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SHEET NO. 1 OF 32

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Civil

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OVERALL SITE PHOTO



PROJECT INFORMATION

CIVIL ENGINEER:

DEWBERRY ENGINEERS INC.
4805 LAKE BROOK DRIVE, SUITE 200
GLEN ALLEN, VA 23060

CONTACT: KEN WAGNER, SENIOR PROJECT MANAGER
PHONE: 804-205-3350
FAX: 804-290-7928
EMAIL: kwagner@dewberry.com

APPLICANT:

DOMINION VIRGINIA POWER
701 EAST CARY STREET, 12TH FLOOR
RICHMOND, VA 23219

CONTACT: COURTNEY FISHER, PERMIT SPECIALIST
PHONE: 804-771-6408
FAX: 804-771-6303
EMAIL: courtney.r.fisher@dom.com

Idylwood Substation

Fairfax County, VA

Special Exception Plat
and 2232 Plan

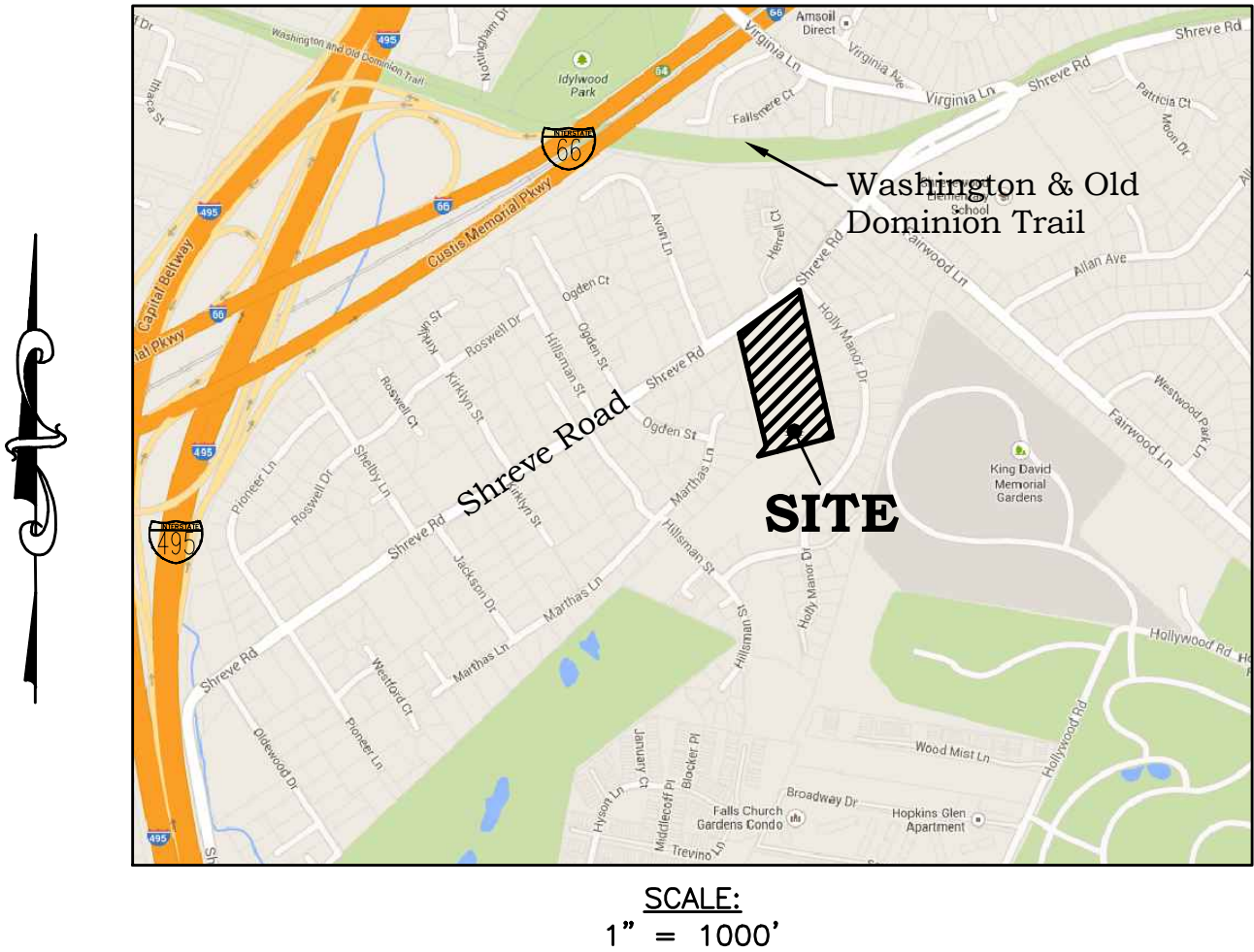
Client:
Dominion Virginia Power



CODE INFORMATION

TAX MAP #: 0492-01-0151, 0492-12-0001A	MINIMUM LOT SIZE	REQUIRED 10,500 S.F.	PROVIDED 311,367 S.F.
ZONING: R-3	MINIMUM LOT WIDTH	80 FT.	425 FT.
DISTRICT: PROVIDENCE	MAXIMUM BUILDING HEIGHT	EXEMPT	32± FT.
USE: LIGHT PUBLIC UTILITY USE (CATEGORY 1), ELECTRIC SUBSTATION, TELECOMMUNICATIONS FACILITY	MAXIMUM FLOOR AREA RATIO	EXEMPT	.043
PARCEL AREA: 7.148 ACRES (TOTAL)	OPEN SPACE	25%	33%

VICINITY MAP



SCALE:
1" = 1000'

SE 2014-PR-032



Dewberry Engineers Inc.
4805 Lake Brook Drive, Suite 200
Glen Allen, Virginia 23060
PHONE: 804.290.7957
FAX: 804.290.7928
www.dewberry.com



DOMINION VIRGINIA POWER
Idylwood Substation
SE 2014-PR-032
SPECIAL EXCEPTION PLAT
2232 PLAN
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA



KEY PLAN

SCALE

No.	DATE	BY	Description

REVISIONS	
DRAWN BY	BKJ
APPROVED BY	KWW
CHECKED BY	KWW
DATE	APRIL 2015
TITLE	

COVER SHEET

PROJECT NO. 50058411

1

SHEET NO. 1 OF 21

FOR INFORMATION ONLY

SHEET 2 OF 32

A

1. TREE PRESERVATION: A DEVIATION FROM PUBLIC FACILITY MANUAL (PFM) 12-0508.3A (3). A DEVIATION REQUEST IS BEING SUBMITTED FOR A CHANGE FROM THE TREE PRESERVATION TARGET. THIS REQUEST IS REQUIRED DUE TO THE CLEARING, GRADING AND PROVISION OF UTILITIES FOR THE DEVELOPMENT PROGRAM FOR AN ELECTRICAL SUBSTATION PRECINCT. THE ACCOMMODATION OF THE TREE PRESERVATION TARGET, THE FEDERAL ENERGY REGULATORY COMMISSION (FERC) AND NORTH AMERICAN ELECTRICAL RELIABILITY (NERC) TREE MANAGEMENT STANDARDS DOES NOT ALLOW LARGE TREES TO REMAIN IN AND AROUND THE SUBSTATION AND TRANSMISSION LINES. SEE EXISTING VEGETATION MAP SHEET FOR DETAILS.
2. REDUCTION IN TRANSITIONAL SCREENING: A MODIFICATION REQUEST IS BEING SUBMITTED FOR A 2/3 REDUCTION IN THE TRANSITIONAL SCREENING YARD WIDTH. SEE PROPOSED LANDSCAPING SHEET FOR DETAILS.
3. FENCE/WALL HEIGHT: A WAIVER REQUEST IS BEING SUBMITTED FOR THE HEIGHT OF THE SCREENING WALL AROUND THE PERIMETER OF THE SUBSTATION PROPERTY. SEE PROPOSED FACILITY SHEET FOR WALL HEIGHTS (16' TO 20' HIGH, MEASURED FROM THE OUTSIDE OF THE WALL)

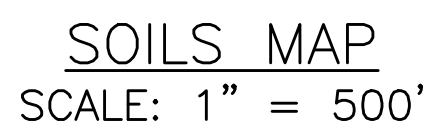
FRONT YARD :  A 40° WITH A BUILDING HEIGHT OF $32'$, THE FRONT YARD = $27'$ BUT NOT LESS THAN $30'$ (USE $30'$)

SIDE YARD :  B 35° WITH A BUILDING HEIGHT OF $32'$, THE SIDE YARD = $22'$ BUT NOT LESS THAN $10'$ (USE $22'$)

REAR YARD :  C 35° WITH A BUILDING HEIGHT OF $32'$, THE REAR YARD = $22'$ BUT NOT LESS THAN $25'$ (USE $25'$)

ANGLE OF BULK PLANE FOR R-3 DISTRICT

MINIMUM REQUIRED YARD FOR BUILDING WITH $32'$ HEIGHT



30A: CODORUS AND HATBORO SOILS
95: URBAN LAND
101: URBAN LAND—WHEATON COMPLEX
104B: WHEATON—FAIRFAX COMPLEX
105B: WHEATON—GLENELG COMPLEX
108B: WHEATON—SUMERDUCK COMPLEX



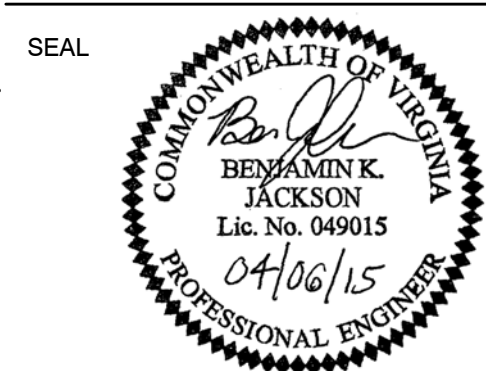
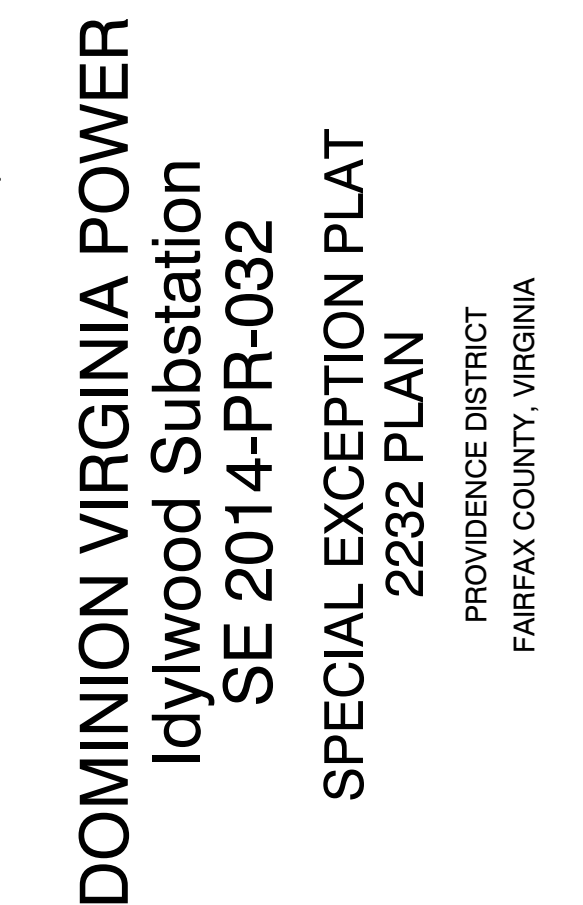
NOT TO SCALE
NOTE: SIGNS WILL BE SPACED NOMINALLY EVERY 30' ALONG WALL.

1. THE STAGING AND PARKING OF CONSTRUCTION VEHICLES SHALL OCCUR ON THE PROPERTY, INCLUDING PERSONAL VEHICLES UTILIZED BY CONSTRUCTION WORKERS, THE HOURS OF CONSTRUCTION SHALL BE POSTED IN ENGLISH AND IN SPANISH AND SHALL BE SET FORTH IN THE DEVELOPMENT CONDITIONS. THE APPLICANT SHALL PROVIDE THE PROVIDENCE DISTRICT SUPERVISOR'S OFFICE WITH A POINT OF CONTACT FOR CONSTRUCTION RELATED ISSUES. THE APPLICANT SHALL PROVIDE AN INITIAL RESPONSE TO CONSTRUCTION RELATED ISSUES WITHIN 24 HOURS OF RECEIVING NOTICE.

1. PROPOSED EQUIPMENT, WALL, LANDSCAPING, STORMWATER FACILITIES AND IMPROVEMENTS SHOWN ON THIS PLAN ARE SUBJECT TO FINAL ENGINEERING. FINAL CONFIGURATION OF STORMWATER MANAGEMENT DEVICES (SHOWN OR EQUIVALENT) TO BE DETERMINED DURING SITE PLAN REVIEW BUT SHALL REMAIN IN SUBSTANTIAL CONFORMANCE AS DEPICTED.



SUBSTATION SIGNAGE LEGEND



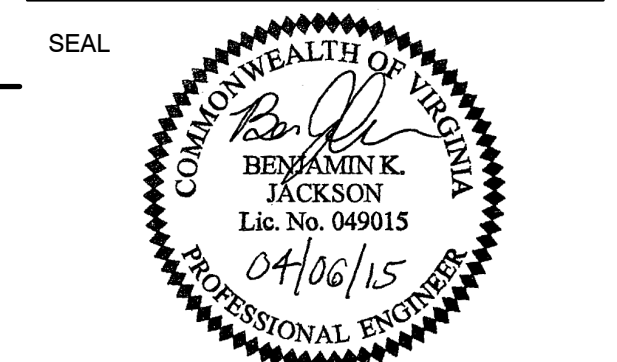
SCALE

No.	DATE	BY	Description

DRAWN BY	BJKJ
APPROVED BY	KWW
CHECKED BY	KWW
DATE	APRIL 2015
TITLE	

PROJECT NO. 50058411

2 OF 21



KEY PLAN

SCALE

0' 30' 60'

GRAPHIC SCALE

No.	DATE	BY	Description

REVISIONS

DRAWN BY BKJ

APPROVED BY KWW

CHECKED BY KWW

DATE APRIL 2015

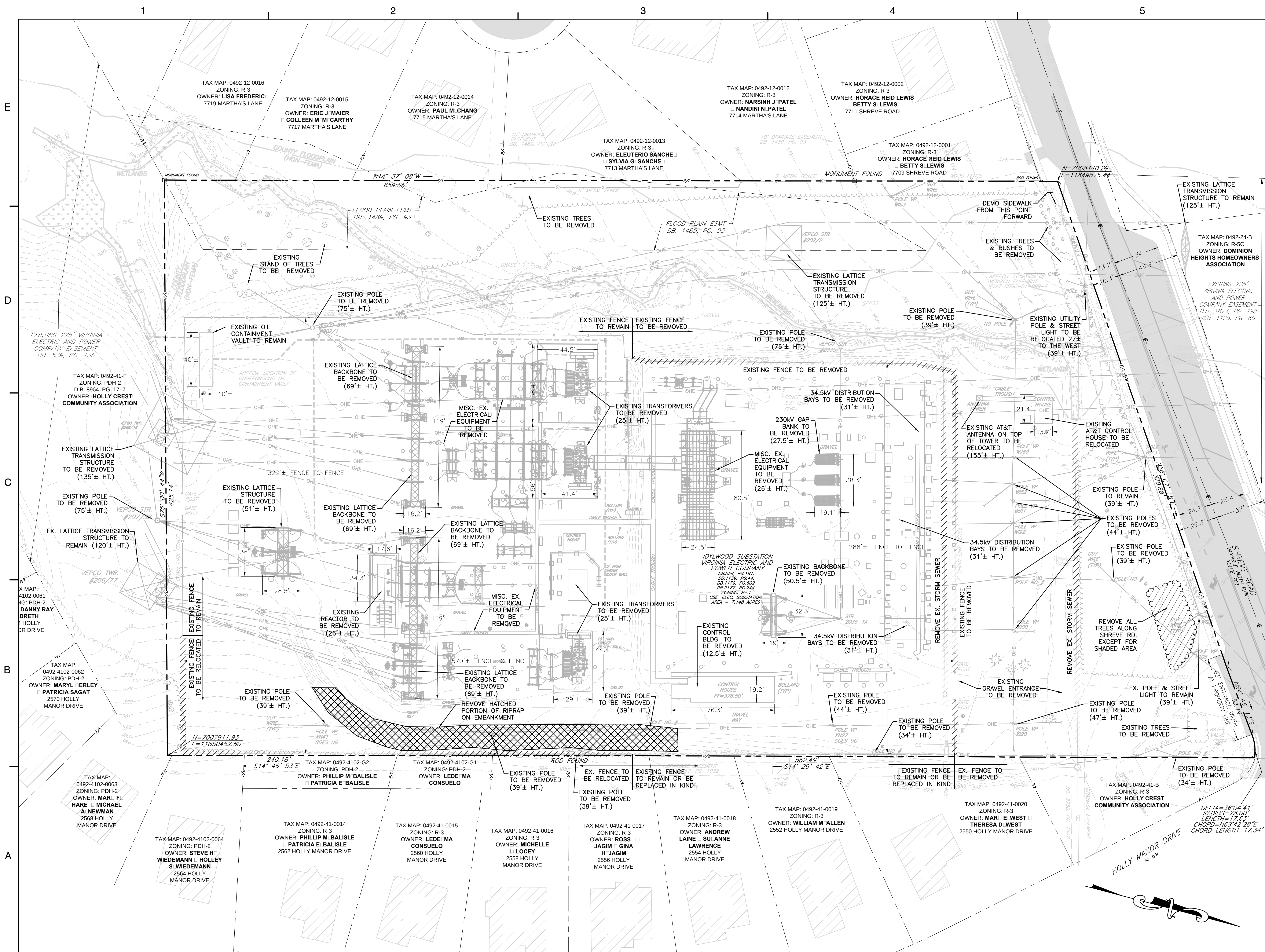
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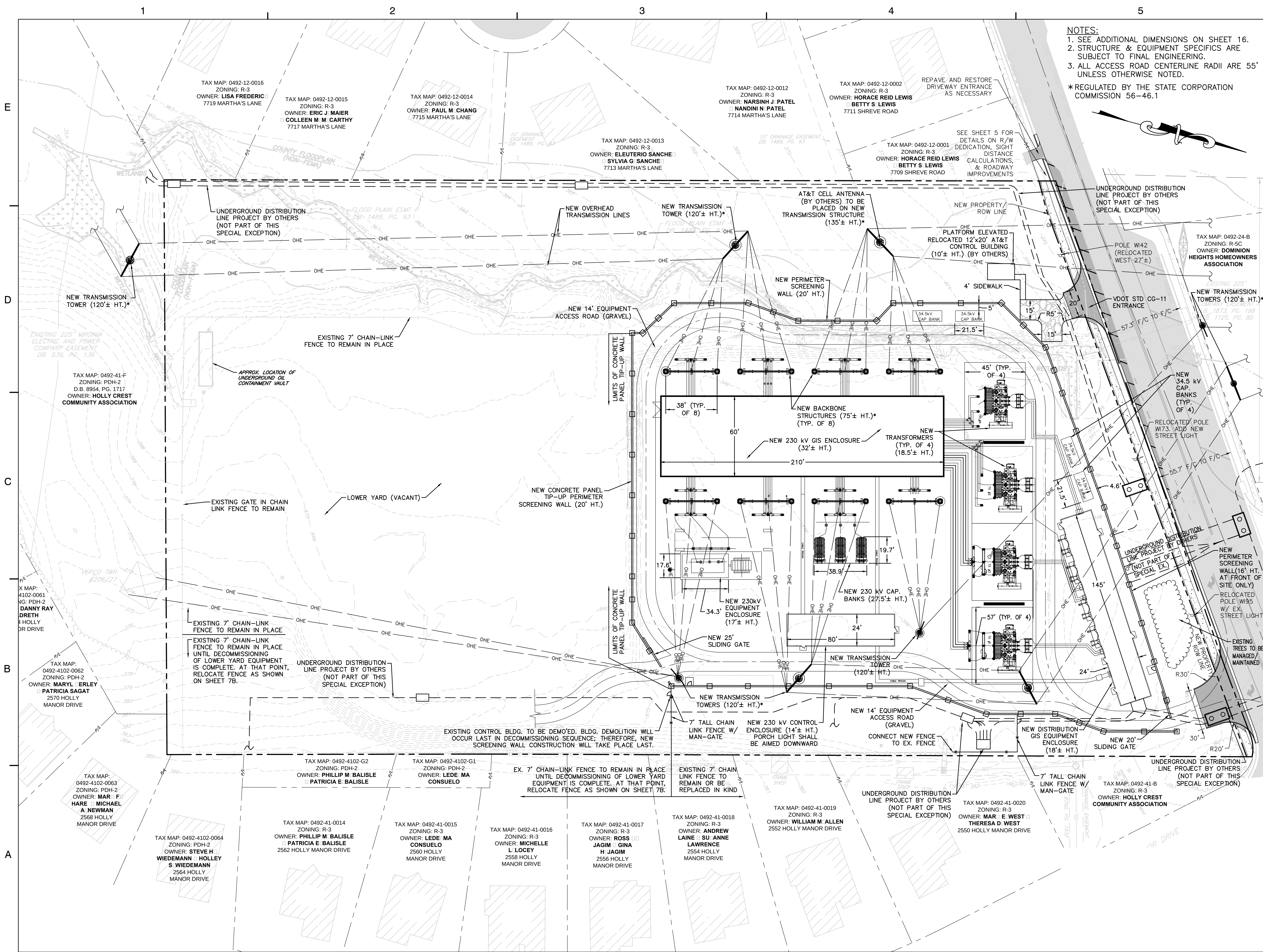
EXISTING CONDITIONS & DEMOLITION PLAN

PROJECT NO. 50058411

SHEET NO. 3 OF 21

FOR INFORMATION ONLY SHEET 4 OF 32





NOTES:
1. SEE ADDITIONAL DIMENSIONS ON SHEET 16.
2. STRUCTURE & EQUIPMENT SPECIFICS ARE SUBJECT TO FINAL ENGINEERING.
3. ALL ACCESS ROAD CENTERLINE RADII ARE 55' UNLESS OTHERWISE NOTED.
*REGULATED BY THE STATE CORPORATION COMMISSION 56-46.1

