

# ENVIRONMENTAL IMPACT REVIEW OF RUNWAY IMPROVEMENTS AT HUMMEL FIELD AIRPORT

## SCOPE OF SERVICES

**P&P Proj. No. 1331**

### **INTRODUCTION**

The purpose of this Environmental Impact Review (EIR) is to evaluate the proposed alternatives for runway improvements at Hummel Field Airport (W75), which is owned by THE MIDDLESEX COUNTY BOARD OF SUPERVISORS (**AIRPORT SPONSOR**). PARRISH AND PARTNERS, LLC (**CONSULTANT**) will prepare environmental documentation for the proposed runway improvements at W75 in accordance with the National Environmental Policy Act (NEPA) and the Code of Virginia §10.1-1191. The goal of this EIR will be a positive determination from the Virginia Department of Environmental Quality (DEQ), as well as identification of an alternative that will provide public benefit while avoiding/minimizing environmental impacts.

Analysis of data will be performed for specific environmental categories as required by the Virginia Department of Environmental Quality's Environmental Impact Review Manual and *Virginia Code*, Section 5.1-7. The EIR documentation will be concise and will include support documents, as appropriate.

The following scope of services has been divided into two phases:

- Phase 1: Initial Coordination and Scoping
  - Task 1 – Archival Research
  - Task 2 – Project Review Request Package
- Phase 2: EIR and Public Hearing
  - Task 1 – Environmental Impact Analysis
  - Task 2 – EIR Documentation
  - Task 3 – Public Hearing

### **PHASE 1 – INITIAL COORDINATION AND SCOPING**

Coordination with the Virginia Department of Historic Resources (DHR), State Historic Preservation Office (SHPO) would be initiated during Phase 1. Prospect (Grey's Point Plantation), which is listed on the National Register of Historic Places (NRHP), is located immediately east of the Airport. Based on 2019 correspondence and recent input from DHR regarding the proposed improvements and potential impacts to this NRHP-listed resource, it is understood that coordination with the DHR prior to initiating the EIR is an important step to define the scope of any additional required cultural resource efforts and facilitate a successful EIR process.

## 1.1 ARCHIVAL RESEARCH

Projects submitted to DHR for Project Review must be accompanied by a map showing the Area of Potential Effects (APE), as well as information on previous surveys and recorded historic resources within it. To acquire this information, an archival search will be requested from DHR staff as part of this task.

## 1.2 PROJECT REVIEW REQUEST PACKAGE

The **CONSULTANT** will prepare the project description and alternatives analysis for submittal to DHR along with the archival research from Task 1.1 in the form of a Project Review Request Package. Project documentation will provide a description of the proposed runway realignment that addresses the purpose and need for the project. Alternatives of the proposed improvements will also be discussed and will demonstrate that feasible options were adequately considered. Efforts to avoid, minimize, and mitigate adverse impacts to the NRHP-listed resource will also be provided. The purpose and need and alternatives text prepared as part of this task will also be used in the EIR document.

The Project Review Request Package will be submitted to DHR. Their Project Review comments will provide needed insight into the scope of the Historic, Architectural, Archaeological, and Cultural Resources task in Phase 2, as well as potential mitigation of impacts that may be requested by DHR as part of their comments on the EIR document.

## **PHASE 2 – EIR DOCUMENTATION AND PUBLIC HEARING**

### 2.1 ENVIRONMENTAL IMPACT ANALYSIS

Existing data will be collected from the appropriate agencies including the **AIRPORT SPONSOR** and will be analyzed to determine the potential impacts of the runway realignment. Maximum use will be made of existing reference materials. The specific impact categories that will be addressed for the alternatives in the EIR shall include: (1) noise; (2) compatible land use; (3) social impacts and environmental justice; (4) induced socioeconomic impacts; (5) air quality; (6) water quality; (7) parks, wildlife refuges, protected natural areas, etc.; (8) historic, architectural, archaeological, and cultural resources; (9) biotic communities; (10) endangered and threatened species of flora and fauna; (11) wetlands; (12) floodplains; (13) coastal zone management; (14) coastal barriers; (15) wild and scenic rivers; (16) farmland; (17) hazardous materials; (18) energy supply and natural resources; (19) light emissions; (20) solid waste impacts; (21) construction impacts; and (22) cumulative impacts.

#### 2.1.A Noise and Noise-Compatible Land Use

According to the FAA Order 1050.1F Desk Reference, no noise analysis is needed for projects involving Design Group I and II airplanes in Approach Categories A through D. Although a future Airport Reference Code associated with the proposed airfield improvements has not yet been identified, based on W75's existing ARC of A-1, no noise analysis would be required. However, due to the importance of potential noise impacts in the comparison of alternatives for the proposed project, the noise analysis completed for the upcoming ALP Update will be reviewed as part of the EIR.

