

**GENERAL NOTES**

OWNER/ DEVELOPER:  
TOWN OF VIENNA  
DEPARTMENT OF PUBLIC WORKS  
127 CENTER STREET, SOUTH  
VIENNA, VA 22180

1. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, THEY SHOULD IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE UTILITY AND ASSURE THE CONTINUANCE OF SERVICE. THE ENGINEER DOES NOT CERTIFY TO THE LOCATION OR EXISTENCE OF ANY UNDERGROUND UTILITY SHOWN ON THIS PLAN. THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 811 PRIOR TO COMMENCEMENT OF ANY EXCAVATION.

2. TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON THE FIELD RUN SURVEY PERFORMED BY URBAN, LTD IN AUGUST, 2021. HORIZONTAL DATUM IS NAD1983 AND VERTICAL DATUM IS NAVD1988.

3. SUBSURFACE UTILITIES SHOWN PER MISS UTILITY MARK OUT FIELD LOCATION.

4. NO TITLE REPORT FURNISHED.

5. CLEARING AND GRADING SHALL BE IN ACCORDANCE WITH THE GRADING AND EROSION CONTROL PLANS AND STANDARDS SET FORTH BY THE VIRGINIA EROSION AND SEDIMENTATION CONTROL HANDBOOK. ALL LAND ON OR OFF-SITE WHICH IS DISTURBED BY THIS IMPROVEMENT AND WHICH IS NOT BEING BUILT UPON OR SURFACED SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION.

6. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING TRUCKS AND/OR OTHER EQUIPMENT PRIOR TO ENTERING THE TOWN STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, ALLAY DUST AND TO TAKE WHATEVER MEASURES NECESSARY TO INSURE THAT THE ROAD IS MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES. SEE SILTATION AND EROSION CONTROL PLANS/NARRATIVE FOR ADDITIONAL INFORMATION.

7. THE CONTRACTOR SHALL PROTECT AND ADJUST, AS REQUIRED, ALL EXISTING MANHOLES AND VALVES WITHIN THE LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE THAT MAY OCCUR BY HIS FAILURE TO PROPERLY PROTECT THE EXISTING MANHOLES AND VALVES.

8. IF APPLICABLE, ANY UTILITIES AND UTILITY POLES TO BE BRACED DUE TO THIS IMPROVEMENT SHALL BE DONE AT THE EXPENSE OF THE CONTRACTOR PURSUANT TO THE TOWN'S PAY ITEM SCHEDULE. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND SCHEDULING ALL UTILITY WORK REQUIRED. THE TOWN WILL COORDINATE WITH DOMINION VIRGINIA POWER IN REGARDS TO RELOCATING ANY POLES DUE TO THIS IMPROVEMENT.

9. ALL STORM SEWER STRUCTURES AND PIPING WITHIN THE AREA OF CONSTRUCTION SHALL BE CLEANED OUT FOLLOWING THE COMPLETION OF CONSTRUCTION.

10. ANY DAMAGE TO EXISTING STREETS, PUBLIC UTILITIES OR PRIVATE UTILITIES, INCLUDING BUT NOT LIMITED TO, VALVE BOXES, WATER METER LIDS, FRAMES OR CROCKS AND WATER LATERALS, DUE TO THIS IMPROVEMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

11. ALL CONSTRUCTION DUE TO THIS IMPROVEMENT IS TO BE PERFORMED IN ACCORDANCE WITH THE STANDARDS SET FORTH BY THE STATE OF VIRGINIA AND THE TOWN OF VIENNA.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE TOWN AND THE ENGINEER/SURVEYOR OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS OBTAINED FROM TOWN OF VIENNA, OR ANY OTHER AUTHORITY ISSUING PERMITS.

13. A SMOOTH GRADE SHALL BE MAINTAINED FROM CENTERLINE TO THE CURB AND GUTTER TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR PONDING OF WATER ON ANY ROAD OR PARKING AREA.

14. PLANS MAY NOT INCLUDE MINOR SITE FEATURES SUCH AS MAILBOXES, PRIVATE LIGHTING FIXTURES, SIGNS, ETC. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM A PRE-CONSTRUCTION SURVEY OF THE PROPOSED STREETS TO LOCATE THESE PRIVATE FEATURES AND RELOCATE THEM AS NECESSARY.

15. THE CONTRACTOR SHALL INSPECT ALL EXISTING UTILITIES FOR NECESSARY REPAIRS PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES. IF ANY SUCH UTILITY REPAIRS ARE REQUIRED, THE CONTRACTOR WILL COORDINATE THESE REPAIRS WITH THE TOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING OR PROPOSED UTILITIES THAT OCCURS DURING CONSTRUCTION ACTIVITIES. DAMAGED UTILITIES SHALL BE REPAIRED IN A TIMELY FASHION TO LIMIT THE INTERRUPTION OF SERVICE TO THE AFFECTED RESIDENTS.

16. THE CONTRACTOR SHALL NOTIFY THE TOWN AND ENGINEER OF ANY DISCREPANCIES BETWEEN EXISTING FIELD CONDITIONS AND THOSE SHOWN ON THE CONTRACT DOCUMENTS THAT IMPACT PROPOSED CONSTRUCTION ACTIVITIES.

17. ALL CONCRETE AND PAVEMENT DEMOLITION/REMOVAL SHALL EMPLOY SAW CUT JOINTS.

18. ROOT PRUNING SHALL BE TO THE DEPTH OF EXCAVATION, OR 24 INCHES, WHICHEVER IS LESS. A TRENCHER OR VIBRATORY PLOW SHALL BE USED TO PRUNE ALL ROOTS. ROOTS OVER ONE AND ONE-HALF INCHES (1.5") IN DIAMETER SHALL BE CLEANLY CUT BY HAND.

19. A ROOT BIOSTIMULANT SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS TO ALL TREES THAT ARE ROOT PRUNED.

20. CONCRETE PIPE TO BE CLASS III UNLESS OTHERWISE SPECIFIED.

21. SIGHT DISTANCE TO BE MAINTAINED BY CONTRACTOR DURING CONSTRUCTION.

22. THE CONTRACTOR SHALL PROVIDE A SMOOTH GRADE FROM THE LIMITS OF DISTURBANCE TO THE BACK OF SIDEWALK.

23. VDOT STD. IS-1, INLET SHAPING, TO BE UTILIZED ON ALL PROPOSED OR MODIFIED EXISTING STORM STRUCTURES.

24. AIR QUALITY PERMIT NOT REQUIRED PER STATE AIR POLLUTION CONTROL BOARD REGULATION ACOR VII, SECTION 2.706 (G)(2)(1).

25. ALL FINISHED GRADING, SEEDING, SODDING OR PAVING SHALL BE DONE IN SUCH A MANNER TO PRECLUDE THE PONDING OF WATER ON THE SITE.

26. THE CONTRACTOR SHALL INSURE THAT ALL CONSTRUCTION CONFORMS WITH CURRENT FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS, INCLUDING FEDERAL REGULATIONS CONTAINED WITHIN "THE AMERICANS WITH DISABILITIES ACT," ENACTED ON JULY 26, 1990 (AKA "ADA").

27. ALL EARTHWORK OPERATIONS SHALL CONFORM TO THE GEOTECHNICAL NOTES AND DETAILS IF PROVIDED.

28. PRIOR TO ANY LAND DISTURBANCE ACTIVITY WITHIN THE AREA OF WASHINGTON GAS, AND F.C.W.A. MAJOR TRANSMISSION LINES, THE CONTRACTOR MUST NOTIFY THESE UTILITY COMPANIES IN ADVANCE TO ASSURE THEY CAN INSPECT AND APPROVE THE CONSTRUCTION ACTIVITY.

29. NO VISIBLE EVIDENCE OF ANY PLACE OF BURIAL OR HISTORIC SITE WAS ENCOUNTERED ON THE PROPERTY BY THIS FIRM. IF ANY GRAVE YARD OR HISTORIC SITE IS ENCOUNTERED DURING CONSTRUCTION THE CONTRACTOR SHALL CEASE WORK IN THE AREA IMMEDIATELY AND NOTIFY THE OWNER AND ENGINEER.

30. ALL CONSTRUCTION INVOLVING PROBLEM SOIL MUST BE PERFORMED UNDER THE FULL-TIME INSPECTION OF THE GEOTECHNICAL ENGINEER.

31. THE GEOTECHNICAL ENGINEER SHALL FURNISH A WRITTEN OPINION TO THE TOWN AS TO WHETHER OR NOT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS PRIOR TO THE ISSUANCE OF ANY OCCUPANCY OR USE PERMIT.

32. ALL CLEARING, GRADING AND ACTUAL CONSTRUCTION ACTIVITY SHALL BE LIMITED TO BETWEEN THE HOURS OF 7:00 A.M. AND 6:00 P.M., MONDAY THROUGH FRIDAY, AND BETWEEN 8:00 A.M. AND 6:00 P.M. SATURDAY. CONSTRUCTION ACTIVITY ON SUNDAY SHALL BE PROHIBITED. CONTRACTOR SHALL CONFIRM HOURS WITH TOWN OF VIENNA PRIOR TO CONSTRUCTION AND ADJUSTMENTS MAY BE MADE DUE TO CLOSE PROXIMITY OF A NEARBY SCHOOL.

**TOWN OF VIENNA NOTES**

1. NOTIFY THE TOWN OF VIENNA DEPARTMENT OF PUBLIC WORKS AT 703-255-6380 WHEN WORK IS TO BE STARTED.

2. ALL CONTRACTOR GENERATED DEBRIS MUST BE HAULED AWAY BY THE CONTRACTOR OR OWNER.

3. ALL RUNOFF MUST SHEET FLOW ACROSS PROPERTY LINES UNLESS APPROVED OTHERWISE BY THE DIRECTOR OF PUBLIC WORKS.

4. ALL PRIVATE STORM DRAINS (I.E. ROOF DRAINS, SLUMP PUMP ETC.) MUST DAYLIGHT AT A MINIMUM OF 10 FEET FROM A PROPERTY LINE.

5. PRIOR TO THE REMOVAL OF ANY TREES, THE APPLICANT OR THEIR REPRESENTATIVE SHALL CONTACT THE TOWN OF VIENNA ARBORIST AT 703-255-6360 TO COORDINATE HAVING THE TOWN ARBORIST ONSITE DURING ALL TREE REMOVAL.

6. TREE PROTECTION FOR ANY TREE, AS SHOWN ON PLAN, MUST BE INSTALLED PRIOR TO ANY SITE WORK.

**ROAD CONSTRUCTION NOTES**

1. ALL CONSTRUCTION SHALL CONFORM TO CURRENT TOWN OF VIENNA AND VDOT STANDARDS AND SPECIFICATIONS.

2. THE LOCATIONS OF EXISTING UTILITIES ON THESE DRAWINGS ARE GENERALLY APPROXIMATE. IT IS THE CONTRACTOR WHO IS RESPONSIBLE TO ENSURE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES IN THE AREA OF CONSTRUCTION PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL NOTIFY THE OWNER AND URBAN ENGINEERING & ASSOC. OF ANY POTENTIAL CONFLICTS PRIOR TO COMMENCING CONSTRUCTION.

3. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND MAKE ALL INSPECTIONS NECESSARY IN ORDER TO DETERMINE THE FULL EXTENT OF WORK REQUIRED TO MAKE THE COMPLETED WORK CONFORM TO THE DRAWINGS AND SPECIFICATIONS.

4. WHERE CONFLICTS REQUIRE RELOCATION OF EXISTING UTILITIES (E.G. AT&T, MCI, C&P, VEPCO, MEDIA GENERAL) UTILITY COMPANIES SHALL BE NOTIFIED.

5. ALL EXISTING SIGNS, FENCES, ETC. DISTURBED BY THIS CONSTRUCTION SHALL BE RELOCATED BY THE CONTRACTOR AS NECESSARY PER TOWN OF VIENNA REQUIREMENTS.

6. ALL EXISTING TOWN OF VIENNA TRAFFIC CONTROL EQUIPMENT WILL BE RELOCATED BY THE CONTRACTOR AS NECESSARY PER VDOT REQUIREMENTS.

7. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS AND UTILITIES WHICH OCCUR AS A RESULT OF PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO THE SITE.

8. ANY EXISTING C&G AND PAVEMENT TO REMAIN THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED/REPAIRED TO TOWN OF VIENNA SATISFACTION. C&G TO BE SAW CUT, OTHERWISE REMOVE TO THE NEAREST JOINT.

9. THE CONTRACTOR SHALL CONTACT MISS UTILITY COMPANY REPRESENTATIVE, REVIEW TEST PIT DATA AND ANY OTHER OPERATIONS AVAILABLE TO ENSURE ALL EXISTING UTILITIES IN THE AREA OF CONSTRUCTION ARE SHOWN ON THE PLANS PRIOR TO CONSTRUCTION.

