AGENDA

JAMES CITY COUNTY BOARD OF SUPERVISORS

READING FILE

August 14, 2007

FOR YOUR INFORMATION

- 1. Comments from Sarah Kadec, representing the James City County Concerned Citizens *Ms. Kadec intends to speak during the Public Comment segment*
- 2. In reference to agenda item number H-1 Airport Feasibility Study Grant Allocation: James City County Revised Draft Scope of Services, Airport Feasibility Study, dated June 14, 2007

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a or Supervisors

Mr. Chairman and Members of the Board of Supervisors. I am Sarah Kadec, residing at 3504 Hunters Ridge, and tonight representing the James City County Concerned Citizens or J4Cs as we are better known.

As you may remember, late last year we issued a set of 6 major goals that we hoped to meet during 2007. These included water conservation, cumulative impacts, traffic, and the environmental inventory. Tonight I wish to present our work on the environmental inventory. Since you have received the report I will try to summarize as quickly as possible the more important aspects. For the benefit of the public, I will display the chart of environmental items that we believe essential in an early environmental assessment of land being considered for development. As you will note, we have grouped the information in a way that we feel facilitates the collection and presentation of the data.

As citizens interested in preserving our way of life, we often found that environmental concerns surfaced very late in the review cycle for any newly proposed development, often at the master plan or site plan stages. This gave us little time to review the proposal and identify environmental problems. Often this resulted in a finding that these problems needed correction before any work could begin. They often meant that the proffers as originally defined were not sufficient for remediating the problems we found. Reports at such a late date delayed the Environment Division review. Staff's work and certainly the efforts of the applicant.

As part of our study, we reviewed existing procedures for rezonings and SUPs, both in James City County and other jurisdictions; looked at tools for determining non-developable areas or those with serious environmental issues; and consulted numerous documents that helped us identify the items you see listed on the chart. We had excellent support from various County staff and officials in this effort, including some of you. We were able to identify and work with one developer who agreed to test the feasibility of moving the environmental impact document to the conceptual stage. Fortunately, we found that the current developer of Stonehouse was willing to work with us. The GS Stonehouse environmental report is available for review and I'm sorry I couldn't get it to all of you in advance. I would like to recognize the Stonehouse team and thank them again on behalf of our citizens group for the Company's support and excellent work in addressing our concerns. In being the first company to attempt this effort, they have raised the bar for other applicants. And in the meantime, we have identified a couple of other firms who have expressed an interest in working with us at the conceptual stage.

In conclusion, I wish to address one issue that will definitely arise in opposition to what we are proposing. That relates to the cost to the developer of such a change. Needless to say, the cost of the environmental survey is moved up, but we do not believe that it is any more than it would be at a later stage when major changes often are required – bringing in costly changes as well as lengthy delays. We asked GS Stonehouse to review this with us, based on their experience. They identified the following aspects of cost in the process. We believe this further enforces the need for the change we are proposing.

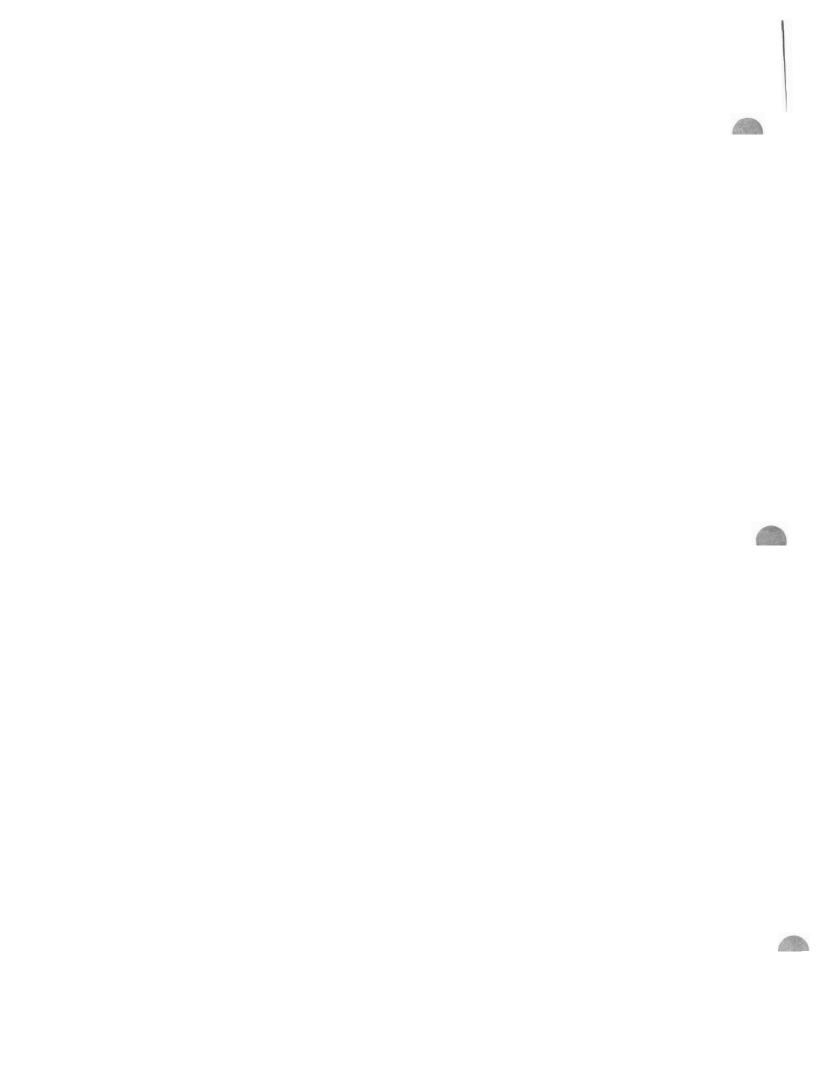
It is important that much of this information is examined before land is purchased and its use is determined.

- Much of the data needed for the inventory is available from the county records or walk-throughs of the property.
- 2. The inventory must be conducted, whether the costs comes later or earlier.
- A shortened review process is a big cost savings; as is the lack of a need for revisions of proposals and proffers at a later date.

We ask that you give approve the recommendation shown here and included in your packets. We stand ready to work with staff on any issues that may arise.

Recommendation:

That the requirement for an environmental survey/inventory be moved earlier in the zoning and SUP process. These surveys would be submitted at the time of the conceptual plan. If required following the Environment Division's review, any additional information could be added following the conceptual plan review and before the master plan, site plan or other plans are submitted. Recognizing the importance of understanding the environmental conditions early in the applications cycle will allow a design that reduces environmental impacts to the greatest extent possible. This will lead to the development of proffers that are well received and achievable.



ENVIRONMENTAL SURVEY/INVENTORY

"Environmental conditions are identified late in the development application cycle – both for rezonings and special use permits (SUP's). As applications move through the process, critical environmental conditions that adversely impact the plans are often discovered."

----James City County Concerned Citizens Major Goal No. 2, 2007

The James City County Concerned Citizens set as one of its major goals for 2007 the examination and recommendations regarding the impact/effect of requiring the environmental survey/inventory earlier in the development applications process. In recent applications before the Board of Supervisors and Planning Commission, we found that negative environmental impacts are not adequately addressed until very late in the process. This not only puts heavy demands on the County's Environment Division staff in its reviews, but often means that Citizen input is limited due to the time pressures and not always knowing the schedule for review and approvals. Citizens are often the last to learn of, and examine, the negative impact of a proposed development.

The following represents our report, along with a recommendation for a change in the current process.

The Comprehensive Plan, County ordinances, the Chesapeake Bay Ordinance and the Powhatan and Yarmouth Creek Watershed Management Plans define areas that are non-developable and set conditions for any development in other, often sensitive areas. These areas are not clearly defined in the early conceptual plans brought before the Planning Staff. Clearly delineated sensitive areas are often not identified until the Master Plans are submitted.

We recognize the costs incurred by the developer in carrying out an environmental survey/inventory at the conceptual stage. However, these same costs will occur later in the process and at that point are more likely to delay review and final approvals. Developers offer proffers on incomplete studies. At later stages they may no longer be valid when all environmental factors are incorporated. Costs associated with correcting problems discovered later may actually be higher than if identified earlier before clearing and land disturbing activities have taken place.

We are currently negotiating with several developers to submit environmental inventories at the same time as the conceptual plan and are currently working with the GS Stonehouse GreenLand Sub LLC application. This application serves as a model to be utilized by other developers. It incorporates the inventory items identified by our group and gives the residents of James City County a much earlier preview of what is being planned. We believe this change will speed up the entire approval process and thus will save money for the developer.

Composition of an Early Environmental Survey/Inventory

Based on our review of the County Zoning, Subdivision and Chesapeake Bay Ordinance, existing watershed management plans, and our own list of important aspects of the environmental resources within the County, we recommend that the items incorporated in Attachment A be included in the initial Environmental Inventory. These can be acquired through land or air surveys, walk-throughs, examination of county maps and records, or environmental studies of the County. They must include identification of geological features that restrict development (i.e., soil conditions and steep slopes), wetlands and streams, and the existence of protected species

RECOMMENDATION

That the requirement for an environmental survey/inventory be moved earlier in the zoning and SUP process. These surveys would be submitted at the time of the conceptual plan. If required following the Environment Division's review, any additional information could be added following the conceptual plan review and before the master plan, site plan or other plans are submitted. Recognizing the importance of understanding the environmental conditions early in the applications cycle will allow a design that reduces environmental impacts to the greatest extent possible. This will lead to the development of proffers that are well conceived and achievable.

Respectfully submitted,

ATTACHMENT A ENVIRONMENTAL INVENTORY

For legislative or conceptual plan level, not per Sec. 23-10 of Chesapeake Bay Ordinance

Hydrologic

- Location of streams and other water bodies (lakes, ponds, impoundments, etc.)
- Which watershed (e.g., Powhatan, Yarmouth, Gordon, Ware, Skiffe)
- Field designation of perennial and intermittent streams
- Evaluation of stream channel characteristics
- Location of springs and major seeps
- Location of tidal and upland wetlands (sinkholes wetland, e.g.)
- Existing stream flow (discharge)
- Floodplain delineation for 100 and 500 year storm events including tidal flooding if applicable

Context

- Existing and proposed viewscapes
- Nature of existing and granted, but not built, surrounding properties and neighborhoods
- · Greenway and habitat connections
- Areas of extreme susceptibility to dust during construction

