

**Schoolfield Hydroelectric Project
(FERC No. 2411)**

FINAL
Application for New License
Major Water Power Project 10 Megawatts
or Less

Exhibit G – Project Boundary

Schoolfield Hydroelectric Project (FERC No. 2411)
EXHIBIT G – PROJECT BOUNDARY

[This page is intentionally left blank]

TABLE OF CONTENTS

1 DETAILED MAPS 1

2 PROJECT BOUNDARY 1

3 FEDERAL LANDS..... 2

4 NON-FEDERAL LANDS 2

1 DETAILED MAPS

Exhibit G provides maps showing the Project boundary enclosing the Project works described in Exhibit A. The maps conform to the requirements of Section 4.41(h) of the Commission's regulations. Maps of the Project area showing principal Project features and the Project boundary are included.

2 PROJECT BOUNDARY

The Project boundary as approved in the August 26, 1994, License Order (License Order) consists of those lands, to the extent the licensee has interest in those lands, as shown in the approved Exhibit G-1 and G-2 dated June 21, 1990, and February 12, 1992, respectively.¹

As part of this Application for License, the co-Licensees propose four changes to the approved Project boundary. First, the co-Licensees propose to change the boundary around the Project reservoir to follow the 437.7 feet NGVD 29 contour rather than the 442-foot NGVD 29² contour, as shown in approved Exhibit G-1. The co-Licensees propose this change because the lands between the 437.7 and 442 feet NGVD 29 contours are not needed for operation and maintenance of the Project. The co-Licensees made this determination because the top of the flashboards is at an elevation of 437.7 feet NGVD 29, and recent LiDAR data collected over the Project area in 2018 facilitates a more accurate representation of the Project's reservoir normal water surface elevation contour. The LiDAR data produced a final digital elevation model (DEM) with a vertical accuracy of 0.37 to 0.65 foot for non-vegetated and vegetated areas at the 95% confidence level, respectively.³ Given the availability of recent and the highly accurate LiDAR data, the co-Licensees affirm that a reservoir contour drawn using the more recent DEM produced by the LiDAR would produce a more accurate Project boundary around the reservoir. As a result, and as currently licensed, any lands above normal maximum water surface elevation of the reservoir serves no other Project purpose, such as those related to recreation, shoreline control, or other measures related to the protection of environmental resources. The normal maximum water surface elevation for the Project would be the top of the flashboards. This proposed change resulted in a reduction of approximately 430 acres from within the Project boundary, and the upriver extent reduced by 0.8 river miles. The proposed boundary change is shown in [Figure 2-1](#). This reduction in area of the Project boundary is not due to a change in the Project works or operation but is an artifact of delineating the reservoir boundary using the normal maximum water surface elevation and better elevation data. As noted above, the approved Project boundary around the Project reservoir was drawn around the 442-foot NGVD 29 contour, or 4.25 feet above the reservoir normal maximum water surface elevation.

The second proposed change concerns the transmission line described in Ordering Paragraph B of the License Order. Ordering Paragraph B states the Project works include a 13-mile-long transmission line, but no such transmission line is depicted in the approved Project boundary

¹ The original copies of Exhibit G-1 and G-2 were filed with the Commission on aperture cards; however, copies were included in the filing of the Pre-Application Document (FERC Accession No. 20190531-5457).

² The 442-foot NGVD 29 contour around the Project reservoir depicted in Exhibit G-1 was drawn using 20-foot contours from a 1965 USGS topographic quadrangle (Danville) photorevised in 1984.

³ Dewberry. 2019. Virginia FEMA NRCS South Central Lidar project, Report Produced for the U.S. Geological Survey. September 25, 2019. 67 pp.

drawings (Exhibits G-1 and G-2); it is depicted in Exhibit F-4.⁴ This transmission line was constructed in 1989 to transmit power produced by the Project to Virginia Power, the power purchasing utility at the time. At present, however, the point of interconnect is at a substation at the edge of existing Project boundary. This change occurred in January 2017. Therefore, the 13-mile-long transmission line referred in the License Order no longer serves a Project purpose.