10. WHERE MANHOLES ARE TO BE PLACED IN THE ROAD R/W, THE TOPS SHALL BE OFFSET TO ASSURE THAT THEY AREA POSITIONED TO MINIMIZE IMPACT TO VEHICULAR WHEEL PATHS.

11. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE OWNER OF COMPLYING WITH OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.

12. ALL FILL MATERIAL REQUIRED TO RAISE GRADES AND UNDER SLABS, WHICH MAY CONSIST OF APPROVED ONSITE SOILS AND/OR OFFSITE BORROW MATERIAL, SHALL BE FREE OF ALL DEBRIS, ORGANIC MATERIAL, AND CLUMPS AND SHALL BE ADJUSTED TO THE PROPER MOISTURE CONTENT BEFORE BEING COMPACTED IN 8" MAXIMUM LAYERS. EACH LAYER TO BE COMPACTED TO 95% DENSITY MODIFIED PROCTOR PER ASTM D1557. BASE AND SUBBASE MATERIAL SHALL BE COMPACTED TO THE REQUIREMENTS OF SECTIONS 308.03, 309.04, AND 309.05 OF VDOT SPECIFICATIONS. SUBGRADE COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 305.03.

13. STANDARD UD-2, UD-3, & UD-4 TO BE UTILIZED IN CONSTRUCTION WITH STANDARD PIPE UNDER DRAIN. UD-2, UD-3, & UD-4 TO BE INSTALLED IN ACCORDANCE WITH VDOT SECTION 108.02, 108.03, AND 108.05.

14. STANDARD GUARDRAILS AND/OR HANDRAILS SHALL BE INSTALLED AT HAZARDOUS LOCATIONS AS DESIGNATED DURING FIELD REVIEW BY THE TOWN OF VIENNA INSPECTOR.

15. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL. IF REQUIRED, THE DEVELOPER SHALL SUBMIT A SIGNING, STRIPING AND/OR SIGNALIZATION PLAN TO THE VDOT LAND DEVELOPMENT SECTION A MINIMUM OF 30 DAYS PRIOR TO PERMIT APPLICATION. THE DEVELOPER SHALL NOT COMMENCE CONSTRUCTION OF ANY PAVEMENT COURSE WITHOUT AN APPROVED STRIPING PLAN.

16. A 4" (MIN.) LAYER OF STONE IS REQUIRED BENEATH CURB AND GUTTER.

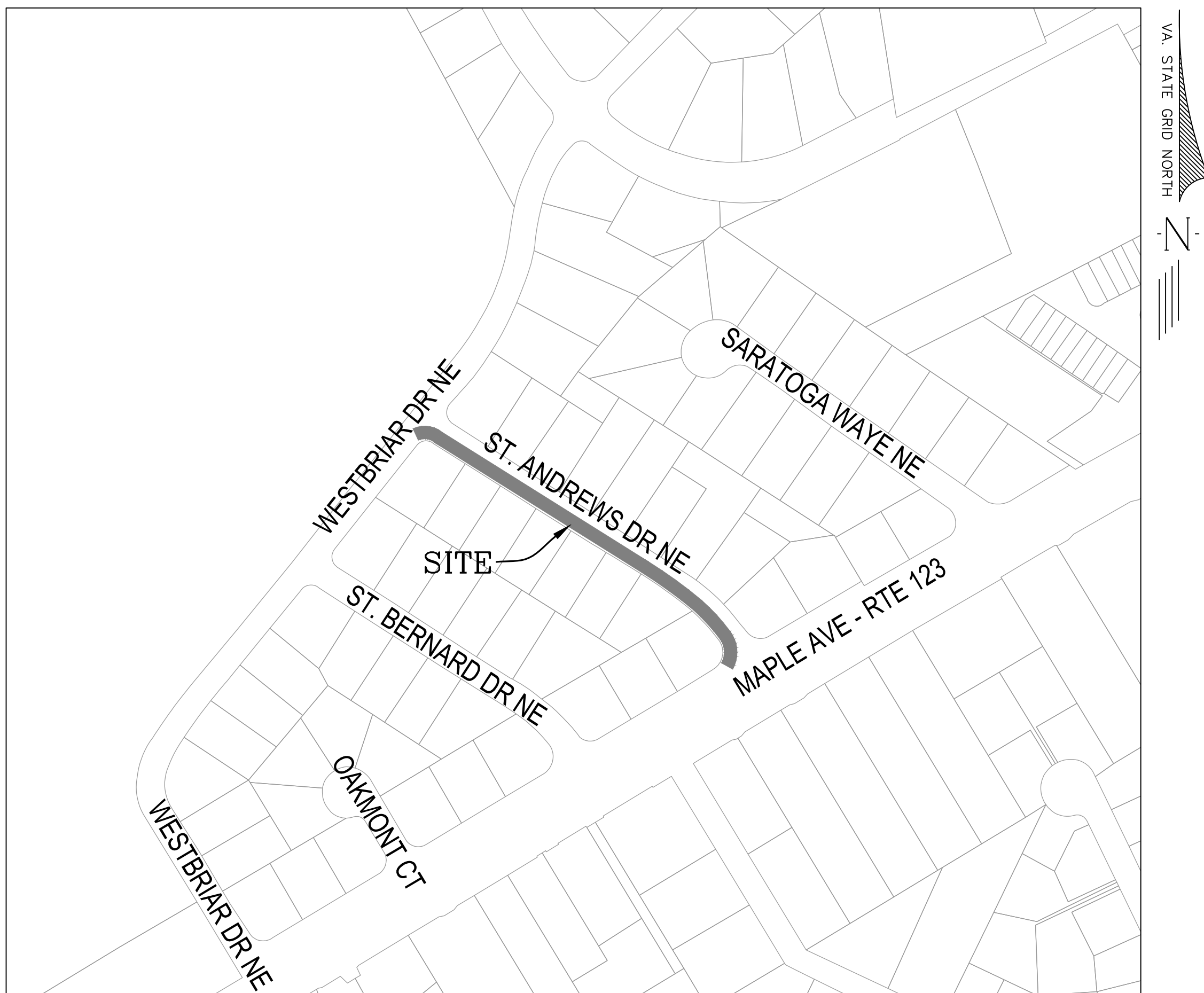
17. ADDITIONAL DITCH LININGS OR SILTATION AND EROSION CONTROL MEASURES SHALL BE PROVIDED, AS DETERMINED NECESSARY BY THE TOWN DURING FIELD REVIEW. ALL COSTS SHALL BE ASSUMED BY THE CONTRACTOR.

18. OVERLAY OF EXISTING PAVEMENT SHALL BE MINIMUM OF 1.25" DEPTH. ANY COSTS ASSOCIATED WITH PAVEMENT OVERLAY, OR THE MILLING OF EXISTING PAVEMENT TO OBTAIN REQUIRED DEPTH, SHALL BE ASSUMED BY THE CONTRACTOR.

# TOWN OF VIENNA DEPARTMENT OF PUBLIC WORKS FAIRFAX COUNTY, VIRGINIA

## SAINT ANDREWS DRIVE NE SIDEWALK IMPROVEMENT PLAN

### 100% DESIGN CONSTRUCTION DRAWINGS



VICINITY MAP  
SCALE : 1" = 200'

**OWNER/DEVELOPER:**



TOWN OF  
**VIENNA**  
*since 1890*

TOWN OF VIENNA  
DEPARTMENT OF PUBLIC WORKS  
127 CENTER ST. S.  
VIENNA, VA 22180

**SURVEY NOTES**

TOPOGRAPHICAL SURVEY PERFORMED BY FIELD RUN SURVEY BY URBAN, LTD PERFORMED IN OCT, 2023.

VERTICAL  
NOTE: ELEVATIONS SHOWN HEREON ARE BASED ON STATIC GPS OBSERVATIONS AS PROCESSED BY THE NATIONAL GEODETIC SURVEY, ONLINE POSITIONING USER SERVICE (OPUS), AND ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM (NAV) OF 1988.

HORIZONTAL  
NOTE: BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON STATIC GPS OBSERVATIONS AS PROCESSED BY THE NATIONAL GEODETIC SURVEY, ONLINE POSITIONING USER SERVICE (OPUS), AND ARE REFERENCED TO VIRGINIA STATE GRID NORTH ZONE NAD 83 - US SURVEY FOOT.

UTILITIES  
UNDERGROUND UTILITIES WERE PAINTED BY UTILITIES SEARCH, INC. AND MAPPED INTO THE BASE BY URBAN, LTD.

## SHEET INDEX

- COVER SHEET
- NOTES AND DETAILS
- EXISTING CONDITIONS AND DEMOLITION PLAN
- SITE PLAN
- PAVEMENT IMPROVEMENT PLAN
- EROSION AND SEDIMENT CONTROL PLAN PH I & PH II
- EROSION AND SEDIMENT CONTROL NARRATIVE AND DETAILS
- VRRM SPREADSHEET & BMP NARRATIVE

**NOTICE REQUIRED**

CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION.

CONTACT "MISS UTILITY" AT  
1-800-552-7001  
FOR THESE UTILITIES

VIRGINIA ELECTRIC & POWER CO.	COLONIAL PIPELINE CO.
A.T. & T. CO.	FAIRFAX CO. WATER AUTHORITY
COLUMBIA GAS TRANSMISSION CO.	WASHINGTON GAS LIGHT CO.
FAIRFAX CO. SAN SEWER DIV.	PRINCE WILLIAM ELEC. CO-OP.
TRANSCO GAS PIPELINE CO.	PLANTATION PIPELINE CO.
COLUMBIA GAS OF VIRGINIA	C & P TELEPHONE CO.
CONTINENTAL TELEPHONE OF VIRGINIA	

**CONTACT THESE UTILITIES**

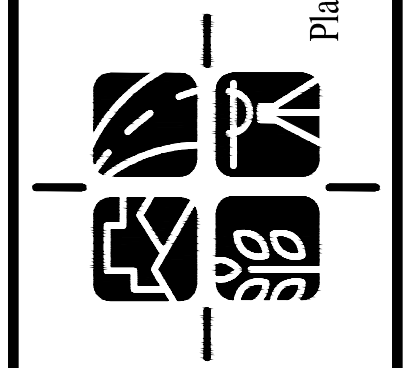
TRI-COUNTY ELEC. CO-OP 1-777-2151	LOUDOUN WATER 571-281-7880
FALLS CHURCH WATER SER. 1-241-5078	FAIRFAX CITY WATER SER. 385-7916

