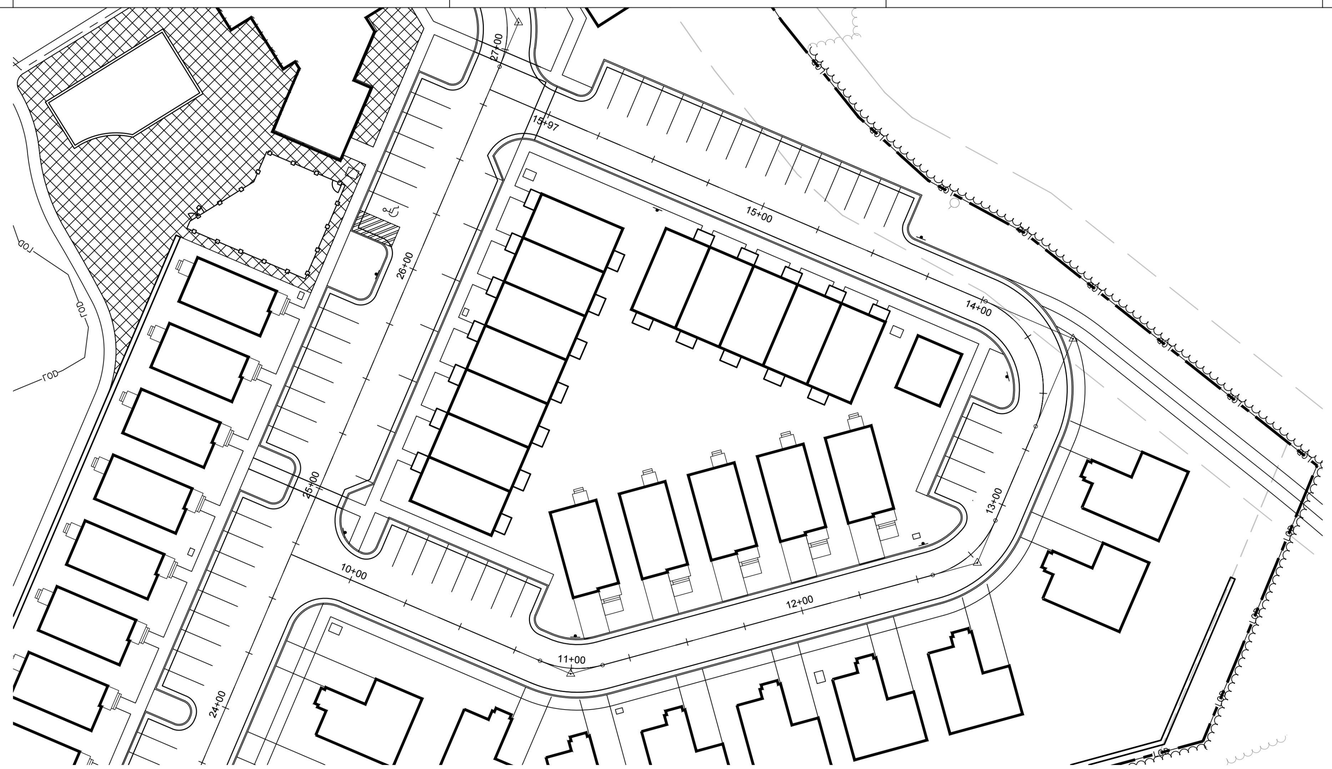
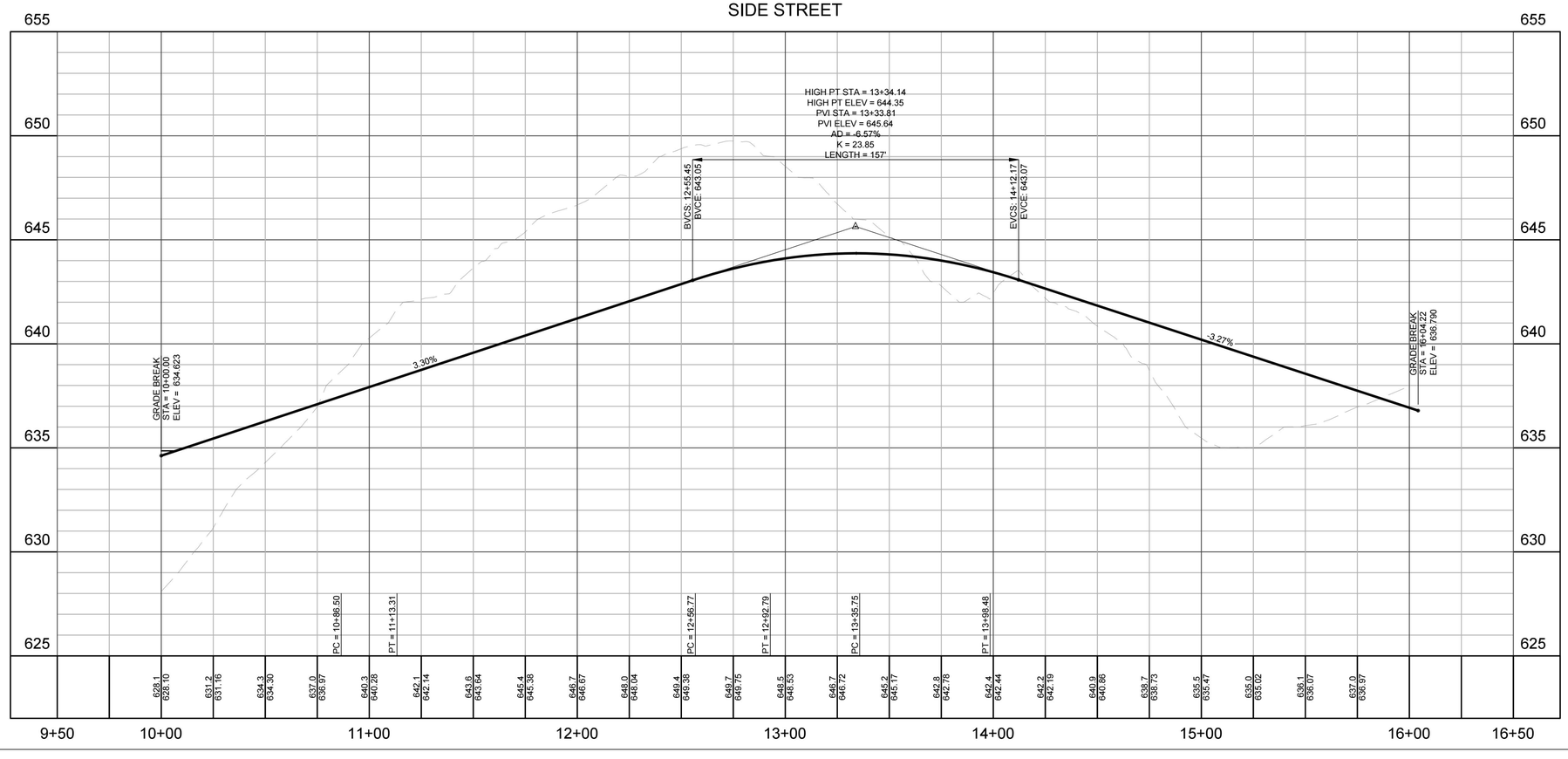




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4805 Lake Brook Drive
Suite 200
Glen Allen, VA 23060
804.290.7957

GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 15' 30' 60'
HORIZONTAL SCALE: 1" = 30'

0' 1.5' 3' 6'
VERTICAL SCALE: 1" = 3'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

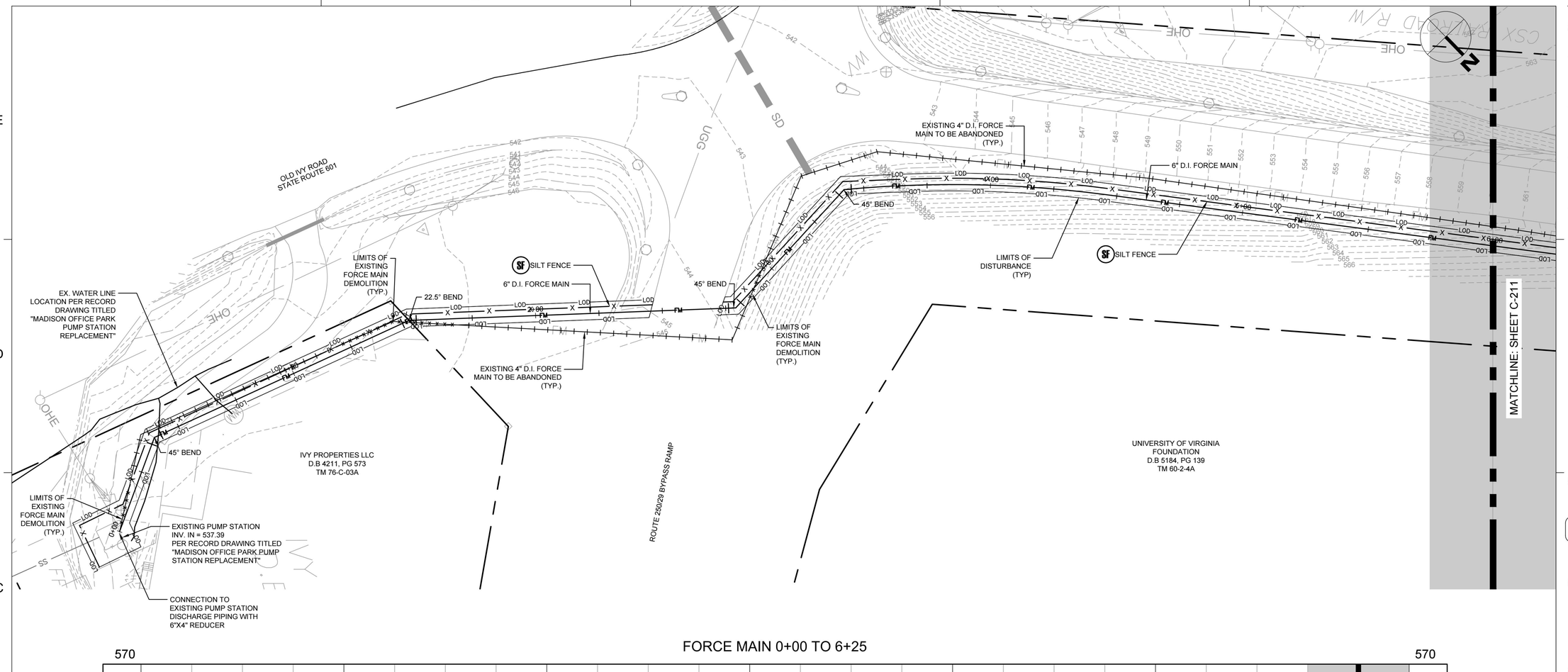
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APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

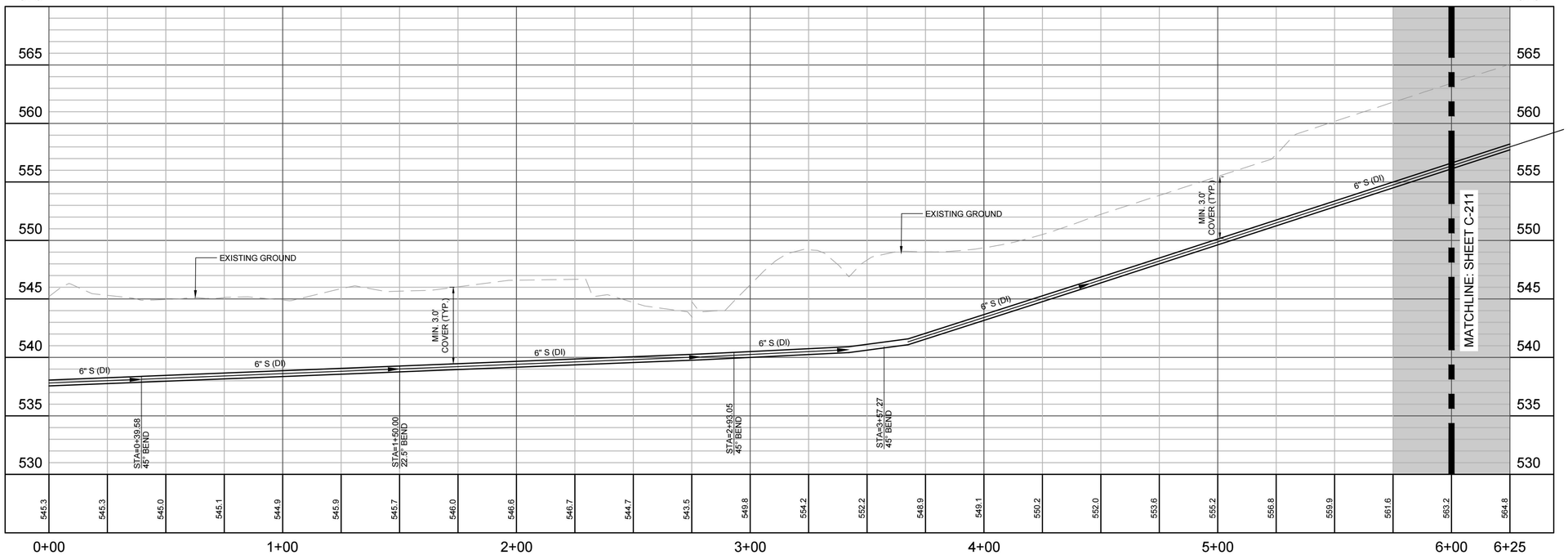
TITLE

ROAD PLAN AND PROFILE

PROJECT NO. 50151935

C-205





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4805 Lake Brook Drive
Suite 200
Glen Allen, VA 23060
804.290.7957

GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE
PLAN 0' 10' 20' 40'
SCALE: 1" = 20'
PROFILE 0' 12.5' 25' 50'
HORIZONTAL SCALE: 1" = 25'
0' 2.5' 5' 10'
VERTICAL SCALE: 1" = 5'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

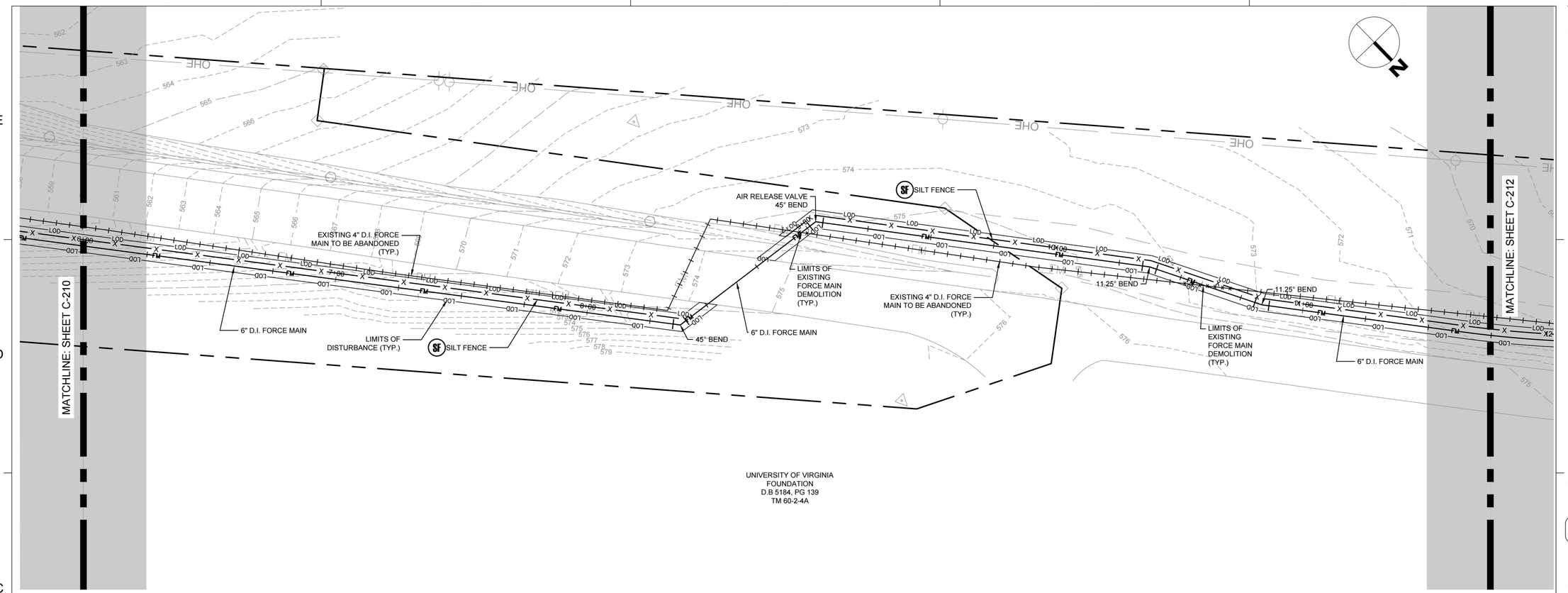
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OFFSITE SANITARY SEWER

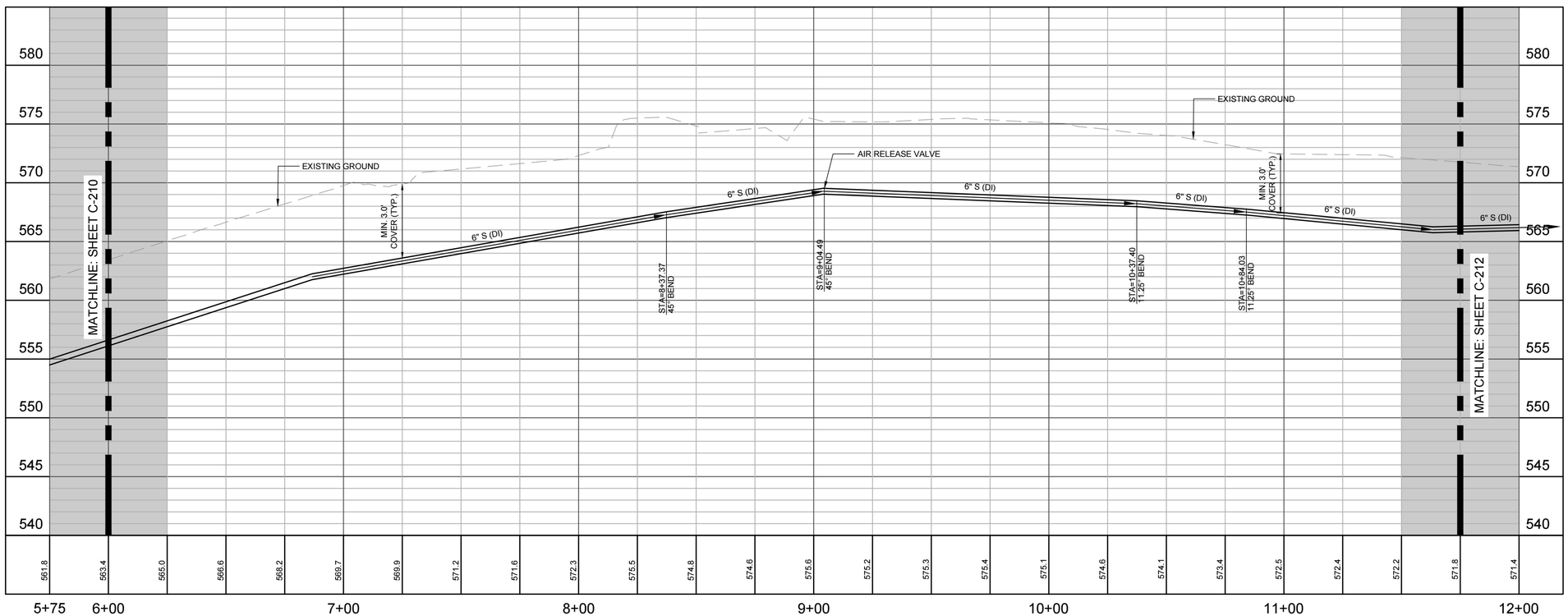
PROJECT NO. 50151935

C-210

SHEET NO. 45 OF 85



FORCE MAIN 5+75 TO 12+00



Dewberry

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GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE
PLAN 0' 10' 20' 40'
SCALE: 1" = 20'
PROFILE 0' 12.5' 25' 50'
HORIZONTAL SCALE: 1" = 25'
0' 2.5' 5' 10'
VERTICAL SCALE: 1" = 5'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

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DATE DECEMBER 11, 2023

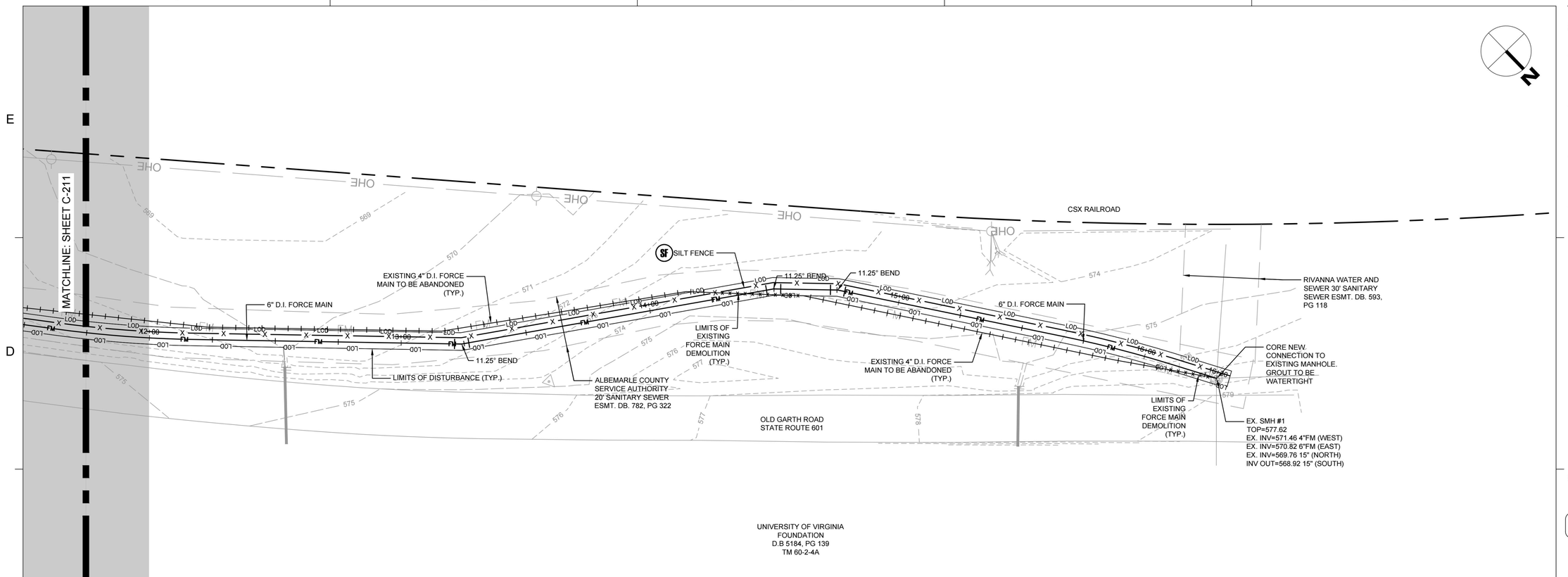
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OFFSITE SANITARY SEWER

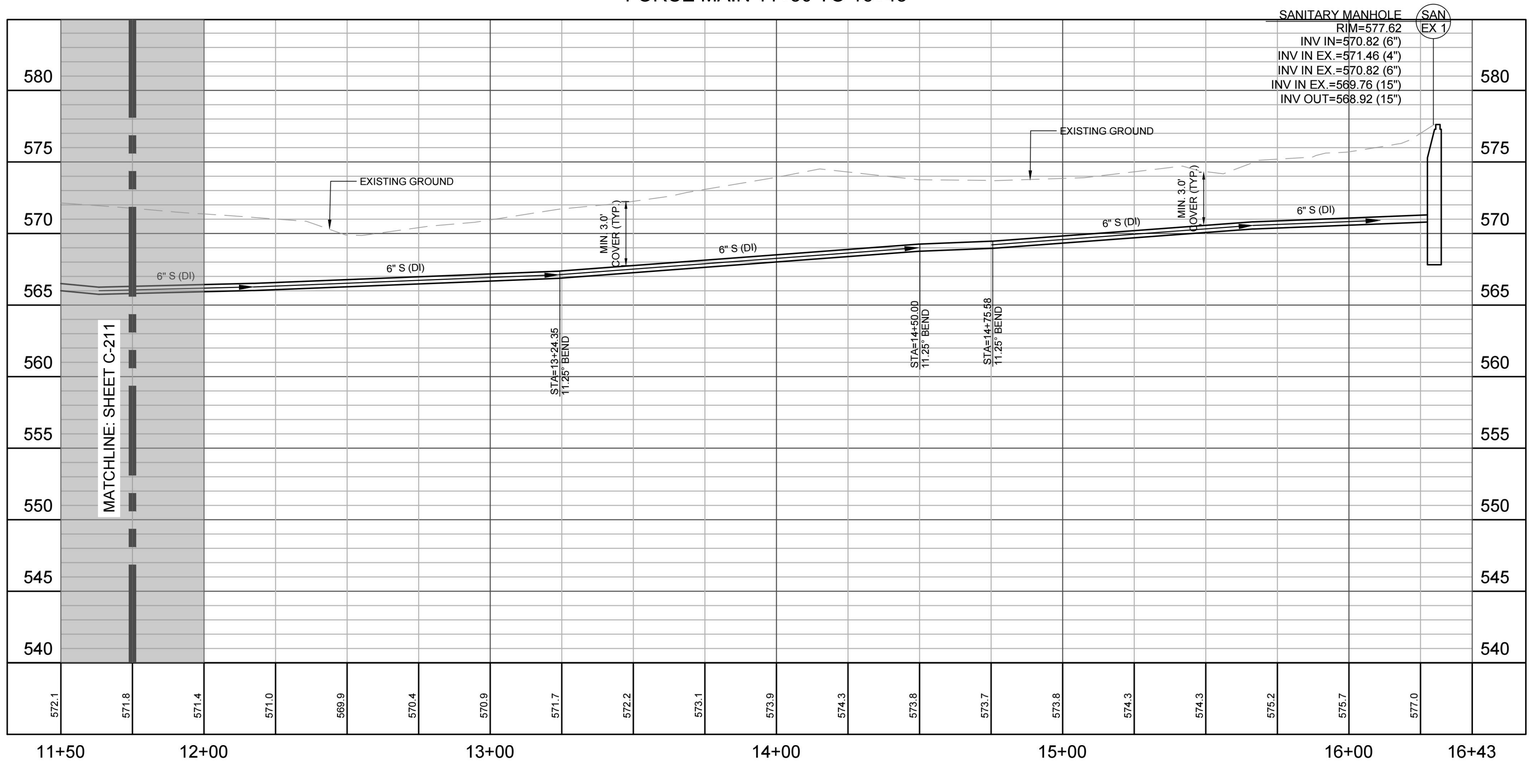
PROJECT NO. 50151935

C-211

SHEET NO. 46 OF 85



FORCE MAIN 11+50 TO 16+43



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4805 Lake Brook Drive
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Glen Allen, VA 23060
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GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE
PLAN 0' 10' 20' 40'
SCALE: 1" = 20'
PROFILE 0' 12.5' 25' 50'
HORIZONTAL SCALE: 1" = 25'
0' 2.5' 5' 10'
VERTICAL SCALE: 1" = 5'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
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DATE DECEMBER 11, 2023

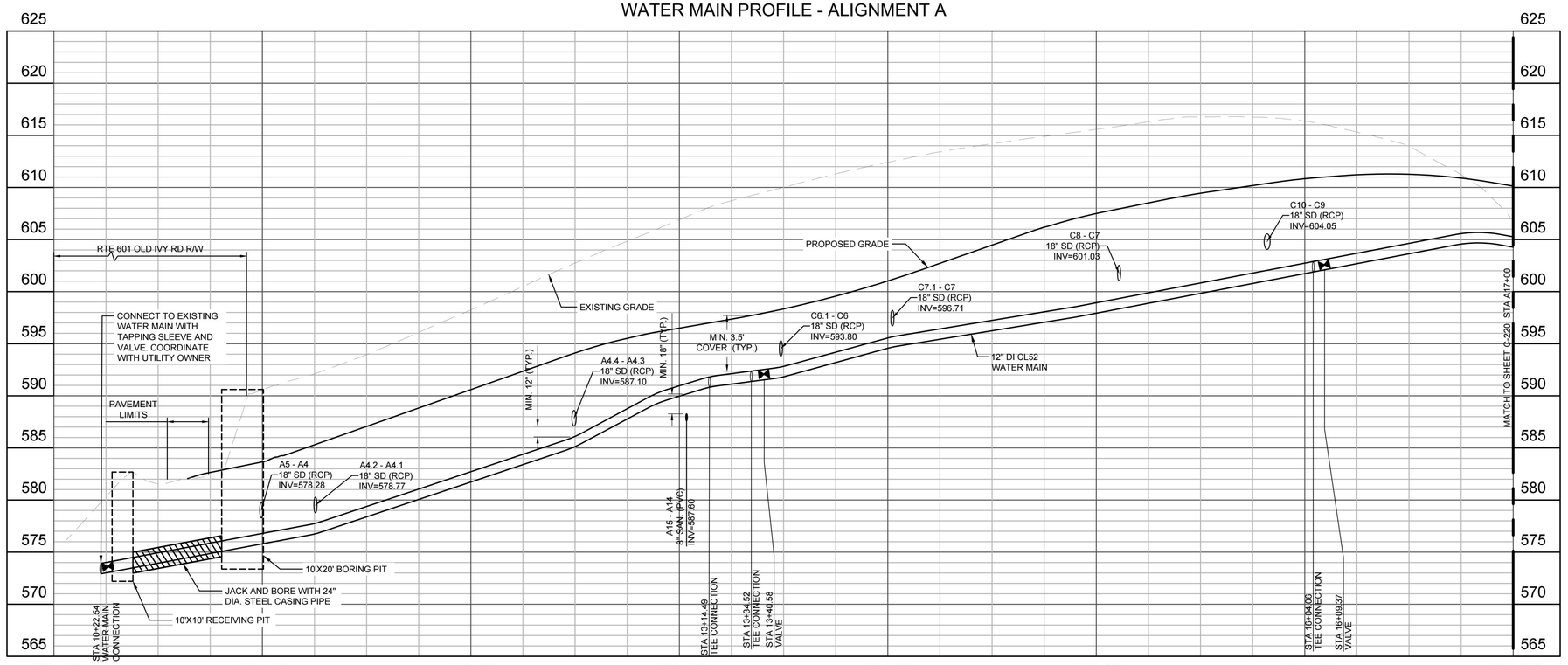
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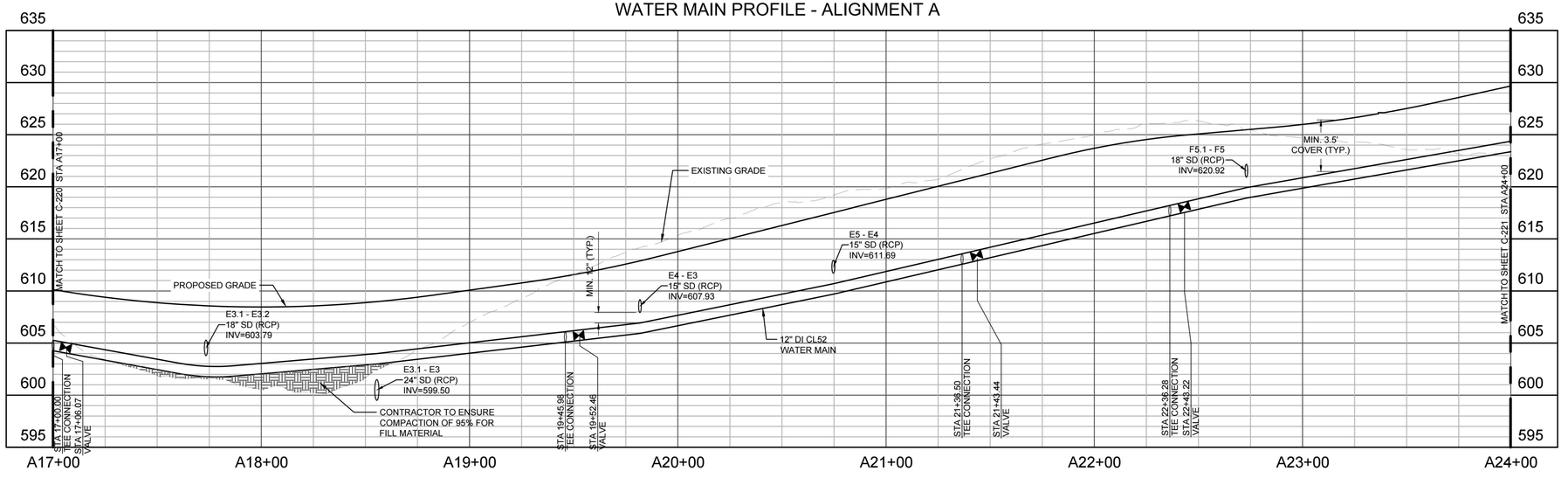
OFFSITE SANITARY SEWER

PROJECT NO. 50151935

C-212

SHEET NO. 47 OF 85





Dewberry

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GREYSTAR

OLD IVY RESIDENCES

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COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

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KEY PLAN

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Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 15' 30' 60'
HORIZONTAL SCALE: 1" = 30'

0' 1.5' 3' 6'
VERTICAL SCALE: 1" = 3'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

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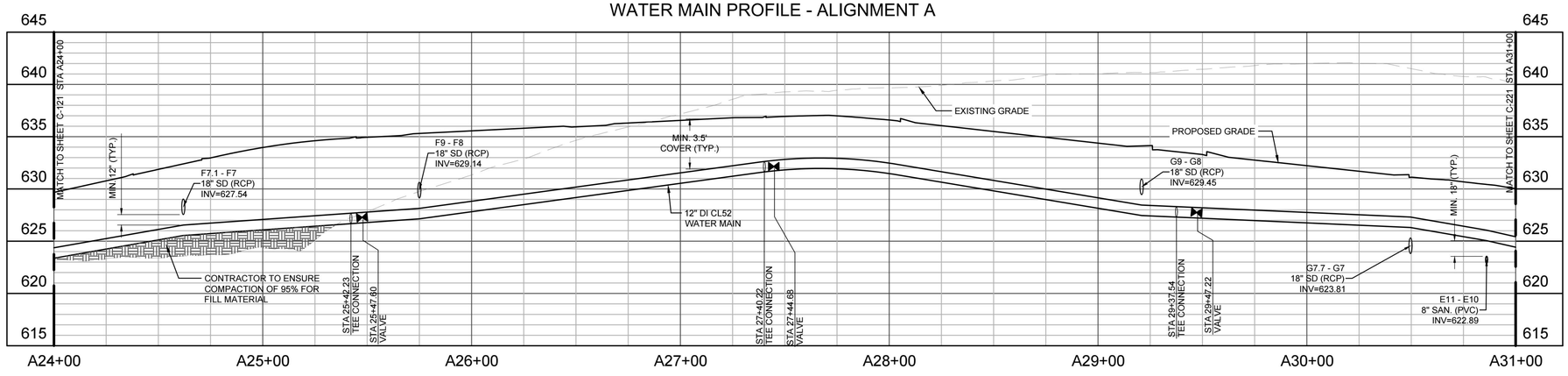
WATERLINE PROFILES

PROJECT NO. 50151935

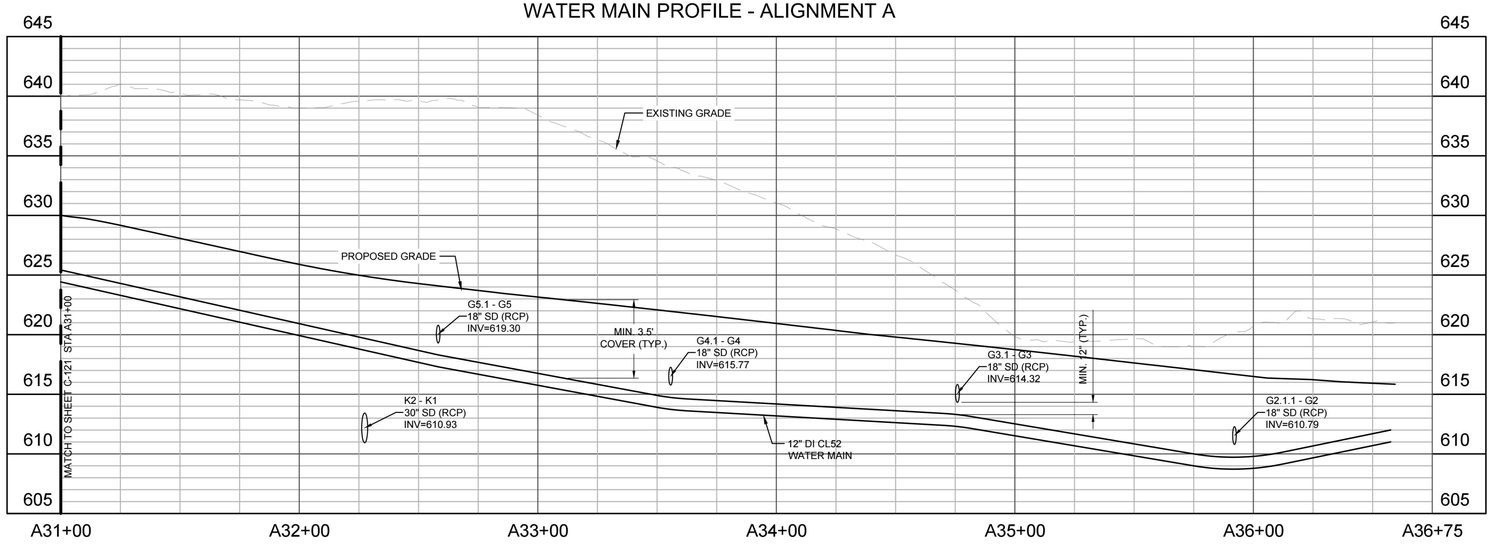
C-220

SHEET NO. 48 OF 85

WATER MAIN PROFILE - ALIGNMENT A



WATER MAIN PROFILE - ALIGNMENT A



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GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

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01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 15' 30' 60'
HORIZONTAL SCALE: 1" = 30'

0' 1.5' 3' 6'
VERTICAL SCALE: 1" = 3'

