



**U S Army Corps
of Engineers**
Huntington District

Public Notice

In reply refer to Public Notice No.
200101010-1

Issuance Date: **July 20, 2006**

Stream: UN TRIB WHITE OAK CREEK Closing Date: **August 21, 2006**

Please address all comments and inquiries to:

U.S. Army Corps of Engineers, Huntington District

ATTN: CELRH-OR-F Public Notice No. (*reference above*)

502 Eighth Street

Huntington, West Virginia 25701-2070

Phone: (304) 399-5210

PUBLIC NOTICE: The purpose of this public notice is to inform you of a proposal for work in which you might be interested. It is also to solicit your comments and information to better enable us to make a reasonable decision on factors affecting the public interest. We hope you will participate in this process.

REGULATORY PROGRAM: Since its early history, the U.S. Army Corps of Engineers (Corps) has played an important role in the development of the nation's water resources. Originally, this involved construction of harbor fortifications and coastal defenses. Later duties included the improvement of waterways to provide avenues of commerce. An important part of our mission today is the protection of the nation's waterways through the administration of the Corps Regulatory Program.

SECTION 10: The Corps is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) to regulate all work or structures in or affecting the course, condition or capacity of navigable waters of the United States (U.S.). The intent of this law is to protect the navigable capacity of waters important to interstate commerce.

SECTION 404: The Corps is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the discharge of dredged and fill material into all waters of the United States, including wetlands. The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity.

TO WHOM IT MAY CONCERN: The following application has been submitted for a Department of the Army Permit under the provisions of Section 404 of the Clean Water Act. This notice serves as the Corps of Engineers' request to the Ohio Environmental Protection Agency to act on Section 401 Water Quality Certification for the following application:

APPLICANT: Rumpke Waste Inc.
10795 Hughes Street
Cincinnati, Ohio 45251

LOCATION: The project is located at the 831-acre Brown County Landfill located west of Beyers Road, south of Sunshine Road and east of White Oak Creek in Georgetown, Brown County, Ohio. The proposal would result in impacts to unnamed tributaries of White Oak Creek and its adjacent wetlands. White Oak Creek is a direct tributary to the Ohio River, a navigable water of the United States.

DESCRIPTION OF PROPOSED WORK: The applicant proposes to place fill material into waters of the United States in conjunction with the expansion of the existing Brown County Landfill. According to the applicant, the expansion is necessary in order to continue to provide solid waste management services to southwestern Ohio. The current landfill would reach its permitted capacity by 2010. To meet future demands, the proposed expansion would allow the disposal of approximately 3,000 tons of non-hazardous waste per day for the next 70 years. The expansion would provide approximately 74 million cubic yards of airspace for waste disposal.

The proposal would consist of the placement of fill material into 6.78 acres of fifteen jurisdictional wetlands, 9,978' of twenty-six stream channels, and one jurisdictional pond totaling 0.37 acre in order to accomplish the proposed expansion. The proposal would also impact 1.92 acres of isolated wetlands, which fall under the jurisdiction of the Ohio Environmental Protection Agency. These areas would be permanently excavated and/or filled in conjunction with the construction of the new landfill cells, borrow areas, sedimentation ponds, and stream mitigation activities. It is anticipated impacts to jurisdictional waters at the site would occur incrementally over the next 1 to 10 years. Any permit issued for this proposal would be valid for 10-12 years.

COMPENSATORY MITIGATION PLAN: To compensate for the loss of 6.78 acres of jurisdictional wetland and 1.92 acres of isolated wetland, the applicant proposes to restore 14.3 acres of shrub/scrub and herbaceous wetlands within the aquatic benches of one existing sedimentation pond (Ponds 001) and two proposed sedimentation ponds (Ponds 004 and 007) on-site. To compensate for the loss of 9,978' of stream channel, the applicant proposes the enhancement 16,966' of perimeter drainage channels that would be installed following final cap construction. The applicant also proposes to create approximately 2,417' of intermittent stream channel on-site.

Wetland construction would consist of the creation of three separate scrub/shrub and emergent wetlands within sediment ponds that currently exist or are proposed at the site. The wetlands would be excavated adjacent to the sediment ponds. The elevations would correspond to the wetland habitat types (trees, shrubs, shallow, intermediate, and deep marsh). Fill would then be placed and compacted to bring the site elevations to within 1' of the final bottom contour. Stockpiled topsoil would be placed to bring the wetlands to the final designated elevations. The final grading plan would incorporate depressional topography and mounds. Wetland hydrology would be supplied by the constant water supply within the adjacent sediment ponds and direct precipitation. Water control

structures would be installed between the sediment ponds and constructed wetlands to prevent drawdown of wetland areas during occasional maintenance of the sediment ponds (5 to 10 years). The wetland vegetation would consist of native trees, shrubs, herbaceous, and aquatic wetland species (See Figure 12 for species list). Wetland Mitigation Area A is proposed for construction in the Fall of 2007 provided the proposal is authorized. Wetland Mitigation Areas B and C are proposed for construction in 2021 and 2027 respectively.

Stream construction would consist of the enhancement of approximately 16,966' of perimeter drainage structures following final cap construction. The enhancements would include the incorporation of meanders, riffle/pool complexes, natural stream substrate, and boulders, where practicable. Depending on final channel gradients, bio-engineering techniques such as step-pools, cross vanes, and/or weirs, would be incorporated to reduce water flows. The applicant also proposes to create approximately 2,417' of stream channel on-site at Sediment Pond 003 and 004. Stream mitigation area #1 (Sediment Pond 003) would connect the pond to an existing stream channel (INT-5) via a new channel measuring 483'. Stream mitigation area #2 (Sediment Pond 004) would connect the pond to an existing stream channel (INT-11) via a new channel measuring 1,934'. The stream channels would receive run-off from the ponds, which have watersheds of approximately 38 acres and 29 acres. The new channels would be constructed with a two stage channel. Substrate from the impacted stream channels would be relocated to the new stream channels. Meanders, riffle/pool complexes, natural stream substrate, and boulders would be incorporated into the new stream channels. Native tree and shrub species would be established within the riparian corridor, which would extend 25' from the top of each bank. Small areas of emergent wetlands would be established at the top of bank along the new stream corridor. Stream mitigation area #1 is proposed for construction in the Fall of 2007 and Stream mitigation area #2 is proposed for construction in 2025.

The wetlands and stream channels would be preserved in perpetuity via a restrictive environmental covenant at the site. The wetlands and stream channels would be monitored for a minimum of five years.

SECTION 404(B)(1) ALTERNATIVES ANALYSIS: A total of 6.78 acres of jurisdictional wetland would be filled as a result of the proposal. The project does not require access to or siting within the wetlands to fulfill its basic purpose and is considered a non-water dependent activity. The Section 404(b)(1) Guidelines state that for non-water dependent activities, practicable alternatives that do not involve wetlands are presumed to be available unless clearly demonstrated otherwise. The applicant is required to provide an alternative analysis that must overcome the presumption prior to receiving authorization for the placement of fill material. The applicant has submitted the required alternative analysis and it is currently being reviewed.

Plans of the proposed work are attached to this notice.

A Section 401 Water Quality Certification is required for this project. It is the applicant's responsibility to obtain the certification from the Ohio Environmental Protection Agency.

HISTORIC AND CULTURAL RESOURCES: The National Register of Historic Places has been consulted and it has been determined there are no properties within the project area listed on the Register. The applicant conducted a Phase I Survey (Schwarz, Terpstra, Morgan) at the 361 acre site. The survey identified 27 prehistoric sites, four historic sites, and two multi-component prehistoric and historic sites at the site. The Principal Investigator (PI) has determined one property, the Stonecroft Farm (BRO-564-12), is eligible for the Register under Criterion C. The PI also recommended further study for three sites, 33BR154, 33BR156, and 33BR150. The Phase I Survey has been provided to the Ohio State Historic Preservation Office (OSHP) for their review and comment. A copy of this public notice will be furnished to the Ohio State Historic Preservation Office for their review. Comments concerning archeological sensitivity of a project area should be based upon collected data.