EMERGENCY DIAL 911  
POLICE - FIRE - RESCUE  
777-1021 777-2222

No.	DATE	DESCRIPTION	REVISIONS
3	07/02/24	100% PLAN	
2	05/16/24	95% PLAN	
1	04/09/24	30% PLAN	

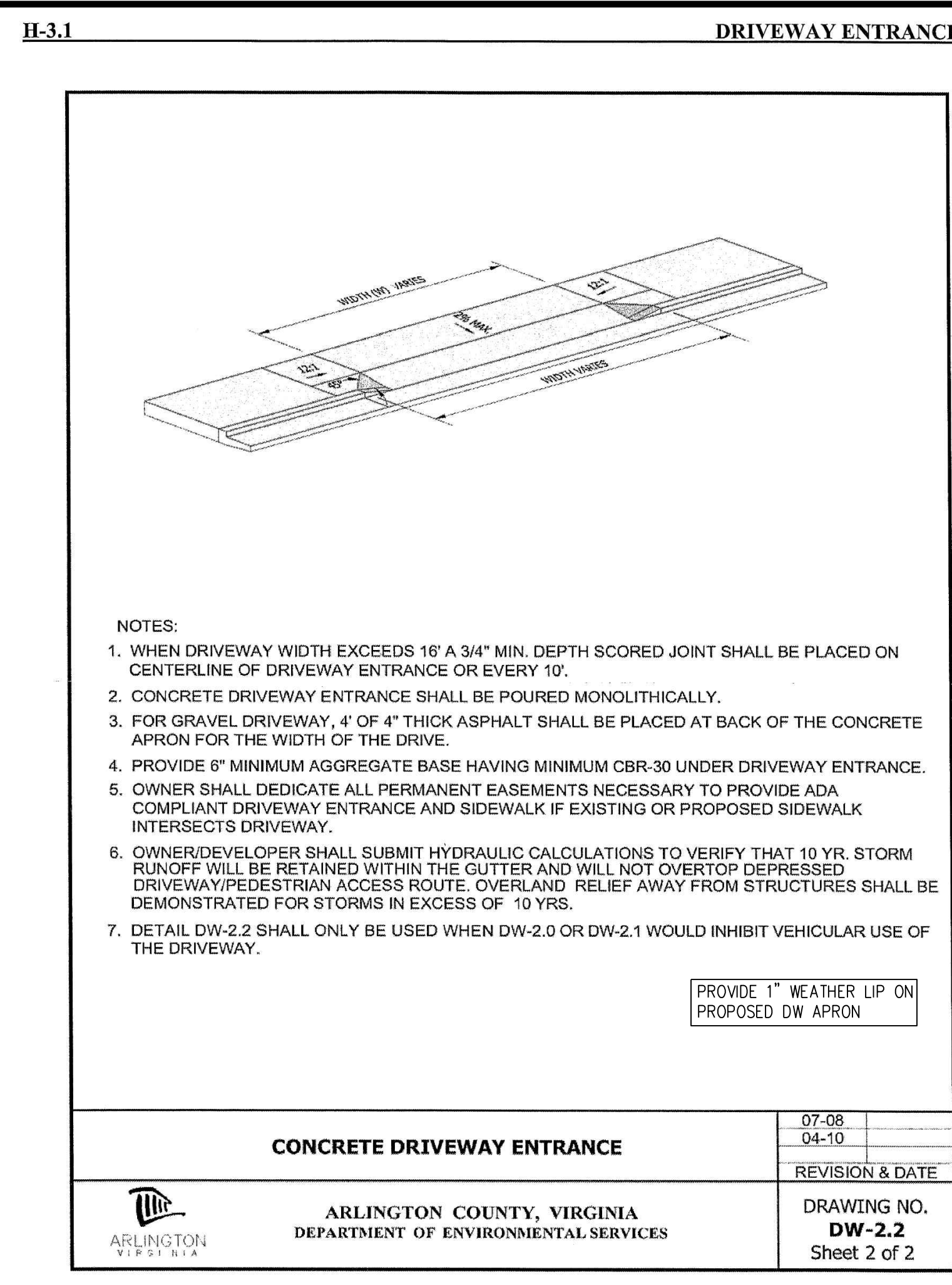
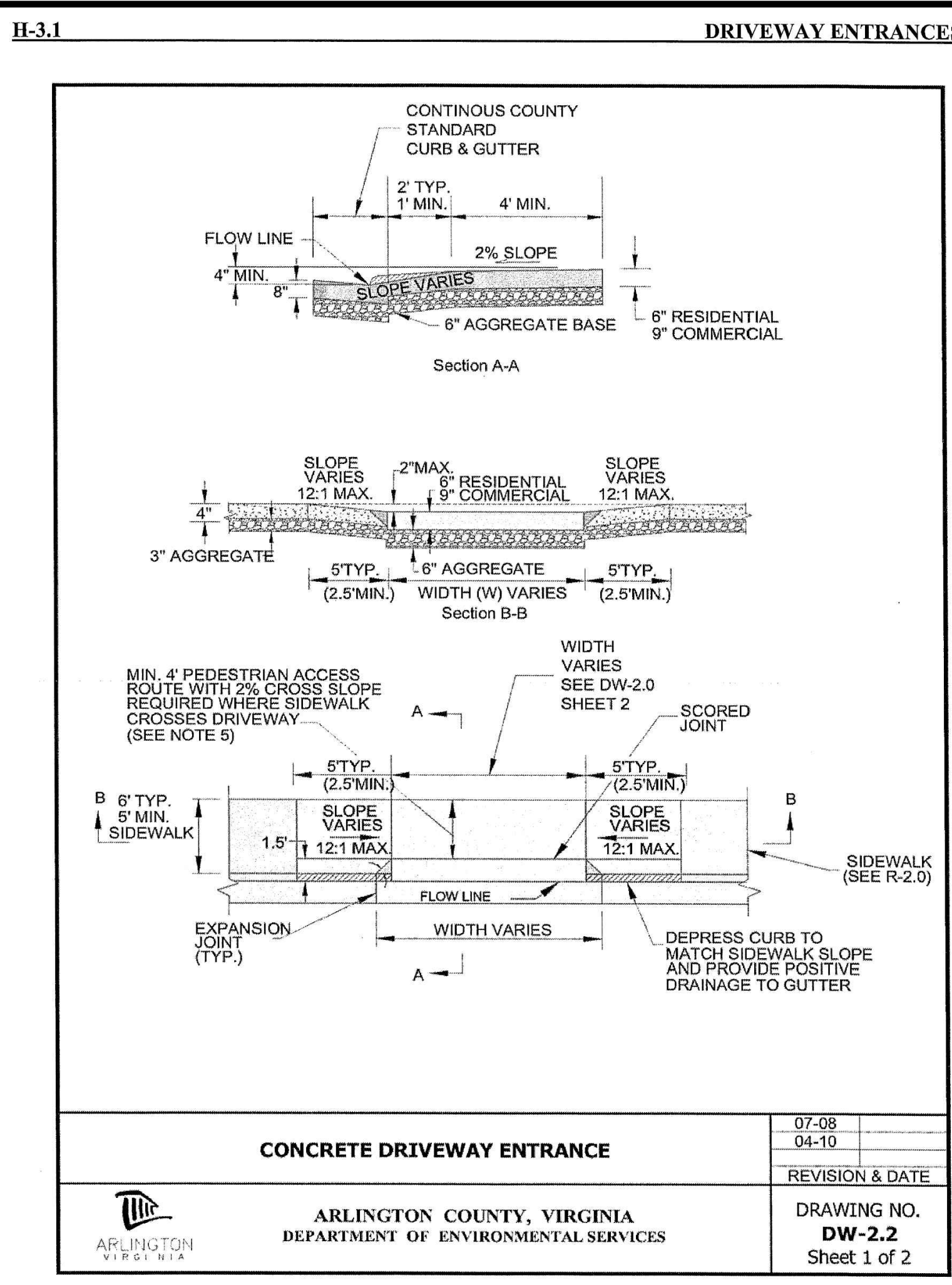
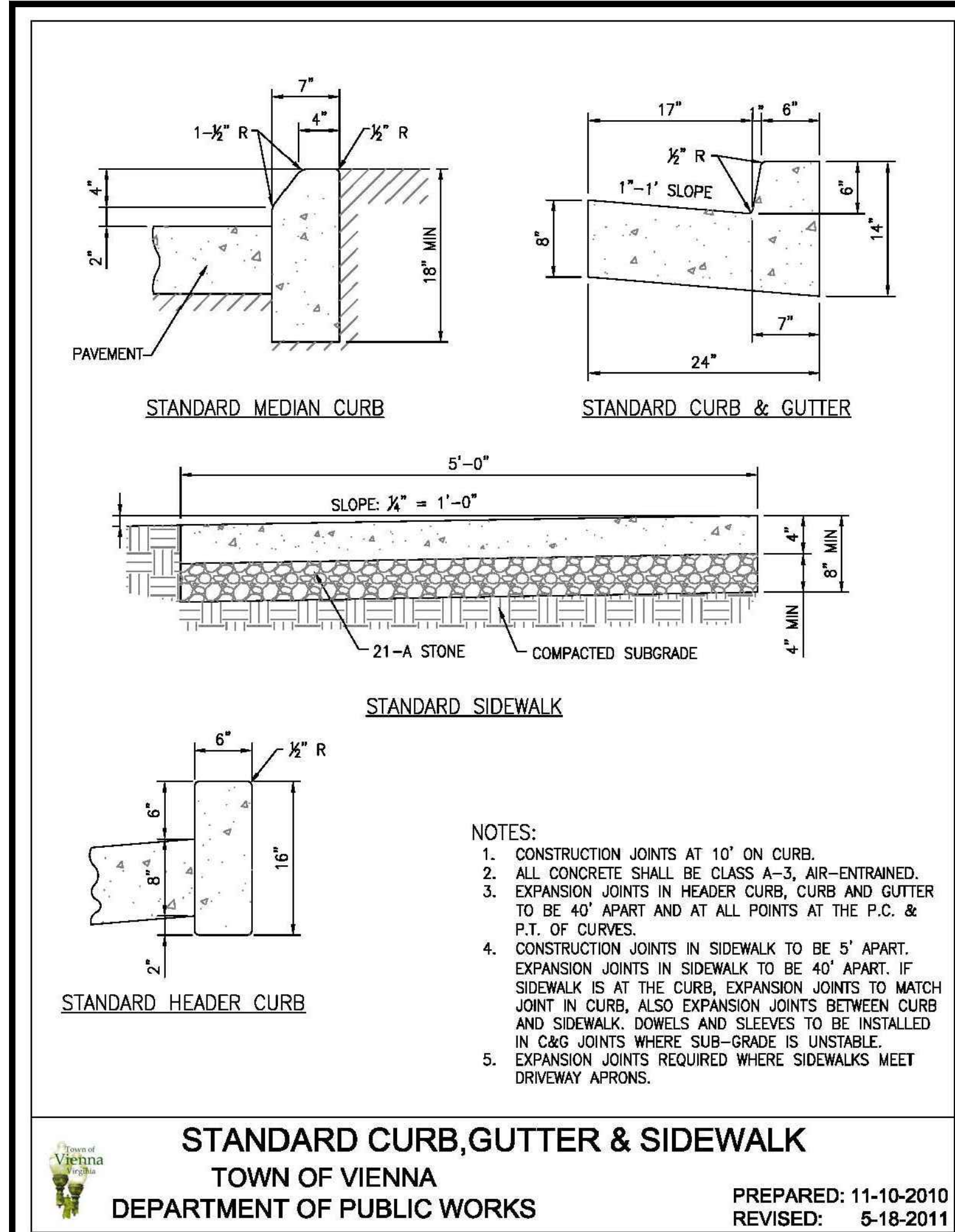
PLAN DATE
04/09/2024
05/16/2024
07/02/2024

Urban, Ltd.  
7112 Littleton Way, Tompkins  
Annandale, Virginia 22003  
Tel. 703.642.8080  
Fax. 703.642.8251  
www.urban-ld.com



