

**REMAND DIRECT TESTIMONY
OF
JON M. BERKIN
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUE-2015-00107**

1 **Q. Please state your name, position of employment, and business address.**

2 A. My name is Jon M. Berkin, and I am employed as a Partner with Environmental
3 Resources Management, Inc. (“ERM”). My business address is 1000 IDS Center, 80
4 South Eighth Street, Minneapolis, Minnesota 55402. ERM recently acquired my former
5 company, Natural Resource Group, LLC (“NRG”).

6 **Q. Have you previously sponsored or submitted testimony in this proceeding?**

7 A. Yes. I adopted the pre-filed direct testimony of Jeffrey R. Thommes, which was
8 submitted on behalf of Virginia Electric and Power Company (“Dominion Energy
9 Virginia” or the “Company”) to the State Corporation Commission of Virginia (the
10 “Commission”) in this proceeding on November 6, 2015. I also submitted pre-filed
11 rebuttal testimony on behalf of the Company on June 9, 2016. Finally, I testified at the
12 evidentiary hearing on direct and rebuttal on June 21, 2016, and June 22, 2016,
13 respectively.

14 **Q. What is the purpose of your remand direct testimony?**

15 A. I am providing remand direct testimony in continuing support of the Company’s
16 application to (i) convert its existing 115 kV Gainesville-Loudoun Line #124, located in
17 Prince William and Loudoun Counties, to 230 kV operation; (ii) construct in Prince
18 William County, Virginia and the Town of Haymarket, Virginia a new 230 kV double

1 circuit transmission line from a tap point approximately 0.5 mile north of the Company's
2 existing Gainesville Substation on the converted Line #124 to a new 230-34.5 kV
3 Haymarket Substation; and (iii) construct a 230-34.5 kV Haymarket Substation on land in
4 Prince William County to be owned by the Company (collectively, the "Project").

5 Specifically, I will address the Company's proffered additional variations to the proposed
6 routes in the record. I will also update certain information pertinent to routing
7 considerations.

8 **Q. Are you sponsoring any exhibits as part of your rebuttal testimony?**

9 A. Yes. Company Exhibit No. __, JMB, consisting of Remand Direct Schedules 1-2, was
10 prepared under my direction and supervision, and is accurate and complete to the best of
11 my knowledge and belief. My Remand Direct Schedule 1 is the route map for the I-66
12 Overhead Route, and my Remand Direct Schedule 2 is the route map for the I-66 Hybrid
13 Route. Each schedule shows the route as originally filed in this proceeding, as well as
14 variations that have developed as this case has been pending and that will be discussed in
15 my remand direct testimony.

16 **Q. What are the proposed routes in the record?**

17 A. The Company originally submitted for consideration a total of five routes, which
18 included: (1) the Proposed I-66 Overhead Route; (2) the Carver Road Alternative Route;
19 (3) the Madison Alternative Route; (4) the I-66 Hybrid Alternative Route; and (5) the
20 Railroad Alternative Route.

21 On April 6, 2017, the Commission issued an Interim Order, which, among other things,
22 found with respect to routing that "both the Railroad Route and the Carver Road Route

1 meet the statutory criteria [for approval] in this case.” (Interim Order at 11.) The Interim
2 Order also explained how, though both routes met the statutory criteria for approval, the
3 Commission found the Railroad Route preferable to the Carver Road Route. (Interim
4 Order at 13-14.) Because the Railroad Route crossed property controlled by Prince
5 William County, the Commission directed the Company to request Prince William
6 County to take the actions necessary to remove any legal constraints blocking
7 construction of the Railroad Route, and to file written confirmation of any response
8 within 60 days. (Interim Order at 14-15.)

9 On June 5, 2017, the Company notified the Commission that construction of the Railroad
10 Route was not feasible due to the legal inability to procure the necessary rights-of-way.

11 On June 23, 2017, the Commission entered a Final Order wherein it approved
12 construction and operation of the Proposed Project along the Carver Road Route.

13 On July 24, 2017, the Company requested the Commission hold the proceeding in
14 abeyance while it evaluated certain issues with the Carver Road Route. And, on
15 September 22, 2017, the Company notified the Commission that through its detailed
16 surveying and engineering processes, the Company had identified a property interest held
17 by Prince William County in certain land along the Carver Road Route, which is
18 dedicated for an extension of Somerset Crossing Drive. The Company noted that it sent a
19 letter to Prince William County on September 8, 2017, in which it formally requested that
20 Prince William County confirm that it will not approve the grant of an easement to
21 Dominion Energy Virginia for the construction and operation of the Project along the
22 Carver Road Route. The Company further explained how, on September 12, 2017,

1 Prince William County’s Board of Supervisors unanimously passed a resolution to deny
 2 the Company’s Carver Road easement request.

3 Accordingly, the proposed routes in the record for this proceeding are the Proposed I-66
 4 Overhead Route; the Madison Alternative Route; and the I-66 Hybrid Alternative Route.

5 I-66 Overhead Route

6 **Q. Has the Company, in conjunction with ERM, undertaken detailed design and**
 7 **surveying to evaluate known impediments to the I-66 Overhead Route?**

8 A. Yes. The Company is not aware of any impediments to the construction of the I-66
 9 Overhead Route that would require authorization from Prince William County for the line
 10 itself. However, the Company now proposes certain minor variations to that route.

