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CITY OF ROCKVILLE GENERAL NOTES: (NOV 2016)

1. THE APPLICANT IS THE ENTITY FOR WHICH THE CITY OF ROCKVILLE DEPARTMENT OF PUBLIC WORKS (DPW) HAS ISSUED A PERMIT. FOR DPW PROJECTS WHERE A PERMIT IS NOT APPLICABLE, THE ENTITY FOR WHICH THE CITY CONTRACT IS ISSUED SHALL BE CONSIDERED THE APPLICANT IN THESE NOTES. THE APPLICANT IS RESPONSIBLE FOR ALL CONTRACTORS, AGENTS, SUBCONTRACTORS, OR OTHER ENTITIES COMPLETING WORK UNDER THIS PERMIT AND/OR APPROVED PLAN.

2. THE APPLICANT MUST ARRANGE A PRE-CONSTRUCTION MEETING PRIOR TO COMMENCING ANY WORK. PROVIDE AT LEAST 48 HOURS OF NOTICE TO THE FOLLOWING: CITY PROJECT INSPECTOR LISTED IN THE PERMIT, CITY FORESTRY INSPECTOR AT 240-314-8713, IF REQUIRED BY EITHER A DPW AND/OR FORESTRY PERMIT, OR DPW SEDIMENT CONTROL INSPECTOR AT 240-314-8879, IF REQUIRED BY PERMIT.

3. THE APPLICANT MUST CONTACT MISS UTILITY AT 1-800-257-7777 OR #811 OR MISSUTILITY.NET SO THAT UTILITIES ARE MARKED PRIOR TO HOLDING ANY PRE-CONSTRUCTION MEETING.

4. INFORMATION CONCERNING EXISTING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES BY DIGGING TEST PITS AT THE UTILITY CROSSING WELL IN ADVANCE OF TRENCHING. IF CLEARANCE IS LESS THAN SHOWN ON THIS PLAN, CONTACT THE PROFESSIONAL ENGINEER WHO STAMPED THE DESIGN PLANS BEFORE PROCEEDING WITH CONSTRUCTION.

5. MAINTAIN A MINIMUM ONE-FOOT VERTICAL CLEARANCE BETWEEN ALL CITY UTILITIES CROSSING ANY OTHER UTILITY, UNLESS OTHERWISE NOTED. MAINTAIN A FIVE-FOOT HORIZONTAL CLEARANCE WITH BETWEEN A CITY UTILITY WITH ANY OTHER UTILITY OR STRUCTURE. THE ONLY EXCEPTION IS THAT THERE SHALL BE A TEN-FOOT HORIZONTAL CLEARANCE BETWEEN CITY WATER AND SEWER MAINS.

6. AT THE END OF EACH DAY, ALL TRENCHES SHALL BE BACKFILLED, ALL EQUIPMENT SECURED AND THE AREA LEFT IN A SAFE CONDITION. STEEL PLATES ARE ALLOWED TO REMAIN NO LONGER THAN SEVEN DAYS. PLATES ARE TO BE NOTCHED (RECESSED) AND PINNED TO THE ROADWAY. PLATES MUST BE LARGE ENOUGH TO ALLOW A MINIMUM OF ONE-FOOT BEARING ON ALL FOUR SIDES OF THE PAVEMENT SURROUNDING THE EXCAVATION. THE STEEL PLATE REQUIREMENTS ONLY APPLY TO PUBLIC STREETS.

7. THE PUBLIC ROAD UTILITY PATCH SHALL BE IN ACCORDANCE WITH CITY STANDARD DETAIL #60, CONTAINED HEREIN, OR AS SHOWN ON THE PLANS. ALL TRENCHES IN PUBLIC STREETS SHALL BE FILLED WITH COMPACTED GRADED AGGREGATE BASE (GAB) FROM BELOW THE PAVEMENT TO THE TOP OF THE PIPE EMBEDMENT ZONE OR TO A DEPTH OF FIVE-FEET, WHICHEVER IS LESS.

8. DPW NORMAL WORKING HOURS ARE MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS, FROM 7 A.M. TO 5 P.M. THE CITY OBSERVES THE FOLLOWING HOLIDAYS: NEW YEAR'S DAY, MARTIN LUTHER KING'S BIRTHDAY, PRESIDENT'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS' DAY, THANKSGIVING DAY, THANKSGIVING FRIDAY AND CHRISTMAS DAY, AND ALL DAYS OF GENERAL AND CONGRESSIONAL ELECTIONS THROUGHOUT THE STATE. THE CONTRACTOR WILL NOT BE PERMITTED TO CLOSE LANES OR DO ANY WORK THAT REQUIRES THE SERVICES OF THE CITY FORCES, OUTSIDE OF THE NORMAL WORKING HOURS, UNLESS OR AUTHORIZED BY DPW IN WRITING. THE CONTRACTOR, WITH WRITTEN PERMISSION OF DPW MAY BE PERMITTED TO WORK OUTSIDE OF THE NORMAL WORK HOURS FOR CLEAN-UP ACTIVITIES OR OTHER SUCH ITEMS THAT DO NOT ADVERSELY IMPACT TRAFFIC, RESIDENTS OR CITY SERVICE.
9. TRAFFIC MUST BE MAINTAINED ON ALL ROADWAYS WITHIN THE CONSTRUCTION AREA AS DIRECTED BY DPW. NO LANE CLOSURE SHALL BE PERMITTED BETWEEN 7:00-9:00 A.M. OR 3:30-6:00 P.M. MONDAY THROUGH FRIDAY. AN EXCEPTION IS THAT LANE CLOSURES ARE PERMITTED ON SECONDARY RESIDENTIAL STREETS AT ANY TIME DURING NORMAL WORKING HOURS. DEPLOYMENT AND DESIGN OF ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). IF REQUIRED, TRAFFIC CONTROL PLANS SHALL BE REVIEWED AND APPROVED BY THE CHIEF OF THE TRAFFIC AND TRANSPORTATION DIVISION. DPW MAY SUSPEND LANE CLOSURE OR OTHER TRAFFIC CONTROLS AT ANY TIME DURING, OR IN ADVANCE OF, INCLEMENT WEATHER EVENTS.

10. SHEETING AND SHORING IS THE TOTAL RESPONSIBILITY OF THE APPLICANT. A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND SHALL SEAL THESE DRAWINGS. PROVIDE THREE COPIES TO DPW FOR INFORMATIONAL PURPOSES ONLY.

11. IN ADDITION TO ALL CITY PERMITS, THE APPLICANT IS RESPONSIBLE TO ENSURE THAT ALL NECESSARY FEDERAL, STATE AND/OR MONTGOMERY COUNTY APPROVALS AND/OR PERMITS HAVE BEEN OBTAINED IN ASSOCIATION WITH THIS APPROVED PLAN.

12. SHOP DRAWINGS MUST BE PREPARED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND PRIOR TO FABRICATION. THE PROFESSIONAL ENGINEER WHO SEALED THE DESIGN PLANS (BUT NOT THE SHOP DRAWINGS) MUST APPROVE THE SHOP DRAWINGS FOR CONFORMANCE TO CONSTRUCTION. ALL PIPES AND STRUCTURES IN PAVED AREAS SHALL BE DESIGNED FOR HS-20 VEHICLES LOADING.

13. UPON COMPLETION OF CONSTRUCTION, THE APPLICANT SHALL PROVIDE THREE SETS OF RED LINED AS-BUILT PRINTS (24"x36") FOR REVIEW AND APPROVAL BY THE CITY. THE DRAWINGS MUST CONTAIN THE ORIGINAL APPROVAL SIGNATURES AND PROFESSIONAL ENGINEER'S SEAL AND SIGNATURE (A SCANNED IMAGE OF THE ORIGINAL MYLAR IS ACCEPTABLE). THE AS-BUILT SHALL BE SEALED BY A PROFESSIONAL SURVEYOR, AS APPROPRIATE AND MUST BE LICENSED BY THE STATE OF MARYLAND. THE SEAL SHALL NOTE THAT IT IS ONLY FOR THE AS-BUILT AND SHALL INCLUDE AN AS-BUILT CERTIFICATION TO THE CITY. UPON RECEIPT OF WRITTEN APPROVAL, THE APPLICANT SHALL PROVIDE APPROVED AS-BUILT MYLAR DRAWING ALONG WITH THE ORIGINAL MYLARS (WITH ALL ORIGINAL SIGNATURES) TO CITY PRIOR TO THE RELEASE OF THE PERMIT.

14. THE APPLICANT MUST COMPLY WITH THE MONTGOMERY COUNTY NOISE CONTROL ORDINANCE. PLEASE REFER TO THE MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AT 240-777-7770, ASKDEP@MONTGOMERYCOUNTYMD.GOV, OR WWW.MONTGOMERYCOUNTYMD.GOV/DEP.

OWNER/DEVELOPER CERTIFICATION

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT, OR ALL OF THESE, WILL BE DONE PURSUANT TO THIS PLAN AND THAT RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF TRAINING AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING OF THE PROJECT AND THAT APPLICABLE SEDIMENT CONTROL CONDITIONS AND REQUIREMENTS OF THE CITY OF ROCKVILLE AND THE STATE OF MARYLAND AND ITS AGENCIES ARE HEREBY MADE PART OF THIS PLAN.

SIGNATURE: _____
PRINTED NAME AND TITLE: _____
DATE: _____

DESIGN AND QUANTITIES CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND THE ORDINANCE OF THE ROCKVILLE CITY CODE. THE ESTIMATE TOTAL AMOUNT OF EXCAVATION AND FILL HAS BEEN COMPUTED TO BE 107 CUBIC YARDS OF EXCAVATION AND 211 CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE 46,929 SQUARE FEET OF WHICH 46,929 IS ON-SITE PROPOSED DISTURBANCE RIGHT-OF-WAY. THE IMPERVIOUS AREA SUBJECT TO STORMWATER MANAGEMENT SHOWN ON THIS PLAN IS 0.53 ACRES OF WHICH 0.53 IS ON-SITE IMPERVIOUS AREA WITHIN THE RIGHT-OF-WAY.

SIGNATURE: _____
PRINTED NAME AND TITLE: _____
DATE: _____
TITLE & LICENSE NUMBER: _____

**WALLACE
MONTGOMERY**
EXPERIENCED PLANNERS-SURVEYORS-CONSTRUCTION MANAGERS
10150 York Road, Suite 200
Purcellville, Maryland 22080
410-684-8800 Fax: 410-687-0925 Fax
www.wallace-montgomery.com

BEFORE BEGINNING CONSTRUCTION
CONTACT
"MISS UTILITY"

WWW.MISSUTILITY.NET
OR
1-800-257-7777
OR 811
AT LEAST 48 HOURS
PRIOR TO EXCAVATION



DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGNED E. J. M.
DRAFTED E. J. M.
CHECKED S. H. D.

DESIGN PLAN APPROVAL

DIRECTOR OF PUBLIC WORKS

APPROVAL DATE

PWK# _____ SCP# _____
SMP# _____ REVIEWED BY _____

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT

APPROVAL DATE

TITLE SHEET

ROCKVILLE SENIOR CENTER ENTRANCE

Election District No. 10 City of Rockville, Maryland

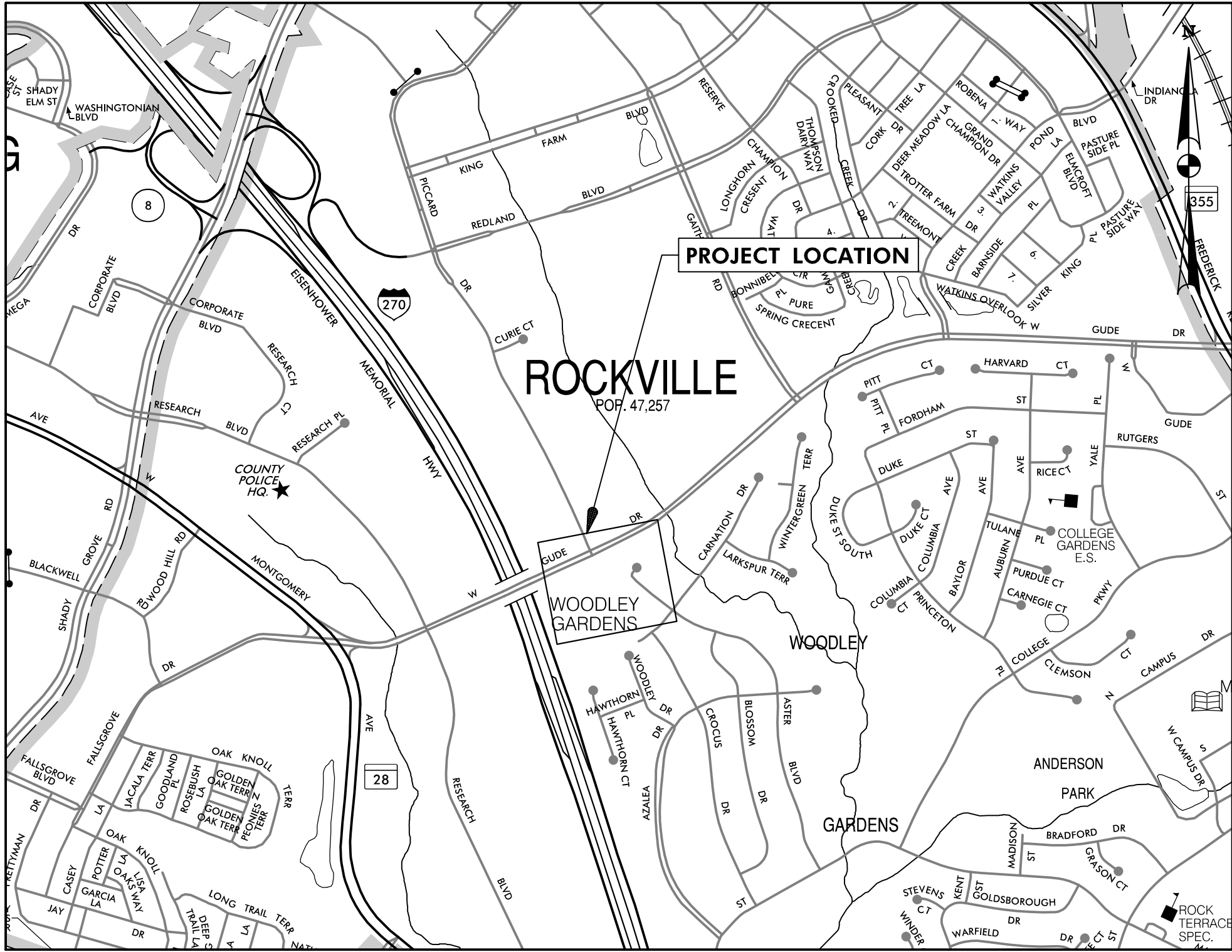
DATE SUBMITTED:
OCT. 2024

SCALE
N.T.S.

SHEET
NO. 1
OF 15

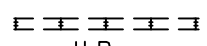
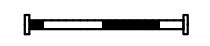
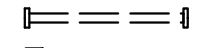
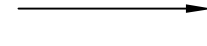
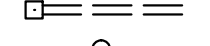
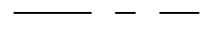
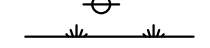
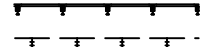
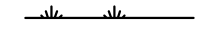
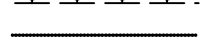
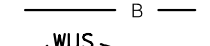
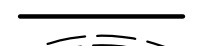
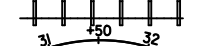
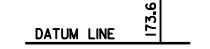
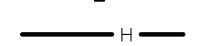
FILE #

CITY OF ROCKVILLE, MD
DEPARTMENT OF PUBLIC WORKS
ROCKVILLE SENIOR CENTER ENTRANCE



VICINITY MAP
SCALE : 1"= 1000'

CONVENTIONAL SIGNS

PROPOSED MEDIAN BARRIER.....		PROPOSED PIPE / CULVERT.....	
ELECTRICAL HAND BOX - SIGNALS.....		EXISTING PIPE / CULVERT.....	
FLOW LINE.....		EXISTING DROP INLET.....	
STATE, COUNTY OR CITY LINES.....		UTILITY POLE.....	
PROPOSED TRAFFIC BARRIER.....		WETLAND.....	
EXISTING TRAFFIC BARRIER.....		WETLAND BUFFER.....	
PROPOSED FENCE LINE.....		WATERS OF THE U.S.....	
EXISTING FENCE LINE.....		HEDGE / TREE LINE.....	
RIGHT OF WAY LINE.....		BUSH / TREE.....	
EXISTING ROADWAY.....		CONIFEROUS TREE.....	
RAILROAD.....		GROUND ELEVATION.....	
BASE LINE OR SURVEY LINE.....		GRADE ELEVATION.....	
FIRE HYDRANT.....			
HISTORIC BOUNDARY.....			
WATERS OF THE U.S.....			

PROFESSIONAL CERTIFICATION:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. 39917, Expiration Date: 1/18/2025.

Seth Darlington
NAME

NOTES:

1. JOB SAFETY AND TRAFFIC CONTROL SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFORM TO ALL LAWS AND REGULATIONS IN REGARD TO WORK UNDER OR ADJACENT TO OVERHEAD POWER LINES.

3. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NATURALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO COMPLETE SUCH WORK.

