention. Reserves "F", "G" and "H" shall be owned and maintained by the Parkwood Homeowners Association.
- NOTE "C":** All contours shown hereon are set in two foot intervals.
- NOTE "D":** The development is located in Gahanna School District.
- NOTE "E":** Pavement widths as shown hereon are from edge of pavement to edge of pavement. It does not include the curb & gutter.
- NOTE "F":** The developer shall install plastic orange construction fencing prior to the commencement of construction and a minimum two rail split rail fence after the completion of construction, which will be located along the property line within the open spaces, in order to separate the private lots from the open space. A three rail split rail fence shall be installed along Clark State Road, the entry road and on the south side of Lots 1 and 74.
- NOTE "G":** Prior to construction of the footing/foundation for the residential building to be constructed on each of the lots 1, 2, 3, 5, 6, 9-12, 21-25, 37-42 and 74-76, the builder of each building shall confer with the Franklin County Development Department for the purpose of determining if special foundation and/or basement construction techniques and/or materials are to be employed on such lot.
- NOTE "H":** As a part of the basement construction for the homes within the above mentioned lots, the developer will install inside and outside foundation drain tiles as well as a back up sump pump.
- NOTE "I":** The developer shall obtain all required environmental permits.
- NOTE "J":** STREAM BUFFER ZONE: The "Stream Buffer Zone" shall forever be restricted from development with buildings, structures, and uses and the total state of said zone shall remain undisturbed. It is the intent and purpose of the Stream Buffer Zone to restrict and forbid any activity or use which would as a result of consequence of such, impede or make more difficult the accomplishment of the purpose of which the said zone was created.

- Additional restrictions include:**
- No dumping or burning of refuse.
  - No hunting or trapping.
  - Natural resources of the zones shall remain undisturbed and no topsoil sand gravel, or rock shall be excavated, removed or graded.
  - Nothing shall be permitted to occur on the premises which would contribute to the erosion of the soil and no trees shall be cut or removed, except for the removal of such dead diseased, rotting, or decayed trees or vegetation which may be required for conservation or scenic purposes, or for reasons of public safety.
  - No private encroachment shall be permitted such as, but not limited to, planting of flowers, shrubs, garden material, etc., dumping of trash or debris, or the installation of any type of recreation or other facility or convenience.
- NOTE "K":** All Stream Buffer Zones and wetlands shall be completely within the open spaces and not a part of the lots.
- NOTE "L":** The subject site for Parkwood is owned by DSM Holdings LLC, Parcel Number 170-00019-00.
- NOTE "M":** Four foot sidewalks will be constructed within the road right-of-ways throughout the development on both sides of the street in front of the open spaces.
- NOTE "N":** Parkwood is located within the Pollution Potential Index Range from 113-125 in the following hydrogeological Settings: T46k 113, 76c10 125 as shown in the CDRR Division of Soil & Water Resources Franklin County, Ohio.
- NOTE "O":** All existing underground drain tiles within the development shall be connected to the proposed storm sewer system.
- NOTE "P":** All stormwater facilities' BMP's shall be a part of the Franklin County Ditch Maintenance Program and will be maintained by the Franklin County Engineers Office. Appropriate flood routing and drainage assessments will be provided on the final plan.
- NOTE "Q":** Phase 1 as shown hereon will be constructed in the summer of 2013 with the two remaining phases, Phase 2 and 3, to be constructed within five years subject to market conditions.
- NOTE "R":** No Build Zone shall remain free of the following structures: drives, walls, buildings and outbuildings, sheds, decks and satellite dish antennae. Nothing herein shall prohibit over lot grading and drainage facilities, utility structures and landscaping.

**GRAPHIC SCALE**



DATE	DESCRIPTION	REVISIONS

PREPARED BY: **EMHT**  
 Earth, Mechanical, Horizontal & Tilt, Inc.  
 3800 New Albany Road, Columbus, OH 43224  
 Phone: 614-774-8500 Fax: 614-774-8501  
 emht.com

PREPARED FOR: **M/I HOMES**  
 3 River Oak, Suite 100  
 Columbus, OH 43219

JEFFERSON TOWNSHIP, FRANKLIN COUNTY, OHIO  
 PRELIMINARY PLAN  
 FOR  
**PARKWOOD**  
 PRELIMINARY PLAN

Jefferson Township Board  
 Call Number: Jefferson Office Section 3  
 204 BP Pg. 41-42

John & Suzanne Kim  
 Co. Sec.  
 (614) 997-0300/0301

Charles E. Jurek & Assoc.  
 (614) 973-1800/1122

Douglas D. E. Sutton C.  
 Resident  
 (614) 200-0609/09181

Franklin County  
 Commissioners  
 0.19 A.C.  
 O.R. 29747 718

DATE	DESCRIPTION	DATE	JOB NO.

LOCATED IN:  
 QUARTER TOWNSHIPS 1 & 4, TOWNSHIP 1, RANGE 16  
 UNITED STATES MILITARY LANDS  
 TOWNSHIP OF JEFFERSON, FRANKLIN COUNTY, OHIO

Scale: 1" = 100'

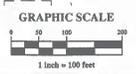
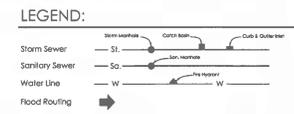
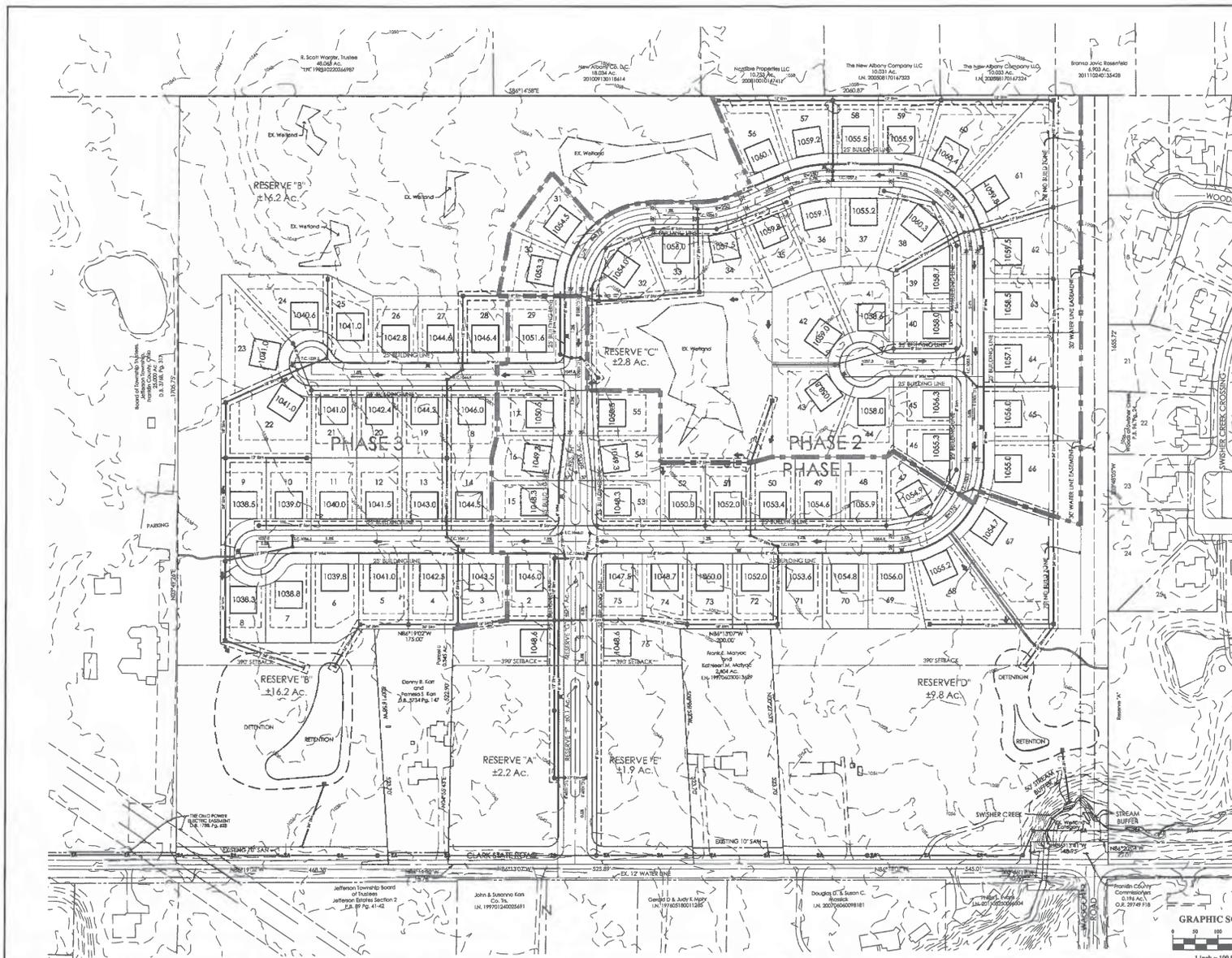
Sheet: 1/4

3/20/2012 10:07 AM C:\Users\jason\My Documents\2012\12\11\20121211\_001\_Prelim\665-PP.dwg User: jason Date: 12/11/2012 10:07 AM Plot: 665-PP.dwg  
 3/20/2012 10:07 AM C:\Users\jason\My Documents\2012\12\11\20121211\_001\_Prelim\665-PP.dwg User: jason Date: 12/11/2012 10:07 AM Plot: 665-PP.dwg

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<p>DATE DESCRIPTION REVISIONS</p>		<p>PREPARED BY: <b>EMHT</b> Evans, Albrecht, Hamilton &amp; Tibon, Inc. 5150 New Albany Road, Columbus, OH 43224 Phone: 614.774.6300 Fax: 614.774.6344 emht.com</p>	<p>PREPARED FOR: <b>MI HOMES</b> 3 Easton Oval, Suite 500 Columbia, OH 43219</p>	<p>JEFFERSON TOWNSHIP, FRANKLIN COUNTY, OHIO PRELIMINARY PLAN FOR <b>PARKWOOD</b> COMPOSITE UTILITY PLAN</p>	<p>LOCATED IN: QUARTER TOWNSHIPS 1 &amp; 4, TOWNSHIP 1, RANGE 16 UNITED STATES MILITARY LANDS TOWNSHIP OF JEFFERSON, FRANKLIN COUNTY, OHIO</p>	<p>Date DECEMBER 10, 2012</p>	<p>Job No. 2012-1216</p>
						<p>Scale 1" = 100'</p>	<p>Sheet 2/4</p>



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Franklin County Planning Department  
Franklin County, OH

665-PP

SEDIMENT AND EROSION CONTROL NOTES

MAINTENANCE: It is the Contractor's responsibility to maintain the sedimentation and erosion control features on this project. Any sediment or silt which has reduced the efficiency of a control shall be removed immediately. Should a structure or feature become damaged, the contractor shall repair or replace at no additional cost to the owner.

INSPECTIONS: The NPDES permit holder shall provide qualified personnel to conduct site inspections ensuring proper functionality of the erosion and sedimentation controls. All erosion and sedimentation controls are to be inspected prior to any seven (7) day storm event or within 24 hours of a 5" storm event or greater. Records of the site inspections shall be kept and made available to jurisdictional agencies if requested.

CONTRACTOR'S RESPONSIBILITIES: Details shown on this plan shall be constructed a minimum. Additional or alternate details may be found in the O.D.H.'s Manual "Erosion and Sediment Control". The Contractor shall be solely responsible for providing necessary and adequate measures for proper control of erosion and sediment runoff from the site along with proper maintenance and inspection in compliance with the NPDES General Permit for Storm Discharges Associated with Construction Activity.

The Contractor shall provide a schedule of operations to the owner. The schedule should include a sequence of the placement of the sedimentation and erosion control measures that provides for continuous protection of the site throughout the earth moving activities. Prior to Construction Questions in a particular area, all sedimentation and erosion control features shall be in place. Field adjustments with respect to locations and dimensions may be made by the Engineer and the Ohio EPA. The Contractor shall place inlet protection for the sedimentation control immediately after construction of the catch basins or inlets which are not tributary to a sediment basin or dam. It may become necessary to remove portions of sedimentation controls during construction to facilitate the grading operations in certain areas. However, the controls shall be replaced upon grading or during any subsequent work on the site. The Contractor shall be responsible to have the current Storm Water Pollution Prevention Plan immediately available or posted on site. The Contractor shall be responsible to ensure that off-site tracking of sediments by vehicles and equipment is minimized. All such off-site sediment shall be cleaned up daily. The Contractor shall be responsible to ensure that no silt or liquid waste is discharged into storm water runoff. Unintended sedimentation may result from soil left on site without being directed through a control practice. Concrete trucks will not be allowed to wash out or discharge surplus concrete into or along-side fire hydrants, streams, or creeks or into existing or man-made channels or water loading facilities. Concrete wash water and surplus concrete shall be confined to approved areas after solidifying; these waste materials shall be removed from the site.

TEMPORARY AND PERMANENT SEEDING

The limits of seeding and mulching are as shown within the plan. Seeding has been assumed to be 2-3" outside the work limits or the right-of-way, whichever is greater. All areas not designated to be seeded shall remain under natural ground cover. These areas disturbed outside the seeding limits shall be seeded and mulched at the Contractor's expense.

TEMPORARY SEEDING: Any area which will be left dormant (undisturbed) for more than 45 days shall be seeded with 7 days of fertilized turf, disturbed areas within 50 feet of a stream, that erode or larger, shall be established with 2 dips of fertilizer. Permanent seeding consists of seeded preparation and application of seed, fertilizer, and water. Soil test is recommended to determine proper application rate of fertilizer and if time is necessary, to determine proper application rate of fertilizer and if time is necessary.

Table with 2 columns: Application Rate, Application Rate. Rows: Fertilizer 12-12-12 (12 lb/1000 sq. ft.), Straw Mulch (2 tons/acre), Lime (300 lb/1000 sq. ft.).

PERMANENT SEEDING: Any area that is of poor grade shall be seeded with 7 days of fertilized turf. Permanent seeding consists of seeded preparation and application of seed, fertilizer, and water. Soil test is recommended to determine proper application rate of fertilizer and if time is necessary, to determine proper application rate of fertilizer and if time is necessary.

NOTE: Other approved seed species may be substituted.

TEMPORARY SEEDING

Table with 4 columns: Seeding Dates, Species, lb./1000 sq. ft., Per acre. Rows: March 1 to Date (4 bushel), August 15 (Annual Ryegrass, Perennial Ryegrass, Tall Fescue), August 16 to November 1 (Annual Ryegrass, Perennial Ryegrass, Tall Fescue).

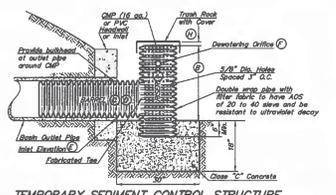
NOTE: Other approved seed species may be substituted.

PERMANENT SEEDING

Table with 3 columns: Seed Mix, Seeding Rate, Notes. Rows: Creeping Red Fescue, Kentucky Bluegrass, Perennial Ryegrass, Dwarf Fescue, Tall Fescue, Green Velvet, Tall Fescue, Perennial Ryegrass, Kentucky Bluegrass, Perennial Ryegrass, Perennial Ryegrass, Creeping Red Fescue.

NOTE: Other approved seed species may be substituted.

NOTE: All erosion and sedimentation control practices are subject to field modification in the discretion of the City of Columbus and/or the Ohio EPA.



TEMPORARY SEDIMENT CONTROL STRUCTURE

No Scale

TEMPORARY SEDIMENT BASIN SCHEDULE

Table with 10 columns: Location, Tributary Acreage, Required Basin Volume (7.5 CF/Ac), Proposed Basin Volume, Length, Width, Depth, Slope, Inlet, Outlet. Rows: West, East.

\*To be finalized during final engineering

SITE NARRATIVE

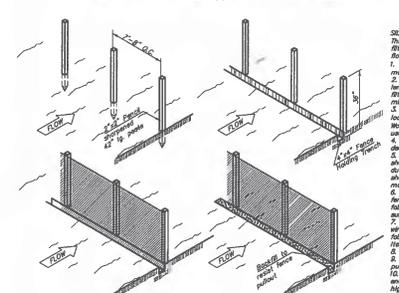
PLAN DESIGNER: DDMT, Inc. 5500 New Albany Road Columbus, OH 43244 Phone: 614-775-4500 Fax: 614-775-4600  
OWNER: 1/4 Acres of Parcel 010 Eastern Ood, Suite 500 Columbus, OH 43229 Phone: 614-416-8317 Fax: 614-416-8317  
DEVELOPER: Same  
PROJECT DESCRIPTION: The site consists of approximately 70 acres of open field and wooded area. Activities will include the construction of single-family units, street, storm sewer, sanitary sewer and water lines. 70% of the site will be disturbed.  
EXISTING SITE CONDITIONS: The site area south to an unconsolidated and towards Blount Creek  
RECEIVING STREAM: Blount Creek  
ADJACENT AREAS: The overall development is bordered to the north Single Family/Residential, to the south by State Route 104 to the Jefferson Community Park and to the west by flood of Blount Creek.  
SOILS: The soil on the site consists of Blm - Berntown silt loam, 0 to 2% slopes Blm - Berntown silt loam, 2 to 6% slopes Oa - Copley silt loam, 2 to 6% slopes Oa - Copley silt loam  
Grading Requirements: The site will be prepared of unsuitable material and will require fill over the site to bring grade up to base-most of the site will be graded to drain back onto the site. All off-site areas will be conducted through the site and storm system with excess above existing storm system with excess above existing volume being discharged through emergency overflow.  
Erosion and Sediment Measures: Erosion and sediment will be controlled by the use of inlet protection at proposed inlets, temporary sediment basins with control structures, and filter fabric fence will be constructed on the site.  
Permanent Maintenance: The site will be stabilized by the use of seeding or sodding in overland areas. All erosion control devices are to be inspected by the construction contractor daily and after significant rains. Any damaged facilities are to be replaced/repaired immediately as may be necessary.  
Construction Sequence: The contractor shall construct the sedimentation structures as shown on this sheet and about 3 prior to commencement of construction activities. Erosion control devices will be installed prior to grading, constructing the temporary sediment control basins and structures as early as possible in the construction sequence. Storm sewer will be installed with inlet protection provided at all structures. Dry off areas have been posted and seeded/soeded may the erosion control devices be removed and storm sewer pipe and inlets cleaned of all sediment before driving construction.

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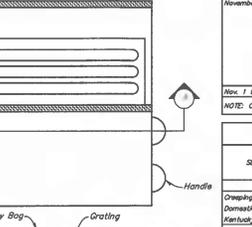
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SEDIMENT FENCE DETAIL

No Scale



DANDY BAG DETAIL

No Scale

Installation: Stand grate on end. Place Dandy Bag over grate. Flip grate over so that grate and bag are up. Pull up slack. Tuck flap in. Be sure end of grate is completely covered by bag or Dandy Bag will not fit properly. Holding handles, carefully place Dandy Bag with grate inserted into Catch Basin frame so that red dot on the top of the Dandy Bag is visible.

Maintenance: After fill has dried, remove it from the surface of Dandy Bag with broom.

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Sediment fence fabric shall be 600T, Type C Coarsest fabric or the equivalent to the following properties:

Table with 2 columns: Material Properties, Value. Rows: Maximum Tensile Strength (120 lb), Maximum Elongation At 60 Lbs (30%), Minimum Puncture Strength (40 lbs), Minimum Tear Strength (200 lb), Minimum Burst Strength (0.44 mm), Minimum Permeability (1 x 10^-3 sec^-1), Ultraviolet Exposure Strength Retention (75%).

SEDIMENT FENCE DETAIL

No Scale

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Logos for EMHT and M/I HOMES.