11 **Q. Please describe the Company’s proposed variations to the I-66 Overhead Route.**

12 A. First, in its Application the Company included the Jordan Lane Variation to the I-66
 13 Overhead Route:

14 *Jordan Lane Variation:*

15 In contrast to the rest of I-66 that the Proposed Route parallels,
 16 approximately 675 feet of existing roadway along Jordan Lane
 17 within Haymarket Township was not established as [Virginia
 18 Department of Transportation (“VDOT”)] right-of-way. This
 19 stretch of Jordan Lane near the eastern end currently remains a
 20 county road dedicated to the Town of Haymarket and Prince
 21 William County via Piedmont Mews, LLC subdivision. Dominion
 22 Virginia Power will work with these localities to negotiate an
 23 overhang easement within the dedicated road easement. However,
 24 in the event that these negotiations are unsuccessful, the Jordan
 25 Lane Variation would eliminate the need for the Company to
 26 obtain an easement from the Town of Haymarket or Prince
 27 William County. The Jordan Lane Variation would involve the
 28 location of one structure inside the proposed sound wall along I-
 29 66. The Company does not anticipate that this single structure will
 30 unnecessarily burden construction or operation of the transmission

line or impede construction or vehicle operations within the existing I-66 right-of-way. This variation does not materially affect the length or impacts of the Proposed Route except to the extent it eliminates a crossing of the Jordan Lane dedicated road parcel.

(Appendix at 48.)

Through further survey and property title research, the Company also discovered a Department of Environmental Quality/Army Corps of Engineers conservation easement in this area at Jordan Lane at milepost 3.59 of the route. In order to avoid this conservation easement, the Company proposes to cross inside of the VDOT sound wall approximately 650 feet east of the original crossing location (at approximate milepost 3.44 rather than 3.56) and place a total of three structures (rather than one as described above) inside of (*i.e.*, on the I-66 side of) the sound wall. The three structures inside the sound wall are not contiguous. There is one inside the wall at milepost 3.53, then one outside the wall and then two more inside the wall at mileposts 3.75 and 3.82, respectively. In total, this engineering change results in approximately 1,050 feet of the proposed transmission line being located on the I-66 side of the sound wall whereas the original design contemplated 886 feet. All structures within the VDOT right-of-way would be located by VDOT permit rather than easement. Therefore, the complete Jordan Lane Variation now begins at milepost 3.44 and extends to milepost 3.92 of the I-66 Overhead Route. This area of the I-66 Overhead Route is depicted on my Remand Direct Schedule 1, Pages 5-6.

Second, as part of this proceeding, Respondent FST Properties, LLC (“FST”) requested that the I-66 Overhead Route and I-66 Hybrid Route be adjusted to avoid FST’s 4.6 acre parcel by turning sharply south on the eastern side of the parcel and continuing until the

1 property line, and then turning sharply west past the southern border of FST's property
 2 until making a final sharp turn north and terminating at the proposed Haymarket
 3 Substation ("FST Variation"). To eliminate the additional heavy angles in the FST
 4 Variation, the Company offered the FST Optimization Variation. From the southwest
 5 intersection of Route 55 and Route 15, the FST Optimization Variation runs southwest
 6 and parallel to FST's southern property line until making a final sharp turn north and
 7 terminating at the proposed Haymarket Substation. The FST Optimization Variation can
 8 be seen on my Remand Direct Schedule 1, Page 7, shown as "Dominion FST
 9 Optimization."

10 As shown, the Company's conceptual design for the FST Optimization Variation requires
 11 a minor adjustment as a result of further engineering analysis and detailed survey work.
 12 Specifically, at the intersection of Route 55 and Route 15, it was necessary to shift the
 13 angle structure location approximately 55 feet southwest in order to avoid an existing 20-
 14 foot wide Washington Gas and Light Company gas line easement. In addition, it also
 15 was necessary to shift a portion of the filed route north of Route 55 beginning at milepost
 16 4.53 slightly to the west to accommodate the change in the location of the angle structure
 17 noted above. The hard angle structure location just south of the proposed Haymarket
 18 Substation was also moved approximately 75 feet south in order to avoid existing
 19 electrical duct banks. The combination of these two adjustments caused the entire
 20 alignment of the original FST Optimization Variation to shift approximately 50 feet to
 21 the south (*i.e.*, the change between the dashed orange and white and red lines depicted in
 22 Remand Direct Schedule 1, Page 7.)

23 Although the Company supported the Walmart Variation for the I-66 Overhead Route in

its post-hearing submissions, detailed survey and engineering has found the existence of a strip of property on the south side of Route 55 (north of the proposed Haymarket Substation), which is dedicated to Prince William County for future use as a public roadway. Prince William County’s authorization would be required in order for the transmission line to cross this strip of property if the Walmart Variation was chosen by the Commission. The location of this dedicated road easement can be seen on my Remand Direct Schedule 1, Page 7. Thus, the Company now supports the Route Variation (in red) as its preferred route segment within the Route 55 corridor of the I-66 Overhead Route.

On November 28, 2017, the Company personnel met with representatives from VDOT regarding the Project and proposed routes. VDOT expressed concerns with certain towers that are conceptually located within VDOT parking lots and the potential loss of parking their construction would cause. These conceptual tower locations and VDOT parking areas can be seen on Remand Direct Schedule 1, Pages 1 and 2 (denoted as “Proposed Park & Ride”). If the Commission ultimately approves the I-66 Overhead Route, the Company will conduct final engineering and coordinate with VDOT on the final tower locations, and minor shifts in the tower locations could be necessary. These shifts could, depending on the locations and resulting span lengths, result in minor variations in tower heights.