The third proposed change to the Project boundary is removal of unnecessary land downstream of the powerhouse and substation. A small parcel, approximately 0.7 acres in size, that lies between the substation and shoreline is currently owned by a private company. This parcel does not serve a Project purpose and is proposed to be removed from the Project boundary.

In addition to the land proposed to be removed from the Project boundary, the co-Licensees propose to add an approximately 0.2-acre parcel immediately adjacent to the south side of the powerhouse. The parcel contains access and a building that is utilized as storage for Project operations. The parcel is owned by the City of Danville, one of the co-Licensees.

The metes and bounds description of the Project boundary are on Exhibit G.

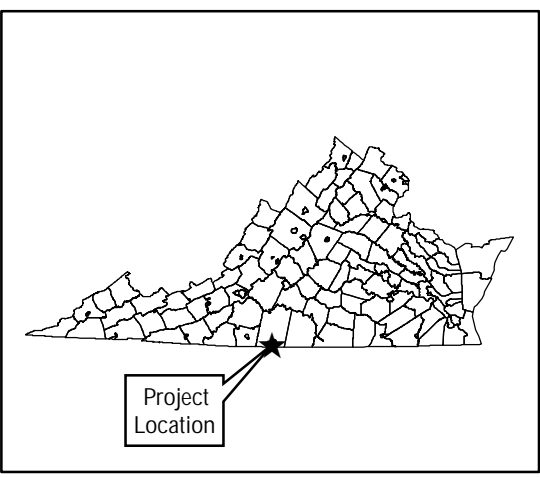
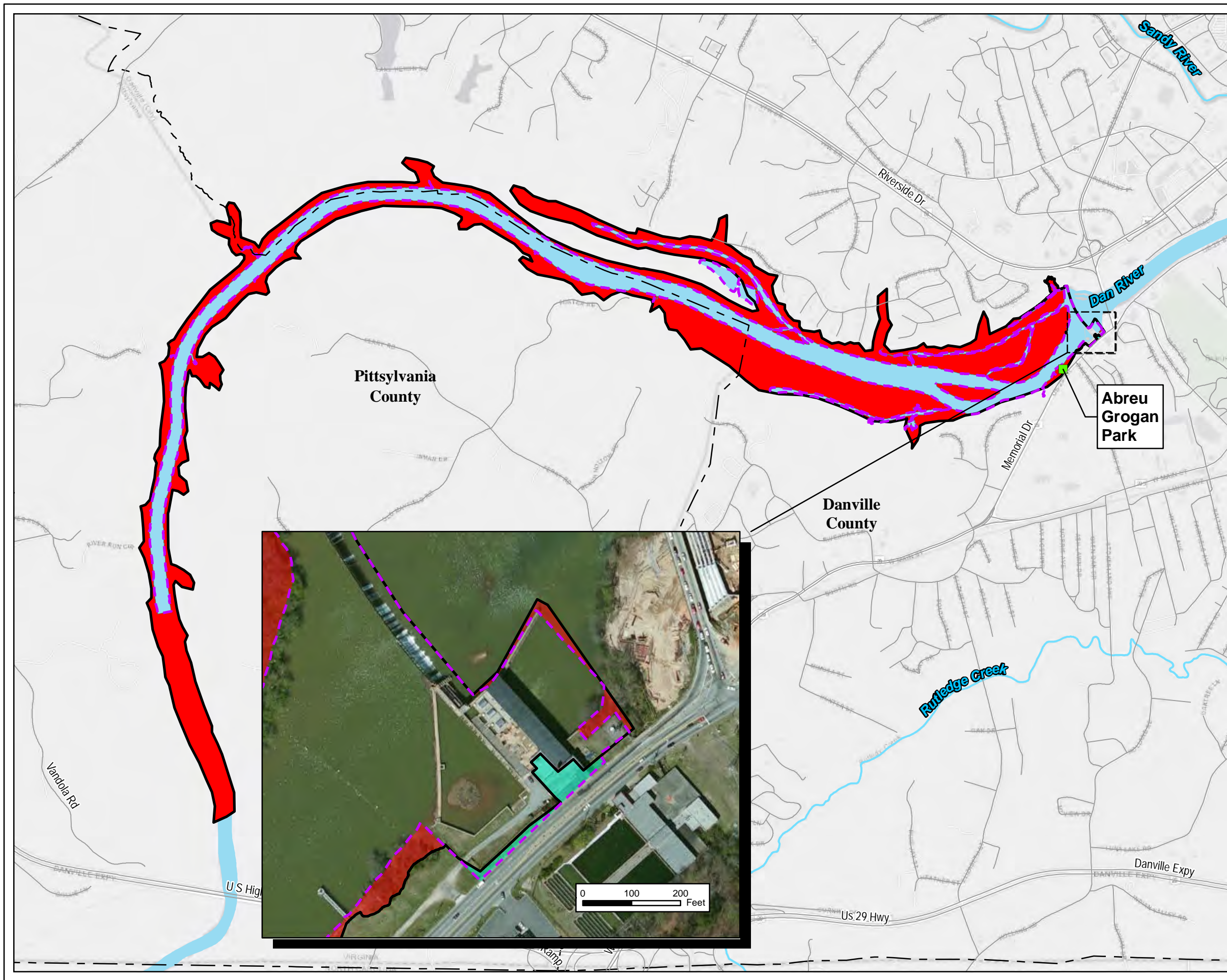
3 FEDERAL LANDS