Land use plans and zoning maps will be collected and reviewed. Land use types to be identified will include residential, commercial, industrial, and noise-sensitive areas (parks, schools, churches, institutional). In addition, community facilities will be identified. Evaluation of existing land use and land use planning will include impacts to existing zoning, conformance with adopted comprehensive land use plans, impacts to property access, and impacts to neighborhood character.

**ASSUMPTIONS:**

1. Document **AIRPORT SPONSOR**'s compliance with grant assurances relating to land use compatibility and the potential impacts of the proposed project.
2. The No Action and two Build Alternatives will be evaluated.
3. If a noise mitigation plan is necessary, it would be completed under a Supplemental Agreement.

**2.1.B Socioeconomics, Environmental Justice, and Children's Health and Safety Risks**

Socioeconomic data will be collected from secondary sources and reviewed. Such data includes employment, demographic characteristics, income, retail and service activities, trends, and projections. Impacts to be analyzed include direct and indirect benefits, potential impacts on land use and development, economics, estimated effect to the tax base and property values, and effects on community cohesion. Induced socioeconomic impacts usually result from development activity. Development that may stimulate or stifle economic activity, increase or decrease demand for public services, or cause changes in the population dynamics will be estimated and their impacts quantified.

In accordance with Executive Order 12898, *Environmental Justice*, impacts to minorities and low-income persons will be assessed to determine if the proposed action has a disproportionate impact to those communities.

Per Executive Order 13045, Protection of Children from Environmental Health and Safety Risks, the proposed improvements will be evaluated relative to the risk for release of any products or substances into the environment that would pose a significant risk to the health or safety of children.

**2.1.C Air Quality**

The United States is divided into geographical areas that are classified as either in "nonattainment" or "attainment" for air quality. If an area has exceeded the National Ambient Air Quality Standards for any of the six criteria pollutants (carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide) then it is in "nonattainment". Middlesex County is within a designated "attainment" area for air quality standards. No air emission inventory or air quality modeling is included as part of the scope of services.

The project will be evaluated for construction-related emissions, as exhaust from heavy equipment, delivery trucks, and construction workers travelling to and from the site; dust from earthwork/grading; equipment movement on unpaved areas; storage/transfer of raw materials; and production of asphalt or concrete are all sources of construction-related emissions, per the FAA Aviation Emissions and Air Quality Handbook.

#### **2.1.D Water Quality**

The Rappahannock River is located approximately 1,700 feet north of the existing Runway 1-19. Collection of the various data necessary to address the water quality requirements and guidelines will be performed. Included will be identification of watersheds of significant importance for public water supplies (including wells), applicable watershed management plans, groundwater characteristics, likely areas to be used for detention/retention, and alternative water quality protection measures. In addition, coordination with Virginia DEQ and other state and local agencies will be performed to ensure compliance.

#### **2.1.E Historic, Architectural, Archaeological, and Cultural Resources**

Pending the results of the coordination with SHPO during Phase I, additional architectural or archaeological surveys may be required and would be completed under a supplemental agreement. Public parks, recreation areas, wildlife and waterfowl refuges, and historic sites will be identified and described utilizing the results of the land use inventory and the results of the cultural resources survey

#### **ASSUMPTIONS:**

- 1. If required, field surveys and/or detailed description of mitigation measures will be provided under a Supplemental Agreement.*

#### **2.1.F Parks, Recreational Areas, Scenic Rivers, Landmarks, or other Natural Areas**

Virginia does not have any designated wild and scenic rivers; this will be documented in the EIR. Public parks, recreation areas, wildlife and waterfowl refuges, other important natural areas, and historic sites will be identified and described utilizing the results of the land use inventory and the results of the cultural resources survey.

#### **2.1.G Biotic Communities**

A qualified biologist shall conduct a biological inventory of the area. A field reconnaissance will be performed within the proposed project area to identify general plant communities and fish and wildlife habitats. Significant habitat for terrestrial wildlife and birds, terrestrial vegetation, aquatic fisheries and vegetation, anadromous fish use areas and colonial waterbird nesting colonies will be identified. The effect on wildlife habitat from clearing and other construction activities associated with the project shall be identified. Other adverse effects to flora and fauna shall also be assessed.

The field reconnaissance will be performed within the study area in conjunction with wetland field investigations to identify general plant communities and fish and wildlife habitats.