Prohibited or Restricted Development Areas

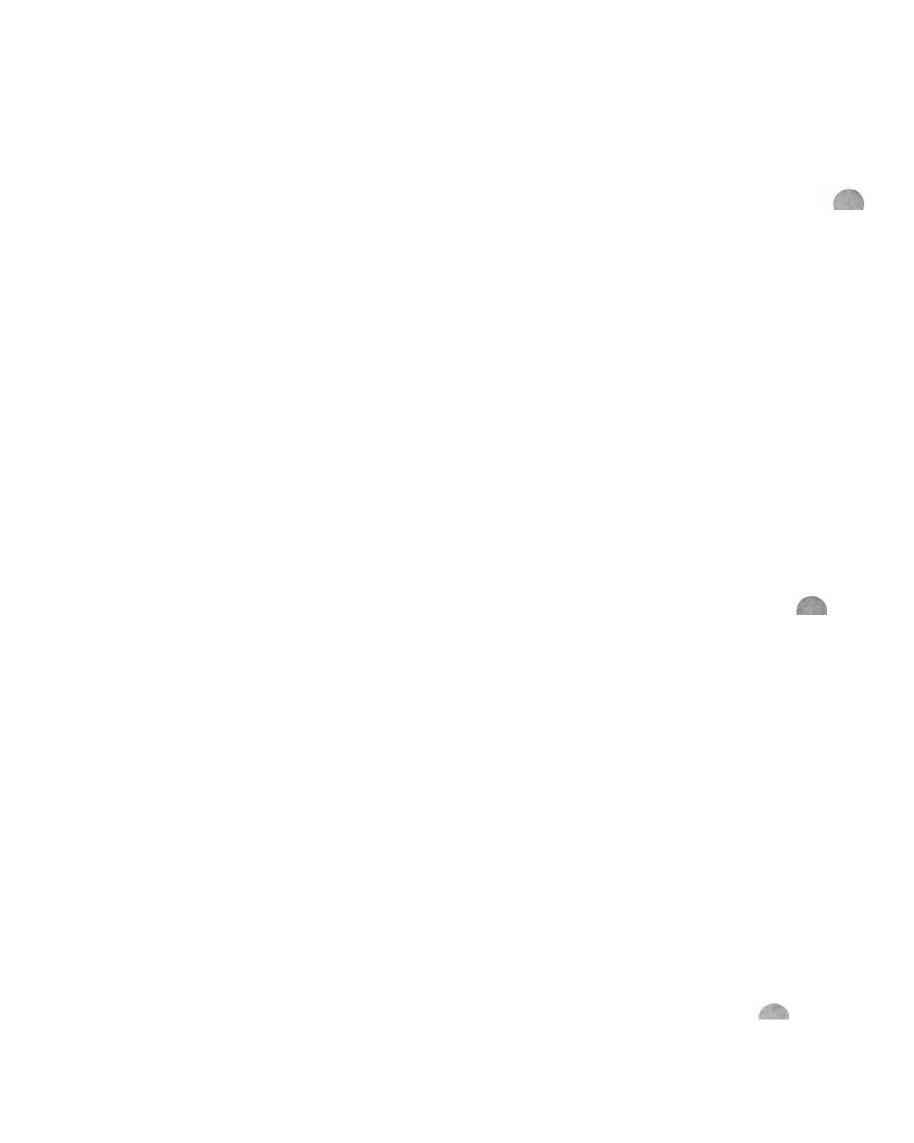
- · Required buffers
- Sites with rare, threatened or endangered species of plants or animals
- Preservation of trees according to state and local codes
- Unique or irreplaceable archaeological sites or features
- Unique or irreplaceable geologic sites or features
- Resource Protection Areas
- Legal wetlands
- Conservation easements

Land Features or Characteristics

- Map showing areas of steep slopes Soils, especially prime agricultural lands and HSG A&B soils (infiltration soils); support for Low Impact Development techniques
- Soils erodability
- Pre-development topography
- Areas of forest, woodland cover and wildlife corridors

Proposed Site Changes

- · Phasing plan for clearing
- · Phasing plan for grading
- Projected pre- and post- development stream flows(discharges), (including from adjoining parcels with existing and proposed development)
- Impervious areas (preliminary or conceptual), percent including all parking, roads, sidewalks, roof cover, etc.
- Stormwater management structures (swales, outfalls, basins, others), conceptual
- Low impact development structures (pervious pavements, walks, infiltration areas, etc.
- Proposed conceptual stormwater management plan
- Conceptual management plan for sediment and erosion control throughout the construction process





May 30, 2007

Ms. Sarah Kadec Chairman James City County Concerned Citizens 1654 Jamestown Road Williamsburg, VA 23185

Dear Ms. Kadec:

We appreciate the level of interest and involvement from your group and look forward to continuing a proactive relationship throughout the life of the continued development at Stonehouse. In your May 18th letter to me you requested that we discuss the Environmental Survey with your group prior to submitting the Conceptual Plan to James City County. Enclosed is a copy of portions of our proposed submittal.

On May 30th the County is receiving a report titled Rezoning and Master Plan Application for Stonehouse, dated May 2007, from GS Stonehouse Green Land Sub LLC. The report was prepared by SELLS Design Studio, a Division of Chas. H. Sells, Inc. (SELLS), and included sections providing analysis of environmental impacts and analysis of stormwater management. We are providing, as attachments for your review, copies of the narrative and mapping for the Environmental Inventory (EI) and Conceptual Stormwater Management Plan in the exact format they were submitted to the County.

During our meeting on May 9th you provided a list of problems and considerations related to environmental surveys for proposed development in James City County. I want to reiterate to you our interest in learning from the information from your group as well as the experience and local knowledge. We have incorporated these concerns and intend to address specific problems as we move forward with the process.

Specifically, we offer the following in response to the problems identified:

1. We recognize the importance of understanding environmental conditions early in the application cycle. For the May 30th submittal, we completed an EI in accordance with the requirements established by the County. To accomplish this work we are using the services of an environmental firm local to James City County. Kerr Environmental Services, Corp. (Kerr), has experience working in and with James City County. They have knowledge of the Stonehouse site and strong relationships with agencies of interest. Kerr completed the EI work as required for the initial submittal through a combination of research of readily available data and field verification. More importantly, Kerr is continuing to move forward with completing the required full scope environmental survey work for the entire project site. We hope that completing environmental survey upfront

will allow us to provide a design that reduces environmental impacts to the greatest extent possible.

2. We have been conservative in identifying our non-developable area throughout the site. We utilized the information from the EI and applied additional buffers to all streams and apparent stream centerlines.

3. We are working on developing proffers that are well conceived and achievable. We are open to suggestions for additional proffers and comments related to past

shortcomings and how we might address similar concerns.

4. We understand the high costs of completing environmental resources surveys and have already evaluated these services. We recognize the importance of the investment of these surveys and intend to use local resources qualified to complete the required surveys and provide the documentation necessary to compliment our design.

Please call me to discuss any questions you may have on the above matter. Additionally, you may contact SELLS directly if you would like to discuss details about the environmental aspects of the project. Andy Hadsell is responsible for coordinating environmental and stormwater management services. He can be reached at (919) 678-0035.

Sincerely,

David Guy Principal

and Guy

GS Virginia

CC:

Attachments: Analysis of Environmental Impacts - Environmental Inventory

Analysis of Stormwater Management

Mr. Ross Massey, P.E., Chas. H. Sells, Inc.

Mr. Vernon Geddy, Attorney

Analysis of Environmental Impacts - Environmental Inventory

Introduction

In accordance with James City County's Natural Resource Policy, Kerr Environmental Services, Corp. (KES) has completed an Environmental Inventory (Ei) to assess the natural resources within the balance of the Stonehouse Development located within James City County, Virginia. The El assesses the following natural resources: wetlands (tidal & non-tidal), floodplains, Chesapeake Bay Preservation Areas (CBPA) Resource Protection Areas (RPA), and rare and protected species and critical habitat.

KES completed a review of natural resources within the project area by analyzing publicly available resources and conducting limited site visits. Publicly available resources utilized included: United States Department of Agriculture (USDA) Soil Survey of James City and York Counties and the City of Williamsburg, U.S. Geologic Survey (USGS) 7.5 minute topographic mapping (Toano and Gressitt quadrangles), National Wetland Inventory Mapping (NWI - Toano and Gressitt quadrangles), 2005 aerial photography provided by the U.S. Department of Agriculture (USDA) -Farm Service Agency (FSA) - Aerial Photography Field Office (APFO) National Agricultural Imagery Program Mosaic (NAIP), Federal Emergency Management Agency (FEMA) floodplain mapping, Virginia Department of Game and Inland Fisheries (DGIF) database review for threatened and endangered species, and Geographic Information System (GIS) information provided by James City County. In addition, the Virginia Department of Conservation & Recreation (DCR) Natural Heritage Program was consulted to review its Biotics Data System for occurrences of natural heritage resources.

A brief description of findings is included below with pertinent data depicted on the enclosed mapping exhibits.

Existing Conditions

The subject project area is comprised of 54 parcels consisting of approximately 4,713 acres of land located within the northeastern portion of the County along the banks of the York River. The majority of the project area (approximately 4,401 acres) is contiguous and is located south of Ware Creek, east of Interstate 64 (I-64), north of Croaker Road, and west of the York River. The remaining portions of the project area (approximately 312 acres) are located within the Stonehouse Industrial Park situated along the west side of I-64 and within the existing Stonehouse development located on the north side of Ware Creek. Mapping that depicts the project area limits is included in the Appendix.

It is estimated that 4,200 acres of the project area exists as mature pine/hardwood forest communities. The balance of the project area exists as either agriculture, open field, or has been developed. Review of 2005 aerial photography indicates that the majority of the surrounding land use is forested with the remaining areas comprised of agriculture or residential development.

A detailed description of existing soil conditions on the site is included within this submittal as part of the analysis of cultural resource impacts. A SOILS mapping exhibit has been provided within this section for reference.

Natural Resource Description Wetlands & Waters of the U.S. (WOUS)

The limits of all wetlands and WOUS are being located and flagged in the field by KES and will later be confirmed by the U.S. Army Corps of Engineers (USACE). However; in the interest of providing the necessary documentation required for the Environmental Inventory, KES has completed a wetland assessment for the project area by reviewing publicly available information and conducting cursory site visits. The documentation reviewed for the wetland assessment included the following resources: the National Wetland Inventory (NWI) mapping (Toano and

Gressitt Quadrangles), USGS 7.5 Minute Series Topographic Quadrangles (Toano and Gressitt), the Soil Survey Geographic (SSURGO) database for James City and York Counties and the City of Williamsburg, Virginia, and the 2005 National Agricultural Imagery Program Mosaic aerial photography. In addition, KES conducted several site visits to visually assess the limits of wetland habitats in the field. The WETLANDS mapping exhibit following this narrative depicts the NWI and soil survey mapping for the project area.

The following natural community description describes general wetland and water locations along with species composition observed in the field.

Estuarine systems

Estuarine tidal wetlands (influenced by tides) are located within the downstream portions of Ware Creek and along the sections of the project area that are adjacent to the York River. These wetlands generally extend from the toe of slope of the adjacent banks seaward to the edge of the main channel. Hydric soils underlie this community. Dominant vegetation observed within these areas consists predominately of herbaceous species to include: common reed (Phragmites australis) saltmeadow cordgrass (Spartina patens) and smooth cordgrass (Spartina alterniflora). NWI mapping identifies estuarine, intertidal, emergent wetlands consisting of persistent vegetation that is irregularly flooded (Cowardin classification E2EM1P).

Open Water

Open water habitats are confined to the thalweg (main channel) of Ware Creek and the York River. Open waters are un-vegetated and are classified by NWI mapping as estuarine, subtidal, unconsolidated bottom which is permanently flooded (Cowardin classification E1UBL).

Lacustrine Systems

Lacustrine System wetlands and deepwater habitats are located in and around Richardson Mill Pond. This system is situated along a portion of Ware Creek which has been impounded at the point where State Route 600 crosses Ware Creek just before entering New Kent County. Wetlands and WOUS for this system are confined within the valleys of Ware Creek. Hydric soils underlie this community. Dominant vegetation observed within this area appeared restricted to within approximately 5 feet from the edge of shore and consisted primarily of aquatic species to include: duckweed (Lemna spp.) watermill (wolffia spp.), smartweeds (Polygonum spp.), pickerelweed (Pontederia cordata), arrow-arum (Peltandra virginica), and common rush (Juncus effusus). NWI mapping identifies Lacustrine, limnetic, unconsolidated bottom that is permanently flooded, which has been diked/impound flooded (Cowardin classification L1UBHh).

