

APPLICATION FOR OHIO EPA SECTION 401 WATER QUALITY CERTIFICATION

Effective October 1, 1996
Revised August, 1998

This application must be completed whenever a proposed activity requires an individual Clean Water Act Section 401 Water Quality Certification (Section 401 certification) from Ohio EPA. A Section 401 certification from the State is required to obtain a federal Clean Water Act Section 404 permit from the U.S. Army Corps Engineers, or any other federal permits or licenses for projects that will result in a discharge of dredged or fill material to any waters of the State. To determine whether you need to submit this application to Ohio EPA, contact the U.S. Army Corps of Engineers District Office with jurisdiction over your project, or other federal agencies reviewing your application for a federal permit to discharge dredged or fill material to waters of the State, or an Ohio EPA Section 401 Coordinator at (614) 644-2001.

The Ohio EPA Section 401 Water Quality Certification Program is authorized by Section 401 of the Clean Water Act (33 U.S.C. 1251) and the Ohio Revised Code Section 6111.03(P). Ohio Administrative Code (OAC) Chapter 3745-32 outlines the application process and criteria for decision by the Director of Ohio EPA. In order for Ohio EPA to issue a Section 401 certification, the project must comply with Ohio's Water Quality Standards (OAC 3745-1) and not potentially result in an adverse long-term or short-term impact on water quality. Included in the Water Quality Standards is the Antidegradation Rule (OAC Rule 3745-1-05), effective October 1, 1996, revised October, 1997 and May, 1998. The Rule includes additional application requirements and public participation procedures. **Because there is a lowering of water quality associated with every project being reviewed for Section 401 certification, every Section 401 certification applicant must provide the information required in Part 10 (pages 3 and 4) of this application.** In addition, applications for projects that will result in discharges of dredged or fill material to wetlands must include a wetland delineation report approved by the Corps of Engineers, a wetland assessment with a proposed assignment of wetland category (ies), official documentation on evaluation of the wetland for threatened or endangered species, and appropriate avoidance, minimization, and mitigation as prescribed in OAC 3745-1-50 to 3745-1-54. Ohio EPA will evaluate the applicant's proposed wetland category assignment and make the final assignment.

Information provided with the application will be used to evaluate the project for certification and is a matter of public record. If the Director determines that the application lacks information necessary to determine whether the applicant has demonstrated the criteria set forth in OAC Rule 3745-32-05(A) and OAC Chapter 3745-1, Ohio EPA will inform the applicant in writing of the additional information that must be submitted. The application will not be accepted until the application is considered complete by the Section 401 Coordinator. An Ohio EPA Section 401 Coordinator will inform you in writing when your application is determined to be complete.

Please submit the following to "Section 401 Supervisor, Ohio EPA/DSW, P.O. Box 1049, Columbus, Ohio 43216-1049:

- Four (4) sets of the completed application form, including the location of the project (preferably on a USGS quadrangle) and 8-1/2 x 11" scaled plan drawings and sections.
- One (1) set of original scaled plan drawings and cross-sections (or good reproducible copies).

(See Application Primer for detailed instructions)

1. The federal permitting agency has determined this project: (check appropriate box and fill in blanks)

- a. requires an individual 404 permit/401 certification- Public Notice # (if known) 2001-00087
- b. requires a Section 401 certification to be authorized by Nationwide Permit # _____
- c. requires a modified 404 permit/401 certification for original Public Notice # _____
- d. requires a federal permit under _____ jurisdiction identified by # _____
- e. requires a modified federal permit under _____ jurisdiction identified by # _____

Click to clear all entered information (on all 4 pages of this form) CLEAR

2. Application number (to be assigned by Ohio EPA):

3. Name and address of applicant: Telephone number during business hours:
 Joseph A. Balog () (Residence)
 Crowland, Ltd. (216) 447-0070 (Office)
 6055 Rockside Woods Boulevard, Suite 100
 Independence, Ohio 44131

3a. Signature of Applicant: *Joseph A. Balog* Date: 08-23-12

4. Name, address and title of authorized agent: Telephone number during business hours:
 Rosty Caryk, Senior Project Manager (716) 870-5286 (Residence)
 Davey Resource Group (800) 828-8312 x8056 (Office)
 10 Ellwood Avenue
 Tonawanda, New York 14223

4a. Statement of Authorization: I hereby designate and authorize the above-named agent to act in my behalf in the processing of this permit application, and to furnish, upon request, supplemental information in support of the application.

Signature of Applicant: *Joseph A. Balog* Date: 08-23-12

5. Location on land where activity exists or is proposed. Indicate coordinates of a fixed reference point at the impact site (if known) and the coordinate system and datum used.

Address:

undeveloped site north of Miller Road and east of I-77, 41.295052N -81.635517W

Street, Road, Route, and Coordinates, or other descriptive location

	Cuyahoga	Brecksville	Ohio	44141
Watershed	County	Township	City	State Zip Code

6. Is any portion of the activity for which authorization is sought complete? Yes No
 If answer is "yes," give reasons, month and year activity was completed. Indicate the existing work on the drawings.

7. List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharge or other activities described in this application.

Issuing Agency	Type of Approval	Identification No.	Date of Application	Date of Approval	Date of Denial

8. **DESCRIPTION OF THE ACTIVITY (fill in information in the following four blocks - 8a, 8b, 8c & 9)**

8a. Activity: Describe the Overall Activity:
 A description of the overall activity is described in detail in the supplemental permit application document.

8b. Purpose: Describe the purpose, need and intended use of the activity:

A description of the purpose, need and intended use of the activity is described in detail in the supplemental permit application document.

8c. Discharge of dredged or fill material: Describe type, quantity of dredged material (in cubic yards), and quantity of fill material (in cubic yards).

The minimal degradation alternative proposes placing approximately 7,600 cubic yards of clean earthen fill in 4.721 acres of wetlands.

A detailed description of impacts is provided in the supplemental permit application document.

9. Waterbody and location of waterbody or upland where activity exists or is proposed, or location in relation to a stream, lake, wetland, wellhead or water intake (if known). Indicate the distance to, and the name of any receiving stream, if appropriate.

The impacts will occur to wetlands and streams located on the site. Drainage from the property is to the east and north, Water from the site enters Chippewa Creek north of the project site. Chippewa Creek continues flowing east and eventually enters the Cuyahoga River.

10. To address the requirements of the Antidegradation Rule, your application must include a report evaluating the:

- Preferred Design (your project) and Mitigative Techniques
- Minimal Degradation Alternative(s) (scaled-down version(s) of your project) and Mitigative Techniques
- Non-Degradation Alternative(s) (project resulting in avoidance of all waters of the state)

At a minimum, item a) below must be completed for the Preferred Design, the Minimal Degradation Alternative(s), and the Non-Degradation Alternative(s), followed by completion of item b) for each alternative, and so on, until all items have been discussed for each alternative (see Primer for specific instructions).

10a) Provide a detailed description of any construction work, fill or other structures to occur or to be placed in or near the surface water. Identify all substances to be discharged, including the cubic yardage of dredged or fill material to be discharged to the surface water.

10b) Describe the magnitude of the proposed lowering of water quality. Include the anticipated impact of the proposed lowering of water quality on aquatic life and wildlife, including threatened and endangered species (include written comments from Ohio Department of Natural Resources and U.S. Fish and Wildlife Service), important commercial or recreational sport fish species, other individual species, and the overall aquatic community structure and function. Include a Corps of Engineers approved wetland delineation.

- 10c) Include a discussion of the technical feasibility, cost effectiveness, and availability. In addition, the reliability of each alternative shall be addressed (including potential recurring operational and maintenance difficulties that could lead to increased surface water degradation.)
- 10d) For regional sewage collection and treatment facilities, include a discussion of the technical feasibility, cost effectiveness and availability, and long-range plans outlined in state or local water quality management planning documents and applicable facility planning documents.
- 10e) To the extent that information is available, list and describe any government and/or privately sponsored conservation projects that exist or may have been formed to specifically target improvement of water quality or enhancement of recreational opportunities on the affected water resource.
- 10f) Provide an outline of the costs of water pollution controls associated with the proposed activity. This may include the cost of best management practices to be used during construction and operation of the project.
- 10g) Describe any impacts on human health and the overall quality and value of the water resource.
- 10h) Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated and a brief discussion on the condition of the local economy.
- 10i) Describe and provide an estimate of the important social and economic benefits that may be lost as a result of this project. Include the effect on commercial and recreational use of the water resource, including effects of lower water quality on recreation, tourism, aesthetics, or other use and enjoyment by humans.
- 10j) Describe environmental benefits, including water quality, lost and gained as a result of this project. Include the effects on the aquatic life, wildlife, threatened or endangered species.
- 10k) Describe mitigation techniques proposed (except for the Non-Degradation Alternative):
 - Describe proposed Wetland Mitigation (see **OAC 3745-1-54** and Primer)
 - Describe proposed Stream, Lake, Pond Mitigation (see Primer)

11. Application is hereby made for a Section 401 Water Quality Certification. I certify that I am familiar with the information contained in this application and, to the best of my knowledge and belief, such information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities or I am acting as the duly authorized agent of the applicant.



Signature of Applicant

08-23-12

Date

Signature of Agent

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in Block 3 has been filled out and signed.



Ohio EPA Section 401 Water Quality Certification Responses to Questions 10A-10K

Crowland Development
Brecksville, Cuyahoga County, Ohio

September, 2012



A Division of The Davey Tree Expert Company



Ohio EPA Section 401 Water Quality Certification Responses to Questions 10A-10K

Crowland Development
Brecksville, Cuyahoga County, Ohio

September, 2012

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Table of Contents

Introduction	1
Project History	1
10.A Project Description	1
Project Objective	2
Existing Natural Resources.....	2
Development Alternatives	5
Alternative Analysis	6
On-Site Avoidance and Minimization	6
10B. Biological and Physical Impacts	9
Preferred Development Alternative Impacts	9
Minimal Degradation Alternative Impacts	10
Non-Degradation Alternative Impacts	12
10C. Applicant's Project Costs	13
10E. Other Related Projects	13
10F. Water Pollution Controls	13
Stormwater Management Plan	14
10G. Human Health Impacts	14
10H. Jobs Created and Revenues Gained	14
10I. Jobs Created and Revenues Gained	14
10J. Environmental Benefits Lost or Gained	14
10K. Mitigation Techniques	15
Preferred Development Alternative	15
Minimal Degradation Alternative	15
Non-Degradation Alternative	16



Appendix 1: Figures

Figure 1	Site Location
Figure 2	Site Aerial Photograph
Figure 3	City of Brecksville Zoning Map
Figure 4	Site Wetland and Stream Map
Figure 5	Preferred Development Alternative (PDA)
Figure 6a	Original Minimal Degradation Alternative (MDA)
Figure 6b	Revised Minimal Degradation Alternative (MDA)
Figure 7	Non-Degradation Alternative (NDA)

Appendix 2: Wetland Delineation, ORAM Evaluation and Stream Assessment

Appendix 3: Wetland Impact Tables

Appendix 4: Agency Correspondence

Appendix 5: Socio-Economic Analysis

Appendix 6: Wetland Mitigation Plan

Introduction

This document provides responses to Questions 10A-10K of the Ohio Environmental Protection Agency (EPA) Section 401 Water Quality Certification Application for the Crowland Development Project. The master developer is Crowland, Ltd. (the Applicant). The purpose of the project is to build a mixed use development to meet the demands of the surrounding local communities and businesses, due to the established need of several identified users and the community in the portion of the City where the Applicant intends to construct the development.

The project is located on an approximately 85.60-acre property in the City of Brecksville, Cuyahoga County, Ohio (Appendix 1, Figures 1-2). For most of the questions, responses are provided for the Applicant's Preferred Development Alternative (PDA), Minimal Degradation Alternative (MDA), and Non-Degradation Alternative (NDA). Ohio EPA defines the MDA as a less environmentally damaging version of the project (as compared to the PDA) that would result in the least amount of impact to surface water quality and still meet project goals. Based upon comments received from the USACE Section 404 public notice, the Applicant revised the MDA to further reduce impacts to water resources on the site. This revised MDA is presented in this application. The original MDA, although not discussed herein, is presented in Appendix 1, Figure 6a. The revision of the MDA shows the efforts that were made by the applicant to provide the agencies with the least environmentally damaging practicable alternative for the project. The NDA is a further scaled-down version that would result in avoidance of all Waters of the State, but may not meet the project goals. Detailed descriptions of the project's PDA, MDA, and NDA are provided in this application.

