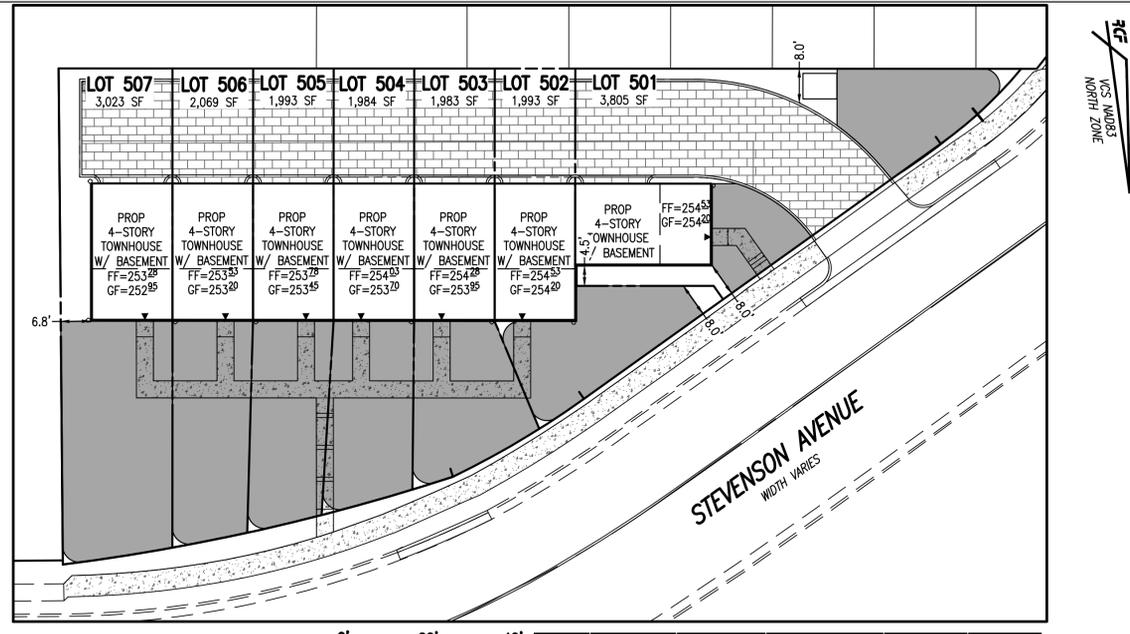


AVERAGE FINISHED GRADE AND BUILDING DETAIL GRAPHIC
SCALE: 1" = 20'

Lot 501 Average Finished Grade		Lot 502 Average Finished Grade		Lot 503 Average Finished Grade		Lot 504 Average Finished Grade	
Spot	Proposed Elevation						
9	254.20	8	254.00	7	253.80	6	253.50
10	254.00	9	254.20	8	254.00	7	253.80
11	253.80	13	253.40	14	253.40	15	253.10
12	253.50	14	253.40	15	253.10	16	252.80
AFG:	253.88	AFG:	253.75	AFG:	253.58	AFG:	253.30

Lot 505 Average Finished Grade		Lot 506 Average Finished Grade		Lot 507 Average Finished Grade	
Spot	Proposed Elevation	Spot	Proposed Elevation	Spot	Proposed Elevation
5	253.30	4	253.00	1	251.80
6	253.50	5	253.30	2	251.90
16	252.80	17	252.60	3	252.70
17	252.60	18	252.30	4	253.00
AFG:	253.05	AFG:	252.80	18	252.30
				19	252.34

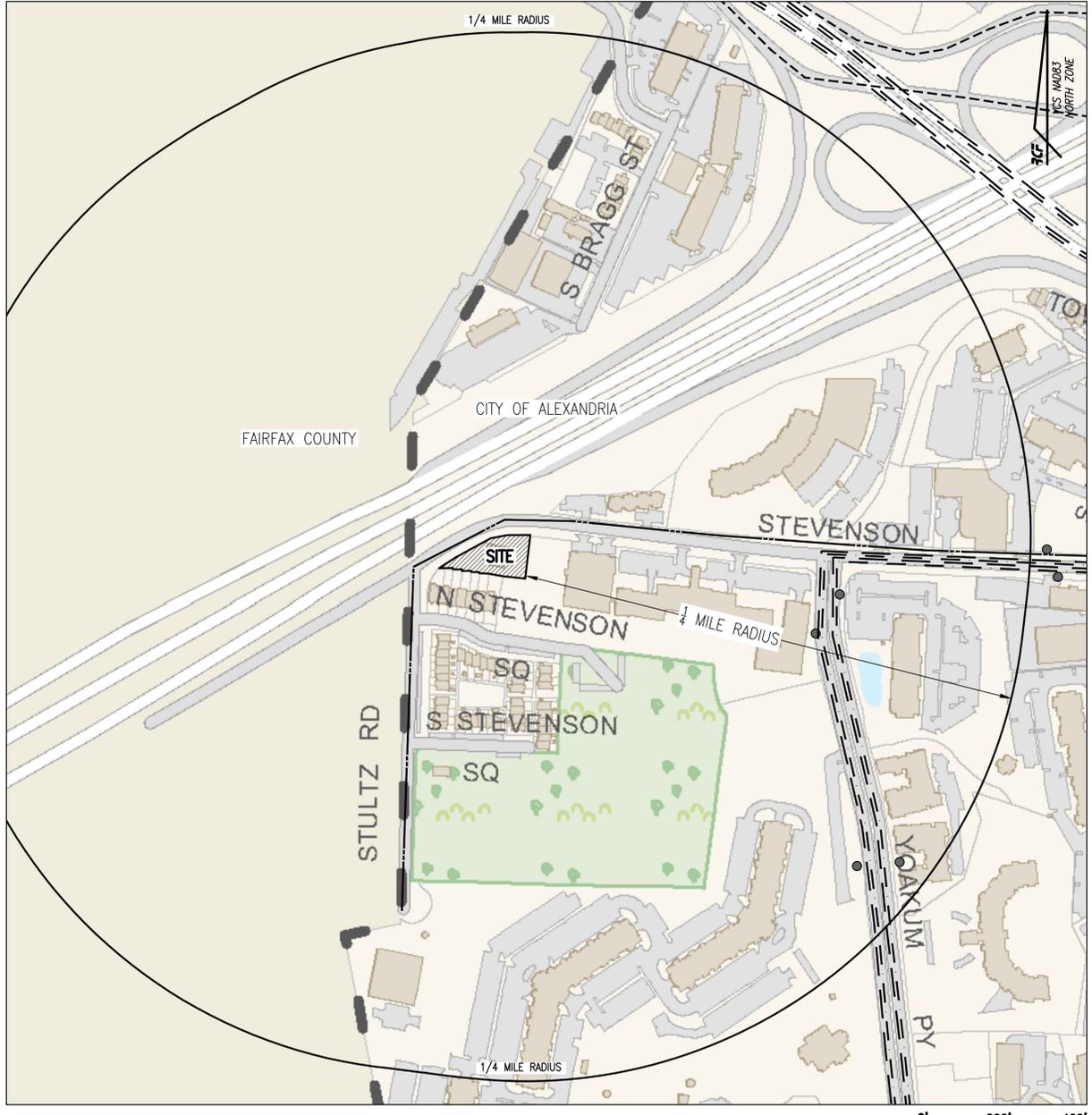


OPEN SPACE GRAPHIC
SCALE: 1" = 20'

ALL OPEN SPACE IS PRIVATE.
NO PRIVATE OPEN SPACE W/
PUBLIC ACCESS EASEMENT OR
PUBLIC OPEN SPACE IS PROPOSED
WITH THIS DEVELOPMENT.