4. THE CONTRACTOR SHALL NOTE THAT IN CASE OF A DISCREPANCY BETWEEN SCALED AND COMPUTED DIMENSIONS SHOWN ON THESE PLANS, THE COMPUTED DIMENSIONS SHALL GOVERN.

UTILITY CONTACTS

AT&T TRANS	800-252-1133
CITY OF ROCKVILLE/ PINPOINT UNDERGROUND	301-868-6803
CITY OF ROCKVILLE	240-314-8577
FIBERLIGHT/ SUNBELT TELECOM	877-596-1500
LEVEL3 NOW CENTURY LINK	877-366-8344
MCI	800-289-3427
MONTGOMERY COUNTY GOVERNMENT	786-345-0991
PEPCO	301-210-0355
VERIZON	301-210-0355
WASHINGTON GAS	301-210-0355

NOTES:

1. CONTRACTOR TO COORDINATE HANDBOX ADJUSTMENTS WITH UTILITY OWNER.LEVELING HANDBOXES IS INCIDENTAL TO SIDEWALK WORK.

NO.	DESCRIPTION OF REVISION	P.E. INITIAL	DATE	DPW	DATE
APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL					

GEOTECHNICAL NOTES

November 2016

1. The Applicant shall be responsible for all subgrade inspection and soil compaction testing associated with any work within a City right-of-way, private property subject to a public access easement, or private property subject to City easement for public utilities or public improvements; and/or any work associated with a sediment control facility, or stormwater management practice. This work shall be completed by or under the supervision of a Professional Engineer licensed in the State of Maryland. For the purposes of these notes and associated approved plans, this Engineer shall be referred to as the Geotechnical Engineer and shall be an independent firm from the Applicant.
2. Any plans subject to NRCS-MD Pond Code 378 Standards/Specifications, as shown on the plans, shall supersede these notes when these notes are less stringent or in case of conflict. Any reference to the Engineer in the 378 Standard/Specifications shall be the Professional Engineer who stamped and sealed the design plans. Any reference to the Geotechnical Engineer shall be the Geotechnical Engineer as defined above or the Geotechnical Engineer who completed certain aspects of the pond design.
3. All inspections, tests, supporting data, reports, and certifications shall be provided to the City of Rockville Department of Public Works (DPW) and shall be sealed by the Geotechnical Engineer. Daily inspection reports, if requested by the City, can be provided without being immediately sealed by the Geotechnical Engineer. These reports shall be compiled, reviewed, sealed and then submitted to DPW at a later date as agreed upon by the City.
4. The Geotechnical Engineer shall approve all fill materials that are used for the project. The Geotechnical Engineer shall obtain samples of proposed fill materials and perform all required testing to determine that fill materials are in conformance with this plan.
5. The Geotechnical Engineer shall provide a report that certifies the subgrade preparation and fill/backfill placement are in conformance with this plan. The certification applies to all fill, backfill, and subgrade operations subject to this plan as detailed in Note #1, including utility trenches. When constructing new roadway pavement this certification report shall be provided prior to the placement of Graded Aggregate Base (GAB). All other certifications shall be provided as requested by the City.
6. All fill and/or backfill material shall be free from organics, frozen material, rocks/stones greater than one and a half inches in any dimension, waste metal products, unsightly debris, toxic material, or other deleterious materials; shall be a minimum of 105 pounds per cubic foot for the maximum dry density according to AASHTO T-180, Method C; and shall not have a liquid limit greater than 30 nor a plasticity index greater than six according to ASTM D-4318. All other materials shall meet the requirements stated in Category 900 of the latest edition of the Maryland State Highway Administration (MSHA) Standard Specifications for Construction and Materials.
7. Compact the material that is one foot below the top of subgrade to at least 92 percent of the maximum dry density per AASHTO T-180. Compact the top one foot to at least 97 percent of the maximum dry density. When necessary, add water or dry the layer in order to compact to the required density. Generally the material shall be within two percent of the optimum moisture content but may be outside of this range if approved by the Geotechnical Engineer.
8. Fill and backfill materials must completely fill all spaces under and adjacent to the structure or pipe. For Stormwater Management embankments, the Applicant shall scarify each lift with a sheepsfoot roller or claw to a minimum depth of two-inches prior to placing the next lift. The Applicant shall scarify embankments parallel with the centerline of the dam core and perpendicular to the principal spillway. Bedding shall be provided in accordance with details indicated on the construction drawings. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four-feet, measured horizontally, to any part of a structure. Under no circumstances shall the Applicant drive equipment over any part of a corrugated metal pipe unless there is a compacted fill of 24-inches or greater over the structure or pipe.
9. At a minimum, compaction tests shall be completed for every lift of fill or backfill. The testing frequency shall be at least once per 150 linear feet of trench or once per 1,500 square feet of fill. At a minimum, there shall be at least one compaction test per lift and a least two compaction tests per day. The Geotechnical Engineer shall supply DPW with certified compaction test results, including certification of pipe bedding subgrade and fill subgrade.

10. Prior to placing any roadway fill on existing grades (original grade after topsoil has been stripped, fill prepared by others outside of this plan or fill not prepared under the supervision of the Geotechnical Engineer), scarify the minimum top eight-inches of soil material. Compact this layer to the compaction requirements in these Notes. Proof-roll this compacted layer using a fully loaded dump truck (minimum 20 ton payload capacity). The Geotechnical Engineer shall inspect the proof-rolling and determine if the subgrade is acceptable or if there are areas that require remediation. Subgrade areas that fail proof-rolling shall be remediated to the satisfaction of the Geotechnical Engineer by either of the following methods:

- A. Scarifying, moisture conditioning, and re-compaction of the subgrade materials.
B. Undercutting soft of unsuitable areas of subgrade and backfilling with compacted select borrow (MSHA Section 916).
C. Undercutting of soft or unsuitable areas of subgrade and placing a layer of geotextile covered by # MSHA 57 coarse aggregate (Table 901A).

DPW may approve an alternate approach for soil remediation/improvement if it is recommended and sealed by the Geotechnical Engineer.

11. Except when specified, do not place layers exceeding eight-inches un-compacted depth. Place the material in horizontal layers across the full width of the embankment. Perform all rolling in a longitudinal direction along the embankment. Begin at the outer edges and progress towards the center. Vary the travel paths of traffic and equipment over the width of the embankment to aid in obtaining uniform compaction.
12. Uniformly grade areas to a smooth surface, free of irregular surface changes. Grade and prepare the subgrade section to the lines, grades, cross sections and/or elevations shown on the plans. At all times, maintain the subgrade surface in such condition as to readily drain.

13. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice. Vehicular and equipment traffic shall be distributed across the prepared surface in such a manner as to prevent disturbance. Repair any damage to the prepared subgrade to the satisfaction of the Geotechnical Engineer. The Geotechnical Engineer must approve the storage or stockpiling of heavy loads on a roadway subgrade.
14. Unsuitable existing fill, soft or loose natural soils, organic material, and rubble shall be stripped to approved grades as determined by the Geotechnical Engineer.
15. Protect all structures and utilities from any damage in the handling, processing or compacting of embankment or backfill material. Exercise caution near arches, retaining walls, culverts and utility trenches to prevent undue strain or movement. The Geotechnical Engineer may require the use of specially selected material adjacent to structures to protect against damage. Do not use rock greater than one and a half inches in any dimension adjacent to structures.
16. When placing and compacting embankment on hillsides or against existing embankments, continuously bench the slopes where the slope is steeper than 4:1 when measured at right angles to the roadway or embankment centerline. Perform the benching operation as the embankment is constructed in layers. Maintain a bench width of at least five-feet. Begin each horizontal cut at the intersection of the original ground and the vertical sides of the previous cut. If the material cut from the benches meets fill requirements, compact this material along with the new embankment material.
17. When placing fill over existing pavement, thoroughly break up, scarify, or remove the pavement as specified or as directed by the Geotechnical Engineer.
18. Prior to the placement of asphalt pavement, proof-roll the compacted graded aggregate base (GAB) layer using a fully loaded dump truck (minimum 20 ton payload capacity). The Geotechnical Engineer shall inspect the proof-rolling and determine if the GAB is acceptable or if there are areas that require remediation. GAB areas that fail proof-rolling shall be remediated to the satisfaction of the Geotechnical Engineer by either of the following methods:

- A. Scarifying, moisture conditioning, and re-compaction of the GAB materials.
B. Undercutting soft of unsuitable areas of GAB and replacing with compacted GAB.

DPW may approve an alternate approach for GAB remediation/improvement if it is recommended and sealed by the Geotechnical Engineer. The Geotechnical Engineer shall provide a sealed approval of the GAB prior to placement of asphalt. DPW may accept an oral or email approval while the final approval and reports are being compiled and completed.

1. All storm drain and paving construction shall be in accordance with the latest General Specifications and Standard Details of the Maryland State Highway Administration, Montgomery County, and the City of Rockville unless otherwise noted.
2. **Material and Installation Requirements for Storm Drain** – DPW will accept the following materials for the construction of main line storm drain, except as otherwise specified on the plans:
- A. Reinforced concrete pipe:
- a. Must be Class IV or V in accordance with the latest versions of ASTM C-76 and ASTM C-443 with rubber-gasketed joints and installed with Montgomery County Standard "C" shaped subgrade bedding or better.
- B. Plastic pipe:
- a. Will be allowed for pipes having a minimum diameter of 15" and a maximum diameter of 36" and as designated on the plan in specific installation locations.
- b. Must be corrugated polyethylene drainage pipe meeting AASHTO M252 or AASHTO M294; or corrugated polypropylene drainage pipe meeting AASHTO M330; and installed in accordance with ASTM D2321.
- c. Joints must be watertight according to the requirements of ASTM D3212 with gaskets that meet the requirements of ASTM F477. Gaskets must be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is kept free from debris.
- d. The pipe embedment zone must extend from 6" below the pipe to 12" above the pipe and consist of angular, crushed stone, rock, or gravel with large void content and little to no fines. Embedment zone backfill must meet the Class IA requirements of ASTM D2321 with 100% passing a 1-1/2" screen, less than or equal to 10% passing a #4 screen, and less than 3% passing a #200 screen.
- i. The pipe embedment zone/trench width must be a minimum of twice the pipe diameter plus 2".
- ii. Pipe embedment zone material must be placed along the side of the pipe for the full width of the trench in layers not exceeding an uncompacted depth of 6". Compact and consolidate each layer simultaneously on both sides of the pipe. Compact thoroughly under the haunches of the pipe. Continue this method of filling and compacting until the compacted backfill material is least 12 in. above the top of the pipe.
- iii. The pipe embedment zone must be encapsulated in a geotextile fabric material to protect against the loss of pipe support by preventing the lateral migration of fines from the trench wall into the backfill envelope.
- e. The manufacturer and trade name of the pipe must be specified on the plans; as should all pertinent manufacturer installation requirements, recommendations, and guidelines for that material.
- f. A third-party inspector must observe and certify that all materials and installation methods comply with these requirements, the City of Rockville Geotechnical Notes, and the approved plans.
- g. The pipe must be deflection tested within 30 days of the placement of compacted fill to finished grade and/or proof rolling in accordance the City of Rockville Geotechnical Notes. This test must take place in the presence of the City Inspector and utilize a mandrel sized to 95% of the minimum inside diameter. Pipe segments which exceed 5% deflection will be rejected by the City and must be replaced in their entirety.

3. If springheads are encountered in any phase during construction, construction must be stopped until they are capped and piped to a storm drain or stream as directed by the City.
4. Provide positive drainage of all areas disturbed by construction. Minimum slope in paved areas is one percent. Minimum slope of graded areas is two percent. Maximum slope on earth banks is 3:1.
5. When tying into existing pavement, saw cut existing paving edge to provide a clean, straight, and vertical joint. When removing existing curb or sidewalks, remove to the nearest joint.
6. Paving Contractor is responsible for adjusting utility tops to finished grade.
7. Applicant is responsible for installing all pavement markings and signage in accordance with the Final Pavement Marking and Signage Plan, which is approved by the Chief of Traffic and Transportation.
8. For pavement sections of private driveways and parking lots, refer to Zoning and Planning Ordinance, 25.16.06.d. – Parking Design Standards -Paving Specifications.
9. Per Maryland Code Public Utilities Section, all newly installed or replaced storm drain and storm drain facilities must be identifiable, detectable, or locatable. Any new or replacement piping that is buried or installed connecting to the storm drain system, shall be buried or installed with a product or technology that makes the piping detectable or locatable. At a minimum, all pipe must be installed with detectable warning tape.
- A. Detectable Warning Tape.
1. Placement
- a. Place tape directly over centerline of pipe the full length of trench, 18 to 30 inches below finished surface and with minimal number of splices.
- b. Overlap tape minimum 6 inches at splices and intersections.
2. Description.
- a. Size: Six-inch width, minimum 5 mils thickness.
- b. Printing: Two lines, minimum 3/4-inch-high black lettering on each line, repeated continuously along length of tape at intervals no greater than 3 feet.
- c. Tape color must follow the APWA Uniform Color Code.
- i. Blue detectable warning tape for water mainline, water service connections, or when water and sewer are installed in same trench.
- ii. Green detectable warning tape for all sewer, storm drain, and stormwater management lines.
3. Approved Manufacturers.

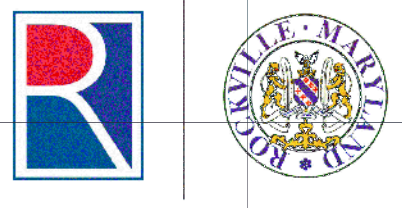
- a. Refer to WSSC's Standards and Specifications Section 02315 Part 2.1(A)(2) for an approved manufactures list.

10. Where the drop on the main line through a structure can be accommodated by an invert slope of 1.5:1 or flatter, a rounded channel lined with sewer brick on edge shall be built to the crown of the pipes.
11. Where any part of the storm drain system is located in a fill section, provide fill material in accordance with the Geotechnical Notes compacted to 95% AASHTO T-99 density from approved subgrade to the structure bottom slabs and/or the pipe bedding.



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CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

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DRAFTED — MI
CHECKED — MW

DESIGN PLAN APPROVAL			
DIRECTOR OF PUBLIC WORKS	PWK#	SCP#	REVIEWED BY
	SMP#		
	APPROVAL DATE		

AS BUILT PLAN APPROVAL	
CHIEF, CONSTRUCTION MANAGEMENT	APPROVAL DATE

EROSION AND SEDIMENT CONTROL
NOTES AND DETAILS

ROCKVILLE SENIOR CENTER ENTRANCE
Election District No. 10 City of Rockville, Maryland

DATE SUBMITTED: OCT. 2024	SCALE NTS	SHEET NO. 2a OF 15	FILE #
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PROFESSIONAL CERTIFICATION:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. 39917, Expiration Date: 1/18/2025

Seth Darlington
NAME

NO.	DESCRIPTION OF REVISION	P.E. INITIAL	DATE	DPW	DATE
APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL					

B.4.5 STANDARDS AND SPECIFICATIONS

FOR

PERMANENT STABILIZATION

Definition

To stabilize disturbed soils with permanent vegetation.

Purpose

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for 6 months or more.

Criteria

A. Seed Mixtures

1. General Use

- Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
- Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
- For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
- For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 ½ pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.

2. Turfgrass Mixtures

- Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
- Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
 - Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
 - Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes: Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1½ to 3 pounds per 1000 square feet.

Notes:

Turfgrass varieties should be selected from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding

Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)

Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)

Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

- Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
- If soil moisture is deficient, supply new seedlings with adequate water for plant growth (½ to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 6B Seed Mixture (from Table B.3): 4 WARM SEASON II COOL SEASON					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P ₂ O ₅	K ₂ O	
4	DEERTONGUE PERENNIAL RYE PERENNIAL RYE PERENNIAL RYE PERENNIAL RYE	15	3/1 - 5/15 5/16 - 6/15	¼ - ½ in	45 pounds per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
	PERENNIAL RYE PERENNIAL RYE PERENNIAL RYE PERENNIAL RYE	20	3/1 - 5/15 5/16 - 6/15	¼ - ½ in				
	PERENNIAL RYE PERENNIAL RYE PERENNIAL RYE PERENNIAL RYE	5	3/1 - 5/15 5/16 - 6/15	¼ - ½ in				
II	DEERTONGUE PERENNIAL RYE PERENNIAL RYE PERENNIAL RYE PERENNIAL RYE	30	3/1 - 5/15 5/16 - 6/15	¼ - ½ in	45 pounds per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
	PERENNIAL RYE PERENNIAL RYE PERENNIAL RYE PERENNIAL RYE	30	3/1 - 5/15 5/16 - 6/15	¼ - ½ in				
	PERENNIAL RYE PERENNIAL RYE PERENNIAL RYE PERENNIAL RYE	20	3/1 - 5/15 5/16 - 6/15	¼ - ½ in				

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

1. General Specifications

- Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
- Sod must be machine cut at a uniform soil thickness of ¾ inch, plus or minus ¼ inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
- Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
- Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
- Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.