JEFFERSON TOWNSHIP, FRANKLIN COUNTY, OHIO  
PRELIMINARY PLAN  
FOR  
PARKWOOD  
EROSION AND SEDIMENT CONTROL DETAILS

LOCATED IN:  
QUARTER TOWNSHIPS 1 & 4, TOWNSHIP 1, RANGE 16  
UNITED STATES MILITARY LANDS  
TOWNSHIP OF JEFFERSON, FRANKLIN COUNTY, OHIO

Date: DECEMBER 10, 2012  
2012-1216

Scale: Sheet  
4/4

PRELIMINARY PLAN FOR PARKWOOD  
2012-1216



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RECEIVED

DEC 11 2012

Franklin County Planning Department  
Franklin County, OH

665-PP

**Post-Construction Water Quality  
Operation & Maintenance Plan**

**Parkwood Subdivision**

**Jefferson Township, Franklin County, Ohio**

**December, 2012**

5500 New Albany Road  
Columbus, OH 43054  
Phone: 614-775-4500  
Fax: 614-775-4805  
Toll Free: 1-888-775-EMHT

emht.com

2012-1216

Engineers

Surveyors

Planners

Scientists

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**EXHIBITS**

EXHIBIT A: Site Maintenance Map



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## **1.0 BEST MANAGEMENT PRACTICE OVERVIEW**

The following report provides inspection and maintenance procedures associated with the post-construction water quality controls for the Parkwood Subdivision located West of Waggoner Road, East of Reynoldsburg-New Albany Road in Jefferson Township, Franklin County, Ohio. The post-construction water, controls and associated inspection and maintenance procedures are required per the Ohio EPA general stormwater permit no. OHC00003 and are intended to comply with Section IV of the Franklin County Engineer's Office Stormwater Drainage Manual to assure long-term adequacy of the stormwater drainage systems.

Stormwater quality treatment and flow rate management for the Parkwood Subdivision will be addressed by managing stormwater runoff from the site by utilizing the proposed wet and dry extended detention basins located throughout the development that will be constructed for the improvements. Impervious areas within the proposed development will discharge (via the proposed storm sewer network) to the proposed basin. Wet basins are designed to give the water quality volume an approximate drawdown time of 24 hours. Dry basins are designed to give the water quality volume an approximate drawdown time of 48 hours.

Stormwater basins treat incoming stormwater runoff by physical, biological, and chemical processes. The primary removal mechanism is the gravitational settling of particulates, organic matter, metals, bacteria and organics as stormwater runoff resides in the permanent pool. Another mechanism for pollutant removal is uptake by algae and wetland plants in the permanent pool, particularly removing nutrients. Other contaminants such as hydrocarbons, are broken down and eliminated by volatilization and chemical activity. Stormwater basins are utilized to remove up to 80% of the total suspended solids load in typical urban post-development runoff when designed and maintained properly. Stormwater basins naturally collect sediment, including gravel, sand and mud, as well as other debris like litter. To maintain its capacity and function, a basin should be kept free of excessive debris, litter, and sediment.



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## **2.0 MAINTENANCE & INSPECTION PROCEDURES**

All maintenance of the proposed retention/detention basins, water quality basins, and public storm sewer infrastructure will remain the responsibility of the Developer or Home Owners Association (Developer/HOA) until such time as the Franklin County Drainage Engineer's Office assumes maintenance responsibilities. The Developer/HOA is responsible for all inspections and reporting outlined within this Manual and as per the Franklin County Stormwater Drainage Manual, Section 4.1.2 until the transfer takes place and will be responsible for all trash and debris removal, weed control and mowing of the basin area above the normal pool elevation.

Prior to the Maintenance of the storm system infrastructure being transferred to the Franklin County Engineer's Office, the build out of the subdivision shall be completed and the Developer/HOA must complete the following items:

1. Removal of the Temporary Sediment Riser within the Stormwater Retention/Detention Basins.
2. An "As-Built" survey of the Storm Sewer System must be submitted for review to the Franklin County Drainage Engineer to verify the system has been constructed per plan. The entire system includes the Basins, the Basin Outlet Control Structures and outlet pipes as well as all pipe, manholes, catch basins and headwalls associated with the storm system routing to and through the Retention/Detention Basins.
3. The basins shall be cleaned of all accumulated sediment and restored to design elevations. The storm sewer infrastructure shall be cleaned thoroughly and any required repairs must be made.
4. The basins and storm sewer system infrastructure shall be inspected by the Franklin County Drainage Engineer.
5. The property owner shall provide an Easement to the Franklin County Drainage Engineer for access and maintenance to the Detention Basins and it shall be at a minimum 20' wide in accordance with the Franklin County Stormwater Drainage Manual, Section 4.1.1. The Access route shall be provided at a maximum slope of 10' (Horiz) to 1' (Vert.) from the road right-of-way to toward the basin.

The stormwater basins and associated outlet structures along with the storm sewer pipe and structures will be inspected and maintained to ensure the stormwater system is functioning properly. Inspections and maintenance will be coordinated by the Developer/HOA and submitted to the Franklin County Drainage Engineer's Office prior to the County assuming maintenance of any storm system related infrastructure. The Developer/HOA shall ensure that inspections occur at the following instances: The basin shall be inspected within 48 hours of significant rain events ( $\geq$  0.5 inches of rain over a 24 hour period) during construction and after the first year of use following the completion of construction activities. An annual inspection frequency can be determined based upon the results of the first year inspections, but should be no less than twice per year unless otherwise noted. Guidance on the frequency of the first year maintenance activities is included in this section. A copy of each inspection log shall be sent annually by December 31<sup>st</sup> of each year to the Franklin County Drainage Engineer.



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Post-Construction Operator: **Franklin County Drainage Engineer**

Franklin County Engineer's Office  
970 Dublin Road  
Columbus, OH 43215

**Email: [jramsey@franklincountyengineer.org](mailto:jramsey@franklincountyengineer.org)**

**Phone: (614) 525-7318**

### **Inspection and Maintenance Procedures**

A report shall be prepared that summarizes the observations made during the site inspection. The reports shall additionally indicate maintenance needs. The reports are to be kept on file and a signed and dated copy of the report should be sent to the Franklin County Engineer's Office (attn. **Jim Ramsey**) on an annual basis, prior to the end of each year. Inspection reports are provided within Appendix A.

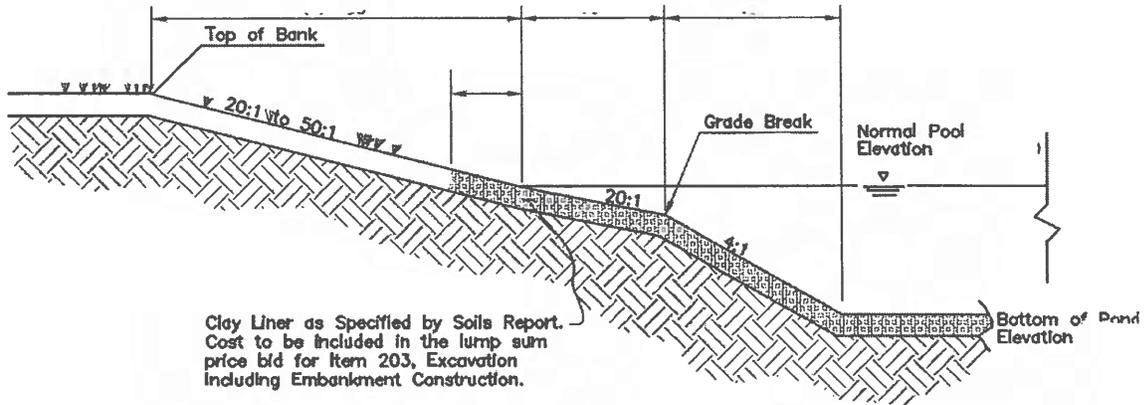
### **Outlet Structure**

The proposed grated storm sewer outlet structures will be located within the retention/detention basins as shown in the Maintenance Plan. Stormwater runoff that exceeds the calculated water quality volume is designed to overflow into these structures and to discharge via orifices to either existing storm sewer system or existing ditch or stream. Orifice controls will be located within storm sewer outlet structures. The orifice controls temporarily back-up stormwater runoff into the basins to provide stormwater detention. Preliminary Outlet structure details for each of the stormwater management features are shown following their respective inspection and maintenance guidance as may be provided on the Final Construction Plans.

### **Establishing a Maintenance Fund for Public Maintenance of Stormwater Infrastructure and BMP's**

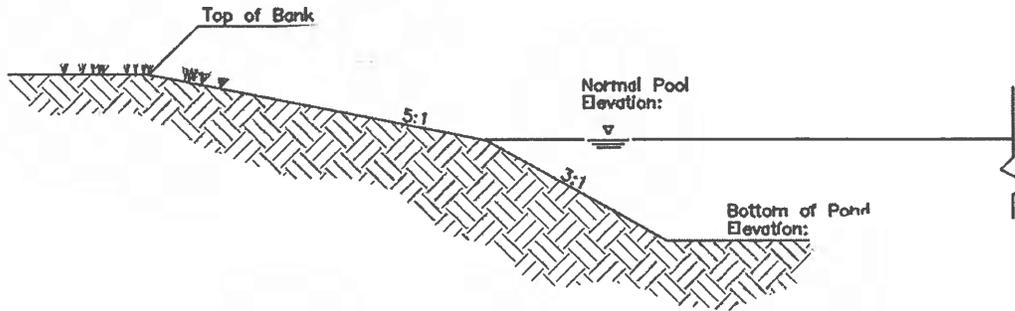
Please refer to the Franklin County Stormwater Drainage Manual, Section 4.1.5 and Section 4.1.5.1.

## WET BASIN AND DRY EXTENDED DETENTION BASIN – CROSS-SECTIONAL VIEW



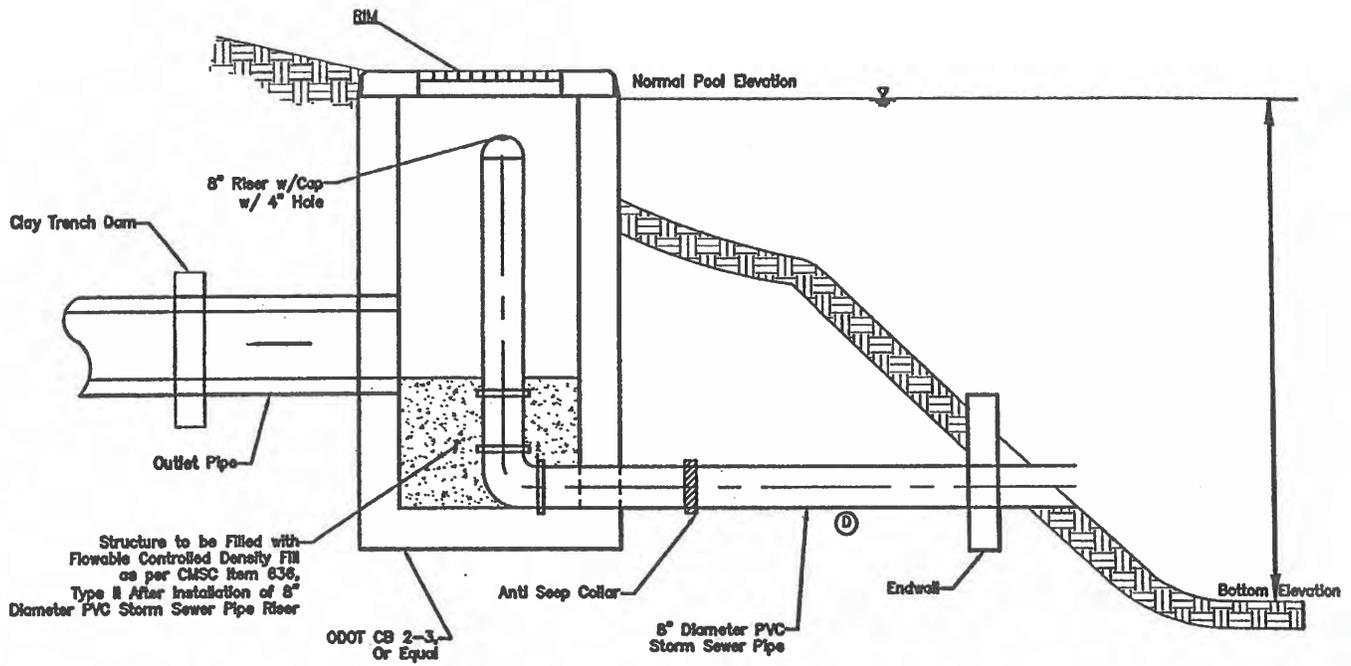
## WET POND SECTION

(No Scale)



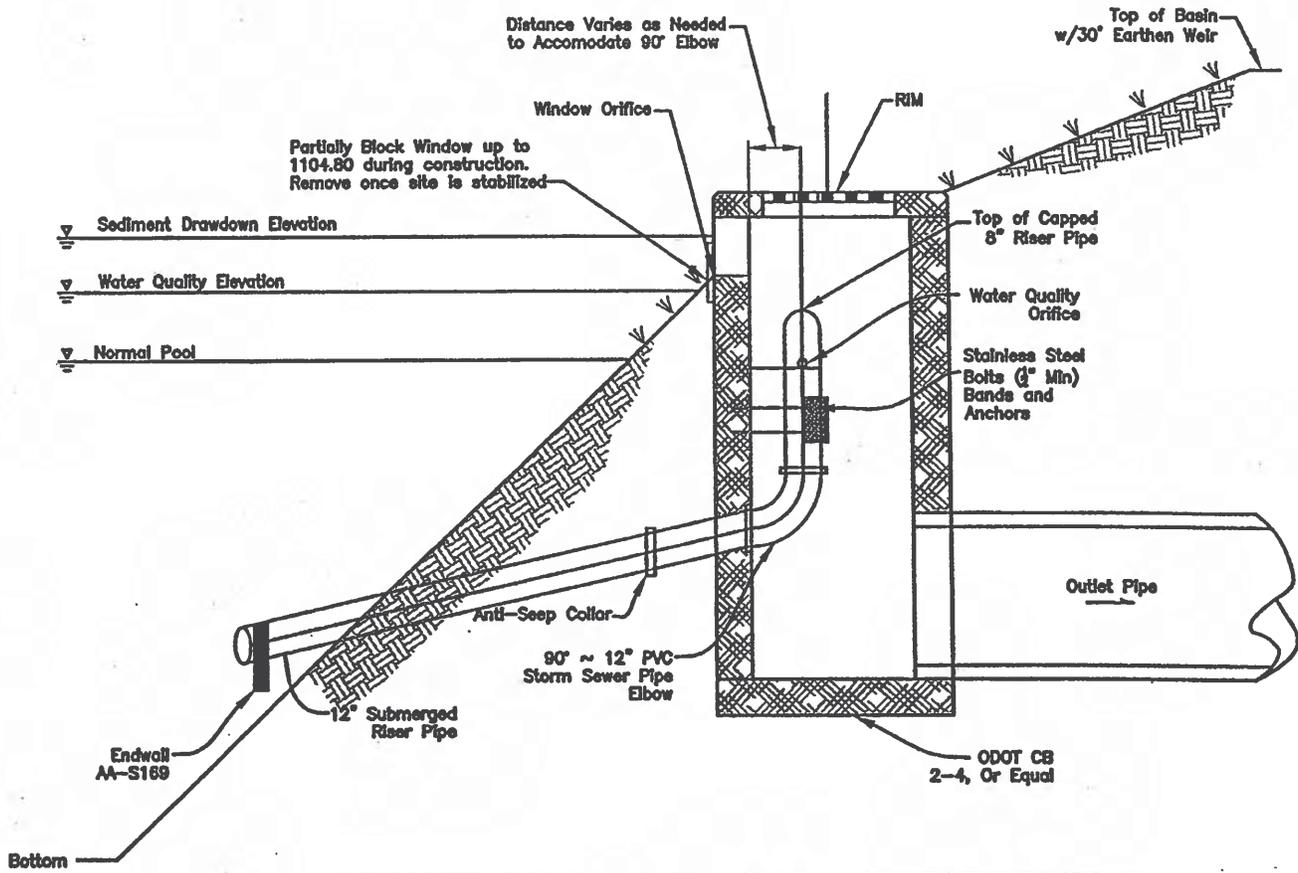
## DRY EXTENDED DETENTION BASIN SECTION

(No Scale)



## WET POND PERMANENT OUTLET STRUCTURE

(No Scale)



## DRY EXTENDED DETENTION OUTLET STRUCTURE DETAIL

(No Scale)



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## APPENDIX A:

### Inspection & Maintenance Report

## Dry Extended Detention Basin Inspection and Maintenance

Inspection Item	Maintenance Procedures	Frequency of Inspection
<b>Inlet/Outlet Structure &amp; Side Slopes</b>	<ul style="list-style-type: none"> <li>• Do not fertilize vegetation surrounding basin.</li> <li>• Remove accumulated sediment and debris from inlet and outlet structures as needed (determined by inspection).</li> <li>• Mow side slopes (all mowing by developer).</li> </ul>	Monthly
<b>Basin Embankment</b>	<ul style="list-style-type: none"> <li>• Repair undercut/eroded areas and stabilize.</li> </ul>	Every 6 months
<b>Storm Sewer System</b>	<ul style="list-style-type: none"> <li>• Remove debris from the sewer system to ensure positive flow to the basin.</li> </ul>	Every 6 months
<b>Stormwater Basin</b>	<ul style="list-style-type: none"> <li>• Inspect for damage, paying particular attention to the outlet control structure.)</li> <li>• Check for signs of eutrophic conditions (algae buildup)</li> <li>• Note signs of hydrocarbon buildup, remove appropriately.</li> <li>• Monitor sediment accumulation in the facility</li> <li>• Examine to ensure inlet and outlet devices are free of debris and are operational.</li> <li>• Inspect for invasive vegetation if wetland components included.</li> </ul>	Annually
<b>Stormwater Basin Sediment Accumulation</b>	<ul style="list-style-type: none"> <li>• Monitor sediment accumulations and remove sediment when the pool volume has become reduced significantly (25% of permanent pool volume lost) or the pond becomes eutrophic.</li> </ul>	5 to 10 years

The Developer/HOA shall be responsible for the inspection and maintenance of the stormwater basin associated outlet structure and all other maintenance procedures listed above. Inspection and maintenance that are conducted shall be documented and filed for future reviews by the Franklin County Drainage Engineer's Office. These responsibilities are for perpetuity and apply to this development or any future owners.

Stormwater Basins treat incoming stormwater runoff by physical, biological and chemical processes. The primary removal mechanism is the gravitational settling of particulates, organic matter, metals, bacteria and organics as stormwater runoff resides in the basin forebay and micropool. Another mechanism for pollutant removal is uptake by algae and wetland plants in the micropool, particularly removing nutrients. Other contaminants such as hydrocarbons are broken down and eliminated by volatilization and chemical activity. Stormwater Basins are utilized to remove up to 80% of the total suspended solids load in typical urban post-development runoff when designed and maintained properly.

Stormwater basins naturally collect sediment, including gravel, sand and mud as well as other debris like litter. To maintain its capacity and function, a basin should be kept free of excessive debris, litter, and sediment. The micropool for the proposed basin is designed to be 2.5' to 3' in depth. This design depth should be verified by the developer at completion of construction activities and every 3 - 7 years to ensure that the basin will continue to function properly. Property owners or contracted personnel should position themselves in the middle of the stormwater basin. Several measurements around center of the stormwater basin shall be taken using a Stadia Rod to determine the depth of the micropool. Once the depth of the micropool reaches 1.85' feet or less, the accumulated sediment shall be excavated to restore the micropool/forebay depth to the original design depth. The micropool is to be temporarily drained/pumped down so that the accumulated sediment can be removed. Sediment excavated from micropool is required to be tested to determine where to appropriately dispose of the material offsite. Sediment removed from the micropool should be stored properly until disposal to ensure no exposure to stormwater runoff and properly disposed or per local guidelines.

**Inspection Report**  
**Dry Extended Detention Basin**

<b>Facility Name and Address</b>	
<b>Date of Inspection</b>	
<b>Inspector Name and Phone Number</b>	
<b>Best Management Practice (BMP) Inspected</b>	

**Inspection References:**

*ODNR Manual, Rainwater and Land Development, Latest Edition*

*Approved Site Improvement Construction and Stormwater Management Plans*

**Instructions:**

One inspection report shall be prepared for each BMP. Identify the BMP inspected as indicated on the Site Plan if multiple BMPs are present on-site. Please sign and date the inspection report and return the original to the Franklin County Drainage Engineer. Please provide pictures taken during the inspection and attach them to the report.