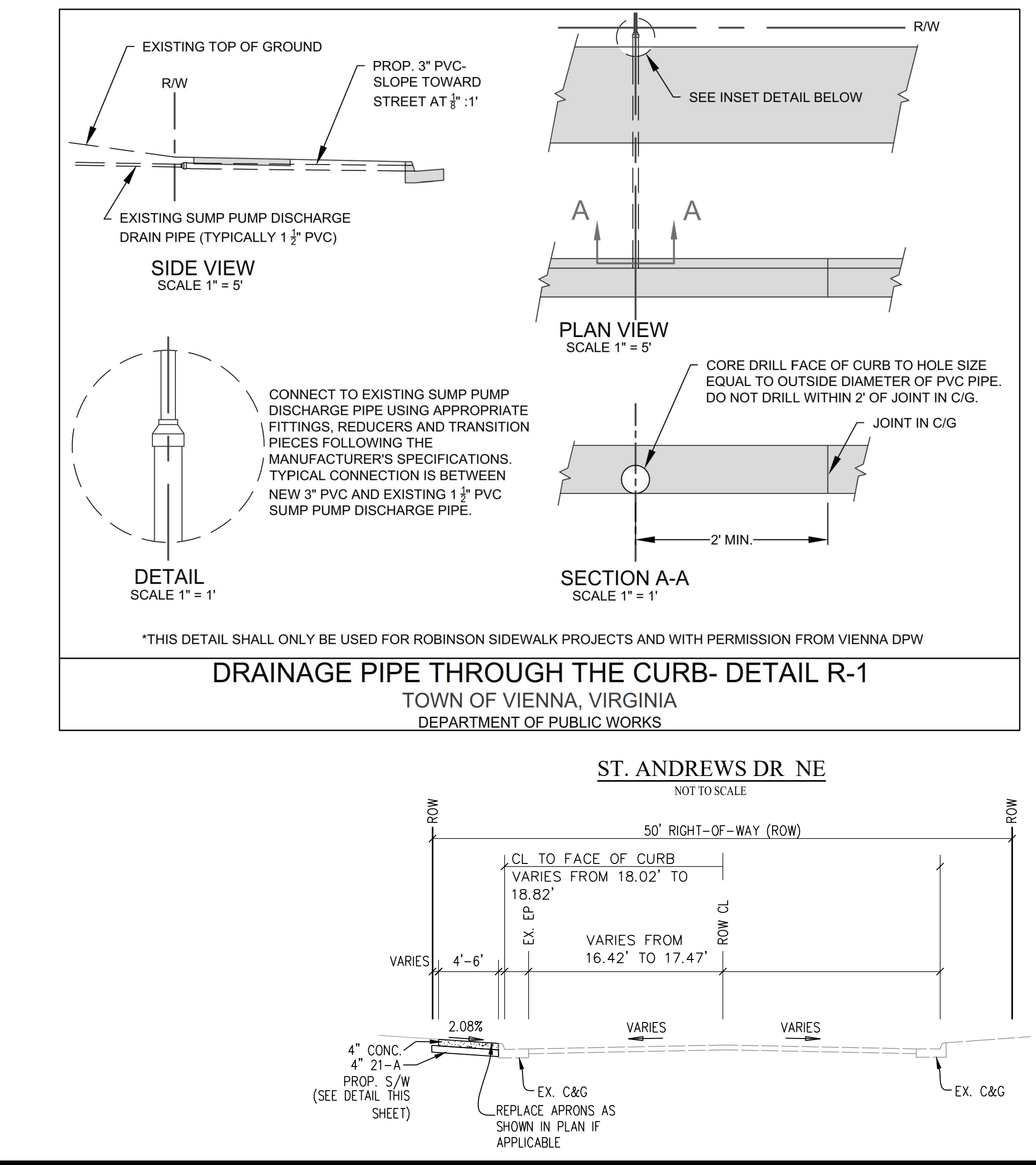
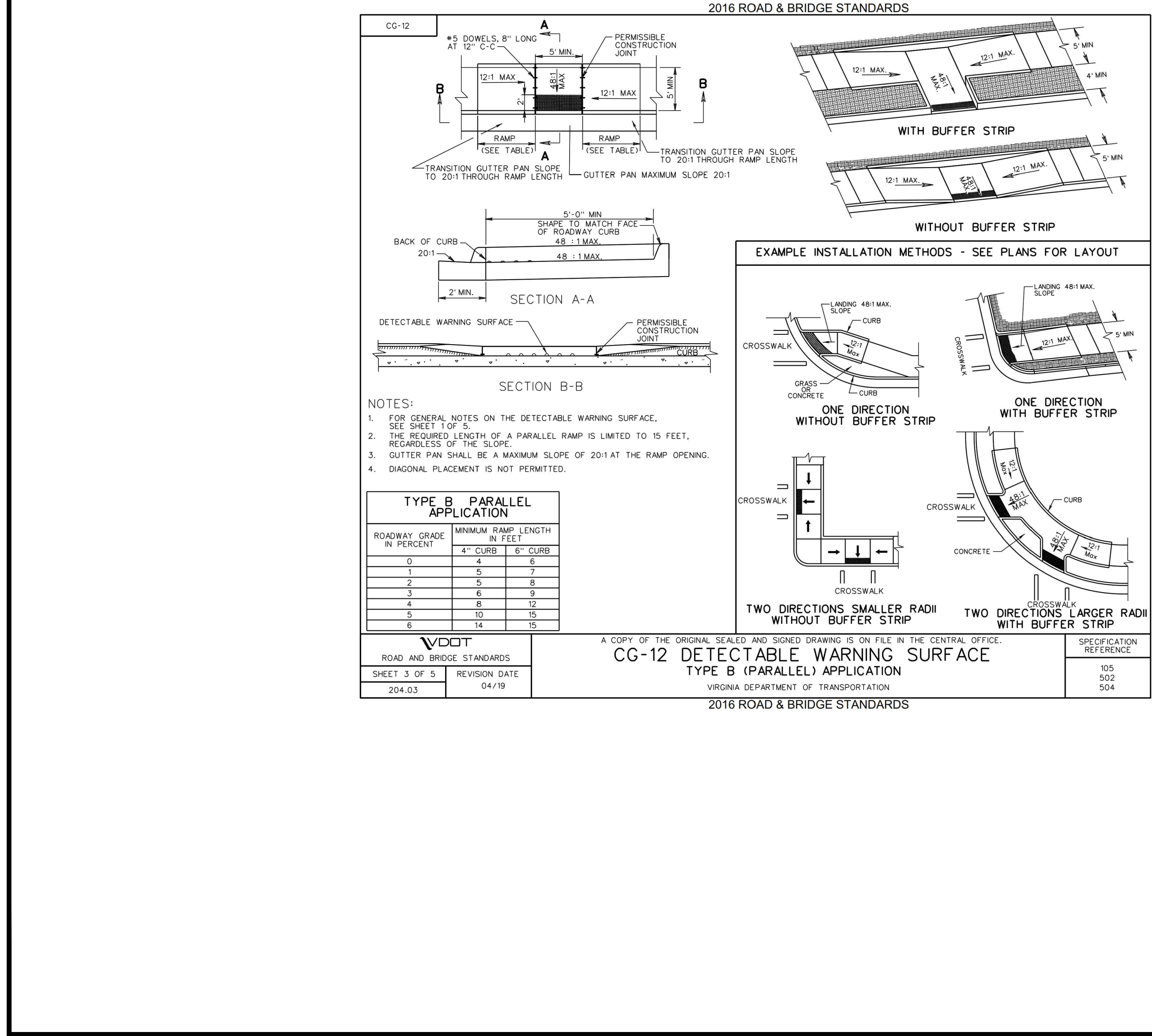
COMMONWEALTH OF VIRGINIA  
C. RYAN CONNOR  
Lic. No. 039531  
07/02/2024  
PROFESSIONAL ENGINEER

COVER SHEET  
SAINT ANDREWS DRIVE NE  
SIDEWALK IMPROVEMENT PLAN  
TOWN OF VIENNA  
FAIRFAX COUNTY, VIRGINIA  
C.I. N/A  
SCALE: AS NOTED  
DATE: APRIL, 2024  
SHEET 1 OF 8  
FILE No. PP-2531



**LEGEND**

EXISTING	DESCRIPTION	PROPOSED
---	INDEX CONTOUR	---
---	INTERMEDIATE CONTOUR	---
---	EDGE OF PAVEMENT	---
---	CURB AND GUTTER	---
---	TRANSITION FROM SPILL TO CATCH CURB	---
---	HEADER CURB	---
---	PROPERTY LINE	---
---	DEPARTING PROPERTY LINE	---
---	LOT LINE	---
---	RIGHT-OF-WAY	---
---	CENTERLINE	---
---	FLOOD PLAIN	---
---	LIMIT OF DISTURBANCE	---
---	TREE LINE	---
---	FLOW LINE OF SWALE	---
---	STREAM	---
---	OVERLAND RELIEF PATHWAY	---
---	FENCE LINE	---
---	EASEMENT	---
---	WATER LINE	---
---	REUSE WATER MAIN	---
---	WATER VALVE	---
---	REDUCER	---
---	SANITARY SEWER	---
---	STORM SEWER	---
---	ELECTRIC LINE	---
---	COMMUNICATION LINE	---
---	GAS LINE	---
---	IRRIGATION LINE	---
---	OVERHEAD POWER LINES	---
---	FIBER OPTIC LINE	---
---	UNKNOWN LINE	---
---	SPOT ELEVATION	---
---	UTILITY POLE	---
---	GUY WIRE	---
---	MAILBOX	---
---	SIGN	---
---	SANITARY SEWER IDENTIFIER	---
---	STORM DRAIN IDENTIFIER	---
---	EASEMENT IDENTIFIER	---
---	WATER METER	---
---	WATER VALVE	---
---	FIRE HYDRANT	---
---	COMMUNICATION VAULT (MANHOLE)	---
---	COMMUNICATION PEDESTAL	---
---	PARKING INDICATOR	---
---	INDICATES THE NUMBER OF TYPICAL PARKING SPACES (TRAFFIC COUNT)	---
---	VEHICLES PER DAY (TRAFFIC COUNT)	---
---	TEST PIT REQUIRED	---
---	CRITICAL SLOPE	---
---	SLOPES TO BE STABILIZED PURSUANT TO VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK	---
---	HANDICAP RAMP	---
---	DENOTES LOCATION OF STANDARD RAMP CONSTRUCTION	---
---	DENOTES CLEAR SIGHT TRIANGLE	---
---	DECIDUOUS TREE	---
---	BENCHMARK	---
---	NEW ASPHALT	---
---	ASPHALT TRAIL	---
---	CONCRETE SIDEWALK	---
---	END WALLS	---
---	END SECTIONS	---
---	STOP SIGN	---
---	STREET SIGN	---
---	GEO	---



PLAN DATE: 04/09/2024, 05/16/2024, 07/02/2024

Urban Ltd. 7712 Old Lee Turnpike, Annandale, Virginia 22003, Tel: 703.642.8080, Fax: 703.642.8251, www.urban-ltd.com