ENDANGERED AND THREATENED SPECIES: The project is located within the known or historic range of the following endangered, threatened, and candidate species: Indiana bat, running buffalo clover, bald eagle, rayed bean mussel, and sheepnose mussel. The Huntington District has consulted the most recently available information and has determined that the project is not likely to affect the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of habitat of such species which has been determined to be critical. This public notice serves as a request to the U.S. Fish and Wildlife Service for any additional information they may have on whether any listed or proposed to be listed endangered or threatened species may be present in the area which would be affected by the activity, pursuant to Section 7 (c) of the Endangered Species Act of 1972 (as amended).

PUBLIC INTEREST REVIEW AND COMMENTS: Any person who has an interest that may be adversely affected by the issuance of a permit may request a public hearing. The request must be submitted in writing to the District Engineer on or before the expiration date of this notice and must clearly set forth the interest which may be adversely affected and the manner in which the interest may be adversely affected by the activity.

Interested parties are invited to state any objections they may have to the proposed work. The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit that reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values,

flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. In addition, the evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under the authority of Section 404(b)(1) of the Clean Water Act. Written statements on these factors received in this office on or before the expiration date of this public notice will become a part of the record and will be considered in the final determination. A permit will be granted unless its issuance is found to be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

CLOSE OF COMMENT PERIOD: All comments pertaining to this Public Notice must reach this office on or before the close of the comment period listed on page one of this Public Notice. If no comments are received by that date, it will be considered that there are no objections. Comments and requests for additional information should be submitted to:

Kimberly Courts-Brown, Regulatory Project Manager
North Regulatory Section, CELRH-OR-FN
U. S. Army Corps of Engineers Huntington District
502 Eighth Street
Huntington, West Virginia 25701-2070.

Please note names and addresses of those who submit comments in response to this public notice may be made publicly available. Thank you for your interest in our nation's water resources. If you have any questions concerning this public notice, please contact Kimberly Courts-Brown of the North Regulatory Section at 304-399-5210.


for Ginger Mullins, Chief
Regulatory Branch

(O)

1.3 PROPOSED WETLAND AND STREAM IMPACTS

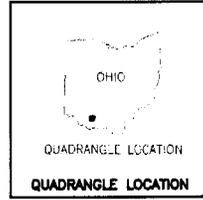
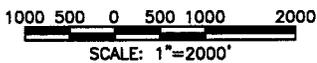
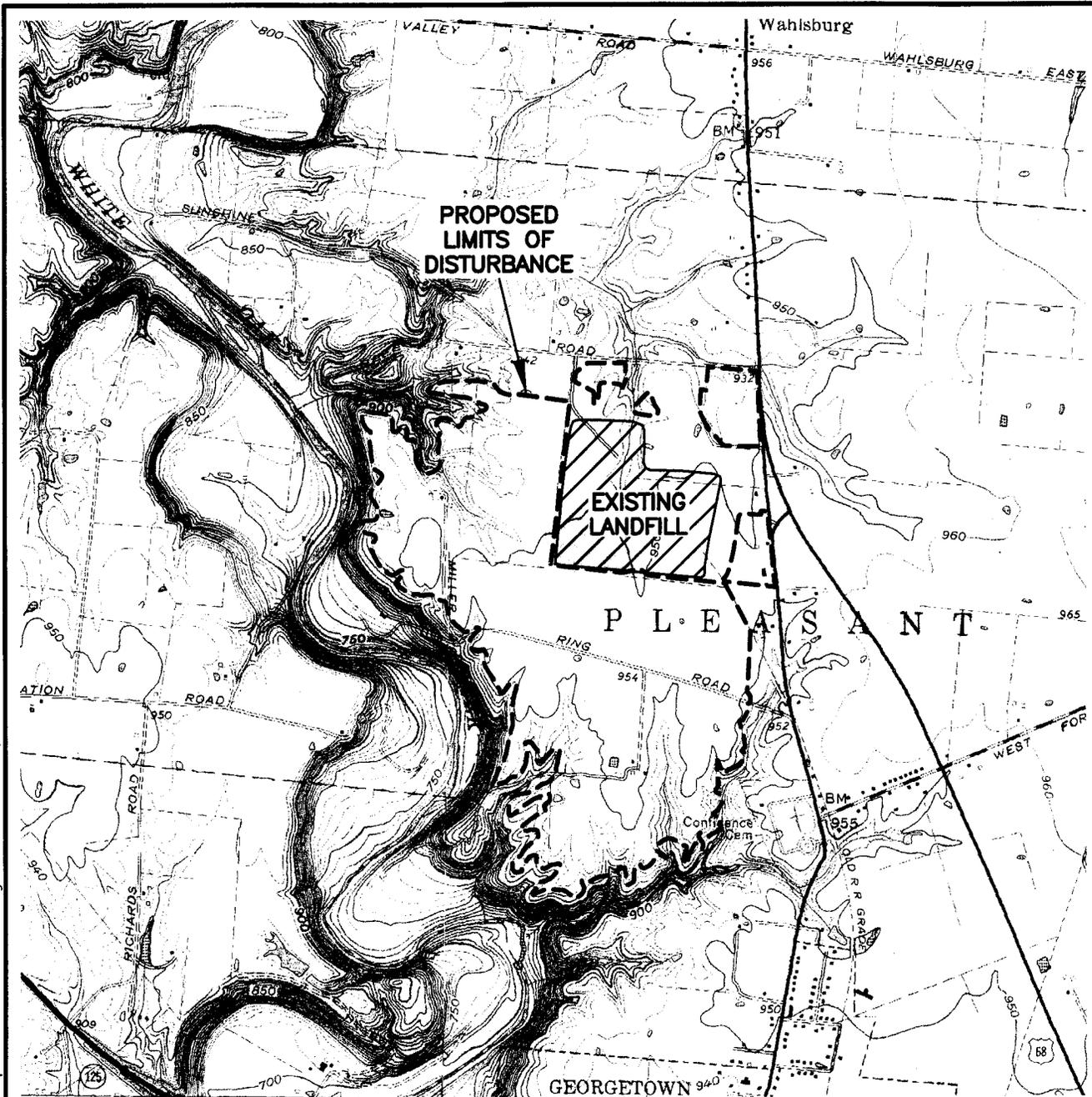
Wetland ID	Isolated or Jurisdictional	USFWS Class.	Category ¹	Total Acreage on Site	Total Proposed Impacts	Reason for Impact
A	Isolated	PEMAd	1	0.07	0.07	LF Expansion
B	Jurisdictional	PEMAd	1	0.35	0.35	LF Expansion
C	Jurisdictional	PEMC	Modified 2	0.63	0.63	LF Expansion
D	Jurisdictional	PEMC	Modified 2	1.12	1.12	LF Expansion
E	Jurisdictional	PEMC	1	0.03	0.03	LF Expansion
F	Isolated	PEM1x	1 or 2 gray zone	0.21	0	None
G	Isolated	PEMCs	1	0.15	0	None
H	Isolated	PEMC	2	0.73	0	None
I	Isolated	PEMCh	1	0.02	0	None
J	Jurisdictional	PEMKs	1	0.06	0.06	LF Expansion
K	Jurisdictional	PEMKs	1	0.10	0.10	LF Expansion
L	Jurisdictional	PEMA	Modified 2	3.08	3.08	LF Expansion
M	Jurisdictional	PFO1F	2	0.57	0.57	LF Expansion
N	Jurisdictional	PEMC	1	0.08	0.08	LF Expansion
O	Jurisdictional	PEMCh	1	0.04	0.04	LF Expansion
P	Jurisdictional	PEM1A	1	0.06	0.06	LF Expansion
Q	Jurisdictional	PEM1C	Modified 2	0.04	0.04	LF Expansion
R	Jurisdictional	PEM1C	Modified 2	0.12	0.12	LF Expansion
S	Jurisdictional	PEM1H	1 or 2 gray	0.50	0.50	LF Expansion
T	Jurisdictional	PEM1C	1 or 2 gray	0.02	0	None
U	Isolated	PEMA	Modified 2	0.38	0.38	New office/ scalehouse
V	Isolated	PEMA	2	0.89	0.89	New office/ scalehouse
W	Isolated	PFO/ EMH	1 or 2 gray	0.15	0.15	New office/ scalehouse
X	Isolated	PEMA	Modified 2	0.43	0.43	New office/ scalehouse
Totals				9.83	8.70	