Finally, the Company made a slight change to I-66 Overhead Route at the crossing of I-66 just west of Jefferson Street between mileposts 4.09 and 4.31 for constructability reasons. The Company reduced the angle of the highway crossing in order to avoid the need to place a structure inside the VDOT sound wall on the south side of I-66 at

1 milepost 4.20 of the filed route. This change is depicted in my Remand Direct Schedule
2 1, Page 6.

3 **Q. Do you have a schedule depicting the I-66 Overhead Route with the noted**
4 **variations?**

5 A. Yes. The entirety of the I-66 Overhead Route, including the variations at Jordan Lane,
6 the area of the FST property and others discussed herein, is depicted in my Remand
7 Direct Schedule 1. The Company requests approval of the I-66 Overhead Route with the
8 Route Variations shown therein in red if an overhead route is chosen by the Commission.

9 Madison Alternative Route

10 **Q. Have there been any developments since the close of this proceeding that impact the**
11 **constructability of the Project along the Madison Route?**

12 A. Yes. As a result of surveying efforts, the Company has learned that a new residence has
13 been constructed within the proposed right-of-way for the Madison Route at 15308
14 Thoroughfare Road, as seen in the below Google Earth image. The red line represents
15 the noticed right-of-way for the Madison Route:



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1 This location is approximately at milepost 5.4 of the Madison Route.

2 In addition, the Company recently became aware of the dedication of two new road
3 easements on the property of Southview 66, LLC at 14300 John Marshall Highway that
4 both cross the Madison Route. These road easements consist of a planned extension of
5 Daves Store Lane and the development of a new road to be named Grove Hill Boulevard.
6 The Company would need to obtain permission from Prince William County to cross
7 these two dedicated road easements.

8 It also is important to note that the Madison Route crosses a number of planned
9 developments in various states of approval, which collectively span over 2.0 miles of the
10 route. Thus, it is possible that other new developments could be impacted by the
11 Madison Alternative Route at these locations.

12 Finally, following approval of the Carver Road Route, a number of public comments
13 were submitted to the Commission's docket that focused on additional cultural and
14 potentially historic resources along that route that were not included in publicly available
15 datasets or public comments, and not otherwise raised during the case. Because the
16 Carver Road and Madison Routes follow the same path for the first approximately 4.7
17 miles of each route, many of the same cultural and potentially historic resources will also
18 exist on the Madison Route.

19 In particular, concerns were raised by residents about the potential impacts of the Carver
20 Route to an historic African-American neighborhood along Carver Road. The Company
21 has previously submitted a Pre-Application Analysis for review by the Virginia
22 Department of Historic Resources ("VDHR") that included a review of the known

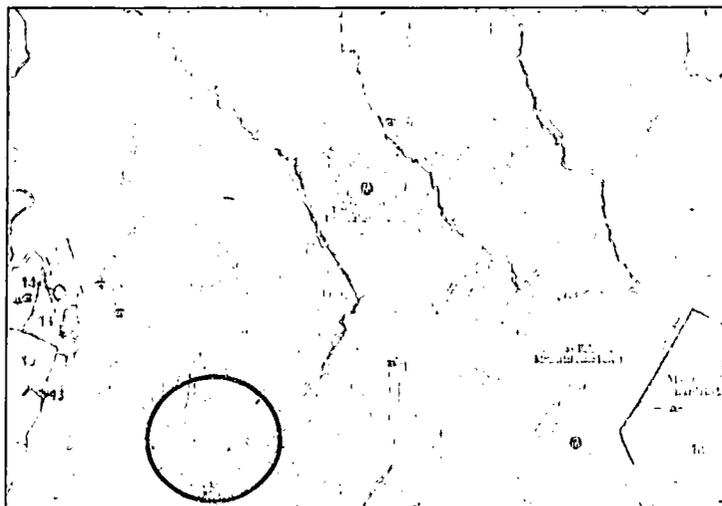
1 cultural resources along each of the routes for the Project, including the Carver Route, as
2 a part of its application. The Pre-Application Analyses for transmission line projects
3 require the identification of the following resource types:

- 4 • All National Historic Landmarks within 1.5 mile;
- 5 • All resources listed in the National Register of Historic Places (“NRHP”), all
6 battlefields, and all historic landscapes within 1.0 mile;
- 7 • All resources previously determined eligible for listing in the NRHP within 0.5
8 mile; and
- 9 • All previously recorded archaeological sites within the right-of-way.

10 The Company’s cultural resources consultant for the project, Dutton + Associates,
11 rechecked the VDHR’s records to determine whether any new resources had been
12 reported in the area of concern along Carver Road subsequent to the submission of the
13 Pre-Application Analysis. This review revealed that there had been no changes reported
14 in this area in the VDHR’s records.