## Operation and Maintenance Inspection Report for Stormwater Basins and Wetlands (\*)

**Inspector Name** \_\_\_\_\_ **Project Location (inc. SP coordinates):** \_\_\_\_\_  
**Inspection Date/Time** \_\_\_\_\_ \_\_\_\_\_  
**Stormwater Pond:** \_\_\_\_\_ **Watershed** \_\_\_\_\_  
     **Normal Pool** \_\_\_\_\_ **Owner Name** \_\_\_\_\_  
     **Normal Dry** \_\_\_\_\_

Inspection Items	Checked? Yes/No	Maintenance Needed? Yes/No	Inspection Frequency	Comments
<b>Pond Components</b>				
<b>1. Embankment and Emergency Spillway</b>				
a. Adequate vegetation and ground cover			A	
b. Embankment erosion			SA	
c. Animal burrows			A	
d. Unauthorized plantings			A	
e. Cracking, bulging, or sliding of dam				
i. Upstream face			A	
ii. Downstream face			A	
iii. At or beyond toe				
Upstream			A	
Downstream			A	
iv. Emergency spillway			A	
f. Pond, toe & chimney drains clear and functioning			A	
g. Leaks on downstream face			A	
h. Abutment protection or riprap failures			A	
i. Visual settlement or horizontal misalignment of top of dam				
j. Emergency spillway clear of debris			A	
k. Other (specify)			A	
<b>2. Riser and principal spillway</b>				
Type: Reinforced concrete _____				
Corrugated pipe _____				
Masonry _____				
a. Low flow orifice obstructed			A	
b. Low flow trash rack				
i. Debris removal necessary			A	
ii. Corrosion control			A	

Inspection Items	Checked? Yes/No	Maintenance Needed? Yes/No	Inspection Frequency	Comments
c. Weir trash rack				
i. Debris removal necessary			A	
ii. Corrosion control			A	
d. Excessive sediment accumulation inside riser			A	
e. Concrete/Masonry condition Riser and barrels				
i. Cracks or displacement			A	
ii. Minor spalling (<1")			A	
iii. Major spalling (rebars exposed)			A	
iv. Joint failures			A	
v. Water tightness			A	
f. Metal pipe condition			A	
g. Control valve				
i. Operational/exercised			A	
ii. Chained and locked			A	
h. Pond drain valve			A	
i. Operational/exercised			A	
ii. Chained and locked			A	
i. Outfall channels flowing			A	
j. Other (specify)			A	
3. Permanent pool (wet ponds)				
a. Undesirable vegetative growth			M	
b. Floating or floatable debris removal required			M	
c. Visible pollution			M	
d. High water marks			M	
e. Shoreline problems			M	
f. Sediment accumulation			M	
g. Other (specify)			M	
4. Sediment forebays				
a. Sedimentation noted			M	
b. Sediment removal when depth <20% design depth			M	
5. Dry pond areas				
a. Vegetation adequate			M	
b. Undesirable vegetative growth			M	
c. Undesirable woody vegetation			M	
d. Low flow channels clear of obstructions			M	
e. Standing water or wet spots			M, S	
f. Sediment and/or trash accumulation			M	
g. Other (specify)			M	

inspection items	Checked? Yes/No	Maintenance Needed? Yes/No	Inspection Frequency	Comments
6. Condition of outfalls into pond				
a. Riprap failures			A,S	
b. Slope erosion			A,S	
c. Storm drain pipes			A,S	
d. Endwalls/headwalls			A,S	
e. Other (specify)			A,S	
7. Other				
a. Encroachments on ponds or easement area			M	
b. Complaints from residents (describe on back)			M	
c. Aesthetics				
i. Grass height			M	
ii. Graffiti removal necessary			M	
iii. Other (specify)			M	
d. Any public hazards (specify)			M	
e. Maintenance access			M	
f. Monitor mosquito larvae presence (seasonal)			M	
8. Constructed wetland areas				
a. Vegetation healthy and growing (50% surface area coverage)			M	
b. Evidence of invasive species			M	
c. Excessive sedimentation in wetland area			M	

Inspection Frequency Key A = Annual, SA = Semi-annual, M = Monthly, S = After major storm

(\*) Source: Georgia Stormwater Management Manual – Adapted from Watershed Management Institute, Inc. (1997)

Summary

1. Inspectors Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Overall condition of Facility (Check one)

- Acceptable  
 Unacceptable

2. Dates any maintenance must be completed by: \_\_\_\_\_  
\_\_\_\_\_

CERTIFICATION STATEMENT

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION ON THIS FORM AND BELIEVE THE INFORMATION IS TRUE, ACCURATE AND COMPLETE.

\_\_\_\_\_  
Authorized Representative Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date



## Wet Basin Inspection and Maintenance

Inspection Item	Maintenance Procedures	Frequency of Inspection
<b>Inlet/Outlet Structure &amp; Side Slopes</b>	<ul style="list-style-type: none"> <li>• Do not fertilize vegetation surrounding basin.</li> <li>• Remove accumulated sediment and debris from inlet and outlet structures as needed (determined by inspection).</li> <li>• Mow side slopes (all mowing by developer).</li> </ul>	Monthly
<b>Basin Embankment</b>	<ul style="list-style-type: none"> <li>• Repair undercut/eroded areas and stabilize.</li> </ul>	As Needed
<b>Storm Sewer System</b>	<ul style="list-style-type: none"> <li>• Remove debris from the sewer system to ensure positive flow to the basin.</li> </ul>	As Needed
<b>Stormwater Basin</b>	<ul style="list-style-type: none"> <li>• Inspect for damage, paying particular attention to the outlet control structure.)</li> <li>• Check for signs of eutrophic conditions (algae buildup)</li> <li>• Note signs of hydrocarbon buildup, remove appropriately.</li> <li>• Monitor sediment accumulation in the facility</li> <li>• Examine to ensure inlet and outlet devices are free of debris and are operational.</li> <li>• Inspect for invasive vegetation if wetland components included.</li> </ul>	Annually
<b>Stormwater Basin Sediment Accumulation</b>	<ul style="list-style-type: none"> <li>• Monitor sediment accumulations and remove sediment when the pool volume has become reduced significant (25% of permanent pool volume lost) or the pond becomes eutrophic.</li> </ul>	5 to 10 years

The Developer/HOA shall be responsible for the inspection and maintenance of the stormwater basin associated outlet structure and all other maintenance procedures listed above. Inspection and maintenance that are conducted shall be documented and filed for future reviews by the Franklin County Drainage Engineer's Office. These responsibilities are for perpetuity and apply to this development or any future owners.

Stormwater Basins treat incoming stormwater runoff by physical, biological and chemical processes. The primary removal mechanism is the gravitational settling of particulates, organic matter, metals, bacteria and organics as stormwater runoff resides in the basin. Another mechanism for pollutant removal is uptake by algae and wetland plants in the wet basin permanent pool, particularly removing nutrients. Other contaminants such as hydrocarbons are broken down and eliminated by volatilization and chemical activity. Stormwater Basins are utilized to remove up to 80% of the total suspended solids load in typical urban post-development runoff when designed and maintained properly.

Stormwater basins naturally collect sediment, including gravel, sand and mud as well as other debris like litter. To maintain its capacity and function, a basin should be kept free of excessive debris, litter, and sediment. The permanent pool for the proposed basin is designed to be 10.0' in depth. This design depth should be verified by the developer at completion of construction activities and every 5-10 years to ensure that the basin will continue to function properly. Property owners or contracted personnel should use a boat, canoe, kayak or similar means to position themselves in the middle of the stormwater basin. Several measurements around center of the stormwater basin shall be taken using a Stadia Rod to determine the depth of the permanent pool. Measurements taken when basin water level is at N.P. Elevation (min. 72 hours after rain event). Once the depth of the stormwater basin reaches four feet or less, the accumulated sediment shall be excavated to restore the permanent pool depth to the original design depth. The stormwater basin is to be temporarily drained/pumped down so that the accumulated sediment can be removed. Sediment excavated from stormwater basin is required to be tested to determine where to appropriately dispose of the material offsite. Sediment removed from the stormwater basin should be stored properly until disposal to ensure no exposure to stormwater runoff and properly disposed of per local guidelines.

**Inspection Report**  
**Wet Basin**

<b>Facility Name and Address</b>	
<b>Date of Inspection</b>	
<b>Inspector Name and Phone Number</b>	
<b>Best Management Practice (BMP) Inspected</b>	

**Inspection References:**

*ODNR Manual, Rainwater and Land Development, Latest Edition*

*Approved Site Improvement Construction and Stormwater Management Plans*

**Instructions:**

One inspection report shall be prepared for each BMP. Identify the BMP inspected as indicated on the Site Plan if multiple BMPs are present on-site. Please sign and date the inspection report and return the original to the Franklin County Drainage Engineer's Office. Please provide pictures taken during the inspection and attach them to the report.

~~Operation and Maintenance Inspection Report for~~  
**Stormwater Basins and Wetlands (\*)**

Project Location (inc. SP coordinates): \_\_\_\_\_

Inspector Name \_\_\_\_\_

Inspection Date/Time \_\_\_\_\_

Stormwater Pond: \_\_\_\_\_

Watershed \_\_\_\_\_

Normal Pool \_\_\_\_\_

Owner Name \_\_\_\_\_

Normal Dry \_\_\_\_\_

Inspection Items	Checked? Yes/No	Maintenance Needed? Yes/No	Inspection Frequency	Comments
<b>Pond Components</b>				
<b>1. Embankment and Emergency Spillway</b>				
a. Adequate vegetation and ground cover			A	
b. Embankment erosion			SA	
c. Animal burrows			A	
d. Unauthorized plantings			A	
e. Cracking, bulging, or sliding of dam				
i. Upstream face			A	
ii. Downstream face			A	
iii. At or beyond toe				
Upstream			A	
Downstream			A	
iv. Emergency spillway			A	
f. Pond, toe & chimney drains clear and functioning			A	
g. Leaks on downstream face			A	
h. Abutment protection or riprap failures			A	
i. Visual settlement or horizontal misalignment of top of dam				
j. Emergency spillway clear of debris			A	
k. Other (specify)			A	
<b>2. Riser and Inlet/Outlet</b>				
Type: Reinforced concrete _____				
Corrugated pipe _____				
Masonry _____				
a. Low flow orifice obstructed			A	
b. Low flow trash rack				
i. Debris removal necessary			A	
ii. Corrosion control			A	

Inspection Items	Checked? Yes/No	Maintenance Needed? Yes/No	Inspection Frequency	Comments
c. Weir trash rack				
i. Debris removal necessary			A	
ii. Corrosion control			A	
d. Excessive sediment accumulation inside riser			A	
e. Concrete/Masonry condition Riser and barrels				
i. Cracks or displacement			A	
ii. Minor spalling (<1")			A	
iii. Major spalling (rebars exposed)			A	
iv. Joint failures			A	
v. Water tightness			A	
f. Metal pipe condition			A	
g. Control valve				
i. Operational/exercised			A	
ii. Chained and locked			A	
h. Pond drain valve			A	
i. Operational/exercised			A	
ii. Chained and locked			A	
i. Outfall channels flowing			A	
j. Other (specify)			A	
2. Permanent pool (eye ponds)				
a. Undesirable vegetative growth			M	
b. Floating or floatable debris removal required			M	
c. Visible pollution			M	
d. High water marks			M	
e. Shoreline problems			M	
f. Sediment accumulation			M	
g. Other (specify)			M	
4. Sediment forebays				
a. Sedimentation noted			M	
b. Sediment removal when depth <20% design depth			M	
5. Dry ponds				
a. Vegetation adequate			M	
b. Undesirable vegetative growth			M	
c. Undesirable woody vegetation			M	
d. Low flow channels clear of obstructions			M	
e. Standing water or wet spots			M, S	
f. Sediment and/or trash accumulation			M	
g. Other (specify)			M	

	Checked? Yes/No	Maintenance Needed? Yes/No	Inspection Frequency	Comments
<b>6. Condition of outfalls into pond</b>				
a. Riprap failures			A,S	
b. Slope erosion			A,S	
c. Storm drain pipes			A,S	
d. Endwalls/headwalls			A,S	
e. Other (specify)			A,S	
<b>7. Other</b>				
a. Encroachments on ponds or easement area			M	
b. Complaints from residents (describe on back)			M	
c. Aesthetics				
i. Grass height			M	
ii. Graffiti removal necessary			M	
iii. Other (specify)			M	
d. Any public hazards (specify)			M	
e. Maintenance access			M	
f. Monitor mosquito larvae presence (seasonal)			M	
<b>8. Constructed wetland areas</b>				
a. Vegetation healthy and growing (50% surface area coverage)			M	
b. Evidence of invasive species			M	
c. Excessive sedimentation in wetland area			M	

Inspection Frequency Key A = Annual, SA = Semi-annual, M = Monthly, S = After major storm

(\*) Source: Georgia Stormwater Management Manual – Adapted from Watershed Management Institute, Inc. (1997)

Summary

1. Inspectors Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Overall condition of Facility (Check one)

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 Unacceptable

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\_\_\_\_\_

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\_\_\_\_\_  
Authorized Representative Signature

\_\_\_\_\_  
Title

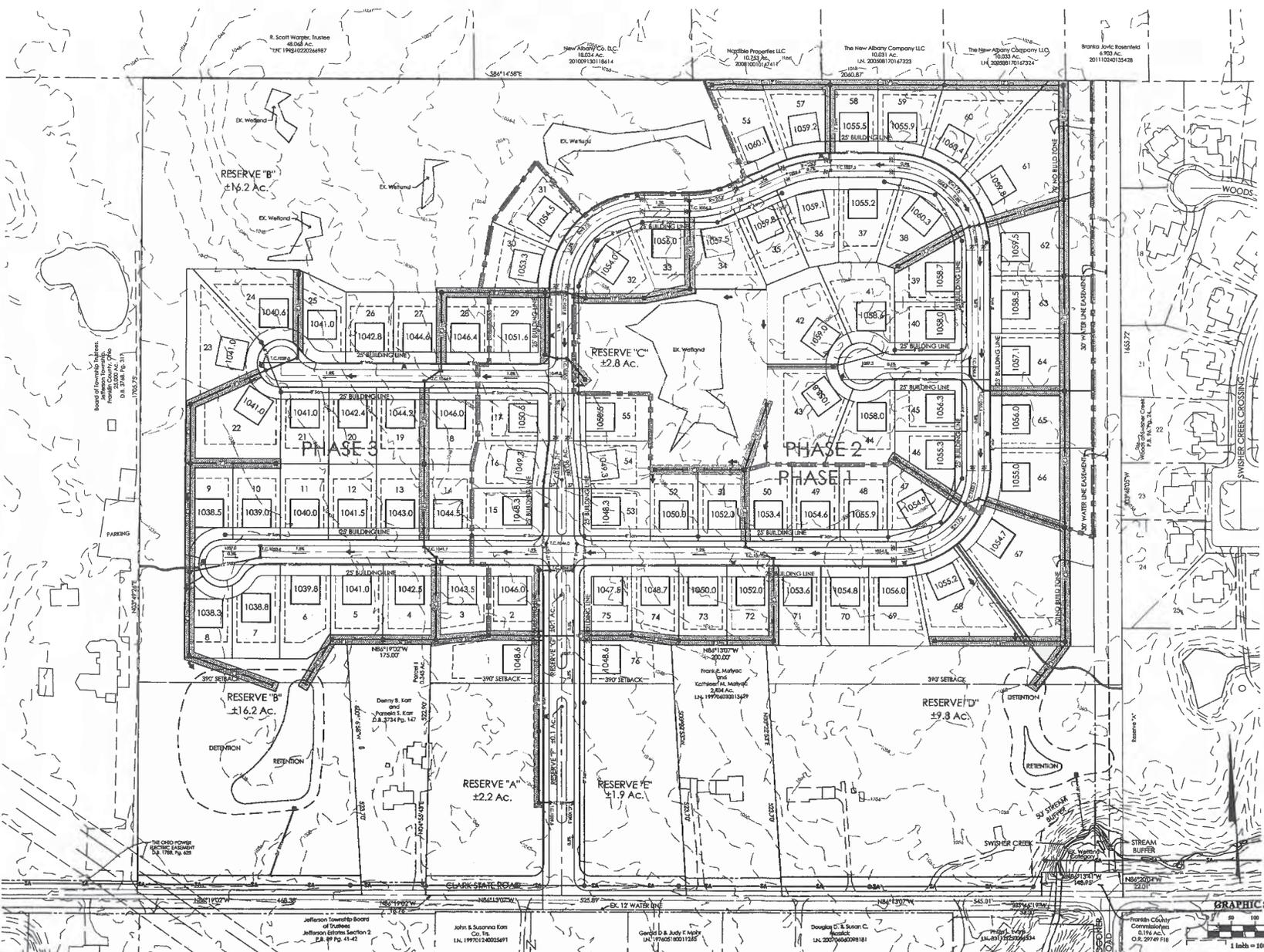
\_\_\_\_\_  
Date





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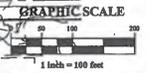
**EXHIBIT A:**  
**Maintenance Plan**



**LEGEND:**

- Storm Sewer: S1, S2, S3, S4
- Sanitary Sewer: Sa
- Water Line: W
- Retention/Deflection Outlet Structure: [Symbol]
- Flood Routing: [Symbol]
- Access and Maintenance Easement for Storm Sewers and Retention/Deflection Basins: [Symbol]

**Note:** The Access and Maintenance Easement Around the Proposed R/D Basins Shall be 20' Around Entire Perimeter or 100'-yr. Detention Limits (Whichever)



DATE	DESCRIPTION

JEFFERSON TOWNSHIP BOARD OF TOWNSHIP  
JEFFERSON ESTATES SECTION 2  
P.L. 89 Pp. 41-42

Prepared by: **EMHT**  
Dennis, McWhorter, Hambleton & Blinn, Inc.  
Engineers • Surveyors • Planners • Scientists  
6300 New Albany Road, Columbus, OH 43244  
Phone: 614.778.4500 • Toll Free: 888.713.5348  
emht.com

JEFFERSON TOWNSHIP, FRANKLIN COUNTY, OHIO  
PRELIMINARY PLAN  
FOR  
**PARKWOOD**  
POST CONSTRUCTION SITE MAINTENANCE PLAN

LOCATED IN:  
QUARTER TOWNSHIPS 1 & 4, TOWNSHIP 14, RANGE 16  
UNITED STATES MILITARY LANDS  
TOWNSHIP OF JEFFERSON, FRANKLIN COUNTY, OHIO

Date	DECEMBER 10, 2012	Job No.	2012-1216
Scale	1" = 100'	Sheet	1/1



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Franklin County Planning Department  
Franklin County, OH

665-PP

**CLARK STATE ROAD  
INVESTIGATION OF WATERS**

**The New Albany Company**

**July 27, 2012**

5500 New Albany Road  
Columbus, OH 43054  
Phone: 614-775-4500  
Fax: 614-775-4802  
Toll Free: 1-888-775-EMHT

emht.com

2012-1088

Engineers

Surveyors

Planners

Scientists



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### APPENDICES

<b>APPENDIX A</b>	<b>Wetland Dataforms</b>
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### EXHIBITS

<b>Exhibit 1</b>	<b>Area Location Map</b>
<b>Exhibit 2</b>	<b>USGS Topographic Map</b>
<b>Exhibit 3</b>	<b>Soil Survey of Union County</b>
<b>Exhibit 4</b>	<b>Flood Insurance Rate Map</b>
<b>Exhibit 5</b>	<b>National Wetland Inventory Map</b>
<b>Exhibit 6</b>	<b>Delineation Map</b>

### PHOTOGRAPHS



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## 1.0 INTRODUCTION

A routine delineation of Waters of the United States, including streams and wetlands, has been conducted and a report prepared by EMH&T for the approximately 76 acre Clark State Road Site. The site is located northwest of the intersection between Clark State Road and Wagner Road in Jefferson Township, Franklin County, Ohio. This study was performed at the request of and is for the exclusive use of the New Albany Company (NACO). An official Jurisdictional Determination (JD) is warranted for this project, since the site contains potentially isolated wetlands. The site also contains a portion of Swisher Creek and a potentially jurisdictional wetland abutting Swisher Creek.

