INDEX OF SHEETS

MAINTENANCE LEGEND:

000-TOWN OF VIENNA
1550 LF-SIDEWALK
0 LF-TRAIL
0 EA-BMP FACILITIES

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION.

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE MOST RECENT REVISIONS OF DEPARTMENT'S:
- 2020 ROAD AND BRIDGE SPECIFICATIONS,
- 2016 ROAD AND BRIDGE STANDARDS,
- 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD),
- 2011 VIRGINIA SUPPLEMENT TO THE MUTCD,
- 2011 VIRGINIA WORK AREA PROTECTION MANUAL,

AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC .PDF VERSION OF THE PLAN ASSEMBLY.

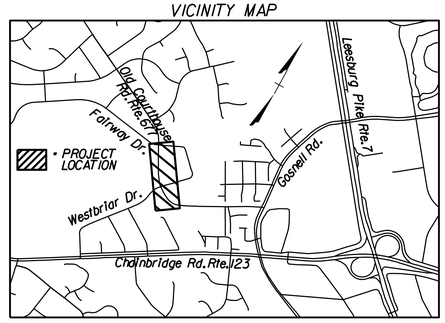
ALL CURVES ARE TO BE SUPERELEVATED, TRANSITIONED AND WIDENED IN ACCORDANCE WITH STANDARD TC-5.11U, EXCEPT WHERE OTHERWISE NOTED.

10/26/2020

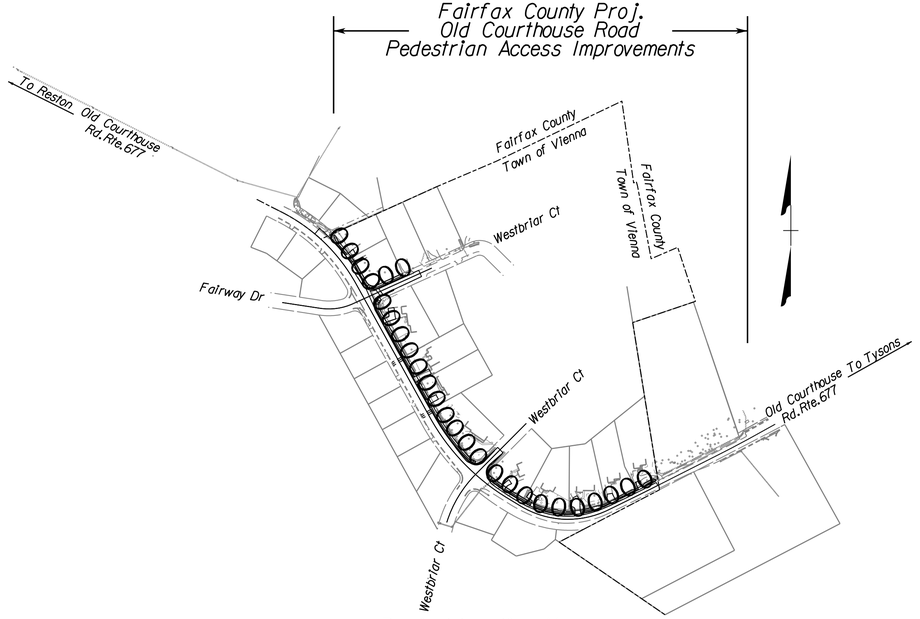
TOWN OF VIENNA, VIRGINIA
DEPARTMENT OF PUBLIC WORKS

FUNCTIONAL CLASSIFICATION			
OLD COURTHOUSE ROAD, ROUTE 677 (VIENNA ROUTE 6668)			
URBAN MINOR ARTERIAL (GS-6) - ROLLING			
Fr: To:	Rte.724, Creek Crossing Rd North City Line for City of Vienna	East City Line for City of Vienna Rte.123, Chain Bridge Road	East City Line for City of Vienna West City Line for City of Vienna
AADT (2019)	7,200	10,000	8,300
DHV	1,094	1,230	1,129
D (%) (design hour)	83.5	84.0	82.6
T (%) (design hour)	0	0	0
DESIGN V (MPH)	25	25	25
POSTED V (MPH)	25	25	25

VICINITY MAP



FINAL PLANS
OCTOBER 2020



Project Location Map
Tax Maps: 29-3, 39-1
Hunter Mill District

OLD COURTHOUSE ROAD PEDESTRIAN ACCESS IMPROVEMENTS PHASE 1
(INSIDE TOWN OF VIENNA LIMITS)

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:18:01 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

FINAL PLANS AUTHORIZED FOR CONSTRUCTION

DIRECTOR, TOWN OF VIENNA DEPARTMENT OF PUBLIC WORKS — DATE

SHEET 1

OLD COURTHOUSE ROAD PEDESTRIAN ACCESS IMPROVEMENTS
FINAL PLAN - OCTOBER 2020

GENERAL NOTES

(THESE GENERAL NOTES SHALL BE USED WHERE THEY ARE APPLICABLE TO THE PROJECT PLANS)

EROSION AND SEDIMENT CONTROL

I. EROSION CONTROL NARRATIVE

PRIOR TO ANY LAND DISTURBING OPERATIONS, THE EROSION CONTROLS, AS SPECIFIED BY THE ENGINEERING PLANS, SHALL BE INSTALLED. ALL MECHANICAL AND VEGETATIVE PRACTICES SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS CONTAINED IN THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. SLOPE AREAS THAT CANNOT BE ADEQUATELY STABILIZED BY SEEDING, SHALL BE SODDED AND STAKED. AS DISTURBED AREAS, NOT TO BE CONSTRUCTED UPON, ARE FINAL GRADED, THEY SHALL BE PREPARED, LIME AND FERTILIZER APPLIED, SEEDED AND MULCHED. FOR THE AREAS OUTSIDE THE V.D.O.T. RIGHT-OF-WAY, THE SEED SHALL CONSIST OF A MIXTURE OF KENTUCKY 31 TALL FESCUE AND KENBLUE IN ACCORDANCE WITH DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES SPECIFICATIONS OR COUNTY APPROVED ALTERNATE SEED FOR AREAS LOCATED WITHIN THE V.D.O.T. RIGHT-OF-WAY, THE SEED MIXTURE SHALL BE IN CONFORMANCE WITH CURRENT V.D.O.T. REQUIREMENTS. SEDIMENT CONTROLS AND MECHANICAL DEVICES SHALL BE REMOVED FROM CONTRIBUTING AREAS AS THEY BECOME STABILIZED. THIS RESTORATION WORK WILL BE PERFORMED WITHIN 7 DAYS AFTER FINAL GRADING. ALL TEMPORARY SEDIMENT CONTROLS AND MECHANICAL DEVICES SHALL BE REMOVED FROM CONTRIBUTING AREAS AS THEY BECOME STABILIZED. FOR ADDITIONAL DETAILS, REFER TO THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.

II. EROSION, SEDIMENTATION, AND LAND CONSERVATION NOTES

1. MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT FEDERAL, STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR THE APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA OR ANY ORDINANCE ENACTED BY THE COUNTY OF FAIRFAX.
2. ALL AREAS, ON OR OFF-SITE, WHICH ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS SEED MIXTURE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 2:1 AND GREATER SHALL BE SODDED AND STAKED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE ENGINEER.
3. ANY DISTURBED AREA NOT PAVED, PERMANENTLY SEEDED, SODDED, OR BUILT UPON BY 1 NOVEMBER OR DISTURBED AFTER THAT DATE, IS TO BE SEEDED WITHIN 14 DAYS WITH OATS, ABRUZZI RYE OR APPROVED EQUIVALENT, AND MULCHED WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS PER ACRE. FOR ADDITIONAL DETAILS, REFER TO THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
4. NO AREA SHALL BE DENUDED AND NOT BE DISTURBED FOR A PERIOD LONGER THAN 14 DAYS IN ACCORDANCE WITH THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
5. TEMPORARY DIVERSIONS, SEEDED AND MULCHED OR STAKED STRAW BALE DIVERSIONS AND OTHER CONTROL MEASURES NECESSARY ARE TO BE PLACED AS INDICATED ON THE DRAWINGS PRIOR TO OR AS THE FIRST STEP IN EXCAVATION.
6. WHEN IN ACCORDANCE WITH STATE AND FEDERAL JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL IS TO BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL IS TO BE PLACED IN STREAMS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 14 DAYS IS TO BE SEEDED FOR TEMPORARY VEGETATION AND MULCHED. WHERE SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT IS TO BE BACK-SLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE MUST OUTLET IN A STABILIZED AREA OR A SEDIMENT BASIN.
7. WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
8. DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY SILT TRAPS, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
9. ALL DISTURBED AREAS ARE TO BE SEEDED AND MULCHED OR SODDED WITHIN 5 DAYS AFTER BACKFILL OF THE APPLICABLE TRENCH SECTION, IN ACCORDANCE WITH THE PROVISIONS CONTAINED IN THE PROJECT SPECIFICATIONS RELATING TO SEEDING AND SODDING. SPEED IS THE ESSENTIAL LAND CONSERVATION ELEMENT FOR A LINEAR PROJECT.
10. FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL AND/OR THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
11. ALL EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED WITHIN 30 DAYS AFTER THE PROJECT IS STABILIZED. (MS-18)
12. AN EROSION AND SEDIMENT CONTROL CONTRACTOR CERTIFICATION (E.S.C.C.C.) IS REQUIRED FOR ALL LAND DISTURBING ACTIVITIES.
13. THE CONTRACTOR SHALL PROPERLY INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROLS FOR THE LIFE OF THE PROJECT; AND ROUTINELY CHECK CONTROL DEVICES BEFORE, DURING AND AFTER STORM EVENTS.

CONSTRUCTION NOTES

1. ALL CONSTRUCTION, INCLUDING ANY PROPOSED LANDSCAPING, SHALL CONFORM TO THE CURRENT EDITION OF THE FAIRFAX COUNTY PFM AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION (V.D.O.T.) STANDARDS AND SPECIFICATIONS AND SHALL CONFORM TO THE CURRENT EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
2. ALL CONSTRUCTION WITHIN THE V.D.O.T. RIGHT-OF-WAY SHALL CONFORM TO THE PROVISIONS CONTAINED IN THE V.D.O.T. LAND USE PERMIT ISSUED FOR THIS LOCATION. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIARIZED WITH THE REQUIREMENTS OF THIS LAND USE PERMIT PRIOR TO THE START OF ANY CONSTRUCTION IN V.D.O.T. RIGHT-OF-WAY. THE SPECIAL PROVISIONS IN FORM MP-63 ARE A PART OF THE VDOT LAND USE PERMIT.
3. UNLESS MORE STRINGENT COMPACTION REQUIREMENTS ARE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS, THE BACKFILL OF EMBANKMENT MATERIAL, THE INSTALLATION OF TRENCH BACKFILL AND THE RESTORATION OF DISTURBED AREAS SHALL BE COMPACTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE V.D.O.T. ROAD AND BRIDGE SPECIFICATIONS. ALL COMPACTION SHALL BE AT ±2% OF THE OPTIMUM MOISTURE CONTENT.
4. ALL SUBGRADE, SUBBASE, BASE AND SHOULDER MATERIAL SHALL BE PLACED AND COMPACTED TO THE DENSITY SPECIFIED IN THE CURRENT EDITION OF THE V.D.O.T. ROAD AND BRIDGE SPECIFICATIONS. ALL COMPACTION SHALL BE AT ±2% OF THE OPTIMUM MOISTURE CONTENT.
5. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING THE V.D.O.T. RIGHT-OF-WAY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ALL STREETS, ALLAY DUST AND TO TAKE WHATEVER MEASURES NECESSARY TO ENSURE THE ROAD(S) ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.
6. TEMPORARY OR PERMANENT PAVEMENT PATCHES ARE TO BE PLACED IN ALL ROADWAY CUTS WITH HOT MIX THE SAME DAY THE CUT IS MADE IN ACCORDANCE WITH V.D.O.T. REQUIREMENTS. SEE SPECIAL PROVISIONS FOR PAVEMENT OPEN CUTS, FORM LUP-OC NOVA FOR DETAILS.
7. THE TOP ELEVATION OF EXISTING MANHOLES SHALL BE ADJUSTED TO MEET THE FINAL PAVEMENT ELEVATION AT THE TIME OF FINAL PAVING OPERATIONS. ALL MANHOLES ARE TO BE PROTECTED FROM THE TRAVELING PUBLIC. NO MANHOLE IS TO BE RAISED ABOVE THE TOP ELEVATION OF THE ROADWAY WITHOUT THE APPROPRIATE TRANSITION.
8. CONTRACTOR IS TO ADJUST MANHOLE, VALVE, AND METER BOX COVERS BEFORE PLACING FINAL SURFACE PAVEMENT.
9. THE CONTRACTOR SHALL VISIT THE SITE AND SHALL VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING A BID FOR THE CONSTRUCTION OF THE PROJECT.
10. WHERE EXISTING NATURAL DRAINAGE DITCHES OR STREAM BANKS ARE DISTURBED DURING CONSTRUCTION THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL ALIGNMENT, GRADE AND INVERT.
11. PROPOSED TOP OF CURB GRADES SHALL BE FIELD ADJUSTED AS REQUIRED TO CONFORM TO THE INTENT OF THE TYPICAL SECTION. A SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE TO THE PROPOSED EDGE OF PAVEMENT OR FACE OF CURB TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF WATER ON THE ROADWAY. THE EXISTING PAVEMENT SHALL BE RECAPPED AND/OR REMOVED AND REPLACED AS REQUIRED TO ACCOMPLISH THIS REQUIREMENT. ALL CURB FORMS SHALL BE INSPECTED FOR HORIZONTAL AND VERTICAL ALIGNMENT BY FAIRFAX COUNTY OR THEIR AUTHORIZED REPRESENTATIVES PRIOR TO PLACING OF CONCRETE.
12. THE FOLLOWING PROVISIONS SHALL APPLY TO THE USE OF SHEETING AND SHORING:
    (A) SHEETING AND SHORING OR OTHER APPROVED METHODS FOR TRENCH BRACING WILL BE REQUIRED ON THIS CONTRACT AS NEEDED TO MEET ALL SAFETY REQUIREMENTS.
    (B) UNLESS OTHERWISE DIRECTED BY THE ENGINEER, SHEETING AND SHORING WILL BE REMOVED FROM ALL TRENCHES PRIOR TO BACKFILLING OPERATIONS.
    (C) UNLESS SPECIFICALLY IDENTIFIED IN THE CONTRACT DOCUMENTS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR SHEETING AND SHORING.

CONSTRUCTION NOTES (CONTINUED)

13. THE CONTRACTOR SHALL RESTORE ALL DRIVEWAYS DISTURBED DURING CONSTRUCTION. RESTORATION SHALL CONSIST OF THE FOLLOWING:
    * GRAVEL DRIVEWAY – PROVIDE MINIMUM 6" COMPACTED 21A
    * ASPHALT DRIVEWAY – PROVIDE 6" COMPACTED 21A WITH MINIMUM 2" SM-9.5A OVERLAY
    * CONCRETE DRIVEWAY – PROVIDE A NEAT SAWCUT CONNECTION, MINIMUM 4" COMPACTED 21A AND 5" CLASS A3 CONCRETE WITH WWF 6X6 – W2.9 X W2.9
14. WHERE A PROPOSED PIPE CROSSES OR PARALLELS A STREET, THE ASPHALT SHALL BE NEATLY SAWCUT TO FULL DEPTH. AFTER INSTALLATION OF THE PIPE, THE ROADWAY SHALL BE PATCHED IN ACCORDANCE WITH THE V.D.O.T. LAND USE PERMIT ISSUED FOR THE PROJECT.
15. HORIZONTAL LOCATION OF THE SERVICE CONNECTIONS AT SANITARY SEWER MAINS, IF INDICATED ON THE CONSTRUCTION PLANS, WERE TAKEN FROM TELEVISION INSPECTION REPORTS. ALL SERVICE CONNECTIONS WERE SHOWN TO BE IN THE UPPER TWO QUADRANTS OF THE MAINS. EXCEPT FOR INTERPOLATION OF THE INVERT AT THE SANITARY MAINS, THE ELEVATIONS AND VERTICAL LOCATIONS OF THE SERVICE CONNECTIONS ARE NOT KNOWN. IN SEWER MAINS AS NOTED, TELEVISION INSPECTIONS DID NOT DETECT ANY SERVICE CONNECTIONS AND THE LOCATIONS SHOWN ON THE DRAWING ARE THE MOST PROBABLE POSITIONS FOR SERVICE CONNECTIONS.
16. THE PAVEMENT DESIGN IN THE CONSTRUCTION PLANS WAS PREPARED BASED ON AVAILABLE SUBSURFACE INFORMATION INCLUDING LABORATORY CALIFORNIA BEARING RATIO (C.B.R.) TESTS THAT WERE PERFORMED DURING THE DESIGN SUBSURFACE INVESTIGATION. WHEN THE CONTRACTOR REACHES THE SUBGRADE ELEVATION, ADDITIONAL CBR TEST LOCATIONS MAY BE DIRECTED BY THE ENGINEER FOR SELECTED LOCATIONS BASED ON ACTUAL FIELD CONDITIONS OBSERVED. THE CBR SAMPLES AND TESTS SHALL BE PERFORMED BY A GEOTECHNICAL ENGINEERING FIRM UNDER CONTRACT WITH FAIRFAX COUNTY. THE RESULTS OF THE ENGINEER'S EVALUATION OF THE CBR LABORATORY TESTS SHALL BE OBTAINED IN WRITING PRIOR TO THE PLACEMENT OF ANY SUBBASE OR BASE MATERIAL IN THE AREA(S) UNDER CONSIDERATION. THE PROPOSED PAVEMENT DESIGN FOR THE AREA(S) UNDER CONSIDERATION WILL EITHER BE CONFIRMED OR ADJUSTED BY THE ENGINEER BASED ON THE RESULT OF THE C.B.R. TEST RESULTS. THE CONTRACTOR SHALL COOPERATE WITH ENGINEER BY MODIFYING CONSTRUCTION ACTIVITIES AND/OR SCHEDULING IN ORDER TO PERMIT THE ADDITIONAL CBR TESTING. THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY MONETARY DAMAGES WHATSOEVER FOR ANY DELAYS RESULTING FROM THIS TESTING. THE CONTRACTOR'S SOLE RELIEF IS A TIME EXTENSION GRANTED IN ACCORDANCE WITH ARTICLE 8.3.

TRANSPORTATION MANAGEMENT PLAN

1. THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT CHANGES TO APPROVED TRANSPORTATION MANAGEMENT PLANS FOR APPROVAL BY V.D.O.T. A MINIMUM OF 30 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY TRAFFIC CONTROL SUCH AS LANE CLOSURES, FLAGGERS DRIVEWAY ENTRANCES, ETC., TO PROPERLY MAINTAIN TRAFFIC THROUGHOUT THE PROJECT.
3. EXISTING SURFACE, BASE, AND SUBBASE MATERIAL WHICH WILL BE DEMOLISHED OR OBLITERATED DURING CONSTRUCTION AND WHICH IS DETERMINED SUITABLE BY THE ENGINEER, SHALL BE SALVAGED AND UTILIZED FOR TRAFFIC MAINTENANCE.
4. ALL REQUIRED CONSTRUCTION SIGNING, TEMPORARY PAVEMENT WIDENING, TEMPORARY LAND STABILIZATION, TRAFFIC BARRIERS, TEMPORARY PAVEMENT MARKINGS, ERADICATION, ETC., SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE FOR TRAFFIC MAINTENANCE.
5. ALL TRAFFIC MAINTENANCE SHALL CONFORM WITH THE FOLLOWING AND THE LATEST REVISIONS THERETO: THE VIRGINIA WORK AREA PROTECTION MANUAL, VA ROAD AND BRIDGE SPECIFICATIONS, VA ROAD AND BRIDGE STANDARDS AND THE FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
6. ALL EXISTING SIGNS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
7. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAY ENTRANCES DURING CONSTRUCTION.
8. TEMPORARY CLOSURE AFFECTING EGRESS TO ADJACENT PROPERTIES SHALL BE COORDINATED WITH AFFECTED PARTIES.
9. PEDESTRIAN DETOUR SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACCORDING TO VIRGINIA WORK AREA PROTECTION AND MUTCD GUIDELINES.
10. THE CONTRACTOR SHALL INFORM THE V.D.O.T. TRAFFIC OPERATIONS CENTER OF ANY LANE CLOSURES AND SUBSEQUENT OPENINGS ON A DAILY BASIS BY CALLING 703-877-3449.

SANITARY SEWER

1. ALL SANITARY SEWER IN THIS CONTRACT SHALL BE PVC SDR-35 UNLESS OTHERWISE NOTED.
2. LENGTHS OF PIPE SHOWN ON THE DRAWINGS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
3. IF PVC PIPE IS USED, ALL LATERAL SPUR CONNECTIONS SHALL BE MADE WITH MANUFACTURED PVC "TEE" OR "WYE" FITTINGS. NO SADDLES SHALL BE USED.
4. LATERAL SPURS SHALL EXTEND 12" INSIDE PROPERTY LINES. IF THE UPPER ENDS OF THE LATERAL SPURS ARE GREATER THAN 6' BELOW THE GROUND SURFACE, THEN THE CONTRACTOR SHALL INSTALL TWO 45° BENDS AND A VERTICAL RISER (ALL 4" DIAMETER) TO WITHIN 4' OF THE GROUND SURFACE. THE INVERT SHOWN IN THE PROFILE IS AT THE BOTTOM OF THE LOWER 45° BEND.
5. AS-BUILT DRAWINGS FOR ALL NEW SANITARY SEWER INSTALLATIONS AND/OR ADJUSTMENTS TO EXISTING SANITARY SEWER FACILITIES SHALL BE PREPARED IN ACCORDANCE WITH SECTION 10-0104 OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
6. WHEN AN EXISTING SANITARY SEWER LINE IS REPLACED, ALL EXISTING SANITARY SEWER LATERAL SPUR LINES SHALL BE RECONNECTED TO NEW SANITARY SEWER. THESE SANITARY SEWER LATERAL SPUR LINE STREET TAPS SHALL BE PROVIDED STARTING AT A POINT 2-FEET TO 6-FEET FROM THE MAIN SEWER, OR IF NECESSARY, AT A LONGER DISTANCE TO ENSURE THAT THE EXISTING SANITARY SEWER LATERAL PIPE IS IN GOOD CONDITION.
7. THE CONTRACTOR SHALL OBTAIN A FAIRFAX COUNTY PLUMBING PERMIT PRIOR TO THE CONNECTION OF ANY SANITARY SEWER SPUR LINE TO THE MAIN SANITARY SEWER.

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CONSTRUCTION NOTES (CONTINUED)

STORM SEWER

1. A WATERTIGHT CONNECTION SHALL BE MADE AT ALL PIPES ENTERING DRAINAGE STRUCTURES. IN ADDITION, WATERTIGHT CONNECTIONS SHALL BE MADE BETWEEN SECTIONS OF PIPE.
2. LENGTHS OF PIPE SHOWN ON THE DRAWINGS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
3. INVERT ELEVATIONS SHOWN ON THE DRAWINGS ARE TAKEN AT THE FACE OF THE STRUCTURE.
4. SHAPE THE INVERTS OF ALL STRUCTURES ACCORDING TO V.D.O.T. STANDARD IS-1.
5. STORM SEWER AND CULVERT PIPE SHALL BE REINFORCED CONCRETE PIPE TO CONFORM TO THE CURRENT A.A.S.H.T.O. DESIGNATION M170, UNLESS OTHERWISE DESIGNATED ON THE PLANS. CLASS III PIPE WILL BE REQUIRED WITHIN THE LIMITS OF V.D.O.T. RIGHT-OF-WAY, UNLESS OTHERWISE NOTED.
6. MINOR FIELD ADJUSTMENTS IN THE ELEVATION AND ALIGNMENT OF THE STORM SEWER AND STRUCTURE MIGHT BE NECESSARY TO MEET EXISTING CONDITIONS AND PROPOSED FINAL GRADING. THE CONTRACTOR SHALL NOTIFY FAIRFAX COUNTY DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES PRIOR TO MAKING ANY NECESSARY ADJUSTMENTS.
7. TOP OF STRUCTURES SHALL BE SET TO MATCH CURB AND GUTTER, SIDEWALK AND/OR DITCH CONSTRUCTION.
8. A VIDEO INSPECTION OF ALL NEW OR MODIFIED STORM SEWERS IN VDOT RIGHT OF WAY WILL BE REQUIRED NO MORE THAN 60 DAYS IN ADVANCE OF PROJECT ACCEPTANCE BY V.D.O.T.
9. ALL STORMSEWER PIPES WITHIN THE PROJECT LIMITS WILL BE FLUSHED.

SIDEWALKS AND TRAILS

1. A MINIMUM OF 2 FOOT CLEARANCE IS REQUIRED BETWEEN THE WALKWAY EDGE AND ANY VERTICAL OBSTRUCTIONS SUCH AS TREES, UTILITY POLES, SIGNS, ETC., UNLESS OTHERWISE SPECIFICALLY NOTED ON THE PLANS AT EACH LOCATION.
2. A 4 FOOT UTILITY STRIP IS REQUIRED BETWEEN THE EDGE OF THE WALKWAY AND THE BACK OF THE CURB AND GUTTER, UNLESS OTHERWISE NOTED ON THE PLAN.
3. A MINIMUM 10 FOOT SEPARATION IS REQUIRED BETWEEN THE EDGE OF THE SIDEWALK AND THE EDGE OF THE PAVEMENT FOR NON CURB AND GUTTER ROADS, UNLESS OTHERWISE NOTED ON THE PLANS.
4. ALL HANDRAIL MATERIAL AND INSTALLATION SHALL CONFORM TO THE CURRENT VDOT ROAD AND BRIDGE STANDARDS 601.05 STANDARD HANDRAIL METHOD OF LOCATING AND ERECTING. THE FOUNDATION DETAIL FOR HANDRAILS SHALL BE SPECIFIED IN THE CONSTRUCTION DRAWINGS.
5. ALL VEGETATIVE MATERIAL WITHIN 10 FEET OF VERTICAL CLEARANCE FROM THE PROPOSED TRAIL SHALL BE REMOVED PRIOR TO TRAIL CONSTRUCTION. THE HORIZONTAL CLEARING LIMITS SHALL BE IN ACCORDANCE WITH THE DETAIL ON THE DETAIL SHEET. AN EXCEPTION TO THIS REQUIREMENT SHALL BE TO SAVE ANY TREES THAT ARE DESIGNATED ON THE CONSTRUCTION PLANS.
6. THE GRADES FOR PROPOSED SIDEWALK SHALL BE IN ACCORDANCE WITH CONSTRUCTION PLANS. ANY FIELD ADJUSTMENT OF THE PROPOSED SIDEWALK GRADES SHALL BE APPROVED BY THE ENGINEER. THE FOLLOWING GRADE CRITERIA SHALL BE ADHERED TO:
    * MINIMUM: 1% EXCEPT IN SAGS WITH ADEQUATE DRAINAGE
    * MAXIMUM: ROADWAY GRADE OR 5%, WHICHEVER IS GREATER.
7. ALL DRIVEWAYS SHALL BE GRADED AS INDICATED ON THE CONSTRUCTION PLANS TO CONFORM TO ALLOWABLE CROSS SLOPES FOR THE WALKWAY. THE CROSS SLOPES FOR WALKWAYS SHALL BE 1/4" PER FOOT OF WIDTH.
8. THE MINIMUM ALLOWABLE TURNING RADIUS FOR WALKWAYS SHALL BE 20 FEET. ANY TURNING RADIUS LESS THAN 20 FEET, REQUIRED DUE TO FIELD ADJUSTMENTS, SHALL BE APPROVED BY THE ENGINEER.
9. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE REQUIREMENTS FOR WALKWAYS IN THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
10. UNLESS MORE STRINGENT COMPACTION REQUIREMENTS ARE NOTED ON THE PLANS, THE SUBGRADE FOR ALL WALKWAYS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THEORETICAL MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT WITHIN THE TOLERANCE SPECIFIED IN THE CURRENT EDITION OF THE V.D.O.T. ROAD AND BRIDGE SPECIFICATIONS.
11. SHARED USE PATHS SHALL BE A MINIMUM OF 8.0 FEET FROM THE FACE OF CURB UNLESS OTHERWISE NOTED ON THE PLAN.

TREE REMOVAL PROTECTION DURING CONSTRUCTION IN EASEMENTS

DENOTES AN EXISTING TREE NOT TO BE REMOVED OR DAMAGED. ALL REMAINING TREES WITHIN THE EASEMENT LIMITS CAN BE REMOVED AS REQUIRED TO PERFORM THE CONSTRUCTION. IN ADDITION, THE CONTRACTOR MUST REMOVE ANY TREES ADVERSELY AFFECTED BY THE CONSTRUCTION TO THE EXTENT THAT IT IS LIKELY TO DIE IN THE OPINION OF THE COUNTY ARBORIST. HOWEVER, EVERY EFFORT WILL BE MADE TO AVOID THE REMOVAL OR DISTURBANCE OF REMAINING TREES.

DENOTES TREES TO HAVE TREE PROTECTION BARRICADE (SNOW FENCE) AT DRIP LINE AS PER ARTICLE 12 OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.

DENOTES AN EXISTING TREE TO BE REMOVED. THIS INCLUDES THE REMOVAL AND / OR GRINDING OF STUMPS TO A MINIMUM OF 12" BELOW FINISHED GRADE.

REVISED: APRIL. 2017

TAX MAP 29-3

COMMONWEALTH OF VIRGINIA — ADAM D. WELSCHENBACH Lic. No. 044359 — PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:18:14 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
STANDARD FAIRFAX COUNTY
GENERAL NOTES
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

SCALE: HORIZ- N/A VERT- N/A
DESIGNED BY: Fairfax County
DRAFTED BY: Fairfax County
CHECKED BY: Fairfax County
SHEET: IC

FUND*

10/21/2020

GENERAL NOTES 2: UTILITIES

(THESE GENERAL NOTES SHALL BE USED WHERE THEY ARE APPLICABLE TO THE PROJECT PLANS)

MISS UTILITY: CALL 1-800-552-7001 OR 811
VA811.COM

UTILITIES NOTES

1. THE UTILITY INFORMATION SHOWN ON THESE PLANS IS TAKEN FROM INFORMATION PROVIDED BY AN UNDERGROUND UTILITY DESIGNATING AND LOCATING COMPANY AND IN SOME CASES, FROM INFORMATION RECEIVED FROM THE UTILITY COMPANIES. THE DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES DOES NOT GUARANTEE THAT THE UTILITY INFORMATION SHOWN ON THE PLANS IS COMPLETE OR ACCURATE. THE CONTRACTOR MUST VERIFY THE UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
2. ALL EXISTING UNDERGROUND UTILITIES SHALL BE MARKED IN THE FIELD BY MISS UTILITY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE FIELD MARKING OF UTILITIES WITH MISS UTILITY.
3. ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF THESE UTILITIES.
4. THE CONTRACTOR SHALL CONFORM TO THE PROVISIONS AS SPECIFIED IN THE CURRENT VIRGINIA ADMINISTRATIVE CODE (VAC) SECTION 20 VAC 5 – 309-140, EXCAVATOR'S RESPONSIBILITIES TO AVOID DAMAGE, DISLOCATING OR DISTURBANCE OF UTILITY LINES, AS FOLLOWS:

   "ANY PERSON EXCAVATING AROUND UNDERGROUND UTILITY LINES SHALL TAKE ALL REASONABLE STEPS TO PROTECT SUCH UTILITY LINES. THESE STEPS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

   1. THE EXCAVATOR SHALL PLAN THE EXCAVATION IN SUCH A MANNER TO AVOID DAMAGE TO, AND MINIMIZE INTERFERENCE WITH, UNDERGROUND UTILITY LINES IN AND NEAR THE CONSTRUCTION AREA.
   2. THE EXCAVATOR SHALL EXPOSE THE UNDERGROUND UTILITY LINE TO ITS EXTREMITIES BY HAND DIGGING WITHIN THE EXCAVATION AREA WHEN EXCAVATION IS EXPECTED TO COME WITHIN TWO FEET OF THE MARKED LOCATION OF THE UNDERGROUND UTILITY LINE.
   3. THE EXCAVATOR SHALL NOT UTILIZE MECHANIZED EQUIPMENT WITHIN TWO FEET OF THE EXTREMITIES OF ALL EXPOSED UTILITY LINES.
   4. THE EXCAVATOR SHALL MAINTAIN A REASONABLE CLEARANCE, TO INCLUDE THE WIDTH OF THE UTILITY LINE, IF KNOWN, PLUS 24 INCHES, BETWEEN THE MARKED OR STAKED LOCATION OF AN UNDERGROUND UTILITY LINE AND THE CUTTING EDGE OR POINT OF ANY MECHANIZED EQUIPMENT, CONSIDERING THE KNOWN LIMIT OF CONTROL OF THE CUTTING EDGE OR POINT TO AVOID DAMAGE TO THE UTILITY LINE.
   5. THE EXCAVATOR SHALL PROVIDE PROPER SUPPORT FOR UNDERGROUND UTILITY LINES DURING EXCAVATION ACTIVITIES. DURING BACKFILL OPERATIONS, THE EXCAVATOR SHALL USE THE SAME OR SIMILAR BACKFILL MATERIAL THAT WAS ORIGINALLY AROUND THE UTILITY LINE, ENSURE THERE IS PROPER COMPACTION AROUND THE UTILITY LINE, PROTECT ALL TRACER WIRES, AND PROTECT OR REPLACE WARNING TAPES."

5. DISCONNECTED, PRIOR TO CLEARING THE SITE OF TREES, BUILDINGS, FOUNDATIONS, ETC. WITHIN THE LIMITS OF CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS INDICATED ON THE CONSTRUCTION PLANS.
6. CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED CONSTRUCTION, EXCAVATION OR BLASTING AT LEAST 2 WORKING DAYS, BUT NOT MORE THAN 10 WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION IN ACCORDANCE WITH CHAPTER 63 OF FAIRFAX COUNTY CODE. NAMES AND TELEPHONE NUMBERS OF SELECT OPERATORS OF UNDERGROUND UTILITY LINES IN FAIRFAX COUNTY APPEAR ON THIS SHEET. THESE NUMBERS WILL ALSO BE USED TO SERVE EMERGENCY CONDITION NOTICE AS REQUIRED BY CHAPTER 63 OF THE FAIRFAX COUNTY CODE. THIS IS NOT A COMPLETE LIST OF ALL UNDERGROUND UTILITY OPERATORS IN FAIRFAX COUNTY.

PRIMARY UTILITY COMPANIES

PRIMARY UTILITY COMPANIES

AMERICAN TELEPHONE & TELEGRAPH CO. (AT&T)
CITY OF FALLS CHURCH PUBLIC UTILITIES
COLUMBIA GAS OF VIRGINIA
COLUMBIA GAS TRANSMISSION CORP.
COLONIAL PIPELINE CO.
COX COMMUNICATIONS
DOMINION TRANSMISSION, INC.
DOMINION VIRGINIA POWER
FAIRFAX CO. WASTEWATER COLLECTION DIVISION
FAIRFAX WATER
FAIRFAX COUNTY PUBLIC SAFETY
MCI, WORLD
WORLD COM. (METROPOLITAN FIBER SYSTEMS)
NORTHERN VIRGINIA ELEC. CO-OP (NOVEC)
TRANSCO GAS PIPELINE CO.
TOWN OF HERNDON PUBLIC WORKS
TOWN OF VIENNA WATER SERVICE
SPRINT (GLOBAL ONE)
UPPER OCCOQUAN SERVICE AUTHORITY (UOSA)
SMART TRAFFIC SIGNAL SYSTEM
PLANTATION PIPE LINE COMPANY
VERIZON
VIENNA WATER
VIRGINIA AMERICAN WATER COMPANY
WASHINGTON GAS
WILLIAMS (TRANSCO) GAS PIPE LINE CORP.

EMERGENCY

1-800-241-3624
(703-248-5044 24/7AFTER HOURS/EMERGENCIES 703-698-5613
1-800-543-8911 – (703) 631-5363 (METRO)
1-800-835-7191 (24 HRS)
1-800-926-2728
(703)-378-0882
1-888-264-8240 24/7
1-866-366-4357
(703) 323-1211
(703) 698-5600 OR 698-5613
(703)-691-2131 OR 911
1-800-624-9675
(703) 852-6700
(703) 335-0500
1-800-440-8475 (24 HRS)
(703) 435-6860 STATION 185 (703) 435-6846
(703) 255-6381 AFTER 5:00 PM., (703) 255-6385
1-800-521-0579 (24 HRS)
703-830-2200
(703)-383-2790
1-800-510-5676
1-800-837-4966
(703)-255-6385
1-800-452-6863
(703) 750-1000 (GAS LEAK (703) 750-4831)
1-800-440-8475 OR 703-368-3255 OFFICE

TRANSPORTATION PROJECTS/WORK WITHIN THE RIGHT-OF-WAY UTILITIES

Underground VDOT Owned/Maintained Utilities

1. Underground Virginia Department of Transportation (VDOT) Owned and/or Maintained utilities may be present within the project limits. These utilities may include power, communication or other utilities related to street/pedestrian lighting, Intelligent Traffic System (ITS) devices such as Variable Message Signs (VMS), traffic signals and other related facilities.
2. Fairfax County has attempted to show any known underground VDOT owned or maintained utilities on the plans based upon the best available information at the time of design.
3. Miss Utility does not and will not mark the location of underground VDOT Owned and/or Maintained utilities within the project area.
4. At least 48 business day hours in advance of any excavation, the Contractor shall be responsible for requesting that VDOT mark their underground utilities in the field. All requests shall be submitted through the online ?Utility Marking System? by registering at the following website:
   a. http://www.vdotutilitymarking.virginia.gov/Account/Login.aspx?ReturnUrl=%2f
5. The 48 hour time limit does not begin until 7 AM the business day following receipt of the utility location request by VDOT. State holiday and weekends are not considered to be business days. Underground VDOT utility location requests received after 4:30 PM shall be considered to be received by VDOT on the next business day.
6. No excavation shall commence until the underground VDOT utilities have been marked.
7. The Contractor shall be responsible for repair or replacement of underground VDOT owned/maintained utilities that are damaged due to construction operations at no cost to the County.

Utility Relocation Plans

1. Fairfax County has coordinated the proposed improvements with the owners of all known underground utilities in the project area.
2. Underground Utility Test Hole information, noting the horizontal and vertical location of known underground utilities that are in potential conflict with the project, may be included in the plan set or provided to the Contractor at the Pre-Construction Conference, or upon request following award of the construction contract.
3. Where underground utilities are in conflict with the project, Fairfax County often attempts to relocate conflicting utilities prior to the commencement of construction activities. However, as with all construction activities, extreme care shall be taken by the contractor to ensure utility locations are known prior to excavation.
4. Miss Utility may not have the most recent up to date information concerning underground utilities that may have been recently relocated prior to construction.
5. Fairfax County may provide available plans showing the approximate location of recently relocated underground utilities to the Contactor at the Pre-Construction Conference, or upon request following award of the Construction Contract. Where practicable, the utility relocation plans may be included in the Bid Documents.
6. Any known underground utilities that are in conflict with the project that are scheduled to be relocated during construction shall be as noted on the plans and/or special provisions. The Contractor shall be responsible for coordinating these relocations with the appropriate utility company.

For All excavation work ANYWHERE in Virginia!
Always call 811 before you dig in Virginia!

REVISED: JUNE, 2017

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
STANDARD FAIRFAX COUNTY
GENERAL NOTES: UTILITIES
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:18:28 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

SCALE HORIZ- N/A VERT- N/A
DESIGNED BY: Fairfax County
DRAFTED BY: Fairfax County
CHECKED BY: Fairfax County
SHEET ID

FUND*

10/21/2020

Right of Way Data

Affected Properties: Old Courthouse Road Pedestrian Access Improvements, Phase I; Project #: FFX 104325

Property Information						Permanent Perpetual Street Easement		Permanent Storm Drainage Easement		Permanent Sidewalk Easement		Permanent Signal Equipment Easement		Permanent Sight Distance Easement		Permanent Retaining Wall Easement		Temporary Easement		Permanent Utility Easement				
Tally	Plan Sheet	Plan Parcel #	Tax Map No.	Property Address	Owner	Street Esmt.	SF	Storm Esmt.	SF	SW Esmt.	SF	Sign Esmt.	SF	Sight Esmt.	SF	Ret.Wall Esmt.	SF	G & TCE	SF	DVP (SF)	COX (SF)	Verizon (SF)	XO Com (SF)	Other (SF)
	3		029-3-06-0048B	403 Old Courthouse Road N.E.	JANET B.ROOT														764					
	3		029-3-06-0048A	401 Old Courthouse Road N.E.	THOMAS BACKMAN														2474					
	3		029-3-06-0049	307 Old Courthouse Road N.E.	JOSE T.HERNANDEZ JR.,LUZ A.HERNANDEZ														2193					
	4		029-3-06-0059	305 Old Courthouse Road N.E.	SANTOSH K.KHANNA,SURINDER KHANNA														1323					
	4		029-3-06-0058A	303 Old Courthouse Road N.E.	MATTHEW R.VERDEROSA														1035					
	4		029-3-06-0057	301 Old Courthouse Road N.E.	CHRISTOPER M.GAFFNEY,RUYI LI														1456					
	4		029-3-06-0035	241 Old Courthouse Road N.E.	LIU-HSIUNG CHUANG,PATRICIA L.CHUANG														1761					
	4,5		029-3-06-0034	239 Old Courthouse Road N.E.	PAUL D.PAVNICA,SHARON L.PAVNICA														2052					
	5,6		029-3-06-0033	237 Old Courthouse Road N.E.	PATRICK MILLER,VERONICA MILLER														2223					
	5,6		029-3-06-0032	235 Old Courthouse Road N.E.	WALON N.HICKS														2597					
	5,6		029-3-06-0031	233 Old Courthouse Road N.E.	DONNA SMITH,MOHAMMAD OUGACHE														2263					

Affected Properties: Old Courthouse Road Pedestrian Access Improvements, Phase II; Project #: FFX 104325

Property Information						Permanent Perpetual Street Easement		Permanent Storm Drainage Easement		Permanent Sidewalk Easement		Permanent Signal Equipment Easement		Permanent Sight Distance Easement		Permanent Retaining Wall Easement		Temporary Easement		Permanent Utility Easement				
Tally	Plan Sheet	Plan Parcel #	Tax Map No.	Property Address	Owner	Street Esmt.	SF	Storm Esmt.	SF	SW Esmt.	SF	Sign Esmt.	SF	Sight Esmt.	SF	Ret.Wall Esmt.	SF	G & TCE	SF	DVP (SF)	COX (SF)	Verizon (SF)	XO Com (SF)	Other (SF)
	5,6		029-3-01-0028	8530 Old Courthouse Road N.E.	FAIRFAX COUNTY WATER AUTHORITY		2372		1025										3822	6903	6903	6903		

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:18:40 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
RIGHT OF WAY DATA SHEET
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE
HORIZ: 1"=25'
VERT: N/A

DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET
1E

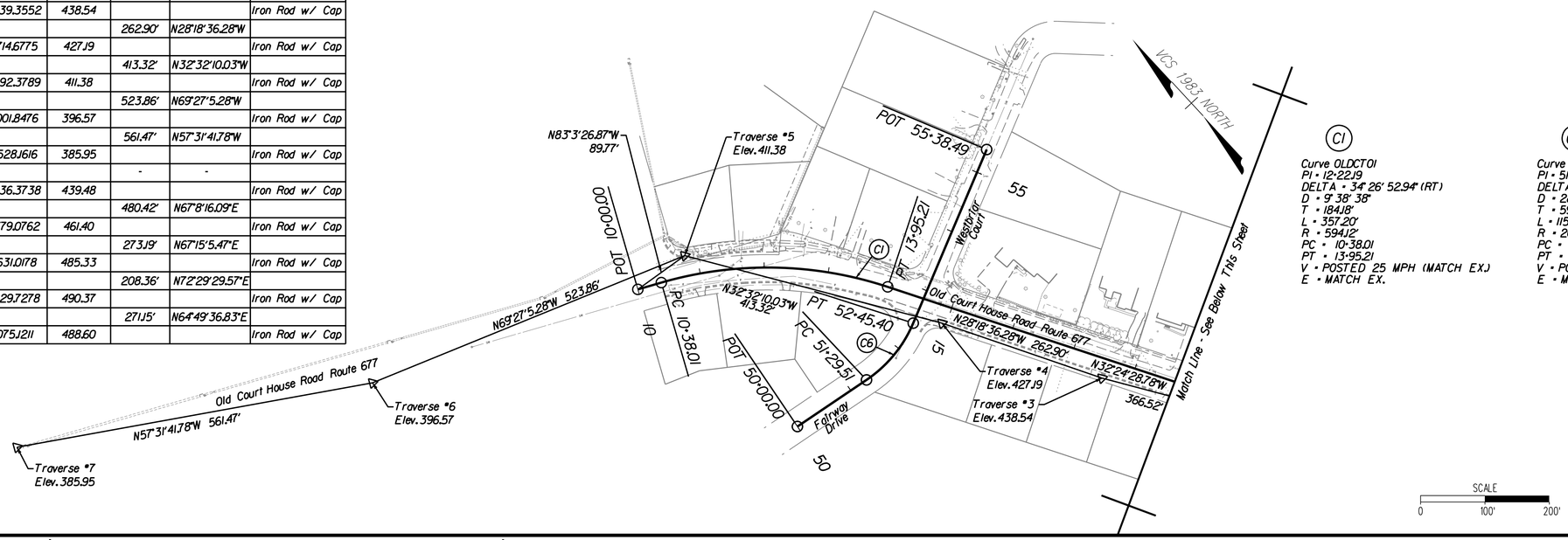
FUND#

10/21/2020

Traverse Tabulation by RDA

NAME	NORTHING	EASTING	ELEVATION (FT.)	DISTANCE	BEARING	DESCRIPTIONS
Trav 1	7,019,122.3194	11,839,936.3738	439.48			Iron Rod w/ Cap
				375.46'	N15°21'13.31"E	
Trav 2	7,019,484.3817	11,840,035.7880	445.10			Iron Rod w/ Cap
				366.52'	N32°24'28.78"W	
Trav 3	7,019,793.8147	11,839,839.3552	438.54			Iron Rod w/ Cap
				262.90'	N28°18'36.28"W	
Trav 4	7,020,025.2689	11,839,714.6775	427.19			Iron Rod w/ Cap
				413.32'	N32°32'10.03"W	
Trav 5	7,020,373.7229	11,839,492.3789	411.38			Iron Rod w/ Cap
				523.86'	N69°27'5.28"W	
Trav 6	7,020,557.5988	11,839,001.8476	396.57			Iron Rod w/ Cap
				561.47'	N57°31'41.78"W	
Trav 7	7,020,859.0416	11,838,528.1616	385.95			Iron Rod w/ Cap
				-	-	
Trav 1	7,019,122.3194	11,839,936.3738	439.48			Iron Rod w/ Cap
				480.42'	N67°8'16.09"E	
Trav 8	7,019,308.9485	11,840,379.0762	461.40			Iron Rod w/ Cap
				273.19'	N67°15'5.47"E	
Trav 9	7,019,414.5846	11,840,631.0178	485.33			Iron Rod w/ Cap
				208.36'	N72°29'29.57"E	
Trav 10	7,019,477.2668	11,840,829.7278	490.37			Iron Rod w/ Cap
				271.15'	N64°49'36.83"E	
Trav 11	7,019,592.6064	11,841,075.1211	488.60			Iron Rod w/ Cap

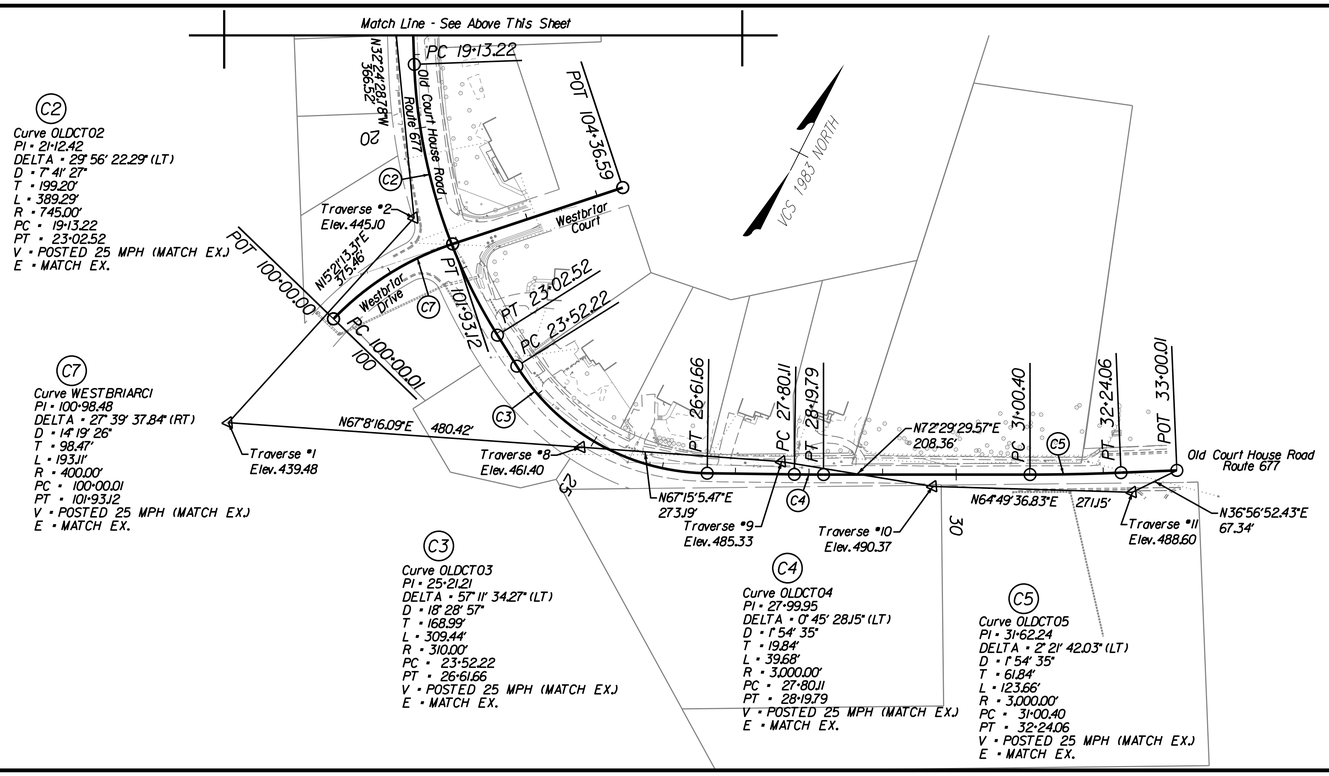
Survey Control Data



C1
Curve OLDCT01
PI = 12+22.19
DELTA = 34° 26' 52.94" (RT)
D = 9° 38' 38"
T = 184.18'
L = 357.20'
R = 594.12'
PC = 10+38.01
PT = 13+95.21
V = POSTED 25 MPH (MATCH EX.)
E = MATCH EX.

C6
Curve FAIRWAYC1
PI = 51+89.12
DELTA = 33° 03' 15.13" (LT)
D = 28° 31' 21"
T = 59.61'
L = 115.89'
R = 200.88'
PC = 51+29.51
PT = 52+45.40
V = POSTED 25 MPH (MATCH EX.)
E = MATCH EX.

SCALE 0 100' 200'



C2
Curve OLDCT02
PI = 21+12.42
DELTA = 29° 56' 22.29" (LT)
D = 7° 41' 27"
T = 199.20'
L = 389.29'
R = 745.00'
PC = 19+13.22
PT = 23+02.52
V = POSTED 25 MPH (MATCH EX.)
E = MATCH EX.

C7
Curve WESTBRIARC1
PI = 100+98.48
DELTA = 27° 39' 37.84" (RT)
D = 14° 19' 26"
T = 98.47'
L = 193.11'
R = 400.00'
PC = 100+00.01
PT = 101+93.12
V = POSTED 25 MPH (MATCH EX.)
E = MATCH EX.

C3
Curve OLDCT03
PI = 25+21.21
DELTA = 57° 11' 34.27" (LT)
D = 18° 28' 57"
T = 168.99'
L = 309.44'
R = 310.00'
PC = 23+52.22
PT = 26+61.66
V = POSTED 25 MPH (MATCH EX.)
E = MATCH EX.

C4
Curve OLDCT04
PI = 27+99.95
DELTA = 0° 45' 28.15" (LT)
D = 1° 54' 35"
T = 19.84'
L = 39.68'
R = 3,000.00'
PC = 27+80.11
PT = 28+19.79
V = POSTED 25 MPH (MATCH EX.)
E = MATCH EX.

C5
Curve OLDCT05
PI = 31+62.24
DELTA = 2° 21' 42.03" (LT)
D = 1° 54' 35"
T = 61.84'
L = 123.66'
R = 3,000.00'
PC = 31+00.40
PT = 32+24.06
V = POSTED 25 MPH (MATCH EX.)
E = MATCH EX.

SCALE 0 100' 200'

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

REVISIONS	△	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS

SURVEY CONTROL DATA SHEET
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE	DESIGNED BY: ADW, P.E.	SHEET
HORIZ: 1"=100'	DRAFTED BY: LKG, JRB	IF
VERT: N/A	CHECKED BY: ADW, P.E.	

