1.0 INTRODUCTION

1.1 BACKGROUND

The Huntington Flood Damage Reduction Study was conducted by the U.S. Army Corps of Engineers (Corps), Baltimore District, Planning Division at the request of the Fairfax County Stormwater Planning Division, under the Floodplain Management Services Program (FPMS). Significant flooding occurred in the Huntington Subdivision (also referred to as Arlington Terrace) along Cameron Run in Fairfax County, Virginia on June 25 and June 26, 2006 (June 2006 flood event) (Figure 1.1). Approximately 160 houses were flooded. Although this area is already in the floodplain, flood elevations were in excess of 2.0 feet higher than the expected county-adopted 1% annual chance flood elevations (flood having a 1-percent chance of occurring in any given year; also sometimes referred to as the 100-year flood). The 1% annual chance flood elevations were based on a United States Geological Survey (USGS) study completed in 1976 (USGS, 1976). The June 2006 flood event was estimated to be a 2% annual chance event (50-year flood) based on a hydrologic model conducted by the Corps (U.S. Army Corps of Engineers (USACE), May 2007). A study report prepared by the Corps for Fairfax County in January 2007 found the factors contributing to higher flood levels over time at Huntington were channel sedimentation, construction at the U.S. Route 1 Interchange (a component of the Woodrow Wilson Bridge Project), and development within the floodplain including Jones Point (Riverside Apartments) (USACE, January 2007). Based on the latest hydraulic modeling, a portion of the Huntington community is in the 1% annual chance floodplain and is at risk of flooding again in the future (USACE, May 2007).

This study was conducted under the authority of the FPMS Program, which is a program that provides authority for the Corps of Engineers to assist county governments with floodplain information and planning assistance. The study was fully funded by Fairfax County, who voluntarily contributed funds to the FPMS program. This study was not conducted through the Corps' civil works program, which is used for projects that may ultimately lead to federal construction. Therefore, it does not include National Environmental Policy Act (NEPA) documentation, or other federal requirements such as external technical review.

1.2 STUDY PURPOSE

The purpose of this investigation was to develop and evaluate alternative solutions for mitigating future flooding at Huntington and to select a final plan for implementation. Analysis included examination of previous flooding studies and local flood history, and the evaluation of flood damage reduction measures available, such as levees, dredging, buyouts and flood proofing individual buildings. Acceptable alternatives underwent a three-phase plan formulation process which led to the selection and 65% design of the final plan. Under the FPMS program, the Corps cannot take the project further than a 65% design.