REVISIONS

NO.	DESCRIPTION	DATE
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TITLE

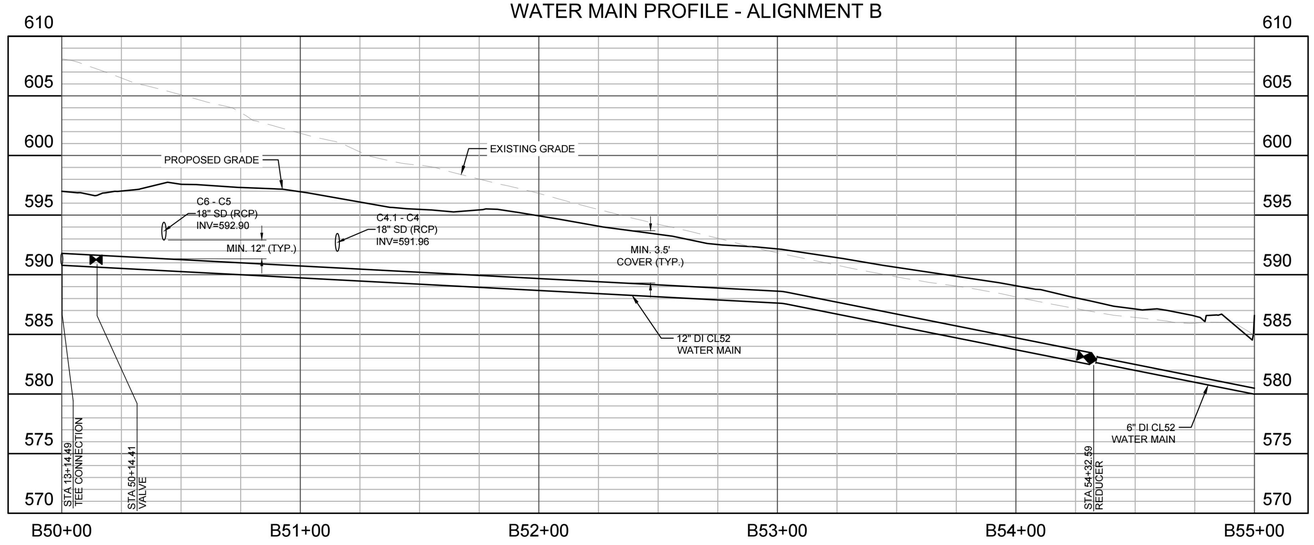
WATERLINE PROFILES

PROJECT NO. 50151935

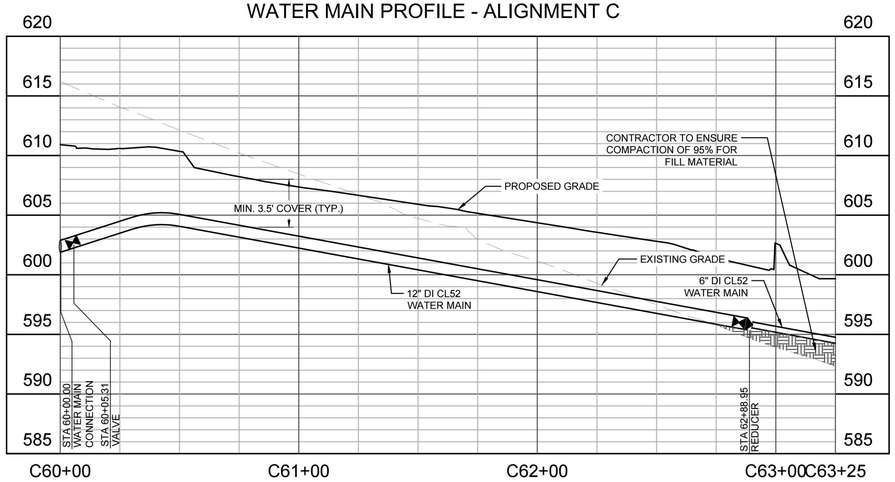
C-221

SHEET NO. 49 OF 85

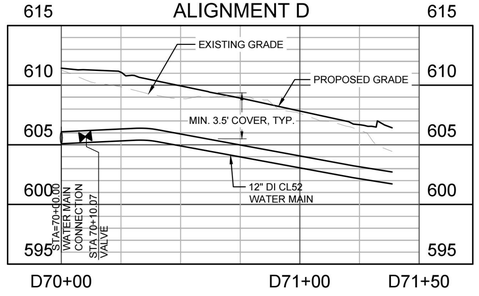
WATER MAIN PROFILE - ALIGNMENT B



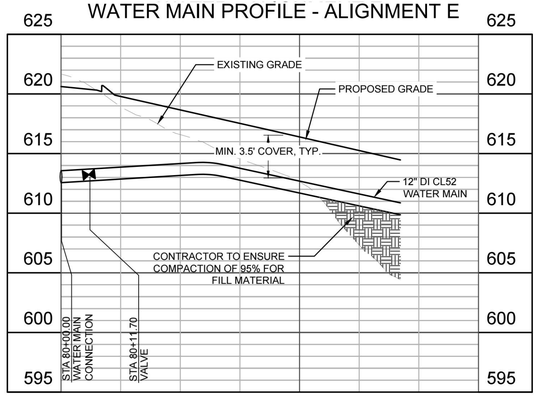
WATER MAIN PROFILE - ALIGNMENT C



WATER MAIN PROFILE - ALIGNMENT D



WATER MAIN PROFILE - ALIGNMENT E



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GREYSTAR

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COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

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NOT FOR CONSTRUCTION

KEY PLAN

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Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 15' 30' 60'
HORIZONTAL SCALE: 1" = 30'

0' 1.5' 3' 6'
VERTICAL SCALE: 1" = 3'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

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CHECKED BY DMK
DATE DECEMBER 11, 2023

TITLE

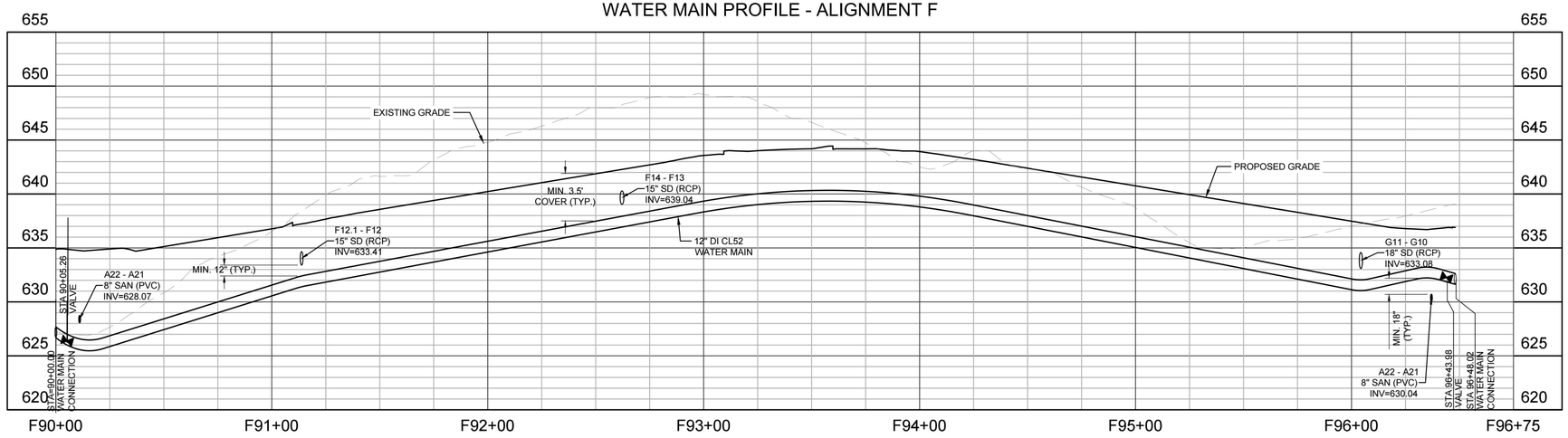
WATERLINE PROFILES

PROJECT NO. 50151935

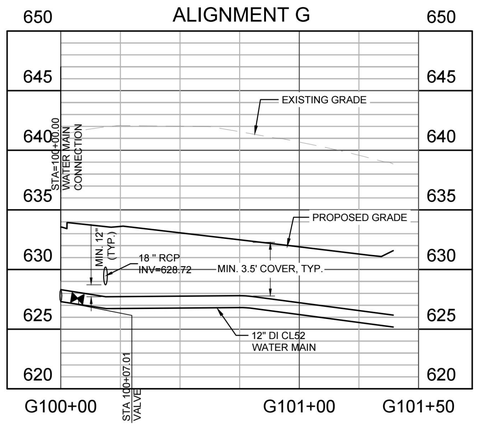
C-222

SHEET NO. 50 OF 85

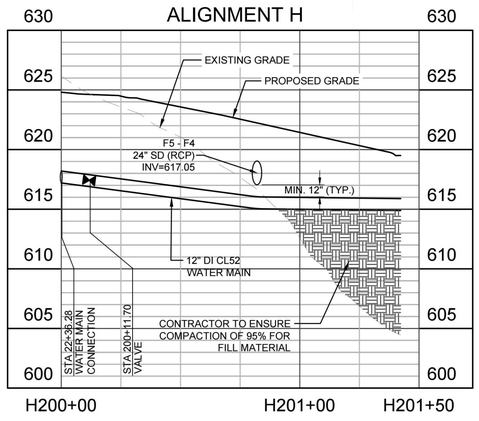
WATER MAIN PROFILE - ALIGNMENT F



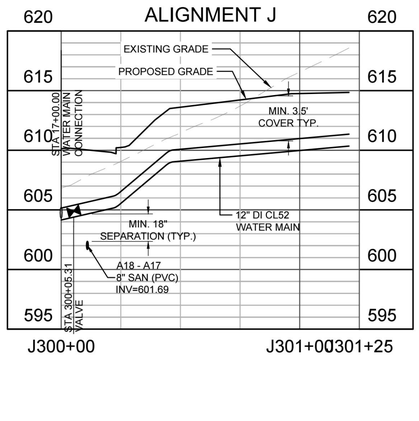
WATER MAIN PROFILE - ALIGNMENT G



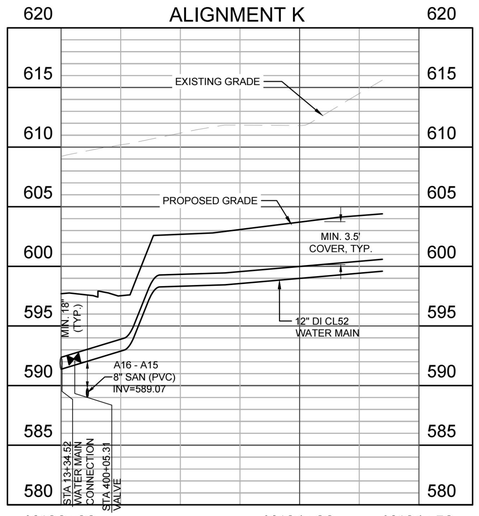
WATER MAIN PROFILE - ALIGNMENT H



WATER MAIN PROFILE - ALIGNMENT J



WATER MAIN PROFILE - ALIGNMENT K



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Glen Allen, VA 23060
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GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 15' 30' 60'
HORIZONTAL SCALE: 1" = 30'

0' 1.5' 3' 6'
VERTICAL SCALE: 1" = 3'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

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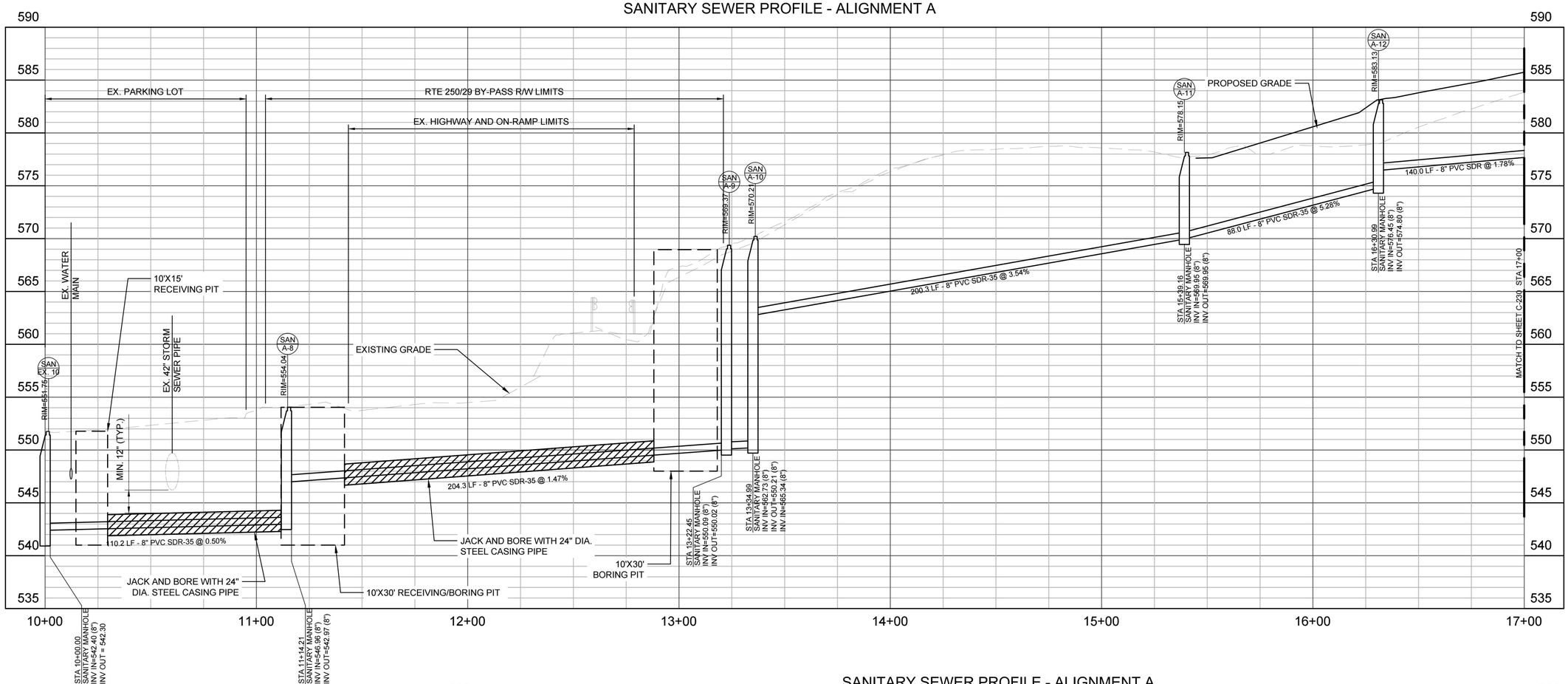
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WATERLINE PROFILES

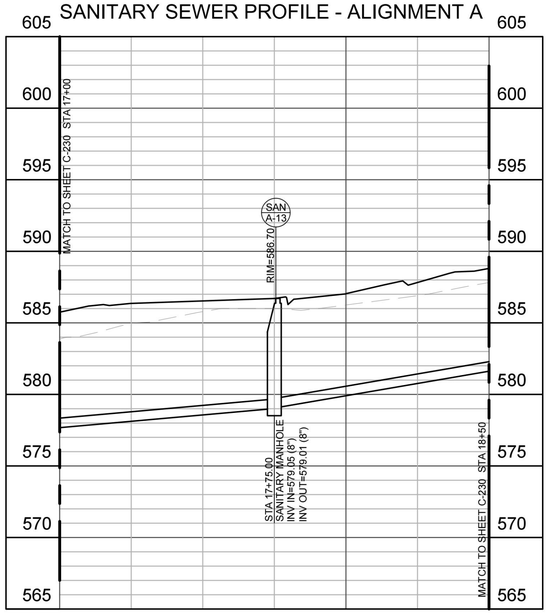
PROJECT NO. 50151935

C-233

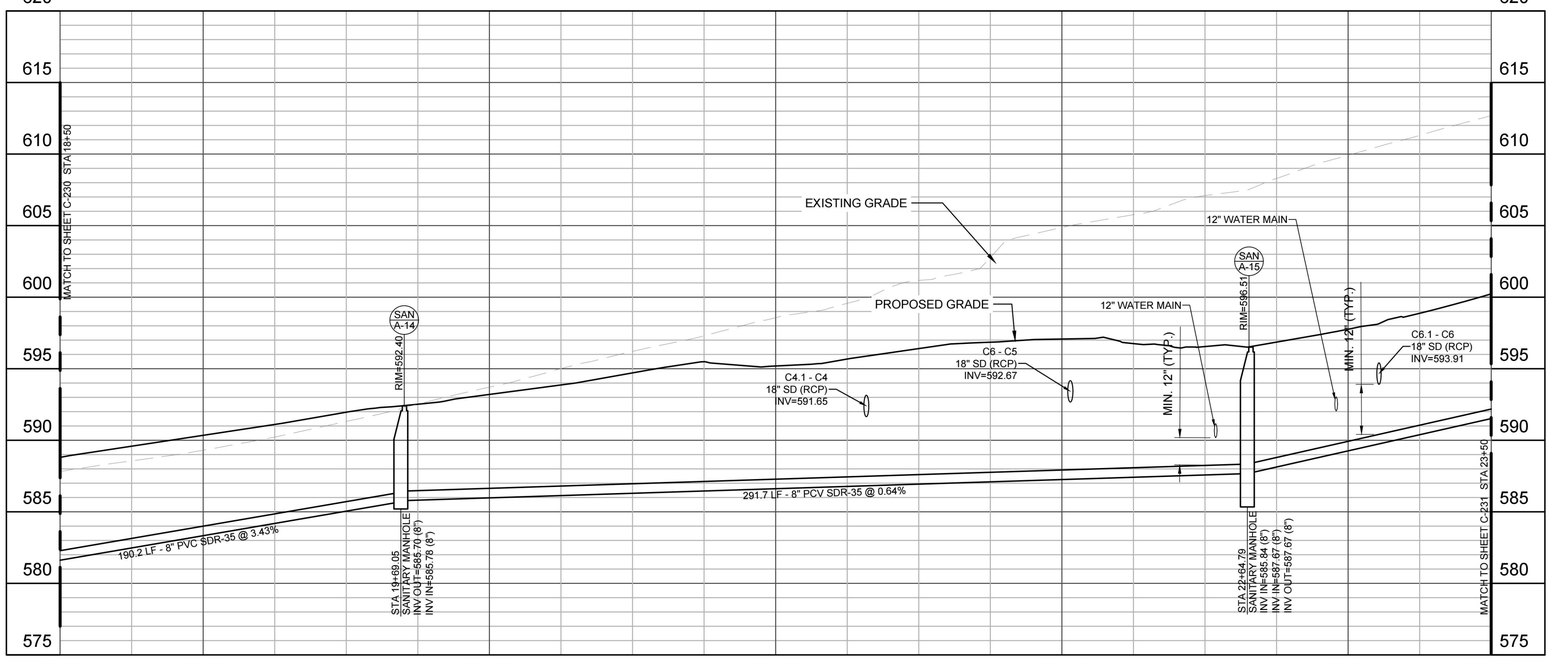
SANITARY SEWER PROFILE - ALIGNMENT A



SANITARY SEWER PROFILE - ALIGNMENT A



SANITARY SEWER PROFILE - ALIGNMENT A



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GREYSTAR

OLD IVY RESIDENCES

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COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

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KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 12.5' 25' 50'
HORIZONTAL SCALE: 1" = 25'

0' 2.5' 5' 10'
VERTICAL SCALE: 1" = 5'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

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DATE DECEMBER 11, 2023

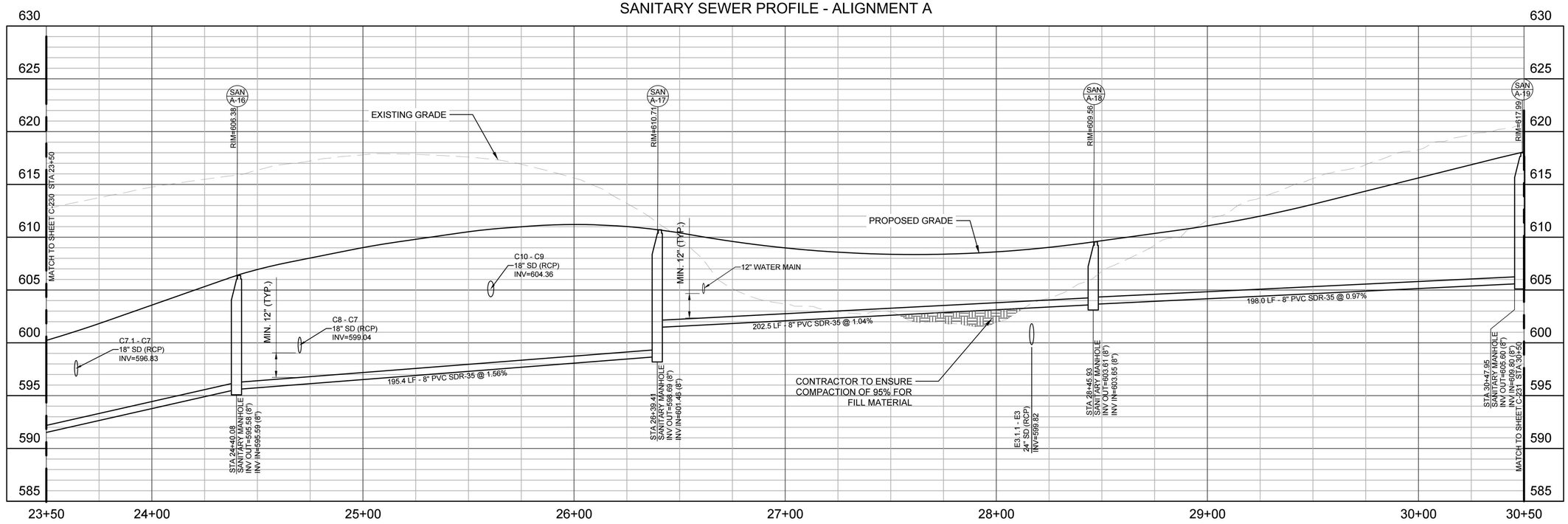
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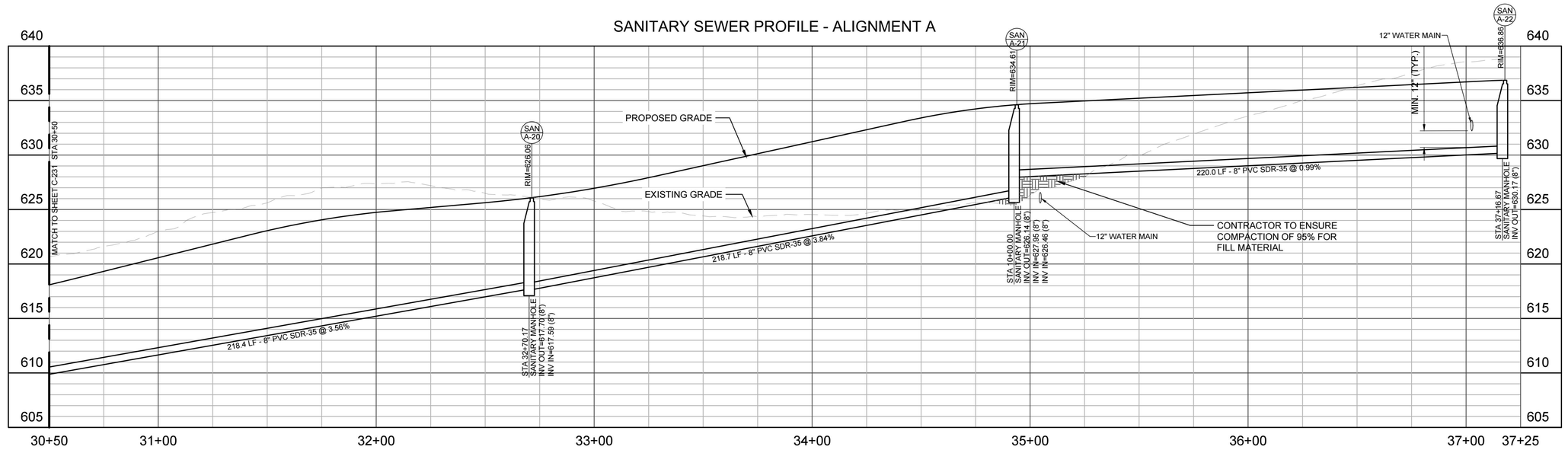
SANITARY SEWER PROFILES

PROJECT NO. 50151935

C-230

SHEET NO. 52 OF 85





Dewberry

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4805 Lake Brook Drive
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Glen Allen, VA 23060
804.290.7957

GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 12.5' 25' 50'
HORIZONTAL SCALE: 1" = 25'

0' 2.5' 5' 10'
VERTICAL SCALE: 1" = 5'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

TITLE

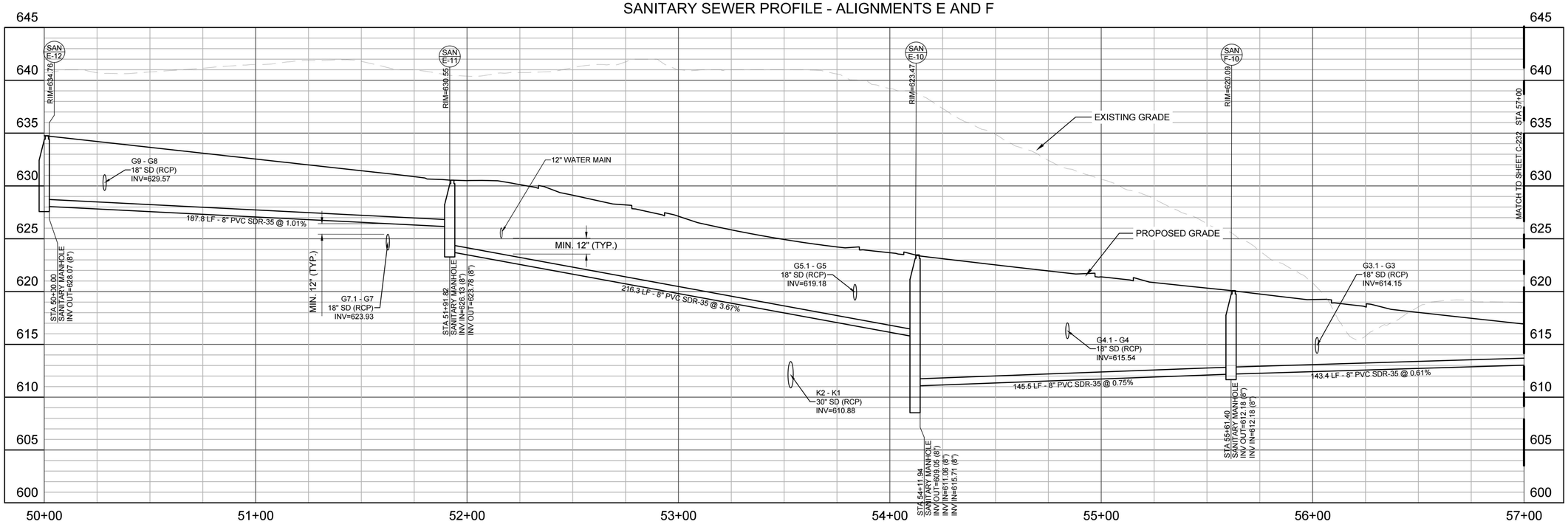
SANITARY SEWER PROFILES

PROJECT NO. 50151935

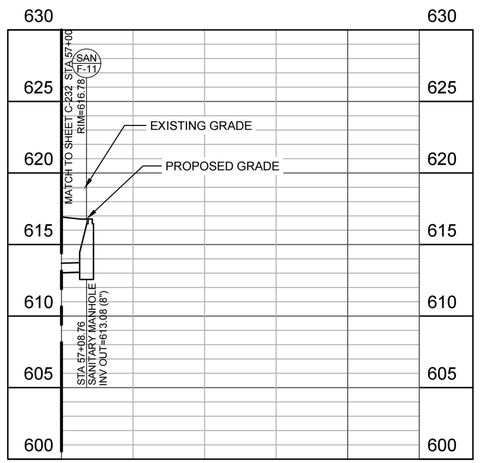
C-231

SHEET NO. 53 OF 85

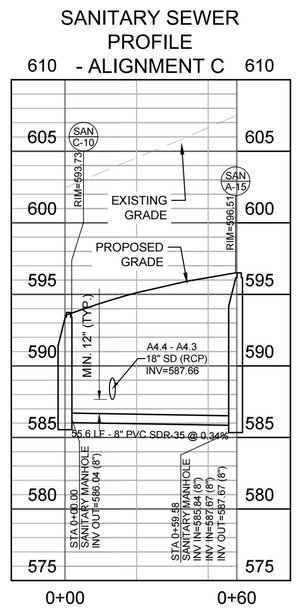
SANITARY SEWER PROFILE - ALIGNMENTS E AND F



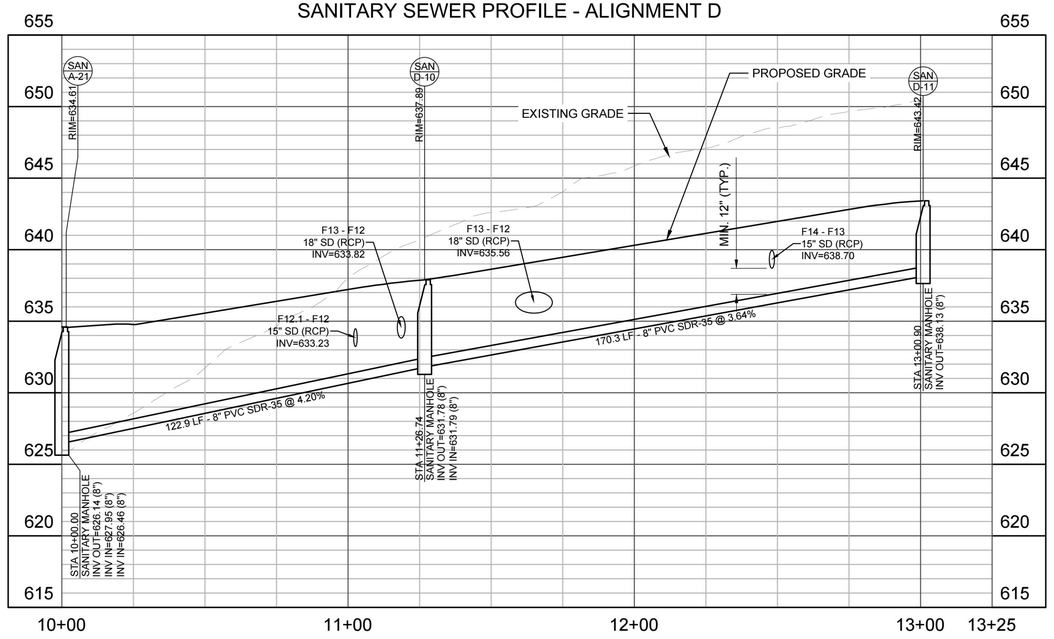
SANITARY SEWER PROFILE - ALIGNMENT F



SANITARY SEWER PROFILE - ALIGNMENT C



SANITARY SEWER PROFILE - ALIGNMENT D



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GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

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NOT FOR CONSTRUCTION

KEY PLAN

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Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 12.5' 25' 50'
HORIZONTAL SCALE: 1" = 25'

0' 2.5' 5' 10'
VERTICAL SCALE: 1" = 5'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

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APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

TITLE

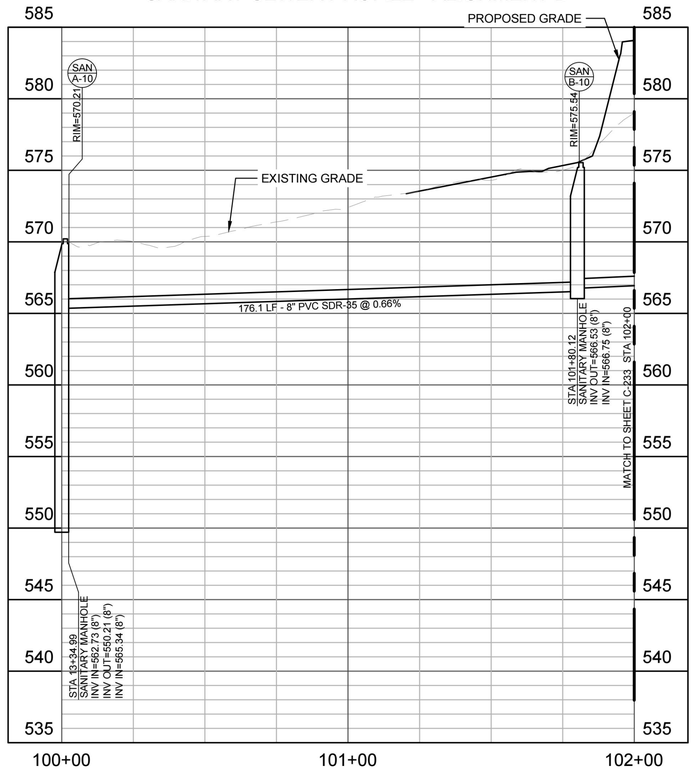
SANITARY SEWER PROFILES

PROJECT NO. 50151935

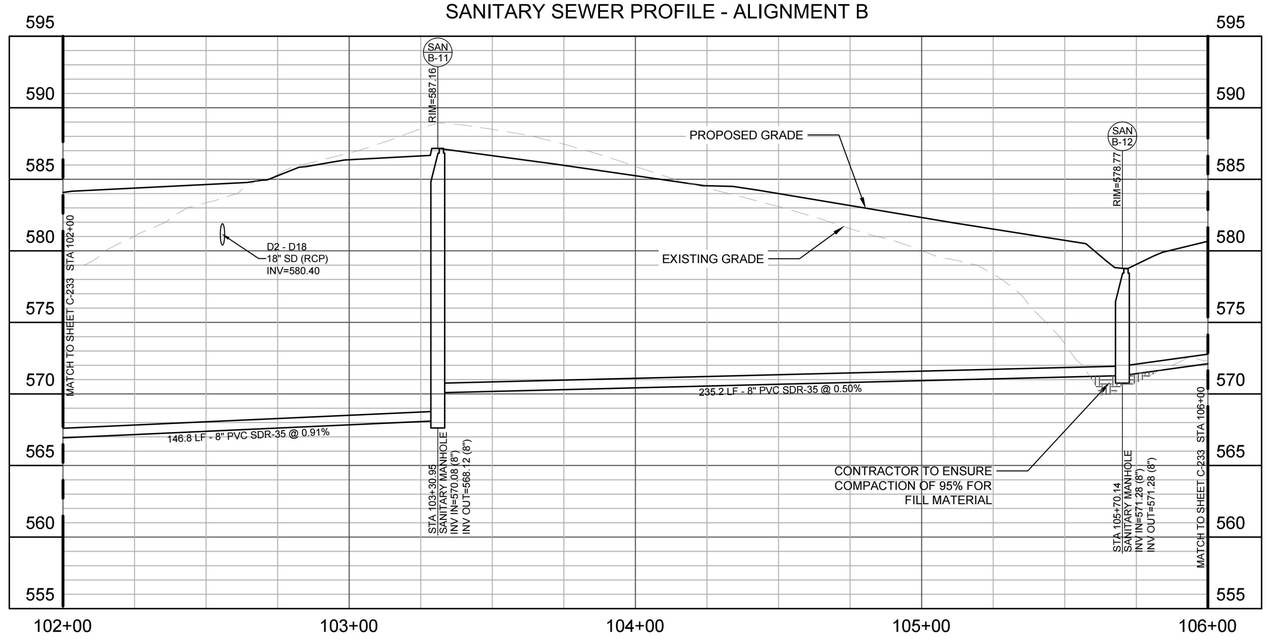
C-232

SHEET NO. 54 OF 85

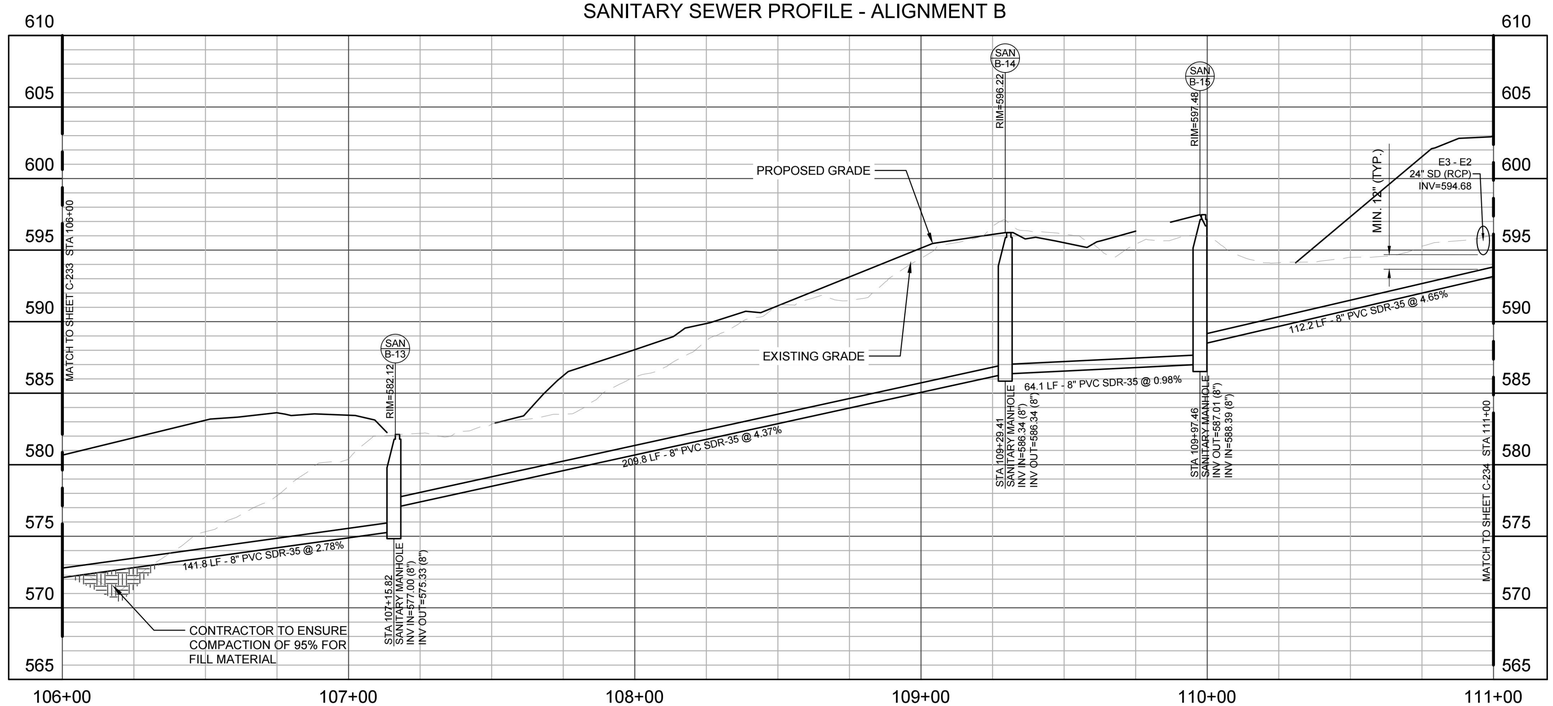
SANITARY SEWER PROFILE - ALIGNMENT B



SANITARY SEWER PROFILE - ALIGNMENT B



SANITARY SEWER PROFILE - ALIGNMENT B



Dewberry

Dewberry Engineers Inc.
4805 Lake Brook Drive
Suite 200
Glen Allen, VA 23060
804.290.7957

GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 12.5' 25' 50'
HORIZONTAL SCALE: 1" = 25'

0' 2.5' 5' 10'
VERTICAL SCALE: 1" = 5'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