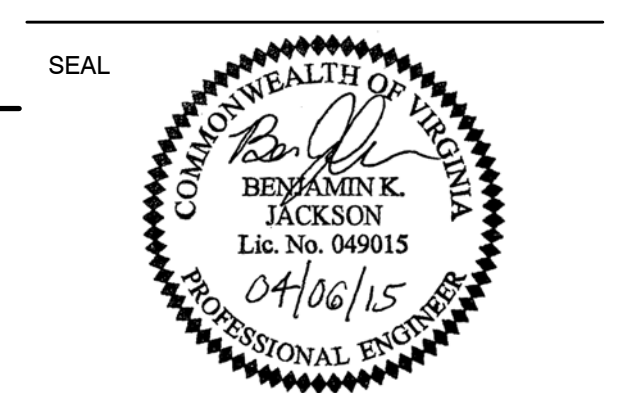


Dewberry Engineers Inc.
4805 Lake Brook Drive, Suite 200
Glen Allen, Virginia 23060
PHONE: 804.290.7957
FAX: 804.290.7928
www.dewberry.com



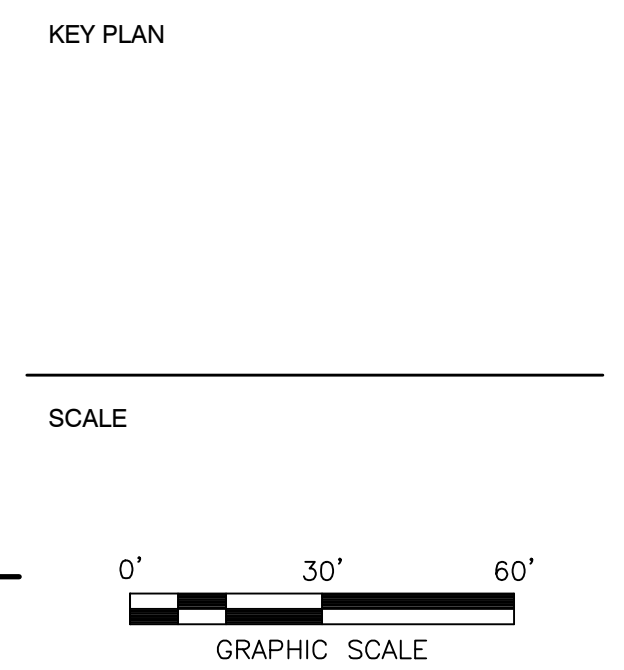
DOMINION VIRGINIA POWER
Idylwood Substation
SE 2014-PR-032
SPECIAL EXCEPTION PLAT
2232 PLAN
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEAL



KEY PLAN

SCALE

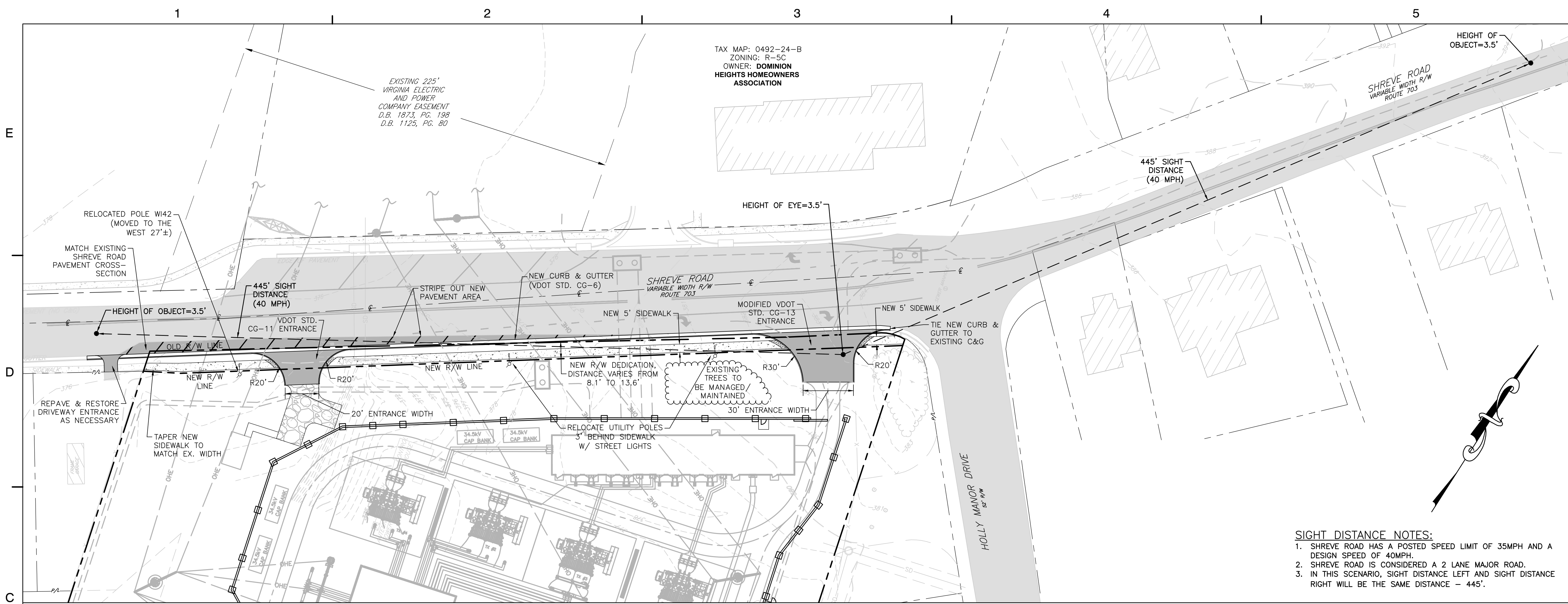


GRAPHIC SCALE

No.	DATE	BY	Description
REVISIONS			
DRAWN BY BKJ			
APPROVED BY KWW			
CHECKED BY KWW			
DATE APRIL 2015			
TITLE			

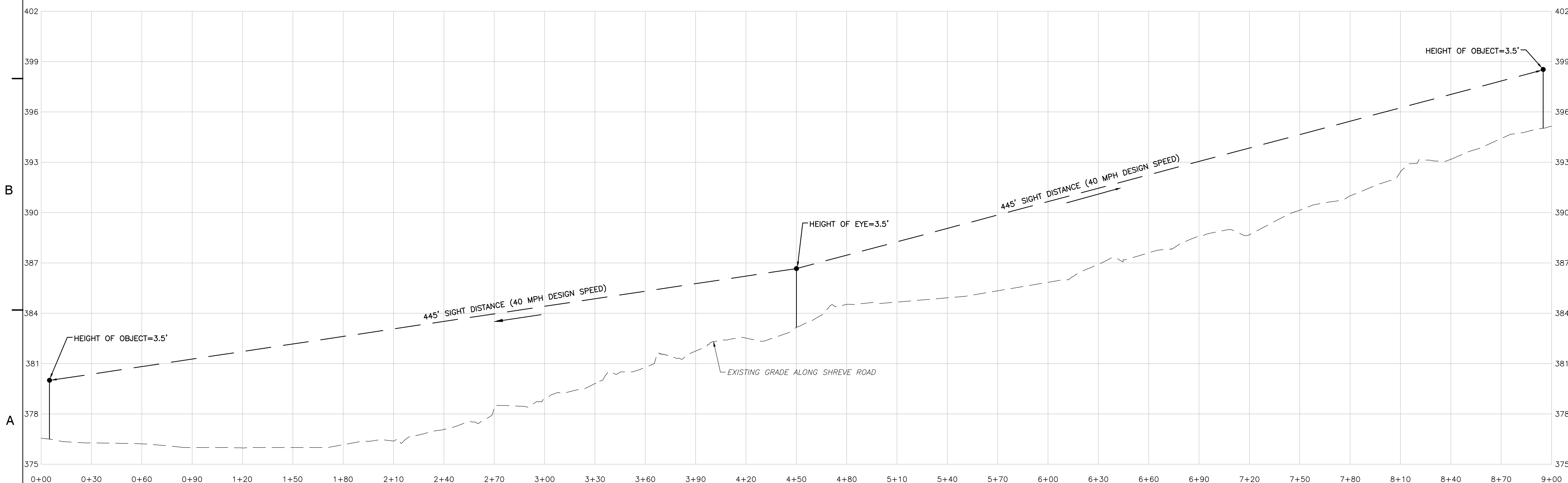
PROPOSED FACILITY PLAN

PROJECT NO. 50058411



SHREVE ROAD IMPROVEMENTS AND SIGHT DISTANCE PLAN

SCALE:
H: 1" = 30'



SUBSTATION ENTRANCE - SIGHT DISTANCE PROFILE

SCALES:
H: 1" = 30', V: 1" = 3'

SIGHT DISTANCE NOTES:

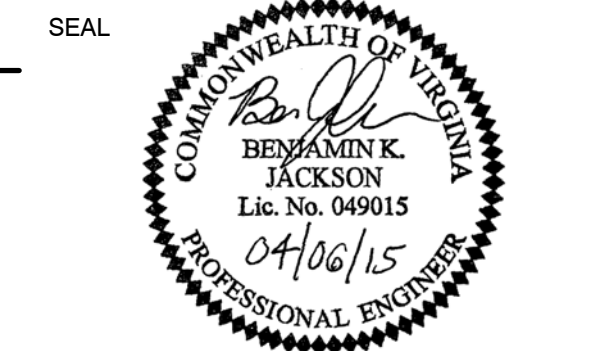
1. SHREVE ROAD HAS A POSTED SPEED LIMIT OF 35MPH AND A DESIGN SPEED OF 40MPH.
2. SHREVE ROAD IS CONSIDERED A 2 LANE MAJOR ROAD.
3. IN THIS SCENARIO, SIGHT DISTANCE LEFT AND SIGHT DISTANCE RIGHT WILL BE THE SAME DISTANCE - 445'.



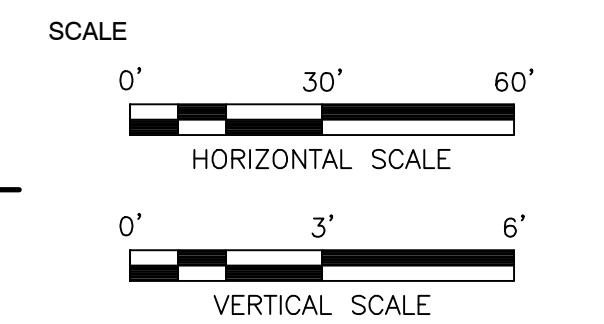
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DOMINION VIRGINIA POWER
Idylwood Substation
SE 2014-PR-032
SPECIAL EXCEPTION PLAT
2232 PLAN
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA



KEY PLAN



No.	DATE	BY	Description

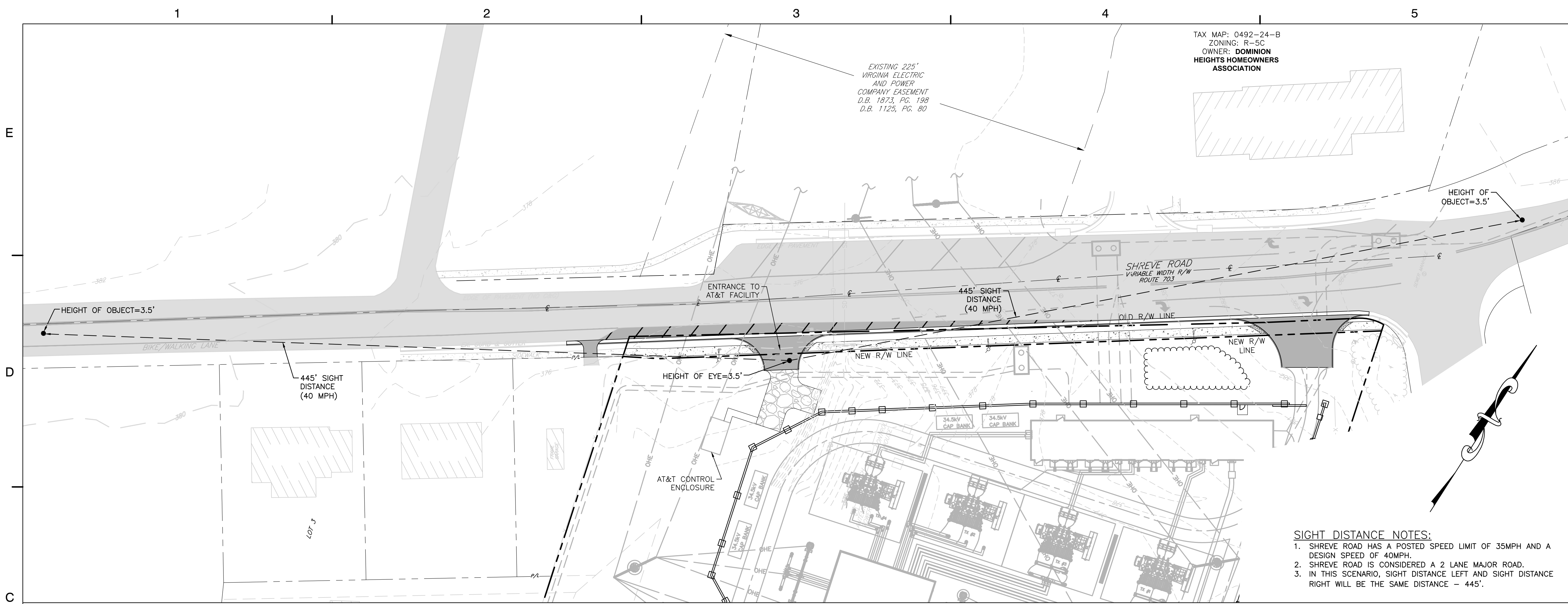
DRAWN BY	BKJ
APPROVED BY	KWW
CHECKED BY	KWW
DATE	APRIL 2015

TITLE
**ROADWAY
IMPROVEMENTS
& SIGHT
DISTANCE PLAN**

PROJECT NO. 50058411

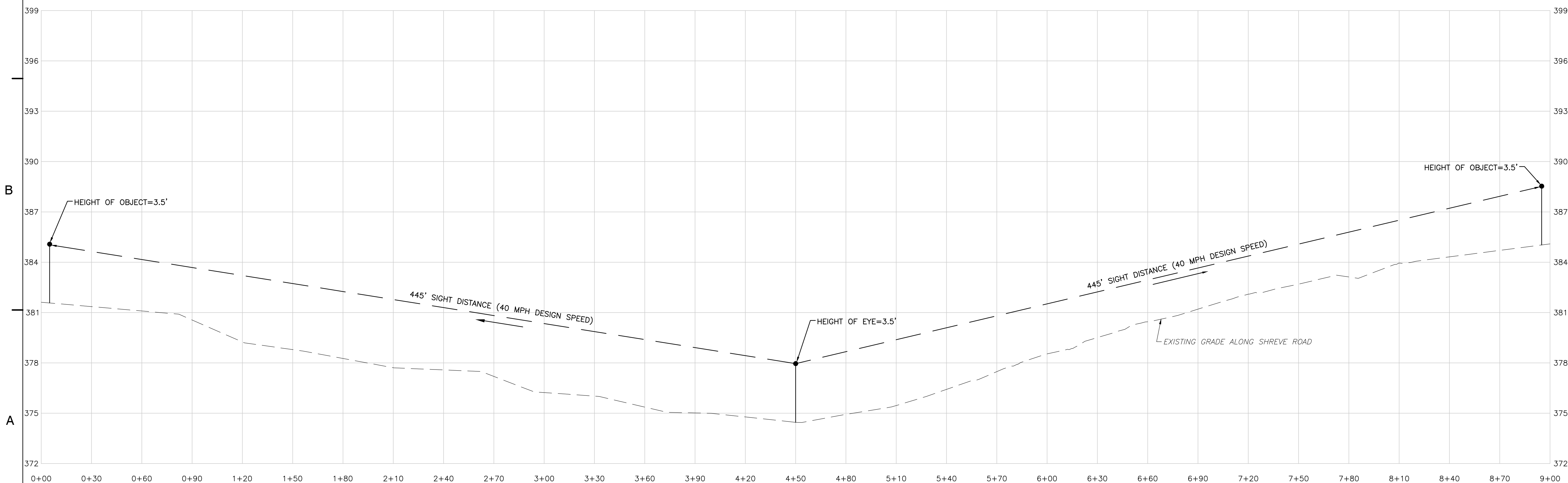
5

SHEET NO. 5 OF 21



AT&T ENTRANCE - SIGHT DISTANCE PLAN

SCALE:
H: 1" = 30'



AT&T ENTRANCE - SIGHT DISTANCE PROFILE

SCALES:
H: 1" = 30', V: 1" = 3'

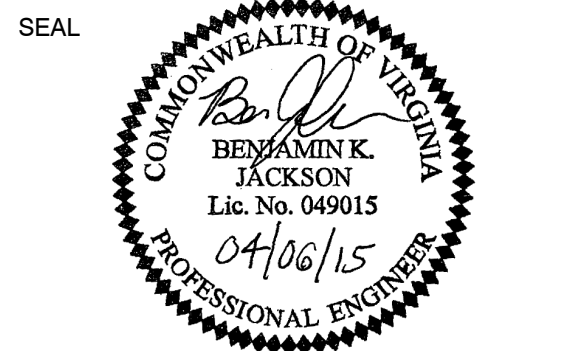
- SIGHT DISTANCE NOTES:
1. SHREVE ROAD HAS A POSTED SPEED LIMIT OF 35MPH AND A DESIGN SPEED OF 40MPH.
 2. SHREVE ROAD IS CONSIDERED A 2 LANE MAJOR ROAD.
 3. IN THIS SCENARIO, SIGHT DISTANCE LEFT AND SIGHT DISTANCE RIGHT WILL BE THE SAME DISTANCE - 445'.



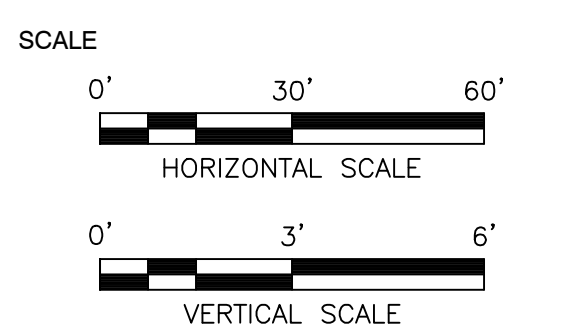
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PHONE: 804.290.7957
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DOMINION VIRGINIA POWER
Idylwood Substation
SE 2014-PR-032
SPECIAL EXCEPTION PLAT
2232 PLAN
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA



KEY PLAN

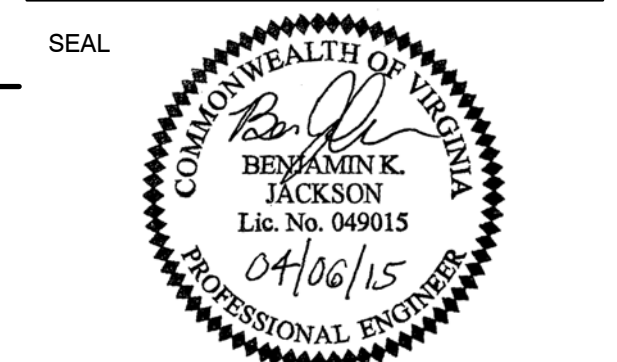


No.	DATE	BY	Description

REVISIONS	
DRAWN BY	BKJ
APPROVED BY	KWW
CHECKED BY	KWW
DATE	APRIL 2015
TITLE	

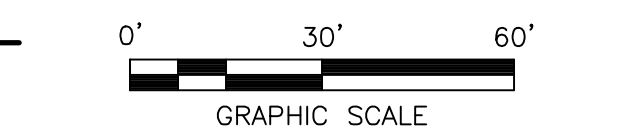
AT&T ENTRANCE
SIGHT DISTANCE
PLAN

PROJECT NO. 50058411



KEY PLAN

SCALE



No.	DATE	BY	Description

REVISIONS

DRAWN BY	BJK
APPROVED BY	KWW
CHECKED BY	KWW
DATE	APRIL 2015
TITLE	

UPPER YARD GRADING PLAN

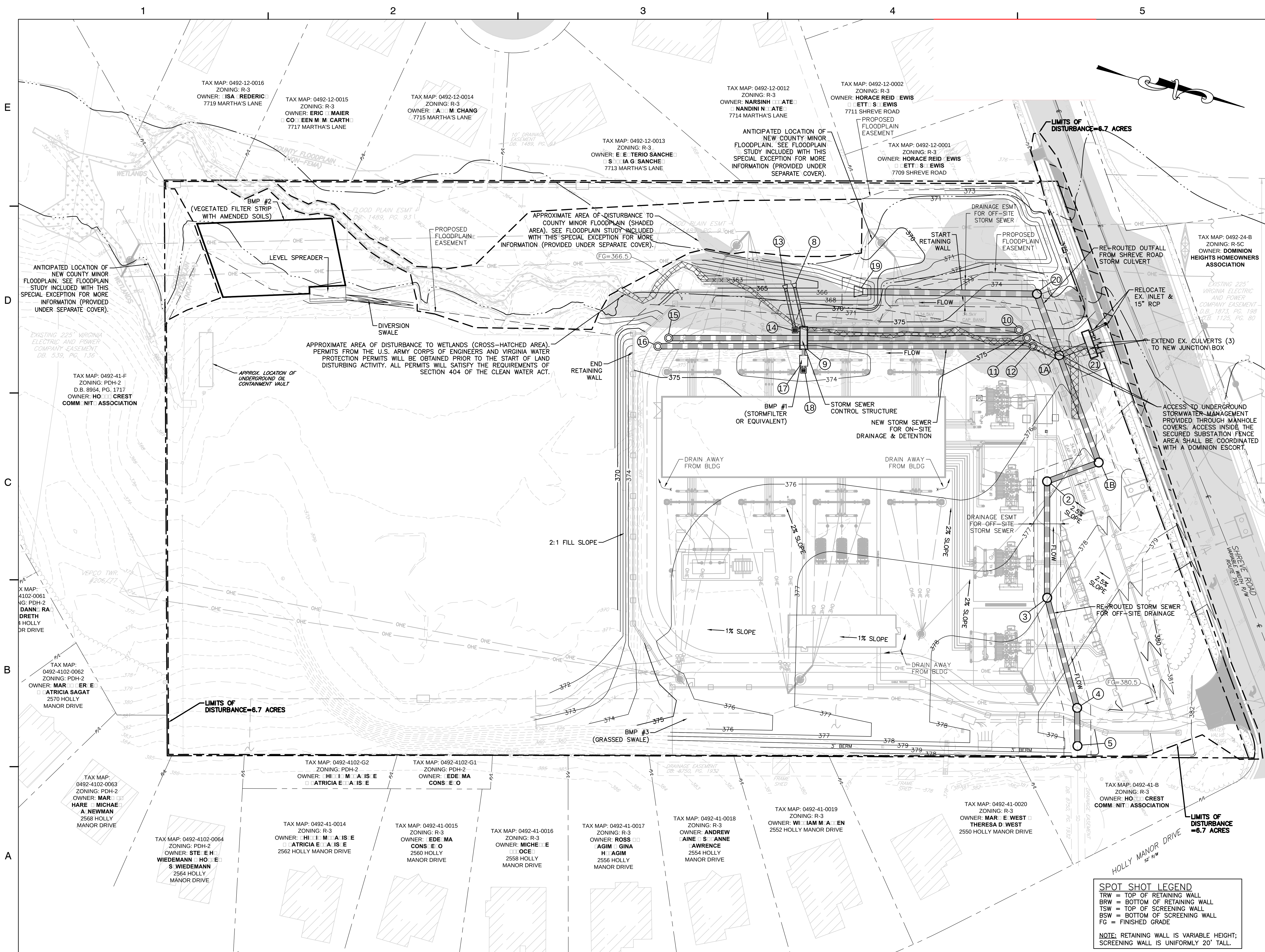
PROJECT NO. 50058411

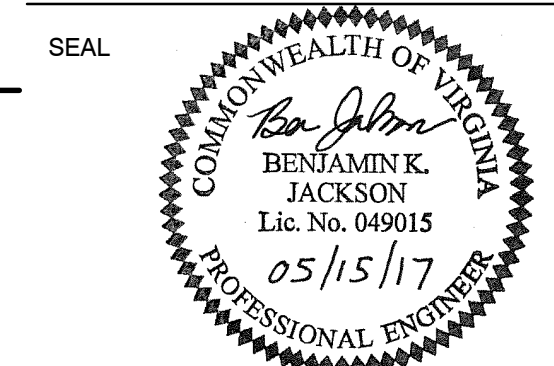
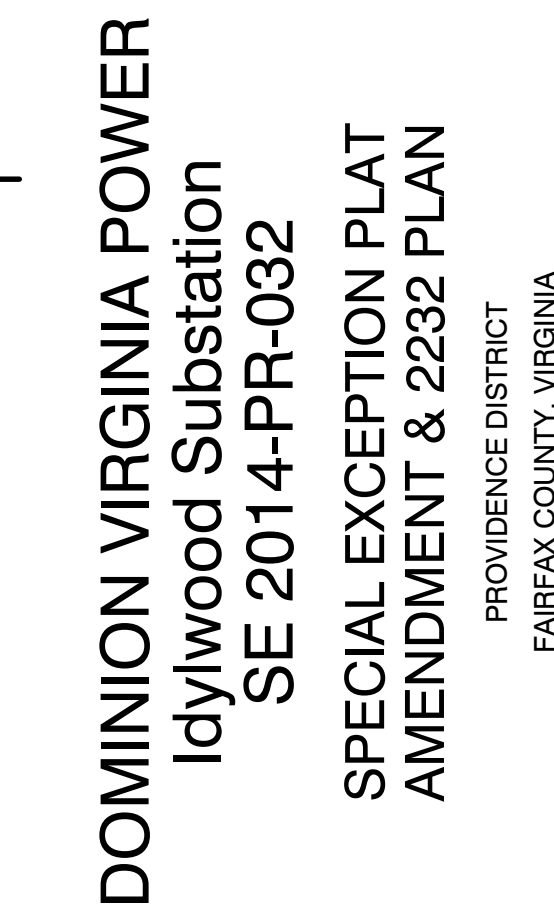
7A