*Potential wetlands located on non-agricultural lands are identified using the 1987 Wetland Delineation Manual (Environmental Laboratory, 1987) for confirmation by the U.S. Army Corps of Engineers (USACE). Impacts to waters and wetlands are regulated by the USACE and the U.S. Environmental Protection Agency (EPA) through Section 404 of the Clean Water Act (33 U.S.C. 1344). In addition, prior to federal authorization for impacts to waters or wetlands, certification must first be obtained from the State as defined in Section 401 of the Clean Water Act (33 U.S.C. 1341). Waters of the United States incorporates coastal waters, navigable inland waters; such as lakes, rivers and streams, tributaries to navigable waters and associated adjacent wetlands, and isolated lakes, wetlands, and intermittent streams (Environmental Laboratory, 1987).*

Potential Waters of the United States, including streams and wetlands, can be identified and delineated in accordance with the June 26, 2008 Regulatory Guidance Letter No. 08-02 issued by the USACE, provided all the wetlands or streams on the site are jurisdictional. This letter was issued by the agency in order to allow the USACE to issue a Preliminary Jurisdictional Determination (JD) when requested by the applicant. This allows the landowner to move ahead expeditiously to obtain a USACE permit when it is in his or her best interest to do so. When a Preliminary JD is used, all waters and wetlands that would be affected in any way by the permitted activity on the site are treated as if they are jurisdictional Waters of the United States. An applicant can request a formal JD if it becomes necessary at a later time. Because isolated wetlands are not federally jurisdictional, they cannot be verified using a Preliminary-JD and must go through the formal JD process described in the following paragraph.

When necessary, potential Waters of the United States, including wetlands, can be identified and delineated in accordance with the June 5, 2007 Regulatory Guidance Letter No. 07-01 issued by the USACE following the U.S. Supreme Court Decision *Rapanos vs. United States*. This letter was issued by the agency in order to provide a consistent national approach for making, documenting, and approving jurisdictional determinations (JDs) and making that information available to the public. The USACE has the authority to permit work and the placement of fill in: navigable Waters of the United States under Sections 9 and 10 of the Rivers and Harbors Act (RHA) of 1899; all those waters that are subject to the ebb and flow of the tide and/or are, presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce; and federally jurisdictional waters under Section 404 of the Clean Water Act (CWA). Under the June 5, 2007 Regulatory Guidance Letter, the CWA jurisdiction covers: traditional navigable waters; wetlands adjacent to traditional navigable waters; non-navigable tributaries of traditional navigable waters that are relatively permanent (tributaries that flow



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year round or have continuous flow at least seasonally [3 months]); and wetlands that directly abut such relatively permanent waters. The CWA jurisdiction also covers non-relatively permanent waters (non-navigable tributaries that do not typically flow year round or have continuous flow at least seasonally [3 months]), wetlands adjacent to non-relatively permanent waters and wetlands adjacent to but not directly abutting relatively permanent waters when a fact-specific analysis determines these waters have a significant nexus with a traditional navigable water. A significant nexus determination must be done in order to prove a non-relatively permanent water has more than an insubstantial or speculative effect on the chemical, physical and/or biological integrity of a downstream traditionally navigable water (USACE, 2007).

Field investigations were conducted for the site originally in December, 2005 by EMH&T. A delineation report dated January 16, 2006 was submitted to the USACE, but was never verified. In July, 2012, EMH&T re-evaluated the wetlands in the field. The location and extent of potential jurisdictional waters are summarized in the following sections. The boundaries identified by EMH&T are potential, as only the USACE has the final authority to determine whether a wetland or water is jurisdictional or isolated.

## **2.0 LITERATURE REVIEW**

A review was made of available topographic maps, soils maps, and wetland inventory maps. This information was used to determine site topography and soil types present. It was also used to determine if wetlands had previously been mapped for either site and if any portions of the sites were located within mapped floodways or floodplains.

### **2.1 Site Description**

As shown on Exhibit 1, the site is located northwest of the intersection between Clark State Road and Wagner Road in Jefferson Township, Franklin County, Ohio. The site consists of active agricultural fields, woodlots, an overgrown field, and a stream corridor.

### **2.2 Topographic Features**

As shown on Exhibit 2, the site is between the approximate elevations of 1040' and 1060' (National Geodetic Vertical Datum), according to the USGS 7.5' Series *New Albany, Ohio* Quadrangle (USGS, Photorevised 1982). No marsh symbols or open water areas were indicated on the site. A drainageway was indicated on the southeast corner of the site.

### **2.3 Mapped Soils**

A hydric soil is a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (USDA-SCS, 1985). As shown on Exhibit 3, the *Soil Survey of Franklin County, Ohio*, the site contains four soil types (USDA-SCS, 1980). The mapped soils are listed in Table 1 along with their hydric status. Pewamo silty clay loam and Condit silt loam are listed as hydric soils on the



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site. No marsh symbols or open water features are mapped on the site. A drainageway was indicated on the southeast corner of the site.

**TABLE 1**  
**Hydric Status of Onsite Soils**

Mapped Soil Unit	Inclusions	Hydric	Non-Hydric	Location of Hydric Inclusions
Bennington silt loam with 0-2 percent slopes (BeA)	Pewamo	N	Y	Depressions
Bennington silt loam with 2-6 percent slopes (BeB)	Pewamo	N	Y	Depressions, Ground Moraines
Condit silt loam (Cn)	-	Y	N	Ground Moraines
Pewamo silty clay loam (Pm)	-	Y	N	Depressions

## 2.4 Hydrologic Conditions

As shown on Exhibit 4, the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) was reviewed for the site (FEMA, 2008). The entire site lies within Zone X (unshaded), which are areas mapped outside the 500-year floodplain. One stream, Swisher Creek, flows through the southeastern corner of the site.

As shown on Exhibit 5, the United States Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI) Map for the *New Albany, Ohio* quadrangle was reviewed for the site (USFWS, 1995). No wetland features were mapped on the site. One Palustrine, Emergent, Seasonally Flooded (PEMC) feature was mapped just offsite to the east.

## 3.0 INVESTIGATIVE METHODOLOGY

According to the Federal Register (1980; 1982), wetlands are defined as *Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.* Under normal site conditions, all three indicators of jurisdictional wetlands including the presence of hydrophytic macrophytes, hydric soils and certain hydrologic indicators must be identified to meet the criteria for a jurisdictional wetland (Environmental Laboratory, 1987).

EMHT conducted a field investigation of the site on December 30, 2005 to determine the location and extent of potential Waters of the United States, including streams and wetlands. Areas identified as potential Waters of the United States and areas that exhibited all three indicators of potential jurisdictional wetlands were noted. Identification of potential jurisdictional wetlands required characterization of plant community types, identification of hydric soils, and hydrologic indicators for each community type. All potential wetlands were delineated in the field, marked with flagging tape, and field surveyed using a hand-held Global Positioning System (GPS). EMHT re-evaluated the locations of the wetlands on the site on July 11, 2012 and July



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12, 2012. EMH&T also updated the datasheets in accordance with the Midwest Regional Supplement to the Delineation Manual.

For all potential wetland areas, dominant species in the tree, sapling, shrub, woody vine and herb layers were determined in accordance with the 1987 Wetlands Delineation Manual and the Midwest Regional Supplement Delineation Manual. Recorded vegetative data consisted of herbs with the greatest percentage of aerial cover within 5' of the plot center. Within a 30' radius of the plot center, saplings and shrubs with the greatest height, trees with the largest relative basal area and woody vines with the greatest number of stems were recorded. Species within each of these layers were listed on data forms.

Dominance was determined for each stratum individually. Dominant species included those that comprised 50 percent of the total dominance measure for a stratum, plus any additional species comprising 20 percent or more of the total dominance measure of a stratum. Hydrophytic vegetation was determined to be present when more than 50 percent of the dominants in a sample area were listed as facultative (FAC), facultative wetland (FACW) or obligate wetland (OBL) plants according to Reed (1988).

Soil data were collected by digging a test pit to determine the presence of hydric soil. Due to dry summer conditions, the soil pit could only be dug to a depth of 4 inches. Soil matrix and mottle colors were identified using a Munsell Soil Color Chart (Macbeth, Revised 1994). Evidence of any hydric soil characteristics and evidence of the presence of wetland hydrology were also recorded.

The boundaries of areas in which all three wetland criteria were met, identified and measured in the field. Points at which dominant vegetation species changed from wetland to upland, where soils changed from hydric to non-hydric, or where indicators of wetland hydrology were no longer observed were noted. The characteristics of each community type were recorded on dataforms and sample points were chosen to represent both an identified potential wetland and its surrounding upland community.

## **4.0 DELINEATION INVESTIGATION RESULTS**

### **4.1 Potentially Jurisdictional Waters**

The site consists of active agricultural fields, woodlots, an overgrown field, and a stream corridor. Five potentially isolated wetlands, one potentially jurisdictional wetland, and one jurisdictional stream are located on the site. Table 2 summarizes these features. The location and extent of potential waters identified during the field investigation are shown on Exhibit 6. Copies of delineation dataforms are located in Appendix A. Pictures of the wetlands and Swisher Creek are included in the Photographs section of this document.



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**TABLE 2**  
**Potentially Jurisdictional Streams and Wetlands**

Feature Name	Classification	On-Site Potentially Isolated Wetlands (acres)	On-Site Potentially Jurisdictional Wetlands (acres)	Approximate On-Site Stream Length (linear feet)
Swisher Creek	Perennial	---	---	275
-	-	-	-	-
Wetland A	Forested	0.09	---	---
Wetland B	Forested	0.07	---	---
Wetland C	Forested	0.05	---	---
Wetland D	Forested	0.79	---	---
Wetland E	Forested	0.32	---	---
Wetland F	Herbaceous	---	0.07	---
<b>Total</b>	-	<b>1.32</b>	<b>0.07</b>	<b>275</b>

Swisher Creek, a jurisdictional perennial stream, is located in the southeastern corner of the site. The stream channel flows across the property for approximately 275 linear feet and is approximately 6 feet wide. Wetland F was located abutting Swisher Creek and is therefore potentially jurisdictional. Wetlands A-E are scattered throughout the forested portion of the site. These five wetland features were located within closed depressions on the landscape and did not have a connection to a Water of the United States. These wetlands are therefore potentially isolated. No other potential wetlands were observed on the site. The boundaries of all features are approximate until the delineation is verified by the United States Army Corps of Engineers (USACE).

**TABLE 3**  
**Potential Jurisdictional Classification of On Site Surface Water Features**

Name	Traditionally Navigable Water (TNW)	Relatively Permanent Water (RPW)	Wetlands abutting a RPW	Wetlands adjacent to a RPW or non-RPW	Non-RPWs	Isolated Wetlands
Swisher Creek	---	Y	---	---	---	---
---	---	---	---	---	---	---
---	---	---	---	---	---	---
Wetland A	---	---	---	---	---	Y
Wetland B	---	---	---	---	---	Y
Wetland C	---	---	---	---	---	Y
Wetland D	---	---	---	---	---	Y
Wetland E	---	---	---	---	---	Y
Wetland F	---	---	Y	---	---	---



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## 4.2 Non-Jurisdictional Waters

Two other wetlands were originally delineated in December, 2005 by EMH&T in an active agricultural field on the western portion of the site. EMH&T re-evaluated these two areas in July, 2012 and determined that they do not meet the criteria as wetland areas. One of the areas, Datapoint Upland 1, was being avoided by farming activities in 2012 but did not meet the vegetation or hydrologic indicators necessary to be considered a wetland. The other area, Datapoint Upland 2, was being successfully farmed and showed no indicators of wetland hydrology. These two areas are therefore uplands. Dataforms and photographs of these two areas are included within this report.

## 5.0 WETLAND HABITAT ASSESSMENT

The Ohio EPA developed the Ohio Rapid Assessment Method (ORAM) to determine the appropriate regulatory category of a particular wetland under the Wetland Antidegradation Rule (Ohio Administrative Rule [OAC] 3745-1-54). The ORAM assigns a score to a wetland based on a series of answers to questions dealing with wetland functions and features. The score is used to rate wetlands as Category 1, 2, or 3, which corresponds with low, medium, and high quality, respectively.

The potential wetlands on the site were scored in 2005 using the ORAM. The 2012 re-evaluation of the wetlands did not identify any scoring changes and the originally ORAM forms have been retained within this report. Table 4 provides a summary of the ORAM scoring for the wetlands on the site. Copies of the ORAM forms are located in Appendix B.

**TABLE 4**  
**Wetland Habitat Assessment Results**

Wetland Name	ORAM Score	ORAM Category
Wetland A	35	Modified 2
Wetland B	40	Modified 2
Wetland C	41	Modified 2
Wetland D	44	Modified 2
Wetland E	42	Modified 2
Wetland F	17	1



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## **6.0 CONCLUSIONS**

A routine delineation of Waters of the United States, including streams and wetlands, has been conducted and a report prepared for the approximately 76 acre Clark State Road Site. The site is located northwest of the intersection between Clark State Road and Wagner Road in Jefferson Township, Franklin County, Ohio. This study was performed at the request of and is for the exclusive use of the New Albany Company (NACO).

The results of the delineation identified five potentially isolated wetlands, one potentially jurisdictional wetland, and one jurisdictional stream. The five potentially isolated wetlands comprise 1.32 acres on the site. The one potentially jurisdictional wetland comprises 0.07 acres on the site, while Swisher Creek flows for 275 linear feet across the site. The boundaries and jurisdictional status of the wetlands within the project area are potential until verified by the USACE.



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## **APPENDIX A**

### **Wetland Dataforms**



Sampling Point: W-A

**SOIL**

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (molst)	%	Color (molst)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 3/2	95	10 YR 5/6	5	D	M	loam	iron concentrations on roots

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S8)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No \_\_\_\_\_

**Remarks:**

Due to dry summer conditions soil pit could only be dug to 4 inches.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B8)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Secondary Indicators (minimum of two required)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes  No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Clark State Road Site City/County: Jefferson Twp., Franklin Sampling Date: 7/12/12  
 Applicant/Owner: New Albany Company State: Ohio Sampling Point: U-A  
 Investigator(s): Eric Nagy Section, Township, Range: \_\_\_\_\_  
 Landform (hill/slope, terrace, etc.): level Local relief (concave, convex, none): none  
 Slope (%): \_\_\_\_\_ Lat: 40 d. 02 min. 47.87 sec. N Long: 82 d. 47 min. 36.80 sec. W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Bennington NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer rubrum</u>	40	Y	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. <u>Fagus grandifolia</u>	10	N	FACU	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. <u>Quercus palustris</u>	40	Y	FACW	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)
4. <u>Prunus serotina</u>	10	N	FACU	
5. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
				UPL species _____ x 5 = _____
_____ = Total Cover				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Rosa multiflora</u>	30	Y	FACU	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Toxicodendron radicans</u>	30	Y	FAC	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. _____				<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. _____				<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
60 = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes <input checked="" type="checkbox"/> No _____
2. _____				
_____ = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)  
 USACE's 2012 plant list was used to determine indicator status.



**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Clark State Road Site City/County: Jefferson Twp., Franklin Sampling Date: 7/12/12  
 Applicant/Owner: New Albany Company State: Ohio Sampling Point: W-B  
 Investigator(s): Eric Nagy Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): CONCAVE  
 Slope (%): \_\_\_\_\_ Lat: 40 d. 02 min. 47.87 sec. N Long: 82 d. 47 min. 36.80 sec. W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Bennington NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Fagus grandifolia</u>	25	Y	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71%</u> (A/B)
2. <u>Fraxinus pennsylvanica</u>	25	Y	FACW	
3. <u>Quercus bicolor</u>	10	N	FACW	
4. <u>Ulmus americana</u>	30	Y	FACW	
5. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
90 = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. <u>Lindera benzoin</u>	70	Y	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
70 = Total Cover				
<b>Herb Stratum (Plot size: <u>5'</u>)</b>				
1. <u>Carex grayi</u>	5	N	FACW	
2. <u>Fraxinus pennsylvanica</u>	10	Y	FACW	
3. <u>Parthenocissus quinquefolia</u>	10	Y	FACU	
4. <u>Toxicodendron radicans</u>	15	Y	FAC	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
40 = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)  
 USACE's 2012 plant list was used to determine indicator status.



**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Clark State Road Site City/County: Jefferson Twp., Franklin Sampling Date: 7/12/12  
 Applicant/Owner: New Albany Company State: Ohio Sampling Point: U-B  
 Investigator(s): Eric Nagy Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): level Local relief (concave, convex, none): none  
 Slope (%): \_\_\_\_\_ Lat: 40 d. 02 min. 47.87 sec. N Long: 82 d. 47 min. 36.80 sec. W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Bennington NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>		
Remarks:			

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25%</u> (A/B)
1. <u>Fagus grandifolia</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Juglans nigra</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Tilia americana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>80</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Lindera benzoin</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>50</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)  
 USACE's 2012 plant list was used to determine indicator status.



**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Clark State Road Site City/County: Jefferson Twp., Franklin Sampling Date: 7/12/12  
 Applicant/Owner: New Albany Company State: Ohio Sampling Point: W-C  
 Investigator(s): Eric Nagy Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave  
 Slope (%): \_\_\_\_\_ Lat: 40 d. 02 min. 47.87 sec. N Long: 82 d. 47 min. 36.80 sec. W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Bennington NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____		
Remarks:		

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Carya laciniosa</u>	20	Y	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2. <u>Fraxinus pennsylvanica</u>	20	Y	FACW	Total Number of Dominant Species Across All Strata: <u>7</u> (B)
3. <u>Ulmus americana</u>	60	Y	FACW	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57%</u> (A/B)
4. _____				
5. _____				
	100	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Lindera benzoin</u>	20	Y	FACW	Total % Cover of: _____ Multiply by: _____
2. <u>Rosa multiflora</u>	5	Y	FACU	OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
	25	= Total Cover		UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Carex grayi</u>	10	N	FACW	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Cinna arundinacea</u>	10	N	FACW	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Geum vernum</u>	30	Y	FACU	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. <u>Parthenocissus quinquefolia</u>	20	Y	FACU	<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. <u>Toxicodendron radicans</u>	10	N	FAC	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
	80	= Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes <input checked="" type="checkbox"/> No _____
2. _____				

Remarks: (Include photo numbers here or on a separate sheet.)  
 USACE's 2012 plant list was used to determine indicator status.



**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Clark State Road Site City/County: Jefferson Twp., Franklin Sampling Date: 7/12/12  
 Applicant/Owner: New Albany Company State: Ohio Sampling Point: U-C  
 Investigator(s): Eric Nagy Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): level Local relief (concave, convex, none): none  
 Slope (%): \_\_\_\_\_ Lat: 40 d. 02 min. 47.87 sec. N Long: 82 d. 47 min. 36.80 sec. W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Bennington NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Carya laciniosa</u>	25	Y	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2. <u>Ulmus americana</u>	75	Y	FACW	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)
4. _____				
5. _____				
	100 = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15'</u> )				Prevalence Index worksheet:
1. <u>Lindera benzoin</u>	50	Y	FACW	Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
	50 = Total Cover			UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5'</u> )				Hydrophytic Vegetation Indicators:
1. <u>Parthenocissus quinquefolia</u>	40	Y	FACU	<input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Toxicodendron radicans</u>	20	Y	FAC	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. _____				<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. _____				<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
	_____ = Total Cover			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present?
1. _____				Yes <input checked="" type="checkbox"/> No _____
2. _____				
	_____ = Total Cover			

Remarks: (Include photo numbers here or on a separate sheet.)  
 USACE's 2012 plant list was used to determine indicator status.



## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Clark State Road Site City/County: Jefferson Twp., Franklin Sampling Date: 7/12/12  
 Applicant/Owner: New Albany Company State: Ohio Sampling Point: W-D  
 Investigator(s): Eric Nagy Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave  
 Slope (%): \_\_\_\_\_ Lat: 40 d. 02 min. 47.87 sec. N Long: 82 d. 47 min. 36.80 sec. W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Bennington NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

### VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<b>Tree Stratum</b> (Plot size: <u>30'</u> )				Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>Acer rubrum</u>	40	Y	FAC	
2. <u>Fraxinus pennsylvanica</u>	50	Y	FACW	
3. <u>Populus deltoides</u>	10	N	FAC	
4. _____				
100 = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )				
1. <u>Lindera benzoin</u>	10	Y	FACW	
2. _____				
3. _____				
10 = Total Cover				
<b>Herb Stratum</b> (Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0' 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Carex grayi</u>	20	Y	FACW	
2. <u>Cinna arundinacea</u>	40	Y	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
_____ = Total Cover				
<b>Woody Vine Stratum</b> (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. _____				
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				
USACE's 2012 plant list was used to determine indicator status.				