TITLE

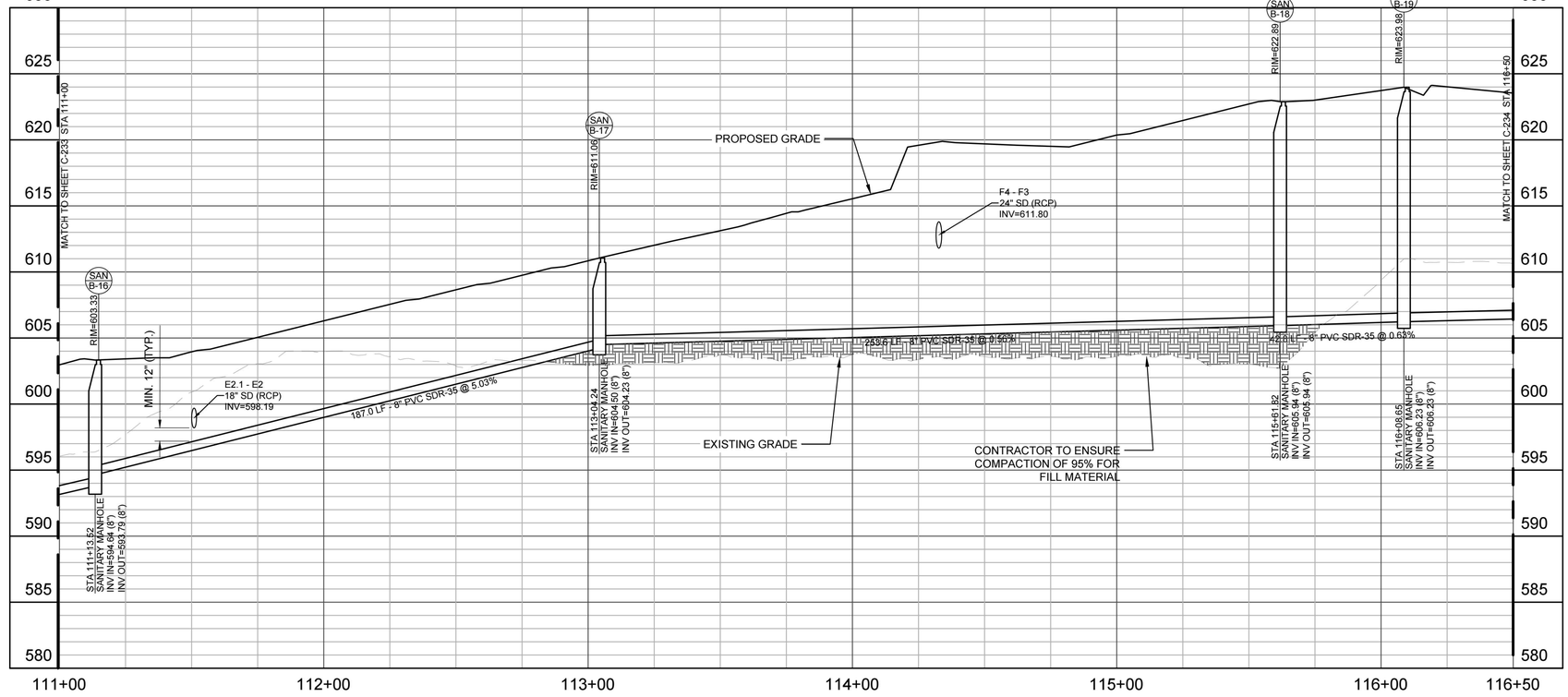
SANITARY SEWER PROFILES

PROJECT NO. 50151935

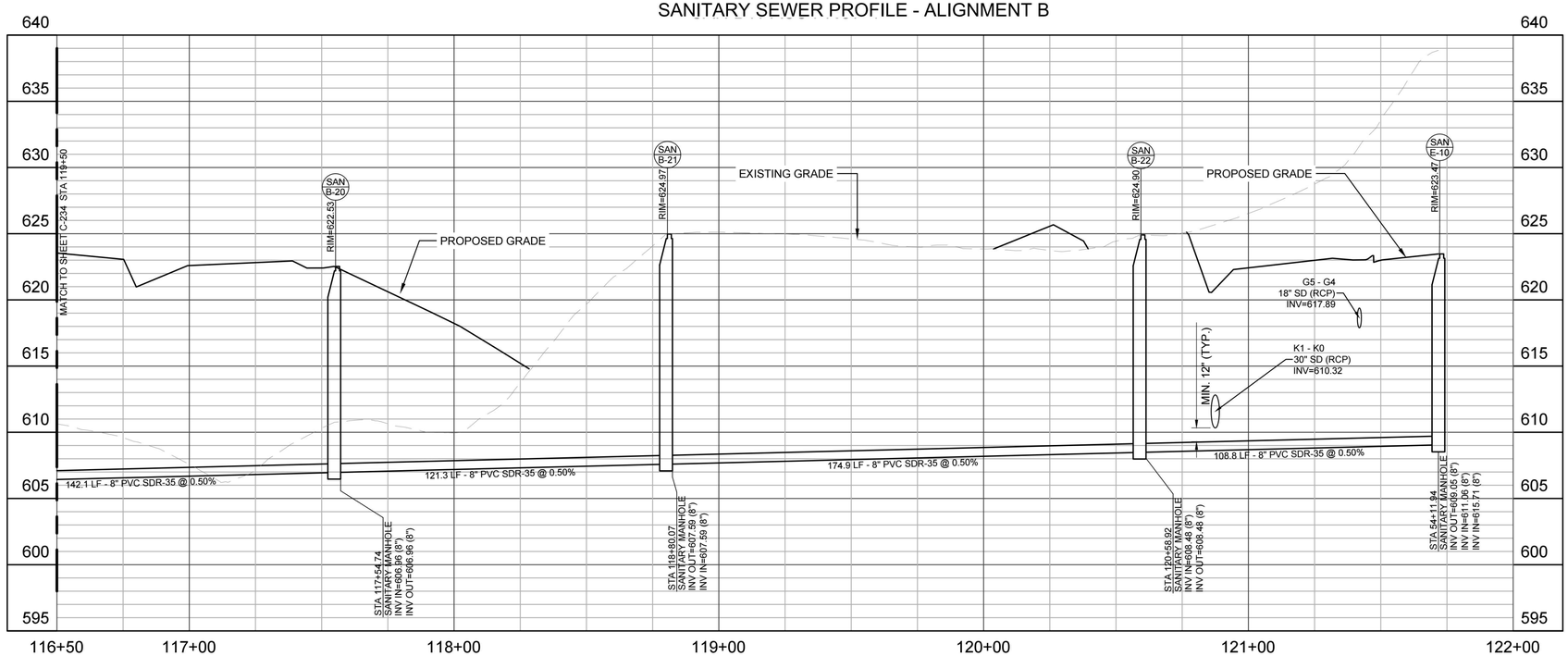
C-233

SHEET NO. 55 OF 85

SANITARY SEWER PROFILE - ALIGNMENT B



SANITARY SEWER PROFILE - ALIGNMENT B



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GREYSTAR

OLD IVY RESIDENCES

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COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

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NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 12.5' 25' 50'
HORIZONTAL SCALE: 1" = 25'

0' 2.5' 5' 10'
VERTICAL SCALE: 1" = 5'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

TITLE

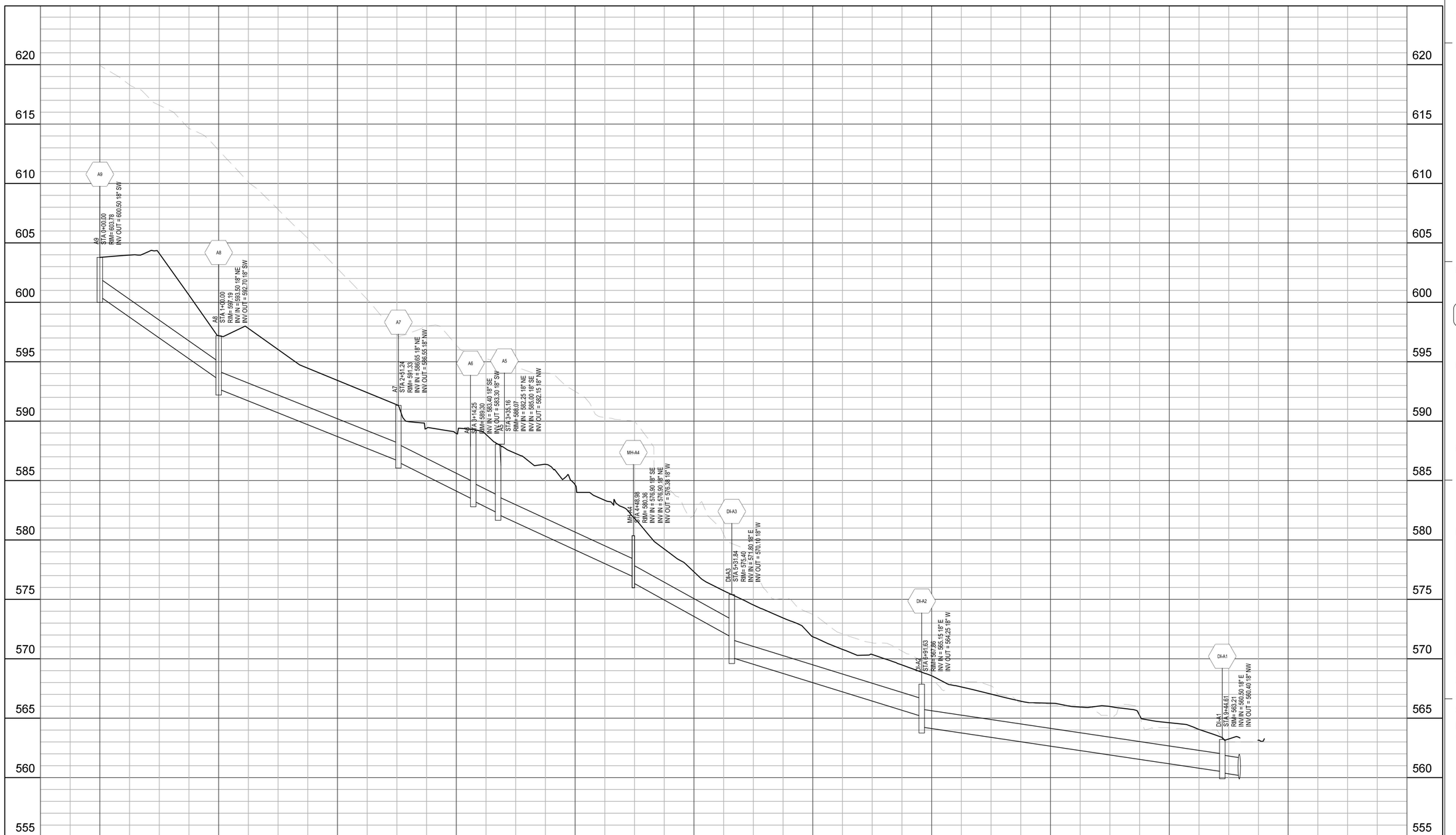
SANITARY SEWER PROFILES

PROJECT NO. 50151935

C-234

SHEET NO. 56 OF 85

LINE A



Dewberry

Dewberry Engineers Inc.
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Suite 200
Glen Allen, VA 23060
804.290.7957

GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

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KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 20' 40' 80'
HORIZONTAL SCALE: 1" = 40'

0' 2' 4' 8'
VERTICAL SCALE: 1" = 4'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

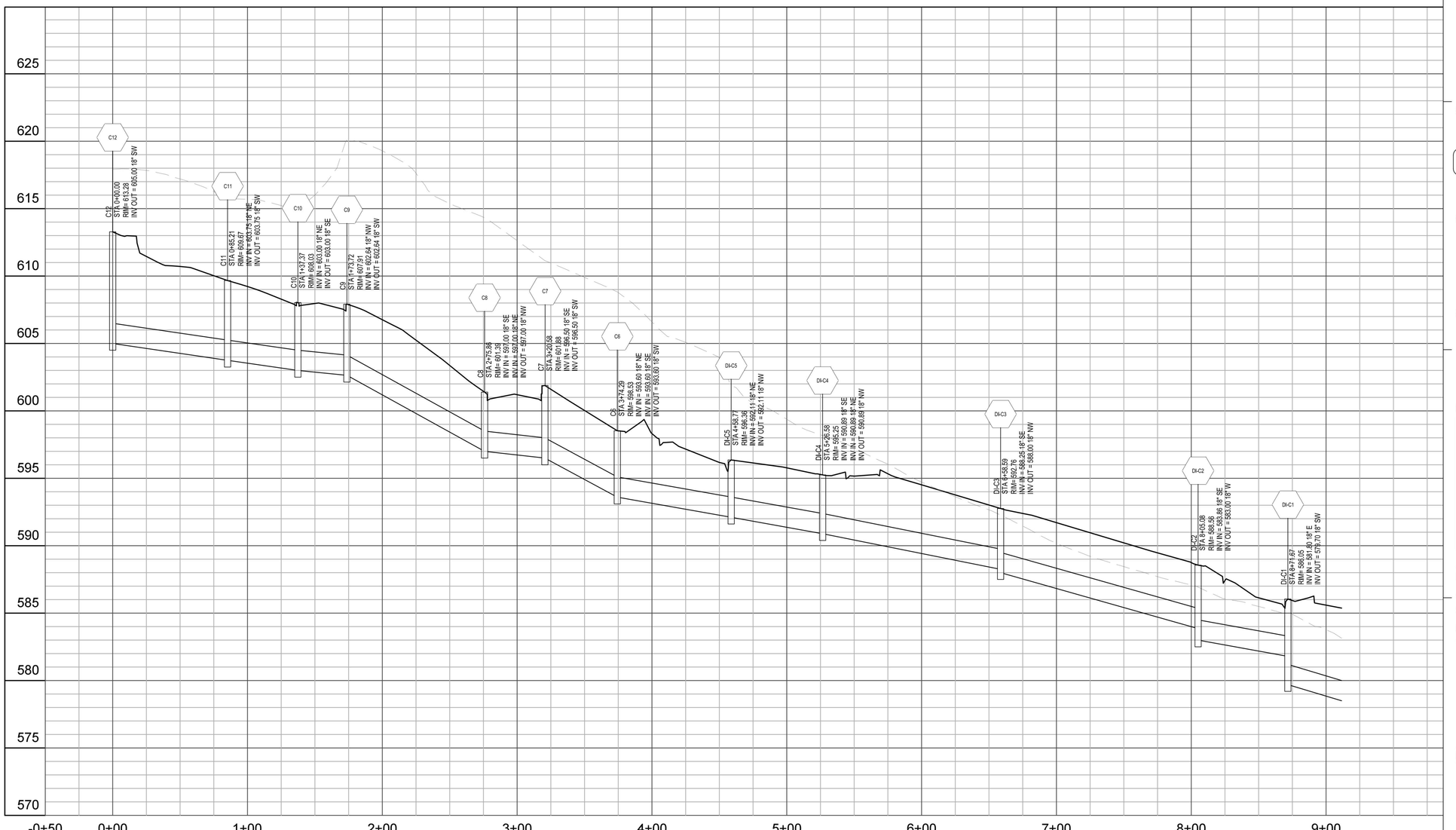
TITLE

STORM SEWER PROFILES

PROJECT NO. 50151935

C-240

SHEET NO. 57 OF 85



Dewberry

Dewberry Engineers Inc.
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Suite 200
Glen Allen, VA 23060
804.290.7957

GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 20' 40' 80'
HORIZONTAL SCALE: 1" = 40'

0' 2' 4' 8'
VERTICAL SCALE: 1" = 4'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

TITLE

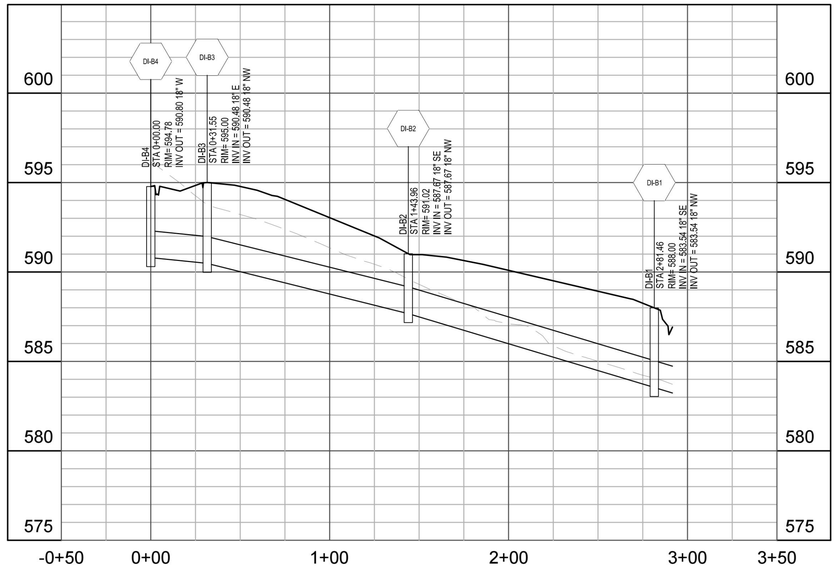
STORM SEWER PROFILES

PROJECT NO. 50151935

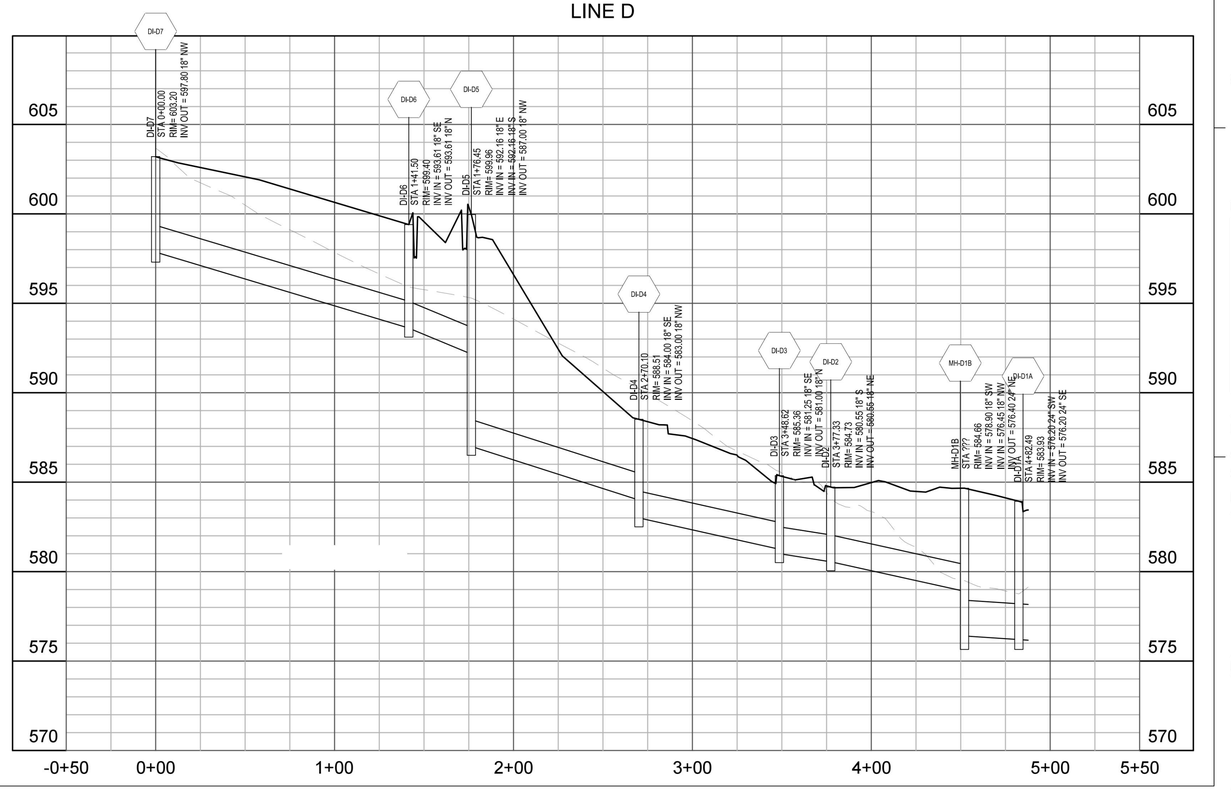
C-241

SHEET NO. 58 OF 85

LINE B



LINE D



Dewberry

Dewberry Engineers Inc.
4805 Lake Brook Drive
Suite 200
Glen Allen, VA 23060
804.290.7957

GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 20' 40' 80'
HORIZONTAL SCALE: 1" = 40'

0' 2' 4' 8'
VERTICAL SCALE: 1" = 4'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

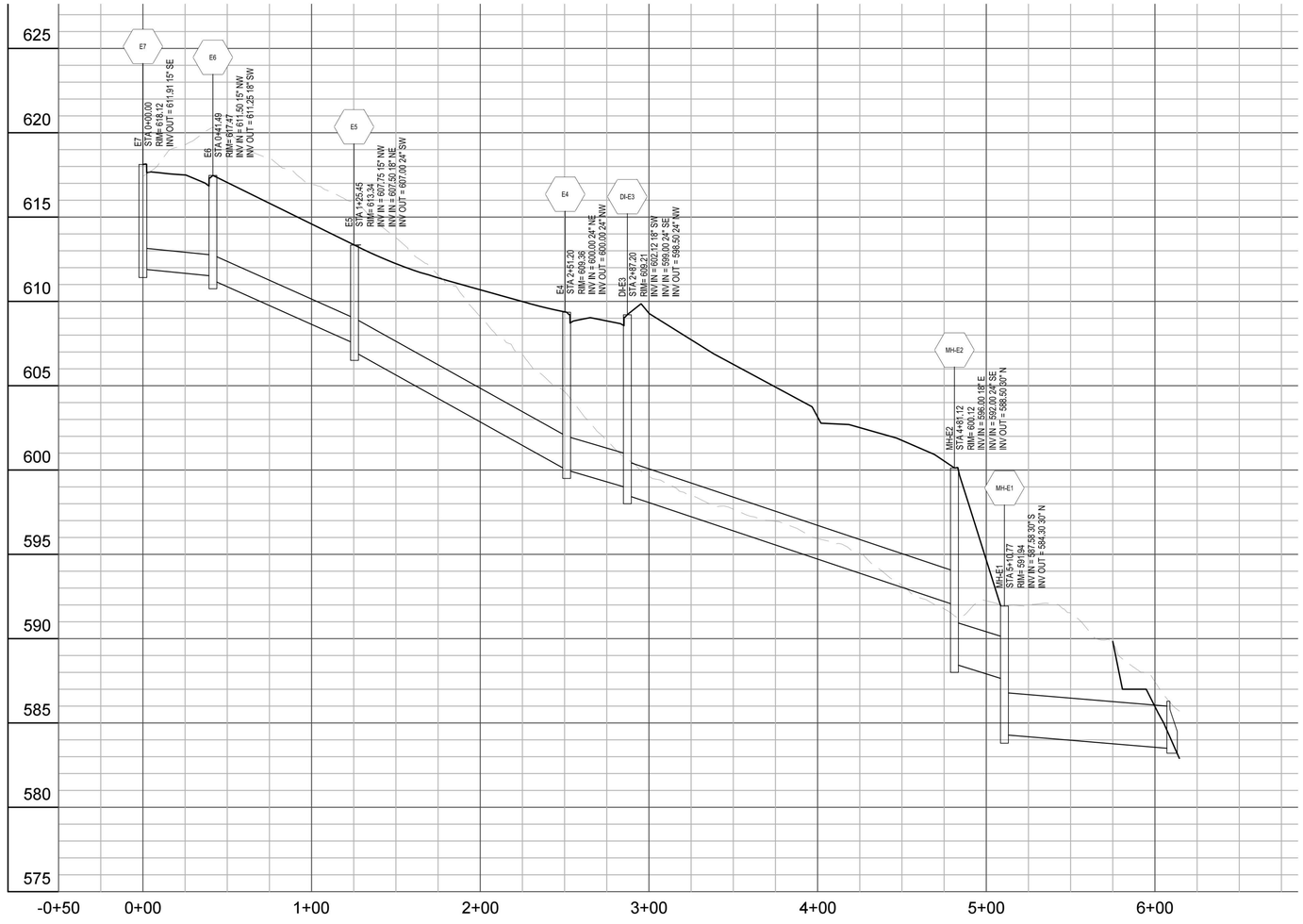
TITLE

STORM SEWER PROFILES

PROJECT NO. 50151935

C-242

SHEET NO. 59 OF 85



Dewberry

Dewberry Engineers Inc.
4805 Lake Brook Drive
Suite 200
Glen Allen, VA 23060
804.290.7957

GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 20' 40' 80'
HORIZONTAL SCALE: 1" = 40'

0' 2' 4' 8'
VERTICAL SCALE: 1" = 4'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

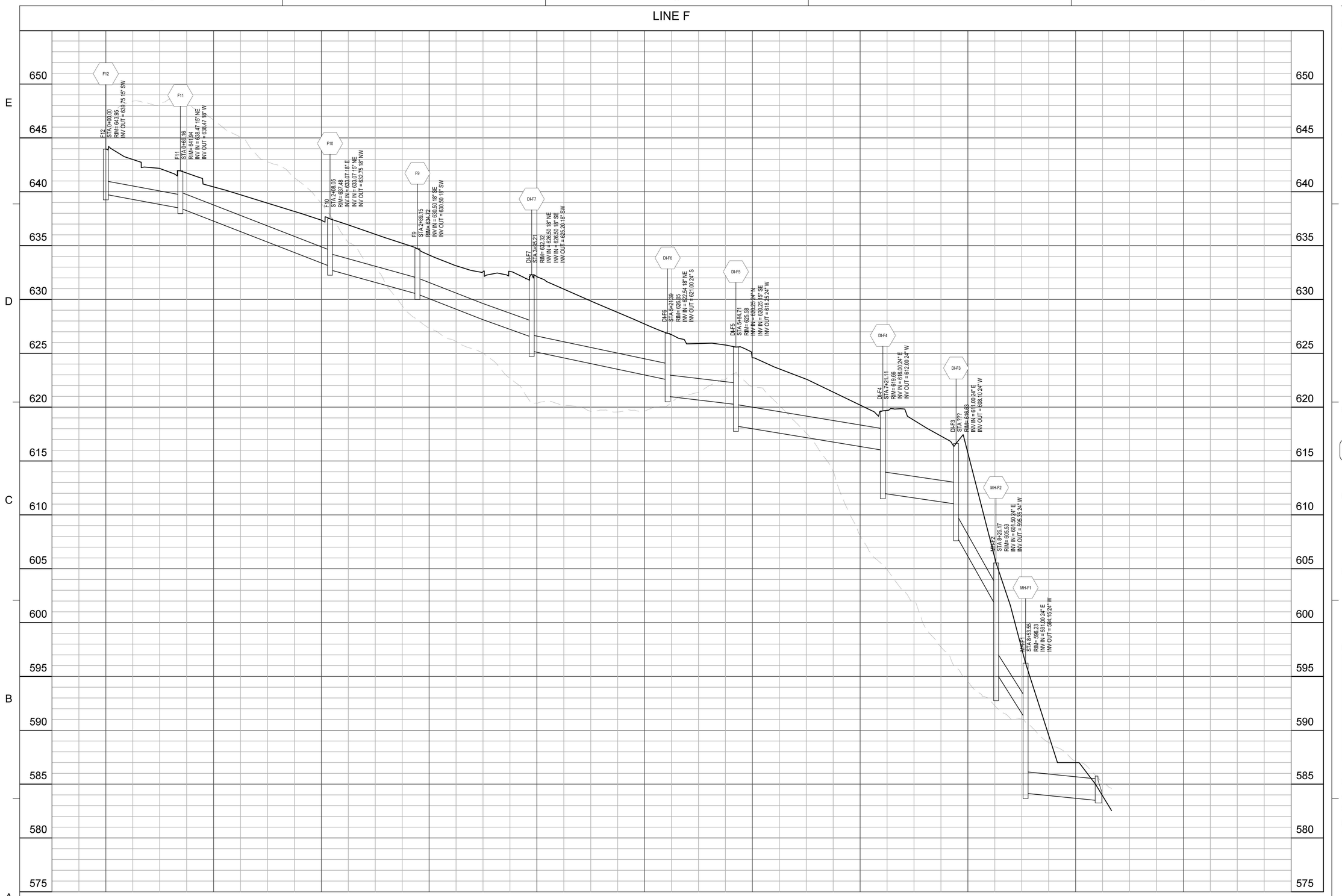
TITLE

STORM SEWER PROFILES

PROJECT NO. 50151935

C-243

SHEET NO. 60 OF 85



Dewberry

Dewberry Engineers Inc.
4805 Lake Brook Drive
Suite 200
Glen Allen, VA 23060
804.290.7957

GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 20' 40' 80'
HORIZONTAL SCALE: 1" = 40'

0' 2' 4' 8'
VERTICAL SCALE: 1" = 4'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

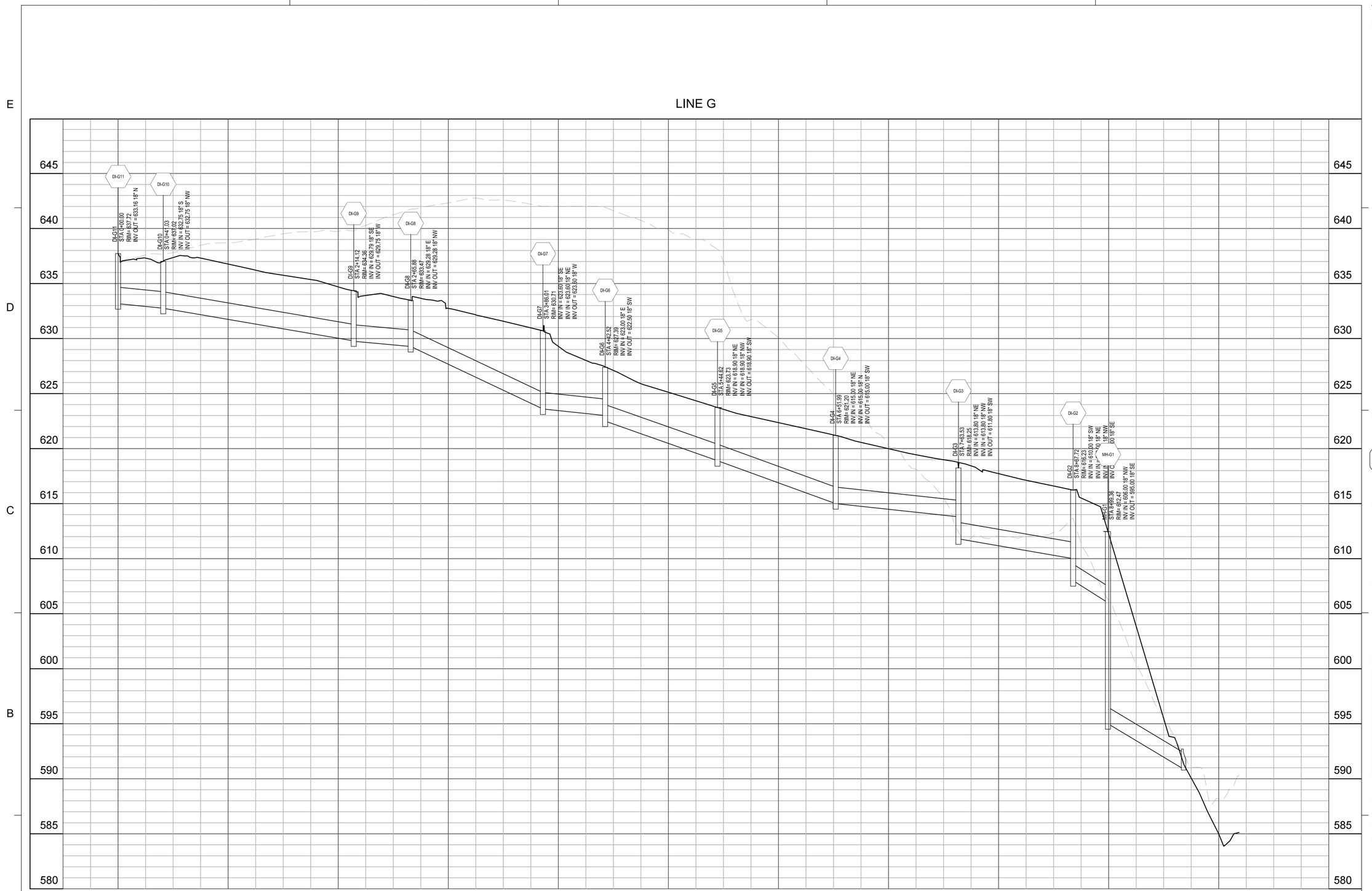
TITLE

STORM SEWER PROFILES

PROJECT NO. 50151935

C-244

SHEET NO. 61 OF 85



Dewberry

Dewberry Engineers Inc.
4805 Lake Brook Drive
Suite 200
Glen Allen, VA 23060
804.290.7957

GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

0' 20' 40' 80'
HORIZONTAL SCALE: 1" = 40'

0' 2' 4' 8'
VERTICAL SCALE: 1" = 4'

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

TITLE

STORM SEWER PROFILES

PROJECT NO. 50151935

C-245

SHEET NO. 62 OF 85

STORM SEWER RUN A

Dewberry

Storm Sewer Design Computations LD-229

PROJECT: Old Ivy Residences COUNTY: Albemarle
DATE: NOV, 2023
ENGINEER: RAY/ Dewberry Engineers Inc. OUTFALL TO STRUCTURE: _-_

FROM INLET	TO INLET	TOTAL AREA "A" (ACRE)	WIEGHTED RUNOFF COEF. "C"	"CA" INCR.	"CA" ACC.*	INLET TIME (MIN.)	FREQUENCY (YR)	RAINFALL INTENSITY "I" (IN/HR)	SATURATION FACTOR C_f	FLOW Q (CFS)	ELEVATIONS (FT) UPSTREAM	ELEVATIONS (FT) DOWNSTREAM	LENGTH L (FT)	SLOPE (FT/FT)	DIAMETER Do (IN)	MATERIAL COEFFICIENT n	CAPACITY (CFS)	VELOCITY (FPS)	MINIMUM VELOCITY (FPS)	MAXIMUM VELOCITY (FPS)	FLOW TIME (MIN)	REMARK
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
A10	A9	0.16	0.80	0.13	0.13	5.00	10	6.64	1.00	0.85	600.50	594.58	100.0	0.059	18	0.013	25.56	6.69	3.0	10.0	0.25	
A9	A8	0.22	0.77	0.17	0.30	5.25	10	6.57	1.00	1.95	594.58	591.82	92.0	0.030	18	0.013	18.19	6.73	3.0	10.0	0.23	
A8	A7	0.18	0.77	0.14	0.44	5.48	10	6.51	1.00	2.84	591.82	589.03	70.0	0.040	18	0.013	20.97	8.30	3.0	10.0	0.14	
A7	A6	0.18	0.77	0.32	0.75	5.62	10	6.47	1.00	4.89	587.25	585.00	76.0	0.030	18	0.013	18.07	8.70	3.0	10.0	0.15	
A6	A5	0.00	0.72	0.21	0.96	5.76	10	6.44	1.00	6.19	583.00	581.00	58.0	0.034	18	0.013	19.51	9.82	3.0	10.0	0.10	
A5	A4	0.22	0.72	0.16	1.12	5.86	10	6.41	1.00	7.18	579.00	578.65	30.0	0.012	18	0.013	11.35	6.81	3.0	10.0	0.07	
A4	A3	0.09	0.80	0.07	1.19	5.93	10	6.39	1.00	7.62	576.80	573.60	103.0	0.031	18	0.013	18.52	9.99	3.0	10.0	0.17	
A3	A2	0.15	0.70	0.11	1.30	6.11	10	6.34	1.00	8.23	570.10	565.15	171.0	0.029	18	0.013	17.87	9.92	3.0	10.0	0.29	
A2	A1	0.34	0.70	0.24	1.54	6.39	10	6.27	1.00	9.62	564.25	560.50	236.0	0.016	18	0.013	13.24	8.19	3.0	10.0	0.48	
A1	OUTFALL	0.64	0.53	0.34	1.87	6.87	10	6.14	1.00	11.50	559.50	558.83	121.0	0.006	24	0.013	16.83	5.78	3.0	10.0	0.35	
A5.2	A5.1	0.53	0.72	0.38	0.38	5.00	10	6.64	1.00	2.53	587.10	584.00	54.0	0.057	18	0.013	25.17	9.14	3.0	10.0	0.10	
A5.1	A5	0.17	0.90	0.21	0.59	5.10	10	6.61	1.00	3.89	584.00	581.00	93.0	0.032	18	0.013	18.87	8.43	3.0	10.0	0.18	
A5.1.1	A5.1	0.06	0.90	0.05	0.05	5.00	10	6.64	1.00	0.36	584.50	584.00	36.0	0.014	18	0.013	12.38	3.11	3.0	10.0	0.19	
A6.1	A6	0.20	0.90	0.18	0.18	5.00	10	6.64	1.00	1.20	586.16	585.00	26.0	0.045	18	0.013	22.19	6.70	3.0	10.0	0.06	

Dewberry

Hydraulic Grade Line Computations LD-347

PROJECT: Old Ivy Residences COUNTY: Albemarle
DATE: NOV, 2023
ENGINEER: RAY/ Dewberry Engineers Inc. OUTFALL TO STRUCTURE: _-_

Inlet Station	Outlet Water Surface Elevation	D_o	Q_o	L_o	S_{fo} %	H_f	JUNCTION LOSS V_o	H_o	Q_i	V_i	Q_iV_i	$V_i^2/2g$	H_i	Angle	H_Δ	H_t	1.3 H_t	0.5 H_t	Final H	Inlet Water Surface Elevation	Rim Elevation	Amount of Flow Entering System Through Drop Inlet	St'd IS-1 Inlet Shaping Provided? (Enter Y or N)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(CFS)	
A6.1	586.200	18	1.20	26.00	0.013	0.00	6.70	0.21	0.00	0.00	0.00	0.00	0.00	90	0.00	0.21	0.27	N.A.	0.28	586.48	592.15	1.20	N
A5.1.1	585.200	18	0.36	36.00	0.001	0.00	3.11	0.04	0.00	0.00	0.00	0.00	0.00	90	0.00	0.04	0.06	N.A.	0.06	585.26	591.38	0.36	N
A5.1	582.200	18	3.89	93.00	0.139	0.13	8.43	0.28	2.53	9.14	23.16	1.30	0.00	0	0.00	0.28	0.36	N.A.	0.49	584.46	591.38	1.37	N
A5.2	585.200	18	2.53	54.00	0.059	0.03	9.14	0.39	0.00	0.00	0.00	0.00	0.00	0	0.00	0.39	0.51	N.A.	0.54	587.42	594.52	2.53	N
A1	560.430	24	11.50	121.00	0.261	0.32	5.78	0.13	9.62	8.19	78.76	1.04	0.36	0	0.00	0.49	N.A.	N.A.	0.81	561.24	563.73	2.08	N
A2	561.700	18	9.62	236.00	0.848	2.00	8.19	0.26	8.23	9.92	81.65	1.53	0.54	4	0.07	0.87	N.A.	N.A.	2.87	565.20	567.92	1.49	N
A3	566.350	18	8.23	171.00	0.620	1.06	9.92	0.38	7.62	9.99	76.06	1.55	0.54	7	0.14	1.06	N.A.	N.A.	2.12	570.81	575.28	0.67	N
A4	574.800	18	7.62	103.00	0.532	0.55	9.99	0.39	7.18	6.81	48.87	0.72	0.25	0	0.00	0.64	N.A.	N.A.	1.19	577.47	584.24	0.46	N
A5	579.850	18	7.18	30.00	0.472	0.14	6.81	0.18	6.19	9.82	60.75	1.50	0.52	33	0.56	1.26	N.A.	N.A.	1.40	581.25	584.78	1.02	N
A6	582.200	18	6.19	58.00	0.351	0.20	9.82	0.37	4.89	8.70	42.53	1.18	0.41	22	0.32	1.10	1.43	N.A.	1.64	583.84	589.72	1.33	N
A7	586.200	18	4.89	76.00	0.219	0.17	8.70	0.29	2.84	8.30	23.57	1.07	0.37	84	0.72	1.39	1.81	N.A.	1.98	588.18	593.46	2.06	N
A8	590.230	18	2.84	70.00	0.074	0.05	8.30	0.27	1.95	6.73	13.17	0.70	0.25	0	0.00	0.51	0.67	N.A.	0.72	592.19	596.28	0.90	N
A9	593.020	18	1.95	92.00	0.035	0.03	6.73	0.18	0.85	6.69	5.68	0.69	0.24	0	0.00	0.42	0.54	N.A.	0.58	594.91	598.22	1.11	N
A10	595.780	18	0.85	100.00	0.007	0.01	6.69	0.21	0.00	0.00	0.00	0.00	0.00		0.00	0.21	0.27	N.A.	0.28	600.69	603.78	0.85	N

STORM SEWER RUN B

Dewberry

Storm Sewer Design Computations LD-229

PROJECT: Old Ivy Residences COUNTY: Albemarle
DATE: NOV, 2023
ENGINEER: RAY/ Dewberry Engineers Inc. OUTFALL TO STRUCTURE: _-_

FROM INLET	TO INLET	TOTAL AREA "A" (ACRE)	WIEGHTED RUNOFF COEF. "C"	"CA" INCR.	"CA" ACC.*	INLET TIME (MIN.)	FREQUENCY (YR)	RAINFALL INTENSITY "I" (IN/HR)	SATURATION FACTOR C_f	FLOW Q (CFS)	INVERT ELEVATIONS (FT) UPSTREAM	INVERT ELEVATIONS (FT) DOWNSTREAM	LENGTH L (FT)	SLOPE (FT/FT)	DIAMETER Do (IN)	MATERIAL COEFFICIENT n	CAPACITY (CFS)	VELOCITY (FPS)	MINIMUM VELOCITY (FPS)	MAXIMUM VELOCITY (FPS)	FLOW TIME (MIN)	REMARK
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
B4	B3	0.14	0.90	0.13	0.13	5.00	10	6.64	1.00	0.84	590.80	590.48	32.0	0.010	18	0.013	10.50	3.56	3.0	10.0	0.15	
B3	B2	0.01	0.90	0.01	0.14	5.15	10	6.60	1.00	0.89	590.48	587.67	112.0	0.025	18	0.013	16.64	5.02	3.0	10.0	0.37	
B2	B1	0.13	0.90	0.12	0.25	5.52	10	6.50	1.00	1.64	587.67	583.54	138.0	0.030	18	0.013	18.17	6.39	3.0	10.0	0.36	
B1	OUTFALL	0.57	0.90	0.51	0.77	5.88	10	6.40	1.00	4.90	583.54	583.24	10.0	0.030	18	0.013	18.19	8.75	3.0	10.0	0.02	