Stream Identifier	On-site Length (ft)	Length of Proposed Stream Impact (ft)	Reason for Impact
PER1	3,341	0	
PER2	168	0	
PER3	2,680	0	
INT1	968	968	Landfill Expansion
INT2	575	575	Landfill Expansion
INT3	116	0	
INT4	234	0	
INT5	322	117	Stream mitigation tie in
INT6	121	0	
INT7	248	0	
INT8	886	0	
INT9	1,756	0	
INT10	488	0	
INT11	2,854	0	
INT12	706	0	
EPH1	675	675	Landfill Expansion
EPH2	1,049	1,049	Landfill Expansion
EPH3	303	303	Landfill Expansion
EPH4	131	0	
EPH5	358	0	
EPH6	86	0	
EPH7	170	104	Borrow Area
EPH8	75	74	Borrow Area
EPH9	29	0	
EPH10	85	85	Borrow Area
EPH11 ⁽¹⁾	161 ⁽¹⁾	0	
EPH12	116	0	
EPH13	79	0	
EPH14	150	0	
EPH15	188	0	
EPH16	585	0	
EPH17	155	0	
EPH18	389	304	Landfill Expansion
EPH19	354	0	
EPH20	103	0	
EPH21	154	154	Landfill Expansion
EPH22	302	302	Landfill Expansion
EPH23	329	329	Landfill Expansion
EPH24	162	162	Landfill Expansion
EPH25	341	0	
EPH26	195	140	Borrow Area
EPH27	71	0	
EPH28	798	0	

Stream Identifier	On-site Length (ft)	Length of Proposed Stream Impact (ft)	Reason for Impact
EPH29	730	602	Landfill Expansion
EPH30	272	272	Landfill Expansion
EPH31	195	0	
EPH32	488	0	
EPH33	80	0	
EPH34	546	221	Borrow Area
EPH35	343	0	
EPH36	168	0	
EPH37	562	514	Sedimentation Pond
EPH38	371	375	Sedimentation Pond
EPH39	1,760	1,760	Landfill Expansion
EPH40	39	0	
EPH41	820	357	Borrow Area
EPH42	235	115	Borrow Area
EPH43	122	0	
EPH44	112	0	
EPH45	270	204	Stream mitigation construction
EPH46	105	26	Stream mitigation construction
EPH47	448	191	Stream mitigation tie in
Total Perennial	6,189	0	
Total Intermittent	9,274	1,660	
Total Ephemeral⁽¹⁾	15,259⁽¹⁾	8,318	
Grand Total	30,722⁽¹⁾	9,978	

⁽¹⁾ EPH11 was incorrectly reported to be 2,854 feet in length in the wetland and stream delineation drawing (dated 8-15-05). The actual length is 161 feet and the total ephemeral length reflects this change.

G:\PROJECTS\2004\041-408 - RUMPKE BROWN COUNTY\DWG\041-408 Site Loc USGS.dwg DTUCKER - MAY 03, 2006 - 07:26:37 XREFS:



SOURCE: USGS 7.5 MINUTE QUADRANGLE HAMERSVILLE, OHIO, 1960 PHOTOREVISED 1974.

CEC
Civil & Environmental Consultants, Inc.
 Cincinnati, OH
 (513) 985-0226 (800) 759-5614
 Pittsburgh, PA Columbus, OH Indianapolis, IN
 Nashville, TN Chicago, IL St. Louis, MO

U.S.G.S. SITE LOCATION MAP
RUMPKE OF OHIO
BROWN COUNTY LANDFILL EXPANSION
BROWN COUNTY, OHIO

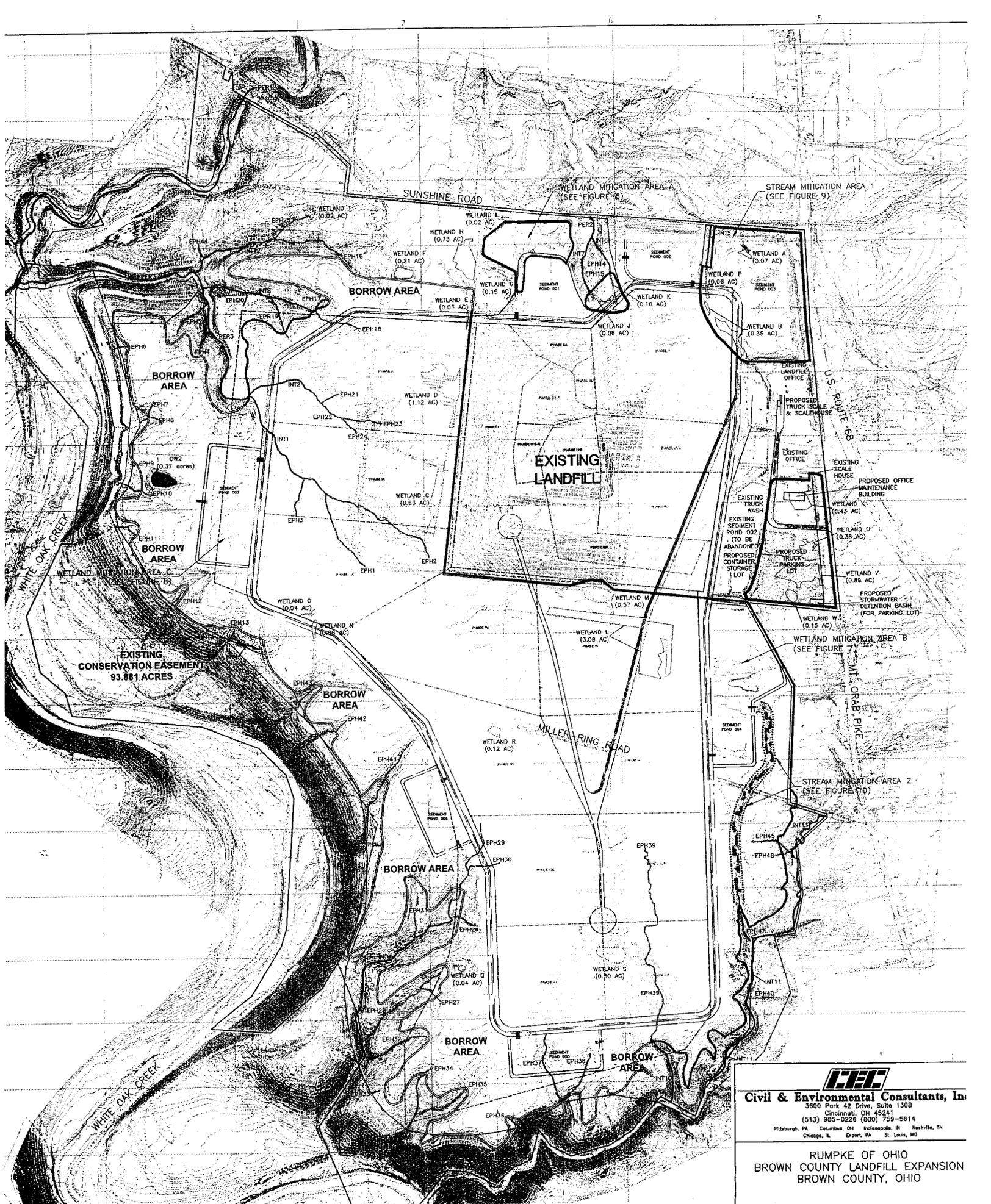
DWN. BY: DFT
CHKD. BY: DAM

SCALE
 AS SHOWN

DATE
 May, 2006

PROJECT NO:
 041-408

FIGURE NO:
 1



CEC
Civil & Environmental Consultants, Inc.
 3600 Park 42 Drive, Suite 130B
 Cincinnati, OH 45241
 (513) 985-0226 (900) 759-5614
 Pittsburgh, PA Columbus, OH Indianapolis, IN Nashville, TN
 Chicago, IL Export, PA St. Louis, MO

**RUMPKE OF OHIO
 BROWN COUNTY LANDFILL EXPANSION
 BROWN COUNTY, OHIO**

EDIT DATE: 05/02/06	OWN BY:	DFT	APPROVED BY:
SCALE: 1"=400'	CHKD. BY:	DAM	PROJ. NO: 041-408.1
PROPOSED SITE PLAN MINIMUM DEGRADATION			SHEET 3 OF
			FIGURE NUMBER