2. Sod Installation

- During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
- Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
- Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

3. Sod Maintenance

- In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
- After the first week, sod watering is required as necessary to maintain adequate moisture content.
- Do not mow until the sod is firmly rooted. No more than ½ of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

B.4.4 STANDARDS AND SPECIFICATIONS

FOR

TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

- Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
- For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
- When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.B.1.a and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 6B Seed Mixture (from Table B.1):					Fertilizer Rate (10-20-20)	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
	ANNUAL RYEGRASS PERENNIAL RYEGRASS PERENNIAL RYEGRASS PERENNIAL RYEGRASS	40	3/1 - 5/15 5/16 - 6/15	0.5	436 lb/ac (10 lb/1000 sf)	2 tons/ac (90 lb/1000 sf)
	PERENNIAL RYEGRASS PERENNIAL RYEGRASS PERENNIAL RYEGRASS PERENNIAL RYEGRASS	96	3/1 - 5/15 5/16 - 6/15	1.0		
	PERENNIAL RYEGRASS PERENNIAL RYEGRASS PERENNIAL RYEGRASS PERENNIAL RYEGRASS	72	3/1 - 5/15 5/16 - 6/15	1.0		
	PERENNIAL RYEGRASS PERENNIAL RYEGRASS PERENNIAL RYEGRASS PERENNIAL RYEGRASS	30	5/16 - 7/31	0.5		

PROFESSIONAL CERTIFICATION:

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. 39917, Expiration Date: 1/18/2025

Seth Darlington

NAME

APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL

DATE SUBMITTED:
OCT. 2024

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NO. 2b

OF 15

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CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE

EROSION AND SEDIMENT CONTROL
NOTES AND DETAILS

ROCKVILLE SENIOR CENTER ENTRANCE

Election District No. 10 City of Rockville, Maryland

B-4.2 STANDARDS AND SPECIFICATIONS

FOR

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

A. Soil Preparation

1. Temporary Stabilization

- a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
 - b. Apply fertilizer and lime as prescribed on the plans.
 - c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
2. Permanent Stabilization
- a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - i. Soil pH between 6.0 and 7.0.
 - ii. Soluble salts less than 500 parts per million (ppm).
 - iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
 - iv. Soil contains 1.5 percent minimum organic matter by weight.
 - v. Soil contains sufficient pore space to permit adequate root penetration.

- b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
- c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
- d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
- e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

- 1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
- 2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
- 3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
 - a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - c. The original soil to be vegetated contains material toxic to plant growth.
 - d. The soil is so acidic that treatment with limestone is not feasible.
- 4. Areas having slopes steeper than 2:1 require special consideration and design.
- 5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
 - a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
 - b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
 - c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
- 6. Topsoil Application
 - a. Erosion and sediment control practices must be maintained when applying topsoil.
 - b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
 - c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4.3 STANDARDS AND SPECIFICATIONS

FOR

SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

A. Seeding

1. Specifications

- a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
- b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
- c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
- d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

2. Application

- a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 - i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
- b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
 - i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
 - ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
- c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
 - i. If fertilizer is being applied at the time of seeding, the application rates must not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P₂O₅ (phosphorous), 200 pounds per acre; K₂O (potassium), 200 pounds per acre.
 - ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - iii. Mix seed and fertilizer on site and seed immediately and without interruption.
 - iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching

1. Specifications (In order of preference)

- a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. **Note: Use only sterile straw mulch in areas where one species of grass is desired.**
- b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
 - iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
 - v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.

2. Application: Apply mulch to all seeded areas immediately after seeding.

- a. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
- b. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
- 3. Anchoring: Perform mulch anchoring immediately following application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
 - a. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.
 - b. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - c. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petrosel, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. **Use of asphalt binders is strictly prohibited.**
 - d. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

B-4.6 STANDARDS AND SPECIFICATIONS

FOR

SOIL STABILIZATION MATTING

Definition

Material used to temporarily or permanently stabilize channels or steep slopes until groundcover is established.

Purpose

To protect the soils until vegetation is established.

Conditions Where Practice Applies

On newly seeded surfaces to prevent the applied seed from washing out; in channels and on steep slopes where the flow has erosive velocities or conveys clear water; on temporary swales, earth dikes, and perimeter dike swales as required by the respective design standard; and, on stream banks where moving water is likely to wash out new vegetative plantings.

Design Criteria

- 1. The soil stabilization matting that is used must withstand the flow velocities and shear stresses determined for the area. Designate on the plan the type of soil stabilization matting using the standard symbol and include the calculated shear stress for the respective treatment area.
- 2. Matting is required on permanent channels where the runoff velocity exceeds two and half feet per second (2.5 fps) or the shear stress exceeds two pounds per square foot (2 lbs/ft²). On temporary channels discharging to a sediment trapping practice, provide matting where the runoff velocity exceeds four feet per second (4 fps).
- 3. Temporary soil stabilization matting is made with degradable (lasts 6 months minimum), natural, or manmade fibers of uniform thickness and distribution of fibers throughout and is smolder resistant. The maximum permissible velocity for temporary matting is 6 feet per second.
- 4. Permanent soil stabilization matting is an open weave, synthetic material consisting of non-degradable fibers or elements of uniform thickness and distribution of weave throughout. The maximum permissible velocity for permanent matting is 8.5 feet per second.
- 5. Calculate channel velocity and shear stress using the following procedure:

Shear Stress (τ) is a measure of the force of moving water against the substrate and is calculated as:

$$\tau = \gamma \cdot R \cdot S_w$$
 where:
 τ = Shear Stress (lb/ft²)
 γ = Weight Density of Water (62.4 lb/ft³)
 R = Average Water Depth (Hydraulic Radius) (ft)
 S_w = Water Surface Slope (ft/ft)

Velocity (v) measures the rate of flow through a defined area and is calculated as:

$$v = \frac{1.486 R^{2/3} S^{1/2}}{n}$$

v = Velocity (ft/sec)
n = Manning's Roughness Coefficient
R = Hydraulic Radius (ft)
S = Channel Slope (ft/ft)

- 6. Use Table B.7 to assist in selecting the appropriate soil stabilization matting for slope applications based on the slope, the slope length, and the soil-erodibility K factor.

Table B.7: Soil Stabilization on Slopes

Slope	20:1 or Flatter (≤5%)			<20:1 to 4:1 (>5 - 25%)			<4:1 to 3:1 (>25 - 33%)			<3:1 to 2.5:1 (>33 - 40%)			<2.5:1 to 2:1** (>40 - 50%)		
Slope Length (feet)*	0-30	30-60	60-120	0-30	30-60	60-120	0-30	30-60	60-120	0-30	30-60	60-120	0-30	30-60	60-120
Straw Mulch/Wood Cellulose Fiber															
Temporary Matting with Design Shear Stress ≥ 1.5 lb/sf															
Temporary Matting with Design Shear Stress ≥ 1.75 lb/sf															
Temporary Matting with Design Shear Stress ≥ 2.0 lb/sf															
Temporary Matting with Design Shear Stress ≥ 2.25 lb/sf															

Effective Range for all K values unless otherwise specified

* Slope length includes contributing flow length.

** Slopes steeper than 2:1 must be engineered.

*** Soil having a K value less than or equal to 0.35 can be stabilized effectively with straw mulch or wood cellulose fiber when located on slopes greater than 5%. Soil stabilization matting is required on all slopes greater than 5% that have soil with a K factor greater than 0.35. K factor ratings are published in the NRCS Soil Survey. During construction or reclamation, the soil-erodibility K value should represent the upper 6 inches of the final fill material re-spread as the last lift. Only the effects of rock fragments within the soil profile are considered in the estimation of the K value. Do not adjust K values to account for rocks on the soil surface or increases in soil organic matter related to management activities.

Maintenance

Vegetation must be established and maintained so that the requirements for Adequate Vegetative Establishment are continuously met in accordance with Section B-4 Vegetative Stabilization.

B-4.8 STANDARDS AND SPECIFICATIONS

FOR

STOCKPILE AREA

Definition

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

- 1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
- 2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Standard B-3 Land Grading.
- 3. Runoff from the stockpile area must drain to a suitable sediment control practice.
- 4. Access to the stockpile area should be from the upgrade side.
- 5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
- 6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
- 7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
- 8. If the stockpile is located on an impervious surface, a liner may be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

**WALLACE
MONTGOMERY**
ENGINEERS-PLANNERS-SURVEYORS-CONSTRUCTION MANAGERS
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www.wallacemontgomery.com A Limited Liability Partnership

BEFORE BEGINNING CONSTRUCTION
CONTACT
"MISS UTILITY"
WWW.MISSUTILITY.NET
OR
1-800-257-7777
OR 811
AT LEAST 48 HOURS
PRIOR TO EXCAVATION



DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGNED MI
DRAFTED MI
CHECKED MW

DESIGN PLAN APPROVAL	
	PWK# _____ SCP# _____ SMP# _____ REVIEWED BY
DIRECTOR OF PUBLIC WORKS	APPROVAL DATE

AS BUILT PLAN APPROVAL	
	CHIEF, CONSTRUCTION MANAGEMENT
APPROVAL DATE	

EROSION AND SEDIMENT CONTROL
NOTES AND DETAILS

ROCKVILLE SENIOR CENTER ENTRANCE

Election District No. 10 City of Rockville, Maryland

DATE SUBMITTED:
OCT. 2024

SCALE
NTS

SHEET
NO. 2c
OF 15

FILE #

PROFESSIONAL CERTIFICATION:
I hereby certify that these documents
were prepared or approved by me, and
that I am a duly licensed Professional
Engineer under the laws of the State
of Maryland, License No. **39917**,
Expiration Date: 1/18/2025

Seth Darlington
NAME

NO.	DESCRIPTION OF REVISION	P.E. INITIAL	DATE	DPW	DATE

APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL

EROSION AND SEDIMENT CONTROL NOTES: (NOV 2016)

1.

THE APPLICANT MUST OBTAIN INSPECTION AND APPROVAL BY THE CITY OF ROCKVILLE DEPARTMENT OF PUBLIC WORKS (DPW) AT THE FOLLOWING POINTS:

A.

AT THE REQUIRED PRECONSTRUCTION MEETINGS.

B.

FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES AND PRIOR TO ANY OTHER LAND DISTURBING ACTIVITY.

C.

DURING THE INSTALLATIONS OF SEDIMENT BASIN OR STORMWATER MANAGEMENT STRUCTURE AT THE REQUIRED INSPECTION POINTS (SEE INSPECTION CHECKLIST ON PLAN). NOTIFICATION PRIOR TO COMMENCING CONSTRUCTION IS MANDATORY.

D.

PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL DEVICES.

E.

PRIOR TO FINAL ACCEPTANCE.
2.

ALL EROSION CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH APPLICABLE PUBLISHED STANDARDS AND SPECIFICATIONS AND THE MOST CURRENT "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL".
3.

THE APPLICANT SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE. SHALL HAVE THEM INSPECTED AND APPROVED BY DPW PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES. SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURES WITHOUT PRIOR PERMISSION FROM DPW.
4.

ANY REQUEST FOR CHANGES TO THE APPROVED SEDIMENT CONTROL PLAN OR SEQUENCE OF CONSTRUCTION MUST BE SUBMITTED TO THE DPW SEDIMENT CONTROL INSPECTOR AND APPROVED BEFORE IMPLEMENTING CHANGES. MAJOR CHANGES WILL REQUIRE A PLAN REVISION.
5.

THE APPLICANT SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DESPOSITION OF MATERIALS ONTO TRAVERSED PUBLIC THROUGHFARE(S). ALL MATERIALS DEPOSITED ONTO PUBLIC THROUGHFARE(S) SHALL BE REMOVED IMMEDIATELY.
6.

THE APPLICANT SHALL INSPECT DAILY AND MAINTAIN CONTINUOUSLY IN EFFECTIVE OPERATING CONDITION ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIME AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM THE DPW SEDIMENT CONTROL INSPECTOR.
7.

ALL SEDIMENT BASINS, TRAP EMBANKMENTS, SWALES, PERIMETER DIKES AND PERMANENT SLOPES STEEPER OR EQUAL TO 3:1 SHALL BE STABILIZED WITH SOD, SEED AND ANCHORED STRAW MULCH OR OTHER APPROVED STABILIZATION MEASURES. WITHIN SEVEN CALENDAR DAYS OF ESTABLISHMENT. ALL AREAS DISTURBED OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST BE MINIMIZED AND STABILIZED IMMEDIATELY. MAINTENANCE MUST BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. RESTABILIZATION OR OVERSEEDING WILL BE REQUIRED, IF NECESSARY.
8.

THE APPLICANT SHALL APPLY SOD, SEED AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES TO ALL DISTURBED AREAS WITHIN SEVEN (7) CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE CEASED ON THAT AREA. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. OTHER ACTIVE CONSTRUCTION AREAS THAT ARE NOT BEING ACTIVELY GRADED (I.E. ROUTES FOR CONSTRUCTION VEHICLES WITHIN A SITE) MAY BE REQUIRED TO BE STABILIZED AT THE DIRECTION OF THE INSPECTOR. STOCKPILES, WHICH HAVE NOT BEEN USED FOR SEVEN (7) CALENDAR DATES SHALL BE STABILIZED THROUGH THE APPLICATION OF SOD, SEED, AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION METHODS.
9.

PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE APPLICANT SHALL STABILIZE ALL CONTRIBUTORY DISTURBED AREA USING SOD OR AN APPROVED PERMANENT SEED MIXTURE WITH REQUIRED SOIL AMENDMENTS AND AN APPROVED ANCHORED MULCH. WOOD FIBER MULCH MAY ONLY BE USED IN SEEDING SEASON TO PROMOTE SHEET FLOW DRAINAGE. AREAS BROUGHT TO FINISHED GRADE DURING THE SEEDING SEASON SHALL BE PERMANENTLY STABILIZED WITHIN SEVEN (7) CALENDAR DAYS OF ESTABLISHMENT. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT STABILIZATION IS FOUND TO BE IMPRACTICAL, APPROVED TEMPORARY SEED AND STRAW ANCHORED MULCH SHALL BE APPLIED TO DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE COMPLETED PRIOR TO THE FOLLOWING APRIL 15.
10.

THE SITE WORK, MATERIALS, APPROVED SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLANS, AND ANY REQUIRED TEST REPORTS SHALL BE AVAILABLE, AT THE SITE FOR INSPECTION BY DULY AUTHORIZED OFFICIALS OF THE CITY OF ROCKVILLE.
11.

SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING MECHANICAL DEVICES TO LOWER THE WATER DOWNSLOPE WITHOUT CAUSING EROSION. DIKES SHALL BE INSTALLED AND MAINTAINED AT THE TOP OF CUT OR FILL SLOPES UNTIL THE SLOPE AND DRAINAGE AREA TO IT ARE FULLY STABILIZED. AT WHICH TIME THEY MUST BE REMOVED AND FINAL GRADING DONE TO PROMOTE SHEET FLOW DRAINAGE. MECHANICAL DEVICES MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOW WHERE EROSION IS LIKELY TO OCCUR.
12.

PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITH SOD OR SEED WITH APPROVED EROSION CONTROL MATTING OR BY OTHER APPROVED STABILIZATION MEASURES.
13.

TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE REMOVED, WITH PERMISSION OF DPW, WITHIN 30 CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS. IF ESTABLISHMENT IS NOT FULL AND UNIFORM AS DETERMINED BY THE DPW SEDIMENT CONTROL INSPECTOR, OVERSEEDING WILL BE REQUIRED. STORMWATER MANAGEMENT STRUCTURES USED TEMPORARILY FOR SEDIMENT CONTROL SHALL BE CONVERTED TO THE PERMANENT CONFIGURATION WITHIN THIS TIME PERIOD AS WELL.
14.

NO PERMANENT CUT OR FILL SLOPE WITH A GRADIENT STEEPER THAN 3:1 WILL BE PERMITTED IN LAWN MAINTENANCE AREAS. A SLOPE GRADIENT OF UP TO 2:1 WILL BE PERMITTED IN AREAS THAT ARE NOT TO BE MAINTAINED PROVIDED THAT THOSE AREAS ARE INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN WITH A LOW-MAINTENANCE GROUND COVER SPECIFIED FOR PERMANENT STABILIZATION. SLOPE GRADIENT STEEPER THAN 2:1 WILL NOT BE PERMITTED WITH VEGETATIVE STABILIZATION.
15.

THE APPLICANT SHALL INSTALL A SPLASH BLOCK AT THE BOTTOM OF EACH DOWNSPOUT UNLESS THE DOWNSPOUT IS CONNECTED BY A DRAIN LINE TO AN ACCEPTABLE OUTLET.
16.

ALL WATER PUMPED FROM AN EXCAVATION DURING CONSTRUCTION SHALL BE PUMPED EITHER TO SEDIMENT TANKS AND/OR SEDIMENT TRAPS. NO WATER WILL BE PUMPED TO THE STORM DRAIN SYSTEM OR SWALE. DE-WATERING SHALL BE PERFORMED IN ACCORDANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
17.

FOR FINISHED GRADING, THE APPLICANT SHALL PROVIDE ADEQUATE GRADIENTS SO AS TO: (1) PREVENT WATER FROM STANDING ON THE SURFACE OF LAWNS MORE THAN 24 HOURS AFTER THE END OF A RAINFALL, EXCEPT IN DESIGNATED DRAINAGE COURSES AND SWALE FLOW AREAS WHICH MAY DRAIN AS LONG AS 48 HOURS AFTER THE END OF A RAINFALL, AND (2) PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS OR OPENINGS.
18.