There are no public lands or reservations of the United States within the Project boundary.

4 NON-FEDERAL LANDS

The Applicant has acquired, either through fee, easement, or lease, all land rights necessary to operate the Project.

⁴ FERC Accession No. 19960314-0338.

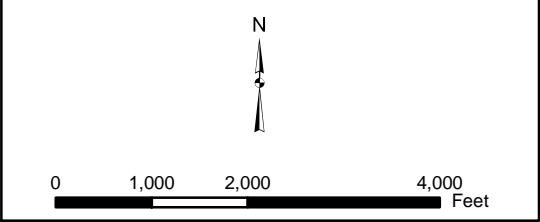


FERC Relicensing
 Schoolfield Hydroelectric Project
 FERC Project No. P-2411

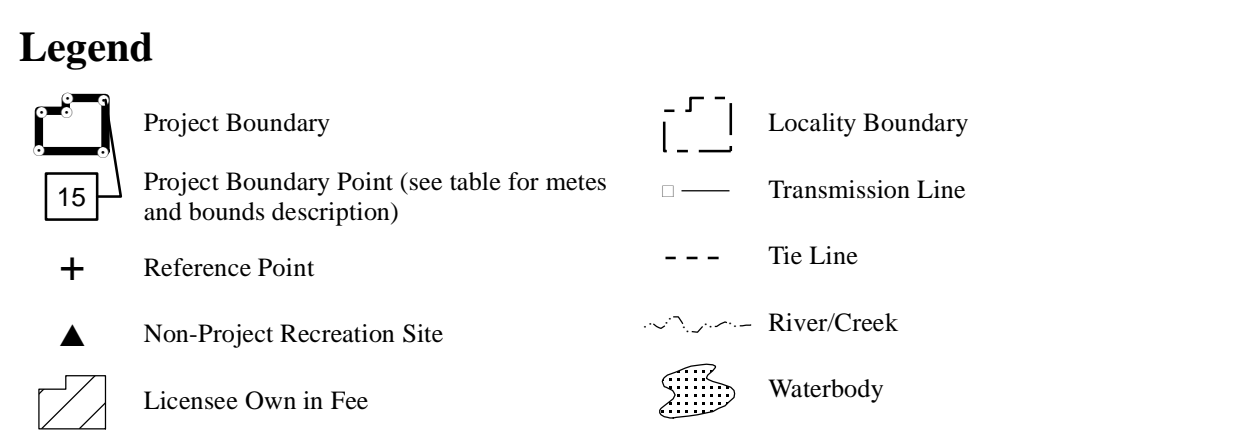
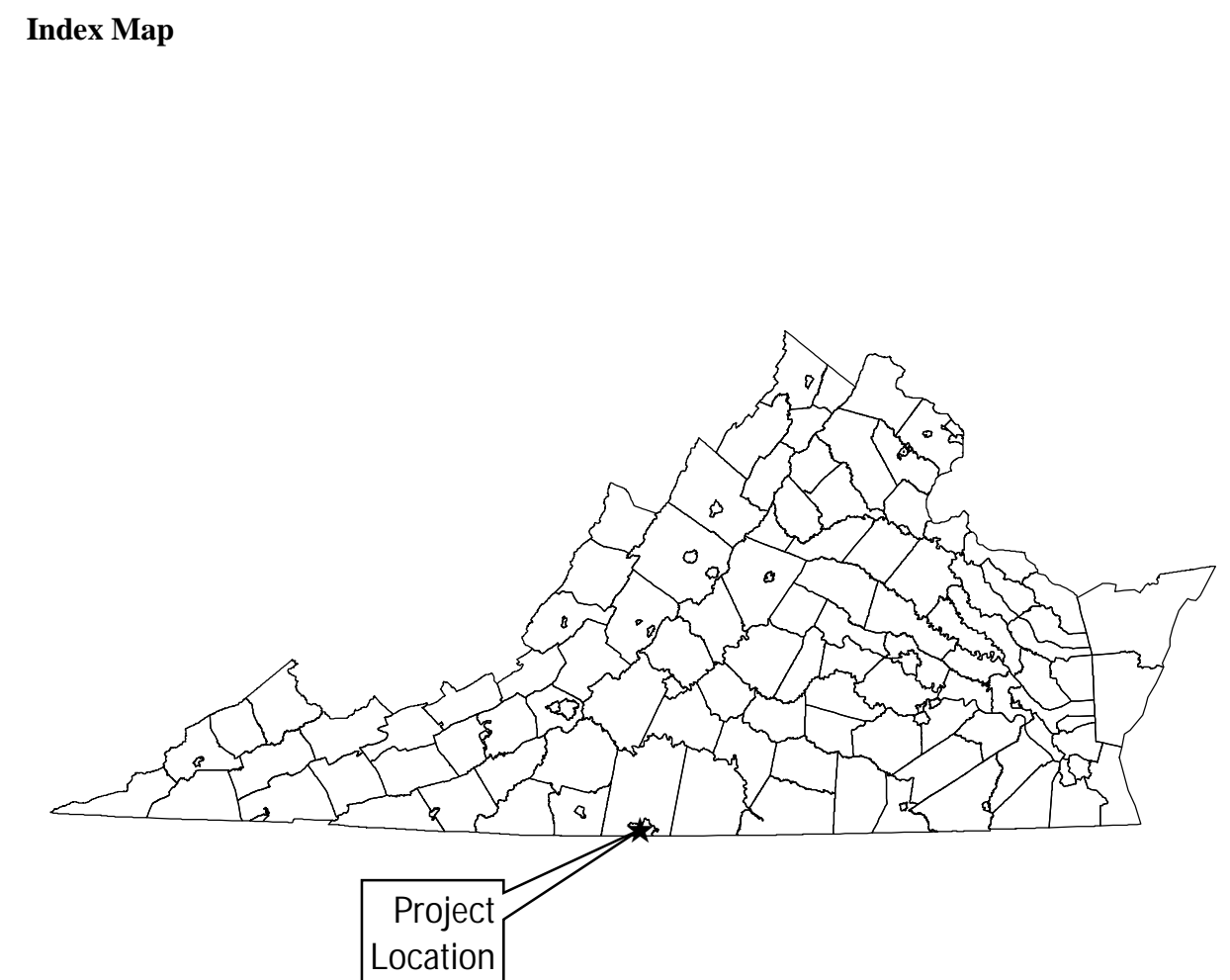
Figure 2-1
 Proposed Project Boundary
 Modifications