Project History

The 85.60-acre site is located in the City of Brecksville and is bordered to the north by residential development along Westview Drive, to the east by the Louis Stokes VA Medical Center, to the south by Miller Road and on the west by Interstate 77 (I-77) (Appendix 1, Figure 1). The project location is within the increasingly urbanized Cleveland-Akron-Elyria Combined Statistical Area. The Applicant has owned this property since 2006.

The project site was historically used almost entirely for farming, but the majority of the site was abandoned and is now primarily second growth forest. A portion of the second growth forest has reverted to forested wetlands. Wetlands and other waters of the United States were originally delineated in 2000 and a Jurisdictional Determination (JD) letter was issued by the United States Army Corps of Engineers (USACE) on April 6, 2001 for the project site. The delineation was updated by Shaw Environmental and Infrastructure, Inc. in 2009 with additional data and documentation provided by Davey Resource Group in 2010 (Appendix 2). A new JD letter was issued on January 12, 2010 (Appendix 4).

The project site is a valuable and viable development site due to the proximity and direct access to I-77. The site will also serve a large potential customer base provided by the growing population of the City of Brecksville. Direct access to Miller Road is anticipated to provide opportunities for the development of retail, office and residential areas. In anticipation of this identified demand, the project proposes development of a total of 38.3 acres of commercial zones and the primary access road. The site will also include required storm water basins and other infrastructure.

The project site is within the area covered by a zoning Master Plan prepared for the City of Brecksville. The City completed the Master Plan, and subsequently went through an extensive public rezoning process to formalize the Master Plan. This included a series of public hearings and a public referendum. The rezoning in this specific area was based, in part, on the existing interchange configuration with Miller Road and I-77,

which has only one exit ramp (southbound) and one entrance ramp (northbound). The City requested a reconfiguration of the interchange to support north and southbound entry and exit ramps, but Ohio Department of Transportation (ODOT) denied the request, based on the presence of an existing interchange with the Ohio Turnpike located immediately to the south. On that basis, and the traffic patterns dictated by the interchange, the City re-zoned development of the entire interchange area (Appendix 1 Figure 3).

The City has successfully withstood challenges to the rezoning, including a court case brought by the former owner of the project site who viewed the rezoning as too restrictive, limiting future development. With this verdict, the current zoning is considered final.

As a result of the rezoning project, development options are limited to specific uses within the boundaries of the site. Motor services are limited to the northeast side of the interchange, while local business development is limited to the northeast and northwest corners of the interchange

In early 2006, when the Applicant purchased the Land, the economic conditions of the United States were substantially different than they are today. At the time of the purchase the principals of the Applicant negotiated with a local bankers for a loan and expected development to occur over the next two or three years. Naturally the principals invested in the Land expecting to make a return on their investment. During the next two plus years, while the economic recession was causing problems for all real estate in the United states, the principals of the Applicant worked with the local bank and local bankers to make minimum interest only payments on the significant real estate loan that the principals had personally guaranteed to acquire the Land. Since the principals had personally guaranteed the debt, they continued to work to keep the project afloat. However in 2008, the local bankers were dismissed and the bank which had made the original loan was taken over by a large bank with no Cleveland, Ohio connections and no northeast Ohio presence. Today the principals of the Applicant are paying principal and interest on the bank loan and attempting to develop a segment of the Land simply to recoup a portion of the money they invested to date and more importantly to raise money to pay off the existing bank loan. The Applicant will lose money on the project but at least the principals of the Applicant will be able to pay off their current, personally guaranteed bank debt.

10.A Project Description

Project Objective

The project calls for the development of 38.3 acres of motor services establishments, retail, hotel, and offices and a primary interior road that will connect Miller Road in the south to Parkview Road in the north. The site will also include required storm water basins, other infrastructure and a preserved on-site mitigation area.

Existing Natural Resources

The wetland delineation of the site was confirmed in 2010 by USACE. Thirty-eight federally regulated wetlands and 5,135 linear feet (LF) of streams, along with six state regulated isolated wetlands, were identified (Appendix 1, Figure 4 and Appendix 2). The 85.60-acre project site consists of seven distinct plant communities, including forested wetland, wetland scrub-shrub, forested upland, emergent marsh, wet meadow, successional old field and an area of maintained lawn associated with two residential buildings on the south of the site. The 5,135 LF of streams are generally heavily modified, deeply incised channels that were historically created to increase site drainage.

Wetlands delineated on the project site were assessed using Ohio EPA's Ohio Rapid Assessment Method (ORAM) for wetlands Version 5.0. The ORAM study computed Quantitative Rating scores for these wetlands (Appendix 2). Of the 44 wetlands on the Project Site, 26 are forested wetlands; six are wetlands that are a mix of forested/wet meadow communities; two are scrub-shrub wetlands; three are wet meadow wetlands and five wetlands are wetland/wet meadow swales.

The quality of onsite streams was assessed using Ohio EPA's Headwater Habitat Evaluation Index (HHEI) form (Appendix 2). Results of the HHEI assessment indicate that perennial streams A-D are modified Class 2 primary headwater streams while all seven ephemeral streams are modified Class I limited resource primary headwater streams.

Wetlands

Forested wetland vegetated communities are dominated by the tree species *Acer rubrum* (red maple), *Carpinus caroliniana* (American hornbeam), *Fraxinus pennsylvanica* (green ash), *Quercus palustris* (pin oak), *Rhamnus frangula* (glossy buckthorn), and *Ulmus americana* (American elm). Herb and shrub species include *Arisaema triphyllum* (swamp Jack in the pulpit), *Carex comosa* (bearded sedge), *Carex stricta* (tussock sedge), *Impatiens capensis* (spotted touch-me-not), *Juncus effusus* (soft rush), *Lindera benzoin* (northern spicebush), *Lysimachia nummularia* (creeping jennie), *Onoclea sensibilis* (sensitive fern), *Poa palustris* (fowl bluegrass), *Toxicodendron radicans* (poison ivy), and *Viburnum dentatum* (arrowwood). Scrub/shrub wetlands are dominated by arrowwood, bearded sedge, creeping jennie, *Eleocharis obtuse* (blunt spikerush), fowl bluegrass, glossy buckthorn, red maple, sensitive fern, soft rush, *Solidago* sp. (goldenrod), spotted touch-me-not, and tussock sedge.

Wet meadow wetlands are dominated by bearded sedge, fowl bluegrass, glossy buckthorn, sensitive fern, soft rush, and tussock sedge.

Emergent wetlands are dominated by bearded sedge, fowl bluegrass, glossy buckthorn, *Rumex orbiculatus* (great water dock), tussock sedge soft rush, and *Typha augustifolia* (narrow leaf cattail).

The majority of wetlands were found to be forested Category 2 wetlands (including many Modified Category 2), with the remaining scoring as Category 1 (Appendix 2). No Category 3 wetlands were found on the site.

Streams

A total of 5,135 LF of federally regulated streams are located on the project site (Appendix 1 Figure 4 and Appendix 2). There are four perennial streams (Streams A-D) that are unnamed tributaries to Chippewa Creek. Ohio EPA Water Quality Standard (Chapter 3745-1 of the Administrative Code) does not include Chippewa Creek in the lists of exceptional warmwater or coldwater habitat streams. Chippewa Creek flows east to the Cuyahoga River approximately 2.5 miles northeast of the site.

There are three ephemeral streams (EPH-1, 2, and 4) that are tributaries to Stream A, two (EPH-6 and 7) that are tributary to Stream B, and two ephemeral streams (EPH 3 and 5) that flow either directly or indirectly into Stream D.

Four perennial stream channels traverse the site (Streams A–D). Stream A (1,803 LF) flows diagonally through the center of the site. Stream B (781 LF) occurs near the western portion of the site and flows into Stream D. Stream C (163 LF) is near the southwest corner of the site and flows into Stream A. Stream D (419 LF) intersects the northwest corner of the Site. All of the streams generally flow north or northeast.

Within the site, Streams A–C were previously channelized. These streams have deeply incised channels with few substrate types, composed mostly of silt, gravel/sand, and muck. There are small sections with

small pool/riffle complexes developing. The flood-prone width is relatively narrow as the streams are generally deeply incised and cannot flow out of their banks during flood events. All have wide riparian zones on both banks consisting primarily of secondary growth forest. Stream A is the longest stream on site, has been channelized, and has high, steep, eroding banks. Stream A discharges from the Site into a concrete flume passing through the adjacent Veterans Hospital site. Davey calculated an HHEI score of 60, resulting in a classification as a Modified Class II PWH stream. Stream B is a highly channelized, straight stream with an incised channel but still provides limited habitat for aquatic species. This section within the project site was redirected to a straightened channel during the construction of the high-pressure gas pipeline. Stream B was assessed using HHEI and scored a 63, and is scored as a Modified Class II PWH stream. Stream C is a relatively short, channelized stream discharging into Stream A. For Stream C, Davey calculated a HHEI score of 40, and is also classified as a Modified Class II PWH stream. Stream D is a natural stream flowing through the northwest corner of the site. It scored a 66 using HHEI, and is classified as Modified Class II PWH stream.

The seven ephemeral streams on the site are typically the remnants of old man-made drainageways put in place over the years. As they all run through forested areas, they have relatively small riparian zones and typically exhibit silty bottoms. The HHEI evaluations range from a low of 15 to a high of 31, all within the Class I PWH classification.

Upland Communities

A total of three upland plant communities occur within the site: an upland forest (mixed hardwood forest, mesophytic); successional old fields; and maintained lawns. No open water areas are present within the project area.

The young upland forest mixed with upland scrub/shrub encompasses about 76 acres of the site. Upland forest vegetative communities are dominated by American elm; *Erythronium americanum* (trout lily); *Fagus grandifolia* (American beech); *Fragaria virginiana* (Virginia strawberry); glossy buckthorn; *Liriodendron tulipifera* (tulip tree); pin oak; *Poa pratensis* (Kentucky bluegrass); *Podophyllum peltatum* (Mayapple); *Polystichum acrostichoides* (Christmas fern); *Potentilla simplex* (common cinquefoil); *Prunus serotina* (black cherry); *Quercus rubra* (northern red oak); red maple; and *Rosa multiflora* (multiflora rose).

Successional old agricultural fields encompass about ten acres of the site and are dominated by *Bromus inermis* (smooth brome grass); *Daucus carota* (Queen Anne's lace); *Dispacus sylvestris* (teasel); Kentucky bluegrass; *Plantago major* (common plantain); *Rubus allegheniensis* (Allegheny blackberry); *Solidago altissima* (tall goldenrod); *Taraxacum officinale* (dandelion); *Trifolium arvense* (rabbit foot clover); and Virginia strawberry.

There are approximately four acres of abandoned lawn on the site that are dominated by common plantain, dandelion, and Kentucky bluegrass.

Wildlife

Animals that currently use the project site are common species that are well adapted to mixed urban, agricultural, and natural environments such as the *Bufo americanus* (American toad); *Thamnophis sirtalis* (common garter snake); *Melospiza melodia* (song sparrow); *Turdus migratorius* (American robin); *Microtus pennsylvanicus* (meadow vole); *Sciurus carolinensis* (eastern gray squirrel); *Sciurus niger* (fox squirrel); *Procyon lotor* (raccoon); *Sylvilagus floridanus* (eastern cottontail); and *Odocoileus virginianus* (white-tailed deer).

Threatened and Endangered Species

The U.S. Fish and Wildlife Service (USFWS) and the Ohio Department of Natural Resources (ODNR) were contacted in 2000 regarding potential occurrences of threatened and endangered species within the site. The response letters indicated that no threatened and endangered species or unique ecological features are known to occur within the site (E, Kroonmeyer, 2000 and Woischke, 2000). USFWS noted that the site lies within the range of a federally endangered species, *Myotis sodalis* (Indiana bat), and a State of Ohio endangered species, *Sistrurus catenatus catenatus* (eastern massasauga rattlesnake). No Indiana bats or massasauga rattlesnakes were observed in any study and no other threatened or endangered plants or animals were observed during 2009 field surveys. No bogs, fens, old growth forests, mature riparian forests, or oak opening communities were found to exist within the site.

