

ENVIRONMENTAL IMPACT ASSESSMENT

PREPARED FOR THE TIGUE PROPERTY
LOCATED IN EAST BRADFORD TOWNSHIP,
CHESTER COUNTY, PA

PREPARED BY ESE CONSULTANTS, INC.

1/19/2016

PROJECT SUMMARY

This Environmental Impact Assessment has been prepared in accordance with a Conditional Use submission for the Tigie Property located at the corner of Tigie Road and Lenape Road in East Bradford Township, Chester County, Pennsylvania. The main project site that is being considered for development consists of two parcels measuring approximately (86) Acres. A separate parcel located on the South side of the corner of Lenape Road and Tigie Road, measuring approximately (5) Acres, is not being considered for development and will be dedicated as permanent open space to the Township of East Bradford. Overall the site, which is considered a Class I DOE historic resource, has a rolling topography of meadow/grassland that was formally used for agricultural practices. Pockets of woodlands border the Northern parcel along Lenape Road and an existing stream, Plum Run. Additional woodland cover can be found near the existing home and along Tigie Road. The Southern parcel has a gentler topography which slopes to the South toward an un-named tributary of Plum Run. This parcel is also made up of a mix of meadow/grassland with a dense pocket of woodland, primarily made up of Tree of Heaven, located in the center of the parcel. Additional vegetation is located along the un-named tributary of Plum Run as well as the land area across the stream, which borders the Township lines of East Bradford, Westtown and Birmingham.

The applicant, Toll Brothers Inc., is proposing to develop the property under the Open Space Development Option, a conditional use permitted in the R-2, R-3 & R-4 base zoning districts in which the subject parcels reside. The proposed development would result in (64) attached Carriage-Homes and (26) Single-Family detached homes and also include the restoration of the existing historic home located on the property for a total of (91) homes overall. The site will feature approximately (44) Acres of open space of which approximately (4) acres will be devoted to active recreation. A majority of the open space will be located adjacent to the existing streams on site, existing woodlands and steeply sloped areas in an effort to align with the open space goals of East Bradford Township.

At the end of this report the reader will find the following attached exhibits for reference:

- Stream pollutant testing results prepared by Del-Val Soil & Environmental Consultants, Inc. (This report can be found in full on the accompanying CD in PDF format)
- Pennsylvania Natural Diversity Inventory report
- Photo Location Map with corresponding photos of site prepared by ESE Consultants, Inc.
- Visual Impact Analysis Exhibit prepared by ESE Consultants, Inc.
- Municipal Services Map prepared by ESE Consultants, Inc.
- Wetland report prepared by Del-Val Soil & Environmental Consultants, Inc. (This report can be found in full on the accompanying CD in PDF format)
- Pennsylvania Historic Resource Survey Form for Tigie Farm
- Existing Conditions Plan-Full Size prepared by ESE Consultants, Inc.

Tigue Tract, East Bradford Township Environmental Impact Assessment

1) Water:

The project site lies within the Brandywine Creek Main Stem Watershed, which is part of the larger Delaware River Basin watershed. The Northern and Western portions of the site drain North and West to Plum Run. The Pennsylvania Department of Environmental Protection (PADEP) Chapter 93 (Water Quality Standards) indicates the designated use of Plum Run is a *warm water fishes, migratory fishes* (WWF, MF). The majority of the project site drains to the south to an un-named tributary of Plum Run. This un-named tributary also has a designated use of *warm water fishes* and *migratory fishes*. It should be noted that where Plum Run and its un-named tributary flow through the site, the streams have been designated as *impaired* by the PADEP “Integrated Water Quality Report, 2012”, thus requiring additional protection. Plum Run has confluence with Brandywine Creek, which has the same designated use (WWF, MF) on the main stem, from the confluence of the East and West Branches (which is upstream from the site) to the Pennsylvania-Delaware border. None of these streams are listed in the most recent Pennsylvania Fish and Boat Commission Pennsylvania *Wild Trout Waters* (August, 2015), which includes all stream sections within the Commonwealth that support the natural reproduction of trout. Therefore, wetlands that have a hydrological connection to these streams are not considered *Exceptional Value* wetlands. The project site does feature areas within the FEMA designated 100-year floodplain on both the Northern and Southern parcels along Plum Run and its un-named tributary. This information can be verified on numerous municipal maps as well as FEMA map panel number 42029C0260F.