10/21/2020

FUND#

Survey Control Data

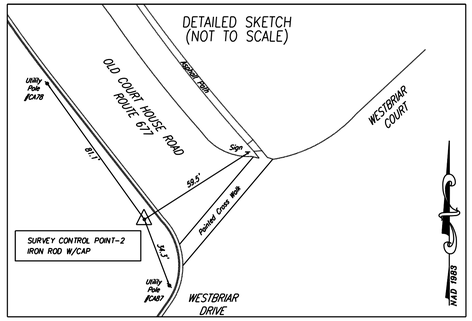
Rinker Design Associates, P.C. Horizontal Control Card

NOKESVILLE ROAD - ROUTE 28
Control Station I. D.: 2
TOWN OF VIENNA, FAIRFAX COUNTY
Established By: RINKER DESIGN ASSOCIATES, P.C.
Vertical Datum Based On: NAVD 1988
Horizontal Datum Based On: NAD 1983
Survey By: DALE WINE
Field Operator: JOHN ROSE

Control Data-Project Coordinates
East (X): 11,840,035.7880
North (Y): 7,019,484.3817
East (Z): 445.10

** See Below for detailed sketch location

DETAILED SKETCH
(NOT TO SCALE)



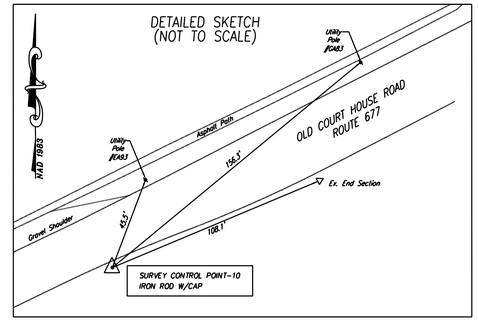
Rinker Design Associates, P.C. Horizontal Control Card

NOKESVILLE ROAD - ROUTE 28
Control Station I. D.: 10
TOWN OF VIENNA, FAIRFAX COUNTY
Established By: RINKER DESIGN ASSOCIATES, P.C.
Vertical Datum Based On: NAVD 1988
Horizontal Datum Based On: NAD 1983
Survey By: DALE WINE
Field Operator: JOHN ROSE

Control Data-Project Coordinates
East (X): 11,840,829.7278
North (Y): 7,019,477.2668
East (Z): 490.37

** See Below for detailed sketch location

DETAILED SKETCH
(NOT TO SCALE)



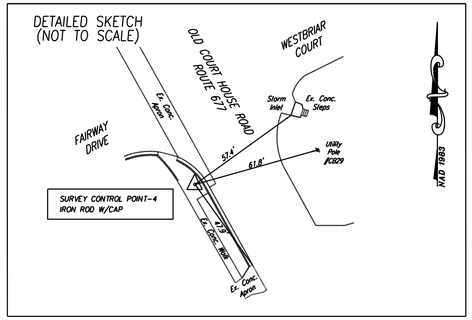
Rinker Design Associates, P.C. Horizontal Control Card

NOKESVILLE ROAD - ROUTE 28
Control Station I. D.: 4
TOWN OF VIENNA, FAIRFAX COUNTY
Established By: RINKER DESIGN ASSOCIATES, P.C.
Vertical Datum Based On: NAVD 1988
Horizontal Datum Based On: NAD 1983
Survey By: DALE WINE
Field Operator: JOHN ROSE

Control Data-Project Coordinates
East (X): 11,839,714.6775
North (Y): 7,020,025.2689
East (Z): 427.19

** See Below for detailed sketch location

DETAILED SKETCH
(NOT TO SCALE)



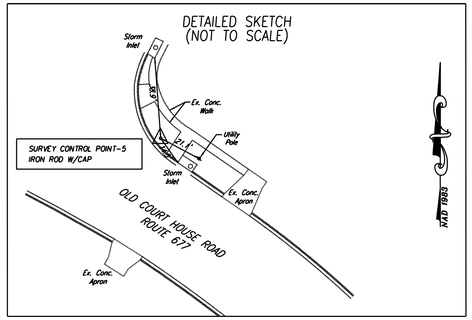
Rinker Design Associates, P.C. Horizontal Control Card

NOKESVILLE ROAD - ROUTE 28
Control Station I. D.: 5
TOWN OF VIENNA, FAIRFAX COUNTY
Established By: RINKER DESIGN ASSOCIATES, P.C.
Vertical Datum Based On: NAVD 1988
Horizontal Datum Based On: NAD 1983
Survey By: DALE WINE
Field Operator: JOHN ROSE

Control Data-Project Coordinates
East (X): 11,839,492.3789
North (Y): 7,020,373.7229
East (Z): 411.38

** See Below for detailed sketch location

DETAILED SKETCH
(NOT TO SCALE)



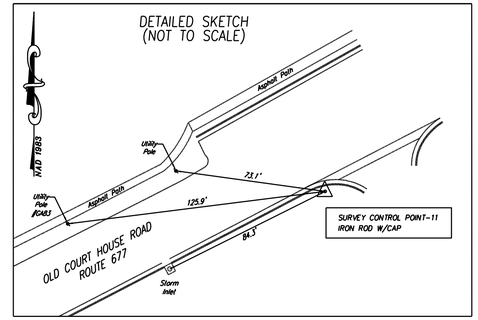
Rinker Design Associates, P.C. Horizontal Control Card

NOKESVILLE ROAD - ROUTE 28
Control Station I. D.: 11
TOWN OF VIENNA, FAIRFAX COUNTY
Established By: RINKER DESIGN ASSOCIATES, P.C.
Vertical Datum Based On: NAVD 1988
Horizontal Datum Based On: NAD 1983
Survey By: DALE WINE
Field Operator: JOHN ROSE

Control Data-Project Coordinates
East (X): 11,841,075.1211
North (Y): 7,019,592.6064
East (Z): 488.60

** See Below for detailed sketch location

DETAILED SKETCH
(NOT TO SCALE)



TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
SURVEY CONTROL DATA SHEET
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ* N/A VERT* N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET 1F(1)

FUND*

10/21/2020

OLD COURTHOUSE ROAD - ROUTE 677

From Sta.10+00.00 to 33+00.01

Chain OLDCT contains:
OLDCT1001 OLDCT1002 CUR OLDCT01 OLDCT1004 OLDCT1005 CUR OLDCT02 OLDCT1007 OLDCT1008 CUR OLDCT03 OLDCT1010 OLDCT1011 CUR OLDCT04 OLDCT1013 OLDCT1014 CUR OLDCT05 OLDCT1016 OLDCT1017

Beginning chain OLDCT description

****

Point OLDCT1001 N 7,020,384.5735 E 11,839,403.2690 Sta 10+00.00

Course from OLDCT1001 to OLDCT1002 S 63° 24' 06.2958" E Dist 38.0004

Point OLDCT1002 N 7,020,367.5595 E 11,839,437.2477 Sta 10+38.00

Course from OLDCT1002 to PC OLDCT01 N 63° 24' 06.2922" W Dist 0.0061

Curve Data

Curve OLDCT01
P.I. Station 12+22.19 N 7,020,285.0973 E 11,839,601.9335
Delta = 34° 26' 52.9369" (RT)
Degree = 9° 38' 37.7012"
Tangent = 184.1838
Length = 357.2038
Radius = 594.1200
External = 27.8947
Long Chord = 351.8479
Mid.Ord. = 26.6437
P.C. Station 10+38.01 N 7,020,367.5623 E 11,839,437.2423
P.T. Station 13+95.21 N 7,020,123.9344 E 11,839,691.0974
C.C. N 7,019,836.3192 E 11,839,171.2358
Back = S 63° 24' 06.2972" E
Ahead = S 28° 57' 13.3603" E
Chord Bear = S 46° 10' 39.8287" E

Point OLDCT1004 N 7,020,123.9340 E 11,839,691.0977 Sta 13+95.21

Course from OLDCT1004 to OLDCT1005 S 28° 57' 15.9856" E Dist 518.0129

Point OLDCT1005 N 7,019,670.6701 E 11,839,941.8750 Sta 19+13.22

Curve Data

Curve OLDCT02
P.I. Station 21+12.42 N 7,019,496.3681 E 11,840,038.3103
Delta = 29° 56' 22.2890" (LT)
Degree = 7° 41' 26.5512"
Tangent = 199.2008
Length = 389.2947
Radius = 745.0000
External = 26.1718
Long Chord = 384.8808
Mid.Ord. = 25.2836
P.C. Station 19+13.22 N 7,019,670.6701 E 11,839,941.8750
P.T. Station 23+02.52 N 7,019,393.4557 E 11,840,208.8682
C.C. N 7,020,031.3329 E 11,840,593.7549
Back = S 28° 57' 15.2967" E
Ahead = S 58° 53' 37.5858" E
Chord Bear = S 43° 55' 26.4413" E

Point OLDCT1007 N 7,019,393.4557 E 11,840,208.8682 Sta 23+02.52

Course from OLDCT1007 to OLDCT1008 S 58° 53' 37.5874" E Dist 49.7025

Point OLDCT1008 N 7,019,367.7781 E 11,840,251.4241 Sta 23+52.22

Curve Data

Curve OLDCT03
P.I. Station 25+21.21 N 7,019,280.4721 E 11,840,396.1172
Delta = 57° 11' 34.2685" (LT)
Degree = 18° 28' 57.0343"
Tangent = 168.9924
Length = 309.4431
Radius = 310.0000
External = 43.0700
Long Chord = 296.7550
Mid.Ord. = 37.8160
P.C. Station 23+52.22 N 7,019,367.7781 E 11,840,251.4241
P.T. Station 26+61.66 N 7,019,354.7831 E 11,840,547.8944
C.C. N 7,019,633.2035 E 11,840,411.5782
Back = S 58° 53' 37.5857" E
Ahead = N 63° 54' 48.1458" E
Chord Bear = S 81° 29' 24.7200" E

Point OLDCT1010 N 7,019,354.7831 E 11,840,547.8944 Sta 26+61.66

Course from OLDCT1010 to OLDCT1011 N 63° 54' 48.1457" E Dist 118.4440

Point OLDCT1011 N 7,019,406.8664 E 11,840,654.2725 Sta 27+80.11

Curve Data

Curve OLDCT04
P.I. Station 27+99.95 N 7,019,415.5906 E 11,840,672.0914
Delta = 0° 45' 28.1475" (LT)
Degree = 1° 54' 35.4935"
Tangent = 19.8399
Length = 39.6793
Radius = 3,000.0000
External = 0.0656
Long Chord = 39.6790
Mid.Ord. = 0.0656
P.C. Station 27+80.11 N 7,019,406.8664 E 11,840,654.2726
P.T. Station 28+19.79 N 7,019,424.5498 E 11,840,689.7933
C.C. N 7,022,101.2572 E 11,839,335.0839
Back = N 63° 54' 48.1446" E
Ahead = N 63° 09' 19.9971" E
Chord Bear = N 63° 32' 04.0708" E

Point OLDCT1013 N 7,019,424.5498 E 11,840,689.7933 Sta 28+19.79

Course from OLDCT1013 to OLDCT1014 N 63° 09' 19.9942" E Dist 280.6141

Point OLDCT1014 N 7,019,551.2666 E 11,840,940.1673 Sta 31+00.40

OLD COURTHOUSE ROAD - ROUTE 677

From Sta.10+00.00 to 33+00.01

Curve Data

Curve OLDCT05
P.I. Station 31+62.24 N 7,019,579.1905 E 11,840,995.3407
Delta = 2° 21' 42.0316" (LT)
Degree = 1° 54' 35.4935"
Tangent = 61.8373
Length = 123.6570
Radius = 3,000.0000
External = 0.6372
Long Chord = 123.6483
Mid.Ord. = 0.6371
P.C. Station 31+00.40 N 7,019,551.2666 E 11,840,940.1673
P.T. Station 32+24.06 N 7,019,609.3642 E 11,841,049.3166
C.C. N 7,022,227.9740 E 11,839,585.4579
Back = N 63° 09' 19.9945" E
Ahead = N 60° 47' 37.9629" E
Chord Bear = N 61° 58' 28.9787" E

Point OLDCT1016 N 7,019,609.3642 E 11,841,049.3166 Sta 32+24.06

Course from OLDCT1016 to OLDCT1017 N 60° 47' 37.9624" E Dist 75.9494

Point OLDCT1017 N 7,019,646.4239 E 11,841,115.6106 Sta 33+00.01

****

Ending chain OLDCT description

FAIRWAY DRIVE

From Sta.50+00.00 to 55+38.49

Chain FAIRWAYDR contains:
FAIRWAY1001 FAIRWAY1002 CUR FAIRWAYC1 FAIRWAY1003 FAIRWAY1004

Beginning chain FAIRWAYDR description

****

Point FAIRWAY1001 N 7,020,059.6479 E 11,839,440.7042 Sta 50+00.00

Course from FAIRWAY1001 to FAIRWAY1002 S 81° 17' 46.6711" E Dist 129.5141

Point FAIRWAY1002 N 7,020,040.0493 E 11,839,568.7269 Sta 51+29.51

Curve Data

Curve FAIRWAYC1
P.I. Station 51+89.12 N 7,020,031.0294 E 11,839,627.6465
Delta = 33° 03' 15.1306" (LT)
Degree = 28° 31' 20.6084"
Tangent = 59.6067
Length = 115.8886
Radius = 200.8800
External = 8.6570
Long Chord = 114.2882
Mid.Ord. = 8.2993
P.C. Station 51+29.51 N 7,020,040.0494 E 11,839,568.7262
P.T. Station 52+45.40 N 7,020,055.6063 E 11,839,681.9507
C.C. N 7,020,238.6160 E 11,839,599.1243
Back = S 81° 17' 46.6711" E
Ahead = N 65° 38' 58.1983" E
Chord Bear = N 82° 10' 35.7636" E

Point FAIRWAY1003 N 7,020,055.6060 E 11,839,681.9501 Sta 52+45.40

Course from FAIRWAY1003 to FAIRWAY1004 N 65° 38' 58.1997" E Dist 293.0897

Point FAIRWAY1004 N 7,020,176.4520 E 11,839,948.9665 Sta 55+38.49

****

Ending chain FAIRWAYDR description

WESTBRIAR COURT

From Sta.100+00.00 to 104+36.59

Chain WESTBRIARCT contains:
WESTBRIARI001 CUR WESTBRIARC1 WESTBRIARI002 WESTBRIARI003

Beginning chain WESTBRIARCT description

****

Point WESTBRIARI001 N 7,019,312.6241 E 11,840,000.1163 Sta 100+00.00

Course from WESTBRIARI001 to PC WESTBRIARC1 N 17° 10' 05.1123" E Dist 0.0112

Curve Data

Curve WESTBRIARC1
P.I. Station 100+98.48 N 7,019,406.7205 E 11,840,029.1865
Delta = 27° 39' 37.8443" (RT)
Degree = 14° 19' 26.2016"
Tangent = 98.47.34
Length = 193.1068
Radius = 400.0000
External = 11.9430
Long Chord = 191.2370
Mid.Ord. = 11.5967
P.C. Station 100+00.01 N 7,019,312.6348 E 11,840,000.1196
P.T. Station 101+93.12 N 7,019,476.5597 E 11,840,098.6091
C.C. N 7,019,794.5644 E 11,840,382.2967
Back = N 17° 10' 05.1026" E
Ahead = N 44° 49' 42.9469" E
Chord Bear = N 30° 59' 54.0247" E

Point WESTBRIARI002 N 7,019,476.5597 E 11,840,098.6091 Sta 101+93.12

Course from WESTBRIARI002 to WESTBRIARI003 N 44° 49' 42.9468" E Dist 243.4768

Point WESTBRIARI003 N 7,019,649.2380 E 11,840,270.2574 Sta 104+36.59

****

Ending chain WESTBRIARCT description

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:19:08 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△#	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
CONSTRUCTION ALIGNMENT DATA SHEET
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE
HORIZ= 1"=25'
VERT= N/A

DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET
IG

FUND#

10/21/2020

THIS SHEETIS FOR GEOMETRIC DATA INFORMATION ONLY!

Fairfax County
Town of Vienna

BEGIN CONSTRUCTION
Sta. 30+06.51

Old Courthouse Road
Route 677

N 63° 24' 06" W

Curve OLDCT01
PI = 12+22.19
DELTA = 34° 26' 52.94" (RT)
D = 9° 38' 38"
T = 184.18'
L = 357.20'
R = 594.12'
PC = 10+38.01
PT = 13+95.21

PT 13+95.21
PT 52+45.40

Fairway Drive

N 65° 38' 58" E

Westbriar Court

Ex. Dwelling

BLDG F.F.=448.75

Garage F.F.=446.37

S 28° 57' 16" E

Constr. ℄

Match Line Station 18+00 - See Below This Sheet

SCALE
0 25' 50'

Match Line Station 18+00 - See Above This Sheet

N 44° 49' 43" E

Curve WESTBRIARC1
PI = 100+98.48
DELTA = 27° 39' 37.84" (RT)
D = 14° 19' 26"
T = 98.47'
L = 193.11'
R = 400.00'
PC = 100+00.01
PT = 101+93.12

PT 101+93.12

Curve OLDCT02
PI = 21+12.42
DELTA = 29° 56' 22.29" (LT)
D = 7° 41' 27"
T = 199.20'
L = 389.29'
R = 745.00'

S 58° 53' 38" E

Old Courthouse Road
Route 677

Match Line Station 25+75 - See Sheet IG(2)

Curve OLDCT03
PI = 25+21.21
DELTA = 57° 11' 34.27" (LT)
D = 18° 28' 57"
T = 168.99'
L = 309.44'
R = 310.00'
PC = 23+52.22
PT = 26+61.66

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:19:22 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	DESCRIPTION	BY	APPROVED	DATE
△*				

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
CONSTRUCTION ALIGNMENT DATA SHEET
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

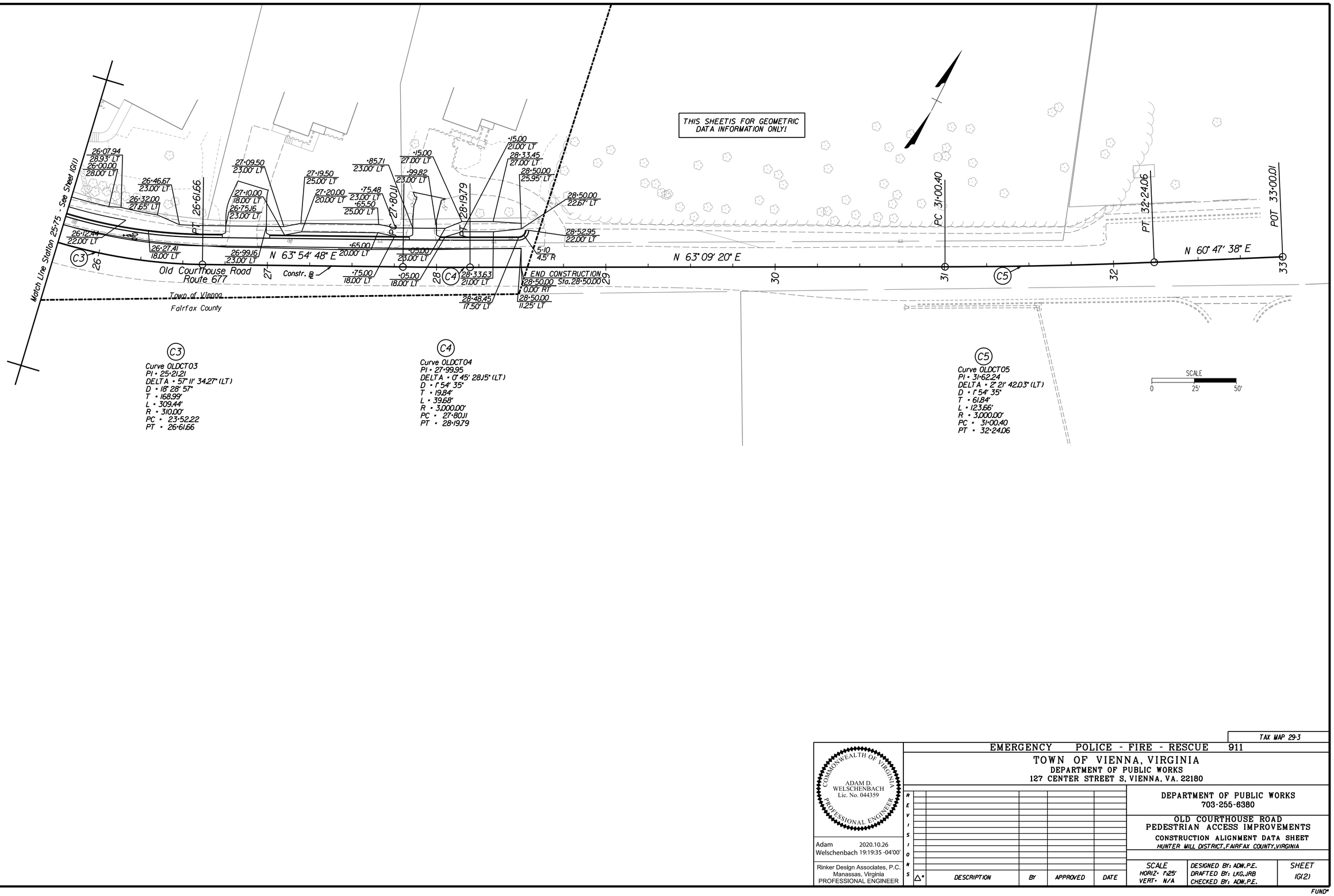
SCALE
HORIZ= 1"=25'
VERT= N/A

DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET
IG(1)

FUND*

10/21/2020



C3
Curve OLDCT03
PI = 25+21.21
DELTA = 57° 11' 34.27" (LT)
D = 18° 28' 57"
T = 168.99'
L = 309.44'
R = 310.00'
PC = 23+52.22
PT = 26+61.66

C4
Curve OLDCT04
PI = 27+99.95
DELTA = 0° 45' 28.15" (LT)
D = 1° 54' 35"
T = 19.84'
L = 39.68'
R = 3,000.00'
PC = 27+80.11
PT = 28+19.79

C5
Curve OLDCT05
PI = 31+62.24
DELTA = 2° 21' 42.03" (LT)
D = 1° 54' 35"
T = 61.84'
L = 123.66'
R = 3,000.00'
PC = 31+00.40
PT = 32+24.06

ADAM D. WELSCHENBACH
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PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:19:35 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
CONSTRUCTION ALIGNMENT DATA SHEET
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

SCALE HORIZ= 1"=25' VERT= N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET IG(2)

FUND*

10/21/2020

General Notes:

1 TMP/SOC Type A Project Information:

a Identify the project's TMP Type:
This project's TMP/SOC plan has been designed in conformance with a Type A TMP/SOC plan.

b Identify the work zone location, length, and widths:
The project location is as shown on Sheet 1. The work zone areas have been delineated as shown on the TMP/SOC plan sheets 1K series . The work zone lengths and widths vary by location as shown on the TMP/SOC plan sheets 1K series.

c Note the hours the Construction Area will be active:
Construction Area shall be considered active when any impact to traffic occurs. (1st Cone In Road). Construction Area hours have the following limitations:

	SINGLE LANE CLOSURES			
	MONDAY TO THURSDAY	FRIDAY	SATURDAY	SUNDAY
DAY TIME	9:30AM TO 3:00PM	9:30AM TO 2:00PM	-	-
NIGHT TIME	10:00PM TO 5:00AM	10:00PM TO 9:00AM	-	-

No lane closures will be allowed from noon on the day before a holiday until noon on the workday following the holiday. Holidays include all State and Federal holidays.

d The TMP/SOC plan, during construction, shall be in accordance with Sections 512, 701, 703 & 704 of the Virginia Department of Transportation Road and Bridge Specifications, dated 2007, the Virginia Work Area Protection Manual, dated June 2011, and the Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition, including the 2011 Virginia Supplement to the MUTCD.

e Note any existing entrances, existing intersections, or existing pedestrian access points that will be affected by the Construction Area or by the traffic control devices:

Existing Entrances:
The following existing commercial or private entrances shall remain open for the duration of construction, except as noted. At the following locations are private or commercial entrances which shall have access maintained at all times:
Approx. Sta: 13+03 LT, 13+35 LT, 15+55 LT, 17+22 LT, 18+66 LT, 22+67 LT, 23+86 LT, 25+56 LT, 26+86 LT, 27+92 LT

Existing Intersections:
There are multiple unsignalized intersections within the limits of this project, which are to remain operational for the duration of construction. These are the intersections of:
Old Courthouse Road @ Westbriar Court (Sta. 14+53.88)
Old Courthouse Road @ Westbriar Court (Sta. 21+64.05)

Existing Pedestrian Access Points:
There are existing sidewalks within the project limits.

Existing Bus Stops:
There are no exisitn bus stops within the project limits.

f Identify the major types of travelers:
The roadway carries large diverse types of travelers. In the peak hours however, residential vehicles are the prevailing traveler type for this roadway.

g The Contractor, at no additional cost to the project and which shall be considered incidental to the cost of the project, shall:

Designate a person assigned to the project who will have the primary responsibility, with sufficient authority, for implementing the TMP/SOC and other safety and mobility aspects of the permit work. This person be in coordination with the Town Construction Inspector during all work.

Ensure that personnel assigned to the project are trained in traffic control to a level commensurate with their responsibilities in accordance with VDOT's work zone traffic control training guidelines. All personnel performing flagging operation duties shall have completed/obtained flagger certification from VDOT. Any person performing flagger operation duties shall submit a copy of their certification prior to the start of the project, at no additional cost to the project. No flagging operation may be started until all certifications for each person performing the work is submitted for acceptance/approval.

Inform the Engineer and Town Construction Inspector of any work requiring lane shifts, lane closures, and/or phase changes a minimum of two working days prior to implementing this activity.

Perform reviews of the Construction Area to ensure compliance with contract documents at regularly scheduled intervals at the direction of the Engineer and Town Construction Inspector. Contractor shall maintain a copy of the temporary traffic control plan at the work site at all times.

Coordinate with Town of Vienna Police Department and Town of Vienna Fire/Rescue Department for any lane closures and any detours of any nature, at no additional cost to the project.

Schedule all phases of construction in such a manner that water, sanitary sewer, cable, fiber cable/optic cable, any overhanging utilities, and any underground utilities services will not be interrupted. The Contractor is solely responsible for any interruption in any utility service, and solely responsible for any repairs to the approval of the impacted utility service.

2 This TMP/SOC plan is intended as a guide. It is not to enumerate every detail which must be considered in the construction of each phase, but only to show the general handling of existing traffic. It shall be the responsibility of the Contractor to present a formal TMP/SOC plan with construction signage to the Engineer and Town Construction Inspector for approval prior to any construction activity that may affect the existing pedestrian or vehicular traffic.

3 Contractor is to maintain at least one lane of traffic on Old Courthouse Road during construction of this project with a minimum clear roadway width in accordance with VDOT standard GS-10 unless otherwise approved by the Engineer. For street intersections, commercial connections, or private entrances, a minimum width no less than existing width shall be maintained at all times, unless approved by the Engineer.

4 All areas excavated below the existing pavement surface and within the clear zone as prescribed in the VWAPM at the conclusion of each workday, shall be backfilled to form an approximate 6:1 wedge against the existing pavement or newly constructed pavement surface for the safety and protection of vehicular traffic. All costs for placing, maintaining and removing 6:1 wedge shall be included in the price bid for other items in the contract and no additional compensation will be allowed.

5 Contractor shall follow the geotechnical recommendations for the project. Materials designated as unsuitable material as detailed in the geotechnical recommendations shall be disposed of offsite and are not to be used for any part of construction. Existing surface, aggregate base, and sub base material which will be demolished or obliterated during construction, and which are suitable for maintenance of traffic, should be utilized prior to the use of commercial material, subject to the approval of the Engineer.

6 Each phase of construction shall be completed to the installation of intermediate course asphalt prior to the start of the next phase unless otherwise directed by the Engineer.

7 Contractor shall ensure positive drainage for the duration of the project. Contractor shall add any additional temporary measures necessary to facilitate proper, positive drainage for the duration of construction.

8 Where Group 2 Channelizing Devices are used to separate the Construction Area and traffic, a minimum clear zone area as defined in the VWAPM is to be maintained.

9 The Contractor is to coordinate with Town of Vienna for location(s) of the construction staging area. A potential staging area for the Contractor to use is located at the Town Property at 600 Mill Street.

10 PUBLIC COMMUNICATIONS PLAN
The Contractor shall be responsible for:

a Notifying the Project Manager and Construction Inspector two weeks in advance of any scheduled work plans and traffic delays.

b Notifying the Project Manager, Construction Inspector, and Town of Vienna of any unscheduled traffic delays.

c Contractor shall attend any and all meetings requested by the Town of Vienna at no additional cost the project.

11 TRANSPORTATION OPERATIONS
The Contractor shall be responsible for implementing and providing the following:

a Post a list of local emergency response agencies inside the project's construction office/trailer.

b Immediately report any traffic incidents that may occur in the work zone.

c Notify the project's Construction Inspector and Town of Vienna of any incidents and expected traffic delays.

d Within 24 hours of any incidents within the construction work zone, a review of the traffic controls shall be completed and necessary adjustments made to reduce the frequency and severity of any future incidents.

CONTACT NUMBERS

Town Dept. Public Works Director	Mike Gallagher, (703) 255-6380
Town Construction Inspectors	TBD
Town Construction Managers	TBD
Emergency Call	911
Non-Emergency Numbers:	
Town Police	(703) 255-6366
Town Fire & Rescue	(703) 938-2242

Suggested Sequence of Construction:

General Phasing Notes:

VWAPM - VDOT's current edition of the Virginia Work Area Protection Manual.
MUTCD - FHWA's current edition Manual on Uniform Traffic Control Devices

1. The Contractor shall submit a temporary traffic control plan that prescribes the necessary traffic control measures for the work to be performed to be approved by the Engineer prior to the commencement of any work activities as indicated on the Temporary Traffic Control Plan Notes shown on this sheet. The Town reserves the right to remove lane closures if traffic queues are deemed unacceptable by Public Works Director at no cost to the project.

2. Prior to the start of construction, the Contractor shall install project limit signage in accordance with VWAPM TTC-53.0. For the duration of construction, the Contractor shall ensure this signage remains in compliance if the project limits change.

3. The Contractor shall be responsible to show the placement for Portable Changeable Message Sign, truck mounted impact attenuators, flagging stations, and if necessary temporary barricades on the plans submitted to the Engineer in accordance with the TMP/SOC General Note #2, on this sheet.

PHASE IV: (No Graphical Plans)

Summary: The Contractor shall generally construct the remaining elements of the project.

1. The Contractor shall implement appropriate traffic control strategies in accordance with VWAPM to perform mill & overlay (under-traffic), final surfacing, pavement striping, and signage installation operations.

2. The Contractor shall implement VWAPM TTC-57.0 "End of Day Signing for Partial Paving Operations on a Multi-Lane Roadway" and/or TTC-58.0 "End of Day Signing for Full Paving Operations on a Multi-Lane Roadway" for the duration of mill & overlay and final surfacing operations.

3. Contractor is to maintain access to all entrances and street connections at all times during construction.

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:20:13 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
TMP/SOC GENERAL NOTES
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ: 1"=25' VERT: N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET 1J

FUND#

10/21/2020

Suggested TMP/SOC Legend: Phase 1

- Denotes Construction Work Zone
- Denotes Certified Flagger
- Denotes Traffic Flow
- Denotes Group 2 Channelizing Devices (Group 2 Devices shown on plans are schematic only. Follow VWAPM for spacing requirements.)
- Denotes Type 3 Barricade
- (Dot - dot - dash) Denotes Temporary Construction Easement
- (Dot - dash) Denotes Permanent Storm Drainage Easement

Maintain access at all times

Westbriar Court

Exist. R/W

Contractor to implement VWAPM TTC-23J

Contractor to implement VWAPM TTC-4J and TTC-5J while maintaining traffic

Fairfax County
Town of Vienna

Maintain access at all times

Exist. R/W

Std. R9-9 24" x 12"

SIDEWALK CLOSED

Special 18" x 12"

Std. R9-9 24" x 12"

SIDEWALK CLOSED AHEAD

Old Courthouse Road
Route 677

Exist. R/W

Old Courthouse Road
Route 677

Exist. R/W

Exist. R/W

Exist. R/W

Exist. R/W

Fairway Drive

Exist. R/W

SCALE
0 25' 50'

55 54 53 52 51

12 13 14 15 16 17

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:20:26 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
TMP/SOC Phase 1 Sta. 10+00 to 17+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ: 1"=25' VERT: N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET IK(0)

FUND#

10/21/2020

Suggested TMP/SOC Legend: Phase 2

- Denotes Construction Work Zone
- Denotes Certified Flagger
- Denotes Traffic Flow
- Denotes Group 2 Channelizing Devices (Group 2 Devices shown on plans are schematic only. Follow VWAPM for spacing requirements.)
- Denotes Type 3 Barricade
- (Dot - dot - dash) Denotes Temporary Construction Easement
- (Dot - dash) Denotes Permanent Storm Drainage Easement

Fairfax County
Town of Vienna

Westbriar Court

Exist. R/W

Contractor to Implement VWAPM TTC-4J and TTC-5J while maintaining traffic

Contractor to Implement VWAPM TTC-23J

Old Courthouse Road
Route 677

Constr. ℄

Fairway Drive

Match Line Sta.17+00 (C.B.L.) See Sheet IK(2)

SCALE
0 25' 50'

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:20:39 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

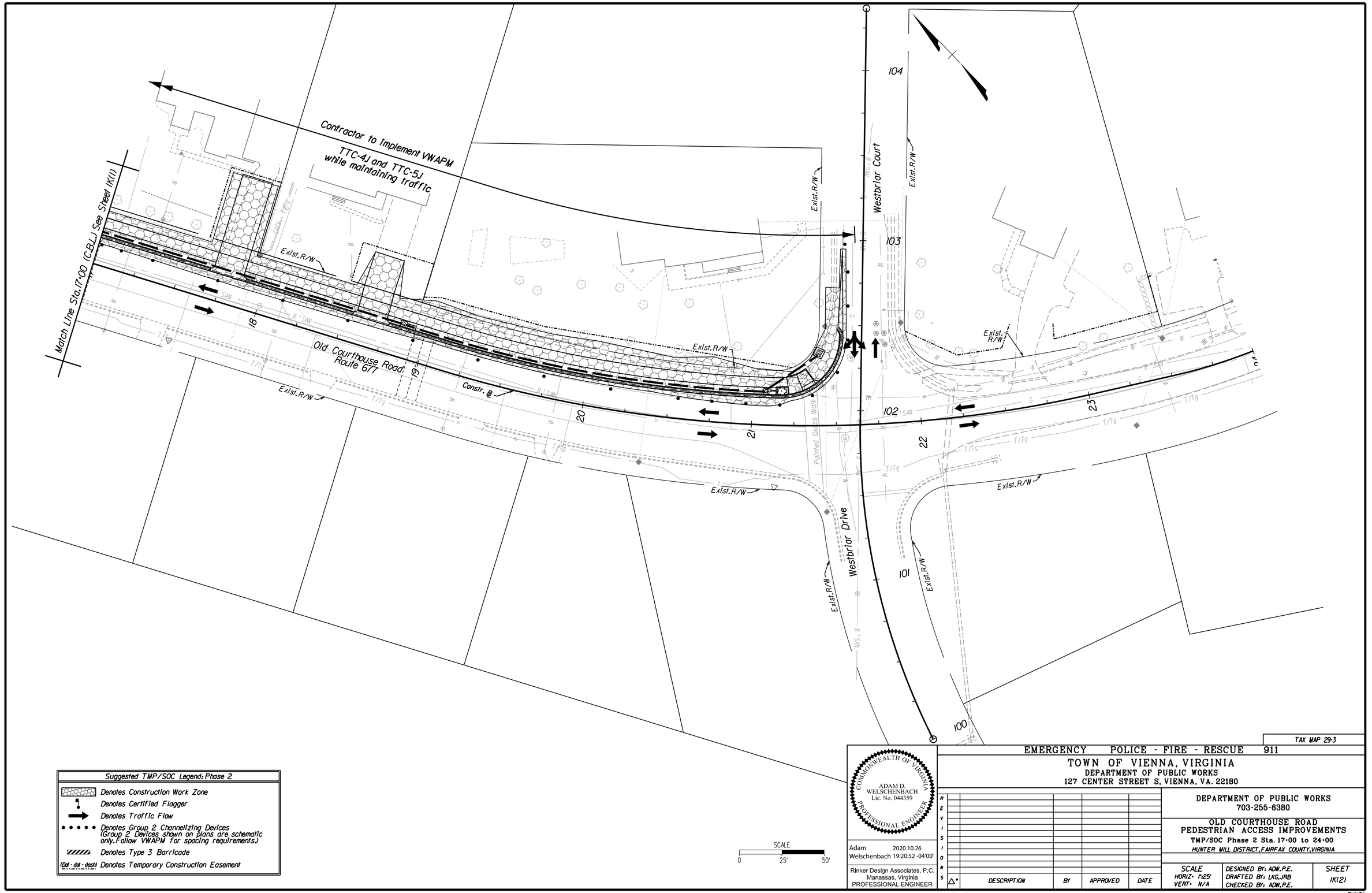
DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
TMP/SOC Phase 2 Sta. 10+00 to 17+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ: 1"=25' VERT: N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET IK(1)

10/21/2020

FUND*



Suggested TMP/SOC Legend: Phase 2

- Denotes Construction Work Zone
- Denotes Certified Flagger
- Denotes Traffic Flow
- Denotes Group 2 Channelizing Devices (Group 2 Devices shown on plans are schematic only. Follow VWAPM for spacing requirements.)
- Denotes Type 3 Barricade
- (Dot - dot - dash) Denotes Temporary Construction Easement

SCALE
0 25' 50'

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:20:52 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△	DESCRIPTION	BY	APPROVED	DATE

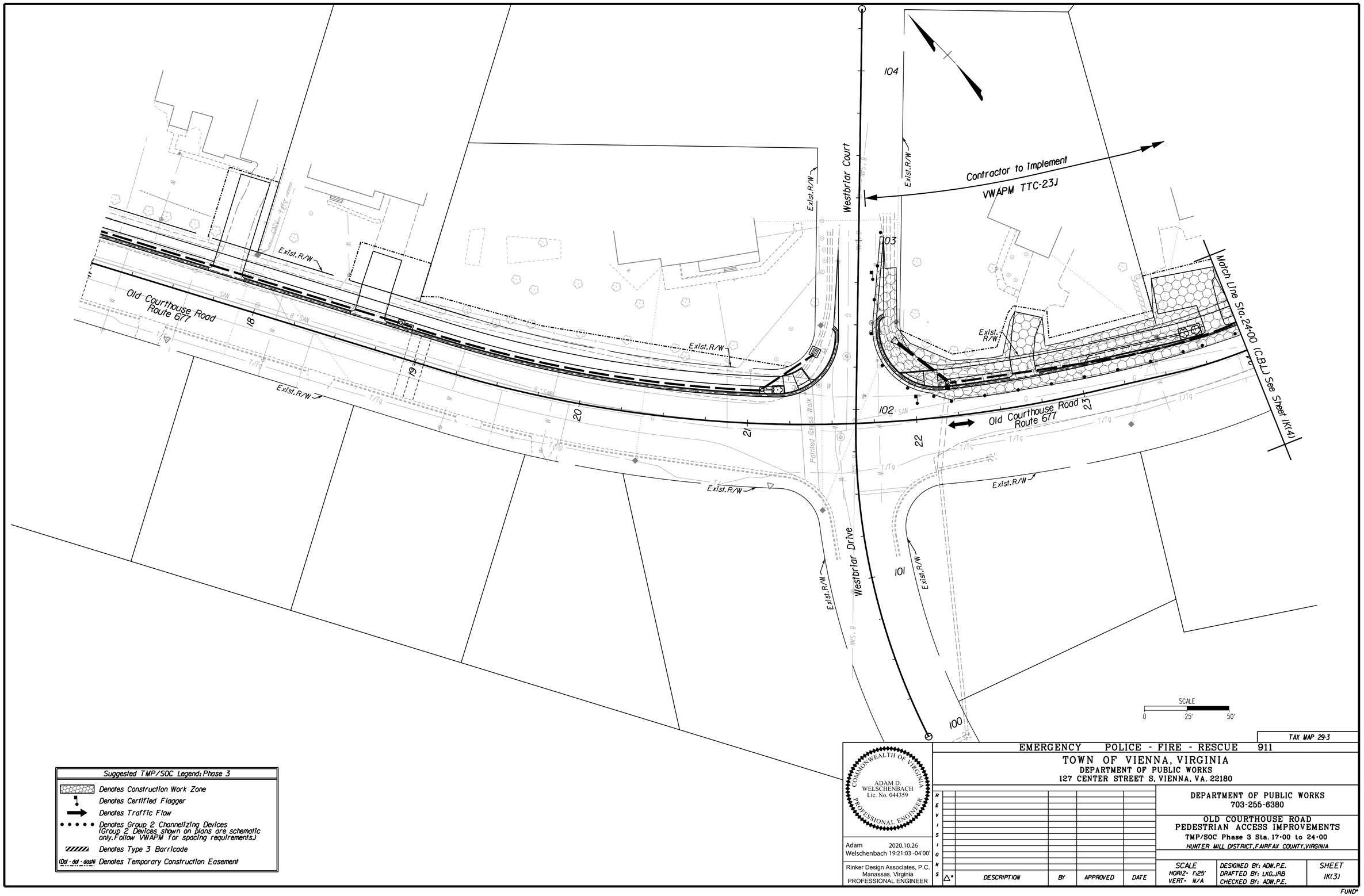
DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
TMP/SOC Phase 2 Sta. 17+00 to 24+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE	DESIGNED BY: ADW, P.E.	SHEET
HORIZ. 1"=25'	DRAFTED BY: LKG, JRB	IK(2)
VERT. N/A	CHECKED BY: ADW, P.E.	

FUND#

10/21/2020



Suggested TMP/SOC Legend: Phase 3
Denotes Construction Work Zone
Denotes Certified Flagger
Denotes Traffic Flow
Denotes Group 2 Channelizing Devices (Group 2 Devices shown on plans are schematic only. Follow VWAPM for spacing requirements.)
Denotes Type 3 Barricade
(Dot - dot - dash) Denotes Temporary Construction Easement

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
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Adam Welschenbach 2020.10.26 19:21:03 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
TMP/SOC Phase 3 Sta. 17+00 to 24+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE	DESIGNED BY: ADW, P.E.	SHEET
HORIZ: 1"=25'	DRAFTED BY: LKG, JRB	IK(3)
VERT: N/A	CHECKED BY: ADW, P.E.	

FUND#

10/21/2020

Match Line Sta.24+00 (C.B.L.) See Sheet IK(3)

Contractor to implement
VWAPM TTC-23J

Exist.R/W

Old Courthouse Road
Route 677

Town of Vienna
Fairfax County

Fairfax County
Town of Vienna

Suggested TMP/SOC Legend: Phase 3
Denotes Construction Work Zone
Denotes Certified Flagger
Denotes Traffic Flow
Denotes Group 2 Channelizing Devices (Group 2 Devices shown on plans are schematic only. Follow VWAPM for spacing requirements.)
Denotes Type 3 Barricade
(Dot - dot - dash) Denotes Temporary Construction Easement

SCALE
0 25' 50'

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
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Adam Welschenbach 2020.10.26 19:21:16 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
TMP/SOC Phase 3 Sta. 24+00 to 31+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE
HORIZ: 1"=25'
VERT: N/A

DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET
IK(4)

FUND#

10/21/2020

Erosion and Sediment Control Narrative

Project Description: This is a pedestrian access improvement project along Old Courthouse Road NE between Pine Valley Drive and Gosnell Road in the Town of Vienna, Virginia. The project proposes to add curb and gutter, sidewalk, curb ramps with pedestrian crossings at Westbriar Court. Additionally, all drainage will be collected and conveyed via a new proposed closed storm sewer system. The project is located in the Wolftrap Creek watershed management area which is within the greater Difficult Run watershed. The land disturbance area for this phase of the project is 1.08 ac.

Existing Site Conditions: The project site is along Old Courthouse Road NE between Pine Valley Drive and Gosnell Road. Vegetation within the project site consists of landscaped lawns and some large trees. Storm runoff is collected by roadside ditches and conveyed to four outfalls via existing closed storm sewer systems.

Adjacent Areas: Areas adjacent to the project are mostly residential or commercial in nature.

Off-site Areas: There will be minimal impacts to adjacent parcels associated with the construction of this project. All necessary right of way, right of entry agreements, easements, and provisions will be acquired prior to the start of construction. The Contractor shall be responsible for the locations of acceptable borrow and/or disposal sites, and these shall be in accordance with Town of Vienna requirements or as directed by the Town.

Soils: See soils map located on this sheet.

Critical Areas: There are no critical areas within the project site.

Erosion and Sediment Control Measures: Water quality and sediment/erosion control are of extreme importance. Care must be taken to avoid discharge of sediment into the existing storm water system. In order to best control impacts on this watershed, all vegetative and structural sediment control practices shall be constructed and maintained according to minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook. Strict compliance with this program and standards is required. We are therefore specifying a plan to minimize impacts on the adjacent properties.

At the time of land disturbing activities within the Town right-of-way, the Contractor shall have a representative with Erosion and Sediment Control Contractor Certification (ESCCC) at the project site. The Town and Contractor are responsible for complying with applicable Local, State, and Federal Environmental Laws and Regulations, including acquiring clearances/authorizations from appropriate regulatory agencies.

Land Disturbing/Construction Sequence - Phase I
1. The Contractor shall install the silt fence and inlet protection as shown on the Phase I Erosion & Sediment Control plan.
2. After the silt fence and inlet protection have been installed, the Contractor shall obtain the site inspector's approval of these controls.
3. After the site inspector's approval of the initial controls, clear and grub the site as necessary.

Land Disturbing/Construction Sequence - Phase 2
1. Fine grade the site.
2. Install curb & gutter, sidewalk, and entrance base course and concrete pavement.
3. Install all permanent sod and fertilize all grassed areas.
4. Clean site of all trash and debris.
5. Have the inspector inspect all areas to determine if they are adequately stabilized.

Maintenance Program: The Contractor shall make a visual inspection of all mechanical controls and newly stabilized areas (i.e. seeded, mulched, or sodded areas) on a daily basis and after each rainfall event to insure that all controls are functioning properly. The following items will be checked in particular: Inlet protection will be checked regularly for sediment buildup which will prevent drainage, and if the gravel is clogged by sediment, it shall be removed and cleaned or replaced; the silt fence barrier will be checked regularly for undermining or deterioration of the fabric, and sediment shall be removed when the level of sediment deposition reaches halfway to the top of the barrier; and the seeded areas will be checked regularly to ensure that a good stand is maintained, and areas shall be fertilized and reseeded as needed. Any damaged controls shall be repaired by the end of the work day, including reseeding and mulching if necessary. The Contractor may install additional measures should he or she deem it necessary at the inspector's approval. All erosion & sediment controls shall be removed within seven (7) days after the project is stabilized.

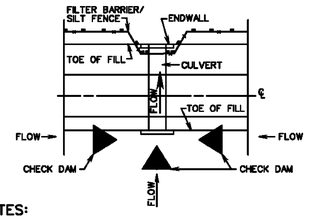
Structural Practices:
1. Silt Fence Barrier (3.05) - Silt fence barriers will be installed downslope of areas with minimal grades to filter sediment-laden runoff from sheet flow as indicated in the Erosion and Sediment control plans.
2. Storm Drain Inlet Protection (3.07) - All storm sewer inlets shall be protected during construction. Sediment-laden water shall be filtered before entering the storm sewer inlets.
3. Culvert Inlet Protection (3.08) - All culverts shall be protected during construction. Sediment-laden water shall be filtered before entering the culvert.
4. Storm Drain Outlet Protection (3.18) - All storm sewer outlets shall be protected during construction.
5. Temporary Seeding (3.31) - All denuded areas which will be left dormant for extended periods of time shall be seeded with fast germinating temporary vegetation immediately following grading. Selection of the seed mixture will depend on the time of year it is applied.
6. Permanent Seeding (3.32) - Perennial vegetative cover shall be established on disturbed areas by planting seed to reduce erosion and decrease sediment yield and to permanently stabilize disturbed areas. Selection of the seed mixture will depend on the time of year it is applied. The planting soil shall be applied in accordance with Std. 3.30.
7. Permanent Stabilization - Permanent stabilization shall be done in accordance with the VESCH and all Town of Vienna seeding standards.

Stormwater Runoff Considerations: See sheet 2K series for Storm Computations and Outfall Analysis for this project.

Dust Control: Contractor shall be responsible to control dust throughout the entire construction phase by the application of water and/or approved adhesives per Std. 3.39 of the Virginia Erosion and Sediment Control Handbook.

CIP CULVERT INLET PROTECTION

TYPICAL DETAIL FOR INSTALLATION OF TEMPORARY FILTER BARRIER/SILT FENCE/CHECK DAM AT CULVERT

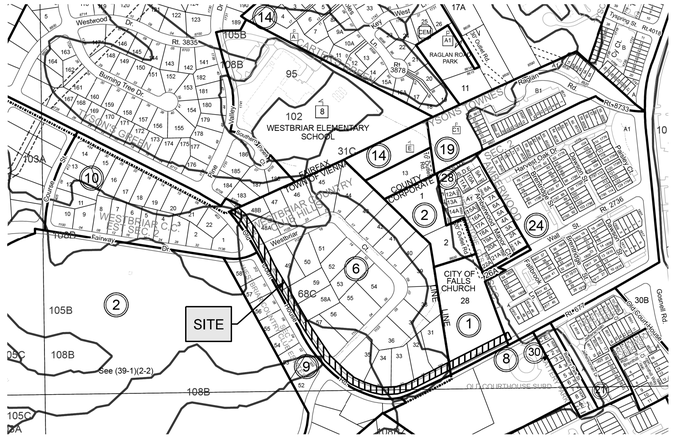


NOTES:

1. IF ANY PORTION OF FILL IS GREATER THAN 5', SILT FENCE IS REQUIRED. IF FILL HEIGHT IS LESS THAN 5', FILTER BARRIER IS REQUIRED.
2. ROCK CHECK DAM IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE ROAD AND BRIDGE SPECIFICATIONS, AND STANDARD EC-4.
3. FILTER BARRIER/SILT FENCE IS TO BE INSTALLED IN ACCORDANCE WITH THE ROAD AND BRIDGE SPECIFICATIONS, AND STANDARD EC-5.

* INSTALLATION DETAIL ONLY - ROCK CHECK DAMS, FILTER BARRIER, AND SILT FENCE TO BE PAID FOR IN ACCORDANCE WITH THE ROAD AND BRIDGE SPECIFICATIONS.

SOILS MAP DATA SCALE: N.T.S.



SOILS MAP SOURCE: ☒COUNTY MAP; ☐PRIVATE SOILS SCIENTIST (FOR UNMAPPED SITES)

SOIL ID NUMBERS	SOIL SERIES NAME	FOUNDATION SUPPORT	SOIL DRAINAGE	EROSION POTENTIAL	PROBLEM CLASS
31C	DANRIPPLE GRAVELLY LOAM	MARGINAL - b,w	MARGINAL - w	MEDIUM	II
68C	KINGSTOWNE DANRIPPLE COMPLEX	MARGINAL - w, b	MARGINAL - w, s	MEDIUM	IVB
103A	WHEATON CODORUS COMPLEX	POOR - f, w, b	POOR - f, w, s	LOW	IVA
105B	WHEATON GLENELG COMPLEX	GOOD	GOOD	HIGH	IVB
108B	WHEATON SYMERDUCK COMPLEX	MARGINAL - w, b	POOR - w, s	MEDIUM	IVB

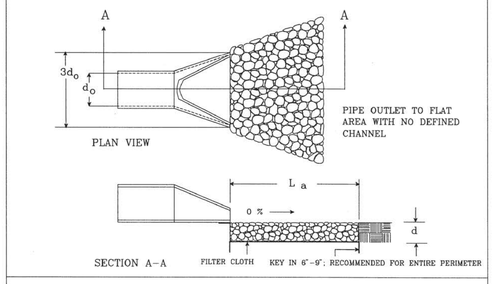
IS THE SITE LOCATED WITHIN NATURALLY OCCURING ASBESTOS SOILS?
YES☐ NO☒

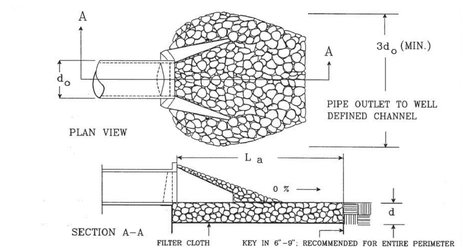
AREAS THAT MAY CONTAIN NATURALLY OCCURING ASBESTOS SOILS ARE LOCATED ON THE ORANGE SOILS TAX MAP GRIDS ON THE COUNTY WEBSITE. SPECIAL PRECAUTIONS REGARDIND THESE SOILS OR FILL ORIGINATING FROM THESE SOILS ARE REQUIRED BY OCCUPATIONAL SAFETY AND HEALTH REGULATIONS ENFORCED BY THE VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY AND SPECIAL GUIDANCE HAS BEEN ISSUED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY.

SOILS MAPPED OVER NATUALLY OCCURING BEDROCK. THESE SOILS OCCUR WITHIN A GEOLOGIC FORMATION KNOWN AS THE PINEY BRANCH COMPLEX, LOCALLY KNOWN AS GREENSTONE. NATURALLY-OCCURRING ASBESTOS MINERALS, PREDOMINANTLY ACTINOLITE AND TREMOLITE, ARE KNOWN TO OCCUR IN THIS FORMATION. EXCAVATIONS IN BEDROCK OR EARTH MOVING ACTIVITIES WITHIN THIS FORMATION MAY EXPOSE THESE MINERALS TO THE ATMOSPHERE, ALLOWING THE FIBERS TO BECOME AIRBORNE.

OP OUTLET PROTECTION

PIPE OUTLET CONDITIONS

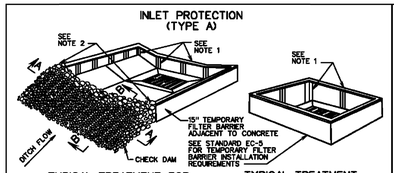




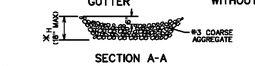
NOTES: 1. APRON LINING MAY BE RIPRAP, GROUTED RIPRAP, GABION BASKET, OR CONCRETE.
2. La IS THE LENGTH OF THE RIPRAP APRON AS CALCULATED USING PLATES 3.18-3 AND 3.18-4.
3. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN 6 INCHES.

IP INLET PROTECTION

INLET PROTECTION (TYPE A)

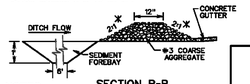


TYPICAL TREATMENT FOR DROP INLET WITH CONCRETE GUTTER



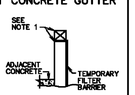
SECTION A-A

*IF CHECK DAM IS LOCATED INSIDE CLEAR ZONE AND ADJACENT TO A TRAVELWAY, SLOPE FACING ON COMING TRAFFIC IS TO BE 6:1 AND MAXIMUM H IS TO BE 12".

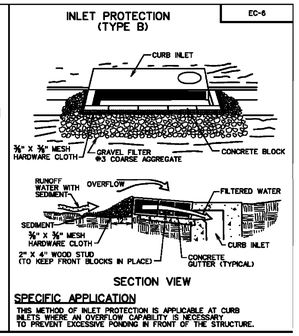


SECTION B-B

TYPICAL TREATMENT FOR DROP INLET WITHOUT CONCRETE GUTTER



INLET PROTECTION (TYPE B) EC-6



SECTION VIEW

SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.

NOTES

1. POSTS AND TOP RAIL SHALL BE A NOMINAL 2¼" X 2¼" OR A 2" DIA NO. 2 SOUTHERN PINE, A NOMINAL 2" X 2" OAK, OR STEEL HAVING A UNIT WEIGHT OF 1.00 LBS PER LINEAR FOOT AND A MIN. LENGTH OF 5' FOR TEMPORARY SILT FENCES.
2. END OF FILTER BARRIER TO BE EMBEDDED INTO AGGREGATE.
3. IF A DROP INLET IS LOCATED IN A SAG IN THE DITCH GRADE, A CHECK DAM IS REQUIRED FOR EACH SIDE OF THE INLET THAT RECEIVES DITCH FLOW.
4. WHERE DRAINAGE AREAS EXCEED ONE ACRE, OR DITCH GRADE EXCEEDS 3%, A TEMPORARY SEDIMENT FOREBAY SHALL BE INSTALLED WITH MINIMUM DIMENSIONS OF 12" DEPTH, 2' WIDTH AND 8' LENGTH.

NOTE:
GEOTEXTILE PRODUCTS DESIGNED TO BE INSERTED INTO GRATED DROP INLETS OR DESIGNED TO COVER THE SLOTS OF SLOT DROP INLETS, THAT HAVE BEEN APPROVED FOR USE ON VDOT PROJECTS AND ARE FOUND ON VDOT'S SPEL LIST, MAY BE SUBSTITUTED FOR THE DROP INLET PROTECTION DEVICES DETAILED HEREON.

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:21:29 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Erosion & Sediment Control Plan: Notes and Details
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

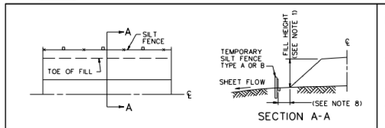
SCALE HORIZ: 1"=25' VERT: N/A | DESIGNED BY: ADW, P.E. DRAFTED BY: LKG, JRB CHECKED BY: ADW, P.E. | SHEET IL

FUND*

10/21/2020

TSF

TEMPORARY SILT FENCE



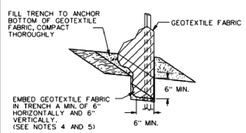
SECTION A-A

TYPICAL DETAIL FOR TEMPORARY SILT FENCE AT TOE OF FILL

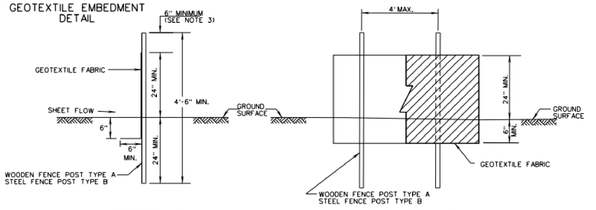
EC-5

NOTES

1. TYPE A SILT FENCE WILL HAVE WOODEN POSTS AND IS LIMITED TO FILL HEIGHTS OF 20 FEET OR LESS. TYPE B SILT FENCE WILL HAVE STEEL POSTS AND MUST BE USED WHERE THE FILL HEIGHT EXCEEDS 20 FEET.
2. WOODEN POSTS SHALL BE OAK AND HAVE NOMINAL DIMENSIONS OF 2" BY 2". STEEL POSTS SHALL HAVE A MINIMUM WEIGHT OF 1.25 POUNDS PER LINEAR FOOT.
3. ALL POSTS SHALL BE DRIVEN 24" MIN. INTO THE GROUND AND SHALL EXTEND 6" ABOVE THE FILTER FABRIC.
4. GEOTEXTILE FABRIC SHALL BE EMBEDDED 12" INTO THE GROUND (6" VERTICALLY AND 6" HORIZONTALLY ALONG THE BOTTOM OF TRENCH) AS SHOWN IN DETAILS.
5. SLICING IS AN APPROVED ALTERNATIVE TO TRENCHING FOR ANCHORING THE GEOTEXTILE FABRIC INTO THE GROUND. SLICING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SECTION 303 OF THE ROAD AND BRIDGE SPECIFICATIONS.
6. WHEN TWO SEPARATE SECTIONS OF GEOTEXTILE FABRIC ADJOIN EACH OTHER, THEY SHALL OVERLAP BY 6" AND BE DOUBLE FOLDED.
7. GEOTEXTILE FABRIC SHALL BE FASTENED SECURELY TO THE POSTS AT BOTH THE TOP AND VERTICAL MIDPOINT OF THE GEOTEXTILE FABRIC.
8. WHEN THE DISTANCE FROM THE TOE OF THE FILL TO THE SILT FENCE IS NOT PROVIDED IN THE PLANS A MINIMUM OF 5 FEET WILL BE USED.
9. MATERIALS FOR ALL SILT FENCE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 242 OF THE VDOT ROAD & BRIDGE SPECIFICATIONS.
10. THE GEOTEXTILE FABRIC FOR SILT FENCE SHALL BE FROM THE VDOT MATERIALS APPROVED LIST 63.



GEOTEXTILE EMBEDMENT DETAIL

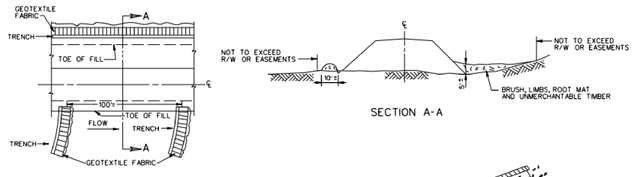


SECTION VIEW ELEVATION VIEW

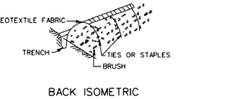
SPECIFICATION REFERENCE	TEMPORARY SILT BARRIERS	VDOT ROAD AND BRIDGE STANDARDS
107 242 245 303	SILT FENCE (TYPE A & B) VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE 04/20 — SHEET 1 OF 2 — 113.07

EC-5

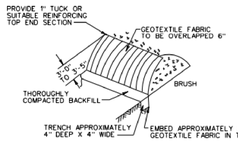
SILT BARRIERS
TYPICAL DETAIL FOR BRUSH BARRIER
(TO BE USED AT ALL APPLICABLE LOCATIONS)



SECTION A-A



BACK ISOMETRIC



FRONT ISOMETRIC

NOTES:

1. BRUSH BARRIERS SHALL BE CONSTRUCTED AT LOCATION SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. BRUSH SHALL BE PILED AGAINST EXISTING TREES TO PREVENT MOVEMENT OF BARRIER. BRUSH SHALL BE PILED AS TIGHTLY AS POSSIBLE AND WEIGHTED DOWN BY UNMERCHANTANTABLE LOGS.
2. GEOTEXTILE FABRIC CONFORMING TO THE ROAD AND BRIDGE SPECIFICATIONS SHALL BE INSTALLED AS DETAILED ABOVE. GEOTEXTILE FABRIC MAY ALSO BE ATTACHED TO EXISTING FENCES WHEN SPECIFIED ON THE PLANS OR DIRECTED BY THE ENGINEER.
3. NO BRUSH WILL BE DESTROYED OR REMOVED FROM THE PROJECT UNTIL ALL BRUSH SILT BARRIERS ARE IN PLACE AND HAVE BEEN INSPECTED AND APPROVED BY THE ENGINEER.
4. DIMENSIONS SHOWN ARE APPROXIMATE ONLY.