An Indiana Bat mist net survey conducted in 2012 found no Indiana bats on the project site. This report is included in Appendix 4. As the site condition and status of the aforementioned species has not changed significantly since the 2000 assessment, it is anticipated that status of any potential threatened or endangered species has not changed as well. The Applicant is in the process of re-contacting USFWS and ODNR and will provide these updates as they become available.

Development Alternatives

As required under the Ohio Anti-Degradation rule, the Applicant has developed three alternatives for the project to address impacts to wetlands and streams: a Preferred Development Alternative (PDA) that provides the greatest return on investment to the Applicant (Appendix 1, Figure 5), a revised Minimal Degradation Alternative (MDA) that best reduces impacts to wetlands and streams while maintaining the project's economic viability (Appendix 1, Figure 6b), and a Non-Degradation Alternative (NDA), that avoids all impacts to streams and wetlands (Appendix 1, Figure 7). Each of the three alternative plans (PDA, MDA and NDA) submitted with this Application were designed to conform to general zoning classifications of the City of Brecksville and Cuyahoga County. The Applicant will conform to any variations that may be required for the site. As mentioned previously, based upon comments received from the USACE Section 404 public notice, the Applicant revised the MDA to further reduce impacts to water resources on the site. This revised MDA is presented here.

The PDA proposes the construction of 65.8 acres of commercial and residential development that includes offices, retail stores, and single family homes (Appendix 1, Figure 5). This option would provide the best return on investment of the three alternative plans but would require filling over 59.9% of the wetlands on the site and would fill 17% of the streams.

The MDA proposes a reduction in the project size to 38.3 acres by limiting development to only the south of the project site (Appendix 1, Figure 6b). This design alternative resulted in a decrease in wetland impacts, and complete elimination of impacts to streams on the site.

The revised MDA is the Applicant's Plan of Record (POR), as it was developed and subsequently revised to minimize impacts to wetlands and streams on the project site while maintaining a financially viable project. Any further reduction in the size or scale of the project would result in a facility insufficient to serve the growing demands and established need of the local communities.

The NDA development footprint shows a significant reduction in total developed acreage. Under the NDA, only a small area (approximately 4 acres) immediately north of Miller Road would be utilized for retail space. This reduced development footprint would not allow for the construction of any office buildings or residential areas (Appendix 1, Figure 7). With the loss of nearly all commercial and residential areas and an associated reduction in overall occupancy potential of the NDA, the ability to support the range of operational economies is severely limited and not economically feasible. Based on the foregoing, financial return on investment was calculated to be below an acceptable value and the NDA was therefore removed from consideration.

Alternative Analysis

Off Site Analysis

The purpose of the project is to build a mixed use development to meet the needs of the surrounding local communities and businesses. Due to the established need of the aforementioned identified users and the community in the portion of the City where the Applicant intends to construct the development, broadening the off-site alternatives analysis search area to include areas outside of the Cities of Brecksville or Broadview Heights would not meet the need of the project, as neither the users or the community's needs would be met if the project was located a significant distance from its current planned location.

The proximity of the project location to the intersection of Miller Road and I-77 within the City of Brecksville makes the site a prime location for commercial development. Direct access to I-77 was critical in the successful development of a large office and industrial zone located on the southeast corner of the interchange. This interchange also serves the traffic associated with the Veteran's Hospital and BF Goodrich Headquarters located to the east of the site. There are no other parcels available in this immediate area that could support such a development.

The project site also lies within an area that is experiencing considerable growth. Within the City of Brecksville Master Plan, this growth is accommodated for in specific locations. Residential growth in this general area is anticipated to continue, and this I-77 interchange will be the preferred access point for travel on the Interstate to and from the metropolitan Cleveland area. In addition, the anticipated conversion of the Veterans Hospital to commercial use will also provide an additional base of potential customers for the planned retail services in the southern end of the project site.

No viable site alternatives were found at interchange sites immediately south and north of the Applicant's site. These interchanges, I-77/Ohio Turnpike to the south and I-77/Royalton Road to the north, do not service the target customer base identified by the Applicant. At the I-77/Ohio Turnpike interchange, very little undeveloped land remains in close proximity and with any visibility from the interstate interchange. This interchange is also difficult to access from the north/south I-77 travel route. Furthermore, this interchange eliminates the direct access to the anticipated existing and potential customer base discussed above. Overall, development options at this location are unsuitable for the proposed project.

The interchange to the north (I-77/North Royalton Road) is an unacceptable development alternative for a number of reasons. This interchange would not have the immediate and concentrated potential customer base that the Miller Road project site has as its target. Any potential customers traveling either east, west, or south would have no incentive to utilize the project site, as it would add to travel time and increased costs to both the environment (greater gas consumption) and to the individual. A potential development at this location would have to propose a large "anchor" store or other such business entity to attract a new client and customer base, which is not the model for the proposed project. Development options are further

restricted by the available usable land at this interchange. Development of any significant size would be limited to the southwest quadrat of this interchange. A preliminary investigation of this area indicated that this site contains wetlands and streams. The northwest and northeast quadrats are nearly fully developed, with open areas dropping precipitously into a deep valley. The southeastern quadrat is also highly developed and has only very limited available land, all located within a deep valley with a major stream at its bottom. Development would be limited to a very narrow and unfeasible strip along the western edge. On the southwest quadrat, some open, undeveloped land is found, but falls rapidly to the east, with the high likelihood that streams and adjacent wetlands would be found there. Overall, this alternative location would not serve the target population.

Within a broader search area in the cities of Brecksville and Broadview Heights, the Applicant did previously examine numerous alternative locations. However, relocating the project to potential alternative parcels would not be practical for the applicant, due to cost of land within these cities. Currently, the reduced project, including the identified development and Road, occupies approximately 30 acres on the Land. Additionally, due to the mixed-use nature of the project, certain types of businesses (such as motor services or gas stations) are often limited in their potential location within a municipality. Government zoning regulations will not allow most uses described in the application to be located anywhere except on a street with high traffic or locations with access to the freeway. This restricts the potential locations that such a project could be feasibly located in its entirety, or where individual portions of it could be sited if split apart.

In reviewing alternate sites, the recent sales prices others are receiving restrict the consideration of alternative locations for this proposed project. For example Getgo Partners, an operator of service stations and convenience stores, bought a one acre parcel on Treeworth Blvd. and Royalton Road, slightly west of the IR-77 freeway entrance, on the Brecksville-Broadview Heights common border, for \$350,000 on March 4, 2011. The same Buyer also bought a 2.72 acre parcel with frontage on State Route 82 (East Royalton Road) for over \$800,000 per acre. Getgo Partners has now constructed a service station and convenience store on the 3.72 acres, with land costs averaging almost \$700,000 per acre. Another sale in the same area was a parcel that could have been used for office development or retail was located in Broadview Heights, across the street from the City of Brecksville. That 4.15 acres of raw land sold for \$595,000 per acre. A third parcel of land, with what appears to contain significant special aquatic features is listed for sale at \$250,000 per acre, again cost prohibitive. Copies information related to these sales or listing prices are located in Attachment 2.

Assuming an average cost of \$250,000 per acre, the Applicant could expect to pay close to a minimum of \$10 million in order to obtain a similar quantity of land for the project. As shown above, the cost of prime land close to IR-77 or other major thoroughfares within the City could easily be much higher than the \$10 million estimate presented here. This cost makes a complete relocation of the project impracticable for the Applicant. As is noted in these responses, the development area has been reduced to 30 acres. Even this development acreage would result in an alternative site "re-location" cost of \$7,500,000. Again, as the applicant is actually attempting to simply recover existing project costs, the addition of this potential purchase cost is not practicable.

The project would serve to fill the need of the surrounding community for additional motor services and retail (including grocery) to the surrounding residential areas. Currently, these areas to the west and north do not have direct access to these services, and are forced to drive into downtown Brecksville or Broadview Heights to obtain them. Development of the site based upon the revised MDA would meet this need.

On-Site Avoidance and Mitigation

As part of this submission process, the Applicant completed an evaluation of three major design alternatives, the PDA, the MDA, and the NDA. Although the revised MDA is accepted by the Applicant as the POR, a discussion of the PDA and NDA is worthwhile as it discusses the genesis of the MDA and clearly demonstrates the extent to which the Applicant went to minimize impacts to wetlands and streams found on the project Site.

Impacts to wetlands were reduced from the PDA impact of 7.23 acres of wetland (with the need for off-site mitigation), to an MDA impact of 4.721 acres, with 2.14 acres of on-site wetland preservation and 4.3 acres of on-site wetland expansion. Wetlands avoided on the site total 9.72 acres. On site wetland mitigation of 4.3 acres will provide compensation for 2.866 acres of impacted federal wetlands at a 1.5:1 ratio. In order to compensate for this loss of wetland acreage, the Applicant will purchase a total of 4.638 acres of wetland mitigation credits at an approved wetland mitigation bank. This will result in a total of 8.938 acres of wetland mitigation.

Under the MDA (Appendix 1, Figure 6) the project will not impact any streams on the Site. Under the PDA (Appendix 1, Figure 5) the proposed project would require crossing impacts to 100 LF of Stream A and the fill of an additional 789 LF of ephemeral stream resulting in a total stream impact of 889 LF.

Preferred Development Alternative

In the PDA analysis, criteria were established to maximize development potential by providing the most desirable overall site configuration. This objective would enhance perceived value, thus allowing the Project to attain its highest economic return.

In order to maximize development potential and at the same time reduce development costs, the PDA would impact 7.531 of the 12.86 acres of wetlands on the site (Appendix 3). A total of 889 LF of the 5,135 LF of streams present on the site would be filled or impacted by crossings (Appendix 3).

Minimal Degradation Alternative

Ohio EPA defines the MDA as an alternative project design that would result in less damage to surface water quality and still meet the overall Project goals. This design must be economically practical. The MDA proposes a reduction in the Project's development by focusing solely on the south portion of the site near I-77 and Miller Road. Associated parking lots and access roads are proportionally reduced commensurate with the reduction in the project proposed by the MDA to the minimum acceptable for this use.

A total of 4.922 acres of federal and state regulated wetlands will be impacted in the MDA (Appendix 3). The MDA site design avoids the majority of the on-site forested wetlands. Further avoidance of wetlands cannot be accomplished while maintaining a financially viable Project.

A large percentage of MDA wetland impacts are to Wetland MM (3.60 acres), a federally-regulated, forested/wet meadow, modified Category 2 wetland. Development plans require filling all 3.60 acres of this wetland. The need for this impact stems from its location at the south end of the project site, placing it in the direct path of the planned access road that will intersect Miller Road. The City of Brecksville mandated road accounts for 0.728 acres of this proposed fill. The actual project development portions account for the other 2.872 acres.

Overall project plans involve the complete filling of seven wetlands and the partial filling of one wetland across the project site. These unavoidable wetland impacts of 4.721 acres will be mitigated by the on-site restoration of 4.3 acres of wetland (located adjacent to several wetlands found in the west portion of the

project site). Off-site mitigation credits totaling 4.638 acres purchased at an approved wetland mitigation bank will provide a total of 8.938 acres of mitigation wetlands (Appendix 5, Figures 5 and 6). All on-site wetlands will be protected by the preservation of upland buffers consisting of varying widths of undisturbed natural buffer, a re-established and maintained natural buffer, and a fully maintained buffer. All plant species used within the natural maintained buffer zones will consist of native Ohio species.

Non-Degradation Alternative

Ohio EPA defines the NDA (Appendix 1, Figure 7) as an alternative project design that results in no direct fill or other regulated impact to wetlands and streams. The NDA shows no direct fill to either wetlands or other regulated waters (including streams) found on the project site. In the NDA all direct impacts to existing streams and wetlands are avoided. The NDA limits project development to a small strip of land immediately adjacent to Miller Road on the south of the site.

The result of this alternative development design is the elimination of all office buildings and other development (Appendix 1, Figure 7). In the NDA the site would consist of approximately 4 acres of retail motor services.