Dewberry

Hydraulic Grade Line Computations LD-347

PROJECT: Old Ivy Residences COUNTY: Albemarle
DATE: NOV, 2023
ENGINEER: RAY/ Dewberry Engineers Inc. OUTFALL TO STRUCTURE: _-_

Inlet Station	Outlet Water Surface Elevation	D_o	Q_o	L_o	S_{fo} %	H_f	JUNCTION LOSS V_o	H_o	Q_i	V_i	Q_iV_i	$V_i^2/2g$	H_i	Angle	H_Δ	H_t	1.3 H_t	0.5 H_t	Final H	Inlet Water Surface Elevation	Rim Elevation	Amount of Flow Entering System Through Drop Inlet	St'd IS-1 Inlet Shaping Provided? (Enter Y or N)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(CFS)	
B1	584.440	18	4.90	10.00	0.220	0.02	8.75	0.30	1.64	6.39	10.47	0.63	0.22	0	0.00	0.52	0.68	N.A.	0.70	585.14	587.50	3.29	N
B2	585.137	18	1.64	138.00	0.025	0.03	6.39	0.16	0.89	5.02	4.47	0.39	0.14	0	0.00	0.30	0.38	N.A.	0.42	587.97	591.38	0.76	N
B3	588.870	18	0.89	112.00	0.007	0.01	5.02	0.10	0.84	3.56	2.98	0.20	0.07	47	0.09	0.26	N.A.	N.A.	0.27	590.72	594.56	0.06	N
B4	591.680	18	0.84	32.00	0.006	0.00	3.56	0.06	0.00	0.00	0.00	0.00	0.00	47	0.00	0.06	0.08	N.A.	0.08	591.76	594.65	0.84	N

STORM SEWER RUN C

Dewberry

Storm Sewer Design Computations LD-229

PROJECT: Old Ivy Residences COUNTY: Albemarle
DATE: NOV, 2023
ENGINEER: RAY/ Dewberry Engineers Inc. OUTFALL TO STRUCTURE: _-_

FROM INLET	TO INLET	TOTAL AREA "A" (ACRE)	WIEGHTED RUNOFF COEF. "C"	"CA" INCR.	"CA" ACC.*	INLET TIME (MIN.)	FREQUENCY (YR)	RAINFALL INTENSITY "I" (IN/HR)	SATURATION FACTOR C_f	FLOW Q (CFS)	INVERT ELEVATIONS (FT) UPSTREAM	INVERT ELEVATIONS (FT) DOWNSTREAM	LENGTH L (FT)	SLOPE (FT/FT)	DIAMETER Do (IN)	MATERIAL COEFFICIENT n	CAPACITY (CFS)	VELOCITY (FPS)	MINIMUM VELOCITY (FPS)	MAXIMUM VELOCITY (FPS)	FLOW TIME (MIN)	REMARK
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
C10	C9	0.08	0.90	0.07	0.07	5.00	10	6.64	1.00	0.48	605.00	603.75	108.0	0.012	18	0.013	11.30	3.18	3.0	10.0	0.57	
C9	C8	0.02	0.90	0.14	0.22	5.57	10	6.49	1.00	1.40	603.75	603.00	63.0	0.012	18	0.013	11.46	4.41	3.0	10.0	0.24	
C8	C7	0.03	0.90	0.19	0.41	5.80	10	6.42	1.00	2.60	603.00	596.50	102.0	0.064	18	0.013	26.52	9.56	3.0	10.0	0.18	
C7	C6	0.03	0.90	0.16	0.57	5.98	10	6.38	1.00	3.63	596.50	593.60	54.0	0.054	18	0.013	24.34	9.91	3.0	10.0	0.09	
C6	C5	0.05	0.90	0.05	0.61	6.07	10	6.35	1.00	3.90	593.60	592.11	85.0	0.018	18	0.013	13.91	6.77	3.0	10.0	0.21	
C5	C4	0.12	0.90	0.26	0.87	6.28	10	6.30	1.00	5.51	592.11	590.89	68.0	0.018	18	0.013	14.07	7.49	3.0	10.0	0.15	
C4	C3	0.43	0.90	0.39	1.26	6.43	10	6.26	1.00	7.89	590.89	588.25	132.0	0.020	18	0.013	14.86	8.55	3.0	10.0	0.26	
C3	C2	0.17	0.76	0.13	1.39	6.69	10	6.19	1.00	8.61	588.00	583.86	146.0	0.028	18	0.013	17.69	9.96	3.0	10.0	0.24	
C2	C1	0.33	0.76	0.25	1.64	6.94	10	6.12	1.00	10.05	583.00	581.80	67.0	0.018	18	0.013	14.06	8.66	3.0	10.0	0.13	
C1	OUTFALL	0.22	0.85	0.19	1.83	7.06	10	6.09	1.00	11.13	581.35	581.00	40.0	0.009	24	0.013	21.16	6.84	3.0	10.0	0.10	
C8.1	C8	0.14	0.90	0.13	0.13	5.00	10	6.64	1.00	0.84	603.44	603.00	36.0	0.012	18	0.013	11.61	3.82	3.0	10.0	0.16	
C7.3	C7.2	1.84	0.55	1.01	1.01	5.00	10	6.64	1.00	6.72	600.00	599.69	15.0	0.021	18	0.013	15.10	8.31	3.0	10.0	0.03	
C7.2	C7.1	0.00	0.00	0.00	1.01	5.03	10	6.63	1.00	6.72	599.69	598.00	126.0	0.013	18	0.013	12.17	7.07	3.0	10.0	0.30	
C7.1	C7	0.18	0.90	0.16	1.17	5.33	10	6.55	1.00	7.69	597.00	596.50	44.0	0.011	18	0.013	11.20	6.84	3.0	10.0	0.11	
C6.1	C6	0.19	0.72	0.14	0.14	5.00	10	6.64	1.00	0.91	594.00	593.60	39.0	0.010	18	0.013	10.64	3.68	3.0	10.0	0.18	
C4.1	C4	0.17	0.90	0.15	0.15	5.00	10	6.64	1.00	1.02	593.02	590.89	84.0	0.025	18	0.013	16.73	5.24	3.0	10.0	0.27	

Dewberry

Hydraulic Grade Line Computations LD-347

PROJECT: Old Ivy Residences COUNTY: Albemarle
DATE: NOV, 2023
ENGINEER: RAY/ Dewberry Engineers Inc. OUTFALL TO STRUCTURE: _-_

Inlet Station	Outlet Water Surface Elevation	D_o	Q_o	L_o	S_{fo} %	H_f	JUNCTION LOSS V_o	H_o	Q_i	V_i	Q_iV_i	$V_i^2/2g$	H_i	Angle	H_Δ	H_t	1.3 H_t	0.5 H_t	Final H	Inlet Water Surface Elevation	Rim Elevation	Amount of Flow Entering System Through Drop Inlet	St'd IS-1 Inlet Shaping Provided? (Enter Y or N)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(CFS)	
C4.1	592.090	18	1.02	84.00	0.009	0.01	5.24	0.13	0.00	0.00	0.00	0.00	0.00	62	0.00	0.13	0.17	N.A.	0.17	593.27	598.02	1.02	N
C6.1	594.800	18	0.91	39.00	0.008	0.00	3.68	0.06	0.00	0.00	0.00	0.00	0.00	52	0.00	0.06	0.08	N.A.	0.09	594.89	597.79	0.91	N
C7.1	597.700	18	7.69	44.00	0.542	0.24	6.84	0.18	6.72	7.07	47.51	0.78	0.27	3	0.03	0.48	N.A.	N.A.	0.72	598.42	600.77	1.06	N
C7.2	599.200	18	6.72	126.00	0.414	0.52	7.07	0.19	6.72	8.31	55.86	1.07	0.38	90	0.75	1.32	N.A.	N.A.	1.84	601.04	604.91	0.00	N
C7.3	601.042	18	6.72	15.00	0.414	0.06	8.31	0.32	0.00	0.00	0.00	0.00	0.00	0	0.00	0.32	0.42	N.A.	0.48	601.52	604.27	6.72	N
C8.1	604.200	18	0.84	36.00	0.006	0.00	3.82	0.07	0.00	0.00	0.00	0.00	0.00	83	0.00	0.07	0.09	N.A.	0.09	604.29	607.15	0.84	N
C1	582.600	24	11.13	40.00	0.244	0.10	6.84	0.18	10.05	8.66	87.07	1.17	0.41	72	0.72	1.31	N.A.	N.A.	1.41	584.01	585.55	1.14	N
C2	584.010	18	10.05	67.00	0.925	0.62	8.66	0.29	8.61	9.96	85.72	1.54	0.54	23	0.43	1.26	N.A.	N.A.	1.88	585.89	588.05	1.54	N
C3	585.892	18	8.61	146.00	0.679	0.99	9.96	0.39	7.89	8.55	67.50	1.14	0.40	0	0.00	0.78	N.A.	N.A.	1.77	588.74	592.25	0.80	N
C4	589.450	18	7.89	132.00	0.571	0.75	8.55	0.28	5.51	7.49	41.26	0.87	0.30	0	0.00	0.59	0.77	N.A.	1.52	591.67	594.76	2.42	N
C5	592.090	18	5.51	68.00	0.278	0.19	7.49	0.22	3.90	6.77	26.38	0.71	0.25	56	0.38	0.85	1.10	N.A.	1.29	593.38	595.86	1.64	N
C6	593.381	18	3.90	85.00	0.139	0.12	6.77	0.18	3.63	9.91	35.94	1.52	0.53	37	0.62	1.33	N.A.	N.A.	1.45	594.83	597.92	0.29	N
C7	594.829	18	3.63	54.00	0.121	0.07	9.91	0.38	2.60	9.56	24.87	1.42	0.50	6	0.10	0.98	1.28	N.A.	1.34	596.89	601.09	1.04	N
C8	597.700	18	2.60	102.00	0.062	0.06	9.56	0.35	1.40	4.41	6.17	0.30	0.11	7	0.03	0.49	0.63	N.A.	0.70	603.32	607.31	1.21	N
C9	604.200	18	1.40	63.00	0.018	0.01	4.41	0.08	0.48	3.18	1.52	0.16	0.05	90	0.11	0.24	0.31	N.A.	0.32	604.52	609.23	0.93	N
C10	604.950	18	0.48	108.00	0.002	0.00	3.18	0.05	0.00	0.00	0.00	0.00	0.00	5	0.00	0.05	0.06	N.A.	0.06	605.21	608.69	0.48	N

STORM SEWER RUN D

STORM SEWER RUN E

Dewberry

Storm Sewer Design Computations LD-229

PROJECT: Old Ivy Residences COUNTY: Albemarle
DATE: NOV, 2023
ENGINEER: RAY/ Dewberry Engineers Inc. OUTFALL TO STRUCTURE: _-_

FROM INLET	TO INLET	TOTAL AREA "A" (ACRE)	WIEGHTED RUNOFF COEF. "C"	"CA" INCR.	"CA" ACC.*	INLET TIME (MIN.)	FREQUENCY (YR)	RAINFALL INTENSITY "I" (IN/HR)	SATURATION FACTOR C_f	FLOW Q (CFS)	INVERT ELEVATIONS (FT) UPSTREAM	INVERT ELEVATIONS (FT) DOWNSTREAM	LENGTH L (FT)	SLOPE (FT/FT)	DIAMETER Do (IN)	MATERIAL COEFFICIENT n	CAPACITY (CFS)	VELOCITY (FPS)	MINIMUM VELOCITY (FPS)	MAXIMUM VELOCITY (FPS)	FLOW TIME (MIN)	REMARK
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
E6	E5	3.14	0.70	2.20	2.20	5.00	10	6.64	1.00	14.59	611.25	610.50	37.0	0.020	18	0.013	14.96	9.67	3.0	10.0	0.06	
E5	E4	0.22	0.85	0.85	3.05	5.06	10	6.62	1.00	20.20	610.50	608.90	103.0	0.016	24	0.013	28.20	9.78	3.0	10.0	0.18	
E4	E3	0.05	0.90	1.03	4.08	5.24	10	6.58	1.00	26.82	606.90	605.10	127.0	0.014	24	0.013	26.93	9.80	3.0	10.0	0.22	
E3	E2	0.08	0.90	0.17	4.25	5.46	10	6.52	1.00	27.70	598.50	596.00	194.0	0.013	30	0.013	46.56	9.92	3.0	10.0	0.33	
E2	E1	0.00	0.00	0.00	4.25	5.78	10	6.43	1.00	27.70	588.50	588.00	46.0	0.011	30	0.013	42.76	9.29	3.0	10.0	0.08	
E1	OUTFALL	0.00	0.00	0.00	4.25	5.86	10	6.41	1.00	27.70	584.30	583.50	67.0	0.012	30	0.013	44.82	9.63	3.0	10.0	0.12	
E4.1	E4	0.95	0.70	0.67	0.67	5.00	10	6.64	1.00	4.42	609.00	608.60	35.0	0.011	15	0.013	6.91	5.98	3.0	10.0	0.10	
E3.2	E3.1	2.82	0.70	1.97	1.97	5.00	10	6.64	1.00	13.11	604.15	603.43	36.0	0.020	18	0.013	14.86	9.51	3.0	10.0	0.06	
E3.1	E3	0.11	0.90	0.10	2.07	5.06	10	6.62	1.00	13.73	603.43	602.12	66.0	0.020	18	0.013	14.80	9.53	3.0	10.0	0.12	
E3.1.1	E3	1.18	0.75	0.89	0.89	5.00	10	6.64	1.00	5.88	605.50	604.50	34.0	0.029	15	0.013	11.08	9.18	3.0	10.0	0.06	
E2.2	E2.1	0.35	0.70	0.25	0.25	5.00	10	6.64	1.00	1.63	602.26	601.00	21.0	0.060	18	0.013	25.73	8.15	3.0	10.0	0.04	
E2.1	E2	0.11	0.90	0.10	0.34	5.04	10	6.63	1.00	2.28	600.00	596.00	108.0	0.037	18	0.013	20.22	7.59	3.0	10.0	0.24	

Dewberry

Hydraulic Grade Line Computations LD-347

PROJECT: Old Ivy Residences COUNTY: Albemarle
DATE: NOV, 2023
ENGINEER: RAY/ Dewberry Engineers Inc. OUTFALL TO STRUCTURE: _-_

Inlet Station	Outlet Water Surface Elevation	D_o	Q_o	L_o	S_{fo} %	H_f	JUNCTION LOSS V_o	H_o	Q_i	V_i	Q_iV_i	$V_i^2/2g$	H_i	Angle	H_Δ	H_t	1.3 H_t	0.5 H_t	Final H	Inlet Water Surface Elevation	Rim Elevation	Amount of Flow Entering System Through Drop Inlet	St'd IS-1 Inlet Shaping Provided? (Enter Y or N)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(CFS)	
E2.1	597.200	18	2.28	108.00	0.048	0.05	7.59	0.22	1.63	8.15	13.26	1.03	0.36	90	0.72	1.31	1.70	N.A.	1.75	600.34	606.02	0.66	N
E2.2	602.200	18	1.63	21.00	0.024	0.01	8.15	0.31	0.00	0.00	0.00	0.00	0.00	29	0.00	0.31	0.40	N.A.	0.41	602.61	605.97	1.63	N
E3.1.1	605.500	15	5.88	34.00	0.838	0.28	9.18	0.39	0.00	0.00	0.00	0.00	0.00	0	0.00	0.39	0.51	N.A.	0.79	606.29	609.14	5.88	N
E3.1	603.320	18	13.73	66.00	1.727	1.14	9.53	0.35	13.11	9.51	124.66	1.40	0.49	90	0.98	1.83	N.A.	N.A.	2.97	606.29	607.99	0.66	N
E3.2	606.288	18	13.11	36.00	1.574	0.57	9.51	0.42	0.00	0.00	0.00	0.00	0.00	0	0.00	0.42	0.55	N.A.	1.11	607.40	608.22	13.11	N
E4.1	609.600	15	4.42	35.00	0.473	0.17	5.98	0.17	0.00	0.00	0.00	0.00	0.00	67	0.00	0.17	0.22	N.A.	0.38	609.98	613.63	4.42	N
E1	585.500	30	27.70	67.00	0.460	0.31	9.63	0.36	27.70	9.29	257.25	1.34	0.47	0	0.00	0.83	N.A.	N.A.	1.14	586.64	592.56	0.00	N
E2	590.000	30	27.70	46.00	0.460	0.21	9.29	0.33	27.70	9.92	274.67	1.53	0.53	44	0.70	1.57	N.A.	N.A.	1.78	591.78	601.49	0.00	N
E3	598.000	30	27.70	194.00	0.460	0.89	9.92	0.38	26.82	9.80	262.86	1.49	0.52	90	1.04	1.95	N.A.	N.A.	2.84	600.84	608.68	1.11	N
E4	606.700	24	26.82	127.00	1.419	1.80	9.80	0.37	20.20	9.78	197.53	1.48	0.52	0	0.00	0.89	1.16	N.A.	2.96	609.66	612.48	6.77	N
E5	610.500	24	20.20	103.00	0.805	0.83	9.78	0.37	14.59	9.67	141.14	1.45	0.51	84	0.98	1.86	2.42	N.A.	3.25	613.75	617.63	5.64	N
E6	613.748	18	14.59	37.00	1.952	0.72	9.67	0.44	0.00	0.00	0.00	0.00	0.00	0	0.00	0.44	0.57	N.A.	1.29	615.04	618.20	14.59	N

STORM SEWER RUN F

Dewberry

Storm Sewer Design Computations LD-229

PROJECT: Old Ivy Residences COUNTY: Albemarle
DATE: NOV, 2023
ENGINEER: RAY/ Dewberry Engineers Inc. OUTFALL TO STRUCTURE: _-_

FROM INLET	TO INLET	TOTAL AREA "A" (ACRE)	WIEGHTED RUNOFF COEF. "C"	"CA" INCR.	"CA" ACC.*	INLET TIME (MIN.)	FREQUENCY (YR)	RAINFALL INTENSITY "I" (IN/HR)	SATURATION FACTOR C_f	FLOW Q (CFS)	INVERT ELEVATIONS (FT) UPSTREAM	INVERT ELEVATIONS (FT) DOWNSTREAM	LENGTH L (FT)	SLOPE (FT/FT)	DIAMETER Do (IN)	MATERIAL COEFFICIENT n	CAPACITY (CFS)	VELOCITY (FPS)	MINIMUM VELOCITY (FPS)	MAXIMUM VELOCITY (FPS)	FLOW TIME (MIN)	REMARK
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
F14	F13	0.03	0.90	0.03	0.03	5.00	10	6.64	1.00	0.18	639.75	638.47	50.0	0.026	15	0.013	10.34	3.21	3.0	10.0	0.26	
F13	F12	0.60	0.70	0.66	0.69	5.26	10	6.57	1.00	4.50	638.47	633.07	185.0	0.029	18	0.013	17.95	8.47	3.0	10.0	0.36	
F12	F11	0.87	0.70	0.61	1.29	5.62	10	6.47	1.00	8.38	632.75	630.50	78.0	0.029	18	0.013	17.84	9.96	3.0	10.0	0.13	
F11	F10	0.03	0.90	0.03	1.32	5.75	10	6.44	1.00	8.50	630.50	630.00	41.0	0.012	18	0.013	11.60	7.19	3.0	10.0	0.10	
F10	F9	0.45	0.80	0.36	1.68	5.85	10	6.41	1.00	10.78	630.00	629.60	18.0	0.022	18	0.013	15.66	9.57	3.0	10.0	0.03	
F9	F8	0.16	0.80	0.21	1.89	5.88	10	6.40	1.00	12.10	629.60	628.60	54.0	0.019	18	0.013	14.29	9.09	3.0	10.0	0.10	
F8	F7	0.10	0.90	0.23	2.12	5.98	10	6.38	1.00	13.54	628.60	626.50	111.0	0.019	18	0.013	14.45	9.32	3.0	10.0	0.20	
F7	F6	0.11	0.90	0.10	2.22	6.18	10	6.32	1.00	14.05	625.20	622.54	126.0	0.021	18	0.013	15.26	9.82	3.0	10.0	0.21	
F6	F5	0.12	0.90	0.93	3.15	6.39	10	6.27	1.00	19.74	621.00	620.25	63.0	0.012	24	0.013	24.68	8.75	3.0	10.0	0.12	
F5	F4	0.04	0.90	0.04	3.19	6.51	10	6.23	1.00	19.86	618.25	616.00	136.0	0.017	24	0.013	29.10	9.99	3.0	10.0	0.23	
F4	F3	0.19	0.90	0.17	3.36	6.74	10	6.17	1.00	20.72	612.00	611.00	63.0	0.016	24	0.013	28.50	9.92	3.0	10.0	0.11	
F3	F2	0.20	0.85	0.17	3.53	6.84	10	6.15	1.00	21.67	608.10	601.50	42.0	0.157	24	0.013	89.68	23.55	3.0	10.0	0.03	
F2	F1	0.00	0.00	0.00	3.53	6.87	10	6.14	1.00	21.67	593.35	591.00	27.0	0.087	24	0.013	66.74	19.01	3.0	10.0	0.02	
F1	OUTFALL	0.00	0.00	0.00	3.53	6.90	10	6.13	1.00	21.67	584.15	583.50	65.0	0.010	24	0.013	22.62	8.22	3.0	10.0	0.13	
F12.1	F12	0.28	0.85	0.24	0.24	5.00	10	6.64	1.00	1.58	633.50	633.07	29.0	0.015	15	0.013	7.87	5.02	3.0	10.0	0.10	
F8.1	F8	0.10	0.80	0.08	0.08	5.00	10	6.64	1.00	0.53	630.50	628.60	98.0	0.019	18	0.013	14.63	3.93	3.0	10.0	0.42	
F7.1	F7	0.18	0.80	0.14	0.14	5.00	10	6.64	1.00	0.96	628.15	626.50	46.0	0.036	18	0.013	19.89	5.81	3.0	10.0	0.13	
F5.1	F5	1.49	0.55	0.82	0.82	5.00	10	6.64	1.00	5.44	621.50	620.25	32.0	0.039	18	0.013	20.76	9.91	3.0	10.0	0.05	

Dewberry

Hydraulic Grade Line Computations LD-347

PROJECT: Old Ivy Residences COUNTY: Albemarle
DATE: NOV, 2023
ENGINEER: RAY/ Dewberry Engineers Inc. OUTFALL TO STRUCTURE: _-_

Inlet Station	Outlet Water Surface Elevation	D_o	Q_o	L_o	S_{fo} %	H_f	JUNCTION LOSS V_o	H_o	Q_i	V_i	Q_iV_i	$V_i^2/2g$	H_i	Angle	H_Δ	H_t	1.3 H_t	0.5 H_t	Final H	Inlet Water Surface Elevation	Rim Elevation	Amount of Flow Entering System Through Drop Inlet	St'd IS-1 Inlet Shaping Provided? (Enter Y or N)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(CFS)	
F5.1	621.450	18	5.44	32.00	0.271	0.09	9.91	0.46	0.00	0.00	0.00	0.00	0.00	0	0.00	0.46	0.59	N.A.	0.68	622.13	625.38	5.44	N
F7.1	627.700	18	0.96	46.00	0.008	0.00	5.81	0.16	0.00	0.00	0.00	0.00	0.00	0	0.00	0.16	0.20	N.A.	0.21	628.37	632.01	0.96	N
F8.1	629.800	18	0.53	98.00	0.003	0.00	3.93	0.07	0.00	0.00	0.00	0.00	0.00	90	0.00	0.07	0.09	N.A.	0.10	630.70	635.83	0.53	N
F12.1	634.070	15	1.58	29.00	0.061	0.02	5.02	0.12	0.00	0.00	0.00	0.00	0.00	78	0.00	0.12	0.15	N.A.	0.17	634.24	637.34	1.58	N
F1	585.100	24	21.67	65.00	0.926	0.60	8.22	0.26	21.67	19.01	412.04	5.61	1.96	0	0.00	2.23	N.A.	N.A.	2.83	587.93	596.90	0.00	N
F2	592.600	24	21.67	27.00	0.926	0.25	19.01	1.40	21.67	23.55	510.40	8.61	3.01	25	2.58	7.00	N.A.	N.A.	7.25	599.85	606.20	0.00	N
F3	603.100	24	21.67	42.00	0.926	0.39	23.55	2.15	20.72	9.92	205.48	1.53	0.53	6	0.11	2.80	N.A.	N.A.	3.19	608.77	618.05	1.04	N
F4	612.600	24	20.72	63.00	0.847	0.53	9.92	0.38	19.86	9.99	198.38	1.55	0.54	5	0.09	1.02	N.A.	N.A.	1.55	614.15	619.16	1.06	N
F5	617.600	24	19.86	136.00	0.778	1.06	9.99	0.39	19.74	8.75	172.66	1.19	0.42	69	0.72	1.52	N.A.	N.A.	2.58	620.18	625.08	0.22	N
F6	621.850	24	19.74	63.00	0.768	0.48	8.75	0.30	14.05	9.82	138.05	1.50	0.52	9	0.17	1.00	1.29	N.A.	1.78	623.63	626.36	5.81	N
F7	623.740	18	14.05	126.00	1.809	2.28	9.82	0.37	13.54	9.32	126.14	1.35	0.47	0	0.00	0.85	N.A.	N.A.	3.13	626.87	631.83	0.63	N
F8	627.700	18	13.54	111.00	1.680	1.86	9.32	0.34	12.10	9.09	110.02	1.28	0.45	86	0.88	1.66	N.A.	N.A.	3.53	631.23	634.05	1.49	N
F9	631.229	18	12.10	54.00	1.341	0.72	9.09	0.32	10.78	9.57	103.19	1.42	0.50	68	0.85	1.67	N.A.	N.A.	2.40	633.63	634.95	1.33	N
F10	633.627	18	10.78	18.00	1.065	0.19	9.57	0.36	8.50	7.19	61.12	0.80	0.28	23	0.22	0.86	1.12	N.A.	1.31	634.94	634.54	2.31	N
F11	634.938	18	8.50	41.00	0.663	0.27	7.19	0.20	8.38	9.96	83.40	1.54	0.54	86	1.05	1.79	N.A.	N.A.	2.06	637.00	634.37	0.17	N
F12	637.001	18	8.38	78.00	0.643	0.50	9.96	0.38	4.50	8.47	38.10	1.11	0.39	30	0.39	1.16	1.51	N.A.	2.01	639.02	636.98	3.94	N
F13	639.016	18	4.50	185.00	0.186	0.34	8.47	0.28	0.18	3.21	0.58	0.16	0.06	89	0.11	0.45	0.58	N.A.	0.92	639.94	643.06	4.32	N
F14	639.939	15	0.18	50.00	0.001	0.00	3.21	0.05	0.00	0.00	0.00	0.00	0.00	54	0.00	0.05	0.06	N.A.	0.06	640.00	643.47	0.18	N

STORM SEWER RUN G

Dewberry

Storm Sewer Design Computations LD-229

PROJECT: Old Ivy Residences COUNTY: Albemarle
DATE: NOV, 2023
ENGINEER: RAY/ Dewberry Engineers Inc. OUTFALL TO STRUCTURE: _-_

FROM INLET	TO INLET	TOTAL AREA "A" (ACRE)	WIEGHTED RUNOFF COEF. "C"	"CA" INCR.	"CA" ACC.*	INLET TIME (MIN.)	FREQUENCY (YR)	RAINFALL INTENSITY "I" (IN/HR)	SATURATION FACTOR C_f	FLOW Q (CFS)	INVERT ELEVATIONS (FT) UPSTREAM	INVERT ELEVATIONS (FT) DOWNSTREAM	LENGTH L (FT)	SLOPE (FT/FT)	DIAMETER Do (IN)	MATERIAL COEFFICIENT n	CAPACITY (CFS)	VELOCITY (FPS)	MINIMUM VELOCITY (FPS)	MAXIMUM VELOCITY (FPS)	FLOW TIME (MIN)	REMARK
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
G11	G10	0.17	0.82	0.14	0.14	5.00	10	6.64	1.00	0.93	633.16	632.75	41.0	0.010	18	0.013	10.50	3.67	3.0	10.0	0.19	
G10	G9	0.27	0.63	0.17	0.31	5.19	10	6.59	1.00	2.04	632.75	629.79	165.0	0.018	18	0.013	14.07	5.68	3.0	10.0	0.48	
G9	G8	0.12	0.90	0.11	0.42	5.67	10	6.46	1.00	2.70	629.79	629.28	51.0	0.010	18	0.013	10.50	4.99	3.0	10.0	0.17	
G8	G7	0.14	0.85	0.20	0.62	5.84	10	6.41	1.00	3.96	629.28	623.60	126.0	0.045	18	0.013	22.30	9.55	3.0	10.0	0.22	
G7	G6	0.11	0.90	0.10	0.72	6.06	10	6.36	1.00	4.55	623.60	623.00	56.0	0.011	18	0.013	10.87	5.89	3.0	10.0	0.16	
G6	G5	0.06	0.85	0.15	0.87	6.22	10	6.31	1.00	5.49	622.50	618.90	103.0	0.035	18	0.013	19.64	9.55	3.0	10.0	0.18	
G5	G4	0.06	0.90	0.10	0.97	6.40	10	6.27	1.00	6.05	618.90	615.00	107.0	0.036	18	0.013	20.05	9.96	3.0	10.0	0.18	
G4	G3	0.09	0.90	0.29	1.25	6.58	10	6.22	1.00	7.78	615.00	613.80	113.0	0.011	18	0.013	10.82	6.68	3.0	10.0	0.28	
G3	G2	0.09	0.90	0.71	1.96	6.86	10	6.14	1.00	12.03	611.80	610.00	108.0	0.017	18	0.013	13.56	8.69	3.0	10.0	0.21	
G2	G1	0.09	0.90	0.08	2.04	7.07	10	6.09	1.00	12.42	610.00	609.25	35.0	0.021	18	0.013	15.38	9.70	3.0	10.0	0.06	
G1	OUTFALL	0.00	0.00	0.00	2.04	7.13	10	6.07	1.00	12.42	595.00	591.00	67.0	0.060	18	0.013	25.67	14.43	3.0	10.0	0.08	
G7.2	G7.1	0.18	0.80	0.14	0.14	5.00	10	6.64	1.00	0.96	625.00	624.10	91.0	0.010	18	0.013	10.45	3.69	3.0	10.0	0.41	
G7.1	G7	0.09	0.90	0.08	0.23	5.41	10	6.53	1.00	1.47	624.10	623.60	50.0	0.010	18	0.013	10.50	4.20	3.0	10.0	0.20	
G5.1	G5	0.12	0.85	0.10	0.10	5.00	10	6.64	1.00	0.68	619.40	618.90	48.0	0.010	18	0.013	10.72	3.40	3.0	10.0	0.24	
G4.1	G4	0.05	0.85	0.04	0.04	5.00	10	6.64	1.00	0.28	616.00	615.00	51.0	0.020	18	0.013	14.71	3.26	3.0	10.0	0.26	
G3.1	G3	0.24	0.85	0.20	0.20	5.00	10	6.64	1.00	1.35	614.47	613.80	46.0	0.015	18	0.013	12.68	4.69	3.0	10.0	0.16	
G2.1.1	G2	0.21	0.85	0.18	0.18	5.00	10	6.64	1.00	1.19	611.00	610.00	45.0	0.022	18	0.013	15.66	5.23	3.0	10.0	0.14	
G2.1.2	G2	0.69	0.65	0.45	0.45	5.00	10	6.64	1.00	2.98	611.00	610.00	95.0	0.011	18	0.013	10.78	5.22	3.0	10.0	0.30	

Dewberry

Hydraulic Grade Line Computations LD-347

PROJECT: Old Ivy Residences COUNTY: Albemarle
DATE: NOV, 2023
ENGINEER: RAY/ Dewberry Engineers Inc. OUTFALL TO STRUCTURE: _-_

Inlet Station	Outlet Water Surface Elevation	D_o	Q_o	L_o	S_{fo} %	H_f	JUNCTION LOSS V_o	H_o	Q_i	V_i	Q_iV_i	$V_i^2/2g$	H_i	Angle	H_Δ	H_t	1.3 H_t	0.5 H_t	Final H	Inlet Water Surface Elevation	Rim Elevation	Amount of Flow Entering System Through Drop Inlet	St'd IS-1 Inlet Shaping Provided? (Enter Y or N)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(CFS)	
G2.1.2	611.200	18	2.98	95.00	0.081	0.08	5.22	0.13	0.00	0.00	0.00	0.00	0.00	0	0.00	0.13	0.17	N.A.	0.24	611.54	615.39	2.98	N
G2.1.1	611.200	18	1.19	45.00	0.013	0.01	5.23	0.13	0.00	0.00	0.00	0.00	0.00	5	0.00	0.13	0.17	N.A.	0.17	611.37	616.35	1.19	N
G3.1	615.000	18	1.35	46.00	0.017	0.01	4.69	0.10	0.00	0.00	0.00	0.00	0.00	79	0.00	0.10	0.13	N.A.	0.14	615.14	618.98	1.35	N
G4.1	616.200	18	0.28	51.00	0.001	0.00	3.26	0.05	0.00	0.00	0.00	0.00	0.00	75	0.00	0.05	0.06	N.A.	0.06	616.26	621.67	0.28	N
G5.1	620.100	18	0.68	48.00	0.004	0.00	3.40	0.05	0.00	0.00	0.00	0.00	0.00	90	0.00	0.05	0.07	N.A.	0.07	620.17	623.13	0.68	N
G7.1	624.800	18	1.47	50.00	0.020	0.01	4.20	0.07	0.96	3.69	3.53	0.21	0.07	74	0.13	0.28	0.36	N.A.	0.37	625.17	630.98	0.53	N
G7.2	625.300	18	0.96	91.00	0.008	0.01	3.69	0.06	0.00	0.00	0.00	0.00	0.00	0	0.00	0.06	0.08	N.A.	0.09	625.39	628.85	0.96	N
G1	592.200	18	12.42	67.00	1.412	0.95	14.43	0.81	12.42	9.70	120.49	1.46	0.51	4	0.07	1.39	N.A.	N.A.	2.34	595.73	604.33	0.00	N
G2	610.450	18	12.42	35.00	1.412	0.49	9.70	0.37	12.03	8.69	104.54	1.17	0.41	90	0.82	1.60	N.A.	N.A.	2.09	612.54	615.34	0.49	N
G3	612.541	18	12.03	108.00	1.326	1.43	8.69	0.29	7.78	6.68	51.94	0.69	0.24	9	0.08	0.62	0.80	N.A.	2.23	614.77	617.79	4.35	N
G4	615.000	18	7.78	113.00	0.554	0.63	6.68	0.17	6.05	9.96	60.25	1.54	0.54	6	0.11	0.83	1.07	N.A.	1.70	616.70	620.77	1.77	N
G5	616.700	18	6.05	107.00	0.336	0.36	9.96	0.38	5.49	9.55	52.40	1.42	0.50	3	0.05	0.93	N.A.	N.A.	1.29	619.46	623.35	0.60	N
G6	620.100	18	5.49	103.00	0.276	0.28	9.55	0.35	4.55	5.89	26.83	0.54	0.19	15	0.10	0.64	N.A.	N.A.	0.93	623.04	627.53	0.97	N
G7	624.200	18	4.55	56.00	0.190	0.11	5.89	0.13	3.96	9.55	37.81	1.41	0.50	80	0.93	1.56	N.A.	N.A.	1.67	625.87	630.29	0.63	N
G8	625.870	18	3.96	126.00	0.144	0.18	9.55	0.35	2.70	4.99	13.45	0.39	0.14	74	0.24	0.73	0.95	N.A.	1.13	629.71	633.52	1.28	N
G9	630.480	18	2.70	51.00	0.067	0.03	4.99	0.10	2.04	5.68	11.59	0.50	0.18	73	0.31	0.59	0.76	N.A.	0.79	631.27	633.98	0.70	N
G10	631.275	18	2.04	165.00	0.038	0.06	5.68	0.13	0.93	3.67	3.40	0.21	0.07	48	0.10	0.30	0.39	N.A.	0.45	633.14	636.52	1.12	N
G11	633.950	18	0.93	41.00	0.008	0.00	3.67	0.06	0.00	0.00	0.00	0.00	0.00	8	0.00	0.06	0.08	N.A.	0.08	634.03	637.22	0.93	N

Dewberry

Dewberry Engineers Inc.
4805 Lake Brook Drive
Suite 200
Glen Allen, VA 23060
804.290.7957

GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA
FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

REVISIONS

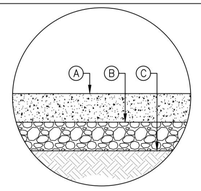
NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

TITLE
STORM SEWER CALCULATIONS

PROJECT NO. 50151935

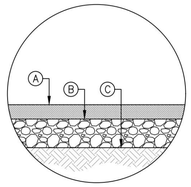
C-411



A 4" CLASS A-3 CONCRETE
B 4" 21B AGGREGATE STONE
C COMPACTED SUBGRADE

STANDARD SIDEWALK SECTION

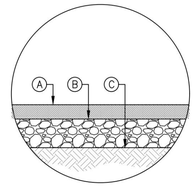
N.T.S. Source: Dewberry



A 2" SM-9.5A ASPHALTIC CONCRETE
B 8" 21B AGGREGATE STONE
C COMPACTED SUBGRADE

LIGHT DUTY ASPHALT PAVEMENT SECTION

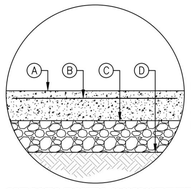
N.T.S. Source: Dewberry



A 1.5" SM-9.5A ASPHALTIC CONCRETE
C 8" 21B AGGREGATE STONE
D COMPACTED SUBGRADE

MULTI-USE PATH ASPHALT PAVEMENT SECTION

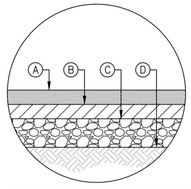
N.T.S. Source: Dewberry



A 6" CLASS A-3 PORTLAND CEMENT CONCRETE
B 6x6 W2.9xW2.9 WOVEN WIRE FABRIC (FLAT SHEETS) 2" FROM TOP OF CONCRETE
C 6" 21B STONE
D COMPACTED SUBGRADE

HEAVY DUTY CONCRETE PAVEMENT SECTION

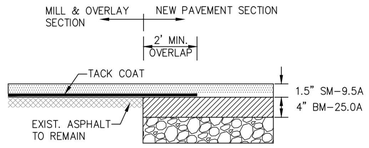
N.T.S. Source: Dewberry



A 2" SM-9.5A ASPHALTIC CONCRETE
B 3" BM-25.0 BITUMINOUS BASE
C 8" 21B AGGREGATE STONE
D COMPACTED SUBGRADE

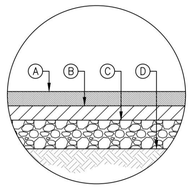
HEAVY DUTY ASPHALT PAVEMENT SECTION

N.T.S. Source: Dewberry



MILL AND OVERLAY PAVEMENT

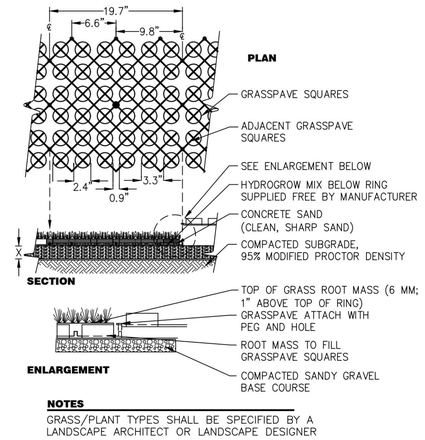
N.T.S. Source: Dewberry



A 1.5" SM-9.5A ASPHALTIC CONCRETE
B 4" BM-25.0A BITUMINOUS BASE
C 12" 21B AGGREGATE STONE, TYPE I OR II, NON-PLASTIC, MIN. CBR = 30.
D COMPACTED SUBGRADE

VDOT R/W (OLD IVY RD) ASPHALT PAVEMENT SECTION

N.T.S. Source: Dewberry

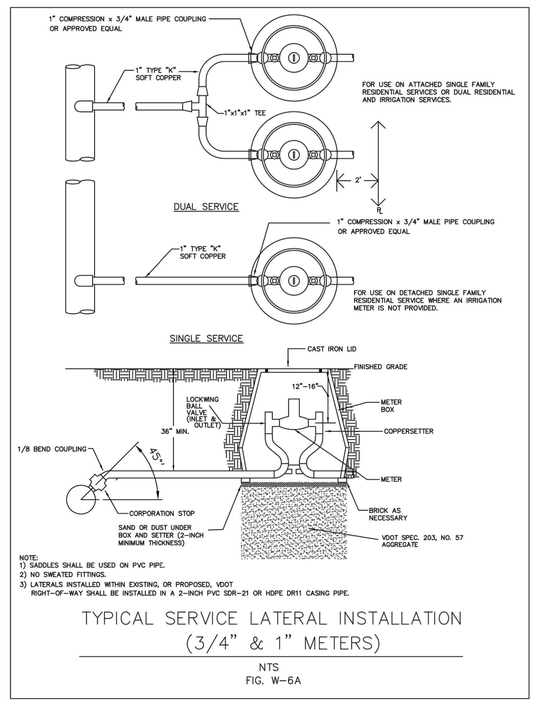


NOTES

GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECT OR LANDSCAPE DESIGNER

TYPICAL GRASSPAVE EMERGENCY ACCESS ROAD

N.T.S. Source: Dewberry



NOTE:
1) SADDLES SHALL BE USED ON PVC PIPE.
2) NO SWEATED FITTINGS.
3) LATERALS INSTALLED WITHIN EXISTING, OR PROPOSED, VDOT RIGHT-OF-WAY SHALL BE INSTALLED IN A 2-INCH PVC SDR-21 OR HDPE DR11 CASING PIPE.