VDOT ROAD AND BRIDGE STANDARDS		A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.	SPECIFICATION REFERENCE
SHEET 2 OF 2	REVISION DATE 04/19	TEMPORARY SILT BARRIERS BRUSH BARRIER VIRGINIA DEPARTMENT OF TRANSPORTATION	107 303
113.08			

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:21:42 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
E&S CONTROL DETAILS
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

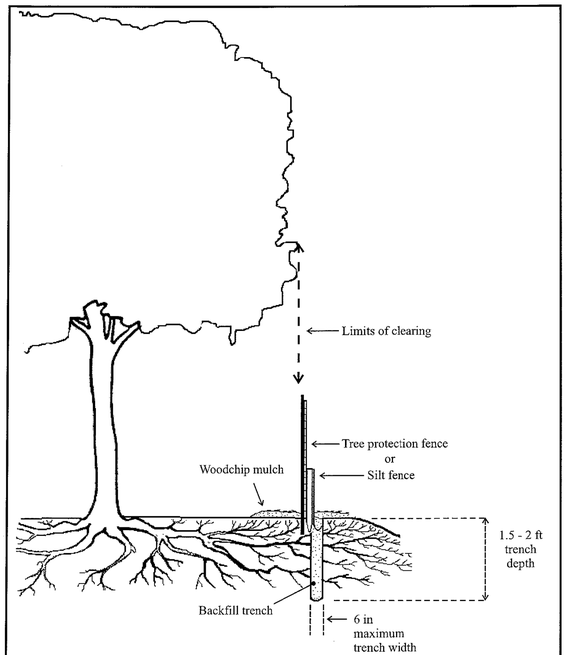
SCALE	DESIGNED BY: ADW, P.E.	SHEET
HORIZ: N/A'S VERT: N/A	DRAFTED BY: LKG, JRB CHECKED BY: ADW, P.E.	IL(0a)

FUND*

10/21/2020

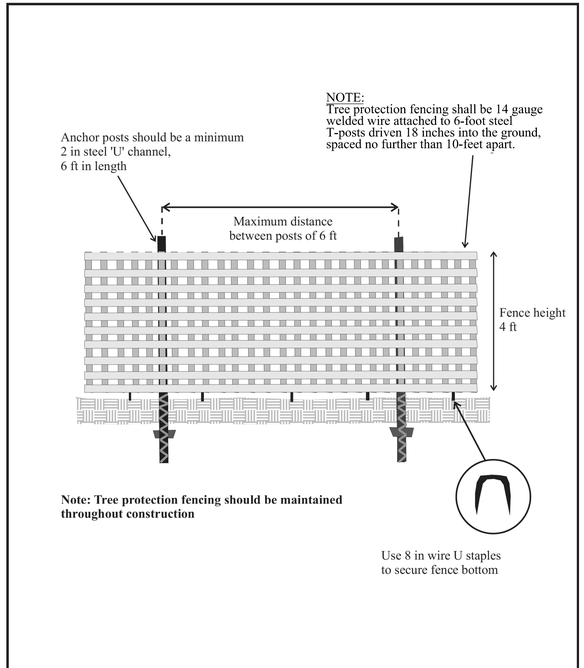
Erosion & Sediment Control Notes & Details

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



Ref. Sec. 12-0702.1 12-0704.20 Rev. 2-02, 2011 Reprint	ROOT PRUNING	PLATE NO. 7-12	STD. NO.

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



Note: Tree protection fencing should be maintained throughout construction

Adapted from: ***Woodland Conservation Manual***, Prince George County, Maryland

Ref. Sec. 12-0703.1B, 12-0505.1B Rev. 2-02, 2011 Reprint	TREE PROTECTION FENCE INSTALLATION	PLATE NO. 6-12	STD. NO. TP

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY CONSTRUCTION ENTRANCES																								
TEMPORARY CONTROL MEASURES																								
STRIP & STOCKPILE TOPSOIL																								
ROUGH GRADE																								
PERMANENT CONTROL STRUCTURES																								
TRAIL CONSTRUCTION																								
FINISH GRADING																								
LANDSCAPING/SEED/FINAL STABILIZATION																								

1) CONTRACTOR SHALL UPDATE THE TABLE BY DATING THE APPLICABLE ACTIVITIES AS PROJECT PROGRESSES.
2) TIME SCHEDULE MUST COINCIDE WITH SEQUENCE OF CONSTRUCTION.

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:21:56 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Erosion & Sediment Control Plan: Notes and Details
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

SCALE HORIZ: N/A VERT: N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET IL(1)

FUND*

10/21/2020

Erosion & Sediment Control Notes & Details

4VAC50-30-40. Minimum Standards. (MS-19)
A VESCP must be consistent with the following criteria, techniques and methods:

1. Permanent or temporary 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 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.
2. During construction of the project, soil stock piles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site.
3. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, mature enough to survive and will inhibit erosion.
4. Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place.
5. Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.
6. Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.
   a. The minimum storage capacity of a sediment trap shall be 134 cubic yards per acre of drainage area and the trap shall only control drainage areas less than three acres.
   b. Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The minimum storage capacity of a sediment basin shall be 134 cubic yards per acre of drainage area. The outfall system shall, at a minimum, maintain the structural integrity of the basin during a 25-year storm of 24-hour duration. Runoff coefficients used in runoff calculations shall correspond to a bare earth condition or those conditions expected to exist while the sediment basin is utilized.
7. Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.
8. Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.
9. Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.
10. All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.
11. Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.
12. When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Non-erodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by non-erodible cover materials.
13. When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary vehicular stream crossing constructed of non-erodible material shall be provided.
14. All applicable federal, state and local chapters pertaining to working in or crossing live watercourses shall be met.
15. The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.
16. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
   a. No more than 500 linear feet of trench may be opened at one time.
   b. Excavated material shall be placed on the uphill side of trenches.
   c. Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.
   d. Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.
   e. Restabilization shall be accomplished in accordance with this chapter.
   f. Applicable safety chapters shall be complied with.
17. Where construction vehicle access routes intersect paved or public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual development lots as well as to larger land-disturbing activities.
18. All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the VESCP authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.
19. Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration in accordance with the following standards and criteria. Stream restoration and relocation projects that incorporate natural channel design concepts are not man-made channels and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels:
   a. Concentrated stormwater runoff leaving a development site shall be discharged directly into an adequate natural or man-made receiving channel, pipe or storm sewer system. For those sites where runoff is discharged into a pipe or pipe system, downstream stability analyses at the outfall of the pipe or pipe system shall be performed.
   b. Adequacy of all channels and pipes shall be verified in the following manner:
      1) The applicant shall demonstrate that the total drainage area to the point of analysis within the channel is one hundred times greater than the contributing drainage area of the project in question; or
      2)
         a) Natural channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overtop channel banks nor cause erosion of channel bed or banks.
         b) All previously constructed man-made channels shall be analyzed by the use of a ten-year storm to verify that stormwater will not overtop its banks and by the use of a two-year storm to demonstrate that stormwater will not cause erosion of channel bed or banks; and
         c) Pipes and storm sewer systems shall be analyzed by the use of a ten-year storm to verify that stormwater will be contained within the pipe or system.
   c. If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, the applicant shall:
      1) Improve the channels to a condition where a ten-year storm will not overtop the banks and a two-year storm will not cause erosion to channel the bed or banks; or
      2) Improve the pipe or pipe system to a condition where the ten-year storm is contained within the appurtenances;
      3) Develop a site design that will not cause the pre-development peak runoff rate from a two-year storm to increase when runoff outfalls into a natural channel or will not cause the pre-development peak runoff rate from a ten-year storm to increase when runoff outfalls into a man-made channel; or
      4) Provide a combination of channel improvement, stormwater detention or other measures which is satisfactory to the VESCP authority to prevent downstream erosion.
   d. The applicant shall provide evidence of permission to make the improvements.
   e. All hydrologic analyses shall be based on the existing watershed characteristics and the ultimate development condition of the subject project.
   f. If the applicant chooses an option that includes stormwater detention, he shall obtain approval from the VESCP of a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the person responsible for performing the maintenance.
   g. Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipators shall be placed at the outfall of all detention facilities as necessary to provide a stabilized transition from the facility to the receiving channel.
   h. All on-site channels must be verified to be adequate.
   i. Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility.
   j. In applying these stormwater management criteria, individual lots or parcels in a residential, commercial or industrial development shall not be considered to be separate development projects. Instead, the development, as a whole, shall be considered to be a single development project. Hydrologic parameters that reflect the ultimate development condition shall be used in all engineering calculations.
   k. All measures used to protect properties and waterways shall be employed in a manner which minimizes impacts on the physical, chemical and biological integrity of rivers, streams and other waters of the state.
   l. Any plan approved prior to July 1, 2014, that provides for stormwater management that addresses any flow rate capacity and velocity requirements for natural or man-made channels shall satisfy the flow rate capacity and velocity requirements for natural or man-made channels if the practices are designed to: (i) detain the water quality volume and to release it over 48 hours; (ii) detain and release over a 24-hour period the expected rainfall resulting from the one year, 24-hour storm; and (iii) reduce the allowable peak flow rate resulting from the 1.5, 2, and 10-year, 24-hour storms to a level that is less than or equal to the peak flow rate from the site assuming it was in a good forested condition, achieved through multiplication of the forested peak flow rate by a reduction factor that is equal to the runoff volume from the site when it was in a good forested condition divided by the runoff volume from the site in its proposed condition, and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels as defined in any regulations promulgated pursuant to 10J-562 or 10J-570 of the Act.
   m. For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements of 10J-561 A of the Act and this subsection shall be satisfied by compliance with water quantity requirements in the Stormwater Management Act (10J-603.2 et seq. of the Code of Virginia) and attendant regulations, unless such land-disturbing activities are in accordance with 4VAC50-60-48 of the Virginia Stormwater Management Program (VSMP) Permit Regulations.
   n. Compliance with the water quantity minimum standards set out in 4VAC50-60-66 of the Virginia Stormwater Management Program (VSMP) Permit Regulations shall be deemed to satisfy the requirements of Minimum Standard 19.

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:22:11 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Erosion & Sediment Control Plan: Notes and Details
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ: N/A VERT: N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET IL(2)

FUND*

10/21/2020

R/W LEGEND

Prop. Non-Revocable Right of Entry Agreement (1)

3-1 P.O.T.: 14+53.88 Old Courthouse Road C.BL.
P.O.C.: 52+86.62 Fairway Drive C.BL.

Westbriar Court

Old Courthouse Road Route 677

Fairway Drive

Constr. ℄

Match Line Sta.18+00 (C.BL.) See Sheet IM(1)

E&S LEGEND

- TSF — Denotes Temporary Silt Fence, Std EC-5
- IP — Denotes Drop Inlet Protection, Std.EC-6 Type A or B
- CIP — Denotes Culvert Inlet Protection, Std.EC-6 Type C
- OP — Denotes Outlet Protection, Std.EC-1
- CD — Denotes Rock Check Dam
- Denotes Tree to be Saved (See Sheet IL(1) for Tree Preservation (TP) details. TP shall be installed per PFM Plate No.6-12 on Sheet IL(1).)
- Denotes Tree to be Removed
- LOD — Limit of Disturbance

SCALE 0 25' 50'

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA — ADAM D. WELSCHENBACH Lic. No. 044359 — PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:22:25 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Erosion & Sediment Control Plan: Phase 1
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE	DESIGNED BY: ADW, P.E.	SHEET
HORIZ: 1:25'	DRAFTED BY: LKG, JRB	IM
VERT: N/A	CHECKED BY: ADW, P.E.	

10/21/2020

FUND*

R/W LEGEND

Prop. Non-Revocable Right of Entry Agreement (7)

Match Line Sta. 18+00 (C.B.L.) See Sheet IM

Match Line Sta. 25+75 (C.B.L.) See Sheet IM(2)

Old Courthouse Road Route 677

Westbriar Court

Westbriar Drive

Arborist to review tree at time of construction based on field conditions.

Constr. ℄

15" RCP 33 LF

12" RCP 17 LF

12" RCP 26 LF

3'-4"x2'-2" HERCP 48 LF

18" RCP 32 LF

21" RCP 158 LF

24" RCP

E&S LEGEND

TSF	Denotes Temporary Silt Fence, Std EC-5
IP	Denotes Drop Inlet Protection, Std.EC-6 Type A or B
CIP	Denotes Culvert Inlet Protection, Std.EC-6 Type C
OP	Denotes Outlet Protection, Std.EC-1
CD	Denotes Rock Check Dam
	Denotes Tree to Be Saved (See Sheet IL(1) for Tree Preservation (TP) details.TP shall be installed per PFM Plate No.6-12 on Sheet IL(11).)
	Denotes Tree to Be Removed
LOD	Limit of Disturbance

SCALE 0 25' 50'

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

TOWN OF VIENNA, VIRGINIA

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

ADAM D. WELSCHENBACH Lic. No. 044359 COMMONWEALTH OF VIRGINIA PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:22:39 -04'00'

Rinker Design Associates, P.C. Manassas, Virginia PROFESSIONAL ENGINEER

REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

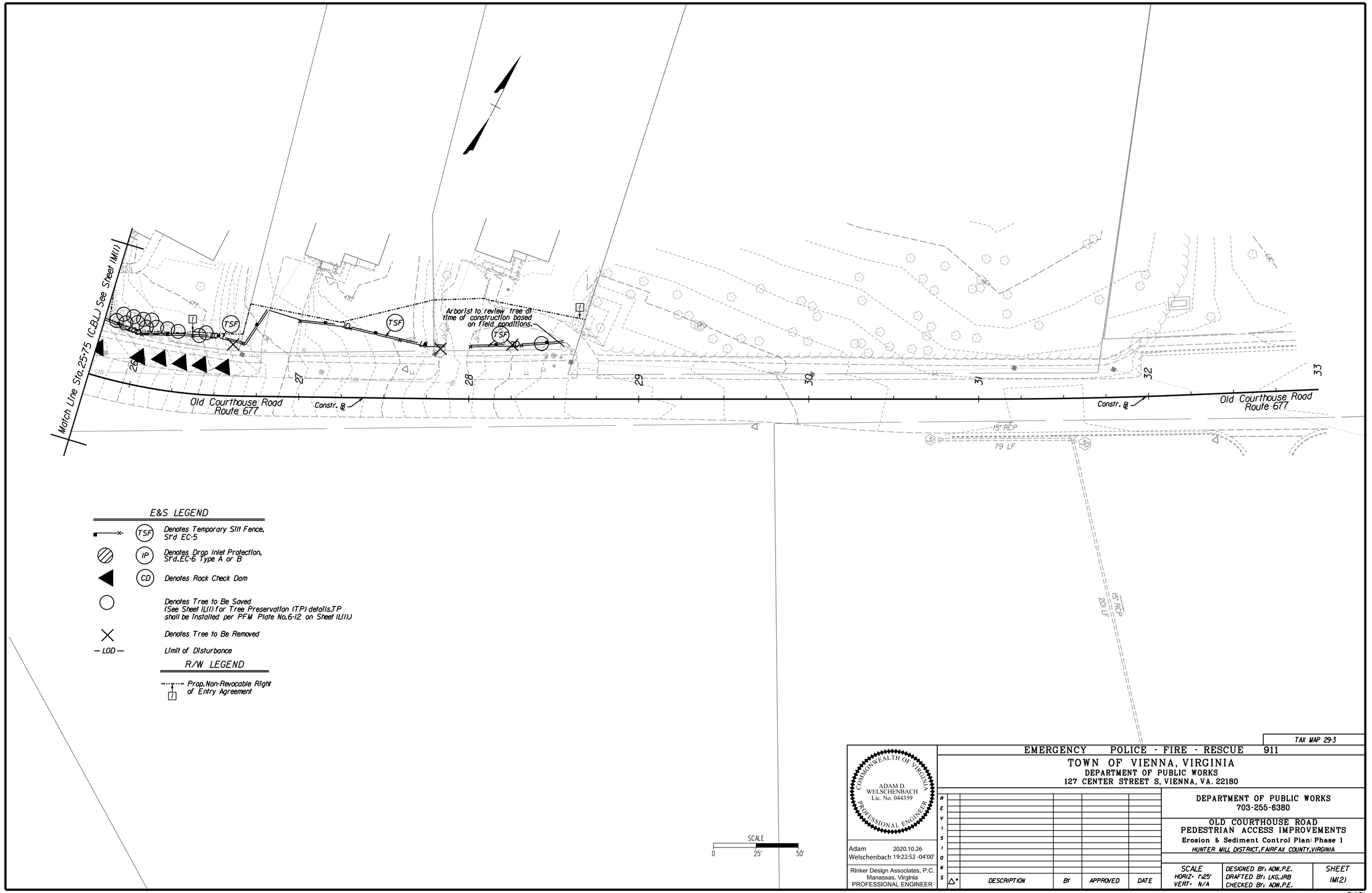
DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Erosion & Sediment Control Plan: Phase 1
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ: 1"=25' VERT: N/A | DESIGNED BY: ADW, P.E. DRAFTED BY: LKG, JRB CHECKED BY: ADW, P.E. | SHEET IM(1)

10/21/2020

FUND*



E&S LEGEND

- TSF — Denotes Temporary Silt Fence, Std EC-5
- IP — Denotes Drop Inlet Protection, Std.EC-6 Type A or B
- CD — Denotes Rock Check Dam
- Denotes Tree to Be Saved (See Sheet IL(1) for Tree Preservation (TP) details.TP shall be Installed per PFM Plate No.6-12 on Sheet IL(1).)
- Denotes Tree to Be Removed
- — LOD — Limit of Disturbance

R/W LEGEND

- Prop.Non-Revocable Right of Entry Agreement (1)

SCALE 0 25' 50'

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

ADAM D. WELSCHENBACH Lic. No. 044359 COMMONWEALTH OF VIRGINIA PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:22:52 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Erosion & Sediment Control Plan: Phase 1
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE	DESIGNED BY: ADW, P.E.	SHEET
HORIZ: 1"=25'	DRAFTED BY: LKG, JRB	IM(2)
VERT: N/A	CHECKED BY: ADW, P.E.	

FUND:

10/21/2020

R/W LEGEND

- Prop. Non-Revocable Right of Entry Agreement
- C ___ Denotes Construction Limits In Cuts
- F __ __ Denotes Construction Limits In Fills

E&S LEGEND

- TSF — Denotes Temporary Silt Fence, Sf'd EC-5
- IP — Denotes Drop Inlet Protection, Sf'd. EC-6 Type A or B
- PS — Permanent Seeding
- — LOD — Limit of Disturbance
- Denotes Tree to be Saved (See Sheet IL(1) for Tree Preservation (TP) details. TP shall be Installed per PFM Plate No. 6-12 on Sheet IL(1).)
- Denotes Tree to Be Removed

The Contractor shall follow all Commonwealth of Virginia and Town of Vienna Erosion and Sediment Control requirements for the duration of construction. The Contractor shall submit a formal E&S plan for approval prior to start of construction activities consistent with this plan.

NOTES:
1) Contractor shall clean cut roots prior to full excavation.
2) Contractor shall ensure all grading activities provide positive drainage and shall not create ponding. The Town of Vienna shall, at its discretion, be permitted to ensure the Contractor provides positive drainage at no additional cost to the project.

Fairfax County
Town of Vienna

Westbriar Court

Old Courthouse Road
Route 677

Fairway Drive

Constr. ℄

Match Line Sta. 18+00 (C.B.L.) See Sheet IN(1)

SCALE
0 25' 50'

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:23:06 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Erosion & Sediment Control Plan: Phase 2
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE
HORIZ. 1"=25'
VERT. N/A

DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET
IN

FUND#

10/21/2020

E&S LEGEND

- TSF — Denotes Temporary Silt Fence, Std EC-5
- IP — Denotes Drop Inlet Protection, Std.EC-6 Type A or B
- PS — Permanent Seeding
- — LOD — Limit of Disturbance
- Denotes Tree to Be Saved (See Sheet IL(1) for Tree Preservation (TP) details.TP shall be Installed per PFM Plate No.6-12 on Sheet IL(1).)
- Denotes Tree to Be Removed

R/W LEGEND

- Prop.Non-Revocable Right of Entry Agreement

Match Line Sta.18+00 (C.B.L.) See Sheet IN

Match Line Sta.25+75 (C.B.L.) See Sheet IN(2)

Old Courthouse Road Route 677

Westbriar Court

Westbriar Drive

Fair

Tow

Arborist to review tree at time of construction based on field conditions.

Arborist to review tree at time of construction based on field conditions.

Constr. ℄

Constr. ℄

18' x 30' CIP

FFE

100

101

102

103

104

SCALE 0 25' 50'

C Denotes Construction Limits In Cuts

F Denotes Construction Limits In Fills

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
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Adam Welschenbach 2020.10.26 19:23:20 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

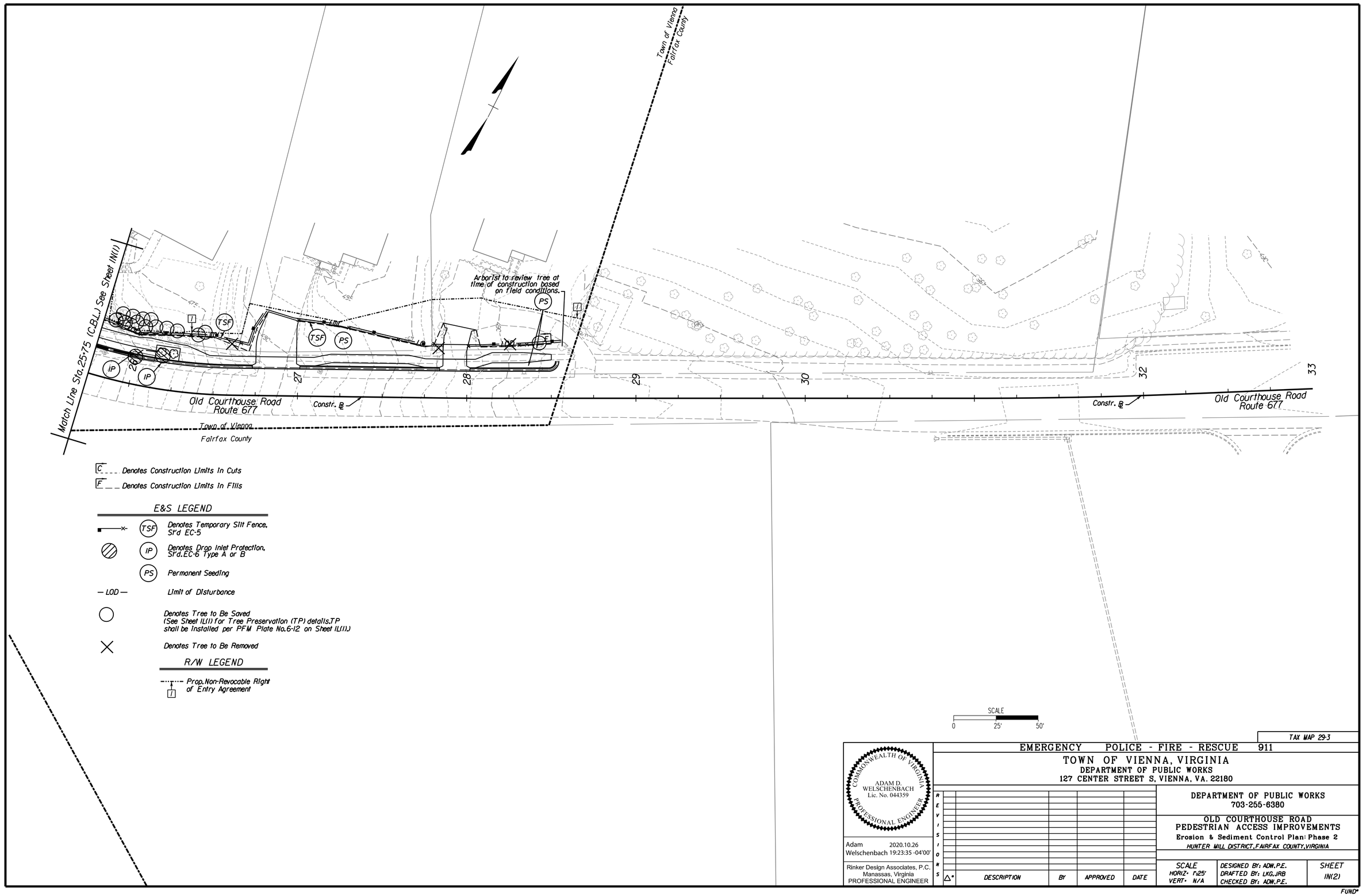
DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Erosion & Sediment Control Plan: Phase 2
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ: 1"=25' VERT: N/A
DESIGNED BY: ADW,P.E.
DRAFTED BY: LKG,JRB
CHECKED BY: ADW,P.E.
SHEET IN(1)

FUND#

10/22/2020



C ____ Denotes Construction Limits In Cuts

F __ __ Denotes Construction Limits In Fills

E&S LEGEND

- TSF — Denotes Temporary Silt Fence, Std EC-5
- IP — Denotes Drop Inlet Protection, Std.EC-6 Type A or B
- PS — Permanent Seeding
- — LOD — Limit of Disturbance
- ○ — Denotes Tree to Be Saved (See Sheet IL(1) for Tree Preservation (TP) details.TP shall be installed per PFM Plate No.6-12 on Sheet IL(1).)
- × — Denotes Tree to Be Removed

R/W LEGEND

- ------ (I) — Prop.Non-Revocable Right of Entry Agreement

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:23:35 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

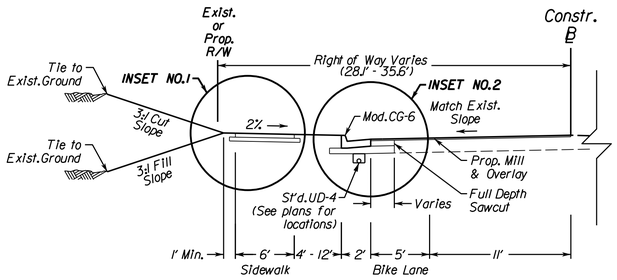
OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Erosion & Sediment Control Plan: Phase 2
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE	DESIGNED BY: ADW, P.E.	SHEET
HORIZ: 1:25'	DRAFTED BY: LKG, JRB	IN(2)
VERT: N/A	CHECKED BY: ADW, P.E.	

FUND*

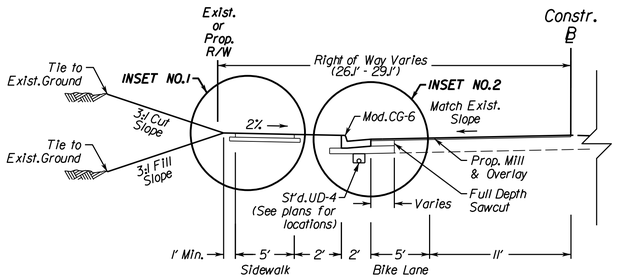
10/21/2020

Old Courthouse Road (Rte.677)
Curb and Gutter Section
(Not to Scale)



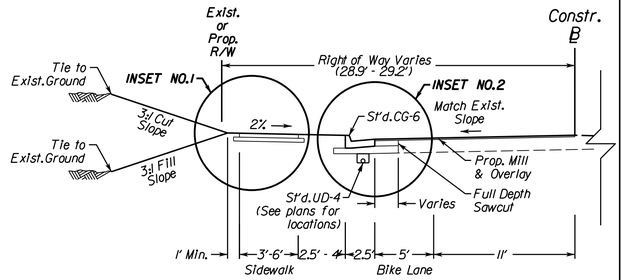
STATION	TO	STATION	BUFFER WIDTH
12+25		13+40	4'
13+40		14+53	2'
14+53		26+21	4'

Old Courthouse Road (Rte.677)
Curb and Gutter Section
(Not to Scale)



STATION	TO	STATION
26+21		27+80

Old Courthouse Road (Rte.677)
Curb and Gutter Section
(Not to Scale)



STATION	TO	STATION	BUFFER WIDTH
27+80		28+33	3'
28+33		28+52.95	3'-4.5'

PRIVATE ENTRANCES

TYPE II Concrete

Concrete Entrance Pavement
7" HES
6" Aggr. Base Mat'l. Ty. I
No. 21A or 21B

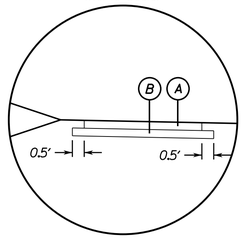
TYPE III Asphalt

Asphalt Conc. Type SM-9.5A or SM-9.5D @ 220 Lbs. per S.Y.
4" Aggr. Base Mat'l. Ty. I
No. 21A or 21B

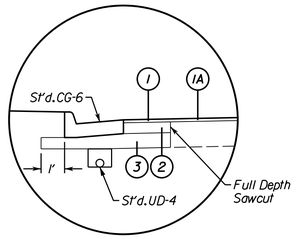
NOT TO SCALE

Notes:
1. The type of entrance (II or III) to be constructed will be determined by the existing condition at the time of construction or as directed by the Town Engineer.
2. Contractor shall ensure all driveway grading activities provide for positive drainage during and post-construction of the project. Any ponding/drainage issues arising due to construction activities are the sole responsibility (including costs) of the Contractor. The Contractor shall coordinate with the Town and property owners/residents prior to the start of construction.
3. The Contractor's price for Asphalt Conc., Type SM-9.5D shall include (at no additional cost to the project) the tie to existing driveways, 5' beyond what is shown in the plans, to provide a better (smoother) tie, at the discretion of the Town Engineer.

INSET NO. 1
(Not to Scale)



INSET NO. 2
(Not to Scale)



TYPICAL SECTION GENERAL NOTES

1. Pavement widening to be performed in accordance with VDOT St'd WP-2.
2. Milling of the existing pavement should consist of 2" minimum mill prior to any resurfacing/build-up.

PAVEMENT SECTION

(1) Surface Course - (2") Asphalt Concrete, Type SM-9.5D @ 238 lbs/sy

(1A) Mill (2" depth), Overlay (2" Min.) - Asphalt Concrete, Type SM-9.5D @ 238 lbs/sy

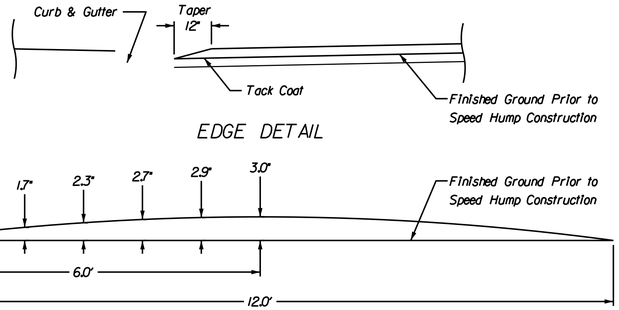
(2) Base Course - (5") Asphalt Concrete, Type BM-25.0A, or match existing asphalt concrete layers, whichever is greater
Subbase Course - (6") Aggregate Base Material, Type I, Size 21B or match existing subbase layer, whichever is greater. Connect to UD-4 underdrain

(3)

SIDEWALK SECTION

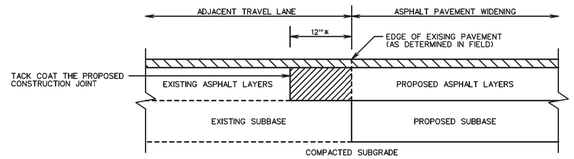
(A) Sidewalk - (4") Class A3 Hydraulic Cement Concrete.
Base Course - (4") Aggregate Base Material Type I, Size 21B extended 6" beyond the edge of the sidewalk.

Traffic Calming Measure - Speed Hump
(Not to Scale)



Notes
1. The speed hump shall be constructed with the same surface mix asphalt used to pave the underlying and adjacent roadway.
2. The underlying pavement shall be milled a minimum of 2" along the entire speed hump perimeter including below the 12" tapers.

WP-2



CONSTRUCTION JOINT DETAIL

REMOVE EXISTING ASPHALT LAYERS TO EXISTING SUBBASE AND REPLACE WITH PROPOSED ASPHALT WIDENING LAYERS

PROPOSED MINIMUM 1½ INCH THICK ASPHALT SURFACE COURSE (SEE NOTE 5)

x MINIMUM 12 INCHES, OR GREATER AS NECESSARY TO ABUT THE FULL THICKNESS OF EXISTING ASPHALT LAYERS AS DETERMINED BY CORES (SEE NOTE 3)

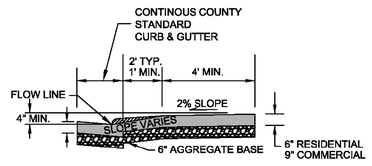
NOTES:
1. ASPHALT PAVEMENT WIDENING SHALL HAVE A PAVEMENT DESIGN IN ACCORDANCE WITH CURRENT VDOT PROCEDURES AND BE APPROVED BY THE ENGINEER.
2. THE PAVEMENT DESIGN FOR ASPHALT PAVEMENT WIDENING SHALL MEET OR EXCEED THE DEPTHS AND TYPES OF THE LAYERS OF EXISTING PAVEMENT. SUBSURFACE DRAINAGE OF THE EXISTING AND PROPOSED PAVEMENT SHALL BE ADDRESSED IN THE PAVEMENT DESIGN.
3. A MINIMUM OF THREE CORES SHALL BE TAKEN ALONG THE CENTER OF THE ADJACENT TRAVEL LANE TO DETERMINE THE TYPE AND THICKNESS OF EXISTING PAVEMENT LAYERS. THESE CORES SHALL BE SPACED NO MORE THAN 500 FEET APART.
4. THE ADJACENT TRAVEL LANE SHALL BE MILLED A MINIMUM DEPTH OF 1½ INCHES AND REPLACED WITH AN ASPHALT SURFACE COURSE TO MATCH THE PROPOSED PAVEMENT WIDENING SURFACE COURSE, UNLESS WAIVED BY THE ENGINEER.
5. THE ENGINEER MAY REQUIRE THE MILLING DEPTH OF THE EXISTING PAVEMENT TO BE ADJUSTED TO ACHIEVE AN ACCEPTABLE PAVEMENT CROSS-SLOPE AND EFFECTIVE SURFACE DRAINAGE.
6. EXISTING PAVEMENT MARKINGS AND MARKERS WITHIN THE PROJECT LIMITS SHALL BE RESTORED SUBJECT TO THE APPROVAL OF THE ENGINEER.
7. FINAL TRANSVERSE PAVEMENT TIE-IN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 315.05(c) OF THE SPECIFICATIONS EXCEPT THAT ALL JOINTS AT TIE-IN LOCATIONS SHALL BE TESTED USING A 10 FOOT STRAIGHTEDGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 315.07(a) OF THE SPECIFICATIONS.

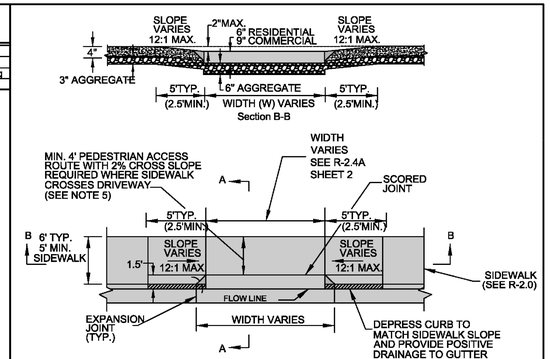
VDOT ROAD AND BRIDGE STANDARDS	ASPHALT PAVEMENT WIDENING FOR WIDENING SUBJECT TO TRAFFIC VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 1 OF 1 / REVISION DATE		315
303.02		

Standard R-2.4C

CONCRETE DRIVEWAY ENTRANCE (MOUNTABLE CURB)

07-08	
04-10	
9/26/13	Naming
REVISION & DATE	





TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Typical Sections & Details
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

SCALE: HORIZ. 1"=25' VERT. N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET 2A

ADAM D. WELSCHENBACH Lic. No. 044359 COMMONWEALTH OF VIRGINIA PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:23:51 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

10/21/2020

FUND*

PROJECT DATA SHEET

PROJECT INFORMATION					
PROJECT NAME	Old Courthouse Road Pedestrian Access Improvements				
COUNTY PROJECT NUMBER	FFX 104325				
VDOT UPC NUMBER (IF APPLICABLE)	PE – xxxxxx	RW – xxxxxx	CN – xxxxxx		
PROJECT LIMITS / LENGTH	North County Line to Battery Park St / 0.40 mi.				
FUNDING SOURCE	Locality				
DATE OF FUNDING OBLIGATION	2016				
LATITUDE/ LONGITUDE	LAT	38° 55' 0" N	LONG	77° 14' 38" W	
6TH ORDER HUC	020700081004 (PL 22 Difficult Run)				
TYPE OF DEVELOPMENT: (SELECT ALL THAT APPLY)					
☐ NEW DEVELOPMENT					
☒ REDEVELOPMENT					
☒ LINEAR DEVELOPMENT					
☐ NON-LINEAR DEVELOPMENT					
STORMWATER MANAGEMENT TECHNICAL CRITERIA USED:					
☒ VSMP TECHNICAL CRITERIA IIB / FFX CO STORMWATER MANAGEMENT ORDINANCE ARTICLE 4					
☐ VSMP TECHNICAL CRITERIA IIC / FFX CO STORMWATER MANAGEMENT ORDINANCE ARTICLE 5					
SWM WAIVER/EXCEPTION(S) REQUIRED: YES ☒ NO ☐	APPROVAL DATE: _____				
TYPE(S): Detention Exception	LDS NUMBER: _____				

CONSTRUCTION SITE ESTIMATES						
TOTAL SITE AREA	1.08	(AC)	47,045	(SF)		
TOTAL DISTURBED AREA	1.08	(AC)	47,045	(SF)		
TOTAL SITE IMPERVIOUS AREA	PRE	0.43	(AC)	POST	0.63	(AC)
VPDES PERMIT REQUIREMENTS (CHECK ONE):						
☐ DISTURBED AREA < 1 (AC) ; VPDES PERMIT NOT REQUIRED.						
☒ DISTURBED AREA ≥ 1 (AC) ; VPDES PERMIT IS REQUIRED.						

RECEIVING WATERS	
RECEIVING STREAM	Wolftrap Creek
WATERSHED	Difficult Run
DESCRIPTION OF IMPAIRED WATERS SUBJECT TO TMDLs, IF APPLICABLE	Not Applicable

NOTE:

1.) FOR ADDITIONAL DETAILS SEE THE LATEST REVISION OF DRAINAGE COMPUTATIONS BOOK AND EROSION AND SEDIMENT CONTROL PLAN SHEETS 1L–1M(1).

2.) THIS IS A COUNTY ADMINISTERED PROJECT AND THE STORM WATER POLLUTION PREVENTION PLANS (SWPPP) IS PREPARED BY FAIRFAX COUNTY. WHEN APPLICABLE, IT WILL BE INCLUDED WITH VPDES AND CONSTRUCTION PACKAGE.

OWNER/REPRESENTATIVE CONTACT INFORMATION

NAME: MICHAEL GALLAGHER,
DEPUTY DIRECTOR OF PUBLIC WORKS,
TOWN OF VIENNA

PHONE NUMBER: 703-255-6380
EMAIL ADDRESS: MGALLAGHER@VIENNAVA.GOV

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

TABLE 1.
WATER QUALITY ANALYSIS PER VSMP TECHNICAL CRITERIA IIB / FFX CO STORMWATER MANAGEMENT ORDINANCE ARTICLE 4 **

RECEIVING WATERS	OUTFALL		TOTAL DISTURBED AREA		PRE DEVELOPMENT LAND USE			POST DEVELOPMENT LAND USE			PHOSPHORUS REMOVAL REQUIRED *	ON-SITE PHOSPHORUS REMOVAL PROVIDED *
	ID	LOCATION	(AC)	(SF)	FORESTED (AC)	TURF (AC)	IMPERVIOUS AREA (AC)	FORESTED (AC)	TURF (AC)	IMPERVIOUS AREA (AC)	(LB/YR)	(LB/YR)
Wolftrap Creek	1.2	--	1.08	47,045	0.00	0.65	0.43	0.00	0.45	0.63	0.59	0.63

NOTE:

~~* PHOSPHORUS REMOVAL TO BE PROVIDED BY THE PURCHASE OF OFFSITE NUTRIENT CREDITS. PLEASE SEE TABLE 2 BELOW FOR MORE INFORMATION.~~

** TABLE HEADING SHOULD BE REVISED IF TECHNICAL CRITERIA 5 IS USED FOR GRANDFATHERED PROJECTS.

TABLE 2.
OFFSITE COMPLIANCE FOR WATER QUALITY (NUTRIENT CREDITS)

NUTRIENT CREDIT BANK NAME	4TH ORDER HUC	NUTRIENT CREDIT TO BE ACQUIRED (LB/YR)	PURCHASE LETTER (MM/DD/YY) (3)
N/A	02070008	0.00	N/A

~~NOTE:~~

~~3. ADDITIONAL INFORMATION WILL BE DOCUMENTED IN THIS TABLE UPON PURCHASE OF NUTRIENT CREDITS. PLEASE SEE LEDGER BELOW FOR EVIDENCE OF NUTRIENT CREDIT AVAILABILITY (RESERVATION)~~

SPACE BELOW RESERVED FOR EVIDENCE OF NUTRIENT CREDIT AVAILABILITY, WHEN NECESSARY

Purchase #2: Ledger- Red Hill Farm Nutrient Bank (DEQ Certification No. Potomac-013) Bulk Purchase of Nutrient Credits by Fairfax County DOT

Total Quantity & Balance Remainig

This spreadsheet applies ONLY to Projects which draw Nutrient Credits from FCDOT's Bulk Purchase.

Draw Down Quantity for Individual Projects

Tracking #	Proj. #	Project Name	UPC # (if any)	Funding Source	Fund Number	Project Location 8 Digit HUC	Watershed Name	Phosphorous Removal Required (lbs/yr)	Cost/Project	TP Transferred (LB)	TP Balance (LB)	TN Retired (LB)	TN Balance (LB)	DEQ Permit #	Purchase Agreement Date	Date Requested	Date of Credit Transfer	Comments
2-1	2G40-088-012	Old Courthouse Road Pedestrian Improvements	N/A	C&I - Bike & Pedestrian Program	400-C40011	0207008	Middle Potomac – Catoctin (Difficult Run)	0.14	$1,958.60	0.14	14.86	1.40	148.51	N/A	2/27/2017	3/6/2017	Pending	

SEE SHEET 2J(1) FOR LOCALITY APPROVAL / ACCEPTANCE OF SWM STRATEGY

STORMWATER INFORMATION TABLE

HIGH DENSITY POLYETHYLENE (HDPE) USED ON THIS PROJECT YES ☐ NO ☒

THE PLAN MEETS: TIME LIMITS ON APPLICABILITY OF APPROVED DESIGN CRITERIA ☐

SWM FACILITIES (PROPOSED ONLY) GRANDFATHERING CRITERIA ☐

VPDES REQUIRED YES ☒ NO ☐

VPDES PERMIT NO. (IF TIME LIMITS): _____

COUNTY STORMWATER PERMIT REQUIRED YES ☒ NO ☐

SWM FACILITIES DESIGNED USING: TECHNICAL CRITERIA 4 ☒ (NEW)

TECHNICAL CRITERIA 5 ☐ (OLD)

FACILITY ID NO.	FACILITY TYPE	PURPOSE	AREA TREATED (ACRES)	LATITUDE (DECIMAL DEGREE)	LONGITUDE (DECIMAL DEGREE)	WATERSHED	RECEIVING WATERS	MAINTENANCE AGREEMENT Y/N	VAHU6 CODE	LENGTH/ AREA OF FACILITY	UNIT (FT/ SF)	NO. OF BLDG. SERVED (FOR ROOFTOP DISCONNECT)
	No SWM Facility					Difficult Run						
	Proposed											

BMP provided by use of Filterra tree boxes.

DISTURBED AREA (DA) WITHIN WATERSHED(S):

WATERSHED 1 Difficult Run DA= 1.08 (ACRES) WATERSHED 2 _____ DA=_____ (ACRES) TOTAL DISTURBED AREA= 1.08 (ACRES)

CERTIFIED E & S PLAN REVIEWER

COMMONWEALTH OF VIRGINIA ADAM D. WELSCHENBACH Lic. No. 044359 PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:24:25 -04'00'

Rinker Design Assoc. P.C. Manassas, Virginia PROFESSIONAL ENGINEER

COMMONWEALTH OF VIRGINIA ADAM D. WELSCHENBACH Lic. No. 044359 PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:24:18 -04'00'

Rinker Design Associates, P.C. Manassas, Virginia PROFESSIONAL ENGINEER

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

REVISIONS				
△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
PROJECT DATA SHEET
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ: N/A VERT: N/A | DESIGNED BY: ADW, P.E. DRAFTED BY: LKG, JRB CHECKED BY: ADW, P.E. | SHEET 2J

FUND#

10/21/2020

Stormwater Detention Exception Request Approval

County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

DEC 14 2018

Vanessa Aguayo, Project Manager
Fairfax County Department of Transportation
4050 Legato Road, Suite 400
Fairfax, Virginia 22033-2895

Subject: Old Courthouse Road Pedestrian Access; 8833-FDOT-001-1;
Tax Map No 029-3-((01))-0024A & 0028; Hunter Mill District

Reference: Stormwater Detention Exception #8833-WSWD-001-1

Dear Ms. Aguayo:

The referenced stormwater detention exception request has been received and reviewed for consistency with the Stormwater Management Ordinance (SWMO) Fairfax County Code section 124-6-1. Based on the justifications provided, the Director has determined that:

i. The exception is the minimum necessary to afford relief;

ii. Granting the exception will not confer any special privileges that are denied in other similar circumstances;

iii. Exception requests are not based upon conditions or circumstances that are self-imposed or self-created; and

iv. Reasonable and appropriate conditions shall be imposed as necessary upon any exception granted so that the intent of the Act and this Chapter are preserved.

Therefore, your request to grant a partial exception of the stormwater detention requirement of the SWMO (124-4-4-D), is hereby approved on December 4, 2018, subject to the following condition:

- Detailed outfall analysis for the existing closed conduit system shall be provided to ensure capacity adequacy for the 10-year storm event.

This exception approval in no way relieves you of any other County drainage requirements including adequacy of outfall and pro-rata share payments. Compliance with the SWMO, the Chesapeake Bay Preservation Ordinance, proffers and development conditions are also required.

Department of Land Development Services
12055 Government Center Parkway, Suite 659
Fairfax, Virginia 22035-5503
Phone 703-324-1780 • TTY 711 • FAX 703-653-6678
www.fairfaxcounty.gov

Vanessa Aguayo, Project Manager
8833-WSWD-001-1
Page 2 of 2

This exception shall automatically expire, without notice, 24 months after the date of this letter, unless the subject plan has been approved.

Please ensure that a copy of this letter is made a part of the submitted plan.

If further assistance is desired, please contact Yosif Ibrahim, Senior Engineer III, Site Development and Inspections Division (SDID), at 703-324-1720 or yosif.ibrahim@fairfaxcounty.gov

Sincerely,

Shahab Baig, P.E.
Chief, North Branch
SDID
Land Development Services (LDS)

cc: Shannon Curtis, Chief, Watershed Assessment Branch, Stormwater Planning Division, Department of Public Works and Environmental Services
Yosif Ibrahim, Senior Engineer III, SDID, LDS
Waiver File

Locality Approval / Acceptance of SWM Strategy

Town of Vienna Virginia

Department of Public Works

Michael J. Gallagher, P.E.
Director

May 1, 2017

Virginia Department of Transportation
NoVA Local Assistance Program
4975 Alliance Drive
Fairfax, Virginia 22030

RE: Locality Approval/Acceptance of SWM Strategy (Joint Town/County Project – Old Courthouse Road Pedestrian Enhancements)

The Town of Vienna maintains all roadways within the Town's limits and the Town's stormwater system is operated under a separate permit from the State of Virginia per requirements of 4VAC50-60, "General Virginia Stormwater Management Program (VSMP) Permit for Discharges of Stormwater from Small Municipal Separate Systems."

The project is to construct pedestrian facilities along the north side of Old Courthouse Road from approximately 350' outside of the Town's northern limit, through the Town and tie to existing facilities at the other end of the Town's northern limits. The entire project is approximately 1900 LF of sidewalk, storm sewer and pedestrian facility improvements. The project is broken into two segments/phases to be constructed at the same time. Phase 1 is all the improvements (approx. 1550 LF) within the Town of Vienna. Phase 2 is all the improvements (approx. 350 LF) within the County. As part of the project's improvements a six (6) foot concrete sidewalk, storm sewer, and residential driveway entrance improvements will be constructed. The proposed improvements have been designed to minimize the amount of disturbance on residential properties and minimizing additional impervious areas on site.

Within the Town, the runoff from the project will be treated by the proposed BMP facilities (i.e. Tree Boxes) to be constructed within the project's limits for Phase 1. The Town confirms that these facilities are designed to handle impervious area draining to them as required by Town requirements. The County will provide their locality approval/acceptance separately.

In summary and as typically requested by VDOT's Location & Design Hydraulic section, this letter serves as concurrence that the project's Phase 1 for elements within the Town, as designed, meets the Town of Vienna's Stormwater Management Requirements.

Please let me know if there are further questions at 703-255-6389 or Michael.Gallagher@viennava.gov.

Sincerely,

Michael J. Gallagher, P.E.
Director of Public Works

Conditional Analysis:

- Detailed analysis has been provided on Sheet 2K(4).

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
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Adam Welschenbach 2020.10.26 19:25:56 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
SWM Detention Exception and Locality Approval
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ: 1:25' VERT: N/A | DESIGNED BY: ADW, P.E. DRAFTED BY: LKG, JRB CHECKED BY: ADW, P.E. | SHEET 2J(1)

FUND*

10/21/2020

Existing Drainage & Sanitary Descriptions

STORM SEWER

(1) Ex.Storm Structure
Ex.Top=427.13
Ex.Inv.In=424.75(Two 15" RCP's)
Ex.Inv.Out=424.73(34"x22" CMP)

(2) Ex.Catch Basin
Ex.Top=415.32
Ex.Inv.In=414.13(At Ditch)
Ex.Inv.Out=410.85(24" RCP)

(3) Ex.Storm MH
Ex.Top=415.43
Ex.Inv.In=410.33(From-2)
Ex.Inv.In=410.24(From-11)
Ex.Inv.Out=410.10(24" RCP)

(4) Ex.Catch Basin
Ex.Top=411.48
Ex.Inv.In=406.86
Ex.Inv.Out=406.47(24" RCP)

(5) Ex.Catch Basin
Ex.Top=410.94
Ex.Inv.In=406.67(From-6)
Ex.Inv.In=405.58(From-4)
Ex.Inv.Out=405.24(27" RCP)

(6) Ex.Catch Basin
Ex.Top=415.58
Ex.Inv.In=409.50(21" RCP)
Ex.Inv.Out=409.38(21" RCP)

(7) Ex.Catch Basin
Ex.Top=405.13
Ex.Inv.In=400.22
Ex.Inv.Out=400.06(27" RCP)

(8) Ex.Catch Basin
Ex.Top=397.96
Ex.Inv.In=392.43
Ex.Inv.Out=391.53(30" RCP)

(9) Ex.Catch Basin
Ex.Top=390.87
Ex.Inv.In=385.17
Ex.Inv.Out=383.37(36" RCP)

(10) Ex.Catch Basin
Ex.Top=386.25
Ex.Inv.In=380.60
Ex.Inv.Out=380.57

(11) Ex.Yard Inlet
Ex.Top=418.00
Ex.Inv.Out=413.00(24" RCP)

(12) Ex.Conc.Headwall
Ex.Top=425.72
Ex.Inv.=423.45

(13) In Pl.Storm Pipe
Inv.=435.99'

(14) In Pl.Storm Pipe
Inv.=436.36'

(15) In Pl.Storm Pipe
Inv.=439.66'

(16) In Pl.Storm Pipe
Inv.=440.25'

(17) In Pl.Endwall
Rim=239.28'
Inv.='

(18) In Pl.Endwall
Rim=438.22'
Inv.=435.20'

(19) In Pl.Curb Inlet
Rim=439.91'
Inv.In=435.31'
Inv.Out=435.29'

(20) In Pl.Curb Inlet
Rim=440.22'
Inv.In=436.14'
Inv.Out=436.00'

(21) In Pl.Storm MH
Rim=447.42'
Inv.In=443.40' (From 22)
Inv.In=442.99' (From 23)
Inv.Out=442.85'

(22) In Pl.Headwall
Rim=448.16'
Inv.=445.23'

(23) In Pl.Storm Inlet
Rim=447.72'
Inv.Out=444.28'

(24) In Pl.Storm Pipe
Inv.=448.00'

(25) In Pl.Storm Pipe
Inv.=449.15'

(26) In Pl.Storm Pipe
Inv.=453.97'

(27) In Pl.Storm Pipe
Inv.=455.33'

(28) In Pl.Storm Pipe
Inv.=465.09'

(29) In Pl.Storm Pipe
Inv.=463.12'

(30) In Pl.Curb Inlet
Rim=488.16'
Inv.In=484.87'
Inv.Out=484.63'

(31) In Pl.End Section
Inv.=486.19'

SANITARY SEWER

(A) Ex.San.MH
Ex.Top=440.20
Ex.Inv.In=430.90
Ex.Inv.Out=430.85(8")

(B) Ex.San.MH
Ex.Top=425.65
Ex.Inv.In=419.65(Both)
Ex.Inv.Out=419.60(8")

(C) Ex.San.MH
Ex.Top=423.73
Ex.Inv.In=411.73

(D) Ex.San.MH
Ex.Top=430.50
Ex.Inv.In=421.93(4" Lateral)
Ex.Inv.In=421.86
Ex.Inv.Out=421.62(8")

(E) Ex.San.MH
Ex.Top=448.38
Ex.Inv.Out=435.52(8")

(F) Ex.San.MH
Abandoned

(G) Ex.San.MH
Ex.Top=412.87
Approx.Inv=404.86(8")

(H) Ex.San.MH
Ex.Top=402.06
Approx.Inv=392.50(8")

(I) In Pl.Sanitary MH
Rim=443.06'
Cannot Access

(J) In Pl.Sanitary MH
Rim=443.75'
Inv.In=436.80'
Inv.Out=436.70'

(K) In Pl.Sanitary MH
Rim=447.11'
Inv.In=438.32' (North)
Inv.In=438.11' (East)
Inv.Out=438.01'

(L) In Pl.Sanitary MH
Rim=453.39'
Inv.In=446.02'
Inv.Out=445.73'

(M) In Pl.Sanitary MH
Rim=456.69'
Inv.In=448.56'
Inv.Out=448.02'

(N) In Pl.Sanitary MH
Rim=466.23'
Inv.In=460.57'
Inv.In=460.07' (Lateral)
Inv.Out=460.05'

(O) In Pl.Sanitary MH
Rim=488.05'
Inv.Out=480.95'

Proposed Drainage Descriptions

PHASE 1

Sheet 3

3-1 — 1 St'd.DI-3BB Req'd.
L=6' H=8.93' Inv.=415.08 Top=424.01
St'd.IS-1 Req'd.
1/2" Steel Plate Req'd.
Connect UD-4 to DI

3-1 to Ex.2 — 196' - 18" Conc.Pipe Req'd.(7' Cover)
(T20' Radius with open joints
- using 8' pipe joint lengths)
Joints are to be opened a maximum
of 25% of the spigot or tongue length.
Inv.(in) 415.08 Inv.(out) 411.05

3-2 — 1 St'd.DI-3B Req'd.
L=6' H=5.35' Inv.=421.16 Top=426.51
St'd.IS-1 Req'd.
Connect UD-4 to DI

3-2 to 3-1 — 38' - 15" Conc.Pipe Req'd.(4' Cover)
Inv.(in) 421.16 Inv.(out) 419.78

3-3 — 3.3 Lin.Ft.St'd.MH-1 or 2 Req'd.
1 St'd.MH-1 Frame & Cover Req'd.
Inv.426.20 Top=430.20
St'd.IS-1 Req'd.