LOT OPEN SPACE REQUIRED: 800 SF

Lot #:	Public Open Space:	Private Open Space:	Private Open Space with Public Access Easement:	Total Open Space:	Ground Level Open Space:
501	0 sf	800 sf	0 sf	800 sf	800 sf
502	0 sf	800 sf	0 sf	800 sf	800 sf
503	0 sf	800 sf	0 sf	800 sf	800 sf
504	0 sf	800 sf	0 sf	800 sf	800 sf
505	0 sf	800 sf	0 sf	800 sf	800 sf
506	0 sf	900 sf	0 sf	900 sf	900 sf
507	0 sf	1,150 sf	0 sf	1,150 sf	1,150 sf



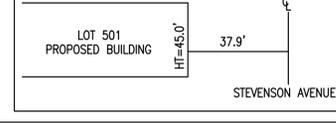
CONTEXTUAL MAP
SCALE: 1" = 200'

LEGEND:

- BUS STOP
- DASH ROUTE 35
- METRO BUS ROUTE 17B
- METRO BUS ROUTE 21C
- BIKE ROUTES

SECTION 6-403 COMPLIANCE NOTE:
SECTION 6-403 STATES "IN ALL HEIGHT DISTRICTS, THE ALLOWABLE HEIGHT OF A BUILDING AT ANY POINT SHALL NOT EXCEED TWICE THE DISTANCE FROM THE FACE OF THE BUILDING AT THAT POINT TO THE CENTERLINE OF THE STREET FACING SUCH BUILDING." SEE DETAIL BELOW FOR SECTION SHOWING COMPLIANCE. DUE TO THE DWELLING ON LOT 501 BEING THE CLOSEST TO THE CENTER LINE AND THE BUILDING HEIGHTS BEING THE SAME, IF THE BUILDING ON LOT 501 IS COMPLIANT, THE REMAINING BUILDINGS ARE COMPLIANT.

SECTION 6-403 DETAIL:
NOT TO SCALE



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APPROVED
SPECIAL USE PERMIT NO. 2022-00004

DEPARTMENT OF PLANNING & ZONING

DIRECTOR: _____ DATE: _____

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. _____ DATE: _____

CHAIRMAN, PLANNING COMMISSION _____ DATE: _____

DATE RECORDED: _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE: _____

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700 Washington Street, Suite 220
Alexandria, Virginia 22314
(703) 549-6422



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EDGEWOOD TOWNS
6336 STEVENSON AVENUE
CITY OF ALEXANDRIA, VIRGINIA

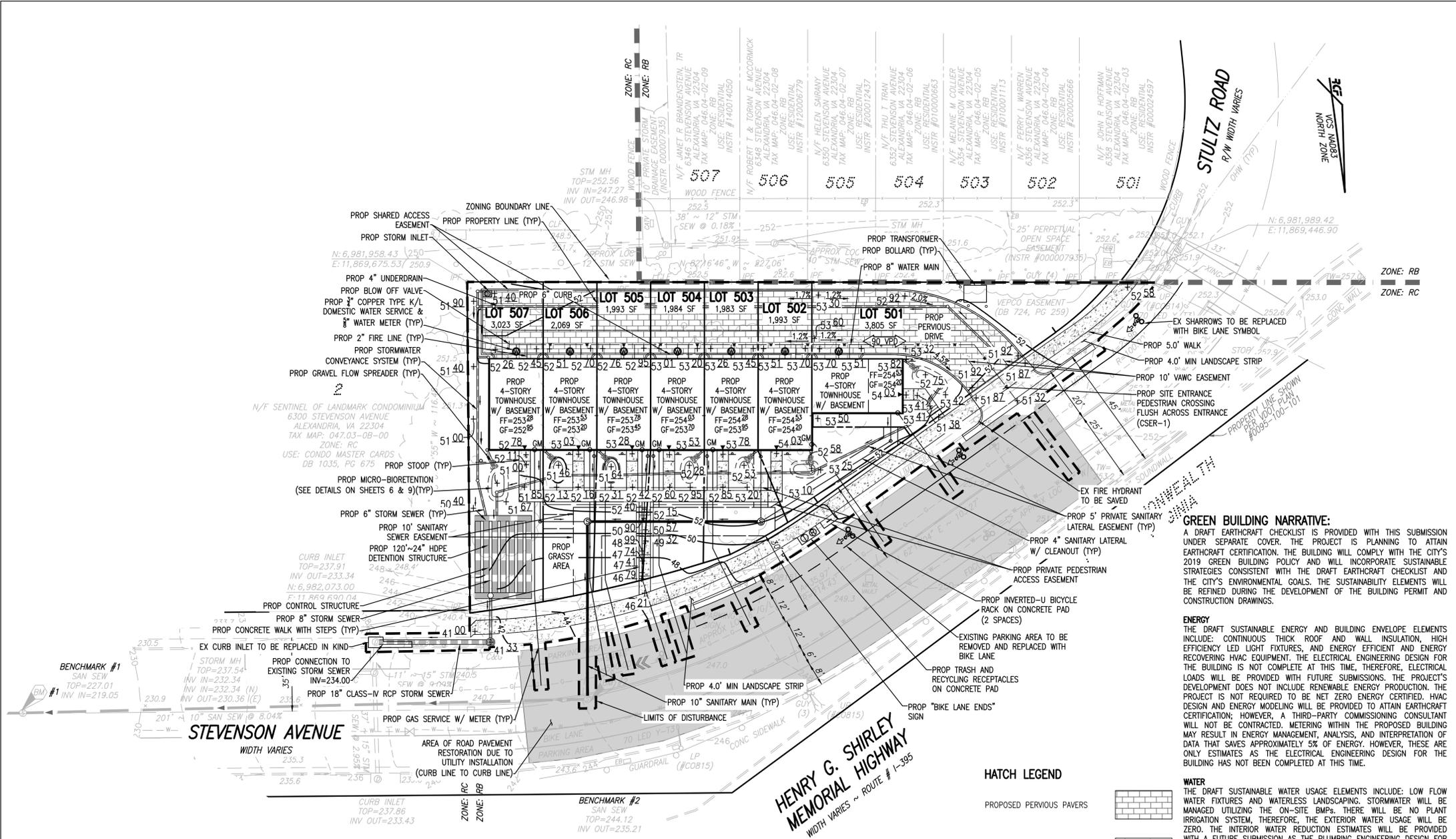
DATE	REVISION

DESIGN: TSM
CHECKED: ACS
SCALE: AS NOTED
DATE: SEPT 2022

CONTEXTUAL PLAN

SHEET **02** OF **15**
FILE: **21-52**

I:\2021\21052\DWG\21052\CONCEPTUAL PLAN.dwg
 Plt: Sep 16, 2022 - 11:08:34am



GENERAL PLAN INFORMATION NOTE:
SEE PROJECT GENERAL NOTES ON SHEET 3.

ARCHAEOLOGY NOTES:
THE APPLICANT/DEVELOPER SHALL CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY (703-746-4399) IF ANY BURIED STRUCTURAL REMAINS (WALL FOUNDATIONS, WELLS, PRIVES, CISTERNS, ETC.) OR CONCENTRATIONS OF ARTIFACTS ARE DISCOVERED DURING DEVELOPMENT. WORK MUST CEASE IN THE AREA OF THE DISCOVERY UNTIL A CITY ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.

THE APPLICANT/DEVELOPER SHALL NOT ALLOW ANY METAL DETECTION OR ARTIFACT COLLECTION TO BE CONDUCTED ON THE PROPERTY, UNLESS AUTHORIZED BY ALEXANDRIA ARCHAEOLOGY. FAILURE TO COMPLY SHALL RESULT IN PROJECT DELAYS.