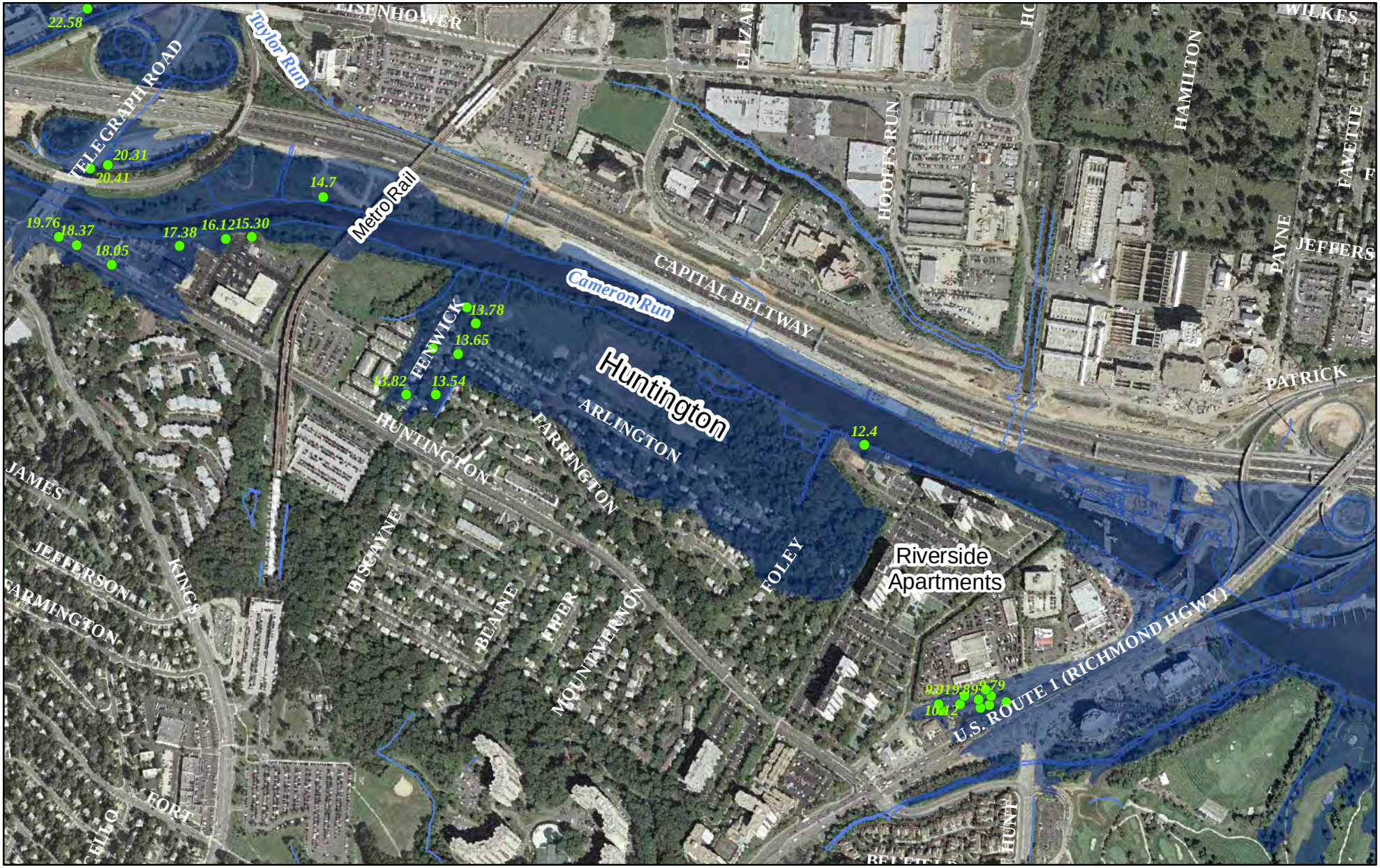

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Figure 1.1

June 2006 Flood Event

0 750 1,500 3,000 Feet

1 inch = 700 feet

Aerial Photograph dated 2004 courtesy of AerialExpress
Elevations referenced to NGVD29 datum

Legend

- June 2006 Flooded Areas
- VDOT High Water Marks

1.3 STUDY AREA

The flood damage reduction focus area is the Huntington area along Cameron Run in Fairfax County, Virginia (Figure 1.2). It consists of both the Huntington community and the Huntington Station community. Huntington is located on the south bank of Cameron Run, north of Huntington Avenue, east of Telegraph Road, and west of U.S. Route 1. The Huntington community consists of duplex residential structures, the majority of which were built in the late 1940s and early 1950s. Most of the structures have basements, with first floor elevations being roughly 5 feet above the lower lying roadways. Approximately 80 of the structures, or 160 homes, in Huntington and the Huntington Community Center are located in a special flood hazard area (area that will be flooded during the 1% annual chance flood, or 100-yr flood) per the most recent floodplain modeling developed by the Corps.

Just to the west of Huntington is the Huntington Station community, which is also included in the flood damage reduction focus area. It consists of approximately 48 townhouses that were built in the 2003 timeframe. Sixteen of the townhouses are located in a special flood hazard area per the Corps' most recent floodplain modeling. In order to evaluate flood damage reduction alternatives for the Huntington and Huntington Station areas, the overall study area extended upstream and downstream of Huntington. Therefore, the actual study area included Cameron Run from Telegraph Road downstream to the Potomac River (Figure 1.3).

There is a new development under construction just to the southeast of Huntington called Huntington Mews. It will consist of 96 townhomes.

Cameron Run drains 42.0 square miles of highly urbanized lands to its confluence with the Potomac River. The Cameron Run watershed includes areas within Fairfax County, the City of Alexandria, and the City of Falls Church (Figure 1.4). Tributaries such as Holmes Run, Backlick Run, Pike Branch, Tripps Run, and Taylor Run convey stormwater runoff to Cameron Run. Lake Barcroft (137 acres in size) and Fairview Lake (15 acres) are man-made reservoirs located within the watershed.