AQUATIC FEATURES

WETLANDS	
WETLAND A	0.57 AC
WETLAND B	0.35 AC
WETLAND C	1.12 AC
WETLAND D	0.03 AC
WETLAND E	0.15 AC
WETLAND F	0.15 AC
WETLAND G	0.15 AC
WETLAND H	0.15 AC
WETLAND I	0.15 AC
WETLAND J	0.15 AC
WETLAND K	0.15 AC
WETLAND L	0.15 AC
WETLAND M	0.15 AC
WETLAND N	0.15 AC
WETLAND O	0.15 AC
WETLAND P	0.15 AC
WETLAND Q	0.15 AC
WETLAND R	0.15 AC
WETLAND S	0.15 AC
WETLAND T	0.15 AC
WETLAND U	0.15 AC
WETLAND V	0.15 AC
WETLAND W	0.15 AC
WETLANDS TOTAL	8.83 ACRES

PERMANENT STREAM	
PERM	2.541 LF
PERM TOTAL	2.541 LF

INTERMITTENT STREAM	
INT	2.880 LF
INT TOTAL	2.880 LF

EPIHEMERAL STREAM	
EPH	1.827 LF
EPH TOTAL	1.827 LF

(1) EPH 11 WAS INCORRECTLY CALCULATED TO BE 2.854 STREAM DUE TO AN ERROR IN THE ORIGINAL DRAWING. THE CORRECTED STREAM DURATION IN THE ORIGINAL DRAWING WAS 8-15-05. THE ACTUAL DURATION IS 181 FEET AND THE ALSO EPH 31 WHICH WAS INCORRECTLY DRAWN ON THE 8-15-05 DRAWING HAS BEEN ADDED.

NOTES:

- BASEMAP TOPOGRAPHY COMPILED FROM Aerial Mapping by M&A SURVEYING SERVICES, INC. AND DATED 04/24/05.
- WETLAND INFORMATION WAS REFERENCED FROM "WETLAND AND STREAM DELINEATION MAP" DATED 3/11/05 AND REVISION 8/15/05.
- LANDFILL SETBACKS:
 300' - PROPERTY LINE
 1000' - DOWNCUTS NOT OWNED BY RUMPKIN
 1000' - WHITE OAK CREEK
 4. TOTAL VOLUME
 74,472,000 CUBIC YARDS

LEGEND

- PROPERTY BOUNDARY
- LIMITS OF DISTURBANCE
- LIMIT OF WETLAND INVESTIGATION
- DELINEATED WETLAND
- PERMANENT STREAM
- INTERMITTENT STREAM
- EPIHEMERAL STREAM
- EXISTING CONSERVATION EASEMENT
- EXPANSION WASTE LIMIT (PROPOSED)
- LIMIT OF LANDFILL PHASE
- EXISTING CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED SOIL BORROW AREA



NO.	DATE	REVISION RECORD
1	08/15/05	DESIGN/REVISED

PROPOSED IMPACTS TO AQUATIC FEATURES

IMPACTED WETLANDS	
WETLAND A	0.07 AC
WETLAND B	0.15 AC
WETLAND C	0.15 AC
WETLAND D	0.15 AC
WETLAND E	0.15 AC
WETLAND F	0.15 AC
WETLAND G	0.15 AC
WETLAND H	0.15 AC
WETLAND I	0.15 AC
WETLAND J	0.15 AC
WETLAND K	0.15 AC
WETLAND L	0.15 AC
WETLAND M	0.15 AC
WETLAND N	0.15 AC
WETLAND O	0.15 AC
WETLAND P	0.15 AC
WETLAND Q	0.15 AC
WETLAND R	0.15 AC
WETLAND S	0.15 AC
WETLAND T	0.15 AC
WETLAND U	0.15 AC
WETLAND V	0.15 AC
WETLAND W	0.15 AC
TOTAL IMPACTED WETLANDS	8.310 ACRES

IMPACTED PERMANENT STREAM	
PERM	0 LF
PERM TOTAL	0 LF

IMPACTED INTERMITTENT STREAM	
INT	988 LF
INT TOTAL	988 LF

IMPACTED EPIHEMERAL STREAM	
EPH	1,880 LF
EPH TOTAL	1,880 LF

(2) IMPACTS ASSOCIATED WITH STREAM MITIGATION.



RUMPKIN ENGINEERING & SURVEYING, INC.
 17000 E. MAIN ST.
 CLEVELAND, OHIO 44128
 513 / 851-0122

CONTRACT NUMBER: 1700
 WORKING CONTRACT NUMBER: 1700/00000000
 THE WORKING CONTRACT WITH
 M&A SURVEYING SERVICES, INC.
 (614) 892-0888



Civil & Environmental Consultants, Inc.
 3400 Park 42, Room 2000, 44138
 CLEVELAND, OHIO 44138
 (313) 562-0220 (800) 794-5614
 www.civilandenvironmental.com

RUMPKIN ENGINEERING & SURVEYING, INC.
 BROWN COUNTY LANDFILL EXPANSION
 BROWN COUNTY, OHIO
 PROPOSED SITE PLAN
 MINIMUM DECORATION
 ALTERNATIVE
 SHEET 3 OF 3
 FIGURE NUMBER
 3

Wetland Mitigation Area A (Pond 001)

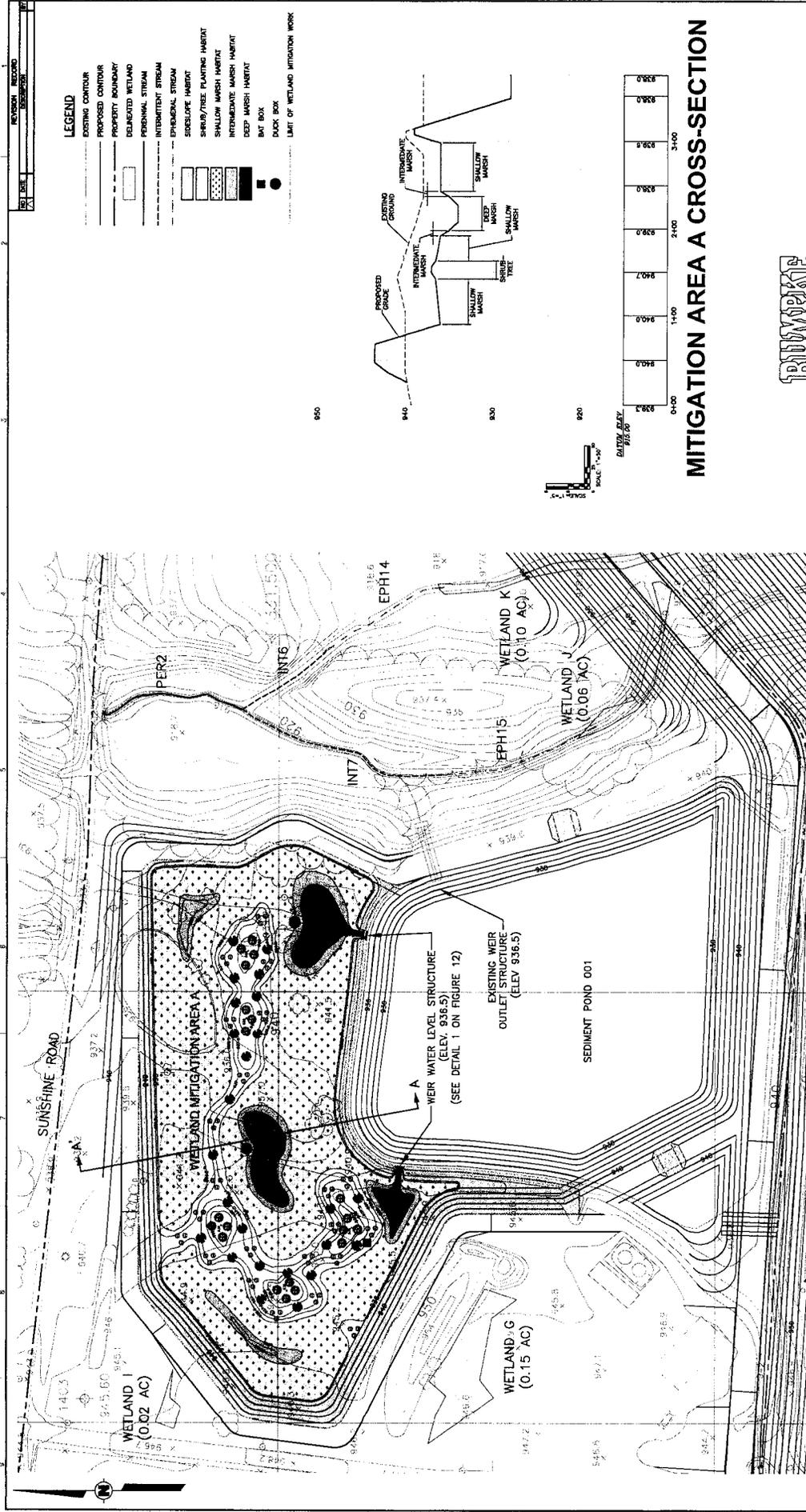
Wetland Type	Hydrologic Design Criteria	Elevation	Acreage
Shrub/Tree Planting Habitat	0.0 to 2.5 feet above pool elevation (935.5)	935.5 to 938	0.74
Shallow Marsh	0.0 to 0.5 feet below pool elevation (935.5)	935 to 935.5	2.07
Intermediate Marsh	0.5 to 1.5 feet below pool elevation (935.5)	934 to 935	0.21
Deep Marsh	>1.5 feet below pool elevation (935.5)	Below 934	0.20
Sideslopes	NA	935.5 to 946	0.80
Total Area			4.02