Palustrine Systems

The majority of wetlands identified within the project area consist of palustrine wetlands. These systems are nontidal and are overlain by hydric soils. Palustrine wetlands within the project area vary in terms of dominant vegetation strata (e.g. trees, shrubs, or emergent species) and hydrologic regime (i.e. permanently flooded, seasonally flooded, saturated, etc...). With a few exceptions, the majority of the wetlands within the project area are confined by topography within drainage features with intermittent and perennial streams. Dominant vegetation observed within the palustrine wetlands include: Red maple (Acer rubrum), sweetgum (liquidambar styraciflua), swamp tupelo (Nyssa biflora), green ash (Fraxinus pennsylvanica), willow oak (Quercus phellos), swamp chestnut oak (Q. michauxii), bald cypress (Taxodium distichum), black gum (Nyssa sylvatica), American beech (Fagus grandifolia), American holly (Ilex opaca), paw-paw (Asimina triloba), greenbriers (smilax spp.), lizards tail (Saururus cernuus), rushes (Juncus spp.), Virginia chain fern (Woodwardia virginica), and netted chain fern (Woodwardia virginica). NWI mapping identifies: palustrine aquatic (Cowardin classification PAB); palustrine unconsolidated bottom (PUB); palustrine emergent (Cowardin classification PEM);

palustrine scrub shrub (PSS); and palustrine forested communities (Cowardin classification PFO). Hydrologic regimes for each palustrine classification noted below vary from seasonally flooded to permanently flooded. (Cowardin classification PAB4/EM1Fb, PABFb, PEM1/ABFb, PEM1/FO5Fb, PEM/SS1Cb, PEM1/SS1Eb, PEM1/SS1R, PEM1C, PEM1Eb, PEM1Fb, PEM1Fb, PFO1/4R, PFO1A, PFO1C, PFO1Cb, PFO1Ch, PFO1Cb, PFO1Eb, PFO1Bb, PFO1R, PFO1S, PFO4A, PFO5Fb, PSS1Cb, PSS1Eb, PSS1Fb, PSS4R, PUB/FO5Fb, PUBFb, PUBFx, and PUBHh).

Floodplain

A review of the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map Panel No. 510201 0010 B, Dated February 6, 1991, revealed the 100—year floodplain (Zone AE) located within the low-lying areas adjacent to drainage features. The approximate limits of the 100—year floodplain are depicted on the FLOODPLAINS mapping exhibit following this narrative. Please note that the floodplain delineation exhibit was created using James City County GIS topographic data and FEMA hard copy FIRM mapping. This data is only an approximation of the FEMA 100-year floodplain.

Chesapeake Bay Preservation Area (CBPA) and Resource Protection Area (RPA)

The project area is located within the Ware Creek drainage basin. Ware Creek drains into the York River which then discharges into the Chesapeake Bay (HUC 02080107). KES has reviewed the James City County GIS data and identified components (i.e. tidal shores and non-tidal wetlands adjacent to tidal wetlands and perennial streams) of the Resource Protection Area (RPA). These RPA resources are afforded a 100-foot buffer pursuant to the County's Chesapeake Bay Preservation Area Ordinance. These buffers extend 100-feet landward of these RPA components. The approximate limits of the RPA are depicted on the CBPA RPA mapping exhibit following this narrative.

KES is performing field-based assessments of the limits of RPA resources pursuant to James City County's Chesapeake Bay Preservation Area Ordinance and guidance entitled Determinations of Water Bodies with Perennial Flow (CBLAD, September 2003).

Additionally, steep slopes (slopes exceeding 25%) have been previously identified by Chas. H. Sells, Inc., and are included on the exhibit. The delineation of steep slopes was based on readily available GIS topographic information.

Rare and Protected Species and Critical Habitat

A review of the Virginia Department of Game and Inland Fisheries (DGIF) database was conducted for occurrences of State and/or Federal listed threatened and/or endangered animal species within the project area. The database lists the Bald Eagle (Haliaeetus leucocephalus) nesting sites as having been documented within the project area from 1993 to 2000. Review of the Virginia Bald Eagle Nest and Productivity Survey for years 2003-2005 indicates that none of the nests identified were found during the specified survey years. This may mean that the nests are no longer active and could be considered abandoned upon further consultation with U.S. Fish and Wildlife Service (USFWS) and/or DGIF. Additional coordination will be performed with the USFWS and/or DGIF prior to detailed design activities to ensure compliance with State and/or Federal laws.

In addition, an Osprey and Bald Eagle breeding area was identified on the DGIF database Breeding Bird Survey (BBS). The survey area is located on the north side of Ware Creek in New Kent County. The purpose of the BBS is to estimate population trends of many species of birds that nest in North America north of Mexico and that migrate across international boundaries. The BBS provides baseline data with which more intensive local studies can be compared. Further coordination will be performed with the USFWS and/or DGIF prior to detailed design activities to ensure compliance with State and/or Federal laws.

The DGIF database also lists occurrences for Great Blue Heron (Ardea herodias herodias) nesting sites and stream reaches frequented by anadromous fish within and immediately adjacent to the project area. While these species are not protected as threatened or endangered species, both resources may require the implementation of additional management strategies (i.e. no encroachment buffers zones, time of year restrictions) in order to preserve and protect the noted resources. Coordination with both the USFWS and DGIF will therefore be performed to clarify necessary management strategies.

KES also contacted the Virginia Department of Conservation and Recreation (DCR) – Division of Natural Heritage Program regarding the location of natural heritage resources within proximity to the project area. Natural Heritage resources are those organisms or habitats that are rare within their natural range. DCR responded with a letter dated April 26, 2007 indicating that the following resources have been documented within the project area as noted below.

A significant community (tidal mesohaline/polyhaline marsh) - presumably the Ware Creek wetland system

- Baid eagle nest
- Small whorled pogonia (Isotria medeoloides) Federally Listed Threatened and State Listed Endangered
- Mountain camellia (Stewartia ovata)

A small whorled pogonia survey is scheduled to be completed later this spring and confirmed by the USFWS for the balance of Stonehouse. Additional coordination to address the above noted resources will be performed with DCR and other applicable State and Federal agencies prior to the start of any detailed design efforts to clarify necessary management strategies.

The approximate location/limits listed in the DGIF database are depicted on the RARE AND ENDANGERED SPECIES CRITICAL HABITAT mapping exhibit and are based upon available mapping. An exhibit depicting the project area boundaries was submitted to DCR as part of the coordination process. DCR reviewed the project limits and based their response on the exhibit provided. No mapping or exhibits were provided by DCR as part of their response.

Stonehouse PUD Analysis of Stormwater Management

Comprehensive Overview

Introduction

A brief needs analysis for stormwater management meeting the general criteria of the Commonwealth of Virginia and James City County's stormwater requirements was completed as a component of the planning for the proposed continued development of Stonehouse. A mapping exhibit is included in the appendix of this report.

This provides a non-binding analysis of the requirements to appropriately and responsibly manage stormwater. It is understood that the County prefers to receive and review a conceptual plan showing what type of structural BMPs are intended and those areas intended to receive credit as natural open space areas (in conservation easement) for stormwater management purposes. Due to the scope of this development in terms of total area and number of proposed land tracts, this information can only be provided numerically and as a graphical representation at this time.

One of the project goals is to preserve pre-development hydrology to reduce impacts to high quality streams as much as possible and to enhance water quality treatment through the use of sensitive site design. Although the location and geographic layout of the site dictates that traditional stormwater devices will be the primary form of stormwater management, design will incorporate uses of Low Impact Development (LID) including basic elements such as providing more discontinuity of impervious surfaces and flow paths, and utilizing an aggressive educational campaign to encourage residents to include small-scale LID devices, rain gardens for example, when finalizing private lot/landscaping design.

The detailed environmental inventory (field delineation) is ongoing, and no geotechnical investigation has been complete. Further, tracts are defined based on proposed uses and detailed information about total land use by tract only indicates proposed type and ranges of units. The exercise of placing representative stormwater management devices is not economically feasible at this time. However, the sections in this analysis outlining the conceptual design and providing results of the analysis provide a baseline understanding of the intention to provide stormwater management that meets the 10-point requirement and that does not negatively impact environmentally sensitive areas.

All plans will be submitted for Preliminary Plan Review by the Development Review Committee prior to initiating detailed design. This will likely be on a tract by tract basis. At that time, stormwater management design will be at a preliminary level showing the type, footprint, details, and supporting technical data for each proposed device. Additionally, both the Erosion and Sediment Control and Stormwater Management Design Plan Checklists will be complete and submitted for the preliminary review. It is understood that the completion of these checklists along with pre-submittal meetings and site visits (as needed) will create a cooperative design and review process with the Environmental Division. The placement of BMPs will be dictated by avoidance of the Chesapeake Bay Preservation Area (CBPA) Resource Protection Areas (RPA), open space, non-RPA wetlands, and other environmentally sensitive areas that permitting and cost alone might render impractical and improbable.

In evaluating conceptual stormwater management solutions for the proposed development, unique characteristics are considered. Preliminary observations and mapping identify the following to be considered in stormwater management planning:

- The project site is situated within the Ware Creek and/or York River (direct)
 watersheds of the County. There are three significant ponds (Bird Swamp,
 Frances Swamp, and Cow Swamp) that drain out to Ware Creek and
 downstream to the York River.
- The properties are vacated timber lands containing primarily hardwood forests, as well as significant areas of wetlands and tidal marshes.
- Much of the project area is conveyed to Ware Creek which also receives significant off-site drainage from existing Stonehouse and other developments upstream of the dam at Six Mount Zion Road.

The proposed development will capture runoff and convey it to stormwater BMPs located to achieve the maximum drainage area possible and within the natural low areas throughout the proposed development. Portions of the subject parcels will not drain to a structural BMP; however, these portions will remain largely undeveloped and consist of steep slopes and ravines for the existing perennial streams. The low density generally proposed for the site in terms of overall land use allows for the avoidance of development within and immediately adjacent to areas of environmental significance. Further, it is the intent of the project to preserve the natural state of the site to the greatest extent possible as a means to provide a development that is context sensitive and provides a true natural setting for residents.

The planned facilities will detain and release designed storm events for the on-site drainage. Stormwater management will be accomplished in accordance with all current applicable standards in the references noted in the following section. All BMPs will be designed to provide downstream channel protection by providing 24-hour drawdown of the 1-year, 24-hour storm volume.

References

In addition to all available resources such as existing standard details, notes, forms, instructions, and applications, for the preparation of this submittal and for the life of the project through the design and review of individual land tracts, the design will be in accordance with the latest versions of the following references:

- Virginia Erosion and Sediment Control Handbook
- Virginia Stormwater Management Handbook
- James City County Guidelines for Design and Construction of Stormwater Management BMPs
- November 2004 Recommended Model Development Principles for James City County, Virginia
- Chesapeake Bay Preservation Ordinance of James City County
- Erosion and Sediment Control Ordinance of James City County
- James City County Erosion and Sediment Control Plan Checklist
- James City County Stormwater Management Design Plan Checklist
- Review comments prepared for previous submittals for Stonehouse Development Area Two, as issued by the Environmental Division under Division Plan No. SWM-03-05 dated January 13th 2006, April 7th 2006 and July 17th 2006, respectively.
- James City County Stormwater Drainage Conveyance Systems (Non-BMP related) General Design and Construction Guidelines
- December 14, 2004 Special Stormwater Criteria Task Group, Special Stormwater Criteria (SSC) in James City County
- Environmental Inventory data, including the following natural resources: wetlands (tidal and non-tidal), floodplains, CBPA RPA, and rare and protected species and critical habitat; obtained in accordance with James City County's Natural Resource Policy by Kerr Environmental Services, Corp.