Within the project boundary of the site, Plum Run and its un-named tributary are considered to be of *impaired* status thus requiring an enlarged riparian buffer. Typically any stream located in East Bradford Township that has not been designated with an impaired status will feature (2) 50’ buffer zones measured horizontally from the top of the stream bank, depending on whether or not steep slopes and wetland areas are located within the first 50’ zone. With Plum Run and its tributary having a designated *impaired* status, the riparian buffer area along the streams will increase on the Tigie property by an additional 50’ in Zone-2 of the buffer for a minimum buffer distance of 150’ overall.

The aquifer designation for this site and surrounding area is considered to be of noncarbonated material and falls under a crystalline designation according to the USGS Aquifer Map for Pennsylvania. The existing historic home on-site currently utilizes well water for consumption. This well will be abandoned through the proper permitting process and the existing structure will be converted to public water consumption. With regards to current groundwater elevations, as of the writing of this report, Well CH-12, located to the West of the project site, listed a depth to groundwater of 37.58’ according to the USGS National Water Information System. Testing on Plum Run and its un-named tributary for pollutants listed in the Township’s NPDES II permit has been completed and the results can be found at the end of this report.

2) Soils & Land:

The site has been identified on the East Bradford Township Agricultural Resources Map as having an “Other ASA properties” designation. The ASA abbreviation is better known as “Agricultural security areas”. Below are the soil types and designations that are present on the noted parcels.

- Califon (CaB): Very deep, moderately well or somewhat poorly drained soils formed in colluvium derived from granitic gneiss
- Chrome (ChC2, ChD2): Moderately deep, well drained, residually weathered soil derived from serpentine
- Codus (Co): Very deep, moderately well or somewhat poorly drained soil formed in recent alluvium derived from upland soils weathered from metamorphic and crystalline rocks.
- Cokesbury (CpA): Deep or very deep, poorly drained soil formed in colluvium derived from granitic gneiss on upland depressions and concave footslopes.
- Gladstone (GdB, GdC): Very deep, well-drained soil derived from residually weathered granitic gneiss.
- Gladstone-Parker (GeD): A soil complex containing soils with inclusions in close association of soils with properties of Gladstone and Parker series.
- Hatboro (Ha): Very deep, poorly drained soil formed in alluvium weathered from micaceous schist.
- Parker (PaB, PaC, PaD, PaE): Very deep, somewhat excessively drained soil, residually weathered from granitic gneiss.

**Of the soils listed above, the following are considered to be Prime Agricultural Soils; Cab, Co, GdB and PaB. There are approximately 19 Acres of Prime Agriculture soils present on site of which approximately 8-9 Acres, or less than 50%, will be disturbed.*

Overall, the site has a rolling topography that consists of approximately 8 acres of steep slopes on the Northern parcel and just less than 2 acres of steep slopes on the Southern parcel. The Northern parcel features a ridgeline that divides the site causing drainage to flow to either Plum run on the Northern side of the parcel, or to Tigue Road, on the Southern portion of the parcel.

Currently the site is not listed as being preserved for Open Space, however the 2009 Open Space, Recreation & Environmental Resources Plan lists the parcels being discussed as an “Open space priority” according to the Future Open Space Protection Priorities Map for East Bradford Township. The project site currently features no existing trails nor are there any equestrian farm facilities on-site.

3) Woodlands & Forest:

The majority of the project site consists of acreage used historically and currently for active agricultural or pasture uses. Virtually all non-wooded areas are utilized by agricultural activities resulting in a highly manipulated flora and frequent disturbances that impact fauna.

There are several small wooded and/or tree mass areas scattered throughout the site, while more contiguous woodland forms the northern and western boundary of the project area. The contiguous wooded areas are generally found on steep slopes and floodplains and are outside the proposed limit of disturbance for the project. Fallow meadows and scrub shrub are found in the lowlands adjacent to the un-named tributary to Plum Run and on the rising uplands on the south side of this watercourse.

