Environmental, Planning, and Engineering Consultants
34 South Broadway
Suite 401
White Plains, NY 10601
tel: 914 949-7336
fax: 914 949-7559
www.akrf.com

Memorandum

To:	Town of Southeast Planning Board
From:	Ashley Ley, AICP; James Nash; and Tracey Cohen
Date:	April 12, 2019
Re:	Commercial Campus at Fields Corner FEIS (formerly known as Northeast Interstate Logistics)
cc:	JMC, Dan Richmond

This memorandum is an update to AKRF's memorandum dated April 4, 2019. In that memorandum, a number of the responses stated that the FEIS was being reviewed by a restoration/horticulture specialist. The following memorandum includes an update to those comments, and new comments on the mitigation plans contained in the appendices.

APPENDIX 6-2 MONITORING AND MAINTENANCE PROTOCOL FOR WETLAND AND WETLAND BUFFER MITIGATION PLANTINGS BY EVANS ASSOCIATES, DATED MARCH 12, 2019

Monitoring Period and Inspection Frequency

1. Quarterly inspections are proposed during the first 2 years and yearly in subsequent 3 years. Inspections should be timed for plant lifecycles, including optimal periods for the identification and removal of invasive species (e.g., before flowering and seed set).
2. A yearly inspection period beginning June 1 is late to address the spring emergence of invasive species. Early detection is critical to invasive species control.
3. Describe early detection/inspection/monitoring protocols, criteria for corrective actions, and acceptance of corrective actions.
4. Provide a plan for long-term adaptive management and stewardship once the regulatory monitoring period is complete to ensure habitat does not become degraded.

Assurances

5. The protocol requires that all restoration plantings have a minimum 85% survival and/or coverage rate, which much be met or exceeded at the end of the second growing season following the initial

planting/seeding. Coverage of the planted and/or seeded area is the relevant metric for success. Include a maximum allowable coverage by non-native/invasive species.

Inspections and Reporting

6. Sediment loading and soil erosion "In the event that erosion occurs, it shall be repaired immediately by the Permittee, and accumulated sediments within the restoration areas shall be removed by hand and deposited in an appropriate upland area outside of the regulated wetland and wetland adjacent area/buffer." Provide guidance on erosion that may be significant enough to require an assessment by a qualified professional (e.g., engineer) to determine an appropriate remedy.
7. Soils potentially containing invasive plant materials (roots, stems, seeds, etc.) should not be transported and deposited in another area. Provide specifications for handling and disposal of potentially contaminated materials in accordance with established best management practices for control of invasive species prior to, during, and subsequent to construction.
8. Plant species composition and mortality: Describe methodology for determination of species composition, coverage, and mortality rates.
9. Wildlife usage: Describe methodology and frequency for wildlife surveys. Include invertebrate surveys in monitoring protocols. Provide baseline data from preconstruction surveys for comparison.

APPENDIX 9-1 INSTALLATION, MANAGEMENT, AND MONITORING PROTOCOL FOR UPLAND HABITAT RESTORATION AREAS AND WETLAND HABITAT RESTORATION BY EVANS ASSOCIATES, DATED MARCH 12, 2019

Objectives of Restoration and Wetland Mitigation

10. Last bullet (p.2) – "Enhance and protect existing wildlife corridors to avoid wildlife mortality in developed portions of the site." Where are these corridors documented and by what methodology? Describe how they have been integrated into the site design to achieve this objective. Do the proposed buildings have glass and/or other reflective surfaces? What design measures will be implemented to prevent avian injury and mortality caused by collisions with buildings? Describe dark sky measures, including full cut off and color temperature for exterior lighting, to minimize harmful impacts to wildlife.

Site Preparation and Planting of Upland Habitat Restoration Areas

11. Provide information on the full extent and composition of invasive species on site and describe control measures for each, including optimal timing based on critical lifecycle stages, expected length of control period (number of growing seasons), etc. Have these been mapped?
12. Describe the protocol to determine whether more than 1 year of invasive species management is required prior to installation of seed mixes and plants. Some species require multiple years of control, especially in the absence of herbicide application.
13. List item no. 2: provide more detailed parameters for identifying existing native trees and/or shrubs to remain and be protected during construction (e.g., minimum size/dbh; species).
14. Describe the protocol to prevent the spread of invasive species by the Contractor's operations, including removal of soil and vegetative debris.

Management and Monitoring of Upland Habitat Restoration Areas

15. List item no. 1 – Specify the use of a flail-type mower to avoid smothering seedlings with cuttings.
16. List item no. 4 – It is highly unlikely that native warm season grasses will establish dominance at the end of the first growing season; mowing through at least two growing season is required. Also,

areas seeded solely with ERNMX-153-1 will not be dominated by native warm season grasses at the end of the first growing season because that mix consists exclusively of forbs and legumes.