TYPICAL SERVICE LATERAL INSTALLATION
(3/4" & 1" METERS)

NTS
FIG. W-6A

TD-10

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Patrick Hill
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Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

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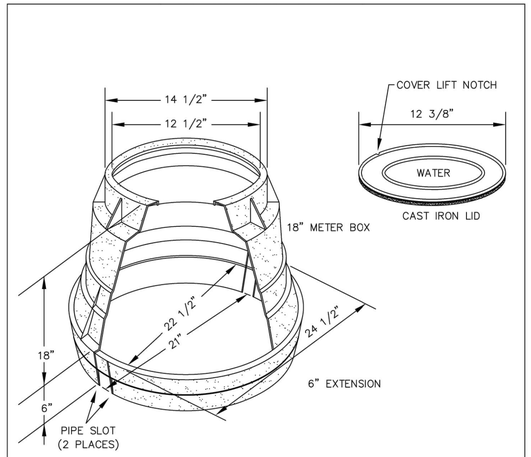
TITLE

CONSTRUCTION DETAILS

PROJECT NO. 50151935

C-500

SHEET NO. 64 OF 85

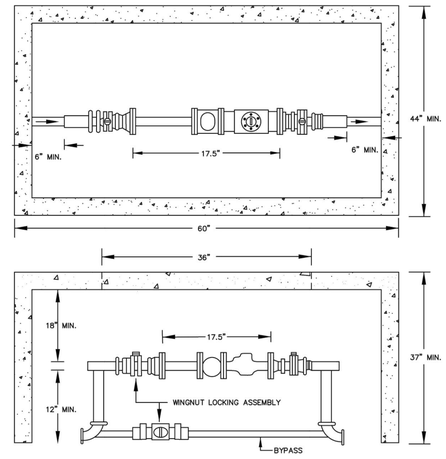


NOTES:
(1) A 1-3/4" DIAMETER HOLE IS REQUIRED IN THE LID FOR TOUCH READ METERS.

TYPICAL METER BOXES (3/4"-1" METERS)

NTS
FIG. W-7

TD-13



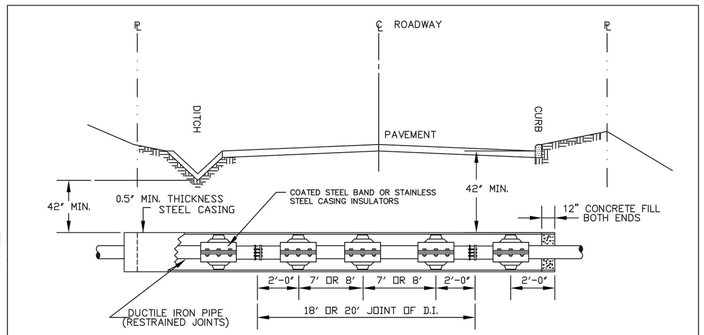
NOTES:

1. PROVIDE A 6" THICK GRAVEL BED BENEATH THE METER VAULT.
2. MINIMUM WALL THICKNESS FOR PRECAST OR POUR-IN-PLACE VAULTS SHALL BE 4".
3. THE OUTSIDE OF THE VAULT BELOW GRADE SHALL BE COATED WITH AN APPROVED WATER PROOFING COMPOUND.

TYPICAL METER VAULT (1 1/2" METER)

NTS
FIG. W-7B

TD-15



TD-11

NOTE: 1. STEEL CASING TO EXTEND TO BACK OF CURB, DITCH, SIDEWALK, ETC. OR A MINIMUM OF 5' BEYOND THE EDGE OF PAVEMENT, WHICHEVER IS GREATER.
2. ENDS OF CASING CAN BE SEALED USING A PULL-ON END SEAL GASKET IN LIEU OF CONCRETE FILL.
3. MIDDLE SPACER SHALL BE PLACED AT THE CENTERPOINT OF PIPE JOINT.

WATER
TYPICAL STEEL SLEEVE INSTALLATION UNDER ROADWAYS

N.T.S
FIG. W-10

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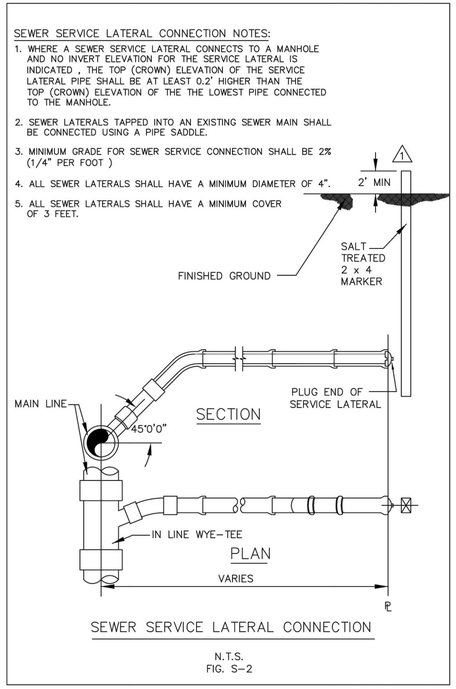
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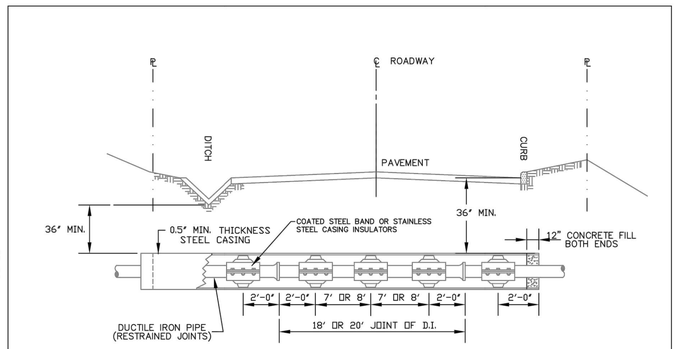
PROJECT NO. 50151935

C-501

SHEET NO. 65 OF 85



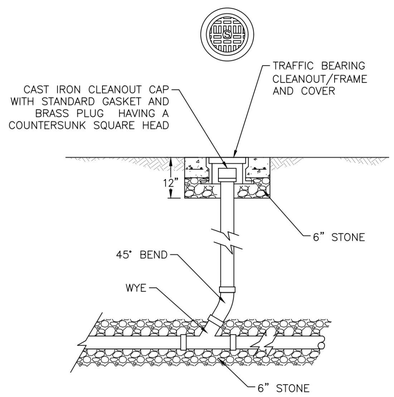
TD-33



NOTE: 1. STEEL CASING TO EXTEND TO BACK OF CURB, DITCH, SIDEWALK, ETC. OR A MINIMUM OF 5' BEYOND THE EDGE OF PAVEMENT, WHICHEVER IS GREATER.
2. ENDS OF CASING CAN BE SEALED USING A PULL-ON END SEAL GASKET IN LIEU OF CONCRETE FILL.
3. MIDDLE SPACER SHALL BE PLACED AT THE CENTERPOINT OF PIPE.

SEWER
TYPICAL STEEL SLEEVE INSTALLATION
UNDER ROADWAYS
N.T.S
FIG. S-5

TD-36

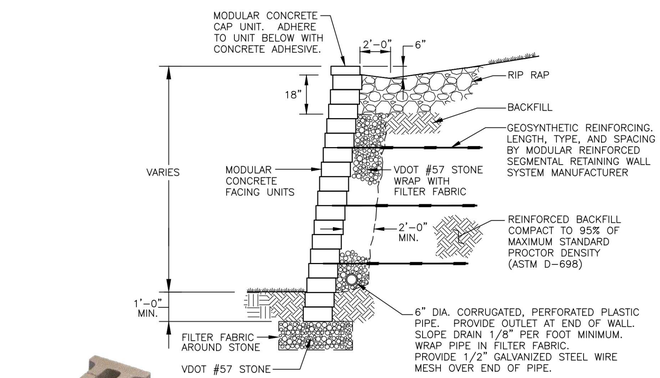


CLEANOUT

N.T.S. Source: Dewberry

NOTES:

1. THE SEGMENTAL RETAINING WALL SYSTEM SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF VIRGINIA.
2. MODULAR RETAINING WALL SYSTEM SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR DESIGN. SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO DEWBERRY ENGINEERS INC. FOR REVIEW AND APPROVAL.
3. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME THAT FILL BEHIND THE UNITS IS COMPACTED.
4. INSTALL #57 STONE IN A 2'-0" WIDTH DIRECTLY BEHIND THE WALL AND EXTEND STONE TO WITHIN 18" OF THE TOP OF THE WALL. DRAINAGE AGGREGATE SHALL NOT EXTEND BELOW FINAL GRADE IN FRONT OF THE WALL.
5. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY (ASTM D-698).
6. COMPACTION WITHIN 5 FEET OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT.
7. GEOSYNTHETIC REINFORCEMENT SHALL BE PLACED WITH STRONGEST DIRECTION PERPENDICULAR TO WALL. FOLLOW GEOSYNTHETIC REINFORCEMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
8. CONTRACTOR SHALL DIRECT SURFACE RUNOFF TO AVOID DAMAGING WALL DURING CONSTRUCTION.
9. FOLLOW APPLICABLE PROVISIONS OF THE MODULAR RETAINING WALL SYSTEM MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
10. COORDINATE MODULAR CONCRETE UNIT STYLE, PATTERN, AND COLOR WITH OWNER.



MODULAR REINFORCED SEGMENTAL RETAINING WALL DETAIL
NOT TO SCALE

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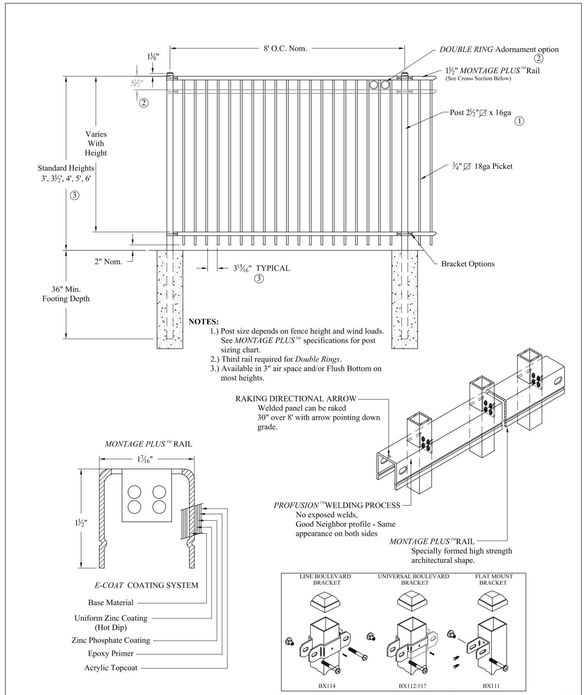
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CONSTRUCTION DETAILS

PROJECT NO. 50151935

C-502

SHEET NO. 66 OF



COMMERCIAL STRENGTH WELDED STEEL PANEL
PRE-ASSEMBLED

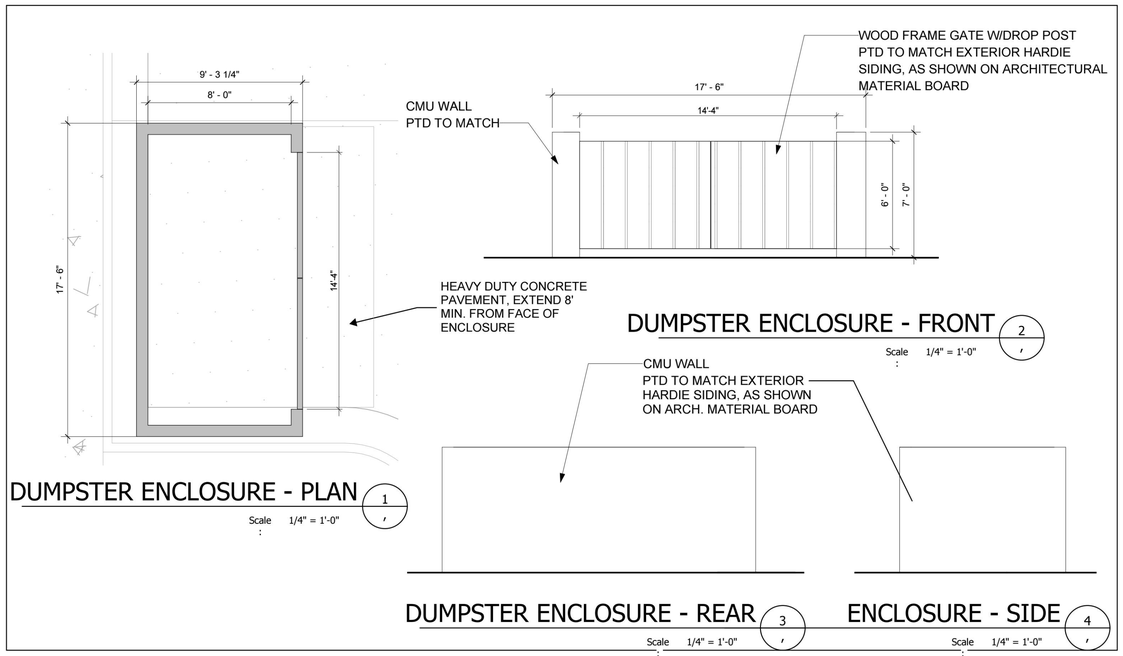
Values shown are nominal and not to be used for installation purposes. See product specification for installation requirements.

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DUMPSTER ENCLOSURE - PLAN 1 — Scale 1/4" = 1'-0"

DUMPSTER ENCLOSURE - FRONT 2 — Scale 1/4" = 1'-0"

DUMPSTER ENCLOSURE - REAR 3 — Scale 1/4" = 1'-0"

ENCLOSURE - SIDE 4 — Scale 1/4" = 1'-0"

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TITLE
CONSTRUCTION DETAILS

PROJECT NO. 50151935

C-503

SHEET NO. 67 OF 85

STRUCTURE TABLE	
ID NO.	DETAILS
A0	RIM = 561.979 A1 TO OUTFALL INV IN = 560.174
A4.1	RIM = 585.591 A4.2 TO A4.1 INV IN = 578.598 A4.3 TO A4.2 INV IN = 578.600 A4.1 TO A4 INV OUT = 578.598
A4.1.1	RIM = 585.432 A4.2 TO A4.1 INV OUT = 579.000
A4.2	RIM = 592.897 A4.4 TO A4.3 INV IN = 586.000 A4.3 TO A4.2 INV OUT = 586.000
A4.3	RIM = 595.017 A4.4 TO A4.3 INV OUT = 588.000
A5	RIM = 588.066 A6 TO A5 INV IN = 582.250 A5.1 TO A5 INV IN = 585.000 A5 TO A4 INV OUT = 582.151
A5.1	RIM = 588.958 A5.1 TO A5 INV OUT = 587.250
A6	RIM = 589.299 A7 TO A6 INV IN = 583.400 A6 TO A5 INV OUT = 583.296
A7	RIM = 591.326 A8 TO A7 INV IN = 586.650 A7 TO A6 INV OUT = 586.551
A8	RIM = 597.188 A9 TO A8 INV IN = 593.500 A8 TO A7 INV OUT = 592.699

STRUCTURE TABLE	
ID NO.	DETAILS
A9	RIM = 603.782 A9 TO A8 INV OUT = 600.500
C6	RIM = 598.387 C7 TO C6 INV IN = 593.600 C6.1 TO C6 INV IN = 593.600 C6 TO C5 INV OUT = 593.600
C6.1	RIM = 598.286 C6.1 TO C6 INV OUT = 594.000
C7	RIM = 601.540 C7.1 TO C7 INV IN = 596.500 C7 TO C6 INV OUT = 596.500
C8	RIM = 601.272 C7.2 TO C7.1 INV IN = 597.000 C8.1 TO C8 INV IN = 597.000 C7.1 TO C7 INV OUT = 597.000
C9	RIM = 607.689 C8 TO C7 INV IN = 596.500 C8.1 TO C8 INV OUT = 603.440
C10	RIM = 608.232 C9 TO C8 INV IN = 603.000 C8 TO C7 INV OUT = 603.000
C11	RIM = 609.684 C10 TO C9 INV IN = 603.750 C9 TO C8 INV OUT = 603.750
C12	RIM = 613.280 C10 TO C9 INV OUT = 605.000
DI-A1	RIM = 563.208 A2 TO A1 INV IN = 560.500 A1 TO OUTFALL INV OUT = 560.400

STRUCTURE TABLE	
ID NO.	DETAILS
DI-A2	RIM = 567.858 A3 TO A2 INV IN = 565.150 A2 TO A1 INV OUT = 564.250
DI-A3	RIM = 575.405 A4 TO A3 INV IN = 571.800 A3 TO A2 INV OUT = 570.100
DI-B1	RIM = 587.995 B2 TO B1 INV IN = 583.545 B1 TO STORAGE INV OUT = 583.540
DI-B2	RIM = 591.022 B3 TO B2 INV IN = 587.670 B2 TO B1 INV OUT = 587.670
DI-B3	RIM = 595.004 B4 TO B3 INV IN = 590.485 B3 TO B2 INV OUT = 590.480
DI-B4	RIM = 594.776 B4 TO B3 INV OUT = 590.800
DI-C1	RIM = 586.046 C2 TO C1 INV IN = 581.796 C1 TO STORAGE INV OUT = 579.696
DI-C2	RIM = 588.562 C3 TO C2 INV IN = 583.855 C2 TO C1 INV OUT = 583.000
DI-C3	RIM = 592.760 C4 TO C3 INV IN = 588.250 C3 TO C2 INV OUT = 588.000
DI-C4	RIM = 595.253 C5 TO C4 INV IN = 590.889 C4.1 TO C4 INV IN = 590.890 C4 TO C3 INV OUT = 590.890

STRUCTURE TABLE	
ID NO.	DETAILS
DI-C4.1	RIM = 598.507 C4.1 TO C4 INV OUT = 593.020
DI-C5	RIM = 596.361 C6 TO C5 INV IN = 592.111 C5 TO C4 INV OUT = 592.110
DI-C7.2	RIM = 603.717 C7.3 TO C7.2 INV IN = 599.690 C7.2 TO C7.1 INV OUT = 599.690
DI-C8.2	RIM = 604.276 C7.3 TO C7.2 INV OUT = 600.000
DI-D1A	RIM = 583.931 D1B TO D1A INV IN = 576.200 D1A TO STORAGE INV OUT = 576.200
DI-D1B.2	RIM = 580.878 D1B.1 TO D1B.2 INV OUT = 577.250
DI-D1B.3	RIM = 581.228 D1B.1 TO D1B.3 INV OUT = 577.000
DI-D2	RIM = 584.728 D3 TO D2 INV IN = 580.550 D2 TO D1B INV OUT = 580.550
DI-D3	RIM = 585.360 D4 TO D3 INV IN = 581.250 D3 TO D2 INV OUT = 581.000
DI-D4	RIM = 588.514 D5 TO D4 INV IN = 584.000 D4 TO D3 INV OUT = 583.000

STRUCTURE TABLE	
ID NO.	DETAILS
DI-D5	RIM = 599.964 D5 TO D5.1 INV IN = 592.160 D6 TO D5 INV IN = 592.160 D5 TO D4 INV OUT = 587.000
DI-D5.1	RIM = 601.141 D5.2 TO D5.1 INV IN = 594.000 D5 TO D5.1 INV OUT = 594.000
DI-D5.2	RIM = 602.557 D5.2 TO D5.1 INV OUT = 595.970
DI-D6	RIM = 599.399 D7 TO D6 INV IN = 593.615 D6 TO D5 INV OUT = 593.610
DI-D7	RIM = 603.201 D7 TO D6 INV OUT = 597.800
DI-E2.1	RIM = 606.519 E2.2 TO E2.1 INV IN = 601.000 E2.1 TO E2 INV OUT = 599.000
DI-E2.2	RIM = 606.475 E2.2 TO E2.1 INV OUT = 602.260
DI-E3	RIM = 609.206 E3 TO E3.1 INV IN = 602.116 E3.1.1 TO E3 INV IN = 599.000 E3 TO E2 INV OUT = 598.500
DI-E3.1	RIM = 608.291 E3.1 TO E3.2 INV IN = 603.430 E3 TO E3.1 INV OUT = 603.430
DI-E3.2	RIM = 608.362 E3.1 TO E3.2 INV OUT = 604.150

STRUCTURE TABLE	
ID NO.	DETAILS
DI-F3	RIM = 616.774 F4 TO F3 INV IN = 611.000 F3 TO F2 INV OUT = 608.100
DI-F4	RIM = 619.657 F5 TO F4 INV IN = 616.000 F4 TO F3 INV OUT = 612.000
DI-F5	RIM = 625.505 F6 TO F5 INV IN = 620.250 F5.1 TO F5 INV IN = 620.250 F5 TO F4 INV OUT = 618.250
DI-F5.1	RIM = 625.947 F5.1 TO F5 INV OUT = 621.500
DI-F6	RIM = 626.857 F7 TO F6 INV IN = 622.540 F6 TO F5 INV OUT = 621.000
DI-F7	RIM = 632.326 F8 TO F7 INV IN = 626.500 F7.1 TO F7 INV IN = 626.500 F7 TO F6 INV OUT = 625.200
DI-G2	RIM = 616.228 G2.1.2 TO G2 INV IN = 610.000 G3 TO G2 INV IN = 610.000 G2.1.1 TO G2 INV IN = 610.000 G2 TO G1 INV OUT = 608.000
DI-G2.1.1	RIM = 616.865 G2.1.1 TO G2 INV OUT = 611.000
DI-G3	RIM = 618.246 G4 TO G3 INV IN = 613.800 G3.1 TO G3 INV IN = 613.800 G3 TO G2 INV OUT = 611.800
DI-G3.1	RIM = 619.466 G3.1 TO G3 INV OUT = 614.470

STRUCTURE TABLE	
ID NO.	DETAILS
DI-G4	RIM = 621.196 G5 TO G4 INV IN = 615.000 G4.1 TO G4 INV IN = 615.000 G4 TO G3 INV OUT = 615.000
DI-G4.1	RIM = 622.161 G4.1 TO G4 INV OUT = 616.000
DI-G5	RIM = 623.734 G6 TO G5 INV IN = 618.900 G5.1 TO G5 INV IN = 618.900 G5 TO G4 INV OUT = 618.900
DI-G5.1	RIM = 624.207 G5.1 TO G5 INV OUT = 619.400
DI-G6	RIM = 627.388 G7 TO G6 INV IN = 623.000 G6 TO G5 INV OUT = 622.500
DI-G7	RIM = 630.705 G8 TO G7 INV IN = 623.600 G7.1 TO G7 INV IN = 623.600 G7 TO G6 INV OUT = 623.600
DI-G7.1	RIM = 631.157 G7.2 TO G7.1 INV IN = 624.100 G7.1 TO G7 INV OUT = 624.100
DI-G7.2	RIM = 629.396 G7.2 TO G7.1 INV OUT = 625.000
DI-G8	RIM = 633.465 G9 TO G8 INV IN = 629.278 G8 TO G7 INV OUT = 629.280
DI-G9	RIM = 634.358 G10 TO G9 INV IN = 629.786 G9 TO G8 INV OUT = 629.750

STRUCTURE TABLE	
ID NO.	DETAILS
DI-G10	RIM = 637.022 G11 TO G10 INV IN = 632.755 G10 TO G9 INV OUT = 632.750
DI-G11	RIM = 637.720 G11 TO G10 INV OUT = 633.165
DI-H1	RIM = 581.827 H1 TO STORAGE INV OUT = 578.3
DI-H2	RIM = 581.999 H2 TO STORAGE INV OUT = 576.1
DI-I1	RIM = 578.081 I1 TO STORAGE INV IN = 565.75
DI-I2	RIM = 568.744 I2 TO STORAGE INV OUT = 564.6
E OUTFALL	RIM = 586.292 E1 TO OUTFALL INV IN = 583.50
E4	RIM = 611.850 E4.1 TO E4 INV IN = 600.000 E3.1.1 TO E3 INV OUT = 600.00
E5	RIM = 613.341 E4 TO E3 INV IN = 607.750 E6 TO E5 INV IN = 607.500 E4.1 TO E4 INV OUT = 607.000
E5.1	RIM = 612.841 E4 TO E3 INV OUT = 608.115

STRUCTURE TABLE	
ID NO.	DETAILS
E6	RIM = 617.474 E5 TO E4 INV IN = 611.500 E6 TO E5 INV OUT = 611.250
E7	RIM = 618.006 E5 TO E4 INV OUT = 611.915
ES-J1	RIM = 575.269 J1 TO J2 INV OUT = 573.750
ES-J2	RIM = 571.519 J1 TO J2 INV IN = 570.000
F OUTFALL	RIM = 585.750 F1 TO OUTFALL INV IN = 583.500
F7.1	RIM = 634.476 F8.1 TO F8 INV IN = 628.600 F9 TO F8 INV IN = 628.600 F8 TO F7 INV OUT = 628.600
F7.1.1	RIM = 635.446 F10 TO F9 INV IN = 629.600 F9 TO F8 INV OUT = 629.600
F7.1.2	RIM = 635.039 F10 TO F9 INV OUT = 630.000
F7.2	RIM = 636.565 F8.1 TO F8 INV OUT = 630.500
F8	RIM = 632.510 F11 TO F10 INV IN = 628.150 F7.1 TO F7 INV OUT = 628.150

STRUCTURE TABLE	
ID NO.	DETAILS
F9	RIM = 634.756 F12 TO F11 INV IN = 630.500 F11 TO F10 INV OUT = 630.500
F10	RIM = 637.480 F13 TO F12 INV IN = 633.073 F12.1 TO F12 INV IN = 633.070 F12 TO F11 INV OUT = 632.750
F10.1	RIM = 637.680 F12.1 TO F12 INV OUT = 633.500
F11	RIM = 641.951 F14 TO F13 INV IN = 638.469 F13 TO F12 INV OUT = 638.470
F12	RIM = 643.968 F14 TO F13 INV OUT = 639.750
G OUTFALL	RIM = 592.708 G1 TO OUTFALL INV IN = 591.000
G2.1.2	RIM = 614.935 G2.1.2 TO G2 INV OUT = 611.000
H OUTFALL	RIM = 573.292 H3 TO OUTFALL INV IN = 571.500
I STORAGE OUTFALL	RIM = 572.000
K0	RIM = 613.060 K1 TO K0 INV IN = 610.114

STRUCTURE TABLE	
ID NO.	DETAILS
K1	RIM = 613.623 K2 TO K1 INV IN = 610.677 K1 TO K0 INV OUT = 610.677
K2	RIM = 614.222 K3 TO K2 INV IN = 611.276 K2 TO K1 INV OUT = 611.276
K3	RIM = 613.304 K3 TO K2 INV OUT = 611.500
L1	RIM = 0.017 L2 TO L1 INV IN = -3.500
L2	RIM = 576.150 L3 TO L2 INV IN = 572.534 L2 TO L1 INV OUT = 570.534
L3	RIM = 576.742 L3 TO L2 INV OUT = 573.225
MH-A4	RIM = 580.357 A5 TO A4 INV IN = 576.900 A4.1 TO A4 INV IN = 576.900 A4 TO A3 INV OUT = 576.383
MH-D1B	RIM = 584.662 D2 TO D1B INV IN = 578.900 D1B TO D1B.1 INV IN = 576.450 D1B TO D1A INV OUT = 576.400
MH-D1B.1	RIM = 582.381 D1B.1 TO D1B.2 INV IN = 576.700 D1B.1 TO D1B.3 INV IN = 576.700 D1B TO D1B.1 INV OUT = 576.700
MH-E1	RIM = 591.936 E2 TO E1 INV IN = 587.577 E1 TO OUTFALL INV OUT = 584.300

PIPE TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
A1 TO OUTFALL	18.000	14.280'	1.58%
A2 TO A1	18.000	252.993'	1.48%
A3 TO A2	18.000	159.801'	3.10%
A4 TO A3	18.000	82.892'	5.53%
A4.1 TO A4	18.000	32.170'	5.28%
A4.2 TO A4.1	18.000	29.539'	1.36%
A4.3 TO A4.2	18.000	102.814'	7.20%
A4.4 TO A4.3	18.000	54.032'	3.70%
A5 TO A4	18.000	113.997'	4.61%
A5.1 TO A5	18.000	85.945'	2.62%
A6 TO A5	18.000	20.910'	5.00%
A7 TO A6	18.000	63.016'	5.00%
A8 TO A7	18.000	151.235'	4.00%
A9 TO A8	18.000	100.000'	7.00%
B1 TO STORAGE	18.000	10.166'	3.00%
B2 TO B1	18.000	137.500'	3.00%
B3 TO B2	18.000	112.410'	2.50%
B4 TO B3	18.000	31.549'	1.00%
C1 TO STORAGE	18.000	39.867'	3.00%
C2 TO C1	18.000	66.594'	1.81%
C3 TO C2	18.000	146.490'	2.83%
C4 TO C3	18.000	132.010'	2.00%
C4.1 TO C4	18.000	84.193'	2.53%
C5 TO C4	18.000	67.813'	1.80%
C6 TO C5	18.000	84.474'	1.76%
C6.1 TO C6	18.000	38.814'	1.03%

PIPE TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
C7 TO C6	18.000	53.715'	5.40%
C7.1 TO C7	18.000	44.714'	1.12%
C7.2 TO C7.1	18.000	125.500'	2.14%
C7.3 TO C7.2	18.000	14.806'	2.09%
C8 TO C7	18.000	36.349'	17.88%
C8.1 TO C8	18.000	102.142'	6.30%
C9 TO C8	18.000	52.166'	1.44%
C10 TO C9	18.000	85.208'	1.47%
D1A TO STORAGE	24.000	5.213'	0.66%
D1B TO D1A	24.000	30.408'	0.66%
D1B TO D1B.1	18.000	44.395'	0.56%
D1B.1 TO D1B.2	18.000	19.137'	2.87%
D1B.1 TO D1B.3	18.000	24.519'	1.22%
D2 TO D1B	18.000	74.746'	2.21%
D3 TO D2	18.000	28.709'	1.57%
D4 TO D3	18.000	78.526'	2.23%
D5 TO D4	18.000	93.651'	3.20%
D5 TO D5.1	18.000	71.135'	2.59%
D5.2 TO D5.1	18.000	66.000'	2.98%
D6 TO D5	18.000	34.947'	4.15%
D7 TO D6	18.000	139.501'	3.00%
E1 TO OUTFALL	30.000	96.330'	0.83%
E2 TO E1	30.000	29.695'	3.11%
E2.1 TO E2	18.000	107.505'	2.79%
E2.2 TO E2.1	18.000	20.591'	6.12%
E3 TO E2	24.000	193.920'	3.35%

PIPE TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
E3 TO E3.1	18.000	77.430'	1.70%
E3.1 TO E3.2	18.000	39.095'	1.84%
E3.1.1 TO E3	24.000	33.999'	2.94%
E4 TO E3	15.000	36.522'	1.00%
E4.1 TO E4	24.000	125.754'	5.57%
E5 TO E4	15.000	41.487'	1.00%
E6 TO E5	18.000	83.962'	4.47%
F1 TO OUTFALL	24.000	64.620'	1.01%
F2 TO F1	24.000	27.380'	15.89%
F3 TO F2	24.000	37.095'	17.79%
F4 TO F3	24.000	67.962'	1.47%
F5 TO F4	24.000	136.403'	1.65%
F5.1 TO F5	15.000	32.000'	3.91%
F6 TO F5	24.000	63.319'	1.18%
F7 TO F6	18.000	126.192'	2.11%
F7.1 TO F7	18.000	46.001'	3.59%
F8 TO F7	18.000	111.000'	1.89%
F8.1 TO F8	18.000	98.000'	1.94%
F9 TO F8	18.000	54.164'	1.85%
F10 TO F9	18.000	17.790'	2.25%
F11 TO F10	18.000	60.053'	3.91%
F12 TO F11	18.000	81.104'	2.77%
F12.1 TO F12	15.000	28.501'	1.51%
F13 TO F12	18.000	138.885'	3.89%
F14 TO F13	15.000	69.162'	1.85%
G1 TO OUTFALL	18.000	66.715'	6.00%

PIPE TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
G2 TO G1	18.000	31.636'	6.32%
G2.1.1 TO G2	18.000	48.552'	2.06%
G2.1.2 TO G2	18.000	97.413'	1.03%
G3 TO G2	18.000	104.188'	1.73%
G3.1 TO G3	18.000	46.489'	1.44%
G4 TO G3	18.000	111.539'	1.08%
G4.1 TO G4	18.000	51.933'	1.93%
G5 TO G4	18.000	107.372'	3.63%
G5.1 TO G5	18.000	47.743'	1.05%
G6 TO G5	18.000	102.102'	3.53%
G7 TO G6	18.000	56.509'	1.06%
G7.1 TO G7	18.000	50.998'	0.98%
G7.2 TO G7.1	18.000	90.589'	0.99%
G8 TO G7	18.000	120.131'	4.73%
G9 TO G8	18.000	51.759'	0.91%
G10 TO G9	18.000	173.090'	1.71%
G11 TO G10	18.000	41.029'	1.00%
H STORAGE TO H3	18.000	102.065'	0.98%
H1 TO STORAGE	15.000	10.584'	2.00%
H2 TO STORAGE	15.000	6.652'	2.20%
H3 TO OUTFALL	18.000	199.547'	0.75%
I STORAGE TO OUTFALL	18.000	53.965'	1.70%
I1 TO STORAGE	18.000	10.000'	2.71%
I2 TO STORAGE	18.000	14.988'	16.06%
J1 TO J2	36.000	52.733'	7.11%
K1 TO K0	30.000	112.595'	0.50%

PIPE TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
K2 TO K1	30.000	119.870'	0.50%
K3 TO K2	30.000	44.763'	0.50%
L2 TO L1	36.000	149.254'	384.60%
L3 TO L2	36.000	138.376'	0.50%

Dewberry

Dewberry Engineers Inc.
4805 Lake Brook Drive
Suite 200
Glen Allen, VA 23060
804.290.7957

GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

COMMONWEALTH OF VIRGINIA
Patrick Hill
PATRICK GAGE HILL
Lic. No. 063308
01/16/24
PROFESSIONAL ENGINEER

SCALE

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

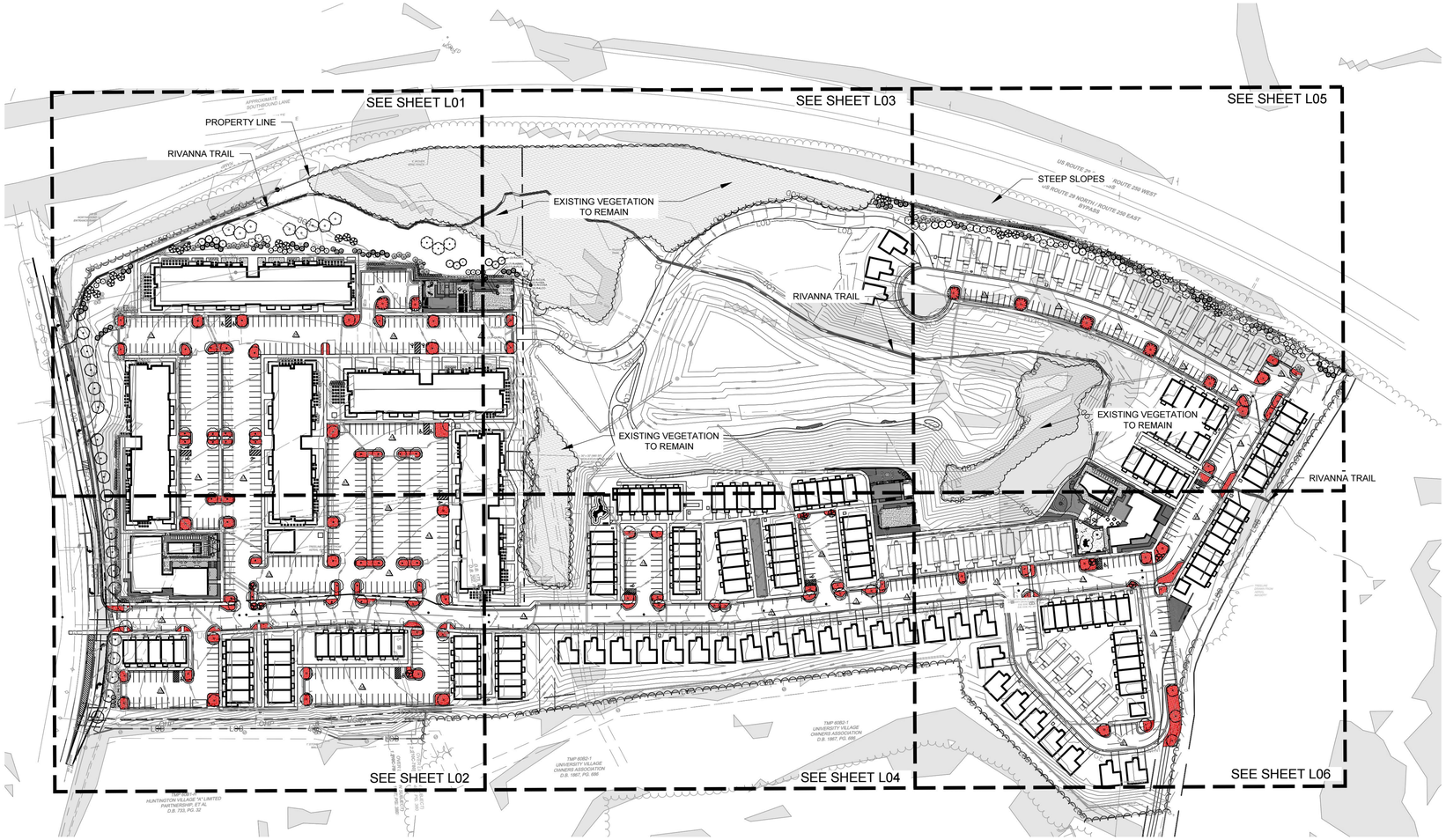
TITLE

PIPE AND STRUCTURE TABLES

PROJECT NO. 50151935

C-601

SHEET NO. 68 OF 85



CONCEPT GRAPHICS SCHEDULE

PARKING LOT AND VEHICULAR CIRCULATION AREA

TAKEOFF: 265,495 SF

INTERIOR PARKING LOT AREA

TAKEOFF: 24,454 SF

LANDSCAPE NOTES:

TREE PROTECTION FENCING

EXISTING TREE LIMITS

PROPOSED TREE LIMITS

ONSITE LANDSCAPE SCHEDULE

KEY	QTY.	CAT.	BOTANICAL NAME	COMMON NAME	CAL / HT.	CONT.	CANOPY	TOTAL CANOPY
SHADE TREES								
ACFR	7	LARGE	ACER X FREEMANII 'JEFFERSRED'	AUTUMN BLAZE MAPLE	2 1/2"	B+B	397	2779
GLET	6	LARGE	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEYLOCUST	2 1/2"	B+B	424	2544
LIQS	3	LARGE	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	2 1/2"	B+B	249	4077
PLAC	41	LARGE	PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANETREE	2 1/2"	B+B	1253	51373
PLOC	9	LARGE	PLATANUS OCCIDENTALIS	SYCAMORE	2 1/2"	B+B	453	4077
QUEP	20	LARGE	QUERCUS PHELLOS	WILLOW OAK	3 1/2"	B+B	370	7400
QURU	49	LARGE	QUERCUS RUBRA	NORTHERN RED OAK	2 1/2"	B+B	424	20776
SUBTOTAL	135						SUBTOTAL	93026
ORNAMENTAL TREES								
AMAR	9	SMALL	AMELANCHIER ARBOREA	DOWNY SERVICEBERRY	1 1/2" - 1 3/4" / 8'	B+B	113	1017
AMGA	28	SMALL	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLANCE'	AUTUMN BRILLIANCE SERVICEBERRY	1 1/2" - 1 3/4" / 8'	B+B	130	3640
CHIVI	19	SMALL	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	1 1/2" - 1 3/4" / 8'	B+B	79	1501
COFR	24	SMALL	CORNUS FLORIDA 'APPALACHIAN SPRING'	APPALACHIAN SPRING FLOWERING DOGWOOD	1 1/2" - 1 3/4" / 8'	B+B	124	2976
SUBTOTAL	71						SUBTOTAL	9134
EVERGREEN TREES								
CUXL	47		CUPRESSUS X LEYLANDII	LEYLAND CYPRESS	1 1/2" - 1 3/4" / 8'	B+B	23	1081
ILAF	33		ILEX ATTENUATA 'FOSTERI NO. 2'	FOSTER NO. 2 HOLLY	1 1/2" - 1 3/4" / 8'	B+B	16	528
ILEO	30		ILEX OPACA	FOSTER HOLLY	1 1/2" - 1 3/4" / 8'	B+B	44	1320
INRS	44		ILEX X NELLIE R STEVENS	NELLIE R STEVENS HOLLY	1 1/2" - 1 3/4" / 8'	B+B	44	1936
JVES	2		JUNIPERUS VIRGINIANA 'CORCORCOR' TM	EMERALD SENTINEL EASTERN RED CEDAR	1 1/2" - 1 3/4" / 8'	B+B	79	158
SUBTOTAL	74						SUBTOTAL	4865
*SHRUBS HAVE NOT BEEN INCLUDED IN THIS TABLE AS THEY ARE NOT COUNTED TOWARDS CANOPY, SEE L07B FOR SHRUBS SCHEDULE							TOTAL	107025

LANDSCAPE NOTES:

1. TIMING OF INSTALLATION: ALL LANDSCAPING SHALL BE INSTALLED BY THE FIRST PLANTING SEASON FOLLOWING THE ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY WITHIN THE DEVELOPMENT, OR A PHASE THEREOF.
2. METHOD OF INSTALLATION: ALL TREES SHALL BE PLANTED IN ACCORDANCE WITH EITHER THE STANDARDIZED LANDSCAPE SPECIFICATIONS JOINTLY ADOPTED BY THE VIRGINIA NURSERYMEN'S ASSOCIATION, THE VIRGINIA SOCIETY OF LANDSCAPE DESIGNERS AND THE VIRGINIA CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS, OR THE ROAD AND BRIDGE SPECIFICATION OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION. PLANTING ISLANDS SHALL CONTAIN A MINIMUM OF 50 SQUARE FEET PER TREE, WITH A MINIMUM DIMENSION OF FIVE FEET IN ORDER TO PROTECT THE LANDSCAPING AND ALLOW FOR PROPER GROWTH. WHEEL STOPS, CURBING OR OTHER BARRIERS SHALL BE PROVIDED TO PREVENT DAMAGE TO LANDSCAPING BY VEHICLES. WHERE NECESSARY, TREES SHALL BE WELLED OR OTHERWISE PROTECTED AGAINST CHANGE OF GRADE. ALL PERVIOUS AREAS OF THE SITE SHALL BE PERMANENTLY PROTECTED FROM SOIL EROSION WITH GRASS OR OTHER GROUND COVER OR MULCH MATERIAL.
3. MAINTAINING AND REPLACING LANDSCAPING AND SCREENING: ALL LANDSCAPING AND SCREENING SHALL BE MAINTAINED IN A HEALTHY CONDITION BY THE CURRENT OWNER OR A PROPERTY OWNERS' ASSOCIATION, AND REPLACED WHEN NECESSARY. REPLACEMENT MATERIAL SHALL COMPLY WITH THE APPROVED LANDSCAPE PLAN.
4. MAINTAINING TREES IF SITE NOT UNDER SINGLE OWNERSHIP: IN THE CASE OF DEVELOPMENT WITH UNITS FOR SALE, THE TREES SHALL BE MAINTAINED BY A PROPERTY OWNER'S ASSOCIATION. PRIOR TO FINAL SITE PLAN APPROVAL, THE DEVELOPER SHALL SUBMIT TO THE AGENT AN INSTRUMENT ASSURING THE PERPETUAL MAINTENANCE OF THE TREES. THE INSTRUMENT SHALL BE SUBJECT TO REVIEW AND APPROVAL BY THE COUNTY ATTORNEY AND SHALL BE IN A FORM AND STYLE SO THAT IT MAY BE RECORDED IN THE OFFICE OF THE CLERK OF THE CIRCUIT COURT OF THE COUNTY. THE AGENT MAY REQUIRE THAT THE INSTRUMENT BE ON A FORM PREPARED BY THE COUNTY ATTORNEY.
5. MAINTAINING STREET TREES PLANTED WITHIN A PUBLIC STREET RIGHT-OF-WAY: IF STREET TREES ARE PLANTED WITHIN THE PUBLIC STREET RIGHT-OF-WAY, THE TREES SHALL BE MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION.
6. ALL SITE PLANTINGS OF TREES AND SHRUBS SHALL BE ALLOWED TO REACH, AND BE MAINTAINED AT, MATURE HEIGHT; THE TOPPING OF TREES IS PROHIBITED. SHRUBS AND TREES SHALL BE PRUNED MANUALLY AND ONLY TO SUPPORT THE OVERALL HEALTH OF THE PLANT.
7. LAWN AREAS MAY BE EITHER SEED OR SOD. TO BE DETERMINED AT TIME OF CONSTRUCTION DOCUMENTATION AND APPROVED BY CLIENT AND LANDSCAPE ARCHITECT.
8. SEE CIVIL DRAWINGS FOR LIGHTING AND PHOTOMETRIC PLANS.
9. LANDSCAPING PLANTS AND TREES ADJACENT TO THE SITE DISTANCE TRIANGLE WILL NEED TO BE MAINTAINED IN AREA BETWEEN 2 AND 7 FEET ABOVE GROUND AS A CLEAR ZONE TO PRESERVE SIGHT LINES AND ACCOMMODATE PEDESTRIANS. THE HOA OR PROPERTY OWNER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF SIGHT LINES.
10. SUPPLEMENTAL FOUNDATION PLANTING SHOWN IN LIGHT GREY ON ALL PLANS.

LandDesign.
200 S. PEYTON STREET
ALEXANDRIA, VA 22314
703.549.7784
WWW.LANDDESIGN.COM

KEY MAP

SEAL

NOT FOR CONSTRUCTION

PROJECT

OLD IVY RESIDENCES

GREYSTAR

CHARLOTTESVILLE

ALBEMARLE COUNTY, VA

LANDDESIGN PROJ.# 2022036

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE

DESIGNED BY: MVC
DRAWN BY: LH/AM
CHECKED BY: LH/MVC

SCALE NORTH

VERT: N/A
HORZ: 1"=40'

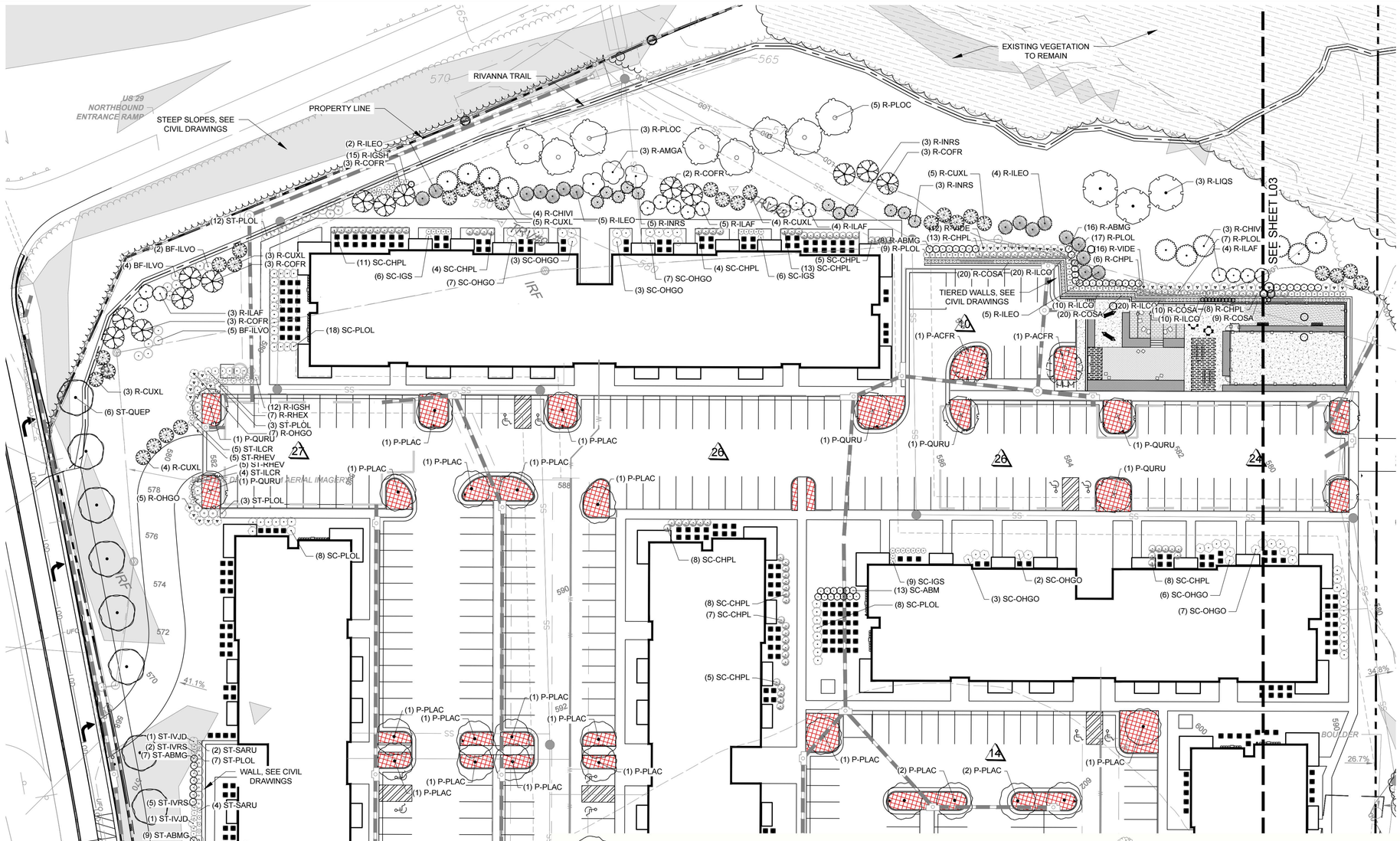
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SHEET TITLE

PLANTING REFERENCE PLAN

SHEET NUMBER

L00



CONCEPT GRAPHICS SCHEDULE

PARKING LOT AND VEHICULAR CIRCULATION AREA

TAKEOFF: 265,495 SF

INTERIOR PARKING LOT AREA

TAKEOFF: 24,454 SF

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PREFIX LEGEND

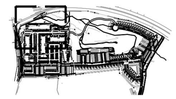
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P-XXXX: REQUIRED VEGETATION TO MEET INTERIOR PARKING LANDSCAPING REQUIREMENTS
ST-XXXX: REQUIRED VEGETATION TO MEET STREETSCAPE REQUIREMENTS
BF-XXXX: REQUIRED VEGETATION TO MEET BUFFER LANDSCAPING REQUIREMENTS
SC-XXXX: REQUIRED VEGETATION TO SCREEN MECHANICAL EQUIPMENT

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME
EVERGREEN			
	R-CUXL	24	CUPRESSUS X LEYLANDII / LEYLAND CYPRESS
	R-ILEO	16	ILEX OPACA / AMERICAN HOLLY
	R-INRS	11	ILEX X 'NELLIE R. STEVENS' / NELLIE R. STEVENS HOLLY
	R-ILAF	15	ILEX X ATTENUATA 'FOSTER NO. 2' / FOSTER NO. 2 HOLLY
LARGE CANOPY TREES			
	P-ACFR	2	ACER X FREEMANII 'JEFFERSRED' TM / AUTUMN BLAZE FREEMAN MAPLE
	R-LIQS	3	LIQUIDAMBAR STYRACIFLUA / SWEET GUM
	R-PLOC	8	PLATANUS OCCIDENTALIS / AMERICAN PLANE TREE (SYCAMORE)
	P-PLAC	20	PLATANUS X ACERIFOLIA 'BLOODGOOD' / BLOODGOOD LONDON PLANE TREE
	P-QURU	6	QUERCUS RUBRA / RED OAK
ORNAMENTAL TREES			
	R-AMGA	3	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE APPLE SERVICEBERRY
	R-CHIVI	7	CHIONANTHUS VIRGINICUS / WHITE FRINGETREE
	R-COFR	14	CORNUS FLORIDA 'APPALACHIAN SPRING' / APPALACHIAN SPRING DOGWOOD
STREET TREES			
	ST-QUEP	10	QUERCUS PHELLOS / WILLOW OAK
DECIDUOUS SHRUB			
	R-VIDE	26	VIBURNUM DENTATUM / VIBURNUM
EVERGREEN SHRUB			
	R-ABMG	24	ABELIA X 'MARDI GRAS' / MARDI GRAS ABELIA
	ST-ABMG	16	ABELIA X 'MARDI GRAS' / MARDI GRAS ABELIA
	SC-ABM	13	ABELIA X 'MARDI GRAS' / MARDI GRAS ABELIA
	R-CHPL	25	CEPHALOTAXUS HARRINGTONIA 'PLANIA' TM / YEWTOPIA PLUM YEW
	SC-CHPL	73	CEPHALOTAXUS HARRINGTONIA 'PLANIA' TM / YEWTOPIA PLUM YEW
	R-COSA	57	COTONEASTER SALICIFOLIUS / WILLOWLEAF COTONEASTER
	ST-ILCR	9	ILEX CRENATA 'COMPACTA' / DWARF JAPANESE HOLLY
	R-ILCO	50	ILEX GLABRA 'COMPACTA' / COMPACT INKBERRY
	R-IGSH	27	ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY
	SC-IGS	21	ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY
	ST-IVJD	2	ILEX VERTICILLATA 'JIM DANDY' / JIM DANDY WINTERBERRY
	ST-IVRS	10	ILEX VERTICILLATA 'RED SPRITE' / RED SPRITE WINTERBERRY
	BF-ILVO	11	ILEX VOMITORIA / YAUPON HOLLY
	R-OHGO	12	OSMANTHUS HETEROPHYLLUS 'GOSHIKI' / GOSHIKI HOLLY OLIVE
	SC-OHGO	32	OSMANTHUS HETEROPHYLLUS 'GOSHIKI' / GOSHIKI HOLLY OLIVE
	R-PLOL	33	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN ENGLISH LAUREL
	ST-PLOL	33	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN ENGLISH LAUREL
	SC-PLOL	34	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN ENGLISH LAUREL
	ST-RHEV	10	RHODODENDRON X 'ROBLEV' TM / AUTUMN IVORY ENCORE AZALEA
	R-RHEX	7	RHODODENDRON X 'ROBLEX' TM / AUTUMN LILY ENCORE AZALEA
	ST-SARU	9	SARCOCOCCA HUMILIS / SWEETBOX

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200 S. PEYTON STREET
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KEY MAP



SEAL

NOT FOR CONSTRUCTION

PROJECT

OLD IVY RESIDENCES

GREYSTAR

CHARLOTTESVILLE

ALBEMARLE COUNTY, VA

LANDDESIGN PROJ.#
2022036

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE

DESIGNED BY: MVC
DRAWN BY: LH/AM
CHECKED BY: LH/MVC

SCALE

VERT: N/A
HORZ: 1"=30'

0 15' 30' 60'

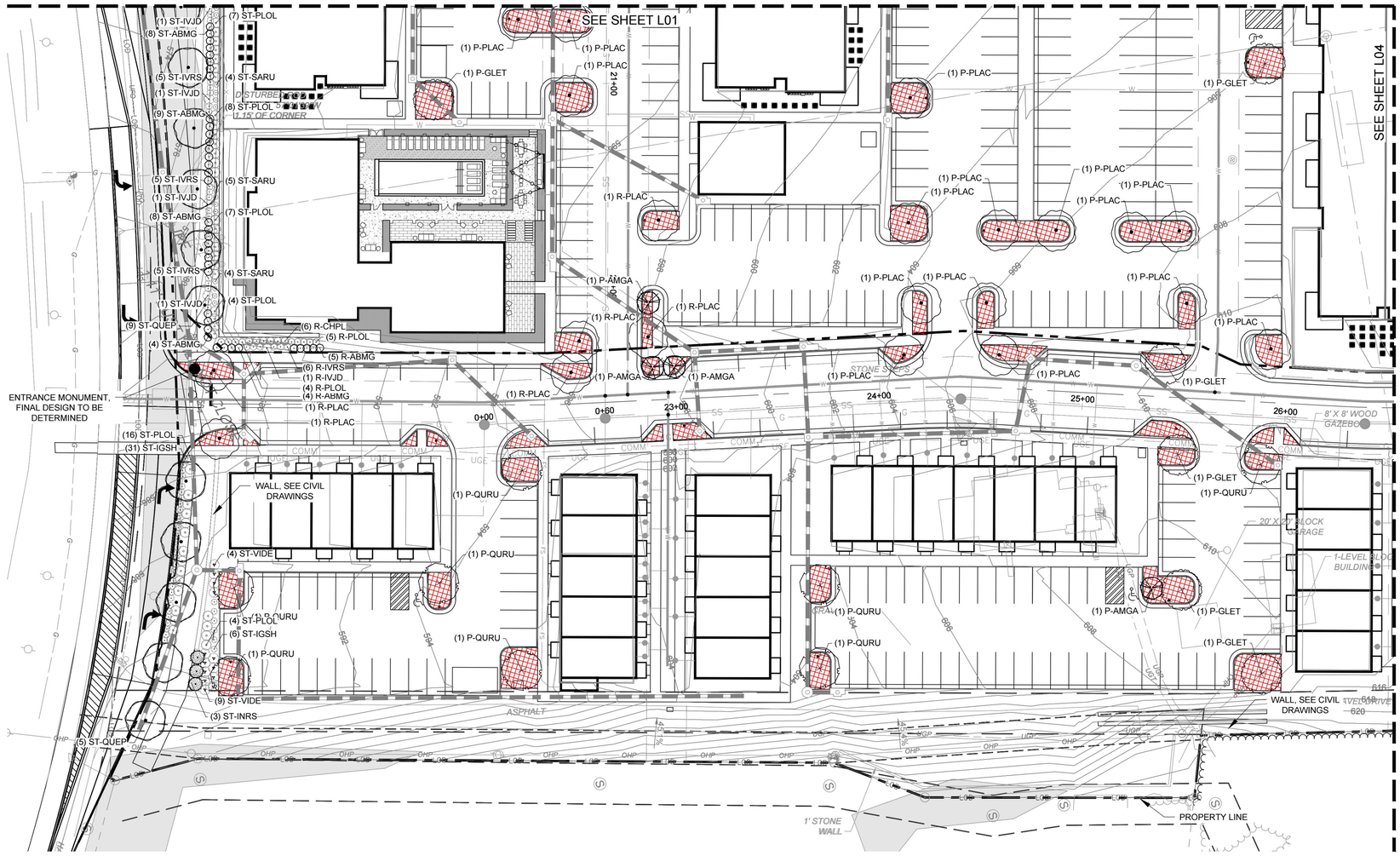
NORTH

SHEET TITLE

PLANTING PLAN ENLARGEMENT

SHEET NUMBER

L01



CONCEPT GRAPHICS SCHEDULE

PARKING LOT AND VEHICULAR CIRCULATION AREA

TAKEOFF: 265,495 SF

INTERIOR PARKING LOT AREA

TAKEOFF: 24,454 SF

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME
EVERGREEN			
	ST-INRS	3	ILEX X 'NELLIE R. STEVENS' / NELLIE R. STEVENS HOLLY
LARGE CANOPY TREES			
	P-GLET	6	GLEDITSIA TRIACANTHOS INERMIS / THORNLESS HONEY LOCUST
	P-PLAC	15	PLATANUS X ACERIFOLIA 'BLOODGOOD' / BLOODGOOD LONDON PLANE TREE
	R-PLAC	6	PLATANUS X ACERIFOLIA 'BLOODGOOD' / BLOODGOOD LONDON PLANE TREE
	P-QURU	8	QUERCUS RUBRA / RED OAK
ORNAMENTAL TREES			
	P-AMGA	4	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE APPLE SERVICEBERRY
STREET TREES			
	ST-QUEP	10	QUERCUS PHELLOS / WILLOW OAK
DECIDUOUS SHRUB			
	ST-VIDE	13	VIBURNUM DENTATUM / VIBURNUM
EVERGREEN SHRUB			
	R-ABMG	9	ABELIA X 'MARDI GRAS' / MARDI GRAS ABELIA
	ST-ABMG	29	ABELIA X 'MARDI GRAS' / MARDI GRAS ABELIA
	R-CHPL	6	CEPHALOTAXUS HARRINGTONIA 'PLANIA' TM / YEWTOPIA PLUM YEW
	ST-IGSH	37	ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY
	R-IVJD	1	ILEX VERTICILLATA 'JIM DANDY' / JIM DANDY WINTERBERRY
	ST-IVJD	4	ILEX VERTICILLATA 'JIM DANDY' / JIM DANDY WINTERBERRY
	R-IVRS	6	ILEX VERTICILLATA 'RED SPRITE' / RED SPRITE WINTERBERRY
	ST-IVRS	17	ILEX VERTICILLATA 'RED SPRITE' / RED SPRITE WINTERBERRY
	R-PLOL	9	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN ENGLISH LAUREL
	ST-PLOL	46	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN ENGLISH LAUREL
	ST-SARU	14	SARCOCOCCA HUMILIS / SWEETBOX

PREFIX LEGEND

R-XXXX: REQUIRED VEGETATION
P-XXXX: REQUIRED VEGETATION TO MEET INTERIOR PARKING LANDSCAPING REQUIREMENTS
ST-XXXX: REQUIRED VEGETATION TO MEET STREETSCAPE REQUIREMENTS
BF-XXXX: REQUIRED VEGETATION TO MEET BUFFER LANDSCAPING REQUIREMENTS
SC-XXXX: REQUIRED VEGETATION TO SCREEN MECHANICAL EQUIPMENT

LANDSCAPE NOTES:

1. TIMING OF INSTALLATION: ALL LANDSCAPING SHALL BE INSTALLED BY THE FIRST PLANTING SEASON FOLLOWING THE ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY WITHIN THE DEVELOPMENT, OR A PHASE THEREOF.
2. METHOD OF INSTALLATION: ALL TREES SHALL BE PLANTED IN ACCORDANCE WITH EITHER THE STANDARDIZED LANDSCAPE SPECIFICATIONS JOINTLY ADOPTED BY THE VIRGINIA NURSERYMEN'S ASSOCIATION, THE VIRGINIA SOCIETY OF LANDSCAPE DESIGNERS AND THE VIRGINIA CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS, OR THE ROAD AND BRIDGE SPECIFICATION OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION. PLANTING ISLANDS SHALL CONTAIN A MINIMUM OF 50 SQUARE FEET PER TREE, WITH A MINIMUM DIMENSION OF FIVE FEET IN ORDER TO PROTECT THE LANDSCAPING AND ALLOW FOR PROPER GROWTH. WHEEL STOPS, CURBING OR OTHER BARRIERS SHALL BE PROVIDED TO PREVENT DAMAGE TO LANDSCAPING BY VEHICLES. WHERE NECESSARY, TREES SHALL BE WELLED OR OTHERWISE PROTECTED AGAINST CHANGE OF GRADE. ALL PERVIOUS AREAS OF THE SITE SHALL BE PERMANENTLY PROTECTED FROM SOIL EROSION WITH GRASS OR OTHER GROUND COVER OR MULCH MATERIAL.
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5. MAINTAINING STREET TREES PLANTED WITHIN A PUBLIC STREET RIGHT-OF-WAY: IF STREET TREES ARE PLANTED WITHIN THE PUBLIC STREET RIGHT-OF-WAY, THE TREES SHALL BE MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION.
6. ALL SITE PLANTINGS OF TREES AND SHRUBS SHALL BE ALLOWED TO REACH, AND BE MAINTAINED AT, MATURE HEIGHT; THE TOPPING OF TREES IS PROHIBITED. SHRUBS AND TREES SHALL BE PRUNED MANUALLY AND ONLY TO SUPPORT THE OVERALL HEALTH OF THE PLANT.
7. LAWN AREAS MAY BE EITHER SEED OR SOD. TO BE DETERMINED AT TIME OF CONSTRUCTION DOCUMENTATION AND APPROVED BY CLIENT AND LANDSCAPE ARCHITECT.
8. SEE CIVIL DRAWINGS FOR LIGHTING AND PHOTOMETRIC PLANS.
9. LANDSCAPING PLANTS AND TREES ADJACENT TO THE SITE DISTANCE TRIANGLE WILL NEED TO BE MAINTAINED IN AREA BETWEEN 2 AND 7 FEET ABOVE GROUND AS A CLEAR ZONE TO PRESERVE SIGHT LINES AND ACCOMMODATE PEDESTRIANS. THE HOA OR PROPERTY OWNER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF SIGHT LINES.

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KEY MAP



SEAL

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PROJECT

OLD IVY RESIDENCES

GREYSTAR

CHARLOTTESVILLE

ALBEMARLE COUNTY, VA

LANDDESIGN PROJ.#
2022036

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE

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DRAWN BY: LH/AM
CHECKED BY: LH/MVC

SCALE

NORTH

VERT: N/A
HORZ: 1"=30'

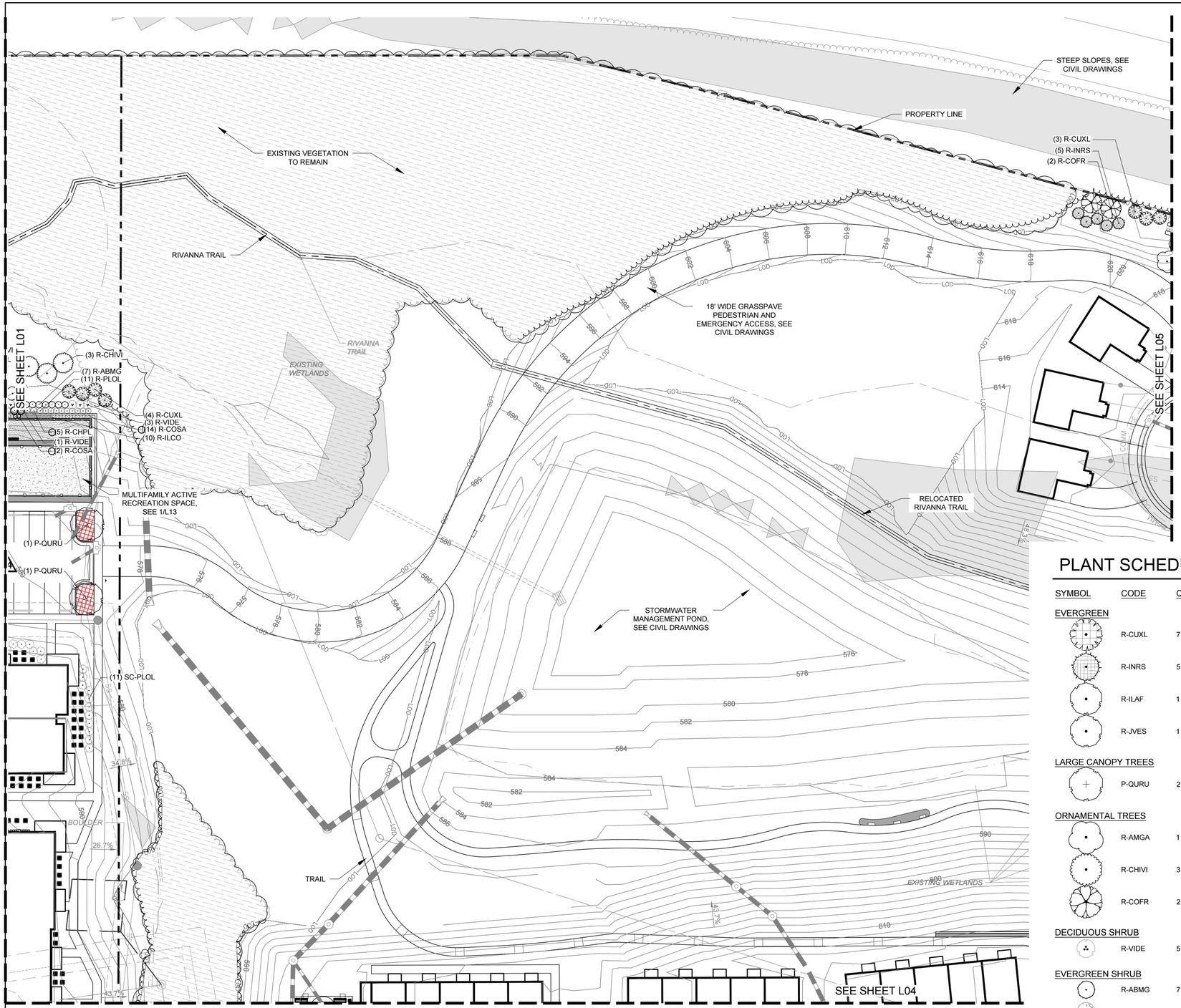
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SHEET TITLE

PLANTING PLAN ENLARGEMENT

SHEET NUMBER

L02



LANDSCAPE NOTES:

1. TIMING OF INSTALLATION: ALL LANDSCAPING SHALL BE INSTALLED BY THE FIRST PLANTING SEASON FOLLOWING THE ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY WITHIN THE DEVELOPMENT, OR A PHASE THEREOF.
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5. MAINTAINING STREET TREES PLANTED WITHIN A PUBLIC STREET RIGHT-OF-WAY: IF STREET TREES ARE PLANTED WITHIN THE PUBLIC STREET RIGHT-OF-WAY, THE TREES SHALL BE MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION.
6. ALL SITE PLANTINGS OF TREES AND SHRUBS SHALL BE ALLOWED TO REACH, AND BE MAINTAINED AT, MATURE HEIGHT; THE TOPPING OF TREES IS PROHIBITED. SHRUBS AND TREES SHALL BE PRUNED MANUALLY AND ONLY TO SUPPORT THE OVERALL HEALTH OF THE PLANT.
7. LAWN AREAS MAY BE EITHER SEED OR SOD. TO BE DETERMINED AT TIME OF CONSTRUCTION DOCUMENTATION AND APPROVED BY CLIENT AND LANDSCAPE ARCHITECT.
8. SEE CIVIL DRAWINGS FOR LIGHTING AND PHOTOMETRIC PLANS.
9. LANDSCAPING PLANTS AND TREES ADJACENT TO THE SITE DISTANCE TRIANGLE WILL NEED TO BE MAINTAINED IN AREA BETWEEN 2 AND 7 FEET ABOVE GROUND AS A CLEAR ZONE TO PRESERVE SIGHT LINES AND ACCOMMODATE PEDESTRIANS. THE HOA OR PROPERTY OWNER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF SIGHT LINES.

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME
EVERGREEN			
	R-CUXL	7	CUPRESSUS X LEYLANDII / LEYLAND CYPRESS
	R-INRS	5	ILEX X 'NELLIE R. STEVENS' / NELLIE R. STEVENS HOLLY
	R-ILAF	1	ILEX X ATTENUATA 'FOSTER NO. 2' / FOSTER NO. 2 HOLLY
	R-JVES	1	JUNIPERUS VIRGINIANA 'CORCORCOR' TM / EMERALD SENTINEL EASTERN REDCEDAR
LARGE CANOPY TREES			
	P-QURU	2	QUERCUS RUBRA / RED OAK
ORNAMENTAL TREES			
	R-AMGA	1	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE APPLE SERVICEBERRY
	R-CHIVI	3	CHIONANTHUS VIRGINICUS / WHITE FRINGETREE
	R-COFR	2	CORNUS FLORIDA 'APPALACHIAN SPRING' / APPALACHIAN SPRING DOGWOOD
DECIDUOUS SHRUB			
	R-VIDE	5	VIBURNUM DENTATUM / VIBURNUM
EVERGREEN SHRUB			
	R-ABMG	7	ABELIA X 'MARDI GRAS' / MARDI GRAS ABELIA
	R-CHPL	5	CEPHALOTAXUS HARRINGTONIA 'PLANIA' TM / YEWTOPIA PLUM YEW
	R-COSA	19	COTONEASTER SALICIFOLIUS / WILLOWLEAF COTONEASTER
	R-ILCO	10	ILEX GLABRA 'COMPACTA' / COMPACT INKBERRY
	R-OHGO	1	OSMANTHUS HETEROPHYLLUS 'GOSHIKI' / GOSHIKI HOLLY OLIVE
	SC-OHGO	6	OSMANTHUS HETEROPHYLLUS 'GOSHIKI' / GOSHIKI HOLLY OLIVE
	R-PLOL	11	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN ENGLISH LAUREL
	SC-PLOL	11	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN ENGLISH LAUREL

CONCEPT GRAPHICS SCHEDULE

PARKING LOT AND VEHICULAR CIRCULATION AREA

TAKEOFF: 265,495 SF

INTERIOR PARKING LOT AREA

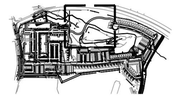
TAKEOFF: 24,454 SF

PREFIX LEGEND

R-XXXX: REQUIRED VEGETATION
P-XXXX: REQUIRED VEGETATION TO MEET INTERIOR PARKING LANDSCAPING REQUIREMENTS
ST-XXXX: REQUIRED VEGETATION TO MEET STREETSCAPE REQUIREMENTS
BF-XXXX: REQUIRED VEGETATION TO MEET BUFFER LANDSCAPING REQUIREMENTS
SC-XXXX: REQUIRED VEGETATION TO SCREEN MECHANICAL EQUIPMENT

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KEY MAP



SEAL

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PROJECT

OLD IVY RESIDENCES

GREYSTAR
CHARLOTTESVILLE
ALBEMARLE COUNTY, VA

LANDDESIGN PROJ.#
2022036

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE

DESIGNED BY: MVC
DRAWN BY: LH/AM
CHECKED BY: LH/MVC

SCALE
NORTH
VERT: N/A
HORZ: 1"=30'
0 15' 30' 60'

SHEET TITLE
PLANTING PLAN ENLARGEMENT

SHEET NUMBER
L03



CONCEPT GRAPHICS SCHEDULE

PARKING LOT AND VEHICULAR CIRCULATION AREA

TAKEOFF: 265,495 SF

INTERIOR PARKING LOT AREA

TAKEOFF: 24,454 SF

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME
LARGE CANOPY TREES			
	P-QURU	13	QUERCUS RUBRA / RED OAK
ORNAMENTAL TREES			
	P-COFR	2	CORNUS FLORIDA 'APPALACHIAN SPRING' / APPALACHIAN SPRING DOGWOOD

PREFIX LEGEND

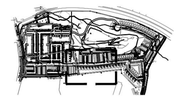
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LANDSCAPE NOTES:

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KEY MAP



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LANDDESIGN PROJ.#
2022036

REVISION / ISSUANCE

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SCALE

NORTH

VERT: N/A
HORZ: 1"=30'

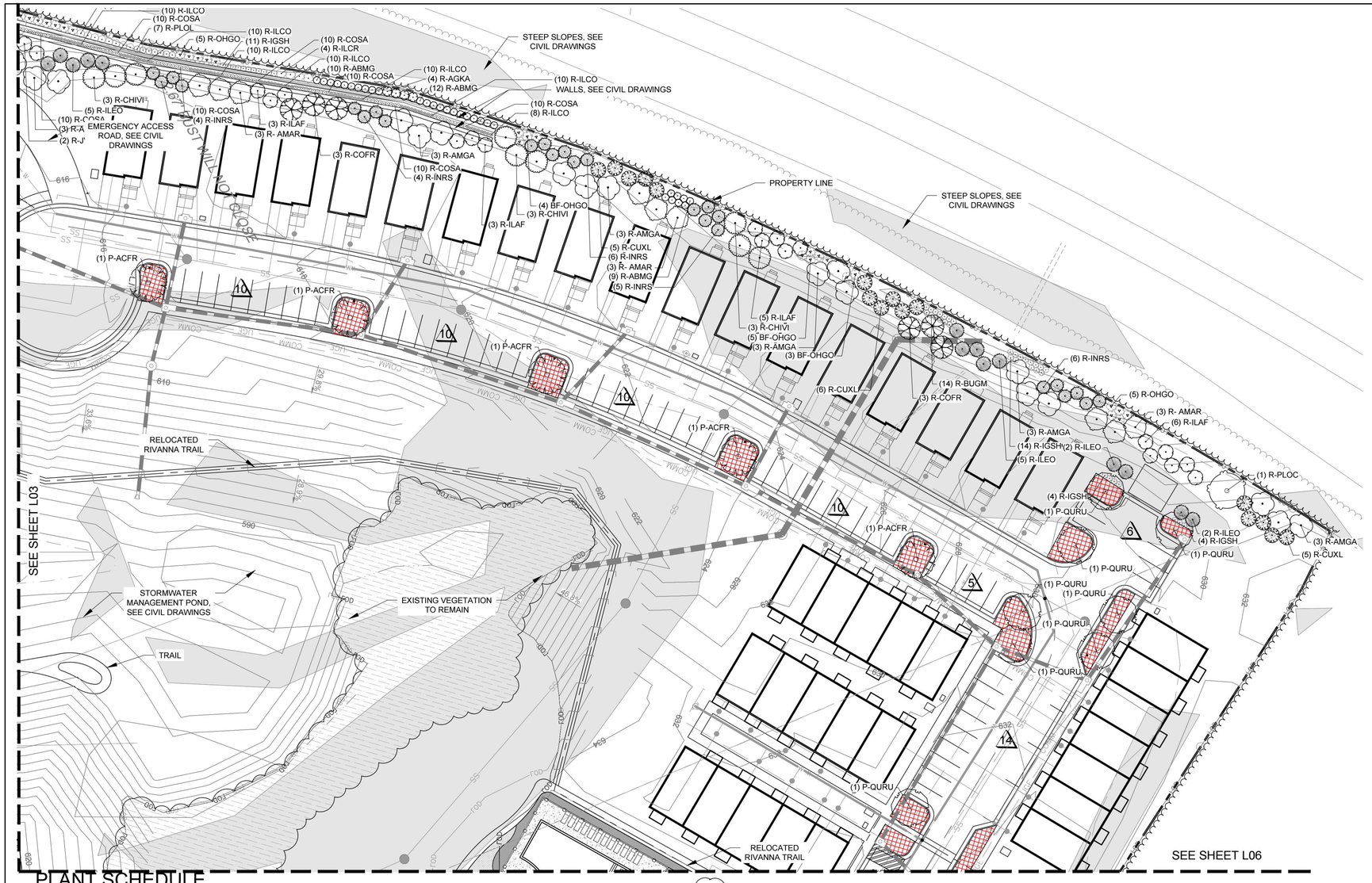
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SHEET TITLE