15 Dutton + Associates also expanded its records review to look outside of the sources
16 required by the VDHR for the Pre-Application Analysis and were able to locate some
17 additional information regarding the area of concern. According to Prince William
18 County’s 2008 *Comprehensive Plan Maps: High Sensitivity Areas and County Registered*
19 *Historic Sites*, the area of concern is located between “Historic High Sensitivity Areas” at
20 Haymarket, between I-66 and Route 29, and at Route 15 and Route 29 and northeast of
21 the “County Registered Historic Sites” of Cerro Gordo (#14), Buckland Historic District

1 (#13), and Buckland Hall (#15). This area is depicted on the map below.¹



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3 This area of concern was known as The Settlement and is also depicted on the historic
4 map below.² According to historian Eugene Scheel:³

5 THE SETTLEMENT: There were two Negro communities with this
6 name: one, south of Catharpin; the other, west of Gainesville. These were
7 forsaken areas, allotted [sic] to ex-slaves who first rented, then bought.
8 Remembered at the former site were midwife Frances Beale, Nelson and
9 Martha Elliott, and Robert Allen and Thornton Allen.

10 The larger Settlement had about fifteen houses at the century's turn. Some
11 old marked stones in the Mt. Pleasant Church graveyard honor Anna
12 Churchill, Estella Crawford, John Perry, and Charles Randall. Other

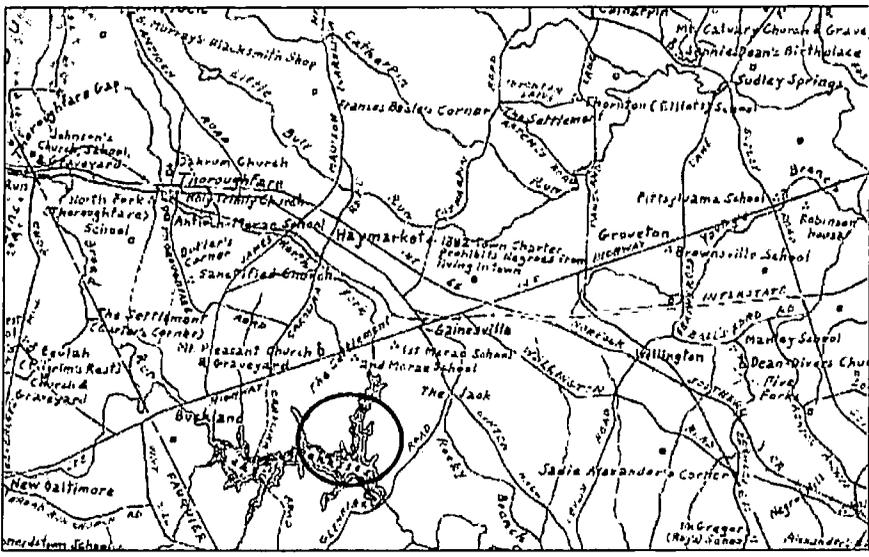
¹ Detail of *Prince William County 2008 Comprehensive Plan High Sensitivity Areas and County Registered Historic Sites*, published 2009, depicting the area of concern. Source: http://eservice.pwcgov.org/planning/documents/MAP_10W8_2008CP_HiSens_and_CRHS3000.pdf.

² Detail of *African-American Heritage Prince William County*, by Eugene Scheel in 2000, depicting the area of concern.

³ Scheel, Eugene M. *African-American Heritage Prince William County*. October 2000. Available online at http://www.pwcgov.org/government/dept/planning/Documents/PWC_AfricanAmerican_Heritage_Map.pdf.

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prominent surnames: Berry, Berryman, Gaskins, Johnson, McPherson,
Thomas, Tibbs, Tyler, Peterson, and Strother.



The Company is providing this information for the record, but does not currently propose any route variations associated with the Madison Alternative Route. As the Company noted in both its Comments to the Hearing Examiner’s Report (filed December 6, 2016) and its September 22, 2017 Update to the Commission, other routes are superior to Madison in terms of cost and impact. Thus, the Company does not advocate selection of the Madison Alternative Route.

I-66 Hybrid Alternative Route

Q. Finally Mr. Berkin, are there any updates related to the I-66 Hybrid Route that you wish to address?

A. Yes. A map of the I-66 Hybrid Route as filed and with the variations discussed herein is included as my Remand Direct Schedule 2.

To begin, I would direct you to Remand Direct Schedule 2, Page 6, which depicts the I-

1 66 Hybrid Route crossing over I-66 in the area of Jefferson Road between mileposts 4.1
2 and 4.5. In his rebuttal testimony beginning on page 13, Company Witness Donald R.
3 Koonce addressed the difficulty of 90 degree bored crossings of I-66 and recommended
4 switching to diagonal horizontal directional drilling crossings, to the extent permitted by
5 VDOT. The Company has incorporated this change into the I-66 Hybrid Route, and it is
6 shown as a Route Variation in my Remand Direct Schedule 2, Page 6. The alignment of
7 the crossing of I-66 has been further refined to avoid directly impacting two proposed
8 VDOT storm water ponds on the east side of Jefferson Road and to also shift the route
9 further away from the VDOT sound wall on the southern side of I-66. In addition, this
10 change will improve the placement at the drill rig near milepost 4.50, which will be
11 required for drilling under I-66. This Route Variation, however, will be subject to
12 approval by VDOT. The Company respectfully requests that at this location, as well as
13 other locations in which VDOT right-of-way is impacted, the Company be permitted the
14 discretion to use its engineering judgment during final design to make minor adjustments
15 as may be necessary to obtain VDOT's authorization and to construct the route.