17. Weeds and invasive plants should not be hand-pulled during the early establishment period to avoid pulling out native seedlings.

18. Provide detailed inspection/monitoring protocols, including timing/frequency, criteria for corrective actions, and metrics for acceptance of corrective actions.

19. Provide a plan for ongoing, long-term adaptive management and stewardship once the regulatory monitoring period is complete to ensure habitat does not become degraded.

Wetland Habitat Restoration

20. How much soil is expected to be excavated from the wetland for invasive species removal? Is the wetland being regraded? Is soil being imported to re-establish existing grades and depth of wetland substrate? Provide specifications for imported soils, including acceptable sources, properties, handling, and assurances that imported soils will be free of weeds and invasive species.

21. *Phragmites australis* – reliance on nonchemical control method alone is generally not effective because of fibrous roots systems and rhizomes, which can penetrate soil to a depth of 6 feet. Digging or pulling plants may leave behind pieces of rhizomes that are capable of sprouting. The shoots of rhizomes are sharp as they emerge from the soil and may puncture plastic sheeting.

22. *Rosa multiflora* – if using only manual and mechanical control methods, frequent repeated cutting is typically required to achieve high mortality (3 to 6 times per growing season for 2 to 4 years).

HABITAT RESTORATION PLANS BY EVANS ASSOCIATES, DATED MARCH 18, 2019

Drawing MP-1 Overall Habitat Restoration & Wetland Mitigation Plan

23. Provide sheet key map

Drawings MP-2 to MP4 Habitat/Wetland Restoration Plans

24. Installing native plant species/seed mixes in stormwater management facilities and over septic areas may contribute to enhanced habitat and ecosystem services, but these systems should not be counted toward compensatory wetland mitigation. Systems require regular and occasional corrective maintenance that is potentially disruptive to long-term ecosystem structure and function.

25. Provide complete species lists and application rate for all proposed seed mixes, not just the vendor's seed mix catalog number. Indicate proposed use of supplemental annual cover crop.

26. Include wetland plugs in the plant schedules on each plan sheet, as applicable. Specify spacing/planting density; species distribution; quantities; and plug sizes.

27. MP-4: Trees and shrubs are widely spaced given size at installation. Provide planting/seeding information for ground plane and consider tighter spacing.

28. The number of seed mixes seems excessive and seeding areas appear to be random/arbitrary blocks that will create a visually and functionally patchy landscape. Is there a correlation with soil type, elevation, aspect or other existing or proposed site conditions? What ecological restoration outcomes are intended as a result of this particular seeding strategy?

29. Some of these seed mixes contain a very high proportion of cultivars (e.g., ERNMX-115 = 92.4% represented by four cultivars). Cultivars are not generally assessed for ecosystem impacts, e.g., aggressiveness and competitive pressure on other native species, genetic diversity, and suitability for grassland invertebrate herbivores and impacts on food webs. Substitute straight native and/or local/regional ecotypes to reduce or eliminate the proportion of cultivars in the seed mixes.

30. ERNMX -153-1 is composed entirely of forbs. All seeded restoration areas should include native grasses, although the ratio of grasses to forbs may be varied across the site to support different wildlife species as well as provide visual, seasonal interest.
31. ERNMX-117 is 70% *Avena sativa*, an unusually high proportion for an annual species typically applied separately from the permanent seed mix or added to the mix at about 20%. The use of this mix is not recommended.
32. There are multiple areas that show proposed grading, but no vegetative treatment is identified, e.g., MP-2, area south of hatched, seeded areas (elevations 685 – 650); MP-3, graded slope at parking. Provide slope stabilization/vegetation information for all disturbed/restored areas.
33. MP-4 Wetland & Wetland Buffer Restoration Plan – Provide site natural resources inventory data for species reference information.

POTENTIAL IMPACTS AND MITIGATION MEASURES

H. VEGETATION AND WILDLIFE

The Town Wetland Inspector will be providing further comments on this chapter. However, AKRF notes the following:

1. An invasive species control plan and specifications should be prepared as part of the Construction Documents to ensure the Contractor's operations do not result in the spread of invasive species.