Trees within the proposed LOD exceeding twelve (12) inches at breast height (dbh) were located and identified. A total of 135 trees meeting this size were identified within or close to the potential LOD with approximately 55-60 of these trees being proposed for removal. A breakdown of the tree species in the order of most to least common observed, including the number count is as follows. (Invasive species highlighted):

- Black locust (*Robinia pseudoacacia*): 35
- Tree of heaven (*Ailanthus altissima*): 26
- Ash species (*Fraxinus spp.*): 24
- Black walnut (*Juglans nigra*): 16
- Sugar maple (*Acer saccharum*): 10
- Black cherry (*Prunus serotina*): 7
- Silver maple (*Acer saccharinum*): 5
- White pine (*Pinus strobus*): 2
- Honey locust (*Gleditsia triacanthos*): 2
- White mulberry (*Morus alba*): 2
- Hawthorne sp. (*Crataegus sp.*): 1
- Spruce sp. (*Picea*): 1
- Hickory sp. (*Carya sp.*): 1
- Elm sp. (*Ulmus sp.*): 1
- Pear sp. (*Pyrus sp.*): 1
- Cherry sp. (*Prunus sp.*): 1
- Unidentified: 1

The understory of the wooded areas within the LOD and the fallow meadows and scrub shrub contain many invasive species including the following that were observed:

- Herbaceous:
 - Japanese stiltgrass (*Microstedium vimineum*)
 - Reed canary grass (*Phalaris arundinacea*)
 - Garlic mustard (*Alliaria petiolata*)
 - Canada thistle (*Cirsium arvense*)
- Vine:
 - Mile-a-minute (*Persicaria perfoliata*)
- Shrub:
 - Japanese barberry (*Berberis thunbergii*)
 - Multiflora rose (*Rosa multiflora*)
 - Autumn olive (*Elaeagnus umbellata*)

- Tree:
 - Tree of heaven (*Alianthus altissima*)

It is notable that Japanese stiltgrass dominates the herbaceous communities where tree canopies are incomplete. In addition, a virtual monoculture of Tree of heaven forms a wooded cluster within the open meadow on the south side of Tigue Road. The herbaceous and shrub communities are also dominated by invasive species such as Japanese stiltgrass, multiflora rose, and autumn olive and can be seen in the photo below:



The Northern parcel of the project features multiple locations that could be considered as being visually significant such as the knoll on the Eastern portion of the Northern parcel that also represents the high point of the site. Also significant is the low-lying land on the Northern parcel that is one of the few areas that can actually be viewed from Tigue Road heading West past the existing barn structures. In regards to the Southern parcel of the project site, the land generally slopes down towards Plum Run creating a vista that can be easily viewed heading both East and West along Tigue Road.

4.) Biota:

Given the proximity of the site to surrounding urbanized and suburban settings, as well as the use of frequent disturbances from routine agricultural practices, site fauna expected to reside or utilize as part of their range could include rabbit, raccoon, groundhogs, fox, deer, possum, and skunk. A review from the Pennsylvania Natural Diversity Index for this site came back clean indicating that there are no rare,

threatened or endangered species within the site. The PNDI report for this site is attached at the end of the report for reference.

5.) Known Environmental Impact:

As is typical with most streams, there are areas of erosion located along the stream channel of Plum Run and its un-named tributary on both the Northern and Southern parcels as indicated by the photographic evidence below;

Plum Run: Northern Parcel



Un-named Tributary-Plum Run-Southern Parcel



Un-named Tributary-Plum Run-Western Parcel



6.) Township Environmental Inventory Map – The township engineer has informed the applicant that no such map exists therefore this section has been omitted.

7.) Existing Conditions Plan - Please refer to the attached exhibit titled Existing Conditions Plan.

8.) Environmental Compliance – The approved plan will comply with all tree removal, tree replacement, buffer planting, storm water basin planting and riparian buffer management requirements per the township code. Upon completion of a grading and storm-water plan during the preliminary plan submission stage, a chart will be created and shown on the plans which indicates the number of trees being removed and the number of compensatory trees that will be planted as a replacement.

General Character:

As has been previously mentioned in this report, the project site is typical of other farms presently located in Chester County, Pennsylvania. The site is generally dominated by open meadow that was once used for animal grazing. In regards to the Northern parcel, the land is made up of rolling terrain with approximately (8) acres of steeply sloped land as identified by the Township's ordinance. Tree cover is mostly located to the perimeter of the site while also encompassing the immediate area around Plum Run. Additional tree cover is located in the center of the site near the existing home structure and its ancillary uses. The existing stream, Plum Run, has associated wetlands and floodplain areas adjacent to the stream bank. The Southern parcel is fairly similar to the Northern parcel with the exception that the existing grade is much less severe. The Southern parcel is primarily made up of open meadow with sparse tree cover. The parcel is divided by an un-named tributary of Plum Run which has associated wetlands and floodplain areas as well. Overall, the site appears to be of a high environmental quality yet there are

issues with stream pollutants, as documented by the impairment status to both streams, and the ever-increasing spread of invasive plant species noted through-out the limited woodland areas. Conservation value should be considered for the stream and its associated buffer areas to help ensure further pollution while an invasive plant species removal program should be considered for the woodland areas to encourage native plant regrowth.