Due to the scope of the development and the anticipated timeframe, as measured in years, for design and construction, these references will be confirmed prior to design of any specific land tract to ensure the most updated requirements are being met. There is the expectation that over time many of these references will be revised to reflect ongoing lessons learned, incorporation of new technologies, and updating of supporting technical data.

Stormwater Management Design Considerations

Based on review of previous submittals, discussions with County staff, meetings with James City County residents, and review of reference material previously identified, the following design considerations and lessons learned will be applied to stormwater management design:

- 1. The 1-year, 24-hour channel protection volume will be detained entirely within the upstream stormwater devices and released over 24 hours. As a result, all sections of the downstream channels will be protected from erosion. James City County requires 24-hour attenuation of the volume of runoff generated from the 1-year storm. Using the Kerplunk method, basins will be designed to contain the resulting volume then will be dewatered. If it takes 24 hours, but less than 48, design will be acceptable.
- 2. Stormwater outfalls as they relate to channel adequacy or the existence of a channel will be addressed. In order to reduce the risk of scour and ensuing head cuts outfalls will be field verified using field run survey below outfalls to confirm the existence of a natural channel meeting the definitions contained in the Virginia Erosion and Sediment Control Handbook and the Virginia Stormwater Management Handbook.
- 3. The issue of nutrient loading, with specific interest given to phosphorous and nitrogen, is accounted for in the 10-point requirement computation. Removal rates, efficiencies, and target pollutants were accounted for when considering the type of basins to include in the James City County Guidelines for Design and Construction of Stormwater Management BMPs.
- 4. Based on the listing of identified stormwater hotspots in the James City County Guidelines for Design and Construction of Stormwater Management BMPs, there do not appear to be risk factors of having any within the proposed Stonehouse. However, during review of specific site plans, areas of interest will be identified for the County to verify the existence of any hotspots for which special stormwater management needs apply.
- 5. Within the 10-point requirement, point values are small for open space and areas used for stormwater management points must be dedicated, by easement, to James City County and be in a natural undisturbed state. There cannot be any overlying easements (drainage, utility, access, etc.).
- 6. Infiltration systems will be utilized in areas where soil conditions allow for proper design and the discharge passes through some sort of a treatment device for quality purposes. CONTECH-type systems in combination with a filter device or natural sand filter are preferred. The main issues here are that the soils in certain places in the Stonehouse area are vertical and highly erosive. These systems will be proposed away from the steeper slopes (to prevent sloughing) in combination with geotechnical advice.
- 7. Pocket parks and the use of more "coving" in place of cul de sacs will be used to promote the application of a Filterra-type system to provide quality treatment for small (less than 0.5 acre) areas within neighborhoods. They provide good water

- quality performance and are considered easier to maintain than similar systems designed and constructed in the field. There is no benefit in terms of attenuation, and additional BMPs will be necessary to achieve stormwater management goals.
- 8. Portions of the site are within the detailed and approximate flood hazard areas identified on the Flood Insurance Rate Map issued by the Federal Emergency Management Agency (FEMA). Where required by the County floodplain overlay district in the zoning ordinance and by FEMA as part of the National Flood Insurance Program Regulations, flood studies will be developed to evaluate impacts on base flood elevations and delineations. This will include the appropriate actions from a processing perspective in the event a conditional letter of map revision or letter of map revision is required to reflect impacts. Specifically, detailed hydraulic analyses of stream crossings will be provided to document sizing procedures.
- 9. The non-binding illustrative plan identifies amenities. These amenities provide for low impact recreational and historical uses. For amenities located within wetlands, RPA and/or RPA buffer areas, development beyond the establishment of walking trails and posting of informational signs will be limited. For water amenities, there is the potential for canoe style boat launches. If proposed, appropriate permitting procedures will be followed. For sections of recreational trails passing through wetlands, elevated boardwalk sections will be used to minimize impacts. At this time, the exact use of each identified amenity has not been established. Preliminary uses are listed in the table on the illustrative plan.
- 10. Crossings as proposed between Tracts 1 and 4 and 7 and 8 may be very difficult from a permitting perspective. It is understood that permitting of wetland and RPA road crossings will not be easy and that design and cost considerations should take into account stringent requirements for minimizing and mitigating impacts to wetlands and RPAs.
- 11. At this time there is no information about existing farm ponds within the development area. Consideration will be given to using these if appropriate but based on the historical uses of the land it is not expected any farm ponds will be sited in locations of stormwater management interest.
- 12. Structural BMP point credit associated with Richardson Mill Pond (County BMP ID Code: WC059) from contributing areas associated with this land plan will not be allowed beyond the natural topographical divide at Six Mount Zion Road (State Route 600). One of the project goals is to provide both water quantity and quality treatment within the development areas draining to Richardson Mill Pond in order to avoid utilizing the pond as a BMP.
- 13. Steep slope areas have been identified based on County GIS data and protection and avoidance of steep slopes, consistent with Section 23-5 of the County's Chesapeake Bay Preservation ordinance, will be a priority within the project area. This information will be field verified throughout the project as field surveys advance through tract by tract. Additionally, the information will be used to establish lot layout to avoid environmentally sensitive areas and take the responsibility of avoidance from individual builders/contractors.

- 14. Lot to lot drainage will be handled in design of grading plans and the responsibility of designing and constructing these drainage systems will not placed on builders. This includes the design of any conveyance outfalls.
- 15. For the use of regional ponds as BMPs, it is understood that permitting with the state agencies and obtaining approval from the local board is a very timely process and there are no guarantees. It is not likely that the stormwater management plan will include the identification of a regional BMP within the proposed development area.
- 16. Avoidance of Hydrologic Soil Group (HSG) A&B soils areas and/or utilization of HSG A&B soil areas for LID purposes will be examined closely during master stormwater management plan, concept plan and plan of development submittals.

Erosion and Sediment Control

Topography and critical erosion soil areas are a major problem within the project area and will be a prime consideration in development and in preparing site erosion and sediment control plans. All plans will be prepared in accordance with James City County design standards. Phasing plans will be prepared to determine the appropriate process for bringing elements of the erosion and sediment control system online and for conversion of devices if proposed. Further, special consideration will be given to addressing both air and water quality as they relate to the environmental sensitivity of the site. Air quality, specifically providing for dust control in the vicinity of I-64 and across the site along the York River will be key elements of the design. It is understood that a detailed inspection program will need to be established throughout construction to independently ensure erosion and sediment control is being applied as designed. Finally, because it is likely material will be moving to and from remote locations, erosion and sediment control plans will adequately address all impacted land.

Conceptual Design Narrative

Drainage Area Analysis

A detailed analysis of the project site has been completed to determine the following geographical features of interest to the stormwater management plan:

Stream centerlines approximated from available mapping resources

- Breakpoints set to identify downstream points of interest for subshed delineation
- Ridgeline assessment to compliment manual drainage area delineation
- Subsheds of the site drainage area

Further, information collected as part of the Environmental Inventory was used to groudtruth the manual delineation. The Conceptual Stormwater Management Plan mapping exhibit provides the delineation along with the supporting information. Drainage areas for subsheds will be updated and confirmed using digital design tools following the collection of field survey data for each land tract.

Surface Area Requirements Analysis

In order to establish a numerical conceptual representation of stormwater management requirements, a preliminary Surface Area to Drainage Area (SA/DA) analysis was used to summarize the details of land use from the illustrative plan and develop the approximate required acreage for BMPs within each tract. For this exercise, and based on the limitations of the existing information about the land and the proposed uses, two types of treatment were considered. The traditional wet pond and traditional sand filter were used to represent a range of available devices. The calculations were completed through the application of an assumed percent impervious surface within the developed area of each land tract. The assumption was that each tract would utilize 80% traditional wet pond-type stormwater devices and 20% traditional sand filter-type devices.

10-Point Requirements Analysis

For each land tract a 10-point requirement worksheet was completed using the same assumptions from the SA/DA analysis. The sheets were used to back calculate the required open space to satisfy the 10-point requirement. Because of the low density and relatively large land area within the project site, open space meeting the requirements of the County should be readily available to be conveyed as undisturbed natural open space easements.

Stormwater Management Device Preliminary Footprints

The drainage area delineation provides an overlay tool for determining the most appropriate layout of various stormwater management devices within each subshed within each tract. In general, the initial footprint of devices will be established by identifying low spots adjacent to appropriate outfall channels just outside the field verified wetlands. RPAs and other buffers.

Stormwater Management Devices

In addition to utilizing traditional stormwater management devices, there is interest in incorporating innovative devices that provide different degrees of treatment while being more context sensitive and in some cases providing lower maintenances alternatives to traditional BMPs.

An LID educational field center will be established at the main amenity center. This will include the construction of a covered recreational amenity such as a gazebo or other gathering space. The structure will incorporate numerous elements of LID including the use of a section of a green roof through complete or terraced coverage, the use of a rain barrel to provide reuse water for irrigation in the immediate vicinity of the structure, a rain garden, and the use of small sections (2-3 parking spaces) of multiple types of permeable pavement. The intention of the LID educational field center will be to provide residents and perspective residents with a working example of applications they could implement on their lots. Impacts of LID on a lot by lot basis can not be counted on or quantified. However, it is expected that applications throughout Stonehouse will serve as additional stormwater management water quantity and quality treatment above and beyond the minimum required standards. An educational component will include the production and distribution of literature explaining the workings of the LID educational field center and providing reference information for interested residents.

A large-scale cistern (rain barrel) will be used at the main amenity center as a means to collect roof runoff to be used for irrigation around the amenity center as runoff is made available. This will be achieved through the use of an interconnected roof drainage system allowing for water to fill a cistern. In addition to use of irrigation, the water can be used for washing of vehicles if a pump is applied.

Infiltration will be utilized where appropriate throughout the site. This will be accomplished through the use of a Contech-type infiltration system that provides localized pretreatment in series with larger infiltration systems. This will provide increased recharge to the existing groundwater table.

Bioretention will be used on a local level within Stonehouse through the use of coving of roadway design and prefabricated bioretention cells located within pocket parks. Coving is a roadway design technique that takes the place of cul-de-sac design. Coving allows for a decrease in impervious roadway surface and provides a more linear space in which bioretention can be provided.

Stormwater Management Inventory System

Through the use of database and GIS applications, a comprehensive inventory of all stormwater management devices within the new Stonehouse will be created. This inventory will provide the ability to quickly view data sheets for every device that will include basic information including location, type, and size of device. Additionally, a digital picture and other design information such as required storage volume and general operations and maintenance requirements can be included. The goal of the system is to provide an interactive means by which the new Stonehouse HOA can maintain their stormwater management system and work proactively with the County. The database will be designed in accordance with any existing James City County stormwater management inventory standards.

Conceptual Design Analysis

Summary of Conceptual Stormwater Management Design

A graphical representation of the conceptual design including general notes and tables has been provided as the Conceptual Stormwater Management Plan mapping exhibit.