### **2.1.H Endangered and Threatened Species of Flora and Fauna**

Section 7 of the *Endangered Species Act* (1973, as amended) requires federal agencies, in consultation with and assisted by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS), to ensure that the proposed airport improvements are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species. Coordination will occur with the USFWS, NMFS, and the Virginia Department of Game and Inland Fisheries to determine whether species or habitats that are listed or proposed for listing may be present within the study area. In conjunction with wetland field investigations, systematic field surveys will be performed to identify potentially suitable habitat within the study area to determine if there are threatened or endangered species present. For listed plant species, potentially suitable habitat will be surveyed at the appropriate bloom and/or fruiting periods. The information contained in the Biological Assessment will be used to prepare the endangered and threatened species section of the EIR.

#### ***ASSUMPTION:***

1. *If detailed mitigation plans or formal agency consultations are necessary to satisfy Section 7 requirements of the Endangered Species Act, these will be performed under a supplemental agreement.*

### **2.1.I Wetlands**

Pursuant to Executive Order 11990, Protection of Wetlands, and Section 404 of the *Clean Water Act* (1977, as amended), potential impacts to jurisdictional wetlands and other waters of the United States will be identified and described. Based on the USFWS National Wetland Inventory (NWI) mapping, the Rappahannock River, located approximately 1,700 feet north of Runway 1-19, is the closest wetland or stream. A wetland delineation for the affected area will be completed to identify wetland types, their location, and acreage. The delineation will be performed according to the 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual. The wetland boundaries will be mapped in the field using sub-meter accuracy Global Positioning System equipment and added to an appropriate base map. A Preliminary Jurisdictional Determination (PJD) will be prepared that will include a wetland map and wetland data sheets which will be submitted to the USACE for their approval. If previously approved wetland delineations are available for some or all of the study area, these will be used in lieu of performing a field delineation.

The results of the wetland delineation, an evaluation of the wetlands, and wetland mitigation options will be incorporated into the wetland section of the EIR. As per Executive Order 11990, impacts will focus on wetland size, type, and potential mitigation measures (avoidance, minimization, and compensation).

**ASSUMPTIONS:**

1. *If necessary, permission to delineate the wetlands off Airport existing property will be obtained by the **AIRPORT SPONSOR**.*
2. *One site visit with the USACE to approve the wetland boundaries is assumed.*
3. *If required, it is anticipated that wetland and/or stream mitigation credits will be purchased from a USACE approved mitigation bank.*

**2.1.J Floodplains**

The 100-year floodplain and floodway boundaries will be identified and described based on the Federal Emergency Management Agency (FEMA) Flood Insurance Study and/or Flood Hazard Boundary maps. Potential encroachments will be addressed in the EIR.

**ASSUMPTION:**

1. *No fieldwork or flagging of floodplain boundaries will be performed.*

**2.1.K Coastal Zone Management Program**

The Virginia DEQ will be contacted to obtain a consistency determination. This will be documented in the EIR.

**2.1.L Coastal Barriers**

Based on review of the USFWS Coastal Barrier Resource System mapping, W75 is located approximately eight miles west of the closest area protected under the Coastal Barriers Resource Act (COBRA). This will be documented in the EIR.

**2.1.M Farmland**

Most soils mapped in the vicinity of the Airport are classified as Prime farmland soils. If required, Form AD-1006, Farmland Conversion Impact Rating, will be submitted to the Natural Resource Conservation Service for compliance with the Farmland Protection Policy Act of 1981. Response from the Natural Resource Conservation Service will be included in the EIR.

**2.1.N Hazardous Materials**

Hazardous waste sites are regulated by the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). A regulatory records search was performed to identify known hazardous material sites, hazardous waste generators, and hazardous material users.

**ASSUMPTIONS:**

1. *No sampling or analysis is anticipated for preparing this section of the EIR. If a Phase I is necessary, it will be done under a Supplemental Agreement.*
2. *A list of spills occurring at the Airport will be provided by the **AIRPORT SPONSOR** and documented in the EIR.*

### **2.1.O Energy Supply and Natural Resources**

Energy requirements will be analyzed for those improvements that relate to stationary sources that would have a measurable effect on local supplies and those involving the movement of air and ground vehicles.

Use of natural resources other than for fuel should be assessed if the action involves a need for unusual materials or materials in short supply. Energy demands for the proposed project will be identified and discussed in terms of availability of resources.

### **2.1.P Light Emissions**

Since the proposed project may involve the installation and/or relocation of lighting systems, the following information will be included in the assessment:

- A brief description of the light system as to its purpose, method of installation (pole, ground mounted), beam angle, intensity, color, flashing sequence, and other pertinent characteristics of the system and its use.
- Measures to lessen annoyances, such as shielding or angular adjustments.

### **2.1.Q Solid Waste Impact**

The quantity and type of solid waste generated will be projected. Local officials will be contacted to determine the location of active or planned solid waste disposal facilities and the capacity that is available at existing disposal facilities. The location of existing and planned facilities relative to the Airport will be discussed.