Planners - Engineers - Landscape Architects - Land Surveyors

**urban**

COMMONWEALTH OF VIRGINIA PROFESSIONAL ENGINEER

C. RYAN CONNOR Lic. No. 039531 07/02/2024

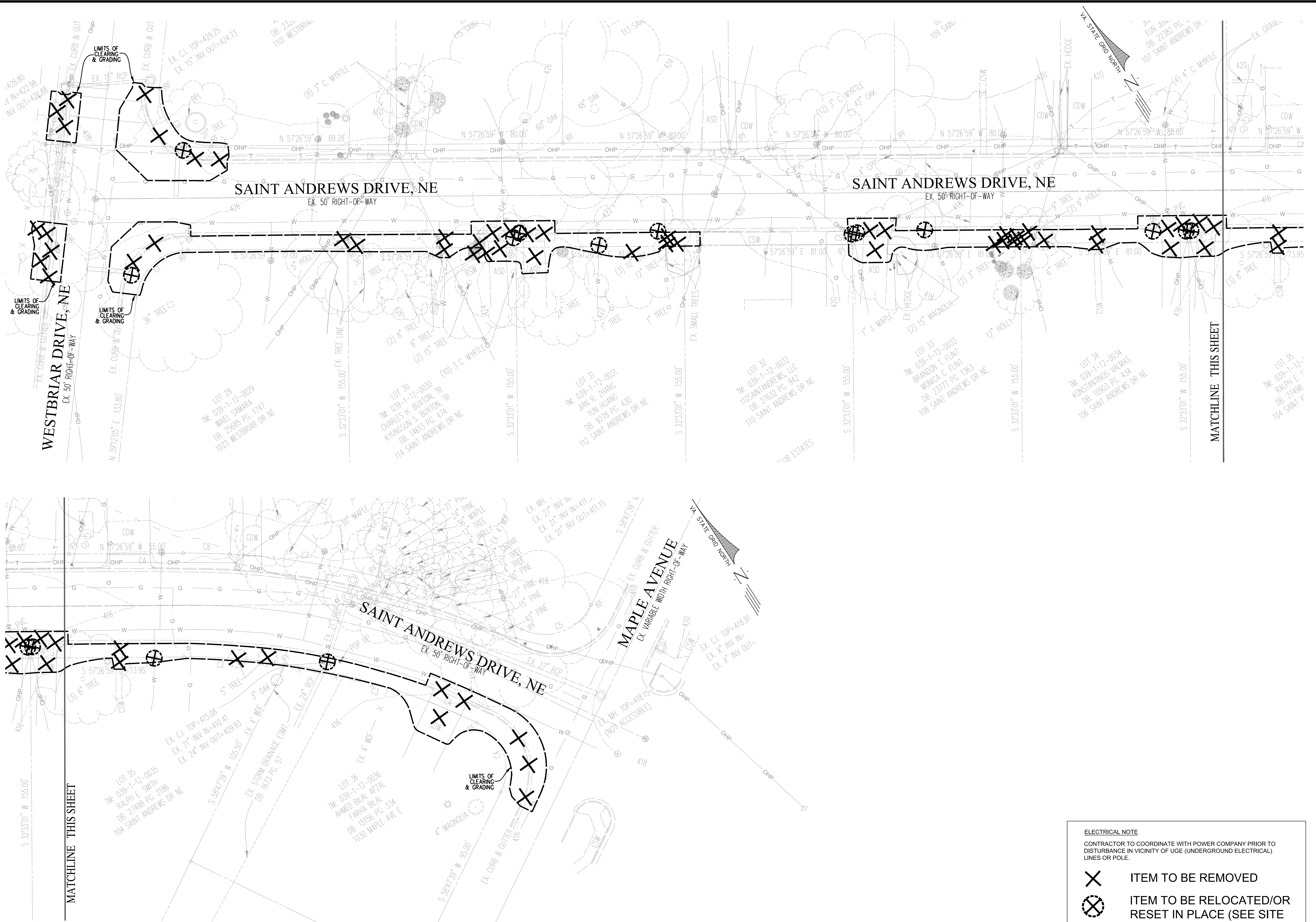
NOTES AND DETAILS

**SAINT ANDREWS DRIVE NE SIDEWALK IMPROVEMENT PLAN**

TOWN OF VIENNA  
FAIRFAX COUNTY, VIRGINIA

DATE: APRIL, 2024  
SCALE: N/A

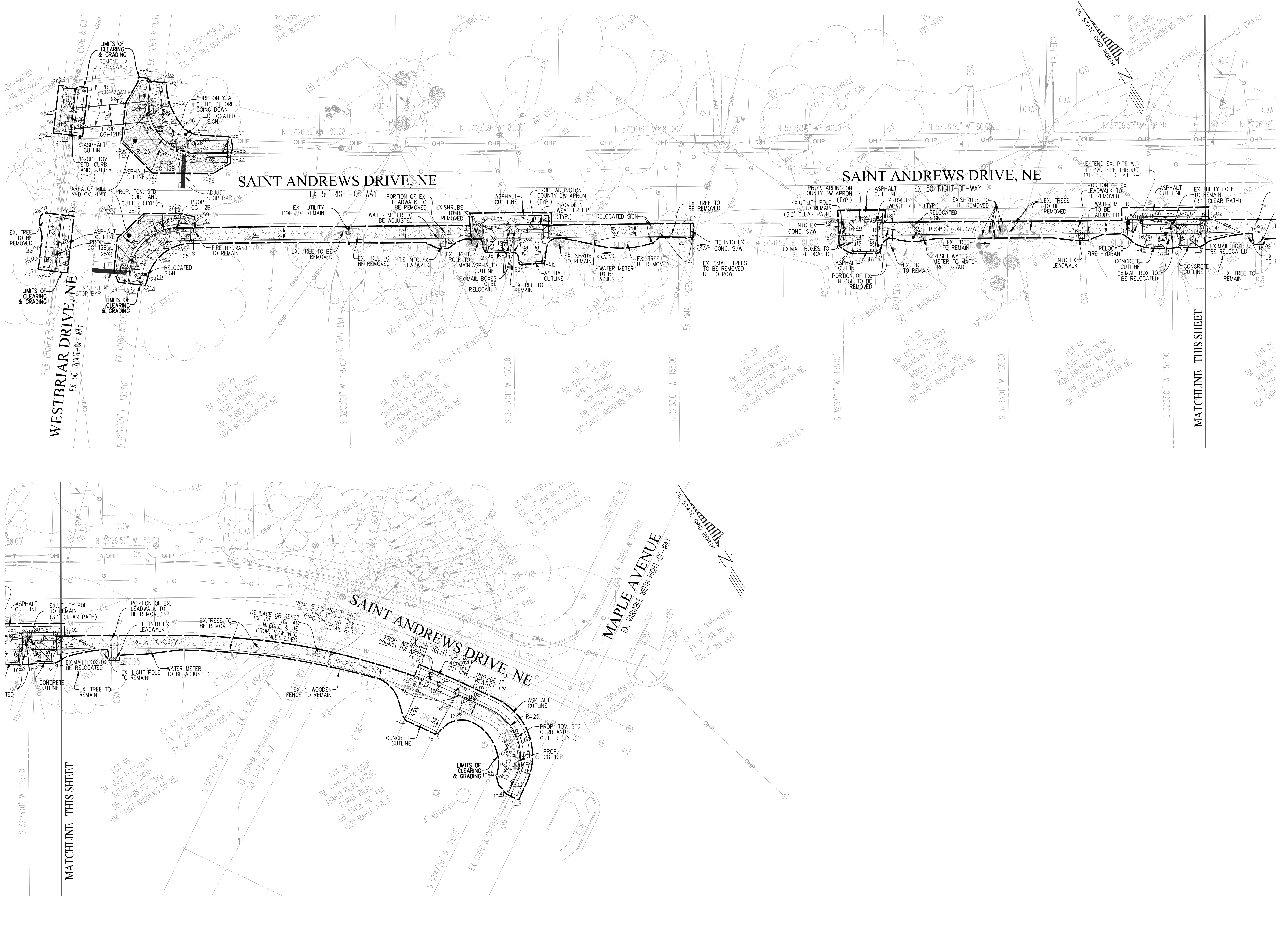
SHEET 2 OF 8  
FILE No. PP-2531



**ELECTRICAL NOTE**  
 CONTRACTOR TO COORDINATE WITH POWER COMPANY PRIOR TO DISTURBANCE IN VICINITY OF USE (UNDERGROUND ELECTRICAL) LINES OR POLE.

ITEM TO BE REMOVED  
 ITEM TO BE RELOCATED/OR RESET IN PLACE (SEE SITE PLAN FOR MORE DETAIL)

Urban Ltd 7110 Blue Ridge Turnpike Annandale, Virginia 22003 Tel: 703.642.8080 Fax: 703.642.8251 www.urban-ltd.com	
<b>urban</b> Planners - Engineers - Landscape Architects - Land Surveyors	
EXISTING CONDITIONS AND DEMOLITION PLAN <b>SAINT ANDREWS DRIVE NE</b> <b>SIDEWALK IMPROVEMENT PLAN</b> TOWN OF VIENNA FAIRFAX COUNTY, VIRGINIA	
SHEET 3 OF 8	DATE: APRIL, 2024 SCALE: 1"=20'
PLAN DATE 04/09/2024 05/16/2024 07/02/2024	DESCRIPTION 3 07/02/24 100% PLAN 2 05/16/24 95% PLAN 1 04/09/24 30% PLAN
No.	REVISIONS



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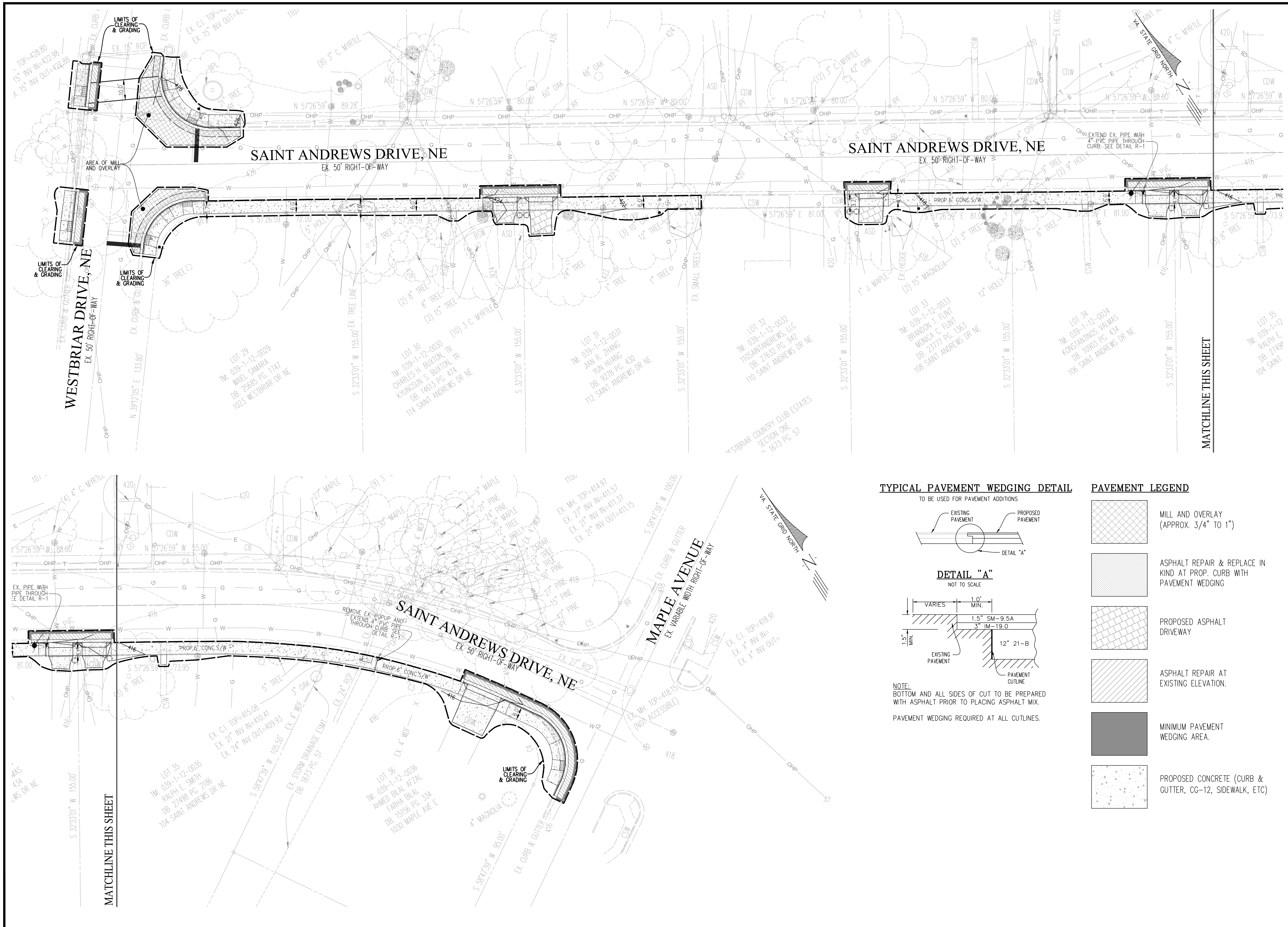
COMMONWEALTH OF VIRGINIA  
 C. RYAN CONNOR  
 Lic. No. 039631  
 07/02/2024  
 PROFESSIONAL ENGINEER

SITE PLAN  
**SAINT ANDREWS DRIVE NE  
 SIDEWALK IMPROVEMENT PLAN**  
 TOWN OF VIENNA  
 FAIRFAX COUNTY, VIRGINIA

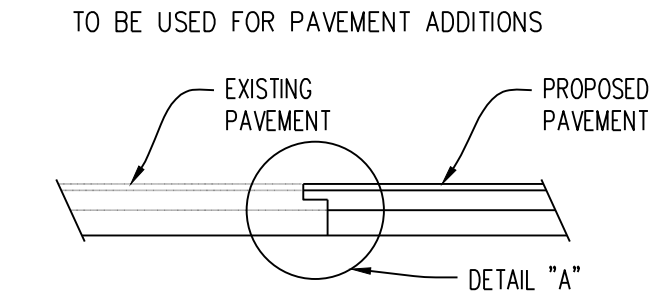
SCALE: 1"=20'  
 DATE: APRIL, 2024

SHEET  
 4  
 OF  
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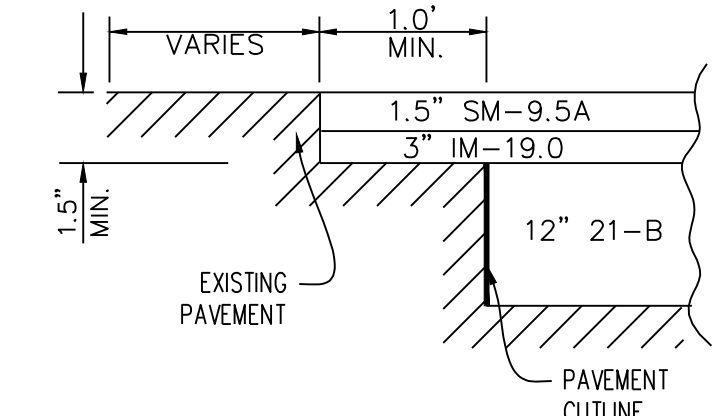
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**TYPICAL PAVEMENT WEDGING DETAIL**

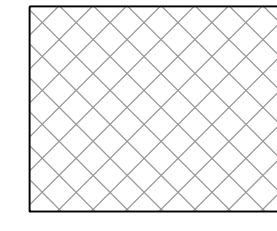
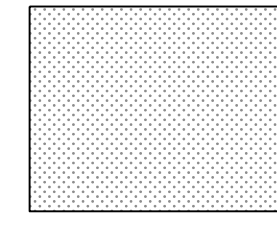
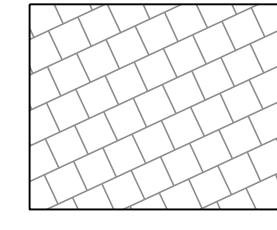
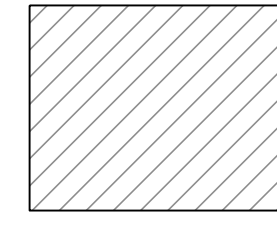

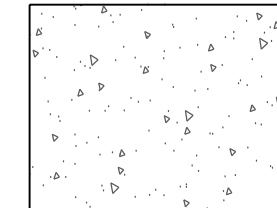


**DETAIL "A"**  
NOT TO SCALE



**NOTE:**  
BOTTOM AND ALL SIDES OF CUT TO BE PREPARED WITH ASPHALT PRIOR TO PLACING ASPHALT MIX.  
PAVEMENT WEDGING REQUIRED AT ALL CUTLINES.