ALL REQUIRED ARCHAEOLOGICAL PRESERVATION MEASURES SHALL BE COMPLETED IN COMPLIANCE WITH SECTION 11-411 OF THE CITY OF ALEXANDRIA ZONING ORDINANCE.

SANITARY SEWER OUTFALL NARRATIVE:
THE EXISTING USE (SINGLE FAMILY HOME/TOWNHOUSE) PRODUCES AN AVERAGE DAILY FLOW OF APPROXIMATELY 1,400 GALLONS PER DAY (350 GPD/UNIT X 1 UNIT X 4.0 PEAK FLOW FACTOR). THE PROPOSED IMPROVEMENTS PRODUCE AN AVERAGE DAILY FLOW OF APPROXIMATELY 9,800 GALLONS PER DAY (350 GPD/UNIT X 7 UNITS X 4.0 PEAK FLOW FACTOR). THE ADDITIONAL FLOW FROM THE PROPOSED IMPROVEMENTS DOES NOT EXCEED 10,000 GPD. THEREFORE, A DETAILED SANITARY SEWER OUTFALL ANALYSIS IS NOT REQUIRED WITH THIS PLAN. THE PROPOSED SANITARY SEWER CAPACITY COMPUTATIONS HAVE BEEN PROVIDED ON SHEET 12.

FIRE SERVICE NOTE:
FIRE TRUCK ACCESS WILL BE PROVIDED VIA THE SITE FRONTAGE ALONG THE STEVENSON AVENUE RIGHT-OF-WAY. EXISTING FIRE HYDRANTS SHALL REMAIN IN-SERVICE AND UNOBSTRUCTED DURING CONSTRUCTION.

ALEXRENEW NOTES:
1. CONTRACTOR SHALL ENSURE ALL DISCHARGES ARE IN ACCORDANCE WITH CITY OF ALEXANDRIA CODE TITLE 5, CHAPTER 6, ARTICLE B.
2. DETERIORATING AND OTHER CONSTRUCTION RELATED DISCHARGE LIMITS TO THE SEWER SYSTEM ARE REGULATED BY ALEXRENEW PRETREATMENT. CONTRACTOR IS REQUIRED TO CONTACT ALEXRENEW'S PRETREATMENT COORDINATOR AT 703-721-3500 X2020.

REFUSE TRUCK NOTE:
TRASH CANS WILL BE STORED ON PRIVATE PROPERTY (WITHIN THE PROPOSED GARAGES) AND ROLLED TO THE STEVENSON AVENUE RIGHT-OF-WAY FOR TRASH PICK UP ON A WEEKLY BASIS.

UTILITIES NOTE:
THE PROPOSED BUILDINGS WILL UTILIZE A NEW SANITARY LATERAL, NEW GAS LINE, A NEW FIRE LINE, AND A NEW DOMESTIC SERVICE LINE. THE NEW SANITARY LATERALS ARE TO CONNECT TO THE PROPOSED SANITARY MAIN IN THE FRONT OF THE SITE. THE PROPOSED SANITARY MAIN IS TO CONNECT TO THE EXISTING SANITARY SEWER WITHIN THE STEVENSON AVENUE RIGHT-OF-WAY. GAS LINES SHALL CONNECT TO THE EXISTING MAINS LOCATED IN THE STEVENSON AVENUE RIGHT-OF-WAY. THE FIRE LINE AND DOMESTIC WATER SERVICE LINES ARE TO CONNECT TO THE PROPOSED WATER MAIN LOCATED IN THE DRIVE AISLE, WHICH CONNECTS TO THE EXISTING WATER MAIN WITHIN THE STEVENSON AVENUE RIGHT-OF-WAY.

STORMWATER MITIGATION NOTE:
IN THE EVENT OF THE PROPOSED ROOF DRAINAGE AND/OR SUMP PUMP DISCHARGE, AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING ADVERSELY IMPACTS AND/OR CREATES A NUISANCE ON PUBLIC RIGHT OF WAY OR PRIVATE PROPERTIES THEN THE APPLICANT SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL IMPROVEMENTS TO THE ROOF DRAINAGE AND/OR GRADING TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES.

UTILITY UNDERGROUNDING NOTE:
ALL PROPOSED DRY UTILITIES SERVING THE SUBJECT PARCEL SHALL BE PLACED UNDERGROUND.

BUILDING WATERPROOFING NOTE:
PROPER WATERPROOFING FOR THE FACE OF THE PROPOSED DWELLINGS FACING THE BIOTRETION FACILITIES IS TO BE PROVIDED AT FINAL SITE PLAN.

PRETREATMENT NOTE:
GUTTER GUARDS ARE TO BE INSTALLED ON DOWNSPOUTS DIRECTED TO THE BIOTRETIONS TO SATISFY THE PRETREATMENT REQUIREMENT.

HVAC NOTE:
HVAC UNITS ARE TO BE LOCATED ON THE UPPER ROOF AND ARE TO BE SCREENED BY A SMALL WALL. SEE THE ARCHITECTURAL SHEETS FOR MORE INFORMATION.

PARKING ACCESS NOTE:
PER SECTION 7-1600(F)(g)(ii) OF THE ZONING ORDINANCE, SINCE PERMEABLE PAVEMENT AND LANDSCAPING IS PROVIDED ALONG THE PROPOSED DRIVE, THE PARKING COVERAGE IN THE REAR IS ACCEPTABLE WITH PLANNING COMMISSION APPROVAL, SEE THE REQUESTED APPLICATIONS AND MODIFICATIONS ON THE COVER SHEET.

STREET LIGHT NOTE:
ALL EXISTING STREET LIGHTS ARE TO BE CONVERTED TO LED ALONG THE FRONTAGE OF THE SITE, SEE THE LIGHTING PLAN PROVIDED ON SHEET L3.01 FOR MORE INFORMATION.

YARD PARKING REQUIREMENTS

REQUIRED YARD AREA	YARD AREA (SQ. FT.)	PARKING AREA (SQ. FT.)	ALLOWABLE RATIO	PARKING RATIO PROPOSED
REAR YARD	5,735	4,309	50%	75%

*NO PROPOSED PARKING IN ANY OTHER REQUIRED YARDS

STREET PAVEMENT RESTORATION NOTE:
THE ROAD SHALL BE REPAVED (MILLED AND OVERLAYED) FROM CURB AND GUTTER LINE TO CURB AND GUTTER LINE DUE TO THE AMOUNT OF PROPOSED UTILITY CUTS IN THE IN THE ROADWAY. BACKFILL MATERIAL SHALL BE COMPACTED TO NO LESS THAN 95% COMPACTION.

GREEN BUILDING NARRATIVE:
A DRAFT EARTHCRRAFT CHECKLIST IS PROVIDED WITH THIS SUBMISSION UNDER SEPARATE COVER. THE PROJECT IS PLANNING TO ATTAIN EARTHCRRAFT CERTIFICATION. THE BUILDING WILL COMPLY WITH THE CITY'S 2019 GREEN BUILDING POLICY AND WILL INCORPORATE SUSTAINABLE STRATEGIES CONSISTENT WITH THE DRAFT EARTHCRRAFT CHECKLIST AND THE CITY'S ENVIRONMENTAL GOALS. THE SUSTAINABILITY ELEMENTS WILL BE REFINED DURING THE DEVELOPMENT OF THE BUILDING PERMIT AND CONSTRUCTION DRAWINGS.