For this submittal, calculated surface areas for wet pond-type devices, sand filter-type devices, and undisturbed natural open space are represented on a tract-by-tract basis for the purpose of illustrating that the required space will be allotted in a way that meets the goal of avoidance of the RPA. Further analysis and better understanding of land uses as the project progresses will result in footprinting of BMPs and identification of area to be dedicated as conservation easement to James City County. In general, it is expected that wet pond-type devices will be positioned using low lots within tracts providing the proper outfall to channels and avoiding the RPA. Sand filter-type devices will be positioned throughout tracts based on areas where infiltration is appropriate and where other unique applications such as bioretention are applicable. The primary alternative for providing open space will be to utilize expanded buffers along RPAs.

The results of the conceptual design by tract using the 10-Point requirements worksheets for each land tract is included in addition to the tables provided on the Conceptual Stormwater Management Plan mapping exhibit.



JAMES CITY COUNTY

REVISED DRAFT SCOPE OF SERVICES AIRPORT FEASIBILITY STUDY

June 14, 2007

TASK 1.0 - PROJECT ORGANIZATION AND COORDINATION

PURPOSE

The purpose of this Airport Feasibility Study is to determine the demand for aviation services and the alternatives available to serve this demand in the James City County area.

- a. Determine aviation demand for a General Aviation-Community Airport (as defined by the Virginia Department of Aviation [DOAV]);
- b. Identify and catalog all costs required to meet FAA standards for a community airport;
- c. Based on data collected above, determine the cost vs. benefit of public ownership of the Williamsburg-Jamestown Airport;
- d. Determine the economic cost vs. benefit to the surrounding communities (James City County, York County, Williamsburg) of public ownership of a community airport;
- e. Examine a Status Quo alternative (private owner), local acquisition of existing Williamsburg-Jamestown Airport alternative, utilization of other existing facilities alternative, and a green field site alternative; and
- f. Provide for appropriate public participation.

METHODOLOGY

This Feasibility Study will be developed using a comprehensive work program, phased schedule, and budget that is designed to meet the stated Study purpose. This will include required project coordination with all agencies, as well as provide for input from the general public. James City County (SPONSOR) will provide certain services and information in support of this Feasibility Study. These are noted throughout this Scope of Services. This Scope of Services incorporates the intent of appropriate Federal Aviation Administration (FAA) Advisory Circulars (ACs), Regulations (FARs), and Orders, as well all applicable Virginia Department of Aviation (DOAV) rules, regulations, and standards necessary to provide the Sponsor with useful and understandable information and guidance to make an informed decision regarding the future of aviation within the County. The format for the Study Design is in accordance with FAA AC 150/5100-14D, Architectural, Engineering, & Planning consultant Services for Airport Grant Projects and can be included in the project responsibilities.

The SPONSOR'S planning consultant is L. Robert Kimball & Associates, Inc. (KIMBALL) and the designated project manager for the preparation of the Feasibility Study is Ronald L. Deck – phone 814.867.4566, fax 814.867.4572, E-mail: RonDeck@lrkimball.com.

After receiving the notice-to-proceed, the SPONSOR will initiate a "kick-off" meeting with KIMBALL, FAA, DOAV, and members of the Community Airport Committee to discuss the various issues that are relevant to the study. These issues will include the sponsor's obligations and requirements, outline of the study, discussion of goals and objectives of the study, key milestones for reports and meetings, and Community Airport Committee involvement and input throughout the study process.

A public information and participation program will be implemented to provide information to and solicit comments from the general public. The public information program will involve the development of a Community Airport Committee, status reports for inclusion in the County newsletter, and regular updates on the County's website. It is also anticipated that one public workshop will be held that will provide the general public an opportunity to review and comment on the Study.

CRITICAL ISSUES

Williamsburg Jamestown Airport's current owners are looking to leave the airport business for personal reasons. One of the owners approached County Administration staff to see if the County had any interest in operating the airport. Based on discussion with Board of Supervisors (after obtaining information from the Virginia Department of Aviation and FAA) it was determined that the County had an interest in preserving the airport as a community airport, if it made good business sense. The Board approved staff requesting grant monies to conduct an airport feasibility study.

The Board has expressed the position that the airport should remain a "community" airport. The area around the current airport has developed with single family homes and an elementary school. People living near the airport have expressed their concerns about public safety and are concerned about any expansion. It should be noted that the provisions of County Resolution, Case No. SUP-16-04, places certain restrictions on the airport. The County has indicated that, if the existing airport site is determined to be the preferred location, the restrictive elements of the Resolution that the FAA has objected to would be removed, assuming County ownership.

The County has developed a list of critical concerns to be addressed in this Study. They are:

- → Ownership and control of the airport access road (access way will permit the construction and maintenance of an access road that will be taken into the Virginia Department of Transportation Secondary Road System.
- → Obstruction control: Current owners place a covenant or deed restriction that prohibits any increase in the "obstructions" on the property that is retained by the current owner.
- → Financial analysis: Current owner's willingness to open all financial books on the airport (to allow the development of and accurate accounting for income and expenditures of the Williamsburg-Jamestown Airport).
- → Assessment of the noise impacts on adjacent neighborhoods.
- → Impacts on Rawls Byrd Elementary School
- → Environmental conditions and impacts on the site.

Public participation is a very important issue. Adjacent and surrounding neighborhoods are very interested in the airport and have strong opinions. Public information meetings to put out information and to receive public input will be very important.

SUBTASKS

1.1 Scope of Services.

KIMBALL will:

- A. Prepare Draft Scope of Services document, project schedule, and project budget for review by the SPONSOR.
- B. Prepare Final Scope of Services incorporating comments received from SPONSOR and FAA/DOAV review of Draft Scope of Services.
- C. Participate in a project Scoping Meeting to develop the project scope and tasks, as well as to confirm the specific requirements of the Study.
- D. Assist the SPONSOR, if requested, in the FAA-required Independent Fee Estimate (IFE) process whereby a qualified firm must estimate the fee for this project based on the detailed Scope of Services. KIMBALL will assist the SPONSOR in submitting the final consultant contract and IFE to the FAA for review and approval.
- E. Prepare and submit Grant applications for Federal Assistance and related Grant reimbursements throughout the course of the Study. The SPONSOR will sign and distribute the applications to the DOAV and FAA, as required.
- F. Assist the SPONSOR in preparing and distributing all necessary copies of the FAA Grant Application, "Application for Federal Assistance, Standard Form 424" to the FAA in a timely manner.
- G. Ensure fully executed copy of consultant and sub-consultant agreement including final scope of work/study design, schedule of consultant compensation, and project time schedule chart/table is submitted to FAA and DOAV prior to notice to proceed.
- H. Prepare and submit to the FAA on behalf of the County the Disadvantaged Business Enterprise (DBE) plan. The plan will include the County's goals for utilizing certified DBE firms and contractors for projects that are funded through FAA grants. In addition to the plan development, KIMBALL will assist the County in the annual required updates and accomplishment reporting. It should be noted that the current cost estimate is less than the threshold amount requiring a DBE plan.

1.2 Project Management.

KIMBALL will:

- A. Prepare monthly progress reports, including:
 - 1. Status of study progress
 - 2. Problems and solutions

- 3. Technical evaluations
- 4. Schedule adjustments
- B. Submit a monthly invoice to the sponsor, including supporting documentation which specifically describes the work and other items for which the billing is submitted. The billing report will also include an estimate of the percent complete of each task appearing on the report. The SPONSOR will be billed on a monthly basis for all work conducted in association with this project.
- C. The project manager will initiate and maintain coordination throughout the planning process with the SPONSOR, the FAA, DOAV, KIMBALL, the sub-consultant, appropriate organizations, as well as the Community Airport Committee (CAC), which is to be formed for this Study.

1.3 Public Participation/Public Information.

This Task continues from the beginning of the Study through the completion of the Airport Feasibility Study. This program will consist of the following elements:

1.3.1. Establish a Community Airport Committee

The SPONSOR shall be responsible for the establishment of a Community Airport Committee (CAC) as provided for in the provisions of County Resolution, Case No. SUP-16-04, which was approved June 7, 2004. A total of three (3) of the committee are planned. The SPONSOR will schedule each meeting and shall be responsible for providing the facility for each meeting and for notifying all members of the Committee. KIMBALL will prepare presentation materials and will facilitate each meeting, as required. KIMBALL also will develop and distribute to the OWNER a summary of each meeting. The first meeting will be a kick-off meeting to review the Study purpose, goals and objectives and to solicit community input. A determination as to the role of Committee members will be established and any work assignments made, as necessary. It is anticipated that the second meeting will be held near the end of Task 2.3. At this time, any information developed to date by KIMBALL and or Committee members can be presented and evaluated. KIMBALL will incorporate all appropriate Committee information into the Study after approval by the SPONSOR. It is anticipated that a Public Workshop will be held near the end of the Study. The Workshop will be in a multiple station format where exhibits depicting the various Study concepts can be viewed. The Workshop will offer the public an opportunity to meet with the planners, certain committee members and community leaders, and the SPONSOR on a one-on-one basis to review and discuss various aspects of the proposed plan. There is no formal presentation at the Workshop; written comments from the public will be encouraged.

KIMBALL will prepare a draft advertisement for the Public Workshop for use by the SPONSOR. The SPONSOR shall be responsible for the logistics of the Public Workshop, including providing the facility and all public notifications. KIMBALL will provide two (2) individuals and all technical presentation materials necessary to conduct the Workshop. The SPONSOR shall provide sufficient individuals to complete any additional staffing needed at the Workshop.

In addition to preparing presentation materials and maintaining a record of each Workshop, KIMBALL will prepare a summary report on Public Participation/Public Information for inclusion in the Feasibility Study.

1.3.2. **Web Page**

KIMBALL will provide draft and final Feasibility Study documents in PDF format on a regular basis to the SPONSOR via a password-protected file transfer protocol (FTP) client. It is further anticipated that the SPONSOR will place the files at the appropriate location on the James City County website/server.

TASK 2.0 – FEASIBILITY STUDY

PURPOSE

As previously stated, the purpose of this Airport Feasibility Study is to determine the demand for aviation services and the alternatives available to serve this demand in the James City County area. It is intended to provide James City County with a tool with which they can make informed decisions regarding the role of aviation within the county and immediate environs.

METHODOLOGY

The Geographic Study Area (GSA) will be used for the evaluation of existing airport conditions and to determine the potential aviation demand within the defined Geographic Study Area. A review of existing documents relating to the Williamsburg-Jamestown Airport and surrounding area will be made including: existing airport layout plan and airspace plan and the Virginia Air Transportation System Plan Study (VATSP), 2003 Update, the County Comprehensive Plan, community plans and recent newspaper or other media articles. Discussions will be held with the airport owner, DOAV, FAA, local planning agencies, airport tenants, and other interested parties concerning airport activity and its relationship to the airport service area.

A more widespread Area of Influence (AOI) will be defined relative to the evaluation of other existing aviation facilities along with their respective market (service) areas. This AOI will be used to evaluate the influence the impact of other airports in the vicinity.

Airport activity data will be obtained from Virginia Air Transportation System Plan, 5010 reports, and airport records. Other data to be collected includes socioeconomic, land use, and environmental. A thorough on-site inspection will be conducted of Williamsburg-Jamestown Airport facilities. Extensive use will be made of existing data and studies, as available.