The historical significance of this site can be documented back to the year 1720, when the original home was first built. A historical narrative for the property, written as part of the Pennsylvania Historic Resource Survey Form, describes the site as "...one of the earliest properties settled in southern part of the Township. The stone ruin near the barn is thought to be the early house on the property, dating to c. 1720. Later in the eighteenth century, the core of the current farmhouse was constructed. The increasing wealth of the property is indicated by the double decker barn (early nineteenth century) and the large Gothic Revival addition onto the house (mid-nineteenth century)." Overall the historical significance of the site can be traced to the six buildings, the Farmhouse, Barn, two sheds, Tenant House Ruin and the Spring House, that are located on the Northern parcel of the subject property. Either through restoration or preservation, these structures should be treated with care as they are indicative of the early rural character that was East Bradford Township in eighteenth and nineteenth centuries.

Storm Water Design:

Peak Runoff Rate Control

Per the East Bradford Subdivision Ordinance, the reductions shown in the table below have been applied to the overall site. The post-developed flows have been reduced to be less than the pre-developed flows at all the study points. The rainfall intensities for these events were gathered from the NOAA site. The calculations have been done using the SCS/TR-55 method to generate the flows.

Design Storm Post-Developed	Design Storm Pre-Developed
2-year	1-year
5-year	5-year
10-year	10-year
25-year	25-year
50-year	50-year
100-year	100-year

The ‘*Tigue Tract– Watershed Summaries*’ table, which can be found on Sheet 6 of 7 of the Tigue Conditional Use submission, summarizes the peak runoff rates and reductions for each point of interest. As demonstrated in the table, the post-developed peak rate has been reduced per the above table for the overall site. Each basin is assumed to have 0.5 in/hr of infiltration and testing will be performed at a future date in conjunction with the full design.

Additional Impervious Surface:

For the SWM calculations, the impervious shown (house, driveway, walkway, sidewalk, and road) as well as 1,500 sf additional for single family lots and 1,000 sf additional for carriage homes have been assumed to be impervious area for Storm Water Management purposes.

Water Quality Management:

In order to provide for water quality on-site, infiltration facilities have been proposed on various locations on the site in accordance with the East Bradford Ordinance. Other BMPs, both structural and non-structural, proposed to meet the WQ requirements may include: A snout Water Quality Filter at the entrance of each underground facility, a vegetated swale (natural) downslope of each basin and the protection / utilization of the natural flow pathways. Another way to achieve the required Water Quality is to use “treatment trains” in which one BMP flows into the next and so on. This will clean the water even more.

Post-Developed versus Pre-Developed Runoff Volumes

As required by the National Pollutant Discharge Elimination System (NPDES) stormwater program, the post-developed 2-year storm runoff volume must not exceed the pre-developed 2-year storm runoff volume.

Development Plan Analysis:

The Conditional Use plan featuring 91 Total Homes that is being submitted in conjunction with this EIA report reflects the environmental protection and natural resource goals identified by East Bradford Township. At this stage of the plan submission process the applicant has identified potentially suitable locations for storm water management areas as denoted on the plan. Should this project receive the recommendation to progress to the preliminary plan stage requiring fully engineered plans, the applicant will ensure that there will be no net gain or increased discharge to surface water bodies from the proposed storm water management facilities. Through best management practices the applicant will also be able to ensure the protection of the local watershed as well as negate any potential impact to the properties and receptors downstream of Plum Run and its tributaries.

Another focus of the proposed layout was to preserve the existing steep slopes to the greatest extent possible and minimize the amount of vegetative disturbance while also demonstrating a regard for locating open space areas near scenic ridgelines, picturesque valleys and critical natural resources. Marketing studies have shown that homes located near existing stands of mature vegetation have a higher value and help to reduce energy costs while also promoting a healthier social life-style. The proposed plan has made every effort to reduce vegetative removal by locating homes on the site where grading can be kept to a minimum, thus preserving the surrounding stands of mature cover. In areas where vegetative removal is necessary, it should be noted that this would provide for an opportunity to focus on the removal of the many existing invasive plant species that are currently dominating the forest floor. In conjunction with the replacement of any trees being removed, if required, there would be a chance to re-introduce native plant species and to better increase the diversity of the current eco-system.