**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Clark State Road Site City/County: Jefferson Twp., Franklin Sampling Date: 7/12/12  
 Applicant/Owner: New Albany Company State: Ohio Sampling Point: U-D  
 Investigator(s): Eric Nagy Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): level Local relief (concave, convex, none): none  
 Slope (%): \_\_\_\_\_ Lat: 40 d. 02 min. 47.87 sec. N Long: 82 d. 47 min. 36.80 sec. W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Bennington NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____	

**VEGETATION – Use scientific names of plants.**

Trea Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer rubrum</u>	85	Y	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. <u>Fraxinus pennsylvanica</u>	10	N	FACW	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. <u>Prunus serotina</u>	5	N	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)
5. _____	100 = Total Cover			
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				Prevalence Index = B/A = _____
1. <u>Lindera benzoin</u>	30	Y	FACW	
2. _____				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0' <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<b>Herb Stratum (Plot size: <u>5'</u>)</b>				
1. <u>Toxicodendron radicans</u>	70	Y	FAC	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____				
2. _____				
_____ = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)  
 USACE's 2012 plant list was used to determine indicator status.

Sampling Point: U-D

**SOIL**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 4/3	100					loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No

**Remarks:**  
 Due to dry summer conditions soil pit could only be dug to 4 inches.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**  
 None observed.

**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Clark State Road Site City/County: Jefferson Twp., Franklin Sampling Date: 7/12/12  
 Applicant/Owner: New Albany Company State: Ohio Sampling Point: W-E  
 Investigator(s): Eric Nagy Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): CONCAVE  
 Slope (%): \_\_\_\_\_ Lat: 40 d. 02 min. 47.87 sec. N Long: 82 d. 47 min. 36.80 sec. W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Bennington NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks:		

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)
1. <u>Acer rubrum</u>	<u>60</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Fraxinus pennsylvanica</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>100</u> = Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ____ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Sapling/Shrub Stratum (Plot size: <u>15'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Lindera benzoin</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Rosa multiflora</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>50</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)  
 USACE's 2012 plant list was used to determine indicator status.

Sampling Point: W-E

**SOIL**

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 3/2	95	10 YR 5/4	5	D	M	loam	iron concentrations on roots

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No \_\_\_\_\_

Remarks:  
Due to dry summer conditions soil pit could only be dug to 4 inches.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

**Secondary Indicators (minimum of two required)**

Field Observations:

Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes  No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Clark State Road Site City/County: Jefferson Twp., Franklin Sampling Date: 7/12/12  
 Applicant/Owner: New Albany Company State: Ohio Sampling Point: U-E  
 Investigator(s): Eric Nagy Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): level Local relief (concave, convex, none): none  
 Slope (%): \_\_\_\_\_ Lat: 40 d. 02 min. 47.87 sec. N Long: 82 d. 47 min. 36.80 sec. W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Bennington NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer rubrum</u>	70	Y	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. <u>Fagus grandifolia</u>	5	N	FACU	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. <u>Fraxinus pennsylvanica</u>	10	N	FACW	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66%</u> (A/B)
4. _____				
5. _____				
	85	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Rosa multiflora</u>	100	Y	FACU	Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
	100	= Total Cover		UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Toxicodendron radicans</u>	60	Y	FAC	1 - Rapid Test for Hydrophytic Vegetation
2. _____				<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. _____				3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. _____				4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. _____				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
	60	= Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes <input checked="" type="checkbox"/> No _____
2. _____				

Remarks: (Include photo numbers here or on a separate sheet.)  
 USACE's 2012 plant list was used to determine indicator status.

**SOIL**

Sampling Point: U-E

<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 4/3	100					loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators:</b>			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Coast Prairie Redox (A18)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10)			<input type="checkbox"/> Depleted Matrix (F3)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)								
<b>Restrictive Layer (if observed):</b>						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Type: _____								
Depth (Inches): _____								
<b>Remarks:</b> Due to dry summer conditions soil pit could only be dug to 4 inches.								

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<b>Primary Indicators (minimum of one is required; check all that apply)</b>		<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	
<b>Field Observations:</b>		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (Inches): _____	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (Inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (Inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
<b>Remarks:</b> None observed.		

**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Clark State Road Site City/County: Jefferson Twp., Franklin Sampling Date: 7/12/12  
 Applicant/Owner: New Albany Company State: Ohio Sampling Point: W-F  
 Investigator(s): Eric Nagy Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): CONCAVE  
 Slope (%): \_\_\_\_\_ Lat: 40 d. 02 min. 33.95 sec. N Long: 82 d. 47 min. 15.75 sec. W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Shoals NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____	

Remarks:

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: <u>5'</u>)</b>				
1. <u>Phalaris arundinacea</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>100</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

**Hydrophytic Vegetation indicators:**  
 1 - Rapid Test for Hydrophytic Vegetation  
 2 - Dominance Test is >50%  
 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)  
 USACE's 2012 plant list was used to determine indicator status.

**SOIL**

Sampling Point: W-F

<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 3/2	100					loam	iron concentrations on roots
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators:</b>			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A18)						
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)						
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)						
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)						
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)						
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)							
			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if observed):</b>								
Type: _____								
Depth (inches): _____						Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b>								
Due to dry summer conditions soil pit could only be dug to 4 inches.								

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<b>Primary Indicators (minimum of one is required; check all that apply)</b>		<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Clark State Road Site City/County: Jefferson Twp., Franklin Sampling Date: 7/12/12  
 Applicant/Owner: New Albany Company State: Ohio Sampling Point: U-F  
 Investigator(s): Eric Nagy Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): CONCAVE  
 Slope (%): \_\_\_\_\_ Lat: 40 d. 02 min. 33.95 sec. N Long: 82 d. 47 min. 15.75 sec. W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Shoals NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>	
Remarks:			

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
= Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
<b>Herb Stratum (Plot size: <u>5'</u>)</b>				
1. <u>Dispsacus fullonum</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Poa spp.</u>	<u>40</u>	<u>Y</u>	<u>FACU-</u>	
3. _____	_____	_____	<u>UPL</u>	
4. <u>Solidago canadensis</u>	<u>40</u>	_____	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>100</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks: (Include photo numbers here or on a separate sheet.) USACE's 2012 plant list was used to determine indicator status.				

**SOIL**

Sampling Point: U-F

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 3/2	100					loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- Coast Prairie Redox (A18)
- Dark Surface (S7)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

**Remarks:**

Due to dry summer conditions soil pit could only be dug to 4 inches.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

**Field Observations:**

Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): - _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): - _____	
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): - _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Clark State Road Site City/County: Jefferson Twp., Franklin Sampling Date: 7/12/12  
 Applicant/Owner: New Albany Company State: Ohio Sampling Point: U-1  
 Investigator(s): Eric Nagy Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): level Local relief (concave, convex, none): none  
 Slope (%): \_\_\_\_\_ Lat: 40 d. 02 min. 47.87 sec. N Long: 82 d. 47 min. 36.80 sec. W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Bennington NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks:			

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u> )				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>40</u> x 2 = <u>80</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>40</u> x 4 = <u>160</u> UPL species _____ x 5 = _____ Column Totals: <u>90</u> (A) <u>270</u> (B)  Prevalence Index = B/A = <u>3.0</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5'</u> )				
1. <u>Echinochloa crusgalli</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Rumex crispus</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
3. <u>Setaria feberi</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Solidago canadensis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. <u>Trifolium pratensis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>90</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) USACE's 2012 plant list was used to determine indicator status.				



**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Clark State Road Site City/County: Jefferson Twp., Franklin Sampling Date: 7/12/12  
 Applicant/Owner: New Albany Company State: Ohio Sampling Point: U-2  
 Investigator(s): Eric Nagy Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): level Local relief (concave, convex, none): NONE  
 Slope (%): \_\_\_\_\_ Lat: 40 d. 02 min. 47.87 sec. N Long: 82 d. 47 min. 36.80 sec. W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Bennington NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation , Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>	
Remarks:			

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5'</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation  
 \_\_\_ 2 - Dominance Test is >50%  
 \_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)  
 Area is farmed with soybeans creating a atypical situation.





A legacy of experience. A reputation for excellence.

## **APPENDIX B**

### **ORAM Dataforms**

<b>Site:</b> Clark State Rd. – Wetland A	<b>Rater(s):</b> E. Nagy	<b>Date:</b> 12/30/05
--	--------------------------	-----------------------

0	0
max 6 pts	subtotal

### Metric 1. Wetland Area (size).

- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
  - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
  - 10 to <25 acres (4 to <10.1ha) (4 pts)
  - 3 to <10 acres (1.2 to <4ha) (3 pts)
  - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
  - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
  - <0.1 acres (0.04ha) (0 pts)

5	5
max 14 pts	subtotal

### Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
  - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
  - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
  - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
  - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
  - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
  - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16	21
max 30 pts	subtotal

### Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
  - Other groundwater (3)
  - Precipitation (1)
  - Seasonal/intermittent surface water (3)
  - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
  - Between stream/lake and other human use (1)
  - Part of wetland/upland (e.g. forest), complex (1)
  - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
  - 0.4 to 0.7m (15.7 to 27.6in) (2)
  - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
  - Regularly inundated/saturated (3)
  - Seasonally inundated (2)
  - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> None or none apparent (12)</li> <li><input type="checkbox"/> Recovered (7)</li> <li><input type="checkbox"/> Recovering (3)</li> <li><input type="checkbox"/> Recent or no recovery (1)</li> </ul> | <p>Check all disturbances observed</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> ditch</li> <li><input type="checkbox"/> tile</li> <li><input type="checkbox"/> dike</li> <li><input type="checkbox"/> weir</li> <li><input type="checkbox"/> stormwater input</li> <li><input type="checkbox"/> point source (nonstormwater)</li> <li><input type="checkbox"/> filling/grading</li> <li><input type="checkbox"/> road bed/RR track</li> <li><input type="checkbox"/> dredging</li> <li><input type="checkbox"/> other _____</li> </ul> |
|---|---|

10	31
max 20 pts	subtotal

### Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
  - Recovered (3)
  - Recovering (2)
  - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
  - Very good (6)
  - Good (5)
  - Moderately good (4)
  - Fair (3)
  - Poor to fair (2)
  - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> None or none apparent (9)</li> <li><input type="checkbox"/> Recovered (6)</li> <li><input checked="" type="checkbox"/> Recovering (3)</li> <li><input type="checkbox"/> Recent or no recovery (1)</li> </ul> | <p>Check all disturbances observed</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> shrub/sapling removal</li> <li><input type="checkbox"/> herbaceous/aquatic bed removal</li> <li><input type="checkbox"/> sedimentation</li> <li><input type="checkbox"/> dredging</li> <li><input type="checkbox"/> farming</li> <li><input type="checkbox"/> nutrient enrichment</li> <li><input type="checkbox"/> mowing</li> <li><input type="checkbox"/> grazing</li> <li><input type="checkbox"/> clearcutting</li> <li><input type="checkbox"/> selective cutting</li> <li><input type="checkbox"/> woody debris removal</li> <li><input type="checkbox"/> toxic pollutants</li> </ul> |
|--|--|

31
subtotal this page

Site: **Clark State Rd. - Wetland A** Rater(s): **E. Nagy** Date: **12/30/05**

31

0 31  
max pts. subtotal

**Metric 5. Special Wetlands.**

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Prairies (10)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migratory songbird/water fowl habitat or usage (10)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10)

4 35  
max pts. subtotal

**Metric 6. Plant communities, interspersions, microtopography.**

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other

6b. horizontal (plan view) Interspersion. Select only one.

- High (5)
- Moderately high (4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5)
- Moderate 25-75% cover (-3)
- Sparse 5-25% cover (-1)
- Nearly absent <5% cover (0)
- Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- Vegetated hummocks/mounds
- Coarse woody debris >15cm (6in)
- Standing dead >25cm (10in) dbh
- Amphibian breeding pools

**Vegetation Community Cover Scale**

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality.

**Narrative Description of Vegetation Quality**

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

**Mudflat and Open Water Class Quality**

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

**Microtopography Cover Scale**

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

Modified Category 2

35 **GRAND TOTAL(max 100 pts)**

Site: **Clark State Rd. - Wetland B** Rater(s): **E. Nagy** Date: **12/30/05**

0	0
max 6 pts	subtotal

### Metric 1. Wetland Area (size).

- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
  - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
  - 10 to <25 acres (4 to <10.1ha) (4 pts)
  - 3 to <10 acres (1.2 to <4ha) (3 pts)
  - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
  - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
  - <0.1 acres (0.04ha) (0 pts)

5	5
max 14 pts	subtotal

### Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
  - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
  - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
  - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
  - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
  - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
  - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16	21
max 30 pts	subtotal

### Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
  - Other groundwater (3)
  - Precipitation (1)
  - Seasonal/intermittent surface water (3)
  - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
  - Between stream/lake and other human use (1)
  - Part of wetland/upland (e.g. forest), complex (1)
  - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
  - 0.4 to 0.7m (15.7 to 27.6in) (2)
  - <0.4m (<15.7in) (1)
- 3d. Duration Inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
  - Regularly inundated/saturated (3)
  - Seasonally inundated (2)
  - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- |   |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> None or none apparent (12)<br><input type="checkbox"/> Recovered (7)<br><input type="checkbox"/> Recovering (3)<br><input type="checkbox"/> Recent or no recovery (1) | Check all disturbances observed<br><input type="checkbox"/> ditch<br><input type="checkbox"/> tile<br><input type="checkbox"/> dike<br><input type="checkbox"/> weir<br><input type="checkbox"/> stormwater input | <input type="checkbox"/> point source (nonstormwater)<br><input type="checkbox"/> filling/grading<br><input type="checkbox"/> road bed/RR track<br><input type="checkbox"/> dredging<br><input type="checkbox"/> other _____ |
|---|---|--|

16	37
max 20 pts	subtotal

### Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
  - Recovered (3)
  - Recovering (2)
  - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
  - Very good (6)
  - Good (5)
  - Moderately good (4)
  - Fair (3)
  - Poor to fair (2)
  - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- |  |   |  |
|--|---|--|
| <input checked="" type="checkbox"/> None or none apparent (0)<br><input type="checkbox"/> Recovered (6)<br><input type="checkbox"/> Recovering (3)<br><input type="checkbox"/> Recent or no recovery (1) | Check all disturbances observed<br><input type="checkbox"/> mowing<br><input type="checkbox"/> grazing<br><input type="checkbox"/> clearcutting<br><input type="checkbox"/> selective cutting<br><input type="checkbox"/> woody debris removal<br><input type="checkbox"/> toxic pollutants | <input type="checkbox"/> shrub/sapling removal<br><input type="checkbox"/> herbaceous/aquatic bed removal<br><input type="checkbox"/> sedimentation<br><input type="checkbox"/> dredging<br><input type="checkbox"/> farming<br><input type="checkbox"/> nutrient enrichment |
|--|---|--|

37
subtotal of this page

Site: Clark State Rd. – Wetland B	Rater(s): E Nagy	Date: 12/30/05
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37

0	37
max 10 pts	subtotal

### Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Prairies (10)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migratory songbird/water fowl habitat or usage (10)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10)

3	40
max 20 pts	subtotal

### Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.  
Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other \_\_\_\_\_

6b. Horizontal (plan view) Interspersion.  
Select only one

- High (5)
- Moderately high (4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5)
- Moderate 25-75% cover (-3)
- Sparse 5-25% cover (-1)
- Nearly absent <5% cover (0)
- Absent (1)

6d. Microtopography.  
Score all present using 0 to 3 scale.

- Vegetated hummocks/mounds
- Coarse woody debris >15cm (6in)
- Standing dead >25cm (10in) dbh
- Amphibian breeding pools

#### Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

#### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

#### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

#### Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

Modified Category 2

40	<b>GRAND TOTAL(max 100 pts)</b>
----	---------------------------------

<b>Site:</b> Clark State Rd. – Wetland C	<b>Rater(s):</b> E. Nagy	<b>Date:</b> 12/30/05
--	--------------------------	-----------------------

0	0
---	---

**Metric 1. Wetland Area (size).**

- max 6 pts. subtotal
- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
  - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
  - 10 to <25 acres (4 to <10.1ha) (4 pts)
  - 3 to <10 acres (1.2 to <4ha) (3 pts)
  - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
  - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
  - <0.1 acres (0.04ha) (0 pts)

5	5
---	---

**Metric 2. Upland buffers and surrounding land use.**

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
  - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
  - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
  - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
  - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
  - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
  - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16	21
----	----

**Metric 3. Hydrology.**

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
  - Other groundwater (3)
  - Precipitation (1)
  - Seasonal/intermittent surface water (3)
  - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
  - Between stream/lake and other human use (1)
  - Part of wetland/upland (e.g. forest), complex (1)
  - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
  - 0.4 to 0.7m (15.7 to 27.6in) (2)
  - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
  - Regularly inundated/saturated (3)
  - Seasonally inundated (2)
  - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
  - Recovered (7)
  - Recovering (3)
  - Recent or no recovery (1)
- | Check all disturbances observed           |   |
|---|---|
| <input type="checkbox"/> ditch            | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile             | <input type="checkbox"/> filling/grading              |
| <input type="checkbox"/> dike             | <input type="checkbox"/> road bed/RR track            |
| <input type="checkbox"/> weir             | <input type="checkbox"/> dredging                     |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> other _____                  |

16	37
----	----

**Metric 4. Habitat Alteration and Development.**

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
  - Recovered (3)
  - Recovering (2)
  - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
  - Very good (6)
  - Good (5)
  - Moderately good (4)
  - Fair (3)
  - Poor to fair (2)
  - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
  - Recovered (6)
  - Recovering (3)
  - Recent or no recovery (1)
- | Check all disturbances observed               |   |
|---|---|
| <input type="checkbox"/> mowing               | <input type="checkbox"/> shrub/sapling removal          |
| <input type="checkbox"/> grazing              | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input type="checkbox"/> clearcutting         | <input type="checkbox"/> sedimentation                  |
| <input type="checkbox"/> selective cutting    | <input type="checkbox"/> dredging                       |
| <input type="checkbox"/> woody debris removal | <input type="checkbox"/> farming                        |
| <input type="checkbox"/> toxic pollutants     | <input type="checkbox"/> nutrient enrichment            |

37
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subtotal this page



<b>Site:</b> Clark State Rd. – Wetland D	<b>Rater(s):</b> E. Nagy	<b>Date:</b> 12/30/05
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2	2
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### Metric 1. Wetland Area (size).

- max 6 pts. subtotal
- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
  - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
  - 10 to <25 acres (4 to <10.1ha) (4 pts)
  - 3 to <10 acres (1.2 to <4ha) (3 pts)
  - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
  - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
  - <0.1 acres (0.04ha) (0 pts)

5	7
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### Metric 2. Upland buffers and surrounding land use.

- max 14 pts. subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
  - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
  - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
  - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
  - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
  - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
  - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16	23
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### Metric 3. Hydrology.

- max 30 pts. subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
  - Other groundwater (3)
  - Precipitation (1)
  - Seasonal/intermittent surface water (3)
  - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
  - Between stream/lake and other human use (1)
  - Part of wetland/upland (e.g. forest), complex (1)
  - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
  - 0.4 to 0.7m (15.7 to 27.6in) (2)
  - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or double check.
- Semi- to permanently inundated/saturated (4)
  - Regularly inundated/saturated (3)
  - Seasonally inundated (2)
  - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
  - Recovered (7)
  - Recovering (3)
  - Recent or no recovery (1)
- Check all disturbances observed

<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)
<input type="checkbox"/> tile	<input type="checkbox"/> filling/grading
<input type="checkbox"/> dike	<input type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input type="checkbox"/> stormwater input	<input type="checkbox"/> other _____

17	40
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### Metric 4. Habitat Alteration and Development.