ENERGY
THE DRAFT SUSTAINABLE ENERGY AND BUILDING ENVELOPE ELEMENTS INCLUDE: CONTINUOUS THICK ROOF AND WALL INSULATION, HIGH EFFICIENCY LED LIGHT FIXTURES, AND ENERGY EFFICIENT AND ENERGY RECOVERING HVAC EQUIPMENT. THE ELECTRICAL ENGINEERING DESIGN FOR THE BUILDING IS NOT COMPLETE AT THIS TIME, THEREFORE, ELECTRICAL LOADS WILL BE PROVIDED WITH FUTURE SUBMISSIONS. THE PROJECT'S DEVELOPMENT DOES NOT INCLUDE RENEWABLE ENERGY PRODUCTION. THE PROJECT IS NOT REQUIRED TO BE NET ZERO ENERGY CERTIFIED. HVAC DESIGN AND ENERGY MODELING WILL BE PROVIDED TO ATTAIN EARTHCRRAFT CERTIFICATION; HOWEVER, A THIRD-PARTY COMMISSIONING CONSULTANT WILL NOT BE CONTRACTED. METERING WITHIN THE PROPOSED BUILDING MAY RESULT IN ENERGY MANAGEMENT, ANALYSIS, AND INTERPRETATION OF DATA THAT SAVES APPROXIMATELY 5% OF ENERGY. HOWEVER, THESE ARE ONLY ESTIMATES AS THE ELECTRICAL ENGINEERING DESIGN FOR THE BUILDING HAS NOT BEEN COMPLETED AT THIS TIME.

WATER
THE DRAFT SUSTAINABLE WATER USAGE ELEMENTS INCLUDE: LOW FLOW WATER FIXTURES AND WATERLESS LANDSCAPING. STORMWATER WILL BE MANAGED UTILIZING THE ON-SITE BMPs. THERE WILL BE NO PLANT IRRIGATION SYSTEM. THEREFORE, THE EXTERIOR WATER USAGE WILL BE ZERO. THE INTERIOR WATER REDUCTION ESTIMATES WILL BE PROVIDED WITH A FUTURE SUBMISSION AS THE PLUMBING ENGINEERING DESIGN FOR THE BUILDING HAS NOT BEEN COMPLETED YET.

INDOOR ENVIRONMENTAL QUALITY
THE DRAFT SUSTAINABLE INDOOR ENVIRONMENTAL QUALITY ELEMENTS INCLUDE: INDOOR AIR QUALITY PLAN DURING CONSTRUCTION, LOW VOC MATERIALS, ADHESIVES, AND PAINTS, AND HVAC FILTRATION AND FRESH OUTSIDE AIR. ENERGY REDUCTION STRATEGIES WILL BE AT THE FOREFRONT OF THE BUILDING'S MECHANICAL AND ELECTRICAL ENGINEERING DESIGN AND WILL BE PROVIDED WITH FUTURE SUBMISSIONS.

HENRY G. SHIRLEY MEMORIAL HIGHWAY
WIDTH VARIES ~ ROUTE # 1-395

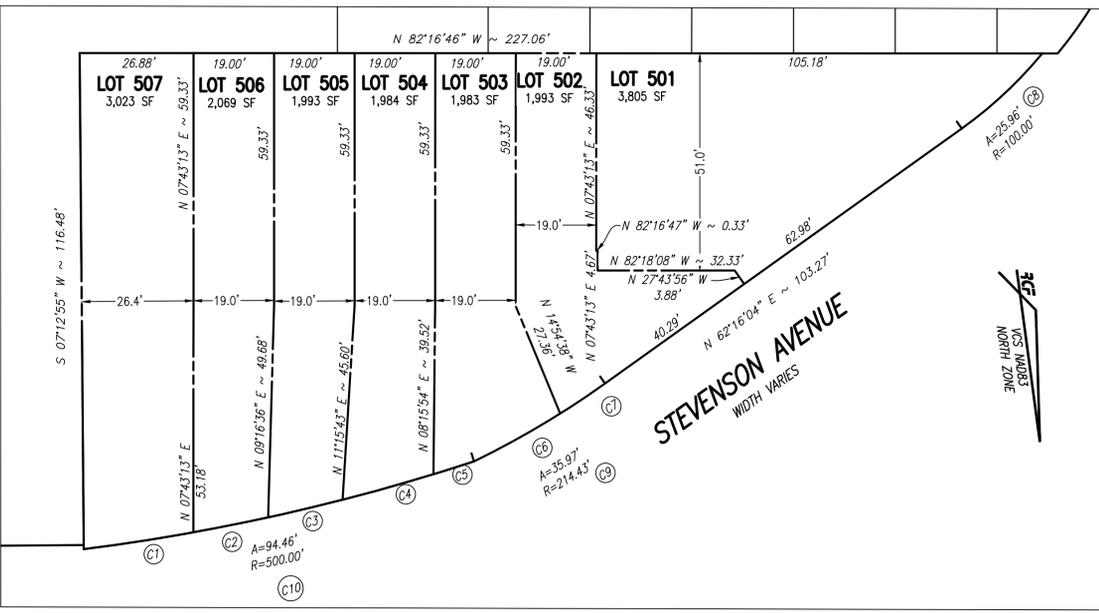


LEGEND

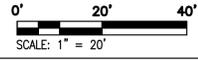
- PROPOSED BEARING AND DISTANCE 26.72'
- PROPOSED LOT WIDTH 26.72'

CURVE TABLE:

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	TANGENT	CHORD BEARING	CHORD LENGTH
C1	26.16'	500.00'	2°59'52"	13.08'	S 88°59'35" W	26.16'
C2	18.00'	500.00'	2°03'45"	9.00'	S 86°27'47" W	18.00'
C3	18.02'	500.00'	2°03'53"	9.01'	S 84°23'58" W	18.02'
C4	22.27'	500.00'	2°33'05"	11.13'	S 82°05'29" W	22.26'
C5	10.01'	500.00'	1°08'51"	5.01'	S 80°14'31" W	10.01'
C6	23.27'	214.43'	6°13'02"	11.85'	S 68°46'15" W	23.26'
C7	12.70'	214.43'	3°23'40"	6.35'	S 63°57'54" W	12.70'
C8	25.96'	100.00'	14°52'32"	13.05'	S 54°49'46" W	25.89'
C9	35.97'	214.43'	9°36'42"	18.03'	N 67°04'25" E	35.93'
C10	94.46'	500.00'	10°49'26"	47.37'	N 85°04'48" E	94.32'



SUBDIVISION EXHIBIT:
SCALE: 1"=20'



SEE SHEET 3 FOR SYMBOL AND TEXT LEGENDS

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APPROVED
SPECIAL USE PERMIT NO. 2022-00004

DEPARTMENT OF PLANNING & ZONING

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. _____

CHAIRMAN, PLANNING COMMISSION _____

DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE _____

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www.rcfields.com
(703) 549-6422