16 Second, in his rebuttal testimony Mr. Koonce also recommended using the Walmart
17 Variation for the I-66 Hybrid Route because it would eliminate some of the heavy angles
18 present in the area near the proposed Haymarket Substation. As discussed above with
19 respect to the I-66 Overhead Route, the area on the south side of I-66 near the FST
20 property is encumbered with multiple existing underground utility easements (gas and
21 power). Using the Walmart Variation for the I-66 Hybrid Route eliminates this issue.
22 Thus, my Remand Direct Schedule 2, Page 7 shows the I-66 Hybrid Route using the
23 Walmart Variation as a Route Variation (in red).

1 However, the Company is aware of two planned developments to the west of the
 2 Walmart that will require modification of the route as it traverses the area west of
 3 Walmart and crosses VA-55 to enter into the Haymarket Substation. These planned
 4 developments consist of an expansion of the Market Center at Haymarket, which is
 5 located adjacent to the Walmart, and the James Madison Marketplace, which will include
 6 the construction of a Home Depot.

7 The Company currently is investigating two possible route variations through this area, as
 8 shown on Remand Direct Schedule 2, Page 7. Variation 1 (yellow dotted line) would
 9 turn south and extend along the parcel boundary between the proposed expansion of the
 10 Market Center at Haymarket and the James Madison Marketplace. This variation would
 11 then turn southwest at different points to cross VA-55 to enter into Haymarket
 12 Substation. Alternatively, Variation 2 (pink dotted line) would turn south and extend
 13 along the property line between the Walmart and the adjacent parcel that would contain
 14 the proposed expansion of the Market Center at Haymarket and then turn southwest to
 15 cross VA-55 to enter into Haymarket Substation. The Company will work with the
 16 developers of these properties to find an optimal route that will minimize impacts to both
 17 planned developments and also will consult with VDOT to determine the best crossing of
 18 VA-55. Should the Commission approve the I-66 Hybrid Route, the Company requests
 19 discretion to implement either Variation 1 or 2, or another suitable variation, as a result of
 20 those discussions with developers and VDOT.

21 Next, in working with the Company's structural engineering group to undertake detailed
 22 engineering of the I-66 Hybrid Route, the proposed alignment was slightly modified in
 23 some locations to accommodate the reality of underground construction wherein large

1 drilling equipment must navigate the chosen route. Although this route, if chosen by the
2 Commission, would still be subject to final engineering, the changes to the I-66 Hybrid
3 Route alignment are shown in red in my Remand Direct Schedule 2, while the light blue
4 line shows the originally proposed route.

5 Specifically, a slight modification was made to the route between mileposts 2.36 and 2.41
6 just west of the transition station for constructability reasons. The route was straightened
7 to remove two sharp angles. This change is shown on Remand Direct Schedule 2, Page 3
8 in red.

9 A similar modification was made to the alignment of the I-66 Hybrid Route between
10 mileposts 3.27 and 3.3. Specifically, the route was straightened in this location to remove
11 a sharp angle for constructability reasons. This change is shown on Remand Direct
12 Schedule 2, Page 5 in red.

13 Finally, I note that the VDOT parking issue discussed above with respect to the I-66
14 Overhead Route also exists on the I-66 Hybrid Route, because the implicated parking
15 areas occur during the segment of the I-66 Hybrid Route that would be overhead. These
16 can be seen on Remand Direct Schedule 2, Pages 1 and 2 (denoted as "Proposed Park &
17 Ride").

18 For all route variations subject to future coordination with VDOT and/or private
19 developers, the Company will attempt to obtain further information in advance of the
20 remand hearing.

21 Should the Commission approve the I-66 Hybrid Route, the Company requests approval

1 of the route (with Route Variations) as shown in my Remand Direct Schedule 2.

2 **Q. Does the I-66 Hybrid Route cross any County-owned or -controlled property?**

3 A. Yes. As can be seen on Remand Direct Schedule 2, Pages 5 and 6, the I-66 Hybrid Route
4 crosses a county road dedicated to the Town of Haymarket and Prince William County
5 via Piedmont Mews, LLC subdivision in the area of Jordan Lane. Additionally, as can be
6 seen on Remand Direct Schedule 2, Page 7, the I-66 Hybrid Route crosses an area of
7 County-dedicated land on the south side of VA-55 to the north of the proposed
8 Haymarket Substation. If the Project is approved by the Commission for construction
9 and operation along the I-66 Hybrid Route, the Company will request the necessary
10 authority from Prince William County and the Town of Haymarket to acquire the
11 necessary easements. Although the Company cannot be certain that the County and
12 Town will grant the requisite authority, the Company believes, based on the many public
13 statements and resolutions, that these entities will grant authority to acquire the necessary
14 easements if underground construction is approved by the Commission.

15 **Q. Do you have any further comments regarding the I-66 Hybrid Route?**

16 A. The I-66 Hybrid Route also requires the construction of a new transition station at the
17 point along the route where the line would transition from overhead to underground –
18 milepost 2.2, as shown on Remand Direct Schedule 2, Page 3. As presented during the
19 case, the Company conceptually planned for this transition station to be located on a
20 property currently owned by Southview 66, LLC. To the Company’s knowledge, no
21 development has taken place on this piece of property that would prevent construction of
22 the transition station.