RESPONSE TO COMMENTS

6. SURFACE WATER AND WETLANDS

2. Response 6-7: One concern is measuring the likelihood that the proposed habitat restoration will permanently restrict the recolonization of these mitigation areas by invasive species present beyond the limit-of-disturbance. Habitat restoration reduces, but does not completely eliminate, the presence of invasive species. For example, invasive species off site will provide a persistent seedbank for re-invasion. A successful restoration project provides a competitive advantage to the native plant community, but ongoing monitoring and maintenance are required as part of a long-term stewardship plan for natural lands.
3. Response 6-8: Regarding avoidance and minimization of wetland and wetland buffer impacts to the maximum extent practicable. The Planning Board shall determine the extent to which wetland and buffer disturbance can be reduced further, with consideration given to the competing goals of habitat protection, traffic circulation and economic return.
4. Response 6-9 to 6-14: These comments apply to stormwater management, water quality treatment practices, erosion control measures, impacts to the drinking water of the NYCDEP watershed, potential hazardous surface water/groundwater contamination, and/or groundwater pumping/recharge. These comments/responses are referred to the Town Engineer for review.
5. Response 6-15: This response clarifies the acreage of wetland and Town/DEC wetland adjacent area (buffer). Figure III.6-1 presents the proposed wetland/buffer disturbance. The topography obscures the regions of buffer encroachment and should be revised to make these areas clearer. Any areas (and quantities) of new impervious surface in the wetland/buffers should be disclosed in this figure.
6. Response 6-16: The existing condition of the 1.54 acre portion of Wetland 4 to be enhanced (extent of degradation, extent to which its existing wetland functions/values are diminished) is a factor for the Planning Board and the Town Wetland Inspector to consider. Additionally, the extent to which the wetland mitigation plans will fully and appropriately offset project-related wetland impacts is a matter for the Planning Board's determination with input from the Town's Wetland Inspector.

Additional characterization/inventory of the wetland to be disturbed and reference wetland(s) are necessary in order to gauge wetland mitigation success.

7. Response 6-17 and 6-18: The wetland mitigation planting plans have been provided to address this comment. Refer to comments above in Sections *Appendix 6-2 Monitoring And Maintenance Protocol For Wetland And Wetland Buffer Mitigation Plantings By Evans Associates, Dated March 12, 2019; Appendix 9-1 Installation, Management, And Monitoring Protocol For Upland Habitat Restoration Areas And Wetland Habitat Restoration By Evans Associates, Dated March 12, 2019; and Habitat Restoration Plans By Evans Associates, Dated March 18, 2019.*

8. Responses 6-34 through 6-36: Refer to comments above in Sections *Appendix 6-2 Monitoring And Maintenance Protocol For Wetland And Wetland Buffer Mitigation Plantings By Evans Associates, Dated March 12, 2019; Appendix 9-1 Installation, Management, And Monitoring Protocol For Upland Habitat Restoration Areas And Wetland Habitat Restoration By Evans Associates, Dated March 12, 2019; and Habitat Restoration Plans By Evans Associates, Dated March 18, 2019.*

9. Refer to comments above in Sections *Appendix 6-2 Monitoring And Maintenance Protocol For Wetland And Wetland Buffer Mitigation Plantings By Evans Associates, Dated March 12, 2019; Appendix 9-1 Installation, Management, And Monitoring Protocol For Upland Habitat Restoration Areas And Wetland Habitat Restoration By Evans Associates, Dated March 12, 2019; and Habitat Restoration Plans By Evans Associates, Dated March 18, 2019.*

9. VEGETATION AND WILDLIFE

10. Response 9-21: Comment regarding how vegetative waste be removed, must show location of disposal/stockpile of debris, on drawing, including invasive A. olive, a "prohibited" invasive species per NYSDEC. Must be addressed in Erosion Control Plan. Response indicates vegetative material will be ground/chipped onsite to be composted at an off-site location for composting. Handling of invasive vegetative material is a critical aspect of mitigation that must be reviewed/monitored to assure success. These measures must be included the Erosion Control Plans. Refer to comments above in Section *Appendix 9-1 Installation, Management, And Monitoring Protocol For Upland Habitat Restoration Areas And Wetland Habitat Restoration By Evans Associates, Dated March 12, 2019.*

11. Response 9-25: Response should describe what measures may be implemented to mitigate spread of Japanese knotweed from the Town log dump into LC-28, either on the applicant's property or in coordination with the Town in its property. Comment speaks to the need to think broadly to ensure that any habitat restoration is successful and not rapidly (ultimately) colonized by areas of invasive plant within unimproved portions of the project site or offsite. Refer to comments above in Sections *Appendix 6-2 Monitoring And Maintenance Protocol For Wetland And Wetland Buffer Mitigation Plantings By Evans Associates, Dated March 12, 2019; Appendix 9-1 Installation, Management, And Monitoring Protocol For Upland Habitat Restoration Areas And Wetland Habitat Restoration By Evans Associates, Dated March 12, 2019; and Habitat Restoration Plans By Evans Associates, Dated March 18, 2019.*

12. Response 9-34: NYSDEC requests seed mix details. Refer to comments above in Section *Habitat Restoration Plans By Evans Associates, Dated March 18, 2019.*