SHEET NO. 7 OF 21

FOR INFORMATION ONLY

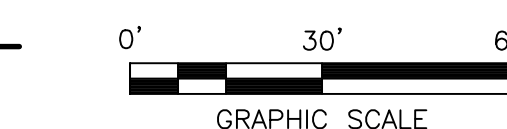
SHEET 9 OF 32





KEY PLAN

SCALE



No.	DATE	BY	Description

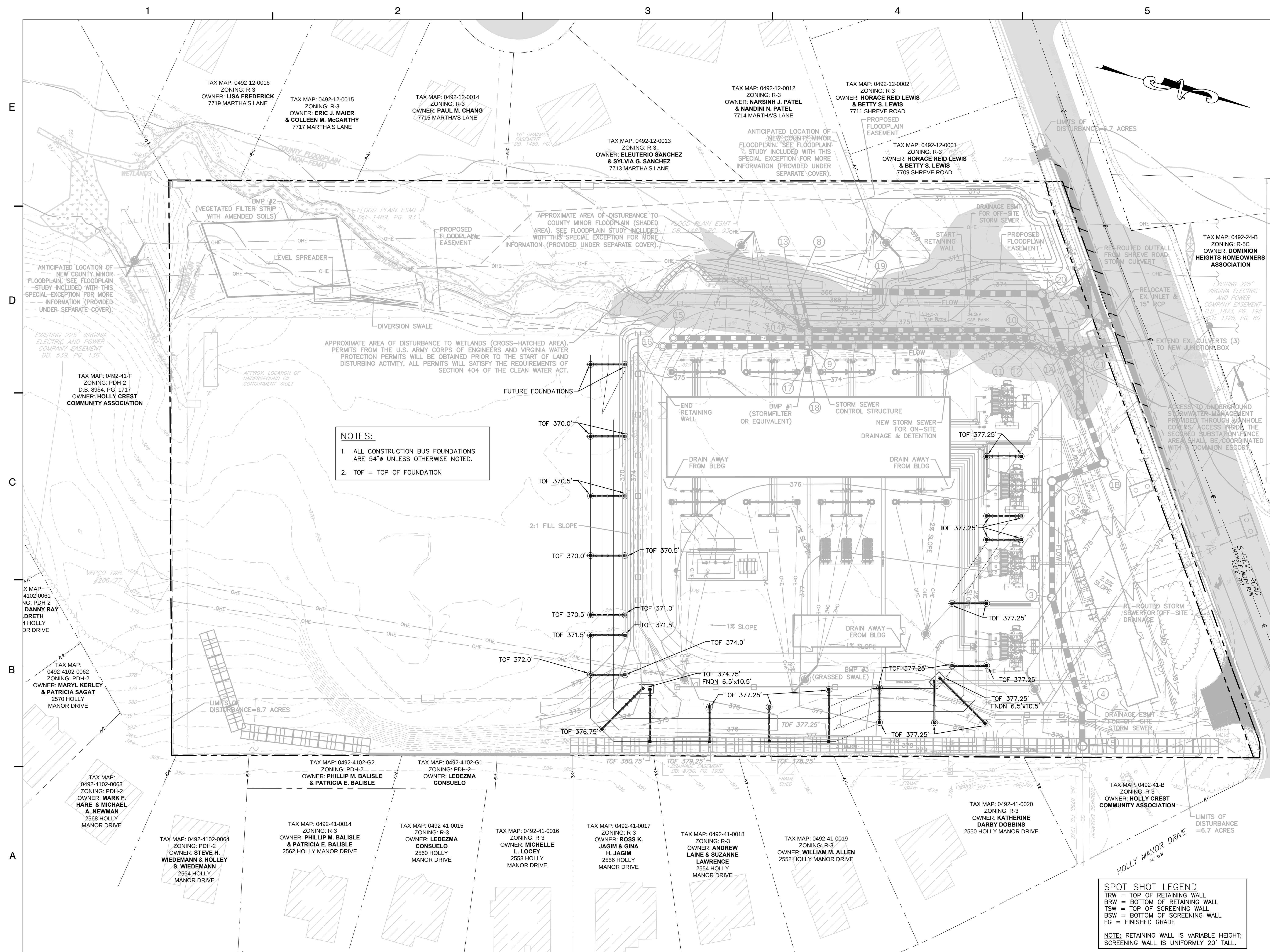
DRAWN BY	BKJ
APPROVED BY	KWW
CHECKED BY	KWW
DATE	MAY 2017
TITLE	

UPPER YARD GRADING PLAN

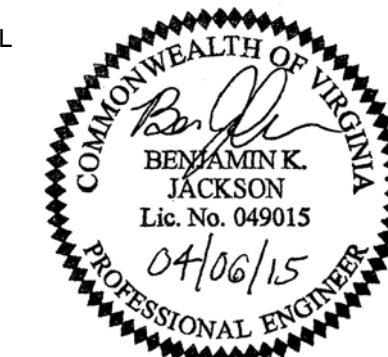
PROJECT NO. 50058411

7A-SEA

SHEET NO. 10 OF 32

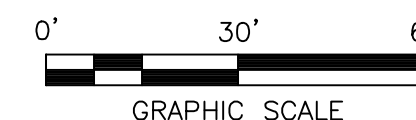


SEAL



KEY PLAN

SCALE



No.	DATE	BY	Description

REVISIONS			
DRAWN BY	BKJ		
APPROVED BY	KWW		
CHECKED BY	KWW		
DATE	APRIL 2015		
TITLE			

LOWER YARD GRADING PLAN

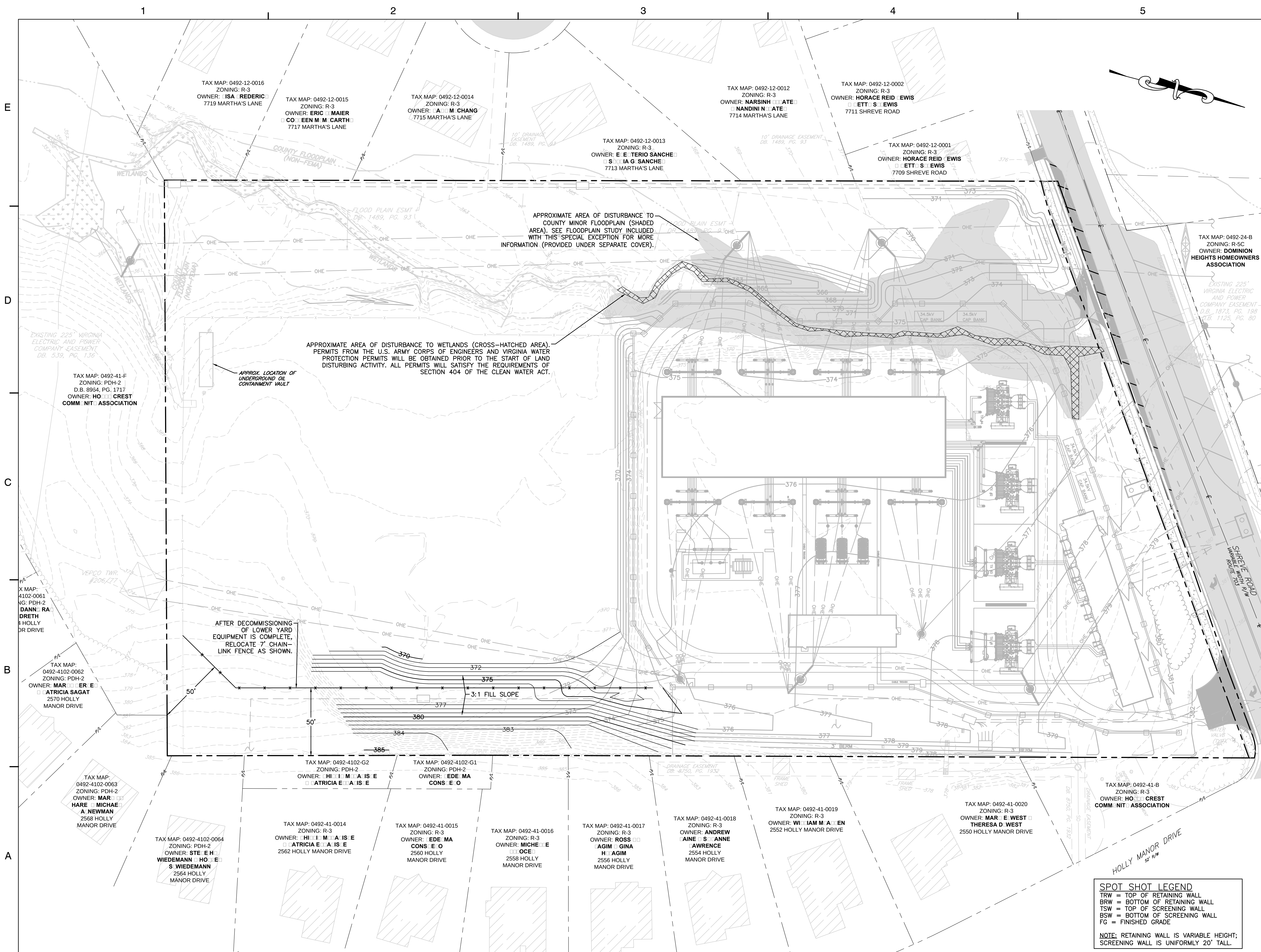
PROJECT NO. 50058411

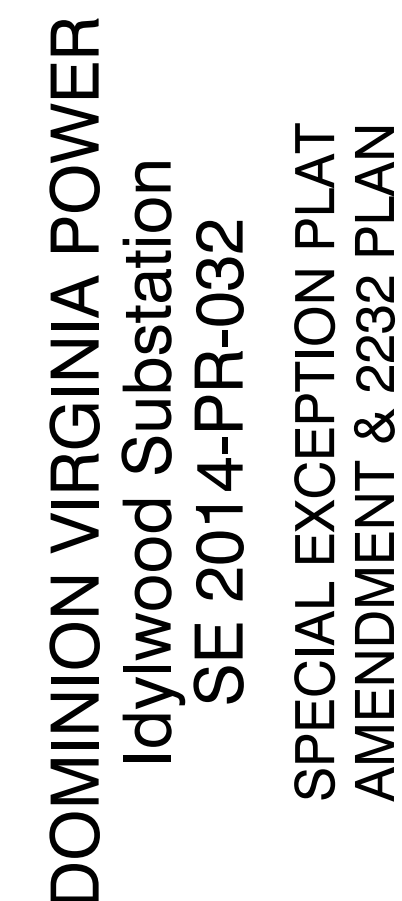
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SHEET NO.

8 OF 21

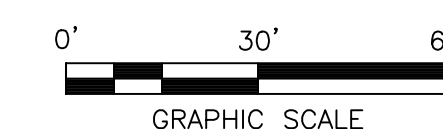
FOR INFORMATION ONLY





KEY PLAN

SCALE



No.	DATE	BY	Description

DRAWN BY BKJ

APPROVED BY KWW

CHECKED BY KWW

DATE MAY 2017

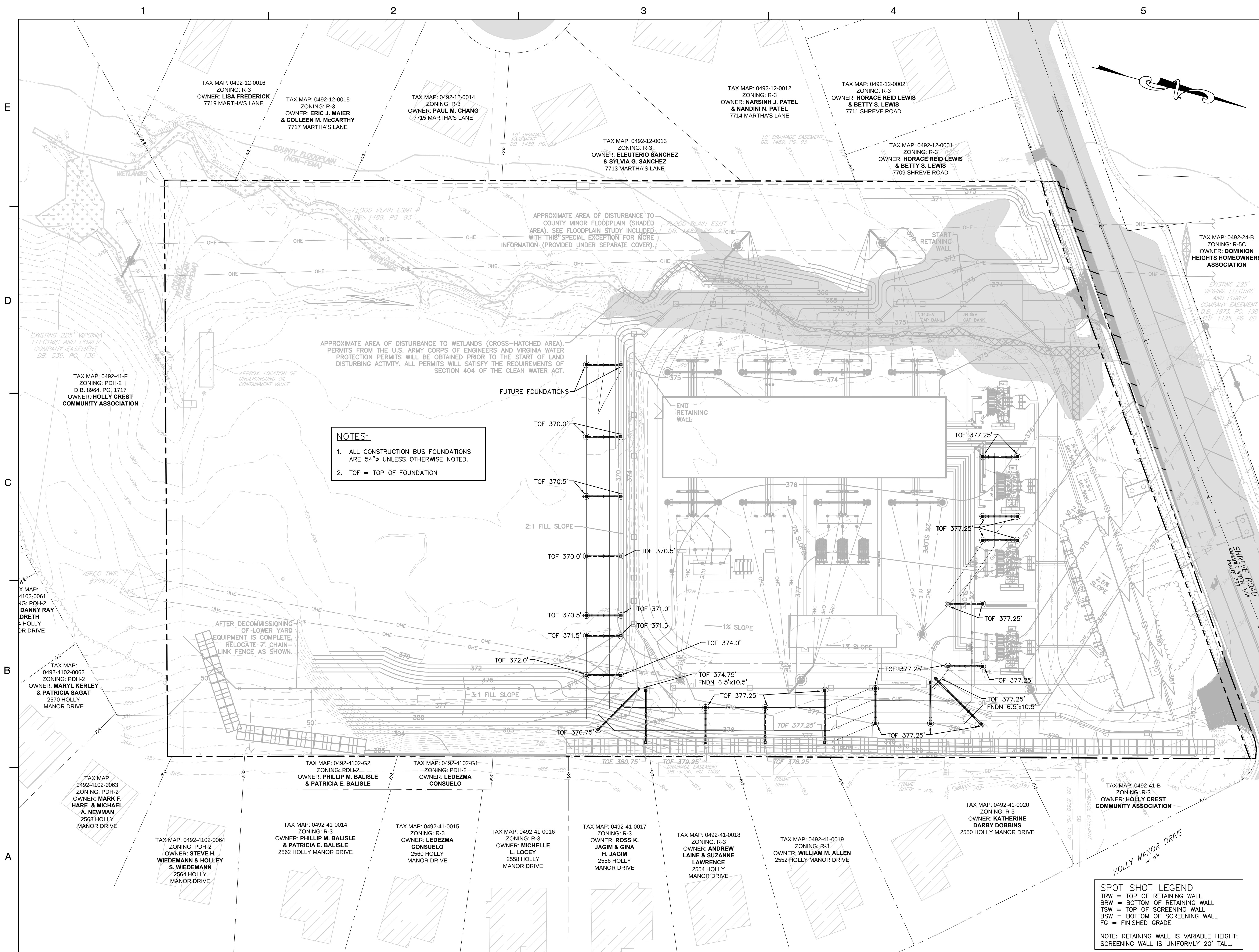
TITLE _____

LOWER YARD GRADING PLAN

PROJECT NO. 50058411

7B-SEA

SHEET NO. 12 OF 32



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Dewberry Engineers Inc.
4805 Lake Brook Drive, Suite 200
Glen Allen, VA 23060-9279
804.290.7957
804.290.7928 fax
www.dewberry.com

Dominion Virginia Power
Idylwood Substation
Fairfax County, Virginia

STORMWATER NARRATIVE

Project Description

Dominion Virginia Power (Dominion) will be expanding an existing electrical substation in Fairfax County, Virginia on a 7.148 acre parcel of land located just southeast of Shreve Road and southwest of Holly Manor Drive.

Stormwater runoff from the site will enter a proposed stormwater quality BMP (Stormfilter) to help meet water quality requirements. Just downstream of the Stormfilter structure, an underground detention system is proposed to meet stormwater quantity control requirements. This system consists of 700 feet of 48" diameter pipe laid out in 3 rows with 2-24" diameter pipes at the outlet through 2 separate structures. In order to detain runoff for the various requirements for different storm events, a 8" diameter orifice would be attached at the upstream end of the first 24" diameter pipe and a 15" diameter orifice would be attached at the upstream end of the second 24" diameter pipe (at a higher invert elevation than the first 24" diameter pipe).

The total drainage area to the stormwater BMP/underground detention system is 2.21 acres. The total volume of storage within the underground pipe system being provided to control runoff is 8,799 cubic feet.

Stormwater discharge from the underground detention system will outlet into a non-FEMA county floodplain. A formal floodplain study has been done to analyze the effect of the proposed development on the floodplain and will be submitted under a separate cover.

This project also involves the re-routing of offsite drainage around the majority of the proposed development. An existing set of culverts (under Shreve Road) will be extended and a section of storm sewer running through the site will be removed and replaced with a new series of pipes. The outlets of these new these pipes will also outlet into the same non-FEMA county floodplain referenced earlier.

Hydrology:

The SCS Method was used to determine flows for this project. For both pre- and post-developed conditions, the following "C" coefficients were used: 0.35 used for all non-road gravel areas, 0.90 for impervious areas (i.e. roads, foundations, etc.) and 0.20 for all lawn and vegetative areas. Computations are included in this report that show that the breakdown of the different land cover characteristics needed to calculate the weighted runoff coefficients.

Also included in this report are computations for times of concentration for the pre- and post-developed drainage areas and computations that show the reduction in peak runoff for the various storms.

Water Quality

This project site meets state requirements for stormwater quality control through a manufactured BMP (Stormfilter) that will collect runoff from the site prior to entering the underground detention system, the designation of one area of the site as a Conserved Open Space BMP area that is to remain undisturbed throughout construction, and a Grass Swale. The Virginia Runoff Reduction Method Re-Development Worksheet (version 2.8) has been completed and included in this report. This worksheet shows that the site meets the requirement for phosphorus load reduction by exceeding the target reduction requirement by 0.1 lb/yr.

Water Quantity

An underground stormwater detention system has been designed which will control the post-developed runoff rates to pre-developed conditions for the 2-year and 10-year storms. The detention system also over-detains the 1-year storm. The table below shows this reduction in the runoff rates.

Pre-Developed			Post-Developed			Controlled Release		
Q1 (ft ³ /s)	Q2 (ft ³ /s)	Q10 (ft ³ /s)	Q1 (ft ³ /s)	Q2 (ft ³ /s)	Q10 (ft ³ /s)	Q1 (ft ³ /s)	Q2 (ft ³ /s)	Q10 (ft ³ /s)
5.2	7.3	14.1	2.37	3.82	14.06	2.83	3.48	0.04

The post-developed 2 and 10-year peak discharges from the site have been reduced from the pre-developed values and will discharge to an existing waterway along the southwestern property boundary. In order to comply with requirements of Fairfax County Code Section 124-4-4(b)(3)c, the detention system also over-detains the 1-year storm to a flow rate as required by the code section since it has been shown (computations included in this report) that the outfall channel at the limit of analysis is able to convey the 2-year 24-hour storm without causing erosion.

The project also meets state requirements for flood protection (per Fairfax County Code Section 124-4-4(c)(1)) since it has been shown (computations included in this report) that the 10-year 24-hour storm can be contained in the outfall channel at the limit of analysis.