- max 20 pts. subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
  - Recovered (3)
  - Recovering (2)
  - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
  - Very good (6)
  - Good (5)
  - Moderately good (4)
  - Fair (3)
  - Poor to fair (2)
  - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
  - Recovered (6)
  - Recovering (3)
  - Recent or no recovery (1)
- Check all disturbances observed

<input type="checkbox"/> mowing	<input type="checkbox"/> shrub/sapling removal
<input type="checkbox"/> grazing	<input type="checkbox"/> herbaceous/aquatic bed removal
<input type="checkbox"/> clearcutting	<input type="checkbox"/> sedimentation
<input type="checkbox"/> selective cutting	<input type="checkbox"/> dredging
<input type="checkbox"/> woody debris removal	<input type="checkbox"/> farming
<input type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment

40
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subtotal this page

Site: Clark State Rd. – Wetland D	Rater(s): E. Nagy	Date: 12/30/05
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40
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subtotal this page

0	40
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max 10 pts

subtotal

### Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Prairies (10)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migratory songbird/water fowl habitat or usage (10)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10)

4	44
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max 20 pts

subtotal

### Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other \_\_\_\_\_

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5)
- Moderate 25-75% cover (-3)
- Sparse 5-25% cover (-1)
- Nearly absent <5% cover (0)
- Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- Vegetated hummocks/mounds
- Coarse woody debris >15cm (6in)
- Standing dead >25cm (10in) dbh
- Amphibian breeding pools

#### Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

#### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present; and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

#### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

#### Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

Modified Category 2

44
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**GRAND TOTAL(max 100 pts)**

Refer to the most recent ORAM Score Calibration Report for the mapping of field points between adjacent categories of the following address: <http://www.ohio-state.edu/daw/401661.htm>

<b>Site:</b> Clark State Rd. – Wetland E	<b>Rater(s):</b> E. Nagy	<b>Date:</b> 12/30/05
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1	1
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### Metric 1. Wetland Area (size).

- max 6 pts      subtotal
- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
  - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
  - 10 to <25 acres (4 to <10.1ha) (4 pts)
  - 3 to <10 acres (1.2 to <4ha) (3 pts)
  - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
  - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
  - <0.1 acres (0.04ha) (0 pts)

5	6
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### Metric 2. Upland buffers and surrounding land use.

- max 14 pts      subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
  - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
  - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
  - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
  - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
  - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
  - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16	22
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### Metric 3. Hydrology.

- max 30 pts      subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
  - Other groundwater (3)
  - Precipitation (1)
  - Seasonal/intermittent surface water (3)
  - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
  - Between stream/lake and other human use (1)
  - Part of wetland/upland (e.g. forest), complex (1)
  - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
  - 0.4 to 0.7in (15.7 to 27.6in) (2)
  - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or double check.
- Semi- to permanently inundated/saturated (4)
  - Regularly inundated/saturated (3)
  - Seasonally inundated (2)
  - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
  - Recovered (7)
  - Recovering (3)
  - Recent or no recovery (1)
- Check all disturbances observed

<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)
<input type="checkbox"/> tile	<input type="checkbox"/> filling/grading
<input type="checkbox"/> dike	<input type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input type="checkbox"/> stormwater input	<input type="checkbox"/> other _____

16	38
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### Metric 4. Habitat Alteration and Development.

- max 20 pts      subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
  - Recovered (3)
  - Recovering (2)
  - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
  - Very good (8)
  - Good (5)
  - Moderately good (4)
  - Fair (3)
  - Poor to fair (2)
  - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
  - Recovered (6)
  - Recovering (3)
  - Recent or no recovery (1)
- Check all disturbances observed

<input type="checkbox"/> mowing	<input type="checkbox"/> shrub/sapling removal
<input type="checkbox"/> grazing	<input type="checkbox"/> herbaceous/aquatic bed removal
<input type="checkbox"/> clearcutting	<input type="checkbox"/> sedimentation
<input type="checkbox"/> selective cutting	<input type="checkbox"/> dredging
<input type="checkbox"/> woody debris removal	<input type="checkbox"/> farming
<input type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment

38
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subtotal this page

<b>Site:</b> Clark State Rd. – Wetland E	<b>Rater(s):</b> E Nagy	<b>Date:</b> 12/30/05
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38
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0	38
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**Metric 5. Special Wetlands.**

max 10 pts      subtotal      Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Prairies (10)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migratory songbird/water fowl habitat or usage (10)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10)

4	42
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**Metric 6. Plant communities, interspersions, microtopography.**

max 20 pts,      subtotal      6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open-water
- Other \_\_\_\_\_

6b. horizontal (plan view) Interspersion.

Select only one:

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5)
- Moderate 25-75% cover (-3)
- Sparse 5-25% cover (-1)
- Nearly absent <5% cover (0)
- Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- Vegetated hummocks/mounds
- Coarse woody debris >15cm (6in)
- Standing dead >25cm (10in) dbh
- Amphibian breeding pools

**Vegetation Community Cover Scale**

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

**Narrative Description of Vegetation Quality**

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

**Mudflat and Open Water Class Quality**

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

**Microtopography Cover Scale**

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

Modified Category 2

42	GRAND TOTAL(max 100 pts)
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Refer to the most recent ORAM Score Calculation Report for the full list of metrics and their weights. This information is also available at the following URL: <http://www.epa.state.nh.us/oram/oram1401.html>

<b>Site:</b> Clark State Rd. – Wetland F	<b>Rater(s):</b> E. Nagy	<b>Date:</b> 1/16/06
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1	1
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**Metric 1. Wetland Area (size).**

- max 6 pts      subtotal
- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
  - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
  - 10 to <25 acres (4 to <10.1ha) (4 pts)
  - 3 to <10 acres (1.2 to <4ha) (3 pts)
  - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
  - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
  - <0.1 acres (0.04ha) (0 pts)

2	3
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**Metric 2. Upland buffers and surrounding land use.**

- max 14 pts      subtotal
- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
  - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
  - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
  - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
  - LOW. Old field (>10 years), shrubland, young second growth forest. (5)
  - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
  - HIGH. Urban, Industrial, open pasture, row cropping, mining, construction. (1)

12	15
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**Metric 3. Hydrology.**

- max 20 pts      subtotal
- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
  - Other groundwater (3)
  - Precipitation (1)
  - Seasonal/intermittent surface water (3)
  - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
  - Between stream/lake and other human use (1)
  - Part of wetland/upland (e.g. forest), complex (1)
  - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
  - 0.4 to 0.7m (15.7 to 27.6in) (2)
  - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
  - Regularly inundated/saturated (3)
  - Seasonally inundated (2)
  - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- |   |  |                                |   |                               |   |                               |   |                               |                                   |   |                                      |
|---|--|--------------------------------|---|-------------------------------|---|-------------------------------|---|-------------------------------|-----------------------------------|---|--------------------------------------|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> None or none apparent (12)</li> <li><input type="checkbox"/> Recovered (7)</li> <li><input type="checkbox"/> Recovering (3)</li> <li><input checked="" type="checkbox"/> Recent or no recovery (1)</li> </ul> | <p style="text-align: center;">Check all disturbances observed</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> ditch</td> <td><input type="checkbox"/> point source (nonstormwater)</td> </tr> <tr> <td><input type="checkbox"/> tile</td> <td><input checked="" type="checkbox"/> filling/grading</td> </tr> <tr> <td><input type="checkbox"/> dike</td> <td><input checked="" type="checkbox"/> road bed/RR track</td> </tr> <tr> <td><input type="checkbox"/> weir</td> <td><input type="checkbox"/> dredging</td> </tr> <tr> <td><input type="checkbox"/> stormwater input</td> <td><input type="checkbox"/> other _____</td> </tr> </table> | <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) | <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading | <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track | <input type="checkbox"/> weir | <input type="checkbox"/> dredging | <input type="checkbox"/> stormwater input | <input type="checkbox"/> other _____ |
| <input type="checkbox"/> ditch  | <input type="checkbox"/> point source (nonstormwater)  |                                |   |                               |   |                               |   |                               |                                   |   |                                      |
| <input type="checkbox"/> tile   | <input checked="" type="checkbox"/> filling/grading  |                                |   |                               |   |                               |   |                               |                                   |   |                                      |
| <input type="checkbox"/> dike   | <input checked="" type="checkbox"/> road bed/RR track  |                                |   |                               |   |                               |   |                               |                                   |   |                                      |
| <input type="checkbox"/> weir   | <input type="checkbox"/> dredging  |                                |   |                               |   |                               |   |                               |                                   |   |                                      |
| <input type="checkbox"/> stormwater input   | <input type="checkbox"/> other _____   |                                |   |                               |   |                               |   |                               |                                   |   |                                      |

4	19
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**Metric 4. Habitat Alteration and Development.**

- max 20 pts      subtotal
- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
  - Recovered (3)
  - Recovering (2)
  - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
  - Very good (6)
  - Good (5)
  - Moderately good (4)
  - Fair (3)
  - Poor to fair (2)
  - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
  - Recovered (6)
  - Recovering (3)
  - Recent or no recovery (1)

- |  |  |
|--|--|
| <p style="text-align: center;">Check all disturbances observed</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> mowing</li> <li><input type="checkbox"/> grazing</li> <li><input type="checkbox"/> clearcutting</li> <li><input type="checkbox"/> selective cutting</li> <li><input type="checkbox"/> woody debris removal</li> <li><input type="checkbox"/> toxic pollutants</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> shrub/sapling removal</li> <li><input type="checkbox"/> herbaceous/aquatic bed removal</li> <li><input type="checkbox"/> sedimentation</li> <li><input type="checkbox"/> dredging</li> <li><input type="checkbox"/> farming</li> <li><input type="checkbox"/> nutrient enrichment</li> </ul> |
|--|--|

19
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subtotal this page

Site: **Clark State Rd. - Wetland F** Rater(s): **E. Nagy** Date: **1/16/06**

19

0	19
max 10 pts.	subtotal

**Metric 5. Special Wetlands.**

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Prairies (10)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migratory songbird/water fowl habitat or usage (10)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10)

4	17
max 20 pts.	subtotal

**Metric 6. Plant communities, interspersions, microtopography.**

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other \_\_\_\_\_

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5)
- Moderate 25-75% cover (-3)
- Sparse 5-25% cover (-1)
- Nearly absent <5% cover (0)
- Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- Vegetaloid hummocks/mosses
- Coarse woody debris >15cm (6in)
- Standing dead >25cm (10in) dbh
- Amphibian breeding pools

**Vegetation Community Cover Scale**

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

**Narrative Description of Vegetation Quality**

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

**Mudflat and Open Water Class Quality**

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

**Microtopography Cover Scale**

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

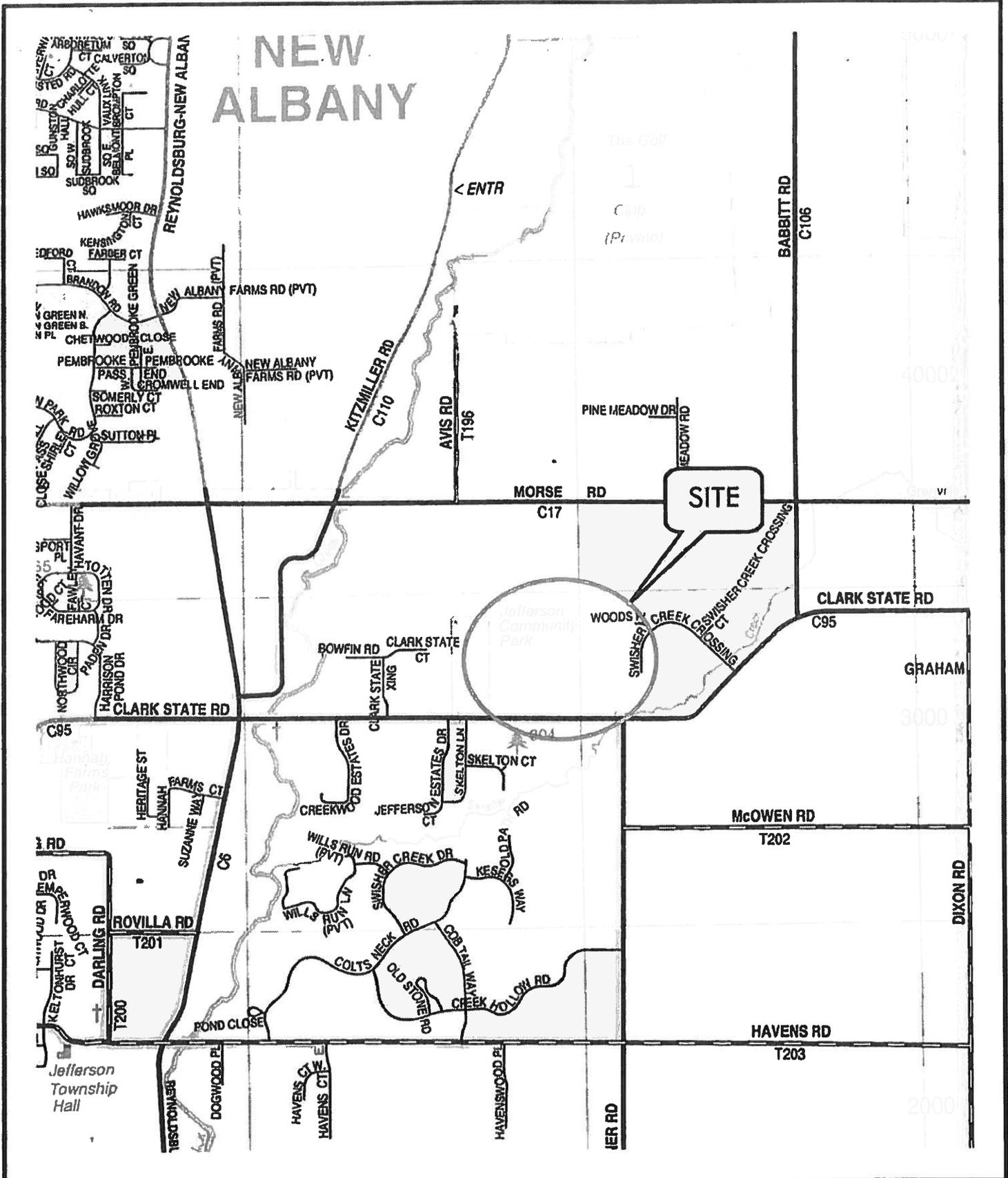
Category 1

17	<b>GRAND TOTAL(max 100 pts)</b>
----	---------------------------------



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## EXHIBITS



Evans, Mechwart, Hamblon & Tillon, Inc.  
 Engineers • Surveyors • Planners • Scientists  
 5500 New Albany Road, Columbus, OH 43054  
 Phone: 614.775.4500 Fax: 614.775.4800

M C H X V I



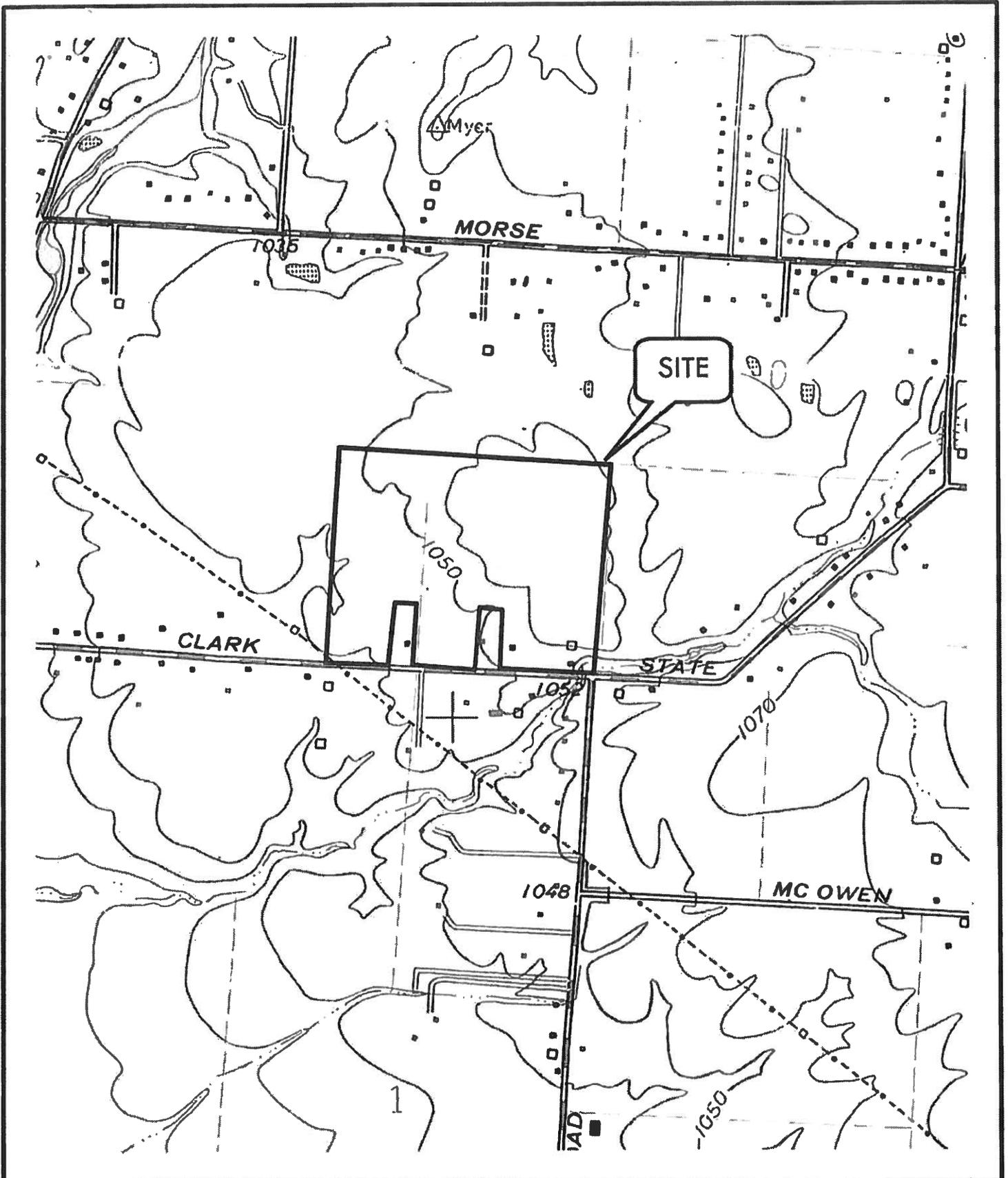
SCALE: 1" = 2000'



CITY OF COLUMBUS, FRANKLIN COUNTY, OHIO  
**CLARK STATE ROAD DELINEATION  
 AREA LOCATION MAP**

Exhibit 1

Source:  
 - FRANKLIN COUNTY MAP (2009)



JEFFERSON TOWNSHIP, FRANKLIN COUNTY, OHIO  
**CLARK STATE ROAD DELINEATION**  
**USGS TOPOGRAPHIC MAP**

**Exhibit 2**

Source:  
 USGS NEW ALBANY, OHIO QUAD (1982)

**EMHT**

Evans, Mechwart, Hamblen & Tilton, Inc.  
 Engineers • Surveyors • Planners • Scientists  
 3500 New Albany Road, Columbus, OH 43054  
 Phone: 614.775.4900 Fax: 614.775.4800

M C M X X V I



SCALE 1" = 1000'





SITE

**EMHT**

Evans, Mechwart, Hamblan & Tilton, Inc.  
 Engineers • Surveyors • Planners • Scientists  
 5500 New Albany Road, Columbus OH 43054  
 Phone: 614.775.4500 Fax: 614.775.4800