3-3 to 3-2 — 102' - 15" Conc.Pipe Req'd.(3' Cover)
Inv.(in) 426.20 Inv.(out) 422.76

3-4 — 1 St'd.ES-1 15" Req'd.
Inv.429.50

3-4 to 3-3 — 23' - 15" Conc.Pipe Req'd.(2' Cover)
Inv.(in) 429.50 Inv.(out) 426.30

3-5 — 1 St'd.DI-3C Req'd.
L=6' H=4.0' Inv.=423.13 Top=427.13
Connect UD-4 to DI

3-5 to 3-2 — 32' - 15" Conc.Pipe Req'd.(2' Cover)
Inv.(in) 423.13 Inv.(out) 422.76

3-6 — 1 St'd.DI-3B Req'd.
L=12' H=7.0' Inv.=422.68 Top=429.68
St'd.IS-1 Req'd.
Connect UD-4 to DI

3-6 to 3-1 — 99' - 15" Conc.Pipe Req'd.(5' Cover)
Inv.(in) 422.68 Inv.(out) 419.78

3-7 — 1 St'd.DI-3B Req'd.
L=14' H=7.0' Inv.=430.08 Top=437.08
St'd.IS-1 Req'd.
Connect UD-4 to DI

3-7 to 3-6 — 161' - 15" Conc.Pipe Req'd.(3' Cover)
Inv.(in) 430.08 Inv.(out) 425.78

Sheet 4

4-1 — 1 St'd.DI-3B Req'd.
L=8' H=4.0' Inv.=438.09 Top=442.09
St'd.IS-1 Req'd.
Connect UD-4 to DI

4-1 to 3-7 — 207' - 15" Conc.Pipe Req'd.(3' Cover)
Inv.(in) 438.09 Inv.(out) 433.18

4-2 — 1 St'd.DI-3B Req'd.
L=6' H=4.0' Inv.=441.87 Top=445.87
St'd.IS-1 Req'd.
Connect UD-4 to DI
Connect 4" SDR-35 PVC to DI

4-2A — 1 Filterra Tree Box (6' x 4')
Inv.=442.59 Top=446.13
(1) 3' x 3' Tree Grate
6' - 4" SDR-35 PVC Outfall Pipe to Str.4-2
See Details,2L Series

4-2 to 4-1 — 215' - 15" Conc.Pipe Req'd.(3' Cover)
(T50' Radius with open joints
- using 8' pipe joint lengths)
Joints are to be opened a maximum
of 25% of the spigot or tongue length.
Inv.(in) 441.87 Inv.(out) 438.19

4-4 — 1 St'd.DI-7 Req'd.Type III Grate Req'd.
H=3.5' Inv.=442.85 Top=446.35

4-4 to 4-2 — 36' - 15" Conc.Pipe Req'd.(3' Cover)
Inv.(in) 442.85 Inv.(out) 441.97

4-6 — 1 St'd.ES-1A 19"x30" Req'd.
Inv.447.00

4-6 to 4-7 — 32' - 19"x30" Elliptical Conc.Pipe Req'd.(1.5' Cover)
Inv.(in) 447.00 Inv.(out) 445.40

4-7 — 1 St'd.DI-3C Req'd.
L=8' H=3.6' Inv.=445.30 Top=448.92
1 St'd.Monolithic Box Req'd.
Less Than Minimum Height
See Detail Sheet 2K(8)
St'd.IS-1 Req'd.
Connect UD-4 to DI

4-7 to Ex.2I — Existing Pipe To Be Extended with
3' - 34" x 22" Conc.Pipe Req'd.(2' Cover)
Inv.(in) 445.30 Inv.(out) 443.40

4-8 — 1 St'd.DI-2B Req'd.
L=10' H=4.0' Inv.=447.58 Top=451.58
St'd.IS-1 Req'd.
Connect UD-4 to DI
Connect 6" SDR-35 PVC to DI

4-8A — 1 Filterra Tree Box (12' x 6')
Inv.=451.37 Top=454.91
(2) 4' x 4' Tree Grate
60' - 6" SDR-35 PVC Outfall Pipe to Str.4-8
See Details,2L Series

4-8 to 4-7 — 79' - 15" Conc.Pipe Req'd.(2' Cover)
Inv.(in) 447.58 Inv.(out) 445.44

Sheet 5

5-1 — 1 St'd.DI-2B Req'd.
L=10' H=4.0' Inv.=453.87 Top=457.87
St'd.IS-1 Req'd.
Connect UD-4 to DI
Connect 6" SDR-35 PVC to DI

5-1A — 1 Filterra Tree Box (12' x 6')
Inv.=456.58 Top=460.12
(2) 4' x 4' Tree Grate
33' - 6" SDR-35 PVC Outfall Pipe to Str.5-1
See Details,2L Series

5-1 to 4-8 — 119' - 15" Conc.Pipe Req'd.(3' Cover)
(352' Radius with open joints
- using 8' pipe joint lengths)
Joints are to be opened a maximum
of 25% of the spigot or tongue length.
Inv.(in) 453.87 Inv.(out) 447.68

5-2 — 1 St'd.DI-2B Req'd.
L=12' H=4.0' Inv.=466.69 Top=470.69
Connect UD-4 to DI
Connect 6" SDR-35 PVC to DI

5-2A — 1 Filterra Tree Box (13' x 7')
Inv.=469.39 Top=472.93
(2) 4' x 4' Tree Grate
13' - 6" SDR-35 PVC Outfall Pipe to Str.5-2
See Details,2L Series

5-2 to 5-1 — 158' - 15" Conc.Pipe Req'd.(3' Cover)
(280' Radius with open joints
- using 8' pipe joint lengths)
Joints are to be opened a maximum
of 25% of the spigot or tongue length.
Inv.(in) 466.69 Inv.(out) 453.91

PHASE 2

5-3 — 1 St'd.DI-3B Req'd.
L=4' H=3.0' Inv.=485.30 Top=488.30
1 St'd.Monolithic Box Req'd.
Less Than Minimum Height
See Detail Sheet 2K(8)
Connect UD-4 to DI

Sheet 6

5-3 to 6-3 — 14' - 15" Conc.Pipe Req'd.(2' Cover)
Inv.(in) 485.30 Inv.(out) 485.20

6-1 — 1 St'd.DI-3C Req'd.
L=6' H=2.59' Inv.=485.60 Top=488.19
1 St'd.Monolithic Box Req'd.
Less Than Minimum Height
See Detail Sheet 2K(8)
Connect UD-4 to DI

6-1 to 5-3 — 38' - 15" Conc.Pipe Req'd.(2' Cover)
Inv.(in) 485.60 Inv.(out) 485.40

6-2 — 1 St'd.DI-3B Req'd.
L=4' H=2.5' Inv.=485.85 Top=488.35
1 St'd.Monolithic Box Req'd.
Less Than Minimum Height
See Detail Sheet 2K(8)
Connect UD-4 to DI

6-2 to 6-1 — 24' - 15" Conc.Pipe Req'd.(1' Cover)
Inv.(in) 485.85 Inv.(out) 485.70

6-3 — 1 St'd.ES-1 15" Req'd.
Inv.485.20
1.17 C.Y.of EC-1 Class AI Req'd.
Type A Installation

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:26:10 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Existing Drainage & Sanitary Descriptions,
Proposed Drainage Descriptions
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ= N/A VERT= N/A
DESIGNED BY: ADW,P.E.
DRAFTED BY: LKG,JRB
CHECKED BY: ADW,P.E.
SHEET 2K

FUND*

10/22/2020

Existing Drainage Map

(Phase 1 & Phase 2)

WCS 1983 North

Pine Valley Drive

Old Courthouse Rd. (Rte.677)

Fairfax County
Town of Vienna

Fairway Drive

Westbriar Ct. (West)

Westbriar Ct. (East)

Westbriar Drive

Upstream of Ex.5
A=6.98 Ac.
C=0.36

Upstream of Ex.3
A=4.38 Ac.
C=0.35

Ex.5
A=2.09 Ac.
C=0.42

Ex.4
A=0.35 Ac.
C=0.47

Ex.40
A=2.94 Ac.
C=0.64

Ex.3
Man Hole

Ex.2
A=6.77 Ac.
C=0.38

Ex.22
A=11.17 Ac.
C=0.36

Ex.23
A=0.43 Ac.
C=0.37

Ex.20
A=0.48 Ac.
C=0.44

Ex.21
Man Hole

Ex.19
A=0.10 Ac.
C=0.90

SCALE
0' 75' 150'

TAX MAP 29-3

Structures Outfalling Within Fairfax County:	Structures Outfalling Within the Town of Vienna:
Ex.2	Ex.22
Ex.Str.Upstream of Ex.3	Ex.23
Ex.3	Ex.21
Ex.4	Ex.20
Ex.Str.Upstream of Ex.5	Ex.19
Ex.5	Ex.40

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:26:23 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

REVISIONS △	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Existing Drainage Map (Phase 1 & Phase 2)
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE
HORIZ: 1:75'
VERT: N/A

DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET
2K(1)

FUND#

10/21/2020

Proposed Drainage Map

(Phase 1 & Phase 2)

Upstream of Ex.3
A=4.38 Ac.
C=0.35

Upstream of Ex.5
A=6.98 Ac.
C=0.36

Ex.2
A=0.38 Ac.
C=0.50

Ex.5
A=2.09 Ac.
C=0.42

Ex.4
A=0.35 Ac.
C=0.47

Ex.3
Man Hole

Ex.40
A=3.03 Ac.
C=0.64

Prop.3-1
A=0.04 Ac.
C=0.54

Prop.3-3
Man Hole

Prop.3-4
A=0.13 Ac.
C=0.37

Prop.3-2
A=0.12 Ac.
C=0.66

Prop.3-5
A=2.07 Ac.
C=0.37

Prop.3-7
A=1.42 Ac.
C=0.37

Prop.4-1
A=0.77 Ac.
C=0.37

Prop.3-6
A=0.81 Ac.
C=0.38

Prop.4-2
A=0.08 Ac.
C=0.41

Ex.21
Man Hole

Ex.19
A=0.10 Ac.
C=0.90

Prop.6-2
A=0.15 Ac.
C=0.63

Prop.6-1
A=0.05 Ac.
C=0.77

Prop.5-3
A=0.18 Ac.
C=0.76

Prop.4-4
A=0.88 Ac.
C=0.36

Prop.4-6
A=8.81 Ac.
C=0.33

Prop.4-5
Man Hole

Prop.5-2
A=0.46 Ac.
C=0.56

Prop.4-7
A=0.59 Ac.
C=0.43

Prop.5-1
A=0.38 Ac.
C=0.52

Prop.4-8
A=0.57 Ac.
C=0.44

Ex.23
A=0.43 Ac.
C=0.37

Ex.20
A=0.46 Ac.
C=0.43

Pine Valley Drive

Old Courthouse Rd.(Rte.677)

Fairfax County
Town of Vienna

Fairway Drive

Westbriar Ct. (West)

Westbriar Ct. (East)

Westbriar Drive

WCS 1983 North

SCALE
0' 75' 150'

Structures Outfalling Within Fairfax County:	
Prop.4-4	Prop.3-2
Prop.4-3	Prop.3-1
Prop.4-2	Ex.2
Prop.4-1	Ex.Str.Upstream of Ex.3
Prop.3-7	Ex.3
Prop.3-6	Ex.4
Prop.3-5	Ex.Str.Upstream of Ex.5
Prop.3-4	Ex.5
Prop.3-3	

Structures Outfalling Within the Town of Vienna:	
Prop.6-2	Prop.4-6
Prop.6-1	Prop.4-5
Prop.5-3	Ex.23
Prop.5-2	Ex.21
Prop.5-1	Ex.20
Prop.4-8	Ex.19
Prop.4-7	Ex.40

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Proposed Drainage Map (Phase 1 & Phase 2)
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:26:55 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

SCALE HORIZ: 1:75' VERT: N/A
DESIGNED BY: ADW,P.E.
DRAFTED BY: LKG,JRB
CHECKED BY: ADW,P.E.
SHEET 2K(2)

10/21/2020

FUND#

Storm Computations for Outfalls in Fairfax County

Inlet																										Sag Inlets Only					
Number	Type	Length (Ft)	Station	Drainage Area (Ac)	C	CA	Sum CA	I (In/Hr)	Q Incr.(CFS)	Qc Carryover (CFS)	QT Gutter Flow (CFS)	S Gutter Slope (Ft/Ft)	Sx Cross Slope (Ft/Ft)	T (Spread) (Ft)	W (Gutter Width) (Ft)	W/T	Sw (Gutter Slope) (Ft/Ft)	Sw/Sx	Eo (App.9C-8)	a	S'w	Se	Computed Length (Ft)	L Specified Length (Ft)	L/LT	E (App.9C-18)	Q Intercepted (CFS)	Qb Carryover (CFS)	Depth at Curb (in)	Allowable Ponding Depth (Ft)	Height of Curb Opening h (Ft)	d/h	Depth at Inlet (In)	T Spread @ SAG (Ft)	Remarks
Ex2	YI-1	4	12+18	6.77	0.38	2.57																												
							2.57	4.00	10.29	0.00	10.29	0.0400			4.00									4		1.00	10.29	0.00	0.6						BHt.=0.356'

PRE-DEVELOPMENT INLET COMPUTATIONS

FORM LD-204
INLET COMPUTATIONS
ROUTE: *Old Courthouse Road Pedestrian Access Improvements*

DESIGNED BY: JZ DATE: 5/06/2016
CHECKED BY: NVD UNITS: ENGLISH

Inlet																										Sag Inlets Only					
Number	Type	Length (Ft)	Station	Drainage Area (Ac)	C	CA	Sum CA	I (In/Hr)	Q Incr.(CFS)	Qc Carryover (CFS)	QT Gutter Flow (CFS)	S Gutter Slope (Ft/Ft)	Sx Cross Slope (Ft/Ft)	T (Spread) (Ft)	W (Gutter Width) (Ft)	W/T	Sw (Gutter Slope) (Ft/Ft)	Sw/Sx	Eo (App.9C-8)	a	S'w	Se	Computed Length (Ft)	L Specified Length (Ft)	L/LT	E (App.9C-18)	Q Intercepted (CFS)	Qb Carryover (CFS)	Depth at Curb (in)	Allowable Ponding Depth (Ft)	Height of Curb Opening h (Ft)	d/h	Depth at Inlet (In)	T Spread @ SAG (Ft)	Remarks
3-1	DI-3BB	6	14+02.67	0.04	0.54	0.02																												
							0.02	4.00	0.09	0.00	0.09	0.0100	0.0208	1.16	2.00	1.7197	0.0833	4.0048	1	3.5	0.0458	0.0666	1.978	6	3.033	1.00	0.09	0.00	1.2						
3-2	DI-3B	6	53+45.11	0.12	0.66	0.08																												
							0.08	4.00	0.32	0.00	0.32	0.0280	0.0520	1.58	1.50	0.9512	0.0833	1.6019	1	2.06	0.0146	0.0666	4.608	6	1.302	1.00	0.32	0.00	1.5						
3-5	DI-3C	6	53+47.54	1.95	0.37	0.72																												Back/Lt.
							0.72	4.00	2.89	0.00		0.0280	0.0510	4.58	1.50	0.3278	0.0833	1.6333		2.08														Back/Lt.
				0.12	0.37	0.04																												Ahead/Rt.
							0.04	4.00	0.18	0.00																								Ahead/Rt.
											3.06	0.0280												6			3.06		3.4	0.413	0.4583	0.9011	4.9	5.61	Weir Flow
3-6	DI-3B	12	15+11.20	0.81	0.38	0.31																												
							0.31	4.00	1.23	0.00	1.23	0.0720	0.0632	2.36	1.50	0.6369	0.0833	1.3180	0.947	1.86	0.1034	0.1611	11.052	12	1.086	1.00	1.23	0.00	2.1						
3-7	DI-3B	14	16+75	1.42	0.37	0.53																												
							0.53	4.00	2.10	0.00	2.10	0.0328	0.0200	6.56	1.50	0.2287	0.0833	4.1650	0.645	2.64	0.1466	0.1145	13.403	14	1.045	1.00	2.10	0.00	2.7						
4-1	DI-3B	8	18+85.00	0.77	0.37	0.28																												
							0.29	4.00	1.14	0.00	1.14	0.0116	0.0176	6.77	1.50	0.2214	0.0833	4.7330	0.649	2.68	0.149	0.1143	7.601	8	1.052	1.00	1.14	0.00	2.6						
4-2	DI-3B	6	21+08.13	0.11	0.41	0.05																												
							0.05	4.00	0.18	0.00	0.18	0.0256	0.0688	1.28	1.50	1.1765	0.0833	1.2108	1	1.76	0.0978	0.0666	3.541	6	1.694	1.00	0.18	0.00	1.3						
4-4	DI-7	2	02+33.54	0.88	0.36	0.32																												
							0.32	4.00	1.27	0.00	1.27	0.0619			2.00									2		1.00	1.27	0.00	0.3						BHt.=0.139'
Ex2	YI-1	4	12+18.20	0.38	0.5	0.19																												
							0.19	4	0.76	0	0.76	0.01			4									4		1	0.76	0	0.3						BHt.=0.062'

POST-DEVELOPMENT INLET COMPUTATIONS

FORM LD-204
INLET COMPUTATIONS
ROUTE: *Old Courthouse Road Pedestrian Access Improvements*

DESIGNED BY: JZ DATE: 9/05/2017
CHECKED BY: NVD UNITS: ENGLISH

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:27:08 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Storm Computations for Outfalls
in Fairfax County
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ= N/A VERT= N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET 2K(3)

FUND*

10/21/2020

Storm Computations for Outfalls in Fairfax County

PRE-DEVELOPMENT STORM COMPUTATIONS, 10-YEAR STORM

FORM LD-229

STORM SEWER DESIGN COMPUTATIONS — **DESIGNED BY:** JZ — **DATE:** 12/13/2018

STORM FREQUENCY 10-Year — **CHECKED BY:** NVD — **UNITS:** ENGLISH

Pipe No.	From Point		To Point		Drain Area "A" (Acre)	Runoff Coeff. "C"	CA		Total Inlet Time (Minutes)	Rain Fall (In/Hr)	Runoff		Invert Elevations		Length of Pipe (Ft)	Slope (Ft/Ft)	Size Dia.or Span/Rise (In)	Shape	Number of Pipes	Capacity (CFS)	Friction Slope (Ft/Ft)	Normal Flow					Flow Time (Sec)	Remarks
	Reference	Sta.	Reference	Sta.			Increment	Accumulated			Lateral (CFS)	Total Q (CFS)	Upper End	Lower End								Depth of Flow, dn (Ft)	Area of Flow, An (SqFt)	Hm (Ft)	Vn (Ft/Sec.)	En (Ft)		
Ex2toEx3	Ex2	12+18.20	Ex3	12+14.61	6.77	0.38	2.57	2.57	5.00	6.77	0.00	17.42	410.85	410.33	8	0.0650	24	Circular	1	57.68	0.0062	0.75	1.08	0.41	16.1	4.77	0	
Ex3toEx4	Ex3	12+14.61	Ex4	11+00.78	0.00		0.00	4.11	16.25	4.45	0.00	24.34	410.10	406.86	120	0.0270	24	Circular	1	37.17	0.0120	1.18	1.93	0.55	12.6	3.65	10	
Ex4toEx5	Ex4	11+00.78	Ex5	10+60.11	0.35	0.47	0.16	4.27	16.41	4.43	0.00	24.34	406.47	405.58	60	0.0148	24	Circular	1	27.55	0.0120	1.46	2.46	0.60	9.9	2.98	6	
Ex5toEx7	Ex5	10+60.11	Ex7		2.09	0.42	0.88	6.51	16.51	4.42	0.00	33.58	405.24	400.22	209	0.0240	27	Circular	1	48.00	0.0122	1.39	2.57	0.63	13.1	4.04	16	

POST-DEVELOPMENT STORM COMPUTATIONS, 10-YEAR STORM

FORM LD-229

STORM SEWER DESIGN COMPUTATIONS — **DESIGNED BY:** JZ — **DATE:** 12/13/2018

STORM FREQUENCY 10-Year — **CHECKED BY:** NVD — **UNITS:** ENGLISH

Pipe No.	From Point		To Point		Drain Area "A" (Acre)	Runoff Coeff. "C"	CA		Total Inlet Time (Minutes)	Rain Fall (In/Hr)	Runoff		Invert Elevations		Length of Pipe (Ft)	Slope (Ft/Ft)	Size Dia.or Span/Rise (In)	Shape	Number of Pipes	Capacity (CFS)	Friction Slope (Ft/Ft)	Normal Flow					Flow Time (Sec)	Remarks
	Reference	Sta.	Reference	Sta.			Increment	Accumulated			Lateral (CFS)	Total Q (CFS)	Upper End	Lower End								Depth of Flow, dn (Ft)	Area of Flow, An (SqFt)	Hm (Ft)	Vn (Ft/Sec.)	En (Ft)		
4-4to4-2	4-4	102+33.54	4-2	21+08.13	0.88	0.36	0.32	0.32	5.00	6.76	0.00	2.14	442.85	441.97	26.00	0.03385	15	Circular	1	11.89	0.00110	0.36	0.29	0.21	7.34	1.20	3.54	
4-2to4-1	4-2	21+08.13	4-1	18+85.00	0.08	0.41	0.03	0.35	5.06	6.74	0.00	2.36	441.87	438.19	215.00	0.01712	15	Circular	1	8.45	0.00140	0.45	0.40	0.25	5.90	0.99	36.42	
4-1to3-7	4-1	18+85.00	3-7	16+75	0.77	0.37	0.29	0.63	5.67	6.55	0.00	4.23	438.09	433.18	207.00	0.02372	15	Circular	1	9.95	0.00450	0.57	0.54	0.29	7.78	1.51	26.62	
3-7to3-6	3-7	16+75	3-6	15+11.20	1.42	0.37	0.53	1.16	6.11	6.41	0.00	7.59	430.08	425.78	161.00	0.02671	15	Circular	1	10.56	0.01440	0.79	0.81	0.36	9.36	2.15	17.20	
3-6to3-1	3-6	15+11.20	3-1	14+02.67	0.81	0.38	0.31	1.47	6.40	6.33	0.00	9.54	422.68	419.78	105.00	0.02762	15	Circular	1	10.74	0.02280	0.92	0.97	0.38	9.89	2.44	10.62	
3-1toEx2	3-1	14+02.67	Ex2	12+18.20	0.04	0.55	0.02	2.38	6.57	6.28	0.00	14.97	415.08	411.05	190.00	0.02121	18	Circular	1	15.30	0.02120	1.20	1.52	0.46	9.87	2.71	19.26	
Ex2toEx3	Ex2	12+18.20	Ex3	12+14.61	0.38	0.50	0.19	2.57	6.90	6.20	0.00	16.15	410.85	410.33	8.00	0.06500	24	Circular	1	57.68	0.00530	0.72	1.03	0.40	15.75	4.57	0.51	
Ex3toEx4	Ex3	12+14.61	Ex4	11+00.78	0.00		0.00	4.11	16.25	4.47	0.00	18.41	410.10	406.86	120.00	0.02700	24	Circular	1	37.17	0.00690	0.99	1.56	0.50	11.80	3.16	10.17	
Ex4toEx5	Ex4	11+00.78	Ex5	10+60.11	0.35	0.47	0.17	4.27	16.42	4.45	0.00	19.15	406.47	405.58	60.00	0.01483	24	Circular	1	27.55	0.00750	1.23	2.02	0.56	9.47	2.62	6.33	
Ex5toEx7	Ex5	10+60.11	Ex7		2.09	0.42	0.88	7.66	16.53	4.43	0.00	33.97	405.24	400.22	209.00	0.02402	27	Circular	1	48.00	0.01250	1.40	2.60	0.64	13.09	4.06	15.97	
3-4to3-3	3-4	54+76	3-3	54+51	0.13	0.37	0.05	0.05	5.00	6.77	0.00	0.33	429.50	426.30	23.00	0.13913	15	Circular	1	24.10	0.00000	0.10	0.05	0.07	6.91	0.84	3.33	
3-3to3-2	3-3	54+51	3-2	53+45.11	0.00		0.00	0.05	5.05	6.75	0.00	0.33	426.20	422.76	102.00	0.03373	15	Circular	1	11.86	0.00000	0.14	0.08	0.09	4.22	0.42	24.16	
3-2to3-1	3-2	53+45.11	3-1	14+02.67	0.12	0.66	0.08	0.89	5.46	6.62	0.00	5.91	421.16	419.78	48.00	0.02875	15	Circular	1	10.95	0.00870	0.65	0.65	0.32	9.10	1.94	5.28	
3-5to3-2	3-5	53+47.54	3-2	53+45.11	2.07	0.37	0.77	0.77	5.00	6.77	0.00	5.19	423.13	422.76	30.00	0.01233	15	Circular	1	7.17	0.00670	0.79	0.82	0.36	6.37	1.42	4.71	

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA — ADAM D. WELSCHENBACH Lic. No. 044359 — PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:27:20 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Storm Computations for Outfalls in Fairfax County
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ. N/A VERT. N/A | DESIGNED BY: ADW, P.E. DRAFTED BY: LKG, JRB CHECKED BY: ADW, P.E. | SHEET 2K(4)

FUND#

10/21/2020

Storm Computations for Outfalls in Fairfax County

PRE-DEVELOPMENT HGL COMPUTATIONS

FORM LD-347

HYDRAULIC GRADE LINE ANALYSIS — DESIGNED BY: JZ — DATE: 12/13/2018

INCIDENCE PROBABILITY 10-Year — CHECKED BY: NVD — UNITS: ENGLISH

INLET OR JUNCTION	STA.	INVERT EL. OUTFLOW PIPE	DEPTH OF FLOW OUTFLOW PIPE	OUTLET WATER SURFACE ELEV.	DIA. PIPE Do (In/mm)	DESIGN DISCH. Qo (CFS/CMS)	LENGTH PIPE Lo (Ft/M)	FRICTION SLOPE.Sfo (FT/FT)	FRICTION LOSS Hf (Ft/M)	JUNCTION LOSS Vo	Contr. Ho (Ft/M)	V1	V1²/2g	HI (Expn) 0.35*MAX. (V12/2g)	SKEW Angle	K	Bend H (Ft/M)	Sum HL (Ft/M)	SURFACE FLOW	Adj.Ht 1.3 Ht (Ft/M)	Inlet Shaping? Y/N	0.5 Ht (Ft/M)	FINAL H (Ft/M)	Inlet Water Surface Elevation	Top of MH Top of Inlet Elev. APPROX.	Adjustment?
(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		(12)	(13)		(14)	(15)		(16)		(16)	(17)	(18)	(19)	
Ex7																								402.02		
Ex5	10+60.11	400.22	2.25	402.02	27	33.58	209	0.0123	2.568	13.1	0.662	9.9	1.5	0.533	58.0	0.54	0.83	2.02	3.88	2.02	YES	1.01	3.58	406.63	410.44	O.K.
Ex4	11+00.78	405.58	2.00	407.18	24	24.34	60	0.0121	0.726	9.9	0.380	12.6	2.5	0.865	41.0	0.43	1.06	2.30	0.73	2.30	YES	1.15	1.88	409.06	410.98	O.K.
Ex3	12+14.61	406.86	2.00	409.06	24	24.34	120	0.0121	1.452	12.6	0.618	16.1	4.0	1.405	75.0	0.62	2.50	4.52	0.00	4.52	YES	2.26	3.71	412.77	415.43	O.K.
Ex2	12+18.20	410.33	2.00	412.77	24	17.42	8	0.0062	0.050	16.1	1.004	0.0	0.0	0.000	0.0	0.00	0.00	1.00	17.42	1.30	YES	0.65	0.70	413.47	414.13	O.K.

POST-DEVELOPMENT HGL COMPUTATIONS

FORM LD-347

HYDRAULIC GRADE LINE ANALYSIS — DESIGNED BY: JZ — DATE: 12/13/2018

INCIDENCE PROBABILITY 10-Year — CHECKED BY: NVD — UNITS: ENGLISH

INLET OR JUNCTION	STA.	INVERT EL. OUTFLOW PIPE	DEPTH OF FLOW OUTFLOW PIPE	OUTLET WATER SURFACE ELEV.	DIA. PIPE Do (In/mm)	DESIGN DISCH. Qo (CFS/CMS)	LENGTH PIPE Lo (Ft/M)	FRICTION SLOPE.Sfo (FT/FT)	FRICTION LOSS Hf (Ft/M)	JUNCTION LOSS Vo	Contr. Ho (Ft/M)	V1	V1²/2g	HI (Expn) 0.35*MAX. (V12/2g)	SKEW Angle	K	Bend H (Ft/M)	Sum HL (Ft/M)	SURFACE FLOW	Adj.Ht 1.3 Ht (Ft/M)	Inlet Shaping? Y/N	0.5 Ht (Ft/M)	FINAL H (Ft/M)	Inlet Water Surface Elevation	Top of MH Top of Inlet Elev. APPROX.	Adjustment?
(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		(12)	(13)		(14)	(15)		(16)		(16)	(17)	(18)	(19)	
Ex7																								402.02		
Ex5	10+60.11	400.22	2.25	402.02	27	33.971	209.00	0.01258	2.63	13.09	0.67	9.47	1.39	0.49	58.0	0.54	0.76	1.91	3.89	1.91	YES	0.95	3.58	406.64	410.44	O.K.
Ex4	11+00.78	405.58	2.00	407.18	24	19.146	60.00	0.00749	0.45	9.47	0.35	11.80	2.16	0.76	41.0	0.43	0.93	2.03	0.73	2.03	YES	1.02	1.46	408.64	410.98	O.K.
Ex3	12+14.61	406.86	2.00	408.64	24	18.412	120.00	0.00692	0.83	11.80	0.54	15.75	3.85	1.35	75.0	0.62	2.40	4.29	0.00	4.29	YES	2.14	2.97	411.62	415.43	O.K.
Ex2	12+18.20	410.33	2.00	411.93	24	16.148	8.00	0.00533	0.04	15.75	0.96	9.87	1.51	0.53	59.0	0.55	0.83	2.32	1.18	2.32	YES	1.16	1.20	413.13	414.82	O.K.
3-1	14+02.67	411.05	1.50	413.13	18	14.971	190.00	0.02123	4.03	9.87	0.38	9.89	1.52	0.53	40.0	0.42	0.54	1.45	0.14	1.45	YES	0.72	4.76	417.89	423.18	O.K.
3-6	15+11.20	419.78	1.25	420.78	15	9.543	105.00	0.02281	2.40	9.89	0.38	9.36	1.36	0.48	4.0	0.06	0.08	0.93	1.95	1.21	YES	0.61	3.00	423.78	429.18	O.K.
3-7	16+75	425.78	1.25	426.78	15	7.593	161.00	0.01444	2.33	9.36	0.34	7.78	0.94	0.33	0.0	0.00	0.00	0.67	3.37	0.87	YES	0.43	2.76	430.87	436.58	O.K.
4-1	18+85.00	433.18	1.25	434.18	15	4.226	207.00	0.00447	0.93	7.78	0.23	5.90	0.54	0.19	0.0	0.00	0.00	0.42	1.87	0.55	YES	0.28	1.20	438.66	441.59	O.K.
4-2	21+08.13	438.19	1.25	439.19	15	2.361	215.00	0.00140	0.30	5.90	0.14	7.34	0.84	0.29	36.0	0.39	0.32	0.75	0.22	0.75	YES	0.38	0.68	442.32	445.87	O.K.
4-4	102+33.54	441.97	1.25	442.97	15	2.140	26.00	0.00115	0.03	7.34	0.21	0.00	0.00	0.00	0.0	0.00	0.00	0.21	2.14	0.27	NO	0.27	0.30	443.27	446.35	O.K.
3-2	53+45.11	419.78	1.25	420.78	15	5.913	48.00	0.00876	0.42	9.10	0.32	6.37	0.63	0.22	43.0	0.44	0.28	0.82	0.52	0.82	YES	0.41	0.83	421.81	426.16	O.K.
3-5	53+47.54	422.76	1.25	423.76	15	5.187	30.00	0.00674	0.20	6.37	0.16	0.00	0.00	0.00	0.0	0.00	0.00	0.16	5.19	0.20	NO	0.20	0.41	424.17	426.63	O.K.
3-3	54+51	422.76	1.25	423.76	15	0.326	102.00	0.00003	0.00	4.22	0.07	6.91	0.74	0.26	0.0	0.00	0.00	0.33	0.00	0.33	YES	0.16	0.17	426.34	430.20	O.K.
3-4	54+76	426.30	1.25	427.30	15	0.326	23.00	0.00003	0.00	6.91	0.19	0.00	0.00	0.00	0.0	0.00	0.00	0.19	0.00	0.19	NO	0.19	0.19	429.60	430.75	O.K.

PROPOSED OUTFALL 1A DITCH COMPUTATIONS

FORM LD-268

DESIGNED BY: AH — DATE: 5/06/2016

CHECKED BY: SCT — UNITS: ENGLISH

STA. TO STA.		FLOW	Area (Acres)	C-value	CA INCR.	CA ACC.	T_c	I_2	Q_2	C or F	Slope Ft/Ft	ALLOW. VEL.	Earth n=.025 (USGS-CL) VEL.	I_{10}	Q_{10}	Depth	Available Depth	REMARKS
Old Courthouse Rd																		
Left Side																		
31+12	31+12	◀	0.40	0.70	0.28	0.28	5	5.23	1.46	C	0.0100	3.5	2.2	6.77	1.90	0.5	1.0	Design Velocity < Allowable Velocity

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA — ADAM D. WELSCHENBACH Lic. No. 044359 — PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:27:33 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Storm Computations for Outfalls
in Fairfax County
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ. N/A VERT. N/A | DESIGNED BY: ADW, P.E. DRAFTED BY: LKG, JRB CHECKED BY: ADW, P.E. | SHEET 2K(5)

FUND*

10/21/2020

Storm Computations for Outfalls in the Town of Vienna

Inlet Number	Type	Length (Ft)	Station	Drainage Area (AC)	C	CA	Sum CA	I (In/Hr)	Q Incr.(CFS)	Qc Carryover (CFS)	QT Gutter Flow (CFS)	S Gutter Slope (Ft/Ft)	Sx Cross Slope (Ft/Ft)	T (Spread) (Ft)	W (Gutter Width) (Ft)	W/T	Sw (Gutter Slope) (Ft/Ft)	Sw/Sx	Eo (App.9C-8)	a	S'w	Se	Computed Length (Ft)	L Specified Length (Ft)	L/LT	E (App.9C-18)	Q Intercepted (CFS)	Qb Carryover (CFS)	Depth at Curb (In)	Sag Inlets Only: Allowable Ponding Depth (Ft)	Height of Curb Opening h (Ft)	d/h	Depth at Inlet (In)	T Spread @ SAG (Ft)	Remarks
Ex20	DI-3B	8	99+90	0.48	0.44	0.21																													
							0.21	4.00	0.84	0.00	0.84	0.0200	0.0200	4.61	1.50	0.3252	0.0833	4.1650	0.811	2.64	0.1466	0.139	7.017	8	1.14	1.00	0.84	0.00	2.2						

PRE-DEVELOPMENT INLET COMPUTATIONS

FORM LD-204
INLET COMPUTATIONS
ROUTE: *Old Courthouse Road Pedestrian Access Improvements*

DESIGNED BY: JZ DATE: 5/06/2016
CHECKED BY: NVD UNITS: ENGLISH

Inlet Number	Type	Length (Ft)	Station	Drainage Area (AC)	C	CA	Sum CA	I (In/Hr)	Q Incr.(CFS)	Qc Carryover (CFS)	QT Gutter Flow (CFS)	S Gutter Slope (Ft/Ft)	Sx Cross Slope (Ft/Ft)	T (Spread) (Ft)	W (Gutter Width) (Ft)	W/T	Sw (Gutter Slope) (Ft/Ft)	Sw/Sx	Eo (App.9C-8)	a	S'w	Se	Computed Length (Ft)	L Specified Length (Ft)	L/LT	E (App.9C-18)	Q Intercepted (CFS)	Qb Carryover (CFS)	Depth at Curb (In)	Sag Inlets Only: Allowable Ponding Depth (Ft)	Height of Curb Opening h (Ft)	d/h	Depth at Inlet (In)	T Spread @ SAG (Ft)	Remarks
4-7	DI-3C	8	22+22.97	0.14	0.43	0.06																													Back/Lt.
			-19.850'L				0.06	4.00	0.24	0.00																									Back/Lt.
				0.45	0.43	0.19																													Ahead/Rt.
							0.19	4.00	0.78	0.00		0.0252	0.0217	3.90	1.50	0.3842	0.0833	3.84		2.61															Ahead/Rt.
											1.02	0.0252												8			1.02		1.4	0.21	0.02	12.00	2.9	5.50	Weir Flow
4-8	DI-2B	10	23+04	0.57	0.44	0.25																													
			-19.500'L				0.25	4.00	1.00	0.00	1.00	0.0100	0.0208	5.16	2.00	0.3875	0.0833	4.00	0.88	3.50	0.1458	0.1484	5.89	2	1.70	1.00	1.00	0.00	2.8						
5-1	DI-2B	10	24+30.32	0.38	0.52	0.20																													
			-19.850'L				0.20	4.00	0.79	0.00	0.79	0.0100	0.0208	4.37	2.00	0.4575	0.0833	4.00	0.93	3.50	0.1458	0.1559	5.18	2	1.93	1.00	0.79	0.00	2.6						
5-2	DI-2B	12	25+99.96	0.46	0.56	0.26																													
			-19.850'L				0.26	4.00	1.03	0.00	1.03	0.0100	0.0208	5.25	2.00	0.3807	0.0833	4.00	0.87	3.50	0.1458	0.1475	5.98	2	2.01	1.00	1.03	0.00	2.8						
5-3	DI-3B	4	31+12	0.01	0.45	0.00																													
			-20.330'L	0.14	0.90	0.13																													
				0.03	0.30	0.01																													
							0.14	4.00	0.56	0.00	0.56	0.0060	0.0442	3.03	2.00	0.6607	0.0833	1.88	0.97	2.94	0.1224	0.1629	3.74	4	1.07	1.00	0.56	0.00	2.5						
6-1	DI-3C	6	31+54.67	0.02	0.90	0.02																													Back/Lt.
			-20.330'L	0.01	0.30	0.00																													Back/Lt.
							0.02	4.00	0.08	0.00		0.0044	0.0486	1.33	2.00	1.5004	0.0833	1.71		2.83															Back/Lt.
				0.02	0.90	0.02																													Ahead/Rt.
							0.02	4.00	0.07	0.00																									Ahead/Rt.
											0.16	0.0044												6			0.16		0.4	0.46	0.04	12.00	2.4	0.76	Weir Flow
6-2	DI-3B	4	31+81.68	0.15	0.63	0.09																													
			-20.330'L				0.10	4.00	0.38	0.00	0.38	0.0112	0.0398	1.97	2.00	1.0157	0.0833	2.09	1.00	3.04	0.1268	0.1666	3.78	4	1.06	1.00	0.38	0.00	2.0						
Ex20	DI-3B	8	99+89.57	0.46	0.43	0.20																													
							0.20	4.00	0.79	0.00	0.79	0.0200	0.0200	4.44	1.50	0.3378	0.0833	4.1650	0.827	2.64	0.1466	0.1413	6.764	8	1.183	1.00	0.79	0.00	2.2						

POST-DEVELOPMENT INLET COMPUTATIONS

FORM LD-204
INLET COMPUTATIONS
ROUTE: *Old Courthouse Road Pedestrian Access Improvements*

DESIGNED BY: JZ DATE: 5/06/2016
CHECKED BY: NVD UNITS: ENGLISH

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:40:20 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Storm Computations for Outfalls
in the Town of Vienna
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ: N/A VERT: N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET 2K(6)

FUND*

10/21/2020

Storm Computations for Outfalls in the Town of Vienna

PRE-DEVELOPMENT STORM COMPUTATIONS, 10-YEAR STORM

FORM LD-229

STORM SEWER DESIGN COMPUTATIONS — **DESIGNED BY:** JZ — **DATE:** 5/06/2016

STORM FREQUENCY 10-Year — **CHECKED BY:** NVD — **UNITS:** ENGLISH

Pipe No.	From Point		To Point		Drain Area "A" (Acre)	Runoff Coeff. "C"	CA		Total Inlet Time (Minutes)	Rain Fall (In/Hr)	Runoff		Invert Elevations		Length of Pipe (Ft)	Slope (Ft/Ft)	Size Dia.or Span/Rise (In)	Shape	Number of Pipes	Capacity (CFS)	Friction Slope (Ft/Ft)	Normal Flow					Flow Time (Sec)	Remarks
	Reference	Sta.	Reference	Sta.			Increment	Accumulated			Lateral (CFS)	Total Q (CFS)	Upper End	Lower End								Depth of Flow, dn (Ft)	Area of Flow, An (SqFt)	Hm (Ft)	Vn (Ft/Sec.)	En (Ft)		
Ex22toEx21	Ex22	22+22.97	Ex21	22+10.51	11.17	0.36	4.02	4.02	15.30	4.58	0.00	18.41	445.23	443.40	47	0.0389	34 X 22	Elliptical	1	62.26	0.0034	0.69	1.40	0.45	13.3	3.44	4	
Ex21toEx20	Ex21	22+10.51	Ex20	99+89.57	0.00		0.00	4.18	15.36	4.57	0.00	19.48	442.85	436.14	158	0.0425	21	Circular	1	32.65	0.0157	0.97	1.38	0.47	14.2	4.09	11	
Ex20toEx19	Ex20	99+89.57	Ex19	99+90.18	0.48	0.44	0.21	4.39	15.55	4.54	0.00	19.96	436.00	435.31	40	0.0173	24	Circular	1	29.71	0.0081	1.20	1.97	0.56	10.1	2.80	4	
Ex19toEx18	Ex19	99+90.18	Ex18	99+90.37	0.10	0.90	0.09	4.48	15.61	4.54	0.00	20.32	435.29	435.20	8	0.0113	24	Circular	1	24.00	0.0084	1.41	2.37	0.59	8.6	2.55	1	

POST-DEVELOPMENT STORM COMPUTATIONS, 10-YEAR STORM

FORM LD-229

STORM SEWER DESIGN COMPUTATIONS — **DESIGNED BY:** JZ — **DATE:** 9/29/2016

STORM FREQUENCY 10-Year — **CHECKED BY:** NVD — **UNITS:** ENGLISH

Pipe No.	From Point		To Point		Drain Area "A" (Acre)	Runoff Coeff. "C"	CA		Total Inlet Time (Minutes)	Rain Fall (In/Hr)	Runoff		Invert Elevations		Length of Pipe (Ft)	Slope (Ft/Ft)	Size Dia.or Span/Rise (In)	Shape	Number of Pipes	Capacity (CFS)	Friction Slope (Ft/Ft)	Normal Flow					Flow Time (Sec)	Remarks
	Reference	Sta.	Reference	Sta.			Increment	Accumulated			Lateral (CFS)	Total Q (CFS)	Upper End	Lower End								Depth of Flow, dn (Ft)	Area of Flow, An (SqFt)	Hm (Ft)	Vn (Ft/Sec.)	En (Ft)		
6-2to6-1	6-2	31+81.68	6-1	31+54.67	0.15	0.63	0.10	0.10	5.00	6.76	0.00	0.64	485.95	485.70	24	0.0104	15	Circular	1	6.59	0.0001	0.26	0.19	0.16	3.4	0.44	7	
6-1to5-3	6-1	31+54.67	5-3	31+12	0.05	0.78	0.04	0.13	5.12	6.72	0.00	0.90	485.60	485.40	38	0.0053	15	Circular	1	4.69	0.0002	0.37	0.31	0.21	3.0	0.51	13	
5-3to6-3	5-3	31+12	6-3	31+12	0.18	0.78	0.14	0.27	5.33	5.09	0.00	1.62	485.30	485.20	14	0.0071	15	Circular	1	5.46	0.0007	0.47	0.42	0.25	3.9	0.70	4	
5-2to5-1	5-2	25+99.96	5-1	24+30.32	0.46	0.56	0.26	0.26	5.00	6.77	0.00	1.75	466.69	453.97	158	0.0805	15	Circular	1	18.33	0.0008	0.26	0.19	0.16	9.4	1.64	17	
5-1to4-8	5-1	24+30.32	4-8	23+04	0.38	0.52	0.20	0.46	5.28	6.68	0.00	3.07	453.87	447.68	119	0.0520	15	Circular	1	14.73	0.0024	0.39	0.32	0.22	9.5	1.78	13	
4-8to4-7	4-8	23+04	4-7	22+22.97	0.57	0.44	0.25	0.71	5.49	6.61	0.00	4.73	447.58	445.44	79	0.0271	15	Circular	1	10.63	0.0056	0.58	0.56	0.30	8.4	1.68	9	
4-6to4-7	4-6	22+00	4-7	22+22.97	8.81	0.33	2.89	2.89	16.90	4.37	0.00	12.62	445.60	445.40	28	0.0071	24	Circular	1	19.12	0.0032	1.19	1.94	0.55	6.5	1.84	4	
4-7toEx21	4-7	22+22.97	Ex21	22+10.51	0.59	0.43	0.25	3.85	16.97	4.36	0.00	21.48	445.30	443.40	50	0.0380	34 X 22	Elliptical	1	61.51	0.0047	0.76	1.59	0.49	13.8	3.71	4	**
Ex21toEx20	Ex21	22+10.51	Ex20	99+89.57	0.00		0.00	4.01	17.03	4.36	0.00	22.17	442.85	436.14	158	0.0425	21	Circular	1	32.65	0.0204	1.06	1.52	0.49	14.6	4.36	11	
Ex20toEx19	Ex20	99+89.57	Ex19	99+90.18	0.46	0.43	0.20	4.20	17.23	4.33	0.00	18.37	436.00	435.31	40	0.0173	24	Circular	1	29.71	0.0069	1.14	1.85	0.54	10.0	2.68	4	
Ex19toEx18	Ex19	99+90.18	Ex18	99+90.37	0.10	0.90	0.09	4.29	17.30	4.33	0.00	18.75	435.29	435.20	8	0.0113	24	Circular	1	24.00	0.0072	1.33	2.22	0.58	8.4	2.44	1	

** Note:
4-7 to Ex.21 is an existing pipe being extended. Velocity of existing pipe Ex. 22 to Ex.21 greater than 10 fps in pre-development conditions.

CURB & GUTTER OUTFALL SPREAD COMPUTATIONS

Outfall	Outfall Location (Station)	Drainage Area (ac)	Cw	Peak Flow, Q (cfs)	Channel Slope (ft/ft)	Gutter Cross Slope (ft/ft)	Road Cross Slope (ft/ft)	Spread* (See Note 1) (ft/ft)	Depth* at Curb (ft/ft)
Outfall *2	Old Courthouse Road								
Pre-Developed	5+75 RT	2.94	0.637	12.70	0.0270	0.0833	0.0200	14.76	4.68
Post-Developed	5+75 RT	3.03	0.645	13.22	0.0270	0.0833	0.0200	14.99	4.74

DESIGNED BY: JZ
CHECKED BY: NVD
DATE: 5/06/2016
UNITS: ENGLISH

* Values derived using Bentley FlowMaster V8i.

Note 1: Allowable Spread at Outfall *2
= 1/2 Driving Lane + On-Street Parking Width + Gutter Width
= 8' + 6' + 1.5' + 15.5'

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:40:07 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Storm Computations for Outfalls in the Town of Vienna
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE	DESIGNED BY: ADW, P.E.	SHEET
HORIZ. N/A	DRAFTED BY: LKG, JRB	2K(7)
VERT. N/A	CHECKED BY: ADW, P.E.	

FUND*

10/21/2020

Storm Computations for Outfalls in the Town of Vienna

PRE-DEVELOPMENT HGL COMPUTATIONS

FORM LD-347

HYDRAULIC GRADE LINE ANALYSIS — DESIGNED BY: JZ — DATE: 5/06/2016

INCIDENCE PROBABILITY 10-Year — CHECKED BY: NVD — UNITS: ENGLISH

INLET OR JUNCTION	STA.	INVERT EL. OUTFLOW PIPE	DEPTH OF FLOW OUTFLOW PIPE	OUTLET WATER SURFACE ELEV.	DIA. PIPE Do (In/mm)	DESIGN DISCH. Qo (CFS/CMS)	LENGTH PIPE Lo (Ft/M)	FRICTION SLOPE,Sfo (FT/FT) (M/M)	FRICTION LOSS Hf (Ft/M)	JUNCTION LOSS Vo	Contr. Ho (Ft/M)	VI	VI²/2g	HI (Expn) 0.35•MAX. (V12/2g)	SKEW Angle	K	Bend H (Ft/M)	Sum HL (Ft/M)	SURFACE FLOW	Adj.Ht 1.3 Ht (Ft/M)	Inlet Shaping? Y/N	0.5 Ht (Ft/M)	FINAL H (Ft/M)	Inlet Water Surface Elevation	Top of MH Top of Inlet Elev. APPROX.	Adjustment?
(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		(12)	(13)		(14)	(15)		(16)		(16)	(17)	(18)	(19)	
Ex18																								436.80		
Ex19	99+90.18	435.20	2.00	436.80	24	20.32	8	0.0084	0.067	8.6	0.285	10.1	1.6	0.559	3.0	0.05	0.07	0.92	0.41	0.92	YES	0.46	0.53	437.33	439.41	O.K.
Ex20	99+89.57	435.31	2.00	437.33	24	19.96	40	0.0081	0.325	10.1	0.399	14.2	3.1	1.091	69.0	0.60	1.87	3.36	0.96	3.36	YES	1.68	2.00	439.33	439.72	O.K.
Ex21	22+10.51	436.14	1.75	439.33	21	19.48	158	0.0158	2.497	14.2	0.780	13.3	2.7	0.961	12.0	0.15	0.42	2.16	0.00	2.16	YES	1.08	3.57	443.82	447.42	O.K.
Ex22	22+22.97	443.40	1.83	444.87	34 X 22	18.41	47	0.0034	0.160	13.3	0.686	0.0	0.0	0.000	0.0	0.00	0.00	0.69	0.00	0.69	NO	0.69	0.85	445.92	448.16	O.K.

POST-DEVELOPMENT HGL COMPUTATIONS

FORM LD-347

HYDRAULIC GRADE LINE ANALYSIS — DESIGNED BY: JZ — DATE: 9/29/2016

INCIDENCE PROBABILITY 10-Year — CHECKED BY: NVD — UNITS: ENGLISH

INLET OR JUNCTION	STA.	INVERT EL. OUTFLOW PIPE	DEPTH OF FLOW OUTFLOW PIPE	OUTLET WATER SURFACE ELEV.	DIA. PIPE Do (In/mm)	DESIGN DISCH. Qo (CFS/CMS)	LENGTH PIPE Lo (Ft/M)	FRICTION SLOPE,Sfo (FT/FT) (M/M)	FRICTION LOSS Hf (Ft/M)	JUNCTION LOSS Vo	Contr. Ho (Ft/M)	VI	VI²/2g	HI (Expn) 0.35•MAX. (V12/2g)	SKEW Angle	K	Bend H (Ft/M)	Sum HL (Ft/M)	SURFACE FLOW	Adj.Ht 1.3 Ht (Ft/M)	Inlet Shaping? Y/N	0.5 Ht (Ft/M)	FINAL H (Ft/M)	Inlet Water Surface Elevation	Top of MH Top of Inlet Elev. APPROX.	Adjustment?
(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		(12)	(13)		(14)	(15)		(16)		(16)	(17)	(18)	(19)	
6-3																								486.20		
5-3	31+12	485.20	1.25	486.20	15	1.62	14	0.0007	0.009	3.88	0.06	2.95	0.14	0.05	90.0	0.70	0.09	0.20	0.71	0.26	YES	0.13	0.14	486.34	488.30	O.K.
6-1	31+54.67	485.40	1.25	486.40	15	0.90	38	0.0002	0.008	2.95	0.03	3.41	0.18	0.06	0.0	0.00	0.00	0.10	0.26	0.13	YES	0.06	0.07	486.47	487.69	O.K.
6-2	31+81.68	485.70	1.25	486.70	15	0.64	24	0.0001	0.002	3.41	0.05	0.00	0.00	0.00	0.0	0.00	0.00	0.05	0.64	0.06	YES	0.03	0.03	486.73	487.85	O.K.
Ex18																								436.80		
Ex19	99+90.18	435.20	2.00	436.80	24	18.75	8	0.0072	0.057	8.45	0.28	9.95	1.54	0.54	3.0	0.05	0.07	0.89	0.39	0.89	YES	0.44	0.50	437.30	439.41	O.K.
Ex20	99+89.57	435.31	2.00	437.30	24	18.37	40	0.0069	0.276	9.95	0.38	13.81	2.96	1.04	69.0	0.60	1.77	3.19	0.86	3.19	YES	1.60	1.87	439.17	439.72	O.K.
Ex21	22+10.51	436.14	1.75	439.17	21	17.51	158	0.0128	2.016	13.81	0.74	12.84	2.56	0.90	12.0	0.15	0.39	2.02	0.00	2.02	YES	1.01	3.03	443.76	447.42	O.K.
4-7	22+22.97	443.40	1.83	444.87	34 X 22	16.81	50	0.0028	0.142	12.84	0.64	6.50	0.66	0.23	75.0	0.62	0.68	1.55	1.11	1.55	YES	0.78	0.92	445.96	448.92	O.K.
4-8	23+04	445.44	1.25	446.44	15	4.73	79	0.0056	0.442	8.41	0.27	9.48	1.40	0.49	0.0	0.00	0.00	0.76	1.66	0.99	YES	0.50	0.94	448.16	451.58	O.K.
5-1	24+30.32	447.68	1.25	448.68	15	3.07	119	0.0024	0.281	9.48	0.35	9.42	1.38	0.48	0.0	0.00	0.00	0.83	1.32	1.08	YES	0.54	0.82	454.26	457.87	O.K.
5-2	25+99.96	453.97	1.25	454.97	15	1.75	158	0.0008	0.121	9.42	0.34	0.00	0.00	0.00	0.0	0.00	0.00	0.34	1.75	0.45	NO	0.45	0.57	466.95	470.69	O.K.
Ex23	22+40.73	442.99	1.50	444.19	18	1.08	31	0.0001	0.003	6.33	0.16	0.00	0.00	0.00	0.0	0.00	0.00	0.16	1.08	0.20	NO	0.20	0.21	444.51	447.72	O.K.
4-6	22+00	445.40	2.00	447.00	24	12.62	28	0.0033	0.091	6.50	0.16	0.00	0.00	0.00	0.0	0.00	0.00	0.16	0.00	0.16	NO	0.16	0.26	447.26	447.60	O.K.

PROPOSED DITCH COMPUTATIONS

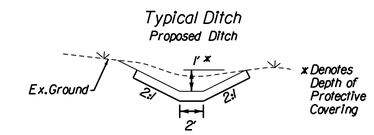
FORM LD-268

DESIGNED BY: JZ — DATE: 5/06/2016

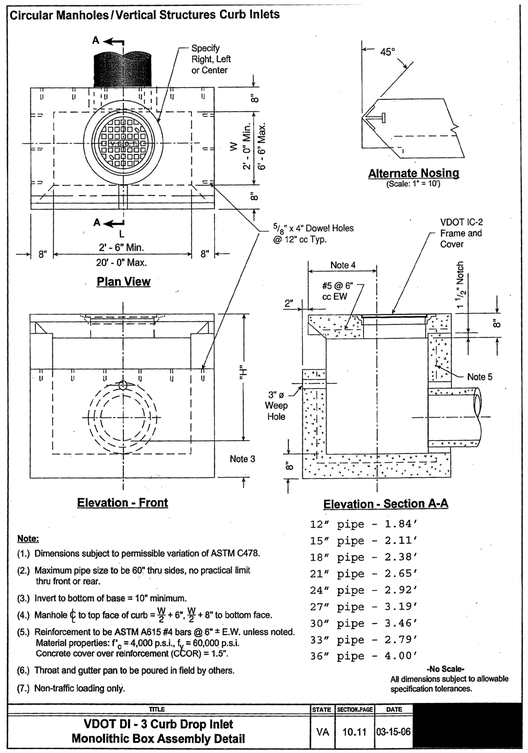
CHECKED BY: SCT — UNITS: ENGLISH

STA. TO STA.		FLOW	Area (Acres)	C-value	CA INCR.	CA ACC.	T_c	I_2	Q_2	C or F	Slope Ft/Ft	ALLOW. VEL.	Earth n=.025 (USGS-CL) VEL.	Protective Lining n=.05 Q_n	n=.05 VEL	n=.05 Depth	n=.013 (PG-5), n=.035 (PG-3) Q_n	n=.013 (PG-5), n=.035 (PG-3) Depth	I_{10}	Q_{10}	Depth	Available Depth	REMARKS
Westbriar Court																							
Right Side																							
102+25	103+12	▼	8.81	0.33	2.91	2.91	17	3.06	8.90	C	0.0640	2.3	7.0				8.90	0.3	4.16	12.09	0.4	1.0	St'd. PG-5 Req'd.

DITCH TYPICAL



Location	Station	to	Station	W	Lining
Westbriar Court (Right)	102+25	to	103+12	6.0	St'd.PG-5 Req'd.



TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA — ADAM D. WELSCHENBACH — Lic. No. 044359 — PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:39:55 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Storm Computations for Outfalls
in the Town of Vienna
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ• N/A VERT• N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET 2K(8)

FUND•

10/21/2020

Drainage, SWM, and Outfall Narratives
(Phase 1 & Phase 2)

Introduction

This project is a pedestrian access improvement project along Old Courthouse Road NE between Pine Valley Drive and Gosnell Road. The project is mostly in the Town of Vienna, Virginia, but ties into existing sidewalks in Fairfax County at each end. The project proposes to add curb and gutter, sidewalk, and curb ramps with pedestrian crossings at Westbriar Court. Additionally, all drainage will be collected and conveyed via new proposed closed storm sewer systems which will tie into existing storm sewer systems. The project is located in the Wolftrap Creek watershed management area which is within the greater Difficult Run watershed (PL22).

The topography for this project is relatively flat with open ground cover and existing roadway. Areas adjacent to the project limits are residential. The construction area is adjacent to the existing roadway.

The project is within the limits of a watershed identified by Fairfax County as: Difficult Run (HUC Code PL22). The outfall analysis is provided to demonstrate adequacy on this sheet.

The stormwater management (SWM) requirements are assessed in accordance with Virginia Department of Transportation (VDOT) and Department of Environment and Quality (DEQ) criteria for existing versus post-project conditions at outfalls within the receiving drainage basin. This project is not grandfathered, and technical criteria IIB will apply in accordance with Fairfax County Stormwater Management Ordinance. There are no stormwater management facilities proposed as part of this project. A waiver of detention requirements has been applied for this project to satisfy the water quantity requirements. The Virginia Runoff Reduction Method was used to determine the phosphorus removal requirement. Water quality requirements within the Town of Vienna project limits will be met through the use of Filterra tree box filters; water quality requirements within Fairfax County project limits will be met through the purchase of nutrient credits.

Storm sewer pipe computations, including LD-229, LD-204, and LD-347, are presented on sheets 2K(3), 2K(4), and 2K(5) for structures outfalling in Fairfax County and on sheets 2K(6), 2K(7), and 2K(8) for structures outfalling in the Town of Vienna. The storm sewer and inlet layouts are intended to drain the roadway in conformance with the VDOT Drainage Manual (VDM) Chapter 9 and convey the project runoff to an adequate outfall. A soils map and tabulation is provided on sheet 2E.

Compliance with the Virginia Erosion and Sediment Control Regulations Minimum Standard 19 (VESCR MS-19) is verified by the outfall analysis through the design of receiving channels and the analysis of existing downstream systems as required.

Drainage Design Criteria and Methodology

This narrative summarizes our understanding of the design criteria and methods of analysis employed in the design of Old Courthouse Road drainage systems. The criteria as defined in the latest edition of the VDOT Drainage Manual (VDM), including all of its Technical Supplements, and I&IM are generally applied. A list of computer software utilized for this project is also provided.

Hydrology

The Rational method was utilized to calculate flow rates to all structures, inlets, and culverts in cubic feet per second (cfs) for drainage areas less than 200 acres. Runoff coefficients were taken from Appendix 6E-1 of the VDM.

Rainfall Intensity

Rainfall intensities used for rational method design of facilities are based upon the NOAA "Atlas 14" Rainfall Precipitation Frequency Data and assigned B, D, & E factors. The following rainfall intensities are developed from chart #76 B, D, & E factors for Fairfax County, Virginia.