1 The Company has also undertaken additional review of potential sites along this route for
2 staging and laydown of equipment, and has identified certain parcels that may be suitable
3 in various locations along the route, including the area of Jefferson Street and Jordan
4 Lane. For completeness of the record, these areas are also depicted within Remand
5 Direct Schedule 2, Pages 4-7 (denoted as “Additional Workspace”).

6 **Q. Does this conclude your remand direct testimony?**

7 **A.** Yes, it does.



Remand Direct Schedule 1
I-66 Overhead Variations Map Set
Gainesville to Haymarket 230kV Transmission Line and Substation Project
 Page 1 of 7

Dominion Energy

ERM

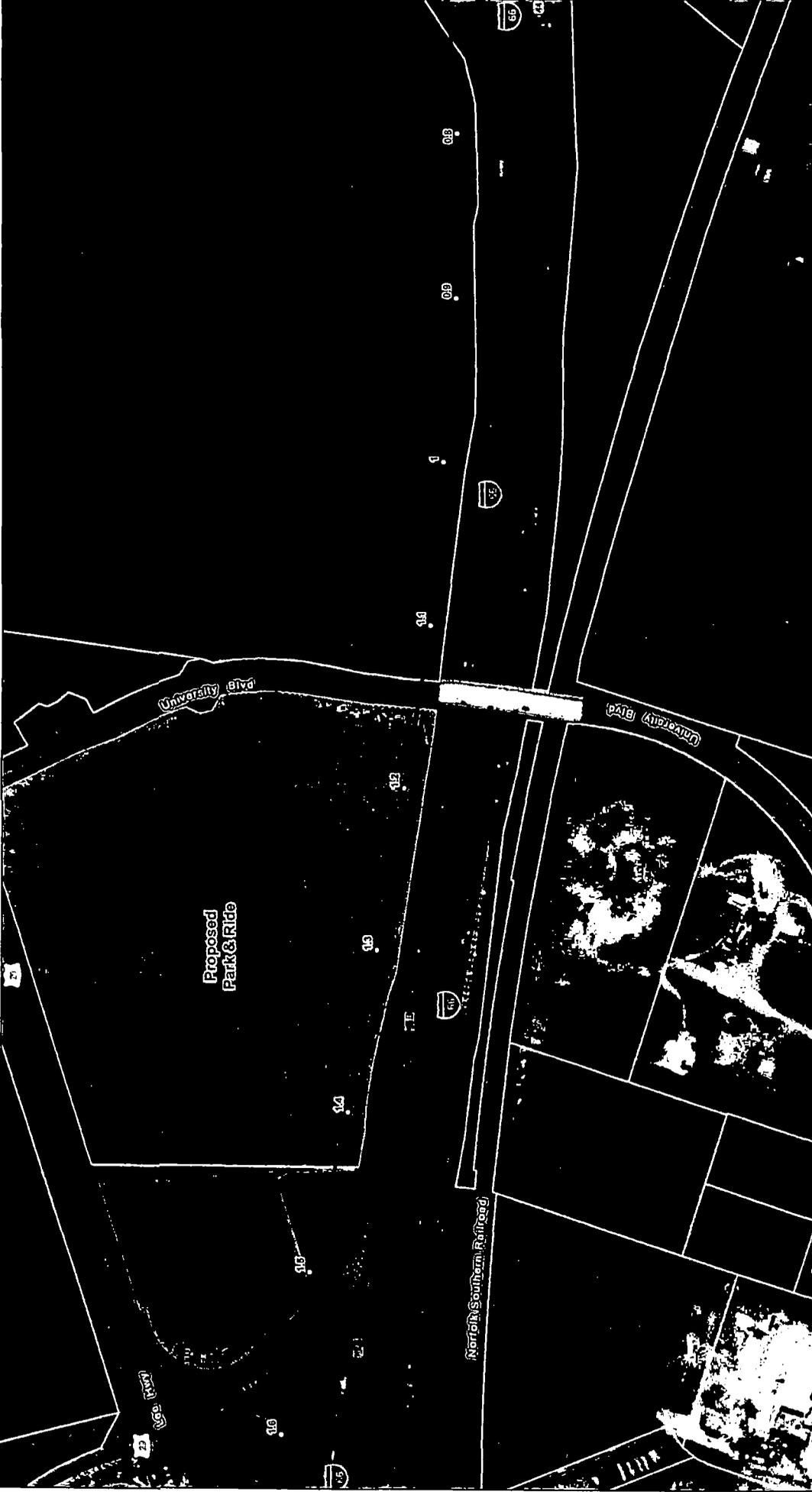
Legend:
 O Milepost
 - Filled - I-66 Overhead Alternative
 - Route Variation
 - Parcel Boundary
 - Proposed VDOT Stormwater Basin
 - Proposed Park & Ride
 - Existing Dominion Transmission Line

Scale: 1:3,600
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Aerial Imagery Date: July 10, 2016

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Milepost
 I-66 Overhead Alternative - Filled
 Route Variation
 Proposed Park & Ride
 Parcel Boundary
 Proposed VDOT Stormwater Basin

1:3,600
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 Aerial Imagery Date: July 10, 2016

Dominion Energy
 Remand Direct Schedule 1
 I-66 Overhead Variations Map Set
 Gainesville to Haymarket 230kV Transmission Line and Substation Project
 Page 2 of 7