ANDREA SPRUCH
Lic. No. 047863
SEPTEMBER 15, 2022
PROFESSIONAL ENGINEER

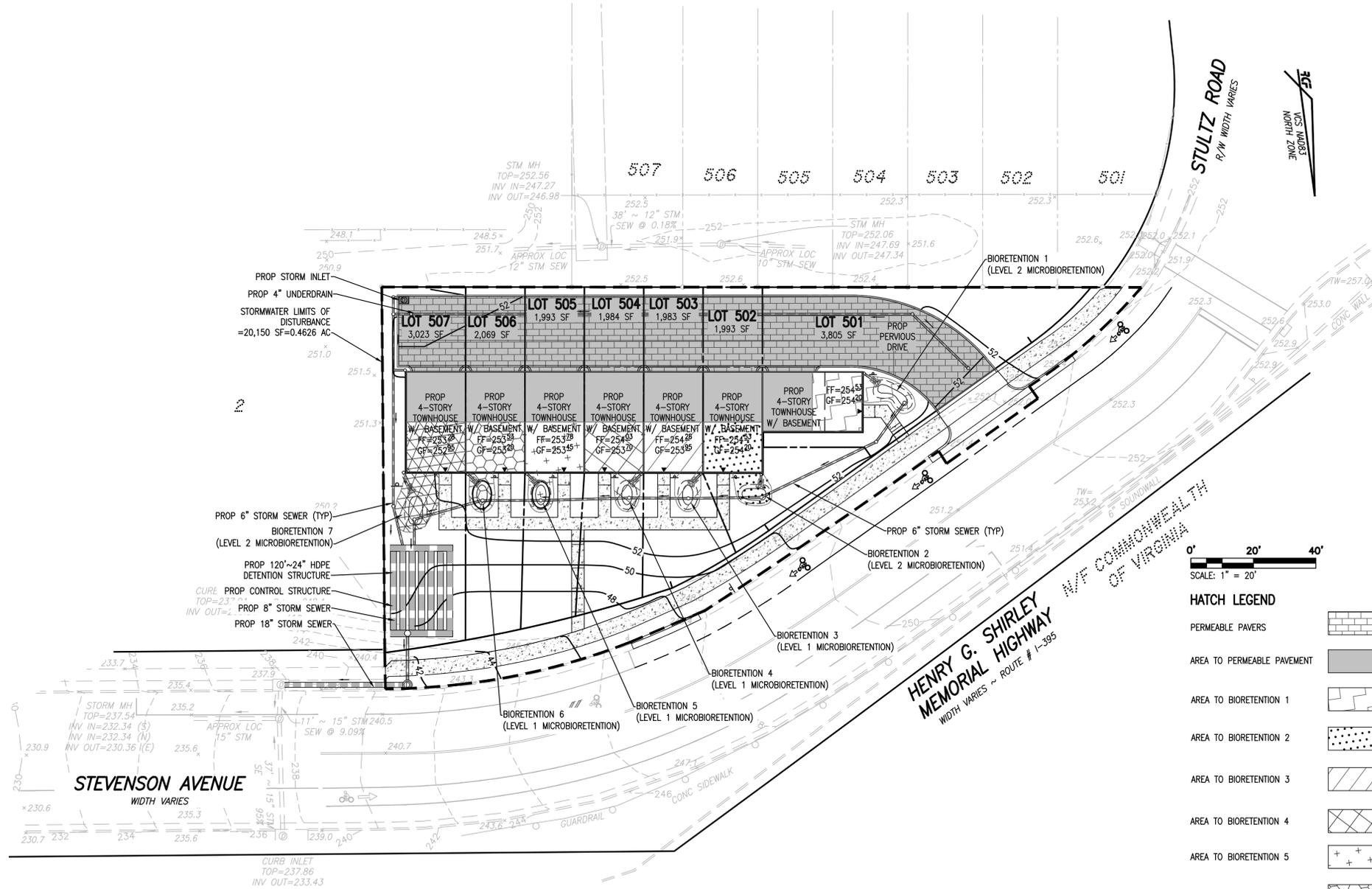
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6336 STEVENSON AVENUE
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION

DESIGN: TSM
CHECKED: ACS
SCALE: 1" = 20'
DATE: SEPT 2022

PRELIMINARY PLAN

SHEET **04** OF **15**
FILE: **21-52**



STORMWATER MANAGEMENT (CITY CODE SECTION 13-109F COMPLIANCE) NARRATIVE

PRE-DEVELOPMENT CONDITIONS:
 THIS 0.39 ACRE PARCEL IS LOCATED IN THE BACKLICK RUN WATERSHED. IN EXISTING CONDITIONS, THE SITE CONSISTS OF AN EXISTING DWELLING, DRIVEWAY, RETAINING WALL AND VEGETATED AREAS. RUNOFF FROM THE ENTIRE PARCEL DRAINS IN A SOUTHEASTERLY DIRECTION TO THE STEVENSON AVENUE RIGHT-OF-WAY WHERE IT IS COLLECTED BY EXISTING CURB INLETS. RUNOFF IS THEN CONVEYED IN A SOUTHEASTERLY DIRECTION WHERE IT EVENTUALLY OUTFALLS TO BACKLICK RUN.

POST-DEVELOPMENT CONDITIONS:
 THIS PROJECT PROPOSES THE CONSTRUCTION OF MULTIPLE TOWNHOUSE DWELLINGS AND ASSOCIATED SITE IMPROVEMENTS. RUNOFF FOR THE ENTIRE SITE WILL CONTINUE TO DRAIN TO THE STEVENSON AVENUE RIGHT-OF-WAY AS IN EXISTING CONDITIONS. RUNOFF IS THEN CONVEYED THROUGH THE EXISTING STORM SEWER SYSTEM WHERE IT EVENTUALLY OUTFALLS TO BACKLICK RUN.

CONCLUSION
 DUE TO AN OVERALL INCREASE OF SITE IMPERVIOUS AREA, THE SITE RELEASES A POST-DEVELOPMENT PEAK RATE OF RUNOFF FOR THE 2 AND 10-YEAR, 24-HOUR STORM EVENT THAT IS GREATER THAN PRE-DEVELOPMENT CONDITIONS (SEE COMPUTATIONS PROVIDED ON THIS SHEET); THEREFORE, DETENTION IS REQUIRED ON-SITE. WITH THE DETENTION STRUCTURE, THE SITE RELEASES A POST-DEVELOPMENT PEAK RATE FOR THE 2 AND 10-YEAR, 24-HOUR STORM EVENTS THAT IS LOWER THAN THE PRE-DEVELOPMENT PEAK FLOW RATE. DUE TO THERE BEING NO INCREASE IN SHEETFLOW LEAVING THE SUBJECT PARCEL, THE DECREASE IN PEAK RUNOFF DURING THE PEAK 2- AND 10-YEAR, 24 HOUR STORM EVENT, AND THE SMALL PORTION OF RUNOFF THAT EXITS THE SITE VIA SHEET FLOW HAVING NO ADVERSE IMPACT ON DOWN GRADIENT PROPERTIES OR RESOURCES, THE STORMWATER MANAGEMENT CRITERIA FOR THE PROPOSED DEVELOPMENT COMPLIES WITH THE CHANNEL PROTECTION AND FLOOD PROTECTION REQUIREMENTS PER CITY CODE SECTION 13-109F.

STORMWATER RUNOFF COMPUTATIONS
 I. PROJECT AREA = 20,150 SQ.FT. OR 0.46 ACRES
 EXISTING IMPERVIOUS AREA = 4,304 SQ.FT. OR 0.10 ACRES (WITHIN STORMWATER LIMITS OF ANALYSIS)
 PROPOSED IMPERVIOUS AREA = 11,275 SQ.FT. OR 0.26 ACRES (WITHIN STORMWATER LIMITS OF ANALYSIS)

VIRGINIA RUNOFF REDUCTION METHOD (PER TR-20, TYPE II, 24-HOUR STORM, USING CLASS D SOILS):

- II. WEIGHTED CURVE NUMBER (CN) CALCULATIONS:
 CN PRE-DEVELOPMENT = $(0.10 \times 98 + 0.36 \times 80) \div 0.46 = 84$
 CN POST-DEVELOPMENT = $(0.26 \times 98 + 0.20 \times 80) \div 0.46 = 90$
 CN POST-DEVELOPMENT FROM VRRM = 88
- III. PRE-DEVELOPMENT PEAK DISCHARGES: ($T_c = 5$ MINS.)
 PEAK Q_p PRE-DEVELOPMENT = 0.94 CFS
 PEAK Q_{10} PRE-DEVELOPMENT = 1.88 CFS
- IV. POST-DEVELOPMENT PEAK DISCHARGES ($T_c = 5$ MINS.)
 PEAK Q_p POST-DEVELOPMENT = 1.18 CFS
 PEAK Q_{10} POST-DEVELOPMENT = 2.13 CFS
 Q_p INCREASE = 0.24 CFS
 Q_{10} INCREASE = 0.25 CFS

DUE TO THE INCREASE IN THE PEAK DISCHARGE FOR THE 2 AND 10-YEAR STORM, DETENTION IS REQUIRED AND SHALL BE PROVIDED THROUGH THE ON-SITE BMPs (PERMEABLE PAVERS, AND BIORETENTION) AND THE PROPOSED DETENTION STRUCTURE.