SEDIMENT TRAPS OR BASINS ARE NOT PERMITTED WITHIN 20-FEET OF A BUILDING, WHICH EXISTS OR IS UNDER CONSTRUCTION. NO BUILDING MAY BE CONSTRUCTED WITHIN 20-FEET OF A SEDIMENT TRAP OR BASIN.
19.

ALL INLET IN NON-SUMP AREAS SHALL HAVE ASHALT BERMS INSTALLED AT THE TIME OF BASE PAVING TO DIRECT RUNOFF TO INLETS.
20.

THE DPW SEDIMENT CONTROL INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SEDIMENT CONTROL MEASURES, IF DEEMED NECESSARY.
21.

ALL TRAP ELEVATIONS ARE RELATIVE TO THE OUTLET ELEVATION, WHICH MUST BE ON EXISTING UNDISTURBED GROUND.
22.

NO CONSTRUCTION VEHICLES SHALL BE DRIVEN WITHIN THE FOOTPRINT OF THE PERMEABLE PAVEMENT. CONTRACTOR TO STABILIZE PERMEABLE PAVEMENT AREAS AT THE END OF EACH WORK DAY.

23.

VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
24.

TEMPORARY SEDIMENT TRAP(S) SHALL BE CLEANED OUT AND RESTORED TO THE ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO A POINT ONE-HALF THE DEPTH BETWEEN THE OUTLET CREST AND THE BOTTOM OF THE TRAP.
25.

SEDIMENT REMOVED FROM TRAPS SHALL BE PLACED AND STABILIZED IN APPROVED AREAS IN SUCH A MANNER THAT IT DOES NOT FOUL EXISTING OR PROPOSED STORM DRAINAGE SYSTEMS OR AREAS ALREADY STABILIZED. SEDIMENT SHALL NOT BE PLACED WITHIN A FLOOD PLAIN OR WETLAND.
26.

ALL SEDIMENT BASINS AND TRAPS MUST BE SURROUNDED WITH A WELDED WIRE SAFETY FENCE. THE FENCE MUST BE AT LEAST 42-INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN EIGHT-FEET, HAVE MESH OPENINGS NO GREATER THAN TWO-INCHES IN WIDTH AND FOUR-INCHES IN HEIGHT WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE MUST BE MAINTAINED IN GOOD CONDITION AT ALL TIMES.
27.

OFF-SITE SPOIL OR BORROW AREAS MUST HAVE APPROVED SEDIMENT CONTROL PLANS.
28.

PROTECT ALL TREES TO BE PRESERVED DURING CONSTRUCTION IN ACCORDANCE WITH THE APPROVED FOREST CONSERVATION PLAN.
29.

THE APPLICANT IS RESPONSIBLE FOR ALL ACTIONS OF CONTRACTOR AND SUBCONTRACTORS, INCLUDING REPAIRING DAMAGE TO SEDIMENT CONTROL DEVICES AND EXISTING INFRASTRUCTURE.
30.

THE APPLICANT SHALL COMPLY WITH ALL PROVISIONS OF THE NPDES CONSTRUCTION DISCHARGE PERMIT. A COPY OF THE PERMIT AND ALL REQUIRED REPORTS SHALL BE AVAILABLE ON SITE AT ALL TIMES.

GEOTECHNICAL NOTES: (NOV 2016)

1.

THE APPLICANT SHALL BE RESPONSIBLE FOR ALL SUBGRADE INSPECTION AND SOIL COMPACTION TESTING ASSOCIATED WITH ANY WORK WITHIN A CITY RIGHT-OF-WAY, PRIVATE PROPERTY SUBJECT TO A PUBLIC ACCESS EASEMENT, OR PRIVATE PROPERTY SUBJECT TO CITY EASEMENT FOR PUBLIC UTILITIES OR PUBLIC IMPROVEMENTS; AND/OR ANY WORK ASSOCIATED WITH A SEDIMENT CONTROL FACILITY, OR STORMWATER MANAGEMENT PRACTICE. THIS WORK SHALL BE COMPLETED BY OR UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND. FOR THE PURPOSES OF THESE NOTES AND ASSOCIATED APPROVED PLANS, THIS ENGINEER SHALL BE REFERRED TO AS THE GEOTECHNICAL ENGINEER AND SHALL BE AN INDEPENDENT FIRM FROM THE APPLICANT.
2.

ANY PLANS SUBJECT TO NRCS-MD POND CODE 378 STANDARDS/SPECIFICATIONS, AS SHOWN ON THE PLANS, SHALL SUPERSEDE THESE NOTES WHEN THESE NOTES ARE LESS STRINGENT OR IN CASE OF CONFLICT. ANY REFERENCE TO THE ENGINEER 378 STANDARD/SPECIFICATIONS SHALL BE THE PROFESSIONAL ENGINEER WHO STAMPED AND SEALED THE DESIGN PLANS. ANY REFERENCE TO THE GEOTECHNICAL ENGINEER SHALL BE THE GEOTECHNICAL ENGINEER AS DEFINED ABOVE OR THE GEOTECHNICAL ENGINEER WHO COMPLETED CERTAIN ASPECTS OF THE POND DESIGN.
3.

ALL INSPECTIONS, TESTS, SUPPORTING DATA, REPORTS, AND CERTIFICATIONS SHALL BE PROVIDED TO THE CITY OF ROCKVILLE DEPARTMENT OF PUBLIC WORKS (DPW) AND SHALL BE SEALED BY THE GEOTECHNICAL ENGINEER. DAILY INSPECTION REPORTS, IF REQUESTED BY THE CITY, CAN BE PROVIDED WITHOUT BEING IMMEDIATELY SEALED BY THE GEOTECHNICAL ENGINEER. THESE REPORTS SHALL BE COMPILED, REVIEWED, SEALED AND THEN SUBMITTED TO DPW AT A LATER DATE AS AGREED UPON BY THE CITY.
4.

THE GEOTECHNICAL ENGINEER SHALL APPROVE ALL FILL MATERIALS THAT ARE USED FOR THE PROJECT. THE GEOTECHNICAL ENGINEER SHALL OBTAIN SAMPLES OF PROPOSED FILL MATERIALS AND PERFORM ALL REQUIRED TESTING TO DETERMINE THAT FILL MATERIALS ARE IN CONFORMANCE WITH THIS PLAN.
5.

THE GEOTECHNICAL ENGINEER SHALL PROVIDE A REPORT THAT CERTIFIES THE SUBGRADE PREPARATION AND FILL/BACKFILL PLACEMENT ARE IN CONFORMANCE WITH THIS PLAN. THE CERTIFICATION APPLIES TO ALL FILL, BACKFILL, AND SUBGRADE OPERATIONS SUBJECT TO THIS PLAN AS DETAILED IN NOTE #1, INCLUDING UTILITY TRENCHES. WHEN CONSTRUCTING NEW ROADWAY PAVEMENT THIS CERTIFICATION REPORT SHALL BE PROVIDED PRIOR TO THE PLACEMENT OF GRADED AGGREGATE BASE (GAB). ALL OTHER CERTIFICATIONS SHALL BE PROVIDED AS REQUESTED BY THE CITY.
6.

ALL FILL AND/OR BACKFILL MATERIAL SHALL BE FREE FROM ORGANICS, FROZEN MATERIAL, ROCKS/STONES GREATER THAN ONE AND A HALF INCHES IN ANY DIMENSION, WASTE METAL PRODUCT, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR OTHER DELETERIOUS MATERIALS; SHALL BE A MINIMUM OF 105 POUNDS PER CUBIC FOOT FOR THE MAXIMUM DRY DENSITY ACCORDING TO AASHTO T-180, METHOD C; AND SHALL NOT HAVE A LIQUID LIMIT GREATER THAN 30 NOR A PLASTICITY INDEX GREATER THAN SIX ACCORDING TO ASTM D-4318. ALL OTHER MATERIALS SHALL MEET THE REQUIREMENTS STATED IN CATEGORY 900 OF THE LATEST EDITION OF THE MARYLAND STATE HIGHWAY ADMINISTRATION (MSHA) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.
7.

COMPACT THE MATERIAL THAT IS ONE FOOT BELOW THE TOP OF SUBGRADE TO AT LEAST 92 PERCENT OF THE MAXIMUM DRY DENSITY PER AASHTO T-180. COMPACT THE TOP ONE FOOT TO AT LEAST 97 PERCENT OF THE MAXIMUM DRY DENSITY. WHEN NECESSARY, ADD WATER OR DRY THE LAYER IN ORDER TO COMPACT TO THE REQUIRED DENSITY. GENERALLY THE MATERIAL SHALL BE WITHIN TWO PERCENT OF THE OPTIMUM MOISTURE CONTENT BUT MAY BE OUTSIDE OF THIS RANGE IF APPROVED BY THE GEOTECHNICAL ENGINEER.
8.

FILL AND BACKFILL MATERIALS MUST COMPLETELY FILL ALL SPACES UNDER AND ADJACENT TO THE STRUCTURE OR PIPE. FOR STORMWATER MANAGEMENT EMBANKMENTS, THE APPLICANT SHALL SCARIFY EACH LIFT WITH A SHEEPSFOOT ROLLER OR CLAW TO MINIMUM DEPTH OF TWO-INCHES PRIOR TO PLACING THE NEXT LIFT. THE APPLICANT SHALL SCARIFY EMBANKMENTS PARALLEL WITH THE CENTERLINE OF THE DAM CORE AND PERPENDICULAR TO THE PRINCIPAL SPILLWAY. BEDDING SHALL BE PROVIDED IN ACCORDANCE WITH DETAILS INDICATED ON THE CONSTRUCTION DRAWINGS. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR-FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL THE APPLICANT DRIVE EQUIPMENT OVER ANY PART OF A CORRUGATED METAL PIPE UNLESS THERE IS A COMPACTED FILL OF 24-INCHES OR GREATER OVER THE STRUCTURE OR PIPE.
9.

AT A MINIMUM, COMPACTION TESTS SHALL BE COMPLETED FOR EVERY LIFT OF FILL OR BACKFILL. THE TESTING FREQUENCY SHALL BE AT LEAST ONCE PER 150 LINEAR FEET OF TRENCH OR ONCE PER 1,500 SQUARE FEET OF FILL. AT A MINIMUM, THERE SHALL BE AT LEAST ONE COMPACTION TEST PER LIFT AND AT LEAST TWO COMPACTION TESTS PER DAY. THE GEOTECHNICAL ENGINEER SHALL SUPPLY DPW WITH CERTIFIED COMPACTION TEST RESULTS, INCLUDING CERTIFICATION OF PIPE BEDDING SUBGRADE AND FILL SUBGRADE.
10.

PRIOR TO PLACING ANY ROADWAY FILL ON EXISTING GRADES (ORIGINAL GRADE AFTER TOPSOIL HAS BEEN STRIPPED, FILL PREPARED BY OTHERS OUTSIDE OF THIS PLAN OR FILL NOT PREPARED UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER), SCARIFY THE MINIMUM TOP EIGHT-INCHES OF SOIL MATERIAL. COMPACT THIS LAYER TO THE COMPACTION REQUIREMENTS IN THESE NOTES. PROOF-ROLL THIS COMPACTED LAYER USING FULLY LOADED DUMP TRUCK (MINIMUM 20 TON PAYLOAD CAPACITY). THE GEOTECHNICAL ENGINEER SHALL INSPECT THE PROOF-ROLLING AND DETERMINE IF THE SUBGRADE IS ACCEPTABLE OR IF THERE ARE AREAS THAT REQUIRE REMEDIATION. SUBGRADE AREAS THAT FAIL PROOF-ROLLING SHALL BE REMEDIATED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER BY EITHER OF THE FOLLOWING METHODS:

A.

SCARIFYING, MOISTURE CONDITIONING, AND RE-COMPACTION OF THE SUBGRADE MATERIALS.

B.

UNDERCUTTING SOFT OF UNSUITABLE AREAS OF SUBGRADE AND BACFILLING WITH COMPACTED SELECT BORROW (MSHA SECTION 916).

C.

UNDERCUTTING OF SOFT OR UNSUITABLE AREAS OF SUBGRADE AND PLACING A LAYER OF GEOTEXTILE COVERED BY #MSHA 57 COARSE AGGREGATE (TABLE 901A).
- DPW MAY APPROVE AN ALTERNATE APPROACH FOR SOIL REMEDIATION/IMPROVEMENT IF IT IS RECOMMENDED AND SEALED BY THE GEOTECHNICAL ENGINEER.
11.

EXCEPT WHEN SPECIFIED, DO NOT PLACE LAYERS EXCEEDING EIGHT-INCHES UN-COMPACTED DEPTH. PLACE THE MATERIAL IN HORIZONTAL LAYERS ACROSS THE FULL WIDTH OF THE EMBANKMENT. PERFORM ALL ROLLING IN A LONGITUDINAL DIRECTION ALONG THE EMBANKMENT. BEGIN AT THE OUTER EDGES AND PROGRESS TOWARDS THE CENTER. VARY THE TRAVEL PATHS OF TRAFFIC AND EQUIPMENT OVER THE WIDTH OF THE EMBANKMENT TO AID IN OBTAINING UNIFORM COMPACTION.
12.

UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES. GRADE AND PREPARE THE SUBGRADE SECTION TO THE LINES, GRADES, CROSS SECTIONS AND/OR ELEVATIONS SHOWN ON THE PLANS. AT ALL TIMES, MAINTAIN THE SUBGRADE SURFACE IN SUCH CONDITION AS TO READILY DRAIN.
13.

DO NOT PLACE BACKFILL OR FILL SOIL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE. VEHICULAR AND EQUIPMENT TRAFFIC SHALL BE DISTRIBUTED ACROSS THE PREPARED SURFACE IN SUCH A MANNER AS TO PREVENT DISTURBANCE. REPAIR ANY DAMAGE TO THE PREPARED SUBGRADE TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER MUST APPROVE THE STORAGE OR STOCKPILING OF HEAVY LOADS ON A ROADWAY SUBGRADE.

14.

UNSUITABLE EXISTING FILL, SOFT OR LOOSE NATURAL SOILS, ORGANIC MATERIAL, AND RUBBLE SHALL BE STRIPPED TO APPROVED GRADES AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
15.

PROTECT ALL STRUCTURES AND UTILITIES FROM ANY DAMAGE IN THE HANDLING, PROCESSING OR COMPACTING OF EMBANKMENT OR BACKFILL MATERIAL. EXERCISE CAUTION NEAR ARCHES, RETAINING WALLS, CULVERTS AND UTILITY TRENCHES TO PREVENT UNDE STRAIN OR MOVEMENT. THE GEOTECHNICAL ENGINEER MAY REQUIRE THE USE OF SPECIALLY SELECTED MATERIAL ADJACENT TO STRUCTURES TO PROTECT AGAINST DAMAGE. DO NOT USE ROCK GREATER THAN ONE AND A HALF INCHES IN ANY DIMENSION ADJACENT TO STRUCTURES.
16.

WHEN PLACING AND COMPACTING EMBANKMENT ON HILLSIDES OR AGAINST EXISTING EMBANKMENT, CONTINUOUSLY BENCH THE SLOPES WHERE THE SLOPE IS STEEPER THAN 4:1 WHEN MEASURED AT RIGHT ANGELS TO THE ROADWAY OR EMBANKMENT CENTERLINE. PERFORM THE BENCHING OPERATION AS THE EMBANKMENT IS CONSTRUCTED IN LAYERS. MAINTAIN A BENCH WIDTH OF AT LEAST FIVE-FEET. BEGIN EACH HORIZONTAL CUT AT THE INTERSECTION OF THE ORIGINAL GROUND AND THE VERTICAL SIDES OF THE PREVIOUS CUTE. IF THE MATERIAL CUT FROM THE BENCHES MEETS FILL REQUIREMENTS, COMPACT THIS MATERIAL ALONG WITH THE NEW EMBANKMENT MATERIAL.
17.

WHEN PLACING FILL OVER EXISTING PAVEMENT, THOROUGHLY BREAK UP, SCARIFY, OR REMOVE THE PAVEMENT AS SPECIFIED OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
18.

PRIOR TO THE PLACEMENT OF ASPHALT PAVEMENT, PROOF-ROLL THE COMPACTED GRADED AGGREGATE BASE (GAB) LAYER USING A FULLY LOADED DUMP TRUCK (MINIMUM 20 TON PAYLOAD CAPACITY). THE GEOTECHNICAL ENGINEER SHALL INSPECT THE PROOF-ROLLING AND DETERMINE IF THE GAB IS ACCEPTABLE OR IF THERE ARE AREAS THAT REQUIRE REMEDIATION. GAB AREAS THAT FAIL PROOF-ROLLING SHALL BE REMEDIATED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER BY EITHER OF THE FOLLOWING METHODS:

A.

SCARIFYING, MOISTURE CONDITIONING, AND RE-COMPACTION OF THE GAB MATERIALS.

B.

UNDERCUTTING SOFT OF UNSUITABLE AREAS OF GAB AND REPLACING WITH COMPACTED GAB.
- DPW MAY APPROVE AN ALTERNATE APPROACH FOR GAB REMEDIATION/IMPROVEMENT IF IT IS RECOMMENDED AND SEALED BY THE GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL PROVIDE A SEALED APPROVAL OF THE GAB PRIOR TO PLACEMENT OF ASPHALT. DPW MAY ACCEPT AN ORAL OR EMAIL APPROVAL WHILE THE FINAL APPROVAL AND REPORTS ARE BEING COMPILED AND COMPLETED.
- STABILIZATION NOTE:
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTRBANCE, PERMANENT OR TEMPORARY STABILIZATION WILL BE COMPLETED WITHIN:

THREE CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1).
- SEVEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE DEVELOPMENT PROJECT NOT UNDER ACTIVE GRADING.
- MAINTENANCE WILL BE PERFORMED, AS NECESSARY, TO ENSURE THAT THE STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE CURRENT MDE AND CITY STANDARDS AND SPECIFICATIONS.
- STANDARD SEQUENCE OF CONSTRUCTION:
1.