RAINFALL INTENSITY (INCHES PER HOUR)

Recurrence Interval (yr)	Duration (Tc – Minutes) 5	10	15	30
2	5.23	4.19	3.51	2.41
10	6.77	5.45	4.62	3.26
25	7.69	6.15	5.22	3.73
100	9.10	7.28	6.22	4.57

The correction factors of 1.1 and 1.25 shall be applied to 25-yr and 100-yr storm intensities respectively.

Storm Sewer Design

All storm sewer pipes along Old Courthouse Road are designed to convey the 10-year design storm event based upon Tables 9-1 & 9-2 of VDM Chapter 9.3.1. A minimum of 0.1-foot drop between the lowest incoming storm sewer pipe through a manhole or inlet and the outgoing storm sewer pipe invert is provided where possible. The Hydraulic Grade Line is analyzed for the 10-year storm event for all storm sewer systems with more than two links utilizing the PipeSoftVA 2.0 computer program. Specified storm sewer pipe materials shall comply with VDOT Drainage Manual and Road and Bridge Standards for "Allowable Pipe Material for Storm Sewer Systems."

Inlet Design

Detailed inlet reports have been provided as documentation for inlet design computations. They were generated using the InletSoftVA 2.0 modeling computer program, which utilizes the HEC-22 methodology to calculate the spread and depth for roadway inlets on grade and in sump.

Roadway Inlets on Grade: Drop inlets on grade are designed for intensities of four (4) inches per hour. The maximum allowable spread from the face of curb for drop inlets on grade is half the width of the travel lane + the width of the gutter pan. The maximum allowable spread is 9.5 feet (1/2 x 16 feet + 1.5 feet) for Old Courthouse Road, 8.1 feet (1/2 x 13.5 feet + 1.5 feet) for Westbriar Court (West), and 6 feet (1/2 x 12 feet + 0 feet) for Westbriar Court (East).

A minimum of ninety percent capture efficiency has been attempted to maximize inlet efficiency. At super-elevation reversals, curb returns and intersections, we have made every attempt to provide 100% interception.

Roadway Inlets at Sumps: In order to correctly evaluate the performance of sump inlets, the overflow from upstream inlets has been accounted for. The maximum allowable spreads for sump inlets are the same as for inlets on grade. To compensate for partial clogging, the computed slot length value will be adjusted by multiplying by a factor of 2. Locations of 0.10% longitudinal slope approaching sumps will be checked to assure that the allowable maximum spread is not exceeded. Flanking inlets shall be located where the edge of pavement elevation is no higher than 0.3 feet above the edge of pavement elevation at the sag point.

Hydrology/Hydraulics Software Utilized In Drainage Computations

1. InletSoftVA, Version 2.00.11 – Virginia Edition
2. PipeSoftVA, Version 2.00.11 – Virginia Edition
3. CulvertSoftVA, Version 2.00.03 – Virginia Edition

Stormwater Management Narrative

The project is within the limits of a watershed identified by Fairfax County as: Difficult Run (HUC Code PL22). Stormwater Management requirements are assessed for individual watersheds in accordance with VDOT and Fairfax County criteria for existing versus post-project conditions at outfalls within the receiving watersheds. "Site Area" as defined in SWPA 12-01 was calculated to develop the overall SWM approach (to meet the requirements and determine the treatment required). The overall site area is 1.30 acres, of which 1.08 acres is within the limits of the Town of Vienna and 0.22 acres is within Fairfax County. The total existing impervious area is 0.51 acres and the total proposed impervious area is 0.75 acres. This project results in 0.24 acres of new impervious area. An overview of the approach to the SWM requirements in the watershed is as follows:

As part of this project, there are no structural methods proposed. A waiver of the detention requirements has been requested for this project. A waiver of WQN requirements is justified as an adequate receiving channel is available. This project proposes 0.24 acre of new impervious area. At Outfall #1A in Fairfax County, there is a minor increase in peak flows due to an increase in impervious area. The outfall at this location is an existing channel. At Outfall #3 in Fairfax County, there is a negligible increase in peak flows due to an increase in impervious area. The outfall at this location is an existing storm sewer system. At Outfall #2 in the Town of Vienna, there is a minor increase in peak flows due to an increase in impervious area. The outfall at this location is existing curb and gutter. At Outfall #1 in the Town of Vienna, there is a minor increase in peak flows due to an increase in impervious area. The outfall at this location is an existing storm sewer system. The adequacy of project outfalls to convey storm water is discussed on this sheet. WQL within this sub-watershed is addressed by the proposed purchase of nutrient credits and Filterra tree boxes.

BMP Narrative

This project is not grandfathered and, therefore, technical criteria IIB applies to this project in accordance with the Fairfax County Stormwater Management Ordinance. This project is considered as a re-development project. The WQL requirements for this project were assessed in accordance with SWPA 12-01, and the Virginia Runoff Reduction Method spreadsheet was used to determine the phosphorus removal for the entire project.

In the Difficult Run watershed, the total site area in accordance with SWPA12-01 is 1.30 acres. , of which 1.08 acres is within the limits of the Town of Vienna and 0.22 acres is within Fairfax County. The total existing impervious area is 0.51 acres and the total proposed impervious area is 0.75 acres. This project results in 0.24 acres of new impervious area. Per the calculations on sheet 2K(11) – 2K(11d), this project requires a total of 0.74 lb/year of total phosphorus load removal.

Within the Town of Vienna, 0.60 lb/yr of total phosphorus load removal is required. The phosphorus removal requirement will be met through four Filterra manufactured BMPs. Please refer to the drainage descriptions on sheet 2K and BMP notes and details on sheets 2L-2L(1) for more information.

For the Fairfax County portion of this project, 0.14 lb/yr of total phosphorus load removal is required. There are no structural facilities proposed in this phase of the project. The phosphorus removal requirement for Fairfax County will be met through the purchase of nutrient credits.

Outfall Analysis Narrative

Project runoff and outfalls are located within the Difficult Run watershed (PL22). Analysis is provided for each outfall associated with the project. With this project, three outfalls have been identified as key locations of study for adequate outfall analysis. The pre- versus post-development drainage conditions of the outfalls are tabulated in the Outfall Analysis Summary Table on sheet 2K(10). The Outfall Maps on sheet 2K(10) identify the location and limits of analysis which are based on peak flow rate. The site's peak flow rate from the 10-year 24 hour storm event is less than or equal to 1.0% of the existing peak flow rate from the 10-year 24 hour storm event prior to the implementation of any stormwater quantity control measures. Offsite drainage areas flowing to or through the project are tabulated assuming actual or current proposed land use.

Soils data provided on sheet 2E is used to determine maximum allowable velocity for the 2-year storm. Soils data is taken from the mapping and data provided by Fairfax County. Individual outfalls are described in detail as follows:

Outfall #1 (In the Town of Vienna)

Description: Outfall #1 is an outfall to an existing storm sewer system running from Old Courthouse Road to Westbriar Court. With the development on this project, there is an increase to the impervious area in the post-developed scenario. Therefore, there is a slight increase in the peak flow rate at this outfall. The proposed system collects runoff from Old Courthouse Road and Westbriar Court and surrounding off-site area.

Drainage Area: The proposed drainage area is 12.16 acres which is a decrease of 0.01 acre over the existing condition. There is an addition of 0.13 acre of new impervious area within this outfall.

Outfall Discharge: Pre- and post-development discharges for this outfall are shown in the Outfall Analysis Summary Table and contributing areas are shown in the Outfall Map on sheet 2K(10). The proposed 10-year flow to the receiving system is 19.77 cfs, which is an increase of 0.07 cfs over the pre-development condition.

Receiving System Cross Section and Capacity: Outfall #1 is an existing storm sewer system downstream of an existing inlet on Old Courthouse Road. The designated location of the outfall section is shown on the Outfall Map on sheet 2K(10). There is an increase of 0.07 cfs to this system for the 10-year storm condition. The existing system is adequate to handle this negligible increase in peak flow. Please refer to the LD-229 Storm Computations on sheet 2K(7).

Limits of Study: The location of the outfall is shown on the Outfall Map on sheet 2K(10). The limit of analysis is 250 L.F. downstream and contained within an existing storm sewer system which extends from proposed structure 4-7 (Old Courthouse Road Station 22+25 LT) to existing structure Ex. 18.

Permissible Velocity: Permissible velocity is not applicable as the runoff is confined within a closed sewer system.

Easement Requirements: The existing system is located within the existing right-of-way or existing storm drain easement as necessary; therefore, no additional easement is required.

Final Opinion: The drainage to the existing system has an insignificant increase in peak flows and flows are contained within the existing closed storm sewer system. The peak flow rate for the project site increases by less than or equal to 1.0% of the existing peak flow rate prior to the implementation of any stormwater quantity control measures. Therefore, it is our professional opinion that Outfall #1 is an adequate outfall and the requirements of MS-19 are satisfied.

Outfall #2 (In the Town of Vienna)

Description: Outfall #2 is an outfall with sheet flow to existing curb and gutter running along Old Courthouse Road. With the development on this project, there is an increase in impervious area in the post-developed scenario. Therefore, there is a minor increase in the peak flow rate at this outfall.

Drainage Area: The proposed drainage area is 3.03 acres which is an increase of 0.09 acre over the existing condition. There is an addition of 0.08 acre of new impervious area within this outfall.

Outfall Discharge: Pre- and post-development discharges for this outfall are shown in the Outfall Analysis Summary Table and contributing areas are shown in the Outfall Map on sheet 2K(10). The proposed 10-year flow to the receiving system is 13.22 cfs, which is an increase of 0.52 cfs over the pre-development condition. The existing curb and gutter is adequate to handle this minor increase in peak flow. Please refer to the Curb & Gutter Outfall Spread Computations on sheet 2K(7).

Receiving System Cross Section and Capacity: Outfall #2 is existing curb and gutter downstream of the project along Old Courthouse Road. The designated location of the outfall section is shown on the Outfall Map on sheet 2K(10). There is an increase of 0.52 cfs to this system for the 10-year storm condition. The existing curb and gutter is adequate to handle this increase in peak flow. Please refer to the Curb & Gutter Outfall Spread Computations on sheet 2K(7).

Limits of Study: The location of the outfall is shown on the Outfall Map on sheet 2K(10). The limit of analysis is 450 L.F. downstream of the intersection of Old Courthouse Road and Pine Valley Drive and contained within existing curb and gutter along Old Courthouse Road.

Permissible Velocity: Permissible velocity is not applicable as the runoff is confined within existing curb and gutter.

Easement Requirements: The existing system is located within the existing right-of-way or existing storm drain easement as necessary; therefore, no additional easement is required.

Final Opinion: The drainage to the existing curb and gutter has a minor increase in peak flows and flows are contained within the existing curb and gutter. Therefore, it is our professional opinion that Outfall #2 is an adequate outfall and the requirements of MS-19 are satisfied.

Outfall #1A (In Town of Vienna)

Description: Outfall #1A is an outfall to an existing channel running along Westbriar Court. With the development on this project, there is an increase to the impervious area in the post-developed scenario. Therefore, there is a slight increase in the peak flow rate at this outfall. The channel collects runoff from Old Courthouse Road within Fairfax County limits and surrounding off-site area and re-enters a proposed storm sewer system downstream in the Town of Vienna.

Drainage Area: The proposed drainage area is 5.98 acres which is the same as in existing conditions. There is an addition of 0.04 acres of new impervious area within this outfall.

Outfall Discharge: Pre- and post-development discharges for this outfall are shown in the Outfall Analysis Summary Table and contributing areas are shown in the Outfall Map on sheet 2K(10). The proposed 10-year flow to the receiving system is 11.94 cfs, which is an increase of 0.18 cfs over the pre-development condition.

Receiving System Cross Section and Capacity Outfall #1A an existing channel downstream of Old Courthouse Road in Fairfax County and running along Westbriar Court. The designated location of the outfall section is shown on the Outfall Map on sheet 2K(10). There is an increase of 0.18 cfs to this system for the 10-year storm condition. Cross section data and computations are shown on sheet 2K(10a). The capacity of the channel is shown to be adequate for conveyance of the 10 year storm event as required, with a water surface depth of 0.5 ft at cross section A-A, 0.4 ft at cross section B-B, and 0.5 ft at cross section C-C. The 10 year storm is contained within the channel.

Limits of Study: The points of study for the outfall are indicated by the cross sections shown on the Outfall Map on sheet 2K(10). The limit of analysis is 350 L.F. downstream of the proposed structure 6-3 (Old Courthouse Road Station 31+00 LT) in Fairfax County.

Permissible Velocity: Existing channel permissible velocities are based on soil classification and comply with VDM Appendix 7D-6 for existing and proposed vegetated channels and appendix 7D-2 for the existing and proposed channels without established linings or proposed channel protection. Soils data is taken from the tabulation on sheet 2E. Soil along the existing channel alignment is type 31C (Danripple Gravelly Loam), and has a maximum permissible velocity of 2.3 fps.

Channel Velocity: The 2 year velocity in the channel is 2.2 fps at cross section A-A, 1.9 fps at cross section B-B, and 2.3 fps and cross section C-C. These velocities are less than or equal to the permissible velocity of 2.3 fps.

Easement Requirements: Outfall #1A is an existing channel. The flows are contained within the channel, therefore no easement for the existing channel is required. Necessary easement will be procured for the proposed ditch to the existing channel.

Final Opinion: The drainage to the existing system has slight increase in peak flows and flows are contained within the existing channel. Therefore, it is our professional opinion that Outfall #1A is an adequate outfall and the requirements of MS-19 are satisfied.

Outfall #3 (In Fairfax County)

Description: Outfall #3 is an outfall to an existing storm sewer system running from east to west along Old Courthouse Road. With the development on this project, there is an increase to the impervious area in the post-developed scenario. Therefore, there is a slight increase in the peak flow rate at this outfall. The proposed system collects runoff from Old Courthouse Road and Pine Valley Drive and surrounding off-site area.

Drainage Area: The proposed drainage area is 17.30 acres which is a decrease of 0.07 acre over the existing condition. There is an addition of 0.04 acre of new impervious area within this outfall.

Outfall Discharge: Pre- and post-development discharges for this outfall are shown in the Outfall Analysis Summary Table and contributing areas are shown in the Outfall Map on sheet 2K(10). The proposed 10-year flow to the receiving system is 28.75 cfs, which is an increase of 0.01 cfs over the pre-development condition.

Receiving System Cross Section and Capacity: Outfall #3 is an existing storm sewer system downstream of an existing inlet on Old Courthouse Road. The designated location of the outfall section is shown on the Outfall Map on sheet 2K(10). There is an increase of 0.01 cfs to this system for the 10-year storm condition. The existing system is adequate to handle this negligible increase in peak flow. Please refer to the LD-229 Storm Computations on sheet 2K(4).

Limits of Study: The location of the outfall is shown on the Outfall Map on sheet 2K(10). The limit of analysis is 400 L.F. downstream and contained within an existing storm sewer system which extends from existing structure Ex. 2 (Old Courthouse Road Station 12+20 LT) to existing structure Ex. 7.

Permissible Velocity: Permissible velocity is not applicable as the runoff is confined within a closed sewer system.

Easement Requirements: The existing system is located within the existing right-of-way or existing storm drain easement as necessary; therefore, no additional easement is required.

Final Opinion: The drainage to the existing system has an insignificant increase in peak flows and flows are contained within the existing closed storm sewer system. The peak flow rate for the project site increases by less than or equal to 1.0% of the existing peak flow rate prior to the implementation of any stormwater quantity control measures. Therefore, it is our professional opinion that Outfall #3 is an adequate outfall and the requirements of MS-19 are satisfied.

TAX MAP 29-3

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:39:42 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Drainage, SWM, and Outfall Narratives
(Phase 1 & Phase 2)
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

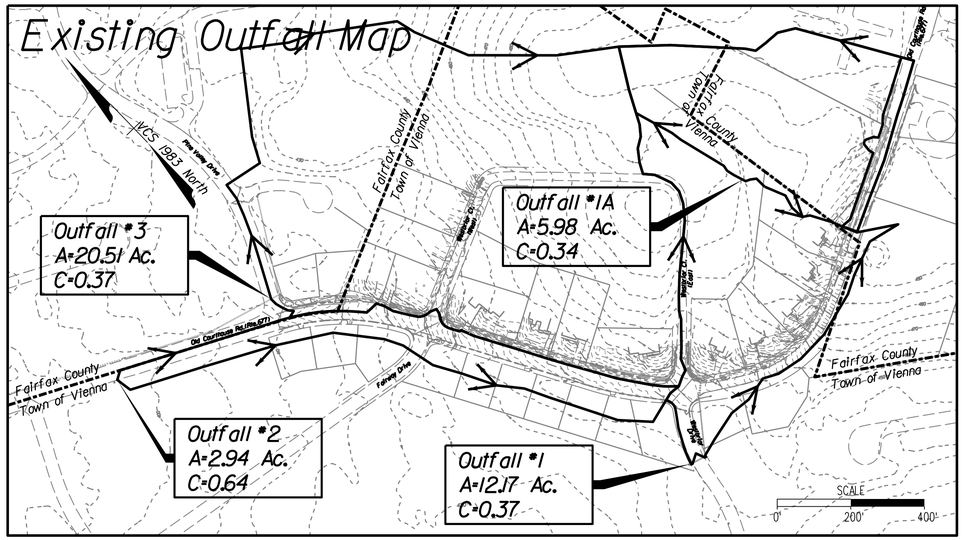
SCALE HORIZ. N/A VERT. N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET 2K(9)

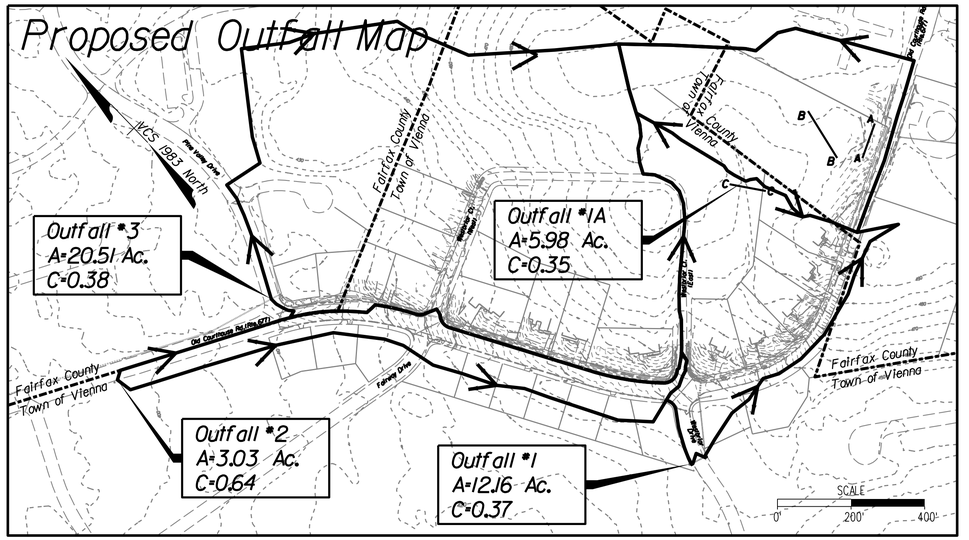
FUND#

10/21/2020

Existing & Proposed Outfall Maps and Outfall Analysis Summary Table

(Phase 1 & Phase 2)





Outfall #1: Within the Town of Vienna
Outfall #2: Within the Town of Vienna
Outfall #3: Within Fairfax County

Outfall #1: Within the Town of Vienna
Outfall #2: Within the Town of Vienna
Outfall #3: Within Fairfax County

OUTFALL ANALYSIS SUMMARY TABLE

DESIGNED BY: CW DATE: 12/13/2018
CHECKED BY: AW UNITS: ENGLISH

	Outfall	Outfall Location (Station)	Outfall Structure (If any)	Drainage Area (ac) Total Area	Imperv. (C=0.90)	Grass (C=0.30)	Forest (C=0.25)	Resident. <12k sqft (C=0.45)	Resident. 17k sqft (C=0.40)	Resident. >1/2 ac (C=0.35)	Cw	Tc (min)	I-Value (In/hr) 2-yr	I-Value (In/hr) 10-yr	Peak Flow,Q (cfs) 2-yr	Peak Flow,Q (cfs) 10-yr	Relative Increase In Peak Flow (cfs) 2-yr	Relative Increase In Peak Flow (cfs) 10-yr	% Increase in Peak Flow 2-yr	% Increase in Peak Flow 10-yr	Outfall Receiving Channel: Channel Velocity 2-yr Check (ft/s)	Natural Channel 2-yr Avail. Depth (In)	Manmade Channel 10-yr Avail. Depth (in)	Stormdrain System Size (In)	Stormdrain System 10-yr Pipe Capacity (cfs)	Outfall Adequacy Yes/No	Remarks
	Outfall #1	Westbriar Court																									
	Pre-Developed	99°90 LT	Ex.18	12.17	0.77	0.78	3.31	1.19	0.72	5.40	0.37	16.6	3.34	4.41	14.93	19.69					N/A	N/A	N/A	24	24.00	Yes	Existing Storm System
	Post-Developed	99°90 LT	Ex.18	12.16	0.90	0.72	3.23	1.19	0.72	5.40	0.37	17.1	3.29	4.35	14.97	19.77	0.04	0.07	0.3%	0.4%	N/A	N/A	N/A	24	24.00	Yes	Existing Storm System
TOWN OF VIENNA (Phase 1)																											
	Outfall #1A	Old Courthouse Road																									
	Pre-Developed	31°00 LT	N/A	5.98	0.28	0.07	3.22	1.11	0.00	1.31	0.34	8.5	4.45	5.78	9.05	11.76					2.3	N/A	2.00	-	N/A	Yes	Sheet Flow to Existing Channel
	Post-Developed	31°00 LT	6-3	5.98	0.32	0.20	3.04	1.11	0.00	1.31	0.35	8.5	4.45	5.78	9.18	11.94	0.14	0.18	1.5%	1.5%	2.3	N/A	2.00	-	N/A	Yes	Ditch to Existing Channel
	Outfall #2	Old Courthouse Road																									
	Pre-Developed	5°75 RT	Ex.40	2.94	1.24	0.00	0.00	1.61	0.10	0.00	0.64	5.0	5.23	6.77	9.80	12.70					N/A	N/A	N/A	-	N/A	Yes	Existing Gutter
	Post-Developed	5°75 RT	Ex.40	3.03	1.32	0.00	0.00	1.61	0.10	0.00	0.64	5.0	5.23	6.77	10.21	13.22	0.40	0.52	4.1%	4.1%	N/A	N/A	N/A	-	N/A	Yes	Existing Gutter
FAIRFAX COUNTY (Phase 2)																											
	Outfall #3	Old Courthouse Road																									
	Pre-Developed	8°57 LT	Ex.7	20.51	0.46	1.18	0.60	2.74	0.22	15.31	0.37	-	0.13	0.20	1.00	1.54					N/A	N/A	N/A	27	48.00	Yes	Existing Storm System
	Post-Developed	8°57 LT	Ex.7	20.51	0.99	1.06	0.60	2.74	0.22	14.90	0.38	-	0.13	0.20	1.04	1.60	0.04	0.06	3.83%	3.83%	N/A	N/A	N/A	27	48.00	Yes	Existing Storm System
	PROJECT SITE TOTALS																										
	Pre-Developed														25.74	33.93											
	Post-Developed														26.22	34.59	0.48	0.66	1.88%	1.94%							

Note: 2yr 24hr and 10 yr 24hr rainfall intensities using for computations in Fairfax County.

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:39:25 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Existing & Proposed Outfall Maps and Outfall Analysis Summary Table (Phase 1 & Phase 2)
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ: 1:200' VERT: N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET 2K(10)

10/21/2020

FUND*

Outfall Computations for Outfalls in the Town of Vienna

Worksheet for Outfall IA AA 2Yr

Input Data
Roughness Coefficient,0.025
Channel Slope,0.01000,ft/ft
Left Side Slope,3.00,ft/ft (H:V)
Right Side Slope,3.00,ft/ft (H:V)
Discharge,1.46,fps

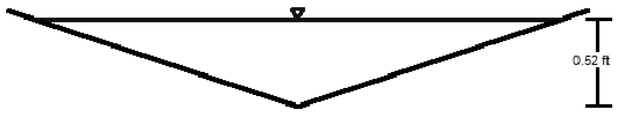
Results
Normal Depth,0.47,ft
Flow Area,0.67,sf
Wetted Perimeter,2.98,ft
Hydraulic Radius,0.22,ft
Top Width,2.83,ft
Critical Depth,0.43,ft
Critical Slope,0.01631,ft/ft
Velocity,2.19,ft/s
Velocity Head,0.07,ft
Specific Energy,0.55,ft
Froude Number,0.80
Flow Type,Subcritical

Worksheet for Outfall IA AA 10Yr

Input Data
Roughness Coefficient,0.025
Channel Slope,0.01000,ft/ft
Left Side Slope,3.00,ft/ft (H:V)
Right Side Slope,3.00,ft/ft (H:V)
Discharge,1.90 fps

Results
Normal Depth,0.52,ft
Flow Area,0.81 sf
Wetted Perimeter,3.29,ft
Hydraulic Radius,0.25,ft
Top Width,3.12,ft
Critical Depth,0.48,ft
Critical Slope,0.01574,ft/ft
Velocity,2.34,ft/s
Velocity Head,0.09,ft
Specific Energy,0.61,ft
Froude Number,0.81
Flow Type,Subcritical

Outfall IA A-A (10 Yr) Cross Section



Worksheet for Outfall IA BB 2Yr

Input Data
Channel Slope,0.03200,ft/ft
Discharge,9.18 fps

Section Definitions
Station (ft),Elevation (ft)
0+00,485.00
0+17,484.00
0+50,483.00
0+80,482.00
0+88,482.00
1+10,483.00
1+29,484.00
1+50,485.00

Roughness Segment Definitions
Start Station,Ending Station,Roughness Coefficient
(0+00, 485.00),(0+50, 483.00),0.060
(0+50, 483.00),(1+10, 483.00),0.050
(1+10, 483.00),(1+50, 485.00),0.060

Results
Normal Depth,0.31,ft
Elevation Range,482.00 to 485.00 ft
Flow Area,4.95 sf
Wetted Perimeter,24.08,ft
Hydraulic Radius,0.21,ft
Top Width,24.07,ft
Normal Depth,0.31,ft
Critical Depth,0.26,ft
Critical Slope,0.06478,ft/ft
Velocity,1.85,ft/s
Velocity Head,0.05,ft
Specific Energy,0.36,ft
Froude Number,0.72
Flow Type,Subcritical

Worksheet for Outfall IA BB 10Yr

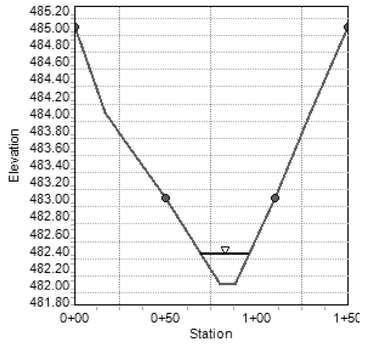
Input Data
Channel Slope,0.03200,ft/ft
Discharge,11.94 fps

Section Definitions
Station (ft),Elevation (ft)
0+00,485.00
0+17,484.00
0+50,483.00
0+80,482.00
0+88,482.00
1+10,483.00
1+29,484.00
1+50,485.00

Roughness Segment Definitions
Start Station,Ending Station,Roughness Coefficient
(0+00, 485.00),(0+50, 483.00),0.060
(0+50, 483.00),(1+10, 483.00),0.050
(1+10, 483.00),(1+50, 485.00),0.060

Results
Normal Depth,0.35,ft
Elevation Range,482.00 to 485.00 ft
Flow Area,6.00 sf
Wetted Perimeter,26.25,ft
Hydraulic Radius,0.23,ft
Top Width,26.23,ft
Normal Depth,0.35,ft
Critical Depth,0.30,ft
Critical Slope,0.06232,ft/ft
Velocity,1.99,ft/s
Velocity Head,0.06,ft
Specific Energy,0.41,ft
Froude Number,0.73
Flow Type,Subcritical

Outfall IA B-B (10 Yr) Cross Section



Worksheet for Outfall IA CC 2Yr

Input Data
Channel Slope,0.02000,ft/ft
Discharge,9.18 fps

Section Definitions
Station (ft),Elevation (ft)
0+00,478.00
0+11,478.00
0+35,476.00
0+50,475.00
0+72,476.00
0+90,478.00
1+00,479.00

Roughness Segment Definitions
Start Station,Ending Station,Roughness Coefficient
(0+00, 478.00),(0+35, 476.00),0.060
(0+35, 476.00),(0+72, 476.00),0.035
(0+72, 476.00),(1+00, 479.00),0.035

Results
Normal Depth,0.47,ft
Elevation Range,475.00 to 479.00 ft
Flow Area,4.04,sf
Wetted Perimeter,17.32,ft
Hydraulic Radius,0.23,ft
Top Width,17.29,ft
Normal Depth,0.47,ft
Critical Depth,0.43,ft
Critical Slope,0.02978,ft/ft
Velocity,2.27,ft/s
Velocity Head,0.08,ft
Specific Energy,0.55,ft
Froude Number,0.83
Flow Type,Subcritical

Worksheet for Outfall IA CC 10Yr

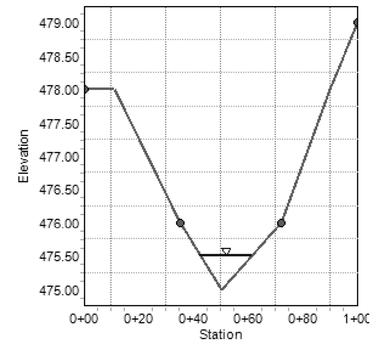
Input Data
Channel Slope,0.02150,ft/ft
Discharge,11.94 fps

Section Definitions
Station (ft),Elevation (ft)
0+00,478.00
0+11,478.00
0+35,476.00
0+50,475.00
0+72,476.00
0+90,478.00
1+00,479.00

Roughness Segment Definitions
Start Station,Ending Station,Roughness Coefficient
(0+00, 478.00),(0+35, 476.00),0.060
(0+35, 476.00),(0+72, 476.00),0.035
(0+72, 476.00),(1+00, 479.00),0.035

Results
Normal Depth,0.51,ft
Elevation Range,475.00 to 479.00 ft
Flow Area,4.78 sf
Wetted Perimeter,18.84,ft
Hydraulic Radius,0.25,ft
Top Width,18.81,ft
Normal Depth,0.51,ft
Critical Depth,0.48,ft
Critical Slope,0.02875,ft/ft
Velocity,2.50,ft/s
Velocity Head,0.10,ft
Specific Energy,0.61,ft
Froude Number,0.87
Flow Type,Subcritical

Outfall IA C-C (10 Yr) Cross Section



TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Outfall Computations
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:39:12 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

SCALE HORIZ* N/A VERT* N/A | DESIGNED BY: ADW,P.E. DRAFTED BY: LKG,JRB CHECKED BY: ADW,P.E. | SHEET 2KI0a)

FUND*

10/21/2020

Water Quality Calculations - Town of Vienna

Project Name:	Old Courthouse Rd Pedestrian Access Improvements - Phase 1
Date:	5/4/2016
	Linear Development Project? Yes

CLEAR ALL

data input cells | constant values | calculation cells | final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 1.08

Maximum reduction required: 20%
The site's net increase in impervious cover (acres) is: 0.206
Post-Development TP Load Reduction for Site (lb/yr): 0.59

Check:
BMP Design Specifications List: 2011 Stds & Specs
Linear project? No
Land cover areas entered correctly? ✓
Total disturbed area entered? ✓

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land				0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed				0.65	0.65
Impervious Cover (acres)				0.43	0.43
					1.08

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 land				0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed				0.44	0.44
Impervious Cover (acres)				0.63	0.63
Area Check	**OK.**	**OK.**	**OK.**	**OK.**	1.08

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Total 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

Land Cover Summary-Pre		
Pre-ReDevelopment	**Listed**	**Adjusted[1]**
Forest/Open Space Cover (acres)	0.00	0.00
Weighted Rv(forest)	0.00	0.00
% Forest	0%	0%
Managed Turf Cover (acres)	0.65	0.44
Weighted Rv(turf)	0.25	0.25
% Managed Turf	60%	51%
Impervious Cover (acres)	0.43	0.43
Rv(impervious)	0.95	0.95
% Impervious	40%	49%
Total Site Area (acres)	**1.08**	**0.87**
Site Rv	**0.53**	**0.59**

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)	
Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.44
Weighted Rv (turf)	0.25
% Managed Turf	41%
Impervious Cover (acres)	0.63
Rv(impervious)	0.95
% Impervious	59%
Final Site Area (acres)	**1.08**
Final Post Dev Site Rv	**0.66**

Land Cover Summary-Post	
Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.44
Weighted Rv (turf)	0.25
% Managed Turf	51%
ReDev. Impervious Cover (acres)	0.43
Rv(impervious)	0.95
% Impervious	49%
Total ReDev. Site Area (acres)	**0.87**
ReDev Site Rv	**0.59**

Land Cover Summary-Post	
Post-Development New Impervious	
New Impervious Cover (acres)	0.21
Rv(impervious)	0.95

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0473	0.0430
Pre-ReDevelopment Treatment Volume (cubic feet)	2,061	1,874
Pre-ReDevelopment TP Load (lb/yr)	**1.29**	**1.18**
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	1.20	1.35
Baseline TP Load (lb/yr) (**0.41 lbs/acre/yr** applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		*0.36*

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	0.0593
Final Post-Development Treatment Volume (cubic feet)	2,584
Final Post-Development TP Load (lb/yr)	**1.62**
Final Post-Development TP Load per acre (lb/acre/yr)	1.51

Post-ReDevelopment Treatment Volume (acre-ft)	0.0430
Post-ReDevelopment Treatment Volume (cubic feet)	1,874
Post-ReDevelopment Load (TP) (lb/yr)*	**1.18**
Post-ReDevelopment TP Load per acre (lb/acre/yr)	1.35
Max. Reduction Required (Below Pre-ReDevelopment Load)	**20%**
TP Load Reduction Required for Redeveloped Area (lb/yr)	**0.24**

Post-Development Treatment Volume (acre-ft)	0.0163
Post-Development Treatment Volume (cubic feet)	710
Post-Development TP Load (lb/yr)	**0.45**
TP Load Reduction Required for New Impervious Area (lb/yr)	**0.36**

[1] *Adjusted Land Cover Summary:*
Pre ReDevelopment 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-ReDevelopment acreage (minus acreage of new impervious cover).

Column I shows load reduction requirement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	**0.60**
Linear Project TP Load Reduction Required (lb/yr):	**0.59**

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	9.26	Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	11.61

Site Results (Water Quality Compliance)

Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
FOREST/OPEN SPACE (ac)	0.00	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER (ac)	0.19	0.15	0.11	0.04	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	0.19	0.15	0.11	0.04	0.00	OK.
MANAGED TURF AREA (ac)	0.24	0.15	0.36	0.07	0.00	AREA EXCEEDED!
MANAGED TURF AREA TREATED (ac)	0.24	0.15	0.36	0.07	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft^3)	2,584

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft^3)	0	0	0	0	0	0
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.55	0.41	0.44	0.13	0.00	1.53
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.27	0.21	0.09	0.06	0.00	0.63
TP LOAD REMAINING (lb/yr)	0.27	0.21	0.35	0.06	0.00	0.90
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.00	0.00	0.00	0.00	0.00	0.00

Total Phosphorus		LINEAR PROJECT:
FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	--	1.62
TP LOAD REDUCTION REQUIRED (lb/yr)	--	*x*
TP LOAD REDUCTION ACHIEVED (lb/yr)	--	*x*
TP LOAD REMAINING (lb/yr):	--	*x*
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	--	CHECK AREAS!

Total Nitrogen (For Information Purposes)	
POST-DEVELOPMENT LOAD (lb/yr)	11.61
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.00
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	11.61

NOTE: The "CHECK AREAS!" message in the VRRM is generated on account of contributing offsite areas included in the Drainage Areas tabs of the spreadsheet.

TOTAL PHOSPHORUS SUMMARY TABLE

Site Results (Water Quality Compliance)		
Total Phosphorus		LINEAR PROJECT
FINAL POST-DEVELOPMENT TP LOAD (lb/yr)		1.62
TP LOAD REDUCTION REQUIRED (lb/yr)		0.60
TP LOAD REDUCTION ACHIEVED (lb/yr)		0.63
TP LOAD REMAINING (lb/yr):		0.99
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):		**0.00**

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA — ADAM D. WELSCHENBACH Lic. No. 044359 — PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:38:59 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Water Quality Calculations
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ* N/A VERT* N/A | DESIGNED BY: ADW, P.E. DRAFTED BY: LKG, JRB CHECKED BY: ADW, P.E. | SHEET 2K(II)

FUND*

10/21/2020

Water Quality Calculations - Town of Vienna

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

BMP Design Specifications List: **2011 Stds & Specs**

Site Summary - Linear Development Project***

Total Rainfall (in):	43
Total Disturbed Acreage:	1.08

Site Land Cover Summary

Pre-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.65	0.65	60
Impervious Cover (acres)	0.00	0.00	0.00	0.43	0.43	40
					1.08	100

Post-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.44	0.44	41
Impervious Cover (acres)	0.00	0.00	0.00	0.63	0.63	59
					1.08	100

Site Tv and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post-ReDevelopment	Post-Development (New Impervious)	Adjusted Pre-ReDevelopment
Site Rv	0.66	0.59	0.95	0.59
Treatment Volume (ft^3)	2,584	1,874	710	1,874
TP Load (lb/yr)	1.62	1.18	0.45	1.18

Pre-ReDevelopment TP Load per acre (lb/acre/yr)	Final Post-Development TP Load per acre (lb/acre/yr)	Post-ReDevelopment TP Load per acre (lb/acre/yr)
1.35	**1.51**	**1.35**

Total TP Load Reduction Required (lb/yr)	**0.59**	N/A***	N/A***

This is a linear development project

	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre-ReDevelopment
TN Load (lb/yr)	11.61	9.26

Site Compliance Summary - ***Linear Development Project

Maximum % Reduction Required Below Pre-ReDevelopment Load	20%

Total Runoff Volume Reduction (ft^3)	0
Total TP Load Reduction Achieved (lb/yr)	*x*
Total TN Load Reduction Achieved (lb/yr)	0.00
Remaining Post Development TP Load (lb/yr)	--
Remaining TP Load Reduction (lb/yr) Required	Check Errors!

Error Summary:
Areas on D.A. tab(s) exceed Site tab areas

SITE COMPLIANCE SUMMARY TABLE - LINEAR DEVELOPMENT

Site Compliance Summary	
Maximum % Reduction Required Below Pre-ReDevelopment Load	20%
Total Runoff Volume Reduction (ft^3)	0
Total TP Load Reduction Achieved (lb/yr)	0.63
Total TN Load Reduction Achieved (lb/yr)	0.00
Remaining Post Development TP Load (lb/yr)	0.99
Remaining TP Load Reduction (lb/yr) Required	**0.00**

NOTE: The "CHECK AREAS!" message in the VRRM is generated on account of contributing offsite areas included in the Drainage Areas tabs of the spreadsheet.

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:38:45 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Water Quality Calculations
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ: N/A VERT: N/A | DESIGNED BY: ADW, P.E. DRAFTED BY: LKG, JRB CHECKED BY: ADW, P.E. | SHEET 2K(IIa)

FUND*

10/21/2020

Water Quality Calculations - Town of Vienna

STR. 4-2A (FILTERRA)

Drainage Area A Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.24	0.24	56
Impervious Cover (acres)	0.00	0.00	0.00	0.19	0.19	44
					0.43	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft^3)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed
14.b. Manufactured Treatment Device-Filtering	**0.24**	**0.19**	**873.02**	**0.00**	**0.55**	**0.27**	**0.27**	

Total Impervious Cover Treated (acres)	0.19
Total Turf Area Treated (acres)	0.24
Total TP Load Reduction Achieved in D.A. (lb/yr)	0.27
Total TN Load Reduction Achieved in D.A. (lb/yr)	0.00

STR. 4-8A (FILTERRA)

Drainage Area B Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.15	0.15	50
Impervious Cover (acres)	0.00	0.00	0.00	0.15	0.15	50
					0.30	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft^3)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed
14.b. Manufactured Treatment Device-Filtering	**0.15**	**0.15**	**653.40**	**0.00**	**0.41**	**0.21**	**0.21**	

Total Impervious Cover Treated (acres)	0.15
Total Turf Area Treated (acres)	0.15
Total TP Load Reduction Achieved in D.A. (lb/yr)	0.21
Total TN Load Reduction Achieved in D.A. (lb/yr)	0.00

STR. 5-1A (FILTERRA)

Drainage Area C Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.36	0.36	77
Impervious Cover (acres)	0.00	0.00	0.00	0.11	0.11	23
					0.47	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft^3)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed
14.b. Manufactured Treatment Device-Filtering	**0.36**	**0.11**	**706.04**	**0.00**	**0.44**	**0.09**	**0.35**	

Total Impervious Cover Treated (acres)	0.11
Total Turf Area Treated (acres)	0.36
Total TP Load Reduction Achieved in D.A. (lb/yr)	0.09
Total TN Load Reduction Achieved in D.A. (lb/yr)	0.00

STR. 5-2A (FILTERRA)

Drainage Area D Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.07	0.07	64
Impervious Cover (acres)	0.00	0.00	0.00	0.04	0.04	36
					0.11	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft^3)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed
14.b. Manufactured Treatment Device-Filtering	**0.07**	**0.04**	**201.47**	**0.00**	**0.13**	**0.06**	**0.06**	

Total Impervious Cover Treated (acres)	0.04
Total Turf Area Treated (acres)	0.07
Total TP Load Reduction Achieved in D.A. (lb/yr)	0.06
Total TN Load Reduction Achieved in D.A. (lb/yr)	0.00

Drainage Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres)	0.24	0.15	0.36	0.07	0.00	0.82
Impervious Cover (acres)	0.19	0.15	0.11	0.04	0.00	0.49
Total Area (acres)	**0.43**	**0.30**	**0.47**	**0.11**	**0.00**	**1.31**

x

Drainage Area Compliance Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Reduced (lb/yr)	0.27	0.21	0.09	0.06	0.00	0.63
TN Load Reduced (lb/yr)	0.00	0.00	0.00	0.00	0.00	0.00

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Water Quality Calculations
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:38:28 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

SCALE HORIZ= N/A VERT= N/A
DESIGNED BY: ADW,P.E.
DRAFTED BY: LKG,JRB
CHECKED BY: ADW,P.E.
SHEET 2K(11b)

FUND#

10/21/2020

Water Quality Calculations - Fairfax County

Project Name:	Old Courthouse Rd Pedestrian Access Improvements - Phase 2
Date:	5/4/2016
	Linear Development Project? Yes

CLEAR ALL

data input cells | constant values | calculation cells | final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 0.22

Maximum reduction required: **20%**
The site's net increase in impervious cover (acres) is: **0.038**
Post-Development TP Load Reduction for Site (lb/yr): **0.14**

Check:
BMP Design Specifications List: 2011 Stds & Specs
Linear project? No
Land cover areas entered correctly? ✓
Total disturbed area entered? ✓

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land				0.09	0.09
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed				0.05	0.05
Impervious Cover (acres)				0.08	0.08
					0.22

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 land				0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed				0.10	0.10
Impervious Cover (acres)				0.12	0.12
Area Check	OK.	OK.	OK.	OK.	0.22

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Total 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

Land Cover Summary-Pre		
Pre-ReDevelopment	**Listed**	**Adjusted[1]**
Forest/Open Space Cover (acres)	0.09	0.05
Weighted Rv(forest)	0.05	0.05
% Forest	41%	29%
Managed Turf Cover (acres)	0.05	0.05
Weighted Rv(turf)	0.25	0.25
% Managed Turf	23%	28%
Impervious Cover (acres)	0.08	0.08
Rv(impervious)	0.95	0.95
% Impervious	35%	43%
Total Site Area (acres)	**0.22**	**0.18**
Site Rv	**0.41**	**0.49**

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)	
Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.10
Weighted Rv (turf)	0.25
% Managed Turf	47%
Impervious Cover (acres)	0.12
Rv(impervious)	0.95
% Impervious	53%
Final Site Area (acres)	**0.22**
Final Post Dev Site Rv	**0.62**

Land Cover Summary-Post	
Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.10
Weighted Rv (turf)	0.25
% Managed Turf	57%
ReDev. Impervious Cover (acres)	0.08
Rv(impervious)	0.95
% Impervious	43%
Total ReDev. Site Area (acres)	**0.18**
ReDev Site Rv	**0.55**

Land Cover Summary-Post	
Post-Development New Impervious	
New Impervious Cover (acres)	0.04
Rv(impervious)	0.95

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0075	0.0074
Pre-ReDevelopment Treatment Volume (cubic feet)	328	321
Pre-ReDevelopment TP Load (lb/yr)	**0.21**	**0.20**
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	0.95	1.12
Baseline TP Load (lb/yr) (**0.41 lbs/acre/yr** applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		*0.07*

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	0.0113
Final Post-Development Treatment Volume (cubic feet)	490
Final Post-Development TP Load (lb/yr)	**0.31**
Final Post-Development TP Load per acre (lb/acre/yr)	1.41

Treatment Volume and Nutrient Load

Post-ReDevelopment Treatment Volume (acre-ft)	0.0082
Post-ReDevelopment Treatment Volume (cubic feet)	359
Post-ReDevelopment Load (TP) (lb/yr)*	**0.23**
Post-ReDevelopment TP Load per acre (lb/acre/yr)	1.25
Max. Reduction Required (Below Pre-ReDevelopment Load)	**20%**
TP Load Reduction Required for Redeveloped Area (lb/yr)	**0.06**

Post-Development Treatment Volume (acre-ft)	0.0030
Post-Development Treatment Volume (cubic feet)	131
Post-Development TP Load (lb/yr)	**0.08**
TP Load Reduction Required for New Impervious Area (lb/yr)	**0.07**

[1] *Adjusted Land Cover Summary:*
Pre ReDevelopment 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-ReDevelopment acreage (minus acreage of new impervious cover).

Column I shows load reduction requriement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	**0.13**
Linear Project TP Load Reduction Required (lb/yr):	**0.14**

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	1.47	Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	2.20

Site Results (Water Quality Compliance)

Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
FOREST/OPEN SPACE (ac)	0.00	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER (ac)	0.00	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	0.00	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	0.00	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	0.00	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft^3) 490

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft^3)	0	0	0	0	0	0
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.00	0.00	0.00	0.00	0.00	0.00
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.00	0.00	0.00	0.00	0.00	0.00
TP LOAD REMAINING (lb/yr)	0.00	0.00	0.00	0.00	0.00	0.00
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.00	0.00	0.00	0.00	0.00	0.00

Total Phosphorus

		LINEAR PROJECT:
FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	--	0.31
TP LOAD REDUCTION REQUIRED (lb/yr)	--	0.14
TP LOAD REDUCTION ACHIEVED (lb/yr)	--	0.00
TP LOAD REMAINING (lb/yr):	--	0.31
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	--	**0.14**

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	2.20
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.00
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	2.20

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA — ADAM D. WELSCHENBACH Lic. No. 044359 — PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:38:14 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Water Quality Calculations
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ= N/A VERT= N/A | DESIGNED BY: ADW, P.E. DRAFTED BY: LKG, JRB CHECKED BY: ADW, P.E. | SHEET 2K(IIc)

FUND*

10/21/2020

Water Quality Calculations - Fairfax County

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

BMP Design Specifications List: **2011 Stds & Specs**

Site Summary - Linear Development Project***

Total Rainfall (in):	**43**
Total Disturbed Acreage:	**0.22**

Site Land Cover Summary

Pre-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.09	0.09	41
Managed Turf (acres)	0.00	0.00	0.00	0.05	0.05	23
Impervious Cover (acres)	0.00	0.00	0.00	0.08	0.08	35
					0.22	100

Post-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.10	0.10	47
Impervious Cover (acres)	0.00	0.00	0.00	0.12	0.12	53
					0.22	100

Site Tv and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post-ReDevelopment	Post-Development (New Impervious)	Adjusted Pre-ReDevelopment
Site Rv	0.62	0.55	0.95	0.49
Treatment Volume (ft^3)	490	359	131	321
TP Load (lb/yr)	0.31	0.23	0.08	0.20

Pre-ReDevelopment TP Load per acre (lb/acre/yr)	Final Post-Development TP Load per acre (lb/acre/yr)	Post-ReDevelopment TP Load per acre (lb/acre/yr)
1.12	**1.41**	**1.25**

Total TP Load Reduction Required (lb/yr)	**0.14**	N/A***	N/A***

This is a linear development project

	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre-ReDevelopment
TN Load (lb/yr)	2.20	1.47

NOTE: BMP requirements within Fairfax County are proposed to be met through the purchase of nutrient credits.

Site Compliance Summary - ***Linear Development Project

Maximum % Reduction Required Below Pre-ReDevelopment Load	20%

Total Runoff Volume Reduction (ft^3)	0
Total TP Load Reduction Achieved (lb/yr)	0.00
Total TN Load Reduction Achieved (lb/yr)	0.00
Remaining Post Development TP Load (lb/yr)	0.31
Remaining TP Load Reduction (lb/yr) Required	0.14

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

TOWN OF VIENNA, VIRGINIA
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127 CENTER STREET S, VIENNA, VA. 22180

COMMONWEALTH OF VIRGINIA
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Adam Welschenbach 2020.10.26 19:38:00 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
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REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
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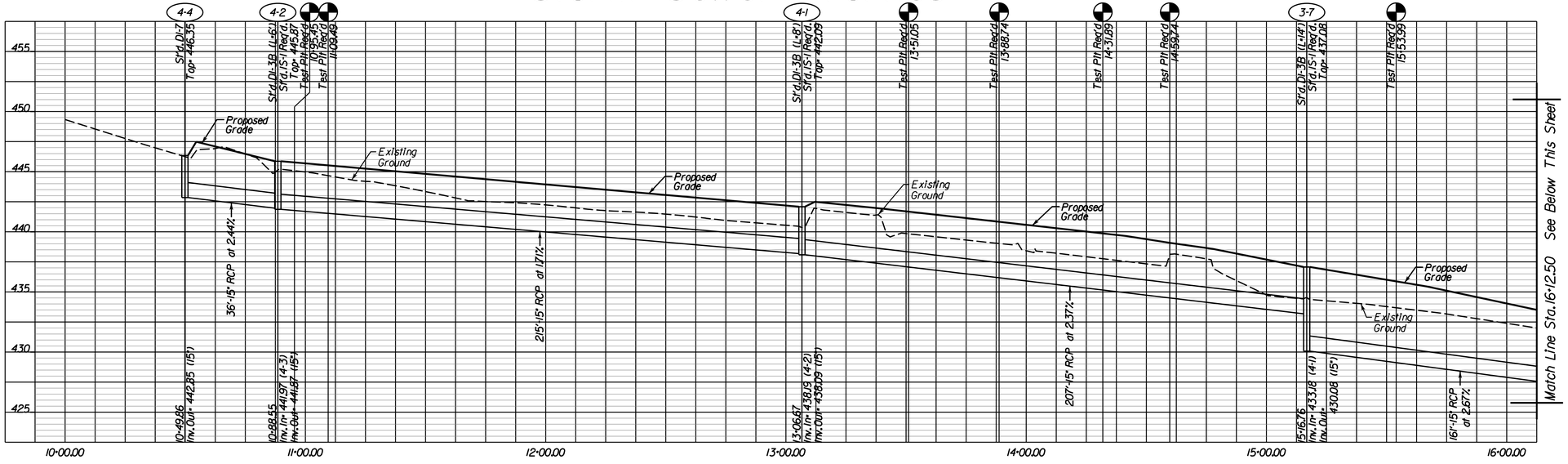
OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Water Quality Calculations
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

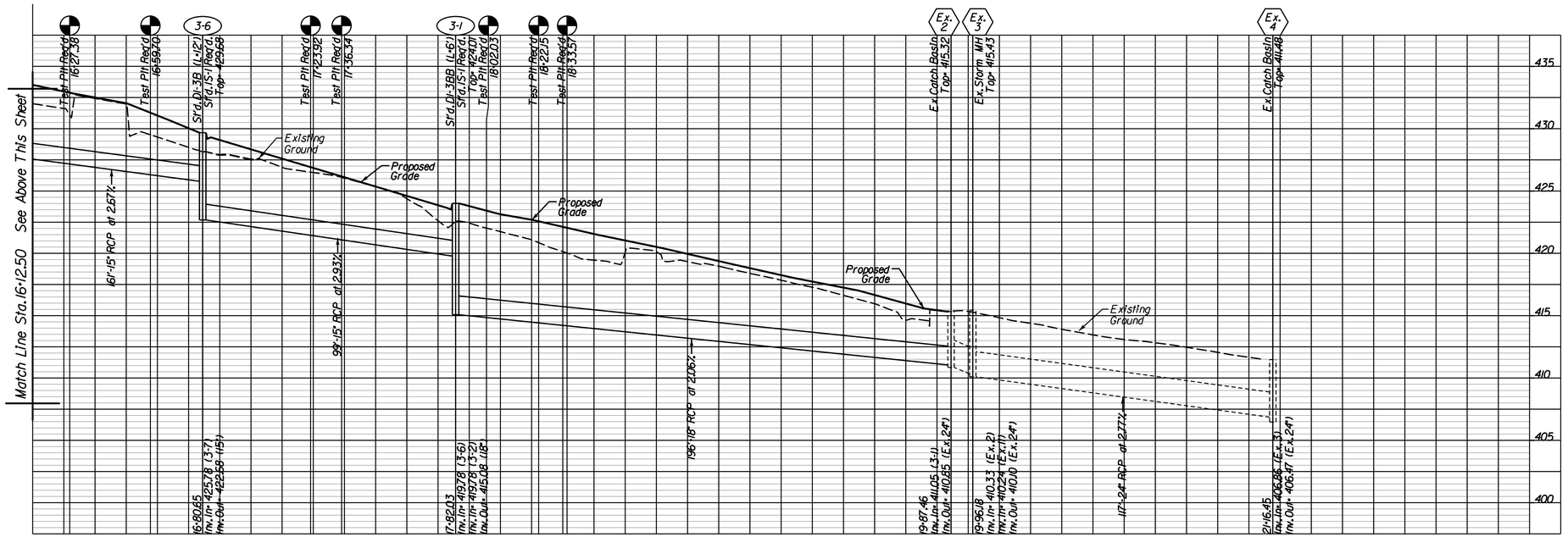
SCALE HORIZ: N/A VERT: N/A | DESIGNED BY: ADW, P.E. DRAFTED BY: LKG, JRB CHECKED BY: ADW, P.E. | SHEET 2K(IId)

FUND*

10/21/2020

Storm Sewer Profiles





SCALE H= 25, V= 5
0 1" 2"
0 25' 50'

Storm Sewer Construction Notes

1. A post installation visual/video camera inspection of storm sewer pipes and pipe culverts shall be conducted by the Contractor in accordance with the requirements of Section 302.03(d) of the VDOT 2007 Supplemental Road & Bridge Specifications and per the Fairfax County Public Facilities Manual (PFM) 2-0502.2F. This is to ensure that the pipe joints are properly connected and sealed and that the pipe is undamaged.
2. Contractor shall flush all proposed storm pipes with clean water before making them operational.