M C M A K V I



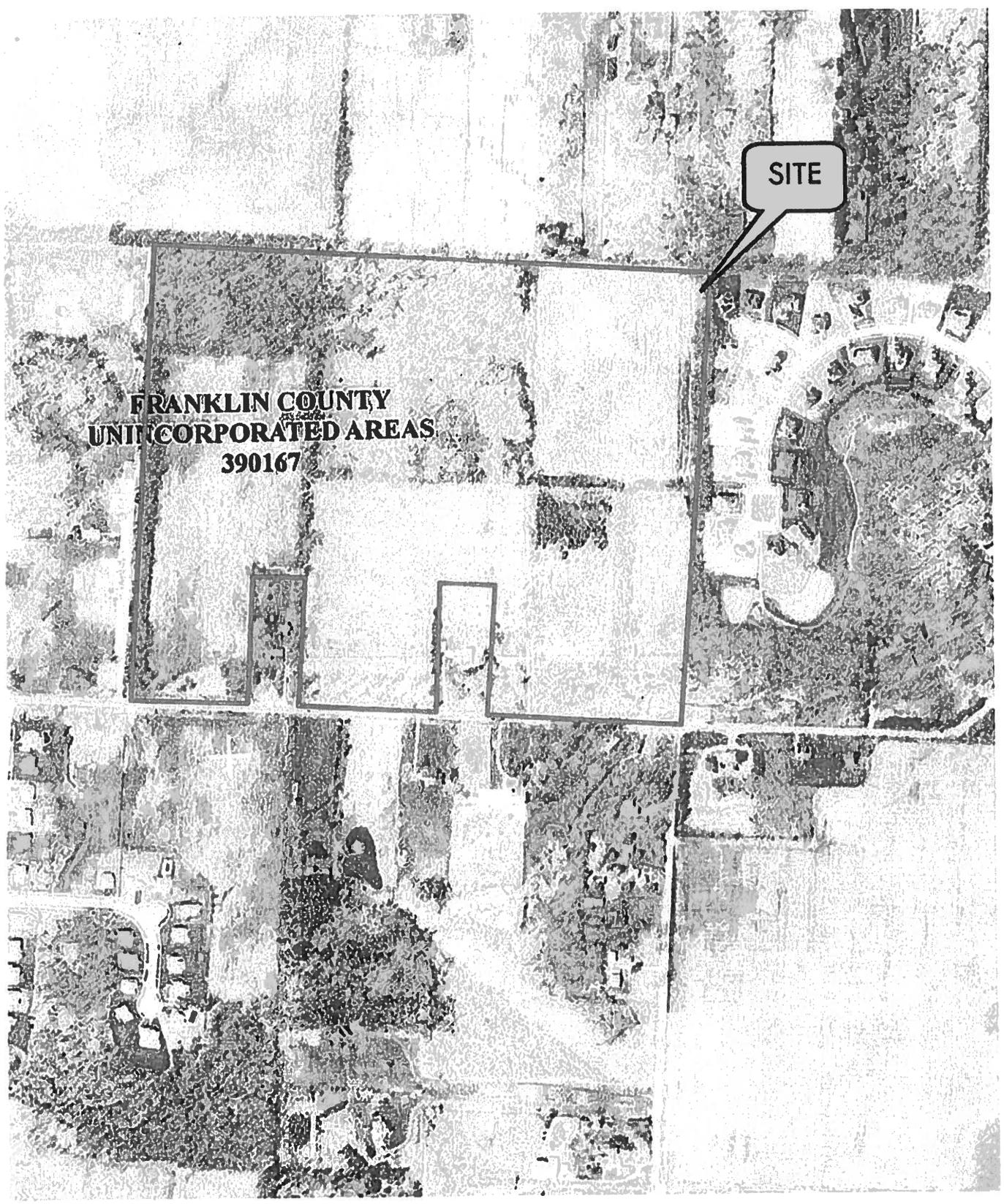
SCALE: 1"=1000'



CITY OF COLUMBUS, FRANKLIN COUNTY, OHIO  
 CLARK STATE ROAD DELINEATION  
 SOIL SURVEY OF FRANKLIN COUNTY

Exhibit 3

Sources  
 - USDA/NRCS (2010)



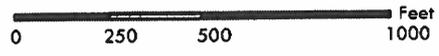
**EMHT**

Evans, Mechwart, Hamblon & Tilton, Inc.  
Engineers • Surveyors • Planners • Scientists  
5500 New Albany Road, Columbus, OH 43054  
Phone: 614.775.4500 Fax: 614.775.4900

K X C M X K V I



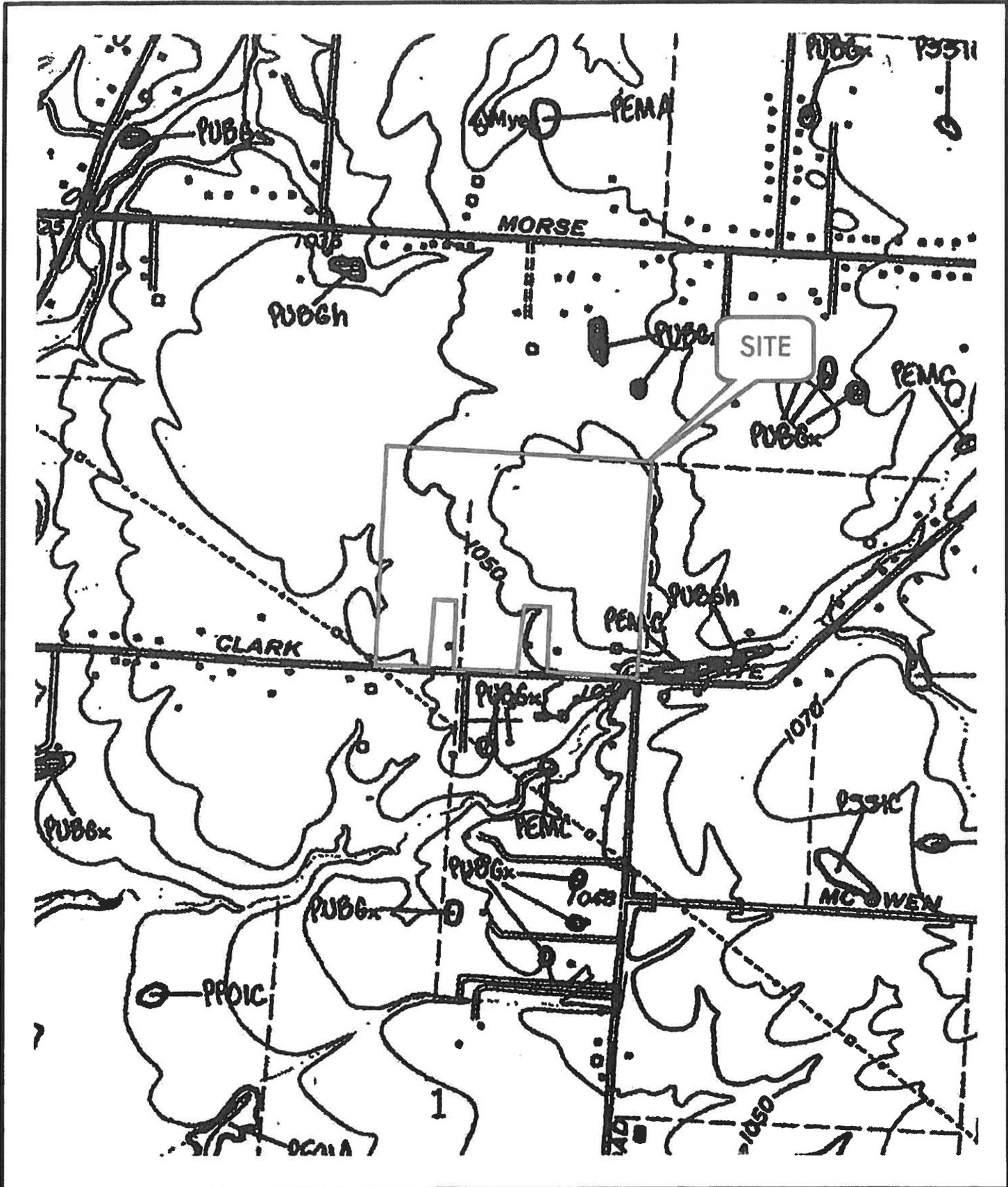
SCALE: 1" = 500'



**CITY OF COLUMBUS, FRANKLIN COUNTY, OHIO  
CLARK STATE ROAD DELINEATION  
FLOOD INSURANCE RATE MAP**

**Exhibit 4**

Source:  
- FEMA 39049C0216K (2008)



**EMHT**

Evans, Mechwart, Hambilton & Tilton, Inc.  
 Engineers • Surveyors • Planners • Scientists  
 5500 New Albany Road, Columbus, OH 43054  
 Phone: 614.775.4900 Fax: 614.775.4800

M C M X K V I



SCALE: 1"=1000'



CITY OF COLUMBUS, FRANKLIN COUNTY, OHIO  
 CLARK STATE ROAD DELINEATION  
 NATIONAL WETLAND INVENTORY MAP

Exhibit 5

Source:  
 - USFWS NEW ALBANY, OHIO QUAD (1995)

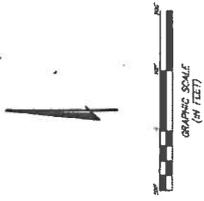


EXHIBIT 6 - DELINEATION MAP  
FOR  
7664 CLARK STATE ROAD

**EMHT**  
 Environmental Management & Technology, Inc.  
 2000 West 10th Street, Columbus, GA 31906  
 (706) 321-1000  
 www.emht.com

Date: July 31, 2012  
 Scale: 1" = 100'  
 Job No.: 2004108  
 Sheet: 1 of 1

2012 7/31/12 10:58 AM C:\Users\james\Documents\7664 Clark State Road\7664 Clark State Road\7664 Clark State Road.dwg  
 1: Date: 7/31/2012 10:58 AM  
 2: User: james  
 3: User: james  
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 49: User: james  
 50: User: james



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## PHOTOGRAPHS



**PHOTOGRAPH 1**  
Forested Wetland A facing north  
(EMH&T, 7/12/12)



**PHOTOGRAPH 2**  
Forested Wetland B facing south  
(EMH&T, 7/12/12)



**PHOTOGRAPH 3**  
Forested Wetland C facing north  
(EMH&T, 7/12/12)



**PHOTOGRAPH 4**  
Forested Wetland D facing north  
(EMH&T, 7/11/12)



**PHOTOGRAPH 5**  
Forested Wetland E facing east  
(EMH&T, 7/11/12)



**PHOTOGRAPH 6**  
Swisher Creek and Wetland F facing east  
(EMH&T, 7/12/12)



**PHOTOGRAPH 7**  
Swisher Creek and Wetland F facing south  
(EMH&T, 7/12/12)



**PHOTOGRAPH 8**  
Swisher Creek and Wetland F facing north  
(EMH&T, 7/12/12)



**PHOTOGRAPH 9**  
Upland 1 facing north  
(EMH&T, 7/12/12)



**PHOTOGRAPH 10**  
Upland 2 facing southeast  
(EMH&T, 7/12/12)



# Administrative Appeal

Revised January 1, 2009

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NOV 29 2012

AP

**Commissioners**  
 Marilyn Brown, President  
 Paula Brooks  
 John O'Grady

Franklin County Planning Department  
 Franklin County, OH

**Economic Development & Planning Department**  
 James Schimmer, Director

Property Information	
Site Address 511 Industrial Mile Road	
Parcel ID(s) 140-007352-00	Zoning Suburban office (SO)
Township Franklin	Acreage 1.481
Water Supply <input checked="" type="checkbox"/> Public (Central) <input type="checkbox"/> Private (Onsite)	Wastewater Treatment <input checked="" type="checkbox"/> Public (Central) <input type="checkbox"/> Private (Onsite)

Staff Use Only
Case # AP-3784
Date filed: 11-29-12
Received by: LMK
Hearing date: 1/22/13
Zoning Compliance: 20-12-4223

Applicant Information	
Name/Company Name Creative Child Care, Inc. e/o Greg Peterson / ISTRAN GAJARY	
Address Peterson, Ellis, Fergus & Peac. LLP 250 Civic Center Dr., Suite 650 Columbus, OH 43215	
Phone # 614.365.7000	Fax # 614.220.0197
Email g.peterson@petersonellis.com igajary@petersonellis.com	

Property Owner Information	
Name/Company Name Timothy M. Kurguz	
Address 5648 Ebright Rd. Grafton, OH 43125	
Phone # 614.239.1919	Fax #
Email	

Agent Information (if applicable)	
Name/Company Name	
Address	
Phone #	Fax #
Email	

Document Submission
The following documents must accompany this application:
<input checked="" type="checkbox"/> Completed form
<input checked="" type="checkbox"/> Auditor's map (8 1/2" x 11")
<input checked="" type="checkbox"/> Covenants and deed
<input checked="" type="checkbox"/> Notarized signatures
<input checked="" type="checkbox"/> Proof of water & waste water supply
<input checked="" type="checkbox"/> Copy of Administrative Officer's decision
Please see the Application Instructions for complete details

**Describe the decision by an Administrative Officer that is being appealed:**  
Creative Child Care, Inc. appeals this agency's decision to grant a Certificate of Zoning Compliance to the YMCA for the use of 511 Industrial Mile Road as an overflow homeless shelter.

**Describe the project:**

**Affidavit**

I hereby certify that the facts, statements, and information presented within this application form are true and correct to the best of my knowledge and belief. I hereby understand and certify that any misrepresentation or omissions of any information required in this application form may result in my application being delayed or not approved by the County. I hereby certify that I have read and fully understand all the information required in this application form.

Applicant: [Signature]  
Sworn to and subscribed before me by Istvan

NOTARIAL SEAL  
Date: 08/12  
Catherine J. Schwartz  
Notary Public, State of Ohio  
My Commission Expires 07-31-2013

Property Owner (Signature must be notarized)

Property Owner (Signature must be notarized)

Date

\*Agent must provide documentation that they are legally representing the property owner.  
\*\*Approval does not invalidate any restrictions and/or covenants that are on the property.



**COPY**

Commissioner Paula Brooks · Commissioner Marilyn Brown · Commissioner John O'Grady  
President

Economic Development & Planning Department  
James Schimmer, Director

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November 27, 2012

NOV 29 2012

Michael Lusk – LUSK Architecture  
35 North Fourth Street, Suite 350  
Columbus, OH 43215

Franklin County Planning Department  
Franklin County, Ohio

AP- 3784

Re: Certificate of Zoning Compliance Application ZC# 11-4223 (511 Industrial Mile Road)

Mr. Lusk:

This correspondence is in regard to Certificate of Zoning Compliance Application, ZC-11-4223, filed October 19, 2012, with the Franklin County Economic Development and Planning Department, to allow for the operation of a social service/overflow shelter on the property located at 511 Industrial Mile Road. This Certificate of Zoning Compliance has been issued with the understanding that the proposed development and use is in compliance with the Franklin County Zoning Resolution. The application has been reviewed and approved with the following conditions:

1. The applicant must notify this department immediately of any change or modification to the submitted materials, development plan and/or proposed timeline.
2. This Certificate of Zoning Compliance shall be in accordance with Section 705.02 of the Franklin County Zoning Resolution.
  - If the applicant has not begun work within six (6) months from the date of issuance, the Certificate of Zoning Compliance shall expire on May 27, 2013.
  - All work must be completed within one (1) year from the date of issuance, if not; the Certificate of Zoning Compliance shall expire on November 27, 2013.
3. Any signage must receive a Sign Permit from the Franklin County Economic Development and Planning Department.

Should you have any questions or require any additional information, please feel free to contact me directly at 614-525-5629 or [rlbrown@franklincountyohio.gov](mailto:rlbrown@franklincountyohio.gov).

Sincerely,

R. Lee Brown  
Planning Administrator

cc: Don Brown, Franklin County Administrator  
Erik Janas, Deputy Franklin County Administrator  
James Schimmer, Director, Franklin County EDP



150 S. Front Street, Suite FSL 10  
Columbus, OH 43215

Tel. 614-525-3094 Fax 614-525-7155

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Franklin County Planning Department  
Franklin County, Ohio

# Application for Certificate of Zoning Compliance

Commercial Construction

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COPY  
NOV 19 2012

Franklin County Planning Department  
Franklin County, OH

AP-3784

Property Information	
Site Address 511 Industrial Mile Road	
Parcel ID(s) 140-007352-00	Zoning District Suburban Office (SO)
Township Franklin	Total Acreage 1.481

Applicant Information	
Name/Company Name Michael Lusk, AIA, NCARB - LUSK Architecture	
Address 35 N. Fourth Street, Suite 350 Columbus, OH 43215	
Phone # 614-827-6000	Fax # 614-827-6001
Email mlusk@luskarchitecture.com	

Property Owner Information	
Name/Company Name Timothy M. Kurguz	
Address 5648 Ebright Road Groveport, OH 43125	
Phone # 614-239-1919	Fax #
mail	

*Tankersie*  
I subscribed and sworn to me  
this 18th day of October 2012  
*Mary Ellen Buck*

Current Tenant	
Name/Company Name Art Helldoerfer, YMCA of Central Ohio	
Phone # 614-573-3608	Fax #
Email ahelldoerfer@ymcacolumbus.org	

Staff Use Only	
Application # ZC-12-4223	
Approved / Denied	
Reviewer:	<i>R. P. P.</i>
Date of action:	11/27/12
Fee Paid:	\$ 225.00
Receipt #	241124
Zoning District	SO
Development Standards met (Y/N)	<input checked="" type="checkbox"/>
Non-Conf. (Y/N)	<input type="checkbox"/>
Floodplain (Y/N)	<input checked="" type="checkbox"/>
VA/CU Req'd (Y/N)	<input checked="" type="checkbox"/>
Agency Review	
BOH/EPA	Sent <i>10/25/12</i> Received <i>11/14/12</i>
FCEO	Sent <i>10/25/12</i> Received <i>11/14/12</i>
FSWCD	Sent <i>10/25/12</i> Received <i>11/14/12</i>

Review Procedure	
Applicant submits materials	
- Application form	<input checked="" type="checkbox"/>
- Fee	<input checked="" type="checkbox"/>
- General Site plan	<input checked="" type="checkbox"/>
- Erosion and Sediment control plan	<input checked="" type="checkbox"/>
- Stormwater management plan	<input checked="" type="checkbox"/>
- Stormwater erosion control	<input checked="" type="checkbox"/>
- Pollution prevention plan	<input checked="" type="checkbox"/>
- Other (specify):	
The Planning Commission reviews internally and makes a recommendation to the Zoning District. Compliance with development standards	
If approved or denied, applicant will be informed of reason(s) and what measures may be taken to correct any shortcomings.	

NOTARY PUBLIC  
MARY ELLEN BUCK  
MY COMM. Exp. 2-12-14



Application for  
**Certificate of  
 Zoning Compliance**  
 Commercial Construction

Application #  
**ZC-12-4223**

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**Development Proposal**

Current Use:

Church with a daycare

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NOV 29 2012

Franklin County Planning Department  
 Franklin County, Ohio

AP-3784

Proposed Use:

Social services/overflow homeless shelter

OCT 19 2012

Franklin County Planning Department  
 Franklin County, OH

**Applicant's Affidavit**

I, Michael Lusk representing Timothy M. Kurguz

Name

Lessee/Owner

being duly sworn, depose and say that the application and foregoing statements and required information are contained herein, and are in all respects true and correct to the best of my knowledge and belief.