C-FACTOR COMPUTATIONS					C-FACTOR COMPUTATIONS				
Pre-Developed					Post-Developed				
LINE OF ANALYSIS	Land Cover	C	Area (Ac.)	C*Area	SWM BASIN	Land Cover	C	Area (Ac.)	C*Area
	Forest (Pervious)	0.2	0.420	0.08		Turf (Pervious)	0.2	0.200	0.04
	Turf (Pervious)	0.2	0.420	0.08		Graded/Ditch (Pervious)	0.2	0.000	0.00
	Substation Pad (Impervious,Road)	0.9	0.000	0.00		Substation Pad (Impervious,Road)	0.9	0.000	0.00
	Substation Pad (Impervious,other)	0.9	1.370	1.23		Substation Pad (Impervious,other)	0.9	2.010	1.81
	Substation Pad (Gravel)	0.35	0.000	0.00		Substation Pad (Gravel)	0.35	0.000	0.00
	Other Impervious	0.9	0.000	0.00		Other Impervious	0.9	0.000	0.00
	Total	3.45	2.21	1.40		Total	3.45	2.21	1.85
	Weighted C	0.63				Weighted C	0.84		
	Total Area	2.21				Total Area	2.21		

Flows	Pre-Developed Q (Pre)	Post-Developed Q (BMP)	Post-Developed Q (Routed)	Controlled Release Q (Pre)-Q (Routed)	Water Elevation	Storage Volume (ac-ft)
Q1 (ft ³ /s)	5.2	7.6	2.37	2.83	370.01	0.120
Q2 (ft ³ /s)	7.30	9.90	3.82	3.48	370.57	0.154
Q10 (ft ³ /s)	14.10	17.20	14.06	0.04	373.58	0.202

MINIMUM STORMWATER INFORMATION FOR REZONING, SPECIAL EXCEPTION, SPECIAL PERMIT AND DEVELOPMENT PLAN APPLICATIONS

The following information is required to be shown or provided in all zoning applications, or a waiver request of the submission requirement with justification shall be attached. Note: Waivers will be acted upon separately. Failure to adequately address the required submission information may result in a delay in processing this application.

This information is required under the following Zoning Ordinance paragraphs:
Special Permits (8-011 2J & 2L) Special Exceptions (9-011 2J & 2L)
Cluster Subdivision (9-615 1G & 1N) Commercial Revitalization Districts (9-622 2A (12) & (14))
Development Plans PRC District (16-302 3 & 4L) PRC Plan (16-303 1E & 1O)
FDP P Districts (except PRC) (16-502 1F & 1Q) Amendments (18-202 10F & 10I)

1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100').

2. A graphic depicting the stormwater management facility(ies) and limits of clearing and grading accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outfalls, energy dissipation devices, and stream stabilization measures as shown on Sheet 7A,7B

3. Provide:	On-site area served (acres)	Off-site area served (acres)	Drainage area (acres)	Footprint area (sf)	Storage Volume (cf)	If pond, dam height (ft)
Facility Name/ Type & No.						
		SEE TABLE	BELOW			
Totals						

4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet 7A,7B

Pond inlet and outlet pipe systems are shown on Sheet 7A,7B

5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet 7A,7B
Type of maintenance access road surface noted on the plat is GRAVEL (asphalt, geoblock, gravel, etc.).

6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet 13.

7. A 'stormwater management narrative' which contains a description of how detention and best management practices requirements will be met is provided on Sheet 8.

8. A description of the existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet 10.

9. A description of how the outfall requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet 10.

10. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheets 2,3.

11. A submission waiver is requested for N/A.

12. Stormwater management is not required because N/A.

STORMWATER/BMP FACILITY SUMMARY

FACILITY NAME/TYPE	ON-SITE AREA SERVED (AC.)	OFF-SITE AREA SERVED (AC.)	DRAINAGE AREA (AC.)	FOOTPRINT AREA (SF)	STORAGE VOLUME (CF)	IF POND, DAM HEIGHT (FT)
UNDERGROUND DETENTION (48"-DIAMETER PIPE)	2.21	N/A	2.21	N/A (UNDER- GROUND)	8,799	N/A
BMP #1-STORMFILTER	2.21	N/A	2.21	48	N/A	N/A
BMP #2-VEGETATED FILTER STRIP	0.86	0.20	1.06	4,996	N/A	N/A
BMP #3-GRASS SWALE	0.19	0.77	0.96	0.19	N/A	N/A

VRM SITE DATA SHEET:

Virginia Runoff Reduction Method ReDevelopment Worksheet - v2.8 - June 2014

To be used w/ DRAFT 2013 BMP Standards and Specifications

Site Data

Project Name: Idylwood Substation

Date: 9/23/14

data input cells
calculation cells
constant values

Post-ReDevelopment Project & Land Cover Information

Total Disturbed Acreage

6.50

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Phosphorus EMC (mg/L)	0.26
Target Phosphorus Target Load (lb/acre/yr)	0.41
P	0.90
Nitrogen EMC (mg/L)	1.86

Pre-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) – undisturbed, protected forest/open space or reforested land	0.00	0.00	2.34	0.00	2.34
Managed Turf (acres) – disturbed, graded for yards or other turf to be mowed/managed	0.00	0.00	0.45	0.00	0.45
Impervious Cover (acres)	0.00	0.00	4.36	0.00	4.36
Total					7.15

Post-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) – undisturbed, protected forest/open space or reforested land	0.00	0.00	0.98	0.00	0.98
Managed Turf (acres) – disturbed, graded for yards or other turf to be mowed/managed	0.00	0.00	1.42	0.00	1.42
Impervious Cover (acres)	0.00	0.00	4.75	0.00	4.75
Total					7.15

Area Check

Rv Coefficients	A soils	B Soils	C Soils	D Soils
Forest/Open Space	0.02	0.03	0.04	0.05
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

Land Cover Summary

Pre-ReDevelopment

	Listed	Adjusted ¹
Forest/Open Space Cover (acres)	2.34	1.96
Composite Rv/forest	0.04	0.04
% Forest	33%	29%
Managed Turf Cover (acres)	0.45	0.45
Composite Rv/turf	0.22	0.22
% Managed Turf	6%	7%
Impervious Cover (acres)	4.36	4.36
Rv/impervious	0.95	0.95
% Impervious	61%	64%
Total Site Area (acres)	7.15	6.76
Site Rv	0.61	0.64

Land Cover Summary

Post-ReDevelopment

Forest/Open Space Cover (acres)	0.98
Composite Rv/forest	0.04
% Forest	14%
Managed Turf Cover (acres)	1.42
Composite Rv/turf	0.22
% Managed Turf	21%
ReDev. Impervious Cover (acres)	4.36
Rv/impervious	0.95
% Impervious	64%
Total ReDev. Site Area (acres)	6.76
ReDev. Site Rv	0.66

¹Adjusted Land Cover Summary reflects the pre redevelopment land cover minus the pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover. The adjusted total acreage is consistent with the Post Redevelopment acreage (minus the acreage of new impervious cover). The load reduction requirement for the new impervious cover to meet the new development load limit is computed in Column I.

Pre-Development Load (TP) (lb/yr)	9.89	9.85
Pre-Development Load (TN) (lb/yr)	70.73	79.38

VRM WATER QUALITY COMPLIANCE SHEET:

Site Results

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
IMPERVIOUS COVER	2.01	0.88	0.06	0.00	0.00	OK
IMPERVIOUS COVER TREATED	2.01	0.88	0.06	0.00	0.00	OK
TURF AREA	0.20	0.21	0.90	0.00	0.00	OK
TURF AREA TREATED	0.20	0.21	0.90	0.00	0.00	OK
AREA CHECK	OK	OK	OK	OK	OK	

Phosphorous

TOTAL PHOSPHOROUS LOAD REDUCTION REQUIRED (LB/YEAR) 3.05

RUNOFF REDUCTION (cf) 1694

PHOSPHOROUS LOAD REDUCTION ACHIEVED (LB/YR) 3.14

ADJUSTED POST-DEVELOPMENT PHOSPHOROUS LOAD (TP) (lb/yr) 7.95

REMAINING PHOSPHOROUS LOAD REDUCTION (LB/YR) NEEDED CONGRATULATIONS!! YOU EXCEEDED THE TARGET REDUCTION BY 0.1 LB/YEAR!!

Nitrogen (for information purposes)

RUNOFF REDUCTION (cf) 1694

NITROGEN LOAD REDUCTION ACHIEVED (LB/YR) 8.35

ADJUSTED POST-DEVELOPMENT NITROGEN LOAD (TP) (lb/yr) 71.01



Dewberry Engineers Inc.

4805 Lake Brook Drive, Suite 200
Glen Allen, Virginia 23060
PHONE: 804.290.7957
FAX: 804.290.7928
www.dewberry.com



DOMINION VIRGINIA POWER

Idylwood Substation

SE 2014-PR-032

SPECIAL EXCEPTION PLAT

2232 PLAT

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEAL



KEY PLAN

SCALE

No.	DATE	BY	Description

REVISIONS

DRAWN BY	TT
APPROVED BY	KWW
CHECKED BY	KWW
DATE	APRIL 2015
TITLE	

STORMWATER MANAGEMENT INFORMATION

PROJECT NO. 50058411

8

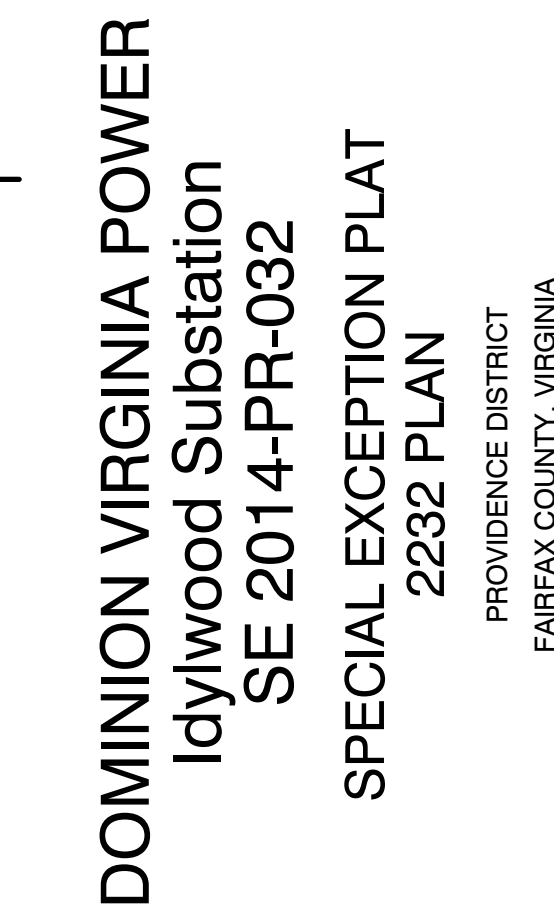
SHEET NO.

9 OF 21

SUBJECT TO FINAL ENGINEERING

FOR INFORMATION ONLY

SHEET 13 OF 32



No.	DATE	BY	Description

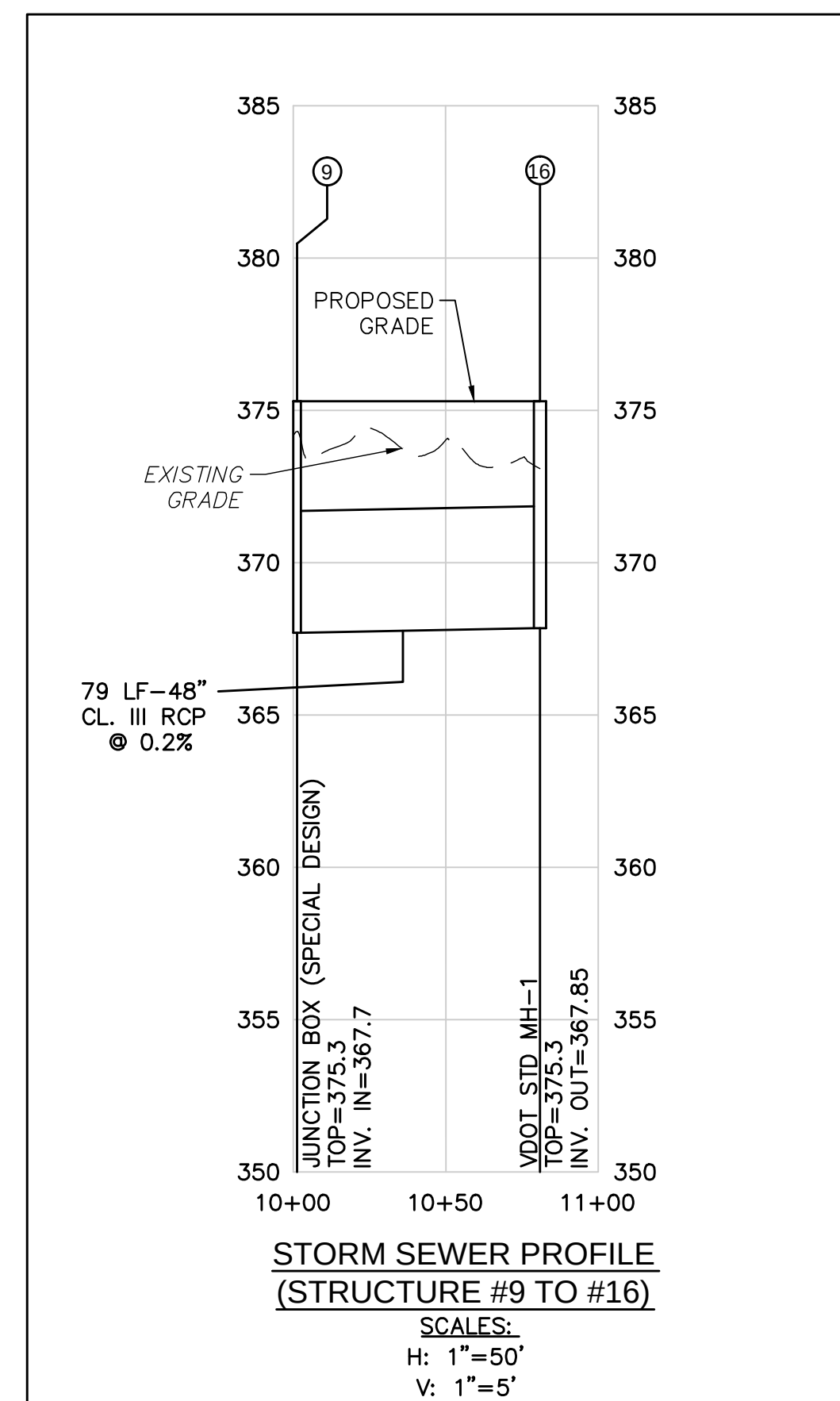
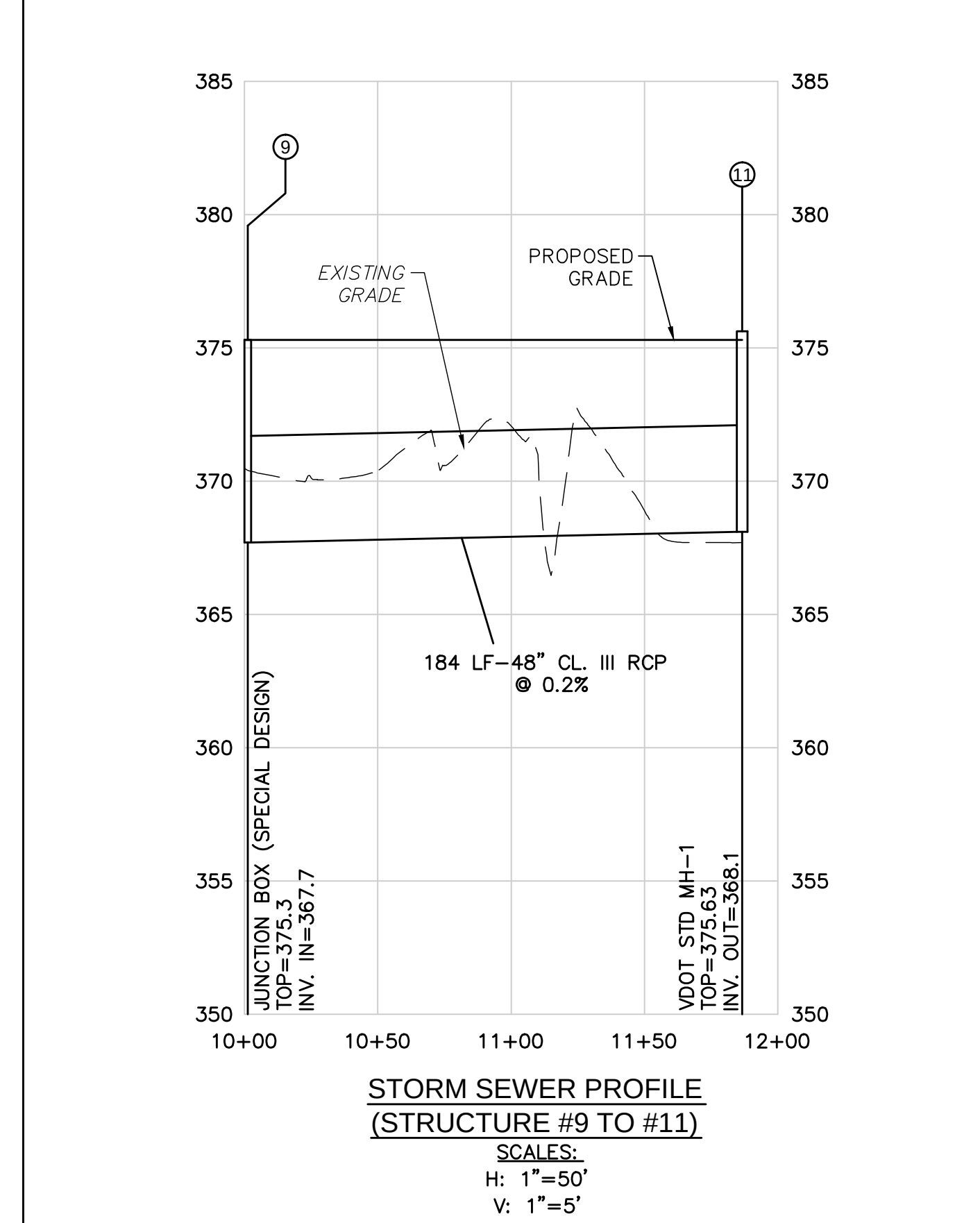
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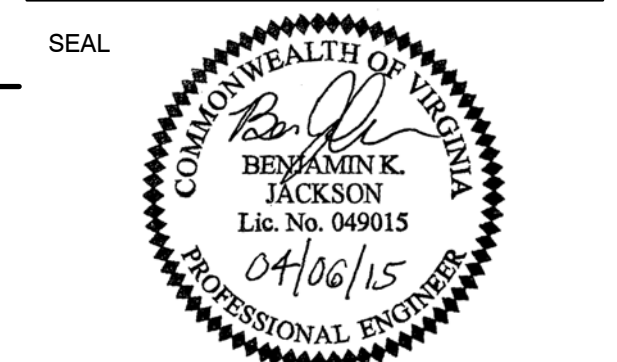
PROJECT NO. 50058411

9

SHEET NO. 10 OF 21

SHEET 15 OF 32





KEY PLAN

SCALE

0' 30' 60'

GRAPHIC SCALE

No.	DATE	BY	Description

REVISIONS

DRAWN BY	TT
APPROVED BY	KWW
CHECKED BY	KWW
DATE	APRIL 2015
TITLE	

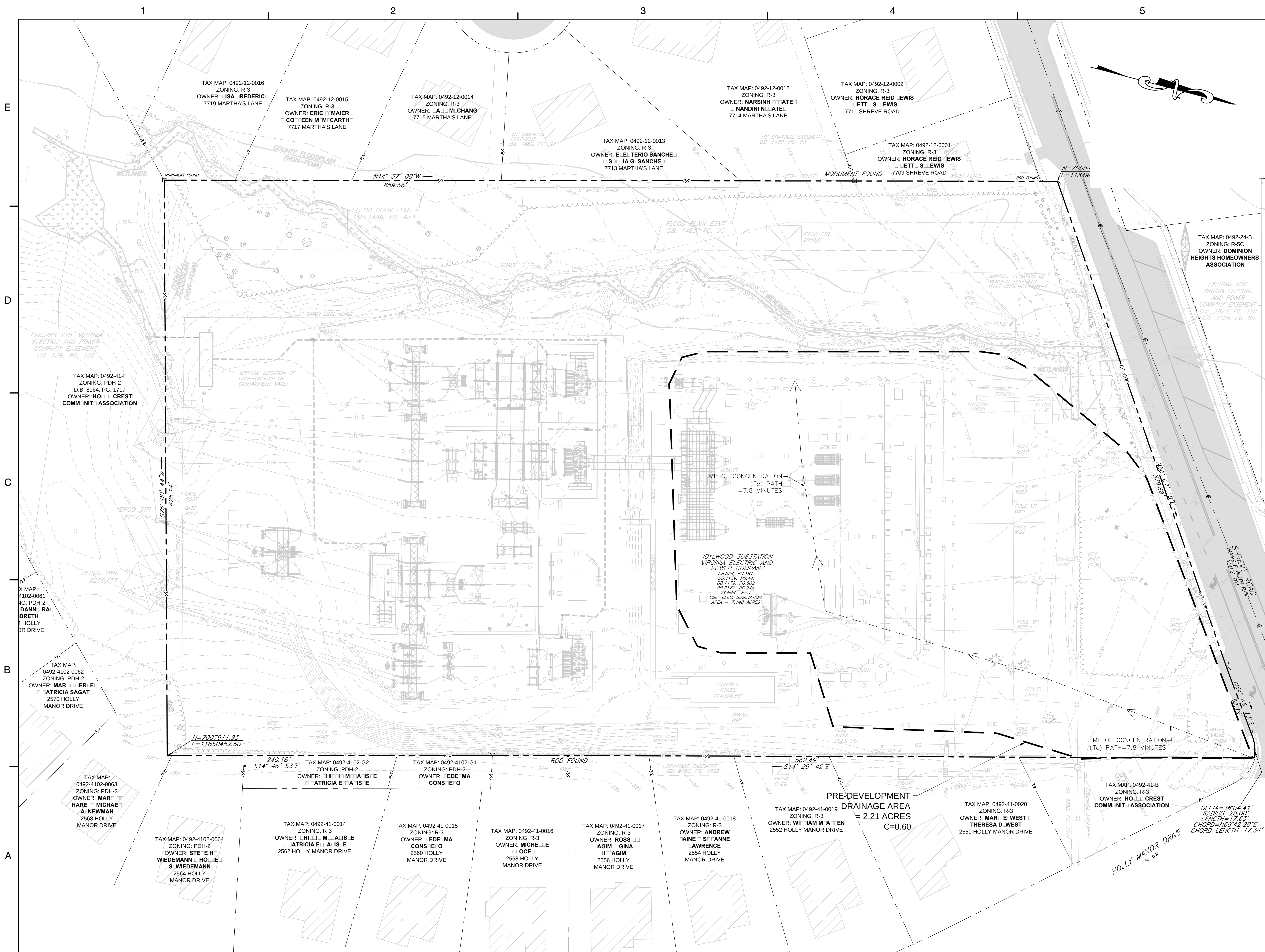
PRE-DEVELOPED DRAINAGE AREA MAP

PROJECT NO. 50058411

11

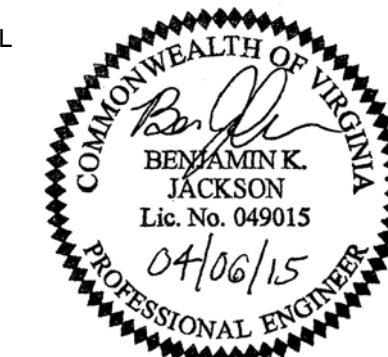
SHEET NO. 12 OF 21

SHEET 17 OF 32



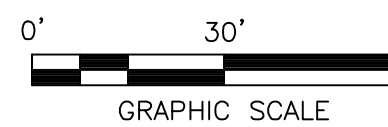
DOMINION VIRGINIA POWER
Idylwood Substation
SE 2014-PR-032
SPECIAL EXCEPTION PLAT
2232 PLAN
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEAL



KEY PLAN

SCALE



No.	DATE	BY	Description
REVISIONS			

DRAWN BY	TT
APPROVED BY	KWW
CHECKED BY	KWW
DATE	APRIL 2015
TITLE	

POST-DEVELOPED
DRAINAGE
AREA MAP

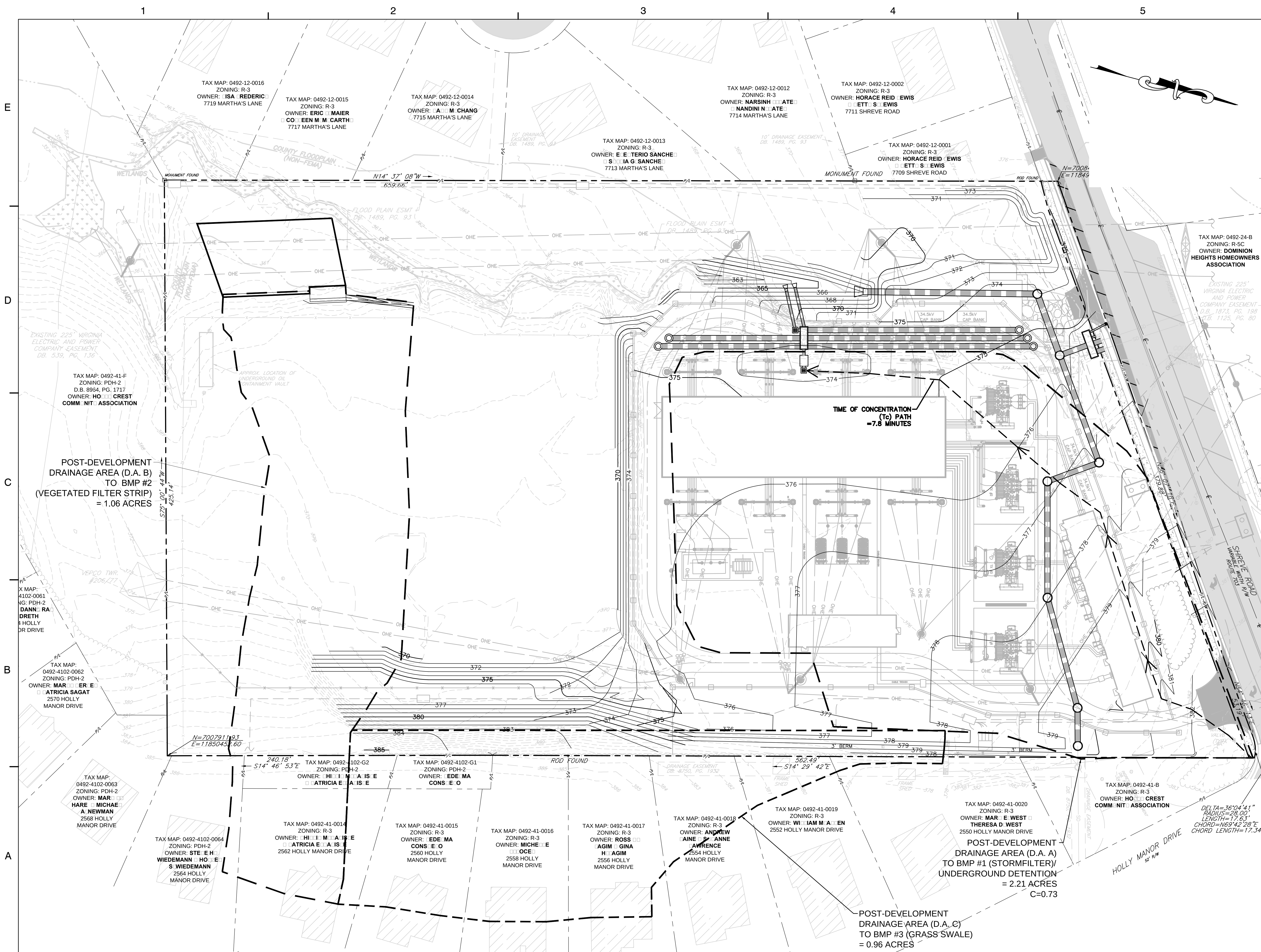
PROJECT NO. 50058411

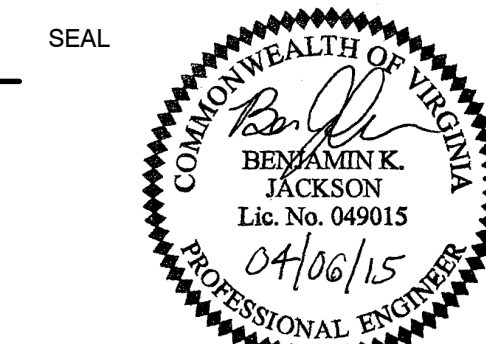
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SHEET NO. 13 OF 21

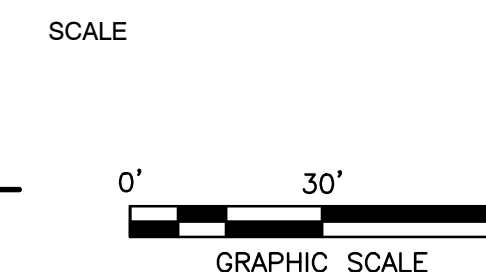
FOR INFORMATION ONLY

SHEET 18 OF 32





KEY PLAN



No.	DATE	BY	Description

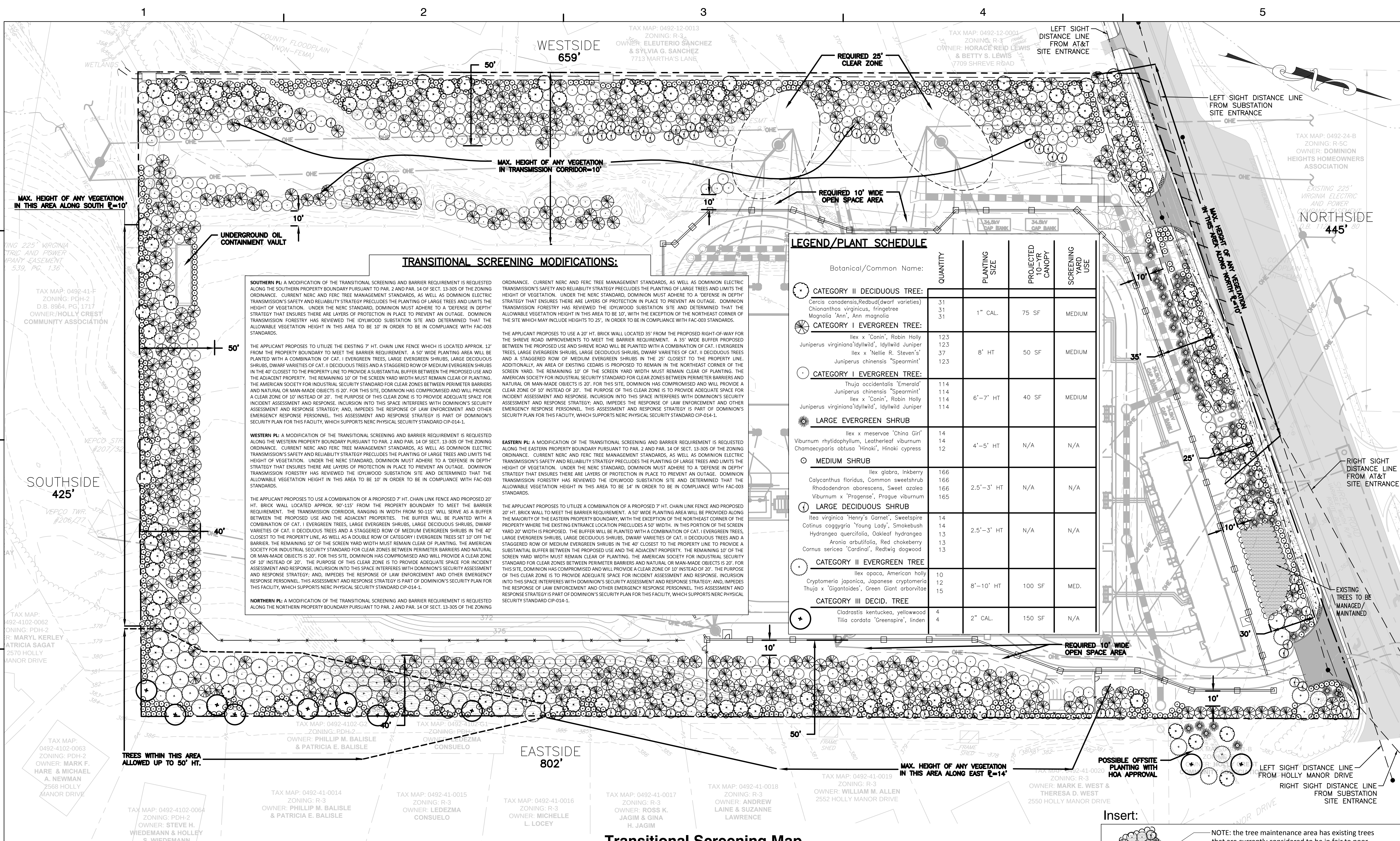
DRAWN BY	LM
APPROVED BY	JC
CHECKED BY	KWW
DATE	APRIL 2015
TITLE	

PROPOSED LANDSCAPING PLAN

PROJECT NO. 50058411

13

SHEET NO. 14 OF 21



SCREENING INFORMATION FOR ALL YARDS (NORTH/SOUTH/EAST/WEST):

REQUIRED:

TRANSITIONAL SCREENING 3 - 50' WIDTH

-10-YEAR TREE CANOPY OF 75% OR GREATER

-AT LEAST 70% EVERGREEN TREES; NO MORE THAN 35% OF ANY SINGLE SPECIES

-3 MEDIUM EVERGREEN SHRUBS FOR EVERY 10 LF

-BARRIER D, E, OR F

PROVIDED:

-PURSUANT TO PAR. 4 OF SECT. 13-305 OF THE ZONING ORDINANCE, A 2/3 REDUCTION IN TRANSITIONAL SCREENING YARD WIDTH IS REQUESTED IN THE SOUTH & EAST YARDS. THEREFORE, MINIMUM YARD WIDTHS IN THESE AREAS WILL BE 16.67'. PLEASE SEE WAIVER REQUEST ON FOLLOWING SHEET.

-SEE YARD-BY-YARD BREAKDOWN OF TREE CANOPY CALCULATIONS BELOW.

-20' TALL PERIMETER SCREENING WALL (EAST, SOUTH, WEST SIDES OF YARD); 16' TALL PERIMETER SCREENING WALL (NORTH)

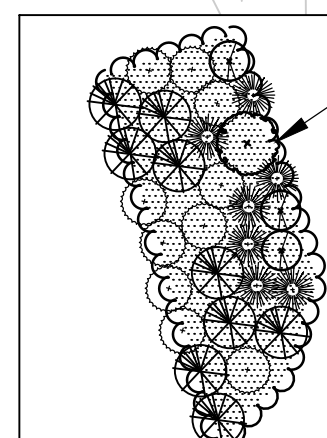
NORTHERN PROPERTY LINE - 445' LENGTH	
REQUIRED: 35' WIDTH	
TREE CANOPY: 445'L X 35'W X 0.75= 11,681 SF	
SHRUBS: (445/10) X 3 SHRUBS= 134	
PROVIDED: 35' WIDTH	
4 CAT. II EVERGREEN TREES @ 100 SF	4 X 100 = 400 SF
34 CAT. I EVERGREEN TREES @ 50 SF	34 X 50 = 1,700 SF
29 CAT. I EVERGREEN TREES @ 40 SF	29 X 40 = 1,160 SF
40 LARGE EVERGREEN SHRUB	
98 MEDIUM EVERGREEN SHRUBS	
7 CAT. II DECIDUOUS TREES @ 75 SF	7 X 75 = 525 SF
17 LARGE DECIDUOUS SHRUBS	
TOTAL = 3,785 SF	

EASTERN PROPERTY LINE - 802' LENGTH	
REQUIRED: 50' WIDTH	
TREE CANOPY: 802'L X 50'W X 0.75= 30,075 SF	
SHRUBS: (802/10) X 3 SHRUBS= 240	
PROVIDED: 18'-50' WIDTH	
28 CAT. II EVERGREEN TREES @ 100 SF	28 X 100 = 2,800 SF
132 CAT. I EVERGREEN TREES @ 50 SF	132 X 50 = 6,600 SF
149 CAT. I EVERGREEN TREES @ 40 SF	149 X 40 = 5,960 SF
240 MEDIUM EVERGREEN SHRUBS	
7 CAT. III DECIDUOUS TREES @ 150 SF	7 X 150 = 1,050 SF
28 CAT. II DECIDUOUS TREES @ 75 SF	28 X 75 = 2,100 SF
18 LARGE DECIDUOUS SHRUBS	
TOTAL = 18,510 SF	

SOUTHERN PROPERTY LINE - 425' LENGTH	
REQUIRED: 50' WIDTH	
TREE CANOPY: 425'L X 50'W X 0.75= 15,938 SF	
SHRUBS: (425/10) X 3 SHRUBS= 127	
PROVIDED: 40' WIDTH	
5 CAT. II EVERGREEN TREES @ 100 SF	5 X 100 = 500 SF
85 CAT. I EVERGREEN TREES @ 50 SF	85 X 50 = 4,250 SF
80 CAT. I EVERGREEN TREES @ 40 SF	80 X 40 = 3,200 SF
127 MEDIUM EVERGREEN SHRUBS	
1 CAT. III DECIDUOUS TREES @ 150 SF	1 X 150 = 150 SF
20 CAT. II DECIDUOUS TREES @ 75 SF	20 X 75 = 1,500 SF
TOTAL = 9,600 SF	

WESTERN PROPERTY LINE - 659' LENGTH	
REQUIRED: 50' WIDTH	
TREE CANOPY: 659'L X 50'W X 0.75= 24,713 SF	
SHRUBS: (659/10) X 3 SHRUBS= 198	
PROVIDED: 90'±-103'± WIDTH	
155 CAT. I EVERGREEN TREES @ 50 SF	155 X 50 = 7,750 SF
198 CAT. I EVERGREEN TREES @ 40 SF	198 X 40 = 7,920 SF
198 MEDIUM EVERGREEN SHRUBS	
38 CAT. II DECIDUOUS TREES @ 75 SF	38 X 75 = 2,850 SF
32 LARGE DECIDUOUS SHRUBS	
TOTAL = 18,520 SF	
GRAND TOTAL	
50,415 SF	

Insert:



NOTE: the tree maintenance area has existing trees that are currently considered to be in fair to poor health. During construction, tree protection fencing will be installed around this area and reasonable construction method will be considered at the pre-construction site walk-thru to minimize root disturbance to this stand of trees. Although, should these trees health be further compromised by the close proximity of the substation construction the applicant will remove and replant the tree maintenance area per the plan insert

FOR INFORMATION ONLY

SHEET 19 OF 32

NOTES:

1. THE PROPERTIES THAT ARE THE SUBJECT OF THIS SPECIAL EXCEPTION PLAT IS IDENTIFIED ON THE FAIRFAX COUNTY ZONING MAP AS 49-2 ((11) 151 AND 49-2 ((12) 0001A, BOTH OF WHICH ARE ZONED R-3.
2. THE TOTAL LAND AREA OF THIS SPECIAL EXCEPTION APPLICATION IS APPROXIMATELY 7.15 ± ACRES.
3. THIS SPECIAL EXCEPTION PLAT ACCOMPANIES AN APPLICATION TO PERMIT THE EXPANSION OF AN EXISTING ELECTRIC SUBSTATION.
4. THE BOUNDARY INFORMATION SHOWN HEREON IS BASED UPON FIELD MONUMENTATION, REFERENCED DEEDS, AND PLATS. IT IS ESTABLISHED TO INCLUDE ALL THE FACILITIES SUBJECT TO THIS SPECIAL EXCEPTION AS DEFINED BY VIRGINIA ELECTRIC AND POWER COMPANY DURING SUPPLEMENTAL ENGINEERING.
5. THE TOPOGRAPHY SHOWN HEREON IS AT A CONTOUR INTERVAL OF ONE (1) FOOT FROM SURVEY INFORMATION PROVIDED BY BURGESS & WIPLE, INC. IN JUNE AND JULY 2013.
6. A STATEMENT WHICH CONFIRMS THE OWNERSHIP OF THE SUBJECT PROPERTIES AND THE NATURE OF THE APPLICANT'S INTEREST IN SAME IS PRESENTED IN A SEPARATE DOCUMENT.
7. MINIMUM YARD REQUIREMENTS FOR 'ALL OTHER STRUCTURES' (NON-RESIDENTIAL) IN THE R-3 DISTRICTS ARE AS FOLLOWS:
FRONT: CONTROLLED BY A 40° ANGLE OF BULK PLANE, BUT NOT LESS THAN 30 FEET.
SIDE: CONTROLLED BY A 35° ANGLE OF BULK PLANE, BUT NOT LESS THAN 10 FEET.
REAR: CONTROLLED BY A 35° ANGLE OF BULK PLANE, BUT NOT LESS THAN 25 FEET.
8. AS STATED IN SECT. 9-104 OF THE FAIRFAX COUNTY ZONING ORDINANCE, THIS USE NEED NOT COMPLY WITH THE BULK REGULATIONS OR THE MINIMUM LOT SIZE REQUIREMENTS OF THE ZONING DISTRICT IN WHICH THE USE IS LOCATED.
9. SANITARY SEWER AND PUBLIC WATER WILL NOT BE PROVIDED TO SITE.
10. NO PERMANENT PARKING AREAS ARE PROPOSED ON SITE.
11. THERE IS COUNTY MINOR FLOODPLAIN (NON-FEMA) LOCATED ON THE SUBJECT PROPERTIES. THIS FLOODPLAIN WILL BE IMPACTED WITH THIS SPECIAL EXCEPTION. EXTENTS OF IMPACT AND SUBSEQUENT MITIGATION ARE OUTLINED IN SEPARATE FLOODPLAIN STUDY.
12. WETLANDS HAVE BEEN DELINEATED AND ARE LOCATED ON THE SUBJECT PROPERTIES. THESE WETLANDS WILL BE IMPACTED WITH THIS SPECIAL EXCEPTION. THESE WETLANDS HAVE BEEN CONFIRMED BY THE U.S. ARMY CORPS OF ENGINEER. A PERMIT WILL BE FILED WITH THE U.S. ARMY CORPS OF ENGINEERS PRIOR TO THE START OF LAND DISTURBING ACTIVITY. MITIGATION WILL NOT BE REQUIRED DUE TO LIMITED AMOUNT OF DISTURBANCE TO THE WETLANDS.
13. THERE IS NOT RESOURCE PROTECTION AREA (RPA) LOCATED WITHIN THE SUBJECT PROPERTIES. HOWEVER, RPA IS PRESENT ON PARCEL 49-2 41 F TO THE SOUTH. RPA MAPPING IS BASED ON FAIRFAX COUNTY INFORMATION REVISED 08.01.05 AND PREPARED BY THE DEPARTMENT OF INFORMATION TECHNOLOGY, ENTERPRISE SERVICE DIVISION-GEOGRAPHIC INFORMATION SERVICES.
14. STORMWATER MANAGEMENT IS SHOWN HEREON ON SHEETS 6 AND 7 IN THE FORM OF A STORMWATER QUALITY AND UNDERGROUND DETENTION (QUANTITY). THE SUPPORTING COMPUTATIONS ARE PRESENTED ON SHEETS 8-9.
15. THERE ARE EXISTING UTILITY AND DRAINAGE EASEMENTS ON THE SUBJECT PROPERTIES SHOWN ON SHEET 3. THE LOCATION OF THE EASEMENTS SHOWN HEREON ARE TAKEN FROM TAX RECORDS AND/OR DEEDS AND OTHER PUBLIC INFORMATION. A TITLE REPORT WAS NOT FURNISHED AT THE TIME OF TOPOGRAPHICAL SURVEY. THEREFORE, NOT ALL EASEMENTS OF RECORD MAY BE SHOWN HEREON.
16. PURSUANT TO PAR. 3, 4 & 14 OF SECT. 13-305 OF THE ZONING ORDINANCE, A MODIFICATION OF THE TRANSITIONAL SCREENING AND BARRIER REQUIREMENTS ARE HEREBY REQUESTED IN FAVOR OF THAT SHOWN HEREON. SEE SHEET 12.
17. NOT ALL UNDERGROUND UTILITIES ARE SHOWN. UNDERGROUND UTILITIES WHICH ARE SHOWN ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY DEPTH, TYPE, AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
18. BASED ON HISTORICAL AND ARCHEOLOGICAL INVESTIGATIONS PERFORMED, THERE ARE NO GRAVES LOCATED ON THE SUBJECT PROPERTY.
19. EXCEPT AS QUALIFIED ON THIS SHEET, THE PROPOSED DEVELOPMENT CONFORMS TO ALL CURRENT APPLICABLE LAND DEVELOPMENT ORDINANCES AND ADOPTED STANDARDS.
20. A DEVIATION FROM THE TREE PRESERVATION TARGET IS BEING REQUESTED. SEE WAIVER REQUEST THIS SHEET.
21. ANY TREE THAT IS IMPROPERLY PRUNED SO AS TO CAUSE DISEASE OR DEATH, AS DETERMINED BY THE URBAN FOREST MANAGEMENT DIVISION, OR REMOVED TO AVOID CONFLICTS WITH THE MAXIMUM 14 FT. HEIGHT RESTRICTION OF THE NERC AND FERC STANDARDS, SHALL BE REPLACED BY THE APPLICANT.