10B. Biological and Physical Impacts

The following sections reviews the project impacts associated with each of the three development alternatives. The 85.60 acre project site consists of second growth forest, successional old field, maintained lawn, forested wetland, wet meadow, scrub-shrub wetland and wet meadow swales. State of Ohio isolated wetlands total 0.8 acre and federally regulated wetlands total 12.06 acres (Appendix 1, Figure 5 and Appendix 3). The project site also contains a total of 5,135 LF of natural perennial streams and man-made and highly modified ephemeral streams (Appendix 1, Figure 5).

Preferred Development Alternative Impacts

The PDA (Appendix 1, Figure 4) represents the Applicant's preferred site development plan. This design has been relinquished by the Applicant (in favor of the MDA) to minimize wetland and stream impacts from the project. The following sections describe the impacts that would result if the site were developed according to the PDA.

Wetlands

To maximize development potential and at the same time reduce development costs, the PDA would impact 7.23 acres of on-site federally-regulated wetlands as well as 0.3 acre of state regulated wetlands (Appendix 1, Figure 5). The PDA would allow for the preservation of a total of 4.83 acres of on-site federal wetlands, with some upland buffers, as well as 6.5 acres of on-site wetland mitigation. Under the PDA, 8.0 acres of off-site wetland mitigation credits will need to be secured from an approved wetland mitigation bank to mitigate for the increased impacts.

Streams

Three ephemeral streams (789 LF) and 100 LF of perennial Stream A would be filled under the PDA (Appendix 3). The potential for on-site mitigation includes 950 LF of stream enhancements.

Plant and Animal Life

Site development based on the PDA would result in greater impacts to plants and animals associated with stream corridors (i.e., riparian habitat) and upland forest communities, when compared to the MDA, because a higher acreage of those habitats would be impacted. However, none of the species that would

be potentially impacted are nationally or regionally in danger of population stress. Although individual members of local populations of commonly found species will be lost, no measurable impact to local populations is anticipated. The number of individuals of wetland species presently found on the site will be reduced in number, due to a net on-site loss of post-construction wetland acreage (although Phase II storm water ponds will provide some wetland habitat), but, the overall populations of such species will not be endangered.

Threatened and Endangered Species

As the site condition and status of the aforementioned species has not changed significantly since the 2000 assessment, it is anticipated that status of any potential threatened or endangered species has not changed as well. The Applicant is in the process of re-contacting USFWS and ODNR and will provide these updates as they become available.

Surface Water Flow Patterns

The site's natural drainage areas would be maintained by site development under the PDA design. Runoff volumes associated with this plan would be higher than the existing conditions, because of the addition of larger amounts of impervious surface (additional structures and parking areas). However, this plan calls for adherence to strict storm water management practices on the development site and internal roads, both under the Phase I and Phase II storm water controls.

Minimal Degradation Alternative Impacts

The Applicant prepared a revised MDA (Appendix 1, Figure 6b and Appendix 3) to evaluate measures to minimize impacts to surface water quality while still meeting project goals. The MDA was selected as the POR. The following sections describe the impacts that would result if the site was developed according to the MDA.

Wetlands

A total of 4.721 acres of federal wetlands and 0.201 acre of state isolated wetlands will be impacted from the MDA (Appendix 1, Figure 6b). A total of 2.14 acres of federal wetlands and 1,305 linear feet of stream will be preserved within the site (Appendix 3) under the revised MDA. Federal wetlands totaling 9.92 acres, and 3,830 linear feet of streams will be avoided in the revised MDA.

Specific impacts to each wetland are detailed below

Federally Regulated Wetlands

Wetland AA-BB-CC

Wetland AA-BB-CC (0.62 acre) is a federally regulated, forested, modified Category 2 wetland. A small portion of this wetland (0.02 acre) will be filled due to its location within the planned road right-of-way.

Wetland BBB

Wetland BBB (0.063 acre) is a federally regulated, emergent, modified Category 2 wetland swale. A small part of this wetland (0.033 acre) will be filled due to its location within the planned road right-of-way.

Wetland C

Wetland C (0.01 acre) is a federally regulated, scrub shrub, modified Category 2 wetland that will require filling due to its location within the planned road right-of-way.

Wetland J

Wetland J (0.56 acre) is a federally regulated, forested, Category 2 wetland. A small portion of Wetland J (0.02 acre) will require filling due to its location within the planned road right-of-way.

Wetland K

Wetland K (0.10 acre) is a federally regulated, wet meadow, Modified Category 2 wetland. A portion of Wetland K (0.01 acre) will be impacted due to its location within the planned road right-of-way.

Wetland MM

Wetland MM (3.60 acres) is a federally regulated, forested/wet meadow, Category 2 wetland. Development plans require filling all of this wetland. Avoidance is not possible due to its location near Miller Road, the planned access road and set zoning.

Wetland II

Wetland II (0.49 acre) is a federally regulated, forested/wet meadow Category 2 wetland. Development plans requires filling all (0.49 acre) of this wetland due to its location near Miller Road and the associated zoning within this area.

Wetland NN

Wetland NN (0.29 acre) is a federally regulated, forested Category 2 wetland. Development plans requires filling all (0.29 acre) of this wetland due to its location near Miller Road and the associated zoning within this area.

Wetland HH

Wetland HH (0.20 acre) is a federally regulated, forested/wet meadow, Category 2 wetland. All of this wetland will be impacted due to its location adjacent to the prime motor services area.

Wetlands DDD, and EEE

Wetlands DDD (0.028 acre) and EEE (0.008 acre) are narrow wetland swales with the proposed development area and require filling.

Wetland JJ

A small portion of Wetland J (0.03 acre) that extends south from the main portion of the wetland will require fill due to its location within the planned Drug Mart.

State Isolated Wetlands

Wetland A

Wetland A (0.15 acre) is a state-regulated, forested, modified Category 2 wetland. A small portion of this wetland (0.001 acre) will be impacted by the proposed road.

Wetland KK/LL

Wetland KK/LL (0.20 acre) is a state-regulated, forested/wet meadow, Category 2 wetland. This wetland will require to be filled due to its location near the proposed access road and Drug Mart.

Unavoidable wetland impacts of 4.922 acres will be mitigated by the on-site restoration and creation of a total of 4.3 acres of wetland, located adjacent to several wetlands and Stream A found on the project site. (Appendix 6). All preserved on-site wetlands will be protected by the preservation of upland areas consisting of varying widths of undisturbed natural buffer, a re-established and maintained natural buffer, and a fully maintained buffer. All plant species used within the natural maintained buffer zones will consist of native Ohio species.

Streams

Under the revised MDA, there will be no impacts to streams on the project site. Indirect impacts to streams would be caused by some loss of upland watershed.

Plant and Animal Life

Site development based on the MDA would result in less impact to plants and animals associated with stream corridors (i.e., riparian habitat) and upland forest communities, compared to the PDA. More acres of those habitats would be preserved or created in the MDA mitigation plan.

Construction of the project, based on the MDA, will impact upland forest and forested/scrub-shrub communities within the site. These habitats are common in northeast Ohio and the specific wetlands in question do not support rare species. The project will impact habitat availability locally but will not significantly affect regional habitat availability. Although the numbers of individuals of most species will decrease with the loss of habitat acreage associated with site development, no significant impact to regional or local wildlife populations are expected.

Threatened and Endangered Species

As the site condition and status of the aforementioned species has not changed significantly since the 2000 assessment, it is anticipated that status of any potential threatened or endangered species has not changed as well. The Applicant is in the process of re-contacting USFWS and ODNR and will provide these updates as they become available.

Surface Water Flow Patterns

The site's natural drainage areas would be maintained within the current sub-watersheds under the MDA design. Runoff volumes associated with this plan would be lower than in the PDA because of the lesser amounts of impervious surface (additional structures and parking areas). The MDA calls for adherence to strict storm water management practices on the development site and internal roads.

Non-Degradation Alternative Impacts

The Applicant prepared a NDA (Appendix 1, Figure 7) to investigate the potential for project development in which there would be no direct disturbance to wetlands or stream channels. The following paragraphs describe the impacts that would result if the site were developed according to the NDA.

Wetlands and Streams

Site development under the NDA would result in no direct fill in wetlands or streams. Indirect impacts to streams would be caused by some loss of upland watershed.

Plant and Animal Life

Direct impacts to wetland plants and animals from site development under the NDA would be non-existent, and thus would not be subject to jurisdictional review by Ohio EPA under the Clean Water Act (Section 401). Some areas of upland habitat would be left undeveloped due to access or space limitations. However, indirect (but unregulated) impacts to wetlands and streams and the resident species of plants and animals would be considerable, as many stream and wetland buffer areas would be removed in an effort to reach a sufficient level of development. Furthermore, no stream or wetland mitigation would be required.

Threatened and Endangered Species

None of the site development plans would impact threatened or endangered species.

Surface Water Flow Patterns

The site's natural drainage areas would not be re-directed under the NDA. Runoff volumes would be increased under this plan, since the total area of impervious surface would be higher than it currently is. This plan would follow all the existing rules for storm water management practices on the development site and internal roads.

10C. Applicant's Project Costs

As part of this submission process, the Applicant completed an economic evaluation of both development costs and community economic benefits for the NDA, PDA, and the MDA. The economic analysis is presented and summarized in Appendix 5. Project cost and parcel sale figures are proprietary and confidential, and may cause economic hardship if released. For this reason, this information is provided for the use of the permitting agencies only. Release to any other entities, reviewers or the public must be approved by the Applicant prior to release or disclosure.

The Project's economic viability is determined by the calculation of a project's return of, and on, capital invested. Given the risk associated with such development, and the need to pay for the land and the associated development costs, a project must provide a reasonable return to the Applicant. Each development option was evaluated from this perspective.

10E. Other Related Projects

The Applicant is aware of no other major development projects that are currently permitted or under construction for the City of Brecksville or the surrounding cities and unincorporated areas (townships) that would be impacted by water quality issues resulting from this project. The Applicant is not aware of any government or privately sponsored conservation projects that are specifically targeting improvements to water quality or enhancements to recreational opportunities that would be affected by this project.

10F. Water Pollution Controls

The Applicant will prepare an erosion and sedimentation control plan that will specify measures for preventing on-site erosion and degradation of wetlands and streams during project construction. This erosion and sedimentation control plan will incorporate the use of best management practices (BMPs) as standard procedures, requiring the use of materials such as erosion control matting, silt fence, and straw/hay bales. For example, steep slopes will be stabilized using erosion control matting and/or an erosion control seed mix. Silt fence or other sedimentation control devices will be installed in areas

where the edge of disturbance is near or crosses wetlands and streams. Temporary stormwater ponds will be constructed, as necessary, to control storm water runoff and sedimentation during construction. Flows from parking lots will not be allowed to directly enter the preserved streams.

Stormwater Management Plan

Stormwater management planning for the Crowland Development will incorporate BMPs and other techniques necessary to maintain compliance with the federal Water Pollution Control Act, Ohio Water Pollution Control Act, and City of Brecksville Stormwater Management Ordinances for stormwater discharges associated with construction activity. Stormwater management planning will address issues related to both water quantity and quality by incorporating appropriate techniques from the latest Ohio Rainwater and Land Development manual and to maintain compliance with the applicable “Ohio Environmental Protection Agency Authorization For Storm Water Discharges Associated With Construction Activity Under the National Pollutant Discharge Elimination System” permit. Storm water pollution prevention plans (SWPPPs) will be developed for individual projects as various sites are developed. These plans will incorporate non-structural preservation methods, erosion prevention practices, sediment controls, runoff controls, post-construction stormwater management, surface water protection, non-sediment pollution controls, and on-going maintenance plans. Post-construction BMPs may include Infiltration Basins, Enhanced Water Quality Swales, Dry or Wet Extended Detention Basins, Constructed Wetlands, Sand and/or Other Media Filtration Systems, Bioretention Cells, Pocket Wetlands, Vegetated Filter Strips, and/or other appropriate BMPs. Development planning will strive to maintain or enhance natural systems, limit impacts, and coordinate SWPPPs for various projects.