PRIOR TO CLEARING ANY TREES, GRADING OR INSTALLING SEDIMENT CONTROL MEASURES, A PRE-CONSTRUCTION MEETING MUST BE CONDUCTED ON SITE WITH THE CITY OF ROCKVILLE SEDIMENT AND EROSION CONTROL INSPECTOR, ARTHUR SIMPSON (240-314-8879); THE CITY FORESTRY INSPECTOR, NATASH SHANGOLD (240-314-8205), AND THE CITY PUBLIC WORKS INSPECTOR AT LEAST 48 HOURS NOTICE IS REQUIRED.

2.

THE PERMITEE MUST CONTACT MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY. ALL UTILITIES MUST BE MARKED PRIOR TO HOLDING THE PRE-CONSTRUCTION MEETING.

3.

THE LIMITS OF DISTURBANCE AND THE TREE SAVE MEASURES, IF APPLICABLE, MUST BE FIELD MARKED PRIOR TO THE PRE-CONSTRUCTION MEETING, INSTALLATION OF SEDIMENT CONTROL MEASURES, CONSTRUCTION, OR OTHER LAND DISTURBING ACTIVITIES.

4.

THE PERMITEE MUST OBTAIN WRITTEN APPROVAL FROM THE CITY OF ROCKVILLE SEDIMENT CONTROL INSPECTOR, CERTIFYING THAT THE LIMITS OF DISTURBANCE ARE CORRECTLY MARKED AND INSTALLED PRIOR TO COMMENCING ANY CLEARING.

5.

INSTALL THE SILT FENCE OR FILTER LOG AND INLET PROTECTION. THE SEDIMENT CONTROL INSPECTOR MAY REQUIRE PLACEMENT OF ADDITIONAL SILT FENCE OR OTHER SEDIMENT CONTROL MEASURE ON THE SITE AS DEEMED NECESSARY.

6.

OBTAIN APPROVAL FROM THE CITY OF ROCKVILLE SEDIMENT CONTROL INSPECTOR FOR THE ESC MEASURES PRIOR TO PERFORMING ANY FURTHER CONSTRUCTION ACTIVITIES. REQUEST NOTICE TO PROCEED INSPECTION FROM CITY INSPECTOR(S).

7.

DEMOLISH NOTED SIDEWALK SECTIONS AND RAMPS ALONG POTOMAC VALLEY ROAD.

8.

INSTALL NEW ENTRANCE DRIVEWAY.

9.

PERMANENTLY STABILIZE ANY REMAINING DISTURBED AREAS WITH SOD.

10.

OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR AND FORESTRY INSPECTOR TO REMOVE SEDIMENT CONTROL AND TREE PROTECTION DEVICES.

11.

REMOVE REMAINING SEDIMENT CONTROL DEVICES AND PERMANENTLY STABILIZE AREAS IMMEDIATELY.
- TASKS MAY BE PERFORMED OUT OF ORDER OR CONCURRENTLY WITH PRIOR APPROVAL FROM THE CITY OF ROCKVILLE SEDIMENT CONTROL INSPECTOR.
- PROFESSIONAL CERTIFICATION:
- I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. **39917**, Expiration Date: **1/18/2025**
- Seth Darlington
- NAME
- | | | | | | |
|--|-------------------------|--------------|------|-----|------|
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| NO. | DESCRIPTION OF REVISION | P.E. INITIAL | DATE | DPW | DATE |
| APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL | | | | | |
- WM

WALLACE MONTGOMERY

EXISTENCE PLANNING-SURVIVORS Construction Managers

10150 York Road, Suite 200

Hunt Valley, Maryland 21036

410-684-5800 Fax: 410-687-0925 Fax

www.wallacemontgomery.com

License: Liability Professional

BEFORE BEGINNING CONSTRUCTION

CONTACT

"MISS UTILITY"

WWW.MISSUTILITY.NET

OR

1-800-257-7777

OR 811

AT LEAST 48 HOURS

PRIOR TO EXCAVATION

DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGNED — E. J. M.
DRAFTED — E. J. M.
CHECKED — S. H. D.

DESIGN PLAN APPROVAL	
	PWK# _____ SCP# _____ SMP# _____ REVIEWED BY _____
DIRECTOR OF PUBLIC WORKS	APPROVAL DATE _____

AS BUILT PLAN APPROVAL	
	CHIEF, CONSTRUCTION MANAGEMENT
	APPROVAL DATE _____

EROSION AND SEDIMENT CONTROL
NOTES AND DETAILS

ROCKVILLE SENIOR CENTER ENTRANCE
Election District No. 10 City of Rockville, Maryland

DATE SUBMITTED: OCT. 2024	SCALE N.T.S.	SHEET NO. <u>2</u> OF <u>15</u>	FILE #
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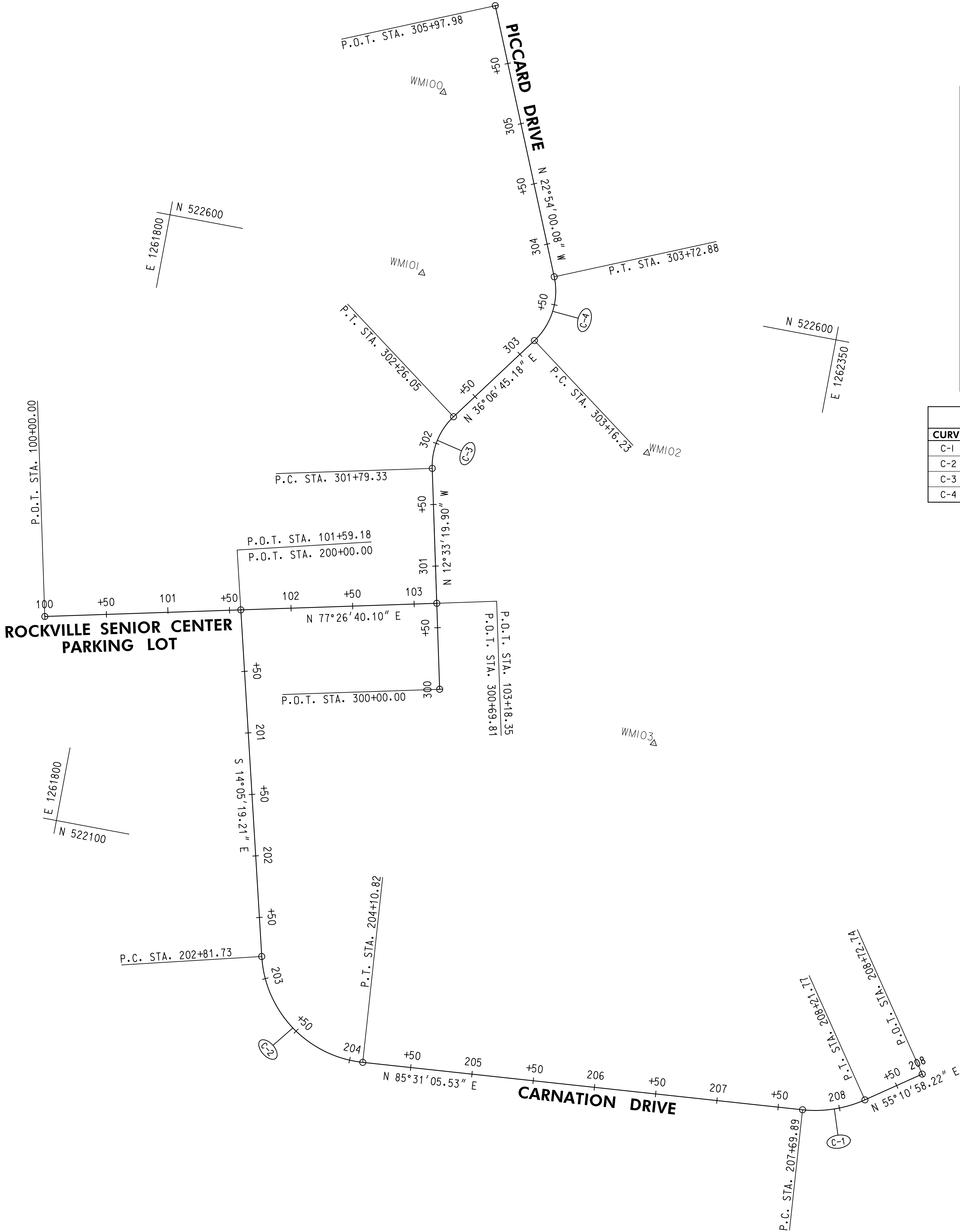


TABLE OF CONSTRUCTION				
POINT DESCR.	STATION	COORDINATES		BEARING
		NORTH	EAST	
ROCKVILLE SENIOR CENTER				
P.O.T.	100+00.00	522,260.9552	1,261,760.2422	N 77°26'40.10" E
P.O.T.	103+18.35	522,330.1595	1,262,070.9774	
PICCARD DRIVE				
P.O.T.	200+00.00	522,295.5576	1,261,915.6108	S 14°05'19.21" E
P.C.	202+81.73	522,022.2973	1,261,984.1916	
P.T.	204+10.82	521,952.9736	1,262,080.6134	N 85°31'05.53" E
P.C.	207+69.89	521,981.0317	1,262,438.5795	
P.T.	208+21.77	521,998.2762	1,262,486.8756	N 55°10'58.22" E
P.O.T.	208+72.74	522,027.3746	1,262,528.7161	
CARNATION DRIVE				
P.O.T.	300+00.00	522,262.0150	1,262,086.1540	N 12°33'19.90" W
P.C.	301+79.33	522,437.0571	1,262,047.1700	
P.T.	302+26.05	522,481.4289	1,262,056.4224	N 36°06'45.18" E
P.C.	303+16.23	522,554.2821	1,262,109.5723	
P.T.	303+72.88	522,608.0994	1,262,115.8052	N 22°54'00.08" W
P.O.T.	305+97.98	522,815.4636	1,262,028.2110	

CURVE DATA							
CURVE	DELTA	Dc	RADIUS	TANGENT	LENGTH	CHORD	EXTERNAL
C-1	30°20'07.3" LT.	58°27'54.3"	98.00'	26.57'	51.89'	51.89'	3.54'
C-2	80°23'35.3" LT.	62°16'40.9"	92.00'	77.74'	129.09'	118.76'	28.44'
C-3	48°40'05.1" RT.	104°10'26.9"	55.00'	24.87'	46.72'	45.33'	5.36'
C-4	59°00'45.3" LT.	104°10'26.9"	55.00'	31.13'	56.65'	54.18'	8.20'

CONTROL TRAVERSE			
POINT NO.	COORDINATES		ELEVATION
	NORTH	EAST	
TRAV. PT WM 100	522,738.6814	1,261,999.7380	451.756
TRAV. PT WM 101	522,591.3273	1,262,009.7830	452.487
TRAV. PT WM 102	522,481.5674	1,262,216.1409	451.542
TRAV. PT WM 103	522,250.9383	1,262,265.0072	N/A

PROFESSIONAL CERTIFICATION:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. 39917, Expiration Date: 1/18/2025.

Seth Darlington
NAME

NO.	DESCRIPTION OF REVISION	P.E. INITIAL	DATE	DPW	DATE
APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL					

**WALLACE MONTGOMERY**
ENGINEERS PLANNERS SURVEYORS CONSTRUCTION MANAGERS
10115 York Road, Suite 200
Purcellville, Maryland 22080
410-881-5500 Fax 410-881-5925 Email
www.wallacemontgomery.com

BEFORE BEGINNING CONSTRUCTION
CONTACT
"MISS UTILITY"
AT
WWW.MISSUTILITY.NET
OR
1-800-257-7777
OR 811
AT LEAST 48 HOURS
PRIOR TO EXCAVATION



DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGNED E. J. M.
DRAFTED E. J. M.
CHECKED S. H. D.

DESIGN PLAN APPROVAL

PWK# _____ SCP# _____
SMP# _____ REVIEWED BY _____

DIRECTOR OF PUBLIC WORKS APPROVAL DATE _____

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE _____

GEOMETRY PLAN

ROCKVILLE SENIOR CENTER ENTRANCE

Election District No. 10 City of Rockville, Maryland

DATE SUBMITTED:
OCT. 2024

SCALE
1"=50'

SHEET
NO. 4
OF 15

FILE #



1. 2" HMA AND VARIABLE DEPTH CONCRETE FOR SLOT BACKFILL SHALL BE INCIDENTAL TO CURB AND GUTTER REPLACEMENT

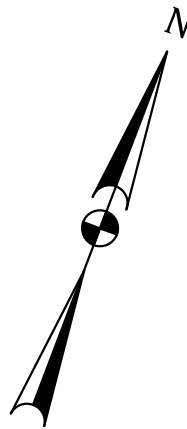


- (A) 4" CONCRETE SIDEWALK
- (B) 9" PLAIN CONCRETE
- (C) 2" HMA SUPERPAVE, 9.5MM FOR SURFACE,
PG 64-22, LEVEL 2
- (D) 6" HMA SUPERPAVE, 19.0MM FOR BASE,
PG 64-22, LEVEL 2
OR MATCH EXISTING SECTIONS DEPTH.
PLACED IN TWO LIFTS
- (E) 4" GRADED AGGREGATE BASE
- (F) LIMITS OF EXCAVATION
- (G) 6" POROUS CONCRETE PAVING SLAB
- (H) 1.5" AASHTO NO. 8 CHOKER STONE COURSE
- (I) 18" WASHED AASHTO NO. 2 AGGREGATE
RESERVOIR
- (J) 2" SAND FILTER COURSE



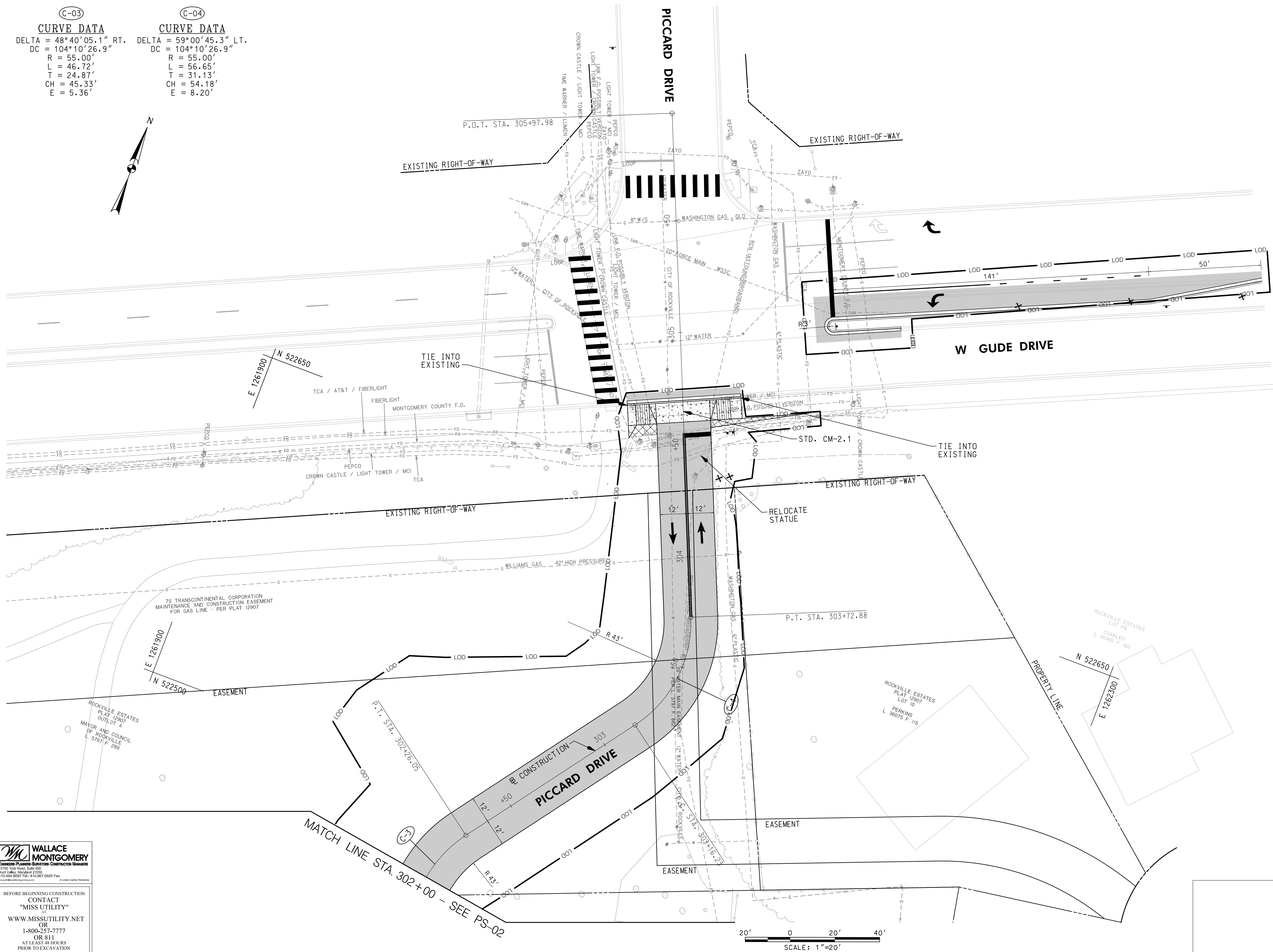
(C-03)
CURVE DATA
DELTA = 48°40'05.1" RT.
DC = 104°10'26.9"
R = 55.00'
L = 46.72'
T = 24.87'
CH = 45.33'
E = 5.36'

(C-04)
CURVE DATA
DELTA = 59°00'45.3" LT.
DC = 104°10'26.9"
R = 55.00'
L = 56.65'
T = 31.13'
CH = 54.18'
E = 8.20'



UTILITY CONTACTS	
AT&T TRANS	800-252-1133
CITY OF ROCKVILLE/ PINPOINT UNDERGROUND	301-868-6803
CITY OF ROCKVILLE	240-314-8577
FIBERLIGHT/ SUNBELT TELECOM	727-596-1500
LEVEL3 NOW CENTURY LINK	877-366-8344
MCI	800-289-3427
MONTGOMERY COUNTY GOVERNMENT	786-345-0991
PEPCO	301-210-0355
VERIZON	301-210-0355
WASHINGTON GAS	301-210-0355

NOTES:
1. CONTRACTOR TO COORDINATE HANDBOX ADJUSTMENTS WITH UTILITY OWNER.