Wetland Mitigation Area B (Pond 004)

Wetland Type	Hydrologic Design Criteria	Elevation	Acreage
Shrub/Tree Planting Habitat	0.0 to 2.0 feet above pool elevation (950)	950 to 952	0.95
Shallow Marsh	0.0 to 0.5 feet below pool elevation (950)	949.5 to 950	4.48
Intermediate Marsh	0.5 to 1.5 feet below pool elevation (950)	948.5 to 949.5	0.46
Deep Marsh	>1.5 feet below pool elevation (95)	Below 948.5	0.23
Sideslopes	NA	952 to 958	1.08
Total Area			7.20

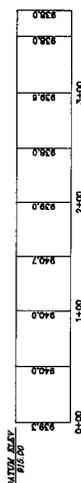
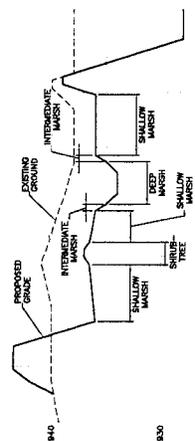
Wetland Mitigation Area C (Pond 007)

Wetland Type	Hydrologic Design Criteria	Elevation	Acreage
Shrub/Tree Planting Habitat	0.0 to 2.0 feet above pool elevation (942)	942 to 944.5	0.42
Shallow Marsh	0.0 to 0.5 feet below pool elevation (942)	941.5 to 942	1.73
Intermediate Marsh	0.5 to 1.5 feet below pool elevation (942)	940.5 to 941.5	0.23
Deep Marsh	>1.5 feet below pool elevation (942)	Below 940.5	0.19
Sideslopes	NA	942 to 950	0.48
Total Area			3.05

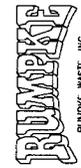


LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY BOUNDARY
- DEGRADED WETLAND
- PERENNIAL STREAM
- INTERMITTENT STREAM
- ENVELOPING STREAM
- SHRUB/TREE PLANTING HABITAT
- SHALLOW MARSH HABITAT
- INTERMEDIATE MARSH HABITAT
- DEEP MARSH HABITAT
- DUCK BOX
- LIMIT OF WETLAND MITIGATION WORK



MITIGATION AREA A CROSS-SECTION



RUMPKIN WASTE, INC.
10755
Highway Road 251
513 / 851-0122

M.A.N. MAPPING SERVICES, INC.
10700
Highway Road 251
513 / 851-0122

ENGINEERED BY: M.A.N. MAPPING SERVICES, INC.
CHECKED BY: M.A.N. MAPPING SERVICES, INC.
DATE: 8/15/06

SCALE: 1"=50'
0 50 100

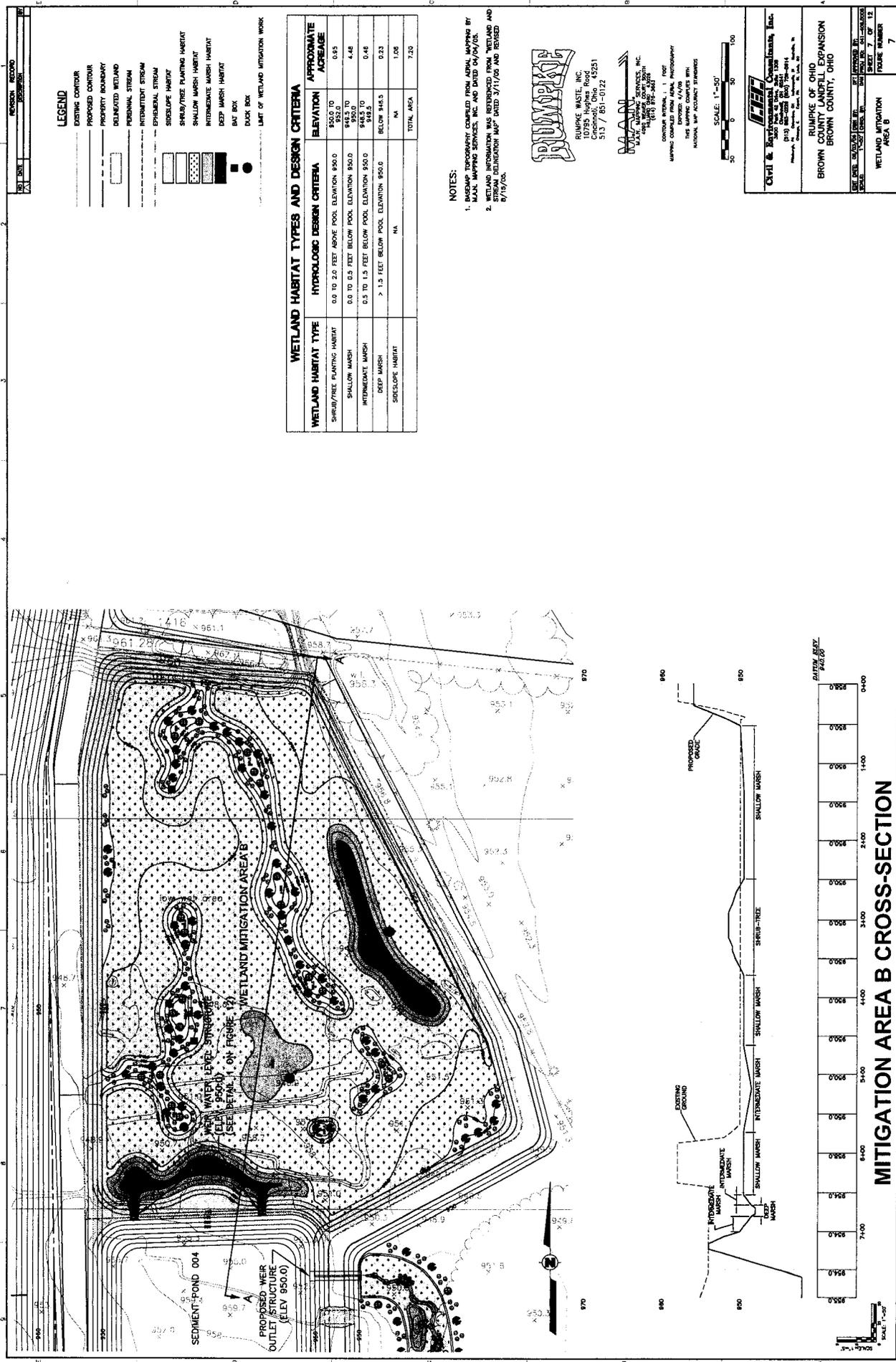
Civil & Environmental Consultants, Inc.
10700 Highway Road 251
Brown County, Ohio 45302
Phone: 513-851-0122
Fax: 513-851-0123
www.ceconline.com

RUMPKIN OF OHIO
BROWN COUNTY LANDFILL EXPANSION
BROWN COUNTY, OHIO

DATE: 8/15/06
SCALE: 1"=50'
SHEET 6 OF 12
WETLAND MITIGATION
AREA A
FIGURE NUMBER
6

- NOTES:**
- BASEMAP TOPOGRAPHY COMPILED FROM AERIAL MAPPING BY M.A.N. MAPPING SERVICES, INC. AND DATED 04/04/05.
 - WETLAND INFORMATION WAS RETRIEVED FROM "WETLAND AND WETLAND MITIGATION MAP" DATED 3/11/05 AND REVISED 8/15/06.