10G. Human Health Impacts

Impacting wetlands on the site should not have a quantifiable negative impact on human health. The proposed project will not lower water quality and therefore will not impact human health or the overall water quality associated with the Chippewa Creek/Lake Erie watershed.

10H. Jobs Created and Revenues Gained

The MDA will result in significant increases in the number of local jobs, both in the construction of the project and permanent long-term jobs. Net increases in revenues to the City of Brecksville and surrounding communities and the State of Ohio will result from this project. The details of the economic impact for all three alternatives are provided in the economic analysis found in Appendix 5.

10I. Jobs Created and Revenues Lost

It is not anticipated that this project will result in the loss of any jobs. The site is presently undeveloped and therefore no current businesses or buildings will be destroyed or replaced. Since this development consists of commercial areas that include office buildings, and retail establishments, it not adversely affect any commercial businesses in the immediate area (Appendix 5). Conversely, with the addition of this development complex, local businesses can expect to draw more potential customers (employees and visitors to the complex) to this area that were not present before, thus providing additional market opportunities for these businesses.

10J. Environmental Benefits Lost or Gained

The losses and gains of various environmental benefits have been discussed previously, particularly in Section 10B. Although any development will result in the loss of upland, wetland, and/or some stream

habitat, the overall balance achieved in the MDA balances that loss with appropriate mitigation and the social and economic benefits to be gained by this project.

10K. Mitigation Techniques

Preferred Development Alternative

Due to the fact that the PDA was not selected as the POR, only limited conceptual mitigation plans have been prepared for this alternative. Under the PDA the on-site wetland mitigation would provide 6.5 acres of creation and would require the purchase 8.0 acres of off-site wetland mitigation credits to achieve the required mitigation to impact ratio for the 7.23 acres of wetland fill. A total of 950 LF of additional stream bank enhancements would also be made.

Minimal Degradation Alternative

The Applicant revised the original MDA in an effort to avoid and minimize wetland and stream impacts from the project. Since this alternative is the Applicant's POR, wetland mitigation measures have been identified for the project, including on-site avoidance and protection of adjacent upland buffers (Appendix 6). All of the proposed mitigation measures will be on the project site.

On-Site Wetland Mitigation

Unavoidable wetland impacts of 4.721 acres will be partially mitigated by on-site wetland restoration. The primary function of the on-site wetland mitigation will be the restoration of a diversified forested wetland habitat, vernal pools and additional wildlife habitat for many species that inhabit wetlands and adjacent areas. The wetland restoration mitigation areas will also serve to provide an increased functionality for biological productivity. Further wetland creation will result from the creation of wetland floodplains adjacent to the proposed stream mitigation previously discussed. All remaining, restored and created wetland areas will be placed under a third-party conservation easement, and will thus be preserved and protected in perpetuity.

The proposed wetland restoration area selected for the expansion of existing wetlands a 4.4 acre area in the southwest corner of the project site.

Hydrology Sources

The primary source of water for the wetland creation areas will be retention of precipitation as well as runoff from adjacent parcels using drainage plugs and control berms. The wetland restoration plan calls for the alteration of existing site drainage by the construction of drainage plugs, limited to an elevation sufficient to block the existing drainages. The drainages proposed for blockage will be identified in the field and mapped with a sub-meter GPS instrument. In addition, a total of three small perimeter berms are also proposed to add additional wetland hydrology. These will also be located in the field and mapped with the same GPS unit. These berm locations will be set in areas where the construction of the original major drainage ditches created a sloped zone that allowed overland sheet flow drainage. The berms will restrict this overland sheet flow so that wetland hydrology will be re-established.

The combination of the berms construction and the blockage of remnant drainages will allow a natural restoration of the original wetland hydrology. In addition, irregularly shaped vernal pools will be created to provide additional wetland habitat within the mitigation area. The vernal pools will be constructed to avoid larger trees, and minimize disturbance of existing vegetation. The existing vegetation consists of species capable of existing in a wetland forest habitat, and is already partially acclimated to an intermittently wet

hydrological regime. As a result, the existing vegetation should not be adversely impacted by the slightly wetter regime.

The drainage plugs, perimeter berms and vernal pools will be constructed during the summer, when conditions are relatively dry, and when construction equipment can access the site with minimal disturbance to the ground. Construction equipment anticipated to be used for this project will be small and lightweight. Equipment access into mitigation areas will be planned to avoid any significant clearing of mature trees.

Non-Degradation Alternative

Since there are no proposed impacts to streams, wetlands, or any other “waters of the United States” or “waters of the State of Ohio” under the NDA (Appendix 1, Figure 7), there are no mitigation plans for the Project Site under the NDA.