LANDSCAPING WAIVER REQUESTS



Dewberry Consultants LLC
9801 Arlington Boulevard
Fairfax, VA 22031-4666
703.889.0100
703.889.0150
www.dewberry.com

April 2, 2015

James Patteson, Director
Fairfax County Department of Public Works and Environmental Services
12055 Government Center Parkway
Suite 659
Fairfax VA 22035

RE: Tax Map 49-2 ((11) 151 and 49-2 ((12) 0001A

- Request for a Tree Preservation Target Deviation
- Request for a Modification of the 10-Year Tree Canopy Requirement

Dear Mr. Patteson:

May this letter serve as a request for:

- A deviation from the Tree Preservation Target as provided for in the provisions set forth in Sect. 12-0508 of the Public Facilities Manual (PFM)
- A modification of the 10-Year Tree Canopy Requirement as provided for in the provisions set forth in Sect. 12-0513 of the Public Facilities Manual (PFM)

The proposed development program at issue is located on the properties referenced as 49-2 ((11) 151 and 49-2 ((12) 0001A. It is located south of Shreve Road and west of the Holly Manor Drive subdivision. The properties (7.15 AC) are currently zoned to the R-3 District and are the subject of a Special Exception, a copy of which is attached for your reference. The pending Special Exception has been filed to allow for the expansion of an existing electrical substation on the site.

Based on the provisions set forth in Sect. 12-0508 of the PFM and more particularly the calculations set forth in Table 12.3, copy attached, 12,501 square feet is the requisite Tree Preservation Target. A deviation from the Tree Preservation Target requirement is requested, for as demonstrated by the attached copy of the proposed development program, the clearing and grading, and provision of utilities for the development program for an electrical substation will preclude the accommodation of the Tree Preservation Target. The Federal Energy Regulatory Commission (FERC) and North American Electric Reliability Corporation (NERC) standards for tree preservation at substations does not allow for large trees to remain in and around the substation and transmission lines. It is our judgment that the proposed development program is a reasonable development program for the subject property which is zoned to the R-3 District.

Based on the provisions set forth in Sect. 12-0513.2, a modification of the 10-year tree canopy requirement is requested, for as demonstrated by the attached copy of the proposed development program, the clearing and grading, and provision of utilities for the development program for an electrical substation will limit the planting of trees in and around the substation. The Federal Energy Regulatory Commission (FERC) and North American Electric Reliability Corporation (NERC) standards for tree preservation at substations does not allow for large trees to be planted in and around the substation and transmission lines. The Dominion Forestry Coordinator for this region has determined that maximum allowable tree heights for the majority of the site are limited to between 10' and 14' by reviewing the maximum sag rating and radial distances for the sections of power line on this site. Under the NERC Standard, Dominion must adhere to a "Defense in Depth" strategy that ensures layers of protection in place to prevent an outage. The tree height limitations are part of adherence to the NERC Standards. Strict application of the tree canopy requirements for the R-3 district (25%) would reduce the usable area of the property due to the equipment and substation layout and would cause an unreasonable or unnecessary hardship to the applicant. The tree canopy calculations (Table 12.10), included with this application proposes approximately 50,415 SF of proposed tree planting, which equals 16.5% tree canopy coverage of the adjusted gross site area of 305,861± SF. It is our judgment that the proposed development program is a reasonable development program for the subject property.

We trust that this statement is sufficient to support our request for a deviation from the Tree Preservation Target for the development program proposed for the subject property. Should you have any questions or the need for additional information, please contact me at 703-849-0144 or jcena@dewberry.com.

Sincerely,

Janice M. Cena, PLA, CA
Senior Landscape Architect
ISA Certified Arborist

TABULATION FOR SUBSTATION SPECIAL EXCEPTION AREA:

—EXISTING/PROPOSED ZONING: R-3; R-3
—EXISTING/PROPOSED TOTAL LAND AREA: 7.15AC; 7.15AC
—MAXIMUM FLOOR AREA RATIO PERMITTED: EXEMPT
PROPOSED FLOOR AREA RATIO: 0.043
—MAXIMUM GROSS FLOOR AREA PERMITTED: EXEMPT
PROPOSED GROSS FLOOR AREA: 13,504 SF
—PARKING SPACES PROVIDED: 0
—MAXIMUM BUILDING HEIGHT PERMITTED: EXEMPT
MAXIMUM BUILDING HEIGHT PROPOSED: 32± FT
—OPEN SPACE REQUIRED: 25% (1.79AC)
OPEN SPACE PROVIDED: 33% (2.39AC)

EXISTING VEGETATION INVENTORY

KEY	COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGES	CONDITION	ACREAGE
A	UPLAND FOREST	POPLAR	SUB-CLIMAX	GOOD TO FAIR	0.02± AC
B	BOTTOMLAND FOREST	GUM, POPLAR	SUB-CLIMAX	GOOD TO FAIR	0.58± AC
C	LANDSCAPED TREE CANOPY	OAK, CEDAR, POPLAR	N/A	GOOD TO FAIR	0.55± AC
D	DEVELOPED LAND	N/A	N/A	N/A	4.17± AC
E	MAINTAINED GRASSLAND	N/A	N/A	N/A	0.74± AC
F	OPEN FIELD	N/A	N/A	N/A	1.07± AC
TOTAL ACREAGE:					7.13± AC

TREE PRESERVATION CALCULATIONS

Table 12.3 Tree Preservation Target Calculations and Statement

A	Pre-development area of existing tree canopy (from Existing Vegetation Map) =	1.15 AC
B	Percentage of gross site area covered by existing tree canopy =	16.1%
C	Percentage of 10-year tree canopy required for site (see Table 12.4) =	25% = 77,920 SF
D	Percentage of the 10-year tree canopy requirement that should be met through tree preservation =	16.1% = 12,545 SF
E	Proposed percentage of canopy requirement that will be met through tree preservation =	0
F	Has the Tree Preservation Target minimum been met?	Provide Yes or No
G	If No for line F, then a request to deviate from the Tree Preservation Target shall be provided on the plan that states one or more of the justifications listed in § 12-0507.3 along with a narrative that provides a site-specific explanation of why the Tree Preservation Target cannot be met. Provide sheet number where deviation request is located.	SEE REQUEST TO DEVIATE, THIS SHEET
H	If step G requires a narrative, it shall be prepared in accordance with § 12-0507.4	
I	Place this information prior to the 10-year Tree Canopy Calculations as per instructions in Table 12.12.	

EXISTING VEGETATION MAP

Scale: 1"=50'

NOTE: ALL PROPOSED LANDSCAPING IN AND AROUND SUBSTATIONS AND TRANSMISSION LINES ARE SUBJECT TO FEDERAL ENERGY REGULATORY COMMISSION (FERC) AND NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION (NERC) STANDARDS AND REGULATIONS.

10-YEAR TREE CANOPY CALCULATIONS

Table 12.10 10-year Tree Canopy Calculation Worksheet

A. Tree Preservation Target and Statement	
SEE SHEET C-6	
B. Tree Canopy Requirement	
B1	Identify gross site area = 311,682 SF
B2	Subtract area dedicated to parks, road frontage, and
B3	Subtract area of exemptions = 0 SF
B4	Adjusted gross site area (B1-B2) = 305,861 SF
B5	Identify site's zoning and/or use R-3
B6	Percentage of 10-year tree canopy required = 25%
B7	Area of 10-year tree canopy required (B4 x B6) = 76,465 SF
B8	Modification of 10-year Tree Canopy Requirements requested? NO
B9	If B8 is yes, then list plan sheet where modification request is located
C. Tree Preservation	
C1	Tree Preservation Target Area = 12,545 SF
C2	Total canopy area meeting standards of 12-0400 = 0
C3	C2 x 1.25 = 0
C4	Total canopy area provided by unique or valuable forest or woodland communities = 0
C5	C4 x 1.5 = 0
C6	Total of canopy area provided by "Heritage," "Memorial," "Specimen," or "Street" trees = 0
C7	C6 x 1.5 to 3.0 = 0
C8	Canopy of trees within Resource Protection Areas and 100-year floodplains
C9	C8 x 1.0 = 0
C10	Total of C3, C5, C7 and C9 = 0

D. Tree Planting	
D1	Area of canopy to be met through tree planting (B7-C10) = 76,465 SF
D2	Area of canopy planted for air quality benefits = 0 SF
D3	x 1.5 = 0 SF
D4	Area of canopy planted for energy conservation = 0
D5	x 1.5 = 0
D6	Area of canopy planted for water quality benefits = 0 SF
D7	x 1.25 = 0 SF
D8	Area of canopy planted for wildlife benefits = 0 SF
D9	x 1.5 = 0 SF
D10	Area of canopy provided by native trees = 0
D11	x 1.5 = 0
D12	Area of canopy provided by improved cultivars and varieties = 0
D13	x 1.5 = 0
D14	Area of canopy provided through tree seedlings = 0
	x 1.0 = 0
D15	Area of canopy provided through native shrubs or woody seed mix = 0
	x 1.0 = 0
D16	Percentage of D14 represented by D15 = NA
D16a	Area of canopy provided with no multipliers = 50,415 SF

D17	Total of canopy area provided through tree planting = 50,415 SF
D18	Is an offsite planting relief requested? NO
D19	Tree Bank or Tree Fund? NO
D20	Canopy area to be requested to be provided through offsite banking or tree fund NA
D21	Amount to be deposited into the Tree Preservation and Planting Fund NA

E. Total of 10-year Tree Canopy Provided	
E1	Total of canopy area provided through tree preservation (C10) = 0
E2	Total of canopy area provided through tree planting (D17) = 50,415 SF
E3	Total of canopy area provided through offsite mechanism (D19) = 0
E4	Total of 10-year Tree Canopy Provided = 50,415 SF

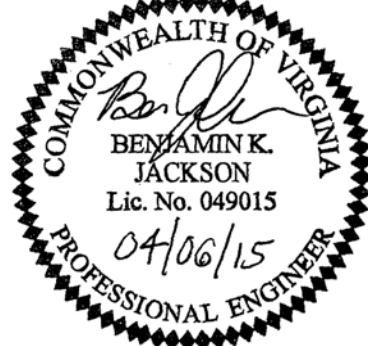


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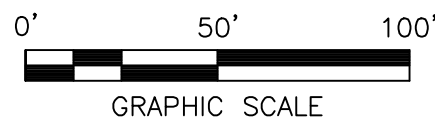
DOMINION VIRGINIA POWER
Idylwood Substation
SE 2014-PR-032
SPECIAL EXCEPTION PLAT
2232 PLAN
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEAL



KEY PLAN

SCALE



No.	DATE	BY	Description
REVISIONS			

DRAWN BY LM
APPROVED BY JC
CHECKED BY KWW
DATE APRIL 2015
TITLE

NOTES, TABULATION, & EXISTING VEGETATION MAP

PROJECT NO. 50058411

14A

SHEET NO.

15 OF 21

FOR INFORMATION ONLY

SHEET 20 OF 32



SCALE



0' 30' 60'

GRAPHIC SCALE

No.	DATE	BY	Description

REVISIONS

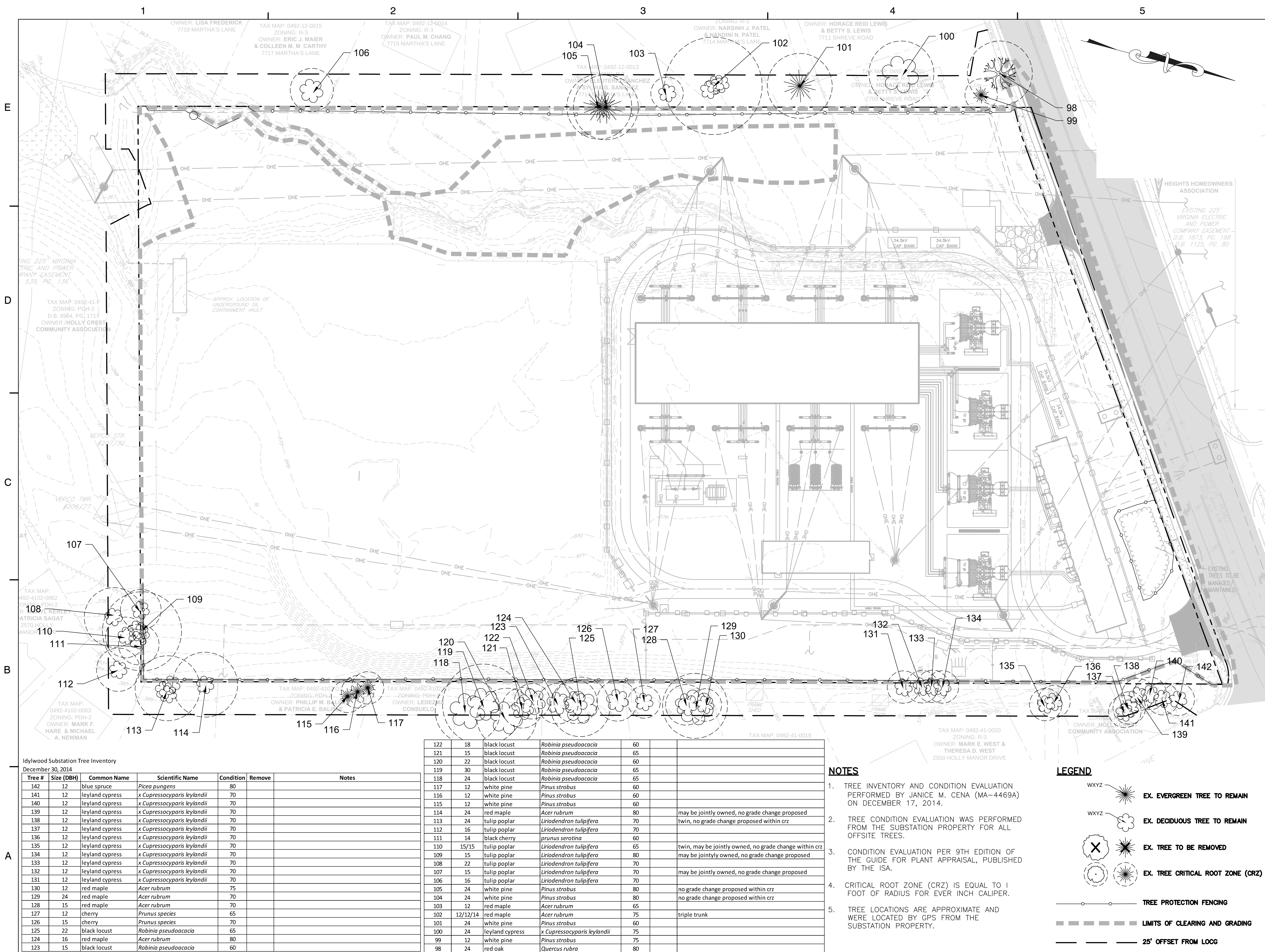
DRAWN BY	LM
APPROVED BY	JC
CHECKED BY	KWW
DATE	APRIL 2015
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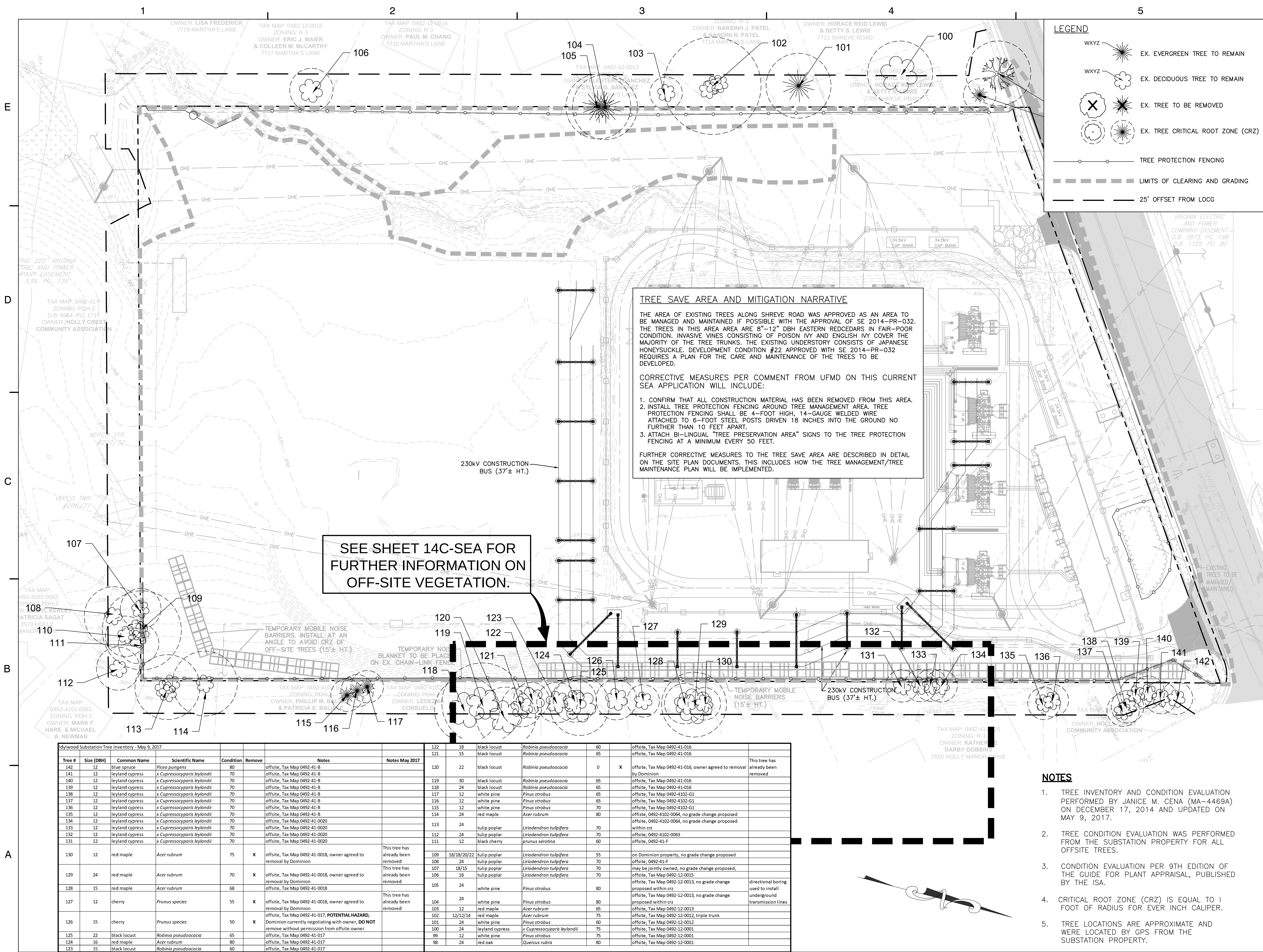
PROJECT NO. 50058411

14B

SHEET NO. 16 OF 21

SHEET 21 OF 32





LEGEND

- WXYZ EX. EVERGREEN TREE TO REMAIN
- WXYZ EX. DECIDUOUS TREE TO REMAIN
- EX. TREE TO BE REMOVED
- EX. TREE CRITICAL ROOT ZONE (CRZ)
- TREE PROTECTION FENCING
- LIMITS OF CLEARING AND GRADING
- 25' OFFSET FROM LOGG

TREE SAVE AREA AND MITIGATION NARRATIVE

THE AREA OF EXISTING TREES ALONG SHREVE ROAD WAS APPROVED AS AN AREA TO BE MANAGED AND MAINTAINED IF POSSIBLE WITH THE APPROVAL OF SE 2014-PR-032. THE TREES IN THIS AREA ARE 8"-12" DBH EASTERN REDCEDARS IN FAIR-POOR CONDITION. INVASIVE VINES CONSISTING OF POISON IVY AND ENGLISH IVY COVER THE MAJORITY OF THE TREE TRUNKS. THE EXISTING UNDERSTORY CONSISTS OF JAPANESE HONEYSUCKLE. DEVELOPMENT CONDITION #22 APPROVED WITH SE 2014-PR-032 REQUIRES A PLAN FOR THE CARE AND MAINTENANCE OF THE TREES TO BE DEVELOPED.

CORRECTIVE MEASURES PER COMMENT FROM UFMD ON THIS CURRENT SEA APPLICATION WILL INCLUDE:

1. CONFIRM THAT ALL CONSTRUCTION MATERIAL HAS BEEN REMOVED FROM THIS AREA.
2. INSTALL TREE PROTECTION FENCING AROUND TREE MANAGEMENT AREA. TREE PROTECTION FENCING SHALL BE 4-FOOT HIGH, 14-GAUGE WELDED WIRE ATTACHED TO 6-FOOT STEEL POSTS DRIVEN 18 INCHES INTO THE GROUND NO FURTHER THAN 10 FEET APART.
3. ATTACH BI-LINGUAL "TREE PRESERVATION AREA" SIGNS TO THE TREE PROTECTION FENCING AT A MINIMUM EVERY 50 FEET.

FURTHER CORRECTIVE MEASURES TO THE TREE SAVE AREA ARE DESCRIBED IN DETAIL ON THE SITE PLAN DOCUMENTS. THIS INCLUDES HOW THE TREE MANAGEMENT/TREE MAINTENANCE PLAN WILL BE IMPLEMENTED.

SEE SHEET 14C-SEA FOR FURTHER INFORMATION ON OFF-SITE VEGETATION.