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
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Adam Welschenbach 2020.10.26 19:37:45 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
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TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

TOWN OF VIENNA, VIRGINIA
DEPARTMENT OF PUBLIC WORKS
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OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Storm Sewer Profiles
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

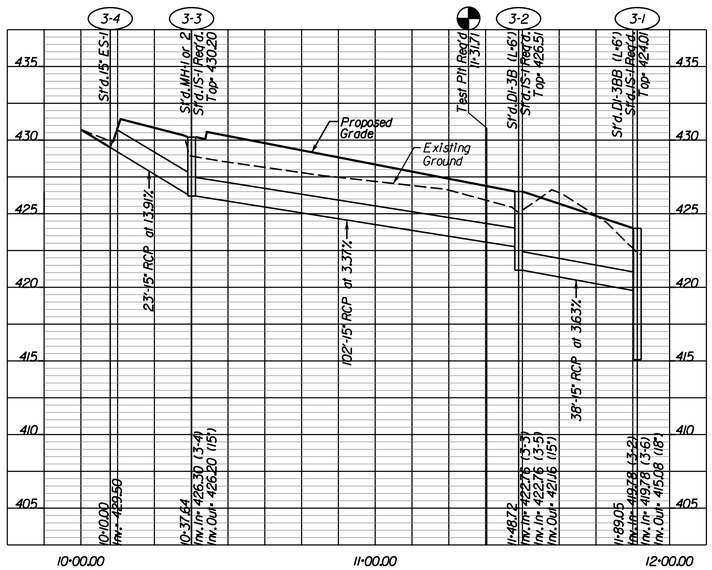
REVISIONS △	DESCRIPTION	BY	APPROVED	DATE

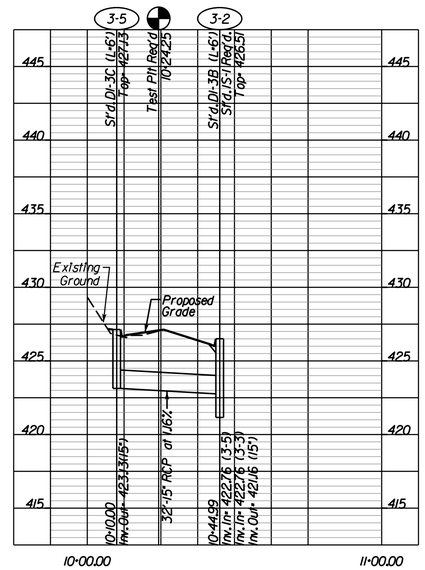
SCALE HORIZ: 1"=25' VERT: 1"=5'
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET 2K(12)

FUND#

10/21/2020

Storm Sewer Profiles





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SCALE H= 25, V= 5
0 25' 50'
2
1
0

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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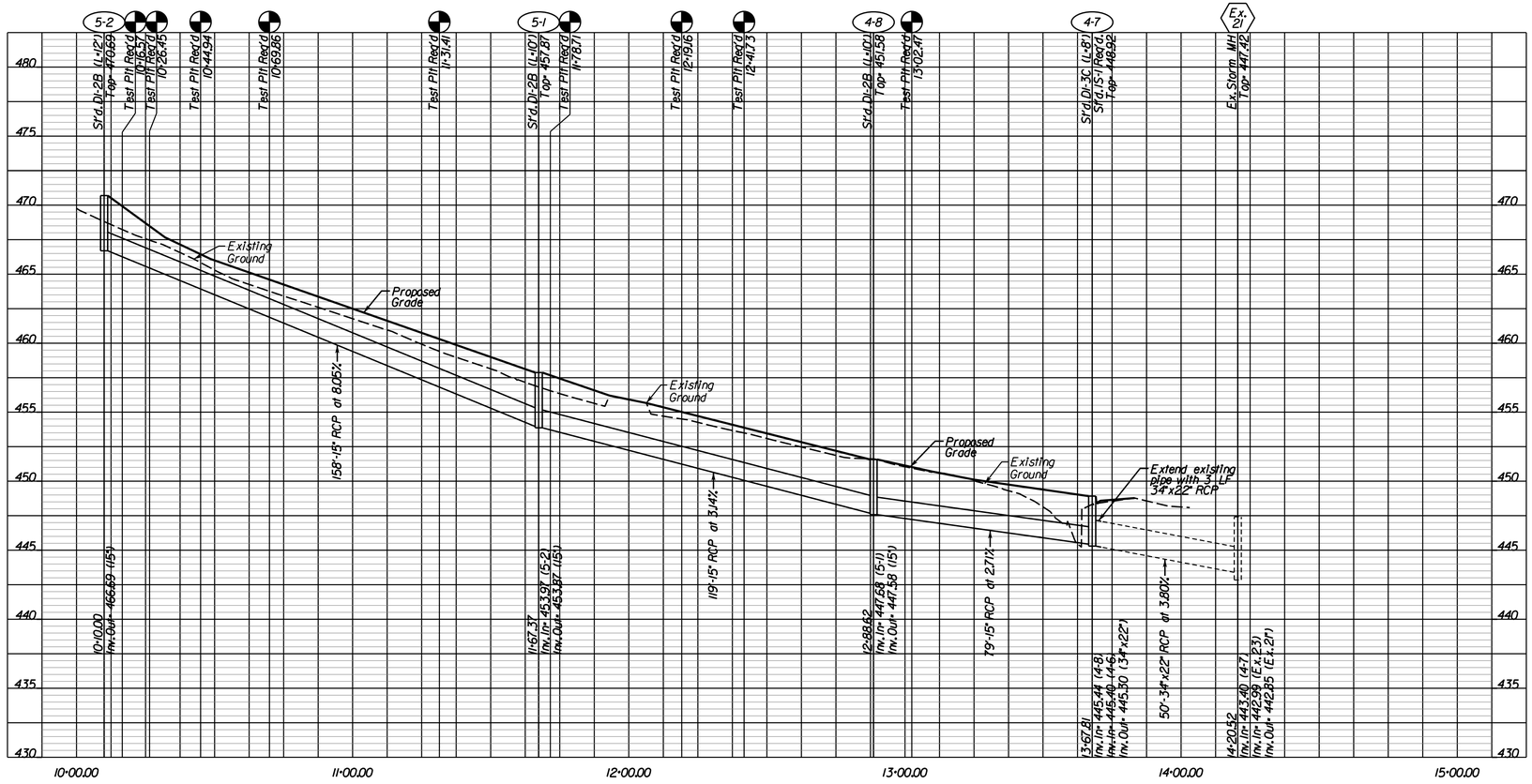
OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Storm Sewer Profiles
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

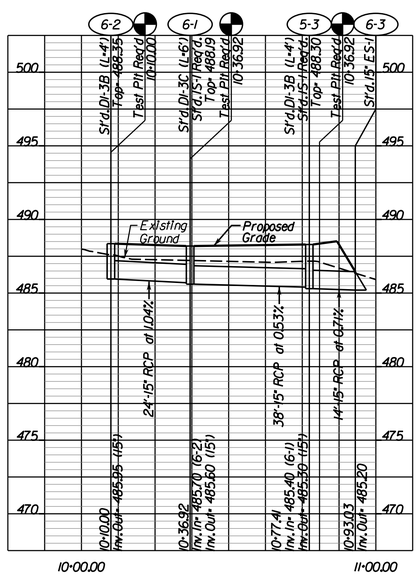
SCALE	DESIGNED BY: ADW, P.E.	SHEET
HORIZ= 1:25'	DRAFTED BY: LKG, JRB	2K(13)
VERT= 1:5'	CHECKED BY: ADW, P.E.	

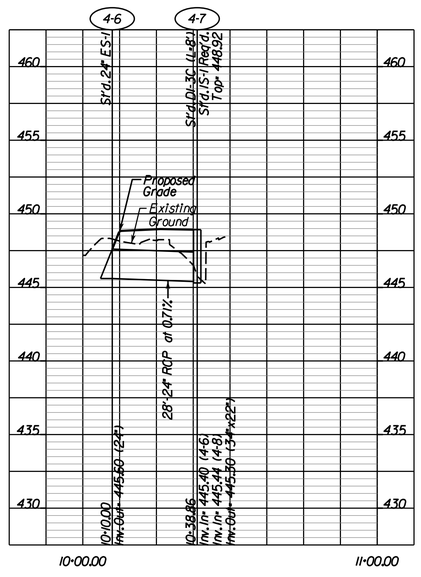
FUND*

10/21/2020

Storm Sewer Profiles







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SCALE H: 25, V: 5
0 25' 50'
0 1 2

TAX MAP 29-3

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DEPARTMENT OF PUBLIC WORKS
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OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Storm Sewer Profiles
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE	DESIGNED BY: ADW, P.E.	SHEET
HORIZ: 1:25'	DRAFTED BY: LKG, JRB	2K(14)
VERT: 1:5'	CHECKED BY: ADW, P.E.	

FUND*

10/21/2020

Storm Computations (For Information Only, Phase I Element)

CULVERT COMPUTATION FOR STR. 4-6 HEADWATER DEPTH

PROJECT	**Old Courthouse Rd Improvements**		
ROAD	**Old Courthouse Rd**	**COUNTY**	Fairfax
CULVERT	4-6		VA
	21+99	40' LT	

SHEET OF
UNITS **ENGLISH**

CULVERT DESIGN FORM LD-269
DESIGNER: ADH/JGZ DATE: 5/6/2016
REVIEWER: SCT DATE: 5/06/2016

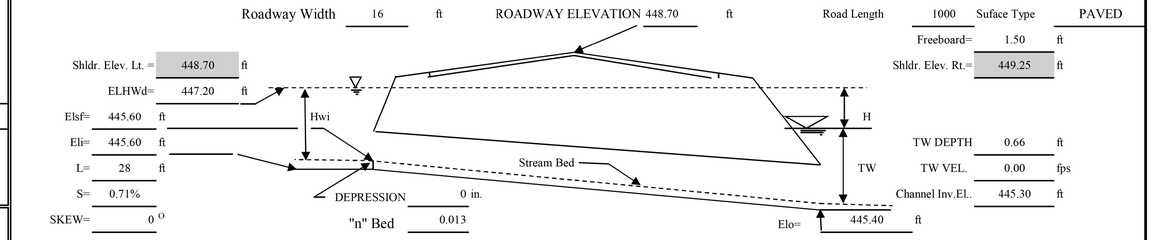
HYDROLOGICAL DATA

Method: INPUT
Drainage Area: 8.81
Time of Concentration 16.9

DESIGN FLOWS

R.I. (years)	FLOW (cfs)	
10	Design	12.70
2	Check	9.62
100	Max.	21.48

CULVERT DESCRIPTION:
TYPE: Single/Multiple Conforming



Inlet Edge Description:
Groove End Projecting
Single / Multiple Conforming / Broken Back Culverts

MATERIAL	SHAPE	Size (in)	N	Mannings n	TOTAL FLOW Q cfs	FLOW PER BARREL Q/N cfs	HEADWATER CALCULATIONS: INLET CONTROL HWi/D	HWi ft	FALL ft	ELHWi ft	OUTLET CONTROL TW ft	dc ft	(dc+D)/2 ft	ho ft	ke	H ft	ELHWo ft	CONTROL HEADWATER ELEV ft	OUTLET VEL fps	MINIMUM SHOULDER ELEV. ft	COMMENTS
Concrete	Circular	24	1	0.01	12.70	12.7	0.91	1.60	0.00	447.20	0.66	1.28	1.64	1.64	0.20	0.39	447.43	447.43	6.50		
					9.62	9.6	0.79	1.29	0.00	446.89	0.66	1.11	1.56	1.55	0.20	0.23	447.18	447.18	6.09		
					21.48	21.5	1.42	2.85	0.00	448.45	0.66	1.66	1.83	1.83	0.20	1.12	448.35	448.45	6.84		

Broken Back Culvert

LENGTH	Elev.	SKEW O

TAILWATER DATA:

Channel Shape		
Bottom Width, ft	0.00	"n" = 0.035
Side Slope Lt: (H:1V)	0.00	
Side Slope Rt: (H:1V)	0.00	
Channel Slope, ft/ft	0.0100	

Distance						
Elevation						
"n" =						

TAILWATER RESULTS:

	Discharge cfs	Elevation ft	Flow depth ft	Velocity fps	Shear force PSF
Design	445.96	0.66	0.00	0.00	
Check	445.96	0.66	0.00	0.00	
Max.	445.96	0.66	0.00	0.00	

ROADWAY DATA:

Roadway Width, ft	16
Surface Type	PAVED
Top of Road Elevation, ft	448.7
Length of Road, ft	1000

ROADWAY OVERTOPPING:

	Discharge cfs	Overtopping Discharge cfs	Overtopping Elevation ft
Design	0		0.00
Check	0		0.00
Max.	0		0.00

TECHNICAL FOOTNOTES:

(1) USE Q/NB FOR BOX CULVERTS
(2) HWi/D = HW/D OR HWi/D FROM DESIGN CHARTS
(3) FALL = HWI - (ELHWd - ELsf); FALL IS ZERO FOR CULVERTS ON GRADE
(4) ELhi = HWi + ELi (INVERT OF INLET CONTROL SECTION)
(5) TW BASED ON DOWNSTREAM CONTROL OR FLOW DEPTH IN CHANNEL
(6) ho = TW or (dc + D/2) (WHICHEVER IS GREATER)
(7) $H = [1 + ke + (29n^2L)/R^{1.33}]v^2/2g$

SUBSCRIPT DEFINITIONS:

HWd	DESIGN HEADWATER	i	INLET
HWi	HW IN INLET CONTROL	o	OUTLET
HWo	HW IN OUTLET CONTROL	sf	Streambed @ culvert face

COMMENTS / DISCUSSION:

CULVERT BARREL SELECTED
SIZE: n:
SHAPE: MATERIAL:
ENTRANCE:

TAX MAP 29-3

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER
Adam Welschenbach 2020.10.26 19:37:05 -04'00'

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EMERGENCY POLICE - FIRE - RESCUE 911
TOWN OF VIENNA, VIRGINIA
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OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Culvert Computation
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

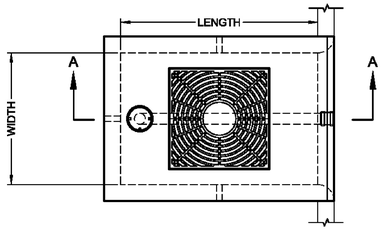
REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

SCALE HORIZ. N/A VERT. N/A
DESIGNED BY: ADW.P.E.
DRAFTED BY: LKG.JRB
CHECKED BY: ADW.P.E.
SHEET 2K(15)

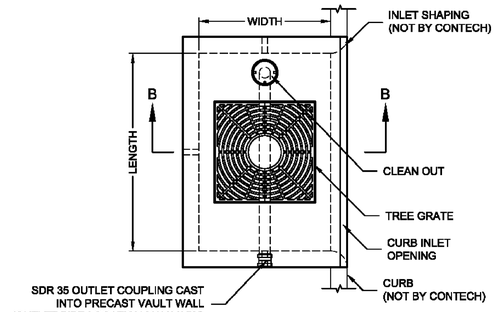
FUND*

10/21/2020

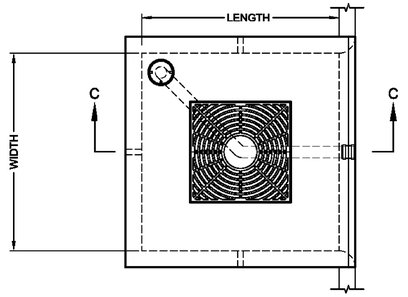
Filterra Notes & Details



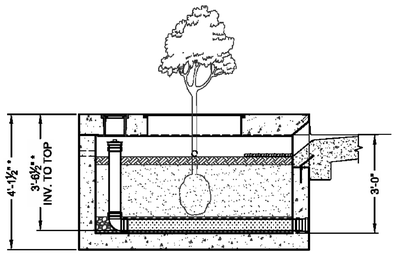
PLAN VIEW



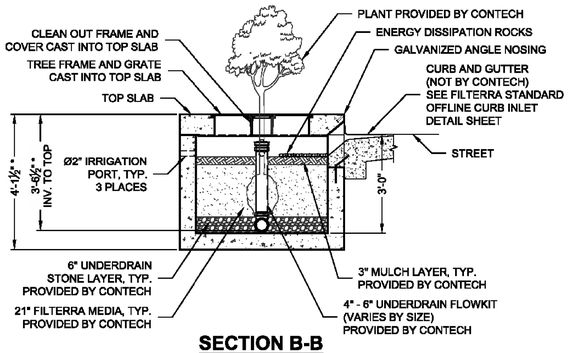
PLAN VIEW



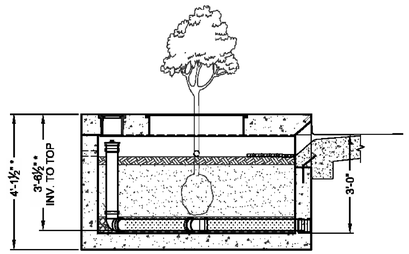
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

SHORT SIDE INLET CONFIGURATION

DESIGNATION	SIZE	LENGTH	WIDTH	OUTLET PIPE	TREE GRATE QTY & SIZE
FT0406	4 x 6	6'-0"	4'-0"	4" SDR 35	(1) 3' x 3'
FT0408	4 x 8	8'-0"	4'-0"	4" SDR 35	(1) 3' x 3'
FT0412	4 x 12	12'-0"	4'-0"	4" SDR 35	(2) 3' x 3'
FT0608	6 x 8	8'-0"	6'-0"	4" SDR 35	(1) 4' x 4'
FT0610	6 x 10	10'-0"	6'-0"	6" SDR 35	(1) 4' x 4'
FT0612	6 x 12	12'-0"	6'-0"	6" SDR 35	(2) 4' x 4'
FT0713	7 x 13	13'-0"	7'-0"	6" SDR 35	(2) 4' x 4'

INTERNAL PIPE CONFIGURATION MAY VARY DEPENDING UPON OUTLET LOCATION

LONG SIDE INLET CONFIGURATION

DESIGNATION	SIZE	LENGTH	WIDTH	OUTLET PIPE	TREE GRATE QTY & SIZE
FT0604	6 x 4	6'-0"	4'-0"	4" SDR 35	(1) 3' x 3'
FT0804	8 x 4	8'-0"	4'-0"	4" SDR 35	(1) 3' x 3'
FT0806	8 x 6	8'-0"	6'-0"	4" SDR 35	(1) 4' x 4'
FT1006	10 x 6	10'-0"	6'-0"	6" SDR 35	(1) 4' x 4'
FT1204	12 x 4	12'-0"	4'-0"	4" SDR 35	(2) 3' x 3'
FT1206	12 x 6	12'-0"	6'-0"	6" SDR 35	(2) 4' x 4'
FT1307	13 x 7	13'-0"	7'-0"	6" SDR 35	(2) 4' x 4'

INTERNAL PIPE CONFIGURATION MAY VARY DEPENDING UPON OUTLET LOCATION

SQUARE INLET CONFIGURATION

DESIGNATION	SIZE	LENGTH	WIDTH	OUTLET PIPE	TREE GRATE QTY & SIZE
FT0404	4 x 4	4'-0"	4'-0"	4" SDR 35	(1) 3' x 3'
FT0606	6 x 6	6'-0"	6'-0"	4" SDR 35	(1) 3' x 3'

INTERNAL PIPE CONFIGURATION MAY VARY DEPENDING UPON OUTLET LOCATION

* DIMENSION MAY VARY ± ½" DEPENDING ON PRECASTER BUILD CONFIGURATION.

filterra
THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 8,277,216; 8,585,321; 7,625,160; 7,459,081; 7,959,415; RELATED FOREIGN PATENTS.

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-845-7000 513-845-7993 FAX

FILTERRA
STANDARD OFFLINE CONFIGURATION DETAILS

Note: See drainage descriptions on Sheet 2K for unit sizing.

FOR INFORMATION PURPOSES ONLY

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:36:51 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
BMP Notes & Details
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ= N/A VERT= N/A | DESIGNED BY: ADW,P.E. DRAFTED BY: LKG,JRB CHECKED BY: ADW,P.E. | SHEET 2L

FUND*

10/21/2020

H:\COMMON\CAD\TREATMENT\54 FILTERRA\40 STANDARD DRAWINGS\FT - OFFLINE\LAYOUT DETAILS\DWG\FILTERRA 40 STANDARD OFFLINE CONFIG DTL.DWG 12/16/2015 5:37 PM

Filterra Notes & Details

FILTERRA STANDARD PLAN NOTES

Construction & Installation

A. The Contractor is responsible for correct installation of Filterra units as shown in plans.

B. Each unit shall be constructed at the locations and elevations according to the sizes shown on the approved drawings. Any modifications to the elevation or location shall be at the direction of and approved by the Engineer.

C. If the Filterra®is stored before installation, the top slab must be placed on the box using the 2x4 wood provided, to prevent any contamination from the site. All internal fittings supplied (if any), must be left in place as per the delivery.

D. The unit shall be placed on a compacted sub-grade with a minimum 6-inch gravel base matching the final grade of the curb line in the area of the unit. The unit to be placed such that the unit and top slab match the grade of the curb in the area of the unit. Compact undisturbed sub-grade materials to 95% of maximum density at +1- 2% of optimum moisture. Unsuitable material below sub-grade shall be replaced to the site engineer's approval.

E. Outlet connections shall be aligned and sealed to meet the approved drawings with modifications necessary to meet site conditions and local regulations.

F. Once the unit is set, the internal wooden forms and protective mesh cover must be left intact. Remove only the temporary wooden shipping blocks between the box and top slab. The top lid should be sealed onto the box section before backfilling, using a nonshrink grout, butyl rubber or similar waterproof seal. The boards on top of the lid and boards sealed in the unit's throat must **NOT** be removed. The Supplier (Americast or its authorized dealer) will remove these sections at the time of activation. Backfilling should be performed in a careful manner, bringing the appropriate fill material up in 6"lifts on all sides. Precast sections shall be set in a manner that will result in a watertight joint. In all instances, installation of Filterra®unit shall conform to ASTM specification C891 "Standard Practice for Installation of Underground Precast Utility Structures", unless directed otherwise in contract documents.

G. Curb and gutter construction (where present) shall ensure that the flow-line of the Filterra®units is at a greater elevation than the flow-line of the bypass structure or relief (drop inlet, curb cut or similar). Failure to comply with this guideline may cause failure and/or damage to the Filterra®environmental device.

H. Each Filterra®unit must receive adequate irrigation to ensure survival of the living system during periods of drier weather. This may be achieved through gutter flow or through the tree grate.

Activation

A. Activation of the Filterra®unit is performed ONLY by the Supplier. Purchaser is responsible for Filterra®inlet protection and subsequent clean out cost. This process cannot commence until the project site is fully stabilized and cleaned (full landscaping, grass cover, final paving and street sweeping completed), negating the chance of construction materials contaminating the Filterra®system. Care shall be taken during construction not to damage the protective throat and top plates.

B. Activation includes installation of plant(s) and mulch layers as necessary.

Maintenance

A. Each correctly installed Filterra®unit is to be maintained by the Supplier, or a Supplier approved contractor for a minimum period of 1 year. The cost of this service is to be included in the price of each Filterra®unit. Extended maintenance contracts are available at extra cost upon request.

B. Annual maintenance consists of a maximum of (2) scheduled visits. The visits are scheduled seasonally; the spring visit aims to clean up after winter loads including salts and sands. The fall visit helps the system by removing excessive leaf litter.

C. Each maintenance visit consists of the following tasks.

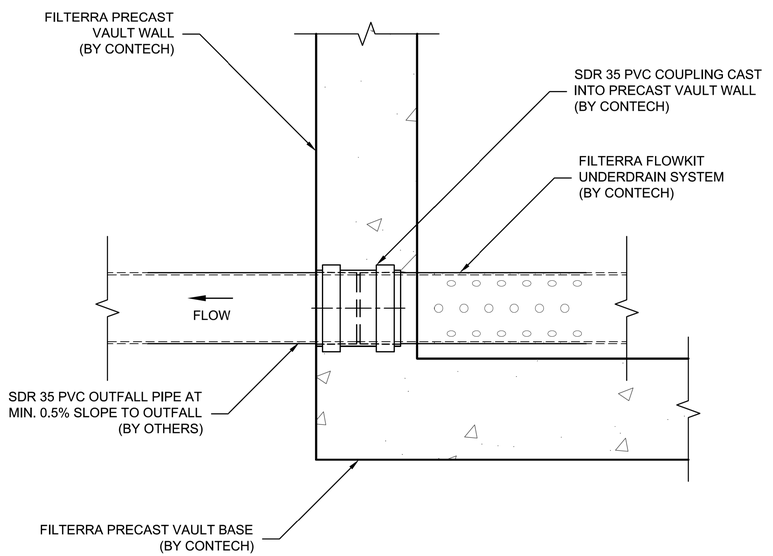
1. Filterra®unit inspection
2. Foreign debris, silt, mulch & trash removal
3. Filter media evaluation and recharge as necessary
4. Plant health evaluation and pruning or replacement as necessary
5. Replacement of mulch
6. Disposal of all maintenance refuse items
7. Maintenance records updated and stored (reports available upon request)

D. The beginning and ending date of Supplier's obligation to maintain the installed system shall be determined by the Supplier at the time the system is activated. Owners must promptly notify the Supplier of any damage to the plant(s), which constitute(s) an integral part of the bioretention technology.

FILTERRA PLANT LIST

Scientific Name	Common Name	Plant Type	Sun	Hardy Range	Height	Spread	Sizing
Cephalanthus occidentalis	Buttonbush	Deciduous	Partial Shade to Full Sun	4A-10A	4'-6'	6'-10'	L
Aronia melanocarpa	Black Chokeberry	Deciduous	Full Shade to Full Sun	3B-6B	3'-6'	4'-6'	M
Aronia arbutifolia	Red Chokeberry	Deciduous	Partial Shade to Full Sun	4B-9A	6'-10'	4'-6'	M
Cornus florida	Flowering Dogwood	Deciduous	Partial Shade to Full Sun	5A-8B	15'-20'	15'-20'	Tree
Cornus amomum	Silky Dogwood	Deciduous	Full shade to Full Sun	4B-8A	8'-10'	8'-15'	L
Sambucus canadensis	American Elderberry	Deciduous	Partial Shade to Full Sun	4A-9B	10'-15'	6'-10'	L
Chionanthus virginicus	White Fringe Tree	Deciduous	Full Shade to Full Sun	4A-9A	12'-20'	10'-15'	Tree
Ilex decidua	Possum Haw Holly	Deciduous	Full Shade to Full Sun	5A-9A	15'-20'	15'-250'	Tree
Ilex verticillata	Winterberry Holly	Deciduous	Partial Shade to Full Sun	3B-9A	6'-10'	8'-15'	L
Myrica pensylvanica	Northern Bayberry	Deciduous	Partial Shade to Full Sun	3A-7A	10'-15'	6'-10'	L
Cercis canadensis	Eastern Redbud	Deciduous	Partial Shade to Full Sun	4B-9A	15'-25'	15'-25'	Tree

Note:This is a recommended planting list.For complete planting list,please refer to Filterra Vault Configuration Plant List - Mid Atlantic Region.



SECTION VIEW

SCALE 1 ½" = 1'-0"

(THROUGH PRECAST VAULT WALL AT OUTFALL PIPE CONNECTION)

filterra®

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 6,277,274; 6,569,321; 7,625,480; 7,425,261; 7,833,412; RELATED FOREIGN PATENTS.

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

FILTERRA OUTFALL PIPE CONNECTION TO PRECAST VAULT WALL DETAIL

DATE:03-23-15 | FILE NAME: FILTERRA OUTFALL PIPE CONNECTION DTL | DRAWN: SCK | CHECKED: XXX

FOR INFORMATION PURPOSES ONLY

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:36:35 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

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OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
BMP Notes & Details
HUNTER MILL DISTRICT,FAIRFAX COUNTY,VIRGINIA

SCALE HORIZ: N/A VERT: N/A | DESIGNED BY: ADW,P.E. DRAFTED BY: LKG,JRB CHECKED BY: ADW,P.E. | SHEET 2L(1)

FUND*

10/21/2020

R/W LEGEND

Prop. Non-Revocable Right of Entry Agreement

C ___ Denotes Construction Limits In Cuts

F __ Denotes Construction Limits In Fills

3-1 P.O.T.: 14+53.88 Old Courthouse Road C.L.
P.O.C.: 52+86.62 Fairway Drive C.L.

PAVEMENT LEGEND

Full-Depth Pavement

Demolition of Pavement

Mill and Overlay

POT 55+38.49

N 65° 38' 58" E

S 28° 57' 16" E

S 63° 24' 06" E

N 63° 24' 06" W

S 81° 17' 47" E

POT 10+00.00

POC 10+38.00

POT 50+00.00

PT 13+95.21

PT 52+45.40

Old Courthouse Road (C1) Route 677

Fairfax County
Town of Vienna

Westbriar Court

Fairway Drive

Exist. R/W

Prop. Sr'd. UD-4

Prop. Mod. CG-6

Prop. 6" Conc. S/W

Prop. CG-12B

Sr'd. 12" CG-9B Type II Rec'd (Concrete)

Sr'd. 14" CG-9B Type II Rec'd (Concrete)

Tie to Exist. Sidewalk

Public Parallel Parking

Bike Lane

Constr. ℄

Rebuild Speed Hump

Match Line Sta. 17+00 (C.B.L.) See Sheet 4

Contractor to grade to provide positive drainage

Utility pole to be relocated by others

Ex. Pole to be braced during any land disturbing activity. Contractor to coordinate with utility providers.

Curve OLDCT01
PI = 12+22.19
DELTA = 34° 26' 52.94" (RT)
D = 9° 38' 38"
T = 184.18'
L = 357.20'
R = 594.12'
PC = 10+38.01
PT = 13+95.21

Curve FAIRWAY01
PI = 51+89.12
DELTA = 33° 03' 15.13" (LT)
D = 28° 31' 21"
T = 59.61'
L = 115.89'
R = 200.88'
PC = 51+29.51
PT = 52+45.40

Lot 47 EDMUND W. LIBBY T.M.029-3-06-0047 *1125 WESTBRIAR COURT N.E.

Lot 48B JANET B. ROOT T.M.029-3-06-0048B *403 OLD COURT HOUSE ROAD N.E.

Lot 48A THOMAS BACHMANN T.M.029-3-06-0048A *401 OLD COURT HOUSE ROAD N.E.

Lot 49 JOSE T. HERNANDEZ JR. LUZ A. HERNANDEZ T.M.029-3-06-0049 *307 OLD COURT HOUSE ROAD N.E.

Lot 50 LISA TRIMBLE HOUGH T.M.029-3-06-0050 *1124 WESTBRIAR COURT N.E.

Lot 183 ANDERS WARGA ANNE K. WARGA T.M.029-3-11-0183 *8706 OLD COURT HOUSE ROAD N.E.

Lot 184 MAJA FERRARI KENNETH FERRARI T.M.029-3-11-0184 *8708 OLD COURT HOUSE ROAD N.E.

Parcel "A" WESTBRIAR COUNTRY CLUB ESTATES SECTION TWO T.M.029-3-10-A OWNER: SIXTH WESTBRIAR ESTATES, INC. D.B. 1787, PG. 650)

Lot 21 JAMES M. SACK ET AL TRUSTEES OF THE HANSEL AND GRETEL TRUST T.M.029-3-10-0021 *406 OLD COURTHOUSE ROAD N.E.

Lot 22 JOSEPH J. LORFANO, JR. PAULINE D. LORFANO T.M.029-3-10-0022 *402 OLD COURTHOUSE ROAD N.E.

Lot 51 JOHN B. ARENS JEANNINE R. ARENS T.M.029-3-10-0001 *1136 FAIRWAY DRIVE N.E.

Lot 58 HERBERT V. TOBIAS, JR. BARBARA TOBIAS, TRUSTEES T.M.029-3-09-0058 *312 OLD COURT HOUSE ROAD N.E.

TAX MAP 029-3-09-0057 NAGHMEH YOUSEZZADEH D.B. 23307, PG. 1648 WESTBRIAR COUNTRY CLUB ESTATES SECTION 1 LOT 57 *310 OLD COURTHOUSE ROAD NE

WESTBRIAR COUNTRY CLUB HILLS SECTION ONE

TYSONS GREEN SECTION TWO

WESTBRIAR COUNTRY CLUB ESTATES SECTION TWO

WESTBRIAR COUNTRY CLUB ESTATES SECTION ONE

Ex. Asphalt Driveway · Ex. Concrete Driveway · Ex. Asphalt Walk · Ex. Concrete Walk · Ex. Asphalt Apron · Ex. Concrete Apron · Ex. Landscaped Area · Ex. Dwelling · Ex. Chain-Link Fence · Ex. Hedgerow · Ex. MLSA · Ex. C&G · Ex. Paved Gutter · Ex. Concrete Bridge · Ex. Utility Cleanouts · Ex. Storm Sewer Manhole · Ex. Storm Sewer Inlet · Ex. Storm Sewer Pipe · Ex. Storm Sewer Headwall · Ex. Storm Sewer Flared End Section · Ex. Storm Sewer Curb Inlet · Ex. Storm Sewer Junction Box · Ex. Storm Sewer Grate Inlet · Ex. Storm Sewer Drop Inlet · Ex. Storm Sewer Yard Inlet · Ex. Storm Sewer Slotted Inlet · Ex. Storm Sewer Combination Inlet

Approx. Loc. Ex. Storm Sewer Easement (D.B. 2388, Pg. 293)

Storm Sewer Easement (D.B. 2388, Pg. 293)

SCALE 0 25' 50'

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA · ADAM D. WELSCHENBACH · Lic. No. 044359 · PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:36:21 -04'00'

Rinker Design Associates, P.C. Manassas, Virginia PROFESSIONAL ENGINEER

REVISIONS	△	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
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OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Plan Sheet Sta. 10+00 to 17+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ. 1"=25' VERT. N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET 3

FUND#

10/21/2020

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Civil Engineering ~ Surveying ~ Land Planning
Transportation ~ Environmental
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Fredericksburg, VA 22406
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Fax: (540) 891-2281

Leesburg
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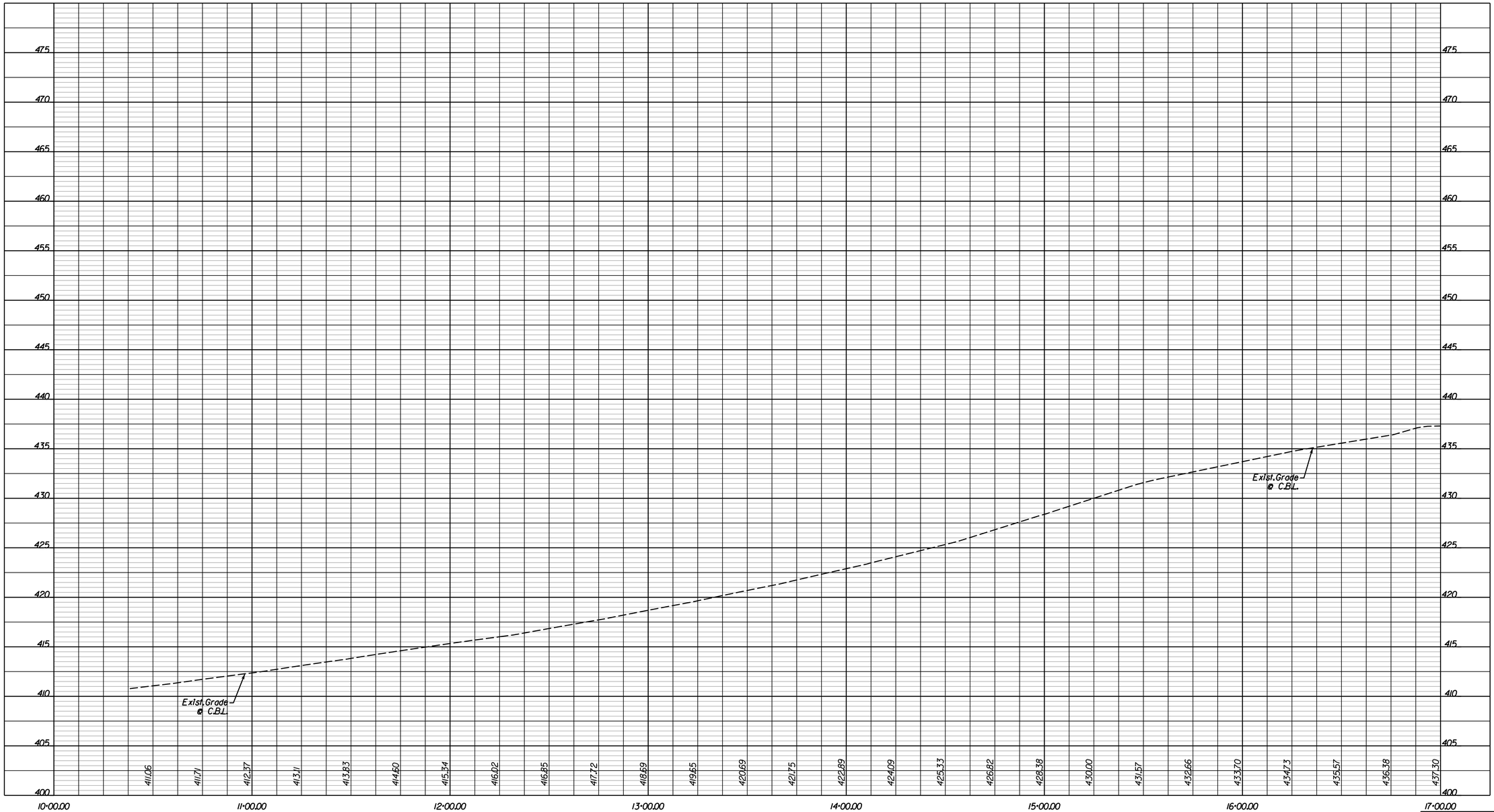
Leesburg, VA 20176
Phone: (703) 443-0400
Fax: (703) 443-0401

Manassas
Suite 200 - 9302 Lee Avenue
Manassas, VA 20110
Phone: (703) 361-2157
Fax: (703) 361-2159



TAX MAP 29-3 & 39-1

SCALE H= 25, V= 2
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0 1.25' 2.5'

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

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PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

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OLD COURTHOUSE ROAD
PEDESTRIAN IMPROVEMENTS
Profile Sheet Sta. 10+00 to 17+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

SCALE: See Scale Bars
DESIGNED BY: CMW, P.E.
DRAFTED BY: T.J.W.
CHECKED BY: ADW, P.E.
SHEET 3A

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10/21/2020

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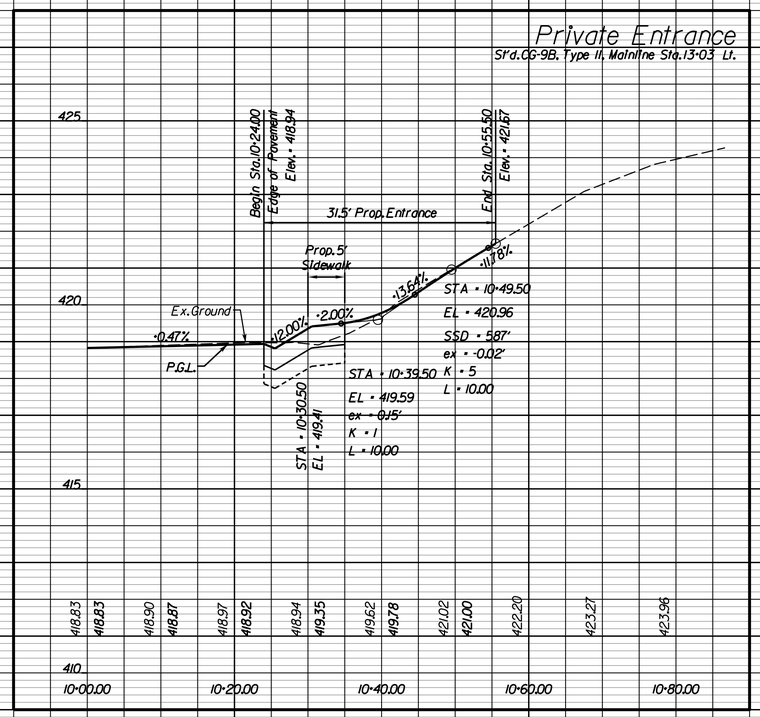
Northern Virginia Office: 4501 Daly Drive, Suite 400, Chantilly, VA 20151, Phone: (703) 263-0101, Fax: (703) 263-0102
Fredericksburg Office: 2300 Dandridge Garrison Road, Suite 201, Fredericksburg, VA 22401, Phone: (540) 368-1717, Fax: (540) 368-1718

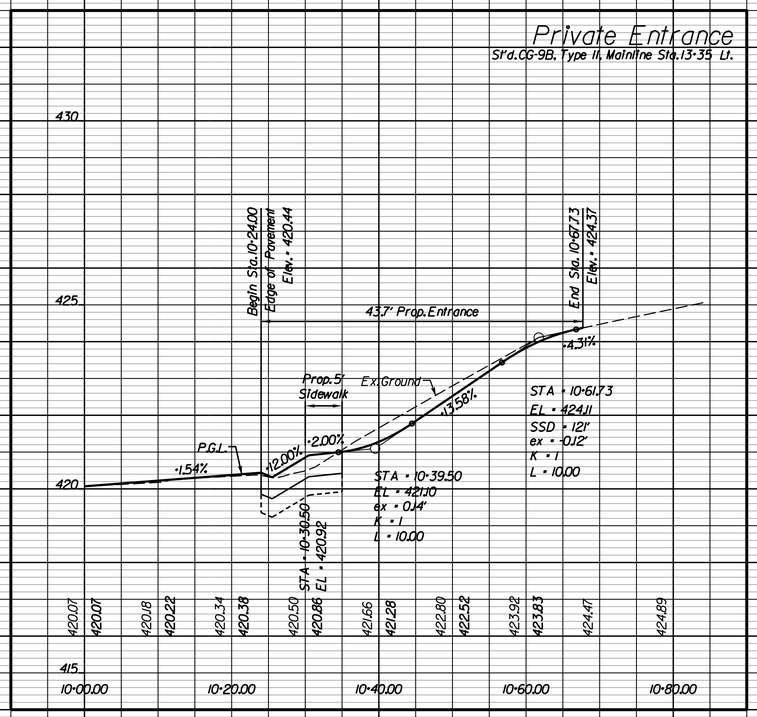
Private Entrance

St'd.CG-9B, Type II, Mainline Sta.13+03 Lt.



Private Entrance

St'd.CG-9B, Type II, Mainline Sta.13+35 Lt.



SCALE H= 10, V= 1
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0 0.5" 1"

ADAM D. WELSCHENBACH
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Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:35:52 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

TAX MAP 29-3 & 39-1

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN IMPROVEMENTS
Private Entrances: Sta. 13+03 and Sta. 13+35
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

SCALE: See Scale Bars
DESIGNED BY: CMW, P.E.
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CHECKED BY: ADW, P.E.
SHEET 3B

10/21/2020

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Office Locations
Corporate Office: 11140 Rockville Pike, Suite 400, North Bethesda, MD 20852, Phone: (301) 770-4744, Fax: (301) 770-1435
Northern Virginia Office: 8180 Greensboro Drive, Suite 200, McLean, VA 22102, Phone: (703) 761-2870, Fax: (703) 761-2787
Southern Virginia Office: 4420 Parliament Place, Suite 202, Lanham, MD 20706, Phone: (240) 744-1000, Fax: (240) 744-1001
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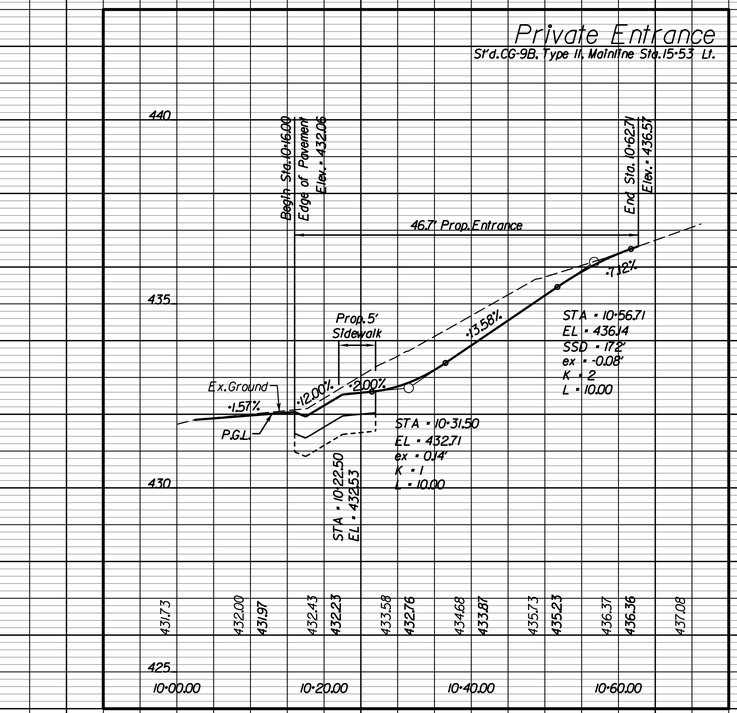

SCALE H= 10, V= 1
0 10' 20'
0 0.5' 1"

ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:35:40 -04'00'

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Manassas, Virginia
PROFESSIONAL ENGINEER

TAX MAP 29-3 & 39-1

EMERGENCY POLICE - FIRE - RESCUE 911

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

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OLD COURTHOUSE ROAD
PEDESTRIAN IMPROVEMENTS
Private Entrances: Sta. 15+53
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

SCALE: See Scale Bars
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DRAFTED BY: T.J.W.
CHECKED BY: ADW, P.E.
SHEET 3C

FUND*

10/21/2020

POT 104+36.59

R/W LEGEND
Prop. Non-Revocable RIght of Entry Agreement

C2 Curve OLDCT02
PI = 21+12.42
DELTA = 29° 56' 22.29" (LT)
D = 7° 41' 27"
T = 199.20'
L = 389.29'
R = 745.00'
PC = 19+13.22
PT = 23+02.52

C3 Curve OLDCT03
PI = 25+21.21
DELTA = 57° 11' 34.27" (LT)
D = 18° 28' 57"
T = 168.99'
L = 309.44'
R = 310.00'
PC = 23+52.22
PT = 26+61.66

C7 Curve WESTBRIARCI
PI = 100+98.48
DELTA = 27° 39' 37.84" (RT)
D = 14° 19' 26"
T = 98.47'
L = 193.11'
R = 400.00'
PC = 100+00.01
PT = 101+93.12

TAX MAP 029-3-06-0059
SANTOSH K.KHANNA
SURINDER KHANNA
D.B.13179, PG.549
WESTBRIAR COUNTRY CLUB HILLS
SECTION 1
LOT 59
*305 OLD COURTHOUSE ROAD NE

TAX MAP 029-3-06-0058A
MATTHEW R.VERDEROSA
D.B.10251, PG.1071
WESTBRIAR COUNTRY CLUB HILLS
SECTION 1
LOT 58A
*303 OLD COURTHOUSE ROAD NE

TAX MAP 029-3-06-0057
CHRISTOPHER M.GAFFNEY
RUYI L.
D.B.20526, PG.1536
WESTBRIAR COUNTRY CLUB HILLS
SECTION 2
LOT 57
*301 OLD COURTHOUSE ROAD NE

TAX MAP 029-3-06-0035
LIU-HSIUNG CHUANG
PATRICIA L.CHUANG
D.B.4554, PG.751
WESTBRIAR COUNTRY CLUB HILLS
SECTION 2
LOT 35
*241 OLD COURTHOUSE ROAD NE

TAX MAP 029-3-09-0056
SADAN CENKCI
ABNOUS N.CENKCI
D.B.24024, PG.1414
WESTBRIAR COUNTRY CLUB ESTATES
SECTION 1
LOT 56
*308 OLD COURTHOUSE ROAD NE

TAX MAP 029-3-09-0055
SUNFLOWER ESTATES,LLC
D.B.23726, PG.542
WESTBRIAR COUNTRY CLUB ESTATES
SECTION 1
LOT 55
*306 OLD COURTHOUSE ROAD NE

TAX MAP 029-3-09-0054
SUNFLOWER ESTATES,LLC
D.B.22088, PG.581
WESTBRIAR COUNTRY CLUB ESTATES
SECTION 1
LOT 54
*304 OLD COURTHOUSE ROAD NE

TAX MAP 029-3-09-0053
JOHN T.LUCAS
JENNIFER B.LUCAS
D.B.11324, PG.903
WESTBRIAR COUNTRY CLUB ESTATES
SECTION 1
LOT 53
*302 OLD COURTHOUSE ROAD NE

TAX MAP 029-3-09-0052
NISHANTH H.MENDIS KRISHNAIYER
LAKSHMAN K.KRISHNAIYER
D.B.11133, PG.1509
WESTBRIAR COUNTRY CLUB ESTATES
SECTION 1
LOT 52
*300 OLD COURTHOUSE ROAD NE

TAX MAP 039-1-12-0050
TIMOTHY E.TAYLOR
JULIE H.TOPOLESKI
D.B.23977, PG.444
WESTBRIAR COUNTRY CLUB ESTATES
SECTION 1
LOT 51
*1125 WESTBRIAR DRIVE NE

TAX MAP 039-1-12-0051
BARRETT H.KASHDAN
D.B.23977, PG.444
WESTBRIAR COUNTRY CLUB ESTATES
SECTION 1
LOT 50
*244 OLD COURTHOUSE ROAD NE

Match Line Sta.17+00 (C.BL.) See Sheet 3
Match Line Sta.24+00 (C.BL.) See Sheet 5
Old Courthouse Road Route 677
Westbriar Court
Westbriar Drive
Bike Lane
Rebuild Speed Hump
Ex. Plantings not to be Impacted
Ex.W/M not to be Impacted
Prop. Std. UD-4
Prop. Mod. CG-6
Prop. Std. CG-12B
Prop. Gravel Shoulder
Prop. PG-5 Ditch See Sheet 2K(8) Contractor to grade to provide positive drainage
Ex. Pole to be braced during any land disturbing activity. Contractor to coordinate with utility provider.
Prop. Std. CG-14 Type III Rec'd (Asphalt)
Prop. Std. 21" CG-9B Type III Rec'd (Asphalt)
Utility Pole to be relocated by others
Ex. Dwelling
Ex. Porch
Ex. Stone Walk
Ex. Brick Column
Ex. Timber Wall
Ex. Roll Fence
Ex. Asphalt Walk
Ex. Asphalt Driveway
Ex. Conc. Walk
Ex. Conc. Apron
Ex. Planter
Ex. Curb Inlet
Ex. Utility Pole
Ex. Fire Hydrant
Ex. Gas Valve
Ex. Gas Meter
Ex. Gas Line
Ex. Water Line
Ex. Sanitary Line
Ex. Storm Line
Ex. Underground Electric
Ex. Overhead Utility
Ex. Tree Line
Ex. Edge of Pavement
Ex. Curb & Gutter
Ex. Conc. Curb
Ex. Asphalt Curb
Ex. Asphalt Curb & Gutter
Ex. Conc. Curb & Gutter
Ex. Conc. Curb & Gutter HCR
Ex. Conc. Curb & Gutter CAR57
Ex. Conc. Curb & Gutter CA78
Ex. Conc. Curb & Gutter CA64
Ex. Conc. Curb & Gutter DA14
Ex. Conc. Curb & Gutter DA15
Ex. Conc. Curb & Gutter DA16
Ex. Conc. Curb & Gutter DA17
Ex. Conc. Curb & Gutter DA18
Ex. Conc. Curb & Gutter DA19
Ex. Conc. Curb & Gutter

Rinker Design Associates, P.C.
Civil Engineering ~ Surveying ~ Land Planning
Transportation ~ Environmental
Right of Way Services

Office Locations
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Fax: (703) 691-2693

10521 Judicial Drive, Suite 204, Fairfax, VA 22030
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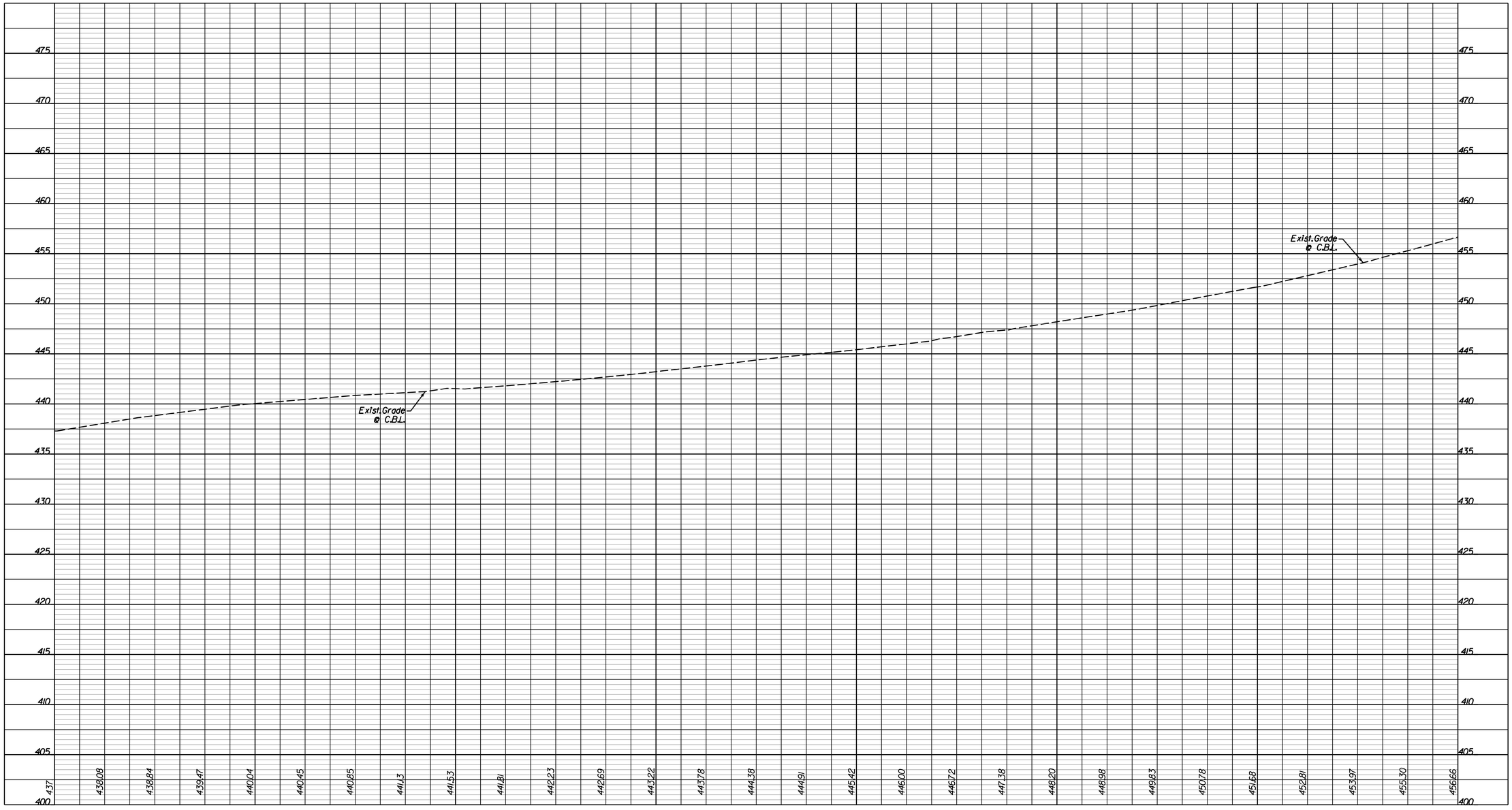
Fax: (703) 691-2693

5425 Discovery Boulevard, Suite 204, Cumming, GA 30040
Phone: (770) 844-2570
Fax: (770) 844-2573



TAX MAP 29-3 & 39-1

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN IMPROVEMENTS
Profile Sheet Sta. 17+00 to 24+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:35:16 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

SCALE H= 25, V= 2
0 25' 50'
0 1.25' 2.5'

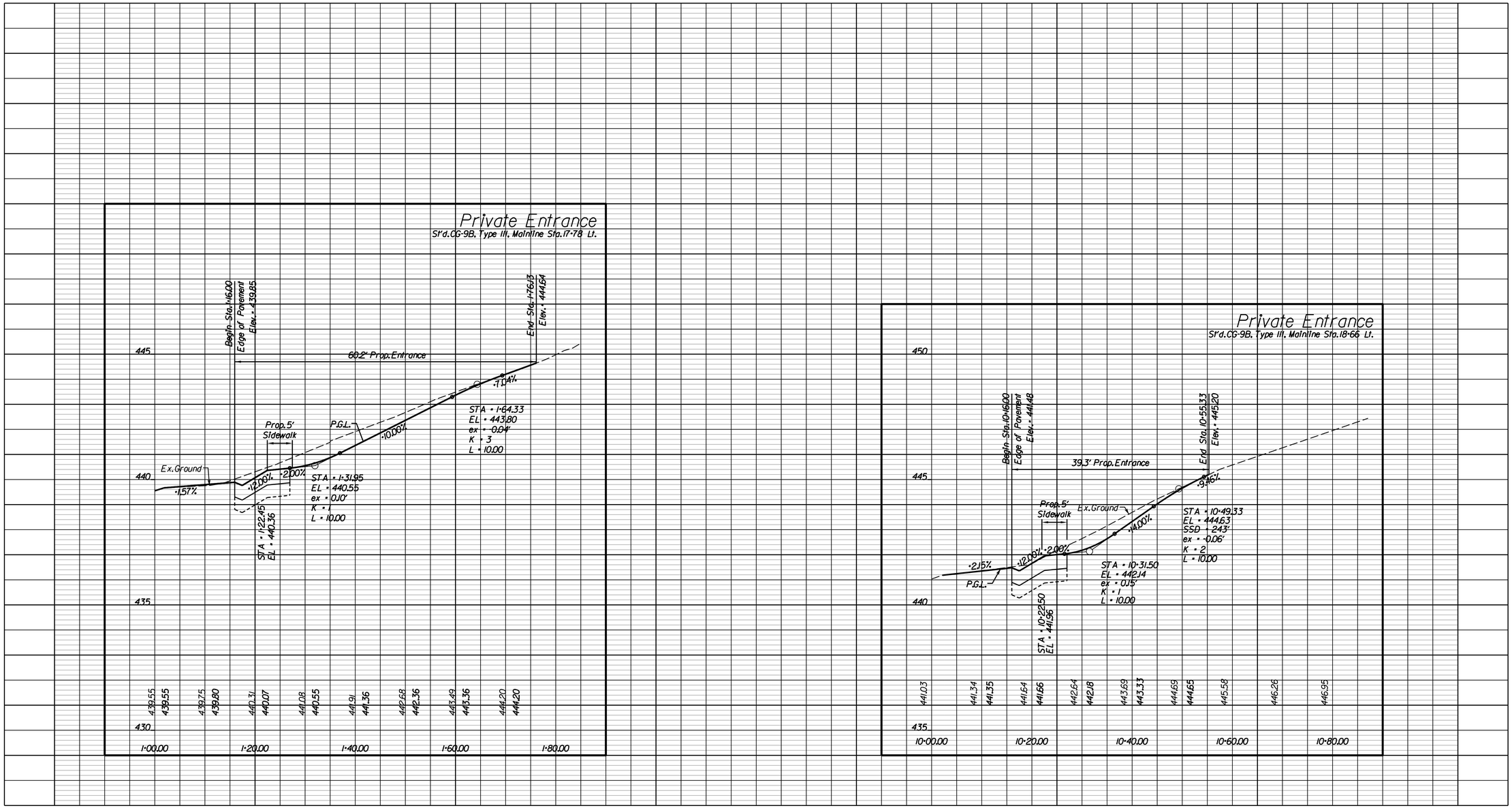
REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

SCALE	DESIGNED BY: CMW,P.E.	SHEET
See Scale Bars	DRAFTED BY: TJW.	4A
	CHECKED BY: ADW,P.E.	