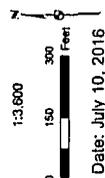
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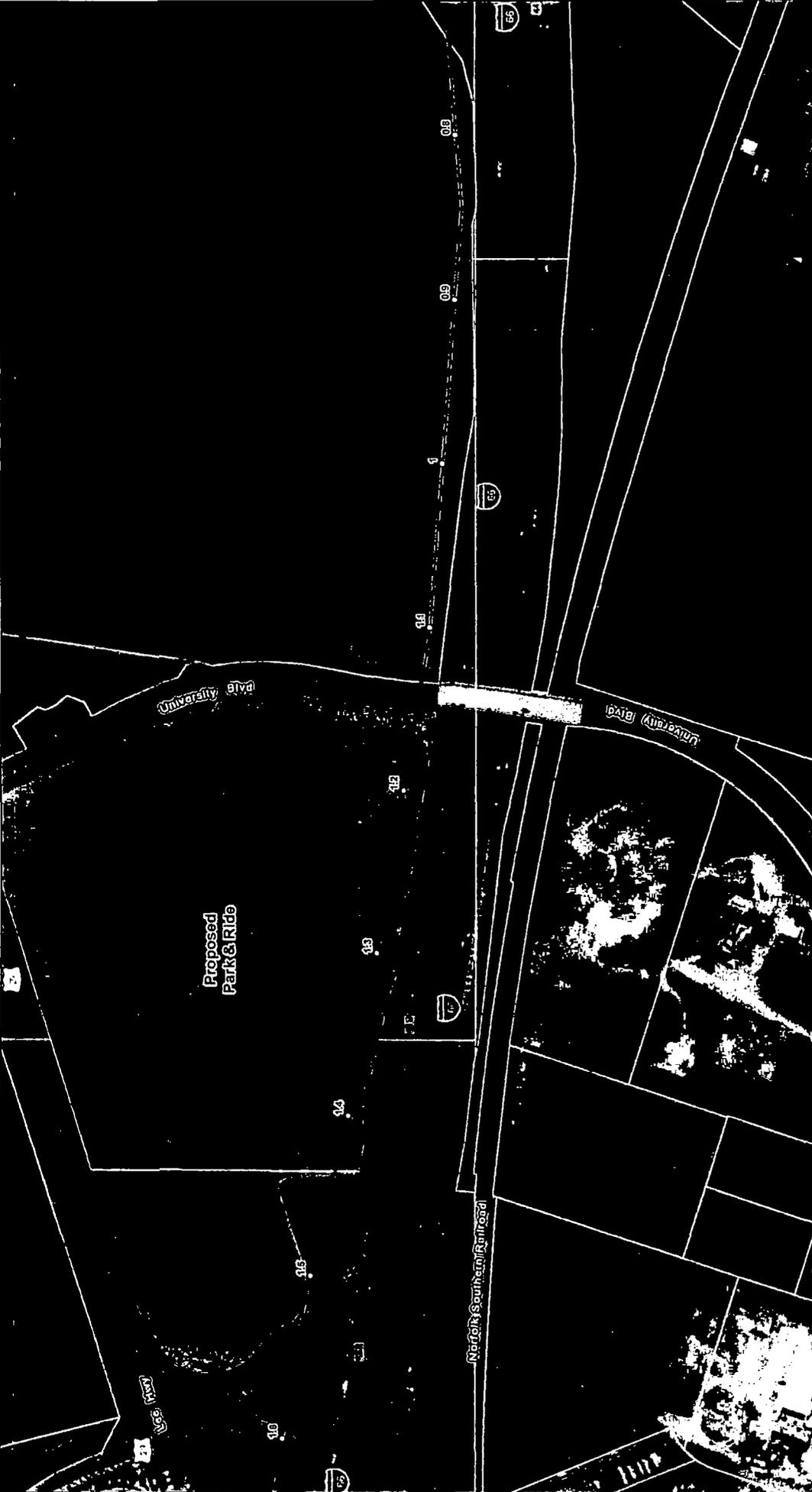


Remand Direct Schedule 1
I-66 Overhead Variations Map Set
Gainesville to Haymarket 230kV Transmission Line and Substation Project
Page 7 of 7



- Milepost
- I-66 Overhead Alternative - Filed
- Route Variation
- Dominion FST Optimization
- △ Parcel Boundary
- △ Proposed Haymarket Substation
- △ Proposed VDOT Stormwater Basin
- ⊠ Road Easement (Prince William County)
- ⊠ Washington Gas and Light Company Easement
- ⊠ VEPCO Electric Easement

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Remand Direct Schedule 2
I-66 Hybrid Variations Map Set
Gainesville to Haymarket 230kV Transmission Line and Substation Project
Page 2 of 7

ERM

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Aerial Imagery Date: July 10, 2016

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Parcel Boundary
Proposed VDOT Stormwater Basin
Proposed Park & Ride

Milepost
I-66 Hybrid Alternative - Filed
Route Variation

Domination Energy

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- 0 Milepost
- I-66 Hybrid Alternative - Filed
- Route Variation
- Parcel Boundary
- Proposed VDOT
- Stormwater Basin
- Additional Workspace