**PAVEMENT LEGEND**

-  MILL AND OVERLAY (APPROX. 3/4" TO 1")
-  ASPHALT REPAIR & REPLACE IN KIND AT PROP. CURB WITH PAVEMENT WEDGING
-  PROPOSED ASPHALT DRIVEWAY
-  ASPHALT REPAIR AT EXISTING ELEVATION.
-  MINIMUM PAVEMENT WEDGING AREA.
-  PROPOSED CONCRETE (CURB & GUTTER, CG-12, SIDEWALK, ETC)

PLAN DATE	DESCRIPTION	REVISIONS
04/09/2024	100% PLAN	
05/16/2024	95% PLAN	
07/02/2024	30% PLAN	
No.	DATE	

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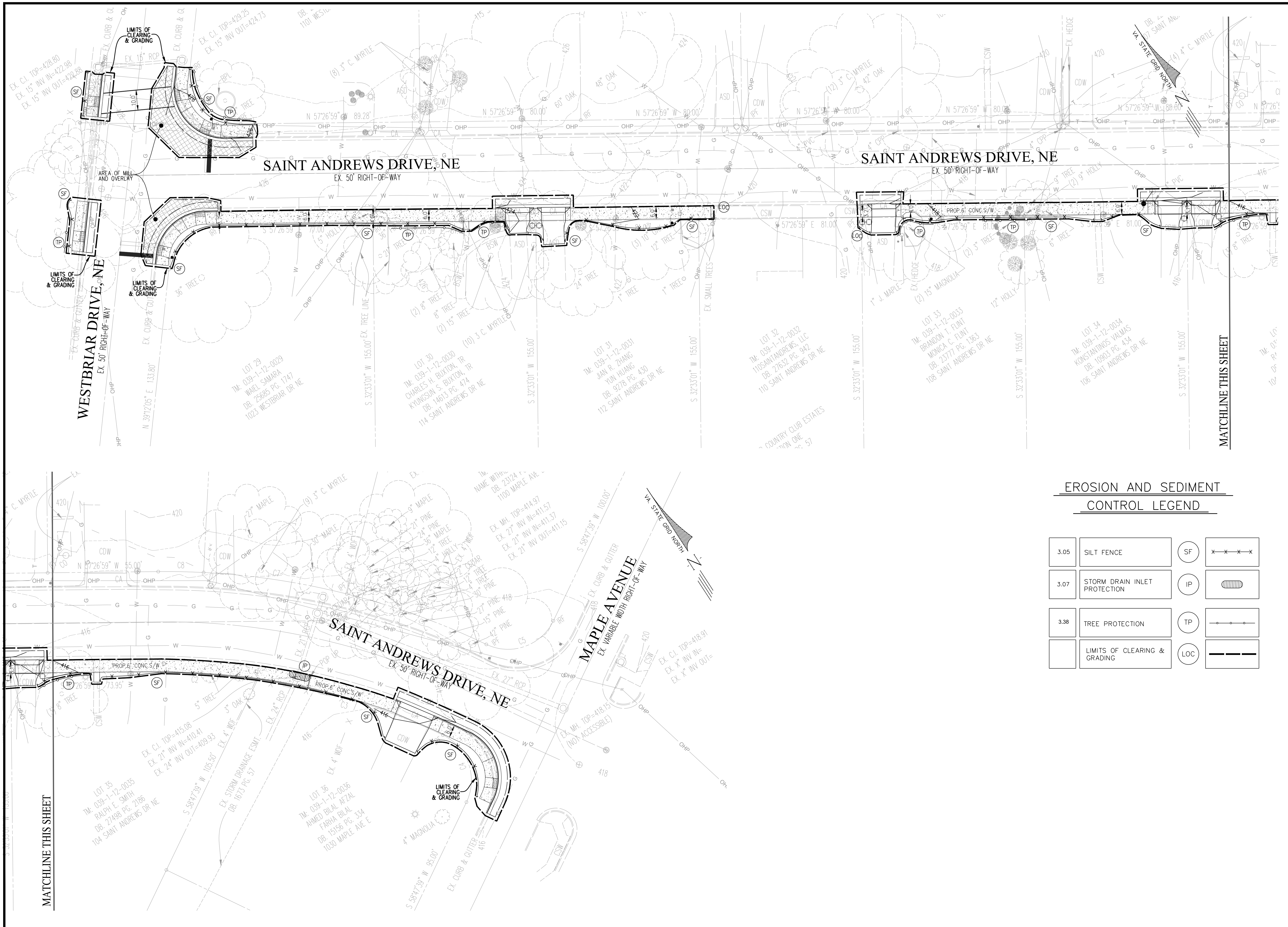
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**PAVEMENT PLAN**  
**SAINT ANDREWS DRIVE NE**  
**SIDEWALK IMPROVEMENT PLAN**  
TOWN OF VIENNA  
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=20'  
DATE: APRIL, 2024

FILE No.  
PP-2531



**EROSION AND SEDIMENT CONTROL LEGEND**

3.05	SILT FENCE	SF	X X X X
3.07	STORM DRAIN INLET PROTECTION	IP	[Symbol]
3.38	TREE PROTECTION	TP	[Symbol]
	LIMITS OF CLEARING & GRADING	LOC	[Symbol]

**EROSION AND SEDIMENT CONTROL PH I & PH II**  
**SAINT ANDREWS DRIVE NE**  
**SIDEWALK IMPROVEMENT PLAN**  
 TOWN OF VIENNA  
 FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=20'

DATE: APRIL, 2024

SHEET 6 OF 8  
 FILE No. PP-2531

PLAN DATE: 04/09/2024, 05/16/2024, 07/02/2024  
 3 07/02/24 100% PLAN  
 2 05/16/24 95% PLAN  
 1 04/09/24 30% PLAN

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COMMONWEALTH OF VIRGINIA  
 C. RYAN CONNOR  
 Lic. No. 039631  
 07/02/2024  
 PROFESSIONAL ENGINEER

REVISIONS

# EROSION AND SEDIMENT CONTROL NARRATIVE

## PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF A SIDEWALK IMPROVEMENT PLAN FOR THE EXISTING SAINT ANDREWS DRIVE NE. IMPROVEMENTS INCLUDE CURB AND GUTTER, SIDEWALK, DRIVEWAY ENTRANCES AND CG-12 DETECTABLE WARNING SURFACES. THE TOTAL DISTURBED ACREAGE FOR THE PROJECT IS 0.25 ACRES.

## EXISTING SITE CONDITIONS

THE SITE IS AN EXISTING ROAD, SAINT ANDREWS DRIVE NE WITH CURB & GUTTER, DRIVEWAY ENTRANCES, AND FRONT YARDS CONTAINING UTILITY POLES, FIRE HYDRANTS, WATER METERS, ETC.

## ADJACENT PROPERTIES

THE SITE IS SURROUNDED ON ALL SIDES BY SINGLE-FAMILY LOTS.

## OFF-SITE AREAS

THERE IS CONSTRUCTION ON OFFSITE AREAS ADJACENT TO ROADWAY. EROSION AND SEDIMENT CONTROL DEVICES WILL BE PLACED OFFSITE AS SHOWN ON PLAN.

## SOILS INFORMATION

SOIL ID NUMBERS	SOIL SERIES NAME	FOUNDATION SUPPORT	SOIL DRAINAGE	EROSION POTENTIAL	PROBLEM CLASS
105B	WHEATON-GLENELG COMPLEX	GOOD	GOOD	HIGH	IVB
108B	WHEATON-SUMERDUCK COMPLEX	MARGINAL	POOR	MEDIUM	IVB

## CRITICAL EROSION AREAS

THERE ARE NO CRITICAL AREAS ASSOCIATED WITH THIS PROJECT. NO SLOPES ARE GREATER THAN 15%, AND THERE ARE NO RESOURCE PROTECTION AREAS WITHIN THE PROJECT LIMITS.

## EROSION AND SEDIMENT CONTROL MEASURES

THE EROSION AND SEDIMENT CONTROL MEASURES FOR THIS PROJECT AREA ARE DESCRIBED IN DETAIL IN THE EROSION AND SEDIMENT CONTROL PROGRAM ON THIS SHEET.

## OVERALL MANAGEMENT STRATEGY

THE OVERALL STRATEGY FOR THIS SITE IS TO TREAT THE ONSITE RUNOFF WITH PERIMETER SILT FENCE AND INLET PROTECTION.

## EROSION CONTROL PROGRAM (GENERAL GUIDELINES)

NOT MORE THAN 75% OF THE SITE IS TO BE DENUDED AT ONE TIME. TEMPORARY SEEDING AND MULCHING ARE TO BE APPLIED TO ANY AREA WITHIN THE SITE NOT CONTINUOUSLY WORKED FOR 5 DAYS AFTER CLEARING AND ROUGH GRADING. IN ADDITION, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS TO MINIMIZE THE VOLUME OF SILT:

- CONTRACTOR SHALL EVALUATE THE SITE TO DETERMINE EXTENSIVE CUT AND FILL AREAS AND SHALL WORK THOSE AREAS TO MINIMIZE THE EXTENT OF HEAVY EQUIPMENT WORK. CONTRACTOR SHALL STRIVE TO BRING AREAS TO GRADE (ROUGH OR FINISH) AND TO STABILIZE. BY TEMPORARY OR PERMANENT VEGETATION, THESE DISTURBED AREAS PRIOR TO BEGINNING WORK IN OTHER AREAS.
- FILL AREAS SHALL BE COMPACTED COMPLETELY PRIOR TO THE END OF EACH WORK DAY. FILL SLOPE SURFACES SHALL BE LEFT ROUGHENED TO REDUCE SHEET EROSION OF THE SLOPES. CONTRACTOR SHALL REDIRECT CONCENTRATED RUNOFF, BY EARTH BERMS OR OTHER DEVICES, AROUND ACTIVELY DISTURBED AREAS TO STABILIZE OUTLETS.
- CUT SLOPE, AS NECESSARY, SHALL BE PROTECTED FROM CONCENTRATED FLOW BY BERMS ABOVE THE SLOPE AND DIRECTED AROUND THE DISTURBED AREA TO STABILIZED OUTLETS.
- IN NEW PAVEMENT AREAS, PLACE THE AGGREGATE BASE STONE ON THE FINISH SUBGRADE AT THE EARLIEST POSSIBLE TIME.
- MATERIALS AND METHODS USED IN CONSTRUCTION AND MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES REQUIRED SHALL CONFORM TO THE CONSTRUCTION STANDARDS AND SPECIFICATIONS IN CHAPTER 3 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH), THIRD EDITION, 1992, AS WELL AS ANY OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
- WHERE APPROPRIATE AND FEASIBLE, AREAS IN WHICH NATURAL GRADES ARE NOT IMPACTED BY PROPOSED GRADING OR STOCKPILE AREAS, SHALL BE LEFT WITH THEIR EXISTING VEGETATION IN PLACE. ALL AREAS SUBJECT TO GRADING SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL.
- PERMANENT OR SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN 1 YEAR.

## SEDIMENT CONTROL PROGRAM (PHASE I)

- INSTALL PERIMETER CONTROLS AS SHOWN ON THE PHASE I PLAN (SILT FENCE, ETC.)  
PERIMETER CONTROLS MUST BE APPROVED IN WRITING BY THE TOWN E & S INSPECTOR BEFORE CLEARING OF THE SITE CAN TAKE PLACE
- COMMENCE CONSTRUCTION OF ALL UTILITIES AND GRADING OF THE SITE.

## SEDIMENT CONTROL PROGRAM (PHASE II)

- COMMENCE CONSTRUCTION OF CURB AND GUTTER, PAVEMENT, AND SIDEWALK AS SHOWN ON THE CONSTRUCTION PLANS.
- INLET PROTECTION (IP) SHALL BE PROVIDED AT STORM DRAIN INLETS AS THEY ARE CONSTRUCTED.
- PERMANENTLY STABILIZE UNPAVED AREAS WITH SOD (PER SEC. 3.33 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK).
- THE CONTROL MEASURES MAY NOT BE REMOVED UNTIL ALL OF THE DISTURBED AREAS HAVE BEEN STABILIZED AND ONLY AS APPROVED AND DIRECTED BY THE INSPECTOR.

## MAINTENANCE

THE FOLLOWING IS A PROGRAM OF MAINTENANCE FOR THE MECHANICAL AND PERMANENT CONTROLS SPECIFIED IN THIS NARRATIVE AND ON THE PLAN:

- THE SITE SUPERINTENDENT, OR HIS REPRESENTATIVE, SHALL MAKE A VISUAL INSPECTION OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREAS (I.E., SEEDED OR SODDEN AREAS) ON A DAILY BASIS (ESPECIALLY AFTER A HEAVY RAINFALL) TO INSURE THAT ALL CONTROLS ARE IN PLACE AND THAT NONE HAVE BEEN DAMAGED. ANY DAMAGED CONTROL SHALL BE REPAIRED PRIOR TO END OF THE WORK DAY TO INCLUDE RESEEDING OR RESETTling, IF NECESSARY. WHEN IT IS CLEAR THAT PLANTS HAVE NOT GERMINATED ON AN AREA OR HAVE DIED, THESE AREAS MUST BE RE-SEEDED IMMEDIATELY TO PREVENT EROSION DAMAGE.
- AFTER ALL CONSTRUCTION OPERATIONS HAVE ENDED AND ALL DISTURBED AREAS ARE STABILIZED, MECHANICAL SEDIMENT CONTROLS SHALL BE REMOVED AND GROUND SHALL BE RESTORED ESTABLISHMENT OF VEGETATION, TO ITS NATURAL OR PROPOSED CONDITION. REMOVAL OF ANY CONTROL IS CONTINGENT UPON APPROVAL BY THE TOWN INSPECTOR.