FUND*

10/21/2020

Office Locations
Fairfax Office: 10632 Main Street, Suite 201, Fairfax, VA 22030, Phone: (703) 591-2626, Fax: (703) 591-2810
Leesburg Office: 1 Harrison Street, Suite 100, Leesburg, VA 20175, Phone: (703) 669-2570, Fax: (703) 669-2575
Manassas Office: 9900 Main Street, Suite 400, Fairfax, VA 22031, Phone: (703) 273-6620, Fax: (703) 273-8490
Rinker Design Associates, P.C.
Civil Engineering - Surveying - Land Planning
Transportation - Environmental - Right of Way Services
www.rinkerdesign.com



SCALE H= 10, V= 1
0 10' 20'
0 0.5' 1"

TAX MAP 29-3 & 39-1

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN IMPROVEMENTS
Private Entrances: Sta. 17+22 and Sta. 18+66
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:35:03 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

SCALE: See Scale Bars
DESIGNED BY: CMW,P.E.
DRAFTED BY: T.J.W.
CHECKED BY: ADW,P.E.
SHEET 4B

FUND*

10/21/2020

Rinker Design Associates, P.C.
Civil Engineering - Surveying - Land Planning
Transportation - Environmental - Right of Way Services

Office Locations
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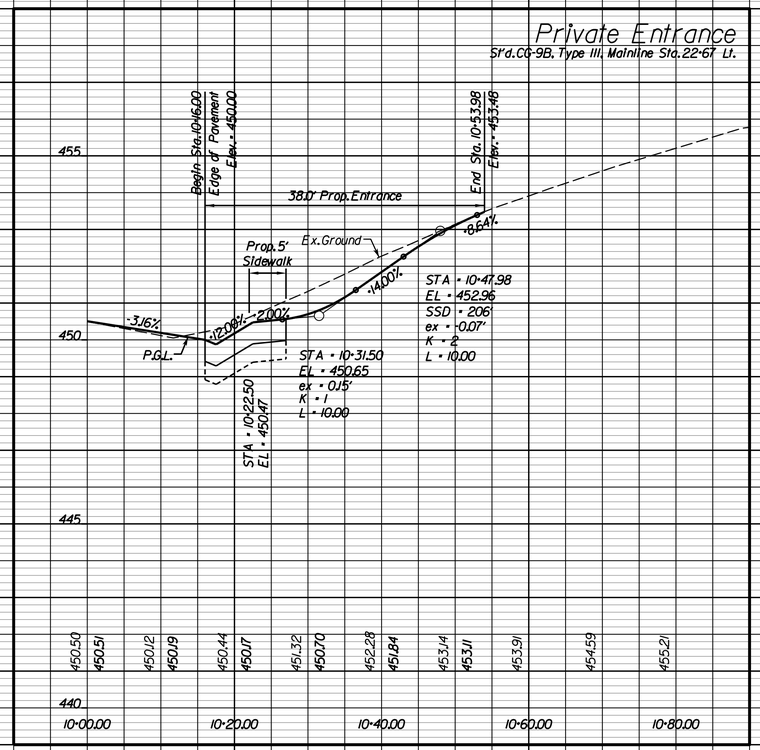
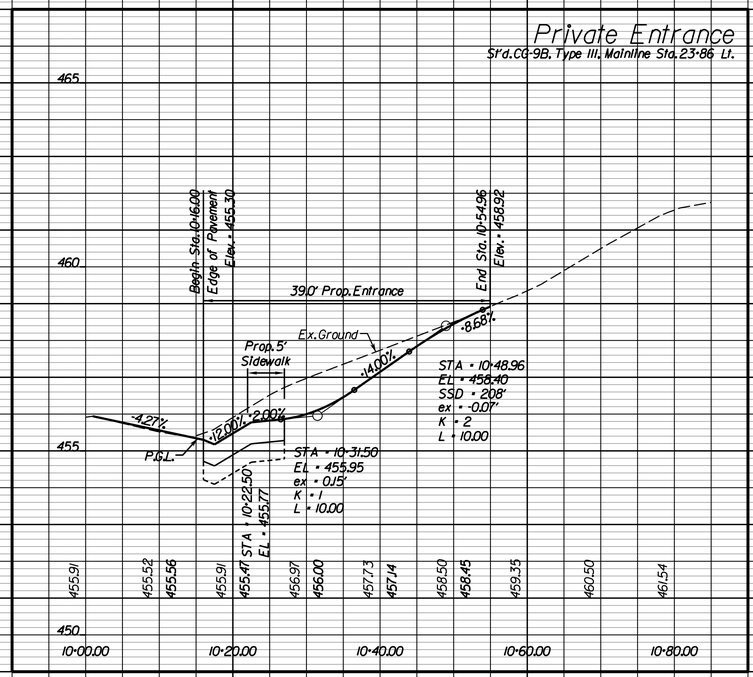
Leesburg: 1 Harrison Street, S.E., Suite 130, Leesburg, VA 20175, Phone: (703) 443-2179, Fax: (703) 443-2930





SCALE H= 10, V= 1
0 10' 20'
0 0.5' 1"

ADAM D. WELSCHENBACH
COMMONWEALTH OF VIRGINIA
Lic. No. 044359
PROFESSIONAL ENGINEER
Adam Welschenbach 2020.10.26 19:34:49 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

TAX MAP 29-3 & 39-1

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN IMPROVEMENTS
Private Entrances: Sta. 22+67 and Sta. 23+86
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

SCALE: See Scale Bars
DESIGNED BY: CMW, P.E.
DRAFTED BY: T.J.W.
CHECKED BY: ADW, P.E.
SHEET 4C

FUND*

10/21/2020

Match Line Sta.24+00 (C.B.L.) See Sheet 4

TAX MAP 029-3-06-0034
PAUL D.PAVNICA
SHARON L.PAVNICA
D.B.8912, PG.1689
WESTBRIAR COUNTRY CLUB HILLS
SECTION 2
LOT 34
*239 OLD COURTHOUSE ROAD NE

TAX MAP 029-3-06-0033
PATRICK MILLER
VERONICA MILLER
D.B.20925, PG.281
WESTBRIAR COUNTRY CLUB HILLS
SECTION 1
LOT 33
*237 OLD COURTHOUSE ROAD NE

TAX MAP 029-3-06-0032
WALON N.HICKS
D.B.18701, PG.162
WESTBRIAR COUNTRY CLUB HILLS
SECTION 1
LOT 32
*235 OLD COURTHOUSE ROAD NE

TAX MAP 029-3-06-0031
DONNA SMITH
MOHAMMAD OUGACHE
D.B.6081, PG.471
WESTBRIAR COUNTRY CLUB HILLS
SECTION 1
LOT 31
*233 OLD COURTHOUSE ROAD NE

TAX MAP 029-3-01-0028
FAIRFAX COUNTY WATER AUTHORITY
D.B.23520, PG.126
*8530 OLD COURTHOUSE ROAD

TAX MAP 039-1-02-B EXIST.R/W
WESTBRIAR ESTATES INC.
D.B.3169, PG.137
WESTBRIAR COUNTRY CLUB HILLS
SECTION 1
OUTLOT A

TAX MAP 039-1-03-0065
FAIRFAX COUNTY PARK AUTHORITY
D.B.3169, PG.137
D.B.2951, PG.449

Curve OLDCT03
PI = 25+21.21
DELTA = 57° 11' 34.27" (LT)
D = 18° 28' 57"
T = 168.99'
L = 309.44'
R = 310.00'
PC = 23+52.22
PT = 26+61.66

Curve OLDCT04
PI = 27+99.95
DELTA = 0° 45' 28.15" (LT)
D = 1° 54' 35"
T = 19.84'
L = 39.68'
R = 3,000.00'
PC = 27+80.11
PT = 28+19.79

Note: Contractor shall not Impact entrance features.

Old Courthouse Road
Route 677
6'W
Bike Lane
Constr. ℄
Prop. 6' Conc. S/W
Prop. Std. UD-4
Prop. Std. CG-9B Type III Recd (Asphalt)
Prop. Std. 2.4K Type III Recd (Asphalt)
Prop. Mod. CG-6 Prop. 5' Conc. S/W
Ex. Water Meter not to be Impacted.
Ex. Trees not to be Impacted.
Ex. Plantings shall be reset in place or replaced in kind at no additional cost to the Project.
Exist. Brick Pillars to Remain.
Tie to Existing.
Utility pole to be relocated by others
Ex. Wooded Area
Ex. Gravel Shoulder
Ex. Asphalt Walk
Ex. Brick Wall
Ex. Chain Link Fence
Ex. MLSA
Ex. Dwelling
Ex. Flag Pole
Ex. Asphalt Driveway
Ex. Concrete
Ex. Asphalt
Ex. E.P.
Exist. R/W
Town of Vienna
Fairfax County
PC 27+80.11
PT 28+19.79
PC 31+00.40
N 63° 54' 48" E
N 63° 09' 20" E
C ___ Denotes Construction Limits in Cuts
F __ Denotes Construction Limits in Fills

PAVEMENT LEGEND
- Full-Depth Pavement
- Demolition of Pavement
- Mill and Overlay

R/W LEGEND
- Prop. Non-Revocable Right of Entry Agreement

SCALE
0 25' 50'

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Plan Sheet Sta. 24+00 to 31+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER
Adam Welschenbach 2020.10.26 19:34:37 -04'00'
Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

SCALE HORIZ: 1"=25' VERT: N/A
DESIGNED BY: ADW,P.E.
DRAFTED BY: LKG,JRB
CHECKED BY: ADW,P.E.
SHEET 5

FUND*

10/21/2020

Rinker Design Associates, P.C.
Civil Engineering ~ Surveying ~ Land Planning
Transportation ~ Environmental
Right of Way Services

Office Locations
Main Office
10211 Timberwood Circle
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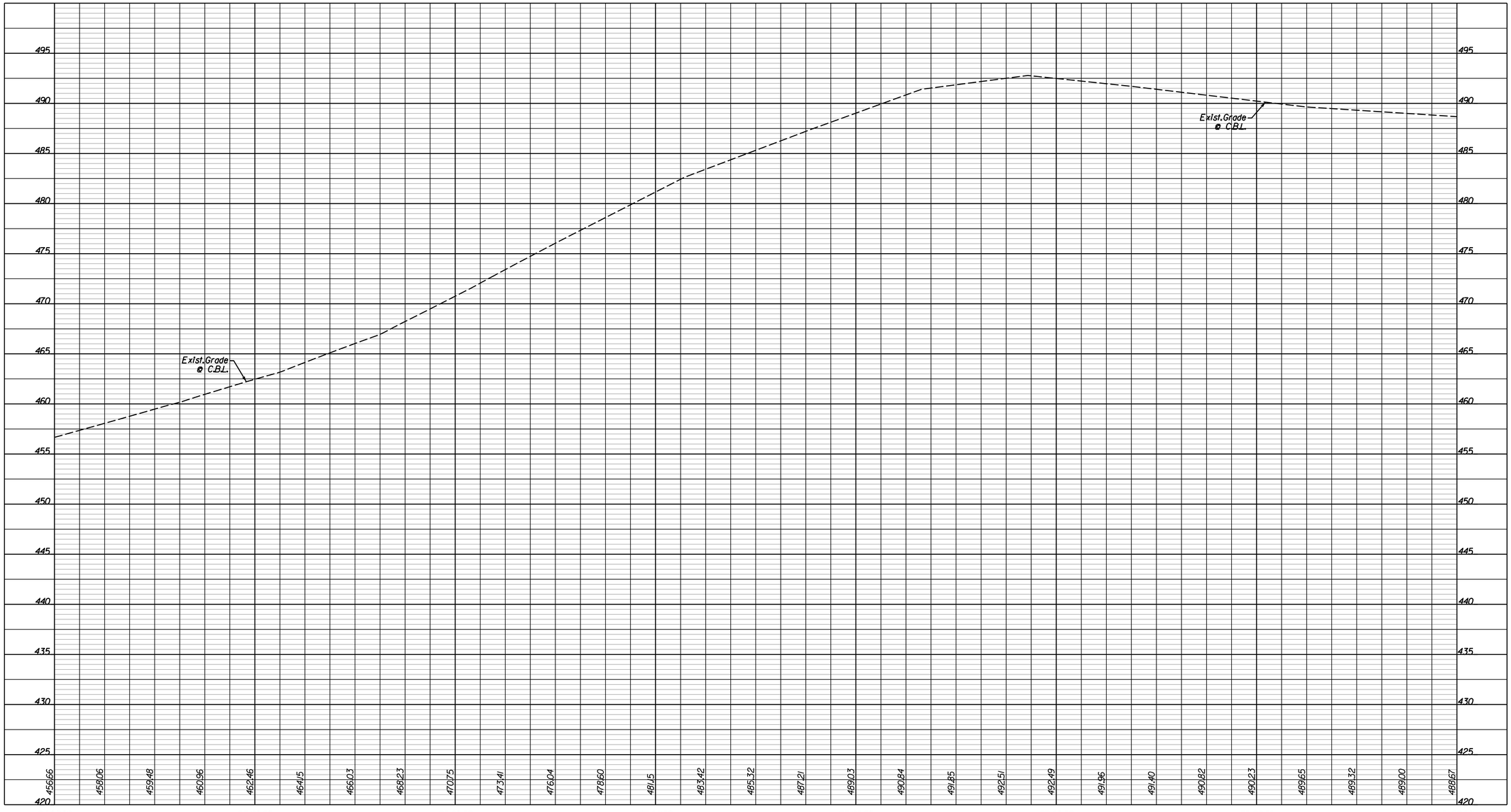
Fax: (502) 244-2278

10211 Timberwood Circle
Suite 200
Louisville, KY 40223
Phone: (502) 244-2276
Fax: (502) 244-2278

Old Dominion Drive
Suite 300
McLean, VA 22101
Phone: (703) 287-8700
Fax: (703) 287-8701



TAX MAP 29-3 & 39-1

SCALE H= 25, V= 2
0 25' 50'
0 1.25' 2.5'

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:34:25 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN IMPROVEMENTS
Profile Sheet Sta. 24+00 to 31+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

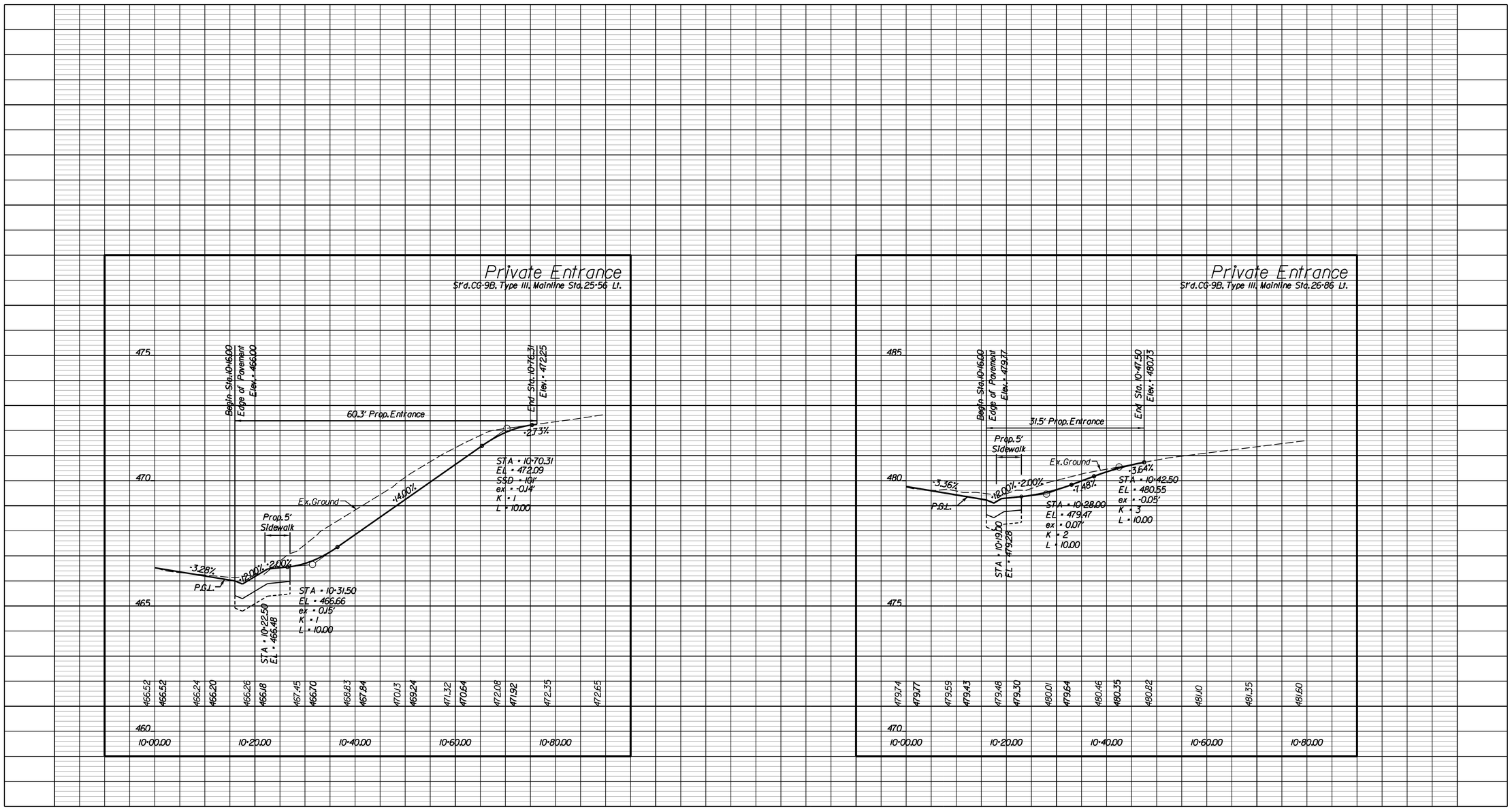
SCALE: See Scale Bars
DESIGNED BY: CMW, P.E.
DRAFTED BY: TJW.
CHECKED BY: ADW, P.E.
SHEET 5A

FUND*

10/21/2020

Rinker Design Associates, P.C.
Civil Engineering - Surveying - Land Planning
Transportation - Environmental - Right of Way Services

Office Locations
Corporate Office: 10711 Braddock Boulevard, Suite 100, Manassas, VA 20110, Phone: (703) 361-2570, Fax: (703) 361-2571
Northern Virginia: 10711 Braddock Boulevard, Suite 100, Manassas, VA 20110, Phone: (703) 361-2570, Fax: (703) 361-2571
Richmond: 2100 West Laburnum Avenue, Suite 105, Richmond, VA 23227, Phone: (804) 346-1170, Fax: (804) 346-1174



SCALE H= 10, V= 1
0 10' 20'
0 0.5' 1'

ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:34:13 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

TAX MAP 29-3 & 39-1

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN IMPROVEMENTS
Private Entrances: Sta. 25+56 and Sta. 26+86
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

SCALE: See Scale Bars
DESIGNED BY: CMW, P.E.
DRAFTED BY: T.J.W.
CHECKED BY: ADW, P.E.
SHEET 5B

FUND*

10/21/2020

Rinker Design Associates, P.C.
Civil Engineering - Surveying - Land Planning
Transportation - Environmental
Right of Way Services

Office Locations
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Fax: (703) 361-2181

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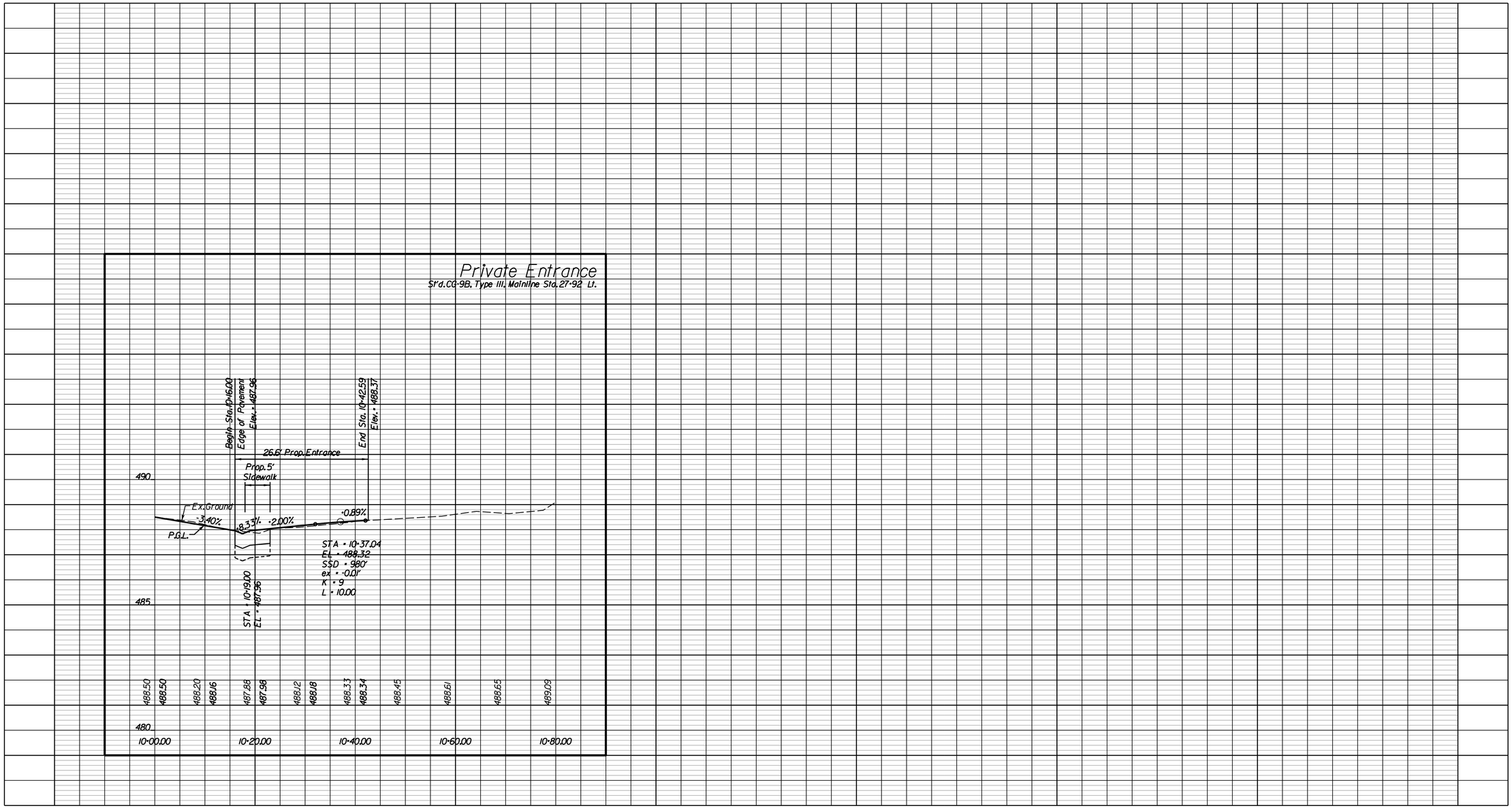
Suite 104
Fredericksburg, VA 22407
Phone: (540) 361-2179
Fax: (540) 361-2181



SCALE H= 10, V= 1
0 10' 20'
0 0.5' 1'

ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:34:01 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

TAX MAP 29-3 & 39-1

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN IMPROVEMENTS
Private Entrances: Sta. 27+92
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS				
△*	DESCRIPTION	BY	APPROVED	DATE

SCALE: See Scale Bars
DESIGNED BY: CMW, P.E.
DRAFTED BY: T.J.W.
CHECKED BY: ADW, P.E.
SHEET 5C

FUND*

10/21/2020

Fairfax County
Town of Vienna

Westbriar Court

Exist.R/W

Relocate Sign(s)
AHEAD

Relocate Sign(s)
STOP
Westbriar Ct
Old Courthouse Rd

Relocate Sign(s)
SLOW CHILDREN PLAYING
Neighbor hood Watch

Relocate Sign(s)
BIKE XING

BIKE ROUTE

SCHOOL

Old Courthouse Road
Route 677

Constr. ℄

Fairway Drive

Match Line Sta.17+00 (C.B.L.) See Sheet 7A

SIGN LEGEND

- Existing Sign Panel
- Proposed Ground Mounted Sign
- SIGN NO. / TEXT NO. — Text Information for Proposed Signs
- SIGNAGE — Proposed Sign Panel
- SIGNAGE — Existing Sign Panel
- SIGNAGE — Remove Sign(s) and Post(s)
- (Dot - dot - dash) — Denotes Temporary Construction Easement
- (Dot - dash) — Denotes Permanent Construction Easement

SCALE
0 25' 50'

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:33:46 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△#	DESCRIPTION	BY	APPROVED	DATE

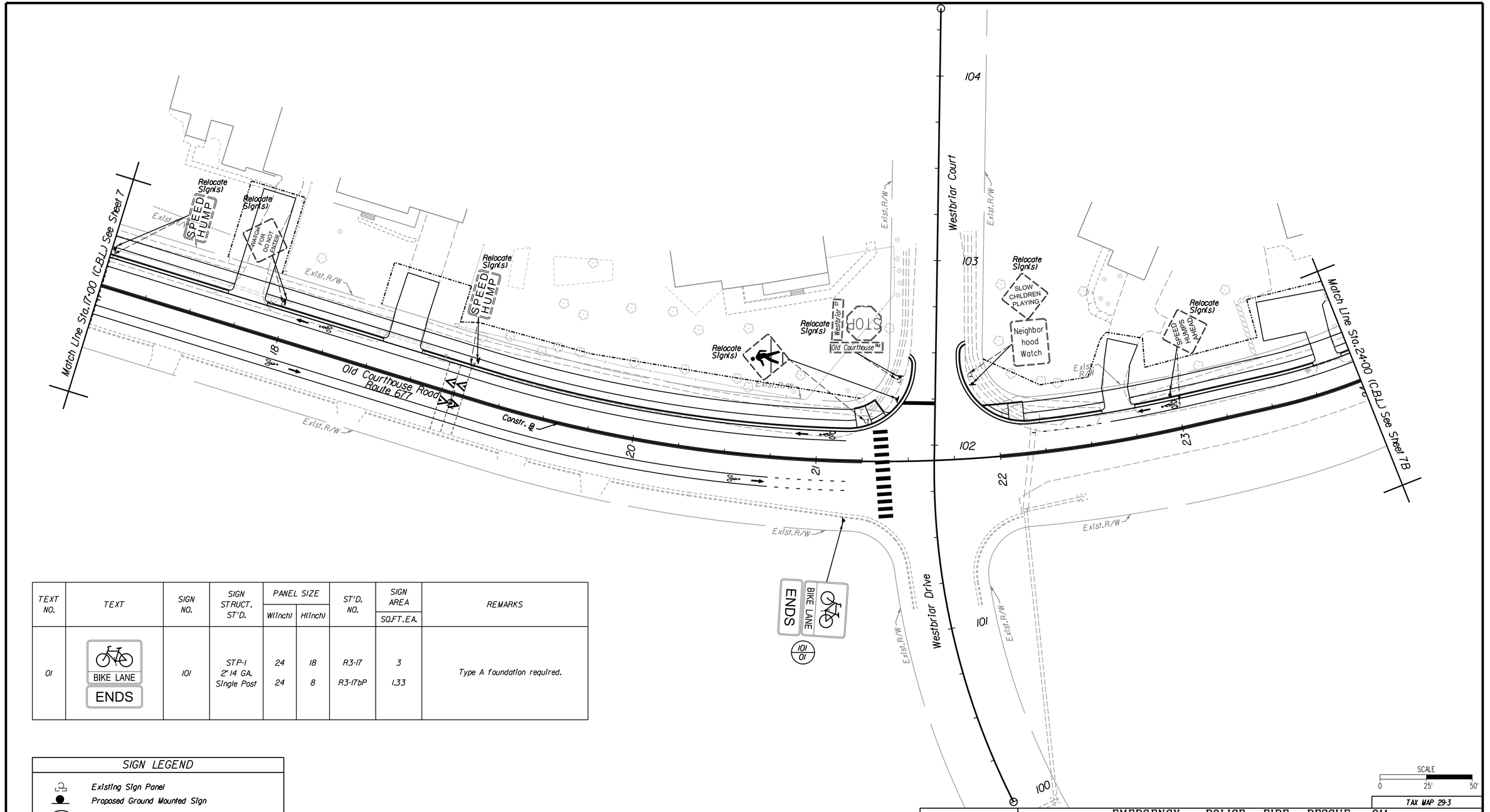
DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Signage Plan: 10+00 to 17+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ: 1"=25' VERT: N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET 7

FUND#

10/21/2020



TEXT NO.	TEXT	SIGN NO.	SIGN STRUCT. ST'D.	PANEL SIZE W(Inch)	PANEL SIZE H(Inch)	ST'D. NO.	SIGN AREA SQ.FT.EA.	REMARKS
01	BIKE LANE ENDS	101	STP-1 2" 14 GA. Single Post	24 24	18 8	R3-17 R3-17bP	3 1.33	Type A foundation required.

SIGN LEGEND

- Existing Sign Panel
- Proposed Ground Mounted Sign
- *** / ** — SIGN NO. / TEXT NO. Text Information for Proposed Signs
- SIGNAGE — Proposed Sign Panel
- SIGNAGE — Existing Sign Panel
- SIGNAGE — Remove Sign(s) and Post(s)
- (Dot - dot - dash) — Denotes Temporary Construction Easement
- (Dot - dash) — Denotes Permanent Construction Easement

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:33:28 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

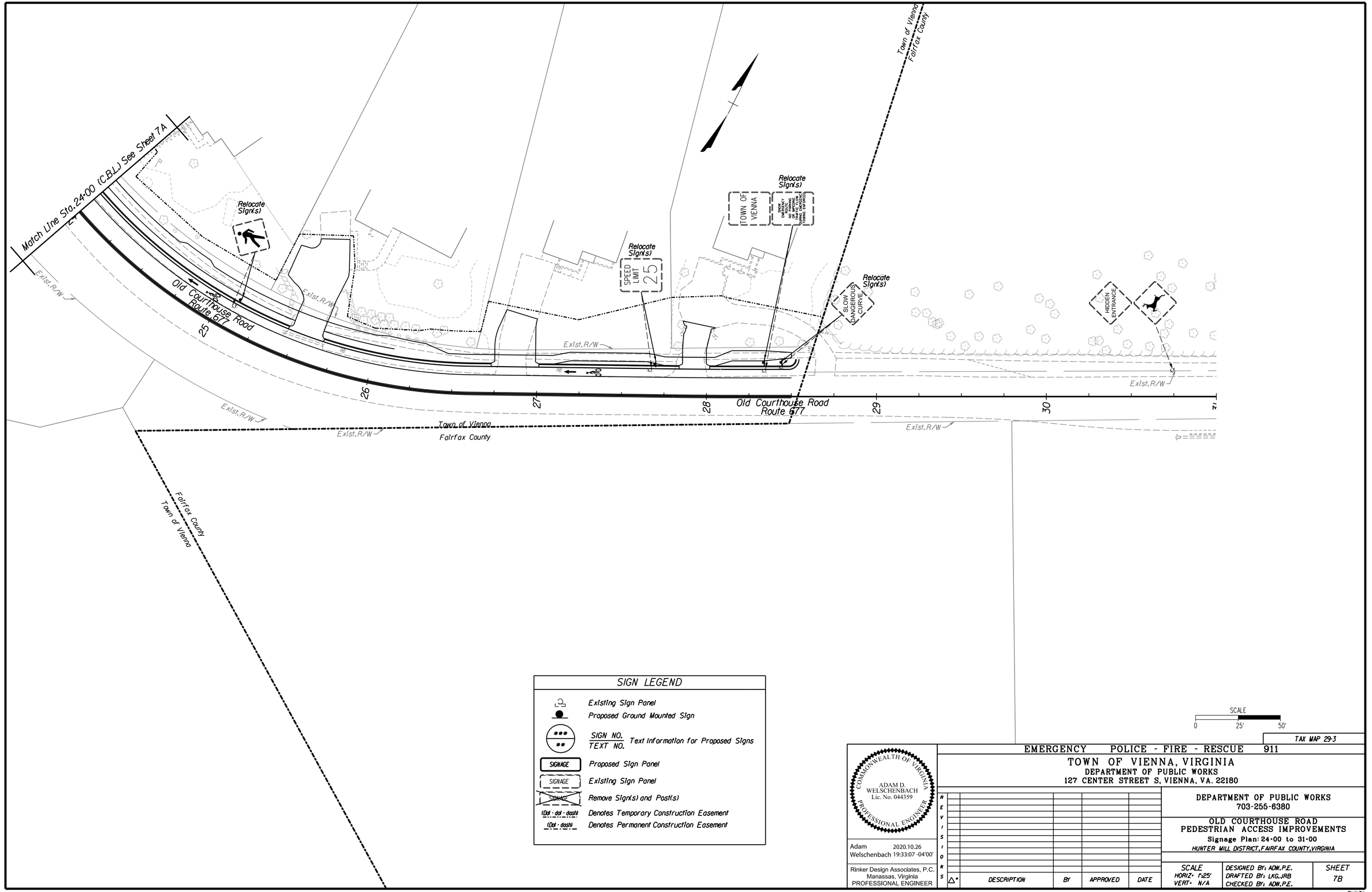
OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Signage Plan: 17+00 to 24+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

SCALE HORIZ. 1"=25' VERT. N/A
DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.
SHEET 7A

FUND*

10/21/2020



SIGN LEGEND

	Existing Sign Panel
	Proposed Ground Mounted Sign
*** / ##	SIGN NO. / TEXT NO. Text Information for Proposed Signs
SIGNAGE	Proposed Sign Panel
SIGNAGE	Existing Sign Panel
SIGNAGE	Remove Sign(s) and Post(s)
(Dot - dot - dash)	Denotes Temporary Construction Easement
(Dot - dash)	Denotes Permanent Construction Easement

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Signage Plan: 24+00 to 31+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:33:07 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

SCALE HORIZ: 1"=25' VERT: N/A
DESIGNED BY: ADW,P.E.
DRAFTED BY: LKG,JRB
CHECKED BY: ADW,P.E.
SHEET 7B

FUND#

10/21/2020

** Pavement Marking General Notes **

1. All proposed pavement markings shall be in accordance with the most current edition of each of the following and any revisions/update thereof:

A) Manual on Uniform Traffic Control Devices (MUTCD)
B) The Virginia Supplement to the Manual on Uniform Traffic Control Devices
C) The Virginia Department of Transportation Road and Bridge Specifications
D) The Virginia Department of Transportation Road and Bridge Standards
E) The discretion of the Town Engineer

2. Any existing pavement markings which will conflict with the proposed pavement markings as shown, shall be completely eradicated.

3. Limits shown for the proposed pavement markings are approximate and shall be verified/modified in the field to ensure that proposed pavement markings continue until existing pavement markings can be matched.

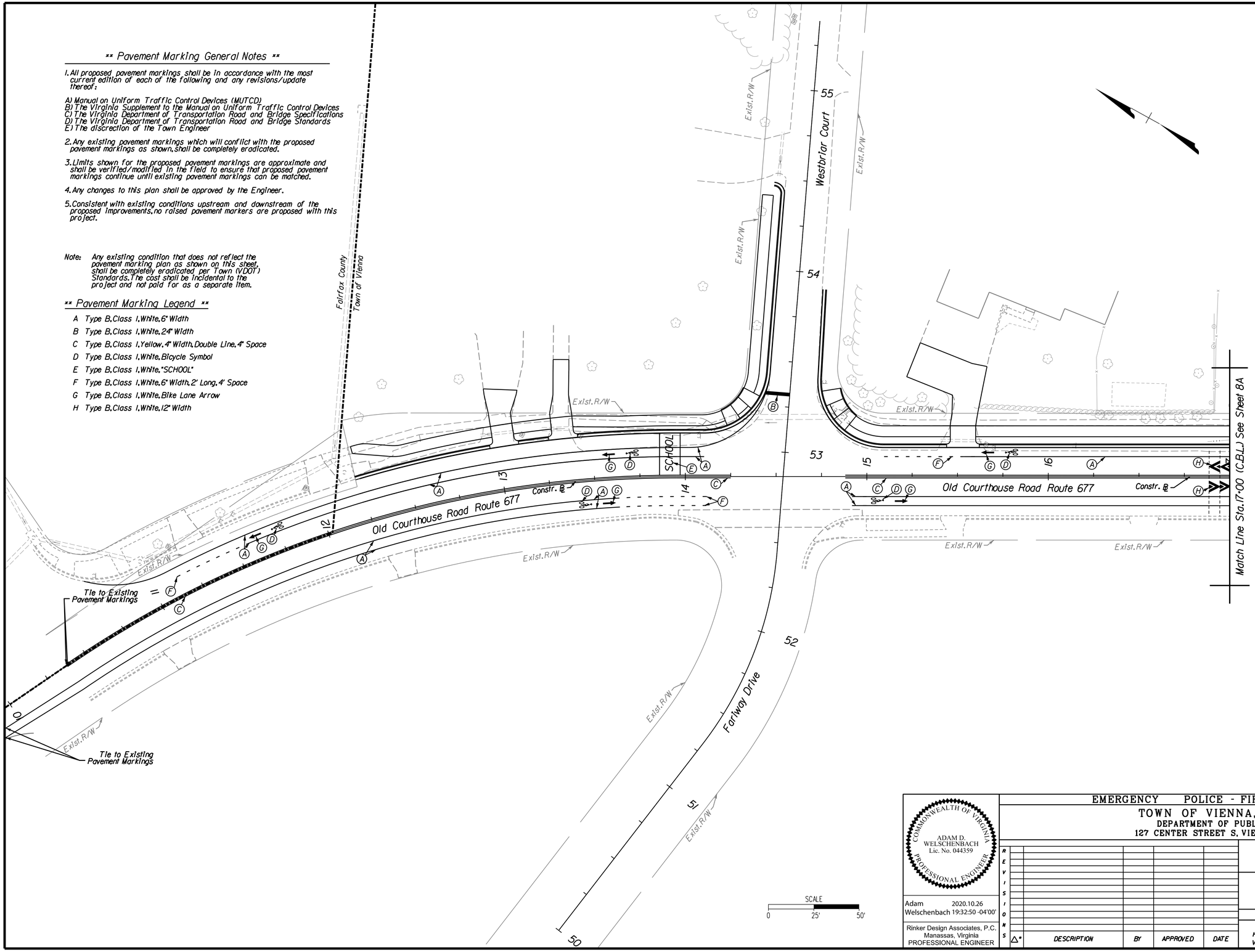
4. Any changes to this plan shall be approved by the Engineer.

5. Consistent with existing conditions upstream and downstream of the proposed improvements, no raised pavement markers are proposed with this project.

Note: Any existing condition that does not reflect the pavement marking plan as shown on this sheet, shall be completely eradicated per Town (VDOT) Standards. The cost shall be incidental to the project and not paid for as a separate item.

** Pavement Marking Legend **

- A Type B, Class I, White, 6" Width
- B Type B, Class I, White, 24" Width
- C Type B, Class I, Yellow, 4" Width, Double Line, 4" Space
- D Type B, Class I, White, Bicycle Symbol
- E Type B, Class I, White, "SCHOOL"
- F Type B, Class I, White, 6" Width, 2' Long, 4' Space
- G Type B, Class I, White, Bike Lane Arrow
- H Type B, Class I, White, 12" Width



TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:32:50 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

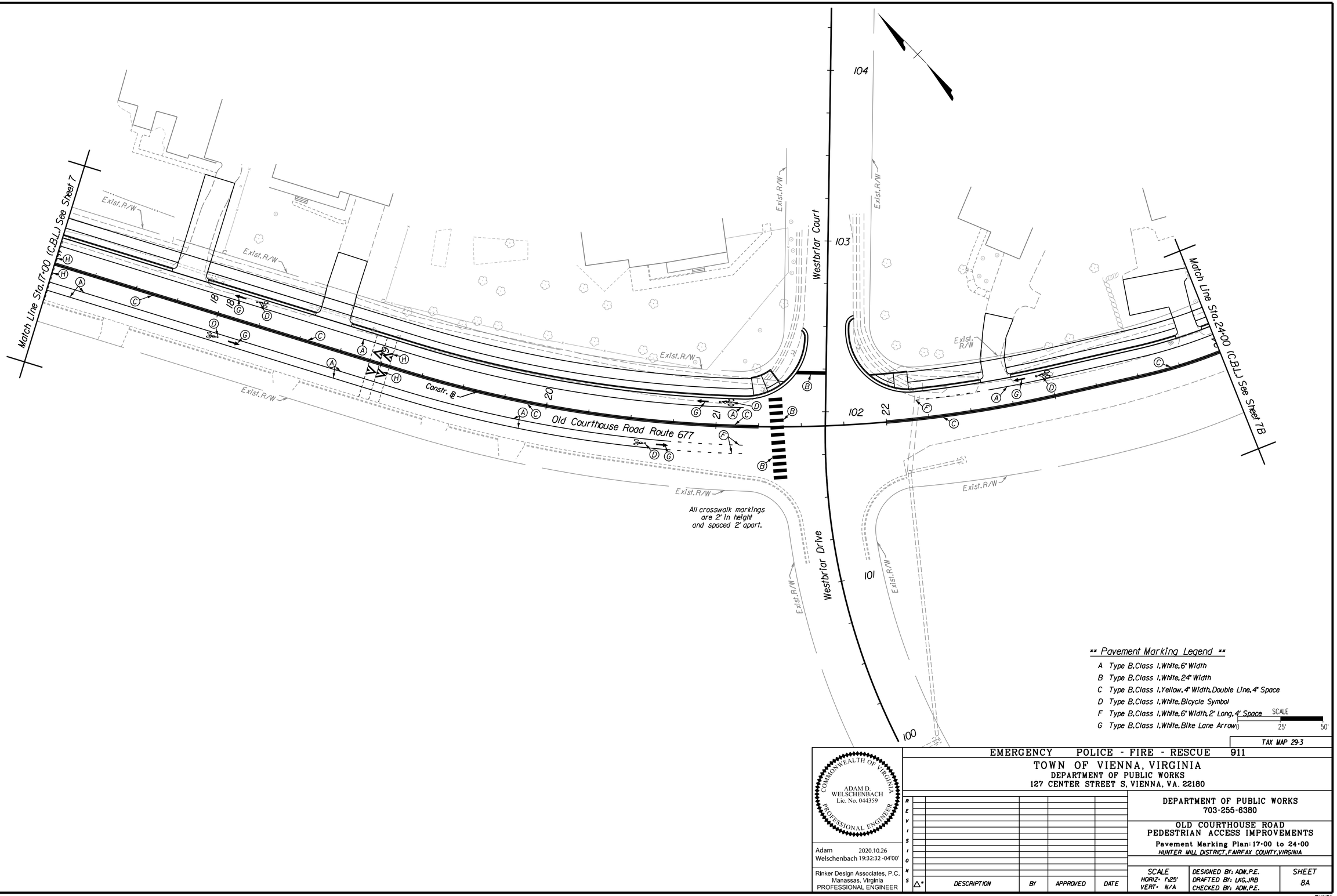
DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Pavement Marking Plan: 10+00 to 17+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE	DESIGNED BY: ADW, P.E.	SHEET
HORIZ: 1"=25'	DRAFTED BY: LKG, JRB	8
VERT: N/A	CHECKED BY: ADW, P.E.	

FUND*

10/21/2020



All crosswalk markings
are 2' in height
and spaced 2' apart.

** Pavement Marking Legend **

A Type B,Class I,White,6" Width
B Type B,Class I,White,24" Width
C Type B,Class I,Yellow,4" Width,Double Line,4" Space
D Type B,Class I,White,Bicycle Symbol
F Type B,Class I,White,6" Width,2' Long,4' Space
G Type B,Class I,White,Bike Lane Arrow

SCALE
0 25' 50'

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

ADAM D.
WELSCHENBACH
Lic. No. 044359

Adam Welschenbach 2020.10.26 19:32:32 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS

△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Pavement Marking Plan: 17+00 to 24+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

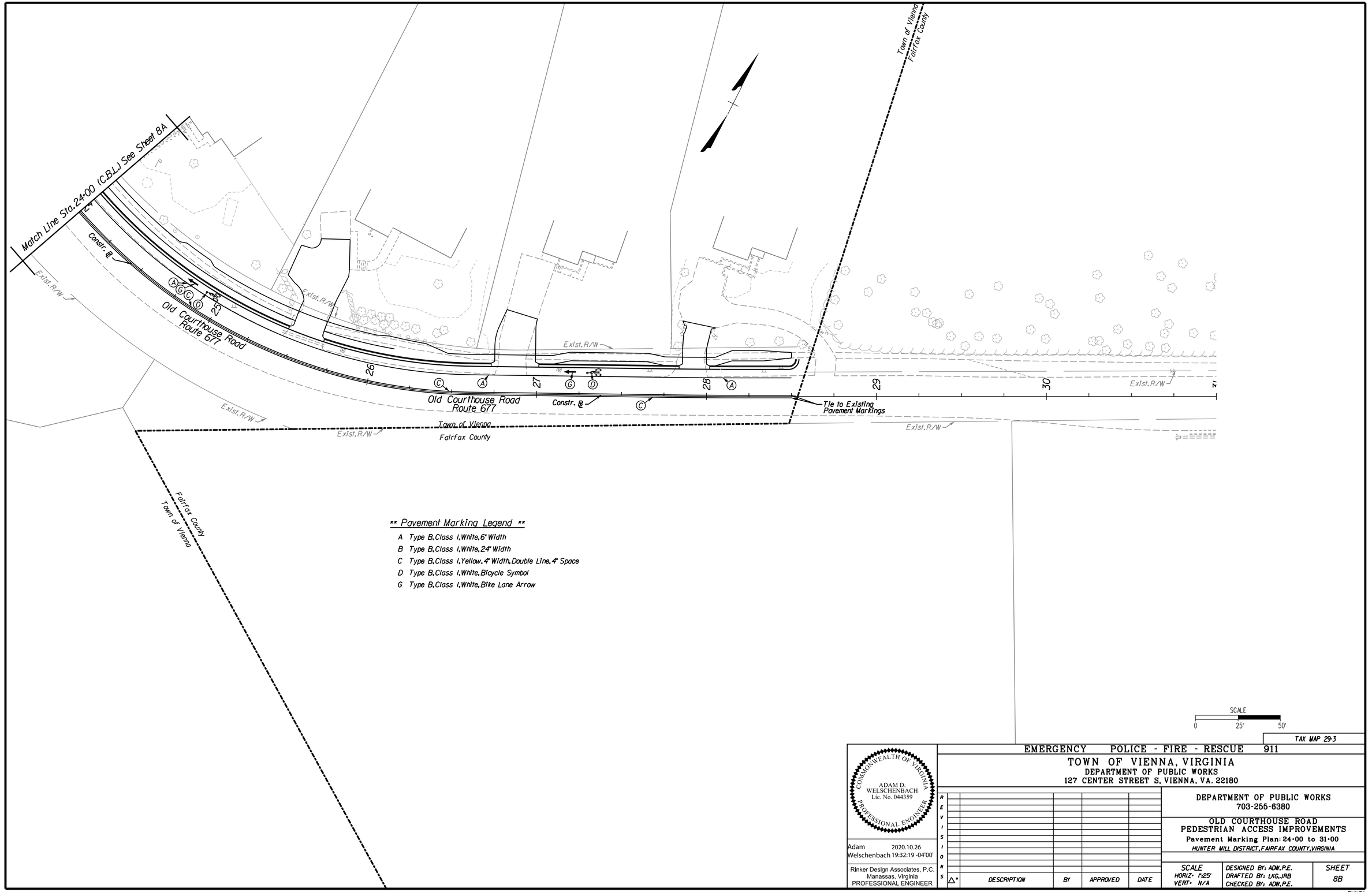
SCALE
HORIZ: 1":25'
VERT: N/A

DESIGNED BY: ADW,P.E.
DRAFTED BY: LKG,JRB
CHECKED BY: ADW,P.E.

SHEET
8A

FUND*

10/21/2020



TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:32:19 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Pavement Marking Plan: 24+00 to 31+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE
HORIZ: 1"=25'
VERT: N/A

DESIGNED BY: ADW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET
8B

FUND#

10/21/2020

THIS SHEET IS PROVIDED FOR INFORMATION ONLY

R/W LEGEND

Prop. Non-Revocable Right of Entry Agreement

C ___ Denotes Construction Limits In Cuts

F __ Denotes Construction Limits In Fills

PAVEMENT LEGEND

Full-Depth Pavement

Demolition of Pavement

Mill and Overlay

Notes:

1. Not all required service laterals shown.

2. All impacted service laterals (of any kind, such as water, gas, and sanitary sewer) shall be field adjusted at no additional cost to the project.

3. All impacted utility appurtenances (of any kind, such as water, gas, and sanitary sewer) shall be field adjusted to finished grade at no additional cost to the project.

Old Courthouse Road Route 677

Fairfax County
Town of Vienna

Westbriar Court

Fairway Drive

Utility pole to be relocated by others

Ex. Pole to be braced during any land disturbing activity. Contractor to coordinate with utility provider.

Prop. Water Line
Prop. Water Line by others
Prop. Gas Line by others
Constr. ℄
Exist. R/W
Ex. Utility Easements
Storm Sewer Ex. 12.5 Storm Sewer Esmt. (D.B. 2388, Pg. 293)
Approx. Loc. Ex. Storm Sewer Esmt. (D.B. 2388, Pg. 293)
Match Line Sta. 17+00 (C.B.L.) See Sheet 10(1)

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

REVISIONS	△	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Utilities Plan: Sta. 10+00 to 17+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE HORIZ. 1"=25' VERT. N/A | DESIGNED BY: ADW, P.E. DRAFTED BY: LKG, JRB CHECKED BY: ADW, P.E. | SHEET 10

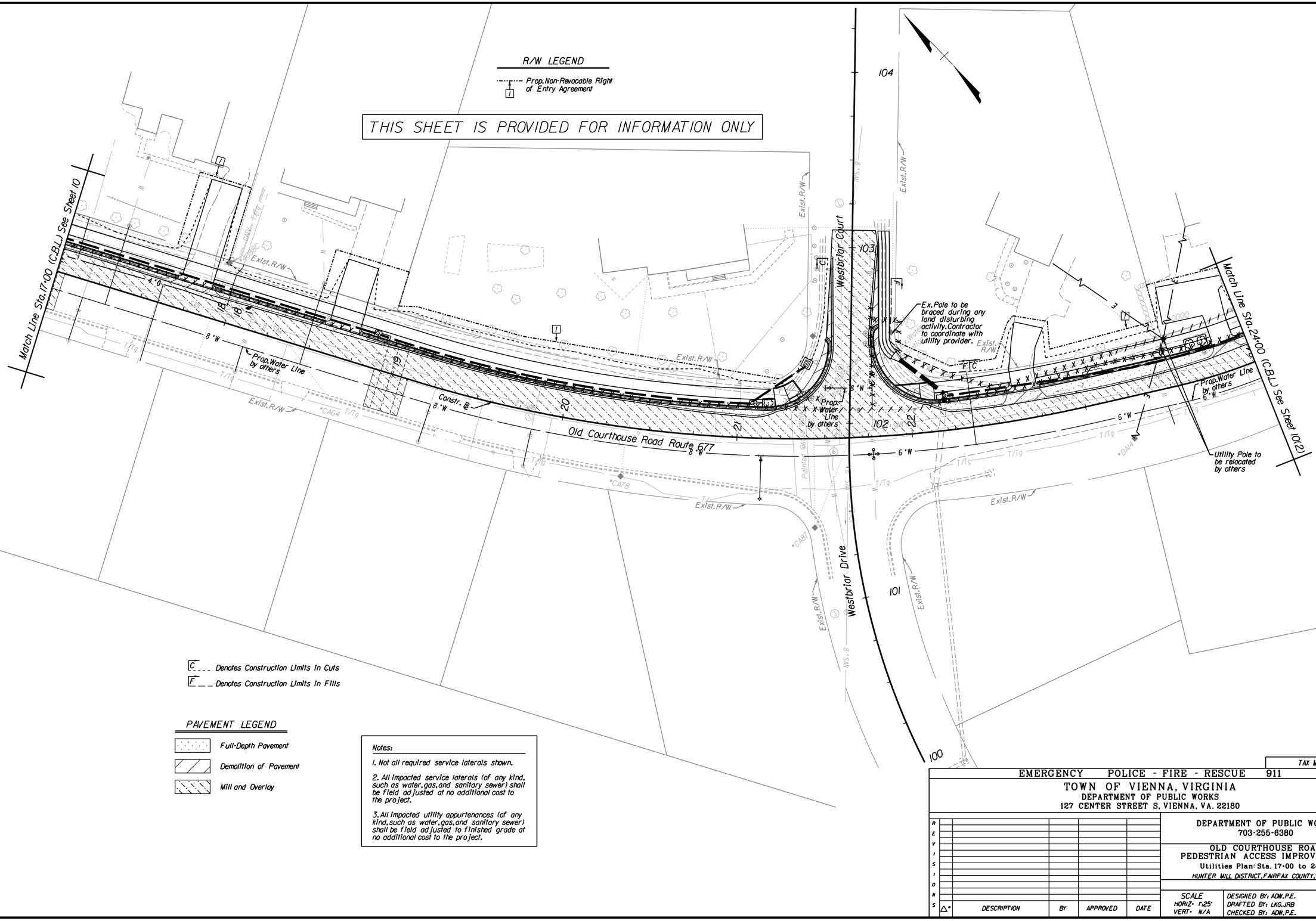
FUND#

10/21/2020

R/W LEGEND

Prop. Non-Revocable Right of Entry Agreement

THIS SHEET IS PROVIDED FOR INFORMATION ONLY



C ____ Denotes Construction Limits In Cuts

F __ Denotes Construction Limits In Fills

PAVEMENT LEGEND

- Full-Depth Pavement
- Demolition of Pavement
- Mill and Overlay

Notes:

1. Not all required service laterals shown.
2. All impacted service laterals (of any kind, such as water, gas, and sanitary sewer) shall be field adjusted at no additional cost to the project.
3. All impacted utility appurtenances (of any kind, such as water, gas, and sanitary sewer) shall be field adjusted to finished grade at no additional cost to the project.

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

REVISIONS △*	DESCRIPTION	BY	APPROVED	DATE

DEPARTMENT OF PUBLIC WORKS
703-255-6380

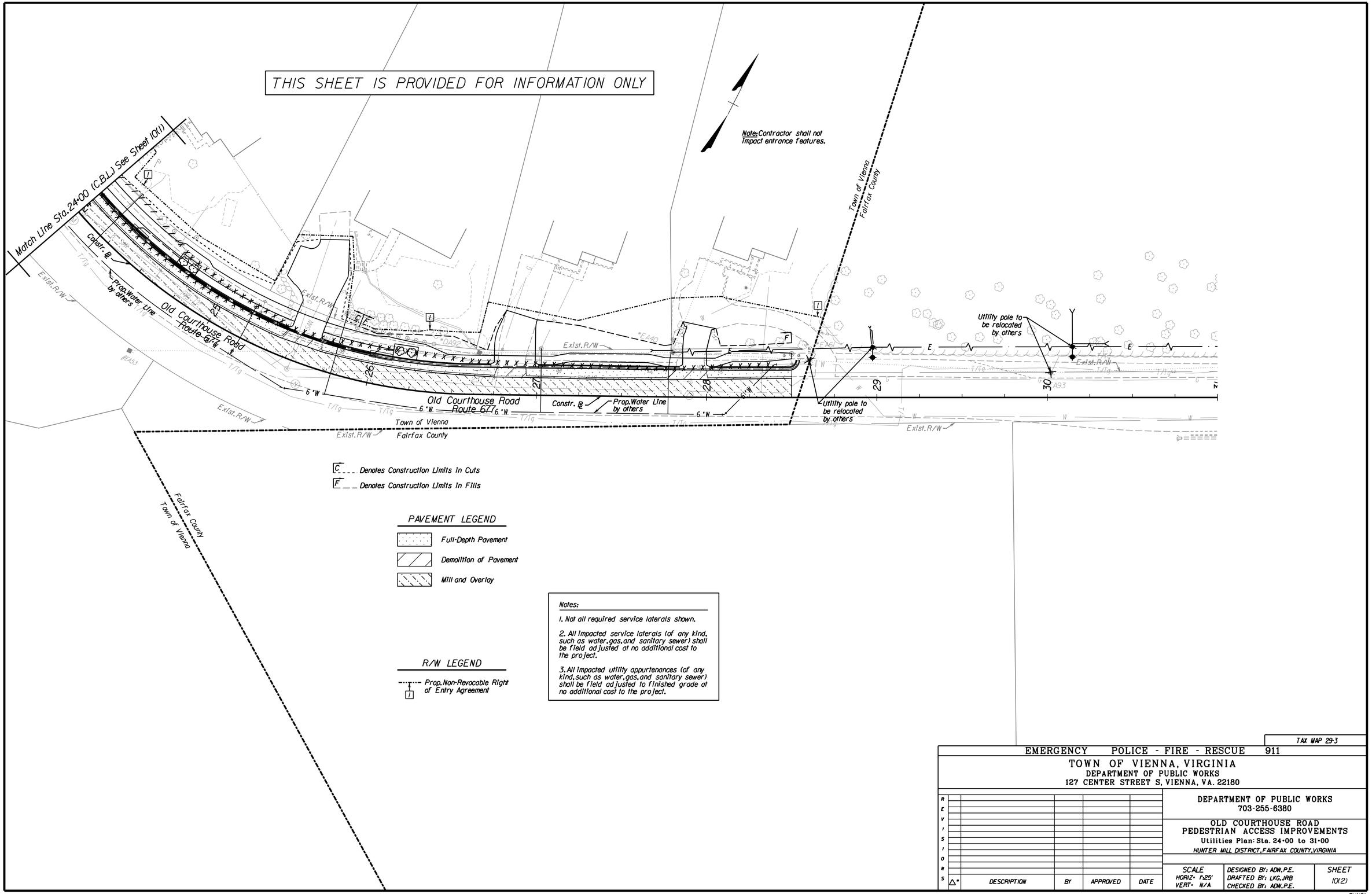
OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Utilities Plan: Sta. 17+00 to 24+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE	DESIGNED BY: ADW, P.E.	SHEET
HORIZ: 1"=25'	DRAFTED BY: LKG, JRB	10(1)
VERT: N/A	CHECKED BY: ADW, P.E.	

10/22/2020

FUND*

THIS SHEET IS PROVIDED FOR INFORMATION ONLY



Notes:

1. Not all required service laterals shown.
2. All impacted service laterals (of any kind, such as water, gas, and sanitary sewer) shall be field adjusted at no additional cost to the project.
3. All impacted utility appurtenances (of any kind, such as water, gas, and sanitary sewer) shall be field adjusted to finished grade at no additional cost to the project.