Aerial Imagery Date: July 10, 2016

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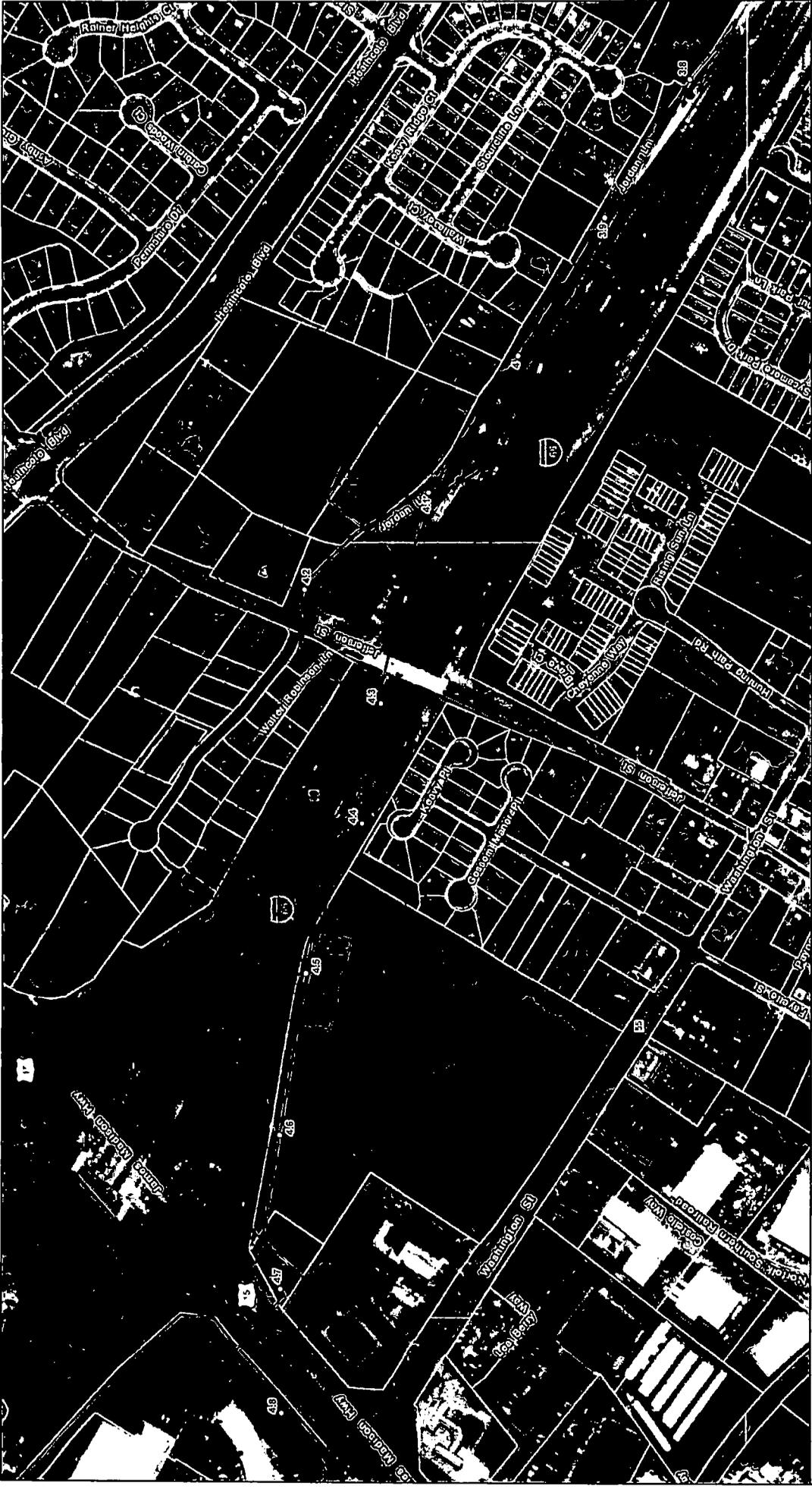


Remand Direct Schedule 2
I-66 Hybrid Variations Map Set
Gainesville to Haymarket 230kV Transmission Line and Substation Project
Page 4 of 7



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Remand Direct Schedule 2
I-66 Hybrid Variations Map Set
Gainesville to Haymarket 230KV Transmission Line and Substation Project
 Page 6 of 7

Denham Energy

ERM

Scale: 1:3,600
 Aerial Imagery Date: July 10, 2016

Legend:

- Parcel Boundary
- Proposed VDOT Stormwater Basin
- Additional Workspace
- Market Center at Haymarket
- Milepost
- I-66 Hybrid Alternative - Filed
- Route Variation
- Jordan Lane Road Easement (Prince William County and Town of Haymarket)

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Remand Direct Schedule 2
I-66 Hybrid Variations Map Set
Gainesville to Haymarket 230kV Transmission Line and Substation Project

Page 7 of 7



Dominion Energy



ERM

Scale: 1:3,600

0 150 300 Feet

Aerial Imagery Date: July 10, 2016

Legend:

- Milepost
- ▬ I-66 Hybrid Alternative - Filled
- ▬ Route Variation
- ▬ Road Easement (Prince William County)
- ▬ Parcel Boundary
- ▬ Proposed VDOT Stormwater Basin
- ▬ Additional Workspace
- ▬ Proposed Office/Hotel
- ▬ Proposed Haymarket Substation
- ▬ James Madison Marketplace
- ▬ Market Center at Haymarket

FILE: M:\GIS\2016\04\230kV\MapSet\MapSet_071016.mxd | REVISION: 04/23/2016 | SCALE: 1:3,600 when printed at 11x17