SUBTASKS

2.1. Inventory of Existing Conditions

2.1.1. Define Geographic Areas

A. The James City County Geographical Study Area (GSA) for the purposes of this Study is defined as the Historic Triangle of James City County, York County, and the City of Williamsburg. The GSA will be that area in which aviation demand is evaluated.

B. The Area of Influence (AOI) for this Study will include that area containing the following airports: New Kent County; Middle Peninsula; and Newport News. The AOI will be that area in which overall aviation capacity will be evaluated as defined in Subtask 2.2.4.

2.1.2. Meet with Current Owner

Prior to proceeding with the Study, it is anticipated that representatives from the SPONSOR and a representative from KIMBALL will meet with the current owner of the airport for the purpose of addressing some of the critical issues described above. They include:

- → Ownership and control of the airport access road (access way will permit the construction and maintenance of an access road that will be taken into the Virginia Department of Transportation Secondary Road System.
- → Current owner's place a covenant or deed restriction that prohibits any increase in the obstructions on the property that is retained by the current owners.
- → Current owner's willingness to open all financial books on the airport (to allow the development of and accurate accounting for income and expenditures of the Williamsburg-Jamestown Airport).

It is anticipated that if the SPONSOR does not receive satisfactory answers to these issues, they may opt to discontinue evaluation of the existing airport at this time. KIMBALL will not proceed with any other elements of this Study until authorized by the SPONSOR. KIMBALL will document the results of this meeting for inclusion in the Study.

Other input:

- → Land interest- of the existing property, which currently contains both aviation and non-aviation uses, what is available for transfer to public ownership?
- → Current owner's willingness to provide information regarding based aircraft and any equipment that might be transferred.
- → Current owner's willingness to distribute a User Survey form to based and transient aircraft owners.

2.1.3. Conduct Inventory

A. Socioeconomic Data

- 1. Collect historical and projected information on socioeconomic factors in the area that would influence civil air transportation demand at the Williamsburg-Jamestown Airport and the GSA.
- 2. Describe the current and future use of the airport and its role in the state system of airports.
- 3. Identify the airport service area based on the role of the Airport.
- 4. Collect historical data on population, personal income, and employment.
- 5. Investigate trends in socioeconomic factors.
- 6. Examine the impact of local factors such as tourism, industry, and demographics.

- 7. Describe current and future development planned for areas within the Study GSA.
- 8. Obtain projections of changes in socioeconomic data.
- 9. Evaluate the economic base of the airport service area.

B. Air Traffic Activity

- 1. Identify past and present patterns of airport activity.
- 2. Annual operations: jet, turboprop and piston airplanes; helicopters; local training (touch-and-go and low-approaches) and itinerant operations by fleet mix.
- 3. Annual general aviation passenger enplanements.
- 4. Based general aviation aircraft by fleet mix.
- 5. Number of annual instrument operations.
- 6. Runway utilization percentages.
- 7. Traffic pattern for each runway end, standard or non-standard.
- 8. Typical departure and arrival corridors.
- 9. Air taxi demand/operations, if applicable.

C. Airport Facilities and Land Use.

- 1. Conduct on-site inspection of all Williamsburg-Jamestown Airport facilities for location and condition to include runways and taxiways, aircraft parking and holding aprons, airport instrumentation and lighting, fuel and maintenance facilities, runway protection zones and approach zones, obstructions, wind coverage, automobile parking, vehicular traffic circulation, fixed base operator (FBO) areas, tiedowns, hangars, drainage, utilities, and other relevant information.
- 2. Conduct on-site inspection of an alternate site as defined by the SPONSOR.
- 3. Obtain the following from airport owner: current airport layout plan, current utility inventory and whether or not capacity is adequate (water, sewer, gas, electric, telephone, cable TV, fiber optics), list of tenants, tenant/leased areas map, Part 77 plan, drainage plans, and building inventory. *Note: It is anticipated that the SPONSOR will assist in this subtask.*
- 4. Collect and evaluate any land use, zoning, and resolutions that may impact the Airport.

D. Airspace and Air Traffic Control.

- 1. Investigate and review airspace use (including Class D, E, and G, and TRSA airspace), airways, obstructions, navigational aids and arrival and departure corridors.
- 2. Discuss airspace and instrument approach procedures with DOAV/FAA and report findings.
- 3. Identify obstructions to air navigation including latest 5010 inspection report.
- 4. Discuss the impacts of restricted areas and Military Operating Areas (MOA) within 10 miles that may influence the airspace and air traffic control where applicable.
- 5. Discuss impact of other surrounding airports within 10 miles on utilization of airspace, if applicable.

6. Discuss meteorological conditions and the resulting effect on air traffic operations.

E. Management and Financial Information.

- 1. Collect and review available financial data relating to the existing Airport. *Note:* It is anticipated that the SPONSOR will assist in this subtask.
- 2.Briefly describe the ownership (Authority, county, municipality, private) of the airport and the management (owner/manager, FBO/contract) of the airport's day-to-day operations.
- 3. Describe the current Airport owner's eligibility for federal and state funding programs, and support for local and private funding sources.
- 4. Describe leases and schedules of rates, fees and other charges that bring revenue to the airport. *Note: It is anticipated that the SPONSOR will assist in this subtask*
- 5.Off-Airport spending survey will be-derived from the 2004 DOAV Economic Impact Study.

2.1.4 Survey Questionnaires.

- A. It is anticipated that a User Survey form will be developed for the purpose of gathering information from existing Airport users. It is further anticipated that the User Survey form will be provided to the DOAV, FAA, and the SPONSOR for review prior to implementation.
- B. Provide copies of the User Survey form to the Airport owner for distribution to based aircraft owners/operators. The same form may be used by the Airport owner / FBO to obtain data from transient aircraft operators that utilize the Airport. Note: It is anticipated that the SPONSOR will assist in this subtask.
- C. With the assistance of the Airport owner, SPONSOR, and CAC members, compile a list of other potential future users that may be interested in using the airport when flying to the area to conduct business or for other reasons.
- D. Use this information to develop a database for statistical analysis of operations and other related planning issues, particularly in the determination of aviation demand.

2.1.5. Mapping

No new mapping will be conducted by KIMBALL. However, the DOAV has indicated that they will be acquiring obstruction related mapping for the existing Airport. It is anticipated that this data will be made available to KIMBALL.

2.1.6. Environmental Overview

- A. The level of effort in this subtask will be minimal and is <u>not</u> intended to constitute an environmental assessment or environmental impact statement. It will provide documentation identifying environmental elements that may need more in-depth evaluation. This effort will be accomplished at the existing airport site only.
- B. Some of the categories in the current version of FAA Order 1050.1E, Environmental Impacts: Policies and Procedures, and Order 5050.4B, National

Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions will be evaluated. The categories to be evaluated are:

- 1. Air quality (EPA Green Book review only)
- 2. Compatible land use
- 3. Department of Transportation Act: Sec 4(f)
- 4. Fish, Wildlife and Plants
- 5. Floodplains
- 6. Hazardous Materials (obtain an Environmental Data Resources Report)
- 7. Noise (Note: noise contours for the existing Airport will be developed using the latest version of the Integrated Noise Model [INM]; any existing aircraft forecasts and fleet mix will be used no new forecasts are being developed)
- 8. Wetlands (Note: potential wetlands will be identified through a review of National Wetland Institute maps only)
- C. Local resource agencies will be contacted to provide any information they think should be considered relative to any potential development of the airport.

2.2 Determine Aviation Demand.

2.2.1. The intent of this subtask is to project general aviation demand anticipated to occur within the defined Geographical Study Area (GSA). Much of the information gathered in subtask 2.1 will be utilized in the completion of this evaluation. Additionally, VATSP information will be used in full as a base in the forecasting process. Data will be extrapolated for the years that are not included in the report. This information will be verified and expanded upon to meet the needs of the study.

2.2.2. Categories

Categories to be considered in the initial demand evaluation are:

- A. Based aircraft by type
- B. Itinerant (visiting) aircraft by type
- C. Air Tour/Air Taxi/Charter operations
- D. Both fixed wing and rotorcraft will be considered
- **2.2.3.** Evaluation factors. Primarily using the information gathered in subtask 2.1, factors to be evaluated include:
 - A. *Economic characteristics* the economic characteristics of a community will affect the demand for air traffic. In addition to national and regional economic activity, these include specific, identifiable, local activities that distinguish this specific geographic area served by the Airport.
 - B. Demographic characteristics- the demographic characteristics of an area's population also affect the demand for aviation services. Factors such as disposable income, usually measured on a per capita basis, is a good indicator of the propensity to travel and general aviation aircraft purchases and use.
 - C. Geographic attributes- the geographic distances between populations and centers of commerce within the Airport service area may have a direct bearing on the type and level of transportation demand. The existence of populations and

centers of commerce beyond an airport's service area may indicate the need for additional airports that serve aviation demand. The physical characteristics of the area and the local climate may also be important, since they may stimulate holiday traffic and tourism. The role of the Airport within the airport system and its relationship to other airports may have an effect on the services that are demanded at the Airport.

- D. Aviation-related factors- business activity, changes in the aviation industry, and local aviation actions can markedly affect the demand for airport services. Wider industry trends, such as the introduction of the Very Light Jet (VLJ) may also alter the level and pattern of demand. Also, actions taken by local authorities, such as changes in user charges, ground access policies or support services can also stimulate or hinder the demand for airport services.
- E. Other factors- External factors may also influence the demand for airport services. These include economic actions such as fuel price changes, availability of aviation fuels, and changes in the level and type of aviation taxes.

2.2.4. Evaluate other airports.

The aviation demand evaluation process will also involve the analysis of other airports within the Area of Influence (AOI). These airports include: New Kent County; Middle Peninsula; and Newport News. This will include the determination of their respective service areas to ensure that aviation facilities are not being unnecessarily duplicated. They will also be analyzed relative to availability of services and any proposed capital improvements. It is anticipated that much of this information will be obtained through the review of their respective Airport Master Plans and Airport Layout Plans. It is also anticipated that these documents will be made available for KIMBALL review by DOAV/FAA, as appropriate.

2.3 Conduct Economic Value Evaluation

2.3.1 Financial Feasibility and Public Value Assessment

To the extent that historical financial information is available, a historical financial analysis will be presented as gathered during the Inventory of Existing Conditions and Determine Aviation Demand tasks, above. Based upon this information, as well as the aviation forecasts available through this study, financial projections will be made for the forecast period to ascertain whether net revenues will be sufficient to cover the costs of the proposed capital improvements.