TAX MAP 29-3

EMERGENCY POLICE - FIRE - RESCUE 911

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

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

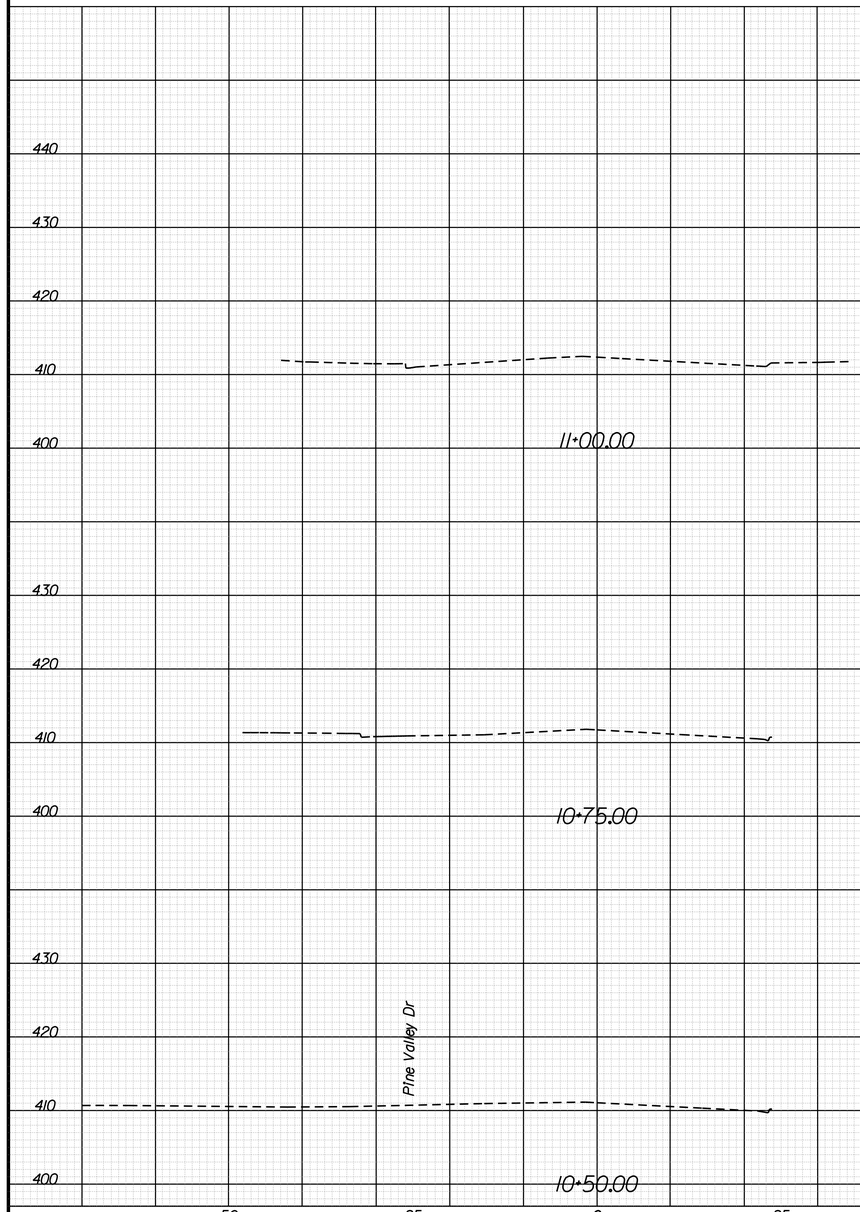
DEPARTMENT OF PUBLIC WORKS
703-255-6380

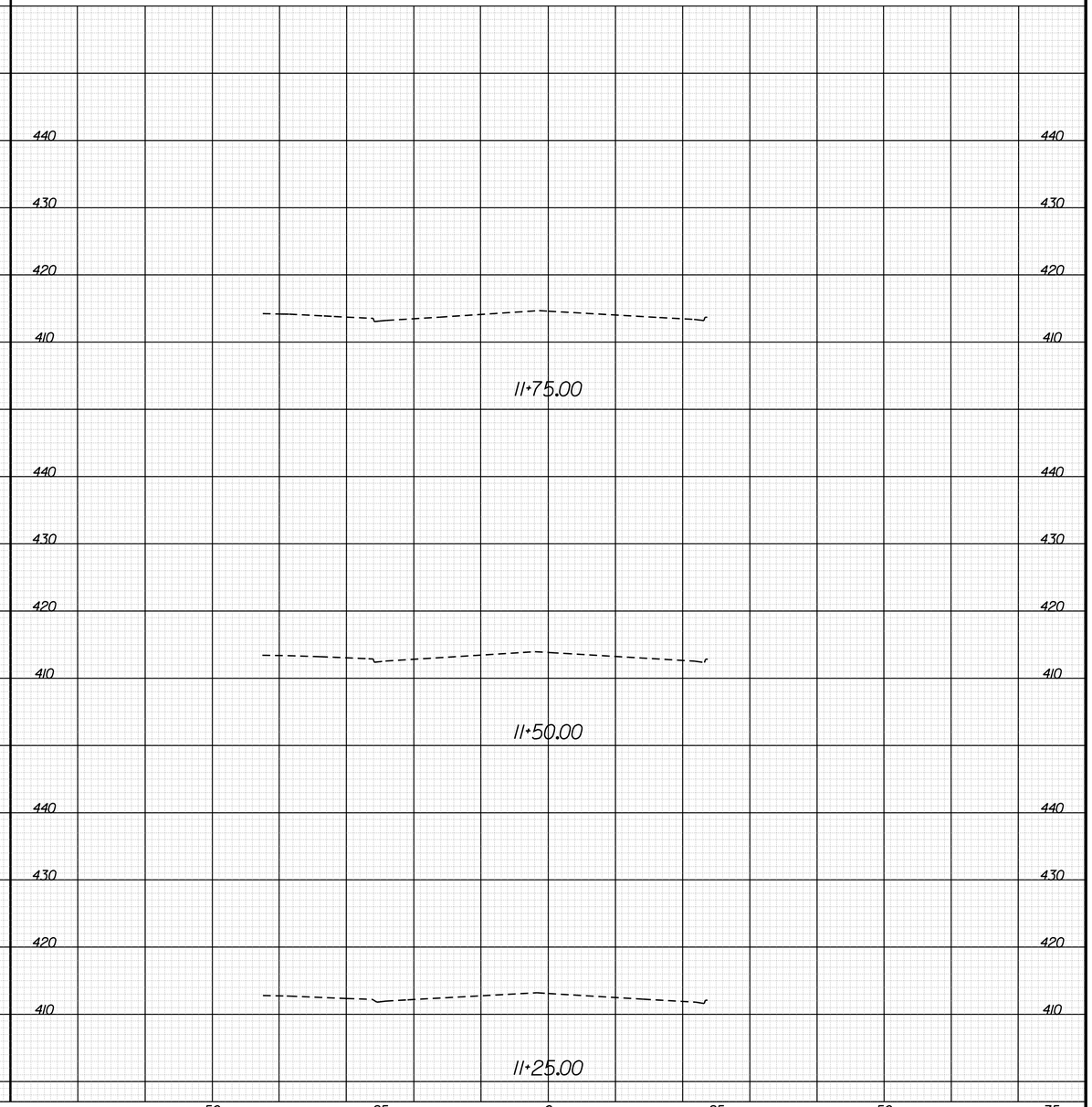
OLD COURTHOUSE ROAD
PEDESTRIAN ACCESS IMPROVEMENTS
Utilities Plan: Sta. 24+00 to 31+00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

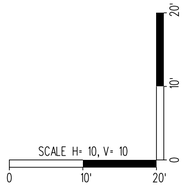
SCALE HORIZ: 1"=25' VERT: N/A | DESIGNED BY: ADW, P.E. DRAFTED BY: LKG, JRB CHECKED BY: ADW, P.E. | SHEET 10(2)

FUND*

10/21/2020







ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:31:46 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN IMPROVEMENTS
CROSS SECTIONS - Station 10+50.00 To Station 11+75.00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS	△	DESCRIPTION	BY	APPROVED	DATE

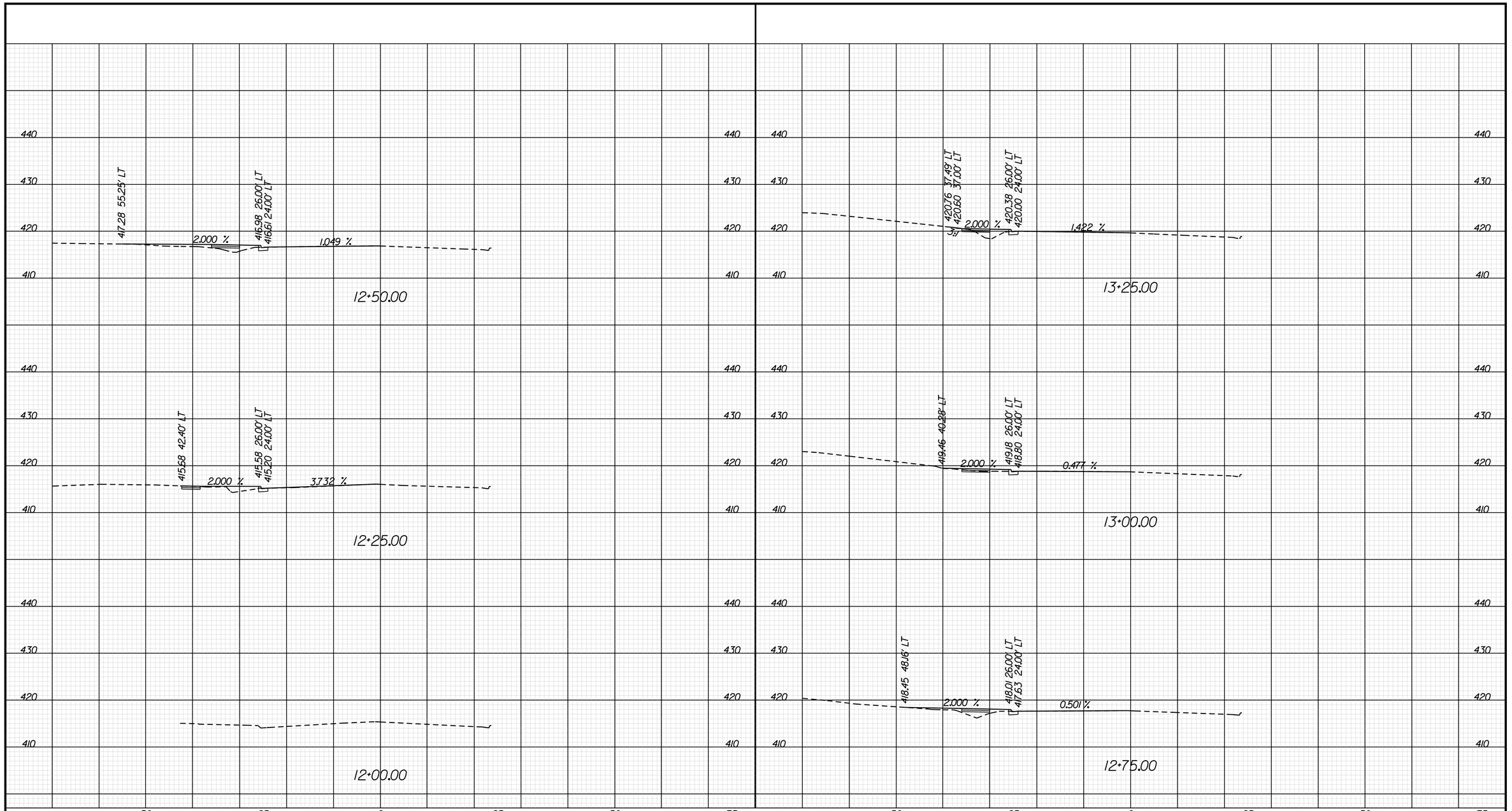
SCALE
HORIZ= 1"=10'
VERT= 1"=10'

DESIGNED BY: CMW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET
XI

10/20/2020

FUND



SCALE H= 10, V= 10

0 10' 20'

0 10' 20'

ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:31:31 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD PEDESTRIAN IMPROVEMENTS

CROSS SECTIONS - Station 12+00.00 To Station 13+25.00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

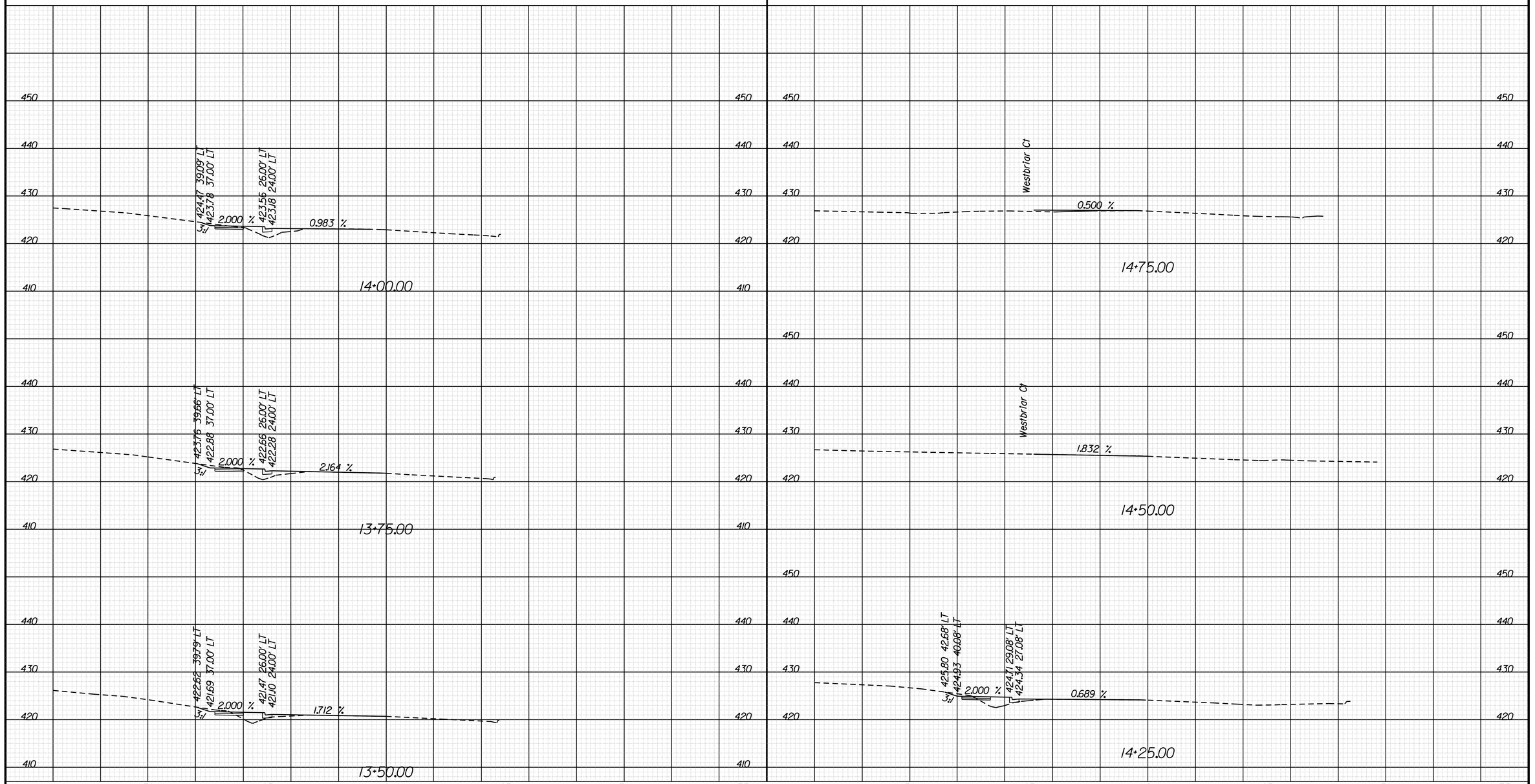
SCALE
HORIZ= 1"=10'
VERT= 1"=10'

DESIGNED BY: CMW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET X2

10/20/2020

FUND*



SCALE H= 10, V= 10

0 10' 20'

0 10' 20'

ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:31:17 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD PEDESTRIAN IMPROVEMENTS

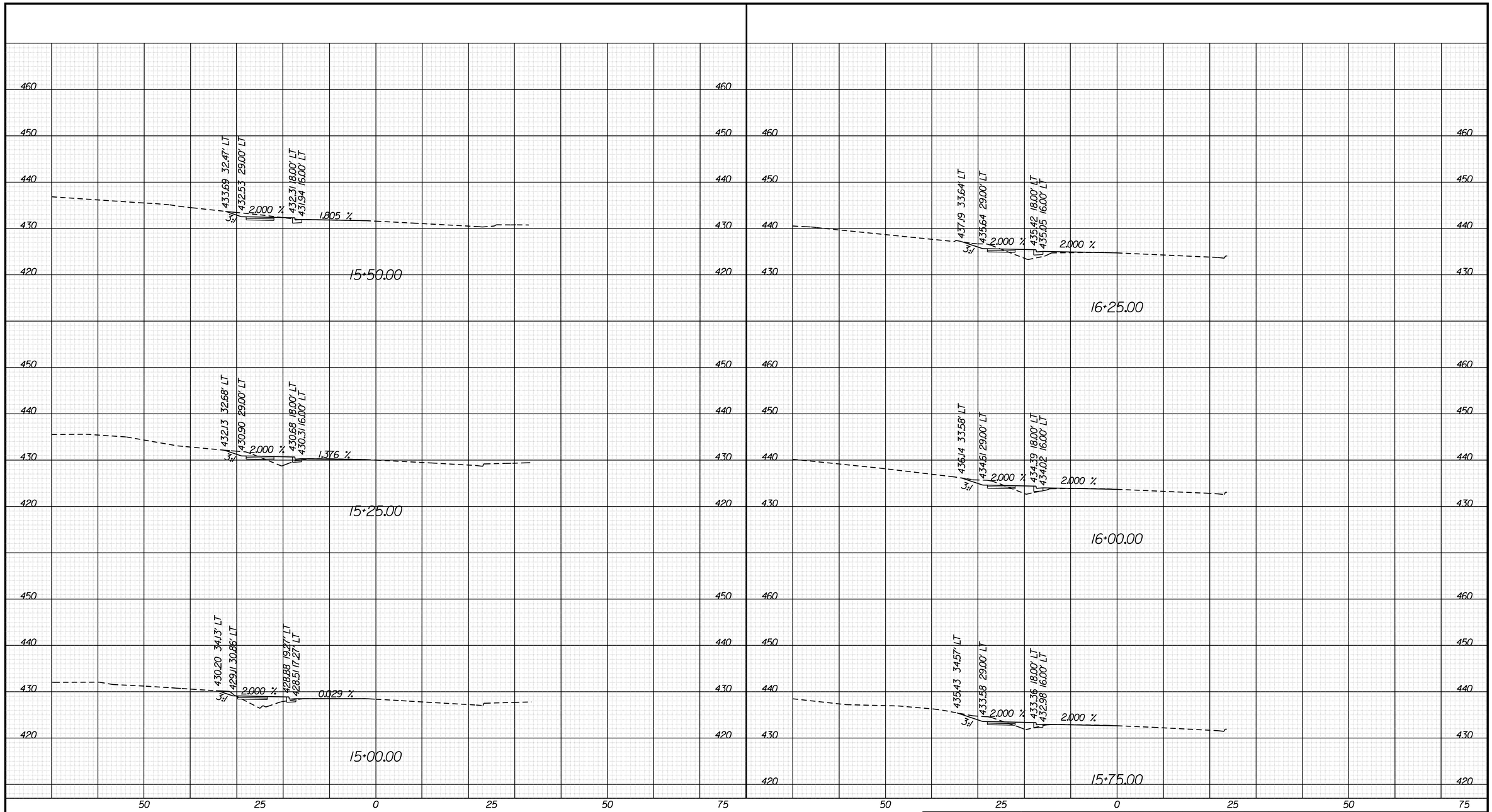
CROSS SECTIONS - Station 13+50.00 To Station 14+75.00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

SCALE	DESIGNED BY: CMW, P.E.	SHEET
HORIZ= 1"=10'	DRAFTED BY: LKG, JRB	X3
VERT= 1"=10'	CHECKED BY: ADW, P.E.	

10/20/2020

FUND*



SCALE H= 10, V= 10

0 10' 20'

20' 10' 0

ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:31:02 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD PEDESTRIAN IMPROVEMENTS

CROSS SECTIONS - Station 15+00.00 To Station 16+25.00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

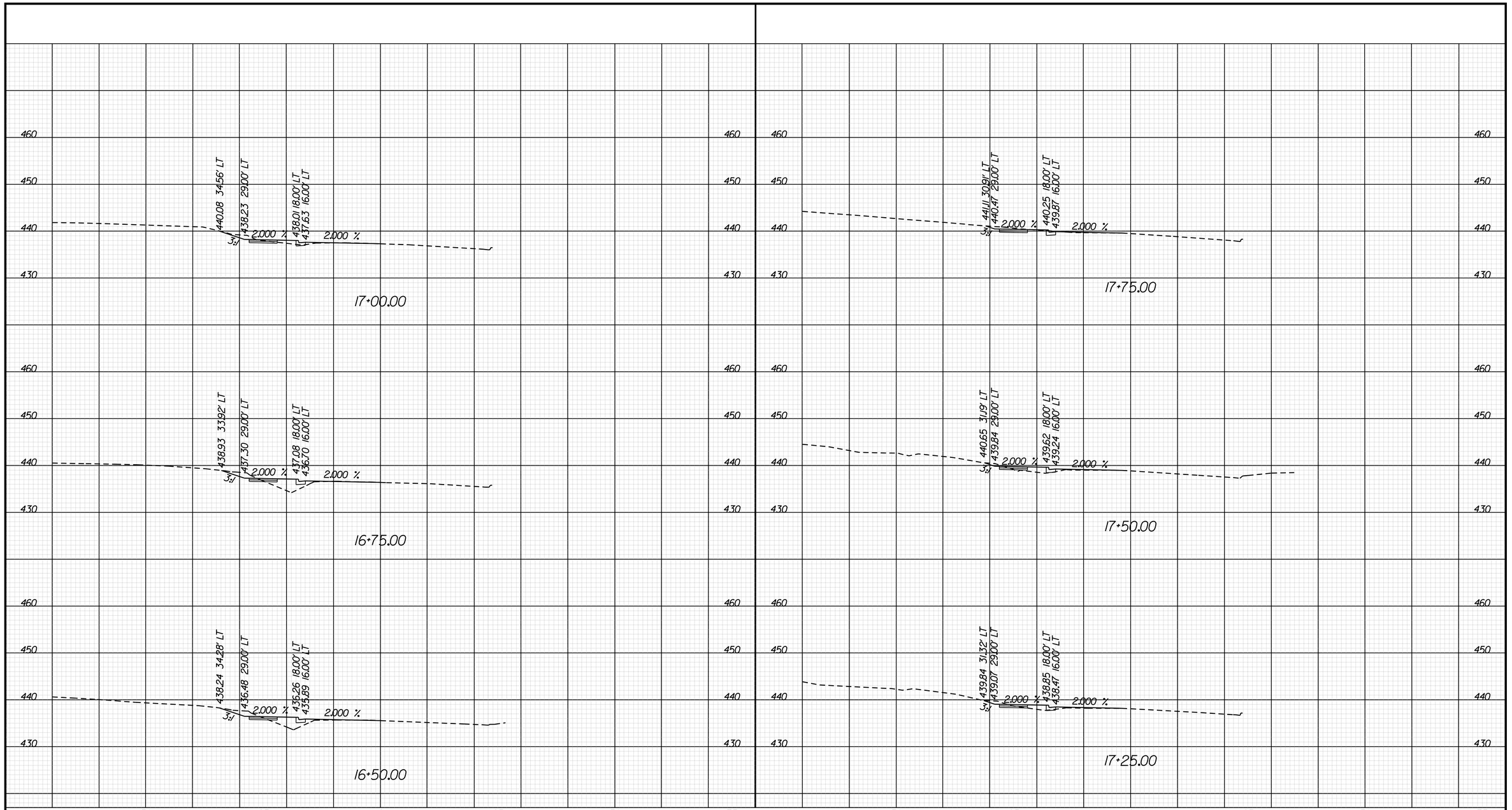
SCALE
HORIZ= 1"=10'
VERT= 1"=10'

DESIGNED BY: CMW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET X4

10/20/2020

FUND*



EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:30:47 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

OLD COURTHOUSE ROAD PEDESTRIAN IMPROVEMENTS

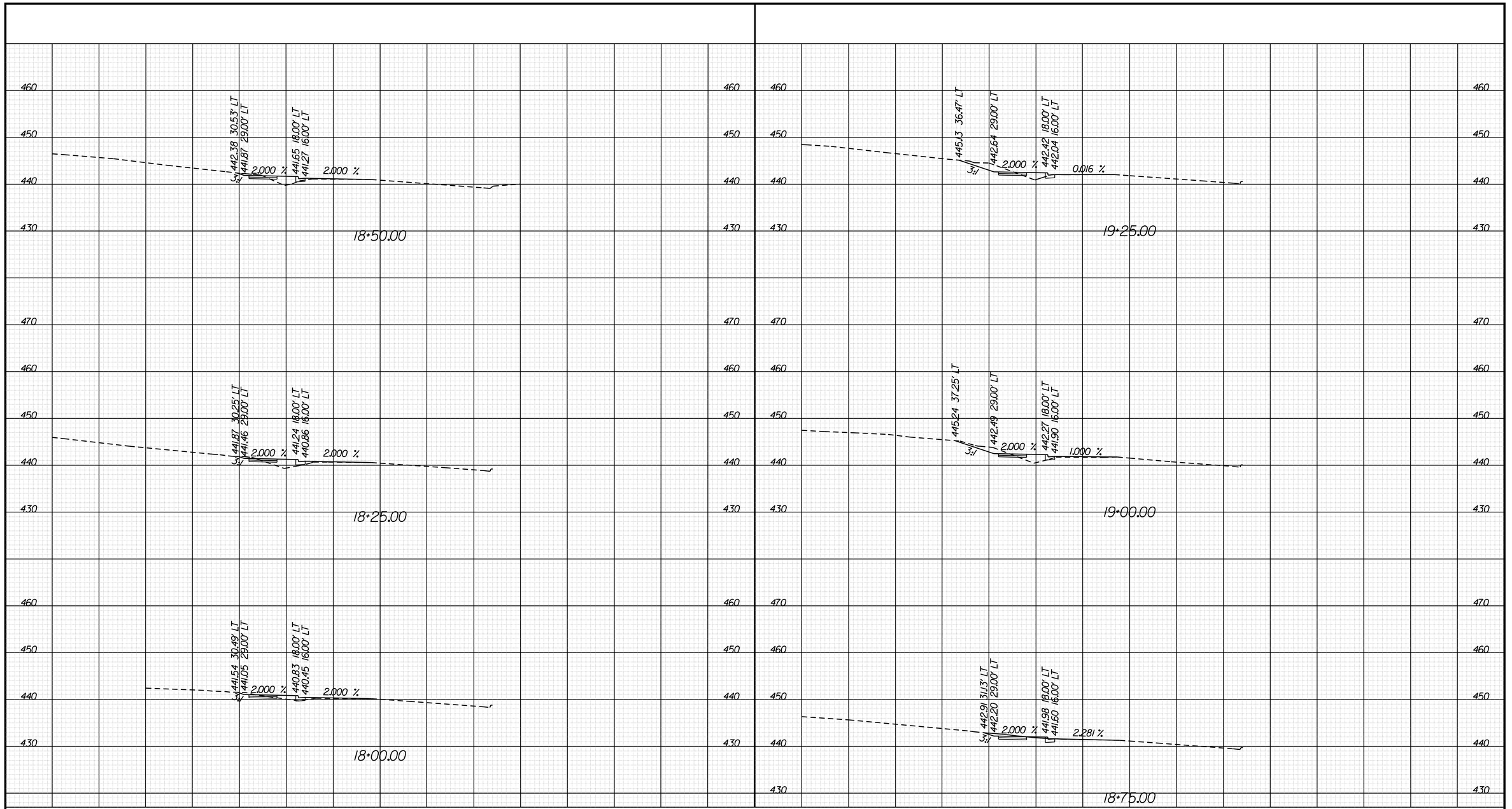
CROSS SECTIONS - Station 16+50.00 To Station 17+75.00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS				
△*	DESCRIPTION	BY	APPROVED	DATE

SCALE	DESIGNED BY: CMW, P.E.	SHEET
HORIZ: 1"=10'	DRAFTED BY: LKG, JRB	X5
VERT: 1"=10'	CHECKED BY: ADW, P.E.	

10/20/2020

FUND*



EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

COMMONWEALTH OF VIRGINIA
ADAM D. WELSCHENBACH
Lic. No. 044359
PROFESSIONAL ENGINEER

Adam Welschenbach 19:30:32 -04'00' 2020.10.26

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

REVISIONS	△*	DESCRIPTION	BY	APPROVED	DATE

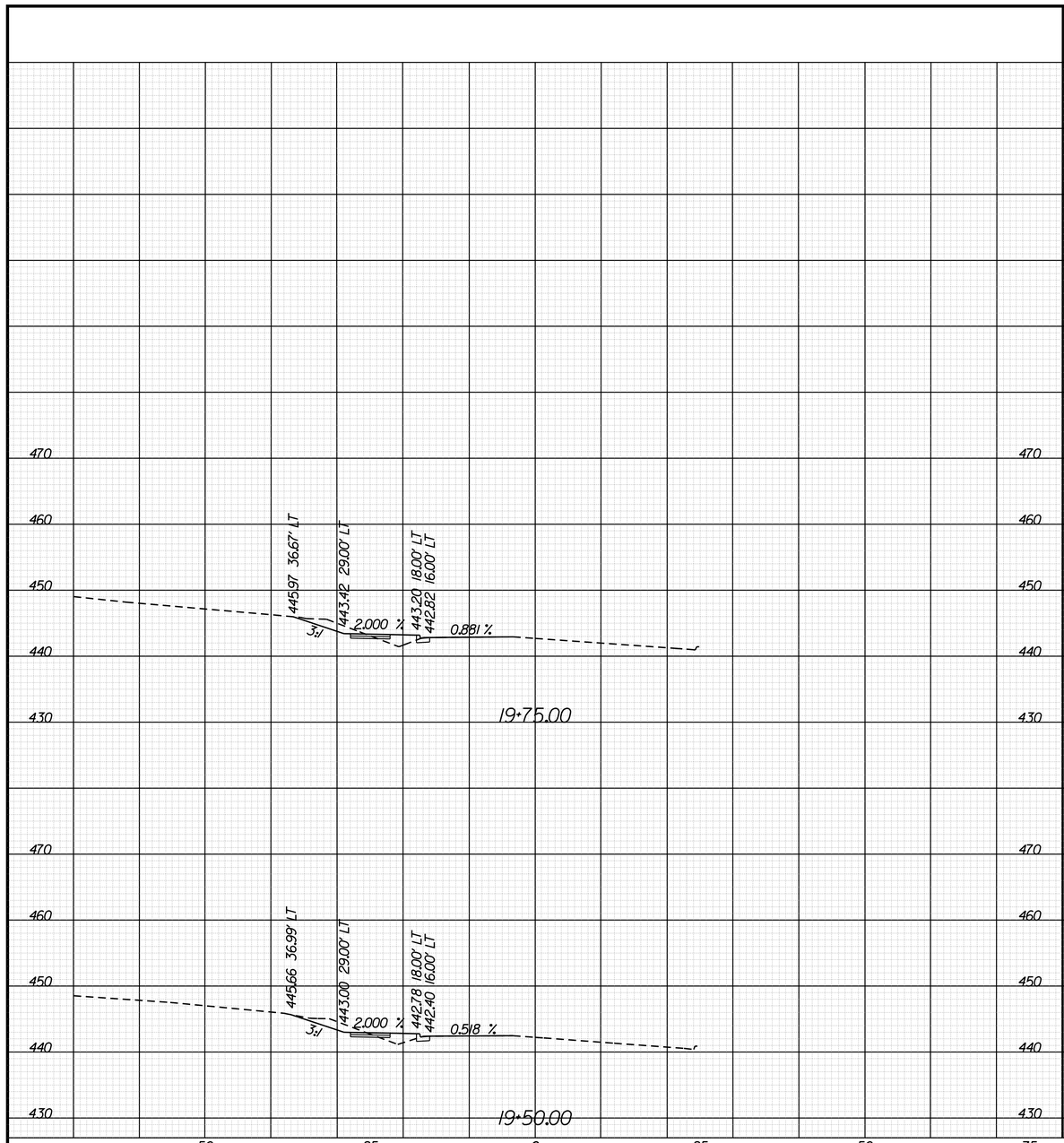
OLD COURTHOUSE ROAD PEDESTRIAN IMPROVEMENTS

CROSS SECTIONS - Station 18+00.00 To Station 19+25.00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

SCALE	DESIGNED BY: CMW, P.E.	SHEET
HORIZ= 1"=10'	DRAFTED BY: LKG, JRB	X6
VERT= 1"=10'	CHECKED BY: ADW, P.E.	

10/20/2020

FUND*



SCALE H= 10, V= 10

0 10' 20'

0 10' 20'

ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:30:18 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD PEDESTRIAN IMPROVEMENTS

CROSS SECTIONS - Station 19+50.00 To Station 20+50.00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS △	DESCRIPTION	BY	APPROVED	DATE

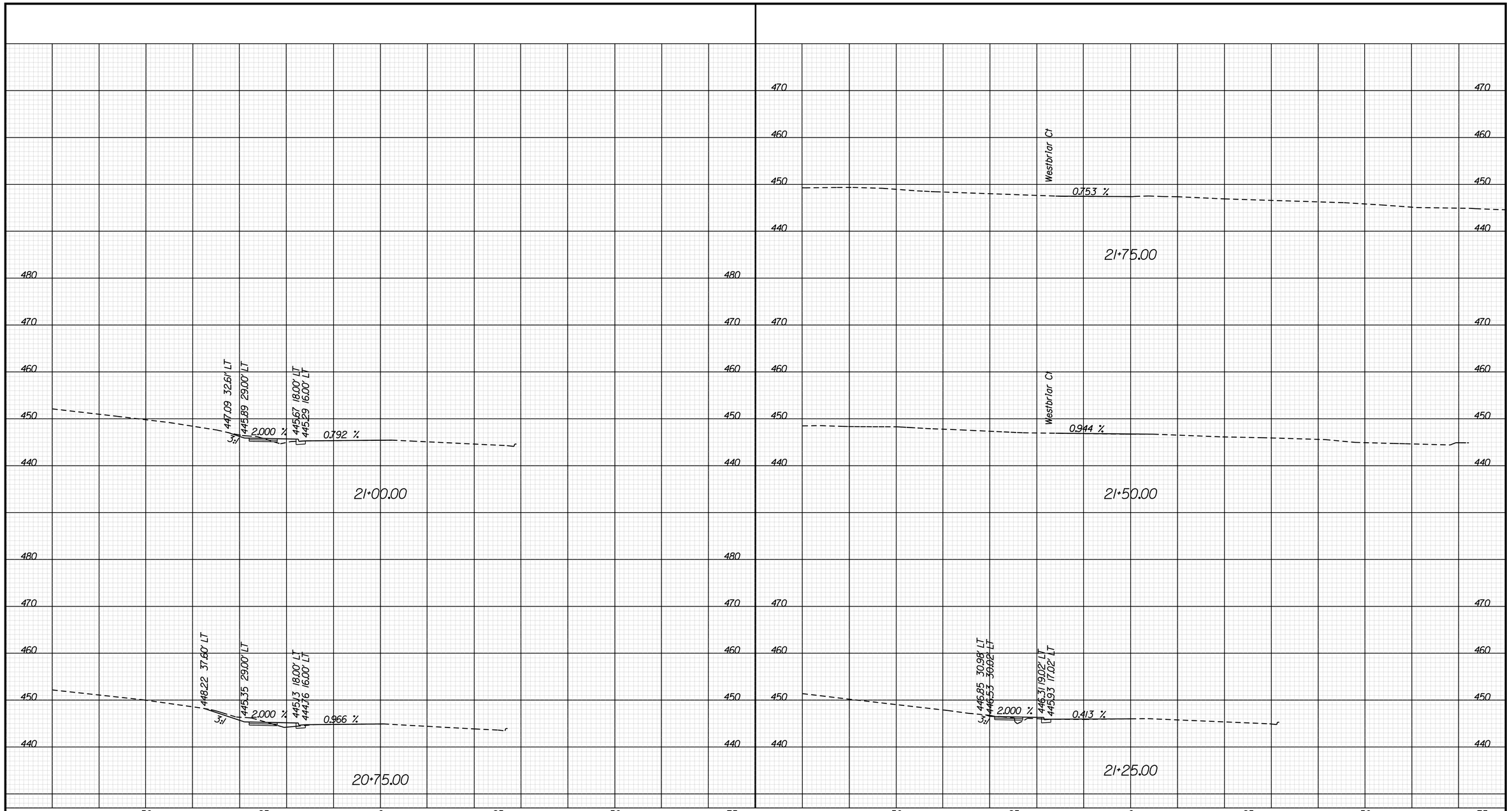
SCALE
HORIZ= 1"=10'
VERT= 1"=10'

DESIGNED BY: CMW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET
X7

10/20/2020

FUND#



SCALE H= 10, V= 10

0 10' 20'

20' 10' 0

ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:30:05 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD
PEDESTRIAN IMPROVEMENTS
CROSS SECTIONS - Station 20+75.00 To Station 21+75.00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS	△	DESCRIPTION	BY	APPROVED	DATE

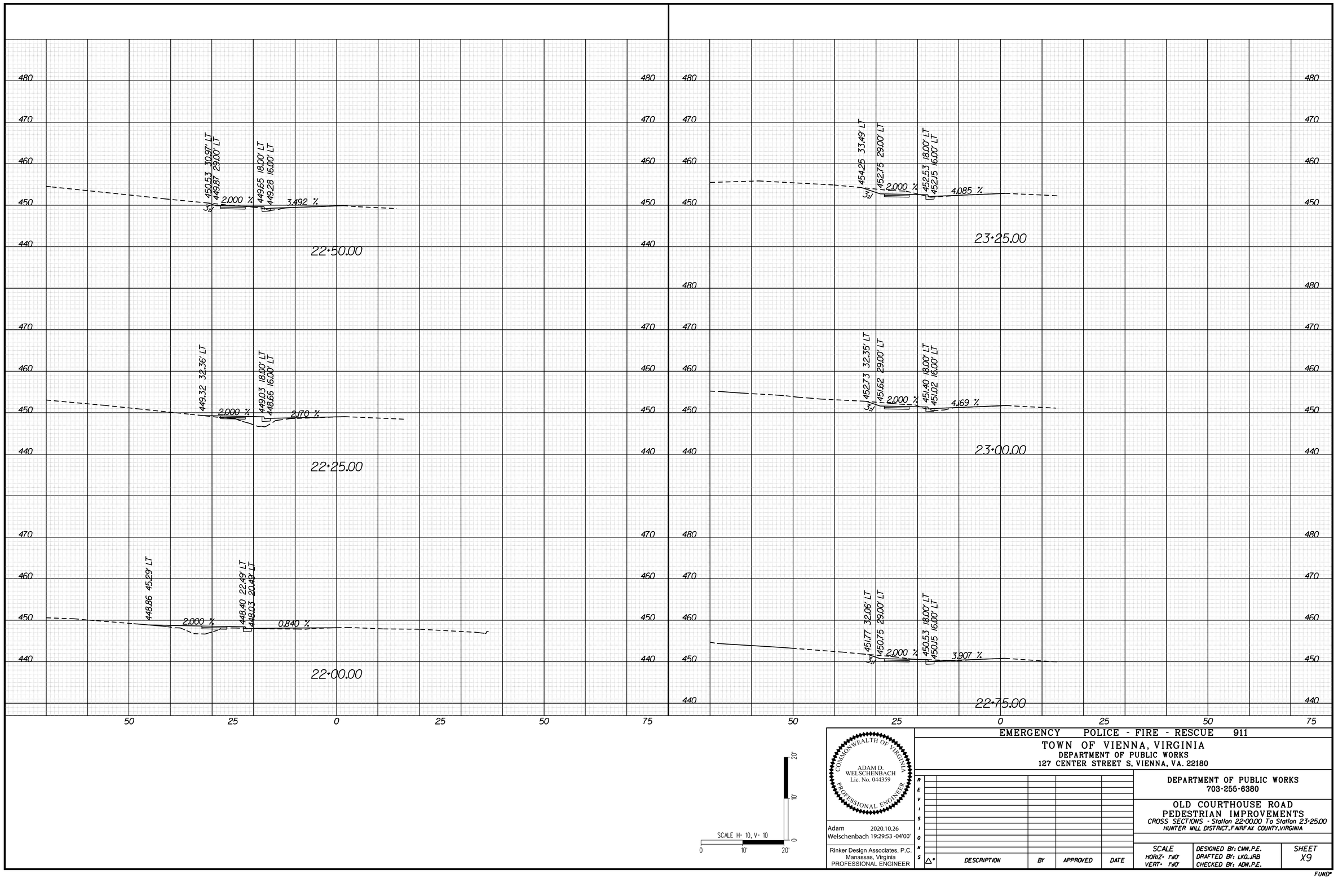
SCALE HORIZ= 1"=10'
VERT= 1"=10'

DESIGNED BY: CMW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET X8

10/20/2020

FUND



ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:29:53 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD PEDESTRIAN IMPROVEMENTS

CROSS SECTIONS - Station 22+00.00 To Station 23+25.00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS △#	DESCRIPTION	BY	APPROVED	DATE

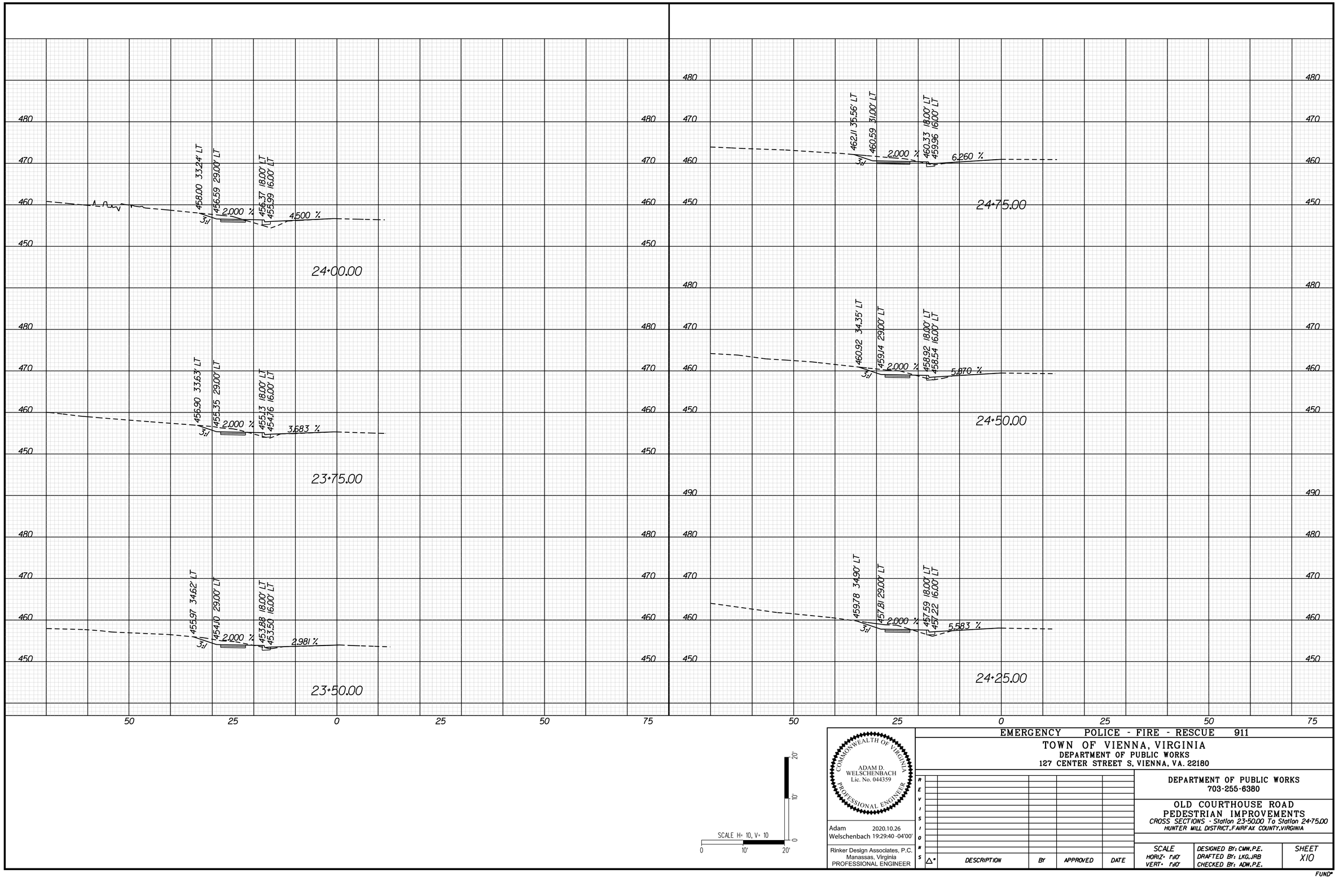
SCALE
HORIZ= 1"=10'
VERT= 1"=10'

DESIGNED BY: CMW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET X9

10/20/2020

FUND#



ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:29:40 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD PEDESTRIAN IMPROVEMENTS

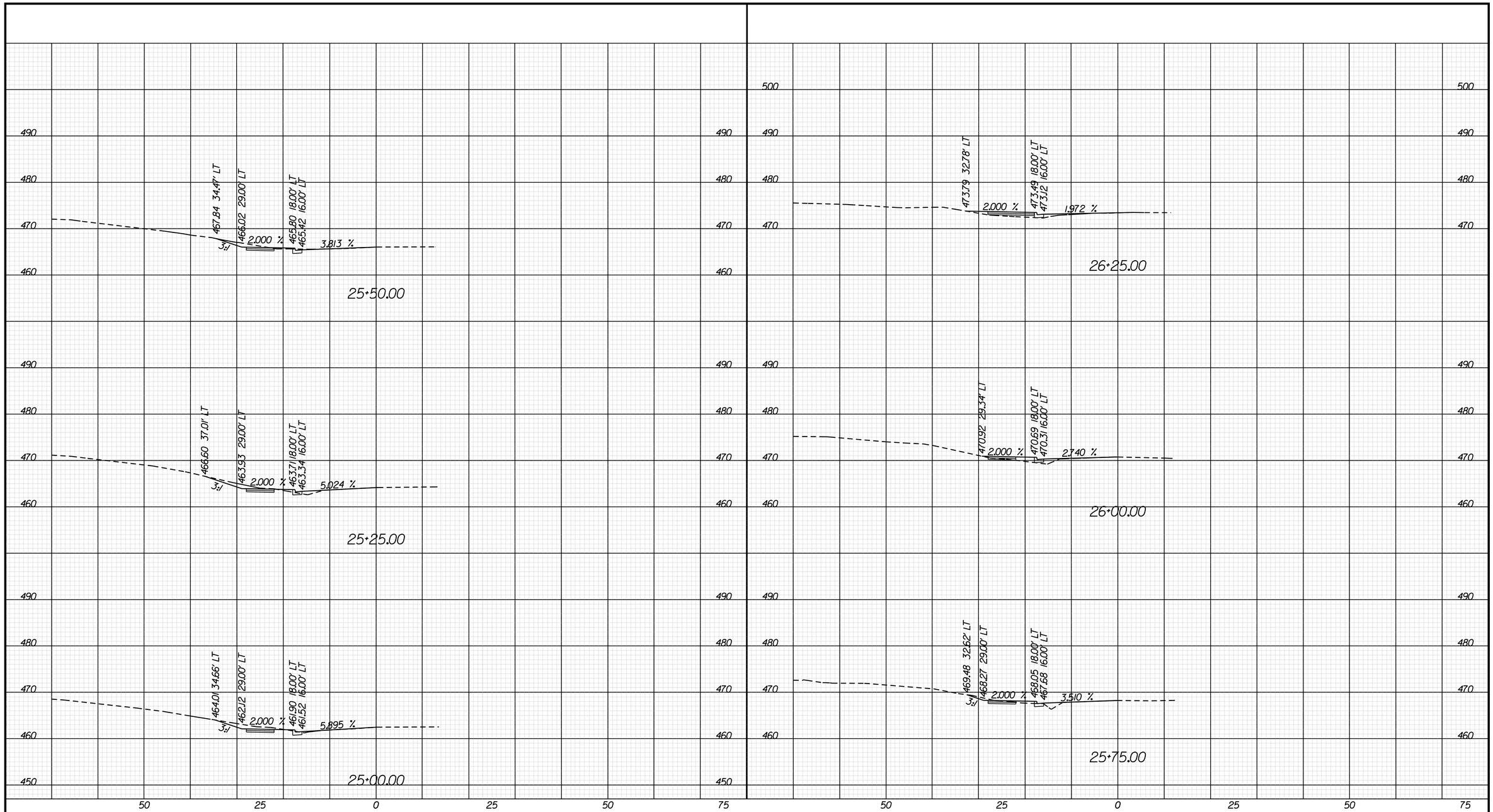
CROSS SECTIONS - Station 23+50.00 To Station 24+75.00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS				
△	DESCRIPTION	BY	APPROVED	DATE

SCALE	DESIGNED BY: CMW, P.E.	SHEET
HORIZ: 1"=10'	DRAFTED BY: LKG, JRB	X10
VERT: 1"=10'	CHECKED BY: ADW, P.E.	

10/20/2020

FUND:



ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:29:26 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD PEDESTRIAN IMPROVEMENTS

CROSS SECTIONS - Station 25+00.00 To Station 26+25.00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS

△*	DESCRIPTION	BY	APPROVED	DATE

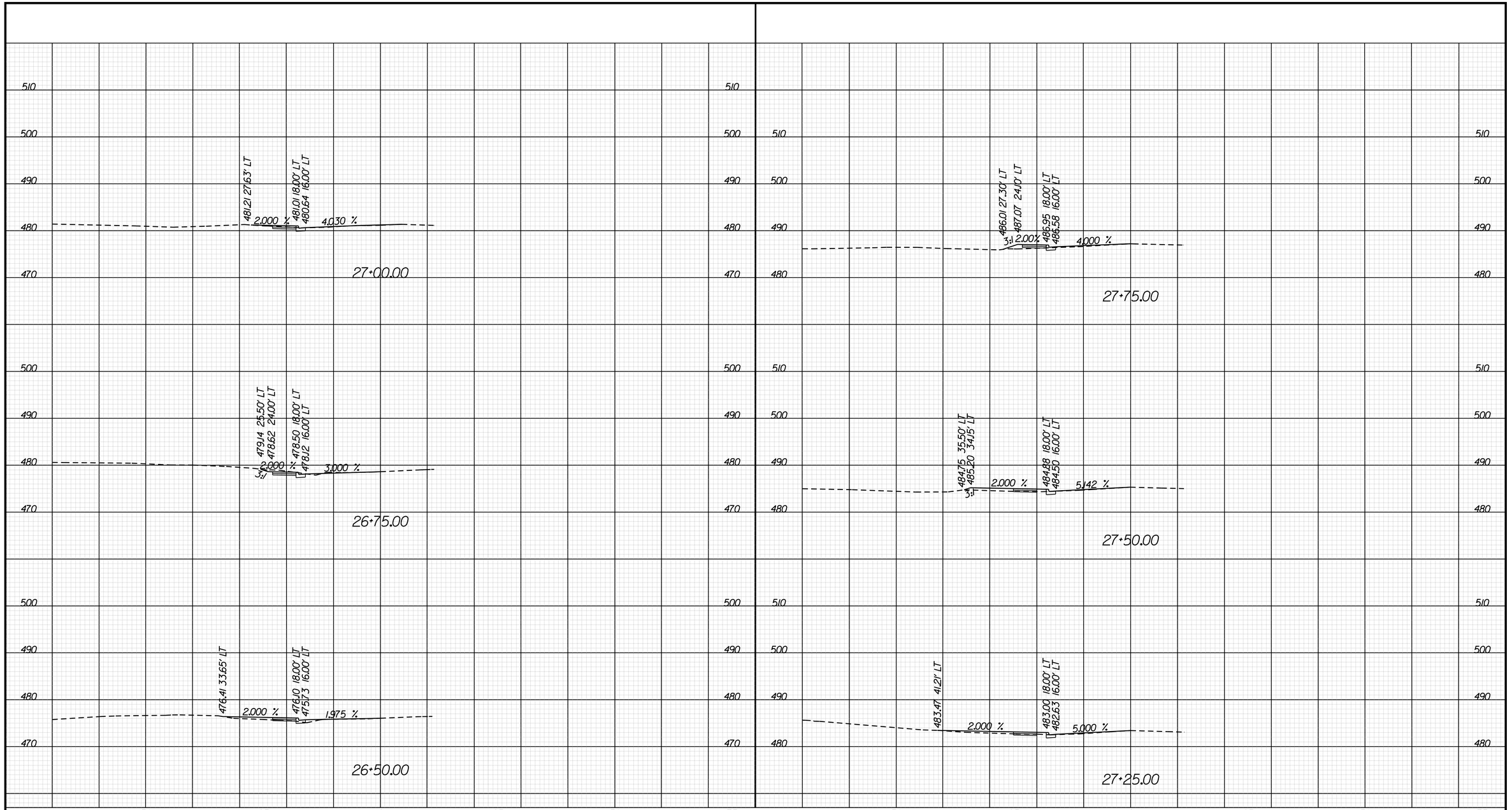
SCALE
HORIZ= 1"=10'
VERT= 1"=10'

DESIGNED BY: CMW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET XII

10/20/2020

FUND*



ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:29:13 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD PEDESTRIAN IMPROVEMENTS

CROSS SECTIONS - Station 26+50.00 To Station 27+75.00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS	△	DESCRIPTION	BY	APPROVED	DATE

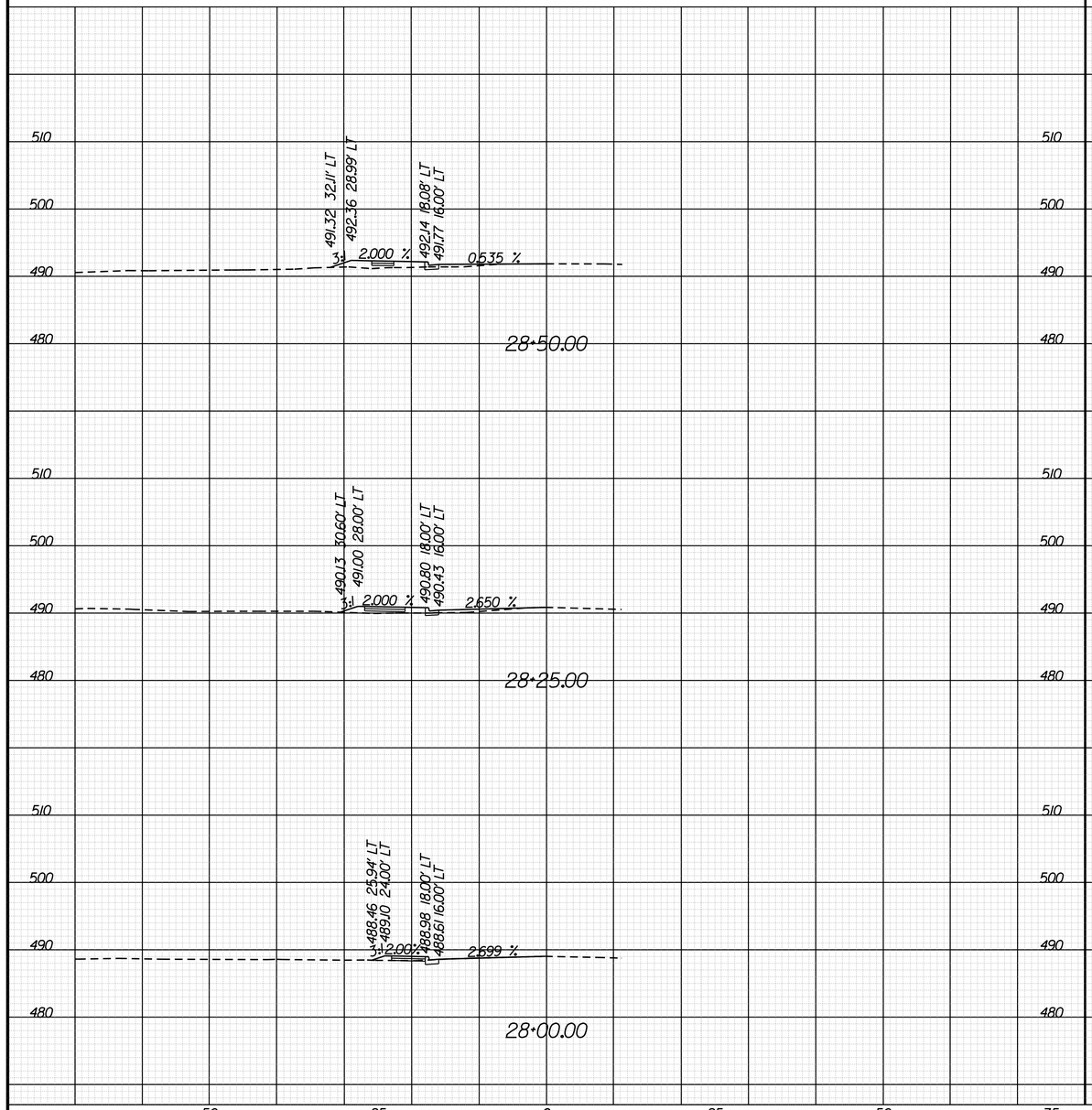
SCALE
HORIZ= 1"=10'
VERT= 1"=10'

DESIGNED BY: CMW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET
X12

10/20/2020

FUND



SCALE H= 10, V= 10

0 10' 20'

20' 10' 0

ADAM D. WELSCHENBACH
Lic. No. 044359
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

Adam Welschenbach 2020.10.26 19:28:59 -04'00'

Rinker Design Associates, P.C.
Manassas, Virginia
PROFESSIONAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911

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

DEPARTMENT OF PUBLIC WORKS
703-255-6380

OLD COURTHOUSE ROAD PEDESTRIAN IMPROVEMENTS

CROSS SECTIONS - Station 28+00.00 To Station 29+25.00
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

REVISIONS

△*	DESCRIPTION	BY	APPROVED	DATE

SCALE
HORIZ= 1"=10'
VERT= 1"=10'

DESIGNED BY: CMW, P.E.
DRAFTED BY: LKG, JRB
CHECKED BY: ADW, P.E.

SHEET
X13

10/20/2020

FUND*