WETLAND HABITAT TYPES AND DESIGN CRITERIA			
WETLAND HABITAT TYPE	HYDROLOGIC DESIGN CRITERIA	ELEVATION	APPROXIMATE ACREAGE
SHRUB/TREE PLANTING HABITAT	0.0 TO 2.5 FEET ABOVE POOL ELEVATION	934.5 TO 939	0.74
SHALLOW MARSH	0.0 TO 0.5 FEET BELOW POOL ELEVATION	935 TO 936.5	2.07
INTERMEDIATE MARSH	0.5 TO 1.5 FEET BELOW POOL ELEVATION	935 TO 936	0.21
DEEP MARSH	> 1.5 FEET BELOW POOL ELEVATION	BELOW 935	0.20
SHRUB/TREE HABITAT	NA	NA	0.70
		TOTAL AREA	4.02



DATE	DESCRIPTION
10/1/00	ISSUED FOR PERMITS

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY BOUNDARY
- DEGRAVED WETLAND
- PERENNIAL STREAM
- INTERMITTENT STREAM
- EPHEMERAL STREAM
- SLOPE HABITAT
- SHRUB/TREE PLANTING HABITAT
- SHALLOW MARSH HABITAT
- INTERMEDIATE MARSH HABITAT
- DEEP MARSH HABITAT
- RAVINE
- DUCK BOX
- LIMIT OF WETLAND MITIGATION WORK

WETLAND HABITAT TYPES AND DESIGN CRITERIA		
WETLAND HABITAT TYPE	HYDROLOGIC DESIGN CRITERIA	APPROXIMATE ACREAGE
SHRUB/TREE PLANTING HABITAT	0.0 TO 2.0 FEET ABOVE POOL ELEVATION 950.0	0.95
SHALLOW MARSH	0.0 TO 0.5 FEET BELOW POOL ELEVATION 950.0	4.48
INTERMEDIATE MARSH	0.5 TO 1.5 FEET BELOW POOL ELEVATION 950.0	0.48
DEEP MARSH	> 1.5 FEET BELOW POOL ELEVATION 950.0	0.23
SLOPE HABITAT	NA	1.08
TOTAL AREA		7.20

NOTES:
 1. MAPS PREPARED BY MACK MAPPRO SERVICES, INC. AND DATED 04/04/05.
 2. WETLAND INFORMATION WAS DERIVED FROM WETLAND AND STREAM DELINEATION MAP DATED 3/11/05 AND REVISED 8/15/05.

BRUMBY
 BRUMBY WASTE, INC.
 10785 Highway Road
 Cincinnati, Ohio 45251
 513 / 851-0122

MACK MAPPRO SERVICES, INC.
 1410 W. STATE STREET
 CINCINNATI, OHIO 45202
 (513) 895-3800

CONTOUR INTERVAL: 1.0 FEET
 WETLAND CONTOUR INTERVAL: 0.5 FEET
 THIS MAPPRO COMPUTER FILE
 NATIONAL MAP ACCOUNT NUMBER

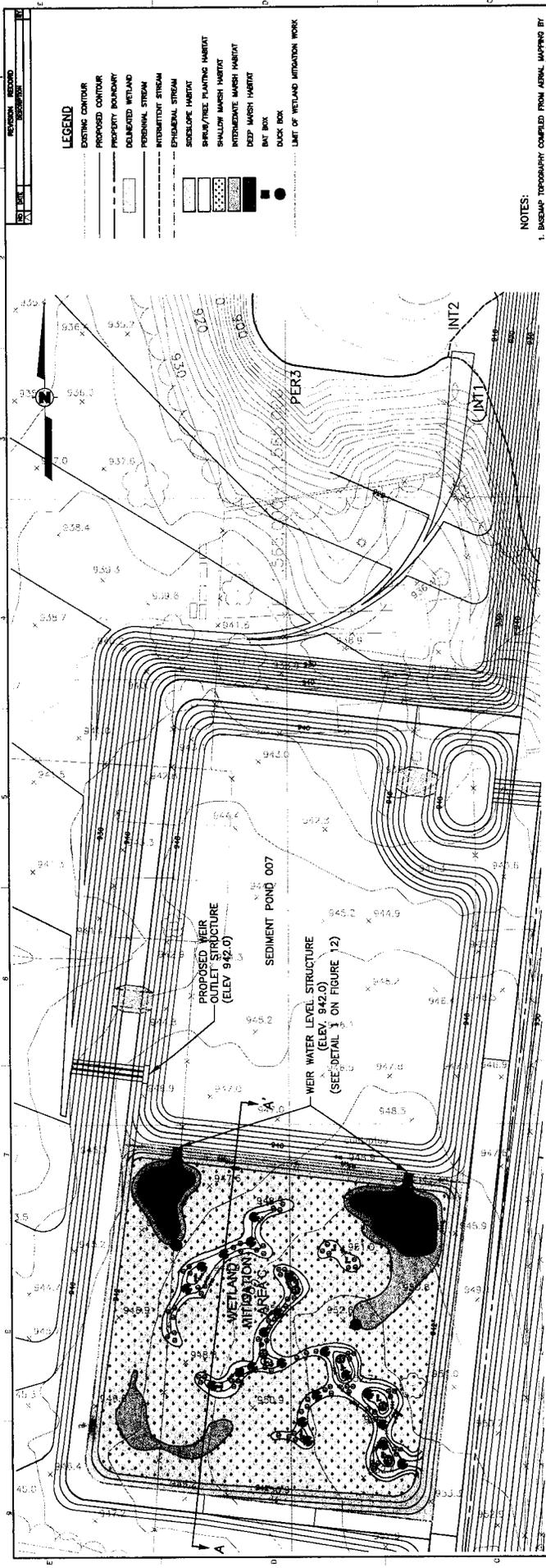


Civil & Environmental Consultants, Inc.
 1000 W. STATE STREET
 CINCINNATI, OHIO 45202
 (513) 895-3800

RUMPKO OF OHIO
 BROWN COUNTY LANDFILL EXPANSION
 BROWN COUNTY, OHIO

WETLAND MITIGATION
 AREA B

SHEET 7 OF 18
 FIGURE NUMBER 7



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY BOUNDARY
- DELIMITED WETLAND
- PROPOSED STREAM
- EXISTENTIAL STREAM
- INTERMITTENT STREAM
- SIDELOBE HABITAT
- SHRUB/TREE PLANTING HABITAT
- SHALLOW MARSH HABITAT
- INTERMEDIATE MARSH HABITAT
- DEEP MARSH HABITAT
- DUCK BOX
- LIMIT OF WETLAND MITIGATION WORK

NOTES:

- BASEMAP TOPOGRAPHY COMPILED FROM AERIAL MAPPING BY M.A.N. MAPPING SERVICES, INC. AND DATED 04/05/06.
- WETLAND INFORMATION WAS REFERENCED FROM "WETLAND AND STREAM DELIMITATION MAP" DATED 3/7/15 AND REVISION 8/15/06.