Idylwood Substation Tree Inventory - May 9, 2017									
Tree #	Size (DBH)	Common Name	Scientific Name	Condition	Remove	Notes	Notes May 2017		
142	12	blue spruce	Picea pungens	80		offsite, Tax Map 0492-41-B			
141	12	leyland cypress	x Cupressocyparis leylandii	70		offsite, Tax Map 0492-41-B			
140	12	leyland cypress	x Cupressocyparis leylandii	70		offsite, Tax Map 0492-41-B			
139	12	leyland cypress	x Cupressocyparis leylandii	70		offsite, Tax Map 0492-41-B			
138	12	leyland cypress	x Cupressocyparis leylandii	70		offsite, Tax Map 0492-41-B			
137	12	leyland cypress	x Cupressocyparis leylandii	70		offsite, Tax Map 0492-41-B			
136	12	leyland cypress	x Cupressocyparis leylandii	70		offsite, Tax Map 0492-41-B			
135	12	leyland cypress	x Cupressocyparis leylandii	70		offsite, Tax Map 0492-41-B			
134	12	leyland cypress	x Cupressocyparis leylandii	70		offsite, Tax Map 0492-41-0020			
133	12	leyland cypress	x Cupressocyparis leylandii	70		offsite, Tax Map 0492-41-0020			
132	12	leyland cypress	x Cupressocyparis leylandii	70		offsite, Tax Map 0492-41-0020			
131	12	leyland cypress	x Cupressocyparis leylandii	70		offsite, Tax Map 0492-41-0020			
130	12	red maple	Acer rubrum	75	X	offsite, Tax Map 0492-41-0018, owner agreed to removal by Dominion	This tree has already been removed		
129	24	red maple	Acer rubrum	70	X	offsite, Tax Map 0492-41-0018, owner agreed to removal by Dominion	This tree has already been removed		
128	15	red maple	Acer rubrum	68		offsite, Tax Map 0492-41-0018			
127	12	cherry	Prunus species	55	X	offsite, Tax Map 0492-41-0018, owner agreed to removal by Dominion	This tree has already been removed		
126	15	cherry	Prunus species	50	X	offsite, Tax Map 0492-41-017, POTENTIAL HAZARD, Dominion currently negotiating with owner, DO NOT remove without permission from offsite owner			
125	22	black locust	Robinia pseudoacacia	65		offsite, Tax Map 0492-41-017			
124	16	red maple	Acer rubrum	80		offsite, Tax Map 0492-41-017			
123	15	black locust	Robinia pseudoacacia	60		offsite, Tax Map 0492-41-017			
122	18	black locust	Robinia pseudoacacia	60		offsite, Tax Map 0492-41-016			
121	15	black locust	Robinia pseudoacacia	65		offsite, Tax Map 0492-41-016			
120	22	black locust	Robinia pseudoacacia	0	X	offsite, Tax Map 0492-41-016, owner agreed to removal by Dominion	This tree has already been removed		
119	30	black locust	Robinia pseudoacacia	65		offsite, Tax Map 0492-41-016			
118	24	black locust	Robinia pseudoacacia	65		offsite, Tax Map 0492-41-016			
117	12	white pine	Pinus strobus	65		offsite, Tax Map 0492-4102-G1			
116	12	white pine	Pinus strobus	65		offsite, Tax Map 0492-4102-G1			
115	12	white pine	Pinus strobus	70		offsite, Tax Map 0492-4102-G1			
114	24	red maple	Acer rubrum	80		offsite, 0492-4102-0064, no grade change proposed within crz			
113	24	tulip poplar	Liriodendron tulipifera	70		offsite, 0492-4102-0063			
112	24	tulip poplar	Liriodendron tulipifera	70		offsite, 0492-4102-0063			
111	12	black cherry	prunus serotina	60		offsite, 0492-41-F			
109	18/18/20/22	tulip poplar	Liriodendron tulipifera	55		on Dominion property, no grade change proposed			
108	24	tulip poplar	Liriodendron tulipifera	70		offsite, 0492-41-F			
107	18/15	tulip poplar	Liriodendron tulipifera	70		may be jointly owned, no grade change proposed, offsite, Tax Map 0492-12-0015			
106	16	tulip poplar	Liriodendron tulipifera	70		offsite, Tax Map 0492-12-0013, no grade change proposed within crz			
105	24	white pine	Pinus strobus	80		offsite, Tax Map 0492-12-0013, no grade change proposed within crz			
104	24	white pine	Pinus strobus	80		offsite, Tax Map 0492-12-0013			
103	12	red maple	Acer rubrum	65		offsite, Tax Map 0492-12-0012, triple trunk			
102	12/12/14	red maple	Acer rubrum	75		offsite, Tax Map 0492-12-0012			
101	24	white pine	Pinus strobus	60		offsite, Tax Map 0492-12-0012			
100	24	leyland cypress	x Cupressocyparis leylandii	75		offsite, Tax Map 0492-12-0001			
99	12	white pine	Pinus strobus	75		offsite, Tax Map 0492-12-0001			
98	24	red oak	Quercus rubra	80		offsite, Tax Map 0492-12-0001			

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FAIRFAX COUNTY, VIRGINIA

SEAL

KEY PLAN

SCALE

0' 30' 60'

GRAPHIC SCALE

No.	DATE	BY	Description
REVISIONS			
DRAWN BY LM			
APPROVED BY JC			
CHECKED BY KWW			
DATE MAY 2017			
TITLE			

NOTES

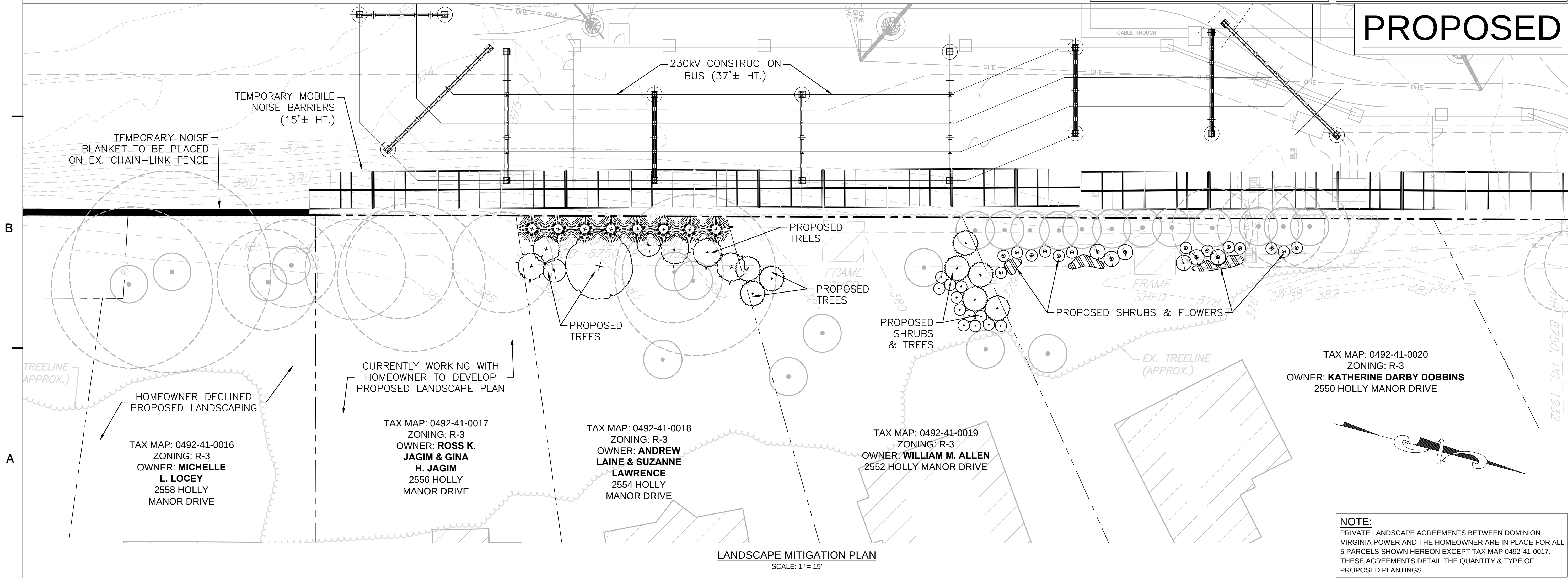
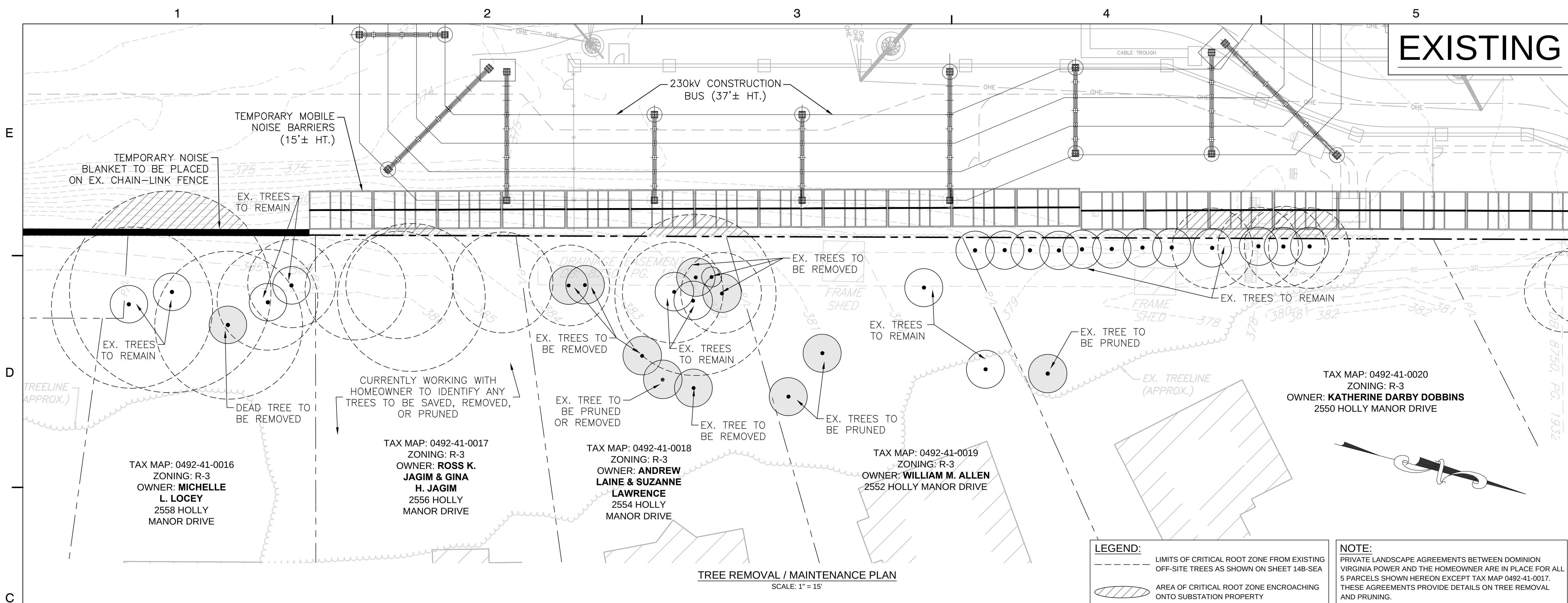
1. TREE INVENTORY AND CONDITION EVALUATION PERFORMED BY JANICE M. CENA (MA-4469A) ON DECEMBER 17, 2014 AND UPDATED ON MAY 9, 2017.
2. TREE CONDITION EVALUATION WAS PERFORMED FROM THE SUBSTATION PROPERTY FOR ALL OFFSITE TREES.
3. CONDITION EVALUATION PER 9TH EDITION OF THE GUIDE FOR PLANT APPRAISAL, PUBLISHED BY THE ISA.
4. CRITICAL ROOT ZONE (CRZ) IS EQUAL TO 1 FOOT OF RADIUS FOR EVERY INCH CALIPER.
5. TREE LOCATIONS ARE APPROXIMATE AND WERE LOCATED BY GPS FROM THE SUBSTATION PROPERTY.

OFF-SITE TREE SURVEY

PROJECT NO. 50058411

14B-SEA

SHEET NO. 22 OF 32



No.	DATE	BY	Description
REVISIONS			

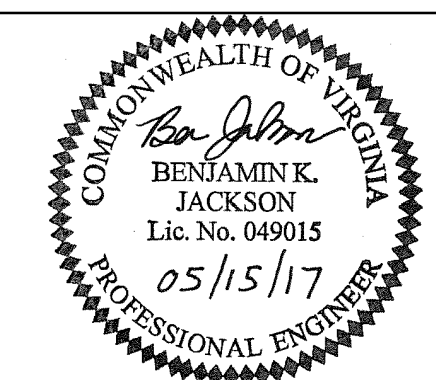
DRAWN BY	BKJ
APPROVED BY	KWW
CHECKED BY	KWW
DATE	MAY 2017
TITLE	

**OFF-SITE TREE AREA
ENHANCEMENTS THRU
PRIVATE AGREEMENTS**

PROJECT NO. 50058411

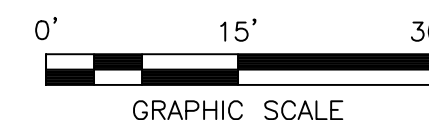
14C-SEA

SEAL



KEY PLAN

SCALE



No.	DATE	BY	Description

REVISIONS

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APPROVED BY KWW

CHECKED BY KWW

DATE MAY 2017

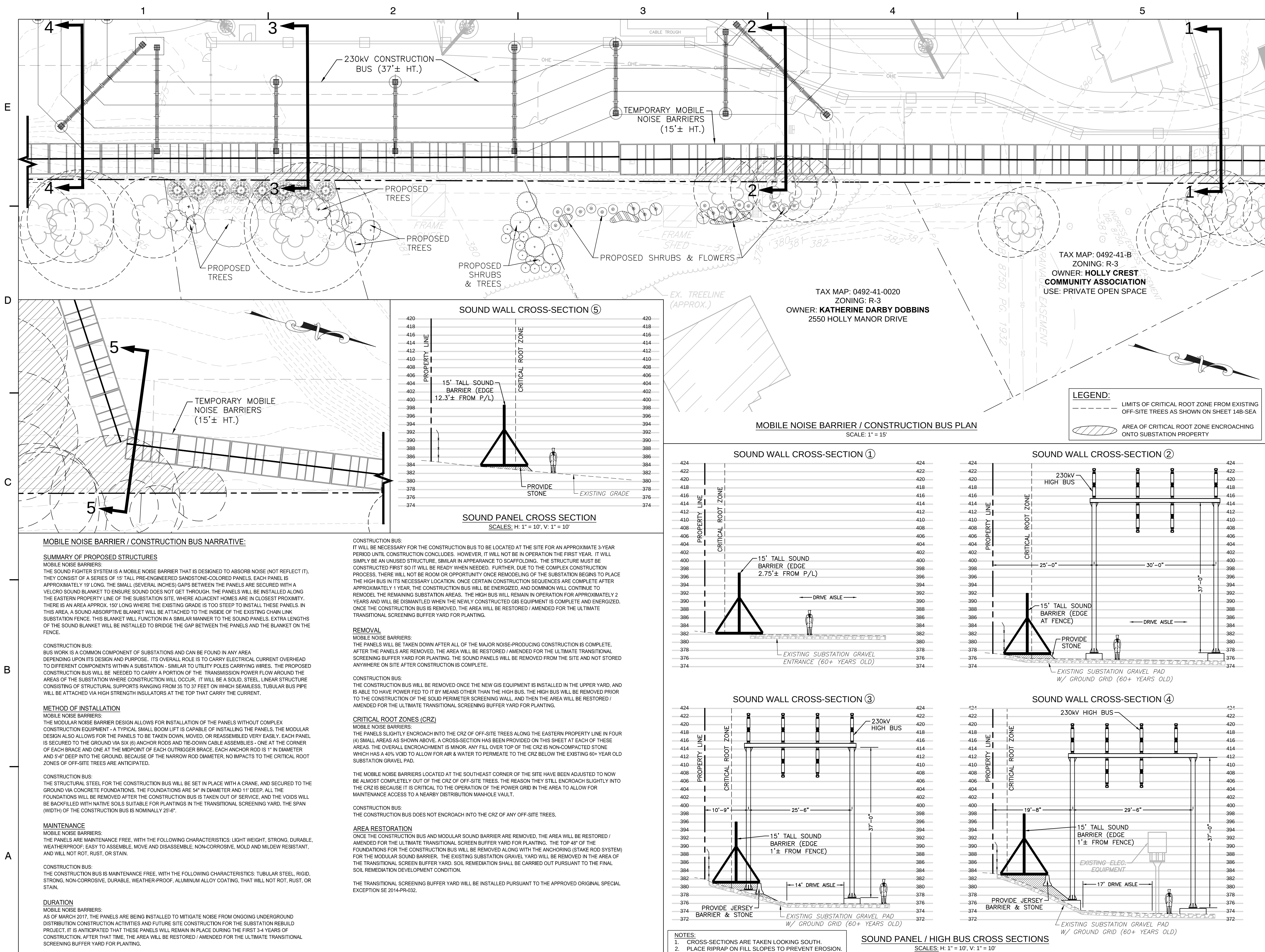
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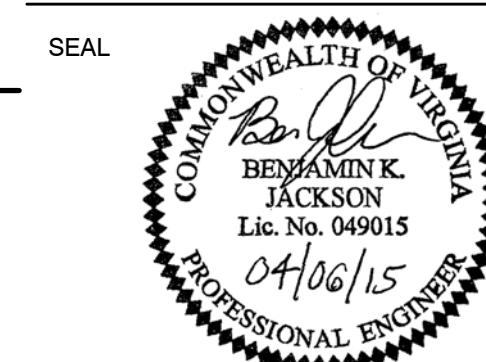
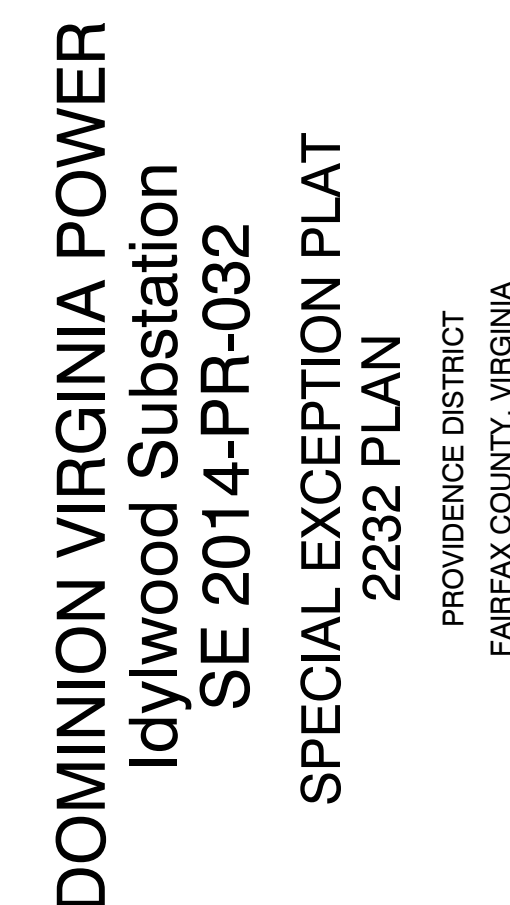
MOBILE NOISE BARRIER / CONSTRUCTION BUS INFO

PROJECT NO. 50058411

14D-SEA

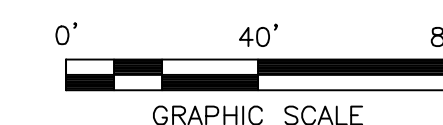
SHEET NO. 24 OF 32





KEY PLAN

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No.	DATE	BY	Description

REVISION

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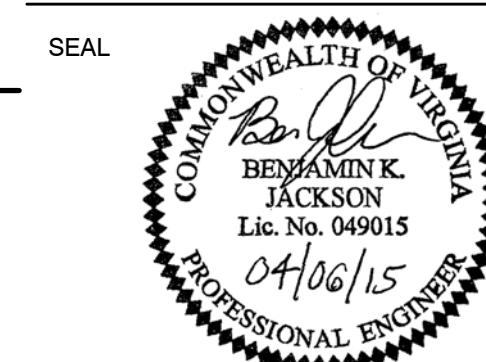
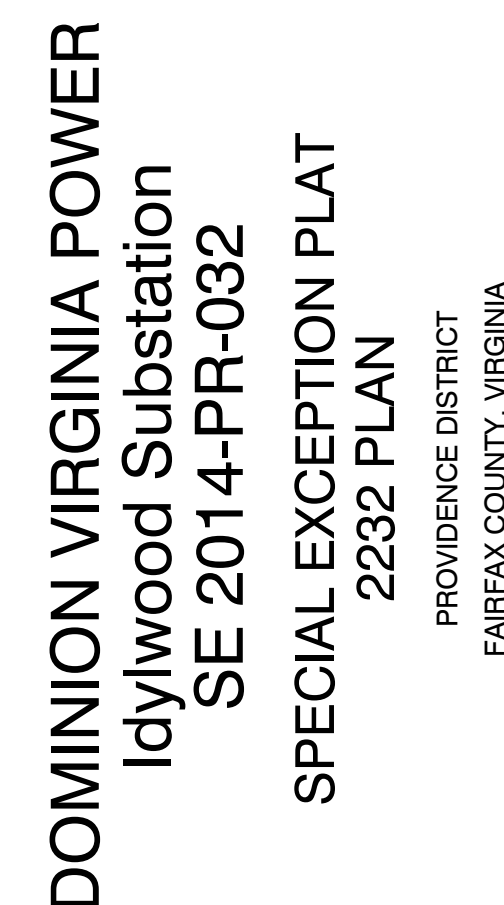
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DATE APRIL 2015

TITLE

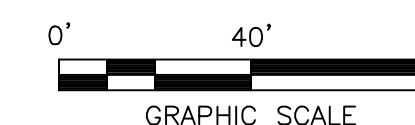
EXISTING DIMENSION
PLAN FROM ADJACENT
PROPERTY LINES
& RESIDENCES

PROJECT NO. 50058411



KEY PLAN

SCALE



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CHECKED BY	KWW
DATE	APRIL 2015

TITLE
PROPOSED DIMENSION
PLAN FROM ADJACENT
PROPERTY LINES
& RESIDENCES

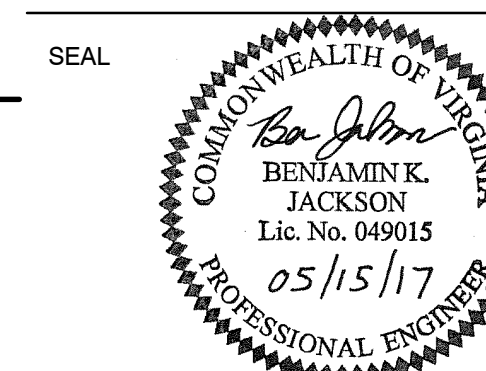
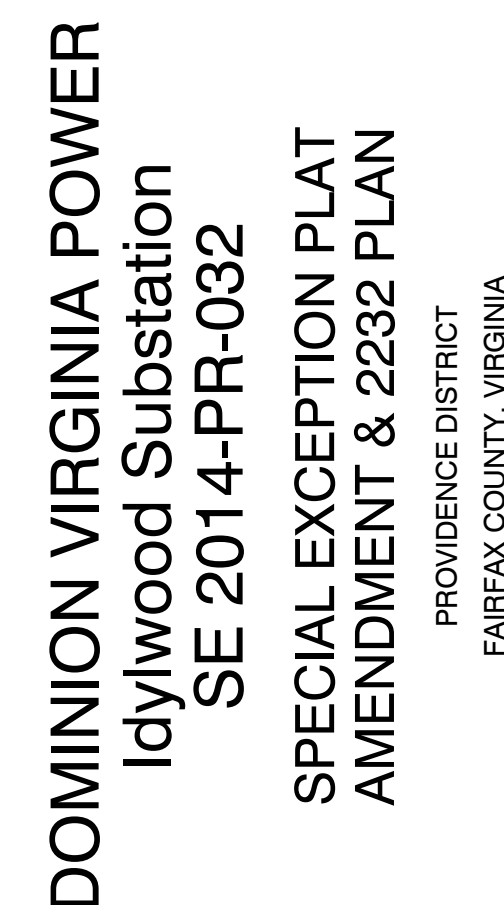
PROJECT NO. 50058411

16

SHEET NO. 18 OF 21

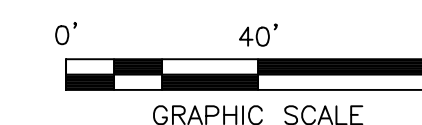
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KEY PLAN

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APPROVED BY	KWW
CHECKED BY	KWW
DATE	MAY 2017

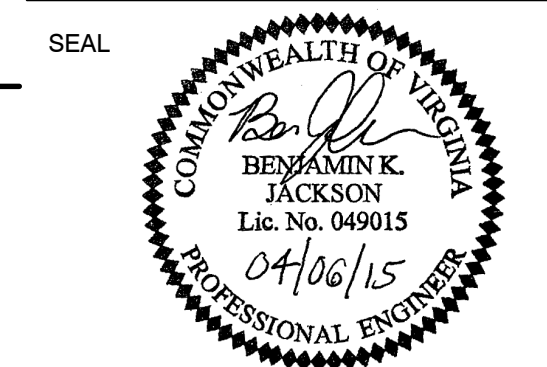
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PROPOSED DIMENSION
PLAN FROM ADJACENT
RESIDENCES TO
CONSTRUCTION BUS

PROJECT NO. 50058411

16-SEA

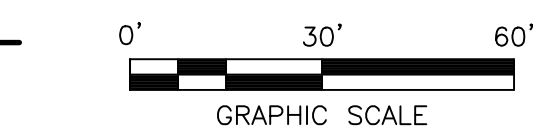
SHEET NO.