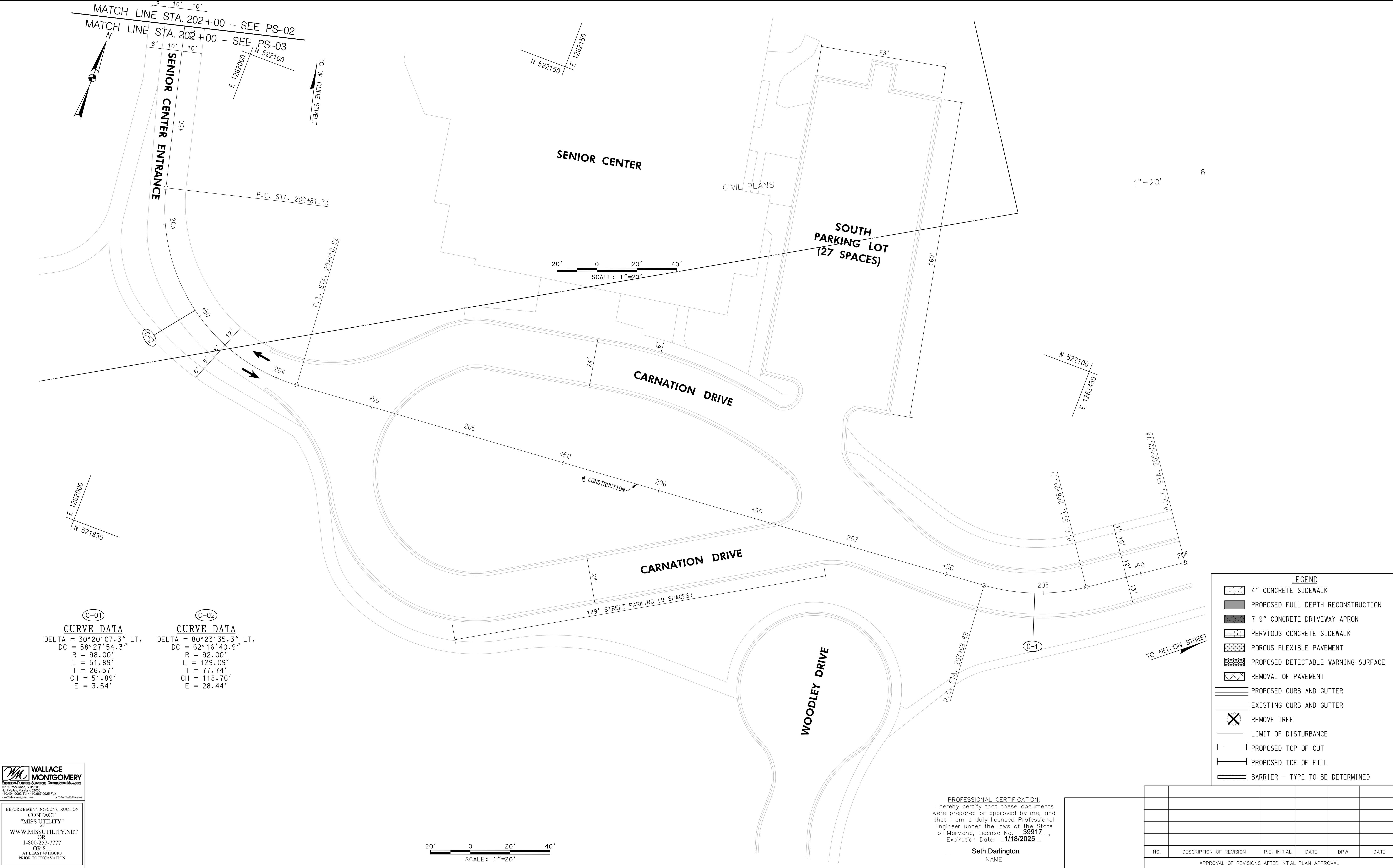


LEGEND	
	4" CONCRETE SIDEWALK
	PROPOSED FULL DEPTH RECONSTRUCTION
	7-9" CONCRETE DRIVEWAY APRON
	PERVIOUS CONCRETE SIDEWALK
	POROUS FLEXIBLE PAVEMENT
	PROPOSED DETECTABLE WARNING SURFACE
	REMOVAL OF PAVEMENT
	PROPOSED CURB AND GUTTER
	EXISTING CURB AND GUTTER
	REMOVE TREE
	LOD - LIMIT OF DISTURBANCE
	PROPOSED TOP OF CUT
	PROPOSED TOE OF FILL
	BARRIER - TYPE TO BE DETERMINED

WALLACE MONTGOMERY
EXISTING PLANNING-SURVEYING-CONSTRUCTION MANAGERS
10150 York Road, Suite 200
Purcellville, Maryland 22080
410-868-5500 Tel / 410-867-5925 Fax
A Limited Liability Partnership

BEFORE BEGINNING CONSTRUCTION
CONTACT
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WWW.MISSUTILITY.NET
OR
1-800-257-7777
OR 811
AT LEAST 48 HOURS
PRIOR TO EXCAVATION

	DEPARTMENT OF PUBLIC WORKS CITY OF ROCKVILLE 111 MARYLAND AVE. ROCKVILLE, MARYLAND	DESIGNED E. J. M.	DESIGN PLAN APPROVAL		AS BUILT PLAN APPROVAL		CIVIL PLANS	ROCKVILLE SENIOR CENTER ENTRANCE	DATE SUBMITTED: OCT. 2024	SCALE 1"=20'	SHEET NO. 5 OF 15	FILE #
		DRAFTED E. J. M.	PWK# _____ SCP# _____	CHIEF, CONSTRUCTION MANAGEMENT	APPROVAL DATE _____	REVIEWED BY _____						
		CHECKED S. H. D.	SMP# _____	DIRECTOR OF PUBLIC WORKS	APPROVAL DATE _____							



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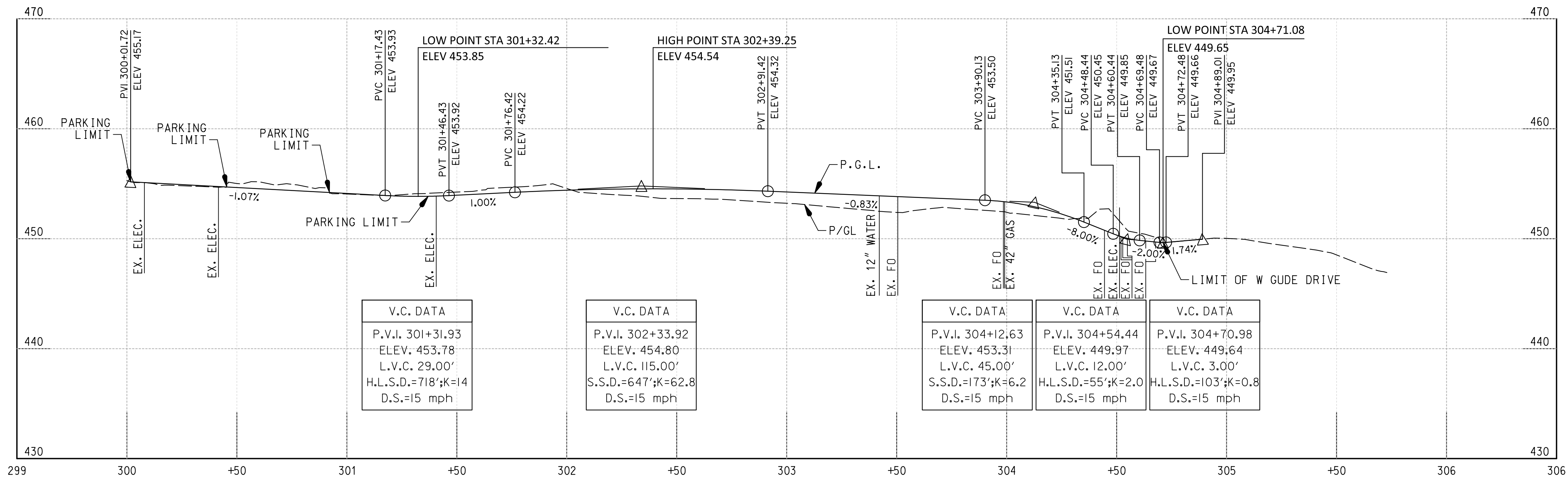
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PROFESSIONAL CERTIFICATION:
I hereby certify that these documents
were prepared or approved by me, and
that I am a duly licensed Professional
Engineer under the laws of the State
of Maryland, License No. **39917**.
Expiration Date: **1/18/2025**

Seth Darlington
NAME

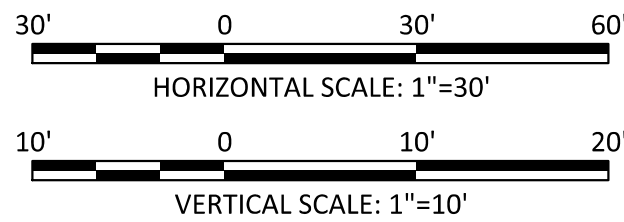
LEGEND	
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	PROPOSED FULL DEPTH RECONSTRUCTION
	7-9" CONCRETE DRIVEWAY APRON
	PERVIOUS CONCRETE SIDEWALK
	POROUS FLEXIBLE PAVEMENT
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	REMOVE TREE
	LIMIT OF DISTURBANCE
	PROPOSED TOP OF CUT
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	BARRIER - TYPE TO BE DETERMINED

APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL					
NO.	DESCRIPTION OF REVISION	P.E. INITIAL	DATE	DPW	DATE



ROCKVILLE SENIOR CENTER ENTRANCE – PICCARD DRIVE

STA. 299+50 TO STA. 306+50



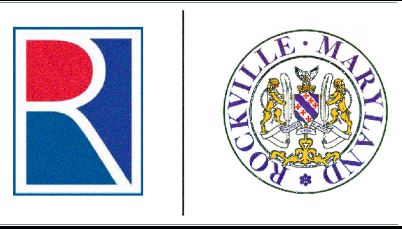
**WALLACE
MONTGOMERY**

EXISTING PLANNING-SURVEYING-CONSTRUCTION MANAGERS
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Expiration Date: **1/18/2025**

Seth Darlington
NAME



DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGNED	E. J. M.
DRAFTED	E. J. M.
CHECKED	S. H. D.

DESIGN PLAN APPROVAL	
DIRECTOR OF PUBLIC WORKS	APPROVAL DATE

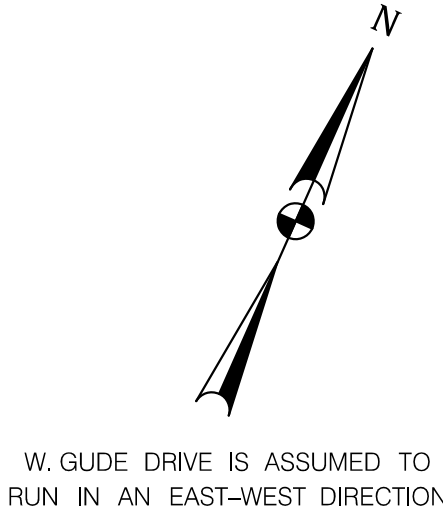
AS BUILT PLAN APPROVAL	
CHIEF, CONSTRUCTION MANAGEMENT	APPROVAL DATE

ROADWAY PROFILE

ROCKVILLE SENIOR CENTER ENTRANCE

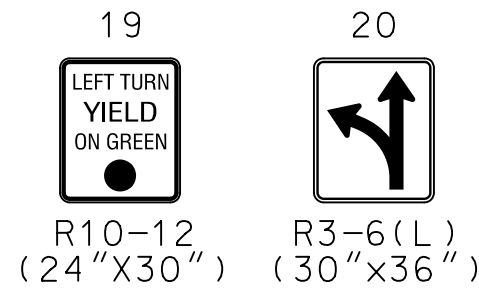
Election District No. 10 City of Rockville, Maryland

DATE SUBMITTED: OCT. 2024	SCALE	SHEET NO. OF 15	FILE #
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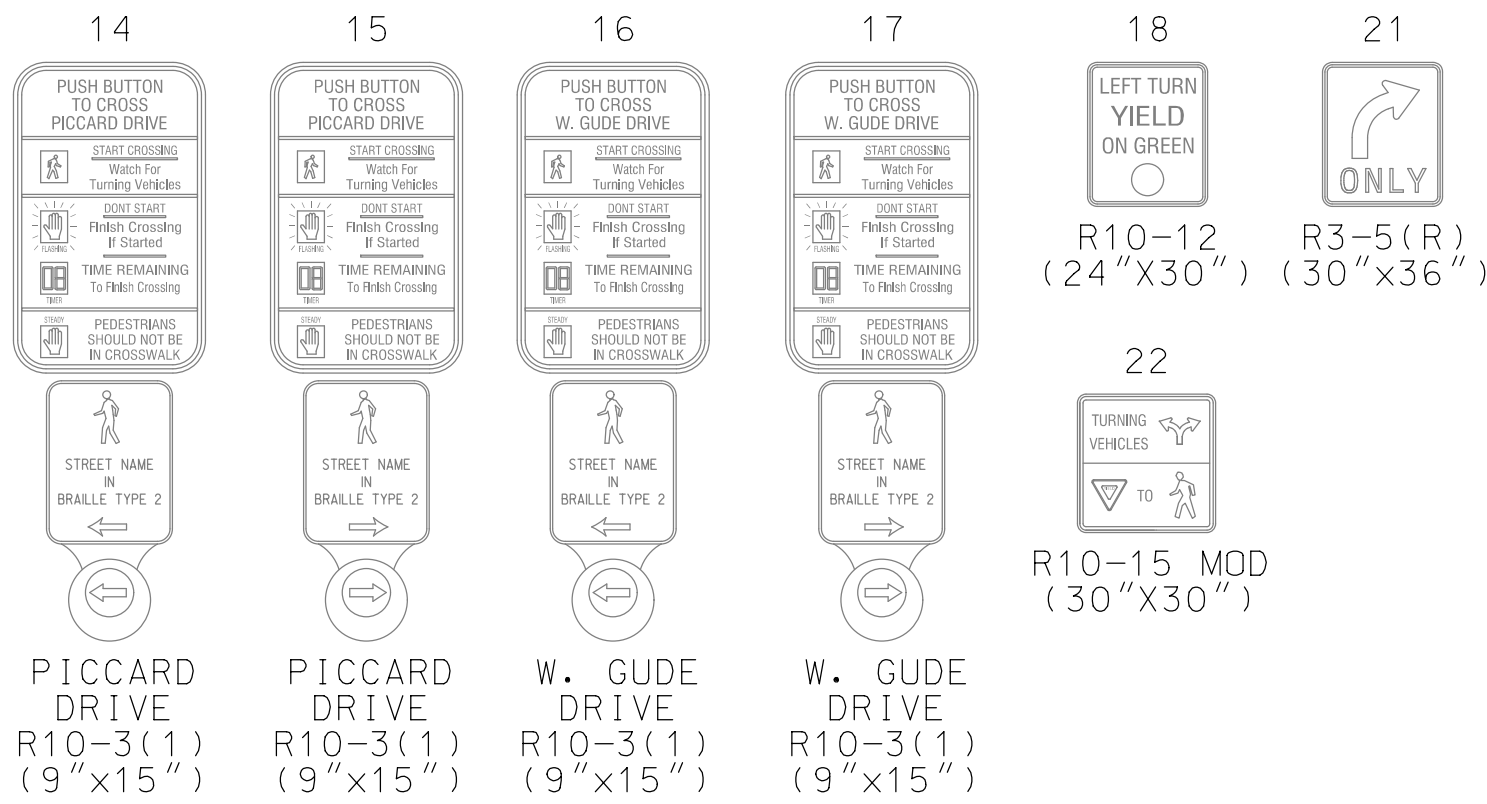