On the Northern parcel, the road network was designed and laid out to minimize the impact to the steep slopes and vegetative cover as much as possible. The multi-family product that is being proposed was specifically located on the Northern side of the existing knoll in order to preserve the scenic vista to the greatest extent possible. In areas where development is shown on a ridge-line in order to preserve steeply-sloped areas, the applicant proposed Single-Family Detached dwellings on 15,000 SF Lots, a far less concentrated use compared to the multi-family component. The majority of the required open space proposed for this parcel was located along Tigue Road in order to preserve and improve upon the existing scenic quality and character of this site. The remaining open space that was required by the Zoning code

was placed along Plum Run to further improve East Bradford's greenways and protect the valuable natural resources associated with the stream and wetland area.

The Southern parcel features a mixed use of 21 Homes on a cul-de-sac. Only the road, labeled Road E, should require any disturbance to the existing steep slopes on this parcel. In combination with the topography that slopes down towards a Plum Run tributary and the proposed 50' Tract Buffer, the applicant will be able to negate many of the negative views created by the proposed development through proper plant selection and site grading. The majority of the required open space for this parcel was located along the Plum Run tributary to improve the potential greenway connection and protect the existing stream and surrounding wetland as is the overall goal of the Township.

Positive & Negative Impact Assessment:

To a large extent the negative impact of steep slope disturbance has been minimized by first identifying the location of steep slopes in the Township required categories of 20-30 % and 30% and greater. The proposed community access drives were located to maximize sight distance for safety and allow the best alignment to work with the existing contour of the property thereby reducing impact on steep slopes. The interior road network meanders along the contour to the ridge line which may produce a negative impact from a "scenic vista" standpoint, however it is the most efficient way to achieve minimum disturbance of steep slopes and potential prime agricultural soils locations. Streams, floodplain and wetlands have been avoided and will in essence be preserved in their natural state through the placement of open space adjacent to these environmentally sensitive areas. The increase in storm water management due to impervious surface runoff will be handled through appropriate reduction techniques including; detention and infiltration facilities as allowed by soil permeability and watershed distribution. All these facilities will infiltrate and or detain runoff to Township and State requirements. Soil erosion and control facilities will clean runoff during site clearing, grading and stabilization phases. Upon completion of site grading these facilities will be converted to permanent facilities or removed. Another positive impact will occur when the barn is repaired and weatherized to improve its appearance along the Tigie Road frontage. This will help maintain and enhance the rural character of the streetscape for years to come. Overall, by way of appropriate and environmentally conscious site planning techniques, many of the impacts that are typically associated with development will be negated through the use of best management practices, the preservation of steeply-sloped areas, the preservation of mature vegetation and the placement of open space around environmentally critical areas as well as existing scenic corridors.

Visual Analysis: Please refer to the attached exhibit titled Photo Location Map and corresponding photos that serves as a visual analysis of the site. Also included is an exhibit that shows the impact of changed vistas with regard to the Northern parcel of the project site. Due to the effort made to limit the proximity of proposed development to the un-named tributary of Plum Run, the scenic vista along Tigie Road looking south will be altered. Landscape berms and buffer plantings will be installed along the road-way to mitigate the views from the roadway.

Existing Services Map: Please refer to the attached exhibit titled Existing Services Map that notes the locations of the services that can be expected to serve the site.

By-Right Plan vs. Open Space Development Option:

The base zoning for the three zoning districts which run through this property allow for 2-Acre Lots, 1-Acre Lots and 25,000SF Lots. A by-right plan for this site would allow between 38-41 Homes with no emphasis on preserving scenic vistas or the protection of critical environmentally sensitive areas that could be permanently preserved through the open space development option. The open space development option, while proposing a higher density than the by-right plan, does help meet the goals of the Township by proposing the expansion of Township greenway areas by locating open space in and around critical riparian zones. It should also be noted that the open space development option, as proposed on the conditional use plan, furthers the Township’s goals of attempting to preserve scenic vistas, mature stands of vegetation and steeply-sloped areas.