## PERMANENT STABILIZATION

AFTER CONSTRUCTION IS COMPLETE ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH SEC. 3.32 AND 3.35 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

## STORMWATER MANAGEMENT

N/A

## ADDITIONAL NOTES

- THE TOWN INSPECTOR SHALL HAVE THE AUTHORITY TO DIRECT THE ADDITION OR DELETION OF EROSION AND SEDIMENT CONTROLS AS SITE CONDITIONS WARRANT.
- EARTHEN STRUCTURES ARE TO BE STABILIZED IMMEDIATELY UPON COMPLETION.

## EROSION AND SEDIMENT CONTROL MEASURES:

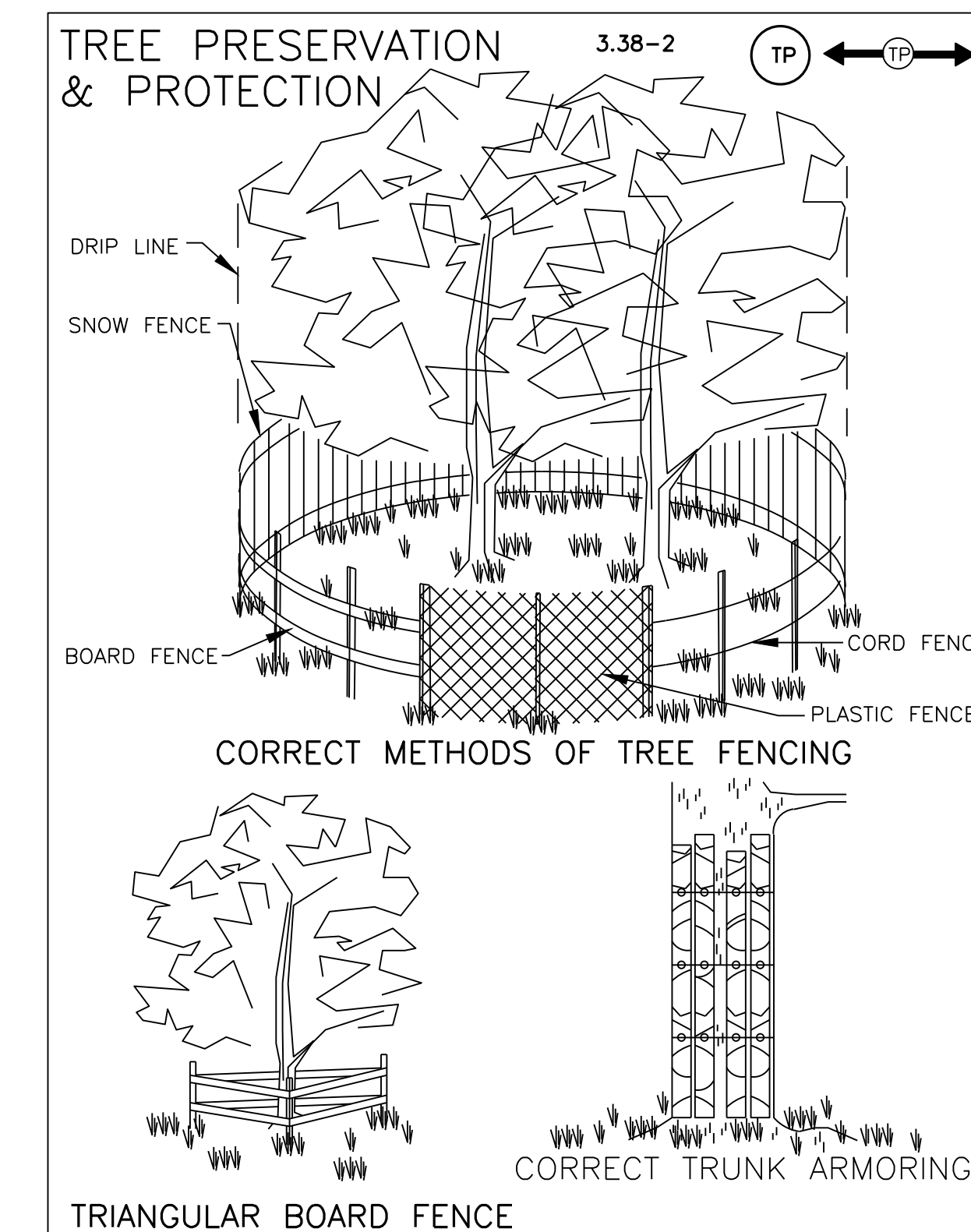
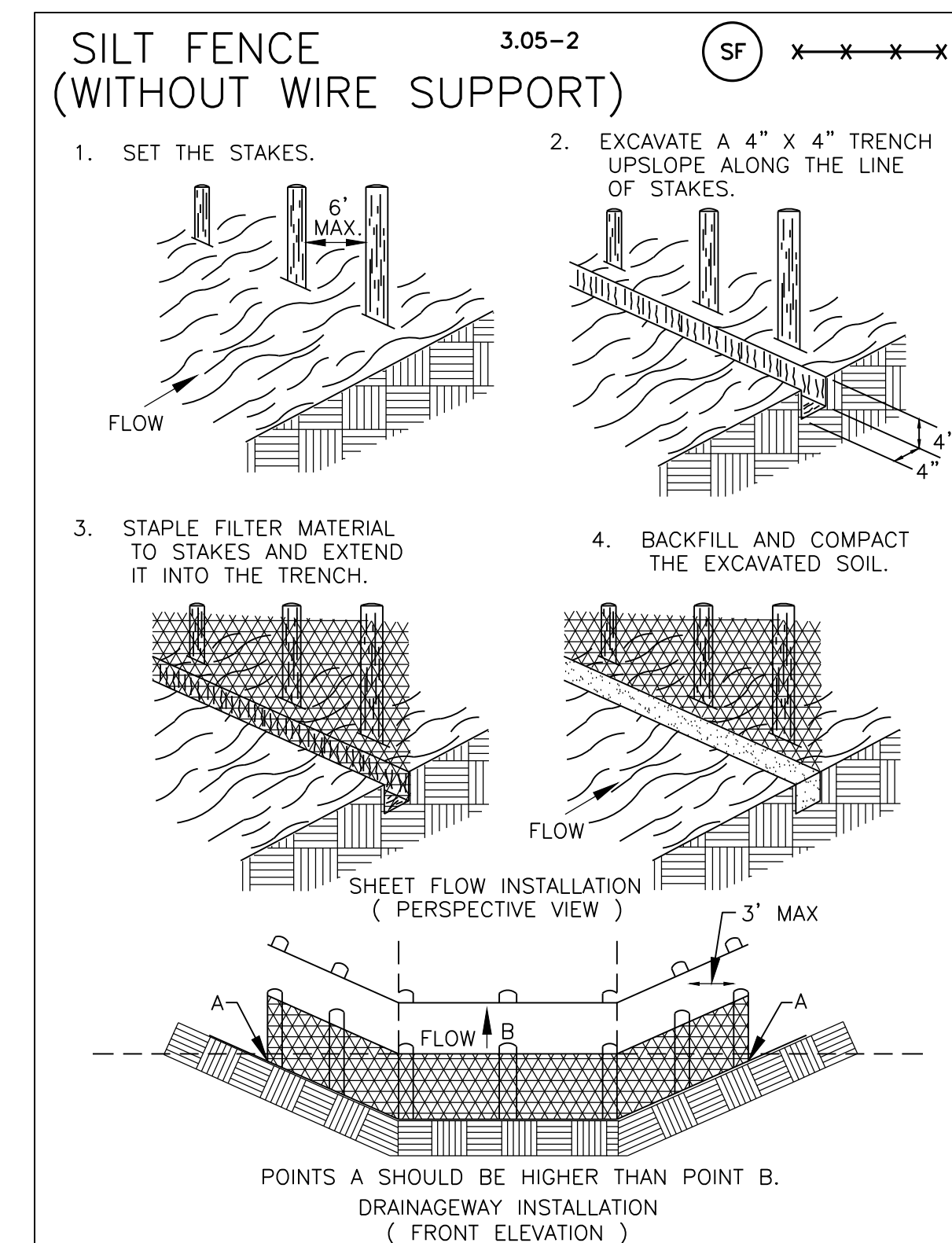
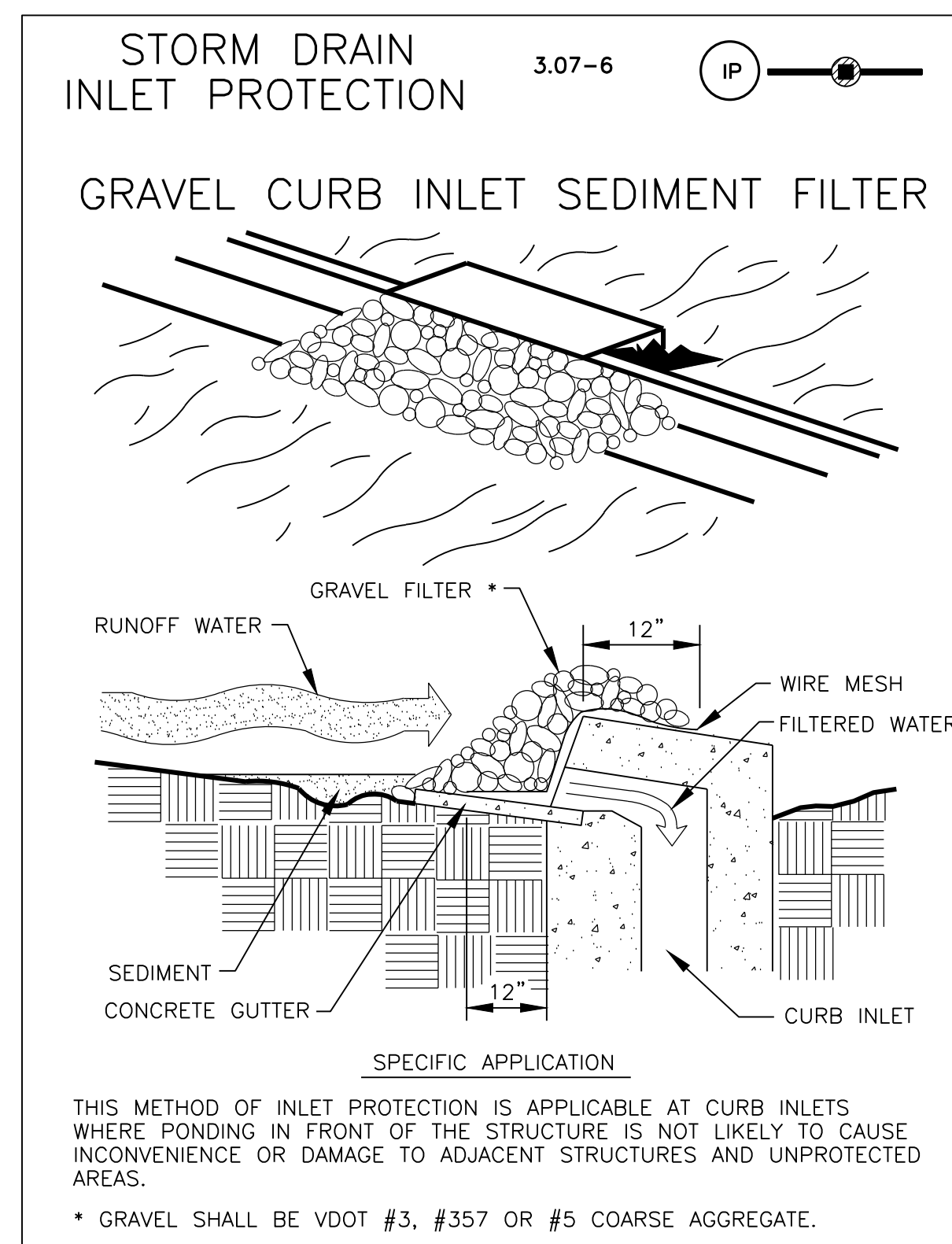
UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VESCH.