W. GUDE DRIVE IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

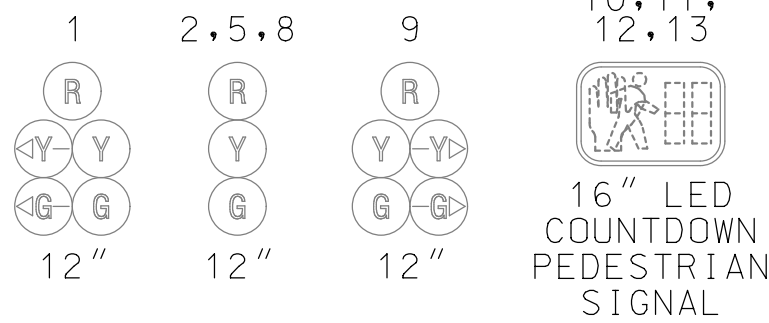
PROPOSED SIGNS



EXISTING SIGNS TO REMAIN



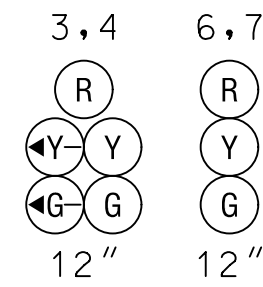
EXISTING SIGNALS TO REMAIN



EXISTING SIGNALS TO BE REMOVED



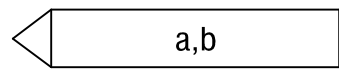
PROPOSED LED SIGNALS



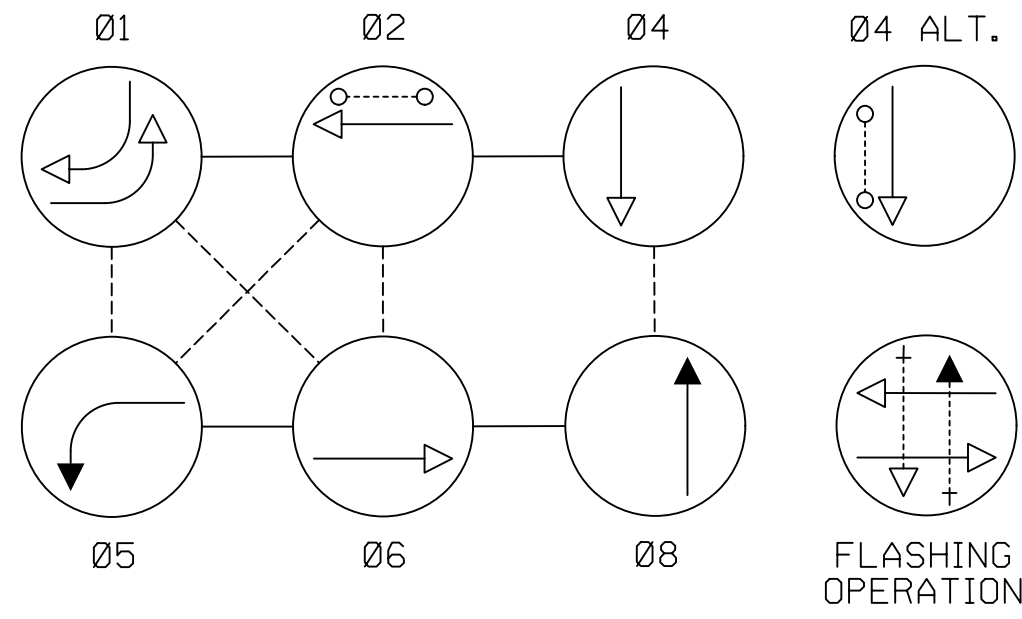
PROPOSED VIDEO DETECTION



PROPOSED VIDEO DETECTION ZONE

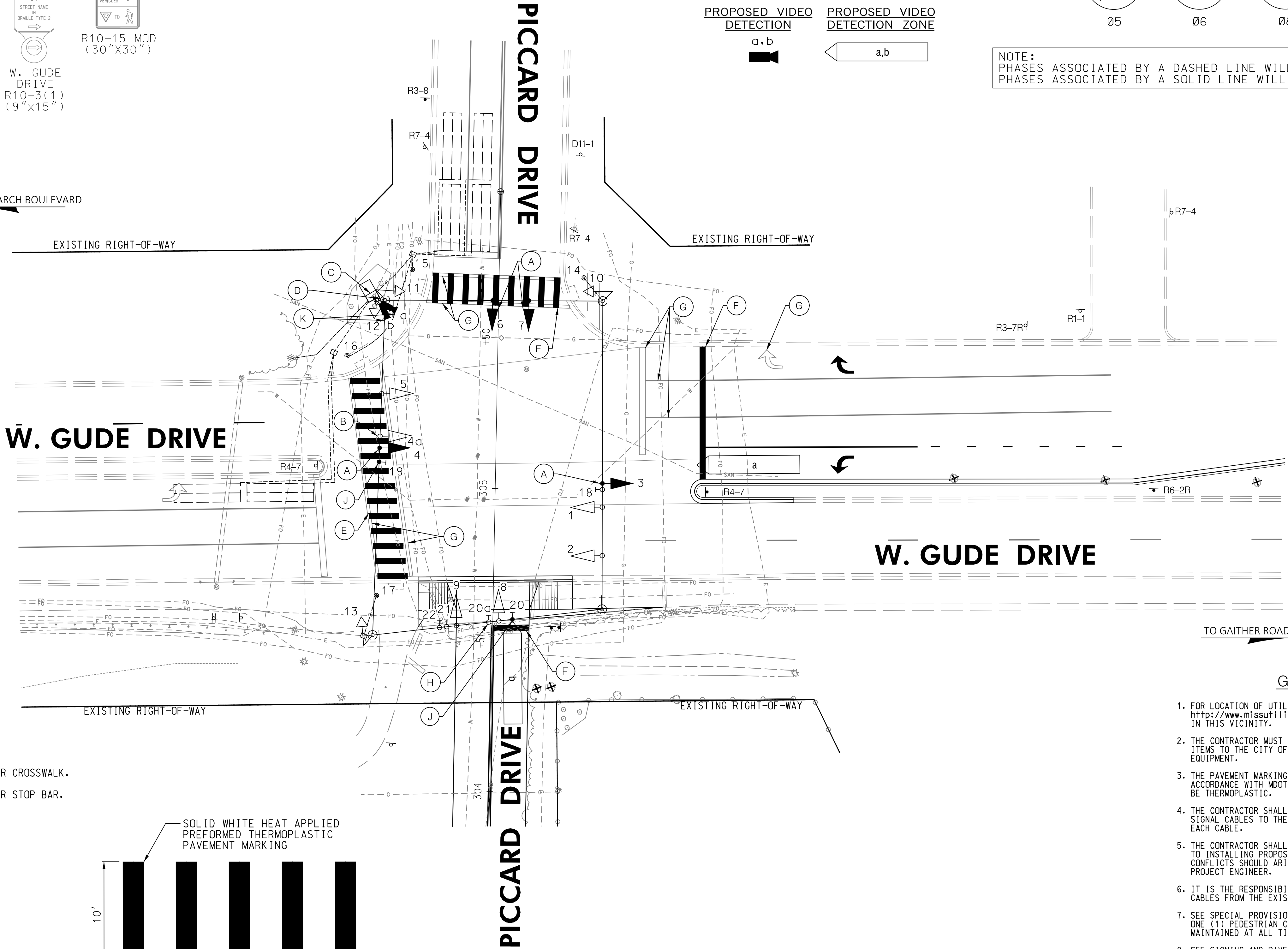


NEMA PHASING



NOTE: PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.

EXISTING SIGN TO BE REMOVED



CONSTRUCTION DETAILS

- (A) INSTALL PROPOSED VEHICULAR LED SIGNAL HEAD ON EXISTING SPAN WIRE.
- (B) REMOVE EXISTING VEHICULAR SIGNAL HEAD.
- (C) USE EXISTING GROUND MOUNTED CABINET AND CONTROLLER.
- (D) USE EXISTING CONDUIT.
- (E) INSTALL 24 INCH WHITE HEAT-APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALK.
- (F) INSTALL 24 INCH WHITE HEAT-APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP BAR.
- (G) REMOVE EXISTING PAVEMENT MARKING.
- (H) REMOVE EXISTING SIGN.
- (J) INSTALL PROPOSED SIGN.
- (K) INSTALL NEW VIDEO DETECTION CAMERA ON EXISTING SIGNAL POLE.

GENERAL NOTES

- FOR LOCATION OF UTILITIES CALL 1-800-257-7777 OR LOG ON TO <http://www.missutility.net/it/c/> 48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY.
- THE CONTRACTOR MUST SUBMIT CUT SHEET PROPOSALS FOR ALL FURNISHED ITEMS TO THE CITY OF ROCKVILLE FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT.
- THE PAVEMENT MARKINGS SHOWN ON THIS PLAN SHALL BE INSTALLED IN ACCORDANCE WITH MDT SHA STANDARDS. PAVEMENT MARKING MATERIAL SHALL BE THERMOPLASTIC.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
- THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ALL UNUSED CABLES FROM THE EXISTING CONDUITS AT NO CHARGE TO THE CITY.
- SEE SPECIAL PROVISIONS FOR MAINTENANCE OF TRAFFIC SPECIFICATIONS. ONE (1) PEDESTRIAN CROSSING ALONG EACH ROADWAY SHALL BE MAINTAINED AT ALL TIMES.
- SEE SIGNING AND PAVEMENT MARKING PLAN FOR ADDITIONAL PAVEMENT MARKING DETAILS.



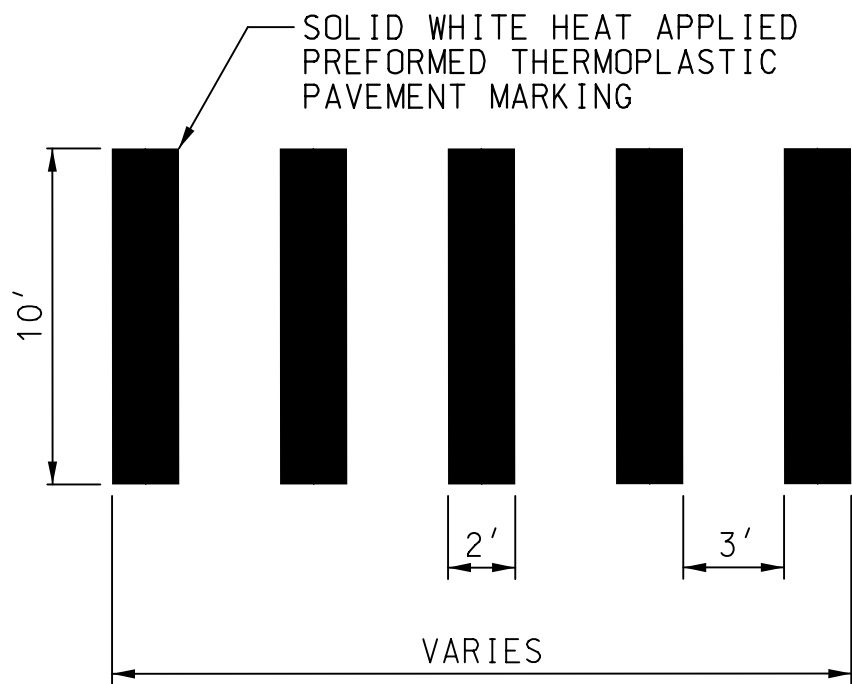
BEFORE BEGINNING CONSTRUCTION CONTACT "MISS UTILITY" AT WWW.MISSUTILITY.NET OR 1-800-257-7777 OR 811 AT LEAST 48 HOURS PRIOR TO EXCAVATION

GEOMETRIC LEGEND

== = EXISTING
--- = PROPOSED

UTILITY LEGEND

--- STORM DRAIN
--- G --- GAS MAIN
--- W --- WATER MAIN
--- SAN --- SEWER MAIN
--- E --- ELEC CABLES UG
--- E --- ELEC CABLES OH
--- T --- TELE CABLES UG
--- T --- TELE CABLES OH
--- FO --- FIBER-OPTIC UG
--- FO --- FIBER-OPTIC OH



CROSSWALK PAVEMENT MARKING DETAIL
NOT TO SCALE



DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGNED **S. A. S.**
DRAFTED **L. J. R.**
CHECKED **K. A. R.**

DESIGN PLAN APPROVAL

DIRECTOR OF PUBLIC WORKS
APPROVAL DATE

PWK# _____ SCP# _____
SMP# _____ REVIEWED BY _____

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT
APPROVAL DATE

SIGNAL PLAN
W. GUDE DRIVE AT PICCARD DRIVE

ROCKVILLE SENIOR CENTER ENTRANCE

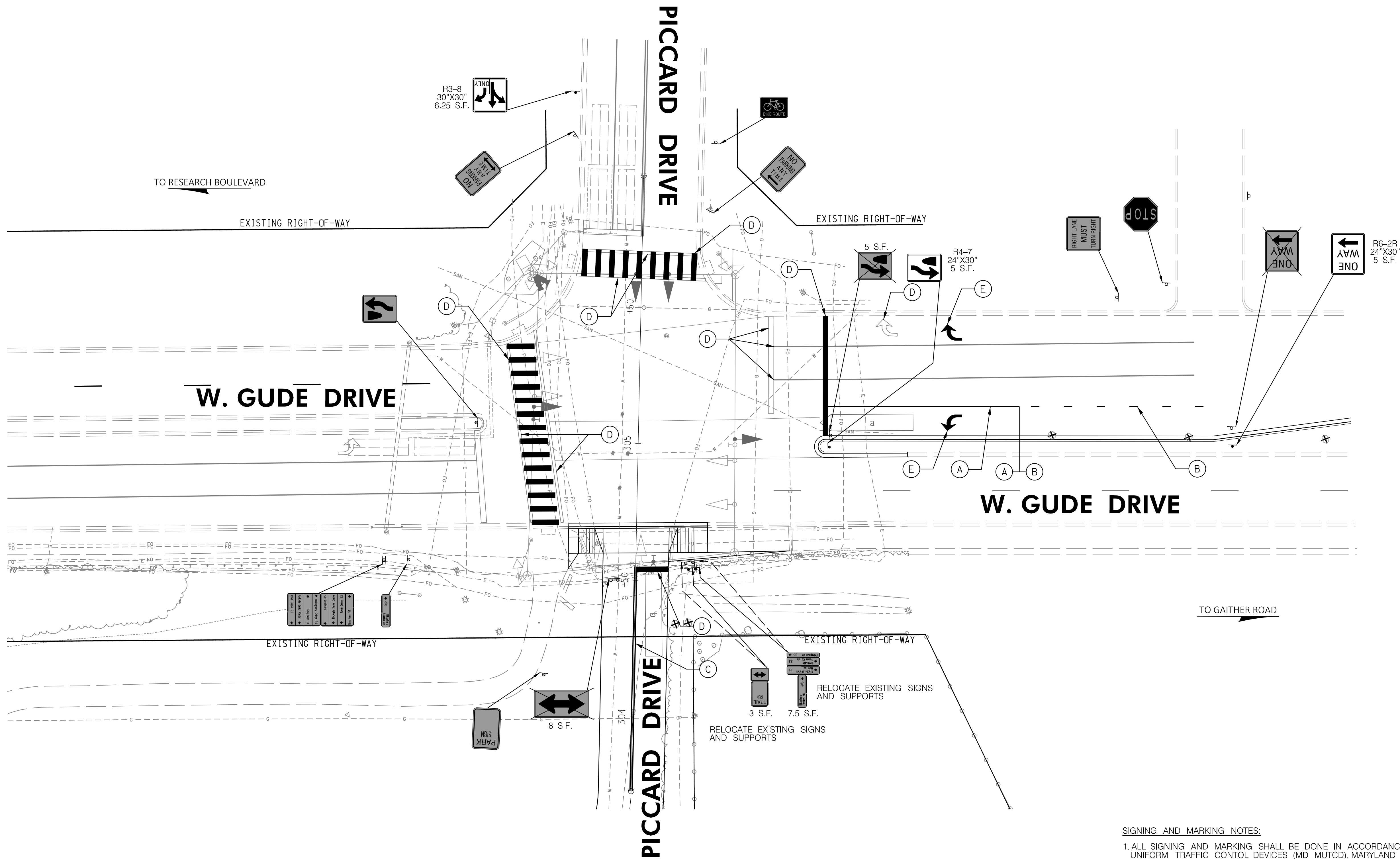
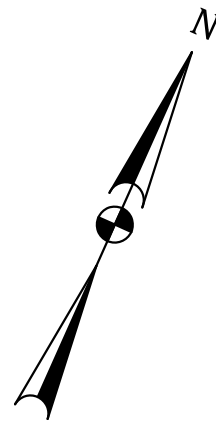
Election District No. 10 City of Rockville, Maryland

DATE SUBMITTED:
OCT. 2024

SCALE
1"=20'

SHEET
NO. 9
OF 15

FILE #

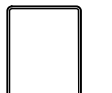


- SIGNING AND MARKING NOTES:**
1. ALL SIGNING AND MARKING SHALL BE DONE IN ACCORDANCE WITH THE LATEST MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD MUTCD), MARYLAND STATE HIGHWAY ADMINISTRATION'S BOOK OF STANDARDS, SPECIFICATIONS AND GUIDELINES.
 2. THE CONTRACTOR SHALL USE DIAMOND GRADE REFLECTIVE SHEETING FOR ALL SIGNS.
 3. WHEN SIGNS ARE INSTALLED IN CONCRETE OR WITHIN THE SIDEWALK, A PVC SLEEVE SHALL BE PROVIDED USING 40 SCHEDULE PVC (4 INCH DIAMETER).
 4. SIGN HEIGHT SHALL BE MINIMUM 7 FEET HIGH FROM THE BOTTOM OF THE SIGN FACE TO THE GROUND.