- A. Develop a short discussion of qualitative and quantitative benefits common among General Aviation Community (GC) airports. Data contained in the 2004 Virginia Airport System Economic Impact Study will be used in this effort. This data will be updated to reflect current conditions, and used as a trend line to project future conditions. No new surveys will be conducted.
- B. Using data assembled during the Inventory of Existing Conditions task of this Study, analyze and present typical revenue and expenditure information. No new formal surveys will be conducted. The following items will be considered:
 - 1. Fuel Availability and Pricing
 - 2. Landing and Tie-Down Fees
 - 3. Aircraft Storage Fees, Space Occupied, and Waiting Lists

- 4. Comparison of Aircraft Maintenance Services Provided
- 5. Comparison of Aviation Services Provided
- 6. Flight Instruction
- 7. Airport Administration and Management Structure
- C. Based on airport activity forecasts and previously assembled data, develop a pro forma estimate of future airport operating revenues and expenditures, as well as the potential airport-related economic contribution to the region for a typical General Aviation Community (GC) airport. Make general estimates for the year 2007 and for the future key years of 2012 and 2017.
- D. From the above analysis, estimate the level of capital expenditures that must be contributed and which cannot be funded by net operating revenues.
- E. A brief analysis of alternative financing methods will be developed, including:
 - 1. General obligation bonds
 - 2. Revenue bonds
 - 3. Private financing
 - 4. Revenue financing
 - 5. General tax fund

2.3.2. Develop Summary Report – Deliverable #1

At this point in the Study, KIMBALL will develop and distribute for review and comment a summary report that will discuss the inventory and forecast elements, focusing on the projected aviation demand, activities, and economic value. One copy of the Report will be distributed to the FAA, one copy to the DOAV, and three copies to be distributed at the discretion of the SPONSOR. An electronic (PDF) version will also be made available. It is anticipated that there will be a 30-day review period.

2.4 Define Airport Requirements.

Based on the previously identified aeronautical demand analysis, the appropriate FAA design standards and supporting facilities will be defined to accommodate the anticipated demand trend. Additionally, the standards for a General Aviation Community Airport (GC) as defined in the VATSP will be utilized. This data will be used to develop an airport template, which will then be applied to each alternative site (reference Task 2.5, below) in an effort to accommodate the identified airport requirements. Costs to develop each alternative site to meet standards will also be developed, as needed.

- A. Based upon the information gathered during the existing inventory and user survey process, it is anticipated that sufficient data will be available in order to determine the appropriate design aircraft (family).
- B. The primary documents to be used are: Advisory Circular (AC) 150/5300-13, Airport Design, (Change 11); AC 150/5325-4B, Runway Length (Change 1), AC 150/5070.6B, Airport Master Plans (Change 1), and Federal Aviation Regulations, Part 77, Objects Affecting Navigable Airspace.

- C. The following dimensions/surfaces will be analyzed:
 - 1. Runway centerline to parallel taxiway centerline
 - 2. Runway centerline to holdline
 - 3. Runway centerline to aircraft parking area
 - 4. Runway width
 - 5. Runway safety area length and width
 - 6. Runway obstacle free zone length and width
 - 7. Runway object free area length and width
 - 8. Runway Protection Zone
 - 9. Taxiway width
 - 10. Taxiway safety area width
 - 11. Taxiway object free area width
 - 12. Runway end siting requirements
 - 13. Recommended runway length
 - 14. FAR Part 77 approach surface (visual approach, utility runway, 20:1 surface)
- D. A table of non-standard conditions and preliminary cost estimates to correct substandard conditions will be developed. Drawings similar to an Airport Layout Plan and an Inner Approach Surface drawing will be developed.

2.5. Alternatives Development

- **2.5.1** Status Quo Alternative this alternative involves maintaining the status quo with the existing private owner and assumes that airport restrictions associated with the current SUP will remain in place.
- 2.5.2 Local Acquisition of the Existing Williamsburg-Jamestown Airport this alternative involves retaining the existing Airport, but under public ownership. This alternative would require the Airport to meet current design standards as determined by this Study. Preliminary cost estimates will be developed. This alternative will also consider that the current SUP restrictions are removed. This will include a meeting with the current owner to determine willingness to sell the necessary property.
- **2.5.3** Utilize Other Existing Facilities this alternative involves evaluating other existing airports.
- **2.5.4** Develop a New Airport (Green Field site) this alternative will investigate the possibility of establishing a new airport that will meet the needs of the previously determined aeronautical demand. No specific site will be identified at this time.
- 2.5.5 Matrix A suggested matrix will be presented for review and approval before the actual alternative evaluation is conducted. Criteria to be considered for inclusion in the matrix will be: 1) Known Environmental Factors; 2) Engineering Factors; 3) Surface Transportation/Access Factors; 4) Operational Factors; 5) Economic Factors; and 6) Public Support Factors. A scoring and a rating system, which considers the importance of each criterion to the DOAV, the FAA, and the SPONSOR, will be developed.

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2.5.6 Develop Summary Report – Deliverable #2

The Second Summary Report will be produced and distributed for review after Section 2.4 "Define Airport Requirements", and Section 2.5 "Alternatives Development" has been completed in draft form. The Second Summary Report will provide an assessment of the optimum airport requirements (and airport configuration) that would satisfy the anticipated airport needs within the defined market area. The Report will also introduce and explain (by definition and relevance) the alternatives that have been formulated to next evaluate the optimum opportunities for accommodating the previously defined demand requirements. One copy of the Report will be distributed to the FAA, one copy to the DOAV, and three copies to be distributed at the discretion of the SPONSOR. An electronic (PDF) version will also be made available. It is anticipated that there will be a 30-day review period.

2.6 Conduct Alternatives Evaluation

Based on the review and approval of the previously submitted defined alternatives to be evaluated, the matrix criteria to be used, and the rating/scoring methodologies, the alternatives evaluation will be conducted and the findings matrix will be completed. No site selection will be accomplished during this effort. The matrix will indicate the relative advantages and disadvantages of each alternative.

2.6.1 Submit Completed Matrix and Report- Deliverable #3

The completed matrix along with supporting documentation and narrative will be submitted for review and comment. One copy of the Report will be distributed to the FAA, one copy to the DOAV, and three copies to be distributed at the discretion of the SPONSOR. An electronic (PDF) version will also be made available. It is anticipated that there will be a 30-day review period.

2.7 Develop Draft Summary Report - Deliverable #4

Once all comments are received and incorporated with regard to all three of the Summary Reports, a Comprehensive Final Draft Report will be produced and distributed for final review. One copy of the Report will be distributed to the FAA, one copy to the DOAV, and three copies to be distributed at the discretion of the SPONSOR. An electronic (PDF) version will also be made available. It is anticipated that there will be a 30-day review period.

2.8 Develop Final Report – Deliverable #5

Once all final draft comments are received and incorporated, the final project deliverables will be produced and distributed. Ten (10) copies of the Final Report will be provided. It is anticipated that one of these copies will be provided to the FAA and one copy to DOAV. An electronic copy on CD-ROM will also be provided to the SPONSOR, the FAA, and DOAV.

NOTE: Attached as Exhibit 1 is a comprehensive list of deliverables.

EXHIBIT 1

LIST OF DELIVERABLES

Develop Summary Report - Deliverable #1

At this point in the Study, KIMBALL will develop and distribute for review and comment a summary report that will discuss the inventory and forecast elements, focusing on the projected aviation demand, activities, and economic value. One copy of the Report will be distributed to the FAA, one copy to the DOAV, and three copies to be distributed at the discretion of the SPONSOR. An electronic (PDF) version will also be made available. It is anticipated that there will be a 30-day review period.

Develop Summary Report – Deliverable #2

The Second Summary Report will be produced and distributed for review after Section 2.4 "Define Airport Requirements", and Section 2.5 "Alternatives Development" has been completed in draft form. The Second Summary Report will provide an assessment of the optimum airport requirements (and airport configuration) that would satisfy the anticipated airport needs within the defined market area. The Report will also introduce and explain (by definition and relevance) the alternatives that have been formulated to next evaluate the optimum opportunities for accommodating the previously defined demand requirements. One copy of the Report will be distributed to the FAA, one copy to the DOAV, and three copies to be distributed at the discretion of the SPONSOR. An electronic (PDF) version will also be made available. It is anticipated that there will be a 30-day review period.

Submit Completed Matrix and Report- Deliverable #3

The completed matrix and supporting documentation and narrative will be submitted for review and comment. One copy of the Report will be distributed to the FAA, one copy to the DOAV, and three copies to be distributed at the discretion of the SPONSOR. An electronic (PDF) version will also be made available. It is anticipated that there will be a 30-day review period.

Develop Technical and Summary Report - Deliverable #4

Once all comments are received and incorporated with regard to all three of the Summary Reports, a Comprehensive Final Draft Report will be produced and distributed for final review. One copy of the Report will be distributed to the FAA, one copy to the DOAV, and three copies to be distributed at the discretion of the SPONSOR. An electronic (PDF) version will also be made available. It is anticipated that there will be a 30-day review period.

Develop Final Report - Deliverable #5

Once all final draft comments are received and incorporated, the final project deliverables will be produced and distributed. Ten (10) copies of the Final Report will be provided. It is anticipated that one of these copies will be provided to the FAA and one copy to DOAV. An electronic copy on CD-ROM will also be provided to the SPONSOR, the FAA, and DOAV.

Schedule of Fees/Fee Estimate by Task

Airport:	#REFI				FAR Overhead	d Rate:	0	
Project:	#REFI				Fee %:		0%	
Date:	#REF!		57876408550		Multiplier:		1.0000	
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	(project scoping)		EIIIC TUSK.	1100	TCC TYPC.			
	<u>Classification</u>	Hours	Labor Rate	<u>Amount</u>	Overhead	<u>Fee</u>	sub-total	
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	Senior Engineer	Ö	\$0.00	\$0.00		\$0.00	\$0.00	
	Senior Airport Planner	Ö	\$0.00	\$0.00		\$0.00	\$0.00	
	Airport Planner	Ö	\$0.00	\$0.00		\$0.00	\$0.00	
	Environmental Specialist-NEPA	Ö	\$0.00	\$0.00		\$0.00	\$0.00	
	Engineer-in-training	Ö	\$0.00	\$0.00		\$0.00	\$0.00	
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	(Ongoing project support)							
	Classification	<u>Hours</u>	<u>Labor Rate</u>	<u>Amount</u>	<u>Overhead</u>	<u>Fee</u>	sub-total	
	Principal-in-Charge	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Project Manager	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Senior Engineer	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Senior Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Environmental Specialist-NEPA	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Engineer-in-training	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Cadd Technician	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Clerical	0	\$0.00	\$0.00	<u>\$0.00</u>	\$0.00	<u>\$0.00</u>	
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	(Conduct 2 Community Airport Con)			
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	Principal-in-Charge	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Project Manager	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Senior Engineer	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Senior Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Airport Planner	0	\$0.00	\$0.00		\$0.00	\$0.00	
	Environmental Specialist-NEPA	0	\$0.00	\$0.00		\$0.00	\$0.00	
	Engineer-in-training	0	\$0.00	\$0.00		\$0.00	\$0.00	
	Cadd Technician	0	\$0.00	\$0.00		\$0.00	\$0.00	
	Clerical	0	\$0.00	\$0.00		\$0.00	\$0.00	
	labor sub totals	0		\$0.00		\$0.00	\$0.00	
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Environmental Specialist-NEPA

Engineer-in-training

Expenses (subconsultant)