### **2.1.R Construction Impacts**

Adverse environmental impacts that may result from the proposed project will be identified and assessed. Such impacts may include noise of equipment on the site, noise and dust from removal of materials through residential streets, air pollution from burning debris, and waste pollution from erosion. The extent to which these effects are subject to local, state, or federal ordinances or regulation will be discussed, as applicable, together with measures to be taken to conform to such requirements.

### **2.1.S Cumulative Impacts**

The impact on the environment resulting from the incremental impact of the action, when added to other past, present, and reasonably foreseeable future actions, shall be analyzed. The overall cumulative impact of the proposed action and the consequences of subsequent, related actions shall be assessed by the **CONSULTANT**.

## 2.2 EIR DOCUMENTATION

An EIR document will be prepared for submittal to the DEQ. The EIR will address the following items.

- Project Description
- Affected Environment
- Impacts of the Project
- Alternatives
- Mitigation
- Irreversible Environmental Changes

### 2.2.A Project Description

The environmental documentation will provide a description of the proposed runway realignment that addresses the purpose and need for the project.

### 2.2.B Affected Environment

The **CONSULTANT** will use the environmental inventory performed for each impact category to describe the environmental setting. This will serve as the background for preparation of the Environmental Consequences section.

### 2.2.C Impacts of the Project

This section will identify and describe the primary and secondary environmental impacts on natural, man-made, human, and economic resources. Primary impacts are environmental changes occurring because of the proposed improvements. Secondary impacts are those impacts that extend to the surrounding area from implementation of the proposed improvements. Emphasis will be placed on those impact categories, noise, Section 4(f), Section 106, that have been raised as key issues and/or which have the potential to exceed thresholds of significance. Mitigation measures will be identified to minimize potentially adverse environmental impacts.

### 2.2.D Alternatives

This section of the environmental documentation will discuss alternatives of the proposed improvements and will demonstrate that feasible options were adequately considered.

### 2.2.E Mitigation

The EIR will include a discussion of measures to avoid or minimize the environmental impacts of the preferred alternative, as well as actions to reduce or compensate for loss of environmental resources. This could include efforts that go beyond permit requirements, such as incorporation of the Commonwealth's pollution prevention policy.

## 2.2.F Irreversible Environmental Changes

The potential long-term impacts of the project will be identified and evaluated, such as disturbance of historic resources and disturbance, destruction, or alteration of wetlands or streams.

### ASSUMPTIONS:

1. *There will be two reviews of the EIR prior to submittal to the DEQ:*
  - a. *The **AIRPORT SPONSOR** will review the EIR and will provide comments to the **CONSULTANT**.*
  - b. *The **DOAV** will review the EIR and will provide comments to the **CONSULTANT**.*
2. *The **CONSULTANT** will provide 1 digital copy of the draft document to the **DOAV** for submittal to DEQ.*
3. *The **CONSULTANT**, with assistance from the **AIRPORT SPONSOR** and **DOAV**, will address comments from the DEQ/reviewing agencies on the EIR, as necessary.*
4. *The **CONSULTANT** will provide 1 digital and physical copy of the final document to the **AIRPORT SPONSOR** and **DOAV**.*

## 2.3 PUBLIC HEARING

It is anticipated that there will be a single public hearing for this project. The DEQ will conduct one (1) public meeting, with the **CONSULTANT** responsible for advertising notification of the meeting in a local newspaper. The **CONSULTANT** will arrange for the meeting to be held at a location agreed upon by the **AIRPORT SPONSOR**, **DOAV**, and DEQ. The **CONSULTANT** will also be responsible for providing DEQ with project information for the public to review on their website prior to the public hearing and attending the meeting to present the project information to participants. This meeting will be designed to inform the public about the scope of the project, including the project's purpose and the alternatives being evaluated. The public will be provided the opportunity to make formal verbal comments at the Public Hearing. The **CONSULTANT** will be responsible for securing the services of a court reporter at the Public Hearing.

### ASSUMPTIONS:

1. *The **CONSULTANT** will advertise and participate in (1) public hearing; additional meetings are not included and would be completed under a Supplemental Agreement.*
2. *The **CONSULTANT** will secure the meeting venue and the services of a court reporter.*
3. *A meeting handout and maximum of six (6) display boards will be prepared for the public hearing (assumes each board would be a 6-square foot color plot and mounted on 1/4-inch foam core). If additional display materials are required, they will be provided under a Supplemental Agreement.*
4. *All public hearing display materials will be transmitted electronically for review prior to printing of the final public meeting materials.*
5. *Two (2) representatives from the **CONSULTANT** Team will attend the public hearing.*

**FEE:** The above described services will be provided at a lump sum fee of \$39,900.