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Figure 1.2

Huntington Flood Damage Reduction Focus Area

0 500 1,000 2,000 Feet

1 inch = 500 feet

Aerial Photograph dated 2004 courtesy of AerialExpress

Legend

Focus Area

1% Annual Chance (100-year) Floodplain (USACE 2007 Model)

N

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Figure 1.3

Study Area

0 1,000 2,000 4,000 Feet

1 inch = 1,000 feet

Aerial Photograph dated 2004 courtesy of AerialExpress

Legend

Study Area

N

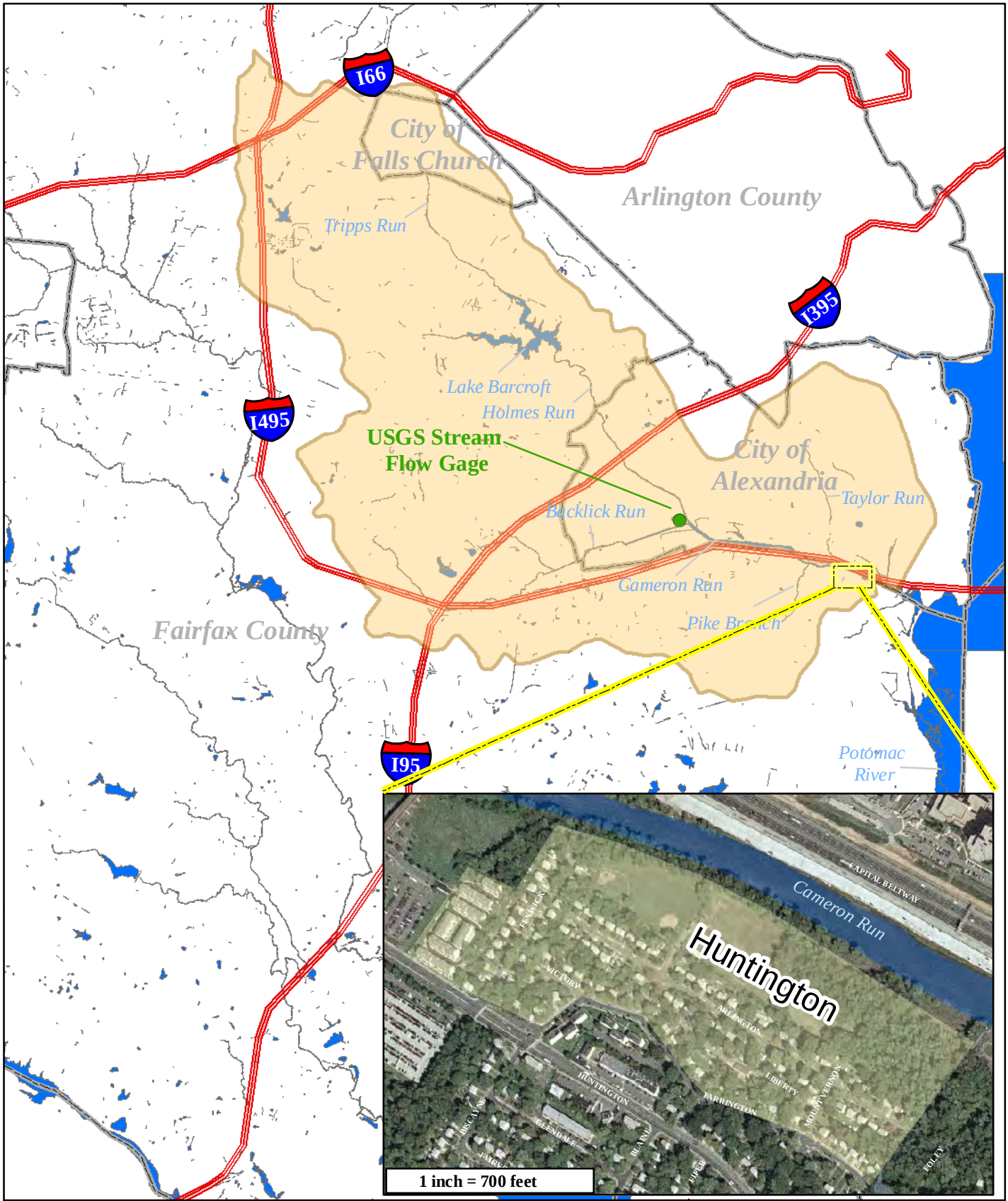

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Figure 1.4
Cameron Run
Watershed Map

0 6,000 12,000 24,000 Feet

1 inch = 10,000 feet

Cameron Run Watershed
U.S. Interstates
Municipal Boundaries