Negative Impact Description, Identification & Remedy Table:

	IMPACT IDENTIFICATION	DESCRIPTON OF ENVIRONMENTAL IMPACT	PROPOSED REMEDY
1.)	REMOVAL OF 110-120 TREES	POTENTIAL FOR HABITAT LOSS, REDUCES OXYGEN PRODUCTION, REDUCES STABILIZATION OF GROUND WHERE TREES HAVE BEEN REMOVED	APPLICANT WILL REPLACE TREES IN ACCORDANCE WITH TOWNSHIP CODE
2.)	DISTURBANCE OF STEEPLY SLOPED AREAS	POSSIBILITY EXISTS FOR EROSION ISSUES WHERE DISTURBANCE OCCURS, LOSS OF AESTHETIC CHARACTER ON VISUALLY PROMINENT HILLSIDES	PROPOSED LAYOUT AND GRADING WILL BE DESIGNED TO MINIMIZE DISTURBANCE OF STEEPLY SLOPED AREAS
3.)	PLACEMENT OF STORM WATER FACILITIES IN RIPARIAN BUFFER AREAS	LOSS OF LAND AREA DESIGNATED FOR STREAM BUFFERING, REDUCTION IN ABILITY TO NATURALLY FILTER AND REMOVE POLLUTION-LADEN RUNOFF, LOSS OF AESTHETIC CHARACTER ALONG WATER BODIES	INVASIVE PLANT SPECIES IN RBA BUFFER WILL BE REMOVED AND A BUFFER MANAGEMENT PLAN WILL BE DESIGNED TO PROMOTE OVERALL STREAM HABITAT HEALTH
4.)	INCREASE OF IMPERVIOUS SURFACE	DECREASE IN GROUNDWATER RECHARGE, INCREASED STORM WATER RUN-OFF AND VELOCITY, POTENTIAL FOR STREAM BANK EROSION	STORM WATER BASINS AND OTHER BMPs WILL BE UTILIZED TO INTERCEPT STORM WATER RUNOFF TO HELP SLOW VELOCITY, INCREASE INFILTRATION, PROMOTE WATER QUALITY AND PROTECT ADJACENT STREAMS FROM FURTHER EROSION
5.)	DISTURBANCE OF PRIME AGRICULTURE SOIL	LOSS OF OPPORTUNITY THAT WOULD ALLOW FOR GARDENS AND OTHER AGRICULTURAL USES	PRIME AGRICULTURAL SOIL THAT IS REMOVED SHALL BE DISTRIBUTED EVENLY AMONGST LOTS AND/OR IN COMMON OPEN SPACE WITH THE INTENT TO PROVIDE AN OPPORTUNITY FOR A COMMUNITY GARDEN
6.)	LOSS OF SCENIC VIEW-SHEDS ON SOUTHERN PARCEL	RURAL CHARACTER AND VIEWS LOOKING SOUTH ON TIGUE ROAD WILL BE LOST DUE TO DEVELOPMENT BACKING UP TO ROADWAY	A 50' WIDE VEGETATIVE BUFFER WITH BERMING WILL BE LOCATED ALONG TIGUE ROAD TO HELP SCREEN THE VIEWS OF THE PROPOSED DWELLING UNITS
7.)	LOSS OF LAND AREA FOR NATIVE FLORA & FAUNA	TYPICAL OF ALL DEVELOPMENT, NATURAL HABITAT FOR ANIMAL & PLANT SPECIES WILL BE REDUCED RESULTING IN DEGRADATION OF LOCAL ECOSYSTEM	DEVELOPMENT WILL BE DESIGNED TO LOCATE OPEN SPACE AROUND EXISTING WOODLAND AND STREAM AREAS. REMOVAL OF INVASIVE PLANT SPECIES AND RE-PLANTING WITH NATIVE PLANT SPECIES WILL BENEFIT LOCAL ECOSYSTEM AND ENCOURAGE PLANT AND ANIMAL DIVERSITY

Wetlands Report:

A wetland delineation has been performed for this site by Del-Val Soil & Environmental Consultants and is shown on the existing conditions plan and the site plan but as of this time a jurisdictional delineation has not yet been approved by the United States Army Corp. of Engineers. The wetlands report that was submitted to the Army Corp. is available at the end of this report for reference.

Certification Statement:

I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the

information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is to the best of my knowledge and belief, true, accurate, and complete.

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