BROWN

M.A.N. MAPPING SERVICES, INC.
 10865 HAWK HOLLOW RD.
 CINCINNATI, OHIO 45251
 513 / 851-0722

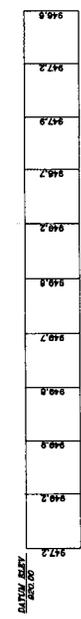
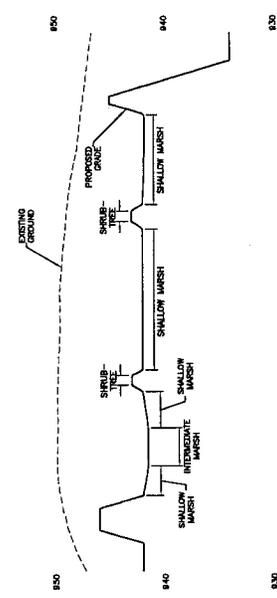
CEC

Civil & Environmental Consultants, Inc.
 10115 W. STATE ST., SUITE 100
 CINCINNATI, OHIO 45241
 513 / 851-0722



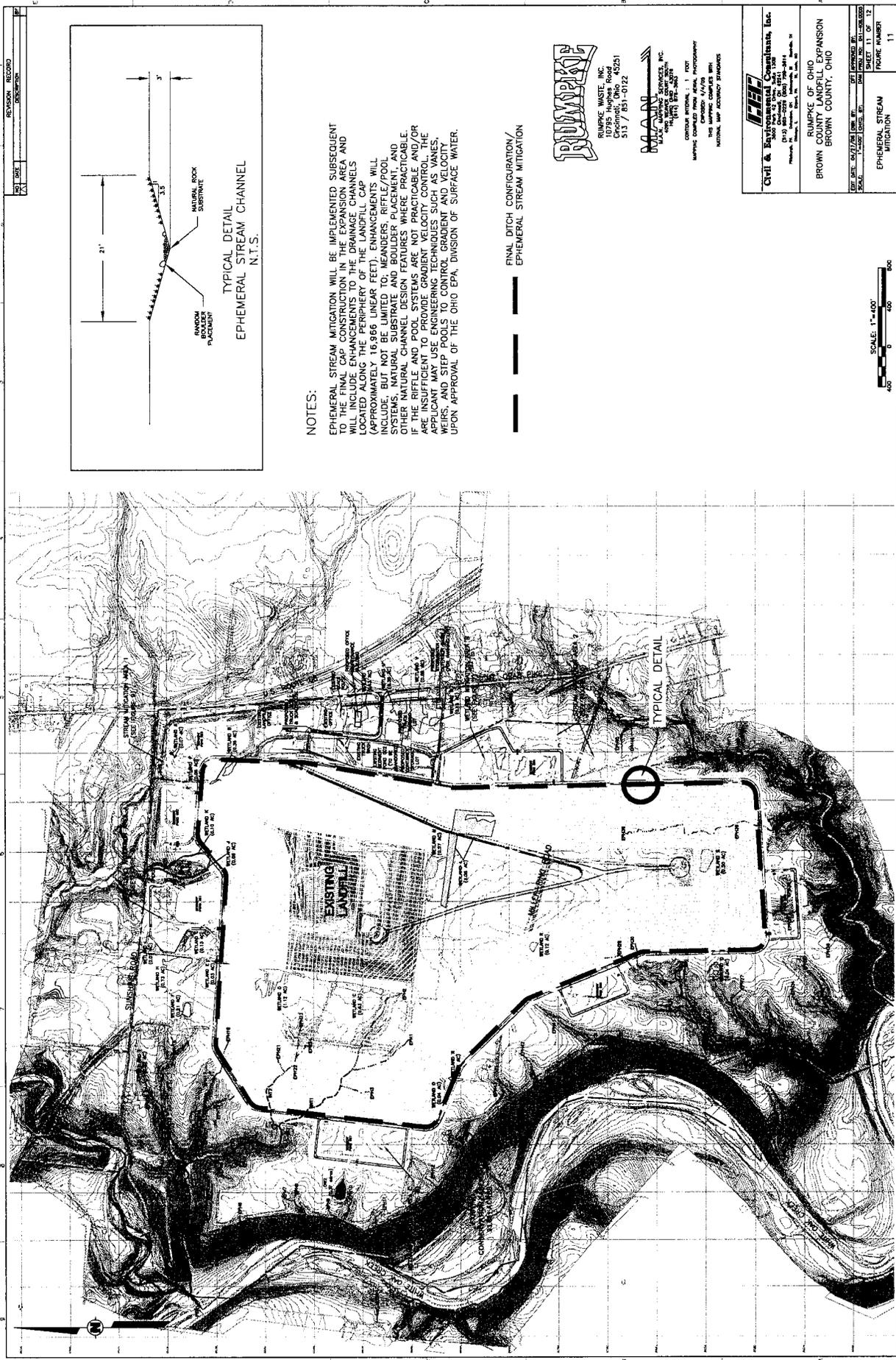
Civil & Environmental Consultants, Inc.	
10115 W. STATE ST., SUITE 100 CINCINNATI, OHIO 45241 513 / 851-0722	
PROJECT: RUMPLEY OF OHIO WETLAND EXPANSION BROWN COUNTY, OHIO	
DATE: 08/15/06	SHEET: 8 OF 12
SCALE: 1"=50'	FIGURE NUMBER: 8

WETLAND HABITAT TYPE	HYDROLOGIC DESIGN CRITERIA	ELEVATION	APPROXIMATE ACRES
SHRUB/TREE PLANTING HABITAT	0.0 TO 2.5 FEET ABOVE POOL ELEVATION 942.0	942.0 TO 944.0	0.42
SHALLOW MARSH	0.0 TO 0.5 FEET BELOW POOL ELEVATION 942.0	941.5 TO 942.0	1.73
INTERMEDIATE MARSH	0.5 TO 1.5 FEET BELOW POOL ELEVATION 942.0	940.5 TO 941.5	0.23
DEEP MARSH	> 1.5 FEET BELOW POOL ELEVATION 942.0	BELOW 940.5	0.19
SIDELOBE HABITAT	NA	NA	0.48
TOTAL AREA			3.05



MITIGATION AREA C CROSS-SECTION

SCALE: 1"=50'



NOTES:

EPHEMERAL STREAM MITIGATION WILL BE IMPLEMENTED SUBSEQUENT TO THE FINAL CAP CONSTRUCTION IN THE EXPANSION AREA AND WILL INCLUDE ENHANCEMENTS TO THE DRAINAGE CHANNELS LOCATED ALONG THE PERIPHERY OF THE LANDFILL CAP INCLUDING BUT NOT LIMITED TO LEANERS, RIFLE / POOL SYSTEMS, NATURAL SUBSTRATE AND BOULDER PLACEMENT AND OTHER NATURAL CHANNEL DESIGN FEATURES WHERE PRACTICABLE. IF THE RIFLE AND POOL SYSTEMS ARE NOT PRACTICABLE AND/OR ARE INSUFFICIENT TO PROVIDE GRADIENT VELOCITY CONTROL, THE APPLICANT MAY USE ENGINEERING TECHNIQUES SUCH AS VANES, APRONS, AND STEP POOLS TO CONTROL SHEAR AND EROSION. UPON APPROVAL OF THE OHIO EPA, DIVISION OF SURFACE WATER.

--- FINAL DITCH CONFIGURATION / EPHEMERAL STREAM MITIGATION



RUMPKÉ WASTE, INC.
 10755 W. STATE ROAD
 CLEVELAND, OH 44125
 513 / 851-0122



M.A.M. CONSULTING SERVICES, INC.
 10000 W. STATE ROAD
 CLEVELAND, OH 44125
 216 / 851-0122

Civil & Environmental Consultants, Inc. 3800 W. STATE ROAD CLEVELAND, OH 44125 216 / 851-0122	
RUMPKÉ OF OHIO COUNTY LANDFILL EXPANSION BROWN COUNTY, OHIO	
DATE: 06/24/04 SCALE: 1"=400' SHEET NO. 11 OF 12	SHEET NO. 11 OF 12 FIGURE NUMBER 11