PLANTING PLAN ENLARGEMENT

SHEET NUMBER

L04



CONCEPT GRAPHICS SCHEDULE

PARKING LOT AND VEHICULAR CIRCULATION AREA

TAKEOFF: 265,495 SF

INTERIOR PARKING LOT AREA

TAKEOFF: 24,454 SF

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME
EVERGREEN			
	R-CUXL	16	CUPRESSUS X LEYLANDII / LEYLAND CYPRESS
	R-ILEO	14	ILEX OPACA / AMERICAN HOLLY
	R-INRS	25	ILEX X 'NELLIE R. STEVENS' / NELLIE R. STEVENS HOLLY
	R-ILAF	17	ILEX X ATTENUATA 'FOSTER NO. 2' / FOSTER NO. 2 HOLLY
	R-JVES	1	JUNIPERUS VIRGINIANA 'CORCORCOR' TM / EMERALD SENTINEL EASTERN REDCEDAR
LARGE CANOPY TREES			
	P-ACFR	5	ACER X FREEMANII 'JEFFERSRED' TM / AUTUMN BLAZE FREEMAN MAPLE
	R-PLOC	1	PLATANUS OCCIDENTALIS / AMERICAN PLANE TREE (SYCAMORE)
	P-QURU	8	QUERCUS RUBRA / RED OAK
ORNAMENTAL TREES			
	R- AMAR	9	AMELANCHIER ARBOREA / DOWNY SERVICEBERRY
	R-AMGA	17	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE APPLE SERVICEBERRY
	R-CHIVI	9	CHIONANTHUS VIRGINICUS / WHITE FRINGETREE
	R-COFR	6	CORNUS FLORIDA 'APPALACHIAN SPRING' / APPALACHIAN SPRING DOGWOOD
EVERGREEN SHRUB			
	R-ABMG	31	ABELIA X 'MARDI GRAS' / MARDI GRAS ABELIA
	R-AGKA	4	ABELIA X GRANDIFLORA 'KALEIDOSCOPE' / KALEIDOSCOPE GLOSSY ABELIA
	R-BUGM	14	BUXUS X 'GREEN MOUND' / GREEN MOUND BOXWOOD
	R-COSA	66	COTONEASTER SALICIFOLIUS / WILLOWLEAF COTONEASTER
	R-ILCR	4	ILEX CRENATA 'COMPACTA' / DWARF JAPANESE HOLLY
	R-ILCO	68	ILEX GLABRA 'COMPACTA' / COMPACT INKBERRY
	R-IGSH	33	ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY
	BF-OHGO	12	OSMANTHUS HETEROPHYLLUS 'GOSHIKI' / GOSHIKI HOLLY OLIVE
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	R-PLOL	7	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN ENGLISH LAUREL
	R-RHEX	8	RHODODENDRON X 'ROBLEX' TM / AUTUMN LILY ENCORE AZALEA

PREFIX LEGEND

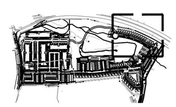
R-XXXX: REQUIRED VEGETATION
P-XXXX: REQUIRED VEGETATION TO MEET INTERIOR PARKING LANDSCAPING REQUIREMENTS
ST-XXXX: REQUIRED VEGETATION TO MEET STREETSCAPE REQUIREMENTS
BF-XXXX: REQUIRED VEGETATION TO MEET BUFFER LANDSCAPING REQUIREMENTS
SC-XXXX: REQUIRED VEGETATION TO SCREEN MECHANICAL EQUIPMENT

LANDSCAPE NOTES:

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LandDesign.
200 S. PEYTON STREET
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KEY MAP



SEAL

NOT FOR CONSTRUCTION

PROJECT

OLD IVY RESIDENCES

GREYSTAR

CHARLOTTESVILLE

ALBEMARLE COUNTY, VA

LANDDESIGN PROJ.#
2022036

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE

DESIGNED BY: MVC
DRAWN BY: LH/AM
CHECKED BY: LH/MVC

SCALE
VERT: N/A
HORZ: 1"=30'
0 15' 30' 60'

NORTH

SHEET TITLE
PLANTING PLAN ENLARGEMENT

SHEET NUMBER
L05



CONCEPT GRAPHICS SCHEDULE

PARKING LOT AND VEHICULAR CIRCULATION AREA

TAKEOFF: 265,495 SF

INTERIOR PARKING LOT AREA

TAKEOFF: 24,454 SF

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME
LARGE CANOPY TREES			
	P-QURU	12	QUERCUS RUBRA / RED OAK
ORNAMENTAL TREES			
	P-AMGA	3	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE APPLE SERVICEBERRY

PREFIX LEGEND

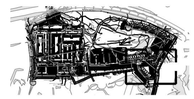
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SHEET TITLE
PLANTING PLAN ENLARGEMENT

SHEET NUMBER
L06

ONSITE LANDSCAPE SCHEDULE

KEY	QTY.	CAT.	BOTANICAL NAME	COMMON NAME	CAL / HT.	CONT.	CANOPY	TOTAL CANOPY
SHADE TREES								
ACFR	7	LARGE	ACER X FREEMANII 'JEFFERSRED'	AUTUMN BLAZE MAPLE	2 1/2"	B+B	397	2779
GLET	6	LARGE	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEYLOCUST	2 1/2"	B+B	424	2544
LIQS	3	LARGE	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	2 1/2"	B+B	249	4077
PLAC	41	LARGE	PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANETREE	2 1/2"	B+B	1253	51373
PLOC	9	LARGE	PLATANUS OCCIDENTALIS	SYCAMORE	2 1/2"	B+B	453	4077
QUEP	20	LARGE	QUERCUS PHELLOS	WILLOW OAK	3 1/2"	B+B	370	7400
QURU	49	LARGE	QUERCUS RUBRA	NORTHERN RED OAK	2 1/2"	B+B	424	20776
SUBTOTAL	135						SUBTOTAL	93026
ORNAMENTAL TREES								
AMAR	9	SMALL	AMELANCHIER ARBOREA	DOWNY SERVICEBERRY	1 1/2" - 1 3/4" / 8'	B+B	113	1017
AMGA	28	SMALL	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLANCE'	AUTUMN BRILLIANCE SERVICEBERRY	1 1/2" - 1 3/4" / 8'	B+B	130	3640
CHIVI	19	SMALL	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	1 1/2" - 1 3/4" / 8'	B+B	79	1501
COFR	24	SMALL	CORNUS FLORIDA 'APPALACHIAN SPRING'	APPALACHIAN SPRING FLOWERING DOGWOOD	1 1/2" - 1 3/4" / 8'	B+B	124	2976
SUBTOTAL	71						SUBTOTAL	9134
EVERGREEN TREES								
CUXL	47		CUPRESSUS X LEYLANDII	LEYLAND CYPRESS	1 1/2" - 1 3/4" / 8'	B+B	23	1081
ILAF	33		ILEX ATTENUATA 'FOSTERI NO. 2'	FOSTER NO. 2 HOLLY	1 1/2" - 1 3/4" / 8'	B+B	16	528
ILEO	30		ILEX OPACA	FOSTER HOLLY	1 1/2" - 1 3/4" / 8'	B+B	44	1320
INRS	44		ILEX X NELLIE R STEVENS	NELLIE R STEVENS HOLLY	1 1/2" - 1 3/4" / 8'	B+B	44	1936
JVES	2		JUNIPERUS VIRGINIANA 'CORCORCOR' TM	EMERALD SENTINEL EASTERN RED CEDAR	1 1/2" - 1 3/4" / 8'	B+B	79	158
SUBTOTAL	74						SUBTOTAL	4865
*SHRUBS HAVE NOT BEEN INCLUDED IN THIS TABLE AS THEY ARE NOT COUNTED TOWARDS CANOPY, SEE L07B FOR SHRUBS SCHEDULE							TOTAL	107025

LANDSCAPING ALONG STREETS
SECTION 32.7.9.5

ADJACENT ROAD NAME AND TYPE	OLD IVY ROAD						
TOTAL LINEAR FEET	668 LF SEE NOTE BELOW						
DESCRIPTION	REQUIRED			PROVIDED			
LARGE TREES (1/50) X 635	13			20			
SHRUBS (1/5) X 635	127			*239			
TYPES	DESCRIPTION	EXISTING	PROPOSED	TOTAL EACH	TOTAL QTY	PERCENT	
DECIDUOUS	LARGE TREE	0	20	20	20	100	87
	MEDIUM TREE	0	0	0		0	
	SMALL TREE	0	0	0		0	
EVERGREEN	LARGE TREE	0	0	0	3	0	0
	MEDIUM TREE	0	0	0		0	
	SMALL TREE	0	3	3		0	
TOTAL		0	23	23	23	87	
DECIDUOUS	SHRUB	0	13	13	239	0	
EVERGREEN	SHRUB	0	226	226		100	
TOTAL		0	239	239	239	100	
ST/BF SYMBOLS INDICATE SPECIES USED TO FULFILL THIS REQUIREMENT							
*SHRUBS ARE PLACED FOR SCREENING ONLY ADJACENT TO PARKING AREAS AND AT BOTTOM OF WALLS							
OLD IVY TO BE SCREENED 635 LF							

LANDSCAPING WITHIN A PARKING AREA
SECTION 32.7.9.6

PARKING LOT AREA AND # OF SPACES	265,495 SF AND 719 SPACES						
PARKING LOT LANDSCAPE REQUIREMENT	5%						
DESCRIPTION	REQUIRED			PROVIDED			
PARKING LOT LANDSCAPE AREA 265,495 X 5%	13275			24,454 SF (9.21%)			
TREES (1/10) X 719 SPACES	72			106			
TYPES	DESCRIPTION	EXISTING	PROPOSED	TOTAL EACH	TOTAL QTY	PERCENT	
DECIDUOUS	LARGE TREE	0	97	97	106	92	100
	MEDIUM TREE	0	0	0		0	
	SMALL TREE	0	9	9		8	
EVERGREEN	LARGE TREE	0	0	0	0	0	0
	MEDIUM TREE	0	0	0		0	
	SMALL TREE	0	0	0		0	
TOTAL		0	106	106	106	100	
DECIDUOUS	SHRUB	0	0	0	0		0
EVERGREEN	SHRUB	0	0	0			0
TOTAL		0	0	0	0		0
P SYMBOLS INDICATE SPECIES USED TO FULFILL THIS REQUIREMENT							

TREE CANOPY
SECTION 32.7.9.8

TOTAL SITE AREA	1,540,717 SF (35.37 AC)	
PROPOSED LAND USE	RESIDENTIAL 20+ UNITS PER ACRE	
MINIMUM TREE CANOPY	15%	
TREE CANOPY REQUIRED (1,540,717 SF X 15%)	231,108 SF	
DESCRIPTION	SQUARE FEET	ACRES
EXISTING CANOPY TO BE PRESERVED	148,798 SF	3.42 AC
PROPOSED CANOPY	107,025 SF	2.46 AC
TOTAL CANOPY PROVIDED	255,823 SF (16.60%)	5.91 AC

PLANT SCHEDULE ALL

SYMBOL	CODE	BOTANICAL / COMMON NAME	REMARKS
EVERGREEN			
	R-CUXL	CUPRESSUS X LEYLANDII / LEYLAND CYPRESS	REQUIRED SCREENING - NON-FLOWERING; FULL SUN; MEDIUM WATER; MEDIUM MAINTENANCE; EVERGREEN; WINTER INTEREST.
	R-ILEO	ILEX OPACA / AMERICAN HOLLY	REQUIRED FOR SCREENING - MAY TO JUNE; GREENISH-WHITE FLOWERS; FUN SUN TO PART SHADE; MEDIUM WATER; LOW MAINTENANCE; EVERGREEN; TOLERATES WINTER INTEREST; DEER, CLAY SOIL, AIR POLLUTION.
	R-INRS	ILEX X 'NELLIE R. STEVENS' / NELLIE R. STEVENS HOLLY	REQUIRED FOR SCREENING - APRIL; GREENISH-WHITE FLOWERS; FULL SUN TO PART SHADE; MEDIUM WATER, LOW MAINTENANCE; EVERGREEN LEAF; TOLERATES WINTER INTEREST; AIR POLLUTION.
	ST-INRS	ILEX X 'NELLIE R. STEVENS' / NELLIE R. STEVENS HOLLY	OLD IVY REQUIRED - APRIL; GREENISH-WHITE FLOWERS; FULL SUN TO PART SHADE; MEDIUM WATER, LOW MAINTENANCE; EVERGREEN LEAF; TOLERATES WINTER INTEREST; AIR POLLUTION.
	R-ILAF	ILEX X ATTENUATA 'FOSTER NO. 2' / FOSTER NO. 2 HOLLY	REQUIRED FOR SCREENING - FULL SUN AND PART SHADE; WHITE FLOWERS; RED FRUIT; EVERGREEN; SPRING BLOOM; WINTER INTEREST; MEDIUM WATER; MEDIUM MAINTENANCE.
	R-JVES	JUNIPERUS VIRGINIANA 'CORCORCOR' TM / EMERALD SENTINEL EASTERN REDCEDAR	REQUIRED - NON-FLOWERING; FULL SUN; DRY TO MEDIUM WATER; LOW MAINTENANCE; EVERGREEN; WINTER INTEREST; FEMALE.
LARGE CANOPY TREES			
	P-ACFR	ACER X FREEMANII 'JEFFERSRED' TM / AUTUMN BLAZE FREEMAN MAPLE	LANDSCAPING WITHIN A PARKING AREA; RARELY FLOWERS; GREENISH-YELLOW TO RED FLOWERS; FULL SUN TO PART SHADE; MEDIUM TO WET WATER; LOW MAINTENANCE; DECIDUOUS; GOOD FALL COLOR; TOLERATES WET SOIL.
	P-GLET	GLEDITSIA TRIACANTHOS INERMIS / THORNLESS HONEY LOCUST	LANDSCAPING WITHIN A PARKING AREA; MAY TO JUNE; GREENISH YELLOW TO GREENISH WHITE FLOWERS; FULL SUN; MEDIUM WATER, MEDIUM MAINTENANCE; DECIDUOUS; GOOD FALL COLOR; TOLERATES DEER, DROUGHT, CLAY SOIL. BLACK WALNUT, AIR POLLUTION.
	R-LIQS	LIQUIDAMBAR STYRACIFLUA / SWEET GUM	REQUIRED SCREENING - FULL TO PARTIAL SUN, MEDIUM WATER, LOW MAINTENANCE, SHADE TREE, APRIL TO MAY BLOOM TIME, NATIVE TO REGION, ONLY USE FRUITLESS VARIETY
	R-PLOC	PLATANUS OCCIDENTALIS / AMERICAN PLANE TREE (SYCAMORE)	REQUIRED FOR SCREENING;- APRIL; YELLOW (MALE) AND RED (FEMALE) FLOWERS; FULL SUN; MEDIUM WATER; HIGH MAINTENANCE; DECIDUOUS; WINTER INTEREST; TOLERATES DEER, WET SOIL, AIR POLLUTION.
	P-PLAC	PLATANUS X ACERIFOLIA 'BLOODGOOD' / BLOODGOOD LONDON PLANE TREE	LANDSCAPING WITHIN A PARKING AREA; APRIL; YELLOW (MALE) AND RED (FEMALE) FLOWERS; FULL SUN; MEDIUM WATER; HIGH MAINTENANCE; DECIDUOUS; WINTER INTEREST; TOLERATES DEER, CLAY SOIL, AIR POLLUTION.
	R-PLAC	PLATANUS X ACERIFOLIA 'BLOODGOOD' / BLOODGOOD LONDON PLANE TREE	REQUIRED FOR SCREENING - APRIL; YELLOW (MALE) AND RED (FEMALE) FLOWERS; FULL SUN; MEDIUM WATER; HIGH MAINTENANCE; DECIDUOUS; WINTER INTEREST; TOLERATES DEER, CLAY SOIL, AIR POLLUTION.
	P-QURU	QUERCUS RUBRA / RED OAK	LANDSCAPING WITHIN A PARKING AREA; MAY; YELLOWISH-GREEN FLOWERS; FULL SUN; DRY TO MEDIUM; LOW MAINTENANCE; DECIDUOUS; GOOD FALL COLOR; TOLERATES DROUGHT, DRY SOIL, BLACK WALNUT, AIR POLLUTION.
ORNAMENTAL TREES			
	R- AMAR	AMELANCHIER ARBOREA / DOWNY SERVICEBERRY	REQUIRED FOR SCREENING - LOCALLY NATIVE, URBAN TOLERANT, ACCEPTABLE FOR SCREENING
	P-AMGA	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE APPLE SERVICEBERRY	MULTI-STEM, 3 STEMS MIN LANDSCAPING WITHIN A PARKING AREA; APRIL; WHITE FLOWER, FULL SUN TO PART SHADE, MEDIUM WATER; LOW MAINTENANCE; DECIDUOUS; GOOD FALL COLOR; ATTRACT BIRDS.
	R-AMGA	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE APPLE SERVICEBERRY	REQUIRED FOR SCREENING - MULTI-STEM, 3 STEMS MIN; APRIL; WHITE FLOWER, FULL SUN TO PART SHADE, MEDIUM WATER; LOW MAINTENANCE; DECIDUOUS; GOOD FALL COLOR; ATTRACT BIRDS.
	R-CHIVI	CHIONANTHUS VIRGINICUS / WHITE FRINGETREE	REQUIRED FOR SCREENING - LOCALLY NATIVE, URBAN TOLERANT, IDEAL FOR SCREENING
	P-COFR	CORNUS FLORIDA 'APPALACHIAN SPRING' / APPALACHIAN SPRING DOGWOOD	REQUIRED WITHIN PARKING AREA; APRIL TO MAY, WHITE FLOWERS; FULL SUN TO PART SHADE; MEDIUM WATER; LOW MAINTENANCE; DECIDUOUS; GOOD FALL COLOR; ATTRACTS BIRDS, BUTTERFLIES; TOLERATES DEER, CLAY SOIL, BLACK WALNUT.
	R-COFR	CORNUS FLORIDA 'APPALACHIAN SPRING' / APPALACHIAN SPRING DOGWOOD	REQUIRED FOR SCREENING; APRIL TO MAY, WHITE FLOWERS; FULL SUN TO PART SHADE; MEDIUM WATER; LOW MAINTENANCE; DECIDUOUS; GOOD FALL COLOR; ATTRACTS BIRDS, BUTTERFLIES; TOLERATES DEER, CLAY SOIL, BLACK WALNUT.
STREET TREES			
	ST-QUEP	QUERCUS PHELLOS / WILLOW OAK	LANDSCAPING ALONG STREETS - STREET TREES; APRIL; YELLOW-GREEN FLOWERS; FULL SUN, MEDIUM TO WET WATER; LOW MAINTENANCE; DECIDUOUS; TOLERATES CLAY SOIL, WET SOIL, AIR POLLUTION.

NOTES

*PLEASE SEE NEXT SHEET FOR SHRUBS SCHEDULE

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HORZ: N/A

SHEET TITLE

LANDSCAPE COMPLIANCE

SHEET NUMBER

L07

PLANT SCHEDULE ALL (CONTINUED)

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	REMARKS
DECIDUOUS SHRUB				
	ST-VIDE	13	VIBURNUM DENTATUM / VIBURNUM	REQUIRED FOR OLD IVY STREETSCAPE - MAY TO JUNE; WHITE SHOWY; FULL SUN TO PART SHADE; MEDIUM WATER; SHOWY FRUIT AND FALL COLOR; DECIDUOUS
	R-VIDE	31	VIBURNUM DENTATUM / VIBURNUM	REQUIRED FOR SCREENING - MAY TO JUNE; WHITE SHOWY; FULL SUN TO PART SHADE; MEDIUM WATER; SHOWY FRUIT AND FALL COLOR; DECIDUOUS
EVERGREEN SHRUB				
	R-ABMG	71	ABELIA X 'MARDI GRAS' / MARDI GRAS ABELIA	REQUIRED FOR SCREENING - JUNE TO SEPTEMBER; PINK WHITE FRAGRANT; FULL SUN TO PART SHADE; MEDIUM WATER; INTEREST THROUGH ALL SEASONS; EVERGREEN
	ST-ABMG	45	ABELIA X 'MARDI GRAS' / MARDI GRAS ABELIA	OLD IVY REQUIRED - JUNE TO SEPTEMBER; PINK WHITE FRAGRANT; FULL SUN TO PART SHADE; MEDIUM WATER; INTEREST THROUGH ALL SEASONS; EVERGREEN
	SC-ABM	13	ABELIA X 'MARDI GRAS' / MARDI GRAS ABELIA	MECHANICAL EQUIPMENT SCREENING - JUNE TO SEPTEMBER; PINK WHITE FRAGRANT; FULL SUN TO PART SHADE; MEDIUM WATER; INTEREST THROUGH ALL SEASONS; EVERGREEN
	R-AGKA	4	ABELIA X GRANDIFLORA 'KALEIDOSCOPE' / KALEIDOSCOPE GLOSSY ABELIA	REQUIRED FOR SCREENING - JULY TO SEPTEMBER; WHITE FRAGRANT; FULL SUN TO PART SHADDE; MEDIUM WATER; MEDIUM MAINTNANCE; ALL SEASON INTEREST; EVERGREEN
	R-BUGM	14	BUXUS X 'GREEN MOUND' / GREEN MOUND BOXWOOD	APRIL; GREEN WHITE INSIGNIFICANT; FULL SUN PART WHADE; MEDIUM WATER; EVERGREEN; COMPACT ROUNDED
	R-CHPL	36	CEPHALOTAXUS HARRINGTONIA 'PLANIA' TM / YEWTOPIA PLUM YEW	REQUIRED FOR SCREENING - NON-FLOWERING; PART TO FULL SHADE; MEDIUM WATER; EVERGREEN; COMPACT VASE SHAPE
	SC-CHPL	73	CEPHALOTAXUS HARRINGTONIA 'PLANIA' TM / YEWTOPIA PLUM YEW	MECHANICAL EQUIPMENT SCREENING - NON-FLOWERING; PART TO FULL SHADE; MEDIUM WATER; EVERGREEN; COMPACT VASE SHAPE
	R-COSA	142	COTONEASTER SALICIFOLIUS / WILLOWLEAF COTONEASTER	REQUIRED FOR SCREENING AT WALLS
	ST-ILCR	9	ILEX CRENATA 'COMPACTA' / DWARF JAPANESE HOLLY	REQUIRED LANDSCAPING ALONG STREET
	R-ILCR	4	ILEX CRENATA 'COMPACTA' / DWARF JAPANESE HOLLY	REQUIRED FOR SCREENING - FULL SUN TO PARTIAL SHADE, EVERGREEN
	R-ILCO	128	ILEX GLABRA 'COMPACTA' / COMPACT INKBERRY	REQUIRED FOR SCREENING AT WALLS
	R-IGSH	60	ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY	REQUIRED FOR SCREENING - MAY TO JUNE; GREEN WHITE INSIGNIFICANT; FULL SUN TO PART SHADE; MEDIUM TO WET WATER; LOW MAINTENANCE; UPRIGHT ROUNDED
	SC-IGS	21	ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY	MECHANICAL EQUIPMENT SCREENING - MAY TO JUNE; GREEN WHITE INSIGNIFICANT; FULL SUN TO PART SHADE; MEDIUM TO WET WATER; LOW MAINTENANCE; UPRIGHT ROUNDED
	ST-IGSH	37	ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY	OLD IVY REQUIRED - MAY TO JUNE; GREEN WHITE INSIGNIFICANT; FULL SUN TO PART SHADE; MEDIUM TO WET WATER; LOW MAINTENANCE; UPRIGHT ROUNDED
	R-IVJD	1	ILEX VERTICILLATA 'JIM DANDY' / JIM DANDY WINTERBERRY	REQUIRED PLANTING - JUNE TO JULY; DULL WHITE INSIGNIFICANT FLOWER; FULL SUN TO PART SHADE; MEDIUM TO WET SOIL; LOW MAINTENANCE; DECIDUOUS
	ST-IVJD	6	ILEX VERTICILLATA 'JIM DANDY' / JIM DANDY WINTERBERRY	OLD IVY REQUIRED - JUNE TO JULY; DULL WHITE INSIGNIFICANT FLOWER; FULL SUN TO PART SHADE; MEDIUM TO WET SOIL; LOW MAINTENANCE; DECIDUOUS
	R-IVRS	6	ILEX VERTICILLATA 'RED SPRITE' / RED SPRITE WINTERBERRY	REQUIRED FOR SCREENING - JUNE TO JULY; DULL WHITE INSIGNIFICANT FLOWER; FULL SUN TO PART SHADE; MEDIUM TO WET SOIL; LOW MAINTENANCE; PROLIFEROUS RED BERRIES IN WINTER; DECIDUOUS
	ST-IVRS	27	ILEX VERTICILLATA 'RED SPRITE' / RED SPRITE WINTERBERRY	OLD IVY REQUIRED - JUNE TO JULY; DULL WHITE INSIGNIFICANT FLOWER; FULL SUN TO PART SHADE; MEDIUM TO WET SOIL; LOW MAINTENANCE; PROLIFEROUS RED BERRIES IN WINTER; DECIDUOUS
	BF-ILVO	11	ILEX VOMITORIA / YAUPON HOLLY	REQUIRED BUFFER - FULL SUN TO DEEP SHADE, DROUGHT AND SALT TOLERANT AND CAN WITHSTAND OCCASIONAL FLOODING
	BF-OHGO	12	OSMANTHUS HETEROPHYLLUS 'GOSHIKI' / GOSHIKI HOLLY OLIVE	REQUIRED BUFFER - AUGUST TO SEPTEMBER; WHITE INSIGNIFICANT; FULL SUN TO PART SHADE; MODERATE WATER; MODERATE MAINTENANCE; EVERGREEN; VARIEGATED
	R-OHGO	29	OSMANTHUS HETEROPHYLLUS 'GOSHIKI' / GOSHIKI HOLLY OLIVE	REQUIRED - AUGUST TO SEPTEMBER; WHITE INSIGNIFICANT; FULL SUN TO PART SHADE; MODERATE WATER; MODERATE MAINTENANCE; EVERGREEN; VARIEGATED
	SC-OHGO	38	OSMANTHUS HETEROPHYLLUS 'GOSHIKI' / GOSHIKI HOLLY OLIVE	MECHANICAL EQUIPMENT SCREENING - AUGUST TO SEPTEMBER; WHITE INSIGNIFICANT; FULL SUN TO PART SHADE; MODERATE WATER; MODERATE MAINTENANCE; EVERGREEN; VARIEGATED
	R-PLOL	60	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN ENGLISH LAUREL	REQUIRED FOR SCREENING - APRILTO MAY; CREAMY WHITE FRAGRANT; FULL SUN TO PART SHADE; MEDIUM WATER; LOW MAINTNANCE; EVERGREEN
	ST-PLOL	79	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN ENGLISH LAUREL	REQUIRED STREETSCAPE - APRILTO MAY; CREAMY WHITE FRAGRANT; FULL SUN TO PART SHADE; MEDIUM WATER; LOW MAINTNANCE; EVERGREEN
	SC-PLOL	45	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN ENGLISH LAUREL	MECHANICAL EQUIPMENT SCREENING - APRIL TO MAY; CREAMY WHITE FRAGRANT; FULL SUN TO PART SHADE; MEDIUM WATER; LOW MAINTNANCE; EVERGREEN
	ST-RHEV	10	RHODODENDRON X 'ROBLEV' TM / AUTUMN IVORY ENCORE AZALEA	REQUIRED FOR STREETSCAPE - SPRING TO FROST; IVORY; PART SHADE; MEDIUM WATER; MEDIUM MAINTENANCE; EVERGREEN
	R-RHEX	15	RHODODENDRON X 'ROBLEX' TM / AUTUMN LILY ENCORE AZALEA	REQUIRED - SPRING TO FROST; WHITE WITH PURPLE STRIPE; FULL SUN TO PART SHADE; MEDIUM WATER; EVERGREEN REBLOOMING
	ST-SARU	23	SARCOCOCCA HUMILIS / SWEETBOX	REQUIRED OLD IVY - MARCH TO APRIL; WHITE FRAGRANT; PART TO FULL SHADE; MEDIUM WATER; MEDIUM MAINTENANCE; EVERGREEN

NOTES

*PLEASE SEE SHEET L07 FOR TREES SCHEDULE AND COMPLIANCE TABULATION

PREFIX LEGEND

R-XXXX: REQUIRED VEGETATION
P-XXXX: REQUIRED VEGETATION TO MEET INTERIOR PARKING LANDSCAPING REQUIREMENTS
ST-XXXX: REQUIRED VEGETATION TO MEET STREETSCAPE REQUIREMENTS
BF-XXXX: REQUIRED VEGETATION TO MEET BUFFER LANDSCAPING REQUIREMENTS
SC-XXXX: REQUIRED VEGETATION TO SCREEN MECHANICAL EQUIPMENT

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KEY MAP

SEAL

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PROJECT

OLD IVY RESIDENCES

GREYSTAR
CHARLOTTESVILLE
ALBEMARLE COUNTY, VA

LANDDESIGN PROJ #
2022036

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE

DESIGNED BY: MVC
DRAWN BY: LH/AM
CHECKED BY: LH/MVC

SCALE NORTH

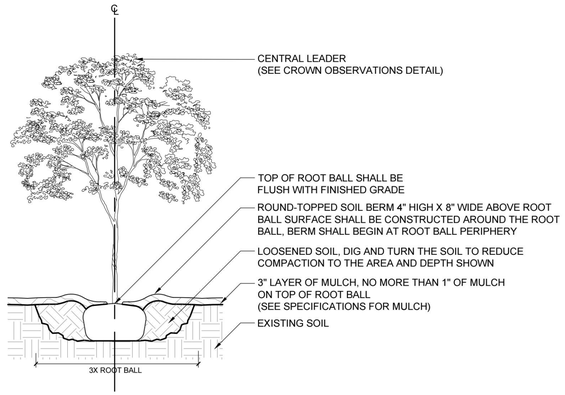
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SHEET TITLE

LANDSCAPE COMPLIANCE

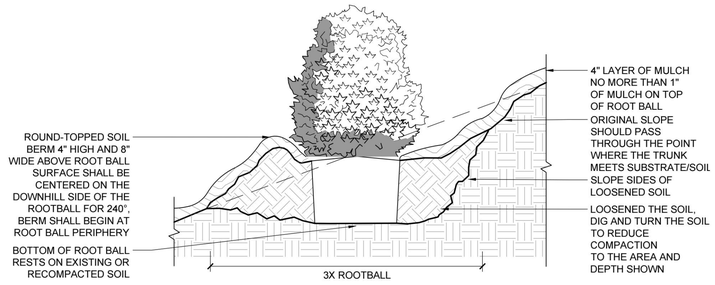
SHEET NUMBER

L07B



1 L08 TREE PLANTING

SECTION 3/8" = 1'-0"



4 L08 SHRUB PLANTING ON SLOPE

SECTION 3/4" = 1'-0"

2 L08 TREE PLANTING ON SLOPE

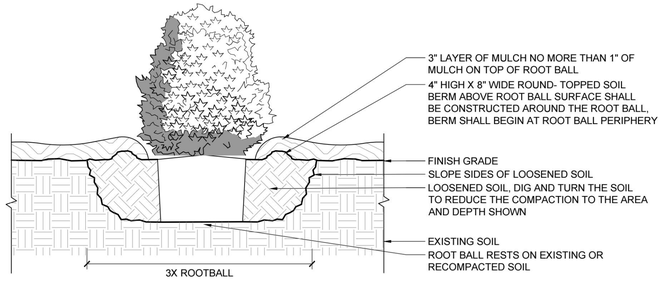
SECTION 3/8" = 1'-0"

PLANT SPACING CHART

SPACING "D"	ROW "A"	PLANTS / S.F.
6" O.C.	5.20" O.C.	4.61
8" O.C.	6.93" O.C.	2.60
10" O.C.	8.66" O.C.	1.66
12" O.C.	10.40" O.C.	1.15
15" O.C.	13.00" O.C.	0.73
18" O.C.	15.60" O.C.	0.51
24" O.C.	20.80" O.C.	0.29

5 L08 GROUNDCOVER SECTION AND SPACING

SECTION 3/4" = 1'-0"



3 L08 SHRUB PLANTING

SECTION 3/4" = 1'-0"

NOTES:

1. ALL TREES TO BE PLANTED SHALL MEET THE SPECIFICATIONS OF THE AMERICAN ASSOCIATION OF NURSERYMEN. THE PLANTING OF TREES SHALL BE DONE IN ACCORDANCE WITH EITHER THE STANDARDIZED LANDSCAPE SPECIFICATIONS JOINTLY ADOPTED BY THE VIRGINIA NURSERYMEN'S ASSOCIATION, THE VIRGINIA SOCIETY OF LANDSCAPE DESIGNERS AND THE VIRGINIA CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS, OR THE ROAD AND BRIDGE SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION.
2. ALL SITE PLANTINGS OF TREES AND SHRUBS SHALL BE ALLOWED TO REACH, AND BE MAINTAINED AT, MATURE HEIGHT; THE TOPPING OF TREES IS PROHIBITED. SHRUBS AND TREES SHALL BE PRUNED MINIMALLY AND ONLY TO SUPPORT THE OVERALL HEALTH OF THE PLANT.
3. THE LANDSCAPING PLANTS AND TREES ADJACENT TO THE SIGHT DISTANCE TRIANGLE WILL NEED TO BE MAINTAINED IN THE AREA BETWEEN 2' AND 7' ABOVE GROUND AS CLEAR ZONE TO PRESERVE SIGHT LINES AND ACCOMMODATE PEDESTRIANS.

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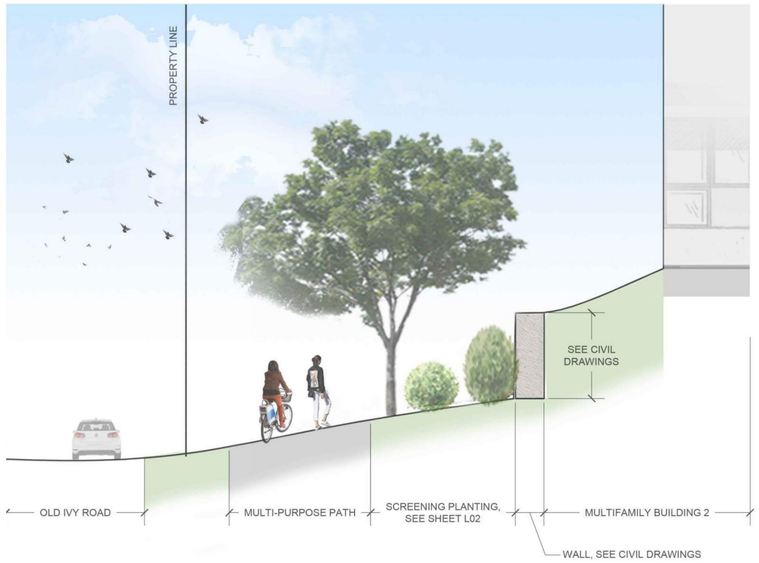
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SHEET TITLE

LANDSCAPE DETAILS

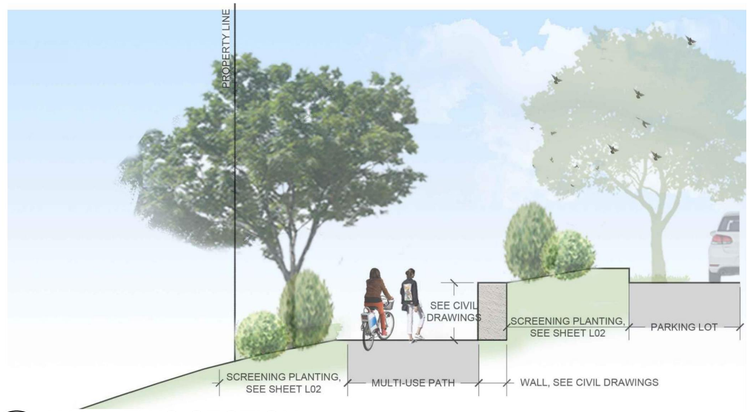
SHEET NUMBER

L08



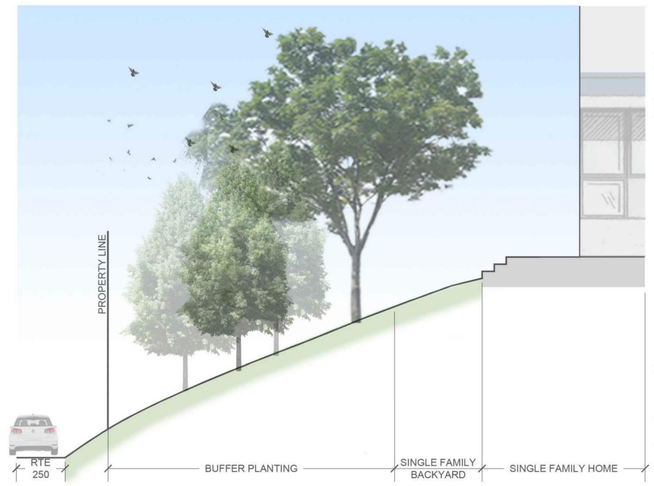
1 L09 WALL ONE SECTION

SECTION — 1" = 5'



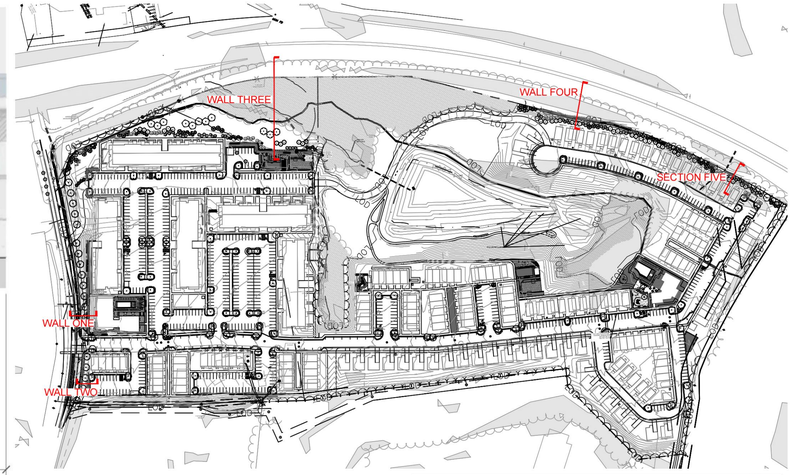
2 L09 WALL TWO SECTION

SECTION — 1" = 5'



04 L09 SECTION FIVE

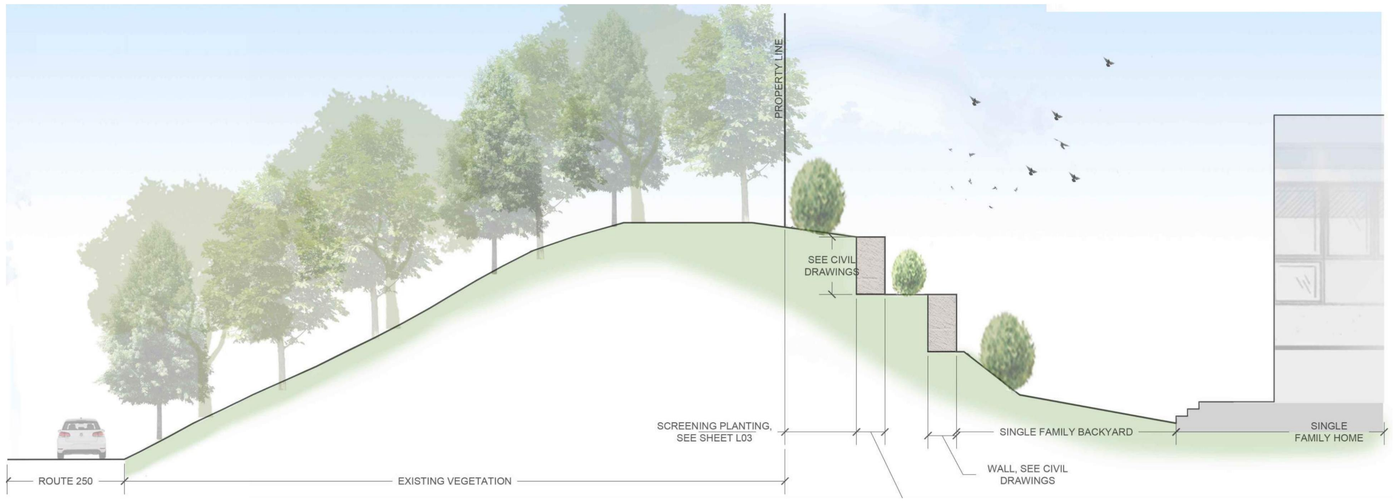
SECTION — 1" = 5'



KEY MAP

NOTES:

1. SECTIONS ARE FOR ILLUSTRATIVE PURPOSES ONLY TO DEMONSTRATE DESIGN INTENT. FINAL DESIGN SHALL BE REVIEWED AND APPROVED BY CLIENT AND DESIGN TEAM.