THE STRUCTURAL PRACTICES PROPOSED WITH THIS PLAN ARE AS FOLLOWS:

- SILT FENCE - 3.05**  
A TEMPORARY SEDIMENT BARRIER CONSISTING OF A SYNTHETIC FILTER FABRIC STRETCHED ACROSS AND ATTACHED TO SUPPORTING POSTS AND ENTRENCHED.
- STORM DRAIN INLET PROTECTION - 3.07**  
A SEDIMENT FILTER OR AN EXCAVATED IMPOUNDING AREA AROUND A STORM DRAIN DROP INLET OR CURB INLET.
- TOPSOILING - 3.30**  
PRESERVING AND REUSING THE SURFACE LAYER OF SOIL FROM AREAS TO BE GRADED.
- TEMPORARY SEEDING - 3.31**  
THE ESTABLISHMENT OF A TEMPORARY VEGETATIVE COVER ON DISTURBED AREAS BY SEEDING WITH APPROPRIATE RAPIDLY GROWING ANNUAL PLANTS.
- SODDING - 3.33**  
STABILIZING FINE-GRADED DISTURBED AREAS BY ESTABLISHING PERMANENT GRASS STANDS WITH SOD
- MULCHING - 3.35**  
APPLICATION OF PLANT RESIDUES OR OTHER SUITABLE MATERIALS TO THE SOIL SURFACE.
- TREE PROTECTION - 3.38**  
PROTECTION OF DESIRABLE TREES FROM MECHANICAL AND OTHER INJURY DURING LAND DISTURBING AND CONSTRUCTION ACTIVITY.
- DUST CONTROL - 3.39**  
REDUCING SURFACE AND AIR MOVEMENT OF DUST DURING LAND DISTURBING, DEMOLITION, AND CONSTRUCTION ACTIVITIES, BY SPRAYING FROM A WATER TRUCK OR OTHER APPROVED METHOD.

## GENERAL LAND CONSERVATION NOTES

- ALL LAND CONSERVATION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
- NO DISTURBED AREA WILL REMAIN DENUDED FOR MORE THAN 14 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE TOWN.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
- ALL STORM SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 500 FEET ARE TO BE OPEN AT ONE TIME.
- ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 5 DAYS AFTER BACKFILL.
- ALL TEMPORARY EARTH BERMS, AND DIVERSIONS ARE TO BE MULCHED AND SEEDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL SOIL STOCKPILES.
- DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION DEVICES, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
- AT THE COMPLETION OF CONSTRUCTION, ALL TEMPORARY SILTATION AND EROSION CONTROLS SHALL BE REMOVED AND ALL DISTURBED AREAS SHALL BE STABILIZED.



PLAN DATE	DESCRIPTION	REVISIONS
04/09/2024		
05/16/2024		
07/02/2024		
3 07/02/24	100% PLAN	
2 05/16/24	95% PLAN	
1 04/09/24	30% PLAN	
No.	DATE	

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COMMONWEALTH OF VIRGINIA

C. RYAN CONNOR  
Lic. No. 039531  
07/02/2024  
PROFESSIONAL ENGINEER

EROSION AND SEDIMENT CONTROL NARRATIVE & DETAILS

SAINT ANDREWS DRIVE NE  
SIDEWALK IMPROVEMENT PLAN  
TOWN OF VIENNA  
FAIRFAX COUNTY, VIRGINIA

SCALE: N/A

DATE: APRIL, 2024

SHEET  
7  
OF  
8

FILE No.  
PP-2531

# BMP SITE REQUIREMENT COMPUTATIONS

© 2011 BMP Standards and Specifications | © 2013 Draft BMP Standards and Specifications

Project Name: **Town of Vienna Saint Andrews Drive NE**  
 Date: **7/8/2024**  
 Linear Development Project?  No

**CLEAR ALL** (Ctrl+Shift+R)  
 data input cells  
 constant values  
 calculation cells  
 final results

### Site Information

### Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) → **0.25**

Check: 2013 Draft Stds & Specs  
 BMP Design Specifications List: Linear project?  No  
 Land cover areas entered correctly?   
 Total disturbed area entered?

Maximum reduction required: **10%**  
 The site's net increase in impervious cover (acres) is: **0.09**  
 Post-Development TP Load Reduction for Site (lb/yr): **0.18**

Pre-ReDevelopment Land Cover (acres)	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be	0.00	0.00	0.00	0.14	0.14
Impervious Cover (acres)	0.00	0.00	0.00	0.11	0.11
					0.25

Post-Development Land Cover (acres)	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be	0.00	0.00	0.00	0.05	0.05
Impervious Cover (acres)	0.00	0.00	0.00	0.20	0.20
Area Check	OK	OK	OK	OK	0.25

Constants	Value
Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Target Phosphorus (TP) EMC (mg/L)	0.26
Total Nitrogen (TN) EMC (mg/L)	1.86
Target TP Load (lb/acre/yr)	0.41
Pj (unitless correction factor)	0.90

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

### LAND COVER SUMMARY -- PRE-REDEVELOPMENT

Pre-Development	Listed	Adjusted <sup>1</sup>
Forest/Open Space Cover (acres)	0.00	0.00
Weighted Rv (forest)	0.00	0.00
% Forest	0%	0%
Managed Turf Cover (acres)	0.14	0.05
Weighted Rv (turf)	0.25	0.25
% Managed Turf	56%	31%
Impervious Cover (acres)	0.11	0.11
Rv (impervious)	0.95	0.95
% Impervious	44%	69%
Total Site Area (acres)	0.25	0.16
Site Rv	0.56	0.73

### LAND COVER SUMMARY -- POST DEVELOPMENT

Final Post-Development	Post-Development	Post-Development
Forest/Open Space Cover (acres)	0.00	0.00
Weighted Rv (forest)	0.00	0.00
% Forest	0%	0%
Managed Turf Cover (acres)	0.05	0.05
Weighted Rv (turf)	0.25	0.25
% Managed Turf	20%	31%
Impervious Cover (acres)	0.20	0.11
Rv (impervious)	0.95	0.95
% Impervious	80%	69%
Total ReDev. Site Area (acres)	0.25	0.16
ReDev Site Rv	0.81	0.73

### Treatment Volume and Nutrient Load

Pre-Development	Post-Development	Post-Development
Pre-Development Treatment Volume (acre-ft)	0.0116	0.0098
Pre-Development Treatment Volume (cubic feet)	506	425
Pre-Development TP Load (lb/yr)	0.32	0.27
Pre-Development TP Load per acre (lb/acre/yr)	1.27	1.67
Baseline TP Load (lb/yr) (0.41 lb/acre/yr applied to pre-development area excluding pervious land proposed for new impervious cover)		0.07

Final Post-Development	Post-Development	Post-Development
Final Post-Development Treatment Volume (acre-ft)	0.0169	0.0071
Final Post-Development Treatment Volume (cubic feet)	735	310
Final Post-Development TP Load (lb/yr)	0.46	0.20
Final Post-Development TP Load per acre (lb/acre/yr)	1.85	1.67
Max. Reduction Required (Below Pre-Development Load)		10%
TP Load Reduction Required for Redeveloped Area (lb/yr)	0.03	
TP Load Reduction Required for New Impervious Area (lb/yr)		0.16

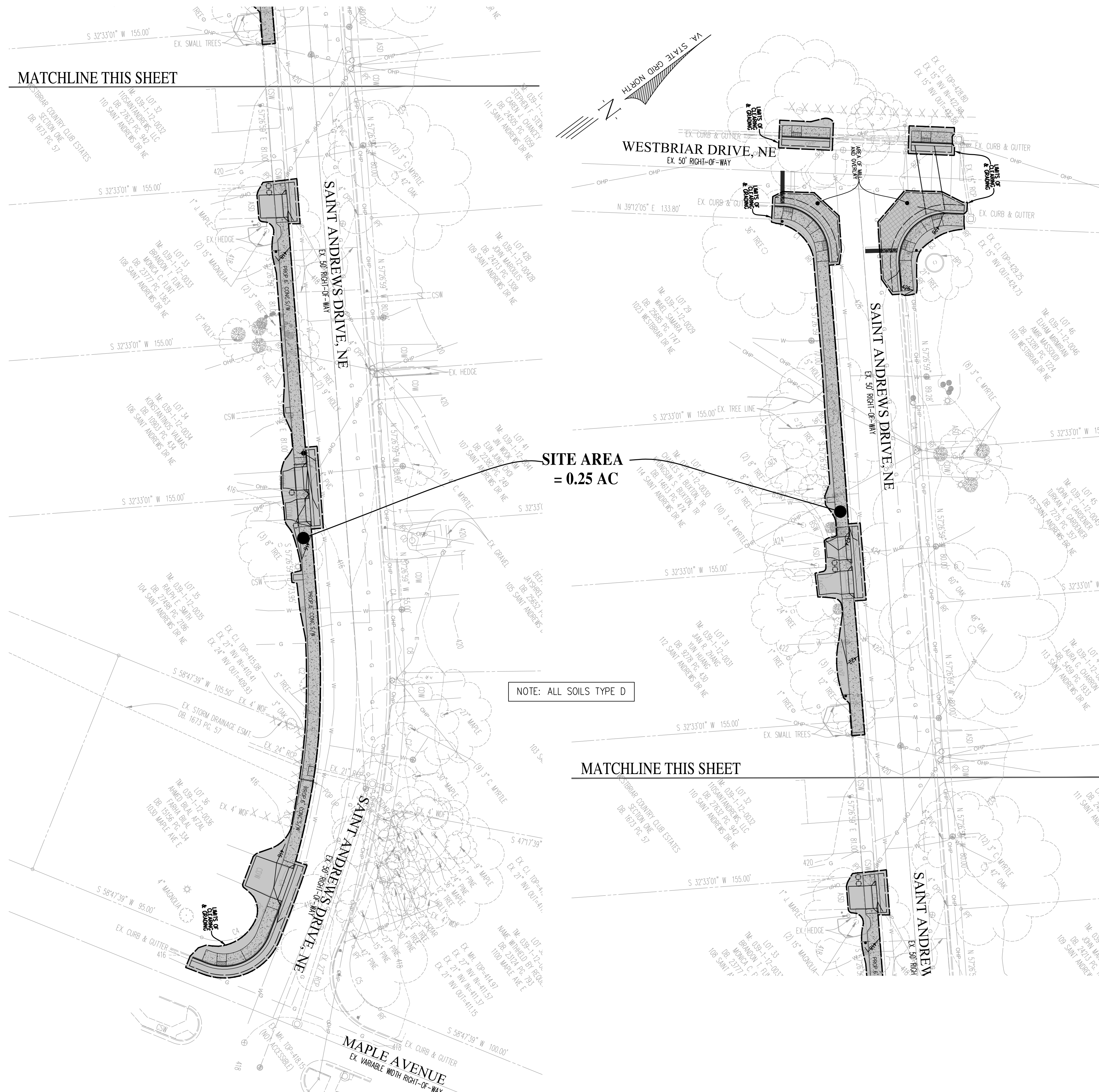
### Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	<b>0.18</b>
------------------------------------	-------------

### Nitrogen Loads (Informational Purposes Only)

Pre-Development TN Load (lb/yr)	2.28	Final Post-Development TN Load (Post-Development & New Impervious) (lb/yr)	3.30
---------------------------------	------	--	------

<sup>1</sup>Adjusted Land Cover Summary:  
 Pre-Development land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.  
 Adjusted total acreage is consistent with Post-Development acreage (minus acreage of new impervious cover).  
 Column 1 shows load reduction requirement for new impervious cover (based on new development load limit, 0.41 lb/acre/yr).



NOTE: THE COMPUTATIONS SHOWN ON THIS SHEET WERE DETERMINED USING VERSION 3.0 OF THE VIRGINIA RUNOFF REDUCTION METHOD (VRRM) RE-DEVELOPMENT COMPLIANCE SPREADSHEET RELEASED AUGUST, 2017.

### BMP NARRATIVE

THE DRAINAGE AREA UTILIZED IN THE WATER QUALITY COMPUTATIONS CONSISTS OF SITE DISTURBANCE AREA. THE MAJORITY OF THIS SITE DRAINS TO THE EXISTING INLETS AND INTO THE EXISTING STORM SYSTEM WITHIN THE PUBLIC ROW.

PER THE BMP CALCULATIONS ON THIS SHEET AND IN COMPLIANCE WITH VSMP (VRRM) WATER QUALITY CONTROL REQUIREMENTS, THE PHOSPHORUS REMOVAL REQUIREMENT OF 0.18 POUNDS/YEAR IS TO BE OFFSET BY EITHER THE PURCHASE OF NUTRIENT CREDITS OR THE USE OF EXCESS IN OTHER TOWN PROJECT, AT THE DISCRETION OF THE TOWN ENGINEER.

PLAN DATE	04/09/2024	05/16/2024	07/02/2024
PLAN NO.	1	2	3
DESCRIPTION	100% PLAN	95% PLAN	30% PLAN
DATE	04/09/24	05/16/24	07/02/24
REVISIONS			

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COMMONWEALTH OF VIRGINIA  
 C. RYAN CONNOR  
 Lic. No. 039631  
 07/02/2024  
 PROFESSIONAL ENGINEER

VRRM SPREADSHEET & WATER QUALITY NARRATIVE  
**SAINT ANDREWS DRIVE NE  
 SIDEWALK IMPROVEMENT PLAN**  
 TOWN OF VIENNA  
 FAIRFAX COUNTY, VIRGINIA

SCALE: 1" = 30'  
 DATE: APRIL, 2024

SHEET  
 8  
 OF  
 8

FILE No.  
 PP-2531