Cadd Technician

Clerical

2.1.5 Mapping (No new mapping by KIMBALL to	o be accor	LRK Task:	9000	Fee Type:	LS			
Classification	Hours	Labor Rate	Amount	<u>Overhead</u>	<u>Fee</u>	sub-total		
Principal-in-Charge	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Project Manager	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Senior Engineer	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Senior Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Environmental Specialist-NEPA	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Engineer-in-training	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Cadd Technician	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Clerical	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
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2.1.6 Environmental Overview		LRK Task:	4900	Fee Type:	LS			
(Conduct environmental overview	,							
<u>Classification</u>	<u>Hours</u>	<u>Labor Rate</u>	<u>Amount</u>	<u>Overhead</u>	<u>Fee</u>	sub-total		
Principal-in-Charge	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Project Manager	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Senior Engineer	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Senior Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Environmental Specialist-NEPA	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Engineer-in-training	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Cadd Technician	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Clerical	0	\$0.00	\$0.00	\$0.00	<u>\$0.00</u>	\$0.00		
labor sub totals	0		\$0.00	\$0.00	\$0.00	\$0.00		
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2.2 Determine Aviation Demand		LRK Task:	3400	Fee Type:	LS			
(Determine Aviation Demand)								
Classification	Hours	<u>Labor Rate</u>	<u>Amount</u>	<u>Overhead</u>	<u>Fee</u>	sub-total		
Principal-in-Charge	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Project Manager	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Senior Engineer	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Senior Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Environmental Specialist-NEPA	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Engineer-in-training	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Cadd Technician	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Clerical	0	\$0.00	\$0,00	<u>\$0.00</u>	<u>\$0,00</u>	<u>\$0.00</u>		
labor sub totals	0		\$0.00	\$0.00	\$0.00	\$0.00		
Expenses (subconsultant)						\$0.00		
Expenses(mileage,materials,copie	s etc)					<u>\$0.00</u>		
				Total Aviation	n Demand		\$0.00 S	R-C-9

2.3 Conduct Economic Value Evaluation

C:\Jamestown Airport\Copy of Feasibility Study Cost Estimate_JGG_final_IFE -01-07

2.3.1 Financial Feasibility & Public Value Assessment		LRK Task:	3801	Fee Type:	LS		
(Complete Financial Feasibility)		Erik Tuoki	0001	· co i ypc.			
Classification	Hours	Labor Rate	<u>Amount</u>	Overhead	<u>Fee</u>	sub-total	
Principal-in-Charge	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Project Manager	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Senior Engineer	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Senior Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Environmental Specialist-NEPA	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Engineer-in-training	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Cadd Technician	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Clerical	0	\$0.00	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	\$0.00	
labor sub totals	0		\$0.00	\$0.00	\$0.00	\$0.00	
Expenses (subconsultant)						\$0.00	
Expenses(mileage,materials,copie	s etc.)					<u>\$0.00</u>	
		Tot	al Financial	Feasibility As	sessment		\$0.00
2.4 Define Airport Requirements (Define Airport requirements-FAA	l ctandam	LRK Task:	3500	Fee Type:	LS		
Classification	Hours	Labor Rate	Amount	Overhead	<u>Fee</u>	sub-total	
Principal-in-Charge	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Project Manager	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Senior Engineer	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Senior Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Airport Planner	ŏ	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Environmental Specialist-NEPA	ŏ	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Engineer-in-training	ō	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Cadd Technician	Ō	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Clerical	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
labor sub totals	0		\$0.00	\$0.00	\$0.00	\$0.00	
Expenses (subconsultant)						\$0.00	
Expenses(mileage,materials,copie	s etc)					\$0.00	
	,					40.00	
p			Total Defin	e Airport Req	uirements		\$0.00
2.5 Alternatives Development		LRK Task:	Total Defin	ne Airport Require Type:	uirements LS		\$0.00
	·		3600	Fee Type:		*****	\$0.00
2.5 Alternatives Development	·		3600	Fee Type:		sub-total	\$0.00
2.5 Alternatives Development (Develop and evaluate 5 alternate	ives; deve	elop a matrix; de	3600 evelop Sumr	Fee Type:	LS		\$0.00
2.5 Alternatives Development (Develop and evaluate 5 alternation)	ives; deve <u>Hours</u>	elop a matrix; de Labor Rate	3600 evelop Sumn <u>Amount</u>	Fee Type: nary Report) Overhead	LS <u>Fee</u>	sub-total	\$0.00
2.5 Alternatives Development (Develop and evaluate 5 alternation) Principal-in-Charge	ives; deve <u>Hours</u> 0	elop a matrix; de Labor Rate \$0.00	3600 evelop Sumn Amount \$0.00	Fee Type: nary Report) Overhead \$0.00	LS Fee \$0.00	<u>sub-total</u> \$0.00	\$0.00
2.5 Alternatives Development (Develop and evaluate 5 alternation Principal-in-Charge Project Manager	ives; deve <u>Hours</u> 0 0	elop a matrix; de Labor Rate \$0.00 \$0.00	3600 evelop Summ Amount \$0.00 \$0.00	Fee Type: nary Report) Overhead \$0.00	Fee \$0.00 \$0.00	sub-total \$0.00 \$0.00	\$0.00
2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner	ives; deve Hours 0 0 0 0	lop a matrix; de Labor Rate \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	3600 evelop Summ Amount \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$0.00
2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA	ives; deve Hours 0 0 0 0 0	lop a matrix; de Labor Rate \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	3600 evelop Summ Amount \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$0.00
2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training	ives; deve Hours 0 0 0 0 0 0 0	lop a matrix; de Labor Rate \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	3600 evelop Sumr Amount \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$0.00
2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician	ives; deve Hours 0 0 0 0 0 0 0	\$0.00 so.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	3600 evelop Sumr Amount \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$0.00
2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician Clerical	ives; deve Hours 0 0 0 0 0 0 0 0	lop a matrix; de Labor Rate \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	3600 evelop Sumr Amount \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$0.00
2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician Clerical labor sub totals	ives; deve Hours 0 0 0 0 0 0 0	\$0.00 so.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	3600 evelop Sumr Amount \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$0.00
2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician Clerical labor sub totals Expenses (subconsultant)	ives; deve Hours 0 0 0 0 0 0 0 0 0	\$0.00 so.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	3600 evelop Sumr Amount \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$0.00
2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician Clerical labor sub totals	ives; deve Hours 0 0 0 0 0 0 0 0 0	\$0.00 so.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	3600 evelop Sumr Amount \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	
2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician Clerical labor sub totals Expenses (subconsultant)	ives; deve Hours 0 0 0 0 0 0 0 0 0	\$0.00 so.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	3600 evelop Sumr Amount \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$0.00
2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician Clerical labor sub totals Expenses (subconsultant)	ives; deve Hours 0 0 0 0 0 0 0 0 0 0 0 0	\$0.00 so.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	3600 evelop Sumr Amount \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	
2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician Clerical labor sub totals Expenses (subconsultant) Expenses(mileage,materials,copie	ives; deve Hours 0 0 0 0 0 0 0 0 0 0 0 0	\$0.00 \$0.00	3600 evelop Sumr Amount \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$ternatives	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	
2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician Clerical labor sub totals Expenses (subconsultant) Expenses (mileage, materials, copie	ives; deve Hours 0 0 0 0 0 0 0 0 0 0 0 0 tion	\$0.00 *\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	3600 evelop Summ Amount \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 To	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$ternatives	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	
2.5 Alternatives Development (Develop and evaluate 5 alternatives Development) Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician Clerical labor sub totals Expenses (subconsultant) Expenses (mileage, materials, copie) 2.6 Conduct Alternatives Evaluatives (Complete the alternatives matrix	ives; deve Hours 0 0 0 0 0 0 0 0 0 0 0 0 tion ()	\$0.00 so.00 \$0.00	3600 evelop Summ Amount \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Country Report)	Fee \$0.00 \$0	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	
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2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician Clerical labor sub totals Expenses (subconsultant) Expenses(mileage,materials,copie) 2.6 Conduct Alternatives Evalua (Complete the alternatives matrix Classification Principal-in-Charge Project Manager	ives; deve Hours 0 0 0 0 0 0 0 0 0 0 0 0 0	\$0.00 *\$0.00	3600 evelop Summ Amount \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$ternatives LS Fee \$0.00 \$0.00	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	
2.5 Alternatives Development (Develop and evaluate 5 alternate Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician Clerical labor sub totals Expenses (subconsultant) Expenses(mileage,materials,copie) 2.6 Conduct Alternatives Evalua (Complete the alternatives matrix Classification Principal-in-Charge Project Manager Senior Engineer	ives; deve Hours 0 0 0 0 0 0 0 0 0 0 0 0 tion v)	\$0.00 *\$0.00	3600 evelop Summ Amount \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Fee Type: mary Report) Overhead \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ternatives LS Fee \$0.00 \$0.00 \$0.00	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	
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2.5 Alternatives Development (Develop and evaluate 5 alternatives Development) (Develop and evaluate 5 alternatives Development) Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician Clerical labor sub totals Expenses (subconsultant) Expenses (mileage, materials, copie) 2.6 Conduct Alternatives Evaluatives (Complete the alternatives matrix Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician	ives; deve Hours 0 0 0 0 0 0 0 0 0 0 s etc) tion 0 0 0 0 0 0 0 0 0 0 0 0 0	Labor Rate	3600 evelop Summ Amount \$0.00	Fee Type: mary Report) Overhead \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ternatives LS Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$ub-total \$0.00	
2.5 Alternatives Development (Develop and evaluate 5 alternatives Development) (Develop and evaluate 5 alternatives Development) Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training Cadd Technician Clerical labor sub totals Expenses (subconsultant) Expenses (mileage, materials, copie) 2.6 Conduct Alternatives Evalua (Complete the alternatives matrix Classification Principal-in-Charge Project Manager Senior Engineer Senior Airport Planner Airport Planner Environmental Specialist-NEPA Engineer-in-training	ives; deve Hours 0 0 0 0 0 0 0 0 0 0 s etc) tion () Hou 0 0 0 0 0 0 0 0 0 0 0 0 0	Labor Rate	3600 evelop Summ Amount \$0.00	Fee Type: mary Report) Overhead \$0.00	ES Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ternatives LS Fee \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$ub-total \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	

Expenses (subconsultant)
Expenses (mileage, materials, copies etc)

Total Conduct Alternatives Evaluation

\$0.00

\$0.00 SR-C-10

2.7 Develop Draft Summary Reports (Develop Summary Reports)	<u>ort</u>	LRK Task:	3901	Fee Type:	LS		
Classification	Hours	Labor Rate	Amount	Overhead	<u>Fee</u>	sub-total	
Principal-in-Charge	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Project Manager	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Senior Engineer	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Senior Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Environmental Specialist-NEPA	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Engineer-in-training	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Cadd Technician	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Clerical	0	\$0.00	\$0.00	\$0.00	\$0.00		
labor sub totals	0		\$0.00	\$0.00	\$0.00	\$0.00	
Expenses (subconsultant)						\$0.00	
Expenses(mileage,materials,copie	s etc)					<u>\$0.00</u>	22
			Total De	evelop Summa	ry Report		\$0.00
2.8 Develop Final Reports		LRK Task:	3901	Fee Type:	LS		
(Develop reports)			_		_		
<u>Classification</u>	<u>Hours</u>	Labor Rate	<u>Amount</u>	<u>Overhead</u>	<u>Fee</u>	sub-total	
Principal-in-Charge	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Project Manager	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Senior Engineer	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Senior Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Airport Planner	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Environmental Specialist-NEPA	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Engineer-in-training	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Cadd Technician	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Clerical	0	\$0.00	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	
labor sub totals	_				44.00	40.00	
_	0		\$0.00	\$0.00	\$0.00	\$0.00	
Expenses (subconsultant)			\$0.00	\$0.00	\$0.00	\$0.00	
Expenses (subconsultant) Expenses(mileage,materials,copie			\$0.00				40.00
•			\$0.00	\$0.00 Total Develo		\$0.00	\$0.00
•			\$0.00	Total Develo		\$0.00	\$0.00 \$0.00