- Legend**
- Project Recreation Site
 - Current Project Boundary
 - Proposed Project Boundary
 - Area Proposed to be Added
 - Area Proposed to be Removed

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



NAD83 State Plane Virginia					NAD83 State Plane Virginia						
Line ID	Northing	Easting	Direction	Distance	Notes	Line ID	Northing	Easting	Direction	Distance	Notes
1	3370639.31	11208887.71	S 45-42-35 E	169.94	Point of Beginning	13	3370918.21	11209026.62	S 60-43-32 W	36.49	
2	3370520.65	11209009.35	N 46-21-57 E	351.89		14	3370900.37	11208994.79	N 40-15-50 W	222.05	
3	3370763.47	11209264.03	N 33-18-29 W	19.40		15	3371069.81	11208851.28	N 33-1-40 W	172.54	
4	3370779.68	11209253.38	N 53-55-50 E	75.75		16	3371214.47	11208757.24	N 27-46-38 W	113.87	
5	3370824.28	11209314.61	N 35-20-9 W	50.86		17	3371315.22	11208704.17	N 22-30-41 W	173.36	
6	3370865.77	11209285.19	S 47-1-36 W	81.82		18	3371475.37	11208637.80	N 16-19-47 W	163.81	
7	3370809.99	11209225.32	N 42-29-3 W	26.46		19	3371632.57	11208591.74	N 16-19-46 W	67.67	
8	3370829.50	11209207.46	N 48-45-6 E	67.54		20	3371697.51	11208572.72	N 10-37-12 W	74.77	
9	3370874.03	11209258.24	N 6-13-29 E	45.37		21	3371771.00	11208558.94	S 80-45-45 W	58.28	
10	3370919.13	11209263.16	N 42-17-14 W	207.83		22	3371761.64	11208501.42	S 9-7-23 E	49.72	
11	3371072.88	11209123.32	S 30-32-20 W	144.53		23	3371712.56	11208509.30	S 19-25-19 E	1138.00	Follows Elevation 437.7 to point of beginning
12	3370948.40	11209049.88	S 37-37-4 W	38.11							



Notes:

- The licensee has acquired rights in fee to all lands necessary for construction, maintenance, and operation of the project. Ownership only shown within Project boundary.
- Islands above the normal maximum water surface (El. 437.7) are excluded from the Project boundary.
- Portions of the Project boundary defined by elevation were derived from LiDAR data provided by the Virginia FEMA NRCS South Central LiDAR project (2018).

Coordinate System:
 NAD83 State Plane
 Virginia South Zone (feet)
 Horizontal Datum:
 NAD 1983
 Vertical Datum:
 National Geodetic Vertical Datum of 1929 (NGVD29)

Declination changing by 0.03° W

I HEREBY STATE THAT THE PROJECT BOUNDARY DELINEATION FOR THE SCHOOLFIELD HYDROELECTRIC PROJECT (FERC NO. P-2411) AS SHOWN ON THIS EXHIBIT "G" DRAWING IS DEVELOPED WITHIN REASONABLE ACCURACIES AS REQUIRED IN 18CFR4.41 TO THE GEOGRAPHIC LOCATION BASED ON A GRAPHICAL POSITIONING IN REFERENCE TO USGS QUADRANGLE MAPPING WITHIN +/-40 FEET. THE SCHOOLFIELD HYDROELECTRIC PROJECT DOCUMENTED PROJECT BOUNDARY LINE WAS ADJUSTED AND/OR ROTATED TO BEST FIT WITH THE USGS QUADRANGLE MAP FEATURES GRAPHICALLY AND WAS NOT FIELD SURVEYED.