5 L09 WALL FOUR SECTION

SECTION — 1" = 5'



3 L09 WALL THREE SECTION

SECTION — 1" = 10'

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SCALE — NORTH

VERT: N/A
HORZ: N/A

SHEET TITLE

WALL SECTIONS

SHEET NUMBER

L09

Conservation Plan Notes:

1. ALL TREES TO BE PRESERVED AND PROTECTED SHALL BE MARKED WITH PAINT OR RIBBON AT A HEIGHT CLEARLY VISIBLE TO EQUIPMENT OPERATORS. NO LAND DISTURBING ACTIVITY SHALL BEGIN UNTIL THE TREE MARKING HAS BEEN INSTALLED BY THE CONTRACTOR AND INSPECTED AND APPROVED BY THE COUNTY ENGINEERING DEPARTMENT.

2. HEAVY EQUIPMENT, VEHICULAR TRAFFIC, AND THE STORAGE OF CONSTRUCTION MATERIALS AND SOIL SHALL NOT BE PERMITTED WITHIN THE OUTSIDE DRIPLINE OF TREES TO BE PRESERVED AND PROTECTED.

3. TEMPORARY EROSION CONTROL MEASURES AND/OR PERMANENT STORMWATER MANAGEMENT FACILITIES LOCATIONS SHALL BE COORDINATED SUCH THAT THEY SHALL NOT ADVERSELY AFFECT TREES TO BE PRESERVED AND PROTECTED.

4. FIRES SHALL NOT BE PERMITTED WITHIN 100 FEET OF THE OUTSIDE DRIPLINE OF TREES TO BE PRESERVED AND PROTECTED.

5. TOXIC MATERIALS SHALL NOT BE STORED WITHIN 100 FEET OF THE OUTSIDE DRIPLINE OF TREES TO BE PRESERVED AND PROTECTED.

6. NO LAND DISTURBING ACTIVITY SHALL BEGIN UNTIL THE TREE PROTECTIVE FENCING HAS BEEN INSTALLED BY THE CONTRACTOR AND INSPECTED AND APPROVED BY THE COUNTY ENGINEERING DEPARTMENT.

7. WHEN TRENCHING FOR ANY KIND OF UNDERGROUND WATER, SEWER, ELECTRICAL, CABLE, TELEPHONE, OR OTHER UTILITY SERVICE IS NECESSARY WITHIN THE LIMITS OF TREE PROTECTION OR BEYOND THE LIMITS OF CLEARING, THE SEPARATION FROM THE TRUNKS OF TREES SHALL BE MAXIMIZED TO THE FURTHEST EXTENT POSSIBLE. TUNNELING SHALL BE REQUIRED WHEN DEEMED, BY THE COUNTY ENGINEER, THAT TRENCHING WILL SIGNIFICANTLY DAMAGE FEEDER ROOTS OF TREES TO BE PRESERVED AND PROTECTED.

8. ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM OF ANY TREE TO BE PRESERVED AND PROTECTED SHALL BE REPAIRED IMMEDIATELY, IN ACCORDANCE WITH THE PRACTICES IN THE EROSION AND SEDIMENT CONTROL HANDBOOK. CARE FOR SERIOUS INJURIES SHALL BE PRESCRIBED BY A PROFESSIONAL FORESTER OR TREE SPECIALIST.

9. SOILS WHICH HAVE BEEN COMPACTED, OVER THE ROOT ZONES OF TREES TO BE PRESERVED AND PROTECTED, SHALL BE AERATED BY PUNCHING HOLES WITH AN IRON BAR EVERY 18" OVER THE ROOT ZONE. THE BAR SHALL BE DRIVEN 12" DEEP AND MOVED BACK AND FORTH IN EACH HOLE UNTIL SOIL IS LOOSENED.

10. TREE PROTECTIVE MEASURES SHALL BE THE LAST OF THE TEMPORARY EROSION CONTROL PLAN MEASURES REMOVED DURING THE FINAL CLEAN-UP.

Landscape Notes

1. CONTRACTOR TO USE EXTREME CARE AND CAUTION AS NOT TO DAMAGE ANY TREES SCHEDULED TO REMAIN OUTSIDE LIMITS OF CONSTRUCTION. LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING SERVE AS LIMITS OF CONSTRUCTION.

2. NO CONSTRUCTION EQUIPMENT OR STORAGE SHALL OCCUR WITHIN DRIPLINE OF EXISTING TREES. PRIOR TO MOBILIZATION CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT (LA) TO DISCUSS TREE PROTECTION EFFORTS. ALL TREE PROTECTION MEASURES SHALL BE APPROVED BY LA AND/OR TREE ARBORIST BEFORE ANY CONSTRUCTION ACTIVITIES SHALL TAKE PLACE ON-SITE. CONTRACTOR TO MONITOR TREES FOR STRESS AND/OR DAMAGE AND ADVISE LA AND TREE ARBORIST IF ANY OCCUR.

3. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT AND/OR TREE ARBORIST 48-HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY NEEDED WITHIN ANY TREE PROTECTION MEASURE. ALL TREE PROTECTION MEASURES SHALL BE REPLACED IN ORIGINAL LOCATION ONCE WORK HAS BEEN COMPLETED. NO WORK SHALL BE DONE WITHIN DRIPLINE OF EXISTING TREES UNLESS APPROVED BY TREE ARBORIST OR LANDSCAPE ARCHITECT PRIOR TO WORK.

4. ALL WORK TO BE PERFORMED BY THE CONTRACTOR WITHIN THE DRIPLINE OF ANY EXISTING TREE OR TREE PROTECTION AREA SHALL BE DONE IN A MANNER SENSITIVE TO ENSURING NO DAMAGE WILL BE DONE TO THE EXISTING TREES. THE PREFERRED METHOD FOR GRADING SMALL AREAS WITHIN THE DRIPLINE SHALL BE DONE BY HAND. LARGER AREAS TO BE GRADED MAY BE DONE WITH A SMALL BOBCAT/TRACT-HOE. CONTRACTOR TO DISCUSS METHODS OF GRADING WORK WITH LANDSCAPE ARCHITECT AND TREE ARBORIST PRIOR TO COMMENCING ANY SUCH WORK WITHIN DESIGNATED TREE PROTECTION AREAS OR WITHIN EXISTING DRIPLINES.

5. ALL PLANTS HAVING A QUANTITY GREATER THAN ONE (1) SHALL BE MATCHED AND SUPPLIED FROM THE SAME SOURCE (PER SPECIES).

6. CONTACT LANDSCAPE ARCHITECT AT THE TIME OF PLANT MATERIAL DELIVERY, BEFORE ANY SUBSTITUTIONS OR CHANGES, IF SCHEDULED TYPES ARE UNAVAILABLE, AND FOLLOWING INSTALLATION. ALL PLANT SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLACEMENT OF ORDERS.

7. LANDSCAPE ARCHITECT SHALL INSPECT AND APPROVE ALL PLANT MATERIAL AT TIME OF DELIVERY AS WELL AS AFTER INSTALLATION PRIOR TO PLANTING. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT 48-HOURS PRIOR TO DELIVERY.

8. PLANT LOCATIONS TO BE REEVALUATED AND REVISED, IF NECESSARY, AFTER FINISHED GRADING.

9. MULCH IN PLANTERS AND PLANTING BEDS TO BE CLEAN AND FREE FROM PEST AND DISEASES. MULCH SHALL BE APPLIED TO A 2-INCH DEPTH. MULCH RINGS 24-INCHES MIN. IN DIAMETER ARE TO BE PLACED AROUND ALL TREES NOT LOCATED IN PLANTING BEDS. MULCH TO BE DOUBLE-SHREDDED HARDWOOD.

10. CONTRACTOR TO VERIFY ALL QUANTITIES BETWEEN PLAN AND PLANT LIST AND REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT IMMEDIATELY PRIOR TO ORDERING.

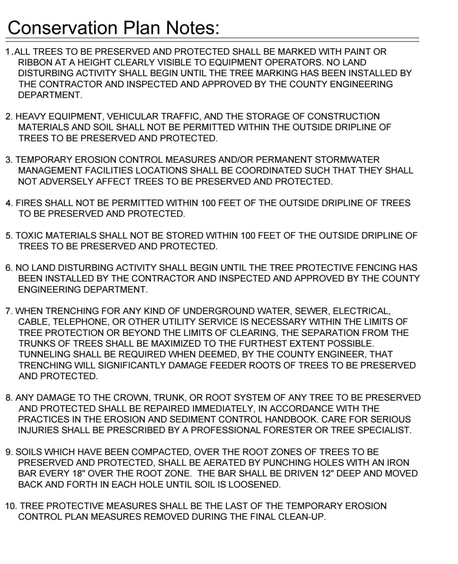
11. ALL STREET TREES WITHIN THE PUBLIC RIGHT OF WAY SHALL BE MAINTAINED BY THE APARTMENT COMPLEX.

12. LANDSCAPING PLANTS AND TREES ADJACENT TO THE SITE DISTANCE TRIANGLE WILL NEED TO BE MAINTAINED IN AREA BETWEEN 2 AND 7 FEET ABOVE GROUND AS A CLEAR ZONE TO PRESERVE SIGHT LINES AND ACCOMMODATE PEDESTRIANS. THE HOA OR PROPERTY OWNER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF SIGHT LINES.

Planting Notes

1. DO NOT PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR ASSUMES COMPLETE RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
2. ALL PLANT MATERIAL SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO ITS ARRIVAL ON SITE. SEE SPECS.
3. ALL AREAS WITHIN THE PROJECT LIMITS OR DISTURBED BY CONSTRUCTION OPERATIONS AND NOT OTHERWISE SPECIFIED SHALL BE SEEDED PER SPECIFICATIONS.

1992 3.38



Source: Va. DSWC Plate 3.38-2

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County of Albemarle
Conservation Plan Checklist – To be placed on Landscape Plans
(Handbook, pp III-284-111-297 for complete specifications)

1. **The following items shall be shown on the plan:**
   - ☑ Trees to be saved;
   - ☑ Limits of clearing (outside dripline of trees to be saved);
   - ☑ Location and type of protective fencing;
   - ☑ Grade changes requiring tree wells or walls;
   - ☑ Proposed trenching or tunneling beyond the limits of clearing.
2. **Markings:**
   - ☑ All trees to be saved shall be marked with print or ribbon at a height clearly visible to equipment operators.
   - ☑ No grading shall begin until the tree marking has been inspected and approved by a County Inspector.
3. **Pre-Construction Conference:**
   - ☑ Tree preservation and protection measures shall be reviewed with the contractor on site.
4. **Equipment Operation and Storage:**
   - ☑ Heavy equipment, vehicular traffic and storage of construction materials including soil shall not be permitted within the driplines of trees to be saved.
5. **Soil Erosion and Stormwater Detention Devices:**
   - ☑ Such devices shall not adversely affect trees to be saved.
6. **Fires:**
   - ☑ Fires are not permitted within 100 feet of the dripline of trees to be saved.
7. **Toxic Materials:**
   - ☑ Toxic materials shall not be stored within 100 feet of the dripline of trees to be saved.
8. **Protective Fencing:**
   - ☑ Trees to be retained within 40 feet of a proposed building or grading activity shall be protected by fencing.
   - ☑ Fencing shall be in place and shall be inspected and approved by a County Inspector prior to grading or construction.
9. **Tree Wells:**
   - ☑ When the ground level must be raised within the dripline of a tree to be saved, a tree well shall be provided and a construction detail submitted for approval.
10. **Tree Walls:**
    - ☑ When the ground level must be lowered within the dripline a tree to be saved, a tree wall shall be provided; and a construction detail submitted for approval.
11. **Trenching and Tunneling:**
    - ☑ When trenching is required within the limits of clearing, it shall be done as far away from the trunks of trees as possible. Tunneling under a large tree shall be considered as an alternative when it is anticipated that necessary trenching will destroy feeder roots.
12. **Cleanup:**
    - ☑ Protective fencing shall be the last items removed during the final cleanup.
13. **Damaged Trees:**
    - ☑ Damaged trees shall be treated immediately by pruning, fertilization or other methods recommended by a tree specialist.

NOTE: IT IS THE DEVELOPER'S RESPONSIBILITY TO CONFER WITH THE CONTRACTOR ON TREE CONSERVATION REQUIREMENTS.

OWNER SIGNATURE	**(DATE)**
DocuSigned by: Leadi Cole	November 21, 2023
CONTRACT PURCHASER SIGNATURE	**(DATE)**
Leadi Cole Authorized Signatory	

5/1/06 Page 1 of 1

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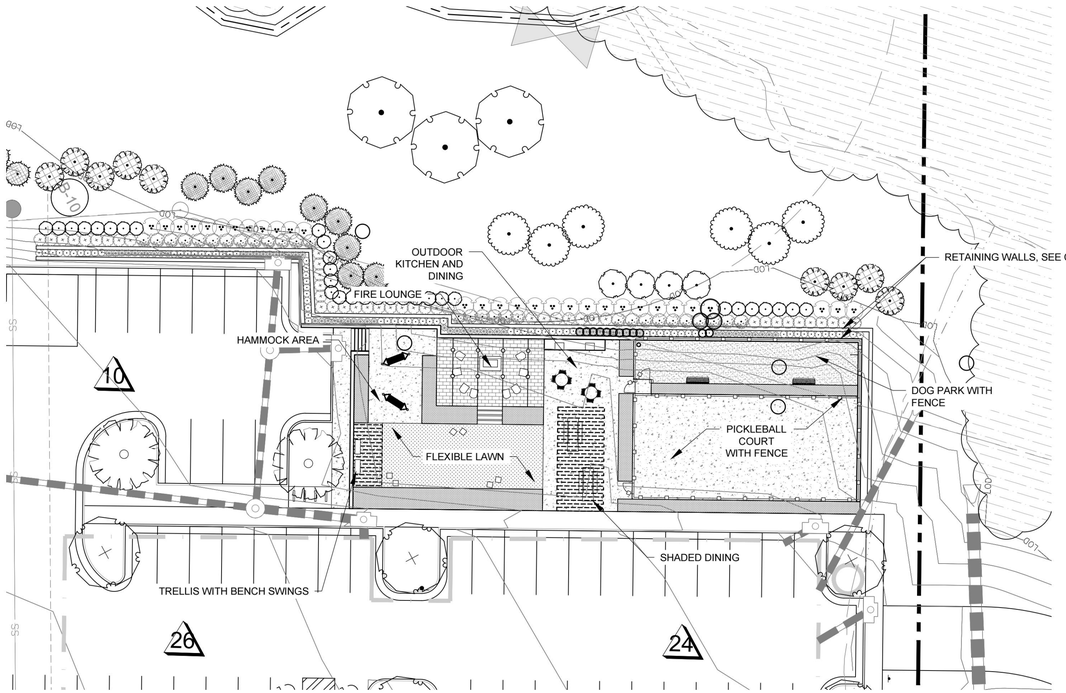
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HORZ: N/A

SHEET TITLE

LANDSCAPE NOTES

SHEET NUMBER

L10



1 L13 ACTIVE RECREATION SPACE 1 PLAN

1" = 20'

LandDesign.
200 S. PEYTON STREET
ALEXANDRIA, VA 22314
703.549.7784
WWW.LANDDESIGN.COM

KEY MAP

SEAL

NOT FOR CONSTRUCTION

PROJECT

OLD IVY RESIDENCES

GREYSTAR

CHARLOTTESVILLE

ALBEMARLE COUNTY, VA

LANDDESIGN PROJ.# 2022036

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE

DESIGNED BY: MVC
DRAWN BY: LH/AM
CHECKED BY: LH/MVC

SCALE

VERT: N/A
HORZ: AS NOTED

NORTH

SHEET TITLE

AMENITY SPACE ENLARGEMENTS

SHEET NUMBER

L13

NOTES:
- TARGETING 0.5FC MINIMUM WITH A 15:1 MAX/MIN UNIFORMITY RATIO AT THE PARKING AREAS & DRIVE
- PROPERTY LINE SHALL NOT EXCEED 0.5FC

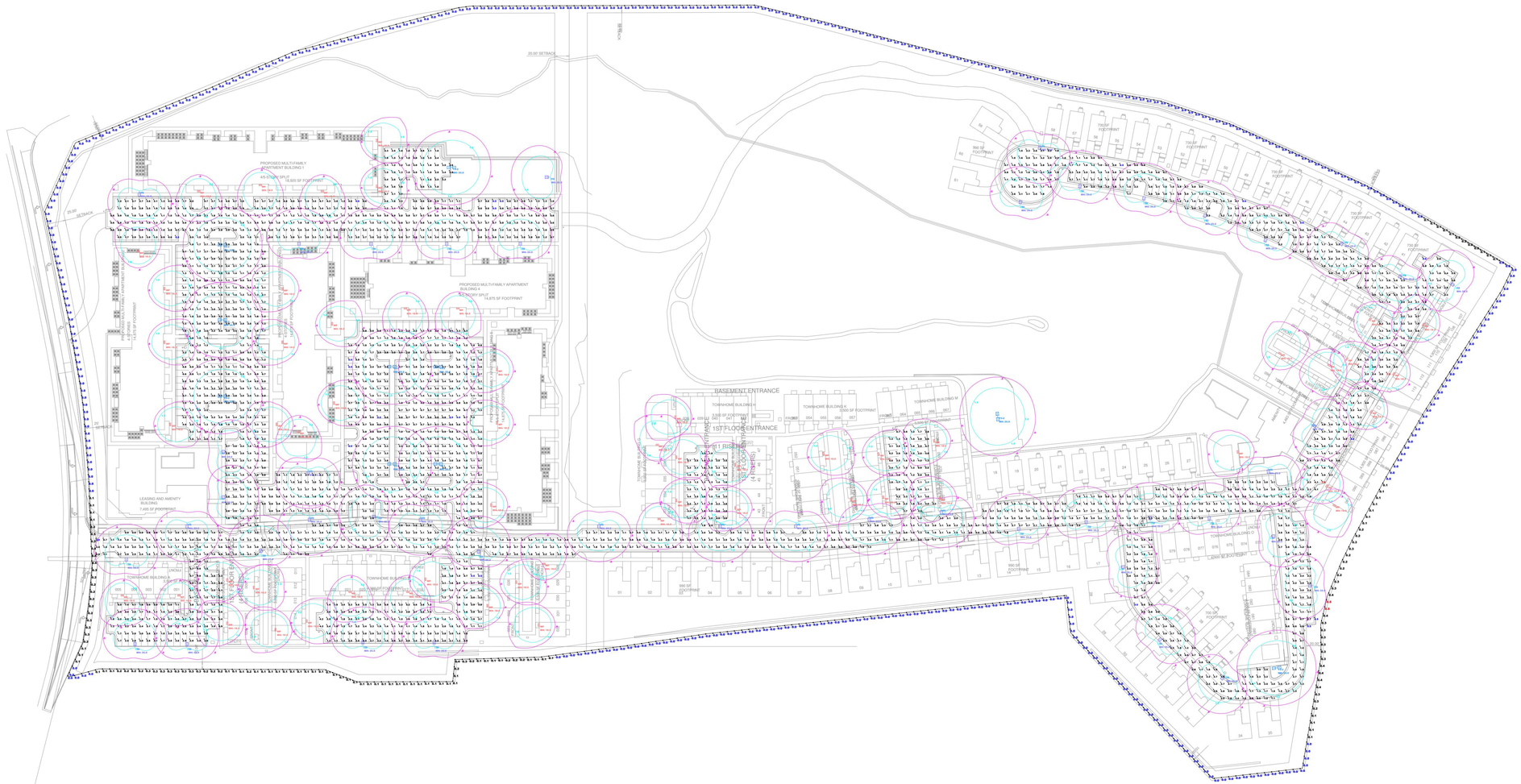
Luminaire Schedule

Symbol	Qty	Label	Arrangement	Lum. Lumens	LLF	Description	Filename
	45	T3	Single	9939	1.000	IVAT3-100L740U-FULL CUT-OFF	dlf1810114-15a-rev2.ies
	10	T3-2	Back-Back	9939	1.000	IVAT3-100L740U-FULL CUT-OFF	dlf1810114-15a-rev2.ies
	57	WP	Single	9865	1.000	AST-FWP01B-80D5CYT3DA1-abcde at 0_ CCT Setting-FULL CUT-OFF	LCWP-80-MVD-8XX.ies

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Description
PARKING AREAS & DRIVE	Illuminance	Fc	1.75	7.5	0.5	3.50	15.00	readings taken at grade
PROPERTY LINE - HORIZONTAL	Illuminance	Fc	0.05	0.5	0.0	N.A.	N.A.	readings taken at grade
PROPERTY LINE - VERTICAL	Illuminance	Fc	0.02	0.5	0.0	N.A.	N.A.	readings taken from grade to 20ft a.f.f. - every 5ft

NOTES:
1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
2) CALCULATIONS SHOW THE EFFECT OF SHADOWING CAUSED BY OBJECTS WITHIN THE AREA.
3) READINGS SHOWN ARE INITIAL HORIZONTAL & VERTICAL FOOTCANDLES TAKEN AS SHOWN IN NUMERIC SUMMARY
4) FIXTURE ORIENTATION IS SUCH THAT 0 IS TO THE RIGHT OF THE DRAWING AND 90 IS TO THE TOP OF THE DRAWING AS SHOWN.
5) TILT ANGLE IS THE RAISING AND LOWERING OF THE FIXTURE HEAD.
6) THE LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.
7) CHECK GRAPHIC SCALE. DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY OCCUR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.
8) LUMINAIRE LUMENS = LUMENS LEAVING LUMINAIRE WITH EFFICIENCY CONSIDERED.



View_1:SITE
Scale: 1 inch= 80 Ft.

OLD IVY RESIDENCES - COUNTY OF ALBEMARLE, VA
REVISED SITE LIGHTING LAYOUT
USING PROPOSED LUMINAIRE LOCATIONS

DESIGNED BY: J. DURAN
SCALE AS SHOWN
REFERENCE EL350B.AGI

DATE 1/15/2024
Page 1 of 3
AGI32® Version 20.9.9

Dewberry
Dewberry Engineers Inc.
4805 Lake Brook Drive
Suite 200
Glen Allen, VA 23060
804.290.7957

GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

SCALE

REVISIONS

NO.	DESCRIPTION	DATE
1	ARB SUBMITTAL	01/16/24

DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

TITLE
SITE LIGHTING PLAN

PROJECT NO. 50151935

SL101

SHEET NO. 82 OF 85

NOTES:
- TARGETING 0.5FC MINIMUM WITH A 15:1 MAX/MIN UNIFORMITY RATIO AT THE PARKING AREAS & DRIVE
- PROPERTY LINE SHALL NOT EXCEED 0.5FC

Luminaire Schedule

Symbol	Qty	Label	Arrangement	Lum. Lumens	LLF	Description	Filename
	45	T3	Single	9939	1.000	IVAT3-100L740U-FULL CUT-OFF	dlf1810114-15a-rev2.ies
	10	T3-2	Back-Back	9939	1.000	IVAT3-100L740U-FULL CUT-OFF	dlf1810114-15a-rev2.ies
	57	WP	Single	9865	1.000	AST-FWP01B-80D5CYT3DA1-abcde at 0_ CCT Setting-FULL CUT-OFF	LCWP-80-MVD-8XX.ies

Calculation Summary

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View_1:Plan Rotated 0 Tilted 0
Scale: 1 inch= 50 Ft.

OLD IVY RESIDENCES - COUNTY OF ALBEMARLE, VA
REVISED SITE LIGHTING LAYOUT
USING PROPOSED LUMINAIRE LOCATIONS

TITLE

DESIGNED BY: J. DURAN
SCALE: AS SHOWN
REFERENCE: EL350B.AGI

LUUM

DATE 1/15/2024
Page 2 of 3
AGI320 Version 20.9.9

Dewberry
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GREYSTAR

OLD IVY RESIDENCES

2441 OLD IVY ROAD
COUNTY OF ALBEMARLE, VA

FINAL SITE PLAN

SEAL

PRELIMINARY DOCUMENTS
NOT FOR CONSTRUCTION

KEY PLAN

SCALE

REVISIONS

NO.	DESCRIPTION	DATE
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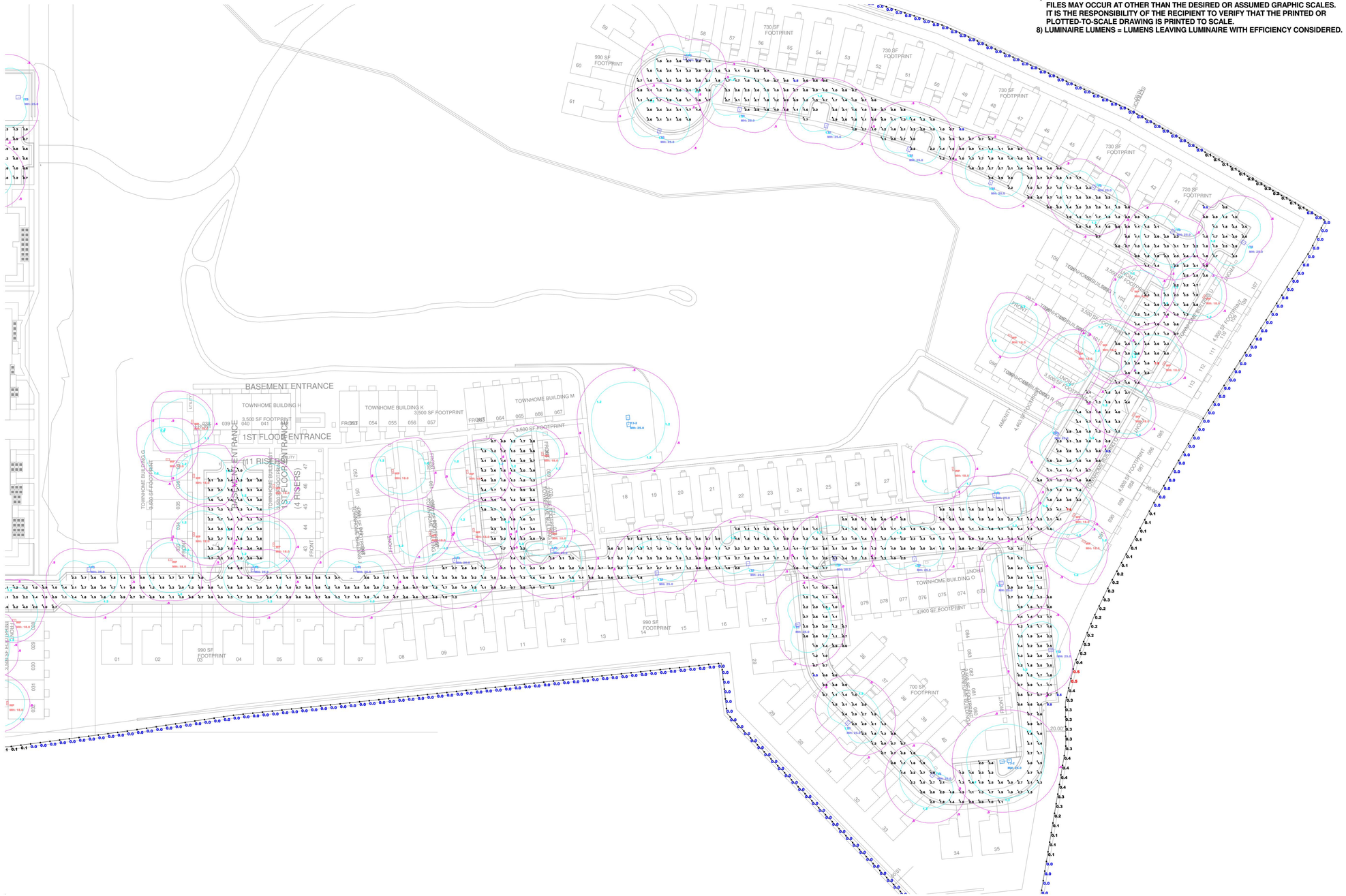
DRAWN BY RAY / TTA / GKA
APPROVED BY PGH
CHECKED BY DMK
DATE DECEMBER 11, 2023

TITLE
SITE LIGHTING PLAN

PROJECT NO. 50151935

SL102

SHEET NO. 83 OF 85



NOTES:
1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
2) CALCULATIONS SHOW THE EFFECT OF SHADOWING CAUSED BY OBJECTS WITHIN THE AREA.
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View_1:Plan Rotated 0 Tilted 0
Scale: 1 inch= 50 Ft.

OLD IVY RESIDENCES - COUNTY OF ALBEMARLE, VA
REVISED SITE LIGHTING LAYOUT
USING PROPOSED LUMINAIRE LOCATIONS

TITLE

DESIGNED BY: J. DURAN
SCALE AS SHOWN
REFERENCE EL350B.AGI

DATE 1/15/2024
Page 3 of 3
AGL320 Version 20.9.9

LUUM

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FINAL SITE PLAN

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DRAWN BY RAY / TTA / GKA
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DATE DECEMBER 11, 2023

TITLE

SITE LIGHTING PLAN

PROJECT NO. 50151935

SL103

SHEET NO. 84 OF 85

Performance

Type II

	IVAT2 - 100L			IVAT2 - 75L			IVAT2 - 45L		
Color Temperature	**5000K**	**4000K**	**3000K**	**5000K**	**4000K**	**3000K**	**5000K**	**4000K**	**3000K**
Input Watts	92	93	93	66	67	67	37	38	38
Output Lumens	10,739	10,095	10,167	7,961	7,484	7,537	4,340	4,080	4,109
Efficacy (lm/W)	117	109	110	120	112	112	117	109	110
Color Accuracy (CRI)	75	73	80	75	73	80	75	73	81
	(Replaces 400W PSMH)			*(Replaces 320W PSMH)*			*(Replaces 175W PSMH)*		

Type III

	IVAT3 - 100L			IVAT3 - 75L			IVAT3 - 45L		
Color Temperature	**5000K**	**4000K**	**3000K**	**5000K**	**4000K**	**3000K**	**5000K**	**4000K**	**3000K**
Input Watts	96	96	91	70	70	66	40	40	38
Output Lumens	11,359	9,939	9,588	7,608	6,657	6,422	4,963	4,342	4,189
Efficacy (lm/W)	118	103	105	110	96	98	124	109	111
Color Accuracy (CRI)	75	73	81	75	73	80	75	73	80
	(Replaces 400W PSMH)			*(Replaces 320W PSMH)*			*(Replaces 175W PSMH)*		

Type IV

	IVAT4 - 130L			IVAT4 - 100L			IVAT4 - 75L			IVAT4 - 45L		
Color Temperature	**5000K**	**4000K**	**3000K**	**5000K**	**4000K**	**3000K**	**5000K**	**4000K**	**3000K**	**5000K**	**4000K**	**3000K**
Input Watts	117	116	117	95	95	93	66	66	66	37	37	37
Output Lumens	14,322	14,174	13,232	11,361	10,832	10,207	7,429	7,353	6,864	4,906	4,856	4,533
Efficacy (lm/W)	123	122	113	120	115	109	113	112	104	132	131	121
Color Accuracy (CRI)	75	72	80	90	90	90	75	72	80	75	72	80
	(Replaces 450W PSMH)			*(Replaces 250W PSMH)*			*(Replaces 150W PSMH)*			*(Replaces 100W PSMH)*		

Type VS

	IVAT5S - 130L			IVAT5S - 100L			IVAT5S - 75L			IVAT5S - 45L		
Color Temperature	**5000K**	**4000K**	**3000K**	**5000K**	**4000K**	**3000K**	**5000K**	**4000K**	**3000K**	**5000K**	**4000K**	**3000K**
Input Watts	118	115	116	97	95	95	66	64	65	38	37	38
Output Lumens	14,494	13,357	12,659	11,577	11,508	10,032	8,434	7,772	7,366	5,210	4,801	4,550
Efficacy (lm/W)	123	116	109	119	122	106	129	122	114	136	128	120
Color Accuracy (CRI)	74	72	80	90	90	90	74	72	80	74	72	80
	(Replaces 450W PSMH)			*(Replaces 400W PSMH)*			*(Replaces 300W PSMH)*			*(Replaces 320W PSMH)*		

Type FT (Forward Throw)

	IVAFT - 100L			IVAFT - 75L			Type FT - 45L		
Color Temperature	**5000K**	**4000K**	**3000K**	**5000K**	**4000K**	**3000K**	**5000K**	**4000K**	**3000K**
Input Watts	95	91	93	68	65	67	39	37	38
Output Lumens	10,594	9,999	9,970	7,927	7,482	7,460	4,928	4,651	4,638
Efficacy (lm/W)	111	110	108	116	115	112	127	125	122
Color Accuracy (CRI)	75	73	80	74	72	80	74	72	80
	(Replaces 400W PSMH)			*(Replaces 320W PSMH)*			*(Replaces 175W PSMH)*		

Specifications

UL:
Suitable for wet locations

LEDs:
Long-life, high-efficiency, micro-power, surface-mount LEDs

Drivers(s):
Class 2, 50/60Hz. 120 - 277V, 347-480V, 4kV standard, 10kV optional surge protection

Dimming Driver:
Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims as low as 10%.

Lifespan:
100,000-hour LED lifespan based on IES LM-80 results & TM-21 calculations at 25°C

IP Rating:
Ingress Protection rating of IP66 for dust and water

Color Weather Starting:
Minimum starting temperature is -40°C (-40°F)

Maximum Ambient Temperature:
Suitable for use in 40°C (104°F) temperatures

Housing:
Die-cast aluminum housing

Mounting:
Universal pole adapter, slipfitter or wall mount options available

Lens:
Diffused Polymethyl Methacrylate (PMMA)

Vibration Rating:
3G vibration tested per ANSI C136.31

Effective Projected Area:
EPA = 0.61

Color Stability:
LED color temperature is warrantied to shift no more than 200K in CCT over a 5-year period

Color Uniformity:
RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

Title 24 Compliant:
An IVELOT edge-lit area light can be used with a motion sensor or photocell control option to comply with 2016 Title 24 Part 6 Section 130.2 (a,b,c).

Finish:
Formulated for high durability and long-lasting color

Green Technology:
Mercury and UV free. RoHS-compliant components

IESNA LM-79 Testing:
RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79

IVELOT™

- Available in 4,500lm (38W), 7,500lm (67W), 10,000lm (94W) and 13,000lm (117W) models
- Offered with 3 mounting options: universal pole adapter, wall or slipfitter
- Type II, III, IV, VS and Forward Throw distributions
- 0-10V Dimming, standard
- Motion sensor, photocell and Lightcloud® Controller options available
- 100,000-Hour LED lifespan

RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty.

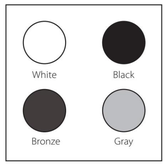
Visit rablighting.com to see which models are DLC listed.



The IVELOT is a complete cutoff, fully shielded area light that minimizes glare, while reducing light trespass.



IVELOT offers several mounting options to support a variety of applications. *(Universal Pole Adapter shown)*



Available in four color finishes: bronze, black, white and gray. *(gray has no texture)*



Available with Lightcloud Controller.



Lightweight, low-profile design, and a low EPA help reduce the load on a pole.



Available with an optional, integrated motion sensor or photocell.

Performance Summary

Input Voltage	120-277V
Input Frequency	50/60 Hz
Rated Wattage	See Performance Table
Delivered Lumens	See Performance Table
Efficacy	> 125 lm/W
CRI	80+, R9 > 0
Available CCT	3000/4000/5000K CCT Selectable
Color Consistency[4]	5-step MacAdam Ellipse
Rated Life	60,000 hours
L70[5]	> 72,000 hours or > 45,000
Power Factor	>0.99
THD	< 2.3%
Dimming	0-10V Continuous (10-100%)
Operating Temp.	-18°C to 40°C

Performance Data

Lens Type	Form Factor	Catalog No.	Rated Wattage (W)	Delivered Lumens	Efficacy (lm/W)
Frosted Acrylic		LCWP-40-MV-850-P	40W	5,000	125
		LCWP-60-MV-850-P	60W	7,500	125
		LCWP-80-MV-850-P	80W	10,000	125

NOTES:
1. Made to order items. Minimum 90 day lead time. Minimum 500 order quantity.
2. DLC Listed
3. DLC Premium Listed
4. Typical color consistency. May vary or be changed.
5. Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications and Dimensions subject to change without notice.

GlobaLux LIGHTING

Project	
Notes	
Type	Date
Cat. No.	

GlobaLux LIGHTING

LCWP™ Series — CCT Adjustable LED Cutoff Wall Pack



LCWP Series
40W (5,000 Lumens)
60W (7,500 Lumens)
80W (10,000 Lumens)

DESCRIPTION
The LCWP family of LED wall packs combine high-performance LEDs, highly-engineered optics to traditional designs to bring you the most advanced line of wall packs on the market. Multiple lumen packages mean there is an LCWP that is just right for your lighting needs. The LCWP wall packs were designed and engineered as maintenance free, energy-efficient alternatives to traditional fluorescent, high pressure sodium and H.I.D. light sources.

CCT 3 MV FIELD ADJUSTABLE · 5 YEARS WARRANTY · DLC 5.0 PREMIUM · UL

Rated Life 60,000 hours
Limited Warranty 5 years
Efficacy up to 125 LPW

Quick Ship
LCWP-40-MVD-830/40/50-P
LCWP-60-MVD-830/40/50-P
LCWP-80-MVD-830/40/50-P

Specification Features

Construction
Rugged die cast aluminum housing withstands outdoor environments. Outer surface treated with durable power coating to provide resistant to corrosion, rust, weathering, and or degradation. Performance engineered internal heat dissipation fins provide superior thermal management for lens life and reliability.

Qualifications
All luminaires are built to UL 1598 and 2108 standards, and bear appropriate UL labels. Wet location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM70, LM80, and TM21 industry standards. DesignLights Consortium® (DLC) DLC qualified product. Not all product variations listed are DLC qualified. Please visit the DLC Qualified Products List at www.designlights.org/QPL to confirm which models are qualified.

Electrical
Equipped standard with a photocell and fixed output driver. Optional 0-10V continuous dimming driver that works with any standard 0-10V control/dimmer. Long-Life LED's 60,000 hours at L80 with projected life over 100,000 hours for reduced life cycle maintenance costs. Adjustable CCT at 3000K, 4000K, 5000K.

Installation
Luminaire mounting designed for standard J-Box. Features multiple conduit entries.

Warranty
5-year limited warranty. See complete warranty for terms and exclusions. (Labor not included).

Options
Optional On/Off or Bi-level Motion sensor, high voltage transformers, emergency battery backups.

Ordering Information

Example:LCWP-40-MVD-830/40/50-P

LCWP	40	MVD	8	30/40/50	P
Series **LCWP** LED Cutoff Wall Pack	**Rated Wattage** **40-** 40W (5000 Lumens) **60-** 60W (7500 Lumens)[2] **80-** 80W (10000 Lumens)[2]	**Driver Type** **MV-** 120-277V[2] **MVD-** 120-277V, 0-10V Dimming[2] **HVD-** 347-480V, 0-10V Dimming **HV-** 347-480V	**CRI** **8** 80+ CRI	**Color Temp** **30/40/50-** 3000/4000/5000K	**Accessories** **P**-Photocell
			Emergency Backup **EML8** 800lm **EML16** 1600lm	**Controls** **OSBL-WP-** Fixture Mounted Bi-Level Occupancy Sensor	

Specifications and Dimensions subject to change without notice.

Dewberry

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DRAWN BY RAY / TTA / GKA
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DATE DECEMBER 11, 2023

TITLE
SITE LIGHTING CUT SHEETS

PROJECT NO. 50151935

SL501

SHEET NO. 85 OF 85