Applicant's Signature

Property Owner's Signature

subscribed and sworn to me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

Notary Public

**Staff Use Only**

**Staff Comments**

See letter dated 11/27/12 to Mike Guel-

- 1.) Notify immediately of any change or modification to the submitted materials, development plan and/or proposed timeline.
- 2.) Section 705.02 - Start work within 6 months, or fine. Must be completed in 1 year or appeal.
- 3.) Any signage must get a sign permit

The foregoing Application for Zoning Compliance is hereby

Approved | Denied

*R. Lee Brown*

*With Condition*

*11/27/12*

Zoning Officer, Franklin County Economic Development and Planning Department

Date



150 S. Front Street, Suite FSL 10  
Columbus, OH 43215

Tel. 614-525-3094 Fax 614-525-7155

# Application for Certificate of Zoning Compliance

Commercial Construction

Application #  
**ZC-12-4223**  
**RECEIVED**

OCT 19 2012

### Site Information

Site Address

511 Industrial Mile Road,

Franklin County Planning Department  
Franklin County, OH

Applicant Name

Michael Lusk, AIA, NCARB, LUSK Architecture

### Inter-Agency Review

Franklin County Board of Health

280 E. Broad St., Suite 200  
Columbus, OH 43215  
Tel. 614-525-3160 Fax 614-525-6672

Franklin County Engineer's Office

910 Dublin Rd  
Columbus, OH 43215  
Tel. 614-525-7489 Fax 614-525-3359

Franklin Soil & Water Conservation District

1328 Dublin Rd  
Columbus, OH 43215  
Tel. 614-486-9813 Fax 614-486-9814

Other Agency:

Phone #

Fax #

### Agency Recommendation / Comments

Approval

Subject to conditions listed below

Disapproval

Conditions / Staff Comments

*See file ZC-12-4223*

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Franklin County Planning Department  
Franklin County, Ohio

AP-3784

Agency Representative

Date

### Return Information

For more information on this application, please contact:

Franklin County EDP staff member

Phone #

Fax #

614-525-7155

Email

**Property Report**

Generated on 11/28/12 at 04:53:02 PM

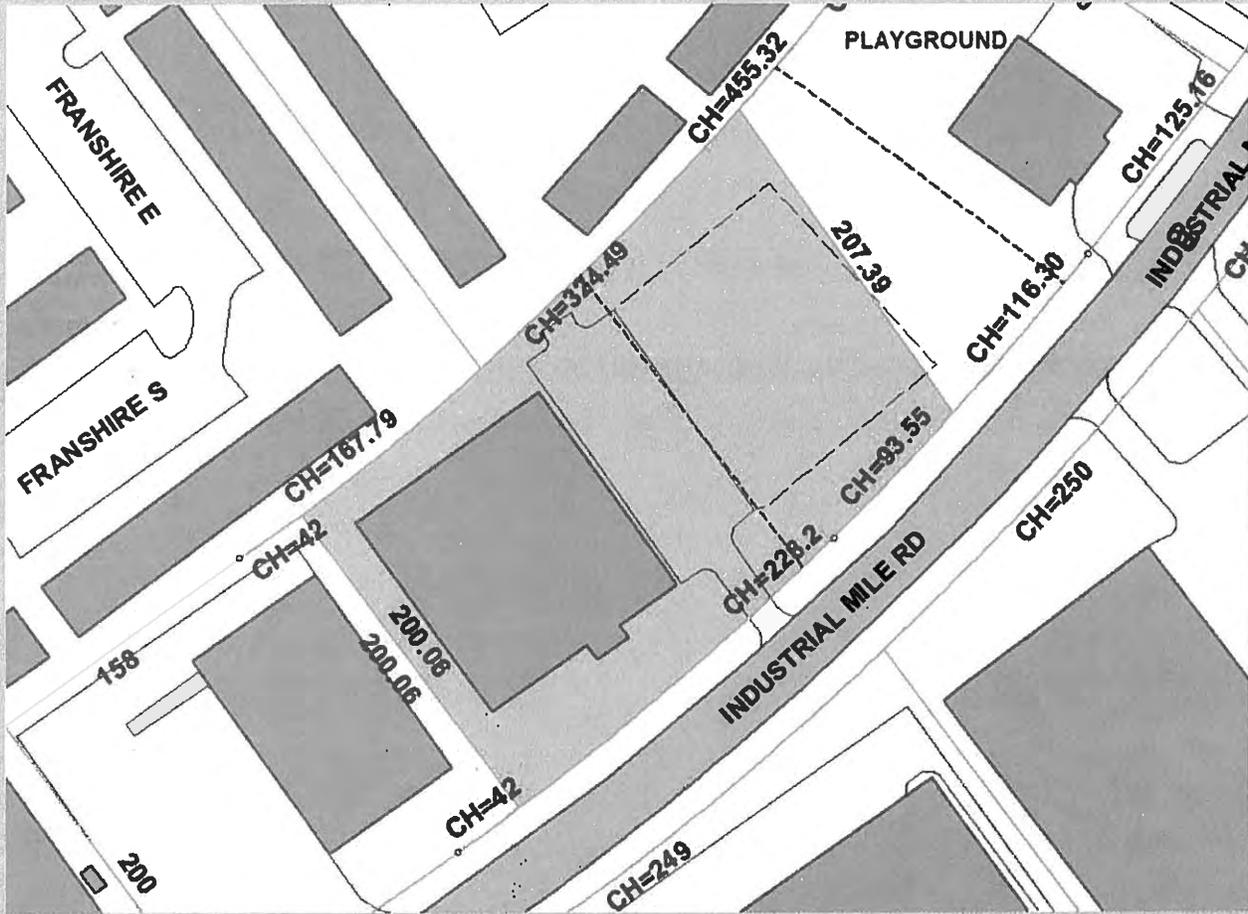
Parcel ID  
**140-007352-00**

Map Routing No  
**140-0019C -017-01**

Card No  
**1**

Location  
**511 INDUSTRIAL MILE RD**

GIS



**Disclaimer**

This drawing is prepared for the real property inventory within this county. It is compiled from recorded deeds, survey plats, and other public records and data. Users of this drawing are notified that the public primary information source should be consulted for verification of the information contained on this drawing. The county and the mapping companies assume no legal responsibilities for the information contained on this drawing. Please notify the Franklin County GIS Division of any discrepancies.

The information on this web site is prepared for the real property inventory within this county. Users of this data are notified that the public primary information source should be consulted for verification of the information contained on this site. The county and vendors assume no legal responsibilities for the information contained on this site. Please notify the Franklin County Auditor's Real Estate Division of any discrepancies.

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Franklin County Planning Department  
Franklin County, OH

AP- 3784

# FRANKLIN COUNTY UTILITIES BILL WATER AND SEWER CHARGES

FRANKLIN COUNTY SANITARY ENGINEERING ● 280 E. Broad St. RM 201 ● COLUMBUS OH 43215-4524

<b>SERVICE DATES</b>	10/12/10 TO 01/11/11	<b>SERVICE LOCATION</b>	511 INDUSTRIAL MILE RD
----------------------	----------------------	-------------------------	------------------------

METER READING	PREVIOUS	CURRENT	USAGE	CODE	AMOUNT
X ACTUAL	43,228	43,412	184	W	690.63
ESTIMATED					
CUST. READ					
				S	1,151.08
				COLS	4.83
X 100 CU. FT.					
1000 GALLONS					
<b>TYPE OF BILL</b>					

<b>CURRENT AMOUNT DUE</b>
1,846.54
<b>DUE DATE</b>
03/08/11
<b>AMOUNT AFTER DUE DATE</b>
2,031.19

<b>ACCOUNT NUMBER</b>	14939*3
-----------------------	---------

BY SETTING WATER HEATER TEMPERATURE TO 120 DEGREES CAN SAVE AN AVERAGE FAMILY UP \$50 PER YEAR. OUR NEW TELEPHONE # 614-525-3940.

TIMOTHY KURGUZ  
5648 EBRIGHT RD  
GROVEPORT, OH 43125

**KEEP THIS COPY FOR YOUR RECORDS**

Water and Sewer Bills may also be paid by mail or in person at the Sanitary Engineers office or with our NEW!!! ONLINE BILL  
 PAY with credit card at: [www.franklincountyohio.gov/commissioners/seng](http://www.franklincountyohio.gov/commissioners/seng)  
 Or PAY BY PHONE - 1-800-609-1736. Contact us at [sanitaryengineering@franklincountyohio.gov](mailto:sanitaryengineering@franklincountyohio.gov)

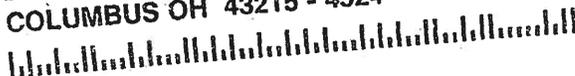
Be sure to sign your check and mail in our attached self addressed envelope

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APR 20 2011

Franklin County Planning Department  
Franklin County, Ohio  
2011-06

FRANKLIN COUNTY SANITARY ENGINEERING  
280 E BROAD ST RM 201  
COLUMBUS OH 43215 - 4524



Postage  
Required  
Post Office will  
not deliver  
without proper  
postage.

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Franklin County Planning Department  
Franklin County, OH

AP-3784

GENERAL WARRANTY DEED\*

89285 2890 2411 T monument

Thomas Family LLC, an Ohio limited liability company, for valuable consideration paid, grant(s) with general warranty covenants, to Timothy M. Kurguz, whose tax-mailing address is 5648 Ebright Road, Groveport, Ohio 43125 the following REAL PROPERTY:

Situated in the Township of Franklin, County of Franklin and State of Ohio and being 0.930 acres and 0.930 acres, more or less, less 0.287 acres and 0.092, more or less, as more particularly described in Exhibit "A" attached hereto and made a part hereof by reference.

Subject to taxes and assessments which are now or may hereafter become liens on said premises and except conditions and restrictions and easements, if any, of record for said premises, subject to all of which this conveyance is made.

Parcel Number: 140-7352 and 140-7354  
Address: 511 Industrial Mile Road, Columbus, Ohio

Prior Instrument Reference: Instrument Number 199908180210229 of the Official Records of Franklin County, Ohio.

Witness his and its hand(s) this 15<sup>th</sup> day of September, 1999.

Signed and acknowledged in presence of:

Thomas Family LLC, an Ohio limited liability company

*Tammy Besore*  
Witness Oscar L. Thomas, Jr. Manager/Member

*Henry D. [Signature]*  
Witness

State of Ohio County of Franklin ss<sup>th</sup>  
BE IT REMEMBERED, That on this 15<sup>th</sup> day of September, 1999, before me, the subscriber, a notary public in and for said state, personally came, Oscar L. Thomas, Jr., Manager/Member of Thomas Family LLC, an Ohio limited liability company, the Grantor(s) in the foregoing deed, and acknowledged the signing thereof to be his and its voluntary act and deed. IN TESTIMONY THEREOF, I have hereunto subscribed my name and affixed my official seal on the day and year last aforesaid.



*Tammy Besore*  
TAMMY BESORE  
Notary Public, State of Ohio  
My Commission Expires  
Jan. 24, 2002

This instrument was prepared by Michael J. Weisz, Esq., 553 City Park Avenue, Columbus, Ohio 43215 Auditor's and Recorder's Stamps

\*See Sections 5302.05 and 5302.06 Ohio Revised Code

TRANSCRIBED  
SEP 16 1999  
FRANKLIN COUNTY, OHIO

21478  
PROPERTY TAX  
297.00  
FRANKLIN COUNTY, OHIO

Franklin County Planning Department  
Franklin County, OH  
AP-5784

NOV 29 2012

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Exhibit "A"

TRACT ONE

Situate in the State of Ohio, County of Franklin, the Township of Franklin and being a part of Virginia Military Lands Survey No. 1425; also being part of that Tract A, conveyed to Peoples Development Company, shown of record in Deed Book 1670, Page 139, records of the Recorder's Office, Franklin County, Ohio, and subsequently transferred to Nationwide Development Company by Affidavit shown of record in Affidavit Book 19, page 282, records of the Auditor's Office, Franklin County, Ohio and being more particularly described as follows:

Beginning at an iron pin in the northwesterly line of Industrial Mile Road, 60 feet in width as the same is designated and delineated upon the recorded plat of Dedication of Industrial Mile Road, of record in Plat Book 32, Page 113, Recorder's Office, Franklin County, Ohio, said iron pin being the southeasterly corner of that 0.910 Acre Tract conveyed to Joyce S. Pillsbury et al of record in Deed Book 3378, page 299, Recorder's Office, Franklin County, Ohio, thence N 36°50'40"W, along the easterly line of said 0.910 Acre Tract, a distance of 200.06 feet, to an iron pin, the northeasterly corner of said 0.910 Acre Tract, said iron pin being in the southeasterly line of Lot No. 3 as the same is designated and delineated upon the recorded plat of Lincoln Park West No. 6 of record in Plat Book 42, page 37, Recorder's Office, Franklin County, Ohio; thence with the arc of a curve to the left having a radius of 1,509.06 feet, the chord of which bears N 47°40'29"E, along the southeasterly line of said Lot No. 3 and the southeasterly line of Lot No. 1 as the same is designated and delineated upon the recorded plat of Lincoln Park West No. 4 of record in Plat Book 40, page 3, Recorder's Office, Franklin County, Ohio, a chord distance of 199.25 feet, to an iron pin; thence, S 30°35'55"E, a distance of 201.83 feet to an iron pin in the northwesterly line of said Industrial Mile Road; thence, with the arc of a curve to the right having a radius of 1709.06 feet, the chord of which bears S 48°18'18"W, along a northwesterly line of said Industrial Mile Road, a chord distance of 205.25 feet to the point of beginning and containing 0.930 Acres of land, more or less.

ALL OF  
(140)  
7352

ALL OF  
7352  
(140)



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NOV 29 2012

Franklin County Planning Department  
Franklin County, OH

AP-3784

Exhibit "A" continued

TRACT TWO

SITUATED IN THE STATE OF OHIO, IN THE COUNTY OF FRANKLIN, AND IN THE TOWNSHIP OF FRANKLIN, AND BOUNDED AND DESCRIBED AS FOLLOWS:

Situate in the State of Ohio, County of Franklin, the Township of Franklin and being a part of Virginia Military Lands Survey No. 1425; also being part of that Tract A, conveyed to Peoples Development Company, shown of record in Deed Book 1670, Page 139, records of the Recorder's Office, Franklin County, Ohio, and subsequently transferred to Nationwide Development Company by Affidavit shown of record in Affidavit Book 19, page 282, records of the Auditor's Office, Franklin County, Ohio and being more particularly described as follows:

Beginning at an iron pin in the northwesterly line of Industrial Mile Road, 60 feet in width as the same is designated and delineated upon the recorded plat of Dedication of Industrial Mile Road, of record in Plat Book 32, Page 113, Recorder's Office, Franklin County, Ohio, said iron pin being the southeasterly corner of that 0.930 Acre Tract conveyed to Buckeye Racquet Ball Ltd. by deed of record in Deed Book 3741, page 237, Recorder's Office, Franklin County, Ohio; thence N. 38° 35' 55" W. along the easterly line of said 0.930 Acre Tract, a distance of 201.82 feet to an iron pin, the northeasterly corner of said 0.930 Acre Tract, said iron pin being in the southeasterly line of Lot No. 1 as the same is designated and delineated upon the recorded plat of Lincoln Park West No. 4 of record in Plat Book 40, page 3, Recorder's Office, Franklin County, Ohio; thence with the arc of a curve to the left having a radius of 1,509.06 feet, the cord of which bears N. 40° 53' 48" E. along the southeasterly line of said Lot No. 1 a chord distance of 177.69 feet, to an iron pin, said iron pin being the northwesterly corner of that 0.551 Acre Tract conveyed to James P. Jones by deed of record in Deed Book 3603, page 293, Recorder's Office, Franklin County, Ohio; thence S. 82° 35' 45" E., along the westerly line of said 0.551 Acre Tract, a distance of 200.00 feet, to an iron pin in the northwesterly line of said Industrial Mile Road, said iron pin being the southwest corner of said 0.551

Acre Tract; thence, with the arc of a curve to the right having a radius of 1709.06 feet, the chord of which bears S. 41° 11' 43" W., along the northwesterly line of said Industrial Mile Road, a chord distance of 226.67 feet to the point of beginning and containing 0.930 acres of land, more or less.

ALL OF  
(140)  
7354

ALL OF  
7354  
(140)



RECEIVED

NOV 29 2012

Franklin County Planning Department  
Franklin County, OH

AP-3784

EXCLUDING FROM THE FOREGOING TWO TRACTS THE FOLLOWING:

0.287 ACRES  
INDUSTRIAL MILE ROAD

Situate in the State of Ohio, County of Franklin, Township of Franklin, being in Virginia Military Survey No. 1425 and being a part of the original 0.930 acre tract (Parcel 7-Tract Two) conveyed to Oscar L. Thomas, Jr., Trustee by deed of record in O.R. 18314-F15, records of the Recorder's Office, Franklin County, Ohio and being more particularly described as follows:

**BEGINNING** at an iron pin found on a curve in the westerly right-of-way line of Industrial Mile Road (of record in Plat Book 32, Page 113) at a southeasterly corner of the 0.092 acre tract conveyed to Creative Child Care, Inc. by deed of record in O.R. 26780 E20.

Thence along said curve to the right having a radius of 1709.06 feet, a central angle of 03° 11' 07", the chord to which bears S 39° 29' 35" W, a chord distance of 95.00 feet, to an iron pin set;

Thence N 34° 31' 21" W, a distance of 207.39 feet, across said original 0.930 acre tract, to an iron pin set in a curve common to said original 0.930 acre tract and Lot 1, Lincoln Park West No. 4, of record in Plat Book 40, Page 3;

Thence along said curve to the left having a radius of 1309.06 feet, a central angle of 01° 08' 21", the chord to which bears N 38° 33' 36" E, a chord distance of 30.00 feet, to an iron pin found at the southwest corner of aforesaid 0.092 acre tract;

Thence S 52° 46' 08" E, a distance of 200.02 feet, along the southerly line of said 0.092 acre tract, to the **POINT OF BEGINNING**. Containing 0.287 acres, more or less, and being subject to all easements and restrictions of record.

The bearings in the above description are based on the bearing of S 52° 46' 08" W, for the southerly line of the 0.092 acre tract, conveyed to Creative Child Care, Inc., of record in O.R. 26780 E20, records of the Recorder's Office, Franklin County, Ohio.

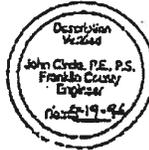


PLAT 31-1999-4-D-001  
June 24, 1999

R. D. ZANDE & ASSOCIATES, INC.

*J. Todd Henwood*  
Registered Surveyor No. 7660

0-19-C  
0.287 AC  
OUT OF  
354  
(140)



Approved By Mid-Ohio Regional Planning Commission  
This approval does not supercede any deed covenant  
or condition which imposes a greater restriction.

**No Plat Required - Date 8-19-96 By *J. Henwood***

subject to grantee combining with their lot # 21 (see parcel)

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Franklin County Planning Department  
Franklin County, OH

AP-3784

Exhibit "A" continued

DESCRIPTION OF 0.092 ACRES INDUSTRIAL MILE ROAD

Situate in the State of Ohio, County of Franklin, the Township of Franklin, being part of Virginia Military Survey Number 1425 and being part of the 0.930 acre tract (Parcel 7, Tract Two) conveyed to Oscar L. Thumbe Jr. as Trustee, by deed of record in O.R. 18314 F13; records of the Recorder's Office, Franklin County, Ohio and being more particularly described as follows:

Beginning at an iron pin on a curve in the northwesterly right-of-way line of Industrial Mile Road being 60.00 feet in width, as delineated upon the plat of Dedication of Industrial Mile Road of record in Plat Book 32, Page 113, at a common corner of said 0.930 acre tract and the 0.551 acre tract conveyed to Creative Child Care, Inc. by deed of record in O.R. 1103 D02;

Thence along said northwesterly right-of-way line of Industrial Mile Road with a curve to the right having a radius of 1709.06 feet, a central angle of 00° 40' 14", the chord to which bears S 37° 33' 59" W, a chord distance of 20.00 feet to an iron pin set;

Thence N 52° 46' 08" W, a distance of 200.02 feet across said 0.930 acre tract to an iron pin set on a curve in the northwesterly line of said 0.930 acre tract and the southeasterly line Lot 1 of Lincoln Park West No. 4 of record in Plat Book 40, Page 3;

Thence along the common line of said 0.930 acre tract and said Lot 1, with a curve to the left having a radius of 1509.06 feet, a central angle of 00° 45' 24", the chord to which bears N 37° 36' 39" E, a chord distance of 20.00 feet to an iron pin found at a common corner of said 0.930 and 0.551 acre tracts;

Thence S 52° 46' 08" E, a distance of 200.00 feet along the common line of said 0.930 and 0.551 acre tracts to the point of beginning of the herein-described strip, containing 0.092 acres, more or less, and being subject to all easements restrictions and rights-of-way of record.

The bearing datum of the afore-described tract is based on the bearing of S 52° 46' 08" E, for the southwesterly line of said 0.551 acre tract of record in O.R. 1103 D02.

R. D. ZANDE & ASSOCIATES, INC.



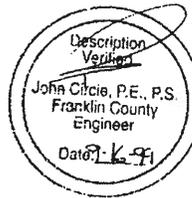
*Steven E. Radu*  
Registered Surveyor 7191

ESM:eds  
May 20, 2014  
Survey 716000/2410

Approved By Mid-Ohio Regional Planning Commission  
This approval does not supersede any deed covenant  
or condition which imposes a greater restriction.  
No Plat Required - Date 6-17-77 By CR Furr



0-19-C  
0.092 ACRES  
OUT OF  
7354  
(140)



0-19-C  
AUC OF  
7352  
7354  
(140)

TOTAL P.06

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Franklin County Planning Department  
Franklin County, Oh

AP-3784