- V. POST-DEVELOPMENT PEAK DISCHARGES W/ DETENTION ($T_c = 5$ MINS.)
 PEAK Q_p POST-DEVELOPMENT W/ DETENTION = 0.89 CFS
 PEAK Q_{10} POST-DEVELOPMENT W/ DETENTION = 1.81 CFS
 Q_p DECREASE = 0.05 CFS
 Q_{10} DECREASE = 0.07 CFS

NATURAL CHANNEL 1-YR STORM CALCULATION NOTE:
 NO NATURAL STREAMS ARE LOCATED WITHIN THE STORMWATER ANALYSIS AREA. THEREFORE, PER CITY CODE CHAPTER 13, 1-YR STORM CALCULATIONS ARE NOT REQUIRED.

PROJECT DESCRIPTION:

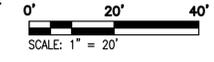
REDEVELOPMENT	IMPERVIOUS	PERVIOUS	TOTAL
DRAINAGE AREA	0.23 AC	0.16 AC	0.39 AC
PROJECT AREA	0.23 AC	0.16 AC	0.39 AC
ON-SITE TREATED	0.20 AC	0.02 AC	0.22 AC
OFF-SITE TREATED	0.00 AC	0.00 AC	0.00 AC
TOTAL TREATED	0.20 AC	0.02 AC	0.22 AC
ON-SITE IMPERVIOUS AREAS DISCONNECTED BY A VEGETATIVE BUFFER	N/A		
TOTAL TREATED OR DISCONNECTED			0.22 AC

WATER QUALITY VOLUME DEFAULT:

PROPOSED IMPERVIOUS: 0.23 AC
 TREATMENT OF FIRST HALF INCH OF RUNOFF: $1,815 \times 0.23 = 417$ CU. FT. WQV REQUIRED

WATER TREATMENT ON-SITE			
BMP TYPE	AREA TREATED BY BMP (ACRES)	IMPERVIOUS AREA TREATED BY BMP (ACRES)	BMP EFFICIENCY (%)
BIORETENTION FACILITIES	0.07	0.05	25%
PERMEABLE PAVERS	0.15	0.15	25%

TOTAL WQV TREATED: NO
 WATER QUALITY VOLUME REQUIRED = 417 CU. FT.
 WATER QUALITY VOLUME TREATED = $1,815 \times 0.20 = 363$ CU. FT.
 PERCENT OF WATER QUALITY VOLUME TREATED = 87.1%
 DETENTION ON SITE: YES
 PROJECT IS WITHIN WHICH WATERSHED? BACKLICK RUN
 PROJECT DISCHARGES TO WHICH BODY OF WATER? CAMERON RUN



HATCH LEGEND

- PERMEABLE PAVERS
- AREA TO PERMEABLE PAVEMENT
- AREA TO BIORETENTION 1
- AREA TO BIORETENTION 2
- AREA TO BIORETENTION 3
- AREA TO BIORETENTION 4
- AREA TO BIORETENTION 5
- AREA TO BIORETENTION 6
- AREA TO BIORETENTION 7

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 DIRECTOR _____ DATE _____
 DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
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 DIRECTOR _____ DATE _____
 CHAIRMAN, PLANNING COMMISSION _____ DATE _____
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 6336 STEVENSON AVENUE
 CITY OF ALEXANDRIA, VIRGINIA

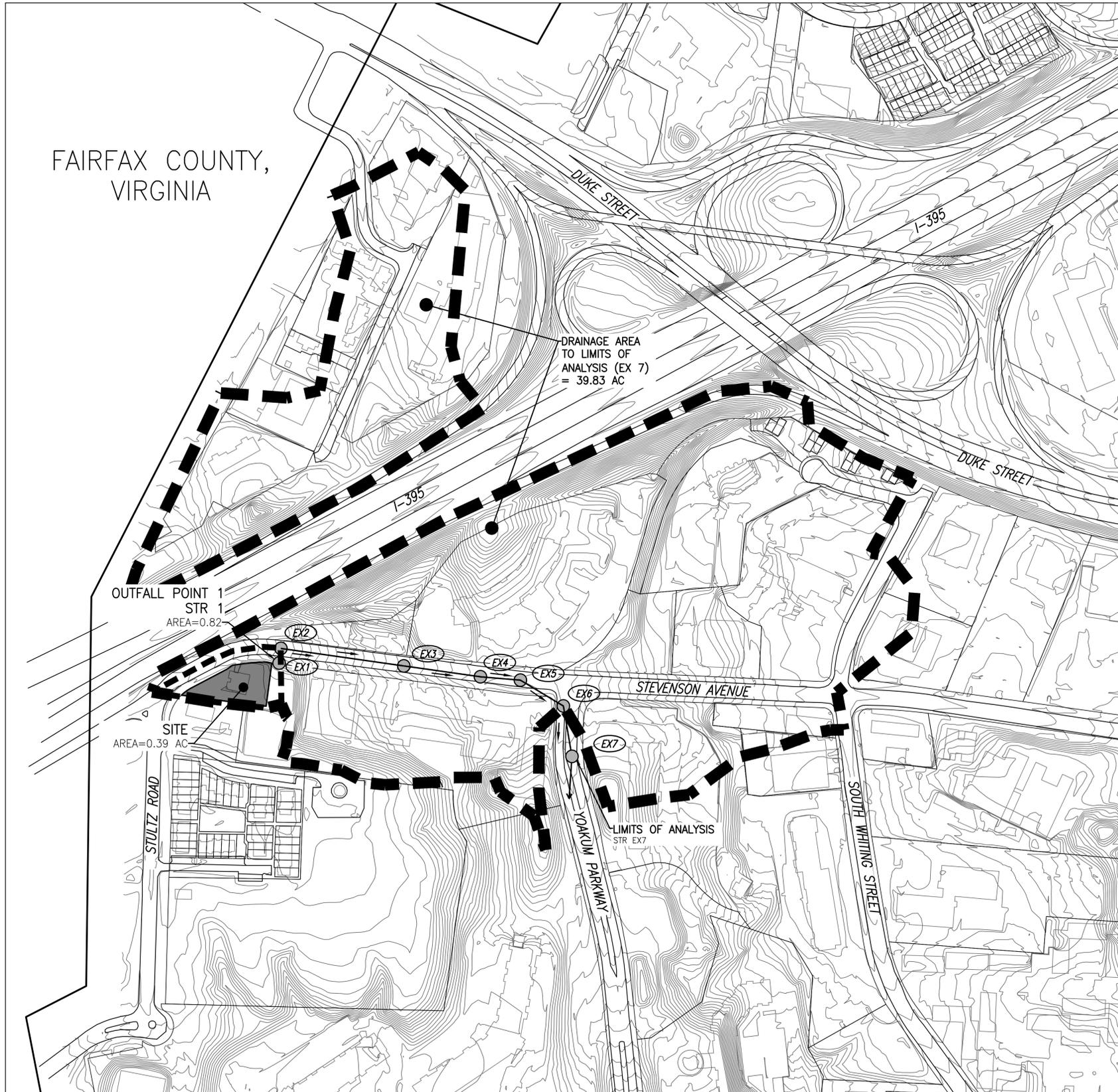
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 DATE: SEPT 2022

STORMWATER MANAGEMENT PLAN

SHEET **06** OF **15**
 FILE: **21-52**

FAIRFAX COUNTY,
VIRGINIA



OUTFALL MAP
SCALE: 1" = 150'

STORMWATER OUTFALL NARRATIVE (CITY CODE SECTION 13-109F):

PRE-DEVELOPMENT CONDITIONS:
THE 0.39 ACRE SITE IS LOCATED IN THE BACKLICK RUN WATERSHED. IN EXISTING CONDITIONS, THE SITE CONSISTS OF AN EXISTING DWELLING, DRIVEWAY, MULTIPLE RETAINING WALLS, AND VEGETATED AREAS. THIS PROJECT HAS ONE OUTFALL POINT.