Appendix 1. Figures

Figure 1 Location of Project Area on Highway Map

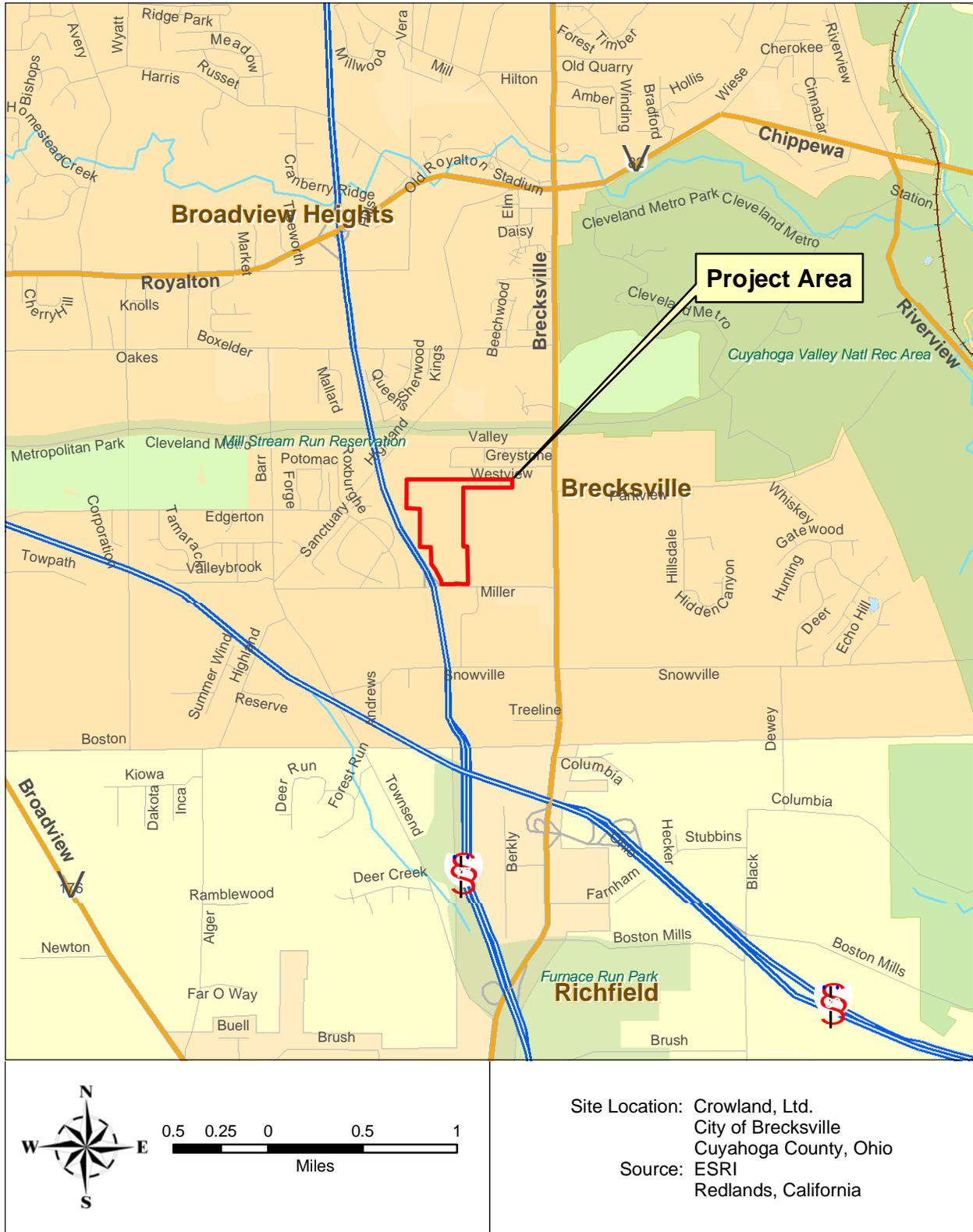


Figure 2 Project Area on Aerial Orthophotograph



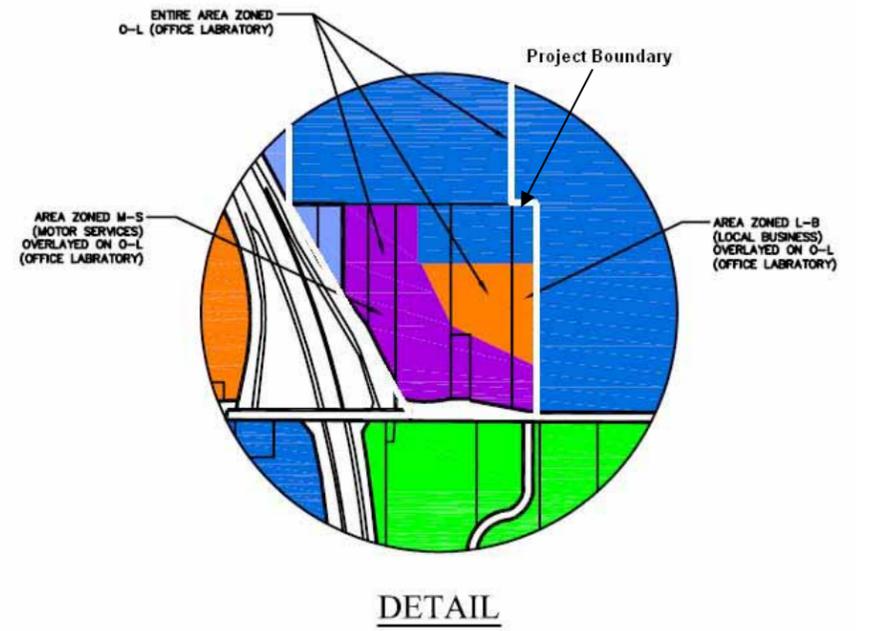
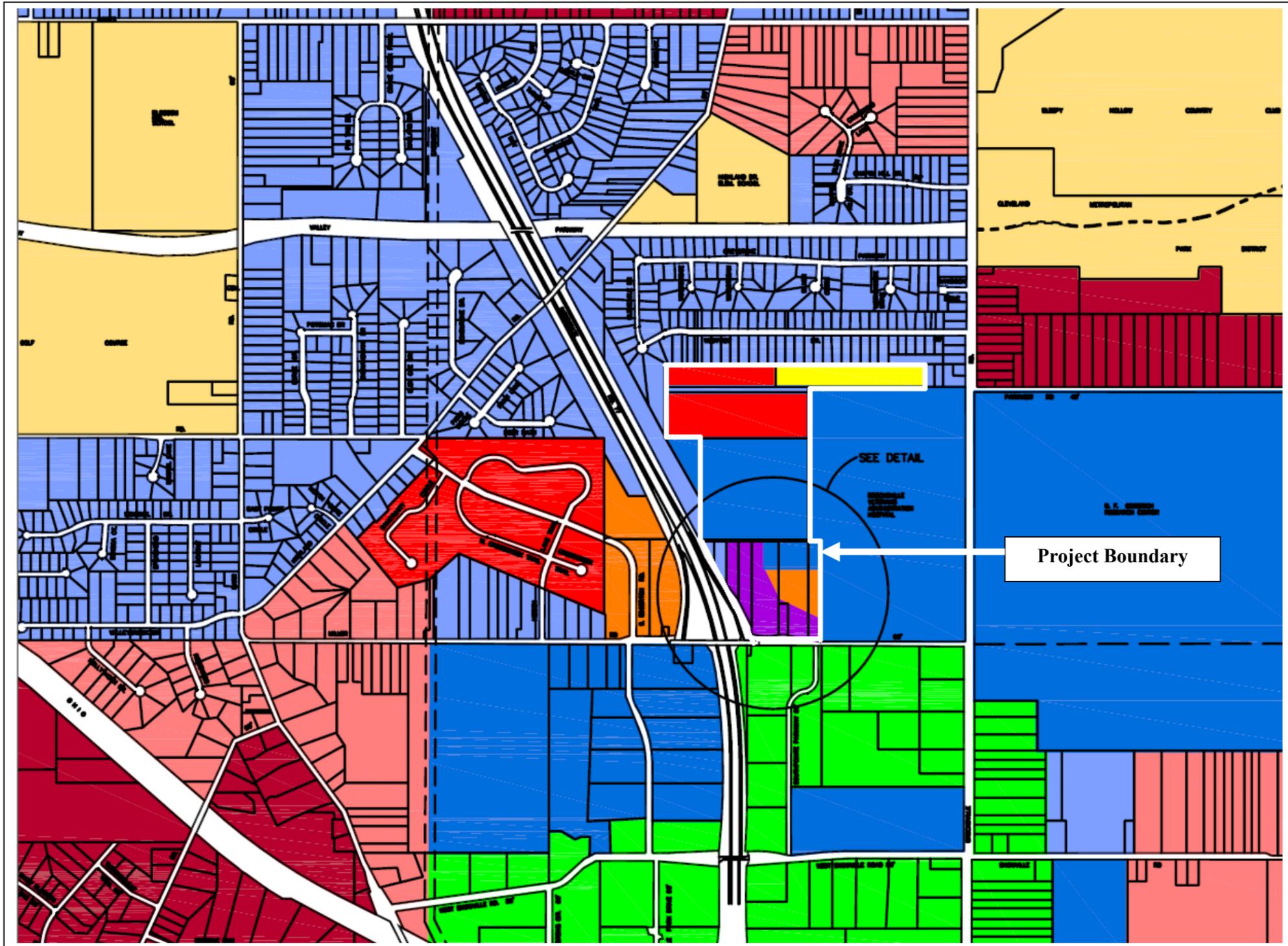
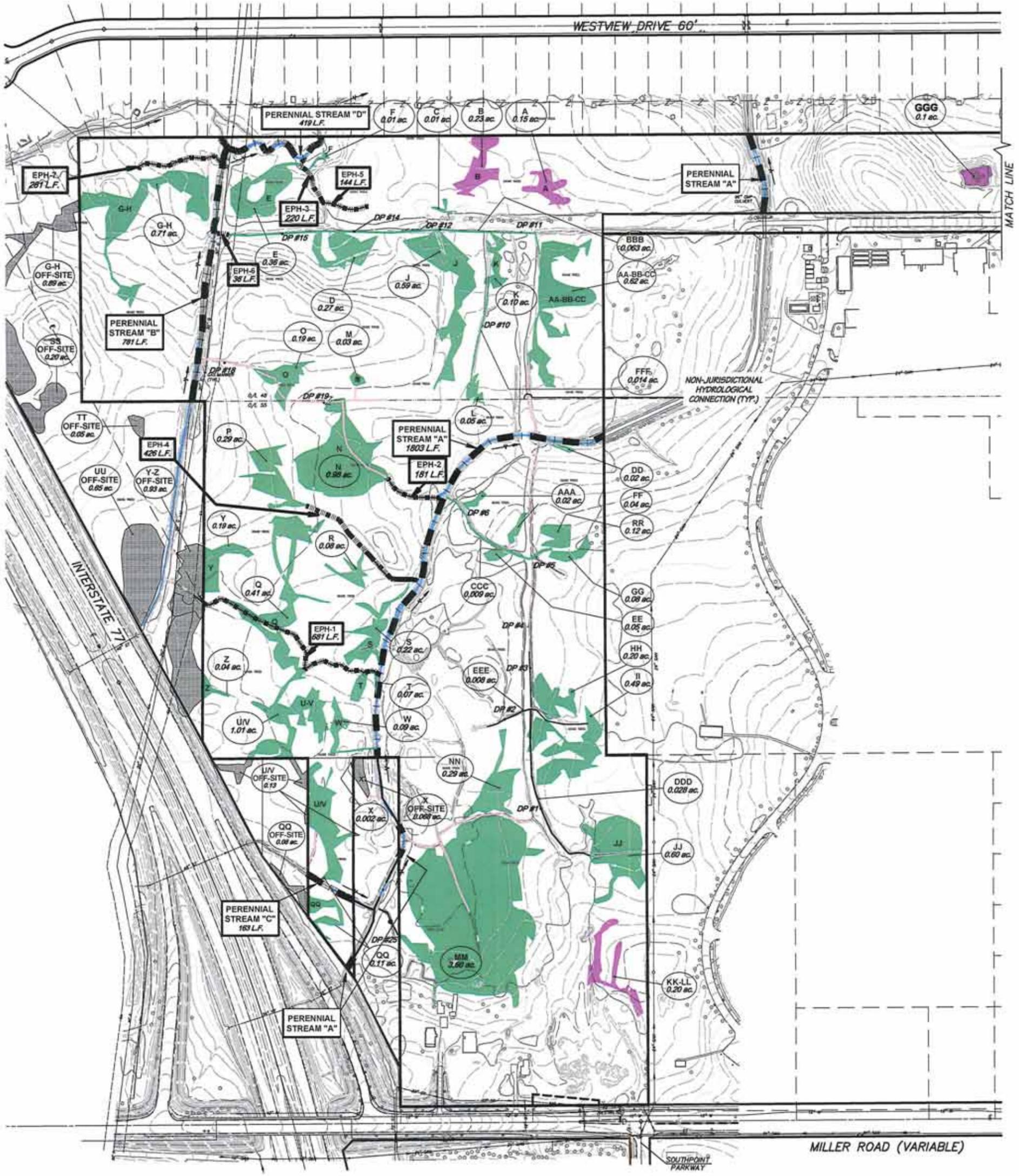
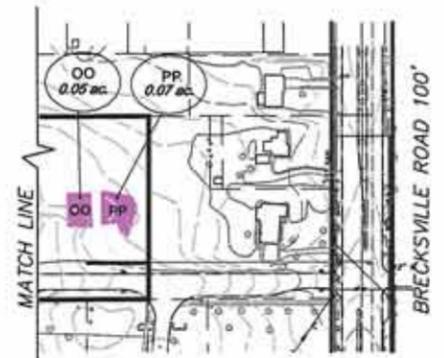


Figure 3 City of Brecksville Zoning



ON-SITE:	WETLANDS/STREAMS:	EXISTING:
	FEDERAL WETLANDS	12.06 AC.
	ISOLATED WETLANDS	0.80 AC.
	STREAMS	5,135 LIN. FT.

EXISTING WETLANDS

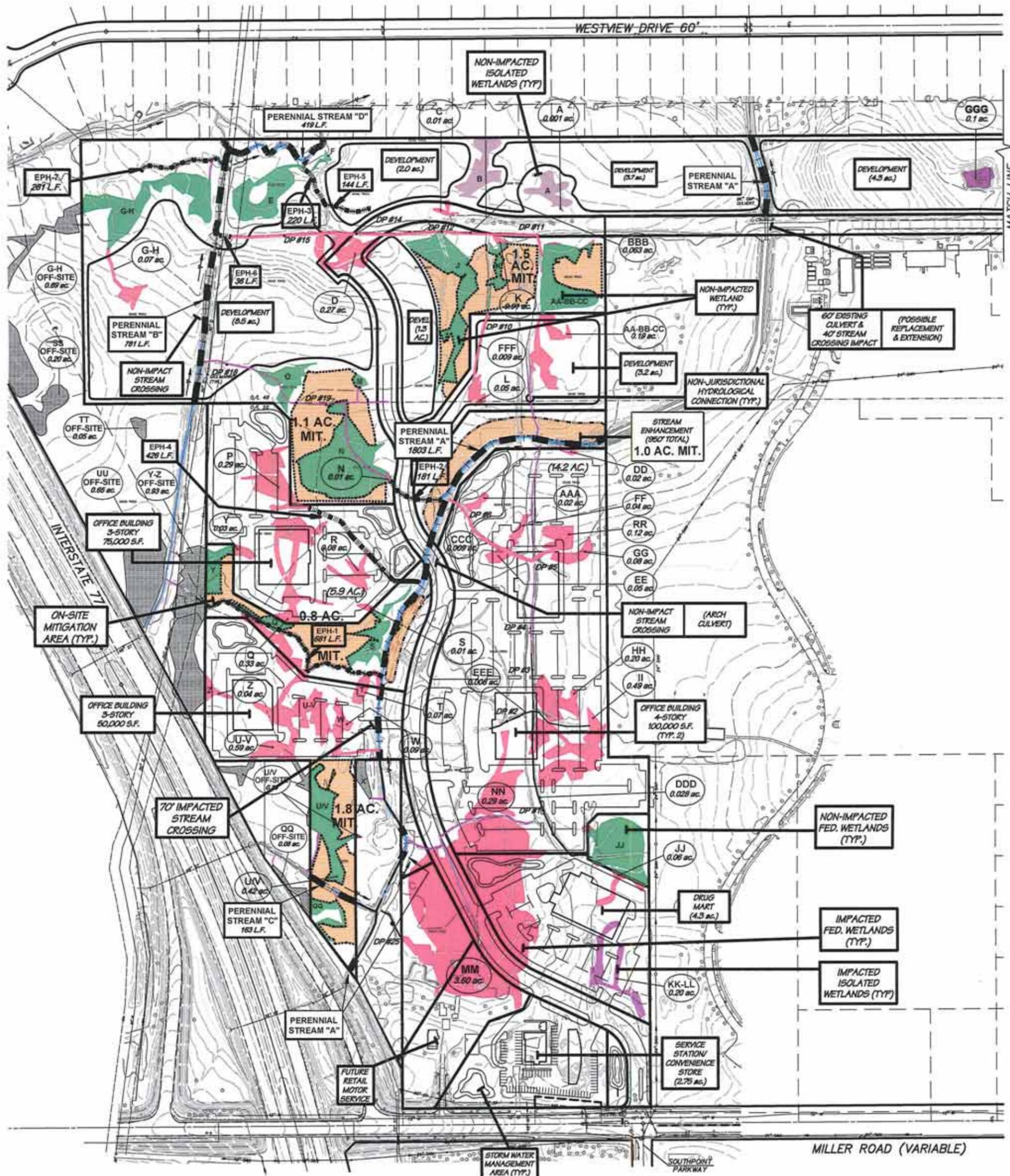
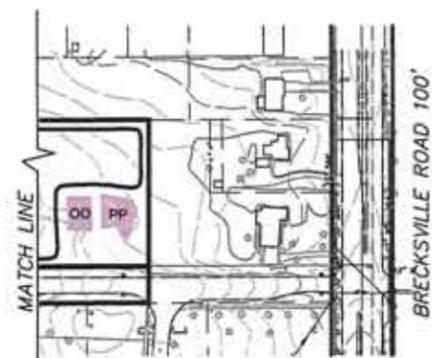
CROWLAND, LTD.