27 OF 32



KEY PLAN

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REVISIONS			

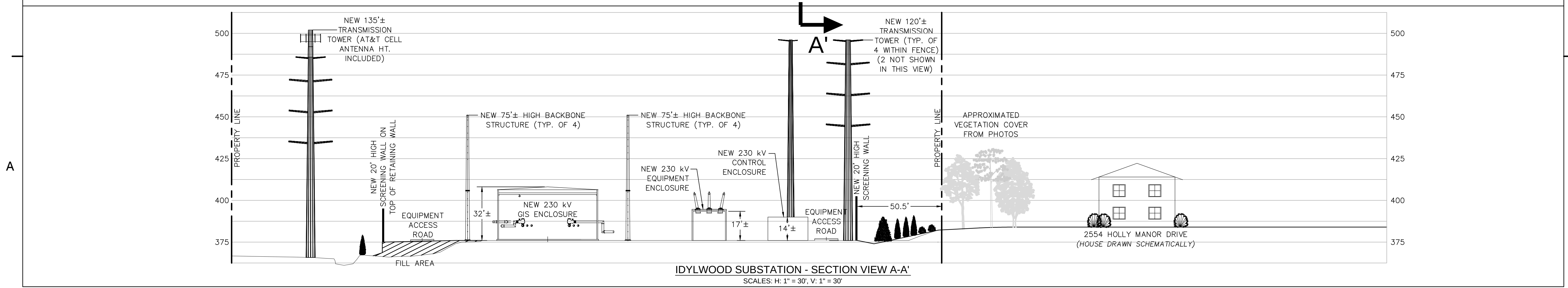
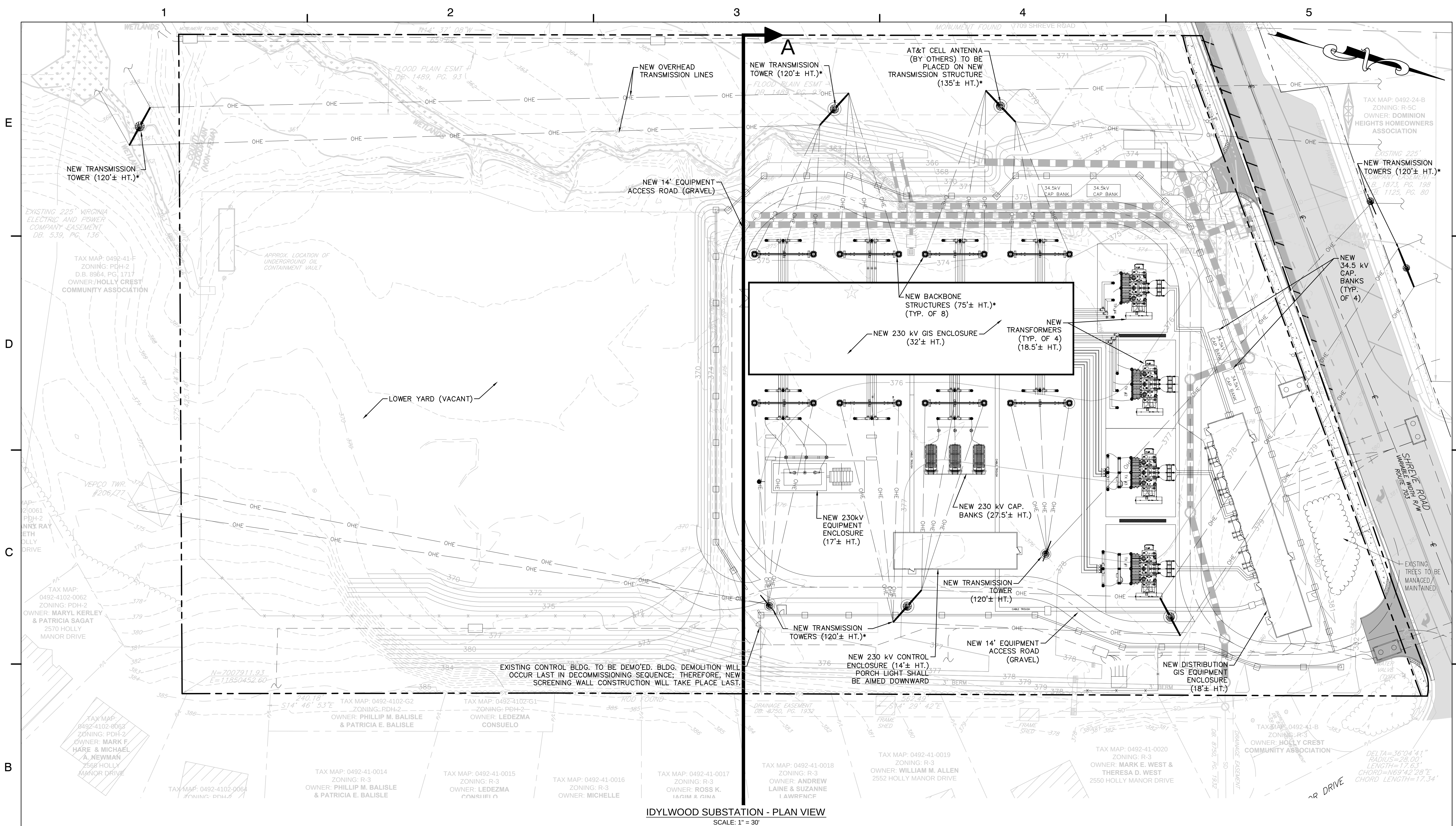
DRAWN BY	BJJ
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CHECKED BY	KWW
DATE	APRIL 2015
TITLE	

SUBSTATION
SECTION VIEW
A-A'

PROJECT NO. 50058411

SHEET NO. 17 OF 19

SHEET 28 OF 32

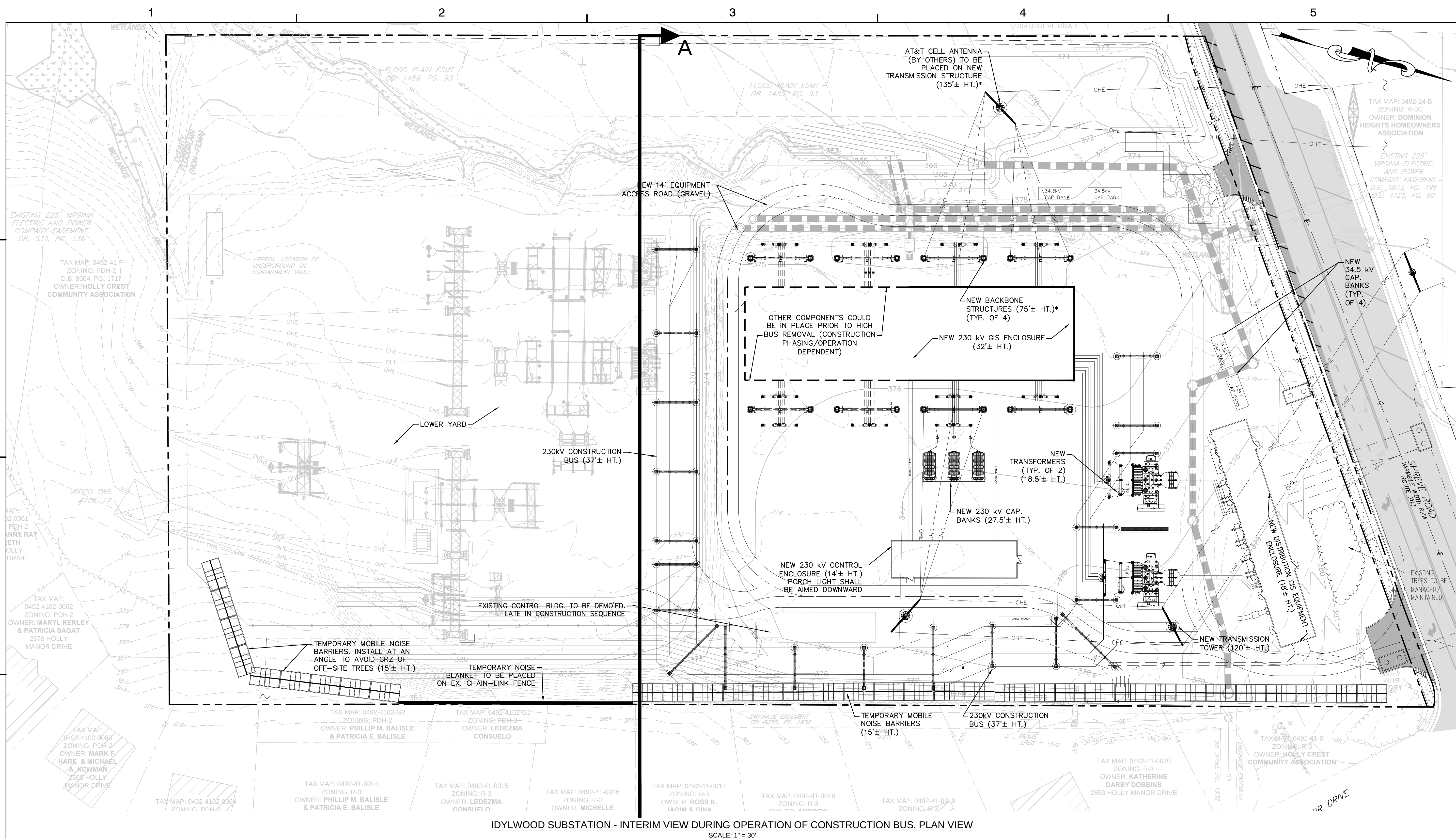


No.	DATE	BY	Description
REVISIONS			
DRAWN BY BKJ			
APPROVED BY KWW			
CHECKED BY KWW			
DATE MAY 2017			
TITLE			

SUBSTATION
SECTION VIEW
A-A'

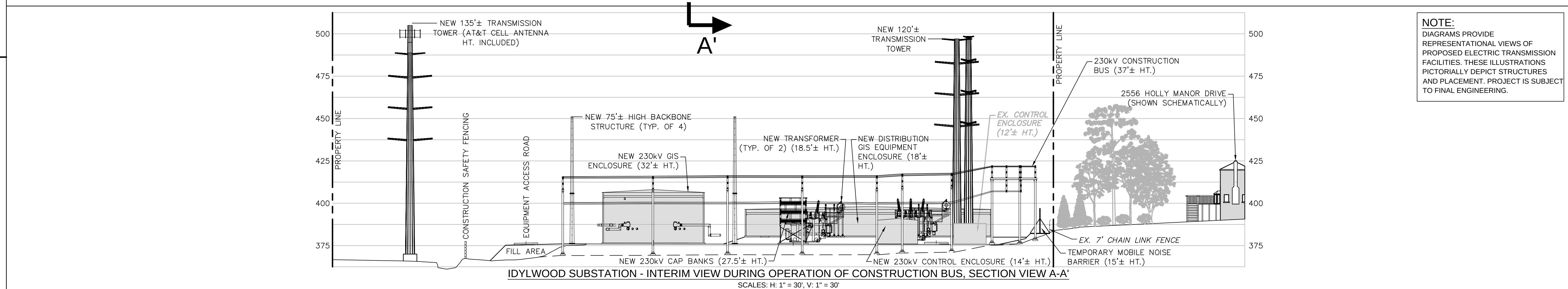
PROJECT NO. 50058411

17-SEA



IDYLWOOD SUBSTATION - INTERIM VIEW DURING OPERATION OF CONSTRUCTION BUS, PLAN VIEW

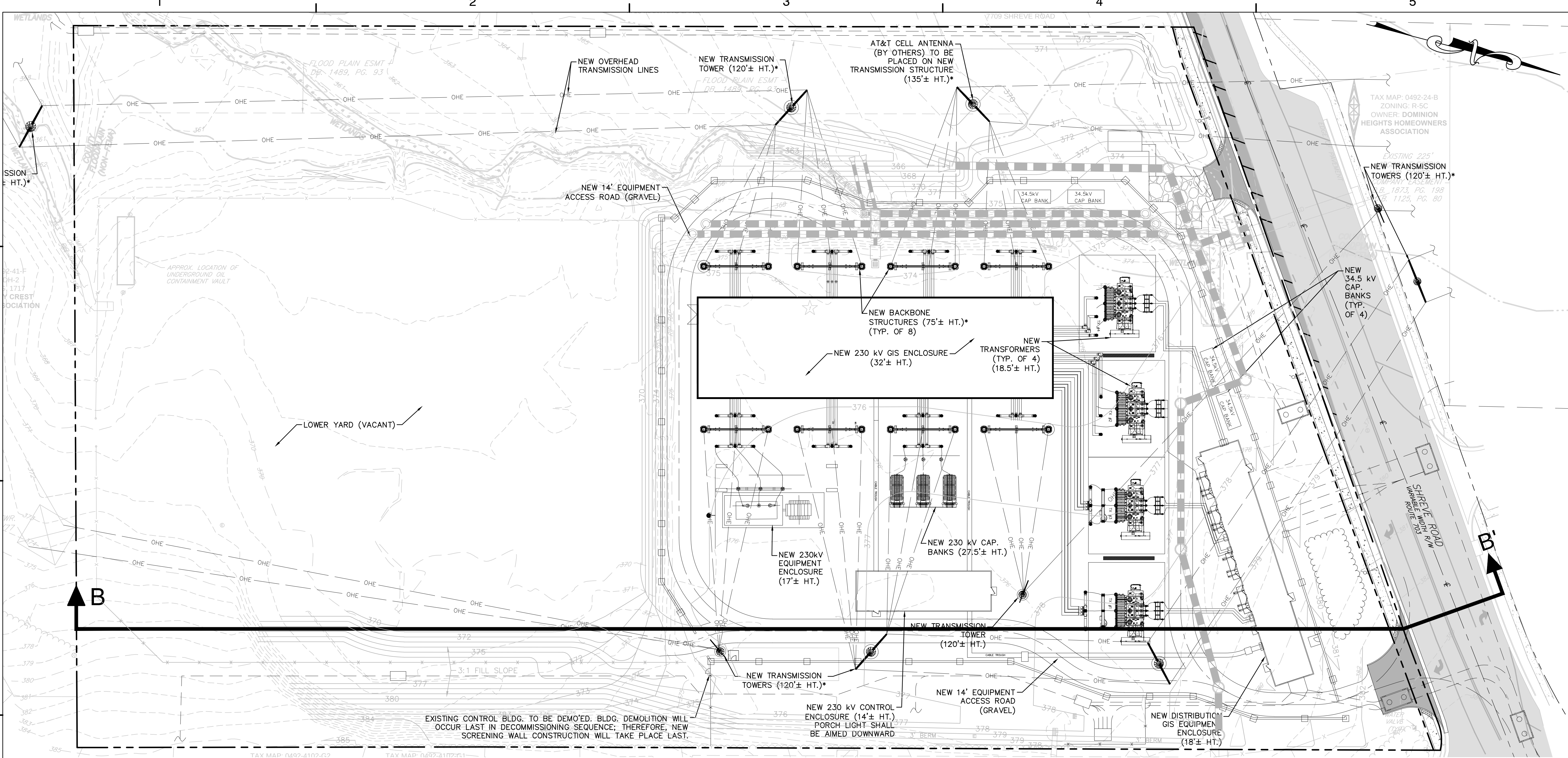
SCALE: 1" = 30'



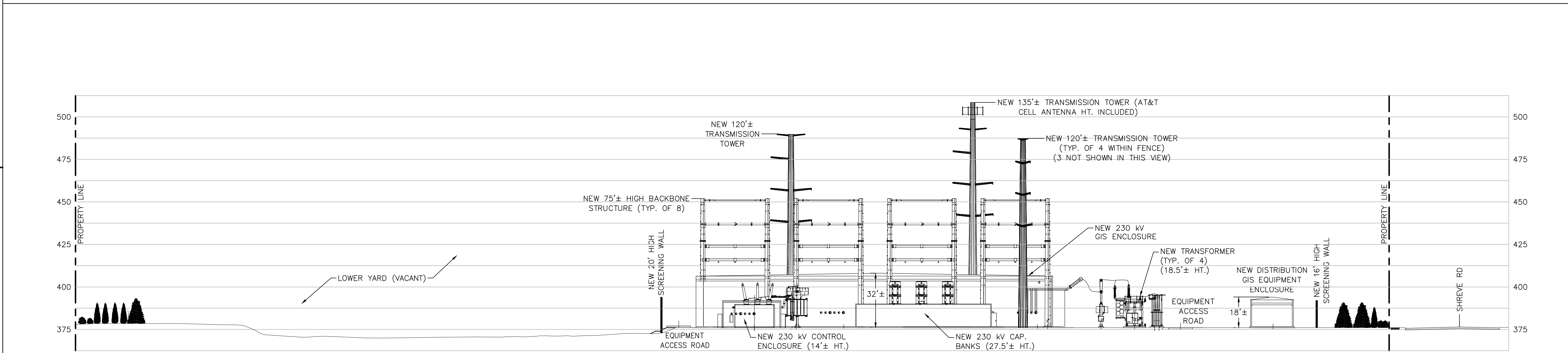
IDYLWOOD SUBSTATION - INTERIM VIEW DURING OPERATION OF CONSTRUCTION BUS, SECTION VIEW A-A'

SCALES: H: 1" = 30', V: 1" = 30'

NOTE:
DIAGRAMS PROVIDE REPRESENTATIONAL VIEWS OF PROPOSED ELECTRIC TRANSMISSION FACILITIES. THESE ILLUSTRATIONS PICTORIALLY DEPICT STRUCTURES AND PLACEMENT. PROJECT IS SUBJECT TO FINAL ENGINEERING.



IDYLMWOOD SUBSTATION - PLAN VIEW
SCALE: 1" = 30'



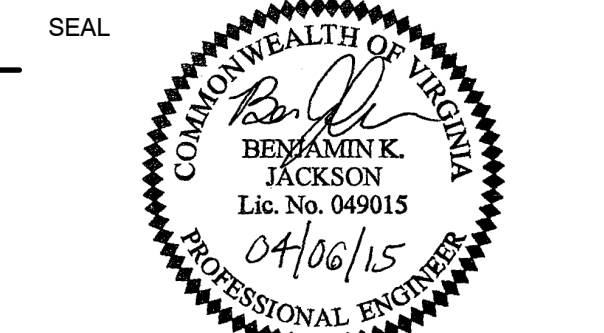
IDYLMWOOD SUBSTATION - SECTION VIEW B-B'
SCALES: H: 1" = 30', V: 1" = 30'



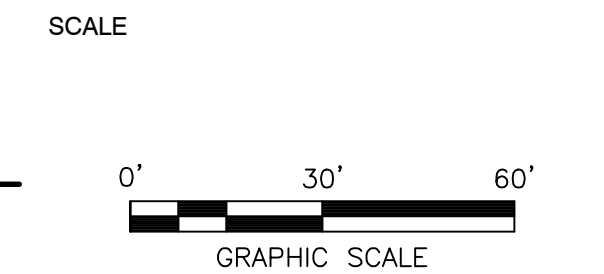
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DOMINION VIRGINIA POWER
Idylwood Substation
SE 2014-PR-032
SPECIAL EXCEPTION PLAT
2232 PLAN
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA



KEY PLAN



No.	DATE	BY	Description

REVISIONS
DRAWN BY BKJ
APPROVED BY KWW
CHECKED BY KWW
DATE APRIL 2015
TITLE

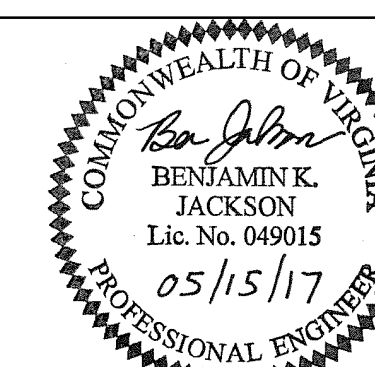
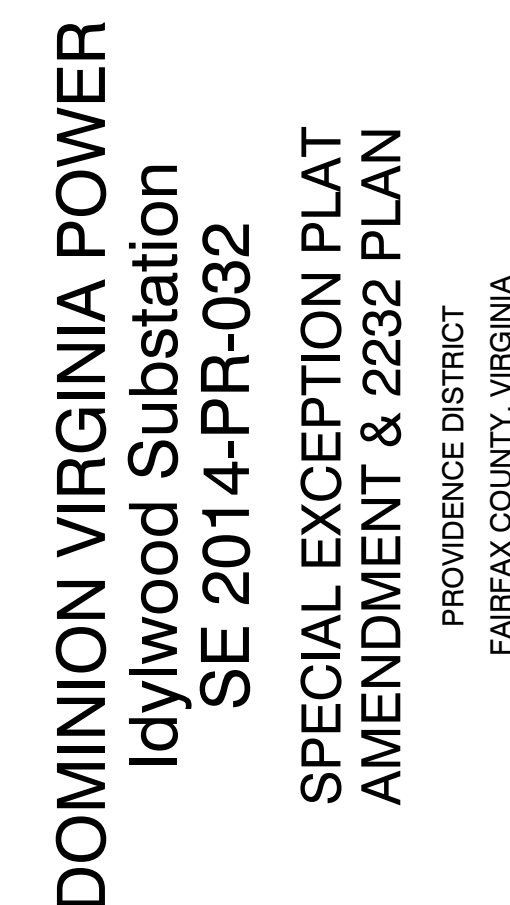
SUBSTATION
SECTION VIEW
B-B'

PROJECT NO. 50058411

SHEET NO. 18 OF 19

SHEET 30 OF 32

FOR INFORMATION ONLY



0' 30'

GRAPHIC SCALE

No.	DATE	BY	Description

SUBSTATION
SECTION VIEW
B-B'

18-SEA

SHEET NO. 31 OF 32