OUTFALL #1: A MAJORITY OF THE PROJECT SITE DRAINS VIA NON-CONCENTRATED SHEET FLOW TOWARDS THE STEVENSON AVENUE RIGHT-OF-WAY (OUTFALL #1) BEFORE FLOWING OFF SITE IN A NORTHERLY DIRECTION. THE STORMWATER RUNOFF IS THEN COLLECTED BY THE EXISTING CURB AND GUTTER, DIRECTING RUNOFF TO THE EXISTING CURB INLET WITHIN THE STEVENSON AVENUE RIGHT-OF-WAY AND PIPED IN A GENERALLY EASTERLY DIRECTION VIA THE CITY OF ALEXANDRIA MAINTAINED STORM SEWER SYSTEM BEFORE IT OUTFALLS TO BACKLICK RUN.

THE REMAINDER OF THE PROJECT SITE IS DIRECTED TO THE ADJACENT PROPERTY TO THE EAST. AFTER ENTERING THE NEIGHBORING PROPERTY, THE RUNOFF IS DIRECTED IN A NORTHERLY DIRECTION TOWARDS THE STEVENSON AVENUE RIGHT-OF-WAY. RUNOFF IS QUICKLY COLLECTED BY THE EXISTING CURB AND GUTTER WITHIN THE RIGHT-OF-WAY, EVENTUALLY BEING COLLECTED BY THE CITY OF ALEXANDRIA MAINTAINED STORM SEWER SYSTEM, JOINING THE OTHER FLOW REGIME, AND OUTFALLING TO BACKLICK RUN.

POST-DEVELOPMENT CONDITIONS:
THE REDEVELOPMENT OF THE PROJECT SITE PROPOSES CONSTRUCTION OF SEVEN TOWNHOUSE DWELLINGS WITH A COMMON DRIVE AISLE, AND ASSOCIATED IMPROVEMENTS. OVERALL IMPERVIOUS AREA WILL INCREASE WITH THE PROPOSED CONSTRUCTION; HOWEVER, A PROPOSED DETENTION STRUCTURE AND ONSITE BMPs ARE TO BE USED TO OFFSET THE INCREASE IN RUNOFF AND REMAINING RUNOFF WILL BE DIRECTED TO THE CITY OF ALEXANDRIA STORM SEWER SYSTEM. EXISTING OVERALL DRAINAGE DIVIDES ARE MAINTAINED FROM PRE-DEVELOPMENT CONDITIONS. THE PROJECT SITE HAS ONE PROPOSED CONDITION OUTFALL POINT.

OUTFALL #1: IN POST-DEVELOPMENT CONDITIONS, THE MAJORITY OF ONSITE STORMWATER RUNOFF IS COLLECTED WITHIN AN ONSITE PRIVATE STORM PIPE SYSTEM. THE RUNOFF THEN OUTFALLS VIA PIPE FLOW TO THE EXISTING STORM SEWER SYSTEM LOCATED WITHIN THE STEVENSON AVENUE RIGHT-OF-WAY, WHERE IT CONVERGES WITH THE REMAINDER OF THE RUNOFF THAT EXITS THE SITE VIA SHEET FLOW TO THE SAME CURB INLET (OUTFALL #1). THE STORMWATER THEN FLOWS IN AN EASTERLY DIRECTION VIA THE CITY OF ALEXANDRIA MAINTAINED STORM SEWER SYSTEM BEFORE IT ENTERS EXISTING MANHOLE (EX 6) WITHIN THE INTERSECTION OF STEVENSON AVE AND YOAKUM PKWY. AT THIS POINT, THE FLOW REACHES THE LIMITS OF ANALYSIS WHERE THE SUBJECT SITE CONTRIBUTING DRAINAGE AREA (0.39 AC) IS LESS THAN 1% OF THE TOTAL WATERSHED AREA (39.83 AC) (PER SECTION 13-109F-2(d)(i) OF THE ZONING ORDINANCE).

COMPUTATIONS SHOWN ON THIS SHEET DEMONSTRATE THAT THE EXISTING MANMADE STORMWATER CONVEYANCE SYSTEM IS MINORLY SURCHARGED IN EXISTING CONDITIONS WITHIN THE PIPE THAT FLOWS FROM STRUCTURE EX4-EX5 & EX5-EX6. HOWEVER, THE PEAK FLOW RATE FOR THE 2 AND 10-YEAR, 24-HOUR STORMS WILL BE REDUCED WITH THE PROPOSED DEVELOPMENT THROUGH THE INSTALLATION OF THE PROPOSED DETENTION STRUCTURE AND ONSITE BMPs. THE WATER QUANTITY REQUIREMENTS FOR THIS SITE IS THEREFORE IN COMPLIANCE WITH SECTIONS 13-109F(1)(a)(i) AND 13-109F(2)(b)(i). SINCE THE SITE DRAINAGE OUTFALLS TO AN EXISTING UNDERSIZED STORM SEWER SYSTEM, NO ONSITE IMPROVEMENTS TO THE SYSTEM ARE REQUIRED DUE TO THE REDUCTION IN THE POST-DEVELOPMENT RUNOFF RATE FOR THE 2-YEAR AND 10-YEAR, 24-HOUR STORM. THE PROJECT'S POST-DEVELOPMENT RUNOFF WILL NOT EXACERBATE ANY EXISTING DOWNSTREAM CAPACITY CONDITIONS.

10-YR, 24-HR STORM SEWER COMPUTATIONS

STRUCTURE		INC. DRAINAGE AREA (AC)	ACCU. DRAINAGE AREA (AC)	CURVE NUMBER	RAINFALL DEPTH (IN)	T _c (MINUTES)	INCREMENTAL "Q" (CFS)	ACCUMULATED "Q" (CFS)	PIPE DIAMETER (IN)	SLOPE (%)	"n"	MAXIMUM "Q" (CFS)	MAXIMUM VELOCITY (FPS)	LENGTH OF RUN (FT)	UPPER INVERT	LOWER INVERT	FALL (FT)
FROM	TO																
EX1	EX2	0.82	0.82	92	5.20	5	3.90	3.90	15	9.26%	0.015	17.78	13.92	10.80	233.34	232.34	1.00
EX2	EX3	0.33	1.15	92	5.20	5	1.57	5.47	18	8.74%	0.015	28.09	15.27	288.93	230.36	205.11	25.25
EX3	EX4	2.44	3.59	92	5.20	5	11.59	17.06	18	4.64%	0.015	20.46	11.12	218.04	205.11	195.00	10.11
EX4	EX5	1.23	4.82	92	5.20	5	5.84	22.90	18	4.29%	0.015	19.68	10.70	103.70	195.00	190.55	4.45
EX5	EX6	1.67	6.49	92	5.20	5	7.93	30.83	24	1.73%	0.015	26.94	8.24	147.08	190.55	188.00	2.55
EX6	EX7	33.34	39.83	92	5.20	15	140.99	171.82	96	2.94%	0.013	1632.88	31.21	151.21	188.00	183.55	4.45

LEGEND:

- STORM STRUCTURE
- DRAINAGE AREA TO LIMITS OF ANALYSIS

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COMMONWEALTH OF VIRGINIA
ANDREA SPRUCH
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SEPTEMBER 15, 2022
PROFESSIONAL ENGINEER

DEVELOPMENT SPECIAL USE PERMIT
EDGEWOOD TOWNS
6336 STEVENSON AVENUE
CITY OF ALEXANDRIA, VIRGINIA

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STORM OUTFALL ANALYSIS

SHEET 10 OF 15
FILE: 21-52

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LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE.