**WALLACE MONTGOMERY**
EXISTING PLANNERS-SUPERVISORS CONSTRUCTION MANAGERS
10110 York Road, Suite 200
Hunt Valley, Maryland 21036
410.646.5500, Tel. 410.667.5925 Fax
www.wallacemontgomery.com A Limited Liability Partnership

BEFORE BEGINNING CONSTRUCTION
CONTACT
"MISS UTILITY"
WWW.MISSUTILITY.NET
OR
1-800-257-7777
OR 811
AT LEAST 48 HOURS
PRIOR TO EXCAVATION

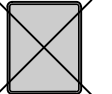
LEGEND



PROPOSED SIGN & SUPPORT



EXISTING SIGN & SUPPORT TO REMAIN



EXISTING SIGN & SUPPORT TO BE REMOVED

(A)

5" SOLID WHITE THERMOPLASTIC PAVEMENT MARKING

(B)

5" DASHED WHITE THERMOPLASTIC PAVEMENT MARKING (3' LINE, 9' SPACE)

(C)

5" SOLID DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING

(D)

SEE SIGNAL PLAN

(E)

WHITE HEAT APPLIED PREFORMED THERMOPLASTIC PAVEMENT MARKING SYMBOLS AND LEGENDS



DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGNED **B.R.P.**
DRAFTED **G.N.C.**
CHECKED **J.L.R.**

DESIGN PLAN APPROVAL

PWK# SCP#
SMP# REVIEWED BY

DIRECTOR OF PUBLIC WORKS APPROVAL DATE

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE

SIGNING AND PAVEMENT MARKING PLAN
W. GUDE DRIVE AT PICCARD DRIVE

ROCKVILLE SENIOR CENTER ENTRANCE

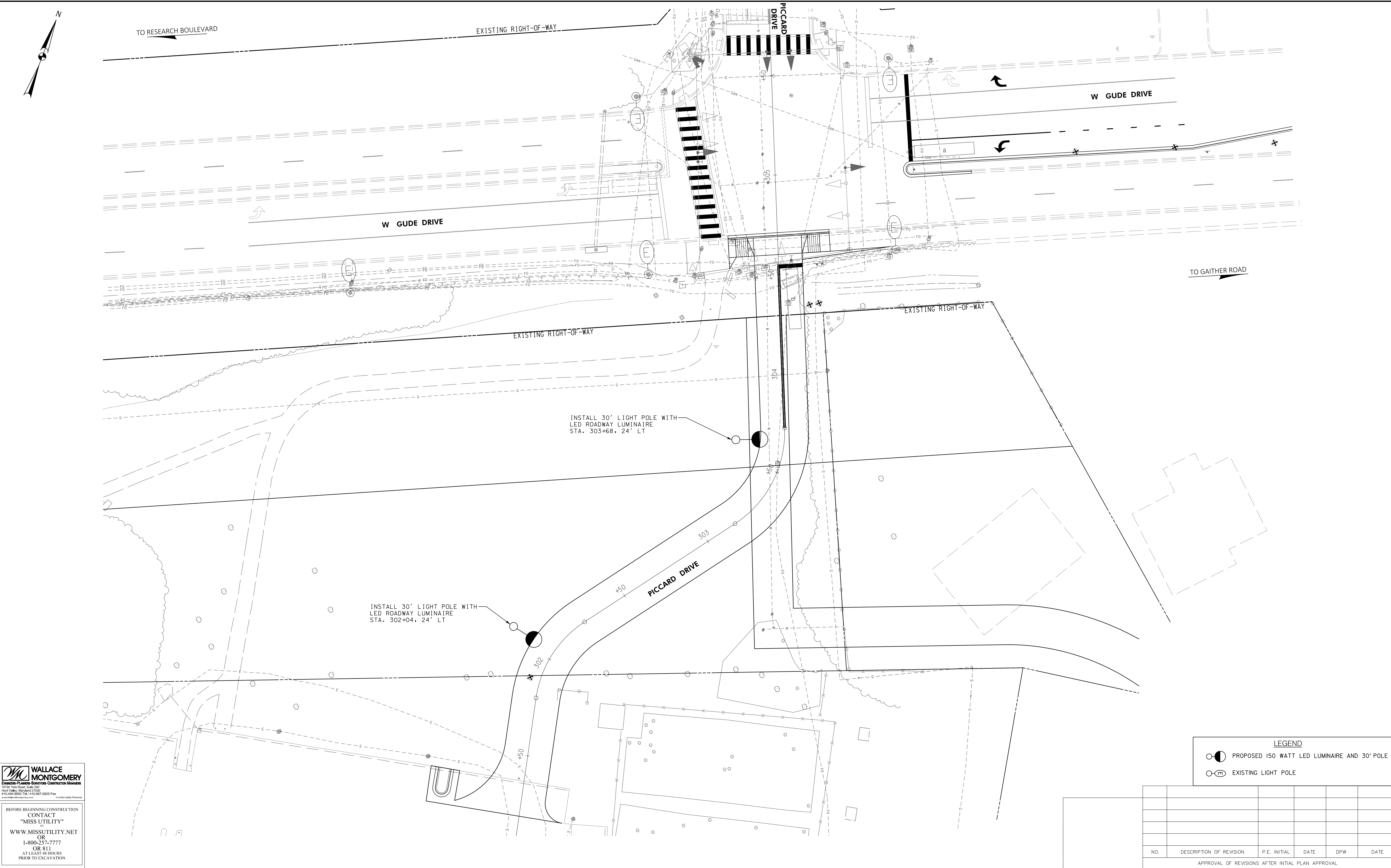
Election District No. 10 City of Rockville, Maryland

DATE SUBMITTED:
OCT. 2024

SCALE
1"=20'

SHEET
NO. 10
OF 15

FILE #

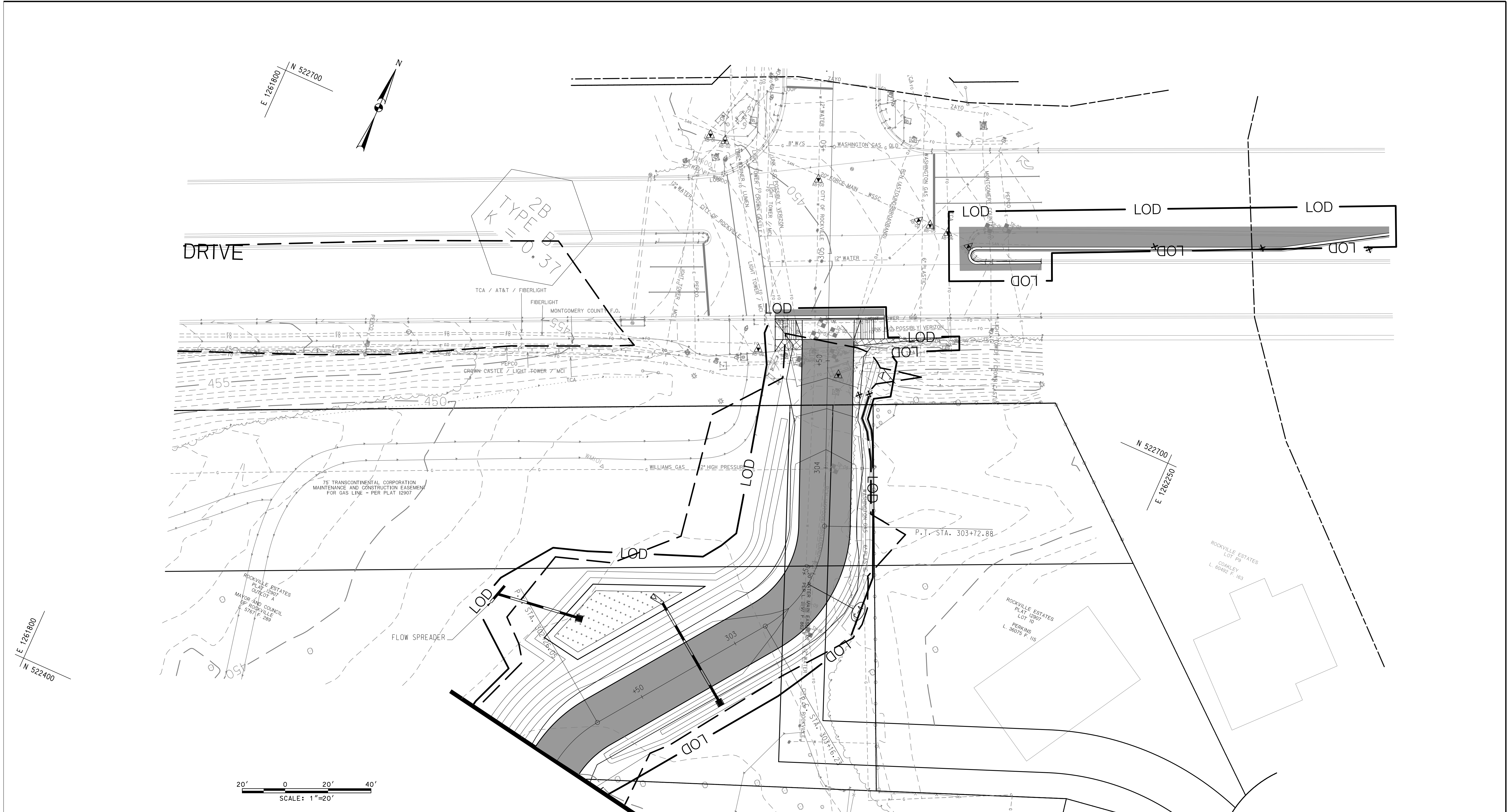


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LEGEND					
	PROPOSED 150 WATT LED LUMINAIRE AND 30' POLE				
	EXISTING LIGHT POLE				

NO.	DESCRIPTION OF REVISION	P.E. INITIAL	DATE	DPW	DATE



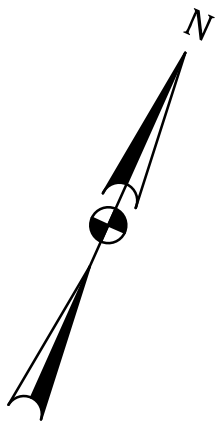
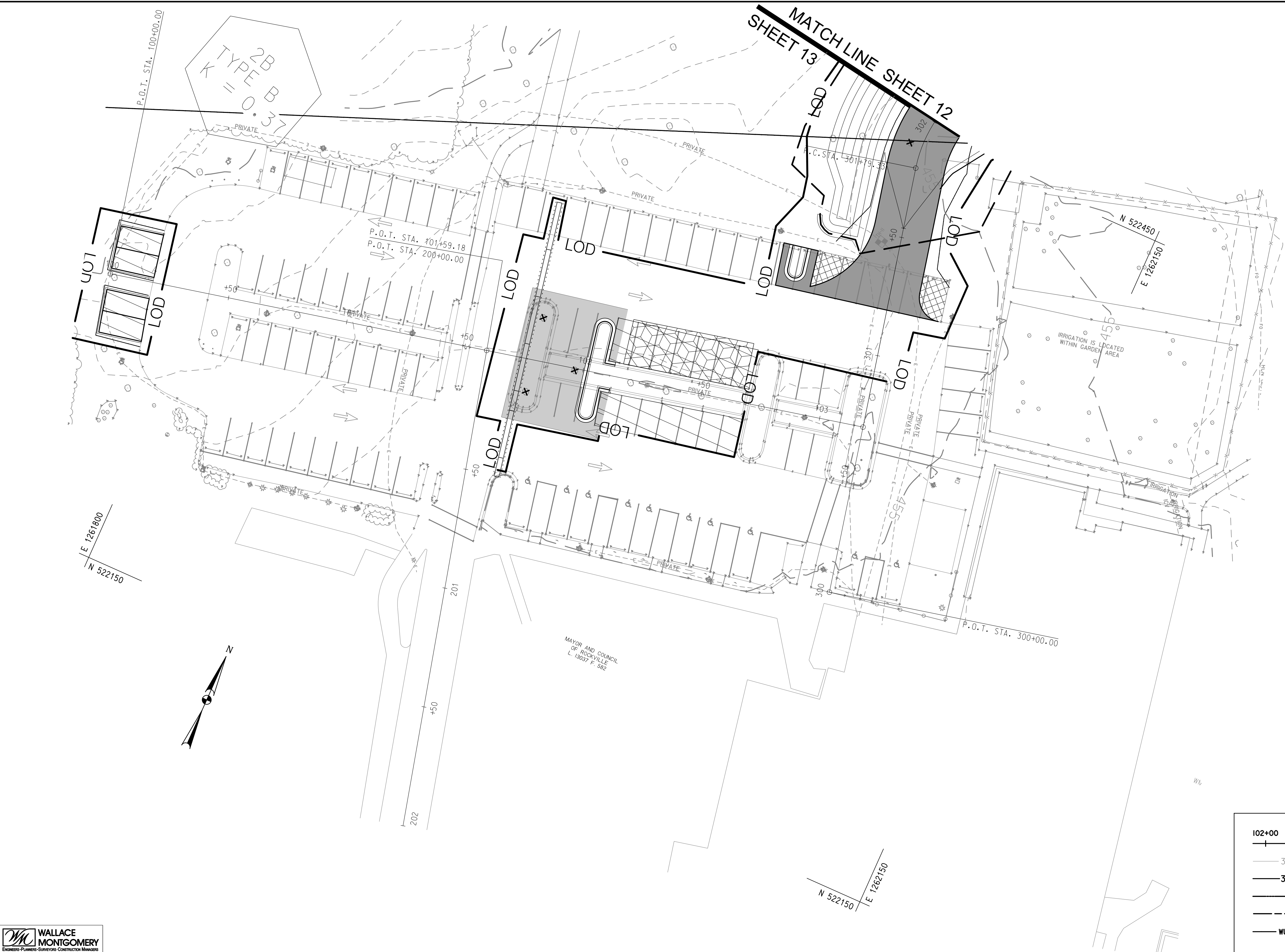
WALLACE MONTGOMERY
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LEGEND	
102+00 +50	LINE OF CONSTRUCTION
35	EXISTING CONTOUR
35	PROPOSED CONTOUR
---	RIGHT OF WAY LINE
---	HSG SOIL BOUNDARY
---	WUS
•••••	WETLAND
---	TREE LINE
---	FIBER OPTIC LINE
---	DRAINAGE AREA TO SWM FACILITIES
---	MICRO-BIO RETENTION MEDIA
---	PERMEABLE PAVEMENT

	DEPARTMENT OF PUBLIC WORKS CITY OF ROCKVILLE 111 MARYLAND AVE. ROCKVILLE, MARYLAND	DESIGNED MI	DESIGN PLAN APPROVAL		AS BUILT PLAN APPROVAL	STORMWATER MANAGEMENT PLAN	ROCKVILLE SENIOR CENTER ENTRANCE Election District No. 10 City of Rockville, Maryland	DATE SUBMITTED: OCT. 2024	SCALE 1" = 20'	SHEET NO. 12 OF 15	FILE #
		DRAFTED MI CHECKED MW	DIRECTOR OF PUBLIC WORKS APPROVAL DATE	PWK# SMP#	SCP# REVIEWED BY			CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE	APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL		

PROFESSIONAL CERTIFICATION:
I hereby certify that these documents
were prepared or approved by me, and
that I am a duly licensed Professional
Engineer under the laws of the State
of Maryland, License No. 39917
Expiration Date: 1/18/2025
Seth Darlington
NAME



LEGEND					
	OF CONSTRUCTION		WETLAND		
	EXISTING CONTOUR		TREE LINE		
	PROPOSED CONTOUR		FIBER OPTIC LINE		
	RIGHT OF WAY LINE		DRAINAGE AREA TO SWM FACILITIES		
	HSG SOIL BOUNDARY		MICRO-BIO RETENTION MEDIA		
	WATERS OF THE US		PERMEABLE PAVEMENT		

PROFESSIONAL CERTIFICATION:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. **39917**.
Expiration Date: **1/18/2025**

Seth Darlington
NAME

NO.	DESCRIPTION OF REVISION	P.E. INITIAL	DATE	DPW	DATE
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APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL

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DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGNED MI
DRAFTED MI
CHECKED MW

DESIGN PLAN APPROVAL			
	PWK#	SCP#	REVIEWED BY
	SMP#		
DIRECTOR OF PUBLIC WORKS		APPROVAL DATE	

AS BUILT PLAN APPROVAL	
	APPROVAL DATE
CHIEF, CONSTRUCTION MANAGEMENT	

STORMWATER
MANAGEMENT
PLAN

ROCKVILLE SENIOR CENTER ENTRANCE

Election District No. 10 City of Rockville, Maryland

DATE SUBMITTED:
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SHEET

NO. 13
OF 15

FILE #