CITY OF BRECKSVILLE, CUYAHOGA COUNTY, OHIO

Or. No. 3541W

Date: Sept., 2011

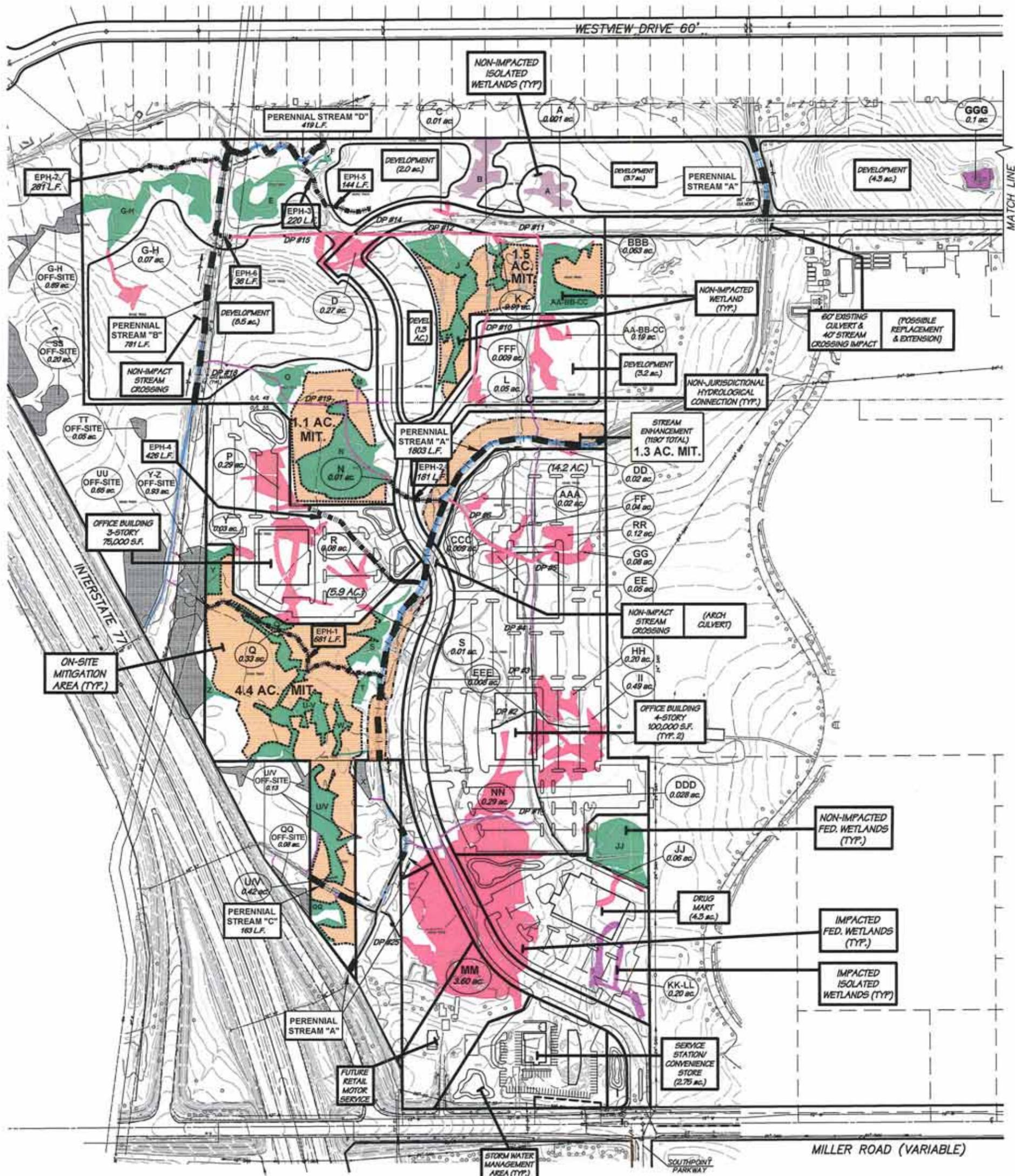
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ON-SITE: WETLANDS/STREAMS:	EXISTING:	IMPACTED:
FEDERAL WETLANDS	12.06 AC.	7.23 AC.
ISOLATED WETLANDS	0.80 AC.	0.301 AC.
STREAMS	5,135 LIN. FT.	899 LIN. FT.

MITIGATION:	ON-SITE	OFF-SITE
WETLAND RESTORATION	6.5 AC.	8.0 AC.
STREAMS-RESTORATION/ ENHANCEMENT	950 LIN FT.	---

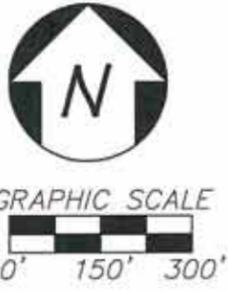
PREFERRED DEVELOPMENT ALTERNATIVE
CROWLAND, LTD.
CITY OF BRECKSVILLE, CUYAHOGA COUNTY, OHIO
 Or. No. 3541W Date: Sept. 9, 2011



ON-SITE: WETLANDS/STREAMS:	EXISTING:	IMPACTED:
FEDERAL WETLANDS	12.06 AC.	6.44 AC.
ISOLATED WETLANDS	0.80 AC.	0.301 AC.
STREAMS	5,135 LIN. FT.	829 LIN. FT.

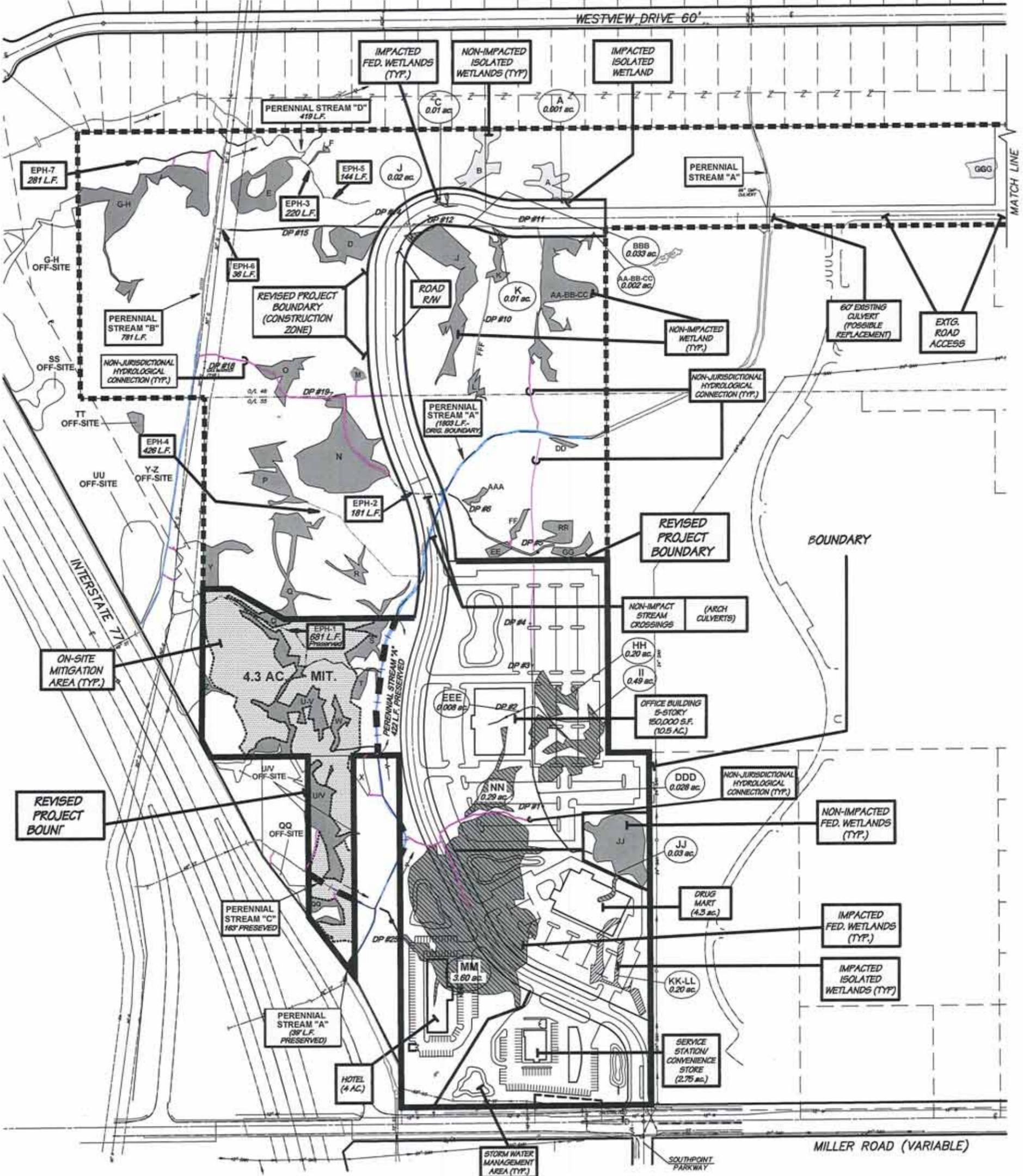
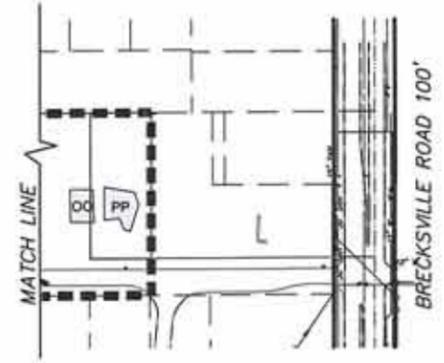
MITIGATION:	ON-SITE	OFF-SITE
WETLAND RESTORATION	8.3 AC.	4.6 AC.
STREAMS-RESTORATION/ ENHANCEMENT	1,190 LIN FT.	---

MINIMUM DEVELOPMENT ALTERNATIVE
CROWLAND, LTD.
 CITY OF BRECKSVILLE, CUYAHOGA COUNTY, OHIO
 Or. No. 3541W Date: Sept. 9, 2011
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LEGEND:

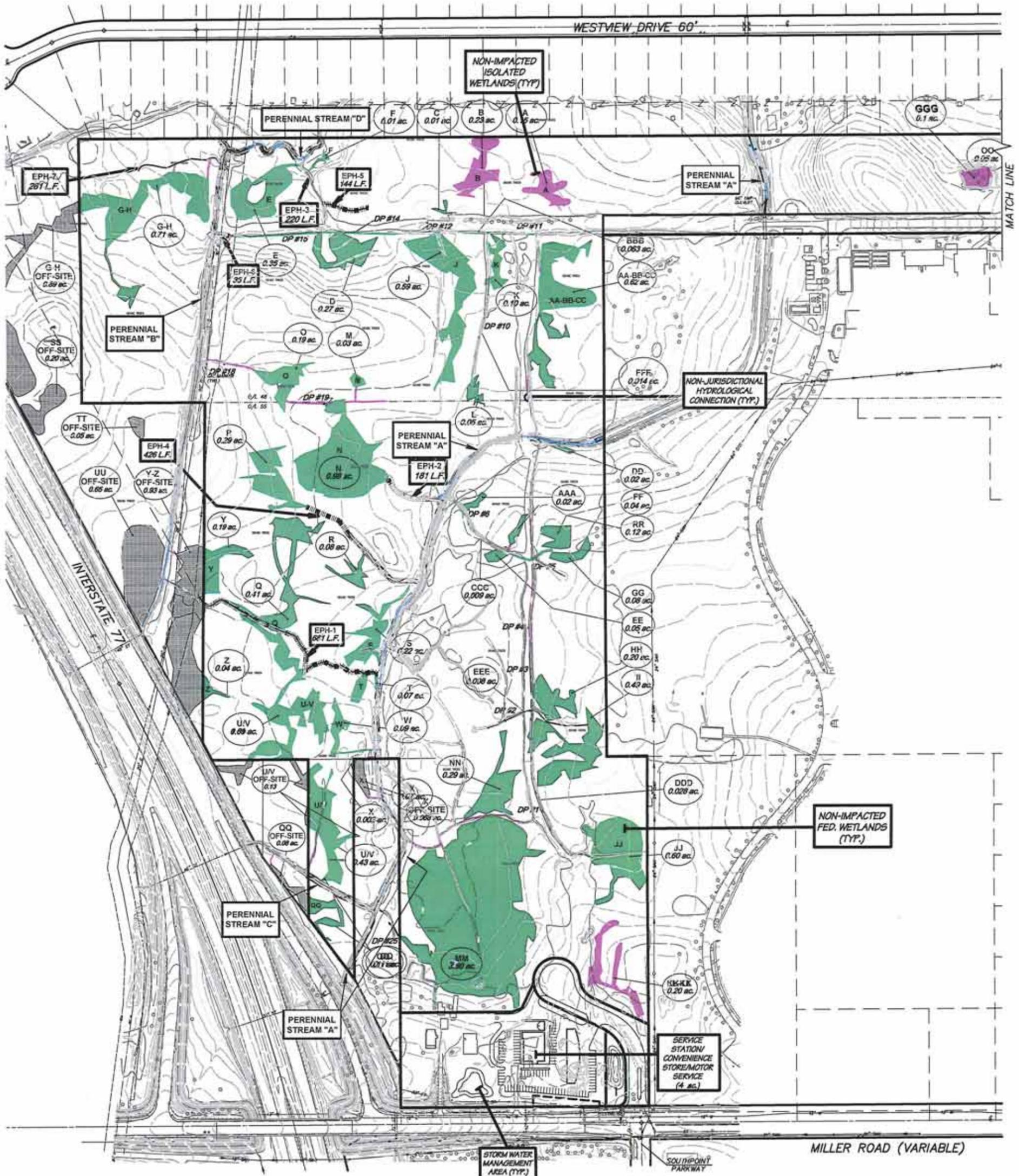
- NON-IMPACTED FEDERAL WETLANDS
- IMPACTED FEDERAL WETLANDS
- NON-IMPACTED ISOLATED WETLANDS
- IMPACTED ISOLATED WETLANDS
- AREA OF ON-SITE MITIGATION



ON-SITE: WETLANDS/STREAMS:	EXISTING: (ORIG. BOUNDARY)	IMPACTED: (REVISED BOUNDARY)	PRESERVED: (REVISED BOUNDARY)	AVOIDED: (ORIGINAL BOUNDARY)
FEDERAL WETLANDS	12.06 AC.	4.721 AC.	2.14 AC.	9.92 AC.
ISOLATED WETLANDS	0.80 AC.	0.201 AC.	-----	0.80 AC.
STREAMS	5,135 LIN. FT.	-----	1,305 LIN. FT.	3,830 LIN. FT.