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA. © 2022 R.C. FIELDS & ASSOCIATES, INC.

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DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. _____

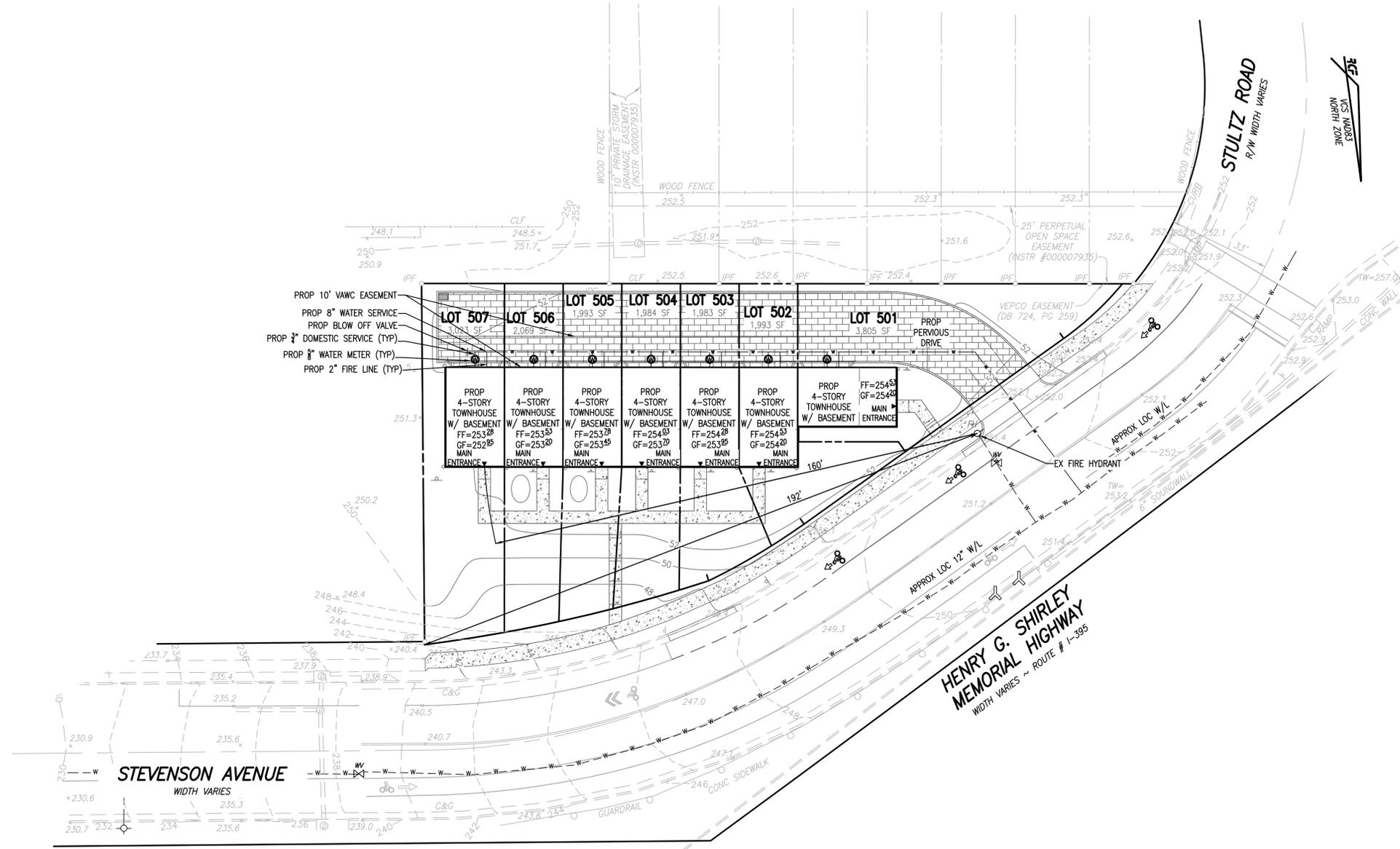
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CHAIRMAN, PLANNING COMMISSION _____ DATE _____

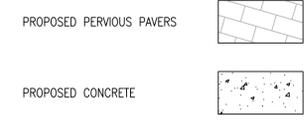
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HATCH LEGEND



FIRE PROTECTION INFORMATION:

- ALL NEW CONSTRUCTION SHALL COMPLY WITH THE CURRENT EDITION OF THE UNIFORM STATEWIDE BUILDING CODE (USBC).
1. A FIRE PREVENTION CODE PERMIT IS REQUIRED FOR THE PROPOSED OPERATION.
 2. THE PROPOSED TOWNHOUSES ARE TO BE FULLY SPRINKLERED.
 3. A FINAL FIRE FLOW ANALYSIS REPORT, IN ACCORDANCE WITH CITY STANDARDS AND PREPARED BY A LICENSED ENGINEER, IS TO BE SUBMITTED TO THE CITY OF ALEXANDRIA FIRE/EMS DEPARTMENT. VERIFICATION THAT THE PROPOSED INFRASTRUCTURE IS CAPABLE OF PROVIDING THE REQUIRED FIRE FLOW IS TO BE PROVIDED IN THE REPORT.

FIRE HYDRANT NOTE:

THE NEAREST FIRE HYDRANT IS SHOWN ON THIS SHEET, ALONG STEVENSON AVENUE. PER FIRE CODE SECTION 18.5.3, THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO THE CLOSEST POINT ON A BUILDING FOR A BUILDING THAT IS NOT A DETACHED ONE OR TWO FAMILY DWELLING IS 400'; THEREFORE, SINCE THE DISTANCE PROVIDED ON THIS DEVELOPMENT IS 160', NO FIRE HYDRANT INSTALLATION IS NEEDED. ADDITIONALLY, PER SECTION 4-2-21-C101.1.20 OF THE CITY CODE, THE MAXIMUM DISTANCE MEASURED FROM THE HYDRANT TO THE MOST REMOTE PART OF VEHICULAR ACCESS TO THE SITE IS 300 FEET. AS SHOWN, THE EXISTING HYDRANT IS APPROXIMATELY 192' FROM THE MOST REMOTE PART OF VEHICULAR ACCESS ALONG THE RIGHT-OF-WAY.



BUILDING CODE ANALYSIS:

USE:	RS
USE GROUP:	TOWNHOUSES
TYPE OF CONSTRUCTION:	V-B
NUMBER OF STORIES:	4 STORIES
FLOOR AREA (1ST FLOOR):	568 SF (LOT 501) 559 SF EACH (LOT 502-507)
FLOOR AREA (2ND FLOOR):	533 SF (LOT 501) 528 SF EACH (LOT 502-507)
FLOOR AREA (3RD FLOOR):	457 SF (LOT 501) 452 SF EACH (LOT 502-507)
FLOOR AREA (4TH FLOOR):	273 SF (LOT 501) 255 SF EACH (LOT 502-507)
BUILDING HEIGHT:	45.0'
FIRE SUPPRESSION/DETECTION:	FULLY SPRINKLERED 13D (NO FDC REQUIRED)

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FIRE SAFETY PLAN

SHEET **15** OF **15**
 FILE: **21-52**

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DIRECTOR _____ DATE _____

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SITE PLAN NO. _____

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CHAIRMAN, PLANNING COMMISSION _____ DATE _____

DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE _____

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