REVISION RECORD		
NO	DATE	DESCRIPTION
1		

PLANTING NOTES FOR WETLAND MITIGATION AREAS

- PLANT MATERIALS ARE SPECIFIED IN TABLES 1 TO 7 OF THE MITIGATION PLAN. PLANT SUBSTITUTIONS WILL NOT BE ALLOWED WITHOUT THE WRITTEN CONSENT OF RUMPKE OR CEC.
- PLANT MATERIALS WILL BE FROM PLANT STOCK NATIVE OR ADAPTED TO THE EASTERN DECIDUOUS FOREST OR TEMPERATE PRAIRIE PARKLAND ECOREGIONS (AS DEFINED BY THE USDA FOREST SERVICE).
- PLANT HANDLING AND INSTALLATION SHOULD BE PERFORMED BY A CONTRACTOR WITH EXPERIENCE IN LANDSCAPING, PLANT PROPAGATION, PLANTING WETLAND MITIGATION SITES, REFORESTATION, AND/OR ECOLOGICAL RESTORATION WORK.
- THE FOLLOWING PLANT SPECIFICATIONS WILL BE MET AT THE TIME OF PLANTING:
 - PLANT MATERIALS WILL BE HEALTHY AND FREE OF DISEASE, PESTS, MECHANICAL INJURY AND STRESS. PLANTS WITH LEAVES AND SHOOTS WILL APPEAR HEALTHY, WITH NO LEAF SPOTS, LEAF DISCOLORATIONS, LEAF WILTING OR CURLING, OR EVIDENCE OF INSECT INFESTATION.
 - SEED WILL MEET THE PERCENT COMPOSITION SPECIFICATIONS DESCRIBED IN THE MITIGATION PLAN, AS CERTIFIED IN WRITING BY THE SUPPLIER.
 - HERBACEOUS RHIZOMES AND TUBERS (PROPAGULES) WILL BE A MINIMUM OF 4 INCHES LONG AND HAVE AT LEAST TWO SHOOTS PER PROPAGULE. PROPAGULES AND SHOOTS WILL BE FIRM AND TURGID, WITHOUT EVIDENCE OF ROT OR DECOMPOSITION.
 - BARE ROOT HERBACEOUS PLANTS AND ROOT STOCK WILL HAVE NEW ROOTS THAT APPEAR WHITE AND CLEAN AND ARE FREE OF ROT.
 - DORMANT BARE ROOT WOODY PLANTS WILL HAVE WELL-DEVELOPED PRIMARY AND FIBROUS ROOTS AND TURGID STEM AND BRANCHES WITH ABUNDANT TERMINAL BUDS. NO MORE THAN 25% OF THE ROOT SYSTEM WILL SHOW EVIDENCE OF PRUNING OR REMOVAL. PLANTS THAT HAVE BROKEN DORMANCY (I.E., WITH LEAVES) WILL BE REJECTED.
 - CONTAINER-GROWN PLANTS WILL BE FULLY ROOTED IN THE SOIL POTTING MEDIUM WITHOUT SPIRALING PRIMARY WOODY ROOTS.
 - BARE ROOT PLANTS AND HERBACEOUS RHIZOMES, TUBERS, AND ROOT STOCK WILL BE SHIPPED IMMEDIATELY FOLLOWING HARVESTING OR LIFTING FROM THE GROUND, UNLESS STORED IN A COLD ROOM (1 TO 4 DEGREES CELSIUS) TO MAINTAIN DORMANCY FOLLOWING HARVESTING. PLANTS WILL BE PROPERLY PACKED AND KEPT MOIST AND COOL DURING SHIPPING TO AVOID DESICCATION AND DAMAGE FROM HEAT/FREEZING.
 - UPON RECEIPT AND FOLLOWING INSPECTION, PLANT MATERIALS SHOULD BE IMMEDIATELY INSTALLED IN THE MITIGATION AREA. IF PLANT MATERIALS CANNOT BE INSTALLED IMMEDIATELY AFTER DELIVERY, THEY WILL BE STORED APPROPRIATELY FOR NO LONGER THAN 3 DAYS. SEED SHOULD BE STORED IN A COOL, DRY, SHELTERED LOCATION. HERBACEOUS PROPAGULES AND BARE ROOT PLANTS SHOULD BE STORED IN THE SHADE, COVERED WITH MOIST MEDIA TO AVOID DRYING FROM THE SUN AND WIND, AND KEPT MOIST DURING TEMPORARY STORAGE BY WATERING PERIODICALLY. CONTAINER-GROWN PLANTS WILL BE STORED OUT OF DIRECT EXPOSURE TO WIND AND SUN AND WILL BE WATERED PERIODICALLY TO MAINTAIN SOIL MOISTURE.
- HERBACEOUS WETLAND PLANTINGS WILL BE INSTALLED DURING THE FALL (SEPTEMBER 1 TO OCTOBER 15) OR SPRING (MARCH 15 TO MAY 15). WOODY WETLAND PLANTINGS WILL BE INSTALLED DURING THE FALL (SEPTEMBER 15 TO NOVEMBER 15) OR THE FIRST EARLY TO MID-SPRING (MARCH 15 TO MAY 15) PLANTING PERIOD FOLLOWING FINAL GRADING OF THE WETLAND MITIGATION AREA, DEPENDING ON SOIL MOISTURE AND TEMPERATURE. WETLAND SEED MIXTURES WILL BE SPREAD IN THE FALL (OCTOBER THROUGH NOVEMBER) OR EARLY SPRING (APRIL). SOIL SHOULD BE MOIST TO SATURATED, BUT NOT PONDED, AT THE TIME OF PLANTING. PLANTING SHOULD NOT BE PERFORMED PRIOR TO PREDICTED PERIODS OF HEAVY FROST, FREEZING TEMPERATURES, OR HEAVY PRECIPITATION.
- WETLAND SEED MIXTURES WILL BE SEED PRIOR TO INSTALLING BARE ROOT AND CONTAINER-GROWN PLANTS. PRIOR TO SEEDING, SEED MIXES SHOULD BE MIXED WITH A MINIMUM OF AN EQUAL VOLUME OF AN APPROPRIATE INERT CARRIER (CLEAN SAND, SAWDUST, OAT GROATS, ETC.) TO PROVIDE MORE UNIFORM SEED DISTRIBUTION. WETLAND SEED MIXES WILL BE BROADCAST ON MOIST SOIL WITH HAND-HELD SEED SPREADERS. WEED-FREE STRAW MULCH WILL BE PLACED IN THOSE AREAS NOT INUNDATED WITH WATER WITHIN 24 HOURS OF SEEDING.
- BARE ROOT AND CONTAINER-GROWN WOODY AND HERBACEOUS WETLAND PLANTS AND HERBACEOUS ROOT STOCK, RHIZOMES, AND TUBERS WILL BE INSTALLED IN MOIST SOIL USING APPROPRIATE HAND TOOLS (SPADE, DIGGLE, AUGER, ETC.). PLASTIC PLANT PROTECTORS, WITH NETTING COVERING THE OPEN END, WILL BE INSTALLED WITH ALL ROOTED WOODY PLANTS. INDIVIDUAL PLANTS WILL BE FERTILIZED ONCE, AT THE TIME OF PLANTING, BY MIXING THE FOLLOWING QUANTITY OF 18-6-12 OSMOCOTE (9-MONTH RELEASE) FERTILIZER IN EACH PLANTING HOLE:
 - 1.0 OUNCE FOR BARE ROOT AND TUBELING HERBACEOUS AND WOODY PLANTS AND HERBACEOUS ROOT STOCK, RHIZOMES, AND TUBERS.
 - 2.0 OUNCES FOR 1 GALLON WOODY PLANTS.
 - 6.0 OUNCES FOR 5 GALLON WOODY PLANTS.
- BARE ROOT AND CONTAINER-GROWN HERBACEOUS AND WOODY PLANTS AND HERBACEOUS ROOT STOCK, RHIZOMES AND TUBERS WILL BE INSTALLED IN EACH OF THE WETLAND PLANT COMMUNITIES AS FOLLOWS:

INTERMEDIATE MARSH - PLANTS WILL BE INSTALLED IN CLUMPS OF 3 PLANTS OF THE SAME SPECIES. PLANTS WILL BE SPACED 0 TO 12 INCHES APART WITHIN CLUMPS AND CLUMPS WILL BE SPACED APPROXIMATELY 9 FEET APART.



RUMPKE WASTE, INC.
10795 Hughes Road
Cincinnati, Ohio 45251
513 / 851-0122



M.A.N. MAPPING SERVICES, INC.
4090 WEAVER COURT SOUTH
HILLIARD OHIO 43026
(614) 876-3683

CONTOUR INTERVAL : 1 FOOT
MAPPING COMPILED FROM AERIAL PHOTOGRAPHY
EXPOSED: 4/4/05
THIS MAPPING COMPLIES WITH
NATIONAL MAP ACCURACY STANDARDS



Civil & Environmental Consultants, Inc.

3800 Park 42 Drive, Suite 1308
Cincinnati, OH 45241
(513) 985-0228 (800) 759-5614
Pittsburgh, PA Columbus, OH Indianapolis, IN Nashville, TN
Chicago, IL Export, PA St. Louis, MO

RUMPKE OF OHIO
BROWN COUNTY LANDFILL EXPANSION
BROWN COUNTY, OHIO

EDIT DATE: 05/04/06 DWN BY: DFT APPROVED BY:
SCALE: N/A CHKD. BY: DAM PROJ. NO.: 041-408.0005

PLANT TABLES, NOTES
& DETAILS

SHEET 12 OF 12
FIGURE NUMBER
12