MITIGATION:	ON-SITE (REVISED BOUNDARY)	OFF-SITE (REVISED BOUNDARY)
WETLAND RESTORATION	4.3 AC.	-----

**REVISED
MINIMUM DEVELOPMENT ALTERNATIVE**
CROWLAND, LTD.
CITY OF BRECKSVILLE, CUYAHOGA COUNTY, OHIO
 Or. No. 3541W Date: July 26, 2011
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ON-SITE:	EXISTING:	IMPACTED:
FEDERAL WETLANDS	12.06 AC.	NO IMPACT
ISOLATED WETLANDS	0.80 AC.	"
STREAMS	5,135 LIN. FT.	"

NON-DEGRADATION DEVELOPMENT ALTERNATIVE
CROWLAND, LTD.
CITY OF BRECKSVILLE, CUYAHOGA COUNTY, OHIO
 Or. No. 3541W Date: Sept. 9, 2011
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Appendix 3. Wetland Impacts

Table 1 Existing Wetlands and Proposed Impacts

Wetlands ID	Community	Jurisdiction	Wetland Acreage	MDA Impacted (Acres)	MDA Avoided (Acres)	MDA Percent Avoided	ORAM Category
AA/BB/CC	Forested	Federal	0.62	0.002	0.62	99.7%	Mod 2
AAA	Scrub-Shrub	Federal	0.02	0.000	0.02	100.0%	1/2
BBB	Swale - Wet Meadow	Federal	0.063	0.033	0.03	47.6%	1
C	Scrub-Shrub	Federal	0.01	0.010	0.00	0.0%	Mod 2
CCC	Swale - Wet Meadow	Federal	0.009	0.000	0.01	100.0%	1
D	Forested	Federal	0.27	0.000	0.27	100.0%	Mod 2
DD	Forested	Federal	0.02	0.000	0.02	100.0%	Mod 2
DDD	Swale - Wet Meadow	Federal	0.028	0.028	0.00	0.0%	1
E	Forested	Federal	0.36	0.000	0.36	100.0%	2
EE	Forested	Federal	0.05	0.000	0.05	100.0%	Mod 2
EEE	Swale - Wet Meadow	Federal	0.008	0.008	0.00	0.0%	1
F	Forested	Federal	0.01	0.000	0.01	100.0%	Mod 2
FF	Forested	Federal	0.04	0.000	0.04	100.0%	Mod 2
FFF	Swale - Wet Meadow	Federal	0.014	0.000	0.01	100.0%	1
G/H*	Forested	Federal	0.71	0.000	0.71	100.0%	2
GG	Wet Meadow	Federal	0.08	0.000	0.08	100.0%	Mod 2
HH	Forested /Wet Meadow	Federal	0.20	0.200	0.00	0.0%	Mod 2
II	Forested /Wet Meadow	Federal	0.49	0.490	0.00	0.0%	Mod 2
J	Forested	Federal	0.59	0.020	0.57	96.6%	2
JJ	Forested /Wet Meadow	Federal	0.60	0.030	0.57	95.0%	Mod 2
K	Wet Meadow	Federal	0.10	0.010	0.09	90.0%	Mod 2
L	Forested	Federal	0.05	0.000	0.05	100.0%	Mod 2
M	Forested	Federal	0.03	0.000	0.03	100.0%	Mod 2
MM	Forested /Wet Meadow	Federal	3.60	3.600	0.00	0.0%	Mod 2
N	Forested	Federal	0.98	0.000	0.98	100.0%	2
NN	Forested	Federal	0.29	0.290	0.00	0.0%	Mod 2
O	Forested	Federal	0.19	0.000	0.19	100.0%	2
P	Forested	Federal	0.29	0.000	0.29	100.0%	2
Q	Forested	Federal	0.41	0.000	0.41	100.0%	2
QQ*	Forested	Federal	0.11	0.000	0.11	100.0%	1/2
R	Forested	Federal	0.08	0.000	0.08	100.0%	2
RR	Forested	Federal	0.12	0.000	0.12	100.0%	Mod 2
S	Forested	Federal	0.22	0.000	0.22	100.0%	Mod 2
T	Forested	Federal	0.07	0.000	0.07	100.0%	Mod 2
U/V*	Forested /Wet Meadow	Federal	1.01	0.000	1.01	100.0%	2
W	Forested	Federal	0.09	0.000	0.09	100.0%	2
X	Forested	Federal	0.002	0.000	0.00	100.0%	Mod 2
Y/Z*	Forested	Federal	0.23	0.000	0.23	100.0%	Mod 2
Total Wetlands			12.06	4.721	7.34	60.9%	

Table 2 Existing Isolated Wetlands and Proposed Impacts

Wetlands ID	Community	Jurisdiction	Wetland Acreage	MDA Impacted (Acres)	MDA Avoided (Acres)	MDA Percent Avoided	ORAM Category
A	Forested	Isolated	0.15	0.001	0.15	99.3%	Mod 2
B	Forested	Isolated	0.23	0.00	0.23	100.0%	Mod 2
GGG	Emergent/Wet Meadow	Isolated	0.10	0.00	0.10	100.00%	1
KK/LL	Forested/Wet Meadow	Isolated	0.20	0.20	0.00	0.0%	1/2
OO	Scrub-Shrub	Isolated	0.05	0.00	0.05	100.0%	1/2
PP	Wet Meadow	Isolated	0.07	0.00	0.07	100.0%	1/2
		Total	0.80	0.201	0.599	74.9%	

Table 3 Existing Streams

Stream ID	Length (feet)	Type	HHEI Class	MDA Impacted	MDA Avoided	MDA Avoided
A	1,803	Perennial	Mod II PHWH	0	1,803	100.0%
B	781	Perennial	Mod II PHWH	0	781	100.0%
C	163	Perennial	Mod II PHWH	0	163	100.0%
D	419	Perennial	Mod II PHWH	0	419	100.0%
EPH-1	681	Ephemeral	Mod I PHWH	0	681	100.0%
EPH-2	181	Ephemeral	Mod I PHWH	0	181	100.0%
EPH-3	220	Ephemeral	Mod I PHWH	0	220	100.0%
EPH-4	426	Ephemeral	Mod I PHWH	0	426	100.0%
EPH-5	144	Ephemeral	Mod I PHWH	0	144	100.0%
EPH-6	36	Ephemeral	Mod I PHWH	0	36	100.0%
EPH-7	281	Ephemeral	Mod I PHWH	0	281	100.0%
Totals	5,135			0	5,135	100.0%

Appendix 5. Socio-Economic Analysis

Non-Degradation Alternative

The estimated Project development costs for the NDA are presented below:

Category	Estimated Cost
Predevelopment cost	\$ 494,894
Land costs	\$7,022,435
Infrastructure & site costs	\$ 660,000
Mitigation costs	\$ 0
TOTAL COSTS	\$8,177,329

Because of the location of the wetlands and streams on the property and limited access, the Applicant will only be able to develop 8.0 acres of residential on the northern portion of the Project, and 5.35 acres of retail/motor services on the southern portion of the Project. Potential land sales will only generate \$2,405,000 in revenue, well below the Applicant's cost of the Project Development.

From a community economic perspective, this design returns the least financial value. The anticipated and local income tax is estimated to be \$108,200 per year; a value that is only 14% of the Revised MDA. The construction tax revenue produced by the NDA would be significantly reduced as well, with \$149,000 estimated in construction income taxes paid to the local community. The estimated full-time jobs would be 107 for the NDA.

The cost/profit summary demonstrates that the NDA would result in a significant loss of \$5,772,329 to the Applicant. Therefore the NDA is not acceptable to the Applicant as a viable project alternative

Preferred Development Alternative

The estimated Project development costs for the PDA are presented below:

Category	Estimated Cost
Predevelopment cost	\$ 494,894
Land costs	\$7,022,435
Infrastructure & site costs	\$1,493,700
Mitigation costs	\$ 442,500
TOTAL COSTS	\$9,453,529

Under the PDA the Applicant will be able to develop 23 acres of residential, which includes 8 acres of 16,000 sq. ft. of land per residential unit and 15 acres of 8,000 sq. ft. of land per residential unit, 24.3 acres of office and 9.05 acres of retail/motor services. Potential land sales will generate \$10,250,000 in revenue resulting in a profit of \$796,471 to the Applicant.

From a community economic perspective, this design returns the most financial value. The anticipated local income tax is estimated to be \$1,094,600, a value that is 39% greater than the \$786,600 local income tax from the Revised MDA. The construction tax revenue produced by the PDA would be 35% higher than the Revised MDA. There would be an estimated 375 more full time jobs with the PDA instead of the Revised MDA. The estimated full time jobs with the PDA would be 1,156 in year 5 compared to 781 in year 5 for the Revised MDA.

Minimal Degradation Alternative

The estimated Projects costs for the revised MDA are presented below:

Category	Estimated Cost
Predevelopment cost	\$ 494,894
Land costs	\$7,022,435
Infrastructure & site costs	\$1,493,700
Mitigation costs	\$ 244,796
TOTAL COSTS	\$9,255,825

Under the Revised MDA the Applicant will be able to develop approximately 14.0 acres of office and 9.05 acres of retail/motor services. Potential land sales will generate \$8,448,750 in revenue resulting in a loss of \$807,075 to the Applicant.

From a community economic perspective, this design returns reduced economic value when compared to the PDA, but the loss is not as great as compared to the NDA. The local community will derive significant economic benefit from the Revised MDA. The anticipated local income tax is estimated to be \$786,600. The estimated full-time jobs would be 781 for the Revised MDA in year 5.

ASSUMPTIONS/EXPLANATIONS

Predevelopment costs are actual costs and include option fees paid to the previous Owner, expenses of wetland and environmental consultants and reports, engineer and architectural layouts, plans and renderings, traffic consultant studies and reports, and attorney fees.

Land costs include payment to the previous Owner, release payments to third parties who had liens against the property, purchase closing costs, real estate tax payments and bank interest charges through January 1, 2012.

Infrastructure and site costs are calculated at \$300 a lineal foot for grading, road and utility costs. There are 3,609 lineal feet of road on site and 1,370 lineal feet of road located on the VA property which will be required to be constructed by the Applicant.

Mitigation costs are estimated to be \$50,000 for 4.3 acres of on-site mitigation, including five years of monitoring, and \$42,000 per acre for off-site mitigation.

Land sales are calculated at \$125,000 per acre for residential, \$300,000 per acre for retail/motor services and \$200,000 per acre for office.

Employee wages are calculated at \$40,000 per employee for offices with an employee density of 3 per 1,000 sq. ft. of office space, and \$30,000 per employee for retail/motor services with an employee density of 2 per 1,000 sq. ft. of retail/motor services space.

Construction wages are calculated at 50% of the cost of construction with residential construction costs of \$125 per square foot, retail/motor service at \$150 per square foot and offices at \$200 per square foot.